SR 710 North Study

LOS ANGELES COUNTY, CALIFORNIA
07-LA-710 (SR 710)
E.A. 187900
EFIS 0700000191

Draft Environmental Impact Report/ Environmental Impact Statement and Draft Section 4(f) De Minimis Findings

Volume II

Prepared by:
State of California Department of Transportation
and the
Los Angeles County Metropolitan Transportation Authority

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Metro

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.

March 2015

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Appendix A: CEQA Checklist

Supporting documentation of all California Environmental Quality Act (CEQA) checklist determinations is provided in Chapter 4 of this Environmental Impact Report/Environmental Impact Statement (EIR/EIS). Discussion of all avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapters 3 and 4.

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CEQA Environmental Checklist

07-LA 710 (SR-710)	N/A	187900
Dist.-Co.-Rte.	P.M/P.M.	E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	TSM/TDM	BRT	LRT	Freeway Tunnel
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	No impact	No impact	No impact	No impact
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	Less than significant impact	Less than significant impact	Potentially significant impact	Less than significant impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

II. AGRICULTURE AND FOREST RESOURCES: Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No impact	No impact	No impact	No impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No impact	No impact	No impact	No impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No impact	No impact	No impact	No impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No impact	No impact	No impact	No impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	No impact	No impact	No impact	No impact

III. AIR QUALITY: Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	Less than significant impact	Less than significant impact	Less than significant impact	No impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

	TSM/TDM	BRT	LRT	Freeway Tunnel
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
d) Expose sensitive receptors to substantial pollutant concentrations?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
e) Create objectionable odors affecting a substantial number of people?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Less than significant impact	Less than significant impact	Less than significant with mitigation	Less than significant with mitigation
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	No impact	No impact	No impact	Less than significant with mitigation
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No impact	No impact	No impact	Less than significant with mitigation
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	No impact	No impact	No impact	No impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No impact	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No impact	No impact	No impact	No impact

V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	Less than significant impact	Less than significant with mitigation and conditions	Less than significant with mitigation and conditions	Less than significant with mitigation and conditions
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less than significant with mitigation	Less than significant with mitigation	Potentially significant impact	Potentially significant impact
d) Disturb any human remains, including those interred outside of formal cemeteries?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

	TSM/TDM	BRT	LRT	Freeway Tunnel
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
ii) Strong seismic ground shaking?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
iii) Seismic-related ground failure, including liquefaction?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
iv) Landslides?	No impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Result in substantial soil erosion or the loss of topsoil?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No impact	No impact	No impact	No impact

VII. GREENHOUSE GAS EMISSIONS: Would the project:	
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document. Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EO S-3-05 and EO S-01-07 and help achieve the targets set forth in AB 32.
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	

	TSM/TDM	BRT	LRT	Freeway Tunnel
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation

	TSM/TDM	BRT	LRT	Freeway Tunnel
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No impact	No impact	No impact	No impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	No impact	No impact	No impact	No impact
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	No impact	No impact	No impact	No impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	Less than significant impact	No impact	No impact	No impact

IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	No impact	No impact	Less than significant impact	Less than significant impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
f) Otherwise substantially degrade water quality?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	No impact	No impact	No impact	No impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	No impact	No impact	No impact	Less than significant impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
j) Inundation by seiche, tsunami, or mudflow	No impact	No impact	No impact	No impact

	TSM/TDM	BRT	LRT	Freeway Tunnel
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	Potentially significant impact	Potentially significant impact	Potentially significant impact	Potentially significant impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	No impact	No impact	No impact	No impact

XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	No impact	No impact	Less than significant	Less than significant impact
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No impact	No impact	No impact	No impact
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	No impact	No impact	No impact	No impact

XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	No impact	No impact	No impact	No impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	No impact	No impact	No impact	No impact

	TSM/TDM	BRT	LRT	Freeway Tunnel
XIV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
ii) Police protection?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
iii) Schools?	No impact	No impact	No impact	No impact
iv) Parks?	No impact	No impact	No impact	No impact
v) Other public facilities?	No impact	No impact	No impact	No impact

XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No impact	Less than significant impact	No impact	No impact

XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	Potentially significant impact	Potentially significant impact	Potentially significant impact	Potentially significant impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	No impact	No impact	No impact	No impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No impact	No impact	No impact	No impact
e) Result in inadequate emergency access?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	No impact	No impact	No impact	No impact

	TSM/TDM	BRT	LRT	Freeway Tunnel
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	No impact	No impact	No impact	No impact
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
g) Comply with federal, state, and local statutes and regulations related to solid waste?	No impact	No impact	No impact	No impact

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	Less than significant with mitigation	Less than significant with mitigation	Potentially significant impact	Potentially significant impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	Potentially significant impact	Potentially significant impact	Potentially significant impact	Potentially significant impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Potentially significant impact	Potentially significant impact	Potentially significant impact	Potentially significant impact

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Appendix B: Draft Section 4(f) De Minimis Finding and Resources Evaluated Relative to the Requirements of Section 4(f)

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Draft Section 4(f) De Minimis Finding and Resources Evaluated Relative to the Requirements of Section 4(f)

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Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Metro

The environmental review, consultation, and any other action required in accordance with the applicable federal laws for this project are being, or have been, carried out by the California Department of Transportation under its assumption of responsibility pursuant to 23 United States Code 327.

Submitted pursuant to 49 United States Code 303.

March 2015

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Acronyms and Abbreviations

ac	acre/acres
ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
APN	Assessor's Parcel Number
ATM	Active Traffic Management
Ave.	Avenue
Blvd.	Boulevard
BRT	Bus Rapid Transit
BSA	Biological Study Area
Cal State LA	California State University, Los Angeles
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CMS	changeable message signs
COZEEP	Construction Zone Enhanced Enforcement Program
dBA	A-weighted decibels
DOI	United States Department of the Interior
Dr.	Drive
E.	East
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
El Encanto	Jardin del Encanto
Express	Express Bus
FHWA	Federal Highway Administration
FOE	Finding of Effects
Foothill	Foothill Transit
ft	foot/feet
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
FY	Fiscal Year
GIS	Geographic Information System

HPSR	Historic Property Survey Report
I-10	Interstate 10
I-105	Interstate 105
I-110	Interstate 110
I-210	Interstate 210
I-405	Interstate 405
I-5	Interstate 5
I-605	Interstate 605
I-710	Interstate 710
ID No.	Identification Number
IEN	Information Exchange Network
ITS	Intelligent Transportation Systems
L&WCF Act	Land and Water Conservation Fund Act
L_{max}	maximum instantaneous noise level
LRT	Light Rail Transit
LRTP	Long Range Transportation Plan
MDL	maximum disturbance limits
Metro	Los Angeles County Metropolitan Transportation Authority
mi	mile, miles
mph	miles per hour
MSA	Metropolitan Statistical Area
National Register	National Register of Historic Places
NB	northbound
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NPS	National Park Service
O&M	operations and maintenance
Pl.	Place
Rapid	Bus Rapid Transit
ROW	right-of-way
RTP	Regional Transportation Plan
S.	South

SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SB	southbound
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategy
SHPO	State Historic Preservation Officer
sq mi	square miles
SR 110	State Route 110
SR 118	State Route 118
SR 134	State Route 134
SR 170	State Route 170
SR 2	State Route 2
SR 22	State Route 22
SR 57	State Route 57
SR 60	State Route 60
SR 710	State Route 710
SR 91	State Route 91
St.	Street
TAP	Transit Access Pass
TBM	tunnel boring machine
TCE, TCEs	temporary construction easement, easements
TDM	Transportation Demand Management
TMP	Transportation Management Plan
TSM	Transportation System Management
TSSP	Traffic Signal Synchronization Program
US-101	United States Route 101
USC	United States Code
USDOT	United States Department of Transportation

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1. Introduction

1.1 Project Overview

The California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro), proposes transportation improvements to improve mobility and relieve congestion in the area between State Route 2 (SR 2) and Interstates 5, 10, 210 and 605 (I-5, I-10, I-210, and I-605, respectively) in east/northeast Los Angeles and the western San Gabriel Valley. The study area for the State Route 710 (SR 710) North Study covers approximately 100 square miles (sq mi) and is generally bounded by I-210 on the north, I-605 on the east, I-10 on the south, and I-5 and SR 2 on the west. The general study area for the SR 710 project includes all or parts of the Cities of Alhambra, Arcadia, Duarte, El Monte, Glendale, La Cañada Flintridge, Los Angeles, Monrovia, Monterey Park, Pasadena, Rosemead, San Gabriel, San Marino, Sierra Madre, South Pasadena, and Temple City. It also includes several distinct neighborhoods in the City of Los Angeles, including El Sereno and Highland Park, and parts of several unincorporated communities (e.g., La Crescenta-Montrose and Altadena) in the western San Gabriel Valley and foothills.

Caltrans is the Lead Agency under the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) for the proposed project.

The purpose of the proposed project is to improve the efficiency of the existing regional freeway and transit networks, reduce congestion on local arterials adversely affected due to accommodating regional traffic volumes, and minimize environmental impacts related to mobile sources. The alternatives considered in this Section 4(f) Evaluation are the No Build, Transportation Systems Management/Transportation Demand Management (TSM/TDM) Bus Rapid Transit (BRT), Light Rail Transit (LRT), and Freeway Tunnel Alternatives.

1.2 Requirements of Sections 4(f) and 6(f)

1.2.1 Section 4(f)

Section 6009(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amended Section 4(f) legislation at 23 United States Code (USC) 138 and 49 USC 303 to simplify the processing and approval of projects that have only de minimis impacts on lands protected by Section 4(f). This revision provides that once the United States Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a de minimis impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. The Federal Highway Administration (FHWA) final rule on Section 4(f) *de minimis* findings is codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

1.2.2 Section 6(f)

State and local governments can obtain grants through the Land and Water Conservation Fund (L&WCF) Act to acquire land for or make improvements to public parks and recreation areas. Section 6(f) of the L&WCF Act prohibits the conversion of property acquired or developed with these grants to a nonrecreation or nonparkland purpose without the approval of the United States Department of the Interior (DOI) National Park Service (NPS). Section 6(f) directs the DOI to ensure that replacement lands of equal value, location, and usefulness are provided as conditions to the conversion of lands acquired or developed with L&WCF Act funds to nonparkland uses. Consequently, where conversions of Section 6(f) lands are proposed for highway projects, replacement of the affected land is required.

Properties in which Section 6(f) funds were used were identified in "Land and Water Conservation Fund – All Funded Projects (3-2-2013)"[1] and the "Land and Water Conservation Fund" website home page.[2] Based on those sources, L&WCA funds were used at several parks in the study area (i.e., Alhambra Park, Almansor Park, Belvedere Community Regional Park, Brookside Park, El Sereno North Park, Emery Park, Santa Fe Dam Recreation Area, and Smith Park). The applicability of Section 6(f) is discussed by resource in Chapter 2, Section 4(f) De Minimis Findings, and Chapter 3, Other Resources Evaluated Relative to the Requirements of Sections 4(f) and 6(f).

1.3 Definitions of Permanent Incorporation, Temporary Occupancy, and Constructive Use of Section 4(f) Properties

As defined in 23 CFR 774.17, there is a use of land from a Section 4(f) property when one of the following occurs:

1. When land is permanently incorporated into a transportation facility.
2. When there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose as determined by the criteria in Section 774.13(d). Section 774.13(d) indicates that temporary occupancies of land that are so minimal as to not constitute a use within the meaning of Section 4(f) are exceptions to the requirement for Section 4(f) approval. Specifically, for the purposes of Section 4(f), such temporary occupancy of a Section 4(f) resource does not normally constitute use if each of the following five conditions is met (23 CFR 774.13(d)):
    a. Duration must be temporary (i.e., less than the time needed for construction of the project), and there should be no change in ownership of the land;
    b. Scope of the work must be minor (i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal);
    c. There are no anticipated permanent adverse physical impacts, nor would there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;

[1] http:// www.parks.ca.gov?/Page_id+21360, accessed October 17, 2013.
[2] Ibid.

d. The land being used must be fully restored (i.e., the property must be returned to a condition that is at least as good as that which existed prior to the project); and

e. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

3. When there is a constructive use of a Section 4(f) property as determined by the criteria in Section 774.15. Section 774.15(a) indicates a constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

1.4 Identification of Section 4(f) Resources

The following study areas were used for the identification of Section 4(f) and 6(f) resources:

- The area within 0.5 mile (mi) of the maximum disturbance limits for the Build Alternatives was used to define the study area for existing publicly owned recreation and park resources, including local, regional, State, and federal resources; existing play and sports fields of public schools with public access (because many public schools and school districts use or allow the use of public school play and sports fields for nonschool activities, such as organized youth sports, all public schools with play and sports fields were considered as possible Section 4(f) resource properties for this analysis); publicly owned wildlife and water fowl refuges and conservation areas; and existing off-street public bicycle, pedestrian, and equestrian trails.
- The Area of Potential Effects (APE) identified in the *Historic Property Survey Report* (HPSR) (2014) was used to define the study area for properties listed, eligible for listing, or determined eligible for listing on the National Register of Historic Places (National Register).

The areas within the anticipated permanent rights-of-way for the Build Alternatives and the APE were the basis for identifying the potential permanent incorporation of land from properties protected under the requirements of Sections 4(f) and 6(f) by the Build Alternatives. Areas of permanent easements and areas proposed for temporary occupancy for temporary construction easements (TCEs) during project construction were also evaluated to assess the potential effects of those project features under the requirements of Sections 4(f) and 6(f). Resources within the 0.5 mi study area and the APE were also assessed to determine whether indirect impacts of the Build Alternatives would result in constructive use of those resources.

1.5 Summary of Effects

Based on the list of Section 4(f) resources identified in the study areas described above, the BRT Alternative was determined to result in the permanent incorporation of land from, and temporary occupancy of land in, the following resource, thereby triggering the requirements for protection under Section 4(f) for that resource:

- Jardin Del Encanto and Cascades Park

As discussed later in Section 3.1.3, Preliminary De Minimis Findings, the permanent incorporation of land from and the temporary occupancy of land in this Section 4(f) resource as a result of the BRT Alternative would have only minor effects on that resource, and Caltrans has made a preliminary *de minimis* finding regarding those effects.

None of the other Build Alternatives would result in the permanent incorporation or temporary occupancy of land from Jardin Del Encanto and Cascades Park. All the Build Alternatives were also determined not to result in the permanent incorporation, temporary occupancy, or constructive use of any other resources in the study area. Those resources are described in detail in Chapter 3, Other Resources Evaluated Relative to the Requirements of Sections 4(f) and 6(f), which also provides analysis documenting why the Build Alternatives would not result in the permanent incorporation, temporary occupancy, or constructive use of those resources under Section 4(f).

As discussed in Chapters 2 and 3, the SR 710 North Study Build Alternatives would not result in the conversion of any Section 6(f) lands to nonparkland uses.

2. Section 4(f) De Minimis Findings

2.1 Jardin Del Encanto and Cascades Park

2.1.1 Description of Jardin Del Encanto and Cascades Park

Jardin Del Encanto and Cascades Park consists of the El Encanto Building south of El Mercado Avenue and Cascades Park, including the Cascades, which is located within the median of El Portal Place in the City of Monterey Park (City) as shown on Figure 2.1-1. The City of Monterey Park is in the southern part of the State Route 710 (SR 710) North Study area, generally between Interstate 10 (I-10) to the north and State Route 60 (SR 60) to the south. The City is bounded on the east by Atlantic Boulevard, and SR 710 is located in the westernmost part of the City.

Cascades Park extends along the median of El Portal Place from De La Fuente Street on the northwest to El Mercado Avenue on the southeast. Cascades Park extends northwest of De La Fuente Street to Kingsford Street and part of Cascades Park is bounded by the extensions of El Portal Place, but those extensions are not public roads. Cascades Park consists of five discontinuous parcels that are separated from each other by De La Fuente Street, Atlantic Boulevard, and two alleys where they cross/intersect with El Portal Place. Figure 2.1-1 shows the location of Cascades Park in the City of Monterey Park, and Figure 2.1-2 shows the individual parcels that make up Cascades Park. The Cascades is an Art Deco-style water feature.

The area around Cascades Park was one of many subdivisions developed in the City of Monterey Park beginning in the early 1920s. Midwick View Estates was proposed by Peter N. Snyder to provide a garden community designed to rival Bel-Air and Beverly Hills. Mr. Snyder's efforts included building Atlantic Boulevard to bring industry to the east side of the City along with residential and commercial development projects along Atlantic Boulevard, including the Midwick View Estates. The focal point of the Midwick View Estates was the El Encanto, a Spanish Colonial Revival building at 700 El Mercado Avenue that was intended to serve as the administration building and community center for Midwick View Estates. The Cascades, a fountain with water cascading down in stepped pools, was visible to viewers from the observation terrace at the administration building. When the planned residential development failed during the depression, Mr. Snyder donated the land occupied by Cascades Park to the City of Monterey Park in about 1938.

Cascades Park covers approximately 1.3 acres (ac). The four Cascades Park parcels southeast of De La Fuente Street are turf/grass with scattered trees for passive recreation uses. There are no amenities such as benches or picnic tables in those parts of Cascades Park. As shown on Figure 2.1-2, there is an extensive water feature referred to as the Cascades on approximately 0.7 ac of the northwesternmost part of Cascades Park. The parcel occupied by the Cascades is bounded on the northwest by Kingsford Street, on the southeast by De La Fuente Street, and on the northeast and southwest by existing development. There are broad walkways extending from Kingsford Street southeast to De La Fuente Street along both sides of the Cascades. The Cascades are below the grade of Kingsford Street, and the stairs at the end of each walkway lead to Kingsford Street. The southeast part of the parcel occupied by the Cascades is above the grade of De La Fuente Street, and the stairs at the end of each walkway lead to that street. There are trees and large shrubs in this part of Cascades Park. The Cascades part of Cascades Park is a very scenic spot and is frequently used as a background for wedding and other photographs.

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LEGEND

- Parcel Lot Lines
- Jardine Del Encanto and Cascades Park
- Cascades Park
- El Encanto

0 100 200
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 2.1-1

SR 710 North Study

Location of Jardin Del Encanto and Cascades Park in the City of Monterey Park

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LEGEND

Cascades Park Boundary

Parcel Lot Lines

FIGURE 2.1-2

0 50 100

FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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SR 710 North Study

Cascades Park

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No Section 6(f) funds were used for the acquisition of any land or the construction of any improvements at Cascades Park. As a result, the requirements of Section 6(f) are not applicable at Cascades Park; therefore, no further discussion regarding Section 6(f) at Cascades Park is provided in this analysis.

Cascades Park is within a large parcel of land owned by the City of Monterey Park. The property owned by the City includes the parcels occupied by all of Cascades Park and the public streets and alleys in the vicinity of and crossing Cascades Park (refer to Figure 2.1-1). El Encanto is also owned by the City. That building is currently used by the Monterey Park Chamber of Commerce.

2.1.2 Section 106

As documented in the *Historic Property Survey Report* (HPSR) (2015) for the SR 710 North Study, the Jardin Del Encanto and Cascades Park was determined to be eligible for the National Register of Historic Places (National Register) under Criterion A (California Historical Resource [CHR] Status Code 2S2, Individual property determined eligible for the National Register by a consensus through the Section 106 process). As a result, the Jardin Del Encanto and Cascades Park is subject to the requirements for approval under Section 4(f). Analyses of the potential effects of the SR 710 North Study Build Alternatives on the Jardin Del Encanto and Cascades Park from the Preliminary *Finding of No Adverse Effect for the State Route 710 North Study* (2015) are incorporated in the analysis of the project effects on that property under Section 4(f) described in this section.

Character-defining features that qualify Jardin Del Encanto and Cascades Park for the National Register include the axial plan, historic stairs, landings, fixtures, street trees, planting strips, curbs, flag poles, retaining walls, neon signage, wrought iron fencing, hand-decorated tiles, planters, the historic 1929 streetlights on the northwest and the southwest corners of the intersection of South Atlantic Boulevard with El Portal Place, the historic 1929 sidewalk and curb at the median on the east side of South Atlantic Boulevard, approximately 12 square feet of historic sidewalk at the median on the west side of South Atlantic Boulevard, and the historic 1929 sidewalk that remains on the northwest and southwest corners of the intersection. The modern streetlights, sidewalk patches, and handicapped accessible ramps are not character-defining features of this historic property.

2.1.3 Use of Cascades Park

The Bus Rapid Transit (BRT) Alternative proposes the addition of dedicated bus lanes on Atlantic Boulevard. At the crossing of El Portal Place, the BRT Alternative would require widening of Atlantic Boulevard and, consequently, encroachment into two of the parcels in Cascades Park. Figure 2.1-3 shows the limits of construction of the bus lane improvements and the edge of the limits of the dedicated bus lanes at the two locations where the bus lanes will encroach into Cascades Park.

The Transportation System Management/Transportation Demand Management (TSM/TDM), Light Rail Transit (LRT), and Freeway Tunnel Alternatives would not result in permanent incorporation or temporary occupancy of any land from Cascades Park. In addition, the nearest improvements in those Build Alternatives are more than 0.5 mile (mi) from Cascades Park; therefore, there is no potential for those Alternatives to result in constructive use of Cascades Park. As a result, those Alternatives are not discussed further in this analysis of the potential effects on Cascades Park.

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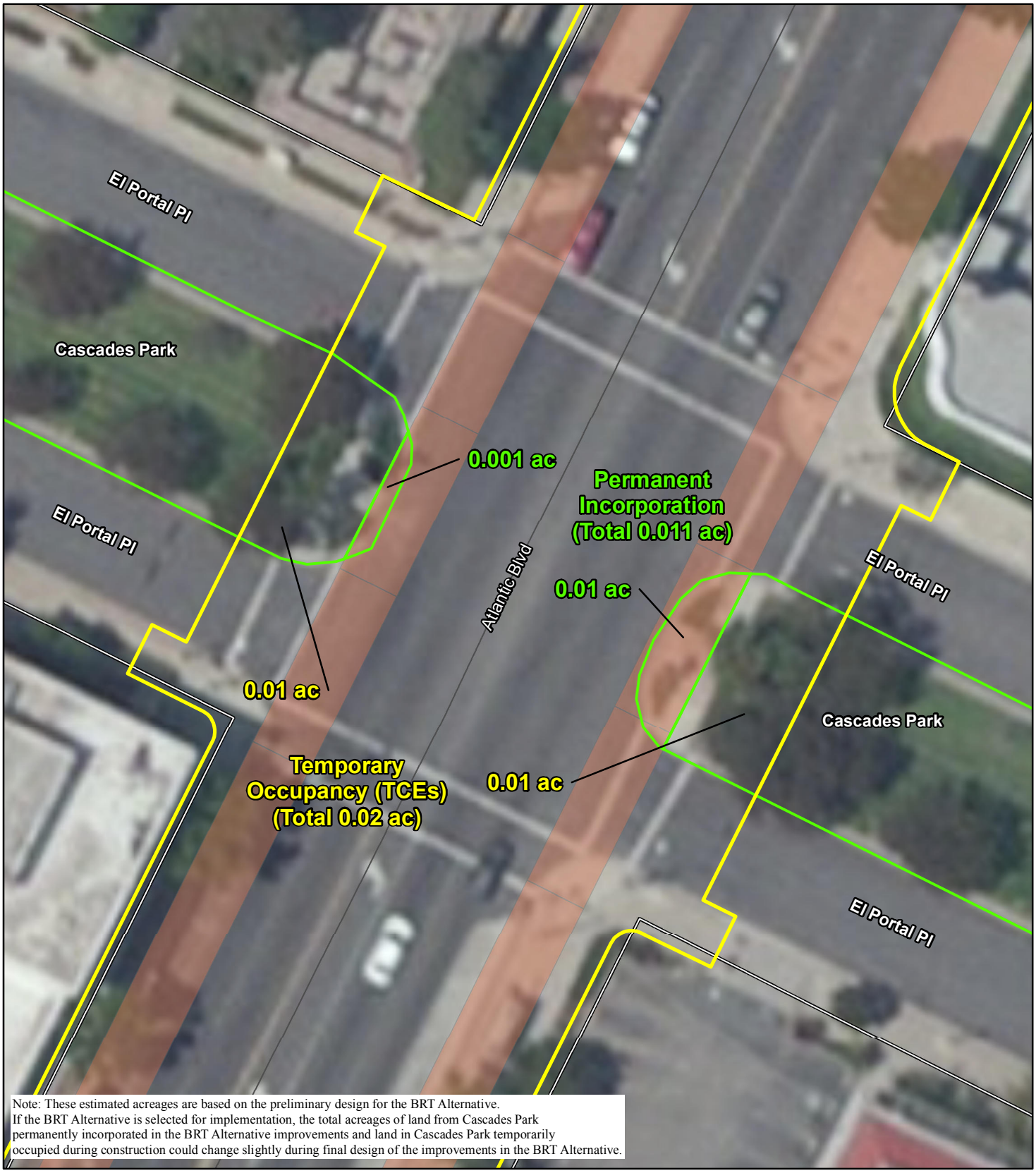

LEGEND

- Cascades Park Boundary
- Parcel Lot Lines

BRT Alternative

- Limits of Construction
- Limits of Dedicated Bus Lanes

N

0 15 30

FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 2.1-3

SR 710 North Study

BRT Alternative at Cascades Park

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The limits of construction are the areas within which project construction activities could occur and are defined as the largest area where those activities could occur under the BRT Alternative. As a result, they are similar to temporary construction easements (TCEs), which are areas that would be used temporarily during construction and then returned to their original owners when construction in that area is complete. For this Section 4(f) analysis, the limits of construction were interpreted to represent TCEs at the locations where those limits fall within Cascades Park as shown on Figure 2.1-3.

The limits of the dedicated bus lanes shown on Figure 2.1-3 show the areas in Cascades Park that would be permanently incorporated into those lanes after project construction is complete. For this Section 4(f) evaluation, the edges of the limits of the bus lanes within Cascades Park were interpreted to represent the edge of the permanent right of way (ROW) for Atlantic Boulevard in the vicinity of Cascades Park.

The potential permanent incorporation and temporary occupancy of land from Cascades Park are described in the following sections.

2.1.3.1 Permanent Incorporation of Land from Cascades Park

As shown on Figure 2.1-3, the BRT Alternative would result in the permanent incorporation of a total of 0.011 ac of land from two areas in Cascades Park. As shown, these acquisitions would affect grass/turf areas and existing sidewalks in Cascades Park. The sidewalks would be replaced within the boundary of Cascades Park as part of the BRT Alternative in order to maintain safe locations for crossing Atlantic Boulevard and accessing those parts of Cascades Park. The existing crosswalks across El Portal Place and Atlantic Boulevard shown on Figure 2.1-3 would be modified to connect with the new sidewalks in Cascades Park. Although the volume of buses on Atlantic Boulevard may increase with the BRT Alternative, access to and from Cascades Park at the locations shown on Figure 2.1-3 would be as good as the existing sidewalk access, and patrons of Cascades Park would be able to continue to access the Park via crosswalks and sidewalks just as they do now.

As documented in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study*, the BRT Alternative would result in: (1) physical destruction or alteration to a contributing part of Jardin Del Encanto and Cascades Park, (2) a change to the physical features within the property's setting, and (3) the introduction of visual elements that would diminish the overall integrity of the Jardin Del Encanto and Cascades Park. As described above, the BRT Alternative improvements would widen South Atlantic Boulevard as it crosses through Jardin Del Encanto and Cascades Park. The widening would require altering the ends of two, round-shaped medians that form the western and eastern borders of the continuous grassy median landscape feature of Jardin Del Encanto and Cascades Park at the El Portal Place/South Atlantic Boulevard intersection as shown on Figure 2.1-3. The existing concrete medians would be set back approximately 6 feet (ft) from their existing positions and would be designed to mirror the curvilinear shape of the original median curbs. The modified medians would include paved areas to facilitate pedestrian crossings of El Portal Place similar to the existing conditions. There are two historical electroliers along the outer sidewalk of El Portal Place, approximately 25 ft west of the South Atlantic Boulevard intersection. The improvements in the BRT Alternative in that area would be designed to not affect those two electroliers. Similar electroliers on the west side of the El Portal Place/South Atlantic Boulevard intersection are approximately 80 ft from the intersection and would not be affected by the improvements in the BRT Alternative.

Some elements of the present medians are not part of the original design of these medians and do not date from the resource's period of significance of 1928. These areas have been previously altered by:

- Construction of a paved walkway for pedestrians crossing El Portal Place as evidenced by the different-colored and -textured concrete with varied surface scoring patterns;
- Installation of modern traffic lights and pedestrian crosswalk signals, one-way signage for El Portal Place-bound traffic, and various plantings; and
- The installation of a decorative sign by the City of Monterey Park in the western median planting area.

As a result, the changes in Cascades Park resulting from the improvements in the BRT Alternative would not rise to the level of adverse impacts to Jardin Del Encanto and Cascades Park as a whole because those modifications would occur in previously modified areas.

The permanent acquisition of approximately 1,000 square feet (sf) from Cascades Park to accommodate the BRT Alternative improvements would result in a minor reduction in the amount of landscaped area in the median flanked by El Portal Place. The modified curbs would be designed to resemble the original curved shape and would include a paved pedestrian walkway and accessible pedestrian ramps. The new median areas would impact some landscaping features, but any trees, bushes, or plants affected would be moved and replanted in locations that resemble the spatial orientation of the existing design. The sidewalk type and finish would be consistent with the historical scoring pattern found in older, intact segments of sidewalks in Jardin Del Encanto and Cascades Park.

Based on the analysis in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study*, the improvements in the BRT Alternative include the reconfiguration of a section of the landscaped median area, which is a contributing element to Jardin Del Encanto and Cascades Park. The alterations would affect the two round-shaped medians that form the western and eastern borders of the continuous grassy median landscape feature of the property at the El Portal Place/South Atlantic Boulevard intersection. The proposed changes to the medians would result in an alteration of the historic materials, workmanship, or engineering aspects at that location that contribute to the eligibility of the Jardin Del Encanto and Cascades Park for the National Register. The other built environment elements and design features of Jardin Del Encanto and Cascades Park would not be affected by the improvements in the BRT Alternative.

Taken together, these proposed alterations at the El Portal Place/South Atlantic Boulevard intersection would partially affect Jardin Del Encanto and Cascades Park. However, the property would continue to be used for its originally intended purpose, which is an example of landscape design, and Art Deco-styled design and Spanish Colonial Revival architecture connected via a landscaped median. The essential aesthetic character of the resource would remain unchanged. The property would retain integrity of location and feeling in terms of a modern motorist or pedestrian traveling through an early 20th century landscaped area in its historic location, and also integrity of association with the development of Monterey Park.

As documented in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study*, the effects of the BRT Alternative at Jardin Del Encanto and Cascades Park would comply with the following Secretary of the United States Department of the Interior's Standards for the Treatment of

Historic Properties: Rehabilitation Standards 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10. As a result, the effect finding of the BRT Alternative improvements on Jardin Del Encanto and Cascades Park would be No Adverse Effect with Standard Conditions.

As described above, the permanent acquisition of land from and the project features in Jardin Del Encanto and Cascades Park would not substantively modify the workmanship, materials, integrity of location, or the essential physical features or characteristics of this property that qualify it for inclusion in the National Register. The changes in the Jardin Del Encanto and Cascades Park as a result of the BRT Alternative improvements would not affect the occupation and intended activities of this property. As a result, the use of land from the project features at this property under the BRT Alternative would not result in a substantial impairment of the property's activities, features, or attributes that qualify the Jardin Del Encanto and Cascades Park for protection under Section 4(f).

2.1.3.2 Temporary Occupancy of Land in Jardin Del Encanto and Cascades Park

The TCEs for the BRT Alternative in Cascades Park would result in temporary occupancy of land in Cascades Park extending beyond the road ROW limits to accommodate the construction of the dedicated bus lanes and the replacement of sidewalks at two areas in Cascades Park. As shown on Figure 2.1-3, the two TCEs would total 0.02 ac of land in Cascades Park. The land temporarily occupied by the TCEs would be returned to a condition that is at least as good as that which existed prior to the project at the completion of the construction of the BRT Alternative in this area. The existing sidewalks will be replaced within the boundary of Cascades Park, and the grass/turf areas affected by project construction would be re-landscaped and returned to a condition at least as good as prior to the project and consistent with the existing landscaping and spatial orientation of the existing landscape design.

2.1.4 Public Notice

This Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was distributed to a large number of agencies and members of the general public for review and comment. In addition, notices regarding the completion of the Draft EIR/EIS in compliance with both the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) were published. A large number of Notices of Availability of the Draft EIR/EIS were distributed to interested parties. The distribution of the Draft EIR/EIS including this Appendix provides agencies and members of the general public opportunities to provide comments on the Draft EIR/EIS for the SR 710 North Study including the analysis in this Appendix supporting the preliminary de minimis finding for the permanent and temporary uses of land from Cascades Park.

After the close of the public review period for the Draft EIR/EIS, the California Department of Transportation (Caltrans) and the Los Angeles County Metropolitan Transportation Authority (Metro) will prepare a Final EIR/EIS for the SR 710 North Study. The comments received by Caltrans and Metro from agencies and members of the general public on the Draft Final EIR/EIS, including any comments regarding the preliminary de minimis finding, and responses to those comments will be included in the Final EIR/EIS.

2.1.5 Preliminary De Minimis Finding

As shown on Figure 2.1-3, the BRT Alternative would result in the permanent incorporation of approximately 0.011 ac of land from Jardin Del Encanto and Cascades Park and the temporary occupancy of approximately 0.02 ac of land in Jardin Del Encanto and Cascades Park for use as TCEs

during construction. Those estimated acreages are based on the preliminary design for the BRT Alternative. If the BRT Alternative is selected for implementation, the total acreages of land from Jardin Del Encanto and Cascades Park permanently incorporated in the BRT Alternative improvements and land in Jardin Del Encanto and Cascades Park temporarily occupied during construction could change slightly during final design of the improvements in the BRT Alternative.

A *de minimis* impact is defined as a minimal impact to a Section 4(f) resource that is not considered to be adverse. For parks and recreation areas, a *de minimis* impact is one that will not adversely affect the activities, features, and attributes that give the property protection under Section 4(f).

The areas in Cascades Park proposed for permanent incorporation in the BRT Alternative improvements currently consist of sidewalks with grass/turf on each side of the sidewalks. The sidewalks in Cascades Park shown on Figure 2.1-3 would be closed temporarily during construction of the BRT Alternative improvements along Atlantic Boulevard. Alternative pedestrian routes will be provided to ensure that park patrons continue to have access to/from Cascades Park. The sidewalks would be replaced as part of the BRT Alternative, and the grass/turf disturbed during construction and not in the areas included in the permanent ROW for the BRT Alternative would be replaced. As a result, the permanent incorporation of 0.011 ac of land from Cascades Park by the BRT Alternative would be a minimal impact that would not be considered adverse under Section 4(f).

The areas in Cascades Park proposed for temporary occupancy for TCEs during construction of the BRT Alternative currently consist of sidewalks with grass/turf on each side of the sidewalks. As noted above, the sidewalks in Cascades Park shown on Figure 2.1-3 would be closed temporarily during construction of the BRT Alternative, and alternative pedestrian routes will be provided to ensure that park patrons continue to have access to/from Cascades Park. The land temporarily occupied by the TCEs would be returned to a condition that is at least as good as that which existed prior to the project at the completion of the construction of the BRT Alternative in this area. As a result, the temporary occupancy of 0.02 ac of land in Cascades Park during construction of the BRT Alternative would be a minimal impact that would not be considered adverse under Section 4(f).

Further, the permanent incorporation of 0.011 ac of land from Cascades Park and the temporary occupancy of 0.02 ac of land in Cascades Park would not affect the Cascades water feature on the northwest end of Cascades Park and, therefore, would not adversely affect the major feature of Cascades Park, and would not affect El Encanto at the southeastern end of Jardin Del Encanto and Cascades Park. The grass/turf and trees in areas of Cascades Park adjacent to the permanent incorporation and temporary occupancy of land and the existing uses of those areas for passive recreation would not change as a result of the permanent incorporation of 0.011 ac and temporary occupancy of 0.02 ac of land in those areas. In summary, as described above, the effects of the permanent incorporation of land from, and temporary occupancy of land in, Cascades Park after implementation of the measures described later in this section would not adversely affect the activities, features, and attributes that give this property protection under Section 4(f).

For historic resources, a finding of *de minimis* impact on a historic site may be made when:

- Caltrans, as assigned under its assumption of responsibility pursuant to 23 United States Code (USC) 327, has considered the views of any consulting parties participating in the consultation required by Section 106 of the National Historic Preservation Act;
- The State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) if participating in the Section 106 consultation, are informed of Caltrans' intent to make

a *de minimis* impact finding based on their written concurrence in the Section 106 determination of "no adverse effect;" and

- The Section 106 process results in a determination of "no adverse effect" with the written concurrence of the SHPO and ACHP, if participating in the Section 106 consultation.
- The official with jurisdiction over the property (the City of Monterey Park) is formally requested to provide its concurrence with the temporary and permanent impacts of the BRT Alternative on El Encanto/Cascades Park and the preliminary De Minimis Finding for those effects.

The preliminary *Finding of No Adverse Effect for the State Route 710 North Study* indicates the BRT Alternative would result in no adverse effect at Jardin Del Encanto and Cascades Park.

As a result, it is preliminarily determined that the BRT Alternative would result in a *de minimis* impact on Jardin Del Encanto and Cascades Park.

2.2 Avoidance, Minimization, and/or Mitigation Measures

2.2.1 Measures

The following design features are included in the BRT Alternative to reduce the effects of the temporary occupancy and permanent incorporation of land from Jardin Del Encanto and Cascades Park:

Cascades-1 **Temporary Construction Easements (applies to the Bus Rapid Transit [BRT] Alternative only):** The Los Angeles County Metropolitan Transportation Authority (Metro) Resident Engineer will require the Construction Contractor to return land in Cascades Park that would be occupied for temporary construction easements (TCEs) to a condition that is at least as good as that which existed prior to the project at the completion of the construction of the BRT Alternative in this area. At a minimum, as part of the construction of the BRT Alternative, the Construction Contractor will replace the existing sidewalks within the boundary of Cascades Park and re-landscape grass/turf areas in the TCEs disturbed by the project construction. Metro will require the Construction Contractor to review the plans for the proposed replacement sidewalks and grass/turf landscaping with the City of Monterey Park prior to installation of those improvements. If any trees are removed from the TCEs, those trees will be replaced elsewhere in Cascades Park after consultation with the City of Monterey Park. The replacement trees, grass, and turf will be similar to the existing plant materials in Cascades Park. The replacement sidewalks, walkways, and accessible pedestrian ramps will be designed to be consistent with the historic sidewalks in the Jardin Del Encanto and Cascades Park.

Metro will require the Construction Contractor to fence and properly secure all active construction areas in and adjacent to Cascades Park within the limits of construction to protect the safety of park patrons during construction.

When the sidewalks in Cascades Park at Atlantic Boulevard are temporarily closed during construction, Metro will require the Construction Contractor to develop and clearly sign pedestrian detours prior to the intersections of Atlantic Boulevard and El Portal Place to avoid making pedestrians backtrack to get to a safe crossing.

Cascades-2 **Permanent Incorporation of Land (applies to the BRT Alternative only):** Metro will include the replacement of sidewalks affected by the permanent incorporation of land in the adjacent areas of Cascades Park as part of the final design. These sidewalks are expected to be in areas within the TCEs. If any shrubs and/or trees are removed from the areas that will be permanently incorporated, the Construction Contractor will replace those trees elsewhere in Cascades Park after consultation with the City of Monterey Park. The replacement shrubs and trees will be similar to the existing plant materials in Cascades Park.

2.2.2 Compliance with the Secretary of the United States Department of the Interior's Standards for the Treatment of Historic Properties

In addition to the measures described above, as documented in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study*, the effects of the BRT Alternative at Jardin Del Encanto and Cascades Park would comply with the following Secretary of the United States Department of the Interior's Standards for the Treatment of Historic Properties: Rehabilitation Standards 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

2.2.3 Project Conditions from the Preliminary Finding of No Adverse Effect for the State Route 710 North Study

The following conditions from the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* would apply to the effects of the BRT Alternative at Jardin Del Encanto and Cascades Park:

- **Project Condition BRT-1:** The proposed improvements would incorporate any design and engineering cues from the existing medians and incorporate them into the design of the new reconfigured medians at the El Portal Place/South Atlantic Boulevard intersection in a manner that is consistent with the historical fabric, yet does not create a sense of false historicism. Any historic light posts would be protected in place during construction and remain in their historical locations following construction.
- **Project Condition BRT-2:** A certified biologist and licensed landscape architect with a demonstrated record in historic landscape rehabilitation will be retained to conduct and coordinate the following activities:
  - A preconstruction survey will be conducted by the certified biologist to identify and list the existing plantings
  - The landscape architect will review the Vegetation Plan prior to construction activities, and coordinate with the construction crews to prepare the ground for replanting healthy plants
  - The landscape architect will work with the appropriate City of Monterey Public Works Department personnel to design an irrigation system to maintain the new vegetation

- The landscape architect will oversee the construction to ensure procedures are successfully followed and completed before hardscape demolition and construction begin
- The landscape architect and City of Monterey Park Public Works personnel will periodically visit the site to monitor the plantings to verify they are sufficiently watered and healthy.

2.3 Consultation and Coordination with the City of Monterey Park

An initial meeting with the City of Monterey Park was held on November 12, 2014 at the City of Monterey Park. The meeting attendees included:

Amy Ho, Program Management Analyst, City of Monterey Park

Samantha Tewasart, Senior Planner, City of Monterey Park

Ray Alfonso, Assistant City Engineer, City of Monterey Park

Cesar Vega, Associate Engineer, City of Monterey Park

Jason Roach, Environmental, Caltrans

Michelle Smith, Project Manager, Metro

Aziz Elattar, Executive Officer-Highway Programs, Metro

Yoga Chandran, CH2M Hill, consultant to Caltrans and Metro

Lily Acuna, Project Assistant, CH2M Hill, consultant to Caltrans and Metro

Deborah Pracilio, Environmental Studies, LSA Associates, Inc., consultant to Caltrans and Metro

The purpose of the meeting was to confirm the boundaries of Jardin del Encanto and Cascades Park with the City and to discuss the potential effects of the proposed BRT Alternative on those resources. The resource boundaries confirmed by the City are shown on the figures included in this chapter.

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3. Other Resources Evaluated Relative to the Requirements of Sections 4(f) and 6(f)

3.1 Introduction

This section discusses parks, recreation areas, recreation areas at publicly owned schools, wildlife refuges, and National Register of Historic Places (National Register) listed and eligible properties within 0.5 mile (mi) of the State Route 710 (SR 710) Build Alternatives that were determined not to trigger the requirements for approval under Section 4(f) protection because:

1. They are not publicly owned;
2. They are not open to the public;
3. They are not historic sites listed on or eligible for listing on the National Register;
4. The Build Alternatives do not permanently incorporate land from the property and do not hinder the preservation of the property; or
5. The proximity impacts of the Build Alternatives do not result in constructive use.

Permanent use of land from, temporary occupancies, and constructive uses of a Section 4(f) resource were defined in detail in Chapter 1. The tables cited in this section are provided following the last page of text in this section. The locations of the resources described in Tables 3.2.1, 3.3.1, 3.4.1, and 3.5.1 in relation to the four Build Alternatives are shown on Figures 3.2-1, 3.3-1, 3.4-1, and 3.5-1. The figures cited in this section follow the tables by alternative (e.g., Table 3.2.1 for the Transportation System Management/Transportation Demand Management [TSM/TDM] Alternative is followed by Figure 3.2-1 for the TSM/TDM Alternative).

Tables 3.2.1 through 3.5.1 and Figures 3.2-1 through 3.5-1 focus on parks and recreation resources as discussed below in Sections 3.2 through 3.5. Tables 3.6.1 through 3.6.4 and Figures 3.6-1 through 3.6-5 focus on National Register listed and eligible properties as discussed in Section 3.6.

This section discusses why a use under Section 4(f) would not occur under the Build Alternatives for the resources described in Tables 3.2.1, 3.3.1, 3.4.1, and 3.5.1, based on the environmental analyses provided in Chapter 3 (Affected Environment, Environmental Consequences, and Avoidance, Minimization, and Mitigation Measures) of the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) addressing permanent and temporary direct impacts related to property acquisition and indirect air quality, settlement, ground-borne noise and vibration, noise, traffic and access, and aesthetics impacts.

Properties in which Section 6(f) funds were used were identified in "Land and Water Conservation Fund – All Funded Projects (3-2-2013)"[1] and on the Land and Water Conservation Fund website home page.[2] Based on those sources, Land and Water Conservation Fund Act (L&WCF Act) funds were determined to have been used at several parks in the study area. The applicability of Section 6(f) is discussed in the tables in this section for the following resources: Alhambra Park, Almansor Park, Belvedere Community Regional Park, Brookside Park, El Sereno North Park, Emery Park, Santa

[1] http:// www.parks.ca.gov?/Page_id+21360, accessed October 17, 2013.
[2] Ibid.

Fe Dam Recreation Area, and Smith Park. These resources are also shown on Figures 3.2-1, 3.3-1, 3.4-1, and 3.5-1.

3.2 TSM/TDM Alternative

Table 3.2.1 and Figure 3.2-1 (provided following the last page of Table 3.2.1) show the resources within 0.5 mi of improvements in the TSM/TDM Alternative. As discussed in Table 3.2.1, those improvements would not result in permanent use of land from, permanent easements, temporary occupancies (temporary construction easements [TCEs]), or constructive uses at any Section 4(f) resources. As a result, the TSM/TDM Alternative would not trigger the requirements for approval under Section 4(f) at any of the resources evaluated in Table 3.2.1 and shown on Figure 3.2-1.

The improvements in the TSM/TDM Alternative are also incorporated in the Bus Rapid Transit (BRT), Light Rail Transit (LRT), and Freeway Tunnel Alternatives. The inclusion of the TSM/TDM Alternative improvements in those Build Alternatives would not result in permanent use of land from, permanent easements, temporary occupancies (TCEs), or constructive uses at any Section 4(f) resources. As a result, the incorporation of the TSM/TDM Alternative improvements in the other Build Alternatives would not trigger the requirements for approval under Section 4(f) at any of the resources evaluated in Table 3.2.1 and shown on Figure 3.2-1.

3.3 BRT Alternative

Table 3.3.1 and Figure 3.3-1 (provided following the last page of Table 3.3.1) show the resources within 0.5 mi of improvements in the BRT Alternative. As discussed in Table 3.3.1, those improvements would not result in permanent use of land from, permanent easements, TCEs, or constructive uses at any Section 4(f) resources. The BRT Alternative would also include all the improvements in the TSM/TDM Alternative, with the exception of Other Road Improvement T-1 (Valley Boulevard to Mission Road Connector Road) and Local Street Improvement L-8 (Fair Oaks Avenue from Grevelia Street to Monterey Road). As described above for the TSM/TDM Alternative, those improvements would not trigger the requirements for approval under Section 4(f) as shown in Table 3.2.1. As a result, the improvements included in the BRT Alternative would not trigger the requirements for approval under Section 4(f) at any of the resources evaluated in Tables 3.2.1 and 3.3.1 and shown on Figures 3.2-1 and 3.3-1, respectively. However, as described earlier in Chapter 2, Section 4(f) Resources, the BRT Alternative would trigger the requirements for approval under Section 4(f) at Jardin Del Encanto and Cascades Park in the City of Monterey Park.

3.4 LRT Alternative

Table 3.4.1 and Figure 3.4-1 (provided following the last page of Table 3.4.1) show the resources within 0.5 mi of improvements in the LRT Alternative. As discussed in Table 3.4.1, those improvements would not result in permanent use of land from, permanent easements, TCEs, or constructive uses at any Section 4(f) resources. The LRT Alternative would also include all the improvements in the TSM/TDM Alternative, with the exception of Other Road Improvement T-1 (Valley Boulevard to Mission Road Connector Road). As described above for the TSM/TDM Alternative, those improvements would not trigger the requirements for approval under Section 4(f) for the resources shown in Table 3.2.1. As a result, the improvements included in the LRT Alternative would not trigger the requirements for approval under Section 4(f) at any of the resources evaluated in Tables 3.2.1 and 3.4.1 and shown on Figures 3.2-1 and 3.4-1, respectively.

3.5 Freeway Tunnel Alternative

Tables 3.5.1 and 3.5.2 and Figure 3.5-1 (provided following the last page of Table 3.5.2) show the resources within 0.5 mi of improvements in the Freeway Tunnel Alternative. As discussed in Table 3.5.1, those improvements would not result in permanent use of land from, permanent easements, TCEs, or constructive uses at any Section 4(f) resources. The Freeway Tunnel Alternative would also include all the improvements in the TSM/TDM Alternative, with the exception of Other Road Improvements T-1 (Valley Boulevard to Mission Road Connector Road) and T-3 (St. John Avenue Extension between Del Mar Boulevard and California Avenue). As described above for the TSM/TDM Alternative, those improvements would not trigger the requirements for approval under Section 4(f) as shown in Table 3.2.1. As a result, the improvements included in the Freeway Tunnel Alternative would not trigger the requirements for approval under Section 4(f) at any of the resources evaluated in Tables 3.2.1 and 3.5.1 and shown on Figures 3.2-1 and 3.5-1, respectively.

3.6 National Register of Historic Places Listed, Eligible, and Potentially Eligible Historic Properties

The potential for the Build Alternatives to result in the permanent use of land from or constructive use of National Register listed, eligible, or potentially eligible historic properties is evaluated in Tables 3.6.1, 3.6.2, 3.6.3, and 3.6.4 for the TSM/TDM, BRT, LRT, and Freeway Tunnel Alternatives, respectively. The locations of the historic properties in the APE for the Build Alternatives are shown on Figures 3.6-1 through 3.6-4. The potential for the SR 710 North Study Build Alternatives to affect National Register listed and eligible properties is based on the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* (2015) and the analyses in other sections of this EIR/EIS, as summarized in the tables in this section. Consultation with the State Historic Preservation Offices regarding the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* has been initiated.

As shown on Tables 3.6.1 and 3.6.2 and on Figures 3.6-1 and 3.6-2, the improvements in the TSM/TDM and BRT Alternatives, respectively, are at-grade in the vicinity of National Register listed or eligible historic properties. The analyses in Tables 3.6.1 and 3.6.2 individually consider the effects of the improvements in those alternatives on historic properties. Table 3.6.1 also discusses a prehistoric village site that may be within the boundary of one improvement in the TSM/TDM Alternative. The location of that site is not provided in this report to avoid vandalism or other potential damage to that site.

As shown in Table 3.6.3 and on Figure 3.6-3, the improvements in the LRT Alternative are all in tunnel and under the National Register listed or eligible historic properties along the alignment of that alternative. Table 3.6.1 lists the historic properties along the LRT Alternative alignment and summarizes the effects for all those properties. Table 3.6.3 also discusses a prehistoric village site that may be within the boundary of the improvement in the LRT Alternative. The location of that site is not provided in this report to avoid vandalism or other potential damage to that site.

As shown in Table 3.6.4 and on Figure 3.6-4, the improvements in the Freeway Tunnel Alternative are at or slightly below grade in the vicinity of two National Register listed or eligible historic properties in the City of Pasadena. The analysis in Table 3.6.4 individually considers the effects of the improvements in the Freeway Tunnel Alternatives on two cultural properties.

As shown in Table 3.6.5 and on Figure 3.6-5, improvements in the Freeway Tunnel Alternative are in tunnel and under a large number of National Register listed or eligible historic properties along the alignment of that alternative in the Cities of Pasadena, South Pasadena, and Los Angeles. Because the potential effects of the Freeway Tunnel Alternative would be the same for each historic property listed in Table 3.6.5, that table summarizes the effects for all those historic properties without repeating the impacts for each single resource.

Table 3.6.4 also discusses two prehistoric village sites that may be within the boundary of the improvements in the Freeway Tunnel Alternative. The locations of those sites are not provided in this report to avoid vandalism or other potential damage to the sites.

In addition to the historic properties shown on Figure 3.6-5, Figure 3.6-6 shows State (California Department of Transportation [Caltrans]) owned National Register listed or eligible historic properties above the Freeway Tunnel Alternative. Those historic properties are also listed in Table 3.6.5 because they are all above the tunnel alignment for the Freeway Tunnel Alternative, and the effects of the Freeway Tunnel Alternative on those historic properties would be the same as for the properties shown on Figure 3.6-5 and described in Table 3.6.5.

3.7 Other Resources Considered That Did Not Trigger the Requirements for Approval Under Section 4(f)

In addition to the Section 4(f) resources discussed above, other resources in the SR 710 project study area within 0.5 mi of the Build Alternatives were evaluated and determined to be either privately owned or not used by the SR 710 Build Alternatives. Those resources and the reasons why they did not trigger the requirements for approval under Section 4(f) are discussed in Table 3.7.1 (provided at the end of the text in this chapter).

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
CITY OF ALHAMBRA	
Alhambra Municipal Golf Course 630 South Almansor Street **Owner/Operator:** City of Alhambra **Description:** This 18-hole golf course features a three-level lighted driving range, two chipping greens, a large putting green and a practice bunker. The facility also includes a restaurant, a golf shop, and the Almansor Court Banquet and Conference Center which has indoor and outdoor areas available for weddings, parties, and corporate events. **Distance:** This golf course is approximately: • 1,545 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Garfield Avenue/Mission Road (***I-16***); • 1,850 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 1,855 feet from the nearest new right of way needed to accommodate the improvements in this Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this golf course from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this golf course would not experience short- or long-term operation air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this golf course from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this golf course would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this golf course, this golf course would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this golf course from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this golf course would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Alhambra Municipal Golf Course because it would not result in proximity impacts on that that golf course.
Alhambra Park 500 North Palm Avenue **Owner/Operator:** City of Alhambra **Description:** This 15.0-acre park provides picnic tables with covered shelters, playground equipment, barbecues, tennis courts, volleyball courts, an outdoor basketball court, a meeting room, an activity room, a swimming pool, an open grass area, a band shell, and restrooms. The Alhambra Veteran's Memorial Wall is located at the north end of the park. Approximately $5,922 of L&WCF Act funds were used to renovate the band shell, replace its wood floor, and add electricity at this park in FY 1991/1992. As a result, the band	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
shell at Alhambra Park is subject to the requirements for protection under Section 6(f). **Distance:** This park is approximately: • 1,590 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Fremont Avenue from Huntington Drive to Alhambra Road (***L-2a***); • 5,090 feet from the nearest new right of way needed to accommodate the improvements in this Alternative; and • 6,760 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	**Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Alhambra Park because it would not result in proximity impacts on that park. **Section 6(f):** Because the TSM/TDM Alternative would not require the permanent acquisition of any land from Alhambra Park, the requirements of Section 6(f) would not apply to this park.
Almansor Park 800 South Almansor Avenue **Owner/Operator:** City of Alhambra **Description:** This 29.2-acre park provides picnic tables with covered shelters, playground equipment, barbecues, ball fields, tennis courts, an outdoor basketball court, horseshoe pits, an exercise par course, a meeting room, an activity room, a gymnasium, a jogging course, trails, an open grass area, and restrooms. Approximately $52,350 of L&WCF Act funds were used to construct a picnic pavilion, a bird observation area, and support facilities at this park in FY 1991/1992, and $50,014 in L&WCF Act funds were used to rehabilitate the existing trails at this park in FY 1994/1995. As a result, these improvements at Almansor Park are subject to the requirements for protection under Section 6(f). **Distance:** This park is approximately: • 1,590 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Garfield Avenue/Mission Road (***I-16***); • 1,790 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Almansor Park because it would not result in proximity impacts on that park. **Section 6(f):** Because the TSM/TDM Alternative would not require the permanent acquisition of any land from Almansor Park, the requirements of Section 6(f) would not apply to this park.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 1,795 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	
Emery Park 2709 Mimosa Street **Owner/Operator:** City of Alhambra **Description:** This 0.7-acre park provides picnic tables, playground equipment, barbecues, an activity room, a kitchen facility, an open grass area, and restrooms. Approximately $100,800 of L&WCF Act funds were used to construct picnic areas, a play area, restrooms, irrigation, landscaping, turf, parking, and lighting at this park in FY 1982/1983. As a result, these improvements at Emery Park are subject to the requirements for protection under Section 6(f). **Distance:** This park is approximately: • 1,600 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Fremont Avenue from Mission Road to Valley Boulevard (***L-2c***); • 3,050 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 3,055 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Emery Park because it would not result in proximity impacts on that park. **Section 6(f):** Because the TSM/TDM Alternative would not require the permanent acquisition of any land from Emery Park, the requirements of Section 6(f) would not apply to this park.
Granada Park 2000 West Hellman Avenue **Owner/Operator:** City of Alhambra **Description:** This 17.3-acre park provides picnic tables with covered shelters, playground equipment, barbecues, ball fields, tennis courts, a meeting room, a kitchen facility, a heated swimming pool, an open grass area, and restrooms.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Distance: This park is approximately: • 1,305 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Hellman Avenue/Fremont Avenue (***I-44***); • 4,880 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 5,535 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	**Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Granada Park because it would not result in proximity impacts on that park.
Gateway Plaza Park Northwest corner of West Valley Boulevard and South Fremont Avenue **Owner/Operator:** City of Alhambra **Description:** This 0.5-acre park at the corner of Valley Boulevard and South Fremont Avenue welcomes visitors to the City with a Moorish-style arch that symbolizes Alhambra as the "Gateway to the San Gabriel Valley." The park also includes landscaping and walkways. **Distance:** This park is approximately: • Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative on Fremont Avenue from Mission Road to Valley Boulevard (***L-2c***); • 2,180 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 2,450 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Alhambra. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to Gateway Plaza Park would substantially reduce the short-term air quality effects on the park. In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on Gateway Plaza Park. **Noise:** Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Alhambra Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to Gateway Plaza Park would substantially reduce the short-term noise effects on the park. The TSM/TDM Alternative improvements (L-2c) in the vicinity of this park will not substantially increase travel speeds or shift travel lanes closer to this park or increase the capacity of roads in the vicinity of this park. As a

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on Gateway Plaza Park. **Traffic:** Construction of the improvements in the TSM/TDM Alternative adjacent to Gateway Plaza Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at Gateway Plaza Park. The TSM/TDM Alternative improvements in the vicinity of Gateway Plaza Park will not modify the access to/from that park and, therefore, would not result in long-term adverse impacts related to traffic and transportation at Gateway Plaza Park. **Visual Resources:** Gateway Plaza Park is adjacent to West Valley Boulevard and South Fremont Avenue, and visitors to the park currently have views of those roads from areas within this park. During construction of the TSM/TDM Alternative improvements in this area, park patrons would have views of construction equipment and activities and areas within those existing roads disturbed during construction. In the long-term park, visitors would have views of West Valley Boulevard and South Fremont Avenue similar to the existing views of those streets from within the park. As a result, the TSM/TDM Alternative improvements in the vicinity of Gateway Plaza Park would not result in short- or long-term visual impacts for park visitors. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Gateway Plaza Park because the proximity impacts of that Alternative would not substantially impair the protected activities, features, or attributes of that park.
Moor Field 1008 South Eighth Street **Owner/Operator:** City of Alhambra **Description:** This 20.3-acre property provides a wide range of facilities for the City and the Alhambra Unified School District, including a baseball field, track, and several other sports fields. **Distance:** Moor Field is approximately: • 870 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Atlantic Boulevard from Glendon Way to I-10 (***L-3***); • 3,090 feet from the nearest edge of the nearest TCE for	**Use of Land for a TCE:** No TCEs are proposed at Moor Field under the TSM/TDM Alternative. **Air Quality:** Based on the distance of Moor Field from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this resource would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of Moor Field from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this resource would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of Moor Field from the nearest construction and operation of any

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the TSM/TDM Alternative; and • 3,095 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	TSM/TDM Alternative improvements, and the presence of intervening land uses, this resource would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Moor Field because it would not result in proximity impacts on that facility.
Recreation Resources at Baldwin Elementary School (K to 8th) 900 South Almansor Street **Owner/Operator:** Alhambra Unified School District **Distance:** The recreation resources at this school are approximately: • 2,280 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Garfield Avenue/Mission Road (***I-16***); • 2,510 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 2,515 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Baldwin Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Fremont Elementary School (K to 8th) 2001 South Elm Street **Owner/Operator:** Alhambra Unified School District **Distance:** The recreation resources at this school are approximately: • 270 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Hellman Avenue/Fremont Avenue (***I-44***); • 3,645 feet from the nearest new right of way needed to	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Construction of the improvements in the TSM/TDM Alternative approximately 300 feet from Fremont

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Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
accommodate the improvements in the TSM/TDM Alternative; and • 4,230 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	Elementary School could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation resources at Fremont Elementary School. Based on the distance from the nearest operation of any TSM/TDM Alternative improvements and that the TSM/TDM Alternative would not result in any permanent changes in access to/from the recreation facilities at this school, they would not experience long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Fremont Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Garfield Elementary School (K to 8th) 110 West McLean Street **Owner/Operator:** Alhambra Unified School District **Distance:** The recreation resources at this school are approximately: • 1,615 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Huntington Drive/Garfield Avenue (***I-13***), Huntington Drive/Atlantic Boulevard (***I-14***), and Atlantic Boulevard/ Garfield Avenue (***I-15***); • 1,725 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 1,740 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Garfield Elementary School because it would not result in proximity impacts on those recreation resources.

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TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at Marguerita Elementary School (K to 8th) 1603 South Marguerita Avenue **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,130 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Atlantic Boulevard from Glendon Way to I-10 (***L-3***); • 6,895 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 7,080 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Marguerita Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Ramona Elementary School (K to 8th) 509 West Norwood Place **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,610 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Garfield Avenue from Valley Boulevard to Glendon Way (***L-4***); • 5,085 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.

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TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 5,090 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	**Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Ramona Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Alhambra High School (9th to 12th) 101 South 2nd Street **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,515 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Garfield Avenue/Mission Road (***I-16***); • 1,595 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 1,600 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation uses at Alhambra High School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Mark Keppel High School (9th to 12th) 501 East Hellman Avenue **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately:	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.

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TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 2,435 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Garfield Avenue from Valley Boulevard to Glendon Way (***L-4***); • 7,240 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 7,245 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	**Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Mark Keppel High School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at San Gabriel High School (9th to 12th) 801 Ramona Street **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,600 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Mission Road (***I-19***); • 2,710 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 2,715 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at San Gabriel High School because it would not result in proximity impacts on those recreation resources.

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Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
EAGLE ROCK (COMMUNITY IN THE CITY OF LOS ANGELES)	
Eagle Rock Recreation Center 1100 Eagle Vista Drive **Owner/Operator:** City of Los Angeles **Description:** This 24.1-acre recreation center includes a gymnasium, an auditorium, barbecue pits, three baseball diamonds (lighted/unlighted), basketball courts (lighted/indoor, unlighted/outdoor), a children's play area, two football fields (unlighted), an indoor gym (without weights), two picnic areas with picnic tables, and tennis courts (unlighted). The gymnasium at the Recreation Center was designed by architect Richard Nuetra in the International Style in 1953 and was designated as cultural historical monument #536 in 1991 by the City of Los Angeles. The facility also includes restrooms and on-site parking. **Distance:** This recreation center is: • Immediately adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative on Figueroa Street from SR 134 to Colorado Boulevard (***L-1***); • 430 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Approximately 2.5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the TSM/TDM Alternative adjacent to this recreation center could result in short-term dust and equipment emissions that could extend into the center property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Los Angeles. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to the Eagle Rock Recreation Center would substantially reduce the short-term air quality effects on the center. In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on Eagle Rock Recreation Center. **Noise:** Construction of the improvements in the TSM/TDM Alternative in the vicinity of this recreation center could result in short-term noise levels that could impact the center. Those construction activities would be required to comply with the City of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to the Eagle Rock Recreation Center would substantially reduce the short-term noise effects on the center. The recreation uses at Eagle Rock Recreation Center are active uses. The TSM/TDM Alternative improvements (L-1) in the vicinity of this recreation center will not substantially increase travel speeds or shift travel lanes closer to this recreation center or increase the capacity of roads in the vicinity of this recreation center. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on Eagle Rock Recreation Center. **Traffic:** Construction of the improvements in the TSM/TDM Alternative adjacent to the Eagle Rock Recreation Center could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at the Eagle Rock Recreation

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	Center. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this recreation center, this resource would not experience long-term traffic effects under the TSM/TDM Alternative. **Visual Resources:** Views from the Eagle Rock Recreation Center are not an important feature of this recreation center. The TSM/TDM Alternative improvements (L-1) in the vicinity of this recreation center consist of improvements to existing Figueroa Street. Views of Figueroa Street from this recreation center would not change substantially during the construction and operation of this improvement. As a result, the TSM/TDM Alternative would not result in short- or long-term adverse visual impacts at Eagle Rock Recreation Center. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Eagle Rock Recreation Center because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that recreation center.
Lanark/Shelby Mini Park Lanark Street and Shelby Place **Owner/Operator:** City of Los Angeles **Description:** This 0.4-acre mini park provides a children's play area. **Distance:** This park is approximately: • 710 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Figueroa Street from SR 134 to Colorado Boulevard (***L-1***); • 2,845 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • More than 2 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Lanark/Shelby Mini Park because it would not result in proximity impacts on that park.

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Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Richard Alatorre Park Figueroa and 134 Freeway **Owner/Operator:** City of Los Angeles **Description:** This 1.8-acre park provides picnic tables and dirt walkways through a nature area. **Distance:** This park is approximately: • Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative on Figueroa Street from SR 134 to Colorado Boulevard (***L-1***); • 70 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • More than 2 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Los Angeles. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to Richard Alatorre Park would substantially reduce the short-term air quality effects on the park. In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on Richard Alatorre Park. **Noise:** Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to Richard Alatorre Park would substantially reduce the short-term noise effects on the park. The TSM/TDM Alternative improvements (L-1) in the vicinity of this park will not substantially increase travel speeds on SR 134, Figueroa Street, or other local streets in the area, or shift travel lanes closer to this park or increase the capacity of roads in the vicinity of this park. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on Richard Alatorre Park. **Traffic:** Construction of the improvements in the TSM/TDM Alternative adjacent to Richard Alatorre Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at Richard Alatorre Park. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this park, this resource would not experience long-term traffic effects under the TSM/TDM Alternative.

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Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Visual Resources: Views from Richard Alatorre Park are not an important feature of this park. The TSM/TDM Alternative improvements (L-1) in the vicinity of this park consist of improvements to existing Figueroa Street. Views of Figueroa Street from this park would not change substantially during the construction and operation of this improvement. As a result, the TSM/TDM Alternative would not result in short- or long-term adverse visual impacts at Richard Alatorre Park. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Richard Alatorre Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.
Yosemite Recreation Center 1840 Yosemite Drive **Owner/Operator:** City of Los Angeles **Description:** This 5.1-acre recreation center provides an auditorium/two indoor meeting rooms (one seats 150 people and one seats 250 people), two basketball courts (lighted/outdoor), a children's play area, a community room, handball courts (lighted), an indoor gym (without weights), an outdoor gym (without weights), picnic tables, two lighted baseball diamonds, seasonal swimming pool, an outdoor stone amphitheater, and tennis courts (lighted). The facility also includes restrooms and on- site parking. **Distance:** This recreation center is approximately: • 2,450 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eagle Rock Boulevard/Colorado Boulevard (***I-45***); • 7,600 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Over 5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this recreation center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this recreation center would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this recreation center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this recreation center would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this recreation center, this recreation center park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this recreation center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this recreation center would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Yosemite Recreation Center because it would not result in proximity impacts on that recreation center.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at Delevan Drive Elementary School 4168 West Avenue 42 **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,940 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eagle Rock Boulevard/York Boulevard (***I-2***); • More than 2 miles from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Nearly 5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of recreation resources at Delevan Drive Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Eagle Rock Elementary School 2057 Fair Park Avenue **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,110 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eagle Rock Boulevard/Colorado Boulevard (***I-45***); • 8,800 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Nearly 4 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of recreation resources at Eagle Rock Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Rockdale Elementary School 1303 Yosemite Drive **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,230 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Figueroa Street from SR 134 to Colorado Boulevard (***L-1***); • 4,395 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Nearly 5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Rockdale Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Toland Way Elementary School 4545 Toland Way **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,190 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eagle Rock Boulevard/York Boulevard (***I-2***); • More than 2 miles from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• Nearly 4 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	**Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Toland Way Elementary School because it would not result in proximity impacts on those recreation resources.
EL SERENO (COMMUNITY IN THE CITY OF LOS ANGELES)	
El Sereno Arroyo Playground 5520 Concord Avenue **Owner/Operator:** City of Los Angeles **Description:** This 1-acre park provides grassy hills, a playground, a Fitness Zone for adults, walking paths, picnic tables, mosaics, decorative fencing, and a garden. The park, which opened in December 2012, includes safety features such as fences with gates that lock automatically when the park is closed, solar powered security cameras, and lighting. The park is located on land owned by Caltrans and provided to the City for use as a park for a lease period of 25 years. **Distance:** This park is adjacent to the: • Nearest edge of the nearest TCE for the TSM/TDM Alternative; and • Nearest limit for permanent improvements in the TSM/TDM Alternative for the Valley Boulevard to Mission Road Connector Road (***T-1***). The land on which this playground is located is owned by the State of California (Caltrans) and is leased to the City of Los Angeles for the playground use. Under the lease agreement (January 23, 2012), "It is agreed and understood, the creation of a publicly accessible park by this agreement does not create a public park within the meaning of Section 4(f)…said park is specifically exempt from the application of Section 4(f)." As a result, the El Sereno Arroyo Playground would not be subject to the requirements for protection	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the TSM/TDM Alternative adjacent to this playground could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Los Angeles. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to the El Sereno Arroyo Playground would substantially reduce the short-term air quality effects on the playground. In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on El Sereno Arroyo Playground. **Noise:** Construction of the improvements in the TSM/TDM Alternative adjacent to this playground could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to the El Sereno Arroyo Playground would substantially reduce the short-term noise effects on the playground. The recreation uses at El Sereno Arroyo Playground are active uses. The TSM/TDM Alternative improvements (T-1) in the vicinity of this park would result in a permanent noise level of 61 dBA, which is an increase of 2 dBA at this park in 2035, compared to the No Build Alternative at 59 dBA. However, because this increase

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
under Section 4(f). However, this playground was included in this analysis to assess the potential for direct and indirect adverse impacts on this playground by the TSM/TDM Alternative. The inclusion of this playground in this analysis does not trigger the requirements for protection under Section 4(f).	would not exceed the applicable NAC, the TSM/TDM Alternative would not result in long-term adverse noise effects on this park. **Traffic:** Construction of the improvements in the TSM/TDM Alternative adjacent to the El Sereno Arroyo Playground could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at the El Sereno Arroyo Playground. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this park, this resource would not experience long-term traffic effects under the TSM/TDM Alternative. **Visual Resources:** Views from El Sereno Arroyo Playground are not an important feature of this park. The TSM/TDM Alternative improvements (T-1) in the vicinity of this park consist of improvements to existing Valley Boulevard. Views of local streets from this park would not change substantially during the construction and operation of this improvement. As a result, the TSM/TDM Alternative would not result in short- or long-term adverse visual impacts at El Sereno Arroyo Playground. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of El Sereno Arroyo Playground because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that playground.
Recreation Resources at El Sereno Elementary School 3838 Rosemead Avenue **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,430 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eastern Avenue/Huntington Drive (***I-3***); • 6,410 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 6,515 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at El Sereno Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at El Sereno Middle School 2839 North Eastern Avenue **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,580 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eastern Avenue/Huntington Drive (***I-3***); • 4,465 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 4,900 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at El Sereno Middle School because it would not result in proximity impacts on those resources.
Recreation Resources at Sierra Park Elementary School 3170 Budau Avenue **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,040 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative for the Valley Boulevard to Mission Road Connector Road (***T-1***); • 2,470 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 2,580 feet from the nearest new right of way needed to	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
accommodate the improvements in the TSM/TDM Alternative.	effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Sierra Park Elementary School because it would not result in proximity impacts on those resources.
Recreation Resources at Sierra Vista Elementary School 4342 Alpha Street **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,000 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Fremont Avenue from Huntington Drive to Alhambra Road (***L-2a***); • 5,930 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 5,945 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Sierra Vista Elementary School because it would not result in proximity impacts on those resources.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
CITY OF GLENDALE	
Carr Park 1615 East Colorado Boulevard **Owner/Operator:** City of Glendale **Description:** This 3.2-acre park includes a basketball court, a children's play area, and picnic areas. **Distance:** This park is approximately: • 1,200 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at West Broadway/Colorado Boulevard (***I-1***); • 2.5 miles from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 4.8 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Carr Park because it would not result in proximity impacts on that park.
CITY OF PASADENA	
Allendale Park 1130 South Marengo Avenue **Owner/Operator:** City of Pasadena **Description:** This 2.9-acre park provides a lighted tennis court, a lighted softball diamond/multi-purpose field with bleachers, playground equipment, on-site parking, picnic tables, and drinking fountains. There is a public library within the boundary of this park. **Distance:** This park is approximately: • 235 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative for the SR 110 (Arroyo Seco Parkway) hook ramps concept (***T-2***);	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Construction of the improvements in the TSM/TDM Alternative approximately 235 feet from Allendale Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at Allendale Park. Based on the

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 350 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 355 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	distance of this park from the nearest operation of any TSM/TDM Alternative improvements and because the TSM/TDM Alternative would not result in any permanent changes in access to/from this park, this park would not experience long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** The nearest construction of TSM/TDM Alternative improvements would be for the SR 110/Fair Oaks Avenue hook ramps southwest of Allendale Park. Based on the distance of this park from the nearest construction and operation of that improvement in the TSM/TDM Alternative, as well as the presence of intervening land uses, including south Marengo Avenue and Blair High School, the SR 110/Fair Oaks hook ramps would not be visible or would be visible only briefly from areas within Allendale Park. The changes in views from the park would not be expected to be substantial because they would be views of urban structures and features in a viewshed which already contains urban structures and features. As a result, the TSM/TDM Alternative improvements would not result in temporary construction or long-term operation visual effects at Allendale Park. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Allendale Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.
Central Park 275 South Raymond Avenue **Owner/Operator:** City of Pasadena **Description:** This 9.2-acre park provides 6 horseshoe pits, 2 lawn bowling courts, an open area, playground equipment, walkway lighting, restrooms, picnic tables, a rose garden, benches, and a clubhouse for the Pasadena Lawn Bowling Club, an affiliate of the American Lawn Bowling Association. **Distance:** This park is approximately: • 1,435 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative for the St. John Avenue extension between Del Mar Boulevard and California Avenue (***T-3***); • 1,580 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 5,510 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Central Park because it would not result in proximity impacts on that park.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Defenders Park Orange Grove Boulevard/Colorado Boulevard **Owner/Operator:** City of Pasadena **Description:** This 1.8-acre passive neighborhood park contains a walkway, multiple monuments, a limestone bench, a wall recognizing the City's founders, a small open grassy area, some trees and shrubbery, and a drinking fountain. **Distance:** This park is approximately: • 1,665 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative for the St. John Avenue extension between Del Mar Boulevard and California Avenue (***T-3***); • 1,955 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 1.5 miles feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Defenders Park because it would not result in proximity impacts on that park.
San Rafael Park Colorado Boulevard/Melrose Boulevard **Owner/Operator:** City of Pasadena **Description:** This 0.9-acre park provides benches, grass areas, playground equipment, picnic facilities, and a drinking fountain. **Distance:** This park is approximately: • 2,190 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Figueroa Street from SR 134 to Colorado Boulevard (***L-1***); • 2,370 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.

TABLE 3.2.1:
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Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• Nearly 2 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	**Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of San Rafael Park because it would not result in proximity impacts on that park.
Singer Park California Boulevard/St. John Avenue **Owner/Operator:** City of Pasadena **Description:** This 2.9-acre neighborhood park includes an open grass area with a number of well-established trees and rose beds, a children's play area, picnic tables, benches, restrooms, and a drinking fountain. **Distance:** This park is: • Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative for the St. John Avenue extension between Del Mar Boulevard and California Avenue (***T-3***); • Approximately 35 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Approximately 4,210 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Pasadena. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to Singer Park would substantially reduce the short-term air quality effects on the park. In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on San Rafael Park. **Noise:** Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to Singer Park would substantially reduce the short-term noise effects on the park. The recreation uses at Singer Park are active uses. The TSM/TDM Alternative improvements (T-3) in the vicinity of this park will not substantially increase travel speeds on local streets adjacent to this park or shift travel lanes closer to this park and would result in only a minimal increase in noise levels at this park. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on Singer Park. **Traffic:** Construction of the improvements in the TSM/TDM Alternative adjacent to Singer Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain

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Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at Singer Park. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this park, this resource would not experience long-term traffic effects under the TSM/TDM Alternative. **Visual Resources:** Existing views from Singer Park include views of West California Boulevard, St. John Avenue, and SR 710 north of California Boulevard. There are views of residential uses outside the park to the north, west, east, and south. Views of the surrounding areas are not expected to be a primary reason for users to visit this park. The nearest construction of a TSM/TDM Alternative improvement to Singer Park would be immediately north and east of the park for improvement T-3, the St John Avenue extension between Del Mar Boulevard and California Avenue. As a result, some construction activities would be visible to patrons in the north and east parts of the park, although trees and shrubs along those sides of the park would partially shield views from those areas in the park. The nearest permanent feature of that TSM/TDM Alternative improvement to Singer Park would be the St. John Avenue extension north of California Avenue. The changes in views from the park would not be expected to be substantial because they would be views of urban structures and features in a viewshed that already contains urban structures and features. As a result, the TSM/TDM Alternative improvements would not result in temporary construction or long-term operation visual effects at Singer Park. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Singer Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.
Recreation Resources at Blair High School 1201 South Marengo Avenue **Owner/Operator:** Pasadena Unified School District **Distance:** This school and the recreation uses at this school are: • Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative for the SR 110 (Arroyo Seco Parkway) hook ramps concept (***T-2***); • Approximately 345 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Approximately 350 feet from the nearest edge of the	The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the TSM/TDM Alternative adjacent to the recreation resources at this school could result in short-term dust and equipment emissions that could extend onto the school property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Pasadena. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to the recreation resources at Blair High School would substantially reduce the short-term air quality effects on those resources. In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual

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nearest TCE for the TSM/TDM Alternative.	MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on the recreation resources at Blair High School. **Noise:** Construction of the improvements in the TSM/TDM Alternative adjacent to the recreation resources at this school could result in short-term noise levels that could impact those resources. Those construction activities would be required to comply with the City of Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to Blair High School would substantially reduce the short-term noise effects on the recreation resources at the school. The recreation resources at Blair High School are active uses that include tennis courts and a pool. The 2035 predicted noise levels at the tennis courts and pool would be the same under the No Build and TSM/TDM Alternatives at 61 dBA, which is less than the 67 dBA NAC for Activity Category C uses. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on the recreation resources at Blair High School. **Traffic:** Construction of the improvements in the TSM/TDM Alternative adjacent to the recreation resources at Blair High School could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation facilities at Blair High School. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to those resources, they would not experience long-term traffic effects under the TSM/TDM Alternative. **Visual Resources:** The sports facilities on the Blair High School campus have existing views of SR 110, Marengo Avenue, and residential and other urban land uses and structures to the east, south, west, and north. Users of the on-campus sports facilities outside school hours typically would not use these types of recreation facilities to view off-campus land uses and, therefore, are not considered sensitive viewers. The patrons of the recreation uses on the Blair High School campus already have views of urban land uses and structures, so the addition of the TSM/TDM Alternative improvements on SR 110 would not substantially change the character of views from this facility. As a result, the TSM/TDM Alternative improvements would not result in temporary construction or long-term operation visual effects at the recreation facilities on the Blair High School campus. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation

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Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	resources at Blair High School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those recreation resources.
CITY OF ROSEMEAD	
Garvey Park and Splash Zone at Garvey Park 7933 Emerson Place **Owner/Operator:** City of Rosemead **Description:** This 1.8-acre park provides two water slides, a splash play area, and a 2,500-square-foot lesson pool. **Distance:** This park is approximately: • 2,450 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at San Gabriel Boulevard/Marshall Street (***I-22***); • 2,700 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 1.5 miles from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Garvey Park and Splash Zone at Garvey Park Alhambra Park because it would not result in proximity impacts on that park.
Rosemead Aquatic Center 9155 East Mission Drive **Owner/Operator:** City of Rosemead **Description:** This 2.9-acre aquatic center provides a 25-yard x 40-meter swimming pool with 13 competition lanes, water polo facilities, diving boards, instruction, a recreation and wading pool, bleachers, shelters, and a picnic area. **Distance:** This aquatic center is approximately: • 1,280 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this aquatic center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this aquatic center would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this aquatic center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this aquatic center would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this aquatic center, this aquatic center would not experience short- or long-term traffic and transportation effects under

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Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Marshall Street (***L-5***); • 1,345 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 1.5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this aquatic center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this aquatic center would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Rosemead Aquatic Center because it would not result in proximity impacts on that facility.
Rosemead Park 4343 Encinita Avenue **Owner/Operator:** City of Rosemead **Description:** This 62-acre park provides three playground areas, picnic shelters with barbeques, two lighted softball/ baseball fields, restrooms, and a 0.5-mile-long walking trail, open space, and on-site parking. **Distance:** This park is approximately: • 860 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to Marshall Street (***L-5***); • 925 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 6,935 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Rosemead Park because it would not result in proximity impacts on that park.
Recreation Resources at Encinita Elementary School (7th and 8th) 4515 North Encinita Avenue **Owner/Operator:** Rosemead School District **Distance:** This school and the recreation resources at this school are approximately: • 1,380 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.

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Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Rosemead Boulevard from Lower Azusa Road to Marshall Street (***L-5***); • 2,120 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Over 1.5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	**Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Encinita Elementary School because it would not result in proximity impacts on those resources.
Recreation Resources at Janson Elementary School (K to 6th) 4022 North Rosemead Boulevard **Owner/Operator:** Rosemead School District **Distance:** This school and the recreation resources at this school are approximately: • 2,135 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to Marshall Street (***L-5***); • 2,940 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 3,110 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Janson Elementary School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those resources.
Recreation Resources at Savannah Elementary School (K to 6th) 3720 Rio Hondo Avenue **Owner/Operator:** Rosemead School District	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.

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Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Distance: This school and the recreation resources at this school are approximately: • 2,655 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to Marshall Street (***L-5***); • 3,335 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 1.5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	**Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Savannah Elementary School because it would not result in proximity impacts on those resources.
Recreation Resources at Muscatel Middle School 4201 North Ivar Avenue **Owner/Operator:** Rosemead School District **Distance:** This school and the recreation resources at this school are approximately: • 680 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to Marshall Street (***L-5***); • 870 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 1 mile from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Muscatel Middle School because it would not result in proximity impacts on those resources.

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Recreation Resources at Rosemead High School 9063 East Mission Drive **Owner/Operator:** El Monte Union High School District **Distance:** This school and the recreation uses at this school are: • Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to Marshall Street (***L-5***); • 780 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 1.3 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the TSM/TDM Alternative adjacent to the recreation resources at this school could result in short-term dust and equipment emissions that could extend onto the school property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Rosemead. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to the recreation resources at Rosemead High School would substantially reduce the short-term air quality effects on the recreation resources at the school. In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on Rosemead High School. **Noise:** Construction of the improvements in the TSM/TDM Alternative adjacent to the recreation resources at this school could result in short-term noise levels that could impact those resources. Those construction activities would be required to comply with the City of Rosemead Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to the recreation resources at Rosemead High School would substantially reduce the short-term noise effects on the school. The recreation resources at Rosemead High School are active uses that include an athletic field. The 2035 predicted noise level at the athletic field under the TSM/TDM Alternative would be 64 dBA, 1 dBA higher than the predicted 2035 noise level under the No Build Alternative (63 dBA). Because the 2035 predicted noise level at the athletic field under the TSM/TDM Alternative would be less than the 67 dBA NAC for Activity Category C uses, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on the recreation resources at Rosemead High School. **Traffic:** Construction of the improvements in the TSM/TDM Alternative in the immediate vicinity of the recreation resources at Rosemead High School could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation

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Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	at the recreation facilities at Rosemead High School. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this school, this resource would not experience long-term traffic effects under the TSM/TDM Alternative. **Visual Resources:** The sports facilities on the Rosemead High School campus have existing views of Rosemead Boulevard, Mission Drive, and residential and other urban land uses and structures to the east, south, west, and north. Users of the on-campus sports facilities outside school hours typically would not use these types of recreation facilities to view off-campus land uses and, therefore, are not considered sensitive viewers. The patrons of the recreation uses on the Rosemead High School campus already have views of urban land uses and structures, so the addition of the TSM/TDM Alternative improvements on Rosemead Boulevard would not substantially change the character of views from this facility. As a result, the TSM/TDM Alternative improvements would not result in temporary construction or long-term operation visual effects at the recreation facilities on the Rosemead High School campus. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Rosemead High School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those resources.
CITY OF SAN GABRIEL	
Marshall Community Park Jackson Avenue and Norwood Place **Owner/Operator:** City of San Gabriel **Description:** Construction of this 2.0-acre park on the former Marshall School site will be completed in 2014. Features of this park will include multi-purpose areas (game courts, synthetic turf field, and grass areas); playground equipment with shade structures; walking/jogging trail; outdoor fitness equipment; picnic structures with picnic tables; restrooms; pedestrian, security and athletic field lighting; seating areas; enhanced native landscaping and demonstration garden; and sustainability elements that demonstrate efficient use of water and other natural elements. **Distance:** This park is approximately: • 1,620 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Avenue/Valley Boulevard (***I-43***); • 4,060 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 7,145 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	**Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Marshall Community Park because it would not result in proximity impacts on that park.
Plaza Park 428 South Mission Drive **Owner/Operator:** City of San Gabriel **Description:** The historic San Gabriel Mission (owned by the Catholic Church) is located within the approximately 0.7-acre Plaza Park. The Mission was founded in 1771 and is currently an active Roman Catholic Church. It is a historic landmark in the City, is California Historical Landmark #161, and is listed on the National Register of Historic Places. The park provides views of the Mission Church building. **Distance:** This park is approximately: • 2,140 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Mission Road (***I-19***); • 2,200 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 2,210 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Plaza Park because it would not result in proximity impacts on that park.
Smith Park 232 West Broadway **Owner/Operator:** City of San Gabriel **Description:** This 6.1-acre park provides a tiny tot playground for children ages 6 years and under, a children's playground for children ages 7 years and older, a lighted basketball court, two lighted tennis courts, four lighted handball courts, three picnic areas, an outdoor pool, an	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements and the operation of those improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
amphitheater, restrooms, and on-site parking. Approximately $510,980 of L&WCF Act funds were used to construct the pool and amphitheater at this park in FY 1978/ 1979. As a result, these improvements at Smith Park are subject to the requirements for protection under Section 6(f). **Distance:** This park is approximately: • 1,220 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Mission Road (***I-19***); • 1,290 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 1,295 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	**Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Smith Park because it would not result in proximity impacts on that park. **Section 6(f):** Because the TSM/TDM Alternative would not require the permanent acquisition of any land from Smith Park, the requirements of Section 6(f) would not apply to this park.
Vincent Lugo Park Wells Street and Ramona Street **Owner/Operator:** City of San Gabriel **Description:** This 11.3-acre park includes a dry riverbed designed to drain to Alhambra Wash, pedestrian lighting, multipurpose trails along the wash and throughout the park, native landscaping, an athletic field/open space, an outdoor classroom, and vehicular and pedestrian bridges. This park is also the home of the La Laguna de San Gabriel, which is a nautical themed play area with sea creatures made of concrete that was constructed approximately 45 years ago. The La Laguna de San Gabriel is on the California Register of Historical Resources and is a City of San Gabriel local landmark. **Distance:** This park is approximately: • 1,250 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Valley Boulevard (***I-43***);	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Vincent Lugo Park because it would not result in proximity impacts on that park.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 4,695 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 3,900 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	
Recreation Resources at Del Mar High School 312 South Del Mar Avenue **Owner/Operator:** San Gabriel Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,280 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Mission Road (***I-19***); and • 1,370 feet from the nearest edge of the nearest TCE and from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Del Mar High School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Dewey Elementary School 525 Dewey Avenue **Owner/Operator:** San Gabriel Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,035 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at San Gabriel Boulevard/Marshall Street (***I-22***); • 1,425 feet from the nearest edge of the nearest TCE for	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
the TSM/TDM Alternative; and • 6,095 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Dewey Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Gabrielino High School 1440 Lafayette Street **Owner/Operator:** San Gabriel Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,085 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Valley Boulevard (***I-43***); • 2,555 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 4,875 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Gabrielino High School because it would not result in proximity impacts on those resources.
Recreation Resources at McKinley Elementary School 1425 Manley Drive **Owner/Operator:** San Gabriel Unified School District **Distance:** This school and the recreation resources at this	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
school are approximately: • 1,080 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Valley Boulevard (***I-43***); and • 3,945 feet from the nearest edge of the nearest TCE and from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at McKinley Elementary School because it would not result in proximity impacts on those recreation resources.
CITY OF SAN MARINO	
Lacy Park and the Thurnher House 1485 Virginia Road **Owner/Operator:** City of San Marino **Description:** Originally Wilson Lake (1875), the site for Lacy Park, was purchased by the City in 1925 and dedicated as a park. This 30-acre park provides a picnic area, nearly 2 miles of walking trails, 6 championship tennis courts, and a 60-year old rose arbor. A wide range of public and civic events are held in Lacy Park. The park also includes restrooms and on-site parking. The historic Thurnher House, at the front entrance of Lacy Park, has a tile roof, graceful arches, and quaint patio areas. Built in 1929, the house currently serves as a community meeting location (but is not available for private parties). It includes a large conference room and table (which seats 20 people), a working fireplace, and a kitchen. The history of Lacy Park is depicted on the walls throughout the House.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative. **Traffic:** Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Lacy Park and the

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Distance: This park and Thurnher House are approximately: • 2,115 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Huntington Drive/Oak Knoll Avenue (***I-24***); • 5,750 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 5,770 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	Thurnher House because it would not result in proximity impacts on that park.
Recreation Resources at Carver Elementary School 3100 Huntington Drive **Owner/Operator:** San Marino Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 25 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at San Gabriel Boulevard/Huntington Drive (***I-18***); • 11,430 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 11,435 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the TSM/TDM Alternative in the vicinity of the recreation resources at this school could result in short-term dust and equipment emissions that could extend onto the school property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of San Marino. Compliance with those measures during construction of the TSM/TDM Alternative improvements in the vicinity of Carver Elementary School would substantially reduce the short-term air quality effects on the recreation resources at the school. In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on the recreation resources at Carver Elementary School. **Noise:** Construction of the improvements in the TSM/TDM Alternative in the vicinity of the recreation resources at this school could result in short-term noise levels that could impact those resources. Those construction activities would be required to comply with the City of San Marino Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements in the vicinity of Carver Elementary School would substantially reduce the short-term noise effects on the recreation resources at the school.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	The recreation uses at Carver Elementary School are active uses. The TSM/TDM Alternative improvements (I-18) in the vicinity of these uses will not substantially increase travel speeds on streets adjacent to this school or shift travel lanes closer to this school. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on the recreation uses at Carver Elementary School. **Traffic:** Construction of the improvements in the TSM/TDM Alternative in the immediate vicinity of the recreation resources at Carver Elementary School could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation facilities at Carver Elementary School. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this school, this resource would not experience long-term traffic effects under the TSM/TDM Alternative. **Visual Resources:** The sports facilities on the Carver Elementary School campus have existing views of Huntington Drive, South San Gabriel Boulevard, and residential and other urban land uses and structures to the east, south, west, and north. Users of the on-campus sports facilities outside school hours typically would not use these types of recreation facilities to view off-campus land uses and, therefore, are not considered sensitive viewers. The patrons of the recreation uses on the Carver Elementary School campus already have views of urban land uses and structures, so the addition of the TSM/TDM Alternative improvements on Huntington Boulevard and South San Gabriel Boulevard would not substantially change the character of views from this facility. As a result, the TSM/TDM Alternative improvements would not result in temporary construction or long-term operation visual effects at the recreation facilities on the Carver Elementary School campus. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Carver Elementary School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those recreation resources.
Recreation Resources at Huntington Middle School 1700 Huntington Drive **Owner/Operator:** San Marino Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,050 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Huntington Drive/Sierra Madre Boulevard (***I-25***); • 7,620 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 7,625 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of the recreation resources at this school from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Huntington Middle School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at San Marino High School 2701 Huntington Drive **Owner/Operator:** San Marino Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,840 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Huntington Drive/Sierra Madre Boulevard (***I-25***); and • 11,245 feet from the nearest new right of way and the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction of any TSM/TDM Alternative improvements and the operation of those improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at San Marino High School because it would not result in proximity impacts on those recreation resources.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at Valentine Elementary School 1650 Huntington Drive **Owner/Operator:** San Marino Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,610 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Huntington Drive/Sierra Madre Boulevard (***I-25***); • 7,065 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 7,080 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Valentine Elementary School because it would not result in proximity impacts on those recreation resources.
CITY OF SOUTH PASADENA	
Eddie Park and House 2017 Edgewood Drive **Owner/Operator:** City of South Pasadena **Description:** This 0.75-acre park includes the historic Eddie House, a group barbeque area, a playground, and an open lawn area. The park site is surrounded by a 3-foot-high brick wall. The Eddie House and grounds were donated to the City by the Eddie family. The 2,200-square-foot house is an example of Transitional Craftsman architecture. The first floor of the house is available as a meeting space and includes a kitchen and restrooms. **Distance:** The Eddie Park and House are approximately:	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, this park would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 1,820 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Huntington Drive/Garfield Avenue (***I-13***), Huntington Drive/Atlantic Boulevard (***I-14***), and Atlantic Boulevard/ Garfield Avenue (***I-15***); • 1,855 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 1,900 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	**Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Eddie Park and House because it would not result in proximity impacts on that park.
Garfield Park 1750 Mission Street **Owner/Operator:** City of South Pasadena **Description:** This 7.6-acre park provides tennis courts, a playground, and a garden area. **Distance:** This park is approximately: • 600 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Fair Oaks Avenue from Grevelia Street to Monterey Road (***L-8***); and • 2,020 feet from the nearest new right of way and the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, this park would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of Garfield Park because it would not result in proximity impacts on those recreation resources.
Library Park 1102 Oxley Street **Owner/Operator:** City of South Pasadena **Description:** This 3.2-acre park provides tennis courts, a half basketball court, a playground, and a baseball field.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Distance: This park is approximately: • 770 feet from the nearest limit for permanent improvements at Fremont Street/Monterey Road (***I-9***), and the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	**Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, this park would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Library Park because it would not result in proximity impacts on that park.
Orange Grove Park and Recreation Building 815 Mission Street **Owner/Operator:** City of South Pasadena **Description:** This 2.5-acre park provides a lighted softball and soccer field, two lighted tennis courts, picnic tables, a small playground, drinking fountains, bleachers, and a bicycle rack. The Orange Grove Park Recreation Building is a 9,500-square-foot facility located in Orange Grove Park. A wide range of programs for families and children are offered at this Recreation Center. The first floor of the Recreation Center is used for recreation and day care programs. The second floor contains a meeting room and a small teen center. **Distance:** This park and recreation building are approximately: • 2,305 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; • 2,775 feet from the nearest limit for permanent	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, this park would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the Orange Grove Park and Recreation Center because it would not result in proximity impacts at that facility.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
improvements in the TSM/TDM Alternative at Fremont Street/Monterey Road (***I-9***); and • 5,020 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	
War Memorial Park 435 Fair Oaks Avenue **Owner/Operator:** City of South Pasadena **Description:** This 1.8-acre park includes the two-story, 12,000-square-foot War Memorial Building, which was constructed in 1921 and is a City of South Pasadena cultural heritage landmark. The Memorial was constructed on the site of the former Oak Lawn Park. The large multipurpose room on the second floor is used for events (e.g., banquets and meetings) for large groups and includes a kitchen. The first floor contains smaller meeting rooms, storage space, and restrooms. The park also includes a landscaped memorial garden and on-site parking. **Distance:** This park is approximately: • Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative at the SR 110 (Arroyo Seco Parkway) hook ramp concept (***T-2***); • Approximately 1,400 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • Approximately 1,405 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of South Pasadena. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to War Memorial Park would substantially reduce the short-term air quality effects on the park. In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on War Memorial Park. **Noise:** Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of South Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to War Memorial Park would substantially reduce the short-term noise effects on the park. The recreation uses at War Memorial Park are active uses. The TSM/TDM Alternative improvements (T-2) in the vicinity of this park will not substantially increase travel speeds on streets adjacent to this park or shift travel lanes closer to this park. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on the recreation uses at War Memorial Park. **Traffic:** Construction of the improvements in the TSM/TDM Alternative adjacent to War Memorial Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	short-term adverse impacts related to traffic and transportation at War Memorial Park. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this park, this resource would not experience long-term traffic effects under the TSM/TDM Alternative. **Visual Resources:** Views from War Memorial Park are not an important feature of this park and currently include views of existing streets adjacent to the park. The TSM/TDM Alternative improvements (T-2) in the vicinity of this park consist of the SR 110/Oaks Avenue hook ramps, which may be visible from the southernmost part of this park. However, those views would not substantially change the character of views from within War Memorial Park during the construction and operation of this improvement. As a result, the TSM/TDM Alternative would not result in short- or long-term adverse visual impacts at War Memorial Park. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of War Memorial Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.
Recreation Resources at Marengo Elementary School 1400 Marengo Avenue **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,395 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Fair Oaks Avenue/Monterey Road (***I-8***); • 2,150 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 3,360 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Marengo Elementary School because it would not result in proximity impacts on those recreation resources.

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at South Pasadena High School 1401 Fremont Avenue **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 595 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Fremont Street/Monterey Road (***I-9***); • 835 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 5,580 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at South Pasadena High School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at South Pasadena Middle School 1500 Fair Oaks Avenue **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,195 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Fair Oaks Avenue/Monterey Road (***I-8***); • 1,555 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and	The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative. **Noise:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 4,315 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative.	operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative. **Summary:** In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at South Pasadena Middle School because it would not result in proximity impacts on those recreation resources.

Source: LSA Associates, Inc. (2014). Refer also to Chapter 5, References and Preparers, for a list of references used to research resources potentially protected under the requirements of Sections 4(f) and 6(f).

[1] Only resources within 0.5 mile of improvements in the TSM/TDM Alternative are evaluated in this table. Cities and communities that do not contain TSM/TDM Alternative improvements are not included in this table. Refer to Figure 3.2-1 for the locations of the resources discussed in this table.

[2] The following distances were measured to assess the potential for short- and long-term proximity impacts on Section 4(f) resources under the TSM/TDM Alternative:

- **Permanent Impacts:** This is an area defined on the ground surface as the maximum limits of the permanent improvements under the TSM/TDM Alternative. The permanent impacts will include areas within existing public rights of way as well as areas within new rights of way acquired specifically for the TSM/TDM Alternative.
- **Right of Way:** This is the area defined on the ground surface as the maximum limits of new right of way acquired for the improvements under the TSM/TDM Alternative. The limits of the new right of way may be further from a Section 4(f) resource than the area of permanent impacts because permanent improvements constructed in areas within existing public right of way may be closer to the resource than the improvements constructed in areas of new right of way.
- **Temporary Construction Easement:** This is a specific area defined on the ground surface that is anticipated to be disturbed during construction of improvements in the TSM/TDM Alternative. This may include areas needed temporarily for materials or equipment storage, or construction of the improvements. The defined TCEs are areas outside the limits of the permanent improvements and permanent right of way for the TSM/TDM Alternative. Areas used for TCEs would be restored to their original or better condition prior to returning those areas to the property owners.

Caltrans = California Department of Transportation
FY = Fiscal Year
GHG = greenhouse gas
I-10 = Interstate 10
K = Kindergarten
L&WCF Act = Land and Water Conservation Fund Act
MSAT = mobile source air toxics
SR 110 = State Route 110
SR 134 = State Route 134
TCE = temporary construction easement
TMP = Transportation Management Plan
TSM/TDM = Transportation Systems Management/Transportation Demand Management

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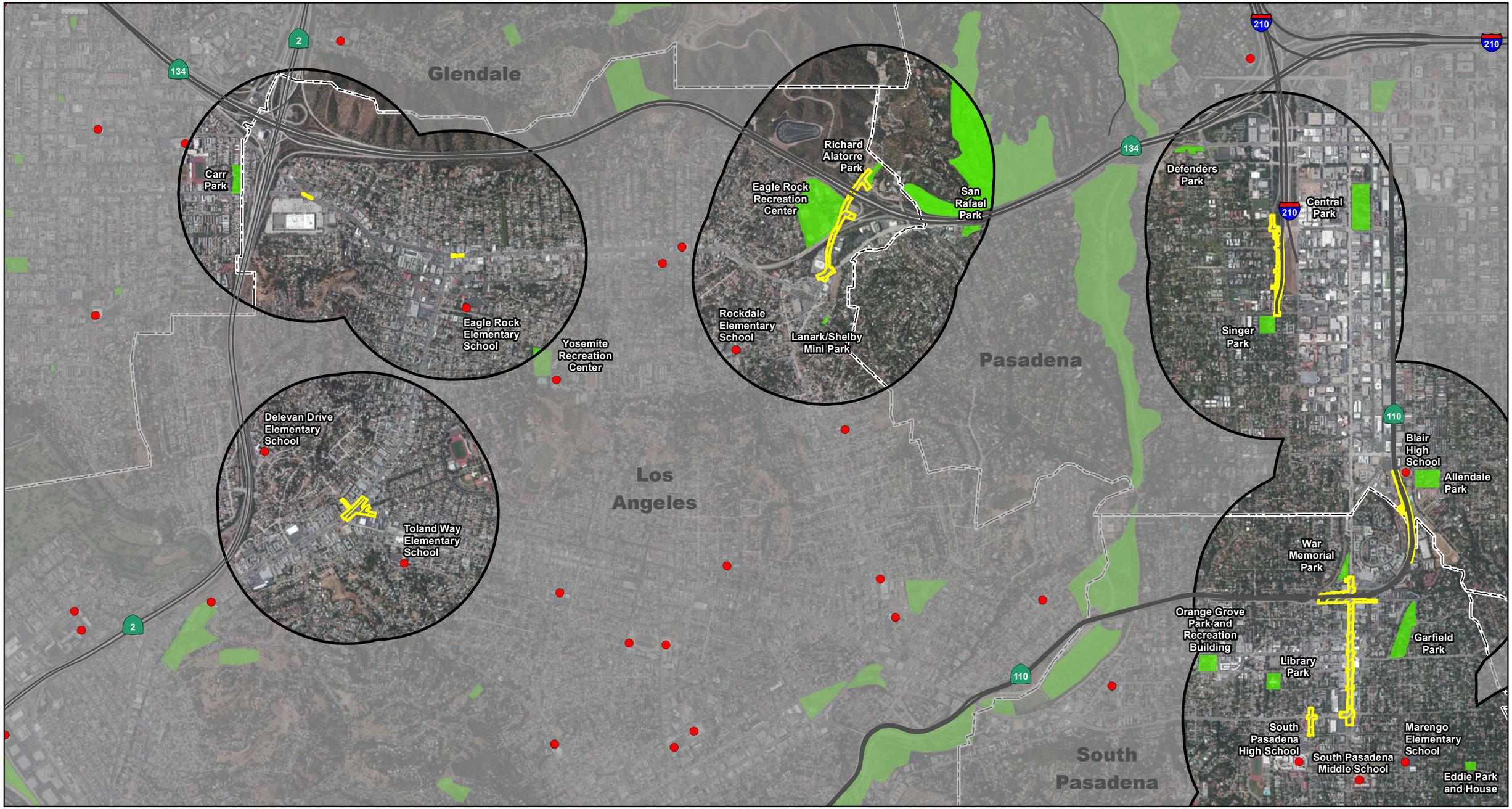

LEGEND

- TSM/TDM Alternative Limits of Construction
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.2-1
Sheet 1 of 4

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Resources within a Half-Mile of the TSM/TDM Alternative

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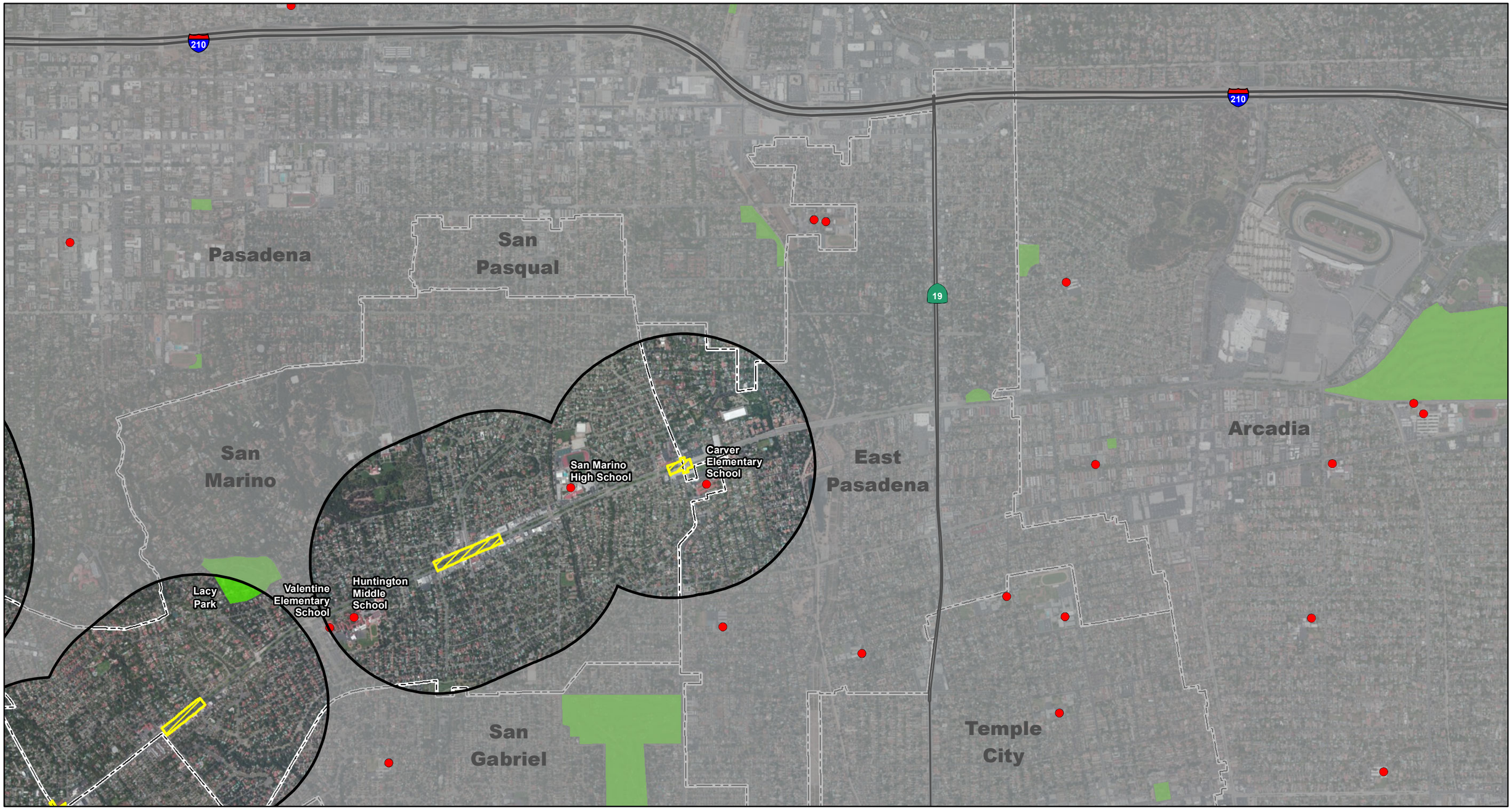

LEGEND

- TSM/TDM Alternative Limits of Construction
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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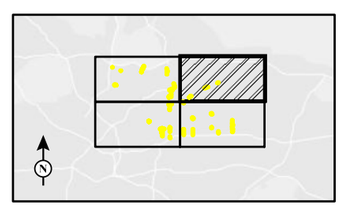

FIGURE 3.2-1
Sheet 2 of 4

SR 710 North Study

Resources within a Half-Mile of the TSM/TDM Alternative

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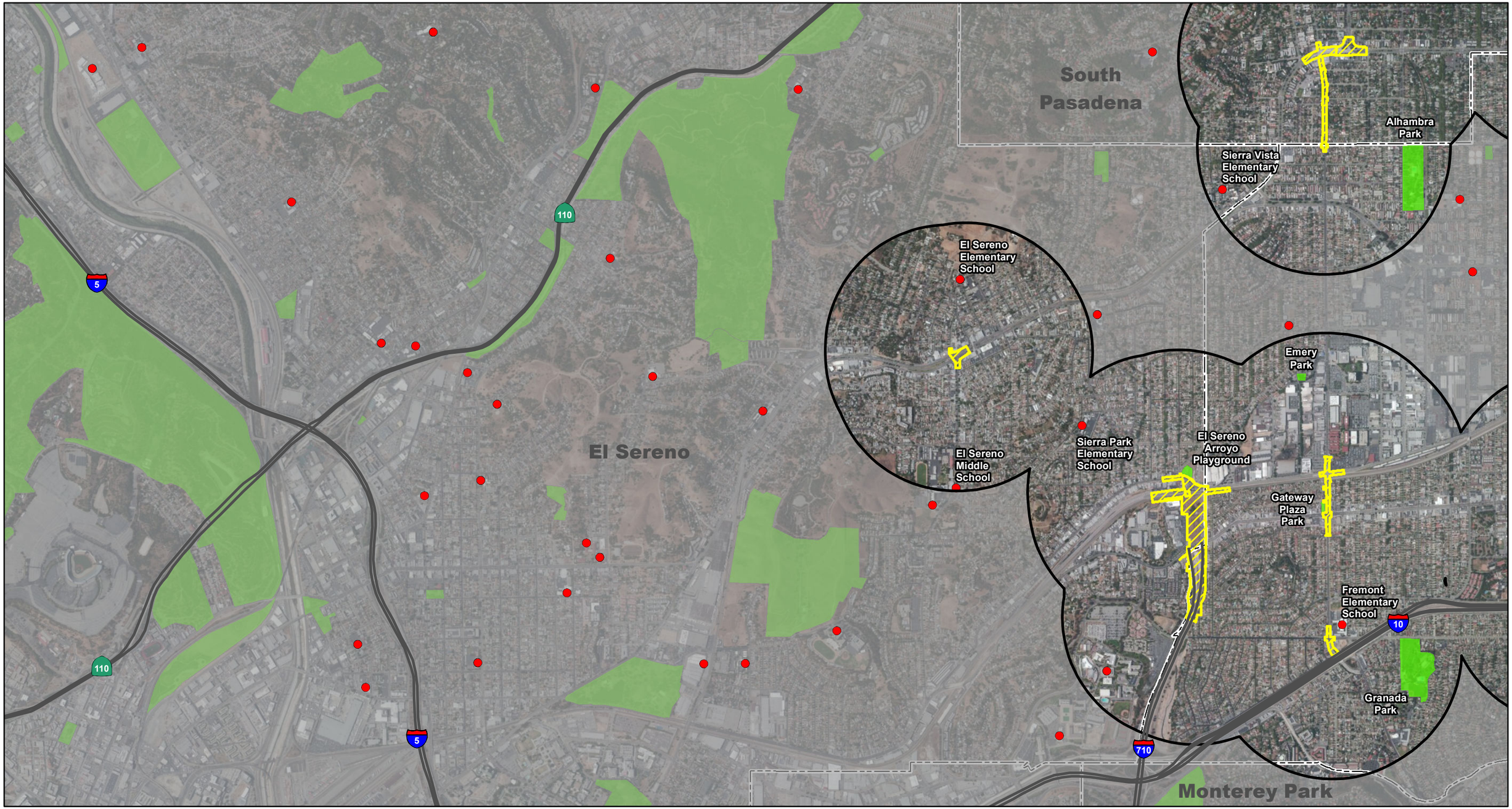

LEGEND

- TSM/TDM Alternative Limits of Construction
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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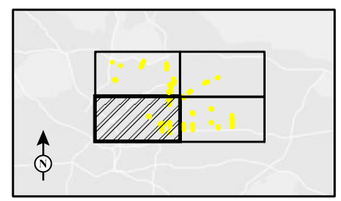

FIGURE 3.2-1
Sheet 3 of 4

SR 710 North Study

Resources within a Half-Mile of the TSM/TDM Alternative

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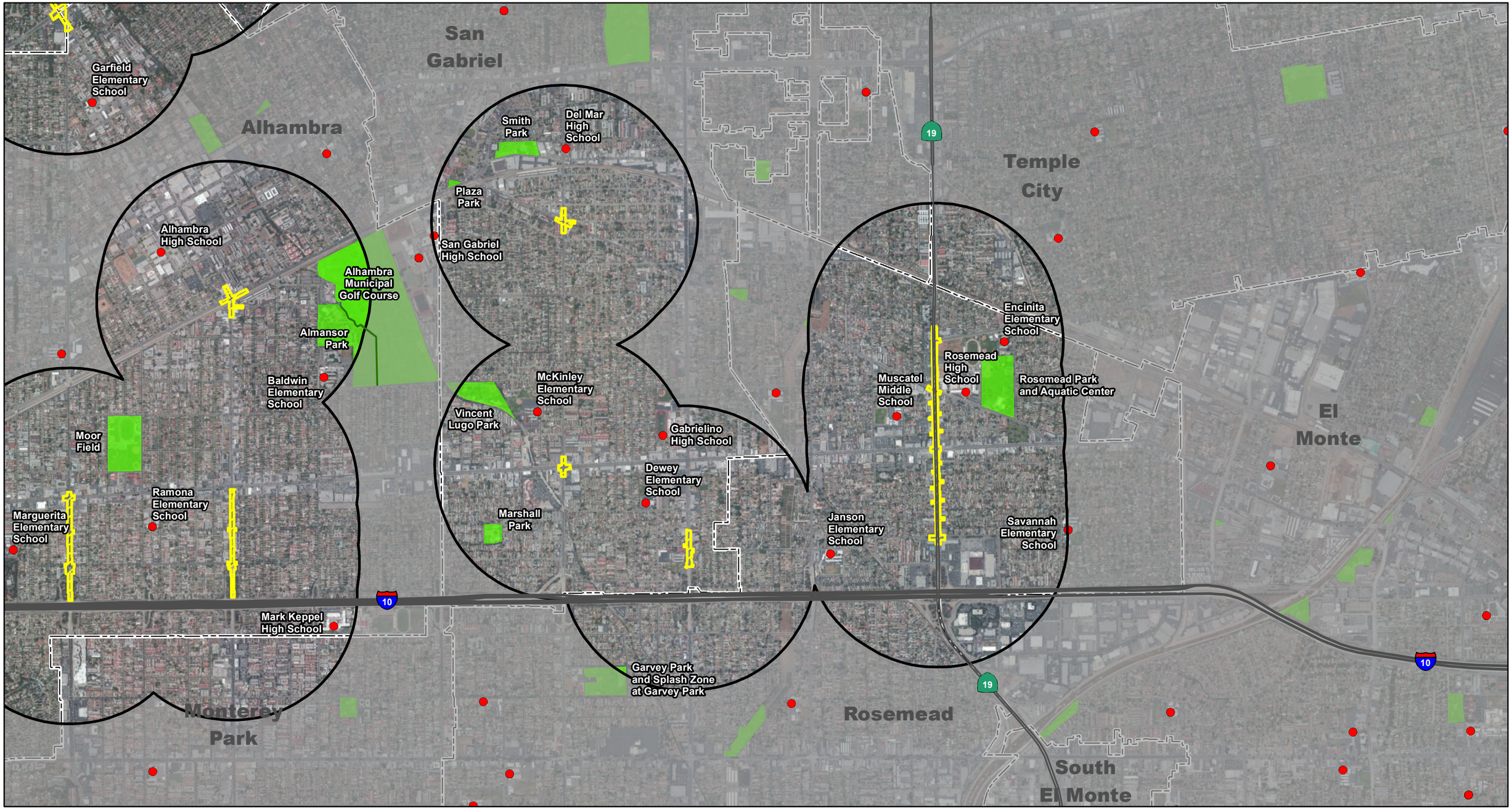

LEGEND

- TSM/TDM Alternative Limits of Construction
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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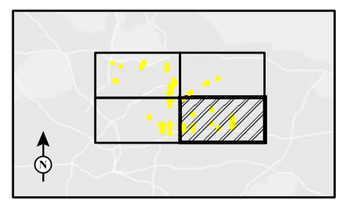

FIGURE 3.2-1
Sheet 4 of 4

SR 710 North Study

Resources within a Half-Mile of the TSM/TDM Alternative

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TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
CITY OF ALHAMBRA	
Alhambra Park 500 North Palm Avenue **Owner/Operator:** City of Alhambra **Description:** This 15.0-acre park provides picnic tables with covered shelters, playground equipment, barbecues, tennis courts, volleyball courts, an outdoor basketball court, a meeting room, an activity room, a swimming pool, an open grass area, a band shell, and restrooms. The Alhambra Veteran's Memorial Wall is in the north end of the park. Approximately $5,922 of L&WCF Act funds were used to renovate the band shell, replace its wood floor, and add electricity at this park in FY 1991/1992. As a result, the band shell at Alhambra Park is subject to the requirements for protection under Section 6(f). **Distance:** This park is approximately: • 1,940 feet from the edge of the nearest construction limits for the BRT Alternative; • 1,950 feet from the nearest dedicated bus lanes and station (Huntington Drive at Marengo Avenue) in the BRT Alternative; and • 2,875 feet from the nearest TCE for the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Alhambra Park because it would not result in proximity impacts on that park. **Section 6(f):** Because the BRT Alternative would not require the permanent acquisition of any land from Alhambra Park, the requirements of Section 6(f) would not apply to this park.
Burke Heritage Park and Alhambra Historical Society Museum 1550 West Alhambra Road **Owner/Operator:** City of Alhambra **Description:** Burke Heritage Park is a 2.3-acre xeriscape garden adjacent to the Alhambra Historical Society Museum. The Museum includes a collection of memorabilia, period clothing, furnishings, and books. The Museum is open on Thursdays and the second and fourth	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative bus facilities and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Sundays of each month, from 2:00 p.m. to 4:00 p.m. Admission is free. **Distance:** This park is approximately: • 1,930 feet from the edge of the nearest construction limits for the BRT Alternative; • 1,945 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 2,580 feet from the nearest station (Huntington Drive at Garfield Road) in the BRT Alternative.	**Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative bus facilities and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Burke Heritage Park and Alhambra Historic Society Museum because it would not result in proximity impacts on those facilities.
Moor Field 1008 South Eighth Street **Owner/Operator:** City of Alhambra **Description:** This 20.3-acre property provides a wide range of facilities for the City and the Alhambra Unified School District, including large and small baseball/softball diamonds, a football/soccer field with bleachers, a running track, restrooms, and a PACE Head Start child care facility. **Distance:** This park is approximately: • 535 feet from the edge of the nearest construction limits for the BRT Alternative; • 785 feet from the edge of the nearest TCE for the BRT Alternative; and • 880 feet from the nearest dedicated bus lanes and station (Atlantic Boulevard at Valley Boulevard) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this property from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses on this property would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this property from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses on this property would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this property are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses on this property would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this property from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses on this property would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Moor Field because it would not result in proximity impacts on that facility.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at Garfield Elementary School (K to 8th) 110 West McLean Street **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,490 feet from the edge of the nearest construction limits for the BRT Alternative; • 1,520 feet from the nearest station (Huntington Drive at Garfield Road) in the BRT Alternative; • 1,750 feet from the edge of the nearest TCE for the BRT improvements; and • 1,930 feet from the nearest dedicated bus lanes in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and bus operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Garfield Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Marguerita Elementary School (K to 8th) 1603 South Marguerita Avenue **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,140 feet from the nearest limits of construction for the BRT Alternative; • 1,160 feet from the nearest TCE for the BRT Alternative; • 1,168 feet from the nearest dedicated bus lanes in the	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
BRT Alternative; and • 1,485 feet from the nearest station (Atlantic Boulevard at Valley Boulevard) in the BRT Alternative.	construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Marguerita Elementary School because it would not result in proximity impacts on those recreation resources.
William Northrup Elementary School (K to 8th) 409 South Atlantic Boulevard **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 85 feet from the nearest limits of construction for the BRT Alternative; • 280 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 1,750 feet from the nearest station (Atlantic Boulevard at Main Street) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the BRT Alternative in the vicinity of the recreation uses at this school could result in short-term dust and equipment emissions that could extend onto the school property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Alhambra. Compliance with those measures during construction of the BRT Alternative facilities in the vicinity of the recreation uses at William Northrup Elementary School would substantially reduce the short-term air quality effects on those resources. Operation of the BRT Alternative in 2020 would result in reduced regional vehicle and GHG emissions compared to existing 2012 and 2020 No Build Alternative conditions. Operation of the BRT Alternative in 2035 would result in decreases in regional vehicle emissions compared to existing 2012 conditions and minor increases or decreases in regional vehicle emissions compared to the 2035 No Build Alternative conditions. Operation of the BRT Alternative in 2020 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2020, the BRT Alternative would result in no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions. In 2035, the BRT Alternative would result in minor increases or decreases or no change in MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build Condition. As a result, operation of the BRT Alternative would not result in adverse air quality impacts on the recreation uses at William Northrup Elementary School. **Noise:** Construction of the improvements in the BRT Alternative in the vicinity of the recreation uses at this school could result in short-term noise levels that could impact those resources. Those construction activities would be required to comply with the City of Alhambra Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	during construction. Compliance with those requirements during construction of the BRT Alternative facilities in the vicinity of William Northrup Elementary School would substantially reduce the short-term noise effects on the recreation uses at the school. The recreation uses at William Northrup Elementary School are active uses. The 2035 predicted noise levels at this school would be the same under the No Build and BRT Alternatives at 63 dBA, which is less than the 67 dBA NAC for activity category C uses. The operation of the BRT Alternative would not result in long-term noise impacts on the recreation uses at William Northrup Elementary School. **Traffic:** Construction of the improvements in the BRT Alternative within approximately 85 feet of the recreation uses at William Northrup Elementary School could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation facilities at William Northrup Elementary School. The BRT Alternative improvements in the vicinity of William Northrup Elementary School would not modify the access to/from that school and, therefore, would not result in long-term adverse impacts related to traffic and transportation at the recreation facilities at this school. **Visual Resources:** Based on the distance from the nearest operation of any BRT Alternative improvements and because the BRT Alternative would not result in any permanent changes in access to/from this school, the recreation facilities at this school would not experience short- or long-term traffic and transportation effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at William Northrup Elementary School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those resources.
Recreation Resources at Park Elementary School (K to 8th) 301 North Marengo Avenue **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,395 feet from the nearest limits of construction for the BRT Alternative; • 2,790 feet from the nearest station (Atlantic Boulevard at Main Street) in the BRT Alternative; and • 4,290 feet from the nearest dedicated bus lanes in the	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative bus stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative bus stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
BRT Alternative.	**Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative bus stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Park Elementary School because it would not result in proximity impacts on those resources.
Recreation Resources at Ramona Elementary School (K to 8th) 509 West Norwood Place **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,690 feet from the nearest limits of construction in the BRT Alternative; • 1,730 feet from the nearest TCE for the BRT Alternative; • 1,805 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 1,870 feet from the nearest station (Atlantic Boulevard at Valley Boulevard) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative bus stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative bus stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Ramona Elementary School because it would not result in proximity impacts on those resources.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at Alhambra High School (9th to 12th) 101 South 2nd Street **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,685 feet from nearest limits of construction for the BRT Alternative; • 1,970 feet from the nearest station (Atlantic Boulevard at Main Street) in the BRT Alternative; • 3,160 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 3,510 to the nearest TCE in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Alhambra High School because it would not result in proximity impacts on those resources.
EAST LOS ANGELES (UNINCORPORATED LOS ANGELES COUNTY)	
Atlantic Avenue Park 570 South Atlantic Boulevard **Owner/Operator:** Los Angeles County Department of Parks and Recreation **Description:** This 3.0-acre park provides a splash pad for younger children and a 50-meter, six-lane swimming pool that are open during the summer. There is a rose garden around the Veteran's Memorial in the park. The park also includes a covered picnic area with picnic tables, a children's playground area, and restrooms. **Distance:** This park is:	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes East Los Angeles. Compliance with those measures during construction of the BRT Alternative facilities adjacent to Atlantic Avenue Park would substantially reduce the short-term air quality effects on the park. Operation of the BRT Alternative in 2020 would result in reduced regional vehicle and GHG emissions compared to existing 2012 and 2020 No Build Alternative conditions. Operation of the BRT Alternative in 2035 would result in decreases in regional vehicle emissions compared to existing 2012 conditions and minor increases or decreases in regional vehicle emissions compared to the 2035 No Build Alternative conditions.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• Directly adjacent to the limits of construction and the nearest dedicated bus lanes in the BRT Alternative; • 45 feet from the nearest TCE in the BRT Alternative; and • 1,515 feet from the nearest bus station (Atlantic Boulevard at Whittier Boulevard) in the BRT Alternative.	Operation of the BRT Alternative in 2020 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2020, the BRT Alternative would result in no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions. In 2035, the BRT Alternative would result in minor increases or decreases or no change in MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build Condition. As a result, operation of the BRT Alternative would not result in adverse air quality impacts on Atlantic Avenue Park. **Noise:** Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the County of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the BRT Alternative facilities adjacent to this park would substantially reduce the short-term noise effects on Atlantic Avenue Park. The recreation uses at Atlantic Avenue Park are active uses. The operation of the BRT Alternative improvements in the vicinity of this park in 2035 would increase noise levels by 1 dBA at Atlantic Avenue Park compared to the No Build Alternative in 2035 (from 61 dBA to 62 dBA), which would not be perceptible to park users and which is less than the 67 dBA NAC for activity category C uses. As a result, the operation of the BRT Alternative would not result in long-term noise impacts on Atlantic Avenue Park. **Traffic:** Construction of the improvements in the BRT Alternative adjacent to Atlantic Avenue Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at Atlantic Avenue Park. The BRT Alternative improvements in the vicinity of Atlantic Avenue Park would not modify the access to/from that park and, therefore, would not result in long-term adverse impacts related to traffic and transportation at this park. **Visual Resources:** Atlantic Avenue Park is directly adjacent to South Atlantic Boulevard, East 6th Street, Amalia Avenue, and Hasting Street, and visitors to the park currently have views of those roads from areas within this park. During construction of the BRT Alternative improvements in this area, park patrons would have views of construction equipment and activities and areas within South Atlantic Boulevard disturbed during construction. In the long-term park, visitors would have views of South Atlantic Boulevard similar to the existing views of that street from within the park. As a result, the BRT Alternative improvements in the vicinity of Atlantic Avenue Park would not result in short- or long-term visual impacts for park visitors. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Atlantic Avenue Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Belvedere Community Regional Park 4914 East Cesar E. Chavez Avenue **Owner/Operator:** Los Angeles County Department of Parks and Recreation **Description:** This approximately 31-acre park serves as the recreation hub of the East Los Angeles community. The park includes a skate park, a children's play area with playground equipment, tennis courts, sports fields, a swimming pool, covered picnic tables, landscaped areas that include large trees shading the landscaped areas, restrooms, and on-site parking. L&WCF Act funds were used at this park as follows: • $172,930 to construct the lighted ball field, soccer field, landscaping, and irrigation in FY 1976/1977. • $197,969 to construct restrooms and parking spaces in FY 1978/1979. • $98,314 to construct swimming pool facilities in FY 1982/1983. These improvements at Belvedere Community Regional Park are subject to the requirements for protection under Section 6(f). **Distance:** This park is approximately: • 1,115 feet from the nearest limits of construction for the BRT Alternative; • 1,150 feet from the nearest dedicated bus lanes in the BRT Alternative; • 1,155 feet from the nearest TCE for the BRT Alternative; and • 1,200 feet from the nearest station (Atlantic Boulevard between Pomona Boulevard and Beverly Boulevard) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative and would not be used by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Belvedere Community Regional Park because it would not result in proximity impacts on that park. **Section 6(f):** Because the BRT Alternative would not require the permanent acquisition of any land from Belvedere Community Regional Park, the requirements of Section 6(f) would not apply to this park.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at David Wark Griffith Middle School (6th to 8th) 4765 East Fourth Street **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,425 feet from the nearest limits of construction and TCE for the BRT Alternative; • 2,500 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 2,805 feet from the nearest station (Atlantic Boulevard between Pomona Boulevard and Beverly Boulevard) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at David Wark Griffith Middle School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Fourth Street Elementary School (K to 5th) 420 South Amalia Avenue **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 420 feet from the nearest TCE in the BRT Alternative; • 435 feet from the nearest limits of construction in the BRT Alternative; • 440 feet from the nearest improvements (dedicated	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the BRT Alternative. **Traffic:** Construction of the improvements in the BRT Alternative within approximately 420 feet of Fourth Street Elementary School could result in short-term traffic impacts in that area. Based on implementation of

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
bus lanes) in the BRT Alternative; and • 1,445 feet from the nearest station (Atlantic Boulevard between Pomona Boulevard and Beverly Boulevard) in the BRT Alternative.	TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation facilities at Fourth Street Elementary School. Based on the distance of this school from the nearest operation of any BRT Alternative improvements and because the BRT Alternative would not result in any permanent changes in access to/from this school, the recreation facilities at this school would not experience long-term traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Fourth Street Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Garfield High School (9th to 12th) 5101 East 6th Street **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 805 feet from the limits of construction in the BRT Alternative; • 815 feet from the nearest TCE in the BRT Alternative; • 895 feet from the nearest improvements (dedicated bus lanes) in the BRT Alternative; and • 1,830 feet from the nearest station (Atlantic Boulevard at Whittier Boulevard) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Garfield High School because it would not result in proximity impacts on those resources.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at Morris K. Hamasaki Elementary School (K to 6th) 4865 East First Street **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,400 feet from the nearest limits of construction for the BRT Alternative; • 2,550 feet from the edge of the nearest TCE for the BRT Alternative; and • 2,550 feet from for the nearest dedicated bus lanes and station (Atlantic Boulevard between Pomona Boulevard and Beverly Boulevard) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Morris K. Hamasaki Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Winter Gardens Elementary School (K to 5th) 1277 South Clela Avenue **Owner/Operator:** Montebello Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,930 feet from the nearest limits of construction in the BRT Alternative; and • 2,085 feet from the nearest dedicated bus lanes and station (Atlantic Boulevard at Whittier Boulevard) in	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
the BRT Alternative.	**Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance o from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Winter Gardens Elementary School because it would not result in proximity impacts on those recreation resources.
CITY OF MONTEREY PARK	
Barnes Memorial Park and Community Center 350 South McPherrin Avenue **Owner/Operator:** City of Monterey Park **Description:** This 11.5-acre park provides a community center, basketball gym, Memorial Bowl, sheltered picnic pavilion, Olympic-sized pool, lighted softball field, tennis courts, a children's play area, restrooms, and on-site parking. **Distance:** This park is approximately: • 1,795 feet from the nearest limits of construction for the BRT Alternative; • 1,820 from the nearest TCE for the BRT Alternative; • 1,890 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 2,355 feet from the nearest station (Atlantic Boulevard at Garvey Avenue) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Barnes Memorial Park and Community Center because it would not result in proximity impacts on that park and community center.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Bella Vista Park 400 Pomona Boulevard **Owner/Operator:** City of Monterey Park **Description:** This 4.0-acre park provides a softball field, a children's play area, outdoor basketball, picnic facilities, lighted tennis courts, and restrooms. **Distance:** This park is approximately: • 2,545 from the nearest limits of construction for the BRT Alternative; • 2,550 feet from the nearest dedicated bus lanes in the BRT Alternative; • 2,665 from the nearest TCE for the BRT Alternative; and • 2,865 feet from the nearest station (Atlantic Boulevard at Cesar Chavez Avenue/Riggin Street) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Bella Vista Park because it would not result in proximity impacts on that park.
Sequoia Park 750 Ridgecrest Avenue **Owner/Operator:** City of Monterey Park **Description:** This 6.8-acre park provides a Japanese garden with the Azumaya View Deck, a softball field, a children's play area, lighted tennis courts, outdoor basketball court, restrooms, picnic facilities, and on-site parking. **Distance:** This park is approximately: • 1,330 feet from the nearest TCE and limits of construction for the BRT Alternative; • 1,340 feet from the nearest dedicated bus lanes in the BRT Alternative; and	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 3,120 feet from the nearest station (Atlantic Boulevard at Garvey Avenue) in the BRT Alternative.	the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Sequoia Park because it would not result in proximity impacts on that park.
Recreation Resources at Bella Vista Elementary School (K to 5th) 2410 Findlay Avenue **Owner/Operator:** Montebello Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,575 feet from the nearest limits of construction and TCE for the BRT Alternative; • 2,480 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 2,745 feet from the nearest station (Atlantic Boulevard at Cesar Chavez Avenue/Riggin Street) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and bus operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Bella Vista Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Robert Hill Lane Elementary School (K to 6th) 1500 Cesar Chavez Avenue **Owner/Operator:** Los Angeles Unified School District	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Distance: This school and the recreation resources at this school are approximately: • 1,700 feet from the nearest limits of construction for the BRT Alternative; • 1,740 feet from the nearest dedicated bus lanes in the BRT Alternative; • 1,755 feet from the nearest TCE for the BRT Alternative; and • 1,810 feet from the nearest station (Atlantic Boulevard at Cesar Chavez Avenue/Riggin Street) in the BRT Alternative.	this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Robert Hill Lane Elementary School because it would not result in proximity impacts on those resources.
Recreation Resources at Repetto Elementary School (K to 8th) 650 South Grandridge Avenue **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,385 feet from the nearest TCE and the nearest dedicated bus lanes for the BRT Alternative; • 2,440 feet from the nearest limits of construction for the BRT Alternative; and • 3,525 feet from the nearest station (Atlantic Boulevard at Garvey Avenue) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Repetto Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Ynez Elementary School (K to 8th) 120 South Ynez Avenue **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,550 feet from the nearest limits of construction for the BRT Alternative; • 1,615 feet from the nearest dedicated bus lanes and station (Atlantic Boulevard at Garvey Avenue) in the BRT Alternative; and • 1,650 feet from the nearest TCE for the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Ynez Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at East Los Angeles College (2-year college) 1301 Avenida Cesar Chavez **Owner/Operator:** Los Angeles Community College District **Distance:** This school and the recreation resources at this school are approximately:	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 885 feet from nearest limits of construction for the BRT Alternative; • 910 feet from the nearest TCE for the BRT Alternative; and • 920 feet from the nearest dedicated bus lanes and station (Atlantic Boulevard at Cesar Chavez Avenue/Riggin Street) in the BRT Alternative.	**Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at East Los Angeles College because it would not result in proximity impacts on those recreation resources.
CITY OF PASADENA	
Allendale Park 1130 South Marengo Avenue **Owner/Operator:** City of Pasadena **Description:** This 2.9-acre park provides a lighted tennis court, a lighted softball diamond/multi-purpose field with bleachers, playground equipment, on-site parking, picnic tables, and drinking fountains. There is a public library within the boundary of this park. **Distance:** This park is approximately: • 1,305 feet from the nearest limits of construction for the BRT Alternative; • 1,320 feet from the nearest TCE for the BRT Alternative; • 1,340 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 1,410 feet from the nearest station (Fair Oaks Avenue at Glenarm Street) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Allendale Park because it would not result in proximity impacts on that park.
Central Park 275 South Raymond Avenue **Owner/Operator:** City of Pasadena **Description:** This 9.2-acre park provides 6 horseshoe pits, 2 lawn bowling courts, an open area, playground equipment, walkway lighting, restrooms, picnic tables, a rose garden, benches, and a clubhouse for the Pasadena Lawn Bowling Club, an affiliate of the American Lawn Bowling Association. **Distance:** This park is: • Adjacent to the limits of construction for the BRT Alternative; • 40 feet from the nearest dedicated bus lanes in the BRT Alternative; • 45 feet from the nearest TCE for the BRT Alternative; and • 60 feet from the nearest station (Fair Oaks Avenue at Del Mar Boulevard) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Pasadena. Compliance with those measures during construction of the BRT Alternative facilities adjacent to this park would substantially reduce the short-term air quality effects on Central Park. Operation of the BRT Alternative in 2020 would result in reduced regional vehicle and GHG emissions compared to existing 2012 and 2020 No Build Alternative conditions. Operation of the BRT Alternative in 2035 would result in decreases in regional vehicle emissions compared to existing 2012 conditions and minor increases or decreases in regional vehicle emissions compared to the 2035 No Build Alternative conditions. Operation of the BRT Alternative in 2020 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2020, the BRT Alternative would result in no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions. In 2035, the BRT Alternative would result in minor increases or decreases or no change in MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build Condition. As a result, operation of the BRT Alternative would not result in adverse air quality impacts on Central Park. **Noise:** Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the BRT Alternative facilities in the vicinity of Central Park would substantially reduce the short-term noise effects on the school. The recreation uses at Central Park are active uses. The operation of the BRT Alternative improvements in the vicinity of this park in 2035 will not increase the noise levels at the recreation resources at the park compared to the No Build Alternative in 2035 (53 dBA under both alternatives). The future predicted noise level at this park under the BRT Alternative (53 dBA) is less than the 67 dBA NAC for activity category C uses. As a result, the operation of the BRT Alternative would not result in long-term noise impacts on Central Park. **Traffic:** Construction of the improvements in the BRT Alternative adjacent to Central Park could result in

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at Central Park. In the long term, the operation of the BRT Alternative along Fair Oaks Avenue will not affect existing pedestrian access to/from Central Park. Although bus volumes on Fair Oaks Avenue may change as a result of the BRT Alternative, the pedestrian access to and from Central Park would be the same as the existing access. **Visual Resources:** Central Park is in the northeast corner of the intersection of Fair Oaks Avenue and Del Mar Boulevard. The BRT Alternative includes an exclusive BRT lane on Fair Oaks Avenue south of Del Mar Boulevard and BRT service in mixed-flow lanes on Del Mar Boulevard east of Fair Oaks Avenue. Those improvements would result in minor modifications to existing Fair Oaks Avenue and Del Mar Boulevard but would not result in physical changes that would substantially change views of those street segments from within Central Park. BRT stations would be provided at the intersections of Fair Oaks Avenue/Del Mar Boulevard and Del Mar Boulevard/Los Robles Boulevard. The stations would consist of modest shelters, seating, and signing for the BRT services operating on those streets. The stations would not substantially change views of those intersections from within Central Park. The changes in views from the park would not be expected to be substantial because they would be views of urban structures and features in a viewshed that already contains urban structures and features. As a result, the BRT Alternative improvements would not result in temporary construction or long-term operation visual effects at Central Park. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Central Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.
Grant Park 232 South Michigan Avenue **Owner/Operator:** City of Pasadena **Description:** This 2.5 ac neighborhood park provides two lighted tennis courts, half basketball courts, a multi-purpose/softball field, three horseshoe pits, an open grass area with trees, restrooms, drinking fountains, picnic tables with canopies, barbeque pits, and a large area with playground equipment for children. **Distance:** This park is approximately: • 705 feet from nearest limits of construction for the	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience short-term construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience short-term construction or long-term operation traffic and

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
BRT Alternative; • 720 feet from the nearest station (Del Mar Avenue at Hill Avenue) in the BRT Alternative; and • 7,400 feet from the nearest TCE and nearest dedicated bus lane for the BRT Alternative.	transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience short-term construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Grant Park because it would not result in proximity impacts on that park.
Memorial Park 85 East Holly Street **Owner/Operator:** City of Pasadena **Description:** This 5.3-acre park is characterized by extensive shrubbery, landscaping, large trees, and a number of monuments. Other facilities provided at this park include a band shell with an audience capacity of 400 persons, picnic facilities, benches, a large open grass area, an exercise walk, restrooms, and drinking fountains. The Pasadena Senior Center is immediately adjacent to the south side of this park. **Distance:** This park is approximately: • 2,090 feet from the nearest limits of construction for the BRT Alternative; • 2,630 feet from the nearest TCE for the BRT Alternative; and • 2,650 feet from the nearest dedicated bus lanes and station (Fair Oaks Avenue at Del Mar Boulevard) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Memorial Park because it would not result in proximity impacts on that park.
Singer Park California Boulevard/St. John Avenue **Owner/Operator:** City of Pasadena **Description:** This 2.9-acre neighborhood park includes an open grass area with a number of well-established trees	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
and rose beds, a children's play area, picnic tables, benches, restrooms, and a drinking fountain. **Distance:** This park is approximately: • 1,510 feet from the nearest limits of construction and TCE for the BRT Alternative; • 1,520 feet from the nearest station (Fair Oaks Avenue at California Boulevard) in the BRT Alternative; and • 1,595 feet from the nearest dedicated bus lanes in the BRT Alternative.	Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Singer Park because it would not result in proximity impacts on that park.
Recreation Resources at Blair High School (6th to 12th) 1201 South Marengo Avenue **Owner/Operator:** Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,135 feet from the nearest TCE for the BRT Alternative; • 1,230 feet from the nearest station (Fair Oaks Avenue at Glenarm Avenue) in the BRT Alternative; • 1,445 feet from the nearest limits of construction for the BRT Alternative; and • 1,450 feet from the nearest dedicated bus lanes in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Blair High School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Rose City High School (10th to 12th) 351 Hudson Avenue **Owner/Operator:** Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 570 feet from the nearest limits of construction for the BRT Alternative; • 580 feet from the nearest station in the BRT Alternative; and • 4,770 feet from the nearest TCE and station (Del Mar Boulevard at Lake Avenue) for the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience short-term construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience short-term construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience short-term construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Rose City High School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Pasadena City College (2-year college) 1570 East Colorado Boulevard **Owner/Operator:** Pasadena Area Community College District **Distance:** This school and the recreation resources at this school are approximately: • 1,690 feet from the limits of construction for the BRT Alternative;	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this school from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the BRT

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 1,700 feet from the nearest station (Del Mar Boulevard at Hill Avenue) in the BRT Alternative; and • 10,260 feet from the nearest TCE and dedicated bus lanes in the BRT Alternative.	Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations or operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Pasadena City College because it would not result in proximity impacts on those recreation resources.
CITY OF SOUTH PASADENA	
Eddie Park and House 2017 Edgewood Drive **Owner/Operator:** City of South Pasadena **Description:** This 0.75-acre park includes the historic Eddie House, a group barbeque area, a playground, and an open lawn area. The park site is surrounded by a 3-foot-high brick wall. The Eddie House and grounds were donated to the City by the Eddie family. The 2,200-square-foot house is an example of Transitional Craftsman architecture. The first floor of the house is available as a meeting space and includes a kitchen and restrooms. **Distance:** This park is approximately: • 1,670 feet from the nearest limits of construction for the BRT Alternative; • 1,685 feet from the nearest dedicated bus lanes in the BRT Alternative; • 1,850 feet from the nearest TCE for the BRT Alternative; and • 1,960 feet from the nearest station (Huntington Drive at Marengo Avenue) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Eddie Park and House because it would not result in proximity impacts on that park.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Garfield Park 1750 Mission Street **Owner/Operator:** City of South Pasadena **Description:** This 7.6-acre park provides tennis courts, a playground, and a garden area. **Distance:** This park is approximately: • 760 feet from the nearest limits of construction for the BRT Alternative; • 790 feet from the nearest dedicated bus lanes and station (Fair Oaks Avenue at Mission Street) in the BRT Alternative; and • 840 feet from the nearest TCE for the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative and would not be used by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Garfield Park because it would not result in proximity impacts on that park.
Library Park 1102 Oxley Street **Owner/Operator:** City of South Pasadena **Description:** This 3.2-acre park provides tennis courts, a half basketball court, a playground, and a baseball field. **Distance:** This park is approximately: • 1,400 feet from the nearest limits of construction for the BRT Alternative; • 1,430 feet from the nearest TCE and dedicated bus lanes in the BRT Alternative; and • 1,460 feet from the nearest station (Fair Oaks Avenue at Mission Street) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Library Park because it would not result in proximity impacts on that park.
Orange Grove Park and Recreation Building 815 Mission Street **Owner/Operator:** City of South Pasadena **Description:** This 2.5-acre park provides a lighted softball and soccer field, two lighted tennis courts, picnic tables, a small playground, drinking fountains, bleachers, and a bicycle rack. The Orange Grove Park Recreation Center is a 9,500-square-foot facility located in Orange Grove Park. A wide range of programs for families and children are offered at this Recreation Center. The first floor of the Recreation Center is used for recreation and day care programs. The second floor contains a meeting room and a small teen center. **Distance:** This park is approximately: • 2,790 feet from the nearest TCE for the BRT Alternative; • 2,800 feet from the nearest limits of construction for the BRT Alternative; and 2,810 feet from the nearest dedicated bus lanes and station (Fair Oaks Avenue at Mission Street) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of Orange Grove Park and Recreation Building because it would not result in proximity impacts on those facilities.
War Memorial Park 435 Fair Oaks Avenue **Owner/Operator:** City of South Pasadena	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Description: This 1.8-acre park includes the two-story, 12,000-square-foot War Memorial Building that was constructed in 1921 on the site of the former Oak Lawn Park. It is a City of South Pasadena cultural heritage landmark. On the second floor of the building, there is a multipurpose room with a kitchen, which is used for events such as banquets and meetings for large groups. The first floor contains smaller meeting rooms, storage space, and restrooms. The Park also includes a landscaped memorial garden and on-site parking. War Memorial Park is located between Fair Oaks Avenue on the east and the Metro Gold Line tracks on the west. **Distance:** This park is: • Adjacent to the limits of construction and the dedicated bus lanes in the BRT Alternative; • Approximately 100 feet from the nearest TCE for the BRT Alternative; and • Approximately 1,475 feet from the nearest station (Fair Oaks Avenue at Mission Street) in the BRT Alternative.	extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of South Pasadena. Compliance with those measures during construction of the BRT Alternative facilities adjacent to War Memorial Park would substantially reduce the short-term air quality effects on the park. Operation of the BRT Alternative in 2020 would result in reduced regional vehicle and GHG emissions compared to existing 2012 and 2020 No Build Alternative conditions. Operation of the BRT Alternative in 2035 would result in decreases in regional vehicle emissions compared to existing 2012 conditions and minor increases or decreases in regional vehicle emissions compared to the 2035 No Build Alternative conditions. Operation of the BRT Alternative in 2020 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2020, the BRT Alternative would result in no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions. In 2035, the BRT Alternative would result in minor increases or decreases or no change in MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build Condition. As a result, operation of the BRT Alternative would not result in adverse air quality impacts on War Memorial Park. **Noise:** Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of South Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the BRT Alternative facilities adjacent to War Memorial Park would substantially reduce the short-term noise effects on the school. The uses at War Memorial Park largely occur within the War Memorial Building. There is a landscaped memorial garden on the northern part of the site occupied by the War Memorial Park. The 2035 noise level at this park under the BRT Alternative would be 67 dBA, 2 dBA higher than the 2035 noise level under the No Build Alternative (65 dBA). Although the 2035 predicted noise levels at this park under the BRT Alternative would be at the 67 dBA NAC for Activity Category C uses, the 2 dBA increase over the No Build Alternative would not be perceptible and therefore would not be expected to result in long-term noise impacts on the recreation resources at War Memorial Park. **Traffic:** Construction of the improvements in the BRT Alternative adjacent to War Memorial Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at War Memorial Park. In the long term, the operation of the BRT Alternative along Fair Oaks Avenue will not affect existing pedestrian access to/from War Memorial Park and will not affect vehicle access to the park to/from Mound Avenue. Although bus volumes on Fair Oaks

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Avenue may change as a result of the BRT Alternative, the pedestrian and vehicle access to and from War Memorial Park would be the same as the existing access. **Visual Resources:** Patrons of War Memorial Park currently have views of at-grade Fair Oaks Avenue to the east, elevated Oak Lawn Avenue to the south, and railroad tracks to the west. As a result, views from within War Memorial Park are not an important feature of this park. During construction, park visitors will have views of construction equipment and activities within Fair Oaks Avenue. In the long term, views of Fair Oaks Avenue from within War Memorial Park will be very similar to existing views of that roadway. In addition, visitors will see more buses operating along Fair Oaks Avenue compared to existing conditions. **Summary:** In summary, the BRT Alternative would not cause a constructive use of War Memorial Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.
Recreation Resources at Marengo Elementary School (K to 5th) 1400 Marengo Avenue **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,135 feet from the nearest TCE for the BRT Alternative; • 1,145 feet from the nearest limits of construction for the BRT Alternative; • 1,165 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 2,550 feet from the nearest station (Huntington Drive at Marengo Avenue) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Marengo Elementary School because it would not result in proximity impacts on those recreation resources.

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at South Pasadena High School (9th to 12th) 1401 Fremont Avenue **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 990 feet from the nearest limits of construction for the BRT Alternative; • 1,010 feet from the nearest dedicated bus lanes in the BRT Alternative; • 1,035 feet from the nearest TCE for the BRT Alternative; and • 2,450 feet from the nearest station (Huntington Drive at Marengo Avenue) in the BRT Alternative.	The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative and would not be used by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at South Pasadena High School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at South Pasadena Middle School (6th to 8th) 1500 Fair Oaks Avenue **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 165 feet from the nearest limits of construction for the BRT Alternative; • 170 feet from the nearest TCE for the BRT Alternative; • 180 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 2,620 feet from the nearest station (Huntington Drive	**Use of Land for a TCE:** The BRT Alternative would not result in permanent incorporation of land or permanent easements at this resource. The construction of the BRT Alternative would require an approximately 284-square-foot (0.006-acre) TCE at South Pasadena Middle School, on the east side of Fair Oaks Avenue and the north side of the school property. The TCE would be approximately 300 feet west of any recreation uses on the school property, would not affect access to those recreation uses, and would be separated from those recreation uses by intervening school buildings. Because the TCE would not affect the recreation uses at South Pasadena Middle School, it would not trigger the requirements for approval under Section 4(f) and no further analysis of that TCE is needed. **Air Quality:** Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the BRT Alternative. **Noise:** Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
at Marengo Avenue) in the BRT Alternative.	experience short- or long-term noise effects under the BRT Alternative. **Traffic:** Construction of the improvements in the BRT Alternative within approximately 165 feet of South Pasadena Middle School could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation facilities at South Pasadena Middle School. Based on the distance from the nearest operation of any BRT Alternative improvements and because the BRT Alternative would not result in any permanent changes in access to/from this school, the recreation facilities at this school would not experience long-term traffic and transportation effects under the BRT Alternative. **Visual Resources:** Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the BRT Alternative. **Summary:** In summary, the BRT Alternative would not cause a constructive use of the recreation resources at South Pasadena Middle School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those recreation resources.

Source: LSA Associates, Inc. (2014). Refer also to Chapter 5, References and Preparers, for a list of references used to research resources potentially protected under the requirements of Sections 4(f) and 6(f).

[1] Only resources within 0.5 mile of improvements in the BRT Alternative are evaluated in this table. Cities and communities that do not contain BRT Alternative improvements are not included in this table. Refer to Figure 3.3-1 for the locations of the resources discussed in this table.

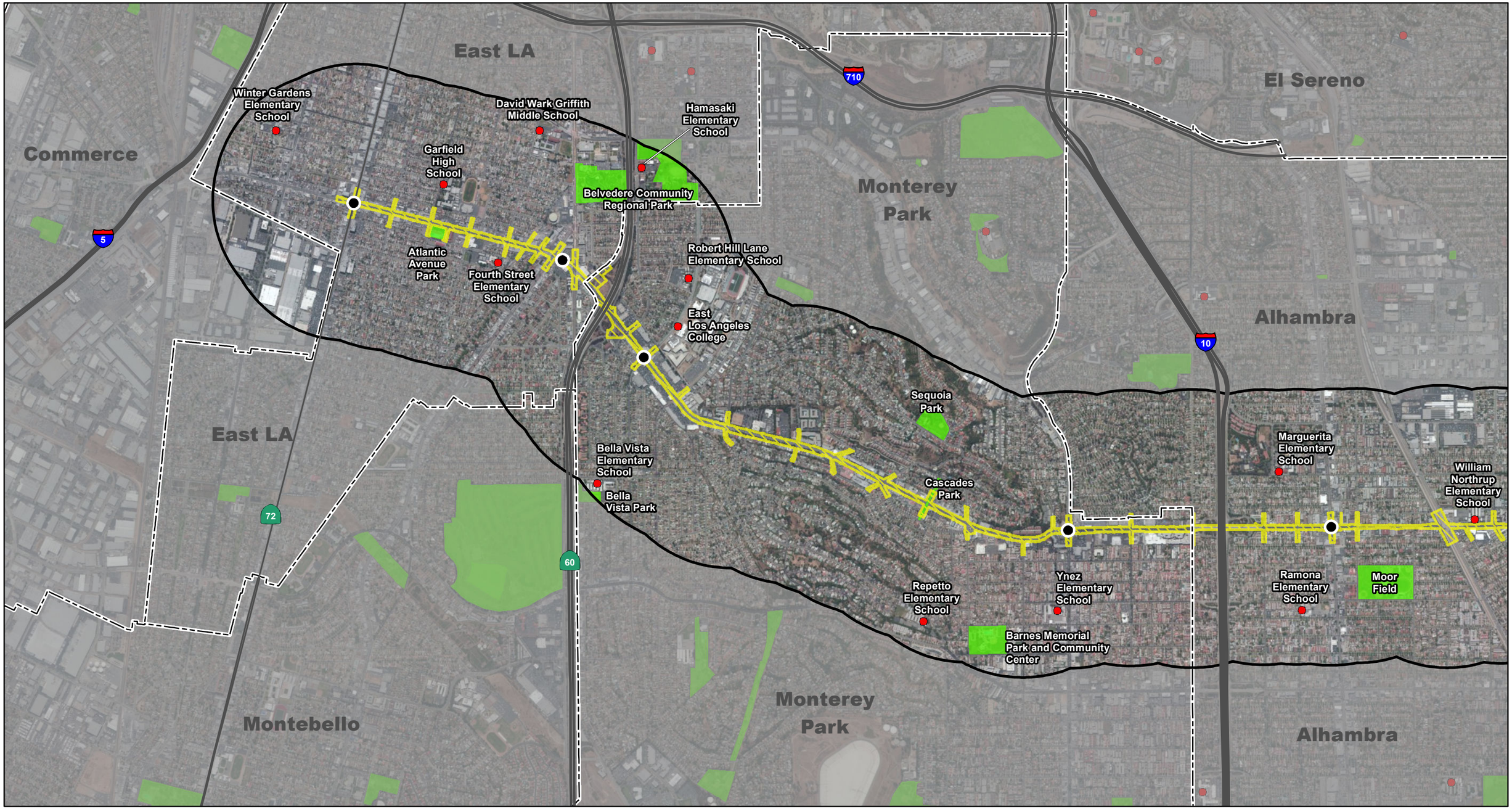
[2] The following distances were measured to assess the potential for short-term proximity impacts on Section 4(f) resources under the BRT Alternative:

- **Limits of Construction:** This is the area anticipated to be disturbed during construction of the improvements in the BRT Alternative.
- **Temporary Construction Easement:** This is a specific area that is anticipated to be disturbed during construction of improvements in the BRT Alternative. This may include areas needed temporarily for materials or equipment storage, or construction of the improvements. The defined TCEs are areas outside the limits of the permanent improvements and permanent right of way for the BRT Alternative. Areas used for TCEs would be restored to their original or better condition prior to returning those areas to the property owners.

The following distances were measured to assess the potential for long-term proximity impacts on Section 4(f) resources under the BRT Alternative:

- **Limits of Dedicated Bus Lanes:** This defines the edges of the dedicated bus lanes.
- **Bus Station:** This defines a designated bus stop for express services operating in the dedicated bus lanes provided in the BRT Alternative.
- **Right of Way:** This is the area defined as the maximum limits of new right of way acquired for the improvements under the BRT Alternative. The limits of the new right of way may be farther from a Section 4(f) type resource than the limits of the dedicated bus lanes because BRT improvements constructed in areas within existing public right of way may be closer to the resource than the improvements constructed in areas of new right of way.

BRT = Bus Rapid Transit
dBA = A-weighted decibels
FY = Fiscal Year
GHG = greenhouse gas
L&WCF Act = Land and Water Conservation Fund Act
MSAT = mobile source air toxics
NAC = noise abatement criteria
TCE = temporary construction easement
TMP = Transportation Management Plan



LEGEND

- BRT Alternative Limits of Construction
- BRT Station
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

I:\CHM1105\GIS\MXD_EIR_EIS\App_B\BRT_SchoolsParksRec.mxd (10/29/2014)

FIGURE 3.3-1
Sheet 1 of 2

SR 710 North Study

Resources within a Half-Mile of the BRT Alternative

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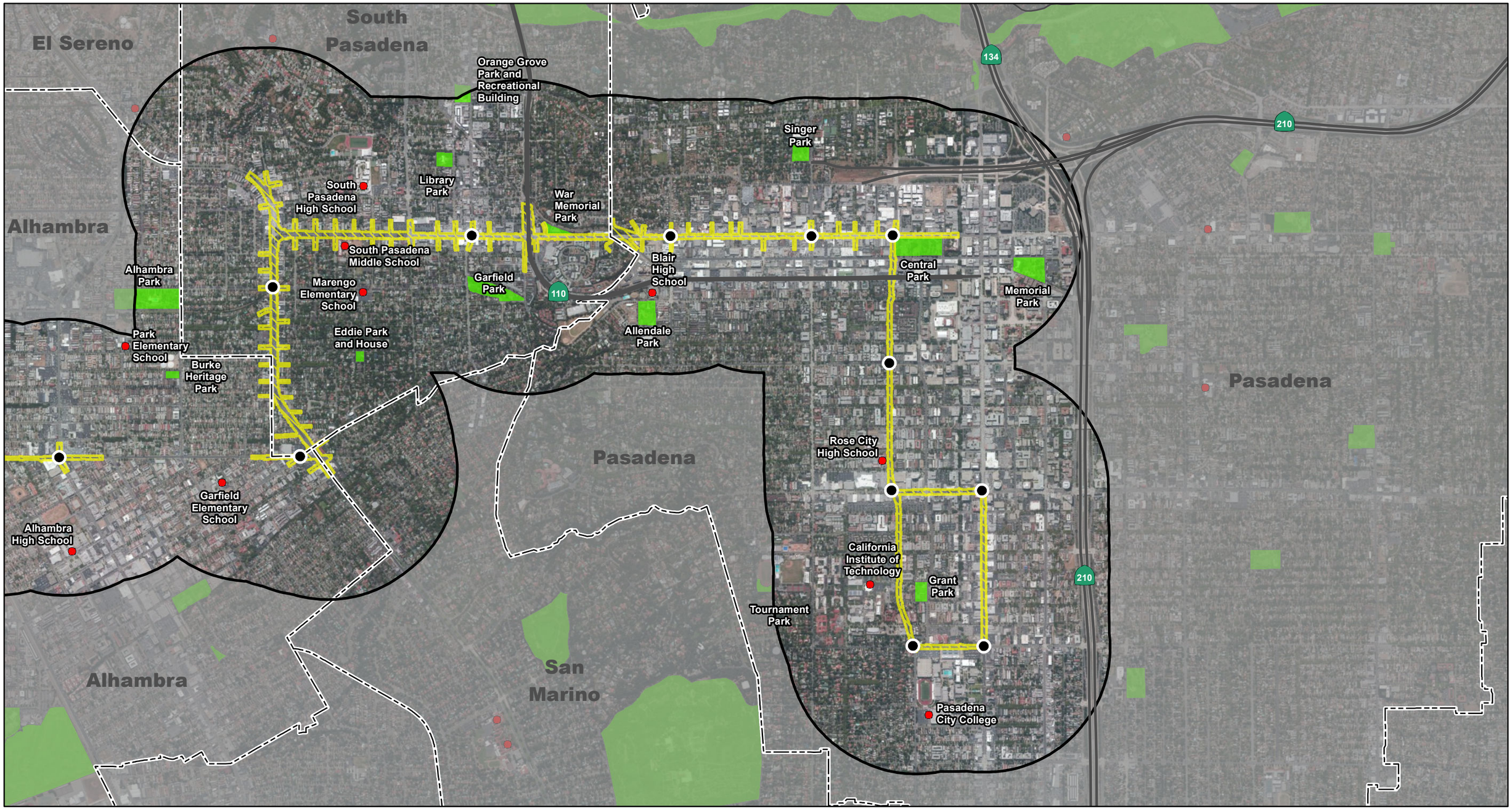

LEGEND

- BRT Alternative Limits of Construction
- BRT Station
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

I:\CHM1105\GIS\MXD_EIR_EIS\App_B\BRT_SchoolsParksRec.mxd (10/29/2014)

FIGURE 3.3-1
Sheet 2 of 2

SR 710 North Study

Resources within a Half-Mile of the BRT Alternative

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TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
CITY OF ALHAMBRA	
Alhambra Park 500 North Palm Avenue **Owner/Operator:** City of Alhambra **Description:** This 15.0-acre park provides picnic tables with covered shelters, playground equipment, barbecues, tennis courts, volleyball courts, an outdoor basketball court, a meeting room, an activity room, a swimming pool, an open grass area, a band shell, and restrooms. The Alhambra Veteran's Memorial Wall is located at the north end of the park. Approximately $5,922 of L&WCF Act funds were used to renovate the band shell, replace its wood floor, and add electricity at this park in FY 1991/1992. As a result, the band shell at Alhambra Park is subject to the requirements for protection under Section 6(f). **Distance:** This park is approximately: • 1,600 feet from the nearest part of the tunnel alignment in the LRT Alternative and the zone of disturbance for the tunnel; and • 2,250 feet from the nearest station (Huntington Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative tunnel improvements and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative tunnel improvements and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fremont Avenue Haul Route[3]:** Alhambra Park is approximately 0.3 mile east of the haul route alignment on Fremont Avenue. Based on the distance of this park from that haul route and the presence of intervening land uses, the use of Fremont Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on Alhambra Park. The Fremont Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Alhambra Park as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Alhambra Park because it would not result in proximity impacts on that park.

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Section 6(f): Because the LRT Alternative would not require the permanent acquisition of any land from Alhambra Park, the requirements of Section 6(f) would not apply to this park.
Emery Park 2709 Mimosa Street **Owner/Operator:** City of Alhambra **Description:** This 0.7-acre park provides picnic tables, playground equipment, barbecues, an activity room, a kitchen facility, an open grass area, and restrooms. Approximately $100,800 of L&WCF Act funds were used to construct picnic areas, a play area, restrooms, irrigation, landscaping, turf, parking, and lighting at this park in FY 1982/1983. As a result, these improvements at Emery Park are subject to the requirements for protection under Section 6(f). **Distance:** This park is approximately: • 350 feet from the nearest part of the zone of disturbance of the tunnel alignment; • 430 feet from the nearest part of the tunnel alignment and the nearest station excavation area; and • 450 feet from the nearest station (Alhambra Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel and station) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel and station) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Construction of the improvements in the LRT Alternative within approximately 350 feet of Emery Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the LRT Alternative would not result in short-term adverse impacts related to traffic and transportation at Emery Park. Based on the distance of this park from the nearest operation of any LRT Alternative improvements and because the LRT Alternative would not result in any permanent changes in access to/from this park, this park would not experience long-term traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the nearest tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel and station) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fremont Avenue Haul Route[3]:** Emery Park is approximately 0.1 mile west of the haul route alignment on Fremont Avenue. Based on the distance of this park from that haul route and the presence of intervening land uses, the use of Fremont Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on Emery Park. The Fremont Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Emery Park as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Emery Park because it would

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	not result in proximity impacts on that park. **Section 6(f):** Because the LRT Alternative would not require the permanent acquisition of any land from Emery Park, the requirements of Section 6(f) would not apply to this park.
Gateway Plaza Park Northwest corner of West Valley Boulevard and South Fremont Avenue **Owner/Operator:** City of Alhambra **Description:** This 0.5-acre park at the corner of Valley Boulevard and South Fremont Avenue welcomes visitors to the City with a Moorish-style arch that symbolizes Alhambra as the "Gateway to the San Gabriel Valley." The park also includes landscaping and walkways. **Distance:** This park is approximately: • 2,500 feet from the nearest part of the zone of disturbance for the tunnel and the tunnel alignment in the LRT Alternative; and • 2,800 feet from the nearest station (Alhambra Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Gateway Plaza Park because it would not result in proximity impacts on that park.
Recreation Resources at Emery Park Elementary School (K to 8th) 2821 West Commonwealth Avenue **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 770 feet from the nearest part of the zone of	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
disturbance for the tunnel and the tunnel alignment in the LRT Alternative; • 880 feet from the parking facility for the Alhambra Station; • 960 feet from the nearest part of the excavation area for the Alhambra Station; and • 1,280 feet from the nearest station (Alhambra Station).	not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of the recreation resources at this school from the tunnel construction and operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fremont Avenue Haul Route[3]:** Emery Park Elementary School is approximately 0.2 mile west of the haul route alignment on Fremont Avenue. Based on the distance of the recreation resources at this school from that haul route and the presence of intervening land uses, the use of Fremont Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on the recreation resources at this school. The Fremont Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on the recreation resources at this school as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Emery Park Elementary School because it would not result in proximity impacts on those recreation resources.
CITY OF AZUSA (ALONG THE LRT SPOILS DISPOSAL HAUL ROUTES)[3]	
Valleydale Park 5525 North Lark Ellen Avenue **Owner/Operator:** Los Angeles County Department of Parks and Recreation **Description:** This park provides a wide range of amenities, including a baseball diamond, basketball court, children's play area, community room, computer center, fitness zone, picnic shelter, senior center, splash pad, and a walking path.	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest haul routes for the LRT Alternative, and the presence of intervening land uses, this park would not experience short-term air quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the park associated with the haul routes. **Noise:** Based on the distance of this park from the nearest haul routes for the LRT Alternative, and the presence of intervening land uses, this park would not experience short-term noise effects as a result of the

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Distance: This park is 0.5 mile from the haul routes on Arrow Highway and Vincent Avenue. No other activities or facilities in the LRT Alternative are located in the vicinity of this park.	haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the park associated with the haul routes. **Traffic:** Because the streets that provide access to this park would not be used by haul trucks during construction of the LRT Alternative, this park would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the park as a result of the use of the haul routes. **Visual Resources:** Based on the distance of this park from the haul route for the LRT Alternative, and the presence of intervening land uses, this park would not experience short-term visual effects as a result of the use of the haul routes under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Valleydale Park because the proximity impacts of that Alternative would not substantially impair the protected activities, features, or attributes of that park.
CITY OF BALDWIN PARK (ALONG THE LRT SPOILS DISPOSAL HAUL ROUTES)[3]	
Recreation Resources at Margaret Heath Elementary School (K to 6th) 14321 School Street **Owner/Operator:** Baldwin Park Unified School District **Description:** The school includes both asphalt and grass outdoor play areas. **Distance:** This school is approximately 0.3 mile from the haul routes on Live Oak Avenue and Arrow Highway. No other activities or facilities in the LRT Alternative are located in the vicinity of this school.	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of the recreation resources at this school from the nearest haul routes for the LRT Alternative, and the presence of intervening land uses, these resources would not experience short-term air quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at the school associated with the haul routes. **Noise:** Based on the distance of the recreation resources at this school from the nearest haul routes for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term noise effects as a result of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the recreation resources at the school associated with the haul routes. **Traffic:** Because the streets that provide access to the recreation resources at this school would not be used by haul trucks during construction of the LRT Alternative, they would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at the school as a result of the use of the haul routes. **Visual Resources:** Based on the distance of this school from the haul route for the LRT Alternative, and the

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	presence of intervening land uses, the recreation resources at this school would not experience short-term visual effects as a result of the use of the haul routes under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Margaret Heath Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Olive Middle School (6th to 8th) 13701 East Olive Street **Owner/Operator:** Baldwin Park Unified School District **Description:** The school includes both asphalt and grass outdoor play areas. **Distance:** This school is approximately 0.4 mile from the haul route on Live Oak Avenue. No other activities or facilities in the LRT Alternative are located in the vicinity of this school.	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of the recreation resources at this school from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term air quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at the school associated with the haul routes. **Noise:** Based on the distance from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term noise effects as a result of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the recreation resources at the school associated with the haul routes. **Traffic:** Because the streets that provide access to the recreation resources at this school would not be used by haul trucks during construction of the LRT Alternative, they would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at the school as a result of the use of the haul routes. **Visual Resources:** Based on the distance of the recreation resources at this school from the haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term visual effects as a result of the use of the haul routes under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Olive Middle School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Pleasant View Elementary School (K to 6th) 14900 East Nubia Street **Owner/Operator:** Baldwin Park Unified School District	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of the recreation resources at this school from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, they would not experience short-term air

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Description: The school includes both asphalt and grass outdoor play areas with sports courts and fields. **Distance:** This school is approximately 0.3 mile from the haul route on Arrow Highway. No other activities or facilities in the LRT Alternative are located in the vicinity of this school.	quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at the school associated with the haul routes. **Noise:** Based on the distance of the recreation resources at this school from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term noise effects as a result of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the recreation resources at the school associated with the haul routes. **Traffic:** Because the streets that provide access to the recreation resources at this school would not be used by haul trucks during construction of the LRT Alternative, they would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at the school as a result of the use of the haul routes. **Visual Resources:** Based on the distance of the recreation resources at this school from the haul route for the LRT Alternative, and the presence of intervening land uses, they would not experience short-term visual effects as a result of the use of the haul routes under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Pleasant View Elementary School because it would not result in proximity impacts on those recreation resources.
CITY OF COVINA/UNINCORPORATED LOS ANGELES COUNTY (ALONG THE LRT SPOILS DISPOSAL HAUL ROUTES ALONG VINCENT AVENUE)[3]	
Recreation Resources at Alice M. Ellington Elementary School (K to 5th) 5034 North Clydebank Avenue **Owner/Operator:** Azusa Unified School District **Description:** The school includes both asphalt and grass outdoor play areas. **Distance:** This school is approximately 0.25 mile east of the segment of the haul route on Vincent Avenue. No other activities or facilities in the LRT Alternative are located in the vicinity of this school.	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term air quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at the school associated with the haul routes. **Noise:** Based on the distance from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term noise effects as a result of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the recreation resources at the school associated with the haul routes.

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Traffic: Because the streets that provide access to the recreation resources at this school would not be used by haul trucks during construction of the LRT Alternative, they would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at the school as a result of the use of the haul routes. **Visual Resources:** Based on the distance from the haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term visual effects as a result of the use of the haul routes under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Alice M. Ellington Elementary School because it would not result in proximity impacts on those recreation resources.
EAST LOS ANGELES (UNINCORPORATED LOS ANGELES COUNTY)	
Belvedere Community Regional Park 4914 East Cesar E. Chavez Avenue **Owner/Operator:** Los Angeles County Department of Parks and Recreation **Description:** This approximately 31-acre park serves as the recreation hub of the East Los Angeles community. The park includes a skate park, a children's play area with playground equipment, tennis courts, sports fields, a swimming pool, covered picnic tables, landscaped areas that include large trees shading the landscaped areas, restrooms, and on-site parking. L&WCF Act funds were used at this park as follows: • $172,930 to construct the lighted ball field, soccer field, landscaping, and irrigation in FY 1976/1977. • $197,969 to construct restrooms and parking spaces in FY 1978/1979. • $98,314 to construct swimming pool facilities in FY 1982/1983. These improvements at Belvedere Community Regional Park are subject to the requirements for protection under	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the light rail facilities in Mednik Avenue west of Belvedere Community Regional Park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes Los Angeles County. Compliance with those measures during construction of the LRT Alternative facilities west of Belvedere Community Regional Park would substantially reduce the short-term air quality effects on the park. As a result, the construction of the LRT Alternative facilities west of Belvedere Community Regional Park would not interfere with the protected activities, features, and attributes of Belvedere Community Regional Park on a temporary basis. Operation of the LRT Alternative in 2025 would result in reduced regional vehicle and GHG emissions compared to existing 2012 and 2025 No Build Alternative conditions. Operation of the LRT Alternative in 2035 would result in reduced regional vehicle emissions compared to existing 2012 and 2035 No Build Alternative conditions. Operation of the LRT Alternative in 2025 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2025, the LRT Alternative would result in no change or minor reductions or increases in MSAT emissions (depending on the individual MSAT pollutants) compared to 2025 No Build Alternative conditions. In 2035, the LRT Alternative would result in reduced MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build conditions. Operation of the LRT Alternative would result in reduced GHG emissions in 2025 and 2035, compared to existing 2012, and No Build Alternative conditions. As a result, operation of the LRT Alternative would not result in adverse air quality impacts on Belvedere Community Regional Park.

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Section 6(f). **Distance:** The west side of this park is: • Adjacent to the eastern edge of the right of way for Mednik Avenue; and • Approximately 65 feet east of the nearest part of the elevated LRT structure which is within the right of way for Mednik Avenue approximately 0.25 mile south of an LRT station at Floral Avenue and approximately 0.25 mile north of an LRT station at 3rd Street near an existing Metro Gold Line station.	**Noise:** Construction of the light rail facilities in Mednik Avenue west of Belvedere Community Regional Park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the County of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the LRT Alternative facilities west of Belvedere Community Regional Park would substantially reduce the short-term noise effects on the park. As a result, the construction of the LRT Alternative facilities west of Belvedere Community Regional Park would not interfere with the protected activities, features, and attributes of Belvedere Community Regional Park on a temporary basis. The recreation uses at Belvedere Community Regional Park are active uses. The 2035 noise level during the operation of the elevated segment of the LRT facility on Mednik Avenue west of Belvedere Community Regional Park, between East 1st Street and Cesar Chavez Avenue, is estimated to be 62 dBA. Because the future predicted noise level at this park under the LRT Alternative (62 dBA) is less than the 67 dBA NAC for Activity Category C uses, the LRT Alternative operational noise would not result in long-term noise impacts at Belvedere Community Regional Park. **Traffic:** The two existing driveways into the parking area on the west side of Belvedere Community Regional Park from Mednik Avenue would be closed temporarily as the street and sidewalk improvements in the adjacent right of way for Mednik Avenue are constructed during the street modifications to accommodate the elevated light rail structure in the middle of Mednik Avenue. Only one driveway will be closed at a time, and signing will be provided along Mednik Avenue and within Belvedere Community Regional Park that directs park patrons to the open driveway. If warranted, based on the construction activities adjacent to and in the vicinity of the open driveway, flag persons will be provided to ensure that pedestrians and vehicles traverse those areas safely. The existing crosswalks across East 1st Street, Mednik Avenue, and Cesar Chavez Avenue may be temporarily closed during construction of the LRT Alternative facilities. This could affect pedestrian access to Belvedere Community Regional Park. Alternative pedestrian routes will be provided to ensure that park patrons continue to have access to/from Belvedere Community Regional Park. The existing crosswalks across East 1st Street, Mednik Avenue, and Cesar Chavez Avenue would be returned to their original conditions after the completion of construction of the LRT Alternative facilities in those areas, thereby restoring the existing pedestrian access points to/from Belvedere Community Regional Park from the adjoining neighborhoods. Although traffic volumes on 1st Street and Mednik Avenue may change as a result of the LRT Alternative, the pedestrian access to and from Belvedere Community Regional Park would be the same as existing access via the existing crosswalks and sidewalks. Operation of the light rail facility would not interfere with pedestrian and vehicular access to/from Belvedere Community Regional Park. There are two light rail stations in the vicinity of Belvedere Community Regional Park, one approximately 0.25

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	mile to the north at Floral Avenue and one approximately 0.25 mile to the south at 3rd Street near an existing Metro Gold Line station. As a result, the LRT Alternative would provide improved accessibility to Belvedere Community Regional Park for patrons who do not live in the immediate vicinity of Belvedere Community Regional Park. As a result, the construction and operation of the elevated segment of the LRT facility west of Belvedere Community Regional Park would not interfere with the protected activities, features, and attributes of Belvedere Community Regional Park on either a temporary or permanent basis. **Vibration:** The construction and operation of the elevated segment of the LRT facility on support columns in the center of the right of way for Mednik Avenue would not result in ground-borne noise or vibration effects that could be felt by patrons in, or otherwise affect patrons of, Belvedere Community Regional Park. As a result, the construction and operation of the elevated segment of the LRT facility west of Belvedere Community Regional Park would not interfere with the protected activities, features, and attributes of Belvedere Community Regional Park on either a temporary or permanent basis. **Visual Resources:** Existing views from the western part of Belvedere Community Regional Park include views of Mednik Avenue, and residential and non-residential uses on the west side of Mednik Avenue. Traffic on Mednik Avenue would be approximately 20 feet closer to viewers in Belvedere Community Regional Park, and the elevated LRT facility would be an additional urban feature in views from Belvedere Community Regional Park. The changes in views from Belvedere Community Regional Park as a result of the LRT Alternative are not considered adverse because, as an active use park, patrons of Belvedere Community Regional Park do not visit Belvedere Community Regional Park to view areas outside Belvedere Community Regional Park and are not likely to be particularly sensitive to views of Belvedere Community Regional Park property. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Belvedere Community Regional Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.
Los Angeles County CSS-Centro Maravilla Service Center 4716 East Cesar E. Chavez Avenue **Owner/Operator:** Los Angeles County **Description:** The Centro Maravilla Service Center is a multi-purpose facility that provides a range of educational, social, and recreational services and activities, comprehensive information and referrals, and translation services. **Distance:** This Service Center is approximately: • 785 feet from the temporary impact area for the aerial	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this Service Center from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this Service Center would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this Service Center from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this Service Center would not experience temporary construction or long-term operation noise effects under the LRT Alternative.

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
LRT facility; • 820 feet from the nearest part of the aerial LRT facility; and • 1,810 feet from the nearest station (Civic Center Station).	**Traffic:** Because the local streets that provide access to this Service Center are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations, this Service Center would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on this Service Center. Based on the distance of this Service Center from the operations in the LRT Alternative, this Service Center would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative. **Visual Resources:** Based on the distance of this Service Center from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this Service Center would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at the Los Angeles County CSS-Centro Maravilla Service Center because it would not result in proximity impacts on those resources.
Recreation Resources at Alfonso Perez Special Education Center (elementary and secondary) 4540 Michigan Avenue **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,850 feet from the temporary impact area for the nearest part of the aerial LRT facility; • 1,880 feet from the permanent impact area and the nearest part of the aerial LRT facility; and • 2,100 feet from the nearest station (Civic Center Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on the recreation resources at this school. Based on the distance of the recreation resources at this school from the operations in the LRT

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during operation of the LRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation uses at the Alfonso Perez Special Education Center because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Brooklyn Avenue Elementary School (K to 8th) 4620 East Cesar E. Chavez Avenue **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,400 feet from the temporary impact area for the aerial LRT facility; • 1,425 feet from the nearest part of the aerial LRT facility; and • 2,100 feet from the nearest station (Civic Center Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on the recreation resources at this school. Based on the distance from the operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Brooklyn Avenue Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at City Terrace Elementary School (K to 5th) 4350 City Terrace Drive **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,800 feet from the temporary impact area and the nearest part of the aerial LRT facility; and • 2,800 feet from the nearest station (Civic Center Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on the recreation resources at this school. Based on the distance from the operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at City Terrace Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at David Wark Griffith Middle School (6th to 8th) 4765 East Fourth Street	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Owner/Operator: Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 915 feet from the southern end of the aerial LRT facility and the nearest station (Civic Center Station).	facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on the recreation resources at this school. Based on the distance of this school from the operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative. **Visual Resources:** Based on the distance of the recreation resources at this school from the nearest construction of LRT Alternative improvements (aerial facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at David Wark Griffith Middle School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Morris K. Hamasaki Elementary School (K to 6th) 4865 East First Street **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 470 feet from the temporary impact area for the aerial LRT facility;	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 690 feet from the nearest part of the aerial LRT facility; and • 1,000 feet from the nearest station (Civic Center Station).	effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on the recreation resources at this school. Based on the distance of the recreation resources at this school from the operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative. **Visual Resources:** Based on the distance of the recreation resources at this school from the nearest construction of LRT Alternative improvements (aerial facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Morris K. Hamasaki Elementary School because it would not result in proximity impacts on those recreation resources.
EL SERENO (COMMUNITY IN THE CITY OF LOS ANGELES)	
El Sereno Arroyo Playground 5520 Concord Avenue **Owner/Operator:** City of Los Angeles **Description:** This 1-acre park provides grassy hills, a playground, a Fitness Zone for adults, walking paths, picnic tables, mosaics, decorative fencing, and a garden. The park, which opened in December 2012, includes safety features such as fences with gates that lock automatically when the park is closed, solar powered security cameras, and lighting. The park is located on land owned by Caltrans and provided to the City for use as a park for a lease period of 25 years. **Distance:** This park is approximately:	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative tunnel improvements and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative tunnel improvements and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 300 feet from the zone of disturbance for the nearest improvement in the LRT Alternative; • 335 feet from the tunnel alignment; • 500 feet from the nearest part of the LRT maintenance yard; and • 3,560 feet from the nearest station (Alhambra Station). The land on which this playground is located is owned by the State of California (Caltrans) and is leased to the City of Los Angeles for the playground use. Under the lease agreement (January 23, 2012), "It is agreed and understood, the creation of a publicly accessible park by this agreement does not create a public park within the meaning of Section 4(f)…said park is specifically exempt from the application of Section 4(f)." As a result, the El Sereno Arroyo Playground would not be subject to the requirements for approval under Section 4(f). However, this playground was included in this analysis to assess the potential for direct and indirect adverse impacts on this playground by the LRT Alternative. The inclusion of this playground in this analysis does not trigger the requirements for approval under Section 4(f).	operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of El Sereno Arroyo Playground because it would not result in proximity impacts on that playground.
Recreation Resources at the Billie Jean King Sports Complex at California State University-Los Angeles (Cal State LA) 5151 State University Drive **Owner/Operator:** The California State University System **Distance:** This Sports Center is: • Adjacent to the right of way limits for the Cal State LA Station and parking area for the Cal State LA Station, and to the temporary impact area for the aerial LRT facility.	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. The permanent right of way and the temporary disturbance areas will be adjacent to, but not encroach into, the part of the Cal State LA property occupied by the Billie Jean King Sports Complex. **Air Quality:** Construction of the improvements in the LRT Alternative in the vicinity of this Sports Complex could result in short-term dust and equipment emissions that could extend into the Sports Complex property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Los Angeles. Compliance with those measures during construction of the LRT Alternative facilities in the vicinity of the Sports Complex would substantially reduce the short-term air quality effects on the Sports Complex. Operation of the LRT Alternative in 2025 would result in reduced regional vehicle emissions compared to existing 2012 and 2025 No Build Alternative conditions. Operation of the LRT Alternative in 2035 would result

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	in reduced regional vehicle emissions compared to existing 2012 and 2035 No Build Alternative conditions. Operation of the LRT Alternative in 2025 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2025, the LRT Alternative would result in no change or minor reductions or increases in MSAT emissions (depending on the individual MSAT pollutants) compared to 2025 No Build Alternative conditions. In 2035, the LRT Alternative would result in reduced MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build conditions. Operation of the LRT Alternative would result in reduced GHG emissions in 2025 and 2035, compared to existing 2012, and No Build Alternative conditions. As a result, operation of the LRT Alternative would not result in adverse air quality impacts on the Billie Jean King Sports Complex. **Noise:** Construction of the improvements in the LRT Alternative in the vicinity of this Sports Complex could result in short-term noise levels that could impact the Sports Complex. Those construction activities would be required to comply with the City of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the LRT Alternative facilities in the vicinity of the Sports Complex would substantially reduce the short-term noise effects on the Sports Complex. The recreation uses at the Sports Complex are active uses. The 2035 noise level during operation of the LRT Alternative improvements in the vicinity of the Sports Complex would be 53.1 dBA. Because the future predicted noise level at this sports complex under the LRT Alternative (53.1 dBA) is less than the 67 dBA NAC for activity category C uses, the operation of the LRT Alternative would not result in long-term noise impacts on the Sports Complex. **Traffic:** Construction of the improvements in the LRT Alternative adjacent to this Sports Complex could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the LRT Alternative would not result in short-term adverse impacts related to traffic and transportation at this Sports Complex. In the long term, students, faculty, and visitors will be able to access the recreation uses at the Sports Complex from Circle Drive the same as under existing conditions. Pedestrian and vehicle access to the Sports Complex will be the same as under existing conditions during operation of the LRT Alternative. **Ground-Borne Noise and Vibration:** Because the Sports Complex is not a very sensitive receptor (e.g., a residence or a performing arts center), potential ground-borne noise and vibration associated with the construction and operation of the LRT Alternative adjacent to the Sports Complex would not result in adverse effects on the recreation facilities at this Sports Complex. **Visual Resources:** The closest parts of the Billie Jean King Sports Complex to the proposed light rail alignment and station are tennis courts, the Jesse Owens track and field, and a baseball diamond. Patrons of these types

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	of recreation uses would typically not use these recreation facilities to view land uses outside the recreation facility and, therefore, are not considered sensitive viewers. The patrons of these recreation uses already have views of urban land uses and structures, so the addition of the light rail line and station would not substantially change the character of views from this facility. As a result, the LRT Alternative improvements would not result in temporary construction or long-term operation visual effects at the Billie Jean King Sports Complex. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the Billie Jean King Sports Complex because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that sports complex.
Recreation Resources at Sierra Vista Elementary School (K to 6th) 4342 Alpha Street **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,155 feet from the zone of disturbance limits for the nearest part of the LRT Alternative tunnel; • 2,165 feet from the nearest part of the LRT Alternative tunnel; and • 4,000 feet from the nearest part of the parking lot for the Huntington Station.	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of the recreation resources at this school from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunnel construction and operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any LRT Alternative improvements and LRT Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fair Oaks Avenue Haul Route[3]:** Sierra Vista Elementary School is approximately 0.4 mile west of the haul route

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	alignment on Fair Oaks Avenue. Based on the distance from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on the recreation resources at this school. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative and, therefore, there would be no long term impacts on the recreation resources at Sierra Vista Elementary School as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Sierra Vista Elementary School because it would not result in proximity impacts on those recreation resources.
CITY OF IRWINDALE (ALONG THE LRT SPOILS DISPOSAL HAUL ROUTES)[3]	
Santa Fe Dam Recreation Area 15501 East Arrow Highway **Owner/Operator:** Los Angeles County Department of Parks and Recreation **Description:** Santa Fe Dam Recreational Area, at the foot of the San Gabriel Mountains, is an 836-acre facility with a 70-acre lake (Santa Fe Flood Control Basin) with year-round fishing and non-motorized watercraft usage. During the summer, the recreation area includes a 5-acre chlorinated swim beach and a children's water play area. The recreation area is home to many protected native plants and animals. A Nature Center operated and staffed by volunteers of the San Gabriel Mountains Regional Conservancy offers educational, interpretive and walking tours throughout the year. The recreation area also includes bicycle, walking, and equestrian trails; a snack bar; organized youth camping; and a bait and tackle shop. Approximately $72,100 of L&WCF Act funds were used to develop support facilities at the Santa Fe Dam Recreation Area in FY 1999-2000. As a result, these improvements at the Santa Fe Dam Recreation Area are subject to the requirements of Section 6(f). **Distance:** The nearest part of the recreation area is	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** These haul routes would be used only during construction of the LRT Alternative. The operation of trucks hauling spoils material to the disposal site and empty trucks returning to the construction sites could result in short-term dust and equipment emissions that could extend into the recreation area property. However, there are extensive requirements for the control of dust and equipment emissions during construction, including along haul routes, in the South Coast Air Basin. Compliance with those measures during the use of the spoils disposal haul routes for the LRT Alternative in the vicinity of the Santa Fe Dam Recreation Area would substantially reduce the short-term air quality effects of trucks operating on the haul routes on the recreation area. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the recreation area associated with the haul routes. **Noise:** During construction of the LRT Alternative, debris from the construction activities will be taken to off-site disposal sites. Typically, haul trucks (dump trucks) are loaded on the site and then follow a specific haul route to the disposal destination. In the City of Irwindale, the haul route will pass by the Santa Fe Dam Recreation Area. The number of haul truck trips will be small compared to the daily traffic volumes on East Arrow Highway. While a pass-by of a haul truck may be noticed due to the use of air brakes or the acceleration of the truck engine, the overall peak-hour and daily noise levels are not expected to increase substantially as a result of haul route traffic during construction of the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the recreation area associated with the haul routes. **Traffic:** As noted above, the haul route traffic during construction of the LRT alternative would be only a small amount of the daily traffic volumes on East Arrow Highway. As a result, that haul route traffic would not adversely affect travel to/from and access to/from the Santa Fe Dam Recreation Area. The haul routes would

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
immediately adjacent to the north side of Arrow Highway, from approximately Azusa Canyon Road to I-605. No other activities or facilities in the LRT Alternative are located in the vicinity of this recreation area.	not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the recreation area associated with the haul routes. **Visual Resources:** Trucks using the haul routes will be similar to trucks currently using Arrow Highway and Live Oak Avenue. Patrons of the recreation area currently have views of traffic, including trucks on Arrow Highway and I-605. As a result, views from within this recreation area are not an important feature of this recreation area. During the use of the haul routes, visitors to the recreation area will have views of haul trucks on I-605 and Arrow Highway similar to existing views of traffic on those roads. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term visual impacts on the recreation area associated with the haul routes. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the Santa Fe Dam Recreation Area because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that recreation area. **Section 6(f):** Because the LRT Alternative would not require the permanent acquisition of any land from the Santa Fe Dam Recreation Area, the requirements of Section 6(f) would not apply to this Recreation Area.
Irwindale Park and Jardin de Roca Park/Irwindale Skatepark (these facilities are across the street from each other) • ***Irwindale Park:*** 5050 North Irwindale Avenue • ***Jardin de Roca Park/Irwindale Skatepark:*** 5051 North Irwindale Avenue **Owner/Operator:** City of Irwindale **Descriptions:** • ***Irwindale Park:*** This park includes a swimming pool, the Alfred F. Herrera softball field, playground, picnic shelter, picnic areas, outdoor basketball court, volleyball sand court, and the Dan Diaz Recreation Center. • ***Jardin de Roca Park/Irwindale Skatepark:*** This skatepark includes a tear-drop-shaped concrete bowl and a "street" section with ledges, stairs, rails, and banks. The park also includes tennis courts, a tot lot, walking path, picnic areas, and outdoor basketball	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at these resources. **Air Quality:** Based on the distance of these parks from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, these parks would not experience short-term air quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on these parks associated with the haul routes. **Noise:** Based on the distance of theses parks from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, these parks would not experience short-term noise effects as a result of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on these parks associated with the haul routes. **Traffic:** Because the streets that provide access to these parks would not be used by haul trucks during construction of the LRT Alternative, these parks would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on these parks as a result of the use of the haul routes. **Visual Resources:** Based on the distance of these parks from the haul route for the LRT Alternative, and the presence of intervening land uses, these parks would not experience short-term visual effects as a result of

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
courts. **Distance:** The nearest parts of these parks are 0.2 mile south of the haul route on Arrow Highway.	the use of the haul routes under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Irwindale Park and Jardin de Roca Park/Irwindale Skatepark because it would not result in proximity impacts on those facilities.
CITY OF MONTEREY PARK	
Highlands Park 400 Casuda Canyon Drive **Owner/Operator:** City of Monterey Park **Description:** This 8.3-acre park adjacent to Monterey Highlands School provides lighted tennis courts, a children's area, open and shady space, restrooms, and on-site parking. **Distance:** This park is approximately: • 2,490 feet from the nearest part of the aerial LRT facility and the temporary disturbance limits for the LRT Alternative improvements; and • 3,900 feet from the nearest station (CSULA Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on this park. Based on the distance of this park from the operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Highlands Park because it would not result in proximity impacts on that park.
Pine Tree Park 2167 Arriba Drive **Owner/Operator:** City of Monterey Park	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Description: This 0.5-acre neighborhood park provides a picnic table and a children's play area. **Distance:** This park is approximately: • 1,935 feet from the maximum disturbance limits for the LRT Alternative and from the nearest part of the aerial LRT facility; and • 3,370 feet from the nearest station (Floral Station).	park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on this park. Based on the distance of this park from the operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Pine Tree Park because it would not result in proximity impacts on that park.
CITY OF PASADENA	
Allendale Park 1130 South Marengo Avenue **Owner/Operator:** City of Pasadena **Description:** This 2.9-acre park provides a lighted tennis court, a lighted softball diamond/multi-purpose field with bleachers, playground equipment, on-site parking, picnic tables, and drinking fountains. There is a public library within the boundary of this park. **Distance:** This park is approximately: • 1,325 feet from the zone of disturbance for the	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
nearest part of the tunnel in the LRT Alternative and from the nearest part of the LRT Alternative tunnel; and • 2,400 feet from the nearest station (Fillmore Station).	Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fair Oaks Avenue Haul Route[3]:** Allendale Park is approximately 0.3 mile east of the haul route alignment on Fair Oaks Avenue. Based on the distance of this park from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on this park. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Allendale Park as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Allendale Park because it would not result in proximity impacts on that park.
Central Park 275 South Raymond Avenue **Owner/Operator:** City of Pasadena **Description:** This 9.2-acre park provides 6 horseshoe pits, 2 lawn bowling courts, an open area, playground equipment, walkway lighting, restrooms, picnic tables, a rose garden, benches, and a clubhouse for the Pasadena Lawn Bowling Club, an affiliate of the American Lawn Bowling Association. **Distance:** This park is approximately: • 1,430 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; and • 1,505 feet from the nearest part of the LRT Alternative tunnel and the nearest station (Fillmore Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fair Oaks Avenue Haul Route[3]:** Central Park is immediately northeast of the haul route alignment on Fair Oaks Avenue. During construction of the LRT Alternative, debris from the construction activities will be taken to off-site disposal sites. Typically, haul trucks (dump trucks) are loaded on the site and then follow a specific haul route to the disposal destination. In the City of Pasadena, the haul route will pass by Central Park. The number of haul truck trips will be small compared to the daily traffic volumes on Fair Oaks Avenue. While a pass-by of a haul truck may be noticed due to the use of air brakes or the acceleration of the truck engine, the overall peak-hour and daily noise levels are not expected to increase substantially as a result of haul route traffic during construction of the LRT Alternative. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Central Park as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Central Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.
Singer Park California Boulevard/St. John Avenue **Owner/Operator:** City of Pasadena **Description:** This 2.9-acre neighborhood park includes an open grass area with a number of well-established trees and rose beds, a children's play area, picnic tables, benches, restrooms, and a drinking fountain. **Distance:** This park is approximately: • 1,940 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; and • 2,020 feet from the nearest part of the LRT Alternative tunnel and from the nearest station (Fillmore Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fair Oaks Avenue Haul Route[3]:** Singer Park is approximately 0.1 mile southwest of the haul route alignment on California Avenue. Based on the distance of this park from that haul route and the presence of intervening land uses, the use of California Avenue as part of the Fair Oaks Avenue haul route would not result in short-term air quality, noise, traffic, or visual effects on this park. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Allendale Park as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Singer Park because it would not result in proximity impacts on that park.
Recreation Resources at Blair High School (6th to 12th) 1201 South Marengo Avenue **Owner/Operator:** Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,440 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; • 1,450 feet from the nearest part of the tunnel in the LRT Alternative; and • 2,400 feet from the nearest station (Fillmore Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunnel construction and operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fair Oaks Avenue Haul Route[3]:** Blair High School is approximately 0.25 mile east of the haul route alignment on Fair Oaks Avenue. Based on the distance of the recreation resources at this school from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on those resources. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on the recreation resources at Blair High School as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Blair High School because it would not result in proximity impacts on those recreation resources.
CITY OF SOUTH PASADENA	
Eddie Park and House 2017 Edgewood Drive **Owner/Operator:** City of South Pasadena **Description:** This 0.75-acre park includes the historic Eddie House, a group barbeque area, a playground, and an open lawn area. The park site is surrounded by a 3-foot-high brick wall. The Eddie House and grounds were donated to the City by the Eddie family. The 2,200-square-foot house is an example of Transitional Craftsman architecture. The first floor of the house is available as a meeting space and includes a kitchen and restrooms. **Distance:** This park is approximately: • 2,340 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; • 2,450 feet from the nearest part of the LRT Alternative tunnel; and • 1.5 miles from the nearest station (Huntington Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Eddie Park and House

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	because it would not result in proximity impacts on those recreation facilities.
Garfield Park 1750 Mission Street **Owner/Operator:** City of South Pasadena **Description:** This 7.6-acre park provides tennis courts, a playground, and a garden area. **Distance:** This park is approximately: • 590 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; and • 780 feet from the nearest part of the LRT Alternative tunnel and from the nearest station (South Pasadena Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fair Oaks Avenue Haul Route[3]:** Garfield Park is approximately 0.25 mile east of the haul route alignment on Fair Oaks Avenue. Based on the distance of this park from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on this park. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Garfield Park as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Garfield Park because it would not result in proximity impacts on that park.

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Library Park 1102 Oxley Street **Owner/Operator:** City of South Pasadena **Description:** This 3.2-acre park provides tennis courts, a half basketball court, a playground, and a baseball field. **Distance:** This park is approximately: • 1,430 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; and • 1,500 feet from the nearest part of the LRT Alternative tunnel and the nearest station (South Pasadena Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Summary:** In summary, the LRT Alternative would not cause a constructive use of Library Park because it would not result in proximity impacts on that park.
War Memorial Park 435 Fair Oaks Avenue **Owner/Operator:** City of South Pasadena **Description:** This 1.8-acre park includes the two-story, 12,000-square-foot War Memorial Building that was constructed in 1921 and is a City of South Pasadena cultural heritage landmark. The War Memorial Building was constructed on the site of the former Oak Lawn Park. The large multipurpose room on the second floor is used for events (e.g., banquets and meetings) for large groups	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest surface construction and operation of any LRT Alternative improvements, this park would not experience short- or long-term air quality effects under the LRT Alternative. **Noise:** Construction of the improvements in the LRT Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of South Pasadena and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the LRT Alternative facilities adjacent to this park would substantially

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
and includes a kitchen. The first floor contains smaller meeting rooms, storage space, and restrooms. The park also includes a landscaped memorial garden and on-site parking. **Distance:** This park is: • Adjacent to the zone of disturbance and above the below grade LRT Alternative tunnel; • No at-grade construction in the vicinity of this park; and • Approximately 1,630 feet from the nearest station (South Pasadena Station).	reduce the short-term noise effects on War Memorial Park. The LRT alignment would be in tunnel in the vicinity of War Memorial Park and the operation of the LRT Alternative in that tunnel would not increase noise levels at this park. As a result, the operation of the LRT Alternative would not result in long-term noise impacts on War Memorial Park. **Traffic:** Based on the distance of this park from the nearest surface construction and operation of any LRT Alternative improvements and because the LRT Alternative would not result in any permanent changes in access to/from this park, this park would not experience short- or long-term traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Because War Memorial Park is not a very sensitive receptor (e.g., a residence or a performing arts center), potential ground-borne noise and vibration associated with the construction and operation of the LRT Alternative adjacent to War Memorial Park would not result in adverse effects on this resource. **Visual Resources:** Based on the distance of this park from the nearest surface construction and operation of any LRT Alternative improvements, this park would not experience short- or long-term visual effects under the LRT Alternative. **Fair Oaks Avenue Haul Route[3]:** War Memorial Park is immediately west of the haul route alignment on Fair Oaks Avenue. During construction of the LRT Alternative, debris from the construction activities will be taken to off-site disposal sites. Typically, haul trucks (dump trucks) are loaded on the site and then follow a specific haul route to the disposal destination. In the City of South Pasadena, the haul route will pass by War Memorial Park. The number of haul truck trips will be small compared to the daily traffic volumes on Fair Oaks Avenue. While a pass-by of a haul truck may be noticed due to the use of air brakes or the acceleration of the truck engine, the overall peak-hour and daily noise levels are not expected to increase substantially as a result of haul route traffic during construction of the LRT Alternative. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on War Memorial Park as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of War Memorial Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at Marengo Elementary School (K to 5th) 1400 Marengo Avenue **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,170 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; • 1,180 feet from the nearest part of the tunnel in the LRT Alternative; and • 1,340 feet from the nearest station (South Pasadena Station) and the parking for that station.	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunnel construction and operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fair Oaks Avenue Haul Route[3]:** Marengo Elementary School is approximately 0.5 mile southeast of the haul route alignment on Fair Oaks Avenue. Based on the distance of the recreation resources at this school from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on the recreation resources at this school. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on the recreation resources at Marengo Elementary School as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Marengo Elementary School because it would not result in proximity impacts on those recreation resources.

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at South Pasadena High School (9th to 12th) 1401 Fremont Avenue **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,015 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; • 1,025 feet from the nearest part of the tunnel in the LRT Alternative; and • 1,690 feet from the nearest station (Huntington Station) and the parking for that station.	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunnel construction and operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative. **Visual Resources:** Based on the distance from the nearest construction of any LRT Alternative improvements and LRT Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fair Oaks Avenue and Fremont Avenue Haul Routes[3]:** South Pasadena High School is approximately 0.5 mile southwest and 0.5 mile northwest of the haul route alignments on Fair Oaks Avenue and Fremont Avenue, respectively. Based on the distance of the recreation resources at this school from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue and Fremont Avenue as spoils material haul routes would not result in short-term air quality, noise, traffic, or visual effects on the recreation resources at this school. These haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on the recreation resources at South Pasadena High School as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at South Pasadena High School because it would not result in proximity impacts on those resources.

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at South Pasadena Middle School (6th to 8th) 1500 Fair Oaks Avenue **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 190 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; • 200 feet from the nearest part of the tunnel in the LRT Alternative; and • 1,250 feet from the nearest station (Huntington Station).	The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative. **Noise:** Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative. **Ground-Borne Noise and Vibration:** Because South Pasadena Middle School is approximately 200 feet from the LRT Alternative and is not a very sensitive receptor (e.g., a residence or a performing arts center), potential ground-borne noise and vibration associated with the construction and operation of the LRT Alternative would not result in adverse effects on the recreation facilities at this school. **Visual Resources:** Based on the distance of this school from the nearest construction of any LRT Alternative improvements and LRT Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative. **Fremont Avenue Haul Route[3]:** South Pasadena Middle School is approximately 0.5 mile northeast of the haul route alignment on Fremont Avenue. Based on the distance of the recreation resources at this school from that haul route and the presence of intervening land uses, the use of Fremont Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on this school. The Fremont Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on the recreation resources at South Pasadena Middle School as a result of the use of that haul route. **Summary:** In summary, the LRT Alternative would not cause a constructive use of the recreation resources at South Pasadena Middle School because it would not result in proximity impacts on those recreation resources.

Table footnotes are provided on the following page.

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]

Source: LSA Associates, Inc. (2014). Refer also to Chapter 5, References and Preparers, for a list of references used to research resources potentially protected under the requirements of Sections 4(f) and 6(f).

[1] Only resources within 0.5 mile of improvements in the LRT Alternative are evaluated in this table. Cities and communities that do not contain LRT Alternative improvements are not included in this table. Refer to Figure 3.4-1 for the locations of the resources discussed in this table.

