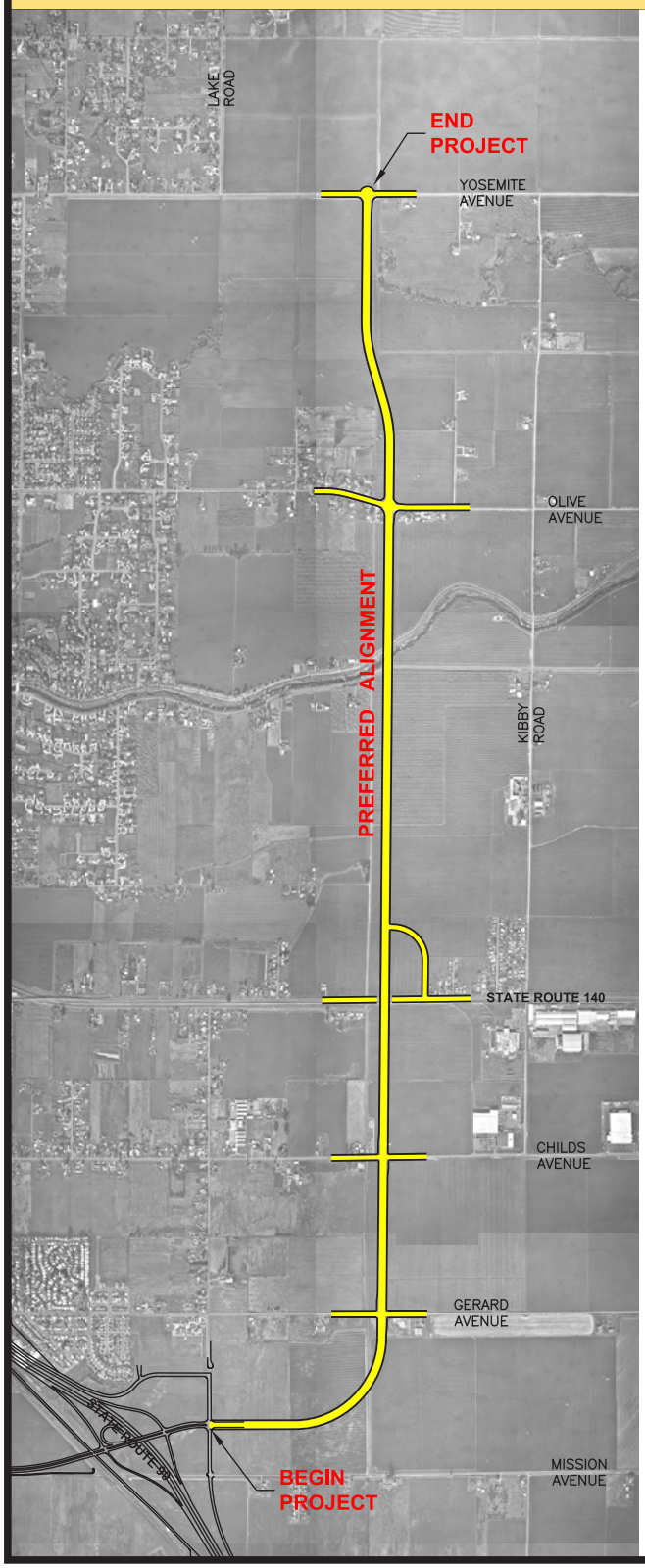
CAMPUS PARKWAY PROJECT



FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS)

For: Proposed New Expressway (Campus Parkway)

From: Mission Avenue Interchange
To: Yosemite Avenue

Project: RPHP21L-0484 (001)
EA: 10-4A0701L

November 2006

Caltrans

MERCED COUNTY 1855

U.S. Department of Transportation
Federal Highway Administration

General Information About This Document

What's in this document?

This document is the Final Environmental Impact Statement (EIS) that examines the potential environmental impacts of alternatives for the proposed Campus Parkway project located in Merced County, California. This document describes why the project has been proposed, alternatives for constructing the alignments, the existing environment that could be affected by the project, and potential impacts from each of the alternatives.

This document has been prepared to comply with the requirements of the National Environmental Policy Act (NEPA) of 1969 (enacted 1970), in accordance with the Federal Highway Administration (FHWA) Environmental Impact and Related Procedures (23 Code of Federal Regulations Section 771).

A joint Draft EIS/Environmental Impact Report (EIR) was completed by Merced County under the direction and review of the California Department of Transportation (Caltrans) and the FHWA. The Draft EIS/EIR was released for public review and an informational meeting was held on April 28, 2005. A public hearing was held at the Merced County Board of Supervisors chambers on June 21, 2005, at which comments and testimony on the document were accepted. The public review period ended on July 5, 2005. In addition to the hearing testimony, comments on the Draft EIS/EIR and the project alternatives were submitted in writing or by e-mail from individuals; private organizations and businesses; and local, state, and federal public agencies. This document addresses comments received on the joint Draft EIS/EIR. Changes made to the Draft EIS/EIR in response to comments are indicated by a vertical line in the outer margin and <u>underline</u> for new text. Merced County issued a separate Final EIR in November 2005 to comply with California Environmental Quality Act (CEQA) requirements and identified the County's preferred alternative as the Yellow Alignment.

Merced County anticipates taking action on the Campus Parkway project in November 2006 through adoption of a General Plan Amendment adding the Campus Parkway alignment to the Circulation Chapter of the Merced County General Plan. The action will include adoption of any necessary findings for each significant effect and adoption of a mitigation monitoring plan. Merced County will file a Notice of Determination (NOD) with the County Clerk and State Office of Planning and Research within five days of approval of the General Plan Amendment.

What happens after this?

This Final EIS also identifies the preferred alternative as the Yellow Alignment. Following distribution of the Final EIS and its availability for comment, the FHWA will prepare a draft Record of Decision (ROD). The ROD will address any remaining comments on the Final EIS. The FHWA may elect to approve the ROD, which completes the NEPA review process. After the project is given environmental approval and sufficient funding is appropriated, Merced County can proceed with right-of-way acquisition and project construction.

FHWA-CA-EIS-05-03-F

10-MER-140- KP 60.4 to 62.3
(PM 37.5 to 38.7)
10-4A0701L

Located approximately 0.4 to 0.8 kilometer (0.25 to 0.5 mile) east of the City of Merced, between the SR 99/Mission Avenue Interchange and Yosemite Avenue

Final Environmental Impact Statement

Submitted Pursuant to: (Federal) 42 United States Code 4332(2)(C)

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration,
THE STATE OF CALIFORNIA
Department of Transportation, and
MERCED COUNTY,
Department of Public Works

11-16-06
Date of Approval

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11/28/06
Date of Approval

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Abstract

The proposed Campus Parkway four-lane limited-access expressway on the eastern side of the City of Merced would connect State Route 99 with Yosemite Avenue. At-grade intersections would be located at Yosemite Avenue, Olive Avenue, Childs Avenue, and Gerard Avenue. A connection would also be provided at State Route 140 that would consist of a hook-shaped ramp located on the highway's north side. Bridges would be constructed over Bear Creek, South and North Bear Creek Drive, and at State Route 140 and the adjacent Burlington Northern and Santa Fe Railroad. The preferred alternative has been identified as the Yellow Alignment. Its impacts include acquisition and conversion of 33 hectares (82 acres) of cropland and orchard (conversion to an expressway right-of-way); loss of foraging and roosting habitat for several species of bats, birds, and raptors; loss of potential San Joaquin kit fox habitat; loss of elderberry bushes; and noise. One residence would be displaced. Permanent wetland impacts total less than 0.04 hectare (0.09 acre), and impacts to other waters of the U.S. total approximately 0.2 hectare (0.5 acre). Mitigation includes wildlife habitat avoidance, seasonal restriction of construction to avoid sensitive species, elderberry planting/compensation, kit fox mitigation, relocation assistance, and erosion and water quality measures.

Summary

The Merced County Department of Public Works, in cooperation with the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), proposes to construct a new four-lane expressway on the east side of the City of Merced, California. The preferred alternative is located between the State Route 99 (SR 99)/Mission Avenue interchange and Yosemite Avenue.

This Final Environmental Impact Statement (EIS) addresses the proposed action's potential to have adverse impacts on the environment. It has been prepared to meet the requirements of the National Environmental Policy Act (NEPA). A Final Environmental Impact Report (EIR) was also prepared by Merced County to meet the requirements of the California Environmental Quality Act (CEQA) (see Section S.5). The project is also subject to other federal, state, and local laws, policies, and guidelines that are addressed in this document.

S.1 Purpose and Need

The existing system of roads in northern and eastern Merced County lack the capacity and connectivity necessary to serve the projected growth in local and regional land use plans. The City of Merced has expanded northward and eastward into the rural county agricultural areas, and the existing roads do not provide sufficient connections between central and northern Merced and areas to the south. This lack of capacity contributes to traffic congestion and does not meet the requirements necessary to address traffic growth projected in future years already accounted for in local and regional General Plans. Those plans include expansion of housing and business within the City and County of Merced, the approved Phase 1 of the Merced Campus of the University of California (UC Merced Campus), and the approved University Community. The existing capacity and connectivity constraints will continue to limit the function of the eastern Merced roadway network even without further expansion of the UC Merced Campus, or the development of the University Community Plan.

S.2 Project Alternatives

Three potential "build" alternatives were evaluated in the draft environmental document, each approximately 7¼ kilometers (km) (4½ miles) in length (see Figure 2.2-1 in Section 2.2). From south to north, the alternatives consisted of a common

alignment between SR 99 and the Mission Avenue interchange to just north of State Route 140 (SR 140) and the Burlington Northern–Santa Fe (BNSF) railroad tracks that parallel SR 140. From just north of SR 140, the Green and Yellow Alignments and a variation of both called the Green Alternate proceeded north to connect with Yosemite Avenue about 0.8 km (0.5 mile) west of Kibby Road. The Green Alignment and Green Alternate also included a short connection between Yosemite Avenue and nearby Lake Road. All three alignments included an overhead structure to cross the BNSF railroad and SR 140 and an arched bridge to cross Bear Creek and the adjacent North and South Bear Creek Drives.

Following public and agency review of the draft environmental document, the Yellow Alignment was identified as the preferred alternative. The Merced County Board of Supervisors determined that the Yellow Alignment would impact the existing community less than the other alternatives evaluated, when considering existing residential development west of the proposed alignments (on the eastern side of the City of Merced). Areas of controversy or concern raised during the public review period included the number of people that would be affected by each alternative in terms of noise, air quality, visual impacts, and general quality-of-life impacts from the presence of a roadway close to homes. Although all three build alternatives affected different neighborhoods or residences, the Yellow Alignment was determined to have the least adverse effect to the fewest existing residences, although it would not avoid these impacts. Mitigation including noise barriers and landscaping is proposed. Farmland impacts were of concern, and the three alignments would have similar direct impacts to farmlands, although impacts under the Yellow Alignment would be slightly greater. Merced County will require mitigation for the loss of productive agricultural lands through the use of conservation easements. Section S.4 provides additional discussion about areas of potential controversy associated with the project.

Early in the scoping process, five alternatives were proposed for the overhead structure that crossed and connected to SR 140. These alternative structures were developed before the traffic studies concluded that a four-lane Campus Parkway was needed. Alternative 1 proposed a grade-separated crossing without any connection between Campus Parkway and SR 140. Alternative 2 proposed a two-lane Campus Parkway and a two-lane short hook-shaped ramp/connector road, hereafter referred to as the connector road. Alternative 3 was a four-lane connector road and a two-lane Campus Parkway with a left-turn median lane. Alternative 4 was two four-lane connector roads and a two-lane Campus Parkway with a left-turn median lane.

Alternative 5 was two four-lane connector roads and six lanes on Campus Parkway. The preferred alternative at the SR 140 crossing and connection with Campus Parkway consists of elements of Alternatives 2, 3, and 5, including an overpass crossing SR 140 and the BNSF railroad tracks, a four-lane road connecting Campus Parkway with SR 140, signals, and turn lanes on SR 140.

The proposed expressway would require a 46-meter (150-foot) right-of-way with additional right-of-way at intersections. Parcels would be acquired for the proposed right-of-way, including portions of some larger parcels. The updated total amount of land that would be acquired for the Yellow Alignment – Preferred Alternative is 65 hectares (ha) (160 acres). This would include the right-of-way and areas for drainage facilities. All right-of-way would be acquired during the first phase of the project.

At-grade intersections would be located within the acquired right-of-way at Yosemite Avenue, Olive Avenue, Childs Avenue, and Gerard Avenue. Intersections may be signalized or optional roundabouts may be constructed (at Yosemite Avenue and Olive Avenue). A connection would also be provided to SR 140 with a hook-shaped ramp located on the highway's north side.

If the project is fully funded and Campus Parkway is built in one phase, the expressway would have a total of four through-traffic lanes. If insufficient funding is available, the proposed project may be built in phases. The first phase of construction may consist of two through lanes, one in each direction, with turn pockets to provide additional channelization at intersections. The second phase of construction would include the construction of two additional through lanes and a center median to complete the project. Depending on available funding, other methods of phased construction may be considered.

The estimated costs for the Yellow Alignment – Preferred Alternative and each of the other alternatives were very similar. The following table summarizes the preliminary cost estimates for each alternative, and includes environmental clearance and preliminary design, final design, right-of-way acquisition, and construction. These preliminary costs were estimated in 2001 and include estimated inflation to the anticipated construction period of 2007 to 2009.

Table S-1 Preliminary Alternative Cost Estimates

Alternative	Right-of-way	Construction	Total
	($ Millions)		
Yellow – Preferred Alternative	$ 13.2	$ 57.5	$ 70.7
Green Alternate	$ 13.2	$ 57.7	$ 70.9
Green	$ 13.1	$ 57.9	$ 71.0

S.3 Potential Impacts and Mitigation

Potential impacts and mitigation measures are summarized in the following table. Details on impacts and mitigation are provided in Chapter 3.

Table S-2 Summary of Major Potential Project Impacts

Potential Impact		Yellow Alignment – Preferred Alternative	Green Alignment	Green Alternate	No Action Alternative	Mitigation/ Minimization
Farmland converted	Total Farmland (ha [acres])	33.6 (83)	22.6 (56)	31.2 (77)	None	Use of conservation easements obtained at a 1:1 ratio
	Williamson Act Farmland	None	None	None	None	None
Business displacements		None	None	None	None	None
Housing displacements		1	1	1	None	Relocation
Utility service relocation		None	None	None	None	None
Consistency with the City General Plan		Yes	Yes	Yes	None	None
Consistency with the County General Plan		Yes	Yes	Yes	None	None
Air quality		Construction Impacts	Construction Impacts	Construction Impacts	None	Construction measures

Table S-2 (Continued) Summary of Major Potential Project Impacts

Potential Impact		Yellow Alignment – Preferred Alternative	Green Alignment	Green Alternate	No Action Alternative	Mitigation/ Minimization
Noise	Caltrans[1] Abatement Criteria	2 Locations Exceed	3 Locations Exceed	3 Locations Exceed	None	Barriers that are feasible[2] will be considered for homes within 200 feet of right-of-way
	County[1] Criteria	2 Locations Exceed	3 Locations Exceed	3 Locations Exceed		
Water quality		Degradation from operation of roadway. Short term degradation from construction of Parkway	Same	Same	None	National Pollutant Discharge Elimination System Phase II permit
Total wetland (seasonal marsh) area (ha [acres])	Permanent	0.035 (0.086)	0.035 (0.086)	0.035 (0.086)	None	Use of off-site mitigation bank or creation of on-site wetland
	Temporary	0.008 (0.019)	0.006 (0.015)	0.008 (0.019)	None	None
Total nonwetland & waters area (primarily irrigation canals) (ha [acres])	Permanent	0.21 (0.53)	0.23 (0.57)	0.19 (0.47)	None	None
	Temporary	0.006 (0.015)	0.006 (0.015)	0.006 (0.015)	None	None
Total wetlands & waters area (ha [acres])	Permanent	0.245 (0.616)	0.265 (0.656)	0.225 (0.556)	None	Creation of on-site wetland
	Temporary	0.014 (0.034)	0.012 (0.03)	0.014 (0.034)	None	None
Floodplains		Redirect flood flow	Redirect flood flow	Redirect flood flow	None	Drainage culverts; design of Bear Creek piers to minimize scour

[1] Caltrans noise abatement criterion used was 66 dBA. This table identifies the number of modeled locations that exceed that level. County criterion applied was a threshold of 65 dBA, where the increase from the project is 3 dBA or more.

[2] Barriers must be feasible to construct and must provide traffic noise attenuation. Barriers at the two locations where the Yellow Alignment – Preferred Alternative would exceed noise criteria are not considered feasible because the affected properties are located along SR 140 and the barriers would prevent access to the driveways and local cross-streets that provide the sole access to the properties. Providing access to driveways or streets by creating gaps in the barriers would render the barriers ineffective. The barriers that would be needed along Yosemite Avenue and Campus Parkway for the Green Alignment and Green Alternate would be ineffective for the same reason.

Table S-2 (Continued) Summary of Major Potential Project Impacts

Potential Impact	**Yellow Alignment** – Preferred Alternative	**Green Alignment**	**Green Alternate**	**No Action Alternative**	**Mitigation/ Minimization**
Habitat and Wildlife	Invasive species distribution	Two (2) oak trees removed, invasive species distribution	Invasive species distribution	None	Oak planting; construction equipment cleaning
Special-Status Species	San Joaquin kit fox, burrowing owl, and Swainson's hawk; special-status bird species; special status fish; valley elderberry longhorn beetle	Same	Same	None	Wildlife passage measures; preconstruction surveys and avoidance; off-site mitigation for kit fox; elderberry planting on-site and off-site mitigation; erosion control
Cultural resources	One property, the Sunshine Dairy, was determined eligible for the National Register of Historic Places. The Yellow Alignment has been designed to avoid this property.	Same	Same	None	None
Number of potential hazardous waste sites	2	2	2	None	Site Investigation, source removal, and remediation
Visual quality	Bear Creek structure is further distant; no change in visual quality	Overhead structures at Bear Creek and SR 140; lighting	Same	None	Limit lighting intrusion; vegetation landscaping and architectural elements
Cumulative impacts	Farmland, construction air quality, traffic noise, growth	Farmland, construction air quality, traffic noise, growth	Farmland, construction air quality, traffic noise, growth	None	Construction dust controls, noise barriers
Growth inducement	Some potential	Some potential	Some potential	None	Existing land use controls

S.4 Areas of Potential Controversy

San Joaquin Kit Fox Impacts

The San Joaquin kit fox (*Vulpes macrotis mutica*) is a protected species under the Federal and California Endangered Species Acts that may inhabit valley and foothill

grasslands, sparsely vegetated shrubby habitats, and some agricultural and urban areas. Sightings of the fox have been periodically reported in the regional area. Habitat assessment and informal consultation was performed with the U.S. Fish and Wildlife Service (USFWS) to define survey methods for this project, which were completed but did not result in identifying any signs or evidence of kit fox use in the project area or nearby surroundings. Habitat in the project area is largely agriculture or otherwise disturbed and is crossed by railroad lines, SR 140, and existing rural roadways. It is unlikely that kit fox use the area for denning or foraging. There is no identified movement of the fox through or across the corridor that would be crossed by Campus Parkway. The USFWS determined that the potential exists for the regional area to support use by the fox. Formal consultation with the USFWS was completed in April 2006. The Biological Opinion issued by the USFWS (Reference 1-1-06-F-0099, April 21, 2006) stated that the project would result in permanent impacts to 56.52 ha (139.67 acres) and temporary impacts to 6.38 ha (15.77 acres) of potential San Joaquin kit fox habitat (USFWS 2006). Conservation and compensatory mitigation is therefore required, and the contractor will be subject to construction requirements and other restrictions. Compensation is required at a 1.1-to-1 ratio for permanent impacts and a 0.3-to-1 ratio for temporary impacts. For the Yellow Alignment – Preferred Alternative, these ratios equal 62.18 ha (153.64 acres) for permanent impacts and 1.91 ha (4.73 acres) for temporary impacts, for a total of 64.09 ha (158.37 acres). Credits will be purchased at a USFWS-approved conservation bank that includes the project limits within its service area, or Merced County will acquire conservation easements on land that has been identified by the USFWS as critical for San Joaquin kit fox recovery.

Valley Elderberry Longhorn Beetle Impacts

The valley elderberry longhorn beetle *(Desmocerus californicus dimorphus)* is listed as a threatened species under the Federal Endangered Species Act. The valley elderberry longhorn beetle is only found in association with its host plant, the blue elderberry shrub. Elderberry shrubs were identified within the alternative alignments at Bear Creek, which Campus Parkway would cross. Some shrubs could be impacted by construction of the two separated grade-crossing structures over Bear Creek.

Elderberry shrubs with stems of 2.5 centimeters (1 inch) or greater in diameter are present in and around the project area.[3] The beetle was not observed and exit holes

[3] Impacts to elderberry stems of 2.5 centimeters (1 inch) or greater in diameter trigger mitigation according to USFWS protocol because of the potential for these stems to provide habitat for valley elderberry longhorn beetles.

were not identified, but the USFWS determined that the project area contains habitat that the species could use and that the species is reasonably certain to occur (USFWS 2006). A total of 70 affected elderberry shrubs/clumps (101 elderberry stems) would be permanently impacted by the Yellow Alignment – Preferred Alternative. USFWS compensation guidelines require the planting of 246 elderberry seedlings or cuttings and 246 associated native riparian species plants and the transplanting of the 70 elderberry shrubs. On-site plantings, off-site plantings, and in-lieu credits at an approved mitigation bank will be considered to meet the Biological Opinion mitigation requirements. Merced County will define the right-of-way and construction easements (or work areas) and mark elderberry habitat outside of those areas as environmentally sensitive areas. Construction crews will be briefed on the locations of environmentally sensitive areas and on avoidance measures. Construction restrictions and other requirements stipulated in the Biological Opinion will apply to the project contractor.

Preferred Alternative and Connection with the University Community

The need for a roadway extending north of Yosemite Avenue would be provided by the planned roadway system for the University Community development, which will be located between Yosemite Avenue and Bellevue Road (north of Campus Parkway's northern limit at Yosemite Avenue). The U.S. Environmental Protection Agency (USEPA) recommended that any preferred alignment of Campus Parkway should not preclude the selection of the "least environmentally damaging practicable alternative" (LEDPA) for the University Community's development. Because a LEDPA determination may be required for the University Community, the selected alignment for Campus Parkway is not to restrict or conflict with the LEDPA review process. At the time of preparation of this Final EIS, the Merced County Board of Supervisors had approved the boundary of the University Community but had not selected a roadway alignment connecting the community with the existing roadway network.

Merced County completed detailed studies of environmentally sensitive resources within the initial project study area (from Bellevue Road south to SR 99) and used the results to define initial roadway layouts that could minimize impact to sensitive resources. The most sensitive resources and habitats within the initial study area, including resources that are within the jurisdiction of Section 404 of the Federal Clean Water Act, were identified well north of Yosemite Avenue. All of the Campus Parkway alignments evaluated for an extension north of Yosemite Avenue had sufficient area to minimize impacts to these resources while adequately serving the

planned development of the University Community. Therefore, the Yellow Alignment – Preferred Alternative should not preclude options for a University Community extension of Campus Parkway north of Yosemite Avenue that can minimize adverse environmental impacts similar to the other alignments studied.

Traffic Noise Impacts

Analysis of traffic noise indicates that some noise-sensitive residential homes and land uses would be impacted by traffic noise at a level that is above federal, state, or local criteria. Noise barriers were evaluated at each impacted location and do not appear feasible to construct or reasonable in terms of cost per impacted home or residential parcel. Barriers that were studied and determined not feasible for the Yellow Alignment – Preferred Alternative would interfere with access to the driveways and cross-streets that provide the sole access to the affected properties. To provide adequate access would require creating gaps in the barriers along SR 140, which would render the barriers ineffective for traffic noise reduction. Design measures that could reduce noise levels will be considered in the final design and could include installation of berms where adequate space is available in the right-of-way. Pavement types that produce less vehicle tire noise could also be considered. However, berms and roadway surfaces for noise abatement (open-graded and rubberized asphalt) are not recognized by the FHWA as effective, and therefore not eligible for federal transportation funding. If non-FHWA funding is available, the use of noise attenuating pavement types and/or berms could be considered. Merced County has proposed to consider construction of feasible berms and/or soundwalls to reduce noise levels for homes within 200 feet of the selected alternative right-of-way.

Farmland Impacts

The project would directly impact existing prime farmland used for crops and orchards. Impacts to farmlands have been identified as an issue of concern during early public meetings on the project. Effects to farmlands were evaluated, including using Natural Resources Conservation Service (NRCS) criteria to determine whether additional federal action should be taken to protect farmlands. The NRCS score fell below the criteria for taking any further action. The only potential impacts to Williamson Act lands would take place if the Campus Parkway connection to SR 140 were located on the west side of the parkway. Connections between the proposed parkway and SR 140 were considered on either side of the parkway, and both options would primarily impact lands in agricultural use. The option to build the connection on the west side of the parkway would impact farmlands protected under the California Williamson Act. The county would prefer to build the SR 140 connection

on the east side, which avoids Williamson Act lands. Merced County has an Agricultural Policy Strategies Committee that is developing a countywide farmland impact and mitigation plan. The Merced County Board of Supervisors recently voted to participate in an agricultural mitigation program only if such a program is adopted countywide. If Merced County adopts a countywide farmland mitigation program before the construction of Campus Parkway, then the project could be subject to the policy. In the event that such a program is not adopted prior to the initiation of grading for the Campus Parkway project, equivalent protection of farmland of comparable value will be considered at a ratio of 1:1 for productive farmland converted with project implementation. Equivalent protection is defined as acquisition of conservation easements by the County (or an appropriate third party designated by the County) that would protect 1 acre of productive farmland for each acre converted through fee title, easement, or other measure.

Cumulative Impacts

There are two other major projects in the region. The new University of California Merced Campus (UC Merced) opened for its first session in 2005. The University Community Plan, approved in December 2004, is proposed by the county to provide a planned community that serves additional housing and infrastructure needs generated by the university that cannot be met by the Campus plan alone. Other projects in the regional vicinity include the SR 99/Mission Avenue interchange, the replacement of the Bradley Overhead on SR 140 west of the parkway alignment, and planned or proposed development projects in the City of Merced. Section 3.22 discusses potential cumulative impacts for each resource area evaluated in the Final EIS.

Growth Inducement

The Merced County Association of Governments predicts that the population of the City of Merced will grow by 60 percent between 2000 and 2025, an increase of 44,802 people. To accommodate this growth, the city has already adopted specific area plans and master development plans for the northern planning area and annexed a large portion of land for industrial and commercial use south of SR 140 that is crossed by Campus Parkway alignments. The approval of the Campus Parkway project does not change the current land use designations in the vicinity of the alternative alignments. The parkway has the potential to encourage pressures in the vicinity of the project to develop lands north of SR 140 that are currently designated for agricultural use. However, existing land use controls require that any such changes require approval by the Merced County Board of Supervisors for a new

Specific Use Development Plan, expansion of the existing Rural Residential Center, or an annexation request by the city.

S.5 Required Approvals and Permits

A number of public agency approvals and permits will be necessary to construct Campus Parkway.

Merced County Board of Supervisors and City of Merced

The Merced County Department of Public Works is responsible for environmental documentation and processing in accordance with CEQA. The Department has completed a Final EIR following public review and comment, and a preferred alternative (the Yellow Alignment – Preferred Alternative) was identified by the Merced County Board of Supervisors. The Circulation Element of the *Merced County Year 2000 General Plan* (Merced County 1990) will be subsequently amended to include the definition of an expressway and the location of the selected alignment. If the County determines that significant and unavoidable impacts consistent with CEQA are determined to occur as a result of the project, then the county would make a findings statement for each significant effect (CEQA only) and a statement of overriding consideration for the project. A Notice of Determination will be filed with the California State Clearinghouse that CEQA review has been completed for this project.

The Circulation Element of the *Merced Vision 2015 General Plan* (City of Merced 1997a) will need to be amended to include the Campus Parkway project, and encroachment permits will need to be issued by the City of Merced.

Completion of NEPA Review and Consultation Requirements

The Final EIS was prepared by Caltrans (in cooperation with Merced County) under the direction, review, and approval of the FHWA. The NEPA review and coordination process requires consultation and concurrence from other federal agencies. The State Office of Historic Preservation, State Historic Preservation Officer (SHPO) has concurred that review required by Section 106 of the National Historic Preservation Act is complete. Coordination with the U.S. Fish and Wildlife Service on potential species presence and study methods has been performed, and formal consultation was completed regarding potential effects and mitigation for the federally protected species discussed in Section S.4 (San Joaquin kit fox and valley elderberry longhorn beetle). A Biological Opinion was issued by the USFWS on

April 21, 2006 (Reference 1-1-06-F-0099; USFWS 2006). The coordination process with federal agencies is documented in Chapter 5 of this Final EIS, and copies of relevant correspondence are included in Appendix A. Other agencies consulted with include the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, the California Department of Fish and Game, the Regional Water Quality Control Board, the Merced County Association of Governments, the Merced County Planning Department, and the City of Merced.

In addition to completing a Final EIS, notification of the availability of the Final EIS will be published in the Federal Register, which initiates a required 30-day public review period. Comments received during the review period will be considered and addressed. A Record of Decision (ROD) can be issued upon completion of the 30-day review period and resolution of any issues raised. Signing of the ROD completes the NEPA review process.

It should be noted that at a future date the FHWA or another federal agency may publish a notice in the Federal Register, pursuant to 23 United States Code 139(I), indicating that a final action has been taken on this project by the FHWA or another federal agency. If such a notice is published, a lawsuit or other legal claim will be barred unless it is filed within 180 days after the date of publication of the notice (or within such shorter time period as is specified in the federal laws pursuant to which judicial review of the federal agency action is allowed). If no notice is published, then the lawsuit or claim can be filed as long as the periods of time provided by other federal laws that govern claims are met.

Regulatory Permits

The following separate regulatory approvals must be issued to the Merced County Department of Public Works before construction can commence:

- U.S. Army Corps of Engineers (USACE) Section 404 authorization under the Federal Clean Water Act. (The project appears to qualify under a Nationwide Permit No. 14 authorization for impacts to jurisdictional waters of the U.S., including wetlands; however, the USACE would make this determination.)
- California Department of Fish and Game Streambed Alteration Agreement (Section 1602).
- Regional Water Quality Control Board Section 401 certification or waiver.
- Regional Water Quality Control Board National Pollutant Discharge Elimination System (NPDES) Phase II Permit.

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Air Quality (2002)
Biological Assessment (2006)
Biological Opinion (2006)
Community Impact Assessment (2004)
Conceptual Mitigation Plan (2002)
Energy (2002)
Floodplain Risk Assessment and Location Hydraulic Study (2001)
Historical Property Survey Report:

- Archaeological Survey Report (ASR) (2001) and Addendum 1 (2001) and Addendum 2 (2002) (contains confidential resource data and not available for public review; summary of document is included in Section 3.19)
- Historic Architectural Survey Report / Historic Resource Evaluation Report (2001) (HASR/HRER) (contains confidential resource data and not available for public review; summary of document is provided in Section 3.18)
- Historic Property Survey Report (2001) and Addendum 1 (2002) (includes summary of information and findings of the ASR and HASR/HRER)

Hydrology and Water Quality Study (2001)
Geologic Hazards Study (2001)
Initial Site Assessment (Hazardous Waste) (2002)
Noise (2004)
Natural Environment Study / Biological Assessment (2004), Addendum 1 (2004), and Addendum 2 (2004)
Traffic Report Summary and Commentary; Analysis of Travel Characteristics Traffic Report (2000)
Traffic Operations Analysis (2001) and Addendum to Operational Traffic Analysis (2002)
Traffic Analysis – Addendum (2004)
Visual Resources (2002)
Wetland Delineation Report (2001) and Addendum 1 (2002)

These reports, with the exception of the ASR and HASR/HRER, can be reviewed at the Merced County Department of Public Works, 345 West 7th Street, Merced, California, (209) 385-7601.

List of Abbreviated Terms

APE	Area of Potential Effect
AADT	annual average daily traffic
BMP	best management practice
BNSF	Burlington Northern–Santa Fe (Railroad)
BTU	British thermal unit(s)
CAA	(Federal) Clean Air Act of 1970
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act of 1988
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
City General Plan	*Merced Vision 2015 General Plan*
City General Plan EIR	*Merced Vision 2015 General Plan Final Program Environmental Impact Report*
County General Plan	*Merced County Year 2000 General Plan*
cm	centimeters
CO	carbon monoxide
CRHR	California Register of Historic Resources
CT	census tract
CWA	Clean Water Act
dBA	A-weighted decibel
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FAPG	Federal-Aid Policy Guide
FHWA	Federal Highway Administration
FMMP	California Department of Conservation Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
g	gravity
GW	groundwater
ha	hectare
HIC	Highway Interchange Center
ISA	Initial Site Assessment
km	kilometer(s)
LAFCO	Local Agency Formation Commission
L_{dn}	Night-Day Average Sound Level
L_{eq}	Equivalent Sound Level
LOS	Level of Service
LUST	Leaking Underground Storage Tank

MCAG	Merced County Association of Governments
MCE	maximum credible earthquake
MID	Merced Irrigation District
MIS	*State Route 99 Merced/Atwater Major Investment Study*
MOU	Memorandum of Understanding
m^3	cubic meters
M_w	Moment Magnitude
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NOI	Notice of Intent
NOP	Notice of Preparation
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service (formerly the SCS)
NRHP	National Register of Historic Places
O_3	ozone
OES	Office of Emergency Services
OHP	California Office of Historic Preservation
NPS	National Park Service
Pb	lead
PM_{10}	particulate matter less than 10 micrometers in diameter
$PM_{2.5}$	particulate matter less than 2.5 micrometers in diameter
ppm	parts per million
PS&E	plans, specifications, and estimates
ROG	reactive organic gas
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RRC	Rural Residential Center
RWQCB	Regional Water Quality Control Board
SCS	Soil Conservation Service (now the Natural Resources Conservation Service)
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	sulfur dioxide
SO_x	sulfur oxides
SR	State Route
STIP	State Transportation Improvement Program
SUDP	Specific Urban Development Plan
SWANCC	Solid Waste Agency of Northern Cook County
SWPPP	Storm Water Pollution Prevention Plan
TCE	trichloroethylene
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency

USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
V/C	Volume to Capacity
VHT	Vehicle Hours Traveled
VISTA	VISTA Information Solutions (national environmental reporting service)
VMT	Vehicle Miles Traveled
$\mu g/m^3$	microgram per cubic meter

Chapter 1 Purpose and Need

The Merced County Department of Public Works, with oversight by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), is evaluating transportation improvements in eastern Merced County, in and around the City of Merced, to address existing circulation inadequacies and the need for capacity improvements consistent with the local and regional planned growth for the area (Figure 1-1). This chapter discusses the purpose of the proposed Campus Parkway project and the need for improvements.

1.1 Project Purpose

The purpose of this action is to provide additional capacity to the regional circulation network in eastern Merced to improve existing and future circulation east of the City of Merced.

More specifically, the purpose of this action is to correct the deficiencies in the local transportation network discussed in **Section 1.2, Project Need**. These include the following:

- Provide standard access to the City of Merced to and from State Route (SR) 99.
- Provide a transportation project consistent with the local and regional transportation plans for an eastern "beltway" adjacent to the City of Merced, to serve development north and east of the current city limits.
- Provide additional access to SR 99 not restricted by the Burlington Northern–Santa Fe (BNSF) railroad tracks that can serve not only existing and planned development, but would also provide additional emergency service access.
- Provide access to planned developments in the City of Merced's north and east Specific Urban Development Plan and Sphere of Influence areas.
- Provide access to the first phase of the Merced Campus of the University of California (UC Merced Campus), which opened in Fall 2005.

1.2 Project Need

The existing major roadway network serving the City of Merced and surrounding county area is shown in Figure 1-2. In general, the roadway network is constrained in its ability to accommodate existing and future growth. The city's core downtown roadways follow a grid pattern, and the original grid has expanded over time with the

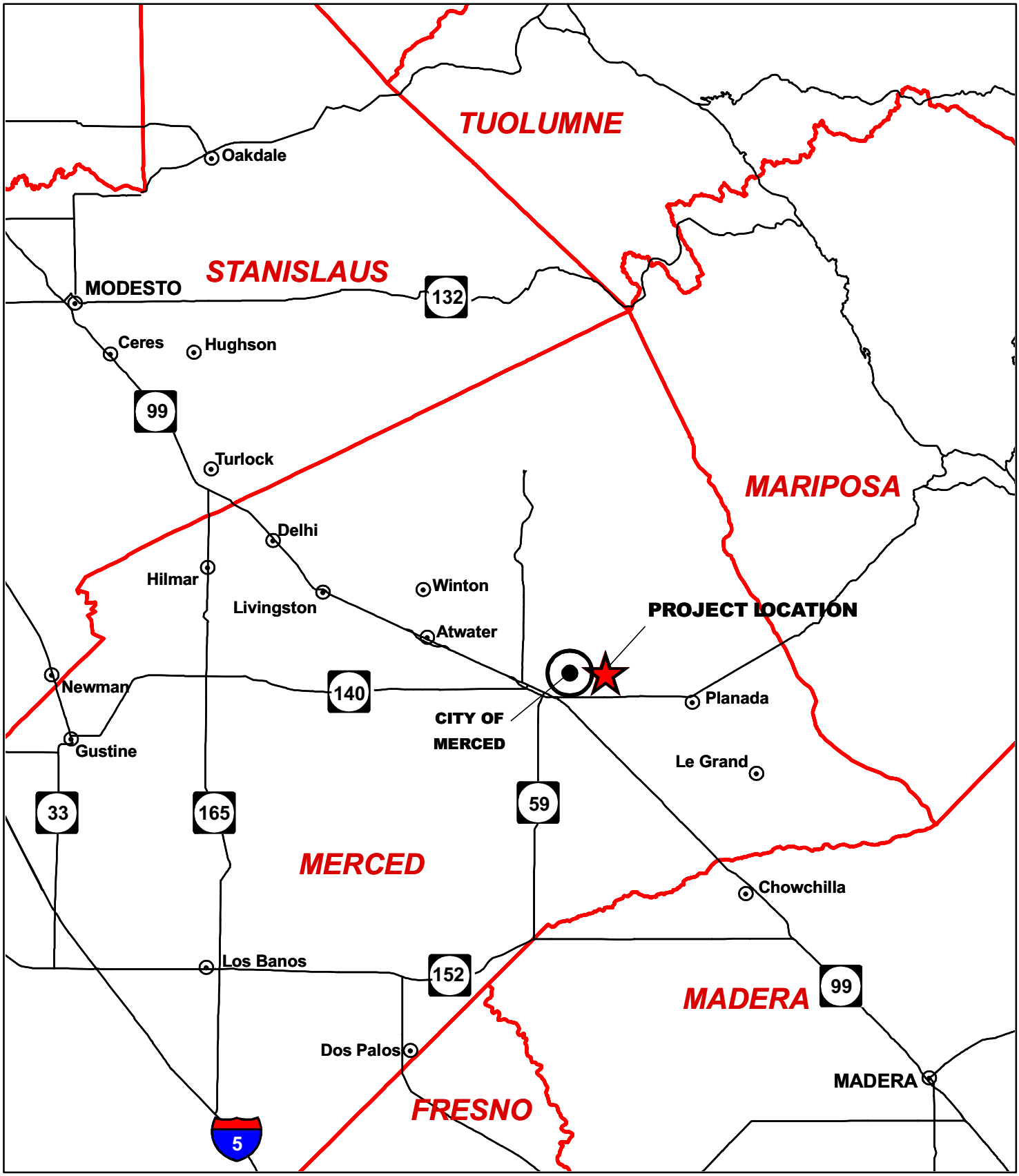
addition of new residential and commercial uses. Growth has been especially strong to the north of the City of Merced, and drivers traveling from north to south toward SR 99 to or through the city encounter increasingly congested conditions on the main arterials. This congestion is created not only by the growth in traffic but also by the presence of existing railroad and creek crossing barriers, as well as discontinuous roadways. As a result, drivers coming from the north of Merced rely on primary arterials such as G, M, and R Streets to travel south until approximately Yosemite Avenue and Olive Avenue, which are two primary east-west roadways located just north of the core Merced downtown and residential neighborhoods.

Figure 1-3 shows a generalized diagram of major traffic flow patterns, with directional arrows that represent primary arterials where traffic volumes are predicted to be highest or increase the most north of SR 140 by year 2025. As shown in the figure, drivers heading east in the direction of Arboleda Drive will increasingly use Yosemite Avenue and Olive Avenue to avoid congestion within Merced. The city's ability to improve capacity and travel mobility on the primary arterials (such as G Street) is limited without substantial right-of-way acquisition through established neighborhoods. These constraints have focused transportation planning on the east and north sides of Merced in an effort to identify and establish new corridors that could accommodate the projected growth associated with local and regional planning. The following sections describe these constraints and issues in more detail.

1.2.1 Current and Projected Traffic Conditions

The City of Merced is located along SR 99 in eastern Merced County. The development of the city has historically grown northward from State Route 99, with the current *Merced Vision 2015 General Plan* (City General Plan) continuing to promote this pattern of growth. The northern and eastern portions of the City of Merced as well as the adjacent portions of Merced County currently contain a mix of scattered suburban housing tracts and agricultural lands.

The BNSF railroad parallels just to the north of SR 99, as both run diagonally to the general north-south and east-west circulation pattern of the city and county road systems. The older downtown road grid itself runs parallel to the railroad and SR 99. The downtown area is mainly built-out, with little vacant land available and buildings built close to the street with on-street parking (see Photo 1-1). The density, design,



City
County Line
Primary Road

6 3 0 6 Miles

N

Campus Parkway Project	PROJECT VICINITY MAP	Figure 1-1

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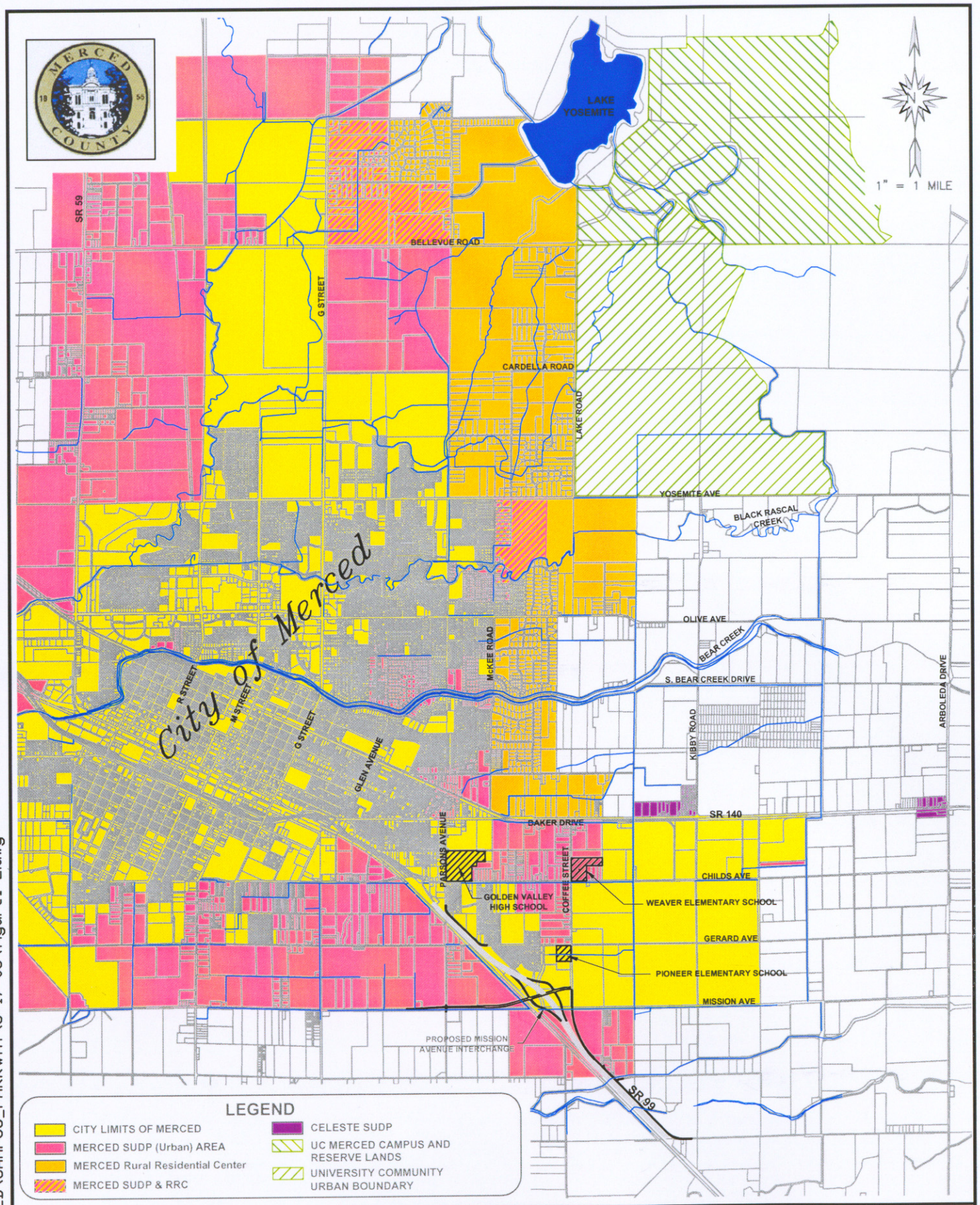

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CAMPUS PARKWAY PROJECT	EXISTING ROADWAY NETWORK OF MERCED	Figure 1-2

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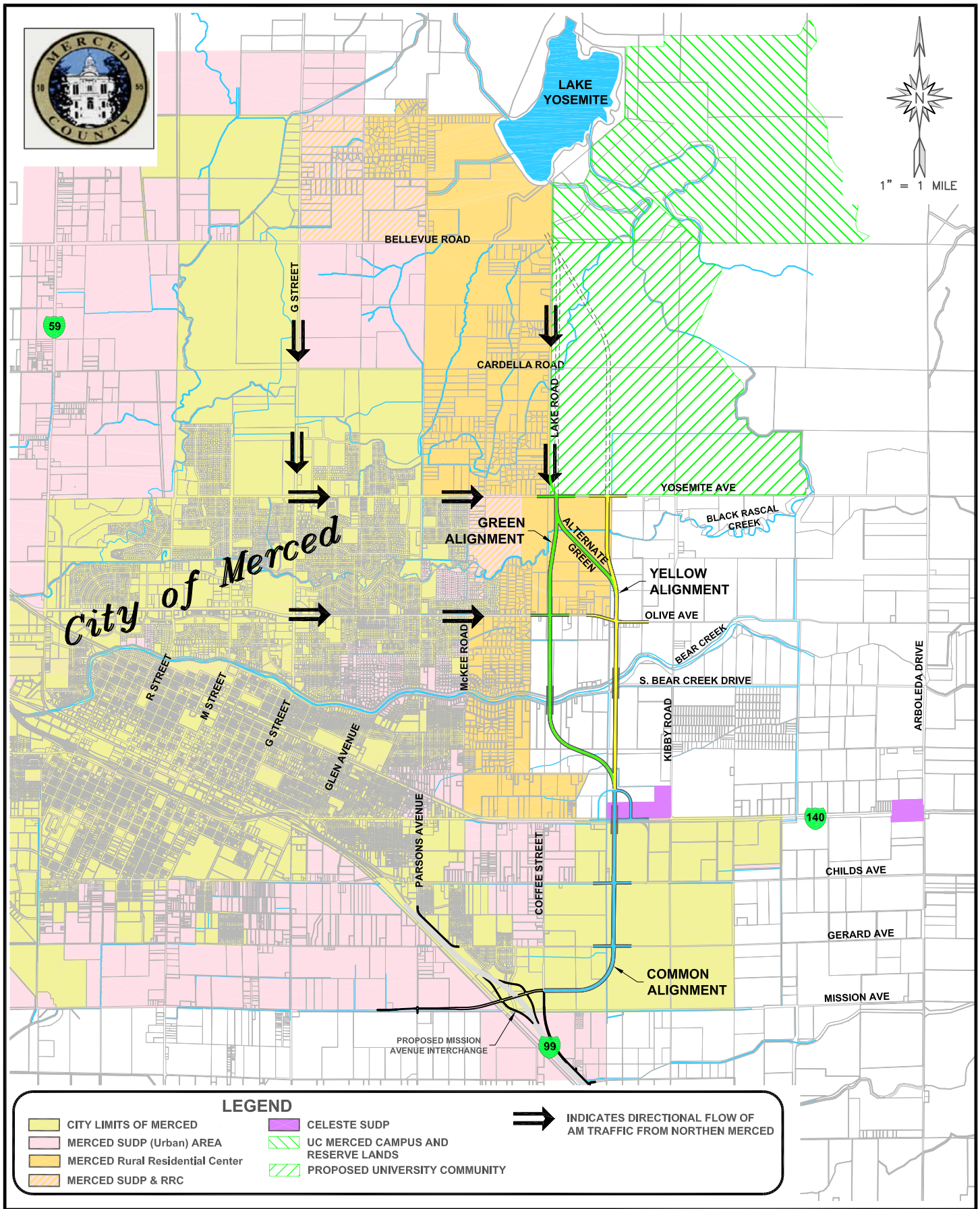

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CAMPUS PARKWAY PROJECT	Major Traffic Flow From North Merced	Figure 1-3

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and layout of the downtown make it difficult to expand or improve the traffic flow through the area without acquiring buildings and property along those roads, such as on R, M, and G Streets. Even with the widening of these roads, it would not address the lack of access across the BNSF railroad or the nonstandard interchanges present at SR 99 through downtown Merced. The density of development along SR 99 also limits the options available to improve these interchanges.

Photo 1-1: Main and G Street, Merced

The City General Plan shows substantial additional future growth occurring in the northern portion of this region consisting of residential areas with scattered neighborhood commercial and professional office uses. For example, the eastern portion of the City of Merced contains a large area south of State Route 140 (SR 140) with an industrial designation. That area is currently undeveloped but is planned for industrial use, which will generate additional truck traffic in the project area. The *Merced County Year 2000 General Plan* (County General Plan) designates a large portion of land abutting the east side of the City of Merced as rural residential for the development of one-acre home sites. The University of California has constructed Phase 1 of its new campus (UC Merced) in the area abutting Lake Yosemite. With the completion of later planned phases of the campus, it will ultimately serve 25,000 students. Just south of the university site, the University Community is proposed, with a planned population of over 30,000 residents. New and proposed development was used as the basis of the cumulative impact analysis and is described in more detail at the beginning of Section 3.22.

1.2.2 Inadequate Capacity and Connectivity

Figure 1-2 shows the existing regional roadway network for Merced. Also shown are the city limits of Merced and the City of Merced Specific Urban Development area, which represents the city's planned growth area. In addition, several other Specific Urban Development Plan (SUDP) areas and Rural Residential Centers (RRC), which are planned growth areas surrounding the city, are shown. The site of the UC Merced Campus and the area of the approved University Community are also shown.

The area of planned growth is served by a network of roads originally constructed to meet the needs of a relatively rural mix of land uses. Traffic circulation in this area is severely constrained due to the limited capacity of the existing roads and intersections, a lack of direct road connections to the growth areas, and again constraints associated with two existing railroad lines that interrupt the roadway network. Projections of land uses and traffic growth show that the existing transportation network will be inadequate to serve the General Plan land uses for future years. The following subsections describe these issues in more detail.

Connectivity to State Route 99

An important connectivity need in the City of Merced is north-south circulation between northern Merced and SR 99. Currently, most of the traffic traveling from northern Merced to SR 99 is carried on three major north-south roadways (G Street, M Street, and R Street). Only one of these three roadways (R Street) has a full interchange connection with SR 99. The new SR 99/Mission Avenue interchange, when completed, will provide the only other full interchange connection at SR 99.

G Street is limited to a southbound on-ramp to SR 99 and a northbound SR 99 off-ramp. M Street has no connection with SR 99. Major congestion already occurs on these roadways during the peak hours and in the future, and this congestion is anticipated to intensify. The functionality of these three roadways is also restricted by the two railroad lines that pass through central Merced: the Union Pacific line that parallels SR 99 and the BNSF line that parallels SR 140 through the project area. Whenever a train passes through town, a large traffic backup occurs on these roadways. Occasionally, a train stops across all three roadways (G Street, M Street, and R Street) on a passing track that runs through the middle of Merced to allow an opposing train to pass through town. In addition to causing a large backup of traffic, this situation also severely restricts the ability of emergency service vehicles to drive across town.

Connectivity to Olive and Yosemite Avenues

Olive Avenue and Yosemite Avenue are the two primary east-west arterials north of Bear Creek that provide an uninterrupted connection between Arboleda Drive and SR 59, except for traffic controls. In general, drivers from north Merced heading south to the city or SR 99 will either be delayed in traffic, especially on G Street, or will divert to an east-west arterial before connecting to SR 99. Traffic seeking a route to central Merced, or SR 99 in central Merced, is limited to the existing city streets that pass through the downtown area, which do not have very high capacity and are

increasingly congested. Drivers that divert off of G Street or one of the other parallel city streets will primarily use Olive Avenue and Yosemite Avenue as east-west routes that are north of the central downtown area and the constraints of Bear Creek and the BNSF railroad tracks. Olive and Yosemite Avenues connect to Arboleda Drive to the east, which can be used by drivers headed south to SR 99. Traffic volumes on Olive Avenue, Yosemite Avenue, and Arboleda Drive are predicted to grow 40 percent or more between 2015 and 2025, a higher growth rate than other city streets, which indicates that drivers will increasingly rely on these arterials in the future. A traffic analysis, described in more detail in Section 2.1.1 under "Traffic Analysis and Modification of Alternatives," projected that traffic volumes north of Yosemite Avenue would change less than 1,000 vehicles per day on most roads by the year 2025.[4] This indicated that Yosemite Avenue provided a logical northern terminus to serve the eastbound and westbound traffic that will increasingly use this route as a diversion east of the City of Merced to Arboleda Drive and SR 99.

Existing Road Network Deficiencies

The area of eastern Merced that would be served by this project is defined generally as east of Coffee Street between Mission Avenue and SR 140. Most of this area is undeveloped and over 405 hectares (ha) (1,000 acres) are slated for industrial development. This area is currently served primarily by three east-west roads (Mission Avenue, Gerard Avenue, and Childs Avenue) and two north-south roads (Coffee Street and Kibby Road). These roads are shown on Figure 1-2:

- **Mission Avenue** is a two-lane rural roadway that currently connects northbound SR 99 with Arboleda Drive. Construction of a new interchange at the intersection of Mission Avenue and SR 99 began in December 2005. Once completed, it will connect to Mission Avenue west of SR 99, while east of SR 99 it will connect to Coffee Street and then to Mission Avenue through a new frontage road that would be constructed at the same time as the interchange.
- **Gerard Avenue** is a two-lane rural roadway between Arboleda Drive and an existing frontage road along SR 99 that eventually leads to the Childs Avenue interchange with SR 99.
- **Childs Avenue** is a two-lane roadway with direct access to an interchange onto SR 99; to use this interchange, traffic must pass by two schools (Golden Valley

[4] The traffic analysis was based on future growth through the year 2025 with the UC Merced Campus developed only to its current Phase 1 expansion. Additional development of subsequent phases and the associated University Community, which are separate projects from Campus Parkway, would generate additional traffic. These projects are evaluated as part of the cumulative impact analysis.

High School and Weaver School) and through residential areas. Childs Avenue extends to the east through the community of Planada.

- **Coffee Street** is a two-lane rural roadway that currently extends from Mission Avenue to Baker Drive (Baker Drive is a narrow rural roadway that parallels the south side of the BNSF railroad tracks and SR 140). Because of the railroad tracks, Coffee Street does not connect to SR 140. With the development of the SR 99/Mission Avenue interchange, the City of Merced has recommended that Coffee Street be bisected between Childs Avenue and Mission Avenue to prevent traffic from passing by Pioneer Elementary School.
- **Kibby Road** is a two-lane rural roadway that extends from Childs Avenue north to Yosemite Avenue. It is important to note that Kibby Road is the closest north-south roadway to the City of Merced that crosses the BNSF tracks (at-grade) that run parallel and adjacent to the south side of SR 140. West of Kibby Road, the next major north-south roadway crossing of the BNSF railroad is G Street.

Connectivity to SR 99 and to central and northern Merced from eastern Merced is very limited. A circuitous drive is required to travel between central and northern Merced and eastern Merced. All of the traffic traveling between these areas must pass through one of the following intersections: SR 140 and Kibby Road, SR 140 and Parsons Avenue, or Childs Avenue and SR 99. Specific capacity and connectivity issues include the following:

- **The intersection of SR 140 and Kibby Road** has limited capacity and functionality as a result of the adjacent at-grade crossing of the BNSF railroad tracks. The railroad tracks are much higher in elevation than the adjoining ground and SR 140. SR 140 is a two-lane roadway with no left turn pockets serving this intersection. This intersection is inadequate to support the type of traffic that would be associated with the development of the land designated for industrial development in the City General Plan.
- **The intersection of SR 140 and Parsons Avenue** is signalized. Parsons Avenue approaching this intersection is a narrow, two-lane roadway with poor pavement. This intersection primarily serves traffic associated with Golden Valley High School, which is located at the corner of Parsons Avenue and Childs Avenue. Any traffic traveling from the industrial-zoned land located in the southeastern quadrant of the city via Parsons Avenue leaves the area by using the SR 140/Parsons Avenue intersection. The addition of heavy commercial truck traffic to Parsons Avenue from the planned industrial area south of SR 140 would

contribute to degradation of the roadway travel surface and would create conflicts with the high volume of traffic traveling to the high school.

- **The interchange of Childs Avenue with SR 99** was constructed in the 1950s and does not meet current design criteria. As a result of its narrow design, its proximity to local intersections, and the need for complex traffic controls, the capacity of this interchange is very limited.

Forecasted Traffic Growth and Operating Conditions

Forecasted growth, based on the City and County General Plans for future land uses, is used by regional governments to predict traffic conditions and assist in planning. The Merced County Association of Governments (MCAG) model shows traffic growth increasing substantially on the region's roads. Table 1-1 lists the traffic volumes on some of the primary arterials and SR 140 in eastern Merced, nearest the project area.

Table 1-1 Modeled Project Area Daily Traffic Volumes

Road Segment	Total Daily Traffic Volumes		
	2000	2015	2025
Yosemite between Lake and Arboleda	819	2,724	4,407
Olive between Kibby and McKee	2,136	2,678	3,152
SR 140 just west of Kibby	8,576	10,527	15,445
Childs just west of Kibby	1,199	1,616	3,934
Gerard east of Coffee	336	475	1,099
Mission east of Coffee	526	654	681

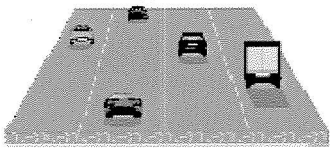
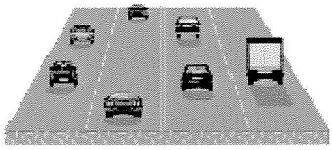
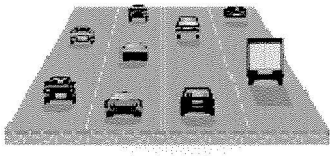
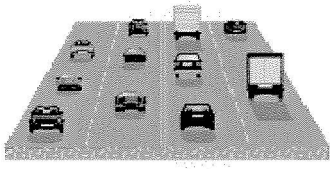
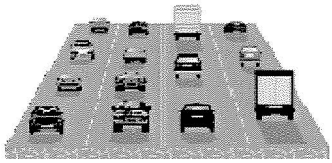
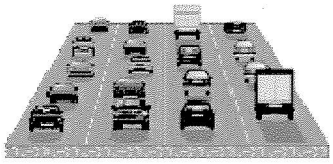
Source (forecasted volume): Dowling 2000

Roadway and intersection Levels of Service (LOS) are predicted to get worse in the future. Levels of Service describe operating conditions for the flow of traffic along a road or through an intersection and are described in terms of "A" through "F," with LOS A representing relatively free flow conditions[5] and LOS F representing the heaviest congestion. Figure 1-4 describes and depicts the different LOS categories. All of the roadway segments listed in Table 1-1 were estimated to function at LOS C

[5] The term "free flow" conditions used here generally refers to the relative level of congestion. Campus Parkway will have speed limits and major local road crossings will be signalized, which controls the flow of the expressway traffic and allows for controlled access onto the expressway from cross streets.

LEVELS OF SERVICE

Representative for Expressways and Highways

Level of Service	Flow Conditions	Technical Descriptions
A		Highest level of service. Traffic flows freely with little or no restrictions on maneuverability. **No delays**
B		Traffic flows freely, but drivers have slightly less freedom to maneuver. **No delays**
C		Density becomes noticeable with ability to maneuver limited by other vehicles. **Minimal delays**
D		Speed and ability to maneuver is severely restricted by increasing density of vehicles. **Minimal delays**
E		Unstable traffic flow. Speeds vary greatly and are unpredictable. **Minimal delays**
F		Traffic flow is unstable, with brief periods of movement followed by forced stops. **Significant delays**

Source: Modified diagram based on Highway Capacity Manual, LOS Criteria

Campus Parkway Project	Diagram of Level of Service (LOS)	Figure 1-4

URS Corporation X:\x_env_permit\Campus_parkway\EIS-EIR\7th ADEIS Revised per FHWA Comments\GIS\LOS.mxd Date: 7/6/2004 12:39:59 PM Name: vjhoffm0

or better. Traffic projections show that by 2015, intersection LOS within the City of Merced would function at LOS D or worse for almost all primary north-south streets between SR 59 and Glen Avenue and on east-west streets between Olive and Childs Avenues. LOS D is considered the threshold of acceptable operating conditions for the City of Merced. In addition, some segments of roadway northwest of the city would operate at LOS D or worse. These conditions would occur without the buildout of the UC Merced Campus or University Community in place. Table 1-2 compares projected levels of service in 2015 and 2025 for selected road segments in the eastern region of the City of Merced.

Table 1-2 2015 and 2025 Levels of Service for Selected Road Segments

Road Segment	Levels of Service (LOS)	
	2015	2025
Bellevue Road (between M and SR 59)	C+	D *to* E
Yosemite Avenue (between R and M)	D	E
Yosemite Avenue (between McKee and Lake)	C+	E
G Street (between Yosemite and Olive)	C+ *to* E	D *to* F
G Street (between Olive and Bear Creek)	F	F
Glen Avenue (between Bear Creek and 16th)	C+ *to* F	F
Childs Avenue (between Coffee and Parsons)	E	F
SR 99 (between SR 140 and Childs)	C+ *to* D	E *to* F
SR 99 (between Childs and Mission)	C+ *to* E	D *to* F

Source (forecasted LOS): Dowling 2004.
Note: "C+" represents LOS of C or better. Levels of service are categorized from A to F, with A representing free-flow conditions and F representing highly congested traffic flow.

By the year 2025, traffic operations on these segments would continue to decline, and unacceptable operating conditions (in terms of poor levels of service in comparison to local thresholds and goals) would extend further to the north and east. Segments of Yosemite Avenue from R Street to just east of McKee Road would decline to E and F, and Childs Avenue near SR 99 would decline from E to F. Olive Avenue nearest G Street would experience an LOS of D in 2015, and by 2025 would function at LOS E and D between G Street and Parsons Avenue. With the buildout of the UC Merced Campus (beyond the current Phase 1 Campus development) and the University Community, Yosemite Avenue, Lake Road and Bellevue Avenue would function at levels of service of D to F (see Table 1-2).

1.2.3 Projected Population Growth

The City of Merced is projected to grow in population, even without the buildout of the UC Merced Campus and the development of the University Community. Much of this growth is focused in the area of north Merced. This includes four adopted, large residential developments, all north of Black Rascal Creek, which include housing, new schools, and commercial/office space. (These growth areas are discussed in more detail in Sections 3.12 and 3.22.)

Anticipated Growth

California Department of Finance projections indicate that the population of the Merced region will grow at a rate of 1.9 percent per year. As a result, the City of Merced is anticipated to reach a population of approximately 117,683 by the year 2025. These projections do not include the potential growth that may result from the UC Merced Campus and the University Community.

The projected buildout population (total residential capacity) for the urban designated areas within the current City General Plan is approximately 177,495. These development and growth projections also do not include the UC Merced Campus and University Community. The first phase of UC Merced opened in Fall 2005. If the 1.9 percent growth rate continues until all of the remaining residential capacity is exhausted, the buildout year for the City of Merced is estimated at 2047. Over 2,000 ha (approximately 5,000 acres) of land within city limits or within an SUDP are either approved or proposed for development.

Potential Additional Growth

The development of the UC Merced Campus and University Community would contribute additional growth at an estimated population of approximately 20,000 by the year 2025. All of this anticipated additional growth is directly related to the development of the UC Merced Campus and University Community. The campus currently accommodates 1,000 students and is expected to grow to 5,000 students in five years (UC Office of the President 2003). Ultimately, the Campus is planned to serve 25,000 students. The community is being planned to the north of Campus Parkway, on approximately 850 ha (2,100 acres) to accommodate the housing and commercial needs of the campus, with up to 7,000 single-family residential units and 4,600 multi-family residential units (as defined in the Final University Community Plan).

1.3 Coordination on Purpose and Need

Defining the project's purpose and need, determining the project limits, and reviewing the independent utility (need) for Campus Parkway with respect to other planned projects involved coordination and input between Merced County, Caltrans, the FHWA, local agencies, and federal and state resource agencies. The need for the project was initially defined by the Merced County Department of Public Works, the project sponsor, and was refined over time in coordination and review with Caltrans and the FHWA. During the initial project stages, meetings and discussions about the purpose and need were held with resource agencies that are responsible for participating in the review of conceptual projects when sensitive environmental resources such as biological species or wetlands may be affected, or when regulatory permits would be required. These agencies included the U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWQCB).

The coordination process addressed the areas and land uses that Campus Parkway would primarily serve, the project's relationship to other planned or proposed developments (especially UC Merced and the University Community), potential growth inducement, and traffic impacts and benefits. As part of this coordination, additional traffic analysis was performed to estimate when local General Plan land uses would create greater demand for increased transportation access from the eastern and northern portions of Merced to SR 99. The project alternatives were also refined to distinctly separate the UC Merced Campus and University Community projects from the Campus Parkway alternatives and to demonstrate that these alternatives provided traffic benefits independent of the campus planning projects. A major outcome of the coordination process was the relocation of the Campus Parkway's proposed northern project limits from Bellevue Road south to Yosemite Avenue. The coordination process with the resource agencies was concluded in March 2001 as a result of these refinements. Additional details about agency coordination are provided in Section 5.3.

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Chapter 2 Project Alternatives

2.1 Alternative Development Process

The conceptual development of the proposed Campus Parkway project involved identification and evaluation of a range of alternative alignments. This section describes the process used to develop and consider the alternative concepts that address the purpose and need for the proposed action. A range of alternatives were considered, including:

(1) Alternatives that were advanced for further evaluation in this report
(2) Alternatives that were identified and initially evaluated but dropped from further consideration

Federal regulations require an Environmental Impact Statement (EIS) to evaluate all reasonable alternatives to a proposed action and explain why other alternatives were eliminated from detailed study (23 Code of Federal Regulations [CFR] 771.123[c]). This section describes each alternative and explains why it was advanced for evaluation or dropped from further study. Alternatives held for further evaluation are presented in more detail than those that were dropped following initial identification or evaluation. The Yellow Alignment has been identified as the preferred alternative. Section 2.1.1 below explains the scoping, planning, and public participation processes that occurred to develop a geographic area, within which, the initial range of alternatives were developed. Sections 2.2 through 2.5 describe each alternative and how it was evaluated or considered. The basis for identifying the Yellow Alignment as the preferred alternative is discussed in Section 2.2.6.

2.1.1 Transportation Planning and Scoping

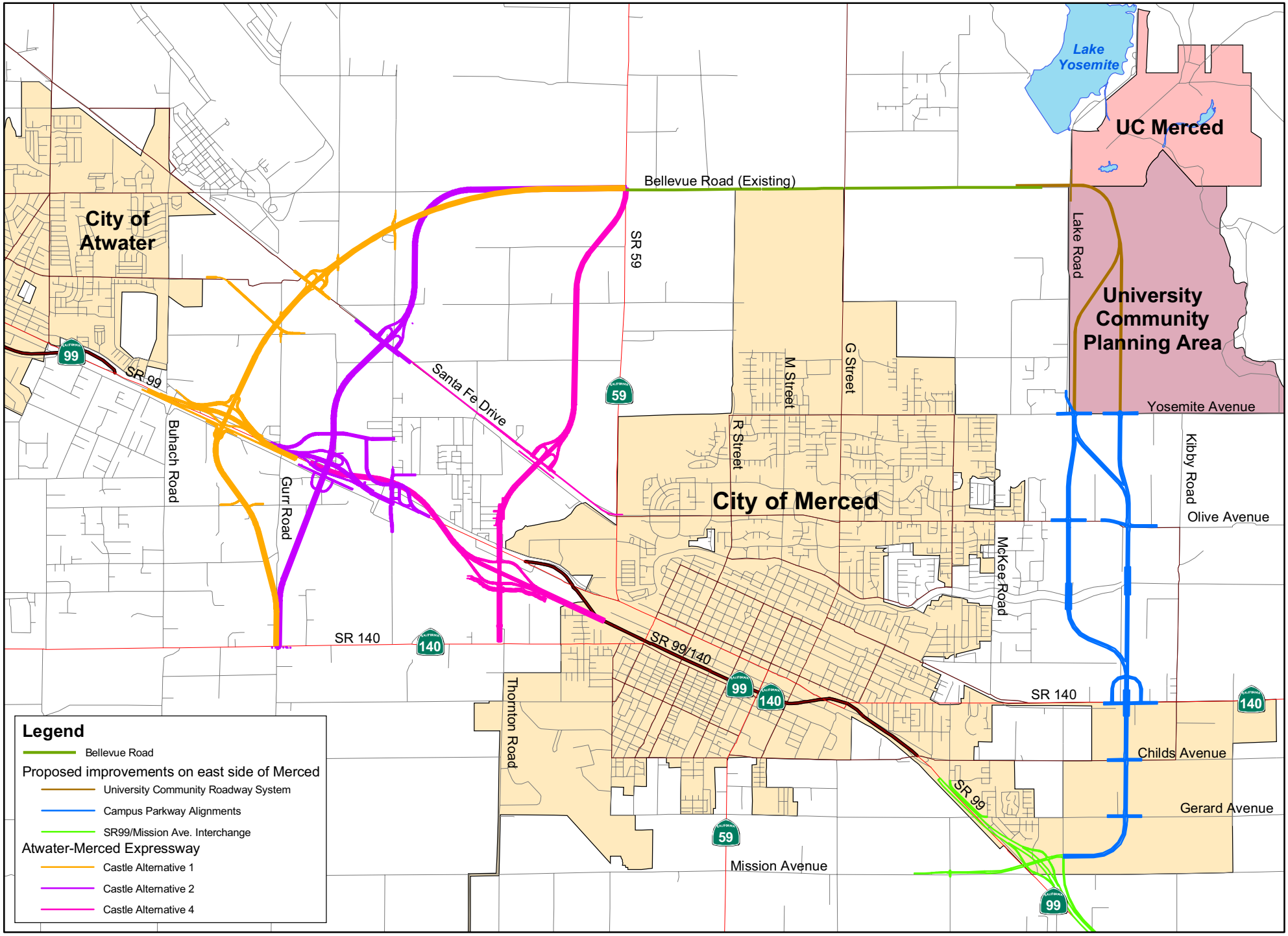
Recognizing the existing constraints to improve transportation in eastern Merced County, and to address future transportation planning needs, several studies examined alternatives for a new transportation corridor that would serve the northern and eastern portions of the City of Merced. Public input was also sought during this scoping process to examine the range of alternatives the community wanted to meet these future transportation needs.

Transportation Planning

Several plans and documents were completed that addressed access to and around the City of Merced. The most relevant studies are summarized below, and the alignments represented by these studies are shown in Figure 2.1-1.

The City of Merced commissioned a 1994 report, *City of Merced Eastern Beltway Alignment Alternatives Analysis and Circulation Plan* (City of Merced 1994). This document analyzed and recommended locations for a north-south expressway located on the east side of Merced that would connect the SR 99/Mission Avenue interchange to Yosemite Avenue. According to the report, the primary goal of the eastern beltway project was to "provide a vehicular connection (expressway) between the southeastern and northeastern areas of the City of Merced." The secondary goal of the eastern beltway project was to "provide safe access to and from the expressway at necessary locations for local and regional access." The report also discussed additional goals related to minimizing impacts and costs of the project.

The overall beltway concept was affirmed and expanded in a planning document adopted in 1997 by the MCAG entitled *State Route 99 Merced/Atwater Major Investment Study* (MCAG 1997). This Major Investment Study (MIS) was prepared to determine the improvements to the regional street and highway system necessary to support the buildout of land designated in the General Plans of the City of Merced, the City of Atwater, and adjacent county urban planning areas. The results of this document were intended to serve as a basis for the planning and programming of regional transportation facilities throughout the study area. At the time that study was prepared, the UC Merced Campus and associated University Community were assumed to be developed on property owned by the Virginia Smith and Cyril Smith Trusts located to the north and east of Lake Yosemite. The MCAG's MIS identified a number of routes and improvements to meet the demands of planned growth throughout and surrounding Merced. It included the Campus Parkway along the eastern extent of Merced, connecting SR 99 with the northern area of development, as well as routes along Bellevue Avenue that could provide access from the north to SR 99 west of the city. Based on the information presented in the report, the eastern expressway was established as the highest-priority project for the regional street and highway system. The alignments that extended along the north of the city and connected to SR 99 to the west became known as the western portion of the city's planned loop system, and have most recently been represented by the planned Atwater-Merced Expressway alignments shown in Figure 2.1-1.



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URS	Campus Parkway 26813284	Current Transportation Planning "Beltway" Concepts/Components	Figure 2.1-1

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When the SR 99/Mission Avenue Interchange project was proposed, it was found to have independent utility from the parkway because the interchange addresses safety and design needs on SR 99 regardless of any connection to a future parkway. Campus Parkway, however, is dependent upon the interchange for access to the highway system in eastern Merced, to allow traffic to avoid central Merced. The SR 99/Mission Avenue interchange environmental document was approved by the FHWA in April 2001, with construction funding awarded by the California Transportation Commission in 2001. Construction began in December 2005.

Public and Agency Scoping

Two public open houses were held in 1999, along with presentations to various interest groups as part of the public scoping process. A Project Development Team (PDT) was also formed with representatives from various local, state, and federal agencies (a more detailed discussion can be found in Section 5.2) to assist with development of the project. The results of this input identified some, and confirmed other conclusions of the PDT regarding the appropriate range of alternatives to be studied. The consensus developed was farmland was to be protected along with minimal disruption to those currently living in the area, and an eastern expressway alignment was a priority as stated in the 1997 MIS discussed above. This general consensus confirmed that widening on or near roads would be too disruptive to the community, the farther east the alignment was placed the more impact it would have on agriculture, and the common alignment at the southern terminus was the least disruptive to the existing residents and farms in the area.

A Notice of Intent (NOI) was published in 2000, and a revised NOI was published in 2001 following a change in the project limits, to notify agencies of the proposed project. Federal and state agency input focused on the logical termini and independent utility of the project in relationship to the UC Merced Campus and associated University Community, and the need for the project without the UC developments (at their originally planned locations).

Traffic Analysis and Modification of Alternatives

As part of the Campus Parkway planning and environmental review process, a refined planning-level traffic analysis report was prepared, *Campus Parkway - Analysis of Travel Characteristics* (Dowling 2000 and 2004). The purpose of the refined regional traffic analysis was to determine:

1. The overall benefits and impacts of the various alignments

2. The number of travel lanes that are required to serve various forecast years and development scenarios
3. The potential effect that future phases of the UC Merced Campus and associated University Community could have on Campus Parkway, and
4. The *independent utility* and *logical termini* of Campus Parkway (without the UC Merced Campus and the associated University Community).

The study's findings (discussed in detail in Section 3.16) concluded that the Campus Parkway build alternatives diverted traffic from roadways that would otherwise suffer congestion in the future without the Campus and associated University Community included in the population and traffic generation forecasts. Including UC Merced and the University Community in the traffic analysis, the improvements were more pronounced. UC Merced, during this time, was moved south to its current location at the northeast corner of Bellevue and Lake Road on the former Merced Hills Golf Course, shifting the University Community to the southeast corner of Yosemite Avenue and Lake Road. The University Community Plan is proposed to incorporate a major arterial roadway that would serve as an extension of Campus Parkway to Bellevue Road, which is addressed in the cumulative impacts discussion for each resource area in Section 3.22.

In the initial stages of project development and alternative identification, the northern terminus for all alternatives was a connection to Bellevue Road, about 2 miles north of Yosemite Avenue. Essentially, the Green Alignment and Yellow Alignment – Preferred Alternative were originally planned to extend north from their present termini at Yosemite Avenue to Bellevue Road. This northern limit was shifted south to Yosemite Avenue after detailed traffic modeling was completed and during consultation with federal and state resource agencies following the adopted National Environmental Policy Act (NEPA)/Section 404 coordination process for transportation projects. The traffic modeling indicated that with only Phase 1 of the proposed UC Merced Campus completed, and without the development of the University Community, the volumes of traffic predicted to use the northern extension of Campus Parkway (north of Yosemite Avenue) would not require substantial new roadway capacity, and that Lake Road and Yosemite Avenue could accommodate the future traffic volumes without substantial improvements. Under this development scenario, traffic generation by 2025 would not head north of Yosemite at a volume that warranted an entirely new road, and that most traffic would still turn onto Yosemite Avenue heading east or west.

However, with expansion of the UC Merced Campus beyond Phase 1 through the study year 2025 and with the University Community developed, traffic generation and demand showed daily volumes in 2025 of 10,000 to 15,000 vehicles per day between Yosemite Avenue and Bellevue Road. Therefore, development of the University Community project, which is an independent action, would include its own internal road and traffic circulation system to meet this demand, connecting to Yosemite Avenue and to the UC Merced Campus area. Conceptual alignments for this road have been developed but are not finalized; the alignment generally extends north from the Campus Parkway terminus. The predicted need for a roadway continuing north of Yosemite Avenue could be accommodated by the University Community development.

Subsequently, the University of California Regents approved and proceeded with Phase 1 of the Merced Campus, with projections of 1,000 students enrolled in 2005, growing to 5,000 students in five years. Additional traffic analysis was performed to include the UC Merced Phase 1 enrollment in the "baseline" traffic projections. The volume of traffic varies with the forecast year and assumed amount and location of future development. Future growth scenarios include with and without future expansion of UC Merced beyond its Phase 1 development, the University Community, and other local developments. This is addressed later in this chapter, along with a more detailed discussion of the issues mentioned above.

2.2 Project Alternatives

This section describes the build alternatives, which are illustrated in Figure 2.2-1, that were advanced for evaluation in the Draft EIS/Environmental Impact Report (EIR). Each alternative considered has a common segment that extends north from the SR 99/Mission Avenue interchange, parallels the Doane and Hartley Laterals (canals), and crosses Gerard Avenue, Childs Avenue, and SR 140. This segment is known as the common alignment. North of SR 140, two alternatives (called the Green Alignment and Yellow Alignment – Preferred Alternative) and a variation of the Green Alignment (called the Green Alternate) head north to a proposed connection with Yosemite Avenue. The basis for the decision to identify the Yellow Alignment as the preferred alternative is discussed in Section 2.2.6.

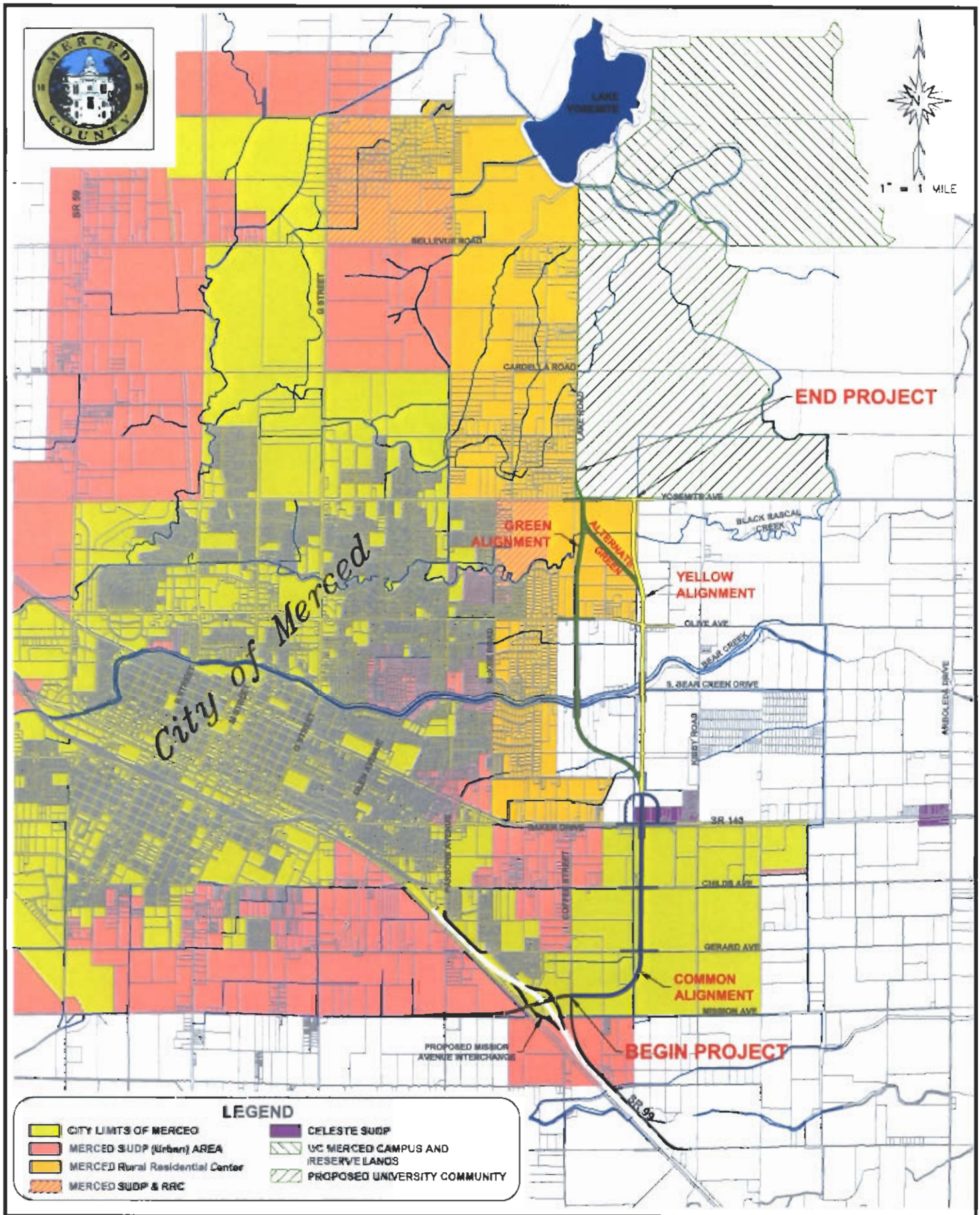
2.2.1 Common Alignment

As described above, the common alignment at the south end of the project was developed to avoid conflicts with two schools in the area, avoid existing development, and minimize impacts to existing farms. Pioneer Elementary is located at Coffee Street and Gerard Avenue and Weaver Elementary is located on Childs Avenue near Coffee Street, both west of the Doane and Hartley Laterals. Running the alignment just east and parallel to the lateral avoids existing homes and minimizes the splitting of farms into parcels too small to commercially farm. Aligning further east would impact the Celeste SUDP, a cluster of low-income housing located at SR 140 and Kibby Road. Locating the alignment even further east reduces the amount of drivers attracted to Campus Parkway, thereby not achieving the purpose of the project.

2.2.2 Green Alignment

North of SR 140, the Green Alignment heads diagonally northwest. About 0.75 kilometer (km) (0.5 mile) northwest of the Hartley Lateral, the alignment turns due north and crosses South Bear Creek Drive, Bear Creek, North Bear Creek Drive, and Olive Avenue, until it reaches Yosemite Avenue (see Figure 2.2-1). At Yosemite Avenue, the Green Alignment (and Green Alternate) includes a potential interim connection with Lake Road and a roundabout intersection at Yosemite Avenue, described in Section 2.3.4. The diagonal connection included in the Green Alignment (and the Green Alternate described below) was provided to eliminate potential traffic conflicts from the close offset spacing of the intersections of Lake Road and Campus Parkway at Yosemite Avenue.

The Green Alignment is the westernmost alternative studied and represents the closest practical alignment to the City of Merced's existing Rural Residential Center development (see Figure 2.2-1). This alternative was carried forward for further consideration as it has the potential to best "consolidate" a new roadway nearest existing development and minimize impacts of breaking up existing farmland parcels. However, this proximity to existing residential uses also has the potential for impacts from traffic using the new expressway, including noise and visual effects. The environmental impact studies discussed in Chapter 3 describe these impacts and how and whether they can be minimized with mitigation measures. The Green Alignment also minimizes the size of overhead structures, as it crosses Bear Creek and South and North Bear Creek Drives in a location where they parallel each other in close proximity.



CAMPUS PARKWAY PROJECT	PROJECT LOCATION	Figure 2.2-1

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This alignment satisfies all the bulleted items listed in Section 1.1. The alignment meets the purpose of the project by attracting traffic away from the existing transportation grid to alleviate congestion and improve LOS and travel times on these roads. As noted in Section 1.2 and described in more detail at the beginning of Section 3.22 ("City of Merced Major Planned Developments"), planned community land uses are developing predominantly to the north of Merced, resulting in traffic patterns that will increasingly use alternate routes to reach SR 99 (see Figure 1-3). Of the three alignments, the Green Alignment would provide the closest route to the City of Merced and would serve slightly more drivers, although the difference in use is not substantially different from the Green Alternate (Section 2.3.1 discusses the differences in projected traffic use among the alignments). With future expansion of the university and the planned University Community in place, the Green Alignment would be used by the most drivers only between Yosemite and Olive Avenues, and the travel demand would be higher for the Green Alternate Alignment and Yellow Alignment – Preferred Alternative, respectively, between Olive Avenue and SR 99. In meeting one of the purposes of the project, to alleviate future roadway congestion and improve travel times, the Green Alignment would be slightly better than the other alignments if future expansion of the UC Merced Campus and University Community projects is not considered. With those developments expanded to the year 2025 projections, the Green Alternate Alignment and Yellow Alignment – Preferred Alternative would provide slightly higher use south of Olive Avenue.

The Green Alignment, Green Alternate, and Yellow Alignment – Preferred Alternative would each cross by suburban residential and rural residential land use parcels in the Olive Avenue and Bear Creek areas.

Section 3.16 provides details on the LOS improvements with each of the alternatives. All three alternatives provide access to SR 99 and avoid conflicts with the BNSF railroad by using overpass crossings. Each of the alternatives is consistent with the local and regional transportation plans for an eastern "Beltway" around the City of Merced.

2.2.3 Yellow Alignment – Preferred Alternative

North of SR 140, the Yellow Alignment – Preferred Alternative heads due north, crossing South Bear Creek Drive, Bear Creek, and Olive Avenue. Just north of Olive Avenue, the alignment shifts to cross over the Bradley Lateral and continues north,

paralleling the west side of the Bradley and Hartley Laterals and crossing Black Rascal Creek (which is culverted at this location), before reaching Yosemite Avenue.

The Yellow Alignment – Preferred Alternative is a relatively straight north-south connection to SR 99 and provides a separation between the proposed expressway and existing residential development along and to the south of Lake Road. The Yellow Alignment – Preferred Alternative, by moving the expressway away from existing development in Merced, reduces potential noise and visual effects with respect to the suburban development within the City of Merced, but also moves Campus Parkway further east within Merced County's existing agricultural lands. The alignment would serve the travel demand patterns shown in Figure 1-3. The differences in projected travel demand with this alignment are discussed above under the Green Alignment. This alignment meets all of the project purposes listed in Section 1.1, as stated for the Green Alignment, including providing access to SR 99, providing an overpass at the BNSF railroad, and being consistent with transportation planning for an Eastern Beltway system.

2.2.4 Green Alternate

This alignment follows the same route as the Yellow Alignment – Preferred Alternative south of Olive Avenue. Between Yosemite and Olive Avenues, the Green Alternate follows a northwest-southeast alignment parallel to a high-voltage transmission line corridor. It was developed as a "hybrid" of the other alignments, to minimize some of the previously mentioned impacts to the City of Merced residential areas by following the Yellow Alignment – Preferred Alternative where it is located east of the existing City of Merced (between generally south of Yosemite Avenue and just north of Bear Creek), while evaluating its potential traffic demand and service.

As noted in Section 2.2.2, the Green Alternate would be used by the greatest number of drivers in the year 2025 south of Olive Avenue, with the future phases of UC Merced and University Community developments in place. This alignment meets all of the project purposes listed in Section 1.1. The Green Alternate would also serve the travel patterns generated by current and projected growth shown in Figure 1-3. As with the Green Alignment and Yellow Alignment – Preferred Alternative, the Green Alternate would provide access to SR 99, provide an overpass at the BNSF railroad, and be consistent with the Eastern Beltway planning concept.

2.2.5 Traffic Systems Management

Traffic systems management refers to actions that can maximize the efficiency of the existing transportation system. These actions include promotion or expansion of ridesharing and high-occupancy vehicle (i.e., carpool) use, traffic flow improvements (such as signal timing), accommodations for mass transit use, and use of traffic operations and surveillance equipment that can monitor or alert centers that control traffic flow. These options are normally considered for major projects in urban areas with populations that exceed 200,000. The City of Merced had approximately 65,000 residents in the year 2000. Many of these options are also relevant to highway operations, where a long and congested commute or travel distance without alternative options provides strong incentive to avoid driving.

Campus Parkway would be a new roadway that would include appropriate traffic management and control systems for an expressway in a semirural area. As described in Section 2.3.4, signals or roundabout intersection controls would be used at crossings with local roads where appropriate. During project design, systems that connect or coordinate traffic controls between intersections will be considered. A separate traffic systems management alternative was not evaluated.

2.2.6 Preferred Alternative

The Yellow Alignment has been identified as the preferred alternative.

The alternatives considered in identifying a preferred alternative included the conceptual-level planning efforts described in Section 2.1. The refined alternatives considered in the environmental review process are described in Sections 2.2 and 2.5. In evaluating this range of alternatives, the Merced County Board of Supervisors determined that the build alternatives (the Green, Green Alternate, and Yellow Alignments) all minimized impacts, but the Yellow Alignment was preferred because it affected the fewest existing residents and would have the least impact on the community. The tables in Appendix H summarize the impacts of the alternatives on critical resources. In addition, the Yellow Alignment – Preferred Alternative would have the least impact on biological resources. The Yellow Alignment – Preferred Alternative would impact slightly more farmland than the other alternatives (11 ha [27 acres] more than the Green Alignment and 2.4 ha [6 acres] more than the Green Alternate Alignment). However, the U.S. Farmland Conversion Impact Rating Form (Figure 3.13-2) prepared for this project indicates that the final score for each

alternative is below the 160-point threshold for considering federal action to protect farmlands.

The alternatives that involved the least new construction, Traffic Systems Management (Section 2.2.5) and the No Action alternative (Section 2.4), would avoid the most impacts because they would involve little or no new right-of-way acquisition and construction and no new roads. However, these alternatives would neither provide adequate capacity to improve travel patterns or flow nor address the need for improved connectivity of the existing transportation system. Hence, these alternatives would not meet the purpose and need for the action and were therefore not advanced for further consideration.

The Yellow Alignment – Preferred Alternative meets the project's purpose and need by providing new expressway access to SR 99 from the major east-west roadways of Merced, specifically Yosemite Avenue, Olive Avenue, SR 140, Childs Avenue, and Gerard Avenue. It would fulfill the local and regional plans for an eastern beltway to serve the eastern extent of the City of Merced, and would help serve the growth of northern Merced that will require alternative routes to SR 99. The proposed Campus Parkway overcrossings at SR 140 and the adjacent railroad tracks and at Bear Creek would provide a new means of crossing these east-west barriers to transportation access and circulation. Finally, the Yellow Alignment – Preferred Alternative would provide access to the existing and planned expansion of the University of California Merced Campus and the planned University Community development.

2.3 Design Features and Project Funding

Design features common to the alternatives are described in this section, as well as estimated costs, planned funding, and the major approvals necessary to proceed into design and construction.

2.3.1 Proposed Travel Lane and Right-of-Way Requirements

Campus Parkway would be designed as an expressway. An expressway limits access to key intersections with major cross streets. Unlike a conventional road or rural highway where properties along the right-of-way can have driveway access onto the road, an expressway does not permit adjacent parcels to install driveways or connections between the key intersections. This improves the traffic flow and

efficiency of the expressway by limiting the number of locations where drivers can enter the expressway or make conflicting left turns.

The right-of-way for Campus Parkway would be 46 meters (150 feet) wide, with additional right-of-way necessary to accommodate left- and right-turn lanes at intersections and to provide a transition for the difference in elevation of Campus Parkway and adjoining land. This width is designed to accommodate two through lanes in each direction, turn pockets, a divided median, bike lanes, and sidewalks.

If the project is fully funded, Campus Parkway would be built in a single phase with four through traffic lanes (two in each direction) throughout the entire project limits (SR 99 to Yosemite Avenue) (Figure 2.3-1).[6] If sufficient funding is not available, Campus Parkway may be built in multiple phases.

Typical cross sections of one potential phasing plan are shown in Figures 2.3-2 and 2.3-3. If construction takes place according to this phasing plan, the entire right-of-way width would be cleared of vegetation and any existing structures would be removed in the first phase. The first phase would also include the construction of one through lane in each direction with turn pockets at intersections. The second phase of construction would include the construction of two additional through lanes and the center median to complete the project. Depending on available funding, other methods of phased construction may be considered.

Although not proposed and not predicted to be needed until after 2025, additional through lanes could be added within the wide median.

Parcels would be acquired for the proposed right-of-way, including portions of some larger parcels. The total amount of land that would be acquired ranges from 55 to 59 ha (135 to 145 acres). This would include the right-of-way and areas for drainage facilities. All right-of-way would be acquired during the first phase of the project.

The range of alternatives evaluated for Campus Parkway is based on two future scenarios of growth involving the University of California at Merced Campus, and the related University Community. The *with UC Phase 1* scenario assumes only the first phase of UC Merced, opened in Fall 2005, is completed. The first phase is

[6] These typical cross section drawings do not show the extent of landscaping that would occur in some areas of the right-of-way to provide a visual shield between the proposed project and nearby residences. As discussed in Section 3.17, a detailed landscaping plan would be developed during the project design phase.

planned to accommodate up to 3,600 students, and growth conditions are included and projected in the analysis to the year 2025. These growth projections represent the traffic conditions described in Section 1.2 ("Forecasted Traffic Growth and Operating Conditions") that are forecasted to contribute to poor traffic operations in the City of Merced and the circuitous traffic patterns shown in Figure 1-3. The project's purpose and need are based on the traffic conditions and patterns represented by future growth through 2025 with only UC Phase 1 in place.

The *with UC/Community Expansion* scenario represents expansion of UC Merced beyond UC Phase 1, together with development of the University Community, with growth projected to the same study year of 2025. This projected growth will further increase traffic demand on the east side of Merced.

The campus and University Community would affect the amount of traffic using Campus Parkway. Without the buildout of UC Merced and the University Community, slightly less traffic would occur, as shown in Table 2.3-1. However, the difference is not substantial. Assuming 2025 conditions with only UC Phase 1 in place the operating Level of Service for the parkway would reach LOS D for a two-lane roadway within approximately eleven years. With expansion of UC Merced beyond UC Phase 1 and with the University Community, a two-lane expressway would exceed LOS D conditions within 10 years. Because the parkway is planned for a 2025 study year, four lanes are proposed meet acceptable levels of service over the planning period of the project. Table 2.3-1 lists the estimated number of vehicles that would use Campus Parkway with UC Phase 1, and with the UC/University Community, and the minimum number of corresponding lanes needed to serve the forecasted traffic.

2.3.2 Bear Creek Overcrossing and Union Pacific Railroad/SR 140 Overcrossing and Connection

Two separated grade-crossing structures would be necessary for Campus Parkway. Photographic renditions of these structures are shown in Section 3.17. At Bear Creek, the planned crossing consists of an overpass above the creek and South and North Bear Creek Drives. A "box girder" design would likely be used to avoid the need for pilings within the creek channel, although one or more supporting pilings may be necessary between the upper banks of the creek and South and North Bear Creek Drives. The bridge would be arched to provide the necessary clearance between the bridge's bottom and South and North Bear Creek Drives. No access connections to South or North Bear Creek Drives are planned. Sidewalks, bike paths, and a divided

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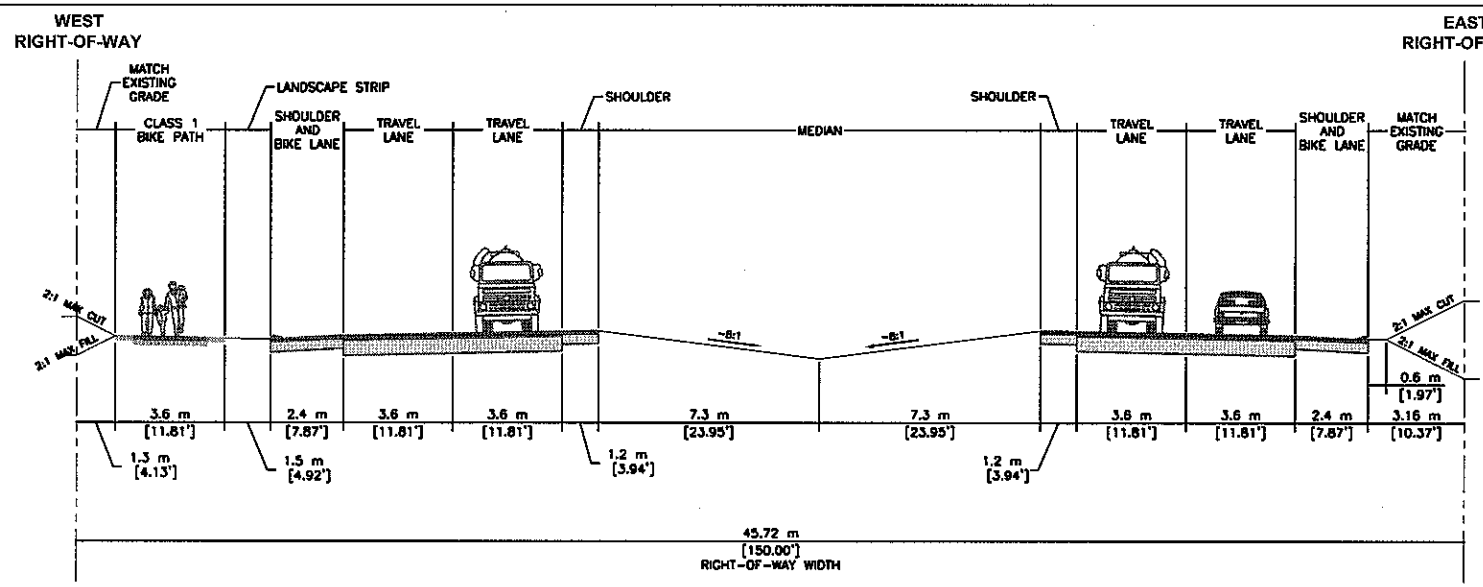
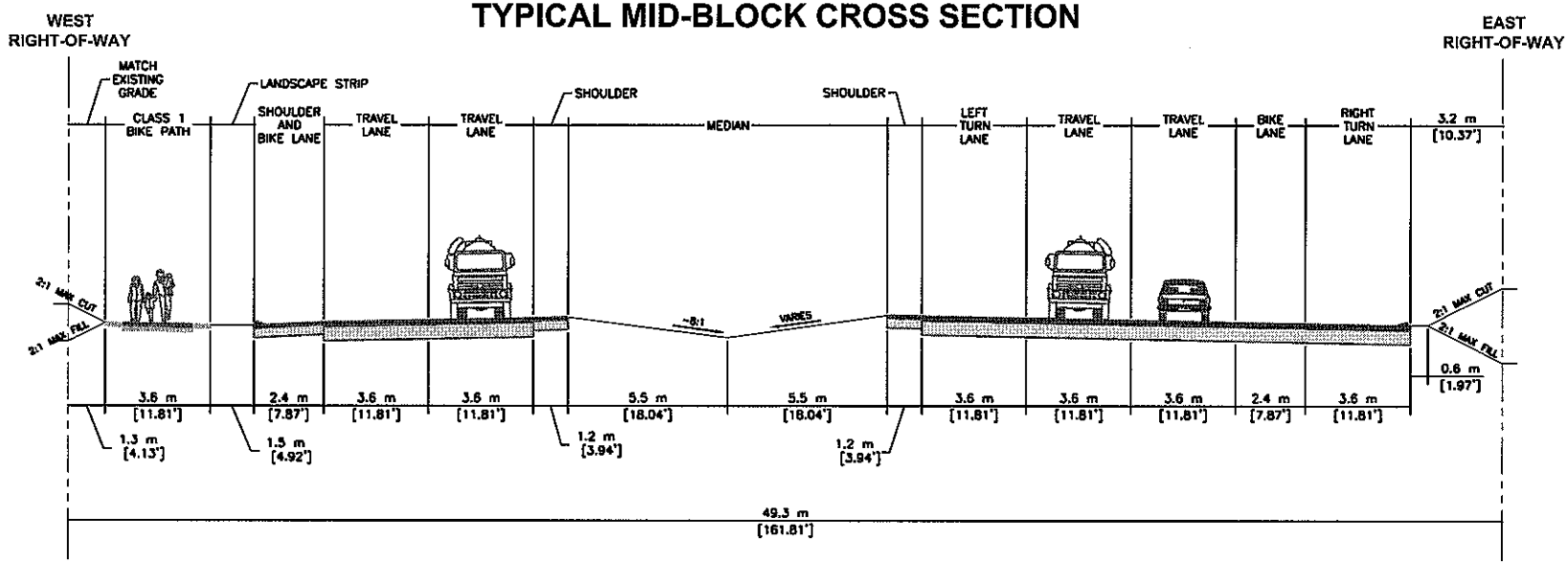
Campus Parkway Project

SINGLE PHASE TYPICAL SECTION



TYPICAL MID-BLOCK CROSS SECTION



TYPICAL SIGNALIZED INTERSECTION APPROACH CROSS SECTION

Caltrans Metric [DUAL UNITS]

Figure 2.3-1

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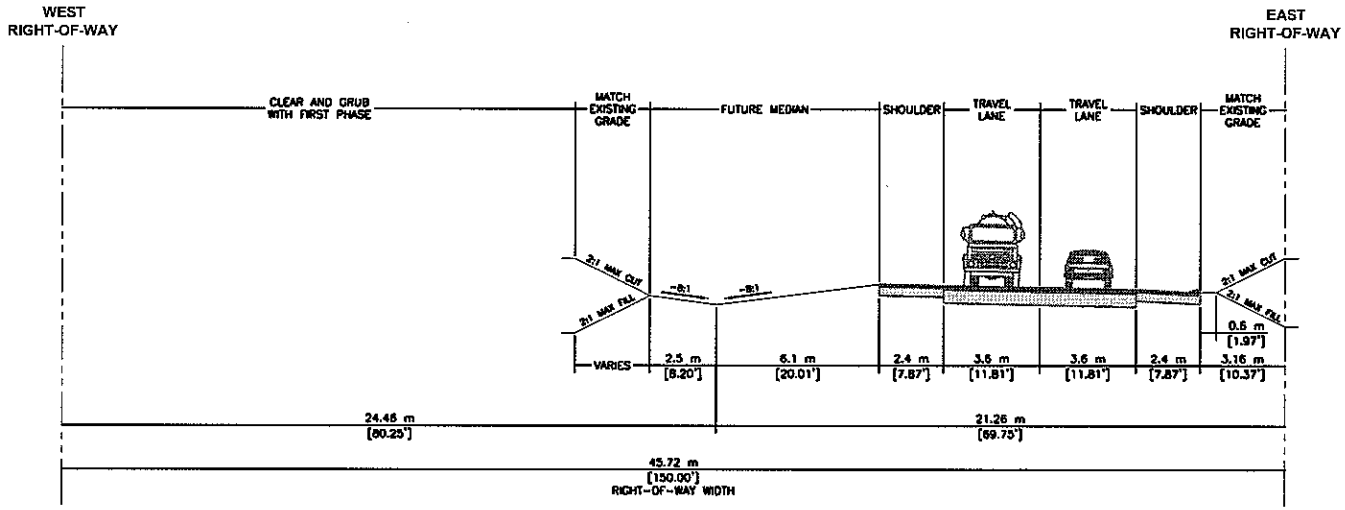
Campus Parkway Project

PHASE 1
MAINLINE CROSS-SECTION

Figure
2.3-2



TYPICAL MID-BLOCK CROSS SECTION

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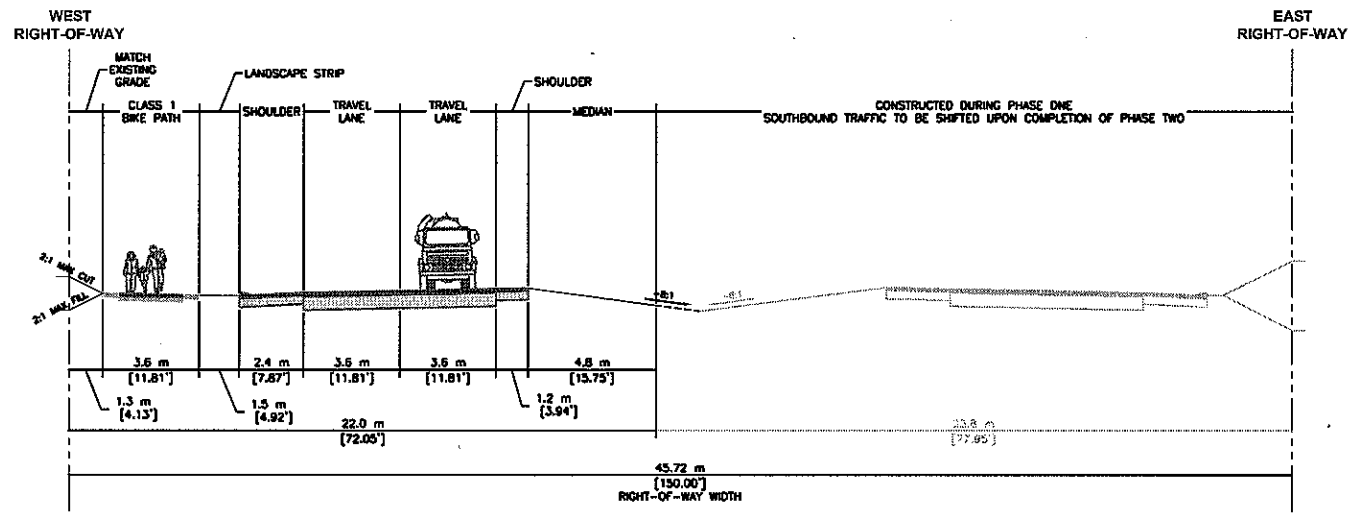
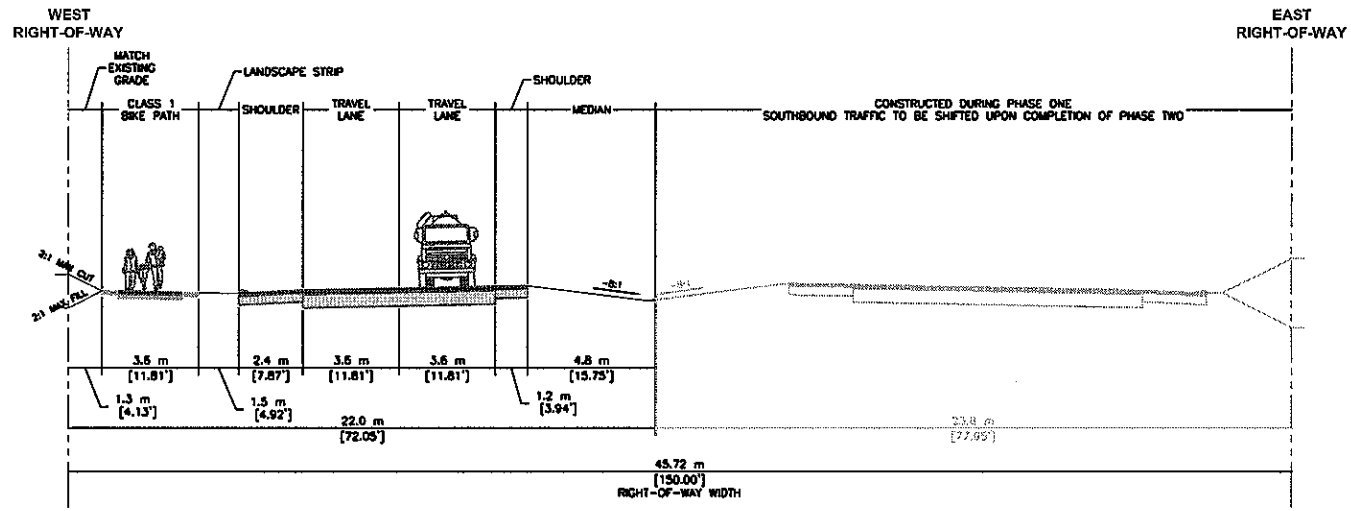
Campus Parkway Project

PHASE 2
MAINLINE CROSS-SECTION



TYPICAL MID-BLOCK CROSS SECTION

(From 400 m beyond SR 140 Connector Roadway to End Project)



TYPICAL CROSS SECTION

(From Begin Project to 400 m beyond SR 140 Connector Roadway)

Caltrans Metric [DUAL UNITS]

Figure 2.3-3

Table 2.3-1 2025 Daily Traffic Volumes and Required Lanes

Roadway Segment	Green Alignment				Green Alternate Alignment				Yellow Alignment – Preferred Alternative			
	Volume of Vehicles		Lanes[1]		Volume of Vehicles		Lanes[1]		Volume of Vehicles		Lanes[1]	
	UC Phase 1[2]	With University Community[2]	UC Phase 1[2]	With University Community[2]	UC Phase 1[2]	With University Community[2]	UC Phase 1[2]	With University Community[2]	UC Phase 1[2]	With University Community[2]	UC Phase 1[2]	With University Community[2]
Yosemite Ave. to Olive Ave.	11,400	21,000	4	4	11,100	17,100	4	4	9,800	19,700	4	4
Olive Ave. to SR 140	18,600	19,500	4	4	17,800	20,400	4	4	16,600	20,200	4	4
SR 140 to Childs Ave.	14,800	14,400	4	4	14,800	15,700	4	4	14,300	14,900	4	4
Childs Ave. to Gerard Ave.	12,100	11,500	4	4	11,700	12,500	4	4	11,400	11,300	4	4
Gerard Ave. to Mission Ave. Interchange	15,700	14,500	4	4	15,400	16,200	4	4	15,300	14,700	4	4

Source: Dowling 2001, 2004

[1] Through-traffic lanes that are needed to provide LOS D or better conditions.

[2] "UC Phase 1" refers to projected conditions in 2025 with only the completion and enrollment of the UC Merced Campus Phase 1 in place. "With University Community" refers to projected conditions in 2025 with expansion of the UC Merced Campus and the University Community in place.

median barrier would extend across this structure. Two bridges would be constructed, one for each direction of traffic, each with two lanes. If project construction is phased (see Section 2.3.1), only one bridge would be built and would accommodate two-way traffic, one lane in each direction. At the second phase, a second bridge would be built, and the directional traffic would be split between the two bridges.

At SR 140, the BNSF railroad tracks run adjacent to and parallel with the south side of the highway. An elevated separated grade-crossing structure that spans both the highway and the tracks would be required. A roadway connection, such as a short hook-shaped ramp, is planned to provide traffic circulation between Campus Parkway and SR 140. Early in the scoping process, five build alternatives were proposed for the overhead structure that would cross and connect to SR 140. They were proposed before the traffic studies concluded that a four-lane Campus Parkway was justified. The five proposed alternatives were as follows:

- Alternative 1 proposed a grade-separated crossing without any connection between Campus Parkway and SR 140. It was rejected as it did not provide access from Campus Parkway to SR 140. This connection was considered essential for maintaining access for traffic circulation.
- Alternative 2 proposed a two-lane Campus Parkway and a two-lane connector road. It was rejected because it did not meet the capacity requirements projected by the traffic studies conducted.
- Alternatives 3, 4, and 5 all proposed widening SR 140 from two to four lanes and creating signalized intersections at SR 140 and the connector road and at Campus Parkway and the connector road.
  - Alternative 3 proposed a four-lane connector road and a two-lane Campus Parkway with a left-turn median lane.
  - Alternative 4 proposed two four-lane connector roads and a two-lane Campus Parkway with a left-turn median lane.
  - Alternative 5 proposed two four-lane connector roads and a six-lane Campus Parkway.

  Alternatives 3, 4, and 5 were rejected because they propose widening SR 140 to four lanes in each direction within the project limits, which was considered as a separate project. Alternatives 4 and 5 were also rejected because traffic studies did not indicate a need for a second connector road.

The locally preferred alternative proposed in this report is a hybrid of Alternatives 2, 3, and 5, minus the widening of SR 140. Features of the hybrid alternative includes a

Campus Parkway overcrossing of SR 140 with three northbound lanes, and a Campus Parkway overcrossing of SR 140 with two southbound lanes. Also included are a four-lane, two-way connector east of the overcrossing, turn lanes on SR 140 at the connector road intersection, and signalized intersections on the connector road at SR 140 and Campus Parkway. The structures would also cross over the BNSF railroad tracks on the south side of SR 140. Because the railroad lies south of SR 140, this connection must be located on the highway's north side and would consist of a hook-shaped ramp. Locating the connection on either the west or east side was evaluated in the studies for this project, and both connection options are shown in this report's figures. Both of these connection options affect lands primarily in agricultural use, specifically, existing orchards. To minimize right-of-way constraints, the county would prefer to locate the connection on the east side of Campus Parkway. An east side connection also avoids the need for a bridge structure over the Hartley Lateral, which helps reduce construction costs.

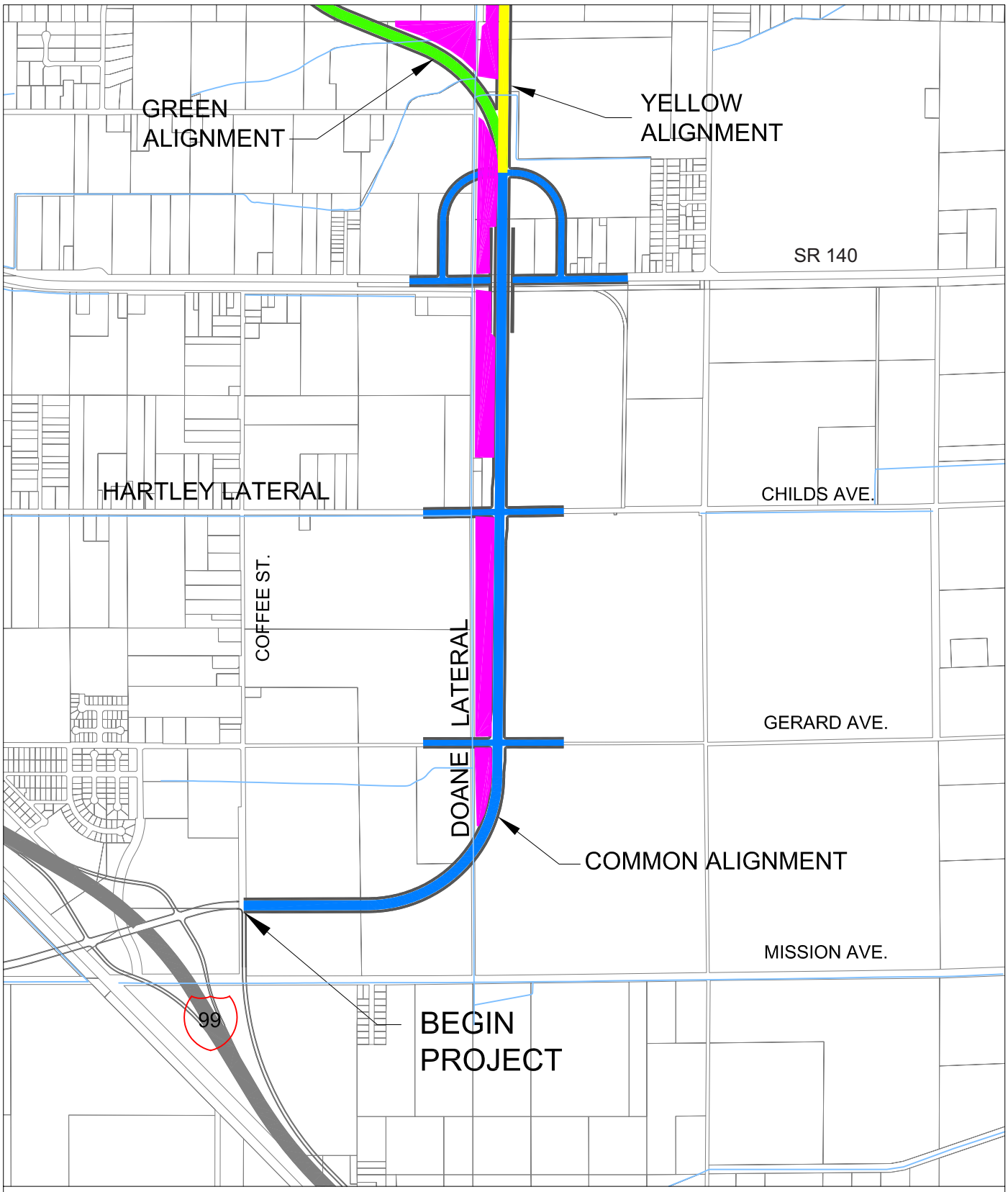
2.3.3 Bridges, Culverts, and Storm Drainage

Small bridges would be constructed at locations where Campus Parkway crosses irrigation canals and drainage courses. A storm drainage system consisting of pipes, swales (low-lying and often wet stretches of land), and drainage ponds would be constructed as part of the proposed Campus Parkway project. The storm water collection and drainage system would be built within the Campus Parkway right-of-way to hold or retain surface water runoff from the project right-of-way. These basins would be located within "excess" right-of-way parcels alongside Campus Parkway, which are shown in Figures 2.3-4A and B. The basins would be graded to form surface water collection and retention areas where water would temporarily collect. The basins would hold most, but not all, runoff from storm events, which may be conveyed by a metered drainage system (to slow down and delay the discharge of water runoff) to nearby local water bodies such as canals and Bear Creek.

2.3.4 Local Road Connections and Crossings

Traffic Signals

As noted in Section 2.3.1, Campus Parkway would be an expressway with access restricted to major intersections at Gerard Avenue, Childs Avenue, Olive Avenue, and Yosemite Avenue. Traffic signals may be installed at these intersections. Depending on projected traffic movements, one or more left- and/or right-turning lanes may be included to allow cars to safely enter or exit the roadway without



Potential Storm Water Retention and Drainage Facilities

Campus Parkway Project	PARCELS WHERE STORM WATER RETENTION AND DRAINAGE FACILITIES MAY BE LOCATED	Figure 2.3-4A

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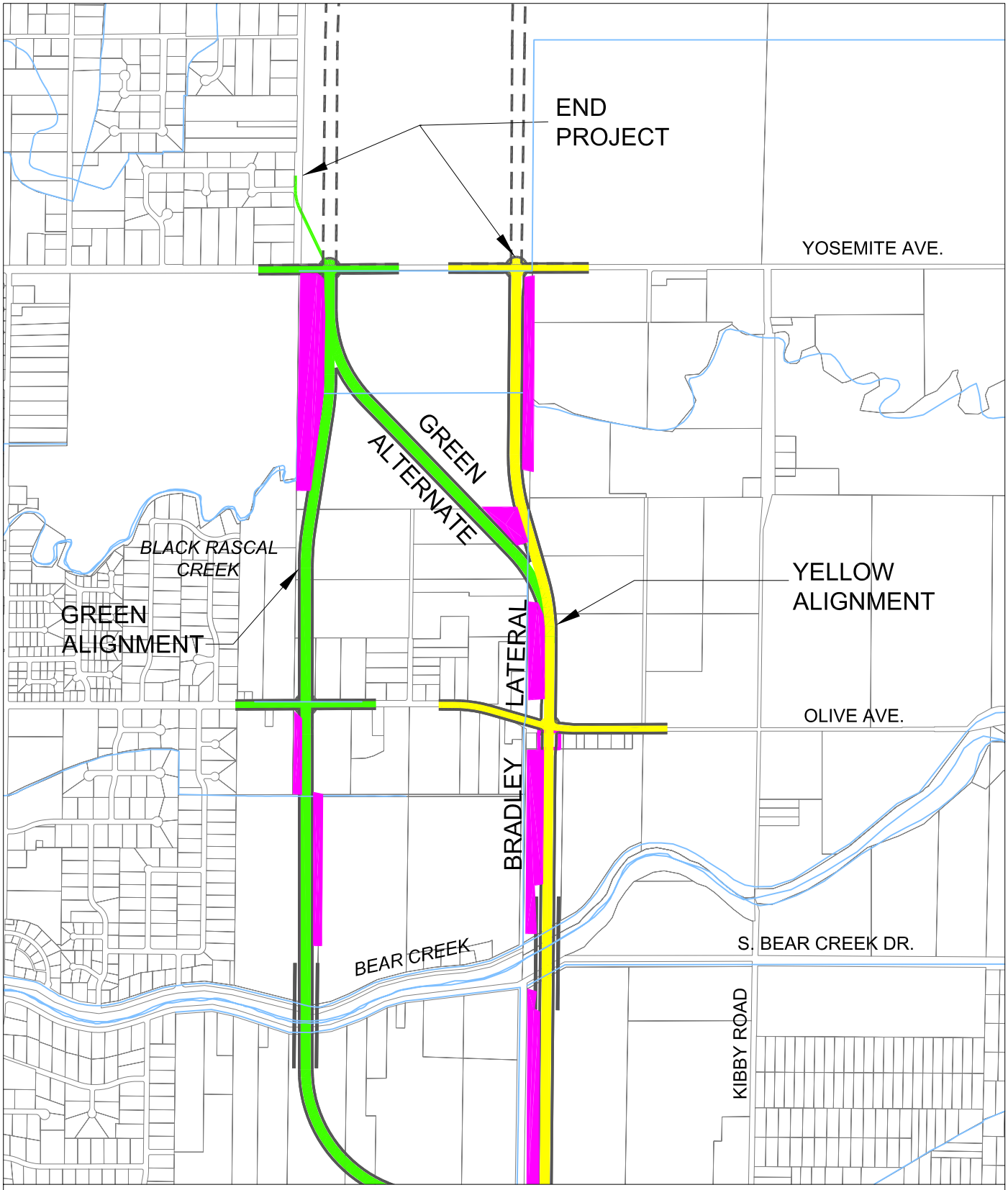

Potential Storm Water Retention and Drainage Facilities

Campus Parkway Project	PARCELS WHERE STORM WATER RETENTION AND DRAINAGE FACILITIES MAY BE LOCATED	Figure 2.3-4B

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causing congestion. The number and length of the turning lanes would require some reconstruction of the cross streets where they connect to Campus Parkway. Therefore, at these key intersections, the width of the intersecting roads may be widened to accommodate the design of the intersection and the turning lanes.

A constraint to widening the Childs Avenue intersection at Campus Parkway was identified as a result of environmental review. The Sunshine Dairy is southwest of and adjacent to the Hartley Lateral, which parallels the existing Childs Avenue in the area of the proposed Campus Parkway. Adding turning lanes on Childs Avenue may require minor relocation of the canal, which would require acquisition of a small sliver of land in the existing fields at the Sunshine Dairy. The Sunshine Dairy was determined eligible for listing in the National Register of Historic Places and the California Register of Historic Resources. To avoid this property entirely, the traffic signal and the intersection of Childs Avenue and Campus Parkway would be designed to minimize widening of Childs Avenue.

Roundabouts

At two of the proposed roadway crossings, Olive Avenue and Yosemite Avenue, the county is considering roundabouts as an alternative traffic control to signals.

Roundabouts provide a circular connection between roads and allow traffic to continuously merge, unlike controlled intersections where opposing directions must come to a stop before continuing or turning if the signal is red. A preliminary analysis performed by the county (Merced County, April 2002) indicated that the use of roundabouts would reduce delays at these crossings when the higher volumes of traffic expected to accompany the UC Merced Campus and University Community are included. Constructing roundabouts instead of signals would reduce the size of the intersection right-of-way. As a form of traffic control, roundabouts have been shown to operate with less potential for accidents.

Roundabout with Possible Interim Connection at Lake Road

As originally conceived, the proposed project would have no direct effect on the layout or connection of Lake Road with Yosemite Avenue. However, the traffic analysis mentioned above identified a substantial reduction in travel delay that could be gained under high demand with the use of a roundabout and an interim connection with Lake Road. This benefit is primarily effective for the Green Alignment and Green Alternate under high traffic demand, such as in future years with development of the UC Merced Campus and University Community. The proposed right-of-way

for the Green Alignment, therefore, includes an optional connection with Lake Road, which is shown in the maps and figures in this report.

2.3.5 Utility Corridor

Utility easements (land reserved for placement of utilities) are sometimes created adjacent to roads to reserve space for utility services such as gas, electricity, and telecommunications (telephone, internet, cable television, etc.). A utility easement could be accommodated in the future next to the Campus Parkway right-of-way. Placement of utilities or provision of new service is not included or proposed as part of this project.

2.3.6 Borrow and Fill Requirements

Preliminary design indicates the need to import approximately 560,000 cubic meters (732,452 cubic yards) of soil for use as fill in areas, such as the embankments necessary for the bridge approaches at the proposed SR 140 crossing and Bear Creek and elevating the expressway above the 100-year floodplain. The majority of this imported fill would be obtained from the construction of a linear storm drainage pond adjacent to the expressway, but within the areas of excess right-of-way that have been included in the environmental studies for this project. The area between the alignments and the Doane, Hartley, and Bradley laterals is one of these borrow areas. The county has not calculated the amount of borrow material that is likely to be generated in these adjacent borrow areas. If additional borrow is necessary, it may be obtained from the site of the Merced County Highway 59 Landfill Expansion Project. If that source should be required, the county has already completed an environmental document to excavate that landfill area, and it would be the contractor's responsibility to ensure that environmental and regulatory permit review and approvals have been obtained that cover these potential work areas. The truck route from the landfill area to the project site would likely be from State Route 59 to Bellevue Road to Lake Road to the project site.

Any waste material that cannot be incorporated in the fill areas would be removed to the Merced County Highway 59 Landfill.

2.3.7 Estimated Alternative Costs and Project Funding

The estimated costs for each of the alternatives are very similar. Table 2.3-2 summarizes the preliminary cost estimates for each alternative, and includes

environmental clearance and preliminary design, final design, right-of-way acquisition, and construction. These costs (shown in millions of dollars) were updated for this Final EIS in April 2006.

Table 2.3-2 Preliminary Alternative Cost Estimates

Alternative	Right-of-way ($ Millions)	Project Development and Construction ($ Millions)	Total ($ Millions)
Yellow	$ 13.2	$ 57.5	$ 70.7
Green Alternate	$ 13.2	$ 57.7	$ 70.9
Green	$ 13.1	$ 57.9	$ 71.0

Funding for this project is summarized in Table 2.3-3.

Table 2.3-3 Campus Parkway Project Funding

Funding Source	Funding Amount
TEA-21 [a]	$11,000,000
SAFETEA-LU[b]	$2,400,000
RIP [c]	$500,000
City of Merced [d]	$6,650,000
State of California [e]	$23,000,000
Total	**$43,550,000**

[a] TEA-21 (Transportation Equity Act for the 21st Century) High-Priority Funds designated specifically for this project as a result of federal legislation.
[b] Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003.
[c] RIP (Regional Improvement Program) Funds designated for this project by the MCAG, approved as state-only funds by the California Transportation Commission for use as required match to TEA-21 funds.
[d] City of Merced Development Fees.
[e] California Traffic Congestion Relief Program (Act of 2000).