[2] The following distances were measured to assess the potential for short-term proximity impacts on Section 4(f) resources under the LRT Alternative:

- **Zone of Potential Disturbance:** This is an area defined on the ground surface above subsurface areas that would be disturbed during construction of the tunnel segment of the LRT Alternative. The elevated segment of the LRT Alternative does not have a zone of potential disturbance.
- **Station Excavation Impact:** This is an area on the ground surface above a subsurface tunnel section where the surface features of a station would be constructed.
- **Temporary Impact:** This is an area on the ground surface that would be disturbed temporarily during construction of non-tunnel features of the LRT Alternative (e.g., the elevated segment, bridges, and the O&M buildings). Areas used for TCEs would be restored to their original or better condition prior to returning those areas to the property owners.

The following distances were measured to assess the potential for long-term proximity impacts on Section 4(f) resources under the LRT Alternative:

- **Permanent Impact:** These are areas on the ground surface that would be permanently incorporated in the project limits. They include parking areas, stations, the alignment of the elevated segment of the LRT Alternative, and the O&M buildings.
- **Aerial Alignment:** This is the alignment of the elevated segment of the LRT Alternative.
- **Tunnel Alignment:** This is the alignment of the tunnel segment of the LRT Alternative.

[3] The preliminary routes for hauling spoils material generated during construction of the LRT Alternative tunnel include segments on Fair Oaks Avenue (from the northern tunnel portal) and Fremont Avenue (from the southern portal); on Arrow Highway and Live Oak Avenue (to/from I-605 at the disposal end of the haul trips), and Azusa Canyon Road (to access the Olive Pit) and Vincent Avenue (to access the Manning Pits). The haul routes will be used only during construction of the LRT Alternative tunnel.

Caltrans = California Department of Transportation
Cal State LA = California State University-Los Angeles
dBA = A-weighted decibels
FY = Fiscal Year
GHG = greenhouse gas
I-605 = Interstate 605
K = Kindergarten
L&WCF Act = Land and Water Conservation Fund Act
LRT = Light Rail Transit
MSAT = mobile source air toxics
TCE = temporary construction easement
TMP = Transportation Management Plan

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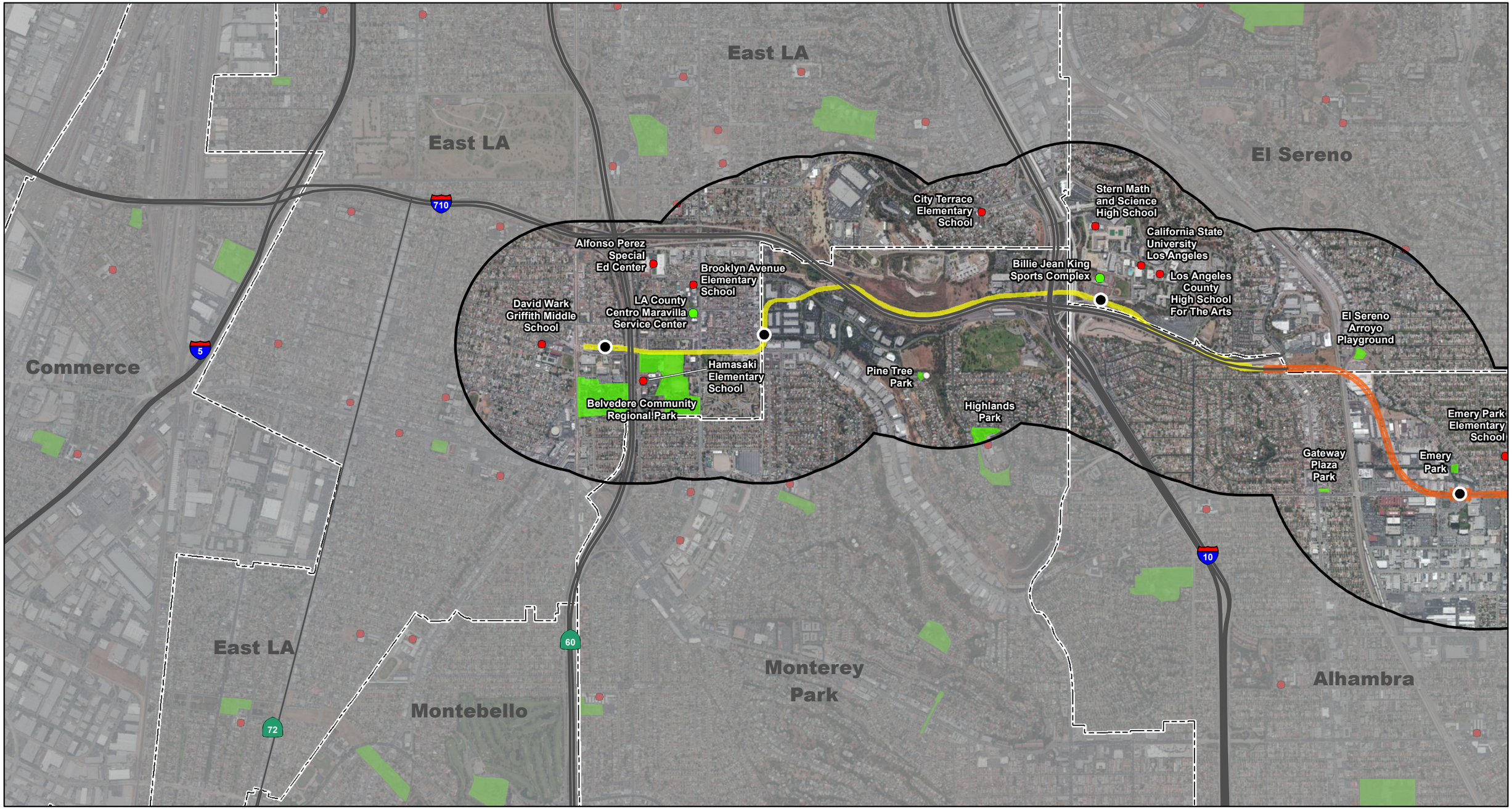

LEGEND

- LRT Alternative At and Above Grade Limits of Construction
- LRT Alternative Tunnel Section Limits of Construction
- LRT Station
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary

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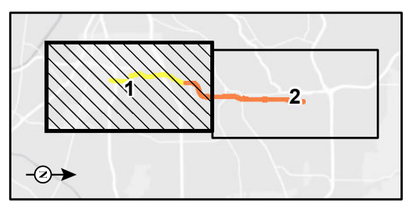
FEET



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.4-1
Sheet 1 of 2

SR 710 North Study

Resources within a Half-Mile of the LRT Alternative

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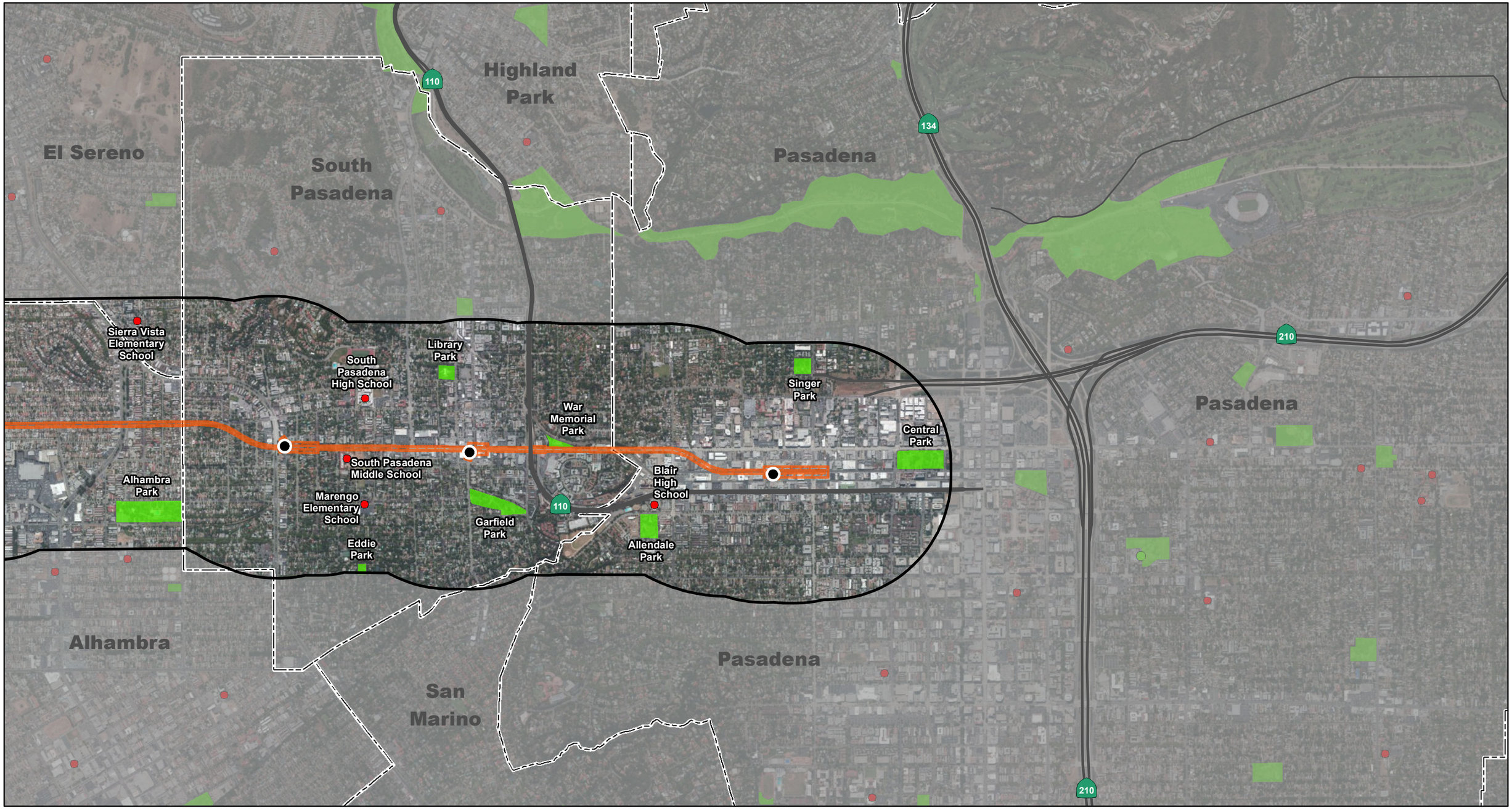

LEGEND

- LRT Alternative At and Above Grade Limits of Construction
- LRT Alternative Tunnel Section Limits of Construction
- LRT Station
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary

0 1000 2000
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SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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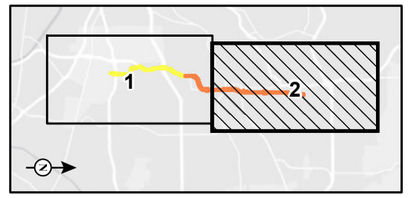

FIGURE 3.4-1
Sheet 2 of 2

SR 710 North Study

Resources within a Half-Mile of the LRT Alternative

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TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
CITY OF ALHAMBRA	
Emery Park 2709 Mimosa Street **Owner/Operator:** City of Alhambra **Description:** This 0.7-acre park provides picnic tables, playground equipment, barbecues, an activity room, a kitchen facility, an open grass area, and restrooms. Approximately $100,800 of L&WCF Act funds were used to construct picnic areas, a play area, restrooms, irrigation, landscaping, turf, parking, and lighting at this park in FY 1982/1983. As a result, these improvements at Emery Park are subject to the requirements for protection under Section 6(f). **Distance:** This park is approximately: • 2,065 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 2,120 feet from the nearest tunnel section improvements; • 2,475 feet from the nearest edge of the MDL and the right of way for the freeway segment improvements; and • 4,120 feet from the nearest tunnel portal (South Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of tunnel section and freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Emery Park because it would not result in proximity impacts on that park. **Section 6(f):** Because the Freeway Tunnel Alternative would not require the permanent acquisition of any land from Emery Park, the requirements of Section 6(f) would not apply to this park.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Gateway Plaza Park Northwest corner of West Valley Boulevard and South Fremont Avenue **Owner/Operator:** City of Alhambra **Description:** This approximately 0.5-park at the corner of Valley Boulevard and South Fremont Avenue welcomes visitors to the City with a Moorish-style arch that symbolizes Alhambra as the "Gateway to the San Gabriel Valley." The park also includes landscaping and walkways. **Distance:** This park is approximately: • 2,335 feet from the edge of the nearest TCE for the nearest freeway segment improvements • 2,380 feet from the nearest edge of right of way for the freeway segment improvements; • 2,415 feet from the edge of the MDL for the nearest freeway segment improvements; • 2,575 feet from the potential settlement zone above the tunnel segment and the nearest tunnel segment improvement; and • 2,770 feet from the nearest tunnel portal (South Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by substantial volumes of trips to/from the construction areas and the tunnel portals, this park would not experience short or long-term traffic operations effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Gateway Plaza Park because it would not result in proximity impacts on that park.
Recreation Resources at Emery Park Elementary School (K to 8th) 2821 West Commonwealth Avenue **Owner/Operator:** Alhambra Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,920 feet from the nearest edge of the potential settlement zone above the tunnel section improvements;	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 1,975 feet from the nearest tunnel section improvements; and • 4,940 feet from the nearest tunnel portal (South Portal).	construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this recreation resource are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, the recreation facilities at this school would not experience temporary construction or long-term operation traffic effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Emery Park Elementary School because it would not result in proximity impacts on those recreation resources.
CITY OF AZUSA (ALONG THE FREEWAY TUNNEL ALTERNATIVE SPOILS DISPOSAL HAUL ROUTES)[3]	
Valleydale Park 5525 North Lark Ellen Avenue **Owner/Operator:** Los Angeles County Department of Parks and Recreation **Description:** This park provides a wide range of amenities, including a baseball diamond, basketball court, children's play area, community room, computer center, fitness zone, picnic shelter, senior center, splash pad, and a walking path **Distance:** This park is 0.5 mile from the haul routes on Arrow Highway and Vincent Avenue. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity of this park.	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest haul routes for the Freeway Tunnel Alternative and the presence of intervening land uses, this park would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the park associated with the haul routes. **Noise:** Based on the distance of this park from the nearest haul routes for the Freeway Tunnel Alternative and the presence of intervening land uses, this park would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the park associated with the haul routes. **Traffic:** Because the streets that provide access to this park would not be used by haul trucks during construction of the Freeway Tunnel Alternative, this park would not experience temporary traffic effects as a

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on the park as a result of the use of the haul routes. **Visual Resources:** Based on the distance of this park from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this park would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Valleydale Park because it would not result in proximity impacts on that park.
CITY OF BALDWIN PARK (ALONG THE FREEWAY TUNNEL ALTERNATIVE SPOILS DISPOSAL HAUL ROUTES)[3]	
Recreation Resources at Margaret Heath Elementary School (K to 6th) 14321 School Street **Owner/Operator:** Baldwin Park Unified School District **Description:** The school includes both asphalt and grass outdoor play areas. **Distance:** This school is approximately 0.3 mile from the haul routes on Live Oak Avenue and Arrow Highway. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity of this school.	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest haul routes for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the school associated with the haul routes. **Noise:** Based on the distance from the nearest haul routes for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the school associated with the haul routes. **Traffic:** Because the streets that provide access to this recreation resource would not be used by haul trucks during construction of the Freeway Tunnel Alternative, it would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on this recreation resource as a result of the use of the haul routes. **Visual Resources:** Based on the distance of this recreation resource from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Margaret Heath Elementary School because it would not result in proximity impacts on those recreation resources.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at Olive Middle School (6th to 8th) 13701 East Olive Street **Owner/Operator:** Baldwin Park Unified School District **Description:** The school includes both asphalt and grass outdoor play areas. **Distance:** This school is approximately 0.4 mile from the haul route on Live Oak Avenue. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity of this school.	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at this school associated with the haul routes. **Noise:** Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the recreation resources at this school associated with the haul routes. **Traffic:** Because the streets that provide access to this recreation resource would not be used by haul trucks during construction of the Freeway Tunnel Alternative, it would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at this school as a result of the use of the haul routes. **Visual Resources:** Based on the distance of this recreation resource from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Olive Middle School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Pleasant View Elementary School (K to 6th) 14900 East Nubia Street **Owner/Operator:** Baldwin Park Unified School District **Description:** The school includes both asphalt and grass outdoor play areas with sports courts and fields. **Distance:** This school is approximately 0.3 mile from the haul route on Arrow Highway. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, the recreation resources at this school would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at this school associated with the haul routes. **Noise:** Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, the recreation resources at this school would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
of this school.	be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the recreation resources at this school associated with the haul routes. **Traffic:** Because the streets that provide access the recreation resources at this school would not be used by haul trucks during construction of the Freeway Tunnel Alternative, this school would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at this school as a result of the use of the haul routes. **Visual Resources:** Based on the distance from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, the recreation resources at this school would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Pleasant View Elementary School because it would not result in proximity impacts on those recreation resources.
CITY OF COVINA/UNINCORPORATED LOS ANGELES COUNTY (ALONG THE FREEWAY TUNNEL ALTERNATIVE SPOILS DISPOSAL HAUL ROUTES ALONG VINCENT AVENUE) [3]	
Recreation Resources at Alice M. Ellington Elementary School (K to 5th) 5034 North Clydebank Avenue **Owner/Operator:** Azusa Unified School District **Description:** The school includes both asphalt and grass outdoor play areas. **Distance:** This school is approximately 0.25 mile east of the segment of the haul route on Vincent Avenue. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity of this school.	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, the recreation resources at this school would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at this school associated with the haul routes. **Noise:** Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this school would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the recreation resources at this school associated with the haul routes. **Traffic:** Because the streets that provide access to this recreation resource would not be used by haul trucks during construction of the Freeway Tunnel Alternative, it would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on this recreation resource as a result of the use of the haul routes.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Visual Resources: Based on the distance from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Alice M. Ellington Elementary School because it would not result in proximity impacts on those recreation resources.
EAST LOS ANGELES (UNINCORPORATED LOS ANGELES COUNTY)	
Recreation Resources at City Terrace Elementary School (K to 5th) 4350 City Terrace Drive **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,135 feet from the edge of the MDL for the nearest freeway segment improvements; • 1,310 feet from the edge of right of way for the nearest freeway segment improvements; • 2,350 feet from the nearest TCE for freeway segment improvements; and • 7,085 feet from the nearest tunnel portal (South Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at City Terrace Elementary School because it would not result in proximity impacts on those recreation resources.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
EL SERENO (COMMUNITY IN THE CITY OF LOS ANGELES)	
El Sereno Arroyo Playground 5520 Concord Avenue **Owner/Operator:** Caltrans/City of Los Angeles **Description:** This 1-acre park provides grassy hills, a playground, a Fitness Zone for adults, walking paths, picnic tables, mosaics, decorative fencing, and a garden. The park, which opened in December 2012, includes safety features such as fences with gates that lock automatically when the park is closed, solar-powered security cameras, and lighting. The park is located on land owned by Caltrans and provided to the City for use as a park for a lease period of 25 years. **Distance:** • Approximately 1/3 of this park is above the tunnel section and the potential settlement zone in the Freeway Tunnel Alternative. • This park is approximately: - 1,135 feet from the edge of the MDL for the nearest freeway segment improvements; and - 1,380 feet from the nearest tunnel portal (South Portal). The land on which this playground is located is owned by the State of California (Caltrans) and is leased to the City of Los Angeles for the playground use. Under the lease agreement (January 23, 2012), "It is agreed and understood, the creation of a publicly accessible park by this agreement does not create a public park within the meaning of Section 4(f)…said park is specifically exempt from the application of Section 4(f)." As a result, the El Sereno Arroyo Playground would not be subject to the requirements for approval under Section 4(f). However, this playground was included in this analysis to assess the potential for direct and indirect adverse impacts on this playground by the Freeway Tunnel	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this playground from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this playground would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this playground from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this playground would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this playground are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this playground would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Because El Sereno Arroyo Playground is not a very sensitive receptor (e.g., a residence or a performing arts center), potential ground-borne noise and vibration associated with the construction and operation of the Freeway Tunnel Alternative adjacent to this park would not result in adverse effects on this resource. **Visual Resources:** Based on the distance of this school from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this playground would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of El Sereno Arroyo Playground because it would not result in proximity impacts on that playground.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Alternative. The inclusion of this playground in this analysis does not trigger the requirements for approval under Section 4(f).	
El Sereno North Park 4410 Garden Homes Avenue **Owner/Operator:** City of Los Angeles **Description:** This 4.2-acre park provides picnic tables with covered shelters, playground equipment, barbecues, ball fields, tennis courts, a meeting room, a kitchen facility, a heated swimming pool, an open grass area, and restrooms. Approximately $233,681 of L&WCF Act funds were used to acquire 3.2 acres for this park in FY 1976/1977. As a result, El Sereno North Park is subject to the requirements for protection under Section 6(f). **Distance:** This park is approximately: • 1,780 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 1,845 feet from the nearest tunnel section improvements; and • 7,950 feet from the nearest tunnel portal (South Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of El Sereno North Park because it would not result in proximity impacts on that park. **Section 6(f):** Because the Freeway Tunnel Alternative would not require the permanent acquisition of any land from El Sereno North Park, the requirements of Section 6(f) would not apply to this park.
Recreation Resources at the Billie Jean King Sports Complex at California State University-Los Angeles (Cal State LA) 5151 State University Drive	**Use of Land for a TCE:** The Freeway Tunnel Alternative would not result in permanent incorporation of land or permanent easements at this resource. Approximately 1.18 acres of land on the southeast part of the University property, south of Campus Road, would be used as a TCE during construction of the freeway improvements in that area. The Billie Jean Sports Complex is north of Campus Road, and no part of the

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Owner/Operator: The California State University System **Description:** This is an undergraduate and graduate university. The approximately 11-acre Billie Jean King Sports Complex, located in the northwest quadrant of the I-710/I-10 freeway to freeway interchange, includes the Eagles Nest Gymnasium, University Stadium, Jesse Owens Track and Field, Reeder Field (baseball), a swimming pool, tennis courts, basketball courts, and on-site parking. **Distance:** The Sports Complex and those recreation uses on the Cal State LA campus are approximately: • 800 feet from the nearest part of the MDL for the freeway segment improvements; • 1,162 feet from the nearest part of a TCE for the freeway segment improvements; • 1,293 feet from the nearest part of the right of way for the freeway segment improvements; and • 3,520 feet from the nearest tunnel portal (South Portal).	University property occupied by the Sports Complex would be used as a TCE. As a result, no land occupied by the Sports Complex would be used as a TCE during construction of the freeway improvements in that area. **Air Quality:** Construction of the improvements in the Freeway Tunnel Alternative in the vicinity of this Sports Complex could result in short-term dust and equipment emissions that could extend into the Sports Complex property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Los Angeles. Compliance with those measures during construction of the Freeway Tunnel Alternative facilities in the vicinity of the Sports Complex would substantially reduce the short-term air quality effects on the Sports Complex. Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in reduced regional vehicle emissions compared to existing 2012 conditions. Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in increases and decreases in regional vehicle emissions depending on the individual design variations (single and dual bore, with and without tolls, etc.). Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2025 and 2035, the Freeway Tunnel Alternative would result in some minor increases in MSAT emissions compared to the No Build Alternative conditions. Operation of the Freeway Tunnel Alternative would result in reduced GHG emissions in 2025 and 2035 compared to existing 2012 conditions and in 2025 compared to 2025 No Build conditions. In 2035, the Freeway Tunnel Alternative would result in reductions in GHG emissions compared to 2035 No Build Alternative conditions except for the Dual-Bore No Tolls and Dual-Bore No Trucks design variations that would result in some increases in GHG emissions in 2035. The increases in regional vehicle, MSAT, and GHG emissions would be minor compared to the No Build Alternatives and, as a result, operation of the Freeway Tunnel Alternative would not result in adverse air quality impacts on the Billie Jean King Sports Complex. **Noise:** Construction of the improvements in the Freeway Tunnel Alternative in the vicinity of this Sports Complex could result in short-term noise levels that could impact the Sports Complex. Those construction activities would be required to comply with the City of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the Freeway Tunnel Alternative facilities in the vicinity of the Sports Complex would substantially reduce the short-term noise effects on the Sports Complex. The recreation resources at the Sports Complex are active uses. The 2035 noise levels under the dual-bore design variation of the Freeway Tunnel Alternative without tolls and the single-bore design variation of the Freeway Tunnel Alternative with tolls and trucks (the operational variations that would result in the largest traffic volume increases and related noise level increases under each respective design variation) are predicted to be 62 dBA and 59 dBA, respectively, at this Sports Complex, which would be higher than the

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	predicted noise levels under the No Build Alternative (57 dBA). Because the 2035 predicted noise levels at this Sports Complex under both design variations of the Freeway Tunnel Alternative would be less than the 67 dBA NAC for Activity Category C uses, the operation of both design variations of the Freeway Tunnel Alternative would not result in long-term noise impacts on the recreation resources at this Sports Complex. **Traffic:** Because the local streets that provide access to this Sports Complex are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative and would not be used by substantial volumes of trips to/from the tunnel portals, this Sports Complex would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of the Sports Complex from the tunneling activities under the Freeway Tunnel Alternative, the Sports Complex school is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this school from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this Sports Complex would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the Billie Jean King Sports Complex because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that sports complex.
Recreation Resources at Chavez Elementary School (K to 6th) 5243 Oakland Street **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,885 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 1,940 feet from the nearest tunnel section improvements; and • 5,220 feet from the nearest tunnel portal (South Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Chavez Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Sierra Park Elementary School (K to 6th) 3170 Budau Avenue **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,225 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 2,280 feet from the nearest tunnel section improvements; and • 3,240 feet from the nearest tunnel portal (South Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of the recreation resources at this school from the tunneling activities under the Freeway Tunnel Alternative, they are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this school from the nearest construction of any freeway segment

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Sierra Park Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Facilities at Sierra Vista Elementary School (K to 6th) 4342 Alpha Street **Owner/Operator:** Los Angeles Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 385 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 430 feet from the nearest tunnel section improvements; and • 7,310 feet from the nearest tunnel portal (South Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any Freeway Tunnel Alternative improvements and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance from the nearest construction of any Freeway Tunnel Alternative improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to the recreation facilities at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance from the nearest construction of any Freeway Tunnel Alternative improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Sierra Vista Elementary School because it would not result in proximity impacts on those recreation resources.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
CITY OF IRWINDALE (ALONG THE FREEWAY TUNNEL ALTERNATIVE SPOILS DISPOSAL HAUL ROUTES) (3)	
Santa Fe Dam Recreation Area 15501 East Arrow Highway **Owner/Operator:** Los Angeles County Department of Parks and Recreation **Description:** Santa Fe Dam Recreational Area, at the foot of the San Gabriel Mountains, is an 836-acre facility with a 70-acre lake (Santa Fe Flood Control Basin) with year-round fishing and non-motorized watercraft usage. During the summer, the recreation area includes a 5-acre chlorinated swim beach and a children's water play area. The recreation area is home to many protected native plants and animals. A Nature Center operated and staffed by volunteers of the San Gabriel Mountains Regional Conservancy offers educational, interpretive, and walking tours throughout the year. The recreation area also includes bicycle, walking, and equestrian trails; a snack bar; organized youth camping; and a bait and tackle shop. Approximately $72,100 of L&WCF Act funds were used to develop support facilities at the Santa Fe Dam Recreation Area in FY 1999-2000. As a result, these improvements at the Santa Fe Dam Recreation Area are subject to the requirements of Section 6(f). **Distance:** The nearest part of the recreation area is immediately adjacent to the north side of Arrow Highway from approximately Azusa Canyon Road to I-605. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity of this recreation area.	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** The haul routes would be used only during construction of the Freeway Tunnel Alternative. The operation of trucks hauling spoils material to the disposal site and empty trucks returning to the construction sites could result in short-term dust and equipment emissions that could extend into the recreation area property. However, there are extensive requirements for the control of dust and equipment emissions during construction, including along haul routes, in the South Coast Air Basin. Compliance with those measures during the use of the spoils disposal haul routes for the Freeway Tunnel Alternative in the vicinity of the Santa Fe Dam Recreation Area would substantially reduce the short-term air quality effects of trucks operating on the haul routes on the recreation area. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the recreation area associated with the haul routes. **Noise:** During construction of the Freeway Tunnel Alternative, debris from the construction activities will be taken to off-site disposal sites. Typically, haul trucks (dump trucks) are loaded on the site and then follow a specific haul route to the disposal destination. In the City of Irwindale, the haul route will pass by the Santa Fe Dam Recreation Area. The number of haul truck trips will be small compared to the daily traffic volumes on East Arrow Highway. While a pass-by of a haul truck may be noticed due to the use of air brakes or the acceleration of the truck engine, the overall peak-hour and daily noise levels are not expected to increase substantially as a result of haul route traffic during construction of the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the recreation area associated with the haul routes. **Traffic:** As noted above, the haul route traffic during construction of the Freeway Tunnel Alternative would be only a small amount of the daily traffic volumes on East Arrow Highway. As a result, that haul route traffic would not adversely affect travel to/from and access to/from the Santa Fe Dam Recreation Area. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on the recreation area associated with the haul routes. **Visual Resources:** Trucks using the haul routes will be similar to trucks currently using Arrow Highway and Live Oak Avenue. Patrons of the recreation area currently have views of traffic, including trucks on Arrow Highway and I-605. As a result, views from within this recreation area are not an important feature of this recreation area. During the use of the haul routes, visitors to the recreation area will have views of haul trucks on I-605 and Arrow Highway, similar to existing views of traffic on those roads. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term visual

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	impacts on the recreation area associated with the haul routes. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the Santa Fe Dam Recreation Area because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that recreation area. **Section 6(f):** Because the Freeway Tunnel Alternative would not require the permanent acquisition of any land from the Santa Fe Dam Recreation Area, the requirements of Section 6(f) would not apply to this Recreation Area.
Irwindale Park and Jardin de Roca Park/Irwindale Skatepark (these facilities are across the street from each other) • ***Irwindale Park:*** 5050 North Irwindale Avenue • ***Jardin de Roca Park/Irwindale Skatepark:*** 5051 North Irwindale Avenue **Owner/Operator:** City of Irwindale **Descriptions:** • ***Irwindale Park:*** This park includes a swimming pool, the Alfred F. Herrera softball field, playground, picnic shelter, picnic areas, outdoor basketball court, volleyball sand court, and the Dan Diaz Recreation Center. • ***Jardin de Roca Park/Irwindale Skatepark:*** This skatepark includes a tear-drop-shaped concrete bowl and a "street" section with ledges, stairs, rails, and banks. The park also includes tennis courts, a tot lot, walking path, picnic areas, and outdoor basketball courts. **Distance:** The nearest parts of these parks are 0.2 mile south of the haul route on Arrow Highway.	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at these resources. **Air Quality:** Based on the distance of these parks from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, these parks would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on these parks associated with the haul routes. **Noise:** Based on the distance of these parks from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, these parks would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on these parks associated with the haul routes. **Traffic:** Because the streets that provide access to these parks would not be used by haul trucks during construction of the Freeway Tunnel Alternative, these parks would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on these parks as a result of the use of the haul routes. **Visual Resources:** Based on the distance of these parks from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, these parks would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Irwindale Park and the Jardin de Roca Park/Irwindale Skatepark because it would not result in proximity impacts on those facilities.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
CITY OF MONTEREY PARK	
Highlands Park 400 Casuda Canyon Drive **Owner/Operator:** City of Monterey Park **Description:** This 8.3-acre park adjacent to Monterey Highlands School provides lighted tennis courts, a children's area, open and shady space, restrooms, and on-site parking. **Distance:** This park is approximately: • 1,930 feet from the edge of the MDL and right of way limits for the nearest freeway segment improvements; • 2,705 feet from the edge of the nearest freeway segment improvements; and • 6,300 feet from the nearest tunnel portal (South Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any Freeway Tunnel Alternative improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative and would not be used by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any Freeway Tunnel Alternative improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Highlands Park because it would not result in proximity impacts on that park.
Pine Tree Park 2167 Arriba Drive **Owner/Operator:** City of Monterey Park **Description:** This 0.5-acre neighborhood park provides a picnic table and a children's play area. **Distance:** This park is approximately:	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any Freeway Tunnel Alternative

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 655 feet from the edge of the MDL for the nearest freeway segment improvements; • 995 feet from the edge of right of way for the nearest freeway segment improvements; • 3,525 feet from the edge of the nearest TCE for freeway segment improvements; and • 7,800 feet from the nearest tunnel portal (South Portal).	improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative and would not be used by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any Freeway Tunnel Alternative improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Pine Tree Park because it would not result in proximity impacts on that park.
Recreation Resources at Monterey Highlands Elementary School (K to 6th) 400 Casuda Canyon Drive **Owner/Operator:** Garvey School District **Distance:** This school and the recreation resources at this school are approximately: • 2,680 feet from the edge of the MDL and right of way for the nearest freeway segment improvements; • 3,148 feet from the edge of the nearest TCE for freeway segment improvements; and • 6,420 feet from the nearest tunnel portal (South Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school is not expected to experience ground-borne noise or

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of the recreation resources at this school from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Monterey Highlands Elementary School because it would not result in proximity impacts on that school.
CITY OF PASADENA	
Allendale Park 1130 Marengo Avenue **Owner/Operator:** City of Pasadena **Description:** This 2.9-acre park provides a lighted tennis court, a lighted softball diamond/multi-purpose field with bleachers, playground equipment, on-site parking, picnic tables, and drinking fountains. There is a public library within the boundary of this park. **Distance:** This park is approximately: • 2,575 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 2,640 feet from the nearest tunnel section improvements; and • 4,295 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative and would not be used by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this school from the tunneling activities under the Freeway Tunnel Alternative, this school is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Allendale Park because it would not result in proximity impacts on that park.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Brenner Park 235 Barthe Drive **Owner/Operator:** City of Pasadena **Description:** This 1.75-acre neighborhood park provides a softball diamond with bleacher seating, a lighted tennis court, a lighted basketball court, an open play area, a tot lot, picnic tables, restrooms, and drinking fountains. **Distance:** This park is approximately: • 370 feet from the edge of the MDL for the nearest freeway segment improvements; • 1,440 feet from the edge of right of way for the nearest freeway segment improvements; and • 8,980 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Brenner Park because it would not result in proximity impacts on that park.
Brookside Park 360 North Arroyo Boulevard **Owner/Operator:** City of Pasadena **Description:** This 62-acre park is in the Central section of the Arroyo Seco. It includes a Jackie Robinson Field, a lighted regulation baseball diamond with seating for 4,200 spectators; two lighted softball fields each with seating for 240 spectators; a lighted multi-purpose field for flag football and soccer; a speaker's platform with permanent seating;	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
picnic tables; a play area; restrooms; drinking fountains; barbeque pits; on-site parking; an aquatic center; open areas; and a dog area. Approximately $152,550 of L&WCF Act funds were used to develop soccer and baseball fields and to install irrigation systems in FY 1977-1978. Approximately $50,800 of L&WCF Act funds were used to construct restrooms at this park in FY 1979-1980. As a result, these improvements at Brookside Park are subject to the requirements of Section 6(f). **Distance:** This park is approximately: • 725 feet from the edge of the MDL for the nearest freeway segment improvements and from the right of way for the nearest freeway segment improvements; • 2,848 feet from the edge of the nearest TCE for freeway segment improvements; and • 4,805 feet from the nearest tunnel portal (North Portal).	Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or would not be used by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Brookside Park because it would not result in proximity impacts on that park. **Section 6(f)**: Because the Freeway Tunnel Alternative would not require the permanent acquisition of any land from Brookside Park, the requirements of Section 6(f) would not apply to this park.
Central Park 275 South Raymond Avenue **Owner/Operator:** City of Pasadena **Description:** This 9.2-acre park provides 6 horseshoe pits, 2 lawn bowling courts, an open area, playground equipment, walkway lighting, restrooms, picnic tables, a rose garden, benches, and a clubhouse for the Pasadena Lawn Bowling Club, an affiliate of the American Lawn Bowling Association. **Distance:** This park is approximately: • 930 feet from the edge of the MDL and right of way for the nearest freeway segment improvements; • 1,600 feet from the nearest freeway segment improvements; • 1,645 feet from the nearest edge of the potential settlement zone; and	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the

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Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• 2,320 feet from the nearest tunnel portal (North Portal).	Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Central Park because it would not result in proximity impacts on that park.
Defenders Park Orange Grove Boulevard/Colorado Boulevard **Description:** Defenders Park is a 1.8-acre passive use park. The park contains a walkway, multiple monuments, a limestone bench, a wall recognizing the founders of Pasadena, a small open grassy area, some trees and shrubbery, and a drinking fountain. **Distance:** This park is approximately: • 300 feet from the edge of the MDL and right of way for the nearest freeway segment improvements; • 3,230 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; and • 3,950 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of Freeway Tunnel Alternative improvements (freeway segment), and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of the Freeway Tunnel Alternative improvements (freeway segment), and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** The nearest construction for the Freeway Tunnel Alternative to this park would occur within the existing right of way on SR 134. Construction- and operation-related traffic under the Freeway Tunnel Alternative in this area would be on SR 134 and would not be expected to affect traffic and transportation on local streets in the vicinity of Defenders Park. As a result, this park would not experience temporary construction or long-term traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of Defenders Park from the tunneling activities under the Freeway Tunnel Alternative, the park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** The nearest construction of a freeway segment of the Freeway Tunnel Alternative to Defenders Park would be on SR 134 north of Colorado Boulevard and east of North Orange Grove Boulevard. Based on the distance of this park from the nearest construction and operation of that freeway segment of the Freeway Tunnel Alternative; the presence of intervening land uses, including Colorado Boulevard; and that SR 134 at North Orange Grove Boulevard is depressed and not visible from Defenders Park, the improvements on SR 134 east of North Orange Grove Boulevard would not be visible from Defenders Park. As a result, the Freeway Tunnel Alternative would not result in temporary construction or long-term operation visual effects

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	at Defenders Park. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Defenders Park because it would not result in proximity impacts on that park.
Lower Arroyo Seco Park Arroyo Boulevard/Norwood Drive **Owner/Operator:** City of Pasadena **Description:** This 150-acre park contains a natural park, a lighted fly-casting pond and clubhouse, an archery range and clubhouse, a system of rubble walls that retains the slopes and helps define paths, multi-use trails, the La Casita del Arroyo Community Center, the Aids Memorial Grove, several promontory outlook points (e.g., Bird Sanctuary), on-site parking, restrooms, and benches. **Distance:** This park is: • Approximately 2,875 feet from the edge of right of way for the nearest freeway segment improvements; • Approximately 2,580 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • Approximately 2,620 feet from the nearest tunnel section improvements; and • Approximately 3,370 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Lower Arroyo Seco Park because it would not result in proximity impacts on that park.
Memorial Park 85 East Holly Street **Owner/Operator:** City of Pasadena **Description:** This 5.3-acre park is characterized by extensive shrubbery, landscaping, large trees, and a number of	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
monuments. Other facilities provided at this park include a band shell with an audience capacity of 400 persons, picnic facilities, benches, a large open grass area, an exercise walk, restrooms, and drinking fountains. The Pasadena Senior Center is immediately adjacent to the south side of this park. **Distance:** This park is approximately: • 610 feet from the edge of the MDL for the nearest freeway segment improvements; • 750 feet from the edge of right of way for the nearest freeway segment improvements; and • 4,710 feet from the nearest tunnel portal (North Portal).	**Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Memorial Park because it would not result in proximity impacts on that park.
Singer Park California Boulevard/St. John Avenue **Owner/Operator:** City of Pasadena **Description:** This 2.9-acre neighborhood park includes an open grass area with a number of well-established trees and rose beds, a children's play area, picnic tables, benches, restrooms, and a drinking fountain. **Distance:** This park is: • Adjacent to the edge of the MDL and right of way for the nearest freeway segment improvements; • Approximately 85 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • Approximately 110 feet from the nearest tunnel section improvements; and	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Construction of the improvements in the Freeway Tunnel Alternative in the vicinity of this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Pasadena. Compliance with those measures during construction of the Freeway Tunnel Alternative facilities in the vicinity of the park would substantially reduce the short-term air quality effects on Singer Park. Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in reduced regional vehicle emissions compared to existing 2012 conditions. Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in increases and decreases in regional vehicle emissions depending on the individual design variations (single and dual bore, with and without tolls, etc.). Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2025 and 2035, the Freeway Tunnel Alternative would result in some minor increases in MSAT emissions compared to the No Build Alternative conditions. Operation of the Freeway Tunnel Alternative would result in reduced GHG emissions in 2025 and 2035 compared to existing 2012 conditions and in 2025 compared to 2025 No

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
• Approximately 120 feet from the nearest tunnel portal (North Portal).	Build conditions. In 2035, the Freeway Tunnel Alternative would result in reductions in GHG emissions compared to 2035 No Build Alternative conditions except for the Dual-Bore No Tolls and Dual-Bore No Trucks design variations that would result in some increases in GHG emissions in 2035. The increases in regional vehicle, MSAT, and GHG emissions would be minor compared to the No Build Alternatives and, as a result, operation of the Freeway Tunnel Alternative would not result in adverse air quality impacts on Singer Park. **Noise:** Construction of the improvements in the Freeway Tunnel Alternative in the vicinity of this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the Freeway Tunnel Alternative facilities in the vicinity of this park would substantially reduce the short-term noise effects on Singer Park. The recreation uses at Singer Park are active uses. The 2035 noise levels under the dual-bore design variation of the Freeway Tunnel Alternative without tolls and the single-bore design variation of the Freeway Tunnel Alternative with tolls and trucks (the operational variations that would result in the largest traffic volume increases and related noise level increases under each respective design variation) are predicted to be 65 dBA and 67 dBA, respectively, at this park, which would be lower than the predicted noise levels under the No Build Alternative at 68 dBA. As a result, the Freeway Tunnel Alternative would not result in long-term noise impacts on the recreation uses at Singer Park. **Traffic:** Construction of the improvements in the Freeway Tunnel Alternative adjacent to Singer Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the Freeway Tunnel Alternative would not result in short-term adverse impacts related to traffic and transportation at Singer Park. In the long term, the Freeway Tunnel Alternative would not result in increased traffic on streets used to access Singer Park. As a result, the operation of the Freeway Tunnel Alternative would not result in long-term traffic impacts on Singer Park. **Ground-Borne Noise and Vibration:** Because Singer Park is not a very sensitive receptor (e.g., a residence or a performing arts center), potential ground-borne noise and vibration associated with the construction and operation of the Freeway Tunnel Alternative adjacent to this park would not result in adverse effects on this resource. **Visual Resources:** Existing views from Singer Park include views of West California Boulevard, St. John Avenue, and SR 710 north of California Boulevard. There are views of residential uses outside the park to the north, west, east, and south. Views of the surrounding areas are not expected to be a primary reason for users to visit this park. The nearest surface construction of the Freeway Tunnel Alternative to Singer Park would be immediately north and east of the park on California Boulevard and St. John Avenue. As a result, some

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	construction activities would be visible to patrons in the north and east parts of the park, although trees and shrubs along those sides of the park would partially shield views from those areas in the park. The nearest surface feature of the Freeway Tunnel Alternative to Singer Park would be approximately 120 feet north of the park, within the existing SR 710 alignment. Views of the Freeway Tunnel Alternative improvements from the northeast corner of the park would be similar to existing views with the addition of the portal structure. The changes in views from the park would not be expected to be substantive because they would be views of urban structures and features in a viewshed that already contains urban structures and features. As a result, the Freeway Tunnel Alternative would not result in temporary construction or long-term operation visual effects at Singer Park. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Singer Park because the proximity impacts of that Alternative would not substantially impair the protected activities, features, or attributes of that park.
Villa-Parke 363 East Villa Street **Owner/Operator:** City of Pasadena **Description:** The 11.9-acre Villa-Parke provides a basketball court, a baseball diamond, sport court lighting, bleachers, soccer and football field overlays, playground equipment, an open area, and restrooms. **Distance:** This park is approximately: • 565 feet from the edge of the MDL for the nearest freeway segment improvements; • 585 feet from the nearest freeway segment improvements; and • 7,465 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or would not be used by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Villa-Parke because it would not result in proximity impacts on that park.
Villa-Parke Community Center 363 East Villa Street **Owner/Operator:** City of Pasadena **Description:** The 41,475-square-foot Community Center is on an 8.1-acre site. The building includes a large auditorium with a stage and storage area, a social/recreation room, weight and boxing rooms, and a gymnasium with showers and dressing rooms. Activities offered at the Community Center include recreation activities for children, adults, and families; a Farmers' Market; and support for a wide range of social service needs. There is also a public library on this site. **Distance:** This park is approximately: • 905 feet from the edge of the MDL for the nearest freeway segment improvements; • 945 feet from the edge of the nearest freeway segment improvements; and • 7,465 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this Community Center from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this Community Center would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this Community Center from the nearest construction of any freeway segment and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this Community Center would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this Community Center are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this Community Center would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this Community Center from the tunneling activities under the Freeway Tunnel Alternative, this Community Center is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this Community Center from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this Community Center would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at the Villa-Parke Community Center because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Blair High School 1201 South Marengo Avenue **Distance:** This school and the recreation resources at this school are approximately: • 2,385 feet from the nearest edge of the potential	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
settlement zone above the tunnel section improvements; • 2,455 feet from the nearest tunnel section improvements; and • 4,235 feet from the nearest tunnel portal (North Portal).	experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of the recreation resources at this school from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, they would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of the recreation resources at this school from the tunneling activities under the Freeway Tunnel Alternative, they are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Blair High School because it would not result in proximity impacts on those resources.
Recreation Resources at Madison Elementary School (K to 5th) 515 Ashtabula Street **Owner/Operator:** Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,375 feet from the edge of the MDL for the nearest freeway segment improvements; • 2,510 feet from the edge of the nearest freeway segment improvements; and • 9,635 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Madison Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at Roosevelt Elementary School (K to 5th) 315 North Pasadena Avenue **Owner/Operator:** Pasadena Unified School District **Distance:** This school and the recreation resources at this school are: • Approximately 550 feet west of mainline SR-710 north of SR 134; and • Approximately 650 feet northwest of mainline SR 134 south of West Walnut Street.	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Construction of the improvements in the Freeway Tunnel Alternative adjacent to the recreation resources at this school could result in short-term noise levels that could impact those recreation uses. Those construction activities would be required to comply with the City of Pasadena and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the Freeway Tunnel Alternative facilities adjacent to this school would substantially reduce the short-term noise effects on the recreation uses at Roosevelt Elementary School. The recreation resources at Roosevelt Elementary School are active uses. The 2035 noise levels under the dual-bore design variation of the Freeway Tunnel Alternative without tolls and the single-bore design variation of the Freeway Tunnel Alternative with tolls and trucks (the operational variations that would result in the largest traffic volume increases and related noise level increases under each respective design variation) are predicted to be 68 dBA and 67 dBA, respectively, at this school, which would be higher than the predicted noise levels under the No Build Alternative (66 dBA). Although the 2035 predicted noise levels at this school under both design variations of the Freeway Tunnel Alternative would approach or exceed the 67 dBA NAC for Activity Category C uses, it was determined that construction of a noise barrier in the vicinity

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	of this school would be unreasonable due to costs. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the freeway construction and improvements under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resource at Roosevelt Elementary School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of the recreation resources at that school.
Recreation Resources at San Rafael Elementary School (K to 5th) 1090 Nithsdale Road **Owner/Operator:** Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 2,220 feet from the edge of the MDL and right of way for the nearest freeway segment improvements; • 2,380 feet from the nearest freeway segment improvements; and • 8,610 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of the recreation resources at this school from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, they would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at San Rafael Elementary School because it would not result in proximity impacts on those recreation resources.
CITY OF SOUTH PASADENA	
Garfield Park 1750 Mission Street **Owner/Operator:** City of South Pasadena **Description:** This 7.6-acre park provides tennis courts, a playground, and a garden area. **Distance:** This park is approximately: • 2,555 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 2,630 feet from the nearest tunnel section improvements; and • 6,700 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Garfield Park because it would not result in proximity impacts on that park.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Library Park 1102 Oxley Street **Owner/Operator:** City of South Pasadena **Description:** This 3.2-acre park provides tennis courts, a half basketball court, a playground, and a baseball field. **Distance:** This park is: • Adjacent to the nearest edge of the potential settlement zone above the tunnel section improvements; • Approximately 75 feet from the nearest tunnel section improvements; and • Approximately 7,645 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction and operation of this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Library Park because it would not result in proximity impacts on that park.
Orange Grove Park and Recreation Center 815 Mission Street **Owner/Operator:** City of South Pasadena **Description:** This 2.5-acre park provides a lighted softball and soccer field, two lighted tennis courts, picnic tables, a small playground, drinking fountains, bleachers, and a bicycle rack.	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
The Orange Grove Park and Recreation Center is a 9,500-square-foot facility located in Orange Grove Park. A wide range of programs for families and children are offered at this Recreation Center. The first floor of the Recreation Center is used for recreation and day care programs. The second floor contains a meeting room and a small teen center. **Distance:** This park is approximately: • 720 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 800 feet from the nearest tunnel section improvements; and • 7,410 feet from the nearest tunnel portal (North Portal).	improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of Orange Grove Park and Recreation Center because it would not result in proximity impacts on those facilities.
War Memorial Park 435 Fair Oaks Avenue **Owner/Operator:** City of South Pasadena **Description:** This 1.8-acre park includes the two-story, 12,000-square-foot War Memorial Building, which was constructed in 1921 and is a City of South Pasadena cultural heritage landmark. The Memorial was constructed on the site of the former Oak Lawn Park. The large multipurpose room on the second floor is used for events (e.g., banquets and meetings) for large groups, and includes a kitchen. The first floor contains smaller meeting rooms, storage space, and restrooms. The Park also includes a landscaped memorial garden and on-site parking. **Distance:** This park is approximately: • 1,140 feet from the nearest edge of the potential settlement zone above the tunnel section	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance of this park from the tunneling activities under the

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
improvements; • 1,130 feet from the nearest tunnel section improvements; and • 5,180 feet from the nearest tunnel portal (North Portal).	Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of War Memorial Park because it would not result in proximity impacts on that park.
Recreation Resources at Monterey Hills Elementary School (K to 5th) 1624 Via Del Rey **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 1,295 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 1,370 feet from the nearest tunnel section improvements; and • 9,515 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance of the recreation resources at this school from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, they would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
	Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Monterey Hills Elementary School because it would not result in proximity impacts on those recreation resources.
Recreation Resources at South Pasadena High School (9th to 12th) 1401 Fremont Avenue **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are: • Adjacent to the nearest edge of the potential settlement zone above the tunnel section improvements; • Approximately 60 feet from the nearest tunnel section improvements; and • Approximately 9,565 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction and operation of this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative and would not be used by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at South Pasadena High School because it would not result in proximity impacts on those recreation resources.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]
Recreation Resources at South Pasadena Middle School (6th to 8th) 1500 Fair Oaks Avenue **Owner/Operator:** South Pasadena Unified School District **Distance:** This school and the recreation resources at this school are approximately: • 25 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 35 feet from the nearest tunnel section improvements; and • 10,075 feet from the nearest tunnel portal (North Portal).	The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource. **Air Quality:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative. **Noise:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction and operation of this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative. **Traffic:** Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative. **Ground-Borne Noise and Vibration:** Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations. **Visual Resources:** Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative. **Summary:** In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at South Pasadena Middle School because it would not result in proximity impacts on those recreation resources.

Table footnotes are provided on the following page.

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource[1]	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f)[2]

Source: LSA Associates, Inc. (2014). Refer also to Chapter 5, References and Preparers, for a list of references used to research resources potentially protected under the requirements of Sections 4(f) and 6(f).
Note 1: Cities and communities which do not contain Freeway Tunnel Alternative improvements are not included in this table.
Note 2: As used in this analysis, "tunnel segment" refers to the segments of the Freeway Tunnel Alternative that would be in the tunnel, and "freeway segment" refers to segments of the freeway that would at at-grade or above grade.

[1] Only resources within 0.5 mile of the project improvements in the Freeway Tunnel Alternative are evaluated in this table. Refer to Figure 3.5-1 for the locations of the resources discussed in this table.

[2] The following distances were measured to assess the potential for short-term proximity impacts on Section 4(f) resources under the Freeway Tunnel Alternative:

- **Maximum Disturbance Limit:** This is an area defined on the ground surface as the maximum area that may be disturbed during construction of the Freeway Tunnel Alternative. This represents a worst case of potential temporary impacts during construction.
- **Temporary Construction Easement:** This is a specific area defined on the ground surface that is anticipated to be disturbed temporarily during construction of the Freeway Tunnel Alternative. This may include areas needed temporarily for materials or equipment storage, or construction of at-grade and elevated freeway segments. The defined TCEs are areas outside the maximum disturbance limits (MDLs). Areas used for TCEs would be restored to their original or better condition prior to returning those areas to the property owners.
- **Potential Settlement:** This is an area above the tunnel alignment defined as potentially subject to settlement as a result of the operation of the tunnel boring machine and the construction of the tunnel/tunnels in the Freeway Tunnel Alternative.

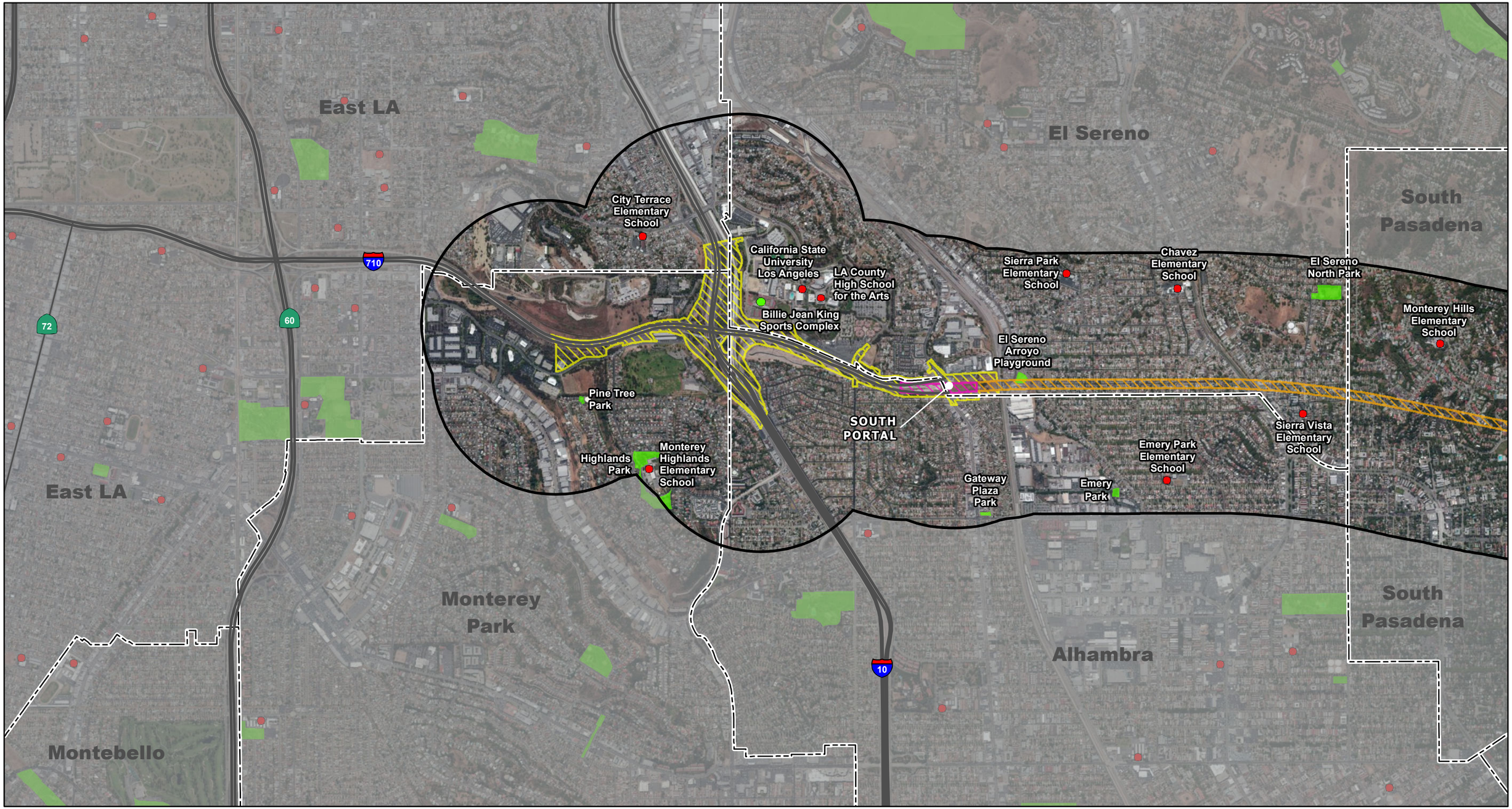
The assessment of the potential for long-term proximity impacts on Section 4(f) resources under the Freeway Tunnel Alternative was based on the limits of the MDLs described above because the permanent improvements would not be any closer to a Section 4(f) resource than the nearest limits of an MDL. In cases where the ultimate right of way would be closer to the Section 4(f) resource than the MDL, the nearest right-of-way limit was used to assess the potential for long-term proximity impacts. The following distances were measured to assess the potential for long-term proximity impacts on Section 4(f) resources under the Freeway Tunnel Alternative:

- **Freeway Segment:** This defines the non-tunnel, elevated and at-grade freeway segment improvements in the Freeway Tunnel Alternative.
- **Tunnel Alignment:** This is the alignment of the tunnel segment of the Freeway Tunnel Alternative.
- **Right-of-Way Limit:** This is the boundary of permanent right of way of the Freeway Tunnel Alternative.

[3] **South Portal Haul Route:** The preliminary route for hauling spoils material generated at the south portal of the tunnel during construction of the Freeway Tunnel Alternative includes a short segment on Fremont Avenue south of Valley Boulevard and then a short segment on I-710 south to I-10. There are no parks or other Section 4(f) properties within 0.5 mile of the non-freeway part of that segment of the haul route; therefore, no discussion is provided regarding that segment of the haul route. The preliminary route at the disposal end of the trip includes Live Oak Avenue and Arrow Highway (to/from I-605 at the disposal end of the haul trips), and Azusa Canyon Road (to access the Olive Pit) and Vincent Avenue (to access the Manning Pits). The haul routes will be used only during construction of the Freeway Tunnel Alternative tunnel.

North Portal Haul Route: At the north portal, haul trucks will enter SR 710 without traveling on local streets. As a result, there will be no truck traffic in that area on non-freeway segments; therefore, no evaluation of potential effects on Section 4(f) properties was needed. The preliminary route at the disposal end of the trip includes Arrow Highway (to/from I-605 at the disposal end of the haul trips), and Azusa Canyon Road (to access the Olive Pit) and Vincent Avenue (to access the Manning Pits). The haul routes will be used only during construction of the Freeway Tunnel Alternative tunnel.

Caltrans = California Department of Transportation
dBA = A-weighted decibels
FY = Fiscal Year
GHG = greenhouse gas
I-10 = Interstate 10
I-605 = Interstate 605
I-710 = Interstate 710
K = Kindergarten
L&WCF Act = Land and Water Conservation Fund Act
MDL = maximum disturbance limit
MSAT = mobile source air toxics
NAC = Noise Abatement Criteria
SR 710 = State Route 710
TCE = temporary construction easement
TMP = Transportation Management Plan



LEGEND

- At-grade Section
- Bored Tunnel Section
- Cut & Cover Tunnel Section
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary

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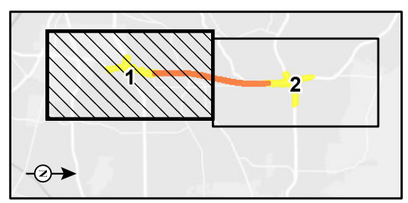

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.5-1

Sheet 1 of 2

SR 710 North Study

Resources within a Half-Mile of the Freeway Tunnel Alternative

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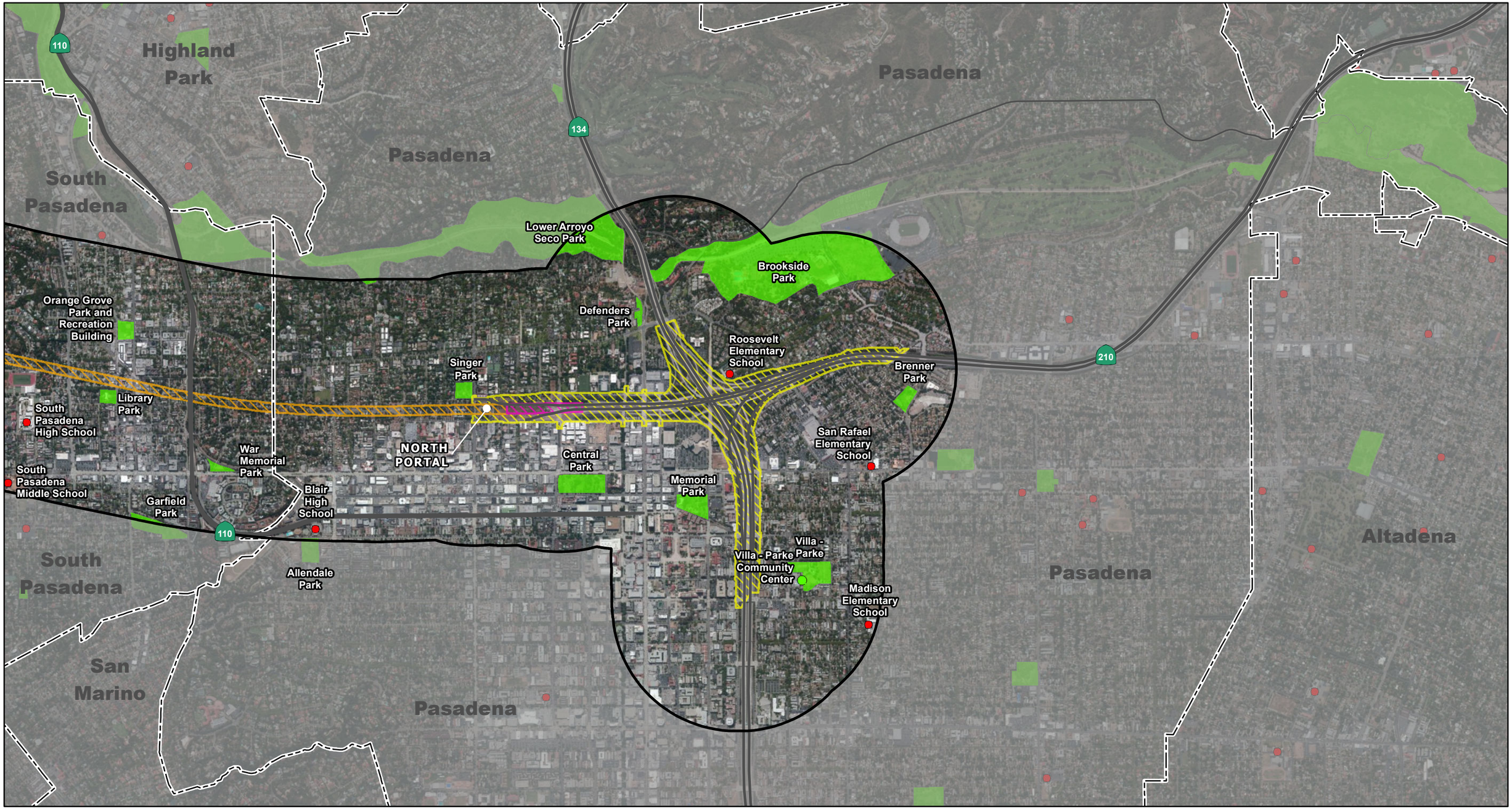

LEGEND

- At-grade Section
- Bored Tunnel Section
- Cut & Cover Tunnel Section
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary

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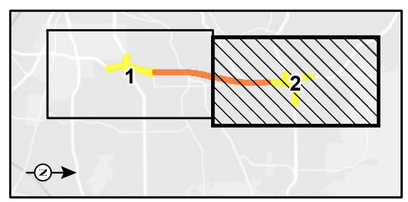

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.5-1

Sheet 2 of 2

SR 710 North Study

Resources within a Half-Mile of the Freeway Tunnel Alternative

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TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
CITY OF PASADENA	
Arroyo Seco Parkway Historic District (includes the route of the Arroyo Seco Freeway from the four-level interchange in the City of Los Angeles, through South Pasadena to East Glenarm Street in Pasadena, and the bridges along that route). The Arroyo Seco Parkway is also a segment of Historic Route 66. The State-owned bridge at the Fair Oaks Avenue Overcrossing (Bridge No. 53 0440) is listed in the Caltrans Bridge Inventory and is a contributing element of this Historic District. **CHR Status Code:** 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with events), Criteria B (Association with Significant Persons), and C (Architecture). The project proposes improvements at two locations in the Arroyo Seco Parkway Historic District under the TSM/TDM Alternative: (1) an approximately 500-foot long segment of roadway that includes the NB off-ramp at the Fair Oaks Avenue Overcrossing, State Agency Bridge No. 53-0440 (Exit 31B); and (2) an approximately 1,500-foot long segment of roadway, beginning approximately 650 feet south of the northern boundary of the Historic District, at East Glenarm Street in the City of South Pasadena, a reconfigured southbound State Street off-ramp and a new southbound State Street on-ramp onto SR 110. • Provide two dedicated left-turn lanes, one through-lane, and one combination through/left-turn lane for the SR 110 northbound off-ramp at Fair Oaks Avenue/ Grevelia Street • Remove the raised median at the SR 110 northbound off-ramp • Eliminate parking on the west side of the southbound direction and add a southbound through-lane on Fair Oaks Avenue south of Grevelia Street • Provide new pavement on Fair Oaks Avenue approximately 100 feet south of Grevelia Street • Replace the existing dedicated left-turn lane and one combination through/left turn lane on northbound Fair Oaks Avenue south of Grevelia Street with two through lanes in order to prohibit a left-turn to the SR 110 northbound off-ramp • Add one southbound through-lane on Fair Oaks Avenue south of State Street • Eliminate two dedicated left-turn lanes to prohibit left-turns onto the SR 110 southbound on-ramp and replace them with one northbound through-lane on Fair Oaks Avenue south of State Street • Replace the combination northbound through/right-turn lane with a dedicated right-turn lane on Fair Oaks Avenue south of State Street	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-1, the proposed TSM/TDM Alternative improvements would require removing part of the existing curb and gutter system; modifying landscaped medians and traffic islands in part to accommodate an additional left turn lane on southbound Fair Oaks Avenue for eastbound traffic onto West Huntington Drive; paving; and restriping West Huntington Drive and Fair Oaks Avenue at this location. These improvements would result in direct effects to the character-defining features that qualify this Historic District for the National Register. The new southbound State Street on-ramp would alter the landscape at that location. Some degree of landscape restoration has occurred within this Historic District since its original construction in 1938-1940. After construction of the TSM/TDM Alternative improvements in this location, a professional landscape architect and biologist would prepare a vegetation plan using historical information and vegetation patterns in other areas of the Historic District to restore this character-defining element of the Historic District at this location. Wall surfaces would feature hanging or clinging vegetation to screen new construction from views within the Historic District. The integrity of feeling would be diminished by changes to the setting as a result of the improvements in the TSM/TDM Alternative. However, the proposed activity would occur in one area of the Historic District and would not introduce a collective visual intrusion so jarring and discordant with the historical design of the Historic District that an adverse effect would result such that this segment of the Historic District/Route 66 would no longer be able to convey its significance and the experience of automobile travel during the period of significance would no longer be understood. Given that the proposed improvements are near the boundary of the Historic District and would be partially screened with clinging or overhanging vegetation, the proposed improvements would not adversely affect the integrity of feeling, association, setting, or design of this Historic District. The scale and proportion of the TSM/TDM Alternative improvements in this area would be similar to historical patterns in this part of the Historic District. Several visual elements have been added to this area since the road was built in 1938-1940. Aerial photographs of the area from the 1950s through the 1970s indicate several transformations in automobile and pedestrian circulation patterns. The proposed

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
• Remove the existing raised median and traffic signal at the Fair Oaks Avenue and State Street intersection • Install an approximately 320-foot long retaining wall with an approximate maximum height of 18 feet along the south side of the northbound SR 110 off-ramp • Install an approximately 250-foot long segment of K-rail deflective concrete barrier in front of the proposed retaining wall approximately 150 feet from the beginning of that retaining wall • Move the southbound SR 110 off-ramp exit approximately 100 feet north of its existing location • Install a southbound SR 110 hook on-ramp on State Street • Install an approximately 325-foot long sound wall on the west side of southbound SR 110 along the outside edge of the freeway shoulder • Install an approximately 400-foot long sound wall on Type 1 retaining wall along the outside edge of the shoulder of the proposed southbound SR 110 hook on-ramp • Install an approximately 750-foot long sound wall along the right of way line on northbound SR 110 (between approximately Station 83+00 and Station 91+00) • Traffic control modifications in the existing traffic control box on the west side on Fair Oaks Avenue approximately 160 feet north of the Fair Oaks Avenue Overcrossing • Install traffic management control equipment in the existing traffic controller cabinet approximately 145 feet north of the northbound Fair Oaks Avenue southbound on-ramp • Install/modify traffic control management control equipment (traffic signal loops in the road and controlling equipment in existing traffic signal pull boxes) at five locations	turning radius and hook ramp configuration of the new on-ramp would mimic the aesthetic character of the Historic District. Therefore, the proposed improvements in the TSM/TDM Alternative would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically in this Historic District. The existing southbound State Street off-ramp is not part of the original 1938–1940 era design of this segment of the Arroyo Seco Parkway. Although it is within the boundary of the Historic District, it is not identified as a contributing element to the Historic District. Modern and historical aerial photographs indicate the Fair Oaks Avenue Overcrossing originally accommodated a southbound off-ramp that was decommissioned and closed between 1948 and 1953. Around that time, the current southbound off-ramp to access Fair Oaks Avenue via State Street was built and the landscaping altered to accommodate that off-ramp and related signage. Although this alteration occurred near the end of the District's period of significance (1938–1953), it does not reflect the original 1938–1940 design and configuration of the road in this location. As a result, the change in this area under the TSM/TDM Alternative would not rise to the level of adverse to the Historic District as a whole because the change would be in an area previously modified by reconfiguring a non-contributing element to the Historic District. As noted above, the realigned State Street off-ramp would require the acquisition of approximately 9,100 sf (2.7 percent) of the Broadway Power Plant parcel, which is not eligible for the National Register. This acquisition would not affect any built environment elements on that property. The reconfigured SB off-ramp would require approximately 250 feet of realigned traffic lane, striping, and related drainage infrastructure. This improvement would also require segments of a combination of new sound and retaining walls, K-Rails barriers, curbs, lane striping, and related drainage infrastructure along the shoulder. The proposed TSM/TDM Alternative improvements at this location will occur entirely within the existing publicly owned right of way for the Arroyo Seco Parkway. These improvements will have no effect on the historic property's setting, location, feeling, and association, which are the most important aspects of integrity under Criterion A. The proposed improvements would alter the integrity of materials, design, and workmanship in this Historic District, which are the most important aspects of integrity under Criterion C. However the scope, scale, and nature of the proposed improvements would be limited to one location in the Historic District. Therefore the

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	proposed improvements would not result in an adverse effect to the character-defining features of this Historic District. In summary, as documented in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study*, the TSM/TDM Alternative improvements would result in No Adverse Effects on the Arroyo Seco Parkway Historic District/Route 66 in South Pasadena. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f):** The TSM/TDM Alternative would not result in permanent easements or temporary occupancies (TCEs) at this property. The TSM/TDM Alternative would require the permanent acquisition of approximately 9,100 sf from a noncontributing feature. As described above, the project features in this area would not substantively modify the workmanship, materials, integrity of location or the essential physical features or characteristics of the Historic District that qualify it for inclusion in the National Register. The changes in the Historic District as a result of the TSM/TDM Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. As a result, the TSM/TDM Alternative improvements in this area would not result in use or proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the Arroyo Seco Parkway Historic District for protection under Section 4(f).
Markham Place Historic District: Generally bounded by West California Boulevard on the north, South Pasadena Avenue on the east, Bellefontaine Street on the south, and South Orange Grove Boulevard on the west **CHR Status Code:** 1S (Individual property listed in the National Register by the Keeper); listed under Criterion C (Architecture). The following improvements would be constructed outside the northern boundary of the Markham Place Historic District under the TSM/TDM Alternative: • New sidewalk and curbs at the northwest corner of the South St. John Avenue/West California Boulevard intersection tiering into existing Del Mar and California Boulevard improvements. • Extend St. John Avenue from West Del Mar Avenue to West California Boulevard, including removing existing Havendale Drive to accommodate the St. John Avenue extension • Replace the existing cul-de-sac at Palmetto Drive with a "T" intersection at St.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-1, the improvements in the TSM/TDM Alternative would be at the South St. John Avenue/West California Boulevard intersection, north of and outside the northern boundary of this Historic District. The proposed curb and gutter improvements as part of the extension of South St. John Avenue under the TSM/TDM Alternative do not have the potential to adversely affect the critical elements of the materials and workmanship in this Historic District, as expressed through the architectural character-defining features of its contributing elements. The reconfiguration of the northwestern corner of the South St. John Avenue/West California Boulevard intersection would be outside the boundary of this Historic District. Although those improvements would result in a change to a physical feature (the intersection) within the setting of the Historic District and potentially an increase in traffic and related-noise, those changes would not affect the integrity of feeling and setting of this Historic District associated with a prominent location along a busy road in an urban

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
John Avenue approximately 550 feet north of the California Boulevard/St. John Avenue intersection • Provide traffic signals for traffic from the SR 710 southbound off-ramp and for southbound through traffic from southbound St. John Avenue, approximately 425 feet north of the California Boulevard/St. John Avenue intersection	area. The project features in this area would be minor and would not detract from the essential physical features or characteristics of the Markham Place Historic District that qualify it for inclusion in the National Register because those improvements would: (1) occur at ground level, (2) consist of small-scale modifications along and outside the periphery of the District boundary, (3) occur in areas along busy roads in an urbanized area, and (4) once completed, would not prevent the continued occupation and existing/intended uses of any of the contributing elements of the Historic District. As a result, the proposed improvements under the TSM/TDM Alternative outside the Markham Place Historic District would result in No Adverse Effect on this resource under Section 106. **Effects under Section 4(f):** The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the District that qualify it for inclusion in the National Register. As a result, the TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the Markham Place Historic District for protection under Section 4(f).
Sequoyah School/Neighborhood Church 535 S. Pasadena Avenue (Three buildings: Children's Chapel, Nursery School, and Religious Education Building) **CHR Status Code:** 2S2 (Individual property determined to be eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture) The following improvements would be constructed within the existing publicly owned right of way at the South St. John Avenue/West California Boulevard intersection, west of and outside the western boundary of the Sequoyah School/ Neighborhood Church property: • Extend South St. John Avenue from West Del Mar Avenue to West California Boulevard, with two to three travel lanes. Existing Havendale Drive will be demolished to accommodate the South St. John Avenue extension. A sidewalk	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of and outside the property boundary of the Sequoyah School/Neighborhood Church. Therefore, the proposed improvements in the TSM/TDM Alternative would not have any direct effects on the historic property. The TSM/TDM Alternative improvements would not result in an indirect adverse effect to the Sequoyah School/Neighborhood Church. The National Register significance of this property is conveyed through its Mid-Century Modern architectural qualities which can include its individual overall building shapes, materials, craftsmanship, decorative details, and various aspects of the buildings and their environment. The proposed curb and gutter improvement as part of the proposed South St. John Avenue extension do not have the potential to adversely affect the critical elements of the Sequoyah School/Neighborhood Church materials and workmanship, as expressed through the architectural character-defining

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
would be provided along the west edge of the South St. John Avenue extension. The street and sidewalk will tie into existing the existing street and sidewalk at West Del Mar Avenue and West California Boulevard. • Replace the existing cul-de-sac at Palmetto Drive with a T intersection at the proposed St John Avenue approximately 550 feet north of the West California Boulevard/South St. John Avenue intersection • Provide traffic signals for traffic from the SR 710 southbound off-ramp and for southbound through traffic from southbound South St. John Avenue, approximately 425 feet north of the West California Boulevard/South St. John Avenue intersection	features of its contributing elements. The scale and proportion of the TSM/TDM Alternative improvements would be similar to historical patterns in the area of the Sequoyah School/Neighborhood Church. Several visual elements were added in this area during the period of significance (1948 for the Nursery School and Religious Education Building and 1956 for the Children's Chapel) for the Sequoyah School/Neighborhood Church. These include variations of traffic signals, street and directional signage, and light standards. Therefore, the improvements in the TSM/TDM Alternative at the northwest corner of the South St. John Avenue/West California Boulevard intersection would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. The TSM/TDM Alternative improvements undertaking would not alter the setting in a way that affects the historic significance of the Sequoyah School/Neighborhood Church. According to a 2014 traffic analysis, the travel lane configuration on South St. John Avenue would increase road noise in the vicinity of the Sequoyah School/ Neighborhood Church. The report concluded that visual and associated audible effects from increased traffic delay times would result under this Alternative. However, the National Register significance of the Sequoyah School/Neighborhood Church is not derived from it being located in a quiet, rural setting. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. Furthermore, the increased traffic volume and associated noise would not interfere with the continued use of the Sequoyah School/Neighborhood Church. The Sequoyah School/Neighborhood Church was intentionally sited west of and near to downtown to provide a children's chapel, nursery, and religious education building as part of a neighborhood church next to a residential neighborhood of important and influential persons near Pasadena's central business district. Therefore, although the reconfiguration of the northwestern corner of South St. John Avenue/West California Boulevard outside the historic boundary of the Sequoyah School/ Neighborhood Church would result in a change to a physical feature in the setting of this historic property, namely the reconfiguration of part of the intersection and an increase in traffic and related-noise, it would not affect the integrity of feeling and setting of the Sequoyah School/Neighborhood Church associated with a prominent location along a busy road in an urban area. **Summary of Effects:** The TSM/TDM Alternative improvements would have No

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	Adverse Effects on the Sequoyah School/Neighborhood Church. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f):** The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the Sequoyah School/Neighborhood Church that qualify it for inclusion in the National Register. As a result, the TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the Sequoyah School/ Neighborhood Church for protection under Section 4(f).
CITY OF SOUTH PASADENA	
Rialto Theatre 1019 Fair Oaks Avenue **CHR Status Code:** 1S (Individual property listed in the National Register by the Keeper; listed under Criteria A [Association with events] and C [Architecture]). The following improvements would be constructed on Fair Oaks Avenue adjacent to the Rialto Theatre under the TSM/TDM Alternative: • Removal of the existing median in and restriping of Fair Oaks Avenue to accommodate a central reversible lane • Installation of two overhead reversible message boards on the west side of Fair Oaks Avenue	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-1, the Rialto Theatre is on the northwest corner of the intersection of Oxley Street and Fair Oaks Avenue. As shown on Figure 3.6-1, the improvements in the TSM/TDM Alternative would be along Fair Oaks Avenue, east of and outside the property boundary of the Rialto Theatre. The primary access to the theater property is from the main driveway on Fair Oaks Avenue. The TSM/TDM Alternative would provide the following improvements within the existing publicly owned right of way in the vicinity of the Rialto Theatre that would not directly affect the Rialto Theatre: • Removal of the existing median and restriping of Fair Oaks Avenue to accommodate a central reversible lane • Installation of two overhead reversible message boards mounted on poles installed in the sidewalk on the west side of Fair Oaks Avenue near the Rialto Theatre to alert motorists of current direction of travel in the reversible lane • Installation of traffic control management equipment in an existing traffic signal pull box in the sidewalk approximately 13 feet from the south-east corner of the boundary of the Rialto Theatre property • Installation of traffic control management equipment in an existing traffic signal controller cabinet located diagonally across the intersection approximately 130 feet south of the boundary of the Rialto Theatre property These TSM/TDM Alternative improvements would result in a change to the physical

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	features in the setting of the Rialto Theatre and the introduction of visual elements in the setting that are out of character with the Rialto Theatre. The proposed reversible lane assignment indicator, removal of the central median, and restriping of Fair Oaks Avenue under the TSM/TDM Alternative do not have a potential to adversely affect the critical elements of the materials and workmanship of this historic property, as expressed through its architectural character-defining features. The scale and proportion of the proposed TSM/TDM Alternative improvements would be similar to historical patterns in the vicinity of the Rialto Theatre. The overhead reversible lane assignment indicators would be approximately 90 feet and 320 feet from the edge of the boundary of the Rialto Theatre property and would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present in this area historically. The TSM/TDM Alternative improvements would not alter the setting in a way that would affect the historic significance of the Rialto Theatre. Although the reconfiguration of the lanes on Fair Oaks Avenue at this location would result in a change to a physical feature within the setting of the Rialto Theatre, those changes would not affect the integrity of feeling and setting of the Rialto Theatre associated with its prominent location along a busy road in an urban area. These alterations would be minor and would not detract from the essential physical features or characteristics of the Rialto Theatre that qualify it for inclusion in the National Register because: (1) they would be in or near previously modified areas in the public right of way (e.g., patchwork sidewalk, curb, gutter repairs, utility equipment installation, or by reconfiguration to improve pedestrian access); (2) with the exception of the overhead message board and poles, these improvements would be at ground level; (3) they would consist of small-scale modifications outside the boundary of the theater property; (4) they would be in areas along busy roads in an urban area region, (5) the proposed alterations would generate minor visual effects that would not substantively obscure the Moorish architectural qualities of the Rialto Theatre and would not rise to the level of adverse because they would not be in front of or adjacent to the Rialto Theatre; and (6) once completed, they would not prevent the continued occupation and the existing/intended uses of this historic property. Therefore, the Rialto Theatre would retain its integrity of location, setting, design, feeling, materials, workmanship, and association even with the improvements in the TSM/TDM Alternative in the Fair Oaks Avenue public right of way. The Rialto Theatre would retain those character-defining elements that allow it to convey its significance under Section 106. As a result, the proposed alterations in

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	the vicinity of the Rialto Theatre would result in No Adverse Effect on that resource under Section 106. **Effects under Section 4(f):** The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would not detract from the essential physical features or characteristics of the Rialto Theatre that qualify it for inclusion in the National Register. As a result, the TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the Rialto Theatre for protection under Section 4(f).
Fair Hope Building 800 Fair Oaks Avenue **CHR Status Code:** 2S2 (Individual property determined to be eligible for the National Register by a consensus through the Section 106 process); listed under Criteria A (Association with events) and C (Architecture) The following improvements would be constructed within Fair Oaks Avenue adjacent to the Fair Hope Building under the TSM/TDM Alternative: • Removal of the existing median in and restriping of Fair Oaks Avenue to accommodate a central reversible lane • Installation of two overhead reversible message boards on the west side of Fair Oaks Avenue • Installation of traffic management equipment in an existing traffic signal pull box in the sidewalk approximately 16 feet from the north-west corner of the Fair Hope Building • Installation of traffic management equipment in an existing traffic controller cabinet across Hope Street and approximately 60 feet from the northwest corner of the Fair Hope Building	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-1, the Fair Hope Building is on the southeast corner of the intersection of Hope Street and Fair Oaks Avenue. As shown on Figure 3.6-1, the improvements in the TSM/TDM Alternative would be along Fair Oaks Avenue, west of and outside the property boundary of the Fair Hope Building. The primary access to the property is from the main driveway on Fair Oaks Avenue. The TSM/TDM Alternative would provide the following improvements in the existing publicly owned right of way in the vicinity of the Fair Hope Building that would not directly affect that property: • Removal of the existing median and restriping of Fair Oaks Avenue to accommodate a central reversible lane • Installation of two overhead reversible message boards mounted on poles installed in the sidewalk on the west side of Fair Oaks Avenue near the Fair Hope Building to alert motorists of current direction of travel in the reversible lane • Installation of traffic management equipment in an existing traffic signal pull box in the sidewalk approximately 16 feet from the north-west corner of the Fair Hope Building • Installation of traffic management equipment in an existing traffic controller cabinet across Hope Street and approximately 60 feet from the northwest corner of the Fair Hope Building These TSM/TDM Alternative improvements would result in a change to the physical features in the setting of the Fair Hope Building and the introduction of visual elements in the setting that are out of character with that building. Nonetheless, the Fair Hope Building would maintain its continuity of land use and association with

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	commercial development along with its design and feeling in its historical location and setting along a major thoroughfare. As a group, the proposed alterations in the TSM/TDM Alternative would generate visual effects; however, those effects would be minor in nature and would not rise to the level of adverse because they would not be in front of or adjacent to the Fair Hope Building and would be in areas that were previously modified over time along Fair Oaks Avenue. Therefore, the Fair Hope Building would retain its integrity of location, setting, design, feeling, materials, workmanship, and association even with the improvements in the TSM/TDM Alternative in the Fair Oaks Avenue public right of way. The Fair Hope Building would retain those character-defining elements that allow it to convey its significance under Section 106. As a result, the proposed alterations in the vicinity of the Fair Hope Building would result in No Adverse Effect on that resource under Section 106. **Effects under Section 4(f):** The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would not detract from the essential physical features or characteristics of the Fair Hope Building that qualify it for inclusion in the National Register. As a result, the TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the Fair Hope Building for protection under Section 4(f).
Arroyo Seco Parkway Historic District: This Historic District is located in the Cities of Pasadena and South Pasadena. Please refer to the discussion above under the City of Pasadena for a description of this Historic District.	Please refer to the discussion above under the City of Pasadena for a description of the potential effects of the TSM/TDM Alternative improvements on this Historic District.
Segment of Route 66: South Fair Oaks Avenue/Fair Oaks Avenue **CHR Status Code:** Assumed eligible for listing in the National Register; under Criterion A (Association with events) The following improvements would be constructed on South Fair Oaks Avenue/Fair Oaks Avenue under the TSM/TDM Alternative: • Convert the existing dedicated left-turn lanes and median area into a reversible lane to accommodate peak traffic flows and prohibit left-turn movements from Fair Oaks Avenue to Oxley Street and Hope Street • Install overhead reversible lane assignment indicators on the sidewalk along Fair	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative along the approximately 2.9 mile long segment of Fair Oaks Avenue/South Fair Oaks Avenue between the intersection of West Huntington Drive in South Pasadena and Colorado Boulevard in Pasadena. The improvements under the TSM/TDM Alternative would be within the historic property boundary of the former segment of Route 66 at the West Huntington Drive intersection of Fair Oaks Avenue to Colorado Boulevard. Therefore, this Alternative would result in a direct effect to the character-defining features of this former segment of Route 66 that support its eligibility for the National Register. However, as

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
Oaks Avenue in the vicinity of the Rialto Theatre and the Fair Hope Building • Provide two dedicated left-turn lanes, one through lane, and one combination through/left turn lane for the SR 110 northbound off-ramp at Fair Oaks Avenue/ Grevelia Street • Remove the raised median at the SR 110 northbound off-ramp • Eliminate parking on the west side of the southbound direction and add a southbound through lane on Fair Oaks Avenue south of Grevelia Street • Provide new pavement on Fair Oaks Avenue, approximately 100 feet south of Grevelia Street • Replace the existing dedicated left-turn lane, and one combination through/left turn lane on northbound Fair Oaks Avenue, south of Grevelia Street, with two through lanes to prohibit left-turns onto the SR 110 northbound off-ramp • Add one through southbound lane on Fair Oaks Avenue south of State Street • Eliminate two dedicated left-turn lanes to prohibit left-turns onto the SR 110 southbound on-ramp and replace them with one northbound through lane on Fair Oaks Avenue south of State Street • Replace the combination northbound through/right-turn lane with a dedicated right-turn lane Fair Oaks Avenue south of State Street • Remove the existing raised median and traffic signal at the Fair Oaks Avenue and State Street intersection • All the improvements on Fair Oaks Avenue, the SR 110 northbound off-ramp, and Grevelia Street would be within existing publicly owned right of way • Remove the existing raised median and traffic signal at the Fair Oaks Avenue/State Street intersection • Eliminate parking on Fair Oaks Avenue north of Monterey Road and widened the curb lane • Widen Huntington Drive on the north side to match the modified landscaped medians • Install overhead reversible lane assignment poles in seven places on Fair Oaks Avenue between Monterey Road and Grevelia Street • Install traffic management equipment in existing traffic controller cabinets at six signalized intersections on Fair Oaks Avenue • Modify existing traffic signal loops in the road and related control equipment in existing traffic signal pull boxes at three locations in the vicinity of the Fair Oaks Avenue/Monterey Road intersection	discussed below, this effect would not be adverse. The proposed improvements would be within the existing publicly owned right of way where previous street improvements have occurred since the road was originally constructed. The significance of this property is conveyed through its association with an important national transportation corridor connecting the Midwest and California; for its highway design and construction trends which can include the overall alignment, materials, and association as a major road; and various aspects of its site and environment. The proposed improvements in the TSM/TDM Alternative would not affect the property's location. Its integrity of feeling and association will be diminished by changes to the setting. However, the reconfiguration and restriping of traffic lanes, traffic islands and landscaped areas, installation of accessible pedestrian ramps and restriped crosswalks would not introduce a visual intrusion so jarring and discordant that an adverse effect would result such that this segment of former Route 66 would no longer be able to convey its significance and the experience of automobile travel on Route 66 during the period of significance would no longer be understood. The proposed improvements in the TSM/TDM Alternative would not significantly alter the character-defining features of the historic property. The scale and proportion of the proposed improvements would be similar to historical patterns in the area of the former segment of Route 66 at the West Huntington Drive/Fair Oaks Avenue intersection. This area already has several visual elements that were added since the road was built. These include modern traffic signals, signage, and light standards. Analysis of historical development of Route 66 in this area starting in the 1920s demonstrates that the area was once along the Pacific Electric Railway streetcar alignment with an associated element of visual clutter that obscured pedestrian views of and from this segment of Route 66 to a varying degree. Aerial photographs of the area from the 1940s through the 1970s show this road has undergone several transformations in automobile and pedestrian circulation patterns first following the removal of the Pacific Electric Railway streetcar system infrastructure in the public right of way by 1952 and then 30 years later when the modern configuration of the road was largely in place. Therefore, the proposed improvements in the TSM/TDM Alternative in this area would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. According to a traffic analysis prepared in 2014, the TSM/TDM Alternative would

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	result in increases or decreases in traffic delay times, depending on the location, and associated road noise from West Huntington Drive north to Colorado Boulevard. That report concluded that visual and associated audible effects from varying traffic delay times along this segment of Route 66 would occur under this Alternative. However, the National Register significance of this segment of Route 66 is not based on it being located in a quiet, rural setting. The varying levels of traffic and associated noise would not introduce a new or discordant type of traffic or auditory influence that was not otherwise present historically. As described above, the proposed improvements in the TSM/TDM Alternative at this location will occur entirely within the existing publicly owned right of way. Those improvements will have no effect on the setting, location or feeling and association of this historic property, which are the most important aspects of integrity under Criterion A. As described above, the character-defining features of Route 66 would not be affected by the improvements in the TSM/TDM Alternative. **Summary of Effects:** The TSM/TDM Alternative improvements would have No Adverse Effects on the segment of historic Route 66 on Fair Oaks Avenue/South Fair Oaks Avenue between the intersection of West Huntington Drive in South Pasadena and Colorado Boulevard in Pasadena. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of this segment of Route 66 that qualify it for inclusion in the National Register. As a result, the TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify Route 66 for protection under Section 4(f).
Segment of Route 66: West Huntington Drive at the foot of Fair Oaks Avenue **CHR Status Code**: Assumed eligible for listing in the National Register; under Criterion A (Association with events) The following improvements would be constructed on West Huntington Drive at the foot of Fair Oaks Avenue under the TSM/TDM Alternative:	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of the former segment of Route 66/West Huntington Drive at the intersection of Fair Oaks Avenue. Those improvements would require removing part of the existing curb and gutter; modifying landscaped medians and traffic islands in part to accommodate an

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
• Remove approximately 12 feet of the existing landscape island on the west side of the Fair Oaks Avenue/West Huntington Drive intersection to accommodate a new southbound left turn lane on Fair Oaks Avenue • Install new crosswalks from both the west and east existing landscaped islands across West Huntington Drive • Install a new crosswalk between the existing landscaped islands • Remove approximately 3-4 feet of the existing west and east landscape islands at the Fair Oaks Avenue and West Huntington Drive intersection and widen West Huntington Drive on the north side of the street to match modified landscaped islands; • Modify the existing traffic control box on the west side of the north-west island of the intersection • Relocate two signal poles on the south side of the northwest islands slightly to the north and south, respectively	additional left turn lane on southbound Fair Oaks Avenue for eastbound traffic onto West Huntington Drive; and paving and restriping West Huntington Drive and Fair Oaks Avenue at this location. These improvements would result in a direct effect to the character-defining features of this former segment of Route 66 that support its eligibility for the National Register eligibility. However, as described below, this effect would not be adverse. The proposed improvements would be within the existing publicly owned right of way where a number of street improvements have occurred since this segment of Route 66 was originally constructed. The significance of Route 66 is conveyed through its association with an important national transportation corridor connecting the Midwest and California; for its highway design and construction trends which can include the overall alignment, materials, and association as a major road; and the various aspects of its site and environment. The proposed improvements in the TSM/TDM Alternative would not affect the property's location. The integrity of feeling and association of this segment of Route 66 will be diminished by changes to the setting. However, the addition of one turn lane, reconfigured traffic islands and landscaped areas, accessible pedestrian ramps and crosswalks, and road restriping would not introduce a visual intrusion so jarring and discordant that an adverse effect would result such that this segment of former Route 66 would no longer be able to convey its significance and the experience of automobile travel Route 66 during the period of significance would no longer be understood. The TSM/TDM Alternative improvements would not significantly alter the character-defining features of the historic property. The scale and proportion of the proposed improvements would be similar to historical patterns in the area of the former segment of Route 66 at the West Huntington Drive intersection with Fair Oaks Avenue. Several visual elements have been added to this area since the road was built. These include modern traffic signals, signage, and light standards. Analysis of historical development of Route 66 in this area from the 1920s onward, demonstrates that the area was once along the Pacific Electric Railway streetcar alignment with an associated element of visual clutter that obscured pedestrian views of and from this segment of Route 66 to a varying degree. Aerial photographs of the area from the 1940s through the 1970s show this intersection has undergone several transformations in automobile and pedestrian circulation patterns first following the removal of the Pacific Electric Railway streetcar system infrastructure in the Huntington Drive/Fair Oaks Avenue median by 1952 and then 30 years later when the modern configuration of this

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	intersection was largely in place. Therefore, the proposed improvements in the TSM/TDM Alternative would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. According to a traffic analysis prepared in 2014, the proposed addition of a left turn lane onto southbound Fair Oaks Avenue from West Huntington Drive would increase road noise along this road segment. That report concluded that visual and associated audible effects from increased traffic delay times would result under this Alternative. However, the National Register significance of this segment of Route 66 does not derive from being located in a quiet, rural setting. The increase in traffic volume and associated noise associated with the TSM/TDM Alternative improvements would not introduce a new or discordant type of auditory influence that was not otherwise present historically. As described above, the proposed improvements at this location will occur entirely within the existing publicly owned right of way. The TSM/TDM Alternative improvements will have no effect on the setting, location, or feeling and association of this historic property, which are the most important aspects of integrity under Criterion A. The character-defining features of the property, as described above, will not be affected by the TSM/TDM Alternative. **Summary of Effects:** The TSM/TDM Alternative improvements would have No Adverse Effects on the segment of historic Route 66 at the intersection of West Huntington Drive and Fair Oaks Avenue. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of this segment of Route 66 that qualify it for inclusion in the National Register. As a result, the TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify Route 66 for protection under Section 4(f).
Segment of Route 66: Intersection of West Huntington Drive and Fremont Avenue **CHR Status Code**: Assumed eligible for listing in the National Register; Criteria A	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of the former segment of Route 66/West Huntington Drive at the intersection of Fremont

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
(Association with events) The following improvements would be constructed at the intersection of West Huntington Drive and Fremont Avenue under the TSM/TDM Alternative: • Reconfigure the eastbound lanes on West Huntington Drive to divide a 26-foot wide combination outside through/right turn lane into an eastbound through lane and a right turn only lane onto Fremont Avenue • Restripe eastbound West Huntington Drive to shift the three through lanes to the right and narrow the average lane width, and retain the existing median would remain • East of the Fremont Avenue intersection, reconfigure a 27 foot wide outside travel lane into a 16 foot wide through land and an 11 foot wide through lane; and convert innermost lane into a second left turn lane into Fremont Avenue	Avenue. The proposed improvements would require restriping travel lanes to accommodate an additional left turn lane on southbound Fremont Avenue at this location. Therefore, the TSM/TDM Alternative would result in a direct effect to the character-defining features of this former segment of Route 66 that qualify it for eligibility for National Register eligibility. However, as described below, this effect would not be adverse. The proposed improvements would be within the existing public owned right of way where a number of street improvements have occurred since the road was originally constructed. The significance of this segment of Route 66 is conveyed through its association with an important national transportation corridor connecting the Midwest and California; for its highway design and construction trends which can include the overall alignment, materials, association as a major road; and various aspects of its site and environment. The proposed improvements in the TSM/TDM Alternative would not affect the property's location. Its integrity of feeling and association will be diminished by changes to the setting. However, the addition of one turn lane and road restriping would not introduce a visual intrusion so jarring and discordant that an adverse effect would result such that this segment of former Route 66 would no longer be able to convey its significance and the experience of automobile travel Route 66 during the period of significance would no longer be understood. The proposed improvements in the TSM/TDM Alternative do not have the potential to adversely affect critical elements of the property's location, association, feeling and setting, as expressed through its associations with important events and its engineering character-defining features. The scale and proportion of the proposed improvements would be similar to historical patterns in the area of the former segment of Route 66 at the West Huntington Drive intersection of Fremont Avenue. This area already has several visual elements that were added since the road was built. These include modern traffic signals, signage, and light standards. Aerial photographs of the area from the 1940s through the 1970s indicate that this intersection has undergone several transformations in automobile and pedestrian circulation patterns first following the removal of the Pacific Electric Railway streetcar system infrastructure in the Huntington Drive/Fremont Avenue median by 1952 and then 30 years later when the former streetcar alignment was paved and areas converted to passenger car use and

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	the modern configuration of this intersection was largely in place. Therefore, the proposed improvements would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. According to traffic analysis prepared in 2014, the proposed addition of a left turn lane and restriping of Huntington Drive at this location would increase road noise along this road segment. The report concluded that visual and associated audible effects from increased traffic delay times would result under this Alternative. However, the National Register significance of this segment of Route 66 does not derive from being located in a quiet, rural setting. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. As described above, the proposed improvements in the TSM/TDM Alternative at this location will occur entirely within the existing publicly owned right of way. Those improvements will have no effect on the setting, location or feeling, and association of this historic property, which are the most important aspects of integrity under Criterion A. The character-defining features of the property, as described above, will not be affected. **Summary of Effects:** The TSM/TDM Alternative improvements would have No Adverse Effect on the former segment of Route 66 at the West Huntington Drive intersection of Fremont Avenue. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of this segment of Route 66 that qualify it for inclusion in the National Register. As a result, the TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify Route 66 for protection under Section 4(f).
270 S. Orange Grove Boulevard **CHR Status Code**: considered eligible for the National Register for this project	**Effects under Section 106**: As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of 270 South Orange Grove Boulevard but there would be no improvements within the historic property boundary of 270 South Orange Grove Boulevard (APN 5713-027-

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
The following TSM/TDM Alternative improvements would be constructed in the existing publicly owned right of way in the vicinity of the South St. John Avenue/Del Mar Ave intersection, east of and outside the boundary of the property at 270 South Orange Grove Boulevard: • The two right hand turning lanes closest to the buildings at 270 South Orange Grove Boulevard would remain unchanged. • An approximately 70 foot long painted median would be added in South St. John Avenue north of the West Del Mar Boulevard intersection; the nearest part of this median would be approximately 45 feet from the historic property boundary of 270 South Orange Grove Boulevard. • The east side of southbound South St. John Avenue north of West Del Mar Boulevard would be widened to accommodate a through lane and a through-left combination lane. The widening will begin approximately 140 feet north of the St. John Avenue/Del Mar Avenue intersection. These lanes will replace two left turn only lanes at the existing T-intersection. • The existing metal sign bridge approximately 55 feet north of the intersection will be replaced with a widened sign bridge in the same location. • The curb and gutter and sidewalk on the east side of South St. John Avenue would be reconstructed to accommodate the pavement widening. The proposed 6 foot wide sidewalk would tie into the existing sidewalk on the north side of West Del Mar Boulevard. The following improvements related to the South St. John Avenue extension proposed under the TSM/TDM Alternative would be south of the buildings at 270 South Orange Grove Boulevard and across West Del Mar Boulevard: • Extend South St. John Avenue from West Del Mar Avenue to West California Boulevard, with two or three lanes. • Existing Havendale Drive will be demolished to accommodate the South St. John Avenue extension. A 6 foot wide sidewalk would be provided on the west edge of the proposed South St. John Avenue. The street and sidewalk will tie into existing at West Del Mar Avenue and West California Boulevard • Replace the existing cul-de-sac at Palmetto Drive with a T-intersection at proposed South St. John Avenue approximately 550 feet north of the West California Boulevard/South St. John Avenue intersection	031). Therefore, the TSM/TDM Alternative improvements would not have any direct effects on the historic property. The TSM/TDM Alternative improvements would not result in an indirect adverse effect to the institutional buildings at 270 South Orange Grove Boulevard. The significance of this property is conveyed through the Modern-styled architectural qualities of the Physical Education Building, Aquatic Center, and Gymnasium which can include their individual overall building shapes, their relative spatial relationships, materials, craftsmanship, decorative details, and various aspects of the environment. The curb and gutter improvement as part of the South St. John Avenue Extension would be approximately 35 feet east of the historic property boundary and would not have the potential to adversely affect the critical elements of the collective materials and workmanship of 270 South Orange Grove Boulevard, as expressed through the architectural character-defining features. The scale and proportion of the TSM/TDM Alternative improvements would be similar to historical patterns in the area of the buildings at 270 South Orange Grove Boulevard. Several visual elements were added during the period of significance (1964). These include variations of traffic signals, street and directional signage, and light standards. Analysis of historical development of the area from the 1960s onward, demonstrates that the area near South St. John Avenue was once more readily connected to downtown Pasadena to the east. These areas included a mix of residential and light commercial uses marking the fringe of the downtown area and connected together by a network of secondary surface streets. The area was transformed from the early 1960s to the early 1970s as buildings and surface streets were demolished and cleared to accommodate a planned extension of SR 710. These changes occurred during the period of significance for this property. By 1980, the existing configuration of South St. John Avenue and the northern stub of SR 710 were in place. Therefore, the proposed improvements to South St. John Avenue east of and outside this historic property at 270 South Orange Grove Boulevard would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically both before and during its period of significance (1959-1983). The TSM/TDM Alternative improvements would not alter the setting in a way that affects the historic significance of the buildings at 270 South Orange Grove Boulevard. According to a 2014 traffic analysis, the travel lane reconfiguration on South St. John

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
• Provide one traffic signal for traffic from the SR 710 southbound off-ramp and one signal for southbound through traffic from southbound South St. John Avenue. The two traffic signals would be approximately 425 feet north of the West California Boulevard and South St. John Intersection	Avenue would increase road noise in the vicinity of the buildings at 270 South Orange Grove Boulevard. The closest intersection to this historic property that was analyzed for anticipated comparative changes in traffic delay times and LOS between the TSM/TDM and No Build Alternatives was the South St. John Avenue/West California Boulevard. The report concluded that visual and associated audible effects from a marked increase in traffic delay times would result under the TSM/TDM Alternative. However, the National Register significance of the Physical Education Building, Aquatic Center, Gymnasium, and outdoor semi-circular amphitheater at 270 South Orange Grove Boulevard does not derive from them being in a quiet, rural setting. The increase in traffic volume would not introduce a new or discordant type of auditory influence that was not otherwise present historically. According to a noise analysis prepared in 2014, the future noise level at the eastern part of the property will increase due to an increase in traffic volumes along South St. John Avenue. The buildings at 270 South Orange Grove Boulevard are noise-sensitive uses. The report stated that exterior noise levels at these buildings will approach 67 dB, which matches the NAC of 67 dBA for school properties. For interior spaces, a reduction of 25 dB was assumed for standard building construction, these buildings use windows that are thicker than standard windows, which would further reduce projected operational noise levels for interior spaces. However, because these buildings are used for recreation and physical education purposes, they are not considered as sensitive to higher levels of interior noise compared to an auditorium or library. The buildings at 270 South Orange Grove Boulevard are in a busy urban area near Pasadena's central business district and in the vicinity of the I-210/SR 134 Freeway interchange, a major regional and national transportation corridor. Therefore, a varying, yet constant level of traffic-generated noise has been historically present within and adjacent to this historic property. It is anticipated that the buildings at 270 South Orange Grove Boulevard would remain in use and occupied by its residents and connecting roads would remain open to regular vehicular traffic. Furthermore, the increased traffic volume and associated noise would not interfere with the use of these buildings as educational institutional properties. The TSM/TDM Alternative improvements would not interrupt the continued use and enjoyment of any of these buildings in their historical locations. Their integrity of feeling and association will be not diminished by changes to the setting because the TSM/TDM Alternative improvements would be outside and east and south east of

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	the historic property boundary of 270 South Orange Grove Boulevard. When completed, the TSM/TDM Alternative improvements would not introduce a visual intrusion so jarring and discordant that an adverse effect would result that the buildings at 270 South Orange Grove Boulevard would no longer be able to convey their significant architectural qualities, professionally designed landscape, and the spatial relationship of the built environment established during the period of significance in a manner that it would no longer be understood. The TSM/TDM Alternative improvements would not significantly alter the character-defining features of the historic property. The buildings at 270 South Orange Grove Boulevard are a collection of institutional education buildings. These properties were intentionally sited west of and near to downtown to showcase a prestigious campus of modern buildings near Pasadena's central business district and readily accessible via major regional transportation arterials. This preexisting condition at this location spans over 51 years both during and after the period of significance of 1964. Therefore, although the TSM/TDM Alternative improvements along a 1,000 foot long segment of the property boundary and the reconfiguration of South St. John Avenue at this location would result in a change to a physical feature within the setting of this area, they would not affect the integrity of feeling and setting associated with the architectural qualities of the buildings at 270 South Orange Grove Avenue. The buildings at 270 South Orange Grove Boulevard would remain connected to Pasadena and other local communities by the roads that became modern South St. John Avenue and Del Mar Boulevard. **Summary of Effects**: The TSM/TDM Alternative would have No Adverse Effects on the buildings at 270 South Orange Grove Boulevard. Those building will retain the aspects of integrity that allow the property to convey its historic significance. **Effects under Section 4(f)**: The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the buildings at 270 South Orange Grove Boulevard that qualify that property for inclusion in the National Register. As a result, the TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	qualify 270 South Orange Grove Boulevard for protection under Section 4(f).
UNINCORPORATED LOS ANGELES COUNTY	
Segment of Route 66: West Huntington Drive and North Eastern Avenue **CHR Status Code**: Assumed eligible for listing in the National Register; Criteria A (Association with events) The following improvements would be constructed on West Huntington Drive and North Eastern Avenue under the TSM/TDM Alternative: • Replace existing median with one dedicated left-turn lane on westbound Huntington Drive to accommodate traffic flows to Eastern Avenue • Add one dedicated right-turn lane to the northbound direction of Eastern Avenue • Replace the existing southbound through lane with one dedicated left-turn lane, and one combination of through and right-turn lane on southbound El Sereno Avenue	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of the former segment of Route 66 at the West Huntington Drive intersection of North Eastern Avenue. The proposed improvements would require removing part of a landscaped median, paving, and restriping West Huntington Drive at this location. Therefore, the TSM/TDM Alternative improvements would result in a direct effect to the character-defining features of this former segment of Route 66 that qualify it for eligibility for National Register. However, for the reasons outlined below, this affect would not be adverse. The modified lane configuration would be within the existing publicly owned right of way where a number of street improvements have occurred since the road's construction. The significance of this historic property is conveyed through its association with an important transportation corridor connecting the Midwest and California; for its highway design and construction trends which can include the overall alignment, materials, and association as a major road; and the various aspects of its site and environment. The proposed improvements would not affect the property's location. Its integrity of feeling and association will be diminished by changes to the setting. However, the addition of one turn lane and road restriping would not introduce a visual intrusion so jarring and discordant such that an adverse effect would result and this segment of former Route 66 would no longer be able to convey its significance and the experience of automobile travel Route 66 during the period of significance would no longer be understood. The TSM/TDM Alternative improvements do not have a potential to adversely affect the critical elements of the location, association, feeling and setting of this historic property, as expressed through its associations with important events and its engineering character-defining features. The scale and proportion of the proposed improvements would be similar to historical patterns in the area of the former segment of Route 66 at the West Huntington Drive intersection of North Eastern Avenue. Several visual elements have been added in this area since the road was built. These include modern traffic

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	signals, signage, and light standards. Analysis of historical development of Route 66 in this area from the 1920s onward, demonstrates that the area was once along the Pacific Electric Railway streetcar alignment with an associated element of visual clutter that obscured pedestrian views of and from this segment of Route 66 to a varying degree. It was present during the period of significance (1926). Aerial photographs of the area from the 1940s through the 1970s show the landscaped median was installed at a later time and lanes were reconfigured to accommodate traffic demand. Therefore, the removal of a segment of the existing landscaped median, installation of an additional left turn lane onto southbound North Eastern Avenue would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. According to a traffic analysis prepared in 2014, the proposed addition of a left turn lane onto southbound North Eastern Avenue from West Huntington Drive would increase road noise along this road. That report concluded that visual and associated audible effects from markedly reduced traffic delay times would result under this Alternative. However, the National Register significance of this segment of Route 66 does not derive from it being located in a quiet, rural setting. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. As described above, the TSM/TDM Alternative improvements at this location will occur entirely within the existing publicly owned right of way. These improvements will have no effect on the setting, location, or feeling and association of this historic property, which are the most important aspects of integrity under Criterion A. The character-defining features of the property, as described above, will not be affected. **Summary of Effects:** The TSM/TDM Alternative improvements would have No Adverse Effects on the former segment of Route 66 at the West Huntington Drive intersection of North Eastern Avenue. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of this segment of Route 66 that qualify it for inclusion in the National Register. As a result, the TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	activities, features, or attributes that qualify Route 66 for protection under Section 4(f).
CITY OF SAN MARINO	
San Marino City Hall and Fire Station: 2200 Huntington Drive **CHR Status Code**: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture). The following improvements would be constructed in the vicinity of the San Marino City Hall and Fire Station under the TSM/TDM Alternative: • Replace existing through and right turn combination lane with one eastbound through lane on northbound Huntington Drive, south of San Marino Avenue • Change diagonal parking striping to parallel parking striping to accommodate a new dedicated right-turn lane for southbound turning movements onto San Marino Avenue	**Effects under Section 106**: As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of the San Marino City Hall and Fire Station. None of the improvements under the TSM/TDM Alternative would occur within the boundary of the San Marino City Hall and Fire Station (APN 5334-005-900). Therefore, those improvements would not have any direct effects on this historic property. The proposed lane configuration would be within the existing publicly owned right of way where a numbers of street improvements have occurred since the construction of this building. The conversion of the existing parking area fronting the San Marino City Hall and Fire Station to accommodate an eastbound travel lane and parallel parking would require restriping Huntington Drive at this location. The additional travel would move traffic-related noise a total of 14 feet closer to the edge of the building (but separated from the building by the parallel parking area, a sidewalk, and a 30 foot wide landscaped area. The significance of this historic property is conveyed through its association with the commercial development of South Pasadena; for Spanish Colonial Revival architectural qualities which can include the overall shape of the building, its materials, craftsmanship, and decorative details; and various aspects of its site and environment. The lane reconfiguration and restriping of Huntington Drive do not have the potential to adversely affect the critical elements of the materials and workmanship of this historic property, as expressed through its architectural character-defining features. The scale and proportion of the improvements in the TSM/TDM Alternative would be similar to historical patterns in the area of the San Marino City Hall and Fire Station. Several visual elements have been added in this area since the San Marino City Hall and Fire Station was built in 1920. These include variations of traffic signals, street and directional signage, and light standards. These were present during the period of significance (1920). Analysis of historical development of the San Marino City Hall and Fire Station and the area from the 1920s onward demonstrates that the area

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	was once along the Pacific Electric Railway streetcar alignment with an associated element of visual clutter that obscured pedestrian views of the San Marino City Hall and Fire Station to a varying degree. Therefore, the improvements on Huntington Drive would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. The proposed improvements would not alter the setting in a way that would affect the historic significance of the San Marino City Hall and Fire Station. According to a traffic analysis prepared in 2014, the proposed travel lane reconfiguration of Huntington Drive would increase road noise in the vicinity of the San Marino City Hall and Fire Station. That report concluded that visual and associated audible effects from reduced traffic delay times would result under this Alternative. However, the National Register significance of the San Marino City Hall and Fire Station does not derive from it being located in a quiet, rural setting. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. Furthermore, the increased traffic volume and associated noise would not interfere with the use of the building for municipal institutional uses. The San Marino City Hall and Fire Station is a municipal building associated with the development of the city of San Marino. It was intentionally sited along Huntington Drive to showcase a key municipal institutional building near the center of the city and facilitate travel for police and fire crews to other parts of the city. This preexisting condition at this location spans over 95 years both during and after the current building's period of significance of 1920. Therefore, although the reconfiguration of Huntington Drive at this location would result in a change to a physical feature within the setting of the San Marino City Hall and Fire Station, namely the reconfiguration of the road lanes, it would not affect the integrity of feeling and setting of this historic property associated with a prominent location along a busy road in an urban area. The San Marino City Hall and Fire Station would remain connected to San Marino and other local communities by the road that became modern Huntington Drive. **Summary of Effects**: The TSM/TDM Alternative improvements would have No Adverse Effects on the San Marino City Hall and Fire Station. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	(TCEs) at this property. As described above, the project features in this area would not detract from the essential physical features or characteristics of the San Marino City Hall and Fire Station that qualify it for inclusion in the National Register. As a result, the TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the San Marino City Hall and Fire Station for protection under Section 4(f).

Sources: *Historic Property Survey Report* (2014); preliminary *Finding of No Adverse Effect for the State Route 710 North Study* (2015); and LSA Associates, Inc. (2015).

[1] Only properties within the Area of Potential Effects for the TSM/TDM Alternative are evaluated in this table. Refer to Figure 3.6-1 for the locations of the resources discussed in this table.

APN = Assessor's Parcel Number
Caltrans = California Department of Transportation
CHR = California Historical Resource
Keeper = Keeper of the National Register of Historic Places
National Register = National Register of Historic Places
sf = square feet
SR 110 = State Route 110
TCE = temporary construction easement
TSM/TDM = Transportation System Management/Transportation Demand Management

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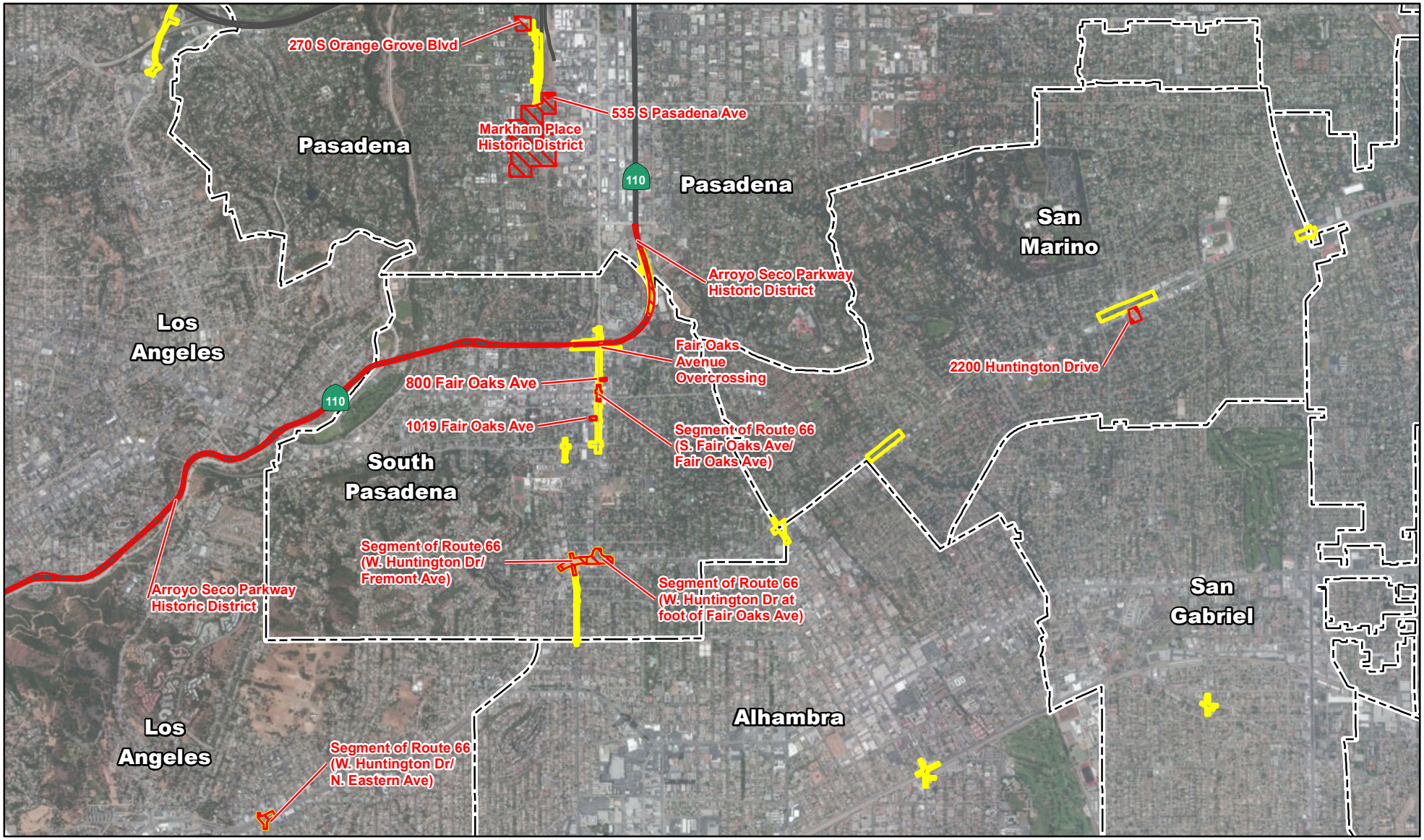

LEGEND

- TSM/TDM Alternative Limits of Construction
- Cultural Resource
- City Boundary

N

0 1750 3500

FEET

SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

I:\CHM1105\GIS\MXD_EIR_EIS\App_B\NRHP_TSM_TDM.mxd (2/27/2015)

FIGURE 3.6-1

SR 710 North Study

Historic Properties for the TSM/TDM Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
UNINCORPORATED LOS ANGELES COUNTY	
Golden Gate Theater (1928) 909 South Atlantic Boulevard **CHR Status Code:** 1S (Individual property listed in National Register by the Keeper); listed under Criterion C (Architecture). The following improvements would be constructed in the vicinity of the Golden Gate Theater under the BRT Alternative: • Construct the Whittier bus stop shelter at the existing Whittier/Atlantic Metro bus stop approximately 50 feet east of the Golden Gate Theater. • Install a new concrete bus pad at the existing Whittier Metro bus stop.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the Golden Gate Theater faces north, fronting on Whittier Boulevard. It is on the southwest corner of the Whittier Boulevard/South Atlantic Boulevard intersection. Access to the property is from driveways on Whittier and South Atlantic Boulevards. The Golden Gate Theater was listed in the National Register under Criterion C for its Spanish Baroque Revival Churrigueresque architecture. The exterior character-defining features that convey the significance of this property are the rusticated stonework, bands of elaborate stucco bas relief, a large arched window, an arched niche, balconets, decorative pilasters, and a decorated parapet. The interior character-defining features that convey the significance of this property are the first floor entrance lobby; sea shell concession stand; winding stairways; ticket booth; decorated proscenium flanked by curved elements; and Art Deco-style details such as tile water fountains, ribbing and pilasters with modillion-like capitals, and lamp shades. The improvements in the BRT Alternative would be constructed within the existing public ROW (roads and sidewalks) and would not directly affect the Golden Gate Theater structure or property. The Whittier Station and the related improvements would introduce visual elements that may diminish the integrity of the significant historic features of the Golden Gate Theater. The Whittier Station would be approximately 50 feet from the facade of the Golden Gate Theater building. The BRT Alternative improvements would be in recently modified areas that include new sidewalks, modern traffic signals, crosswalk signals, street signs, a modern bus shelter, a concrete bus pad, and accessible pedestrian ramps at all four corners of the Whittier Boulevard/South Atlantic Boulevard intersection. Jackhammering to remove approximately 500 square feet of the existing sidewalk, curb, and gutter to construct the Whittier BRT Station approximately 50 feet east of the theater building could potentially damage part of the facade of that building. However, it is not anticipated that this activity would generate adverse vibration effects that may damage to the Golden Gate Theater. The use of jackhammers typically generates 0.035 in/sec PPV of motion at 25 feet from the jackhammer. Given that noticeable damage to historic properties occurs with 0.08-0.12 in/sec PPV and the closest location for potential concrete removal is approximately 50 feet east of the Golden Gate Theater, it is anticipated that vibration from that activity would be below levels that would warrant special concern for the decorative elements of theater building facade. The alterations under the BRT Alternative in this area would be minor and would not detract from the essential physical features or characteristics of the Golden Gate Theater that qualify it for inclusion in the National Register because they would: (1) consist of modifications to non-contributing elements along the periphery and outside of the resource boundary and approximately 55 to 60 feet from the facade of the Golden Gate Theater; and (2) be in areas along busy roads in an urban area and, once completed, would not prevent the continued occupation and intended uses of any of the contributing elements of the property. In summary, the improvements in the BRT Alternative in the vicinity of the Golden Gate Theater would result in No Adverse Effect on that property. **Effects under Section 4(f):** The BRT Alternative would not result in permanent incorporation of land from, or

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the Golden Gate Theater that qualify it for inclusion in the National Register. The changes in views from and to the Golden Gate Theater would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Golden Gate Theater for protection under Section 4(f).
St. Alphonsus Church 532 South Atlantic Boulevard **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture) The following improvements would be implemented in the vicinity of St. Alphonsus Church under the BRT Alternative: • Widen South Atlantic Boulevard by reducing the width of the sidewalk width in both directions of travel to accommodate a dedicated bus lane. • Restripe South Atlantic Boulevard from 4 to 5 lanes to accommodate a northbound dedicated bus lane. • Install an accessible pedestrian ramp with tactile paving approximately 30 feet southwest of the St. Alphonsus Church building. • Install two reconfigured driveway curb cut outs, approximately 30 feet and 80 feet, respectively, from the northwest corner of the Saint Alphonsus Church building. • Relocate an electrolier along the new sidewalk approximately 25 feet from the west side of the church building.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, St. Alphonsus Church faces west, fronting on South Atlantic Boulevard. The church building is on the northeast corner of the South Atlantic Boulevard/Hastings Street intersection. Access to the property is from driveways on South Atlantic Boulevard and Hastings Street. The Church has been determined eligible for the National Register as a representative work of the Albert C. Martin & Associates architectural firm and for its Spanish Eclectic architectural qualities. The character-defining features that convey the significance of this property are the a low-pitched roof sheathed with red tile, narrow eave overhang, arched windows, a central pointed arch that mimics the roofline, brick accents, the bell tower, and stucco wall cladding. The improvements in the BRT Alternative would be within the existing public ROW (road and sidewalks) and would not directly affect the St. Alphonsus Church building or property. These improvements would introduce visual elements that may diminish the integrity of the significant historic features of St. Alphonsus Church as a result of the reconfigured and narrowed sidewalk (from approximately 10-feet wide to approximately 7-feet wide), a reconfigured accessible pedestrian ramp at the northeast corner of the Hastings Street/South Atlantic Boulevard intersection (approximately 30 feet from the southwestern corner of the St. Alphonsus Church building), and two reconfigured driveways (one approximately 30 feet and the other approximately 80 feet from the northwestern corner of the St. Alphonsus Church building). These BRT Alternative improvements would be recently modified areas, including patchwork repairs to the sidewalk. Jackhammering the existing concrete sidewalk to narrow the sidewalk; install the new curb, gutters, and accessible pedestrian ramp; and relocate a light post and signage could potentially damage part of the façade of the Church building. These improvements would be within the existing publicly owned right of way where a number of street improvements have been implemented since construction of the Church building. The road widening and new sidewalk under the BRT Alternative would require removal of approximately 2 feet of the sidewalk and curb and gutter system approximately 28 feet west of the Saint Alphonsus Church building. It is not anticipated that this activity would generate adverse vibration effects that may result in damage to the Saint Alphonsus Church. The use of jackhammers typically generates 0.035 in/sec PPV of motion at 25 feet from the jackhammer. Given that noticeable damage to historic properties occurs with 0.08-0.12 in/sec PPV and the closest location for potential concrete removal is approximately 30 feet west of the Church building, it is anticipated that this vibration would be even less and fall below levels to warrant special concern for the decorative elements of façade of the Church building. As a result, these BRT Alternative improvements would be minor and would not detract from the essential physical features or

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	characteristics of the St. Alphonsus Church building that qualify it for inclusion in the National Register because they would: (1) consist of modifications to non-contributing elements along the periphery and outside of the resource boundary, approximately 55–60 feet from the corner of the St. Alphonsus Church building; (2) be at ground level; and (3) be in areas along busy roads in an urban area and, once completed, would not prevent the continued occupation and intended uses of any of the contributing elements of the property. In summary, the improvements in the BRT Alternative in the vicinity of St. Alphonsus Church would result in No Adverse Effect on that property. **Effects under Section 4(f):** The BRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of St. Alphonsus Church that qualify it for inclusion in the National Register. The changes in views from and to St. Alphonsus Church would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify St. Alphonsus Church for protection under Section 4(f).
CITY OF MONTEREY PARK	
Dr. Henry K. Kawamoto Office 823 South Atlantic Boulevard **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criteria B (Association with Significant Persons) and C (Architecture) The following improvements would be implemented in the vicinity of 823 South Atlantic Boulevard under the BRT Alternative: • Widen South Atlantic Boulevard reducing sidewalk width directions of travel, narrowing the median, and eliminating on-street peak period parking in both directions of travel • Restripe adjacent lanes on South Atlantic Boulevard from 4 to 6 lanes to accommodate dedicated bus lanes in both directions of travel • Install a reconfigured driveway curb cut out approximately 40 feet from the southeast corner of the	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the two-story commercial building at 823 South Atlantic Boulevard faces east, fronting on South Atlantic Boulevard. The building is north of the northwest corner of the South Atlantic Boulevard/Cadiz Street intersection. Access to the property is from one driveway on South Atlantic Boulevard and another on an unnamed alley west of and behind the building. The Dr. Henry K. Kawamoto Office Building has been determined eligible for the National Register for its association with world-renowned Tessier-trained craniofacial surgeon, Dr. Henry Kawamoto, who was the building's original owner/occupant. The period of significance for this Contemporary style commercial building is 1961 to 1970. The character-defining features that convey the significance of this property are the flat roof, the large banks of windows, and decorative shade screens. The improvements in the BRT Alternative would be constructed within the existing public ROW (road and sidewalks) and would not directly affect the building at 823 South Atlantic Boulevard. These improvements would introduce visual elements that may diminish the integrity of the significant historic features of 823 South Atlantic Boulevard as a result of narrowing the sidewalk (from approximately 10-feet wide to approximately 6-feet wide) and reconfiguring one driveway curb approximately 40 feet from the southeastern corner of the building. These improvements would be in recently modified areas, including patchwork repairs to the sidewalk. Jackhammering the existing concrete sidewalk to narrow the sidewalk, and to install new curb, gutters, and accessible pedestrian ramp, and relocate an informational street post and signage to accommodate the dedicated southbound bus lane could potentially damage part of the building's façade. Those improvements in the BRT Alternative would be within the existing publicly owned where previous street improvements have occurred since the building was constructed. These improvements

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
building • Install an accessible pedestrian ramp with tactile paving at the intersection of South Atlantic Boulevard/Cadiz Street, approximately 170 feet from the southeast corner building • Remove three ficus trees in the sidewalk right of way adjacent to the property boundary • Relocate a poured stone streetlight approximately 6 feet to the west along the new sidewalk, approximately 12 feet from the west side of the building	would require removal of approximately 6 feet of the sidewalk and curb and gutter system and three street ficus trees outside the boundary of the Dr. Henry K. Kawamoto Office property. It is not anticipated that this activity would generate adverse vibration effects that may result in damage to the office building. The use of jackhammers typically generates 0.035 in/sec PPV of motion at 25 feet from the jackhammer. Given that noticeable damage to historic properties occurs with 0.08-0.12 in/sec PPV and the closest location for concrete removal is approximately 8 feet west of the Dr. Henry K. Kawamoto Office building, it is anticipated that this vibration would not be at a level to warrant special concern for the decorative elements of Contemporary façade of the building. Because the building is used for medical purposes, vibration and noise may affect delicate medical procedures and disrupt a typically quiet medical clinic facility. However, construction activity would be temporary in nature and would minimize any disruption. The improvements in the BRT Alternative would be minor and would not detract from the essential physical features or characteristics of 823 South Atlantic Boulevard that qualify it for inclusion in the National Register because they would: (1) consist of modifications to non-contributing elements along the periphery of the boundary of 823 South Atlantic Boulevard, (2) be at ground level, and (3) be in areas along busy roads in an urban area and, once completed, would not prevent the continued occupation and intended uses of any of the contributing elements of the property. In summary, the improvements in the BRT Alternative in the vicinity of 823 South Atlantic Boulevard would result in No Adverse Effect on that property. **Effects under Section 4(f):** The BRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of 823 South Atlantic Boulevard that qualify it for inclusion in the National Register. The changes in views from and to 823 South Atlantic Boulevard would not permanently affect the occupation and intended uses of any of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify 823 South Atlantic Boulevard for protection under Section 4(f).
CITY OF PASADENA	
Old Pasadena Historic District (Generally bounded by Corson Street on the north, Raymond Avenue and Arroyo Parkway on the east, East Del Mar Boulevard on the south, and Pasadena Avenue on the west) **CHR Status Code:** 1S (Individual property listed in National Register by the Keeper); listed under Criterion A (Association with Events). The following improvements would be implemented in the vicinity of the contributing element to the Old Pasadena	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the Old Pasadena Historic District contains 180 mostly commercial and some residential parcels and is generally bounded on the north by Corson Street, on the east by Raymond Avenue and SR 110/Arroyo Seco Parkway, on the south by East Del Mar Boulevard, and on the west by South Pasadena Avenue. This Historic District is centered on the Fair Oaks Avenue/Colorado Boulevard intersection. The Old Pasadena Historic District was listed in the National Register in 1983 and its boundaries were adjusted in 2008. It is eligible under Criterion A as the earliest commercial development in the City and the focus of commerce and industry in Pasadena and the San Gabriel Valley. The character-defining features that convey the significance of this Historic District are the predominantly commercial, one- to two-story buildings, few residential buildings; a train station; some light industrial buildings; several

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
Historic District under the BRT Alternative: • Widen South Fair Oaks Avenue by reducing the sidewalk width in both directions of travel, narrowing the travel lanes, and eliminating parking in the northbound direction • Restripe South Fair Oaks Avenue from 4 lanes to 5 lanes to accommodate dedicated bus lanes in the northbound direction • Construct the Fair Oaks/Del Mar BRT Station approximately 85 feet from the northwest corner of the building at 330 South Fair Oaks Avenue • Replace and construct a 205 foot long bus pad in South Fair Oaks Avenue west of the building at 330 South Fair Oaks Avenue • Install pedestrian access ramps with tactile paving at the intersection of South Fair Oaks Avenue/Del Mar Boulevard approximately 115 feet from the northwest corner of the building at 330 South Fair Oaks Avenue • Install a reconfigured driveway curb cut out at the parking lot entrance approximately 5 feet from the northwest corner of the building at 330 South Fair Oaks Avenue; • Relocate traffic signals at the South Fair Oaks Avenue/ Del Mar Boulevard intersection	churches; a park; and alleyways between buildings. The general character-defining features of the one- and two-story, commercial and industrial buildings that were built between 1886-1936 include stepped parapets; wide entrances; store fronts; red-tiled roof cladding; arched window and door openings; brick, concrete, and stucco wall cladding; ceramic tile bulkheads; multi-light transoms; sculptured medallions; contoured molding; and fluted columns. There is one contributing element to the District in the APE, a commercial building at 330 South Fair Oaks Avenue built in 1926 that forms a part of the southern boundary of the District. Character-defining features of this building include brick construction; chevron decorations in the cornice; second story one-over-one, double-hung, tripartite windows with soldier brick lintels; and first-story bays with tripartite, plate glass windows with transoms. The improvements in the BRT Alternative would be within the existing public ROW (road and sidewalk) and would not directly affect the building at 330 South Fair Oaks Avenue. However, these improvements would result in: (1) alteration to contributing element of the Historic District, (2) a change to the physical features within the setting of the Historic District, and (3) the introduction of visual elements that would diminish the overall integrity of the Historic District. Specifically, the BRT Alternative would widen South Fair Oaks Avenue at the East Del Mar Boulevard intersection approximately 1 foot and would reconfigure the rounded curb at the southeastern corner of the South Fair Oaks Avenue/East Del Mar Boulevard intersection. This reconfigured curb would include an accessible pedestrian ramp that would replace an existing access ramp in a previously modified location. The reconfigured concrete sidewalk and curb would be designed to accommodate the proposed Fair Oaks/Del Mar Station at a location approximately 85 feet from 330 South Fair Oaks Avenue. That Case A facility would be the least visually and structurally intrusive version of the BRT Alternative stations. Some elements of the existing sidewalk and its configuration adjacent to 300 and 330 South Fair Oaks Avenue are not contributing elements of the Historic District and do not date from the period of significance of 1886–1936 because they have been previously altered by: • Installation of an accessible pedestrian ramp at the corner. • Installation of modern streetlights, traffic signal, crosswalk signaling equipment, and an above-ground traffic signal control box. • Repair work to access utilities near the building as evidenced by the different-colored and -textured concrete with varied surface scoring patterns. The main street-facing facade of the building at 330 South Fair Oaks Avenue show modifications that have altered its integrity of design, materials, and workmanship. These alterations include: • A new main entrance area and doors. • A low-rise, full-length planter box of Roman brick along the main, street-facing facade.

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	• Full-length canvas awning and support apparatus. As a result, the improvements in the BRT Alternative adjacent to this building would not rise to the level of adverse effects to the Historic District as a whole because those improvements would be in previously modified areas and adjacent to a contributing element that possess varying levels of individual alterations to its main street-facing facade. The reconfigured concrete sidewalk type and finish in the BRT Alternative would be consistent with the historical scoring pattern found in older, intact locations in the Historic District, with accommodations made for bus passenger safety as included in the Case A BRT station design. The proposed alterations to the Historic District at this location in and adjacent to the District's southern boundary under the BRT Alternative include the reconfiguration of a section of the sidewalk, curb, and gutter and a driveway curb cut out adjacent to the building at 330 South Fair Oaks Avenue, which is a contributing elements to the Historic District; installation of a Case A BRT station facility (a minimally intrusive BRT facility) at a suitable location in the reconfigured sidewalk; and an accessible pedestrian ramp at the southeastern corner of the South Fair Oaks Avenue/East Del Mar Boulevard intersection. The proposed changes to the sidewalk and curb would be in previously modified areas and would indirectly alter integrity of materials, workmanship, or engineering aspects that contribute to the Historic District's eligibility at this location. The other built environment elements and design features of the Historic District would not be affected by the improvements in the BRT Alternative. The BRT station would minimally alter views of and from the building at 330 South Fair Oaks Avenue, but would not adversely affect the overall historic integrity of design, setting, and feeling of the Historic District at the South Fair Oaks Avenue/East Del Mar Boulevard intersection near the southern boundary of the Historic District. Even with the alterations that would result from the improvements in the BRT Alternative, the Historic District as a whole would retain its integrity of location, workmanship, materials, and association with the late 19th century and early 20th century commercial development in Pasadena and its cumulative architectural qualities. However, taken together, these proposed alterations at the South Fair Oaks Avenue/East Del Mar Boulevard intersection would partially affect an area on the southern boundary of the Historic District. The contributing element at 330 South Fair Oaks Avenue would continue to be used for its originally intended purposes, which is an example of small-scale, early 20th century vernacular commercial architecture, in its historical location. The essential aesthetic character of the Historic District would remain unchanged. The Historic District would also retain integrity of location and feeling in terms of a modern motorist or pedestrian through an early 20th century landscaped area in its historic location as well as integrity of association with the development of downtown Pasadena. In summary, the improvements in the BRT Alternative in the vicinity of 330 South Fair Oaks Avenue would result in No Adverse Effect with Standard and Project Conditions on the property. The BRT Alternative improvements could conceivably generate vibration-related effects to the building at 330 South Fair Oaks Avenue. The noise and vibration generated by construction related activities may generate levels near historic properties that could result in minor, cosmetic damage and/or structural damage, based

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	on the severity of the vibration. The main source of vibration related to concrete sidewalk removal is the use of jackhammers. As documented in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study*, the effects of the BRT Alternative on the Old Pasadena Historic District would comply with the following Secretary of the United States Department of the Interior's Standards for the Treatment of Historic Properties: Rehabilitation Standards 1, 2, 4, 5, 9, and 10. In addition, the following condition from the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* would apply to the effects of the BRT Alternative on the Old Pasadena Historic District: **Project Condition BRT-3, Equipment Use.** To reduce effects associated with concrete removal, equipment other than jackhammers that could be used to remove and break up concrete and related activities that generate lesser levels of vibration including but are not limited to: • Use of deep saw-cuts to minimize vibration transmission from pavement breaking operations • Use of concrete cutters on pavement instead of pavement breakers (where practical) • Use of vibratory rather than impact pile drivers (where feasible) • Routing of heavy truck traffic and heavy equipment to minimize vibration in the vicinity of the historic property • Properly securing street deck plates over cut and cover excavations (to prevent automobile vibrating the plates against the pavement) • Minimize duration of vibration events **Project Condition BRT-4, Vibration Management.** As described in detail in the preliminary *Finding of No Adverse Effect for the SR 710 North Study*, the following would be implemented to reduce the level of expected vibration related effects during construction activities for the BRT Alternative improvements: • Public outreach in the vicinity of the construction activities • Preconstruction building survey conducted by a certified inspector • Vibration monitoring by an on-site technician and automated monitors • Vibration Plan prepared, reviewed, approved and administered by a professional acoustical engineer in coordination with the licensed Project Historic Architect, who meets the Secretary of the Interior's professional Qualification Standards for Historic Architecture, and the Project Engineer or designed party. The Vibration Monitoring Plan would include the vibration instrumentation, location of vibration monitors, data acquisition, and exceedance notification and reporting procedures. Based on implementation of these conditions, the effect finding of the BRT Alternative improvements on the Old Pasadena Historic District would be No Adverse Effect with Standard and Project Conditions.

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	Effects under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property and in the Historic District. As described above, the improvements in the BRT Alternative in the vicinity of the Old Pasadena Historic District may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the Historic District that qualify it inclusion in the National Register with the implementation of Project Conditions BRT-3 and BRT-4. The changes in the Historic District resulting from the BRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property and the Historic District. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the activities, features, or attributes that qualify the Old Pasadena Historic District and the property at 330 South Fair Oaks Avenue for protection under Section 4(f).
Glenarm Building and Electric Fountain 72 E. Glenarm Street/1124 S. Fair Oaks Avenue **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion A (Association with Events) The following improvements would be implemented in the vicinity of 72 E. Glenarm Street under the BRT Alternative: • Widen South Fair Oaks Avenue by reducing the sidewalk width in both directions of travel, narrowing the travel lanes, and eliminating peak period on-street parking in both directions of travel • Restripe Fair Oaks Avenue from 4 lanes to 5 lanes to accommodate dedicated bus lanes in both directions of travel • Install an accessible pedestrian access ramp with tactile paving at the South Fair Oaks Avenue/East Glenarm Street intersection approximately 5 feet from the northwest corner of the property • Relocate a modern metal streetlight approximately 3 feet to the east along the new sidewalk, approximately 5 feet from the west side of the property • Relocate traffic signals at South Fair Oaks Avenue/East Glenarm Street intersection approximately 10 feet from	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the Glenarm Building, a municipal utility building, and its associated electric fountain at 72 E. Glenarm Street in Pasadena face west, fronting on both South Fair Oaks Avenue and E. Glenarm Street, both of which are four-lane surfaces street with a central left-turn lane. Pedestrian access to the property is near the South Fair Oaks Avenue/E. Glenarm Street intersection where paved walks lead to the large, circular, raised decorative electric fountain. There is no pedestrian access into the municipal utility building. The Glenarm Building and electric fountain were determined eligible for listing in the National Register under Criterion A in 1994. The Glenarm Building includes east (circa 1928) and west (1932) additions to an earlier building. The eastern part was designed in the Georgian Revival style and the west part was designed in the Moderne style. The electric fountain was constructed in 1938 and served as a cooling mechanism for the power plant. The period of significance for this property is 1928-1932. These features were collectively designated as a City of Pasadena Historic Monument Landmark on February 4, 2008. The character-defining features that convey the significance of this historic property are the monumental spatial relationships in the western turbine hall and boiler room; visible equipment and infrastructure including control panels, burner fronts, feed pumps, steam valves, and turbines; a floor-to-ceiling hallway between the boilers including the free-floating master gauge in the hallway); railings, tile wainscoting, bracket lamps, wall clock and flooring in the turbine hall; and a remaining railroad spur. The improvements in the BRT Alternative would be within the existing ROW and would not directly affect the building or electric fountain at 72 E. Glenarm Street. The BRT Alternative would introduce visual elements that may diminish the integrity of the significant historic features of this historic property. The visual alterations would result from the reconfigured narrowed sidewalk from approximately 10 feet to approximately 6 feet wide and one reconfigured pedestrian access ramp approximately 115 feet from the northwest corner of the Glenarm Building and approximately 55 feet from the nearest point of the decorative electric fountain. The proposed alterations would be in recently modified areas. Those previous modifications include patchwork repair to the sidewalk; and installation of modern streetlights, a traffic signal, crosswalk signaling equipment, and an above-ground traffic signal control box on South Fair Oaks Avenue. The area has also been subject to

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
the northwest corner of the property • Construct an 8 foot wide raised median in South Fair Oaks Avenue	changes in configuration and appearance due to ongoing maintenance over time. The proposed changes as a result of the BRT Alternative in the vicinity of the building and fountain at 72 E. Glenarm Street would be in the existing ROW, with the exception of replacing a section deteriorated existing paving to accommodate the installation of an accessible pedestrian ramp to replace an existing one in a previously modified location. Vibration effects to the Glenarm Building and Electric Fountain are not anticipated due to the minimum distance of 50 feet from construction activity for the BRT Alternative improvements along South Fair Oaks Avenue from the Electric Fountain which will be closer to that construction than the Glenarm Building. Construction of the accessible pedestrian ramp in the public right of way would remove part of the historic sidewalk that leads from the southeast corner of the East Glenarm Street/South Fair Oaks intersection to the Electric Fountain. The BRT Alternative improvements would replicate the historical surface scoring pattern on that sidewalk but would differentiate the new paving from the original in a way that is easily discernable. The BRT Alternative improvements would have a direct effect on this historic property as a result of the removal of part of the historic sidewalk just outside the boundary of the historic property. Consequently, these alterations would be minor and would not detract from the essential physical features or Moderne architectural characteristics of 72 E. Glenarm Street that qualify it for inclusion in the National Register because they would (1) consist of modifications to non-contributing elements along the periphery and outside the boundary of 72 E. Glenarm Street; (2) would be at ground level; and (3) would be along a busy road in an urban area and once completed, would not prevent the continued occupation and intended uses of any of the contributing elements of the property. As documented in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study*, the effects of the BRT Alternative on the Glenarm Building and Electric Fountain would comply with the following Secretary of the United States Department of the Interior's Standards for the Treatment of Historic Properties: Rehabilitation Standards 1, 2, 4, 5, 9, and 10. Project Condition BRT-3, described earlier in this table, would also apply to the BRT Alternative construction in the vicinity of the Glenarm Building and the Electric Fountain. The following condition from the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* would apply to the effects of the BRT Alternative improvements on the historic sidewalk adjacent to the boundary of the Glenarm Building and the Electric Fountain: **Project Condition BRT-5, Construction of Design Elements.** In the vicinity of the Glenarm Building and the Electric Fountain, the BRT Alternative improvements would incorporate design and engineering cues elements from the existing sidewalk into the design of the new reconfigured sidewalk in a manner that is consistent with the historical fabric but does not create a false sense of historical development. These design elements and associated treatment conditions are described below: • The sidewalk height, width, and shape will remain consistent as practicable with the historical design; • The width, depth, and the surface scoring pattern of the will remain consistent with the historical design; and

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	• The color, finish, and surface scoring patterns of new paving will be referential rather than replicative of the historic sidewalk. One method, for example, would be to stamp the new concrete with the year of construction and use an alternatively colored paving surface. In summary, based on implementation of these conditions, the effect finding of the BRT Alternative improvements on this historic property would be No Adverse Effect with Standard and Project Conditions. **Effects under Section 4(f):** The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the BRT Alternative in the vicinity of this historic property may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the historic property that qualify it for inclusion in the National Register with the implementation of Project Conditions BRT-3 and BRT-5. The changes in the historic sidewalk adjacent to the boundary of the Glenarm Building and Electric Fountain property resulting from the BRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of that property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Glenarm Building and Electric Fountain for protection under Section 4(f).
Bekins Storage Company Roof Sign 511 Fair Oaks Avenue **CHR Status Code**: 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with events) and C (Architecture) The following improvements would be constructed in the vicinity of 511 Fair Oaks Avenue under the BRT Alternative: • Widen South Fair Oaks Avenue by reducing the sidewalk width in both directions of travel, narrowing the travel lanes, and eliminating parking in both directions of travel • Restripe South Fair Oaks Avenue from 4 lanes to 5 lanes to accommodate dedicated bus lanes in the northbound direction • Install an accessible pedestrian access ramp with tactile paving at the South Fair Oaks Avenue/Palmetto Drive intersection approximately 145 feet north and 60 below the Bekins Storage Company Roof Sign	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the Bekins Storage Company Roof Sign was constructed in 1926, on top of a five-story building at the southeast corner of the Palmetto Drive/South Fair Oaks Avenue intersection. Access to the property is from the main entrance along Palmetto Drive. The Roof Sign faces Fair Oaks Avenue, a four-lane surface street with a central left-turn lane and paved median. The former Bekins sign and its related components, rather than the building itself (built 1915), are the historic property at this location. The Bekins Storage Company Roof Sign was individually listed in the National Register under Criteria A for its association with the development of the automobile as the chief mode of transportation and its impact on commercial history, and as only remaining pre-war example in Pasadena of the once-popular massive projecting roof signs designed to attract motorists; and under Criterion C as an early example of the use of neon lighting in advertising. The character-defining features that convey the significance of this property are the steel frame mounting; two-sided signage with individual, open channel, metal can letters with white returns; and neon capital letters. The Roof Sign is approximately 60 feet above Fair Oaks Avenue and will not be directly or indirectly affected by the improvements in the BRT Alternative on Fair Oaks Avenue. **Summary of Effects:** The Bekins Storage Co. Roof Sign will retain the aspects of integrity that allow it to convey its historic significance and the BRT Alternative would result in No Adverse Effect on this historic property.

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
• Install a reconfigured driveway curb cut out at the parking lot entrance approximately 65 feet from and 60 feet below the southwest corner of the Bekins Storage Company Roof Sign	**Effects under Section 4(f):** The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. The BRT Alternative project features in this area would be minor and would not detract from the essential physical features or characteristics of the Bekins Storage Co. Roof Sign that qualify it for inclusion in the National Register. The changes that would occur on the street below the sign would not affect the intended uses of any of the Roof Sign. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Bekins Storage Co. Roof Sign for protection under Section 4(f).
Segment of Route 66 East Colorado Boulevard **CHR Status Code**: 2S2 (Individual property determined to be eligible for the National Register by a consensus through the Section 106 process); listed under Criteria A (Association with events) and C (Architecture) The following improvements would be constructed on East Colorado Boulevard under the BRT Alternative: • The northbound Colorado Hill BRT Station at the East Colorado Boulevard/North Hill Avenue intersection including installation of a concrete bus pad in the street, and pedestrian access ramps; these improvements would replace an existing Colorado/Hill Metro bus stop.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the improvements under the BRT Alternative on the segment of the former Route 66 along East Colorado Boulevard would occur at the intersection of North Hill Avenue and East Colorado Boulevard. Those improvements would include the installation of a new bus station in the location of an existing facility and installation of a concrete bus pad in the East Colorado Boulevard right of way. Therefore, the improvements in the BRT Alternative would result in a direct effect to the character-defining features of this former segment of Route 66 that support its National Register eligibility. However, for the following reasons this effect would not be adverse: • The BRT Alternative improvements would not affect the property's location. • The reconfiguration and installation of the BRT Station would not introduce a visual intrusion so jarring and discordant that an adverse effect would result such that this segment of former Route 66 would no longer be able to convey its significance and the experience of automobile travel Route 66 during the period of significance would no longer be understood. The improvements in the BRT Alternative would not significantly alter the character-defining features of the historic property. Route 66 in California was listed in the National Register in January 2012. According to a National Register of Historic Places Multiple Property Documentation Form (2011), Route 66 appeared eligible under Criteria A and C for significant associations with American history as an important transportation corridor connecting the Midwest and California and for its innovative highway design and construction practices. Its period of significance is 1926, which reflects the date of the original designation of the series of roads that make up Route 66 to 1931, the date this particular segment was bypassed when the route alignment was changed. The character-defining features that convey the significance of this property are the original Route 66 alignment; a length of highway sufficient to convey to the motoring public the feeling of being back in time (1926-1931); an urban built environment free of visual intrusions from the recent past (obviously later than 1931); and a road prism located on the same alignment as it was during the period of significance (1926-1931). **Summary of Effects:** The BRT Alternative improvements at the former segment of Route 66 along East Colorado Boulevard will occur entirely within the existing publicly owned ROW. The BRT Alternative

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	improvements will have no effect on the setting, location or feeling, and association of this historic property, which are the most important aspects of integrity under Criterion A. The character-defining features of the property will not be affected by the BRT Alternative improvements and there would be No Adverse Effect to this property. **Effects under Section 4(f)**: The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the former segment of Route 66 along East Colorado Boulevard that qualify it for inclusion in the National Register. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify this former segment of Route 66 for protection under Section 4(f).
CITY OF SOUTH PASADENA	
Fair Hope Building 800 Fair Oaks Avenue **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criteria A (Association with Events) and C (Architecture) The following improvements would be implemented in the vicinity of the Fair Hope Building under the BRT Alternative: • Widen Fair Oaks Avenue by reducing the sidewalk width in both directions of travel and eliminating peak period on-street parking in both directions of travel • Restripe Fair Oaks Avenue from 4 lanes to 6 lanes to accommodate dedicated bus lanes in both directions of travel • Install a reconfigured driveway curb cut out at the parking lot entrance approximately 15 feet from the southwest corner of the Fair Hope Building • Install an accessible pedestrian access ramp with tactile paving at the Fair Oaks Avenue/Hope Street intersection approximately 5 feet from the northwest corner of the building • Relocate electrolier approximately 4 feet to the east	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the Fair Hope Building is on the southeast corner of the intersection of Hope Street and Fair Oaks Avenue. The Fair Hope Building faces west, fronting on Fair Oaks Avenue. Access to the property is from the main entrance on Fair Oaks Avenue, several side entrances on Hope Street, and a service entrance on Raymond Lane, which is an alley at the rear of the building. The Fair Hope Building is a designated local landmark and is eligible for the National Register for its association with the development of South Pasadena and its Classical Revival/Neoclassical architecture. The character-defining features that convey the significance of this property are symmetrical composition; flat roof with a flared cornice; wide pilasters; multi-paned, fixed, and awning windows; and storefront windows and doors sheltered beneath fabric awnings. The improvements in the BRT Alternative would be within the existing public ROW (road and sidewalks) and would not directly affect the Fair Hope Building. The removal of the pedestrian ramp at the southeast corner of the South Fair Oaks Avenue/Hope Street intersection may generate vibration effects to the Fair Hope Building façade. Therefore, that improvement in the BRT Alternative may have a direct effect on this historic property. Although the condition of the façade of the Fair Hope Building is presumed sound, its 104 year age is cause for concern. Operating heavy equipment near the building could potentially damage part of the property that contributes to its historic significance, such as the façade. The improvements in the BRT Alternative would be within the existing publicly owned right of way where a number of street improvements have occurred since the building was constructed. Those improvements may require equipment to grind off lane stripes on the existing road surface approximately 25 feet west of the Fair Hope Building. It is not anticipated that this activity would generate adverse vibration effects that would weaken or damage the Fair Hope Building. Lane striping is commonly removed by grinding the stripes off the road using a milling machine or cold planers. These machines use a large rotating drum removing and grinding the road surface. The use of a cold planer typically generates 0.03 in/sec PPV of motion at 25 feet from the machine. Given that noticeable damage to historic properties occurs with 0.08-0.12 in/sec

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
along the new sidewalk, approximately 5 feet from the west side of the Fair Hope Building • Relocate traffic signals at Fair Oaks Avenue /Hope Street intersection approximately 5 feet to the east approximately 5 feet from the northwest corner of the building	PPV and the milling would be in relatively soft asphalt at a depth of 1 inch and approximately 30 feet east of the façade of the Fair Hope Building, it is anticipated that this vibration would be even less and be below levels to warrant special concern for the structural condition of the Fair Hope Building. Jackhammering near the building could potentially damage part of the property that contributes to its historic significance, such as the façade. The installation of the pedestrian ramp and narrowed curb within the existing publicly owned right of way at the southeast corner of the Fair Oaks Avenue/Hope Street intersection would require the partial demolition and removal of a section of the existing sidewalk and total removal of an existing pedestrian ramp 7 to 8 feet northwest from the Fair Hope Building. The use of jackhammers typically generates 0.035 in/sec PPV of motion at 25 feet from the jackhammer. It is anticipated that jackhammering to break up and remove the concrete at a location 7 to 8 feet from the building to accommodate the new pedestrian ramp would generate adverse vibration effects that may weaken or damage the Fair Hope Building. Given that noticeable damage to historic properties occurs with 0.08-0.12 in/sec PPV and the closest location for potential concrete removal is approximately 7 to 8 feet from the building, the use of jackhammers at this location may result in vibration-related damage to the Fair Hope Building. Therefore, the use of concrete cut-off saws instead of jackhammers is the necessary method to separate and remove the minimum amount of concrete necessary to accommodate the pedestrian ramp without generating harmful vibration effects. This approach is warranted given the special concern for the Fair Hope Building's structural condition. Therefore, the BRT Alternative improvements would have a direct effect on this historic property as a result of vibration effects during the removal of the pedestrian ramp. As documented in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study*, the effects of the BRT Alternative on the Fair Hope Building would comply with the following Secretary of the United States Department of the Interior's Standards for the Treatment of Historic Properties: Rehabilitation Standards 1, 2, 4, 5, 9, and 10. In addition, Project Conditions BRT-3 and BRT-4, described earlier, would apply to the effects of the BRT Alternative improvements in the vicinity of the Fair Hope Building. In summary, based on implementation of these conditions, the effect finding of the BRT Alternative improvements on this historic property would be No Adverse Effect with Standard and Project Conditions. **Effects under Section 4(f).** The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this historic property. As described above, the improvements in the BRT Alternative in the vicinity of this property may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the historic property that qualify it for inclusion in the National Register with the implementation of Project Conditions BRT-3 and BRT-4. The changes in the vicinity of this property resulting from the BRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	the Fair Hope Building for protection under Section 4(f).
Rialto Theatre (1925) 1019 Fair Oaks Avenue **CHR Status Code:** 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with Events) and C (Architecture). The following improvements would be implemented in the vicinity of the Rialto Theatre under the BRT Alternative: • Restripe Fair Oaks Avenue from 4 to 5 lanes to accommodate dedicated bus lanes in each direction • Retain the left turn cut-out by eliminating parking in both directions of travel and reducing the sidewalk width in the northbound direction • Install an accessible pedestrian access ramp with tactile paving at the Fair Oaks/Oxley Street intersection approximately 7 feet from the southeast corner of the building The Rialto Theatre was listed in the National Register under Criteria A and C for its association with vaudeville entertainment, architect L.A. Smith, and its architecture. It is a two-story reinforced concrete, brick, and structural steel building with a Moorish motif. It was designed by architect L.A. Smith and built by William G. Reed. Other character-defining features that convey the significance of this property as an early-20th century movie palace include the movie screen and apparatus; projector room, proscenium arch, stage, boxes, mezzanine, lobby, stairs, ceilings, and decorative niches.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the Rialto Theatre faces east, fronting on Fair Oaks Avenue. The building is on the northwest corner of the Oxley Street/Fair Oaks Avenue intersection. Access to the property is from the main entrance on Fair Oaks Avenue, a side entrance on Oxley Street, and a service entrance on an alley at the rear of the building. The removal of the pedestrian ramp at the northwest corner of South Fair Oaks Avenue/Oxley Street may generate vibration effects on the façade of the Rialto Theatre building. Therefore, the BRT Alternative improvements may have a direct effect on the historic property. The fragile condition of the Theatre building façade is a cause for concern. Operating heavy equipment near the building could potentially damage part of the property, such as Centennial Celebration Sidewalk underneath the marquee sign that contributes to its historic significance or the façade. The BRT Alternative improvements would be within the existing publicly owned right of way where a number of previous street improvements have been implemented since the Theatre was constructed. The improvements may require equipment to grind off the lane striping on the existing road surface approximately 30 feet east of the Rialto Theatre. It is not anticipated that this activity would generate adverse vibration effects that may weaken or damage the Rialto Theatre. Lane striping is commonly removed by grinding the stripes off the road using a milling machine or cold planers. These machines use a large rotating drum removing and grinding the road surface. The use of a cold planer typically generates 0.03 in/sec PPV of motion at 25 feet from the machine. Given that noticeable damage to historic properties occurs with 0.08-0.12 in/sec PPV and the d milling would be in relatively soft asphalt at a depth of 1 inch approximately 30 feet east of the Rialto Theatre façade, it is anticipated that this vibration would be even less and be below levels to warrant special concern for the Rialto's structural condition. The improvements under the BRT Alternative would be within the existing public ROW (road and sidewalks) and would not directly affect the Rialto Theatre. Jackhammering near the building might conceivably damage part of the property, such as the Centennial Celebration Sidewalk or the façade. The installation of the reconfigured pedestrian ramp and narrowed curb within the existing publicly owned right of way at the northwest corner of the Fair Oaks Avenue/Oxley Street intersection would require the partial demolition and removal of a section of the existing sidewalk and total removal of pedestrian ramp 6 to 7 feet southeast from the Rialto Theatre building. It is anticipated that jackhammering to break up and remove the concrete at a location 6 to 7 feet from the Theatre building to accommodate the new pedestrian ramp would generate adverse vibration effects that may weaken or damage the Rialto Theatre building. Given that noticeable damage to historic properties occurs with 0.08-0.12 in/sec PPV and the closest location for potential concrete removal is approximately 6 to 7 feet from the building, the use of jackhammers at this location may result in vibration-related damage to the Rialto Theatre building. Therefore, the use of concrete cut-off saws is the necessary method to separate and remove the minimum amount of concrete necessary to facilitate the installation of the pedestrian ramp without generating harmful vibration effects. This is approach is warranted given the special concern for the structural condition of the Rialto Theatre building. The potential

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	for an adverse direct effect would occur as a result of the BRT Alternative improvements. As documented in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study*, the effects of the BRT Alternative on the Rialto Theater would comply with the following Secretary of the United States Department of the Interior's Standards for the Treatment of Historic Properties: Rehabilitation Standards 1, 2, 4, 5, 9, and 10. In addition, Project Conditions BRT-3 and BRT-4, described earlier in this table, would apply to the effects of the BRT Alternative improvements in the vicinity of the Rialto Theater. In summary, based on implementation of these conditions, the effect finding of the BRT Alternative improvements on this historic property would be No Adverse Effect with Standard and Project Conditions. **Effects under Section 4(f):** The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at the Rialto Theater. As described above, the improvements in the BRT Alternative in the vicinity of this property may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the historic property that qualify it for inclusion in the National Register with the implementation of Project Conditions BRT-3 and BRT-4 described above. The changes in the vicinity of this property resulting from the BRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Rialto Theater for protection under Section 4(f).
Oaklawn Waiting Station (1905) 435 Fair Oaks Avenue **CHR Status Code:** 1S (Individual property listed in National Register by the Keeper); listed under Criterion C (Architecture). The following improvements would be implemented in the vicinity of the Oaklawn Waiting Station under the BRT Alternative: • Remove 7 foot wide bulb out at the Fair Oaks Avenue/ Mound Avenue approximately 14 to 18 feet south of the southeast corner of Oaklawn Waiting Station • Modify the curb return and install pedestrian access ramps with tactile paving at the Fair Oaks Avenue/ Mound Avenue intersection approximately 10 feet from the Oaklawn Waiting Station • Relocate a light post closer to the Oaklawn Waiting	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the Oaklawn Waiting Station was constructed in 1905, near the northwest corner of the Fair Oaks Avenue/Mound Avenue intersection. The front facade of this building faces Fair Oaks Avenue, a four-lane surface street with a central left-turn lane and paved median. The Oaklawn Waiting Station is a contributing element to the locally designated Oaklawn Historic District and was individually listed in the National Register on July 16, 1973. The Waiting Station is significant under Criterion C in the area of design and architecture because it was designed by the Pasadena firm of Greene & Greene Architects and engineered by Michael de Palo, an Italian expert in early reinforced concrete. The character-defining features that convey the significance of this property are piers constructed of boulders from the nearby Arroyo Seco and a heavy, wood-beamed, side gabled roof sheathed in Ludowici clay tiles. The improvements under the BRT Alternative would not occur within the historic property boundary of the Oaklawn Waiting Station. However, removal of an existing pedestrian ramp removal at the northwest corner of South Fair Oaks Avenue/Mound Avenue may generate vibration effects to the Oaklawn Waiting Station. The removal of that ramp and the reduction in the width of the curb on Fair Oaks Avenue would be approximately 16 feet from the Oaklawn Waiting Station, and relocation of a street light pole would be approximately 7 feet southeast of the Oaklawn Waiting Station.

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
Station • Restripe Fair Oaks Avenue from 4 lanes to 6 lanes to accommodate dedicated bus lanes in both directions of travel by reducing the sidewalk on the east side of Fair Oaks Avenue, narrowing the travel lanes, and eliminating peak period on-street parking in both directions of travel • Construct an 8 foot wide raised median with a left-turn cut-out for traffic onto State Street	Although the structural condition of the Oaklawn Waiting Station is presumed sound given its substantial construction using large, heavy boulders, its 110 year age is a cause for concern. Operating heavy equipment near the building might conceivably damage part of the property that contributes to its historic significance, namely its characteristic heavy stone masonry construction. The lane configuration and reconfiguration of the accessible pedestrian ramp at the Fair Oaks Avenue/Mound Avenue intersection would be within the existing publicly owned right of way where a number of street improvements have occurred since the building was constructed. The BRT Alternative improvements may require equipment to grind off lane stripes on the existing road surface approximately 25 feet east of the Oaklawn Waiting Station. It is not anticipated that this activity would generate adverse vibration effects that could weaken or damage the Oaklawn Waiting Station. Lane striping is commonly removed by grinding the stripes off the road using a milling machine or cold planers. These machines use a large rotating drum removing and grinding the road surface. The use of a cold planer typically generates 0.03 in/sec PPV of motion at 25 feet from the machine. Given that noticeable damage to historic properties occurs with 0.08-0.12 in/sec PPV and the milling would be in relatively soft asphalt at a depth of 1 inch approximately 25 feet east of the Oaklawn Waiting Station, it is anticipated that this vibration would be even less and be below levels to warrant special concern for their structural condition. Jackhammering near the Oaklawn Waiting Station might conceivably damage part of the property that contributes to its historic significance, namely its characteristic heavy stone masonry construction. The installation of the reconfigured pedestrian ramp, narrowed curb, and streetlight relocation within the existing publicly owned right of way at the northwest corner of the Fair Oaks Avenue/Mound Avenue intersection would require: • Partial demolition and removal of a section of the existing sidewalk and total removal of present pedestrian ramp approximately 15 to 16 feet southeast of the Oaklawn Waiting Station • Removal of approximately 7 feet of concrete at the Fair Oaks Avenue/Mound Avenue bulb out approximately 12 feet from the Oaklawn Waiting Station • Relocation of a metal streetlight approximately 7 feet east of the Oaklawn Waiting Station. The use of jackhammers typically generates 0.035 in/sec PPV of motion at 25 feet from the jackhammer. It is anticipated that jackhammering to break up and remove the concrete at locations ranging from 7 feet to 16 feet from the Oaklawn Waiting Station to accommodate the BRT Alternative improvements may generate adverse vibration effects that could weaken or damage the Oaklawn Waiting Station. Given that noticeable damage to historic properties occurs with 0.08-0.12 in/sec PPV and the closest location for potential concrete removal is approximately 7 feet from the Oaklawn Waiting Station, the use of jackhammers could conceivably result in vibration-related damage to the Oaklawn Waiting Station. Therefore, the use of concrete cut-off saws is the necessary method to separate and remove the minimum amount of concrete necessary to facilitate the installation of the pedestrian ramp without generating harmful vibration effects. This approach is warranted given the special concern for the Oaklawn Waiting Station's age and unknown structural condition. The BRT

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	Alternative improvements could result in a direct adverse effect only to the Oaklawn Waiting Station. As documented in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study*, the effects of the BRT Alternative on the Oaklawn Waiting Station would comply with the following Secretary of the United States Department of the Interior's Standards for the Treatment of Historic Properties: Rehabilitation Standards 1, 2, 4, 5, 9, and 10. In addition, Project Conditions BRT-3 and BRT-4, described earlier in this table, would apply to the effects of the BRT Alternative improvements in the vicinity of the Oaklawn Waiting Station. In summary, based on implementation of these conditions, the effect finding of the BRT Alternative improvements on this historic property would be No Adverse Effect with Standard and Project Conditions. **Effects under Section 4(f):** The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at the Oaklawn Waiting Station. As described above, the improvements in the BRT Alternative in the vicinity of this property may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the historic property that qualify it for inclusion in the National Register with the implementation of Project Conditions BRT-3 and BRT-4. The changes in the vicinity of this property resulting from the BRT Alternative improvements would not affect the occupation and intended uses of Oaklawn Waiting Station. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Oaklawn Waiting Station for protection under Section 4(f).
War Memorial Building (1921) 435 Fair Oaks Avenue **CHR Status Code:** 2S2 (Individual property determined eligible for National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture). **War Memorial Building (1921) CHR Status Code:** 2S/5D1 (Individual property determined eligible for National Register by the Keeper). The following improvements would be implemented in the vicinity of War Memorial Building under the BRT Alternative: • Replace with curb and gutter fronting the War Memorial Building • Modify the curb return and install pedestrian access ramps with tactile paving at the Fair Oaks Avenue/	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the War Memorial Building was constructed in 1921, near the northwest corner of the Fair Oaks Avenue/Mound Avenue intersection. The front façade of this building faces Fair Oaks Avenue, a four-lane surface street with a central left-turn lane and paved median. The Spanish Eclectic War Memorial Building was designed by architect Norman Marsh and built in 1921. It is a contributor to the locally designated Oaklawn Historic District and was determined individually eligible for the National Register in 1994. The character-defining features that convey the significance of this property are stuccoed exterior walls; a moderately-pitched gabled roof with red tile cladding; full-width, main, street-facing veranda; and multiple glass doors. The improvements under the BRT Alternative would not occur within the historic property boundary of the Memorial Building. The removal of the existing pedestrian ramp at the northwest corner of South Fair Oaks Avenue/Mound Avenue, the reduction in the width of the curb on Fair Oaks Avenue, and relocation of a street light pole would be approximately 65 to 70 feet from the southeast corner of the War Memorial Building. There are no other BRT Alternative improvements in the area near the War Memorial Building. Therefore, the

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
Mound Avenue intersection approximately 160 feet from the War Memorial Building • Restripe Fair Oaks Avenue from 4 lanes to 6 lanes to accommodate dedicated bus lanes in both directions of travel by reducing the sidewalk on the east side of Fair Oaks Avenue, narrowing the travel lanes, and eliminating peak period on-street parking in both directions of travel • Construct an 8 foot wide raised median with a left-turn cut-out for traffic onto State Street	BRT Alternative improvements are not expected to result in direct or indirect impacts on the War Memorial Building. The improvements in the BRT Alternative in the vicinity of the War Memorial Building would not diminish the integrity of materials and workmanship, the integrity of location, or the essential physical features or characteristics that qualify this historic property for inclusion in the National Register. The effect finding of the BRT Alternative improvements on the War Memorial Building would be No Adverse Effect. **Effects under Section 4(f):** The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs), or any indirect effects at the Warm Memorial Building. The changes in the vicinity of this property resulting from the BRT Alternative improvements would not affect the occupation and intended uses of the War Memorial Building. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the War Memorial Building for protection under Section 4(f).
Raymond Hill Waiting Station Southeast corner of Fair Oaks Avenue/Raymond Hill Road Intersection **CHR Status Codes:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process), 3S (Appears eligible for the National Register as an individual property through survey evaluation), and 5S1 (Individual property that is listed to designated locally); listed under Criteria A (Association with Events) and C (Architecture) The following improvements would be implemented in the vicinity of Raymond Hill Waiting Station under the BRT Alternative: • Restripe a Fair Oaks Avenue from 4 lanes to 5 lanes to accommodate dedicated bus lanes in the southbound direction by narrowing the sidewalk on the west side of Fair Oaks Avenue on the opposite side of the street from the Waiting Station	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the Raymond Hill Waiting Station faces west, fronting on Fair Oaks Avenue. That one-story shelter structure is on the southeast corner of the Raymond Hill Road/Fair Oaks Avenue intersection. The Raymond Hill Waiting Station was determined eligible for listing in the National Register under Criterion A for its association with Early 20th Century Commercial Development (1901-1919) in the City of South Pasadena and for its association with the second incarnation of the Raymond Hotel and the Pacific Electric Railway's Pasadena Short Line; and under Criterion C as a rare example of a simple Arts & Crafts (Craftsman) trolley waiting station. The character-defining features that convey the significance of this property are its gabled roof with wood shingles, cobblestone and cement piers, and cobblestone retaining wall. The improvements in the BRT Alternative would be within the existing public ROW (road and sidewalks) and would not directly affect the Raymond Hill Waiting Station. These improvements would introduce visual elements that may diminish the integrity of the significant historic features of the Raymond Hill Waiting Station as a result of the reconfigured road. However, the Waiting Station structure itself would not be altered. The improvements in the BRT Alternative would be minor and would not detract from the essential physical features or characteristics of the Raymond Hill Waiting Station that qualify it for inclusion in the National Register because they would: (1) consist of modifications to non-contributing elements along the periphery and outside the boundary of the Raymond Hill Waiting Station, (2) be at ground level, and (3) be in areas along busy roads in an urban area and, once completed, would not prevent the continued occupation and intended uses of any of the contributing elements of the property. In summary, the improvements in the BRT Alternative in the vicinity of the Raymond Hill Waiting Station would result in No Adverse Effect on that property. **Effects under Section 4(f):** The BRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	features in this area would be minor and would not detract from the essential physical features or characteristics of the Raymond Hill Waiting Station that contribute to qualifying that property for inclusion in the National Register. The changes in views from and to the Raymond Hill Waiting Station would not affect the occupation and intended uses of this property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Raymond Hill Waiting Station for protection under Section 4(f).
South Pasadena Middle School 1500 Fair Oaks Avenue **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture). The following improvements would be constructed in the vicinity of South Pasadena Middle School under the BRT Alternative: • Widen Fair Oaks Ave by reducing the sidewalk/ landscape width in both directions of travel and narrowing the median • Restripe Fair Oaks Avenue from 6 lanes to 8 lanes to accommodate dedicated bus lanes in both directions of travel • Retain the existing left-turn cut-outs on Fair Oaks Avenue • Remove a 9 foot wide landscaped area adjacent to the sidewalk • Construct a narrowed raised median along Fair Oaks Avenue • Protect existing trees in the median in place • Install accessible pedestrian access ramps with tactile paving at the intersection of Fair Oaks/Oaks approximately 20 feet from the southwest corner of the building and at the intersection of Fair Oaks Avenue/Rollin Street approximately 140 feet from the northwest corner of the building; • Install a reconfigured driveway curb cut out at the parking lot entrance approximately 70 feet from the	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the Mission Revival-designed South Pasadena Middle School campus faces west, fronting on Fair Oaks Avenue. The campus is on the southeast corner of the Fair Oaks Avenue/Oak Street intersection. Access to the campus is provided at a number of locations on Fair Oaks Avenue and Oak Street. The 1928 Mission Revival style building, formerly known as South Pasadena Junior High School, was determined eligible for the National Register under Criterion C for architecture and as the work of a master. The character-defining features that convey the significance of this property are the Roman basilica plan, clock/bell tower, narrow eaves, arches, brick work, and terra cotta tile. South Pasadena Middle School would not be altered by the BRT Alternative. The improvements in the BRT Alternative in the vicinity of South Pasadena Middle School would be in existing public ROW (road and sidewalks). The BRT Alternative would introduce visual elements that may diminish the integrity of the significant historic features of South Pasadena Middle School as a result of the narrower sidewalk (from approximately 14-feet wide to approximately 8-feet wide) and one reconfigured driveway approximately 70 feet from the southeast corner of the historic Main Building on the school campus. The improvements in the BRT Alternative would be in recently modified areas, including patchwork repairs to the sidewalk. The improvements in the BRT Alternative would be minor and would not detract from the essential physical features or characteristics of South Pasadena Middle School that qualify it for inclusion in the National Register because they would: (1) consist of modifications to non-contributing elements along the periphery and outside of the boundary of the South Pasadena Middle School campus, (2) be at ground level, and (3) be in areas along a busy road in an urban area and, once completed, would not prevent the continued occupation and intended uses of any of the contributing elements of the property. In summary, the improvements in the BRT Alternative in the vicinity of South Pasadena Middle School would result in No Adverse Effect on that property. **Effects under Section 4(f):** The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of South Pasadena Middle School that qualify it for inclusion in the National Register. The changes in views from and to the South Pasadena Middle School campus would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify South Pasadena Middle School for protection under Section 4(f).

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
northwest corner of the building • Relocate one electrolier approximately 50 feet from the west side of the building one electrolier approximately 130 feet from the northwest corner of the building; • Relocate traffic signals and pull box at the Fair Oaks Avenue/Oaks Street intersection approximately 5 feet to the northeast and approximately 20 feet from the southwest corner of the building; • Relocate traffic signals at the Fair Oaks/Rollin intersection approximately 5 feet to the east and approximately 140 feet from the northwest corner of the building • Retain on-street parking adjacent to the school property	
Community Facilities Planners Building **(aka Fair Oaks Professional Group)** 1414 Fair Oaks Avenue **CHR Status Codes:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process) and 2D2 (Contributor to a district determined eligible for the National Register by consensus through the Section 106 process); listed under Criterion C (Architecture). The following improvements would be constructed in the vicinity of the Community Facilities Planners Building under the BRT Alternative: • Widen Fair Oaks Avenue by reducing the width of the sidewalk and landscaping in both directions of travel and narrowing the median • Restripe Fair Oaks Avenue from 6 lanes to 8 lanes to accommodate dedicated bus lanes in both directions of travel • Remove 9 foot wide landscaped area adjacent to the sidewalk approximately 12 feet west of the part of the Community Facilities Planners Building built in 1969 and outside the historic property boundary	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the Modern-styled Community Facilities Planners Building built in 1958 faces west fronting on Fair Oaks Avenue. The Community Facilities Planners Building is on the southeast corner of the Fair Oaks Avenue/Bank Street intersection. Access to the property is from various locations on Fair Oaks Avenue and Bank Street. The 1958 Modern-styled office building was determined eligible for the National Register under Criterion C for its mixture of Modern architecture and grounds designed by prominent landscape architect Garrett Eckbo and because the building is a marriage of architecture and landscape architecture. The character-defining features that convey the significance of this property are the spatial relationships between the buildings and landscaping, mature trees, wide building eaves, and the geometric design elements. The BRT Alternative would introduce visual elements that may diminish the integrity of the significant historic features of the Community Facilities Planners Building. Changes to the visual elements would result from construction of the accessible pedestrian ramp at the northwestern corner of the parcel, approximately 100 feet from the northwestern corner of the Community Facilities Planners Building. The new sidewalk in the vicinity of the Community Facilities Planners Building would result in slightly reconfigured pedestrian circulation patterns in the area; however, it would provide safe access for pedestrians and students of the adjacent South Pasadena Middle School campus. The Community Facilities Planners Building and the contributing Garret Eckbo-designed landscape elements on the property that are near the 1958 building are set back from Fair Oaks Avenue, behind a later addition between the main building and Fair Oaks Avenue, with that building partially obscuring views of the Community Facilities Planners Building from the street. The historic Modern architectural qualities of the Smith & Williams and the Garret Eckbo-designed landscape elements would not be modified by the improvements in the BRT Alternative. The improvements in the BRT Alternative would be at ground level in areas that have been previously modified. Those improvements would be minor and would not detract from the essential architectural or landscaping features or characteristics of the Community Facilities Planners

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
• Install a reconfigured driveway curb cut out at the parking lot entrance approximately 25 feet from the southwest corner of the Community Facilities Planners Building • Install an accessible pedestrian access ramp with tactile paving at the Fair Oaks Avenue/Bank Street intersection approximately 50 feet from the northwest corner of the Community Facilities Planners Building. • Construct a raised median along Fair Oaks Avenue • Protect existing trees in the median in place • Relocate an electrolier approximately 6 feet to the east along the new sidewalk, approximately 20 feet from the northwest corner of the Community Facilities Planners Building • Relocate traffic signals at Fair Oaks Avenue/Rollin Street intersection approximately 5 feet to the east approximately 50 feet from the northwest corner of the Community Facilities Planners Building • Retain on-street parking adjacent to the property	Building that qualify it for inclusion in the National Register because they would: (1) consist of modifications to non-contributing elements along the periphery of the property boundary of the Community Facilities Planners Building, (2) be at ground level, and (3) be in areas along busy roads in an urban area and, once completed, would not prevent the continued occupation and intended uses of any of the contributing elements of the property. In summary, the improvements in the BRT Alternative in the vicinity of the Community Facilities Planners Building would result in No Adverse Effect on that property. **Effects under Section 4(f):** The BRT Alternative would not result in permanent use of land from, or permanent easements or temporary occupancies (TCEs) at, this property. The project features in this area would be minor and would not detract from the essential physical features or characteristics of the Community Facilities Planners Building that qualify it for inclusion in the National Register. The changes in views from and to the Community Facilities Planners Building would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in use or proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Community Facilities Planners Building for protection under Section 4(f).
Segment of Route 66 West Huntington Drive and Fair Oaks Avenue **CHR Status Code**: 2S2 (Individual property determined to be eligible for the National Register by a consensus through the Section 106 process); listed under Criteria A and C The following improvements would be constructed on West Huntington Drive and Fair Oaks Avenue under the BRT Alternative: • Restripe the West Huntington Drive/Fair Oaks Avenue intersection to accommodate two reconfigured left-turn lanes for traffic onto Fair Oaks Avenue • Realign the median curb on curved turn lanes for northbound traffic from West Huntington Drive onto Fair Oaks Avenue by 5 feet to the west and southbound traffic from Fair Oaks Avenue onto eastbound West Huntington Drive 2 feet to the west;	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the improvements under the BRT Alternative on the segments of the former Route 66 along West Huntington Drive and Fair Oaks Avenue would include the removal of a segment of the existing curb and gutter system on West Huntington Drive and Fair Oaks Avenue to accommodate lane reconfigurations, modifications to the landscaped median and traffic islands to accommodate construction of a third additional left turn lane on southbound Fair Oaks Avenue for eastbound traffic onto West Huntington Drive, install new accessible pedestrian ramps and crosswalks to provide safe pedestrian circulation patterns, and restripe lanes as necessary. Therefore, the BRT Alternative improvements would result in a direct effect to the character-defining features of this former segment of Route 66 that support its National Register eligibility. However, for the following reasons this effect would not be adverse: The BRT Alternative improvements would be within the existing publicly owned right of way where a number of previous street improvements have been implemented since the road was originally constructed The improvements in the BRT Alternative would not affect the property's location. The improvements in the BRT Alternative would not introduce a visual intrusion so jarring and discordant that an adverse effect would result such that this segment of former Route 66 would no longer be able to convey its significance and the experience of automobile travel Route 66 during the period of significance.

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
• Reduce the width of the median along southbound Fair Oaks Avenue Install a reconfigured median and pedestrian crosswalks with accessible pedestrian curb ramps with tactile paving at two locations that span West Huntington Drive; and	The BRT Alternative improvements would not significantly alter the character-defining features of the historic property. Route 66 in California was listed in the National Register in January 2012. According to a National Register of Historic Places Multiple Property Documentation Form prepared in 2011, Route 66 appeared eligible under Criteria A and C for significant associations with American history as an important transportation corridor connecting the Midwest and California and for its innovative highway design and construction practices. Its period of significance is 1926, which reflects the date of the original designation of the series of roads that make up Route 66 to 1931, the date this particular segment was bypassed when the route alignment was changed. The character-defining features that convey the significance of this property are the original Route 66 alignment, a length of highway sufficient to convey to the motoring public the feeling of being back in time (1926-1931), an urban built environment free of visual intrusions from the recent past (obviously later than 1931), and a road prism located on the same alignment as it was during the period of significance (1926-1931). **Summary of Effects:** The BRT Alternative improvements at the former segment of Route 66 on West Huntington Drive and Fair Oaks Avenue will occur entirely within the existing publicly owned right of way. The BRT Alternative improvements will have no effect on the historic property's setting, location or feeling and association, which are the most important aspects of integrity under Criterion A. The character-defining features of the property will not be affected and the BRT Alternative would result in No Adverse Effect on this historic property. **Effects under Section 4(f)**: The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the former segment of Route 66 on West Huntington Drive and Fair Oaks Avenue that qualify it for inclusion in the National Register. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify this segment of Route 66 for protection under Section 4(f).
CITIES OF SOUTH PASADENA AND PASADENA	
Segment of Route 66 South Fair Oaks Avenue/Fair Oaks Avenue **CHR Status Code**: 2S2 (Individual property determined to be eligible for the National Register by a consensus through the Section 106 process); listed under Criteria A and C The following improvements would be constructed on South Fair Oaks Avenue/Fair Oaks Avenue under the BRT	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-2, the improvements under the BRT Alternative on the segments of the former Route 66 along Fair Oaks Avenue and South Fair Oaks Avenue would occur within the historic property boundary at the West Huntington Drive intersection of Fair Oaks Avenue to Colorado Boulevard. The BRT Alternative improvements would alter sidewalk widths, remove segments of the existing curb and gutter system to accommodate lane reconfigurations, modify landscaped medians and traffic islands as appropriate to accommodate construction of additional lanes for buses, left turn lanes to accommodate varying traffic demands, and install new accessible pedestrian ramps and crosswalks to provide safe

TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
Alternative: • Widen and restripe a 1.6 mile long segment of Fair Oaks Avenue • Construct the northbound Mission BRT Station, and install a concrete bus pad in the street and pedestrian access ramps • Construct the southbound Mission BRT Station at the Fair Oaks Avenue/Mission Street intersection, and install a concrete bus pad in the street and pedestrian access ramps • Construct the northbound and southbound Glenarm BRT Stations at the South Fair Oaks Avenue/Glenarm Street intersection, and install concrete bus pads in the street and pedestrian access ramps • Construct the northbound and southbound California BRT Station at the South Fair Oaks Avenue/California Boulevard intersection, and install concrete bus pads in the street and pedestrian access ramps • Construct the northbound Fair Oaks/Del Mar BRT Station, and install a concrete bus pad in the street and pedestrian access ramps • Construct the southbound Fair Oaks/Del Mar BRT Station, and install a concrete bus pad in the street and pedestrian access ramps • Relocate traffic signals and electroliers	pedestrian circulation patterns. Therefore, the improvements under the BRT Alternative would result in a direct effect to the character-defining features of this former segment of Route 66 that support its National Register eligibility. However, for the following reasons this effect would not be adverse: • The improvements in the BRT Alternative would be within the existing publicly owned right of way ROW where a number of street improvements have been implemented since the road was originally constructed. • The BRT Alternative improvements would not affect the property's location and would not introduce a visual intrusion so jarring and discordant that an adverse effect would result such that this segment of former Route 66 would no longer be able to convey its significance and the experience of automobile travel Route 66 during the period of significance would no longer be understood. • The BRT Alternative improvements would not substantially alter the character-defining features of the historic property. Route 66 in California was listed in the National Register in January 2012. According to a National Register of Historic Places, Multiple Property Documentation Form prepared in 2011, Route 66 appeared eligible under Criteria A and C for significant associations with American history as an important transportation corridor connecting the Midwest and California and for its innovative highway design and construction practices. Its period of significance is 1926, which reflects the date of the original designation of the series of roads that make up Route 66 to 1931, the date this particular segment was bypassed when the route alignment was changed. The character-defining features that convey the significance of this property are the original Route 66 alignment, a length of highway sufficient to convey to the motoring public the feeling of being back in time (1926-1931), an urban built environment free of visual intrusions from the recent past (obviously later than 1931), and a road prism located on the same alignment as it was during the period of significance (1926-1931). **Summary of Effects:** The BRT Alternative improvements at the segment of Route 66 along Fair Oaks Avenue and South Fair Oaks Avenue will occur entirely within the existing publicly owned right of way. The BRT Alternative improvements will have no effect on the setting, location or feeling and association of the historic property, which are the most important aspects of integrity under Criterion A. The character-defining features of the property, as described above, will not be affected. The BRT Alternative would result in No Adverse Effect on this segment of Route 66. **Effects under Section 4(f)**: The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the former segment of Route 66 along Fair Oaks Avenue and South Fair Oaks Avenue that qualify it for inclusion in the National Register. The improvements would have No Adverse Effect on the former segment of Route 66 because the road will retain the aspects of integrity that allow it to convey its

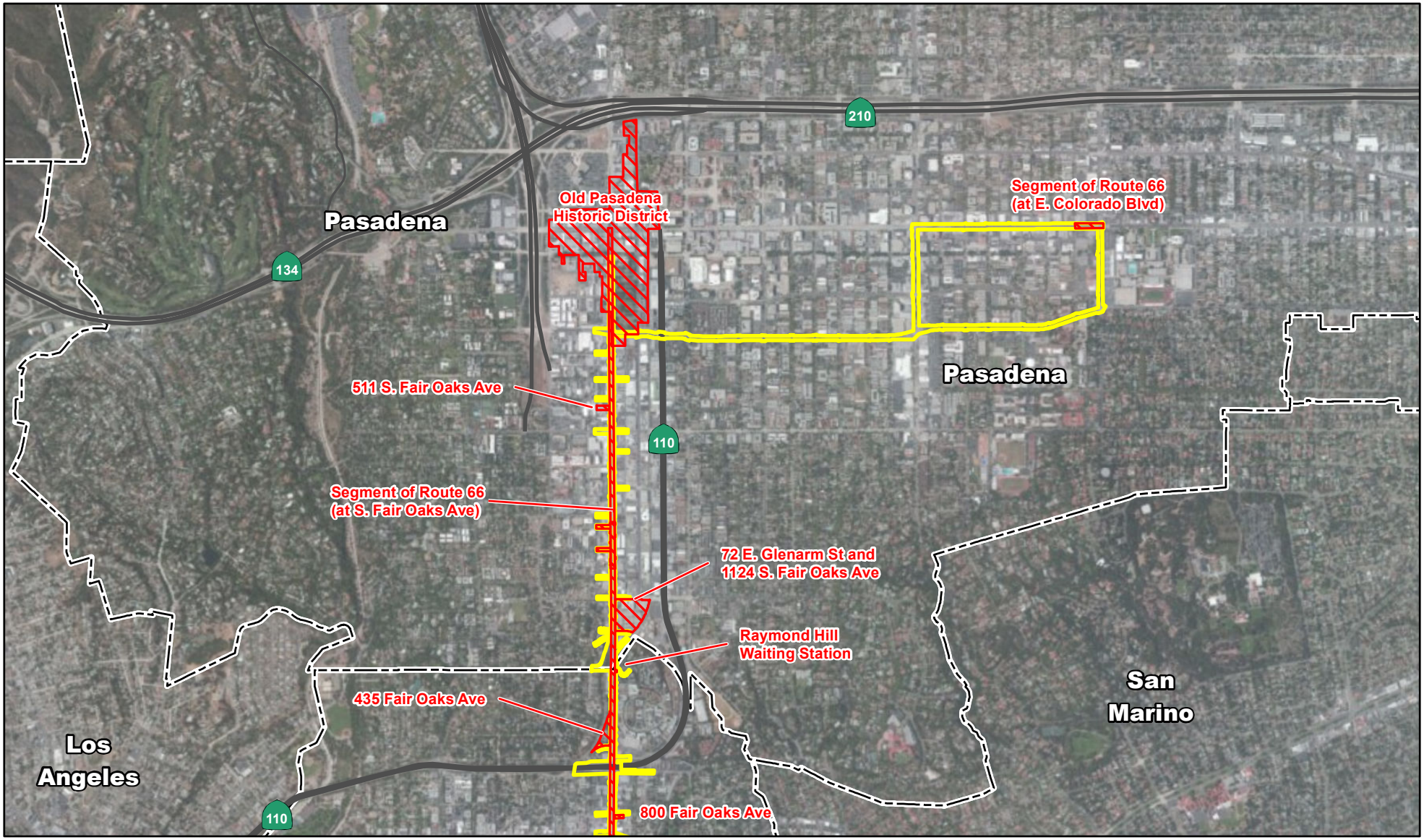
TABLE 3.6.2:
BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Sections 106 and 4(f)
	historic significance. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify this segment of Route 66 for protection under Section 4(f).

Sources: *Historic Property Survey Report* (2014); preliminary *Finding of No Adverse Effect for the State Route 710 North Study* (2015); and LSA Associates, Inc. (2015).

[1] Only properties within the Area of Potential Effects for the BRT Alternative are evaluated in this table. Refer to Figure 3.6-2 for the locations of the resources discussed in this table.

BRT = Bus Rapid Transit
CHR = California Historical Resource
National Register = National Register of Historic Places
sf = square feet
SR 110 = State Route 110
TCE = temporary construction easements
UPRR = Union Pacific Railroad



LEGEND

- Cultural Resource
- BRT Alternative Limits of Construction
- City Boundary

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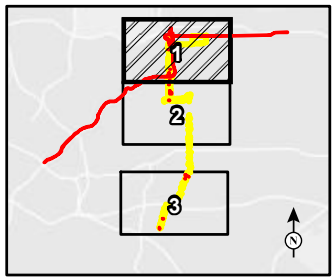
FEET



SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-2
Sheet 1 of 3

SR 710 North Study

Historic Properties for the BRT Alternative

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LEGEND

- Cultural Resource
- BRT Alternative Limits of Construction
- City Boundary

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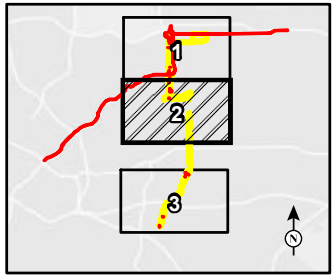

SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-2
Sheet 2 of 3

SR 710 North Study

Historic Properties for the BRT Alternative

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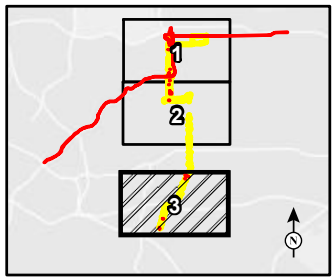
LEGEND

- Cultural Resource
- BRT Alternative Limits of Construction
- City Boundary



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SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-2
Sheet 3 of 3

SR 710 North Study

Historic Properties for the BRT Alternative

07-LA-710 (SR 710)
EA 187900
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TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
CITY OF ALHAMBRA	
100 North Fremont Avenue **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture). The following improvements would be constructed in the vicinity of 100 North Fremont Avenue under the LRT Alternative: • Excavation of two approximately 20 foot diameter tunnels below the median of North Fremont Avenue west of this historic property. The outer edge of the nearest tunnel would be approximately 60 feet below the ground surface and approximately 15 feet west of the edge of the building.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of 100 North Fremont Avenue. Those improvements would be outside the historic property boundary of the 100 North Fremont Avenue (APN 5339-002-011). Therefore, the LRT Alternative improvements will not have any direct effects on this historic property. The tunnels would be excavated with pressurized-face TBMs that would inherently lessen ground movement and if necessary additional conditions can be employed to lessen or eliminate ground movement effects. The use of pressurized-face TBMs typically generates less than 0.12 in/sec PPV at from 25 feet away the TBMs. The nearest tunneling activity would be approximately 15 feet west of 100 North Fremont Avenue and approximately 60 feet below the ground surface. It is conceivable that TBM-generated vibration measured at the 100 North Fremont Avenue would fall well below the threshold for minor cosmetic damage and, therefore, does not warrant special concern for potential effects to the character defining, Streamline Moderne architectural features of this building. It is, therefore, credible that this historic property would not experience an adverse direct effect from tunneling activity. Because this building is next to a busy, four-lane road, there has historically been a constant level of traffic-generated vibration and related ground noise present to some degree. According to a groundborne noise and vibration impacts technical report prepared in 2014, the LRT trains would operate at a speed of 45 miles per hour at this location. It is anticipated that associated operational ground borne noise levels would range between 46 dBA to 49 dBA near this location. This exceeds the FTA criteria of 35 dBA for operational groundborne noise and vibration for properties classified as a 2-4 Unit Residential property. Therefore, under the LRT Alternative, operational impacts from groundborne noise and vibration are anticipated in the area of 100 North Fremont Avenue. Because the LRT Alternative improvements would be approximately 60 feet below North Fremont Avenue, with no associated activity at the surface, it would not alter or introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically in this area. The improvements in the LRT Alternative would not alter the visual setting in any way that would affect the

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	significance of this historic property. According to a 2014 traffic analysis, the LRT Alternative improvements at this location would increase road noise in the vicinity of this historic property. The report concluded that visual and associated audible effects from increased traffic delay times would result under this Alternative. However, the National Register-significance of 100 North Fremont Avenue is derived from it being located in a quiet, rural setting. It is a property that is associated with some level of noise related to its setting in busy, urban environment. The increase in traffic volume and associated noise under the LRT Alternative would not introduce a new or discordant type of auditory influence that was not otherwise present historically. The Streamline Moderne apartment building at 100 North Fremont Avenue was intentionally sited along North Fremont Avenue for residents to easily access the major transportation arterials, including street car lines near West Main Street and Huntington Avenue, to the southwest. Because, the construction and operations activities under the LRT Alternative would be approximately 15 feet west of the building and approximately 60 feet below the ground surface with no associated surface activity, there would be no effects to the integrity of feeling and setting associated with the prominent location of 100 North Fremont Avenue along a busy road in an urban area. The LRT Alternative improvements would not result in a direct adverse effect to 100 North Fremont Avenue. The significance of this historic property is conveyed through its Streamline Moderne architectural qualities which can include the overall shape of the building, its materials, craftsmanship, decorative details, and various environmental design and aspects of its site to convey its significance. **Summary of Effects:** The LRT Alternative improvements may have an adverse indirect effect on the Streamline Moderne apartment building at 100 North Fremont Avenue as a result of an anticipated high level of operational groundborne noise and vibration from the LRT trains operating under North Fremont Avenue. The following specific conditions from the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* address the potential effects of operation-related noise and vibration effects on the building at 100 North Fremont Avenue and, based on implementation of these conditions, the effect finding of the LRT Alternative improvements on this Historic District would be No Adverse Effect. **Project Condition LRT-1:** The following presents a step by step approach for

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	reducing the effects of construction vibration resulting from the LRT Alternative tunnel excavation: **Public Outreach** While vibration levels should not exceed thresholds, some vibration from demolition, excavation, operation of heavy machinery, and installation of wall-support systems is expected to be perceptible at the properties nearest these activities. The proposed project conditions to reduce the level of expected effects outlined in this section are recommended to reduce the potential for adverse effects to historic properties and complaints from the community. Community outreach to educate the public about the project and its expected effects should include individual consultation with owners of potentially affected historic properties potentially affected by project-related vibration and education demonstrating the relationship between vibration level, perception, superficial and structural damage. As a way of getting feedback from the community during the project, an official complaints register should be routinely updated, maintained, and responses made in a deliberate, timely fashion. **Preconstruction Building Survey** A preconstruction survey undertaken by an independent certified inspector before beginning of construction-related activities would provide important baseline information for historical properties to: a) assesses their structural condition, and b) determine the safe threshold of a particular historic property when compared to the proposed activity at that location. A preconstruction survey typically includes inspecting building foundations, exterior walls, driveways, sidewalks, hardscape elements, and interior floors and walls documenting any pre-existing defects such as cracks, settlement, subsidence, corrosions, or water damage. The survey would document all existing cracks determined to be significant (i.e., a crack more than 2 millimeters wide). Cracks that are determined to be significant would be monitored during construction using crack monitors (such as grid type crack gages). The schedule of crack monitoring will follow generally accepted industry guidelines. The inspection can be documented by, but not limited to, photographing or videotaping the elements of the property under inspection.

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	The Project Historic Architect will establish a training program for construction personnel to emphasize the importance of protecting all identified historic properties in the vicinity of the APE. This program will include information on recognizing historic fabric and materials, and directions on how to exercise care when working around and operating equipment near historic buildings, including the proper storage of materials. The program will also include information on ways to minimize vibration from demolition and construction, as well as ways to monitor and report any damage to historic properties from such vibration. A provision for establishing this training program will be incorporated into the contract, and those contract provisions will be reviewed and approved by a Caltrans PQS architectural historian or another appropriate official. Following the baseline condition assessment, the architect and structural engineer would monitor groundborne vibration levels during construction and report any changes to the existing conditions of the at-risk buildings, including, but not limited to, expansion of existing cracks, new spalls, or other exterior deterioration. **Vibration Monitoring During Construction** The primary objective of monitoring is to verify that safe, acceptable levels of vibration by construction-related activity are not exceeded. Selected vibration monitoring at selected historic properties is based upon the expected level of vibration is based upon the sensitivity of the historic property to vibration effects including, but not limited to, method of construction, building height, foundation type (e.g., slab or piles), overall condition, and overall sensitivity. Any structural areas identified in the preconstruction survey that show damage that may be aggravated by construction-related activities that warrant monitoring during construction should be documented and have monitors installed prior to construction. The monitors can include both “attended” (monitoring with a technician present) and unattended (automated) monitoring. The location of the vibration monitors would be informed by the findings of preconstruction survey results that would indicate the highest at-risk location(s). Unattended monitors should be located at the outside of the buildings in a locked case.

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	Unattended monitors should be capable of measuring continuous data unattended and sending the data in real time to several different parties including, but not limited to, the responsible Caltrans Project Engineer to ensure that vibration levels do not exceed the thresholds presented above in this FOE. The monitors should also be capable of generating an instant e-mail alert when the thresholds are exceeded so immediate corrective action can be taken. It is recommended that vibration monitors provide alerts when 0.12 inches/second PPV are exceeded. If a second exceedance occurs at a historic property identified in this report, potential damage from vibration should be assessed. A visual inspection of the property should be made to verify that there are no damages developing or occurring as a result of the vibration. Monitoring reports will be submitted to a Caltrans PQS architectural historian or another appropriate official, who will also establish the frequency of monitoring and reporting. The structural engineer will consult with the architect if any problems with character-defining features of a contributing building are discovered. If, in the opinion of the structural engineer in consultation with the architect, substantial adverse changes to the character-defining features of the contributing buildings are found during construction (and can be reasonably attributed to the effects from construction activities), the monitoring team will immediately inform the project sponsor or sponsor's designated representative responsible for construction activities. The monitoring team will also provide recommendations for preventive and/or corrective measures, and such measures will be implemented by the project sponsor. The preventive/ corrective measures may include: 1. halting construction in situations where construction activities would imminently endanger historical buildings; 2. redesigning the project to avoid certain activities that would pose future risks to historical buildings; and 3. repairing any construction-related damage such that the character-defining features of any affected buildings are restored to their pre-project condition. The monitoring teams recommendations will be reviewed by the Caltrans PQS architectural historian or another appropriate official for feasibility and

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	appropriateness, but preventive measures will be implemented in a timely manner to avoid damage. **Vibration Monitoring Plan** A Vibration Monitoring Plan will be prepared, reviewed, approved, and administered by a professional, independent acoustical engineer in coordination with a licensed Project Historic Architect who meets the Secretary of the Interior's professional Qualification Standards for Historic Architecture and, the Caltrans Project Engineer or designed party. The Vibration Monitoring Plan should include the vibration instrumentation, location of vibration monitors, data acquisition, and exceedance notification and reporting procedures. Vibration Instrumentation: Vibration monitors common to these applications shall be selected by consultation with Caltrans, acoustical engineers, and be equipped with cellular modems for internet communication and use the auto call home feature to provide real time notification of vibration level exceedance to the responsible Caltrans Project Engineer or designated party. The vibration monitor will be set to automatically record daily events during working hours and to record peak PPV values in short, regular intervals during construction activity. Vibration monitoring equipment shall be maintained in good working order and routinely calibrated at intervals not more than 6 months, or some other regular interval deemed appropriate by Caltrans, acoustical engineers, and other responsible parties. Location of Vibration Monitors: Prepare and submit a scaled plan indicating monitoring locations, including measurements to be taken at construction site boundaries and at nearby historic and non-historic properties. Data Acquisition: The information to be provided in the data repots will be presented including at a minimum daily PPV readings at time of day from multiple locations, the maximum peak vector sum PPV, and maximum frequency for each direction, and a USBM R18507 compliance chart of maximum PPV vs. frequency. The reports will also identify construction equipment operating during the monitoring period and their locations and distances to all vibration sensitive locations.