2.4 No Action Alternative

The No Action alternative retains the existing roadway system and any future transportation improvements that are funded and approved, but it includes none of the project "build" alternatives identified in this document. Traffic conditions will worsen over time within eastern and northern portions of the City of Merced due to the lack of connectivity and traffic volume growth increases (see Section 1.2.2).

The proposed Campus Parkway would provide improvements to circulation and capacity in eastern Merced, especially by the planning year 2025. Some road segments nearest Campus Parkway would be negatively affected as this "diverted" traffic draws toward the parkway, but overall improvements outweigh the negative

impacts. Levels of Service would also improve and average regional traffic speed would increase. These effects are described in more detail for future conditions with and without the project alternatives in Section 3.16.

2.5 Alternatives Considered But Withdrawn From Further Evaluation

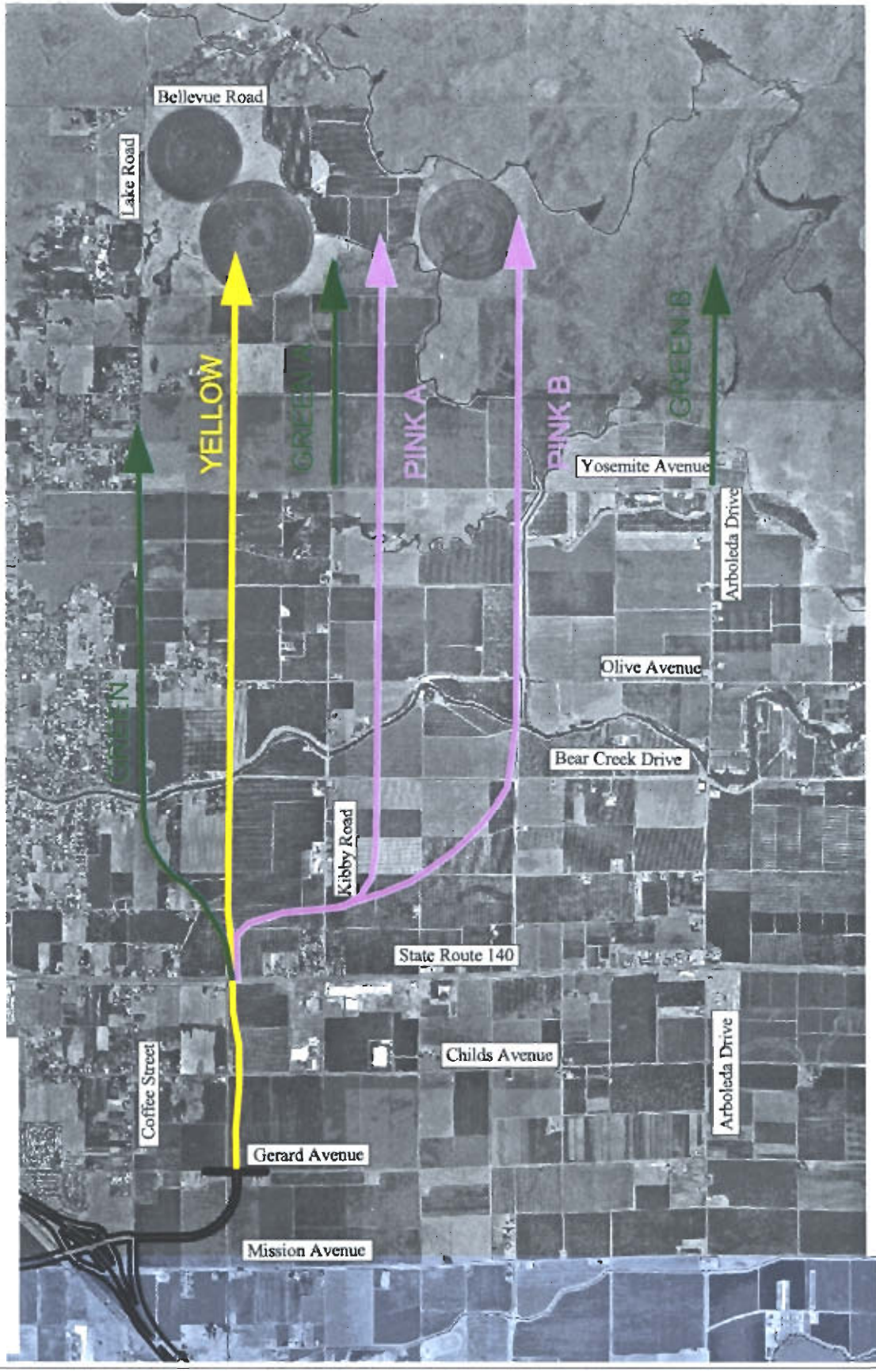
A range of alternative alignments for Campus Parkway were developed in 1999 based on concepts developed by the Merced County Public Works Department, input from a Project Development Team, and public meetings held on the project. The Project Development Team included representatives from Merced County, the City of Merced, MCAG, Caltrans, FHWA, and UC Merced.

The alternatives identified during this process were conceptual. They included new alignments that would be constructed to an expressway standard and extensions of existing two-lane nonexpressway roads that could be built in combinations that might provide sufficient future north-south capacity. The following discussion summarizes the alternatives considered and the reasons that they were not advanced for further evaluation. Figure 2.5-1 shows the locations of the alternatives considered but withdrawn from further evaluation. At the time that these alignment alternatives were developed, their northern connections with existing or future roads were not defined. Hence, the alignments in Figure 2.5-1 are simply shown heading straight north above Yosemite Avenue.

2.5.1 Improve Existing Transportation Network

Improvements to the existing network would have to include widening R, M, and/or G Streets to add more through lanes, and/or improvements at intersections between SR 99 and Yosemite Avenue. Review of aerial photographs and parcel maps indicated that widening R, M, and G Streets would impact 91, 67, and 121 parcels, respectively. Because structures in downtown Merced are generally built with minimal or no setbacks from the existing right-of-way, any purchase of right-of-way would have to involve the demolition or major renovation of structures fronting those roads (see Photo 1-1, Section 1.2.1). Downtown infrastructure improvement needs would also require grade separations over the BNSF railroad track along G Street, improvements to the SR 99 interchange, and widening of bridges over Bear Creek.

The total cost of these improvements is estimated to exceed $120 million. Almost half of that cost is right-of-way acquisition. The remaining costs consist of bridge and



Scale 1:50,000

Campus Parkway Project	ALIGNMENTS INITIALLY IDENTIFIED AND CONSIDERED	Figure 2.5-1

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structure construction, roadway widening, intersection improvements, and drainage and utilities improvements. In addition, improvements to the existing network would not resolve the transportation needs for the planned industrial area and other areas east of the City of Merced, as traffic from those uses would have to travel west into the city's existing roadway network to gain access to the SR 99. This may require over 4.8 km (3 miles) of improvements along Kibby Road, including widening of a bridge across Bear Creek and improvements to SR 140 interchange, which would cost at least $20 million.

These improvements and their costs are examples of investments to the existing transportation system that would be necessary to add capacity along existing alignments. Improvements to the existing roadway network were not carried forward as an alternative because of the combination of necessary right-of-way acquisition requirements, the related impacts to existing land uses (including residential and business acquisition and relocation), and relatively high costs.

2.5.2 Green Alignment Along Lake Road (Extend Lake Road)

The three initially identified Green Alignments were the only alternatives that used existing county roads. These alignments would have been limited to the extension of existing collector roadways rather than the all-new restricted access expressways considered for the other alignments. The intent of the original Green Alignments was to evaluate whether using existing roadways to the maximum extent feasible was environmentally superior or provided other benefits compared to developing new alignments.

The original Green Alignment extended north from the SR 99/Mission Avenue interchange, paralleling the Doane and Hartley Laterals and crossing Gerard and Childs Avenues and SR 140 (the same segment described for the Green Alignment and Yellow Alignment – Preferred Alternative in Section 2.2). North of SR 140, the alignment traveled northwest to a crossing at Bear Creek then headed straight north to a connection with the existing southern terminus of Lake Road at Yosemite Avenue. The original concept of the southern extension of Lake Road was intended to work in combination with either the Green A or B alternative segments described in the following subsections.

Traffic modeling of these alternative segments indicated that north of Yosemite Avenue, north-south traffic would be concentrated at G Street because of its central location within northern Merced, even with the expansion of land use development

within the northern areas of the city. Traffic volumes for 2025 are predicted to be approximately 4,000 vehicles per day with UC Merced Phase 1 completed and without Campus Parkway in place south of Yosemite Avenue. With a Green Alignment connecting to Yosemite Avenue near Lake Road's southern terminus, Lake Road volumes are predicted at 6,200 vehicles per day. With a Yellow Alignment – Preferred Alternative connecting to Yosemite Avenue further west, the volumes on Lake Road are predicted at 4,900 vehicles per day. These volumes can be served by the existing two-lane roadway, which is one of the primary reasons that the northern terminus of Campus Parkway was established at Yosemite Avenue.

In addition, UC Merced and the nearby University Community will expand over time, and traffic demand will increase from these major land use developments north and east of Lake Road. However, the University Community development will have its own internal access and traffic circulation system, with plans to connect to Yosemite Avenue and Bellevue Road. Lake Road will be disconnected from Bellevue Road except for restricted access. With that road system in place, traffic demand on Lake Road is predicted to be minimal (less than 500 vehicles per day for any of the alternatives). Therefore, the Green Alignment segment along Lake Road north of Yosemite Avenue was dropped from further consideration. The projected traffic volumes for 2025 do not justify the need for capacity improvements to accommodate predicted growth in the City of Merced and UC Phase 1. Also, the planned infrastructure improvements that will be required for the other UC Merced Campus phases and the University Community is predicted to cause the traffic demand to decline to a very low volume.

2.5.3 Green A Alignment (Extend Kibby Road)

Kibby Road is an existing north-south county road between Childs and Yosemite Avenues. This alternative would have extended Kibby Road north toward the University Specific Use Development Plan area. This alternative would potentially direct new through traffic onto a local road (Kibby Road), resulting in adverse impacts to existing residences. It would cross existing agricultural fields and operations and could have a higher potential for localized growth-inducing impacts because it could not be upgraded to an expressway with access control between major road crossings. As noted above, because traffic modeling ultimately showed low future demand north of Yosemite Avenue until after 2025, the project limits were modified to Yosemite Avenue and this alternative was no longer consistent with the project limits. Traffic modeling also showed that alignments located farther east of

the City of Merced were also increasingly ineffective at serving future traffic demands. Traffic volumes consistently decreased with the Green A alignment, as well as the Green B and Pink A and B alignments discussed below, because the roadways would be too far east to serve the traffic congestion problems related to growth in Merced and the existing transportation connectivity issues described in Section 1.2. Overall, the Green A alignment did not meet the basic purpose and need of alleviating future traffic conditions or providing additional access or connectivity with the existing roadway network and planned development areas.

2.5.4 Green B Alignment (Extend Arboleda Drive)

This alignment would extend Arboleda Drive north toward the University Community area. It is the furthest east of any alignment studied and would primarily serve UC Merced and the University Community, with little benefit to the City of Merced. This alignment would potentially contribute substantial new traffic to Arboleda Drive and would have the greatest potential to induce growth the furthest from the current city limits, with consequent indirect adverse agricultural land use impacts associated with future urban or suburban "infill" development. In addition, the University relocated the UC Merced Campus to the golf course area off of Lake Road, further reducing the traffic volume projections for future years even with consideration of a UC Merced Campus in place. The Green B alignment also would not substantially serve the future growth in traffic or resolve the roadway connectivity problems described in Section 1.2. This alternative alignment would also be located entirely north of Yosemite Avenue and would not be consistent with the project need or the change in the project limits discussed earlier. This alternative was therefore eliminated from further consideration.

2.5.5 Pink A and B Alignments

Both of these alignments were conceptualized at an early stage of project planning. Initially, a northern terminus for Campus Parkway was considered corresponding with an extension to Bellevue Road and/or a potential future university access road connection near the eastern terminus of Bellevue Road. Based on this likely northern connection, both Pink Alignments take a relatively circuitous route to the east, away from the City of Merced between SR 140 and Bellevue Road, and return west to connect to Bellevue Road. These alignments add approximately 1.6 km (1 mile) to the more direct routes provided by the Green Alignment and Yellow Alignment – Preferred Alternative. Similar to the Green A and B alignments, the initial traffic

forecast modeling showed a distinct drop in demand for these longer, more indirect routes located further east of the City of Merced. With the relocation of the UC Merced Campus site to the former golf course location off of Lake Road, the potential traffic demand for these routes would be even lower. Consequently, these alignments had a low ability to meet the proposed project's stated purpose and need to best serve the projected future growth of the City and County of Merced.

Both the Pink A and B Alignments pass through existing agricultural lands, well east of the present limits of City of Merced growth. A major concern raised during public meetings held in March and June 1999 was that the project should avoid alignments that have a high potential to induce growth farther east of the present city and county growth patterns. Thus, not only would construction of an expressway on the Pink A or B Alignments directly impact agricultural lands and operations, but those alignments would be farther outside of the City of Merced limits.

Both of the Pink Alignments would have to cross Bear Creek in an area where the creek is separated from nearby South Bear Creek Drive. This would require an additional intersection, an additional structure crossing over or under the roadway, or creation of new cul-de-sacs on South Bear Creek Drive that would affect local traffic circulation. These impacts are avoided by the Green Alignment and Yellow Alignment – Preferred Alternative, which cross Bear Creek and the adjacent Bear Creek Drive via a single structure.

Response to the June 30, 1999, public workshop hearing supported the proposal to drop both of the Pink Alignments. Approximately 50 percent of the respondents at the meeting who completed a questionnaire expressed an opinion regarding whether to drop the Pink Alignments. Among that group, nearly all supported the decision to suspend evaluation of these alternatives. Based on adverse environmental impacts, a greater potential for growth inducement away from existing city limits, and additional costs for bridge structures, both the Pink A and B Alignments were eliminated from further consideration.

2.5.6 Western Beltway Alignment

Early public meetings on the Campus Parkway project examined a potential alignment alternative referencing the western portion of a loop system west of the City of Merced, heading northeast from SR 99 toward the area that was being considered for the UC Merced Campus and the University Community.

This alignment was introduced in the 1996 Major Investment Study prepared for SR 99, which addressed how to accommodate the future capacity needs of the highway. The study proposed both eastern and western roadways connecting to the UC Merced Campus and University Community area, in effect creating a loop around the City of Merced, called the UC Campus Parkway Loop System, with two access areas for the new campus. The MCAG incorporated the study recommendations into the planning process for the Regional Transportation Plan, which was updated in 2004. The proposed Campus Parkway alternative alignments would be consistent with and essentially fulfill the concept of the eastern portion of this loop system, from SR 99 north to Yosemite Avenue. The western portion of the loop system is now referred to as the Atwater-Merced Expressway (Figure 2.1-1). The Atwater-Merced Expressway is an active and separate project in Merced's Regional Transportation Plan and was the subject of a completed Project Study Report (PSR) (2001). This programmed project serves a separate area of Merced from Campus Parkway, and would not serve the eastern portion of Merced between SR 99 and SR 140 that is restricted by the BNSF railroad alignment, which includes the city's planned SUDP industrial area. It is a separate conceptual improvement that is compatible with Campus Parkway. The preparation of a joint NEPA/CEQA document and review process began in 2005–2006.

2.5.7 Alignment North of Yosemite Avenue

The original Notice of Intent, published in 2000 described the northern limits of the project at Bellevue Avenue. The build alternatives for this project were changed to end at Yosemite Avenue to correspond with the scoping that took place, as described earlier in this Chapter, and the traffic analysis showing improvement to the regional road network through 2025 with the northern terminus of the build alternatives at Yosemite Avenue. This also coincided with the change in the location of UC Merced to the northeast corner of Lake Road and Bellevue Avenue and the University Community to the northeast corner of Lake Road and Yosemite Avenue. The University Community plan is proposed to incorporate a major arterial roadway that would serve as an extension of Campus Parkway to Bellevue Road, which is addressed under cumulative impacts in this document. Therefore, the alignment of Campus Parkway north of Yosemite Avenue was dropped from further consideration as it would not meet the purpose of the parkway as currently defined, and would not be needed prior to the year 2025 without the expansion of UC Merced and the University Community, which are separate projects.

2.6 Related Transportation Projects

This section summarizes two local projects that are directly connected to or near the Campus Parkway alignments: the SR 99/Mission Avenue interchange, and the reconstruction of the Bradley overhead on SR 140 just east of Campus Parkway.

Other proposed or planned projects in Merced include institutional uses such as expansion of the UC Merced Campus, community land use planning such as the University Community, and individual development plans or proposals for new housing and business. New roadway projects envisioned in or near Merced are identified in regional transportation plans prepared by the MCAG. These projects, which are identified at the beginning of Section 3, do not directly connect or relate to Campus Parkway but would provide additional transportation capacity or connectivity.

2.6.1 SR 99/Mission Avenue Interchange

SR 99 south of the City of Merced is a four-lane divided expressway with at-grade intersections. Caltrans is upgrading this portion of SR 99 to a six-lane freeway, with a full diamond interchange at Mission Avenue and a frontage road. This project was designed to eliminate a current safety issue along this portion of SR 99, upgrade it to freeway status consistent with the long-range plan for the route, and improve local traffic circulation and capacity.

This project involves changes to local circulation in the vicinity of SR 99 and the proposed Campus Parkway. When the parkway is completed, Mission Avenue will cross SR 99 on a new overpass, with northbound and southbound ramp connections. Between SR 99 and Coffee Street, Mission Avenue will be realigned to the north to a new local intersection with Coffee Street and the proposed southern terminus of Campus Parkway. The existing section of Mission Avenue between SR 99 and Coffee Street will be abandoned. East of Coffee Street, Mission Avenue will remain unchanged. Coffee Street will be changed to a cul-de-sac just south of Gerard Avenue and just north of the connection with Campus Parkway to reduce traffic diverting to local streets near the Pioneer Elementary School. South of Mission Avenue, Coffee Street will be extended as a frontage road on a new alignment parallel to SR 99. The SR 99/Mission Avenue interchange environmental document was approved by the FHWA in April 2001, with construction funding awarded by the California Transportation Commission in 2001. Construction began in December 2005.

2.6.2 SR 140 and the Bradley Overhead

SR 140 has four lanes between SR 99 and approximately 21st Street (just west of Parsons Avenue) and two lanes from 21st Street to the east. It crosses the Union Pacific Railroad tracks just east of McKee Road on a two-lane structure called the Bradley Overhead. Caltrans is planning to replace this overhead with a new five-lane (center left-turn lane) structure that has improved sight lines, shoulders, and pedestrian walkways. Caltrans published a Draft EIR for the Bradley Overhead in 2004. Subsequently, the FHWA determined that an Environmental Assessment (EA) in compliance with NEPA was needed. A joint EIR/EA was issued in October 2005 for public review.

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Chapter 3 Affected Environment, Environmental Consequences, and Mitigation Measures

A full range of environmental and cultural/social topics are evaluated in the following subsections. The environmental and cultural settings, the potential for the proposed project to affect identified resources, the cumulative impacts of the project and other planned developments in the region on identified resources, and recommended mitigation measures that could reduce or avoid potential impacts are described.

The affected environment sections describe the existing environment. The extent of the environmental setting area evaluated (the study area) differs among resources depending on the locations where impacts would be expected. For example, traffic impacts from the proposed project are assessed for the regional roadway network, whereas historical resource impacts are assessed at the specific locations of the project alignment right-of-ways. The affected environment sections, therefore, describe local and regional resources that occur throughout the broader geographic area.

The impact analyses are based primarily on one of two factors, depending on the primary cause of the impact. Impacts related to traffic, air quality, noise, utilities, and public services are analyzed based on the use of the roadway and potential changes in population or the community. Impacts related to geologic, hydrological, cultural, and biological resources are analyzed on the basis of the proposed roadway's footprint or the location and acreage of ground disturbance.

Cumulative impacts of Campus Parkway combined with other development projects are discussed in Section 3.22.

3.1 Geology

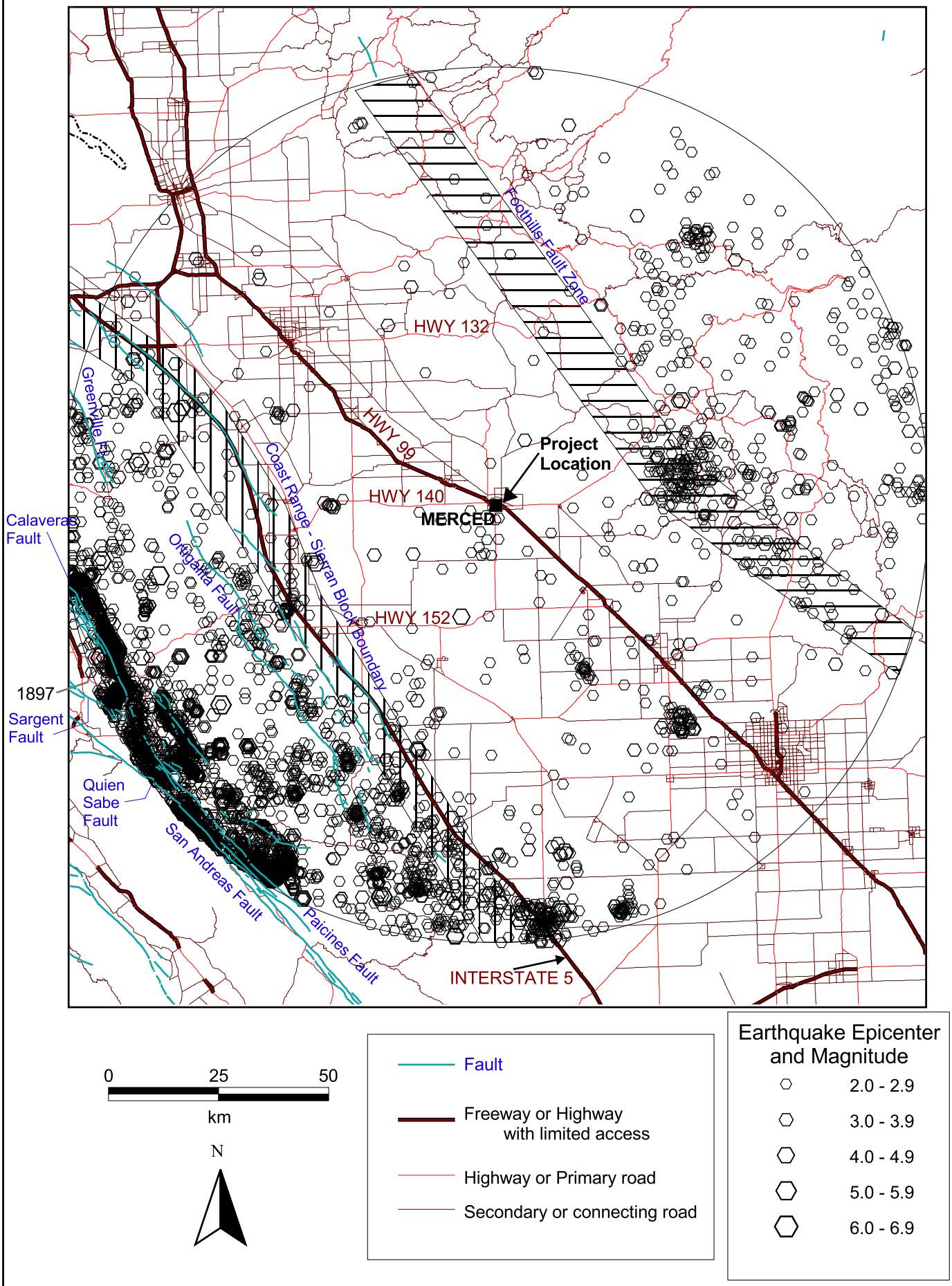
3.1.1 Affected Environment

Regional Geologic, Physiographic, Seismic, and Tectonic Setting

The proposed Campus Parkway is located in the San Joaquin Valley, which is part of the Great Valley Physiographic Province. The basin trends northwest to southeast, bordered by the Sierra Nevada Mountains to the east and the Coast Ranges to the west. The valley is characterized by a thick, undeformed sequence of alluvium and volcanic deposits overlying Cretaceous and Tertiary marine and nonmarine deposits, which overlay Cretaceous to Jurassic metamorphic and igneous rocks. The proposed project is near the Sierra Nevada physiographic province. East of the project, the western flank of the Sierra Nevada geologic block is bound by the Foothills fault zone.

The Great Valley Province has relatively low seismic activity in relation to the surrounding provinces. The Great Valley Province is bordered on the west by the seismically active Central Coast Ranges, which include the San Andreas, Coast Range-Sierran Block Boundary, and Foothills fault systems. These fault systems accommodate the movement between the Pacific and North American tectonic plates and have resulted in a number of large, damaging earthquakes. The San Andreas fault is considered capable of generating a Maximum Credible Earthquake (MCE) of Moment Magnitude (M_w) 8.0. This major fault is located 100 km (62.1 miles) from the proposed project site (Grant 1993; Sieh 1978). The nearest fault to the west of the project area is the Coast Range-Sierran Block Boundary fault system, which is divided into segments that are considered independent seismogenic sources. The closest segment to the project area is 53 km (32.9 miles) to the southwest and is considered to have the capability of generating MCEs up to M_w 6.6. The Foothills fault system contains the closest potentially active fault to the project area. At a distance of 44 km (27.3 miles) east of the project area, these faults are capable of generating MCEs of M_w 6.5 (LaForge 1999). The majority of historical seismicity in the region is associated with the San Andreas fault system, including the San Andreas, Calaveras, and Ortigalia Faults.

Seismicity in the immediate vicinity of the proposed project area is diffuse and consists of small-magnitude “background” events. Figure 3.1-1 shows historical seismicity within a 100 km (62.1 mile) radius of the City of Merced, and Table 3.1-1 lists all major Quaternary faults within 100 km (62.1 miles) of the project site.



URS Corporation X:\x_env_permit\Campus_parkway\GIS_Data\seismic\merced.apr Date: 03/22/05 1:07:14 PM DTWood

Campus Parkway Project	**HISTORICAL SEISMICITY WITHIN A 100 KM RADIUS OF MERCED. (M >= 2.0), 1866-2001**	**Figure 3.1-1**

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Table 3.1-1 Major Faults Within 100 Kilometers of the Project Site

Fault	Maximum Magnitude (M_w)	Sense of Faulting[2]	Distances			Peak Ground Acceleration (g)[1]			
			Horizontal Distance (km)[3]	Seismogenic Distance (km)[4]	Rupture Distance (km)[5]	Abrahamson & Silva 1997	Sadigh et al. 1997	Campbell 1997	Average
San Andreas	8.0	SS	100	100	100	0.07	0.06	0.06	**0.06**
S. Calaveras	6.7	SS	94	94	94	0.03	0.02	0.02	**0.03**
Sargent	6.8	SS	98	98	98	0.03	0.02	0.02	**0.03**
Quien Sabe	6.4	SS	88	88	88	0.03	0.02	0.02	**0.02**
Ortigalita	6.9	SS	62	62	62	0.06	0.05	0.05	**0.05**
Greenville	7.2	SS	88	88	88	0.05	0.04	0.04	**0.04**
CRSB	6.6	R	55	55	53	0.08	0.05	0.06	**0.06**
Foothills	6.5	N	42	42	44	0.06	0.06	0.06	**0.06**

Sources: Bortugno et al. 1991, Jennings 1994, and LaForge and Ake 1999.

[1] g = Gravity. Acceleration of gravity is equal to $9.81 m/s^2$. When an earthquake is described as having a ground acceleration of 0.06g, for example, this indicates that it has an acceleration that is 6 percent of the acceleration of gravity.

[2] SS = strike-slip fault; R = reverse or thrust fault; N= normal fault.

[3] Horizontal distance is defined as the shortest distance from the site to the vertical projection of the fault rupture on the earth's surface.

[4] M_w and seismogenic distance used by Campbell (1997). Seismogenic distance is the shortest distance from the site to the zone of seismogenic rupture. The top of this zone is assumed to be at a depth of 2 km.

[5] M_w and rupture distance used by Abrahamson and Silva (1997) and Sadigh et al. (1997). Rupture distance is the shortest distance from the site to the surface rupture.

Figure 3.1-1 also illustrates many of the faults discussed in Table 3.1-1 and shows that the majority of seismic activity is along the Foothills and Coast Range fault zones.

Site Geology

The topography of the proposed Campus Parkway alignments is relatively flat, with elevations ranging from 55 to 58 meters (180 to 190 feet) above mean sea level with a gentle slope toward the west. The incised valley of Bear Creek crosses the study area and drains to the west, toward the San Joaquin River. The stratigraphic units crossed by the proposed Campus Parkway consist of alluvial sand, silt, and gravel formations.

Geologic Hazards

The following summarizes the potential geologic hazards within the proposed project area. Geologic hazards were assessed based on criteria set forth in the following regulations, plans, and guidelines:

- Alquist-Priolo Earthquake Fault Zoning Act of 1972 (amended in 1994)
- Seismic Hazards Mapping Act of 1990
- California Building Code
- Uniform Building Code
- County General Plan

Surface Fault Rupture

No hazard from ground rupture exists at the proposed project site. The site is located outside of any Alquist-Priolo Earthquake Fault Zones, areas that the State of California has delineated around active faults.

Earthquake Shaking

Strong earthquake ground shaking is not considered a major seismic hazard in the proposed project area. The estimated MCE for the San Andreas fault, M_w 8.0, would generate peak horizontal ground acceleration of 0.06 gravitational force (g) at the site. The Coast Range-Sierran Block Boundary and Foothills fault system, with MCEs of M_w 6.6 and 6.5, respectively, can also produce this level of ground shaking. These potential ground motion values are relatively low compared with more active regions of California.

Liquefaction and Lateral Spreading

Liquefaction is the phenomenon during which loose, saturated, cohesionless soils temporarily lose shear strength during strong ground shaking. Lateral spreading occurs when soil liquefies and flows out of a cut face. Seismically induced liquefaction and

lateral spreading are not potential hazards at the site. The geologic formations in the area are likely to contain deposits of sand and silt, which are potentially liquefiable. However, with a peak horizontal ground acceleration of 0.06g, liquefaction of soils is unlikely. The threshold ground motion for triggering liquefaction is approximately 0.3g.

Landsliding

The relatively flat terrain along the majority of the proposed road alignments minimizes landslide potential. Potential slope stability issues may exist with regard to the steep banks of Bear Creek at the proposed bridge crossings.

Subsidence

Subsidence is the sinking or downward settling of the earth's surface. Settlement beneath roads can lead to cracking of the pavement. Land surface subsidence can result from both natural and human-induced phenomena, as described below.

Natural Subsidence. Tectonic subsidence is not considered to be a hazard at the site. Subsidence due to oxidation or dewatering of organic-rich soil is not expected to be a problem at the proposed project site because no apparent substantial thicknesses of organic-rich sediments are present. Subsidence because of rapid sedimentation is not considered a likely mechanism for triggering subsidence at the site because the lack of substantial drainage suggests it is not subject to rapid sedimentation. The sediments and rocks that comprise the various Tertiary and Quaternary stratigraphic units in the project area generally are not considered to contain cavities that could collapse and result in surface subsidence.

Human-Induced Subsidence. Subsidence due to withdrawal of subsurface fluids including water and petroleum is not considered a substantial hazard at this site. No petroleum reserves are known to exist beneath the site, and therefore compaction from removal of petroleum is not a hazard. Subsidence because of groundwater withdrawal has occurred in the past in the San Joaquin Valley and continues in some localities today. However, areas that are known to have this type of subsidence are located more to the south and east of the site, in other counties, and are not considered a serious current hazard in this area.

Expansive Soils

The expansion and shrinking action of some soils can result in differential ground movements. However, the majority of the soils in the project area are not highly plastic or expansive (Arkley 1962). Expansive soils are typically high in clays and

exhibit shrinking-swelling characteristics with wetting and drying cycles. The Ryer series, which occurs within the project area, does include a few small, imperfectly drained areas of plastic clay. These soils may be potentially expansive. However, because of the limited extent of these potentially expansive soils within the project area, the hazard is relatively low.

Erosion

Wind and water are the primary agents of erosion. Wind erosion is not considered a substantial hazard within the proposed project area because the surface deposits are old, consolidated, and not very susceptible to wind erosion. However, much of the project route crosses agricultural lands in production, which are more susceptible to erosion when the soils are exposed or tilled. The relatively flat terrain along the project route reduces the potential for water erosion, except along the creeks (Bear and Black Rascal Creeks) that cross the corridor.

3.1.2 Permanent Impacts

The following impacts apply to all three project alignments under consideration. No substantial differences in geologic impacts or hazards were identified between any of the alignments.

Fault Rupture

No known active faults cross the proposed project site, and therefore there is no known potential for fault rupture. This impact is considered unlikely.

Earthquake Shaking

Although the project site is located outside of the areas of highest seismic activity (Figure 3.1-1), it would still be subject to the hazards of ground shaking. All project-related structures, including culverts, embankments, soil retaining walls and bridges, have a potential to be damaged by earthquake shaking.

Liquefaction and Lateral Spreading

The project site would be subject to an estimated peak horizontal ground motion of 0.06g. At this magnitude of motion, liquefaction and lateral spreading of soils are unlikely.

Landsliding

Although the proposed project crosses lands that are relatively flat, unstable slopes could be created by cut and fill, especially at Bear Creek and the SR 140 crossings.

Construction of the proposed bridge on the banks of Bear Creek and the approaches to the overcrossing of SR 140 and the BNSF railroad tracks could result in potential landslide hazards if not properly designed for the site conditions.

Subsidence

Subsidence is not considered a hazard along the project alignments.

Expansive Soils

A low probability exists that expansive soils are present along the proposed project alignments. If present, differential ground movement related to these soils may occur. Such an event could damage project facilities and is considered a hazard.

Erosion

Erosion at creek and drainage crossings could be increased by the placement of new structures within the banks of the waterways. This can occur at the inlet or outlets of new culverts and drainage facilities, and from scour (erosion caused by moving water) at bridge piers or footings.

3.1.3 Temporary and Construction Phase Impacts

The major proposed project structures (the Bear Creek crossing and SR 140 crossing) would be subject to the earthquake-induced effects described above during the construction period. Unstable slopes and erosion effects can also be at a greater risk during construction because the ground surface is temporarily exposed.

3.1.4 Avoidance, Minimization, and Mitigation Measures

The following measures are recommended for the design and construction of the proposed project, and apply to any of the three alternatives under consideration. These recommendations are based on the preliminary studies conducted to identify geologic conditions and impacts of the project. Specific geologic and geotechnical investigations and design measures would be developed during the preparation of the final project design and during the plans, specifications, and estimates (PS&E) phase, which would verify these conditions. In general, no geologic conditions exist in the proposed construction area that cannot be mitigated by typical design and construction procedures.

Fault Rupture and Subsidence

No known active faults cross the proposed project site, and subsidence is not considered a hazard along this corridor. No mitigation for surface fault rupture or subsidence is necessary.

Earthquake Shaking

The potential for strong earthquake-induced ground motions at the site is low and is not considered a substantial seismic hazard in the project area. All structures, including culverts, embankments, soil retaining walls and bridges, would be built in accordance with Uniform Building Code Zone 3 guidelines. Any recommendations from the geologic and geotechnical investigations performed during the final design and PS&E phases would be incorporated into the project design and construction.

Liquefaction and Lateral Spreading

The expected ground motion at the site due to earthquakes is not considered likely to trigger liquefaction of soils. Thus, the hazard from seismically induced liquefaction or lateral spreading is expected to be minor. Specific soils and foundation treatment would be addressed during the final design and PS&E phase of the proposed project.

Landsliding

Because of the relatively flat terrain in the proposed project area, problems with slope stability are expected to be minimal, with the potential exception of the Bear Creek crossing and the approaches to the overcrossing at SR 140 and the BNSF railroad tracks. The creek crossing would be bridged, with supporting columns placed in the creek banks. Slope stability analyses must be performed on the slopes of the creek with the proposed loads of the bridge structure. Landslide hazards along the relatively flat terrain of the remainder of the route would be limited to cut and fill slopes, which are expected to be minimal along the corridor. Site-specific soils and geologic conditions should be investigated to determine the maximum slope angles for all cut and fill slopes. A grading plan should be developed to mitigate any slope stability problems. Adverse effects to the stability of Bear Creek slopes from earthquake-induced lateral spreading of soils are expected to be minimal because of the weak ground motions associated with known seismic activity in the area. The embankments prepared for the approaches to the overcrossing at SR 140 and the BNSF railroad tracks would be made of fill, and the design of these fill embankments should minimize risks of geologic hazards.

Expansive Soils

A limited potential for expansive soils exists at the site. It will be necessary to verify this hazard with a geotechnical investigation during final design and the PS&E phase. Any substantial thickness of expansive soils along the road alignment should be accounted for in the project design or removed.

Erosion

The foundations of the Bear Creek bridge (supporting columns and abutments) are anticipated to be above the creek bed. Therefore, excessive erosion or scour should not occur under normal circumstances but could take place during flood conditions. Erosion and scour protection measures for structures within the creek channel or along the banks should be evaluated during final design.

3.2 Hydrology, Water Quality, Storm Water Runoff

This section discusses hydrology, water quality, and drainage of storm water runoff. Floodplains are discussed and evaluated in Section 3.10.

3.2.1 Affected Environment

Topography, Climate, and Soils

Natural creeks, engineered canals, and roadways provide the only major topographic changes throughout the region. The general gradient in the project area is toward the west and southwest with elevations ranging from 55 to 60 meters (180 to 195 feet) above mean sea level.

Summers in the Merced area are almost rainless and very warm to hot, and winters are cool. The average annual precipitation for the Merced area measures approximately 31 centimeters (cm) (12 inches) (MID 1997). The majority of precipitation falls between October and April. The maximum precipitation of a 100-year frequency, 24-hour duration storm event at the nearby Merced Gage Station No. 2 is 7.3 cm (2.9 inches) of rainfall.

The majority of the soils in the project area consist of clay loam. They are well drained, with deep, moderately to slowly permeable characteristics. Soils to the north of the proposed Campus Parkway are similar, but include more hardpan soil types.

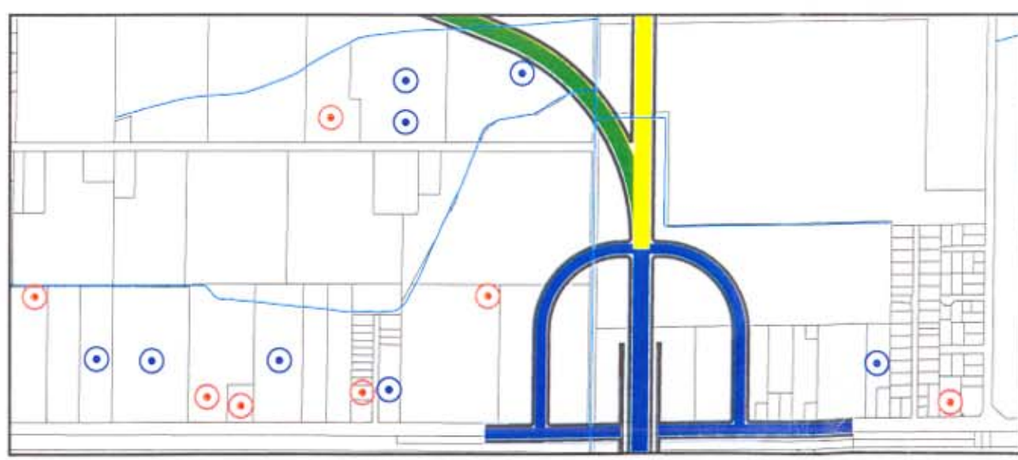
Surface Water

Surface water in the regional vicinity of the proposed Campus Parkway includes rivers, creeks, irrigation canals, and Lake Yosemite. Figure 1-2 illustrates regional surface water bodies including Lake Yosemite, and Figure 3.2-1 shows surface water bodies and groundwater wells in the project vicinity.

The project area is predominantly farmland and has been substantially graded to the extent that few areas of natural drainage patterns exist, with the potential exception of Bear Creek. Overland surface flows in the project area drain primarily to Bear Creek and Black Rascal Creek. Doane Lateral, Hartley/Bradley Lateral, and other unnamed irrigation canals also carry surface water in the project area. Other off-site surface waters near the project area include the Merced River, Canal Creek, Fahrens Creek, and Cottonwood Creek to the north and northwest and Miles Creek and Owens Creek to the south and east. The Main Canal, Le Grand Canal, and Fairfield Canal are also

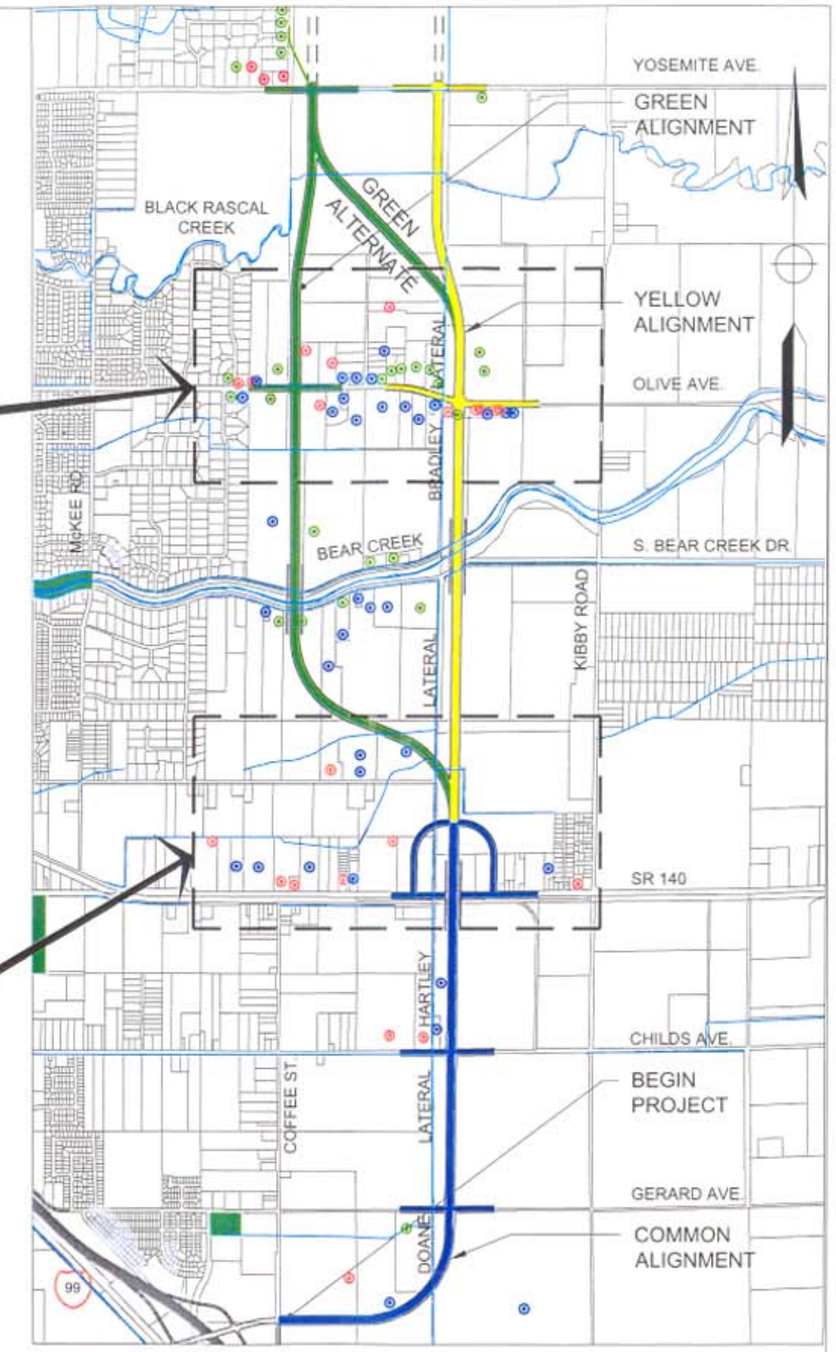
LEGEND

- WELL LOCATION IDENTIFIED FROM REVIEW OF RECORDS
- WELL IS PRESENT AT PARCEL/PROPERTY BUT PRECISE LOCATION NOT VERIFIED. SYMBOL INDICATES ONLY THAT A WELL IS ON RECORD AT THE PARCEL
- WELL LOCATION IDENTIFIED BASED ON A VISUAL ANALYSIS OF AERIAL PHOTOGRAPHS. WHERE A HOME WAS LOCATED, IT WAS ASSUMED THAT A WELL EXISTS. (SR 140 NOT INCLUDED. A WATER SYSTEM HAS BEEN INSTALLED DUE TO CONTAMINATED WATER).



1000' 0 1000' 2000'

SCALE: 1"= 1000'-0"



2500' 0 2500' 5000'

SCALE: 1"= 2500'-0"

URS	Project No. 26813284 Campus Parkway Project	LOCATIONS OF LOCAL CREEKS, CANALS, AND KNOWN EXISTING DOMESTIC AND IRRIGATION WELLS	Figure 3.2-1

J:\CADSHARED\CAMPUS_PARKWAY\EIS\FIGURE3.2-1.DWG 08/29/02 COLOR_01.PCP

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part of the local surface water resources that divert water from the Merced River and Lake Yosemite via numerous smaller canals and laterals.

Closest to the Campus Parkway area, Fahrens Creek and Black Rascal Creek are tributaries of Bear Creek. Bear Creek ultimately flows south of the City of Merced and discharges its waters into Owens Creek, a tributary to the San Joaquin River. Bear Creek, the western extension of Black Rascal Creek, and Fahrens Creek flow through the City of Merced. Flow in Black Rascal Creek is diverted into Bear Creek approximately 5 km (3 miles) upstream from the City of Merced and the project area via the Black Rascal diversion. Below the diversion and through the project area, Black Rascal Creek carries only local inflow and parallels Bear Creek to the point where it is joined by Fahrens Creek west of the proposed project.

The nearest body of surface water to the Campus Parkway project area is Lake Yosemite, located approximately 8 km (5 miles) north of the project. Lake Yosemite is supplied by the Main Canal, which receives its water from the Merced River, and winter storm runoff from the areas above the lake and the Main Canal. Water is discharged from Lake Yosemite via the Le Grand and Fairfield Canals. The regional canals are used primarily for irrigation and secondarily for flood control.

Existing Drainage Infrastructure

The existing storm drainage infrastructure currently serving the project area is limited to the Merced Irrigation District's (MID's) canal system, consisting of the Doane Lateral, Hartley/Bradley Lateral and other unnamed irrigation canals. The primary function of the canals is the delivery of irrigation water from Lake Yosemite through Fairfield Canal to agricultural users. The MID opens the irrigation gates at Lake Yosemite on March 31 and closes them on October 31 (Merced County *Storm Drainage Design Manual* [no date]), allowing the delivery of water to agricultural users. Lake Yosemite acts as a flood control detention, releasing excess flows to LeGrand Canal.

Existing Surface Water Quality

Surface water quality in Merced County differs from east to west and from north to south. The Sierra Nevada mountains dispense relatively low amounts of dissolved solids into streams and rivers on the east side of Merced County and the project area. Similarly, the stream flow into the Merced River in the northern part of the county is of very high quality, but gradually decreases south through the Valley because of the inflow of excess irrigation waters (Merced County 1990).

Groundwater Resources

The proposed Campus Parkway is located in the San Joaquin Valley Groundwater Basin, the largest groundwater basin in the state. Approximately 30 million acre-feet of water are stored beneath this groundwater basin. The groundwater in the basin is not stagnant; a portion (about 600,000 acre-feet, or 2 percent of the stored volume) discharges from the basin each year but is replenished by about the same amount (CH2M Hill 1995).

The proposed Campus Parkway is also located within the Merced Groundwater Subbasin (No. 5-22.04), part of the San Joaquin Valley Groundwater Basin. This lies on the eastern side of the San Joaquin Valley within the eastern half of Merced County. Four aquifers are recognized beneath the Merced area, listed from deepest to shallowest:

- The Mehrten Formation
- A confined aquifer between the Mehrten Formation and the base of the Corcoran Clay
- An intermediate aquifer above the Corcoran Clay and below the shallow clay
- A shallow unconfined aquifer

In the project area, groundwater depths range between 7 and 21 meters (24 and 68 feet) below ground surface with elevations ranging from 33 to 55 meters (109 to 180 feet) below mean sea level for the unconfined aquifer (data retrieval from January 1995 to January 2001, DWS 2001). Groundwater flow direction in the project area is from northeast to southwest (DWS 2001). The MID monitors groundwater levels on a monthly basis. The City of Merced monitors groundwater levels on a quarterly basis.

A search for well locations was performed for land parcels which intersect with the proposed Campus Parkway right of ways. The search was performed using information obtained from the Merced County Public Health Department and the State Water Resources Board and by reviewing aerial photographs. Files were reviewed to determine whether a well exists, well location, depth of ground water, depth of well, and depth of screen intervals. Table 3.2-1 summarizes available information from the Merced County Public Health Department regarding well location (by parcel number), well number, planned use, depth to groundwater, depth of completed well, and screen interval. In some cases, specific descriptive information was available. In other cases, specific well information was not available, but the existing information revealed that a well exists. Note that the majority of the wells located within the project vicinity are

used for domestic purposes (residences). Based on the available information, well depths and screen intervals range from 60 to 400 feet below the surface. Figure 3.2-1 illustrates the locations of wells. The exact location was available for some wells and not for others. When specific locations were not available, the figure illustrates them in the center of the parcel. Figure 3.2-1 also includes wells located based on a review of aerial photographs of the project vicinity. On parcels where specific well information was not available, a well was assumed to exist if a residential building could be identified.

Table 3.2-1 Existing Groundwater Wells in the Project Area

APN	Well Number[1]	Planned Use[2]	Depth to Groundwater (feet)	Depth of Completed Well (feet)	Screen Intervals (feet)
008-020-11	NA	domestic	NA	NA	NA
008-020-16	77-765 D[3]	domestic	NA	110	90-110
008-020-17	396840	domestic	NA	230	195-230
008-080-04	340943	domestic	NA	110	90-110
008-090-04	NA	domestic	NA	NA	NA
008-090-32	22943	domestic	NA	157	145-157
008-090-33	110878	domestic	NA	80	60-80
008-090-45	345113	domestic	NA	175	160-075
008-090-53	NA	domestic	NA	NA	NA
008-120-01	359701	domestic	NA	180	170-180
008-120-02	481519	domestic	NA	175	160-175
008-120-04	716642	domestic	NA	203	175-203
008-120-05	46781	domestic	NA	120	100-120
008-120-07	NA	domestic	NA	NA	NA
008-120-15	90-148-D0[3]	domestic	NA	130	115-130
008-120-17	NA	domestic	NA	NA	NA
008-120-25	NA	domestic	NA	NA	NA
008-120-27	NA	domestic	NA	NA	NA
008-120-29	NA[4]	domestic	NA	NA	NA
008-120-30	NA	irrigation	NA	NA	NA
	80-247-D[3]	domestic	NA	320	NA
008-120-31	NA	domestic	NA	NA	NA
008-120-34	NA	domestic	NA	NA	NA
008-120-40	NA	domestic	NA	NA	NA
008-120-41	120398[5]	irrigation	19	NA	NA
008-130-44	21861[5]	irrigation	24	NA	NA
008-280-01	NA	domestic	NA	NA	NA
008-290-43	77-746 D[3]	domestic	NA	100	80-100
060-660-25	92534[5]	domestic	27	NA	NA

[1] State Well Numbers are used unless otherwise indicated.
[2] "Planned Use" was assumed to be for domestic purposes if a dwelling was located on the property.
[3] Merced County Public Health Department Permit Number.
[4] No well information was found; however, the property is a residence and contains a septic tank. Therefore, it was assumed that a well exists for domestic or other water supply uses.
[5] Well information was obtained from the State Water Resources Control Board.

Notes:
Data for well numbers 415434, 22909, 360529, and 48692 were obtained from the Department of Water Resources. These wells appear to duplicate information obtained from the Merced County Department of Public Health and are not included in this table.
The Merced County Public Health Department files contain information starting in 1975. Specific information prior to that date is not available.
NA = No information available

Table 3.2-1 (Continued) Existing Groundwater Wells in the Project Area

APN	Well Number[1]	Planned Use[2]	Depth to Groundwater (feet)	Depth of Completed Well (feet)	Screen Intervals (feet)
060-660-26	NA	domestic	NA	140	NA
060-660-27	NA	domestic	NA	116	96-116
061-010-12	NA	domestic	NA	NA	NA
061-010-20	NA	domestic	NA	NA	NA
061-010-21	NA	domestic	NA	NA	NA
061-010-26	NA	domestic	NA	NA	NA
061-010-36	219555	domestic	NA	160	120-160
061-010-37	NA	domestic	NA	NA	NA
061-100-06	345125	domestic	NA	285	270-285
061-100-19	NA[4]	domestic	NA	NA	NA
061-110-08	67675[5]	domestic	39	NA	
061-121-37	NA	domestic and business	NA	60	NA
061-250-13	NA	NA	NA	NA	NA
061-250-16	NA	domestic	NA	NA	NA
061-250-51	NA	domestic	NA	NA	NA
061-320-24	NA	domestic	NA	NA	NA
061-320-26	255226	domestic	NA	155	135-150
061-320-27	23198	NA	23	NA	NA
061-330-02	NA	domestic	NA	NA	NA
061-330-03	361591	domestic	NA	185	160-180
	NA	domestic	NA	150	NA
061-330-04	NA	domestic	NA	NA	NA
061-330-11	359539	domestic	NA	240	225-240
061-330-19	NA	domestic	NA	NA	NA
061-330-20	NA	domestic	NA	NA	NA
061-330-25	NA	domestic	NA	NA	NA
061-340-09	NA	domestic	NA	210	NA
061-340-10	NA	domestic	NA	NA	NA
061-340-15	258518[5]	municipal	NA	NA	NA
NA	29952[5]	domestic	34	NA	NA

[1] State Well Numbers are used unless otherwise indicated.
[2] "Planned Use" was assumed to be for domestic purposes if a dwelling was located on the property.
[3] Merced County Public Health Department Permit Number.
[4] No well information was found; however, the property is a residence and contains a septic tank. Therefore, it was assumed that a well exists for domestic or other water supply uses.
[5] Well information was obtained from the State Water Resources Control Board.

Notes:
Data for well numbers 415434, 22909, 360529, and 48692 were obtained from the Department of Water Resources. These wells appear to duplicate information obtained from the Merced County Department of Public Health and are not included in this table.
The Merced County Public Health Department files contain information starting in 1975. Specific information prior to that date is not available.
NA = No information available

Groundwater recharge occurs in the project area predominantly from seepage and percolation from surface water. Soils in the project area consist predominantly of clay loam with a generally moderate surface permeability potential. No perched

groundwater[7] problems exist in the project area, suggesting that the permeability potential of soils is relatively high.

Groundwater quality is determined primarily by salt concentrations, and to a lesser degree, by levels of nutrients (i.e., nitrate-nitrogen), pesticides (i.e., dibromochloropropane), and other contaminants. Overall groundwater quality in Merced County is generally similar to surface water quality; it is good to excellent in the higher foothill areas and decreases in quality toward the valley's central low areas (Merced County 1990). Groundwater contamination associated with dry cleaning operations and the GE Kendall Plant has occurred in the vicinity of the Campus Parkway route. The GE Kendall Plant is located at the intersection of Kibby Road and SR 140.

Regulatory Setting

The following is a summary of the regulatory context under which issues associated with water quality, drainage, and on-site and off-site flooding are managed at the federal, state, and local level.

Federal and State Regulations

The State Water Resources Control Board and the RWQCB are responsible for ensuring implementation and compliance with the provisions of the federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act. Along with the State Water Resources Control Board and the RWQCB, water quality protection is the responsibility of water supply and wastewater management agencies as well as city and county governments.

The Central Valley Region RWQCB (Region 5), which has jurisdiction at the project site, has prepared *The Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin* (Basin Plan). The Basin Plan establishes water quality objectives and implementation programs to meet stated objectives and to protect the beneficial uses of water in the Sacramento-San Joaquin River Basin. Beneficial uses identified in the Basin Plan for Yosemite Lake and tributaries include domestic water supply, agriculture, recreation, freshwater habitat, and fisheries. All discharges to surface water or groundwater in the project area are subject to the Basin Plan requirements (CVRWQCB 1998).

[7] Perched groundwater is groundwater located above the level of the water table and separated from it by a zone of impermeable material.

Because construction of the proposed project would disturb more than 0.4 ha (1 acre), the project would be subject to the permit requirements of the state-adopted General Construction Activity Storm Water Permit, which is a part of the NPDES permit system. The Merced County Department of Public Works will prepare the required SWPPP and implement best management practices (BMPs) to reduce construction effects on water quality.

In addition to the State General Construction Activity Permit, the Central Valley RWQCB has also adopted a general NPDES permit for short-term discharges of small volumes of wastewater from certain construction-related activities. Permit conditions for the discharge of these types of wastewater to surface water are specified in Waste Discharge Requirements General Order for Dewatering and Other Low-Threat Discharges to Surface Waters, Order No. 5-00-15, NPDES No. CAG995001. Discharges may be covered by the permit if they are (1) either 4 months or less in duration or (2) the average dry weather discharge does not exceed 946 cubic meters (250,000 gallons) per day. Construction dewatering, well development water, pump/well testing, and miscellaneous dewatering/low-threat discharges are among the types of discharges that may be covered by the permit. The general permit also specifies standards for testing, monitoring and reporting, receiving water limitations, and discharge prohibitions.

Local Regulations

The County General Plan has goals and policies designed to properly manage water resources, including protection of surface and groundwater resources from contamination, evaporation, and inefficient use; assurance that land uses and development will not impair water quality or productive capacity; encouragement of methods to prevent groundwater depletion and promote the conservation and reuse of water; and promotion of community drainage systems to manage, control, and reduce degradation of wetlands and other riparian areas from urban runoff (Merced County 1990). The Merced County Department of Public Works will be responsible for complying with its Drainage Design Standards to ensure that the storm water drainage system for any proposed development within the county shall be designed in accordance with its Drainage Design Manual.

3.2.2 Permanent Impacts

The following summarizes potential project impacts. These impacts apply to all three alternatives except where differences are noted.

Surface Water

Storm Water Runoff Volume

The amount of storm water runoff in the project area would increase because of the addition of impervious roadway surface from the proposed Campus Parkway. The landscaped areas within the right-of-way would remain pervious as they currently exist, therefore, only the roadway shoulders and bicycle/pedestrian way surfaces would contribute to project-related increases in storm water runoff. New, paved surface area (excluding the landscaped areas) would be either 45 ha (111 acres) under the Green Alignment or Yellow Alignment – Preferred Alternative or 46 ha (114 acres) with the Green Alternate. Using data from the National Oceanic and Atmospheric Administration, the estimated runoff from a 10-year storm event would be 19.3 acre-feet for the Green Alignment or Yellow Alignment – Preferred Alternative or 19.9 acre-feet for the Green Alternate (see Table 3.2-2). The Merced County Drainage Design Standards also require that increased runoff because of new development not result in an increase in natural drainage flow beyond predevelopment 100-year, 24-hour storm flows. The estimated runoff from the 100-year, 24-hour storm event would be 26.4 acre-feet for the Green Alignment or Yellow Alignment – Preferred Alternative and 27.1 acre-feet for the Green Alternate. This represents a post-development runoff volume increase of 7.1 acre-feet for the Green Alignment or Yellow Alignment – Preferred Alternative and 7.2 acre-feet for the Green Alternate.

Table 3.2-2 Campus Parkway Project – Proposed Runoff from Paved Areas

Total Runoff Volume for Green Alignment or Yellow Alignment – Preferred Alternative

Return Period	Runoff Volume (cubic meters [acre-feet])	
	California Department of Water Resources Data	National Oceanic and Atmospheric Administration Data
2-Year	13,939 (11.3)	16,282 (13.2)
5-Year	18,873 (15.3)	20,599 (16.7)
10-Year	21,596 (17.8)	23,807 (19.3)
25-Year	25,780 (20.9)	27,137 (22.0)
50-Year	28,494 (23.1)	29,234 (23.7)
100-Year	**31,208 (25.3)**	**32,564 (26.4)**

Table 3.2-2 (Continued) Campus Parkway Project – Proposed Runoff from Paved Areas

Total Runoff Volume for Green Alternate

Return Period	Runoff Volume (cubic meters [acre-feet])	
	California Department of Water Resources Data	National Oceanic and Atmospheric Administration Data
2-Year	14,309 (11.6)	16,652 (13.5)
5-Year	19,366 (15.7)	21,093 (17.1)
10-Year	22,573 (18.3)	24,547 (19.9)
25-Year	26,520 (21.5)	27,877 (22.6)
50-Year	29,234 (23.7)	30,097 (24.4)
100-Year	**32,071 (26.0)**	**33,428 (27.1)**

Rainfall Depth-Duration-Frequency Data

Return Period	24-hour Rainfall Depth (in centimeters [inches])	
	California Department of Water Resources Data	National Oceanic and Atmospheric Administration Data
2-Year	3.28 (1.29)	3.81 (1.50)
5-Year	4.42 (1.74)	4.83 (1.90)
10-Year	5.16 (2.03)	5.59 (2.20)
25-Year	6.05 (2.38)	6.35 (2.50)
50-Year	6.68 (2.63)	6.86 (2.70)
100-Year	7.32 (2.88)	7.62 (3.00)

Other data used for runoff calculation:
Paved Area = 44.9 ha (111 acres) acres (for Green Alignment/Yellow Alignment – Preferred Alternative)
46.1 ha (114 acres) acres (for Green Alternate)
Runoff Coefficient = 0.95 (assumed for paved areas)

As part of the project, retention basins would be built within the Campus Parkway's right-of-way to hold or retain surface water runoff, which controls the amount and rate of surface water flow from the project right-of-way. These basins would be located within "excess" right-of-way parcels alongside Campus Parkway, as described in Section 2.3.3. The drainage areas would temporarily collect and hold storm water runoff, some of which would percolate or infiltrate into the groundwater, and the excess may be drained to discharge points at canals and surface water bodies, such as Bear Creek. The drainage facility areas were included in the evaluation of environmental impacts for the project. BMPs, as described in Section 3.2.4, would be required for the project and drainage/discharge system. The potential impact from surface water runoff from the proposed expressway is minimized as a result of proposed project design features.

As noted in Section 3.2.1, the project area has been graded and its drainage patterns have been altered over time by the predominant agricultural uses. With the exception of elevated bridge and overpass crossings of Bear Creek and SR 140, all of the

Campus Parkway alternatives would be constructed at-grade, and drainage facilities would be incorporated into the project during the final design phase. Drainage and runoff patterns would be affected but not adversely impacted by the proposed Campus Parkway project. Campus Parkway would cross the 100-year floodplain of Bear Creek, but the railroad and Bear Creek crossings and other grade crossings would be constructed to allow the runoff from this event to pass through, maintaining approximately the same drainage patterns (see Section 3.10).

Storm Water Runoff Quality

The FHWA has evaluated street and highway storm water runoff and identified that it can, in some instances, adversely affect water quality (FHWA 1990). The nature of these impacts depends on the uses and flow rate or volume of the receiving water, rainfall characteristics, and street or highway characteristics. In general, heavy metals associated with vehicle tire and brake wear, oil and grease, and air emissions are the primary toxic pollutants associated with transportation corridors.

Campus Parkway would cross lands that are currently used primarily for agricultural production. The traffic analysis for the project (Dowling 2000) shows that some future regional and local traffic that would use existing roads would shift and use the parkway, and the new roadway surface would generate pollutant runoff. This could have an adverse impact on water quality in the Campus Parkway vicinity. However, the project's retention basins would have a beneficial effect on drainage water quality by collecting water runoff and allowing some of it to settle, percolate, and drain prior to flowing off-site. This effect would reduce the level of contaminants flowing into surface water bodies. This project design would minimize but not completely eliminate surface water runoff impacts. Mitigation measures are discussed in Section 3.2.4.