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	Exceedance Notification and Reporting Procedures: A description of the notification of exceedance and reporting procedures will be included and the follow-up procedures taken to reduce vibration levels to below the allowable limits. The exceedance notice will trigger a "stop work" to prevent the unanticipated damage to a historic property. Work shall be permitted to resume when the Caltrans Engineer, the Project Historic Architect have determined that the appropriate modifications to the work have been made to ensure no further damage is likely to result. For the historic properties listed above (the Rialto Theatre, the Fair Hope Building, Hospital Veterinary, and the Raymond Florist Historic District, in particular). If such damage is likely, the qualified professional will develop specifications regarding the restriction and monitoring of construction activities that will be incorporated into the contract. Project modifications recommended by the qualified professional will be made prior to project construction to reduce vibrations to below damage threshold levels. Following the notice to proceed but before work begins, the Vibration Monitoring Plan will be submitted to the Caltrans Project Engineer or a designated party for review, comment, and approval before work can begin. At a minimum, the vibration monitoring data will be sent to the Caltrans Project Engineer or a designated party on a weekly basis or sooner if needed. Included will be comparative measurements taken during the previous monitoring interval. In the event that the measured vibration levels exceed allowable limits, the Caltrans Project Engineer or a designated party will be immediately notified and any further construction activities will be stopped until either alternative equipment or alternative construction procedures can be used that generate vibration levels that do not exceed the allowable limits. **Project Condition LRT-2:** The following presents a step by step approach for reducing the effects of operational vibration resulting from LRT Alternative operations: The LRT tunnel alignments will be concrete slab track system and, therefore, only certain types of vibration isolation systems are applicable. Examples of design measure that can be considered include (but are not limited to):

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	• Highly resistant direct fixation (HRDF) fasteners (e.g., Egg Type DP fastener); • Rail suspension fastener (RSF) system (an example of which is the Pangard fastener); • Isolated slab track system (ISTS), this consists of a concrete slab poured over the top of a continuous elastomeric mat; and • Floating slab track system (FST), this consists of a concrete slab supported by individual elastomeric pads. During an appropriate point in the ongoing project design process, segments of the LRT railway that are anticipated to generate operational groundborne noise and vibration in excess of FTA limits for the given property type of a historic property, design engineers will explore the available vibration-isolation systems and incorporate those that are most effective in reducing operational ground borne noise and vibration into the final construction design. **Effects under Section 4(f):** The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the LRT Alternative under this property would not affect the integrity of materials and workmanship, or modify the integrity of location or the essential physical features or characteristics of the property that qualify it for inclusion in the National Register with implementation of Project Conditions LRT-1 and LRT-2. The LRT Alternative improvements would not affect the occupation and intended uses of this historic property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify 100 North Freemont Avenue for protection under Section 4(f).
CITY OF PASADENA	
Glenarm Building and Electric Fountain 1124 South Fair Oaks Avenue/72 East Glenarm Street **CHR Status Code**: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion A (Association with events). The following improvements would be constructed in the vicinity of the Glenarm Building and Electric Fountain under the LRT Alternative:	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the Glenarm Building and Electric Fountain. Those improvements would not be within the historic property boundary of the Glenarm Building and Electric Fountain (APN 5317-030-901). The tunnels would be excavated with pressurized-face TBMs that would inherently lessen ground movement and if necessary additional conditions can be employed to lessen or eliminate ground movement effects. The nearest excavation activity would come to Glenarm Building and Electric Fountain would be northwest of

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
• Excavation of two approximately 20 foot diameter tunnels below the median of South Fair Oaks Avenue west of this historic property. As the tunnel alignment proceeds north along South Fair Oaks Avenue, it would veer northeast as it approaches and crosses under the East Glenarm Street/South Fair Oaks intersection but not cross the historic property boundary. The top of the tunnel would be 60 feet below the ground surface. The outer edge of the tunnel nearest to the Glenarm Building and Electric Fountain would be at a distance of 70 feet and 130 feet northwest of those resources, respectively.	and at depths of approximately 130 feet and 70 feet, respectively, below the ground surface. It is, therefore, conceivable that this historic property would not experience an adverse direct effect from tunneling activity. Moreover, because this historic property is an operational power plant, there is a constant level of vibration and related ground noise present from the operation of pumps, turbines, and associated equipment. According to a groundborne noise and vibration impacts technical report prepared in 2014, the operational groundborne noise and vibration analysis for LRT trains did not include this location. However, in the absence of information, and by the reasons given above, it can be reasonably anticipated that due to the depth and distance of excavation from the Glenarm Building and the electric fountain, associated operational ground borne noise levels would not meet or exceed FTA criteria for operational groundborne noise and vibration at this location. Therefore, under the LRT Alternative, adverse effects due to operational groundborne noise and vibration are not anticipated in the area of this historic property. Because the proposed improvements would be approximately 60 feet below the surface of Fair Oaks Avenue, it would not alter or introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. The proposed improvements would not alter the setting in any way that would affect the significance of this historic property. According to a traffic analysis prepared in 2014, the LRT Alternative improvements at this location would increase road noise in the vicinity of this property. The report concluded that visual and associated audible effects from a marked increase in traffic delay times would result under this Alternative. However, National Register significance of the Glenarm Building and Electric Fountain does not derive from it being located in a quiet, rural setting. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. This power plant was intentionally sited at a distance from residential and downtown areas in an industrial area at the edge of town along a railroad alignment for safety and aesthetic reasons. Therefore, because the proposed improvements would occur at a depth of 60 feet under South Fair Oaks Avenue and the intersection of East Glenarm Street in the vicinity of the Glenarm Building and Electric Fountain, it would not affect the property's integrity of feeling and setting associated with a prominent

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	location along a busy road in an industrial area near the southern border of Pasadena. The Glenarm Building and Electric Fountain would remain connected to Pasadena and other local communities by the roads that became modern South Fair Oaks Avenue and East Glenarm Street. The LRT Alternative improvements do not have the potential to result in indirect adverse effects to the critical elements of the materials and workmanship of this historic property, as expressed through its architectural character-defining features. **Summary of Effects:** The LRT Alternative improvements would have No Adverse Effects on the Glenarm Building and Electric Fountain. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the LRT Alternative under this property would not diminish the integrity of materials and workmanship and would not modify the integrity of location or the essential physical features or characteristics of the property that qualify it for inclusion in the National Register. In summary, the LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Glenarm Building and Electric Fountain for protection under Section 4(f).
Raymond Florist Historic District 60–62 East California Boulevard and 597 South Raymond Avenue **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register through the Section 106 process); listed under Criteria A (Association with events) and B (Association with persons). The LRT Alternative would result in excavation for the Fillmore LRT Station, which would extend across the entire width of South Raymond Avenue and reach a maximum depth of approximately 80 feet. The top of the as-built underground station platform would be 30 feet below the surface. The northwest corner of the excavation pit would be approximately 20 feet from the contributing elements to this Historic District at 60–62 East California Boulevard and 597 South Raymond Avenue. Stabilization of the excavation pit for the station would require the pre-drilled installation of soldier piles.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, the main facades of the Raymond Florist Historic District (a mixed-use residential and commercial property) face north, fronting on East California Boulevard, and east, fronting on South Raymond Avenue. The District is on the southwest corner of the East California Boulevard/South Raymond Avenue intersection. Access to the property is from several locations along East California Boulevard. The Fillmore LRT Station would be excavated using jackhammers to break up surfaces and excavators and other heavy equipment to excavate the station area. Soldier piles to shore up the excavation walls would be installed via a pre-drilled process and tied into the ground laterally. Some of the tiebacks may extend under the foundation of the contributing elements of this Historic District at 60–62 East California Boulevard and 597 South Raymond Avenue. The station excavation in the vicinity of this Historic District may result in minor physical damage to the Historic District, and introduce visual, atmospheric, or audible elements that may diminish the integrity of the significant

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	historic features of the Historic District. Although construction of the Fillmore LRT Station would not alter the Historic District's integrity of location, setting, design, feeling, and association, ground-borne vibration associated with the station excavation and related construction may result in minor cosmetic damage to the contributing elements in this Historic District. Therefore, the improvements in the LRT Alternative in the vicinity of this Historic District may diminish the integrity of materials and workmanship. Because the Historic District is eligible for listing in the National Register at the local level for its architectural qualities and associations with Pasadena's Japanese-American community, alterations to the integrity of materials and workmanship could affect its overall eligibility. Project Conditions LRT-1 and LRT-2, provided earlier in this table, address the potential effects of construction-related vibration effects on the Raymond Florist Historic District and, based on implementation of these conditions, the effect finding of the LRT Alternative improvements on this Historic District would be No Adverse Effect without Standard Conditions. **Summary of Effects:** The LRT Alternative improvements, as currently proposed, may have an adverse indirect effect on the Raymond Florist Historic District. If Project Conditions LRT-1 and LRT-2 are implemented, the LRT Alternative would result in No Adverse Effect without Standard Conditions on this historic property. **Effects under Section 4(f):** The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the LRT Alternative in the vicinity of this Historic District may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the Historic District that qualify it for inclusion in the National Register with implementation of Project Conditions LRT-1 and LRT-2 described above. The changes in the Historic District resulting from the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Raymond Florist Historic District for protection under Section 4(f).

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
Hospital Veterinary 959 South Raymond Avenue **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion B (Association with persons) and Criterion C (Architecture). The LRT Alternative would result in the excavation of two approximately 20 feet diameter light rail tunnels approximately 60 feet under the Petsadena/Raymond Animal Hospital building. No corresponding activity would occur at the surface.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, the Hospital Veterinary faces east, fronting and slightly set back from South Raymond Avenue. Access to the property is from the main entrance on South Raymond Avenue. The LRT Alternative may result in: minor physical damage to the Hospital Veterinary building; a change to the physical features within the setting of the property; and introduce visual, atmospheric, or audible elements that may diminish the integrity of the significant historic features of this property. Specifically, ground-borne vibration associated with the proposed excavation of the LRT tunnels under the Hospital Veterinary building could result in minor cosmetic damage to the building but would not alter the integrity of location, setting, design, feeling, and association for the Hospital Veterinary building. As a result, the LRT Alternative improvements may diminish the integrity of materials and workmanship of the Veterinary Hospital building. Project Conditions LRT-1 and LRT-2, from the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and provided earlier in the discussion of the Raymond Florist Historic District, would also address the potential effects of construction-related vibration effects on the Hospital Veterinary building. As a result, the effect finding of the LRT Alternative improvements on this property would be No Adverse Effect without Standard Conditions. **Summary of Effects:** The LRT Alternative improvements may result in a direct adverse effect to Hospital Veterinary at 959 South Raymond Avenue in Pasadena. If Project Conditions LRT-1 and LRT-2 are implemented, the LRT Alternative would result in No Adverse Effect without Standard Conditions on this historic property. **Effects under Section 4(f):** The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the LRT Alternative under this property may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the property that qualify it for inclusion in the National Register with implementation of Project Conditions LRT-1 and LRT-2 described above. The changes in the Hospital Veterinary building as a result of the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	activities, features, or attributes that qualify the Hospital Veterinary building for protection under Section 4(f).
Segment of Route 66 South Fair Oaks Avenue/Fair Oaks Avenue **CHR Status Code**: Considered eligible for listing in the National Register for this project; Criterion A (Association with events) The following improvements would be constructed on South Fair Oaks Avenue/Fair Oaks Avenue under the LRT Alternative: • Excavation of two approximately 20 foot diameter tunnels below the median of this 1.62 mile long segment of Fair Oaks Avenue/South Fair Oaks Avenue. The approximate depth of the top of the tunnel would be 60-85 feet below the ground surface • Construct the South Pasadena LRT Station, at a depth of 80 to 90 feet below the ground surface at the intersection of Fair Oaks Avenue/Mission Street. The top of the as-built underground station platform would be 30 feet below the ground surface. The station would be connected to a 338-space surface parking lot • Construct the Huntington LRT Station, at a depth of 80 feet below the ground surface at the foot of Fair Oaks Avenue at the West Huntington Drive intersection. The top of the as-built underground station platform would be 30 feet below the ground surface. The station entrance would be on the northwest corner of the Fair Oaks Avenue/West Huntington Drive intersection with a three-level, 400-space parking structure south of and across West Huntington Drive at the southeast corner of the West Huntington Drive/Fremont Avenue intersection.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the former segment of Route 66 at Fair Oaks Avenue/South Fair Oaks Avenue. Those improvements would be within the historic property boundary of this segment of former Route 66, as defined as the road right of way and at three locations outside the historic property boundary to construct the South Pasadena and Huntington LRT Stations and a three-level parking structure at Fremont Street. Therefore, the LRT Alternative improvements would result in a direct effect to the character-defining features of this former segment of Route 66 that support its National Register eligibility. However, for the reasons described below, this effect would not be adverse. The approximately 1.62 mi long twin-tunnel segment would be excavated with pressurized-face TBMs that would inherently lessen ground movement and if necessary additional conditions can be employed to lessen or eliminate ground movement effects. The nearest excavation activity to the surface of this segment of former Route 66 would vary from 60 feet to approximately 85 feet below the ground surface. It is conceivable that TBM-generated vibration measured along this segment would fall well below the threshold for minor, cosmetic damage and, therefore, does not warrant special concern for effects to its integrity of location and setting of this segment of road. It is, therefore credible that this historic property would not experience an adverse direct effect from tunneling activity. Moreover, because this road has historically been an active regional transportation corridor, there has historically been a constant level of traffic-generated vibration and related ground noise on this road. For the segments of former Route 66, namely the areas for the construction of South Pasadena and Huntington LRT stations, this road would remain open to vehicular traffic. The proposed improvements would be within the existing publicly owned right of way where a number of street improvements have occurred since the road's construction. The LRT Alternative improvements would not affect the location of this historic property. Its integrity of feeling and association will be diminished by changes to the setting. The LRT Alternative would result in the demolition and removal of two segments of former Route 66 at the foot of Fair Oaks Avenue and at Mission Street/

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	Fair Oaks Avenue intersection. These areas would accommodate cut and cover excavations for the underground station platforms and related infrastructure for those LRT stations. However, once the installation and construction of the underground station platforms are completed, the road would be rebuilt in the same right of way and its historical intended use would resume. The LRT Alternative would not relocate the road alignment, which is this resource's chief character-defining feature. When completed, the new road pavement would not introduce a visual intrusion so jarring and discordant that an adverse effect would result such that this segment of former Route 66 would no longer be able to convey its significance and the experience of automobile travel on Route 66 during the period of significance would no longer be understood. The LRT Alternative improvements would not significantly alter the character-defining features of this historic property. The scale and proportion of the proposed improvements would be similar to historical patterns in the area of the former segment of Route 66 at the West Huntington Drive intersection of Fair Oaks Avenue. This area already has several visual elements that were added since the road was built. These include modern traffic signals, signage, and light standards. Therefore, the proposed improvements would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. According to a traffic analysis prepared in 2014, the LRT Alternative would result in lengthened or shortened traffic delay times, depending on the location, and associated road noise from West Huntington Drive north to East Glenarm Street. That report concluded that visual and associated audible effects from varying traffic delay times along the segment would result under this Alternative. However, the National Register significance for this segment of Route 66 is not derived from it being located in a quiet, rural setting. The varying levels of traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. As described above, the proposed improvements at this location will occur within the existing publicly owned right of way, with the exceptions of currently privately owned land that would be acquired to build the South Pasadena and Huntington LRT stations. The LRT Alternative improvements will have no effect on the setting, location or feeling and association of this historic property, which are the most important aspects of integrity under Criterion A. The character-defining features of

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	the property, as described above, will not be affected. **Summary of Effects:** The LRT Alternative improvements would have No Adverse Effects on the segment of historic Route 66 between Fair Oaks Avenue/South Fair Oaks Avenue between the intersection of West Huntington Drive in South Pasadena and East Glenarm Street in Pasadena. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of this segment of Route 66 that qualify it for inclusion in the National Register. As a result, the LRT Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify Route 66 for protection under Section 4(f).
CITY OF SOUTH PASADENA	
Rialto Theatre (1925) 1019 Fair Oaks Avenue **CHR Status Code:** 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with events and a person) and C (Architecture). • The LRT Alternative would result in the excavation of two approximately 20 feet diameter light rail tunnels approximately 65 feet under Fair Oaks Avenue with the closest point of boring-related activity approximately 20 feet east of the Rialto Theatre building. • Construct the South Pasadena LRT Station at 80-90 feet below ground surface. The Station entrance would be approximately 560 feet north of and across Fair Oaks Avenue from the Rialto Theatre. A 338-space surface parking lot and the station entrance portal on the east side of Fair Oaks Avenue between Oxley Street and Mission Street will be visible from the Theatre.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, the Rialto Theatre faces east, fronting on Fair Oaks Avenue. It is on the northwest corner of the Oxley Street/Fair Oaks Avenue intersection. Access to the property is from the main entrance on Fair Oaks Avenue, a side entrance on Oxley Street, and a service entrance via an alley at the rear of the building. The improvements in the LRT Alternative may result in minor physical cosmetic damage to the Rialto Theatre, and may introduce visual, atmospheric, or audible elements that may diminish the integrity of the significant historic features of the property. Ground-borne vibration from the excavation of the LRT tunnels may result in minor cosmetic damage to the theater building. Although these improvements in the LRT Alternative would not alter the integrity of location, setting, design, feeling, and association for the Rialto Theatre building, they may result in minor cosmetic damage to the building that may diminish the integrity of materials and workmanship of the building. Project Conditions LRT-1 and LRT-2, from the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and provided earlier in the discussion of the Raymond Florist Historic District, would also address the potential effects of construction-related vibration effects on the Rialto Theatre building. As a result, the effect finding of the LRT Alternative improvements on this property would be No Adverse Effect

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	without Standard Conditions. **Summary of Effects:** The LRT Alternative improvements, as currently proposed, may have an adverse direct effect on the Rialto Theatre. If Project Conditions LRT-1 and LRT-2 are implemented, the LRT Alternative would result in No Adverse Effect on this historic property. **Effects under Section 4(f):** The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the LRT Alternative under this property may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the property that qualify it for inclusion in the National Register with implementation of Project Conditions LRT-1 and LRT-2 described above. The changes in the Rialto Theatre building as a result of the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of that property. In summary, the LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Rialto Theatre building for protection under Section 4(f).
Arroyo Seco Parkway Historic District (includes the route of the Arroyo Seco Freeway from the four-level interchange in the City of Los Angeles, through South Pasadena to East Glenarm Street in Pasadena, and bridges along that route). The Arroyo Seco Parkway is also a segment of Historic Route 66. **CHR Status Code:** 1S (Individual property listed in the National Register by the Keeper); listed under Criterion A (Association with Events), Criterion B (Association with persons), and Criterion C (Architecture). The LRT Alternative would result in the excavation of two approximately 20 feet diameter light rail tunnels approximately 60 feet under the Arroyo Seco Parkway/SR 110 roadbed underneath the Fair Oaks overcrossing (a contributing element to the District).	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, the Arroyo Seco Parkway Historic District extends south from East Glenarm Street in the City of South Pasadena to US-101 in the City of Los Angeles. The Arroyo Seco Parkway Historic District and the Fair Oaks Avenue Overcrossing in that Historic District would not be altered by the LRT Alternative. There would be improvements under the LRT Alternative at this one location within the boundary of this Historic District which would have a direct effect on this historic property. As discussed above in the ground movement description section, the tunnels would be excavated with pressurized-face TBMs that would inherently lessen ground movement and if necessary additional conditions can be employed to lessen or eliminate ground movement effects. The proposed activity would be contained within an area approximately 60 feet wide by approximately 230 feet long by 20 feet deep, centered on the Fair Oaks Avenue Overcrossing and under the Arroyo Seco Parkway/SR 110 roadbed, with no surface construction activity. Therefore, these improvements would not introduce any visual obstructions and would not alter the setting in a way that affects the historic significance of the District. The LRT Alternative improvements would not significantly

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	alter the character-defining features of this historic property. According to a traffic analysis prepared in 2014, the proposed LRT Alternative improvements at this location would increase road noise along this stretch of road. The report concluded that visual and associated audible effects from increased traffic delay times would result under this Alternative. However, the National Register significance of the Arroyo Seco Parkway Historic District is not derived from it being located in a quiet, rural setting. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. According to a groundborne noise and vibration impacts technical report prepared in 2014, groundborne noise and vibration effects were not analyzed within this Historic District. Given that this Historic District is an existing road with associated road noise and vibration, groundborne noise and vibration would not affect sensitive groups. The LRT Alternative would not exceed FTA criteria for operational groundborne noise and vibration, and therefore, no adverse effects from operational groundborne noise and vibration are anticipated in this area of the Historic District as a result of the LRT Alternative improvements. The proposed improvements at this location will occur entirely within the existing publicly owned right of way. They will have no effect on the setting, location, feeling, and association of the Historic District, which are the most important aspects of integrity under Criterion A. The proposed improvements would alter the integrity of materials, design, and workmanship in the Historic District, which are the most important aspects of integrity under Criterion C. However the scope, scale, and nature of the proposed improvements would be limited to one location within the Historic District. Therefore, the proposed improvements would not result in an adverse effect to the character-defining features of this Historic District. **Summary of Effects:** The LRT Alternative improvements would result in No Adverse Effect on the Arroyo Seco Parkway Historic District/Route 66 in South Pasadena. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f):** The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the LRT Alternative under this property may diminish the integrity of materials and workmanship but

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	would not modify the integrity of location or the essential physical features or characteristics of the property that qualify it for inclusion in the National Register with implementation of Project Conditions LRT-1 and LRT-2 described above. The changes in the Arroyo Seco Parkway Historic District as a result of the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of that property. In summary, the LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Arroyo Seco Parkway Historic District for protection under Section 4(f).
Fair Hope Building 800 Fair Oaks Avenue **CHR Status Code:** 2S2 (Individual property determined to be eligible for the National Register by consensus through the Section 106 process); listed under Criteria A (Association with events) and C (Architecture). The following improvements in the LRT Alternative would be constructed in the vicinity of the Fair Hope Building: • Excavation of two approximately 20 feet diameter light rail tunnels approximately 60 feet under Fair Oaks Avenue with the closest point of boring-related activity approximately 20 feet west of the Fair Hope Building. • Construct the South Pasadena LRT Station 80 to 90 feet below the ground surface. The top of the as-built underground station platform would be 30 feet below the ground surface and the Station entrance would be approximately 350 feet south of from the Fair Hope Building.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, the Fair Hope Building faces west, fronting on Fair Oaks Avenue. It is on the southeast corner of the Hope Street/Fair Oaks Avenue intersection. Access to the property is from the main entrance on Fair Oaks Avenue, a side entrance on Hope Street, and a service entrance via Raymond Lane, an alley at the rear of the building. The improvements in the LRT Alternative in the vicinity of the Fair Hope Building may result in minor physical cosmetic damage to the Fair Hope Building, and may introduce visual, atmospheric, or audible elements that may diminish the integrity of the significant historic features of the property. Ground-borne vibration from the excavation of the tunnels and the South Pasadena LRT Station may result in minor cosmetic damage to the Fair Hope Building. The LRT Station would be excavated using jackhammers to break up surfaces, followed by excavators and other heavy equipment. Soldier piles to shore up excavation walls could be installed via a pre-drilled process and tied into the ground laterally with tiebacks. If tiebacks are used, some of the tiebacks may extend under the parcel occupied by the Fair Hope Building. The excavation of the South Pasadena LRT Station underground platform would result in the removal of an amount of soil removal near the Fair Hope Building that credibly raises concerns for this historic property. The excavation at a point 20 feet west of the façade of the Fair Hope Building may potentially generate ground settlement and associated movement near the foundation of that building that could pose a risk to the building and its occupants. Therefore, the excavation related activity for the LRT Alternative improvements may result in an indirect adverse effect to the Fair Hope Building, including but not limited to the operation of heavy equipment such as excavators, back hoes, and heavy trucks. Although these improvements in the LRT Alternative would not alter the integrity

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	of location, setting, design, feeling, and association for the Fair Hope Building, they may result in minor cosmetic damage to the building that may diminish the integrity of materials and workmanship of the Fair Hope Building. Project Conditions LRT-1 and LRT-2, from the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and provided earlier in the discussion of the Raymond Florist Historic District, would also address the potential effects of construction-related vibration effects on the Fair Hope Building. As a result, the effect finding of the LRT Alternative improvements on this property would be No Adverse Effect without Standard Conditions. **Summary of Effects:** The LRT Alternative improvements, as currently proposed, may have an adverse indirect effect on the Fair Hope Building. If Project Conditions LRT-1 and LRT-2 are implemented, the LRT Alternative would result in No Adverse Effect on this historic property. **Effects under Section 4(f):** The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the LRT Alternative under this property may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the property that qualify it for inclusion in the National Register with implementation of Project Conditions LRT-1 and LRT-2 described above. The changes in the Fair Hope Building as a result of the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of that property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Fair Hope Building for protection under Section 4(f).
Horatio Rust Prehistoric Village Site This prehistoric site recorded by Horatio Rust was exposed during road grading activities in 1897. A large number of artifacts was recorded and collected including 50 hammer stones, 30 metates, over 100 manos, a bone awl, and a number of cogged and discoidal stones. Rust noted that the finds were located 2 to 3 feet beneath the ground surface and that the metates were all discovered face-down. The location of this site is not provided in this report to avoid vandalism or other potential damage to the site.	**Effects under Section 106:** Part of this prehistoric site may be within the disturbance limits for the LRT Alternative. As a result, it is possible construction of the LRT Alternative could encounter prehistoric artifacts. The preliminary *Finding of No Adverse Effect* determined that any potential archeological resources encountered at this site during construction of this Alternative would be important chiefly because of what can be learned from data recovery and would have minimal value for preservation in place. The *Post-Review Discovery and Monitoring Plan for the State Route 710 North Study Cities of Los Angeles, Monterey Park, Alhambra, South Pasadena* (included in the preliminary *Finding of*

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
As discussed in the *Historic Property Survey Report*, this site was determined to be eligible for the National Register as part of this undertaking. • The LRT Alternative would result in the excavation of two directional 20 foot diameter tunnels approximately 60 feet below the ground surface.	*No Adverse Effect*) specifies procedures to be followed prior to and during construction activities to ensure compliance with the Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans regarding compliance with Section 106 of the National Historic Preservation Act as it pertains to the administration of the Federal-Aid High-way Program in California (Caltrans Section 106 PA). **Summary of Effects:** The LRT Alternative improvements may have an adverse effect on the Horatio Rust Site. Although it is not likely that the proposed improvements would result in physical destruction or damage to the resource, the potential exists to alter or damage character-defining features that qualify the property for inclusion in the National Register. A Post-Review Discovery and Monitoring Plan will be implemented to guide archaeological monitoring and data recovery for any project related construction activity in the area of this resource. In summary, the LRT Alternative improvements would have No Adverse Effect on the Horatio Rust Prehistoric Village Site. **Effects under Section 4(f):** Section 4(f) does not apply to archaeological resources that are important chiefly because of what can be learned from data recovery and have minimal value for preservation in place (23 CFR 774.13(b)(1)). As a result, no further analysis or consideration of the effects of the LRT Alternative on the Horatio Rust Prehistoric Village Site under Section 4(f) is required.
Oaklawn Waiting Station **CHR Status Code:** 1S (Individual property listed in National Register by the Keeper; listed under Criterion C (Architecture). The following improvements would be implemented in the vicinity of the Oaklawn Waiting Station under the LRT Alternative: • Excavation of two approximately 20 foot diameter tunnels below the median of South Fair Oaks Avenue east of this historic property. As the tunnel alignment proceeds north along South Fair Oaks Avenue, the top of the tunnel would be 75 feet below the ground surface. The outer edge of the nearest tunnel to the Oaklawn Waiting Station and War Memorial Building would be 15 feet and 40 feet west of these resources, respectively.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, improvements in the LRT Alternative in the vicinity of the Oaklawn Waiting Station would not be within the historic property boundary of the Oaklawn Waiting Station (APN 5317-019-900). As discussed above in the ground movement description section, the LRT Alternative tunnels would be excavated with pressurized-face TBMs that would inherently lessen ground movement and if necessary additional conditions can be employed to lessen or eliminate ground movement effects. It is conceivable that TBM-generated vibration at the Oaklawn Waiting Station would fall well below the threshold for minor, cosmetic damage and, therefore, would not warrant special concern for effects to their character defining architectural features or spatial relationships. It is, therefore, conceivable that this historic property would not experience an adverse direct effect from tunneling activity. Moreover, because these buildings are located next to a busy

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	road, there has historically been a constant level of traffic-generated vibration and related ground noise. According to a groundborne noise and vibration impacts technical report prepared in 2014, the LRT trains would operate at a speed of 55 miles per hour at this location. It is anticipated that associated operational groundborne noise levels would range between 29 dBA to 32 dBA near this location. This is below the FTA criteria for operational groundborne noise and vibration for institutional property types. Therefore, under the LRT Alternative, adverse effects due to operational groundborne noise and vibration are not anticipated in the area of the Oaklawn Waiting Station. Because the LRT Alternative improvements would be approximately 75 feet below the surface of Fair Oaks Avenue, it would not alter or introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. Those improvements would not alter the setting in any way that would affect the significance of this historic property. The Oaklawn Waiting Station is a municipal building associated with its respective architectural and design qualities. It was intentionally sited on Fair Oaks Avenue for public transportation access and for a community assembly center. The LRT Alternative improvements would be at a depth of 75 feet below South Fair Oaks Avenue in the vicinity of the Oaklawn Waiting Station, and they would not affect the integrity of feeling and setting of this historic property associated with a prominent location along a busy road in an urban area. As a group, the LRT Alternative improvements do not have the potential to result in indirect adverse effects to the critical elements of the property's materials and workmanship, as expressed through its architectural character-defining features. **Summary of Effects:** The LRT Alternative improvements would have No Adverse Effect on the Oaklawn Waiting Station. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the Oaklawn Waiting Station and War Memorial Building that

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	qualify it for inclusion in the National Register. As a result, the LRT Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the Oaklawn Waiting Station for protection under Section 4(f).
War Memorial Building (1921) 435 Fair Oaks Avenue **CHR Status Code:** 2S2 (Individual property determined eligible for National Register by consensus through the Section 106 process); listed under Criterion C (Architecture). **War Memorial Building (1921) CHR Status Code:** 2S/5D1 (Individual property determined eligible for National Register by the Keeper). The following improvements would be implemented in the vicinity of the War Memorial Building under the LRT Alternative: • Excavation of two approximately 20 foot diameter tunnels below the median of South Fair Oaks Avenue east of this historic property. As the tunnel alignment proceeds north along South Fair Oaks Avenue, the top of the tunnel would be 75 feet below the ground surface. The outer edge of the nearest tunnel to the War Memorial Building would be 40 feet west of that property.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, the improvements in the LRT Alternative in the vicinity of the War Memorial Building would not be within the historic property boundary of the and War Memorial Building (APN 5317-019-900). As discussed above in the ground movement description section, the LRT Alternative tunnels would be excavated with pressurized-face TBMs that would inherently lessen ground movement and if necessary additional conditions can be employed to lessen or eliminate ground movement effects. It is conceivable that TBM-generated vibration at the War Memorial Building would fall well below the threshold for minor, cosmetic damage and, therefore, would not warrant special concern for effects to their character defining architectural features or spatial relationships. It is, therefore, conceivable that this historic property would not experience an adverse direct effect from tunneling activity. Moreover, because these buildings are located next to a busy road, there has historically been a constant level of traffic-generated vibration and related ground noise. According to a groundborne noise and vibration impacts technical report prepared in 2014, the LRT trains would operate at a speed of 55 miles per hour at this location. It is anticipated that associated operational groundborne noise levels would range between 29 dBA to 32 dBA near this location. This is below the FTA criteria for operational groundborne noise and vibration for institutional property types. Therefore, under the LRT Alternative, adverse effects due to operational groundborne noise and vibration are not anticipated in the area of the War Memorial Building. Because the LRT Alternative improvements would be approximately 75 feet below the surface of Fair Oaks Avenue, it would not alter or introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. Those improvements would not alter the setting in any way that would affect the significance of this historic property. The War Memorial Building is a municipal building associated with its respective architectural and design qualities. It was intentionally sited on Fair Oaks Avenue

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	for public transportation access and for a community assembly center. The LRT Alternative improvements would be occur at a depth of 75 feet below South Fair Oaks Avenue in the vicinity of the War Memorial Building, and they would not affect the integrity of feeling and setting of this historic property associated with a prominent location along a busy road in an urban area. As a group, the LRT Alternative improvements do not have the potential to result in indirect adverse effects to the critical elements of the materials and workmanship of this property, as expressed through its architectural character-defining features. **Summary of Effects:** The LRT Alternative improvements would have No Adverse Effect on the War Memorial Building. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the War Memorial Building that qualify it for inclusion in the National Register. As a result, the LRT Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the War Memorial Building for protection under Section 4(f).
Community Facilities Planners Building **(aka Fair Oaks Professional Group)** 1414 Fair Oaks Avenue **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture). The following improvements would be constructed in the vicinity of the Community Facilities Planners Building under the LRT Alternative: • Excavation of two approximately 20 foot diameter tunnels below the median of South Fair Oaks Avenue west of this historic property. The top of the tunnel would be 60 feet below the ground surface. The outer edge of the nearest tunnel to the Community Facilities Planners Building would be approximately 140 feet west of the original, 1958-built building and Garret Eckbo-designed landscape.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the Community Facilities Planners Building. Those improvements would not be within the historic property boundary of the Community Facilities Planners Building (APN 5320-005-023). Therefore, the LRT Alternative improvements will not have any direct effects on the historic property. The tunnels would be excavated with pressurized-face TBMs that would inherently lessen ground movement and if necessary additional conditions can be employed to lessen or eliminate ground movement effects. The nearest excavation activity to the Main Building, the original built environment element of the campus dating from its 1958 period of significance closest to Fair Oaks Avenue, would be approximately 150 feet to west and below the ground surface. It is conceivable that TBM-generated vibration measured at the Community Facilities Planners Building's 1958-built facility would fall well below the threshold for minor, cosmetic damage and, therefore, does not

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	warrant special concern for effects to its character defining, architectural features or its Garret Eckbo-designed landscape. It is, therefore, credible that this historic property would not experience an adverse direct effect from tunneling activity. Moreover, because this building is located next to a busy road, there has historically been a constant level of traffic-generated vibration and related ground noise present to some degree. According to a groundborne noise and vibration impacts technical report prepared in 2014, the LRT trains would operate at a speed of 45 miles per hour at this location. It is anticipated that operational groundborne noise levels would range between 39 dBA to 42dBA near this location. This exceeds the FTA criteria of 40 dBA for operational groundborne noise and vibration for properties classified as a quiet office. Therefore, under the LRT Alternative, operational impacts from groundborne noise and vibration are anticipated in the area of the Community Facilities Planners Building. Because the LRT Alternative improvements would be approximately 60 feet below the surface of Fair Oaks Avenue, it would not alter or introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. Those improvements would not alter the visual setting in any way that would affect the significance of this historic property. According to a traffic analysis prepared in 2014, the LRT Alternative improvements at this location would increase road noise in the vicinity of this this historic property. That report concluded that visual and associated audible effects from a marked increase in traffic delay times would result under this Alternative. However, the National Register significance of the Community Facilities Planners Building does not derive from it being located in a quiet, rural setting. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. The Community Facilities Planners Building was intentionally sited along Fair Oaks Avenue to showcase an innovative hybrid office and landscaping property. Therefore, due to proposed project activity occurring approximately 60 feet underground at an approximate distance of 140 feet from the property boundary, and with no associated surface activity, conceivably there would be no effects to the integrity of feeling and setting of the Community Facilities Planners Building

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	associated with a prominent location along a busy road in an urban area. The Community Facilities Planners Building would remain connected to South Pasadena and other local communities by the road that became modern Fair Oaks Avenue. The LRT Alternative improvements would not result in a direct adverse effect to the Community Facilities Planners Building. The significance of the property is conveyed through its Modern architectural qualities which can include the overall shape of the building, its materials, craftsmanship, decorative details, as well as its Garret Eckbo-designed landscape which are represented in the various environmental design and aspects of its site to convey its significance. **Summary of Effects:** The LRT Alternative improvements, as currently proposed, may have an adverse indirect effect on the Community Facilities Planners Building as a result of operational groundborne noise and vibration from the LRT trains operating under Fair Oaks Avenue. If Project Conditions LRT-1 and LRT-2 are implemented, the LRT Alternative would result in No Adverse Effect without Standard Conditions on this historic property. **Effects under Section 4(f)**: The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the LRT Alternative under this property may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the property that qualify it for inclusion in the National Register with implementation of Project Conditions LRT-1 and LRT-2 described above. The changes in the Community Facilities Planners Building as a result of the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Community Facilities Planners Building for protection under Section 4(f).

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
South Pasadena Middle School 1500 Fair Oaks Avenue **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture). The following improvements would be constructed in the vicinity of South Pasadena Middle School under the LRT Alternative: • Excavation of two approximately 20 foot diameter tunnels below the median of South Fair Oaks Avenue west of this historic property. The top of the tunnel would be 60 feet below the ground surface. The outer edge of the nearest tunnel to the South Pasadena Middle School would be approximately 100 feet west of the original Main Building.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the South Pasadena Middle School. Those improvements would not occur within the historic property boundary of the South Pasadena Middle School (APN 5320-006-901). Therefore, the LRT Alternative improvements will not have any direct effects on this historic property. The tunnels would be excavated with pressurized-face TBMs that would inherently lessen ground movement and if necessary additional conditions can be employed to lessen or eliminate ground movement effects. It is conceivable that TBM-generated vibration measured at the South Pasadena Middle School's 1928-built Main Building would fall well below the threshold for minor, cosmetic damage and, therefore, does not warrant special concern for effects to its character defining, architectural features. It is, therefore, credible that this historic property would not experience an adverse direct effect from tunneling activity. Moreover, because this building is located next to a busy road, there has historically been a constant level of traffic-generated vibration and related ground noise present to some degree. According to a groundborne noise and vibration impacts technical report prepared in 2014, the LRT trains would operate at a speed of 45 miles per hour at this location. It is anticipated that operational ground borne noise levels would range between 32 dBA to 35 dBA at the South Pasadena Middle School. This is below the FTA criteria of 40 dBA for operational groundborne noise and vibration for institutional property types. Therefore, under the LRT Alternative, adverse effects due to operational groundborne noise and vibration are not anticipated in the area of this historic property. Because the proposed improvements would be approximately 60 feet below the surface of Fair Oaks Avenue, it would not alter or introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. The proposed undertaking would not alter the setting in any way that would affect the significance of this historic property. According to a traffic analysis prepared in 2014, the proposed LRT Alternative improvements at this location would increase road noise in the vicinity of this historic property. That report concluded that visual and associated audible effects from increased traffic delay times would result under this Alternative. However, the National Register significance of the South Pasadena Middle School does not derive from it being located in a quiet, rural setting. It is a property that is

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	associated with some level of noise related to an educational institution. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. The South Pasadena Middle School was intentionally sited along Fair Oaks Avenue to showcase a key educational institutional building near the center of the city and facilitate travel for parents and students to and from other parts of the community. Therefore, due to proposed project activity occurring approximately 60 feet underground and with no associated surface activity, it would not affect the integrity of feeling and setting of the South Pasadena Middle School associated with a prominent location along a busy road in an urban area. The South Pasadena Middle School would remain connected to South Pasadena and other local communities by the road that became modern Fair Oaks Avenue. The LRT Alternative improvements would not result in an indirect adverse effect to the South Pasadena Middle School. **Summary of Effects:** The LRT Alternative improvements would have No Adverse Effects on the South Pasadena Middle School. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the South Pasadena Middle School that qualify it for inclusion in the National Register. As a result, the LRT Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the South Pasadena Middle School for protection under Section 4(f).
Raymond Hill Waiting Station Southeast corner of Fair Oaks Avenue and Raymond Hill Road **CHR Status Codes:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process), listed under Criteria A (Association with Events) and C (Architecture) The following improvements would be implemented in the vicinity of Raymond Hill Waiting Station under the LRT Alternative:	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the Raymond Hill Waiting Station. Those improvements would not be within the historic property boundary of the Raymond Hill Waiting Station. Therefore, those improvements will not have any direct effects on the historic property. The tunnels would be excavated with pressurized-face TBMs that would inherently lessen ground movement and if necessary additional conditions can be employed

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
• Excavation of two approximately 20 foot diameter tunnels below the median of South Fair Oaks Avenue west of this historic property. The top of the tunnel would be 85 feet below the ground surface. The outer edge of the nearest tunnel to the Raymond Hill Waiting Station would be approximately 15 feet west of the building.	to lessen or eliminate ground movement effects. The nearest excavation activity to the Raymond Hill Waiting Station would be due west and approximately 85 feet below the surface. It is conceivable that TBM-generated vibration measured at the Raymond Hill Waiting Station, which was rebuilt in 1978, would fall well below the threshold for minor, cosmetic damage and, therefore, does not warrant special concern for effects to its character defining Arts & Crafts architectural qualities trolley waiting station. It is, therefore, credible that this historic property would not experience an adverse direct effect from tunneling activity. Moreover, because this building is located next to a busy road, there has historically been a constant level of traffic-generated vibration and related ground noise present to some degree. According to a groundborne noise and vibration impacts technical report prepared in 2014, this specific location was not analyzed. Using data in that report for the Oaklawn Waiting Station and War Memorial Building, approximately 0.25 mi south of the Raymond Hill Waiting Station, LRT trains would operate at a speed of 55 miles per hour at this location. Under the LRT Alternative, operational impacts from groundborne noise and vibration are not anticipated in the area of the Raymond Hill Waiting Station. Because the proposed improvements would be approximately 85 feet below the surface of Fair Oaks Avenue, it would not alter or introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. The proposed LRT Alternative improvements would not alter the visual setting in any way that would affect the significance of this historic property. According to a traffic analysis prepared in 2014, the LRT Alternative improvements at this location would increase road noise in the vicinity of this historic property. That report concluded that visual and associated audible effects from reduced traffic delay times would result under this Alternative. However, the National Register significance of the Raymond Hill Waiting Station is not derived from it being located in a quiet, rural setting. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. Furthermore, the increased traffic volume and associated noise would not interfere with the continued, intended use of the Raymond Hill Waiting Station.

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	The Raymond Hill Waiting Station is municipal building associated with early 20th century commercial development in the City of South Pasadena and for its Craftsman-derived architectural design qualities. It was intentionally sited along Fair Oaks Avenue for public transportation access for the former Raymond Hotel and later adapted into the modern public transportation system. Therefore, due to proposed project activity occurring approximately 85 feet underground approximately 15 feet west of the building and with no associated surface activity, conceivably there would be no effects to the integrity of feeling and setting of the Raymond Hill Waiting Station associated with a prominent location along a busy road in an urban area. Therefore, although the proposed lane reconfiguration of Fair Oaks Avenue at this location would result in a change to a physical feature within the setting of the Raymond Hill Waiting Station, the lane reconfiguration would not affect the integrity of feeling and setting of the Raymond Hill Waiting Station associated with a prominent location along a busy road in an urban area. The Raymond Hill Waiting Station would remain connected to South Pasadena and other local communities by the road that became modern Fair Oaks Avenue. The LRT Alternative improvements would not result in direct or indirect adverse effects to the Raymond Hill Waiting Station. The property's significance is conveyed through its Craftsman architectural qualities which can include the overall shape of the building, its materials, craftsmanship, decorative details, as well as the various environmental design and aspects of its site to convey its significance, and which would not be adversely affected by the LRT Alternative. **Summary of Effects:** The LRT Alternative improvements would have No Adverse Effects on the Raymond Hill Waiting Station. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f):** The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the Raymond Hill Waiting Station that qualify it for inclusion in the National Register. As a result, the LRT Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the Raymond Hill Waiting Station for protection under Section 4(f).

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
UNINCORPORATED LOS ANGELES COUNTY	
4777 East Cesar E. Chavez Avenue NW corner of the East Cesar E. Chavez Avenue/Mednik Avenue **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture). The following improvements would be constructed in the vicinity of the building at 4777 East Cesar E. Chavez Avenue under the LRT Alternative: • Mednik Avenue would be widened by 20 feet on the opposite, eastern side of the street, with new sidewalks, curbs, and gutters. Mednik Avenue would be reconfigured and striped to provide only one automobile travel lane and a bike lane in each direction. Street parking would be added to the east side of Mednik Avenue • An aerial segment of the LRT Alternative would be constructed in the public road in front of this historic property. The base of the aerial structure would be approximately 25 feet above the ground surface. The aerial guideway would be approximately 35 feet wide and would be supported by 7 foot wide octagonal concrete columns installed in a new raised median island along Mednik Avenue. One aerial guideway support column would be installed just north of the East Cesar Chavez Avenue/Mednik Avenue intersection approximately 90 feet southeast from the corner of the historic building and another support column would be installed approximately 140 feet north and 70 feet northeast from the corner of that building. The support column bases would be approximately 100-120 feet below the road surface. The new raised median island would prohibit left turns into and out of this property from Mednik Avenue. The access from Cesar Chavez Avenue would not be affected.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the building at 4777 East Cesar E. Chavez Avenue. Those improvements would not be within the boundary of the Art Deco building at 4777 East Cesar E. Chavez Avenue, defined as parcel boundary (APN 5235-020-050). Therefore, the LRT Alternative improvements will not have any direct effects on the historic property. This building's Art Deco façade is a cause for concern. Excavation of the aerial support columns 90 feet southeast of and 70 feet northeast of the building at a depth of 100-125 feet might conceivably damage part of the property, such as the decorative Art Deco façade motif that contributes to its historic significance. Excavation of the LRT aerial support columns via Caisson drilling may result in minor cosmetic damage to the building due to ground-borne vibration. The closest location for excavation activity would be approximately 70 feet northeast of this historic property and, therefore, it is anticipated that this vibration would be even less and fall below levels to warrant special concern for the building's Art Deco-styled facade. According to a groundborne noise and vibration impacts technical report prepared in 2014, operational groundborne noise and vibration analysis for LRT trains did not include this location. Therefore, in the absence of information, it can be reasonably anticipated that operational ground borne noise levels may meet or exceed FTA criteria for operational groundborne noise and vibration at this location. Therefore, under the LRT Alternative, operational impacts from groundborne noise and vibration are anticipated in the area of this historic property. The LRT Alternative improvements may result in a direct adverse effect to this historic property. The significance of this property is conveyed through its association with its Art Deco architectural qualities which can include the overall shape of the building, its materials, craftsmanship, decorative details, interior spaces and features, as well as the various aspects of its site and environment. The LRT Alternative improvements would not result in an indirect adverse effect to this building. As described above, the significance of the property is conveyed through its association with its Art Deco architectural qualities which can include

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	the overall shape of the building, its materials, craftsmanship, decorative details, as well as the various aspects of its site and environment to convey its significance. The aerial LRT aerial tramway would be approximately 30 feet above the Mednik Avenue median and approximately 40 feet east of the building. Those improvements would not cross over into the historic property boundary and would be separated from that property by a 20 foot wide segment of Mednik Avenue and the existing sidewalk leading to the main entrance of that building. The scale and proportion of the proposed improvements would be a considerable change from historical patterns in the area of this historic property. Several visual elements have been added since the building was constructed in 1935. These include modern traffic signals, signage, and light standards. Therefore, the installation of the proposed improvements in the vicinity of this historic property would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. The lane reconfiguration, widening, and restriping of Mednik Avenue to accommodate the aerial LRT facility does not have a potential to adversely affect the critical elements of the property's materials, design, and workmanship, as expressed through its architectural character-defining features. According to a traffic analysis prepared in 2014, the LRT Alternative improvements at this location would increase road noise in the vicinity of this historic property. The report concluded that visual and associated audible effects from a marked increase in traffic delay times would result under this Alternative. However, the National Register significance of this building is not derived from it being located in a quiet, rural setting. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. Furthermore, the increased traffic volume and associated noise would not interfere with the building's continued and intended use as a commercial property. The free-standing Art Deco-styled building was intentionally sited along Mednik Avenue to attract and generate commercial income. Therefore, although the reconfiguration of Mednik Avenue near this location would result in a change to a physical feature in within the setting of this historic property, namely the installation of a segment of LRT aerial railway, it would not adversely affect the integrity of feeling and setting of the property associated with a prominent location along a busy road in an urban area. This building would remain

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	connected to this area of unincorporated Los Angeles County and other local communities by the roads that became modern Mednik Avenue and East Cesar E. Chavez Avenue. **Summary of Effects:** The LRT Alternative improvements, as currently proposed, may have an adverse direct effect on the free standing Art Deco-styled commercial building at 4777 East Cesar E. Chavez Avenue. If Project Conditions LRT-1 and LRT-2 are implemented, the LRT Alternative would result in a No Adverse Effect without Standard Conditions on this historic property. **Effects under Section 4(f)**: The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the LRT Alternative under this property may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the property that qualify it for inclusion in the National Register with implementation of Project Conditions LRT-1 and LRT-2 described above. The changes in the area as a result of the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of that property. In summary, the LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the building at 4777 East Cesar E. Chavez Avenue for protection under Section 4(f).
Otsungna Prehistoric Village Site **CHR Status Code**: As discussed in the *Historic Property Survey Report*, this site was determined to be eligible for the National Register as a part of this current project. The following improvements would be constructed in the vicinity of the Otsungna Prehistoric Village Site under the LRT Alternative: • Excavation and construction of pylons to support an aerial segment of LRT.	**Effects under Section 106:** Improvements proposed under the LRT Alternative may occur within the ethnographically attested area of the Otsungna Prehistoric Village site. Therefore, those improvements may result in a direct adverse effect to the character-defining features of the site if any such features are extant. At this time no information on extant, character-defining features is available. **Summary of Effects:** The LRT Alternative improvements may have an adverse effect on the Otsungna Prehistoric Village site if the site or any part of the site remains extant. Although it is not likely that the proposed improvements would result in physical destruction or damage to the resource (because, as a result, of disturbances to the area over the last approximately 240 years, it is highly unlikely that the resource or any part of it is extant), the potential exists to alter or damage character-defining features that qualify the property for inclusion in the National Register. In the unlikely event the site is encountered during project-related, ground-disturbing

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	activities, a Post-Review Discovery and Monitoring Plan will guide archaeological monitoring and data recovery for any work conducted in the area. In summary, the LRT Alternative improvements would have No Adverse Effect on the Otsungna Prehistoric Village Site. **Effects under Section 4(f)**: Section 4(f) does not apply to archaeological resources that are important chiefly because of what can be learned from data recovery and have minimal value for preservation in place (23 CFR 774.13(b)(1)). As a result, no further analysis or consideration of the effects of the LRT Alternative on the Otsungna Prehistoric Village Site under Section 4(f) is required.
2020 Fremont Avenue **CHR Status Code:** considered eligible for the National Register for this project The following improvements would be constructed in the vicinity of 2020 Fremont Avenue under the LRT Alternative: • Excavation of two approximately 20 foot diameter tunnels below the median of Fremont Avenue. The tunnel alignment would cross under the northwest corner of this historic property at a depth of approximately 65 feet below the ground surface and approximately 155 feet away from the building on that property. The top of the tunnel would be approximately 65 feet below the ground surface under the northwest corner of this property.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of 2020 Fremont Avenue. Those improvements would pass under the northwest corner within the historic property boundary of 2020 Fremont Avenue (APN 5319-013-006). The tunnels would be excavated with pressurized-face TBMs that would inherently lessen ground movement and if necessary additional conditions can be employed to lessen or eliminate ground movement effects. The use of pressurized-face TBMs typically generates less than 0.12 in/sec PPV at 25 feet from the TBMs. The nearest excavation activity to the 1925-built Spanish-styled residential building would be at an approximate depth of 65 feet below the ground surface and approximately 155 feet from the building at 2020 Fremont Avenue. It is conceivable that TBM-generated vibration measured at the 1925-built residence would fall well below the threshold for minor cosmetic damage and, therefore, does not warrant special concern for effects to the character defining architectural features of this building. It is, therefore, credible that this historic property would not experience an adverse direct effect from tunneling activity. According to a groundborne noise and vibration impacts technical report prepared in 2014, the LRT trains would operate at a speed of 45 miles per hour at this location. It is anticipated that associated operational ground borne noise levels would range from 32 dBA to 35 dBA at the residential building at 2020 Fremont Avenue. The maximum 35 dBA is the FTA criteria for operational groundborne noise and vibration for residential properties. Therefore, under the LRT Alternative, adverse effects from operational groundborne noise and vibration are not anticipated in the area of 2020 Fremont Avenue. Because the LRT Alternative improvements would be approximately 60 feet below the ground surface of Fremont Avenue and

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	approximately 155 feet west/northwest of the building at 2020 Fremont Avenue, it would not alter or introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically. The LRT Alternative improvements would not alter the setting in any way that would affect the significance of this historic property. According to a 2014 traffic analysis, the LRT Alternative improvements at this location would increase road noise in the vicinity of this historic property. The report concluded that visual and associated audible effects from increased traffic delay times would result under this Alternative. However, the National Register significance of 2020 Fremont Avenue does not derive from it being located in a quiet, rural setting. It is a property that is associated with some level of noise related to its setting in busy, urban environment. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically. The residence at 2020 Fremont Avenue was intentionally sited along Fremont Avenue to showcase a custom home with decorative architecture in proximity the center of the city and public transportation, and to facilitate travel to and from other parts of the community. Because the activity associated with the LRT Alternative improvements would be approximately 60 feet below the ground surface with no associated surface activity, they would not affect the integrity of feeling and setting associated with the decorative Spanish-styled residential architecture of the residence at 2020 Fremont Avenue along a busy road in an urban area. The LRT Alternative improvements would not result in an indirect adverse effect to the residential property at 2020 Fremont Avenue. The significance of this property is conveyed through its Spanish-styled architectural qualities which can include the overall shape of the building; its materials, craftsmanship, and decorative details; and various aspects of its site and environment. **Summary of Effects:** The LRT Alternative improvements would result in No Adverse Effects on the residential property at 2020 Fremont Avenue. This historic property will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the LRT Alternative under this property would not affect the integrity of materials and workmanship, or

TABLE 3.6.3:
LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property[1]	Potential Effects Under Section 4(f)
	modify the integrity of location or the essential physical features or characteristics of the property that qualify it for inclusion in the National Register. The LRT Alternative improvements would not affect the occupation and intended uses of this historic property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify 2020 Freemont Avenue for protection under Section 4(f).

Sources: *Historic Property Survey Report* (2014); preliminary *Finding of No Adverse Effect for the State Route 710 North Study* (2015); and LSA Associates, Inc. (2015).

[1] Only properties within the Area of Potential Effects for the LRT Alternative are evaluated in this table. Refer to Figure 3.6-3 for the locations of the resources discussed in this table.

CHR = California Historical Resource
Keeper = Keeper of the National Register of Historic Places
LRT = Light Rail Transit
National Register = National Register of Historic Places
PQS = Professionally Qualified Staff
SR 110 = State Route 110
TCE = temporary construction easement
US-101 = United States Route 101
VdB = vibration velocity decibels

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LEGEND

- LRT Alternative Limits of Construction
- Cultural Resource
- City Boundary

N

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FEET

SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-3

SR 710 North Study

Historic Properties for the LRT Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
CITY OF PASADENA	
Ambassador West Cultural Landscape Historic District **CHR Status Code:** 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture). The Freeway Tunnel Alternative would provide the following improvements in the vicinity of this District, for the Dual Bore and Single Bore design variations, respectively: **Dual Bore** • Install new southbound SR 710 on ramp from South St. John Avenue, with one or two lanes • Widen the east side of South St. John Avenue between West Green Street and West Colorado Boulevard to accommodate two additional southbound through lanes for the new southbound SR 710 on-ramp • Eliminate the existing two lane southbound SR 710 off-ramp and existing St. John Avenue approximately 600 feet north of Del Mar Boulevard, and replace it with new re-aligned South St. John Avenue with a new South St. John Avenue/West Del Mar Boulevard intersection approximately 150 feet west of existing intersection. **Single Bore** • Eliminate the existing two lane southbound SR 710 off-ramp and replace it with a single lane, 700 feet long emergency runaway truck ramp connecting to South St. John Avenue	**Effects under Section 106:** The Ambassador West Cultural Landscape Historic District contains 12 contributing elements. As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-4, it is bounded by West Green Street to the north, South Orange Grove Boulevard to the west, South St. John Avenue to the east, and the southern parcel lines of APNs 5713-013-056 and 5713-013-058. There are three contributing elements to this Historic District in the APE for the Freeway Tunnel Alternative: • Ambassador Auditorium Building, 131 South St. John Avenue • Ambassador Student Center Building, 169 South St. John Avenue • Hall of Administration Building, 300 West Green Street These three buildings would not be altered by the Freeway Tunnel Alternative. These contributing elements partially form the east boundary of the Ambassador West Cultural Landscape Historic District and front South St. John Street near the West Green Street/South St. John Avenue intersection. East of and beyond South St. John Street is the southbound SR 710 ROW. Improvements proposed under the Freeway Tunnel Alternative would not be within the historic boundary and the District and, therefore, would not have any direct effects on this historic property. Improvements in the Freeway Tunnel Alternative would be along an approximately 1,000 foot long segment along the eastern boundary of the District and would consist of widening South St. John Avenue to accommodate the additional southbound travel lanes associated with the reconfigured and realigned South St. John Avenue to accommodate a southbound SR 710 off-ramp that would connect to southbound SR 710 south of the East Del Mar Boulevard intersection. The proposed widening of South St. John Avenue along the District boundary would be on the opposite side of South St. John from the District. Other improvements such as the runaway truck ramp installation, reconfigured southbound SR 710 on-ramp, and any related sidewalk, curb, and gutter work would not extend into the historic property. The Freeway Tunnel Alternative improvements do not have the potential to adversely affect the critical elements of the property's materials, design, and workmanship, as expressed through its architectural character-defining features and their spatial relationships within the interior landscaped gardens. The Freeway Tunnel Alternative may introduce visual or audible elements that may diminish the integrity of the significant historic features of this Historic District. In the long term, the visual and

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	audible elements would be associated with traffic traveling into/out of the tunnels. Based on the *Noise Study Report* (2014), the noise level in the east part of this Historic District along South St. John Avenue, which is the area that would be nearest the North Portal and the closest to noise related to traffic entering and leaving the tunnel(s), would increase 11 dB from both the Existing and Future No Build noise level of 61 dB (i.e., up to 72 dB). Visual effects would consist of increased vehicular traffic on St. John Avenue adjacent to the east boundary of the Historic District because the proposed improvements would connect South St. John Avenue with the West California Boulevard intersection, and from traffic entering and exiting the freeway tunnel(s). These impacts would not be adverse because this area is characterized by existing high levels of local traffic on West Colorado Boulevard, East Green Street, and East Del May Boulevard, and freeway traffic on SR 134/Ventura Freeway. The increased traffic and noise levels along St. John Avenue would not affect the historic uses of the contributing elements of the Historic District as a learning institution. The indirect changes to noise levels and visual effects as a result of increased traffic along the eastern boundary of this Historic District would not detract from the essential physical features or characteristics of the District that qualify it for inclusion in the National Register because they would occur in areas along busy roads in an urban area and, once completed, would not prevent the continued occupation and intended use of the contributing elements of this Historic District as part of a school campus. None of the proposed improvements occurring outside the District would cross the resource's boundary. Therefore, under the both the single-bore and dual-bore design variations of the Freeway Tunnel Alternative, the proposed alterations at the District described above would result in no adverse effect. In summary, the effect finding of the Freeway Tunnel Alternative improvements on this Historic District would be No Adverse Effect. **Summary of Effects:** The Freeway Tunnel Alternative improvements would have no adverse effects on the contributing elements to the District. The District will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f):** The Freeway Tunnel Alternative would not result in permanent use of land from, or permanent easements or temporary occupancies (TCEs) at, this property. As described above, the indirect changes to noise levels and visual effects as a result of increased traffic along the eastern boundary of this Historic District would not detract from the essential physical features or characteristics of the

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	District that qualify it for inclusion in the National Register, and would not prevent the continued occupation and intended use of the contributing elements of this Historic District as part of a school campus. As a result, the Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Ambassador West Cultural Landscape Historic District for protection under Section 4(f).
Markham Place Historic District **CHR Status Code:** 1S (Listed in the National Register by the Keeper); listed under Criterion C (Architecture) The Freeway Tunnel Alternative would provide the following improvements within the District. • The Freeway Tunnel Alternative would result in the excavation of an approximately 60 feet diameter single-bore tunnel or two approximately 60 feet diameter tunnels at depths that would gradually rise from approximately 160 feet at the southern end of the Historic District at Bellefontaine Street to 100 feet at the northern end of the Historic District at West California Boulevard. The Freeway Tunnel Alternative would provide the following improvements in the vicinity of the District for the Dual Bore and Single Bore design variations, respectively: **Dual Bore** • Construct an approximately 20 foot-high bell tower structure approximately 1,650 feet north of the northern boundary of the District boundary. The bell tower will be surrounded by landscaping and pedestrian walkways connecting to Pasadena Avenue, Del Mar Boulevard, and St. John Avenue • Extend St. John Avenue from West Del Mar Boulevard approximately 1,800 feet south to West California Boulevard, with two to three travel lanes. The proposed street and sidewalk segments will tie into the existing sidewalk and streets at Del Mar Boulevard and California Boulevard. An approximately 450 foot long segment of existing Havendale Drive will be demolished to accommodate the St. John Avenue extension and the reconfigured South St. John/West California Boulevard intersection	**Effects under Section 106:** The Markham Place Historic District includes 69 mostly residential parcels, 26 of which are contributing elements. The Historic District also includes Singer Park. As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-4, the Historic District is generally bounded on the north by West California Boulevard, on the east by South Pasadena Avenue, on the south by Bellefontaine Street, and on the west by South Orange Grove Boulevard. The Freeway Tunnel Alternative may result in minor physical damage to the Historic District, and may introduce visual and audible elements that may diminish the integrity of the significant historic features of this Historic District. The Freeway Tunnel Alternative would introduce audible and visual elements at the northern boundary of the Historic District along West California Boulevard that are associated with construction of the cut-and-cover tunnel segment north of the Historic District boundary and the traffic traveling into/out of the tunnels. According to the Noise Study Report (2014), the current noise level in the north part of the Historic District in the area that would be closest to the North Portal, and therefore closest to traffic entering and leaving the tunnel(s), would experience a reduction of 1 dB from the existing noise level of 59 dB (i.e., down to 58 dB) during operation of the Freeway Tunnel Alternative. The tunnel segment would be excavated with pressurized-face TBMs that would inherently lessen ground movement and, if necessary, additional conditions can be employed to lessen or eliminate ground movement effects. It is therefore credible that the District's contributing elements could experience effects from the TBM excavation. It is also credible that TBM-generated vibrations occurring at a minimum distance four times greater than the benchmark distance of 25 feet would fall well below the threshold for minor, cosmetic damage. Therefore, special concern for the District's contributing elements above or adjacent to the proposed tunnel alignment(s)

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
Single Bore • Extend St. John Avenue from West Del Mar Boulevard approximately 1,700 feet south to West California Boulevard, with two to three travel lanes. The proposed street and sidewalk segments will tie into the existing sidewalk and streets at Del Mar Boulevard and California Boulevard. An approximately 450 foot long segment of existing Havendale Drive will be demolished to accommodate the proposed extension of South St. John Avenue and the reconfigured South St. John/West California Boulevard intersection Under both the Dual Bore and Single Bore variations, the following improvements would occur in the vicinity of the Markham Place Historic District: • Construct a new OMC building above the freeway tunnel approximately 500 feet north of the District and 200 feet northeast of the Palmetto cul-de-sac • The tunnel excavation will extend approximately 400 feet north of the District boundary. At that point, an approximately 1,475 foot long segment of cut and cover tunnel would be constructed, to approximately 225 feet north of the Del Mar Boulevard Overcrossing	is not warranted. The District is located in a busy urban area near Pasadena's central business district. A varying, yet constant level of traffic-generated vibration and related ground noise has been historically present within and adjacent to the District. It is anticipated that the buildings above and adjacent to the tunnel alignments would remain in use and occupied by its residents and the roads connecting the District to the community would remain open to regular vehicular traffic. The proposed improvements would not result in the physical destruction or damage to any of the District's contributing elements. The depth of the proposed work would not remove or otherwise affect the location of any of the District's contributing elements. The Freeway Tunnel Alternative improvements do not include any associated surface construction, and the expected ground-borne noise and vibration levels generated by excavation activity would not damage the District's contributing elements. Those improvements would not interrupt the continued use and enjoyment of any of the contributing elements in their historical locations. The integrity of feeling and association of this District will not be diminished by changes to the setting because the proposed improvements would occur at approximate depths of 160 feet to 100 feet below the ground surface. The scale and proportion of the proposed above-ground improvements in the vicinity of the District would be similar to historical patterns of development that have occurred in the area. Visual elements that were added during the period of significance (1887-1937) include traffic signals, street and directional signage, and light standards. Therefore, the Freeway Tunnel Alternative improvements at the northwest corner of the South St. John Avenue/West California Boulevard intersection would not introduce a discordant type of visual obstruction out of scale and proportion with previous visual obstructions present historically. The Freeway Tunnel Alternative would not alter the setting in a way that affects the historic significance of the District. The tunnel excavation below this Historic District may result in minor physical damage to the Historic District as a result of ground-borne vibration that may diminish the integrity of the significant historic features of the Historic District. The tunnel excavation would not alter the Historic District's integrity of location, setting, design, feeling, and association. However, ground-borne vibration associated with the tunnel excavation and related construction may result in minor cosmetic damage to the contributing elements in this Historic District and may diminish the integrity of materials and workmanship. Because the Historic District is listed on the National

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	Register for its architectural qualities, alterations to the integrity of materials and workmanship could affect its overall eligibility. **Summary of Effects:** The Freeway Tunnel Alternative improvements would have No Adverse Effects on the District. The District will retain the aspects of integrity that allow it to convey its historic significance. In summary, the Freeway Tunnel Alternative would result in No Adverse Effect on the Markham Place Historic District. **Effects under Section 4(f):** The Freeway Tunnel Alternative would not result in the permanent use of land from, or permanent easements or temporary occupancies (TCEs) at, this property. As described above, the improvements in the Freeway Tunnel Alternative in the vicinity of this Historic District may diminish the integrity of materials and workmanship but would not modify the integrity of location or the essential physical features or characteristics of the Historic District that qualify it for inclusion in the National Register with implementation of Conditions A and B described above. The changes in the Historic District as a result of the Freeway Tunnel Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. As a result, the Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Markham Place Historic District for protection under Section 4(f).
Norton Simon Museum 411 West Colorado Boulevard **CHR Status Code**: 2S2 (Individual property determined for the National Register by a consensus through the Section 106 process); listed under Criteria A (Association with events), B (Association with persons), and C (Architecture). The following improvements would be constructed in the vicinity of the Norton Simon Museum under the Freeway Tunnel Alternative: • Replace the existing "Del Mar Blvd / California Blvd to 110" sign on an existing overhead sign bridge with a new sign that reads "710 South /Long Beach /Exit Only" approximately 165 feet northeast of the Simon Museum. The existing sign bridge will remain in place.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Norton Simon Museum. Those improvements would not be within the boundary of the Norton Simon Museum. Therefore, the Freeway Tunnel Alternative improvements would not have any direct effects on this historic property. The Freeway Tunnel Alternative improvements would not result in an indirect adverse effect to the Norton Simon Museum. The significance of this property is conveyed through its associations with civic development, a prominent individual art collector, and as a distinctive example of the Late Modern architectural style which can include the overall shape of the building; its location, materials, design, craftsmanship, workmanship, setting, feeling and decorative details; and various aspects of its site and environment. The proposed sign replacement under the Freeway Tunnel Alternative would be at a location where there is an existing sign. The existing sign is obscured from the Museum by a dense stand of trees in the road shoulder. Therefore,

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	the improvements in the Freeway Tunnel Alternative do not have the potential to adversely affect indirectly the critical elements of the property's materials, design, location, setting, feeling, association, and workmanship, as expressed through its association with Pasadena's civic development, a prominent individual art collector, or its architectural qualities. The scale and proportion of the proposed improvements would not result in a measurable change to the similar to historical patterns in the area of the Norton Simon Museum. Several visual elements were added in this area during the 1969 period of significance for the Museum. These include the construction of modern Pasadena, SR 134, modern traffic signals, street and directional signage, and light standards. Therefore, the proposed improvements to the area in the vicinity of the Norton Simon Museum would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically both before and during its period of significance. The proposed improvements in the Freeway Tunnel Alternative would not alter the setting in a way that affects the historic significance of the Norton Simon Museum. According to traffic analysis prepared in 2014, the proposed travel lane reconfiguration on Huntington Drive would increase road noise in the vicinity of the Norton Simon Museum. The report concluded that visual and associated audible effects from a marked increase in traffic delay times would result under either the Dual Bore or Single Bore design variation. However, the National Register significance of the Norton Simon Museum is not derived from it being located in a quiet, rural setting. The increase in traffic volume would not introduce a new or discordant type of auditory influence that was not otherwise present historically. According to a noise analysis prepared in 2014, the future noise level at the southern part of the Norton Simon Museum will increase due to an increase in traffic volumes along SR 134. The study showed that interior levels at these buildings will approach 47 dB, which is below the NAC of 52 dBA for sensitive interior uses. Furthermore, the increased traffic volume and associated noise would not interfere with its use as a public arts institution. The Freeway Tunnel Alternative improvements would not interrupt the continued use and enjoyment of this historic property in its historical location. Its integrity of feeling and association will be not diminished by changes to the setting because the proposed improvements would be approximately 165 feet

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	from the northern boundary of the Norton Simon Museum. Evaluation of the groundborne noise and vibration from motor vehicles traveling in the freeway tunnel(s) indicate that no sensitive receivers would be impacted by operational vibration. Moreover, the Norton Simon Museum is in a busy urban area near Pasadena's central business district and in the immediate vicinity of the I-210/SR 134 interchange, a major regional and national transportation corridor. Therefore, a varying, yet constant level of traffic-generated vibration and related ground noise has been historically present within and adjacent to this historic property. When completed, the Freeway Tunnel Alternative improvements would not introduce a visual intrusion so jarring and discordant that an adverse effect would result such that the Norton Simon Museum would no longer be able to convey its significance thorough its associations under Criteria A, B, and C established during the period of significance in a manner that it would no longer be understood. The proposed improvements would not significantly alter the character-defining features of the historic property. This property was intentionally sited west of and near to downtown to showcase a prestigious art collection near restaurants and related venues in Pasadena's central business district, at location readily accessible via major regional transportation arterials. The Freeway Tunnel Alternative improvements would not affect the integrity of feeling and setting of the Museum associated with its historical development pattern and associated architectural qualities. **Summary of Effects:** The Freeway Tunnel Alternative improvements would have no adverse effects on the contributing elements to the Norton Simon Museum. This historic property would retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would not detract from the essential physical features or characteristics of the Norton Simon Museum that qualify it for inclusion in the National Register. As a result, the Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the North Simon Museum for protection

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	under Section 4(f).
Raymond-Summit Historic District 396 North Summit Avenue The District is approximately bounded by North Raymond Avenue, East Villa Street, North Summit Avenue, and East Maple Street in the City of Pasadena. **CHR Status Code**: 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with events) and C (Architecture). The North Portal of the Freeway Tunnel Alternative would be approximately 0.4 mile from this District which would introduce visual and audible elements in that area.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative within approximately 0.4 mile of the boundary of the Raymond-Summit Historic District. Those improvements would not have any direct effects on this historic property. The improvements in the Freeway Tunnel Alternative would not result in an indirect adverse effect to the District. The excavation and construction of tunnel(s) and related street improvements in the Freeway Tunnel Alternative would occur approximately 0.4 mile south of this District. Therefore the improvements in the Freeway Tunnel Alternative do not have the potential to indirectly adversely affect the critical elements of the property's materials, design, and workmanship, as expressed through its association with early Pasadena's development or its architectural character-defining features. The scale and proportion of the proposed improvements would be similar to historical patterns in the area of the District. This area has been transformed since the period of significance (1879-1906) for this Historic District. These include the construction of modern Pasadena, SR 134 to the south, modern traffic signals, street and directional signage, and light standards on the surface streets. These changes occurred following the period of significance for the District. Therefore, the improvements in the Freeway Tunnel Alternative approximately 0.4 mile south of this District would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically both before and during its period of significance. The Freeway Tunnel Alternative improvements would not alter the setting in a way that would affect the historic significance of the District in a manner that has not already occurred over the last 100 years. According to a traffic analysis prepared in 2014, the Freeway Tunnel Alternative would increase road noise in the vicinity of the District. That report concluded that visual and associated audible effects from a decrease in traffic delay times would result under either the Dual Bore or Single Bore design variation. However, the National Register significance of this District is not derived from it being located in a quiet, rural setting. The increase in traffic volume would not introduce a new or discordant type of auditory influence that was not otherwise present historically.

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	According to a noise analysis prepared in 2014, the future noise level at the southern part of the District will increase due to an increase in traffic volumes on SR 134. The increased traffic volume and associated noise would not interfere with their continued use as residential properties. The improvements in the Freeway Tunnel Alternative project would not interrupt the continued use and enjoyment of any of the contributing elements in their historical locations. Integrity of feeling and association will be not diminished by changes to the setting because those improvements would be approximately 0.4 mile south of the boundary of the District. The groundborne noise and vibration impacts analysis prepared in 2014 concluded that all of the predicted vibration levels under the Freeway Tunnel Alternative are considerably lower that the appropriate FTA criterion for each receiver. The District is in a busy urban area separated from Pasadena's central business district by SR 134 and is in the vicinity of the I-210/SR 134 interchange, a major regional and national transportation corridor. Therefore, a varying, yet constant level of traffic-generated vibration and related ground noise has been historically present within and adjacent to this District. It is anticipated that the buildings in the District would remain in use and occupied by its residents and connecting roads would remain open to regular vehicular traffic. When completed, the Freeway Tunnel Alternative improvements would not introduce a visual intrusion so jarring and discordant that an adverse effect would result such that the District would no longer be able to convey its significance thorough its association with the early development of Pasadena and or its architectural qualities established during the period of significance in a manner that it would no longer be understood. The Freeway Tunnel Alternative improvements would not significantly alter the character-defining features of the historic property. The District was intentionally sited west of and near to downtown to showcase a prestigious campus of modern buildings and modern landscape design near Pasadena's central business district and readily accessible via major regional transportation arterials. The Freeway Tunnel Alternative improvements approximately 0.4 mile south of the boundary of the District would not result in a change to a physical feature in the setting of the District. The improvements would not affect the District's integrity of feeling and setting associated with its historical development pattern and associated architectural qualities.

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	Summary of Effects: The Freeway Tunnel Alternative improvements would have No Adverse Effects on the contributing elements to the District. The District will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would not detract from the essential physical features or characteristics of the Raymond-Summit Historic District that qualify it for inclusion in the National Register. As a result, the Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the Raymond-Summit Historic District for protection under Section 4(f).
Herkimer Arms Apartment House 411-412 North Raymond Avenue **CHR Status Code**: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criteria A (Association with events) and C (Architecture). The Freeway Tunnel Alternative North Portal improvements would be approximately 0.4 mi south of the boundary of the Herkimer Arms Apartment House property. Those improvements would introduce visual and audible elements approximately 0.4 mi from this property.	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative approximately 0.4 mile south of this historic property. Therefore, those improvements would not have any direct effects on this historic property. The Freeway Tunnel Alternative improvements would not result in an indirect adverse effect to the Herkimer Arms Apartment House. The significance of this property is conveyed through its association as a representative example of Greene and Green multi-unit domestic architectural qualities which can include the overall shape of the building, its materials, craftsmanship, decorative details, and various aspects of its site and environment. Because the tunnel excavation and related street improvements in the Freeway Tunnel Alternative would be approximately 0.4 mi to the south of this historic property, those improvements does not have the potential to adversely affect indirectly the critical elements of the property's materials, design, and workmanship, as expressed through its association with early Pasadena's development or its architectural character-defining features. The scale and proportion of the proposed improvements would be similar to historical patterns in the area of the Herkimer Arms Apartment House. Several visual elements were added during the period of significance (1879-1906) for this property, including the construction of modern Pasadena, SR 134, modern traffic signals, street and directional signage, and light standards. In 2009, the Herkimer Arms Apartment House was moved approximately 0.6 mi northwest from 527 Union Street in Pasadena to

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	411-412 North Raymond Avenue. Although it has lost integrity of location, it was moved to a location similar to its original site on Union Street. As a historic property eligible under Criterion C, integrity of location is not as critical to conveying its significance for its architectural, engineering, and design character defining features. Therefore, the improvements in the Freeway Tunnel Alternative would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically both before and during its period of significance. The Freeway Tunnel Alternative improvements would not alter the setting in a way that would further affect the historic significance of the Herkimer Arms Apartment House in a manner that has not already occurred over the last 100 years in this area before the building moved to its current location at 411-412 North Raymond Avenue. According to a traffic analysis prepared in 2014, the proposed travel lane reconfiguration of Huntington Drive would increase road noise in the vicinity of the Herkimer Arms Apartment House. That report concluded that visual and associated audible effects from a decrease in traffic delay times would result under either the Dual Bore or Single Bore design variation. However, the National Register significance of the Herkimer Arms Apartment House is not derived from it being located in a quiet, rural setting. The increase in traffic volume would not introduce a new or discordant type of auditory influence that was not otherwise present historically. According to a noise analysis prepared in 2014, the future noise level at the southern part of the Herkimer Arms Apartment House will increase due to an increase in traffic volumes on SR 134. The Freeway Tunnel Alternative improvements would not interrupt the continued use and enjoyment of any of the contributing elements of this historic property in their historical locations. Integrity of feeling and association will be not diminished by changes to the setting because the proposed improvements would be approximately 0.4 mi south of the boundary of the Herkimer Arms Apartment House property. Evaluation of the groundborne noise and vibration from motor vehicles traveling in the freeway tunnel(s) indicated that no sensitive receivers would be impacted by operational noise from the tunnel(s). The Herkimer Arms Apartment House is in a busy urban area near Pasadena's central business district and in the vicinity of the I-210 and SR 134 interchange, a major regional and national transportation corridor. Therefore, a varying, yet constant level of traffic-generated vibration and related ground noise has been historically present at and adjacent to this historic property. It is anticipated

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	that the buildings above and adjacent to the tunnel alignments would remain in use and occupied by its residents and the roads connecting the Herkimer Arms Apartment House to the community would remain open to regular vehicular traffic. When completed, the Freeway Tunnel Alternative improvements would not introduce a visual intrusion so jarring and discordant that an adverse effect would result such that the Herkimer Arms Apartment House would no longer be able to convey its significance thorough its association as a Greene and Greene architectural property and associated architectural qualities established during the period of significance in a manner that it would no longer be understood. The improvements in the Freeway Tunnel Alternative would not significantly alter the character-defining features of this historic property. The Herkimer Arms Apartment House residential buildings were intentionally sited west of and near to downtown to showcase a prestigious campus of modern buildings and modern landscape design near Pasadena's central business district. The Freeway Tunnel Alternative improvements approximately 0.4 mile to the south would not result in a change to a physical feature within the setting of the Herkimer Arms Apartment House. The improvements would not affect the integrity of feeling and setting of the Herkimer Arms Apartment House associated with its historical development pattern and associated architectural qualities. **Summary of Effects:** The Freeway Tunnel Alternative improvements would have No Adverse Effects on the contributing elements of the Herkimer Arms Apartment House. This historic property would retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would not detract from the essential physical features or characteristics of the Herkimer Arms Apartment House that qualify it for inclusion in the National Register. As a result, the Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the Herkimer Arms Apartment House for protection under Section 4(f).

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
Old Pasadena Historic District The District is generally bounded by Fair Oaks and Raymond Avenues, Colorado Boulevard, and Green Street **CHR Status Code**: 1S (Individual property listed in the National register by the Keeper); listed under Criteria A (Association with events). The Freeway Tunnel Alternative would propose the following improvements in the vicinity of the District for the Dual Bore design variation: • Construct an approximately 20 foot high bell tower structure approximately 1,400 feet southwest of the western District boundary line. The bell tower will be surrounded by landscaping, and pedestrian walkways connecting to Pasadena Avenue, Del Mar Boulevard, and St. John Avenue • Install an approximately 30 foot long soundwall on the southeast corner of the South Pasadena Avenue/East Colorado Boulevard intersection, approximately 250 feet from the northernmost corner of 34 South Pasadena Avenue parcel and on the south side of East Colorado Boulevard. Under both the Dual Bore and Single Bore design variations of the Freeway Tunnel Alternative, the following improvements would be constructed in the vicinity of the District: • Widen an approximately 550 foot long segment of South Pasadena Avenue to accommodate a new northbound SR 710 off-ramp to South Pasadena Avenue. The widening will begin where the proposed northbound SR 710off ramp will tie into South Pasadena Avenue and will end at East Colorado Boulevard. The existing northbound SR710 on-ramp from South Pasadena Avenue will be demolished to build the new northbound off-ramp. The widening will require demolition of and relocation of the existing curb, gutter and trees south of Del Mar Boulevard, at a minimum distance of 1,600 feet south of the building at 34 South Pasadena Avenue. The existing parking lot, west of South Pasadena Avenue, between East Green Street and East Colorado Boulevard, will be widened to the west to reconstruct lost parking area due to the street widening. An approximately 250 long retaining wall would be constructed on the west side of the existing parking lot • Install new landscaping at the North Portal around the OMC building and within	**Effects under Section 106:** As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Old Pasadena Historic District. Those improvements would not be within the historic boundary of this District. Therefore, the Freeway Tunnel Alternative improvements would not have any direct effects on this historic property. The improvements in the Freeway Tunnel Alternative would be along an approximately 500 feet long segment on the western boundary of this District. Those improvements would consist of widening South Pasadena Avenue to accommodate a new off ramp onto South Pasadena Avenue and an outer travel lane on South Pasadena Avenue. This road widening and reconfiguration may result in direct and indirect effects to its character-defining features of this District that support its National Register eligibility. However, as described below, those effects would not be adverse. The Freeway Tunnel Alternative improvements would not result in an indirect adverse effect to the District. The significance of this property is conveyed through its association with the early commercial development in Pasadena which can include its setting, location, or feelings and association, which are the most important aspects of integrity under Criterion A, and various aspects of its site and environment. The area to accommodate the proposed widening of South Pasadena Avenue would be outside the District boundary. None of the improvements (such as the reconfigured SB SR 710 on-ramp, and any related sidewalk, curb, and gutter work) would extend into the historic property. The new on-ramp, lane reconfiguration, widening, and restriping of South Pasadena Avenue under the Freeway Tunnel Alternative do not have the potential to adversely affect the critical elements of the setting, location, or feeling and association of the property, as expressed through its association with the early development of Pasadena. The scale and proportion of the Freeway Tunnel Alternative improvements would be similar to historical patterns in and around the District. Several visual elements were added during the period of significance for this District (886-936). These include variations of traffic signals, street and directional signage, and light standards. Analysis of historical development of the District and the area from the 1960s onward demonstrates that the area near South Pasadena Avenue was once more readily connected to the residential areas west of downtown. These areas included a mix of

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
freeway right of way between East Del Mar Boulevard and the I-210/SR 134 interchange	residential and light commercial uses marking the fringe of the downtown area and connected together by a network of secondary surface streets. The area began to be transformed in the early 1960s and 1970s as buildings and surface streets were demolished and cleared to accommodate a planned extension of SR 710. These changes were occurring during the District's period of significance. By 1980, the existing configuration of South Pasadena Avenue and the northern stub of SR 710 were in place. Therefore, the Freeway Tunnel Alternative improvements to South Pasadena Avenue east of and outside the District would not introduce a discordant type of visual obstruction out of scale and proportion of previous visual obstructions present historically both before and during its period of significance. Those improvements would not alter the setting in a way that affects the historic significance of the District. According to traffic analysis prepared in 2014, the travel lane reconfiguration of South Pasadena Avenue would increase road noise in the vicinity of District. The report concluded that visual and associated audible effects from a marked increase in traffic delay times would result under either the Dual Bore or Single Bore design variation. However, the National Register significance of the Old Pasadena Historic District is not derived from it being located in a quiet, rural setting. The increase in traffic volume and associated noise would not introduce a new or discordant type of auditory influence that was not otherwise present historically in this District. The increased traffic volume and associated noise would not interfere with the continued and intended use of the building as an income-generating commercial property. According to a noise analysis prepared in 2014, the future noise level at the east part of the District will increase due to an increase in traffic volumes along South Pasadena Avenue and the Freeway Tunnel Alternative. The report noted that interior levels at these buildings will approach 47 dB, which is below the NAC of 52 dBA for sensitive interior uses. While a reduction of 25 dB was assumed for standard building construction, many historical buildings contain replacement windows that are thicker than standard windows, which would further reduce operation related noise levels under the Freeway Tunnel Alternative. Furthermore, the increased traffic volume and associated noise would not interfere with the use of the contributing elements as part of a busy downtown area next to a busy regional freeway interchange. The Freeway Tunnel Alternative improvements would not interrupt the continued use and enjoyment of any of the contributing elements in their historical locations. The integrity of feeling and association of the District will be not diminished by changes to

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	the setting because the Freeway Tunnel Alternative improvements would be located along and outside the east boundary of the District. Evaluation of the groundborne noise and vibration from motor vehicles traveling in the freeway tunnel(s) indicate that no sensitive receivers would be impacted by operational vibration. The District is in a busy urban area near Pasadena's central business district and in the vicinity of the I-210/SR 134 interchange, a major regional and national transportation corridor. Therefore, a varying, yet constant level of traffic-generated vibration and related ground noise has been historically present within and adjacent to the District. It is anticipated that the buildings within the District would remain in use and occupied by its residents and connecting roads would remain open to regular vehicular traffic. This District contains a grouping of commercial buildings, public transportation infrastructure, and civic facilities such as parks and other public buildings in an urban downtown core. The contributing elements that comprise the District were intentionally sited in the downtown area to maximize exposure and generate income in an area where consumer activity would be high. Therefore, although the Freeway Tunnel Alternative improvements along South Pasadena Avenue would be along and outside the boundary of the District and would result in a change to a physical features along that boundary of the District, those improvements would not affect the integrity of feeling and setting of the District associated with a prominent location along a busy road in a central business district. The contributing elements of the District would remain connected to Pasadena and other local communities by the roads that became modern South Pasadena Avenue and Del Mar Boulevard. **Summary of Effects:** In summary, as a group, the Freeway Tunnel Alternative improvements do not have the potential to adversely affect the critical elements of the materials and workmanship of this District, as expressed through its architectural character-defining features. Those improvements would have No Adverse Effects on the contributing elements to the District. The District will retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would not detract from the essential physical features or characteristics of the

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	Old Pasadena Historic District that qualify it for inclusion in the National Register. As a result, the Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the Old Pasadena Historic District for protection under Section 4(f).
CITY OF SOUTH PASADENA	
Horatio Rust Prehistoric Village Site This prehistoric site recorded by Horatio Rust was exposed during road grading activities in 1897. A large number of artifacts was recorded and collected including 50 hammer stones, 30 metates, over 100 manos, a bone awl, and a number of cogged and discoidal stones. Rust noted that the finds were located 2 to 3 feet beneath the ground surface and that the metates were all discovered face-down. The location of this site is not provided in this report to avoid vandalism or other potential damage to the site. As discussed in the *Historic Property Survey Report*, this site was determined to be eligible for the National Register as part of this undertaking. Under the Freeway Tunnel Alternative, one (Single-Bore Design Variation) or two (Dual-Bore Design Variation) approximately 60 foot diameter tunnel(s)would be constructed below the Horatio Rust Prehistoric Village Site at depths of greater than 50 feet below the ground surface.	**Effects under Section 106:** Part of this prehistoric site may be within the disturbance limits for the Freeway Tunnel Alternative. As a result, it is possible construction of the Freeway Tunnel Alternative could encounter prehistoric artifacts. The preliminary *Finding of No Adverse Effect* determined that any potential archeological resources encountered at this site during construction of this Alternative would be important chiefly because of what can be learned from data recovery and would have minimal value for preservation in place. The *Post-Review Discovery and Monitoring Plan for the State Route 710 North Study Cities of Los Angeles, Monterey Park, Alhambra, South Pasadena* (Discovery Plan, included in the preliminary *Finding of No Adverse Effect*) specifies procedures to be followed prior to and during construction activities to ensure compliance with the Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans regarding compliance with Section 106 of the National Historic Preservation Act as it pertains to the administration of the Federal-Aid High-way Program in California (Caltrans Section 106 PA). **Summary of Effects:** The Freeway Tunnel Alternative improvements may have an adverse effect on the Horatio Rust Site if the site or any part of the site remains extant. Although it is not likely that the proposed improvements would result in physical destruction or damage to the resource (because, as a result of disturbances to the site area over the last 115 years, it is highly unlikely that the resource or any part of it is extant), the potential exists to alter or damage character-defining features that qualify this Site for inclusion in the National Register. In the unlikely event the site is encountered during ground-disturbing activities under the Freeway Tunnel Alternative, a Post-Review Discovery and Monitoring Plan will guide archaeological monitoring and data recovery for any work conducted in the area. In summary, the Freeway Tunnel Alternative improvements would have No Adverse Effect on the Horatio Rust Prehistoric Site. **Effects under Section 4(f):** Section 4(f) does not apply to archaeological resources that

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	are important chiefly because of what can be learned from data recovery and have minimal value for preservation in place (23 CFR 774.13(b)(1)). As a result, no further analysis or consideration of the effects of the Freeway Tunnel Alternative on the Horatio Rust Prehistoric Village Site under Section 4(f) is required.
270 S. Orange Grove Boulevard **CHR Status Code**: considered eligible for the National Register for this project The following Freeway Tunnel Alternative improvements would be constructed within the existing publicly owned right of way in the vicinity of the South St. John Avenue/ West Del Mar Ave intersection **Dual Bore** • Realign South St. John Ave starting approximately 700 feet north of the South St. John Ave/West Del Mar Boulevard intersection, diverging from the existing alignment to the east, crossing West Del Mar Boulevard, and extending south of West Del Mar Boulevard toward West California Boulevard • Remove the existing T-intersection • Widen the east side of South St. John Avenue between West Green Street and West Colorado Boulevard to accommodate two additional southbound through lanes for the southbound SR 710 on-ramp • Reconstruct curb and gutter and sidewalk on the west side of South St. John Avenue to follow the realigned road • Reconstruct the curb and gutter on the east side of South St. John Avenue to follow the realigned road • Widen St. John Avenue from two to four lanes approximately 260 feet north of the South St John Avenue/West Del Mar Boulevard intersection with one dedicated right turn lane, a through lane, a through-left combination lane, and a dedicated right hand turn lane north of that intersection • Reconstruct all four curb returns at the South St. John Avenue/West Del Mar Boulevard intersection • Construct two through lanes south of West Del Mar Boulevard and east of Havendale Drive, above the southbound freeway tunnel alignment extending to West California Boulevard • Remove the existing southbound SR 710 off ramp at South St. John Avenue • Add a new southbound SR 710 on ramp from South St. John Avenue, starting	**Effects under Section 106**: As described in detail in the preliminary *Finding of No Adverse Effect for the State Route 710 North Study* and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of 270 South Orange Grove Boulevard but there would be no improvements within the historic property boundary of 270 South Orange Grove Boulevard (APN 5713-027-031). Therefore, the Freeway Tunnel Alternative improvements would not have any direct effects on the historic property. The Freeway Tunnel Alternative improvements would be along and outside of an approximately 325 foot long segment of the eastern property boundary along South St. John Avenue. The improvements along this segment would consist of reconfiguring South St. John Avenue to accommodate additional southbound SB travel lanes associated with the reconfigured and realigned South St. John Avenue to accommodate a southbound SR 710 off-ramp that would connect to southbound 710 south of the West Del Mar boulevard intersection. The proposed road widening and reconfiguration at a location southeast of this historic property may result in direct and indirect effects to its character-defining features at this location that support its National Register eligibility. However, for the reasons described below, effects would not be adverse. The Freeway Tunnel Alternative improvements would not result in an indirect adverse effect to the Physical Education Building, Aquatic Center, Gymnasium, and an outdoor semi-circular amphitheater at 270 South Orange Grove Boulevard. The significance of this property significance is conveyed through its association with its Modern architectural qualities which can include the overall shape of the buildings, its materials, craftsmanship, decorative details, and various aspects of the site and its environment. The area to accommodate the proposed widening of South St. John Avenue east of and outside this historic property boundary would be on the opposite side of South St. John Avenue from the buildings at 270 South Orange Grove Boulevard. Other Freeway Tunnel Alternative improvements such as the reconfigured southbound SR 710 on-ramp and related sidewalk, curb, and gutter modifications would be south of, and would not cross into, the historic property boundary. The lane

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
approximately 1,300 feet north of the West Del Mar Boulevard/South St. John Avenue intersection **Single Bore** • Realign South St. John Avenue approximately 600 feet north of the South St. John Avenue/West Del Mar Boulevard intersection, diverging from the existing alignment to the east, crossing West Del Mar Boulevard, and extending south of West Del Mar Boulevard toward West California Boulevard • Remove the existing T-intersection • Reconstruct curb and gutter and sidewalk on the west side of South St. John Avenue to follow the realigned road • Reconstruct the curb and gutter on the east side of South St. John Avenue to follow the realigned road • Widen St. John Avenue from two to four lanes approximately 240 feet north of the South St. John Avenue/West Del Mar boulevard intersection with one dedicated right turn lane, a through lane, a through-left combination lane, and a dedicated right hand turn lane north of that intersection • Reconstruct all four curb returns of the South St. John Avenue/West Del Mar Boulevard intersection • Construct two through lanes south of West Del Mar Boulevard connecting to West California Boulevard and remove existing Havendale Drive. • Remove the existing southbound SR 710 off ramp at South St. John Avenue • Add a southbound SR 710 truck turn around ramp to South St. John Avenue that would tie into South St. John Avenue approximately 440 feet north of the West Del Mar Boulevard/ South St. John Avenue intersection.	reconfiguration, widening, and restriping of South St. John Avenue does not have the potential to adversely affect the critical elements of this historic property's materials, design, and workmanship, as expressed through its architectural character-defining features. According to a 2014 traffic analysis, the travel lane reconfiguration on South St. John Avenue would increase road noise in the vicinity of the Physical Education Building, Aquatic Center, Gymnasium, and an outdoor semi-circular amphitheater at 270 South Orange Grove Boulevard. The closest intersections to those buildings that were analyzed for anticipated comparative changes in traffic delay times and LOS between the Dual Bore and Single Bore variations of the Freeway Tunnel Alternative and the No Build Alternative were South Orange Grove Boulevard/West Colorado Boulevard and South St. John Avenue/West Del Mar Boulevard. The report concluded that visual and associated audible effects from a marked increase in traffic delay times would result under the Dual Bore and Single Bore design variations. However, the National Register significance of the Physical Education Building, Aquatic Center, Gymnasium, and an outdoor semi-circular amphitheater at 270 South Orange Grove Boulevard does not derive from them being in a quiet, rural setting. The increase in traffic volume would not introduce a new or discordant type of auditory influence that was not otherwise present historically. According to a noise analysis prepared in 2014, the future noise level in areas east of this historic property would increase due to increased traffic volumes along South St. John Avenue as a result of the South St. John Extension. The report stated that exterior noise levels at these buildings will approach 67 dB, which matches the NAC of 67 dBA for school properties. For interior spaces, a reduction of 25 dB was assumed for standard building construction, these buildings use windows that are thicker than standard windows, which would further reduce projected operational noise levels for interior spaces. However, because the Physical Education Building, Aquatic Center, Gymnasium, and an outdoor semi-circular amphitheater are used for recreation, physical education, and other outdoor-related purposes, they are not considered as sensitive to higher levels of interior noise compared to an auditorium or library. In addition, the buildings at 270 South Orange Grove Boulevard are in a busy urban area near Pasadena's central business district and in the vicinity of the I-210/ SR 134 interchange, a major regional and national transportation corridor. Therefore, a varying, yet constant level of traffic-generated vibration and related ground noise has

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	been historically present within and adjacent to this historic property. It is anticipated that the buildings at 270 South Orange Grove Boulevard would remain used by students and any connecting roads would remain open to regular vehicular traffic. Furthermore, the increased traffic volume and associated noise would not interfere with the use of these buildings as educational institutional properties. The Freeway Tunnel Alternative improvements would not interrupt the continued use and enjoyment of any of these buildings in their historical locations. Their integrity of feeling and association will be not diminished by changes to the setting because those improvements would be east and south east of, and outside, the historic property boundary of 270 South Orange Grove Boulevard. When completed, the Freeway Tunnel Alternative improvements would not introduce a visual intrusion so jarring and discordant that an adverse effect would result that the buildings at 270 South Orange Grove Boulevard would no longer be able to convey their significant architectural qualities and the spatial relationship of the built environment established during the period of significance in a manner that it would no longer be understood. Views into and out of the historic property would not be drastically altered because many of the improvements would be a ground level and, with respect to the Freeway Tunnel(s), they would be at a sub-grade elevation. The Freeway Tunnel Alternative improvements would not significantly alter the character-defining features of the historic property. The buildings at 270 South Orange Grove Boulevard are a collection of institutional education buildings that were intentionally sited west of and near to downtown to showcase a prestigious campus of modern buildings near Pasadena's central business district and readily accessible via major regional transportation arterials. This preexisting condition at this location spans over 51 years both during and after the period of significance of 1964. Therefore, although the Freeway Tunnel Alternative improvements along and outside the east property boundary and the reconfiguration of South St. John Avenue would not result in a change to a physical feature within the setting of this historic property, and would not affect integrity of feeling and setting associated with its architectural qualities. The Physical Education Building, Aquatic Center, Gymnasium, and an outdoor semi-circular amphitheater at 270 South Orange Grove Boulevard would remain connected to Pasadena and other local communities by the roads that became modern South St. John Avenue and West Del Mar Boulevard.

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	Summary of Effects: The Freeway Tunnel Alternative improvements would have No Adverse Effects to the Physical Education Building, Aquatic Center, Gymnasium, and an outdoor semi-circular amphitheater at 270 South Orange Grove Boulevard. This historic property would retain the aspects of integrity that allow it to convey its historic significance. **Effects under Section 4(f)**: The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the project features in this area would be minor and would not detract from the essential physical features or characteristics of the buildings at 270 South Orange Grove Boulevard that qualify that property for inclusion in the National Register. As a result, the Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify 270 South Orange Grove Boulevard for protection under Section 4(f).
UNINCORPORATED LOS ANGELES COUNTY	
Otsungna Prehistoric Village Site This Tongva village was observed in 1769 by the Portolá Expedition on the banks of a stream (Arroyo Rosa de Castilla, which no longer exists) running north to south in the east part of present-day El Sereno. Although there are no archeological records for this site, records left by the San Gabriel Mission Franciscans confirm the existence of this village. The Tongva people of Otsungna are said to have served as a primary source of labor for the building of the San Gabriel Mission and other construction projects. Scant evidence of the village remains because the area was never studied and no artifacts were preserved. The location of this site is not provided in this report to avoid vandalism or other potential damage to the site. As discussed in the *Historic Property Survey Report*, this site was determined to be eligible for the National Register as part of this undertaking. Under the Freeway Tunnel Alternative Single-Bore and Dual-Bore Design Variations, an at-grade connection between the existing terminus of SR 710 and the new tunnel segment would be constructed in the vicinity of the Otsungna Prehistoric Village site.	**Effects under Section 106:** Part of this prehistoric site may be within the disturbance limits for the Freeway Tunnel Alternative. As a result, it is possible construction of the Freeway Tunnel Alternative could encounter prehistoric artifacts. The preliminary *Finding of No Adverse Effect* determined that any potential archeological resources encountered at this site during construction of this Alternative would be important chiefly because of what can be learned from data recovery and would have minimal value for preservation in place. The Discovery Plan included in the preliminary *Finding of No Adverse Effect* specifies procedures to be followed prior to and during construction activities to ensure compliance with the Caltrans Section 106 PA. **Summary of Effects:** The Freeway Tunnel Alternative improvements may have an adverse effect on the Otsungna Prehistoric Village site if the site or any part of the site remains extant. Although it is not likely that the proposed improvements would result in physical destruction or damage to the resource (because, as a result of disturbances to the site area over the last 240+ years, it is highly unlikely that the resource or any part of it is extant), the potential exists to alter or damage character-defining features that qualify the property for inclusion in the National Register. In the unlikely event the site is encountered during ground-disturbing activities under the Freeway Tunnel Alternative, a Post-Review Discovery and Monitoring Plan guide archaeological

TABLE 3.6.4:
Freeway Tunnel Alternative (Non-Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property[1]	Potential Effects Under Section 4(f)
	monitoring and data recovery for any work conducted in the area. In summary, the Freeway Tunnel Alternative would have No Adverse Effect on the Otsungna Prehistoric Village Site. **Effects under Section 4(f):** Section 4(f) does not apply to archaeological resources that are important chiefly because of what can be learned from data recovery and have minimal value for preservation in place (23 CFR 774.13(b)(1)). As a result, no further analysis or consideration of the effects of the Freeway Tunnel on the Otsungna Prehistoric Village Site under Section 4(f) is required.

Sources: *Historic Property Survey Report* (2014); preliminary *Finding of No Adverse Effect for the State Route 710 North Study* (2015); and LSA Associates, Inc. (2015).

[1] Only properties within the APE for the at-grade segments of the Freeway Tunnel Alternative are evaluated in this table. Refer to Figure 3.6-4 for the locations of the resources discussed in this table that are located along the at-grade segment of the Freeway Tunnel Alternative.

APE = Area of Potential Effects
APN = Assessor's Parcel Number
CHR = California Historical Resource
dB = decibels
I-110 = Interstate 110
Keeper = Keeper of the National Register of Historic Places
National Register = National Register of Historic Places
ROW = right of way
SR 134 = State Route 134
TCE = temporary construction easement

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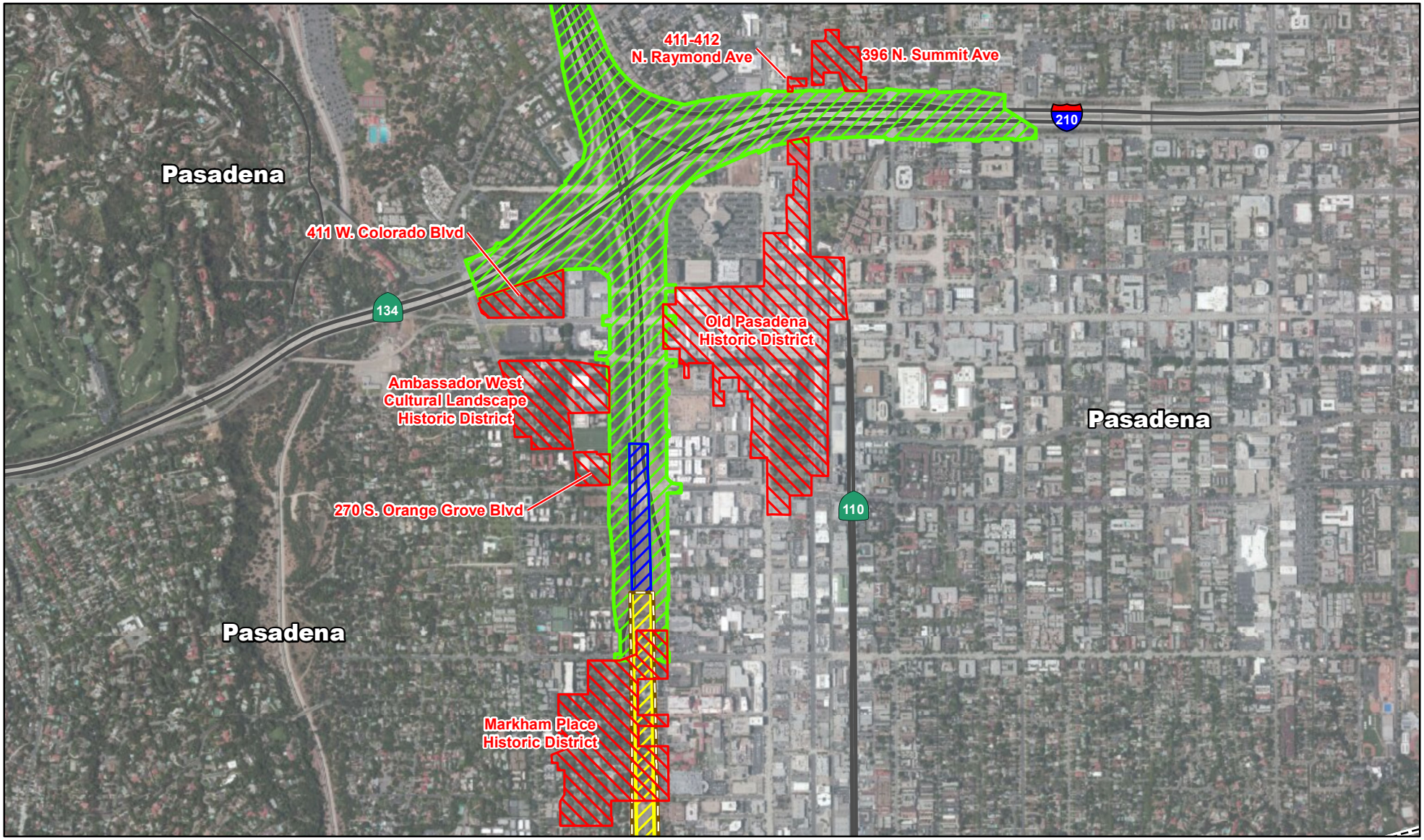

LEGEND

- Freeway Tunnel Alternative At Grade Limits of Construction
- Freeway Tunnel Alternative Bored Tunnel Limits of Construction
- Freeway Tunnel Alternative Cut & Cover Tunnel Limits of Construction
- Freeway Tunnel Alternative Potential Settlement Zone
- City Boundary

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SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-4

SR 710 North Study

Historic Properties for the Non-Tunnel Segments of the Freeway Tunnel Alternative

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TABLE 3.6.5:

Freeway Tunnel Alternative (Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Potential Effects

The historic properties listed in this table along the alignment of the Freeway Tunnel Alternative are above the tunnel segment of that alternative. As a result, the potential effects of the Freeway Tunnel Alternative on those resources would be the same for each resource. Because the alignment of the Freeway Tunnel Alternative will be in tunnel segment in the vicinity of these properties, there would be no surface construction in the vicinity of these properties. As a result, the Freeway Tunnel Alternative would not result in permanent use of land from or permanent easements, or temporary occupancies (TCEs) at any of these properties.

Under the either single-bore and dual-bore variations of the Freeway Tunnel Alternative, the tunnel alignment(s) would be at depths ranging from of 120 to 250 feet below the National Register listed or eligible, or contributing properties in the cities of Los Angeles, Monterey Park, Alhambra, and South Pasadena, and unincorporated Los Angeles County listed in this table. The improvements in the Freeway Tunnel Alternative would not affect the characteristics of these historic properties that qualify them for inclusion in the National Register because:

- The duration of activity underneath any given resource would be approximately 1 or 2 days and would occur at a depth of 120 to 250 feet. At that depth, the tunnel boring-related activity under these properties would be undetectable at the surface.
- The Freeway Tunnel Alternative would not include any construction-related activity at the ground surface in the vicinity of these historic properties.
- The tunnel excavation will be conducted using pressurized-face tunnel boring machines designed for boring in densely urbanized areas to lessen ground movements and, if necessary, additional conditions can be employed to lessen or eliminate ground movement effects.

As a result, a finding of no detectable risk of adverse effect (i.e. damage) to any of the historic properties listed in this table would occur as a result of the Freeway Tunnel Alternative.

City	Resource	National Register Status[1]
Los Angeles	**3927-3947 Lowell Avenue**	Individual property determined eligible for the National Register
Los Angeles	**Short Line Villa Tract Historic District** In the El Sereno community, generally bounded by Kendall Avenue on the north, Newtonia Drive and Sierra Vista School on the south, Huntington Drive on the east and the rear property line of the west side of Maycrest Avenue on the west.	Individual property determined eligible for the National Register
Los Angeles	**Historic Route 66** (Segment of Route 66 in the APE corresponds to the segment of Huntington Drive between Maycrest Avenue and Lowell Avenue)	Individual property determined eligible for the National Register
Pasadena and South Pasadena	**Arroyo Seco Parkway Historic District** Includes the route of the Arroyo Seco Freeway from the four-level interchange in Los Angeles, through South Pasadena to East Glenarm Street in Pasadena and bridges along that route	Listed as an individual property
Pasadena and South Pasadena	**Historic Route 66** This segment of Route 66 corresponds to the segment of the Arroyo Seco Parkway Historic District	Individual property determined eligible for the National Register
Pasadena and South Pasadena	**Pasadena Avenue Historic District** (includes properties in Pasadena and South Pasadena) Generally, the district boundaries are Barclay Alley on the north, Avoca Avenue and West State Street on the east, Columbia Street (properties on both sides) on the south, and South Orange Grove Boulevard on the west)	Listed as an individual property

TABLE 3.6.5:
Freeway Tunnel Alternative (Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

City	Resource	National Register Status[1]
Pasadena	**Sequoyah School/Neighborhood Church** **535 S. Pasadena Avenue** (Three buildings: Children's Chapel, Nursery School, and Religious Education Building)	Individual property determined eligible for the National Register by a consensus through Section 106 process. Listed in the California Register.
Pasadena	**Caroline Walkley House and small apartment** **595 S. Pasadena Avenue and 190 W. California Boulevard**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**Caroline Walkley–Alice and Robert Wood House** **696 S. St. John Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**Driscoll House** **679 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**Miss Markham House** **763 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**Page House** **765 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**Tomkins House** **779 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**801 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**Reverend Hiram Hill/Alonzo Beal House** **866 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**Hurlburt Street Fire Station No. 5** **900 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**J. Durand Kennett House** **1000 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**F.J. Kennet House** **1030 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district

TABLE 3.6.5:
Freeway Tunnel Alternative (Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

City	Resource	National Register Status[1]
Pasadena	**Mrs. D. Hagan House** **1041 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**James and Fanny Hale House** **1051 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**W.W. Phelps House** **1112 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**A.G. Simons/John McWilliams Jr. House** **1199 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**Mary Werner House** **1200 South Pasadena Avenue**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**Ralph B. Hubbard Residence** **1207 South Pasadena Avenue**	Individual property determined eligible for the National Register
Pasadena	**206 to 216 West California Boulevard** Apartment Building	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**R. Sturgis Cook House** **180 West State Street (aka 1170 S. Pasadena Avenue)** 1928 French Eclectic-style residence in the Pasadena Avenue Historic District	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**Hartshorn House No. 1** **224 West State Street**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
Pasadena	**Hartshorn House No. 2** **232 West State Street**	A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district
South Pasadena	**Otake-Nambu House** **857 Bank Street** 1890 Victorian-influenced residence	Individual property determined eligible for listing
South Pasadena	**East Wynyate** **909 Lyndon Street** 1896 residence	Individual property determined eligible for listing
South Pasadena	**J.G. Pierce House** **911 Monterey Road**	Individual property determined eligible for listing
South Pasadena	**Kenneth M. Joy House** **921 Monterey Road** 1912 Craftsman-style residence	Individual property determined eligible for listing
South Pasadena	**920 Lyndon Street**	Individual property determined eligible for listing

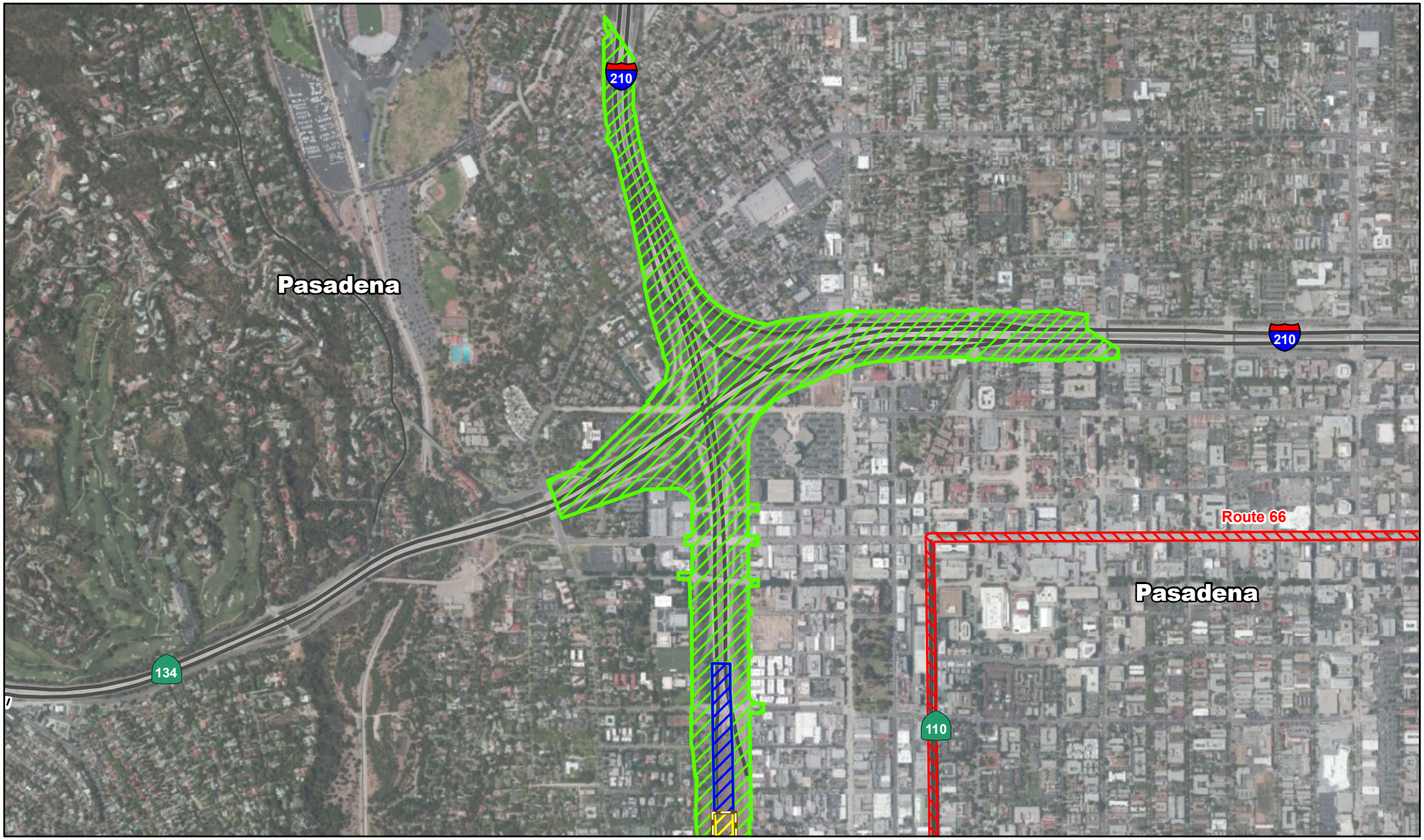
TABLE 3.6.5:
Freeway Tunnel Alternative (Tunnel Segments) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

City	Resource	National Register Status[1]
South Pasadena	**Blanche Home** **1030 Buena Vista Street**	Individual property determined eligible for listing
South Pasadena	**318 Fairview Avenue**	Considered eligible for listing for this project
South Pasadena	**Augusta Raab Home** **1109 Buena Vista Street**	Individual property determined eligible for listing
South Pasadena	**El Cerrito Circle Historic District** Eight Properties on both sides of El Cerrito Circle and two properties on the west side of Diamond Avenue	Individual property determined eligible for listing
South Pasadena	**North of Mission Historic District** Includes the 600 to 700 block of Meridian Avenue, north of Mission Street and south of the Pasadena Freeway	Individual property determined eligible for listing
South Pasadena	**South of Mission Historic District** Located along the 1100 block of Glendon Way and the 1000 to 1100 block of Meridian Avenue between Monterey Road to the south and El Centro Street to the north	Individual property determined eligible for listing
South Pasadena	**South Pasadena Historic Business District** (also known as Mission West Historic District) Generally located south of Hope Street, west of Fairview Avenue, north of Oxley Street and east of Santa Fe Lane	Listed as an individual property
South Pasadena	**Library Neighborhood Historic District** Generally bounded by Diamond Avenue, Oxley Street, Fremont Avenue, and Monterey Road	**CHR Status Code**: Considered eligible for the National Register for purposes of this project.
South Pasadena	**904 Monterey Road**	Considered eligible for the National Register for purposes of this project

Sources: *Historic Property Survey Report* (2014); preliminary *Finding of No Adverse Effect for the State Route 710 North Study* (2015); and technical analyses in Chapter 3, Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures.

[1] Only properties within the Area of Potential Effects for the tunnel segments of the Freeway Tunnel Alternative are evaluated in this table. Refer to Figure 3.6-5 for the locations of the resources discussed in this table.

National Register = National Register of Historic Places



LEGEND

- Freeway Tunnel Alternative At Grade Limits of Construction
- Freeway Tunnel Alternative Bored Tunnel Limits of Construction
- Freeway Tunnel Alternative Cut & Cover Tunnel Limits of Construction
- Freeway Tunnel Alternative Potential Settlement Zone
- Cultural Resource
- City Boundary

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SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-5
Sheet 1 of 3

SR 710 North Study

Historic Properties Above the Tunnel Segment of the Freeway Tunnel Alternative

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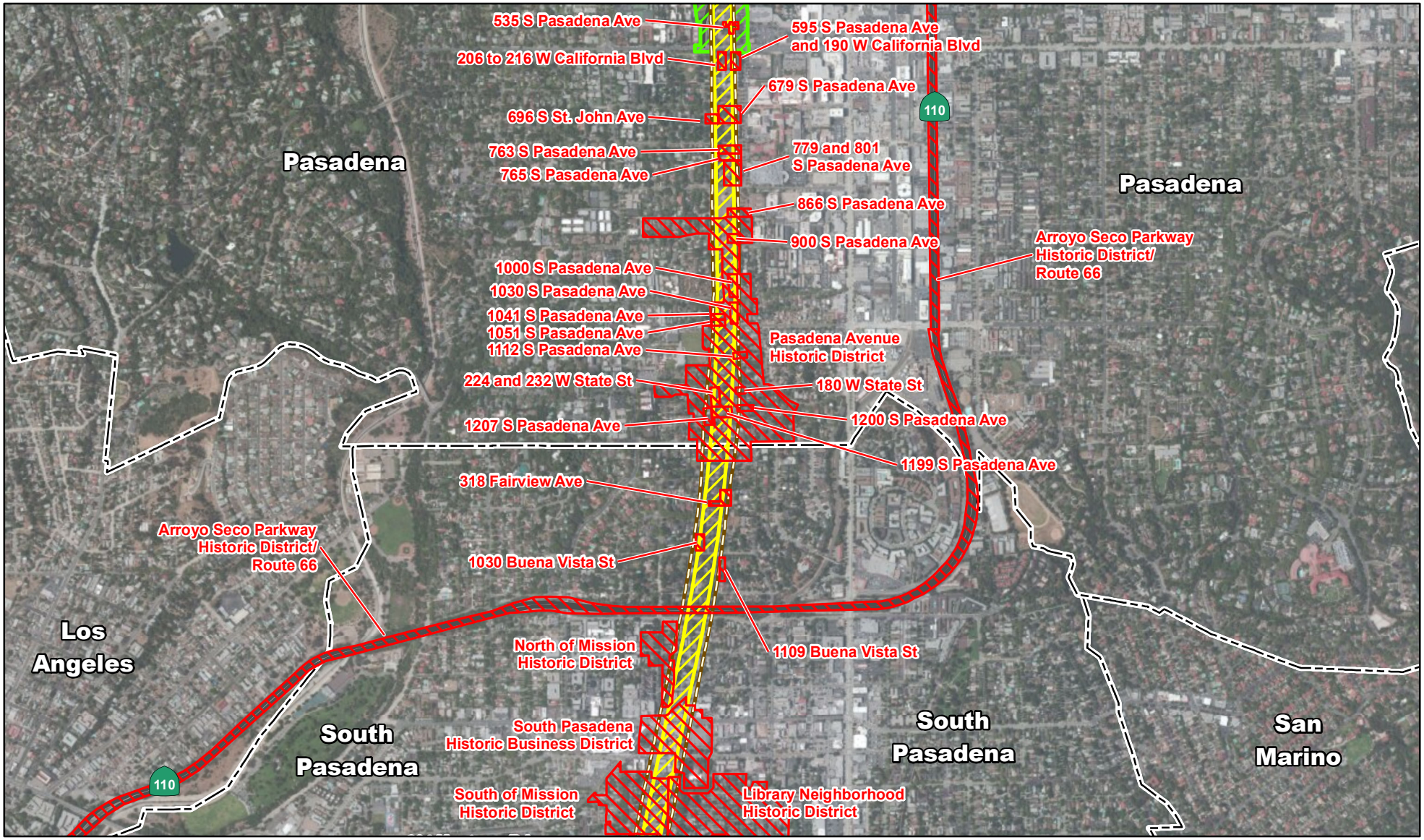

LEGEND

- Freeway Tunnel Alternative At Grade Limits of Construction
- Freeway Tunnel Alternative Bored Tunnel Limits of Construction
- Freeway Tunnel Alternative Cut & Cover Tunnel Limits of Construction
- Freeway Tunnel Alternative Potential Settlement Zone
- Cultural Resource
- City Boundary

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SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-5
Sheet 2 of 3

SR 710 North Study

Historic Properties Above the Tunnel Segment of the Freeway Tunnel Alternative

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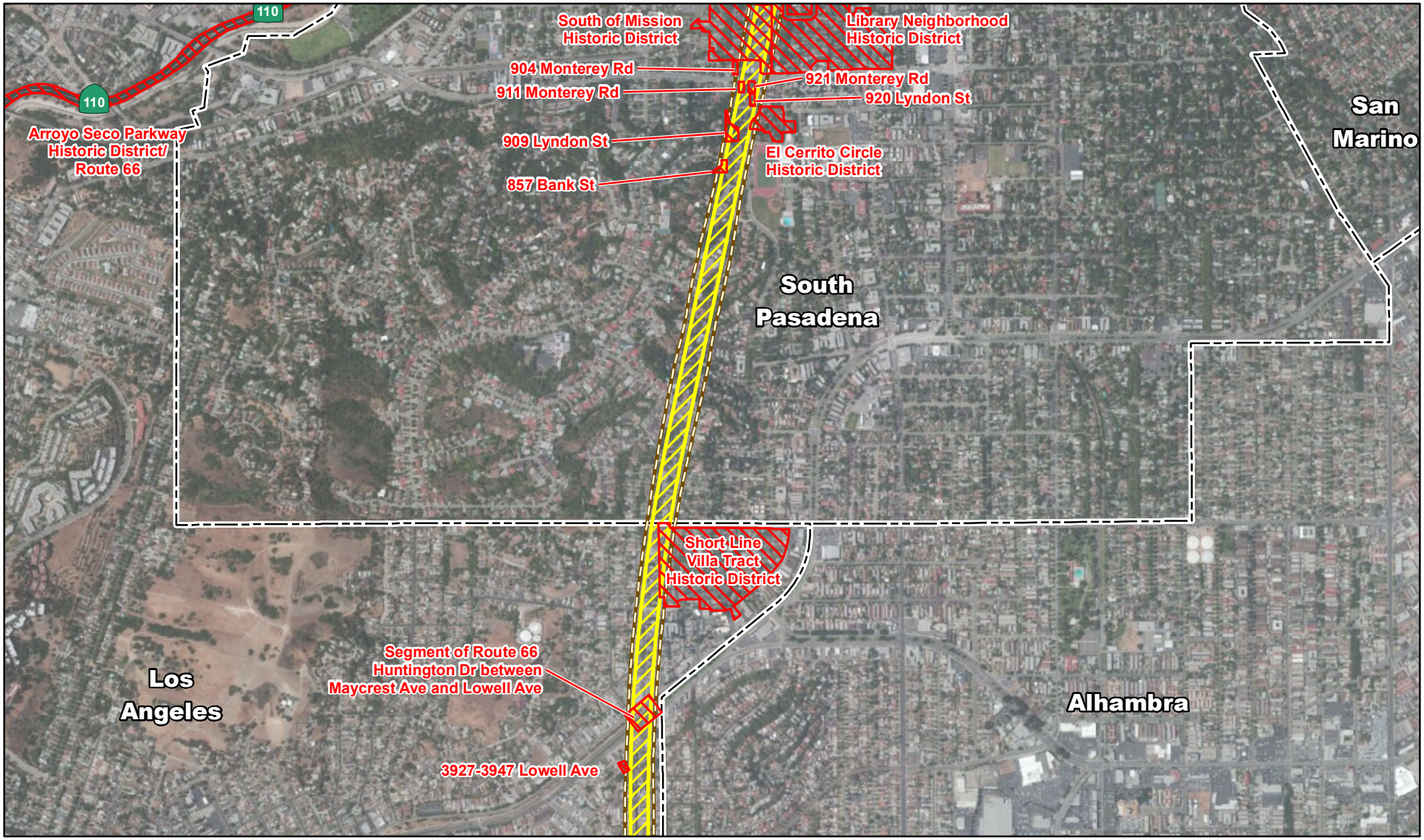

LEGEND

- Freeway Tunnel Alternative At Grade Limits of Construction
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- Freeway Tunnel Alternative Cut & Cover Tunnel Limits of Construction
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- Cultural Resource
- City Boundary

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SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-5
Sheet 3 of 3

SR 710 North Study

Historic Properties Above the Tunnel Segment of the Freeway Tunnel Alternative

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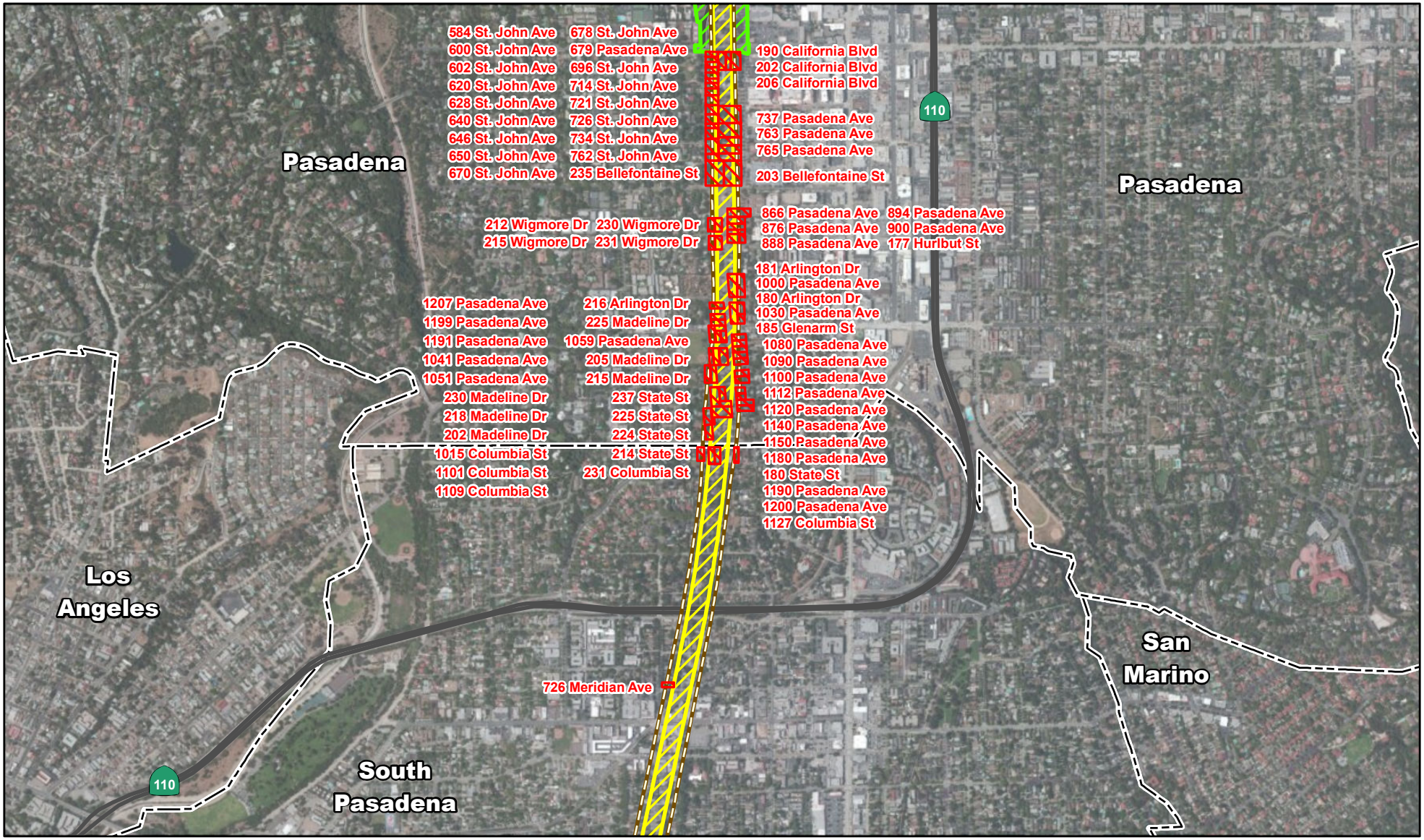

LEGEND

- Cultural Resource
- Freeway Tunnel Alternative At Grade Limits of Construction
- Freeway Tunnel Alternative Bored Tunnel Limits of Construction
- Freeway Tunnel Alternative Cut & Cover Tunnel Limits of Construction
- Freeway Tunnel Alternative Potential Settlement Zone
- City Boundary

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SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-6
Sheet 1 of 2

SR 710 North Study

State (Caltrans)-Owned Historic Properties for the Freeway Tunnel Alternative

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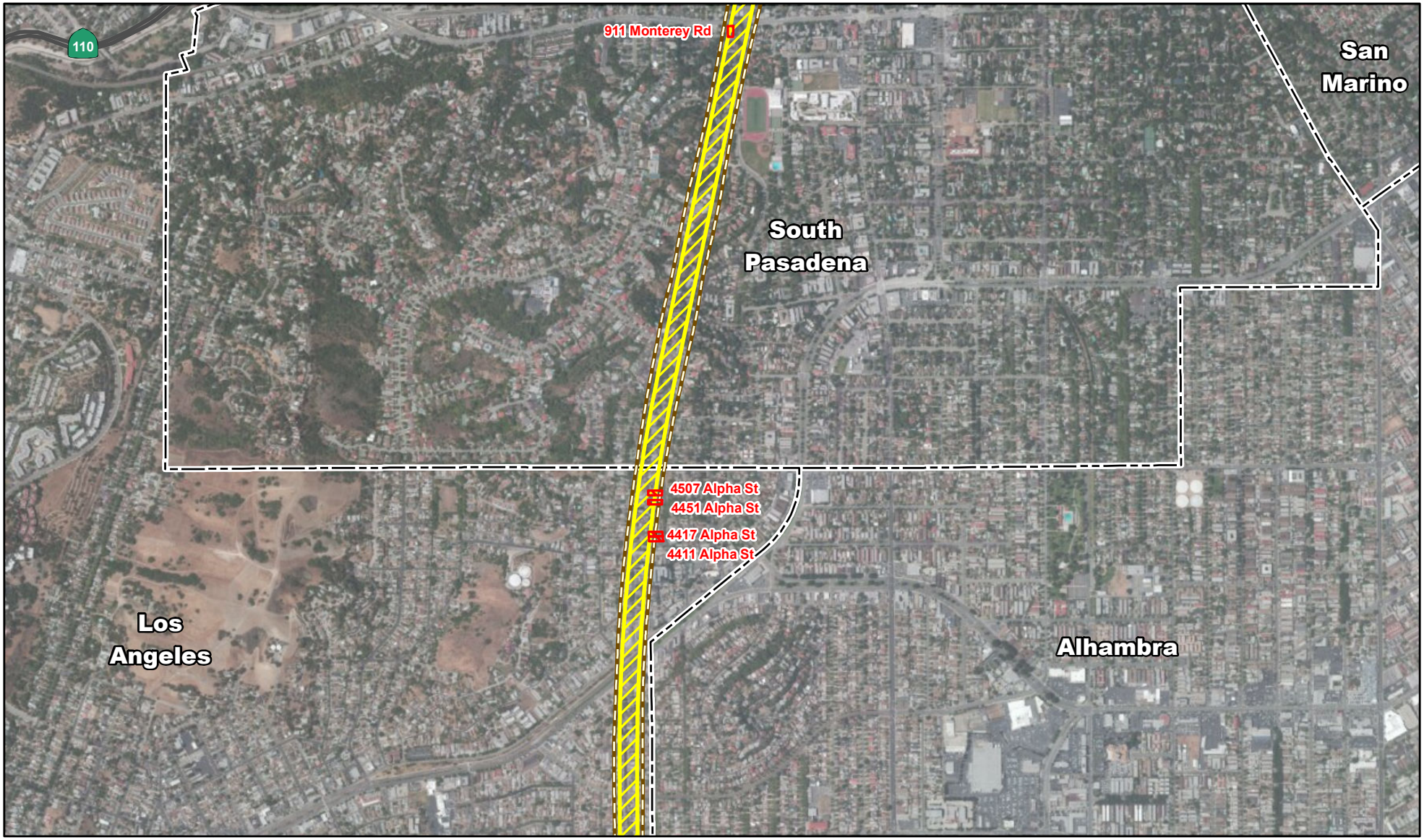

LEGEND

- Cultural Resource
- Freeway Tunnel Alternative At Grade Limits of Construction
- Freeway Tunnel Alternative Bored Tunnel Limits of Construction
- Freeway Tunnel Alternative Cut & Cover Tunnel Limits of Construction
- Freeway Tunnel Alternative Potential Settlement Zone
- City Boundary

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SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-6
Sheet 2 of 2

SR 710 North Study

State (Caltrans)-Owned Historic Properties for the Freeway Tunnel Alternative

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TABLE 3.7.1:

Resources Not Protected under Section 4(f) and Why They are Not Protected under Section 4(f)

Resource Name	Why It is Not Protected under Section 4(f)
CITY OF ALHAMBRA	
Century High School and Independent Alternative High School	There are no recreation resources on the Century High School campus; sports fields and other recreation resources for this school are available from the adjacent Garfield High School. (The potential effects of the Build Alternatives on the recreation resources at Garfield High School were evaluated earlier in this section.)
Private schools (all levels)	Privately owned
The Winston Smoyer Memorial Community Garden	Not a recreation resource; it provides small plots for individual gardeners
YMCA West San Gabriel Valley	Privately owned non-profit organization
EAGLE ROCK (COMMUNITY IN THE CITY OF LOS ANGELES)	
California Academy for Liberal Studies and Early College High School	No recreation resources at this public high school
Private schools (all levels)	Privately owned and operated
Renaissance Arts Academy	No recreation resources at this public high school
EAST LOS ANGELES (UNINCORPORATED LOS ANGELES COUNTY)	
Bienvenidos-East Los Angeles Family Preservation	Privately owned and operated
Boys and Girls Club of East Los Angeles	Privately owned and operated
Casa Maravilla	Privately owned and operated
East Monte Community Center	Privately owned and operated
KIPP Racies Academy	No recreation resources at this public high school
Media Arts High School	No recreation resources at this public high school
Monterey Continuation High School	No recreation resources at this public high school
Private schools (all levels)	Privately owned
EL SERENO (COMMUNITY IN THE CITY OF LOS ANGELES)	
Anahuacalmecac University Preparatory High School/Xinaxcalmecac Academy	No recreation resources at this public high school
Los Angeles County High School for the Arts	No recreation resources at this public high school
Private schools (all levels)	Privately owned and operated
Stern Math and Science High School	No recreation resources at this public high school
CITY OF MONTEREY PARK	
Chinatown Service Center, Monterey Park office	Privately owned and operated
Langley Senior Center	No outdoor and very limited indoor recreation activities; open only to senior citizens
Monterey Park Golf Club	Privately owned and operated, but open to the public
Private schools (all levels)	Privately owned and operated
CITY OF PASADENA	
Annadale Golf Course	Privately owned and operated
Armory Center for the Arts	Privately owned and operated
El Centro de Accion Social	Privately owned and operated
Norton Simon Museum	Privately owned and operated
Pasadena Senior Center	Privately owned and operated
Private schools (all levels)	Privately owned and operated
Rose Bowl Aquatic Center	Privately owned and operated
Salvation Army Corps Community Center – Pasadena	Privately owned and operated
Tournament Park	Privately owned and operated

TABLE 3.7.1:
Resources Not Protected under Section 4(f) and Why They are Not Protected under Section 4(f)

Resource Name	Why It is Not Protected under Section 4(f)
CITY OF ROSEMEAD	
Private schools (all levels)	Privately owned and operated
Rosemead Community Recreation Center	Center is a facility for rent for public and private activities but does not provide recreation activities or facilities open to the public
CITY OF SAN GABRIEL	
Asian Youth Center	Privately owned and operated
Private schools (all levels)	Privately owned and operated
CITY OF SAN MARINO	
Huntington Botanical Gardens	Privately owned and operated
Private schools (all levels)	Privately owned and operated
San Marino Center	Privately owned and operated
CITY OF SOUTH PASADENA	
Private schools (all levels)	Privately owned and operated
South Pasadena Senior Center	No outdoor and very limited indoor recreation activities; open only to senior citizens
YMCA South Pasadena/San Marino	Privately owned and operated

Source: LSA Associates, Inc. (2014). Refer also to Chapter 5, References and Preparers, for a list of references used to research resources potentially protected under the requirements of Sections 4(f) and 6(f).

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4.2 List of Preparers

4.2.1 LSA Associates, Inc.

Rob McCann, Environmental Principal in Charge

Deborah Pracilio, Environmental Project Manager

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Jane Dillon, Environmental Planner

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Justin Roos, Associate, GIS

Jade Dean, GIS

Beverly Inloes, Technical Editor and Word Processor

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Attachment A: Documentation of Coordination and Consultation

A.1 Section 4(f) Coordination and Consultation with the City of Monterey Park

This attachment contains the following correspondence:

- November 12, 2014 – Draft Meeting Summary Notes of Status Update Meeting with the City of Monterey Park, including discussion of the potential effects of the Bus Rapid Transit (BRT) Alternative on Cascades Park, and an attendance list (4 pages)

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Draft Meeting Summary Notes
SR 710 North Study
Status Update Meeting with City of Monterey Park

PREPARED FOR: Michelle Smith/Metro

PREPARED BY: CH2M HILL

DATE: November 12, 2014

TIME: 10:00 a.m.

LOCATION: City of Monterey Park
320 W. Newmark Ave., Monterey Park, CA 91754

ATTENDEES: See attached attendance sheet

OVERVIEW:

The purpose of the meeting was to discuss the proposed improvements of the Bus Rapid Transit (BRT) Alternative as it's related to potential impact to Cascade Park:

I. Overview:

- Michelle Smith/Metro gave an overview of the SR 710 North Study and the alternatives that are being considered. These alternatives include:
  - **i.** No Build
  - **ii.** Transportation System Management (TSM)/Transportation Demand Management (TDM)
  - **iii.** Bus Rapid Transit (BRT)
  - **iv.** Light Rail Transit (LRT)
  - **v.** Freeway Tunnel
- Yoga Chandran/CH2M HILL and Deborah Pracilio/LSA described that the BRT alternative includes a dedicated bus lane on Atlantic Boulevard through Monterey Park, which would include widening of Atlantic Boulevard by 8-ft at Cascades Park on either side. This would include removing a portion of the curb, replacing the

curb, and replacing signage and landscaping. This minor reduction would affect about 0.025 of Cascade Park.

- Deborah provided an aerial image identifying Cascades Park and asked for confirmation what exactly is considered part of the park. The City confirmed that the median is part of Cascades Park.
- The widening of Atlantic Boulevard would lead up to Cascades Park with a dedicated N/S bus lane. Yoga will confirm the peak hours are Monday through Friday, 7 am to 9 am, and 4 pm to 6 pm. (Yoga confirmed with the design lead that this is the case).
- Businesses may have an issue with a raised median and should be contacted during final design, if this becomes the preferred alternative.
- Aziz Elattar/Metro asked if the City allows turn movements without a raised median. City responded that they have allowed this in their city.
- The City asked if a hybrid solution was considered. Yoga said that the study team is not looking to combine LRT and BRT, but that all alternatives have TSM/TDM. The City asked if the LRT alternative is addressed in the EIR. Yoga stated that all alternatives are evaluated equally and nothing has been ruled out.
- Deborah stated that if the City is in agreement with the impact to Cascades Park, documentation would be provided as part of Section 4(f). The City did not have any issues with the proposed improvements, but was interested in the BRT alternative as a whole.
- The City stated that Cascades Park will be undergoing improvements including all new irrigation, refurbishing the waterfall and rose gardens, and didn't see restoring the sidewalk as an issue. Historic street lights will be removed/replaced. The City will provide as-built drawings, allowing the study team to determine any historic resources/structures under Section 106.
- These improvements by the City are scheduled in phases, with the first phase happening next month. Phase I will include planting and refurbishing the waterfall. Phase II will include repairing the concrete and asphalt sidewalk. Phase II could start in the spring/summer of 2015.
- The Draft Environmental Document will be released in February with a 90-day review period, and will be available at the library. The TAC members will be provided a copy of the document. Amy Ho/City of Monterey Park will be the point person for distribution.
- Amy said that a Class III bike plan (on Atlantic Boulevard) is going to the council in December, and will have to see how that impacts the BRT.

II. Action Items:

- Yoga to confirm that peak hours are Monday through Friday, 7 am to 9 am, and 4 pm to 6 pm. – Confirmed that this is the case

- Yoga to confirm existing curb to curb width. It was confirmed the existing curb to curb width at Cascades Park (Atlantic Boulevard/El Portal Place) is 68 feet.
- City of Monterey Park to provide as-built drawings for Cascade Park.
- City of Monterey Park to provide a copy of the grant application for proposed improvements to Cascade Park.

Metro

Caltrans

SR 710 North Study
METRO MEETING ATTENDANCE FORM

Subject: Meeting with the City of Monterey Park
Date: November 12th, 2014
Location: Monterey Park City Hall, Room 251

Name	Role	Agency	Phone	E-mail	Initial
Smith, Michelle	Project Manager	Metro	219-922-3057	smithmi@metro.net	MS
Govan, Cleavon	Environmental Lead	Metro	213-922-3034	govanc@metro.net	
Elattar, Aziz	Executive Officer - Highway Programs	Metro	213-922-4715	elattara@metro.net	AE
Damrath, Garrett	Environmental Manager	Caltrans	213-897-9016	Garrett.Damrath@dot.ca.gov	
Roach, Jason	Environmental	Caltrans	213-897-0357	Jason.Roach@dot.ca.gov	
Ho, Amy	Principal Management Analyst	Monterey Park Public Works	626-307-1383	AMHo@montereypark.ca.gov	
Chandran, Yoga	Project Manager	CH2M HILL	714-435-6111	cyoga.chandran@ch2m.com	
Acuña, Lilly	Project Assistant	CH2M HILL	213-228-8250	lilly.acuna@ch2m.com	
Pracilio, Deborah	Environmental Studies	LSA	949-553-0666	deborah.pracilio@lsa-assoc.com	DP
Samantha Tewasart	Senior Planner	MPK	626-307-1324	stewasart@montereypark.ca.gov	ST
Ray Alfonso	Asst. City Engr.	MPK	626-307-1330	ralfonso@montereypark.ca.gov	RA
VEGA, CESAR	ASSOC. ENGR	MPK	6263071320	CVEGA@MONTEREYPARK.CA.	CV

Appendix C: Title VI Policy Statement

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DEPARTMENT OF TRANSPORTATION
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Be energy efficient!

March 2013

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone: (916) 324-0449, TTY: 711, or via Fax: (916) 324-1949.

MALCOLM DOUGHERTY
Director

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Appendix D: Summary of Relocation Benefits

D.1 California Department of Transportation Relocation Assistance Program

D.1.1 Declaration of Policy

> "The purpose of this title is to establish a uniform policy for fair and equitable treatment of persons displaced as a result of federal and federally assisted programs in order that such persons shall not suffer disproportionate injuries as a result of programs designed for the benefit of the public as a whole."

The Fifth Amendment to the U.S. Constitution states, "No Person shall…be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation." The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 Code of Federal Regulations (CFR) Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments, as discussed below.

D.1.2 Fair Housing

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the United States to provide, within constitutional limitations, for fair housing. This act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require Caltrans to provide a person a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee in order to see that all payments and benefits are fully utilized and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations and also are given a detailed explanation of the Caltrans Relocation Assistance Program. To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Caltrans relocation advisor.

D.1.3 Relocation Assistance Advisory Services

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the United States. Caltrans will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the

availability and prices of both houses for sale and rental units that are "decent, safe and sanitary." Nonresidential displacees will receive information on comparable properties for lease or purchase (for business, farm and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning federal and state assisted housing programs and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable "decent, safe and sanitary" replacement dwelling, available on the market, is offered to them by Caltrans.

D.1.4 Residential Relocation Payments

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows.

D.1.4.1 Moving Costs

Any displaced person, who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until Caltrans obtains control of the property in order to be eligible for relocation payments.

D.1.4.2 Purchase Differential

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 180 days or more prior to the date of the initiation of negotiations (usually the first written offer to purchase the property), may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. The maximum combination of these three supplemental payments that the owner-occupant can receive is $22,500. If the total entitlement

(without the moving payments) is in excess of $22,500, the Last Resort Housing Program will be used (see the explanation of the Last Resort Housing Program below).

D.1.4.3 Rent Differential

Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by Caltrans prior to the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when Caltrans determines that the cost to rent a comparable "decent, safe and sanitary" replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted under the Down Payment section below. The maximum amount payable to any eligible tenant and any owner-occupant of less than 180 days, in addition to moving expenses, is $5,250. If the total entitlement for rent supplement exceeds $5,250, the Last Resort Housing Program will be used.

To receive any relocation benefits, the displaced person must buy or rent and occupy a "decent, safe and sanitary" replacement dwelling within one year from the date Caltrans takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

D.1.4.4 Down Payment

The down payment option has been designed to aid owner-occupants of less than 180 days and tenants in legal occupancy prior to Caltrans' initiation of negotiations. The down payment and incidental expenses cannot exceed the maximum payment of $5,250. The one-year eligibility period in which to purchase and occupy a "decent, safe and sanitary" replacement dwelling will apply.

D.1.4.5 Last Resort Housing

Federal regulations (49 CFR 24) contain the policy and procedure for implementing the Last Resort Housing Program on federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the $22,500 and $5,250 limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances.

After the initiation of negotiations, Caltrans will within a reasonable length of time, personally contact the displacees to gather important information, including the following:

- Number of people to be displaced.
- Specific arrangements needed to accommodate any family member(s) with special needs.
- Financial ability to relocate into comparable replacement dwelling which will adequately house all members of the family.
- Preferences in area of relocation.
- Location of employment or school.

D.1.5 Nonresidential Relocation Assistance

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms and nonprofit organizations in locating suitable replacement property, and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent, suitable for a particular business's specific relocation needs. The types of payments available to eligible businesses, farms and nonprofit organizations are: searching and moving expenses, and possibly reestablishment expenses; or a fixed in lieu payment instead of any moving, searching and reestablishment expenses. The payment types can be summarized as follows.

D.1.5.1 Moving Expenses

Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment and similar business-related property, including: dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items acquired in the right-of-way contract may not be moved under the Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to $2,500, for reasonable expenses actually incurred.

D.1.5.2 Reestablishment Expenses

Reestablishment expenses related to the operation of the business at the new location, up to $10,000 for reasonable expenses actually incurred.

D.1.5.3 Fixed In Lieu Payment

A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses that meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years prior to the relocation and may not be less than $1,000 nor more than $20,000.

D.1.6 Additional Information

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, or any other law, except for any federal law providing local "Section 8" Housing Programs.

Any person, business, farm or nonprofit organization that has been refused a relocation payment by the Caltrans relocation advisor or believes that the payment(s) offered by the agency are inadequate may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment for lost goodwill that arises from the displacement for a public project. A list of ineligible expenses can be obtained from Caltrans Right-of-Way. California's law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.

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Attachment A:

Your Rights and Benefits as a Displaced Business, Farm, or Nonprofit Organization under the Uniform Relocation Assistance Program

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Your Rights and Benefits as a Displaced Business, Farm or Nonprofit Organization Under the Uniform Relocation Assistance Program

Introduction

In building a modern transportation system, the displacement of a small percentage of the population is often necessary. However, it is the policy of Caltrans that displaced persons shall not suffer unnecessarily as a result of programs designed to benefit the public as a whole.

Displaced businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments.

This brochure provides information about available relocation services and payments. If you are required to move as the result of a Caltrans transportation project, a Relocation Agent will contact you. The Relocation Agent will be able to answer your specific questions and provide additional information.

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 As Amended "The Uniform Act"

The purpose of this Act is to provide for uniform and equitable treatment of persons displaced from their business, farm or nonprofit organization, by federal and federally assisted programs and to establish uniform and equitable land acquisition policies for federal and federally assisted programs.

49 Code of Federal Regulations Part 24 implements the "Uniform Act" in accordance with the following relocation assistance objective:

> To ensure that persons displaced as a direct result of federal or federally-assisted projects are treated fairly, consistently and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

While every effort has been made to assure the accuracy of this booklet, it should be understood that it does not have the force and effect of law, rule, or regulation governing the payment of benefits. Should any difference or error occur, the law will take precedence.

Relocation Services

The California Department of Transportation has two programs to aid businesses, farms and nonprofit organizations which must relocate.

These are:

1. The Relocation Advisory Assistance Program, which is to aid you in locating a suitable replacement property, and

2. The Relocation Payments Program, which is to reimburse you for certain costs involved in relocating. These payments are classified as:

    - Moving and Related Expenses (costs to move personal property not acquired).

    - Reestablishment Expenses (expenses related to the replacement property).

    - In-Lieu Payment (a fixed payment in lieu of moving and related expenses, and reestablishment expenses).

NOTE: *Payment of loss of goodwill is considered an acquisition cost. California law and the federal regulations mandate that relocation payments cannot duplicate other payments such as goodwill. You will* **not** *be eligible to receive any relocation payments until the State has actually made the first written offer to purchase the property. You will also receive at least 90 days' written notice before you must move.*

Some Important Definitions...

Your relocation benefits can be better understood if you become familiar with the following terms:

Business: Any lawful activity, with the exception of a farm operation, conducted primarily for the purchase, sale, lease and rental of personal or real property, or for the manufacture, processing, and/or marketing of products, commodities, or any other personal property, or for the sale of services to the public, or solely for the purpose of this Act, and outdoor advertising display or displays, when the display(s) must be moved as a result of the project.

Displaced Person or Displacee: Any person who moves from real property or moves personal property from real property as a result of the acquisition of the real property, in whole or in part, or as the result of a written notice from the agency to vacate the real property needed for a transportation project. In the case of a partial acquisition, Caltrans shall determine if a person is displaced as a direct result of the acquisition.

Owners and tenants **not lawfully present** in the United States are not eligible to receive relocation payments and assistance.

Contributes Materially: A business or farm operation must have had average annual gross receipts of at least $5,000 **or** average annual net earnings of at least $1,000, or their income must have contributed at least 33 1/3 percent of the owner's or operator's average annual gross income form all sources, in order to qualify as a bona-fide operation.

Farm Operation: Any activity conducted solely or primarily for the production of one or more agricultural products or commodities, including timber, for sale and home use, and customarily producing such products or commodities in sufficient quantity to be capable of contributing materially to the operator's support.

Nonprofit Organization: A public or private entity that has established its nonprofit status under applicable law.

MOVING EXPENSES

If you qualify as a displaced business, farm or nonprofit organization, you are entitled to reimbursement of your moving costs and certain related expenses incurred in moving. To qualify you must legally occupy the property as the owner or lessee/tenant when Caltrans initiates negotiations for the acquisition of the property **OR** at the time Caltrans acquires title or takes possession of the property. However, to assure your eligibility and prompt payment of moving expenses, you should contact your Relocation Agent before you move.

You Can Choose Either:

Actual Reasonable Moving Costs – You may be paid for your actual reasonable moving costs and related expenses when a commercial mover performs the move. Reimbursement will be limited to a move of 50 miles or less. Related expenses, with limitations, ***may*** include:

- Transportation.
- Packing and unpacking of personal property.
- Disconnecting and reconnecting personal property related to the operation.
- Temporary storage of personal property.
- Insurance while property is in storage or transit, or the loss and damage of personal property if insurance is not reasonably available.
- Expenses in finding a replacement location.
- Professional services to plan and monitor the move of the personal property to the new location.
- Licenses, permits and fees required at the replacement location.

OR

Self-Move Agreement – You may be paid to move your own personal property based on the lower of two acceptable bids obtained by Caltrans.

Under this option, you will still be eligible for reimbursement of related expenses listed above that were not included in the bids.

OR

In-Lieu Payment – You can accept a fixed payment between $1,000 and $20,000, based on your annual earnings IN LIEU OF the moving cost, related expenses and reestablishment cost.

Actual Reasonable Moving Costs

You may be paid the actual reasonable and necessary costs of your move when a professional mover performs the move. All of your moving costs must be supported by paid receipts or other evidence of expenses incurred. In addition to the transportation costs of your personal property, certain other expenses may also be reimbursable, such as packing, crating, unpacking and uncrating, and the disconnecting, dismantling, removing, reassembling, and reinstalling relocated machinery, equipment, and other personal property.

Other expenses such as professional services necessary for planning and carrying out the move, temporary storage costs, and the cost of licenses, permits and certifications may also be reimbursable. This is not intended to be an all-inclusive list of moving related expenses. Your Relocation Agent can provide you with a complete explanation of reimbursable expenses.

Self-Move Agreement

If you agree to take full responsibility for all or part of the move of your business, farm, or nonprofit organization, the Department may approve a payment not to exceed the lower of two acceptable bids obtained by the Department from qualified moving firms or a qualified Department staff employee. A low-cost or uncomplicated move may be based on a single bid or estimate at the Department's discretion. The advantage of this moving option is the fact that it relieves the displaced business, farm or nonprofit organization operator from documenting all moving expenses. The Department may make the payment without additional documentation as long as the payment is limited to the amount of the lowest acceptable bid or estimate. Other expenses, such as professional services for planning, storage costs, and the cost of licenses, permits, and certifications may also be reimbursable if determined to be necessary. These latter expenses must be pre approved by the Relocation Agent.

Requirements:

Before you move, you must provide Caltrans with the:

- Certified inventory of all personal property to be moved.
- Date you intend to vacate the property.
- Address of the replacement property.
- Opportunity to monitor and inspect the move from the acquired property to the replacement property.

Related Expenses

1. **Searching Expenses for Replacement Property:** Displaced businesses, farms and nonprofit organizations are entitled to reimbursement for actual reasonable expenses incurred in searching for a replacement property, not to exceed $2,500. Expenses may include transportation, meals, and lodging when away from home; the reasonable value of the time spent during the search; fees paid to the real estate agents, brokers or consultants; and other expenses determined to be reasonable and necessary by the Department.

2. **Direct Loss of Tangible Personal Property:** Displaced businesses, farms, and nonprofit organizations may be eligible for a payment for the actual direct loss of tangible personal property which is incurred as a result of the move or discontinuance of the operation. This payment will be based upon the lesser of:

    a. The fair market value of the item for continued use at the displacement site minus the proceeds from its sale.

    OR

    b. The estimated cost of moving and reinstalling the replaced item, based on the lowest acceptable bid or estimate obtained by the Department for eligible moving and related expense4s, including dismantling and reassembly, but with no allowance for storage, cost of code requirement betterments or upgrades at the replacement site.

EXAMPLE:
You determine that the "document shredder" cannot be moved to the new location because of its condition, and you will not replace it at the new location.

Fair Market Value of the Document Shredder Based on its use at the current location	$ 1,500
Proceeds: Price received from selling the Document Shredder	- $ 500
Net Value	$ 1,000

OR

Estimated cost to move	$ 1,050

Based on the "lesser of", the amount of the "Loss of Tangible Personal Property" =	**$ 1,000**

Note: You are also entitled to all reasonable costs incurred in attempting to sell the document shredder (e.g. advertisement).

3. Purchase of Substitute Personal Property: If an item of personal property, which is used as part of the business, farm, or nonprofit organization, is not moved but is promptly replaced with a substitute item that performs a comparable function at the replacement site, the displacee is entitled to payment of the lesser of:

    a. The cost of the substitute item, including installation costs at the replacement site, minus any proceeds from the sale or trade-in of the replaced item;

    OR

    b. The estimated cost of moving and reinstalling the replaced item, based on the lowest acceptable bid or estimate obtained by the Department for eligible moving and related expenses, including dismantling and reassembly, but with no allowance for storage, cost of code requirement betterments or upgrades at the replacement site.

EXAMPLE A:

You determine that the copying machine cannot be moved to the new location because it is now obsolete and you will replace it.

Cost of a substitute copy machine		
Including installation costs at the replacement site		$ 3,000
Trade-in Allowance	-	$ 2,500
Net Value		$ 500

OR

Estimated cost to move	$ 550

Based on the "lesser of", the amount of the "Substitute Personal Property" =	**$ 500**

EXAMPLE B:

You determine that the chairs will not be used at the new location because they no longer match the décor and you will replace them.

Cost of substitute chairs		$ 1,000
Proceeds from selling the chairs	-	$ 100
Net Value		$ 900

OR

Estimated cost to move	$ 200

Based on the "lesser of", the amount of the "Substitute Personal Property" =	**$ 200**

Note: You are also entitled to all reasonable costs incurred in attempting to sell the copy machine and/or chairs.

4. **Disconnecting and Reinstallation:** You will be reimbursed for your actual and reasonable costs to disconnect, dismantle, remove, reassemble and reinstall any machinery, equipment or other personal property in relation to its move to the new location. This includes connection to utilities available nearby and any modifications to the

personalty that is necessary to adapt it to utilities at the replacement site.

5. **Physical changes at the new location:** You may be reimbursed for certain physical changes to the replacement property if the changes are necessary to permit the reinstallation of machinery or equipment necessary for the continue operation of the business. ***Note:*** *The changes cannot increase the value of the building for general purposes, nor can they increase the mechanical capability of the buildings beyond its normal requirements.*

6. The cost of installing utilities from the right of way line to the structure(s) or improvements on the replacement site.

7. Marketing studies, feasibility surveys and soil testing.

8. Professional real estate services needed for the purchase or lease of a replacement site.

9. One-time assessments or impact fees for anticipated heavy utility usage.

Reestablishment Expenses

A small business, farm or nonprofit organization may be eligible for a payment, not to exceed $10,000, for expenses actually incurred in relocating and reestablishing the enterprise at a replacement site.

Reestablishment expenses may include, but are not limited to, the following:

1. Repairs or improvements to the replacement real property required by Federal, State or local laws, codes or ordinances.

2. Modifications to the replacement real property to make the structure(s) suitable for the business operation.

3. Construction and installation of exterior signing to advertise the business.

4. Redecoration or replacement such as painting, wallpapering, paneling or carpeting when required by the condition of the replacement site or for aesthetic purposes.

5. Advertising the new business location.

6. The estimated increased costs of operation at the replacement site during the first two years, for items such as:

    a) Lease or rental charges
    b) Personal or real property taxes
    c) Insurance premiums, and
    d) Utility charges (excluding impact fees).

7. Other items that the Department considers essential for the reestablishment of the business or farm.

Note: *A nonprofit organization must substantiate that it cannot be relocated without a substantial loss of existing patronage (membership or clientele). The payment is based on the average of two years annual gross revenues less administrative expenses.*

In-Lieu Payment (Fixed)

Displaced businesses, farms and nonprofit organizations may be eligible for a fixed payment in lieu of (in place of) actual moving expenses, personal property losses, searching expense, and reestablishment expenses. The fixed payment may not be less than $1,000 or more than $20,000.

For a business to be eligible for a fixed payment, the Department must determine the following:

1. The business owns or rents personal property that must be moved due to the displacement.

2. The business cannot be relocated without a substantial loss of existing patronage.

3. The business is not part of a commercial enterprise having more than three other businesses engaged in the same or similar activity, which are under the same ownership and are not being displaced by the department.

4. The business contributed materially to the income of the displaced business operator during the two taxable years prior to displacement.

Any business operation that is engaged solely in the rental of space to others is not eligible for a fixed payment. This includes the rental of space for residential or business purposes.

Eligibility requirements for farms and nonprofit organizations are slightly different than business requirements. If you are being displaced from a farm or your represent a nonprofit organization and are interested in a fixed payment, please consult your relocation counselor for additional information.

The Computation of Your In-Lieu Payment:

The fixed payment for a displaced business or farm is based upon the average annual net earnings of the operation for the two taxable years immediately preceding the taxable year in which it is displaced. Caltrans can use a different two year period if it is determined that the last two taxable years do not accurately reflect the earnings of the operation.

EXAMPLE: Caltrans acquires your property and you move in 2005:

2003 Annual Net Earnings	$ 10,500
2004 Annual Net Earnings	$ 12,500
TOTAL	$ 23,000
Average over two years	**$ 11,500**

This would be the amount of your in-lieu payment. Remember – this is in-lieu of all other moving benefits, including reestablishment expenses. You must provide the Department with proof of net earnings to support your claim.

Proof of net earnings can be documented by income tax returns, certified financial statements, or other reasonable evidence of net earnings acceptable to the Department.

Note: The computation for nonprofit organizations differs in that the payment is computed on the basis of average annual gross revenues less administrative expenses for the two year period specified above.

Before You Move:

A. Request a determination of entitlement for in-lieu payment from your Relocation Agent.
B. Include a written statement of the reasons the business cannot be relocated without a substantial loss in net earnings.

C. Provide certified copies of tax returns for the two tax years immediately preceding the tax year in which you move. (If you move anytime in the year 2005, regardless of when negotiations began or the State took title to the property, the taxable years would be 2003 and 2004).
D. You will be notified of the amount you are entitled to after the application is received and approved.
E. You cannot receive the payment until after you vacate the property, AND submit a claim for the payment within 18 months of the date of your move.

Relocation Advisory Assistance

Any business, farm or nonprofit organization displaced by Caltrans shall be offered relocation advisory assistance for the purpose of locating a replacement property. Relocation services are provided by qualified personnel employed by Caltrans. It is their goal and desire to be of service to you and assist in any way possible to help you successfully relocate.

A Relocation Agent from Caltrans will contact you personally. Relocation services and payments will be explained to you in accordance with your eligibility. During the initial interview with you, your needs and desires will be determined as well as your need for assistance.

You can expect to receive the following services, advice and assistance from your Relocation Agent who will:

- Determine your needs and preferences.
- Explain the relocation benefits and eligibility requirements.
- Provide information on replacement properties for your consideration.
- Provide information on counseling you can obtain to help minimize hardships in adjusting to your new location.
- Assist you in completing loan documents, rental applications or Relocation Claims Forms.

AND provide information on:

- Security deposits
- Interest rates and terms
- Typical down payments
- Permits, fees and local planning
- SBA loan requirements
- Real property taxes.
- Consumer education literature

If you desire, your Relocation Agent will give you current listings of other available replacement property. Transportation will be provided to inspect available property, especially if you are elderly or handicapped. Though you may use the services of a real estate broker, Caltrans cannot provide a referral.

Your Relocation Agent is familiar with the services provided by others in your community and will provide information on other federal, state, and local programs offering assistance to displaced persons. If you have special needs, your Relocation Agent will make every effort to secure the services of those agencies with trained personnel who have the expertise to help you.

If the highway project will require a considerable number of people to be relocated, Caltrans will establish a temporary Relocation Field Office on or near the project. Project relocation offices will be open during convenient hours and evening hours if necessary.

In addition to these services, Caltrans is required to coordinate its relocation activities with other agencies causing displacements to ensure that all persons displaced receive fair and consistent relocation benefits.

Remember - YOUR RELOCATION AGENT is there to offer advice and assistance. Do not hesitate to ask questions. And be sure you fully understand all of your rights and available benefits.

YOUR RIGHTS AS A DISPLACEE

It is important to remember that your relocation benefits will not have an adverse affect on your:

- Social Security Eligibility
- Welfare Eligibility
- Income Taxes

In addition, the Title VIII of the Civil Rights Act of 1968 and later acts and amendments make discriminatory practices in the purchase and rental of most residential units illegal if based on race, color, religion, sex, or national origin.

Caltrans' Non-Discrimination Policy ensures that all services and/or benefits will be administered to the general public without regard to race, color, national origin, or sex in compliance with Title VI of the 1964 Civil Rights Act (42 USC 2000d. et seq.).

And you always have the Right to Appeal any decision by Caltrans regarding your relocation benefits and eligibility.

Your Right of Appeal is guaranteed in the "Uniform Act" which states that any person may file an appeal with the head of the responsible agency if that

person believes that the agency has failed to properly determine the person's eligibility or the amount of a payment authorized by the Act.

If you indicate your dissatisfaction, either verbally or in writing, Caltrans will assist you in filing an appeal and explain the procedures to be followed. You will be given a prompt and full opportunity to be heard. You have the right to be represented by legal counsel or other representative in connection with the appeal (but solely at your own expense).

Caltrans will consider all pertinent justifications and materials submitted by you and other available information needed to ensure a fair review. Caltrans will provide you with a written determination resulting from the appeal with an explanation of the basis for the decision. If you are still dissatisfied with the relief granted, Caltrans will advise you that you may seek judicial review.

NOTES

Sus Derechos y Beneficios Como Negocio, Operación Agrícola o Organización No Lucrativa Desplazada Bajo el Departmento de Transportación de California, Programa para Asistencia de Reubicación

Introducción

Cuando se está construyendo un sistema de transporte moderno, el desplazamiento de un pequeño porcentaje de la población es a veces necesario. Sin embargo, es el procedimiento de Caltrans que las personas desplazadas no deben de sufrir innecesariamente como resultado de los programas diseñados para el benificio del público en general.

Los negocios, operaciones agrícolas, y organizaciones no-lucrativas desplazadas pueden ser elegibles para servicios de reubicación y pagos.

Este libreto le provee información acerca de los servicios y pagos de reubicación disponibles. Si usted tiene que mudarse como resultado de un proyecto de transportación de Caltrans, un Agente de Reubicación lo contactará. El Agente de Reubicación estará disponible para responderle preguntas específicas y darle información adicional.

Acta de Procedimiento Uniforme de Asistencia para Reubicación y Adquisición de Bienes Raíces de 1970, Emendada
"El Acta Uniforme"

El propósito de esta Acta es de proveer uniformidad e igualdad de tratamiento a personas desplazadas de sus negocios, operaciones agrícolas, u organización no-lucrativa, por programas federales o programas asistidos con fondos federales, y de establecer uniformidad e igualdad en los procedimientos para adquisición de tierras para los programas federales y programas asistidos con fondos federales.

El Código de Regulaciones Federales 49, Parte 24 implementa el "Acta Uniforme" de acuerdo a los siguientes objetivos de asistencia de relocalización:

> Para asegurar que las personas desplazadas como resultado directo de proyectos federales o proyectos asistidos con fondos federales sean tratados con justicia, consistencia e igualdad de tal manera que esas personas no sufran daños desproporcionados como resultado de los proyectos diseñados para el beneficio del público en general.

Mientras se ha hecho todo esfuerzo para asegurar la veracidad de este folleto, debe entenderse que no tiene la fuerza ni efecto de la ley, regla o regulaciones que gobiernan el pago de los beneficios. Si alguna diferencia o error resulta, la ley tomará precedencia.

Servicios de Reubicación

El Departamento Transportación tiene dos programas para de ayudar a negocios, granjas y organizaciones no-lucrativas que tienen que reubicarse. Estas son:

1. El Programa de Consejos de Asistencia de Reubicación, que es para ayudarle en localizar una propiedad de reemplazo conveniente, y

2. El Programa de Pagos para Reubicación, que le reembolsará de ciertos costos envueltos en la reubicación. Estos pagos están clasificados como:

    - Gastos Relacionados a Mudanza (costos de mover propiedad personal no adquirida).
    - Gastos de Reestablecimiento (gastos relacionados a la propiedad de reemplazo.)
    - Pagos Fijos (pago fijo en vez de los gastos de mudanzas y otros gastos relacionados, y gastos de reestablecimiento).

Nota: *Pagos por pérdida de clientela es considerado un costo de adquisición. La ley de California y las regulaciones federales mandan que los pagos de reubicación no pueden duplicar otros pagos, como los pagos de pérdida de clientela.*

Usted **no** puede ser elegible a recibir ningún pago de reubicación hasta que el Estado haya hecho la primera oferta escrita para comprar su propiedad. Usted tambien recibirá un aviso escrito por lo menos 90 días antes que se tenga que mover.

Algunas Definiciones Importantes…

Sus beneficios de relocalización pueden ser entendidos mejor si usted se familiariza con los siguientes términos:

Negocio: Cualquier actividad legal, con la excepción de operaciones agrícolas, conducida principalmente para la compra, venta, arrendamiento, y alquiler de bienes personales o bienes raices, o para la fabricación, elaboración y/o mercadotecnia de productos, mercancías, u otros bienes personales, o solamente para el propósito de ésta Acta, un rótulo con anuncio o anuncios, cuando el rótulo(s) tenga(n) que ser movido(s) como resultado del proyecto.

Negocios Pequeños: Un negocio que tenga no más de 500 empleados trabajando en el lugar que esta siendo adquirido o desplazado por un programa o proyecto.

Contribuye Materialmente: Un negocio u operación agrícola debe de haber tenido un ingreso bruto en recibos de al menos $5,000 o un promedio anual de ingreso netos de al menos $1,000, para poder calificar como una operación de buena fé.

Operación Agrícola: Cualquier actividad conducida sola o primarialemente para la producción de uno o más productos de agricultura o mercancías, incluyendo venta de madera, para la venta y uso en casa, y producción ordinaria de tales productos o mercancía en cantidades suficientes para tener la capacidad de contribuir materialmente al soporte del operario.

Organización No-lucrativa: Una entidad pública o privada que haya establecido su estado de organización no-lucrativa bajo las leyes aplicables.

Persona desplazada: Cualquier individuo o familia que se muda de una propiedad o mueva sus bienes personales de una propiedad como resultado de la acquisición de bienes raíces, en todo o en parte, o como resultado de una notificación escrita de una agencia para desocupar la propiedad que se necesita para un proyecto de transportación. En el caso de una adquisición parcial, Caltrans determinará si la persona es desplazada directamente como resultado de la adquisición.

Los residentes que no están legalmente en los Estados Unidos no son elegibles para recibir pagos y asistencia de reubicación.

Los beneficios de reubicación varían según el tipo y tiempo de ocupación. Como una persona desplazada de un unidad residencial usted puede ser clasificado como:

- Un dueño ocupante de una propiedad residencial (incluye casas movibles)
- Un inquilino ocupante de una propiedad Residencial (incluye casas movibles y cuartos para dormir)

GASTOS DE MUDANZA

Si usted califica como un negocio, operación agrícola, u organización no-lucrativa desplazada, usted puede recibir reembolso de los gastos de mudanza y ciertos gastos relacionados incurridos en la mudanza. Para calificar, usted tiene que ocupar la propiedad legalmente como dueño o inquilino cuando Caltrans inicie negociaciones para la adquisición de la propiedad, O al tiempo que Caltrans adquiera título, o tome posesión de la propiedad. Sin embargo, para asegurar su elegibilidad y el pronto pago de los gastos de mudanza, usted tiene que haber contactado a su Agente de Reubicación antes de que se mude.

Usted Puede Escoger Entre:

Gastos Razonables de Mudanza Actual – Usted tiene que haber pagado por sus gastos de mudanza razonables y gastos relacionados cuando una compañia comercial hace la mudanza.

El reembolso será limitado a mudanza de 50 millas o menos. Los gastos relacionados, con limitaciones, ***pueden*** incluir:

- Transportación.
- Empacamiento y desempacamiento de la propiedad personal.
- Desconnección y reconneción relacionada a la operación de la propiedad personal.
- Almacenamiento temporal de la propiedad personal.

Seguros mientras la propiedad está en almacenamiento o en tránsito, o la propiedad personal es perdida y dañada, si los seguros no son razonablemente disponible.

- Gastos en encontrar un lugar de reemplazamiento.
- Servicios profesionales para planificar y supervisar la mudanza de la propiedad personal al nuevo lugar.
- Licencias, permisos y honorarios requiridos en el lugar de reemplazamiento.

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Contrato de Mudanza Propia – Usted puede ser pagado por mover su propia propiedad personal basado en la más baja de dos ofertas aceptables obtenidas por Caltrans. Bajo esta opción, usted deberá todavía ser elegible para el reembolsamiento de los gastos arriba relacionados que no fueron incluídos en la oferta

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Pago Fijo – Usted puede aceptar un pago fijo entre $1,000 y $20,000 basado en sus ganancias anuales EN VEZ de los costos y gastos relacionados de la mudanza.

Costos Actuales Razonables de Mudanza:

Pueden pagársele los gastos actuales razonables y necesarios de su mudanza si lo transporta con una compañía comercial de muebles y mudanzas. Todos sus gastos deben de ser respaldados con recibos u otra evidencia de gastos incurridos. Además de los gastos de transportación de su propiedad personal, ciertos otros gastos también pueden ser reembolsados, tales como empaque, embalaje, desempaque y desembalaje, desconexión, desmantelación, removimiento, reensamblamiento, y reinstalación de maquinaria relocalizada, equipos y otras propiedades personales. Otros gastos necesarios tales como servicios profesionales para planificar y supervisar la mudanza, almacenaje temporal y el costo para licencias, permisos y certificados también pueden ser reembolsables. Esta no es la intención de ser una lista inclusiva de todos los gastos relacionados de mudanza. Su Agente de Reubicación puede proveerle una explicación completa de los gastos reembolsables.

Contrato de Mudanza Propia

Si usted elige tomar la responsabilidad total o parcial para la mudanza de su negocio, operación agrícola, u organización no-lucrativa, Caltrans puede aprobar un pago sin exceder el presupuesto mas bajo de dos ofertas aceptables de una compañía comercial de muebles y mudanzas o por el Agente de Reubicación. Una mudanza a costo bajo o sin complicaciones puede ser basada en una sola oferta o estimado. En realidad, la ventaja de esta opción es que releva de la obligación al operador del negocio, operación agrícola u organización no-lucrativa desplazadas de documentar todos los gastos de mudanza. Caltrans puede hacer el pago sin documentación adicional siempre y cuando el pago sea limitado a la cantidad más baja aceptable de la oferta o del estimado. Otros gastos tales como servicios profesionales para planificar, costos de almacenaje y el costo de licencias, permisos, y certificados también pueden ser reembolsables si son necesarios. Estos gastos tienen que ser aprobados de ante mano por el Agente de Reubicación.

Requisitos:

Antes de que se mueva, usted tiene que proveer a Caltrans con:

- El inventario certificado de toda la propiedad personal que va a mover.
- La fecha que usted intenta desalojar la propiedad.
- La dirección de la propiedad de reemplazamiento.
- La oportunidad de supervisar e inspeccionar la mudanza desde la propiedad adquirada a la propiedad de reemplazo.

Gastos Relacionados

(1) **Gastos Para la Búsqueda de una Propiedad de Reemplazo** – Negocios, operaciones agrícolas, y organizaciones no-lucrativas tienen derecho a un reembolso por gastos actuales razonables, incurridos en la búsqueda de una propiedad de reemplazo, sin exceder $1,000. Los gastos pueden incluir transportación, alimento y alojamiento cuando esté lejos de su casa; el valor razonable del tiempo que ha gastado buscando una propiedad de reemplazo; los honorarios pagados a agentes de bienes raíces o asesores; y otros gastos determinados por Caltrans como razonables y necesarios.

(2) **Pérdidas Directas de Bienes Personales Tangibles:** Los negocios, operaciones agrícolas, y organizaciones no-lucrativas desplazadas pueden ser elegibles para un pago por pérdidas directas de bienes personales tangibles incurrido como resultado de la mudanza o descontinuación de la operación. Este pago deberá ser basado en el menor de:

(a) El valor de mercado de un producto para uso continuo en el sitio de desplazamiento menos la ganancia por su venta.

O

(b) El costo estimado de mudanza y reinstalación de los objetos reemplazados es basado en la oferta mas baja o el estimado obtenido por Caltrans para mudanza elegible y costos relacionados, incluyendo desmantelamiento y reemsamblaje, pero sin pago por almacenamiento.

POR EJEMPLO:

Usted determina que el “cortador de documentos” no puede ser movido a la nueva localidad por su condición, y usted no lo va a reemplazar en la nueva localidad.

El Valor de Mercado del Cortador de Documentos basado en su uso actual en la localidad actual es de	$1,500
Ganancia: Precio recibido por la venta del Cortador de Documentos	– $ 500
Valor Neto	$1,000
Ó	
El costo estimado de moverlo	$ 1,050
Basado en el “menor de”, la cantidad de la “Perdida de Propiedad Personal Tangible”	= **$ 1,000**

Nota: *Usted tambien tiene derecho a todos los costos rasonables incurrido en su esfuerzo por vender el cortador de documentos (por ejemplo, anuncio commercial)*

(3) Compra de Substitución de la Propiedad Personal: Si un objeto de propiedad personal, el cual es usado como parte del negocio, la operación agrícola, o la organización no-lucrativa, no es movido pero es prontamente reemplazado con un objeto substituto que hace una función comparable en el sitio de reemplazo, el desplazado tiene derecho al menor de:

(a) El costo de un objeto substituto, incluyendo los costos de instalación en el sitio de reemplamiento, menos cualquier ganacia por la venta o intercambio del objeto reemplazado.

O

(b) El costo estimado de mudanza y reinstalación del objeto de reemplazo, basado en la oferta mas baja aceptable o el estimado obtenido por Caltrans para una mudanza elegible y gastos relacionados, incluyendo el desmantelamiento y reensamblaje, pero sin pago por almacenamiento

EJEMPLO A:

Usted puede determinar que la máquina copiadora no puede ser movida a la nueva localidad porque es ahora obsoleta y la va a reemplazar.

Costo de substuitir una Máquina Copiadora incluyendo costos de instalación en el sitio de reemplazamiento.	$ 3,000
Pago por el Intercambio	– $ 2,500
Valor Neto	$ 500
O	
Costo estimado de la mudanza	$ 550
Basado en el “menor de” la cantidad de “La Propiedad Personal Substituida”	**$ 500**

EJEMPLO B:

Usted determina que las sillas no van a ser usadas en la nueva localidad, porque ya no combinan con la decoración, y usted las quiere reemplazar.

Costo de la sillas substitutas	$ 1,000
Ganancias: Por la venta de las Sillas	– $ 100
Valor Neto	$ 900
O	
Costo estimado de la mudanza	$ 200
Basado en el “menor de”, la cantidad de “La Propiedad Personal de Substitución”	**$ 200**

NOTA: *Usted tambien tiene derecho a todos los gastos razonables incurridos en su esfuerzo por vender la copiadora (Ejemplo A) o las sillas (Ejemplo B).*

(4) **Desconección y Reinstalación:** Usted va a ser reembolsado por los costos actuales y razonables de desconección, desmantelamiento, mudanza, reem-samblaje, e reinstalación de cualquier maquinaria, equipo u otra propiedad personal en relación a la mudanza a su nuevo local. Esto incluye conección a los servicios públicos disponibles en el lugar y a cualquier modificación de los objectos personales que sean necesario para adaptar a los servicios públicos en el sitio de reemplazamiento.

(5) **Cambios Físicos en el nuevo local:** Usted puede ser reembolsado por ciertos cambios físicos de la propiedad de reemplazamiento si los cambios son necesarios para permitir la reinstalación de la maquinaria o equipo necesario para la continua operación del negocio.

Nota: *Los cambios no pueden incrementar el valor del edificio para propósitos generales, tampoco pueden incrementar la capacidad mecánica de los edificios más alla de los requerimientos normales.*

Gastos De Reestablecimiento

Un pequeño negocio, operación agrícola, u organización no-lucrativa puede ser elegible para un pago, que no exceda $10,000, para los gastos actuales incurridos en la reubicación y el reestablecimiento en el sitio de reemplazo.

Gastos de reestablecimiento pueden incluir, pero no están limitados a, lo siguiente:

1. Reparación y mejoramiento de la propiedad de reemplazamiento requerido por las leyes, códigos, u ordenanzas federales, estatales o locales.

2. Modificaciones de la propiedad de reemplazamiento para hacer la estructura(s) apropiado para la operación del negocio.

3. Construcción e instalación de los letreros exteriores para anunciar el negocio.

4. El costo de instalación de servicios públicos desde la línea del derecho de vía a la estructura(s) o mejoramientos en el sitio de reemplazamiento.

5. Redecoración o reemplazamiento como pintura, tapizado de pared, paneles, o carpetas cuando sean requeridas por la condición del sitio de reemplazo o con propósitos estéticos.

6. El costo de licencias, honorarios, y permisos cuando no sean cubiertos como gastos de mudanza.

7. Estudios de mercado, estudios de factibilidad y exámen de suelo.

8. Anunciar la localidad del nuevo negocio.

9. Servicios profesionales de bienes raíces necesarios para la compra o la renta de un lugar de reemplazo.

10. El aumento del costo estimado de operación en el lugar de reemplazo durante los primeros dos años, por objectos como:

    a. Cargas de rentas,
    b. Impuestos de propiedad personal o propiedad real
    c. Prima de seguros, y
    d. Carga de servicios públicos (excluyendo honorarios de impacto).

11. Evaluación de una-vez o honorarios de impacto por alta utilización de servicios públicos.

12. Otros objetos que el Departmento considere esenciales para el reestablecimiento del negocio ú operación agrícola.

Pago De Una Vez (O Pago Fijo)

Negocios que han sido desplazados, operaciones agrícolas, y organizaciones no-lucrativas podrían ser elegibles para un pago fijo (en vez de) por los gastos actuales de mudanza, pérdida de propiedad personal, gastos de búsqueda, y gastos de reestablecimiento. Los pagos fijos no podrán ser menos de $1,000 o más de $20,000.

Para que un negocio sea elegible por un pago fijo, Caltrans debe de determinar lo siguiente:

1. El negocio posee o renta propiedad personal que debe de ser movida debido al desplazamiento.

2. El negocio no puede ser relocalizado sin una pérdida substancial de la clientela existente.

3. El negocio no es parte de un empresa comercial que tiene mas de tres otros negocios conectados en una misma o actividad similar, las cuales están bajo el mismo dueño y no están siendo desplazadas por el Departamento.

4. El negocio contribuyó materialmente a las ganancias del operador del negocio desplazado durante los dos años anteriores al desplazamiento.

Cualquier operación del negocio que está conectado solamente en la renta del espacio de otros, no es elegible para un pago fijo. Esto incluye la renta de espacio con propósitos residenciales o de negocios.

Los requerimientos de elegibilidad para las operaciones agrícolas y organizaciones no-lucrativas son un poco diferentes a los requerimientos para negocios. Si usted está siendo desplazado de una granja o usted representa una organización no-lucrativa y está interesado en un pago fijo, por favor consulte con su consejero de reubicación para información adicional.

La computación de Su Pago Fijo

El pago fijo para un negocio desplazado o una operación agrícola es basado en el promedio anual neto de ganancias de la operación por los dos años immediatamente precedentes al año en el cual fue desplazado. Caltrans puede usar un período de dos años diferentes, si se determina que los dos últimos años no reflejan con certeza las ganacias de la operación.

EJEMPLO: Caltrans adquiere su propiedad y usted se mueve en el 2001:

1999 Ganancias Netas Anuales	$10,500
2000 Ganancias Netas Anuales	$12,500
TOTAL	$23,000
Promedio de los dos años	$11,500

Este podría ser la cantidad de su pago fijo. Recuerde – esto es “en vez de” todos los otros beneficios de mudanza. Usted tendrá que proveer Caltrans pruebas de las ganacias netas para verificar su reclamo.

Prueba de las ganancias netas pueden ser documentas con sus declaraciones de impuestos, cartas financieras certificadas, u otra evidencia razonable de las ganancias netas aceptables por Caltrans.

Nota: *La computación de las organizaciones no-lucrativas difiere en que los pagos son computados en la base del promedio anual grueso de las ganancias menos los gastos administrativos por el período de los dos años especificados arriba.*

Antes de que se Mueva:

A. Complete una forma de “Aplicación para Determinación de sus Derechos” que la puede obtener de su Agente de Reubicación, y devuélvala con la mayor prontitud posible.

B. Incluya una declaración escrita de las razones por las cuales su negocio no puede ser reubicado sin una pérdida substancial en la ganancias netas.

C. Provea una copia certificada de su declaración de impuestos de los dos años immediatamente precedentes al año en el que se va a mover. (Si usted se mueve en cualquier momento en el año 2001, sin importar de cuando comenzaron las negociaciones o cuando el Estado tomó título de su propiedad, los años serán el de 1999 y el 2000.

D. Usted deberá ser notificado de la cantidad a la que tiene derecho después que la aplicación es recibida y aprobada.

E. Usted no puede recibir un pago hasta que se haya movido de la propiedad, Y que haya entregado un reclamo de pago dentro de los 18 meses de la fecha de mudanza.

Asistencia de Asesoría de Reubicación

A cualquier negocio, operación agrícola, u organización no-lucrativa, desplazado por Caltrans debe de ofrecerle los servicios de asistencia de reubicación con el propósito de localizar una propiedad de reemplazamiento. Los servicios de reubicación deben de ser proveídos por un empleado de Caltrans. Es la meta y el deseo de nosotros de servirle y asistirle en cualquier manera posible para ayudarle a reubicarse exitosamente.

Un Agente de Reubicación de Caltrans se comunicará con usted personalmente. Los servicios de reubicación y los pagos deberán ser explicados a usted de acuerdo con su elegibilidad. Durante la entrevista inicial con usted, sus necesidades y deseos deberán determinarse así como su necesidad de asistencia.

Usted puede esperar recibir los siguientes servicios, consejos, y asistencia de su Agente de Reubicación quien le:

- Determinará sus necesidades y preferencias.
- Explicará los beneficios de reubicación y su elegibilidad.
- Proveerá información en las propiedades de reemplazo para su consideración.
- Proveerá información en aconsejarle como puede obtener ayuda para minimizar la adversidad en ajustarse a su nuevo local.
- Asistirá en completar los documentos de préstamos, aplicaciones de rentas o Formas de Reclamos de Reubicación.

Y puede proveerle información en:

- Depósitos de seguridad.
- Taza de intereses y términos.
- Pagos típicos de enganches.
- Permisos, honorarios, y ordenanzas locales.
- Requirimientos de préstamos SBA
- Impuestos de bienes raíces.
- Literatura de educación al consumidor.

Si usted desea, su Agente de Reubicación le dará una lista actual de otras propiedades de reemplazamiento que esten disponibles. Se le proveerá transportación para inspeccionar la propiedad disponible, especialmente si usted es anciano o desabilitado. Aunque usted puede usar los servicios de un vendedor de bienes raíces, Caltrans no lo puede referir a un agente específico.

Su Agente de Reubicación está familiarizado con los servicios proveído por otros en su comunidad y le proveerá información de otros programas federales, estatales y locales que ofrecen asistencia a las personas desplazadas. Si usted tiene necesidades especiales, su Agente de Reubicación hará un esfuerzo para asegurar los servicios del personal entrenado de estas agencias que tienen la experiencia para ayudarle.

Si el proyecto de carreteras requiere que un número considerable de personas sean reubicadas, Caltrans establecerá Oficinas temporales de Reubicación en o cerca del proyecto. Las oficinas de projectos de reubicación serán abiertas durante las horas convenientes y hasta horas de la noche si es necesario.

Además de estos servicios, Caltrans será requerido a coordinar las actividades de reubicación con otras agencias causantes de desplazamiento para asegurar que todas las personas desplazadas reciban beneficios de reubicación iguales y consistentes.

Recuerde – Su Agente de Reubicación está ahí para ofrecer consejos y asistencia. No tenga dudas en preguntar. Y esté seguro que usted entiende completamente todos los derechos y beneficios disponibles.

SUS DERECHOS COMO UNA PERSONA DESPLAZADA

Es importante que recuerde que los beneficios de reubicación no tendrán un efecto adverson en su:

- Elegibilidad para Seguro Social
- Elegibilidad para Asistencia Social
- Declaración de Impuestos.

Además, el **Título VIII del Acta de Derechos Civiles de 1968**, y las actas anteriores y sus enmiendas hacen ilegal las prácticas en la venta y renta de las unidades residenciales que estén basadas en la raza, color, religion, sexo, u origen nacional.

Los Procedimientos No-Descriminatorios de Caltrans aseguran que todos los servicios y/o beneficios sean administrados al público en general sin diferencia de raza, color, origen nacional, o sexo en cumplimiento con el Título VI del Acta de Derechos Civiles de 1964. (42 USC 2000 (d.) et seq.).

Y usted siempre tiene el **Derecho de Apelar** una decisión de Caltrans en relación a sus beneficios de reubicación y elegibilidad.

Su Derecho de Apelación es garantizado en la “Ley Uniforme” que establece que una persona puede apelar con el responsible de la agencia si esta persona cree que la agencia ha fallado en determinar apropiadamente la elegibilidad de la persona o la cantidad de un pago autorizado por la Ley.

Si usted indica su disatisfacción, ya sea verbalmente o por escrito, Caltrans puede asistirle en entregar su caso y explicar los procedimientos a seguir. A usted le darán la oportunidad de ser oído pronta y totalmente. Usted tiene el derecho de ser representado por un consejero legal u otro representante en conección con la apelación (pero solamente a su propio costo.)

Caltrans puede considerar todas las justificaciones pertinentes y materiales entregadas por usted y cualquier otra información disponible que sea necesaria para asegurar una revisión justa. Caltrans le proveerá con una determinación de la apelación por escrito con una explicación de la base de la decisión. Si usted todavía no está satisfecho con la asistencia prestada, Caltrans le aconsejará que usted puede buscar una revisión judicial.

Noticiero de la Ley para Americanos con Incapacidades Físicas (ADA):

Para personas con incapacidades físicas, este documento es disponible en formatos alternativos. Para Información llame al número (916) 654-5413 Voz, CRS: 1-800-735-2929, o escriba a Derecho de Vía, MS 37, 1120 N Street, Sacramento, CA 95814.

NOTAS:

Appendix E: Environmental Commitments Record

The purpose of the Environmental Commitments Record (ECR) is to ensure that the California Department of Transportation (Caltrans) and/or the Los Angeles County Metropolitan Transportation Authority (Metro) meet their environmental commitments for the project by:

1. Identifying each environmental commitment made for the project, as shown in the Environmental Impact Report/Environmental Impact Statement (EIR/EIS)
2. Specifying how each commitment will be met
3. Documenting the completion of each commitment

The ECR provided on the following pages will be used by the project team as a detailed reference throughout all the project phases, both to identify and track commitments and as the most current detailed source of information regarding those commitments and the status of their implementation.

The California Environmental Quality Act (CEQA), Public Resources Code Section 21081, and Sections 15091 and 15097 of the CEQA Guidelines, require that a Mitigation Monitoring and Reporting Program (MMRP) be adopted when the Lead Agency (in this case, Caltrans or Metro) certifies an EIR for a project. The purpose of the MMRP is to assign responsibility for the implementation, monitoring, and timing of each measure that has been identified to avoid or substantially reduce an environmental impact of the project. The CEQA Lead Agency is required to ensure compliance with each of the adopted mitigation measures outlined in the MMRP because significant environmental impacts could result from the project if the mitigation measures are not implemented. The ECR provided in this Appendix meets the requirements for an MMRP for the project under CEQA.

Once the project is constructed, a report will be included in the project files at Caltrans or Metro, as appropriate, reporting the compliance of the project design, construction, and operations with the avoidance, minimization, and mitigation measures in the EIR/EIS.

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Task and Brief Description		Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
Design Kick-Off		Project Management and Project Development	Beginning of 1 phase							
Environmental PS&E Review		Project Management and Environmental	District PS&E Circulation							
Preconstruction Meeting		Project Management	Contract Award							
Transfer Resident Engineer Book		Project Engineer	Preconstruction Meeting							
Pre-Job Meeting		Project Management and Construction	Construction							
Environmental Compliance Review		Project Management and Construction	Safety Review							
Design Features Memorandum		Project Management and Construction	Post-construction							
LAND USE										
LU-1*	**General Plans (applies to all four Build Alternatives):** The Build Alternatives would result in inconsistencies with local jurisdictions' General Plans and/or other local land use plans. If a Build Alternative is selected for implementation, the Los Angeles County Metropolitan Transportation Authority (for the TSM/TDM, BRT, and LRT Alternatives) and the California Department of Transportation (for the Freeway Tunnel Alternative) will request the applicable local jurisdictions to amend their General Plans and/or other local land use plans after the acquisition of land for the selected alternative to reflect the improvements in that Build Alternative.	Metro or Caltrans	After property acquisition							
LU-2	**Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and Federal Transportation Improvement Program (FTIP) (applies to the Transportation Systems Management/Transportation Demand Management [TSM/TDM], Bus Rapid Transit [BRT], and Light Rail Transit [LRT] Alternatives or any Freeway Tunnel Alternative other than the Freeway Tunnel Alternative with the dual-bore tunnel design and tolled operational variation):** If the TSM/TDM Alternative, BRT Alternative, LRT Alternative, or any Freeway Tunnel Alternative other than the Freeway Tunnel Alternative with the dual-bore tunnel design and tolled operational variation is selected for implementation, the Los Angeles County Metropolitan Transportation Authority will coordinate with the Southern California Association of Governments on needed amendments to the next cycle of the RTP/SCS and FTIP to reflect the selected project and to delete the projects (RTP ID 18790 and FTIP ID 18790) describing a tunnel extension of SR 710 North with 4 toll lanes in each direction from those transportation plans.	Metro or Caltrans	Prior to approval of the Final EIR/EIS							
Parks-1*	**Compliance with the Public Park Preservation Act (California Public Resources Code Sections 5400–5409) (applies to the Bus Rapid Transit [BRT] Alternative only):** As part of the right of way acquisition process for the BRT Alternative, the Los Angeles County Metropolitan Transportation Authority (Metro) Division of Right of Way personnel will coordinate with the City of Monterey Park to provide compensation for the acquisition of land from Cascades Park as required under the Public Park Preservation Act. In the event that funds from FHWA are used for improvements in the BRT Alternative, Caltrans will participate in the negotiations with the City of Monterey Park and the land acquisition process for the acquisition of land from Cascades Park.	Metro	During right-of-way acquisition							
Cascades-1	**Temporary Construction Easements (applies to the Bus Rapid Transit [BRT] Alternative):** Resident Engineer will require the Construction Contractor to return land in Cascades Park that would be occupied for temporary construction easements (TCEs) to a condition that is at least as good as that which existed prior to the project at the completion of the construction of the BRT Alternative in this area. At a minimum, as part of the construction of the BRT Alternative, the Construction Contractor will replace the existing sidewalks within the boundary of Cascades Park and re-landscape grass/turf areas in the TCEs disturbed by the project construction. Metro will require the Construction Contractor to review the plans for the proposed replacement sidewalks and grass/turf landscaping with the City of Monterey Park prior to installation of those improvements. If any trees are removed from the TCEs, those trees will be replaced elsewhere in Cascades Park after consultation with the City of Monterey Park. The replacement trees, grass, and turf will be similar to the existing plant materials in Cascades Park. The Los Angeles County Metropolitan Transportation Authority (Metro) will require the Construction Contractor to fence and properly secure all active construction areas in and adjacent to Cascades Park within the limits of construction to protect the safety of park patrons during construction. When the sidewalks in Cascades Park at Atlantic Boulevard are temporarily closed during construction, Metro will require the Construction Contractor to develop and clearly sign pedestrian detours prior to the intersections of Atlantic Boulevard and El Portal Place to avoid making pedestrians backtrack to get	Metro Resident Engineer and the Construction Contractor	During and after occupation of land for TCEs							

* Mitigation for significant impacts under CEQA.

	Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
	to a safe crossing. In the event that funds from FHWA are used for improvements in the BRT Alternative, Caltrans will work in conjunction with Metro to ensure that the provisions of this measure that are related to returning land in Cascades Park used as a TCE to a condition at least as good as that which existed prior to the project are satisfied.									
Cascades-2	**Permanent Incorporation of Land (applies to the BRT Alternative):** Metro will include the replacement of the sidewalks affected by the permanent incorporation of land in Cascades Park in the adjacent areas of Cascades Park as part of final design. These are expected to be areas within the TCEs. If any shrubs and/or trees are removed from the areas that will be permanently incorporated, the Construction Contractor will replace those trees elsewhere in Cascades Park after consultation with the City of Monterey Park. The replacement shrubs and trees will be similar to the existing plant materials in Cascades Park. In the event that funds from FHWA are used for improvements in the BRT Alternative, Caltrans will work in conjunction with Metro to ensure that the provisions of this measure related to replacing sidewalks and shrubs/trees in Cascades Park are satisfied.	Metro Project Engineer and the Construction Contractor	During final design and construction							
GROWTH										
No avoidance, minimization, or mitigation measures are required.										
COMMUNITY IMPACTS AND RELOCATION (INCLUDING ENVIRONMENTAL JUSTICE)										
CI-1	**Property Acquisition (applies to all four Build Alternatives):** All acquisition of property for improvements in the Build Alternatives by the Los Angeles County Metropolitan Transportation Authority (for the Transportation System Management/Transportation Demand Management, Bus Rapid Transit, and Light Rail Transit Alternatives) or the California Department of Transportation (for the Freeway Tunnel Alternative), including any federally funded improvements, will be conducted in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act) of 1970 as amended. The Uniform Act establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or the displacement of persons from their homes, businesses, or farms. The Uniform Act's protections and assistance apply to the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects. (Please refer to Appendix D, Summary of Relocation Benefits, for more detail.)	Metro or Caltrans	During final design							
UTILITIES AND EMERGENCY SERVICES										
No avoidance, minimization, or mitigation measures are required.										
TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES										
T-1	**Transportation Management Plan (applies to all four Build Alternatives):** Preliminary Transportation Management Plan (TMP) Data Sheets were prepared for each Build Alternative and are included in the *Draft Project Report* (2014). Once the preferred alternative is identified, the Project Engineer will prepare a revised TMP Data Sheet and the Final TMP during final design. The objectives of the TMP will be to: • Maintain traffic safety during construction; • Effectively maintain an acceptable level of traffic flow throughout the transportation system during construction; • Minimize traffic delays and facilitate reduction of duration of construction activities; • Minimize detours and impacts to pedestrians and bicyclists; • Foster public awareness of the project and related impacts; and • Achieve public acceptance of construction of the project and the Final TMP measures. The TMP will address all aspects of transportation effects of all construction activities on vehicular, pedestrian, and bicycle access and mobility, including: temporary lane, sidewalk, and ramp closures; detours; increases in traffic volumes (including regular traffic and construction traffic, construction equipment, materials delivery vehicles, waste/haul vehicles, and employee commutes); and potential effects on emergency services (e.g., fire, police, ambulances), transit services, bicyclists, and pedestrians). The development of the TMP will be closely coordinated with the California Department of Transportation (Caltrans), the Los Angeles County Metropolitan Transportation Authority (Metro), local jurisdictions (cities and the county), and other potentially affected parties (school bus and transit operators and police, fire, and emergency services providers). The TMP will identify specific TMP strategies, the party/parties responsible for implementing those strategies, the agencies and parties the	Caltrans or Metro	During final design							

* Mitigation for significant impacts under CEQA.

	Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
	TMP strategies will be coordinated with, and the timing of the implementation of those strategies. The TMP will include specific strategies to address short-term, project-related construction effects on traffic, bicyclists, pedestrians, and area residents and businesses. Table 3.5.16 lists the types of TMP strategies that would be applicable to the individual Build Alternatives. The TMP for the Preferred Alternative will include, but not be limited to, those strategies. Ramp Closure Plans will be prepared by a qualified traffic engineer during final design for each on- and/or off-ramp proposed to be closed temporarily for 10 or more days during construction of the Freeway Tunnel Alternative. The ramp closure plans will be implemented by the Resident Engineer during construction. *(This TMP component applies to the Freeway Tunnel Alternative only.)* The Resident Engineer will require the Construction Contractor to implement the strategies in the TMP prior to, during, and after construction activities, as required in the TMP.									
T-2	**Pedestrian and Bicycle Facility Closures (applies to all four Build Alternatives):** When sidewalks, crosswalks, and/or bicycle facilities are temporarily closed during construction, pedestrian and bicycle detours will be developed and clearly signed prior to closing the locations.	Construction Contractor	During construction							
VISUAL AND AESTHETICS										
V-1	**Vividness (applies to the Light Rail Transit [LRT] and Freeway Tunnel Alternatives):** The Los Angeles County Metropolitan Transportation Authority (Metro) (LRT Alternative) and the California Department of Transportation (Caltrans) (Freeway Tunnel Alternative) will address effects of the Build Alternatives related to a reduction in the vividness of views based on inclusion of the following in the final design: • A single visual element will be introduced into the affected view to serve as a visual focal point in the view. An example of this concept would be to introduce a single specimen tree or a signature architectural feature in view. • Screening to diminish distracting visual elements and increase the perception/value of another visual element will be added. An example of this concept is to add landscaping and/or architectural components to screen distracting views. • Visual elements will be added to lend additional focus to an existing accent visual element. An example of this concept is to add trees on both sides of the Key View to visually frame and emphasize an existing visual highlight in the middle of the view.	Metro and Caltrans	During final design							
V-2	**Intactness (applies to the LRT and Freeway Tunnel Alternatives):** Metro (LRT Alternative) and Caltrans (Freeway Tunnel Alternative) will address effects of the Build Alternatives related to a reduction in the intactness of views based on inclusion of the following in the final design: • Screening such as landscaping or architectural features will be added to diminish the intrusions of new structures into the view. An example of this will be to visually screen intruding power lines and support structures with landscaping. • Encroaching elements will be undergrounded or relocated. An example of this is to relocate or underground visible utility lines. • Intruding objects will be disguised with architectural features, textures, and/or colors. An example of this is to add architectural features to light fixtures or traffic signals that encroach into a view.	Metro and Caltrans	During final design							
V-3	**Unity (applies to the LRT and Freeway Tunnel Alternatives):** Metro (LRT Alternative) and Caltrans (Freeway Tunnel Alternative) will address effects of the Build Alternatives related to a reduction in the unity of views based on inclusion of the following in the final design: • Screening such as landscaping or architectural features will be added to minimize visual elements that distract from the visual flow of the View. An example of this is to add elements to screen views of new structures or buildings. • Visual elements will be emphasized to help balance the View into major masses of visual space. An example of this is to add visual elements such as landscaping to minimize the views of new construction and maintain the balance of the view. • Repetitive elements will be added into the view to introduce or strengthen visual patterns or rhymes of a view. An example of this is to add repetitive elements such as bollards, street trees, flagpoles, or other features to visually tie the view together.	Metro and Caltrans	During final design							

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	Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
V-4	**Walls with Aesthetic Treatments (applies to all four Build Alternatives):** The final designs of sound walls and retaining walls adjacent to identified viewer groups or within sensitive Key Views within State-owned right of way and for the Freeway Tunnel Alternative will be based on Caltrans Highway Design Manual standards and consideration of community input. Metro design standards will be used for the Transportation System Management/Transportation Demand Management, Bus Rapid Transit, and LRT Alternatives. The wall designs will include enhancements such as, but not limited to, graphic patterns and colors based on input gathered from the local community, stakeholders, and Caltrans.	Metro or Caltrans	During final design							
V-5	**Built Structures (applies to the LRT Alternative):** Metro will design the project structures (buildings, columns, retaining walls, sound walls, tunnels, portals, and elevated LRT facilities) to blend with or enhance the surrounding areas. Design considerations such as placement, orientation, shape of structure, color, and type of materials used, and addition of decorative features will be incorporated as appropriate in the project structures.	Metro	During final design							
V-6	**Landscaping (applies to the LRT and Freeway Tunnel Alternatives):** Metro (LRT Alternative) and Caltrans (Freeway Tunnel Alternative) will address different levels of visual impacts related to walls and berms and for screening views of project features during final design as follows: • Low impacts will be addressed based on the incorporation of limited amounts of vines and shrubs and/or trees. • Moderate impacts will be addressed with a higher concentration of vines, shrubs, trees and/or larger plant materials to minimize visual effects within 5 years. Additional modifications and/or aesthetic treatments may be incorporated into the final landscaping design based on input from viewers of moderately impacted areas. • Moderately high visual impacts will be addressed with a berm planted with ground cover, shrubs, and trees where space allows. Additional modifications and/or aesthetic treatments may be incorporated into the final landscaping design with input from viewers of moderately impacted areas.	Metro and Caltrans	During final design							
V-7	**Short-Term Visual Effects (applies to all four Build Alternatives):** During final design, Metro (TSM/TDM, BRT, and LRT Alternatives) and Caltrans (Freeway Tunnel Alternative) will identify land uses adjacent to construction areas that may be sensitive to views of construction, staging, and materials storage areas. The final design will include features to minimize views of those areas, including but not limited to: temporary screening, installation of temporary and/or permanent landscaping (particularly trees and shrubs) as early in the construction process as feasible, and/or installation of temporary and/or permanent berms. Metro and Caltrans will require the Construction Contractor to implement and maintain these features throughout the construction period.	Metro or Caltrans	During final design							
CULTURAL RESOURCES										
CR-1	**Discovery of Cultural Resources (applies to all four Build Alternatives):** If cultural materials are discovered during ground disturbance and earthmoving, the Los Angeles County Metropolitan Transportation Authority (Metro) (TSM/TDM, BRT, and LRT Alternatives) or the California Department of Transportation (Caltrans) (Freeway Tunnel Alternative) will require the Construction Contractor to divert all such activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find.	Metro or Caltrans	During construction							
CR-2	**Discovery of Human Remains (applies to all four Build Alternatives):** If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner will be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendant (MLD). At that time, the person who discovered the remains will also contact the California Department of Transportation (Caltrans) District 7 Environmental Branch Chief (Freeway Tunnel Alternative) or Metro (TSM/TDM, BRT and LRT Alternatives) so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.	Construction contractor	During construction							
CR-3	**Native American Monitor (applies to all four Build Alternatives):** The Resident Engineer will require the Construction Contractor to have a Native American monitor on site during all ground disturbance and earthmoving activities in areas identified as sensitive for cultural resources based on consultation with representatives from individual Tribes conducted during final design.	Resident Engineer Construction Contractor	During construction							

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Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
CR-4 **Post-Review Discovery and Monitoring Plan (applies to all four Build Alternatives):** Prior to and during project construction, the Resident Engineer will require the construction contractor to implement the requirements of the Post-Review Discovery and Monitoring Plan included in the final *Finding of No Adverse Effect for the State Route 710 North Study*. The implementation of those requirements will be overseen by a Caltrans Professionally Qualified Staff (PQS) Archaeological Monitor or a consultant who meets Caltrans PQS requirements.	Resident Engineer Construction Contractor	During PS&E phase; during and after construction								
CR-5 **Cultural Awareness Training (applies to all four Build Alternatives):** A qualified cultural resources monitor or representative will attend the pre-construction meeting. At this meeting, the cultural resources monitor will conduct cultural resources awareness training, including describing the likelihood of encountering cultural resources and human remains during grading and excavation, what types of cultural resources might be discovered, the roles and authorities of the cultural resources monitors, the methods used to assess and recover discovered resources, and other information relevant to cultural resources and the monitoring that will be conducted during project construction.	Cultural resources monitor	During construction								
BRT Alternative Effects on the Jardin Del Encanto and Cascades Park **Project Condition BRT-1:** The proposed improvements would incorporate any design and engineering cues from the existing medians and incorporate them into the design of the new reconfigured medians at the El Portal Place/South Atlantic Boulevard intersection in a manner that is consistent with the historical fabric, yet does not create a sense of false historicism. Any historic light posts would be protected in place and remain in their historical locations following construction.	Project sponsor	During design phase								
BRT Alternative Effects on the Jardin Del Encanto and Cascades Park **Project Condition BRT-2:** In-kind vegetation should be replanted with an adequate irrigation system to incorporate and support the historical landscaping at this location. Prior to construction, a landscape architect should identify those plant species currently in the landscaped areas in and adjacent to the median to determine their type, concentrations, and spatial patterns. Following the construction of the hardscape, a landscape architect should design the vegetation plan that would recreate, to the extent possible, the current planting arrangement with an irrigation system sufficient to maintain these landscaped areas.	Landscape architect	Prior to construction and following the construction of the hardscape								
BRT Alternative Effects on the Old Pasadena Historic District, Fair Hope Building, Rialto Theatre, Glenarm Building and Electric Fountain, and Oaklawn Waiting Station **Project Condition BRT-3** **Equipment Use.** To reduce effects associated with concrete removal, equipment other than jackhammers that could be used to remove and break up concrete and related activities that generate lesser levels of vibration including but are not limited to: • Use of deep saw-cuts to minimize vibration transmission from pavement breaking operations • Use of concrete cutters on pavement instead of pavement breakers (where practical) • Use of vibratory rather than impact pile drivers (where feasible) • Routing of heavy truck traffic and heavy equipment to minimize vibration in the vicinity of the historic property • Properly securing street deck plates over cut and cover excavations (to prevent automobile vibrating the plates against the pavement) • Minimize duration of vibration events	Construction Contractor	During construction								
BRT Alternative Effects on the Old Pasadena Historic District, Fair Hope Building, Rialto Theatre, and Oaklawn Waiting Station **Project Condition BRT-4** **Vibration Management.** The following presents a step by step management approach for reducing the effects of construction vibration resulting from construction activities for the BRT Alternative: ***Public Outreach*** While vibration levels should not exceed thresholds, some vibration from demolition, excavation, operation of heavy machinery, and installation of wall-support systems is expected to be perceptible at the properties nearest these activities. The proposed project conditions to reduce the level of expected effects outlined in this section are recommended to reduce the potential for adverse effects to historic properties and complaints from the community. Community outreach to educate the public about the project and its expected effects should include	Project Engineer Construction Contractor	During final design and construction								

* Mitigation for significant impacts under CEQA.

Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
individual consultation with owners of potentially affected historic properties potentially affected by project-related vibration and education demonstrating the relationship between vibration level, perception, superficial and structural damage. As a way of getting feedback from the community during the project, an official complaints register should be routinely updated, maintained, and responses made in a deliberate, timely fashion. ***Preconstruction Building Survey*** A preconstruction survey undertaken by an independent certified inspector before beginning of construction-related activities would provide important baseline information for historical properties to: a) assesses their structural condition, and b) determine the safe threshold of a particular historic property when compared to the proposed activity at that location. A preconstruction survey typically includes inspecting building foundations, exterior walls, driveways, sidewalks, hardscape elements, and interior floors and walls documenting any pre-existing defects such as cracks, settlement, subsidence, corrosions, or water damage. The inspection can be documented by, but not limited to, photographing or videotaping the elements of the property under inspection. ***Vibration Monitoring During Construction*** The primary objective of monitoring is to verify that safe, acceptable levels of vibration by construction-related activity are not exceeded. Selected vibration monitoring at selected historic properties is based upon the expected level of vibration is based upon the sensitivity of the historic property to vibration effects including, but not limited to, method of construction, building height, foundation type (e.g., slab or piles), overall condition, and overall sensitivity. Any structural areas identified in the preconstruction survey that show damage that may be aggravated by construction-related activities that warrant monitoring during construction should be documented and have monitors installed prior to construction. The monitors can include both “attended” (monitoring with a technician present) and unattended (automated) monitoring. The location of the vibration monitors would be informed by the findings of pre-construction survey results that would indicate the highest at-risk location(s). Unattended monitors should be located at the outside of the buildings in a locked case. Unattended monitors should be capable of measuring continuous data unattended and sending the data in real time to several different parties including, but not limited to, the responsible Caltrans Project Engineer to ensure that vibration levels do not exceed the thresholds presented above in this FOE. The monitors should also be capable of generating an instant e-mail alert when the thresholds are exceeded so immediate corrective action can be taken. It is recommended that vibration monitors provide alerts when 0.12 inches/second PPV are exceeded. If a second exceedance occurs at a historic property identified in this report, potential damage from vibration should be assessed. A visual inspection of the property should be made to verify that there are no damages developing or occurring as a result of the vibration. ***Vibration Monitoring Plan*** A Vibration Monitoring Plan will be prepared, reviewed, approved, and administered by a professional, independent acoustical engineer in coordination with a licensed Project Historic Architect who meets the Secretary of the Interior’s professional Qualification Standards for Historic Architecture and, the Caltrans Project Engineer or designed party. The Vibration Monitoring Plan should include the vibration instrumentation, location of vibration monitors, data acquisition, and exceedance notification and reporting procedures as follows. • <u>Vibration Instrumentation</u>: Vibration monitors common to these applications shall be selected by consultation with Caltrans, acoustical engineers, and be equipped with cellular modems for internet communication and use the auto call home feature to provide real time notification of vibration level exceedance to the responsible Caltrans Project Engineer or designated party. The vibration monitor will be set to automatically record daily events during working hours and to record peak PPV values in short, regular intervals during construction activity. Vibration monitoring equipment shall be maintained in good working order and routinely calibrated at intervals not more than 6 months, or some other regular interval deemed appropriate by Caltrans, acoustical engineers, and other responsible parties. • <u>Location of Vibration Monitors</u>: Prepare and submit a scaled plan indicating monitoring locations, including measurements to be taken at construction site boundaries and at nearby historic and non-historic properties. • <u>Data Acquisition</u>: The information to be provided in the data repots will be presented including at a minimum daily PPV readings at time of day from multiple locations, the maximum peak vector sum PPV, and maximum frequency for each direction, and a USBM R18507 compliance chart of maximum PPV vs. frequency. The									

* Mitigation for significant impacts under CEQA.

Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
reports will also identify construction equipment operating during the monitoring period and their locations and distances to all vibration sensitive locations. • Exceedance Notification and Reporting Procedures: A description of the notification of exceedance and reporting procedures will be included and the follow-up procedures taken to reduce vibration levels to below the allowable limits. The exceedance notice will trigger a "stop work" to prevent the unanticipated damage to a historic property. Work shall be permitted to resume when the Caltrans Engineer, the Project Historic Architect have determined that the appropriate modifications to the work have been made to ensure no further damage is likely to result. Following the notice to proceed but before work begins, the Vibration Monitoring Plan will be submitted to the Caltrans Project Engineer or a designated party for review, comment, and approval before work can begin. At a minimum, the vibration monitoring data will be sent to the Caltrans Project Engineer or a designated party on a weekly basis or sooner if needed. Included will be comparative measurements taken during the previous monitoring interval. In the event that the measured vibration levels exceed allowable limits, the Caltrans Project Engineer or a designated party will be immediately notified and any further construction activities will be stopped until either alternative equipment or alternative construction procedures can be used that generate vibration levels that do not exceed the allowable limits.									
BRT Alternative Effects on the Glenarm Building and Electric Fountain **Project Condition BRT-5** **Construction of Design Elements**. In the vicinity of the Glenarm Building and the Electric Fountain, the BRT Alternative improvements would incorporate design and engineering cues elements from the existing sidewalk into the design of the new reconfigured sidewalk in a manner that is consistent with the historical fabric but does not create a false sense of historical development. These design elements and associated treatment conditions are described below: • The sidewalk height, width, and shape will remain consistent as practicable with the historical design; • The width, depth, and the surface scoring pattern of the will remain consistent with the historical design; and • The color, finish, and surface scoring patterns of new paving will be referential rather than replicative of the historic sidewalk. One method, for example, would be to stamp the new concrete with the year of construction and use an alternatively colored paving surface.	Project Engineer	During final design							
Vibration-Related Effects of the LRT Alternative on the Raymond Florist Historic District, Rialto Theatre, Fair Hope Building, Hospital Veterinary, 100 North Fremont Avenue, 4777 East Cesar E. Chavez Avenue, and Community Facilities Planners Building (aka Fair Oaks Professional Group) **Project Condition LRT-1** The following presents a step by step approach for reducing the effects of construction vibration resulting from the LRT Alternative tunnel excavation: ***Public Outreach*** While vibration levels should not exceed thresholds, some vibration from demolition, excavation, operation of heavy machinery, and installation of wall-support systems is expected to be perceptible at the properties nearest these activities. The proposed project conditions to reduce the level of expected effects outlined in this section are recommended to reduce the potential for adverse effects to historic properties and complaints from the community. Community outreach to educate the public about the project and its expected effects should include individual consultation with owners of potentially affected historic properties potentially affected by project-related vibration and education demonstrating the relationship between vibration level, perception, superficial and structural damage. As a way of getting feedback from the community during the project, an official complaints register should be routinely updated, maintained, and responses made in a deliberate, timely fashion. ***Preconstruction Building Survey*** A preconstruction survey undertaken by an independent certified inspector before beginning of construction-related activities would provide important baseline information for historical properties to: a) assesses their structural condition, and b) determine the safe threshold of a particular historic property when compared to the proposed activity at that location. A preconstruction survey typically includes inspecting building foundations, exterior walls, driveways, sidewalks, hardscape elements, and interior floors and walls documenting any pre-existing defects such as cracks, settlement, subsidence, corrosions, or water damage.	A qualified geologist, structural engineer, or other professional with expertise in ground vibration	During construction							

* Mitigation for significant impacts under CEQA.

Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
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The survey would document all existing cracks determined to be significant (i.e., a crack more than 2 millimeters wide). Cracks that are determined to be significant would be monitored during construction using crack monitors (such as grid type crack gages). The schedule of crack monitoring will follow generally accepted industry guidelines. The inspection can be documented by, but not limited to, photographing or videotaping the elements of the property under inspection. The Project Historic Architect will establish a training program for construction personnel to emphasize the importance of protecting all identified historic properties in the vicinity of the APE. This program will include information on recognizing historic fabric and materials, and directions on how to exercise care when working around and operating equipment near historic buildings, including the proper storage of materials. The program will also include information on ways to minimize vibration from demolition and construction, as well as ways to monitor and report any damage to historic properties from such vibration. A provision for establishing this training program will be incorporated into the contract, and those contract provisions will be reviewed and approved by a Caltrans PQS architectural historian or another appropriate official. Following the baseline condition assessment, the architect and structural engineer would monitor groundborne vibration levels during construction and report any changes to the existing conditions of the at-risk buildings, including, but not limited to, expansion of existing cracks, new spalls, or other exterior deterioration. ***Vibration Monitoring During Construction*** The primary objective of monitoring is to verify that safe, acceptable levels of vibration by construction-related activity are not exceeded. Selected vibration monitoring at selected historic properties is based upon the expected level of vibration is based upon the sensitivity of the historic property to vibration effects including, but not limited to, method of construction, building height, foundation type (e.g., slab or piles), overall condition, and overall sensitivity. Any structural areas identified in the preconstruction survey that show damage that may be aggravated by construction-related activities that warrant monitoring during construction should be documented and have monitors installed prior to construction. The monitors can include both “attended” (monitoring with a technician present) and unattended (automated) monitoring. The location of the vibration monitors would be informed by the findings of preconstruction survey results that would indicate the highest at-risk location(s). Unattended monitors should be located at the outside of the buildings in a locked case. Unattended monitors should be capable of measuring continuous data unattended and sending the data in real time to several different parties including, but not limited to, the responsible Caltrans Project Engineer to ensure that vibration levels do not exceed the thresholds presented above in this FOE. The monitors should also be capable of generating an instant e-mail alert when the thresholds are exceeded so immediate corrective action can be taken. It is recommended that vibration monitors provide alerts when 0.12 inches/second PPV are exceeded. If a second exceedance occurs at a historic property identified in this report, potential damage from vibration should be assessed. A visual inspection of the property should be made to verify that there are no damages developing or occurring as a result of the vibration. Monitoring reports will be submitted to a Caltrans PQS architectural historian or another appropriate official, who will also establish the frequency of monitoring and reporting. The structural engineer will consult with the architect if any problems with character-defining features of a contributing building are discovered. If, in the opinion of the structural engineer in consultation with the architect, substantial adverse changes to the character-defining features of the contributing buildings are found during construction (and can be reasonably attributed to the effects from construction activities), the monitoring team will immediately inform the project sponsor or sponsor’s designated representative responsible for construction activities. The monitoring team will also provide recommendations for preventive and/or corrective measures, and such measures will be implemented by the project sponsor. The preventive/corrective measures may include: • Halting construction in situations where construction activities would imminently endanger historical buildings; • Redesigning the project to avoid certain activities that would pose future risks to historical buildings; and • Repairing any construction-related damage such that the character-defining features of any affected buildings are restored to their pre-project condition. The monitoring teams recommendations will be reviewed by the Caltrans PQS architectural historian or another appropriate official for feasibility and appropriateness, but preventive measures will be implemented in a timely									

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manner to avoid damage. **Vibration Monitoring Plan** A Vibration Monitoring Plan will be prepared, reviewed, approved, and administered by a professional, independent acoustical engineer in coordination with a licensed Project Historic Architect who meets the Secretary of the Interior's professional Qualification Standards for Historic Architecture and, the Caltrans Project Engineer or designed party. The Vibration Monitoring Plan should include the vibration instrumentation, location of vibration monitors, data acquisition, and exceedance notification and reporting procedures. ***Vibration Instrumentation*** Vibration monitors common to these applications shall be selected by consultation with Caltrans, acoustical engineers, and be equipped with cellular modems for internet communication and use the auto call home feature to provide real time notification of vibration level exceedance to the responsible Caltrans Project Engineer or designated party. The vibration monitor will be set to automatically record daily events during working hours and to record peak PPV values in short, regular intervals during construction activity. Vibration monitoring equipment shall be maintained in good working order and routinely calibrated at intervals not more than 6 months, or some other regular interval deemed appropriate by Caltrans, acoustical engineers, and other responsible parties. ***Location of Vibration Monitors*** Prepare and submit a scaled plan indicating monitoring locations, including measurements to be taken at construction site boundaries and at nearby historic and non-historic properties. ***Data Acquisition*** The information to be provided in the data repots will be presented including at a minimum daily PPV readings at time of day from multiple locations, the maximum peak vector sum PPV, and maximum frequency for each direction, and a USBM R18507 compliance chart of maximum PPV vs. frequency. The reports will also identify construction equipment operating during the monitoring period and their locations and distances to all vibration sensitive locations. ***Exceedance Notification and Reporting Procedures*** A description of the notification of exceedance and reporting procedures will be included and the follow-up procedures taken to reduce vibration levels to below the allowable limits. The exceedance notice will trigger a "stop work" to prevent the unanticipated damage to a historic property. Work shall be permitted to resume when the Caltrans Engineer, the Project Historic Architect have determined that the appropriate modifications to the work have been made to ensure no further damage is likely to result. For the historic properties listed above (the Rialto Theatre, the Fair Hope Building, Hospital Veterinary, and the Raymond Florist Historic District, in particular). If such damage is likely, the qualified professional will develop specifications regarding the restriction and monitoring of construction activities that will be incorporated into the contract. Project modifications recommended by the qualified professional will be made prior to project construction to reduce vibrations to below damage threshold levels. Following the notice to proceed but before work begins, the Vibration Monitoring Plan will be submitted to the Caltrans Project Engineer or a designated party for review, comment, and approval before work can begin. At a minimum, the vibration monitoring data will be sent to the Caltrans Project Engineer or a designated party on a weekly basis or sooner if needed. Included will be comparative measurements taken during the previous monitoring interval. In the event that the measured vibration levels exceed allowable limits, the Caltrans Project Engineer or a designated party will be immediately notified and any further construction activities will be stopped until either alternative equipment or alternative construction procedures can be used that generate vibration levels that do not exceed the allowable limits.									
Vibration-Related Effects of the LRT Alternative on the Raymond Florist Historic District, Rialto Theatre, Fair Hope Building, Hospital Veterinary, 100 North Fremont Avenue, 4777 East Cesar E. Chavez Avenue, and Community Facilities Planners Building (aka Fair Oaks Professional Group) **Project Condition LRT-2** The following presents a step by step approach for reducing the effects of operational vibration resulting from LRT	Project Engineer Construction Contractor	During final design and construction							

* Mitigation for significant impacts under CEQA.

Task and Brief Description		Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
Alternative operations: The LRT tunnel alignments will be concrete slab track system and, therefore, only certain types of vibration isolation systems are applicable. Examples of design measure that can be considered include (but are not limited to): • Highly resistant direct fixation (HRDF) fasteners (e.g., Egg Type DP fastener); • Rail suspension fastener (RSF) system (an example of which is the Pangard fastener); • Isolated slab track system (ISTS), this consists of a concrete slab poured over the top of a continuous elastomeric mat; and • Floating slab track system (FST), this consists of a concrete slab supported by individual elastomeric pads. During an appropriate point in the ongoing project design process, segments of the LRT railway that are anticipated to generate operational groundborne noise and vibration in excess of FTA limits for the given property type of a historic property, design engineers will explore the available vibration-isolation systems and incorporate those that are most effective in reducing operational ground borne noise and vibration into the final construction design.										
HYDROLOGY AND FLOODPLAINS										
No avoidance, minimization, or mitigation measures are required.										
WATER QUALITY AND STORM WATER RUNOFF										
WQ-1	**National Pollutant Discharge Elimination (NPDES) General Permit (applies to all four Build Alternatives):** The Los Angeles County Metropolitan Transportation Authority (Metro) (Transportation System Management/Transportation Demand Management [TSM/TDM], Bus Rapid Transit [BRT], and Light Rail Transit [LRT] Alternatives) or the California Department of Transportation (Caltrans) (Freeway Tunnel Alternative) will require the Construction Contractor to comply with the provisions of the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2009-0009-DWQ, as amended by 2010-2014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002, or any subsequent permit. The project will comply with the Construction General Permit by preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) to address all construction-related activities, equipment, and materials that have the potential to impact water quality for the appropriate Risk Level. The SWPPP will identify the sources of pollutants that may affect the quality of storm water and include Best Management Practices (BMPs) (e.g., Erosion Control, Sediment Control, and Good Housekeeping BMPs) to control the pollutants, such as sediment control, catch basin inlet protection, temporary soil stabilization, construction materials management, and non-storm water BMPs.	Metro or Caltrans	During construction							
WQ-2	**Dewatering (applies to all four Build Alternatives):** If dewatering is required, Metro (TSM/TDM, BRT, and LRT Alternatives) or Caltrans (Freeway Tunnel Alternative) will require the Construction Contractor to comply with the requirements of Order No. R4-2013-0095 (NPDES No. CAG994004) for construction site dewatering. Order No. R4-2013-0095 covers general waste discharge permits for discharges to surface waters from activities involving groundwater extraction. It covers treated or untreated groundwater generated from permanent or temporary dewatering operations or other appropriate wastewater discharge not specifically covered in other general NPDES permits in the Los Angeles region. Under this order, permittees are required to monitor their discharges from groundwater extraction waste from construction to ensure that effluent limitations for constituents are not exceeded.	Metro or Caltrans	During construction							
WQ-3	**Groundwater Monitoring (applies to the LRT and Freeway Tunnel Alternatives):** Prior to tunneling and construction activities, Caltrans (for the Freeway Tunnel Alternative) or Metro (for the LRT Alternative) will require the Project Geotechnical Engineer and/or the Project Geologist to perform a comprehensive investigation to establish a baseline for groundwater levels and quality (chemistry) in the areas in which tunneling or excavations would occur. In addition, groundwater monitoring will be performed routinely during tunnel excavation to ensure that the activities are not affecting the local groundwater levels and quality.	Caltrans or Metro	Prior to construction and during tunnel excavation							
WQ-4	**Improvements in State-Owned Right of Way (applies to the Freeway Tunnel Alternative):** During construction of the improvements within State-owned right of way (ROW), the Resident Engineer will require the Construction Contractor to comply with the provisions of the NPDES Permit, Statewide Storm Water Permit, Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation Order No. 2012-0011-DWQ, NPDES No. CAS000003 (Caltrans Permit) or any subsequent permit.	Caltrans Resident Engineer	During construction							

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WQ-5	**Improvements Outside State-Owned Right of Way (applies to the TSM/TDM, BRT, and LRT Alternatives):** During construction of the improvements outside State-owned ROW, in compliance with the Standard Urban Storm Water Mitigation Plan (SUSMP) prepared for the Los Angeles Regional Water Quality Control Board WDRs for Municipal Separate Storm Sewer System Order No. R4-2012-0175, NPDES Permit No. CAS004001, as amended, the Resident Engineer will require the Construction Contractor to prepare and implement a final project-specific SUSMP. The final project-specific SUSMP will include implementation of Site Design, Source Control, and Treatment Control BMPs to the maximum extent practicable. Site Design, Source Control, and Treatment Control BMPs such as tree box filters, catch basins, curb inlet filters, media filters, and bioretention facilities.	Metro Resident Engineer	During construction							
WQ-6	**Improvements in State-Owned Right of Way (applies to the Freeway Tunnel Alternative):** For improvements within State-owned ROW, the Resident Engineer will require the Construction Contractor to prepare and implement Caltrans-approved Design Pollution Prevention BMPs to the maximum extent practicable consistent with the requirements of the Caltrans Permit and Project Planning and Design Guide. Design Pollution Prevention BMPs include preservation of existing vegetation, slope/surface protection systems (permanent soil stabilization and replanting of vegetation), asphalt concrete dikes, toe-of-fill ditches, and downdrains/overside drains.	Caltrans Resident Engineer	During construction							
WQ-7	**Improvements in State-Owned Right of Way (applies to the Freeway Tunnel Alternative):** For improvements within State-owned ROW, the Resident Engineer will require the Construction Contractor to prepare and implement to implement Caltrans-approved Treatment BMPs to the maximum extent practicable consistent with the requirements of the Caltrans Permit and Project Planning and Design Guide. Treatment BMPs include biofiltration swales and gross solid removal devices.	Caltrans Resident Engineer	During construction							
GEOLOGY, SOILS, SEISMIC, AND TOPOGRAPHY										
GEO-1	**Final Geotechnical/Baseline Report (applies to all four Build Alternatives):** During preliminary and final design, a comprehensive geologic and geotechnical investigation will be conducted and design-level geotechnical/baseline reports will be prepared. This report will document and provide design recommendations for seismic hazards such as fault-induced ground rupture, ground shaking, co-seismic deformation, slope instability, seismic settlement, liquefaction, or related secondary seismic impacts that may be present along the alignment of the selected Build Alternative project. The report will also provide design recommendations for geology-related constraints such as settlement, collapse potential, expansion, landslides, erosion, and naturally occurring gas. The performance standard for this report will be the geotechnical design standards of the State of California and the California Department of Transportation (Caltrans), the Federal Highway Administration (FHWA), the Los Angeles County Metropolitan Transportation Authority (Metro), and/or the local jurisdiction, as applicable. The Project Engineer will incorporate the measures recommended in the design-level geotechnical report in the final design and project specifications. The Construction Contractor, Design/Build Contractor, or the Private Public Partnership developer, as applicable, will implement the measures recommended in the design-level geotechnical reports as included in the project design and specifications.	Metro or Caltrans Project Engineer	During preliminary and final design							
GEO-2	**Quality Assurance/Quality Control Plan (applies to all four Build Alternatives):** The Resident Engineer will maintain a quality assurance/quality control (QA/QC) plan during construction (i.e., a Metro QA/QC plan for the Transportation System Management/Transportation Demand Management [TSM/TDM], Bus Rapid Transit [BRT], and Light Rail Transit [LRT] Alternatives, and a Caltrans QA/QC plan for the Freeway Tunnel Alternative). The QA/QC plan will include observing, monitoring, and testing by the Project Geotechnical Engineer and/or the Project Geologist prior to and during construction to confirm that the geotechnical/geologic recommendations from the design-level geotechnical report and standard design and construction practices are fulfilled by the Contractor, or if different site conditions are encountered, appropriate changes are made to accommodate such issues. Comprehensive real time monitoring with geotechnical-tunnel data management software and implementation of an observational approach to construction management will be implemented during construction of the LRT or Freeway Tunnel Alternatives. The Project Geotechnical Engineer and/or the Project Geologist will submit weekly reports to Caltrans or Metro, during all project-related grading, excavation, and construction activities.	Metro or Caltrans Resident Engineer	During construction							
GEO-3	**Tunnel Design (applies to the LRT and Freeway Tunnel Alternatives):** During preliminary and final design, the Metro (LRT Alternative) or Caltrans (Freeway Tunnel Alternative) Project Engineer will make sure that the following measures are included in the comprehensive geologic and geotechnical investigation and the design-level geotechnical/baseline report and the project design and specifications: • A comprehensive geotechnical investigation program will be developed and performed including a	Metro or Caltrans Project Engineer	During preliminary and final design							

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	site-specific seismic hazards assessment and a site-specific fault characterization evaluation. • A robust construction instrumentation and monitoring program will be developed to monitor ground movements on and below the ground surface along the bored tunnel alignments, cut and cover tunnels, and at portal and underground station excavations in real time. Additionally, structures and groundwater levels will also be monitored. Warning and action levels for ground movements will be set so that during construction the contractor will be required to act if action levels are exceeded. • Pre-construction condition surveys of structures along the tunnel alignment will be performed prior to excavation to determine baseline conditions and the potential for damage of the structures along the alignment. • A detailed construction methods assessment will be performed to identify construction methods required to overcome the geologic challenges along the alignment (e.g., variable ground conditions along the alignment, mixed-face conditions, high groundwater heads, and potentially gassy ground conditions). • There is extensive experience with the capability of underground structures to remain stable during earthquake shaking. The tunnels, portals, and underground stations will be designed using established procedures to accommodate earthquake shaking. • A fault crossing design will be evaluated to be able to accommodate the expected fault offset, maintaining the structural integrity of the tunnel lining and preventing the intrusion of surrounding groundwater into the tunnel. The design will meet the performance criteria of the operating agency. • To control gas and groundwater infiltration into the tunnel, a precast concrete segmental tunnel lining with double rubber gasketed joints will be used to provide a watertight and gastight tunnel. Gas-proof and waterproof membranes will be required where applicable for underground stations, cross passages and vault excavations for the fault crossing.									
GEO-4	**Tunnel Construction (applies to the LRT and Freeway Tunnel Alternatives):** It is expected that bored tunnels for either the LRT or Freeway Tunnel Alternative would be constructed using a tunnel boring machine (TBM). During construction, the Project Engineer will select a pre-qualified contractor with experience with large, pressurized-face TBMs. The Project Engineer will ensure that the Construction Contractor implements the following measures during tunnel boring operations: • The contractor is expected to use pressurized-face TBMs for the bored tunnels which are routinely used to successfully control ground losses and the contractor will be required to use a sufficiently-stiff support system for the portal and underground station excavation support to meet specific ground loss guidelines developed in the design phase to minimize surface ground settlement, which would minimize damage to existing structures. Conservative values and techniques will be specified so that ground movements are below the levels that could cause structural damage and the TBM will be operated to comply with the requirements. The contractor will have a contingency plan of action if the instruments read that ground movements are above established action levels. • During tunneling, a positive face pressure will be applied to the tunnel heading as required to limit surface settlement and loss of ground and surface settlement. The ground will be properly conditioned by injecting additives in front of the TBM to allow an adequate face pressure to be maintained. • Ground treatment will be performed in areas identified during the design phase to improve ground conditions and to protect critical structures. • The ground movements at the surface and above and around the tunnel will be monitored in real time. Ground movements will be controlled throughout the construction duration to confirm that ground control is being achieved and ground movements are below the acceptable levels set during design. If ground movements exceed acceptable levels set during design, then additional measures will be required to reduce excavation-induced settlement and lessen or eliminate the ground movement effects on the adjacent structures. Several methods could be employed including: – Permeation grouting – Compaction grouting – Underpinning • The TBM expected to be used for the running tunnels will have a comprehensive and integrated backfill grouting system to limit tail- and shield-related ground losses.	Metro or Caltrans Project Engineer	During construction							

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PALEONTOLOGY									
PAL-1* **Paleontological Mitigation Plan (PMP) and Paleontological Resources Impact Mitigation Program (PRIMP) (applies to all four Build Alternatives):** For the Freeway Tunnel Alternative, during Plans, Specifications, and Estimates (PS&E), the California Department of Transportation (Caltrans) will prepare a PMP that follows the guidelines provided in the Caltrans Standard Environmental Reference Environmental Handbook, Volume 1, Chapter 8 and that includes the measures listed below. For the Transportation System Management/Transportation Demand Management (TSM/TDM), Bus Rapid Transit (BRT), and Light Rail Transit (LRT) Alternatives, during final design, the Los Angeles County Metropolitan Transportation Authority (Metro) will prepare a PRIMP that follows the guidelines of the Society of Vertebrate Paleontology (2010). The PMP and PRIMP will both include the following measures: • A qualified paleontologist or representative will attend the pre-construction meeting. At this meeting, the paleontologist will conduct paleontological resources awareness training, including describing the likelihood of encountering paleontological resources during grading and excavation, what types of resources might be discovered, the roles and authorities of the paleontological resources monitors, the methods used to assess and recover discovered resources, and other information relevant to paleontological resources and the monitoring that will be conducted during project construction. • A preconstruction field survey will be conducted in areas with deposits of high paleontological sensitivity after vegetation and paving have been removed, and any observed surface paleontological resources salvaged prior to the beginning of additional grading. • In general, a qualified paleontological monitor will initially be present on a full-time basis whenever excavation would occur within the sediments that have a high paleontological sensitivity rating, and on a spot-check basis when excavating in sediments that have a low sensitivity rating. No monitoring is generally necessary in deposits with no paleontological sensitivity, such as Artificial Fill and Holocene Alluvial Fan Deposits. However, the specific monitoring levels and locations will be developed according to the final design plans and take into account the excavation methods and depths, the thickness of any Artificial Fill and/or Holocene Alluvial Fan Deposits present in the project area, and the sensitivity of the deposits underlying those two geologic units. • Full-time monitoring may be reduced to a part-time or spot-check basis if no resources are being discovered in sediments with a high sensitivity rating (monitoring reductions, when they occur, will be determined by the qualified Principal Paleontologist in consultation with the Resident Engineer). The monitor will inspect fresh cuts and/or spoils piles to recover paleontological resources and/or screen wash for smaller fossils, depending on the material available for inspection. The monitor will be empowered to temporarily divert construction equipment away from the immediate area of the discovery. The monitor will be equipped to rapidly stabilize and remove fossils to avoid prolonged delays to construction schedules. If large mammal fossils or large concentrations of fossils are encountered, heavy equipment will be used to assist in the removal and collection of large materials. • Native sediments of high and low sensitivity will occasionally be spot-screened on site through 1/8- to 1/20-inch mesh screens to determine whether microvertebrates or other small fossils are present. If small fossils are encountered, sediment samples (up to 3 cubic yards, or 6,000 pounds) will be collected and processed through 1/20-inch mesh screens to recover additional fossils. • Recovered specimens will be prepared to the point of identification and permanent preservation. This includes the sorting of any washed mass samples to recover small invertebrate and vertebrate fossils, the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and storage cost, and the addition of approved chemical hardeners/stabilizers to fragile specimens. • Specimens will be identified to the lowest taxonomic level possible and curated into an institutional repository with retrievable storage. The repository institutions usually charge a one-time fee based on volume, so removing surplus sediment is important. The repository institution may be a local museum or university with a curator who can retrieve the specimens on request. Caltrans requires that a draft curation agreement be in place with an approved curation facility prior to the initiation of any paleontological monitoring or mitigation activities. • For the Freeway Tunnel Alternative, a Paleontological Mitigation Report will be prepared and submitted to Caltrans to document completion of the mitigation plan. For the TSM/TDM, BRT, and LRT Alternatives, a final report of findings will be prepared and submitted to Metro to document completion of the mitigation program.	Caltrans or Metro	Prior to and during construction							

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	Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
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HAZARDOUS WASTE AND MATERIALS										
HW-1	**Striping and Pavement Markings (applies to all four Build Alternatives):** During Plans, Specifications and Estimates (PS&E), the Project Engineer will ensure that specifications related to the sampling, handling, and treatment of pavement markings are included and implemented during construction. A qualified contractor will sample and test the striping paint along roads to be disturbed as part of the project for lead chromate. The field and analytical data obtained during this study will be used to provide a review of the sampling locations and descriptions, a summary of the analytical results, and recommendations for striping paint removal, containment, and off-site transportation and disposal, as appropriate. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.	Metro or Caltrans Project Engineer	During PS&E and prior to construction							
HW-2	**Transformers (applies to the Transportation System Management/Transportation Demand Management [TSM/TDM], Bus Rapid Transit [BRT], and Light Rail Transit [LRT] Alternatives):** During PS&E, the Project Engineer will ensure the specifications related to the handling and treatment of transformers are included and implemented if transformer removal is required. The Construction Contractor will contact Southern California Edison prior to handling or removal of electric transformers. Should utility poles require removal, the Resident Engineer will require the Construction Contractor to conduct additional sampling and analysis to determine the presence of creosote (often associated with the preservation of wooden electric poles) and appropriate disposal methods. Any hazardous transformers or poles that are disturbed/removed will be disposed of in accordance with the California Health and Safety Code.	Metro or Caltrans Project Engineer	During PS&E and during construction							
HW-3	**Lead Compliance Plan (applies to all four Build Alternatives):** Prior to construction, the Project Engineer will ensure that the specifications related to the testing and handling of soils with aerially deposited lead (ADL) are included during PS&E and implemented during construction. The Construction Contractors responsible for excavating, transporting, or stockpiling soil will prepare a Lead Compliance Plan in accordance with the California Department of Transportation (Caltrans) Code of Safety Practices (Freeway Tunnel Alternative), the California Code of Regulations (all four Build Alternatives), and California Occupational Safety and Health Administration (all four Build Alternatives) standards. The Lead Compliance Plan will address the presence of ADL in the soils within the project area and the health and safety of construction workers.	Metro or Caltrans Project Engineer	Prior to construction							
HW-4	**Aerially-Deposited Lead Investigation (applies to all four Build Alternatives):** During PS&E, the Project Engineer will ensure the specifications related to soil sampling and handling of soils with ADL are included and implemented prior to any site preparation, disturbance, grading, and construction. The qualified contractor will conduct soil sampling for ADL in unpaved locations adjacent to existing roadways within the project alignment. The analytical results of the soil sampling will determine the appropriate handling of the soil in those areas and the disposal of surplus materials. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.	Metro or Caltrans Project Engineer	During PS&E and prior to site preparation, disturbance, grading, and construction							
HW-5	**Demolition of Structures and Bridges (applies to all four Build Alternatives):** The Project Engineer will ensure the specifications related to the sampling, handling, treatment and disposal of asbestos-containing materials (ACM), lead-based paint (LBP), and equipment containing chlorofluorocarbons (CFCs) for properties planned for demolition are included during PS&E and implemented after property acquisition and prior to demolition. The qualified contractor will assess structures planned for demolition within the project area for the possible presence of ACM, LBP, and equipment containing CFCs. These studies will be conducted by trained and/or licensed professionals and will comply with the United States Environmental Protection Agency (EPA), National Emission Standards for Hazardous Air Pollutants 40 Code of Federal Regulations (CFR), South Coast Air Quality Management District (SCAQMD) Rule 1403, Housing and Urban Development, and California Department of Public Health guidelines. The results of these studies will provide a description of the ACM, LBP, and CFC locations, estimated quantity, and recommendations for removal, containment, and off-site transportation and disposal. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.	Metro or Caltrans Project Engineer	During PS&E and after property acquisition and prior to demolition							
HW-6	**SCAQMD Rule 1403 (applies to all four Build Alternatives):** The Project Engineer will ensure the specifications related to air pollution control during demolition or renovation of a structure or bridge are included during PS&E and implemented prior to demolition or renovation of a structure or bridge. The Construction Contractor will notify the SCAQMD and submit the required fees at least 10 days prior to proceeding with the demolition work (refer to SCAQMD Rule 1403). Failure to do so may result in Los Angeles County Metropolitan Transportation Authority (Metro) or Caltrans being cited for regulatory	Metro or Caltrans Project Engineer	During PS&E and prior to any demolition or renovation of a structure or bridge							

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	noncompliance. Notification would fall under Section 7-1.01F, Air Pollution Control, and Section 7-1.04, Permits and Licenses of the Standard Specifications. The Construction Contractors will be required to adhere to the requirements of SCAQMD Rule 1403 during renovation/demolition activities. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.									
HW-7	**Phase II Site Investigations (applies to all four Build Alternatives):** The Project Engineer will ensure the specifications related to the handling, treatment, and disposal of hazardous wastes are included during PS&E and implemented prior to Phase II Site Investigations to determine if special handling, treatment, or disposal provisions associated with hazardous wastes will be required for the project. A qualified contractor will conduct Phase II Site Investigations at the following locations: 1. Former Circle K Stores (Subject Property 1), 1000 West Valley Boulevard, Alhambra 2. Fashion Master Cleaners (Subject Property 2), 1433 Huntington Drive, South Pasadena 3. Railroad Right of Way (ROW) (Subject Property 3) north of Valley Boulevard and State Route 710 (SR 710) and immediately south of Alhambra Avenue/Mission Road 4. Elite Cleaners (Subject Property 4), 1310 Fair Oaks Avenue, Alhambra 5. Blanchard Landfill (Subject Property 5), between Blanchard Avenue and McBride Avenue at 4531 East Blanchard Street, Monterey Park 6. Mercury Die/Mission Corrugated (Subject Property 6), 3201 West Mission Road, Alhambra The Phase II Site Investigations will be performed prior to completion of the PS&E phase of the project for properties that may be potentially impacted by the selected Build Alternative. Based on the results of the Phase II Site Investigations, additional soil and/or groundwater sampling as well as removal and/or treatment of soil and/or groundwater prior to construction may be necessary. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.	Metro or Caltrans Project Engineer	Prior to completion of the PS&E phase							
HW-8*	**Soils Adjacent to the Railroad ROW (applies to the TSM/TDM Alternative):** The Project Engineer will ensure the specifications related to the sampling and handling of soils adjacent to the railroad ROW are included during PS&E and implemented prior to disturbance of soils adjacent to the railroad ROW in the Build Alternative ROW. A qualified contractor will sample those soils to determine whether they require special handling and disposal.	Metro or Caltrans Project Engineer	During PS&E and prior to disturbance of soils adjacent to the railroad ROW							
HW-9	**Tunnel Construction Activities (applies to the LRT and Freeway Tunnel Alternatives):** The Project Engineer will ensure the specifications related to sampling and handling of soils and water during tunnel excavation and boring activities are included during PS&E and implemented prior to the initiation of tunnel excavation and boring. The Construction Contractor will set up a temporary stockpiling area at the construction portals so that excavated material can be sampled as it is excavated. A Sampling and Analysis Plan will be required so that the excavated material is classified properly and so the correct handling methods and the appropriate disposal facility are selected according to Caltrans and State regulatory requirements. Water, including construction water, groundwater, and wet weather flows, will also be sampled. If necessary, the water can be treated at the construction portal areas by the Construction Contractor prior to discharge following an appropriate approved discharge permit into the sewer system; typically a Construction Contractor is required to have basic water treatment capabilities at the construction site. If the water cannot be treated to meet sewer discharge requirements or if the volume of water for disposal exceeds the discharge permit's capacity, it may need to be transported to an offsite disposal location. Disposal of all materials would need to meet all local, State, and federal regulations, where applicable.	Caltrans or Metro Project Engineer	During PS&E and during construction							
HW-10	**Unknown Hazards (applies to all four Build Alternatives):** The Project Engineer will ensure the specifications related to the monitoring of soil excavations for visible soil staining, odor, and the possible presence of unknown hazardous material sources are included during PS&E and implemented during construction. The Construction Contractor will monitor soil excavations for visible soil staining, odor, and the possible presence of unknown hazardous material sources. The Construction Contractor will have field monitoring equipment (e.g., photoionization detector) on site to facilitate the timely detection of potentially hazardous conditions in the field. If signs of potential impact (odors, discolored soil, etc.) are noted or observed during construction activity, sampling and analysis should be conducted. Soil samples should be analyzed for total petroleum hydrocarbons with carbon chain analysis using EPA Method 8015B and volatile organic compounds by EPA Method 8260B where run-off may have collected. If other	Metro or Caltrans Project Engineer	During PS&E and during construction							

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	hazardous materials contamination or sources are suspected or identified during project construction activities, an environmental professional will evaluate the course of action required. This course of action will follow the Unknown Hazards Procedures described in Chapter 7 of the Caltrans Construction Manual (August 2006) for areas within State-owned ROW. For improvements outside the State-owned ROW, applicable State and federal regulations will be followed during construction activities and if any impacts are identified. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.									
AIR QUALITY										
AQ-1	**Fugitive Dust (applies to all four Build Alternatives):** During clearing, grading, earthmoving, or excavation operations, the Resident Engineer (will require the construction contractor to control excessive fugitive dust emissions by regular watering or other dust preventive measures using the following procedures, as specified in the South Coast Air Quality Management District Rule 403. The Construction Contractor will be required to: • Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites during workdays, weekends, holidays, and windy conditions. • Install wind fencing, phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions. • When hauling material and operating non-earthmoving equipment, prevent spillage and limit off-road speeds to 15 miles per hour (mph). Limit speed of off-road earthmoving equipment to 10 mph.	Metro or Caltrans Resident Engineer	During clearing, grading, earthmoving, or excavation							
AQ-2	**Equipment and Vehicle Emissions (applies to all four Build Alternatives):** During all site preparation, grading, excavation, and construction, either the Resident Engineer for the TSM/TDM, BRT, and LRT Alternatives or the Resident Engineer for the Freeway Tunnel Alternative, as applicable, will require the Construction Contractor to: • Reduce use, trips, and unnecessary idling from heavy equipment. • Use solar-powered rather than diesel-powered changeable message signs. • Obtain electricity from power poles rather than from generators where feasible. • Maintain and tune engines per manufacturer's specifications to perform at United States Environmental Protection Agency (EPA) certification levels and at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications. • Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations. • Use new, clean (diesel or retrofitted diesel) equipment meeting the most stringent applicable federal or State standards and commit to the best available emissions control technology. Use Tier 3, or higher, engines for construction equipment with a rated horsepower exceeding 75. Use Tier 2, or higher, engines for construction equipment with a rated horsepower of less than 75. If non-road construction equipment that meets or exceeds Tier 2 or 3 engine standards is not available, the Construction Contractor will be required to use the best available emissions control technologies on all equipment. • Utilize EPA-registered particulate traps and other appropriate controls where suitable to reduce emissions of diesel particulate matter and other pollutants at the construction site.	Metro or Caltrans Resident Engineer	During site preparation, grading, excavation, and construction							
AQ-3	**Diesel Fuel Emissions and Sensitive Receptors (applies to all four Build Alternatives):** Prior to any site disturbance, either the Resident Engineer for the TSM/TDM, BRT, and LRT Alternatives or the Resident Engineer (for the Freeway Tunnel Alternative), as applicable, will require the Construction Contractor to: • Meet EPA diesel fuel requirements off road and on highway and, where appropriate, use alternative fuels such as natural gas and electric. • Identify sensitive receptors in the project area (e.g., residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes) and specify the means by which impacts to these populations will be minimized. For example, locate construction equipment and staging zones away from sensitive receptors and away from fresh air intakes to buildings and air conditioners.	Metro or Caltrans Resident Engineer	Prior to site disturbance							

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AQ-4	**California Department of Transportation (Caltrans) Standard Specifications for Construction (applies to the Freeway Tunnel Alternative):** During all site preparation, grading, excavation, and construction, the Resident Engineer will require the Construction Contractor to adhere to Caltrans Standard Specifications for Construction (Sections 14-9.03 and 18 [Dust Control] and Section 39-3.06 [Asphalt Concrete Plant Emissions]).	Caltrans Resident Engineer	During site preparation, grading, excavation, and construction							
AQ-5	**Metro Green Construction Policy (applies to the TSM/TDM, BRT, and LRT Alternatives):** Metro will require the Construction Contractors to comply with its "Green Construction Policy" (adopted 2011, or more current) related to the use of greener, less polluting construction equipment and vehicles, and the implementation of best practices to meet or exceed air quality emission standards.	Metro	During construction							
NOISE AND VIBRATION										
N-1	**Construction in State-Owned Rights of Way (ROW) (applies to the Freeway Tunnel Alternative only):** During construction of the Freeway Tunnel Alternative, the California Department of Transportation (Caltrans) will require the Construction Contractor to control noise from construction activities within State-owned ROWs in conformance with Caltrans Standard Specifications Section 14 8.02, "Noise Control." The noise level from the Contractor's operations between the hours of 9:00 p.m. and 6:00 a.m. will not exceed 86 A-weighted decibels (dBA) at a distance of 50 feet. In addition, the Construction Contractor will equip all internal combustion engines with the manufacturer-recommended mufflers and will not operate any internal combustion engine on the job site without the appropriate muffler.	Caltrans	During Construction							
N-2	**Construction Outside State-Owned ROW (applies to the Transportation System Management/Transportation Demand Management [TSM/TDM], Bus Rapid Transit [BRT] and Light Rail Transit [LRT] Alternatives):** During construction outside State-owned ROWs, the Los Angeles County Metropolitan Transportation Authority (Metro) will require the Construction Contractors to comply with the hours of operation, the allowable noise levels at specified distances from construction activities, and other noise reduction/avoidance requirements in the applicable jurisdiction's Municipal Code and/or Noise Ordinance.	Metro	During Construction							
N-3	**Tunnel Boring Machine (applies to the LRT and Freeway Tunnel Alternatives only):** Metro (LRT Alternative) or Caltrans (Freeway Tunnel Alternative), as appropriate, will require the Construction Contractor to maintain machinery in good working order during all tunnel boring activities.	Metro or Caltrans	During Construction							
N-4	**Supply and Muck Trains (Applies to the LRT and Freeway Tunnel Alternatives only):** The Metro (LRT Alternative) or Caltrans (Freeway Tunnel Alternative) Project Engineer will include the following measures in the Plans, Specifications, and Estimates (PS&E) if supply or muck trains are used to remove spoils: • **Resilient Mat:** A resilient mat system will be used to support and fasten the tunnel train tracks to reduce the ground-borne noise by at least 4 dBA.	Metro or Caltrans Project Engineer	During the Plans, Specifications, and Estimates phase							
N-5	**Ground-Borne Noise and Vibration:** For the TSM/TDM and BRT Alternatives, Caltrans or Metro will not allow the Construction Contractor to use pile driving or other activities that generate high levels of vibration during the construction of the TSM/TDM or BRT Alternatives. Metro will require the Construction Contractor to carry out construction activities for the LRT Alternative in compliance with applicable Federal Transit Administration (FTA) criteria and guidelines as well as any applicable local regulations related to ground-borne noise and vibration. Caltrans will require Construction Contractors to carry out construction activities for the Freeway Tunnel Alternative in compliance with applicable Federal Highway Administration (FHWA) and Caltrans guidelines as well as any applicable local regulations related to ground-borne noise and vibration. The Project Engineer will develop specific property line vibration limits during final design for inclusion in the construction vibration specifications. Metro (LRT Alternative) or Caltrans (Freeway Tunnel Alternative), as appropriate, will require the Construction Contractors to conduct regular vibration monitoring during construction to verify compliance with those limits. The following vibration control and minimization measures are anticipated to be applied during construction to meet the vibration limits: • The Project Engineer may incorporate comprehensive construction vibration specifications in all construction bid documents. • The Resident Engineer will require the Construction Contractor to initially conduct vibration monitoring daily at the nearest representative affected buildings during the startup of tunnel boring. The vibration measurements will be measured in the vertical direction on the ground surface and measured during peak vibration-generating construction activities. If the measured vibration data are	Metro	During Construction							

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	in compliance with the vibration limits (either in terms of velocity levels in dB re: 1 micro-inch/second or peak particle velocity in inches/second), then vibration monitoring may be performed weekly instead of daily monitoring, on approval by Metro. • The Resident Engineer will require the Construction Contractor to use pre-drilled holes for soldier piles (instead of driving them into the ground) in areas where the LRT Alternative station sites are within 200 feet of residential receptors. The use of soil mix wall for excavation methods could be used in place of pile driving activities; if soldier piles are to be placed into a soil-mix wall, this placement would be done after the excavation of the wall, so the soldier piles would not be driven into the ground. • The Resident Engineer will require the Construction Contractor to perform vertical direction vibration root mean square monitoring on the ground at the nearest representative residential structure during supply train operations in the tunnels. These measurements will be repeated at approximately 1-mile intervals along the tunnel construction. • The Resident Engineer will require the Construction Contractor to implement a public notification program to alert residents well in advance of construction activities that may result in vibration effects. • The Resident Engineer will require the Construction Contractor to implement a complaint resolution procedure to rapidly address any noise and vibration problems that may develop during construction. • The Resident Engineer will require the Construction Contractor to reduce muck train speeds in the vicinity of noise-sensitive receptors if complaints occur after the supply train is operational, reduce train speeds in the vicinity of noise-sensitive receptors, use ballast mats underneath the train rails, and/or use a conveyor system to remove spoils.									
N-6	**Grifols Vibration Study:** For the TSM/TDM Alternative, Caltrans or Metro will not allow the Construction Contractor to use pile driving or other activities that generate high levels of vibration during the construction of the TSM/TDM Alternative. During PS&E for the Freeway Tunnel Alternative, the Caltrans Project Engineer will prepare a site-specific evaluation of potential airborne dust due to vibration associated with freeway tunnel construction at the Grifols facility. The analysis will use more detailed engineering and soil conditions developed during final design. The Caltrans Project Engineer will include the results of the evaluation and any specific measures to ensure that vibration from the Project does not affect the clean room's compliance with the International Organization for Standardization (ISO) standards for airborne dust in clean rooms, if found to affect clean room compliance with ISO airborne dust standards, will be incorporated into the PS&E. During PS&E for the LRT Alternative, the Metro Project Engineer will prepare a site-specific evaluation of potential airborne dust due to vibration associated with the construction of the LRT Alternative at the Grifols facility based on more detailed engineering and soil conditions developed during final design. The Metro Project Engineer will include the results of the evaluation, and any specific measures to address vibration, if found to affect clean room operation, will be incorporated into the PS&E.	Caltrans Project Engineer	During the Plans, Specifications, and Estimates phase							
N-7	**Vibration and Ground-Borne Noise during Operation (LRT Alternative):** The Metro Project Engineer, during final design of the LRT Alternative, will conduct additional field testing and analysis for the specific identification of ground-borne noise impacts and will incorporate the vibration isolation system or systems to comply with FTA ground-borne noise level criteria. The vibration isolation systems could include one or a combination of the following systems: • Highly resilient direct fixation (HRDF) fasteners (e.g., Egg Type DF fastener) • Rail suspension fastener (RSF) system (an example of which is the Panguard fastener) • Isolated slab track system (IST) – concrete slab poured on top of an continuous elastomeric mat • Floating slab track system (FST) – concrete slab supported by discrete elastomeric pads	Metro Project Engineer	During final design of the LRT Alternative							
ENERGY										
E-1	**Construction Efficiency Plan (applies to all four Build Alternatives):** As part of the Plans, Specifications, and Estimates phase, the Project Engineer will prepare a construction efficiency plan, which may include the following: • Reusing existing rail, steel, and lumber wherever possible, such as for falsework, shoring, and other applications during the construction process. • Recycling of asphalt taken up from roadways, if practicable and cost-effective. • Using newer, more energy-efficient equipment where feasible and maintenance of older construction	Metro or Caltrans Project Engineer	During the Plans, Specifications, and Estimates phase							

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	equipment to keep it in good working order. • Promoting scheduling of construction operations to efficiently use construction equipment (e.g., only haul waste when haul trucks are full and combine smaller dozer operations into a single comprehensive operation where possible). • Promoting construction employee carpooling.									
NATURAL COMMUNITIES										
NC-1	**Riparian/Riverine Habitat Protection (applies to the Freeway Tunnel Alternative):** Prior to any construction or ground-disturbing activities, the California Department of Transportation (Caltrans) will require the Construction Contractor to place a highly visible barrier such as Environmentally Sensitive Area (ESA) fencing or other marker around any riparian or riverine habitats to be preserved. No grading or fill activities will be authorized within the marked areas. No structures of any kind, or incidental storage of equipment or supplies, will be allowed within the marked areas. Silt fence barriers will be installed along the ESA boundary to prevent inadvertent deposition of fill in the ESAs.	Caltrans	Prior to construction or ground-disturbing activities							
NC-2	**Construction Plan (applies to the Freeway Tunnel Alternative):** Caltrans will require the Construction Contractor to identify designated areas in developed or nonsensitive upland habitat areas on the construction plans for equipment maintenance, staging, fueling, and other related activities. Those areas will be selected such that spills and runoff would not enter riparian or riverine habitats or any fenced ESAs.	Caltrans	Prior to construction							
NC-3	**Compliance Monitoring (applies to the Freeway Tunnel Alternative):** Caltrans will require the Construction Contractor to have a qualified biologist monitor during construction in the vicinity of riparian and riverine areas consistent with the Section 404 permit (refer to Measure WET-1) or the Streambed Alternation Agreement (refer to Measure WET-2) issued for the project to ensure that all avoidance and minimization measures are properly applied and followed.	Caltrans	During construction							
WETLANDS AND OTHER WATERS										
WET-1*	**United States Army Corps of Engineers (USACE) Section 404 Dredge and Fill Permit (applies to the Freeway Tunnel Alternative):** Areas identified as being under the jurisdiction of the USACE will be avoided wherever possible. The California Department of Transportation (Caltrans) will obtain a Dredge and Fill Permit from the USACE if any USACE jurisdictional areas are to be impacted and prior to approval of Plans, Specifications, and Estimates (PS&E). The measures specified in the Dredge and Fill Permit would minimize temporary and permanent project impacts to drainages and habitats subject to USACE jurisdiction. In addition, commonly used best management practices (BMPs) will be used to minimize project impacts. For streams, compensatory mitigation at a minimum 1:1 ratio would be required to meet the "no net loss" national goal. Compensatory measures may include restoration of previously existing waters, enhancement of the functions of existing waters, establishment of new waters, preservation of existing aquatic sites, participation in an in-lieu fee program, and/ or participation in a mitigation bank approved by the USACE.	Caltrans	During the Plans, Specifications, and Estimates phase							
WET-2*	**Streambed Alteration Agreement (SAA) (applies to the Freeway Tunnel Alternative):** Areas identified as being under the jurisdiction of the California Department of Fish and Wildlife (CDFW) will be avoided wherever possible. Caltrans will obtain an SAA from the CDFW under Section 1600 of the Department of Fish and Game Code if any CDFW jurisdictional areas are to be impacted and prior to approval of PS&E. The measures specified in the SAA would minimize temporary and permanent project impacts to drainages and habitats subject to CDFW jurisdiction. In addition, commonly used BMPs will be used to minimize project impacts. Those measures may include restoration of previously existing waters, enhancement of the functions of existing waters, establishment of new waters, preservation of existing aquatic sites, and/or participation in a mitigation bank approved by the CDFW**.**	Caltrans	During the Plans, Specifications, and Estimates phase							
WET-3*	**Section 401 Water Quality Certification (applies to the Freeway Tunnel Alternative):** Areas identified as being under the jurisdiction of the Regional Water Quality Control Board (RWQCB) will be avoided wherever possible. Caltrans will obtain a Section 401 Water Quality Certification from the RWQCB if any RWQCB jurisdictional areas are to be impacted and prior to approval of the PS&E. In addition, commonly used BMPs will be used to minimize project impacts. Compensatory mitigation may be identified to offset temporary and permanent impacts to RWQCB jurisdictional waters. The RWQCB has published preliminary draft compensatory mitigation requirements to ensure achievement of the RWQCB's no net loss and long-term net gain policy for aquatic resources. Mitigation ratios would be determined in consultation with the RWQCB at the time of issuance of the certification. The measures specified in the Section 401 Water Quality Certification would minimize project impacts to drainages and habitats subject to RWQCB jurisdiction. Those measures may include restoration of previously existing waters, enhancement of the functions of existing waters, establishment of new waters, preservation of existing	Caltrans	During the Plans, Specifications, and Estimates phase							

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	aquatic sites, and/or participation in a mitigation bank approved by the RWQCB.									
PLANT SPECIES										
PS-1	**Coulter's Goldfields (applies to the LRT Alternative):** Should the Light Rail Transit (LRT) Alternative be selected and documentation of the planting efforts of the population of Coulter's goldfields in the Biological Study Area (BSA) be unavailable, the Los Angeles County Metropolitan Transportation Authority (Metro) will address the effects of the LRT Alternative on the Coulter's goldfields population as follows: • The disturbance of this population will be avoided to the greatest extent possible during final design. Prior to any construction or ground-disturbing activities near the population, the Resident Engineer will require the construction contractor to plan a highly visible barrier such as Environmentally Sensitive Area (ESA) fencing or other marker near or around any part of the population that will not be directly impacted to avoid effects on that part of the population. No access or work will be authorized within the ESA. • The Resident Engineer will require the Construction Contractor to have a qualified biologist monitor construction in the vicinity of the ESA for the duration of any ground-disturbing activities in the vicinity of the ESA to ensure that indirect effects to the population are minimized.	Metro or Caltrans	Prior to and during construction or ground-disturbing activities							
PS-2	**Coulter's Goldfields (applies to Freeway Tunnel Alternative):** Should the Freeway Tunnel Alternative be selected and documentation of the planting efforts of the population of Coulter's goldfields in the BSA be unavailable, the California Department of Transportation (Caltrans) will address the effects of the Freeway Tunnel Alternative on the Coulter's goldfields population as follows: • The removal of this population will be avoided to the greatest extent possible during final design. If during Plans, Specifications and Estimates (PS&E), direct impacts to Coulter's goldfields is avoided by project design, prior to any construction or ground-disturbing activities near the population, the Resident Engineer will require the construction contractor to plan a highly visible barrier (e.g., Environmentally Sensitive Area [ESA] fencing or other marker) near or around any part of the population that will not be directly impacted to avoid effects on that part of the population. No access or work will be authorized within the ESA. • The Resident Engineer will require the Construction Contractor to have a qualified biologist monitor construction in the vicinity of the ESA for the duration of any ground-disturbing activities in the vicinity of the ESA to ensure that indirect effects to the population are minimized. • Should removal of the Coulter's goldfields population be required, Caltrans will consult with the California Department of Fish and Wildlife (CDFW) to determine the appropriate mitigation-to-impact ratio for this population. Mitigation may include replacement within a State-owned right of way (ROW). Caltrans will coordinate with the CDFW prior to construction to determine the appropriate mitigation actions required and to ensure the actions are carried out.	Caltrans Resident Engineer	Prior to and during construction or ground disturbing activities							
PS-3*	**Southern California Black Walnut (applies to the Freeway Tunnel Alternative):** The Caltrans Resident Engineer will require the Construction Contractor to implement the following to address the effects of the Freeway Tunnel Alternative on the Southern California black walnut: • The removal and/or disturbance of this individual tree will be avoided to the greatest extent possible during final design and construction. A qualified arborist will establish the dripline of this tree, which will be identified on the design plans, and an ESA will be established. • Prior to any construction or ground-disturbing activities, the Resident Engineer will require the Construction Contractor to plan a highly visible barrier (e.g., ESA fencing or other marker) near or around any part of the population that will not be directly impacted to avoid effects on that part of the population. No access or work will be authorized within the ESA. • The Resident Engineer will require the Construction Contractor to have a qualified arborist monitor construction within the vicinity of any established ESA for the duration of any ground-disturbing activities.	Metro or Caltrans Resident Engineer	Prior to construction or ground disturbing activities							
PS-4	**Trees Protected by City and/or County Ordinances (applies to the four Build Alternatives):** The following will be required to address project effects on protected trees: • Prior to construction or ground-disturbing activities, the Resident Engineer will require the Construction Contractor to plan a highly visible barrier (e.g., ESA fencing or other marker) near or around any part of the population that will be placed around the dripline or trunk of protected trees within and adjacent to the limits of disturbance such that no work will occur within the protected	Metro or Caltrans	During construction							

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	area. If this is infeasible, the Resident Engineer will require the Construction Contractor to obtain appropriate tree removal permits for each impacted protected tree from the appropriate local agency (i.e., Cities of Los Angeles, Pasadena, South Pasadena, and Rosemead, or Los Angeles County). • Compensatory mitigation may be required at the discretion of the agency with jurisdiction over protected trees; therefore, the compensatory mitigation would vary by jurisdiction. Compensation will be provided consistent with the requirements of the appropriate local agency's tree protection ordinance.									
ANIMAL SPECIES										
AS-1	**Bats (applies to all four Build Alternatives):** Due to the presence of marginally suitable bridge roosting habitat within the TSM/TDM and Freeway Tunnel Alternatives, the following avoidance and minimization efforts will be implemented: • The Los Angeles County Metropolitan Transportation Authority (Metro) (TSM/TDM Alternative) or the California Department of Transportation (Caltrans) (Freeway Tunnel Alternative) will have preconstruction bat surveys conducted by a qualified bat biologist prior to ground-disturbing and/or bridge construction activities. The surveys will be conducted at least 30 days prior to the start of project construction activities regardless of the time of year. The most effective dates to determine the presence of day or maternity roosts is during the breeding season (March–September). If it is determined during the preconstruction bridge surveys that a structure is being used as a bat roost site, work will be avoided within 100 feet (ft) of the roost site. No work will take place between 10:00 p.m. and sunrise, and airspace access to the bridge will be restricted. Lights will not be used under the structure, foot traffic and equipment use will not be allowed under the structure, and combustion equipment will not be parked or operated under the structure. If a structure is determined to be used by roosting bats, a qualified bat biologist will be on site for the duration of construction activities that may impact bats. If it is determined that the above activities cannot be avoided, bats will be excluded from the bridge using California Department of Fish and Wildlife (CDFW) approved exclusionary devices to the extent necessary to prevent mortality to the colony. Exclusion will take place prior to April 15. If a structure is determined to be in use by roosting bats, CDFW will be contacted to determine additional, appropriate avoidance and minimization measures, including exclusion measures. Due to the presence of potentially impacted trees that may provide roosting habitat within the BRT, LRT, and Freeway Tunnel Alternatives, the following avoidance and minimization efforts will be implemented: • Metro (TSM/TDM Alternative, BRT Alternative, and LRT Alternative) or Caltrans (Freeway Tunnel Alternative) will have preconstruction bat surveys conducted by a qualified bat biologist prior to the removal of any large trees containing cavities that may be suitable for roosting. A qualified bat biologist will inspect the tree for roosting bats prior to tree removal. If a bat is found, tree removal will be postponed until the bat has vacated the tree, at least 24 hours. As tree-roosting bats often switch roosting trees from night to night, clearance of the tree by a qualified bat biologist immediately prior to tree removal would serve to avoid and minimize any direct impact or mortality to tree roosting bat species.	Metro or Caltrans	Prior to ground-disturbing and/or bridge construction activities							
AS-2	**Monarch Butterfly (applies to all four Build Alternatives):** Metro (TSM/TDM, Bus Rapid Transit [BRT], and Light Rail Transit [LRT] Alternatives) or Caltrans (Freeway Tunnel Alternative) will require the Construction Contractor to implement the following avoidance and minimization measures in areas of potentially suitable habitat for winter roosting aggregations of monarch butterfly and species' egg, caterpillar, and pupal stages: • If eucalyptus trees are to be removed or trimmed between October and March, preconstruction surveys for winter roosting aggregations of monarchs will be conducted by a qualified biologist. • If a winter roosting aggregation is discovered, the area will be flagged and posted with Environmentally Sensitive Area (ESA) signs. If practicable, activities within this area will be avoided until the aggregation disperses in spring. • If any mature trees are to be removed or trimmed between September and October, preconstruction surveys for overnight fall roosts of monarchs will be conducted by a qualified biologist. • If an overnight fall roost is discovered, the area will be flagged and posted with ESA signs by a qualified biologist. If practicable, activities within this area will be avoided until the fall roosting group disperses (during the day).	Metro or Caltrans	Prior to and during construction							

* Mitigation for significant impacts under CEQA.

	Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
	• Preconstruction surveys for milkweed plants that may support monarch eggs, caterpillars, or pupae will be conducted within grassland and riparian areas by a qualified biologist. • Any milkweed plants found that may support monarch eggs, caterpillars, or pupae will be flagged and ESA signs posted by a qualified biologist. Construction in the area will be avoided and minimized.									
AS-3	**Amphibians and Reptiles Avoidance and Minimization Measures (applies to all four Build Alternatives):** Metro (TSM/TDM, BRT, and LRT Alternatives) will require the Construction Contractor to implement the following avoidance and minimization measures in areas of potentially suitable nonnative grassland and disturbed/developed habitat for western spadefoot and San Bernardino ring-necked snake: • Potentially suitable habitat for these species will be avoided to the greatest extent possible during construction and design. Staging areas will be confined to existing disturbed areas to the greatest extent possible. • Preconstruction surveys will be conducted in areas of potentially suitable habitat by a qualified biologist. • If any individuals of these species are determined to be present during the preconstruction surveys, CDFW will be notified and translocation will be conducted by a qualified biologist. • The translocation process will be conducted in accordance with the guidelines outlined by CDFW. Caltrans (Freeway Tunnel Alternative) will require the Construction Contractor to implement the following avoidance and minimization measures in areas of potentially suitable wetland complex, nonnative grassland, and disturbed/developed habitat for coast range newt, western spadefoot, two-striped garter snake, western pond turtle, San Bernardino ring-necked snake, and South Coast garter snake: • Potentially suitable habitat for these species will be avoided to the greatest extent possible during construction and design. Staging areas will be confined to existing disturbed areas to the greatest extent possible. • Preconstruction surveys will be conducted in areas of potentially suitable habitat by a qualified biologist. • If any individuals of these species are determined to be present during the preconstruction surveys, CDFW will be notified and translocation will be conducted by a qualified biologist. • The translocation process will be conducted in accordance with the guidelines outlined by CDFW.	Metro or Caltrans	Prior to and during construction							
AS-4	**Other Special-Status Bird Avoidance and Minimization Measures (applies to all four Build Alternatives):** Metro (TSM/TDM, BRT, and LRT Alternatives) or Caltrans (Freeway Tunnel Alternative) will require the Construction Contractor to implement the following avoidance and minimization efforts for Cooper's hawk, Allen's hummingbird, Costa's hummingbird, Lawrence's goldfinch, merlin, Nuttall's woodpecker, oak titmouse, and any nesting or breeding birds of prey protected under California Fish and Game Code Sections 3503 and 3503.5, and any other nesting or breeding birds protected under the Migratory Bird Treaty Act (MBTA): • The removal and/or disturbance of trees or suitable roosting shrubbery will be minimized to the greatest extent possible. • Any activities in which tree or native vegetation trimming/removal or construction on bridges may occur will take place outside of the nesting bird season (February 1–August 31) where feasible. • Should bridge construction be required during the nesting season, a qualified biologist will be required to inspect the construction site prior to February 1 and be present during bird nest removal. The presence of the qualified biologist is required to inspect the construction site and confirm that any nests potentially occurring are unoccupied or inactive prior to nest removal, as removing active nests violates state and federal law • If avoidance of these activities during this period is not possible, preconstruction surveys by a qualified biologist will be conducted to identify any existing nests or breeding birds within 200 feet and including the area scheduled for construction. The survey will be completed no more than 48 hours prior to the start of project activities. Additional surveys will be conducted if more than 3 days pass between preconstruction nesting bird surveys and the start of construction. • If breeding/nesting birds are located within 300 ft of the limits of disturbance, a buffer will be flagged	Metro or Caltrans	Prior to and during construction							

* Mitigation for significant impacts under CEQA.

	Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
	around the nest by a qualified biologist and ESA signs posted. Any work within 300 ft of the flagged area will require a qualified biologist to monitor the birds and ensure that the construction activities do not negatively impact the birds. • If the biologist identifies signs of stress to any bird species, the biologist will halt activities in the immediate area until the birds resume their normal behavior or until the nest has been determined to be no longer active. This intervention will provide adequate protection to native nesting bird species under the MBTA and the California Fish and Game Code. • Should breeding/nesting birds of prey be located within the area scheduled for construction, the buffer will be extended to 500 ft as birds of prey are typically more sensitive to disturbance. • Unoccupied nests will be removed from the bridges prior to the colony returning to the nesting site to begin nesting (February 1–August 31). During the period of time between the removal of unoccupied nests and the start of bridge construction, bridges will be checked often and unoccupied nests that are under construction will be removed. The removal of unoccupied nests will be monitored by a qualified biologist through the duration of construction. These efforts will continue until September or until the completion of construction in order to keep the structures free of nesting birds. Nest removal will not take place for nests found in trees or other vegetation. • The construction buffer limits may be modified at the discretion of a qualified biologist familiar with the specific circumstances of the situation. Coordination with CDFW will be conducted to confirm appropriate buffers and determine when it is safe to remove the buffers. If there are no breeding/nesting birds, no further action is necessary.									
THREATENED AND ENDANGERED SPECIES										
No avoidance, minimization, or mitigation measures are required.										
INVASIVE SPECIES										
IS-1	**Weed Abatement Program (applies to all four Build Alternatives):** During final design, the Los Angeles County Metropolitan Transportation Authority (Transportation System Management/Transportation Demand Management, Bus Rapid Transit, and Light Rail Transit Alternatives) or the California Department of Transportation (Freeway Tunnel Alternative) Project Engineer will develop a weed abatement program and will include it in the Plans, Specifications, and Estimates package. The intent of this program is to minimize the introduction and spread of nonnative plant material during construction of the selected Build Alternative. This program will include, but not be limited to, the following monitoring and eradication measures during and after construction: • Preconstruction surveys will be conducted to identify populations of invasive species within the project disturbance limits with the potential to be encouraged by construction activities such as exposure or tilling of bare ground, disturbance of adjacent habitats that are not highly invaded, and/or enhanced distribution of pollen or seeds. Such populations will be controlled by mechanical or chemical means prior to construction. • Revegetation of soils will occur as soon as practical after completion of construction activities in those areas. To prevent the spread of invasive species on the project site, invasive species-free products will be exclusively used for all activities, including, but not limited to, landscaping materials and soil erosion materials (i.e., mulch, soil mats, straw fencing, or wattles). • Any disturbance in any construction area not containing existing infestations of exotic plants will be monitored quarterly for 1 year post-construction to ensure that establishment of invasive plant species in the area has not occurred. If evidence of invasive plant species establishment is found, invasive species control measures will be implemented immediately.	Metro or Caltrans Project Engineer	During final design and construction							
CUMULATIVE EFFECTS										
No avoidance, minimization, or mitigation measures beyond those listed above are required.										

* Mitigation for significant impacts under CEQA.

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Appendix F: List of Acronyms

°F	degrees Fahrenheit
µg/L	micrograms per liter
AADT	annual average daily traffic
AB	Assembly Bill
ac	acre/acres
AC	alternating current
ACC	All Communities Convening
ACM	asbestos-containing material
ACS	American Community Survey
ADA	Americans with Disabilities Act
ADL	aerially deposited lead
ADT	average daily traffic
AFV	alternative fuel vehicle
amsl	above mean sea level
APE	Area of Potential Effects
APN	Assessor's Parcel Number
ARB	California Air Resources Board
ASA	Archaeological Survey Area
ASR	Archaeological Survey Report
ASTM	American Society for Testing and Materials
ATM	Active Traffic Management
AULs	activity and use limitations
Basin	South Coast Air Basin
Basin Plan	Los Angeles Regional Water Quality Control Board Basin Plan
bgs	below ground surface
BMPs	Best Management Practices
BRT	Bus Rapid Transit
BSA	Biological Study Area
BTEX	benzene, toluene, ethylbenzene, and total xylenes
BTU	British thermal unit
CAA	Clean Air Act
Cal State LA	California State University, Los Angeles
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
Cal-IPC	California Invasive Plant Council

Caltrans	California Department of Transportation
CCO	Construction Change Order
CCR	California Code of Regulations
CCTV	closed-circuit television
CDFW	California Department of Fish and Wildlife
CDMG	California Department of Mines and Geology
CDPH	California Department of Public Health
CDSM	cement deep soil mixing
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERFA	Community Environmental Response Facilitation Act of 1992
CESA	California Endangered Species Act
CFCs	chlorofluorocarbons
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH_4	methane
CHP	California Highway Patrol
CIA	Community Impact Assessment
CIDH	cast-in-drilled-hole
CLC	Community Liaison Council
CMP	Congestion Management Program
CMS	changeable message signs
CNDDB	California Natural Diversity Database
CNG	compressed natural gas
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CO-CAT	Coastal Ocean Climate Action Team
County	Los Angeles County
COZEEP	Construction Zone Enhanced Enforcement Program
CPUC	California Public Utilities Commission
CRPR	California Rare Plant Rank

CSC	California Species of Special Concern
CTP	California Transportation Plan
CWA	Clean Water Act
db	decibel/decibels
dBA	A-weighted decibels
DC	direct current
Desk Guide	Environmental Justice in Transportation Planning and Investments
DGE	diesel gallon equivalent
DHHS	Department of Health and Human Services
diesel PM	diesel particulate matter plus diesel exhaust organic gases
DOI	United States Department of the Interior
DP-30	Director's Policy 30
DPM	diesel particulate matter
DRIR	Draft Relocation Impact Report
DSA	Disturbed Soil Area
DTSC	Department of Toxic Substances Control
E85	Ethanol, 85 percent
EDR	Environmental Data Resources, Inc.
EIA	Energy Information Administration
EIR	Environmental Impact Report
EIR/EA	Environmental Impact Report/Environmental Assessment
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
EIS	Environmental Impact Statement
EMFAC	California Emission Factor Model
EnviroStor	California Department of Toxic Substances Control Database of Environmental Sites
EO	Executive Order
EPA	United States Environmental Protection Agency
EPB	earth-pressure balance
ESA	Environmentally Sensitive Area
FACP	fire alarm control panel
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FFFS	Fixed Fire Fighting System
FHWA	Federal Highway Administration

FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRMs	Flood Insurance Rate Maps
FST	floating slab track
ft	foot/feet
FTA	Federal Transit Administration
FTA Manual	Transit Noise and Vibration Impact Assessment Manual
FTIP	Federal Transportation Improvement Program
FY	Fiscal Year
gal	gallon/gallons
Geotracker	Regional Water Quality Control Board Database of Environmental Sites
GGE	gasoline gallon equivalent
GHG	greenhouse gas
GSRD	gross solid removal device
H_2S	hydrogen sulfide
HA	Hydrologic Area
Handbook	Energy and Transportation Systems Handbook
HCM	Highway Capacity Manual 2010
HCP	Habitat Conservation Plan
HDM	Highway Design Manual
HFC-134a	s,s,s,2-tetrafluoroethane
HFC-152a	difluoroethane
HFC-23	fluoroform
HHS	United States Department of Health and Human Services
HI	Hazard Index
HIA	Hazard Index Acute
HIC	Hazard Index Chronic
HICOMP	Highway Congestion Monitoring Program
HOT	high-occupancy toll
HOV	high-occupancy vehicle
HPSR	Historic Property Survey Report
HRA	Health Risk Assessment
HRDF	highly resilient direct fixation
HRER	Historical Resources Evaluation Report
HSA	Hydrologic Subarea
HU	Hydrologic Unit
HUD	Housing and Urban Development

Hz	Hertz
I	Intactness
I-10	Interstate 10
I-105	Interstate 105
I-110	Interstate 110
I-210	Interstate 210
I-405	Interstate 405
I-5	Interstate 5
I-605	Interstate 605
I-710	Interstate 710
IEN	Information Exchange Network
IEPR	Integrated Energy Policy Report
in/yr	inches per year
IPCC	Intergovernmental Panel on Climate Change
IRIS	Integrated Risk Information System
IS	Initial Study
ISA	Initial Site Assessment
IST	isolated slab track
ITS	Intelligent Transportation Systems
JD	Jurisdictional Delineation
JPL	Jet Propulsion Laboratory
LACM	Natural History Museum of Los Angeles County
LADOT	Los Angeles Department of Transportation
LADPW	Los Angeles County Department of Public Works
LARWQCB	Los Angeles Regional Water Quality Control Board
LBP	lead-based paint
LED	light-emitting diode
LEDPA	least environmentally damaging practicable alternative
LEHD	Longitudinal Employer-Household Dynamics
L_{max}	maximum instantaneous noise level
LNG	liquefied natural gas
LOS	levels of service
LPG	liquefied petroleum gas
LRT	Light Rail Transit
LRTP	Long Range Transportation Plan
LRV	light rail vehicle

LUST	Leaking Underground Storage Tank
m	meter/meters
Ma	million years ago
MBTA	Migratory Bird Treaty Act
MBTE	methyl tertiary-butyl ether
MEIR	maximally exposed individual resident
MEIW	maximally exposed individual worker
Metro	Los Angeles County Metropolitan Transportation Authority
mg/L	milligrams per liter
mi	mile/miles
MLD	Most Likely Descendant
mm/yr	millimeters per year
M_{max}	maximum moment magnitude
ModCom	Modern Committee of the Los Angeles Conservancy
MOVES	Motor Vehicle Emission Simulator
mph	miles per hour
MPO	Metropolitan Planning Organization
MPR	Mobility Performance Report
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MSA	Metropolitan Statistical Area
MSAT	Mobile Source Air Toxics
MSE	mechanically stabilized earth
MTBE	methyl-t-butyl ether
MW	megawatts
mya	million years ago
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NADR	Noise Abatement Decision Report
NAHC	Native American Heritage Commission
NATA	National Air Toxics Assessment
National Register	National Register of Historic Places
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NES	Natural Environment Study

NESHAPs	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act of 1966
NHTSA	National Highway Traffic Safety Administration
NNL	National Natural Landmark
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries Service	National Oceanic and Atmospheric Administration, National Marine Fisheries Service
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NSR	Noise Study Report
O&M	operations and maintenance
O_3	ozone
OC	overcrossing
OCS	Outer Continental Shelf or overhead contact system
OHWM	ordinary high water mark
OMC	Operations and Maintenance Center
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Act
OSTP	Office of Science and Technology Policy
PA	Programmatic Agreement OR public address system
PA&ED	Project Approval and Environmental Document
PAC	Public Awareness Campaign
Pb	lead
pc/mi/ln	passenger cars per mile per lane
PCBs	polychlorinated biphenyls
PCE	perchloroethylene
PDF	project design feature
PEAR	Preliminary Environmental Analysis Report
PeMS	Performance Monitoring System
PIR/PER	Paleontological Identification Report/Paleontological Evaluation Report

PM	particulate matter
PM_{10}	particulate matter less than 10 microns in size
$PM_{2.5}$	particulate matter less than 2.5 microns in size
PMI	point of maximum impact
PMP	Paleontological Mitigation Plan
PMR	Paleontological Mitigation Report
POAQC	project of air quality concern
POM	polycyclic organic matter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
ppm	parts per million
PQS	Professionally Qualified Staff
PRC	Public Resources Code
PRIMP	Paleontological Resources Impact Mitigation Program
proposed project	SR 710 North Study Project
Protocol	Caltrans Transportation Project-Level Carbon Monoxide Protocol
PS&E	Plans, Specifications, and Estimates
PTZ	pan-tilt-zoom
QA/QC	quality assurance/quality control
RAP	Relocation Assistance Program
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act of 1976
RCRA-SQG	Resource Conservation and Recovery Act – Small Quantity Generator
RECs	recognized environmental conditions
Resources Agency	California Natural Resources Agency
RMS	root mean square
ROD	Record of Decision
ROG	reactive organic gas
ROW	right of way
RSA	Resource Study Area
RSF	rail suspension fastener
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement

SAFETEA-LU	Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SDC	Seismic Design Criteria
SEA	Significant Ecological Area
SEM	sequential excavation method
SER	Standard Environmental Reference
sf	square foot/feet
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act
SO_2	sulfur dioxide
SOAC	Stakeholder Outreach Advisory Committee
SOC	Statement of Overriding Considerations
SONGS	San Onofre Nuclear Generating Station
sq mi	square mile/miles
SR 110	State Route 110
SR 118	State Route 118
SR 134	State Route 134
SR 170	State Route 170
SR 19	State Route 19
SR 2	State Route 2
SR 22	State Route 22
SR 57	State Route 57
SR 60	State Route 60
SR 7	State Route 7
SR 710	State Route 710

SR 91	State Route 91
SSP	Standard Special Provisions
SUSMP	Standard Urban Storm Water Mitigation Plan
SVP	Society of Vertebrate Paleontology
SWITRS	Statewide Integrated Traffic Records System
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
TACs	toxic air contaminants
TAP	transit access pass
TASAS	Traffic Accident Surveillance and Analysis System
TBM	tunnel boring machine
TCE	temporary construction easement
TCP	traditional cultural property
TCWG	Transportation Conformity Working Group
TDM	Transportation Demand Management
TDS	total dissolved solids
TIP	transportation improvement program
Title VI	Title VI of the Civil Rights Act of 1964
TMDL	Total Maximum Daily Load
TMP	Transportation Management Plan
TNW	traditional navigable water
TPH	total petroleum hydrocarbons
TSCA	Toxic Substances Control Act
TSM	Transportation System Management
TSM/TDM	Transportation System Management/Transportation Demand Management
TSSP	Traffic Signal Synchronization Program
U	Unity
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
UPRR	Union Pacific Railroad
US-101	United States Route 101
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture

USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tanks
V	Vividness
v/c	volume/capacity
VdB	vibration velocity decibels
VHT	vehicle hours traveled
VIA	Visual Impact Assessment
VMT	vehicle miles traveled
VOCs	volatile organic compounds
WDRs	Waste Discharge Requirements
WPCP	Water Pollution Control Plan
YMCA	Young Men's Christian Association

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Appendix G: List of Technical Studies

Air Quality Assessment Report (January 2015). Prepared by LSA Associates, Inc.

Archaeological Survey Report (November 2014). Prepared by Sapphos Environmental, Inc.

Community Impact Assessment (November 2014). Prepared by LSA Associates, Inc.

Cumulative Impacts Assessment (January 2015). Prepared by LSA Associates, Inc.

Draft Relocation Impact Report (October 2014). Epic Land Solutions, Inc.

Energy Technical Report (October 2014). Prepared by LSA Associates, Inc.

Geologic Hazard Evaluation to Support Environmental Studies Documentation (November 2014). Prepared by CH2MHILL.

Groundborne Noise and Vibration Impacts (November 2014). Prepared by Wilson, Ihrig and Associates.

Health Risk Assessment (November 2014). Prepared by CH2MHILL.

Historic Property Survey Report (December 2014). Prepared by LSA Associates, Inc.

Historic Property Survey Report Addendum (February 2015). Prepared by LSA Associates, Inc.

Historical Resources Evaluation Report (December 2014). Prepared by LSA Associates, Inc.

Jurisdictional Delineation Report: State Agencies Jurisdiction (November 2014). Prepared by Sapphos Environmental, Inc.

Jurisdictional Delineation Report: U.S. Army Corps of Engineers (October 2014). Prepared by Sapphos Environmental, Inc.

Location Hydraulic Study (February 2014). Prepared by CH2MHILL.

Natural Environment Study (November 2014). Prepared by Sapphos Environmental, Inc.

Noise Abatement Decision Report (September 2014). Prepared by LSA Associates, Inc.

Noise Study Report (October 2014). Prepared by LSA Associates, Inc.

Paleontological Resources Identification and Evaluation Report (March 2014). Prepared by LSA Associates, Inc.

Phase I Initial Site Assessment (November 2014). Prepared by CH2MHILL.

Preliminary Drainage Report (August 2014). Prepared by CH2MHILL.

Preliminary Geotechnical Report (November 2014). Prepared by CH2MHILL.

Storm Water Data Report (September 2014). Prepared by CH2MHILL.

Summary Floodplain Encroachment Report (February 2014). Prepared by LSA Associates, Inc.

Transportation Technical Report (November 2014). Prepared by CH2MHILL.

Tunnel Evaluation Report (September 2014). Prepared by Jacobs Associates.

Tunnel Systems Report for the Freeway Tunnel Alternative (September 2014). Prepared by ILF Consultants, Inc.

Visual Impact Assessment (November 2014). Prepared by Tatsumi and Partners, Inc.

Water Quality Assessment Report (May 2014). Prepared by LSA Associates, Inc.

Appendix H: FTIP and RTP Project Listings

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SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

2015 Federal Transportation Improvement Program

Los Angeles County
State Highway
Including Amendments 1-2
(In 000`s)

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amendment
LA0G1138	Los Angeles	SCAB		LA990921	PLN40	710	4.9	24.9	S	EXEMPT - 93.126	1
Description:							PTC	3,000	Agency	LOS ANGELES COUNTY MTA	

Improvements to I-710 Soundwalls. The purpose of this project is to mitigate noise levels and provide aesthetic treatments on the 710 soundwalls.

Fund	ENG	R/W	CON	Total	Prior	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
MEASURE R 20H - HIGHWAY CAPITAL	3,000			3,000		3,000						3,000
LA0G1138 Total	3,000			3,000		3,000						3,000

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amendment
LA0B952	Los Angeles	SCAB		LA0B952	PLN40	710	5	25	S	EXEMPT - 93.126	0
Description:							PTC	56,500	Agency	LOS ANGELES COUNTY MTA	

Route 710: Reconstruct I-710 Interchanges at I-5, at I-405, at SR 91, and at I-105. As part of of the I-710 Corridor Program proposing 4 truck lanes (ports-rail yards), 10 general lanes (port-SR-60)(ISTEA ID # 37)(SAFTEA-LU 3773). (see additional description in the general comments section)

Fund	ENG	R/W	CON	Total	Prior	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
DEMO - ISTEA	570			570	570							570
DEMO-SAFETEA-LU	5,500			5,500	5,500							5,500
GENERAL FUNDS	2,000			2,000	2,000							2,000
LOCAL TRANS FUNDS	1,000			1,000	1,000							1,000
MEASURE R 20H - HIGHWAY CAPITAL	16,000			16,000	13,000	3,000						16,000
PROP "C25" FUNDS	4,430			4,430	4,430							4,430
PORT FUNDS	10,000			10,000	10,000							10,000
PRIVATE FUNDS	2,000			2,000	2,000							2,000
STATE CASH - IIP	10,000			10,000	10,000							10,000
STATE CASH - RIP	5,000			5,000	5,000							5,000
LA0B952 Total	56,500			56,500	53,500	3,000						56,500

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amendment
18790	Los Angeles	SCAB		18790	PLN40	710	26.5	32.7	S	EXEMPT - 93.126	0
Description:							PTC	70,454	Agency	CALTRANS	

Route 710: Study to perform alternative analysis, engineering and environmental studies to close 710 Freeway gap. (EA # 187901, PPN0# 2215)

Fund	ENG	R/W	CON	Total	Prior	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total
DEMO-SAFETEA-LU	2,400			2,400		2,400						2,400
MEASURE R	59,000			59,000	59,000							59,000
STATE CASH - IPP PRIOR	4,054			4,054	4,054							4,054
STATE CASH - RIP PRIOR	5,000			5,000	5,000							5,000
18790 Total	70,454			70,454	68,054	2,400						70,454

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County	System	Lead Agency	RTP ID	FTIP ID	Begin PM	End PM	Route #	Route Name	From	To	Description	Roadway Segment: Route Name	Roadway Segment: Length	Roadway Segment: From	Roadway Segment: To	Roadway Segment: Description	Roadway Segment: Existing Lanes	Roadway Segment: Proposed Lanes	Transit Segment: Route	Additional Details	RTP Baseline	Project Completion By*
Los Angeles	State Highway	LONG BEACH	LA000512	LA000512	3.6	5	710	Ocean Boulevard			BRIDGE NO. 53C0065, OCEAN BLVD. OVER ENTRANCE CHANNEL, UP RR, 1.0 MI E STATE ROUTE 47. Replace existing 5 lane Gerald Desmond Bridge (GDB) with new 6 lane bridge.	710	2000	Pico Avenue	SR-47	Replace 5-lane bridge with a 6-lane bridge	5	6				2018
Los Angeles	State Highway		1M0101				710	SR-710	Valley Boulevard	California Bl & Pasadena Ave	SR-710 North Extension (tunnel) (alignment TBD)									4 toll lanes in each direction in tunnel		2027
Los Angeles	Transit	SANTA CLARITA	LA0G774								Vista Canyon Ranch Transit Center - relocate the existing, temporary Via Princessa Metrolink Station to the Vista Canyon project site. The Vista Canyon Transit Station will consist of a Metrolink Station and Bus Transfer Station. Additionally, the station will include a pedestrian overpass or undercrossing of the tracks and an adjacent parking structure with up to 750 parking spaces. Project using $100 of toll credits for each phase (ENG,ROW & CONS $300 in total) to match 5307 funds.											2018
Los Angeles	Transit	LOS ANGELES, CITY OF	LA0G901	LA0G901	0	0					Historic Los Angeles Streetcar											2018
Los Angeles	Transit	AZUSA	1O0705	LAF3434	0	0	0				Azusa Intermodal Transit Center. Construct regional Azusa Intermodal Transit Center to accommodate existing and future parking demand and support effective transit use. Park n Ride, the structure would be located on the southeast quadrant of Alameda Ave./								NA			2015
Los Angeles	Transit	BALDWIN PARK	LAE0076	LAE0076	0	0	0				Baldwin Park Metrolink Station (3825 Downing Ave). CONSTRUCT ADD'L VEHICLE PARKING (200 TO 400 SPACES), BICYCLE PARKING LOT AND PEDESTRIAN REST AREA AT THE TRANSIT CENTER. SAFTEA-LU 76, E2009-BUSP-060 (page 20059 in FTA 2009 Earmarks)								Metrolink		X	2014
Los Angeles	Transit	BURBANK	LAF1455	LAF1455	0	0	0				Cross-Town Transit Connector and Service Expansion. Funds to acquire two (2) CNG buses to implement new local transit service between North Hollywood Red Line Station and Downtown Burbank.								N/A		X	2015
Los Angeles	Transit	BURBANK	LAF1455	LAF1455	0	0	0				Cross-Town Transit Connector and Service Expansion. Funds to acquire two (2) CNG buses to implement new local transit service between North Hollywood Red Line Station and Downtown Burbank.								na		X	2015
Los Angeles	Transit	BURBANK GLENDALE PASADENA AIRPORT	7120010	LA000789A	0	0	0				Burbank-Glendale-Pasadena Airport Intermodal Ground Access Link: construction of a link between the airport and other transportation services, including construction of a new Metrolink station at Hollywood Way/San Fernando Road on the Antelope Valley Line								Metrolink - Antelope Valley Line			2018
Los Angeles	Transit	FOOTHILL TRANSIT ZONE	LA0B311	LA0B311	0	0	0				Park and Ride Facilities (Transit Oriented Neighborhood Program)3 Park and Rides located in the cities of Azusa, Industry, and West Covina.								497 & 493		X	2014
Los Angeles	Transit	FOOTHILL TRANSIT ZONE	LA0B311	LA0B311	0	0	0				Park and Ride Facilities (Transit Oriented Neighborhood Program)3 Park and Rides located in the cities of Azusa, Industry, and West Covina.								Azusa		X	2014
Los Angeles	Transit	FOOTHILL TRANSIT ZONE	LA0B311	LA0B311	0	0	0				Park and Ride Facilities (Transit Oriented Neighborhood Program)3 Park and Rides located in the cities of Azusa, Industry, and West Covina.								West Covina		X	2014
Los Angeles	Transit	FOOTHILL TRANSIT ZONE	LA0G142	LA0G142	0	0	0				LACRD - 12 buses for the I-10 El Monte Busway. HOT Lane. (RTP# 1TR08D08 & 1TR08D07A)								1		X	2012
Los Angeles	Transit	GARDENA	1AL04	LAF3306	0	0	0				Gardena Municipal Bus Lines Line #1X TSP (Transit Signal Synchronization Project 21-signals). Project will implement Transit Signal Priority along its Line #1X to reduce transit travel times and enhance on-time performance. City of Gardena: Marine Avenue:								N/A			2018
Los Angeles	Transit	LONG BEACH	LA0C8237	LA0C8237	0	0	0				LONG BEACH PARK AND RIDE FACILITY AT 4TH AND PACIFIC, SOUTH OF THE MTA BLUE LINE PACIFIC STATION. 100 DEDICATED, TRANSIT ORIENTED SPACES IN MIXED USE DEVELOPMENT								Metro Blue Line		X	2014
Los Angeles	Transit	LONG BEACH	LAE0332	LAE0332	0	0	0				LONG BEACH PARK AND RIDE FACILITY AT 3RD STREET AND PACIFIC AVE SOUTH OF THE MTA BLUE LINE PACIFIC STATION. 300 TO 500 SPACE AND INCLUDE RESIDENTIAL AND COMMERCIAL DEVELOPMENT								Metro Blue Line		X	2012
Los Angeles	Transit	LOS ANGELES COUNTY	1TL104	LAF1414	0	0	0				Third Street & La Verne Avenue Parking Structure. Construct a parking structure at Third Street and La Verne Avenue to provide 370 space park and ride lot for Gold Line transit users.								Gold Line		X	2018

* Represents the Plan network year for which the project was analyzed for the RTP/SCS modeling and regional emissions analysis

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Appendix I: Notice of Preparation and Notice of Intent

The following documents are provided in Appendix I:

1. Notice of Preparation (NOP) of a Draft Environmental Impact Report to be prepared for the State Route 710 North Gap Closure Project February 28, 2011).
2. Notice of Intent (NOI) of a Draft Environmental Impact Statement to be prepared for the State Route 710 Gap North Closure Project (March 3, 2011).

Letters received from State, federal, and local agencies, elected officials, organizations, and members of the public during the scoping process, including in response to the NOP and NOI, are discussed in detail and provided in the *710 North Gap Closure Project Scoping Summary Report* (September 2011).

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SCH NO. _____

NOTICE OF PREPARATION

To: _____

_____

_____

From: California Dept. of Transportation
100 S. Main Street, MS 16-A
Los Angeles, CA 90012

Subject: **Notice of Preparation of a Draft Environmental Impact Report**
Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

Project Title: State Route 710 North Gap Closure Project

Project Location: Depending on the alternative selected, this project would be located in the study area bordered by Interstate 10 to the south, Interstate 605 to the east, Interstate 210 to the north, and State Route 2 to the west, in Los Angeles County, California.

Project Description: The proposed project, depending on the results of a thorough environmental analysis of all possible transportation improvements during the NEPA/CEQA process, may include, but not be limited to: surface and subsurface highway/freeway construction, heavy rail and bus/light rail systems, local street upgrades, traffic management systems and a no build alternative. There currently is a gap in the I-710 corridor, for a distance of approximately 4.5 miles (7.2km), which extends between Valley Boulevard to the south and Del Mar Boulevard to the north. As originally identified in the April 13, 1998 Record of Decision for the Meridian Variation alignment, this gap contributes to congestion on local streets and the regional freeway system. The objective of this project is to relieve congestion and improve mobility within the study area.

This is to inform you that the California Department of Transportation will be the lead agency and will prepare an Environmental Impact Report (EIR) for the project described above. Your participation as a responsible agency is requested in the preparation and review of this document.

We need to know the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

A location map and the potential environmental effects are contained in the attached materials.

Caltrans will be holding public scoping meetings to provide an overview of the project, summary of the environmental process and issues addressed, and receive input regarding environmental issues and the suggested scope and content of the EIR. The Scoping meetings will be held in San Gabriel, Alhambra, Glendale, South Pasadena, El Sereno, and Pasadena. More information on the scoping meetings are in the attached materials.

A copy of the Initial Study (___is) (__x_is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please direct your response to Ron Kosinski, Deputy District Director Telephone (213) 897-0703 at the address shown above. Please supply us with the name for a contact person in your agency.

Date Feb 28, 2011 Signature Ronald Kosinski

Title DEPUTY DIST. DIR. ENV. PLANNING

Scoping Meetings: An Agency Scoping Meeting will be held in Los Angeles, March 14, 2011, 2pm to 4pm, Caltrans, District 7 Headquarters, RM 1.040 100 S. Main Street, 90012.

Public Scoping Meetings will be held at the following locations:

- **San Gabriel,** March 15, 2011, 6pm to 8pm Jefferson Middle School, 1372 East Las Tunas Drive, 91776
- **Alhambra,** March 16, 2011, 6pm to 8pm Civic Center Library, 101 S. First Street, 91801
- **Glendale,** March 22, 2011, 6pm to 8pm Glendale Community College, 1500 North Verdugo Road, 91208
- **South Pasadena,** March 23, 2011, 6pm to 8pm South Pasadena High School, 1401 Fremont Ave., 91030
- **El Sereno,** March 29, 2011, 6pm to 8pm LA Christian Presbyterian Church, 2241 N. Eastern Ave., 90032
- **Pasadena,** March 30, 2011, 6pm to 8pm Lake Avenue Church, 393 N. Lake Ave., 91101

Impacts:
Various environmental and community resources are known to exist within the limits of the study area. These resources include, but are not limited to: geotechnical, erosion, hydrology, air quality, water quality, noise, biology, public utilities, vehicle traffic patterns, parking, land use planning and hazardous waste. Displacement of businesses and homes is a significant issue. Soundwalls, relocation assistance, construction impact management and other mitigation measures will be incorporated into the proposed project.

It is anticipated that the proposed project may require the following federal approvals and permits: a Biological Opinion from the United States Fish and Wildlife Service, approval of a PM10 and PM2.5 Hot Spot Analysis by the Conformity Working Group for transportation conformity determination under the Clean Air Act. Section 404 nationwide permit from the U.S. Army Corps of Engineers, Section 401 Water Quality Certification from the California Regional Water Quality Control Board, Section 1601 Streambed Alteration Agreement from the California Department of Fish and Game, and encroachment permits from the various cities in which project construction would occur.

comments were received.[15] Because proposed Section 16(a) is substantially similar to the ISE, NYSE Arca, and FINRA rules, it raises no new regulatory issues.

The Commission also believes that good cause exists to grant accelerated approval to proposed Section 16(b) to Chapter III, which conforms the Exchange rule to the requirements of Section 6(b)(10) of the Act. Section 6(b)(10) of the Act, enacted under Section 957 of the Dodd-Frank Act, does not provide for a transition phase, and requires rules of national securities exchanges to prohibit broker voting on the election of a member of the board of directors of an issuer (except for a vote with respect to the uncontested election of a member of the board of directors of any investment company registered under the Investment Company Act of 1940), executive compensation, or any other significant matter, as determined by the Commission by rule. The Commission believes that good cause exists to grant accelerated approval to proposed Section 16(b) to Chapter III, because it will conform the Box rules to the requirements of Section 6(b)(10) of the Act.

V. Conclusion

It is therefore ordered, pursuant to Section 19(b)(2) of the Act,[16] that the proposed rule change (SR–BX–2011–011) be, and it hereby is, approved on an accelerated basis.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[17]

Cathy H. Ahn,

Deputy Secretary.

[FR Doc. 2011–5304 Filed 3–8–11; 8:45 am]

BILLING CODE 8011–01–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement: Los Angeles County, CA

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of intent.

SUMMARY: The FHWA, on behalf of the California Department of Transportation (Caltrans), is issuing this notice to advise the public that a Draft Environmental Impact Statement will be prepared for a proposed highway project in Los Angeles County, California.

DATES: Public Scoping Meetings will be held at the following locations:

San Gabriel, March 15, 2011, 6 p.m. to 8 p.m.

Alhambra, March 16, 2011, 6 p.m. to 8 p.m.

Glendale, March 22, 2011, 6 p.m. to 8 p.m.

South Pasadena, March 23, 2011, 6 p.m. to 8 p.m.

El Sereno, March 29, 2011, 6 p.m. to 8 p.m.

Pasadena, March 30, 2011, 6 p.m. to 8 p.m.

An online Virtual Scoping Meeting will be held on March 21, 2011. Register to participate at *metro.net/sr710conversations* and click the "Participate from Home" tab. (It will begin live at 6 p.m. and continue on demand through April 14, 2011).

ADDRESSES: San Gabriel—Jefferson Middle School, 1372 East Las Tunas Drive, San Gabriel, CA 91776.

Alhambra—Civic Center Library, 101 S. First Street, Alhambra, CA 91801.

Glendale—Glendale Community College, (Student Center RM 212), 1500 North Verdugo Road, Glendale, CA 91208.

South Pasadena—South Pasadena High School, (Auditorium), 1401 Fremont Ave., South Pasadena, CA 91030.

El Sereno—LA Christian Presbyterian Church, (Gymnasium), 2241 N. Eastern Ave., Los Angeles, CA 90032.

Pasadena—Lake Avenue Church, (4th floor above Harris Hall), 393 N. Lake Ave., Pasadena, CA 91101.

FOR FURTHER INFORMATION CONTACT: Ronald Kosinski, Deputy District Director, California Department of Transportation, District 7, Division of Environmental Planning, 100 South Main Street, Mail Stop 16A, Los Angeles, CA 90012.

SUPPLEMENTARY INFORMATION: Effective July 1, 2007, the Federal Highway Administration (FHWA) assigned, and the California Department of Transportation (Caltrans) assumed, environmental responsibilities for this project pursuant to 23 U.S.C. 327. Caltrans as the delegated National Environmental Policy Act (NEPA) agency will prepare a Draft Environmental Impact Statement on a proposal for the State Route 710 Gap North Closure project in Los Angeles County, California. The proposed project, depending on the results of a thorough environmental analysis of all possible transportation improvements during the NEPA/CEQA process, may include, but not be limited to: surface and subsurface highway/freeway construction, heavy rail and bus/light rail systems, local street upgrades, traffic management systems and a no build alternative. There currently is a gap in the I–710 corridor, for a distance of approximately 4.5 miles (7.2 km), which extends between Valley Boulevard to the south and Del Mar Boulevard to the north. As originally identified in the April 13, 1998 Record of Decision for the Meridian Variation alignment, this gap contributes to congestion on local streets and the regional freeway system. The objective of this project is to relieve congestion and improve mobility within the study area.

It is anticipated that the proposed project may require the following federal approvals and permits: a Biological Opinion from the United States Fish and Wildlife Service, approval of a PM10 and PM2.5 Hot Spot Analysis by the Conformity Working Group for transportation conformity determination under the Clean Air Act. Section 404 nationwide permit from the U.S. Army Corps of Engineers, Section 401 Water Quality Certification from the California Regional Water Quality Control Board, Section 1601 Streambed Alteration Agreement from the California Department of Fish and Game, and encroachment permits from the various cities in which project construction would occur.

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, State, Participating Agencies, Tribal Governments and local agencies, and to private organizations and citizens who have previously expressed or are known to have interest in this proposal. The public scoping process will officially begin in March 2011. Public scoping meeting(s) will be held in San Gabriel, Alhambra, Glendale, South Pasadena, Los Angeles, El Sereno, and Pasadena in March 2011. In addition, one online Virtual Scoping Meeting will be held on March 21, 2011. (It will begin live at 6 p.m. and continue on demand through April 14, 2011). Further, a public hearing will be held once the Draft Environmental Impact Statement is completed. Public notice will be given of the time and place of the meeting and hearing. The Draft Environmental Impact Statement will be available for public and agency review and comment prior to the public hearing to ensure that the full range of issues related to this proposed action are addressed and all significant issues identified, comments, and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to Caltrans at the address provided above.

[15] *See* note 8 *supra.*

[16] 15 U.S.C. 78s(b)(2).

[17] 17 CFR 200.30–3(a)(12).

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Issued on: March 3, 2011.

Shawn E. Oliver,

Federal Highway Administration, Sacramento, California.

[FR Doc. 2011–5407 Filed 3–8–11; 8:45 am]

BILLING CODE 4910–22–P

DEPARTMENT OF THE TREASURY

Departmental Offices Proposed Collections; Comment Requests

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, as part of its continuing effort to reduce paperwork burdens, invites the general public and other Federal agencies to comment on a proposed information collection, as required by the Paperwork Reduction Act of 1995, Public Law 104–13 (44 U.S.C. 3506(c)(2)(A)). The Consumer Financial Protection Bureau implementation team is soliciting comments regarding forms for questions, complaints, and other information about consumer financial products and services.

DATES: Written comments should be received on or before May 9, 2011 to be assured of consideration.

ADDRESSES: Direct all written comments to Andrew Trueblood, Consumer Financial Protection Bureau implementation team, 1801 L Street, NW., Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: Requests for additional information should be directed to Andrew Trueblood in writing at Consumer Financial Protection Bureau implementation team, 1801 L Street, NW., Washington, DC 20036, by telephone at (202) 435–7070, or by e-mail at *andrew.trueblood@treasury.gov.*

SUPPLEMENTARY INFORMATION:

Title: Consumer Financial Protection Bureau Consumer Response Intake Fields.

OMB Control Number: NEW.

Abstract: The Dodd-Frank Wall Street Reform and Consumer Protection Act, Public Law 111–203, Title X, established the Consumer Financial Protection Bureau (CFPB). Among the CFPB's functions is to facilitate the centralized collection of, monitoring of, and response to complaints concerning consumer financial products and services. In order to collect data about the consumer financial market and facilitate the appropriate routing of, handling of, and response to complaints, questions, and other information concerning consumer financial products and services, the CFPB is developing online and paper intake methods which will have fields for persons to complete. The fields will help document information such as the type of contact; the substance of the complaint, question, or other information; contact information for the person making the contact and/or related persons; information about any subject incident and institution; and identifying information about the consumer or consumer's household.

Type of Review: NEW.

Affected Public: Individuals and households with questions, complaints, and other information about consumer financial products and services.

Estimated Number of Respondents: Approximately 1–3 million per year. CFPB's intake of complaints, questions, and other information relating to consumer financial products and services is a new collection that may centralize intake now performed by existing agencies. As such, the projections of the number of respondents have a high level of uncertainty.

Estimated Average Time per Respondent: 10 minutes per response. The time to complete the form will depend on the nature of the contact. Simple feedback may take as little as a few minutes to complete while more complicated complaints could take longer to describe.

Estimated Total Annual Burden Hours: Approximately 330,000 burden hours.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for Office of Management and Budget approval. All comments will become a matter of public record. The public is invited to submit written comments concerning: (a) Whether the intake of complaints, questions, and other information relating to consumer financial products and services is necessary for the proper performance of the functions of the Bureau, including whether the information will have practical uses; (b) the accuracy of the above estimate of the burden of the information collection; (c) ways to enhance the quality, usefulness, and clarity of the information to be collected; (d) ways to minimize the reporting and/or record keeping burdens on respondents, including the use of automated collection techniques or other forms of information technology; (e) estimates of capital or start-up costs of operation, maintenance, and purchase of services to provide information; and (f) specific types of information that would be useful for CFPB to collect through its intake forms, in order to advance the mission of CFPB.

Robert Dahl,

Treasury Departmental Clearance Officer.

[FR Doc. 2011–5349 Filed 3–8–11; 8:45 am]

BILLING CODE 4810–25–P

DEPARTMENT OF THE TREASURY

Submission for OMB Review; Comment Request

March 3, 2011.

The Department of the Treasury will submit the following public information collection requirements to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13 on or after the date of publication of this notice. A copy of the submissions may be obtained by contacting the Treasury Department Office Clearance Officers listed. Comments regarding these information collections should be addressed to the OMB reviewer listed and to the Treasury PRA Clearance Officer, Department of the Treasury, 1750 Pennsylvania Avenue, NW., Suite 11020, Washington, DC 20220.

Dates: Written comments should be received on or before April 8, 2011 to be assured of consideration.

Departmental Offices (DO)

Summary: As part of a Federal Government-wide effort to streamline the process to seek feedback from the public on service delivery, the Department of the Treasury has submitted a Generic Information Collection Request (Generic ICR): "Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery" to OMB for approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*). Treasury is requesting clearance for eight separate OMB Control Numbers for eight bureaus and offices within the Department. Each clearance will have the same title and purpose, but will be available for use by each bureau under their control number and burden estimate, as detailed below.

Title: Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery.

Abstract: The information collection activity will garner qualitative customer and stakeholder feedback in an efficient, timely manner, in accordance with the

Appendix J: References

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Appendix K: USFWS Species List

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
PHONE: (760)431-9440 FAX: (760)431-5901
URL: www.fws.gov/carlsbad/

Consultation Code: 08ECAR00-2015-SLI-0138 January 13, 2015
Event Code: 08ECAR00-2015-E-00307
Project Name: 710 Gap Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: 710 Gap Project

Official Species List

Provided by:

Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
(760) 431-9440
http://www.fws.gov/carlsbad/

Consultation Code: 08ECAR00-2015-SLI-0138
Event Code: 08ECAR00-2015-E-00307

Project Type: Transportation

Project Name: 710 Gap Project
Project Description: The proposed project is located in the cities of Los Angeles, Pasadena, South Pasadena, San Marino Alhambra, San Gabriel, Rosemead, and Monterey Park in Los Angeles County. The study area is bounded by SR-2 to the west, SR-605 to the east, I-210 to the north, and I-10 and I-5 to the south.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-118.3705456 33.8746826, -118.3774121 34.3612842, -117.8885205 34.3635514, -117.8871472 33.8781031, -118.3705456 33.8746826)))

Project Counties: Los Angeles, CA | Orange, CA

Endangered Species Act Species List

There are a total of 15 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	**Status**	**Has Critical Habitat**	**Condition(s)**
arroyo toad *(Anaxyrus californicus)* Population: Entire	Endangered	Final designated	
Mountain Yellow-Legged frog *(Rana muscosa)* Population: southern California DPS	Endangered	Final designated	
Birds			
California Least tern *(Sterna antillarum browni)*	Endangered		
Coastal California gnatcatcher *(Polioptila californica californica)* Population: Entire	Threatened	Final designated	
Least Bell's vireo *(Vireo bellii pusillus)* Population: Entire	Endangered	Final designated	
Light-Footed Clapper rail *(Rallus longirostris levipes)* Population: U.S.A. only	Endangered		
Southwestern Willow flycatcher	Endangered	Final designated	

(Empidonax traillii extimus) Population: Entire			
Fishes			
Santa Ana sucker *(Catostomus santaanae)* Population: 3 CA river basins	Threatened	Final designated	
Flowering Plants			
Braunton's milk-vetch *(Astragalus brauntonii)*	Endangered	Final designated	
Gambel's watercress *(Rorippa gambellii)*	Endangered		
Nevin's barberry *(Berberis nevinii)*	Endangered	Final designated	
Slender-Horned spineflower *(Dodecahema leptoceras)*	Endangered		
Thread-Leaved brodiaea *(Brodiaea filifolia)*	Threatened	Final designated	
Insects			
Palos Verdes Blue butterfly *(Glaucopsyche lygdamus palosverdesensis)* Population: Entire	Endangered	Final designated	
Mammals			
Pacific Pocket mouse *(Perognathus longimembris pacificus)* Population: Entire	Endangered		

Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

Amphibians	**Critical Habitat Type**
arroyo toad *(Anaxyrus californicus)* Population: Entire	Final designated
Mountain Yellow-Legged frog *(Rana muscosa)* Population: southern California DPS	Final designated
Birds	
Coastal California gnatcatcher *(Polioptila californica californica)* Population: Entire	Final designated
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Entire	Final designated
Fishes	
Santa Ana sucker *(Catostomus santaanae)* Population: 3 CA river basins	Final designated
Flowering Plants	
Braunton's milk-vetch *(Astragalus brauntonii)*	Final designated

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Appendix L: Community Impacts Figures

This appendix contains the following figures, which support the analysis in Section 3.3, Community Impacts:

Figure 3.3-1: TSM/TDM Alternative Community Services and Facilities L-3
Figure 3.3-2: TSM/TDM Alternative Schools, Parks, and Recreation Facilities L-11
Figure 3.3-3: BRT Alternative Community Services and Facilities L-19
Figure 3.3-4: BRT Alternative Schools, Parks, and Recreation Facilities L-23
Figure 3.3-5: LRT Alternative Community Services and Facilities L-27
Figure 3.3-6: LRT Alternative Schools, Parks, and Recreation Facilities L-31
Figure 3.3-7: Freeway Tunnel Alternative Community Services and Facilities L-35
Figure 3.3-8: Freeway Tunnel Alternative Schools, Parks, and Recreation Facilities L-39
Figure 3.3-9: TSM/TDM Alternative Parcel Acquisitions L-43
Figure 3.3-10: BRT Alternative Parcel Acquisitions L-85
Figure 3.3-11: LRT Alternative Parcel Acquisitions L-119
Figure 3.3-12: Freeway Tunnel Alternative – Single Bore Design Variation L-137
Figure 3.3-13: Freeway Tunnel Alternative – Dual Bore Design Variation L-161
Figure 3.3-14: TSM/TDM Alternative and Environmental Justice Populations L-185
Figure 3.3-15: BRT Alternative and Environmental Justice Populations L-193
Figure 3.3-16: LRT Alternative and Environmental Justice Populations L-197
Figure 3.3-17: Freeway Tunnel Alternative and Environmental Justice Populations L-201

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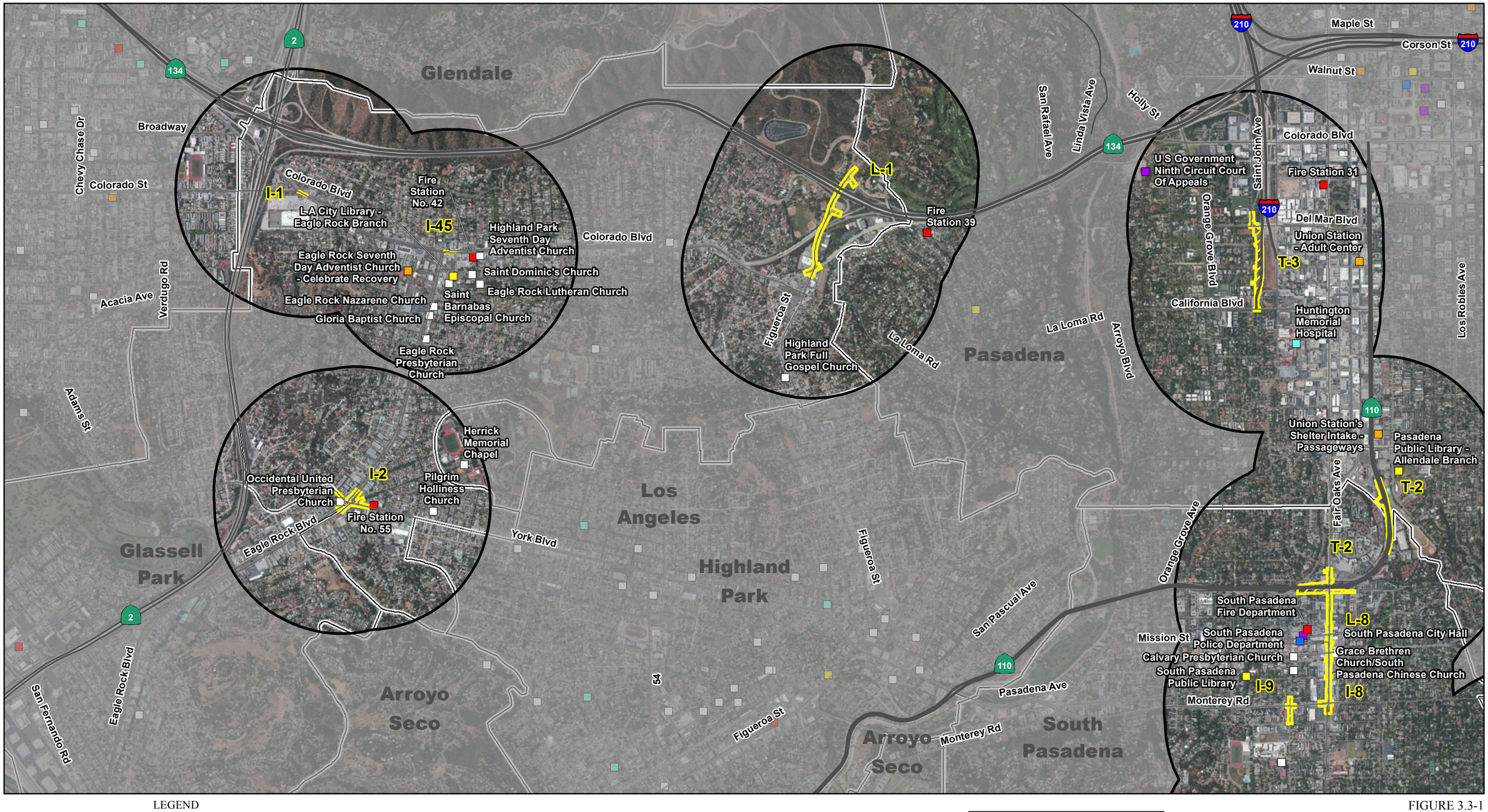

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communites
- Police Station
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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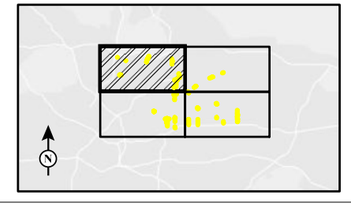

FIGURE 3.3-1
Sheet 1 of 4

SR 710 North Study

TSM/TDM Alternative
Community Services and Facilities

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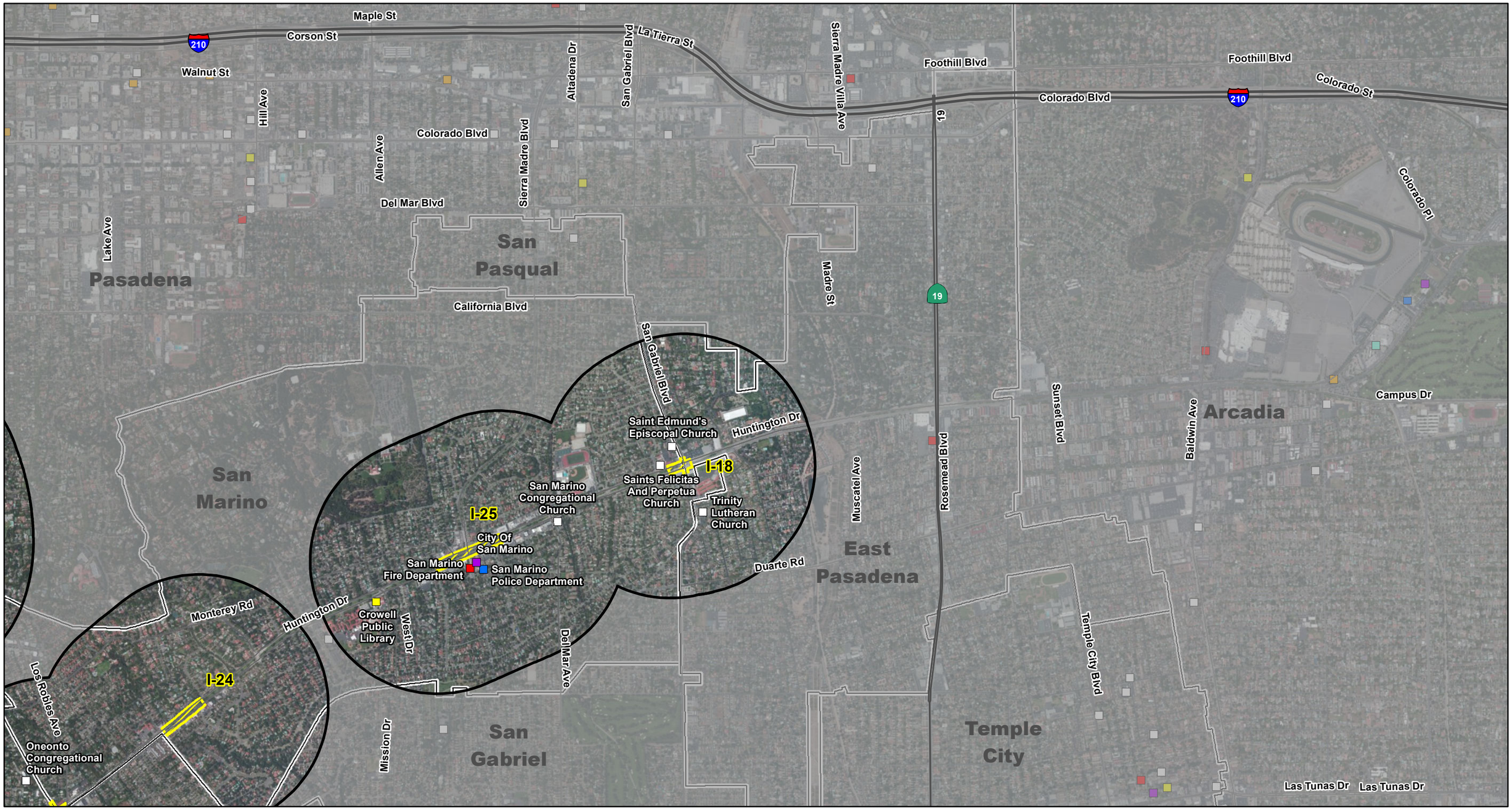

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communites
- Police Station
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-1
Sheet 2 of 4

SR 710 North Study

TSM/TDM Alternative
Community Services and Facilities

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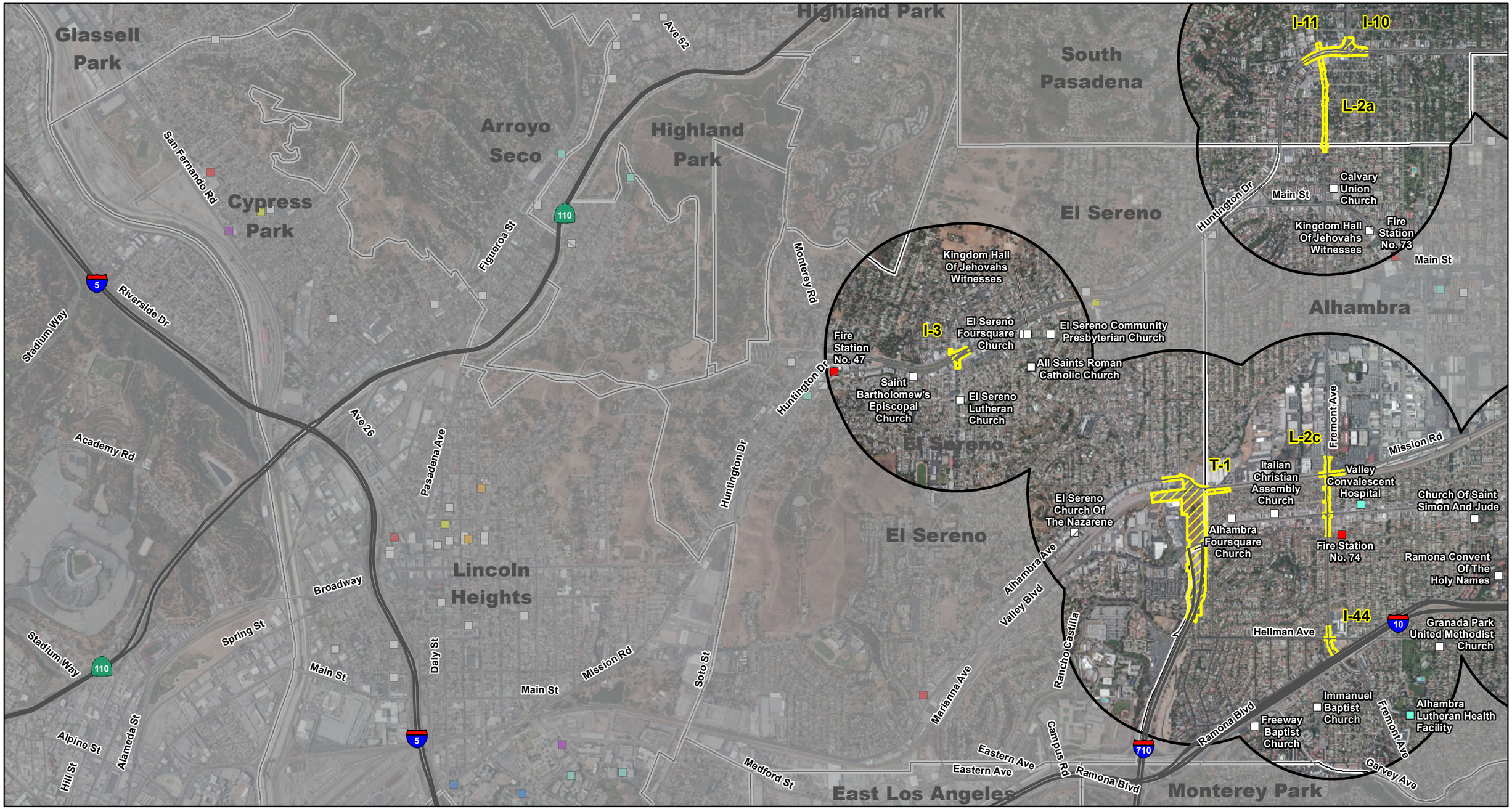

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communites
- Police Station
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

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FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-1
Sheet 3 of 4

SR 710 North Study

TSM/TDM Alternative
Community Services and Facilities

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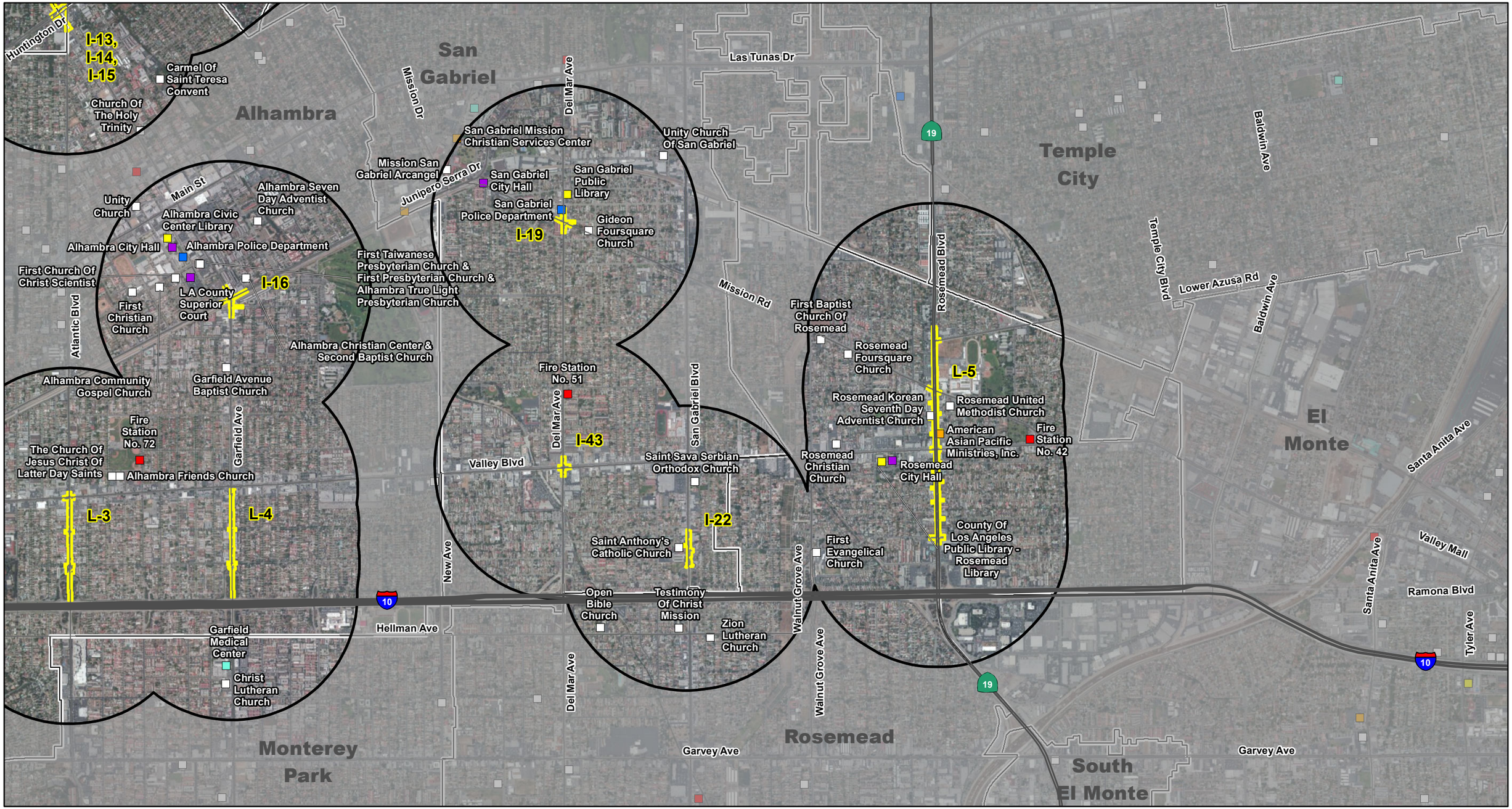

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communites
- Police Station
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

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FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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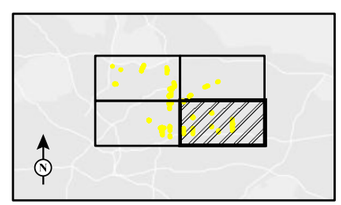

FIGURE 3.3-1
Sheet 4 of 4

SR 710 North Study

TSM/TDM Alternative
Community Services and Facilities

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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communites
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-2
Sheet 1 of 4

SR 710 North Study

TSM/TDM Alternative
Schools, Parks, and Recreation Facilities

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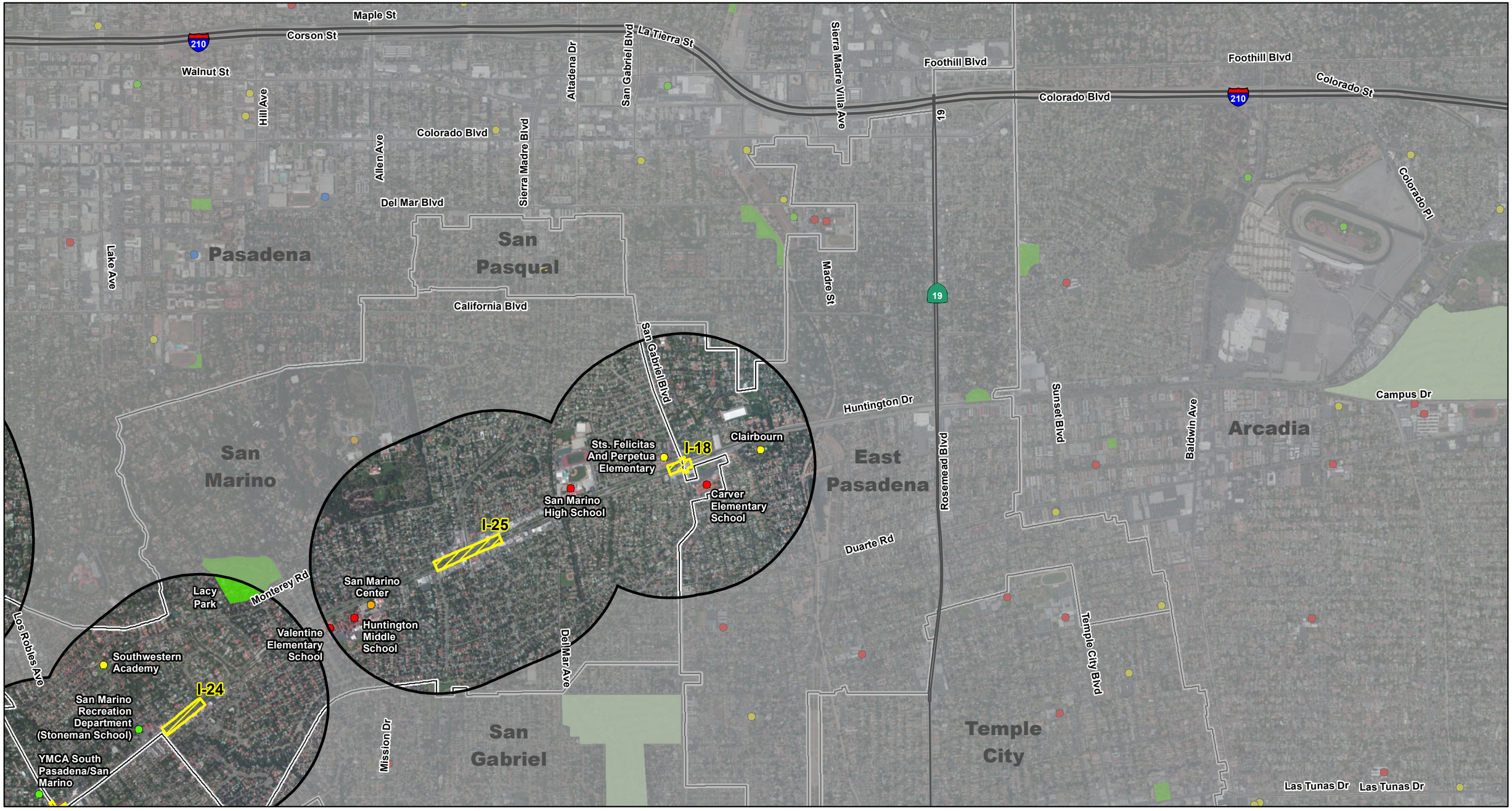

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communites
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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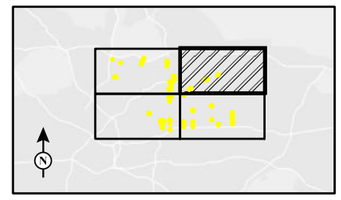

FIGURE 3.3-2
Sheet 2 of 4

SR 710 North Study

TSM/TDM Alternative
Schools, Parks, and Recreation Facilities

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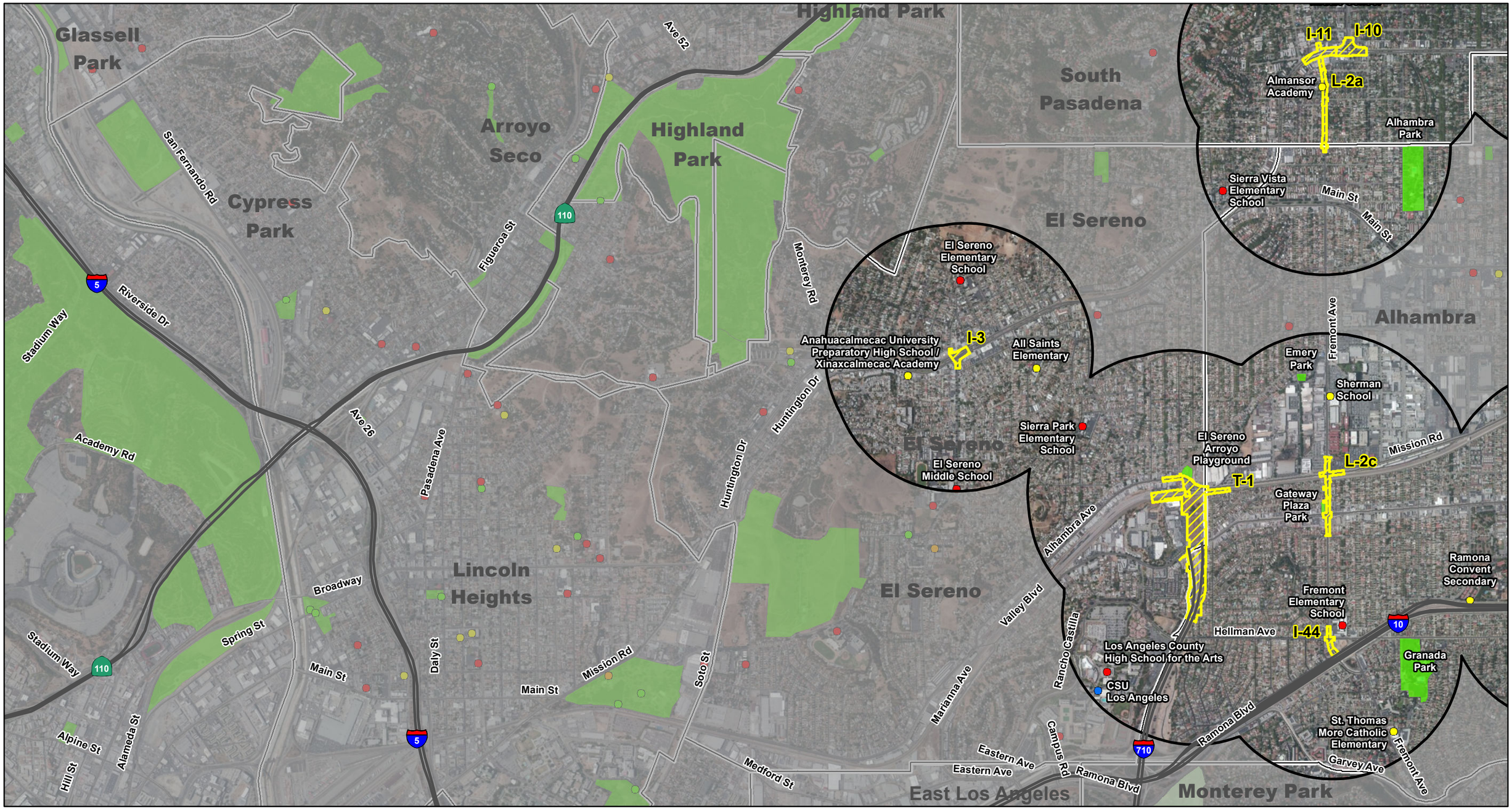

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communites
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-2
Sheet 3 of 4

SR 710 North Study

TSM/TDM Alternative
Schools, Parks, and Recreation Facilities

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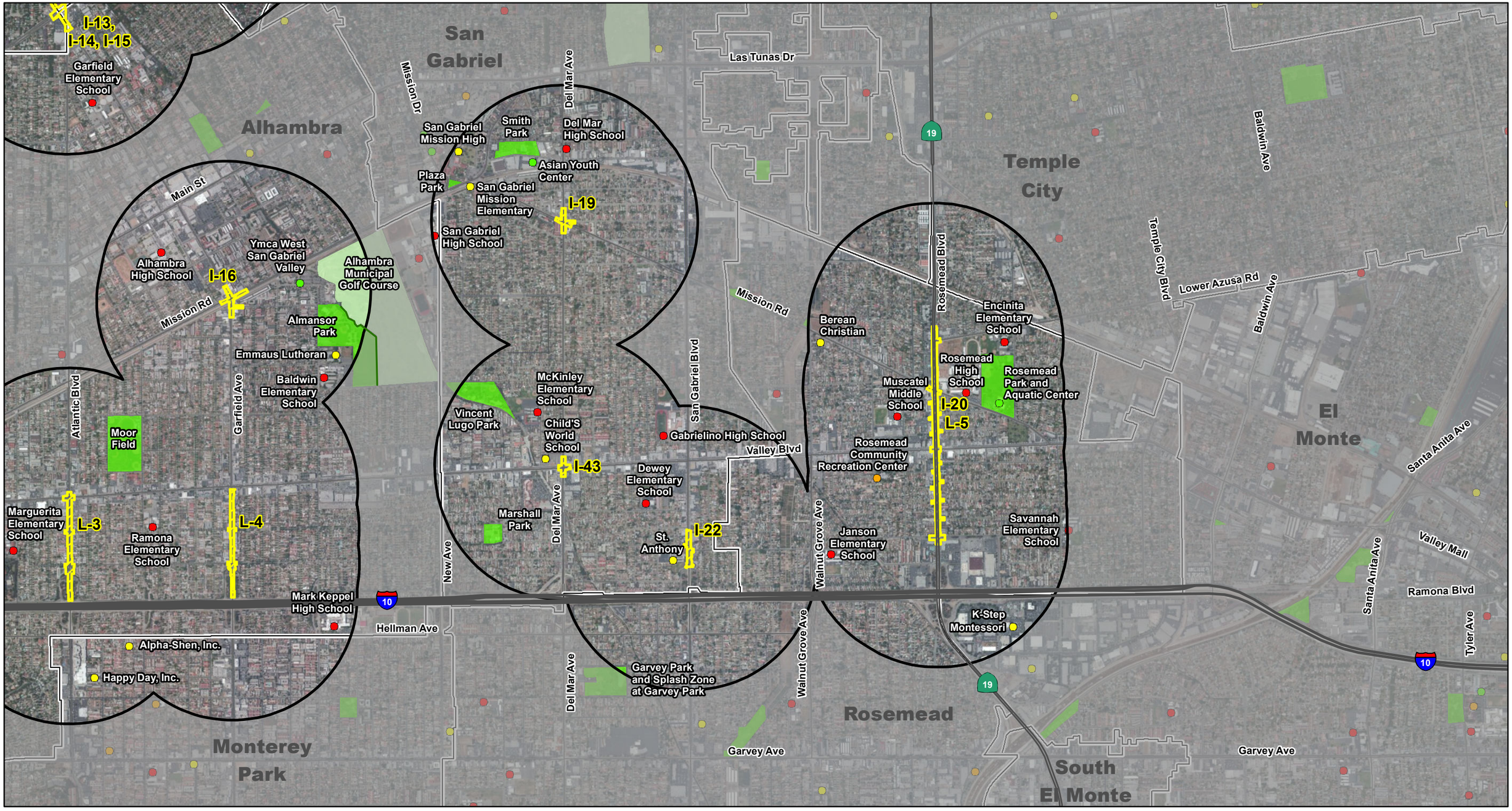

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communites
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

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FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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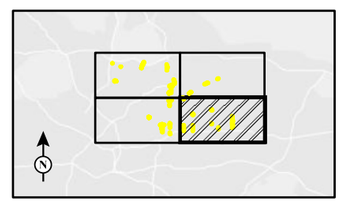

FIGURE 3.3-2
Sheet 4 of 4

SR 710 North Study

TSM/TDM Alternative
Schools, Parks, and Recreation Facilities

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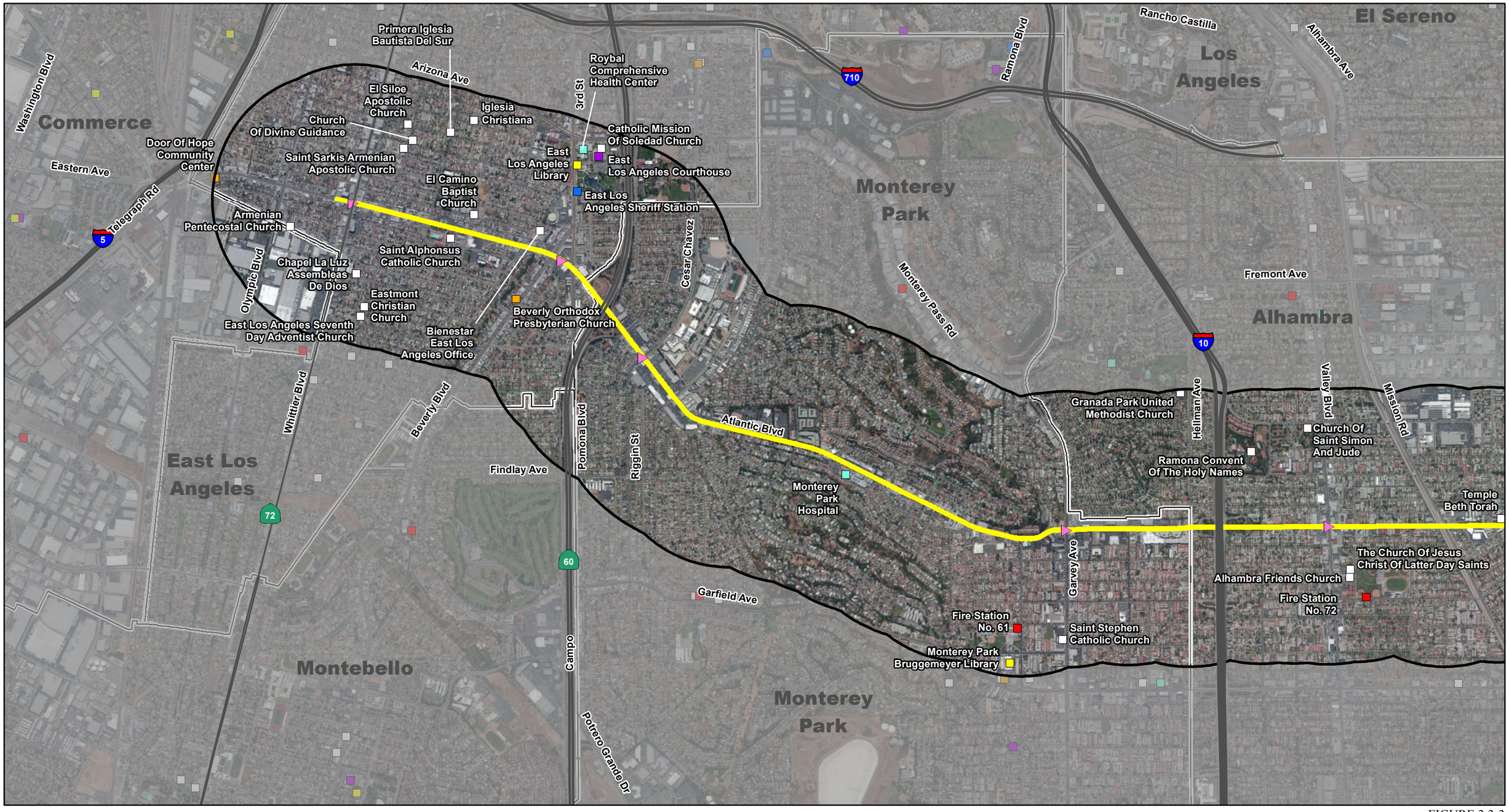

LEGEND

- BRT Alternative Alignment
- Station
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communites
- Police
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-3
Sheet 1 of 2

SR-710 North Study

BRT Alternative
Community Services and Facilities

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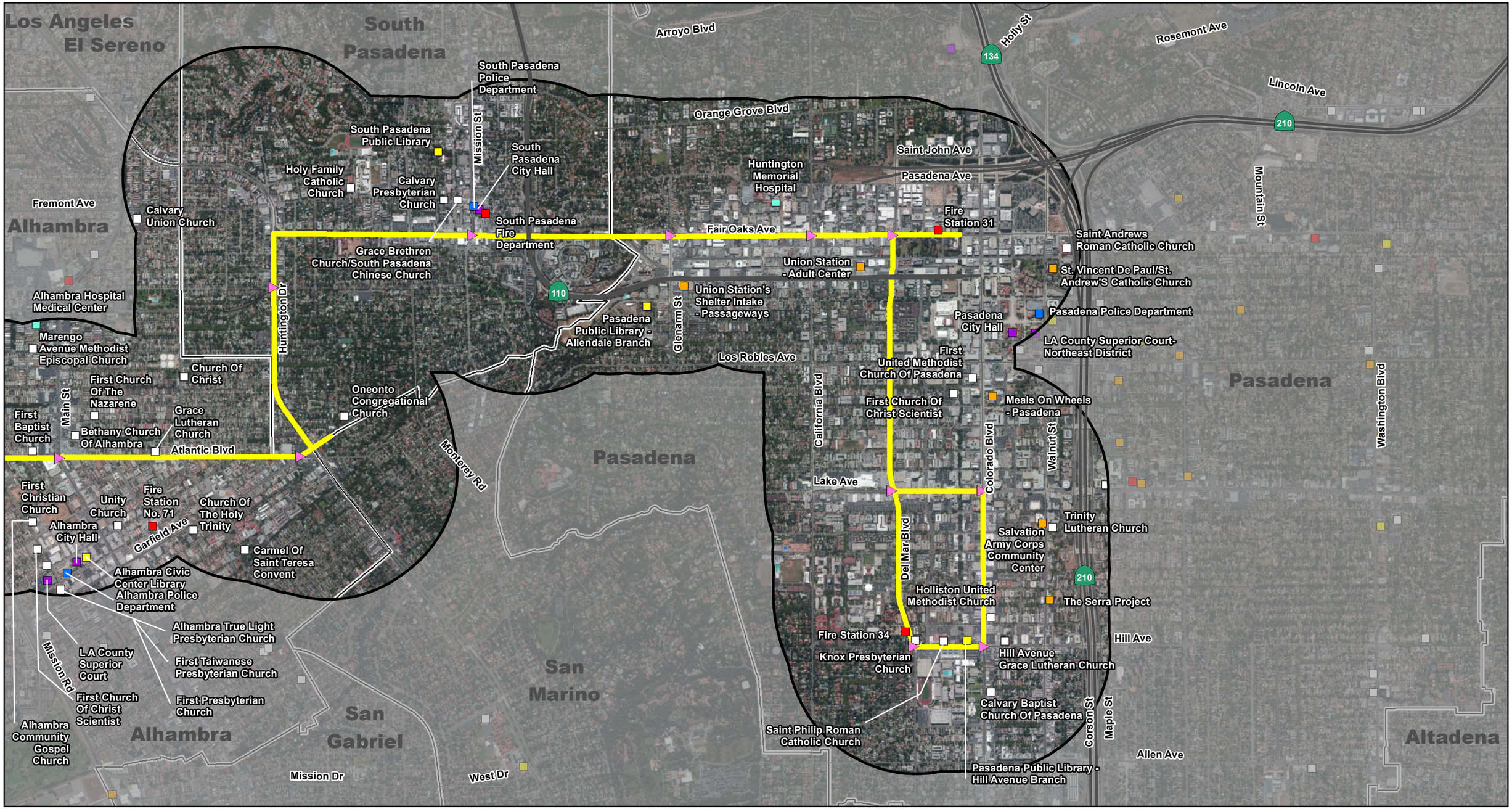

LEGEND

- BRT Alternative Alignment
- Station
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communites
- Police
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

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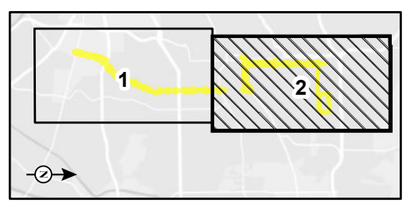

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FIGURE 3.3-3
Sheet 2 of 2

SR-710 North Study

BRT Alternative
Community Services and Facilities

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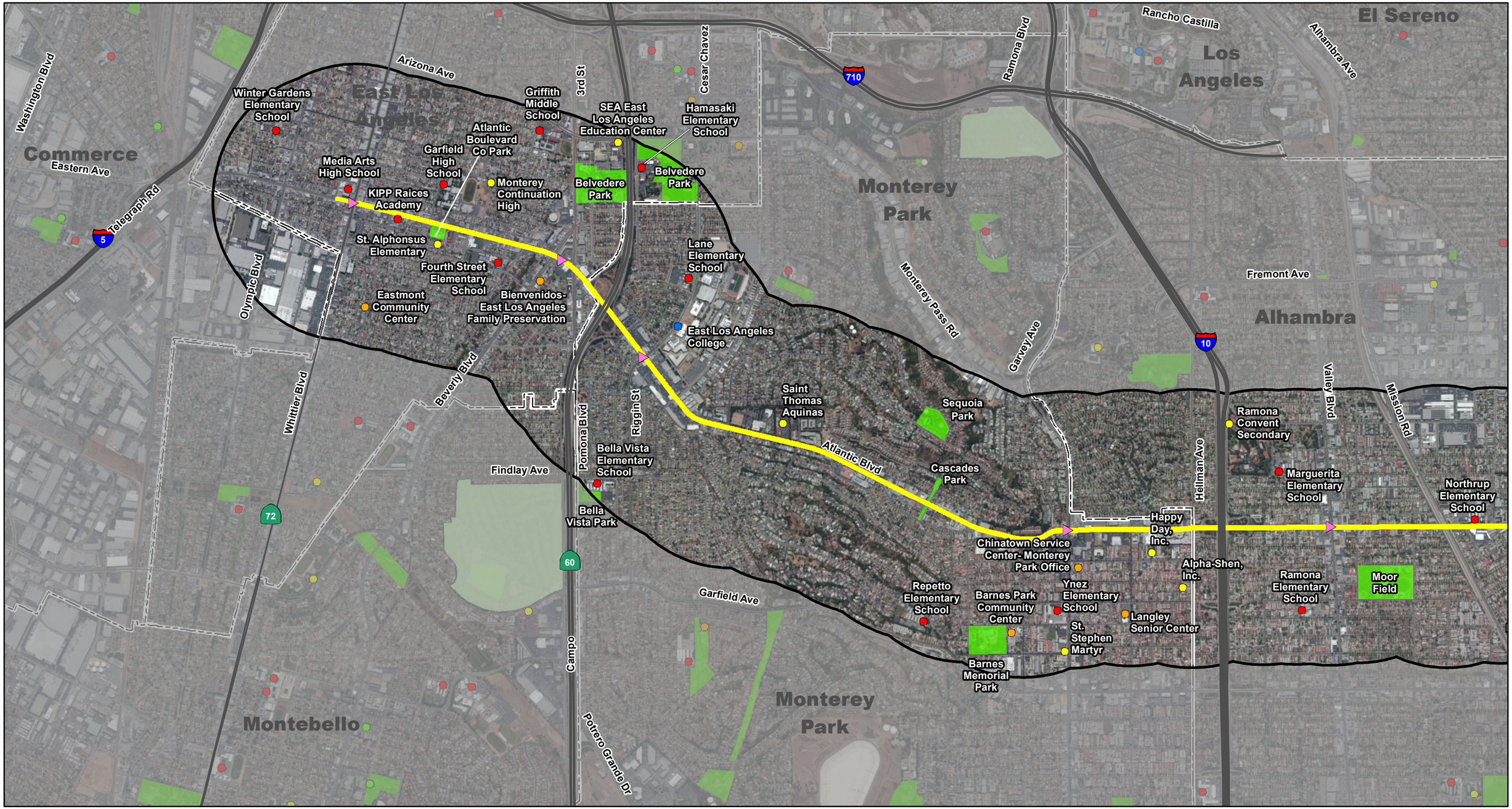
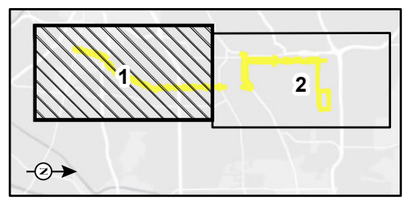


LEGEND

- BRT Alternative Alignment
- Station
- 0.5 Mile from the Project Improvements
- Cities and Unincorporated Communities
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

0 1000 2000
FEET



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-4
Sheet 1 of 2

SR-710 North Study

BRT Alternative
Schools, Parks, and Recreation Facilities

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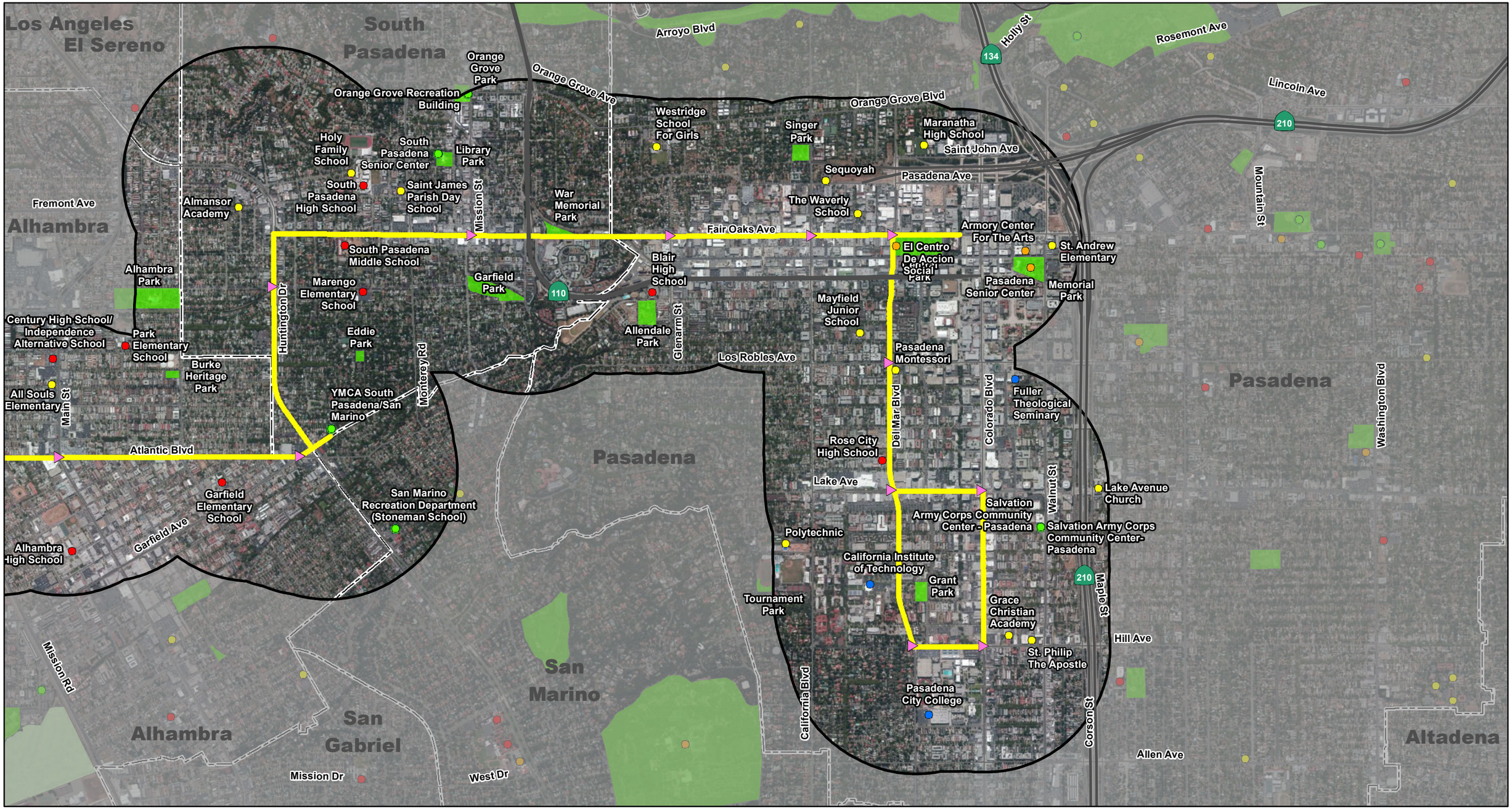

LEGEND

- BRT Alternative Alignment
- Station
- 0.5 Mile from the Project Improvements
- Cities and Unincorporated Communities
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

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FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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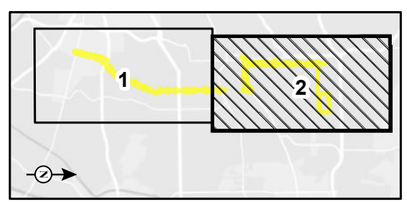

FIGURE 3.3-4
Sheet 2 of 2

SR-710 North Study

BRT Alternative
Schools, Parks, and Recreation Facilities

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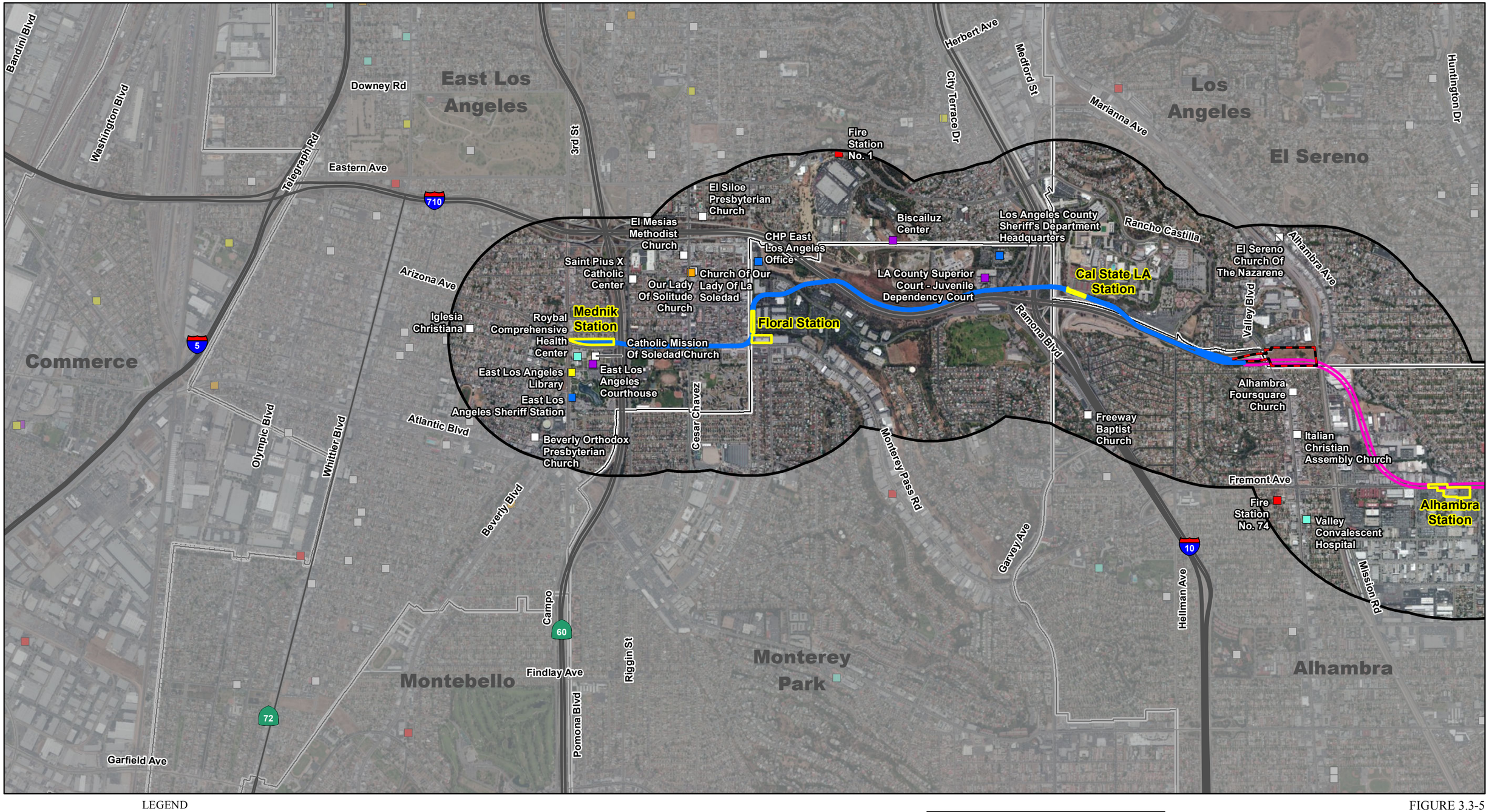
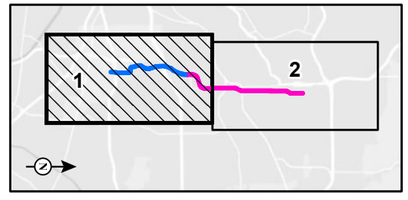


LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communities
- Police
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

0 1000 2000
FEET



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-5
Sheet 1 of 2

SR-710 North Study

LRT Alternative
Community Services and Facilities

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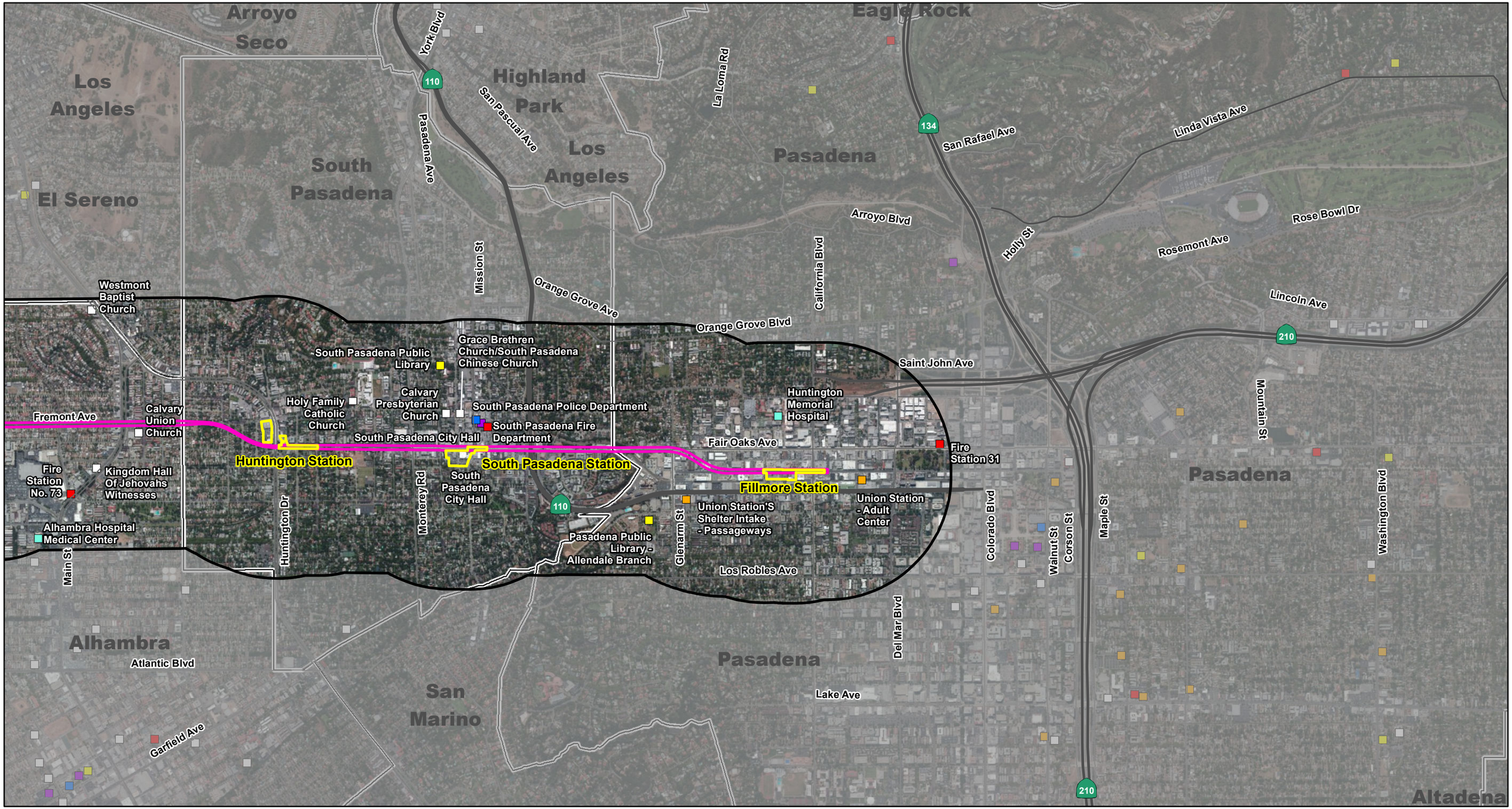
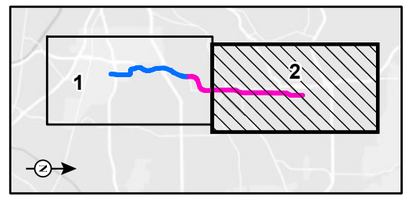


LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communities
- Police
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

0 1000 2000
FEET



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-5
Sheet 2 of 2

SR-710 North Study

LRT Alternative
Community Services and Facilities

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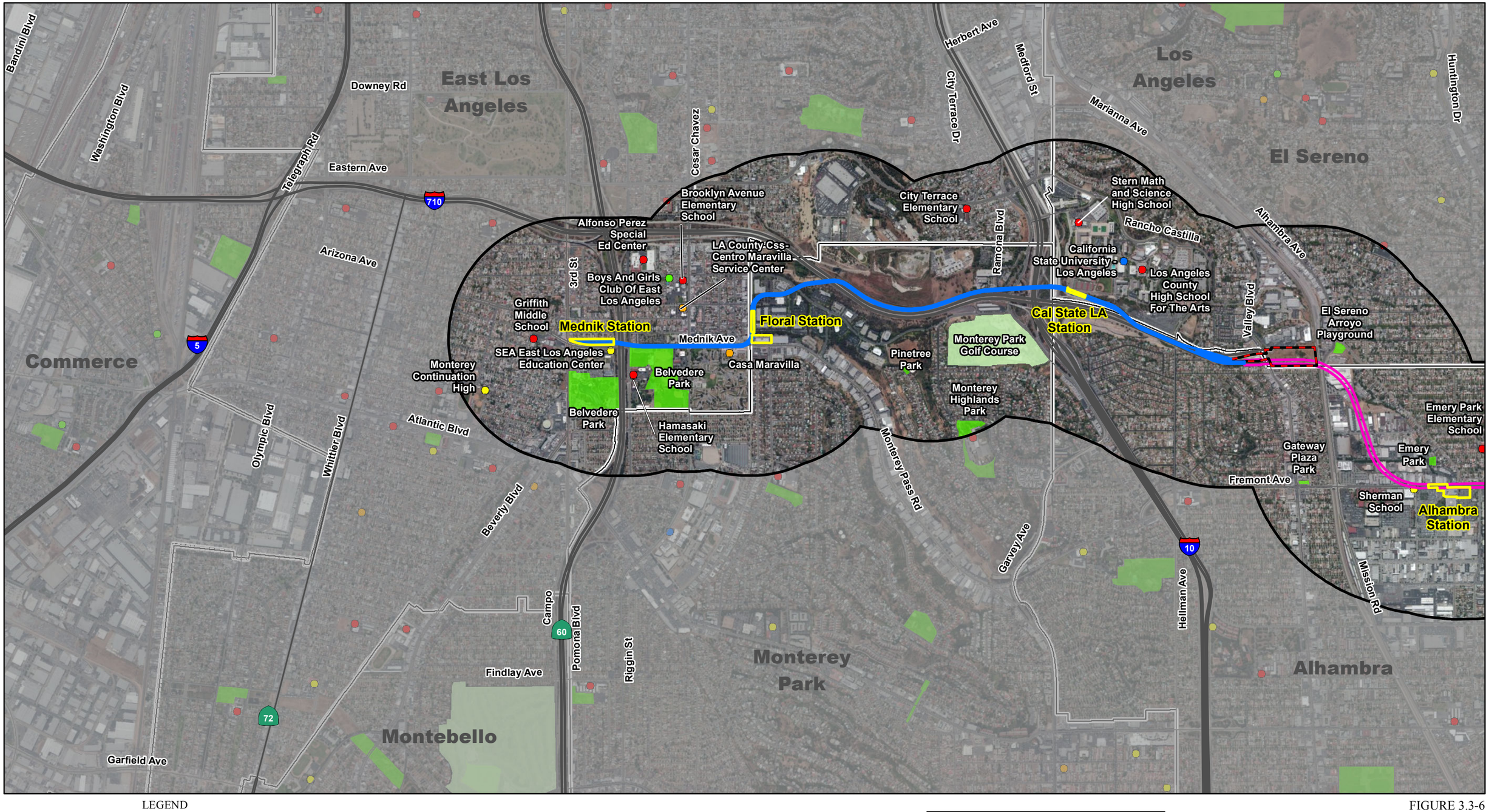
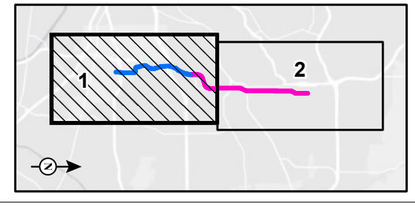


LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communities
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

0 1000 2000
FEET



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-6
Sheet 1 of 2

SR-710 North Study

LRT Alternative
Schools, Parks, and Recreation Facilities

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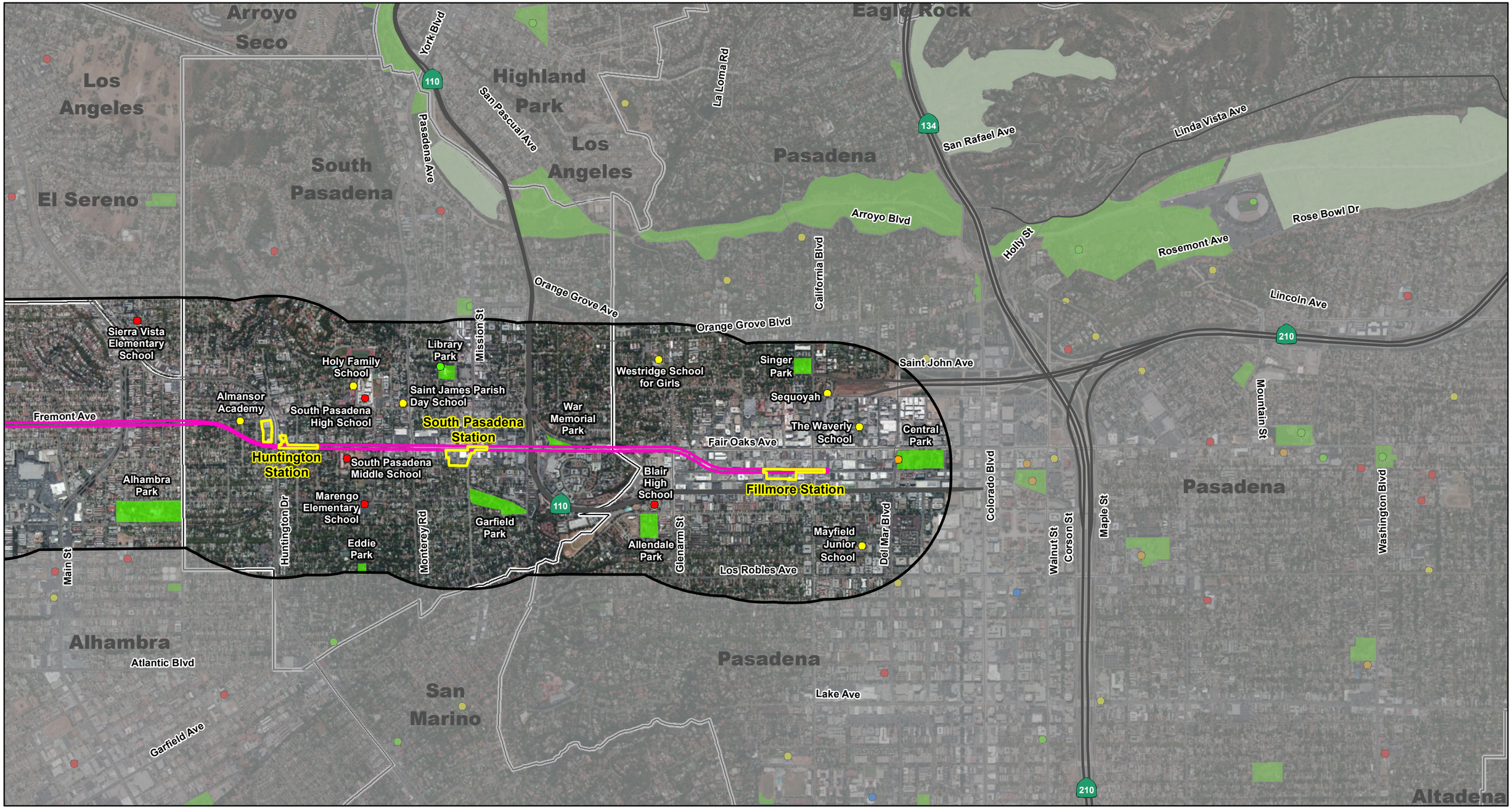
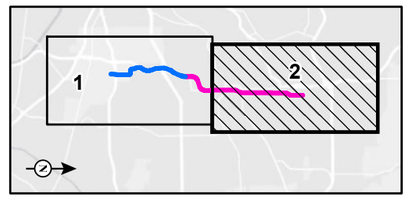


LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communities
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

0 1000 2000
FEET



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-6
Sheet 2 of 2

SR-710 North Study

LRT Alternative
Schools, Parks, and Recreation Facilities

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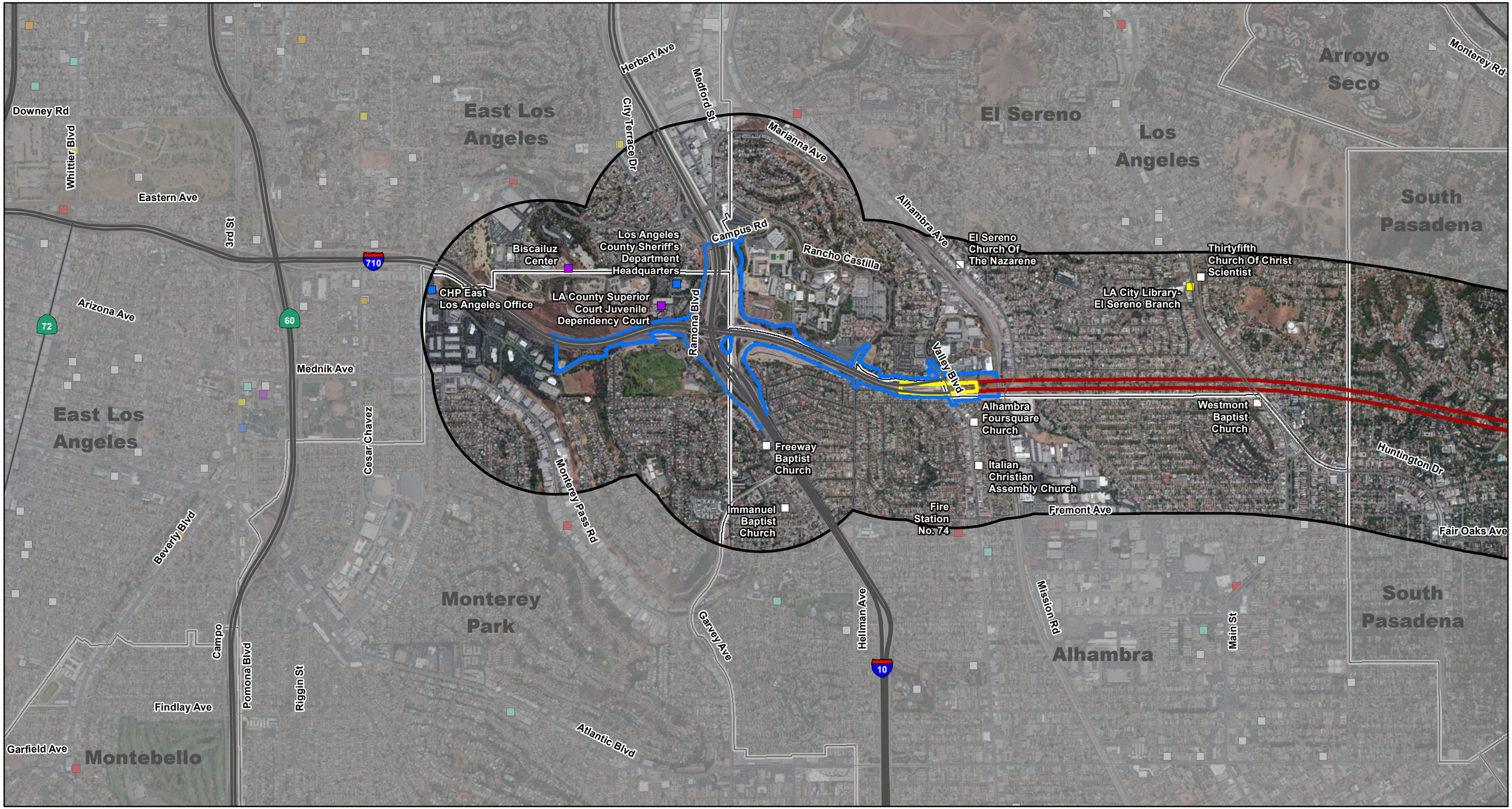

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communities
- Police
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

0 1000 2000
FEET

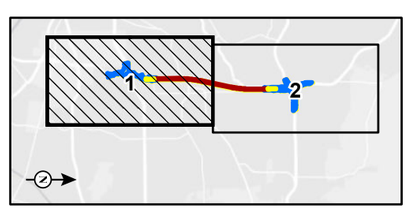

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FIGURE 3.3-7
Sheet 1 of 2

SR-710 North Study

Freeway Tunnel Alternative
Community Services and Facilities

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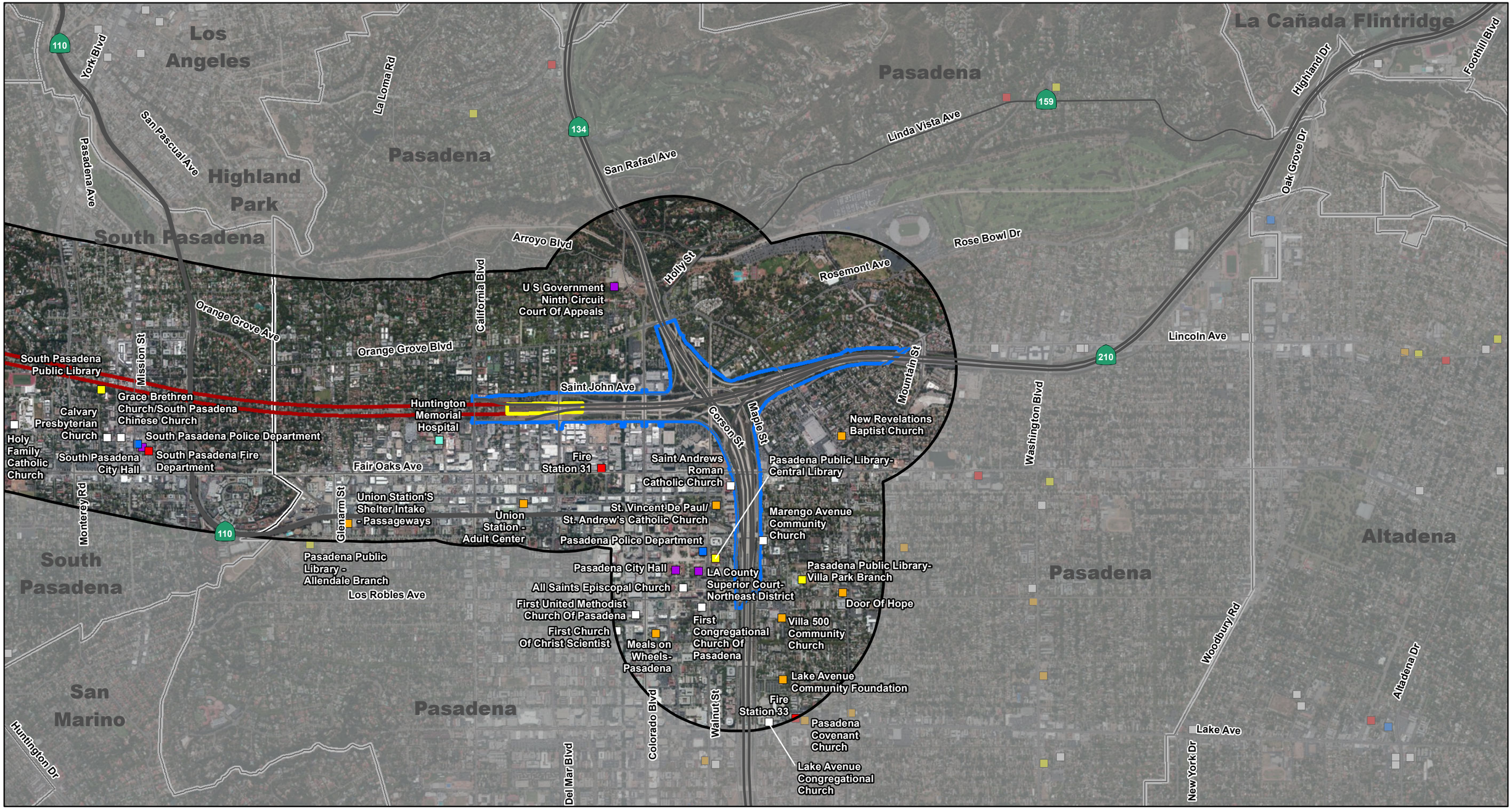

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communities
- Police
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

0 1000 2000
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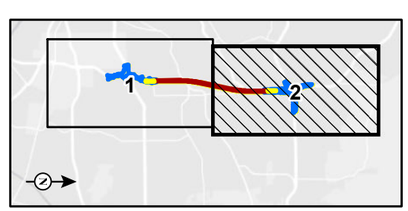

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-7
Sheet 2 of 2

SR-710 North Study

Freeway Tunnel Alternative
Community Services and Facilities

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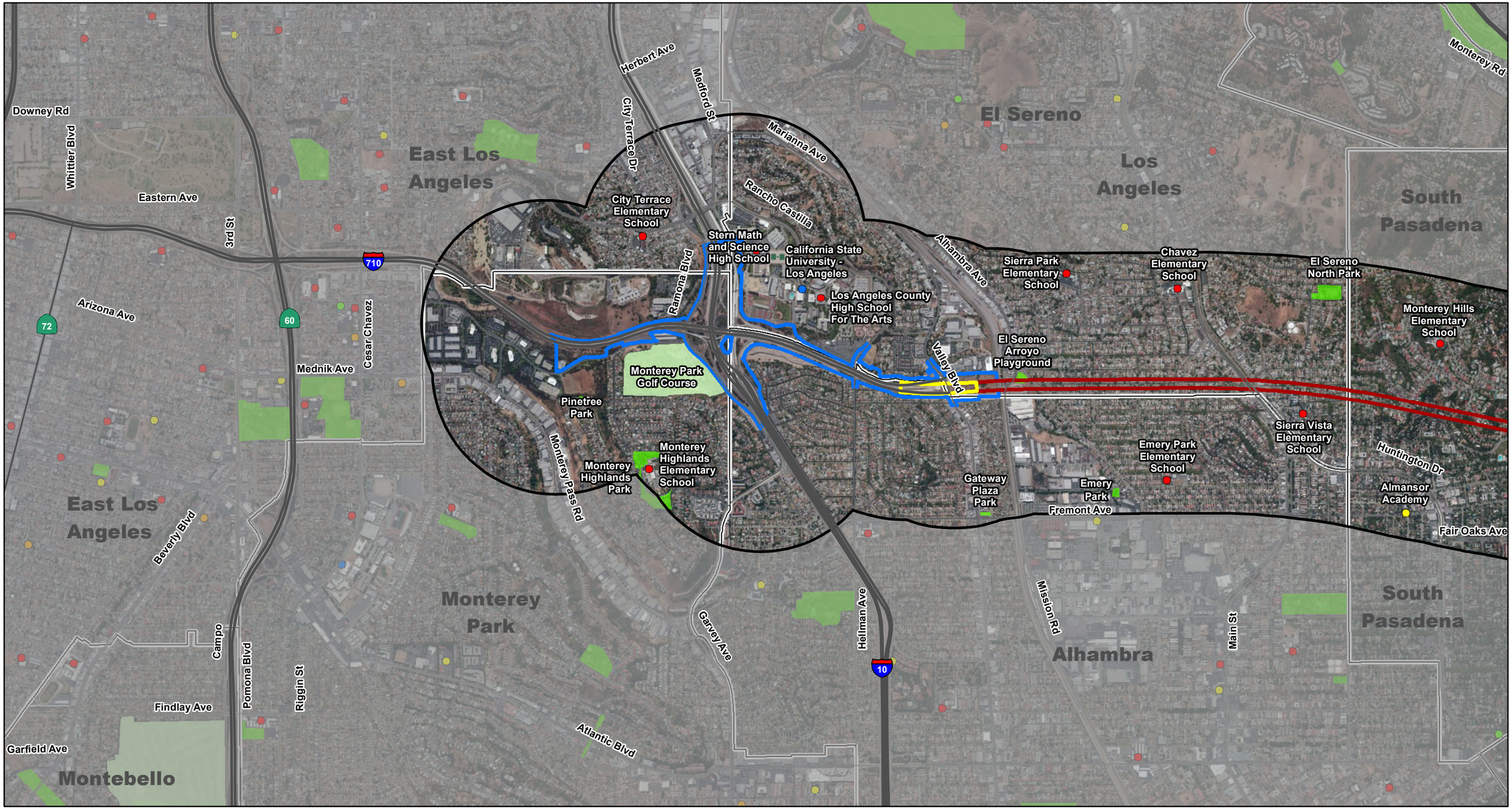
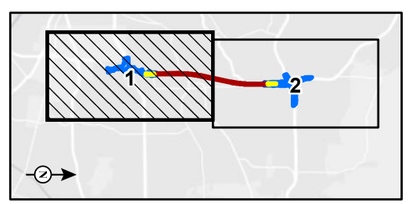


LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communities
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

0 1000 2000
FEET



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-8
Sheet 1 of 2

SR-710 North Study

Freeway Tunnel Alternative
Schools, Parks, and Recreation Facilities

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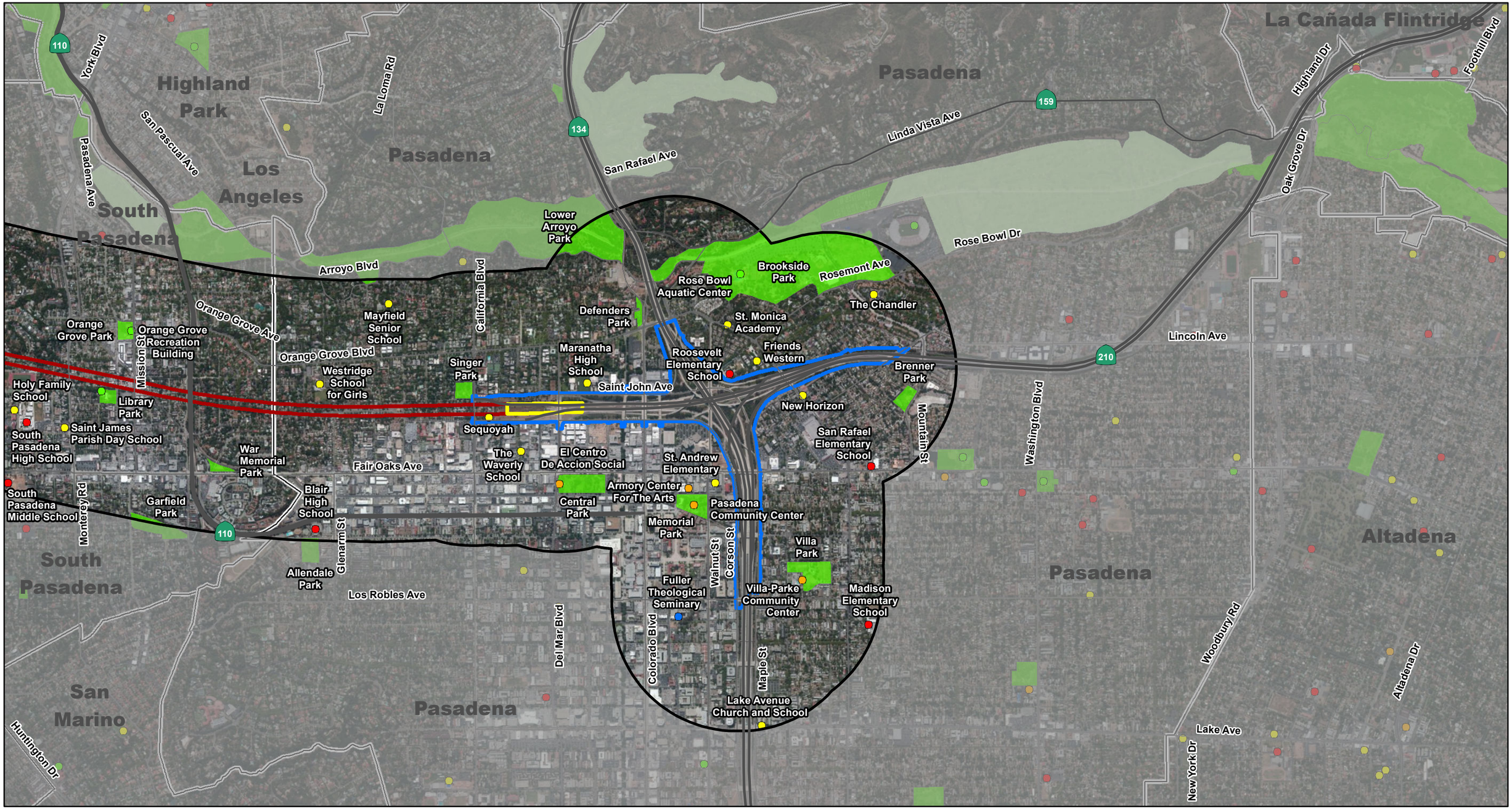
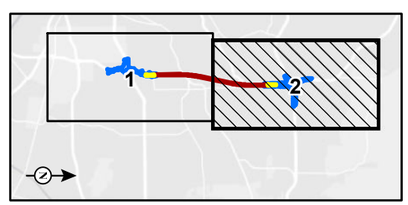


LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communities
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

0 1000 2000
FEET



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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FIGURE 3.3-8
Sheet 2 of 2

SR-710 North Study

Freeway Tunnel Alternative
Schools, Parks, and Recreation Facilities

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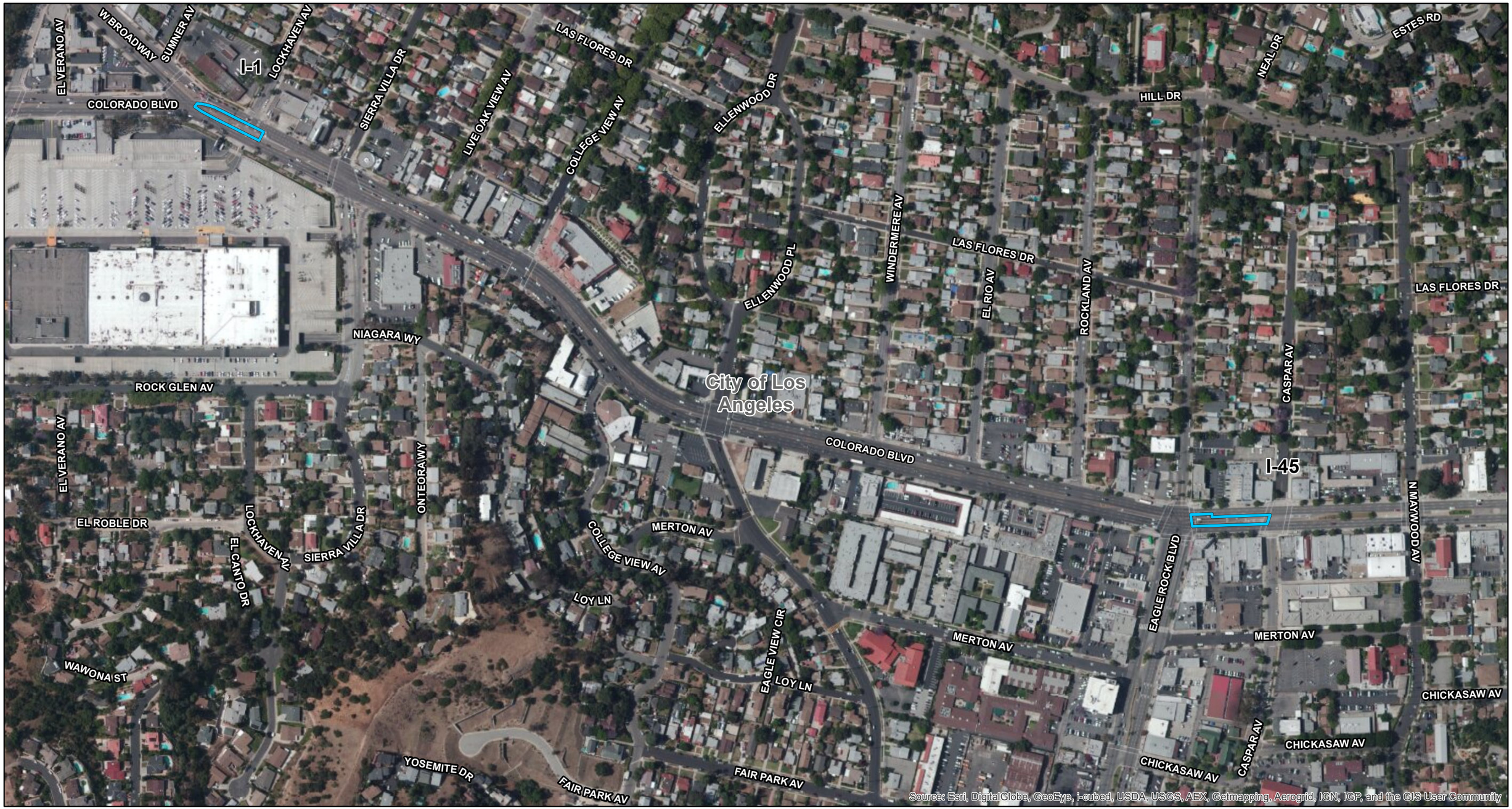

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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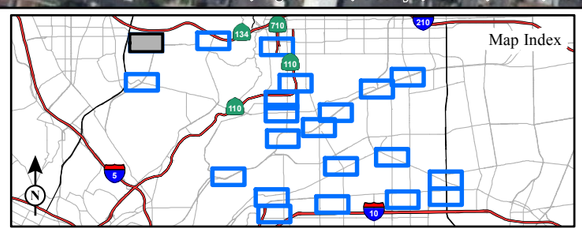

FIGURE 3.3-9
Sheet 1 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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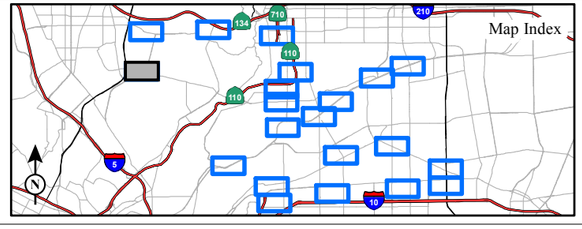

FIGURE 3.3-9
Sheet 2 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
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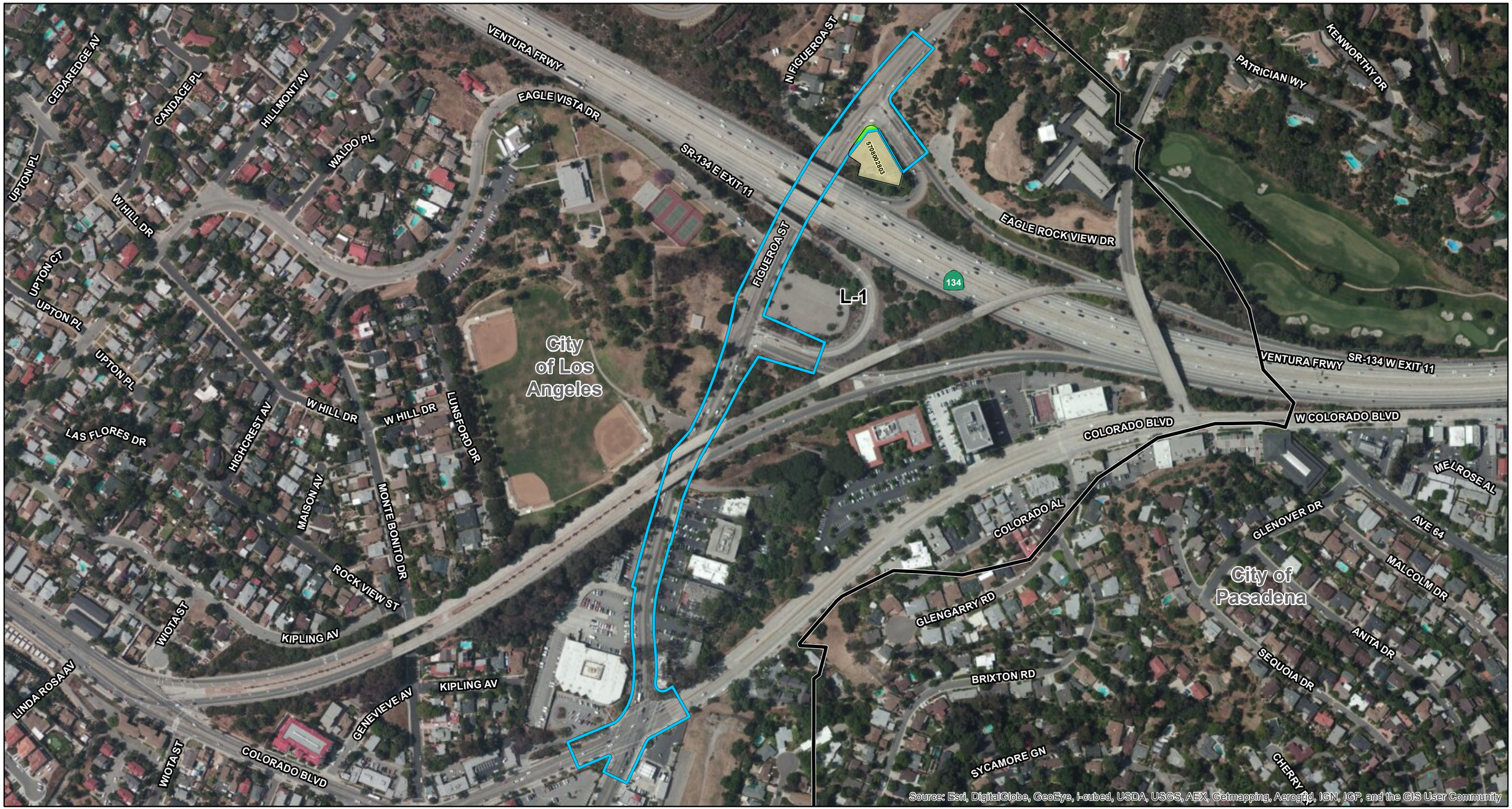
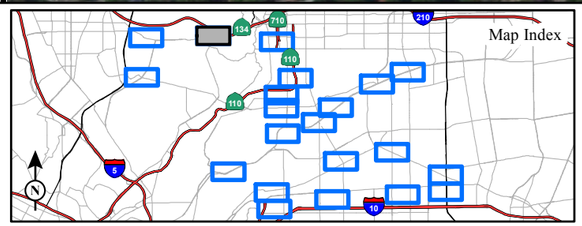


LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET



SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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FIGURE 3.3-9
Sheet 3 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
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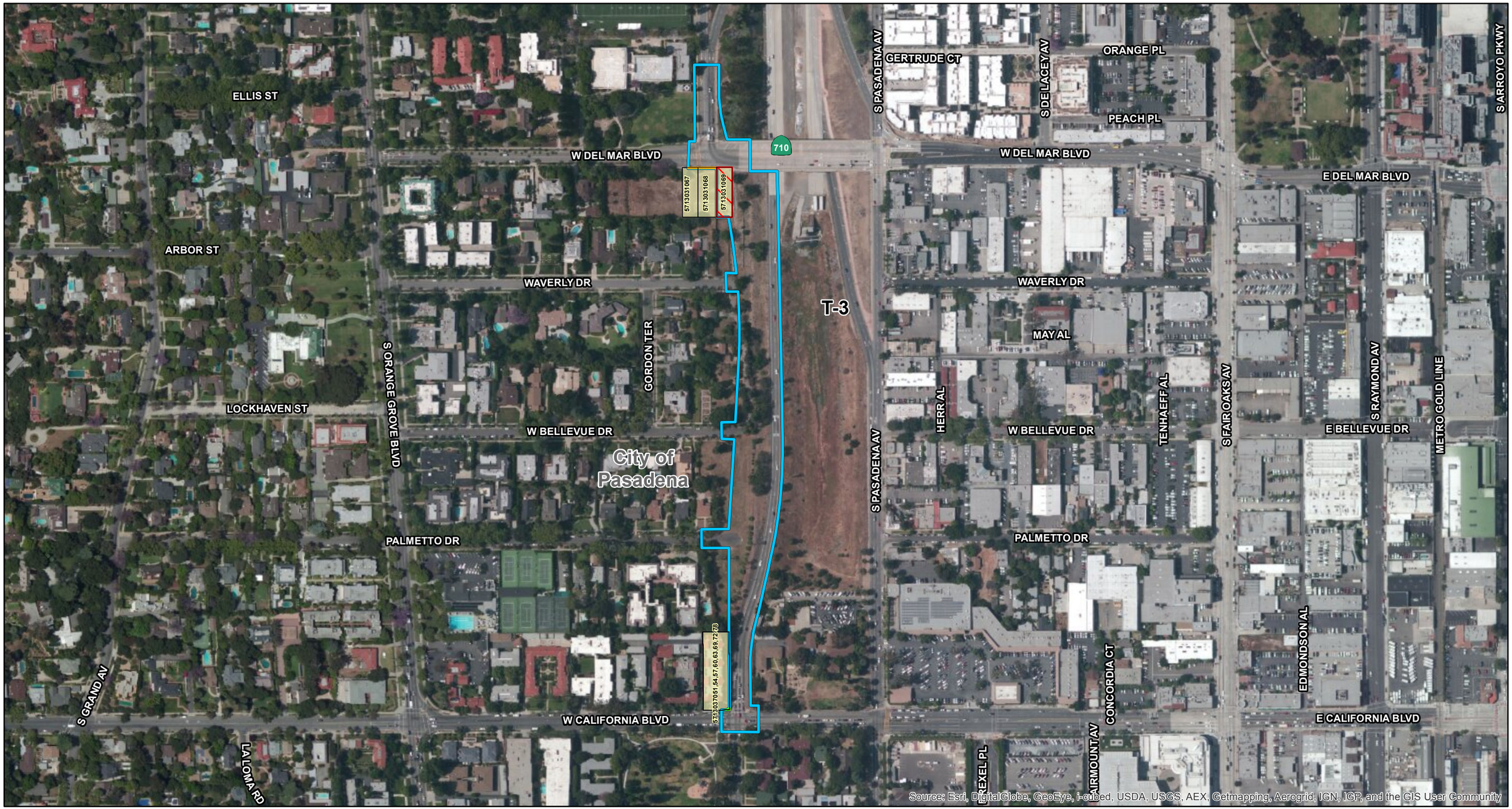

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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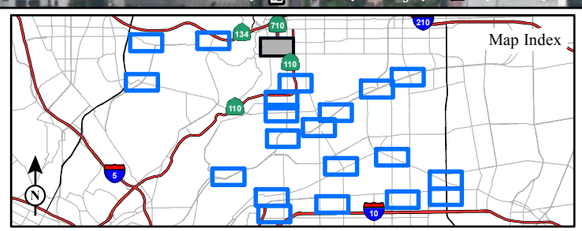

FIGURE 3.3-9
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SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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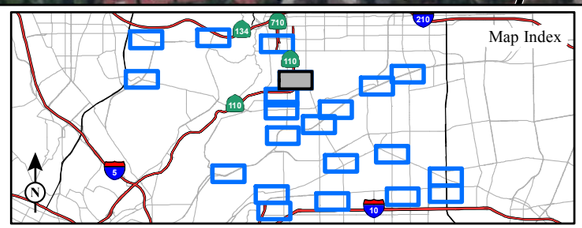

FIGURE 3.3-9
Sheet 5 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
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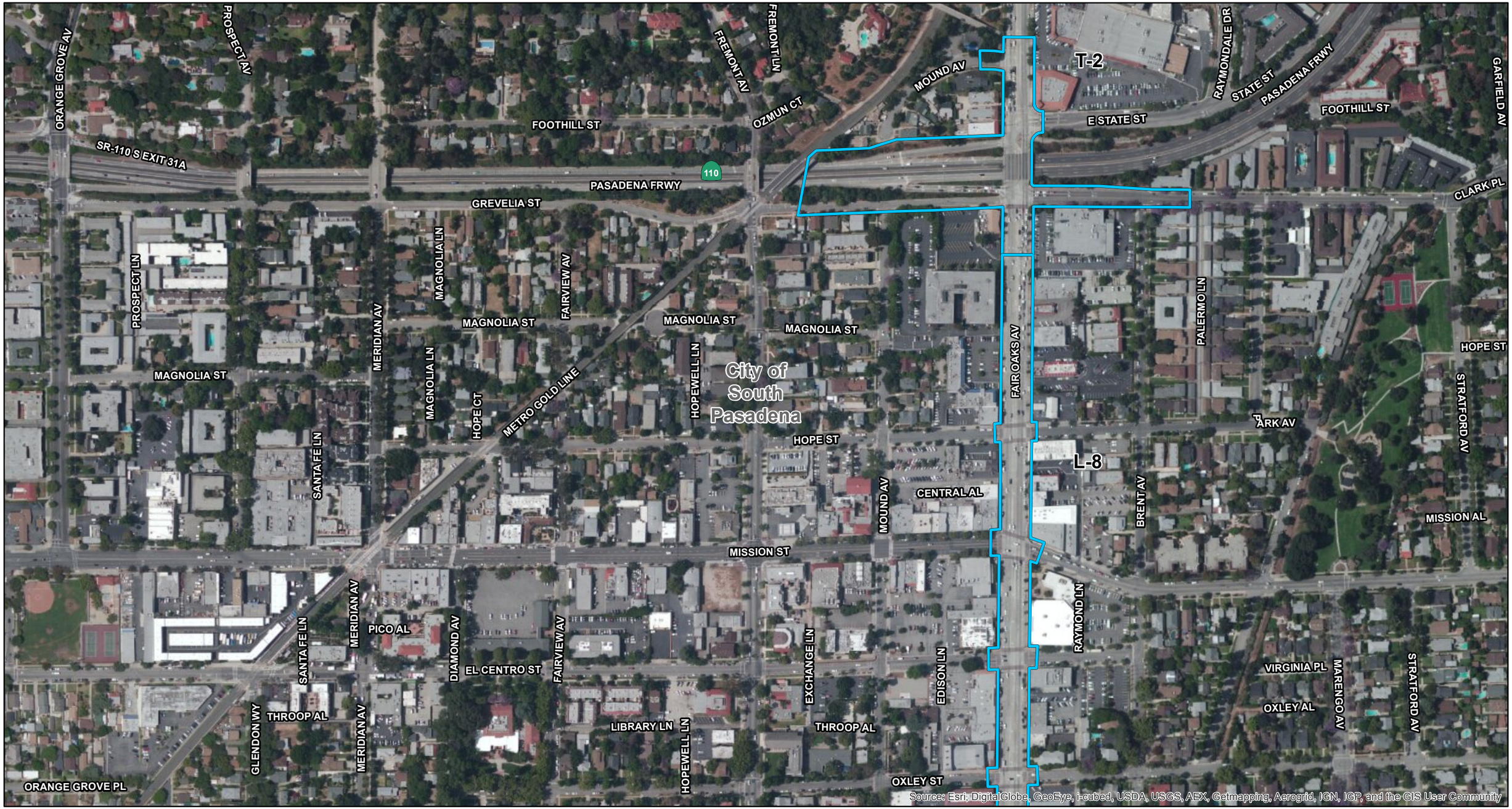

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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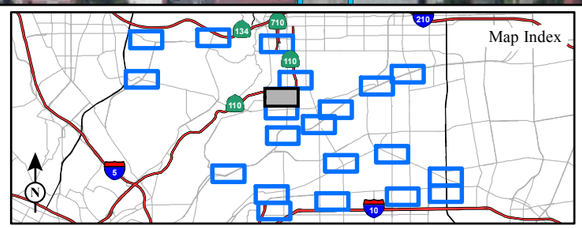

FIGURE 3.3-9
Sheet 6 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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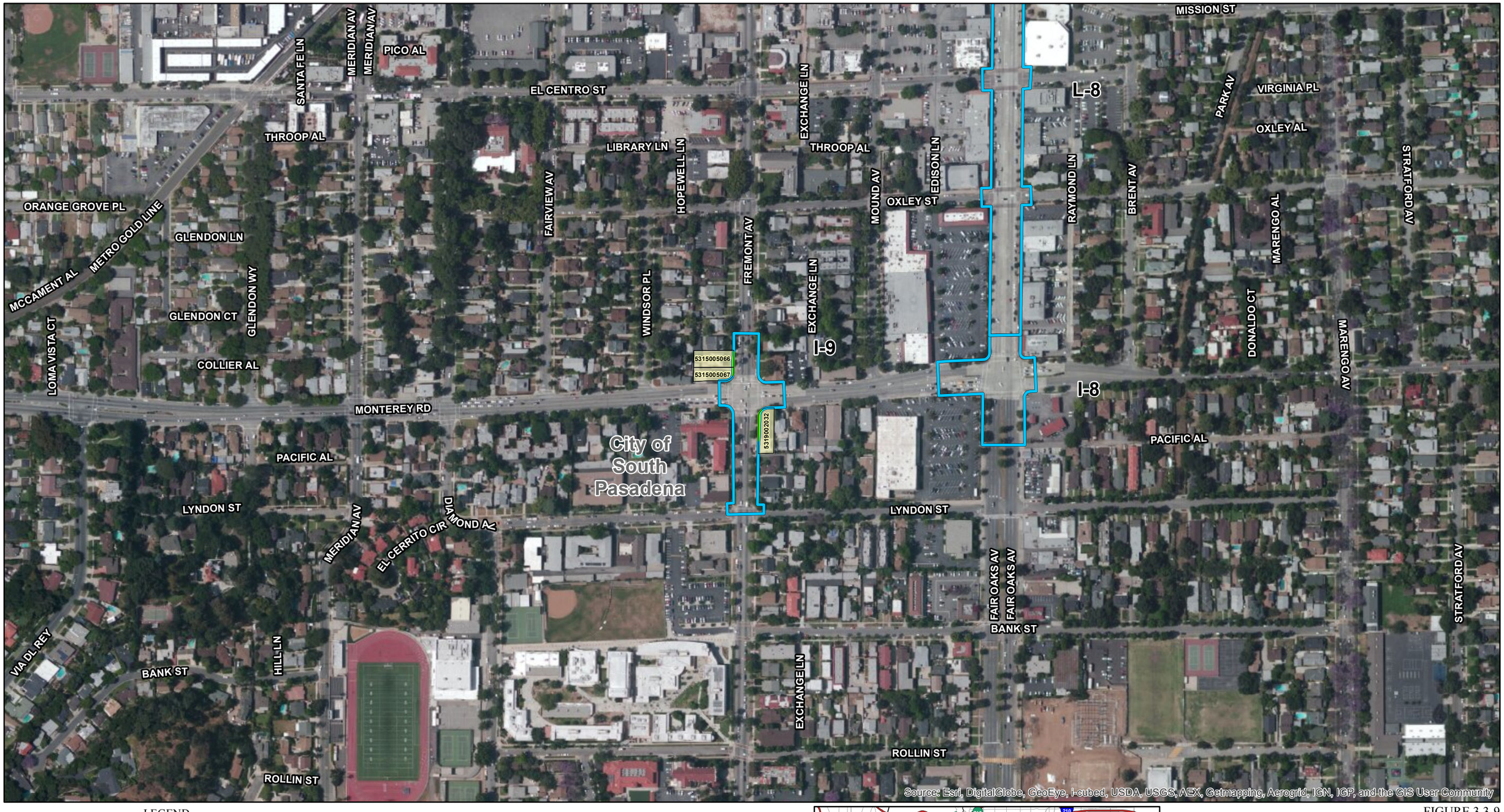

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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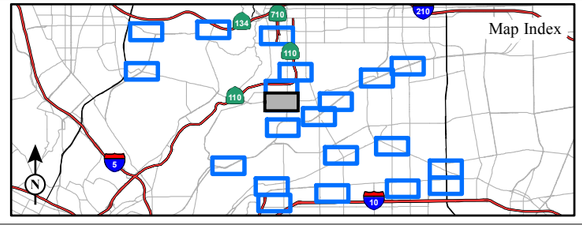

FIGURE 3.3-9
Sheet 7 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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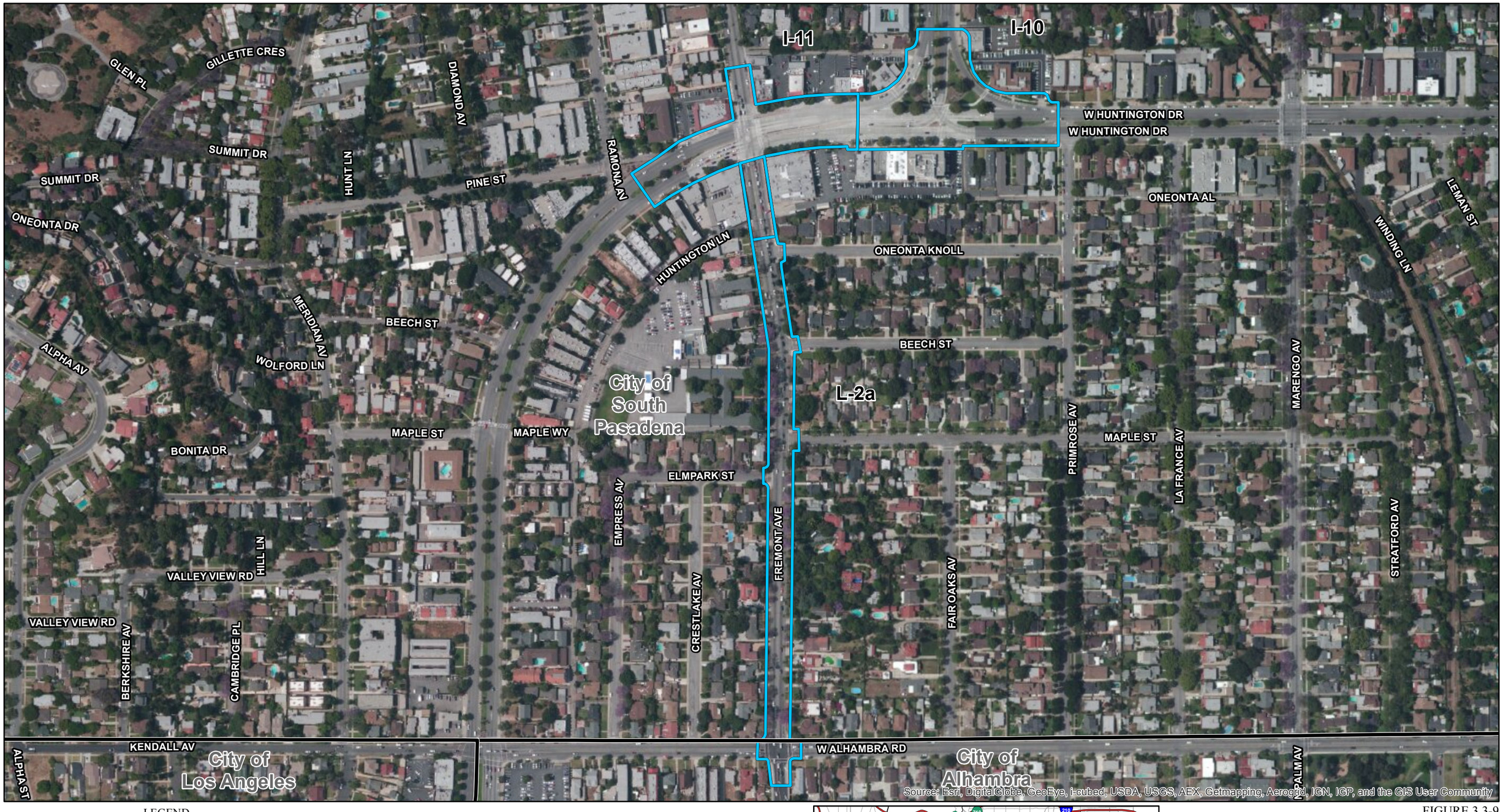
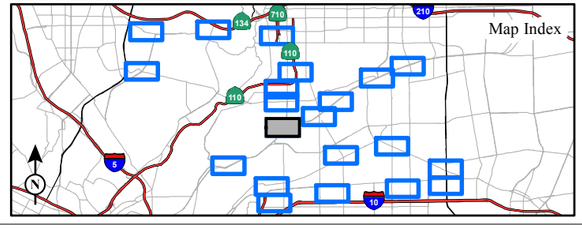


LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET



SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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FIGURE 3.3-9
Sheet 8 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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OAK HILL AV
HELLMAN AV
EDISON ST
OAK HILL AV
CASSATT ST
COLLIS AV
RANDOLPH AV
EL SERENO AV
CASTALIA AV
ROSEMEAD AV
NOVGOROD ST
DRYSDALE AV
TAMPICO AV
PORTOLA AV
HUNTINGTON DR
OAKLAND ST
PAULA ST
HARRIMAN AV
HILLSDALE DR
City of Los Angeles
I-3
PUEBLO AV
NAVARRO ST
ACADEMY ST
LOCKE AV
HUNTINGTON DR
W HUNTINGTON DR
W HUNTINGTON DR
AXTELL ST
PORTOLA AV
MINTO CT
HUNTINGTON DR S
PAOLA AV
FITHIAN AV
THELMA AV
N EASTERN AV
CASTALIA AV
GREY DR
WALDO CT
EDLOFT AV
TWINING ST
TWINING ST
LINDA VISTA TER
KENNETH DR
TWINING ST
TWINING ST
BETTY DR
PHELPS AV
BARSTOW ST
CASTALIA AV
APPLETON ST

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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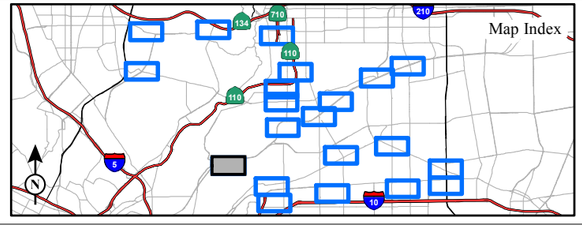

FIGURE 3.3-9
Sheet 9 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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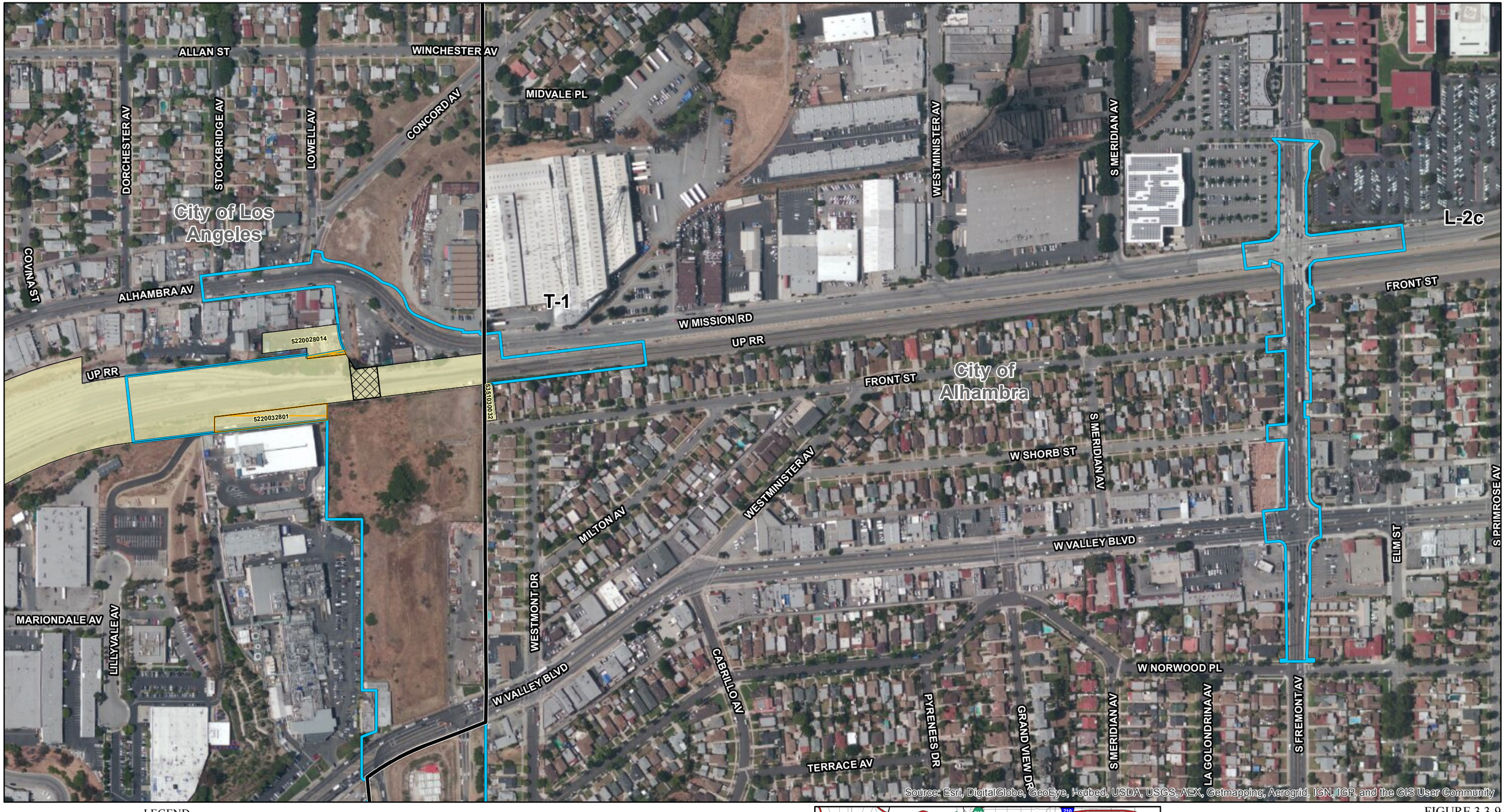

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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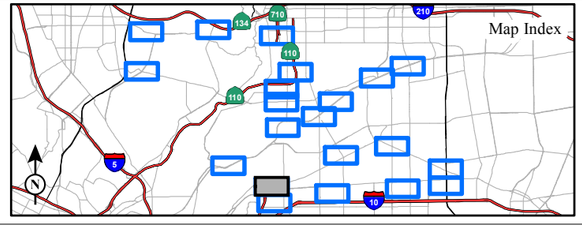

FIGURE 3.3-9
Sheet 10 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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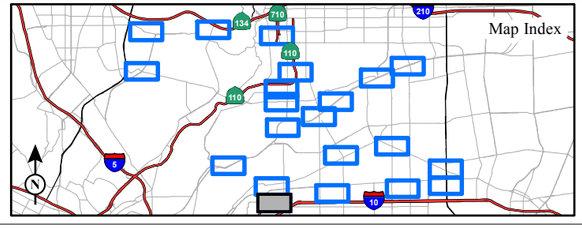

FIGURE 3.3-9
Sheet 11 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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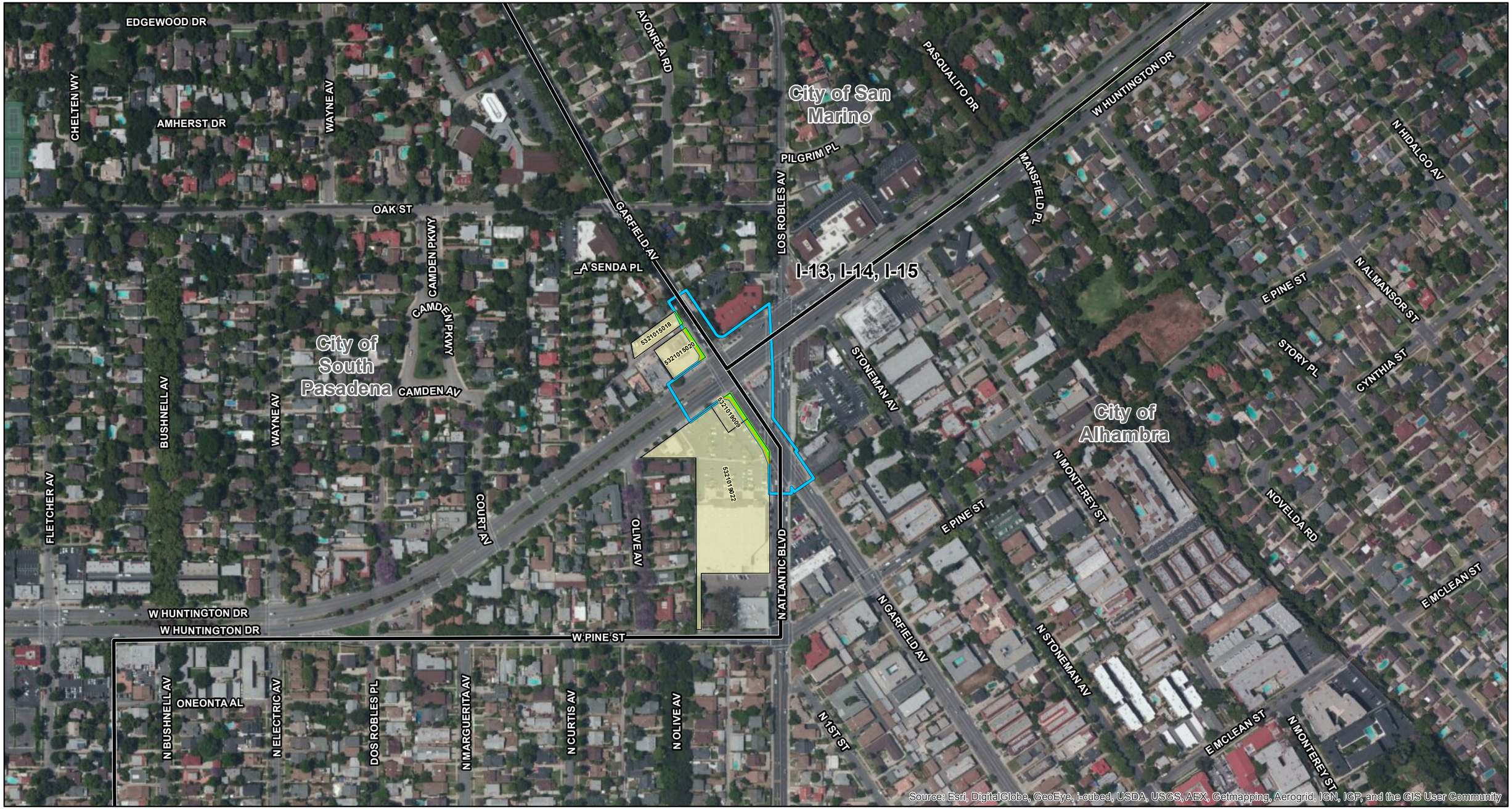

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET

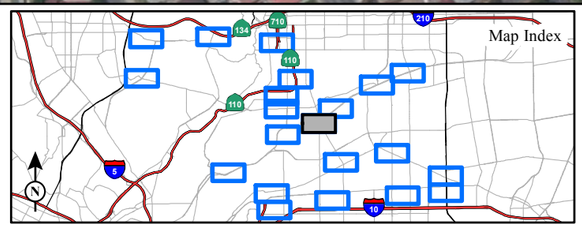

FIGURE 3.3-9
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SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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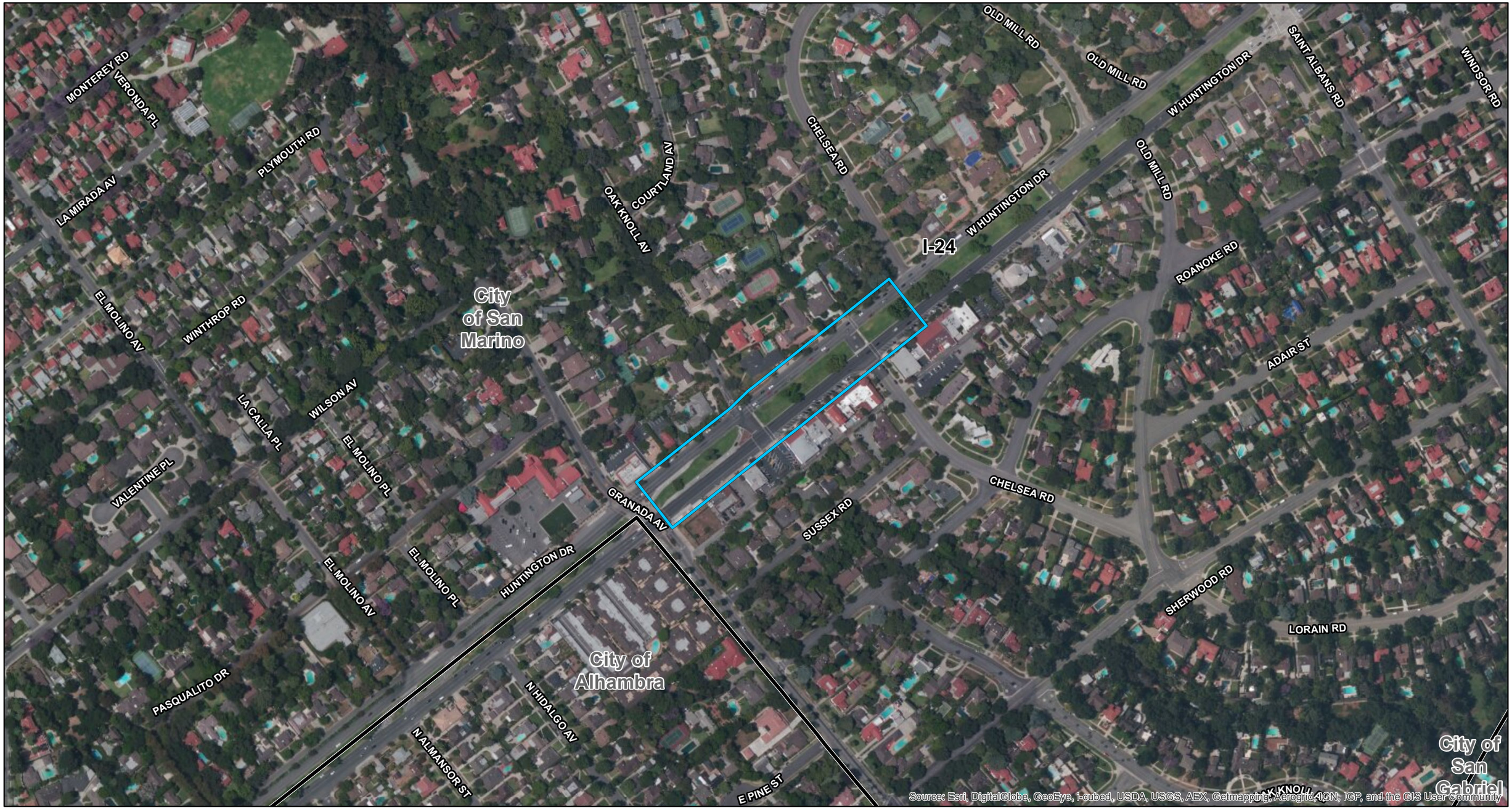

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

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FEET

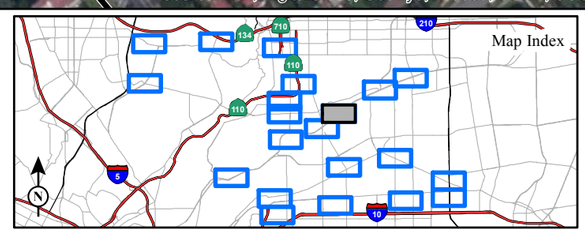

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FIGURE 3.3-9
Sheet 13 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
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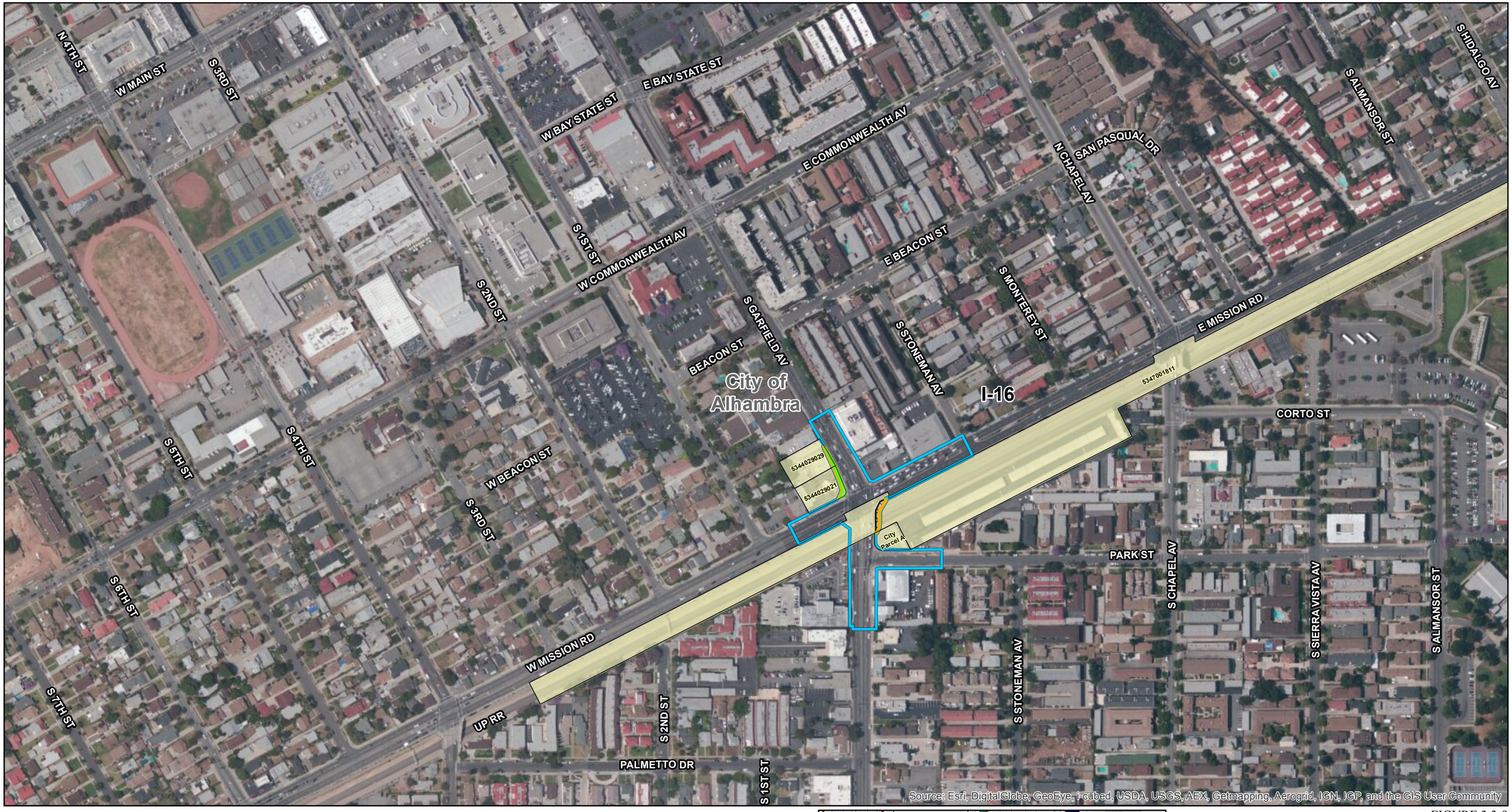

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
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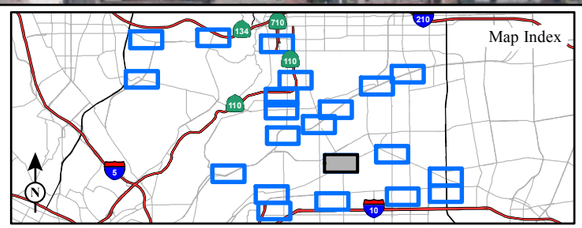

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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FIGURE 3.3-9
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SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
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EFIS 0700000191

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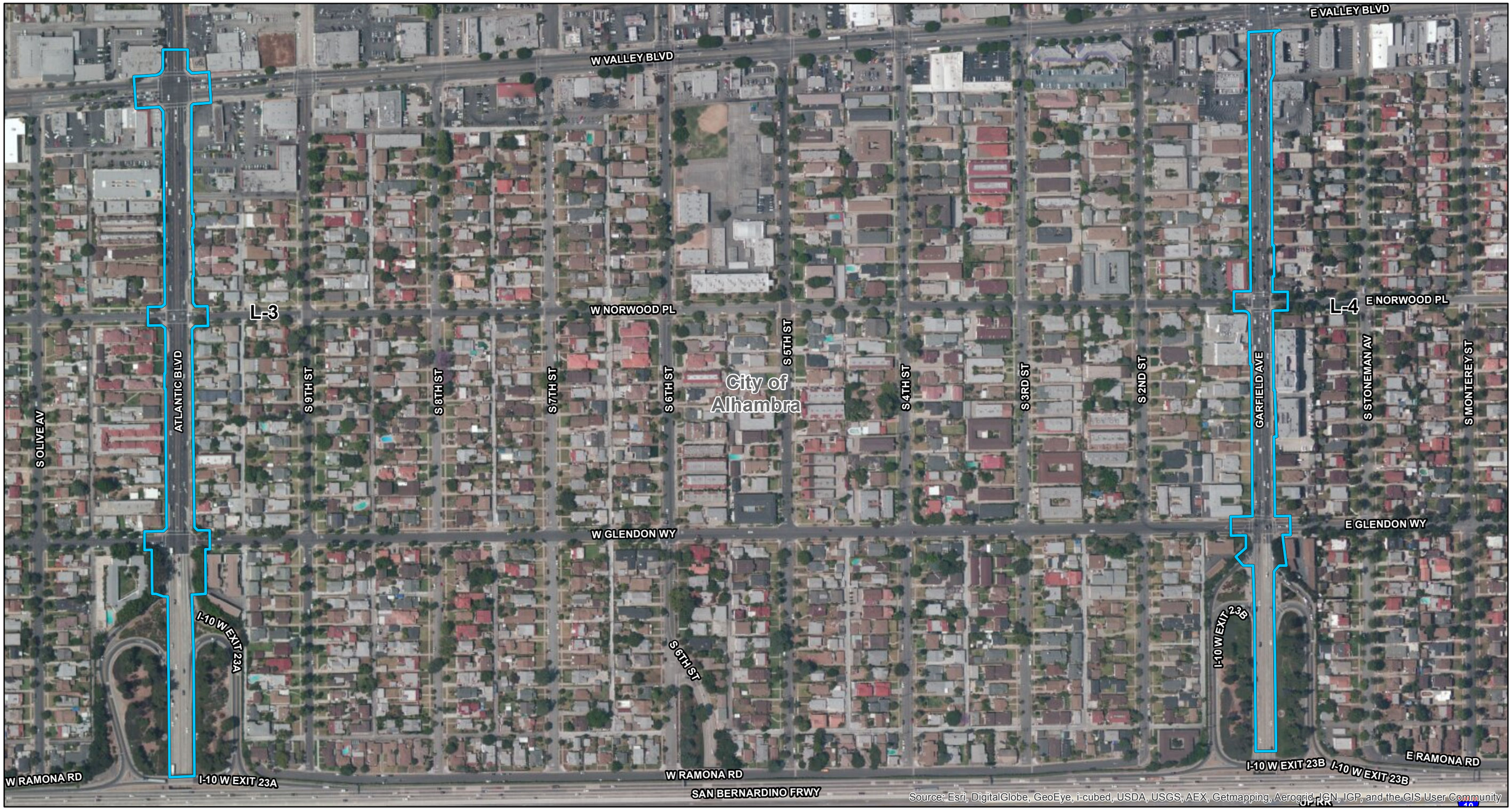

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
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- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

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0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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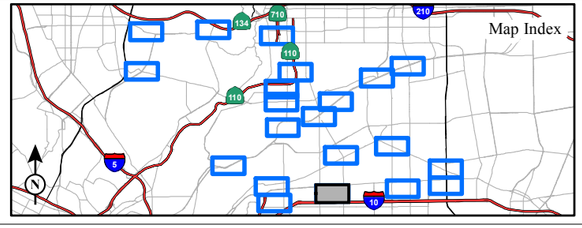

FIGURE 3.3-9
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SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
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EA 187900
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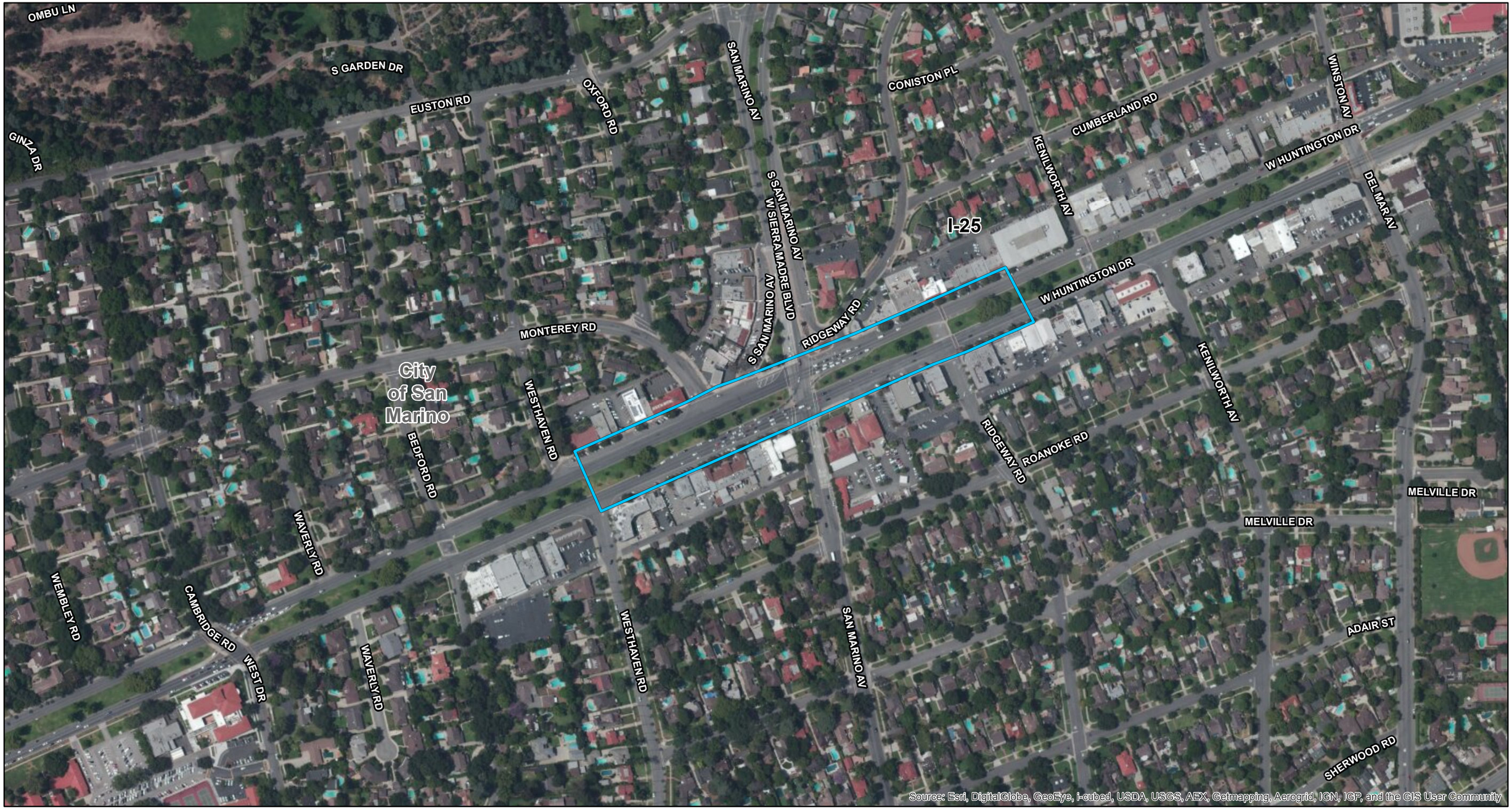

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
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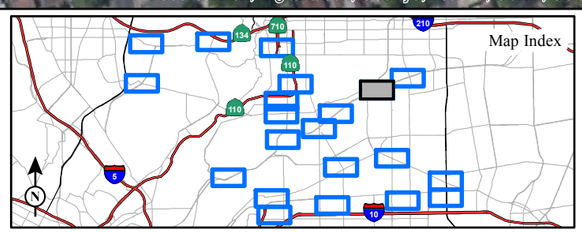
FEET



SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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FIGURE 3.3-9
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SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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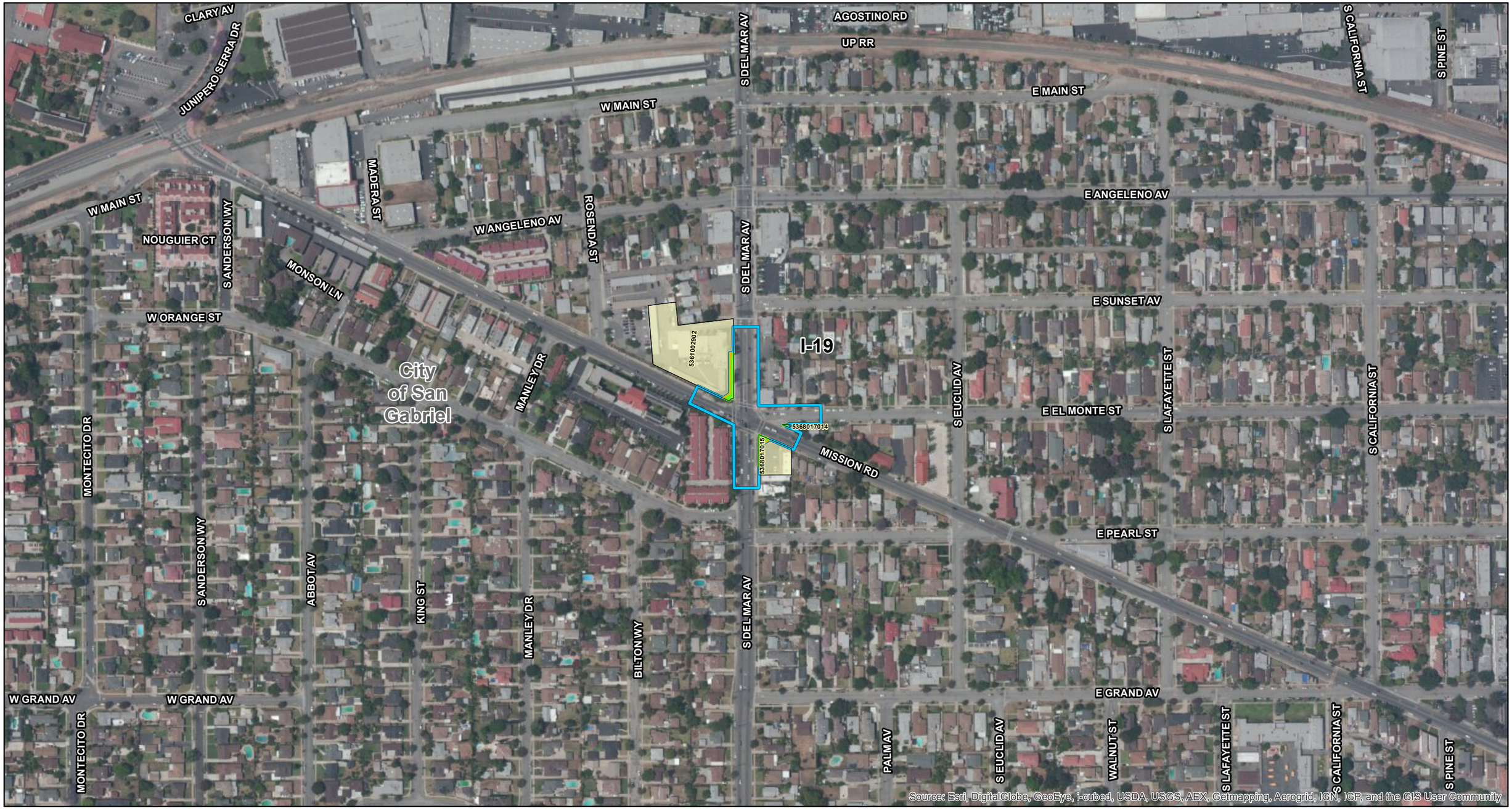

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
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- Partial Acquisition
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- Permanent Easement

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FEET

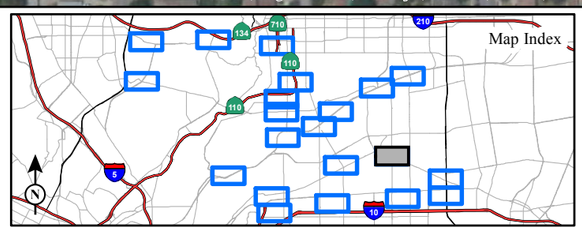

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FIGURE 3.3-9
Sheet 17 of 21

SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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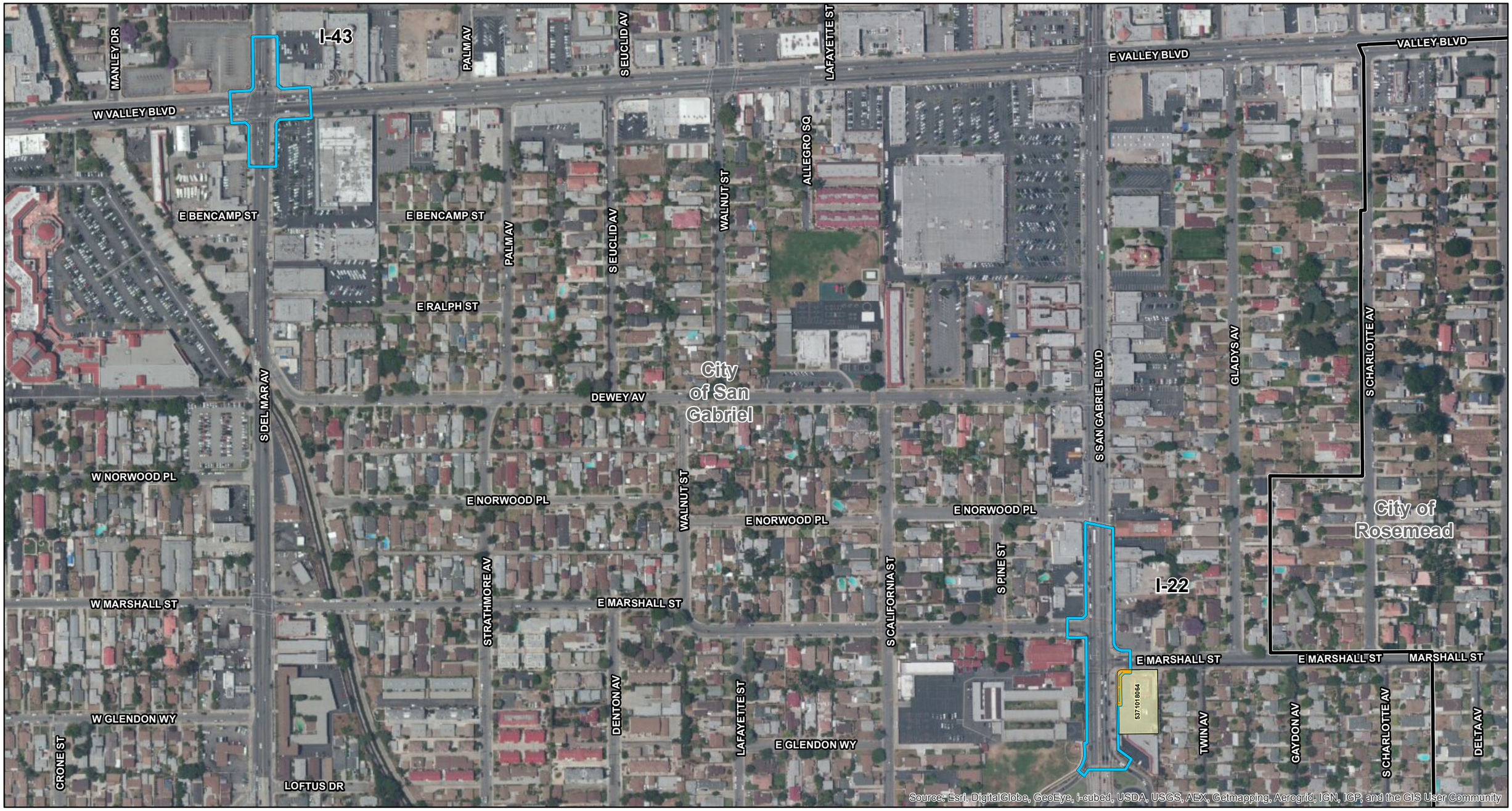

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
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N

0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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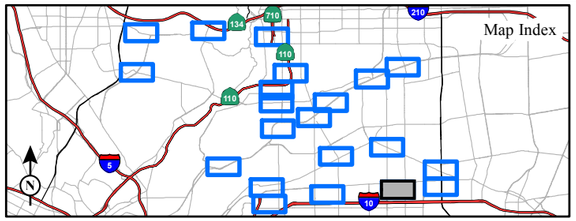

FIGURE 3.3-9
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SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions

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EA 187900
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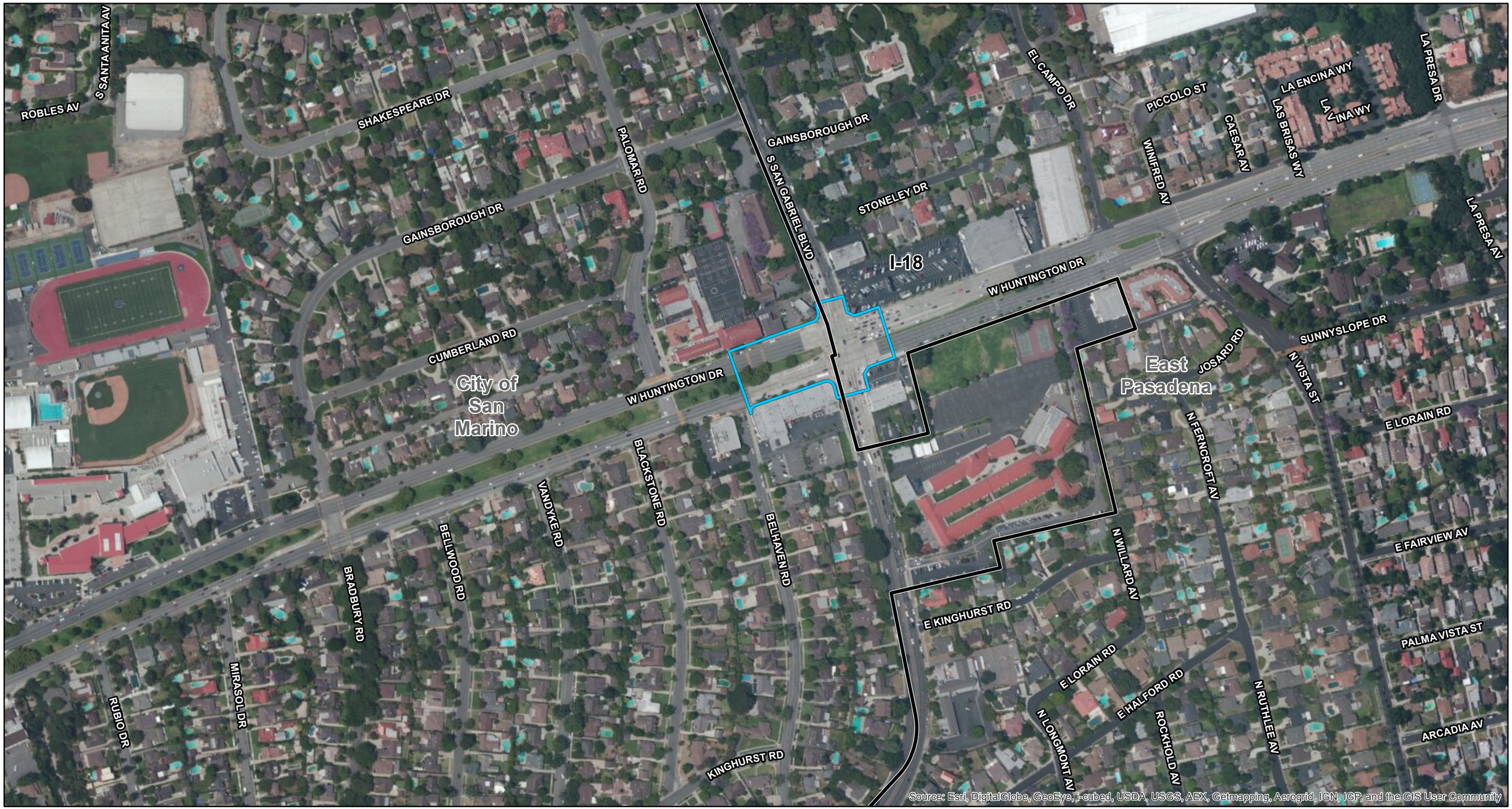

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
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0 150 300
FEET

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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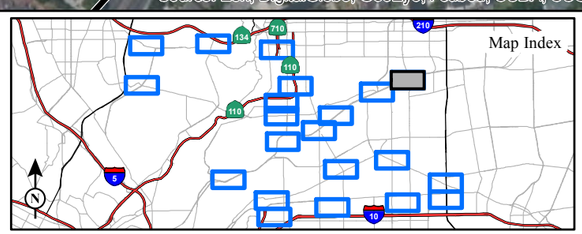

FIGURE 3.3-9
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SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
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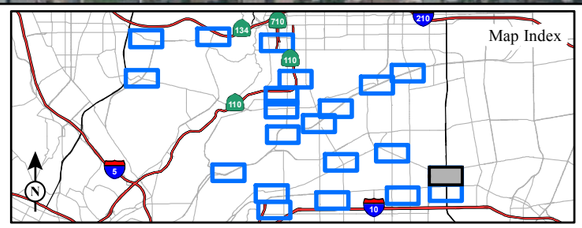
LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

0 150 300
FEET



SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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FIGURE 3.3-9
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SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
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BENTEL AV
HOVEY ST
BARTLETT AV
MISSION DR
LOMA AV
5391012043
VALLEY BLVD
5390012063
STEELE ST
STEELE ST
STEELE ST
NEVADA AV
NEVADA AV
L-5
HART AV
GUESS ST
GUESS ST
GUESS ST
GUESS ST
MUSCATEL AV
IVAR AV
ROSEMEAD BLVD
GERNERT AV
City of Rosemead
RALPH ST
RALPH ST
RALPH ST
EDDA VILLA DR
DE ADALENA ST
DE ADALENA ST
DE ADALENA ST
DUBONNET AV
BARTLETT AV
NORWOOD PL
NORWOOD PL
GREENDALE AV
MARSHALL ST
GLENDON WY
LEE ST
HART AV
CLAUDIA CIR
19
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement

N

0 150 300
FEET

Map Index

SOURCE: Bing Maps (5/2010); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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FIGURE 3.3-9
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SR 710 North Study
TSM/TDM Alternative
Parcel Acquisitions

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VANCOUVER AV
S WOODS AV
VERONA ST
CLELA AV
VANCOUVER AV
FRASER AV
EAGLE ST
S LA VERNE AV
WOODS AV
S VANCOUVER AV
LOUIS PL
WOODS AV
S ATLANTIC BLVD
E 6TH ST
CLELA AV
ESCUELA ST
S WOODS AV
S VANCOUVER AV
E 4TH ST
AMALIA AV
East Los Angeles
S HILLVIEW AV
WHITTIER BLVD
HUBBARD ST
GRACE PL
LOUIS PL
AMALIA AV
ATLANTIC BLVD
GOODRICH BLVD
GRACE PL
OAKFORD DR
S HILLVIEW AV
EAGLE ST
City of Commerce
PERCY ST
REPETTO ST
VIA CORONA
S MARGARET AV
S BELDEN AV

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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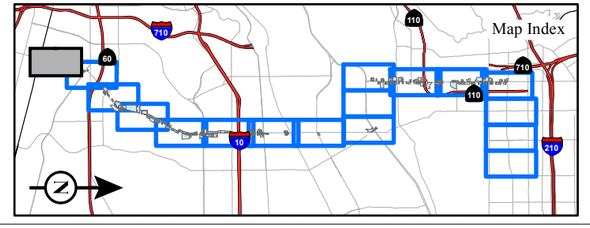

FIGURE 3.3-10
Sheet 1 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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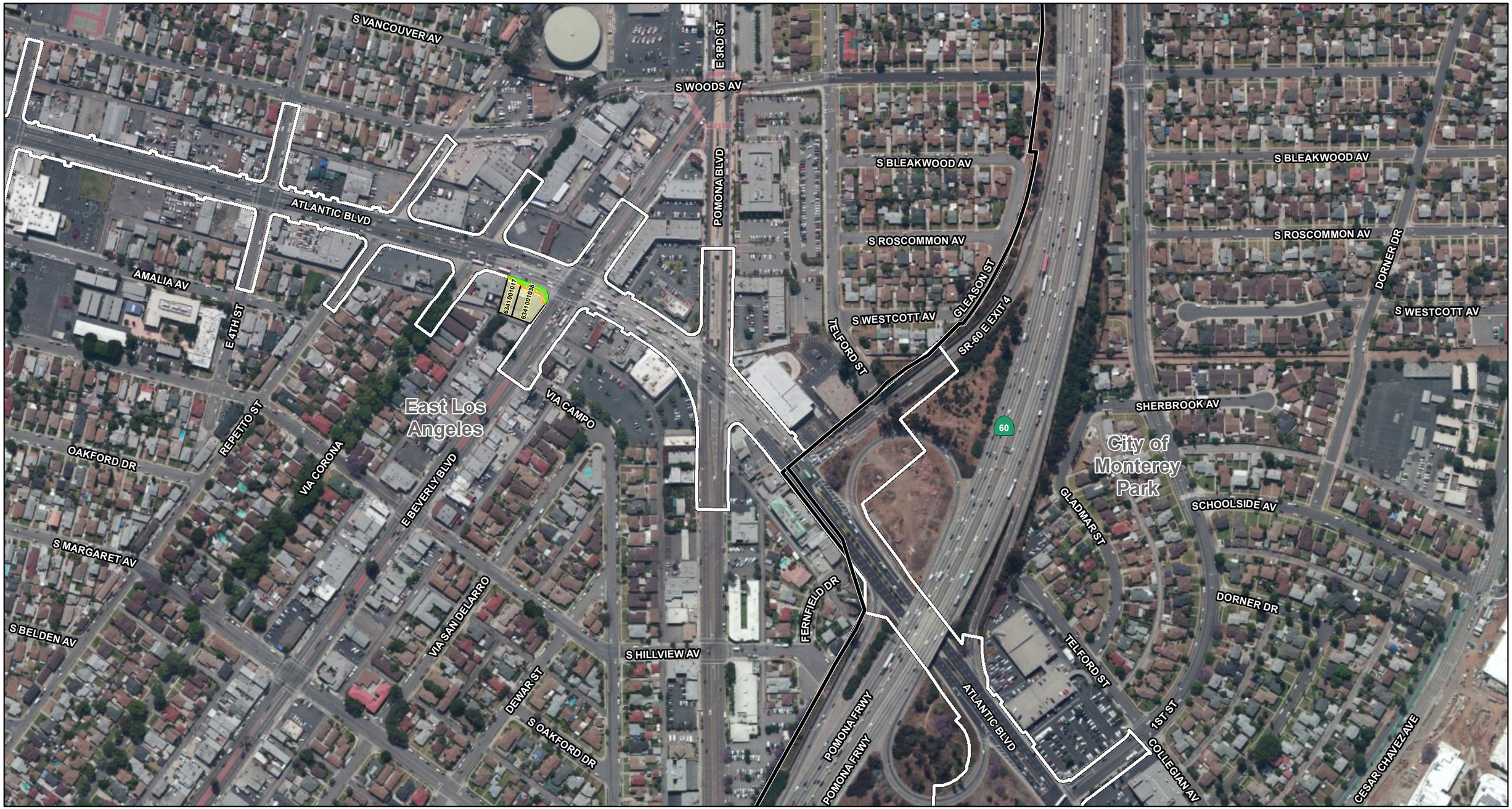

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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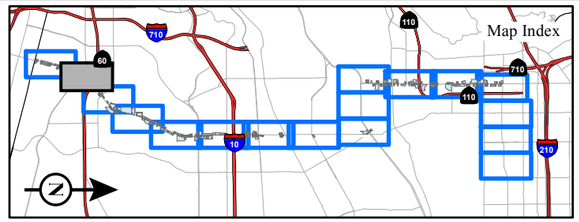

FIGURE 3.3-10
Sheet 2 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
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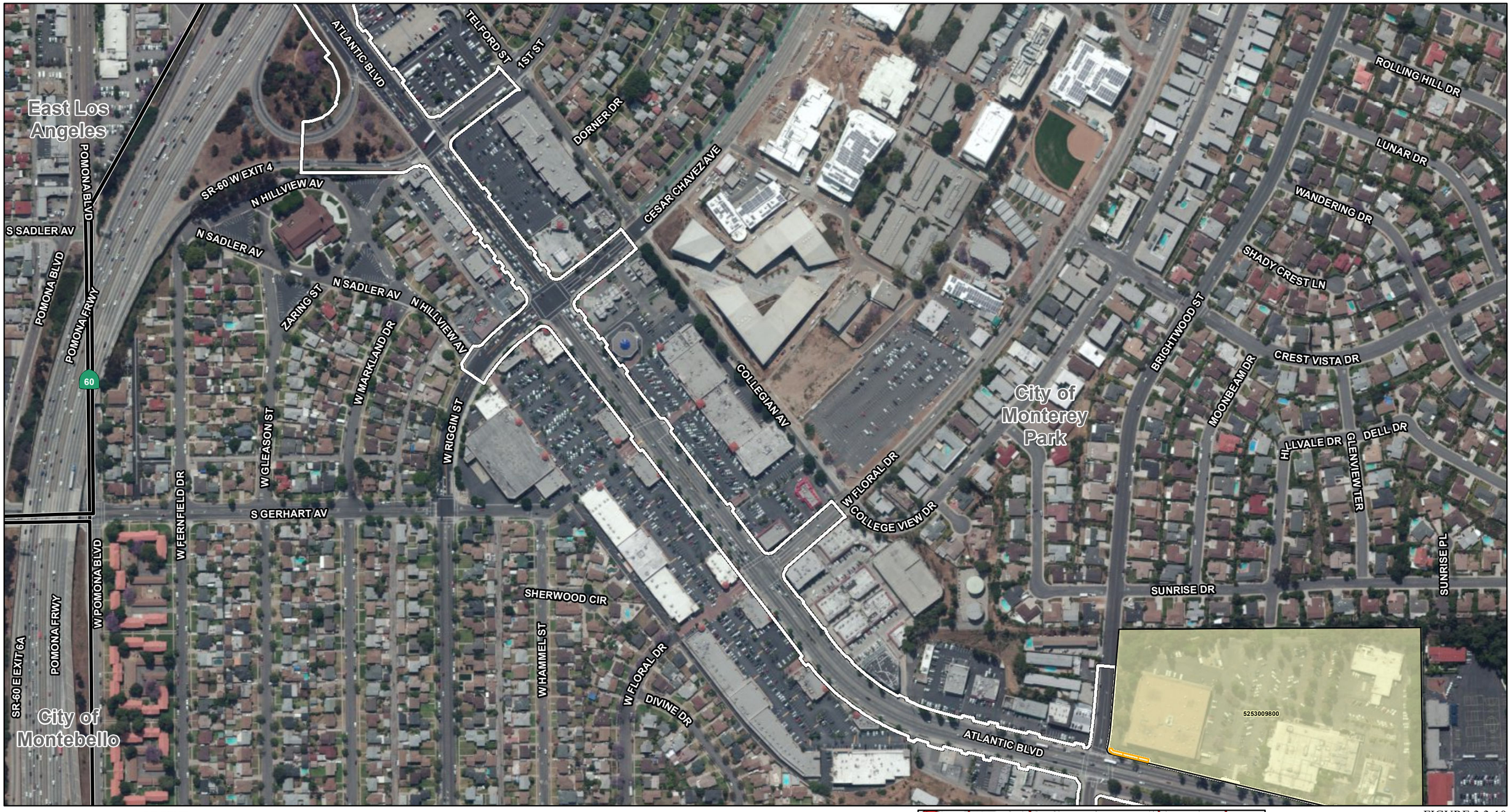

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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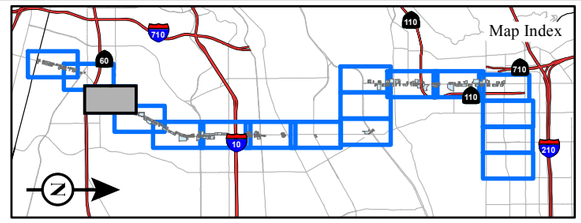

FIGURE 3.3-10
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SR 710 North Study
BRT Alternative
Parcel Acquisitions

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LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
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- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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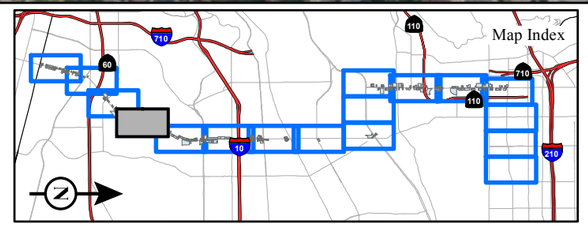

FIGURE 3.3-10
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SR 710 North Study
BRT Alternative
Parcel Acquisitions

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LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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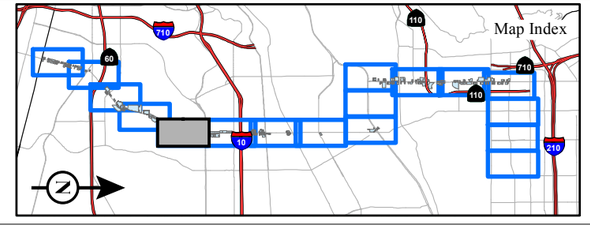

FIGURE 3.3-10
Sheet 5 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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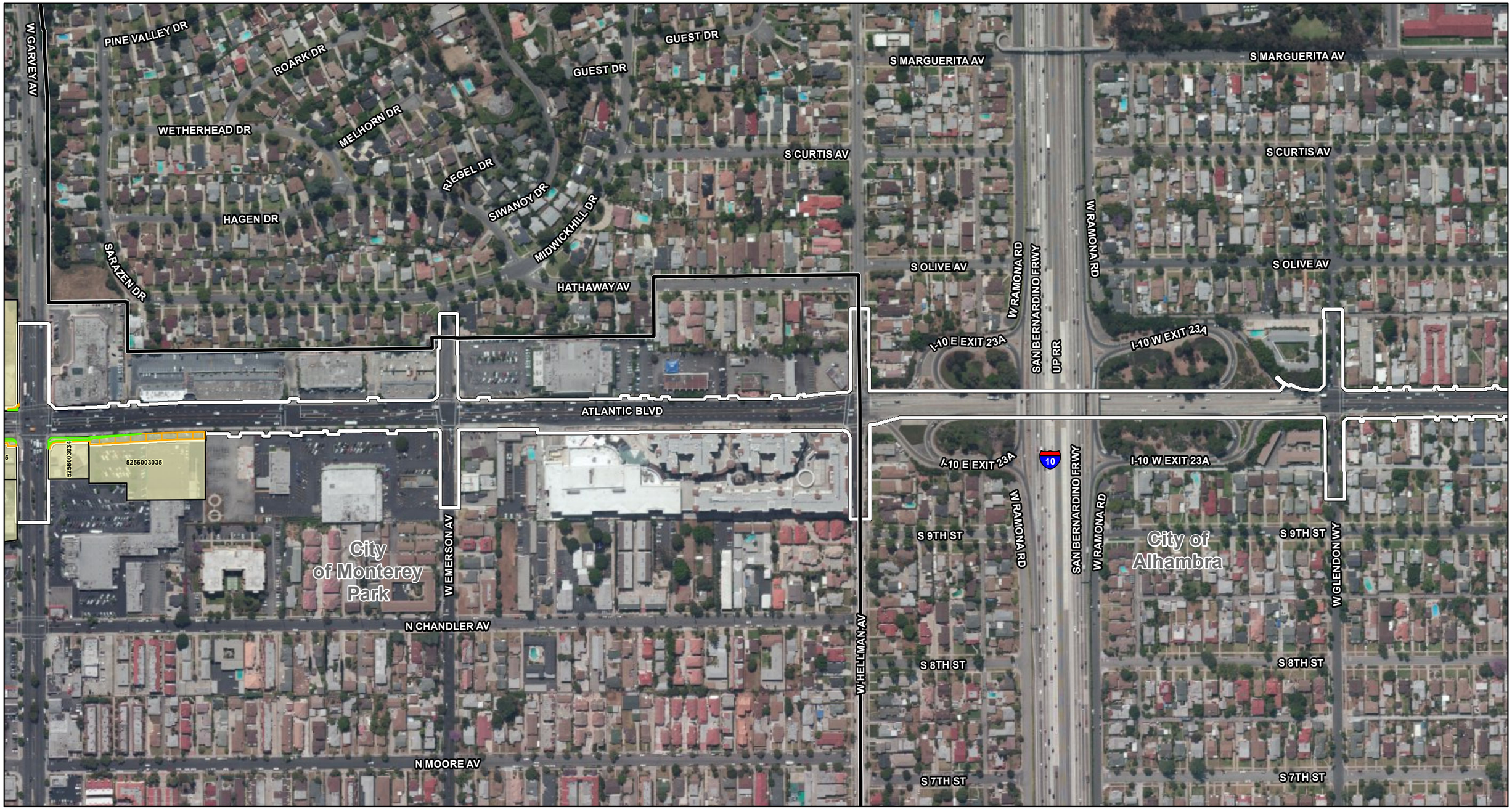

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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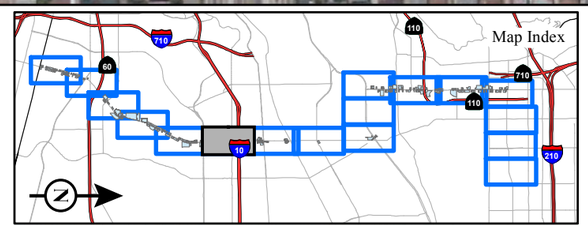

FIGURE 3.3-10
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SR 710 North Study
BRT Alternative
Parcel Acquisitions

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EA 187900
EFIS 0700000191

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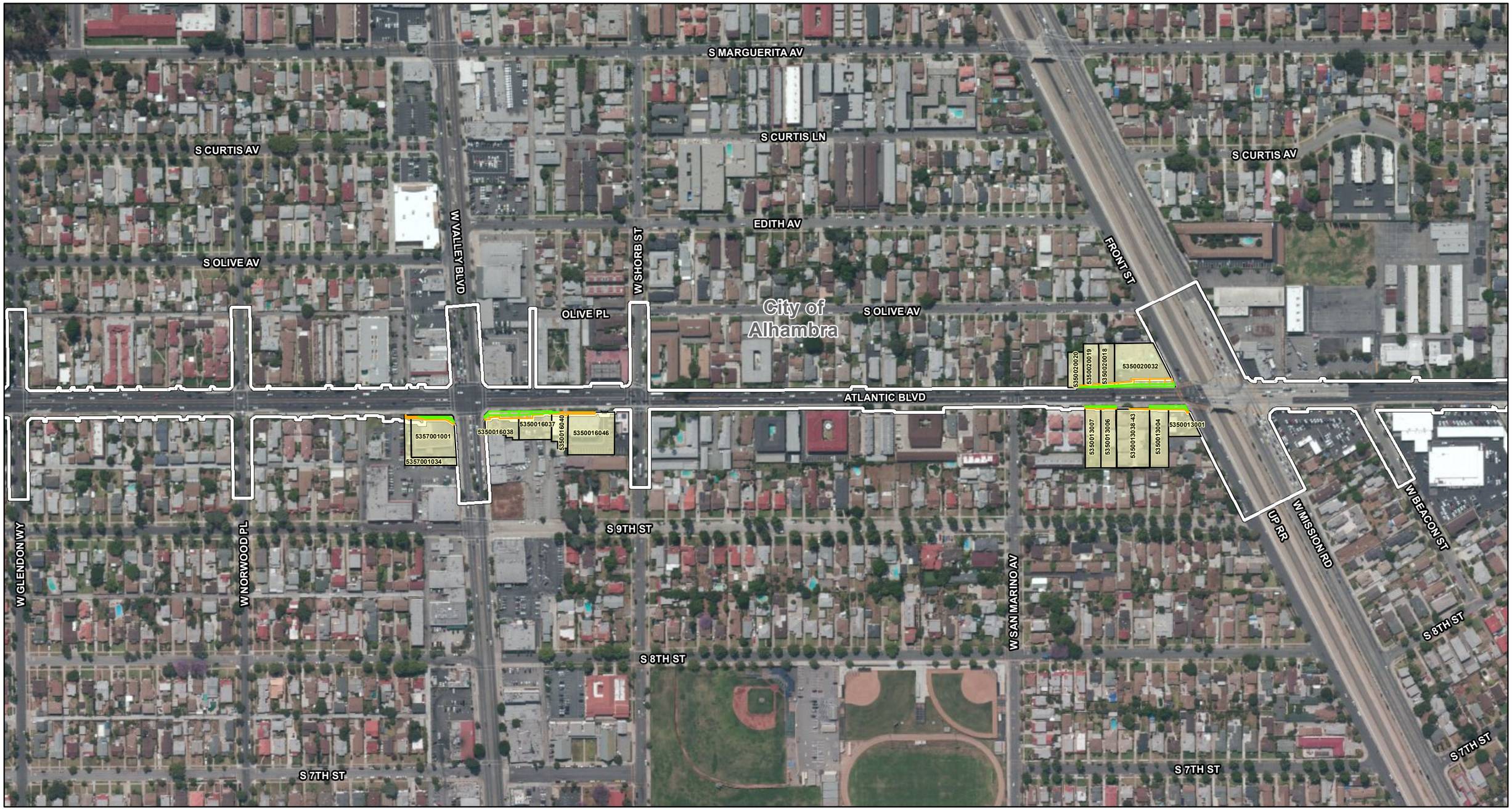

LEGEND

- BRT Alternative Improvement Location
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- Temporary Construction Easement

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FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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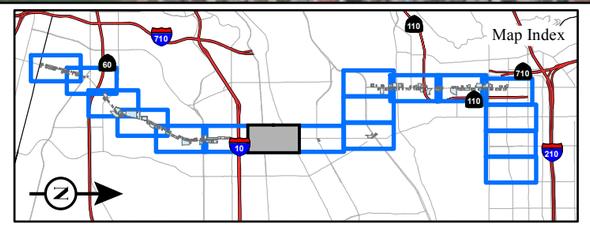

FIGURE 3.3-10
Sheet 7 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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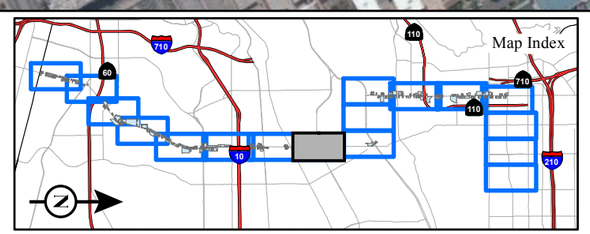
LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET



SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

I:\CHM1105\GIS\MXD_EIR_EIS\App_L\ParcelAcq_Alt_BRT_Mapbook.mxd (10/29/2014)

FIGURE 3.3-10
Sheet 8 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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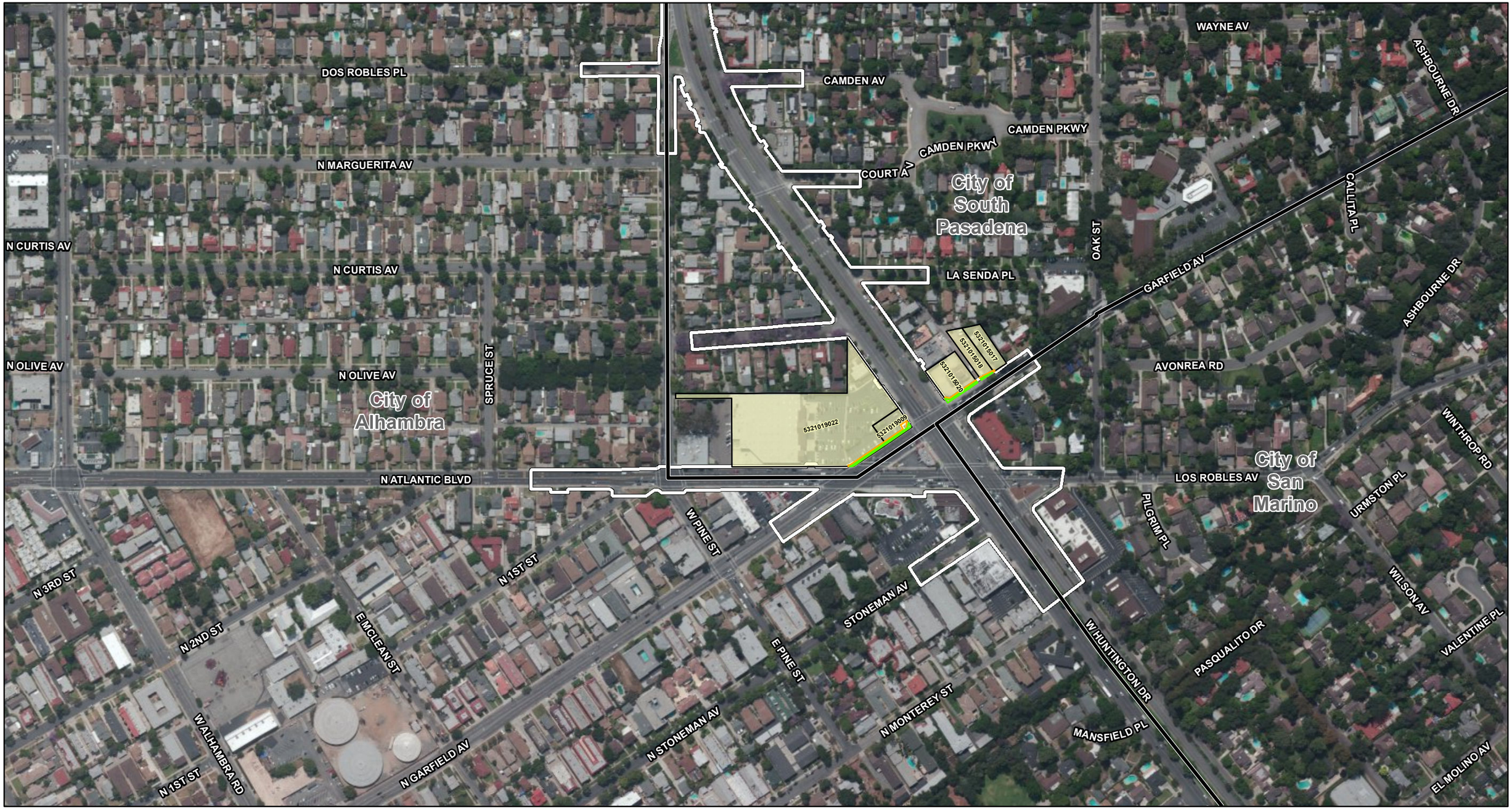

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

I:\CHM1105\GIS\MXD_EIR_EIS\App_L\ParcelAcq_Alt_BRT_Mapbook.mxd (10/29/2014)

FIGURE 3.3-10
Sheet 9 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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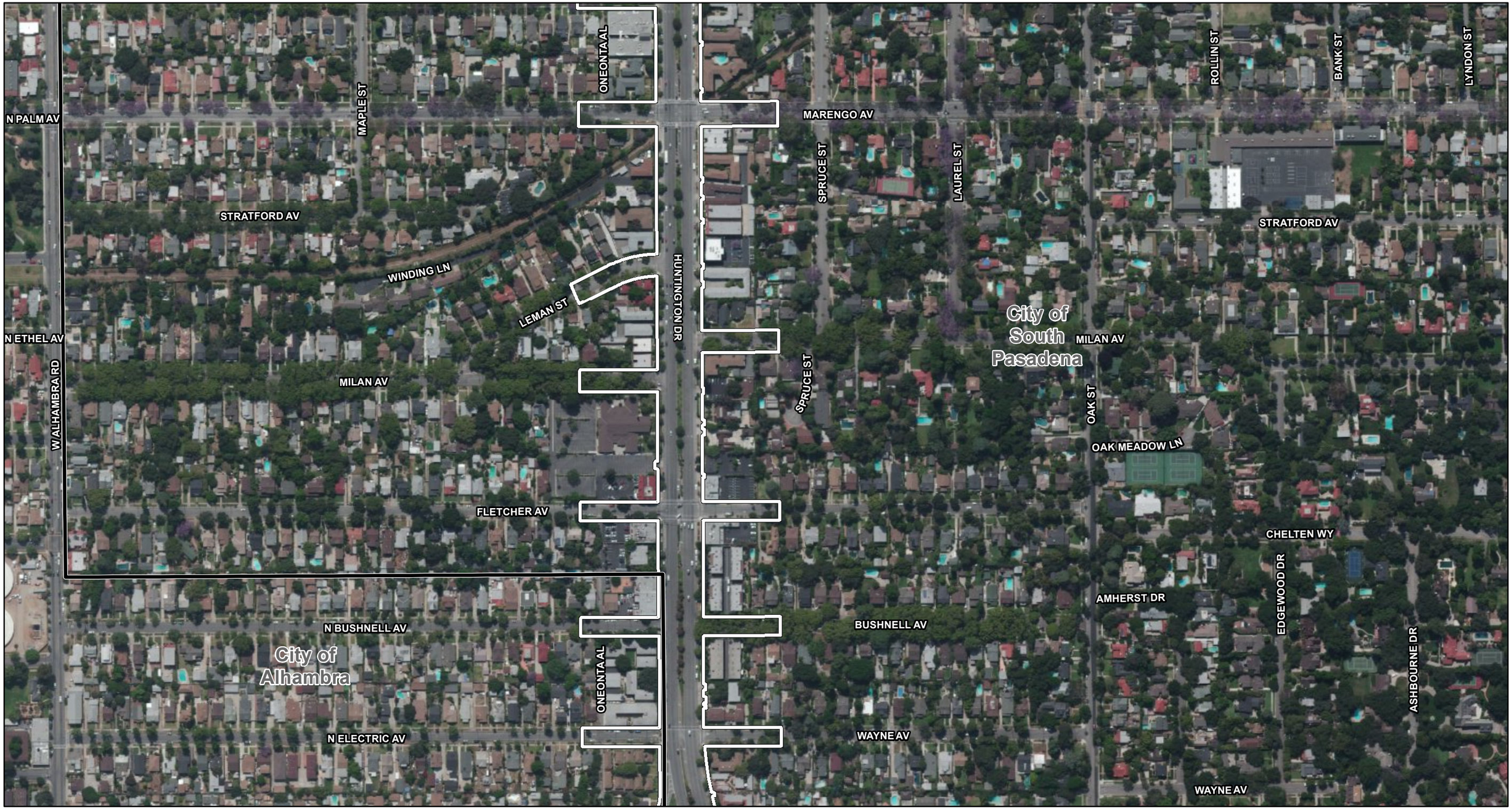

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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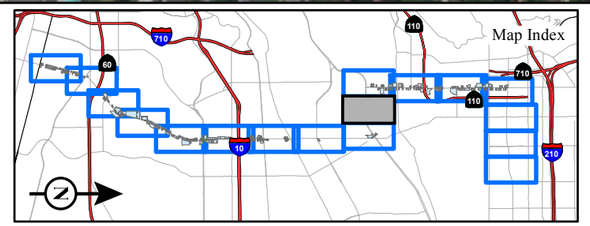

FIGURE 3.3-10
Sheet 10 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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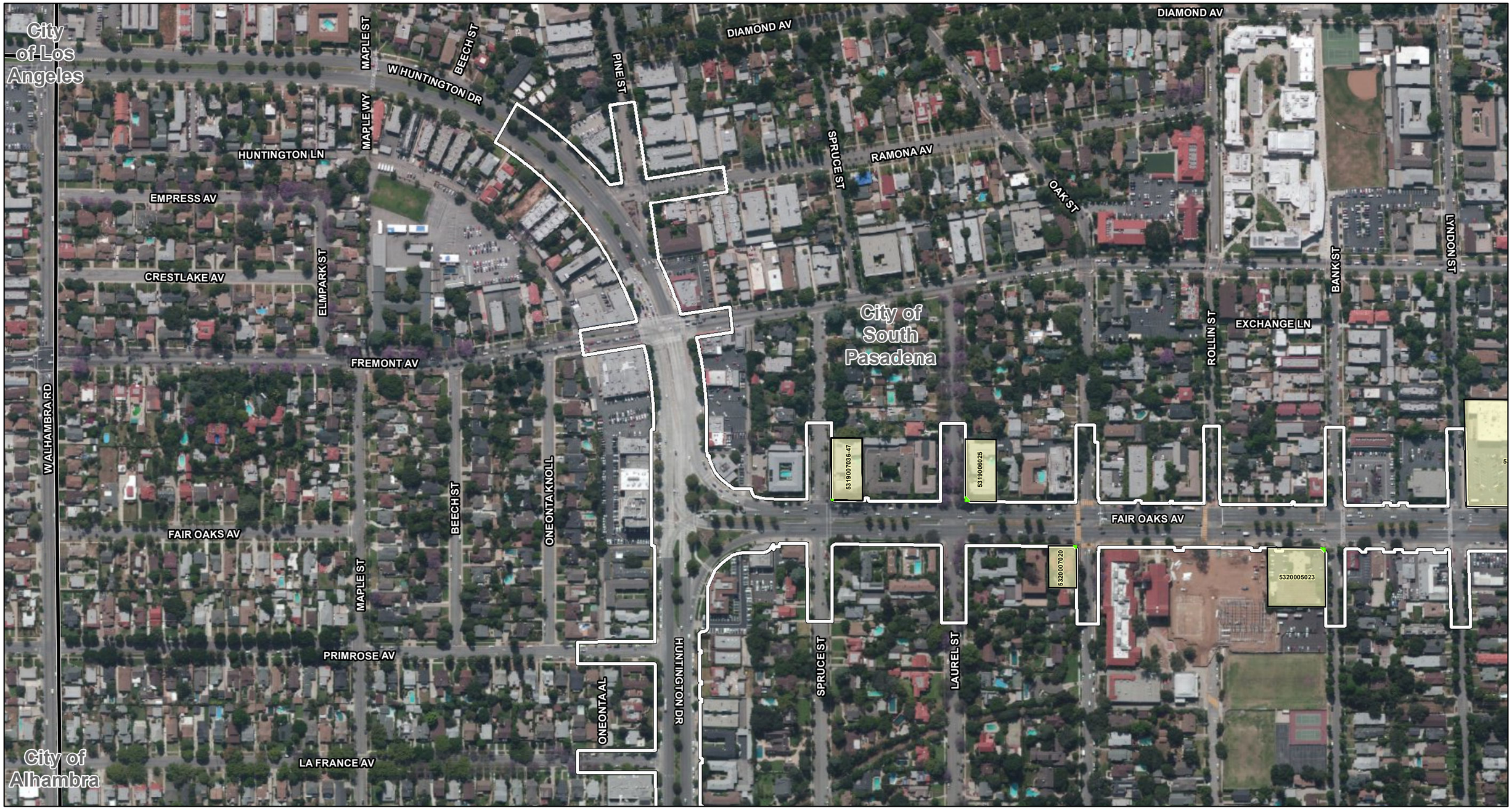

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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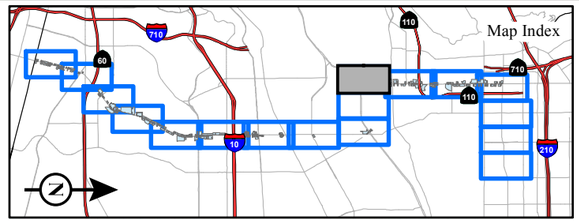

FIGURE 3.3-10
Sheet 11 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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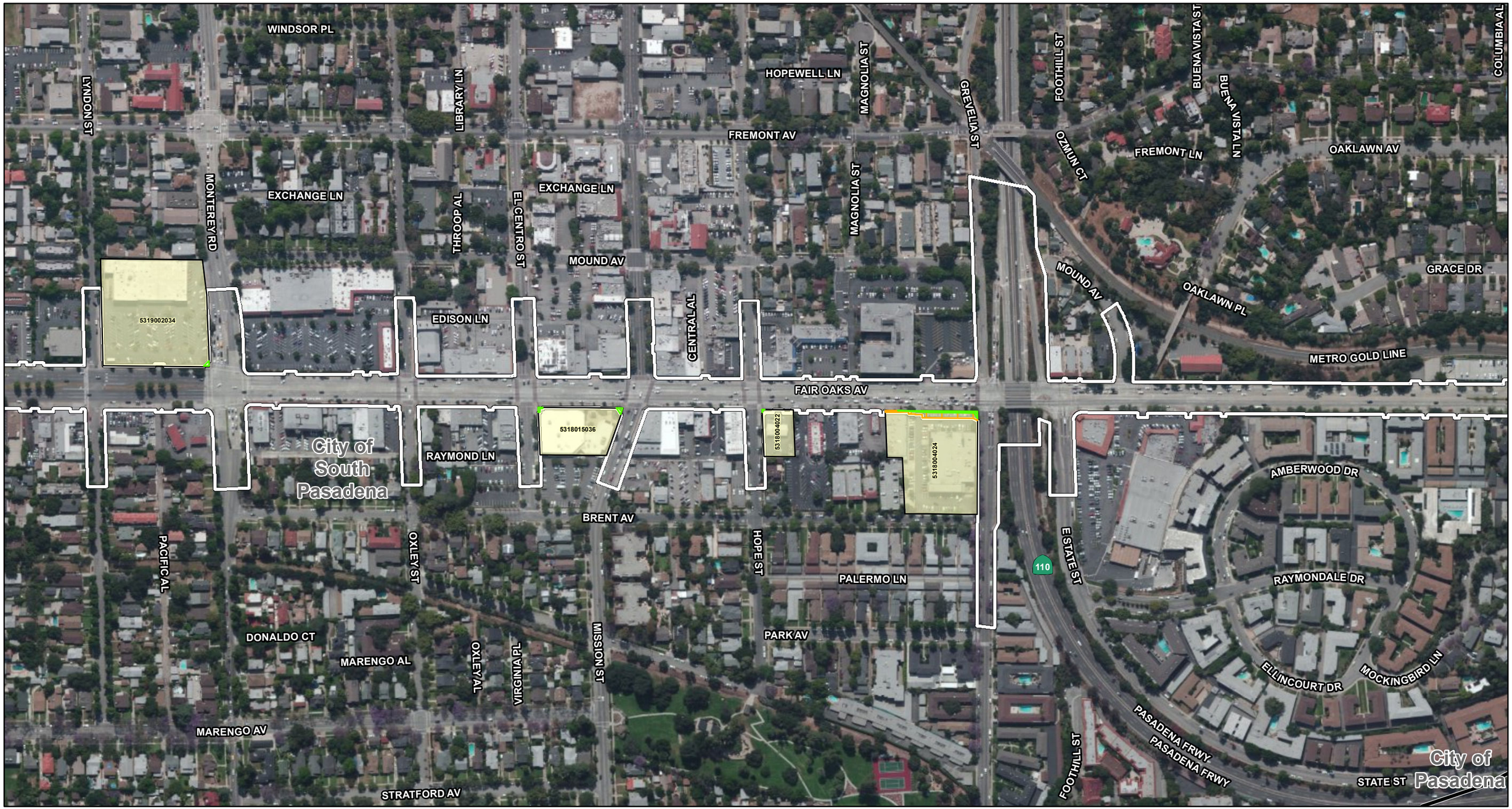

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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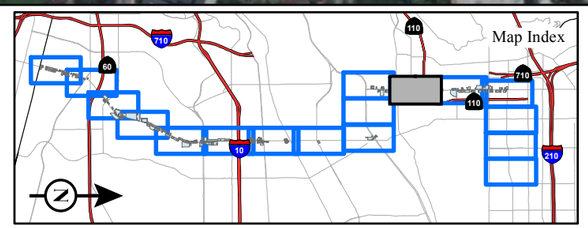

FIGURE 3.3-10
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SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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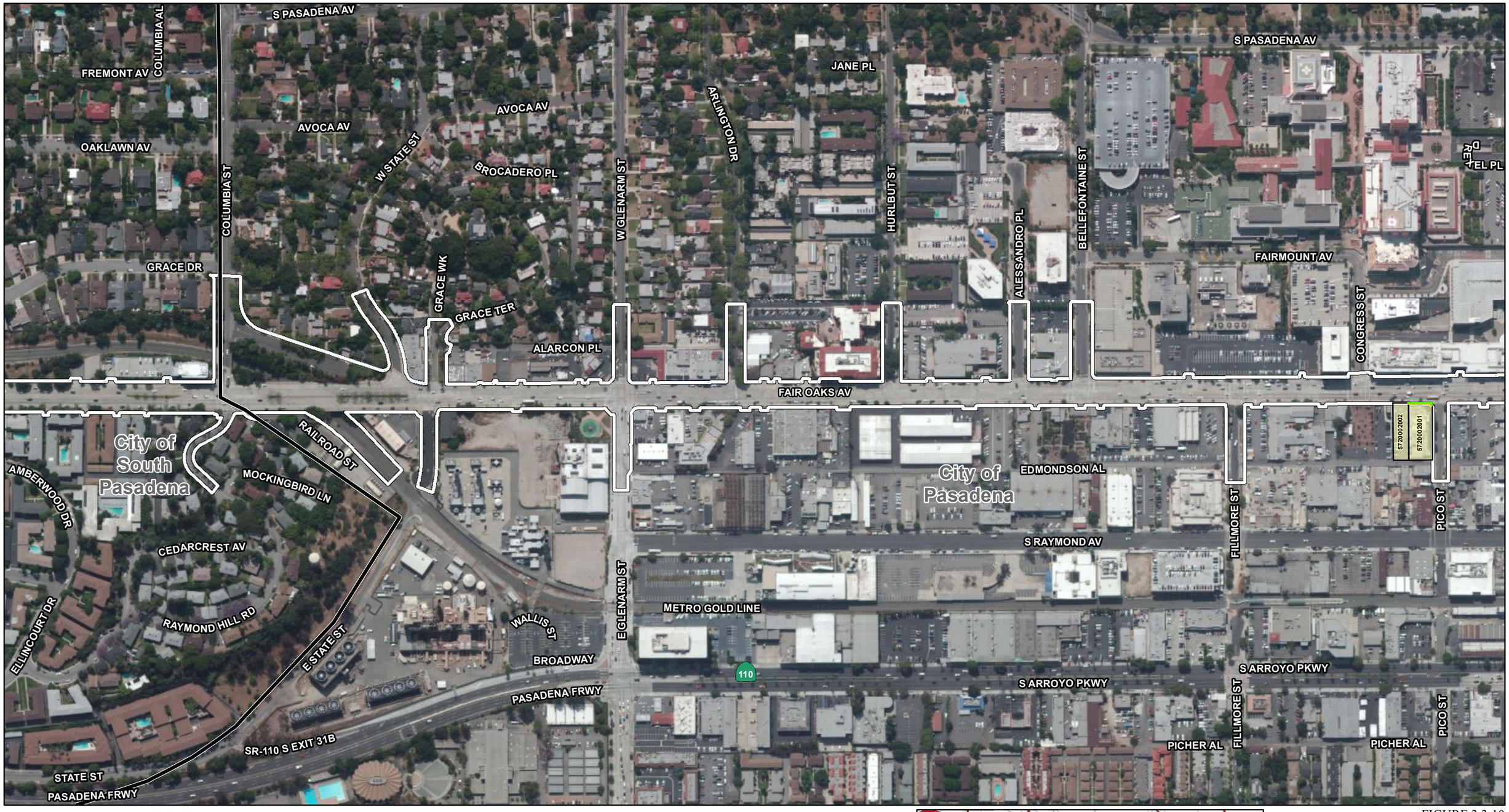

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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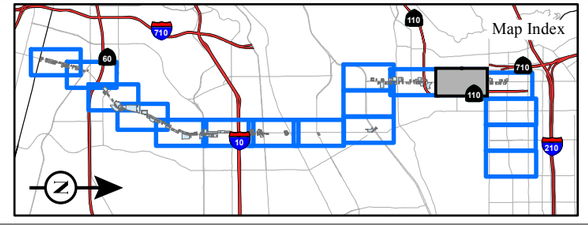

FIGURE 3.3-10
Sheet 13 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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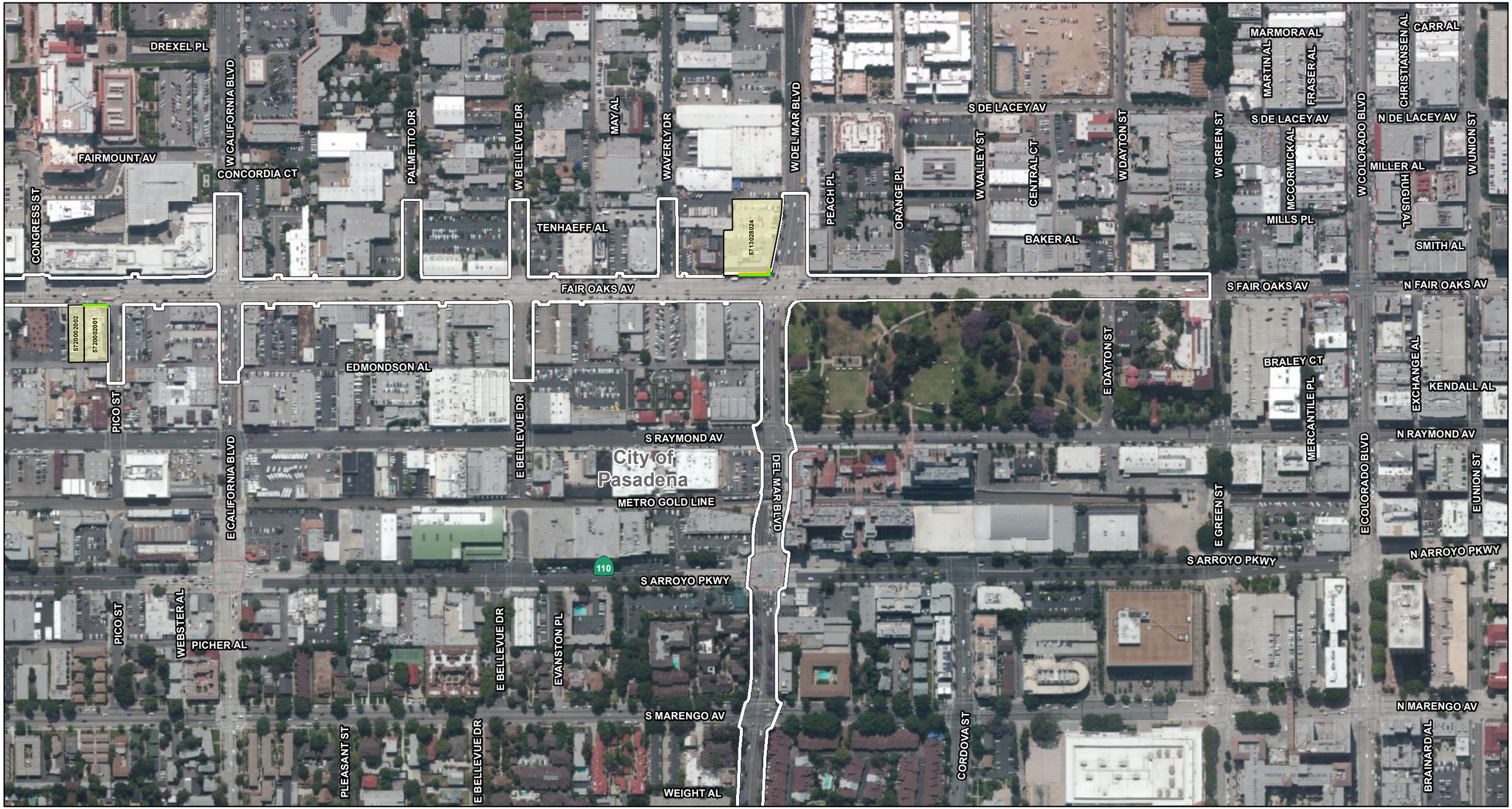

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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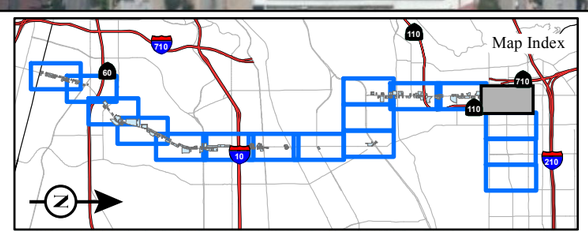

FIGURE 3.3-10
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SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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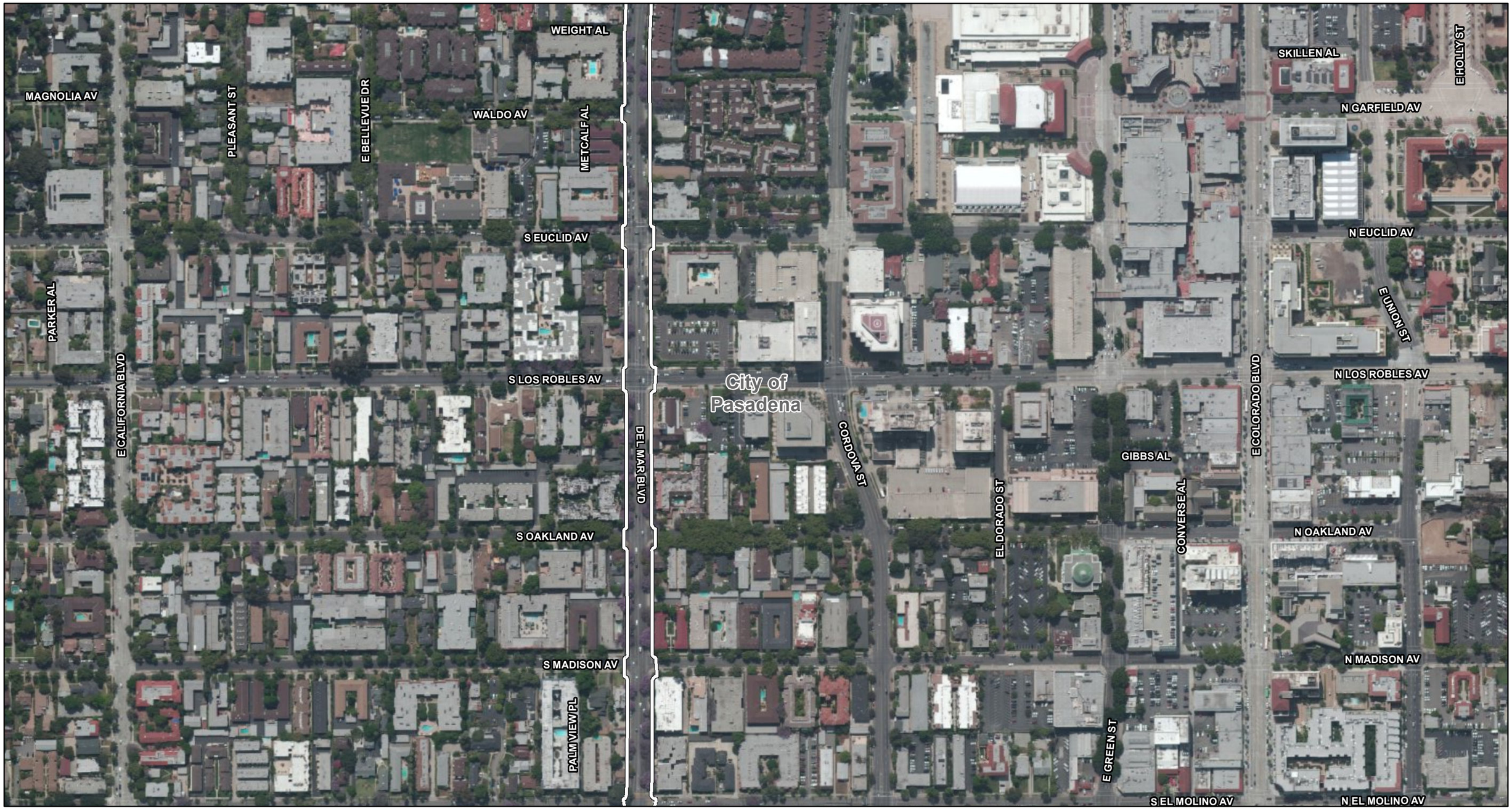
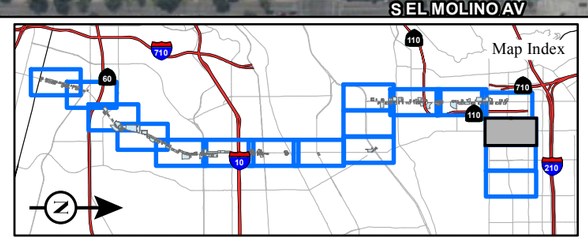


LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET



SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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FIGURE 3.3-10
Sheet 15 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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S EL MOLINO AV
OAK KNOLL GARDENS DR
ARBOLEDA DR
S OAK KNOLL AV
S HUDSON AV
E CALIFORNIA BLVD
DEL MAR BLVD
City of Pasadena
MIRA MONTE PL
E GREEN ST
N EL MOLINO AV
E UNION ST
N OAK KNOLL AV
N HUDSON AV
E COLORADO BLVD
S LAKE AV
N LAKE AV
GRANITE DR
SHOPPERS LN
CORDOVA ST
MARKET AL
BOSTON CT
S MENTOR AV
SAN PASQUAL ST
N MENTOR AV
MENEELY AL
S CATALINA AV
N CATALINA AV

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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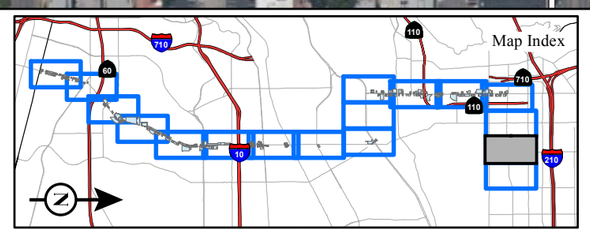

FIGURE 3.3-10
Sheet 16 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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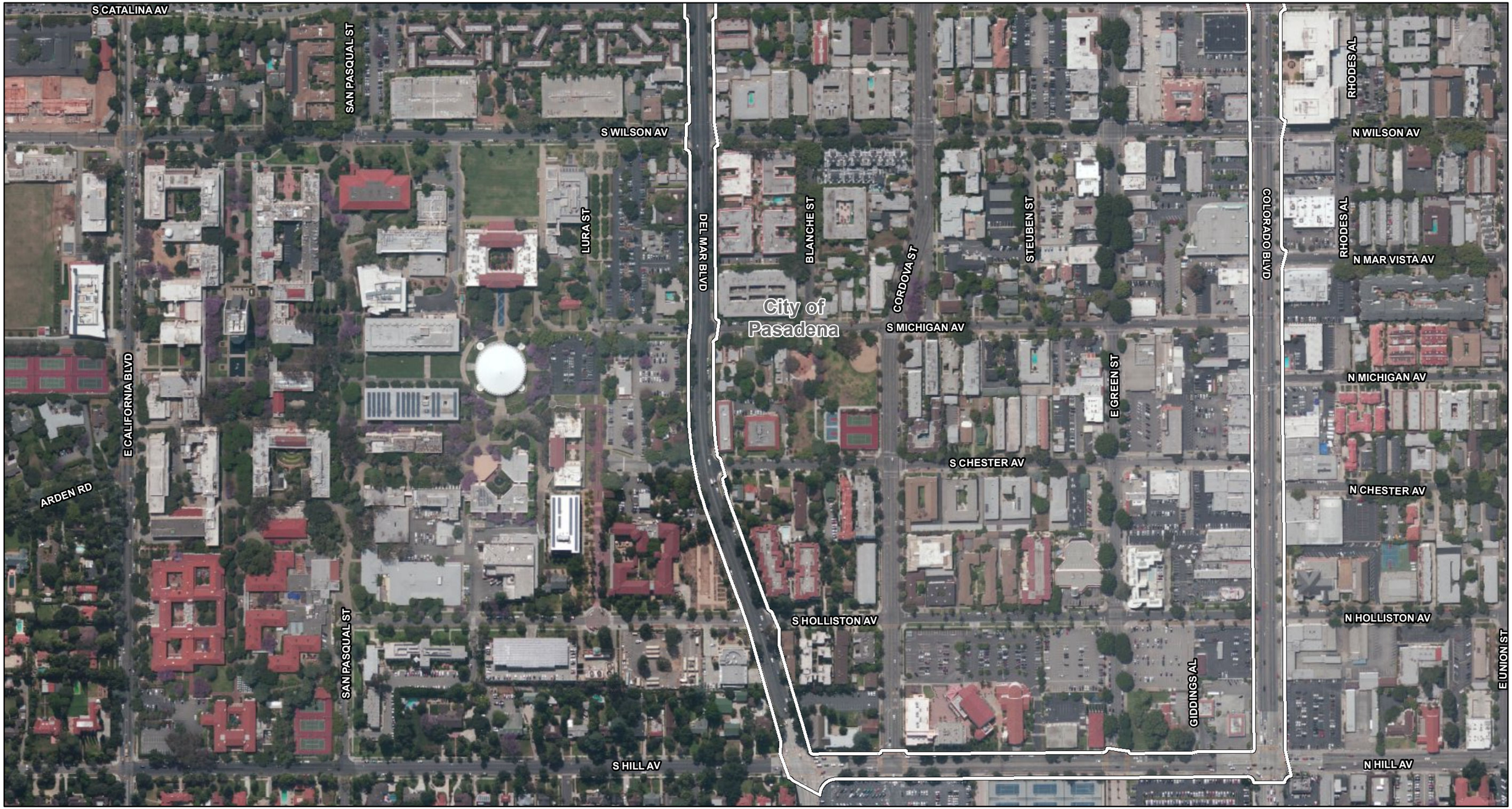

LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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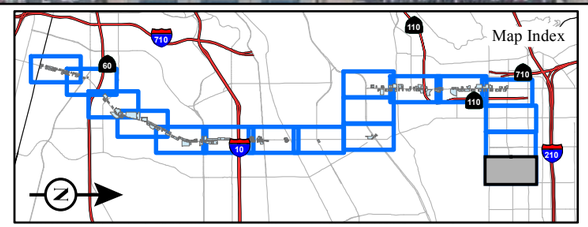

FIGURE 3.3-10
Sheet 17 of 17

SR 710 North Study
BRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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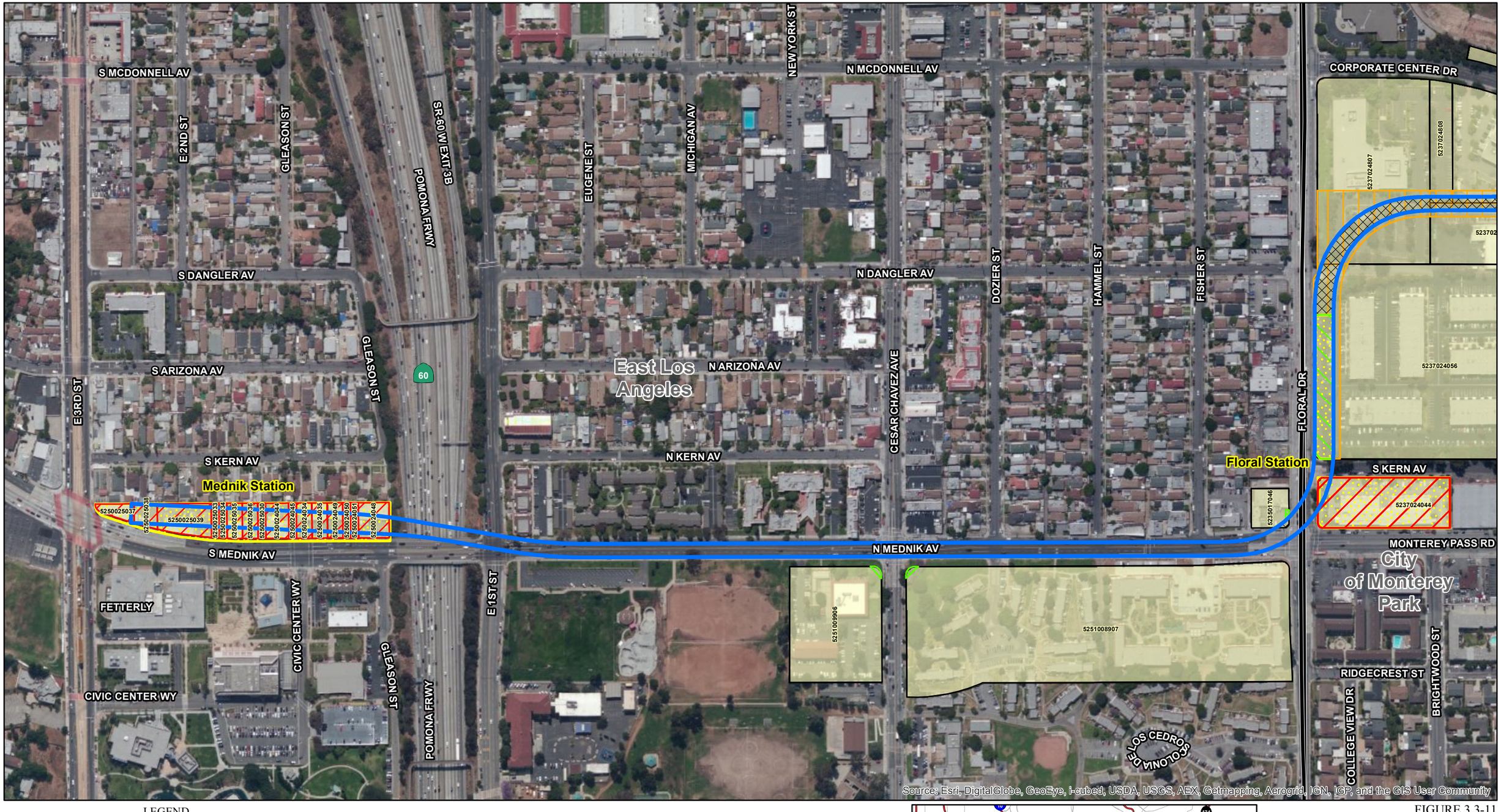

LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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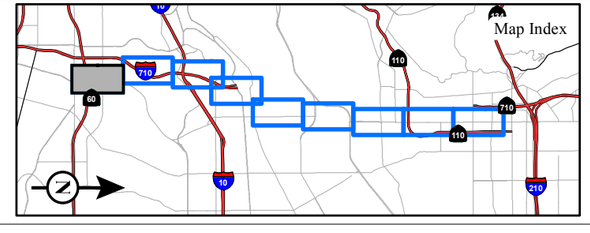

FIGURE 3.3-11
Sheet 1 of 9

SR 710 North Study
LRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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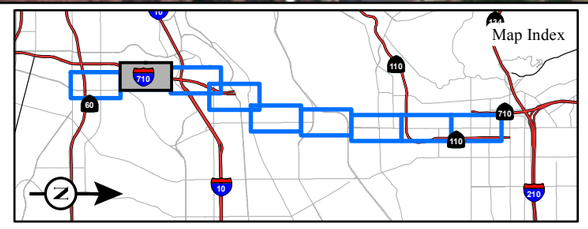

FIGURE 3.3-11
Sheet 2 of 9

SR 710 North Study
LRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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East Los Angeles
STATE UNIVERSITY DR
SAN BERNARDINO FRWY
PAS RANCHO CASTILLA
LANSDOWNE AV
SHERIFF RD
5225031018
5223034908
I-10 E EXIT 21
CENTRE PLAZA DR
MARIONDALE AV
710
10
Cal State LA Station
I-710 S EXIT 22B
I-710 S EXIT 22A
I-710 N EXIT 22
I-10 W EXIT 21
El Sereno Community
City of Los Angeles
City of Monterey Park
CORPORATE CENTER DR
I-710 S EXIT 22B
LILLYVALE AV
W RAMONA BLVD
VANDALIA AV
City of Alhambra
BALZAC ST
CAPETOWN AV
JULEP PL
CHARNWOOD AV
HIGHBURY AV
UP RR
W HELLMAN AV
RICH PL

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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Map Index

FIGURE 3.3-11
Sheet 3 of 9

SR 710 North Study
LRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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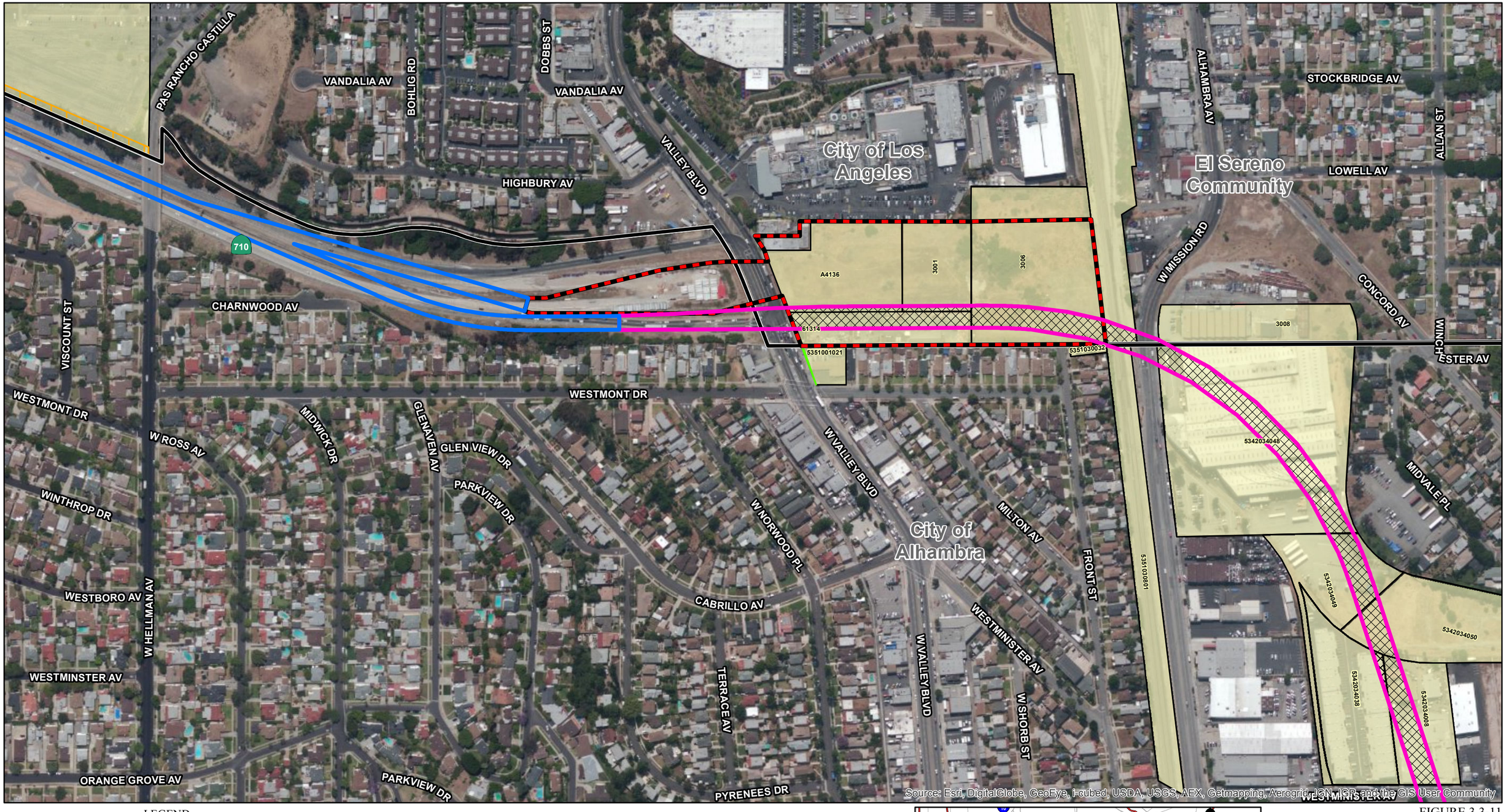

LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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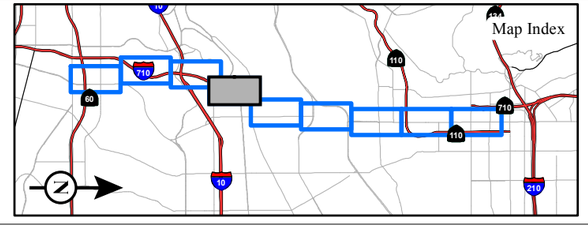

FIGURE 3.3-11
Sheet 4 of 9

SR 710 North Study
LRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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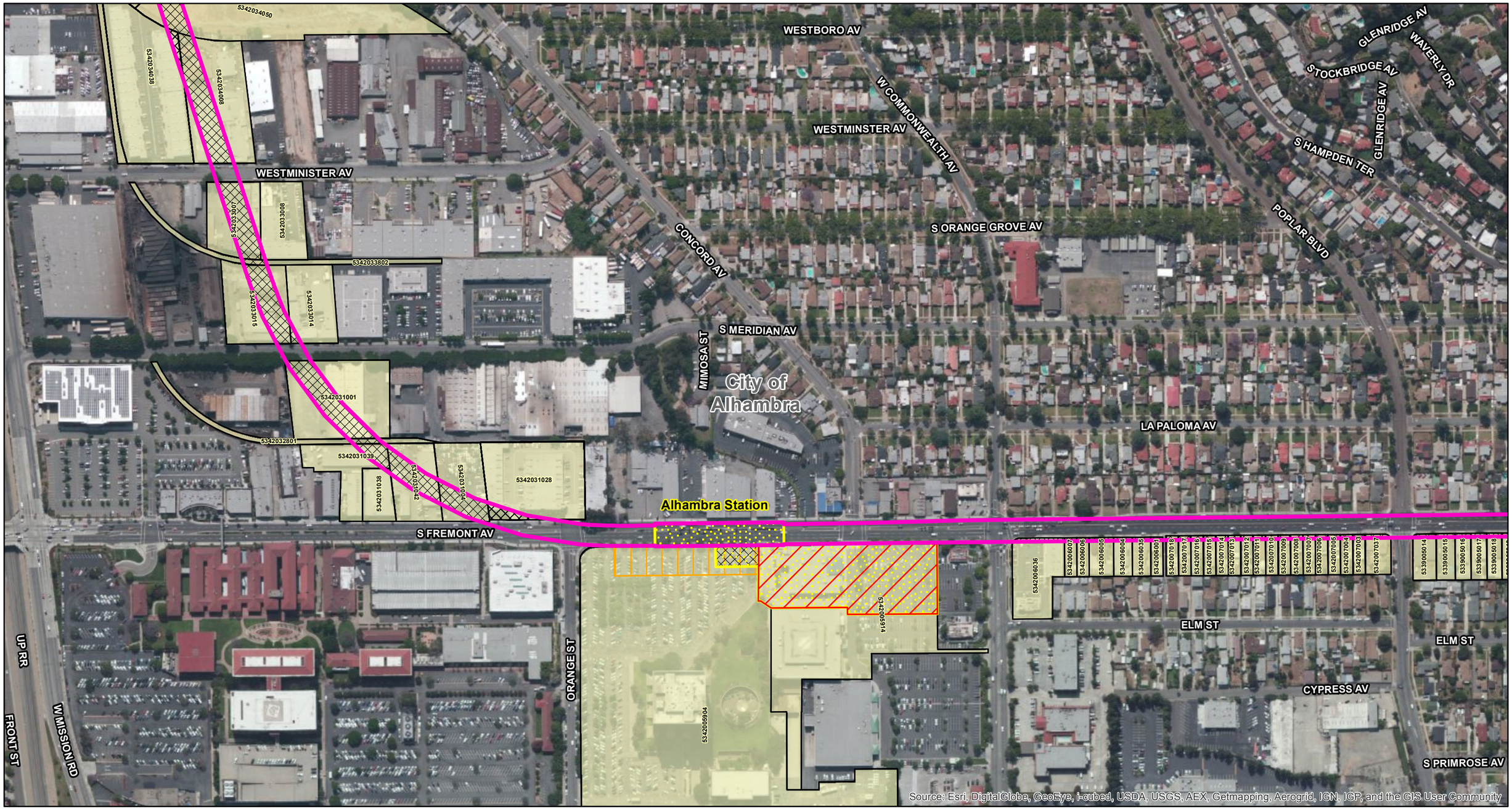

LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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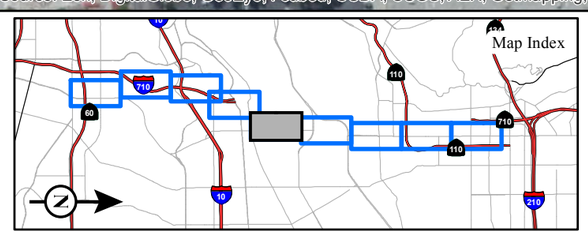

FIGURE 3.3-11
Sheet 5 of 9

SR 710 North Study
LRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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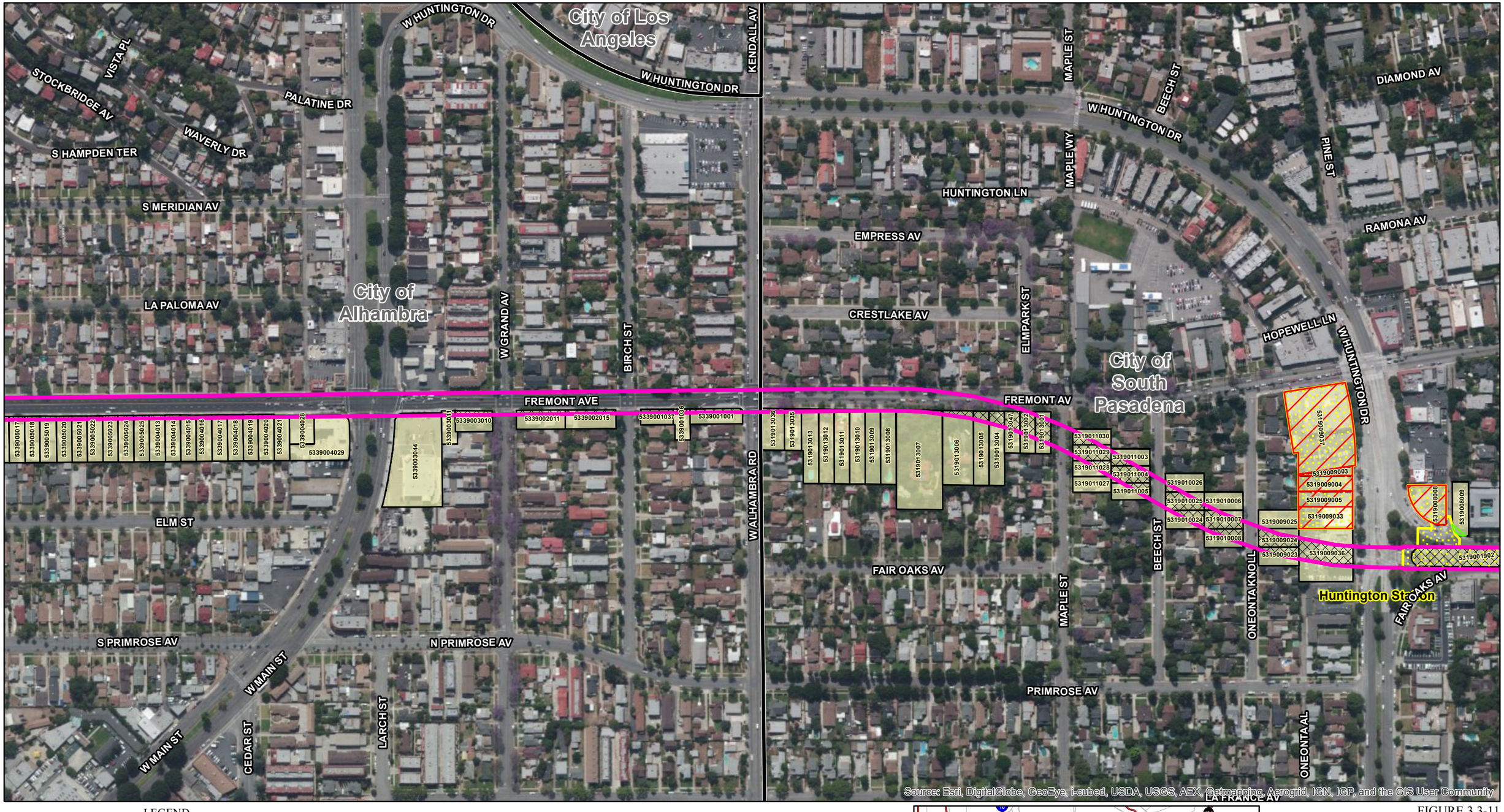

LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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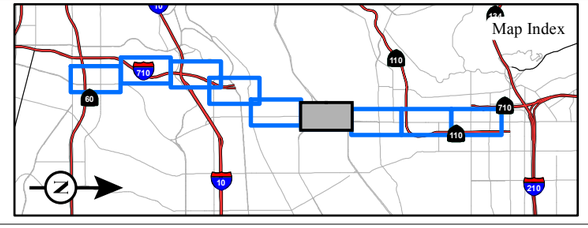

FIGURE 3.3-11
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SR 710 North Study
LRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
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RAMONA AV
SPRUCE ST
OAK ST
ROLLIN ST
EXCHANGE LN
BANK ST
LYNDON ST
FREMONT AV
WINDSOR PL
HOPEWELL LN
LIBRARY LN
HOPEWELL LN
MAGNOLIA ST
EXCHANGE LN
EXCHANGE LN
THROOP AL
EL CENTRO ST
MOUND AV
MAGNOLIA ST
City of South Pasadena
EDISON LN
OXLEY ST
CENTRAL AL
HOPE ST
South Pasadena Station
5319008009
5319001902
5319001902
5319001902
5319001901
5319001901
FAIR OAKS AV
Huntington Station
SPRUCE ST
LAUREL ST
5318015003
5318015004
5318015005
5318015006
5318015036
RAYMOND LN
5318015009
5318015008
5318015007
5318015017
MISSION ST
BRENT AV
MONTEREY RD
PACIFIC AL
PALERMO LN
DONALDO CT
MARENGO AL
OXLEY AL
VIRGINIA PL
PARK AV
MARENGO AV
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
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- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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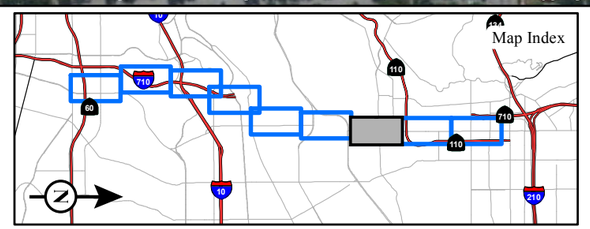

FIGURE 3.3-11
Sheet 7 of 9

SR 710 North Study
LRT Alternative
Parcel Acquisitions

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EA 187900
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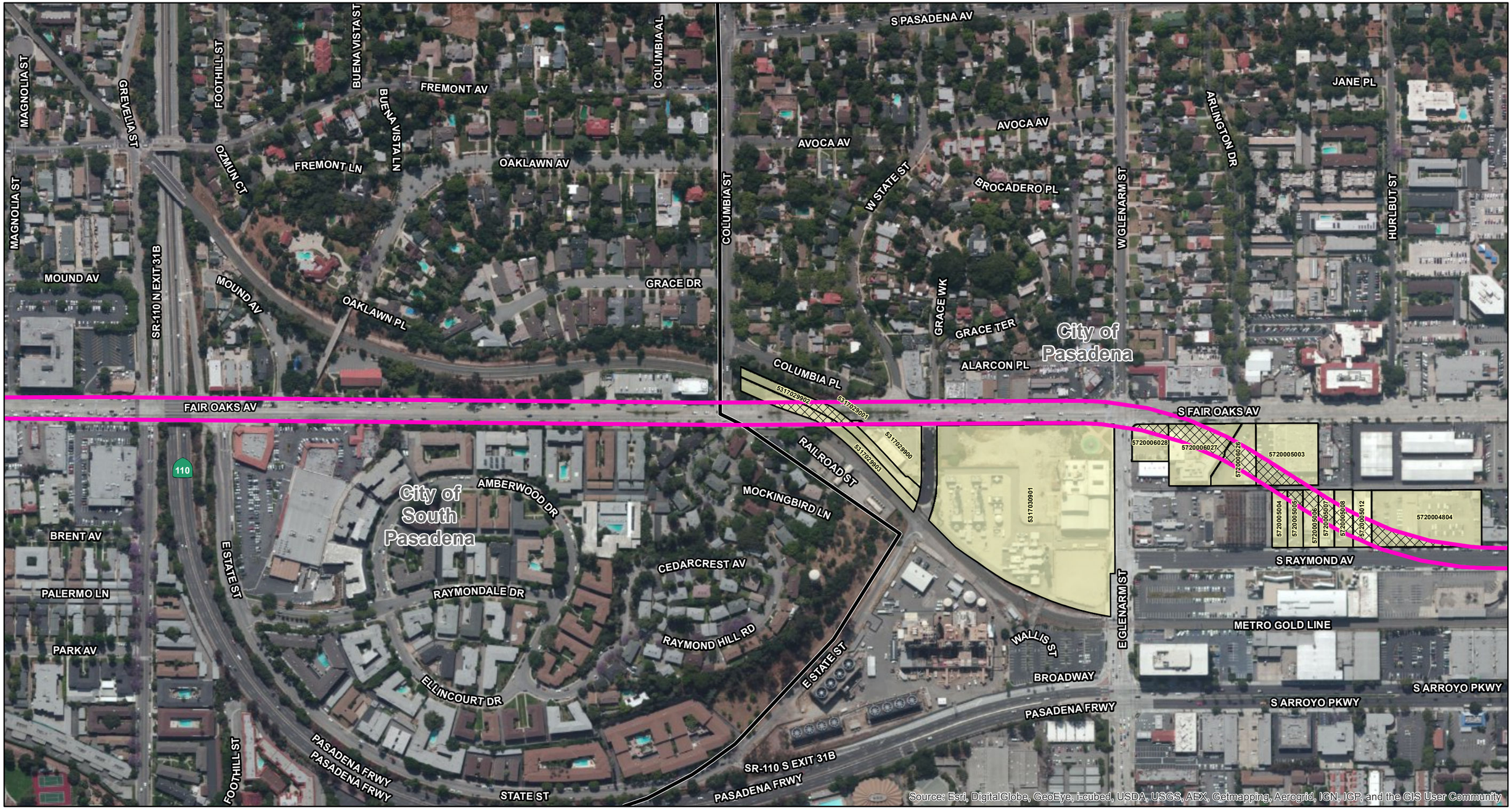

LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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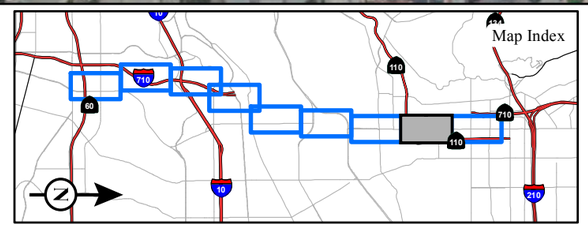

FIGURE 3.3-11
Sheet 8 of 9

SR 710 North Study
LRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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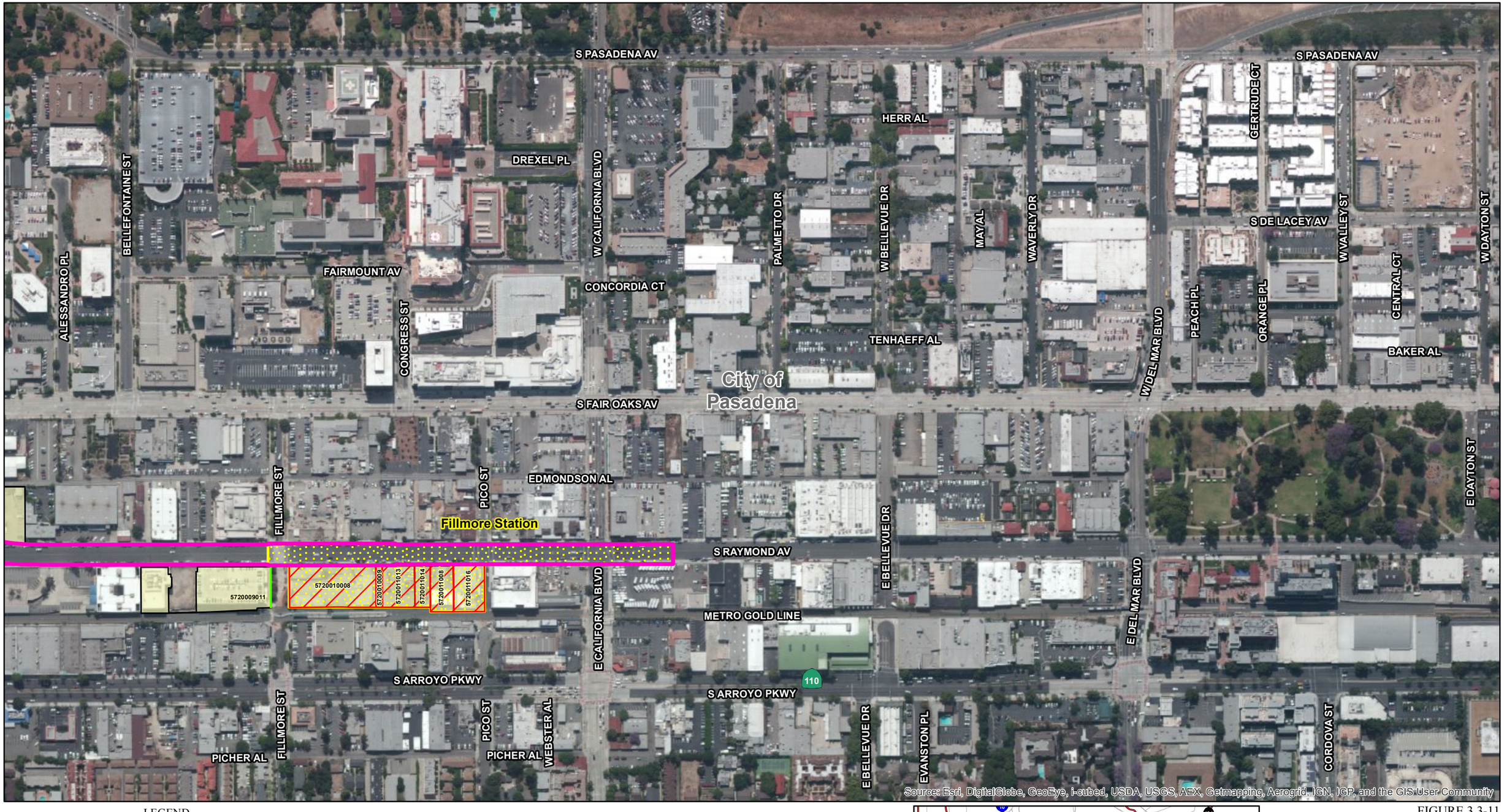

LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

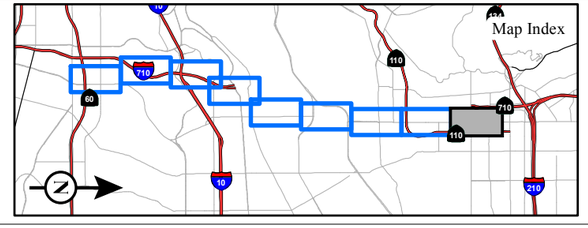

FIGURE 3.3-11
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SR 710 North Study
LRT Alternative
Parcel Acquisitions

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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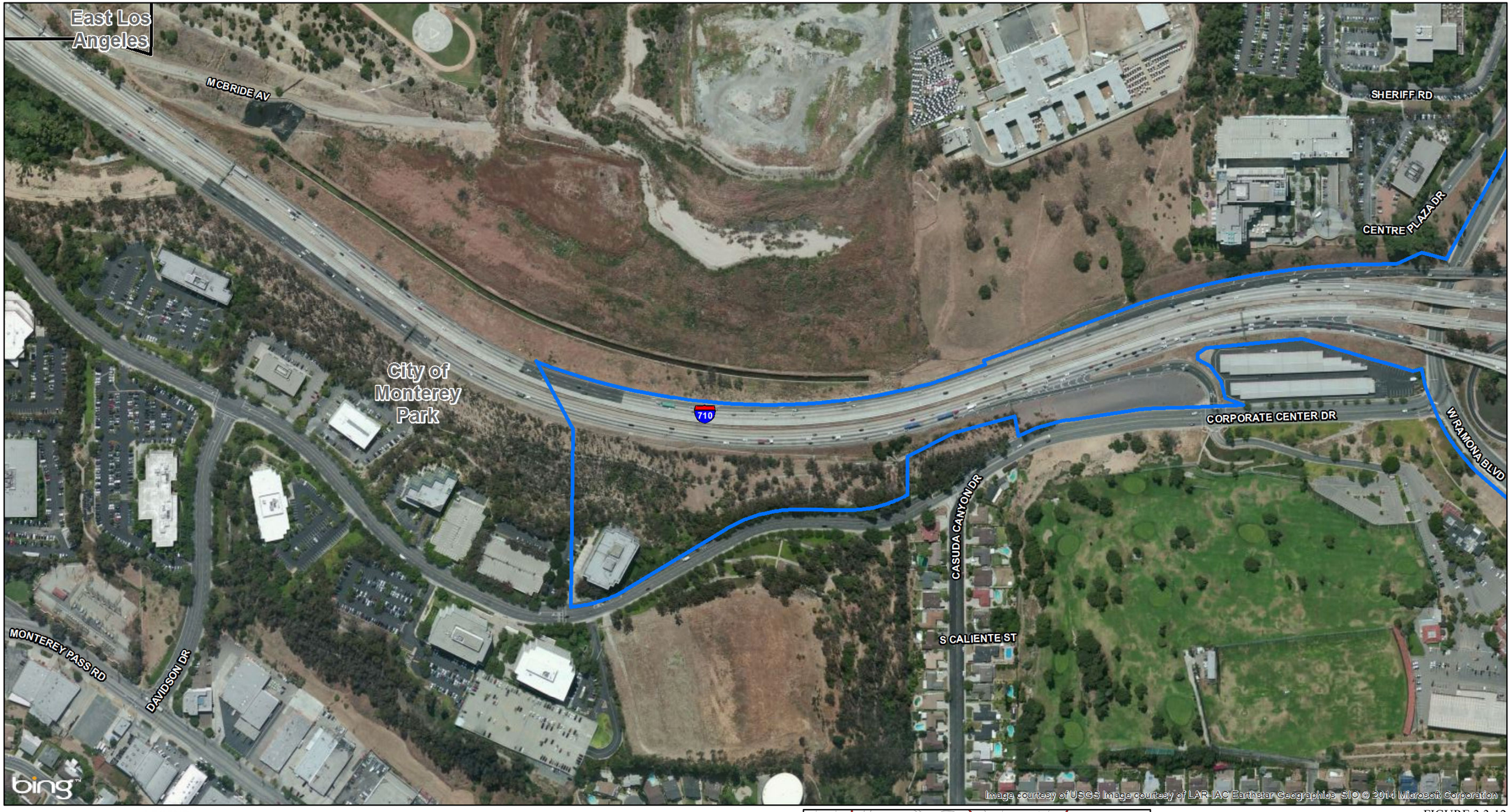

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquistion
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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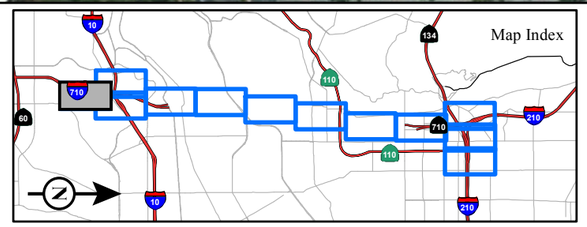

FIGURE 3.3-12
Sheet 1 of 12

SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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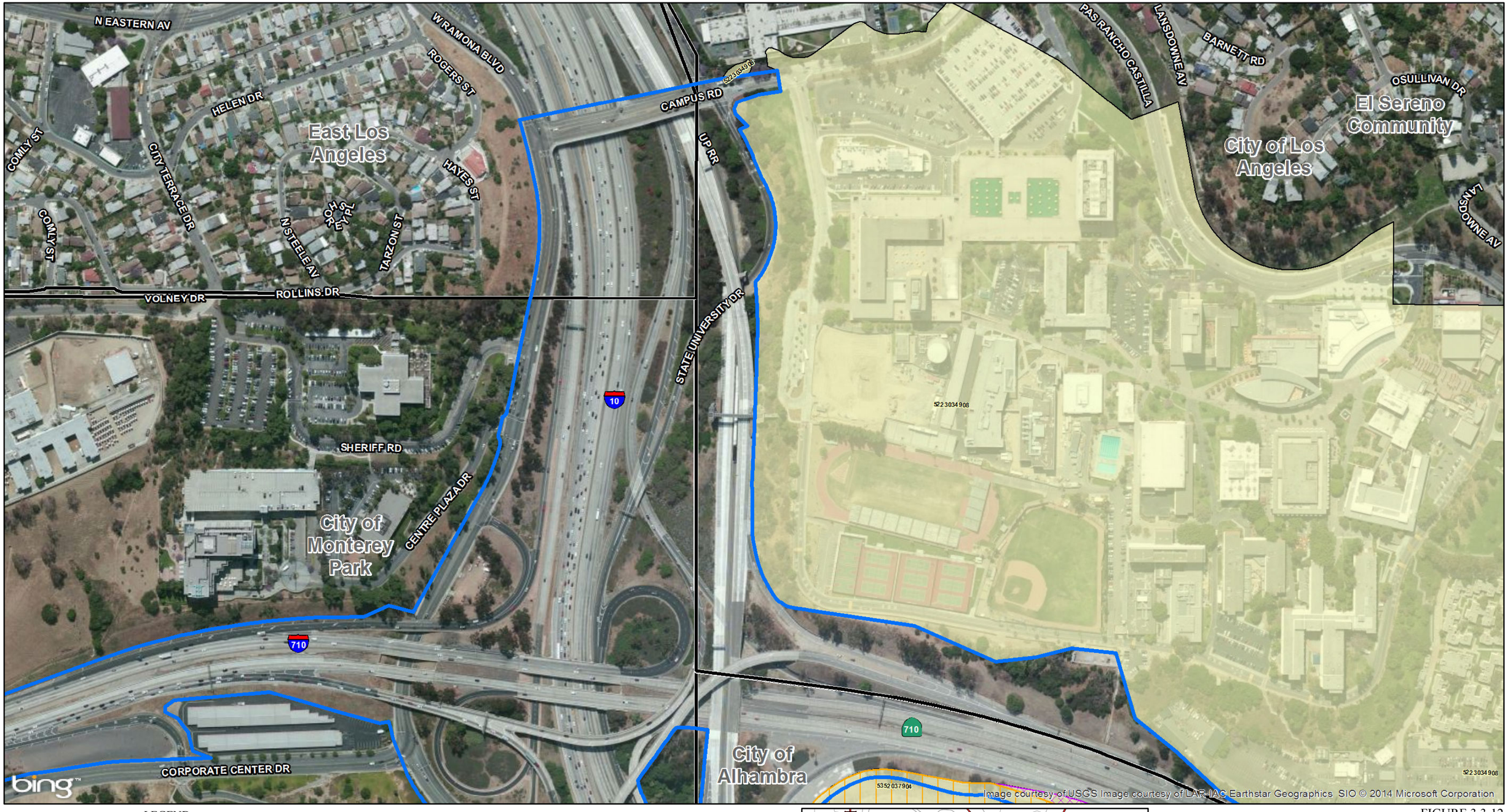

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquistion
- Permanent Easement
- Temporary Construction Easement

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FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

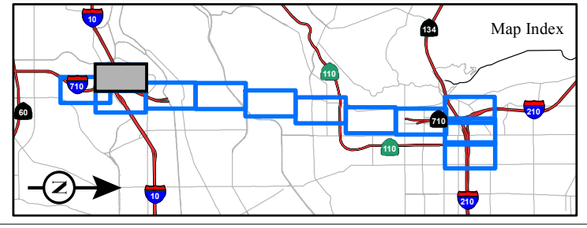

FIGURE 3.3-12
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SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquistion
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

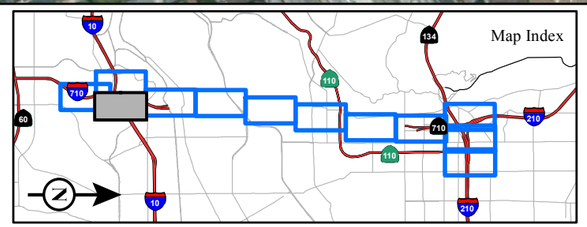

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FIGURE 3.3-12
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SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
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- Full Acquisition
- Partial Acquistion
- Permanent Easement
- Temporary Construction Easement

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FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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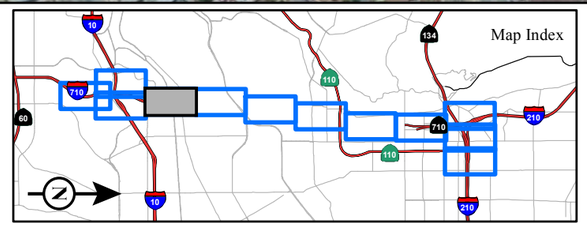

FIGURE 3.3-12
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SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
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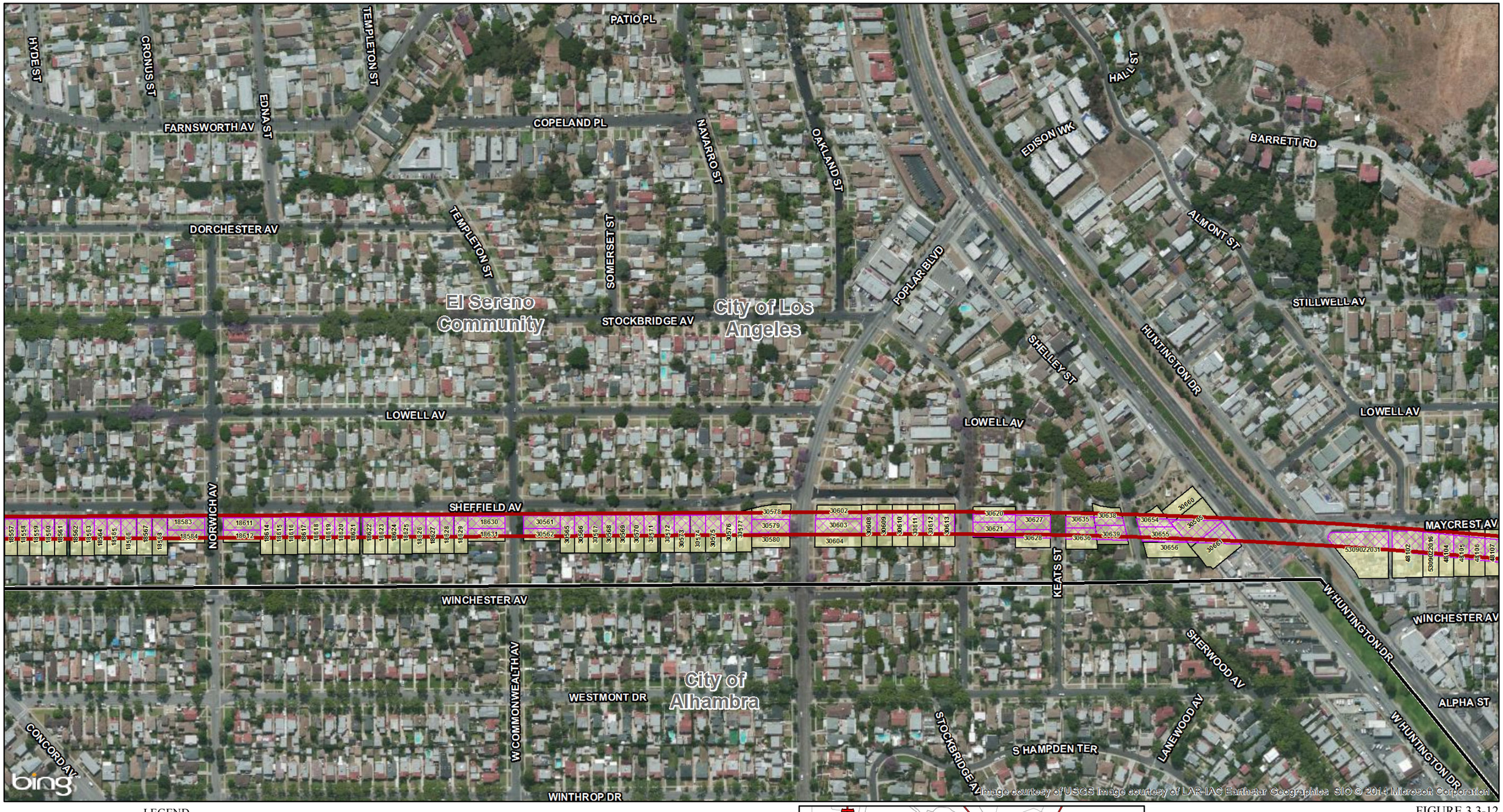

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquistion
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

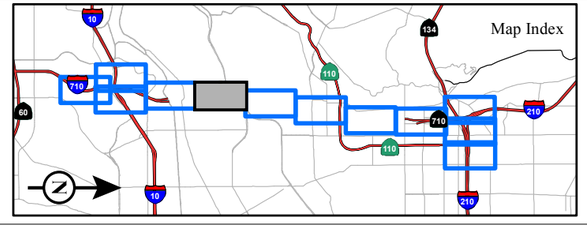

FIGURE 3.3-12
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SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
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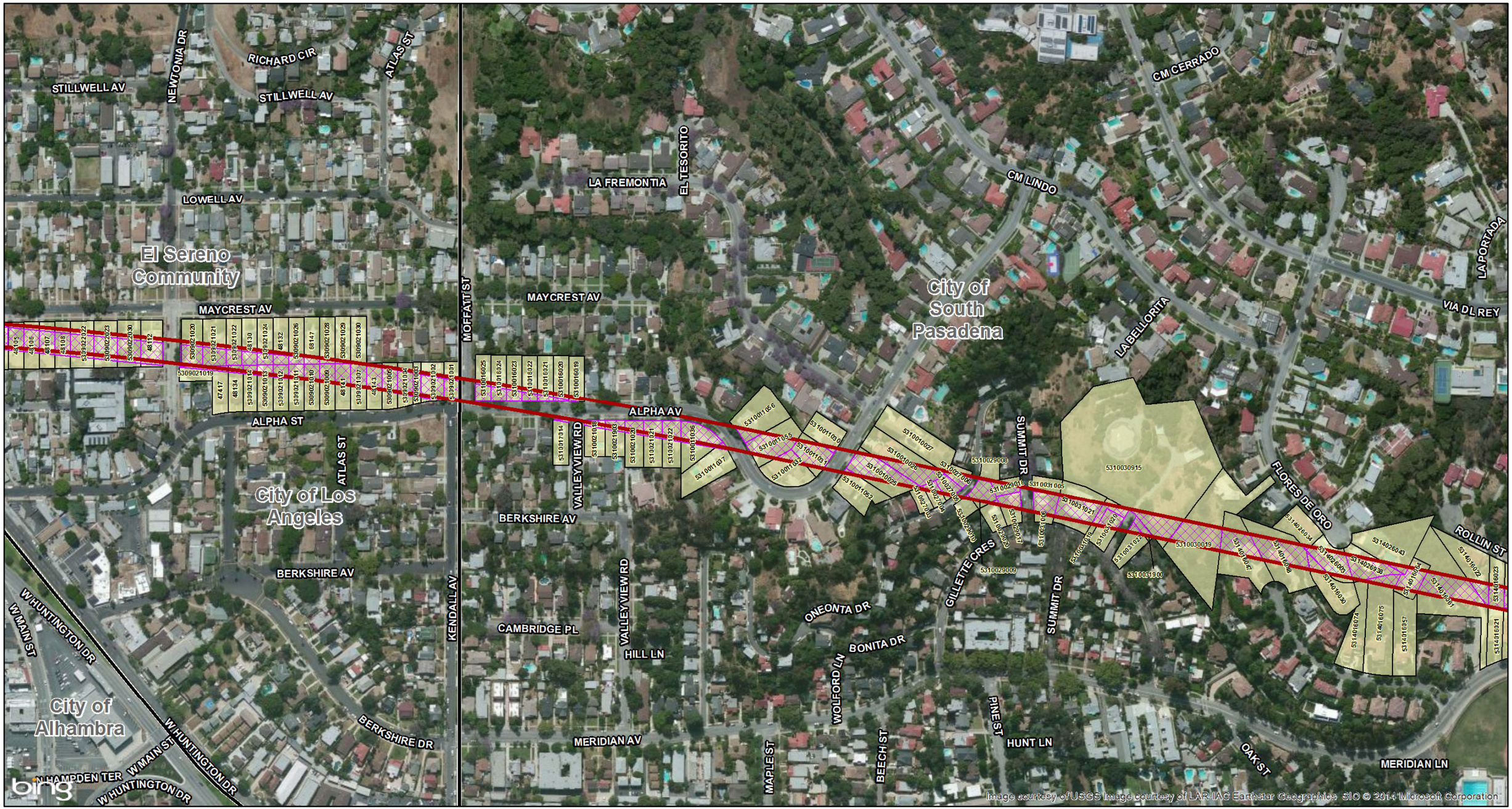

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

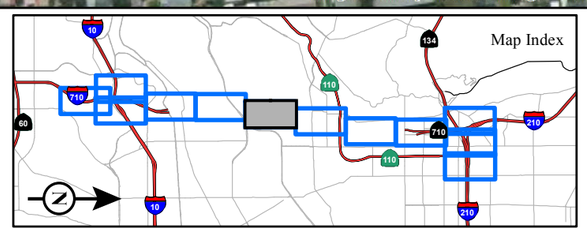

FIGURE 3.3-12
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SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquistion
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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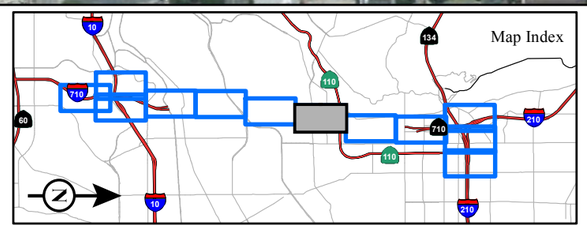

FIGURE 3.3-12
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SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
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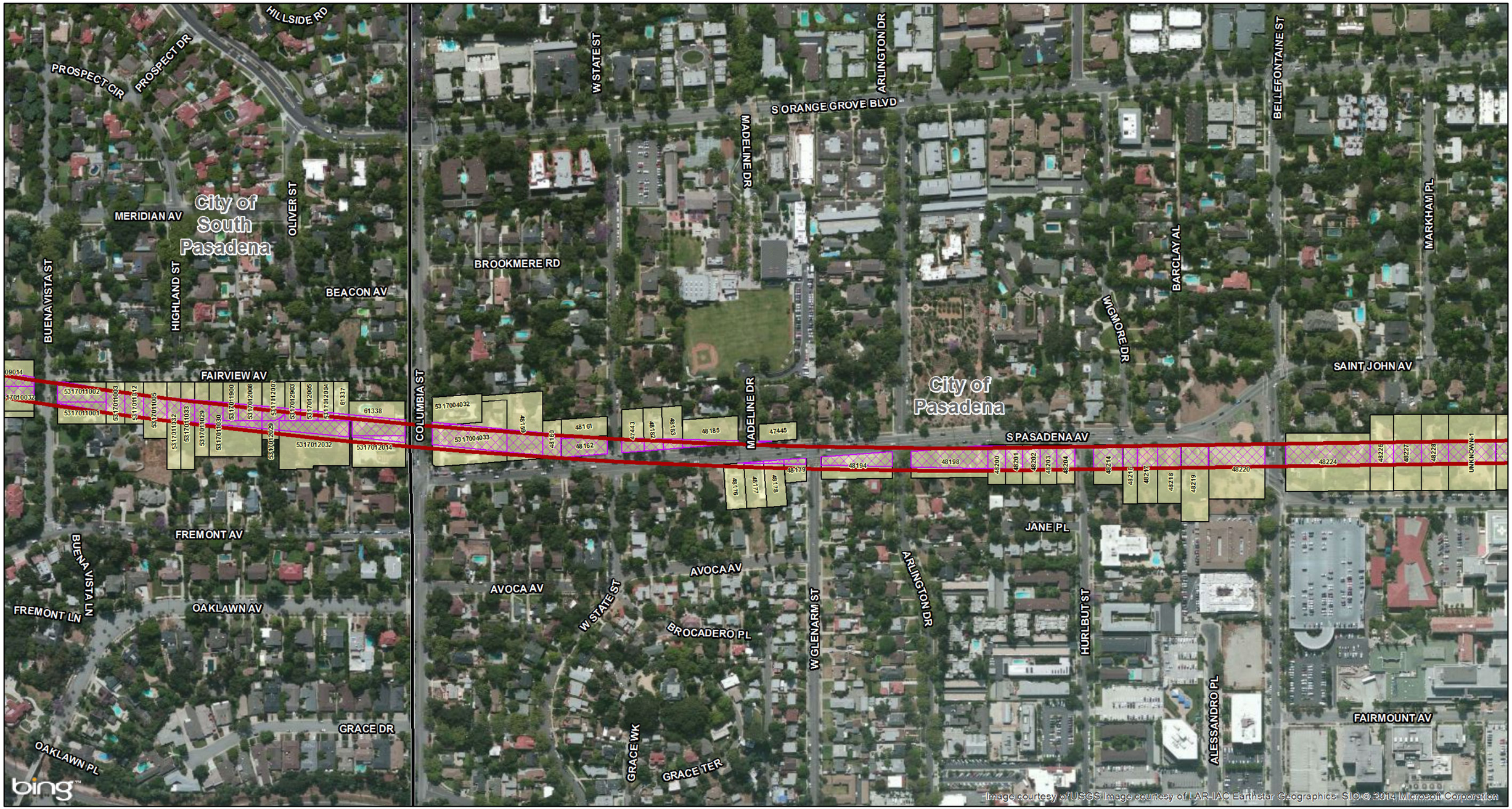

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquistion
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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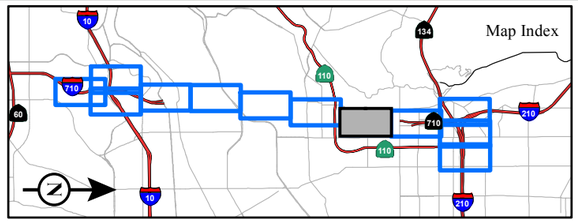

FIGURE 3.3-12
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SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquistion
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

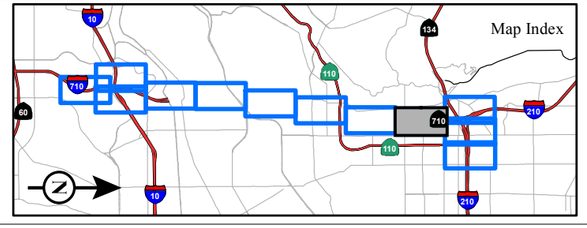

FIGURE 3.3-12
Sheet 9 of 12

SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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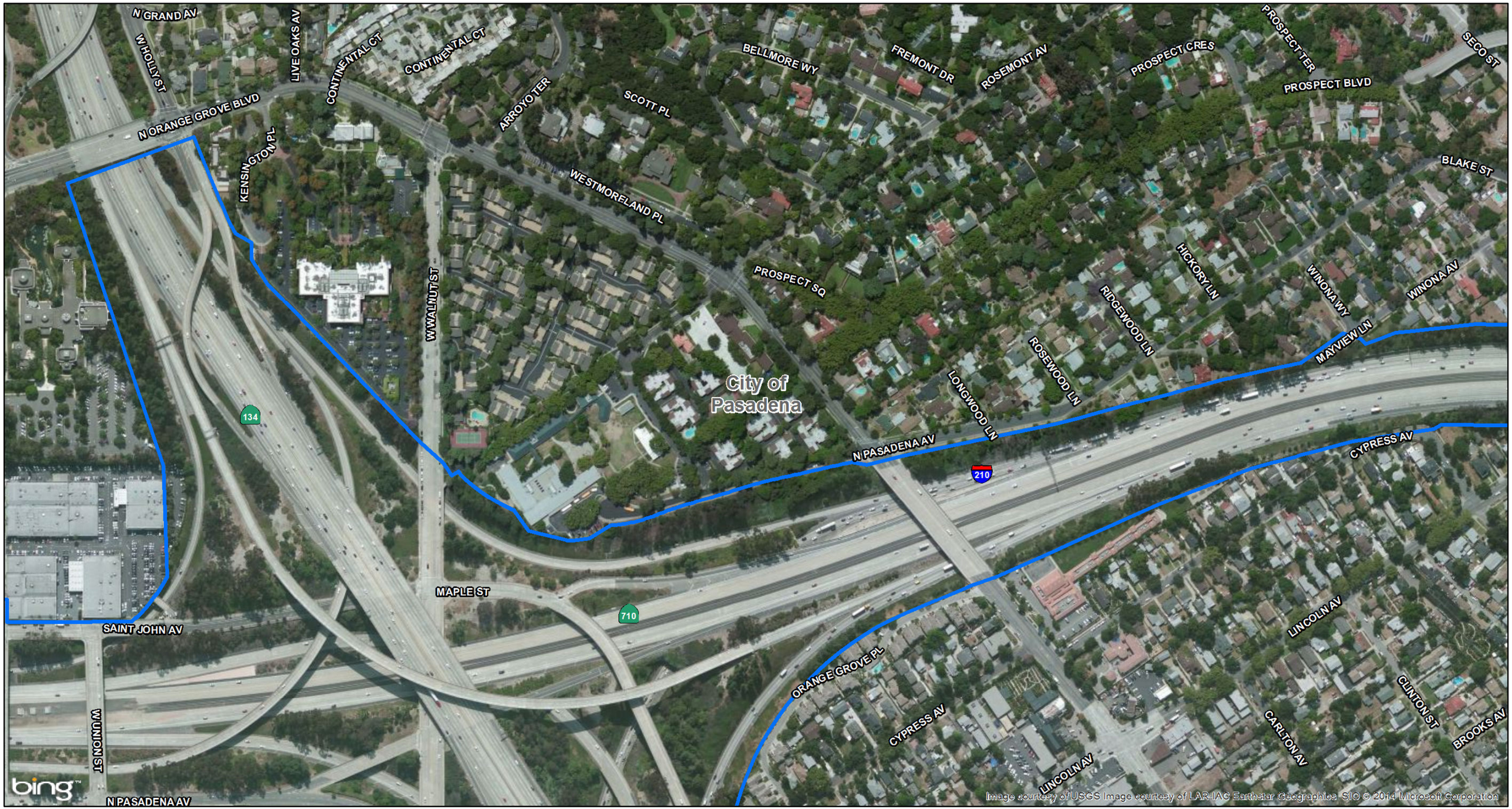

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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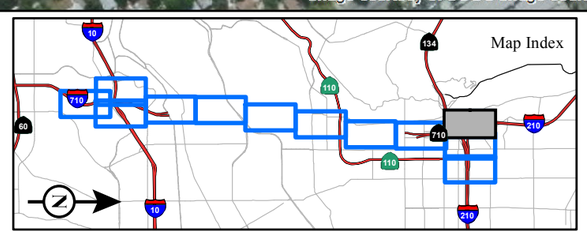

FIGURE 3.3-12
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SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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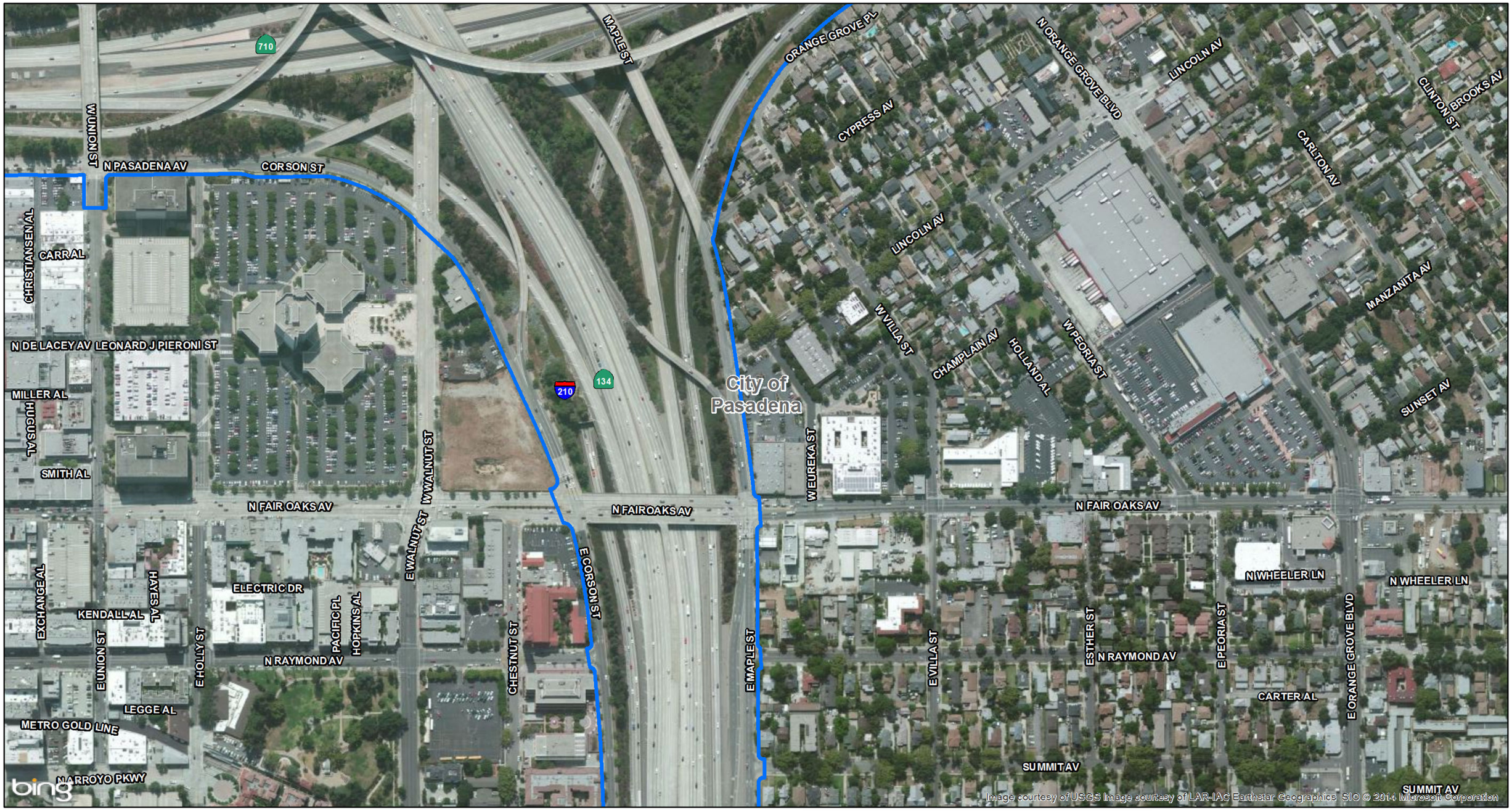

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquistion
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

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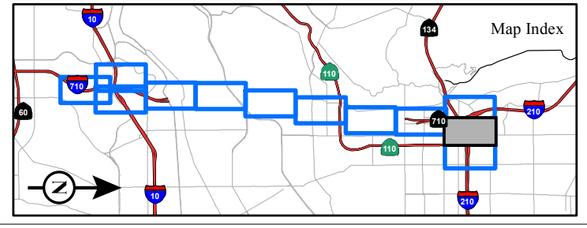

FIGURE 3.3-12
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SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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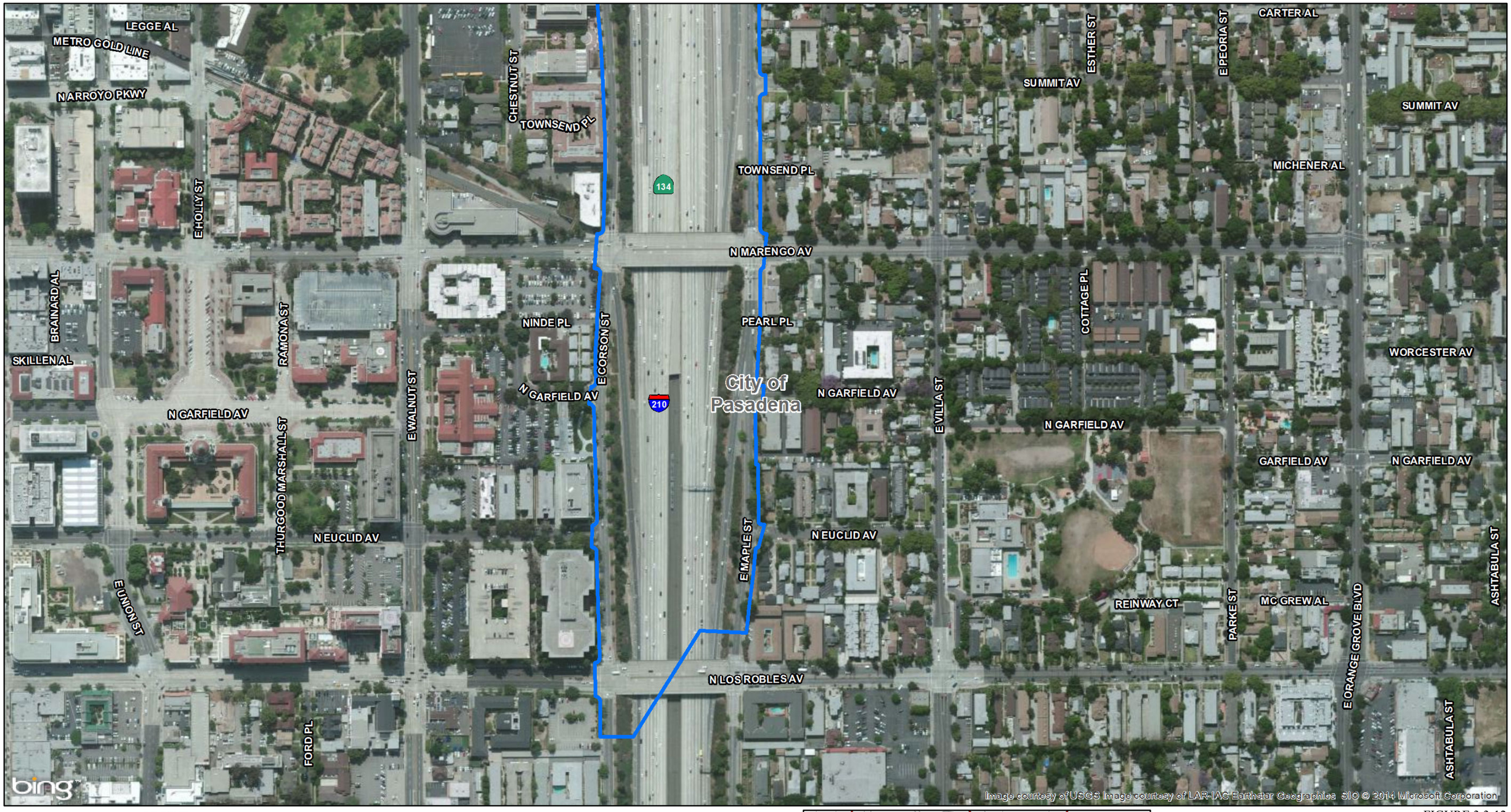

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquistion
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

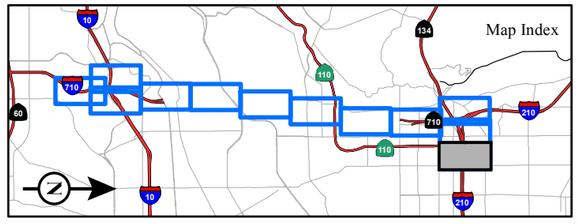

FIGURE 3.3-12
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SR 710 North Study
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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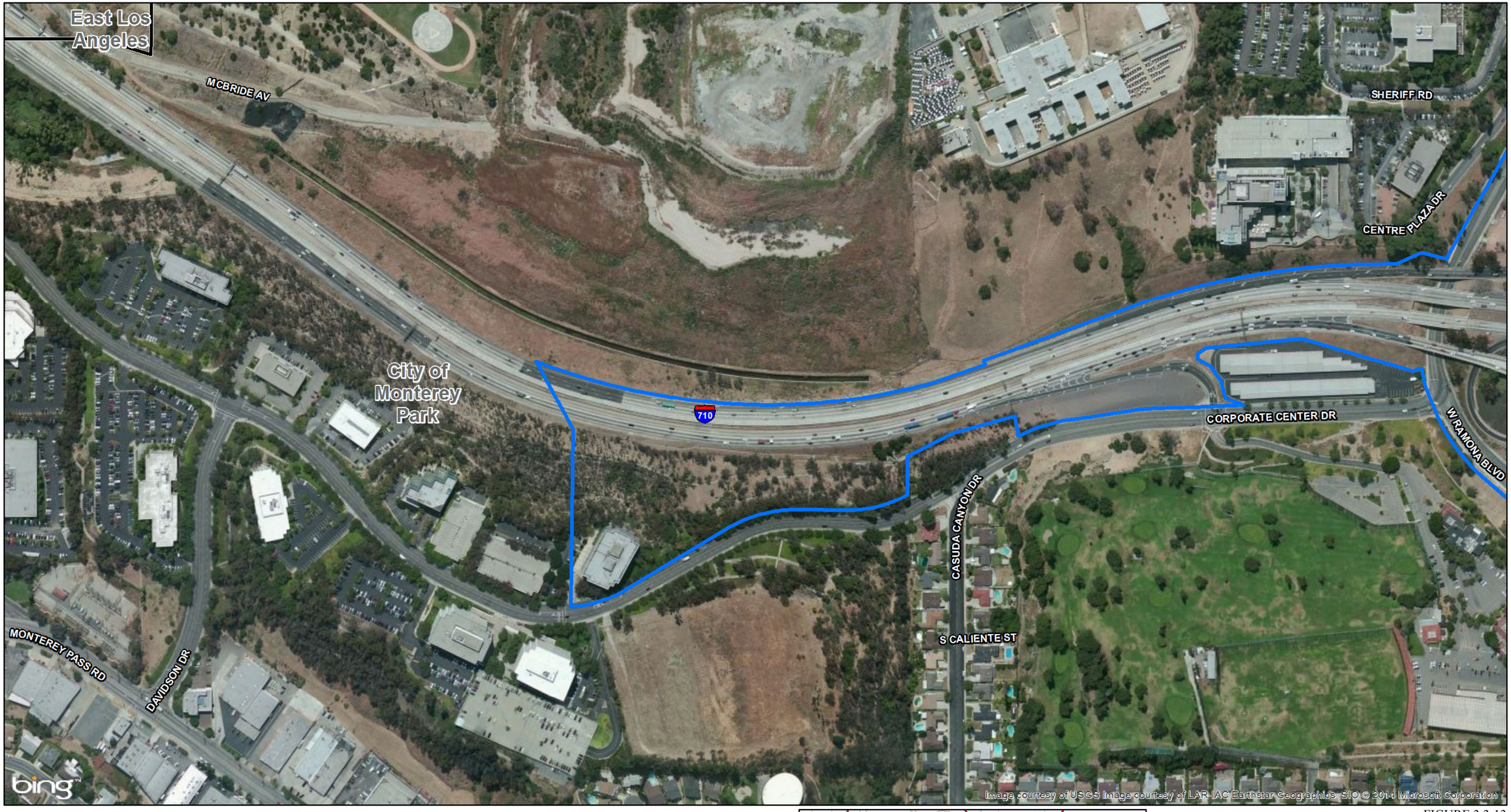

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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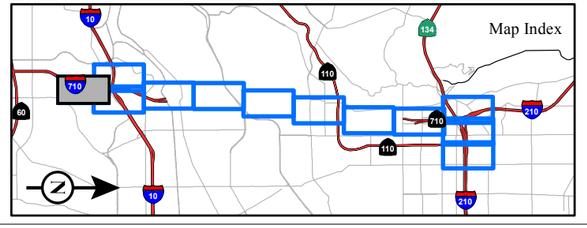

FIGURE 3.3-13
Sheet 1 of 12

SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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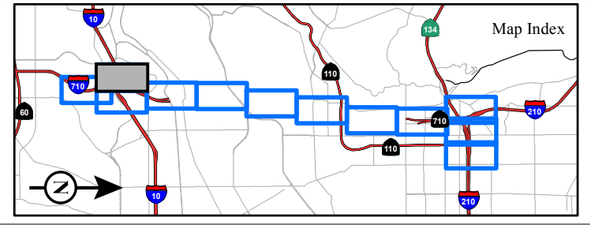

FIGURE 3.3-13
Sheet 2 of 12

SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

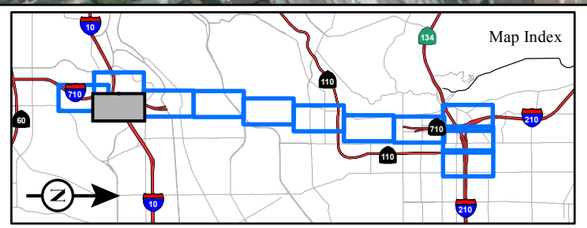

FIGURE 3.3-13
Sheet 3 of 12

SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
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0 150 300
FEET

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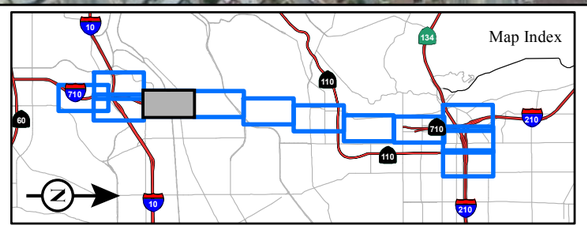

FIGURE 3.3-13
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SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
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EA 187900
EFIS 0700000191

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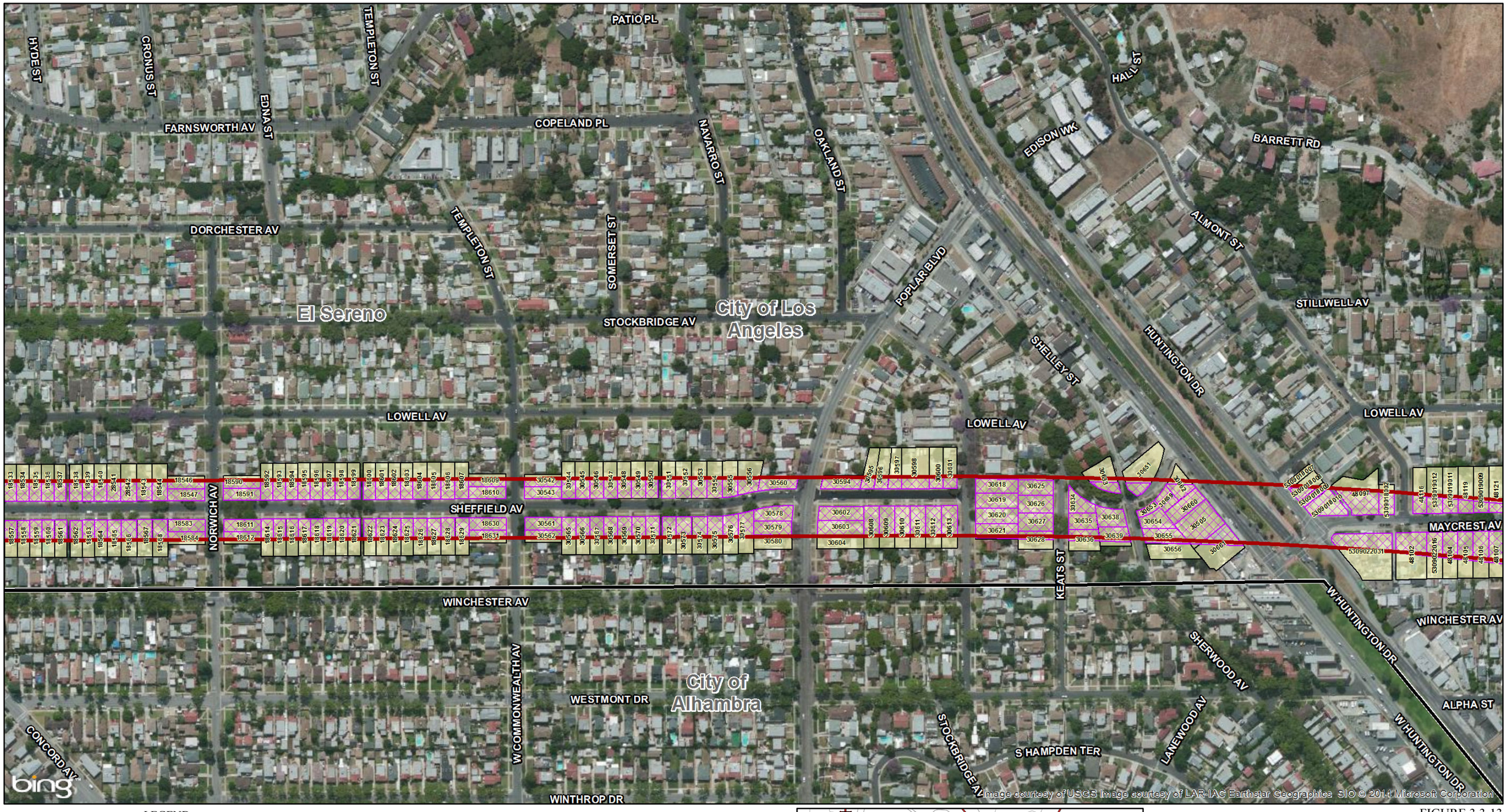

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Easement
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

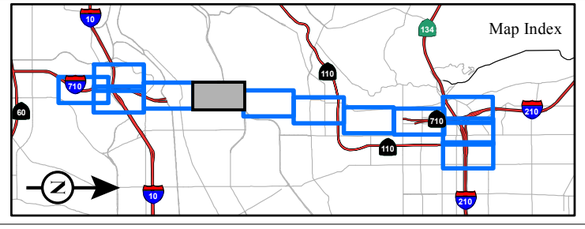

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FIGURE 3.3-13
Sheet 5 of 12

SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
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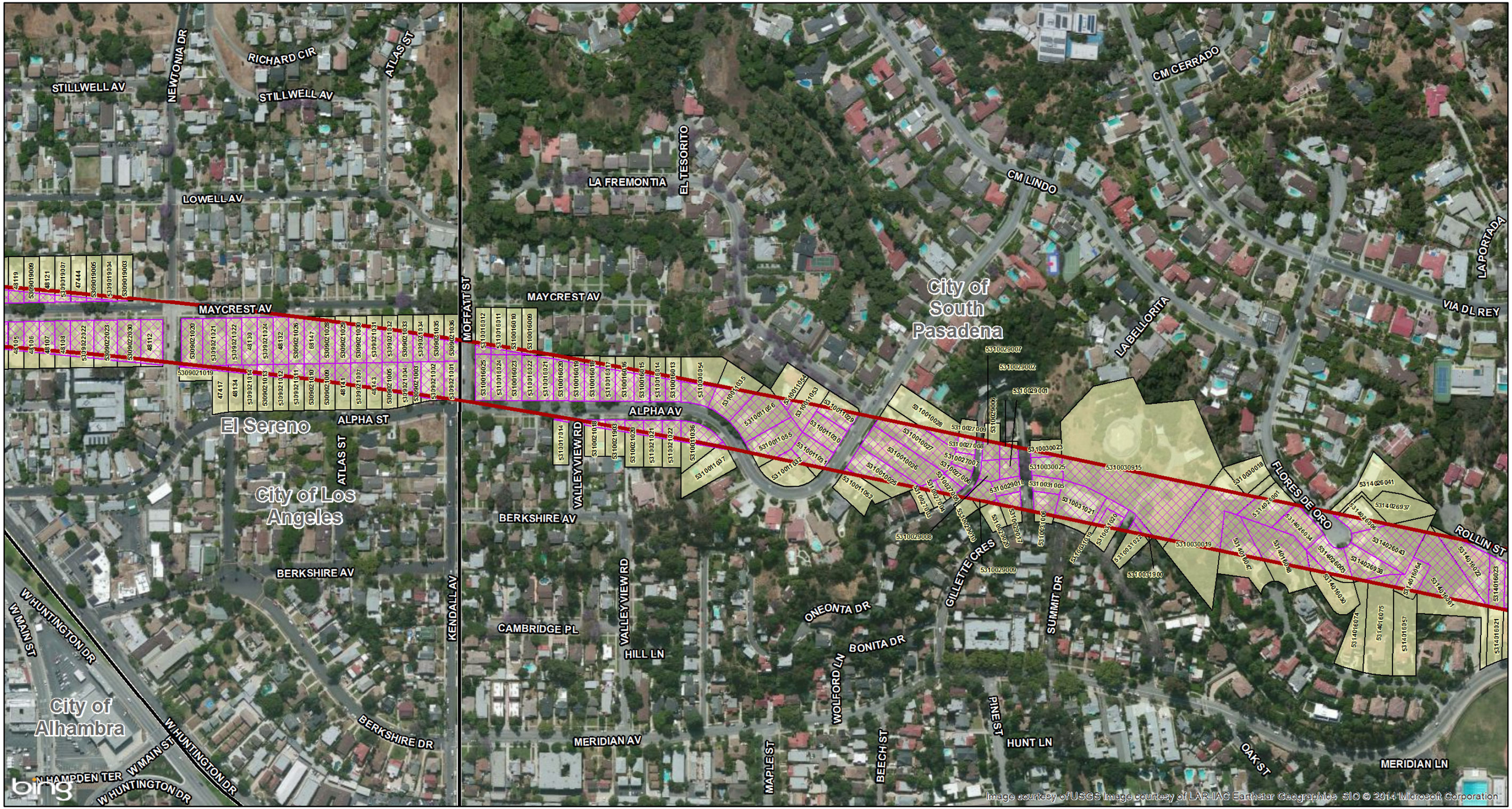

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

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SOURCE: Bing Maps (5/2010); EPIC (12/2013)

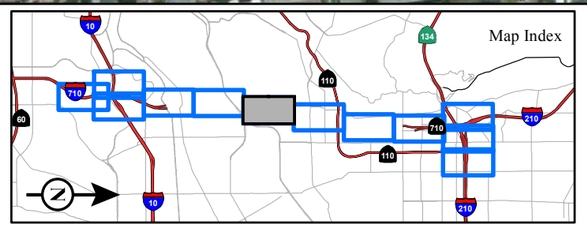

FIGURE 3.3-13
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SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
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EA 187900
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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
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- City/Community/Neighborhood Boundary
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- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

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SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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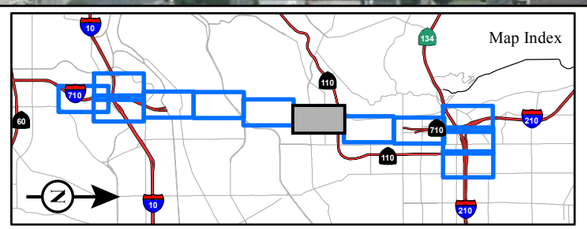

FIGURE 3.3-13
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SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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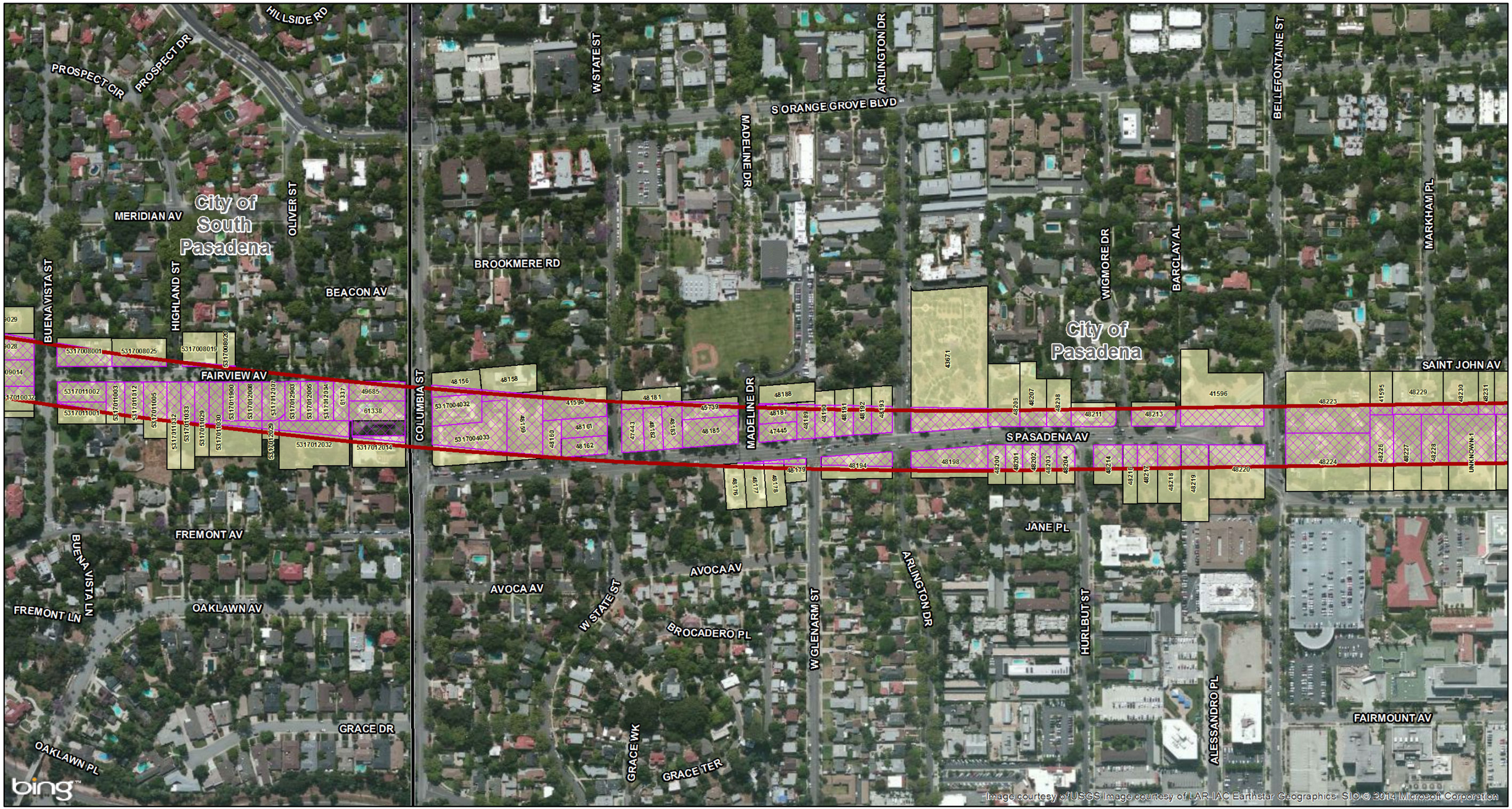

LEGEND

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- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
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- Temporary Construction Easement

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FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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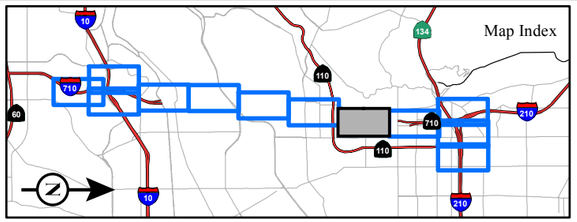

FIGURE 3.3-13
Sheet 8 of 12

SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
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LEGEND

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- Temporary Construction Easement

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SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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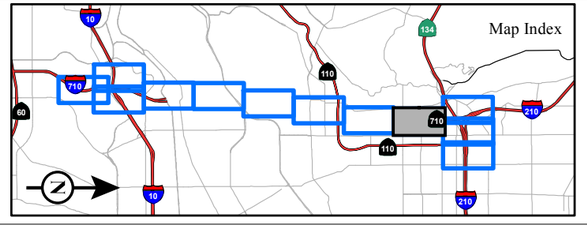