Groundwater

Groundwater Use and Recharge

Adding 7.2 km (4.5 miles) of new paved surface would increase the amount of impervious surfaces in the area, thus potentially decreasing the amount of groundwater recharge. Approximately 45 ha (111 acres) of paved surface would be added with either the Green Alignment or Yellow Alignment – Preferred Alternative and 46 ha (114 acres) would be added with the Green Alternate (excluding the landscaped areas). Some runoff from the proposed Parkway would be captured in retention basins within the project right-of-way and would provide recharge from these sources.

Not all of the water runoff may be held in the retention basins during large storm events, and some retained water would evaporate. The actual location of the retention basins and drainage facilities would be determined during the final design phase of the project. Because the project would include measures that manage surface runoff and contribute to groundwater recharge, impacts to regional groundwater recharge would not adversely impact regional groundwater quantities.

As described in Section 3.2.1, four aquifers are recognized beneath the Merced area, but none are designated as sole source aquifers by the USEPA (FHWA 2001). A sole source aquifer supplies 50 percent or more of the drinking water for an area. This program was established under Section 1424(e) of the Safe Drinking Water Act of 1974 (FHWA 2001). Overall, the proposed Campus Parkway would not substantially affect domestic groundwater supply, agricultural groundwater supplies, or sole source aquifers.

Landscaped portions of the project right-of-way may be irrigated with groundwater. This would not be an adverse impact because most of the agricultural land within the right-of-way is currently irrigated with groundwater or canal water. It should be noted that the landscaped areas of the proposed Campus Parkway may be irrigated with sources other than groundwater, such as irrigation canal water or water collected in the proposed retention basins. In any event, the amount of land irrigated as a result of Campus Parkway would be less than the amount currently irrigated. Landscaped areas in the right-of-way planted with drought-resistant species would further reduce the project's affect on groundwater resources.

3.2.3 Construction and Other Temporary Impacts

Surface Water

The project could have adverse water quality impacts related to construction activities. Storm water runoff carrying construction erosion sediments could drain into the Doane Lateral (south of Bear Creek), Hartley/Bradley Lateral (north of Bear Creek), Bear Creek, or Black Rascal Creek, eventually flowing to the San Joaquin River. Soil erosion could, especially during heavy rainfall, increase suspended solids, dissolved solids, and organic pollutants in nearby creeks. These conditions can persist until completion of construction activities and implementation of landscaping and other long-term erosion control measures.

Accidental spills of petroleum hydrocarbons such as fuels and lubricating oils, concrete wastewater, other potentially toxic materials, and possibly sanitary wastes are

also a concern during construction activities. An accidental release of these wastes could adversely impact surface water quality, vegetation, and wildlife habitat. The magnitude of the impact from an accidental release would depend on the amount and type of material spilled.

Groundwater

The Green Alignment, Yellow Alignment – Preferred Alternative, and Green Alternate would not be below existing grade and would not require any substantial excavation. Impacts, if any, to groundwater quantity or quality as a result of the construction of the proposed project would be minimal. Accidental spills during construction would have to be substantial to impact groundwater. This impact is considered unlikely but is addressed in Section 3.2.4.

One groundwater well would be closed and sealed as a result of a necessary property acquisition that would occur at one of two parcels corresponding with either the Green Alignment or Yellow Alignment – Preferred Alternative. Acquisition of the property is unavoidable, and the domestic well would be sealed in accordance with state and local requirements. All other wells would be avoided. No wells are expected to be relocated.

Groundwater may be used during construction for dust control purposes. However, water could also be supplied via other sources, such as water tank trucks or other surface water sources. Because of the low volume of water needed for dust control, the pumping of water from nearby wells for this purpose would not result in an adverse impact to groundwater.

3.2.4 Avoidance, Minimization, and Mitigation Measures

To gain approval to build the Campus Parkway project, Merced County will be required to apply for an NPDES permit under the Phase II requirements that begin in 2003 for the proposed project. A SWPPP will be prepared under the NPDES permit to address construction-phase impacts and post-construction storm water management. The SWPPP will do this by dictating reductions of pollutants in storm water discharges to the maximum extent practicable through the use of BMPs. For discharges from a construction site, toxic pollutants must be reduced using the Best Available Technology that is economically feasible, and conventional pollutants must be reduced using the Best Conventional Technology.

The revised Statewide May 2001 Storm Water Management Plan includes new and revised BMP categories, including new/reconstructed facility pollution prevention

BMPs, new/reconstructed facility treatment control BMPs, supplemental water quality based treatment control BMPs, and construction site BMPs.

The SWPPP required for this project would also include a number of control measures covering limitations on construction and implementation of erosion and sediment controls, as well as maintenance, monitoring, and reporting provisions.

Construction BMPs are temporary BMPs that the county would likely implement to meet Best Available Technology/Best Conventional Technology for construction projects. The selected temporary BMPs would be consistent with those practices to achieve compliance with requirements of the State of California NPDES General Permit for Storm Water Discharges Associated with Construction Activities. Where an existing or proposed storm drain system with a drainage pipe or collection ditch discharges into either a receiving water or a downstream storm drain system owned by others, approved treatment systems would be considered and, where feasible, installed. Small bridges or culverts would be constructed at locations where the proposed Campus Parkway crosses irrigation canals and drainage courses. A storm drainage system consisting of pipes, swales, and drainage ponds would be constructed as part of the project.

Other typical construction BMPs set forth in SWPPPs include using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter storm drain systems or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent contaminants from entering storm drains; and using barriers such as straw bales or plastic to minimize the amount of uncontrolled runoff that could enter drains or surface water.

Erosion control measures would be developed as part of the SWPPP and applied to exposed areas during construction. Erosion control measures may include the trapping of sediments within the construction area by placing barriers such as straw bales at the perimeter of downstream drainage points or by construction of temporary detention basins. Other methods of minimizing erosion impacts include limiting the amount and length of exposure of graded soil and hydromulching (applying a mixture of mulch, seed, and fertilizer).

The location of nearby existing groundwater wells with respect to the project right-of-way have been identified in Figure 3.2-1 and are listed in Table 3.2-1. These locations would be verified as needed during the final design phase of the project. However, the

only impacts to wells would occur where a full residential property take is necessary. All of the property acquisition for the alternatives consists of portions of parcels that do not have residences present within the acquired portion, with the exception of one residential property per alternative. Therefore, only one well would be impacted for each of the alternatives, and the affected well would not be relocated.

The overall mitigation structure for water quality impacts is a condition of the NPDES permit, other planning agreements, and the expected need for county storm water management programs. Implementation details for these mitigation measures would be developed and incorporated into project design and operations prior to project startup. With proper implementation of these mitigation measures and compliance with the new NPDES permit, short-term construction-related water quality impacts would be avoided or minimized.

Long-term impacts could potentially result from sediment carried by storm water from project-related erosion and toxic vehicle-related pollutants carried in storm water runoff. The project design would incorporate permanent soil erosion control measures. An NPDES permit also typically stipulates that permanent measures to control pollutant discharges must be considered and implemented for all new or reconstructed facilities. These may include retention basins, detention basins, and grassy areas that drain runoff from the project. Such measures reduce pollutants entering drainages and would be incorporated into the final engineering design or landscape design of the project. In addition, the NPDES permit could also stipulate that an operation and maintenance program be implemented for the permanent control measures.

3.3 Hazardous Waste and Materials

This section summarizes the results of an Initial Site Assessment (ISA) (hazardous waste study) conducted for the proposed Campus Parkway. The purpose of the ISA was to assess the potential for existing hazardous waste contamination within the three route alignments. Completion of the ISA was the first screening step for a hazardous waste site evaluation. The ISA had a "positive" result, meaning that there were positive findings of sites requiring further investigation for environmental hazards if the project is advanced for preliminary design.

3.3.1 Affected Environment

Rural and farm housing is scattered along the three alignments with concentrations along SR 140, Olive Avenue, and South Bear Creek Road. The very few commercial businesses adjacent to the proposed alignments include service stations, retail stores, and restaurants along SR 140. Large industrial facilities at or near the three alignments are found at the intersection of Kibby Road and SR 140 (Wellmade Metal Manufactures, Tri Valley Growers Plant, and a former General Electric transformer manufacturer) and at the intersection of Childs Avenue and Tower Road (Wilson Substation and PG&E, which are near but outside of the project alignments).

Methods

The ISA study area consisted of the right-of-way of the three alignments and the adjacent properties within 0.4 km (0.25 mile) of the right-of-way. The services of VISTA Information Solutions (VISTA), a national environmental reporting service, were used to generate an initial list of properties recorded with known contamination problems and property owners that have registered tanks or services that involve hazardous materials. A visual observation and site reconnaissance was conducted along each alternative, focusing on the identification of sites within the study area, land use types, and business names for each site. The Merced County Division of Environmental Health was contacted regarding sites with potential environmental concerns and provided information that was more recent than that from the VISTA database.

Evaluation of Sites

Thirteen properties with hazardous waste concerns were identified within the proposed project's right-of-way or less than 0.4 km (0.25 mile) from the proposed alignments. Most of the sites are listed as having (or having had) underground storage tanks (USTs) on their property. The precise status and location of many of these USTs is unknown

because they belong to private individuals or farms, exempting the owners from UST regulations. These sites are listed in Table 3.3-1. The site numbering used in the ISA followed the sequence and identification assigned by the VISTA database, and some of the listings represented the same site, hence the multiple site numbering in the descriptions in the table.

Table 3.3-1 Properties Involving Hazardous Materials Storage or Handling, or Former Sites

VISTA Site No.[1]	Address	Property Type	Potential Issue	Road Alignment within 1/4 mile of Site		
				Green	Green Alternate	Yellow – Preferred Alternative
Site 31	North Lake Rd.	Farm	UST within Property; verified outside of Parkway right-of-way[2]	X	X	
Site 29	North Crown Rd.	Residence	UST within Property; verified outside of Parkway right-of-way[2]			X
Site 30	North Crown Rd.	Residence	UST within Property; verified outside of Parkway right-of-way[2]			X
Site 23	Leaf Dr.	Farm	UST within Property; verified outside of Parkway right-of-way[2]	X		
Site 20	Crown Rd.	Residence	UST within Property; verified outside of Parkway right-of-way[2]		X	X
Site 16	East South Bear Creek Dr.	Residence	UST within Property; verified outside of Parkway right-of-way[2]	X		
Site 12	East SR 140	Mini-Mart/Gas Station	UST recorded at site, but site abandoned. County Division of Environmental Health reports that tanks removed, but status unknown	X	X	X
Site 50	East SR 140	Mini-Mart/Gas Station	UST recorded at site, but site abandoned. County Division of Environmental Health reports that tanks removed, but status unknown	X	X	X
Site 10	East SR 140	Gas Station	UST recorded at site, but site abandoned. County Division of Environmental Health reports 3 USTs still in service, and 1 tank previously removed.	X	X	X
Site 43c	East SR 140	Gas Station	UST recorded at site, but site abandoned. County Division of Environmental Health reports 3 USTs still in service, and 1 tank previously removed.	X	X	X
Site 43b/47c	SR 140/Kibby Rd. NW Corner	Commercial Farming Company	Closed LUST/UST and Waste Generator	X	X	X

Notes:
The sites identified in this table are known to contain or to have previously contained one or more USTs within the overall property but are not currently listed as active hazardous waste sites and the site owners are not currently registered as handling hazardous materials. At some of these properties, field review indicated that the UST does not appear to be located within the portion of the property that may be acquired for Campus Parkway. During right-of-way acquisition, verify that UST is either not present within the acquired right-of-way and/or that its status has not changed.

[1] Sites organized from north to south. Letter indicates multiple addresses under the same VISTA site number. See Appendix A of the ISA for the VISTA Report.

[2] UST belongs to private individual or farm. These tanks are exempt from the UST regulations (40 CFR Part 28.0.10-12), and no further site details are available from the Merced County Division of Environmental Health.

Available data and field review indicate that two of the 13 properties have known contamination in the vicinity of the project. These two properties are identified in Table 3.3-2 and described below, and the locations are shown on Figure 3.3-1.

Table 3.3-2 Recommendations for Sites Evaluated in the Initial Site Assessment

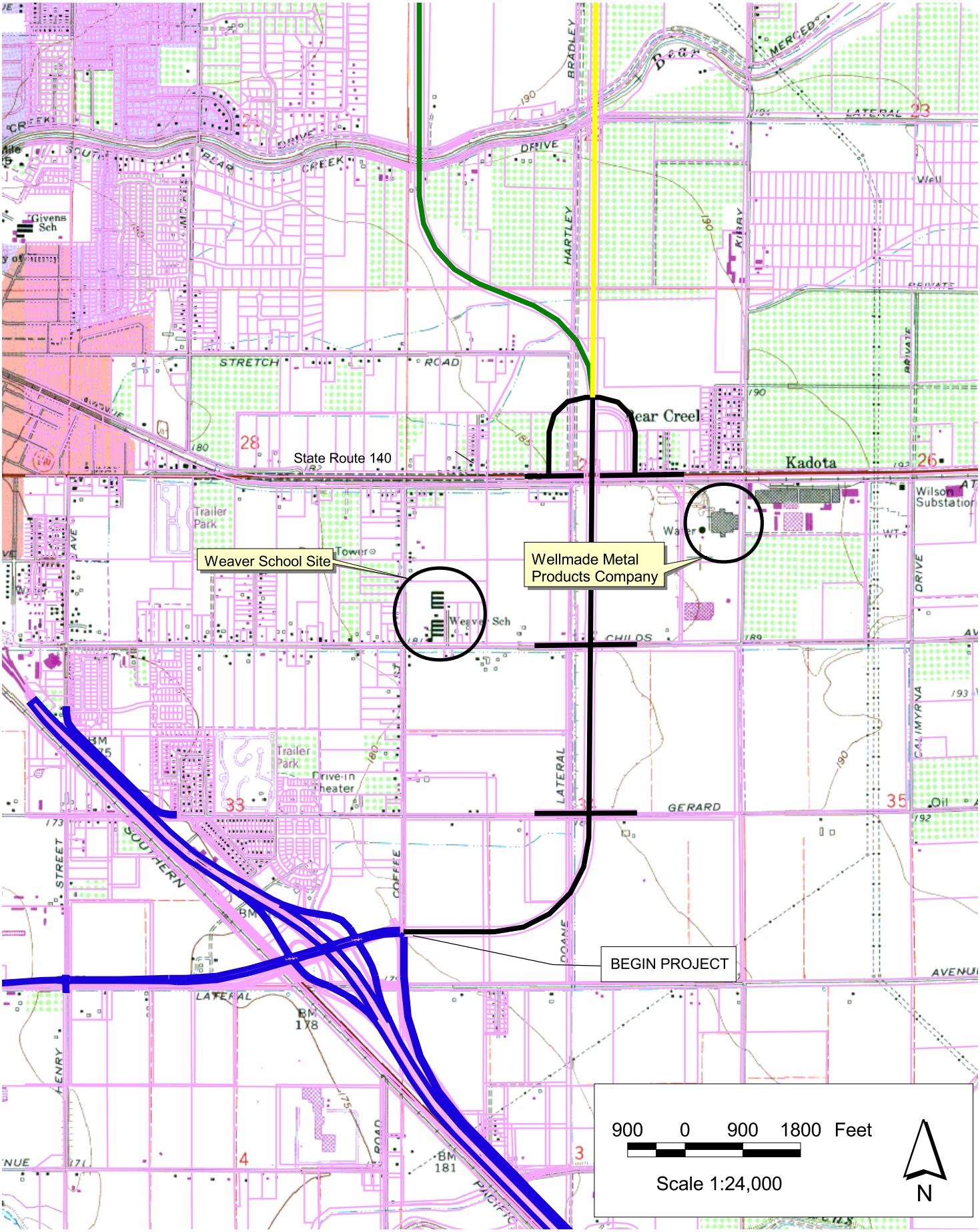
VISTA Site No.[1]	Address	Property Name	Potential Issue
Site 43a (same as 47a,b)	Kibby Rd. at SR 140	General Electric Co. WLMD	Transformer Manufacturer - TCE Contamination
Site 47a (same as 43a & 47b)	1715 North Kibby Rd.	Bechtel, Inc. Kendall	Possible Chemical Manufacturing Plant
Site 47b (same as 43a & 47a)	1715 North Kibby Rd.	Wellmade Metal Products Co.	Metal Coating Services
Site 5 (on Site 54)	Childs Ave. and Coffee Rd.	GAC Groundwater Cleanup System	Groundwater Monitoring for TCE
Site 54	3076 East Childs Ave.	Weaver Elementary School	Closed LUST/UST & GW monitoring[2]

1 Sites organized from north to south. Letter indicates multiple addresses under the same VISTA site number. For details, refer to Appendix A of the ISA report.
2 LUST and GW are abbreviations for "Leaking Underground Storage Tank" and "groundwater," respectively.

General Electric/Wellmade Metal Products (Sites 43a, 47a, and 47b)

The Wellmade Metal Products Company is located at Kibby Road and SR 140. The property is recorded as a metal coating services company; it is about 15 meters (50 feet) from the proposed right-of-way for the Campus Parkway common alignment but will not be acquired. General Electric Company was a former occupant of this site, as was Bechtel, Inc. Kendall Company Plant (as listed in the VISTA databases). This site is recorded as a former transformer manufacturing plant that resulted in a contamination plume (measurable discharge) apparently extending to Weaver Elementary School. This subsurface plume crosses beneath Campus Parkway's common alignment. The chemical of concern is TCE.

Remediation work is ongoing at the Wellmade Metal Products sites under RWQCB oversight. Remediation consists of "air stripping," a process in which air is pumped through subsurface wells and extracted through a device that strips or filters removed pollutants.



Campus Parkway Project	CONTAMINATED SITES OF GREATEST CONCERN	Figure 3.3-1

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Weaver Elementary School (Sites 5 and 54)

Sites 5 and 54 represent Weaver Elementary School and a groundwater cleanup system at the school. Both locations are on an adjacent property approximately 240 meters (800 feet) from the right-of-way of the common alignment. The groundwater cleanup system is run by General Electric and is part of the trichloroethylene (TCE) contamination cleanup of the former General Electric transformer manufacturing plant that was on the corner of Kibby Road and SR 140. This property is listed as having at least one removed leaking UST and contains other aboveground and underground storage tanks.

3.3.2 Permanent and Construction Impacts

Two properties were identified within the project area that appear to be associated with a single hazardous material groundwater contamination issue: the Weaver Elementary School and Wellmade Metal Products properties. Both have a groundwater cleanup system run by General Electric as part of the TCE contamination cleanup of the former General Electric transformer manufacturing plant that was on the corner of Kibby Road and SR 140. These properties are on opposite sides of the common alignment of Campus Parkway (Figure 3.3-1). All parcels between these properties are presumed to have a risk of contamination (Lyons Investments, Parcel No. 61-340-15; Lynn, No. 61-340-09; Verra, No. 61-340-08; Verra, No. 61-310-09; Trejo, No. 61-340-10; and City of Merced, No. 61-340-14). Although the parkway alignment passes over these parcels, the roadway would likely be at-grade or on fill, which would reduce the potential for excavation or disturbance of subsurface soils. Therefore, a potential impact of excavating into these subsurface soils or groundwater and exposing or mixing potentially contaminated materials with construction grading or excavation appears unlikely. However, before any right-of-way acquisition, further investigation or confirmation should be performed to confirm this assumption regarding the extent and nature of contamination in the Campus Parkway right-of-way areas to be acquired.

A potential exists that the status of the other properties identified in the ISA, which are known to contain or to have contained one or more USTs, could change prior to project right-of-way acquisition or construction. These sites were briefly described in Table 3.3-1. It is also possible that farm and household USTs exist that are not covered in the regulatory databases. Contamination issues may also exist from past land use activities, such as historic burn pits or piles, pesticide application, etc., that are outside the scope of the ISA. None of these potential risks have been identified, but they are

noted because unknown contamination might be encountered once subsurface construction work begins.

3.3.3 Avoidance, Minimization, and Mitigation Measures

Before right-of-way acquisition, steps would be taken by Merced County Department of Public Works to verify whether site contamination at properties identified in the ISA report has changed and/or could be affected by construction of the project. These steps apply to the proposed right-of-way acquisition, and would include but are not limited to the following:

- Performance of a Site Investigation focused on the issues identified in the ISA
- Verification of extent of contamination by further review of state and Merced County agency records, if available, and/or subsurface testing
- Location and removal of potential sources of contamination such as USTs, piping, etc.
- Removal of contaminated soil and/or groundwater in the study area
- Control of contaminated soil or groundwater to avoid generation of contaminated spoils during construction
- Inspection of the residential structure that would be acquired for right-of-way to determine whether asbestos-containing material is present, and, if found, removal of the material and disposal to an appropriate landfill

Where contamination is present, a remediation plan that complies with state and federal standards would be developed and implemented in cooperation with the current landowner.

The findings of the investigations for this report should be verified at the time that property is acquired for the Campus Parkway project. Prior to right-of-way acquisition, steps would be taken to confirm the location of existing USTs and associated piping. Removal of tanks, piping, and contaminated soils would be verified. State agency and Merced County Division of Environmental Health records for soil or groundwater contamination, if present, would be reviewed to determine whether the contamination incident has been properly evaluated and monitored or remediated in accordance with state and local laws and regulations. State regulatory agency and Merced County Division of Environmental Health records would be reviewed to verify the status of the site and investigation.

Where previous UST or contamination remediation has taken place in the project area and where construction is involved, a note should be placed in the Resident Engineer's (RE) file to alert construction crews to the possibility of undetected or unknown soil contamination. If odor or fumes are encountered during construction, work should be stopped in the immediate area and the RE informed. All USTs within the right-of-way will be removed and associated contamination will be removed or remediated. Permits must be obtained from appropriate county, state, and local fire protection agencies before removal of USTs. A health and safety plan should also be developed and included for the RE.

Once the final route of Campus Parkway is established and prior to right-of-way acquisition, further verification of potential environmental issues would be conducted. This would include identifying the location and status of farm and household USTs not covered in the regulatory databases, and evaluating potential contamination issues from past land use activities. These verification steps would be determined before right-of-way acquisition and may include:

Farm and Household USTs

- Reviewing regulatory agency files to verify site status
- Conducting interviews with property owners to establish the age, construction, and use of tank(s)
- Estimating distance of tank(s) from right-of-way acquisition and evaluating potential impact to the right-of-way if a leak has occurred
- Taking soil and groundwater samples downgradient, if needed

Pesticide Residues and Previous Agricultural Burn Pits or Piles

- Performing soil sampling and analysis along right-of-way
- Developing a soil management plan for contaminated soils, if any
- Reviewing historic aerial photos or Sanborn Insurance Maps if available

3.4 Air Quality

3.4.1 Affected Environment

Regulatory Background

The project area is subject to air quality planning programs established by the federal Clean Air Act (CAA) of 1970 and the California Clean Air Act (CCAA) of 1988. Both the federal and state statutes provide for ambient (outdoor) air quality standards to protect public health, timetables for progressing toward achieving and maintaining ambient standards, and the development of plans to guide the air quality improvement efforts of state and local agencies. National and state air quality standards have been established for six ambient air pollutants (referred to as criteria pollutants): ozone (O_3), carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). State and national ambient air quality standards for criteria pollutants are listed in Table 3.4-1.

Emissions limitations are typically imposed upon individual sources of air pollutants by local agencies or upon certain large or unique facilities by the USEPA. Mobile sources of air pollutants such as automobiles, aircraft, and trains are controlled primarily through state and federal agencies. Within the project vicinity, air quality is monitored, evaluated, and controlled by the USEPA, the California Air Resources Board (CARB), and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Each agency develops rules and regulations to attain the goals or directives imposed by legislation. The major elements of this air quality regulatory framework are summarized below, as they might pertain to the review of the Campus Parkway project.

The 1990 CAA Amendments require that each state have an air pollution control plan called the State Implementation Plan (SIP). The SIP, which is reviewed by the USEPA, includes strategies and control measures to attain the national ambient air quality standards by deadlines established by the CAA. As described later in this evaluation, federally funded transportation projects such as Campus Parkway must be included in regional transportation planning that demonstrates the achievement of the air quality goals of the SIP. Plans may also include interim milestones for progress toward attainment.

Table 3.4-1 State and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]		San Joaquin Valley State Status/ Classification	San Joaquin Valley National Status/ Classification
		Concentrations[c]	Primary[c, d]	Secondary[c, e]		
Ozone (O_3)	8-hour	0.070 ppm	0.08 ppm	Same as Primary	Nonattainment/ None	Nonattainment/ Serious
	1-hour[f]	0.09 ppm	0.12 ppm		Nonattainment/Severe	Nonattainment/ Extreme
Carbon Monoxide (CO)	8-hour	9.0 ppm	9 ppm	Same as Primary	Attainment/ None	Attainment/ None
	1-hour	20.0 ppm	35 ppm			
Nitrogen Dioxide (NO_2)	Annual Mean	--	0.053 ppm	Same as Primary	Attainment/ None	Attainment/ Unclassified
	1-hour	0.25 ppm	--			
Sulfur Dioxide (SO_2)	Annual Mean	--	0.03 ppm	--	Attainment/ None	Attainment/ Unclassified
	24-hour	0.04 ppm	0.14 ppm	--		
	3-hour	--	--	0.5 ppm		
	1-hour	0.25 ppm	--	--		
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 $\mu g/m^3$	50 $\mu g/m^3$	Same as Primary	Nonattainment/ Serious	Nonattainment/ None
	24-hour	50 $\mu g/m^3$	150 $\mu g/m^3$	Same as Primary		
Fine Particulate Matter ($PM_{2.5}$)	Annual Mean	12 $\mu g/m^3$	15 $\mu g/m^3$	Same as Primary	Nonattainment/ None	Nonattainment/ None
	24-hour	--	65 $\mu g/m^3$			
Lead (Pb)	30-day Avg.	1.5 $\mu g/m^3$		1.5 $\mu g/m^3$	Attainment/ None	Attainment/ Unclassified
	Calendar Quarter	-	1.5 $\mu g/m^3$			

Notes:

[a] California standards other than carbon monoxide, sulfur dioxide (1 hour), and fine particulate matter are values that are not to be equaled or violated. The carbon monoxide, sulfur dioxide (1 hour), and fine particulate matter standards are not to be violated.

[b] National standards other than ozone, the 24-hour $PM_{2.5}$, the PM_{10}, and standards based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the annual fourth highest daily maximum concentration is less than 0.08 ppm. The 24-hour PM_{10} standard is attained when the 99th percentile of 24-hour PM_{10} concentrations in a year, averaged over 3 years, at the population-oriented monitoring site with the highest measured values in the area, is below 150 $\mu g/m^3$. The 24-hour $PM_{2.5}$ standard is attained when the 98th percentile of 24-hour $PM_{2.5}$ concentrations in a year, averaged over 3 years, at the population-oriented monitoring site with the highest measured values in the area, is below 65 $\mu g/m^3$. The annual average $PM_{2.5}$ standard is attained when the 3-year average of the annual arithmetic mean $PM_{2.5}$ concentrations, from single or multiple community oriented monitors is less than or equal to 15 $\mu g/m^3$.

[c] All measurements of air quality are to be corrected to a reference temperature of 25 degrees Celsius (77 degrees Fahrenheit) and a reference pressure of 760 mm of mercury (Hg) (1013.2 millibar). Ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National Primary Standards: The levels of air quality deemed necessary by the federal government, with an adequate margin of safety, to protect the public health.

[e] National Secondary Standards: The levels of air quality deemed necessary by the federal government, to protect the public welfare from any known or anticipated adverse effects to a pollutant.

[f] The 1-hour ozone standard will be replaced by the 8-hour standard on an area-by-area basis when the area has achieved 3 consecutive years of air quality data meeting the 1-hour standard.

ppm = parts per million, $\mu g/m^3$ = micrograms per cubic meter

The USEPA has classified air basins (or portions thereof) as being in "attainment," in "nonattainment," or "unclassified" for each criteria air pollutant, based on whether or not the national ambient air quality standards have been achieved. An area is designated unclassified when insufficient air quality data are available on which to base an attainment or nonattainment designation. The USEPA classifies the San Joaquin Valley Air Basin as being in nonattainment for O_3, PM_{10}, and $PM_{2.5}$ and in attainment or unclassified for NO_x, CO, SO_2, and lead (see Table 3.4-1).

The CARB regulates mobile emissions sources and oversees the activities of county and regional air quality management districts. The CARB regulates local air quality indirectly by establishing vehicle emission standards through its planning, coordinating, and research activities.

California has adopted ambient standards that are more stringent than the national standards for the criteria air pollutants. Under the CCAA, which was patterned after the federal CAA, areas are designated as being in attainment, in nonattainment, or unclassified with respect to the state ambient air quality standards. The CCAA requires that districts design a plan to achieve an annual reduction of 5 percent or more in district-wide emissions for each nonattainment criteria pollutant or its precursor(s). A precursor is a compound that changes when it enters the air and eventually produces air pollutants. For example, organic compounds are precursors for ozone. The San Joaquin Valley Air Basin is in nonattainment for the state O_3, PM_{10}, and $PM_{2.5}$ standards. The air basin is designated an attainment area for state NO_x, sulfur oxides (SO_x), CO, and lead standards (see Table 3.4-1). Sulfates, hydrogen sulfide, and visibility-reducing particles are unclassified in the air basin.

The SJVAPCD has jurisdiction over air quality in the San Joaquin Valley Air Basin and regulates most air pollutant sources except for motor vehicles, locomotives, aircraft, agriculture equipment, and marine vessels. The SJVAPCD, along with the CARB, maintains ambient air quality monitoring stations at numerous locations throughout the air basin to measure criteria pollutant levels. In 1998, the SJVAPCD published the *Guide for Assessing and Mitigating Air Quality Impacts*, which advises local jurisdictions on procedures for addressing air quality in environmental documents. The SJVAPCD has entered into a memorandum of understanding with the MCAG and Council of Fresno County Governments. This memorandum of understanding ensures a coordinated approach in the development and implementation of the transportation plans required by the CCAA and the CAA.

Criteria Pollutants

The major criteria pollutants of concern in the San Joaquin Valley Air Basin are described below.

- O_3 is a secondary pollutant that forms in the atmosphere as a result of the interaction between ultraviolet light, reactive organic gases (ROGs), and NO_x. O_3 at ground level is harmful to the upper respiratory system and the lungs. ROGs and NO_x are generated by motor vehicle exhaust and stationary sources. Air quality programs for O_3 focus on reductions of mobile source emissions. Substantial reductions in O_3 have been achieved through the state-mandated vehicle inspection program.
- ROGs are an important component of ozone formation, and they contain toxic compounds. The primary sources of ROGs are petroleum transfer and storage, mobile sources, and organic solvents. The regional air quality attainment plan contains many control measures to reduce these gases.
- NO_x is created during the combustion of fossil fuels under high temperature and pressure. The major health effect from exposure to nitrogen dioxide is the risk of acute and chronic respiratory disease. This pollutant is in attainment in the regional area, but it contributes to O_3 formation.
- PM_{10} consists of particles in the atmosphere resulting from many sources, including fume-producing industrial and agricultural operations, motor vehicle tires, combustion, atmospheric photochemical reactions, burned agriculture waste, construction activities, and wind-raised dust. High concentrations of particulate matter can result in reduced visibility. Health effects from exposure to high concentrations of particulate matter can include an increased risk of cancer and chronic respiratory disease. Long-term exposure can contribute to altered lung function, including in children. Current standards apply to concentrations of particles that are smaller than 10 micrometers in diameter, which are referred to as PM_{10}.
- $PM_{2.5}$, called fine particulate matter, is formed as a result of fuel combustion from automobiles, wood burning, industrial processes, and diesel-powered vehicles. $PM_{2.5}$ is also formed in the atmosphere when gases such as SO_2, NO_x, and volatile organic compounds (all products of fuel combustion) are transformed in the air by chemical reactions. Fine particulate matter can increase the risk of cancer because it can deposit deep in the lungs and contains chemicals that are particularly harmful to health. Fine particulate matter can also reside in the atmosphere for long periods of time and is the main contributor to reduced visibility.

- CO is an odorless, invisible gas usually formed as the result of incomplete combustion of organic substances. Motor vehicles are a primary source of CO. Effects from exposure to high levels of CO include interference with the transfer of oxygen to the blood, which can cause dizziness and fatigue and impair central nervous system functions. Carbon monoxide tends to dissipate rapidly into the atmosphere. Consequently, violations of the CO standard are generally limited to major intersections during peak hour traffic conditions.
- SO_x can damage and irritate lung tissue, accelerate the corrosion of materials exposed to them and harm vegetation. SO_2 is a colorless gas created by the combustion of sulfur-containing fossil fuels.
- Lead is a metal that was used to increase the octane rating in auto fuel, a practice that is no longer allowed. Lead is a toxin that can adversely affect the nervous, reproductive, and other systems.

New Air Quality Standards

The USEPA has adopted changes, rules, and area designations related to national ambient air quality standards for O_3 and particulate matter (USEPA 1997a,b; 2004). The current standards for O_3 (8-hour) and particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$) (24-hour and annual) are shown in Table 3.4-1. These standards are discussed separately because they have a different regulatory status than previously adopted standards.

The USEPA established a regulatory standard for O_3 in 1997 of 0.08 ppm for the 8-hour measuring period, and 0.12 ppm for the 1-hour measuring period. Of particular concern in setting the standards was evidence that exposure to O_3 can be associated with increased hospital admissions for people with respiratory ailments, including asthma, and with reductions in lung function in children and adults who are active outdoors. Evidence also exists that long-term exposure can cause repeated inflammation of the lungs, impairment of lung defense mechanisms, and irreversible damage in lung structure, leading to premature aging of the lungs and chronic respiratory illnesses (USEPA 1997a).

For particulate matter, the USEPA adopted a 24-hour standard and an annual average standard for the fine fraction of respirable particulate matter, $PM_{2.5}$. The USEPA retained the existing PM_{10} standards but slightly changed the form of the 24-hour PM_{10} standard. The USEPA's review of the particulate matter standard showed that "coarse" respirable particles (2.5 to 10 micrometers in size) can be inhaled and aggravate health problems such as asthma. Therefore, the USEPA chose to retain PM_{10} standards. The

USEPA also reviewed studies providing epidemiological evidence that exposure to particulate matter at levels below the existing PM_{10} standards were associated with increased hospital admissions and premature death. The USEPA found that finer particles (less than 2.5 micrometers in diameter) can penetrate more deeply into lungs than coarser particles and are more likely to contribute to severe health effects (USEPA 1997b). Therefore, the USEPA established new standards for $PM_{2.5}$.

Soon after the promulgation of the new air quality standards, the USEPA's authority to establish these new standards was challenged legally. On May 14, 1999, the federal D.C. Circuit Court of Appeals remanded both the new O_3 and $PM_{2.5}$ standards back to the USEPA for failing to articulate adequately its authority to set the standards (*American Trucking Associations v. U.S. EPA*, 175 F.3d 1027, D.C. Cir. 1999). The USEPA filed a petition for a rehearing on June 28, 1999, with the D.C. Circuit Court of Appeals. The petition was granted in part and denied in part (*American Trucking Associations v. U.S. EPA*, 195 F.3d 4, D.C. Cir. 1999). On January 27, 2000, the USEPA petitioned the U.S. Supreme Court (*Browner v. American Trucking Associations*, No. 99-1257, Sup. Ct. 2000). On February 27, 2001, the U.S. Supreme Court held that the USEPA had authority to issue the new standards and upheld in part and reversed in part the other judgments of the D.C. Circuit Court of Appeals (*Whitman v. American Trucking Associations*, No. 99-1257 and No. 99-1426, Sup. Ct. 2001). The Supreme Court remanded the case back to the D.C. Circuit and the USEPA for proceedings consistent with its opinion. On March 26, 2002, the D.C. Circuit, on remand from the Supreme Court, rejected all remaining challenges (*American Trucking Associations, Inc., et al. v. USEPA*, No. 97-1441, D.C. Circuit 2001).

Following this long sequence of court actions, the federal standards for O_3 and $PM_{2.5}$ set in 1997 remained unchanged. Subsequently, the USEPA focused on implementation actions to meet the standards, and in April 2004, the USEPA issued a final rule classifying areas with regard to achieving the standards. The Merced County area designations for the new federal 8-hour ozone ambient air quality standard has been determined by the USEPA to be serious nonattainment. The area designation for the new federal $PM_{2.5}$ ambient air quality standard is also nonattainment (as of April 2005). Conformity requirements will be effective one year from the date on which area designations are made for each pollutant.

In April 2005, California approved a more restrictive standard for O_3. The new statewide standard for O_3 was set at 0.070 ppm for the 8-hour measuring period (in comparison to the current federal standard of 0.08 ppm).

Existing Air Quality

Air quality in the San Joaquin Valley Air Basin is a function of the criteria pollutants that are emitted locally, the existing regional ambient air quality, and meteorological and topographic factors that influence the intrusion of pollutants from sources outside the immediate vicinity. Dispersion of air pollutants in the northern portion of the San Joaquin Valley is limited by persistent inversions and low surface wind speeds. In the summer, subsiding air from the Pacific high-pressure system produces a persistent regional scale inversion, regularly trapping pollutants and limiting mixing. Light surface winds and the physical barriers of mountain ranges to the east and west channel airflow and limit horizontal dispersion. The primary route of ventilation is southeast over the Tehachapi Mountains to the Mojave Desert. Multiday periods of stagnation occur during summer and winter, causing air pollutant levels to build up to peak concentrations.

The entire San Joaquin Valley, including the project area, has been classified as a severe nonattainment area for O_3 by the USEPA. The USEPA has also designated the San Joaquin Valley as being in serious nonattainment for PM_{10} and nonattainment for $PM_{2.5}$. The CARB has designated this area as being in nonattainment under the California Ambient Air Quality Standards for these same pollutants. A 4-year summary of the measured concentrations of criteria air pollutants in the project area is provided in Table 3.4-2. It is important to note that the designation of an area as in attainment or nonattainment is based on monitored data throughout the air basin, which comprises all counties in the San Joaquin Valley. Thus, although monitoring stations in Merced show no exceedances of certain standards for nonattainment pollutants, monitoring data from elsewhere in the air basin do show exceedances.

As shown in Table 3.4-2, data are not listed for CO as it has not been monitored in Merced County since 1992. Merced County is considered in attainment for CO. Before 1992, Merced County had met standards for CO concentrations, and because Merced County does not have an extremely dense urban area, it was determined that Merced County currently attains standards for CO (Cadrett 2002).

Table 3.4-2 Air Pollutant Data Summary (2002-2005)

Pollutant	Merced – 385 S. Coffee Street			
	2002	2003	2004	2005
Ozone (ppm)				
Highest 1-Hour Concentration	0.14	0.12	0.11	0.10
Days>State Standard	55	54	14	6
Days>National Standard	2	0	0	0
Nitrogen Dioxide (ppm)				
Highest 1-Hour Concentration	0.068	0.063	0.059	0.062
Annual Average	--	--	--	--
Particulate Matter <10 µm (PM_{10}) (µg/m^3)				
Highest 24-Hour Concentration	88	75	47	75
Measured Days > State Standard	14	7	0	5
Measured Days > National Standard	0	0	0	0
State Annual Geometric Mean	39.6	32.7	--	28.6
National Annual Arithmetic Mean	38.8	32.1	--	28.2

Notes:
1. Data obtained from the California Air Resources Board Internet Site.
2. Carbon monoxide is no longer monitored in Merced County.
3. PM_{10} data collected at the 2334 M Street Station in Merced.
4. NO_x levels did not exceed state or federal standards during this period.

ppm = parts per million
µg/m^3 = microgram per cubic meter

3.4.2 Permanent Impacts

Air quality issues relate to a range of different pollutants for which individual regulatory standards are set and compared against. The evaluation of air quality impacts addressed in this section focuses on the project's conformity with the regional air quality framework discussed in Section 3.4.1 and the project's potential to result in an adverse impact to the region's compliance with the relevant standards. Transportation planning takes place at a regional level, and part of this planning process is evaluation of air quality impacts for adoption of funding and priorities for transportation improvements. The MCAG has included the Campus Parkway in all of its required regional, state, and federal transportation planning steps. The Regional Transportation Plan (RTP) is the long-term (20-year) planning document that proposes how federal, state, and local transportation funds will be spent in the region. The Regional Transportation Improvement Program (RTIP) is the region's (MCAG's) formal request and plan for spending state transportation improvement funds over a 5-year planning period. The RTIP is also used to define the regional projects contained in the State Transportation Improvement Program (STIP). Projects in the STIP with identified funding are ultimately advanced to the Federal Transportation Improvement Program (FTIP), which is the 3-year plan for project implementation.

The 2006 RTIP has been updated to include the Campus Parkway expressway with limits from SR 99 to Yosemite Avenue. The Campus Parkway project is also included in the MCAG's 2004 RTP (Appendix C, Local Project Lists) and 2007 FTIP. The FTIP lists the projects included in the MCAG's most recent air quality conformity analysis and describes the current project limits as SR 99 to Yosemite Avenue.[8] MCAG Resolution 2006/07-20-01, which adopted the 2007 FTIP and 2004 RTP on July 20, 2006, included the necessary finding that the projects in the 2007 FTIP and 2004 RTP are from a financially constrained transportation funding program. Consistent with the federal conformity requirements, the MCAG's analysis applied the most recent population and economic growth forecasts.

In summary, the proposed project was included in the MCAG's 2006 RTIP, 2004 RTP, and 2007 FTIP. The MCAG identified the current FTIP and RTP as financially constrained transportation programs when they were evaluated for air quality conformity in 2006. The design concept and scope of the proposed project is consistent with the project description in the current plans, as well as the assumptions in the MCAG's regional emissions analysis. The required regional air quality conformity analysis steps have been completed by the MCAG and other local, state, and federal transportation planning agencies with respect to the Campus Parkway.

The outcome of this process also provides for transportation improvement planning that evaluates the contribution of traffic sources of pollutants (e.g., ROGs, O_3, NO_x, etc.) at a regional level, consistent with the regional nature of air quality issues. Therefore, project-related operational impacts from the emissions of regional pollutants are addressed in the FTIP and RTP. With the RTP and FTIP conforming to the SIP, the proposed project's contribution to increasing regional pollutants would not be considered a substantial impact with the exception of PM_{10}, which is discussed below in "Qualitative PM_{10} 'Hot Spot' Analysis."

In contrast, one pollutant, CO, is of primary concern at a localized level, and its major source is automobiles. Unlike the other criteria pollutants, CO dissipates quickly and is of most concern where people are nearest congested traffic. The discussion of impacts therefore focuses on the project's consistency with regional planning and the potential for CO impacts.

[8] See http://www.mcag.cog.ca.us/docs/2006/07FINALFTIP.pdf

Applicable Air Quality Plans and Conformity to the SIP

Applicable regulatory air quality plans (which are elements of the SIP) are described below. These plans were adopted in response to monitored pollutant levels that did not meet federal standards.

Pollutant	Applicable Implementation Plan or SIP
O_3	2004 State Implementation Plan for Ozone in San Joaquin Valley, approved by the CARB October 2004 and submitted to the USEPA November 2004. February 2005, the USEPA issued approval of motor vehicle emission budgets and adequacy determination for amended SJVAPCD Ozone Rate Progress Plan for transportation conformity purposes.
PM_{10}	2003 PM_{10} Plan, San Joaquin Valley Plan to Attain Federal Standards for Particulate Matter 10 Microns and Smaller, adopted on June 19, 2003, and Regional Transportation Planning Agency Commitments for Implementation, dated April 2003. Amendments to the 2003 San Joaquin Valley Plan to Attain Federal Standards for Particulate Matter 10 Microns and Smaller, adopted December 18, 2003. April 28, 2004, the USEPA finalized approval of provisions of the San Joaquin Valley's 2003 PM_{10} Plan and Plan Amendments as meeting the Clean Air Act requirements for serious PM_{10} nonattainment areas.

As described above, the project has been included in transportation plans and regional transportation air quality analyses that have been determined to conform to federal requirements:

Applicable Transportation Improvement Program	Name and Date
Regional Transportation Plan (RTP)	MCAG Regional Transportation Plan, adopted August 19, 2004
Federal Transportation Plan (FTIP)	MCAG 2007 Final Federal Transportation Improvement Program, adopted July 20, 2006. Includes Campus Parkway as a new arterial from SR 99 to Yosemite Avenue.

Section 176(c) of the CAA Amendments require that federally funded or approved transportation plans, programs, and projects conform to the SIP, which contains the controls necessary for the state to meet the National Ambient Air Quality Standards. The USEPA promulgated 40 CFR Parts 50 and 93 to implement Section 176(c) of the CAA Amendments. Funding for the project would come from Merced County and federal TIP sources and is planned for in the RTP.

The FTIP and RTP provide for timely or prompt use of transportation control measures and contribute to annual reductions in volatile organic compounds, NO_x, PM_{10}, and CO emissions. The MCAG and the FHWA have demonstrated that the RTP and FTIP conform to the SIP. The proposed project design and scope described in the FTIP and the RTP and evaluated in this analysis have not changed since the FTIP and RTP were found to conform to the SIP. This determination or conformity to the SIP is based on the latest planning assumptions regarding land use and travel forecasts. Comparison of

the project corridor to other more severely congested roadway segments indicates that CO concentrations attributable to the proposed project would not increase the number or severity of exceedances of the National Ambient Air Quality Standards. Therefore, under 40 CFR Part 93, the Campus Parkway project is found to be in conformance with the SIP.

Traffic-Related CO Impacts: Methodology

The county analyzed localized CO air quality impacts for the three proposed alignments for Campus Parkway. Operational CO impacts for the project's 2025 Design Year were assessed under two development scenarios: anticipated future land uses with the UC Merced Campus and University Community and without the UC Merced Campus and University Community. The impact assessment for the development scenario that includes the UC Merced Campus and University Community (referred to as Cumulative Operations) is for cumulative impacts. Cumulative impacts are further discussed in Section 3.22.4. The impact assessment for the development scenario without the UC Merced Campus and University Community (referred to as Project Operations) incorporates traffic volumes from the MCAG model for anticipated future land uses and roadway facilities for Merced County. All traffic modeling and volumes were developed in the Campus Parkway Traffic Operations Analysis (Dowling 2001).

The CO impacts analysis followed the procedures in *Transportation Project-Level Carbon Monoxide Protocol*, prepared by the University of California, Davis, Institute of Transportation Studies (CO Protocol). This protocol applies screening procedures, based on the attainment status of the area in which the project is planned, to evaluate potential CO impacts of the project and assess the need for any further detailed analysis.

Merced is in attainment for CO, as discussed in Section 3.4.1. For projects in CO attainment areas, the first level of analysis outlined by the CO Protocol is to determine if the project would lead to an increase in localized CO emissions. This is performed by comparing traffic volumes and other variables that affect air quality between Project and No Project scenarios. For the Campus Parkway project, the No Project scenario would result in no new roadway, wherein no cars or other CO-emitting vehicles would regularly operate along the Campus Parkway corridor. Therefore, Campus Parkway would increase CO emissions along the new roadway corridor when compared to the No Project scenario.

The next level of analysis described by the CO Protocol evaluates whether the project would potentially create CO concentrations higher than those existing within the region at the time that CO attainment was demonstrated. This relies on a comparative analysis between the proposed project and a similar, existing roadway in the same air basin. This analysis is used to determine the potential for higher CO concentrations that might occur from the proposed project. The currently existing roadway used for comparison is referred to as the "worst case" roadway. This comparative analysis evaluates the following criteria:

- "Air quality sensitive receptor" locations (homes, schools, etc.) are the same distance or farther from the roadway than the receptor locations at the "worst case" roadway in the attainment area.
- The proposed roadway traffic volumes are the same or lower than those of the worst case roadway.
- Meteorological conditions at each location are similar.
- The percentage of vehicles operating in cold start mode is the same or lower for the proposed project when compared to the worst case roadway in the attainment area.
- The percentage of heavy-duty gasoline trucks for the proposed project is not greater than that for the worst case roadway.
- The background concentration in the proposed project area is the same or lower than that in the area of the worst case roadway.

If the proposed project satisfies the above conditions, it would not lead to a violation of the CO standards. This is because the worst case roadway currently existing in the attainment area does not cause CO concentrations to exceed the ambient standards, and the proposed project's CO impacts would be lower.[9] The impact is not considered adverse and no further analysis, such as a microscale CO model, is required. For the Campus Parkway project, the intersection and mainline section (a roadway segment between two intersections) with the highest traffic volumes would potentially produce the highest CO concentrations.

[9] CO is not a pollutant that accumulates in an air basin over time. Localized hot spots of concentrated CO are of most concern for impacts from CO.

Traffic-Related CO Impact Analysis

Traffic conditions for the proposed project were compared to traffic conditions at two similar traffic roadways: the mainline roadway of SR 152, west of the I Street intersection in the City of Los Banos (worst case mainline) and the intersection at Olive Avenue and R Street in the City of Merced (worst case intersection). These two roadways qualify as worst case because they meet the criteria outlined in the CO Protocol and repeated in the above methodology section.

Mainline CO Comparison Analysis

The mainline section of the Green Alignment between Olive Avenue and SR 140 (mainline study area) has the highest daily traffic volume and is therefore used for comparison to the worst case mainline facility.

Each subsection of the comparison analysis between the mainline study area and the worst case mainline is described below:

- **Receptor Locations**. Receptor locations are as close or closer to the worst case mainline than those projected to be adjacent to the mainline study area, based on planned land uses.
- **Traffic Volumes**. Daily traffic volumes are 18,100 vehicles for the mainline study area and 28,000 vehicles for the worst case mainline (Caltrans 2002). Daily traffic volumes at the worst case mainline are greater than those at the mainline study area.
- **Meteorology**. The meteorological conditions of the worst case mainline are the same as those for the mainline study area. The two traffic facilities are located in the San Joaquin Valley, approximately 48 km (30 miles) apart.
- **Percentage of Vehicles Operating in Cold-Start Mode**. The percentage of vehicles operating in cold-start mode is not expected to be substantially different for the proposed project than that for the worst case mainline. At maximum, each can expect 10-15 percent of vehicles operating in a cold start mode (UC Davis 1997).
- **Percentage of Heavy-Duty Gas Trucks**. Because of denser urban land uses surrounding the worst case mainline and the fact that the worst case mainline roadway is a main roadway through the City of Los Banos, more heavy-duty gas trucks would be present on the worst case mainline than on Campus Parkway.
- **Background CO Concentrations**. Background CO concentrations would be higher at the worst case mainline than at the mainline study area because the land

uses surrounding the worst case mainline are denser than the predicted land uses surrounding Campus Parkway.

The mainline section of the Green Alignment between Olive Avenue and SR 140 of Campus Parkway, which is predicted to have the highest mainline daily traffic volumes for the project, satisfies the comparison analysis conditions listed above. Therefore, the mainline section of the proposed project would not lead to a violation of the CO standards.

Intersection CO Comparison Analysis

The intersection of SR 140 and the connector to Campus Parkway for the Green Alternate (study intersection) has the highest predicted peak hour traffic volume in the project area (p.m. peak hour). The comparison analysis was conducted between the study intersection and the worst case intersection.

Each subsection of the comparison analysis between the study intersection and the worst case intersection is described below:

- **Receptor Locations**. Receptor locations are as close or closer to the worst case intersection than those projected to be adjacent to the study intersection, based on planned land uses.
- **Traffic Volumes**. Peak hour traffic volumes are 2,290 vehicles for the study intersection and 3,998 vehicles for the worst case intersection (Fehr and Peers 2001). Peak-hour traffic volumes at the worst case intersection are greater than those at the study intersection.
- **Meteorology**. The meteorological conditions of the worst case intersection are the same as those for the study intersection. The two intersections are located in the San Joaquin Valley, approximately 6 km (4 miles) from each other.
- **Percentage of Vehicles Operating in Cold-Start Mode**. The percentage of vehicles operating in cold-start mode is expected to be much higher at the worst case intersection. According to guidance provided in the CO protocol, at the worst case intersection, up to 40 percent of the vehicles using the intersection can be expected to operate in cold-start mode. At maximum, the study intersection can expect 10-15 percent of vehicles operating in cold-start mode (UC Davis 1997).
- **Percentage of Heavy-Duty Gas Trucks**. Because of denser urban land uses surrounding the worst case intersection, more heavy-duty gas trucks would be present at the worst case intersection than at the SR 140/Campus Parkway intersection.

- **Background CO Concentrations**. Background CO concentrations would be higher at the worst case intersection than at the study intersection because the land uses surrounding the worst case intersection are denser than the predicted land uses surrounding Campus Parkway.

The intersection of SR 140 and the connector to Campus Parkway for the Green Alternate, which is predicted to have the highest intersection peak hour traffic volumes for the Campus Parkway project (p.m. peak hour), satisfies the conditions listed above. Therefore, the intersections of the proposed project would not lead to a violation of CO standards.

Since the proposed project would not have any intersections or mainline segments that would violate CO standards, according to the guidance of the CO protocol, impacts from the introduction of CO by the proposed project would not be adverse.

Qualitative PM_{10} Hot-Spot Analysis

This section describes the qualitative assessment of the project with regard to potential violations of the federal PM_{10} standards ("hot spots") due to operation of the proposed project. A qualitative PM_{10} hot-spot analysis or discussion is required for transportation projects that are funded or approved by the FHWA or the FTA and are in federal PM_{10} nonattainment or maintenance areas. Both of these criteria apply to this project.

The hot-spot evaluation methods allow for a qualitative assessment of the project and its setting against several measures that would indicate the potential to cause a new PM_{10} violation or increase the severity of an existing violation. The following three applicable criteria are addressed:

1. Monitored PM_{10} concentrations near the project location do not currently exceed federal PM_{10} standards.

2. The Campus Parkway project in the project design year (2025) has lower vehicle volumes than a worst-case roadway, where nearby monitors show no federal PM_{10} violations.

3. The Campus Parkway project would reduce regional vehicle miles traveled (VMT) and move traffic away from local streets and onto the parkway.

Project Vicinity PM_{10} Concentrations

Monitored PM_{10} concentrations at the Merced M Street air monitoring station are summarized in Table 3.4-2. The table shows that in the most recent years of monitoring (2001–2004), PM_{10} concentrations in the project vicinity did not exceed the federal standards.

Comparison of Campus Parkway to State Route 99

The daily traffic volumes on Campus Parkway were compared to daily volumes on State Route (SR) 99 near Merced. SR 99 represents the worst-case roadway, as its daily traffic volumes (49,000) are higher than those predicted for Campus Parkway (18,100) in the year 2025. With the Green Alignment, the segment with the highest daily volumes is between Olive Avenue and SR 140, at 18,100 vehicles per day.

Daily traffic volumes on SR 99 were obtained from the Caltrans "Traffic and Vehicle Data Homepage." The average daily traffic volumes on the segment of SR 99 between J Street and R Street are 48,000 vehicles per day. These volumes are greater than those predicted on the most heavily traveled portion of Campus Parkway (18,100 vehicles per day).

The air monitoring station that reports PM_{10} concentrations in Merced is located at 2334 M Street, about 1.2 km (0.75 mile) from the segment of SR 99 between J Street and R Street. The PM_{10} concentrations at this station do not exceed the federal PM_{10} standards of 150 micrograms per cubic meter ($\mu g/m^3$) for the 24-hour average or 50 $\mu g/m^3$ for the annual average (Table 3.4-2).

Decrease in Regional VMT

The proposed project would result in a decrease in regional VMT by moving traffic from local streets onto Campus Parkway. Insufficient connectivity currently exists to the northern and eastern parts of Merced, as stated in Chapter 2. The proposed project would provide connectivity, reducing the distance traveled along arterial streets. The decrease in VMT is summarized in Section 3.16.

Diesel Toxics Analysis

The CARB has found that diesel particulate matter such as $PM_{2.5}$ poses the greatest cancer risks among all identified air toxics. Diesel trucks contribute more than half of the total diesel particulate emissions, with the remainder coming from stationary and other diesel combustion sources. However, the CARB has adopted a Diesel Risk Reduction Plan (DRRP) with control measures that would reduce the overall diesel PM emissions by about 85 percent from 2000 to 2020. In addition, total toxic risk from

diesel particulate matter is a function of lifetime exposure, and most sensitive receptors of diesel exhaust may only be exposed for a much shorter duration. Further, diesel particulate matter is only one of many environmental toxics, and its cancer risks may be overshadowed by those of other toxics and other pollutants in various environmental media. Thus, while diesel exhaust may pose potential cancer risks, most receptors' short-term exposure may only cause minimal harm, and these risks would also greatly diminish in the future operating years of the project due to planned emission control regulations.

While no quantitative tools currently exist to assess the project's air toxics impact, potential impacts from the project can be evaluated by qualitatively comparing the build scenario to the no-build scenario. It was concluded that the project would not cause any additional negative air toxics impact, based on the following comparisons:

- No substantial increase in truck traffic would take place in the build scenario compared to the no-build scenario.
- The build scenario would reduce congestion levels and stop-and-go conditions and change them into more free-flowing conditions, and should therefore decrease the acceleration events that cause the highest per-vehicle exhaust emissions. Total vehicle miles traveled with the project alternatives are less than with the no-build scenario.
- All sensitive receptors would be at least as far away or farther away from the roadway in the build scenario than in the no-build scenario.

$PM_{2.5}$ Hot-Spot Conformity Requirements

In March 2006, the USEPA and the FHWA issued guidance for determining which transportation projects must be analyzed for particulate matter impacts. A "hot-spot" analysis involves an estimation of future pollutant emissions on a small scale or project-level basis as a means of demonstrating whether state and local air quality goals can be achieved within an overall air quality nonattainment or maintenance area. According to the guidance, $PM_{2.5}$ hot-spot analyses are required for all projects in nonattainment areas that qualify as "Projects of Air Quality Concern." The Campus Parkway project is within the San Joaquin Valley $PM_{2.5}$ nonattainment area.

The MCAG reviewed the Campus Parkway project against criteria set forth in the guidance to determine whether it would qualify as a Project of Air Quality Concern. The MCAG determined that project's estimated maximum of 25,000 annual average daily traffic (AADT) and 10 percent diesel truck traffic (250 trucks per day) in the

year 2030 would not exceed the conformity guidelines of 125,000 AADT and 8 percent diesel truck traffic (10,000 trucks per day). In addition, the MCAG determined that the project would improve levels of service at some intersections, relieve congestion, and provide air quality improvement. On June 16, 2006, the MCAG issued a memorandum documenting the finding that the Campus Parkway project is not a "Project of Air Quality Concern" (included in Appendix A). The memorandum was transmitted to the San Joaquin Valley Transportation Director's Association Model Coordinating Committee via e-mail for review and concurrence on July 25, 2006. The San Joaquin Valley Unified Air Pollution Control District, the USEPA, and the FHWA concurred with the assessment (see Appendix A); no additional interagency comments were received.

Potential Airborne Asbestos Impacts

Naturally Occurring Asbestos

The proposed project is not located in an area with naturally occurring asbestos. A figure obtained from the California Division of Mines and Geology report, *A General Location Guide for Ultramafic Rocks in California—Areas More Likely to Contain Naturally Occurring Asbestos* (Open File Report 2000-19), shows that the project area has no naturally occurring asbestos.

Structural Asbestos

The demolition of any structures as part of the proposed project could result in exposure of airborne asbestos, if asbestos is present in the structure. One single-family residence would be removed as part of the proposed project. Whether any asbestos-containing materials are present in the residence is unknown at this time. At the time of property acquisition, the property would be evaluated for the presence of asbestos-containing materials. If found, appropriate asbestos-removal measures would be followed and the material would be disposed of in a licensed landfill.

Potential Localized Exposure to Air Emissions and Related Health Concerns

The project would construct a new expressway in eastern Merced County and result in shifting traffic patterns within the existing roadway network. As a result, total vehicle emissions would change for the regional area, and exposure to vehicle emissions may increase or decrease depending on location with respect to the changes in traffic within the roadway network. Emissions from vehicles dissipate quickly with distance, but higher exposure could occur within proximity of the roadway depending on wind and weather conditions. The highest exposure to new traffic and its emissions with the

project would be directly adjacent to the Parkway alternatives, or along the primary roadways connecting to the Parkway. The CARB guidance for the protection of public health indicates that localized impacts are of particular concern within 150 meters of high-volume roadways (roads carrying over 100,000 trips per day, or 20,000 truck trips per day). Campus Parkway would carry volumes well below these thresholds, in the range of 11,000 to 21,000 vehicles per day (see Table 2.3-1). Overall (within Merced County and the City of Merced), total vehicle miles would decline with any of the three build alternatives in comparison to the No Action alternative.

Conclusion

The proximity of SR 99 to the monitoring station on M Street does not cause a federal PM_{10} violation. The daily traffic volumes predicted for Campus Parkway are less than those predicted for existing similar roadways; therefore, Campus Parkway should not contribute to a new PM_{10} violation. In addition, the project is included in a conforming FTIP so its emissions have been included in the regional air quality planning. PM_{10} control measures in the 2003 regional PM_{10} plan were reviewed and none apply to operation of a roadway. Since the project has been included in the RTP and FTIP, its emissions are part of an overall budget that would allow the region to progress toward attainment of the PM_{10} standards. Regarding the emissions of diesel particulate matter, the project would not cause a substantial increase in truck traffic, and the project would reduce overall congestion and vehicle miles traveled compared with the no-build scenario and thus also reduce diesel emissions. Project construction would not be within a known area of naturally occurring asbestos soils or rock, and the potential for disturbing asbestos in building materials is minimal and will be contained and mitigated during construction.

3.4.3 Construction and Other Temporary Impacts

Construction is a source of dust emissions that can have temporary impacts on local air quality (i.e., that exceed state air quality standards for PM_{10}). Construction emissions would result from earth moving and heavy equipment use involved in land clearing, ground excavation, cut and fill operations, and the construction of the project facilities. Dust emissions would vary from day to day depending on the level of activity, the specific operations, and the prevailing weather.

In addition to particulate emissions from earth moving, combustion emissions (NO_x, ROGs, PM_{10}, and CO) from fuel-powered construction equipment may create a

temporary impact on local air quality. Such equipment is typically diesel-fueled and can contribute NO_x and PM_{10} emissions during the construction period.

The SJVAPCD CEQA Guidelines do not require quantification of construction emissions. Instead, the emphasis is on mitigating this type of temporary impact. SJVAPCD Regulation VIII specifies mitigation measures for reducing impacts from construction-related PM_{10} emissions. If the project follows the practices described in Regulation VIII, the impact would not be considered substantial. The SJVAPCD CEQA Guidelines significance thresholds of 10 tons per year for NO_x and ROGs (ozone precursors) apply to operational impacts rather than construction impacts (SJVAPCD 1998).

3.4.4 Avoidance, Minimization, and Mitigation Measures

Construction

As discussed in Section 3.4.3, impacts from dust generated by excavation and construction activities would be localized and of a temporary nature. Dust control practices would be employed to minimize or avoid potential exceedances (violations) of the PM_{10} air quality standard during construction as required by SJVAPCD Regulation VIII. As part of this measure, the County's contractor would prepare and submit a Dust Control Plan prior to the start of construction. This plan would be required as part of the construction contract. The Dust Control Plan would identify each dust control measure to be implemented including, but not limited to, the following:

- Apply water or chemical dust suppressants and restrict construction activities to limit visible dust emissions to 20 percent opacity.
- Limit areas to be disturbed at any one time.
- Limit areas to be cleared to facilities required for the project and necessary equipment and material stockpile areas.
- Plant erosion control material on exposed slopes.
- Ensure off-site haul trucks have a freeboard space of not less than 15 cm (6 inches) with water applied on top of the load. Otherwise, cover haul trucks with a tarp or other suitable cover.
- Limit the speed of construction equipment and vehicles on unpaved access/haul roads within the construction site to 24 km per hour (15 miles per hour) and post speed limit signs at the access/haul road entrance(s).
- Remove all visible trackout at the end of the workday.

In addition, pollutant emissions in construction equipment exhaust can be mitigated by the following measures, recommended by the SJVAPCD, and should be considered in the development of the Plans, Specifications, and Estimates for the project.

- Use CARB-certified alternative fueled engines in construction equipment, which may consist of compressed natural gas, propane, electric motors, or other CARB-certified off-road technologies .
- Use engines that meet the current off-road engine emission standard (as certified by the CARB), or be re-powered with an engine that meets this standard. Tier I and Tier II engines have substantially less NO_x and particulate matter emissions compared to uncontrolled engines.
- Diesel equipment should use alternative diesel fuel blends, biodiesel, or ultra low sulfur diesel (ULSD) that have been verified by the CARB.
- Apply idle reduction technologies to save fuel and reduce diesel emissions from idling trucks and construction equipment.
- Shut off diesel engines when not in use on the premises to reduce emissions from idling.
- Light-duty cars and trucks used at the job site should be alternative-fueled or hybrids.

During the review of the Draft EIS/EIR, the SJVAPCD identified a number of rules that may apply to specific activities that may or may not be necessary with this project. The following activities and rules could apply.

- Burning of agricultural land: Clearance of the right-of-way is normally performed with mechanical methods and equipment; SJVAPCD Rule 4103 also does not allow burning for conversion of agricultural land.
- Asphalt paving: Paving operations are subject to SJVAPCD Rule 4641, which restricts the use of certain asphalt types.
- Removal of asbestos (from demolition of any structures): Structures are checked for the presence of asbestos (used in certain old building materials) before or during the right-of-way acquisition process. SJVAPCD Rule 4002 would apply to the handling of materials under such circumstances.
- Portable concrete batch plant: A SJVAPCD permit would be required by the contractor.

Operation

The operation of the proposed project is not expected to have a substantial impact on air quality. Therefore, no project-specific air quality-related mitigation measures are required.

3.5 Noise

This section discusses the evaluation of noise impacts to potentially noise-sensitive land uses along the proposed Campus Parkway.

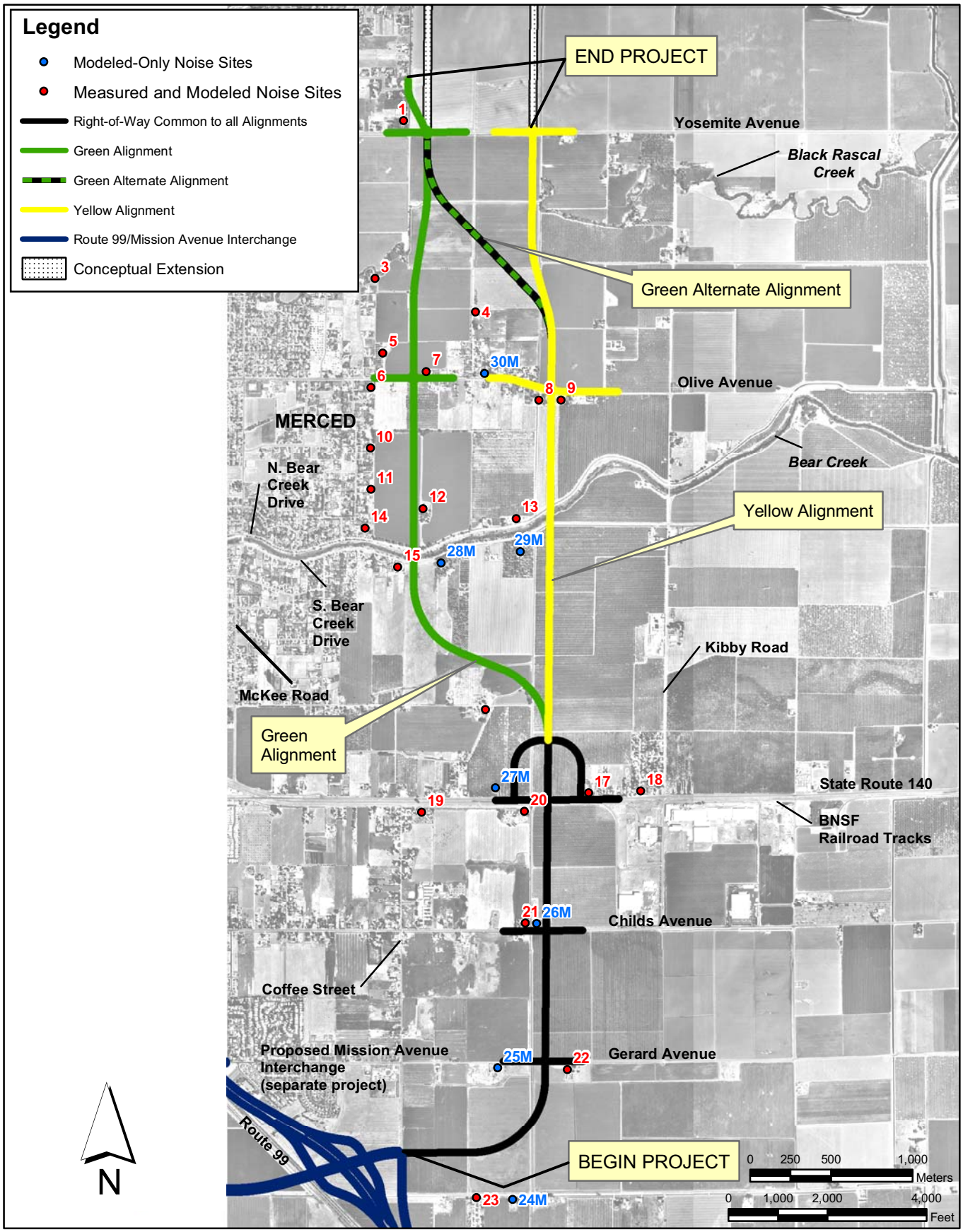
3.5.1 Affected Environment

Land uses in the project area consist primarily of agricultural, rural residential, low density, and planned industrial. North of SR 140, several tracts of homes as well as individual residences are separated from one another by open fields and large distances. South of SR 140, the residences are either widely separated from one another or grouped in clusters (such as at the community of Celeste at Kibby Road and SR 140). Industrial, regional/community commercial, and business park uses also exist in the southern portion of the project area.

To characterize existing noise levels for a transportation noise study, ambient (exterior) noise level measurements are taken at locations representative of the land uses and terrain along each proposed alignment. Both short-term (about 10 to 20 minutes duration) and long-term (24-hour) readings are taken. The long-term readings show when a peak noise level occurs within the 24-hour day. This peak noise reading is then used to determine the difference in decibels between the short-term and long-term readings at all of the measured sites. This difference, or "correlation factor," is applied in the impact analysis (discussed in the following sections) to determine a potential peak noise level with the project.

Ambient noise levels were measured on December 4 and 5, 2001, at representative noise-sensitive land uses throughout the project area. Measurement sites are shown in Figure 3.5-1. Short-term (less than 1 hour in duration) noise measurements were conducted at 22 sites.[10] Two or more separate measurements were conducted at each site except for one, where the second measurement was suspended because of unfavorable weather conditions. The short-term noise measurement data are presented in Table 3.5-1.

[10] Initially, 23 measurement sites were planned; however, permission to conduct measurements at Site 2 could not be obtained as the owner was not present during the field visits. It was determined based on observations that this area was adequately represented by other measurement sites (for example, Site 1). Consequently, Site 2 is not shown in Figure 3.5-1 or included in the tables in this section.



URS Corporation X:\x_env_permit\Campus_parkway\GIS_Data\MXD\092403_redo\fig_3.5-1_Noise_Measurement_and_Modeling_Locations_in_the_Natural_Resources_Study_Area_092403.mxd Date: 9/24/2003 8:59:49 AM Name: DTWood

Campus Parkway Project	NOISE MEASUREMENT AND MODELING LOCATIONS	Figure 3.5-1

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Table 3.5-1 Short-Term Noise Measurement Data Summary Campus Parkway Noise Study

Segment	Site No.	Nearest Project Alignment	Address	Location	Count 1 L_{eq} (dBA)	Count 2 L_{eq} (dBA)	Count 3 L_{eq} (dBA)
N. of Yosemite Avenue	1	Green	2966 University Ave.	Adjacent to side yard	62.5	61.0	NA
Yosemite Avenue to Olive Avenue	3	Green	2813 Leaf Dr.	Rear yard	35.2	36.6	NA
	4	Green Alternate	2310 Leeds Rd.	Side yard	39.4	37.9	NA
	5	Green	2891 Olive Ave.	Side yard	40.7	40.6	NA
	7	Green	3090 Olive Ave.	Rear yard	51.7	50.9	NA
Olive Avenue to SR 140	8	Yellow	3481 Olive Ave.	Rear yard	49.5	51.2	NA
	6	Green	3084 Whitegate Dr.	Rear yard	46.2	47.0	NA
	11	Green	2920 Whitegate Dr.	Rear yard	41.0	42.9	NA
	12	Green	3066 N. Bear Creek Rd.	Front yard	47.9	46.5	NA
	14	Green	2872 Whitegate Dr.	Rear yard	37.8	39.6	NA
	15	Green	2946 Bear Creek Rd.	Side yard	47.7	47.3	NA
	16	Green	3435 Stretch Rd.	Rear yard	43.2	43.3	NA
	9	Yellow	3595 Olive Ave.	Side yard	56.7	57.8	NA
	13	Yellow	3356 N. Bear Creek Rd.	Front yard	47.0	47.2	NA
	17	Common	3700 E. SR 140	Side yard	65.6	63.6	NA
	18	Common	SR 140 at Easy St.	Front yard	65.4	NA	NA
SR 140 to Childs Avenue	19	Common	3057 Baker Dr.	Front yard	51.7	53.1	NA
	20	Common	3461 Baker Dr.	Front yard	51.5	50.1	NA
	21	Common	Between 3464 and 3474 Childs Ave.	Side yard	58.0	58.6	NA
South of Childs Avenue	22	Common	3663 Gerard Ave.	Front yard	53.0	49.3	51.3
	23	Common	1022 Lawndale Ave.	Rear yard	56.9	53.9	53.5

NA = Not applicable. Two or more short-term noise readings were recorded as necessary per protocol, except location 18 where the second reading was suspended due to unfavorable weather conditions.

The measured ambient noise levels in the project area varied from 35 A-weighted decibels (dBA) to 66 dBA Equivalent Sound Level (L_{eq}).[11] Two long-term (24 hours or more in duration) noise measurements were also conducted and used to estimate the daytime noise levels at the short-term measurement sites. The long-term noise data are

[11] L_{eq} is the equivalent fluctuating sound over a measured time period (e.g., 1-hour L_{eq} or 24-hour L_{eq}). This descriptor is typically used in transportation projects by Caltrans and FHWA. L_{dn} is the Night-Day Average Sound Level over a 24-hour period, with a 10 dBA "penalty" added during nighttime hours to account for greater noise sensitivity. This descriptor is used by Merced County and City.

summarized in Table 3.5-2. Based on the long-term noise data, existing peak-noise hour noise levels were estimated for each of the measurement and modeled sites.

Table 3.5-2 Long-Term Data Measurement Summary

LT-North (Measurement Site 10)
Measurement Date: 12/4/01 - 12/05/01

Time	1 hr L_{eq} (dBA)
Overall	--
12:00	48.4
13:00	45.4
14:00	47.0
15:00	41.1
16:00	44.7
17:00	41.7
18:00	44.4
19:00	42.2
20:00	42.6
21:00	45.6
22:00	44.4
23:00	41.4
0:00	44.3
1:00	47.9
2:00	45.1
3:00	48.0
4:00	49.2
5:00	49.4
6:00	49.3
7:00	48.1
8:00	45.1
9:00	47.2
10:00	46.8
11:00	45.3
12:00	42.8
Overall	
Max L_{eq} (dBA)	49.4
Min L_{eq} (dBA)	41.1
Avg L_{eq} (dBA)	45.6
L_{dn} (dBA)	48.4
Delta (Max L_{eq} - L_{dn})	1.0

LT-South (Measurement Site 21)
Measurement Date: 12/4/01 - 12/05/01

Time	1 hr L_{eq} (dBA)
Overall	--
12:00	58.5
13:00	59.4
14:00	60.3
15:00	60.8
16:00	59.8
17:00	59.7
18:00	58.3
19:00	56.8
20:00	57.6
21:00	55.8
22:00	55.5
23:00	54.3
0:00	53.6
1:00	53.4
2:00	54.6
3:00	52.9
4:00	54.3
5:00	56.1
6:00	58.7
7:00	60.4
8:00	59.6
9:00	61.2
10:00	60.5
11:00	60.1
12:00	59.3
Overall	
1 hr L_{eq} (dBA)	61.2
Min L_{eq} (dBA)	52.9
Avg L_{eq} (dBA)	57.6
L_{dn} (dBA)	58.5
Delta (Max L_{eq} - L_{dn})	2.7

Noise Assessment Criteria

The Caltrans noise policies set forth in the *Traffic Noise Analysis Protocol for New Highway and Construction and Reconstruction Projects* (Caltrans 1998a) was used as guidance for analyzing noise. These policies fulfill the highway noise analysis and abatement/mitigation requirements for all relevant state and federal environmental

statutes.[12] The Caltrans *Technical Noise Supplement* (Caltrans 1998b) establishes guidelines for construction of noise barriers along highways where sensitive receptors (e.g., residences) are located. Under FHWA and Caltrans policies, noise barriers should be considered for transportation improvement projects when the following criteria are met:

(1) The predicted worst-case hourly noise level is expected to approach or exceed FHWA noise abatement criteria (e.g., 67 dBA L_{eq} for residences or other Category B land uses). Under current Caltrans policy, a noise level of 66 dBA is considered to approach the Noise Abatement Criteria (NAC) of 67 dBA. Table 3.5-3 describes the FHWA's NAC Activity Categories. Therefore, locations where future noise levels are predicted to equal or exceed 66 dBA are identified as approaching or exceeding the NAC.

Table 3.5-3 Noise Abatement Criteria

Activity Category	Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	—	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools Churches, libraries, hospitals, and auditoriums.

Hourly A-Weighted Sound Level – Decibels (dBA)
Federal-Aid Highway Program Manual Vol.7, Chapter 7
Transmittal 348, August 9, 1982 Sec. 3, Attachment

(2) Regardless of whether the worst-case noise level approaches or exceeds the NAC, a location would be impacted if the ambient noise levels would increase substantially. Caltrans considers an increase of 12 dBA to be substantial.

(3) A feasible noise barrier must provide a minimum noise reduction of 5 dBA to achieve a noticeable change in noise level.

[12] These policies include 23 CFR Part 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise."

(4) A reasonable noise barrier must be cost effective and should consider the number of residences that would benefit from the barrier(s).

The noise barrier must interrupt the line of sight between the noise source and the receptor.

The Caltrans and FHWA requirements were the primary criteria used in the noise analysis. However, Merced County also has noise evaluation criteria applicable to local planning. Merced County requires new residential land use projects to be located where noise would not exceed an existing or projected future exterior noise level standard of 65 dBA Night-Day Average Sound Level (L_{dn}) and an interior noise level standard of 45 dBA L_{dn}. Additionally, existing residential land use areas that are or would be exposed to exterior noise levels of 65 dBA L_{dn} or greater are considered "noise impacted" and must be reviewed by Merced County to identify possible means of noise level reduction (Merced County 1990). Applying these criteria, a land use was considered impacted by the project if the changes in traffic noise levels resulted in any of the following:

- An increase in noise that causes the county thresholds to be exceeded by 3 dBA or more
- An increase of 3 dBA where noise levels without the project are above county thresholds (65 dBA for residential and 70 dBA for parks)
- An increase of 5 dBA where noise levels without the project are 50 to 65 dBA L_{dn} for residential uses
- An increase of 10 dBA where noise levels without the project are less than 50 dBA L_{dn} for residential uses

3.5.2 Permanent Impacts

Traffic noise impacts were evaluated against FHWA, Caltrans, and Merced County noise impact criteria and modeled for 29 representative noise-sensitive receptors. Traffic data from the project's Traffic Operations Report (Dowling 2001) were used for the noise study.

Noise Impacts Using FHWA/Caltrans Criteria

Table 3.5-4 identifies where the predicted noise level for Campus Parkway (labeled "CP") may exceed 66 dBA, the applicable FHWA Activity Category (B) for residential land uses. These locations would approach or exceed the NAC. Under the Green Alignment or the Green Alternate, Site 1 (located adjacent to Yosemite Avenue)

Table 3.5-4
Comparison of Predicted and Existing Noise Levels to Caltrans Criteria for Project Alternatives [1]

		Predicted[3] L_{eq} (dBA)						Substantial Increase—Increase between Ambient and Predicted (if greater than or equal to 12 dB)[6]						Caltrans Noise Abatement Criteria (B, C or E) Approached or Exceeded[7]					
	Adjusted Existing Peak-Noise Hour	Green		Green Alternate		Yellow – Preferred Alternative		Green		Green Alternate		Yellow – Preferred Alternative		Green		Green Alternate		Yellow – Preferred Alternative	
Site [2]	L_{eq} (dBA)	CP[4]	CP w/ UC[5]	CP[4]	CP w/ UC[5]	CP[4]	CP w/ UC[5]	CP[4]	CP w/ UC[5]	CP[4]	CP w/ UC[5]	CP[4]	CP w/ UC[5]	CP[4]	CP w/ UC[5]	CP[4]	CP w/ UC[5]	CP[4]	CP w/ UC[5]
1	66	66	66	66	67	62	61							B	B	B	B		
3	40	50	53	45	47	43	44	13											
4	43	49	51	49	51	47	50												
5	43	52	55	45	46	45	46	12											
6	53	55	56	53	54	53	54												
7	56	61	64	56	56	56	56												
8	55	55	55	58	59	58	59												
9	60	60	60	65	65	65	65												
10 (11)	43	51	53	45	45	45	45												
11	43	51	52	45	45	45	45												
12	52	60	61	52	53	52	53												
13	55	56	56	58	58	58	58												
14	47	51	52	48	48	48	48												
15	50	55	56	51	51	51	51												
16	46	53	54	51	51	51	51												
17	65	68	68	68	68	68	68							B	B	B	B	B	B
18	67	67	68	67	68	67	68							B	B	B	B	B	B
19	53	55	56	55	56	55	56												
20	52	55	56	55	56	55	56												
21	60	61	61	61	61	61	61												
22	52	56	56	56	56	56	56												
23	55	56	56	56	56	56	56												
24 (23)	55	56	56	56	56	56	56												
25 (22)	52	54	54	54	54	54	54												
26 (21)	61	63	63	63	63	63	63												
27 (17)	61	63	63	63	63	63	63												
28 (15)	50	56	56	51	51	51	51												
29 (13)	55	56	56	58	58	58	58												
30 (7)	56	56	57	57	57	57	57												

Notes:
(1) CP refers to Campus Parkway. The Green, Green Alternate, and Yellow alignments were analyzed. For each alignment alternative, two traffic scenarios were analyzed: CP (Campus Parkway only), and CP w/UC (Campus Parkway with UC Campus and University Community).
(2) Surrogate site in parentheses if not measured; Site number 2 was excluded from the analysis because of a lack of an adequate surrogate for ambient noise levels.
(3) Includes ambient level at all sites except 1, 2, 17-20
(4) Campus Parkway project plus cumulative growth, projected to Year 2025
(5) Campus Parkway project plus cumulative growth including UC Merced Campus and University Community development, projected to Year 2025
(6) 12 dBA is considered a substantial noise increase per Caltrans criteria.
(7) Noise abatement criteria is defined by Activity Categories. Category B represents residences and similar noise sensitive land uses.

and Sites 17 and 18 (both located adjacent to SR 140) would exceed the Caltrans NAC for Category B land uses (i.e., residential). Peak noise levels (in L_{eq}) would be 66 to 68 dBA. For the Yellow Alignment – Preferred Alternative, only Sites 17 and 18 are predicted to potentially exceed the noise abatement criteria. According to Caltrans criteria, a noise increase is substantial when the predicted noise levels within the project exceed existing levels by 12 dBA L_{eq}(h). None of the locations evaluated exceed this criteria, which is the trigger for further analysis.

Noise Impacts Using Merced County Criteria

Table 3.5-5 shows that applying Merced County noise impact criteria would result in impacts to up to three of the 29 modeled receptors from the project. These impacts occur because the Campus Parkway traffic noise is predicted to exceed 65 dBA. Under the Green and Green Alternate Alignments, noise levels at Sites 1, 17, and 18 would exceed the county 65 dBA L_{dn} exterior noise standard for residential land uses. Two locations (Sites 17 and 18) would register exceedances under the Yellow Alignment – Preferred Alternative.

3.5.3 Construction and Other Temporary Impacts

Construction activities would occur during a period of approximately 2 years. Roadway construction would occur in several phases, resulting in intermittent periods of noise over time. Construction activities and associated noise would also move along the right-of-way as construction activities proceeded and stages of the project are completed. At a distance of 15 meters (50 feet), construction noise levels can range from approximately 70 dBA to 95 dBA. Pile driving, jackhammers, and tractors can produce the highest levels. These levels would be intermittent over time and in location. Noise levels generated by construction equipment (or by any “point source”) also decrease at a rate of approximately 6 dBA per doubling of distance away from the source (Diehl 1973). On occasion, there is a potential that noise levels could substantially increase (more than 12 dBA).

Table 3.5-5 Comparison of Predicted and Existing Noise Levels to County Criteria for Project Alternatives[1]

Existing Ambient		Predicted[3] L_{dn} (dBA)						Exceed County L_{dn} Criteria of 65 dBA ?						Level of Significant Impact Per UC Merced Long-Range Development Plan Criteria[4]					
		Green		Green Alternate		Yellow – Preferred Alternative		Green		Green Alternate		Yellow – Preferred Alternative		Green		Green Alternate		Yellow – Preferred Alternative	
Site[2]	L_{dn} (dBA)	CP[5]	CP w/ UC[6]	CP[5]	CP w/ UC[6]	CP[5]	CP w/ UC[6]	CP[5]	CP w/ UC[6]	CP[5]	CP w/ UC[6]	CP[5]	CP w/ UC[6]	CP[5]	CP w/ UC[6]	CP[5]	CP w/ UC[6]	CP[5]	CP w/ UC[6]
1	65	65	65	65	66	61	60	Yes	Yes	Yes	Yes								
3	39	49	52	44	46	42	43							D	D				
4	42	48	50	48	50	46	49												
5	42	51	54	44	45	44	45								D				
6	52	54	55	52	53	52	53												
7	55	60	63	55	55	55	55							C	C				
8	54	54	54	57	58	57	58												
9	59	59	59	64	64	64	64									C	C	C	C
10 (11)	42	50	52	44	44	44	44								D				
11	42	50	51	44	44	44	44												
12	51	59	60	51	52	51	52							C	C				
13	54	55	55	57	57	57	57												
14	46	50	51	47	47	47	47												
15	49	54	55	50	50	50	50												
16	43	50	51	48	48	48	48												
17	62	65	65	65	65	65	65	Yes	Yes	Yes	Yes	Yes	Yes	A	A	A	A	A	A
18	64	64	65	64	65	64	65	Yes	Yes	Yes	Yes	Yes	Yes						
19	50	52	53	52	53	52	53												
20	50	52	53	52	53	52	53												
21	58	58	58	58	58	58	58												
22	49	53	53	53	53	53	53												
23	52	53	53	53	53	53	53												
24 (23)	52	53	53	53	53	53	53												
25 (22)	49	51	51	51	51	51	51												
26 (21)	58	60	60	60	60	60	60												
27 (17)	58	60	60	60	60	60	60												
28 (15)	49	55	55	50	50	50	50												
29 (13)	54	55	55	57	57	57	57												
30 (7)	55	55	56	56	56	56	56												

[1] Three Campus Parkway alignment alternatives (Green, Green Alternate and Yellow) were analyzed. For each alignment alternative, two traffic scenarios were analyzed (with and without UC Merced Campus and University Community).
[2] Surrogate site in parentheses if not measured; Site 2 was excluded from the analysis because of absence of an adequate surrogate for ambient noise levels.
[3] Includes ambient level at all sites except 1, 2, and 17–20.
[4] Impact category designation ("Increase" refers to Predicted minus Ambient):
A: Predicted L_{dn} > 65 dB; increase >= 3 dB
B: Ambient L_{dn} > 65 dB; increase >= 3 dB
C: Ambient L_{dn} between 50 dB and 65 dB, inclusive; increase >= 5 dB
D: Ambient L_{dn} < 50 dB; increase >= 10 dB
[5] Campus Parkway project plus cumulative growth, projected to 2025.
[6] Campus Parkway project plus cumulative growth including UC Merced Campus and University Community development, projected to 2025.

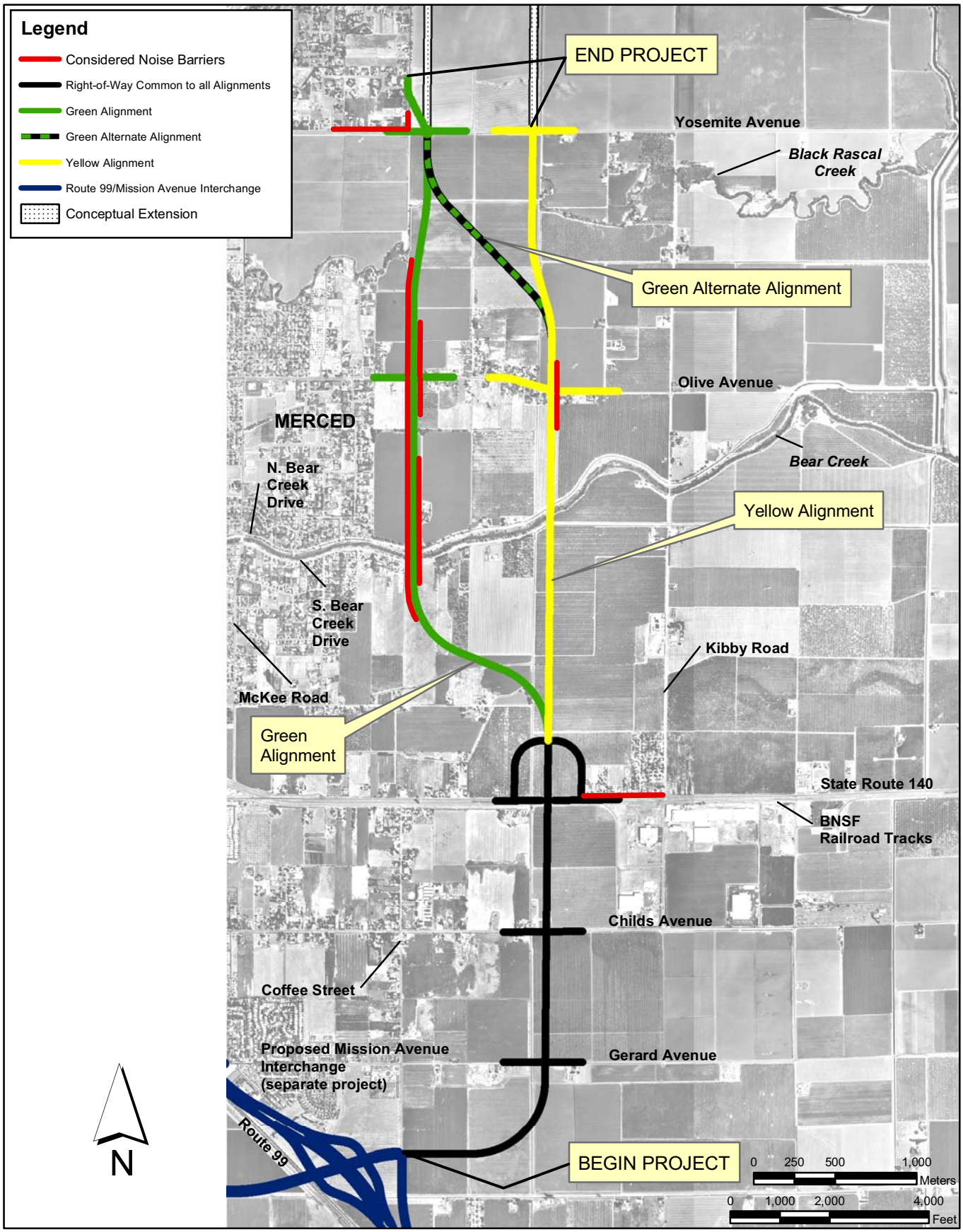
3.5.4 Abatement Measures

Abatement in the form of soundwalls was considered at representative noise-sensitive receptors where the predicted future noise levels with the project exceeded Caltrans or Merced County noise impact criteria. Figure 3.5-2 shows the locations of the noise barriers studied. Table 3.5-6 lists the noise barrier study locations and identifies the locations where decibel levels were predicted to exceed the Caltrans or county abatement or impact criteria (see columns identified as "Predicted L_{eq} (dBA) for Project Alternative"). Those are the locations that either exceeded the minimum Caltrans or county abatement threshold level or were predicted to have a substantial increase in noise with the project.

For each of the impacted locations, a range of soundwall heights from 1.8 meters (6 feet) to 4.9 meters (16 feet) was analyzed. Table 3.5-6(a) shows that Sites 1, 3, 5, 17 and 18 were all considered for abatement under Caltrans NAC. The results in Table 3.5-6(a) show the predicted noise levels from a soundwall-type barrier constructed within the project right-of-way. Receptor locations listed in Tables 3.5-6(a) and (b) that are shaded or diagonally hatched had modeled noise levels that could not be sufficiently reduced or protected "effectively" by barriers. That means that modeled receptor locations with barriers in place could not achieve a necessary line-of-sight blockage or the noise barriers did not achieve a minimum sound reduction (i.e., at least 5 dBA reduction).

Noise barriers were also considered in the noise technical report prepared for this project (URS 2004). Three sites were considered for barriers: Site 1, located along Yosemite Avenue, which would be affected by the Green Alignment and Green Alternate; and Sites 17 and 18, located along SR 140, which would be affected by the Green Alignment, Green Alternate, and Yellow Alignment – Preferred Alternative. To block traffic noise from either Yosemite Avenue (for Site 1) or SR 140 (for Sites 17 and 18) would require installation of solid walls, which are not practicable because they would interfere with access to the driveways and local cross-streets that provide the sole access to the affected properties. Creating breaks or gaps in the soundwalls would reduce the noise reduction performance of the walls, rendering them ineffective. For these reasons, barriers were not considered feasible and are not proposed.

Table 3.5-6(a) is based on Caltrans' and FHWA's use of equivalent sound levels (L_{eq}) as a noise level measure and on the Caltrans and FHWA noise abatement criteria. Table 3.5-6(b) is based on Merced County's use of L_{dn} as the noise level measure and the county's corresponding criteria. Table 3.5-6(b) shows that Sites 1, 3, 5, 7, 9, 10, 12,



URS Corporation X:\x_env_permit\Campus_parkway\GIS_Data\MXD\092403_redo\fig_3.5-2_Considered_Noise_Barriers_in_the_Natural_Resources_Study_Area_092403.mxd Date: 9/24/2003 9:02:51 AM Name: DTWood

Campus Parkway Project	LOCATIONS OF NOISE BARRIERS STUDIED	Figure 3.5-2

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Table 3.5-6 Barrier Heights to Satisfy Caltrans[1] and County[2] Criteria for Project Alternatives[3]

(a) Caltrans Criteria

Site	Adjusted Existing Peak-Noise Hour L_{eq} (dBA)	Predicted[4] L_{eq} (dBA) for Project Alternative: Green CP[10]	Green CP w/ UC[11]	Green Alternate CP[10]	Green Alternate CP w/ UC[11]	Yellow – Preferred Alternative CP[10]	Yellow – Preferred Alternative CP w/ UC[11]	Barrier Height Required to Break Line-of-Sight[5] (m)	Predicted L_{eq} (dBA) for Six Barrier Heights[6]: Green, Campus Parkway Project[10] (feet / meters) 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9	Green, Campus Parkway Project w/ UC[11] 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9	Green Alternate[8], Campus Parkway Project[10] 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9	Green Alternate[8], Campus Parkway Project w/ UC[11] 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9	Yellow – Preferred Alternative[8], Campus Parkway Project[10] 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9	Yellow – Preferred Alternative[8], Campus Parkway Project w/ UC[11] 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9
1[7]	66	66	66	66	67	62	61	3.7	59	58	56	55	54	53	60	59	57	56	55	55	59	58	56	55	54	53	61	60	58	57	56	55										
3	40	50	53	45	47	43	44	3.7							52	52	51	51	50	49																						
5	43	52	55	45	46	45	46	3.7							54	53	53	52	51	50																						
17[7]	65	68	68	68	68	68	68	4.3	64	62	61	60	60	59	65	63	62	61	60	59	64	62	61	60	60	59	64	62	61	60	60	59	64	62	61	60	60	59	64	62	61	60	60	59
18[7]	67	67	68	67	68	67	68	3.7	64	63	62	62	61	61	64	63	63	62	62	62	64	63	62	62	61	61	65	64	63	63	62	62	64	63	62	62	61	61	65	64	63	63	62	62

(b) County Criteria

Site[9]	Existing Ambient L_{dn} (dBA)	Predicted[4] L_{dn} (dBA) for Project Alternative: Green CP[10]	Green CP w/ UC[11]	Green Alternate CP[10]	Green Alternate CP w/ UC[11]	Yellow – Preferred Alternative CP[10]	Yellow – Preferred Alternative CP w/ UC[11]	Predicted L_{dn} (dBA) for Six Barrier Heights[6]: Green, Campus Parkway Project[10] (feet / meters) 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9	Green, Campus Parkway Project w/ UC[11] 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9	Green Alternate[8], Campus Parkway Project[10] 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9	Green Alternate[8], Campus Parkway Project w/ UC[11] 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9	Yellow – Preferred Alternative, Campus Parkway Project[10] 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9	Yellow – Preferred Alternative, Campus Parkway Project w/ UC[11] 6 / 1.8	8 / 2.4	10 / 3.0	12 / 3.7	14 / 4.3	16 / 4.9
1[7]	65	65	65	65	66	61	60	58	57	55	54	53	52	59	58	56	55	54	54	58	57	55	54	53	52	60	59	57	56	55	54											
3	39	49	52	44	46	42	43	48	48	47	47	46	45	51	51	50	50	49	48																							
5	42	51	54	44	45	44	45							53	52	52	51	50	49																							
7	55	60	63	55	55	55	55	55	54	53	51	50	49	58	57	56	54	53	52																							
9	59	59	59	64	64	64	64													59	58	56	55	53	52	60	59	58	56	55	54	59	58	56	55	53	52	60	59	58	56	55	54
10 (11)	42	50	52	44	44	44	44							51	50	49	49	48	47																							
12	51	59	60	51	52	51	52	57	55	53	52	51	51	57	56	55	53	52	52																							
17[7]	62	65	66	65	66	65	66	61	59	58	57	57	56	63	61	60	59	58	57	61	59	58	57	57	56	63	61	60	59	58	57	61	59	58	57	57	56	63	61	60	59	58	57
18[7]	64	65	65	65	65	65	65	62	61	60	60	59	59	61	60	60	59	59	59	62	61	60	60	59	59	61	60	60	59	59	59	62	61	60	60	59	59	61	60	60	59	59	59

Notes:
(1) Barrier must break line-of-sight between the receptor and an 11.5-foot truck exhaust stack and achieve 5 dB of noise reduction.
(2) Barrier must achieve a 5 dB noise reduction.
(3) Three Campus Parkway alignment alternatives (Green, Green Alternate and Yellow – Preferred Alternative) were analyzed. For each alignment, two traffic scenarios were analyzed (Campus Parkway Project [CP] and Campus Parkway Project w/ UC Projects [CP w/ UC]).
(4) Includes ambient level at all sites except 1, 17, and 18.
(5) Line-of-sight (LS) between the receptor and an 11.5-foot truck exhaust stack; assumes all routings would provide same LS requirement.
(6) Legend:
= Not applicable
= Does not satisfy line-of-sight criterion
= Does not achieve a 5 dB reduction
(No shading) = Continuous barrier (with no breaks or gaps for driveways or other access) would satisfy criteria
(7) Site 1 would require a barrier parallel to Yosemite Avenue and a barrier parallel to Campus Parkway extending north of Yosemite Avenue. Sites 17 and 18 would require barriers along SR 140. Barriers at Sites 1, 17, and 18 are not considered feasible because the need to provide access to these properties would necessitate including breaks or gaps in the sound barriers. These barriers were not evaluated further because including breaks would render the barriers ineffective in achieving a satisfactory traffic noise reduction.
(8) Barrier calculations from Green Alignment routing used for Sites 9, 17, and 18.
(9) Surrogate site in parentheses if not measured.
(10) Campus Parkway project plus cumulative growth, projected to 2025.
(11) Campus Parkway project plus cumulative growth including UC Merced Campus and University Community development, projected to 2025.

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17, and 18 were all considered for abatement/mitigation measures under Merced County NAC.

Table 3.5-7 shows the results of the noise abatement feasibility analysis to satisfy both Caltrans and county guidelines. As noted earlier, Caltrans and FHWA noise abatement policies state that proposed noise abatement must also be reasonable in terms of cost effectiveness for the number of residences benefited. This means that the cost to build the barrier divided by the number of residences protected must be approximately equal to or less than a "base allowance" or "reasonable allowance" per benefited residence.

Table 3.5-7 Noise Abatement Costs for Each Project Alternative to Satisfy Caltrans and County Abatement Criteria

	Green									
	Campus Parkway Project [1]					Campus Parkway Project w/ UC Campus & Community[2]				
Site	Barrier Height (feet)	Barrier Length (feet)	Benefited Residences	Total Barrier Cost ($)	Average Cost per House ($)	Barrier Height (feet)	Barrier Length (feet)	Benefited Residences	Total Barrier Cost ($)	Average Cost per House ($)
5						16	4640	1	$ 1,039,360	$ 1,039,360
7	6	2000	3	$ 168,000	$ 56,000	6	2000	3	$ 168,000	$ 56,000
10						16	7500	16	$ 1,680,000	$ 105,000
12	10	1600	1	$ 224,000	$ 224,000	10	1600	1	$ 224,000	$ 224,000
Total			4	$ 392,000	$ 98,000			21	$ 3,111,360	$ 148,160

	Green Alternate									
	Campus Parkway Project [1]					Campus Parkway Project w/ UC Campus & Community [2]				
Site	Barrier Height (feet)	Barrier Length (feet)	Benefited Residences	Total Barrier Cost ($)	Average Cost per House ($)	Barrier Height (feet)	Barrier Length (feet)	Benefited Residences	Total Barrier Cost ($)	Average Cost per House ($)
9	6	1440	1	$ 120,960	$ 120,960	8	1440	1	$ 161,280	$ 161,280
Total			1	$ 120,960	$ 120,960			1	$ 161,280	$ 161,280

	Yellow – Preferred Alternative									
	Campus Parkway Project [1]					Campus Parkway Project w/ UC Campus & Community [2]				
Site	Barrier Height (feet)	Barrier Length (feet)	Benefited Residences	Total Barrier Cost ($)	Average Cost per House ($)	Barrier Height (feet)	Barrier Length (feet)	Benefited Residences	Total Barrier Cost ($)	Average Cost per House ($)
9	6	1440	1	$ 120,960	$ 120,960	8	1440	1	$ 161,280	$ 161,280
Total			1	$ 120,960	$ 120,960			1	$ 161,280	$ 161,280

Notes:
[1] Campus Parkway project plus cumulative growth, projected to year 2025
[2] Campus Parkway project plus cumulative growth including UC Merced Campus and University Community development, projected to year 2025.
= Not applicable

Table 3.5-7 indicates that, to construct soundwalls that would be feasible and meet Caltrans and county criteria, the barrier construction cost per benefited residence would vary from $56,000 per residence (for Site 7) to $1,039,360 per residence (for Site 5). A preliminary "reasonableness determination" was made based upon the lowest barrier construction cost per benefited residence (Site 7). Using the methodology outlined in the Caltrans Traffic Noise Analysis Protocol, the base Caltrans allowance of $17,000 per benefited residence was adjusted for absolute noise levels, "build" versus existing noise levels, achievable noise reduction, and estimated construction date of the residences protected. A modified "reasonableness allowance" of $33,000 per benefited residence was estimated. Even with this calculated adjustment increase from $17,000 to $33,000 per residence protected, none of the considered soundwalls fall within the reasonable allowance to construct under Caltrans criteria. The conclusion of this analysis is that federal funding cannot be applied to construction of sound barriers at the evaluated locations because they would not effectively reduce noise levels and/or cannot be cost-effectively constructed.

In addition to cost considerations, specific areas along the alignments have site conditions that render soundwalls impracticable. At Yosemite Avenue and Lake Road, and along SR 140 in Celeste, noise barriers would not be effective because of the necessary openings or gaps required for driveway access. In locations where residences are not directly adjacent to the proposed right-of-way, such as along the northern portion of the Green Alignment, noise barriers are generally not effective because of the large distance between a property and the roadway. In addition, while it is possible to construct soundwalls on private property, the process requires unanimous consent by affected property owners. Construction easements and long-term maintenance agreements are also required for any aspect of a project located on private property.

Alternative sound reduction measures can be considered during final design of the project. Berms are generally accepted as providing more noise reduction for a given overall height than soundwalls. Several representative sites were selected and modeled with soundwalls and then berms to determine the acoustical benefit that could be expected for this project by construction of berms instead of soundwalls. The results are presented in Table 3.5-8. The modeling indicates that berms would reduce traffic noise levels by an additional 2 to 3 dBA compared to soundwalls of the same height. The use of earthen berms for noise abatement is not an FHWA approved sound abatement measure so is not eligible for federal funding. County funding would be required if berms are used, and for any noise abatement based on County requirements that does not

meet the FHWA reasonable and feasible criteria discussed earlier in this section.

Note, however, that any additional acoustical benefit provided by berms is generally believed to be nullified when a "wall atop a berm" combination is used.

Table 3.5-8 Noise Reduction Performance from Berms versus Soundwalls (dBA)

	Site	Barrier Type	Barrier Height (Feet)					
			6	8	10	12	14	16
			(Meters)					
			1.8	2.4	3.0	3.7	4.3	4.9
Noise Level (dBA)	5	Soundwall	51	50	50	49	48	47
		Berm	49	48	47	47	46	45
		Difference	*-2*	*-2*	*-3*	*-2*	*-2*	*-2*
	7	Soundwall	59	58	57	55	54	53
		Berm	57	56	54	53	52	51
		Difference	*-2*	*-2*	*-3*	*-2*	*-2*	*-2*
	9	Soundwall	61	60	59	57	56	55
		Berm	58	57	56	54	53	52
		Difference	*-3*	*-3*	*-3*	*-3*	*-3*	*-3*

Note: Relative performance of berms versus soundwalls estimated using Sound32 noise model for selected receptors and project scenarios with predicted noise impacts.

Merced County will consider incorporation of noise abatement measures in the design of the project, which would be funded by local or county funds. Noise barriers would be provided (where feasible) to minimize the effect of noise from Campus Parkway for existing residential structures that are within 200 feet of the right-of-way. Noise barriers that Merced County will consider may consist of berms, soundwalls, or a combination of the two.

A final decision on abatement measures will be made upon completion of the project design and the public involvement process. Possible installation of berms by the county would depend upon the availability of sufficient right-of-way and a cost-effective source of fill material.

3.6 Energy

3.6.1 Affected Environment

In California, the vast majority of energy consumed originates from nonrenewable sources. Approximately 60 percent of the state's energy is derived from petroleum; 27 percent is from natural gas; 10 percent is from hydroelectric, geothermal, nuclear, and other sources; and 3 percent is from coal. Of all the energy consumed, 48 percent is for transportation use, 31 percent is for industrial use, 12 percent is for residential use, and 9 percent is for commercial use (CEC 1993).

These statistics show that the consumption of petroleum for transportation is the primary use of nonrenewable energy in the state. One of the focuses on conservation of energy has, therefore, been on reducing the energy consumed by transportation, primarily automobile traffic. Conservation objectives have included improving the efficiency of the transportation mode, such as the USEPA fleet requirements for increasing the fuel efficiency of personal automobiles. Other conservation strategies include encouragement of high-occupancy vehicle use, improved road construction and maintenance, and traffic flow improvements.

3.6.2 Permanent Impacts

Campus Parkway would result in beneficial impacts to energy consumption by reducing the total energy use of vehicles in the project area. A region-level energy analysis was conducted to compare and show the influence that Campus Parkway would have on the consumption of transportation energy in the eastern Merced area. Comparing projected 2025 total vehicle miles traveled (see Table 3.6-1) between the No Action alternative and the three build alternatives shows that the total miles traveled decreases by 47,866 for the Green and Green Alternate Alignments and decreases by 38,423 for the Yellow Alignment – Preferred Alternative.[13]

[13] As described in the *Analysis of Travel Characteristics Traffic Report* by Dowling Associates, Inc., 2000, "traffic that would use Campus Parkway would experience shorter travel routes, shorter travel times, and less congestion. Routes from which travel is diverted would experience lower traffic levels and less congestion." Therefore, regional travel conditions would experience a reduction in vehicle miles traveled and vehicle hours traveled as a result of Campus Parkway (Dowling 2000). Dowling Associates used a traffic forecasting model developed and maintained by the Merced County Association of Governments (MCAG) to draw conclusions about traffic and travel characteristics in the Merced area. The model uses current and future land uses in the forecasts (based on General Plan growth information for the County and City of Merced. To determine the effects of the proposed project on regional travel, a study area that consisted of the City of Merced and a broad area immediately surrounding Merced was analyzed for the year 2025. Vehicle miles traveled and travel time were tabulated for the study area.

Table 3.6-1
Predicted Energy (Gas) Consumption in the Project Region for Each Alternative

	Vehicle Miles Traveled (VMT) (miles/day)[2]	Vehicle Hours Traveled (VHT) (hours/day)[2]	Miles Per Hour (MPH)[2]	Fuel Consumption Rate (FCR) (Gallons/1000 Miles)[3]	Conversion Factor (CV)[4]	Corrected FCR (Gallons/1000 Vehicle Miles)[5]	Miles Per Gallon (MPG)[6]	Total Gallons Per Day[7]	Energy Savings in Gallons per Day
No Build	2,133,538	108,920	19.6	72.6	0.605	43.9	22.8	93,706	N/A
Green Alignment	2,085,672	104,464	20.0	72.0	0.605	43.6	23.0	90,845	**2861**
Green Alternate Alignment[1]	2,085,672	104,464	20.0	72.0	0.605	43.6	23.0	90,845	**2861**
Yellow Alignment - Preferred Alternative	2,095,115	105,836	19.8	72.3	0.605	43.7	22.9	91,633	**2072**
Formulas:	VMT / VHT = MPH			FCR x CV = corrected FCR			VMT / MPG = Total Gallons per Day		(see note[8])

Notes:

1. Values for the Green Alternate Alignment are identical to the other Green Alignment (personal communication, Dowling Assoc, Inc.).

2. Vehicle miles traveled (VMT) represents the total predicted miles traveled in a 24-hour period by all cars and trucks within the traffic study area in eastern Merced County. The miles per hour represents the average speed predicted for all study area vehicles within a 24-hour period. Source: Analysis of Travel Characteristics Traffic Report for the Campus Parkway Project, Dowling Assoc, Inc., November 2000. Changes in regional travel conditions are also discussed in Section 3.16 Traffic and Transportation.

3. Fuel Consumption Rate value is the rate of total gallons consumed per 1000 miles. It was calculated for Light Duty Vehicles, assuming an "On Road Inertia Vehicle Weight" of 3938 Lbs and a vehicle velocity as listed as Miles Per Hour in the table. Base year for this value is 1980. Source: Energy and Transportation Systems, Caltrans, July 1983.

4. The Fuel Conversion Rate available was for the average on-the-road vehicle fleet of 1980. It is therefore adjusted for improvements in vehicle efficiency using a "conversion factor" to yield a "corrected FCR" for the year 2020. A conversion factor for 2020 was used as this was the furthest projected conversion factor available. Source: The Motor Fuel Consumption Model, U.S Department of Energy, December 1988.

5. Corrected FCR = FCR*(Conversion Factor)

6. Miles Per Gallon = 1000/(Corrected FCR)

7. Gallons per Day = (Vehicle Miles Traveled)/(Miles Per Gallon)

8. The energy savings = Total Gallons per Day for the No Action Alternative minus each Alternative. This is the reduction in gas consumed in the study area for traffic with each alternative in place.

This means that on an average weekday (24 hours), the alternative alignments provide a shorter route for drivers traveling through the eastern and northern areas of Merced County, resulting in fewer miles traveled by regional traffic. Roads that would realize a substantial decrease in traffic volumes (defined as more than 500 vehicles per day) in east Merced include Arboleda Drive, Lake Road, and McKee Road. Increases would result on segments of Olive Avenue, State Route 140, Yosemite Avenue, and Bellevue Road where they connect to Campus Parkway, as traffic diverts to Campus Parkway from other routes. For example, the traffic forecasting shows that drivers that would otherwise use Arboleda Drive and Yosemite Avenue to travel between SR 99 and North Merced would utilize the shorter, more direct route of Campus Parkway between SR 99 and Yosemite Avenue. Another measure of change in traffic is the number of roadway segments or links (segments of roadways between major intersections) that change in volume with Campus Parkway. In eastern Merced, approximately 300 to 350 roadway links would have volume decreases of 500 vehicles per day or more with the parkway alternatives, while about 150 links would increase by 500 vehicles or more (in the vicinity of Campus Parkway). Overall, the project would reduce the average distance traveled for traffic in eastern Merced, with some traffic volume increases in the immediate vicinity of the new expressway.

Table 3.6-1 summarizes the overall changes in total vehicle miles traveled (VMT), vehicle hours traveled (VHT), and average speed (miles per hour or MPH). Total miles and hours traveled reduce by about 2 to 4 percent when comparing VMT and VHT between the No Action alternative and the other build alternatives. Average speed within the study area improves slightly, which improves (decreases) gas consumption by automobiles and trucks at this speed range (19–20 MPH). Both of these changes reduce the amount of fuel consumed due to shorter distances traveled and improved fuel efficiency. Table 3.6-1 also presents the estimated energy requirements and energy savings in the Merced area resulting from the proposed project (Campus Parkway extending from SR 99 to Yosemite Avenue). Since vehicles would operate more efficiently and travel less distance and time, the gallons of fuel used per day would decrease under project conditions and energy would be conserved. The Green Alignment and Green Alternate are estimated to conserve 10,829 liters (2,861 gallons) of fuel per day[14] compared to the No Action alternative. The Yellow Alignment –

[14] Estimated fuel consumption per day is calculated using a methodology presented in the Caltrans report *Energy and Transportation Systems* (Caltrans 1983a). The calculated vehicle miles traveled value is multiplied by a Fuel Consumption Rate factor to calculate a miles per gallon value. The Fuel Consumption Rate factor accounts for the calculated miles per hour, the average fuel consumption for the projected future on-the-road vehicle fleet, and an average projected vehicle weight. Dividing vehicle miles traveled by miles per gallons gives a daily gallon value.

Preferred Alternative is estimated to conserve 7,846 liters (2,073 gallons) of fuel per day over the No Action alternative. Therefore, all three project alignments, under project operations, would have lower energy requirements than the No Action alternative. This is a beneficial effect.

3.6.3 Construction and Other Temporary Impacts

Construction of any of the three proposed alignments would require the investment of energy for building the project. The No Action alternative would not require any energy to be used for construction. Considerable energy, generally in the form of petroleum fuel used by construction vehicles, would be used in the production and building of the roadway and major structures (e.g., the bridge at Bear Creek and the overpass at SR 140). An estimated total construction energy requirement was made using construction "energy cost factors" that associate construction costs with construction energy requirements. The energy required for construction and the construction energy payback period for the proposed project was calculated based on the guidelines provided in Appendix C of the Caltrans report, *Energy and Transportation Systems* (Caltrans 1983a). At the time of preparation of the Draft EIS/EIR, Campus Parkway was estimated to cost from $51.1 million to $51.5 million to construct (see Table 2.3-2). Campus Parkway meets Caltrans' roadway classification of rural freeway and rural conventional highway. Construction energy cost factors for rural and rural conventional highways[15] were multiplied by the construction cost to estimate the total energy that might be required to construct each of the alternatives. "Construction energy payback" is an estimate of the amount of time required to offset the investment of energy in constructing the project versus the reduction in energy consumption realized by the operation of the project. The estimated payback period for construction is between 10.4 and 13.6 years, depending on the project alignment and whether a rural freeway or a rural conventional highway energy factor is applied (Caltrans 1983a). Construction energy was calculated for the project based on the parkway extending from SR 99 to Yosemite Avenue. The construction energy payback period is within the 20-year design period of the project (the period of time that the project is designed to service). As discussed above, the regional energy requirements at the post-construction and operational stages of Campus Parkway would be lower under the three build alternatives than under the No

[15] The "construction energy factors" applied in the energy evaluation were from *Energy and Transportation Systems* (Caltrans 1983a). The published factors represent the total energy in British thermal units (BTUs) that a category of transportation improvement project is estimated to consume, averaged per dollar of construction. The factors used were 2.32×10^4 BTUs/2002 construction dollars for a rural freeway and 2.21×10^4 BTUs/2002 construction dollars for a rural highway.

Action alternative. This fact, combined with the analysis of construction-related energy requirements, leads to the conclusion that the net savings in energy requirements in operations of Campus Parkway would more than offset construction energy requirements, and thus, in the long term, result in a net savings in energy usage. The project would not result in a wasteful and inefficient use of energy because the alternatives provide a reduction in gas consumption over the long-term design period of the project. No adverse impact to energy use would result from project construction.

3.7 Wetlands and Other Waters of the United States

3.7.1 Affected Environment

The assessment of wetlands involved several steps. A natural resources study area was defined for the proposed project that encompassed all potentially impacted areas and allowed for possible shifts or changes in the alternatives. Note that the natural resources study area is, therefore, much larger than the area that would be affected by each alignment (discussed in Sections 3.7.3 and 3.7.4). As shown on Figure 3.7-1, this study area extends approximately 107 meters (350 feet) from the center of each project alignment and intersection improvement. Wetlands were surveyed and mapped within the study area. Potential jurisdictional[16] wetlands were delineated using the routine on-site method described in the 1987 USACE Wetlands Delineation Manual (Environmental Laboratory 1987). All jurisdictional wetlands (using the definition of 33 CFR 328.3[b]) and waters of the United States and nonjurisdictional wetlands were identified and are shown on Figure 3.7-2 and listed in Table 3.7-1. The USACE has issued concurrence of the estimated jurisdictional wetlands and waters of the U.S. for the proposed project. Appendix A contains all coordination letters with the USACE for the proposed project. As shown in Table 3.7-1, approximately 9.537 ha (23.556 acres) of jurisdictional wetlands and waters of the U.S. occur within the study area. Jurisdictional wetland types include seasonal marsh and riparian (streamside) forest and scrub. Jurisdictional nonwetland waters include perennial streams and irrigation canals. The categories of wetland types inventoried in the study area are summarized in the following subsections and in Table 3.7-2.

Table 3.7-1 Total Area of Jurisdictional Wetland and Nonwetland Waters of the U.S. Within the Study Area

Type	Hectares	Acres
Wetlands		
Riparian Wetland	2.085	5.152
Seasonal Marsh	1.817	4.489
Total Wetland Area	**3.902**	**9.641**
Nonwetlands		
Perennial Stream	1.448	3.578
Irrigation Canal	4.187	10.347
Total Area of Nonwetland Waters	**5.635**	**13.925**
Total Area of All Waters of the U.S.	**9.537**	**23.566**

Note: This table lists the resource areas in the study area. The estimated impacted area is discussed in Sections 3.7.2 and 3.7.3.

[16] "Jurisdictional" refers to areas that meet specific criteria established under the federal CWA. These areas can include waters, wetlands, and mudflats.

Table 3.7-2 Summary of Wetland Functions and Values

Function / Value	Criteria	Rating[1]		
		Seasonal Marsh	Riparian Forest and Scrub	Cultivated Wetlands
Groundwater recharge	**High**: groundwater table slopes away from wetland, non-riparian, not permanently inundated **Low**: wetlands with impervious underlying strata or marine/estuarine wetlands	High (3) Rationale: Not permanently inundated	Moderate (2) Rationale: coarse-textured alluvial (deposited by running water) soils and seasonal inundation	High (3) Rationale: Not permanently inundated
Groundwater discharge	**High**: permanently inundated, below dam/impoundment, outlets but no defined inlet, presence of springs **Low**: rated "HIGH" for groundwater recharge, non-permanently flooded wetlands lacking the "HIGH" characteristics defined above	Low (1) Rationale: not permanently inundated	Low (1) Rationale: no evidence of groundwater discharge (e.g., springs)	Low (1) Rationale: not permanently inundated
Flood flow alteration	**High**: regulated reservoir, outflow less than inflow, non-tidal, capacity to delay runoff (depression) **Low**: permanently inundated (i.e. less capacity), no potential for ponding, all tidal wetlands	High (3) Rationale: lower elevation areas retain water during rainy season	Low (1) Rationale: steep banks provide little opportunity for retention of high flows	High (3) Rationale: lower elevation areas retain water during rainy season
Sediment/ toxic or toxic agent retention	**High**: potential for erosion or toxics in the watershed combined with capacity to confine or impound water; no outlet (or constricted), riffle and pool complexes, erect vegetation **Low**: no flowing water, no open water >100 feet wide, or no vegetation; immediately downstream of an impoundment, high-velocity flows	High (3) Rationale: has high capacity to confine or impound water	Low (1) Rationale: high velocity flows during flood events, does not retain water	High (3) Rationale: has high capacity to confine or impound water
Nutrient removal/ transformation	**High**: same as for sediment/toxic retention (capacity to confine or impound water; no outlet (or constricted), riffle and pool complexes, erect vegetation) **Low**: low sediment trapping, peat sediments, anoxic (low in oxygen) water column, marine wetlands	High (3) Rationale: has high capacity to confine or impound water	Low (1) Rationale: limited capacity to retain nutrients	High (3) Rationale: has high capacity to confine or impound water

[1] The functional capacity of wetland types is rated on a scale of 1 to 3 in which Low is 1, Moderate is 2, and High is 3.

Table 3.7-2 (Continued) Summary of Wetland Functions and Values

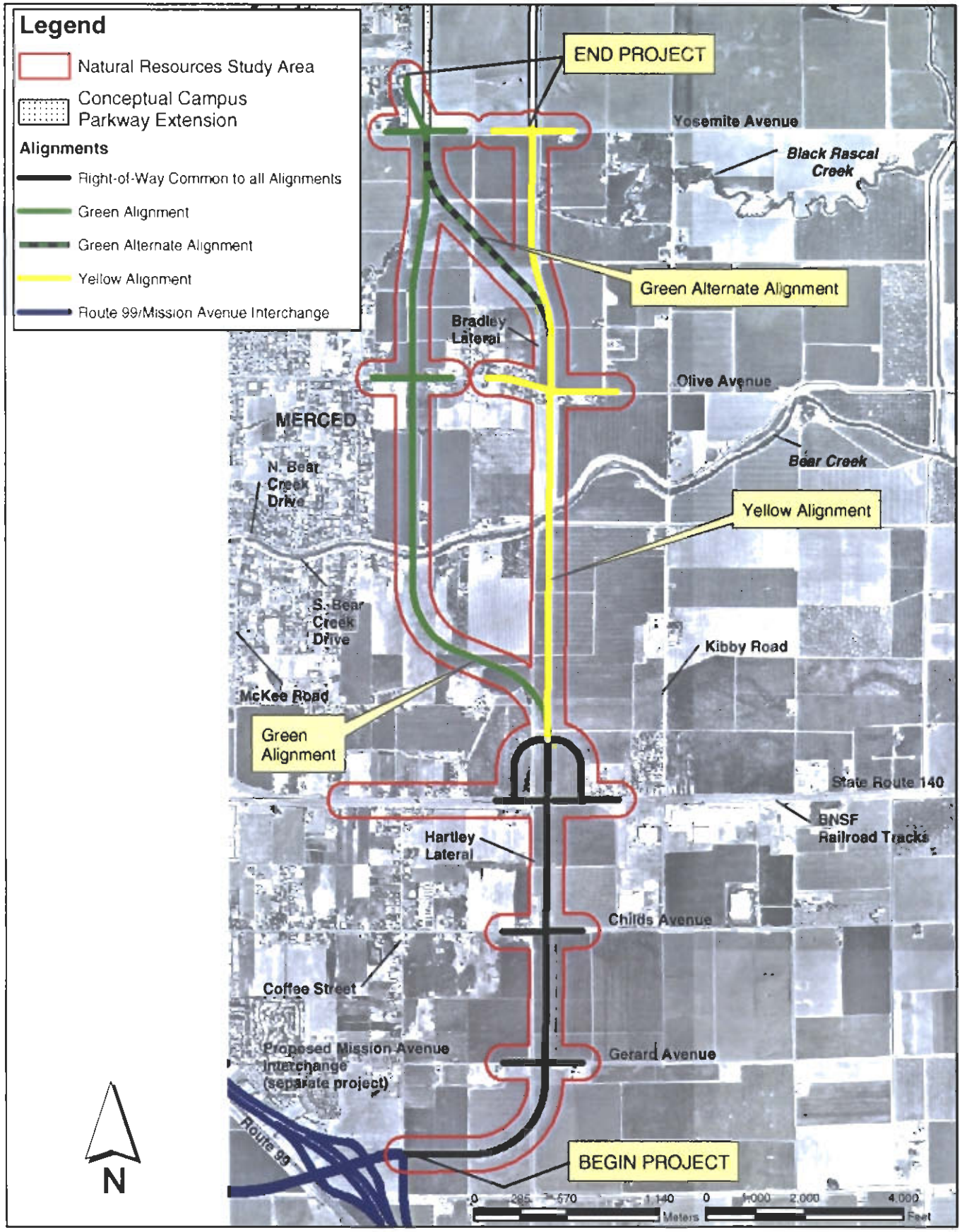
Function / Value	Criteria	Rating[1]		
		Seasonal Marsh	Riparian Forest and Scrub	Cultivated Wetlands
Production export	**High**: high primary productivity and high water velocity; Riverine wetlands with eutrophic conditions (rich in nutrients), large watershed (>100 square miles), erect or submerged vegetation. Headwater wetlands with erect vegetation, erosive conditions, potential for flooding, and eutrophic conditions. **Low**: no permanent or intermittent outlets	Moderate (2) Rationale: Has high primary productivity in some areas	Moderate (2) Rationale: Lacks eutrophic conditions	Moderate (2) Rationale: Has high primary productivity in some areas
Wildlife diversity/ abundance	**High**: riparian wetlands, floodplain wetlands, high vegetation diversity, wetland-upland complexes **Low**: isolated wetlands within urbanized areas, lack of connecting corridors, small wetlands with low vegetation diversity or narrow ecotones	Low (1) Rationale: supports low structural diversity of habitat	Moderate (2) Rationale: vegetation provides structural habitat diversity and movement corridors but riparian wetlands are confined by steep banks and adjacent agricultural development	Low (1) Rationale: supports low structural diversity of habitat; cultivation practices alter habitat
Aquatic diversity/ abundance	**High**: regularly flooded, erect vegetation, adequate levels of dissolved oxygen, diverse vegetation cover providing partial shading **Low**: substrate of bedrock or rubble, farmed, acidic surface water	Moderate (2) Rationale: erect vegetation, regularly flooded	Moderate (2) Rationale: plant cover provides partial shading, area regularly flooded	Low (1) Rationale: farmed; cultivation practices alter habitat
Uniqueness/ heritage	**High**: presence of special-status species, significant archeological resources, “unique” wetland types, or publicly owned lands designated for conservation, preservation, or research **Low**: absence of criteria listed above	Low (1) Rationale: no special-status species, not a unique wetland type	Moderate (2) Rationale: riparian wetlands provide habitat for elderberry shrubs, the host plant of the listed valley elderberry longhorn beetle	Low (1) Rationale: no special-status species, not a unique wetland type; cultivation practices alter habitat

[1] The functional capacity of wetland types is rated on a scale of 1 to 3 in which Low is 1, Moderate is 2, and High is 3.