FIGURE 3.3-13
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SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
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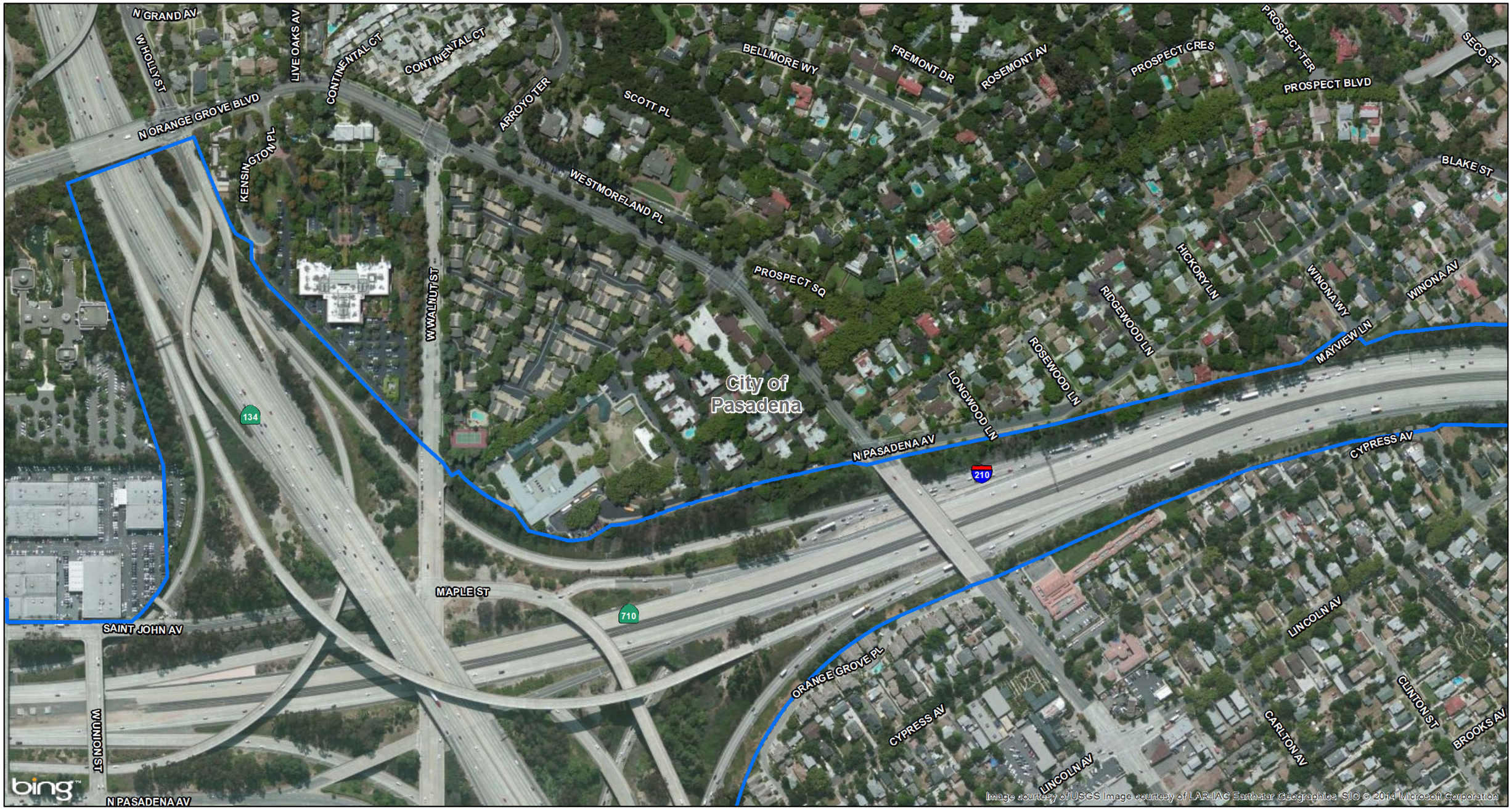

LEGEND

- At Grade Segment
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- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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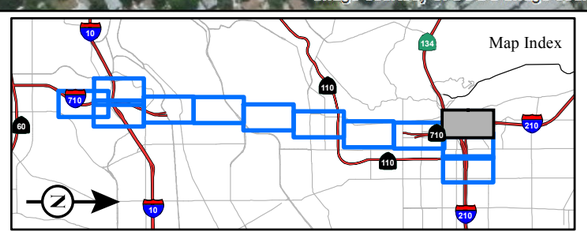

FIGURE 3.3-13
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SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
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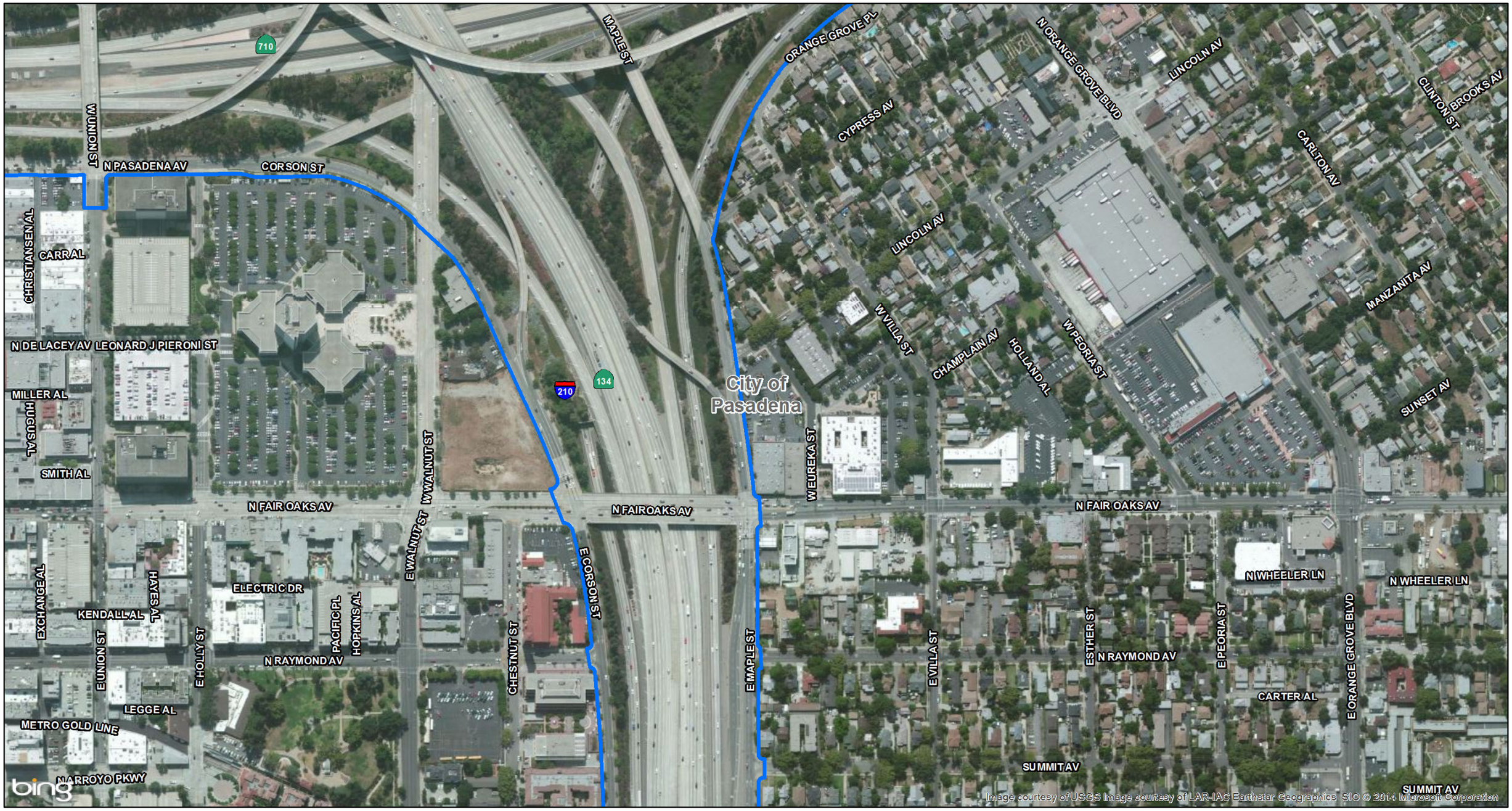

LEGEND

- At Grade Segment
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- Bored Tunnel Segment
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- Full Acquisition
- Partial Acquisition
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- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

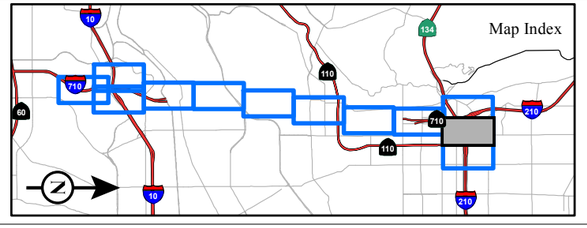

FIGURE 3.3-13
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SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
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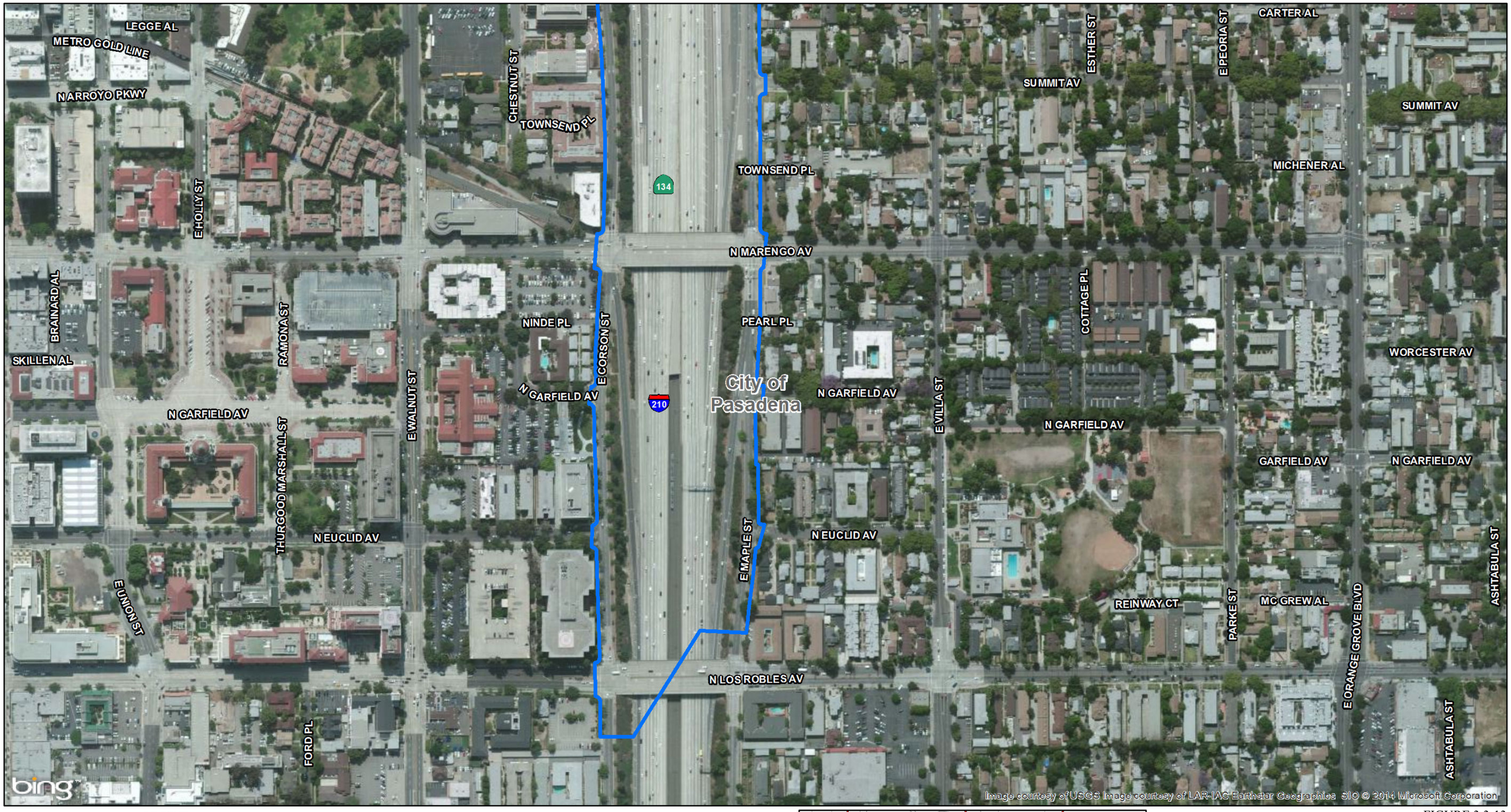

LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
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- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

0 150 300
FEET

SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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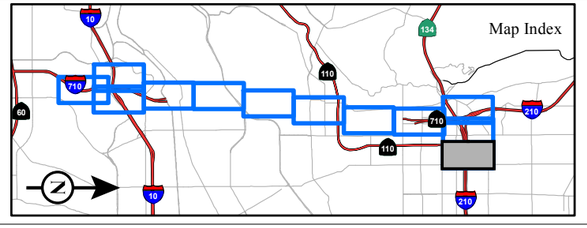

FIGURE 3.3-13
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SR 710 North Study
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
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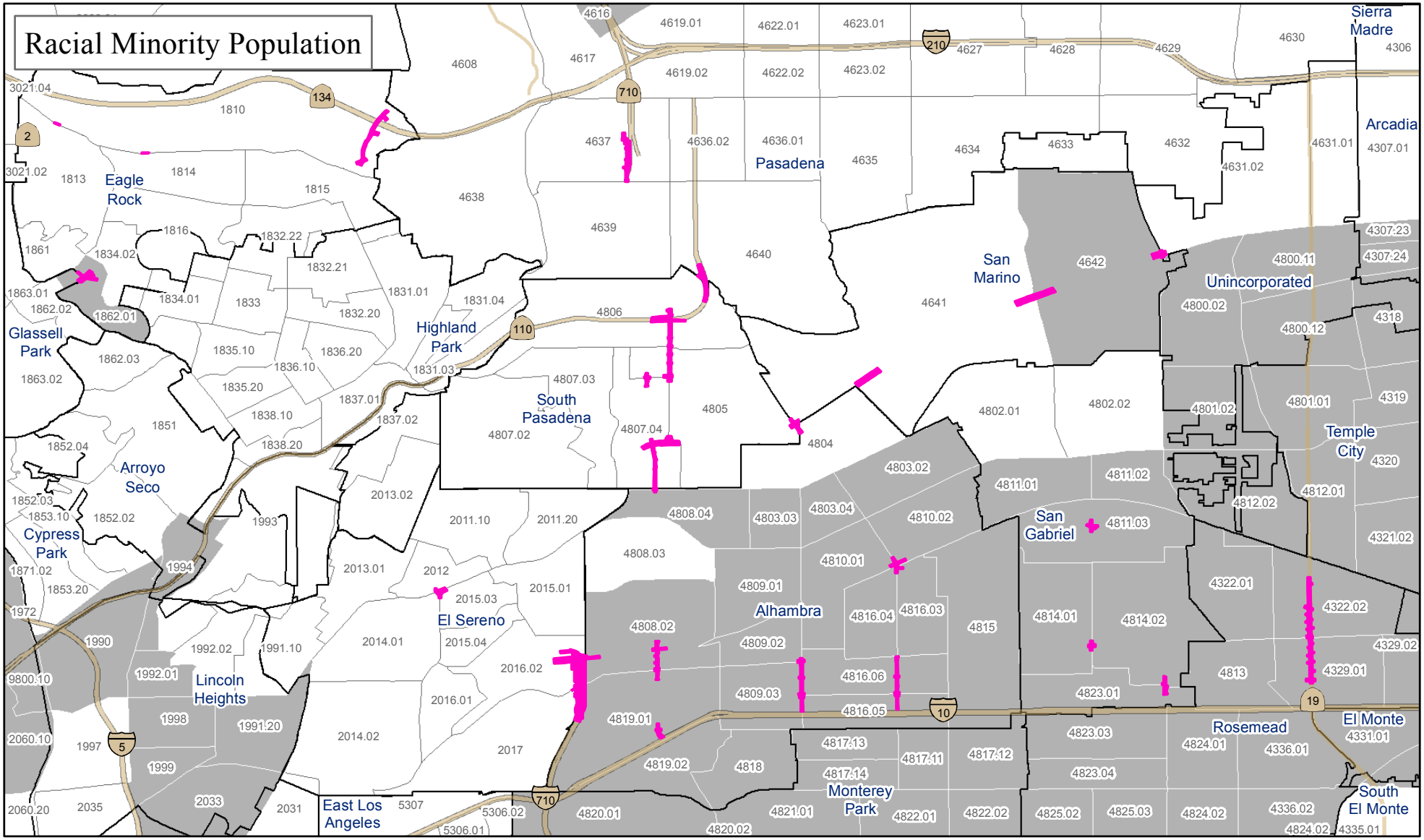

FIGURE 3.3-14
Sheet 1 of 4

SOURCE: CH2M Hill (2013); U.S. Census (2010)

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SR 710 North Study

TSM/TDM Alternative and Environmental Justice Populations

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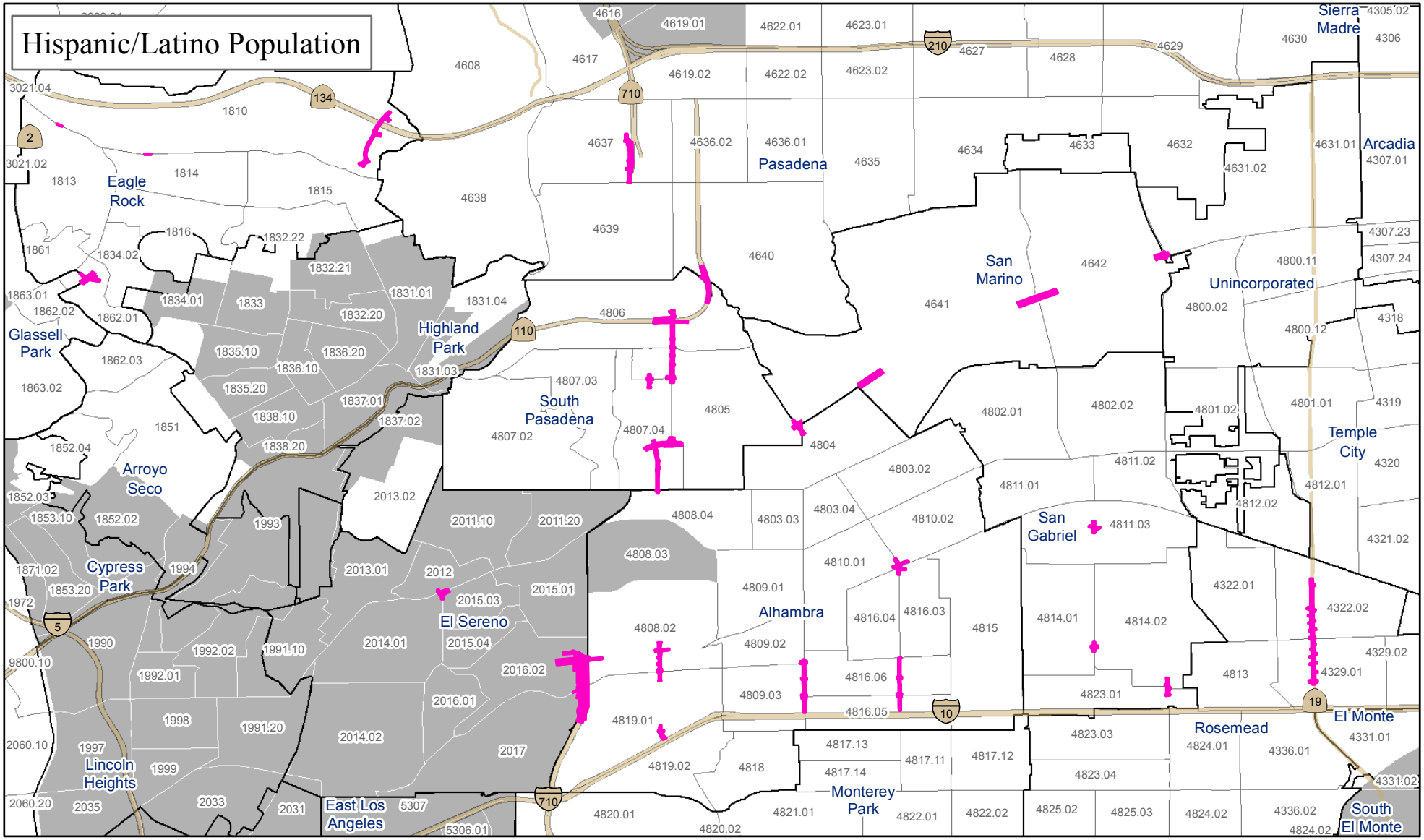

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- Census Tracts Where the Percentage of Hispanics/Latinos is 10% Higher than the County Average
- Jurisdictional Boundary

N

0 3050 6100
FEET

SOURCE: CH2M Hill (2013); U.S. Census (2010)

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FIGURE 3.3-14
Sheet 2 of 4

SR 710 North Study

TSM/TDM Alternative and Environmental Justice Populations

07-LA-710 (SR 710)
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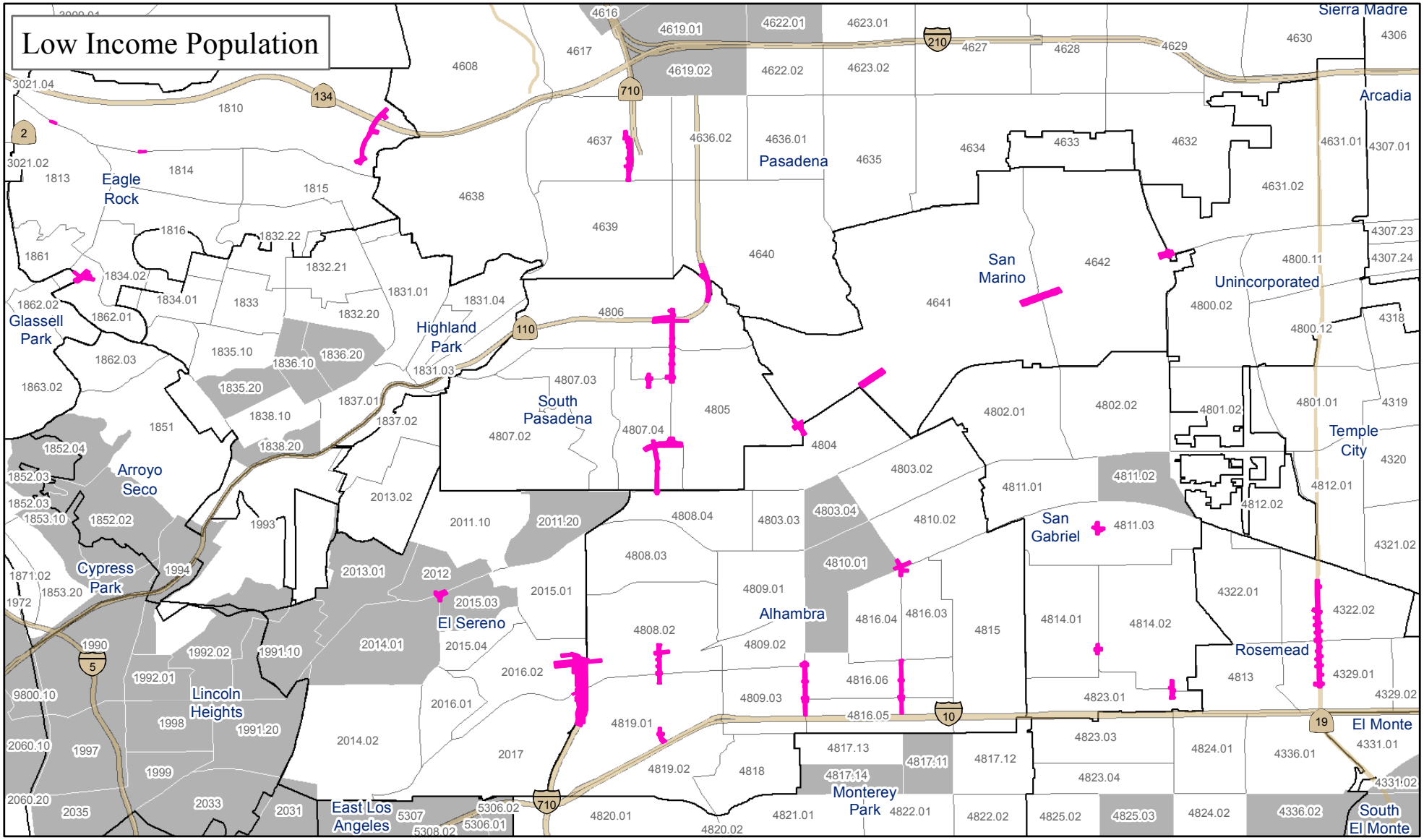

FIGURE 3.3-14
Sheet 3 of 4

SR 710 North Study

TSM/TDM Alternative and Environmental Justice Populations

07-LA-710 (SR 710)
EA 187900
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SOURCE: CH2M Hill (2013); U.S. Census ACS 2007-2011, Table DP03

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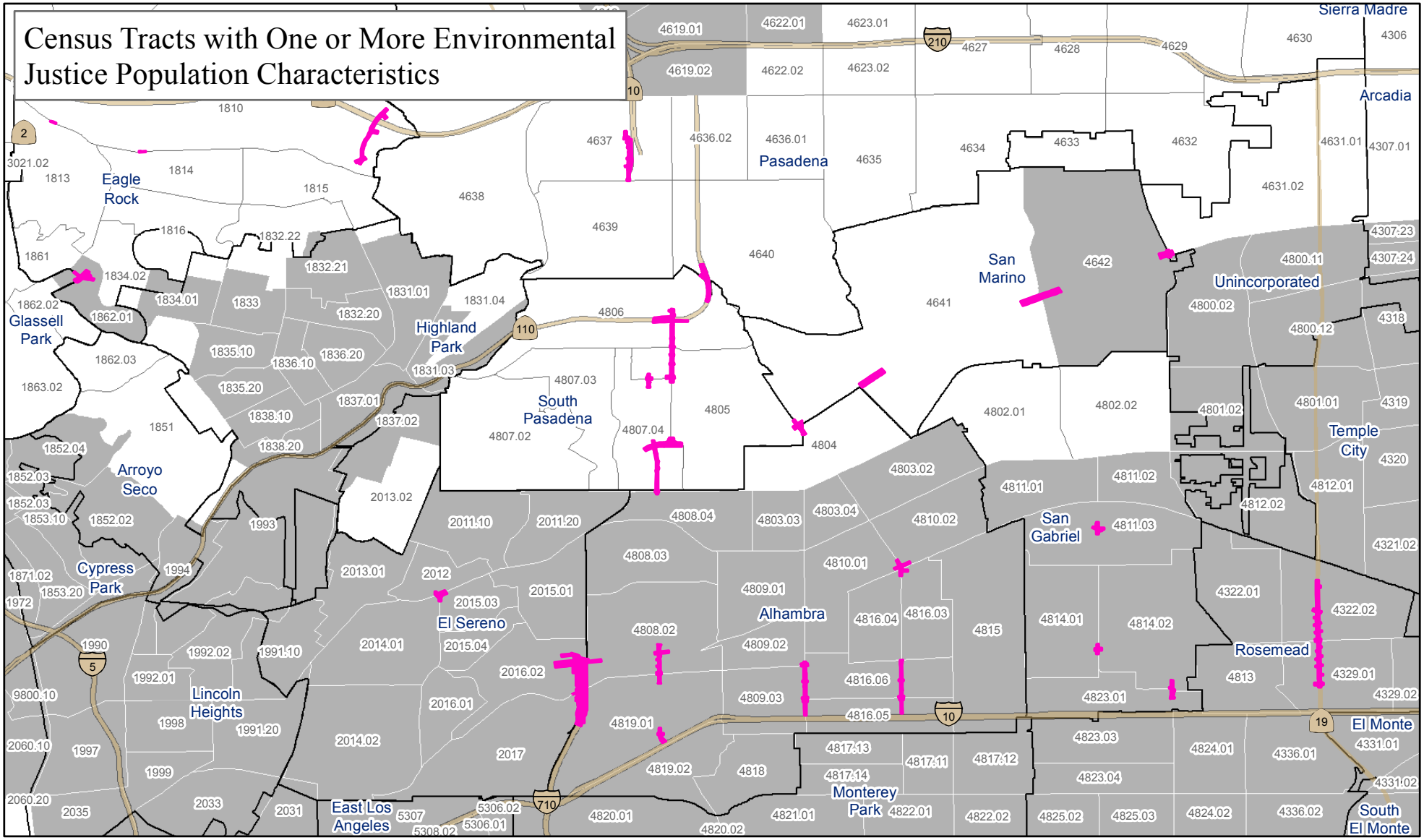

LEGEND

TSM/TDM Alternative Local Street and Intersection Improvements

Census Tracts with One or More Environmental Justice Population Percentage Substantially Greater than the County Average

Jurisdictional Boundary

SOURCE: CH2M Hill (2013); U.S. Census (2010); U.S. Census ACS 2007-2011, Tables DP03, B01001, B25046, and B26001

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FIGURE 3.3-14
Sheet 4 of 4

SR 710 North Study
TSM/TDM Alternative and Environmental Justice Populations

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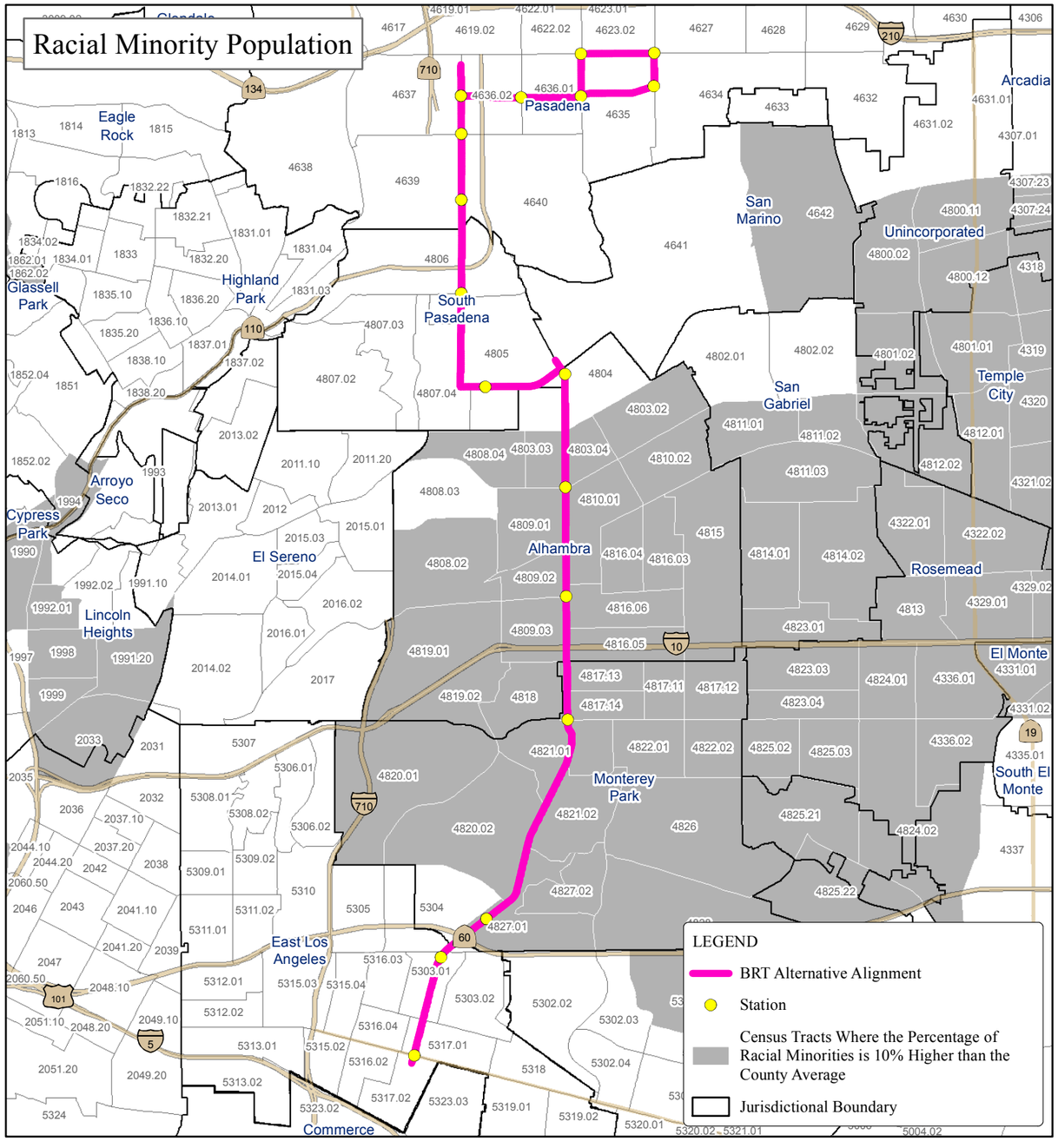

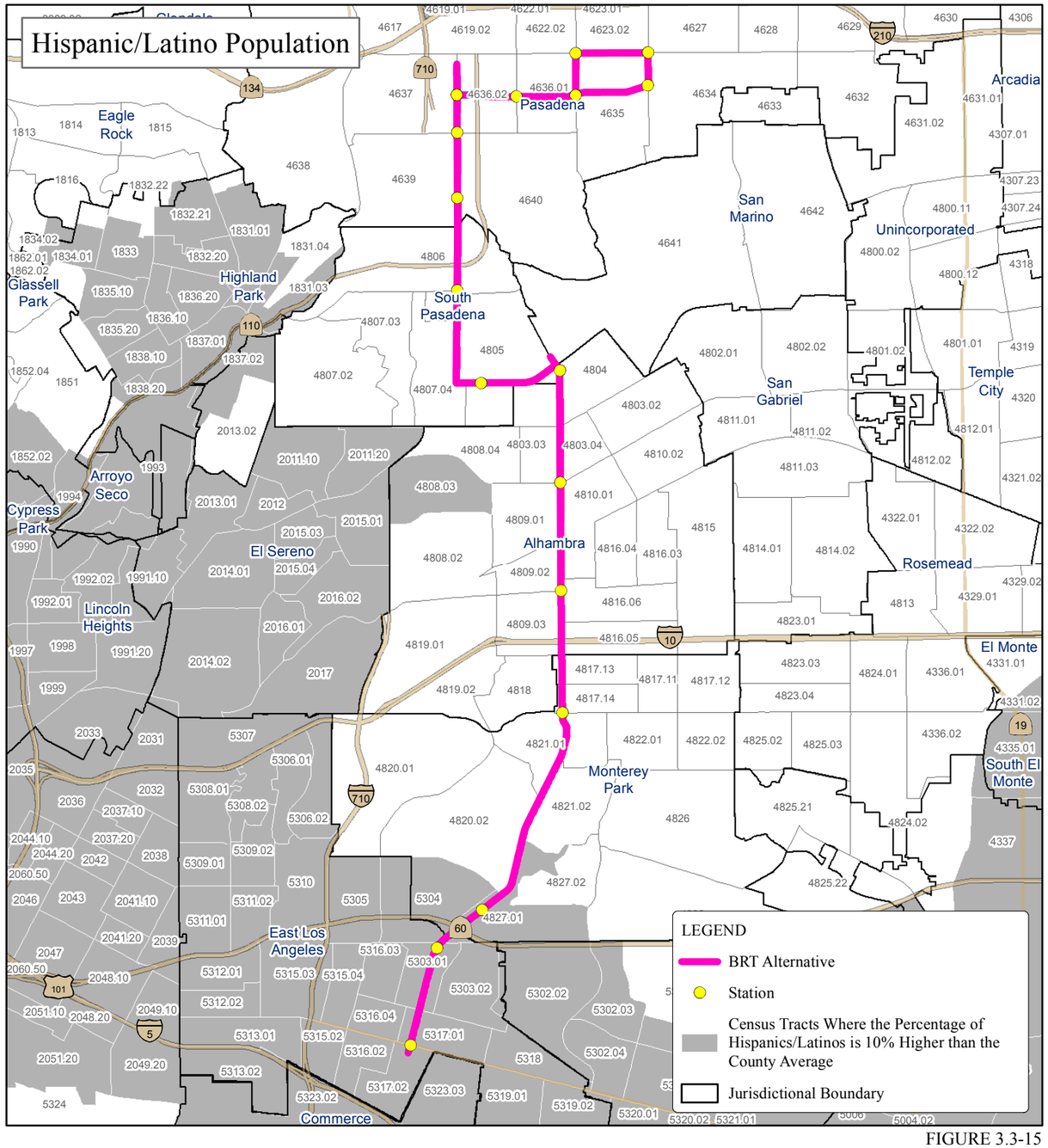

FIGURE 3.3-15
Sheet 1 of 2

0 3000 6000
Feet

SOURCE: CH2M Hill (2013); U.S. Census (2010)

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SR 710 North Study

BRT Alternative and Environmental Justice Populations

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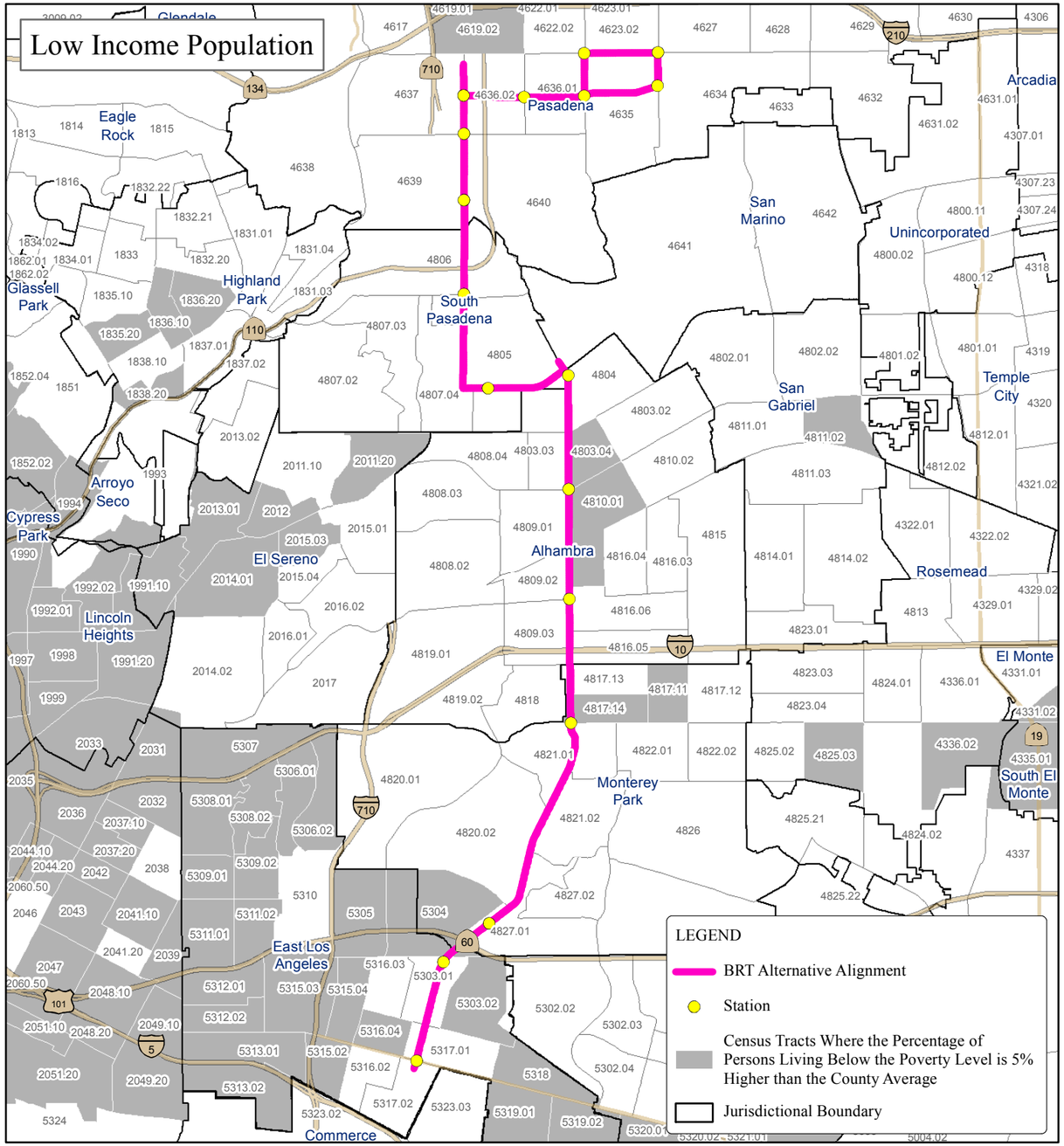

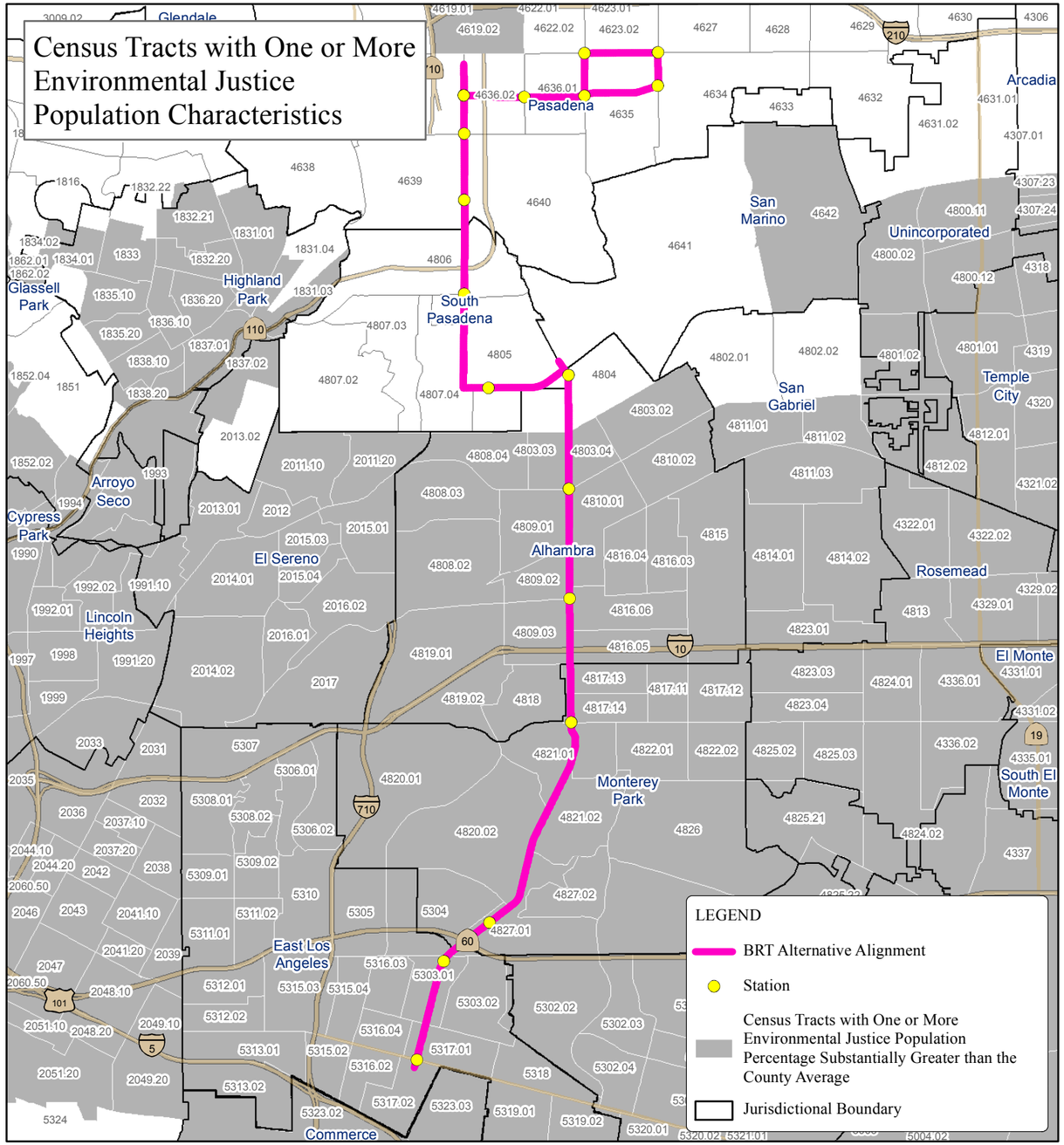

FIGURE 3.3-15
Sheet 2 of 2

0 3000 6000
Feet

SOURCE: CH2M Hill (2013); U.S. Census (2010); U.S. Census ACS 2007-2011, Tables DP03, B01001, B25046, and B26001

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SR 710 North Study
BRT Alternative and Environmental Justice Populations
07-LA-710 (SR 710)
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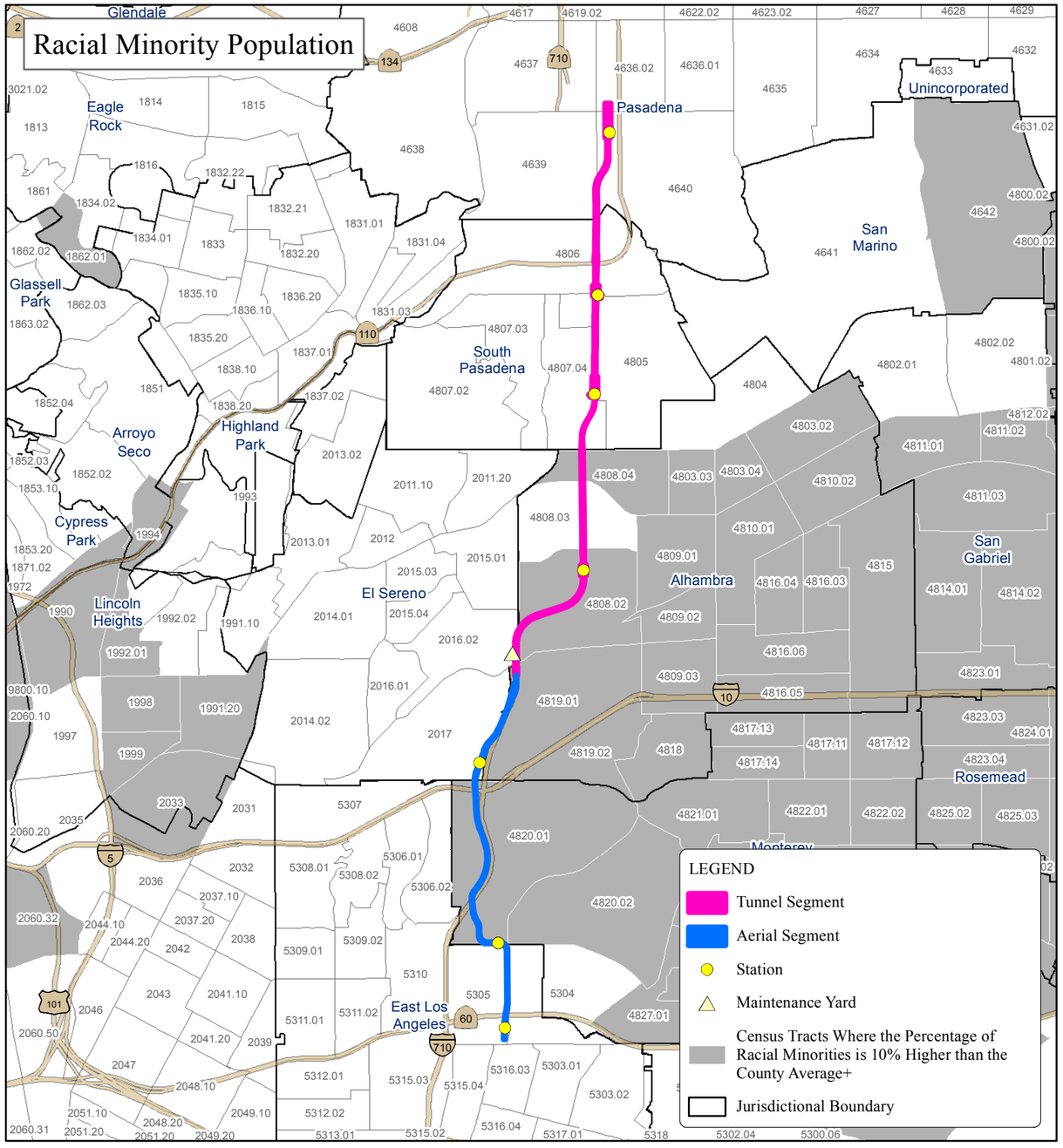
Racial Minority Population



Hispanic/Latino Population

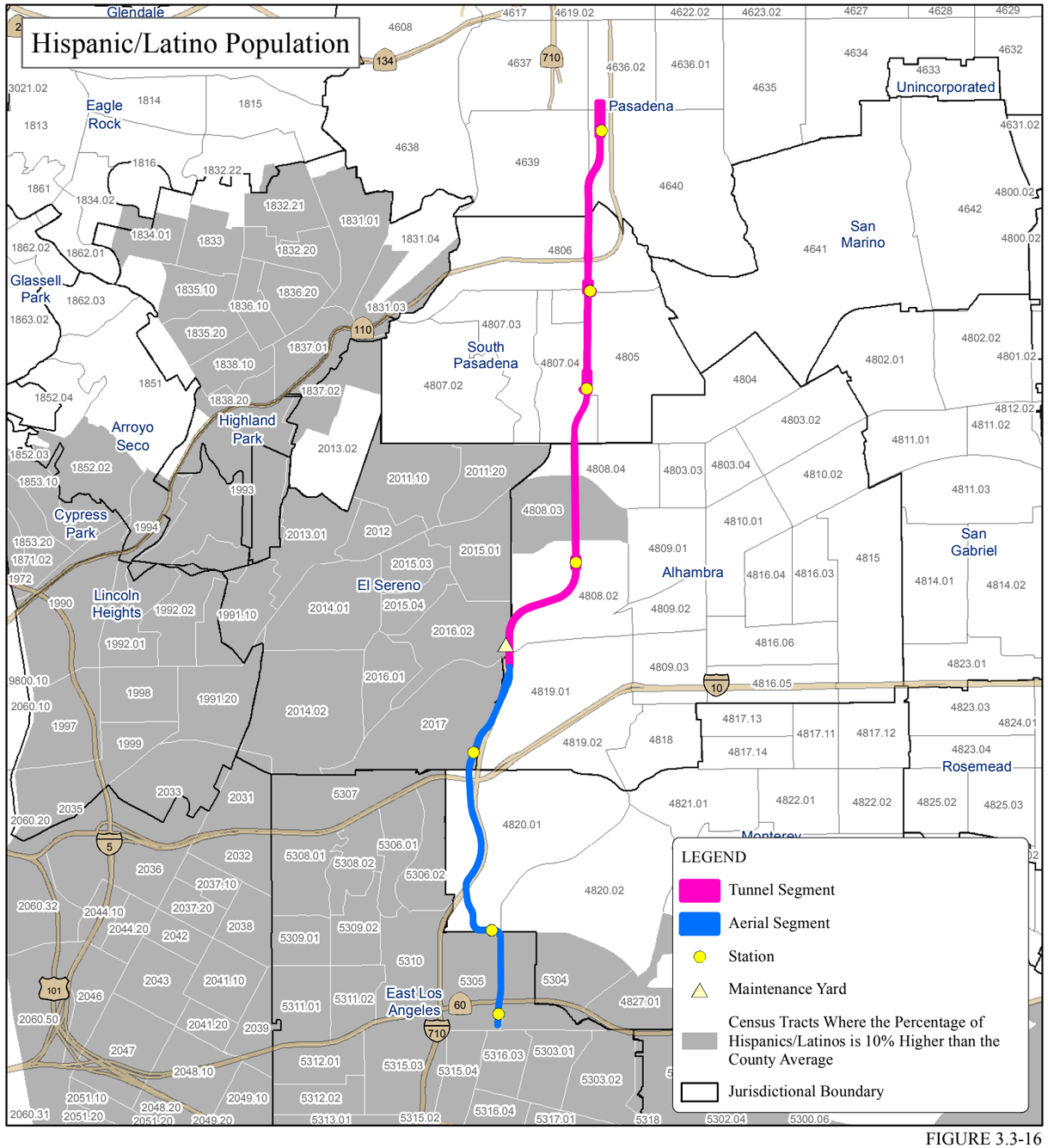


FIGURE 3.3-16
Sheet 1 of 2

0 0.5 1
Miles

SOURCE: CH2M Hill (2013); U.S. Census (2010)

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SR 710 North Study
LRT Alternative and Environmental Justice Populations
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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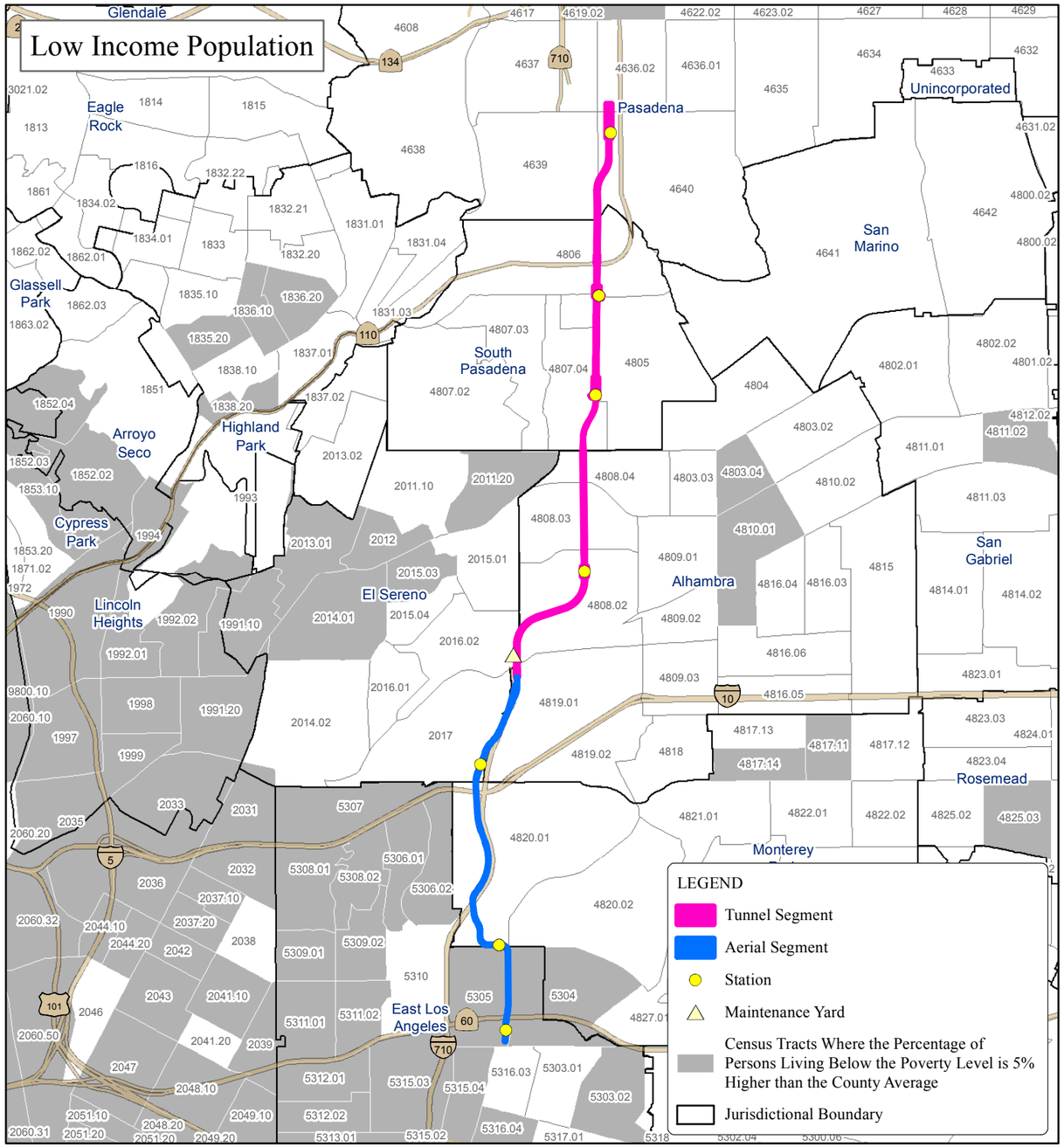

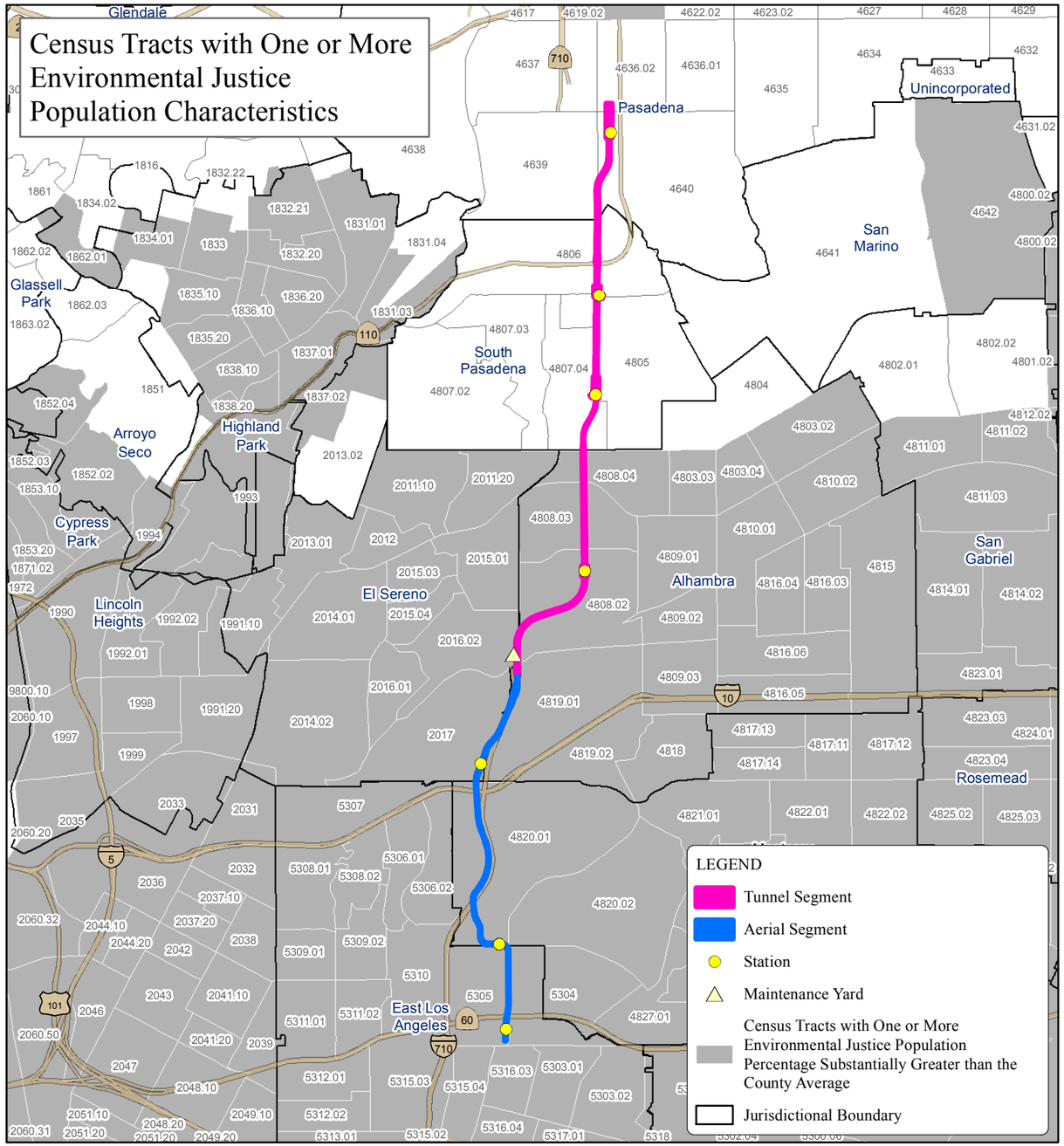

FIGURE 3.3-16
Sheet 2 of 2

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Miles

SOURCE: CH2M Hill (2013); U.S. Census (2010); U.S. Census ACS 2007-2011, Tables DP03, B01001, B25046, and B26001

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SR 710 North Study
LRT Alternative and Environmental Justice Populations

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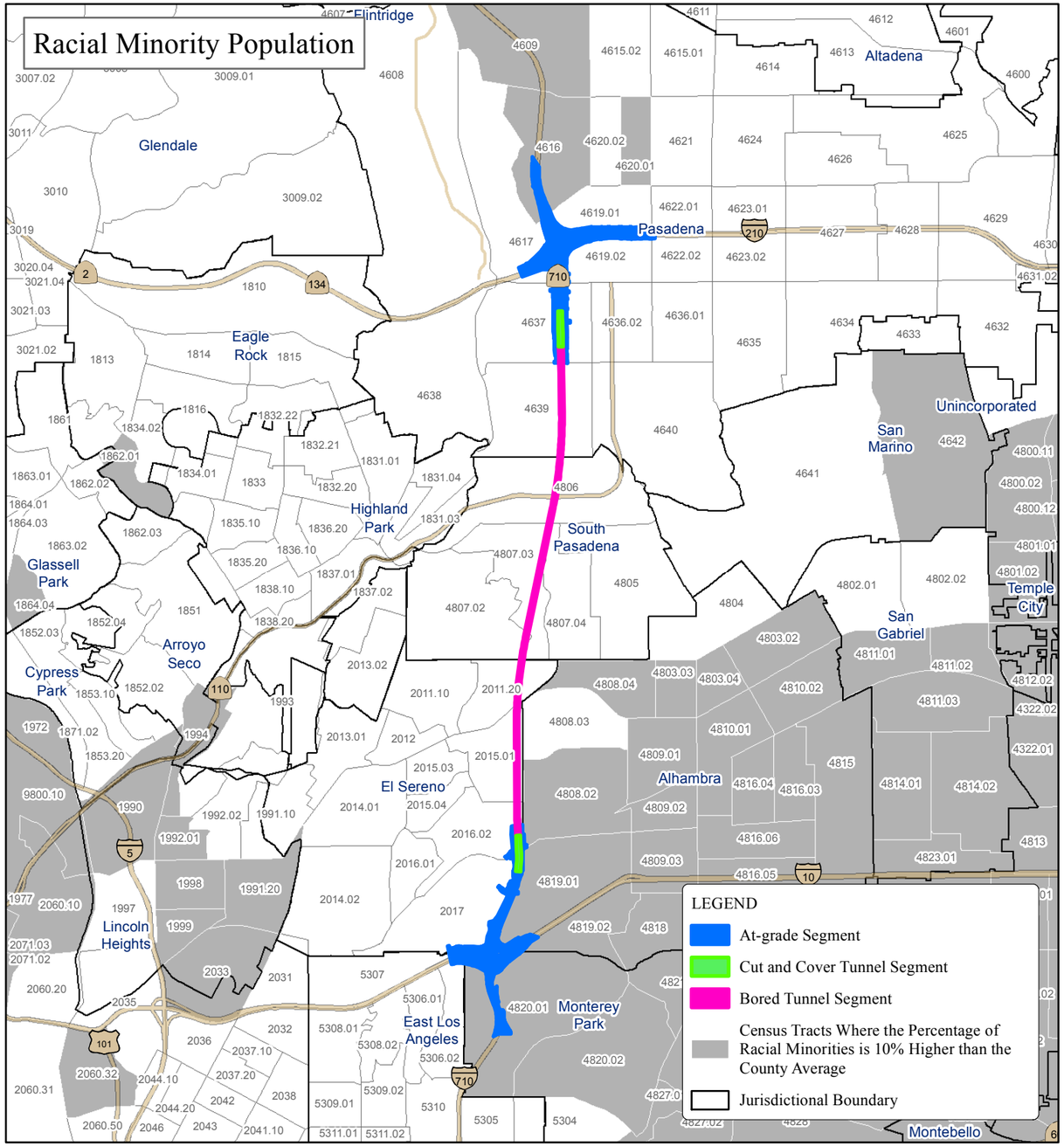

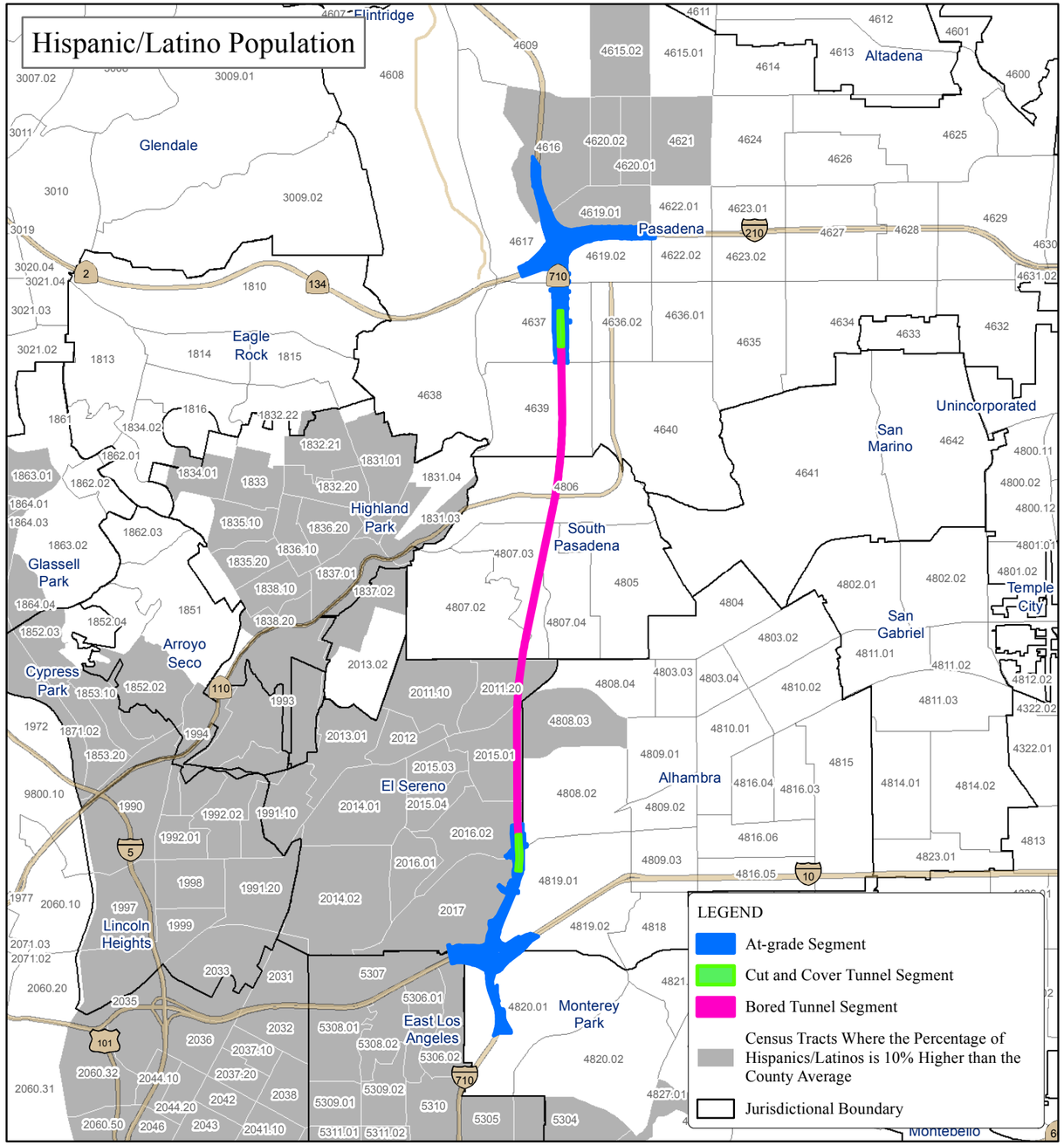

FIGURE 3.3-17
Sheet 1 of 2

0 3000 6000
Feet

SOURCE: CH2M Hill (2013); U.S. Census (2010)

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SR 710 North Study

Freeway Tunnel - Dual Bore Alternative and Environmental Justice Populations

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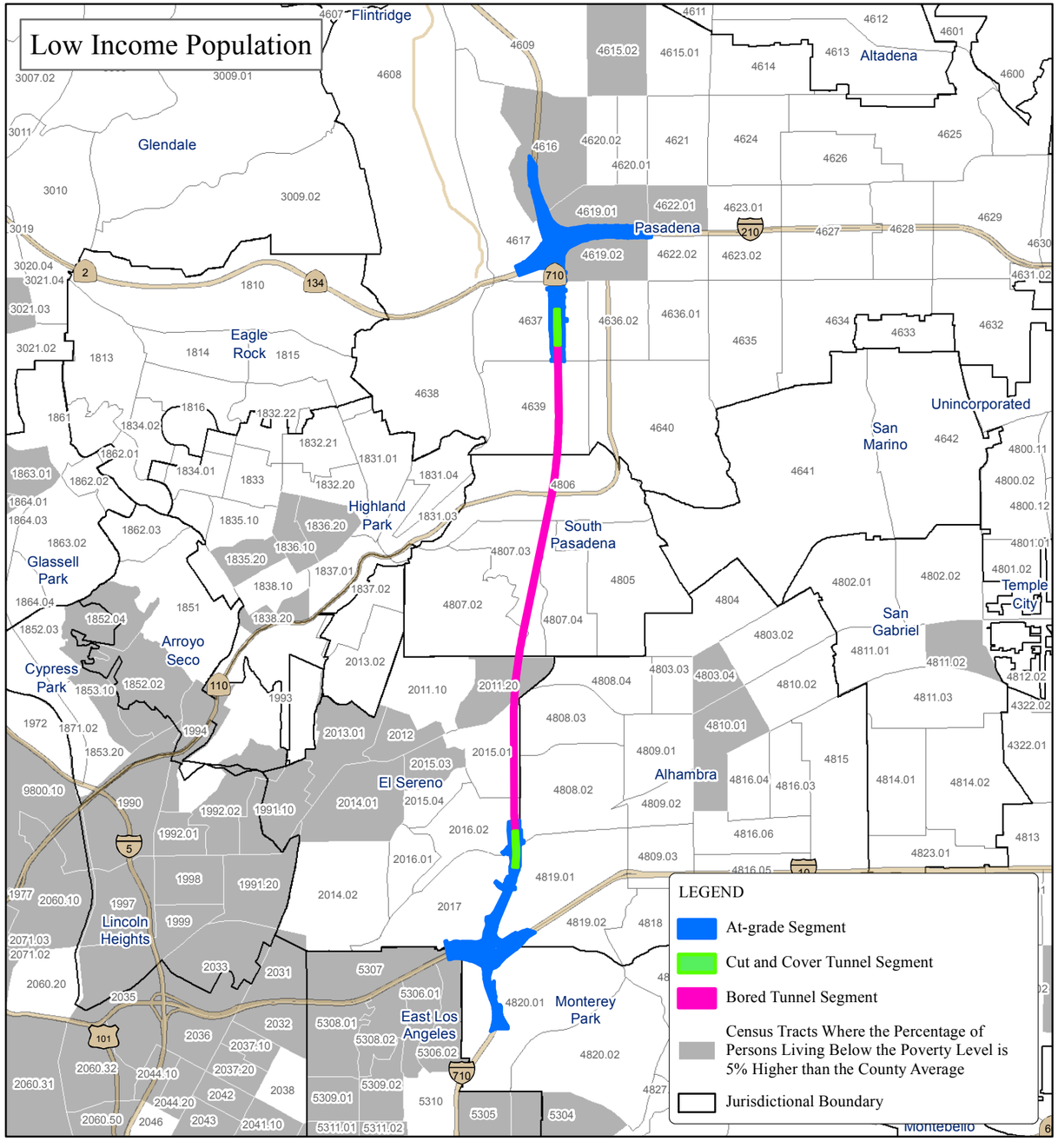

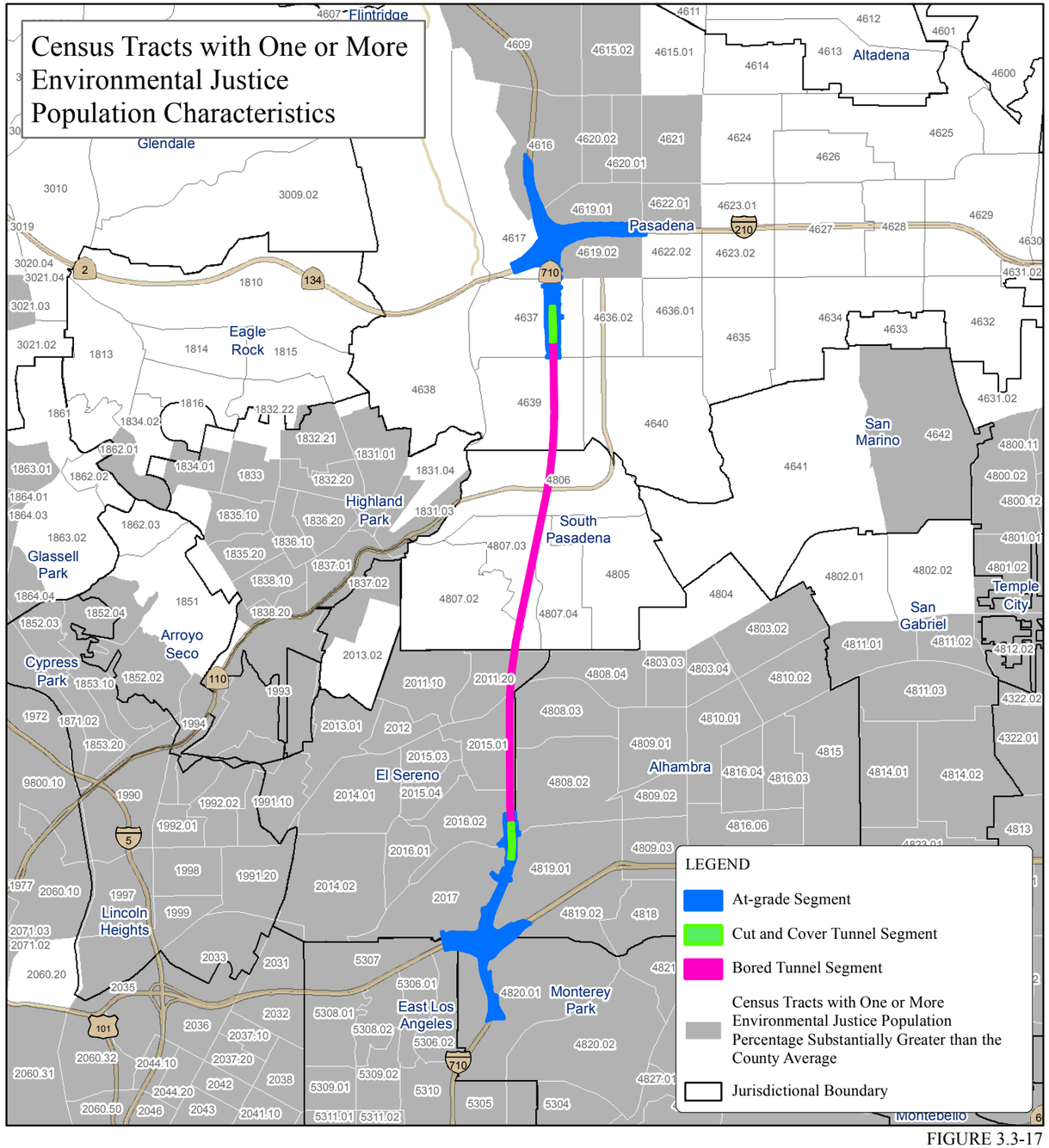

FIGURE 3.3-17
Sheet 2 of 2

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Feet

SOURCE: CH2M Hill (2013); U.S. Census (2010); U.S. Census ACS 2007-2011, Tables DP03, B01001, B25046, and B26001

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SR 710 North Study

Freeway Tunnel - Dual Bore Alternative and Environmental Justice Populations

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Appendix M: Visual Impact Assessment Figures

This appendix contains the following figures, which support the analysis in Section 3.6, Visual/ Aesthetics:

Figure 3.6-1: Landscape Units – BRT M-3
Figure 3.6-2: Landscape Units – LRT M-5
Figure 3.6-3: Landscape Units – FWY M-7
Figure 3.6-4: Key View 1 – BRT Description M-9
Figure 3.6-5: Key View 2 – BRT Description M-11
Figure 3.6-6: Key View 3 – LRT Description M-13
Figure 3.6-7: Key View 4 – LRT Description M-15
Figure 3.6-8: Key View 5 – LRT Description M-17
Figure 3.6-9: Key View 6 – LRT Description M-19
Figure 3.6-10: Key View 7 – LRT Description M-21
Figure 3.6-11: Key View 8 – LRT Description M-23
Figure 3.6-12: Key View 9 – LRT Description M-25
Figure 3.6-13: Key View 10 – LRT Description M-27
Figure 3.6-14: Key View 11 – LRT Description M-29
Figure 3.6-15: Key View 12 – LRT Description M-31
Figure 3.6-16: Key View 13 – LRT Description M-33
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Figure 3.6-24: Key View 21 – FWY Description M-49
Figure 3.6-25: Key View 22 – FWY Description M-51
Figure 3.6-26: Key View 23 – FWY Description M-53
Figure 3.6-27: Key View 24 – FWY Description M-55
Figure 3.6-28: Key View 25 – FWY Description M-57
Figure 3.6-29: Key View 26 – FWY Description M-59
Figure 3.6-30: Key View 27 – FWY Description M-61
Figure 3.6-31: Key View 28 – FWY Description M-63
Figure 3.6-32: Key View 29 – FWY Description M-65
Figure 3.6-33: Key View 30 – FWY Description M-67

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LEGEND

- Commercial Retail
- Education
- Freeway
- Industrial
- Recreation
- Residential

FIGURE 3.6-1

SR 710 North Study

Landscape Units - BRT

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Landscape Units-BRT.cdr (10/28/14)

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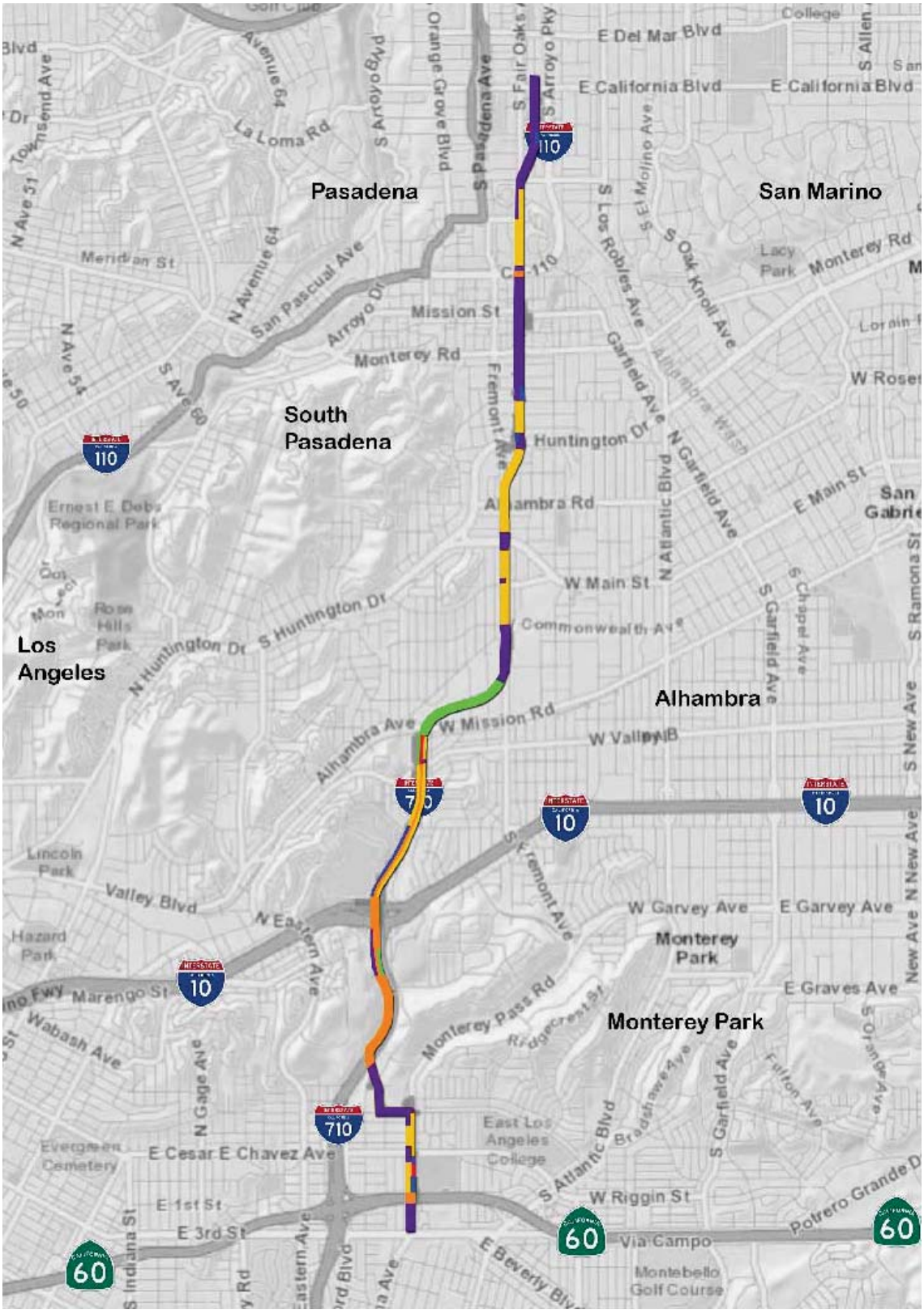

LEGEND

- Commercial Retail
- Education
- Freeway
- Industrial
- Recreation
- Residential

FIGURE 3.6-2

SR 710 North Study

Landscape Units - LRT

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Landscape Units-LRT.cdr (10/28/14)

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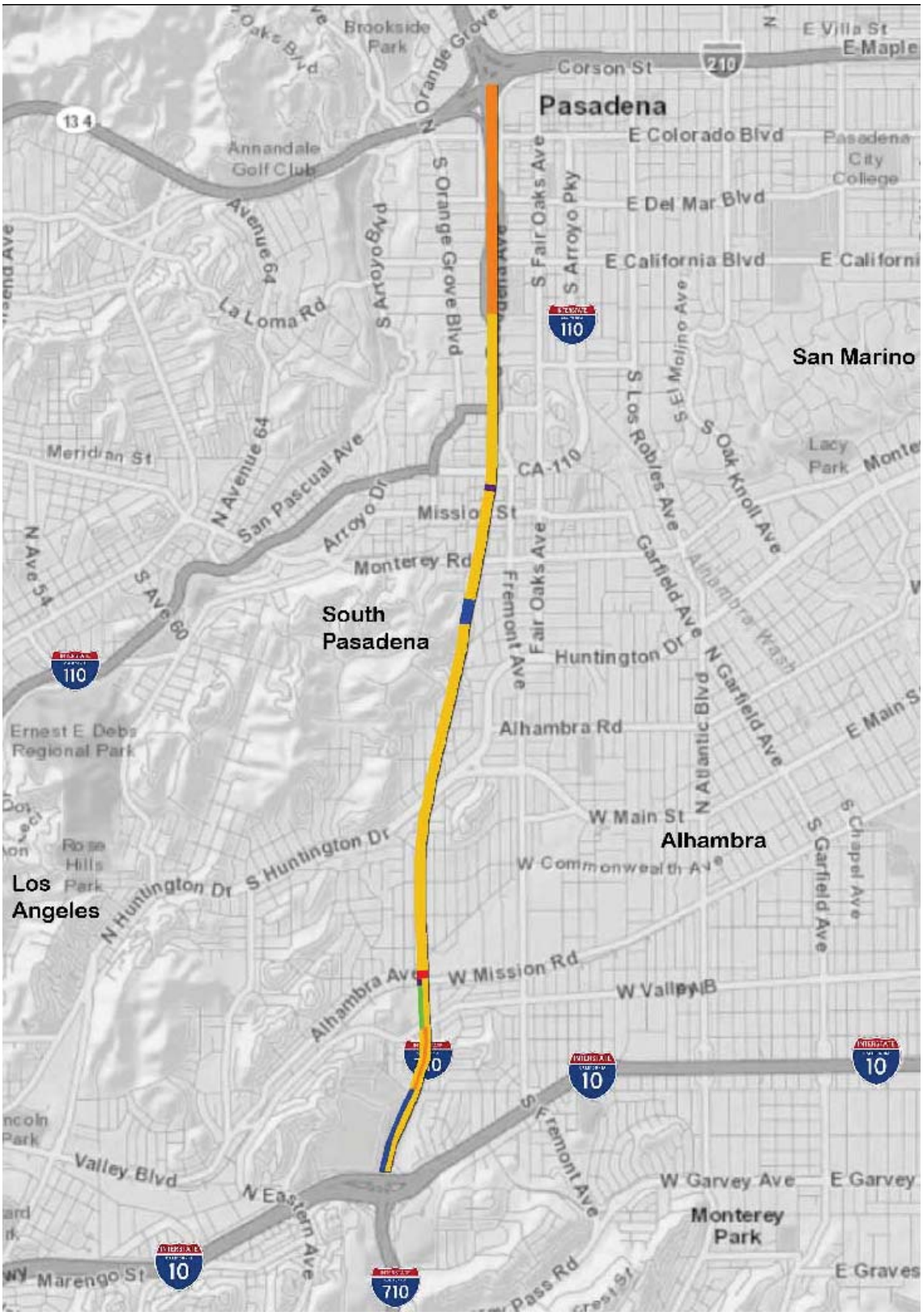

LEGEND

- Commercial Retail
- Education
- Freeway
- Industrial
- Recreation
- Residential

FIGURE 3.6-3

SR 710 North Study

Landscape Units - FWY

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Landscape Units-FWY.cdr (10/28/14)

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Existing Condition

Visual Simulation: Proposed Bus Rapid Transit Valley Station (BRT).

KEY VIEW 1-BRT

1100 W. Valley Blvd
Intersection of Atlantic Blvd and Valley Blvd
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 4'39.96"N
Longitude = 118° 8'4.70"W
Heading = 25.35° NNE

The location of the Key View 1-BRT was taken from the southwest corner of Valley Boulevard/Atlantic Boulevard intersection in front of Conroy's Flower shop. The view looks northeast towards the proposed Bus Rapid Transit Station (BRT).

Study Area
BRT ALTERNATIVE

FIGURE 3.6-4

LEGEND

- Bus Rapid Transit (BRT) Alternative
- BRT Stations
- BRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

SR 710 North Study
Key View 1 - BRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 1-BRT.cdr (10/28/14)

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Existing Condition

Visual Simulation: Proposed Bus Rapid Transit Lane (BRT)

KEY VIEW 2-BRT

245 Fair Oaks Avenue
City of South Pasadena, CA 91030

GPS Location:
Latitude = 34° 7'22.20"N
Longitude = 118° 9'1.39"W
Heading = 25.35° NNE

The location of Key View 2-BRT was taken from the sidewalk along Fair Oaks Avenue just outside of Peter Tolkin Architecture. The view looks northeast towards the proposed Bus Rapid Transit Lane (BRT).

Study Area
BRT ALTERNATIVE

LEGEND

- Bus Rapid Transit (BRT) Alternative
- BRT Stations
- BRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 2-BRT.cdr (10/28/14)

FIGURE 3.6-5

SR 710 North Study

Key View 2 - BRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

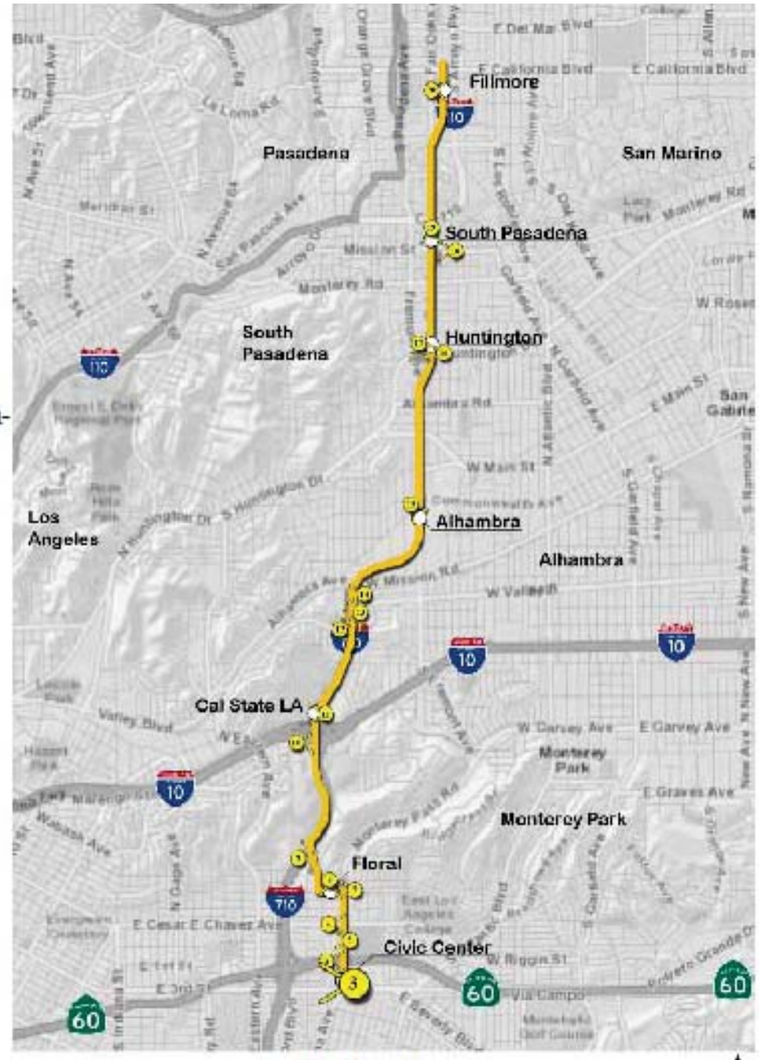
Visual Simulation: Proposed Mednik Station

KEY VIEW 3-LRT

220 S. Mednik Avenue
City of East Los Angeles, CA 90022

GPS Location:
Latitude = 34° 2'2.76"N
Longitude = 118° 9'42.26"W
Heading = 268.4° W

The location of Key View 3-LRT was taken on the sidewalk along S. Mednik Avenue just outside the Edward Roybal comprehensive Health Center. The view looks west towards the proposed Mednik Station.



LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 3-LRT.cdr (1/5/15)

FIGURE 3.6-6

SR 710 North Study
Key View 3 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

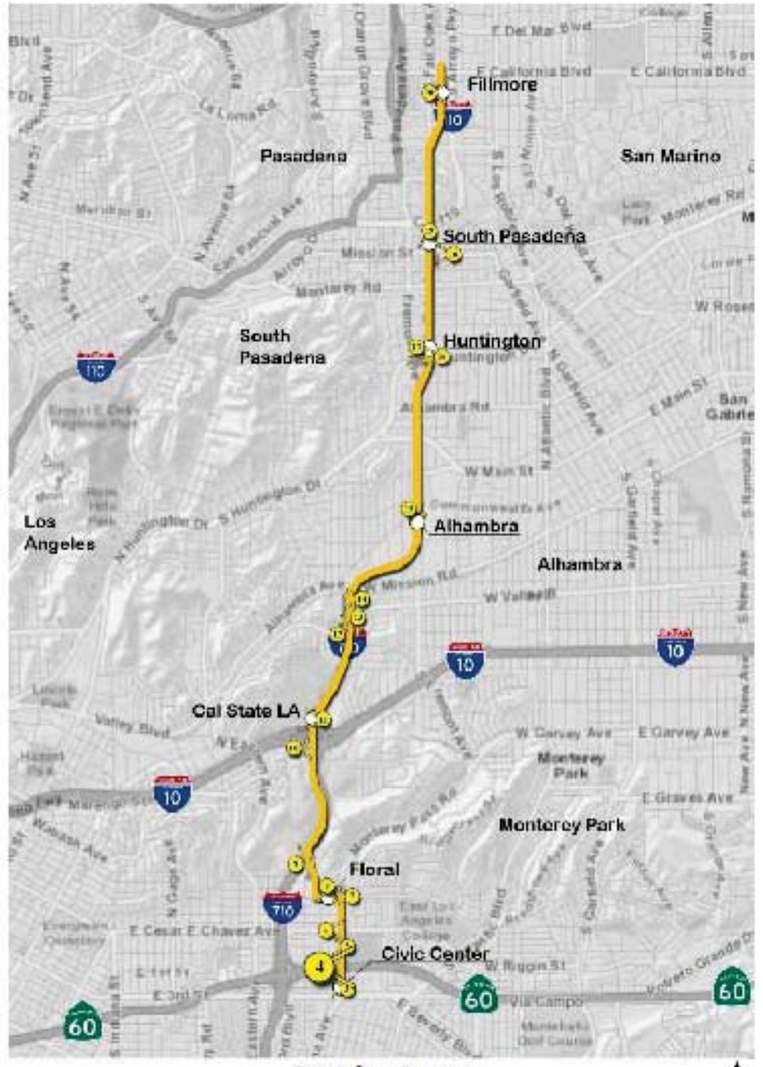
Visual Simulation: Light Rail Transit crossing the SR 60 Freeway

KEY VIEW 4-LRT

SR 60 Eastbound at Dangler Avenue
City of East Los Angeles, CA 90022

GPS Location:
Latitude = 34° 2'11.30"N
Longitude = 118° 9'51.57"W
Heading = 85° E

The location of Key View 4-LRT was taken from the pedestrian bridge on Dangler Avenue,west of Mednik Avenue. The view looks east towards the elevated Light Rail Transit crossing the SR 60 (Pomona Freeway).



Study Area
LRT ALTERNATIVE

FIGURE 3.6-7

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

SR 710 North Study
Key View 4 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

Visual Simulation: Light Rail Transit running above N. Mednik Ave.

KEY VIEW 5-LRT

Belvedere Community Regional Park
4914 E. Cesar Chazez Avenue
City of East Los Angeles, CA 90022

GPS Location:
Latitude = 34° 2'2.38"N
Longitude = 118° 9'39.74"W
Heading = 271° W

The location of Key View 5-LRT is within Belvedere Community Regional Park and was taken from the open field in the Park. The view looks towards the proposed elevated Light Rail Transit running above N. Mednik Avenue.

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

FIGURE 3.6-8

SR 710 North Study
Key View 5 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 5-LRT.cdr (10/28/14)

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Existing Condition

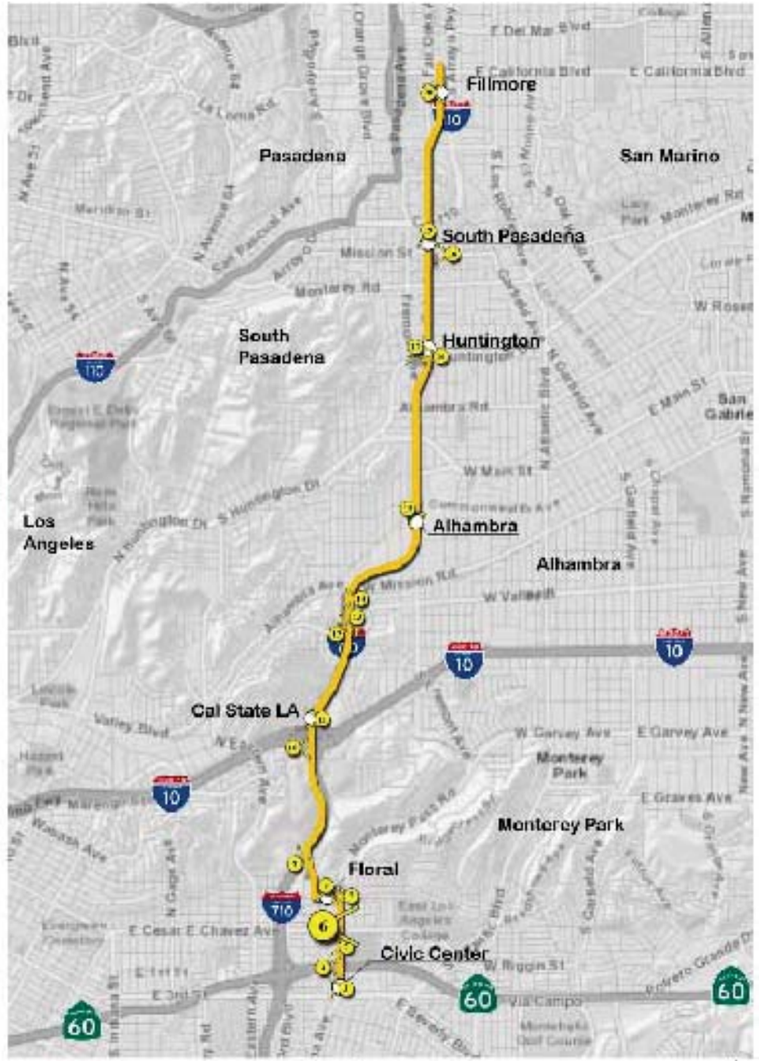
Visual Simulation: Light Rail Transit running above N. Mednik Ave.

KEY VIEW 6-LRT

4760 East Cesar E. Chavez Avenue.
City of East Los Angeles, CA 90022

GPS Location:
Latitude = 34° 2'25.88"N
Longitude = 118° 9'45.98"W
Heading = 91° E

The location of Key View 6-LRT was taken place on East Cesar E. Chavez a block west of Mednik Avenue, and outside of Denny's restaurant. The view looks east towards the proposed elevated Light Rail Transit running above N. Mednik Avenue.



Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 6-LRT.cdr (10/28/14)

FIGURE 3.6-9

SR 710 North Study

Key View 6 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

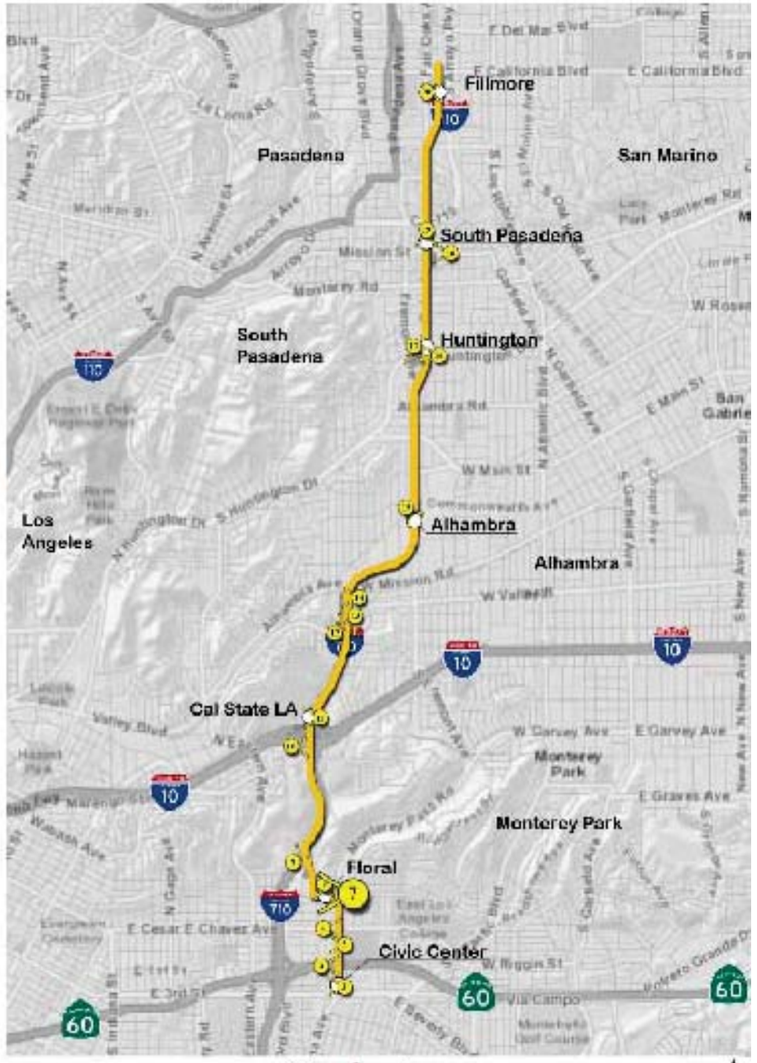
Visual Simulation: Light Rail Transit running above N. Mednik Avenue looking towards Floral Station.

KEY VIEW 7-LRT

2349 Floral Drive
City of Monterey Park, CA 91754

GPS Location:
Latitude = 34° 2'39.19"N
Longitude = 118° 9'40.82"W
Heading = 269° W

The location of Key View 7-LRT was taken from the street median on Floral Drive just east of Mednik Avenue. The view looks west towards the proposed elevated Light Rail Transit is running above N. Mednik Avenue and curving onto the proposed Floral Station.



LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

FIGURE 3.6-10

SR 710 North Study

Key View 7 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 7-LRT.cdr (10/28/14)

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Existing Condition

Visual Simulation: Proposed Floral Station.

KEY VIEW 8-LRT

4721-4761 Floral Drive
City of Monterey Park, CA 91754

GPS Location:
Latitude = 34° 2'40.90"N
Longitude = 118° 9'49.02"W
Heading = 179° S

The location of Key View 8-LRT was taken from the parking lot of southern side of the Monterey Park Business Center. The view looks south towards at the proposed Floral Station.

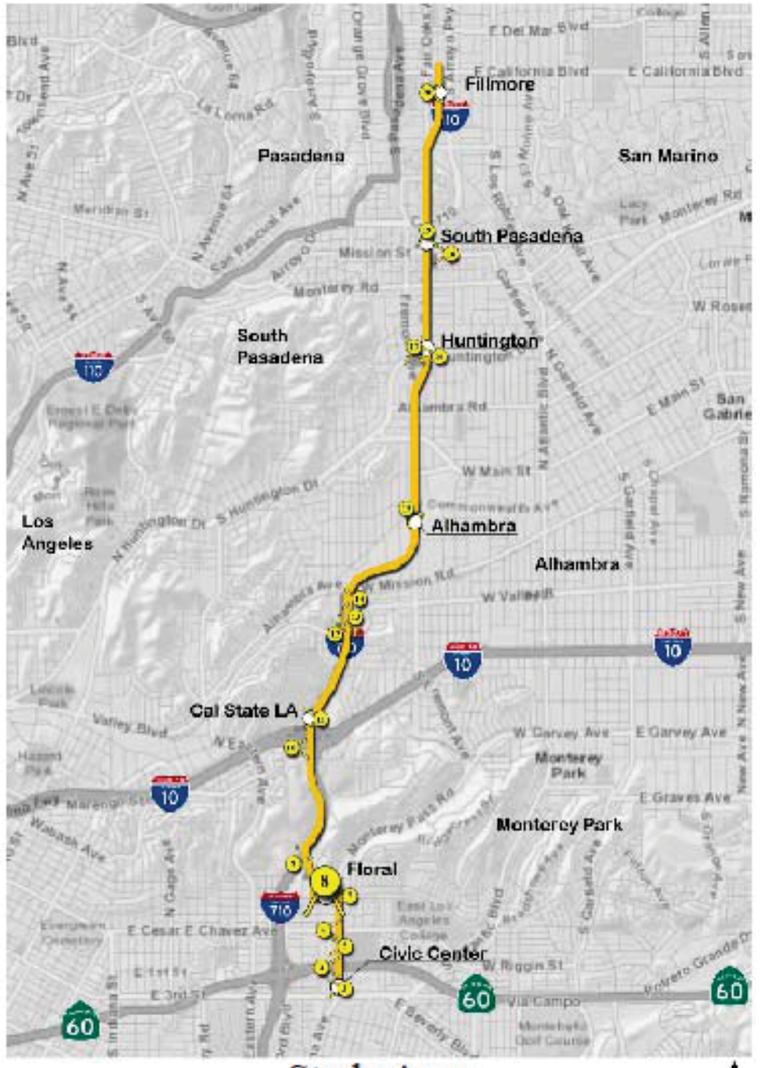

FIGURE 3.6-11

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

SR 710 North Study

Key View 8 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 8-LRT.cdr (10/29/14)

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Existing Condition

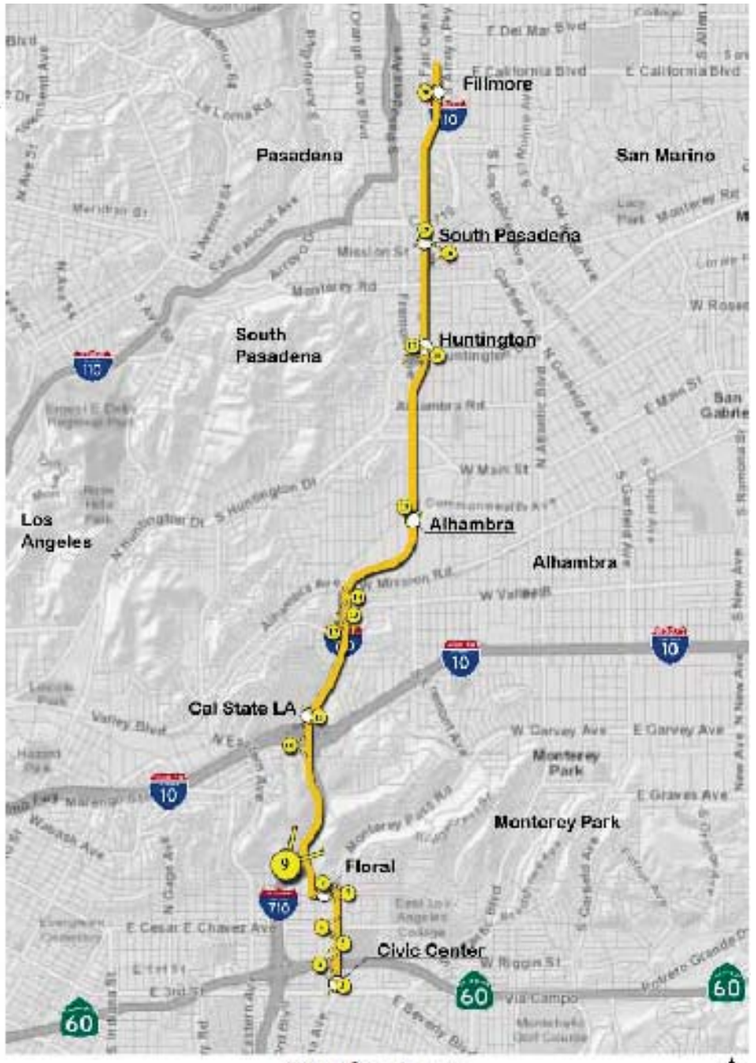
Visual Simulation: Light Rail Transit crossing the I-710 Freeway.

KEY VIEW 9-LRT

I-710 Northbound, northeast of Floral Drive crossing
City of East Los Angeles, CA 90022

GPS Location:
Latitude = 34° 2'52.25"N
Longitude = 118° 10'2.59"W
Heading = 34° NE

The location of Key View 9-LRT was taken on the I-710 Northbound between commercial office buildings on the east and the Los Angeles County Sheriff's Office property on the west. The view looks northeast towards the proposed elevatedLight Rail Transit crossing the I-710 freeway.



LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

FIGURE 3.6-12

SR 710 North Study

Key View 9 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 9-LRT.cdr (10/29/14)

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Existing Condition

Visual Simulation: Light Rail Transit crossing the I-10 Freeway.

KEY VIEW 10-LRT

I-10 Eastbound at I-710 Northbound/Southbound Junction
City of Monterey Park, CA 91754

GPS Location:
Latitude = 34° 3'39.60"N
Longitude = 118° 10'1.84"W
Heading = 97° E

The location of Key View 10-LRT was taken from the I-10 East/SR 710 North transition ramp/W. Ramona Road off-ramp. The view looks east towards the proposed elevated Light Rail Transit that will run parallel to the SR 710 freeway.

Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 10-LRT.cdr (11/7/14)

FIGURE 3.6-13

SR 710 North Study
Key View 10 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

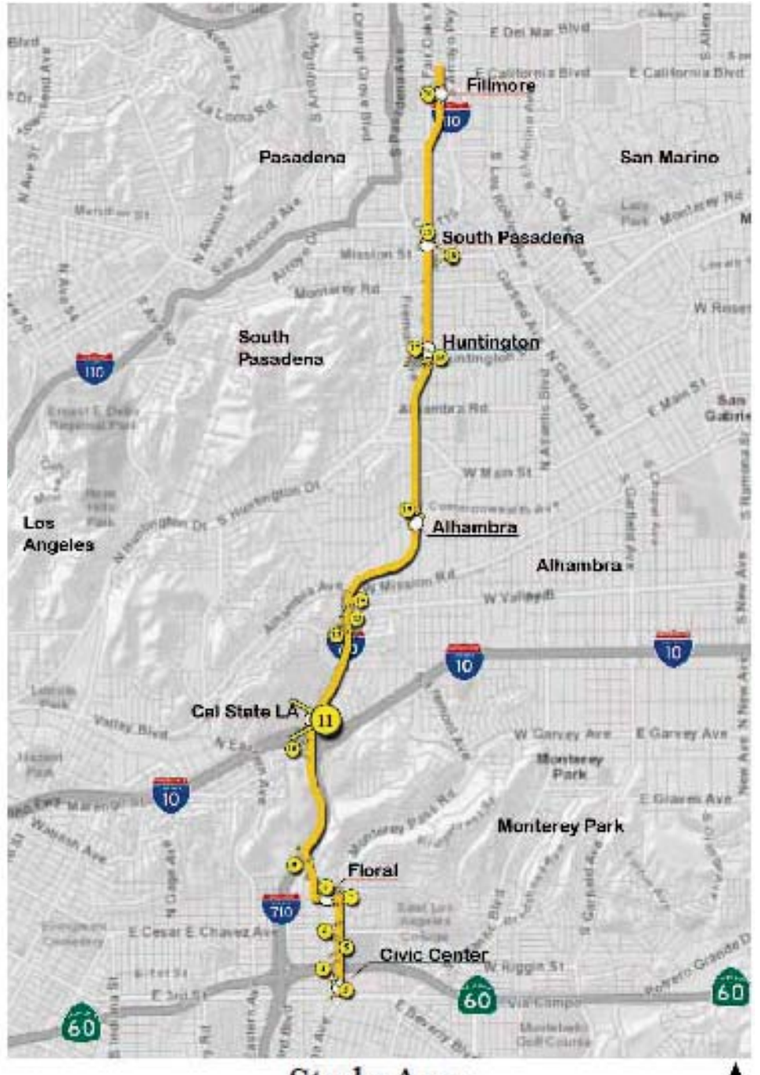
Visual Simulation: Proposed Cal State LA Station

KEY VIEW 11-LRT

I-10 Westbound to SR 710 Northbound Transition Ramp
City of Los Angeles, CA 90032

GPS Location:
Latitude = 34° 3'48.51"N
Longitude = 118° 9'52.06"W
Heading = 278° W

The location of Key View 11-LRT was taken at the I-10 West to SR 710 North transition ramp. The view looks west toward the proposed California State University Los Angeles (CSU-LA) station.



Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 11-LRT.cdr (11/7/14)

FIGURE 3.6-14

SR 710 North Study
Key View 11 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

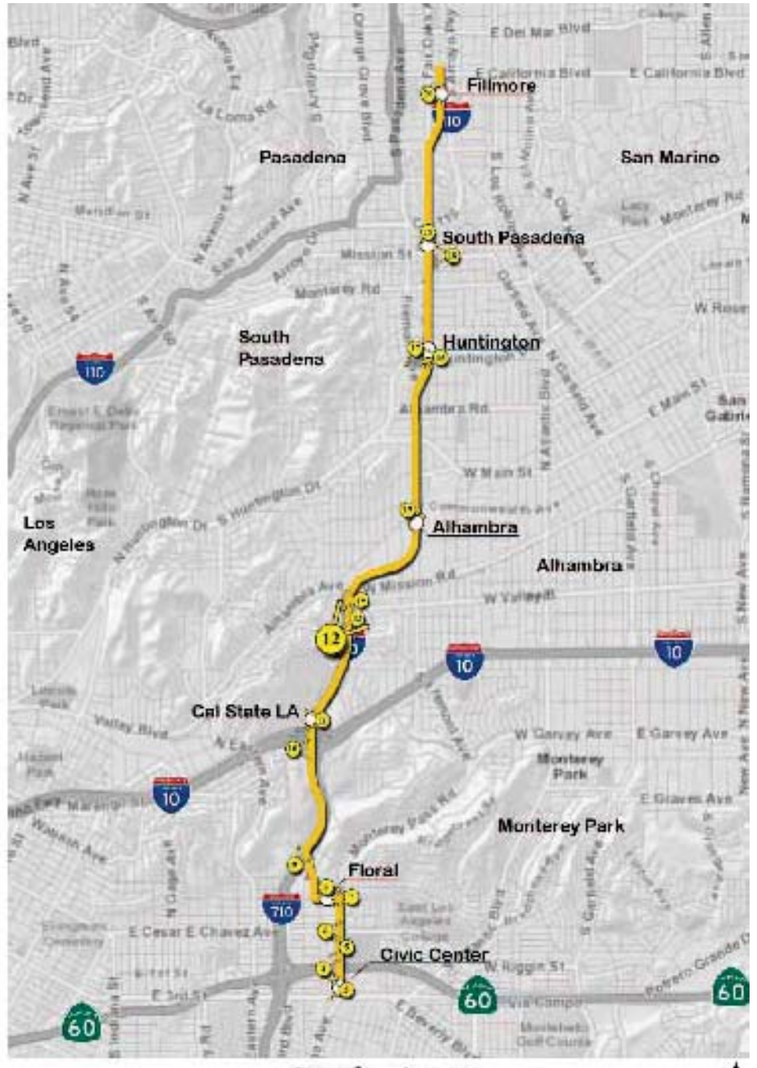
Visual Simulation: Light Rail Transit maintenance yard at Valley Blvd.

KEY VIEW 12-LRT

5531 Valley Boulevard
City of Los Angeles, CA 90032

GPS Location:
Latitude = 34° 4'28.66"N
Longitude = 118° 9'42.27"W
Heading =25° NNE

The location of Key View 12-LRT was taken on Valley Boulevard at the entrance of the on-ramp of SR 710 Southbound. The view looks northeast towards the proposed Light Rail Transit maintenance yard.



Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

FIGURE 3.6-15

SR 710 North Study
Key View 12 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

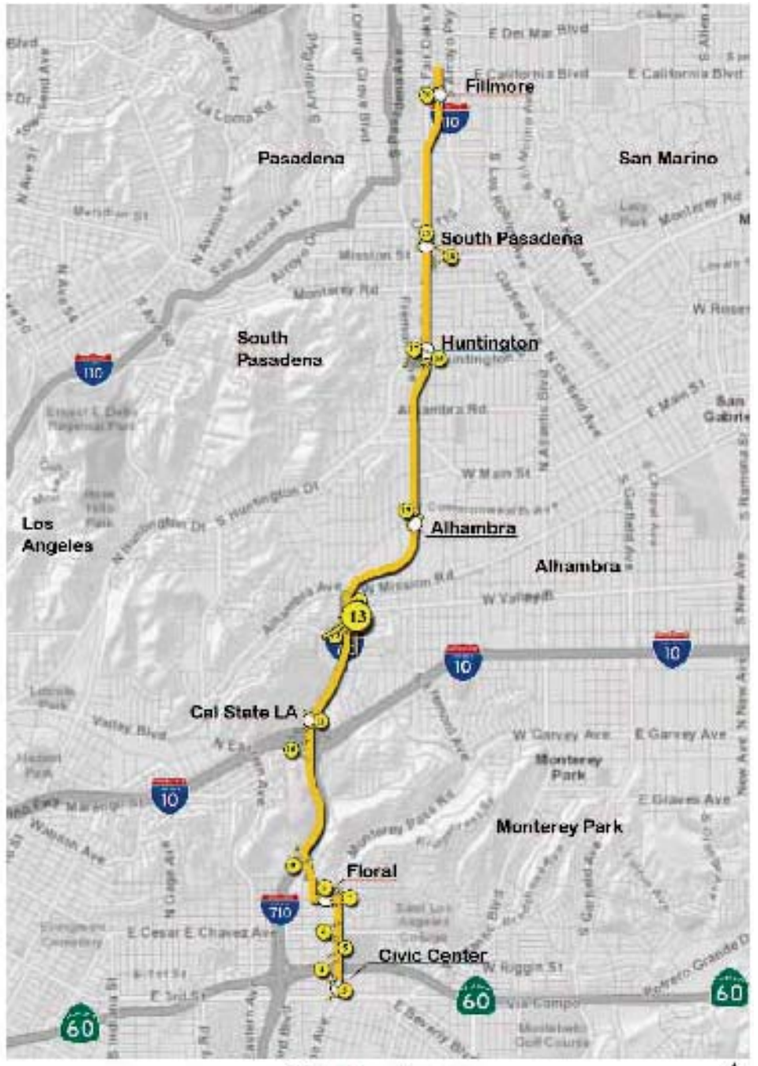
Visual Simulation: Light Rail Transit maintenance yard at Valley Blvd.

KEY VIEW 13-LRT

3299 W. Valley Boulevard
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 4'31.14"N
Longitude = 118° 9'38.83"W
Heading = 188° S

The location of Key View 13-LRT was taken on Valley Boulevard at the end of the off-ramp of SR 710 Northbound. The view looks south towards the proposed Light Rail Transit maintenance yard.



Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 13-LRT.cdr (11/7/14)

FIGURE 3.6-16

SR 710 North Study
Key View 13 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

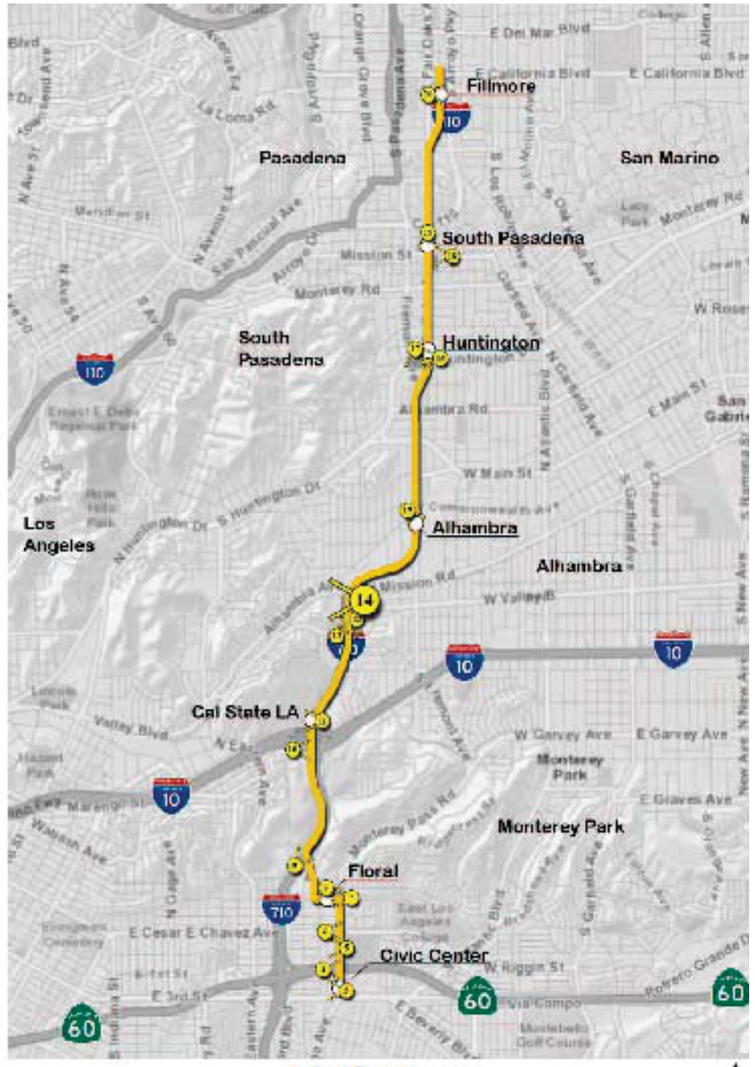
Visual Simulation: Light Rail Transit maintenance area.

KEY VIEW 14-LRT

3201 Front Street
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 4'39".99"N
Longitude = 118° 9'36.17"W
Heading = 264° W

The location of Key View 14-LRT was taken from the intersection of Front Street and Westmont Drive. The view looks west towards the proposed Light Rail Transit maintenance yard.



LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

FIGURE 3.6-17

SR 710 North Study

Key View 14 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

Visual Simulation: Proposed Fremont Station

KEY VIEW 15-LRT

619 S. Fremont Avenue
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 5'13.59"N
Longitude = 118° 9'7.43"W
Heading = 155° SSE

The location of Key View 15-LRT was taken from the sidewalk in front of Duncan Printing Company on S. Fremont Avenue. The view looks southeast towards the proposed Fremont Station.

Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 15-LRT.cdr (10/29/14)

FIGURE 3.6-18

SR 710 North Study
Key View 15 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

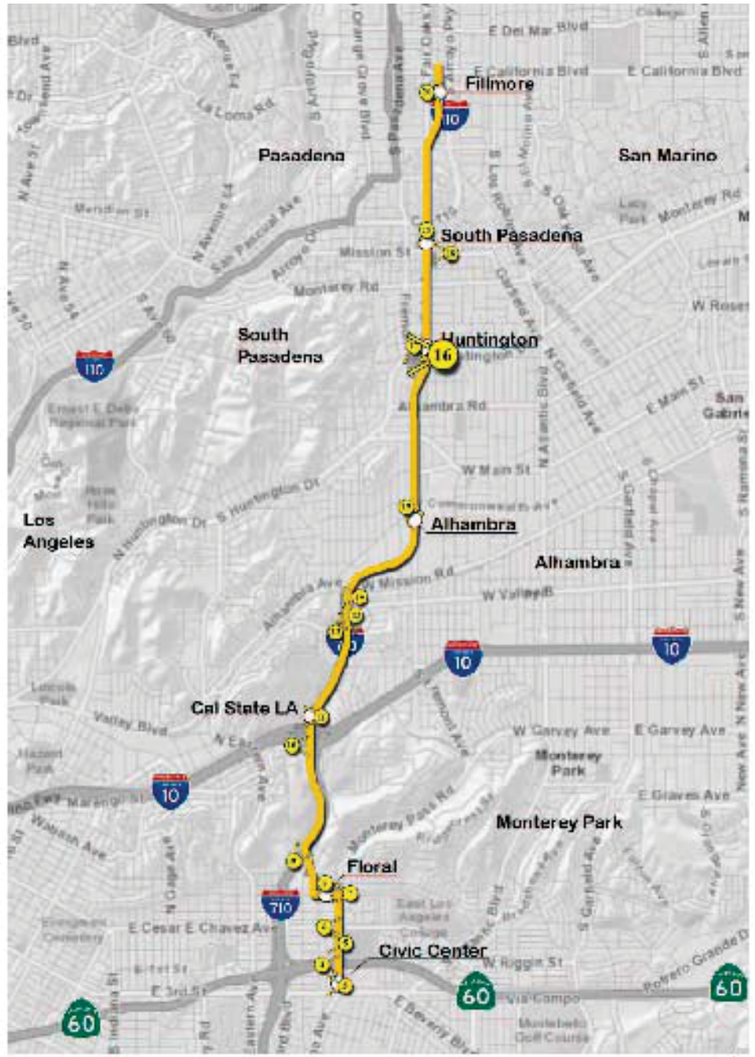
Visual Simulation: Proposed Huntington Station.

KEY VIEW 16-LRT

1600 Huntington Drive
City of South Pasadena, CA 91030

GPS Location:
Latitude = 34° 6'15.23"N
Longitude = 118° 8'57.20"W
Heading = 269° W

The location of the Key View 16-LRT was taken place along Huntington Drive. The view looks west towards the proposed Huntington Station.



LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 16-LRT.cdr (10/29/14)

FIGURE 3.6-19

SR 710 North Study

Key View 16 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

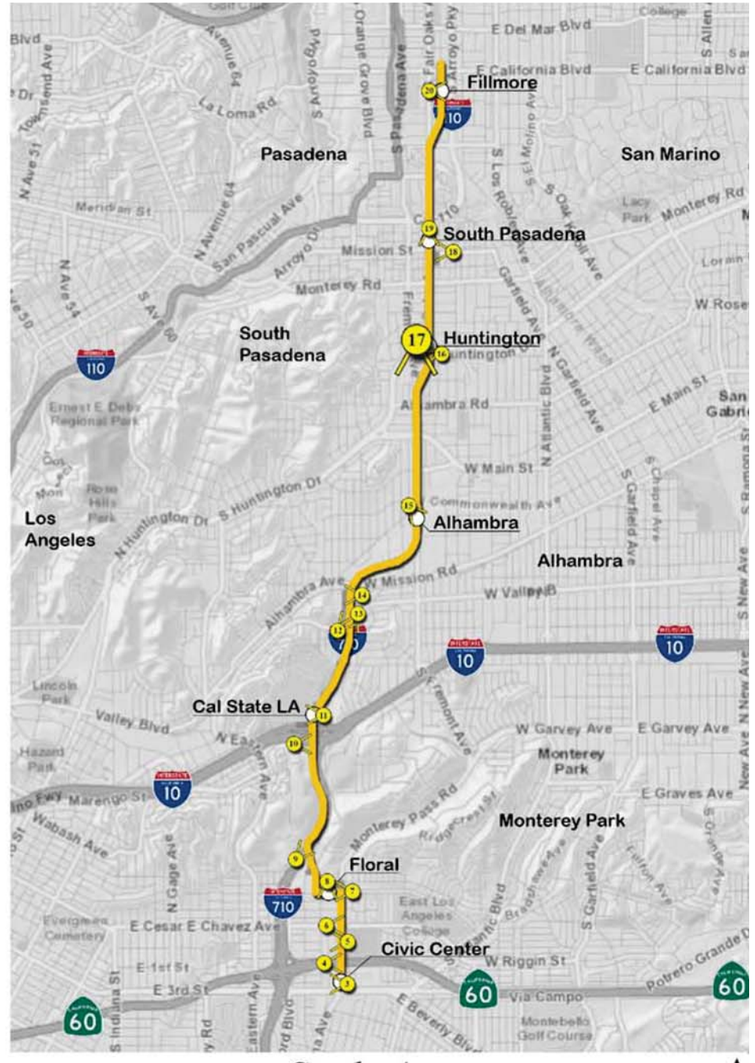
Visual Simulation: Proposed Huntington Station Parking Structure.

KEY VIEW 17-LRT

1502 Huntington Drive
City of South Pasadena, CA 91030

GPS Location:
Latitude = 34° 6'15.82"N
Longitude = 118° 9'5.28"W
Heading = 179° S

The location of the Key View 17-LRT was taken from the sidewalk in front of Gifted Hands Therapeutic store on Huntington Drive. The view looks south at the proposed Huntington Station parking structure.



Study Area
LRT ALTERNATIVE

NTS

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

FIGURE 3.6-20

SR 710 North Study
Key View 17 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

Visual Simulation: Proposed South Pasadena Station.

KEY VIEW 18-LRT

1701 Mission Street
City of South Pasadena, CA 91030

GPS Location:
Latitude = 34° 6'55.69"N
Longitude = 118° 8'56.24"W
Heading = 288° WNW

The location of Key View 18-LRT was taken from the intersection of Mission Street and Brent Avenue. The view looks northwest towards the proposed South Pasadena Station.

Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

FIGURE 3.6-21

SR 710 North Study
Key View 18 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 18-LRT.cdr (10/29/14)

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Existing Condition

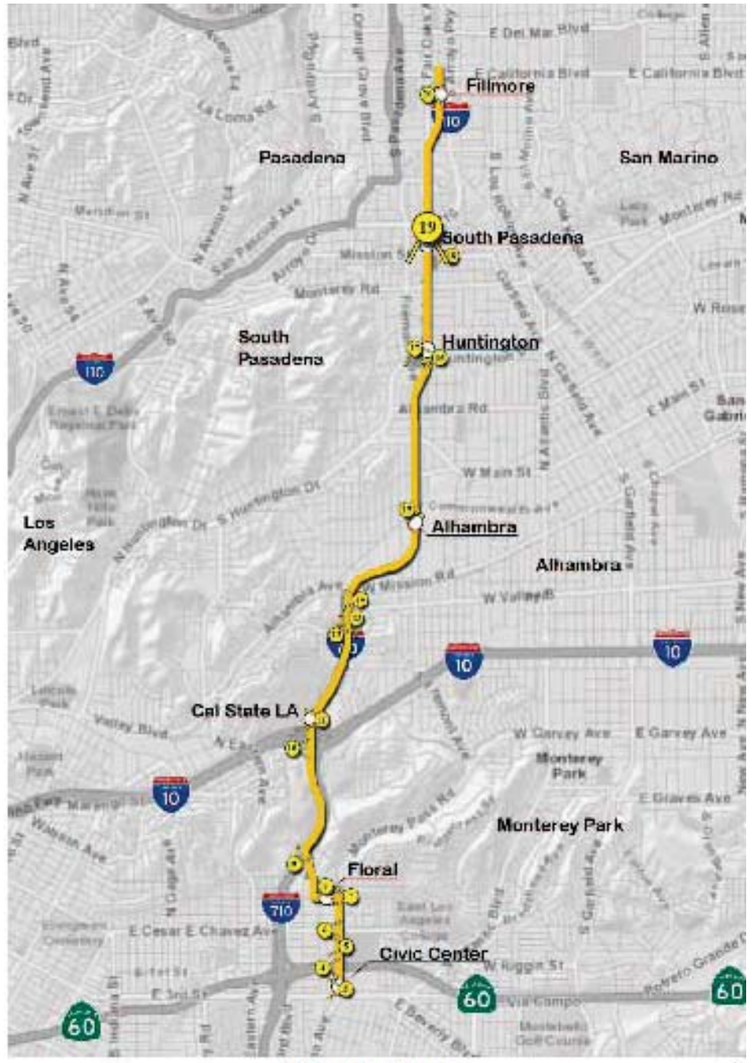
Visual Simulation: Proposed South Pasadena Station.

KEY VIEW 19-LRT

809 Fair Oaks Ave
City of South Pasadena, CA 91030

GPS Location:
Latitude = 34° 7'0.39"N
Longitude = 118° 9'1.30"W
Heading = 179° S

The location of the Key View 19-LRT was taken from the intersection of Fair Oaks Avenue and Hope Street. The view looks south towards the proposed Light Rail Transit South Pasadena Station.



Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

FIGURE 3.6-22

SR 710 North Study
Key View 19 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 19-LRT.cdr (10/29/14)

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Existing Condition

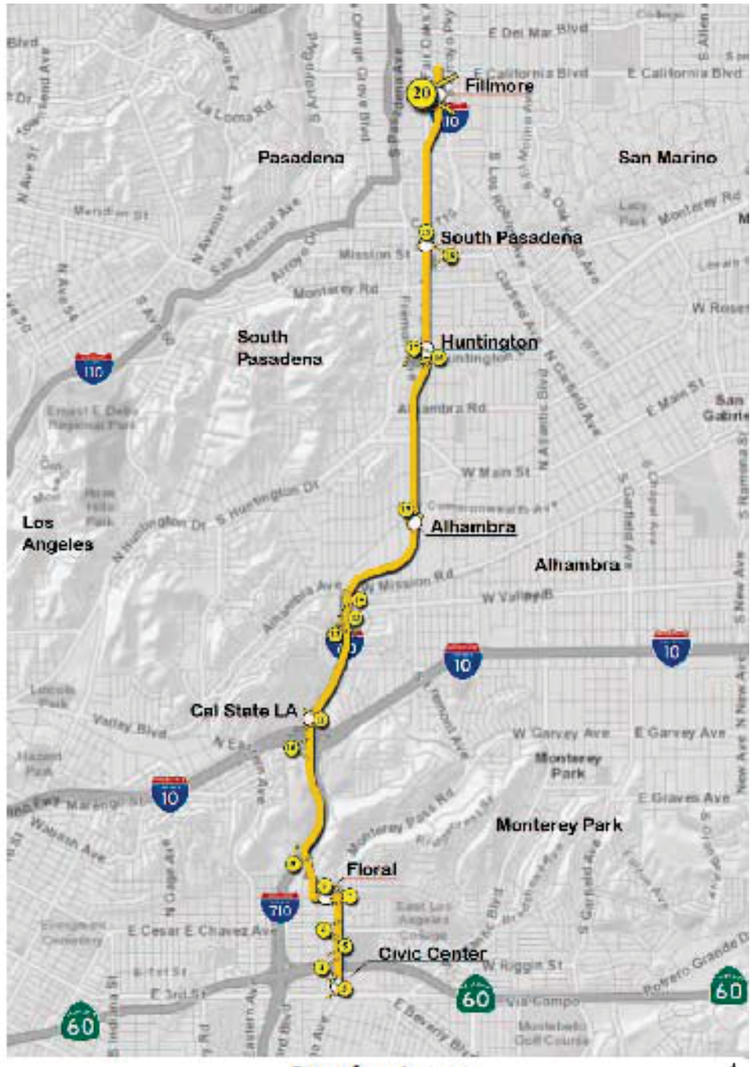
Visual Simulation: Proposed Fillmore Station.

KEY VIEW 20-LRT

695 South Raymond Avenue
City of Pasadena, CA 91105

GPS Location:
Latitude = 34° 7'59.89"N
Longitude = 118° 8'55.90"W
Heading = 90° E

The location of the Key View 20-LRT was taken on the sidewalk along South Raymond Avenue. The view looks east towards the proposed Fillmore Station.



Study Area
LRT ALTERNATIVE

FIGURE 3.6-23

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

SR 710 North Study
Key View 20 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 20-LRT.cdr (10/29/14)

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Existing Condition

Visual Simulation: Proposed Freeway tunnel impact area.

KEY VIEW 21-FWY

I-10 Westbound to SR 710 Northbound Ramp
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 3'55.06"N
Longitude = 118° 9'50.67"W
Heading = 17° NNE

The location of Key View 21-FWY was taken from the SR 710 Northbound at I-10 Westbound to SR 710 ramp junction. The view looks northeast towards the proposed freeway tunnel impact area.

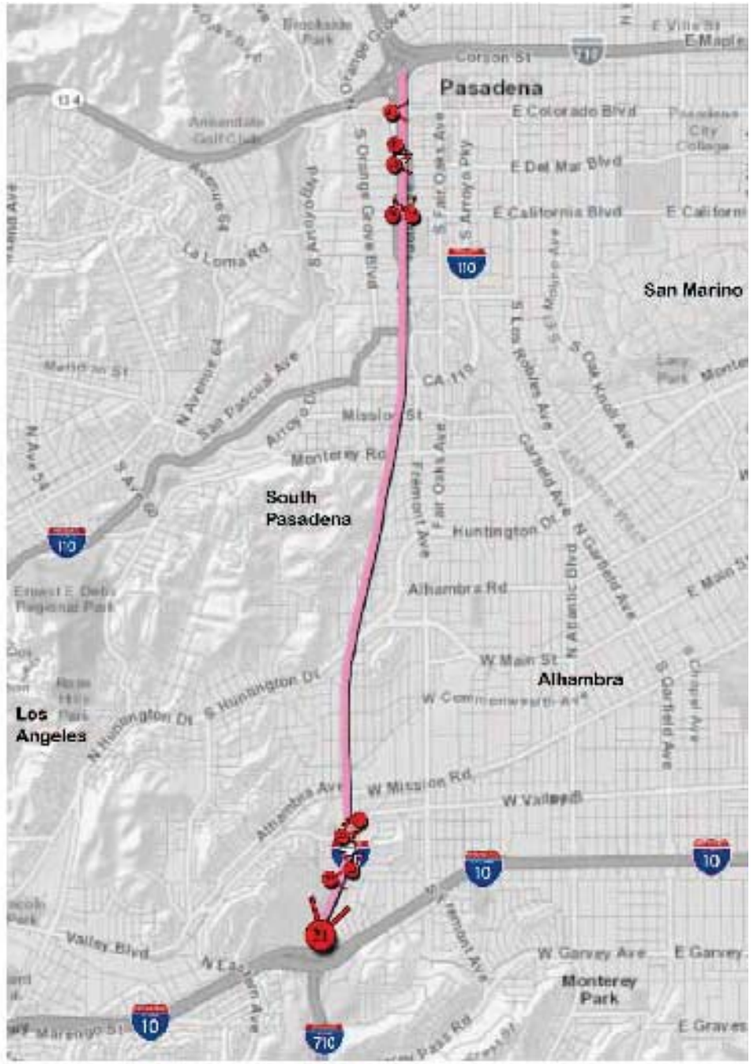

FIGURE 3.6-24

LEGEND

- FWY Tunnel Alternative
- FWY Tunnel Portals
- FWY Tunnel Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 21-FWY.cdr (11/7/14)

SR 710 North Study

Key View 21 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

KEY VIEW 22-FWY

5300 Paseo Rancho Castilla
City of Los Angeles, CA 90032

GPS Location:
Latitude = 34° 4'10.92"N
Longitude = 118° 9'47.67"W
Heading = 89° E

The location of Key View 22-FWY was taken on the sidewalk along Paseo Rancho Castilla, next to the California State University, Los Angeles campus parking lot. The view looks east towards the proposed Hellman Avenue bridge replacement over the SR 710.

Visual Simulation: Proposed Bridge Replacement at Hellman Avenue.

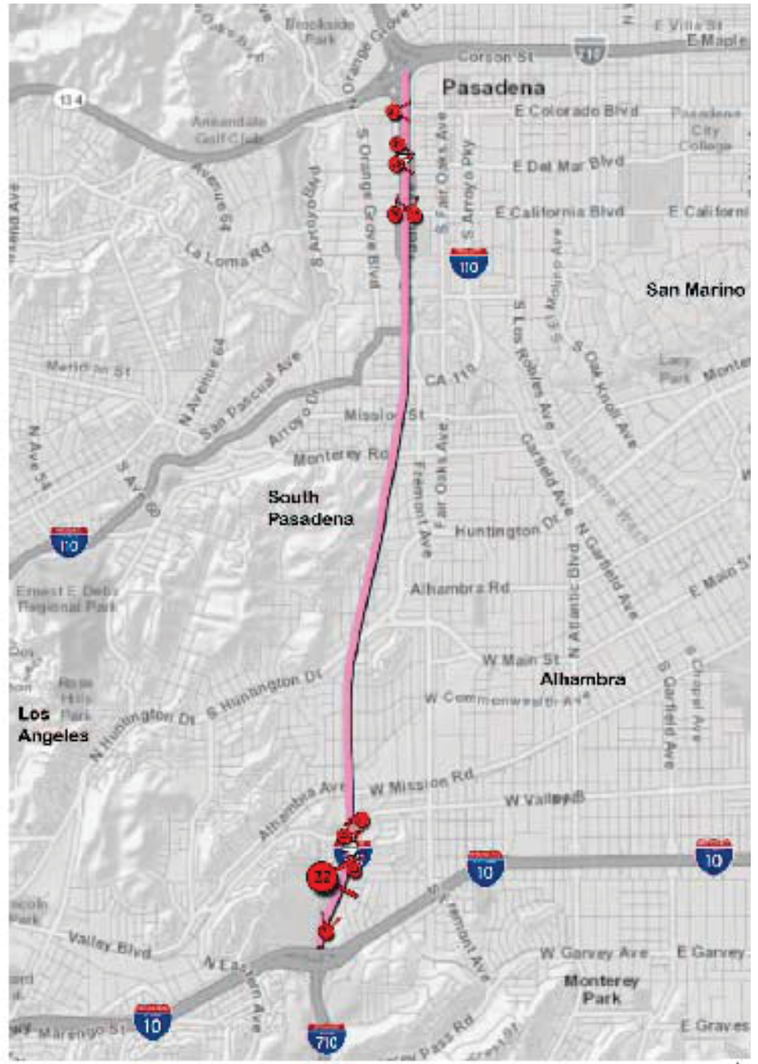

FIGURE 3.6-25

LEGEND

- FWY Tunnel Alternative
- FWY Tunnel Portals
- FWY Tunnel Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

SR 710 North Study

Key View 22 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 22-FWY.cdr (11/7/14)

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Existing Condition

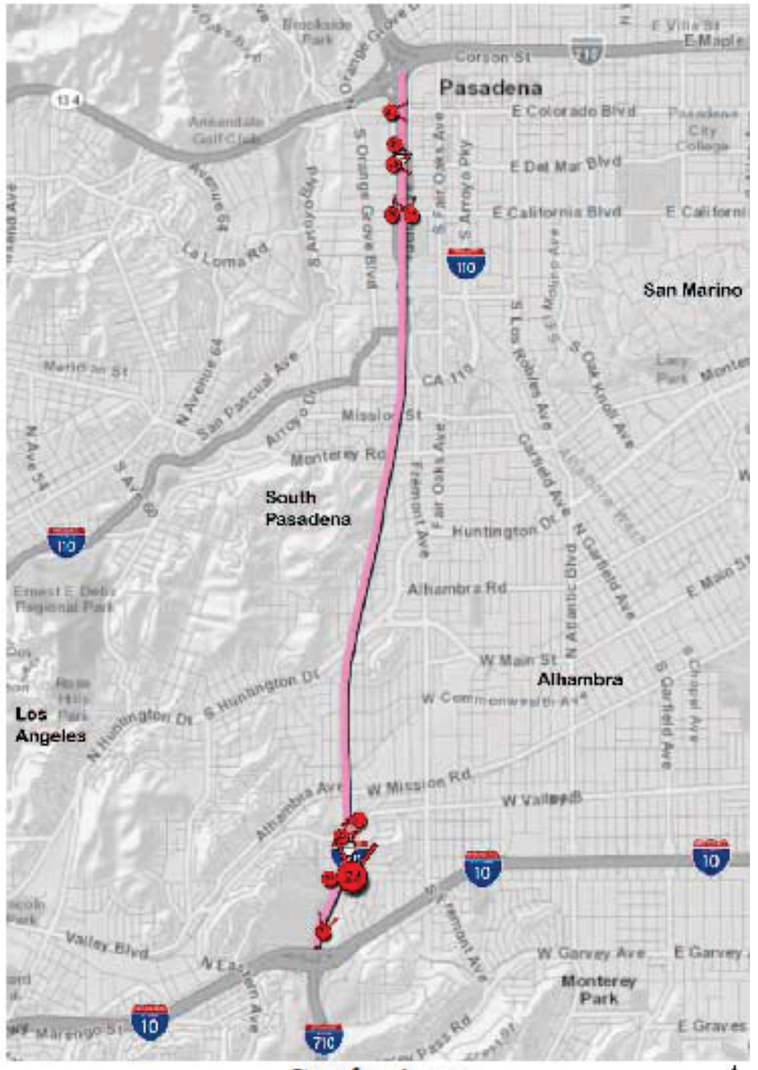
Visual Simulation: Proposed southern portal.

KEY VIEW 23-FWY

SR 710 Northbound, North of Paseo Rancho Castilla
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 4'13.87"N
Longitude = 118° 9'41.33"W
Heading = 18° NNE

The location of Key View 23-FWY was from the SR 710 Northbound shoulder approx. 360 feet north of Hellman Avenue bridge. The view looks northeast towards the proposed southern portal.



Study Area
FWY ALTERNATIVE

LEGEND

- FWY Tunnel Alternative
- FWY Tunnel Portals
- FWY Tunnel Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 23-FWY.cdr (11/7/14)

FIGURE 3.6-26

SR 710 North Study
Key View 23 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

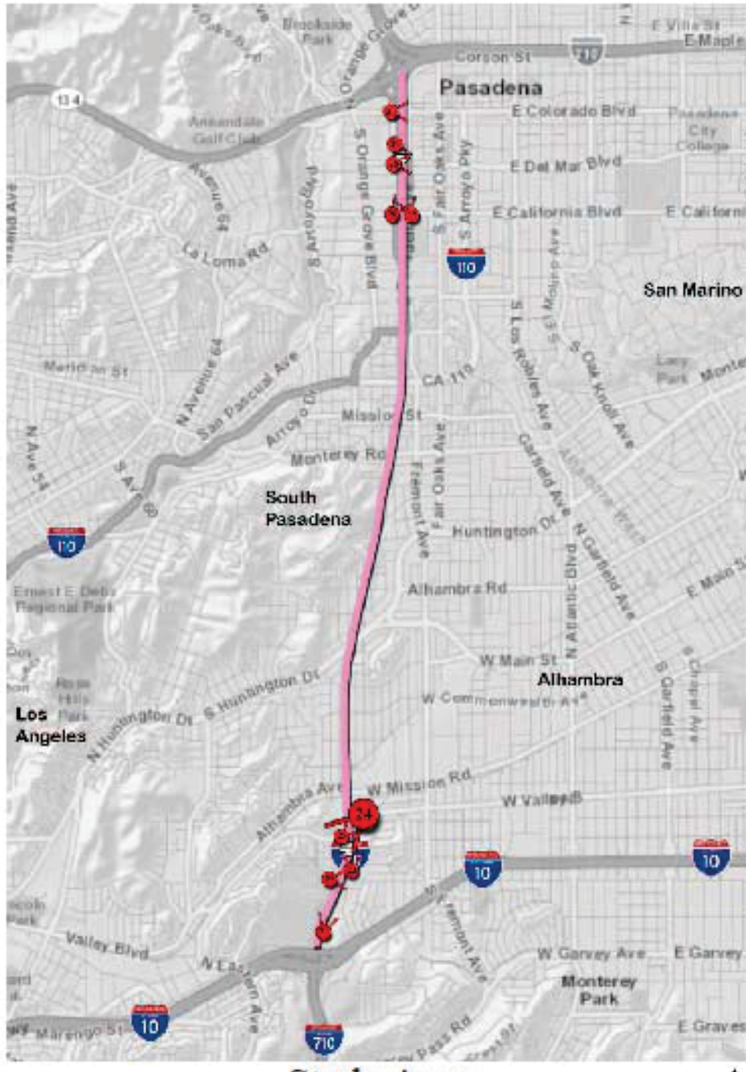
Visual Simulation: Proposed southern portal area.

KEY VIEW 24-FWY

3201 W. Valley Boulevard
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 4'31.70"N
Longitude = 118° 9'37.02"W
Heading = 245° WSW

The location of Key View 24-FWY was taken on the side-walk along Valley Boulevard slightly east of the SR 710 off-ramp. The view looks southwest towards the proposed southern portal area.



LEGEND

- FWY Tunnel Alternative
- FWY Tunnel Portals
- FWY Tunnel Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

FIGURE 3.6-27

SR 710 North Study

Key View 24 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 24-FWY.cdr (11/7/14)

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Existing Condition

Visual Simulation: Proposed Operation Maintenance Building (OMC).

KEY VIEW 25-FWY

5288 West Valley Boulevard
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 4'28.66"N
Longitude = 118° 9'42.27"W
Heading = 25° NNE

The location of Key View 25-FWY was taken at the intersection of SR 710 on-ramp and Valley Boulevard. The view looks northeast towards the proposed Operation Maintenance Building (OMC).

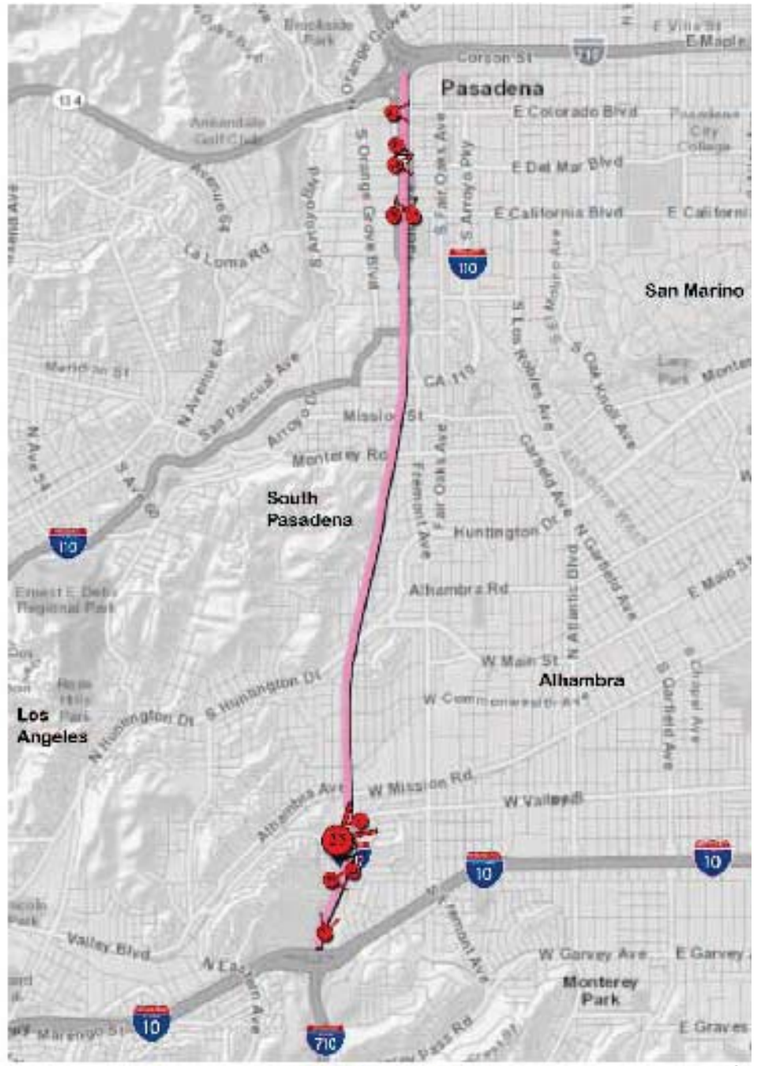

FIGURE 3.6-28

LEGEND

- FWY Tunnel Alternative
- FWY Tunnel Portals
- FWY Tunnel Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

SR 710 North Study

Key View 25 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 25-FWY.cdr (10/29/14)

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Existing Condition

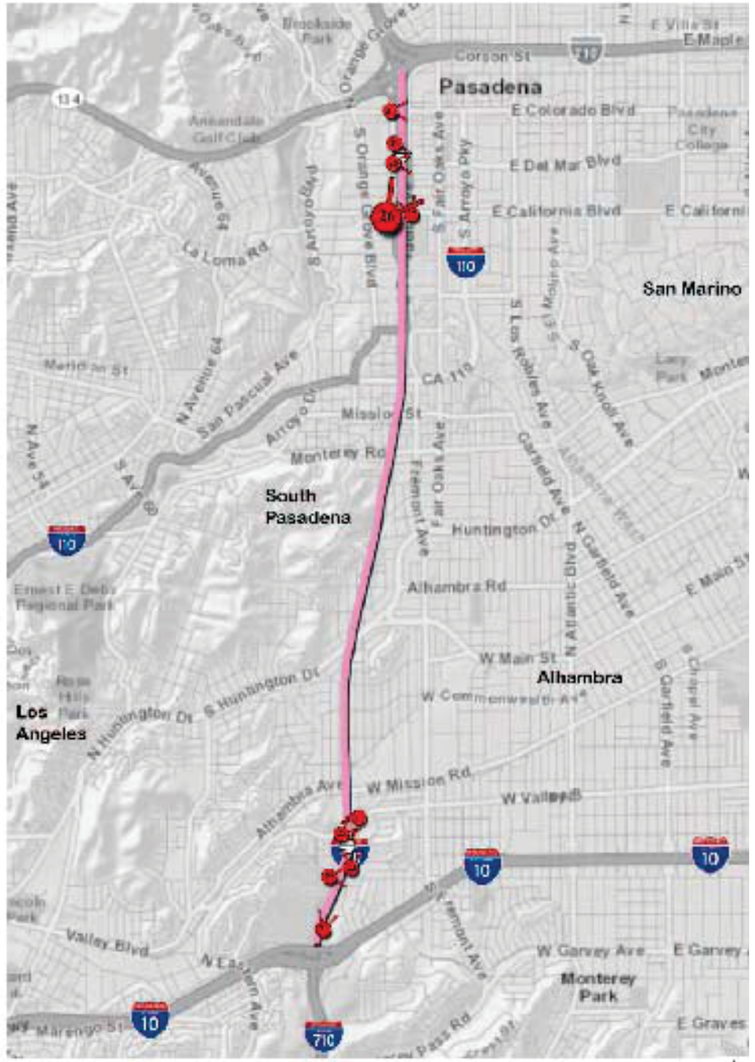
Visual Simulation: Proposed Freeway tunnel impact at W. California Boulevard and Saint John Avenue.

KEY VIEW 26-FWY

300-336 W. California Boulevard
City of Pasadena, CA 91105

GPS Location:
Latitude = 34° 8'8.83"N
Longitude = 118° 9'20.18"W
Heading = 9° N

The location of Key View 26-FWY was taken from the corner of Singer Park, intersection of Saint John Avenue and California Boulevard. The view looks north towards the proposed Operation Maintenance Building (OMC).



Study Area
FWY ALTERNATIVE

LEGEND

- FWY Tunnel Alternative
- FWY Tunnel Portals
- FWY Tunnel Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 26-FWY.cdr (10/29/14)

FIGURE 3.6-29

SR 710 North Study

Key View 26 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

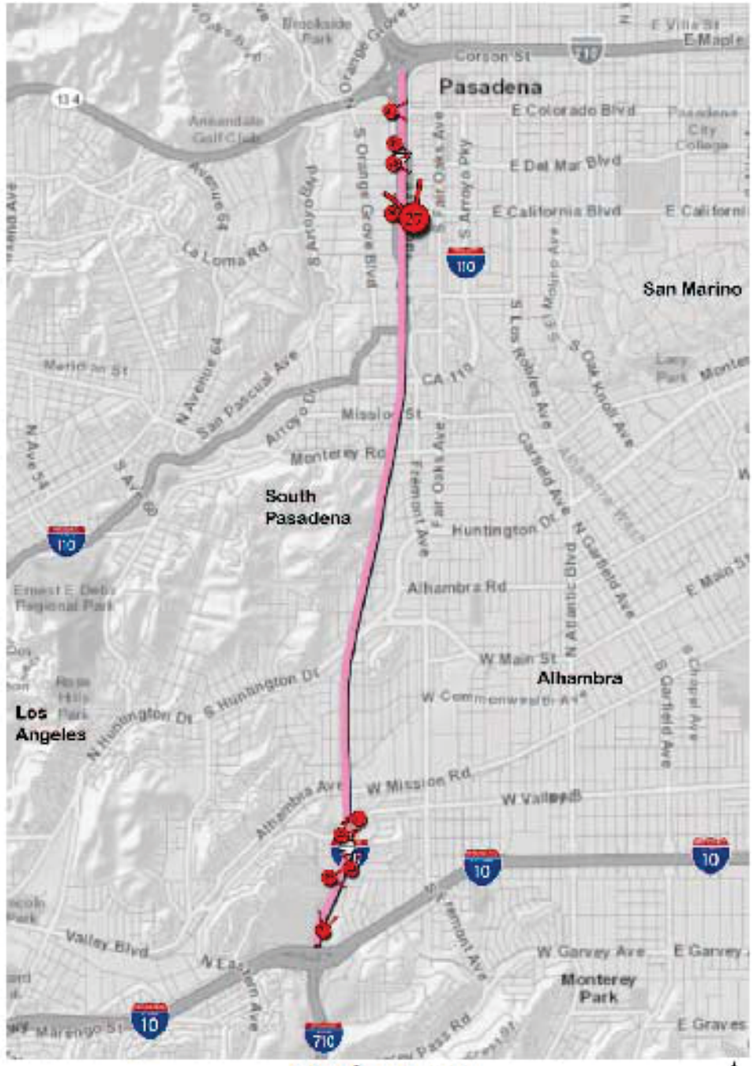
Visual Simulation: Proposed Freeway tunnel impact at W. California Boulevard and S. Pasadena Avenue.

KEY VIEW 27-FWY

Huntington Hospital
100 W. California Boulevard
City of Pasadena, CA 91105

GPS Location:
Latitude = 34° 8'8.19"N
Longitude = 118° 9'14.41"W
Heading = 352° N

The location of Key View 27-FWY was taken from the corner of Huntington Hospital, intersection of S. Pasadena Avenue and California Boulevard. The view looks north towards the proposed Operation Maintenance Building (OMC).



LEGEND

- FWY Tunnel Alternative
- FWY Tunnel Portals
- FWY Tunnel Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 27-FWY.cdr (10/29/14)

FIGURE 3.6-30

SR 710 North Study

Key View 27 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

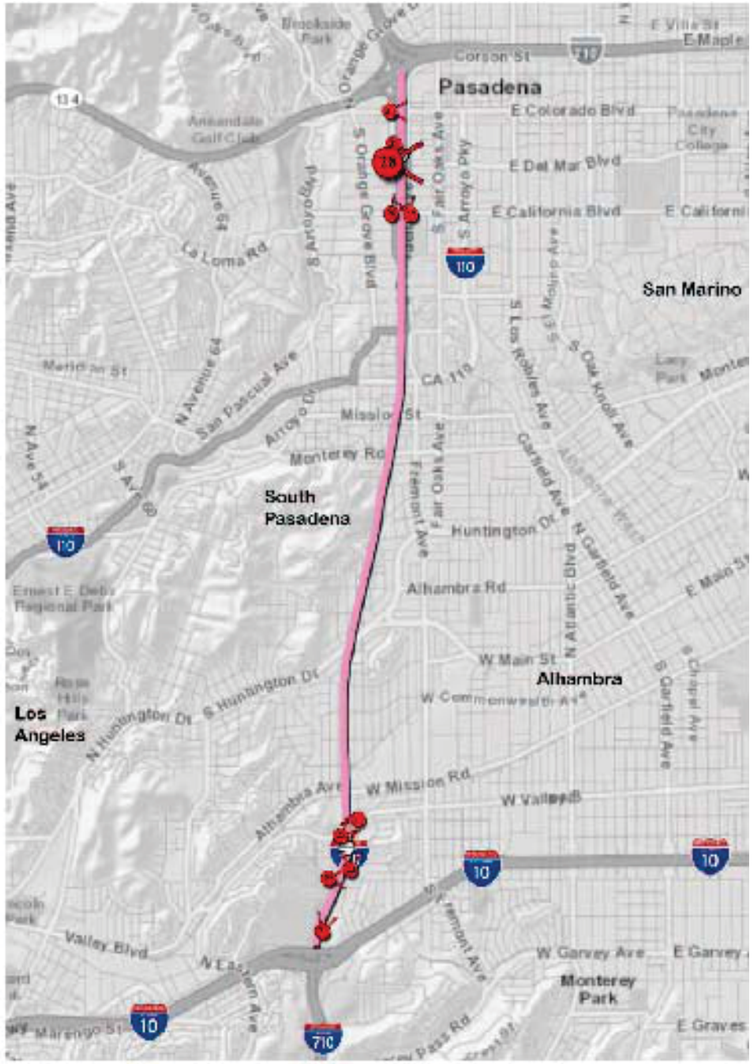
Visual Simulation: Proposed Bridge Replacement at Del Mar Blvd.

KEY VIEW 28-FWY

334-356 W. Del Mar Blvd
City of Pasadena, CA 91105

GPS Location:
Latitude = 34° 8'26.72"N
Longitude = 118° 9'21.75"W
Heading = 89° E

The location of Key View 28-FWY was taken from the street median along Del Mar Boulevard. The view looks east towards the proposed Del Mar Boulevard bridge replacement.



Study Area
FWY ALTERNATIVE

LEGEND

- FWY Tunnel Alternative
- FWY Tunnel Portals
- FWY Tunnel Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 28-FWY.cdr (10/29/14)

FIGURE 3.6-31

SR 710 North Study

Key View 28 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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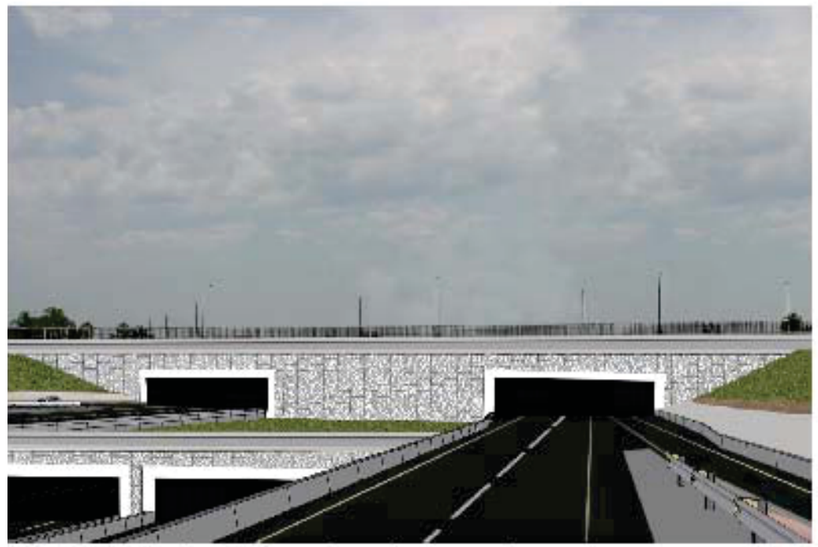
Existing Condition



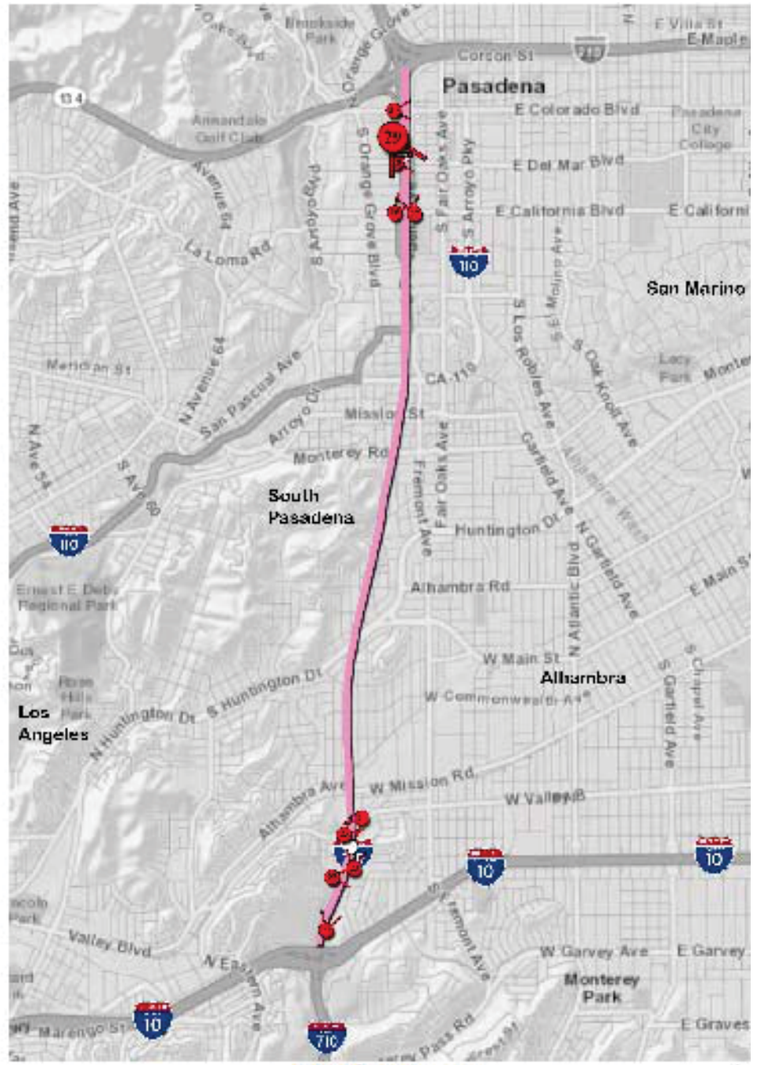
Visual Simulation: Proposed northern portal.

KEY VIEW 29-FWY

SR-710 Southbound Freeway North of Der Mar Blvd Bridge
City of Pasadena, CA 91123

GPS Location:
Latitude = 34°8'31.64"N
Longitude = 118° 9'19'.09"W
Heading = 177° S

The location of Key View 29-FWY was taken from the SR 710 Southbound freeway approximately 450 feet north of the Del Mar Boulevard bridge. The view looks south towards the proposed northern portal.



LEGEND

- FWY Tunnel Alternative
- FWY Tunnel Portals
- FWY Tunnel Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

FIGURE 3.6-32

SR 710 North Study
Key View 29 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

I:\CHM1105\G\Visual\Key View 29-FWY.cdr (11/7/14)

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Existing Condition

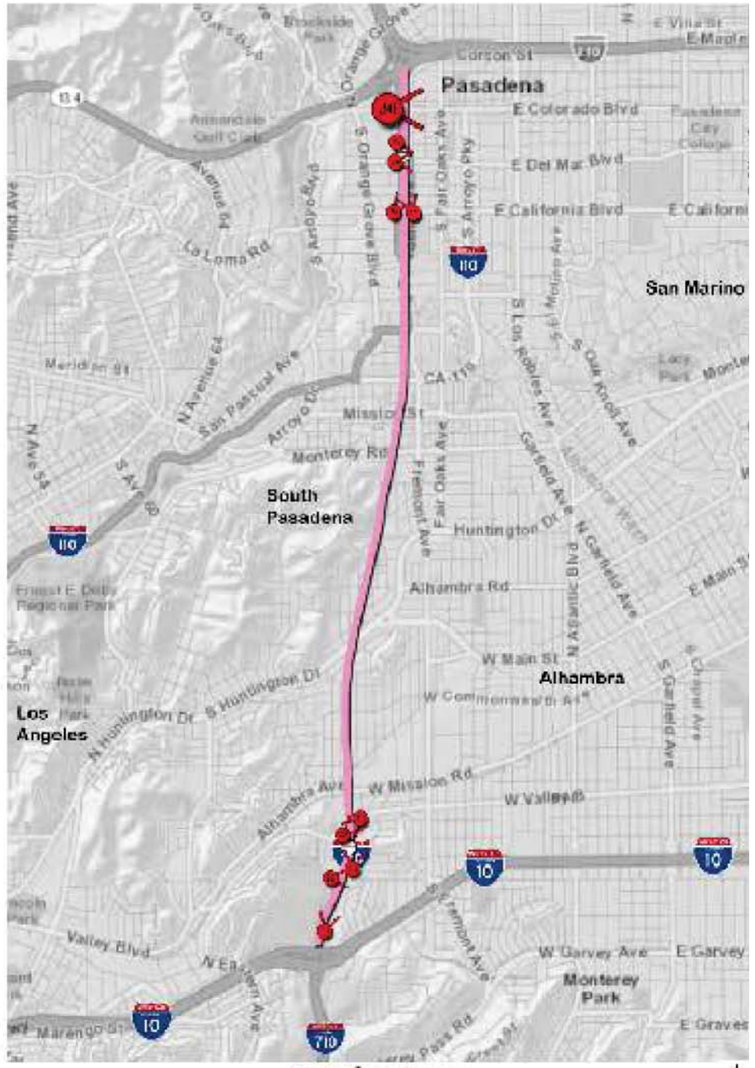
Visual Simulation: Proposed View at W. Colorado Blvd.

KEY VIEW 30-FWY

282-288 W. Colorado Boulevard
City of Pasadena, CA 91103

GPS Location:
Latitude = 34° 8'44.73"N
Longitude = 118° 9'22.54"W
Heading = 89° E

The location of Key View 30-FWY was taken from the street median along W. Colorado Boulevard. The view looks east towards the western side of Colorado Boulevard bridge over-pass of the SR 710 northern terminus. Visible new features would include a series six ventilation stacks for northern portal, new paving and new striping.



LEGEND

- FWY Tunnel Alternative
- FWY Tunnel Portals
- FWY Tunnel Key View Locations
- Freeways
- Major Roads
- Residential

NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 30-FWY.cdr (10/29/14)

FIGURE 3.6-33

SR 710 North Study

Key View 30 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Appendix N: Noise Tables and Figures

This appendix contains the following tables and figures, which support the analysis in Section 3.14, Noise and Vibration:

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TABLE 3.14.2:
Noise Levels Defining Impact for Transit Projects

Existing Noise Exposure $L_{eq}(h)$ or L_{dn} (dBA)[1]	Project Noise Impact Exposure,[1] $L_{eq}(h)$ or L_{dn} (dBA)					
	Category 1 or 2 Sites			Category 3 Sites		
	No Impact	Moderate Impact	Severe Impact	No Impact	Moderate Impact	Severe Impact
<43	<Ambient + 10	Ambient + 10–15	>Ambient + 15	<Ambient + 15	Ambient + 15–20	>Ambient + 20
43	<52	52–58	>58	<57	57–63	>63
44	<52	52–58	>58	<57	57–63	>63
45	<52	52–58	>58	<57	57–63	>63
46	<53	53–59	>59	<58	58–64	>64
47	<53	53–59	>59	<58	58–64	>64
48	<53	53–59	>59	<58	58–64	>64
49	<54	54–59	>59	<59	59–64	>64
50	<54	54–59	>59	<59	59–64	>64
51	<54	54–60	>60	<59	59–65	>65
52	<55	55–60	>60	<60	60–65	>65
53	<55	55–60	>60	<60	60–65	>65
54	<55	55–61	>61	<60	60–66	>66
55	<56	56–61	>61	<61	61–66	>66
56	<56	56–62	>62	<61	61–67	>67
57	<57	57–62	>62	<62	62–67	>67
58	<57	57–62	>62	<62	62–67	>67
59	<58	58–63	>63	<63	63–68	>68
60	<58	58–63	>63	<63	63–68	>68
61	<59	59–64	>64	<64	64–69	>69
62	<59	59–64	>64	<64	64–69	>69
63	<60	60–65	>65	<65	65–70	>70
64	<61	61–65	>65	<66	66–70	>70
65	<61	61–66	>66	<66	66–71	>71
66	<62	62–67	>67	<67	67–72	>72
67	<63	63–67	>67	<68	68–72	>72
68	<63	63–68	>68	<68	68–73	>73
69	<64	64–69	>69	<69	69–74	>74
70	<65	65–69	>69	<70	70–74	>74
71	<66	66–70	>70	<71	71–75	>75
72	<66	66–71	>71	<71	71–76	>76
73	<66	66–71	>71	<71	71–76	>76
74	<66	66–72	>72	<71	71–77	>77
75	<66	66–73	>73	<71	71–78	>78
76	<66	66–74	>74	<71	71–79	>79
77	<66	66–74	>74	<71	71–79	>79
>77	<66	66–75	>75	<71	71–80	>80

Source: *Noise Study Report* (2014).

[1] L_{dn} is used for land use where nighttime sensitivity is a factor; L_{eq} during the hour of maximum transit noise exposure is used for land use involving only daytime activities.

dBA = A-weighted decibels

L_{dn} = day-night average sound level

$L_{eq}(h)$ = 1-hour A-weighted equivalent continuous sound level

TABLE 3.14.3:
Noise Impact Criteria – Effect on Cumulative Noise Exposure

L_{dn} or L_{eq} (in dBA rounded to nearest whole decibel)			
Existing Noise Exposure	**Allowable Project Noise Exposure**	**Allowable Combined Total Noise Exposure**	**Allowable Noise Exposure Increase**
45	51	52	7
50	53	55	5
55	55	58	3
60	57	62	2
65	60	66	1
70	64	71	1
75	65	75	0

Source: *Noise Study Report* (2014).
dBA = A-weighted decibels L_{eq} = equivalent continuous sound level
L_{dn} = day-night average sound level

TABLE 3.14.4:
Ground-Borne Vibration and Ground-Borne Noise Impact Criteria for Detailed Analysis

Land Use Category	**Ground-Borne Vibration Impact Levels (VdB re: 1 micro-inch/second)**			**Ground-Borne Noise Impact Levels (dB re: 20 micro-Pascals)**		
	Frequent Events[1]	**Occasional Events**[2]	**Infrequent Events**[3]	**Frequent Events**[1]	**Occasional Events**[2]	**Infrequent Events**[3]
Category 1: Buildings where vibration would interfere with interior operations	65 VdB[4]	65 VdB[4]	65 VdB[4]	N/A[5]	N/A[5]	N/A[5]
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA

Source: *Groundborne Noise and Vibration Impacts Report* (2014).
[1] "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category
[2] "Occasional Events" is defined as 30 to 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.
[3] "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.
[4] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the heating, ventilation, and air conditioning systems and stiffened floors.
[5] Vibration-sensitive equipment is not sensitive to ground-borne noise.
dB = decibels
dBA = A-weighted decibels
N/A = Not Applicable
VdB = vibration velocity decibels

TABLE 3.14.5:
Criteria for Special Land Use Categories

Type of Building or Room	Ground-Borne Vibration Impact Levels (VdB re: 1 micro-inch/second)		Ground-Borne Noise Impact Levels (dB re: 20 micro-Pascals)	
	Frequent Events[1]	Occasional or Infrequent Events[2]	Frequent Events[1]	Occasional or Infrequent Events[2]
Concert Halls	65 VdB	65 VdB	25 dBA	25 dBA
Television Studios	65 VdB	65 VdB	25 dBA	25 dBA
Recording Studios	65 VdB	65 VdB	25 dBA	25 dBA
Auditoriums	72 VdB	80 VdB	30 dBA	38 dBA
Theaters	72 VdB	80 VdB	30 dBA	43 dBA

Source: *Groundborne Noise and Vibration Impacts Report* (2014).
Note: If the building will rarely be occupied when trains are operating, there is no need to consider impact. As an example, consider locating a commuter rail line next to a concert hall. If no commuter trains will operate after 7:00 p.m., it should be rare that the trains will interfere with the use of the hall.
[1] "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.
[2] "Occasional or Infrequent Events" is defined as fewer than 70 vibration events per day. This category includes most commuter rail systems.
dB = decibels
dBA = A-weighted decibels
VdB = vibration velocity decibels

TABLE 3.14.6:
Construction Vibration Damage Criteria

Building Category	Peak Particle Velocity (inches/second)	Approximate Vibration Velocity Level (RMS VdB re: 1 micro-inch/second)
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry building	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: *Groundborne Noise and Vibration Impacts Report* (2014).
RMS = root mean square
VdB = vibration velocity decibels

TABLE 3.14.7:
Existing Land Uses in the Vicinity of the TSM/TDM Alternative

Improvement Name and No.	Description of Existing Land Uses in the Vicinity of the Improvement
Local Street Improvement L-2a	**Fremont Avenue South of Alhambra Road:** Land uses along this segment of Fremont Avenue include single-family and multifamily residences that are at the same grade as Fremont Avenue.
	Fremont Avenue between Alhambra Road and Maple Street: Land uses along this segment of Fremont Avenue include single-family residences that are at the same grade as Fremont Avenue.
	Fremont Avenue between Maple Street and Huntington Drive: Land uses along this segment of Fremont Avenue include single-family residences and a school that are at the same grade as Fremont Avenue.
Local Street Improvement L-3	**Atlantic Boulevard Between I-10 and Valley Boulevard:** Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences and commercial uses that range from being at the same grade as Atlantic Boulevard to 15 feet higher in elevation than Atlantic Boulevard.
Local Street Improvement L-4	**Garfield Avenue Between I-10 and Valley Boulevard:** Land uses along this segment of Garfield Avenue include single-family and multifamily residences, and office and commercial uses that range from at the same grade as Garfield Avenue to 15 feet higher in elevation than Garfield Avenue.
Local Street Improvement L-5	**Rosemead Boulevard Between Marshall Street and Valley Boulevard:** Land uses along this segment of Rosemead Boulevard include single-family and multifamily residences, a restaurant, and office and commercial uses that are at the same grade as Rosemead Boulevard.
	Rosemead Boulevard Between Valley Boulevard and North of Lower Azusa Road: Land uses along this segment of Rosemead Boulevard include single-family and multifamily residences, a restaurant, a school, a church, and office and commercial uses that are at the same grade as Rosemead Boulevard.
Local Street Improvement L-8	**Fair Oaks Avenue Between South of Monterey Road and Grevelia Street:** Land uses along this segment of Fair Oaks Avenue include single-family and multifamily residences and commercial uses with frequent outdoor use areas that are at the same grade as Fair Oaks Avenue.
Other Road Improvement T-1	**SR 710 and Connector Road Between Paseo Rancho Castilla/Hellman Avenue and Alhambra Avenue/Mission Road:** Land uses in this area include single-family residences and a commercial use (gas station). Land uses in this area range from 5 feet lower in elevation than SR 710 to 45 feet higher in elevation than SR 710 and the new connector road.
Other Road Improvement T-2	**SR 110 Between Fair Oaks Avenue and Glenarm Street:** Land uses along this segment of SR 110 include single-family and multifamily residences, a public works facility, and a school that range from 10 feet lower in elevation than SR 110 to 23 feet higher in elevation than SR 110.
Other Road Improvement T-3	**Pasadena Avenue Between Bellefontaine Street and Union Street:** Land uses along this segment of Pasadena Avenue include multifamily residences, a church with frequent outdoor human use areas, a hospital, vacant land, and commercial uses with and without frequent outdoor use areas. These land uses range from 5 feet lower in elevation than SR 710 to 30 feet higher in elevation than SR 710 and are generally at the same grade as Pasadena Avenue.
	St. John Avenue Between Bellefontaine Street and Union Street: Land uses along this segment of St. John Avenue include single-family and multifamily residences, two schools, a sports field, and a park. These land uses range from 5 feet lower in elevation than SR 710 to 40 feet higher in elevation than SR 710 and are generally at the same grade as St. John Avenue.

Source: *Noise Study Report* (2014).
I-10 = Interstate 10
SR 710 = State Route 710
SR 110 = State Route 110
TDM = Transportation Demand Management
TSM = Transportation System Management

TABLE 3.14.8:
Predicted Future Noise Level and Noise Barrier Analysis – TSM/TDM Alternative[1]

TSM/TDM Inter-section ID	Receptor No.	ETW No.	TNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level (dBA $L_{eq}(h)$)[2]	2035 Noise Level				Activity Category	Impact Type[3,4]	Future Worst-Hour Noise Levels (dBA $L_{eq}(h)$)																								
														Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5,6]																									
														6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
								Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
L-2a	L2a/TR-1			Residential	1	Fremont Avenue	**67**	**67**	**68**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-2			Residential	4	Fremont Avenue	56	56	57	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-3			Residential	8	Fair Oaks Avenue	52	52	53	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-4			Residential	5	Fremont Avenue	54	54	56	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-5			Residential	2	Fremont Avenue	60	60	62	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-6			Residential	6	Fremont Avenue	56	56	57	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-7			Residential	4	Fremont Avenue	64	64	65	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-8			Residential	4	Fremont Avenue	61	61	62	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-9	ETW No. 1		Residential	1	Fremont Avenue	59	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-10			Residential	1	Fremont Avenue	**66**	**66**	**67**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-11			Residential	1	Fremont Avenue	**66**	**66**	**67**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-12			Residential	3	Fremont Avenue	**67**	**67**	**68**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-13			School Playground	1	Fremont Avenue	**66**	**66**	**67**	1	1	C(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-14			School Playground	1	Fremont Avenue	63	63	64	1	1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-15			Residential	1	Elm Park Street	56	56	58	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-16			Residential	2	Elm Park Street	60	61	62	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-17			Residential	8	Fremont Avenue	58	58	60	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-18			Residential	8	Fremont Avenue	58	58	60	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-19			Residential	8	Fremont Avenue	58	59	60	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L2a/TR-20			Residential	2	Fremont Avenue	**66**	**66**	**68**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
L-3	L3/TR-1			Residential	3	9th Street	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-2			Residential	11	9th Street	65	65	65	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-3			Residential	3	9th Street	**70**	**70**	**70**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-4			Residential	7	9th Street	62	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-5			Residential	7	9th Street	59	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-6			Residential	4	Glendon Way	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-7			Residential	2	Atlantic Boulevard	**70**	**70**	**72**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-8			Residential	4	Atlantic Boulevard	63	63	65	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-9			Residential	6	Atlantic Boulevard	**68**	**69**	**71**	2	3	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-10			Residential	4	Atlantic Boulevard	63	63	64	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-11			Residential	18	9th Street	58	58	60	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-12			Residential	5	Atlantic Boulevard	**70**	**70**	**72**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-13			Residential	6	Atlantic Boulevard	62	62	64	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-14			Residential	6	Atlantic Boulevard	**70**	**70**	**72**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-15	ETW No. 1		Residential	6	Atlantic Boulevard	64	64	**67**	3	3	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-16			Residential	8	9th Street	57	58	60	2	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-17			Residential	10	Atlantic Boulevard	62	62	64	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-18			Residential	4	Atlantic Boulevard	**71**	**71**	**73**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-19			Commercial	1	Atlantic Boulevard	69	69	71	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-20			Commercial	1	Atlantic Boulevard	69	71	72	1	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-21			Commercial	1	Atlantic Boulevard	70	71	73	2	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-22		TNB No. 1	Residential	1	Atlantic Boulevard	**67**	**67**	**69**	2	2	B(67)	A/E	64	5	1	63	6	1	63	6	1	63	6	1	63	6	1	62	7	1	62	7	1	62	7	1
	L3/TR-23			Residential	1	Atlantic Boulevard	**68**	**69**	**71**	2	3	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-24			Residential	10	Olive Avenue	54	54	56	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-25			Residential	6	Atlantic Boulevard	**66**	**66**	**68**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-26			Residential	2	Atlantic Boulevard	58	58	60	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-27			Residential	2	Atlantic Boulevard	58	59	60	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-28			Residential	4	Atlantic Boulevard	65	**66**	**68**	2	3	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-29			Residential	6	Atlantic Boulevard	58	58	60	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-30			Residential	13	Olive Avenue	55	55	57	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-31			Residential	4	Atlantic Boulevard	62	62	64	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.8:
Predicted Future Noise Level and Noise Barrier Analysis – TSM/TDM Alternative[1]

TSM/TDM Inter-section ID	Receptor No.	ETW No.	TNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level (dBA $L_{eq}(h)$)[2]	Future Worst-Hour Noise Levels (dBA $L_{eq}(h)$)																													
								2035 Noise Level						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5,6]																							
								Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category	Impact Type[3,4]	6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
														L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
L-3 cont'd	L3/TR-32			Residential	3	Atlantic Boulevard	59	59	61	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-33			Residential	3	Atlantic Boulevard	65	65	**67**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-34		TNB No. 2	Residential	1	Atlantic Boulevard	**66**	**66**	**67**	1	1	B(67)	A/E	60	7	1	57	10	1	54	13	1	53	14	1	52	15	1	51	16	1	50	17	1	49	18	1
	L3/TR-35			Residential	7	Atlantic Boulevard	61	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-36	ETW No. 2		Residential	1	Glendon Way	64	64	64	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-37			Residential	4	Olive Avenue	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-38			Residential	3	Olive Avenue	**70**	**70**	**70**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L3/TR-39			Residential	3	Olive Avenue	65	65	65	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
L-4	L4/TR-1			Residential	1	Stoneman Avenue	**75**	**75**	**75**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-2			Residential	3	Stoneman Avenue	**70**	**70**	**70**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-3			Residential	4	Stoneman Avenue	61	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-4			Residential	4	Stoneman Avenue	62	63	63	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-5			Residential	1	Glendon Way	**69**	**69**	**70**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-6			Residential	3	Garfield Avenue	**70**	**70**	**72**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-7			Residential	7	Stoneman Avenue	57	57	59	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-8			Residential	1	Garfield Avenue	**70**	**70**	**72**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-9			Medical Center	1	Garfield Avenue	69	69	72	3	3	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-10			Residential	6	Stoneman Avenue	57	57	59	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-11			Medical Center	1	Garfield Avenue	68	68	70	2	2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-12			Residential	6	Stoneman Avenue	55	55	58	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-13			Residential	1	Garfield Avenue	**68**	**68**	**71**	3	3	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-14			Residential	4	Garfield Avenue	**68**	**68**	**70**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-15			Residential	6	Stoneman Avenue	55	55	58	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-16			Office	1	Garfield Avenue	67	67	70	3	3	E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-17			Residential	1	Stoneman Avenue	56	56	58	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-18			Commercial/ Restaurant	1	Garfield Avenue	69	69	71	2	2	E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-19			Commercial	1	Garfield Avenue	69	69	70	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-20			Commercial	1	Garfield Avenue	68	68	70	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-21			Residential	1	Garfield Avenue	**68**	**68**	**70**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-22			Residential	1	2nd Street	54	54	56	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-23			Residential	6	Garfield Avenue	56	56	59	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-24			Office	1	Garfield Avenue	69	69	71	2	2	E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-25			Office	1	Garfield Avenue	69	69	72	3	3	E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-26			Residential	6	2nd Street	59	59	61	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-27			Residential	4	Garfield Avenue	**69**	**69**	**72**	3	3	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-28			Residential	3	Garfield Avenue	**69**	**69**	**71**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-29			Residential	1	2nd Street	60	60	61	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-30			Residential	1	Garfield Avenue	**68**	**68**	**70**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-31			Residential	1	Glendon Way	**67**	**67**	**68**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-32			Residential	3	2nd Street	62	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-33			Residential	4	2nd Street	64	64	64	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-34			Residential	5	2nd Street	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L4/TR-35			Residential	1	2nd Street	**75**	**75**	**75**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
L-5	L5/TR-1			Commercial/ Restaurant	1	Rosemead Boulevard	70	69	70	1	0	E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-2			Residential	1	Rosemead Boulevard	**71**	**71**	**72**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-3			Residential	2	Marshall Street	58	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-4			Residential	1	Rosemead Boulevard	**70**	**70**	**71**	1	1	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-5			Residential	1	Rosemead Boulevard	61	61	62	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.8:
Predicted Future Noise Level and Noise Barrier Analysis – TSM/TDM Alternative[1]

TSM/TDM Inter-section ID	Receptor No.	ETW No.	TNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level (dBA $L_{eq}(h)$)[2]	Future Worst-Hour Noise Levels (dBA $L_{eq}(h)$)																																	
								2035 Noise Level						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5,6]																											
														6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
								Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category	Impact Type[3,4]	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
L-5 cont'd	L5/TR-6			Residential	1	Rosemead Boulevard	**70**	**71**	**72**	1	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-7			Residential	2	Ralph Street	61	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-8			Residential	1	Rosemead Boulevard	**69**	**69**	**70**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-9			Residential	2	Rosemead Boulevard	56	56	57	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-10			Residential	3	Rosemead Boulevard	63	63	63	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-11			Residential	1	Rosemead Boulevard	61	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-12			Commercial	1	Rosemead Boulevard	70	70	71	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-13			Commercial	1	Rosemead Boulevard	74	74	76	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-14			Commercial	1	Rosemead Boulevard	74	74	76	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-15			Restaurant	1	Rosemead Boulevard	**73**	**73**	**75**	2	2	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-16			Residential	2	Newby Avenue	62	62	63	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-17			Residential	1	Rosemead Boulevard	62	62	63	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-18			Restaurant	1	Rosemead Boulevard	67	67	68	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-19			School	1	Rosemead Boulevard	65	65	67	2	2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-20			School Sports Field	1	Rosemead Boulevard	63	63	64	1	1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-21			Commercial	1	Lower Azusa Road	62	62	63	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-22	ETW No. 1		Residential	2	Damon Street	50	50	52	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-23	ETW No. 1		Residential	2	Mead Avenue	57	57	59	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-24			Office	1	Rosemead Boulevard	65	65	67	2	2	E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-25			Commercial	1	Rosemead Boulevard	62	62	63	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-26			Residential	1	Rosemead Boulevard	63	63	63	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-27			Commercial	1	Rosemead Boulevard	67	67	69	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-28			Commercial	1	Rosemead Boulevard	64	64	65	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-29			Commercial	1	Rosemead Boulevard	67	67	68	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-30			Church	1	Rosemead Boulevard	68	68	70	2	2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-31			School	1	Rosemead Boulevard	68	68	70	2	2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-32			Commercial	1	Rosemead Boulevard	64	64	65	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-33		TNB No. 1	Residential	2	Rosemead Boulevard	**67**	**67**	**68**	1	1	B(67)	A/E	61	7	2	59	9	2	59	9	2	58	10	2	58	10	2	58	10	2	58	10	2	58	10	2
	L5/TR-34			Residential	2	Rosemead Boulevard	63	64	64	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-35			Restaurant	1	Rosemead Boulevard	**71**	**71**	**72**	1	1	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.8:
Predicted Future Noise Level and Noise Barrier Analysis – TSM/TDM Alternative[1]

TSM/TDM Inter-section ID	Receptor No.	ETW No.	TNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level (dBA $L_{eq}(h)$)[2]	2035 Noise Level				Activity Category	Impact Type[3,4]	Future Worst-Hour Noise Levels (dBA $L_{eq}(h)$)																								
														Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5,6]																									
														6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
								Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
L-5 cont'd	L5/TR-36			Residential	1	Rosemead Boulevard	**70**	**70**	**71**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-37			Office	1	Rosemead Boulevard	67	67	68	1	1	E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-38			Commercial	1	Rosemead Boulevard	70	71	72	1	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-39			Residential	1	Rosemead Boulevard	**70**	**71**	**72**	1	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-40			Residential	4	Rosemead Boulevard	60	60	61	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-41			Office	1	Rosemead Boulevard	70	70	71	1	1	E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-42			Residential	1	Rosemead Boulevard	**70**	**70**	**71**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-43			Residential	2	Marshall Street	57	57	57	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L5/TR-44			Commercial	1	Rosemead Boulevard	70	70	71	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
L-8	L8/TR-1			Residential	2	Lyndon Street	57	57	60	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-2			Restaurant	1	Fair Oaks Avenue	68	69	**71**	2	3	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-3			Residential	3	Monterey Road	56	56	59	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-4			Residential	10	Brent Avenue	58	58	61	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-5			Commercial	1	Fair Oaks Avenue	71	71	74	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-6			Residential	5	Brent Avenue	59	59	61	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-7			Commercial	1	Fair Oaks Avenue	71	71	75	4	4	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-8			Commercial	1	Fair Oaks Avenue	71	71	74	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-9			Restaurant	1	Fair Oaks Avenue	69	69	**72**	3	3	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-10			Restaurant	1	Fair Oaks Avenue	68	68	**71**	3	3	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-11			Residential	1	Brent Avenue	58	58	61	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-12			Restaurant	1	Fair Oaks Avenue	70	70	**72**	2	2	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-13			Commercial	1	Fair Oaks Avenue	68	68	71	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-14			Commercial	1	Fair Oaks Avenue	70	70	73	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-15			Restaurant	1	Fair Oaks Avenue	70	70	**73**	3	3	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-16			Commercial	1	Fair Oaks Avenue	71	71	74	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-17			Commercial	1	Fair Oaks Avenue	71	71	75	4	4	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-18			Restaurant	1	Fair Oaks Avenue	70	70	**73**	3	3	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-19			Restaurant	1	Fair Oaks Avenue	59	60	62	2	3	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L8/TR-20			Commercial	1	Fair Oaks Avenue	57	57	59	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T-1	T1/TR-1			Residential	6	Charnwood Avenue	56	56	56	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-2			Residential	3	Charnwood Avenue	62	62	61	-1	-1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-3			Residential	4	Westmond Drive	63	63	63	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-4			Residential	3	Charnwood Avenue	63	63	63	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-5			Residential	3	Westmond Drive	65	65	65	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-6		TNB No. 1	Residential	3	Westmond Drive	60	60	60	0	0	B(67)	--	--	--	--	59	1	--	59	1	--	59	1	--	59	1	--	59	1	--	59	1	--	59	1	--	59	1	--
	T1/TR-7		TNB No. 1	Residential	2	Westmond Drive	**70**	**70**	**70**	0	0	B(67)	A/E	--	--	--	60	10	2	58	12	2	57	13	2	57	13	2	56	14	2	55	15	2	55	15	2	55	15	2
	T1/TR-8		TNB No. 1	Residential	3	Westmond Drive	**68**	**68**	**68**	0	0	B(67)	A/E	--	--	--	60	8	3	58	10	3	57	11	3	56	12	3	55	13	3	55	13	3	54	14	3	54	14	3
	T1/TR-9		TNB No. 1	Residential	3	Westmond Drive	**67**	**67**	**67**	0	0	B(67)	A/E	--	--	--	60	7	3	58	9	3	57	10	3	56	11	3	56	11	3	55	12	3	55	12	3	54	13	3
	T1/TR-10		TNB No. 1	Residential	4	Westmond Drive	63	63	64	1	1	B(67)	--	--	--	--	56	8	4	55	9	4	54	10	4	53	11	4	52	12	4	52	12	4	51	13	4	51	13	4
	T1/TR-11		TNB No. 1	Residential	2	Westmond Drive	**66**	**66**	**67**	1	1	B(67)	A/E	--	--	--	57	10	2	56	11	2	55	12	2	54	13	2	54	13	2	53	14	2	53	14	2	52	14	2

TABLE 3.14.8:
Predicted Future Noise Level and Noise Barrier Analysis – TSM/TDM Alternative[1]

TSM/TDM Inter-section ID	Receptor No.	ETW No.	TNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level (dBA $L_{eq}(h)$)[2]	2035 Noise Level				Activity Category	Impact Type[3,4]	Future Worst-Hour Noise Levels (dBA $L_{eq}(h)$)																								
														Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5,6]																									
														6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
								Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
T-1 cont'd	T1/TR-12		TNB No. 1	Residential	2	Westmond Drive	**66**	**66**	**67**	1	1	B(67)	A/E	--	--	--	58	9	2	57	10	2	57	10	2	56	11	2	56	11	2	56	11	2	55	12	2
	T1/TR-13		TNB No. 1	Residential	2	Westmond Drive	65	**66**	**67**	1	2	B(67)	A/E	--	--	--	59	8	2	59	8	2	59	8	2	59	8	2	59	8	2	59	8	2	59	8	2
	T1/TR-14			Commercial	1	Valley Boulevard	71	71	71	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-15			Residential	4	Westmond Drive	62	62	64	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-16			Residential	5	Westmond Drive	59	59	62	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-17			Residential	5	Westmond Drive	56	56	60	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-18			Residential	3	Westmond Drive	56	56	60	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-19			Residential	3	Front Street	62	62	64	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-20			Industrial	1	Mission Road	64	65	66	1	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-21			Residential	1	Stockbridge Avenue	58	59	60	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-22			Residential	4	Lowell Avenue	59	59	61	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-23			Residential	2	Lowell Avenue	59	60	61	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-24			Commercial/ Industrial	1	Alhambra Avenue	67	68	69	1	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-25			Commercial/ Industrial	1	Alhambra Avenue	68	68	70	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-26			Commercial/ Industrial	1	Alhambra Avenue	63	64	68	4	5	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-27			Industrial	1	Valley Boulevard	53	53	60	7	7	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-28			Industrial	1	Valley Boulevard	55	55	59	4	4	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-29			Residential	1	Valley Boulevard	**66**	**66**	**69**	3	3	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-30		TNB No. 2	Residential	1	Highbury Avenue	**67**	**67**	64	-3	-3	B(67)	--	62	2	--	61	3	--	60	4	--	59	5	1	59	5	1	58	6	1	57	7	1	57	7	1
	T1/TR-31		TNB No. 2	Residential	4	Highbury Avenue	**67**	**67**	65	-2	-2	B(67)	--	64	1	--	62	3	--	60	5	4	59	6	4	59	6	4	58	7	4	57	8	4	57	8	4
	T1/TR-32		TNB No. 2	Residential	1	Highbury Avenue	64	64	64	0	0	B(67)	--	63	1	--	63	1	--	63	1	--	61	3	--	61	3	--	60	4	--	59	5	1	59	5	1
	T1/TR-33		TNB No. 2	Residential	4	Highbury Avenue	**67**	**67**	**66**	-1	-1	B(67)	A/E	**66**	0	--	**66**	0	--	64	2	--	62	4	--	61	5	4	60	6	4	60	6	4	59	7	4
	T1/TR-34		TNB No. 2	Residential	2	Highbury Avenue	**68**	**68**	**68**	0	0	B(67)	A/E	**67**	1	--	**67**	1	--	**66**	2	--	64	4	--	62	6	2	61	7	2	60	8	2	60	8	2
	T1/TR-35		TNB No. 2	Residential	5	Highbury Avenue	62	62	62	0	0	B(67)	--	62	0	--	62	0	--	62	0	--	61	1	--	60	2	--	59	3	--	58	4	--	58	4	--
	T1/TR-36		TNB No. 2	Residential	4	Highbury Avenue	**70**	**70**	**70**	0	0	B(67)	A/E	**69**	1	--	**69**	1	--	**67**	3	--	**66**	4	--	**66**	4	--	65	5	4	65	5	4	65	5	4
T-2	T2/TR-1		TNB No. 1	Residential	9	Garfield Avenue	61	62	62	0	1	B(67)	--	59	3	--	59	3	--	59	3	--	58	4	--	58	4	--	58	4	--	58	4	--	58	4	--
	T2/TR-2		TNB No. 1	Residential	4	Garfield Avenue	**67**	**68**	**68**	0	1	B(67)	A/E	59	9	4	58	10	4	57	11	4	56	12	4	56	12	4	54	14	4	53	15	4	52	16	4
	T2/TR-3			Utility	1	Garfield Avenue	58	59	59	0	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T2/TR-4			Residential	1	Garfield Avenue	61	62	62	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T2/TR-5			School Tennis	1	Marengo Avenue	60	61	61	0	1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T2/TR-6			School Pool	1	Marengo Avenue	61	61	61	0	0	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T2/TR-7			Utility	1	State Street	70	70	70	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T2/TR-8		TNB No. 2	Residential	4	State Street	**71**	**71**	**71**	0	0	B(67)	A/E	**69**	2	--	**69**	2	--	**68**	3	--	**68**	3	--	**68**	3	--	**68**	3	--	**68**	3	--	**68**	3	--
	T2/TR-9		TNB No. 2	Residential	13	State Street[7]	**72**	**74**	**74**	0	2	B(67)	A/E	**71**	3	--	**69**	5	13	**68**	6	13	**67**	7	13	**66**	8	13	65	9	13	65	9	13	65	9	13
	T2/TR-10		TNB No. 2	Residential	13	State Street[8]	**72**	**74**	**74**	0	2	B(67)	A/E	**73**	1	--	**72**	2	--	**71**	3	--	**69**	5	13	**67**	7	13	**66**	8	13	65	9	13	65	9	13
	T2/TR-11		TNB No. 2	Residential	8	State Street[8]	**68**	**70**	**70**	0	2	B(67)	A/E	**69**	1	--	**68**	2	--	**66**	4	--	63	7	8	62	8	8	61	9	8	61	9	8	61	9	8
	T2/TR-12		TNB No. 2	Residential	1	State Street	53	54	54	0	1	B(67)	--	53	1	--	53	1	--	52	2	--	52	2	--	51	3	--	51	3	--	51	3	--	50	4	--

TABLE 3.14.8:
Predicted Future Noise Level and Noise Barrier Analysis – TSM/TDM Alternative[1]

TSM/TDM Inter-section ID	Receptor No.	ETW No.	TNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level (dBA $L_{eq}(h)$)[2]	Future Worst-Hour Noise Levels (dBA $L_{eq}(h)$)																												
								2035 Noise Level						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5,6]																						
														6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
								Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category	Impact Type[3,4]	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
T-2 cont'd	T2/TR-13		TNB No. 2	Residential	1	State Street	47	48	48	0	1	B(67)	--	47	1	--	47	1	--	47	1	--	46	2	--	45	3	--	44	4	--	44	4	--	44	4	--
	T2/TR-14		TNB No. 2	Residential	1	State Street	65	65	**66**	1	1	B(67)	*A/E*	65	1	--	64	2	--	64	2	--	64	2	--	64	2	--	64	2	--	64	2	--	64	2	--
	T2/TR-15			Residential	1	State Street	47	49	49	0	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T-3	T3/TR-1			Church BB Court	1	Pasadena Avenue	62	62	62	0	0	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-2			Restaurant	1	Pasadena Avenue	60	60	61	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-3			Commercial	1	Pasadena Avenue	66	66	66	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-4			Commercial	1	Pasadena Avenue	71	71	71	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-5			Commercial	1	Pasadena Avenue	68	68	68	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-6			Commercial	1	Pasadena Avenue	64	64	65	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-7			School	1	Saint John Avenue	66	66	67	1	1	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-8			Residential	1	Waverly Drive	58	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-9			Residential	1	Waverly Drive	58	58	61	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-10			Residential	4	Gordon Terrace	57	57	59	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-11			Residential	2	Havendale Drive	57	57	61	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-12			Residential	1	Havendale Drive	57	57	61	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-13			Residential	1	Palmetto Drive	56	56	62	6	6	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-14			Residential	2	Palmetto Drive	55	55	58	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-15	ETW No. 5		Residential	1	Palmetto Drive	54	54	57	3	3	B(68)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-16			Residential	1	California Boulevard	**70**	**71**	**71**	0	1	B(69)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-17			School	1	Pasadena Avenue	64	64	66	2	2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-18			School Playground	1	Pasadena Avenue	60	61	61	0	1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Source: *Noise Study Report* (2014).
[1] Refer to Figure 3.14-2 for locations of the TSM/TDM Alternative improvements, the receptors, and existing sound walls.
[2] Numbers in **bold** represent noise levels that approach or exceed the NAC.
[3] A dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.
[4] *Italics* indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.
[5] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).
[6] Shaded areas represent existing walls and their approximate height.
[7] Receptor represents second-story balconies.
[8] Receptor represents third-story balconies.
A/E = Approach or Exceed
dBA = A-weighted decibels
dBA $L_{eq}(h)$ = equivalent continuous sound level measured in A-weighted decibels
ETW = Existing TSM/TDM Wall
I.L. = Insertion Loss
NAC = Noise Abatement Criteria
NBR = Number of Benefited Receptors
TDM = Transportation Demand Management
TNB = TSM/TDM Noise Barrier
TSM = Transportation System Management

TABLE 3.14.9:
Predicted Future Noise Level and Noise Barrier Analysis – TSM/TDM Alternative (Alternate Barriers)[1]

TSM/TDM Inter-section ID	Receptor No.	ETW No.[1]	TNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level (dBA L_{eq}(h))[2]	Future Worst-Hour Noise Levels (dBA L_{eq}(h))																														
								2035 Noise Level							Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																							
															6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
								Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category	Impact Type[3,4]	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
T-1	T1/TR-30		TNB No. 3	Residential	1	Highbury Avenue	**67**	**67**	64	-3	-3	B(67)	--	64	0	--	64	0	--	64	0	--	64	0	--	64	0	--	63	1	--	61	3	--	58	6	1
	T1/TR-31		TNB No. 3	Residential	4	Highbury Avenue	**67**	**67**	65	-2	-2	B(67)	--	65	0	--	65	0	--	64	1	--	62	3	--	60	5	4	58	7	4	57	8	4	56	9	4
	T1/TR-32		TNB No. 3	Residential	1	Highbury Avenue	64	64	64	0	0	B(67)	--	64	0	--	64	0	--	63	1	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--
	T1/TR-33		TNB No. 3	Residential	4	Highbury Avenue	**67**	**67**	**66**	-1	-1	B(67)	A/E	60	6	4	59	7	4	58	8	4	58	8	4	58	8	4	57	9	4	56	10	4	55	11	4
	T1/TR-34		TNB No. 4	Residential	2	Highbury Avenue	**68**	**68**	**68**	0	0	B(67)	A/E	62	6	2	60	8	2	58	10	2	57	11	2	56	12	2	55	13	2	54	14	2	53	15	2
	T1/TR-35		TNB No. 4	Residential	5	Highbury Avenue	62	62	62	0	0	B(67)	--	62	0	--	61	1	--	61	1	--	60	2	--	59	3	--	58	4	--	58	4	--	58	4	--
	T1/TR-36		TNB No. 4	Residential	4	Highbury Avenue	**70**	**70**	**70**	0	0	B(67)	A/E	62	8	4	59	11	4	57	13	4	55	15	4	54	16	4	53	17	4	53	17	4	52	18	4

Source: *Noise Study Report* (2014).
[1] Refer to Figure 3.14-2 for locations of the TSM/TDM Alternative improvements, the receptors, and existing sound walls.
[2] Numbers in **bold** represent noise levels that approach or exceed the NAC.
[3] A dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.
[4] *Italics* indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.
[5] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).
A/E = Approach or Exceed
dBA = A-weighted decibels
dBA L_{eq}(h) = equivalent continuous sound level measured in A-weighted decibels
ETW = Existing TSM/TDM Wall
NAC = Noise Abatement Criteria
TDM = Transportation Demand Management
TNB = TSM/TDM Noise Barrier
TSM = Transportation System Management

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TABLE 3.14.10:
Existing Land Uses in the Vicinity of the BRT Alternative

Improvement Name	Description of Existing Land Uses in the Vicinity of the Improvement
Atlantic Boulevard between Olympic Boulevard and Whittier Boulevard	Land uses along this segment of Atlantic Boulevard include single-family residences and commercial uses that are at the same grade as Atlantic Boulevard.
Atlantic Boulevard between Whittier Boulevard and Beverly Boulevard	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a preschool, a church, a park, and commercial uses with and without outdoor eating areas that are at the same grade as Atlantic Boulevard.
Atlantic Boulevard between Beverly Boulevard and SR 60	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences and commercial uses with and without outdoor eating areas that are at the same grade as Atlantic Boulevard.
Atlantic Boulevard between SR 60 and Brightwood Street	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a church, and commercial uses with and without outdoor eating areas. The land uses along the northbound side of Atlantic Boulevard range from the same grade as Atlantic Boulevard to 50 feet higher in elevation than Atlantic Boulevard. Land uses along the southbound side of Atlantic Boulevard range from the same grade as Atlantic Boulevard to 30 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between Brightwood Street and Cadiz Street	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, two churches, a health care center, and commercial uses that range from the same grade as Atlantic Boulevard to 45 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between Cadiz Street and Garvey Avenue	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a church, two hotels, and commercial uses with and without outdoor eating areas. The land uses along the northbound side of Atlantic Boulevard range from 25 feet lower in elevation than Atlantic Boulevard to 5 feet higher in elevation than Atlantic Boulevard. The land uses along the southbound side of Atlantic Boulevard range from the same grade as Atlantic Boulevard to 80 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between Garvey Avenue and I-10	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a hotel with an outdoor pool area, an office with an outdoor eating area, and commercial uses that range from the same grade as Atlantic Boulevard to 15 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between I-10 and Valley Boulevard	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, and commercial uses that range from the same grade as Atlantic Boulevard to 15 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between Valley Boulevard and Main Street	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a school with outdoor recreational areas, a church with frequent outdoor use areas, and office and commercial uses that range from the same grade as Atlantic Boulevard to 5 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard Between Main Street and Alhambra Road	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a church with frequent outdoor use areas, and commercial uses that range from the same grade as Atlantic Boulevard to 5 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between Alhambra Road and Huntington Drive	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, and commercial uses with and without outdoor eating areas that range from the same grade as Atlantic Boulevard to 5 feet higher in elevation than Atlantic Boulevard.
Huntington Drive between Atlantic Boulevard and Fletcher Avenue	Land uses along this segment of Huntington Drive include single-family and multifamily residences, a preschool with outdoor frequent human use, a medical building, and commercial uses. The land uses along the westbound side of Huntington Drive range from the same grade as Huntington Drive to 5 feet higher in elevation than Huntington Drive. Land uses along the eastbound side of Huntington Drive range from 5 feet lower in elevation than Huntington Drive to the same grade as Huntington Drive.