Table 3.7-2 (Continued) Summary of Wetland Functions and Values

Function / Value	Criteria	Rating[1]		
		Seasonal Marsh	Riparian Forest and Scrub	Cultivated Wetlands
Recreation	**High**: wetlands used and accessible for recreation **Low**: wetlands not used or accessible for recreation	Low (1) Rationale: private lands with no public access	Moderate (2) Rationale: creeks may be used for fishing, limited public access available.	Low (1) Rationale: private lands with no public access
Summary of Wetland Functions:		20	16	19

[1] The functional capacity of wetland types is rated on a scale of 1 to 3 in which Low is 1, Moderate is 2, and High is 3.



Campus Parkway Project	NATURAL RESOURCES STUDY AREA	Figure 3.7-1

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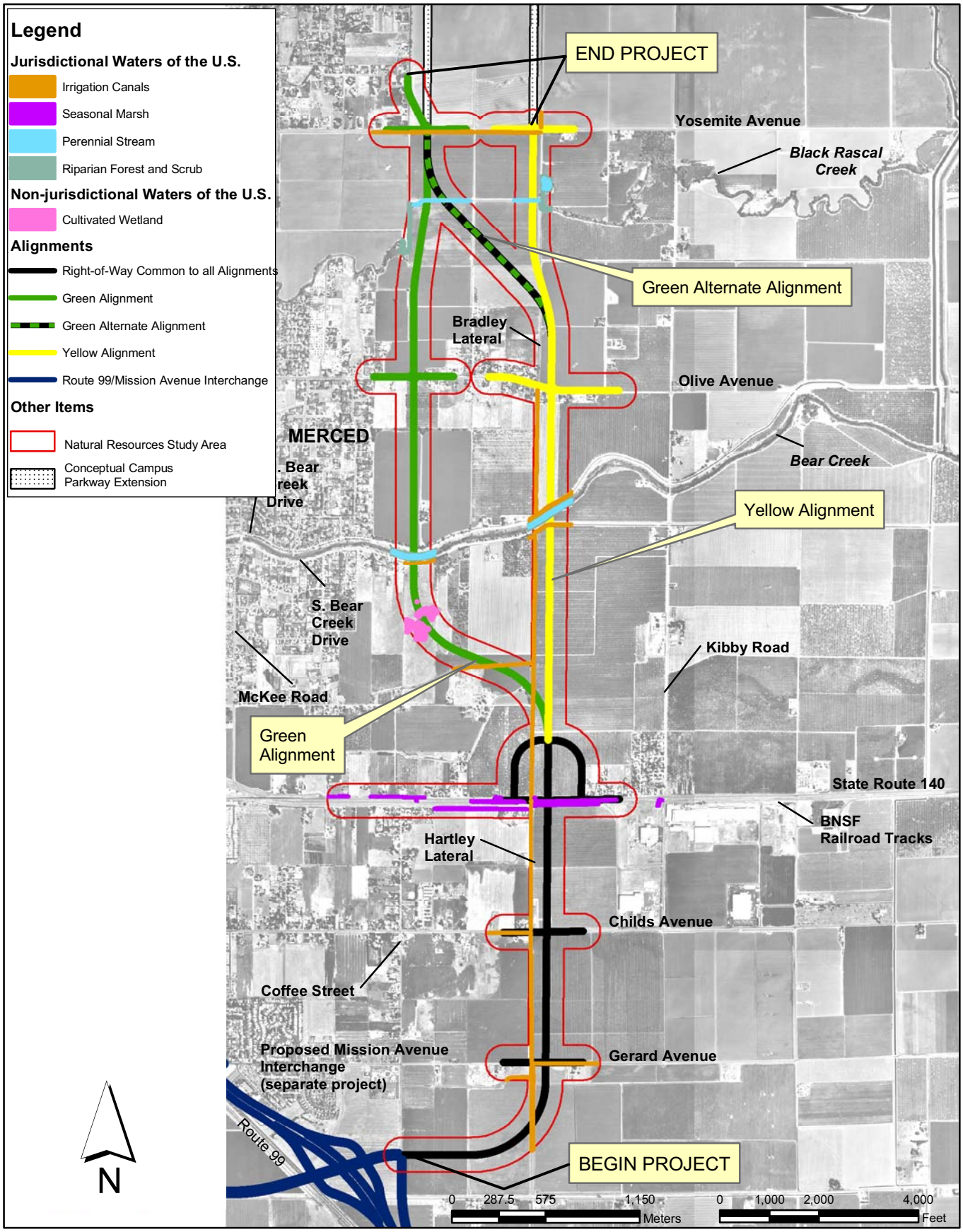

Campus Parkway Project	WATERS OF THE U.S. IN THE NATURAL RESOURCES STUDY AREA	Figure 3.7-2

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Seasonal Marsh

Seasonal marsh wetlands are typically inundated and/or saturated for long periods of time (more than 60 days). Seasonal marshes in the study area are associated with linear depressions and drainage ditches that receive surface runoff during the wet season and irrigation runoff during the dry season. Seasonal marshes are located parallel to SR 140 and the BNSF railroad embankment. Dominant plants are common spikerush (*Eleocharis macrostachya*), Pacific bog rush (*Juncus* sp.), tall flatsedge (*Cyperus eragrostis)*, Bermuda grass (*Cynodon dactylon*), perennial ryegrass (*Lolium perenne*), Johnson grass (*Sorghum halepense*), celery leaf buttercup (*Ranunculus sceleratus*), and sprangletop (*Leptochloa uninervia*).

These wetlands have a moderate capacity to confine and store water and are likely to provide some groundwater recharge, flood flow alteration, sediment/toxic retention, and nutrient removal/transformation. Seasonal marsh wetlands have low to moderate levels of biological diversity and were not found to support any special-status species. They are also not considered to be a unique wetland type.

Riparian Forest and Scrub

Riparian forest and scrub is present along Bear Creek within the project area, and along Black Rascal Creek outside of the study area (Black Rascal Creek within the project right-of-way is an earthen-lined channel devoid of vegetation). Plant species in these riparian areas include sandbar willow (*Salix exigua*), Fremont cottonwood (*Populus fremontii*), Himalayan blackberry (*Rubus discolor*), giant reed (*Arundo donax*), arroyo willow (*Salix lasiolepis*), tall flatsedge, wild rose (*Rosa californica*), elderberry (*Sambucus mexicana*), and mugwort (*Artemisia douglasiana*). The riparian wetland boundaries generally coincide with the location of the ordinary high water line of the creeks.

These wetlands are most functional in the habitat they provide to a diversity of animals. By providing shade in the creek, riparian vegetation is beneficial to fish. This vegetation is structurally diverse with multiple canopy layers that provide important habitats for birds and mammals. This habitat can provide a corridor for wildlife movements. Some elderberry shrubs, which are used by the federally listed valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), are present on Bear Creek (impacts to the valley elderberry longhorn beetle are analyzed in Section 3.9). Because of the MID-controlled and unusually consistent water flow and hydrology, Bear Creek does not provide very high-quality riparian habitat.

The riparian wetlands do not provide functions such as sediment or toxic retention, or removal or transformation of nutrients because they do not retain ponded water. They also have only a moderate capacity for groundwater discharge and flood flow alteration. Because private lands border Black Rascal and Bear Creeks, these wetlands would not provide recreational values such as fishing or wildlife observation. These wetlands are not considered highly unique, and the functionality of these wetlands is considered low.

Perennial Streams

Perennial stream channels are Black Rascal and Bear Creeks. These channels are considered jurisdictional nonwetland waters of the U.S. Within the project right-of-way, Black Rascal Creek is an earthen-lined channel devoid of vegetation. Riparian forest and scrub wetlands border some sections of Bear Creek within the project right-of-way. The lateral limits of the nonwetland jurisdiction correspond with the lower limits of the riparian wetlands or the ordinary high water line where adjacent wetlands are absent at Bear Creek and the ordinary high-water line at Black Rascal Creek. It is possible that these perennial streams support special-status fish species, which are discussed in Section 3.9. These streams may serve as a movement corridor for wildlife.

Irrigation Canals

The irrigation canals that occur within the study area are operated by the MID. The major canal systems are the Bradley, Doane, and Hartley Lateral systems. These systems receive water from the Merced River by way of Lake Yosemite and the Fairfield Canal, and discharge into natural waterways including Black Rascal and Bear Creeks. The canal systems are considered jurisdictional because the irrigation infrastructure uses jurisdictional waterways that are tributaries to the San Joaquin River to collect and convey water.

The canals' primary function is to convey water to fields for agricultural use. They are almost entirely concrete-lined, which reduces their value in terms of groundwater recharge although the water they carry is important for groundwater recharge once it is discharged into the fields by farmers.

Cultivated Wetlands

Cultivated wetlands are located in a topographic depression that is isolated from other jurisdictional wetlands or nonwetland waters of the U.S., approximately 305 meters (1,000 feet) south of Bear Creek and approximately 244 meters (800 feet) north of a

branch of the Hartley Lateral irrigation canal. This site is being cultivated to grow Sudan grass (*Sorghum bicolor*), a species that benefits from wetland habitat. Cultivation of Sudan grass requires frequent irrigation to maintain soil moisture.

These cultivated wetlands have a potential for functional groundwater recharge, flood flow alterations, sediment and toxic retention, and nutrient removal and transformation. The potential also exists for functional production export. Because of the ongoing soil disturbance related to cultivation practices such as tilling, disking, and ploughing, the habitat value and the above mentioned functions of these cultivated wetlands is moderate. These wetlands are not considered unique.

A January 2001 U.S. Supreme Court ruling, referred to generally as the SWANCC (Solid Waste Agency of Northern Cook County) Decision, reduces the protection of "isolated wetlands" under Section 404 of the federal Clean Water Act. Evaluation of the wetlands within the Campus Parkway study area by the USACE, at the request of Merced County, confirmed that an area of irrigated pastureland (the Sudan grass area discussed above) fell within the isolated wetlands definition, and it was not included in the total acreage of jurisdictional wetlands for the project (see Appendix A).

3.7.2 Permanent Impacts

Impacts to wetlands and other jurisdictional waters of the U.S. were estimated based on a maximum right-of-way width of approximately 45 meters (150 feet) for each alignment. Seasonal marsh is the only jurisdictional wetland type that would be permanently impacted by the project. Between 0.19 ha (0.47 acre) and 0.23 ha (0.57 acre) of the irrigation canals within the study area would be permanently affected. Table 3.7-3 summarizes the minor differences in the area of potential permanent impacts of each alignment by jurisdictional wetland and nonwetland type. Permanent impacts would consist of areas that would be paved or otherwise permanently covered by elements of the proposed project. All canal areas permanently impacted would likely be placed in culverts under the project alignment.

Permanent impacts to seasonal marsh wetlands would total 0.04 ha (0.09 acre). This impact would apply to all alignments because the impacted wetland occurs at the intersection of Campus Parkway with SR 140, which is common to all the alignments. This impact is not anticipated to be adverse to the beneficial values of the wetlands, including flood control capacity, water pollution control capacity, fish and wildlife habitat value, or the stability and quality of this wetland.

Table 3.7-3 Potential Permanent Impacts to Jurisdictional Wetlands and Other Waters of the U.S.

Type	Impact Area by Alignment (ha [acres])		
	Green	Green Alternate	Yellow – Preferred Alternative
Wetlands			
Riparian forest and scrub	0.00	0.00	0.00
Seasonal marsh	0.035 (0.086)	0.035 (0.086)	0.035 (0.086)
Subtotal - Wetlands	**0.035 (0.086)**	**0.035 (0.086)**	**0.035 (0.086)**
Nonwetlands			
Perennial stream	0.00	0.00	0.00
Canals	0.23 (0.57)	0.19 (0.47)	0.21 (0.53)
Subtotal – Other Waters of the U.S.	**0.23 (0.57)**	**0.19 (0.47)**	**0.21 (0.53)**
Total All Waters of the U.S.	**0.265 (0.656)**	**0.225 (0.556)**	**0.245 (0.616)**

Note: The impact area is based on the following assumptions:
(a) Impacts would be limited to the proposed right-of-way width within the natural resources study area (from SR 99 to the north side of Yosemite Avenue).
(b) Permanent impacts are assumed for all wetlands and other waters of the U.S. within the right-of-way except at Black Rascal and Bear Creeks. Bridges at these crossings would span the riparian forest, scrub wetlands, and nonwetland waters.

		Green		Green Alternate		Yellow – Preferred Alternative	
Type	**Functions & Values Rating[1]**	**Acres**	**Acres x Rating**	**Acres**	**Acres x Rating**	**Acres**	**Acres x Rating**
Riparian forest and scrub	16	0	0	0	0	0	0
Seasonal marsh	20	0.086	1.72	0.086	1.72	0.086	1.72
Totals		**0.086**	**1.72**	**0.086**	**1.72**	**0.086**	**1.72**

[1] From the Summary of Wetland Functions total, Table 3.7-2.

Placement of a bridge over Bear Creek for any of the proposed alignments would potentially create an adverse impact to aquatic resources and water quality caused by runoff drainage from the bridge going directly into Bear Creek. This habitat potentially contains sensitive fish species, discussed in Section 3.9.

Permanent impacts to irrigation canals would affect 0.23 ha (0.57 acre) for the Green Alignment, 0.19 ha (0.47 acre) for the Green Alternate, and 0.21 ha (0.53 acre) for the Yellow Alignment – Preferred Alternative. This area of the canals would be culverted and placed under a proposed alignment or alignment right-of-way. The primary

function of these canals, to convey water for irrigation, would not be affected. Since these waters have a low functionality beyond water conveyance, permanent impacts to irrigation canals are not considered adverse.

High-quality riparian habitat exists along Black Rascal Creek outside of the study area both upstream and downstream of the study area. Within the project limits, the stream channel has no vegetated cover. In relation to its function and value, this stream channel provides a means of connectivity between riparian habitats outside of the project study area. All of the proposed alignments would cross this possible wildlife corridor but would not permanently impact the stream channel. The proposed alignments would not affect the function of Black Rascal Creek as a wildlife corridor.

Wetlands – Only Practicable Alternative Finding

Executive Order 11990 requires all federal agencies to avoid adverse impacts to wetlands unless there is no practicable alternative and to minimize those impacts where unavoidable. Appendix I includes the Wetlands – Only Practicable Alternative Finding.

3.7.3 Wetlands and Regulatory Permit Requirements

Under Section 404 of the Clean Water Act, the types of impacts to wetlands and Other Waters of the United States appear to qualify the project for the USACE Nationwide Permit authorization program. Preliminary review of the impacts indicates that the project appears to meet the criteria for USACE Nationwide Permit No. 14 for Linear Transportation Crossings, including the "General Conditions" required for all Nationwide authorizations. This can only be determined by the USACE, and a permit application would be submitted to the USACE after the NEPA process is complete. The USACE would determine the appropriate review process at that time. Other related regulatory approvals required are a water quality certification or waiver from the RWQCB and a Streambed Alteration Agreement (see Section 5.3 for more detail on these and other necessary regulatory approvals).

3.7.4 Construction and Other Temporary Impacts

Riparian forest and scrub wetlands would be temporarily affected at Bear and Black Rascal Creeks because of construction. The perennial streams could also be temporarily affected by construction below the ordinary high water line. These impacts could temporarily impair the habitat function of these areas. As shown in

Table 3.7-4, temporary impacts are relatively small for all of the alignments (0.014 ha [0.034 acre] at most).

Table 3.7-4 Potential Temporary Impacts to Jurisdictional Wetlands and Other Waters of the U.S.

Type	Impact Area by Alignment (ha [acres])		
	Green	Green Alternate	Yellow – Preferred Alternative
Wetlands			
Riparian forest and scrub	0.006 (0.015)	0.008 (0.019)	0.008 (0.019)
Seasonal marsh	0.00	0.00	0.00
Subtotal - Wetlands	**0.006 (0.015)**	**0.008 (0.019)**	**0.008 (0.019)**
Nonwetlands			
Perennial stream	0.006 (0.015)	0.006 (0.015)	0.006 (0.015)
Canals	0.00	0.00	0.00
Subtotal – Other Waters of the U.S.	**0.006 (0.015)**	**0.006 (0.015)**	**0.006 (0.015)**
Total All Waters of the U.S.	**0.012 (0.03)**	**0.014 (0.034)**	**0.014 (0.034)**

Note: Impact area is based on the assumption that temporary impacts are assumed for all wetlands and other waters within the right-of-way at Bear and Black Rascal Creeks because of construction access needs.

		Green		Green Alternate		Yellow – Preferred Alternative	
Type	Functions & Values Rating[1]	Acres	Acres x Rating	Acres	Acres x Rating	Acres	Acres x Rating
Riparian forest and scrub	16	0.015	0.24	0.008	0.128	0.008	0.128
Seasonal marsh	20	0	0	0	0	0	0
Totals		**0.015**	**0.24**	**0.008**	**0.128**	**0.008**	**0.128**

[1] From the Summary of Wetland Functions total, Table 3.7-2.

3.7.5 Avoidance, Minimization, and Mitigation Measures

Merced County Department of Public Works and Caltrans have consulted with the USACE on the delineation of wetlands in the project study areas and the potential for the limited impacts to qualify the project for authorization under the USACE's Nationwide Permit program. An application will be made to the USACE for the project's preferred alternative along with a proposed mitigation plan for wetland impacts. The following describes the conceptual mitigation plan for wetland impacts.

Permanent loss of wetlands (approximately 0.04 ha or 0.09 acre) would be mitigated through use of a mitigation bank or by creation of replacement wetlands in the project area. The mitigation goal would be 1.1:1 replacement of the functions and values of the affected seasonal marsh wetlands.[17] Because the amount (area) of replacement wetlands is relatively small, the use of a mitigation bank (an area of wetland mitigation specifically established and maintained to compensate for impacts of one or more projects) may be appropriate. Federal resource agency policy guidance on the use of a mitigation bank includes, in general, preference for the use of a mitigation bank to compensate for minor aquatic resource impacts in lieu of on-site mitigation, such as where impacts consist of numerous, small impacts associated with a linear project, and are authorized under the USACE nationwide authorization program (see Section 3.7.3).[18]

The Vieira–Sandy Mush Road Conservation Bank in Merced has been established and is listed for vernal pool preservation but not wetland creation. Additional banks are anticipated in the Central Valley area, although each bank has unique criteria for how it can be applied or credited. The USFWS East Grasslands Wildlife Management Area is available for wetland and Other Waters of the U.S. off-site mitigation. This area has been approved for use by the USACE for the mitigation of the wetland impacts from the SR 99/Mission Avenue interchange, the southern terminus for this project. The USFWS purchases conservation easements in perpetuity (or fee title) to property and arranges with property owners to expand or create wetlands and other habitat protection to fully mitigate for the project's impacts.

Alternatively, if mitigation banking is unavailable or not applicable, on-site mitigation would be planned adjacent to the planned storm water detention basins required for this project. Areas designed and designated for wetland mitigation would be protected, separately from the storm water management system, although both may draw surface water runoff from the project facilities and area. These basins would be planted with herbaceous wetlands species such as nutsedge (*Cyperus esculentus*), soft rush (*Juncus effusus*), creeping wildrye (*Elymus glaucus*), and meadow barley (*Hordeum brachyantherum*). These species tolerate disturbance and would be compatible with periodic maintenance activities that may be necessary within the basins. Basins would

[17] The SR 99/Mission Avenue interchange USACE-approved mitigation ratio for wetlands was 1.1 to 1.

[18] Final policy guidance from the USACE, USEPA, NRCS, USFWS, and National Marine Fisheries Service regarding the establishment, use, and operation of mitigation banks for impacts to waters of the United States and other aquatic resources, memorandum dated December 28, 1995, and federal guidance on the use of the TEA-21 Preference for Mitigation Banking to Fulfill Mitigation Requirements under Section 404 of the Clean Water Act, July 11, 2003.

be designed to provide seasonal inundation and saturation for a minimum of 1–2 months during the wet season. A conceptual wetland mitigation plan has been developed to address implementation, management, and monitoring and will be refined to detail the following components:

- Performance criteria for native vegetation cover, hydrology, and species composition
- Contingency measures for nonperformance
- Schedules for monitoring and maintenance
- Descriptions of required maintenance activities

This plan will be submitted to the USACE and the RWQCB for review and approval as part of the CWA Section 404 and Section 401 permitting and certification process.

Impacts to aquatic habitats from runoff of the bridge spanning Bear Creek would be mitigated by collecting and directing drainage water from the bridge surfaces away from the Bear Creek channel. Where the right-of-way allows placement of detention basins near the bridge, storm water would be directed from the bridge surface to these basins.

Permanent impacts to irrigation canals are not considered adverse; therefore, no mitigation is required.

3.8 Vegetation and Wildlife

3.8.1 Affected Environment

The natural resources study area (shown on Figure 3.7-1 and described in Section 3.7.1) is located on the eastern side of San Joaquin Valley, in land primarily developed for agriculture. Habitat types within this area include agricultural crops and orchards, oak woodland, seasonal marsh, riparian forest and scrub, perennial streams, and ruderal (disturbed or roadside) vegetation. In general, agricultural cropland and orchards dominate, in varying patterns corresponding with the different land owners and lessees who manage the lands. Between the changes in crops and orchards, and alongside roads and canals, narrow bands of trees or shrubs may exist. Narrow bands of riparian corridors are located along Bear Creek and outside of the proposed project corridor along Black Rascal Creek.

Agricultural

The dominant habitat in the natural resources study area is agricultural. Grain, tomatoes, alfalfa, cotton, irrigated pasture, corn, and almonds dominate. Typical wildlife found in this agricultural habitat include gopher snake (*Pituophis catenifer*), house mouse (*Mus musculus*), deer mouse (*Peromyscus maniculatis*), coyote (*Canis latrans*), Brewer's blackbird (*Euphagus cyanocephalus*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), and red-tailed hawk (*Buteo jamaicensis*).

Oak Woodlands

The few oak trees in the natural resources study area and vicinity are valley oaks (*Quercus lobata*), occurring on the Green Alignment about midway between Bear Creek and SR 140. This species of oak can grow very large, reaching up to 30 meters (100 feet) in height with diameters of approximately 2 meters (6 or 7 feet) diameter at breast height (DBH). The locations of six valley oak trees located in the study area are shown on Figure 3.8-1. These six trees are the only oak trees located within the study area. Senate Concurrent Resolution No. 17 (1989) directs state agencies to preserve and protect native oak woodlands to the greatest extent possible, and this stand of oaks meets the minimum standard to qualify as an "oak woodland," pursuant to the Senate resolution. This oak woodland is isolated from other similar habitats and is in an atypical location. Oak woodlands of eastern San Joaquin Valley tend to provide habitat for lizards, western toad (*Bufo boreas*), bats, California quail (*Callipepla californica*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), and California ground squirrel (*Spermophilus beecheyi*). However, because these affected

oak trees are relatively isolated from other oak woodland habitats, this particular habitat is not of high quality.

Seasonal Marsh, Riparian Forest and Scrub, and Perennial Streams

Seasonal marshes include irrigation canals and areas created by tailwater runoff from central-pivot irrigation systems and other agricultural irrigation. Riparian forest and scrub make up the wetland habitat along Bear Creek in the natural resources study area, located at the ordinary high water line of these creeks, and along Black Rascal Creek within the study area but outside of the right-of-way. Perennial streams are Bear and Black Rascal Creeks. All of these habitat types potentially provide food, water, nesting, migration, and dispersal corridors for a number of diverse amphibian and reptile species, birds, and mammals (Brode and Bury 1984; Laymon 1984; Trapp 1984). These habitats and impacts to these habitats are discussed in more detail in Section 3.7 of this report.

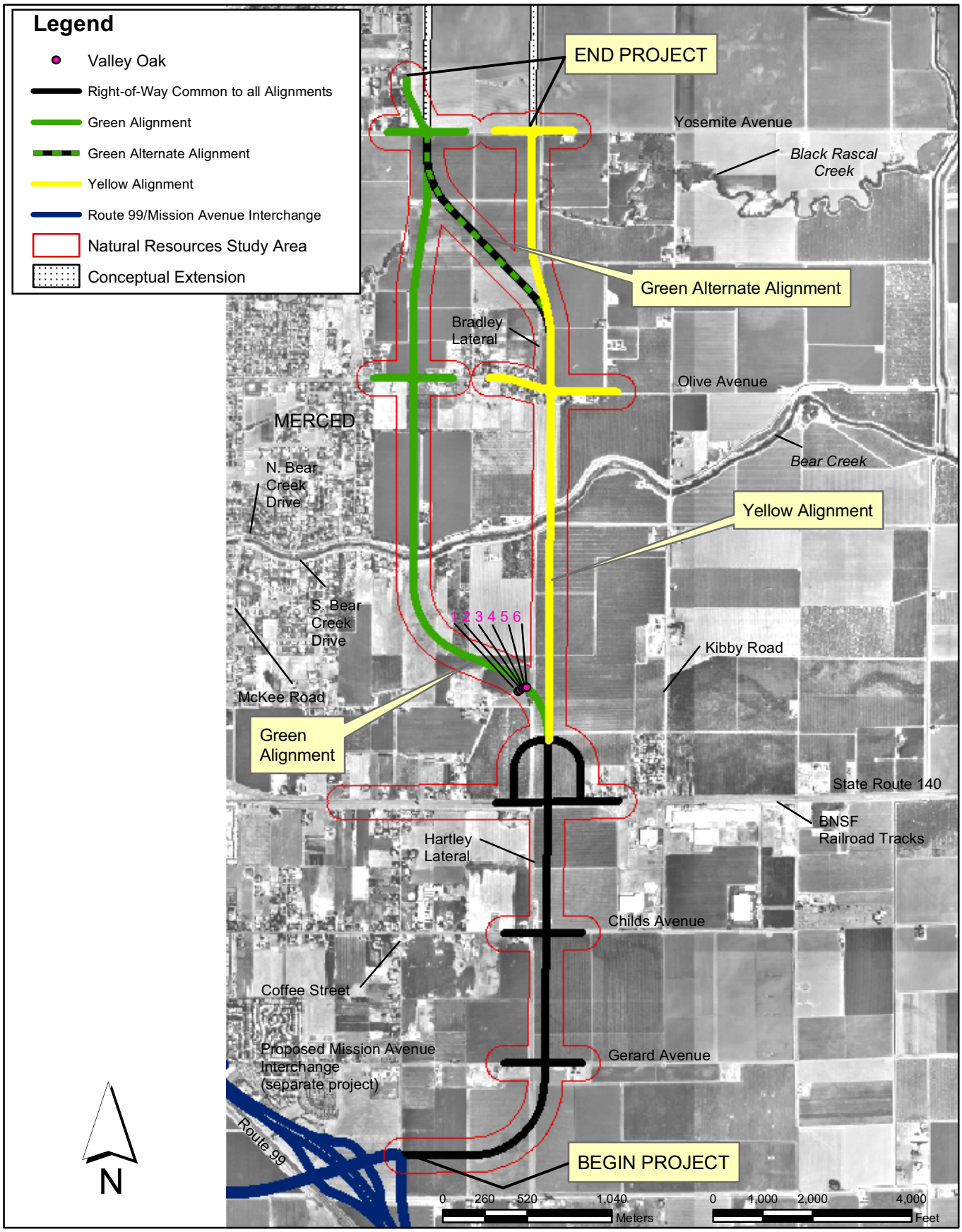
Invasive Species

Executive Order 13112 directs federal agencies to assess the potential for their actions to affect the unwanted spread of invasive species. Best Management Practices and other measures are to be incorporated into the project to minimize the possibility of spreading invasive species. A list of invasive species was obtained from the California Department of Food and Agriculture's Plant Quarantine Manual for Merced County. Ruderal habitats within the natural resources study area are dominated by nonnative plant species. The only species found in the study area that are considered threats are yellow starthistle (*Centaurea solstitialis*), field bindweed (*Convolvulus arvensis*), dodder (*Cuscuta* spp.), Bermuda grass, and alkali mallow (*Malvella leprosa*). These species are common throughout the region.

3.8.2 Permanent and Construction Impacts

Oak Woodlands

Oak trees are only present on the Green Alignment, about midway between Bear Creek and SR 140 (Figure 3.8-1). Valley oaks numbered 5 and 6 in Table 3.8-1 and on Figure 3.8-1 are located within the proposed right-of-way for the Green Alignment, and construction of that alignment would require the removal of these trees. The loss of these trees would not have a substantial impact on the status of oak woodlands in Merced, or in the region. Removal of these two oak trees would displace wildlife that use these particular trees for food, nesting, roosting, etc. The other four oak trees in the natural resources study area are not anticipated to be impacted.



Campus Parkway Project	VALLEY OAKS LOCATED IN THE NATURAL RESOURCES STUDY AREA	Figure 3.8-1

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Table 3.8-1 Diameter at Breast Height (DBH) of Valley Oak Trees in the Right of Way of the Green Alignment

Oak Tree Number	DBH	
	Centimeters	Inches
5	45	18
6	14	5.5

Wildlife

The most diverse habitat for wildlife along the alternative corridors is at Bear Creek, the portions of Black Rascal Creek that have vegetated cover, and narrow transitional "edges" between crops, orchards, and pockets of nonagricultural vegetation. These areas are of minor habitat use. Bear Creek and the vegetated areas between South and North Bear Creek Drives provide one of the widest and most diverse habitats for potential wildlife corridor use in the project area. The area of vegetated habitat between South and North Bear Creek Roads within the proposed right-of-way is 1.3 ha (3.2 acres). This area would be crossed by a relatively long-span bridge structure that would not adversely impact wildlife movement or habitat use. Temporary impacts could occur during construction. A span would also cross SR 140 and the BNSF railroad tracks, but this area does not provide much wildlife cover.

Campus Parkway would not substantially affect wildlife use of the corridor at Bear Creek. It would impact edges of potential habitat or use along croplands, orchards, and some roadways and canals, but this type of habitat is common within the study area. The potential for vehicle collisions with wildlife would not be substantially changed as the primary wildlife corridor (Bear Creek) is crossed by a bridge, and other roadways and traffic already exist throughout the study area.

Black Rascal Creek is channelized and unvegetated within the proposed project right-of-way. Habitat that provides wildlife cover and is more diverse lies just outside the right-of-way and can be avoided. The stream channel within the project right-of-way provides a possible wildlife corridor between high-quality riparian habitats located outside the right-of-way. The proposed project would not affect the function of Black Rascal Creek as a wildlife corridor because the habitat areas of this stream channel would not be impacted.

Nonlisted avian species, including raptors, may forage within the agricultural areas in the project region. They also could potentially nest in areas within or near the project

alignments. A potential exists that land clearing and construction activities could impact these species if they are present. The California Fish and Game Code prohibits destruction of raptor nests or activities that cause reproductive failure of a nesting raptor.

Invasive Species

The project has a potential to benefit invasive species, typical of any other construction project. Seeds from invasive plants could be unknowingly transported into the work area during construction from another area by construction equipment. Imported construction material could be contaminated with seeds from invasive plants. Another source of seeds could be organic material used for erosion control, hydroseeding or revegetation of disturbed areas, which could contain seeds from invasive plants not already found in the study area. Plants that are either already present in the study area or plants introduced into the study area during construction could colonize disturbed areas. Because yellow starthistle, field bindweed, dodder, Bermuda grass, and alkali mallow are all present in the study area, these species may recolonize and thrive in areas disturbed during construction. This potential impact is primarily identified for Phase 1 of the project, during which only one-half of the right-of-way would be completed until additional funding is obtained. Best Management Practices and other measures are to be incorporated into the project to minimize the possibility of spreading invasive species.

3.8.3 Avoidance, Minimization, and Mitigation Measures

Oak Woodlands

Two valley oak trees have been identified for removal. Merced County would replant valley oak trees or another native oak species that is suitable to the area in compensation for the two trees removed. A mitigation ratio of 3:1 or more for the replacement of these oak trees would be determined during final design, and would be based on the size of the trees removed. The replacement planting would be within excess right-of-way areas or off-site.

Wildlife

Impacts to any federally or state protected species would be mitigated. Specific mitigation measures would be identified under consultation with the appropriate responsible agency. Section 3.9 of this report discusses mitigation of impacts to listed species. For nonlisted raptors, preconstruction, breeding season surveys would be conducted within 0.4 km (0.25 mile) of proposed construction activities between February 15 and August 15. Merced County will consult with the CDFG to determine

potential impacts and appropriate mitigation for any raptors nesting within 0.4 km (0.25 mile) of construction activities.

Riparian Habitat

Riparian habitat exists along Black Rascal Creek near the Yellow Alignment – Preferred Alternative east of the Hartley/Bradley Lateral and on the east side of the Green Alignment study area. These riparian areas would be designated as Environmentally Sensitive Areas and avoided during construction.

Habitat within the Bear Creek channel that could be temporarily impacted during construction would be revegetated/planted.

Invasive Species

To ensure that seeds from invasive species are not transported into the project area by construction equipment, all equipment should be cleaned, which could include water or brushing of vehicles, prior to being transported to the project area. All construction equipment should be clean and free of seeds or other plant material before being brought on-site.

Prior to importing material to the project site, the contractor would notify the engineer of the location of the source of the material. Prior to removal of material or disturbance to the site or stockpile, qualified personnel would inspect the borrow site for the presence of quarantined plants identified in Appendix F of the Campus Parkway *Natural Environment Study/Biological Assessment* (URS 2004). If quarantined plants are present, the contractor would remove 15 centimeters (6 inches) of the surface of the borrow site or stockpile prior to removing and hauling material to the project site. This removal would minimize the potential for invasive species to colonized areas disturbed during construction.

Any organic material used during project construction for erosion control, or any material used for hydroseeding or revegetating disturbed areas, should similarly be free of invasive species. If the provider of the material cannot ensure that it is free of invasive species on the list in Appendix F of the *Natural Environment Study/Biological Assessment* (URS 2004), then it should also be inspected by qualified personnel prior to being transported into the project area.

3.9 Threatened and Endangered Species

The biological studies for this project involved review of existing data and records regarding presence of habitat and occurrence of species, project-specific surveys, and assessment of impacts and mitigation. Data sources reviewed included the California Natural Diversity Data Base (CNDDB), the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California, and listings of potential occurrences of species of concern identified by the USFWS (USFWS lists are included in Appendix F). Field surveys for the presence of potential habitats and species were conducted between 1998 and 2000. Documentation of the studies and findings are summarized below and detailed in this project's *Natural Environment Study/Biological Assessment* (URS 2004). Agency consultation is summarized in Section 5.3.5, and copies of agency correspondence are included in Appendix A.

3.9.1 Affected Environment

San Joaquin Kit Fox

The San Joaquin kit fox (*Vulpes macrotis mutica*) is protected under the federal Endangered Species Act (ESA) of 1973 and the California ESA. This subspecies of kit fox inhabits valley and foothill grasslands, sparsely vegetated shrubby habitats (O'Farrell 1983) and some agricultural and urban areas (Jensen 1972; Morrel 1972).

Sightings of the San Joaquin kit fox were recorded in 2001 in the vicinity of Planada to the east and southeast of the study area, and in 1999 approximately 5 km (3.1 miles) to the east and northeast of the study area. The CNDDB's nearest documented occurrences are approximately 1.6 km (1 mile) east, 9.7 km (6 miles) southeast, 3.2 km (2 miles) southeast, and 14.5 km (9 miles) west of the proposed Campus Parkway. The suitability of the project area to support or currently be used by kit fox was assessed using relatively intensive surveys and assessment techniques. This involved consultation and agreement with USFWS personnel regarding survey methods, followed by a habitat suitability assessment, "prey-base trapping" to determine presence of small mammals favored by kit fox, and observation and detection using camera and tracking stations. The study methods for this assessment were agreed to in August 2000, and the surveys were performed between August 9 and 23, 2000. No kit fox, kit fox signs, or other evidence of kit fox were detected during the focused surveys conducted for this project. These surveys were taken in areas between Yosemite Avenue and Lake Yosemite, in the Virginia Smith Trust area (which includes the footprint area of the UC Merced Campus), and in the University Community Plan area.

Suitable grassland habitat for the kit fox exists in the areas of the UC Merced Campus and University Community. An appropriate prey base is located within the parkway's natural resources study area and the area of the UC Merced Campus and University Community. Ground squirrel burrows in the study area and the UC Merced Campus and University Community areas provide limited denning opportunities.

The natural resources study area does not fall within any of the three core population areas identified in *The Recovery Plan for Upland Species of the San Joaquin Valley* (USFWS 1998). These core population areas, which are identified because they have relatively dense and geographically distinct kit fox populations, are located to the west and south of Merced County in the Carrizo Plain Natural Area in San Luis Obispo County, western Kern County, and the Ciervo-Panoche Natural Area of western Fresno and eastern San Benito Counties. The general area east of the City of Merced is mentioned in the recovery plan in regard to determining the population status and linking natural lands to the west and east of Campus Parkway. Informal consultation with the USFWS was first conducted on March 5, 2003, and periodically thereafter to discuss project impacts to San Joaquin kit fox and other listed species under USFWS jurisdiction. Formal consultation with the USFWS began in January 2006. A Biological Opinion was issued on April 21, 2006 (Reference 1-1-06-F-0099; USFWS 2006).

The Biological Opinion identified recent records of San Joaquin kit fox occurrences to the northeast and northwest of the project area at distances from 4 to 13 km (2.5 to 8 miles) (USFWS 2006). The opinion stated that suitable kit fox habitat is located in the project area in the form of agricultural and open ruderal habitat. Based on past sightings, the biology and ecology of the species, the presence of suitable habitat in the project area, and the fact that San Joaquin kit fox have been documented to move 14.5 km (9 miles) or more in a single night, the USFWS believes that it is reasonable to assume that this listed species inhabits the project area.

Bats

The following special-status bat species are likely to occur in the project area:

- Pallid bat (*Antrozous pallidus*), a state species of concern (Pierson 2000)
- Greater western mastiff bat (*Eumops perotis californicus*), a federal and state species of concern
- Yuma myotis bat (*Myotis yumanensis*), a federal and state species of concern

Pallid bats generally roost in buildings, under bridges, in crevices, and in hollow trees. They forage in dry open grasslands near water and rocky outcroppings, old structures, and oak woodlands. The closest documented occurrence is at the bridge over the Merced River of SR 59 approximately 20 km (12.5 miles) north of the project area. Pallid bats are likely to forage in the study area, over the pastures and near waterways, including Bear Creek, Black Rascal Creek, and irrigation canals.

Greater western mastiff bats roost in cliffs and high buildings (Pierson 2000). They are known to travel at least 26 km (16 miles) from their roost and 600 to 700 meters (1,970 to 2,300 feet) above the ground to forage. This species is known to occur 29 km (18 miles) south of the study area and 34 km (21 miles) east of the project area. This species is likely to forage above the project area.

Yuma myotis bats are known to roost under artificial structures such as bridges (Pierson 2000) and to forage on aquatic emergent insects. Colonies have been documented roosting under bridges in the region, including the SR 59 bridge over the Merced River. This species is also likely to forage in the study area near grasslands and waterways such as Bear Creek, Black Rascal Creek, and irrigation canals.

Burrowing Owls

The Western burrowing owl (*Athene cunicularia hypugaea*) is designated as a federal and state species of concern. Burrowing owls prefer annual and perennial grasslands, typically with sparse or nonexistent tree or shrub canopies. In California, they are found in close association with California ground squirrel burrows, and they use human-made structures such as culverts, debris piles, or openings beneath pavement as shelter and nesting habitat (CDFG 1995).

Row crops in the study area are currently unsuitable habitat for burrowing owls because of frequent disking and other ground-disturbing activities that disrupt burrows that are required habitat for this species. The sides of the embankment of the BNSF railroad, which crosses the study area, could provide suitable, but limited nesting and foraging habitat for burrowing owls. No known occurrences of burrowing owls have been reported in the study area and no owls were seen during any surveys performed in this area. Burrowing owls were observed and active burrows were found approximately 1.6 km (1 mile) north of the study area.

Swainson's Hawk

The Swainson's hawk is protected as a threatened species under the California ESA. This species of hawk is known to nest in areas scattered with trees and riparian corridors

adjacent to annual grasslands, pastures, alfalfa, and other crops that provide foraging habitat (CDFG 1994). These hawks have also been observed to nest in urban habitat, but with documented lower reproductive success (England 1995). This species forages in agricultural and grassland areas that allow access to secure ground-level prey.

Following CDFG guidance for assessing impacts to this species, a 16-km (10-mile) radius was analyzed for known occurrences, and surveyed for occurrences, nests, and suitable foraging and nesting habitat. CDFG guidance also stipulates that it is important to separately analyze nest sites within 0.8 km (0.5 mile) of the project area (CDFG 1994). Within 0.8 km (0.5 mile) of the proposed Parkway alignments, suitable nesting habitat exists in trees along the roadways and canals that intersect or are adjacent to the proposed project. Suitable foraging habitat, such as irrigated pasture, grain crops, fallow fields, hay fields, and cornfields, is scattered along the proposed alignments. However, a large percentage of the agricultural lands within 0.8 km (0.5 mile) of the project area are orchards, which would not support Swainson's hawk. The developed area west of Campus Parkway (City of Merced) does not contain suitable foraging habitat. The close proximity of more suitable nesting habitat south and southwest of the study area makes Swainson's hawk use of habitats within 0.8 km (0.5 mile) of the study area less likely. Many trees suitable for nesting are located directly north of the project alignments, but most of the land uses (residential and developed) adjacent to these trees are not suitable to foraging.

Surveys within a 16-km (10-mile) radius of the project area found three Swainson's hawk nests. These nests were along Bear Creek and in the southern portion of the study area, and two of the nests were occupied. Thirteen observations were also made of flying or perched Swainson's hawks, all observed in the southern portion of the survey area. These observations were estimated to consist of five to seven individuals. Figure 3.9-1 shows the locations of Swainson's hawk nests and observed birds.

Mountain Plover

The mountain plover (*Charadrius montanus*) is listed as a threatened species by the federal ESA. This species migrates between its breeding habitat of the Rocky Mountain states and its wintering habitat of the San Joaquin and Imperial valleys of Southern California (Federal Register 1999). These birds occupy grassland and agricultural lands of San Joaquin Valley, primarily west of SR 99, between September and March (Hunting 1995; Federal Register 1999). They prefer grasslands with exposed, bare ground. Cultivated fields in the study area provide suitable habitat for the mountain plover, but these fields may not provide enough barren or sparsely

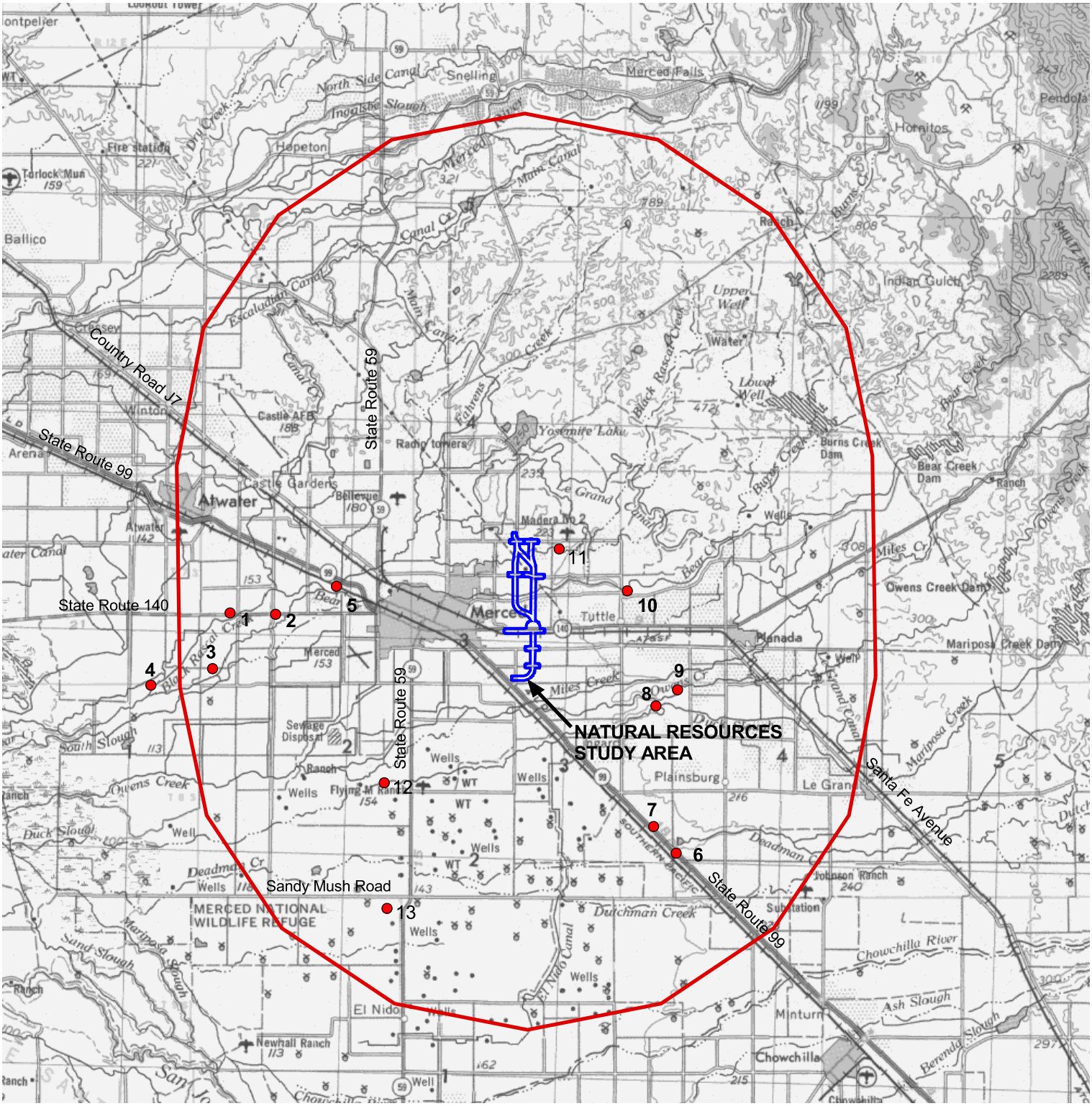
vegetated areas to attract large numbers of this species. This species has been observed only twice in the region north and east of the study area in 1999 and 2000. No other observations are known within 16 km (10 miles) of the project area.

Mountain plovers could likely occur sporadically in the study area for short periods as they move between breeding and wintering grounds. However, since only a few occurrences have been known in the county and only two small groups were observed near the project area, occurrences in the study area would likely be in small numbers.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) is a federal and state species of concern that is nearly restricted to California. This species generally winters in the Sacramento-San Joaquin River Delta and coastal areas. Their nesting areas include silage and grain fields, freshwater marshes, giant reed, safflower, black mustard (*Brassica nigra*), tamarisk, Fremont cottonwood, California ash (*Fraxinus dipetala*), barley, mule fat (*Baccharis salicifolia*), wheat, desert olive groves, and lemon orchards. High-quality foraging habitat includes irrigated pastures, lightly grazed rangelands, dry seasonal pools, mowed alfalfa fields, feedlots, and dairies. Low-quality foraging habitat includes cultivated row crops, orchards, vineyards, and heavily grazed rangelands. Tricolored blackbirds are a highly colonial species, reported to breed in groups of up to 100,000 and 200,000 nests (Beedy 1999; Collier 1968 and Cook 1996 in Beedy 1999).

Tricolored blackbirds have been reported to nest within many areas of Merced County, including San Luis, Merced, and Los Banos wildlife refuges, and several sections of levees and channels surrounding Bear Creek, between 22 and 40 km (14 and 25 miles) southwest of the natural resources study area (Jones 1997). However, none were observed within the study area during habitat mapping surveys for this project. No suitable nesting habitat is located within the potential right-of-ways for the project alignments. Within the study area, some of the riparian habitat associated with Bear Creek may provide suitable nesting areas, but the narrow width of this riparian corridor and its separation from high-quality foraging habitats by urban development or the presence of orchards is likely to preclude tricolored blackbird use of this area. Grain fields and orchards could provide nesting habitat. Small areas of suitable nesting and foraging habitat exist near the intersection of Childs Avenue and Hartley Lateral and in a riparian wetland associated with Black Rascal Creek. Highly suitable nesting habitat exists several miles southwest of the study area.



Observed Raptor Activity

All observations made in 1999 by URS unless otherwise noted. Observations of flying birds determined to represent only a few different individuals (see text).
SWHA = Swainson's hawk;
RTHA = red-tailed hawk; RSHA = red-shouldered hawk

1. SWHA flying
2. SWHA flying close to unidentified nest
3. Two SWHA flying near location of SWHA nest observed in 1992 by Jones and Stokes (1997)
4. Two SWHA flying near location of SWHA nest observed in 1992 by Jones and Stokes (1997)
5. RTHA nest
6. SWHA nest
7. Two SWHA flying
8. SWHA flying
9. SWHA nest
10. SWHA nest observed in 1992 by Jones and Stokes (1997)
11. RSHA nest
12. Two SWHA flying
13. Two SWHA perched

Raptor Occurrences

Raptor Study Area

0 3 6 Kilometers

Scale 1:250,000

N

Campus Parkway Project	SWAINSON'S HAWK AND OTHER RAPTOR OBSERVATIONS WITHIN A 16 KILOMETER (10 MILE) RADIUS OF THE NATURAL RESOURCES STUDY AREA	Figure 3.9-1

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Horned Lark

The horned lark (*Eremophila alpestris*) is a state species of concern. This species ranges throughout California in grasslands and other open habitats where trees and shrubs are absent (Zeiner 1990; Beason 1995). They tend to nest on ground in barren or lightly vegetated areas adjacent to dense stands of vegetation that could provide cover and protection from predators. Although none were observed, horned larks may use bare and disced agricultural areas. This species is not expected to use the study area for nesting because ground is generally bare for brief periods only between crop rotations. Horned larks were observed in grasslands north of the study area, during biological surveys in 1999 and 2000, between Lake Yosemite and Yosemite Avenue.

White-faced Ibis

The white-faced ibis (*Plegadis chihi*) is a federal and state species of concern. Among other locations, this species will breed and winter in San Joaquin Valley. Their primary nesting habitat consists of extensive emergent marshes with large tule stands surrounded by open water. White-faced ibis will sometimes nest in trees with other colonial-nesting species (Zeiner 1990; Eckert 1981; USFWS 1985c in Jones 1997). Foraging generally occurs in shallow, flooded grassy marshes, seasonal wetlands, gopher mounds in irrigated fields, and flood-irrigated agricultural fields, especially alfalfa (Remsen 1978; Ryder 1994).

No white-faced ibis were observed during project-related biological surveys, but one potential sighting was made on the Virginia Smith Trust lands to the north (Bumgardner 2000). This species has been observed in recent years foraging at Merced National Wildlife Refuge, 16 km (10 miles) southwest of the study area (Chouinard 2000). This sighting is the only recent positive occurrence of this species within 16 km (10 miles) of the project area. The study area lacks suitable nesting habitat, but suitable foraging habitat is available in irrigated pastures within the study area and irrigated pastures and seasonal wetlands to the north. Foraging ibis are likely to occur very infrequently and in very low numbers since suitable roosting and nesting habitat is not present in the project vicinity.

White-tailed Kite

The white-tailed kite (*Elanus leucurus*) is a federal species of special concern and a state fully protected species. Kites are common-to-uncommon residents in coastal and valley lowlands throughout California. Their nests are usually loosely piled sticks placed near the tops of dense oak, willow, or other tree stands (Zeiner et al. 1990). Kites forage over grasslands, marshes, agricultural areas, and wetlands, where they prey mostly on small

mammals (Zeiner et al. 1990). This species was observed during project studies conducted between 1999 and 2000 and has the potential to nest in the project area.

Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is a federal species of concern. This species prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. It occurs in highest density in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. This species frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low or sparse herbaceous cover (CDFG 2003). In California, loggerhead shrikes lay their eggs from March into May, and their young become independent in July or August. A monogamous, solitary nester, the loggerhead shrike lays a clutch of four to eight eggs and may be double-brooded (CDFG 2003). This species was observed during project studies between 1999 and 2000. They have the potential to nest in the project area.

Lewis' Woodpecker

Lewis' woodpecker is a federal species of special concern. This species breeds in open woodland and forest, including oak woodland and riparian woodland. An open canopy, a brushy understory with ground cover and abundant insect prey, dead or downed woody material and available perches are all important aspects of their breeding ecology. Nests are in the form of cavities excavated in trunk or large branches of large, dead or decaying trees. They are often found in burned or clear-cut areas. This species has the potential to forage and nest in the project area, although it was not observed during project studies conducted in 1999–2000.

Long-Billed Curlew

Long-billed curlew is a federal and state species of special concern. This species breeds within the northeastern portion of the state in grassland or wet meadow habitats that are usually adjacent to lakes or marshes. Conversion of these breeding grounds to agricultural areas is believed to be the primary cause for the decline of this species in the state (Zeiner et al. 1990). Long-billed curlews commonly winter in the Central Valley, where they occupy seasonal wetland habitats. This species was observed during project studies between 1999 and 2000. Nesting habitat for this species is not present.

Nuttall's Woodpecker

Nuttall's woodpecker is a federal species of special concern. It is found in oak woodland, riparian woodland and chaparral. Nest holes are excavated in willow, alder,

cottonwood, sycamore, or oak trees. Eggs are laid between late March and mid-June. This species forages predominantly in oaks, though their diet includes insects as well as acorns. It has the potential to nest and forage in the project area, although it was not observed during project studies in 1999–2000.

Lawrence's Goldfinch

Lawrence's goldfinch is a federal species of concern. It is found in oak and riparian woodland, chaparral and weedy areas near water. This species is a late nester, often nesting in late May. It breeds erratically and changes nesting locations frequently. This species has the potential to nest and forage in the project area although it was not observed during project studies in 1999–2000.

Special-Status Fish Species

The Kern brook lamprey, hardhead, and California roach are special-status fish species that are likely to occur in the study area. The Kern brook lamprey (*Lamptra hubbsi*) is a federal and state species of concern. The distribution of this species has not been well documented, but it is believed to be native and restricted to the San Joaquin drainage (Moyle 1995). Populations have been found in the lower reaches of the Merced, Kaweah, Kings, and San Joaquin Rivers. Although its presence has not been documented in the study area, and its habitat has been adversely impacted from water diversions of Bear and Black Rascal Creeks, potential exists for this species to be present in Bear and Black Rascal Creeks.

Hardhead (*Mylopharodon conocephalus*), a state species of concern, is a large minnow that can grow to 2 feet in length. It prefers clear foothill streams of the San Joaquin-Sacramento drainage, and is probably sensitive to high levels of suspended sediment in the water. These fish spawn in the spring. They are known to occur in the Merced River and in the Eastside Canal, which is hydrologically connected to the study area (CDFG 2000). Hardheads are sensitive to the effects of altered flow regimes and do not do well in the presence of nonnative sunfish (members of Centrarchidae, such as bass) (Moyle 1995). These adverse conditions are present in the creeks within the study area. While hardheads may have once been abundant in Bear Creek or Black Rascal Creek, if still present, their numbers today are probably limited and declining.

The San Joaquin Valley form of the California roach (*Lavinia symmetricus*) is a state species of concern. This small omnivorous minnow is typically found in small, warm, intermittent streams, but this fish has also been observed in a variety of other habitats, including cool, clear streams; human-modified habitats; and main channels of rivers

(Moyle 1995). Spawning occurs in the spring, in shallow areas of moderate flow and gravel/rubble substrate. Dams and diversions are increasingly isolating populations of the San Joaquin roach from one another. They are also threatened by predation from introduced centrarchids. This species may be present in Bear and Black Rascal Creeks.

No Essential Fish Habitat exists in the study area. This habitat designation is used by the National Marine Fisheries Service, fishery councils, and other federal agencies for "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The late fall-run chinook salmon *(Oncorhynchus tshawytscha)* was identified as the only species potentially occurring in the proposed project region. Barriers (dams), seasonally dry creeks, and seasonal water temperature make it highly unlikely that this or any other anadromous fish (fish that swim from oceans to rivers to breed) would occur in the area.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle is listed as a threatened species under the federal ESA. Elderberry beetles have only been found in association with their host plants, blue elderberry shrubs, which are often found within or close to riparian habitats along Central Valley rivers and their tributaries. Stems and trunks must be equal to or greater than 2.5 centimeters (1 inch) in diameter to provide suitable habitat for beetles. Generally, the valley elderberry longhorn beetle occurs in low densities and is very difficult to observe. Therefore, the USFWS requires mitigation for impacts to any elderberry shrubs located within the range of the beetle (USFWS 1999).

The nearest documented occurrences of the valley elderberry longhorn beetle to the project area are at locations on the Merced River (CDFG 2000). Blue elderberry shrubs are located within or near the study area along Bear Creek, and elderberry shrubs with stems 2.5 cm (1 inch) or greater in diameter are found in and around the project area (USFWS 2006). Elderberry stem counts were updated for the Yellow Alignment after its selection as the preferred alternative. Although evidence of beetle presence in the form of exit holes was not found, the USFWS determined that the project area contains habitat that the species could use and the beetle is reasonably certain to occur.

3.9.2 Permanent Impacts

Table 3.9-1 summarizes potential impacts to sensitive biological resources. The following sections describe the potentially affected species and habitat.

Table 3.9-1 Summary of Potential Impacts to Sensitive Biological Resources

Affected Biological Resources	Potential Impacts[1]		
	Green Alignment	Green Alternate Alignment	Yellow Alignment – Preferred Alternative
Listed, Proposed, and Candidate Species			
San Joaquin kit fox (*Vulpes macrotis mutica*)	Similar to Yellow Alignment.	Similar to Yellow Alignment.	Project construction would result in temporary loss of 6.38 ha (15.77 acres) and permanent loss of 56.52 ha (139.67 acres) of kit fox foraging and travel habitat (USFWS 2006).
Swainson's hawk (*Buteo swainsoni*)	19.0 ha (47 acres) foraging habitat.	14.9 ha (37 acres) foraging habitat.	13.7 ha (34 acres) foraging habitat.
Mountain plover (*Charadrius montanus*)	13.3 ha (33 acres) foraging and resting habitat.	13.0 ha (32 acres) foraging and resting habitat.	11.7 ha (29 acres) foraging and resting habitat.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	Elderberry shrubs present.	Elderberry shrubs present.	• 70 elderberry shrubs/clumps (101 elderberry stems).
Burrowing Owl	No owl burrows.	No owl burrows.	No owl burrows.
Other Special-Status Species			
Pallid bat (Antrozous pallidus) Greater western mastiff bat (*Eumops perotis californicus*) Yuma myotis bat (*Myotis yumanensis*)	Foraging habitat is north of Yosemite Avenue and would not be affected.	Two valley oaks would be removed, but they are considered too small for bat roosting habitat. Foraging habitat is north of Yosemite Avenue and would not be affected.	Foraging habitat is north of Yosemite Avenue and would not be affected.
Tricolored blackbird (*Agelaius tricolor*)	5.7 ha (14 acres) high-quality and 27.6 ha (68 acres) low-quality foraging habitat removed. No direct impact to nesting. Potential indirect nesting disturbance during construction.	1.9 ha (5 acres) high-quality and 34.6 ha (85 acres) low-quality foraging habitat removed. No direct impact to nesting. Potential indirect nesting disturbance during construction.	2.0 ha (5 acres) high-quality and 32.8 ha (81 acres) low-quality foraging habitat removed. No direct impact to nesting. Potential indirect nesting disturbance during construction.
Horned lark (Eremophila alpestris)	Loss of foraging habitat (13.3 ha [33 acres]). Potential nesting disturbance.	Loss of foraging habitat (13.0 ha [32 acres]). Potential nesting disturbance.	Loss of foraging habitat (11.7 ha [30 acres]). Potential nesting disturbance.
White-faced ibis (*Plegadis chihi*)	Loss of foraging habitat (5.7 ha [14 acres]). Low potential for impacts.	Loss of foraging habitat (1.9 ha [5 acres]). Low potential for impacts.	Loss of foraging habitat (2.0 ha [5 acres]). Low potential for impacts.
White-tailed kite (*Elanus Leucurus*)	19.3 ha (33 acres) foraging and resting habitat.	13.0 ha (32 acres) foraging and resting habitat.	11.7 ha (29 acres) foraging and resting habitat.
Loggerhead shrike (*lanuis ludovicianus*)	19.3 ha (33 acres) foraging and resting habitat.	13.0 ha (32 acres) foraging and resting habitat.	11.7 ha (29 acres) foraging and resting habitat.

[1] The impact area is based on the project limits from Yosemite Avenue to SR 99. This table does not include species described in Appendix F that are not affected by the proposed alignments. Many project impacts overlap. Some habitats such as foraging areas for birds are used by multiple species. Therefore, the total area of natural vegetation types affected by the proposed project is substantially less than the sum of all species impacts listed above.

Table 3.9-1 (Continued) Summary of Potential Impacts to Sensitive Biological Resources

Affected Biological Resources	Potential Impacts[1]		
	Green Alignment	Green Alternate Alignment	Yellow Alignment – Preferred Alternative
Other Special-Status Species (Continued)			
Lewis' woodpecker *(Melanerpes lewis)*	Loss of 0.035 ha (0.086 acres) seasonal marsh habitat.	Loss of 0.035 ha (0.086 acres) seasonal marsh habitat.	Loss of 0.035 ha (0.086 acres) seasonal marsh habitat.
Long-billed curlew *(Numenius americanus)*	5.7 ha (14 acres) high-quality and 27.6 ha (68 acres) low-quality foraging habitat removed. No direct impact to nesting. Potential indirect nesting disturbance during construction.	1.9 ha (5 acres) high-quality and 34.6 ha (85 acres) low-quality foraging habitat removed. No direct impact to nesting. Potential indirect nesting disturbance during construction.	2.0 ha (5 acres) high-quality and 32.8 ha (81 acres) low-quality foraging habitat removed. No direct impact to nesting. Potential indirect nesting disturbance during construction.
Nuttall's woodpecker *(Picoides nuttallii)*	Loss of 0.035 ha (0.086 acres) seasonal marsh habitat.	Loss of 0.035 ha (0.086 acres) seasonal marsh habitat.	Loss of 0.035 ha (0.086 acres) seasonal marsh habitat.
Lawrence's goldfinch *(Carduelis lawrencei)*	Loss of 0.035 ha (0.086 acres) seasonal marsh habitat.	Loss of 0.035 ha (0.086 acres) seasonal marsh habitat.	Loss of 0.035 ha (0.086 acres) seasonal marsh habitat.
Wetlands			
Vernal pools and swales	No impact.	No impact.	No impact.
Seasonal seeps	No impact.	No impact.	No impact.
Seasonal marsh	Permanent: 0.035 ha (0.086 acre). Temporary: None.	Permanent: 0.035 ha (0.086 acre). Temporary: None.	Permanent: 0.035 ha (0.086 acre). Temporary: None.
Riparian forest and scrub	Permanent: None. Temporary: 0.006 ha (0.015 acre).	Permanent: None. Temporary: 0.008 ha (0.019 acre).	Permanent: None. Temporary: 0.009 ha (0.019 acre).
Wetland Subtotal	Permanent: 0.035 ha (0.086 acre). Temporary: 0.006 ha (0.015 acre).	Permanent: 0.035 ha (0.086 acre). Temporary: 0.008 ha (0.019 acre).	Permanent: 0.035 ha (0.086 acre). Temporary: 0.009 ha (0.019 acre).
Other Waters of the U.S.			
Perennial stream	Permanent: None. Temporary: 0.006 ha (0.015 acre).	Permanent: None. Temporary: 0.006 ha (0.015 acre).	Permanent: None. Temporary: 0.006 ha (0.015 acre).
Canals	Permanent: 0.23 ha (0.57 acre). Temporary: None.	Permanent: 0.19 ha (0.47 acre). Temporary: None.	Permanent: 0.21 ha (0.53 acre). Temporary: None.
Total Wetlands and Waters of the U.S.	Permanent: 0.265 ha (0.656 acre). Temporary: 0.012 ha (0.03 acre).	Permanent: 0.225 ha (0.556 acre). Temporary: 0.014 ha (0.034 acre).	Permanent: 0.245 ha (0.616 acre). Temporary: 0.014 ha (0.034 acre).
Sensitive Natural Communities			
Oak woodlands	2 valley oaks.	No affected oaks.	No affected oaks.

[1] The impact area is based on the project limits from Yosemite Avenue to SR 99. This table does not include species described in Appendix F that are not affected by the proposed alignments. Many project impacts overlap. Some habitats such as foraging areas for birds are used by multiple species. Therefore, the total area of natural vegetation types affected by the proposed project is substantially less than the sum of all species impacts listed above.

San Joaquin Kit Fox

Habitats in the project area are largely developed and disturbed. However, the potential presence of San Joaquin kit fox in the area cannot be ruled out, and the Biological Opinion (USFWS 2006) concluded that the potential exists for the fox to inhabit the project area. Bear Creek, which passes through the urban center of Merced, could provide some marginal connectivity between areas where kit fox occur. The kit fox sightings in Atwater, the single kit fox sighting northeast of Campus Parkway, sightings recorded in 2001 in the vicinity of Planada, and the occurrences in the Kesterson National Wildlife Refuge and associated wildlife refuges (where kit fox are known to occur) indicate the species' presence in the regional area, parts of which may be indirectly linked by Bear Creek. A relatively long overpass is proposed to span Bear Creek and the roadways north and south of the creek. Kit fox are not known to use riparian corridors for movement or dispersal between suitable habitat. To the extent that kit fox would use a creek for movement or could successfully travel the distance to suitable habitat, and to the extent that they use movement areas below overpasses, the overpass would not constitute a barrier to movement.

The USFWS determined that the Yellow Alignment – Preferred Alternative would result in the temporary loss and degradation of 6.38 ha (15.77 acres) and the permanent loss of 56.52 ha (139.67 acres) of San Joaquin kit fox foraging and travel corridor habitat. The USFWS also determined that there would be a low likelihood of direct mortality impacts to the kit fox from den destruction. Other potential effects, if the species is present, include potential vehicle strikes.

Bats

Construction of the Green Alignment would likely result in the removal of two valley oak trees (Figure 3.8-1). Pallid bats often roost in large oak trees, particularly in those that have hollow cavities. The oak trees that may be removed for the proposed project are not particularly large, and do not appear to provide substantial roost habitat for pallid bats. No other potential bat roosting habitat was identified in the study area. Construction of Campus Parkway would result in a loss of foraging habitat for the three special-status bat species to potentially occur in the study area. This impact is not considered adverse or substantial because a large amount of available foraging habitat surrounds the proposed project within the foraging range of these species.

Burrowing Owls

The embankment of the BNSF railroad line, which crosses the study area, provides a suitable, but limited, nesting and foraging habitat for burrowing owls. No known

active owl burrows are located in the study area. At the time of biological surveys, no owl burrows were found and no owls were observed in the area. However, because suitable habitat exists in the study area, burrowing owls might potentially occupy a new site along the railroad embankment prior to the development of the roadway.

All potential project alignments would span over the railroad embankment and no permanent impact would occur to this potential habitat. Adverse impacts would be limited to indirect noise or visual disturbance. Use of the parkway could decrease the reproductive success of individual pairs if the disturbance causes adults to decrease foraging activities. Operation of Campus Parkway would result in an increased potential for mortality of burrowing owls because of collisions with cars. Vehicle collisions are known to be a major source of mortality to burrowing owls, most likely because of their habit of walking, running, or hopping along the ground in pursuit of prey (Haug 1993; Thomsen 1971).

Swainson's Hawk

The CDFG considers loss of foraging habitat for Swainson's hawks within a 16-km (10-mile) radius of an active nest as an impact to this species. Nests are considered active if they have been used at least once during the last 5 years (CDFG 1994). The CDFG also considers any intensive new disturbance within 0.4 km (0.25 mile) of an active nest, which may cause nest abandonment or forced fledging, as an impact to the species. The potential impact radius around nest sites in secluded areas, away from urban development, is generally increased to 0.8 km (0.5 mile) (CDFG 1994).

Nesting Swainson's hawks or their nesting habitat were assessed within 0.8 km (0.5 mile) of the study area as outlined by CDFG guidelines (CDFG 1994). Suitable foraging habitat for nesting within 16 km (10 miles) of the study area was also evaluated.

Development of any of the alignments would not occur within 0.8 km (0.5 mile) of known Swainson's hawk nests. However, prior to the start of construction, Swainson's hawks could establish new nests within agricultural areas or riparian habitats within the 0.8 km (0.5 mile) area of concern. Even though these areas do not currently provide high quality nesting habitat for Swainson's hawks, available nest sites of any quality are considered critical to the population recovery of this species (CDFG 1994). Loss or degradation of suitable habitat is a potential impact. Future changes in agricultural land use patterns, including the City General Plan designation of industrial uses south of SR 140, would change the suitability of large portions of the study area to support nesting Swainson's hawks, making them less important to the recovery of this species.

Suitable foraging habitat, including row crops and irrigated pasture, would be eliminated by each of the alignments. The amount of foraging habitat that would be removed is estimated at 13.7 ha (34 acres) for the Yellow Alignment – Preferred Alternative, 19.0 ha (47 acres) for the Green Alignment, and 14.9 ha (37 acres) for the Green Alternate. All potential foraging habitat removed by the alignments, except for a small amount of irrigated pasture, occurs within 16 km (10 miles) of three active nests. The closest known nest is within 8 km (5 miles) of the project area. The other two known nests are within 12 km (7.5 miles) of the project area. Loss of foraging habitat would likely have a small impact on observed individual nesting pairs since those nests were observed several miles from the study area.

Operation of Campus Parkway would indirectly impact adjacent and nearby foraging habitat for Swainson's hawks by increasing noise and visual disturbances in areas east and west of the new roadway. Impacts within 0.8 km (0.5 mile) of nesting pairs may include reproductive failure if noise or visual disturbance associated with long-term use of the parkway causes adults to abandon their nests or decrease foraging activities. Increased mortality to Swainson's hawks may result from collisions with cars since they may cross over the roadway in pursuit of prey. Potential impacts would be limited to the March 1 through September 15 breeding season when Swainson's hawks return to California from wintering areas. The direct and indirect impacts to Swainson's hawks are expected to be low since the study area provides low to moderate quality nesting and foraging habitat and because Swainson's hawks were not observed within the study area during focused surveys.

Mountain Plover, White-Tailed Kite, and Loggerhead Shrike

Loss of agricultural row crops used for foraging and roosting habitat by these birds would total 11.7 ha (29 acres) for the Yellow Alignment – Preferred Alternative, 13.3 ha (33 acres) for the Green Alignment, and 13 ha (32 acres) for the Green Alternate. Direct impacts would include the permanent loss and displacement from the above mentioned roosting and foraging habitat. Indirect impacts would include noise and visual disturbance to individuals roosting or foraging within habitats adjacent to the roadway. These birds could be affected by loss of row crops, although these habitats are only suitable when they are plowed or when crops suitable for foraging, such as grains and alfalfa, are being grown. Therefore, only a small portion of agricultural habitat in row crop production is expected to be suitable foraging habitat at any one time. Loss of supporting habitat because of development of any of the alignments is not likely to adversely affect these species.

Tricolored Blackbird and Long-Billed Curlew

Development of Campus Parkway would reduce the amount of foraging habitat available for nesting birds in the vicinity of the study area. Loss of high quality irrigated pasture potentially used for foraging areas would total 2 ha (5 acres) for the Yellow Alignment – Preferred Alternative, 5.7 ha (14 acres) for the Green Alignment, and 1.9 ha (5 acres) for the Green Alternate. Loss of low-quality foraging habitat including orchards and row crops would total 32.8 ha (81 acres) for the Yellow Alignment – Preferred Alternative, 27.6 ha (68 acres) for the Green Alignment, and 34.6 ha (85 acres) for the Green Alternate.

No direct loss of high-quality nesting habitat for tricolored blackbirds would occur as a result of developing any of the proposed alignments. Tricolored blackbirds have the potential to nest within agricultural habitats in the study area, although their potential use for foraging and nesting in these areas is very low. Each of the alignments could indirectly impact two known potential nesting sites associated with Himalayan blackberry bushes near the intersection of Childs Avenue and Hartley Lateral, approximately 91 meters (300 feet) from the alignments. The proposed alignments would also have the potential to indirectly impact one of two potential nest sites along Black Rascal Creek, which is within 15 meters (50 feet) of the roadway, both upstream and downstream of the proposed alignments. Noise and visual disturbances associated with long-term operation of the roadway could reduce the suitability of these areas to support nesting tricolored blackbirds. No recent sightings of tricolored blackbirds have been reported in the study area; therefore, direct and indirect impacts to potential tricolored blackbird nesting and foraging habitat are expected to be low from development of any of the proposed alignments. Impacts would be the same for the long-billed curlew, as it utilizes the same or similar habitat.

Horned Lark

Loss of row crops because of the development of Campus Parkway could potentially impact foraging horned larks. However, these habitats are only suitable when they are tilled and out of production. Only a small portion of agricultural habitat in row crop production is expected to be suitable for horned larks at any one time. Direct loss of potential row crop foraging habitat for horned larks would total 11.7 ha (30 acres) for the Yellow Alignment – Preferred Alternative, 13.0 ha (32 acres) for the Green Alignment, and 13.3 ha (33 acres) for the Green Alternate. Horned larks likely nest in the regional area, but not within the study area. No nests would be affected; however, use of the roadway for moving, foraging, feeding, etc., would increase the potential for mortality of horned larks because of collisions with vehicles.

White-Faced Ibis

Direct loss of potential irrigated pasture foraging habitat for white-faced ibis would total 2.0 ha (5 acres) for the Yellow Alignment – Preferred Alternative, 5.7 ha (14 acres) for the Green Alignment, and 1.9 ha (5 acres) for the Green Alternate. The Yellow Alignment – Preferred Alternative and Green Alternate would have essentially the same level of impact to potential white-faced ibis foraging habitat. Indirect impacts to foraging ibis may include displacement from suitable foraging habitat because of noise and visual disturbance from operation of the roadway. Ibis are expected to occur very infrequently and in very low numbers within the study area. Potential impacts to white-faced ibis from development of any of the alignments are expected to be very low.

Lewis' Woodpecker, Nuttall's Woodpecker, and Lawrence's Goldfinch

Lewis' woodpecker, Nuttall's woodpecker, and Lawrence's goldfinch utilize riparian and seasonal marsh habitat and other habitats. Loss of marsh areas would be relatively minor and would be the same for all three alternatives, at 0.035 ha (0.086 acre). Potential impacts to these species are therefore expected to be low.

Special-Status Fish Species

No direct impacts would occur at Bear Creek, and Black Rascal Creek is already channelized. No Essential Fish Habitat has been identified in the proposed project area. Over the long term, water quality in Bear and Black Rascal Creeks could be adversely affected if runoff from the roadway flows directly into the creeks. This could negatively affect fishes that may be present. However, the project includes detention basins within the right-of-way, which would help mitigate this potential impact. Other sources of diminishing water quality already affect these streams, which carry water to and from agricultural areas and are already crossed by a number of roadways.

Valley Elderberry Longhorn Beetle

The USFWS quantifies impacts to the valley elderberry longhorn beetle based on the number of elderberry stems greater than 2.5 cm (1 inch) in diameter that would be impacted or removed (USFWS 1999). The impacts are further broken down based on the number of stems that are in each of three size classes (2.5 to 7.5 cm, 7.5 cm to 12.5 cm, and greater than or equal to 12.5 cm in diameter), and whether they are located in riparian or nonriparian areas.

Total shrubs and stems that would be impacted by the Yellow Alignment – Preferred Alternative are listed in Table 3.9-2. As shown in Table 3.9-2, no exit holes were observed that indicate presence of the beetle at or before the time of the survey. However, actual presence of the beetle is not a necessary finding if it is determined that suitable habitat would be affected. The elderberry seedling ratio shown in Table 3.9-2 is the USFWS-required number of replacement elderberry plants that must be replaced depending on the stem size of the plants removed. The associated native plant ratio is the proportion of native plants that the USFWS requires to be planted along with the elderberry plants, as the beetle occurs more abundantly when the habitat contains a mix of native plants.

Table 3.9-2 Summary of Elderberry Shrub Impacts for the Yellow Alignment – Preferred Alternative

Location	Stems (maximum diameter at ground level)	Exit Hole on Shrub?	Elderberry Seedling Ratio	Associated Native Plant Ratio	Number of Stems Observed	Required Elderberry Plantings	Required Associated Native Plant Plantings
Nonriparian	Stems ≥ 1" & ≤ 3"		1:1	1:1	0	0	0
			2:1	2:1	0	0	0
Nonriparian	Stems > 3" & < 5"		2:1	1:1	0	0	0
			4:1	2:1	0	0	0
Nonriparian	Stems ≥ 5"		3:1	1:1	0	0	0
			6:1	2:1	0	0	0
Riparian	Stems ≥ 1" & ≤ 3"	No	2:1	1:1	69	138	138
			4:1	2:1	0	0	0
Riparian	Stems > 3" & < 5"	No	3:1	1:1	20	60	60
			6:1	2:1	0	0	0
Riparian	Stems ≥ 5"	No	4:1	1:1	12	48	48
			8:1	2:1	0	0	0
Total replacement plantings						246	246
Total elderberry shrubs to be transplanted						70	
246/5* = 49.2 = 50 planting basins + 20 additional basins for "excess" transplants = 70 basins							

* As many as five elderberry cuttings or seedlings and associated native plants may be planted within planting basins. The 246 required elderberry plantings can be accommodated with 50 planting basins/areas.

3.9.3 Construction and Other Temporary Impacts

San Joaquin Kit Fox

While the occurrence of San Joaquin kit fox in the area is rare, its potential cannot be ruled out. The USFWS Biological Opinion included construction activities as a potential impact (USFWS 2006). Avoidance measures are proposed in Section 3.9.4.

Burrowing Owls

Active burrowing owl nests were not found in the study area. Impacts from construction would be limited to the identified habitat along the BNSF railroad embankments if owls were to establish use in this area before construction. The BNSF railroad tracks would be spanned by an overcrossing so potential impacts would be limited to areas necessary for construction access.

Swainson's Hawk

Construction of Campus Parkway would not occur within 0.8 km (0.5 mile) of known Swainson's hawk nests. However, prior to the start of construction, Swainson's hawks have the potential to establish nests within agricultural areas or riparian habitats within 0.8 km (0.5 mile) of the alignments. Construction disturbance impacts would only occur if nests are established between the time of the surveys and project construction. Construction impacts within 0.8 km (0.5 mile) of nesting pairs may include reproductive failure if noise or visual disturbance associated with construction of the roadway causes adults to abandon their nests or decrease foraging activities. Temporary impacts to Swainson's hawks would be limited to the breeding season (March 1 and September 15), when Swainson's hawks return to California from wintering areas.

Tricolored Blackbird

Construction activities in close proximity to the two potential tricolored blackbird nest sites may indirectly impact the reproductive success of breeding pairs if adults abandon their nests or reduce their foraging activities. These potential nest sites, which are mentioned previously, are located at Black Rascal Creek and near the intersection of Childs Avenue and Hartley Lateral. Construction activities in close proximity to nest sites can indirectly impact the reproductive success of individual pairs if adults abandon their nests or reduce their foraging activities.

White-faced Ibis

White-faced ibis are expected to occur very infrequently and in very low numbers within the natural resources study area. Potential temporary and construction impact to this species would include displacement from suitable foraging habitat surrounding the roadway because of noise and visual disturbance. Potential impacts are expected to be very low.

Special-Status Fish Species

Special-status fish species could be affected by reduced water quality in Bear or Black Rascal creeks during construction. Dust, debris, or sediment from disturbed areas may be carried into Bear or Black Rascal Creeks during grading and construction, which could adversely affect special-status fish species that may be present. Fine particles can reduce water quality, make it difficult for fishes to breathe, and damage their gills. If best management practices are used, temporary impacts to water quality associated with construction around creeks in the natural resources study area are not likely to adversely affect fish species. Construction of the proposed Campus Parkway would not involve substantial work in the active channels of these creeks.

3.9.4 Avoidance, Minimization, and Mitigation Measures

Merced County consulted with federal and state resource agencies in regard to avoidance, minimization, and mitigation measures for threatened and endangered species that would be potentially impacted by the Campus Parkway project. Avoidance measures taken for two federally listed species in particular, the San Joaquin kit fox and the valley elderberry longhorn beetle, are also discussed below. A conceptual mitigation plan was developed to address the proposed project's potential impacts.

In general, temporary fencing would be installed during construction to protect sensitive biological resources. The perimeter of the work area would be fenced at all stream crossings. All sensitive resources or areas likely to contain special-status species such as wetlands, elderberry shrubs, and concentrations of burrows that can be avoided during construction would be fenced outside of the work area, or would be clearly marked as environmentally sensitive areas, and would be avoided. Mitigation for individual species is summarized below.

San Joaquin Kit Fox

The project's inclusion of a relatively long overpass at Bear Creek and the adjoining North and South Bear Creek Drives would facilitate passage for the kit fox. Although not proposed as a kit fox mitigation measure, this design feature would allow for kit fox passage within the Bear Creek area and adjoining corridor.

To avoid impacts to kit fox during construction, the following measures will be required of the contractor:

a. At the end of each working day, the contractor shall take measures to prevent the entrapment of kit foxes in all excavated, steep-walled holes or trenches more than 0.6 meter (2 feet) deep. Such measures shall include covering excavations with plywood or providing dirt or plank escape ramps from the trenches.

b. The contractor shall inspect all pipes and culverts with a diameter greater than or equal to 100 mm (4 inches) before burying, capping, or other use. If a kit fox is discovered during this inspection, the pipe or culvert shall not be disturbed until after the fox has escaped (other than to move it to a safe location, if necessary).

c. The contractor shall immediately notify the engineer if a dead, injured, or entrapped kit fox is found. Work in the immediate area may be temporarily halted while a biologist consults with the CDFG and the USFWS. Any entrapped kit fox shall be permitted to escape.

d. If a suspected kit fox den is discovered, all construction activity within a 46 meter (151 foot) radius of the den would be halted while an appropriate biologist consults with the CDFG and the USFWS. An Environmentally Sensitive Area would be established around the den, and entry into the area would be restricted.

e. The contractor shall provide closed garbage containers where food-related trash is generated, and the garbage shall be disposed of daily.

The USFWS has requested compensatory mitigation for such impacts. Merced County has coordinated with the USFWS regarding all required studies for the kit fox (findings are summarized in Section 3.9.1), and the potential habitat within the study area has been characterized and summarized in this environmental document, and discussed in detail in *Natural Environment Study/Biological Assessment* (URS 2004) and Biological Assessment (URS 2006). The Biological Opinion (USFWS 2006) outlines conservation measures and recommendations for the protection of the species. Compensation is required at a 1.1-to-1 ratio for permanent impacts and a 0.3-to-1 ratio for temporary impacts. The compensation requirement for the impacted acreage of potential San Joaquin kit fox habitat listed in Section 3.9.2 consists of 62.18 ha (153.64 acres) for permanent impacts and 1.91 ha (4.73 acres) for temporary impacts, totaling 64.09 ha (158.37 acres). Credits will be purchased at a USFWS-approved conservation bank that includes the project limits within its service area, or Merced County will acquire conservation easements on land that has been identified by the USFWS as critical for San Joaquin kit fox recovery.

In addition to the compensation requirements, the Biological Opinion (USFWS 2006) also stipulates terms and conditions for construction, including construction contractor training on impact avoidance and reporting measures, on-site vehicle restrictions, worker and equipment restrictions, erosion control and revegetation, pre-construction surveys (for presence of kit fox at the time of construction), and other requirements. The requirements of the Biological Opinion shall be included in the construction contracts.

Burrowing Owl

Avoidance, minimization, and mitigation measures for impacts to burrowing owls would be implemented in consultation with the CDFG and in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 1995).

Preconstruction surveys for burrowing owls would be conducted in suitable habitat within the project limits and within 150 meters (500 feet) from the project limits. Burrowing owl and burrow surveys should be conducted at least once between April 15 and July 15 and once between December 1 and January 31 (CDFG 1995). The locations of all observed burrowing owls and active burrows would be marked on a map of the project area at a scale sufficient to accurately show the distance of observed owls and active burrows from the limits of construction.

If burrowing owls are detected during the preconstruction surveys, Merced County would submit a mitigation and management plan to the CDFG. This plan would describe the number and location of observed owls and active burrows, as well as the dates, times, and weather conditions during the surveys. The plan would also include a description of the project site and its habitat suitability for burrowing owls; photographs and historical information of burrowing owl use; and proposed implementation of the following CDFG avoidance, minimization, and mitigation measures for impacts to burrowing owls:

- Occupied burrows would not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the CDFG verifies through noninvasive methods that birds have not begun egg-laying or that juveniles are foraging independently and are capable of independent survival.
- Only passive relocation techniques would be used to remove owls from active burrows located within a 75-meter (250-foot) buffer zone from the project footprint during the nonbreeding season. The passive relocation technique consists

of placing one-way doors at each burrow entrance for 48 hours to insure that owls have left the burrow before hand excavation of the burrows occurs.

- If destruction of occupied burrows is unavoidable, existing unsuitable burrows would be enhanced (enlarged or cleared of debris) or artificial burrows would be installed at a ratio of 2:1 within suitable habitat adjacent to the buffer zone. Artificial burrows would be monitored daily for 1 week to confirm owl use of burrows before excavating active burrows. If suitable habitat for burrowing owls is not available in areas adjacent to the buffer zone, alternative mitigation measures would need to be established in consultation with the CDFG for impacts to individual burrowing owl pairs.
- To offset the loss of foraging and burrow habitat, a minimum of 2.6 ha (6.5 acres) of foraging habitat per pair or unpaired resident bird would be acquired and permanently protected. Habitat compensation would include one or more of the following: (1) acquisition of lands adjacent to occupied burrowing owl habitat or (2) acquisition of burrowing owl mitigation credits from an approved mitigation bank. Habitat compensation would be subject to approval by the CDFG. A management and monitoring plan would be prepared for any acquired lands. The monitoring plan would include performance criteria, remedial measures, and provisions for submittal of an annual report to the CDFG (1995).

Early mitigation planning and implementation for burrowing owls is recommended because passive trapout can be labor intensive and time consuming in areas of moderate- to high-density ground squirrel activity. In addition, passive trapout activities are restricted to the nonbreeding season. Burrowing owls exhibit a high degree of nest site fidelity; therefore, owls trapped out of their burrows are likely to continuously colonize adjacent ground squirrel burrows within the 75-meter (250-foot) buffer zone until all the burrows have been backfilled. Once trapout activities begin, burrows with or without signs of burrowing owl use cannot be excavated or backfilled until they have been installed with trapdoors for 48 hours, which can be very labor intensive. Areas where passive trapout has occurred may require regular disking immediately following trapout activities and until construction activities render those areas unsuitable for ground squirrels and thus owls. These activities would require approval by the CDFG prior to implementation.

Swainson's Hawk

Avoidance and minimization of impacts to Swainson's hawks would be implemented in consultation with the CDFG and in accordance with the *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley*

of California (CDFG 1994). Construction activities would be timed so as to not occur within 0.8 km (0.5 mile) of an active nest from March 1 to September 15 or March 1 to August 1 with a CDFG Management Agreement. If construction activities are planned to occur after March 1, preconstruction breeding surveys would be conducted for nests located within suitable nesting habitat 0.8 km (0.5 mile) of planned construction activities. If a Swainson's hawk nest is observed within 0.4 km (0.25 mile) of planned construction, the CDFG would be consulted in regard to impacts and whether a biological monitor should be implemented to reduce the potential of a take or construction should be delayed until after the nest is abandoned for the season. If a Swainson's hawk nest is observed within 0.8 km (0.5 mile) of planned construction activities, the CDFG would be consulted in regard to impacts to the nest and avoidance and minimization measures to reduce impacts.

Mitigation for loss of suitable foraging habitat for Swainson's hawks nesting within 16 km (10 miles) of the proposed project would include the following measures:

- If an active nest site is identified within 1.6 km (1 mile) of the project, Merced County shall provide off-site habitat management lands. Two options are proposed for implementation. The first option would include fee title acquisition or conservation easement acquisition of suitable foraging habitat at a 1:1 ratio or at a 0.5:1 ratio if the acquired lands can be actively managed for prey production. The second option is acquisition of comparable credits from an approved mitigation bank.
- If an active nest site is identified between 1.6 and 8 km (1 and 5 miles) from the project, Merced County will provide habitat management lands at a 0.75:1 ratio or will acquire comparable credits from an approved mitigation bank.
- If an active nest site is identified between 8 and 16 km (5 and 10 miles) from the project, Merced County will provide habitat management lands at a 0.5:1 ratio or will acquire comparable credits from an approved mitigation bank.

Based on previously documented occurrences of this species, one Swainson's hawk nest is known to occur within 1.6 to 8 km (1 to 5 miles) and two Swainson's hawk nests are known to occur within 8 to 16 km (5 to 10 miles). Merced County will provide habitat management lands or will acquire comparable credits from an approved mitigation bank for a minimum of 33.25 ha (82.16 acres) for the Green Alignment, 26.08 ha (64.43 acres) for the Green Alternate Alignment, and 23.98 ha (59.24 acres) for the Yellow Alignment – Preferred Alternative. These mitigation

calculations may change if more Swainson's hawk nests are identified during preconstruction surveys.

Other Bird Species

The following preconstruction survey and avoidance measures apply to the tricolored blackbird, white-tailed kite, loggerhead shrike, Lewis woodpecker, Nuttall's woodpecker, and Lawrence's goldfinch.

- Breeding season surveys for tricolored blackbirds and other riparian nesting species as well as nesting horned larks and other passerines (perching birds and songbirds) will be conducted between mid-March and late August.
- Construction activities within 91 meters (300 feet) of active nests will not begin until all birds have completed breeding activities or until the CDFG determines that construction activities will not impact breeding birds or their young.
- Preconstruction surveys for the horned lark and other grassland birds will be conducted one week prior to initiating construction activities within 91 meters (300 feet) of proposed construction activities. Crop rotation within agricultural areas may render some areas suitable or unsuitable as nesting habitat within a given season; therefore, potential nesting habitat for nesting birds will be determined within the year of planned construction and prior to the preconstruction breeding surveys.

Special-Status Fish Species

The following mitigation measures are proposed to avoid impacts to water quality in Bear and Black Rascal Creeks to protect special-status fish species. Merced County would implement best management practices during all construction within 91 meters (300 feet) of Bear and Black Rascal Creeks. Erosion control measures would include silt fences around all disturbed soil including spoils piles, laydown areas, and bladed access routes. Permanent erosion control measures would be implemented immediately upon completion of construction. These measures would include hydroseeding with appropriate erosion control seed mixes, installation of erosion control blankets on slopes greater than 10 percent, and removal of all temporary fill material from the banks of channels. All construction equipment would be refueled more than 91 meters (300 feet) from flowing streams. If dewatering is necessary, water would be discharged into vegetated upland areas and adequately filtered before entering a stream channel.

Vegetated swales and detention basins are already anticipated within the project's right-of-way, which would reduce runoff from the roadway or bridges flowing directly into creeks in the study area.

Valley Elderberry Longhorn Beetle

The USFWS Biological Opinion requires compensation and construction avoidance for impacts to valley elderberry longhorn beetle habitat (USFWS 2006). Compensation for the 101 elderberry stems that would be removed or affected by the project requires Merced County to establish a 1.17 ha (2.89 acre) conservation area at a USFWS-approved location or to purchase equivalent credits from a USFWS-approved conservation bank. Within the conservation area, Merced County will plant 246 elderberry seedlings or cuttings and 246 associated native riparian species plantings according the 1999 USFWS conservation guidelines for this species. The USFWS assumed that the project would permanently remove 70 elderberry shrubs, which according to the guidelines requires 70 167-square-meter (1,800-square-foot) planting basins. If Merced County develops a conservation area, it shall implement specific measures to manage the long-term protection of the valley elderberry longhorn beetle, develop and implement a USFWS-approved management plan for the conservation area, and implement USFWS criteria for conservation banks and off-site compensation.

Other requirements specified in the Biological Opinion include construction avoidance and protection measures, briefing of construction workers, construction monitoring and reporting, and shrub transplanting requirements (USFWS 2006).

To meet the necessary compensation requirements, three options or a combination of options may be pursued:

On-Site Option

On-site mitigation would include transplanting affected elderberry shrubs to suitable locations within or adjacent to the project study area, planting additional elderberry shrubs, and planting associated species at USFWS-approved locations within the project area. Proposed storm water retention ponds have been considered as potential locations. Adequate space for the required plantings is available in the storm water retention and drainage facilities that would be built adjacent to Campus Parkway. While the elderberry shrubs could be planted at any of these facilities, the proposed basins adjacent to Black Rascal Creek would provide the best connectivity to an existing riparian area. Transplanting would take place when the plants are dormant

(from approximately November through the first 2 weeks in February), and a qualified biologist (monitor) would be present. Transplanting would be conducted according to the procedure described by the USFWS (1997). A conservation easement or similar protection in perpetuity would be designated by Merced County for the selected mitigation site.

Off-Site Option

Affected elderberry shrubs could be transplanted at an off-site location. Suitable sites are available along the Merced River, approximately 17 km (11 miles) north of the project area. Off-site plantings would be implemented in coordination with a local land trust or other agency that would provide protection and management of the plantings in perpetuity.

In-Lieu Credits Option

Mitigation credits for elderberry shrub impacts are available from the French Camp Conservation Bank near Stockton. The French Camp Conservation Bank is a USFWS-approved bank, and the proposed project is located within the bank's service area.

3.10 Floodplains

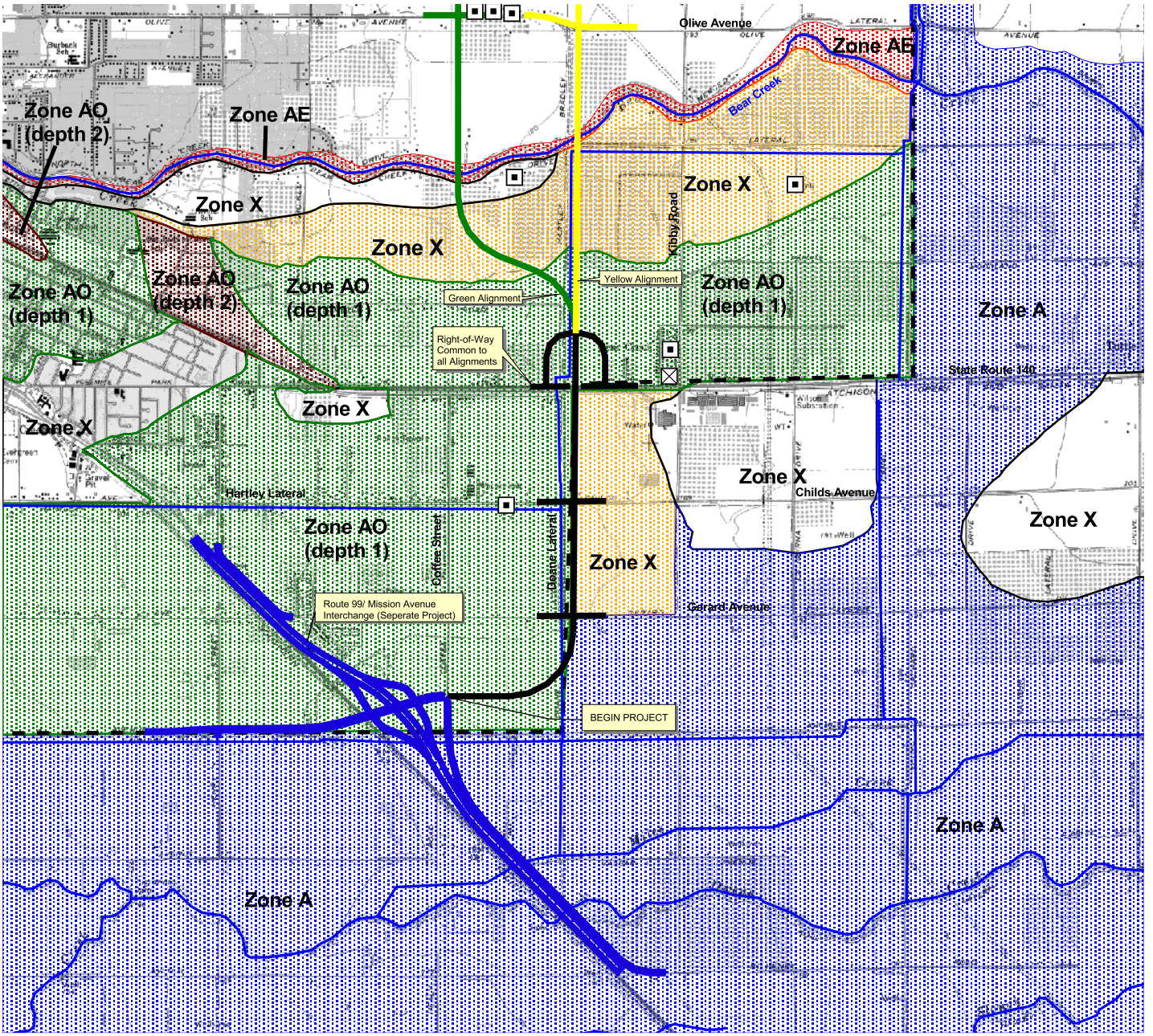
A floodplain evaluation was performed to determine if the Campus Parkway project would encroach on a base 100-year floodplain. In addition, a location hydraulic study was performed that focused on the evaluation of the 100-year flood profile for Bear Creek at the planned bridge crossing for the Green Alignment and Yellow Alignment – Preferred Alternative. A condition model was used to analyze the effects of the planned bridge structure spanning over Bear Creek. The purpose of these two studies was to evaluate the impacts of the project's development within the local floodplain.

3.10.1 Affected Environment

The Green Alignment and Yellow Alignment – Preferred Alternative[19] would be located within five types of flood zone areas as designated by the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map. This is the official map used by FEMA to outline the areas of special flood hazard applicable to a community (see Figures 3.10-1A and B). The majority of the project would be located within FEMA's "Zone X," which contains areas that could experience 500-year or 100-year flooding (with less than 0.31 meter [1 foot] of flood water) and areas outside of the 500-year flood zone. The project would also be constructed in a portion of a "Zone AO" area, which can be inundated by 100-year floods, 0.3 to 0.9 meter (1 to 3 feet) in depth (usually as sheet flow on sloping terrain). A very small portion of the common alignment would cross over a "Zone A" area, which is within the 100-year floodplain, but has no base flood elevations determined by FEMA. Where the Yellow and Green Alignments cross Bear Creek, they are within "Zone AE," which can be inundated with 100-year floods where FEMA has determined a base flood elevation.

Recorded stream flow data for Bear Creek from 1955 to 2001 shows the largest recorded flood discharge near the project area as approximately 216,700 liters per second (7,653 cubic feet per second) compared to the Bear Creek channel capacity of 226,600 liters per second (8,000 cubic feet per second) (FEMA 1995). Flood flows in excess of this capacity are predicted to spill over the left bank of the creek approximately 10 km (6 miles) east of the City of Merced. Because of topography and

[19] The Green Alternate, where it crosses diagonally between the Green Alignment and Yellow Alignment – Preferred Alternative, would not be within a mapped floodplain. South of the diagonal crossover, this alignment would be the same roadway as the Yellow Alignment.



Project Description

- Yellow Alignment
- Green Alignment
- Green Alternate Alignment
- Route 99/Mission Avenue Interchange Project
- Right-of-Way Common to all Alignments
- Domestic wells
- Irrigation well

Flood Zones

- Limit of detailed study
- Zone A: Special flood hazard area inundated by 100-year flood. No base flood elevations determined
- Zone AE: Special flood hazard area inundated by 100-year flood. Base flood elevations determined
- Zone AO: Special flood hazard area inundated by 100-year flood. Flood depths of 1 to 3 feet (e.g., depth 1 = 1 foot) (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- Zone X: Areas of 500-year flood, areas of 100-year flood with average depths of less than 1 foot or with drainage areas protected by levees from 100-year flood.
- Zone X: Areas determined to be outside 500-year floodplain

2000 0 2000 Feet

N

Source:
Federal Emergency Management Agency,
Flood Insurance Rate Maps, Merced County,
California and incorporated areas, 1995.
Map numbers 06047C0430E, 06047C0440E, 06047C0435E, 060470445E.

Campus Parkway Project	PROJECT AREA MAP WITH FLOOD ZONES	Figure 3.10-1A

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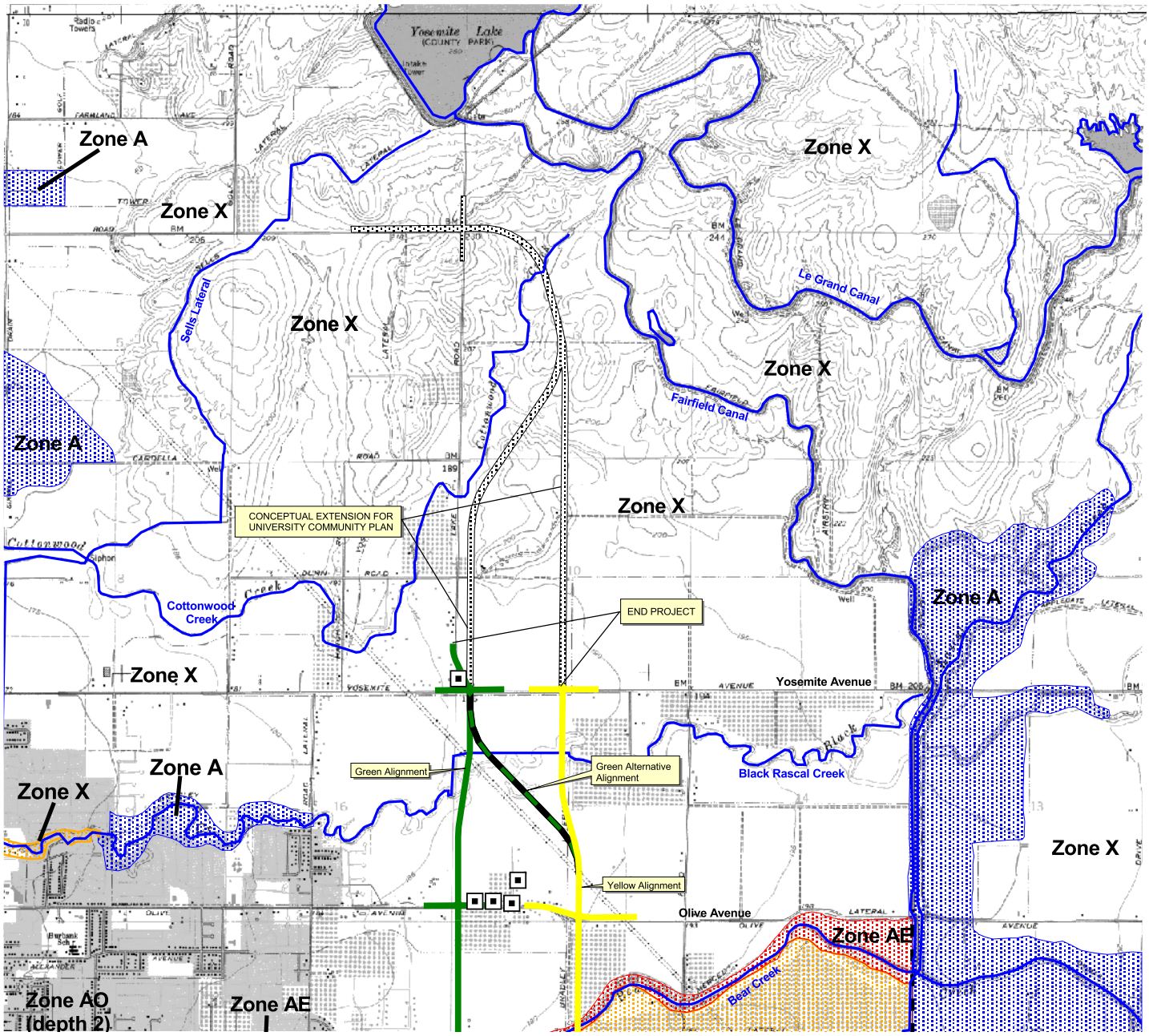

Project Description

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- Zone A: Special flood hazard area inundated by 100-year flood. No base flood elevations determined
- Zone AE: Special flood hazard area inundated by 100-year flood. Base flood elevations determined
- Zone AO: Special flood hazard area inundated by 100-year flood. Flood depths of 1 to 3 feet (e.g., depth 1 = 1 foot) (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- Zone X: Areas of 500-year flood, areas of 100-year flood with average depths of less than 1 foot or with drainage areas protected by levees from 100-year flood.
- Zone X: Areas determined to be outside 500-year floodplain

2000 0 2000 Feet

N

Source:
Federal Emergency Management Agency,
Flood Insurance Rate Maps, Merced County,
California and incorporated areas, 1995.
Map numbers 06047C0430E, 06047C0440E, 06047C0435E, 060470445E.

Campus Parkway Project	PROJECT AREA MAP WITH FLOOD ZONES	Figure 3.10-1B

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existing creek embankments, flood overflows from the creek would not return to Bear Creek. Based on FEMA's Flood Insurance Study and map, the predicted flood overflow would move westward into the City of Merced along the BNSF railroad embankment, where it ponds and can eventually overtop the embankment between R Street and V Street.

Within the project area, Black Rascal Creek is a relatively low-flow, channelized waterway. Like Bear Creek, this creek is restricted where it crosses the Fairfield Canal, contributing to the Zone A flood zone illustrated in Figure 3.10-1B east of the project area. The other waterways crossed by the alternative alignments are canals, which contain controlled water deliveries for irrigation use. The water deliveries end in October and begin again around March of each year, and these controlled canals are not substantial contributors to regional or local flood conditions.

Lake Yosemite Dam is a 16-meter-(53-foot)-high earthen dam located along the southwest side of Lake Yosemite. The inundation zone calculated for Lake Yosemite Dam by the California Department of Water Resources (DWR) would not affect the proposed Campus Parkway project area (OES 2001).

Regional flood protection in Merced County has been constructed and operated primarily by the USACE (USACE 1983). The Merced County Streams Group Project (DWR 1997) consists of the construction or modification of several dams and the construction of levees and channels along creeks in the Bear Creek Stream Group (including Canal, Fahrens, Black Rascal, Miles, and Owens Creeks and the remainder of Bear Creek). Previously, vital flood control structures were constructed on Bear Creek and Burns Creek. Haystack Dam, proposed for construction on Black Rascal Creek, will be the final major piece required to complete the Merced County Streams Group Project and provide central Merced County with adequate flood protection. The dam would be located on Black Rascal Creek approximately 1.6 km (1 mile) north of the Le Grand Canal (north of the parkway's project limits). The proposed dam will only hold back high flows in the creek during 100-year flood events.

The county and city have adopted flood damage prevention ordinances that include requirements for development within FEMA-designated flood zones (Merced County 1990, City of Merced 1997a). These ordinances are implemented to reduce the risks of flooding and ensure compliance with federal regulations governing the National Flood Insurance Program. Both the city and county have also established planning objectives regarding potential development within flood zones. Any development within the

county or city jurisdiction would have to comply with these requirements and goals. Both jurisdictions recognize in their General Plans the mapped FEMA floodplain area south of Bear Creek.

Additional requirements governing floodplain development exist at the federal level. Executive Order 11988, issued on May 24, 1977, describes requirements for evaluation of proposed projects that may encroach upon floodplains. The implementation of Executive Order 11988 is addressed in the Code of Federal Regulations, Federal Aid Policy Guide[20] (FAPG), requiring preparation of a Location Hydraulic Base Floodplain Evaluation Study, and assessment of the floodplain risk. The Floodplain Risk Assessment and Location Hydraulic Study report for the Campus Parkway project was prepared in September 2001 to comply with Executive Order 11988 and the FAPG requirements.

3.10.2 Permanent Impacts

Flood zones in the regional area are primarily affected by waters in Bear Creek and, to a lesser extent, Black Rascal Creek, overflowing their channels east of the project alignments to the east side of the Fairfield Canal (Figures 3.10-1A and 3.10-1B). Nearest the project alignments, 100-year flows of 1 foot in depth are primarily directed westward by the existing BNSF railroad embankment paralleling SR 140. The project also crosses these flood depths south of Gerard Avenue where the alignment common to all alternatives connects to Coffee Street.

Floodplain impacts for the proposed Campus Parkway, described below, are the same for all three project alignments.

Longitudinal Encroachment

Most of Campus Parkway would be located perpendicular to the natural drainage of the floodplain in the project area. Therefore, the proposed project, including the planned roadways and grade crossings, would not create longitudinal encroachments to the existing base (100-year) floodplain.

At Bear Creek, the proposed bridge structure would require bridge piers and abutments. This structure had not yet been designed when the floodplain evaluation was conducted, but it would have supporting abutments at each end and some supporting columns within the Bear Creek banks. This bridge would span the creek, as

[20] Title 23, Code of Federal Regulations, Part 650, Subpart A (23 CFR 650A), "Location Hydraulic Design of Encroachment on Floodplains."

well as North and South Bear Creek Drives, with an arch-like profile. The bridge structure and abutments are expected to be located outside of the predicted 100-year flood elevation for Bear Creek. It would be necessary to locate some supporting bridge piers within the Bear Creek banks, outside of the normal seasonal water flow/elevation, but potentially within the high water of a 100-year flood event. These piers should not substantially affect the flood water elevation or flow. Therefore, the proposed channel crossing would not create substantial longitudinal encroachments to the existing floodplain.

Incompatible Floodplain Development

Incompatible floodplain development is defined as development that is not consistent with a community floodplain development plan (FHWA 1987). As illustrated in Figures 3.10-1A and B, areas subject to flooding (100-year flood event; more than 1 foot in depth) that Campus Parkway would cross are the Bear Creek channel and the area between SR 99 and just north of SR 140. These areas are identified as Zones A, AE, and AO. The project would not change or support further development along areas subjected to flooding. Residential uses along Bear Creek are accessible from South or North Bear Creek Drives, and Campus Parkway would not connect with these roads.

Significant Floodplain Encroachment

A significant encroachment is defined in the FHPM (FHWA 1979) as a highway encroachment that would cause one or more of the following impacts during construction or flooding: (1) interruption of emergency vehicles or evacuation routes, (2) creation of a significant risk, and (3) creation of a significant adverse impact on natural and beneficial floodplain values.

The Campus Parkway project would be designed as an expressway. This would improve the traffic flow capacity around the City of Merced and would also serve as an additional emergency vehicle and evacuation route. All three alignments would cross Bear Creek on an elevated bridge structure that would not substantially impair the predicted passage of a 100-year flood event. At SR 140, an overcrossing of that roadway and the BNSF railroad tracks would also allow passage of elevated flood waters. Therefore, the proposed project does not constitute a significant floodplain encroachment.

Project-Created Flooding Risks

The Location Hydraulic Study determined that the existing base flood elevations (100-year event) in Bear Creek would not be substantially affected by the project. At the

creek channel, the proposed span for the alternative alignments would be above the flood water elevations, and abutments would be outside of the floodplain limits. Depending on their ultimate location, the supporting bridge piers may be within the flood zone but are not predicted to substantially affect the flood water elevation.

Campus Parkway would be on an elevated embankment to the immediate north and south of SR 140 and the BNSF railroad tracks where the overpass and bridge transition to grade level. These embankments would be located in Zone AO and would act as barriers for spillover flood flows from Bear Creek (Figures 3.10-1A and B). This would increase or concentrate the flooding in the area between the east side of the overcrossing approach roads and the north side of SR 140. This is a potentially adverse impact.

In general, other portions of Campus Parkway are expected to be built at or near existing grade within Zone AO.

Natural and Beneficial Floodplain Values

Natural and beneficial floodplain values as defined in the FHPM include but are not limited to wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, forestry, natural moderation of floods, water quality maintenance, and groundwater recharge. Land uses adjacent to the alternatives and to Bear Creek are primarily agricultural, residential, and undeveloped lands. The proposed project would create a new paved road with bridges at water crossings and at SR 140. This would not change impermeable surfaces enough to substantially decrease the groundwater recharge capability and would not have a negative impact on the natural floodplain, as existing flood patterns would not be substantially changed. The project avoids or mitigates potential effects to wildlife, plants, and water quality as addressed in other sections of this environmental document.

Encroachment of a Regulatory Floodway[21]

The project would not substantially change flood heights where base flood elevations have been established, based on the preliminary definition of the project and the anticipated structure types that cross the designated flood areas. The base flood elevation would not be substantially changed at Bear Creek, and mitigation measures are recommended in Section 3.22.10 to maximize the passage of flows at the crossing of SR 140.

[21] A "regulatory floodway" is a floodplain area designated and reserved by a federal, state, or local authority to allow or maintain unobstructed or unconfined flood flows within 1 foot of the designated flood elevations.

The Merced County Department of Public Works Administration Division serves as the Floodplain Administrator for the county. The department was consulted on the project and concluded that no significant impact to the surrounding floodplain would occur. No revision to a regulatory floodway is planned.

3.10.3 Construction and Other Temporary Impacts

No additional substantial impacts to floodplains are expected during construction. Work within Bear Creek would require Merced County to obtain a CDFG Streambed Alteration Agreement permit. This permit would restrict construction work within Bear Creek to the dry season.

3.10.4 Avoidance, Minimization, and Mitigation Measures

Flooding due to the existence of the Campus Parkway embankments to the north and south of SR 140 can be minimized by providing adequate drainage under the approach road at the north end of the grade crossing. The potential flood barrier associated with constructing the expressway on fill above the existing grade can be minimized by providing drainage culverts at major drainage crossings along the roadway.

For all other areas along the Campus Parkway alignments between Bear Creek and SR 99, the roadway is generally anticipated to be at or near existing grade. If the final design results in grade changes that might restrict flood flow direction, additional drainage structures may be necessary along the roadway. The need for these measures would be determined in the final design.

To prevent substantial adverse impacts on natural and beneficial floodplain values, other mitigation measures (e.g., erosion control and water quality protection) would be incorporated during the project's final design stage. These measures are addressed in Section 3.2.

The pier foundations for the bridges spanning Bear Creek would be designed to take into account the potential for scour (erosion from water currents) during extreme flood events. An evaluation of potential scour effects would be performed during final design to minimize this effect.

3.11 Wild and Scenic Rivers, Parks, Recreational Areas, Wildlife and Waterfowl Refuges

No parks, recreational areas, or refuges exist within or adjacent to the project area. None of the waterways, including Bear Creek or Black Rascal Creek (which is culverted in the project area), have wild and scenic status designation. Neither Bear Creek nor Black Rascal Creek are shown as parkland in the County General Plan.

3.12 Land Use, Planning, and Growth

This section provides a discussion of the existing land uses, General Plan land use designations, and urban design policies related to Merced County, the City of Merced, and the study area. This section also addresses growth and the potential for growth inducement.

3.12.1 Affected Environment

Existing Land Uses

Merced County's major land use is agriculture. Major types of agricultural land uses include grazing lands, pasture, row crops, orchards, and agricultural service centers. Other countywide land uses include urban centers (incorporated and unincorporated cities and towns), roads, natural resources (state and county parks, mines, and wildlife areas), and irrigation infrastructure (reservoirs, dams, and canals).

The study area is dominated by agriculture, with orchards, row crops, pastures, and some fallow fields. The majority of the residential neighborhoods are located on the western edge of the study area boundary, with some small neighborhoods located along some of the major east-west roads.

Land Use Planning

The proposed Campus Parkway would cross the jurisdictional boundaries of the City of Merced and Merced County. The common alignment between Mission Avenue and SR 140 would be within the city, and between SR 140 and Yosemite Avenue would be within the county. The land use designations of the city and county within the study area are displayed on Figure 3.12-1.

City of Merced

The City General Plan designates Residential, Commercial, and Industrial land uses within the study area. Although designated with urban land uses, the large area under city jurisdiction in the southern portion of the study area is currently under agricultural use. The city recently annexed this area, and at the time of this report no new developments have been made. The small residential area of the city that is located at the corner of Olive Avenue and McKee Road is designated Low-Density Residential.

The Transportation and Circulation Chapter of the City General Plan identifies the need for further study of access to the UC Merced Campus and a beltway system east and west of the city (City of Merced 1997a). The City General Plan only refers to a

potential Mission Avenue Beltway, and states in Policy T-1.2 the need to "coordinate circulation and transportation planning with pertinent regional, state, and federal agencies" (City of Merced 1997a).

Merced County

The County General Plan has Agriculture and Rural Residential Center land use designations within the study area. These two land use designations cover the majority of the land within the study area.

The County General Plan was last amended before the current alignments of Campus Parkway were proposed. However, in recognition of the University Community, it recommended that alternatives for a "specific prospective corridor" be analyzed and protected (Merced County 1990).

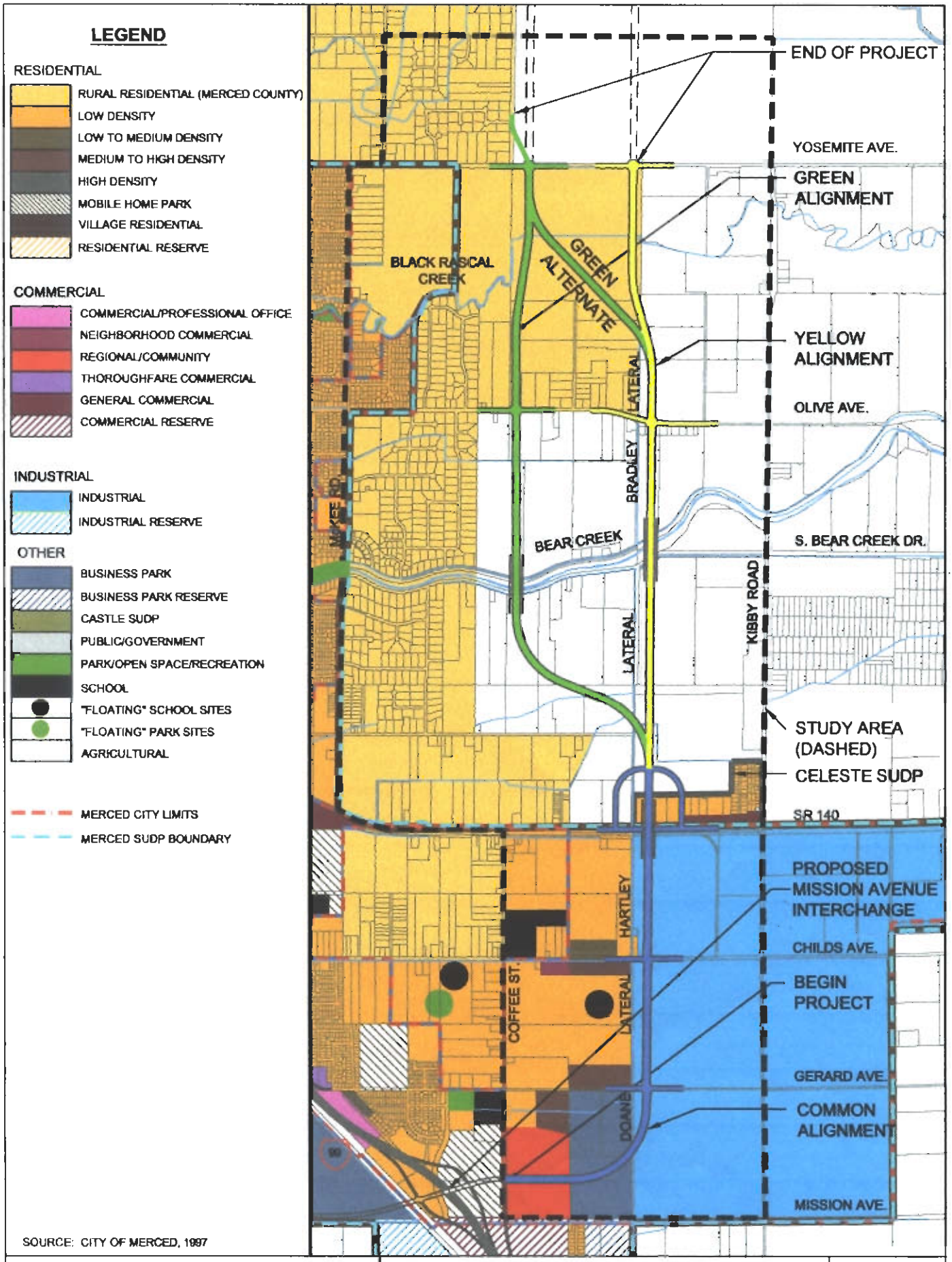
Celeste

Celeste is a small, unincorporated community within the study area at the corner of SR 140 and Kibby Road. It is designated as a Specific Use Development Plan area in the County General Plan. Because of water quality issues, Celeste now receives water and sewer services from the City of Merced, but expansion capacity is not available (Merced County 1990). The majority of the land uses in the community are Low-Density Residential, with some General Commercial land uses designated along SR 140.

Growth

For Merced County, the major growth centers are the cities of Merced and Los Banos, although other cities in the county such as Delhi, Livingston, and Atwater along SR 99 have also grown considerably in the past decade. Table 3.12-1 shows the population projections for the incorporated and unincorporated communities of Merced County, as reported by the MCAG.

Two major projects have been proposed in the past decade that could greatly alter the growth patterns of the City of Merced. First and foremost is the UC Merced Campus, which opened in 2005. Phase 1 of UC Merced constructed 42 ha (103 acres) of the core campus, centered approximately where the Merced Hills Golf Course was formerly located. Total area of the UC Merced project is 809 ha (2,000 acres), of which 368 ha (910 acres) constitute the main campus (UC Merced 2002). The campus would be owned and operated by the UC Regents, a state entity.



SOURCE: CITY OF MERCED, 1997

Campus Parkway Project	EXISTING LAND USE	Figure 3.12-1

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Table 3.12-1 Merced County Population Projections

Cities	2000	2005	2010	2015	2020	2025
Atwater	28,545	31,557	34,291	35,798	36,468	36,430
Dos Palos	6,061	6,600	7,135	7,612	8,141	8,636
Gustine	4,655	5,119	5,588	6,020	6,502	6,965
Livingston	10,725	12,524	14,519	16,612	19,053	21,675
Los Banos	24,106	29,645	36,194	43,613	52,681	63,116
Merced	70,544	81,263	92,014	100,706	108,505	115,346
Total Incorporated	144,636	166,708	189,741	210,361	231,350	252,168

Communities	2000	2005	2010	2015	2020	2025
Delhi	7,178	8,903	10,964	13,326	13,500	13,500
Franklin/Beachwood	4,110	4,410	4,698	4,940	5,206	5,442
Hilmar	4,533	4,793	5,031	5,212	5,413	5,576
Le Grand	1,708	1,833	1,952	2,053	2,163	2,261
Planada	4,515	4,774	5,011	5,192	5,391	5,553
Santa Nella	1,308	1,868	2,648	3,705	5,197	7,230
Winton	8,243	8,716	9,149	9,479	9,844	10,139
UC Merced & Community	0	384	3,088	8,220	14,066	21,682
Remainder of Unincorporated	39,025	40,457	41,641	42,296	45,805	49,619
Total Unincorporated	70,620	76,138	84,182	94,423	106,585	121,002

Source: MCAG, www.mcag.cog.ca.us/citydata.htm.

The University Community project, which would be located generally south of the UC Merced campus site and north of Yosemite Avenue, would serve the community needs of UC Merced with off-campus housing and commercial districts. The first phase of the University Community, which is proposed over the next 20 to 25 years, would develop approximately 405 ha (1,000 acres) of land immediately south of the former location of the Merced Hills Golf Course. The University Community would be designated as an unincorporated SUDP in the County General Plan. The City of Merced has indicated a desire to annex this area, and revenue sharing discussions have occurred.

The City of Merced is planning for large-scale growth within the City SUDP that is related to these two projects. The City General Plan recognizes that "given the proximity to the campus, it can be assumed that a significant portion of the growth will take place in the [City's] SUDP" (City of Merced 1997a). As shown in Table 3.12-1, as many as 21,682 people related to the UC Merced Campus are projected to be living in or adjacent to the City of Merced by the year 2025.

In anticipation of the projected growth, the City of Merced has initiated an update to its General Plan and has conducted some long-range planning studies to determine its future needs, and as of 1996 has adopted four large residential developments in the northern planning area of the city. Figure 3.22-1 in Section 3.22 shows the location of all adopted and proposed developments in the vicinity of the City of Merced. The City of Merced selected to orient its planned growth northward. New commercial and industrial sites were also analyzed and selected to ensure that the city would be able to meet the growing demands of the projected population.

The City General Plan identifies three adopted Specific Area Plans and one Master Development Plan. All of these planned developments, the Fahrens Park Specific Plan (122 ha [306 acres]), the Campus (Merced College) North Specific Plan (32 ha [78 acres]), the Northeast Yosemite Specific Plan (259 ha [640 acres]), and the Bellevue Ranch Master Development Plan (552 ha [1,365 acres]), are housing developments with community amenities such as schools, open space, and some office/commercial space. Bellevue Ranch, the largest adopted development, would be built out south of Bellevue Road in the next 20 years (Lesch 2001).

Proposed developments either within the city limits or within the SUDP boundary that are discussed in the City General Plan include the South Merced – West Specific Plan (259 ha [640 acres]), the South Merced – East Specific Plan (518 ha [1,280 acres]), the South Thornton Specific Plan (142 ha [350 acres]), and the Fahrens Creek Specific Plan (259 ha [640 acres]) (see Figure 3.22-1). Another Specific Area Plan entitled The Dominion (70 ha [174 acres]), which is located at the northeast corner of Bellevue Road and G Street, was proposed in 1997 when the City General Plan was issued. All of these development projects are in conceptual stages, with a variety of land uses proposed.

Although approximately 2,104 ha (5,200 acres) of land is either approved or proposed for development, none of it is located within the study area. This is primarily because of the selected Northern City concept. The City General Plan states concern over the availability of developable land north of the current City of Merced SUDP as well as the conservation of farmlands within the study area even though these lands are not within city jurisdiction. Specifically, Policy UE-1.1 states that the city should “work with Merced County to establish policies to protect prime agricultural areas around the Sphere of Influence, including areas north of Highway 140 and east of Lake Road (extended), from urban development” (City of Merced 1997a).

Section 3.22 describes approved and proposed development plans as of mid-2005. Housing and community developments have been proposed north and west of the Campus Parkway project. South of SR 140, the City is actively considering industries interested in this area that have large parcel size needs, such as food processing or warehousing/trucking. A proposal for a new Wal-Mart distribution center was announced in August 2005 (with service beginning in 2008) within industrial-designated lands in this area. The city annexed this portion of the SUDP in June 1999, but land uses were designated as early as 1997 when the City General Plan was issued (Richardson 2001).

Besides population (housing) growth, employment is also expected to increase dramatically over the next 25 years. The MCAG predicts that between 1990 and 2015, the county population will grow approximately 141 percent and county jobs will increase by 123 percent. By comparison, the City General Plan forecasts that during the same period, the city's population will grow by 143 percent and jobs by 156 percent. With strong projected job growth, the land for commercial and industrial sector growth has become a necessity. In 1990, only 340 ha (840 acres) remained of industrially and commercially zoned land. Currently, the city has close to 1,303 ha (3,220 acres) designated and reserved for industrial use, 793 ha (1,960 acres) designated and reserved for retail commercial use, and 567 ha (1,400 acres) designated and reserved for office commercial use. As stated earlier, a large portion of the land designated for industrial use is located in the southern part of the study area.

3.12.2 Permanent and Construction Impacts

Land Use Changes

The proposed project would result in direct land use changes, such as the conversion of farmland and residential lands, to the project right-of-way. The project would require the acquisition of parcels of land that currently contain agricultural uses, such as row crops, orchards, and pasture, and the potential relocation of a single-family home. These issues are discussed in Section 3.14.

All of the proposed alignments were located, in part, to avoid division of parcels. This avoidance minimizes the land use impacts associated with dividing farmed parcels where access is necessary to tend to crops and manage the land. However, there may be instances where a farmer is using more than one parcel, and the parkway would divide the farming operation. Because the farmer would not be able to move

equipment across the expressway, the proposed Campus Parkway could result in potential impacts to current land uses in the study area.

The Yellow Alignment – Preferred Alternative limits access to the Hartley and Bradley Laterals by farmers immediately east of the alignment. The farmers would still be able to use the existing canal bank road. However, to access the canal bank road, they would need to travel to one of the cross streets, where access would be provided. There are also some major irrigation pumps and filtration systems along the canal that would be separated from the remaining farmed areas. Access to these pumps and filter systems would remain via the canal bank roads at an inconvenience to the farmer.