TABLE 3.14.10:
Existing Land Uses in the Vicinity of the BRT Alternative

Improvement Name	Description of Existing Land Uses in the Vicinity of the Improvement
Huntington Drive between Fletcher Avenue and Fair Oaks Avenue	Land uses along this segment of Huntington Drive include single-family and multifamily residences, and commercial uses. The land uses along the westbound side of Huntington Drive range from the same grade as Huntington Drive to 15 feet higher in elevation than Huntington Drive. The land uses along the eastbound side of Huntington Drive range from 5 feet lower in elevation than Huntington Drive to 10 feet higher in elevation than Huntington Drive.
Fair Oaks Avenue between Huntington Drive and Monterey Road	Land uses along this segment of Fair Oaks Avenue include single-family and multifamily residences, a school, and office and commercial uses with and without outdoor eating areas. The land uses along the northbound side of Fair Oaks Avenue range from the same grade as Fair Oaks Avenue to 5 feet higher in elevation than Fair Oaks Avenue. The land uses along the southbound side of Fair Oaks Avenue range from the same grade as Fair Oaks Avenue to 15 feet higher in elevation than Fair Oaks Avenue.
Fair Oaks Avenue between Monterey Road and SR 110	Land uses along this segment of Fair Oaks Avenue include single-family and multifamily residences, and commercial uses with frequent outdoor use areas that are at the same grade as Fair Oaks Avenue.
Fair Oaks Avenue between SR 110 and Glenarm Street	Land uses along this segment of Fair Oaks Avenue include single-family and multifamily residences, a medical center, a museum, and office, commercial, and industrial uses. The land uses along the northbound side of Fair Oaks Avenue range from 5 feet lower in elevation than Fair Oaks Avenue to 30 feet higher in elevation than Fair Oaks Avenue. The land uses along the southbound side of Fair Oaks Avenue range from 5 feet lower in elevation than Fair Oaks Avenue to 15 feet higher in elevation than Fair Oaks Avenue.
Fair Oaks Avenue between Glenarm Street and California Boulevard	Land uses along this segment of Fair Oaks Avenue include single-family and multifamily residences, a nursing home, medical centers, and office and commercial uses with frequent outdoor use areas that are at the same grade as Fair Oaks Avenue.
Fair Oaks Avenue between California Boulevard and Del Mar Boulevard	Land uses along this segment of Fair Oaks Avenue include a park and commercial uses with frequent outdoor use areas. The land uses along the northbound side of Fair Oaks Avenue range from the same grade as Fair Oaks Avenue to 40 feet higher in elevation than Fair Oaks Avenue. The land uses along the southbound side of Fair Oaks Avenue range from 10 to 30 feet higher in elevation than Fair Oaks Avenue.

Source: *Noise Study Report* (2014).
BRT = Bus Rapid Transit
I-10 = Interstate 10
SR 60 = State Route 60
SR 110 = State Route 110

TABLE 3.14.11:
Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative[1]

Receptor No.	BNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																													
						2035 Noise Levels				Activity Category (NAC)	Impact Type[3,4]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																							
												6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
						Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
BR-1		Residential	5	Amalia Avenue	59	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-2		Commercial	1	Atlantic Boulevard	68	68	69	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-3		Residential	14	Amalia Avenue	56	57	58	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-4		Commercial	1	Atlantic Boulevard	70	70	71	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-5		Residential	11	Amalia Avenue	57	58	59	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-6		Residential	13	Amalia Avenue	54	54	56	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-7		Commercial	1	Atlantic Boulevard	66	66	67	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-8		Residential	12	Amalia Avenue	54	54	56	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-9		Park	1	Atlantic Boulevard	61	61	62	1	1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-10		Church	1	Atlantic Boulevard	64	64	66	2	2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-11		Residential	1	Amalia Avenue	53	53	55	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-12		Residential	1	Amalia Avenue	54	55	56	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-13		School	1	Atlantic Boulevard	61	61	62	1	1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-14		Residential	11	Amalia Avenue	58	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-15		Residential	4	Amalia Avenue	59	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-16		Commercial	1	Atlantic Boulevard	69	69	71	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-17		Residential	3	Repetto Street	59	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-18		Residential	1	Repetto Street	61	61	62	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-19		Residential	1	Via Corona	61	62	62	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-20		Residential	1	Via Corona	61	61	62	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-21		Commercial	1	Atlantic Boulevard	69	69	72	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-22		Residential	1	Via Campo	63	63	63	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-23		Residential	2	Fernfield Drive	**68**	**68**	**68**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-24		Commercial	1	Atlantic Boulevard	70	70	71	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-25		Residential	3	Fernfield Drive	**69**	**69**	**68**	-1	-1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-26		Church	1	Hillview Avenue	73	73	73	0	0	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-27		Residential	5	Hillview Avenue	**66**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-28		Commercial	1	Atlantic Boulevard	69	69	70	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-29		Commercial	1	Atlantic Boulevard	71	71	71	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-30		Restaurant	1	Atlantic Boulevard	**68**	68	69	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-31		Residential	7	Bradshaw Avenue	61	61	62	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-32		Commercial	1	Atlantic Boulevard	69	70	72	2	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-33		Residential	1	Brightwood Street	60	60	62	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-34		Residential	7	Atlantic Boulevard	59	59	61	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-35		Residential	1	Adobe Place	59	59	61	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-36		Residential	1	Atlantic Boulevard	64	64	65	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-37		Residential	4	Atlantic Boulevard	57	57	58	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-38		Residential	5	Atlantic Boulevard	57	57	58	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-39		Residential	16	Ynez Avenue	44	44	45	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-40		Residential	5	Atlantic Boulevard	58	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-41		Residential	3	Atlantic Boulevard	59	59	60	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-42		Residential	4	Atlantic Boulevard	62	62	63	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-43		Residential	13	Ynez Avenue	45	45	45	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-44		Residential	4	Atlantic Boulevard	62	62	63	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-45		Residential	1	Atlantic Boulevard	65	**66**	**67**	1	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-46		Residential	4	Ynez Avenue	48	49	50	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-47		Medical Center	1	Atlantic Boulevard	67	67	68	1	1	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-48		Residential	11	Ynez Avenue	46	46	47	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-49		Medical Center	1	Atlantic Boulevard	68	68	69	1	1	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-50		Residential	1	Cadiz Street	55	55	56	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-51		Residential	4	El Mercado Avenue	54	54	56	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-52		Restaurant	1	Atlantic Boulevard	69	69	**71**	2	2	B(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.11:
Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative[1]

Receptor No.	BNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$						Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																							
						2035 Noise Levels				Activity Category (NAC)	Impact Type[3,4]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																							
												6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
						Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
BR-53		Commercial	1	Atlantic Boulevard	69	69	71	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-54		Residential	6	El Mercado Avenue	54	54	56	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-55		Commercial	1	Atlantic Boulevard	65	65	66	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-56		Residential	5	El Mercado Avenue	54	54	56	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-57		Restaurant	1	Atlantic Boulevard	64	64	65	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-58		Residential	1	El Mercado Avenue	55	55	57	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-59		Commercial	1	Atlantic Boulevard	70	70	72	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-60		Residential	12	El Mercado Avenue	56	56	57	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-61		Church	1	Atlantic Boulevard	**66**	**66**	**66**	0	0	C(67)/D(52)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-62		Hotel	1	Atlantic Boulevard	68	68	69	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-63		Residential	6	El Mercado Avenue	53	53	55	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-64		Commercial	1	Atlantic Boulevard	70	70	71	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-65		Restaurant	1	Atlantic Boulevard	69	69	70	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-66		Motel	1	El Mercado Avenue	62	62	63	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-67		Residential	3	Harding Avenue	49	49	50	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-68		Restaurant	1	Atlantic Boulevard	68	68	70	2	2	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-69		Commercial	1	Atlantic Boulevard	63	63	64	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-70		Residential	9	Chandler Avenue	58	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-71		Residential	1	Newmark Avenue	58	58	60	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-72		Commercial	1	Atlantic Boulevard	70	70	72	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-73		Commercial	1	Atlantic Boulevard	69	69	71	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-74		Residential	1	Chandler Avenue	59	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-75		Residential	1	Chandler Avenue	58	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-76		Residential	1	Chandler Avenue	58	58	60	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-77		Commercial	1	Atlantic Boulevard	68	68	69	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-78		Commercial	1	Atlantic Boulevard	69	69	71	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-79		Commercial	1	Atlantic Boulevard	63	63	64	1	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-80		Residential	3	Chandler Avenue	52	52	53	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-81		Commercial	1	Atlantic Boulevard	58	58	60	2	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-82		Residential	2	Chandler Avenue	52	53	53	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-83		Commercial	1	Atlantic Boulevard	61	62	63	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-84		Hotel	1	Atlantic Boulevard	58	59	58	-1	-1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-85		Residential	1	Atlantic Boulevard	**66**	**66**	**67**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-86		Residential	1	Hellman Avenue	**71**	**72**	**71**	-1	-1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-87		Residential	2	Hellman Avenue	63	63	63	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-88		Residential	3	9th Street	**70**	**70**	**70**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-89		Residential	3	9th Street	**74**	**74**	**74**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-90		Residential	2	9th Street	**68**	**68**	**68**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-91		Residential	3	Ramona Road	65	**67**	**67**	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-92		Residential	11	9th Street	63	65	65	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-93		Residential	3	9th Street	**67**	**70**	**70**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-94		Residential	7	9th Street	60	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-95		Residential	7	9th Street	57	60	60	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-96		Residential	4	Glendon Way	65	**67**	**68**	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-97		Residential	2	Atlantic Boulevard	**69**	**69**	**70**	1	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-98		Residential	4	Atlantic Boulevard	62	62	63	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-99		Residential	1	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-100		Residential	4	Atlantic Boulevard	61	61	62	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-101		Residential	18	9th Street	57	57	58	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-102		Residential	1	Atlantic Boulevard	**68**	**68**	**70**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-103		Residential	6	Atlantic Boulevard	60	60	61	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-104		Residential	1	Atlantic Boulevard	**68**	**68**	**69**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.11:
Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative[1]

Receptor No.	BNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																													
						2035 Noise Levels				Activity Category (NAC)	Impact Type[3,4]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																							
												6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
						Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
BR-105		Residential	6	Atlantic Boulevard	62	62	63	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-106		Residential	8	9th Street	56	56	57	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-107		Residential	10	Atlantic Boulevard	60	60	61	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-108		Residential	1	Atlantic Boulevard	**69**	**69**	**70**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-109		Commercial	1	Atlantic Boulevard	67	67	68	1	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-110		Commercial	1	Atlantic Boulevard	69	69	69	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-111		Residential	4	9th Street	54	54	55	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-112		Commercial	1	Atlantic Boulevard	68	68	68	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-113		Residential	20	Atlantic Boulevard	58	58	58	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-114		Residential	1	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-115		Residential	1	Atlantic Boulevard	48	48	48	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-116		Residential	4	Atlantic Boulevard	61	61	61	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-117		Residential	24	9th Street	48	48	48	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-118		Residential	1	Atlantic Boulevard	54	54	54	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-119		Residential	1	Atlantic Boulevard	**68**	**68**	**68**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-120		Residential	1	Atlantic Boulevard	58	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-121		Residential	1	Atlantic Boulevard	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-122	BNB No. 5	Residential	1	Atlantic Boulevard[6]	**69**	**69**	**69**	0	0	B(67)	A/E	62	7	1	59	10	1	57	12	1	55	14	1	54	15	1	52	17	1	51	18	1	50	19	1
BR-123		Residential	1	Atlantic Boulevard	**68**	**68**	**68**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-124		Residential	1	Atlantic Boulevard	58	58	58	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-125		Residential	1	Atlantic Boulevard	**68**	**68**	**68**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-126		Residential	15	9th Street	54	55	55	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-127		Residential	6	Atlantic Boulevard	60	60	60	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-128		Commercial	1	Atlantic Boulevard	69	69	70	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-129		Commercial	1	Atlantic Boulevard	64	64	64	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-130		Residential	3	Beacon Street	59	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-131		Commercial	1	Atlantic Boulevard	68	68	68	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-132		Residential	4	Commonwealth Avenue	62	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-133		Commercial	1	Atlantic Boulevard	64	64	64	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-134		Residential	4	Commonwealth Avenue	61	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-135		Residential	12	Atlantic Boulevard	63	64	64	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-136		Residential	1	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-137		Residential	1	Atlantic Boulevard	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-138		Office	1	Atlantic Boulevard	68	68	68	0	0	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-139		Commercial	1	Atlantic Boulevard	66	66	66	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-140		Residential	1	Atlantic Boulevard	65	65	65	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-141		Residential	3	Atlantic Boulevard	**70**	**70**	**70**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-142		Residential	1	Atlantic Boulevard	**68**	**68**	**68**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-143		Residential	1	Atlantic Boulevard	**68**	**68**	**68**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-144		Residential	20	Atlantic Boulevard	55	55	55	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-145		Residential	1	Atlantic Boulevard	64	64	64	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-146		Residential	2	5th Street	60	60	60	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-147		Residential	1	Atlantic Boulevard	60	60	60	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-148		Residential	1	Atlantic Boulevard	**67**	**67**	**68**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-149		Residential	1	Atlantic Boulevard	63	63	63	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-150		Residential	3	Atlantic Boulevard	60	60	60	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-151		Residential	3	Atlantic Boulevard	62	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-152		Residential	3	Atlantic Boulevard	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-153		Residential	1	Atlantic Boulevard	61	61	62	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-154		Residential	5	Atlantic Boulevard	64	64	64	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-155		Residential	1	Atlantic Boulevard	49	49	49	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-156		Residential	4	Atlantic Boulevard	64	64	65	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.11:
Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative[1]

Receptor No.	BNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$							Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																												
						2035 Noise Levels				Activity Category (NAC)	Impact Type[3,4]	6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet							
						Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR					
BR-157		Restaurant	1	Atlantic Boulevard	70	70	70	0	0	B(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-158		Commercial	1	Atlantic Boulevard	69	68	68	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-159		Residential	4	Atlantic Boulevard	62	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-160		Residential	1	Atlantic Boulevard	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-161		Residential	4	Atlantic Boulevard	63	63	63	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-162		Residential	1	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-163		Residential	7	Atlantic Boulevard	59	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-164		Residential	2	Atlantic Boulevard	60	60	60	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-165		Residential	1	Atlantic Boulevard	**70**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-166		Residential	2	Atlantic Boulevard	59	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-167		Residential	1	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-168		Residential	8	Atlantic Boulevard	60	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-169		Residential	1	Atlantic Boulevard	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-170		Residential	2	Atlantic Boulevard	62	62	63	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-171		Residential	1	1st Street	63	62	63	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-172		Residential	2	Pine Street	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-173		Residential	1	Pine Street	56	56	56	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-174		Residential	5	Atlantic Boulevard	64	63	63	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-175		Residential	2	Pine Street	61	60	61	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-176		Residential	1	Atlantic Boulevard	68	68	68	0	0	B(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-177		Residential	1	Garfield Avenue	61	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-178		Restaurant	1	Atlantic Boulevard	64	64	64	0	0	B(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-179		Commercial	1	Atlantic Boulevard	72	72	71	-1	-1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-180		Medical Center	1	Huntington Drive	67	68	65	-3	-2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-181		Residential	1	Huntington Drive	**67**	**68**	**66**	-2	-1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-182		Commercial	1	Huntington Drive	70	71	71	0	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-183		Residential	1	Huntington Drive	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-184		Residential	3	La Senda Place	58	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-185		Residential	3	Huntington Drive	61	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-186		Residential	4	Huntington Drive	57	57	57	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-187		Residential	4	Court Avenue	57	58	58	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-188		Office	1	Huntington Drive	69	69	70	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-189		Residential	3	Camden Avenue	59	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-190		Residential	1	Huntington Drive	**68**	**69**	**69**	0	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-191		Residential	2	Wayne Avenue	58	58	58	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-192		Residential	1	Huntington Drive	**69**	**69**	**70**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-193		Residential	6	Huntington Drive	64	64	64	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-194		Residential	11	Huntington Drive	59	60	60	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-195		Residential	11	Huntington Drive	60	60	60	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-196		Commercial	1	Huntington Drive	69	69	70	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-197		Residential	4	Spruce Street	59	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-198		Residential	1	Huntington Drive	**66**	**67**	**67**	0	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-199		Commercial	1	Huntington Drive	68	69	69	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-200		Residential	1	Huntington Drive	**68**	**69**	**70**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-201		Residential	11	Spruce Street	56	57	57	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-202		Residential	1	Huntington Drive	**69**	**69**	**70**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-203		Residential	1	Marengo Avenue	57	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-204		Residential	3	Marengo Avenue	55	56	56	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-205		Residential	1	Huntington Drive	58	58	58	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-206		Residential	1	Huntington Drive	**70**	**70**	**71**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-207		Residential	7	Spruce Street	58	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-208		Residential	4	Huntington Drive	60	61	61	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.11:
Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative[1]

Receptor No.	BNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																													
						2035 Noise Levels						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																								
												6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
						Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category (NAC)	Impact Type[3,4]	L_{eq} (h)	I.L.	N B R	L_{eq} (h)	I.L.	N B R	L_{eq} (h)	I.L.	N B R	L_{eq} (h)	I.L.	N B R	L_{eq} (h)	I.L.	N B R	L_{eq} (h)	I.L.	N B R	L_{eq} (h)	I.L.	N B R	L_{eq} (h)	I.L.	N B R
BR-209		Residential	1	Huntington Drive	**68**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-210		Residential	1	Spruce Street	60	62	62	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-211		Residential	1	Huntington Drive	65	67	66	-1	-1	B(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-212		Office	1	Fair Oaks Avenue	66	69	68	-1	0	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-213		Residential	4	Fair Oaks Avenue	54	56	57	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-214		Residential	1	Laurel Street	57	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-215		Residential	1	Fair Oaks Avenue	65	**67**	**68**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-216		Residential	4	Oak Street	51	54	56	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-217		Residential	1	Oak Street	57	60	61	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-218		School	1	Fair Oaks Avenue	66	68	69	1	1	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-219		Commercial	1	Fair Oaks Avenue	67	69	70	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-220		Commercial	1	Fair Oaks Avenue	67	70	70	0	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-221		Residential	3	Bank Street	56	58	61	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-222		Restaurant	1	Fair Oaks Avenue	66	68	69	1	1	B(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-223		Residential	2	Lyndon Street	57	60	61	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-224		Restaurant	1	Fair Oaks Avenue	68	70	70	0	0	B(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-225		Residential	3	Monterey Road	55	57	60	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-226		Residential	10	Brent Avenue	57	58	61	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-227		Commercial	1	Fair Oaks Avenue	70	70	74	4	4	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-228		Residential	5	Brent Avenue	58	58	62	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-229		Commercial	1	Fair Oaks Avenue	70	71	74	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-230		Commercial	1	Fair Oaks Avenue	70	70	74	4	4	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-231		Restaurant	1	Fair Oaks Avenue	68	68	**71**	3	3	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-232		Restaurant	1	Fair Oaks Avenue	67	67	70	3	3	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-233		Residential	1	Brent Avenue	58	58	61	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-234		Restaurant	1	Fair Oaks Avenue	68	69	**72**	3	3	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-235		Commercial	1	Fair Oaks Avenue	64	65	66	1	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-236		Commercial	1	Fair Oaks Avenue	65	65	67	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-237	BNB No. 6	Residential	1	Amberwood Drive[6]	65	65	**67**	2	2	B(67)	A/E	**67**	0	--	**67**	0	--	**66**	1	--	**66**	1	--	**66**	1	--	**66**	1	--	64	3	--	63	4	--
BR-238		Residential	1	Amberwood Drive	46	46	48	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-239		Residential	1	Amberwood Drive	47	47	49	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-240		Residential	1	Fair Oaks Avenue	65	65	**67**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-241		Residential	1	Fair Oaks Avenue	65	65	**67**	2	2	C(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-242		Restaurant	1	Fair Oaks Avenue	64	64	65	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-243		Industrial/ Commercial	1	Fair Oaks Avenue	64	64	65	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-244		Office	1	Fair Oaks Avenue	60	60	61	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-245		Commercial	1	Fair Oaks Avenue	66	66	67	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-246		Restaurant	1	Fair Oaks Avenue	63	63	64	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-247		Commercial	1	Fair Oaks Avenue	65	66	67	1	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-248		Commercial	1	Fair Oaks Avenue	72	73	75	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-249		Medical Facility	1	Fair Oaks Avenue	71	71	72	1	1	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-250		Commercial	1	Fair Oaks Avenue	72	73	73	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-251		Restaurant	1	Fair Oaks Avenue	69	69	70	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-252		Restaurant	1	Fair Oaks Avenue	64	64	66	2	2	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-253		Commercial	1	Fair Oaks Avenue	65	65	67	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-254		Commercial	1	Fair Oaks Avenue	65	65	66	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-255		Park	1	Fair Oaks Avenue	53	53	54	1	1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-256		Commercial	1	Fair Oaks Avenue	63	63	64	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-257		Restaurant	1	Fair Oaks Avenue	63	63	64	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-258		Commercial	1	Fair Oaks Avenue	64	64	65	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-259		Medical Center	1	Fair Oaks Avenue	70	71	71	0	1	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.11:
Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative[1]

Receptor No.	BNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$				Activity Category (NAC)	Impact Type[3,4]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																										
						2035 Noise Levels						6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
						Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
BR-260		Medical Center	1	Fair Oaks Avenue	70	70	71	1	1	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-261		Office	1	Fair Oaks Avenue	67	67	68	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-262		Residential	1	Fair Oaks Avenue	**68**	**68**	**69**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-263		Residential	1	Arlington Drive	55	55	56	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-264		Medical Center	1	Fair Oaks Avenue	68	69	69	0	1	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-265		Commercial	1	Fair Oaks Avenue	67	67	68	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-266		Residential	5	Grace Terrace	59	59	59	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-267		Residential	3	State Street	60	60	61	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-268		Residential	3	Columbia Place	56	56	58	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-269		Residential	7	Columbia Place	54	54	57	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-270		Medical Center	1	Fair Oaks Avenue	66	66	68	2	2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-271		Residential	8	Grace Drive	54	54	57	3	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-272		Residential	6	Grace Drive	57	57	59	2	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-273		Institutional	1	Fair Oaks Avenue	65	65	67	2	2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-274		Commercial	1	Fair Oaks Avenue	64	64	66	2	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-275		Residential	1	Fair Oaks Avenue	65	65	**67**	2	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-276		Residential	5	Mound Avenue	55	55	58	3	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-277		Commercial	1	Fair Oaks Avenue	69	69	72	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-278		Commercial	1	Fair Oaks Avenue	67	67	70	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-279		Commercial	1	Fair Oaks Avenue	68	69	72	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-280		Restaurant	1	Fair Oaks Avenue	69	69	**73**	4	4	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-281		Commercial	1	Fair Oaks Avenue	70	70	73	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-282		Commercial	1	Fair Oaks Avenue	70	71	74	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-283		Restaurant	1	Fair Oaks Avenue	69	69	**72**	3	3	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-284		Restaurant	1	Oxley Street	59	59	63	4	4	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-285		Commercial	1	Fair Oaks Avenue	56	58	60	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-286		Commercial	1	Fair Oaks Avenue	66	68	69	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-287		Residential	6	Fair Oaks Avenue	59	61	62	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-288		Residential	8	Fair Oaks Avenue	59	61	62	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-289		Residential	1	Fair Oaks Avenue	65	**67**	**68**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-290		Residential	2	Rollin Street	54	57	59	2	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-291		Commercial	1	Fair Oaks Avenue	66	68	69	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-292		Residential	4	Oak Street	55	57	59	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-293		Residential	1	Fair Oaks Avenue	65	**67**	**68**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-294		Residential	1	Fair Oaks Avenue	57	60	60	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-295		Residential	3	Oak Street	51	53	55	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-296		Residential	1	Fair Oaks Avenue	64	**66**	**67**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-297		Residential	1	Fair Oaks Avenue	54	57	59	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-298		Residential	1	Fair Oaks Avenue	46	49	49	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-299		Residential	3	Spruce Street	48	49	49	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-300		Residential	1	Spruce Street	43	45	45	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-301		Residential	1	Fair Oaks Avenue	62	64	64	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-302		Residential	2	Spruce Street	58	60	60	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-303		Commercial	1	Huntington Drive	66	68	68	0	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-304		Commercial	1	Huntington Drive	71	71	70	-1	-1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-305		Residential	10	Oneonta Knoll	61	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-306		Residential	1	Huntington Drive	**70**	**70**	**70**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-307		Residential	2	Primrose Avenue	59	60	60	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-308		Residential	1	Huntington Drive	65	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-309		Commercial	1	Huntington Drive	70	71	71	0	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-310		Residential	4	La France Avenue	59	60	61	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-311		Residential	1	Huntington Drive	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.11:
Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative[1]

Receptor No.	BNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																													
						2035 Noise Levels						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																								
												6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
						Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category (NAC)	Impact Type[3,4]	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
BR-312		Residential	2	Marengo Avenue	60	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-313		Residential	1	Huntington Drive	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-314		Residential	3	Leman Street	57	58	58	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-315		Residential	4	Huntington Drive	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-316		Residential	1	Huntington Drive	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-317		Residential	3	Leman Street	58	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-318		Residential	1	Huntington Drive	62	62	63	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-319		Residential	4	Fletcher Avenue	58	58	58	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-320		Commercial	1	Huntington Drive	70	70	70	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-321		Residential	1	Huntington Drive	60	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-322		Residential	1	Huntington Drive	**69**	**70**	**70**	0	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-323		Residential	4	Electric Avenue	56	56	57	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-324		Residential	1	Electric Avenue	**67**	**67**	**68**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-325		Residential	1	Dos Robles Place	64	64	64	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-326		Residential	5	Dos Robles Place	58	58	58	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-327		Residential	2	Pine Street	61	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-328		Commercial	1	Huntington Drive	69	69	69	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-329		Residential	8	Huntington Drive	62	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-330		Residential	1	Huntington Drive	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-331		Residential	4	Pine Street	59	60	60	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-332		Residential	1	Huntington Drive	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-333		Residential	1	Huntington Drive	**68**	**69**	**69**	0	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-334		Residential	1	Huntington Drive	**69**	**70**	**70**	0	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-335		Residential	1	Huntington Drive	70	70	70	0	0	B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-336		Residential	3	Olive Avenue	60	61	61	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-337		Commercial	1	Atlantic Boulevard	69	69	69	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-338		Residential	3	Atlantic Boulevard	60	60	60	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-339		Residential	9	Olive Avenue	56	56	56	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-340		Residential	5	Atlantic Boulevard	60	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-341		Residential	4	Atlantic Boulevard	59	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-342		Residential	6	Atlantic Boulevard	59	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-343		Residential	5	Atlantic Boulevard	65	64	64	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-344		Residential	26	Olive Avenue	56	56	56	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-345		Residential	3	Atlantic Boulevard	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-346		Residential	6	Atlantic Boulevard	**68**	**68**	**68**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-347		Residential	3	Atlantic Boulevard	**68**	**68**	**68**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-348		Residential	1	Atlantic Boulevard	59	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-349		Commercial	1	Atlantic Boulevard	69	69	70	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-350		Commercial	1	Atlantic Boulevard	62	62	62	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-351		Residential	2	Atlantic Boulevard	62	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-352		Residential	4	Atlantic Boulevard	65	65	65	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-353		Church	1	Atlantic Boulevard	63	63	63	0	0	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-354		Residential	18	Olive Avenue	55	55	55	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-355		Residential	1	Atlantic Boulevard	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-356		Residential	3	Atlantic Boulevard	61	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-357		Residential	1	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-358		Residential	1	Atlantic Boulevard	65	65	65	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-359		Residential	2	Atlantic Boulevard	62	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-360		Residential	2	Atlantic Boulevard	62	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-361		Residential	3	Olive Avenue	53	53	53	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-362		Residential	1	Atlantic Boulevard	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-363		Residential	6	Atlantic Boulevard	63	63	63	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.11:
Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative[1]

Receptor No.	BNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																																
						2035 Noise Levels				Activity Category (NAC)	Impact Type[3,4]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																													
												6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
						Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
BR-364		Residential	1	Olive Avenue	53	53	53	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-365		Residential	4	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-366		Residential	1	Atlantic Boulevard	60	60	60	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-367		Residential	4	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-368		Residential	8	Olive Avenue	58	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-369		Residential	1	Atlantic Boulevard	**69**	**69**	**70**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-370		Residential	1	Atlantic Boulevard	**69**	**69**	**70**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-371		Commercial	1	Atlantic Boulevard	70	70	71	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-372		Commercial	1	Atlantic Boulevard	63	63	63	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-373		Church	1	Atlantic Boulevard	49	49	49	0	0	C(67)/D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-374		Residential	1	Atlantic Boulevard	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-375		Residential	1	Atlantic Boulevard	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-376		Residential	1	Atlantic Boulevard	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-377		Residential	2	Atlantic Boulevard	65	65	**66**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-378		Residential	1	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-379		Residential	1	Atlantic Boulevard	**66**	**66**	**67**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-380		Commercial	1	Atlantic Boulevard	68	68	68	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-381		School	1	Atlantic Boulevard	63	63	63	0	0	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-382		Commercial	1	Atlantic Boulevard	69	69	69	0	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-383		Commercial	1	Atlantic Boulevard	66	66	66	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-384		Residential	1	Atlantic Boulevard	**70**	**70**	**69**	-1	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-385		Residential	3	Atlantic Boulevard	65	65	65	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-386		Residential	3	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-387		Residential	24	Olive Avenue	61	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-388		Residential	2	Atlantic Boulevard	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-389		Residential	2	Atlantic Boulevard	**66**	**66**	**66**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-390		Residential	2	Atlantic Boulevard	62	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-391		Residential	1	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-392		Residential	3	Atlantic Boulevard	58	58	58	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-393		Residential	3	Atlantic Boulevard	**68**	**68**	**68**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-394		Residential	1	Atlantic Boulevard	48	48	48	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-395		Residential	3	Atlantic Boulevard	61	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-396		Residential	4	Atlantic Boulevard	64	64	64	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-397	BNB No. 4	Residential	1	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	A/E	63	4	--	62	5	1	61	6	1	61	6	1	61	6	1	61	6	1	61	6	1	61	6	1	61	6	1
BR-398		Residential	4	Shorb Street	57	57	58	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-399		Commercial	1	Atlantic Boulevard	66	66	66	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-400		Residential	1	Atlantic Boulevard	63	63	64	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-401		Commercial	1	Atlantic Boulevard	68	68	71	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-402		Commercial	1	Atlantic Boulevard	69	69	70	1	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-403		Residential	1	Atlantic Boulevard	**67**	**67**	**68**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-404		Residential	1	Atlantic Boulevard	**67**	**67**	**68**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-405		Residential	10	Olive Avenue	56	55	58	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-406		Residential	6	Atlantic Boulevard	**66**	**66**	**67**	1	2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-407		Residential	2	Atlantic Boulevard	65	62	65	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-408		Residential	2	Atlantic Boulevard	63	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-409		Residential	4	Atlantic Boulevard	64	64	65	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-410		Residential	6	Atlantic Boulevard	63	59	60	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-411		Residential	13	Olive Avenue	56	56	57	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-412		Residential	4	Atlantic Boulevard	**66**	**66**	**67**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-413		Residential	3	Atlantic Boulevard	63	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-414		Residential	3	Atlantic Boulevard	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-415		Residential	1	Atlantic Boulevard	**68**	**68**	**69**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.11:
Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative[1]

Receptor No.	BNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$							Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																												
						2035 Noise Levels				Activity Category (NAC)	Impact Type[3,4]	6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet							
						Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
BR-416		Residential	7	Olive Avenue	62	62	62	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-417		Residential	1	Glendon Way	64	64	64	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-418		Residential	4	Olive Avenue	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-419		Residential	3	Olive Avenue	**71**	**71**	**71**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-420		Residential	3	Olive Avenue	65	65	65	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-421		Residential	2	Ramona Road	**69**	**69**	**69**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-422		Residential	1	Ramona Road	**75**	**75**	**75**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-423		Residential	6	Olive Avenue	**70**	**70**	**70**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-424		Residential	3	Hellman Avenue	64	64	65	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-425		Residential	2	Hellman Avenue	**67**	**67**	**67**	0	0	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-426		Residential	2	Hellman Avenue	61	61	61	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-427		Residential	8	Hathaway Avenue	56	56	57	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-428		Commercial	1	Atlantic Boulevard	63	64	64	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-429		Residential	10	Hathaway Avenue	55	55	55	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-430		Residential	2	Hathaway Avenue	53	53	54	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-431		Residential	3	Hathaway Avenue	49	49	50	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-432		Residential	1	Atlantic Boulevard	**67**	**68**	**66**	-2	-2	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-433		Residential	4	Hathaway Avenue	52	52	53	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-434		Residential	4	Hathaway Avenue	52	52	53	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-435		Residential	5	Hathaway Avenue	48	48	48	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-436		Residential	5	Hathaway Avenue	47	47	48	1	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-437		Residential	1	Atlantic Boulevard	63	63	64	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-438		Residential	4	Hathaway Avenue	48	48	49	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-439		Commercial	1	Atlantic Boulevard	65	65	67	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-440		Residential	2	Mabel Avenue	60	60	61	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-441		Commercial	1	Atlantic Boulevard	72	72	73	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-442		Residential	4	Mabel Avenue	60	61	62	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-443	BNB No. 2	Residential	2	Atlantic Boulevard	**68**	**68**	**69**	1	1	B(67)	A/E	**68**	1	--	**68**	1	--	**67**	2	--	**66**	3	--	65	4	--	64	5	2	62	7	2	59	10	2						
BR-444	BNB No. 2	Residential	7	Atlantic Boulevard	65	65	**66**	1	1	B(67)	A/E	**66**	0	--	65	1	--	64	2	--	63	3	--	61	5	7	58	8	7	56	10	7	55	11	7						
BR-445	BNB No. 2	Residential	12	Atlantic Boulevard	53	54	55	1	1	B(67)	--	54	1	--	54	1	--	53	2	--	53	2	--	53	2	--	53	2	--	53	2	--	53	2	--						
BR-446	BNB No. 2	Residential	6	Atlantic Boulevard	65	65	**66**	1	1	B(67)	A/E	**66**	0	--	65	1	--	64	2	--	64	2	--	62	4	--	61	5	6	60	6	6	60	6	6						
BR-447	BNB No. 2	Residential	6	Atlantic Boulevard	**66**	**67**	**67**	0	1	B(67)	A/E	65	2	--	65	2	--	64	3	--	61	6	6	59	8	6	58	9	6	57	10	6	56	11	6						
BR-448	BNB No. 2	Residential	6	De La Fuente Street	59	59	60	1	1	B(67)	--	59	1	--	59	1	--	58	2	--	58	2	--	58	2	--	57	3	--	57	3	--	57	3	--						
BR-449	BNB No. 2	Residential	3	Atlantic Boulevard	**68**	**68**	**69**	1	1	B(67)	A/E	**67**	2	--	**66**	3	--	64	5	3	62	7	3	60	9	3	60	9	3	58	11	3	57	12	3						
BR-450	BNB No. 1	Residential	12	Atlantic Boulevard[6]	**67**	**68**	**69**	1	2	B(67)	A/E	**66**	3	--	65	4	--	60	9	12	58	11	12	57	12	12	56	13	12	55	14	12	55	14	12						
BR-451	BNB No. 1	Residential	7	De La Fuente Street	61	61	62	1	1	B(67)	--	59	3	--	59	3	--	58	4	--	58	4	--	58	4	--	58	4	--	58	4	--	58	4	--						
BR-452		Commercial	1	Atlantic Boulevard	71	71	72	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-453		Residential	7	De La Fuente Street	61	61	62	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-454		Commercial	1	Atlantic Boulevard	69	69	71	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-455		Commercial	1	Atlantic Boulevard	70	70	72	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-456		Residential	11	De La Fuente Street	57	57	59	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-457		Commercial	1	Atlantic Boulevard	71	71	73	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-458		Residential	5	De La Fuente Street	60	60	61	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-459		Commercial	1	Atlantic Boulevard	69	69	71	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-460		Residential	8	De La Fuente Street	60	60	61	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-461		Commercial	1	Atlantic Boulevard	68	68	70	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-462		Residential	5	De La Fuente Street	62	62	63	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-463		Commercial	1	Atlantic Boulevard	67	67	69	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-464		Residential	12	De La Fuente Street	63	63	64	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-465		Commercial	1	Atlantic Boulevard	68	68	69	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-466		Residential	6	De La Fuente Street	61	61	63	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-467		Church	1	Atlantic Boulevard	69	69	71	2	2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.11:
Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative[1]

Receptor No.	BNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$				Activity Category (NAC)	Impact Type[3,4]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																									
						2035 Noise Levels						6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
						Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
BR-468		Residential	3	Atlantic Boulevard	**67**	**67**	**68**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-469		Residential	6	Atlantic Boulevard	63	63	63	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-470		Residential	3	Atlantic Boulevard	54	54	56	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-471		Residential	6	Atlantic Boulevard	56	56	58	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-472		Residential	1	Atlantic Boulevard	52	52	53	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-473		Residential	9	Atlantic Boulevard	**69**	**69**	**70**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-474		Residential	12	Atlantic Boulevard	**69**	**69**	**70**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-475		Residential	4	El Repetto Drive	53	54	55	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-476		Residential	2	El Repetto Drive	56	56	57	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-477		Residential	5	El Repetto Drive	**66**	**66**	**67**	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-478		Residential	3	El Repetto Drive	56	56	57	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-479		Residential	2	El Repetto Drive	59	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-480		Church	1	Atlantic Boulevard	64	64	65	1	1	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-481		Commercial	1	Atlantic Boulevard	66	66	67	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-482		Residential	1	Brightwood Street	62	63	64	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-483		Commercial	1	Atlantic Boulevard	64	65	66	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-484		Commercial	1	Atlantic Boulevard	69	69	69	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-485		Restaurant	1	Atlantic Boulevard	69	70	69	-1	0	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-486		Commercial	1	Atlantic Boulevard	72	73	73	0	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-487		Residential	3	1st Street	65	65	65	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-488		Commercial	1	Atlantic Boulevard	75	75	77	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-489		Commercial	1	Atlantic Boulevard	70	70	72	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-490		Restaurant	1	Atlantic Boulevard	62	62	62	0	0	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-491		Commercial	1	Atlantic Boulevard	67	68	69	1	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-492		Residential	12	Woods Avenue	59	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-493		Commercial	1	Atlantic Boulevard	68	68	69	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-494		Residential	10	Woods Avenue	58	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-495		Residential	10	Woods Avenue	57	57	58	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-496		Commercial	1	Atlantic Boulevard	68	68	69	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-497		Commercial	1	Atlantic Boulevard	61	62	62	0	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-498		Residential	21	Woods Avenue	55	55	56	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-499		Restaurant	1	Atlantic Boulevard	63	64	65	1	2	B(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-500		Residential	1	Woods Avenue	54	55	56	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-501		Residential	10	Woods Avenue	54	54	55	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-502		Residential	9	Woods Avenue	53	54	55	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-503		Commercial	1	Atlantic Boulevard	65	65	66	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-504		Residential	19	Woods Avenue	57	57	58	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-505		Commercial	1	Atlantic Boulevard	69	69	70	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BR-506		Commercial	1	Atlantic Boulevard	64	64	64	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Source: *Noise Study Report* (2014).
[1] Refer to Figure 3.14-3 for the locations of the BRT Alternative improvements and receptors.
[2] Numbers in **bold** represent noise levels that approach or exceed the NAC.
[3] A dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.
[4] *Italics* indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.
[5] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).
[6] Receptor represents a second-story balcony.

A/E = Approach or Exceed
BNB = BRT Noise Barrier
BRT = Bus Rapid Transit
dBA = A-weighted decibels
dBA $L_{eq}(h)$ = equivalent continuous sound level measured per hour in A-weighted decibels
NAC = Noise Abatement Criteria

TABLE 3.14.12:
Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative (Alternate Barriers)[1]

Receptor No.	BNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level (dBA $L_{eq}(h)$)[2]	Future Worst-Hour Noise Levels (dBA $L_{eq}(h)$)						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																							
						2035 Noise Level						6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
						Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category	Impact Type[3,4]	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
BR-443	BNB No. 3	Residential	2	Atlantic Boulevard	**68**	**68**	**69**	1	1	B(67)	A/E	58[4]	11	2	56	13	2	55	14	2	55	14	2	54	15	2	54	15	2	53	16	2	53	16	2
BR-444	BNB No. 3	Residential	7	Atlantic Boulevard	65	65	**66**	1	1	B(67)	A/E	57	9	7	56	10	7	56	10	7	55	11	7	55	11	7	55	11	7	54	12	7	54	12	7
BR-445	BNB No. 3	Residential	12	Atlantic Boulevard	54	54	55	1	1	B(67)	--	54	1	--	54	1	--	54	1	--	54	1	--	54	1	--	54	1	--	54	1	--	54	1	--
BR-446	BNB No. 3	Residential	6	Atlantic Boulevard	65	65	**66**	1	1	B(67)	A/E	59	7	6	58	8	6	58	8	6	57	9	6	57	9	6	57	9	6	57	9	6	57	9	6
BR-447	BNB No. 3	Residential	6	Atlantic Boulevard	**66**	**67**	**67**	0	1	B(67)	A/E	58	9	6	57	10	6	56	11	6	55	12	6	55	12	6	55	12	6	55	12	6	55	12	6
BR-448	BNB No. 3	Residential	6	De La Fuente Street	59	59	60	1	1	B(67)	--	58	2	--	58	2	--	58	2	--	58	2	--	58	2	--	58	2	--	58	2	--	58	2	--
BR-449	BNB No. 3	Residential	3	Atlantic Boulevard	**68**	**68**	**69**	1	1	B(67)	A/E	59	10	3	56	13	3	55	14	3	55	14	3	54	15	3	54	15	3	54	15	3	54	15	3

Source: *Noise Study Report* (2014).
[1] Refer to Figure 3.14-3 for the locations of the BRT Alternative improvements and receptors.
[2] Numbers in **bold** represent noise levels that approach or exceed the NAC.
[3] A dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.
[4] *Italics* indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.
[5] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).
A/E = Approach or Exceed
BNB = BRT Noise Barrier
BRT = Bus Rapid Transit
dBA = A-weighed decibels
dBA $L_{eq}(h)$ = equivalent continuous sound level measured in A-weighted decibels
NAC = Noise Abatement Criteria

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TABLE 3.14.13:
Existing Land Uses in the Vicinity of the LRT Alternative

LRT Alignment Segment	Description of Existing Land Uses in the Vicinity of the Improvement
LRT Alignment between 3rd Street and SR 60	Land uses along this segment of the LRT Alternative include single-family and multifamily residences, and commercial uses. Under FTA criteria, the single-family and multifamily residences are the noise sensitive uses considered for abatement.
LRT Alignment between SR 60 and Floral Drive	Land uses along this segment of the LRT Alternative include single-family and multifamily residences, a learning facility, an active park, and office and commercial uses. Under FTA criteria, the single-family and multifamily residences, and the learning facility are the noise sensitive uses considered for abatement.
LRT Alignment between Mednik Avenue and I-710	Land uses along this segment of the LRT Alternative include single-family and multifamily residences, and office and commercial uses. Under FTA criteria, the single-family residences and multifamily residences are the noise sensitive uses considered for abatement.
LRT Alignment along I-710 South of I-10	Land uses along this segment of the LRT Alternative include single-family residences, a golf course, and office and commercial uses. Under FTA criteria, the single-family residences are the noise sensitive uses considered for abatement.
LRT Alignment along I-710 Between I-10 and Hellman Avenue	Land uses in this area include single-family and multifamily residences, and a university (California State University, Los Angeles). Under FTA criteria, all these land uses are noise sensitive uses considered for abatement.
LRT Alignment along I-710 between Hellman Avenue and Valley Boulevard	Land uses along this segment of the LRT Alternative include single-family and multifamily residences. Under FTA criteria, all these residences are noise sensitive uses considered for abatement.

Source: *Noise Study Report* (2014).
FTA = Federal Transit Administration
I-10 = Interstate 10
I-710 = Interstate 710
LRT = Light Rail Transit
SR 60 = State Route 60

TABLE 3.14.14:
Light Rail Train Alternative Operations Noise Impact Analysis[1]

Receptor Location	Associated Measurement Location	Existing Noise Measurement (L_{eq})	Existing Noise Level (L_{dn})[2]	Distance to Tracks (ft)	Track Height Above Ground/ Receptor (ft)	Train Operations Noise Level (L_{dn})	Noise Exposure Increase (dBA)	No Impact, Moderate, or Severe[3]	Project Noise Exposure Producing No Impact (L_{dn})[3]	Proposed Barrier Height (ft)	Train Noise Level With Mitigation (dBA)	Noise Exposure Increase After Mitigation (dBA)
LR-1	LM-1	50.1	54.6	75	29	62.5	8.6	Severe	<55	6.0	53.4	2.4
LR-2	LM-1	50.1	54.6	210	29	56.2	3.9	Moderate	<55	4.0	50.8	1.5
LR-3	LM-2	61.5	63.1	90	20	66.4	5.0	Severe	<60	5.5	58.4	1.3
LR-4	LM-2	61.5	63.1	260	20	59.5	1.6	Moderate	<60	4.0	54.7	0.6
LR-5	LM-4	62.0	64.6	160	20	62.6	2.1	Moderate	<61	4.0	57.3	0.7
LR-6	LM-6	55.1	58.0	95	25.5	66.2	8.8	Severe	<57	9.5	55.8	2.1
LR-7[4]	LM-5	59.3	61.9	170	27	62.6	3.4	–	–	0.0	–	–
LR-8	LM-5	59.3	61.9	82	27	67.2	6.4	Severe	<59	7.0	57.7	1.4
LR-9	LM-7	57.1	60.0	355	27.5	58.0	2.1	Moderate	<58	4.0	53.4	0.9
LR-10	LM-8	63.0	65.6	70	28	68.2	4.5	Severe	<61	5.0	59.8	1.0
LR-11	LM-9	64.9	67.8	80	27	67.4	2.8	Moderate	<63	4.0	60.3	0.7
LR-12	LM-12	63.6	67.6	90	35	66.9	2.7	Moderate	<63	4.0	59.6	0.6
LR-13	LM-12	63.6	67.6	90	35	66.9	2.7	Moderate	<63	4.0	59.6	0.6
LR-14	LM-12	63.6	67.6	100	35	66.2	2.4	Moderate	<63	4.0	59.2	0.6
LR-15	LM-12	63.6	67.6	95	35	66.5	2.5	Moderate	<63	4.0	59.4	0.6
LR-16	LM-13	63.7	67.7	265	22	59.5	0.6	No Impact	<63	0.0	-	-
LR-17	FM-1	58.2	61.7	490	-18	53.7	0.6	No Impact	<59	0.0	-	-
LR-18	FM-4	62.8	67.0	835	50	55.3	0.3	No Impact	<63	0.0	-	-
LR-19	FM-5	59.9	64.4	710	38	54.9	0.5	No Impact	<61	0.0	-	-
LR-20	FM-6	57.4	61.9	400	68	60.8	2.5	Moderate	<59	4.0	55.4	0.9
LR-21	FM-7	61.4	65.9	275	47	61.1	1.2	Moderate	<62	4.0	55.5	0.4
LR-22	FM-8	58.1	61.8	210	22	61.0	2.6	Moderate	<59	4.0	55.9	1.0
LR-23	FM-9	66.0	69.7	155	0	62.0	0.7	No Impact	<65	0.0	-	-
LR-24	FM-10	73.3	77.0	105	0	64.8	0.3	No Impact	<66	0.0	-	-
LR-25	FM-12	59.5	63.3	400	0	55.2	0.6	No Impact	<60	0.0	-	-
LR-26	FM-19	62.3	76.7	360	0	55.9	0.0	No Impact	<66	0.0	-	-
LR-27	FM-20	68.0	71.4	190	0	60.5	0.3	No Impact	<66	0.0	-	-
LR-28	FM-22	55.5	58.9	690	0	51.2	0.7	No Impact	<58	0.0	-	-
LR-29	FM-23	55.2	58.1	530	0	53.1	1.2	No Impact	<57	0.0	-	-

Source: *Noise Study Report* (2014).

[1] Refer to Figure 3.14-4 for the locations of the LRT Alternative improvements and receptor locations.

[2] Short-term measurements LR-1 through LR-13 were converted to L_{dn} levels using LML1 as a reference daily level.
Short-term measurements LR-14 through LR-17 were converted to L_{dn} levels using LML2 as a reference daily level.
Short-term measurements LM-18 through LR-21 were converted to L_{dn} levels using FML1 as a reference daily level.
Short-term measurements LM-22 through LM-29 were converted to L_{dn} levels using LML2 as a reference daily level.

[3] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 3-1.

[4] Non-noise sensitive park. Level shown for reporting purposes only.

dBA = A-weighted decibels
ft = foot/feet
L_{dn} = day-night average noise level
L_{eq} = equivalent continuous noise level

TABLE 3.14.15:
Existing Land Uses in the Vicinity of the Freeway Tunnel Alternative

Location of Improvement	Description of Existing Land Uses in the Vicinity of the Improvement
Southeast quadrant of the SR 710 and I-10 interchange	Land uses in this area include single-family and multifamily residences, a golf course, and office and commercial uses. These land uses are 10 to 150 feet higher in elevation than SR 710 and range from the same grade as I-10 to 175 feet higher in elevation than I-10.
Northeast quadrant of the SR 710 and I-10 interchange south of Paseo Rancho Castilla/Hellman Avenue	Land uses in this area include single-family and multifamily residences. These land uses range from 15 feet lower in elevation than SR 710 to 40 feet higher in elevation than SR 710, and from 25 feet lower in elevation than I-10 to 50 feet higher in elevation than I-10.
SR 710 northbound side between Paseo Rancho Castilla/Hellman Avenue and Alhambra Avenue/ Mission Road	Land uses in this area include single-family residences and a commercial use (gas station). These land uses range from 5 feet lower in elevation than SR 710 to 45 feet higher in elevation than SR 710.
SR 710 southbound side between Paseo Rancho Castilla/Hellman Avenue and Alhambra Avenue/ Mission Road	Land uses in this area include single-family and multifamily residences. These land uses range from 5 feet lower in elevation than SR 710 to 30 feet higher in elevation than SR 710.
Northwest quadrant of the SR 710 and I-10 interchange south of Paseo Rancho Castilla/Hellman Avenue	Land uses in this area include multifamily residences, Cal State LA classrooms and sports fields, and commercial uses. These land uses are 30 to 95 feet higher in elevation than SR 710 and 35 to 50 feet higher in elevation than I-10.
Southwest quadrant of the SR 710 and I-10 interchange	Land uses in this area include single-family residences, police training areas, and office uses. These land uses are 50 to 210 feet higher in elevation than SR 710 and 95 to 170 feet higher in elevation than I-10.
SR 710 northbound side between Bellefontaine Street and Union Street	Land uses in this area include multifamily residences, a church with frequent outdoor human use areas, a hospital, vacant land, and commercial uses with and without frequent outdoor use areas. These land uses range from 5 feet lower in elevation than SR 710 to 30 feet higher in elevation than SR 710.
Southeast quadrant of the SR 710 and SR 134/I-210 interchange north of Union Street	Land uses in this area include commercial and office uses. These land uses are at the same grade as SR 710 and range from the same grade as I-210 to 20 feet higher in elevation than I-210.
Northeast quadrant of the SR 710 and SR 134/I-210 interchange west of Fair Oaks Avenue	Land uses in this area include single-family and multifamily residences, a school with an outdoor basketball court, and commercial uses. These land uses range from 10 to 35 feet higher in elevation than I-210.
I-210 southbound side between Walnut Street and Mountain Street	Land uses in this area include single-family and multifamily residences, and a school. These land uses are 14 to 50 feet higher in elevation than I-210 and 15 to 20 feet lower in elevation than SR 134.
SR 134 westbound side west of Orange Grove Boulevard	Land uses in this area include single-family and multifamily residences and commercial uses. These land uses range from 10 feet lower in elevation than SR 134 to 35 feet higher in elevation than SR 134.
Southwest quadrant of the SR 710 and SR 134/I-210 interchange north of Union Street	Land uses in this area include commercial uses. These land uses are 40 feet higher in elevation than SR 710, and range from 40 feet lower in elevation than SR 134 to 20 feet higher in elevation than SR 134.
SR 710 southbound side between Bellefontaine Street and Union Street	Land uses in this area include single-family and multifamily residences, two schools, a sports field, and a park. These land uses range from 5 feet lower in elevation than SR 710 to 40 feet higher in elevation than SR 710.

Source: *Noise Study Report* (2014).
Cal State LA = California State University, Los Angeles
I-10 = Interstate 10
I-210 = Interstate 210
SR 134 = State Route 134
SR 710 = State Route 710

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TABLE 3.14.16:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Single-Bore Design Variation[1]

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																														
							2035 Noise Levels						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																								
													6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
							Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category (NAC)	Impact Type[3,4]	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
FR-1		FTNB No. 1	Residential	1	Casuda Canyon Drive	63	63	65	2	2	B(67)	--	63	2	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--
FR-2		FTNB No. 1	Residential	1	Corporate Center Drive	**70**	**70**	**71**	1	1	B(67)	A/E	67	4	--	**67**	4	--	**67**	4	--	**67**	4	--	**66**	5	1	**66**	5	1	**66**	5	1	**66**	5	1
FR-3		FTNB No. 1	Golf Course	1	Ramona Boulevard	73	73	74	1	1	C(67)	*A/E*	73	1	--	73	1	--	73	1	--	73	1	--	73	1	--	73	1	--	73	1	--	73	1	--
FR-4			Commercial	1	Corporate Center Drive	80	80	81	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-5			Restaurant	1	Ramona Boulevard	68	68	69	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-6		FTNB No. 3A	Residential	3	Balzac Street	**69**	**69**	**69**	0	0	B(67)	A/E	64	5	3	63	6	3	62	7	3	61	8	3	60	9	3	59	10	3	58	11	3	58	11	3
FR-7		FTNB No. 3A	Residential	1	Capetown Avenue	64	64	**67**	3	3	B(67)	A/E	63	4	--	63	4	--	63	4	--	62	5	1	62	5	1	61	6	1	61	6	1	60	7	1
FR-8		FTNB No. 3A	Residential	1	Balzac Street	**68**	**68**	**71**	3	3	B(67)	A/E	61	10	1	59	12	1	58	13	1	57	14	1	57	14	1	57	14	1	56	15	1	56	15	1
FR-9		FTNB No. 3A	Residential	1	Balzac Street	**66**	**67**	**70**	3	4	B(67)	A/E	59	11	1	58	12	1	57	13	1	56	14	1	55	15	1	55	15	1	55	15	1	54	16	1
FR-10		FTNB No. 3A	Residential	2	Balzac Street	65	65	**69**	4	4	B(67)	A/E	62	7	2	60	9	2	59	10	2	58	11	2	57	12	2	57	12	2	56	13	2	56	13	2
FR-11		FTNB No. 3A	Residential	2	Balzac Street	64	65	**68**	3	4	B(67)	A/E	63	5	2	61	7	2	61	7	2	60	8	2	60	8	2	59	9	2	59	9	2	58	10	2
FR-12		FTNB No. 3A	Residential	3	Capetown Avenue	62	62	**66**	4	4	B(67)	A/E	62	4	--	62	4	--	61	5	3	61	5	3	60	6	3	59	7	3	58	8	3	58	8	3
FR-13		FTNB No. 3A	Residential	3	Capetown Avenue	61	61	**66**	5	5	B(67)	A/E	58	8	3	56	10	3	55	11	3	54	12	3	54	12	3	53	13	3	53	13	3	53	13	3
FR-14		FTNB No. 3A	Residential	2	Julep Place	64	65	**69**	4	5	B(67)	A/E	**68**	1	--	**68**	1	--	**67**	2	--	**67**	2	--	**66**	3	--	**66**	3	--	65	4	--	63	6	2
FR-15		FTNB No. 3A	Residential	2	Charnwood Avenue	64	65	**69**	4	5	B(67)	A/E	61	8	2	60	9	2	60	9	2	59	10	2	58	11	2	57	12	2	56	13	2	55	14	2
FR-16		FTNB No. 3A	Residential	3	Charnwood Avenue	59	59	64	5	5	B(67)	--	60	4	--	58	6	3	57	7	3	56	8	3	55	9	3	54	10	3	54	10	3	54	10	3
FR-17		FTNB No. 3A	Residential	3	Charnwood Avenue	**66**	**66**	**69**	3	3	B(67)	A/E	64	5	3	62	7	3	60	9	3	59	10	3	58	11	3	57	12	3	57	12	3	56	13	3
FR-18	EFTW No. 4		Residential	3	Charnwood Avenue	62	63	**68**	5	6	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-19	EFTW No. 4		Residential	3	Charnwood Avenue	65	65	**70**	5	5	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-20	EFTW No. 4		Residential	3	Charnwood Avenue	61	62	**66**	4	5	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-21			Residential	2	Hellman Avenue	63	63	**68**	5	5	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-22			Residential	4	Charnwood Avenue	60	60	65	5	5	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-23			Residential	5	Charnwood Avenue	56	56	58	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-24		FTNB No. 5	Residential	1	Charnwood Avenue	64	64	**68**	4	4	B(67)	A/E	65	3	--	64	4	--	64	4	--	64	4	--	63	5	1	63	5	1	63	5	1	63	5	1
FR-25		FTNB No. 5	Residential	3	Charnwood Avenue	**70**	**70**	**75**	5	5	B(67)	A/E	**67**	8	3	65	10	3	63	12	3	62	13	3	61	14	3	60	15	3	60	15	3	59	16	3
FR-26		FTNB No. 5	Residential	2	Charnwood Avenue	**71**	**71**	**76**	5	5	B(67)	A/E	**66**	10	2	63	13	2	61	15	2	60	16	2	59	17	2	58	18	2	57	19	2	57	19	2
FR-27		FTNB No. 5	Residential	6	Charnwood Avenue	56	57	59	2	3	B(67)	--	57	2	--	57	2	--	56	3	--	55	4	--	55	4	--	54	5	6	54	5	6	53	6	6
FR-28		FTNB No. 5	Residential	3	Charnwood Avenue	62	63	65	2	3	B(67)	--	63	2	--	62	3	--	61	4	--	59	6	3	58	7	3	58	7	3	57	8	3	57	8	3
FR-29		FTNB No. 5	Residential	4	Westmont Drive	63	64	65	1	2	B(67)	A/E	63	2	--	62	3	--	61	4	--	60	5	4	58	7	4	58	7	4	57	8	4	57	8	4
FR-30		FTNB No. 5	Residential	3	Charnwood Avenue	63	64	**66**	2	3	B(67)	A/E	65	1	--	63	3	--	62	4	--	61	5	3	60	6	3	59	7	3	58	8	3	58	8	3
FR-31		FTNB No. 5	Residential	3	Westmont Drive	65	**66**	**67**	1	2	B(67)	A/E	65	2	--	64	3	--	62	5	3	61	6	3	60	7	3	59	8	3	58	9	3	58	9	3
FR-32		FTNB No. 5	Residential	3	Westmont Drive	61	62	**66**	4	5	B(67)	A/E	65	1	--	64	2	--	63	3	--	63	3	--	62	4	--	62	4	--	60	6	3	59	7	3
FR-33		FTNB No. 5	Residential	2	Westmont Drive	**70**	**71**	**73**	2	3	B(67)	A/E	**67**	6	2	**66**	7	2	65	8	2	64	9	2	63	10	2	62	11	2	61	12	2	60	13	2
FR-34		FTNB No. 5	Residential	3	Westmont Drive	**68**	**68**	**75**	7	7	B(67)	A/E	63	12	3	62	13	3	61	14	3	60	15	3	59	16	3	59	16	3	58	17	3	57	18	3
FR-35		FTNB No. 5	Residential	3	Westmont Drive	**67**	**67**	**70**	3	3	B(67)	A/E	63	7	3	62	8	3	61	9	3	61	9	3	60	10	3	60	10	3	59	11	3	58	12	3
FR-36		FTNB No. 5	Residential	4	Westmont Drive	63	64	65	1	2	B(67)	--	60	5	4	59	6	4	58	7	4	57	8	4	57	8	4	56	9	4	55	10	4	55	10	4
FR-37		FTNB No. 5	Residential	2	Westmont Drive	65	**66**	64	-2	-1	B(67)	--	59	5	2	58	6	2	57	7	2	57	7	2	56	8	2	56	8	2	55	9	2	55	9	2
FR-38		FTNB No. 5	Residential	2	Westmont Drive	65	65	**67**	2	2	B(67)	--	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--
FR-39			Residential	2	Westmont Drive	65	65	**66**	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-40			Commercial	1	Valley Boulevard	68	68	69	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-41			Residential	4	Westmont Drive	60	60	64	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-42			Residential	5	Westmont Drive	57	57	61	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-43			Residential	5	Westmont Drive	55	56	59	3	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-44			Residential	3	Westmont Drive	55	55	58	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-45			Residential	3	Front Street	60	60	61	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-46			Residential	1	Valley Boulevard	64	64	65	1	1	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-47		FTNB No. 7	Residential	1	Highbury Avenue	**68**	**68**	**73**	5	5	B(67)	A/E	**73**	0	--	**73**	0	--	**73**	0	--	**72**	1	--	**72**	1	--	**68**	5	1	**65**	8	1	63	10	1
FR-48		FTNB No. 7	Residential	4	Highbury Avenue	**68**	**68**	**73**	5	5	B(67)	A/E	**72**	1	--	**71**	2	--	**70**	3	--	**67**	6	4	65	8	4	64	9	4	62	11	4	61	12	4
FR-49		FTNB No. 7	Residential	4	Highbury Avenue	**67**	**68**	**74**	6	7	B(67)	A/E	**68**	6	4	**66**	8	4	65	9	4	64	10	4	63	11	4	62	12	4	62	12	4	61	13	4
FR-50		FTNB No. 8	Residential	2	Highbury Avenue	**68**	**69**	**74**	5	6	B(67)	A/E	**67**	7	2	65	9	2	64	10	2	62	11	2	61	13	2	60	14	2	59	15	2	58	16	2
FR-51		FTNB No. 8	Residential	4	Highbury Avenue	**70**	**71**	**74**	3	4	B(67)	A/E	**66**	8	4	63	11	4	61	13	4	60	14	4	59	15	4	58	16	4	57	17	4	57	17	4
FR-52			Residential	5	Highbury Avenue	55	55	59	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.16:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Single-Bore Design Variation[1]

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$						Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																							
							2035 Noise Levels				Activity Category (NAC)	Impact Type[3,4]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																							
													6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
							Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
FR-53			Residential	1	Paseo Rancho Casilla	58	58	62	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-54			Classrooms	1	Circle Drive	56	56	60	4	4	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-55			Sports Field	1	Circle Drive	57	57	59	2	2	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-56			Office	1	Center Plaza Drive	**74**	**74**	**74**	0	0	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-57			Office	1	Center Plaza Drive	62	63	64	1	2	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-58			Police Training	1	Sheriff Road	66	66	67	1	1	C(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-59			Hospital	1	California Boulevard	53	53	52	-1	-1	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-60			Commercial	1	Pasadena Avenue	62	62	62	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-61			Commercial	1	Pasadena Avenue	56	56	55	-1	-1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-62			Church Recreational	1	Pasadena Avenue	59	60	60	0	1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-63			Restaurant	1	Pasadena Avenue	58	58	58	0	0	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-64			Commercial	1	Pasadena Avenue	63	63	63	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-65			Commercial	1	Pasadena Avenue	70	70	66	-4	-4	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-66			Commercial	1	Pasadena Avenue	67	68	67	-1	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-67			Commercial	1	Pasadena Avenue	64	64	63	-1	-1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-68			Residential	1	Pasadena Avenue	64	65	**67**	2	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-69			Residential	1	Pasadena Avenue	61	62	65	3	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-70			Vacant	1	Pasadena Avenue	59	59	67	8	8	G	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-71			Commercial	1	Pasadena Avenue	66	66	69	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-72		FTNB No. 9	Restaurant	1	Colorado Boulevard	66	66	69	3	3	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-73			Office	1	Pasadena Avenue	66	66	69	3	3	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-74			Office	1	Walnut Street	66	67	67	0	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-75		FTNB No. 10	Residential	6	Cypress Avenue	**70**	**71**	**71**	0	1	B(67)	A/E	--	--	--	**66**	5	6	64	7	6	63	8	6	62	9	6	61	10	6	61	10	6	60	11	6
FR-76	EFTW No. 8	FTNB No. 10	Residential	2	Orange Grove Place	65	**66**	**66**	0	1	B(67)	A/E	--	--	--	64	2	--	63	3	--	62	4	--	61	5	2	61	5	2	60	6	2	60	6	2
FR-77	EFTW No. 8	FTNB No. 10	Residential	4	Cypress Avenue	**67**	**67**	**67**	0	0	B(67)	A/E	--	--	--	**67**	0	--	64	3	--	63	4	--	62	5	4	61	6	4	61	6	4	60	7	4
FR-78	EFTW No. 8	FTNB No. 10	Residential	2	Orange Grove Place	**66**	**67**	**67**	0	1	B(67)	A/E	--	--	--	65	2	--	63	4	--	62	5	2	62	5	2	61	6	2	60	7	2	60	7	2
FR-79	EFTW No. 8	FTNB No. 10	Residential	4	Orange Grove Place	65	65	**66**	1	1	B(67)	A/E	--	--	--	65	1	--	63	3	--	62	4	--	62	4	--	61	5	4	60	6	4	60	6	4
FR-80	EFTW No. 8	FTNB No. 10	Residential	4	Orange Grove Place	**73**	**73**	**75**	2	2	B(67)	A/E	--	--	--	**70**	5	4	**66**	9	4	64	11	4	63	12	4	62	13	4	61	14	4	60	15	4
FR-81	EFTW No. 8	FTNB No. 10	Residential	1	Orange Grove Place	63	64	64	0	1	B(67)	--	--	--	--	64	0	--	63	1	--	62	2	--	62	2	--	61	3	--	60	4	--	60	4	--
FR-82	EFTW No. 8	FTNB No. 10	Residential	3	Orange Grove Place	62	62	63	1	1	B(67)	--	--	--	--	62	1	--	62	1	--	61	2	--	60	3	--	60	3	--	59	4	--	59	4	--
FR-83	EFTW No. 8	FTNB No. 10	Residential	4	Orange Grove Place	63	64	65	1	2	B(67)	--	--	--	--	64	1	--	64	1	--	63	2	--	63	2	--	62	3	--	62	3	--	62	3	--
FR-84	EFTW No. 8	FTNB No. 10	Residential	3	Orange Grove Place	65	65	**66**	1	1	B(67)	A/E	--	--	--	**66**	0	--	**66**	0	--	**66**	0	--	65	1	--	65	1	--	65	1	--	65	1	--
FR-85	EFTW No. 9	FTNB No. 11	School	1	Orange Grove Boulevard	**66**	**67**	**68**	1	2	C(67)/D(52)	A/E	--	--	--	**67**	1	--	**66**	2	--	65	3	--	65	3	--	64	4	--	63	5	1	63	5	1
FR-86	EFTW No. 9	FTNB No. 11	Residential	1	Cypress Avenue	57	58	59	1	2	B(67)	--	--	--	--	59	0	--	58	1	--	58	1	--	58	1	--	58	1	--	58	1	--	58	1	--
FR-87	EFTW No. 9	FTNB No. 11	Residential	3	Cypress Avenue	58	59	60	1	2	B(67)	--	--	--	--	59	1	--	59	1	--	59	1	--	59	1	--	59	1	--	59	1	--	59	1	--
FR-88	EFTW No. 9	FTNB No. 11	Residential	3	Cypress Avenue	61	62	63	1	2	B(67)	--	--	--	--	62	1	--	62	1	--	62	1	--	61	2	--	61	2	--	61	2	--	61	2	--
FR-89	EFTW No. 9	FTNB No. 11	Residential	3	Cypress Avenue	64	64	**66**	2	2	B(67)	A/E	--	--	--	65	1	--	64	2	--	63	3	--	62	4	--	62	4	--	61	5	3	61	5	3
FR-90	EFTW No. 9	FTNB No. 11	Residential	3	Cypress Avenue	65	**66**	**67**	1	2	B(67)	A/E	--	--	--	**66**	1	--	65	2	--	64	3	--	63	4	--	63	4	--	62	5	3	61	6	3
FR-91	EFTW No. 9	FTNB No. 11	Residential	2	Cypress Avenue	**68**	**68**	**69**	1	1	B(67)	--	--	--	--	67	2	--	65	4	--	64	5	2	63	6	2	62	7	2	61	8	2	61	8	2
FR-92	EFTW No. 9	FTNB No. 11	Residential	3	Cypress Avenue	**66**	**67**	**68**	1	2	B(67)	A/E	--	--	--	69	2	--	68	3	--	67	4	--	66	5	3	65	6	3	65	6	3	64	7	3
FR-93	EFTW No. 9	FTNB No. 11	Residential	2	Cypress Avenue	**69**	**69**	**70**	1	1	B(67)	A/E	--	--	--	69	1	--	69	1	--	69	1	--	68	2	--	68	2	--	68	2	--	68	2	--
FR-94	EFTW No. 9	FTNB No. 11	Residential	1	Cypress Avenue	**71**	**72**	**72**	0	1	B(67)	A/E	--	--	--	71	1	--	71	1	--	71	1	--	71	1	--	70	2	--	70	2	--	70	2	--
FR-95	EFTW No. 9	FTNB No. 11	Residential	1	Cypress Avenue	**70**	**71**	**72**	1	2	B(67)	A/E	--	--	--	71	0	--	71	0	--	71	0	--	71	0	--	71	0	--	70	1	--	70	1	--
FR-96	EFTW No. 10	FTNB No. 12	Residential	3	Lincoln Avenue	**70**	**70**	**71**	1	1	B(67)	A/E	--	--	--	70	1	--	68	3	--	67	4	--	66	5	3	65	6	3	65	6	3	64	7	3
FR-97	EFTW No. 10	FTNB No. 12	Residential	2	Lincoln Avenue	**68**	**69**	**69**	0	1	B(67)	A/E	--	--	--	68	1	--	67	2	--	66	3	--	65	4	--	65	4	--	64	5	2	64	5	2
FR-98	EFTW No. 10	FTNB No. 12	Residential	1	Lincoln Avenue	**68**	**69**	**70**	1	2	B(67)	A/E	--	--	--	69	1	--	69	1	--	68	2	--	67	3	--	67	3	--	66	4	--	66	4	--
FR-99		FTNB No. 13A	Residential	1	Cypress Avenue	62	63	64	1	2	B(67)	--	64	0	--	64	0	--	64	0	--	64	0	--	64	0	--	64	0	--	64	0	--	64	0	--
FR-100		FTNB No. 13A	Residential	6	Winona Avenue	63	64	64	0	1	B(67)	--	63	1	--	63	1	--	63	1	--	63	1	--	63	1	--	63	1	--	63	1	--	63	1	--
FR-101		FTNB No. 13A	Residential	1	Winona Avenue	61	62	63	1	2	B(67)	--	62	0	--	62	0	--	62	0	--	62	0	--	62	0	--	62	0	--	62	0	--	62	0	--
FR-102		FTNB No. 13A	Residential	3	Winona Avenue	**67**	**67**	**68**	1	1	B(67)	A/E	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--
FR-103		FTNB No. 13A	Residential	2	Mayview Lane	64	65	**67**	2	3	B(67)	A/E	**67**	0	--	**66**	1	--	**66**	1	--	**66**	1	--	**66**	1	--	**66**	1	--	**66**	1	--	**66**	1	--

TABLE 3.14.16:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Single-Bore Design Variation[1]

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																																	
							2035 Noise Levels						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																											
													6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
							Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category (NAC)	Impact Type[3,4]	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
FR-104		FTNB No. 13A	Residential	3	Mayview Lane	**70**	**71**	**72**	1	2	B(67)	A/E	**70**	2	--	**70**	2	--	**70**	2	--	**70**	2	--	**70**	2	--	**70**	2	--	**70**	2	--	**70**	2	--
FR-105		FTNB No. 13A	Residential	2	Pasadena Avenue	**72**	**73**	**74**	1	2	B(67)	A/E	**72**	2	--	**72**	2	--	**71**	3	--	**71**	3	--	**71**	3	--	**71**	3	--	**71**	3	--	**71**	3	--
FR-106		FTNB No. 13A	Residential	1	Pasadena Avenue	64	65	**69**	4	5	B(67)	A/E	**68**	1	--	**67**	2	--	**67**	2	--	**67**	2	--	**67**	2	--	**67**	2	--	**67**	2	--	**67**	2	--
FR-107		FTNB No. 13A	Residential	1	Rosewood Lane	62	62	64	2	2	B(67)	--	63	1	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--
FR-108		FTNB No. 13A	Residential	2	Pasadena Avenue	**68**	**69**	**71**	2	3	B(67)	A/E	**68**	3	--	**68**	3	--	**67**	4	--	**67**	4	--	**67**	4	--	**67**	4	--	**67**	4	--	**67**	4	--
FR-109		FTNB No. 13A	Residential	2	Rosewood Lane	63	64	65	1	2	B(67)	A/E	63	2	--	63	2	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--
FR-110		FTNB No. 13A	Residential	1	Longwood Lane	**70**	**71**	**73**	2	3	B(67)	A/E	**70**	3	--	**70**	3	--	**70**	3	--	**70**	3	--	**69**	4	--	**69**	4	--	**69**	4	--	**69**	4	--
FR-111		FTNB No. 13A	Residential	2	Orange Grove Boulevard	**66**	**66**	**67**	1	1	B(67)	A/E	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--
FR-112		FTNB No. 13A	Residential	2	Prospect Boulevard	**66**	**67**	**68**	1	2	B(67)	A/E	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--
FR-113			Residential	3	Pasadena Avenue	**69**	**69**	**70**	1	1	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-114		FTNB No. 14	Residential	1	Orange Grove Boulevard	**67**	**67**	**68**	1	1	B(67)	--	**67**	1	--	**67**	1	--	**67**	1	--	**67**	1	--	**67**	1	--	**67**	1	--	**67**	1	--	**66**	2	--
FR-115		FTNB No. 14	School	1	Pasadena Avenue	**66**	**66**	**67**	1	1	C(67)/D(52)	A/E	64	3	--	62	5	1	61	6	1	60	7	1	60	7	1	59	8	1	59	8	1	58	9	1
FR-116		FTNB No. 15	Residential	1	Walnut Street	**69**	**69**	**69**	0	0	B(67)	A/E	65	4	--	61	8	1	59	10	1	58	11	1	57	12	1	56	13	1	55	14	1	54	15	1
FR-117		FTNB No. 15	Residential	1	Walnut Street	**69**	**69**	**69**	0	0	B(67)	A/E	**69**	0	--	**69**	0	--	**68**	1	--	65	4	--	63	6	1	62	7	1	62	7	1	61	8	1
FR-118			Commercial	1	Saint John Avenue	63	63	63	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-119			Commercial	1	Saint John Avenue	64	64	67	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-120			Residential	1	Saint John Avenue	61	61	**68**	7	7	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-121			Church	1	Saint John Avenue	61	61	69	8	8	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-122			School	1	Saint John Avenue	54	54	56	2	2	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-123			Sports Field	1	Saint John Avenue	53	53	53	0	0	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-124			School	1	Saint John Avenue	66	66	58	-8	-8	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-125			Residential	1	Waverly Drive	58	58	56	-2	-2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-126			Residential	1	Waverly Drive	58	58	57	-1	-1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-127			Residential	4	Gordon Terrace	57	57	57	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-128			Residential	2	Gordon Terrace	57	57	58	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-129			Residential	1	Bellevue Drive	57	57	57	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-130			Residential	1	Palmetto Drive	56	57	56	-1	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-131			Residential	2	Palmetto Drive	55	56	55	-1	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-132	EFTW No. 15		Residential	1	Palmetto Drive	53	54	53	-1	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-133			Residential	1	California Boulevard	**68**	**68**	**67**	-1	-1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-134			School	1	Pasadena Avenue	64	64	61	-3	-3	C(67)/D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-135			School Playground	1	Pasadena Avenue	57	57	57	0	0	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-136			Residential	1	California Boulevard	59	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-137			Residential	1	California Boulevard	53	53	53	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Source: *Noise Study Report* (2014).

[1] Refer to Figure 3.14-5 for the locations of the Freeway Tunnel Alternative improvements (single-bore design variation), the receptors, and existing sound walls.

[2] Numbers in **bold** represent noise levels that approach or exceed the NAC.

[3] A dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.

[4] *Italics* indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.

[5] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

A/E = Approach or Exceed
dBA = A-weighed decibels
dBA $L_{eq}(h)$ = equivalent continuous sound level per hour measured in A-weighted decibels
EFTW = Existing Freeway Tunnel Wall
FTNB = Freeway Tunnel Noise Barrier
NAC = Noise Abatement Criteria

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TABLE 3.14.17:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Single-Bore Design Variation (Alternate Barriers)[1]

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																													
							2035 Noise Levels						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																							
													6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
							Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category (NAC)	Impact Type[3,4]	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
FR-1		FTNB No. 2	Residential	1	Casuda Canyon Drive	63	63	65	2	2	B(67)	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--
FR-2		FTNB No. 2	Residential	1	Corporate Center Drive	**70**	**70**	**71**	1	1	B(67)	A/E	**66**	5	1	65	6	1	65	6	1	65	6	1	65	6	1	65	6	1	65	6	1	65	6	1
FR-6		FTNB No. 3B	Residential	3	Balzac Street	**69**	**69**	**69**	0	0	B(67)	A/E	64	5	3	64	5	3	64	5	3	64	5	3	64	5	3	64	5	3	64	5	3	64	5	3
FR-7		FTNB No. 3B	Residential	1	Capetown Avenue	64	64	**67**	3	3	B(67)	A/E	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--
FR-8		FTNB No. 3B	Residential	1	Balzac Street	**68**	**68**	**71**	3	3	B(67)	A/E	61	10	1	61	10	1	61	10	1	61	10	1	61	10	1	61	10	1	61	10	1	61	10	1
FR-9		FTNB No. 3B	Residential	1	Balzac Street	**66**	**67**	**70**	3	4	B(67)	A/E	59	11	1	58	12	1	57	13	1	56	14	1	55	15	1	55	15	1	55	15	1	54	16	1
FR-10		FTNB No. 3B	Residential	2	Balzac Street	65	65	**69**	4	4	B(67)	A/E	62	7	2	60	9	2	59	10	2	58	11	2	57	12	2	57	12	2	56	13	2	56	13	2
FR-11		FTNB No. 3B	Residential	2	Balzac Street	64	65	**68**	3	4	B(67)	A/E	63	5	2	61	7	2	61	7	2	60	8	2	60	8	2	59	9	2	59	9	2	58	10	2
FR-12		FTNB No. 3B	Residential	3	Capetown Avenue	62	62	**66**	4	4	B(67)	A/E	62	4	--	62	4	--	61	5	3	61	5	3	60	6	3	59	7	3	58	8	3	58	8	3
FR-13		FTNB No. 3B	Residential	3	Capetown Avenue	61	61	**66**	5	5	B(67)	A/E	57	9	3	56	10	3	55	11	3	54	12	3	54	12	3	53	13	3	53	13	3	53	13	3
FR-14		FTNB No. 3B	Residential	2	Julep Place	64	65	**69**	4	5	B(67)	A/E	**68**	1	--	**68**	1	--	**67**	2	--	**67**	2	--	**66**	3	--	**66**	3	--	65	4	--	63	6	2
FR-15		FTNB No. 3B	Residential	2	Charnwood Avenue	64	65	**69**	4	5	B(67)	A/E	61	8	2	60	9	2	59	10	2	59	10	2	58	11	2	56	13	2	56	13	2	55	14	2
FR-16		FTNB No. 3B	Residential	3	Charnwood Avenue	59	59	64	5	5	B(67)	--	60	4	--	58	6	3	57	7	3	56	8	3	55	9	3	54	10	3	54	10	3	54	10	3
FR-17		FTNB No. 3B	Residential	3	Charnwood Avenue	**66**	**66**	**69**	3	3	B(67)	A/E	64	5	3	62	7	3	60	9	3	59	10	3	58	11	3	57	12	3	57	12	3	56	13	3
FR-18	EFTW No. 4	FTNB No. 3B	Residential	3	Charnwood Avenue	62	63	**68**	5	6	B(67)	A/E	63	6	3	62	7	3	61	8	3	60	9	3	59	10	3	58	10	3	58	10	3	57	11	3
FR-19	EFTW No. 4	FTNB No. 3B	Residential	3	Charnwood Avenue	65	65	**70**	5	5	B(67)	A/E	64	6	3	64	6	3	63	7	3	62	8	3	61	9	3	61	9	3	59	11	3	58	12	3
FR-20	EFTW No. 4	FTNB No. 3B	Residential	3	Charnwood Avenue	61	62	**66**	4	5	B(67)	A/E	63	3	--	63	3	--	63	3	--	63	3	--	62	4	--	62	4	--	62	4	--	62	4	--
FR-21		FTNB No. 3B	Residential	2	Hellman Avenue	63	63	**68**	5	5	B(67)	A/E	63	5	2	63	5	2	63	5	2	63	5	2	63	5	2	63	5	2	63	5	2	62	6	2
FR-22		FTNB No. 3B	Residential	4	Charnwood Avenue	60	60	65	5	5	B(67)	--	63	2	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--	61	4	--
FR-47		FTNB No. 6 S	Residential	1	Highbury Avenue	**68**	**68**	**73**	5	5	B(67)	A/E	--	--	--	**73**	0	--	**72**	1	--	**72**	1	--	**71**	2	--	**70**	3	--	**69**	4	--	**68**	5	1
FR-48		FTNB No. 6 S	Residential	4	Highbury Avenue	**68**	**68**	**73**	5	5	B(67)	A/E	--	--	--	**73**	0	--	**73**	0	--	**72**	1	--	**72**	1	--	**71**	2	--	**70**	3	--	**70**	3	--
FR-49		FTNB No. 6 S	Residential	4	Highbury Avenue	**67**	**68**	**74**	6	7	B(67)	A/E	--	--	--	**74**	0	--	**74**	0	--	**74**	0	--	**73**	1	--	**72**	2	--	**72**	2	--	**72**	2	--
FR-50		FTNB No. 6 S	Residential	2	Highbury Avenue	**68**	**69**	**74**	5	6	B(67)	A/E	--	--	--	**73**	1	--	**73**	2	--	**72**	2	--	**72**	2	--	**72**	2	--	**71**	3	--	**71**	3	--
FR-51		FTNB No. 6 S	Residential	4	Highbury Avenue	**70**	**71**	**74**	3	4	B(67)	A/E	--	--	--	**72**	2	--	**72**	2	--	**72**	2	--	**71**	3	--	**71**	3	--	**70**	4	--	**69**	5	4
FR-99		FTNB No. 13B	Residential	1	Cypress Avenue	62	63	64	1	2	B(67)	--	--	--	--	--	--	--	63	1	--	63	1	--	63	1	--	63	1	--	63	1	--	63	1	--
FR-100		FTNB No. 13B	Residential	6	Winona Avenue	63	64	64	0	1	B(67)	--	--	--	--	--	--	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--
FR-101		FTNB No. 13B	Residential	1	Winona Avenue	61	62	63	1	2	B(67)	--	--	--	--	--	--	--	61	1	--	61	1	--	61	1	--	61	1	--	61	1	--	61	1	--
FR-102		FTNB No. 13B	Residential	3	Winona Avenue	**67**	**67**	**68**	1	1	B(67)	A/E	--	--	--	--	--	--	**67**	0	--	**66**	1	--	65	2	--	64	3	--	63	4	--	62	5	3
FR-103		FTNB No. 13B	Residential	2	Mayview Lane	64	65	**67**	2	3	B(67)	A/E	--	--	--	--	--	--	**66**	1	--	65	2	--	65	2	--	64	3	--	64	3	--	64	3	--
FR-104		FTNB No. 13B	Residential	3	Mayview Lane	**70**	**71**	**72**	1	2	B(67)	A/E	--	--	--	--	--	--	**67**	5	3	65	7	3	64	8	3	63	9	3	63	9	3	62	10	3
FR-105		FTNB No. 13B	Residential	2	Pasadena Avenue	**72**	**73**	**74**	1	2	B(67)	A/E	--	--	--	--	--	--	**67**	7	2	**66**	8	2	65	9	2	64	10	2	63	11	2	63	11	2
FR-106		FTNB No. 13B	Residential	1	Pasadena Avenue	64	65	**69**	4	5	B(67)	A/E	--	--	--	--	--	--	**67**	2	--	**67**	2	--	**67**	2	--	**67**	2	--	**67**	2	--	**66**	3	--
FR-107		FTNB No. 13B	Residential	1	Rosewood Lane	62	62	64	2	2	B(67)	--	--	--	--	--	--	--	62	2	--	62	2	--	62	2	--	62	2	--	61	3	--	61	3	--
FR-108		FTNB No. 13B	Residential	2	Pasadena Avenue	**68**	**69**	**71**	2	3	B(67)	A/E	--	--	--	--	--	--	**67**	4	--	**67**	4	--	**67**	4	--	**67**	4	--	**67**	4	--	**66**	5	2
FR-109		FTNB No. 13B	Residential	2	Rosewood Lane	63	64	65	1	2	B(67)	A/E	--	--	--	--	--	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--	61	4	--

TABLE 3.14.17:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Single-Bore Design Variation (Alternate Barriers)[1]

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																																
							2035 Noise Levels						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																										
													6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
							Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category (NAC)	Impact Type[3,4]	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
FR-110		FTNB No. 13B	Residential	1	Longwood Lane	**70**	**71**	**73**	2	3	B(67)	A/E	--	--	--	--	--	--	**70**	3	--	**70**	3	--	**69**	4	--	**69**	4	--	**69**	4	--	**69**	4	--
FR-111		FTNB No. 13B	Residential	2	Orange Grove Boulevard	**66**	**66**	**67**	1	1	B(67)	A/E	--	--	--	--	--	--	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--
FR-112		FTNB No. 13B	Residential	2	Prospect Boulevard	**66**	**67**	**68**	1	2	B(67)	A/E	--	--	--	--	--	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--

Source: *Noise Study Report* (2014).
[1] Refer to Figure 3.14-5 for the locations of the Freeway Tunnel Alternative improvements (single-bore design variation), the receptors, and existing sound walls.
[2] Numbers in **bold** represent noise levels that approach or exceed the NAC.
[3] a dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.
[4] *Italics* indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.
[5] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).
A/E = Approach or Exceed
dBA = A-weighed decibels
dBA $L_{eq}(h)$ = equivalent continuous sound level per hour measured in A-weighted decibels
EFTW = Existing Freeway Tunnel Wall
FTNB = Freeway Tunnel Noise Barrier
NAC = Noise Abatement Criteria

TABLE 3.14.18:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Dual-Bore Design Variation[1]

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																												
							2035 Noise Levels				Activity Category (NAC)	Impact Type[3,4]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																					
													6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
							Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
FR-1		FTNB No. 1	Residential	1	Casuda Canyon Drive	63	63	65	2	2	B(67)	--	63	2	--	63	2	--	63	2	--	63	2	--	63	2	--	63	2	--	63	2	--	63	2	--
FR-2		FTNB No. 1	Residential	1	Corporate Center Drive	**70**	**70**	**72**	2	2	B(67)	A/E	**69**	3	--	**69**	3	--	**68**	4	--	**68**	4	--	**68**	4	--	**68**	4	--	**68**	4	--	**68**	4	--
FR-3		FTNB No. 1	Golf Course	1	Ramona Boulevard	73	73	75	2	2	C(67)	*A/E*	74	1	--	74	1	--	74	1	--	74	1	--	74	1	--	74	1	--	74	1	--	74	1	--
FR-4			Commercial	1	Corporate Center Drive	80	80	81	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-5			Restaurant	1	Ramona Boulevard	68	68	70	2	2	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-6		FTNB No. 3A	Residential	3	Balzac Street	**69**	**69**	**71**	2	2	B(67)	A/E	65	6	3	64	7	3	63	8	3	62	9	3	62	9	3	61	10	3	60	11	3	60	11	3
FR-7		FTNB No. 3A	Residential	1	Capetown Avenue	64	64	**70**	6	6	B(67)	A/E	**66**	4	--	65	5	1	64	6	1	64	6	1	63	7	1	63	7	1	62	8	1	62	8	1
FR-8		FTNB No. 3A	Residential	1	Balzac Street	**68**	**68**	**73**	5	5	B(67)	A/E	63	10	1	61	12	1	60	13	1	59	14	1	59	14	1	58	15	1	58	15	1	57	16	1
FR-9		FTNB No. 3A	Residential	1	Balzac Street	**66**	**67**	**72**	5	6	B(67)	A/E	61	11	1	59	13	1	58	14	1	58	14	1	57	15	1	56	16	1	56	16	1	56	16	1
FR-10		FTNB No. 3A	Residential	2	Balzac Street	65	65	**72**	7	7	B(67)	A/E	65	7	2	63	9	2	61	11	2	60	12	2	59	13	2	59	13	2	58	14	2	58	14	2
FR-11		FTNB No. 3A	Residential	2	Balzac Street	64	65	**71**	6	7	B(67)	A/E	65	6	2	63	8	2	62	9	2	62	9	2	61	10	2	61	10	2	60	11	2	60	11	2
FR-12		FTNB No. 3A	Residential	3	Capetown Avenue	62	62	**69**	7	7	B(67)	A/E	65	4	--	65	4	--	64	5	3	64	5	3	63	6	3	62	7	3	61	8	3	60	9	3
FR-13		FTNB No. 3A	Residential	3	Capetown Avenue	61	61	**70**	9	9	B(67)	A/E	60	10	3	58	12	3	57	13	3	56	14	3	55	15	3	55	15	3	54	16	3	54	16	3
FR-14		FTNB No. 3A	Residential	2	Julep Place	64	65	**72**	7	8	B(67)	A/E	**71**	1	--	**71**	1	--	**71**	1	--	**70**	2	--	**70**	2	--	**69**	3	--	**68**	4	--	**66**	6	2
FR-15		FTNB No. 3A	Residential	2	Charnwood Avenue	64	65	**72**	7	8	B(67)	A/E	65	7	2	64	8	2	63	9	2	61	11	2	60	12	2	59	13	2	58	14	2	57	15	2
FR-16		FTNB No. 3A	Residential	3	Charnwood Avenue	59	59	**67**	8	8	B(67)	A/E	63	4	--	62	5	3	60	7	3	59	8	3	58	9	3	57	10	3	56	11	3	56	11	3
FR-17		FTNB No. 3A	Residential	3	Charnwood Avenue	**66**	**66**	**72**	6	6	B(67)	A/E	**66**	6	3	65	7	3	64	8	3	63	9	3	61	11	3	60	12	3	60	12	3	59	13	3
FR-18	EFTW No. 4		Residential	3	Charnwood Avenue	62	63	**70**	7	8	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-19	EFTW No. 4		Residential	3	Charnwood Avenue	65	65	**73**	8	8	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-20	EFTW No. 4		Residential	3	Charnwood Avenue	61	62	**69**	7	8	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-21			Residential	2	Hellman Avenue	63	63	**71**	8	8	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-22			Residential	4	Charnwood Avenue	60	60	**68**	8	8	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-23			Residential	5	Charnwood Avenue	56	56	62	6	6	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-24		FTNB No. 5	Residential	1	Charnwood Avenue	64	64	**72**	8	8	B(67)	A/E	**68**	4	--	**68**	4	--	**68**	4	--	**68**	4	--	**68**	4	--	**68**	4	--	**68**	4	--	**68**	4	--
FR-25		FTNB No. 5	Residential	3	Charnwood Avenue	**70**	**70**	**77**	7	7	B(67)	A/E	**72**	5	3	**72**	5	3	**72**	5	3	**72**	5	3	**72**	5	3	**72**	5	3	**72**	5	3	**72**	5	3
FR-26		FTNB No. 5	Residential	2	Charnwood Avenue	**71**	**71**	**78**	7	7	B(67)	A/E	**68**	10	2	65	13	2	63	15	2	62	16	2	61	17	2	60	18	2	59	19	2	59	19	2
FR-27		FTNB No. 5	Residential	6	Charnwood Avenue	56	57	63	6	7	B(67)	--	62	1	--	61	2	--	61	2	--	60	3	--	59	4	--	58	5	6	58	5	6	57	6	6
FR-28		FTNB No. 5	Residential	3	Charnwood Avenue	62	63	**68**	5	6	B(67)	A/E	**67**	1	--	**66**	2	--	65	3	--	64	4	--	63	5	3	62	6	3	61	7	3	60	8	3
FR-29		FTNB No. 5	Residential	4	Westmont Drive	63	64	**70**	6	7	B(67)	A/E	**69**	1	--	**68**	2	--	**67**	3	--	65	5	4	63	7	4	62	8	4	61	9	4	61	9	4
FR-30		FTNB No. 5	Residential	3	Charnwood Avenue	63	64	**69**	5	6	B(67)	A/E	**68**	1	--	**67**	2	--	**66**	3	--	65	4	--	64	5	3	63	6	3	62	7	3	61	8	3
FR-31		FTNB No. 5	Residential	3	Westmont Drive	65	**66**	**72**	6	7	B(67)	A/E	**70**	2	--	**69**	3	--	**68**	4	--	**68**	4	--	65	7	3	64	8	3	63	9	3	62	10	3
FR-32		FTNB No. 5	Residential	3	Westmont Drive	61	62	**68**	6	7	B(67)	A/E	**67**	1	--	**67**	1	--	**66**	2	--	**66**	2	--	65	3	--	65	3	--	64	4	--	63	5	3
FR-33		FTNB No. 5	Residential	2	Westmont Drive	**70**	**71**	**77**	6	7	B(67)	A/E	**69**	8	2	**68**	9	2	**67**	10	2	**66**	11	2	65	12	2	64	13	2	63	14	2	62	15	2
FR-34		FTNB No. 5	Residential	3	Westmont Drive	**68**	**68**	**78**	10	10	B(67)	A/E	65	13	3	64	14	3	63	15	3	62	16	3	61	17	3	61	17	3	60	18	3	59	19	3
FR-35		FTNB No. 5	Residential	3	Westmont Drive	**67**	**67**	**73**	6	6	B(67)	A/E	**66**	7	3	65	8	3	64	9	3	63	10	3	62	11	3	62	11	3	61	12	3	60	13	3
FR-36		FTNB No. 5	Residential	4	Westmont Drive	63	64	**68**	4	5	B(67)	A/E	62	6	4	61	7	4	60	8	4	59	9	4	58	10	4	57	11	4	56	12	4	56	12	4
FR-37		FTNB No. 5	Residential	2	Westmont Drive	65	**66**	**67**	1	2	B(67)	A/E	61	6	2	60	7	2	59	8	2	58	9	2	58	9	2	57	10	2	56	11	2	56	11	2
FR-38		FTNB No. 5	Residential	2	Westmont Drive	65	65	**67**	2	2	B(67)	A/E	61	6	2	61	6	2	60	7	2	60	7	2	60	7	2	60	7	2	59	8	2	59	8	2
FR-39			Residential	2	Westmont Drive	65	65	64	-1	-1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-40			Commercial	1	Valley Boulevard	68	68	69	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-41			Residential	4	Westmont Drive	60	60	65	5	5	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-42			Residential	5	Westmont Drive	57	57	64	7	7	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-43			Residential	5	Westmont Drive	55	56	62	6	7	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-44			Residential	3	Westmont Drive	55	55	61	6	6	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-45			Residential	3	Front Street	60	60	63	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-46			Residential	1	Valley Boulevard	64	64	**66**	2	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-47		FTNB No. 7	Residential	1	Highbury Avenue	**68**	**68**	**74**	6	6	B(67)	A/E	**74**	0	--	**74**	0	--	**74**	0	--	**74**	0	--	**72**	2	--	**68**	6	1	**66**	8	1	65	9	1
FR-48		FTNB No. 7	Residential	4	Highbury Avenue	**68**	**68**	**75**	7	7	B(67)	A/E	**74**	1	--	**73**	2	--	**71**	4	--	**68**	7	4	**66**	9	4	65	10	4	64	11	4	63	12	4
FR-49		FTNB No. 7	Residential	4	Highbury Avenue	**67**	**68**	**77**	9	10	B(67)	A/E	**70**	7	4	**67**	10	4	**66**	11	4	65	12	4	63	14	4	61	16	4	60	17	4	58	19	4
FR-50		FTNB No. 8	Residential	2	Highbury Avenue	**68**	**69**	**77**	8	9	B(67)	A/E	**70**	7	2	**69**	8	2	**67**	10	2	66	11	2	65	12	2	64	13	2	63	14	2	63	14	2
FR-51		FTNB No. 8	Residential	4	Highbury Avenue	**70**	**71**	**78**	7	8	B(67)	A/E	**70**	8	4	**67**	11	4	65	13	4	63	15	4	62	16	4	62	16	4	61	17	4	61	17	4
FR-52			Residential	5	Highbury Avenue	55	55	62	7	7	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3.14.18:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Dual-Bore Design Variation[1]

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																							
							2035 Noise Levels				Activity Category (NAC)	Impact Type[3,4]	6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
							Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
FR-53			Residential	1	Paseo Rancho Casilla	58	58	69	11	11	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-54			Classrooms	1	Circle Drive	56	56	63	7	7	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-55			Sports Field	1	Circle Drive	57	57	62	5	5	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-56			Office	1	Center Plaza Drive	**74**	**74**	**75**	1	1	E(72)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-57			Office	1	Center Plaza Drive	62	63	65	2	3	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-58			Police Training	1	Sheriff Road	66	66	68	2	2	C(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-59			Hospital	1	California Boulevard	53	53	53	0	0	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-60			Commercial	1	Pasadena Avenue	62	62	61	-1	-1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-61			Commercial	1	Pasadena Avenue	56	56	55	-1	-1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-62			Church Recreational	1	Pasadena Avenue	59	60	60	0	1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-63			Restaurant	1	Pasadena Avenue	58	58	58	0	0	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-64			Commercial	1	Pasadena Avenue	63	63	63	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-65			Commercial	1	Pasadena Avenue	70	70	66	-4	-4	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-66			Commercial	1	Pasadena Avenue	67	68	67	-1	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-67			Commercial	1	Pasadena Avenue	64	64	62	-2	-2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-68			Residential	1	Pasadena Avenue	64	65	**69**	4	5	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-69			Residential	1	Pasadena Avenue	61	62	**67**	5	6	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-70			Vacant	1	Pasadena Avenue	59	59	68	9	9	G	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-71			Commercial	1	Pasadena Avenue	66	66	73	7	7	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-72		FTNB No. 9	Restaurant	1	Colorado Boulevard	66	66	**72**	6	6	E(72)	A/E	65	7	1	64	8	1	62	10	1	61	11	1	60	12	1	59	13	1	58	14	1	58	14	1
FR-73			Office	1	Pasadena Avenue	66	66	72	6	6	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-74			Office	1	Walnut Street	66	67	68	1	2	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-75		FTNB No. 10	Residential	6	Cypress Avenue	**70**	**71**	**73**	2	3	B(67)	A/E	--	--	--	**67**	6	6	65	8	6	64	9	6	63	10	6	62	11	6	62	11	6	61	12	6
FR-76	EFTW No. 8	FTNB No. 10	Residential	2	Orange Grove Place	65	**66**	**67**	1	2	B(67)	A/E	--	--	--	65	2	--	64	3	--	63	4	--	62	5	2	62	5	2	61	6	2	61	6	2
FR-77	EFTW No. 8	FTNB No. 10	Residential	4	Cypress Avenue	**67**	**67**	**68**	1	1	B(67)	A/E	--	--	--	**68**	0	--	65	3	--	64	4	--	63	5	4	63	5	4	62	6	4	62	6	4
FR-78	EFTW No. 8	FTNB No. 10	Residential	2	Orange Grove Place	**66**	**67**	**68**	1	2	B(67)	A/E	--	--	--	**66**	2	--	65	3	--	64	4	--	63	5	2	62	6	2	62	6	2	61	7	2
FR-79	EFTW No. 8	FTNB No. 10	Residential	4	Orange Grove Place	65	65	**67**	2	2	B(67)	A/E	--	--	--	**66**	1	--	64	3	--	64	3	--	63	4	--	62	5	4	62	5	4	61	6	4
FR-80	EFTW No. 8	FTNB No. 10	Residential	4	Orange Grove Place	**73**	**73**	**76**	3	3	B(67)	A/E	--	--	--	**71**	5	4	**67**	9	4	65	11	4	64	12	4	63	13	4	62	14	4	61	15	4
FR-81	EFTW No. 8	FTNB No. 10	Residential	1	Orange Grove Place	63	64	**66**	2	3	B(67)	--	--	--	--	65	1	--	65	1	--	64	2	--	63	3	--	62	4	--	62	4	--	61	5	1
FR-82	EFTW No. 8	FTNB No. 10	Residential	3	Orange Grove Place	62	62	64	2	2	B(67)	--	--	--	--	64	0	--	63	1	--	62	2	--	62	2	--	61	3	--	61	3	--	61	3	--
FR-83	EFTW No. 8	FTNB No. 10	Residential	4	Orange Grove Place	63	64	**66**	2	3	B(67)	A/E	--	--	--	**66**	0	--	65	1	--	65	1	--	64	2	--	64	2	--	63	3	--	63	3	--
FR-84	EFTW No. 8	FTNB No. 10	Residential	3	Orange Grove Place	65	65	**67**	2	2	B(67)	A/E	--	--	--	**67**	0	--	**67**	0	--	**67**	0	--	**66**	1	--	**66**	1	--	**66**	1	--	**66**	1	--
FR-85	EFTW No. 9	FTNB No. 11	School	1	Orange Grove Boulevard	**66**	**67**	**70**	3	4	C(67)/D(52)	A/E	--	--	--	**68**	2	--	**67**	3	--	**67**	3	--	**66**	4	--	65	5	1	65	5	1	64	6	1
FR-86	EFTW No. 9	FTNB No. 11	Residential	1	Cypress Avenue	57	58	61	3	4	B(67)	--	--	--	--	60	1	--	60	1	--	59	2	--	59	2	--	59	2	--	59	2	--	59	2	--
FR-87	EFTW No. 9	FTNB No. 11	Residential	3	Cypress Avenue	58	59	61	2	3	B(67)	--	--	--	--	61	0	--	60	1	--	60	1	--	60	1	--	60	1	--	60	1	--	60	1	--
FR-88	EFTW No. 9	FTNB No. 11	Residential	3	Cypress Avenue	61	62	65	3	4	B(67)	--	--	--	--	64	1	--	63	2	--	63	2	--	63	2	--	62	3	--	62	3	--	62	3	--
FR-89	EFTW No. 9	FTNB No. 11	Residential	3	Cypress Avenue	64	64	**67**	3	3	B(67)	A/E	--	--	--	**66**	1	--	65	2	--	65	2	--	64	3	--	63	4	--	63	4	--	62	5	3
FR-90	EFTW No. 9	FTNB No. 11	Residential	3	Cypress Avenue	65	**66**	**68**	2	3	B(67)	A/E	--	--	--	**67**	1	--	**66**	2	--	65	3	--	65	3	--	64	4	--	63	5	3	63	5	3
FR-91	EFTW No. 9	FTNB No. 11	Residential	2	Cypress Avenue	**68**	**68**	**71**	3	3	B(67)	A/E	--	--	--	68	3	--	66	5	2	65	6	2	64	7	2	63	8	2	63	8	2	62	9	2
FR-92	EFTW No. 9	FTNB No. 11	Residential	3	Cypress Avenue	**66**	**67**	**69**	2	3	B(67)	A/E	--	--	--	70	2	--	69	3	--	68	4	--	67	5	3	67	5	3	66	6	3	65	7	3
FR-93	EFTW No. 9	FTNB No. 11	Residential	2	Cypress Avenue	**69**	**69**	**72**	3	3	B(67)	A/E	--	--	--	70	1	--	70	1	--	70	1	--	70	1	--	69	2	--	69	2	--	69	2	--
FR-94	EFTW No. 9	FTNB No. 11	Residential	1	Cypress Avenue	**71**	**72**	**74**	2	3	B(67)	A/E	--	--	--	73	0	--	72	1	--	72	1	--	72	1	--	72	1	--	72	1	--	72	1	--
FR-95	EFTW No. 9	FTNB No. 11	Residential	1	Cypress Avenue	**70**	**71**	**73**	2	3	B(67)	A/E	--	--	--	72	1	--	72	1	--	72	1	--	72	1	--	72	1	--	72	1	--	72	1	--
FR-96	EFTW No. 10	FTNB No. 12	Residential	3	Lincoln Avenue	**70**	**70**	**73**	3	3	B(67)	A/E	--	--	--	71	2	--	70	3	--	68	5	3	67	6	3	67	6	3	66	7	3	66	7	3
FR-97	EFTW No. 10	FTNB No. 12	Residential	2	Lincoln Avenue	**68**	**69**	**71**	2	3	B(67)	A/E	--	--	--	70	1	--	69	2	--	68	3	--	67	4	--	67	4	--	67	4	--	67	4	--
FR-98	EFTW No. 10	FTNB No. 12	Residential	1	Lincoln Avenue	**68**	**69**	**71**	2	3	B(67)	A/E	--	--	--	71	0	--	70	1	--	69	2	--	69	2	--	69	2	--	68	3	--	68	3	--
FR-99		FTNB No. 13A	Residential	1	Cypress Avenue	62	63	**66**	3	4	B(67)	A/E	66	0	--	66	0	--	66	0	--	66	0	--	66	0	--	66	0	--	66	0	--	66	0	--
FR-100		FTNB No. 13A	Residential	6	Winona Avenue	63	64	**66**	2	3	B(67)	--	65	0	--	65	0	--	65	0	--	65	0	--	65	0	--	65	0	--	65	0	--	65	0	--
FR-101		FTNB No. 13A	Residential	1	Winona Avenue	61	62	64	2	3	B(67)	--	64	0	--	64	0	--	64	0	--	64	0	--	64	0	--	64	0	--	64	0	--	64	0	--
FR-102		FTNB No. 13A	Residential	3	Winona Avenue	**67**	**67**	**69**	2	2	B(67)	A/E	69	0	--	69	0	--	69	0	--	69	0	--	69	0	--	69	0	--	69	0	--	69	0	--
FR-103		FTNB No. 13A	Residential	2	Mayview Lane	64	65	**68**	3	4	B(67)	A/E	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--

TABLE 3.14.18:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Dual-Bore Design Variation[1]

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																													
							2035 Noise Levels				Activity Category (NAC)	Impact Type[3,4]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5]																							
													6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
							Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
FR-104		FTNB No. 13A	Residential	3	Mayview Lane	**70**	**71**	**73**	2	3	B(67)	A/E	**68**	5	3	**68**	5	3	**68**	5	3	**68**	5	3	**68**	5	3	**68**	5	3	**68**	5	3	**68**	5	3
FR-105		FTNB No. 13A	Residential	2	Pasadena Avenue	**72**	**73**	**75**	2	3	B(67)	A/E	**72**	3	--	**72**	3	--	**72**	3	--	**72**	3	--	**72**	3	--	**72**	3	--	**72**	3	--	**72**	3	--
FR-106		FTNB No. 13A	Residential	1	Pasadena Avenue	64	65	**69**	4	5	B(67)	A/E	**69**	0	--	**69**	0	--	**69**	0	--	**69**	0	--	**69**	0	--	**69**	0	--	**69**	0	--	**69**	0	--
FR-107		FTNB No. 13A	Residential	1	Rosewood Lane	62	62	65	3	3	B(67)	--	65	0	--	65	0	--	65	0	--	65	0	--	65	0	--	65	0	--	65	0	--	65	0	--
FR-108		FTNB No. 13A	Residential	2	Pasadena Avenue	**68**	**69**	**72**	3	4	B(67)	A/E	64	8	2	63	9	2	63	9	2	63	9	2	63	9	2	63	9	2	63	9	2	63	9	2
FR-109		FTNB No. 13A	Residential	2	Rosewood Lane	63	64	**67**	3	4	B(67)	A/E	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--	**67**	0	--
FR-110		FTNB No. 13A	Residential	1	Longwood Lane	**70**	**71**	**74**	3	4	B(67)	A/E	**66**	8	1	**66**	8	1	65	9	1	65	9	1	65	9	1	65	9	1	65	9	1	65	9	1
FR-111		FTNB No. 13A	Residential	2	Orange Grove Boulevard	**66**	**66**	**68**	2	2	B(67)	A/E	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--
FR-112		FTNB No. 13A	Residential	2	Prospect Boulevard	**66**	**67**	**68**	1	2	B(67)	A/E	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--
FR-113			Residential	3	Pasadena Avenue	**69**	**69**	**72**	3	3	B(67)	A/E	69	3	--	69	3	--	68	4	--	68	4	--	68	4	--	68	4	--	68	4	--	68	4	--
FR-114			Residential	1	Orange Grove Boulevard	**67**	**67**	**69**	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-115		FTNB No. 14	School	1	Pasadena Avenue	**66**	**66**	**68**	2	2	C(67)/D(52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-116		FTNB No. 15	Residential	1	Walnut Street	**69**	**69**	**70**	1	1	B(67)	A/E	**66**	4	--	62	8	1	60	10	1	59	11	1	58	12	1	58	12	1	56	14	1	55	15	1
FR-117		FTNB No. 15	Residential	1	Walnut Street	**69**	**69**	**70**	1	1	B(67)	A/E	**70**	0	--	**70**	0	--	**69**	1	--	**66**	4	--	64	6	1	63	7	1	63	7	1	62	8	1
FR-118			Commercial	1	Saint John Avenue	63	63	65	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-119			Commercial	1	Saint John Avenue	64	64	71	7	7	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-120			Residential	1	Saint John Avenue	61	61	**70**	9	9	B(67)	*A/E*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-121			Church	1	Saint John Avenue	61	61	72	11	11	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-122			School	1	Saint John Avenue	54	54	59	5	5	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-123			Sports Field	1	Saint John Avenue	53	53	58	5	5	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-124			School	1	Saint John Avenue	66	66	64	-2	-2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-125			Residential	1	Waverly Drive	58	58	61	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-126			Residential	1	Waverly Drive	58	58	61	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-127			Residential	4	Gordon Terrace	57	57	60	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-128			Residential	2	Gordon Terrace	57	57	61	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-129			Residential	1	Bellevue Drive	57	57	60	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-130			Residential	1	Palmetto Drive	56	57	59	2	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-131			Residential	2	Palmetto Drive	55	56	58	2	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-132	EFTW No. 15		Residential	1	Palmetto Drive	53	54	53	-1	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-133			Residential	1	California Boulevard	**68**	**68**	65	-3	-3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-134			School	1	Pasadena Avenue	64	64	61	-3	-3	C(67)/D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-135			School Playground	1	Pasadena Avenue	57	57	56	-1	-1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-136			Residential	1	California Boulevard	59	59	57	-2	-2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-137			Residential	1	California Boulevard	53	53	52	-1	-1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Source: *Noise Study Report* (2014).
[1] Refer to Figure 3.14-6 for the locations of the Freeway Tunnel Alternative improvements (dual-bore design variation), the receptors, and existing sound walls.
[2] Numbers in **bold** represent noise levels that approach or exceed the NAC.
[3] A dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.
[4] *Italics* indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.
[5] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).
A/E = Approach or Exceed
dBA = A-weighed decibels
dBA $L_{eq}(h)$ = equivalent continuous sound level per hour measured in A-weighted decibels
EFTW = Existing Freeway Tunnel Wall
FTNB = Freeway Tunnel Noise Barrier
NAC = Noise Abatement Criteria

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TABLE 3.14.19:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Dual-Bore Design Variation (Alternate Barriers)[1]

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																												
							2035 Noise Levels						Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5,6]																							
													6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
							Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions	Activity Category (NAC)	Impact Type[3,4]	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
FR-1		FTNB No. 2	Residential	1	Casuda Canyon Drive	63	63	65	2	2	B(67)	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--
FR-2		FTNB No. 2	Residential	1	Corporate Center Drive	**70**	**70**	**72**	2	2	B(67)	A/E	**67**	5	1	**66**	6	1	**66**	6	1	**66**	6	1	**66**	6	1	**66**	6	1	**66**	6	1	**66**	6	1
FR-6		FTNB No. 3B	Residential	3	Balzac Street	**69**	**69**	**71**	2	2	B(67)	A/E	65	6	3	64	7	3	63	8	3	62	9	3	62	9	3	61	10	3	60	11	3	60	11	3
FR-7		FTNB No. 3B	Residential	1	Capetown Avenue	64	64	**70**	6	6	B(67)	A/E	**66**	4	--	65	5	1	64	6	1	64	6	1	63	7	1	63	7	1	62	8	1	62	8	1
FR-8		FTNB No. 3B	Residential	1	Balzac Street	**68**	**68**	**73**	5	5	B(67)	A/E	63	10	1	61	12	1	60	13	1	59	14	1	59	14	1	58	15	1	58	15	1	57	16	1
FR-9		FTNB No. 3B	Residential	1	Balzac Street	**66**	**67**	**72**	5	6	B(67)	A/E	61	11	1	59	13	1	58	14	1	58	14	1	57	15	1	56	16	1	56	16	1	56	16	1
FR-10		FTNB No. 3B	Residential	2	Balzac Street	65	65	**72**	7	7	B(67)	A/E	65	7	2	63	9	2	61	11	2	60	12	2	59	13	2	59	13	2	58	14	2	58	14	2
FR-11		FTNB No. 3B	Residential	2	Balzac Street	64	65	**71**	6	7	B(67)	A/E	65	6	2	63	8	2	62	9	2	62	9	2	61	10	2	61	10	2	60	11	2	60	11	2
FR-12		FTNB No. 3B	Residential	3	Capetown Avenue	62	62	**69**	7	7	B(67)	A/E	65	4	--	65	4	--	64	5	3	64	5	3	63	6	3	62	7	3	61	8	3	60	9	3
FR-13		FTNB No. 3B	Residential	3	Capetown Avenue	61	61	**70**	9	9	B(67)	A/E	**66**	4	--	65	5	3	64	6	3	63	7	3	63	7	3	61	9	3	61	9	3	60	10	3
FR-14		FTNB No. 3B	Residential	2	Julep Place	64	65	**72**	7	8	B(67)	A/E	**69**	3	--	**67**	5	2	**67**	5	2	**66**	6	2	64	8	2	63	9	2	62	10	2	61	11	2
FR-15		FTNB No. 3B	Residential	2	Charnwood Avenue	64	65	**72**	7	8	B(67)	A/E	**67**	5	2	**66**	6	2	**66**	6	2	64	8	2	63	9	2	62	10	2	61	11	2	61	11	2
FR-16		FTNB No. 3B	Residential	3	Charnwood Avenue	59	59	**67**	8	8	B(67)	A/E	65	2	--	64	3	--	63	4	--	62	5	3	61	6	3	61	6	3	60	7	3	60	7	3
FR-17		FTNB No. 3B	Residential	3	Charnwood Avenue	**66**	**66**	**72**	6	6	B(67)	A/E	**67**	5	3	**66**	6	3	64	8	3	63	9	3	63	9	3	62	10	3	62	10	3	61	11	3
FR-18	EFTW No. 4	FTNB No. 4	Residential	3	Charnwood Avenue	62	63	**70**	7	8	B(67)	A/E	**68**	2	--	**67**	3	--	**67**	3	--	**66**	4	--	65	5	3	65	5	3	65	5	3	65	5	3
FR-19	EFTW No. 4	FTNB No. 4	Residential	3	Charnwood Avenue	65	65	**73**	8	8	B(67)	A/E	**71**	2	--	**71**	2	--	**69**	4	--	**68**	5	3	**67**	6	3	65	8	3	64	9	3	63	10	3
FR-20	EFTW No. 4	FTNB No. 4	Residential	3	Charnwood Avenue	61	62	**69**	7	8	B(67)	A/E	**69**	0	--	**69**	0	--	**69**	0	--	**68**	1	--	**68**	1	--	**68**	1	--	**68**	1	--	**67**	2	--
FR-21		FTNB No. 4	Residential	2	Hellman Avenue	63	63	**71**	8	8	B(67)	A/E	**71**	0	--	**71**	0	--	**71**	0	--	**71**	0	--	**71**	0	--	**71**	0	--	**71**	0	--	**70**	1	--
FR-22		FTNB No. 4	Residential	4	Charnwood Avenue	60	60	**68**	8	8	B(67)	A/E	**68**	0	--	**67**	1	--	**67**	1	--	**67**	1	--	**67**	1	--	**66**	2	--	65	3	--	65	3	--
FR-47		FTNB No. 6 D	Residential	1	Highbury Avenue	**68**	**68**	**74**	6	6	B(67)	A/E	**73**	1	--	**72**	2	--	**70**	4	--	**68**	6	1	**67**	7	1	**65**	9	1	64	10	1	64	10	1
FR-48		FTNB No. 6 D	Residential	4	Highbury Avenue	**68**	**68**	**75**	7	7	B(67)	A/E	**74**	1	--	**73**	2	--	**71**	4	--	**79**	6	4	**67**	8	4	**66**	9	4	**65**	10	4	**64**	11	4
FR-49		FTNB No. 6 D	Residential	4	Highbury Avenue	**67**	**68**	**77**	9	10	B(67)	A/E	**77**	0	--	**76**	1	--	**74**	3	--	**73**	4	--	**72**	5	--	**71**	6	4	**68**	9	4	**66**	11	4
FR-50		FTNB No. 6 D	Residential	2	Highbury Avenue	**68**	**69**	**77**	8	9	B(67)	A/E	**77**	0	--	**74**	3	--	**73**	4	--	**70**	7	2	**67**	10	2	**66**	11	2	**65**	12	2	**64**	13	2
FR-51		FTNB No. 6 D	Residential	4	Highbury Avenue	**70**	**71**	**78**	7	8	B(67)	A/E	**72**	6	4	**70**	8	4	**68**	10	4	**67**	11	4	**66**	12	4	**66**	12	4	65	13	4	65	13	4
FR-99		FTNB No. 13B	Residential	1	Cypress Avenue	62	63	**66**	3	4	B(67)	A/E	--	--	--	--	--	--	65	1	--	65	1	--	65	1	--	65	1	--	65	1	--	65	1	--
FR-100		FTNB No. 13B	Residential	6	Winona Avenue	63	64	**66**	2	3	B(67)	--	--	--	--	--	--	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--
FR-101		FTNB No. 13B	Residential	1	Winona Avenue	61	62	64	2	3	B(67)	--	--	--	--	--	--	--	63	1	--	63	1	--	63	1	--	63	1	--	63	1	--	63	1	--
FR-102		FTNB No. 13B	Residential	3	Winona Avenue	**67**	**67**	**69**	2	2	B(67)	A/E	--	--	--	--	--	--	**68**	1	--	**67**	2	--	**66**	3	--	65	4	--	65	4	--	64	5	3
FR-103		FTNB No. 13B	Residential	2	Mayview Lane	64	65	**68**	3	4	B(67)	A/E	--	--	--	--	--	--	**67**	1	--	**67**	1	--	**66**	2	--	65	3	--	65	3	--	65	3	--
FR-104		FTNB No. 13B	Residential	3	Mayview Lane	**70**	**71**	**73**	2	3	B(67)	A/E	--	--	--	--	--	--	**68**	5	3	**66**	7	3	**66**	7	3	64	9	3	64	9	3	63	10	3
FR-105		FTNB No. 13B	Residential	2	Pasadena Avenue	**72**	**73**	**75**	2	3	B(67)	A/E	--	--	--	--	--	--	**68**	7	2	**67**	8	2	**66**	9	2	65	10	2	64	11	2	64	11	2
FR-106		FTNB No. 13B	Residential	1	Pasadena Avenue	64	65	**69**	4	5	B(67)	A/E	--	--	--	--	--	--	**68**	1	--	**68**	1	--	**67**	2	--	**67**	2	--	**67**	2	--	**67**	2	--
FR-107		FTNB No. 13B	Residential	1	Rosewood Lane	62	62	65	3	3	B(67)	--	--	--	--	--	--	--	63	2	--	63	2	--	63	2	--	63	2	--	62	3	--	62	3	--
FR-108		FTNB No. 13B	Residential	2	Pasadena Avenue	**68**	**69**	**72**	3	4	B(67)	A/E	--	--	--	--	--	--	**69**	3	--	**68**	4	--	**68**	4	--	**68**	4	--	**67**	5	2	**67**	5	2
FR-109		FTNB No. 13B	Residential	2	Rosewood Lane	63	64	**67**	3	4	B(67)	A/E	--	--	--	--	--	--	64	3	--	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--

TABLE 3.14.19:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Dual-Bore Design Variation (Alternate Barriers)[1]

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/ Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)$[2]	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																																
							2035 Noise Levels				Activity Category (NAC)	Impact Type[3,4]	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR)[2,5,6]																									
													6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
							Without Project[2]	With Project[2]	With Project Minus No Project Conditions	With Project Minus Existing Conditions			L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR	L_{eq} (h)	I.L.	NBR
FR-110		FTNB No. 13B	Residential	1	Longwood Lane	**70**	**71**	**74**	3	4	B(67)	A/E	--	--	--	--	--	--	**71**	3	--	**71**	3	--	**70**	4	--	**70**	4	--	**70**	4	--	**70**	4	--
FR-111		FTNB No. 13B	Residential	2	Orange Grove Boulevard	**66**	**66**	**68**	2	2	B(67)	A/E	--	--	--	--	--	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--
FR-112		FTNB No. 13B	Residential	2	Prospect Boulevard	**66**	**67**	**68**	1	2	B(67)	A/E	--	--	--	--	--	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--	**68**	0	--

Source: *Noise Study Report* (2014).
[1] Refer to Figure 3.14-6 for the locations of the Freeway Tunnel Alternative improvements (dual-bore design variation), the receptors, and existing sound walls.
[2] Numbers in **bold** represent noise levels that approach or exceed the NAC.
[3] A dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.
[4] *Italics* indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.
[5] Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).
A/E = Approach or Exceed
dBA = A-weighed decibels
dBA $L_{eq}(h)$ = equivalent continuous sound level per hour measured in A-weighted decibels
EFTW = Existing Freeway Tunnel Wall
FTNB = Freeway Tunnel Noise Barrier
NAC = Noise Abatement Criteria

TABLE 3.14.20:
Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels (dBA L_{max} at 50 ft)	Suggested Maximum Sound Levels for Analysis (dBA L_{max} at 50 ft)
Pile drivers	81–96	93
Rock drills	83–99	96
Jackhammers	75–85	82
Pneumatic tools	78–88	85
Pumps	74–84	80
Scrapers	83–91	87
Haul trucks	83–94	88
Cranes	79–86	82
Portable generators	71–87	80
Rollers	75–82	80
Dozers	77–90	85
Tractors	77–82	80
Front-end loaders	77–90	86
Hydraulic backhoe	81–90	86
Hydraulic excavators	81–90	86
Graders	79–89	86
Air compressors	76–89	86
Trucks	81–87	86

Source: *Noise Study Report* (2014).
dBA L_{max} = maximum instantaneous sound level measured in A-weighted decibels
ft = feet

TABLE 3.14-21:
Receptor Locations Where the Applicable Noise Abatement Criteria Would be Approached or Exceeded under the TSM/TDM Alternative

Improvement Name and No.	Receptor and Land Use Description	Noise Abatement Considered
Local Street Improvement L-3	**Receptor TR-22 (L3/TR-22):** This receptor location represents an existing swimming pool on the west side of Atlantic Boulevard. There are no existing walls that shield this area.	One noise barrier (TNB No. 1) was modeled along the property line to shield this residence.
	Receptor TR-34 (L3/TR-34): This receptor location represents an existing residence on Glendon Way on the west side of Atlantic Boulevard. There are no existing walls that shield this residence.	One noise barrier (TNB No. 2) was modeled along the property line to shield this residence.
Local Street Improvement L-5	**Receptor TR-33 (L5/TR-33):** This receptor location represents an existing residence on the west side of Rosemead Boulevard. There are no existing walls that shield this residence.	One noise barrier (TNB No. 1) was modeled along the property line to shield this residence.
Other Road Improvement T-1	**Receptors TR-6 (T1/TR-6) through TR-13 (T1/TR-13):** These receptor locations represent existing residences on the east side of SR 710. There are no existing walls that shield these residences.	One noise barrier (TNB No. 1) was modeled along the property line to shield these residences.
	Receptors TR-30 (T1/TR-30) through TR-36 (T1/TR-36): These receptor locations represent existing residences on the west side of SR 710. There are no existing walls that shield these residences.	Three noise barriers (TNB Nos. 2 through 4) were modeled along the edge of shoulder of SR 710 and the property lines to shield these residences. Two scenarios were analyzed: Scenario 1, which only includes modeled TNB No. 2, and Scenario 2, which includes modeled TNB Nos. 3 and 4.
Other Road Improvement T-2	**Receptors TR-1 (T2/TR-1) and TR-2 (T2/TR-2):** These receptor locations represent existing single-family and multifamily residences on the east side of SR 110. There are no existing walls that shield these residences.	One noise barrier (TNB No. 1) was modeled along the ROW/property line to shield these residences and multifamily residence balconies.
	Receptors TR-8 (T2/TR-8) through TR-14 (T2/TR-14): These receptor locations represent existing multifamily residences on the west side of SR 110. There are no existing walls that shield these residences.	One noise barrier (TNB No. 2) was modeled along the ROW/edge of roadway to shield the first, second, and third floor balconies of these multifamily residences.

Source: *Noise Study Report* (2014).
ROW = right of way
SR 110 = State Route 110
SR 710 = State Route 710
TDM = Transportation Demand Management
TNB = TSM/TDM Noise Barrier
TSM = Transportation System Management

TABLE 3.14.22:

Summary of Feasible Noise Barriers for the TSM/TDM Alternative

TSM/TDM Intersection ID No.	Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units[1]	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station No.	
								Begin	End
L-3	TNB No. 1	6	48	L3/TR-22	1	$55,000	$55,000	29+85	30+15
		8[2]		L3/TR-22	1	$55,000	$55,000		
		10		L3/TR-22	1	$55,000	$55,000		
		12		L3/TR-22	1	$55,000	$55,000		
		14		L3/TR-22	1	$55,000	$55,000		
		16		L3/TR-22	1	$55,000	$55,000		
		18		L3/TR-22	1	$55,000	$55,000		
		20		L3/TR-22	1	$55,000	$55,000		
	TNB No. 2	6	46	L3/TR-34	1	$55,000	$55,000	19+10	19+23
		8[2]		L3/TR-34	1	$55,000	$55,000		
		10		L3/TR-34	1	$55,000	$55,000		
		12		L3/TR-34	1	$55,000	$55,000		
		14		L3/TR-34	1	$55,000	$55,000		
		16		L3/TR-34	1	$55,000	$55,000		
		18		L3/TR-34	1	$55,000	$55,000		
		20		L3/TR-34	1	$55,000	$55,000		
L-5	TNB No. 1	6	202	L5/TR-33	2	$55,000	$110,000	30+18	30+23
		8		L5/TR-33	2	$55,000	$110,000		
		10[2]		L5/TR-33	2	$55,000	$110,000		
		12		L5/TR-33	2	$55,000	$110,000		
		14		L5/TR-33	2	$55,000	$110,000		
		16		L5/TR-33	2	$55,000	$110,000		
		18		L5/TR-33	2	$55,000	$110,000		
		20		L5/TR-33	2	$55,000	$110,000		
T-1	TNB No. 1	8	1247	T1/TR-7 to T1/TR-13	18	$55,000	$990,000	40+95	53+67
		10		T1/TR-7 to T1/TR-13	18	$55,000	$990,000		
		12		T1/TR-7 to T1/TR-13	18	$55,000	$990,000		
		14		T1/TR-7 to T1/TR-13	18	$55,000	$990,000		
		16[2]		T1/TR-7 to T1/TR-13	18	$55,000	$990,000		
		18		T1/TR-7 to T1/TR-13	18	$55,000	$990,000		
		20		T1/TR-7 to T1/TR-13	18	$55,000	$990,000		
	TNB No. 2	10	963	T1/TR-31	4	$55,000	$220,000	39+75	48+53
		12		T1/TR-30, T1/TR-31	5	$55,000	$275,000		
		14		T1/TR-30, T1/TR-31, T1/TR-33, T1/TR-34	11	$55,000	$605,000		
		16		T1/TR-30, T1/TR-31, T1/TR-33, T1/TR-34, T1/TR-36	15	$55,000	$825,000		
		18		T1/TR-30 to T1/TR-34, T1/TR-36	16	$55,000	$880,000		
		20[3]		T1/TR-30 to T1/TR-34, T1/TR-36	16	$55,000	$880,000		

TABLE 3.14.22:

Summary of Feasible Noise Barriers for the TSM/TDM Alternative

TSM/TDM Intersection ID No.	Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units[1]	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station No.	
								Begin	End
T-1	TNB No. 3	6	673	T1/TR-33	4	$55,000	$220,000	43+00	49+52
		8		T1/TR-33	4	$55,000	$220,000		
		10		T1/TR-33	4	$55,000	$220,000		
		12		T1/TR-33	4	$55,000	$220,000		
		14		T1/TR-31, T1/TR-33	8	$55,000	$440,000		
		16		T1/TR-31, T1/TR-33	8	$55,000	$440,000		
		18		T1/TR-31, T1/TR-33	8	$55,000	$440,000		
		20[3]		T1/TR-30, T1/TR-31, T1/TR-33	9	$55,000	$495,000		
	TNB No. 4	6	406	T1/TR-34	6	$55,000	$330,000	39+36	42+40
		8		T1/TR-34	6	$55,000	$330,000		
		10		T1/TR-34	6	$55,000	$330,000		
		12		T1/TR-34	6	$55,000	$330,000		
		14		T1/TR-34	6	$55,000	$330,000		
		16		T1/TR-34	6	$55,000	$330,000		
		18		T1/TR-34	6	$55,000	$330,000		
		20[2]		T1/TR-34	6	$55,000	$330,000		
T-2	TNB No. 1	6	349	T2/TR-2	4	$55,000	$220,000	79+28	82+63
		8		T2/TR-2	4	$55,000	$220,000		
		10[2]		T2/TR-2	4	$55,000	$220,000		
		12		T2/TR-2	4	$55,000	$220,000		
		14		T2/TR-2	4	$55,000	$220,000		
		16		T2/TR-2	4	$55,000	$220,000		
		18		T2/TR-2	4	$55,000	$220,000		
		20		T2/TR-2	4	$55,000	$220,000		
	TNB No. 2	8	743	T2/TR-9	13	$55,000	$715,000	82+37	89+95
		10		T2/TR-9	13	$55,000	$715,000		
		12		T2/TR-9 to T2/TR-11	34	$55,000	$1,870,000		
		14		T2/TR-9 to T2/TR-11	34	$55,000	$1,870,000		
		16		T2/TR-9 to T2/TR-11	34	$55,000	$1,870,000		
		18		T2/TR-9 to T2/TR-11	34	$55,000	$1,870,000		
		20[2]		T2/TR-9 to T2/TR-11	34	$55,000	$1,870,000		

Source: *Noise Study Report* (2014).

[1] Number of units that are attenuated by 5 dBA or more by the modeled barrier.

[2] Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

[3] Denotes that the maximum feasible barrier height would not break the line of sight between the receptor and the truck exhaust stack.

dBA = A-weighted decibels
ft = feet
TDM = Transportation Demand Management
TNB = Freeway Tunnel Noise Barrier
TSM = Transportation System Management

TABLE 3.14.23:
Receptor Locations Where the Applicable Noise Abatement Criteria Would be Approached or Exceeded under the BRT Alternative

Receptor and Land Use Description	Noise Abatement Considered
Receptor BR-122: This receptor location represents an existing residence on San Marino Avenue on the east side of Atlantic Boulevard. There are no existing walls that shield this residence.	One noise barrier (BNB No. 5) was modeled along the property line to shield this residence.
Receptor BR-237: This receptor location represents an existing apartment complex on Amberwood Drive on the east side of Atlantic Boulevard. There are no existing walls that shield these apartments.	One noise barrier (BNB No. 6) was modeled along the property line to shield these apartments.
Receptor BR-397: This receptor location represents an existing pool area associated with an apartment complex on Shorb Street on the west side of Atlantic Boulevard. There are no existing walls that shield this pool area.	One noise barrier (BNB No. 4) was modeled along the property line to shield this pool area.
Receptors BR-443, BR-444, BR-446, BR-447, and BR-449: These receptor locations represent existing single-family and multifamily residences on the west side of Atlantic Boulevard, between Harding Avenue and Mabel Avenue. There are no existing walls that shield these residences.	Two noise barriers (BNB Nos. 2 and 3) were modeled along the City's ROW/property line and at the top of slope to shield these residences.
Receptor BR-450: This receptor location represents an existing multifamily residence on the west side of Atlantic Boulevard, between Harding Avenue and Mabel Avenue. There are no existing walls that shield this residence.	One noise barrier (BNB No. 1) was modeled along the property line to shield this residence.

Source: *Noise Study Report* (2014).
BNB = BRT Noise Barrier
BRT = Bus Rapid Transit
ROW = right of way

TABLE 3.14.24:

Summary of Feasible Noise Barriers for the BRT Alternative

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units[1]	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
BNB No. 1	10	340	BR-450	12	$55,000	$660,000	168+95	172+05
	12		BR-450	12	$55,000	$660,000		
	14		BR-450	12	$55,000	$660,000		
	16		BR-450	12	$55,000	$660,000		
	18		BR-450	12	$55,000	$660,000		
	20[2]		BR-450	12	$55,000	$660,000		
BNB No. 2	10	826	BR-448	3	$55,000	$165,000	173+00 & 177+02	176+85 & 181+48
	12		BR-447, BR-449	9	$55,000	$495,000		
	14		BR-444, BR-447, BR-449	16	$55,000	$880,000		
	16		BR-443, BR-444, BR-446, BR-447, BR-449	24	$55,000	$1,320,000		
	18		BR-443, BR-444, BR-446, BR-447, BR-449	24	$55,000	$1,320,000		
	20[3]		BR-443, BR-444, BR-446, BR-447, BR-449	24	$55,000	$1,320,000		
BNB No. 3	6	623	BR-443, BR-444, BR-446, BR-447, BR-449	24	$55,000	$1,320,000	173+55 & 177+04	176+98 & 180+30
	8[2]		BR-443, BR-444, BR-446, BR-447, BR-449	24	$55,000	$1,320,000		
	10		BR-443, BR-444, BR-446, BR-447, BR-449	24	$55,000	$1,320,000		
	12		BR-443, BR-444, BR-446, BR-447, BR-449	24	$55,000	$1,320,000		
	14		BR-443, BR-444, BR-446, BR-447, BR-449	24	$55,000	$1,320,000		
	16		BR-443, BR-444, BR-446, BR-447, BR-449	24	$55,000	$1,320,000		
	18		BR-443, BR-444, BR-446, BR-447, BR-449	24	$55,000	$1,320,000		
	20		BR-443, BR-444, BR-446, BR-447, BR-449	24	$55,000	$1,320,000		
BNB No. 4	8[2]	67	BR-397	1	$55,000	$55,000	248+20	248+58
	10		BR-397	1	$55,000	$55,000		
	12		BR-397	1	$55,000	$55,000		
	14		BR-397	1	$55,000	$55,000		
	16		BR-397	1	$55,000	$55,000		
	18		BR-397	1	$55,000	$55,000		
	20		BR-397	1	$55,000	$55,000		
BNB No. 5	6	146	BR-122	1	$55,000	$55,000	260+16	260+95
	8		BR-122	1	$55,000	$55,000		
	10[2]		BR-122	1	$55,000	$55,000		
	12		BR-122	1	$55,000	$55,000		
	14		BR-122	1	$55,000	$55,000		
	16		BR-122	1	$55,000	$55,000		
	18		BR-122	1	$55,000	$55,000		
	20		BR-122	1	$55,000	$55,000		

Source: *Noise Study Report* (2014).

[1] Number of units that are attenuated by 5 dBA or more by the modeled barrier.

[2] Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

[3] Denotes that the maximum feasible barrier height would not break the line of sight between the receptor and the truck exhaust stack.

BNB = BRT Noise Barrier
BRT = Bus Rapid Transit
dBA = A-weighted decibels
ft = feet

TABLE 3.14.25:
Summary of Noise Impact Analysis for the LRT Alternative

Receptor Location	Existing Noise Level (L_{dn})	Train Operations Noise Level (L_{dn})	Noise Exposure Increase (dBA)	No Impact, Moderate, Severe[1]	Proposed Barrier Height (ft)[2]	Train Noise Level With Mitigation (dBA)	No Impact, Moderate, Severe After Mitigation[1]
LR-01	54.6	63.6	9.5	Severe	6.0	54.4	No Impact
LR-02	54.6	57.2	4.5	Moderate	4.0	51.8	No Impact
LR-03	63.1	67.5	5.7	Severe	5.5	59.5	No Impact
LR-04	63.1	60.5	1.9	Moderate	4.0	55.8	No Impact
LR-05	64.6	63.7	2.6	Moderate	4.0	58.4	No Impact
LR-06	58.0	67.3	9.8	Severe	9.5	56.9	No Impact
LR-07[3]	61.9	63.7	4.0	–	0.0	–	–
LR-08	61.9	68.3	7.3	Severe	7.0	58.7	No Impact
LR-09	60.0	59.1	2.6	Moderate	4.0	54.4	No Impact
LR-10	65.6	69.3	5.2	Severe	5.0	60.8	No Impact
LR-11	67.8	68.4	3.3	Moderate	4.0	61.4	No Impact
LR-12	67.6	67.9	3.2	Moderate	4.0	60.6	No Impact
LR-13	67.6	67.9	3.2	Moderate	4.0	60.6	No Impact
LR-14	67.6	67.3	2.9	Moderate	4.0	60.2	No Impact
LR-15	67.6	67.6	3.0	Moderate	4.0	60.4	No Impact
LR-16	67.7	60.5	0.8	No Impact	0.0	–	–
LR-17	61.7	54.7	0.8	No Impact	0.0	–	–
LR-18	67.0	56.3	0.4	No Impact	0.0	–	–
LR-19	64.4	55.9	0.6	No Impact	0.0	–	–
LR-20	61.9	61.9	3.0	Moderate	4.0	56.4	No Impact
LR-21	65.9	62.1	1.5	Moderate	4.0	56.5	No Impact
LR-22	61.8	62.0	3.1	Moderate	4.0	57.0	No Impact
LR-23	69.7	63.0	0.8	No Impact	0.0	–	–
LR-24	77.0	65.8	0.3	No Impact	0.0	–	–
LR-25	63.3	56.2	0.8	No Impact	0.0	–	–
LR-26	76.7	57.0	0.0	No Impact	0.0	–	–
LR-27	71.4	61.6	0.4	No Impact	0.0	–	–
LR-28	58.9	52.3	0.9	No Impact	0.0	–	–
LR-29	58.1	54.2	1.5	No Impact	0.0	–	–

Source: *Noise Study Report* (2014).

[1] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 3-1.

[2] Proposed barrier height is relative to the track height level.

[3] Non-noise-sensitive active park. Only passive parks are classified as being noise sensitive. Level shown for reporting purposes only.

dBA = A-weighted decibels

ft = feet

L_{dn} = day-night average sound level

LRT = Light Rail Transit

TABLE 3.14.26:
Receptor Locations Where the Applicable Noise Abatement Criteria Would be Approached or Exceeded under the Freeway Tunnel Alternative

Receptor and Land Use Description	Noise Abatement Considered
Receptor FR-2: This receptor location represents an existing residence on Corporate Center Drive on the east side of I-710. There is an existing 6 ft high wall located along the residential property line that shields this residence.	Two separate noise barrier locations were modeled to shield this residence to compare their effectiveness. One noise barrier (FTNB No. 1) was modeled along the edge of the State ROW, and an alternative noise barrier (FTNB No. 2) was modeled along the residential property line.
Receptors FR-6 through FR-22: These receptor locations represent existing residences on Balzac Street on the north side of SR 60, and Capetown Avenue, Charnwood Avenue, Julep Place, and Hellman Avenue on the west side of I-710. There are two existing 5.5 to 6 ft high walls that shield some of these residences.	Three noise barriers were modeled along the edge of shoulder and the State ROW property line to shield these residences. The first barrier (FTNB No. 03A) was calculated from 6 to 20 ft with no changes to the existing walls. The second wall (FTNB No. 03B) would replace the existing wall and with FTNB No. 3A was calculated from 6 to 20 ft. A third scenario included no changes at the existing walls at the residential property lines and modeling FTNB No. 4 along the shoulder of the connector ramp on the east side of SR 710. A small gap in that wall would be necessary to allow access to the retention basin between the freeway and the residences.
Receptors FR-24 through FR-26 and FR-28 through FR-39: These receptor locations represent existing residences on Charnwood Avenue and Westmont Drive on the east side of I-710. There are no existing walls that shield these residences.	One noise barrier (FTNB No. 5) was modeled along the State ROW/property line to shield these residences.
Receptors FR-47 through FR-49: These receptor locations represent existing residences on Highbury Avenue on the west side of I-710. There are no existing walls that shield these residences.	Two separate noise barrier locations were modeled to shield these residences to compare their effectiveness. One noise barrier (FTNB No. 7) was modeled along the residential private property line for each design variation, and the other noise barrier (FTNB No. 6) was modeled along the edge of the shoulder for each design variation (6S for single bore and 6D for dual bore).
Receptors FR-50 and FR-51: These receptor locations represent existing residences on Highbury Avenue on the west side of I-710. There are no existing walls that shield these residences.	Two separate noise barrier locations were modeled to shield these residences to compare their effectiveness. One noise barrier (FTNB No. 8) was modeled along the residential private property line for each design variation, and the other noise barrier (FTNB No. 6) was modeled along the edge of the shoulder for each design variation (6S for single bore and 6D for dual bore).
Receptor FR-72: This receptor location represents an existing restaurant patio on Colorado Boulevard on the east side of SR 710. There is no existing wall that shields the outdoor frequent human use area associated with this restaurant patio (dual bore only).	One noise barrier (FTNB No. 9) was modeled along the property line to shield this outdoor frequent human use area.
Receptors FR-75 through FR-81, FR-83 and FR-84: These receptor locations represent existing multifamily residences on Orange Grove Place and Cypress Avenue on the east side of I-210. There is an existing 6.5 foot high wall that shields these residences.	One noise barrier (FTNB No. 10) was modeled along the State ROW/property line to shield these residences.
Receptors FR-85 and FR-89 through FR-95: These receptor locations represent existing residences on Cypress Avenue and a school on Orange Grove Boulevard on the east side of I-210. There is an existing 6 ft high wall that shields these residences and school.	One noise barrier, FTNB No. 11, was modeled along the State right of way/property line to shield these residences and school.

TABLE 3.14.26:
Receptor Locations Where the Applicable Noise Abatement Criteria Would be Approached or Exceeded under the Freeway Tunnel Alternative

Receptor and Land Use Description	Noise Abatement Considered
Receptors FR-96 through FR-98: These receptor locations represent existing residences on Lincoln Avenue on the east side of I-210. There is an existing 6 ft high wall that shields these residences.	One noise barrier (FTNB No. 12) was modeled along the State ROW/property line to shield these residences.
Receptors FR-99, FR-100, FR-102 through FR-106, FR-108 through FR-113: These receptor locations represent existing residences on Winona Avenue, Pasadena Avenue, Mayview Lane, Ridgewood Lane, Rosewood Lane, Longwood Lane, Orange Grove Boulevard, and Prospect Boulevard on the west side of I-210. There is an existing 6.5 to 10 ft high wall that shields some of these residences.	Two locations were modeled for this barrier. For the first, FTNB No. 13B was calculated from 6 to 20 ft with no changes to the existing walls. For the second, FTNB No. 13A, the existing wall would be replaced and FTNB No. 13B would be added at that location.
Receptors FR-114 and FR-115: This receptor location represents an existing school on Pasadena Avenue on the west side of I-210. There are no existing walls that shield the outdoor frequent human use areas associated with the school.	One noise barrier (FTNB No. 14) was modeled along the property line to shield these outdoor frequent human use areas.
Receptors FR-116 and FR-117: These receptor locations represent an existing pool and tennis court associated with an apartment complex on Walnut Street on the northwest side of the I-210/SR 134 interchange. There are no existing walls that shield the outdoor frequent human use areas associated with the apartments.	One noise barrier (FTNB No. 15) was modeled along the property line to shield these outdoor frequent human use areas.

Source: *Noise Study Report* (2014).
ft = foot/feet
FTNB = Freeway Tunnel Noise Barrier
I-210 = Interstate 210
I-710 = Interstate 710
ROW = right of way
SR 134 = State Route 134
SR 60 = State Route 60

Table 3.14.27:

Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units[1]	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
FTNB No. 1	14	537	FR-2	1	$55,000	$55,000	1376+15	1381+30
	16		FR-2	1	$55,000	$55,000		
	18		FR-2	1	$55,000	$55,000		
	20[3]		FR-2	1	$55,000	$55,000		
FTNB No. 2	6	115	FR-2	1	$55,000	$55,000	1378+57	1379+00
	8[2]		FR-2	1	$55,000	$55,000		
	10		FR-2	1	$55,000	$55,000		
	12		FR-2	1	$55,000	$55,000		
	14		FR-2	1	$55,000	$55,000		
	16		FR-2	1	$55,000	$55,000		
	18		FR-2	1	$55,000	$55,000		
	20		FR-2	1	$55,000	$55,000		
FTNB No. 3A	6	2453	FR-6, FR-8 to FR-11, FR-13, FR-15, FR-17	17	$55,000	$935,000	1406+90	1425+40
	8		FR-6, FR-8 to FR-11, FR-13, FR-15 to FR-17	20	$55,000	$1,100,000		
	10		FR-6, FR-8 to FR-13, FR-15 to FR-17	23	$55,000	$1,265,000		
	12[2]		FR-6 to FR-13, FR-15 to FR-17	24	$55,000	$1,320,000		
	14		FR-6 to FR-13, FR-15 to FR-17	24	$55,000	$1,320,000		
	16		FR-6 to FR-13, FR-15 to FR-17	24	$55,000	$1,320,000		
	18		FR-6 to FR-13, FR-15 to FR-17	24	$55,000	$1,320,000		
	20		FR-6 to FR-17	26	$55,000	$1,430,000		
FTNB No. 3B	6	3091	FR-6, FR-8 to FR-11, FR-13, FR-15, FR-17, FR-21	19	$55,000	$1,045,000	1425+21	1431+40
	8		FR-6, FR-8 to FR-11, FR-13, FR-15 to FR-19, FR-21	28	$55,000	$1,540,000		
	10		FR-6, FR-8 to FR-13, FR-15 to FR-21	34	$55,000	$1,870,000		
	12[2]		FR-6, FR-8 to FR-13, FR-15 to FR-21	34	$55,000	$1,870,000		
	14		FR-6, FR-8 to FR-13, FR-15 to FR-21	34	$55,000	$1,870,000		
	16		FR-6, FR-8 to FR-13, FR-15 to FR-21	34	$55,000	$1,870,000		
	18		FR-6, FR-8 to FR-13, FR-15 to FR-21	34	$55,000	$1,870,000		
	20		FR-6, FR-8 to FR-21	36	$55,000	$1,980,000		
FTNB No. 4	6	2621	FR-15, FR-18, FR-19, FR-21	10	$55,000	$550,000	1406+65 & 1414+22	1413+92 & 1431+40
	8		FR-14, FR-15, FR-17 to FR-19, FR-21	15	$55,000	$825,000		
	10		FR-13 to FR-15, FR-17 to FR-19, FR-21	18	$55,000	$990,000		
	12		FR-13 to FR-19, FR-21	21	$55,000	$1,155,000		
	14		FR-13 to FR-19, FR-21	21	$55,000	$1,155,000		
	16		FR-13 to FR-19, FR-21	21	$55,000	$1,155,000		
	18		FR-10, FR-12 to FR-19, FR-21	26	$55,000	$1,430,000		
	20[3]		FR-9 to FR-19, FR-21	29	$55,000	$1,595,000		

Table 3.14.27:

Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units[1]	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
FTNB No. 5	6	1801	FR-25, FR-26, FR-33 to FR-37	19	$55,000	$1,045,000	1432+48	1449+75
	8		FR-25, FR-26, FR-33 to FR-37	19	$55,000	$1,045,000		
	10		FR-25, FR-26, FR-31, FR-33 to FR-37	22	$55,000	$1,210,000		
	12		FR-25, FR-26, FR-28 to FR-31, FR-33 to FR-37	32	$55,000	$1,760,000		
	14		FR-24 to FR-26, FR-28 to FR-31, FR-33 to FR-37	33	$55,000	$1,815,000		
	16		FR-24 to FR-31, FR-33 to FR-37	39	$55,000	$2,145,000		
	18		FR-24 to FR-37	42	$55,000	$2,310,000		
	20[2]		FR-24 to FR-37	42	$55,000	$2,310,000		
FTNB No. 6S	20[3]	1454	FR-47, FR-51	5	$55,000	$275,000	1432+85	1447+75
FTNB No. 7	6	673	FR-49	4	$55,000	$220,000	1440+20	1446+75
	8		FR-49	4	$55,000	$220,000		
	10		FR-49	4	$55,000	$220,000		
	12		FR-48, FR-49	8	$55,000	$440,000		
	14		FR-48, FR-49	8	$55,000	$440,000		
	16		FR-47 to FR-49	9	$55,000	$495,000		
	18		FR-47 to FR-49	9	$55,000	$495,000		
	20[2]		FR-47 to FR-49	9	$55,000	$495,000		
FTNB No. 8	6	406	FR-50, FR-51	6	$55,000	$330,000	1436+65	1439+70
	8		FR-50, FR-51	6	$55,000	$330,000		
	10		FR-50, FR-51	6	$55,000	$330,000		
	12		FR-50, FR-51	6	$55,000	$330,000		
	14		FR-50, FR-51	6	$55,000	$330,000		
	16		FR-50, FR-51	6	$55,000	$330,000		
	18		FR-50, FR-51	6	$55,000	$330,000		
	20[2]		FR-50, FR-51	6	$55,000	$330,000		
FTNB No. 10	8	1207	FR-75, FR-80	10	$55,000	$550,000	1774+35	1784+20
	10		FR-75, FR-80	10	$55,000	$550,000		
	12		FR-75, FR-78, FR-80	12	$55,000	$660,000		
	14[2]		FR-75 to FR-78, FR-80	18	$55,000	$990,000		
	16		FR-75 to FR-80	22	$55,000	$1,210,000		
	18		FR-75 to FR-80	22	$55,000	$1,210,000		
	20		FR-75 to FR-80	22	$55,000	$1,210,000		
FTNB No. 11	12[2]	1404	FR-91	2	$55,000	$110,000	1786+00	1800+28
	14		FR-91, FR-92	5	$55,000	$275,000		
	16		FR-91, FR-92	5	$55,000	$275,000		
	18		FR-85, FR-89 to FR-92	12	$55,000	$660,000		
	20		FR-85, FR-89 to FR-92	12	$55,000	$660,000		

Table 3.14.27:

Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units[1]	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
FTNB No. 12	14	556	FR-96	3	$55,000	$165,000	1800+20	1805+95
	16		FR-96	3	$55,000	$165,000		
	18		FR-96	3	$55,000	$165,000		
	20[3]		FR-96, FR-97	5	$55,000	$275,000		
FTNB No. 13A	10[2]	2315	FR-104, FR-105	5	$55,000	$275,000	1783+50	1806+20
	12		FR-104, FR-105	5	$55,000	$275,000		
	14		FR-104, FR-105	5	$55,000	$275,000		
	16		FR-104, FR-105	5	$55,000	$275,000		
	18		FR-104, FR-105	5	$55,000	$275,000		
	20		FR-102, FR-104, FR-105, FR-107	10	$55,000	$550,000		
FTNB No. 14	8	263	FR-115	1	$55,000	$55,000	1774+15	1776+22
	10		FR-115	1	$55,000	$55,000		
	12		FR-115	1	$55,000	$55,000		
	14		FR-115	1	$55,000	$55,000		
	16[2]		FR-115	1	$55,000	$55,000		
	18		FR-115	1	$55,000	$55,000		
	20		FR-115	1	$55,000	$55,000		
FTNB No. 15	8	262	FR-116	1	$55,000	$55,000	1768+60	1769+90
	10		FR-116	1	$55,000	$55,000		
	12[2]		FR-116	1	$55,000	$55,000		
	14		FR-116, FR-117	2	$55,000	$110,000		
	16		FR-116, FR-117	2	$55,000	$110,000		
	18		FR-116, FR-117	2	$55,000	$110,000		
	20		FR-116, FR-117	2	$55,000	$110,000		

Source: *Noise Study Report* (2014).

[1] Number of units that are attenuated by 5 dBA or more by the modeled barrier.

[2] Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

[3] Denotes that the maximum feasible barrier height would not break the line of sight between the receptor and the truck exhaust stack.

dBA = A-weighted decibels

ft = feet

FTNB = Freeway Tunnel Noise Barrier

TABLE 3.14.28:

Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units[1]	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
FTNB No. 2	6	115	FR-2	1	$55,000	$55,000	1378+57	1379+00
	8[2]		FR-2	1	$55,000	$55,000		
	10		FR-2	1	$55,000	$55,000		
	12		FR-2	1	$55,000	$55,000		
	14		FR-2	1	$55,000	$55,000		
	16		FR-2	1	$55,000	$55,000		
	18		FR-2	1	$55,000	$55,000		
	20		FR-2	1	$55,000	$55,000		
FTNB No. 3A	6	2453	FR-6, FR-8 to FR-11, FR-13, FR-15, FR-17	17	$55,000	$935,000	1407+00	1425+50
	8		FR-6 to FR-11, FR-13, FR-15 to FR-17	21	$55,000	$1,155,000		
	10		FR-6 to FR-13, FR-15 to FR-17	24	$55,000	$1,320,000		
	12[2]		FR-6 to FR-13, FR-15 to FR-17	24	$55,000	$1,320,000		
	14		FR-6 to FR-13, FR-15 to FR-17	24	$55,000	$1,320,000		
	16		FR-6 to FR-13, FR-15 to FR-17	24	$55,000	$1,320,000		
	18		FR-6 to FR-13, FR-15 to FR-17	24	$55,000	$1,320,000		
	20		FR-6 to FR-17	26	$55,000	$1,430,000		
FTNB No. 3B	6	3091	FR-6, FR-8 to FR-11, FR-13, FR-15, FR-17	17	$55,000	$935,000	1425+21	1431+40
	8		FR-6 to FR-11, FR-13, FR-15 to FR-17, FR-19, FR-21	26	$55,000	$1,430,000		
	10		FR-6 to FR-13, FR-15 to FR-19, FR-21	32	$55,000	$1,760,000		
	12[2]		FR-6 to FR-13, FR-15 to FR-21	35	$55,000	$1,925,000		
	14		FR-6 to FR-13, FR-15 to FR-21	35	$55,000	$1,925,000		
	16		FR-6 to FR-13, FR-15 to FR-21	35	$55,000	$1,925,000		
	18		FR-6 to FR-13, FR-15 to FR-21	35	$55,000	$1,925,000		
	20		FR-6 to FR-21	37	$55,000	$2,035,000		
FTNB No. 4	6	2621	FR-15, FR-17	5	$55,000	$275,000	1406+78 & 1414+25	1414+05 & 1431+40
	8		FR-13 to FR-15, FR-17	10	$55,000	$550,000		
	10		FR-10, FR-13 to FR-15, FR-17	12	$55,000	$660,000		
	12		FR-10, FR-12 to FR-17, FR-19	21	$55,000	$1,155,000		
	14		FR-10 to FR-17, FR-19	23	$55,000	$1,265,000		
	16		FR-10 to FR-19	26	$55,000	$1,430,000		
	18		FR-9 to FR-19	27	$55,000	$1,485,000		
	20[3]		FR-9 to FR-19	27	$55,000	$1,485,000		
FTNB No. 5	6	1801	FR-25, FR-26, FR-33 to FR-38	21	$55,000	$1,155,000	1432+48	1449+75
	8		FR-25, FR-26, FR-33 to FR-38	21	$55,000	$1,155,000		
	10		FR-25, FR-26, FR-33 to FR-38	21	$55,000	$1,155,000		
	12		FR-25, FR-26, FR-29, FR-33 to FR-38	25	$55,000	$1,375,000		
	14		FR-25, FR-26, FR-28 to FR-31, FR-33 to FR-38	34	$55,000	$1,870,000		

TABLE 3.14.28:

Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units[1]	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
	16		FR-25 to FR-31, FR-33 to FR-38	40	$55,000	$2,200,000		
	18		FR-25 to FR-31, FR-33 to FR-38	40	$55,000	$2,200,000		
	20[2]		FR-25 to FR-38	43	$55,000	$2,365,000		
FTNB No. 6D	6	1404	FR-51	4	$55,000	$220,000	1432+85	1447+60
	8		FR-51	4	$55,001	$220,004		
	10		FR-51	4	$55,002	$220,008		
	12		FR-47, FR-48, FR-50, FR-51	11	$55,003	$605,033		
	14		FR-47-FR-51	15	$55,004	$825,060		
	16		FR-47-FR-51	15	$55,005	$825,075		
	18		FR-47-FR-51	15	$55,006	$825,090		
	20[3]		FR-47-FR-51	15	$55,007	$825,105		
FTNB No. 7	6	673	FR-49	4	$55,000	$220,000	1440+35	1446+80
	8		FR-49	4	$55,000	$220,000		
	10		FR-49	4	$55,000	$220,000		
	12		FR-48, FR-49	8	$55,000	$440,000		
	14		FR-48, FR-49	8	$55,000	$440,000		
	16		FR-47 to FR-49	9	$55,000	$495,000		
	18		FR-47 to FR-49	9	$55,000	$495,000		
	20[2]		FR-47 to FR-49	9	$55,000	$495,000		
FTNB No. 8	6	406	FR-50, FR-51	6	$55,000	$330,000	1436+80	1439+85
	8		FR-50, FR-51	6	$55,000	$330,000		
	10		FR-50, FR-51	6	$55,000	$330,000		
	12		FR-50, FR-51	6	$55,000	$330,000		
	14		FR-50, FR-51	6	$55,000	$330,000		
	16		FR-50, FR-51	6	$55,000	$330,000		
	18		FR-50, FR-51	6	$55,000	$330,000		
	20[2]		FR-50, FR-51	6	$55,000	$330,000		
FTNB No. 9	6	84	FR-72	1	$55,000	$55,000	1751+75	1752+25
	8[2]		FR-72	1	$55,000	$55,000		
	10		FR-72	1	$55,000	$55,000		
	12		FR-72	1	$55,000	$55,000		
	14		FR-72	1	$55,000	$55,000		
	16		FR-72	1	$55,000	$55,000		
	18		FR-72	1	$55,000	$55,000		
	20		FR-72	1	$55,000	$55,000		

TABLE 3.14.28:

Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units[1]	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
FTNB No. 10	8	1207	FR-75, FR-80	10	$55,000	$550,000	1774+35	1784+20
	10		FR-75, FR-80	10	$55,000	$550,000		
	12		FR-75, FR-80	10	$55,000	$550,000		
	14[2]		FR-75 to FR-78, FR-80	18	$55,000	$990,000		
	16		FR-75 to FR-80	22	$55,000	$1,210,000		
	18		FR-75 to FR-80	22	$55,000	$1,210,000		
	20		FR-75 to FR-81	23	$55,000	$1,265,000		
FTNB No. 11	10[2]	1404	FR-91	2	$55,000	$110,000	1786+00	1800+28
	12		FR-91	2	$55,000	$110,000		
	14		FR-91, FR-92	5	$55,000	$275,000		
	16		FR-85, FR-91, FR-92	6	$55,000	$330,000		
	18		FR-85, FR-90 to FR-92	9	$55,000	$495,000		
	20		FR-85, FR-89 to FR-92	12	$55,000	$660,000		
FTNB No. 12	14	556	FR-96	3	$54,997	$164,991	1800+20	1805+95
	16		FR-96	3	$54,998	$164,994		
	18		FR-96	3	$54,999	$164,997		
	20[3]		FR-96	3	$55,000	$165,000		
FTNB No. 13A	10[2]	2315	FR-104, FR-105	5	$55,000	$275,000	1783+50	1806+20
	12		FR-104, FR-105	5	$55,000	$275,000		
	14		FR-104, FR-105, FR-108	7	$55,000	$385,000		
	16		FR-104, FR-105, FR-108	7	$55,000	$385,000		
	18		FR-104, FR-105, FR-108	7	$55,000	$385,000		
	20		FR-104, FR-105, FR-108, FR-109	9	$55,000	$495,000		
FTNB No. 13B	18[2]	709	FR-108	2	$55,000	$110,000	1790+65	1806+20
	20		FR-108	2	$55,000	$110,000		
FTNB No. 14	8	263	FR-115	1	$55,000	$55,000	1774+15	1776+22
	10		FR-115	1	$55,000	$55,000		
	12		FR-115	1	$55,000	$55,000		
	14		FR-115	1	$55,000	$55,000		
	16[2]		FR-115	1	$55,000	$55,000		
	18		FR-115	1	$55,000	$55,000		
	20		FR-115	1	$55,000	$55,000		
FTNB No. 15	8	262	FR-116	1	$55,000	$55,000	1768+60	1769+90
	10		FR-116	1	$55,000	$55,000		
	12[2]		FR-116	1	$55,000	$55,000		
	14		FR-116, FR-117	2	$55,000	$110,000		

TABLE 3.14.28:

Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units[1]	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
	16		FR-116, FR-117	2	$55,000	$110,000		
	18		FR-116, FR-117	2	$55,000	$110,000		
	20		FR-116, FR-117	2	$55,000	$110,000		

Source: *Noise Study Report* (2014).

[1] Number of units that are attenuated by 5 dBA or more by the modeled barrier.

[2] Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

[3] Denotes that the maximum feasible barrier height would not break the line of sight between the receptor and the truck exhaust stack.

dBA = A-weighted decibels

ft = feet

FTNB = Freeway Tunnel Noise Barrier

TABLE 3.14.29:
Predicted Future Interior Noise Levels for the TSM/TDM, BRT, and Freeway Tunnel Alternatives

Measurement Location	Modeled Receptor Location	Exterior to Interior Reduction (dB)[1]	Exterior (dBA L_{eq})[2]	Interior (dBA L_{eq})
SM-1	BR-7	34	68	34
SM-2	BR-13	21	62	41
SM-3	BR-380	25	68	43
SM-4	BR-161	24	63	39
SM-5	BR-218	21	69	48
SM-6	FR-180	25	59	34
SM-7	FR-170	25	63	38
SM-8	FR-152	20	68	48
SM-9	FR-118	24	69	45
SM-10	FR-133	30	69	39
SM-11	L2a/TR-14	27	64	37
SM-12	L5/TR-19	37	67	30
SM-13	T2/TR-6	19	61	42

Source: *Noise Study Report* (2014).
[1] The exterior to interior reduction was calculated based on simultaneous exterior and interior noise level measurements shown in Table 6.32 in the *Noise Study Report*.
[2] The exterior noise level was chosen for the worst-case condition at each receptor modeled.
dB = decibels
dBA L_{eq} = equivalent continuous sound level measured in A-weighted decibels

TABLE 3.14.30:

Summary of Abatement Information for the TSM/TDM Alternative

Inter-section ID No.	Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units[1]	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
									Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]	Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]
L-3	TNB No. 1	6	48	5	1	City ROW/Private Property Line	$55,000	$55,000	-	No	-	No
		8[4]		6	1	City ROW/Private Property Line	$55,000	$55,000	-	No	-	No
		10		6	1	City ROW/Private Property Line	$55,000	$55,000	-	No	-	No
		12		6	1	City ROW/Private Property Line	$55,000	$55,000	-	No	-	No
		14		6	1	City ROW/Private Property Line	$55,000	$55,000	-	No	-	No
		16		7	1	City ROW/Private Property Line	$55,000	$55,000	$33,720	Yes	$27,120	Yes
		18		7	1	City ROW/Private Property Line	$55,000	$55,000	$36,960	Yes	$30,360	Yes
		20		7	1	City ROW/Private Property Line	$55,000	$55,000	$40,200	Yes	$33,600	Yes
	TNB No. 2	6	46	7	1	Private Property Line	$55,000	$55,000	$49,053	Yes	$10,178	Yes
		8[4]		10	1	Private Property Line	$55,000	$55,000	$52,158	Yes	$13,283	Yes
		10		13	1	Private Property Line	$55,000	$55,000	$55,263	No	$16,388	Yes
		12		14	1	Private Property Line	$55,000	$55,000	$58,368	No	$19,493	Yes
		14		15	1	Private Property Line	$55,000	$55,000	$61,473	No	$22,598	Yes
		16		16	1	Private Property Line	$55,000	$55,000	$64,578	No	$25,703	Yes
		18		17	1	Private Property Line	$55,000	$55,000	$67,683	No	$28,808	Yes
		20		18	1	Private Property Line	$55,000	$55,000	$70,788	No	$31,913	Yes
L-5	TNB No. 1	6	202	7	2	Private Property Line	$55,000	$110,000	$111,936	No	$52,811	Yes
		8		9	2	Private Property Line	$55,000	$110,000	$125,571	No	$66,446	Yes
		10[4]		9	2	Private Property Line	$55,000	$110,000	$139,206	No	$80,081	Yes
		12		10	2	Private Property Line	$55,000	$110,000	$152,841	No	$93,716	Yes
		14		10	2	Private Property Line	$55,000	$110,000	$166,476	No	$107,351	Yes
		16		10	2	Private Property Line	$55,000	$110,000	$180,111	No	$120,986	No
		18		10	2	Private Property Line	$55,000	$110,000	$193,746	No	$134,621	No
		20		10	2	Private Property Line	$55,000	$110,000	$207,381	No	$148,256	No
T-1	TNB No. 1	8	1247	7-10	18	Caltrans ROW	$55,000	$990,000	$981,972	Yes	$921,009	Yes
		10		8-12	18	Caltrans ROW	$55,000	$990,000	$1,184,171	No	$1,123,209	No
		12		8-13	18	Caltrans ROW	$55,000	$990,000	$1,183,959	No	$1,122,997	No
		14		8-13	18	Caltrans ROW	$55,000	$990,000	$1,175,061	No	$1,114,098	No
		16[4]		8-14	18	Caltrans ROW	$55,000	$990,000	$1,436,514	No	$1,375,552	No
		18		8-15	18	Caltrans ROW	$55,000	$990,000	$1,696,909	No	$1,635,946	No
		20		8-15	18	Caltrans ROW	$55,000	$990,000	$1,825,093	No	$1,764,131	No
	TNB No. 2	10	963	5	4	Caltrans ROW	$55,000	$220,000	-	No	-	No
		12		5-6	5	Caltrans ROW	$55,000	$275,000	-	No	-	No
		14		5-6	11	Caltrans ROW	$55,000	$605,000	-	No	-	Yes
		16		5-7	15	Caltrans ROW	$55,000	$825,000	$541,387	Yes	$541,387	Yes
		18		5-8	16	Caltrans ROW	$55,000	$880,000	$603,380	Yes	$603,380	Yes
		20[5]		5-8	16	Caltrans ROW	$55,000	$880,000	$665,373	Yes	$665,373	Yes
	TNB No. 3	6	673	6	4	Private Property Line	$55,000	$220,000	-	No	-	No
		8		7	4	Private Property Line	$55,000	$220,000	$859,633	No	$409,611	No
		10		8	4	Private Property Line	$55,000	$220,000	$905,060	No	$455,039	No

TABLE 3.14.30:
Summary of Abatement Information for the TSM/TDM Alternative

Inter-section ID No.	Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units[1]	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
									Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]	Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]
		12		8	4	Private Property Line	$55,000	$220,000	$950,488	No	$500,466	No
		14		5-8	8	Private Property Line	$55,000	$440,000	$995,915	No	$545,894	No
		16		7-9	8	Private Property Line	$55,000	$440,000	$1,041,343	No	$591,321	No
		18		8-10	8	Private Property Line	$55,000	$440,000	$1,086,770	No	$636,749	No
		20[5]		6-11	9	Private Property Line	$55,000	$495,000	$1,132,198	No	$682,176	No
	TNB No. 4	6	406	6-8	6	Private Property Line	$55,000	$330,000	$588,214	No	$353,580	No
		8		8-11	6	Private Property Line	$55,000	$330,000	$615,619	No	$380,985	No
		10		10-13	6	Private Property Line	$55,000	$330,000	$643,024	No	$408,390	No
		12		11-15	6	Private Property Line	$55,000	$330,000	$670,429	No	$435,795	No
		14		12-16	6	Private Property Line	$55,000	$330,000	$697,834	No	$463,200	No
		16		13-17	6	Private Property Line	$55,000	$330,000	$725,239	No	$490,605	No
		18		14-17	6	Private Property Line	$55,000	$330,000	$752,644	No	$518,010	No
		20[4]		15-18	6	Private Property Line	$55,000	$330,000	$780,049	No	$545,415	No
T-2	TNB No. 1	6	349	9	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$104,264	Yes	$88,995	Yes
		8		10	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$127,821	Yes	$112,553	Yes
		10[4]		11	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$151,379	Yes	$136,110	Yes
		12		12	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$174,936	Yes	$159,668	Yes
		14		12	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$198,494	Yes	$183,225	Yes
		16		14	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$222,051	No	$206,783	Yes
		18		15	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$245,609	No	$230,340	No
		20		16	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$269,166	No	$253,898	No
	TNB No. 2	8	743	5	13	Caltrans ROW	$55,000	$715,000	-	No	-	Yes
		10		6	13	Caltrans ROW	$55,000	$715,000	-	No	-	Yes
		12		5-7	34	Caltrans ROW	$55,000	$1,870,000	$347,353	Yes	$314,846	Yes
		14		7-8	34	Caltrans ROW	$55,000	$1,870,000	$397,505	Yes	$364,999	Yes
		16		8-9	34	Caltrans ROW	$55,000	$1,870,000	$447,658	Yes	$415,151	Yes
		18		9	34	Caltrans ROW	$55,000	$1,870,000	$497,810	Yes	$465,304	Yes
		20[4]		9	34	Caltrans ROW	$55,000	$1,870,000	$547,963	Yes	$515,456	Yes

Source: LSA Associates, Inc. (2014).

[1] Number of units that are attenuated by 5 dBA or more by the modeled barrier.

[2] Sound barrier construction cost information provided by CH2M HILL.

[3] Shaded area represents barrier heights that have been determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more.

[4] Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

[5] Denotes that the maximum feasible barrier height would not break the line of sight between the receptor and the truck exhaust stack.

Caltrans = California Department of Transportation
dBA = A-weighted decibels
ft = feet
ROW = right of way
TDM = Transportation Demand Management
TNB = TSM/TDM Noise Barrier
TSM = Transportation System Management

TABLE 3.14.31

Summary of Abatement Information for the BRT Alternative

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units[1]	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]	Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]
BNB No. 1	10	340	9	12	Private Property Line	$55,000	$660,000	$567,613	Yes	$546,363	Yes
	12		11	12	Private Property Line	$55,000	$660,000	$590,308	Yes	$569,058	Yes
	14		12	12	Private Property Line	$55,000	$660,000	$613,003	Yes	$591,753	Yes
	16		13	12	Private Property Line	$55,000	$660,000	$635,698	Yes	$614,448	Yes
	18		14	12	Private Property Line	$55,000	$660,000	$660,688	No	$639,438	Yes
	20[4]		14	12	Private Property Line	$55,000	$660,000	$683,638	No	$662,388	No
BNB No. 2	10	826	5	3	Private Property Line	$55,000	$165,000	-	No	-	No
	12		6-7	9	Private Property Line	$55,000	$495,000	$1,290,757	No	$1,238,382	No
	14		5-9	16	Private Property Line	$55,000	$880,000	$1,346,693	No	$1,294,318	No
	16		5-9	24	Private Property Line	$55,000	$1,320,000	$1,402,630	No	$1,350,255	No
	18		6-11	24	Private Property Line	$55,000	$1,320,000	$1,464,223	No	$1,411,848	No
	20[5]		6-12	24	Private Property Line	$55,000	$1,320,000	$1,520,788	No	$1,468,413	No
BNB No. 3	6	623	7-11	24	Private Property Line	$55,000	$1,320,000	$476,237	Yes	$359,612	Yes
	8[4]		8-13	24	Private Property Line	$55,000	$1,320,000	$519,699	Yes	$403,074	Yes
	10		8-14	24	Private Property Line	$55,000	$1,320,000	$563,161	Yes	$446,536	Yes
	12		9-14	24	Private Property Line	$55,000	$1,320,000	$606,624	Yes	$489,999	Yes
	14		9-15	24	Private Property Line	$55,000	$1,320,000	$650,086	Yes	$533,461	Yes
	16		9-15	24	Private Property Line	$55,000	$1,320,000	$693,548	Yes	$576,923	Yes
	18		9-16	24	Private Property Line	$55,000	$1,320,000	$741,209	Yes	$624,584	Yes
	20		9-16	24	Private Property Line	$55,000	$1,320,000	$785,138	Yes	$668,513	Yes
BNB No. 4	8[4]	67	5	1	Private Property Line	$55,000	$55,000	-	No	-	No
	10		5	1	Private Property Line	$55,000	$55,000	-	No	-	No
	12		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	14		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	16		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	18		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	20		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
BNB No. 5	6	146	7	1	Private Property Line	$55,000	$55,000	$39,413	Yes	$33,788	Yes
	8		10	1	Private Property Line	$55,000	$55,000	$49,425	Yes	$43,800	Yes
	10[4]		12	1	Private Property Line	$55,000	$55,000	$59,438	No	$53,813	Yes
	12		14	1	Private Property Line	$55,000	$55,000	$69,450	No	$63,825	No
	14		15	1	Private Property Line	$55,000	$55,000	$79,463	No	$73,838	No
	16		17	1	Private Property Line	$55,000	$55,000	$89,475	No	$83,850	No
	18		18	1	Private Property Line	$55,000	$55,000	$100,500	No	$94,875	No
	20		19	1	Private Property Line	$55,000	$55,000	$110,625	No	$105,000	No

Source: LSA Associates, Inc. (2014).

[1] Number of units that are attenuated by 5 dBA or more by the modeled barrier.

[2] Sound barrier construction cost information provided by CH2M HILL.

[3] Shaded area represents barrier heights that have been determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more.

[4] Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

BNB = BRT Noise Barrier BRT = Bus Rapid Transit dBA = A-weighted decibels ft = feet

TABLE 3.14.32:

Summary of Abatement Information for the Freeway Tunnel Alternative Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units[1]	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]	Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]
FTNB No. 1	14	537	5	1	Caltrans ROW	$55,000	$55,000	-	No	-	No
	16		5	1	Caltrans ROW	$55,000	$55,000	-	No	-	No
	18		5	1	Caltrans ROW	$55,000	$55,000	-	No	-	No
	20[5]		5	1	Caltrans ROW	$55,000	$55,000	-	No	-	No
FTNB No. 2	6	115	5	1	Private Property Line	$55,000	$55,000	-	No	-	No
	8[4]		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	10		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	12		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	14		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	16		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	18		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	20		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
FTNB No. 3A	6	2453	5-11	17	Caltrans ROW/Private Property Line	$55,000	$935,000	$4,117,108	No	$1,487,844	No
	8		6-12	20	Caltrans ROW/Private Property Line	$55,000	$1,100,000	$4,274,036	No	$1,644,773	No
	10		5-13	23	Caltrans ROW/Private Property Line	$55,000	$1,265,000	$4,434,284	No	$1,805,021	No
	12[4]		5-14	24	Caltrans ROW/Private Property Line	$55,000	$1,320,000	$4,607,528	No	$1,978,264	No
	14		5-15	24	Caltrans ROW/Private Property Line	$55,000	$1,320,000	$4,780,771	No	$2,151,508	No
	16		6-15	24	Caltrans ROW/Private Property Line	$55,000	$1,320,000	$4,954,014	No	$2,324,751	No
	18		6-15	24	Caltrans ROW/Private Property Line	$55,000	$1,320,000	$5,127,257	No	$2,497,994	No
	20		6-16	26	Caltrans ROW/Private Property Line	$55,000	$1,430,000	$5,300,500	No	$2,671,237	No
FTNB No. 3A +3B	6	3091	5-11	19	Caltrans ROW/Private Property Line	$55,000	$1,045,000	$4,468,534	No	$1,839,271	No
	8		5-12	28	Caltrans ROW/Private Property Line	$55,000	$1,540,000	$4,670,521	No	$2,041,258	No
	10		5-13	34	Caltrans ROW/Private Property Line	$55,000	$1,870,000	$4,875,828	No	$2,246,565	No
	12[4]		5-14	34	Caltrans ROW/Private Property Line	$55,000	$1,870,000	$5,094,130	No	$2,464,867	No
	14		5-15	34	Caltrans ROW/Private Property Line	$55,000	$1,870,000	$5,312,432	No	$2,683,169	No
	16		5-15	34	Caltrans ROW/Private Property Line	$55,000	$1,870,000	$5,530,734	No	$2,901,471	No
	18		5-15	34	Caltrans ROW/Private Property Line	$55,000	$1,870,000	$5,749,036	No	$3,119,773	No
	20		5-16	36	Caltrans ROW/Private Property Line	$55,000	$1,980,000	$5,967,338	No	$3,338,074	No
FTNB No. 4	6	2621	5-6	10	Edge of Shoulder	$55,000	$550,000	-	No	-	No
	8		5-6	15	Edge of Shoulder	$55,000	$825,000	-	No	-	No
	10		5-7	18	Edge of Shoulder	$55,000	$990,000	$1,009,649	No	$1,009,649	No
	12		5-8	21	Edge of Shoulder	$55,000	$1,155,000	$1,186,566	No	$1,186,566	No
	14		5-10	21	Edge of Shoulder	$55,000	$1,155,000	$1,363,484	No	$1,363,484	No
	16		5-10	21	Edge of Shoulder	$55,000	$1,155,000	$1,540,401	No	$1,540,401	No
	18		5-11	26	Edge of Shoulder	$55,000	$1,430,000	$1,717,319	No	$1,717,319	No
	20[5]		5-12	29	Edge of Shoulder	$55,000	$1,595,000	$1,894,236	No	$1,894,236	No

TABLE 3.14.32:

Summary of Abatement Information for the Freeway Tunnel Alternative Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units[1]	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]	Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]
FTNB No. 5	6	1801	5-12	19	Caltrans ROW/Private Property Line	$55,000	$1,045,000	$607,438	Yes	$596,363	Yes
	8		6-13	19	Caltrans ROW/Private Property Line	$55,000	$1,045,000	$729,005	Yes	$717,930	Yes
	10		5-15	22	Caltrans ROW/Private Property Line	$55,000	$1,210,000	$850,573	Yes	$839,498	Yes
	12		5-16	32	Caltrans ROW/Private Property Line	$55,000	$1,760,000	$972,140	Yes	$961,065	Yes
	14		5-17	33	Caltrans ROW/Private Property Line	$55,000	$1,815,000	$1,093,708	Yes	$1,082,633	Yes
	16		5-18	39	Caltrans ROW/Private Property Line	$55,000	$2,145,000	$1,215,275	Yes	$1,204,200	Yes
	18		5-19	42	Caltrans ROW/Private Property Line	$55,000	$2,310,000	$1,336,843	Yes	$1,325,768	Yes
	20[4]		5-19	42	Caltrans ROW/Private Property Line	$55,000	$2,310,000	$1,458,410	Yes	$1,447,335	Yes
FTNB No. 6S	20[5]	1454	5	5	Edge of Shoulder	$55,000	$275,000	-	No	-	No
FTNB No. 7	6	673	6	4	Caltrans ROW/Private Property Line	$55,000	$220,000	-	No	-	No
	8		8	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$757,983	No	$327,649	No
	10		9	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$803,410	No	$373,076	No
	12		6-10	8	Caltrans ROW/Private Property Line	$55,000	$440,000	$848,838	No	$418,504	Yes
	14		8-11	8	Caltrans ROW/Private Property Line	$55,000	$440,000	$894,265	No	$463,931	No
	16		5-12	9	Caltrans ROW/Private Property Line	$55,000	$495,000	$939,693	No	$509,359	No
	18		8-12	9	Caltrans ROW/Private Property Line	$55,000	$495,000	$985,120	No	$554,786	No
	20[4]		10-13	9	Caltrans ROW/Private Property Line	$55,000	$495,000	$1,030,548	No	$600,214	No
FTNB No. 8	6	406	7-8	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$430,864	No	$200,393	Yes
	8		9-11	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$458,269	No	$227,798	Yes
	10		10-13	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$485,674	No	$255,203	Yes
	12		12-14	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$513,079	No	$282,608	Yes
	14		13-15	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$540,484	No	$310,013	Yes
	16		14-16	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$567,889	No	$337,418	No
	18		15-17	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$595,294	No	$364,823	No
	20[4]		16-17	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$622,699	No	$392,228	No
FTNB No. 10	8	1207	5	10	Caltrans ROW/Private Property Line	$55,000	$550,000	-	No	-	No
	10		7-9	10	Caltrans ROW/Private Property Line	$55,000	$550,000	$437,797	Yes	$437,797	Yes
	12		5-11	12	Caltrans ROW/Private Property Line	$55,000	$660,000	$523,041	Yes	$523,041	Yes
	14[4]		5-12	18	Caltrans ROW/Private Property Line	$55,000	$990,000	$608,286	Yes	$608,286	Yes
	16		5-13	22	Caltrans ROW/Private Property Line	$55,000	$1,210,000	$693,530	Yes	$693,530	Yes
	18		6-14	22	Caltrans ROW/Private Property Line	$55,000	$1,210,000	$778,774	Yes	$778,774	Yes
	20		6-15	22	Caltrans ROW/Private Property Line	$55,000	$1,210,000	$864,019	Yes	$864,019	Yes
FTNB No. 11	12[4]	1404	5	2	Caltrans ROW/Private Property Line	$55,000	$110,000	-	No	-	No
	14		5-6	5	Caltrans ROW/Private Property Line	$55,000	$275,000	-	No	-	No
	16		6-7	5	Caltrans ROW/Private Property Line	$55,000	$275,000	$1,154,716	No	$1,044,248	No
	18		5-8	12	Caltrans ROW/Private Property Line	$55,000	$660,000	$1,253,874	No	$1,143,405	No
	20		5-9	12	Caltrans ROW/Private Property Line	$55,000	$660,000	$1,353,031	No	$1,242,563	No

TABLE 3.14.32:

Summary of Abatement Information for the Freeway Tunnel Alternative Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units[1]	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]	Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]
FTNB No. 12	14	556	5	3	Edge of Shoulder	$55,000	$165,000	-	No	-	No
	16		5	3	Edge of Shoulder	$55,000	$165,000	-	No	-	No
	18		5	3	Edge of Shoulder	$55,000	$165,000	-	No	-	No
	20[5]		5-6	5	Edge of Shoulder	$55,000	$275,000	-	No	-	No
FTNB No. 13A+B	10[4]	2315	5-7	5	Caltrans ROW/Private Property Line	$55,000	$275,000	$1,239,683	No	$1,239,683	No
	12		7-8	5	Caltrans ROW/Private Property Line	$55,000	$275,000	$1,403,180	No	$1,403,180	No
	14		8-9	5	Caltrans ROW/Private Property Line	$55,000	$275,000	$1,566,677	No	$1,566,677	No
	16		9-10	5	Caltrans ROW/Private Property Line	$55,000	$275,000	$1,730,174	No	$1,730,174	No
	18		9-11	5	Caltrans ROW/Private Property Line	$55,000	$275,000	$1,893,671	No	$1,893,671	No
	20		5-11	10	Caltrans ROW/Private Property Line	$55,000	$550,000	$2,057,168	No	$2,057,168	No
FTNB No. 14	8[4]	263	5	1	Private Property Line	$55,000	$55,000	-	No	-	No
	10		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	12		7	1	Private Property Line	$55,000	$55,000	$142,135	No	$111,446	No
	14		7	1	Private Property Line	$55,000	$55,000	$159,888	No	$129,199	No
	16		8	1	Private Property Line	$55,000	$55,000	$177,640	No	$146,951	No
	18		8	1	Private Property Line	$55,000	$55,000	$195,393	No	$164,704	No
	20		9	1	Private Property Line	$55,000	$55,000	$213,145	No	$182,456	No
FTNB No. 15	8	262	8	1	Private Property Line	$55,000	$55,000	$117,687	No	$75,653	No
	10		10	1	Private Property Line	$55,000	$55,000	$135,372	No	$93,338	No
	12[4]		11	1	Private Property Line	$55,000	$55,000	$153,057	No	$111,023	No
	14		6-12	2	Private Property Line	$55,000	$110,000	$170,742	No	$128,708	No
	16		7-13	2	Private Property Line	$55,000	$110,000	$188,427	No	$146,393	No
	18		7-14	2	Private Property Line	$55,000	$110,000	$206,112	No	$164,078	No
	20		8-15	2	Private Property Line	$55,000	$110,000	$223,797	No	$181,763	No

Source: LSA Associates, Inc. (2014).

[1] Number of units that are attenuated by 5 dBA or more by the modeled barrier.

[2] Sound barrier construction cost information provided by CH2M HILL.

[3] Shaded area represents barrier heights that have been determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more.

[4] Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

Caltrans = California Department of Transportation
dBA = A-weighted decibels
ft = feet
FTNB = Freeway Tunnel Noise Barrier
ROW = right of way

TABLE 3.14.33:

Summary of Abatement Information for the Freeway Tunnel Alternative Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units[1]	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]	Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]
FTNB No. 2	6	115	5	1	Private Property Line	$55,000	$55,000	-	No	-	No
	8[4]		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	10		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	12		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	14		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	16		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	18		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	20		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
FTNB No. 3A	6	2453	6-11	17	Caltrans ROW/Private Property Line	$55,000	$935,000	$4,098,717	No	$1,469,454	No
	8		5-13	21	Caltrans ROW/Private Property Line	$55,000	$1,155,000	$4,248,702	No	$1,619,439	No
	10		5-14	24	Caltrans ROW/Private Property Line	$55,000	$1,320,000	$4,401,859	No	$1,772,596	No
	12[4]		5-14	24	Caltrans ROW/Private Property Line	$55,000	$1,320,000	$4,567,437	No	$1,938,174	No
	14		6-15	24	Caltrans ROW/Private Property Line	$55,000	$1,320,000	$4,733,014	No	$2,103,751	No
	16		7-16	24	Caltrans ROW/Private Property Line	$55,000	$1,320,000	$4,898,592	No	$2,269,329	No
	18		8-16	24	Caltrans ROW/Private Property Line	$55,000	$1,320,000	$5,064,169	No	$2,434,906	No
	20		6-16	26	Caltrans ROW/Private Property Line	$55,000	$1,430,000	$5,229,747	No	$2,600,484	No
FTNB No. 3A + 3B	6	3091	6-11	17	Caltrans ROW/Private Property Line	$55,000	$935,000	$4,543,657	No	$2,777,134	No
	8		5-13	26	Caltrans ROW/Private Property Line	$55,000	$1,430,000	$4,752,299	No	$2,970,184	No
	10		5-14	32	Caltrans ROW/Private Property Line	$55,000	$1,760,000	$4,960,942	No	$3,166,406	No
	12[4]		5-14	35	Caltrans ROW/Private Property Line	$55,000	$1,925,000	$5,169,584	No	$3,375,049	No
	14		5-15	35	Caltrans ROW/Private Property Line	$55,000	$1,925,000	$5,378,227	No	$3,583,691	No
	16		5-16	35	Caltrans ROW/Private Property Line	$55,000	$1,925,000	$5,586,869	No	$3,792,334	No
	18		5-16	35	Caltrans ROW/Private Property Line	$55,000	$1,925,000	$5,795,512	No	$4,000,976	No
	20		5-16	37	Caltrans ROW/Private Property Line	$55,000	$2,035,000	$6,004,154	No	$4,209,619	No
FTNB No. 4	6	2621	5	5	Edge of Shoulder	$55,000	$275,000	-	No	-	No
	8		5-6	10	Edge of Shoulder	$55,000	$550,000	-	No	-	No
	10		5-8	12	Edge of Shoulder	$55,000	$660,000	$1,009,649	No	$1,009,649	No
	12		5-9	21	Edge of Shoulder	$55,000	$1,155,000	$1,186,566	No	$1,186,566	No
	14		5-9	23	Edge of Shoulder	$55,000	$1,265,000	$1,363,484	No	$1,363,484	No
	16		5-10	26	Edge of Shoulder	$55,000	$1,430,000	$1,540,401	No	$1,540,401	No
	18		5-11	27	Edge of Shoulder	$55,000	$1,485,000	$1,717,319	No	$1,717,319	No
	20[5]		5-11	27	Edge of Shoulder	$55,000	$1,485,000	$1,894,236	No	$1,894,236	No
FTNB No. 5	6	1801	5-13	21	Caltrans ROW/Private Property Line	$55,000	$1,155,000	$607,438	Yes	$596,363	Yes
	8		5-14	21	Caltrans ROW/Private Property Line	$55,000	$1,155,000	$729,005	Yes	$717,930	Yes
	10		5-15	21	Caltrans ROW/Private Property Line	$55,000	$1,155,000	$850,573	Yes	$839,498	Yes
	12		5-16	25	Caltrans ROW/Private Property Line	$55,000	$1,375,000	$972,140	Yes	$961,065	Yes
	14		5-17	34	Caltrans ROW/Private Property Line	$55,000	$1,870,000	$1,093,708	Yes	$1,082,633	Yes
	16		5-18	40	Caltrans ROW/Private Property Line	$55,000	$2,200,000	$1,215,275	Yes	$1,204,200	Yes
	18		5-19	40	Caltrans ROW/Private Property Line	$55,000	$2,200,000	$1,336,843	Yes	$1,325,768	Yes
	20[4]		5-19	43	Caltrans ROW/Private Property Line	$55,000	$2,365,000	$1,458,410	Yes	$1,447,335	Yes

TABLE 3.14.33:

Summary of Abatement Information for the Freeway Tunnel Alternative Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units[1]	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]	Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]
FTNB No. 6D	6	1404	6	4	Edge of Shoulder	$55,000	$220,000	-	No	-	No
	8		8	4	Edge of Shoulder	$55,000	$220,000	$427,781	No	$427,781	No
	10		10	4	Edge of Shoulder	$55,000	$220,000	$518,164	No	$518,164	No
	12		6-11	11	Edge of Shoulder	$55,000	$605,000	$608,546	No	$608,546	No
	14		5-12	15	Edge of Shoulder	$55,000	$825,000	$698,929	Yes	$698,929	Yes
	16		6-12	15	Edge of Shoulder	$55,000	$825,000	$789,311	Yes	$789,311	Yes
	18		9-13	15	Edge of Shoulder	$55,000	$825,000	$879,694	No	$879,694	No
	20[5]		10-13	15	Edge of Shoulder	$55,000	$825,000	$970,076	No	$970,076	No
FTNB No. 7	6	673	7	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$712,555	No	$282,221	No
	8		10	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$757,983	No	$327,649	No
	10		11	4	Caltrans ROW/Private Property Line	$55,000	$220,000	$803,410	No	$373,076	No
	12		7-12	8	Caltrans ROW/Private Property Line	$55,000	$440,000	$848,838	No	$418,504	Yes
	14		9-14	8	Caltrans ROW/Private Property Line	$55,000	$440,000	$894,265	No	$463,931	No
	16		6-16	9	Caltrans ROW/Private Property Line	$55,000	$495,000	$939,693	No	$509,359	No
	18		8-17	9	Caltrans ROW/Private Property Line	$55,000	$495,000	$985,120	No	$554,786	No
	20[4]		9-19	9	Caltrans ROW/Private Property Line	$55,000	$495,000	$1,030,548	No	$600,214	No
FTNB No. 8	6	406	7-8	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$430,864	No	$200,393	Yes
	8		8-11	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$458,269	No	$227,798	Yes
	10		10-13	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$485,674	No	$255,203	Yes
	12		11-15	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$513,079	No	$282,608	Yes
	14		12-16	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$540,484	No	$310,013	Yes
	16		13-16	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$567,889	No	$337,418	No
	18		14-17	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$595,294	No	$364,823	No
	20[4]		14-17	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$622,699	No	$392,228	No
FTNB No. 9	6	84	7	1	Private Property Line	$55,000	$55,000	$26,985	Yes	$19,110	Yes
	8[4]		8	1	Private Property Line	$55,000	$55,000	$32,655	Yes	$24,780	Yes
	10		10	1	Private Property Line	$55,000	$55,000	$38,325	Yes	$30,450	Yes
	12		11	1	Private Property Line	$55,000	$55,000	$43,995	Yes	$36,120	Yes
	14		12	1	Private Property Line	$55,000	$55,000	$49,665	Yes	$41,790	Yes
	16		13	1	Private Property Line	$55,000	$55,000	$55,335	No	$47,460	Yes
	18		14	1	Private Property Line	$55,000	$55,000	$61,005	No	$53,130	Yes
	20		14	1	Private Property Line	$55,000	$55,000	$66,675	No	$58,800	No
FTNB No. 10	8	1207	5-6	10	Caltrans ROW/Private Property Line	$55,000	$550,000	-	No	-	No
	10		8-9	10	Caltrans ROW/Private Property Line	$55,000	$550,000	$437,797	Yes	$437,797	Yes
	12		9-11	10	Caltrans ROW/Private Property Line	$55,000	$550,000	$523,041	Yes	$523,041	Yes
	14[4]		5-12	18	Caltrans ROW/Private Property Line	$55,000	$990,000	$608,286	Yes	$608,286	Yes
	16		5-13	22	Caltrans ROW/Private Property Line	$55,000	$1,210,000	$693,530	Yes	$693,530	Yes
	18		5-14	22	Caltrans ROW/Private Property Line	$55,000	$1,210,000	$778,774	Yes	$778,774	Yes
	20		6-15	23	Caltrans ROW/Private Property Line	$55,000	$1,265,000	$864,019	Yes	$864,019	Yes

TABLE 3.14.33:

Summary of Abatement Information for the Freeway Tunnel Alternative Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units[1]	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]	Estimated Sound Barrier Construction Cost[2,3]	Reasonable?[3]
FTNB No. 11	10	1404	5	2	Caltrans ROW/Private Property Line	$55,000	$110,000	-	No	-	No
	12[4]		6	2	Caltrans ROW/Private Property Line	$55,000	$110,000	-	No	-	No
	14		5-7	5	Caltrans ROW/Private Property Line	$55,000	$275,000	$1,055,559	No	$945,090	No
	16		5-8	6	Caltrans ROW/Private Property Line	$55,000	$330,000	$1,154,716	No	$1,044,248	No
	18		5-8	9	Caltrans ROW/Private Property Line	$55,000	$495,000	$1,253,874	No	$1,143,405	No
	20		5-9	12	Caltrans ROW/Private Property Line	$55,000	$660,000	$1,353,031	No	$1,242,563	No
FTNB No. 12	14	556	5	3	Edge of Shoulder	$55,000	$165,000	-	No	-	No
	16		6	3	Edge of Shoulder	$55,000	$165,000	-	No	-	No
	18		6	3	Edge of Shoulder	$55,000	$165,000	-	No	-	No
	20[4]		6	3	Edge of Shoulder	$55,000	$165,000	-	No	-	No
FTNB No. 13A+B	10[4]	2315	5-7	5	Caltrans ROW/Private Property Line	$55,000	$275,000	$1,239,683	No	$1,239,683	No
	12		7-8	5	Caltrans ROW/Private Property Line	$55,000	$275,000	$1,403,180	No	$1,403,180	No
	14		5-9	7	Caltrans ROW/Private Property Line	$55,000	$385,000	$1,566,677	No	$1,566,677	No
	16		5-10	7	Caltrans ROW/Private Property Line	$55,000	$385,000	$1,730,174	No	$1,730,174	No
	18		5-11	7	Caltrans ROW/Private Property Line	$55,000	$385,000	$1,893,671	No	$1,893,671	No
	20		5-11	9	Caltrans ROW/Private Property Line	$55,000	$495,000	$2,057,168	No	$2,057,168	No
FTNB No. 13B	18[4]	709	5	2	Caltrans ROW/Private Property Line	$55,000	$110,000	-	No	-	No
	20		5	2	Caltrans ROW/Private Property Line	$55,000	$110,000	-	No	-	No
FTNB No. 14	8[4]	263	5	1	Private Property Line	$55,000	$55,000	-	No	-	No
	10		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	12		6	1	Private Property Line	$55,000	$55,000	-	No	-	No
	14		7	1	Private Property Line	$55,000	$55,000	$159,888	No	$129,199	No
	16[4]		8	1	Private Property Line	$55,000	$55,000	$177,640	No	$146,951	No
	18		8	1	Private Property Line	$55,000	$55,000	$195,393	No	$164,704	No
	20		8	1	Private Property Line	$55,000	$55,000	$213,145	No	$182,456	No
FTNB No. 15	8	262	8	1	Private Property Line	$55,000	$55,000	$117,687	No	$75,653	No
	10		10	1	Private Property Line	$55,000	$55,000	$135,372	No	$93,338	No
	12[4]		11	1	Private Property Line	$55,000	$55,000	$153,057	No	$111,023	No
	14		6-12	2	Private Property Line	$55,000	$110,000	$170,742	No	$128,708	No
	16		7-12	2	Private Property Line	$55,000	$110,000	$188,427	No	$146,393	No
	18		7-14	2	Private Property Line	$55,000	$110,000	$206,112	No	$164,078	No
	20		8-15	2	Private Property Line	$55,000	$110,000	$223,797	No	$181,763	No

Source: LSA Associates, Inc. (2014).

[1] Number of units that are attenuated by 5 dBA or more by the modeled barrier.

[2] Sound barrier construction cost information provided by CH2M HILL.

[3] Shaded area represents barrier heights that have been determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more.

[4] Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

Caltrans = California Department of Transportation
dBA = A-weighted decibels
ft = feet
FTNB = Freeway Tunnel Noise Barrier
ROW = right of way

TABLE 3.14.34:
Summary of Reasonable Barriers by Alternative

Alternative		Reasonable Noise Barriers
TSM/TDM Alternative	Improvement - L3	TNB No. 1 at 16, 18, and 20 ft high
		TNB No. 2 at 6, 8, **10**, **12**, **14**, **16**, **18**, and **20** ft high
	Improvement – L5	TNB No. 1 at **6**, **8**, **10**, **12** and **14** ft high
	Improvement – T1	TNB No. 1 at 8 ft high
		TNB No. 2 at 16, 18, and 20 ft high
	Improvement – T2	TNB No. 1 at 6, 8, 10, 12, 14, and **16** ft high
		TNB No. 2 at 12, 14, 16, 18, and 20 ft high
BRT Alternative		BNB No. 1 at 10, 12, 14, 16, and **18** ft high
		BNB No. 3 at 6, 8, 10, 12, 14, 16, 18, and 20 ft high
		BNB No. 5 at 6, 8, **10** ft high
Freeway Tunnel Alternative – Single-Bore Design Variation		FTNB No. 5 at 6, 8, 10, 12, 14, 16, 18, and 20 ft high
		FTNB No. 7 at **12** ft high
		FTNB No. 8 at **6**, **8**, **10**, **12**, and **14** ft high
		FTNB No. 10 at 10, 12, 14, 16, 18, and 20 ft high
Freeway Tunnel Alternative – Dual-Bore Design Variation		FTNB No. 5 at 6, 8, 10, 12, 14, 16, 18, and 20 ft high
		FTNB No. 6D at 14 and 16 ft high
		FTNB No. 7 at **12** ft high
		FTNB No. 8 at **6**, **8**, **10**, **12**, and **14** ft high
		FTNB No. 9 at 6, 8, 10, 12, 14, **16**, and **18** ft high
		FTNB No. 10 at 10, 14, 16, 18, and 20 ft high

Source: *Noise Study Report* (2014).
Note: **Bold** wall heights are reasonable only with right of way denoted.
BNB = BRT Noise Barrier
BRT = Bus Rapid Transit
ft = feet
FTNB = Freeway Tunnel Noise Barrier
TDM = Transportation Demand Management
TNB = TSM/TDM Noise Barrier
TSM = Transportation System Management

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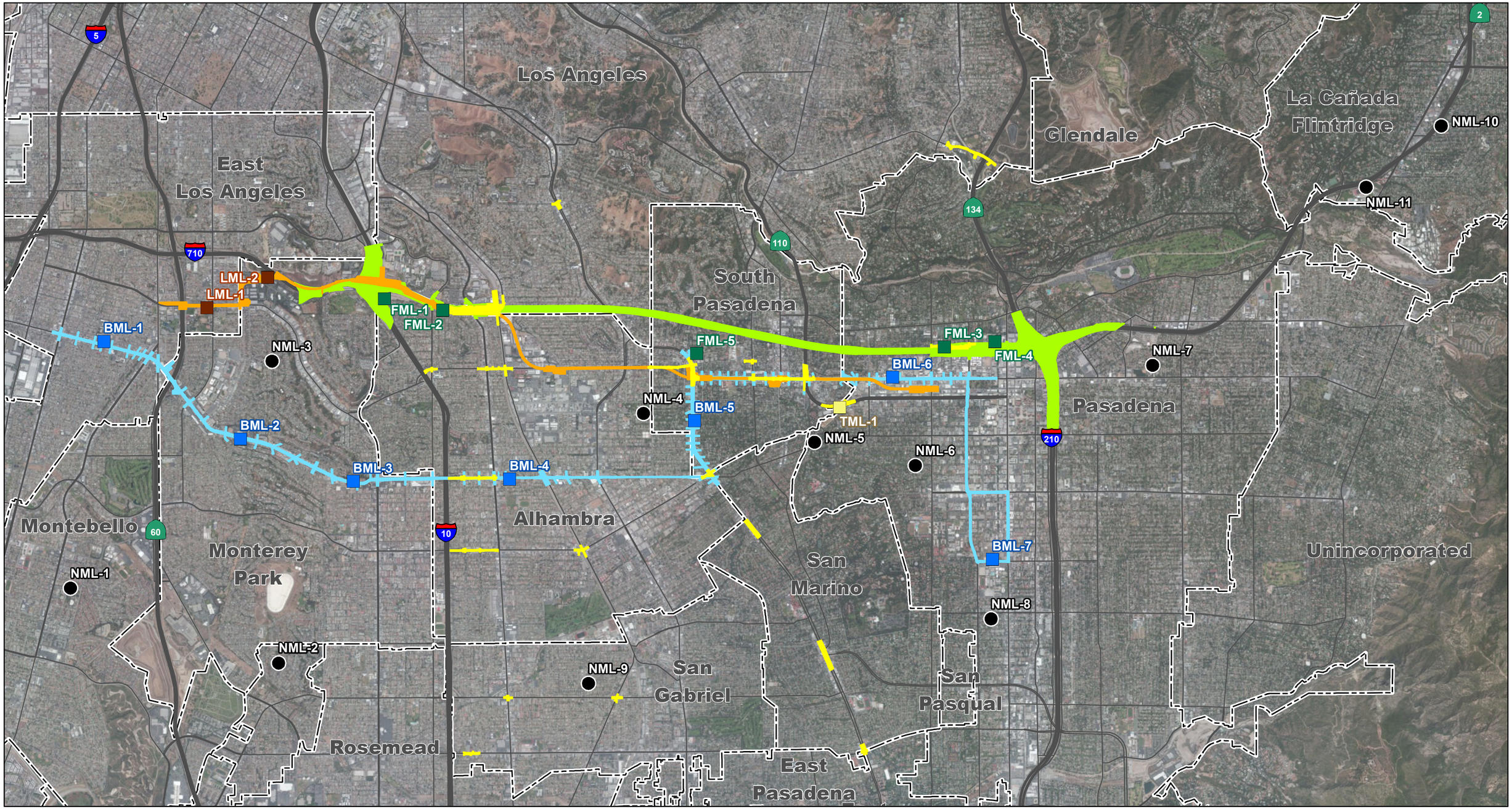

LEGEND

- Neighborhood Noise Measurement Locations (NML)
- Long-term, 24-hour, Measurement Locations (BML)
- Long-term, 24-hour, Measurement Locations (LRL)
- Long-term, 24-hour, Measurement Locations (FML)
- Long-term, 24-hour, Measurement Locations (TML)
- TSM/TDM Alternative Alignment
- BRT Alternative Alignment
- LRT Alternative Alignment
- Freeway Tunnel Alternative Alignment

0 2250 4500
FEET

SOURCE: ESRI (2013); Thomas Brothers (2011); *Noise Study Report* (2014)

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FIGURE 3.14-2

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Long-Term Noise Measurement Locations

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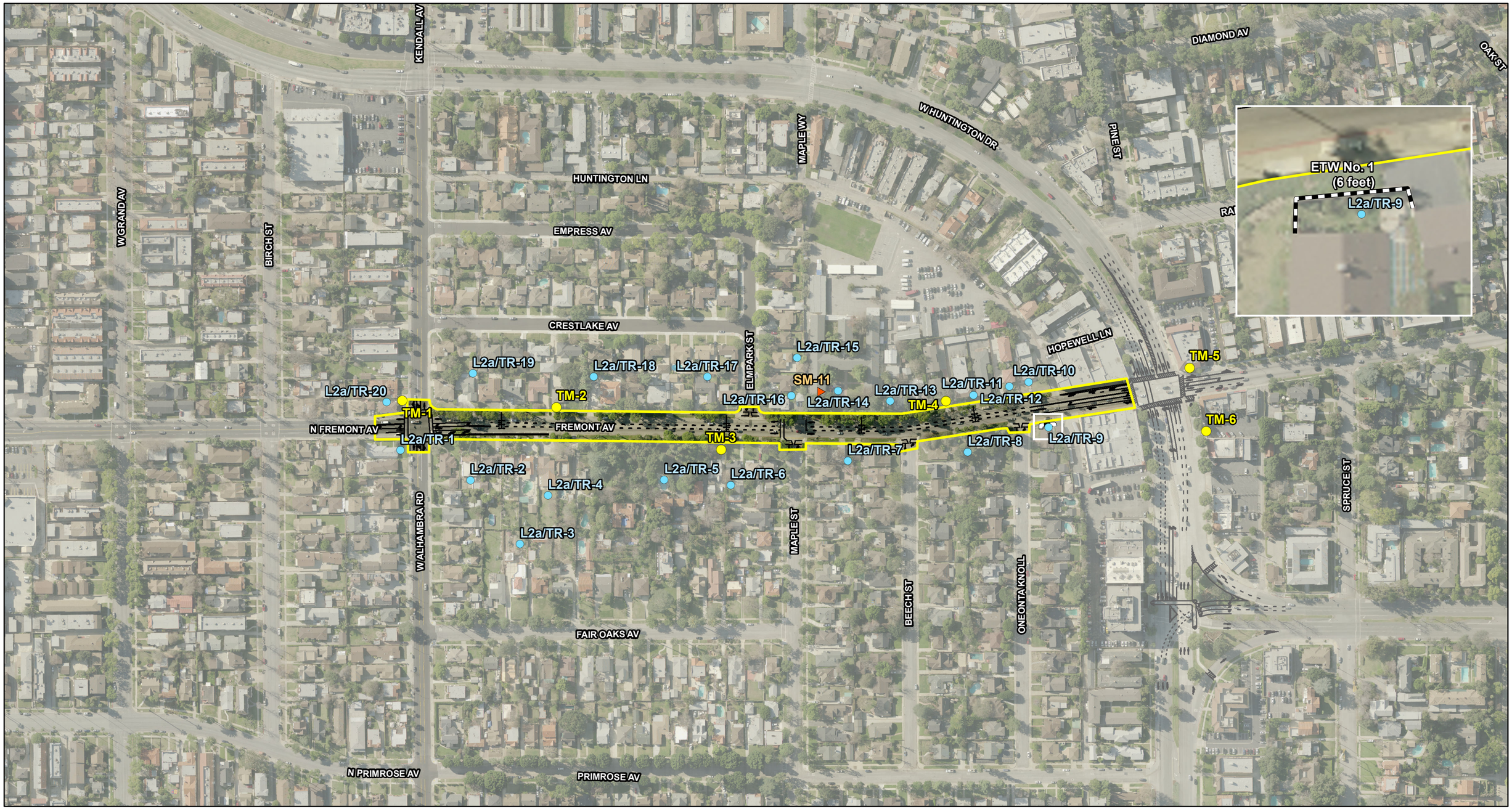

LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-3
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - TSM/TDM Alternative

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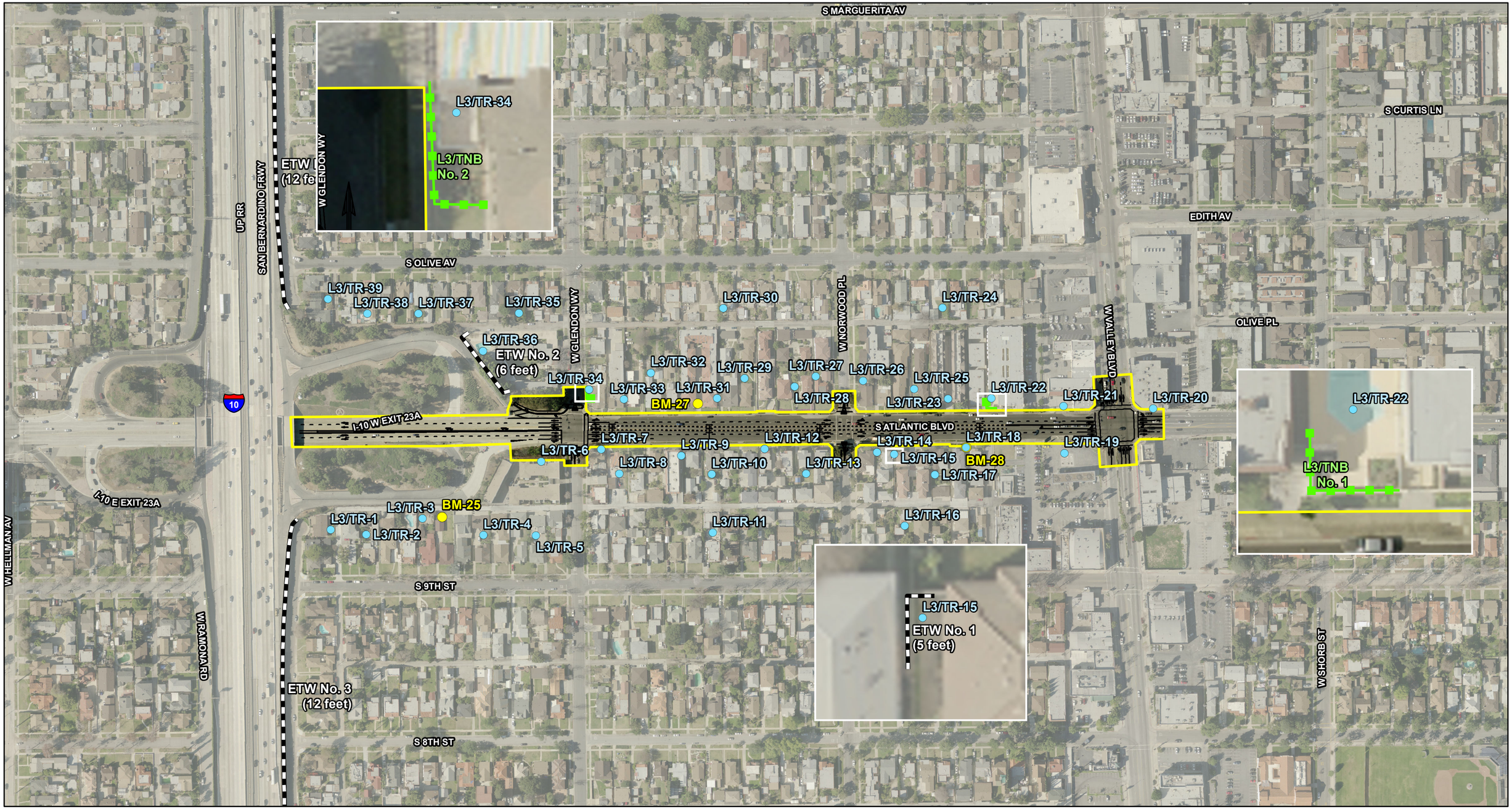

LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-3
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - TSM/TDM Alternative
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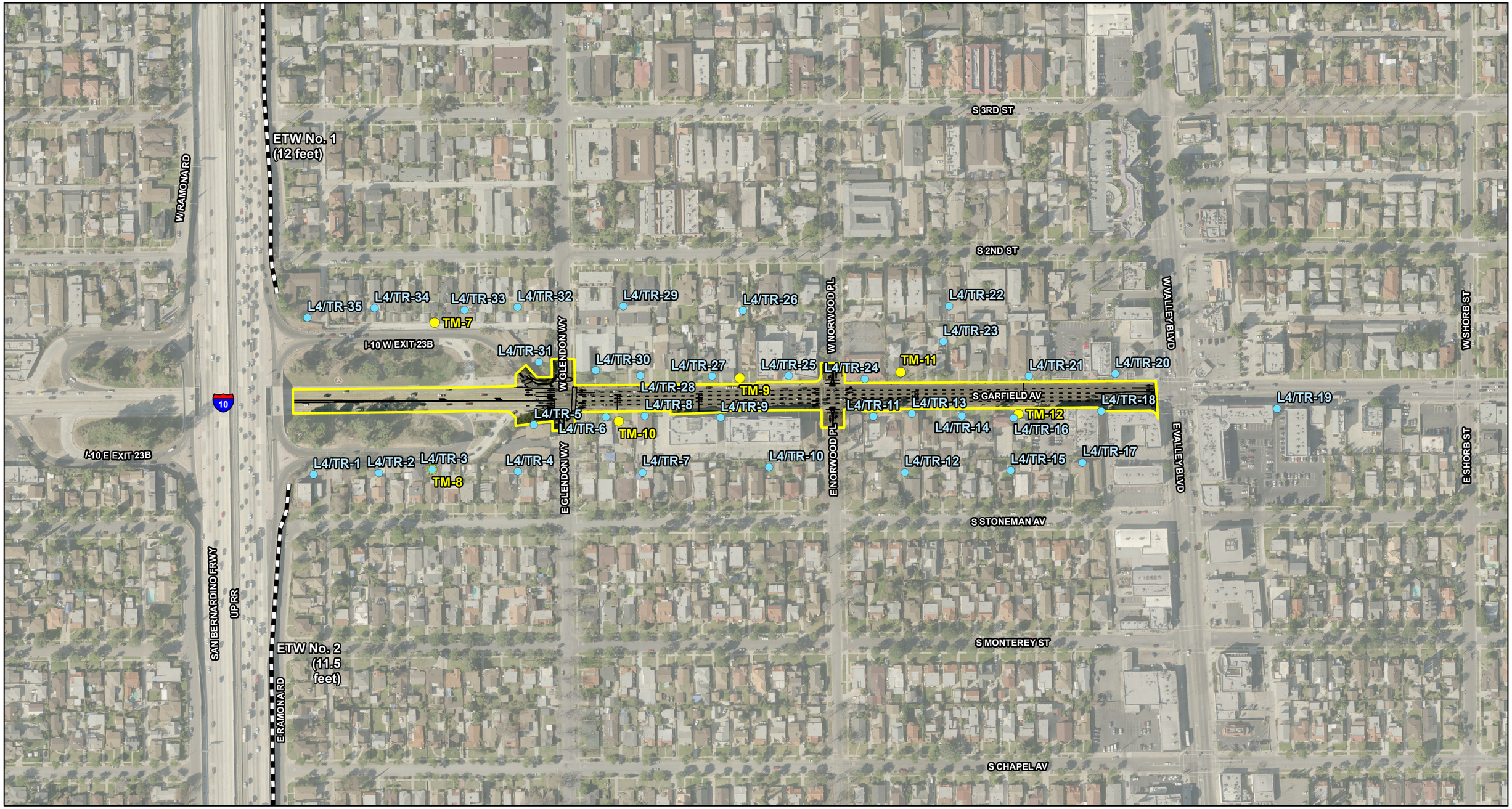

LEGEND

- TSM/TDM Alternative
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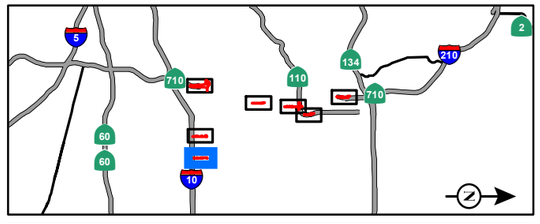

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-3
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - TSM/TDM Alternative

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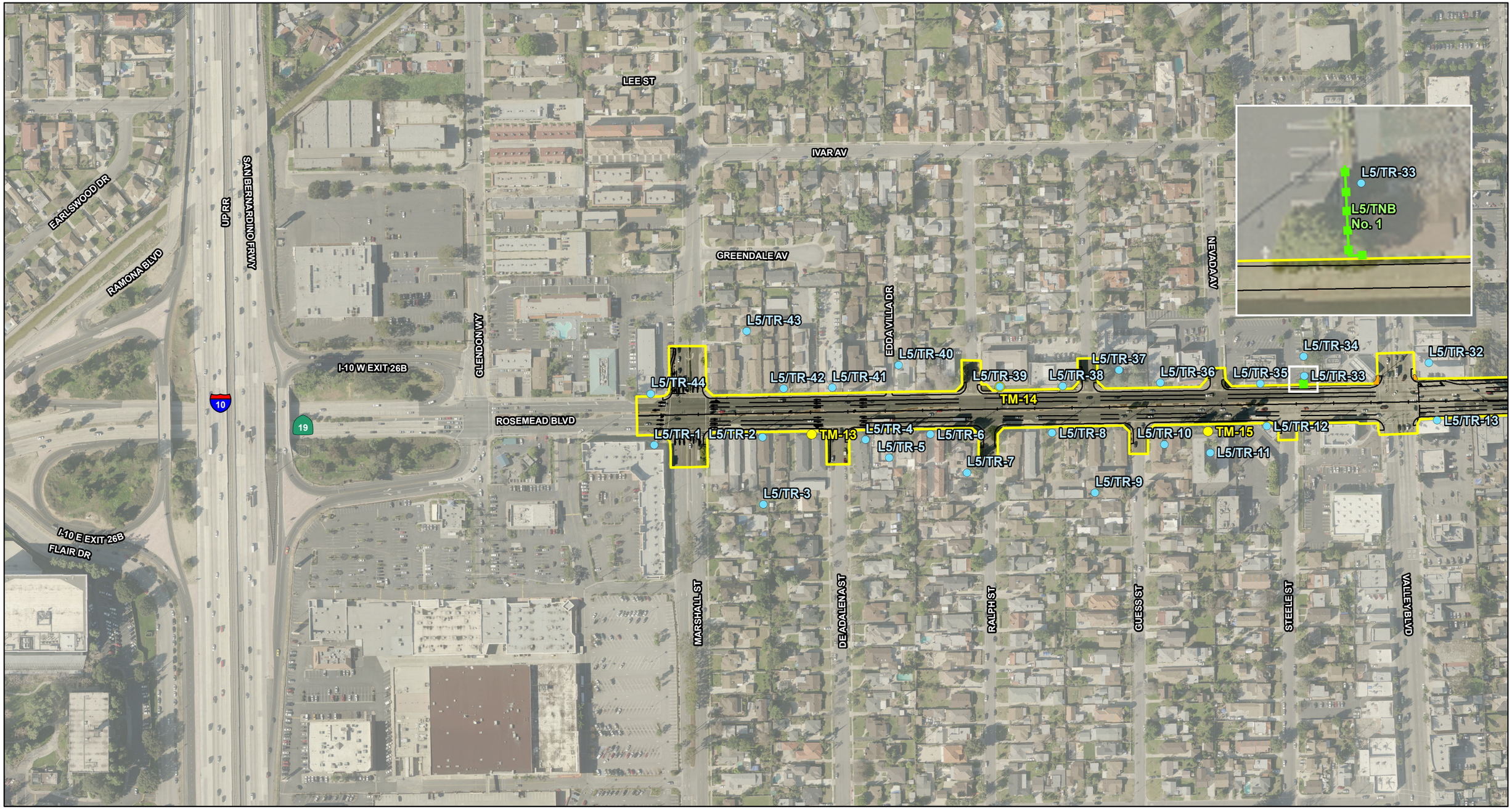

LEGEND

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- School Measurement Locations

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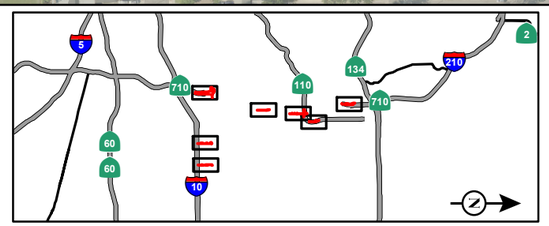

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-3
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - TSM/TDM Alternative

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LEGEND

- TSM/TDM Alternative
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FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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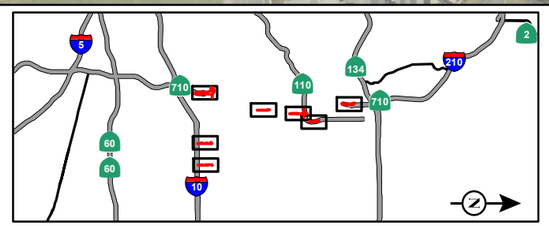

FIGURE 3.14-3
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Noise Measurement and Receptor Locations
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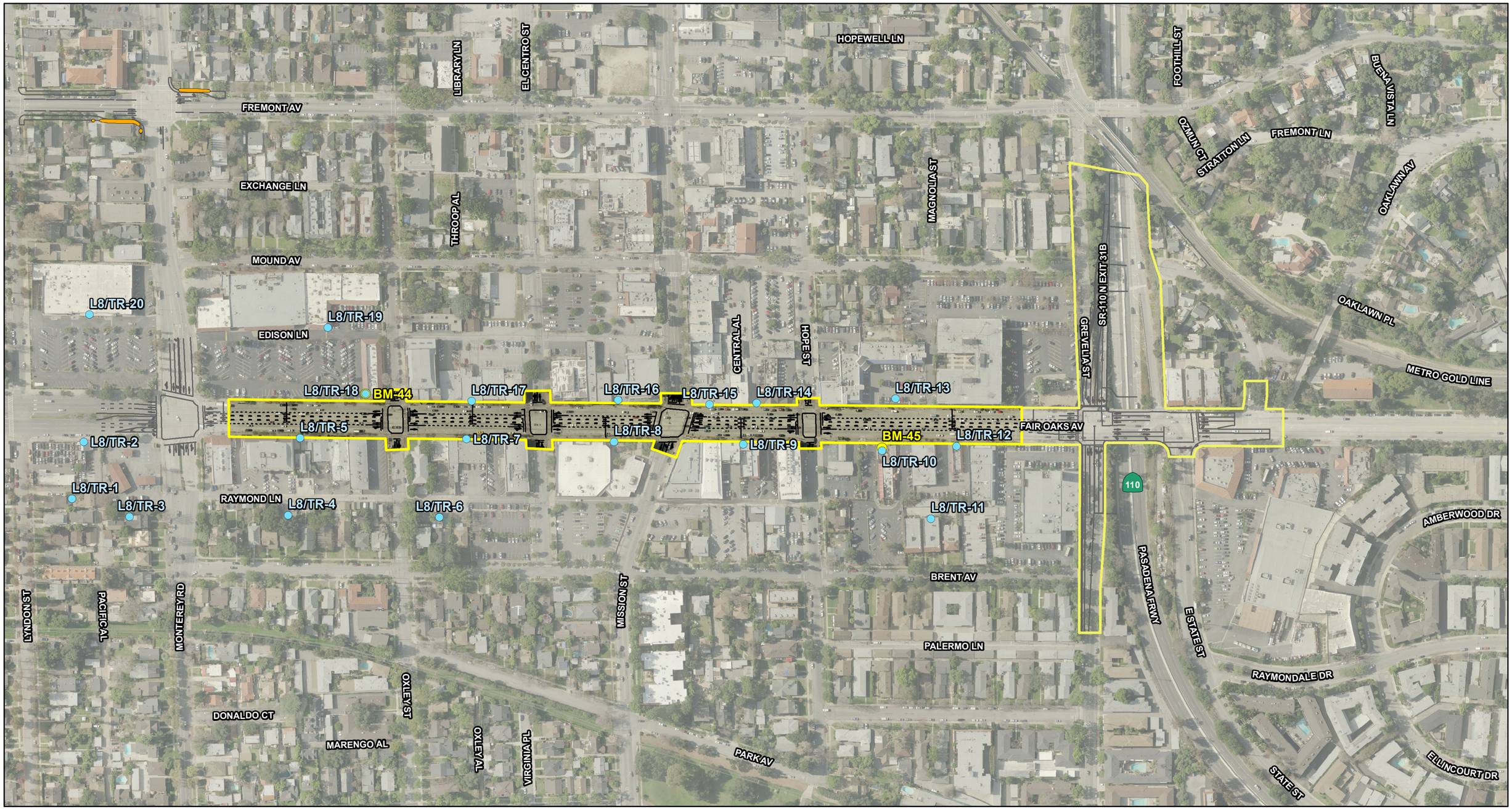

LEGEND

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FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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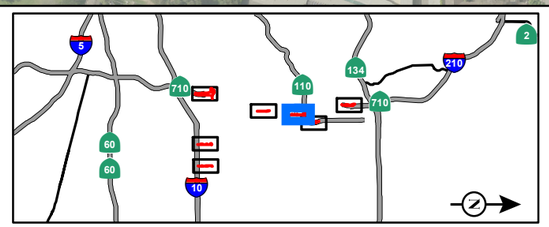

FIGURE 3.14-3
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - TSM/TDM Alternative
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MARIONDALE AV
LILLYVALE AV
PAS RANCHO CASTILLA
BOHLIG RD
DOBBS ST
VANDALIA AV
UP RR
DORCHESTER AV
STOCKBRIDGE AV
ALHAMBRA AV
LOWELL AV
CONCORD AV
W MISSION RD
HIGHBURY AV
VALLEY BLVD
W HELLMAN AV
CHARNWOOD AV
LONG BEACH FRWY
710
WESTMONT DR
MIDWICK DR
W ROSS AV
PARKVIEW DR
CABRILLO AV
GLEN AVEN AV
GLEN VIEW DR
PYRENEES DR
W NORWOOD PL
W VALLEY BLVD
MILTON AV
FRONT ST

T1/TR-35
FM-18
T1/TR-29
T1/TR-32
T1/TR-36
T1/TR-34
T1/TNB No. 4
FM-20
T1/TNB No. 3
T1/TR-33
T1/TR-31
T1/TR-30
FM-19
FM-16
T1/TR-28
T1/TR-27
T1/TR-25
T1/TR-24
T1/TR-21
T1/TR-23
T1/TR-22
T1/TR-26
FM-9
T1/TNB No. 2
T1/TNB No. 1
T1/TR-1
T1/TR-2
T1/TR-4
T1/TR-3
T1/TR-5
T1/TR-6
FM-11
T1/TR-7
T1/TR-8
T1/TR-9
T1/TR-10
T1/TR-11
T1/TR-12
T1/TR-13
FM-12
T1/TR-14
T1/TR-15
FM-13
T1/TR-16
T1/TR-17
T1/TR-18
FM-14
T1/TR-19
T1/TR-20

LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
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- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

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FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-3
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - TSM/TDM Alternative
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BRENT AV
PALERMO LN
PARK AV
AMBERWOOD DR
RAYMONDALE DR
CEDARCREST AV
RAYMOND HILL RD
ELLINCOURT DR
MOCKINGBIRD LN
E STATE ST
METRO GOLD LINE
S RAYMOND AV
BROADWAY
S ARROYO PKWY
GREVELIA ST
FOOTHILL ST
STRATFORD AV
CLARK PL
STRATFORD LN
MILAN AV
MILL RD
LAS FLORES DR
HARDISON PL
HARDISON AL
S MARENGO AV
MARGUERITA LN
ALLENDALE RD
S EUCLID AV
WALLIS ST
E GLENARM ST
OHIO ST
STATE ST
PASADENA FRWY
GARFIELD AV
SR-110 S EXIT 31B
110

T2/TR-1
T2/TR-2
T2/TR-3
T2/TR-4
T2/TR-5
T2/TR-6
T2/TR-7
T2/TR-8
T2/TR-9
T2/TR-10
T2/TR-11
T2/TR-12
T2/TR-13
T2/TR-14
T2/TR-15
T2/TNB No. 1
T2/TNB No. 2
TM-19
TML-1
TM-21
SM-13

LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-3

SR 710 North Study
Noise Measurement and Receptor Locations
and Modeled Noise Barriers - TSM/TDM Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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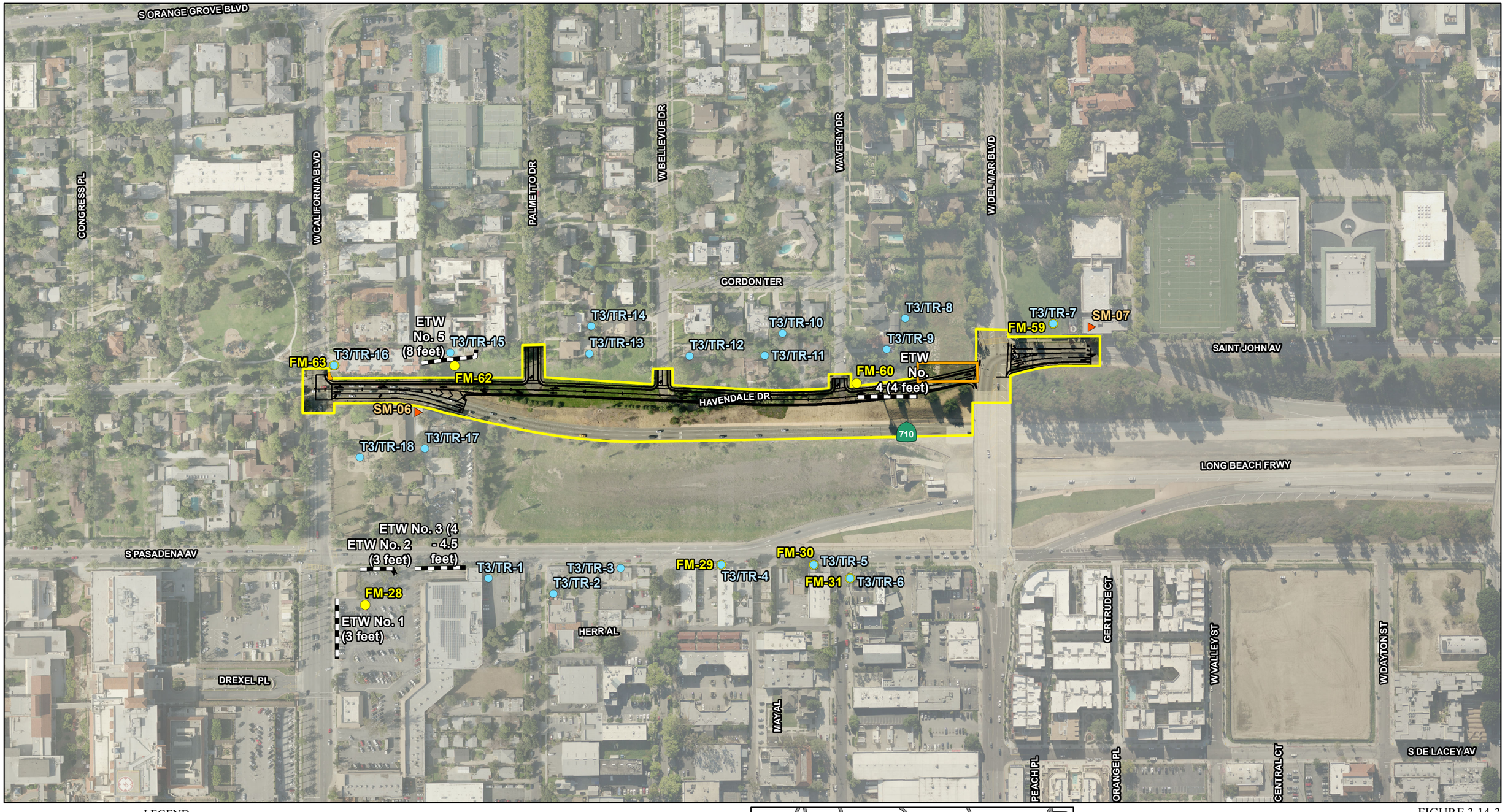

LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

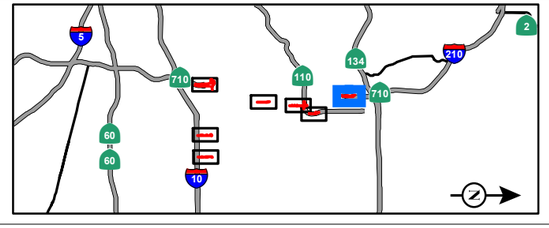

FIGURE 3.14-3
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SR 710 North Study
Noise Measurement and Receptor Locations
and Modeled Noise Barriers - TSM/TDM Alternative

07-LA-710 (SR 710)
EA 187900
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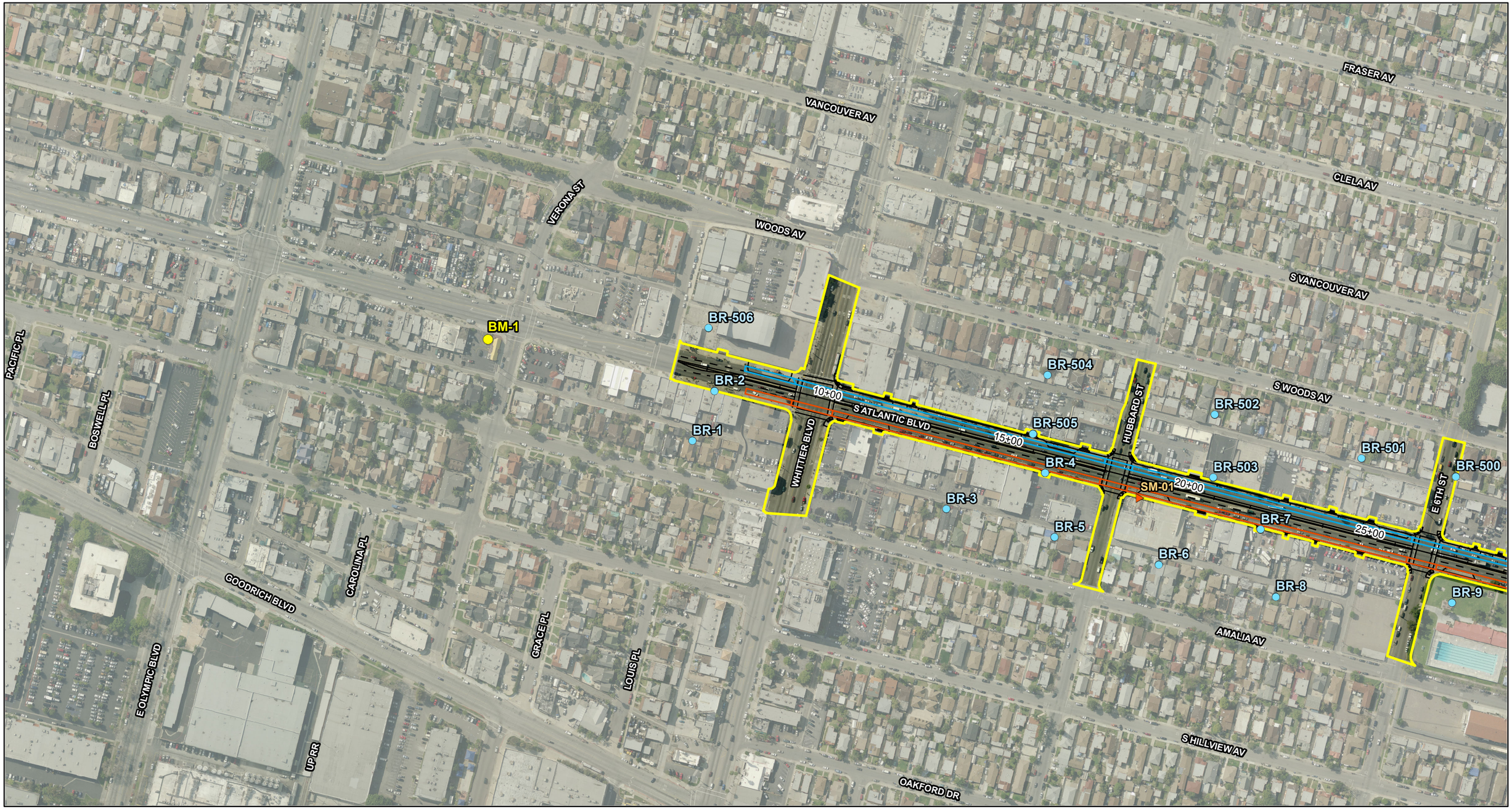
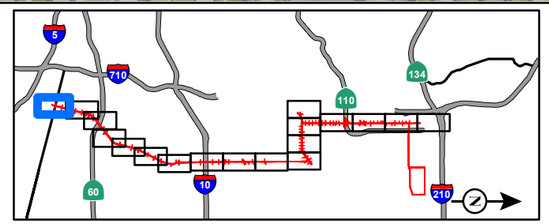


LEGEND

- BRT Roadway Geometries
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-4
Page 1 of 18

SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

07-LA-710 (SR 710)
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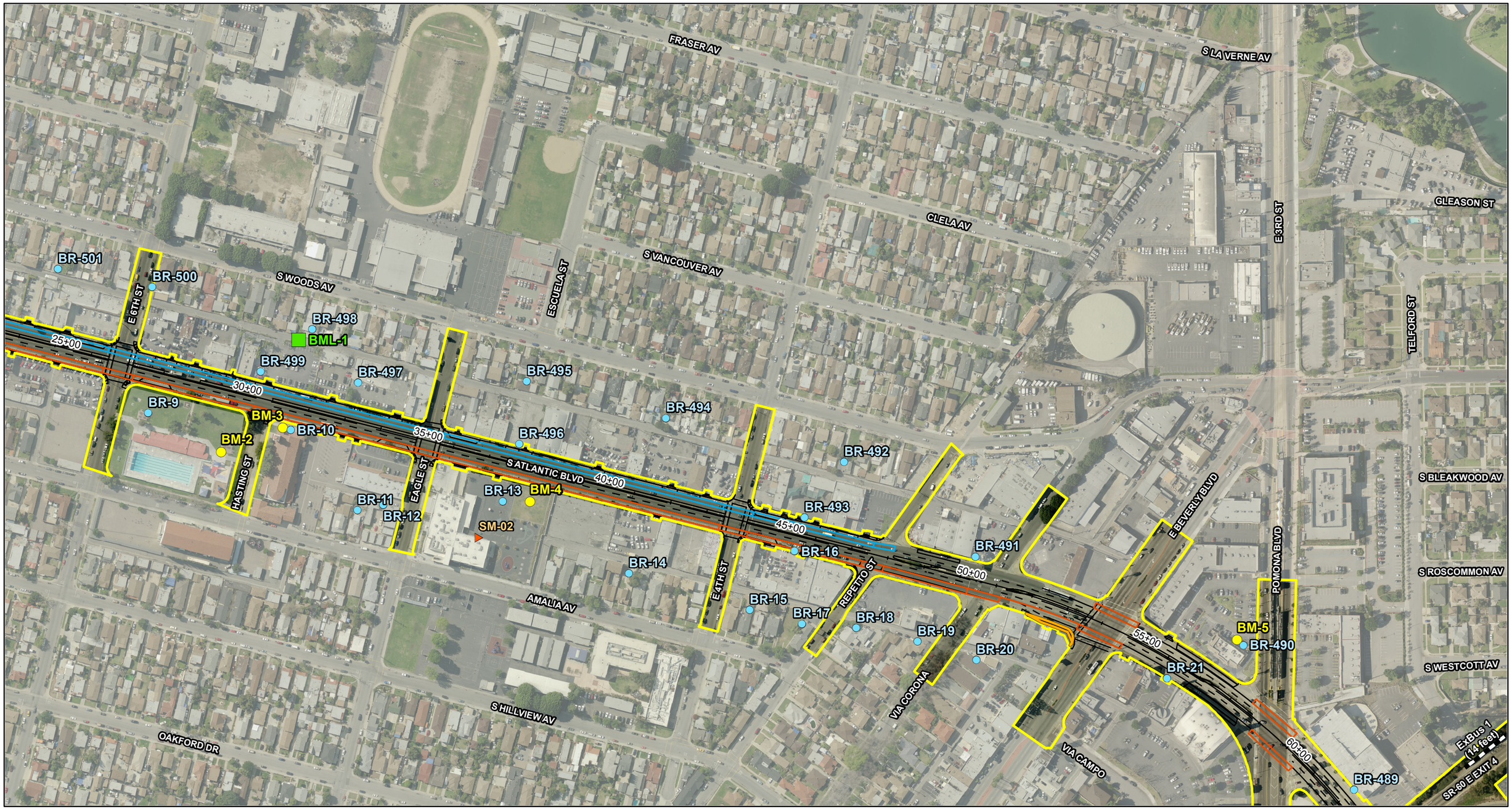
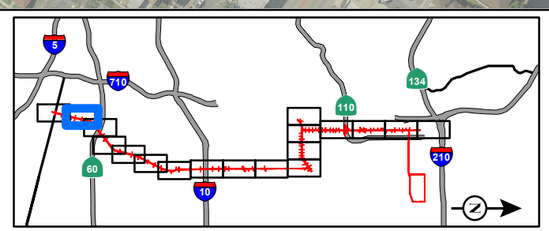


LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-4
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SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

07-LA-710 (SR 710)
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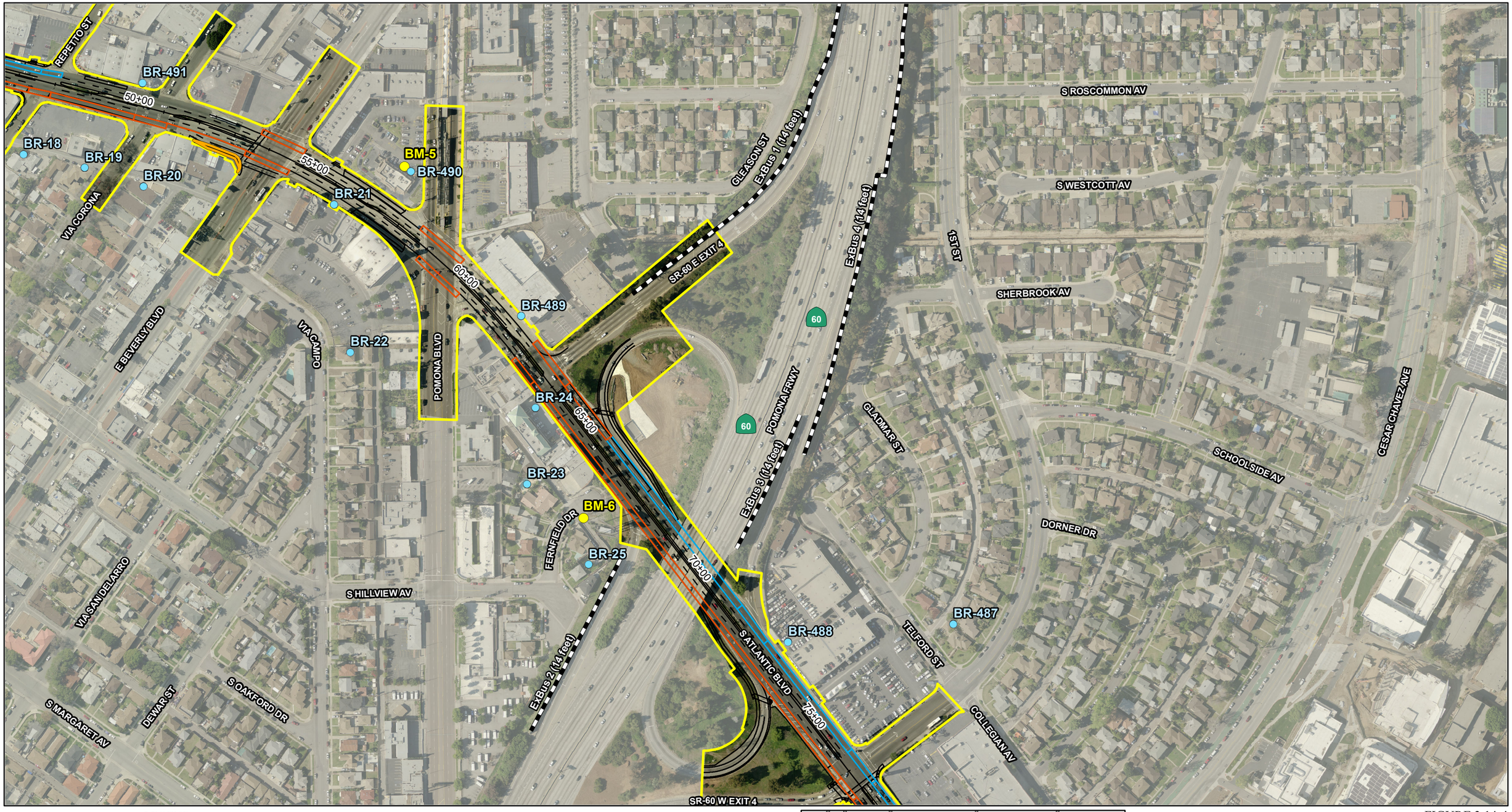

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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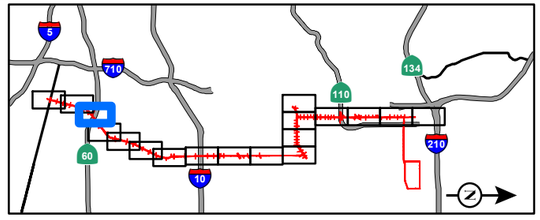

FIGURE 3.14-4

SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

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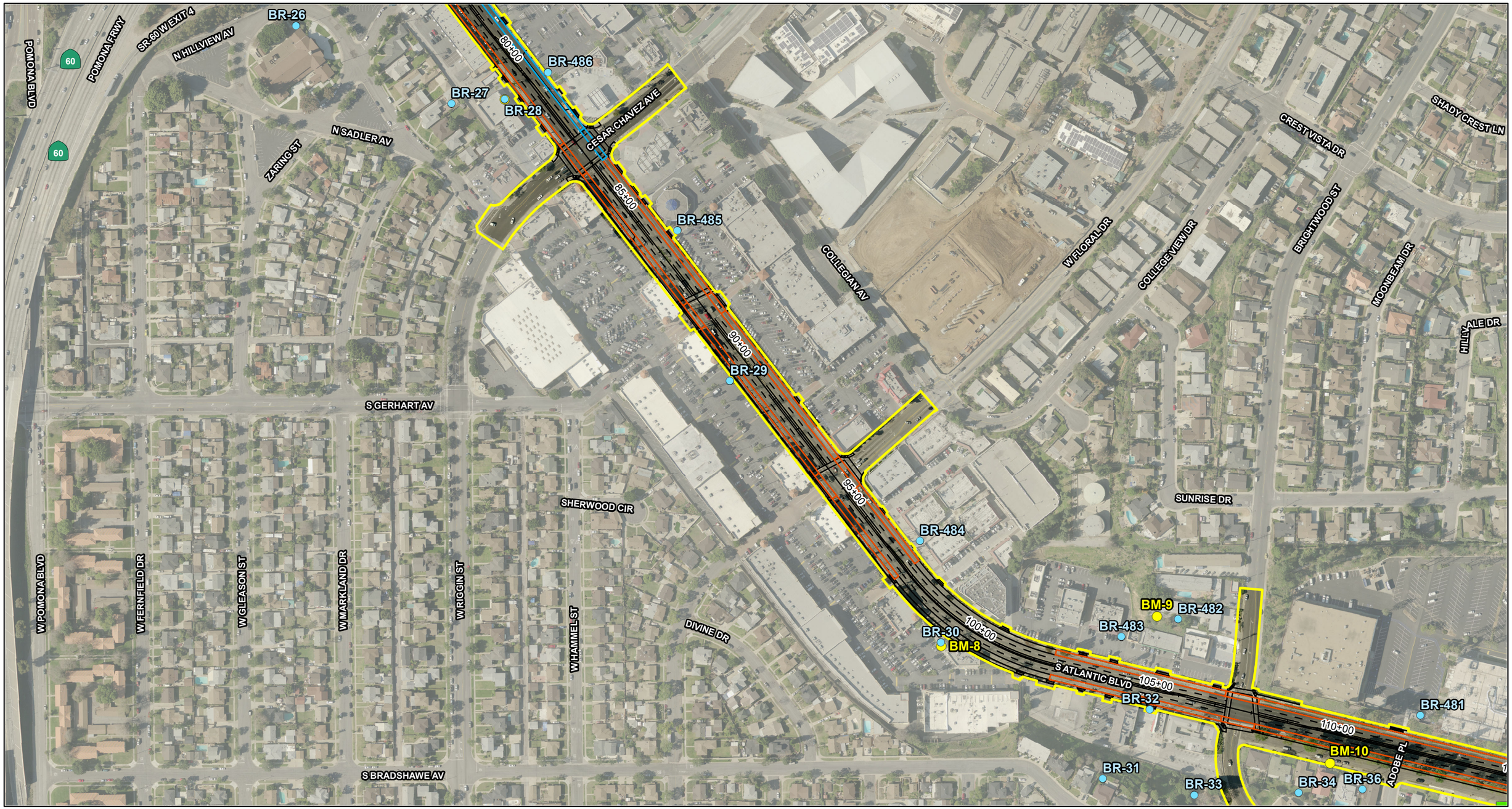

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-4
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SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

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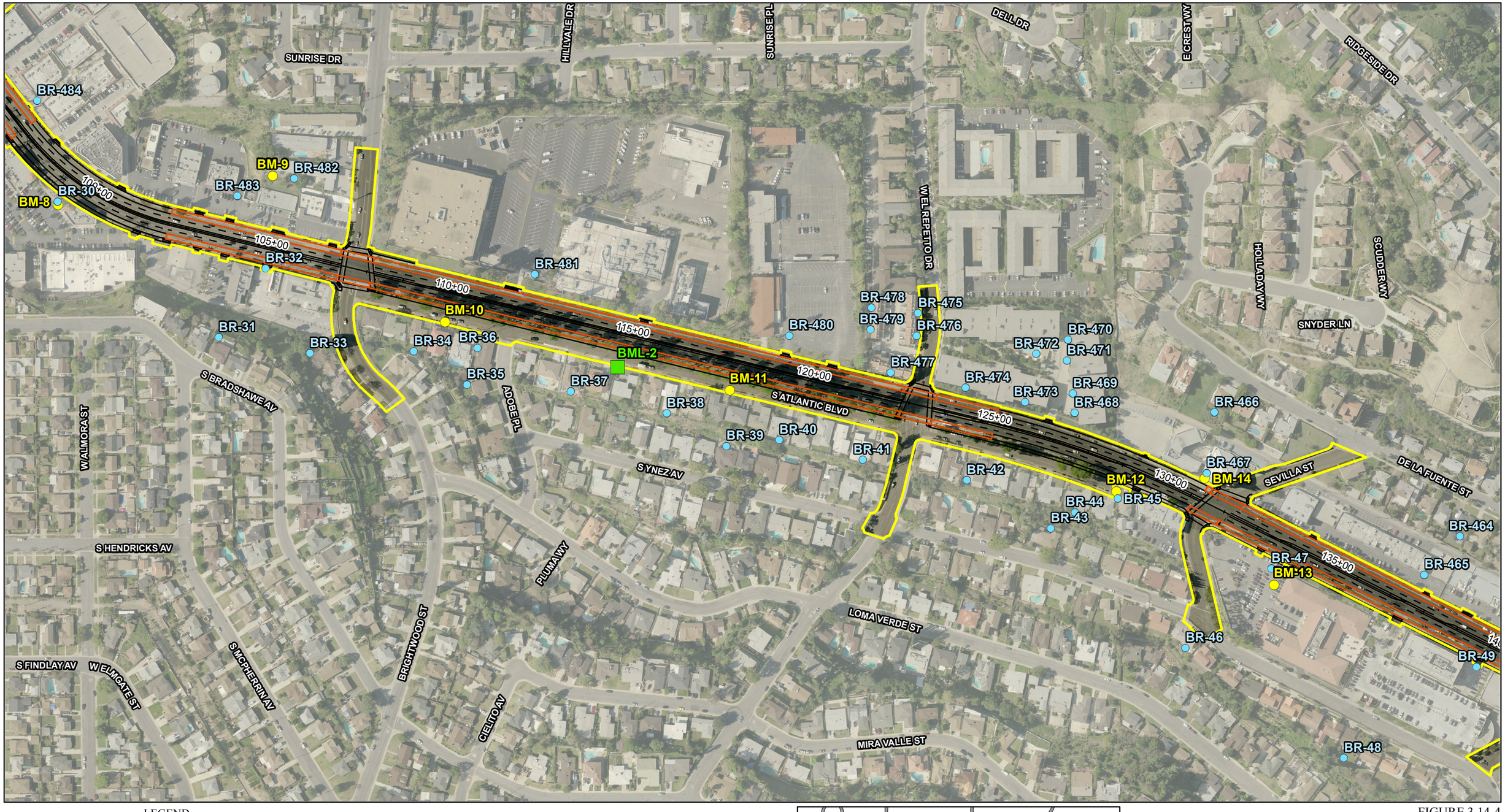

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

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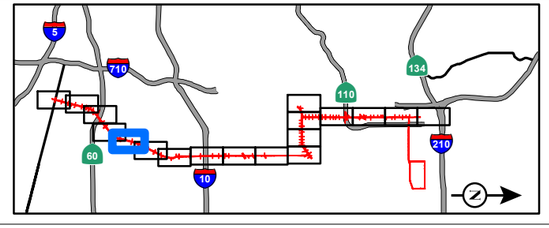
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-4
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative
07-LA-710 (SR 710)
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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

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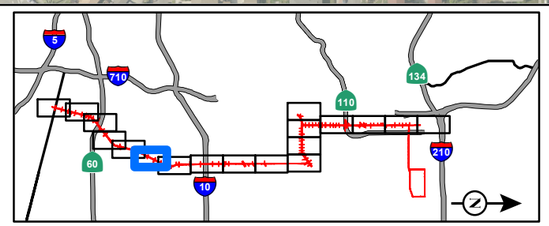
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-4
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SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

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EA 187900
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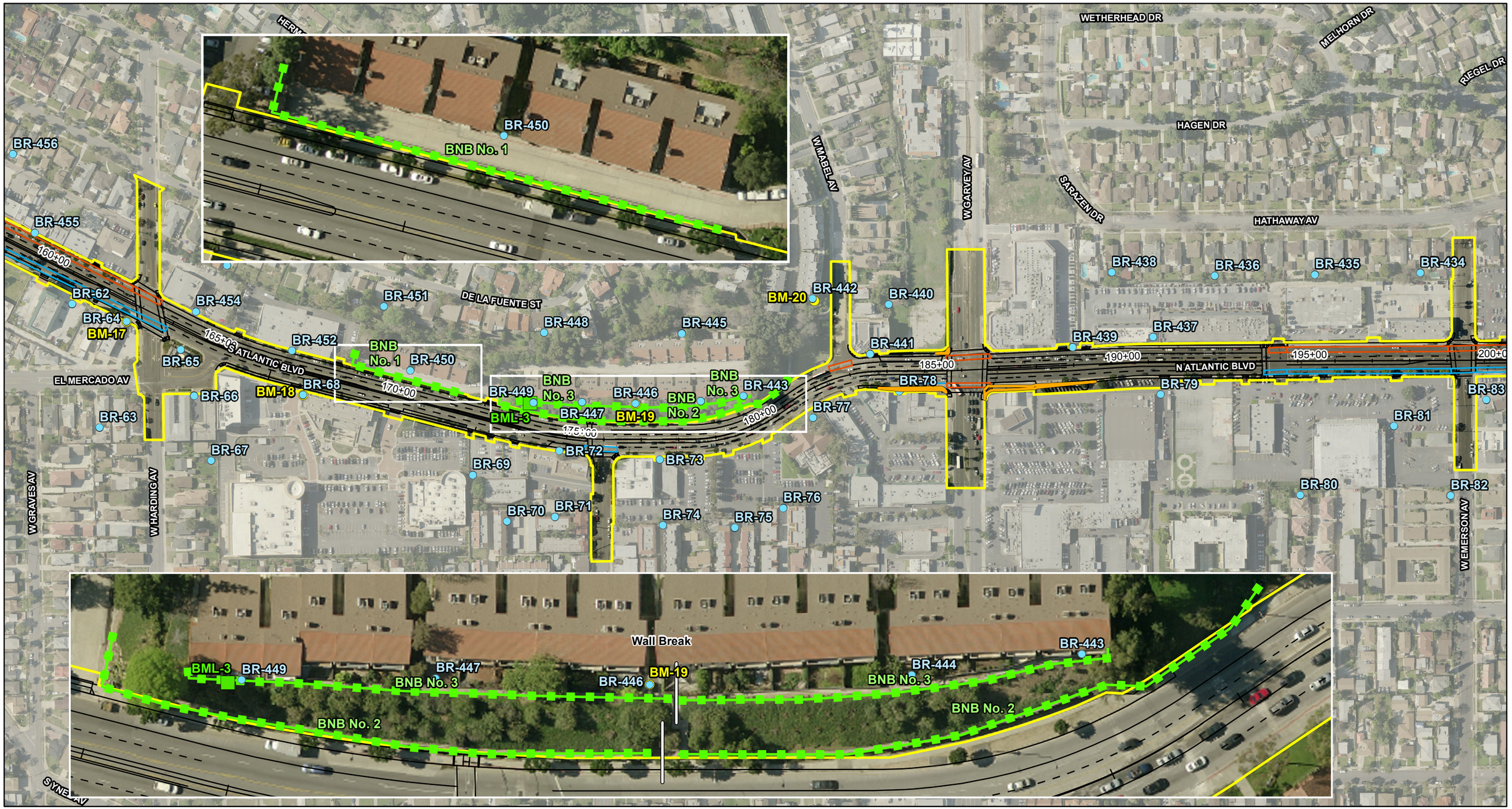

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
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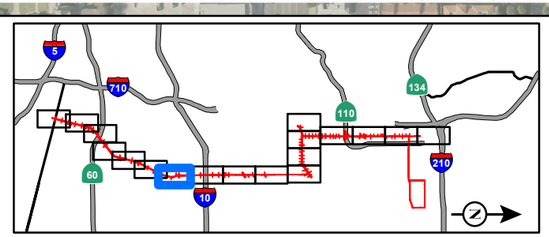
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-4
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SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

07-LA-710 (SR 710)
EA 187900
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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
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- BRT Alternative
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- Modeled Receptor Locations
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FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-4
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative
07-LA-710 (SR 710)
EA 187900
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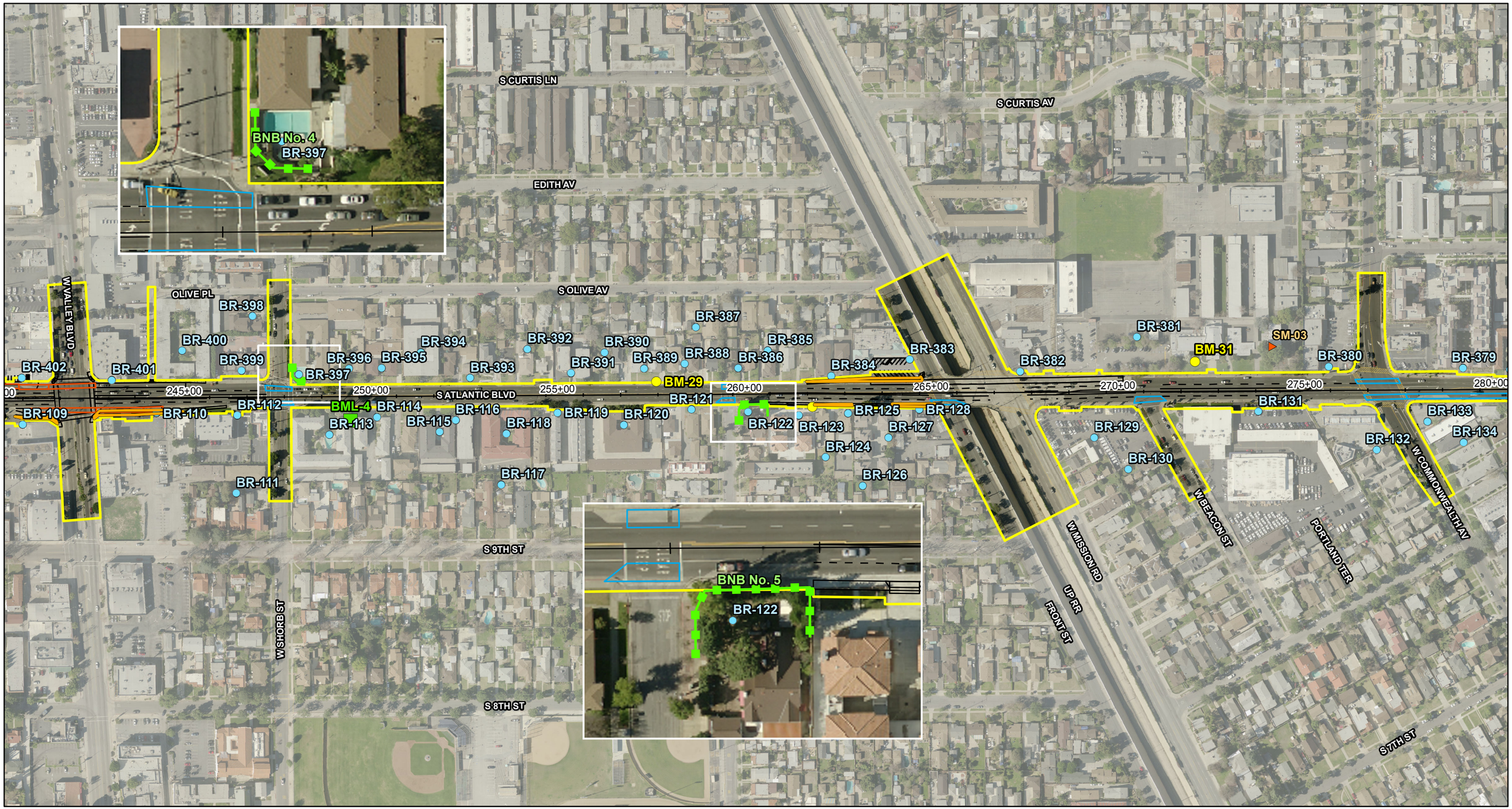

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

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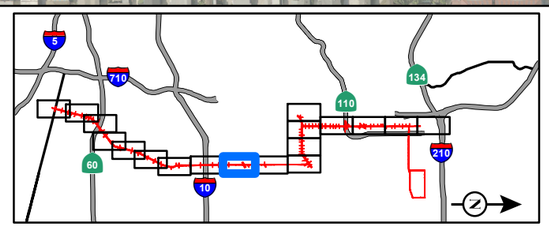

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FIGURE 3.14-4

SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative
07-LA-710 (SR 710)
EA 187900
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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
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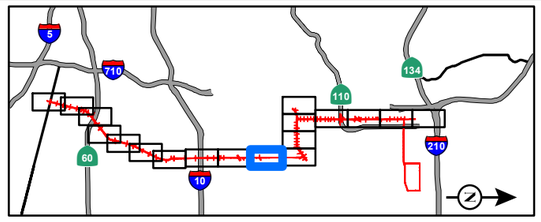

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FIGURE 3.14-4

SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

07-LA-710 (SR 710)
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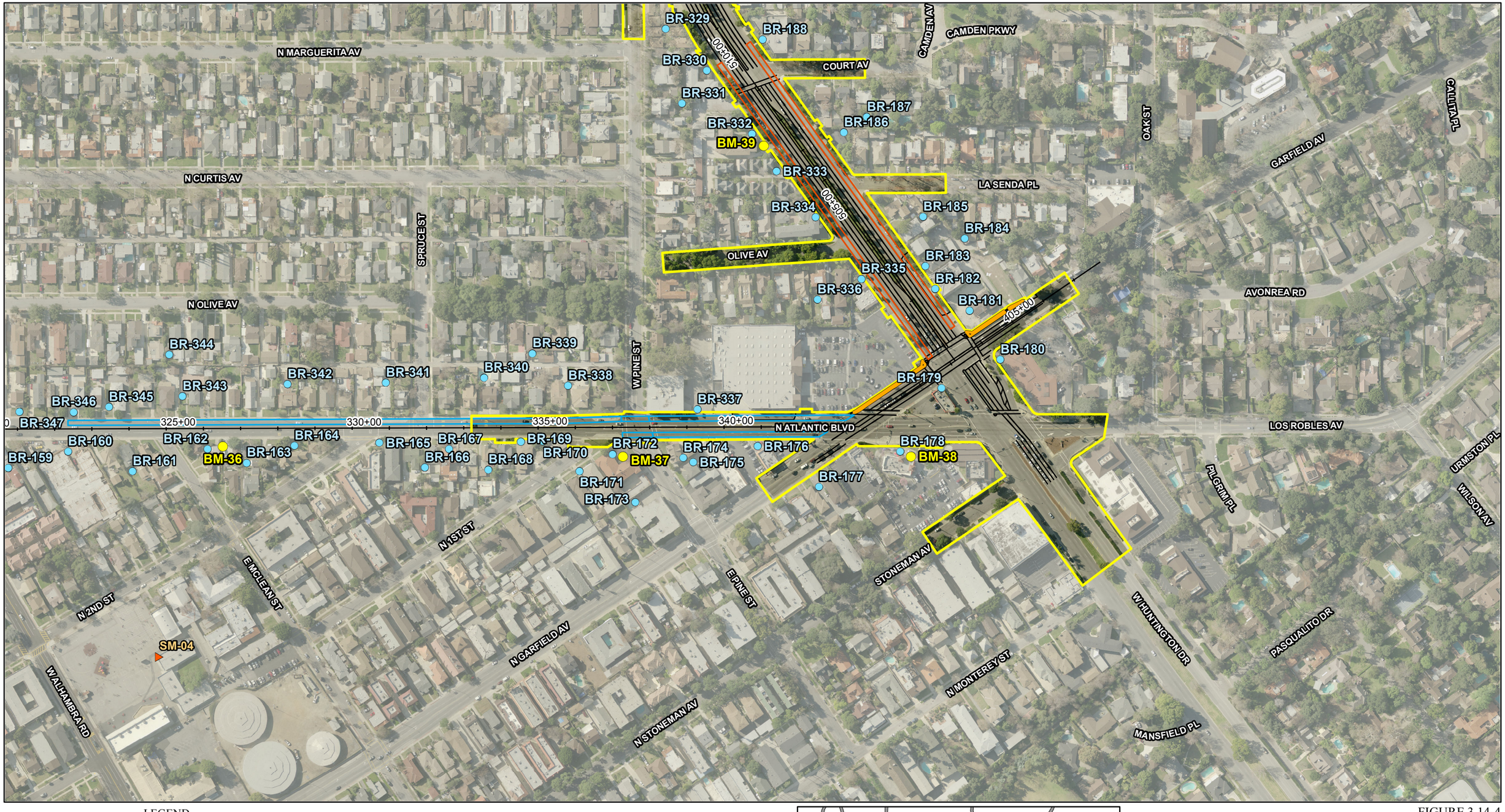

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
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- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

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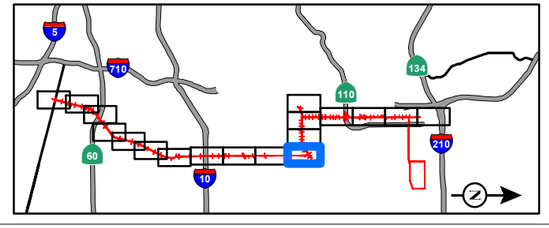

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FIGURE 3.14-4

SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

07-LA-710 (SR 710)
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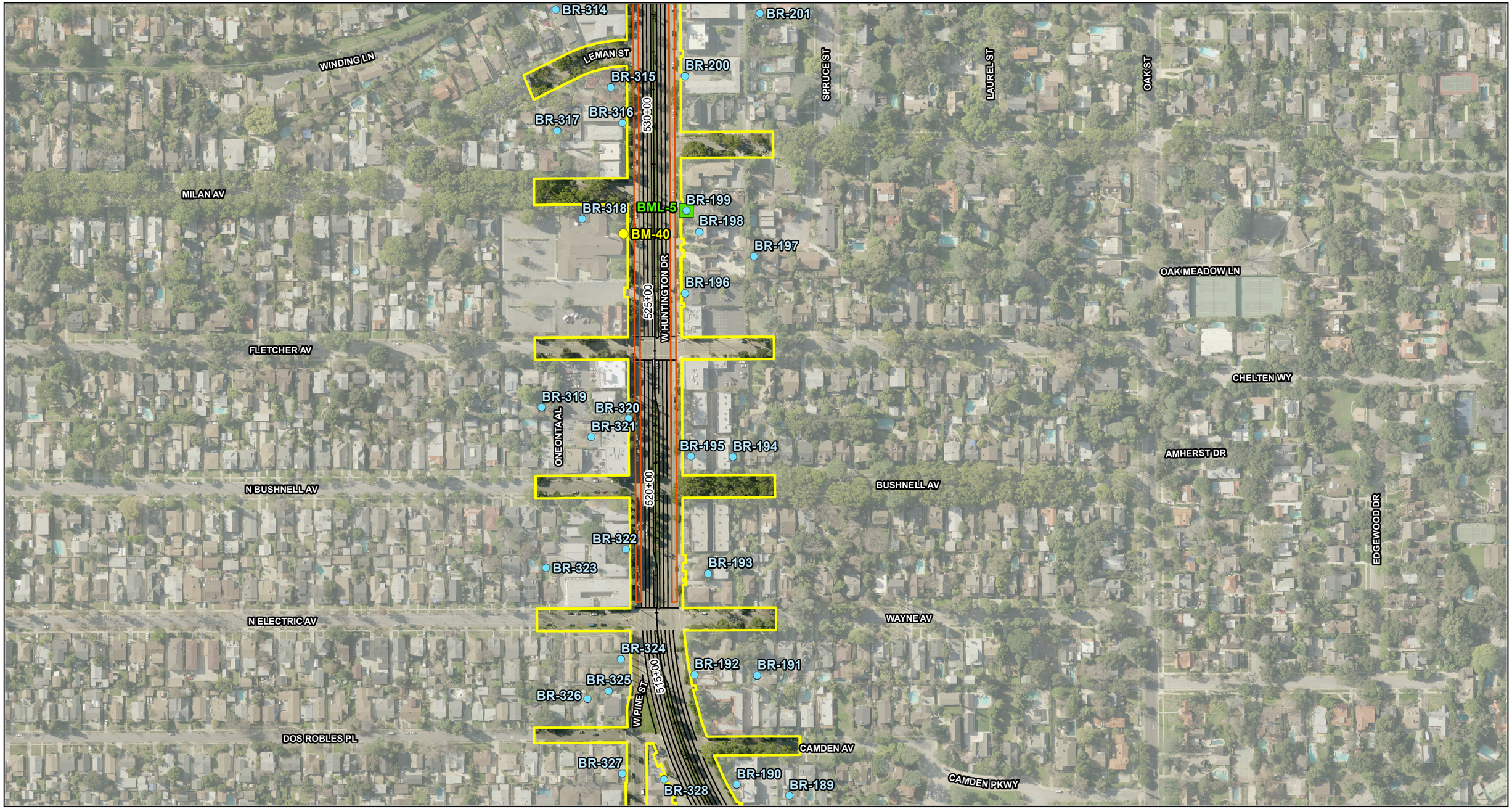

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
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- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

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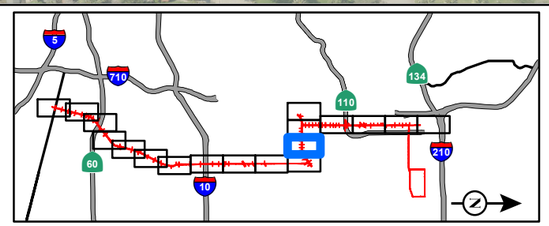

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FIGURE 3.14-4
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SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

07-LA-710 (SR 710)
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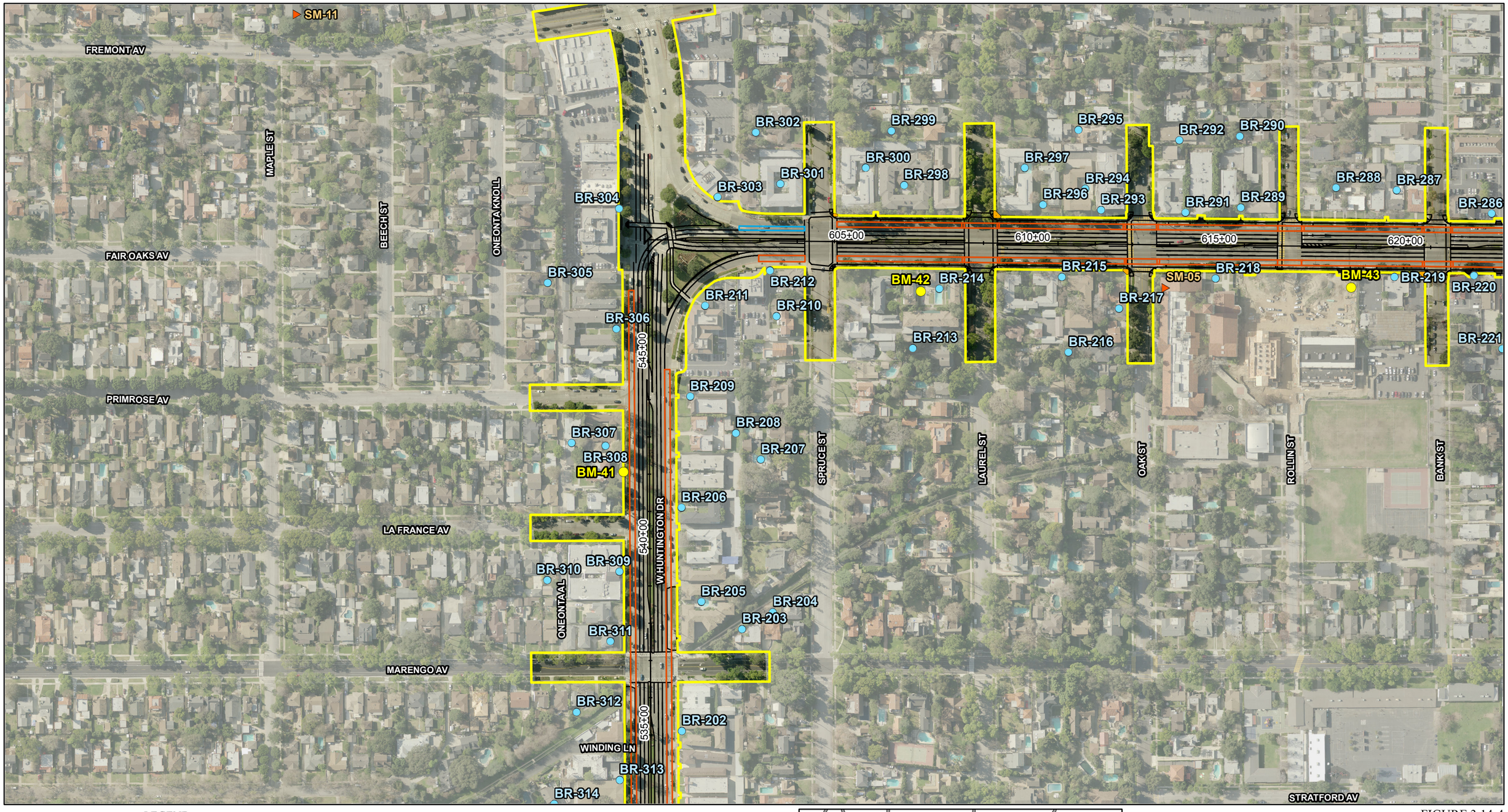

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
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FEET

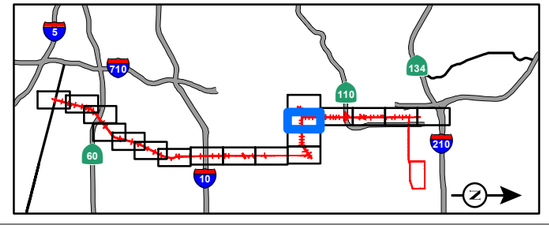

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FIGURE 3.14-4
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SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
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FEET

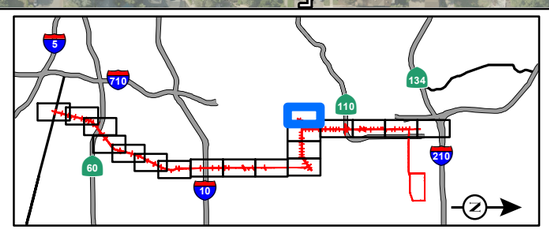

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FIGURE 3.14-4
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

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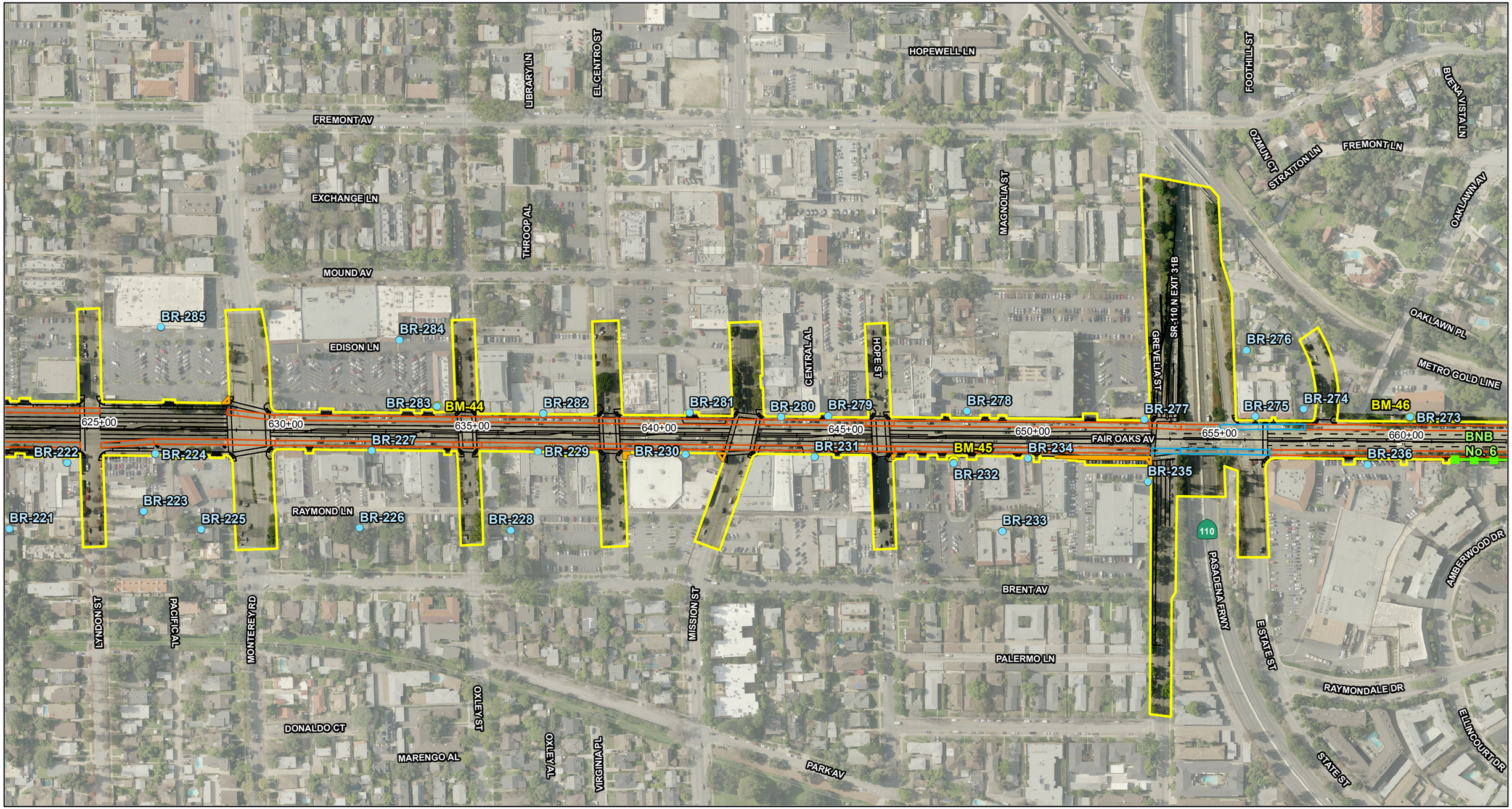

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
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- BRT Alternative
- Existing Walls
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- Modeled Receptor Locations
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FIGURE 3.14-4
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative
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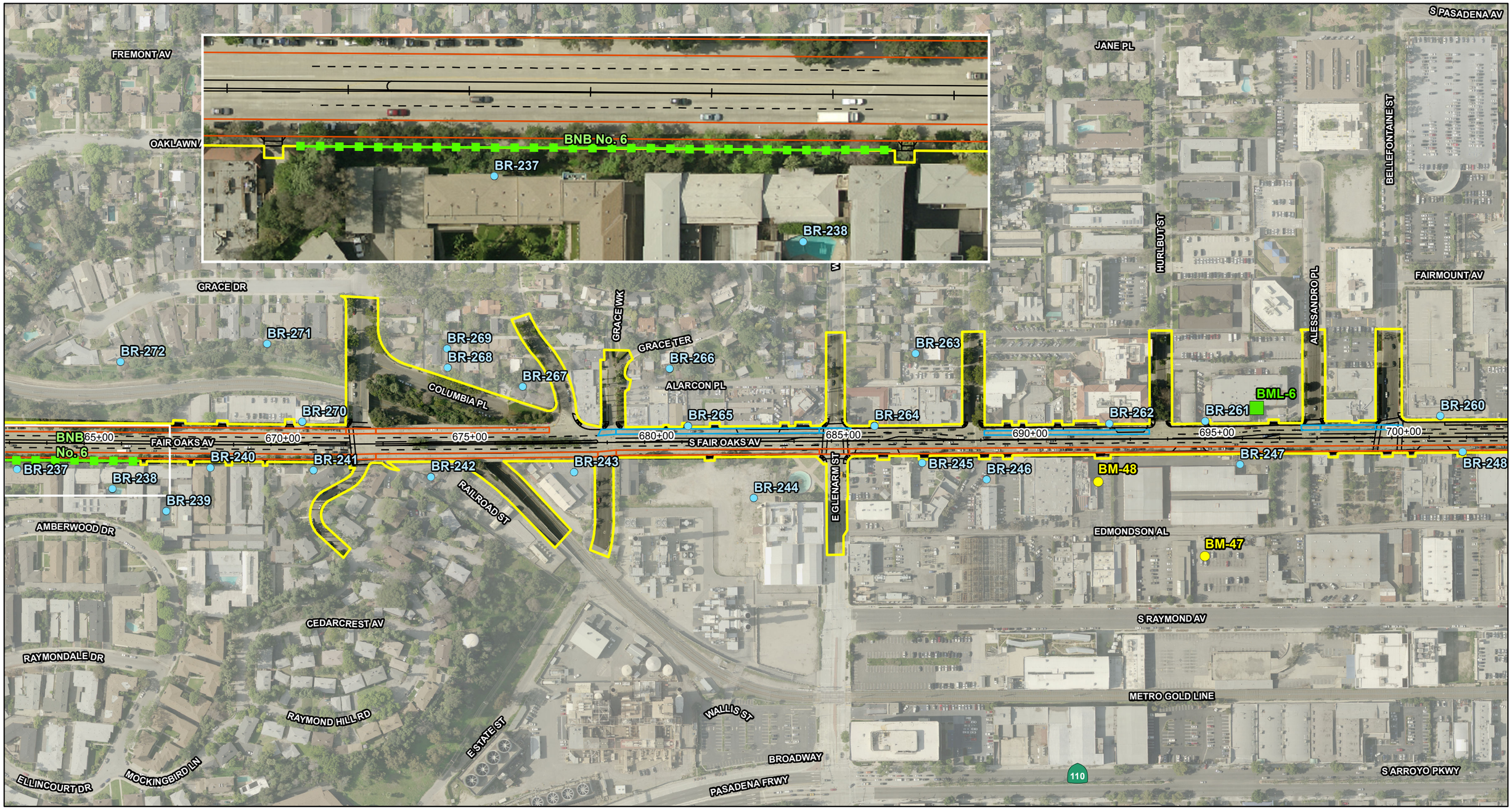

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

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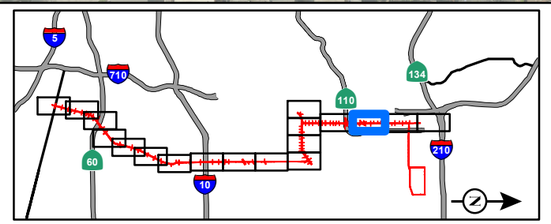

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-4

SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

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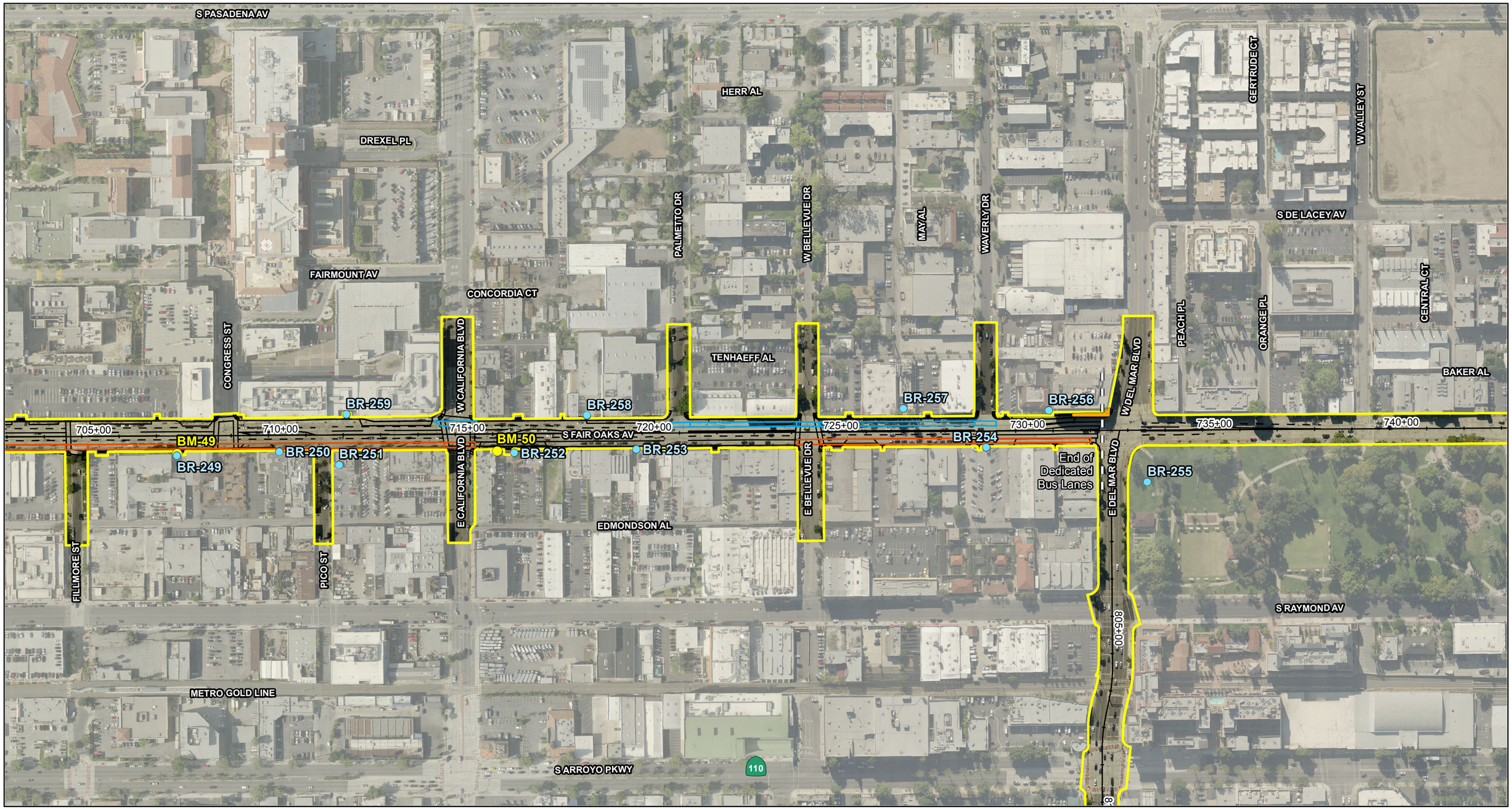
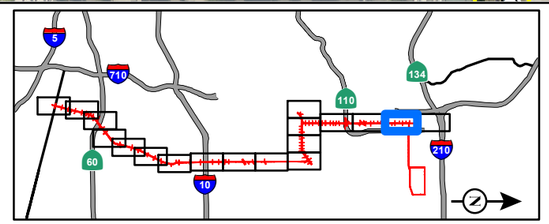


LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-4
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SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative

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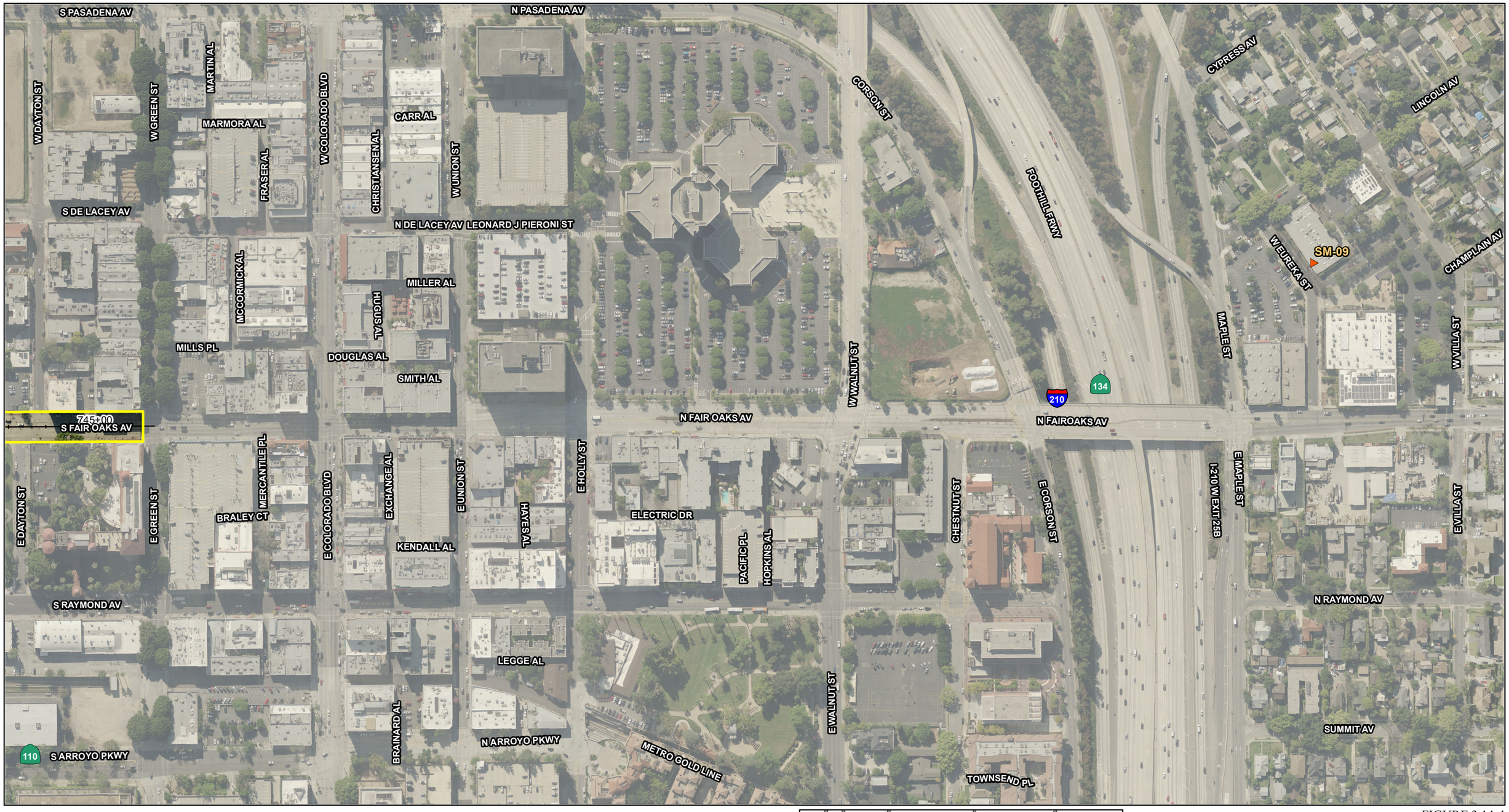

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
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- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

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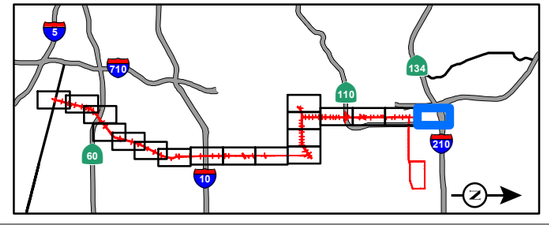

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-4

SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - BRT Alternative
07-LA-710 (SR 710)
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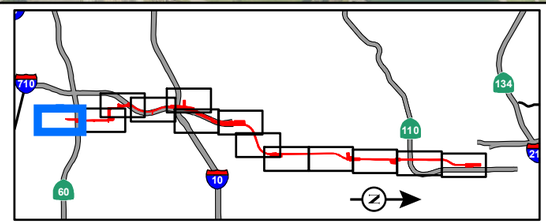
LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
- Modeled Noise Barriers: 7 feet
- Modeled Noise Barriers: 9.5 feet
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-5
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SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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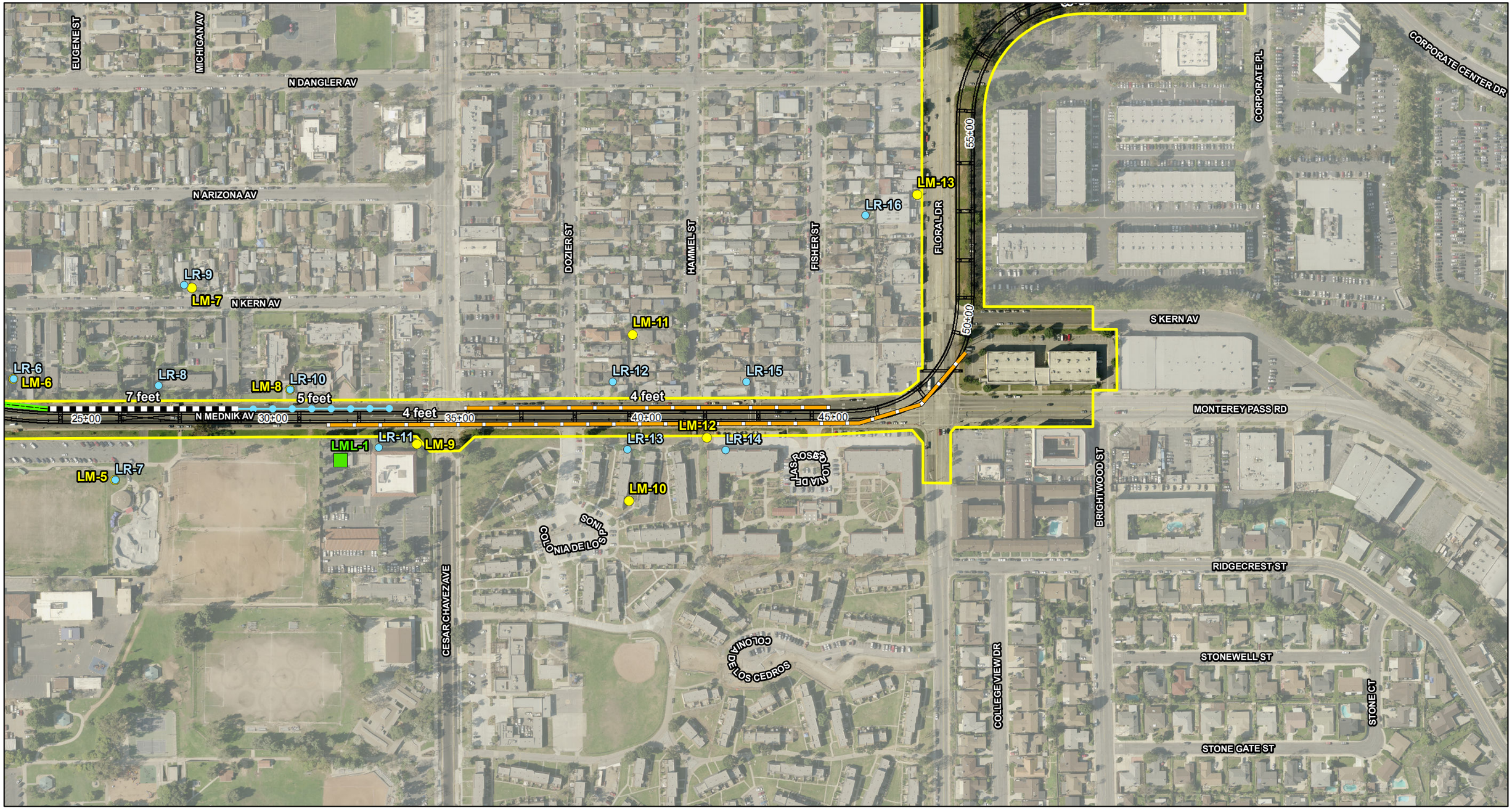

LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
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- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
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FEET

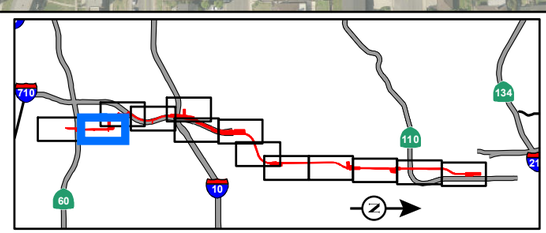

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FIGURE 3.14-5

SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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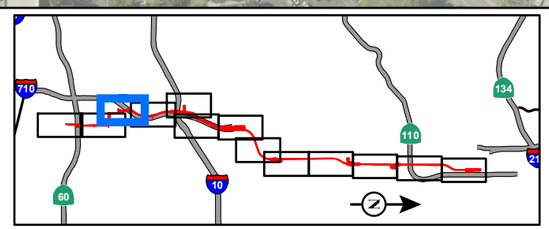

FIGURE 3.14-5

SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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LEGEND

- LRT Geometrics
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- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

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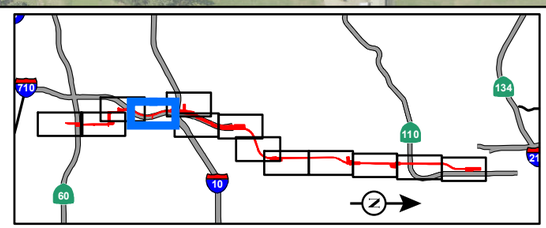

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-5
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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LEGEND

- LRT Geometrics
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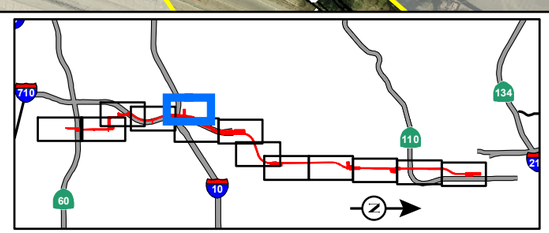

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-5
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
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- Long-term, 24-hour, Measurement Locations (LRT)
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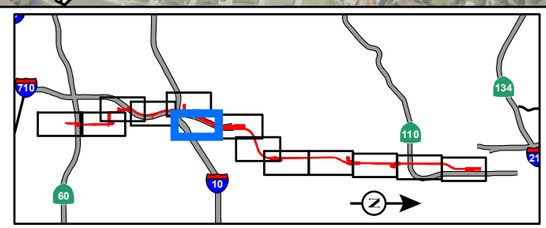

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FIGURE 3.14-5
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
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- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

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FEET

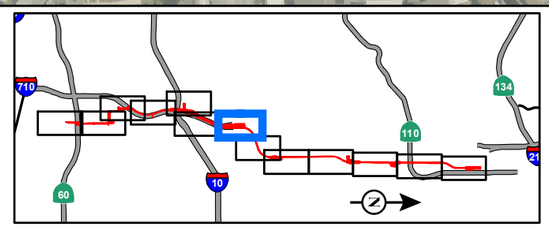

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FIGURE 3.14-5
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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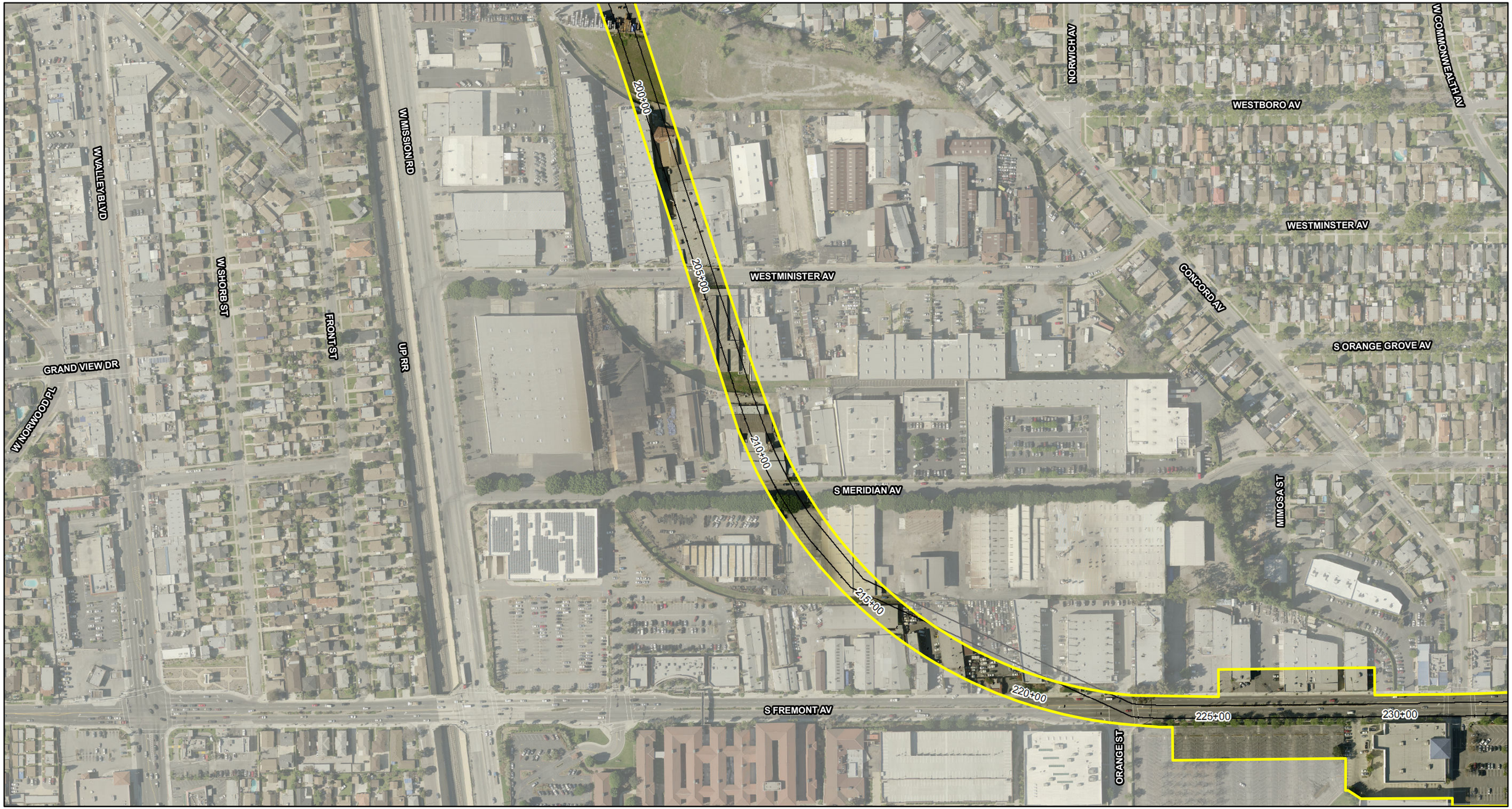

LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
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- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

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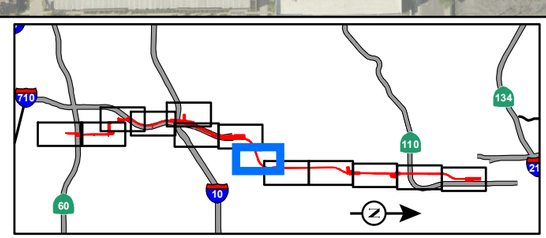

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-5

SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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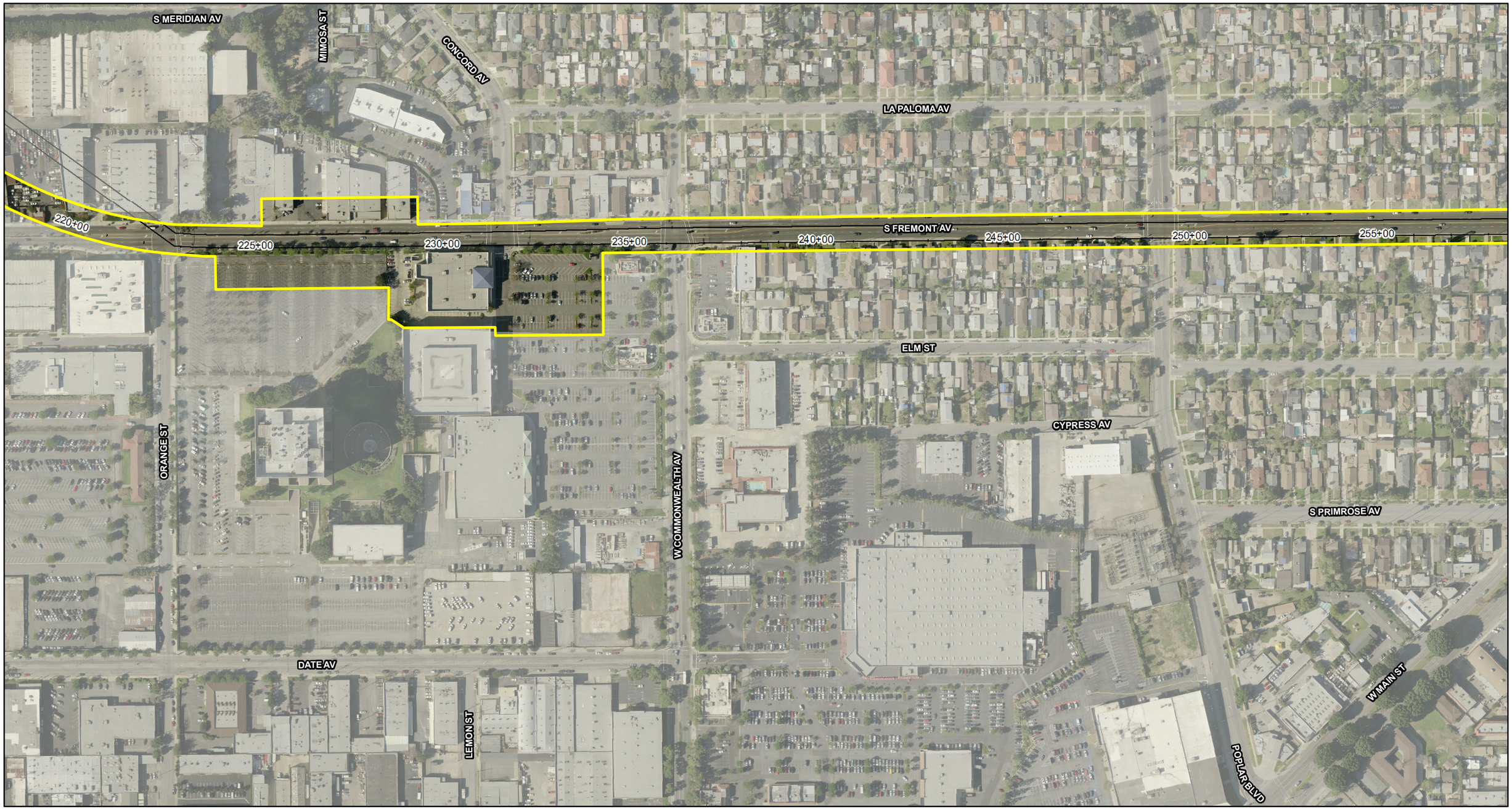

LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
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- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

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FEET

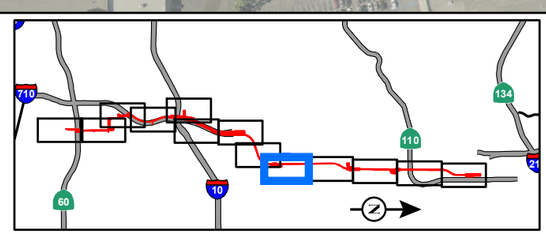

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FIGURE 3.14-5
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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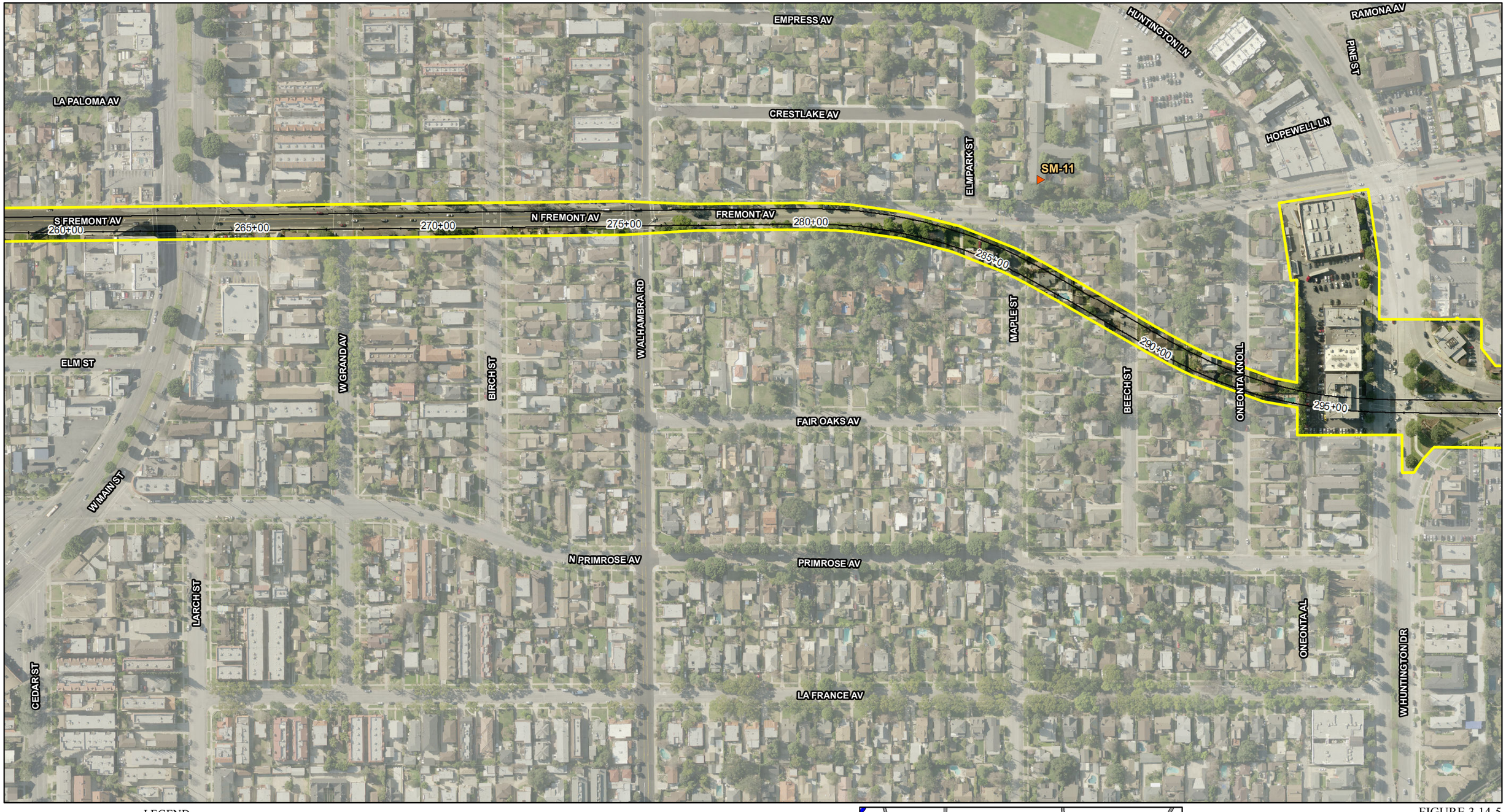

LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
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- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

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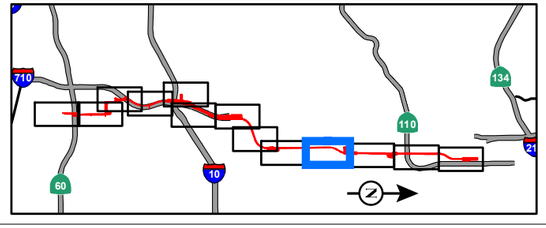
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-5
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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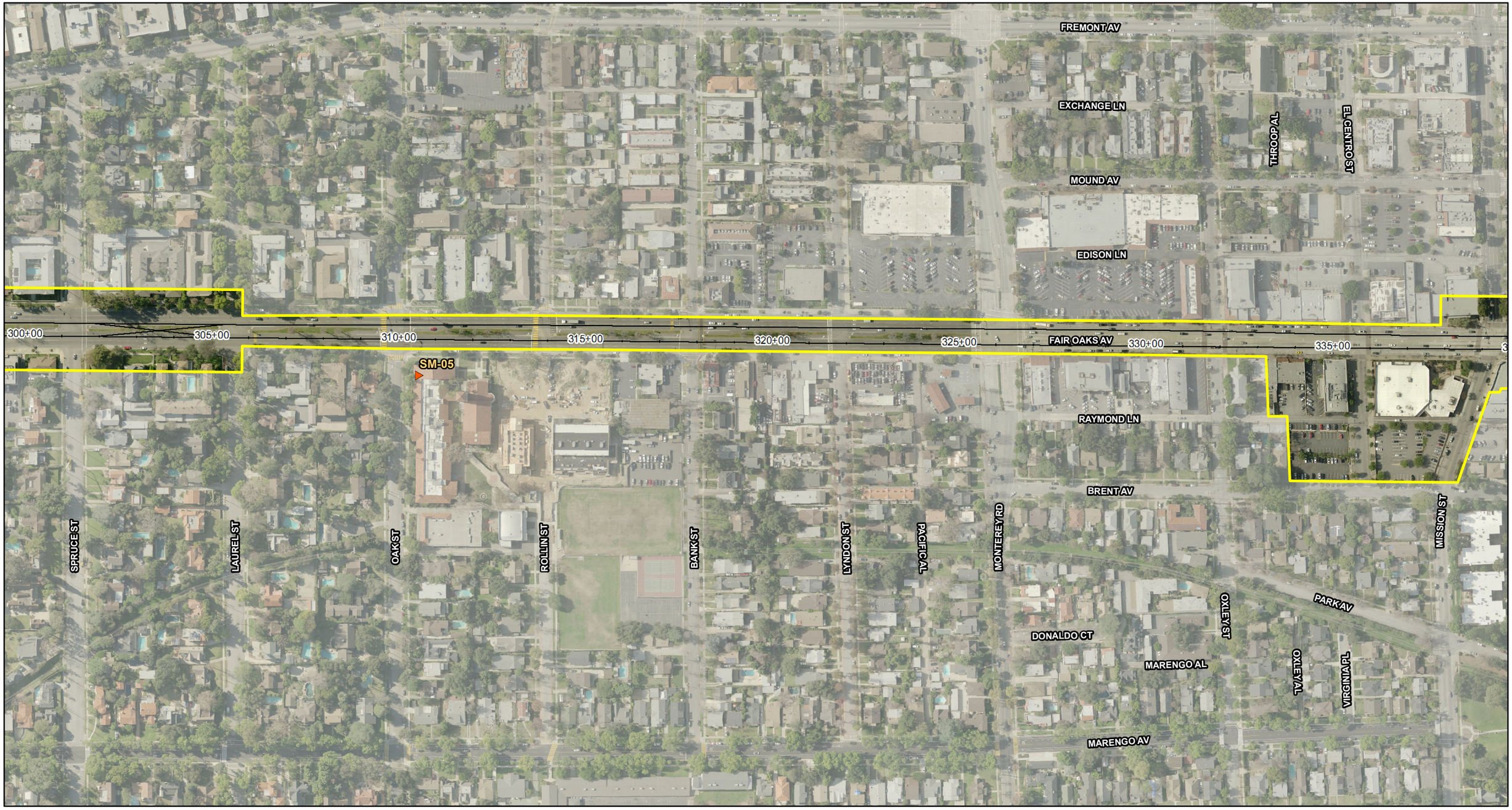

LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
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- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

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FEET

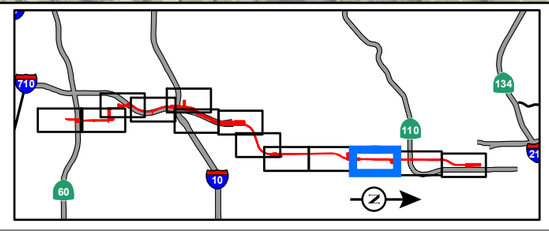

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FIGURE 3.14-5
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SR 710 North Study

Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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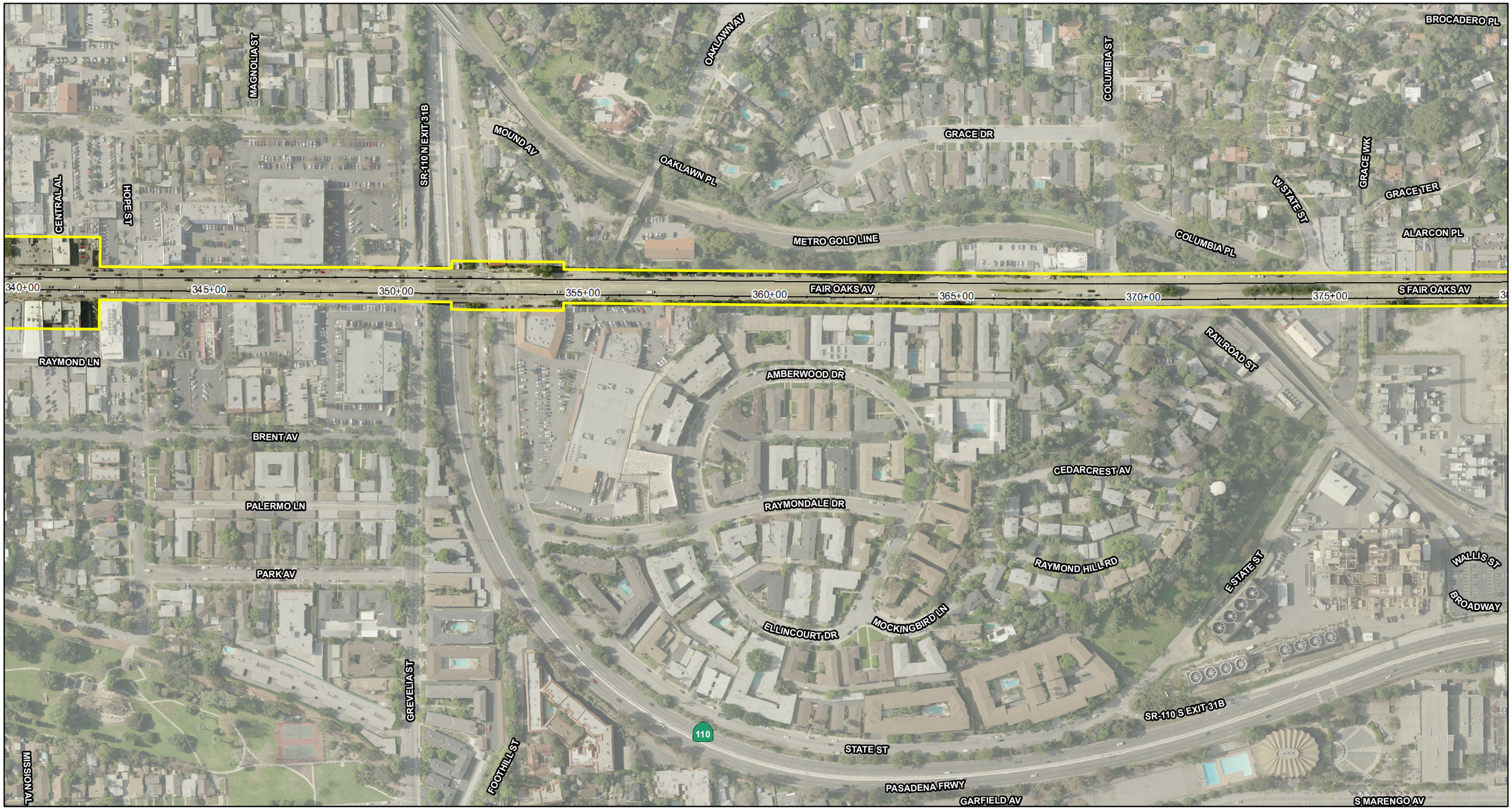

LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
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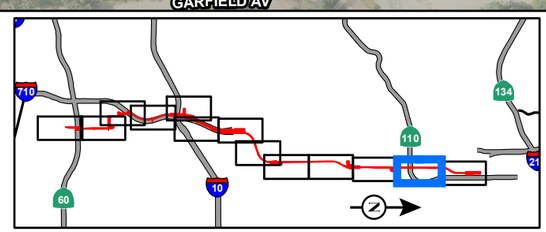
0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-5

SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative

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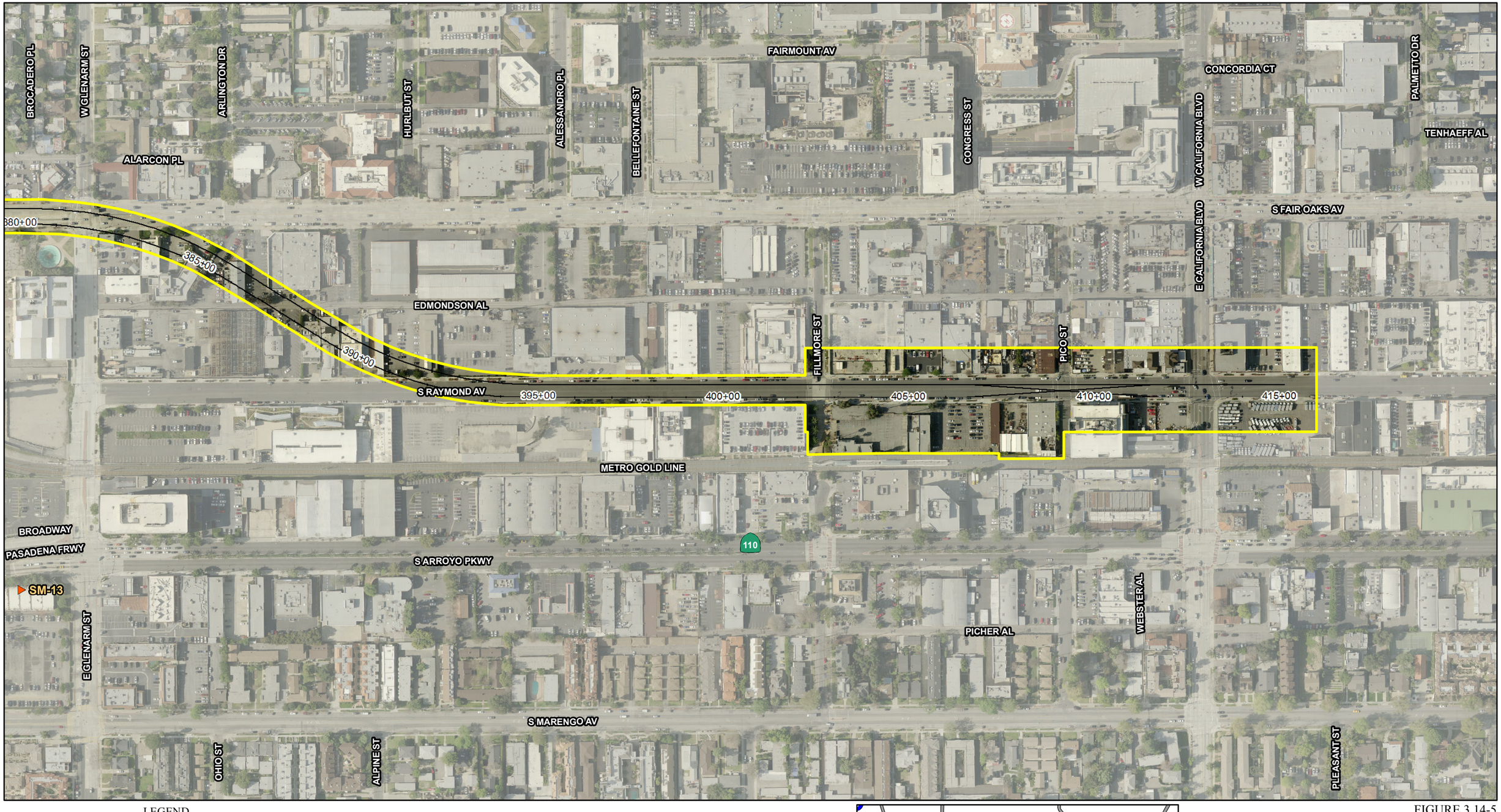

LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
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FEET

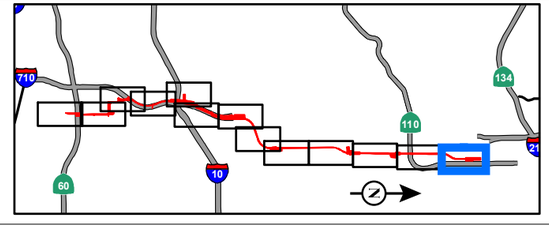

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FIGURE 3.14-5
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - LRT Alternative
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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

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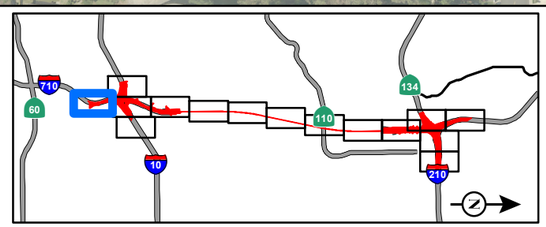

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-6
Sheet 1 of 15
SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

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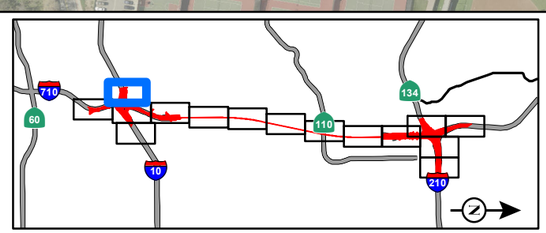

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-6
Sheet 2 of 15
SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
07-LA-710 (SR 710)
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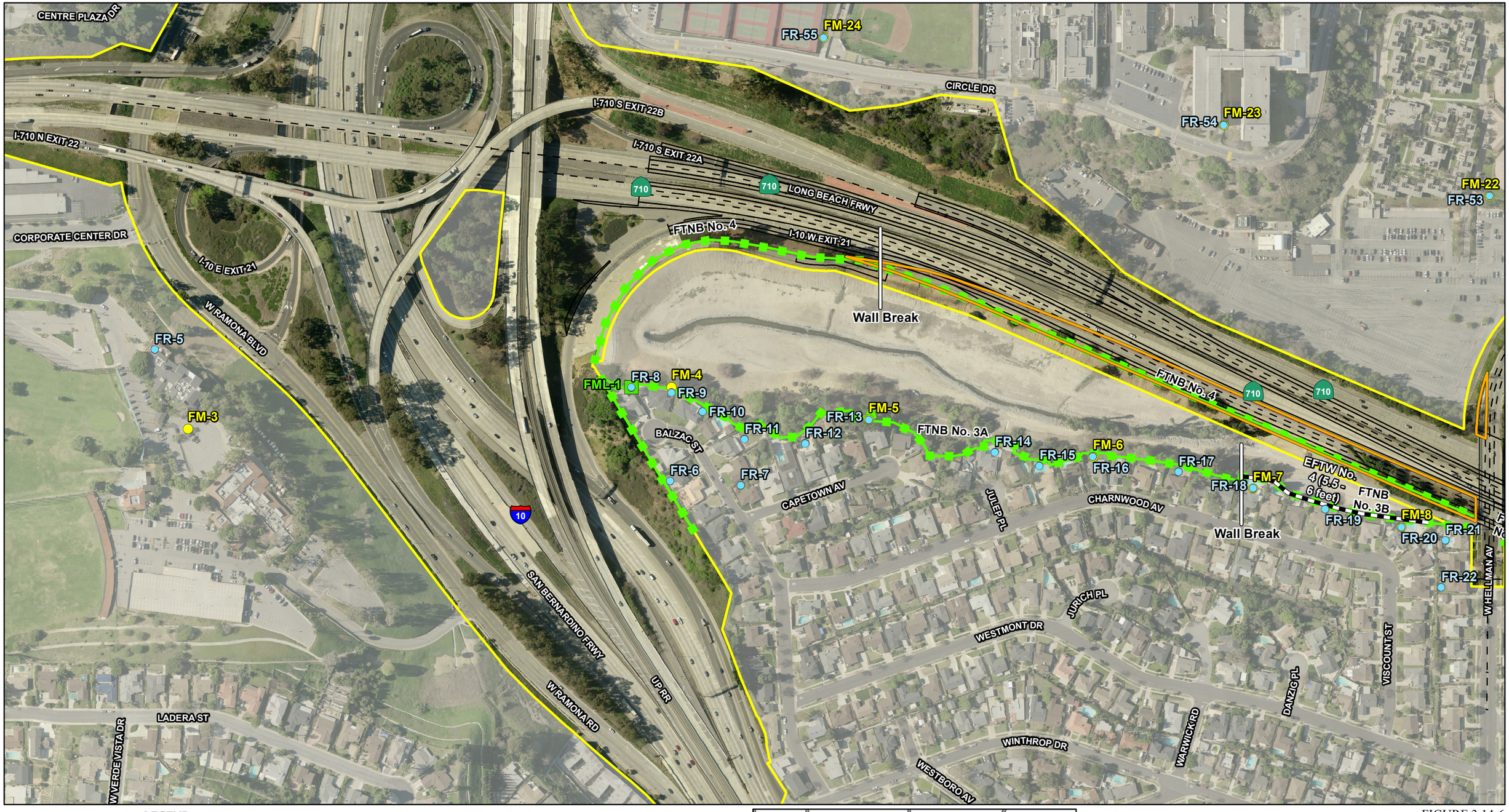

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

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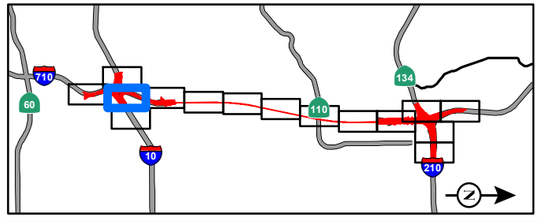

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-6
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
07-LA-710 (SR 710)
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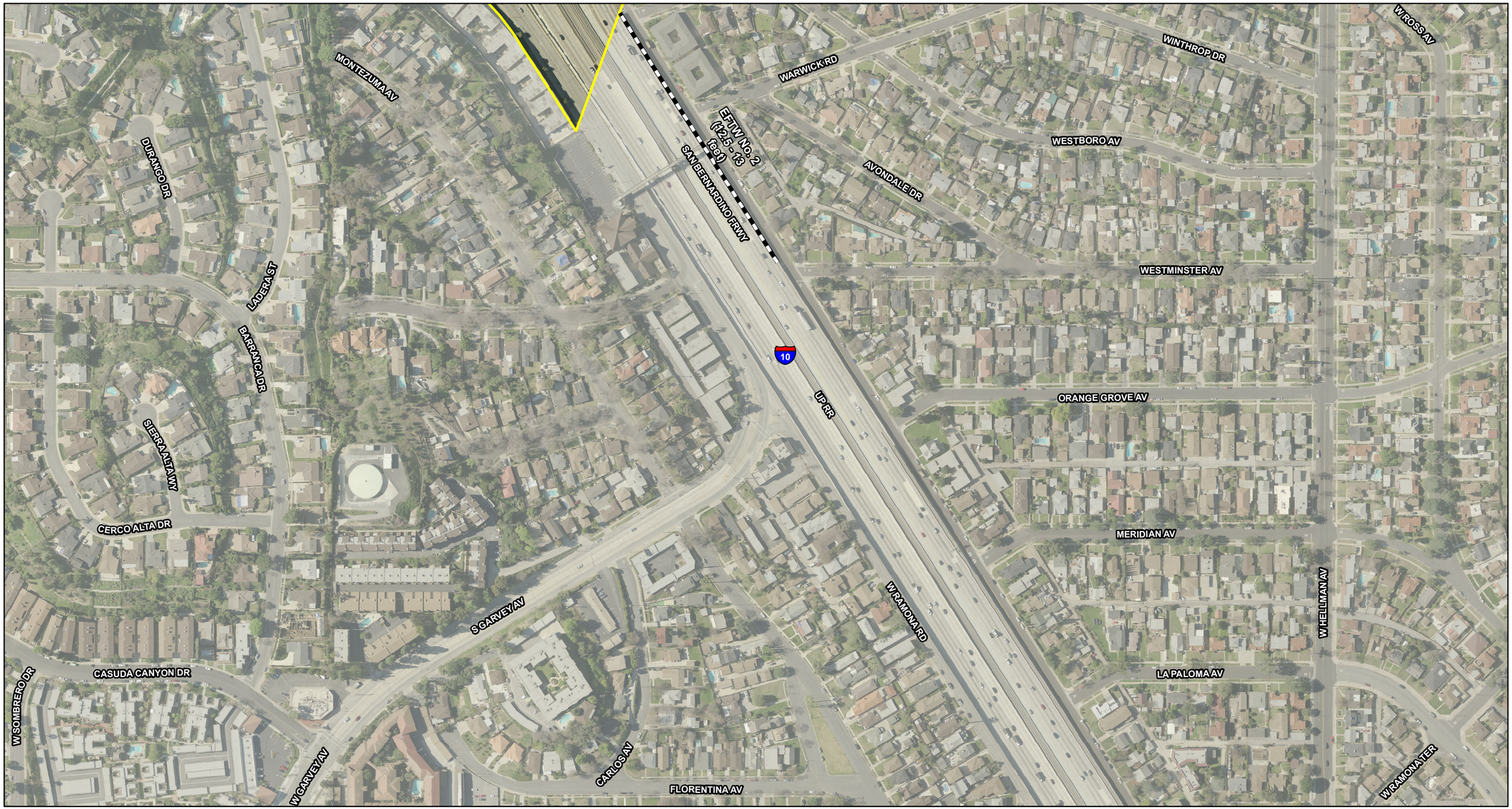

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- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

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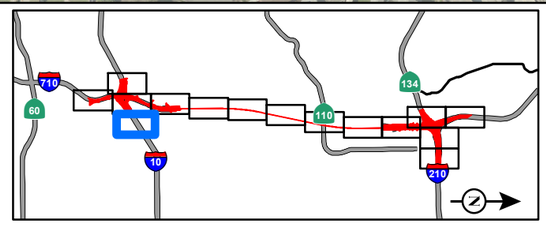

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-6
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
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- Modeled Receptor Locations
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- Long-term, 24-hour, Measurement Locations (FML)
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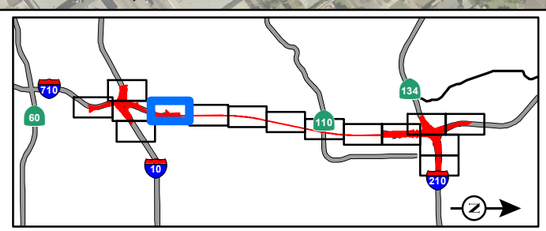

FIGURE 3.14-6
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SR 710 North Study
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Single Bore Design
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LOWELL AV
SHEFFIELD AV
KEATS ST
WINCHESTER AV
CONCORD AV
WESTMONT DR
NORWICH AV
W COMMONWEALTH AV
S HAMPDEN TER
MIDVALE PL
WINTHROP DR
PALATINE DR

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

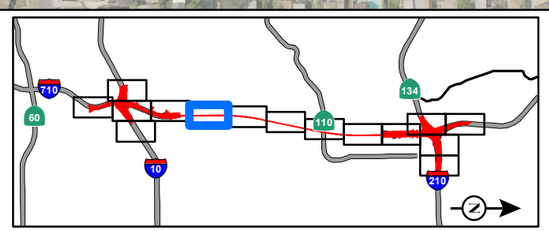

FIGURE 3.14-6
Sheet 6 of 15
SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
07-LA-710 (SR 710)
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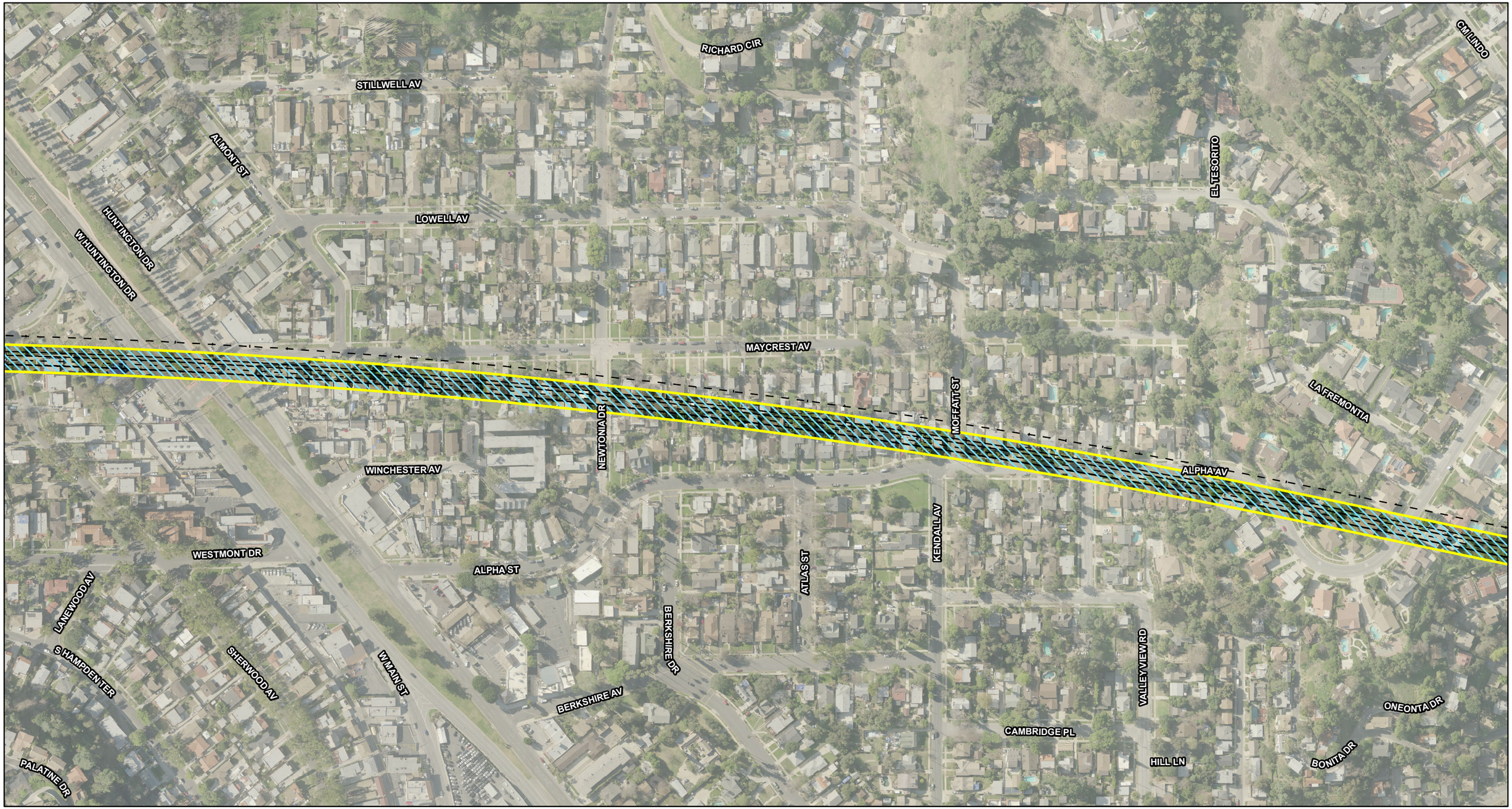

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
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- Modeled Receptor Locations
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- Long-term, 24-hour, Measurement Locations (FML)
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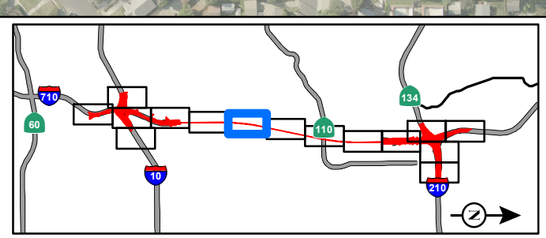

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-6
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
07-LA-710 (SR 710)
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MONTEREY RD
SUTOW AL
HAWTHORNE ST
ALPHA AV
LABELLORITA
ORANGE GROVE AV
LOMA VISTA CT
METRO GOLD LINE
MCCAMENT AL
ORANGE GROVE PL
BANK ST
VIA DL REY
COLLIER AL
GLENDON CT
ONEONTA DR
GLEN PL
FLORES DE ORO
LYNDON ST
GLENDON LN
ROLLIN ST
GLENDON WY
SUMMIT DR
GILLETTE CRES
HILL LN
PACIFICAL
MERIDIAN AV
BRAEWOOD CT
EL CERRITO CIR
HUNT LN
OAK ST
MERIDIAN LN
PINE ST
DIAMOND AV
OXLEY ST

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
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- Existing Walls
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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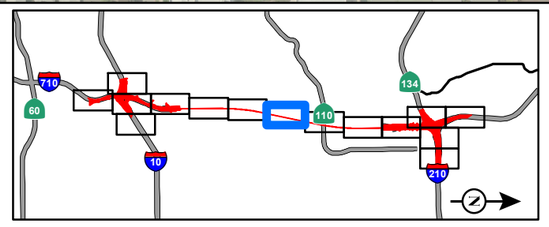

FIGURE 3.14-6
Sheet 8 of 15
SR 710 North Study
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Single Bore Design
07-LA-710 (SR 710)
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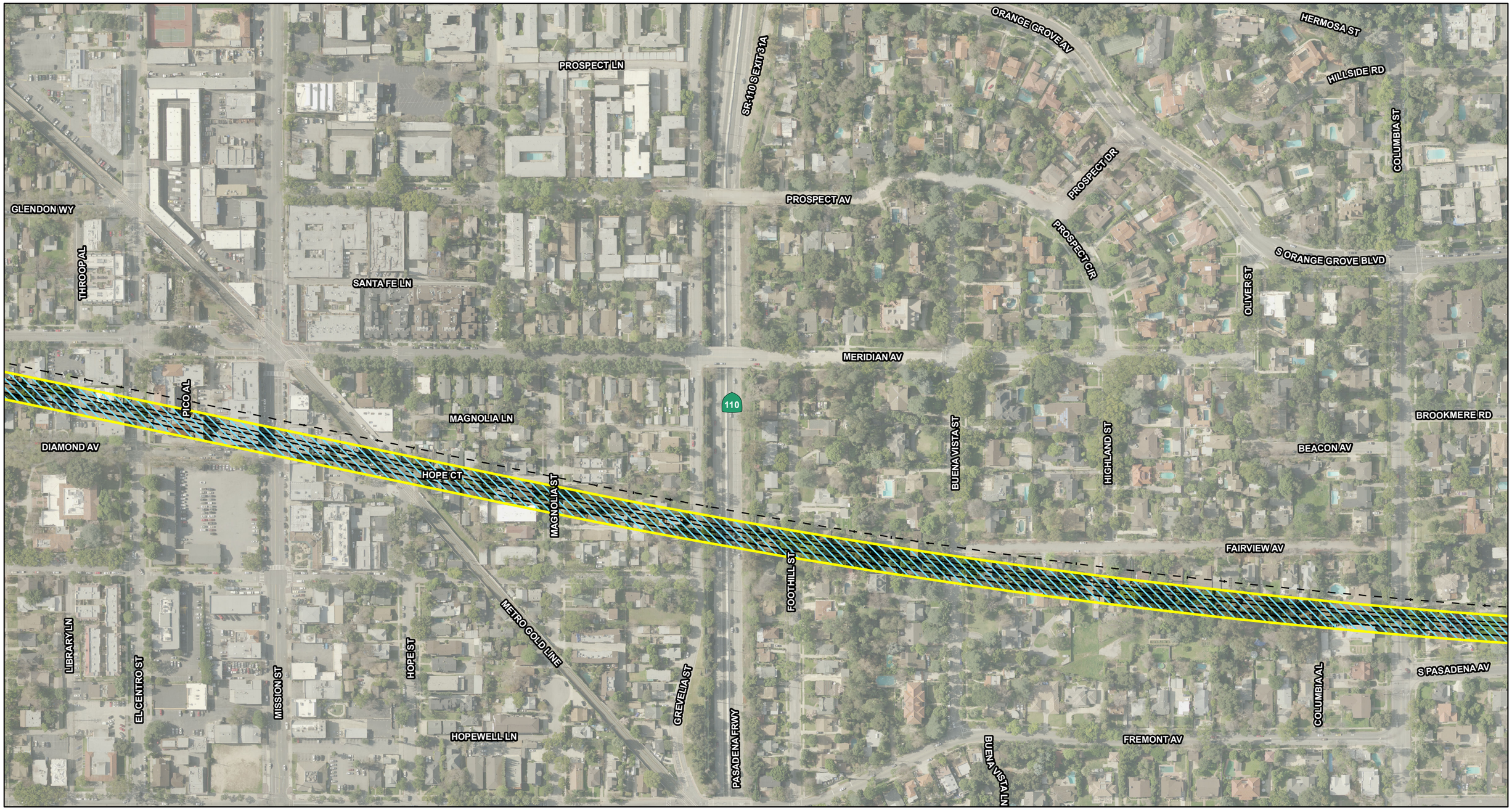

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
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- Modeled Receptor Locations
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- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

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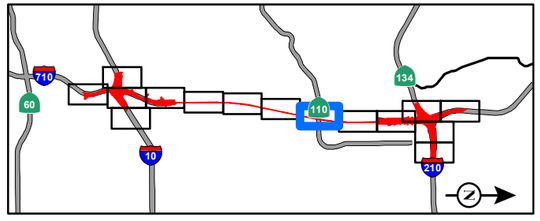

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-6
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
07-LA-710 (SR 710)
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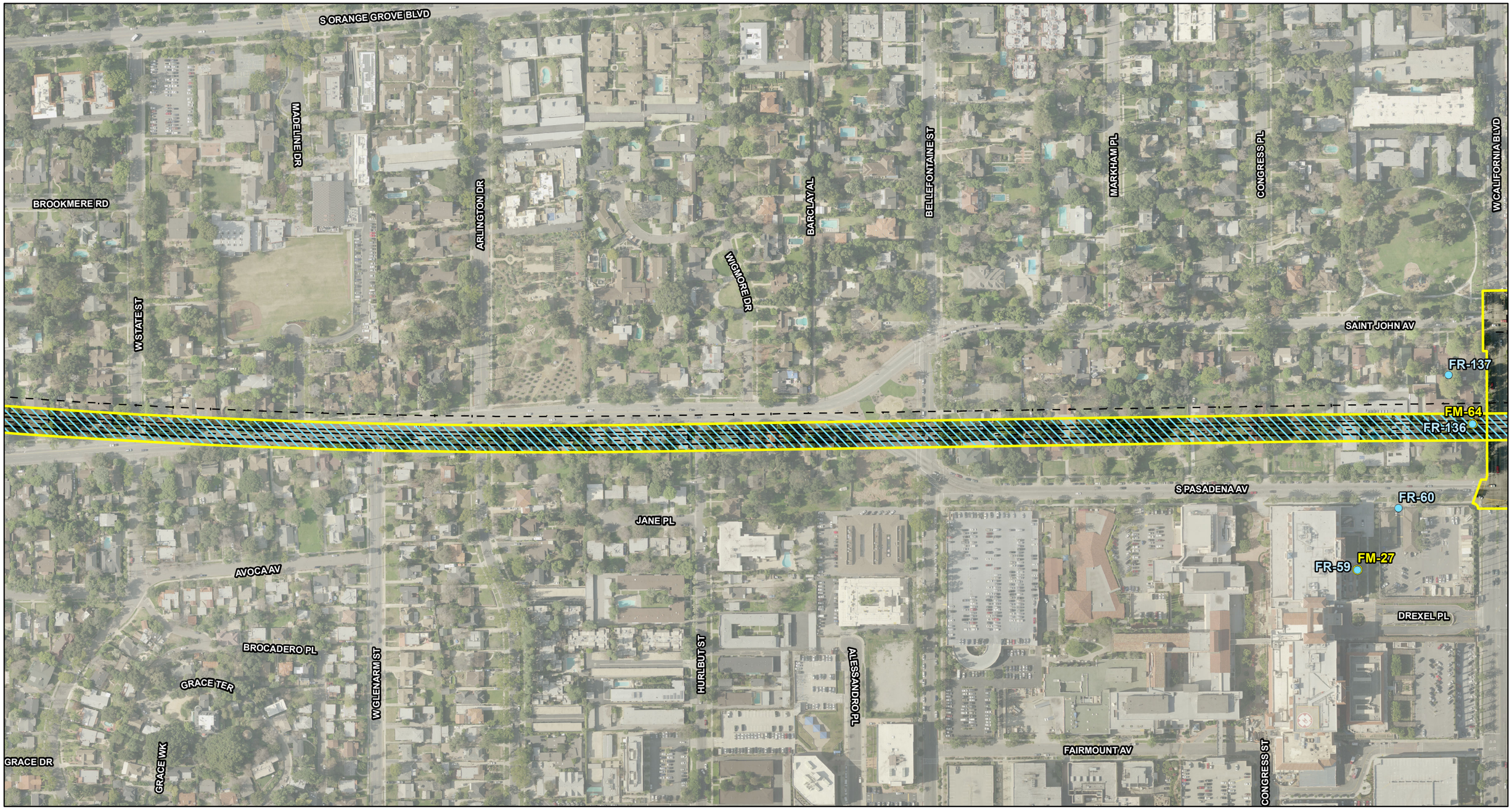

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

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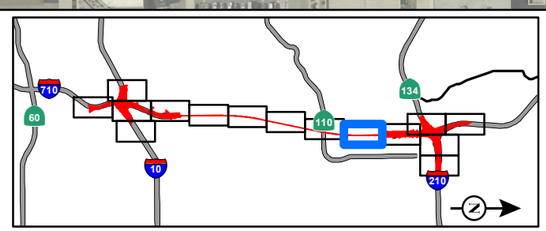

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-6
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
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- Modeled Receptor Locations
- Short-term Measurement Locations
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- School Measurement Locations

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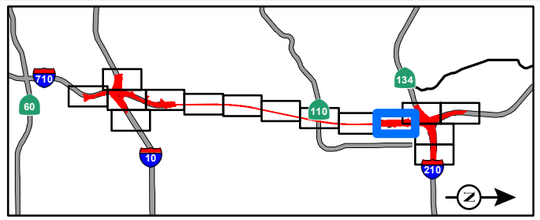

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-6
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
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- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

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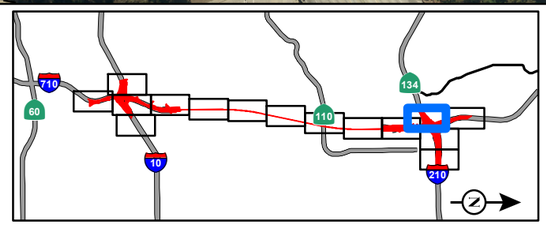

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FIGURE 3.14-6
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
07-LA-710 (SR 710)
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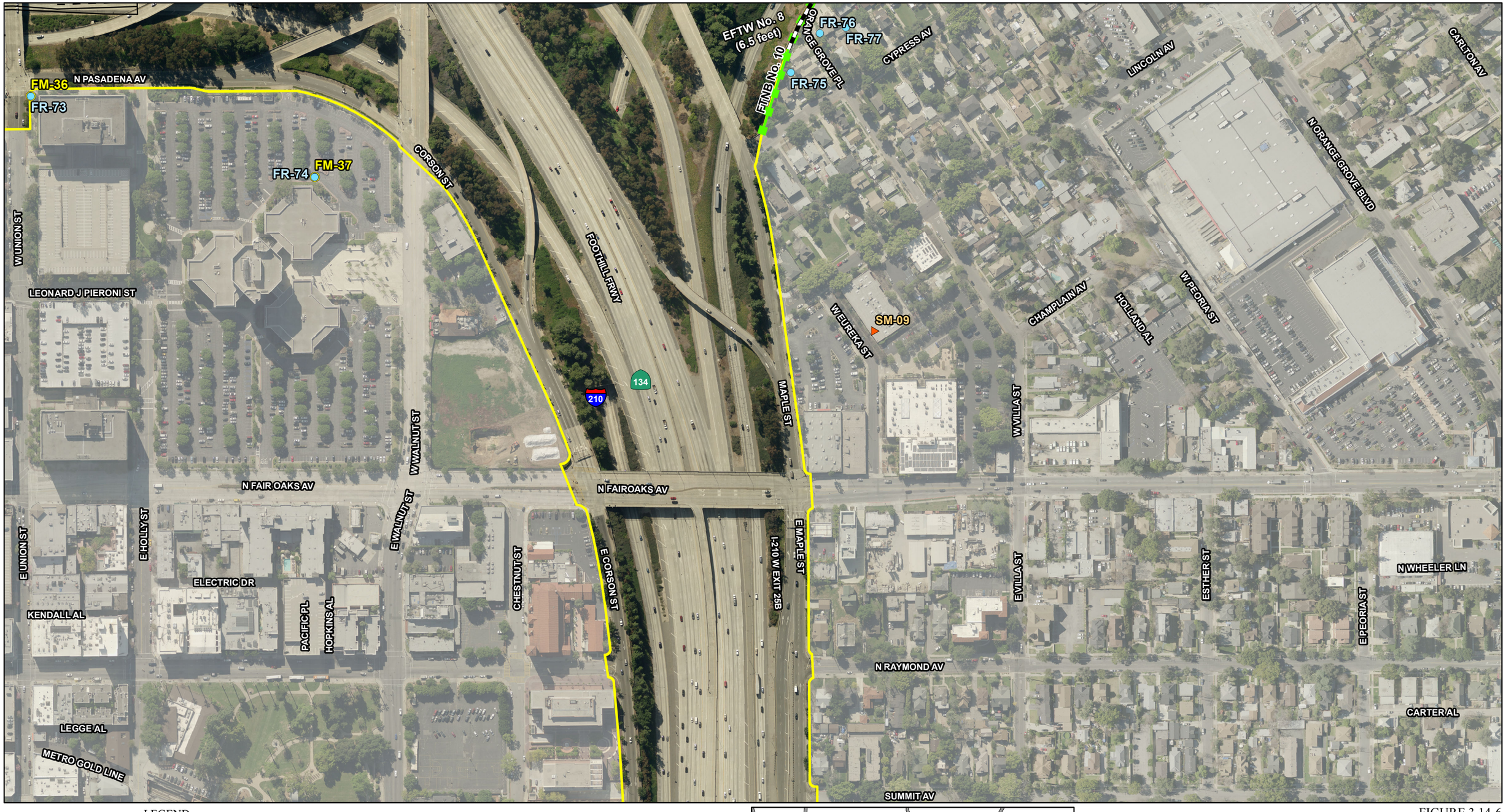

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

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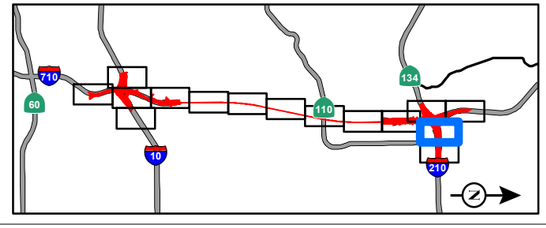

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FIGURE 3.14-6
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SR 710 North Study
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Single Bore Design
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MICHENER AL
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N MARENGO AV
NINDE PL
RAMONA ST
METRO GOLD LINE
FOOTHILL FRWY
PEARL PL
COTTAGE PL
PARKE ST
210
N GARFIELD AV
GARFIELD AV
THURGOOD MARSHALL ST
E WALNUT ST
E CORSON ST
E MAPLE ST
N EUCLID AV
REINWAY CT
MC GREW AL
N LOS ROBLES AV
FORD PL

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
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- Modeled Noise Barriers
- Modeled Receptor Locations
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- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

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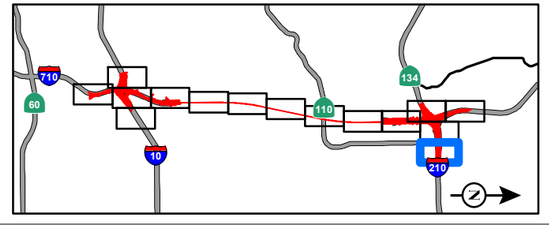

FIGURE 3.14-6
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
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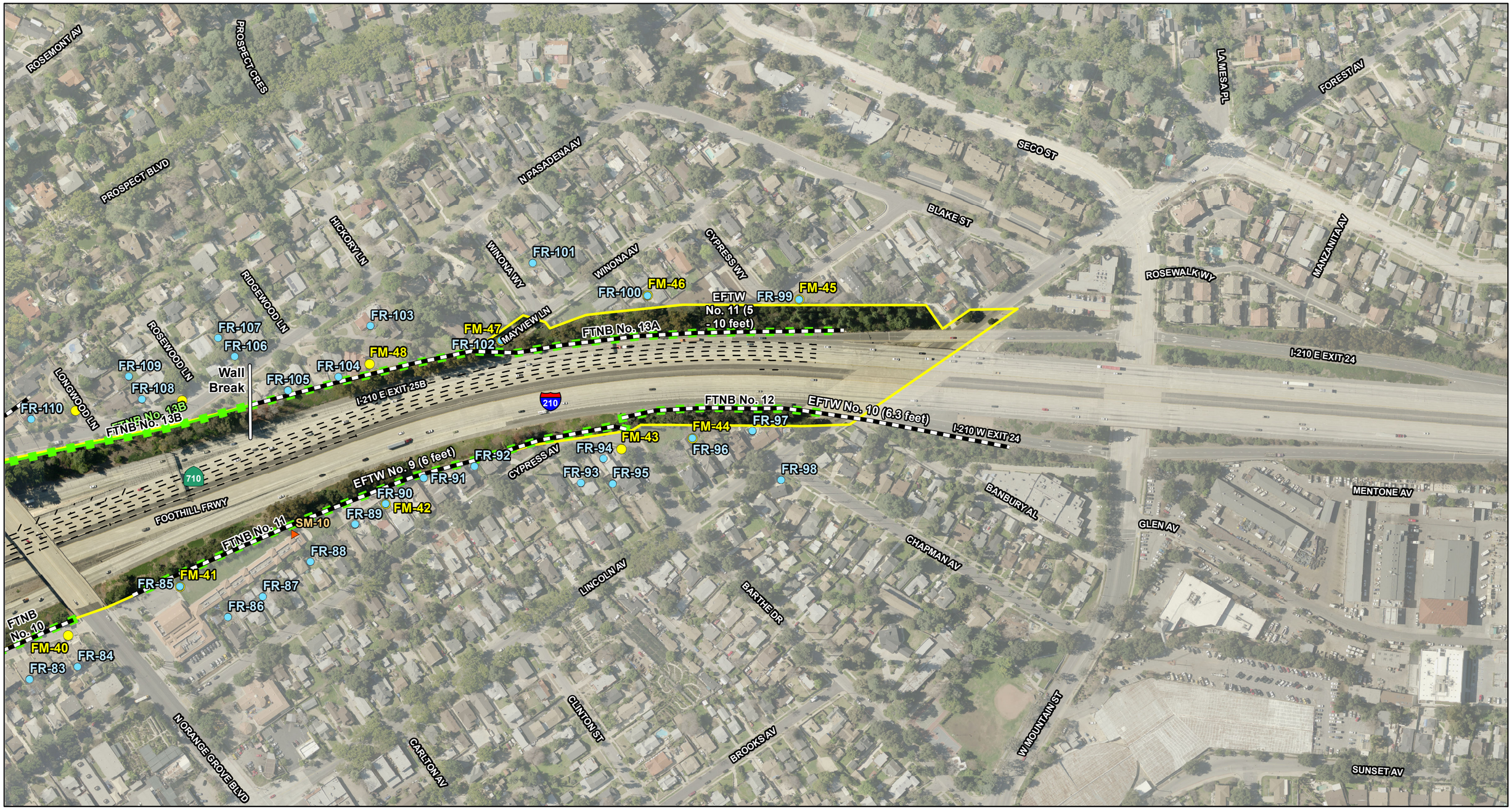

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

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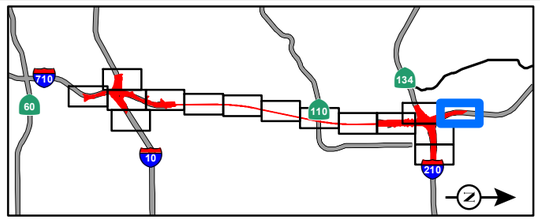

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-6
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Single Bore Design
07-LA-710 (SR 710)
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LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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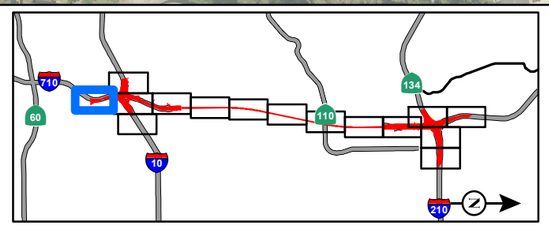

FIGURE 3.14-7
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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N STEELE AV
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TARZON ST
VOLNEY DR
ROLLINS DR
FM-26
SHERIFF RD
CENTRE PLAZA DR
FR-56
I-10 E EXIT 21
SAN BERNARDINO FRWY
I-10 W EXIT 21
UP RR
STATE UNIVERSITY DR
CIRCLE DR
CAMPUS RD
LANSDOWNE AV
BARNETT WY
O'SULLIVAN DR
BARNETT RD
PAS RANCHO CASTILLA

LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-7
Sheet 2 of 15
SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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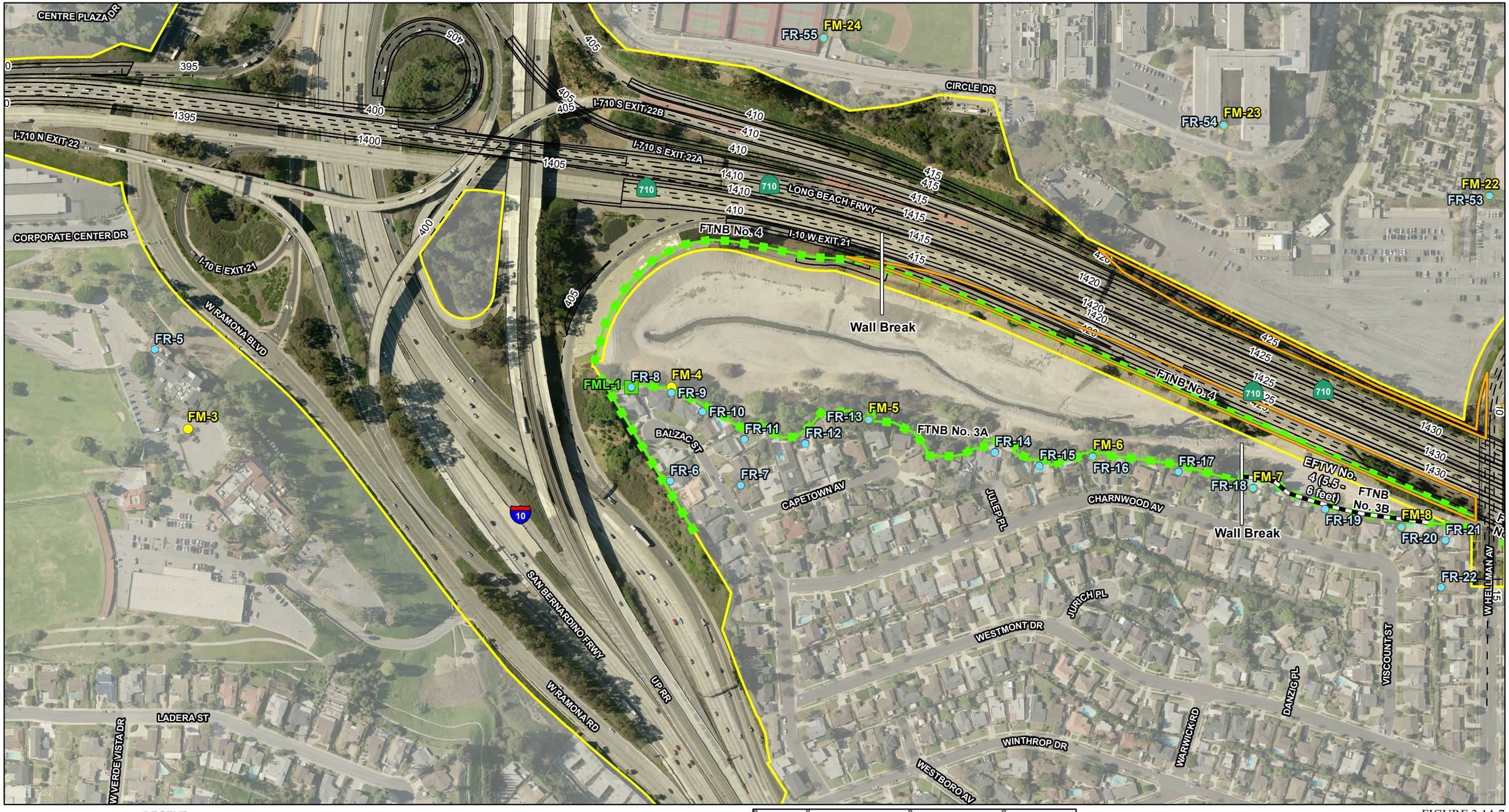

LEGEND

- Freeway Tunnel Dual Bore Geometrics
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FEET

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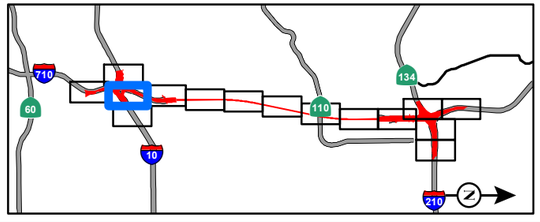

FIGURE 3.14-7
Sheet 3 of 15
SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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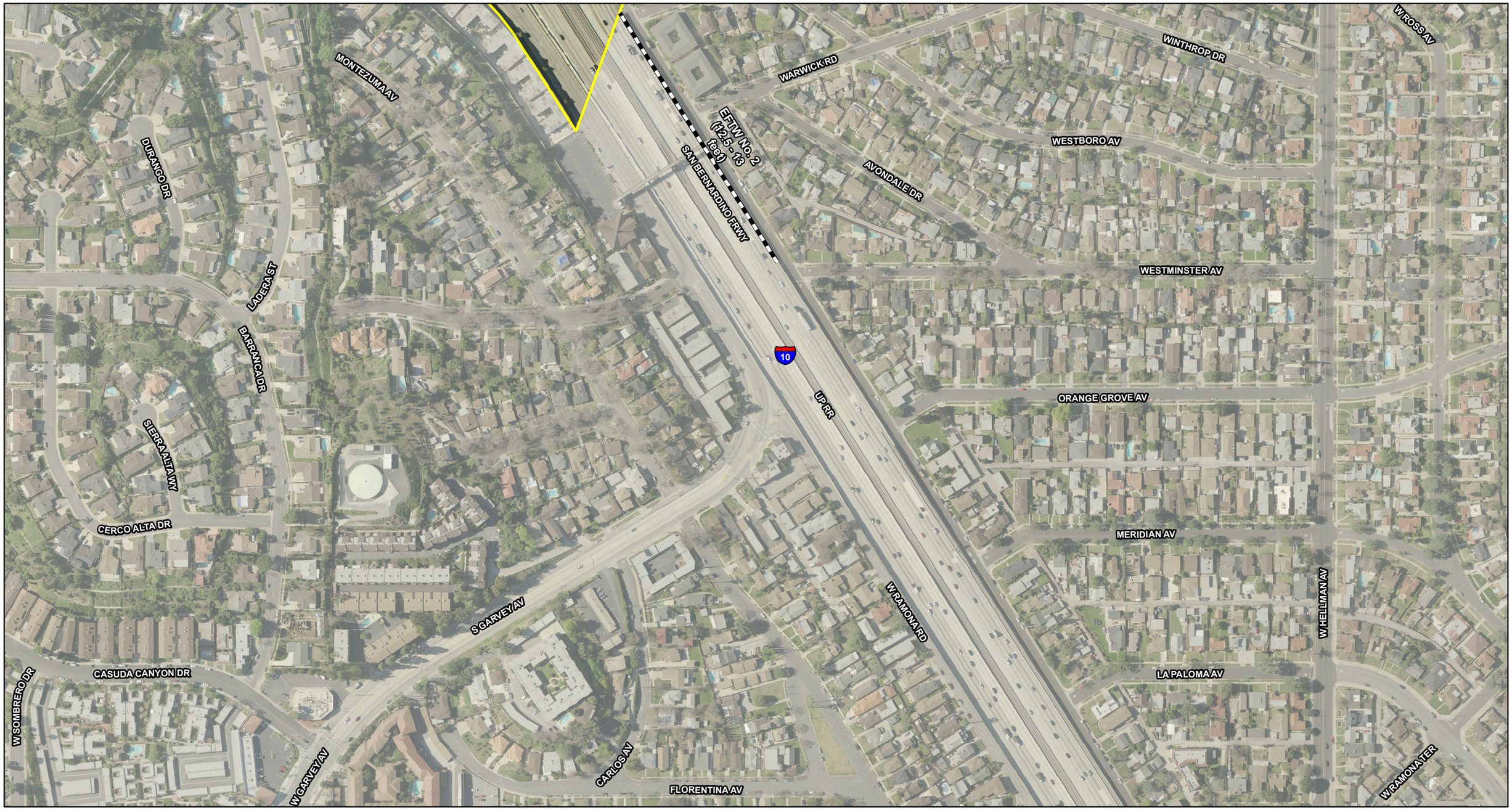

LEGEND

- Freeway Tunnel Dual Bore Geometrics
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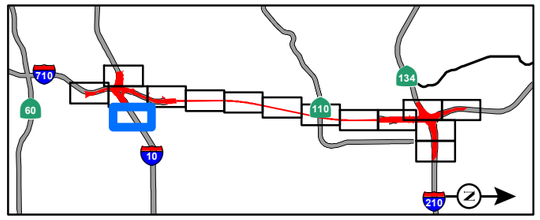

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-7
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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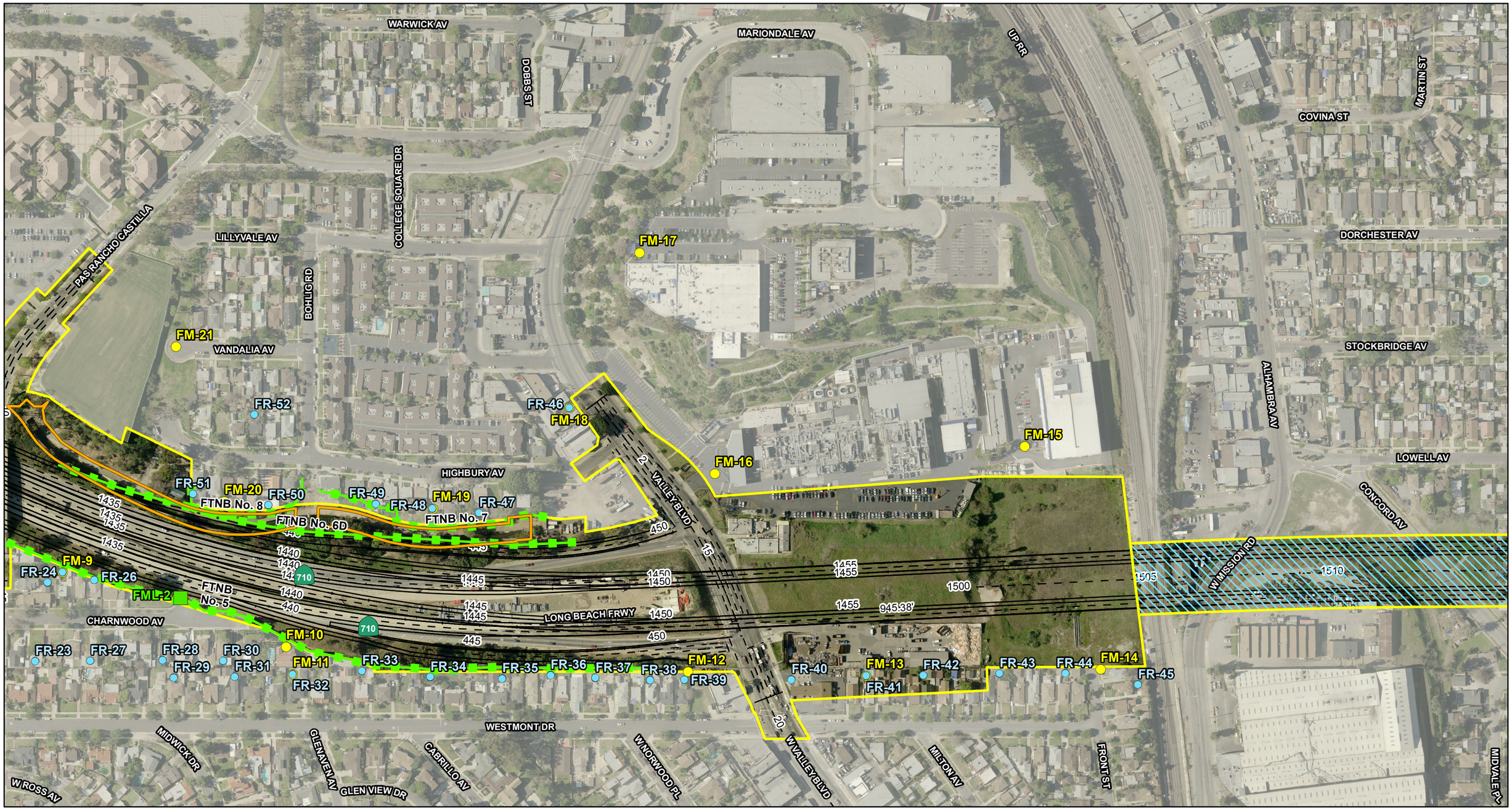

LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
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- Long-term, 24-hour, Measurement Locations (FML)
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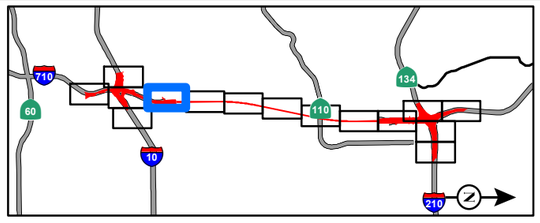

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-7
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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DORCHESTER AV
EDNA ST
TEMPLETON ST
SOMERSET ST
NAVARRO ST
OAKLAND ST
POPLAR BLVD
HUNTINGTON DR
W HUNTINGTON DR
SHELLEY ST
ALLAN ST
STOCKBRIDGE AV
LOWELL AV
1515
1520
1525
1530
SHEFFIELD AV
1535
1540
1545
1550
KEATS ST
WINCHESTER AV
CONCORD AV
WESTMONT DR
NORWICH AV
W COMMONWEALTH AV
S HAMPDEN TER
MIDVALE PL
WINTHROP DR
PALATINE DR

LEGEND

- Freeway Tunnel Dual Bore Geometrics
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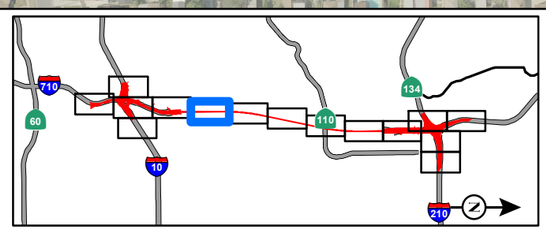

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-7
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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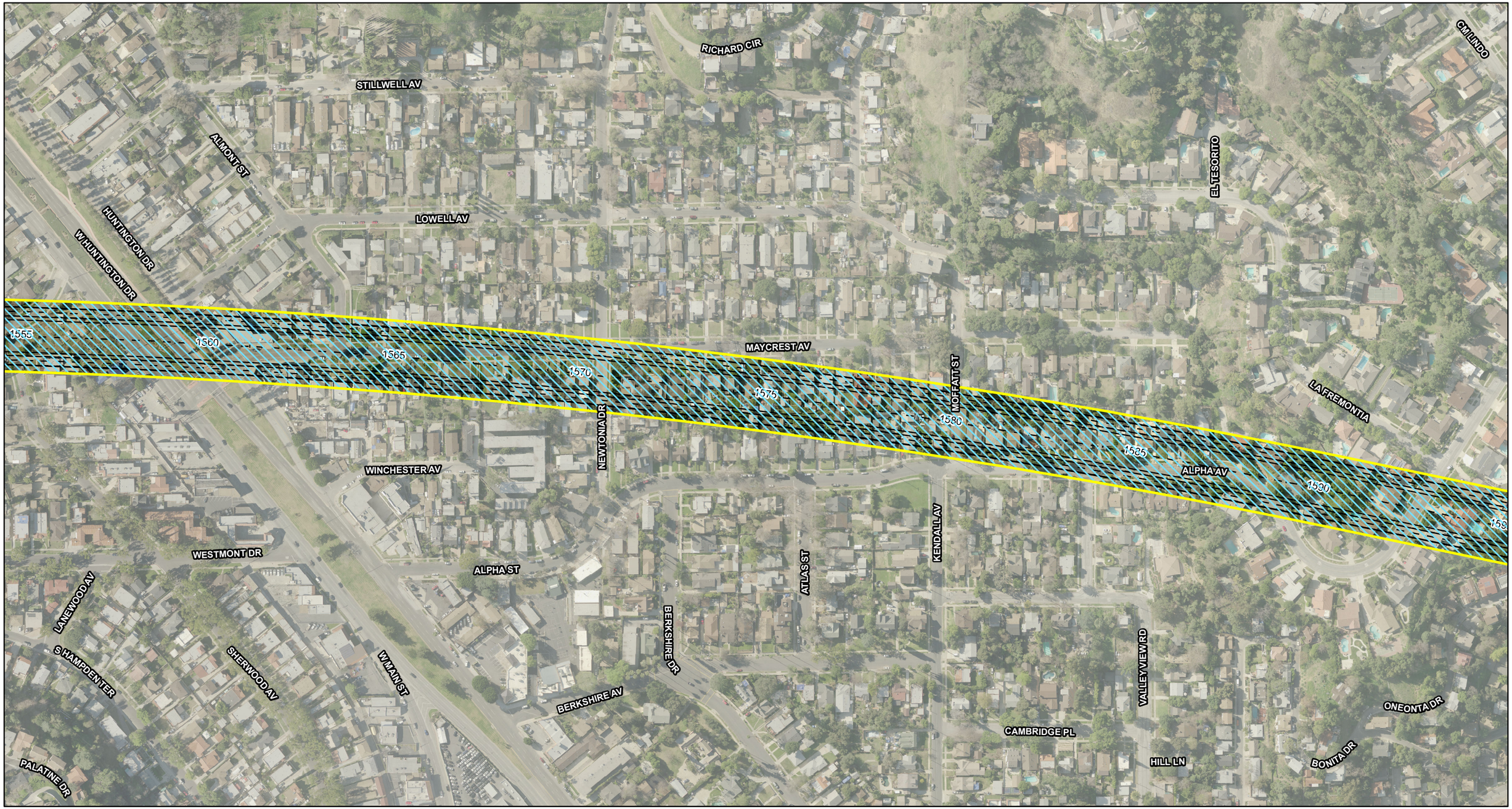

LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
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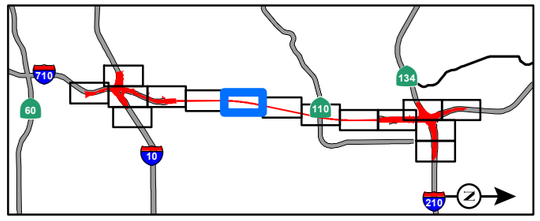

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FIGURE 3.14-7
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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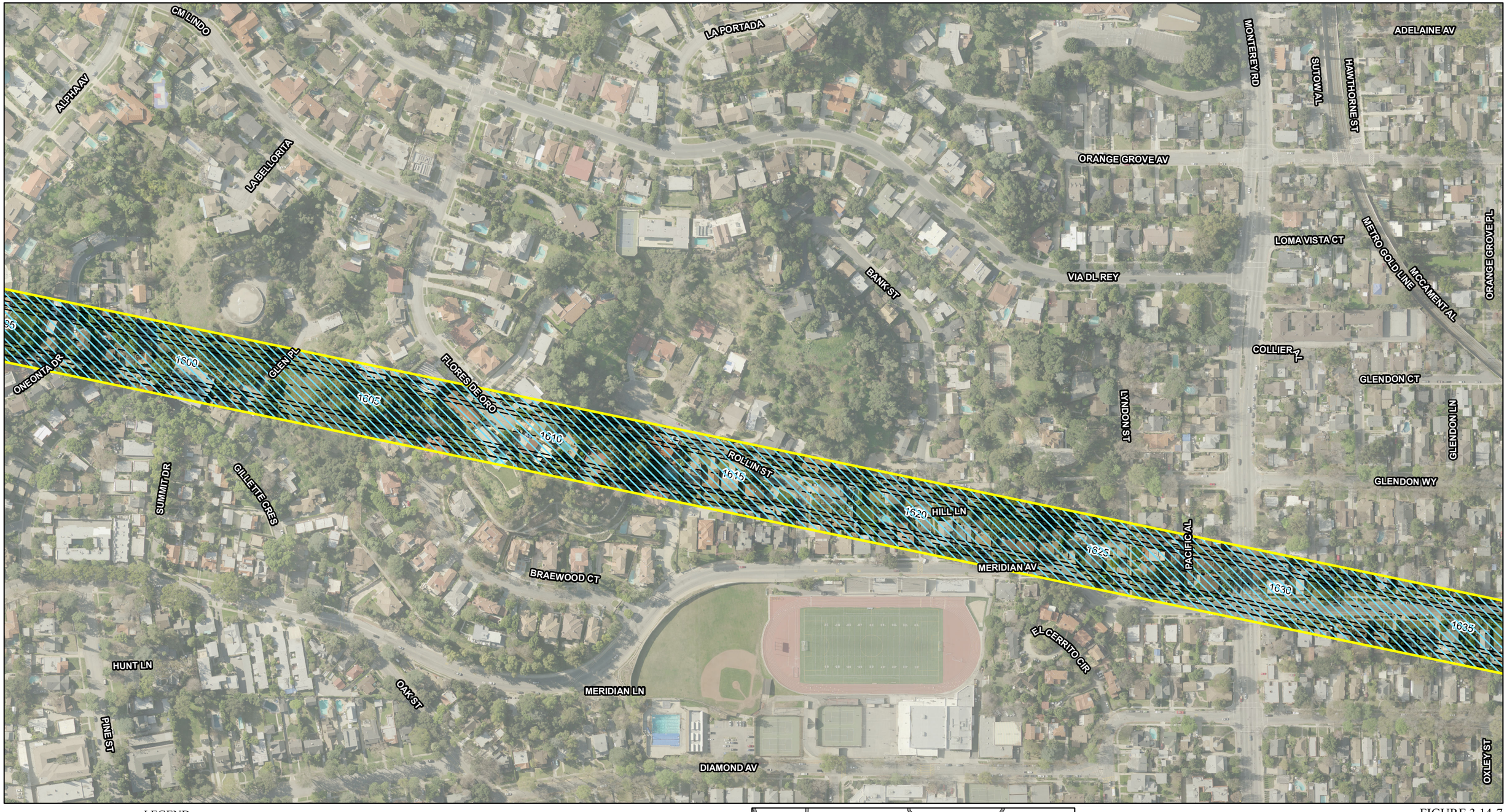

LEGEND

- Freeway Tunnel Dual Bore Geometrics
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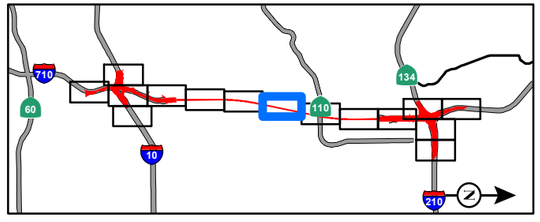

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FIGURE 3.14-7
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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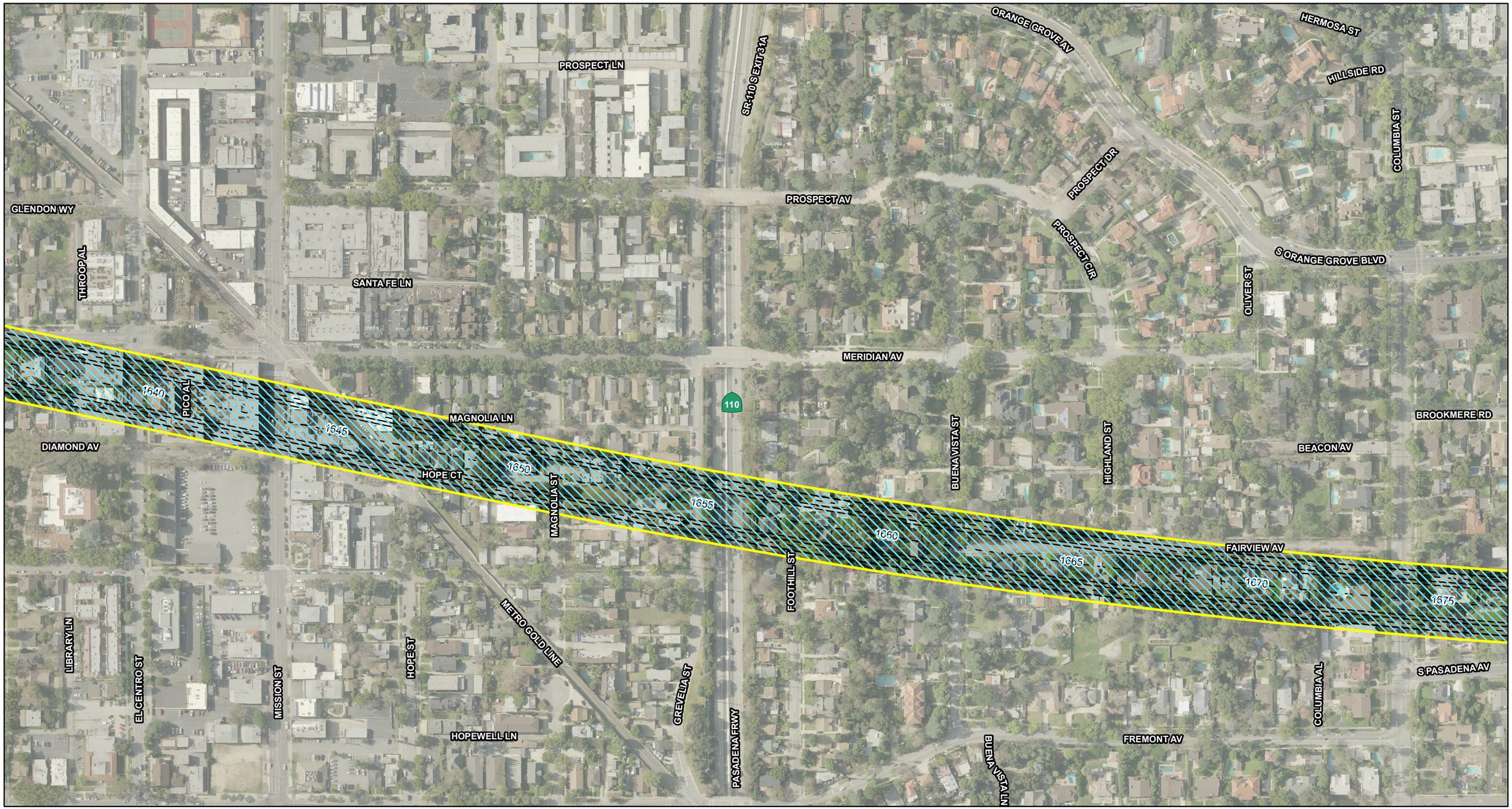

LEGEND

- Freeway Tunnel Dual Bore Geometrics
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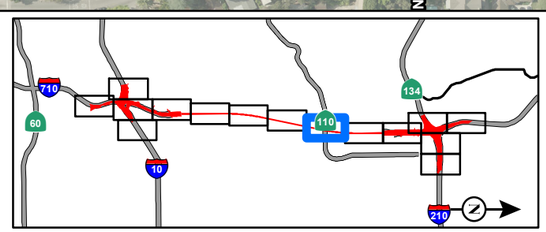

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FIGURE 3.14-7
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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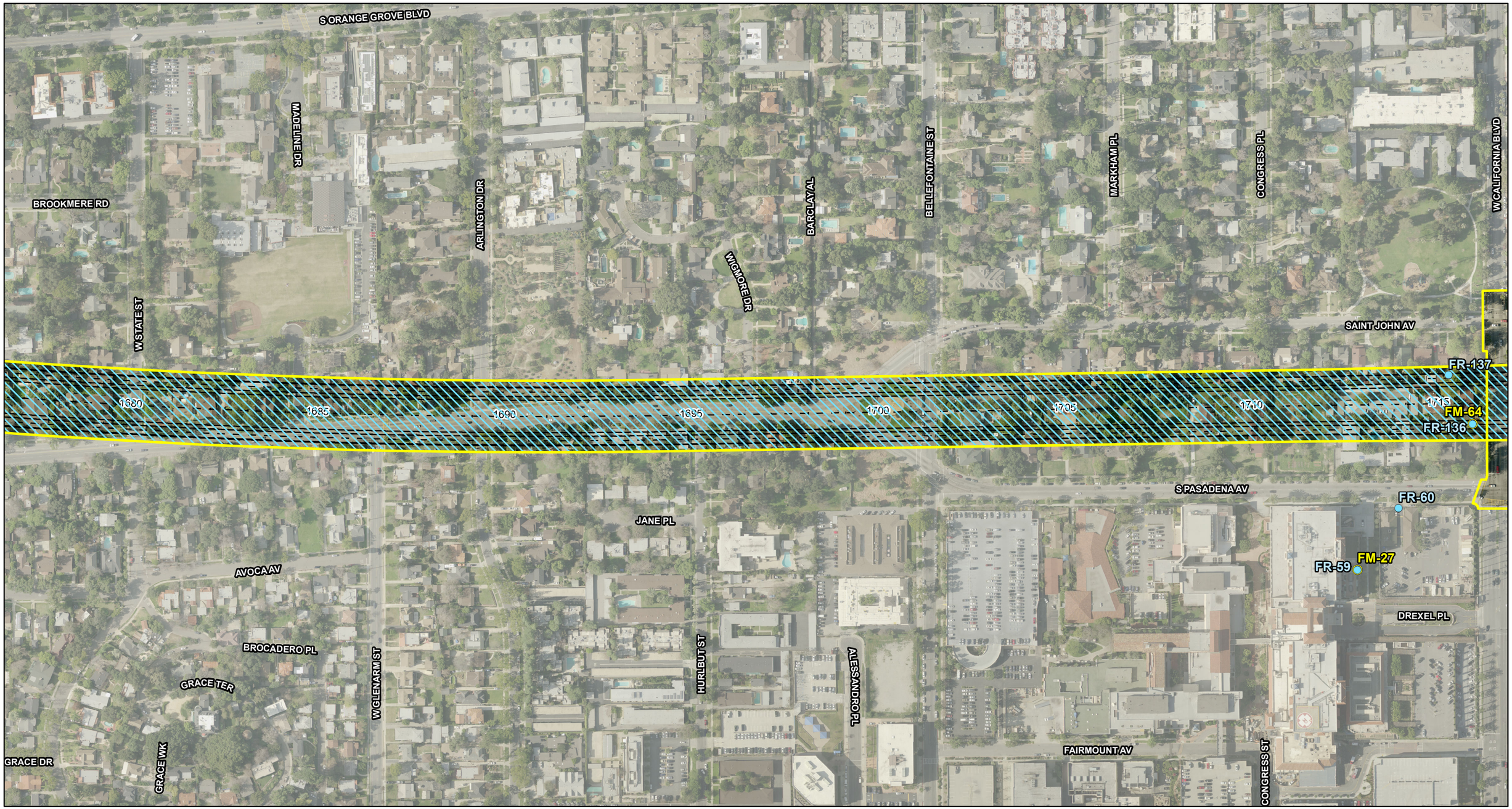

LEGEND

- Freeway Tunnel Dual Bore Geometrics
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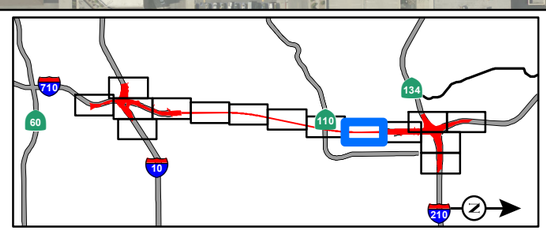

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); *Noise Study Report* (2014)

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FIGURE 3.14-7
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
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LEGEND

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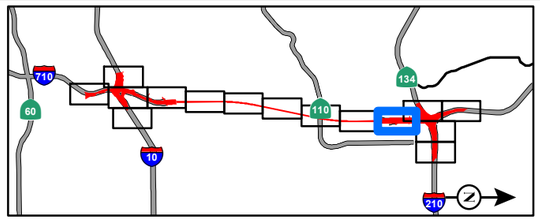

FIGURE 3.14-7
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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LEGEND

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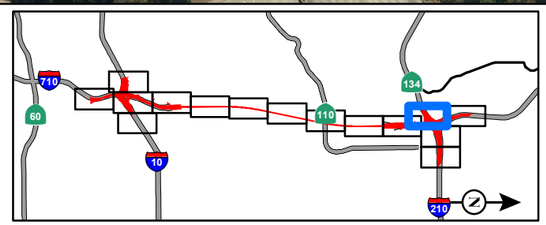

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FIGURE 3.14-7
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Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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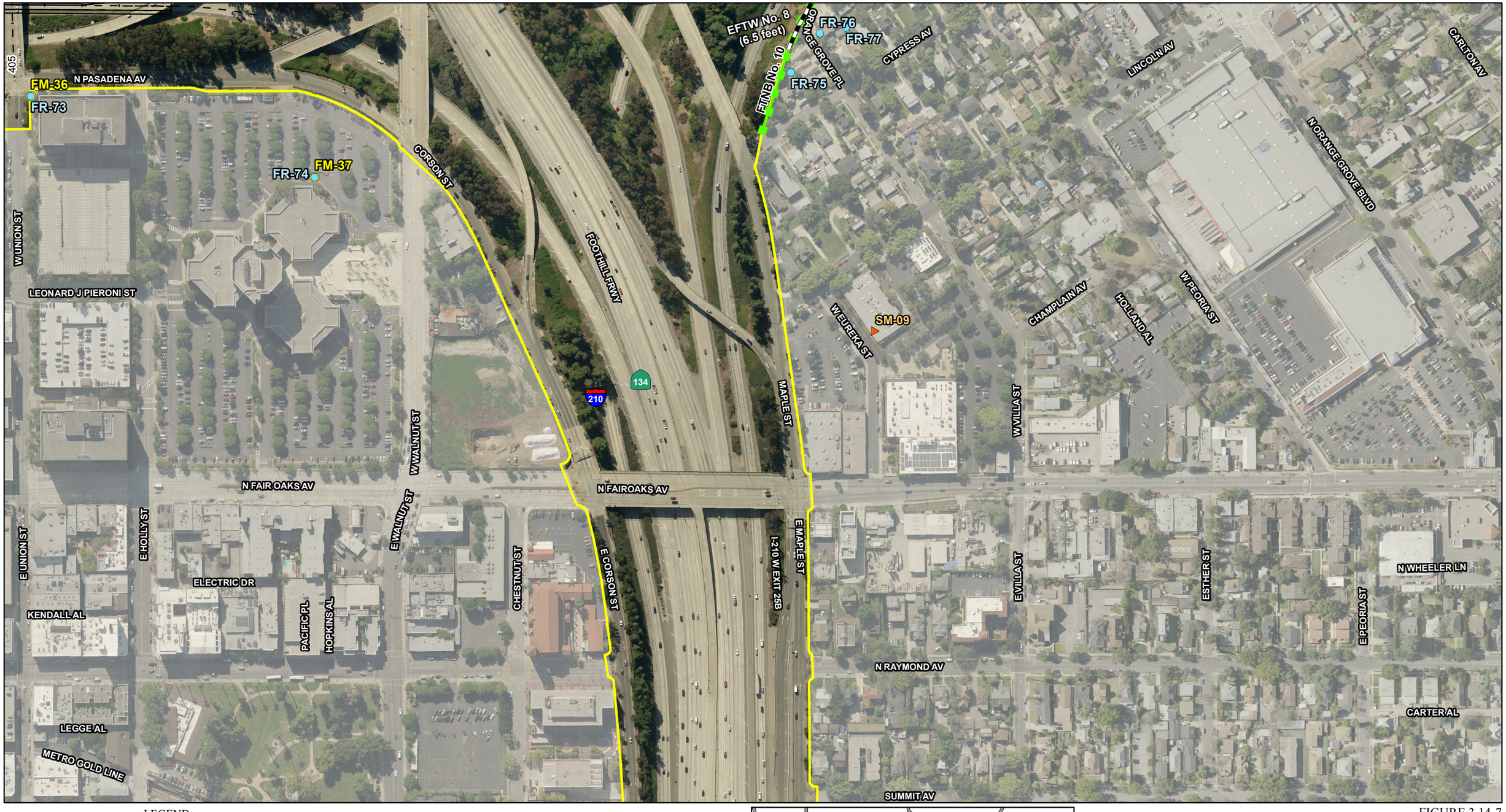

LEGEND

- Freeway Tunnel Dual Bore Geometrics
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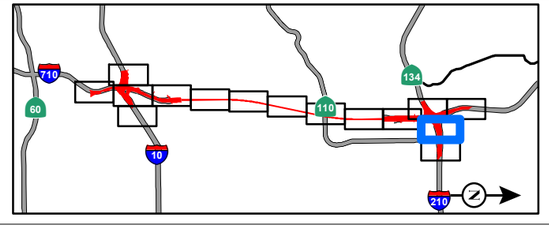

FIGURE 3.14-7
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N ARROYO PKWY
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E HOLLY ST
CHESTNUT ST
TOWNSEND PL
I-210 W EXIT 25B
E VILLA ST
MICHENER AL
134
N MARENGO AV
NINDE PL
PEARL PL
COTTAGE PL
PARKE ST
RAMONA ST
METRO GOLD LINE
FOOTHILL FRWY
210
N GARFIELD AV
GARFIELD AV
THURGOOD MARSHALL ST
E WALNUT ST
E CORSON ST
E MAPLE ST
N EUCLID AV
REINWAY CT
MC GREW AL
N LOS ROBLES AV
FORD PL

LEGEND

- Freeway Tunnel Dual Bore Geometrics
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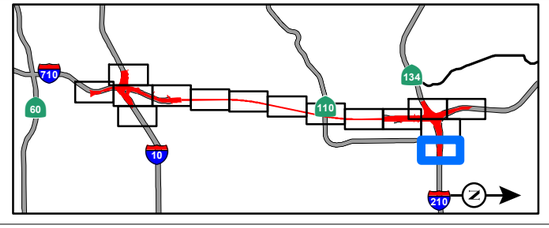

FIGURE 3.14-7
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SR 710 North Study
Noise Measurement and Receptor Locations and Modeled Noise Barriers - Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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LEGEND

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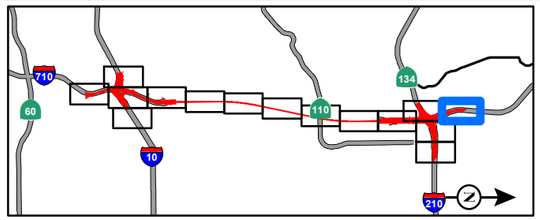

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FIGURE 3.14-7
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Dual Bore Design
07-LA-710 (SR 710)
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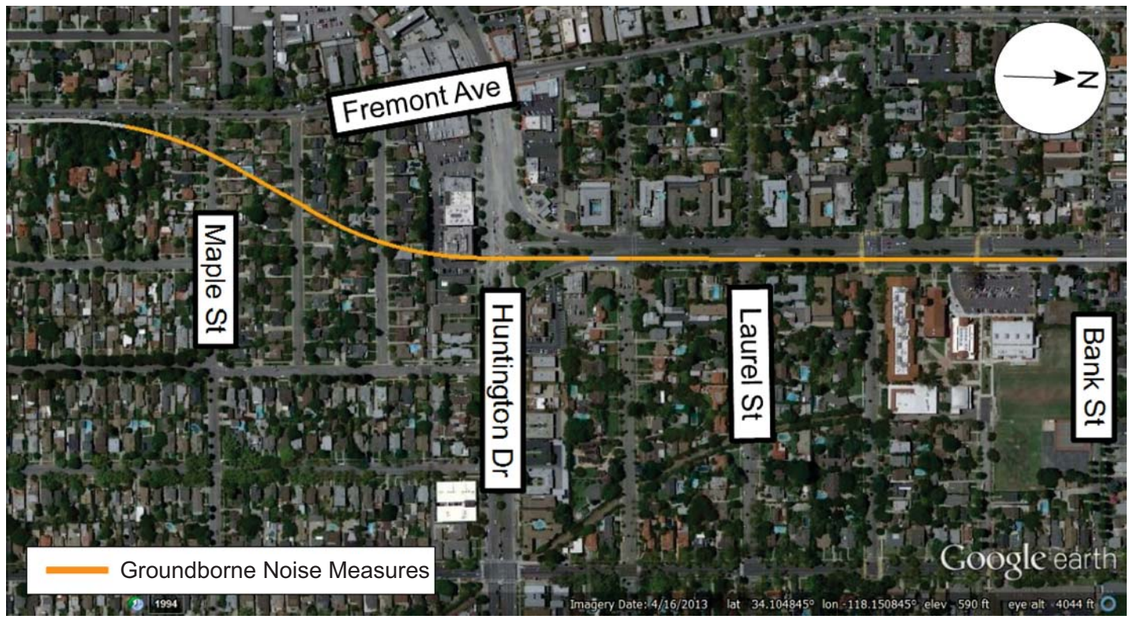
Segment 1

Segment 2

Segment 3



Segment 4

FIGURE 3.14-8

SR 710 North Study
Locations of Groundborne Noise Measures for the LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

SOURCE: Wilson, Ihrig and Associates, Inc.

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