Besides accessibility to fields and irrigation infrastructure, patterns in agricultural land uses may also be affected. As the geometry of fields and orchards is important to farming operations for reasons such as drainage and maximum yield, Campus Parkway could also result in potential impacts to land uses related to reconfiguration of existing crop layout.

Indirect land use changes could also occur in the study area because of the proposed project. These could be attributed to the possible construction of businesses and homes along the selected alignment in areas designated for urban uses as a result of the increased access provided by Campus Parkway, in accordance with local general planning. Development that occurs adjacent to the selected alignment outside these planned areas as a result of the project would be considered a growth inducement impact, which is discussed below.

Consistency with Land Use Plans

The proposed project would be consistent with the policies in the City and County General Plans and the Regional Transportation Plan. As noted above, both the City and County General Plans refer to the need for studies and a possible beltway system on the eastern side of the City of Merced. The MCAG's Regional Transportation Plan references Campus Parkway as part of the desired future transportation system.

Growth and Potential for Growth Inducement

Growth, as used in this report, refers to development of the built environment as communities respond to the demands of an increasing population and/or business environment. Growth trends fluctuate over periods of low and high activity depending on factors such as policy, zoning, economy, and infrastructure that either encourage or discourage it. The nature of a development project can be described as tending toward

growth inducement or growth accommodation, the former being a project that creates potential for further development where it is not planned for, and the latter being a project that is planned as a response to existing or foreseeable demands of the community served. This distinction generally explains the intent and purpose of a proposed project.

Merced County and the City of Merced plan for growth through development of their general plans, which designate areas suitable for development. The land use designations and policies expressed in the general plans represent how the city and county plan to grow, identifying the areas where growth is planned and not planned. Planned growth is represented by urban land use designations such as residential, industrial, and commercial. Nongrowth areas include agriculture, open space, and parkland designations. The City and County General Plans are intended to present current and potential future land uses through a planning period. For example, the City General Plan was adopted in 1997 and represents a planning period through 2015. The most recent update to the Merced County General Plan was in 1990 for a planning horizon year of 2000. Applications (usually by landowners and land developers) can be made to amend a General Plan for a different land use designation at specific properties, requiring environmental and public review. The city and county can also revise land use designations when they update and adopt their overall General Plans.

The analysis of potential growth inducement focuses on the portions of the study area that could have increased development pressure to convert from an agricultural to urban land use as a direct or indirect result of planning and constructing Campus Parkway. Growth that may occur in nonagricultural areas with an urban land use designation as a result of the proposed project or cumulatively with another project is not considered here because this form of growth is already planned for in the City or County General Plans. Individual and cumulative growth impacts on farmlands are discussed in Sections 3.13.2 and 3.13.3, respectively.

The existing constraints to growth in the designated agricultural land use areas within the study area are discussed below, along with ways that designated land uses could be influenced to change. Finally, the potential contribution of the Campus Parkway project to growth and land use changes is discussed.

Growth Constraints

As mentioned above, City and County General Plan land use designations are the primary means used to plan and manage future growth. Land use designations are

supported by Zoning Ordinances that contain enforceable requirements to regulate development (e.g., allowable dwelling densities, minimum lot sizes, and setback requirements). Land in the study area with an agricultural land use designation is located generally north of SR 140 and south of Olive Avenue. Although the proposed project would place a roadway through these agricultural areas, Campus Parkway would not directly cause this land use designation to change outside the right-of-way acquired for the project. Also, the Campus Parkway right-of-way would not require a land use designation change; roadways do not hold a separate land use designation in the City and County General Plans.

The county zoning requirements that accompany the agricultural land use designation vary by minimum lot size. The A-1 zone is the highest allowable density, which requires a minimum lot size of 20 acres. All of the land designated for agricultural use in the study area is zoned A-1. This zoning classification would remain unless the land use designation is changed. Campus Parkway would not violate the A-1 zoning requirements, although the project would reduce the size of some existing parcels through the purchase of right-of-way easements. The other major land use designation within county jurisdiction is Rural Residential Center, which cannot be developed to a higher density than one dwelling unit per acre.

The common alignment portion of Campus Parkway (between SR 99 and SR 140) would service an undeveloped portion of the city, which is designated for Industrial, Commercial, Other (Business Park), and Low-Density housing. This currently undeveloped portion of the city has already been designated for urban development and is accessible from existing roadways.

The common alignment would also pass through the Celeste SUDP. Although the unincorporated community of Celeste does not have a Community-Specific Plan, existing land uses within the SUDP boundary are primarily Low-Density Residential, with some General Commercial land uses along SR 140.

Sewer and water are the utilities required for development at urban densities. Sewer and water are typically not supplied to land use designations with very low densities, such as Rural Residential Center or Agricultural. Such is the case within the study area. No sewer or water utility infrastructure serves the rural portions of the study area. The only water and sewer lines are located in the city portions of the study area, with the exception of the city sewer line that serves Celeste. Celeste is not allowed to use

this sewer connection to expand its urban boundary or increase urban development within its SUDP boundary.

Although the proposed project would provide a utility easement adjacent to the right-of-way, no public or service utilities are proposed for the project. Sewer and water utilities could be constructed within the parkway's planned easement, but this would require the county to issue an encroachment permit that would be subject to environmental review under CEQA.

For sewer and water to be supplied to the county portions of the study area, a private developer or landowner would need to pay for it unless the city annexed the land. If the city annexed land, development proposals would need to comply with the provisions in the Tax Revenue Sharing Agreement established between the city and county as well as the policies of the Merced Local Agency Formation Commission (LAFCO).

Growth Pressures

As discussed in Section 3.12.1 above, the City of Merced is growing and is predicted to continue growing over the next 25 years. The MCAG predicts that the population of the City of Merced will increase by 44,802 people (approximately 60 percent) between 2000 and 2025. This figure does not include the predicted 21,682 additional residents related to UC Merced or the University Community. Jobs are also anticipated to increase dramatically. To accommodate predicted growth, the city adopted specific area plans and master development plans for the northern planning area and annexed a large portion of land for industrial and commercial use in the study area.

The UC Merced Campus is projected to grow and would result in a substantial increase in local population. This population increase could have implications of potential growth inducement south of the proposed campus (i.e., along Campus Parkway). However, the University Community project would absorb a large majority of the development pressures associated with the new UC Merced Campus. The University Community project would be built in phases to accommodate development associated with UC Merced as it grows.

Traffic congestion along the major arterials and the patterns of traffic developing because of the congestion are two indications of how growth affects the city (i.e., starting to outgrow the current road network). As a new roadway, the parkway would provide a new north-south route on the east side of the City of Merced that would divert drivers from more congested routes. Traffic using the parkway represents a

potential "market" that developers may try to cater to along the route, which could result in increased pressure to convert adjacent lands from an agricultural to an urban land use. The direct access provided into the study area from SR 99 via the approved Mission Avenue interchange could improve conditions for growth primarily by changing people's perception of access. Therefore, the vehicular access provided by the project may contribute to growth pressures to convert land uses in the vicinity of the project. However, any such conversion would still require a decision by the Merced County Board of Supervisors to change the land use designation, which would require environmental and public review under CEQA.

Potential Impacts of Growth

During the past 3 to 5 years, Central Valley communities have experienced above-average growth in terms of housing construction and population. This growth has consisted predominantly of housing construction, commercial and office space development, and construction of Phase 1 of the UC Merced Campus. Future growth in the area, based on land use plans, will consist of expansion of similar development. For example, in the area of the proposed Campus Parkway, land use plans indicate expansion of UC Merced beyond Phase 1, potential construction of phases of the University Community Plan (a housing and mixed-use SUDP), and development of industrial uses between SR 99 and SR 140 (in August 2005, Wal-Mart announced plans to construct a distribution center at this location to serve a truck fleet that will access SR 99; service to this center is anticipated to begin in 2008). The following summarizes the environmental impacts and mitigation of these expansions of land use development or growth, which are discussed in other sections of this report.

Surface Water and Groundwater Resources/Flooding. Storm water runoff from land use expansion will drain into local creeks and canals, which could affect water quality and quantity. This could increase pollutant loading and floodwater runoff into the creeks in the area, including Black Rascal Creek, Fahrens Creek, Fairfield Canal, Miles Creek, and the Doane and Hartley Laterals. All land use development is required to meet regulatory permit requirements, which will require controls and best management practices to minimize runoff impacts. Potential growth-related impacts to groundwater resources, such as from increased use of groundwater supplies, will be controlled under the updated water supply management plan, which requires increased recharge of groundwater supplies, conservation measures, and capacity improvements. Flood control measures will also be required for all future projects that increase runoff, as detailed in Section 3.22.10.

Air Quality and Noise. Traffic will increase with additional land use development and was evaluated for the General Plan projected conditions for year 2025. The region has been classified as a nonattainment zone for ozone and particulate matter (PM_{10} and $PM_{2.5}$), as noted in Section 3.4. The projected increase in traffic from the changes in land use has the potential to increase air pollutants in the future, depending on the balance between additional vehicle miles traveled and the off-setting reduction in vehicle emission rates as older cars are replaced with newer, more fuel- and emission-efficient vehicles. Noise impacts for the project examined maximum noise levels based on the same 2025 traffic levels, and therefore include growth and land use changes in the analysis presented in this document.

Wetlands and Biological Resources. Land use growth and changes from Campus Parkway, UC Merced, University Community, and SR 99/Mission Avenue interchange were identified in this document as potentially impacting a total of 55 ha (135 acres) of wetlands, vernal pools, marshes, pastures, and drainages. Potential housing and related community development could add another 43 ha (106 acres), depending on specific impacts. Land use expansion will also affect annual grassland habitat, woodlands/oak trees, and riparian habitat within the local creeks and canals.

Farmlands. Proposed developments in the eastern Merced area that might benefit from Campus Parkway could affect up to 1,590 ha (3,936 acres) of farmland, dry farmland area, and grazing lands (see Section 3.13.3), if all were approved and built with no avoidance or minimization requirements.

Traffic. The traffic analysis for Campus Parkway was based on expansion of land use development through the study year 2025, which included the development of the land uses noted earlier. These changes are described in this document in Section 3.16.3. Overall vehicle miles traveled will reduce with the growth in land use and Campus Parkway in place because of reduced travel distances. Volumes on existing roads such as Olive and Yosemite Avenues will increase in the vicinity of the Campus Parkway alignment as drivers approach the new expressway.

Conclusions

The land use policies of the City and County General Plans and their supporting Zoning Ordinances are the primary land use controls that set forth the current and future planned growth in the project area. The approval of the Campus Parkway project does not change the current land use designations in the vicinity of the parkway. The City of Merced is growing and will continue to grow over the next 25

years, increasing by a predicted 60 percent by 2025, not including any growth associated with the UC Merced Campus or the University Community. It is anticipated that all of the City of Merced's growth planned through the year 2025 can be accommodated on land within the city's Specific Urban Development Plan boundary that is currently not developed. Campus Parkway is proposed to accommodate traffic demands in the area associated with the future planned growth as addressed by the City and County General Plans. While serving planned growth, some portions of the parkway (between SR 140 and Yosemite Avenue) pass through designated agricultural lands where pressures for growth through land use change could increase. However, it is likely that for any type of urban development to occur outside of the existing urban land use designations (the SUDP boundaries of the city and Celeste and the county RRC area), the Merced County Board of Supervisors would need to approve either (1) a new SUDP; (2) an expansion of the RRC boundary; or (3) an annexation request by the city, which would also be subject to the provisions of Merced LAFCO and the city/county Tax Sharing Revenue Agreement. Furthermore, any action taken by the Merced County Board of Supervisors to amend the General Plan would be subject to the provisions of CEQA. In conclusion, the Campus Parkway project would meet the traffic demands of planned growth in the vicinity of the City of Merced while minimizing unplanned growth. It is anticipated that existing land use controls would limit the potential for adverse affects in the project study area because of unplanned growth.

3.12.3 Avoidance, Minimization, and Mitigation Measures

No mitigation measures are proposed for the Campus Parkway project. Potential cumulative growth impacts are limited by existing land use planning and controls. No additional mitigation measures are proposed.

3.13 Farmlands/Agricultural Lands

3.13.1 Affected Environment

Soils

According to the Merced Area Soils Survey conducted by the Soil Conservation Service (SCS) (now the Natural Resources Conservation Service, or NRCS), the major soil association in the study area is the Wyman-Yokohl-Margeurite, with a small portion of the Redding-Pentz-Peters soil association. The Wyman-Yokohl-Margeurite association is located in the historic alluvial fans and floodplains of the area. This association consists of well-drained, medium-textured, and moderately fine-textured soils (SCS 1962).

The Merced Area Soils Survey delineates the locations of specific soil types. Each soil type has a capability classification that is based on how suitable it is for most types of farming (SCS 1962). There are eight classes ranging from Class I to Class VIII soils, with Class I soils having the fewest limitations for crop production and the subsequent classes having progressively greater physical and natural limitations for agricultural use. Class I and II soils are considered prime farmland by the NRCS because of the excellent properties these soils possess for crop production. Soils of the project area range between Class I and IV. These soil capability classifications roughly correlate to the farmland designations discussed in the following section.

Farmland

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) designates and maps farmland in California based on SCS/NRCS soil surveys and other local land use data. The FMMP publishes biannual data on farmland conversion in the form of maps and the California Farmland Conversion Report. Two types of maps are compiled in conjunction with this report: Important Farmland Maps for areas that have modern (SCS/NRCS) soils surveys, and Interim Farmland Maps for areas without modern soil survey data (CDC 1994). Important Farmland Maps classify land as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban and Built-Up Land, Other Land, and Water. Values such as soil capability classification, Storie index rating (an estimated value of a soil for general intensive agriculture), irrigation, and productivity of crops are used by FMMP to categorize the four types of farmland.

In 1998, Merced County had 475,340 ha (1,174,579 acres) of agricultural land, including grazing land, out of a county total of 510,484 ha (1,261,420 acres) (CDC 2000). Of these agricultural lands, 240,242 ha (593,645 acres), or approximately 50 percent, were categorized by FMMP as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. Prime Farmland comprised 24.6 percent of all agricultural lands in Merced County.

In the June 2000 California Farmland Conversion Report, the FMMP reported that between 1996 and 1998 the rate of urbanization in California increased by 25 percent. During this time, the San Joaquin Valley region led the conversions of irrigated farmland to urban use in California with 3,847 ha (9,505 acres) converted (CDC 2000).

Merced County has also experienced conversions of farmland to other land uses. Table 3.13-1 shows the actual inventory totals of changes in farmlands between 1996 and 1998, based on the FMMP conversion data of all Important Farmland Map categories in Merced County between 1996 and 1998. This table shows categories of lands (listed in the column titled Land Use Category) that have been converted to other uses, either as other farmland categories or as nonfarmland. For example, 12,807 acres of farmland changed or were recategorized as another farmland category, and 6,635 acres of grazing land were converted to farmland, primarily orchards. However, 4,265 acres of farmland were converted to grazing lands, and 5,993 acres of all agricultural lands (farmlands and grazing land) were converted to nonfarmland uses (1,872 acres of urban plus 4,121 acres of other lands). The most relevant data in Table 3.13-1 are the totals of the farmland categories recorded as converted to nonfarmland uses (a total of 22,056 acres converted between 1996 and 1998), which exceeds the grazing and nonagricultural land conversions (7,644 acres of grazing land, 1,593 acres of urban, and 3,014 acres of other lands).

The study area is approximately 1,670 ha (4,126 acres), of which 1,269 ha (3,135 acres) have an FMMP farmland classification. According to the Merced County 1998 FMMP Important Farmland Map, the study area contains 742 ha (1,833 acres) of Prime Farmland, 223 ha (552 acres) of Farmland of Statewide Importance, 274 ha (677 acres) of Unique Farmland, 30 ha (73 acres) of Farmland of Statewide Importance, 387 ha (956 acres) of Urban Land, and 19 ha (46 acres) of Other Land. A large percentage of farmland in the study area is under residential or other urban use or is currently being used for agriculture but planned for urban development.

Table 3.13-1 All Farmland Conversions to Other Uses in Merced County 1996 to 1998

		Farmland					Agricultural Land		Other Lands		
Land Use Category		Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	**Total Important Farmland**	Grazing Land	**Total Agricultural Land (Farm plus Ag Land)**	Urban & Built-Up Land	Other Land	**Total Converted to Another Use**
Prime Farmland[1,2]	to	--	850	562	1,067	2,479	670	3,149	741	1,534	5,424
Farmland of Statewide Importance[1,2]	to	623	--	874	604	2,101	464	2,565	365	1,179	4,109
Unique Farmland[1,2]	to	936	741	--	854	2,531	869	3,400	108	402	3,910
Farmland of Local Importance[3]	to	1,754	1,230	2,712	--	5,696	2,262	7,958	298	357	8,613
IMPORTANT FARMLAND SUBTOTAL		**3,313**	**2,821**	**4,148**	**2,525**	**12,807**	**4,265**	**17,072**	**1,512**	**3,472**	**22,056**
Grazing Land[3]	to	1,110	509	2,507	2,509	6,635	--	6,635	360	649	7,644
AGRICULTURAL LAND SUBTOTAL		**4,423**	**3,330**	**6,655**	**5,034**	**19,442**	**4,265**	**23,707**	**1,872**	**4,121**	**29,700**
Urban and Built-Up Land[4]	to	383	201	27	191	802	120	922	--	671	1,593
Other Land[3]	to	1,260	856	241	76	2,433	484	2,917	97	--	3,014
Water Area[5]	to	0	0	0	0	0	0	0	0	0	0
TOTAL ACREAGE CONVERTED	**to**	**6,066**	**4,387**	**6,923**	**5,301**	**22,677**	**4,869**	**27,546**	**1,969**	**4,792**	**34,307**

Source: California Department of Conservation 2000.
[1] Conversions to Other Land primarily due to increases in animal agriculture facilities, borrow pits and ranchettes throughout the county.
[2] Conversions between Important Farmland categories primarily due to corrections made to soil unit identification throughout the county.
[3] Conversions to Prime Farmland, Farmland of Statewide Importance and Unique Farmland primarily due to new orchards in the area east of Highway 99.
[4] Conversions from Urban and Built-Up Land are primarily the result of refinements made to the urban boundary.
[5] Refinements made to lake boundaries from 1:24,000-scale quadrangles may result in different acreage totals for Water and adjacent land use categories than those in the 1994-96 report.

Agricultural Economy

Merced County has the fifth largest agricultural economy in California, which produced $1.53 billion in agricultural commodities in 2000 (Agricultural Commissioner 2000). Livestock and poultry products such as milk, beef, chicken, and eggs have been the consistent leading agricultural sector in Merced County, which were responsible for approximately 34 percent of the total value of agricultural commodities produced and sold by Merced County farmers in 2000.

Of the leading 12 farm commodities produced in Merced County, four are in the top five leading export list for the state of California, including milk, almonds, cotton, and wine. Four of the top 12 commodities occur within the study area.

The crops observed during site visits with an agricultural biologist from the Agricultural Commissioner's office include almond, alfalfa, corn, cotton, grain, melon, pistachio, tomato, and walnut. The row crops are rotated but orchards are perennial. Pasture and some fallow fields also occur in the study area.

Applicable Farmland Policies

Federal and state governments as well as local jurisdictions have established various policies to preserve farmland. At the federal level, the provisions of the U.S. Farmland Protection Policy Act of 1984 require agencies to address the effects of projects on farmlands. The Act requires the preparation of an inventory of farmlands that identifies prime, unique, and farmlands of statewide or local importance that would be affected by a project. A Farmland Conversion Impact Rating must be scored on an AD 1006 Form for each alternative in consultation with county NRCS staff. Farmland conversion impacts of project alternatives with scores of 160 points or more are to be given increasingly higher levels of consideration for protection under the law than alternatives with scores below 160 points.

At the state level, the California Land Conservation Act of 1965 (also known as the Williamson Act) was enacted to minimize the conversion of farmland to urban uses. This Act allows local governments to designate farmlands as agricultural preserves within which a landowner can sign a 10-year contract agreeing not to develop his or her land in return for a lower agricultural tax rate. The contracts are automatically renewed annually for a perpetual 10-year life unless a notice of nonrenewal is filed. The Act prohibits public agencies from acquiring lands under a Williamson Act contract for public improvements if other land is available where the improvement could be located. The minimum acreage needed to obtain a Williamson Act contract is 10 acres, which

may come from more than one parcel. Recently, the state of California approved the Super Williamson Act, which allows for a 20-year contract for a minimum of 100 acres. Merced County does not participate in the Super Williamson Act.

At the local level, city and county agencies have general plan policies that emphasize preservation of agricultural resources. Typically these policies are aimed at directing development away from prime agricultural soils, creating buffers between urban and rural sectors, or encouraging in-fill development.

Local Agency Formation Commissions (LAFCOs) are local governmental agencies (established in every county in California except San Francisco) responsible for controlling urban expansion. LAFCOs, composed of city and county officials, function as "boundary commissions" with the power to approve or deny any requests for annexation of land from unincorporated (county) areas into incorporated (city) areas (AFT 1997a). The power vested in LAFCOs to control annexations was established by the Cortese/Knox Local Government Reorganization Act of 1985.

General Plans

The County General Plan contains numerous policies that are directed toward protecting the county's agricultural resources. Appendix B of the County General Plan contains all the goals, objectives, policies, and implementation measures related to protecting the agricultural resources of the county. The "Urban-Centered Concept" is the basic land use principle used by the county, which guides all proposed urban development toward existing incorporated or unincorporated cities in the county. The goals of the Agriculture Chapter are to protect productive agricultural lands by directing proposed development away from designated farmlands and to avoid the incompatibility of urban and rural land uses. According to the policies of the Agricultural Chapter, the conversion of productive agricultural land is only allowed after careful consideration by the County Board of Supervisors, following the criteria set forth by the policies of Goal 2 in the Agricultural Chapter of the County General Plan.

The City General Plan devotes equally as much attention to the issue of farmland protection as does the County General Plan. In 1990, the City of Merced began a process entitled "Merced 2030: How Should We Grow?" which looked at how to manage the anticipated growth of the city and the direction in which it would develop. Based on the identification of physical constraints to the south and west of the city and of prime agricultural soils immediately to the east, the city elected to grow northward toward the foothills. Based on the "Northern City" scenario, the City General Plan

contains urban expansion policies such as Policies UE-1.1 and OS-2.1 that discourage growth into areas with prime agricultural soils, including the area where Campus Parkway is proposed.

Merced LAFCO

Local Agency Formation Commissions (LAFCOs) are local government agencies responsible for controlling urban expansion. One of their functions is to approve or deny requests for annexation of land from unincorporated county areas into incorporated city areas. LAFCOs establish their own operating policies. In 1994, Merced County LAFCO adopted a set of Local LAFCO Goals, Objectives, and Policies to address local concerns and priorities regarding annexations and the preservation of agricultural lands (City of Merced 1997a). The principal guidelines of these polices is to protect "prime agricultural land" as established by the Cortese/Knox/Hertzberg Act, which includes land composed of Class I and II soils as defined by the Merced Area Soils Survey. Other policies are focused on avoiding premature conversions of land by amendments to the Sphere of Influence boundaries.

3.13.2 Permanent and Construction Impacts

Impacts to farmlands were minimized for each alternative by aligning the potential roadway near existing canals (Yellow Alignment – Preferred Alternative), an existing power line (Green Alternate Alignment), and the existing edge of suburban growth (Green Alignment). This was intended to reduce the division of large agricultural parcels and maintain the potential alignments near the existing eastern edge of the city's development.

Farmland impacts were analyzed based on the acreage of each farmland type (Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance) that would occur within the right-of-way for each alignment. Farmland impacts from potential growth inducement for each alignment were also evaluated.

Project Right-of-Way Impacts

Overlaying the 1998 FMMP Important Farmland Map with the areas designated for farmland use in the General Plan, the total farmland affected for each alignment is 33.6 ha (83 acres) for the Yellow Alignment – Preferred Alternative, 22.6 ha (56 acres) for the Green Alignment, and 31.2 ha (77 acres) for the Green Alternate. Figure 3.13-1 illustrates the farmland by type potentially affected by the project alternatives.

LEGEND:

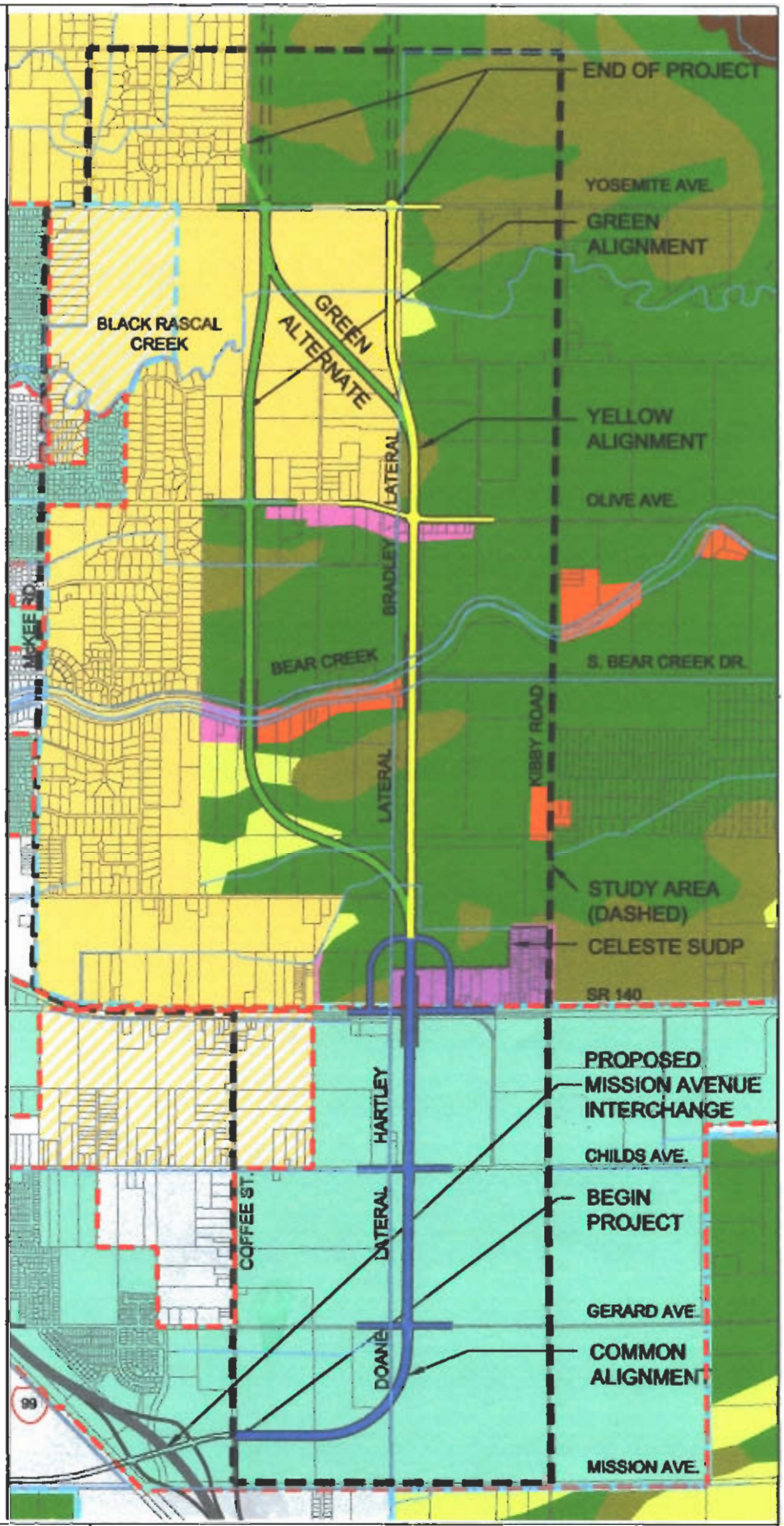
- PRIME FARMLAND
- STATEWIDE IMPORTANCE
- UNIQUE FARMLAND
- LOCAL IMPORTANCE
- URBAN/BUILT-UP
- OTHER

Farmland designations shown on this exhibit were derived from the 1998 Important Farmland Map, produced as part of the Farmland Mapping and Monitoring Program (FMMP) managed by the State of California Department of Conservation.

- CITY OF MERCED
- SUDP (CITY OF MERCED)
- SUDP AND RRC
- RURAL RESIDENTIAL CENTER

NOTE:

CURRENT LAND USE DESIGNATIONS DISPLAYED AS OVERLAY TO EXISTING FARMLAND CATEGORIES.



Campus Parkway Project	AGRICULTURAL RESOURCES POTENTIALLY AFFECTED	Figure 3.13-1

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These results were submitted to the NRCS Field Station in Merced for verification along with a Farmland Conversion Impact Rating Form (AD 1006 Form) as required by the U.S. Farmland Protection Policy Act of 1984 for federally funded projects. Figure 3.13-2 contains a copy of the AD 1006 Form that was verified and returned by the NRCS on August 15, 2001. Using the NRCS scoring, the county completed the AD 1006 Form. The final score for each project alternative was below the 160-point threshold for considering increased federal action to protect farmlands.[22]

As noted in Section 2.3.2, two options were evaluated that would connect Campus Parkway with SR 140, referred to as the east or west connection options. Both options would affect land in agricultural use. The primary difference between the two is that the west connection option would pass through two parcels that are currently under a Williamson Act contract. Normally, the affected parcels cannot be converted from their agricultural use under the 10-year duration of the contract without incurring a tax penalty. However, because the project is being conducted by Merced County with involvement and oversight from Caltrans and the FHWA, a "public acquisition" process can be used. This process involves submittal of a notice, explanation, and findings in accordance with the Williamson Act (California Government Code Section 51291). The identification of the Yellow Alignment as the preferred alternative includes the east connection option. Because the west connection option was eliminated from further consideration, the project no longer involves any lands under Williamson Act protection.

Farmland Impacts Because of Growth Induced by the Project

For purposes of this discussion, a growth-inducement impact constitutes a conversion of farmland to an urban use outside Campus Parkway right-of-way as a result of the project. The areas designated for continued agricultural use that are crossed by the proposed Campus Parkway alignments are between Yosemite Avenue and SR 140. The majority of the farmland in the study area between Olive Avenue and SR 140 is Prime Farmland, as shown on the 1998 FMMP Important Farmland Map (Figure 3.13-1).

[22] The acreages used on the form are slightly higher than the acreages presented in this section. The acreages have been revised downward due to refinements in the alignment. The slight reduction in the acreages does not affect the results in the AD 1006 Form.

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 7/23/01
Name Of Project Campus Parkway Project	Federal Agency Involved FHWA
Proposed Land Use Transportation - Expressway	County And State Merced County,California
PART II *(To be completed by SCS)*	Date Request Received By SCS July 30, 2001

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply — do not complete additional parts of this form).*	Yes ☐	No ☐	Acres Irrigated 500,400 / Average Farm Size 311 ac.
Major Crop(s) Tomatoes, Almonds, Cotton	Farmable Land In Govt. Jurisdiction Acres: 510,500 % 40		Amount Of Farmland As Defined in FPPA Acres: 432,000 %
Name Of Land Evaluation System Used California Storie Index	Name Of Local Site Assessment System None		Date Land Evaluation Returned By SCS August 15, 2001

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	86	58	80	
B. Total Acres To Be Converted Indirectly	0	0	0	
C. Total Acres In Site				
PART IV *(To be completed by SCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	53.8	55.4	57.5	
B. Total Acres Statewide And Local Important Farmland	23.2	33.2	23.4	
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	less than 1% for all sites			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	data not available			
PART V *(To be completed by SCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	59	58	59	

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Nonurban Use	15	6	5	6	
2. Perimeter In Nonurban Use	10	6	6	6	
3. Percent Of Site Being Farmed	20	16	15	16	
4. Protection Provided By State And Local Government	20	20	20	20	
5. Distance From Urban Builtup Area	N/A	—	—	—	
6. Distance To Urban Support Services	N/A	—	—	—	
7. Size Of Present Farm Unit Compared To Average	10	5	5	5	
8. Creation Of Nonfarmable Farmland	25	15	10	10	
9. Availability Of Farm Support Services	5	0	0	0	
10. On-Farm Investments	20	16	16	16	
11. Effects Of Conversion On Farm Support Services	25	5	2	2	
12. Compatibility With Existing Agricultural Use	10	2	3	2	
TOTAL SITE ASSESSMENT POINTS	160	91	82	83	
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	59	58	59	
Total Site Assessment *(From Part VI above or a local site assessment)*	160	91	82	83	
TOTAL POINTS *(Total of above 2 lines)*	260	150	140	142	

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☒

Reason For Selection:

(See Instructions on reverse side) Form AD-1006 (10-83)

Campus Parkway Project	**FARMLAND CONVERSION IMPACT RATING FORM**	Figure 3.13-2

Farmlands on the edge of urban areas have a much higher tendency to convert to urban land uses (Sokolow 1996, 1997; AFT 1997a, 1997b, 1999; Medvitz 1999). This is thought to be because of factors such as rising speculative land values that result in increased development pressures, increased risks and costs to the farmer, lower productivity, and complaints by adjacent urban residents about farming practices.

The Campus Parkway project would be constructed on the eastern outskirts of the City of Merced to accommodate current and future planned growth in and around the city. If constructed, a portion of the parkway would pass through areas of the county that have an agricultural land use designation. This change has the potential to increase pressure on landowners to convert their farmlands to more urban uses. However, constructing a limited-access expressway would minimize this potential effect, and existing land use controls limit the potential for change without approvals by the Merced County Board of Supervisors.

3.13.3 Avoidance, Minimization, and Mitigation Measures

Farmland as a Natural Resource

As reported in Section 3.13.1 above, the completed AD 1006 Form scored each project alternative lower than the 160-point threshold, as defined by the U.S. Farmland Protection Policy Act of 1984. Therefore, no federal action is required to mitigate the loss of farmlands. At the state level, farmland protection is offered through the California Land Conservation Act of 1965 through what are commonly referred to as Williamson Act contracts (as discussed in Section 3.13.1). As stated in Section 3.13.2, the proposed project avoids impacts to the Williamson Act parcels located within the study area with the Yellow Alignment – Preferred Alternative on-off ramp alignment.

As a general rule, the majority of farmland protection in California is determined by local agencies. Currently, Merced County does not have a farmland impact and mitigation policy. Although the County General Plan contains many protection policies to avoid the premature conversion of farmland, the county has no policy that standardizes the procedure for mitigating the loss of farmland throughout Merced County. The county has an Agricultural Policy Strategies Committee that is developing a countywide impact and mitigation strategy. Recently, during its environmental review process for the University Community project, the County Board of Supervisors voted to participate in an agricultural mitigation program only if such a program is adopted countywide. If the county adopts a countywide farmland

mitigation program before the construction of Campus Parkway, then the proposed project would be subject to the policy.

Merced County will require mitigation for the loss of productive agricultural lands in conformance with any countywide program adopted by Merced County. Since approximately 2001, the County has approved several community plans for development areas where farmland impacts were mitigated with the requirement for conservation easements at a 1:1 ratio. Examples of these include the Santa Nella Community Plan, Planada Community Plan, and the recently adopted University Community Plan. The requirements have generally applied to impacts to Important or Prime Farmlands affected by the adoption of the plans, within the boundaries of the planned development areas. In the event that such a program is not adopted prior to the initiation of grading for the Campus Parkway project, equivalent protection of farmland at comparable value will be considered at a ratio of 1:1 for productive farmland converted for project implementation. Equivalent protection is defined as acquisition of conservation easements by the County (or an appropriate third party designated by the County) that would protect 1 acre of productive farmland for each acre converted through fee title, easement, or other measure.

Farmland as an Economic Resource

The county would purchase all farmland under private ownership within the selected alignment at fair market value, which would compensate each landowner for the loss of farmland.

3.14 Community Impacts (Social, Economic) and Environmental Justice

3.14.1 Affected Environment

Social Components

The community impacts study area includes portions of Merced County, the City of Merced, and Census Tract (CT) 11, CT 12, CT 14, and CT 18 (Figure 3.14-1). Study area data are represented in the census tract data, whereas the city and county data represent a broader study region. For reference, CT 18 is the most rural tract, and CT 11, CT 12, and CT 14 all cover portions of the City of Merced and the Rural Residential Center area of the county.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by the President on February 11, 1994, directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law.

Demographic Characteristics – Population, Households, and Income

According to the most recent U.S. Census, Merced County's population was 210,554 in the year 2000.[23] This represents an increase of 32,141 persons over the 1990 population, or an 18 percent increase over the past 10 years. The population of the City of Merced has also greatly increased over the past decade, from 56,216 persons in 1990 to 63,893 in the year 2000, representing a 13.7 percent rise. CT 12 and CT 14, which both cover older parts of the City of Merced, did not witness much growth in the past decade, whereas CT 11 and CT 18, which are located in the newer northern part of the city, experienced rapid population increases. Table 3.14-1 illustrates the population changes between the 1990 Census and the 2000 Census.

[23] Although initial population data from the 2000 U.S. Census have been released, other socioeconomic statistics such as housing and age distribution were not available at the time this report was written. Wherever possible, 2000 Census data are used. In cases where current data were not available, estimates from the Department of Finance, Merced County Association of Governments, and other agencies responsible for maintaining social statistics were used. In some cases, only 1990 Census data were available.

Table 3.14-1 Study Area Populations

Attribute	Merced County	City of Merced	CT 11[a]	CT 12	CT 14[a]	CT 18[a]
Total Population (1990)	178,403	56,216	6,133	5,349	9,173	1,640
Total Population (2000)	210,554	63,893	7,459	5,329	9,017	2,846
Percent Change	18.0	13.7	21.6	-0.4	-1.7	73.5

Source: U.S. Census 1990 and 2000

[a] CT 11, 14, and 18 were divided for the 2000 Census, resulting in six tracts. For purposes of comparison, the 2000 data were combined to represent the populations within the 1990 Census Tract boundaries.

The number of households in the study area has increased along with the population, but the average household size has remained relatively unchanged over the past decade. Table 3.14-2 shows number of households and average household sizes in the study area for 1990 and 2000.

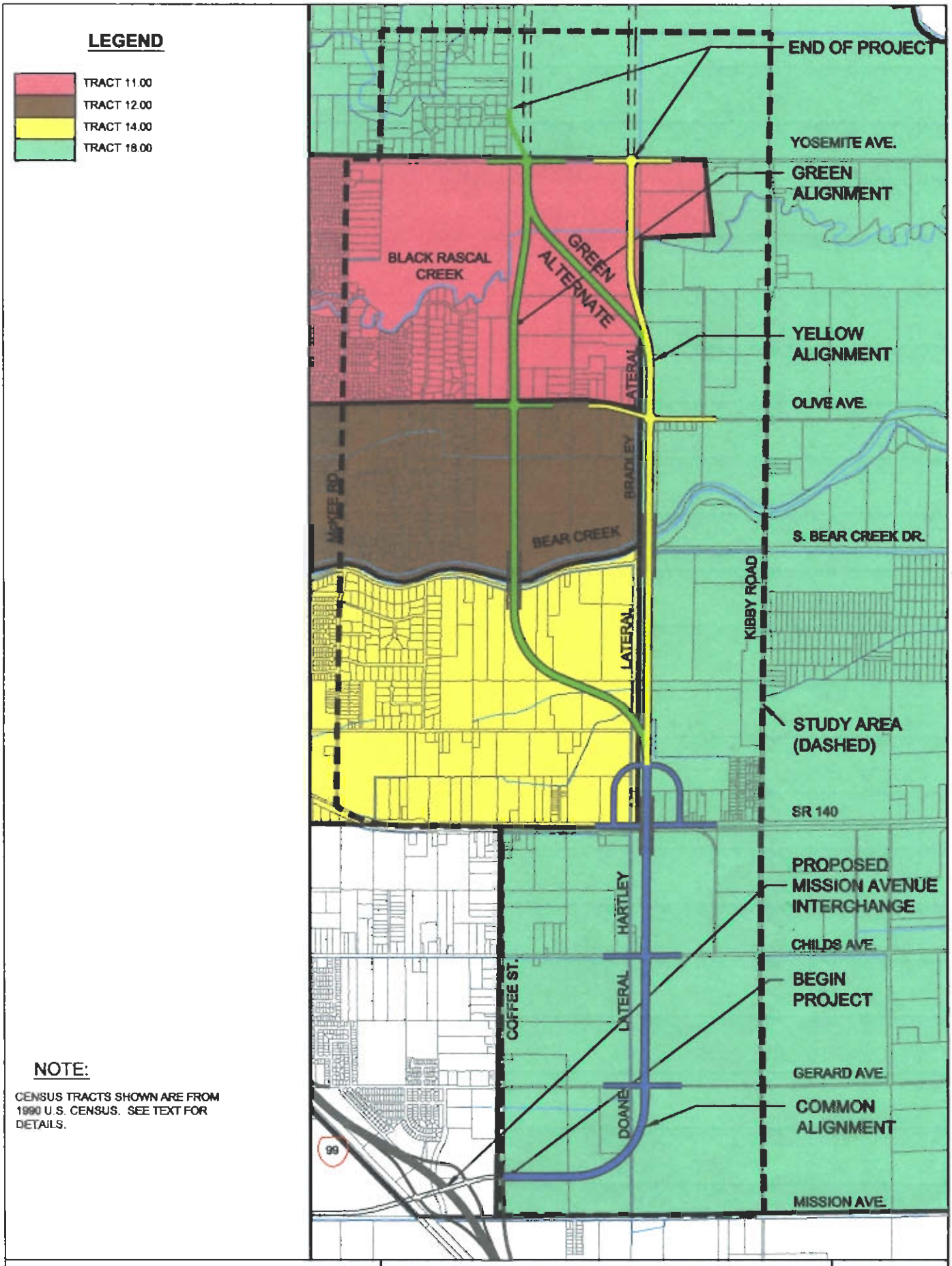
Table 3.14-2 Housing Statistics in the Study Area

Attribute	Merced County	City of Merced	CT 11[a]	CT 12	CT 14[a]	CT 18[a]
Total Households (1990)	55,548	18,154	2,092	1,833	3,114	467
Total Households (2000)	63,815	20,435	NA	NA	NA	NA
Percent Change	13	11.2	NA	NA	NA	NA
Average Household Size (1990)	3.0	3.0	2.9	2.9	3.0	3.5
Average Household Size (2000)	3.2	3.1	NA	NA	NA	NA

Source: U.S. Census 1990 and 2000

a CTs 11, 14, and 18 were divided for the 2000 Census, resulting in six tracts. For purposes of comparison, the 2000 data were combined to represent the populations within the 1990 Census Tract boundaries.

Table 3.14-3 presents the mean household income, per capita income, and number of persons below the official poverty level in the county, the city, and the census tracts that occur within the study area boundary for 1999 (2000 census data). The number of residents within the census tracts affected by the alternatives generally reported higher household and per capita incomes than the averages for the residents of the City and County of Merced. The exceptions were CT 14.01 and CT 18.02, new divisions of CTs 14 and 18 created in the 2000 Census, where the median household and per capita incomes were below both the city and county averages. In addition, the percentages of individuals living below the poverty level in CT 14.01 (28.6 percent) and CT 18.02 (31.8 percent) were higher than the city and county averages (24.2 and 21.6, respectively).



NOTE:

CENSUS TRACTS SHOWN ARE FROM 1990 U.S. CENSUS. SEE TEXT FOR DETAILS.

Campus Parkway Project	CENSUS TRACTS IN THE PROJECT STUDY AREA	Figure 3.14-1

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Table 3.14-3 Income in 1999

Attribute	Merced County	City of Merced	CT 11.01 / 11.02	CT 12	CT 14.01 / 14.02	CT 18.01 / 18.02
Median household income ($)	35,352	33,575	50,870 / 63,958	50,938	28,207 / 45,913	66,250 / 29,100
Per capita income ($)	14,257	13,115	19,662 / 29,395	22,583	11,678 / 17,664	22,549 / 12,021
Number/(percent) of persons below poverty level	45,059 (21.6)	26,303 (24.2)	422 / 40 (7.6 / 2.1)	787 (14.8)	1,185 /1,124 (28.6/23.2)	54 / 388 (3.4/31.8)

Source: U.S. Census 2000 Quick Facts, http://factfinder.census.gov/home/en/saff.

Ethnicity

The ethnic compositions of the study area in the year 2000 are provided by numeric breakdown in Table 3.14-4a and by percentage in Table 3.14-4b. Compared to the racial compositions of the County and City of Merced, the study area has a greater percentage of whites than other races and a lower percentage of Latino or Hispanic persons.

Table 3.14-4a Racial/Ethnic Composition of the Study Area 2000

Racial Group	Merced County	City of Merced	CT 11[a]	CT 12	CT 14[a]	CT 18[a]
Total Population	210,554	63,893	7,459	5,329	9,017	2,846
White	118,350	33,481	5,473	3,828	5,525	1,966
Black or African American	8,064	4,044	215	196	401	67
American Indian and Alaska Native	2,510	818	58	56	138	34
Asian	14,321	7,267	502	393	857	224
Native Hawaiian or Other Pacific Islander	396	133	16	7	7	2
Some Other Race	55,013	14,813	723	609	1,623	451
Two or More Races	11,900	3,337	372	240	466	102
Hispanic or Latino (of any race)	95,466	26,425	1,648	1,348	3,244	872

Source: U.S. Census 2000

[a] CTs 11, 14, and 18 were divided for the 2000 Census, resulting in 6 tracts. For purposes of comparison, the 2000 data were combined to represent the populations within the 1990 Census Tract boundaries.

Table 3.14-4b Percentages of Racial/Ethnic Composition in the Study Area 2000

Racial Group	Merced County	City of Merced	CT 11[a]	CT 12	CT 14[a]	CT 18[a]
White	56.2	52.4	73.4	71.8	61.3	69.1
Black or African American	3.8	6.3	2.9	3.7	4.4	2.4
American Indian and Alaska Native	1.2	1.3	0.8	1.1	1.5	1.2
Asian	6.8	11.4	6.7	7.4	9.5	7.9
Native Hawaiian or Other Pacific Islander	0.2	0.2	0.2	0.1	0.1	0.1
Some Other Race	26.1	23.2	9.7	11.4	18.0	15.8
Two or More Races	5.7	5.2	5.0	4.5	5.2	3.6
Total Population	100.0	100.0	100.0	100.0	100.0	100.0
Hispanic or Latino (of any race)	45.3	41.4	22.1	25.3	36.0	30.6

Source: U.S. Census 2000. Based on Table 3.14-4a above.

Table 3.14-5 highlights the change in racial composition between the 1990 Census and 2000 Census. Notable changes were the 12.8 percent increase in the Hispanic/Latino population and the 11.2 percent decrease in the white population in the county. The Census Tracts that make up the study area also underwent similar changes. Although the population in CT 18 grew by almost 74 percent over the past decade, it only experienced a 4.2 percent increase in the Hispanic/Latino category.

Table 3.14-5 1990–2000 Percent Change in Racial/Ethnic Composition

Racial Group	Merced County	City of Merced	CT 11[a]	CT 12	CT 14[a]	CT 18[a]
Total Population	0.0	0.0	0.0	0.0	0.0	0.0
White	-11.2	-9.3	-12.2	-10.5	-7.1	-12.7
Black or African American	-0.9	-0.5	-3.2	0.6	1.0	2.4
American Indian and Alaska Native	0.3	0.4	0.0	-0.2	0.7	-1.3
Asian or Pacific Islander	-1.5	-3.7	6.0	-0.4	-5.1	-5.0
Some Other Race	7.7	7.9	3.2	6.0	5.3	13.1
Hispanic or Latino (of any race)	12.8	11.5	7.5	10.8	12.3	4.2

Note: Categories taken from the 1990 U.S. Census. The Asian and Native Hawaiian or Other Pacific Islander categories from the 2000 Census were combined to determine the percent change.

Age Characteristics

Table 3.14-6 lists the age composition for the study area. For the most part, the age distribution within the study area census treats generally reflects the regional age composition.

Community/Neighborhood Characteristics

The population in the study area is relatively low compared to the higher density within the City of Merced. All of the potentially affected neighborhoods are located along Gerard Avenue, Childs Avenue, Olive Avenue, and Yosemite Avenue, which Campus Parkway would cross if constructed. SR 140 and North and South Bear Creek Drives would not intersect Campus Parkway. Celeste is the only identified community in the County General Plan besides the City of Merced that occurs in the study area. Celeste is an unincorporated SUDP with city water and sewer service. The neighborhood is mostly composed of affordable housing, with the majority of the community employed in the agricultural sector.

Residential Characteristics and Projections of Housing Stock

Table 3.14-7 presents housing data for the county, city, and study area. The 2000 Census reports that there are 68,373 total housing units in the county, of which 63,815 are occupied. The vacancy rate is approximately 6.7 percent, which indicates a slightly low demand for housing (around 5 percent is an optimal supply and demand balance). In comparison, the City of Merced currently has 21,532 total housing units, of which 20,435 units are occupied (a 5.1 percent vacancy rate).

The closure of Castle Air Force Base caused a major shift in the city's population and housing characteristics. A good example of this is the difference between pre-closure MCAG projections for housing and new projections in the City General Plan. Between 1990 and 1997, the MCAG predicted that 8,494 units would be needed. Shortly after the 1990 Census data were published, Castle Air Force Base closed, causing the city to lower city housing predictions to 3,267 units over the same period.

Even with the base closure, the City of Merced experienced rapid population growth between 1990 and 2000, as discussed above. In the proposed project vicinity, most of the housing development in the past decade has occurred in the City of Merced.

Table 3.14-6 Age Distribution

Age Group	Merced County		City of Merced		CT 11		CT 12		CT 14		CT 18	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Under 5 years	18,140	10.2	6,319	11.2	494	8.2	371	6.8	1,018	11.0	145	8.9
5 to 17 years	42,526	23.8	13,115	23.3	1,378	22.8	1,242	23.0	2,126	23.0	443	27.1
18 to 64 years	101,269	56.8	31,725	56.4	3,733	61.8	3,224	59.5	5,207	56.4	893	54.6
65 years and over	16,468	9.2	5,057	9.0	444	7.3	580	10.7	891	9.6	154	9.4
Total population	178,403	100	56,216	100	6,049	100	5,417	100	9,242	100	1,635	100

Source: 1990 U.S. Census

Table 3.14-7 Housing Characteristics

Attribute	Merced County[1]	City of Merced[1]	CT 11[2]	CT 12[2]	CT 14[2]	CT 18[2]
Total Housing Units	68,373	21,532	2,128	1,905	3,212	516
Occupied Units	63,815	20,435	2,075	1,855	3,108	470
Vacancy Rate (%)	6.7	5.1	2.5	2.6	3.2	8.9

[1] U.S. Census 2000, www.quickfacts.census.gov/cgi-bin/hunits/counts.pl
[2] U.S. Census 1990.

The City General Plan identifies 2,526.4 gross-acres of developable land designated for housing growth. Almost 82 percent of this land is designated for low-density (two to six dwelling units/acre) housing. Depending on the extent of buildout and infrastructure, this acreage could support between 6,187 and 15,385 dwelling units (City of Merced 1997a).

The study area contained approximately 7,761 housing units in 1990. Because CT 11, CT 12, CT 14, and CT 18 only occur partially within the study area and a large portion of the housing is in the RRC-designated area, the actual housing count within the study area in 1990 was likely 40 percent lower. CT 11, CT 12, and CT 14 all had very low vacancy rates in 1990, averaging just 2.76 percent. However, CT 18 (the more rural of the Census Tracts in the study area) had an 8.9 percent vacancy rate. This higher rate of vacancy was likely because of farm worker camps and housing, which often remain vacant some of the year (Merced County 1990).

Housing Policies

Both the City and County General Plans are concerned with supplying “affordable” housing, that is, housing that is affordable to the group of people to whom it is targeted. Housing groups are divided into four categories: Very Low Income, Low Income, Moderate Income, and Above Moderate Income. Each is defined by the percentage earned by the household compared to the county or city average. For both the city and county, the MCAG Regional Housing Needs Plan anticipated that 24 percent of all new houses built would need to be affordable for very low-income households, 19 percent for low-income, 21 percent for moderate-income, and 36 percent for above moderate–income households (City of Merced 1997a).

Based on MCAG predictions for future housing needs, both the City and County General Plans contain policies for meeting affordable housing needs. Both strategies

include new housing goals, housing rehabilitation goals, housing conservation goals, and meeting the needs of households with special needs, such as for the elderly, the disabled, or migrant farm workers. It should be noted that the City General Plan does not specify a policy for creating new above moderate–income housing. Because of the vacancy in the RRC areas around the city, it is inferred that most of the higher income housing, if any, would be built outside of the current city limits.

Because of the location of the Campus Parkway project, very few of the policies contained in the General Plans pertain to the study area. Some of the above moderate–income housing needs may be accommodated by the vacant lands in the RRC area if development occurs. The city housing designations in the southern portion of the study area are currently inactive but could be used for accommodating all of the affordable housing income groups.

Economy

Merced County's economy is agriculture-based, with total agricultural revenue reaching $1.53 billion in the year 2000. The economy of most of the unincorporated cities and towns is based almost entirely in agriculture, with the exception of the City of Merced. The City of Merced has the most diversified market in the county with respect to the various industrial and commercial sectors as well as consumer diversity. Tourism is also a large revenue-producing market for the City of Merced, which is advertised as the "Gateway to Yosemite."

Employment

About 18 percent of the workers in Merced County are employed in agriculture, and 19 percent are government workers. Other major employment sectors for the county include manufacturing and retail.

The unemployment rate in the county has averaged about 14 percent over the past 15 years, which is almost double the state average (7 percent) for the same period. The consistently higher unemployment rate has been due in part to an economy heavily dependent on the success of the agricultural sector, which has not always been stable. In 2000, the county unemployment rate was slightly below its average (12.9 percent); however, it was still much higher than the state average of 5.1 percent.

The unemployment rate for the City of Merced has mirrored that of the county over the past 15 years and continues to do so. Currently at 12.9 percent unemployment, the city seems to maintain a strong dependency on the agricultural sector. Even with a diversifying economy, population growth is outpacing job growth.

The Merced City Economic Development Corporation points out that the City of Merced is the employment capital of Merced County, with the majority of the county population within a 30-minute commute of the city. Because the city can tap the county labor pool, it benefits from very reasonable wage rates and an abundant labor force of unskilled workers. According to Merced City Economic Development Corporation statistics on wages, the average wage for an experienced worker in the industrial sector (including manufacturing) is approximately $11.50 per hour.

Tax Revenue

In Merced County, the total assessed value of all property and property assets entering the year 2001 was approximately $10.1 billion (Levy 2001). The property tax collected for Merced County was approximately 1 percent, or $10.1 million. Property taxes are allocated by tax rate areas throughout the county and are based on the assessed value of the property. Assessment values are set at the time a property changes ownership, or no more than 2 percent per year. The assessment is based on a number of factors, including assets located on the property.

The study area contains six tax rate areas. Property within tax rate areas 110-01, 5-138, and 5-148 is taxed at 1.0560 percent of the assessed property value. Property within tax rate areas 83-28, 5-136, and 5-42 is taxed at 1.0300 percent. Tax area 110-01 covers the existing agricultural areas within the study area. The other five tax rate areas cover small, more urban areas of the study area.

County property tax dollars are allocated to the county programs, services, and local governments. Education received the most tax dollars in 2000 (61.2 percent), with the County General Fund receiving 15.9 percent; Cities (Incorporated), 12.9 percent; Fire Control, 7.2 percent; and Special Districts, 3.7 percent. The County General Fund supports many county services and departments. The Special Districts also support county services, but these services are managed by separate boards other than the County Board of Directors, such as the MID. Property tax dollars are not the only source of funding for county and city governments and their services. State bonds, federal grants, and sales taxes also make necessary contributions.

3.14.2 Permanent and Temporary Impacts

Impacts are discussed in terms of communities and groups that would benefit or experience adverse impacts as a result of the proposed project, as well as specific impacts to properties and communities within or adjacent to the right-of-way.

Community and Housing Impacts

In general, the greater community of the City of Merced would benefit from Campus Parkway, as it provides improved transportation access and circulation. Private citizens, businesses, and institutions would benefit from an additional north-south route between northern Merced and SR 99, which would serve as an alternative to traveling through downtown. In addition, much of the proposed and planned growth north of the city that would establish new communities, such as UC Merced, the University Community, and Bellevue Ranch, would all benefit from an expressway such as Campus Parkway leading to or near them. The Class I pedestrian/bicycle paths proposed would also benefit nontransit users in the area.

Residents living within or adjacent to the proposed right-of-way would be adversely affected by Campus Parkway. To construct the parkway, a right-of-way would be purchased for the entire length of the project. The majority of the right-of-way purchases would be partial acquisitions of land under agricultural production, which would not result in relocation impacts. One property (one per alignment) with a single-family residence would require relocation. Since only one alternative would be selected, relocation impacts would be limited to one single-family residence for the entire project. Relocation impacts are discussed below.

Household Impacts

Campus Parkway would potentially affect houses and properties identified within the right-of-way and possibly nearby. Impacts to households within the project right-of-way are limited to a single household relocation (see “Relocation Impacts,” below). Impacts to households adjacent to or near the right-of-way include changes in noise and aesthetics, which were separately evaluated. Vehicular traffic noise would increase in areas surrounding the project, and mitigation was evaluated in accordance with federal, state, and local requirements and criteria (Merced County 2002). Visual impacts, including aesthetics, light and glare, to residential areas in close proximity to the parkway are addressed in Section 3.17.

Environmental Justice

The two households, either of which could be affected by relocation due to all three of the build alternatives, are occupied by white residents. Household income information for these specific, potentially relocated households was not available, but the single-family homes appear to be typical of the study area in terms of the type of home, size, and maintenance.

An analysis of the socioeconomic and demographic characteristics of the study area shows that no low-income or minority communities would be disproportionately affected by the project. The FHWA and Caltrans use the U.S. Department of Health and Human Services poverty guidelines to determine the low-income threshold, which was $18,100 for a family of four at the time this study was performed. Even though the average household size in the study area is approximately 3 to 3.5 persons per household, the average household income in the study area exceeds this level. The two homes potentially affected by the alignments are within Census Tracts 12 and 18, and both of these tracts are above County and City of Merced median household income (see Table 3.14-3) and are well above the low-income poverty guidelines stated above. In regard to potential disproportionate community impacts, all of the census tracts crossed by the project are similar to or above the County and City of Merced median household and per capita average income levels, indicating the project would not disproportionately affect lower income communities within the County or City of Merced.

The ages of residents in the study area census tracts are similar to those reported across the County and City of Merced. The project is not expected to disproportionately affect any single age classification.

A minority population is defined as any readily identifiable group of minority persons who live in geographic proximity to the proposed project, and geographically dispersed persons who would be similarly affected by a proposed FHWA program, policy, or activity. A low-income population is defined as any readily identifiable group of low-income persons who live in geographic proximity to the proposed project, and geographically dispersed persons who would be similarly affected by a proposed FHWA program, policy, or activity. Based on the census tract information, the populations are co-mingled, and any project impacts would be evenly dispersed. Therefore, it is concluded that there would be no disproportionate impacts to the minority and/or low-income populations.

Within the study area, observation of the homes and communities along the proposed alignments appears consistent with the census-based information discussed above. Single family suburban-style homes are located along Olive Avenue, in the Bear Creek area, and in the housing tracts to the west of the Green Alignment north of SR 140 to Yosemite Avenue. Some isolated farm homes and complexes are located within the agricultural land tracts east of Merced City limits. Smaller, rural residential homes exist along SR 140, including within Celeste, located along Kibby Road east of the

proposed project. Celeste is the only community identified in the County General Plan that is within the study area evaluated for this project, and it appears to be composed of more affordable housing supporting agriculture-based employment. The project does not directly impact Celeste or the rural homes along SR 140. The alignment of Campus Parkway, including the "connection" loop between the parkway and SR 140, was selected to avoid impacts to homes and communities by locating it well west of Celeste and parallel to the east side of the Hartley Lateral.

The environmental studies included evaluation of potential "indirect" impacts that might occur along the proposed alignment, including on SR 140 and in Celeste. Noise levels at locations along SR 140 show decibel levels increasing due to project traffic by up to 1 to 3 dBA. That change is not considered an adverse impact and is below predicted noise level increases at other project study locations. Residents nearest the parkway along or near SR 140 would be able to see the proposed structure that would cross the highway and railroad, but these same views are already affected by the existing highway, the adjacent railroad, and utility lines. Similar visual changes were also identified for the suburban residents nearest the proposed bridge crossing of Bear Creek. Mitigation is recommended, consisting of development of landscaping and architectural treatment of the bridge design that would be developed during the final design stages of the project.

In conclusion, the only low-income or minority population with potential for disproportionate impacts, if any, from the project would be in the general area of SR 140 and the community of Celeste. The potential impacts for this area are similar or less than those identified for the overall project, and mitigation measures are identified and included. There are no substantial, adverse impacts after mitigation is applied.

No minority or low-income populations have been identified that would be adversely affected by the proposed project as determined above. Therefore, this project complies with the provisions of Executive Order 12898.

Community Cohesion Impacts

Campus Parkway could have some effect on community cohesion associated with increased traffic. The neighborhoods along Olive Avenue and Yosemite Avenue would not be further physically divided by the project except for the addition of turning lanes on these roads. However, these roads would experience higher traffic volumes associated with increased traffic north of SR 140 that diverts toward Campus Parkway.

Table 3.14-8 shows the estimated number of vehicle trips per day along the four roads mentioned above in the neighborhoods west of each alignment. The neighborhoods along Gerard Avenue and Childs Avenue would see a future reduction in vehicle numbers if either Campus Parkway alignment is built. However, these neighborhoods are located in an area of the city that is designated for industrial uses. With buildout of the City General Plan, these neighborhoods would be replaced by industrial and commercial uses.

Table 3.14-8 Traffic Impacts to Community Cohesion in the Study Area[1]

Street/Neighborhood[2]	Year 2000	Year 2015			Year 2025		
	Baseline Conditions[3]	Baseline Conditions	Green Alignment	Yellow Alignment – Preferred Alternative	Baseline Conditions	Green Alignment	Yellow Alignment – Preferred Alternative
Gerard Avenue	350	1,450	850	700	1,100	1,550	1,450
Campus Parkway South[4]	-	-	6,300	5,750	-	12,950	12,200
Campus Parkway North	-	-	6,600	5,900	-	10,800	9,900
Childs Avenue	1,200	9,650	7,900	3,200	3,950	5,850	5,900
Campus Parkway South	-	-	6,600	5,900	-	10,800	9,900
Campus Parkway North	-	-	7,500	6,500	-	13,150	12,250
Olive Avenue	2,150	3,400	5,450	4,700	4,100	8,300	7,350
Campus Parkway South	-	-	10,050	8,400	-	15,750	13,500
Campus Parkway North	-	-	5,150	4,000	-	8,000	6,400
Yosemite Avenue	800	2,700	5,350	3,900	4,400	7,050	6,300
Campus Parkway South	-	-	5,150	4,000	-	8,000	6,400

Source: Merced County, 2000. Analysis of Travel Characteristics Traffic Report.
[1] No scenarios include the development of UC Merced or the University Community. They are based on MCAG model predictions. These numbers have been rounded for easier interpretation. The Traffic Study that presented this data incorporated the common alignment into the Green Alignment scenario and Yellow Alignment – Preferred Alternative scenario. The accuracy of the data in the Traffic Study that these numbers are based on is not guaranteed by URS Corporation.
[2] Neighborhoods are considered only within the study area along the roads listed. Numbers in the table represent stretches of roadway approximately where an alignment of Campus Parkway would cross.
[3] Traffic volumes based on no Campus Parkway.
[4] Campus Parkway vehicle trips north and south of the listed roadway/neighborhood.

The neighborhoods along Olive Avenue and Yosemite Avenue would experience an increase in the number of vehicles using the streets. For example, in 2025 without the development of the Yellow Alignment – Preferred Alternative, UC Merced, or the University Community, vehicle trips per day along Olive Avenue between McKee Road and Kibby Road are predicted at 4,100. Assuming the Yellow Alignment – Preferred Alternative is built, without the development of UC Merced or the University Community, in 2025 the Olive Avenue neighborhood west of the parkway would see an estimated 7,350 vehicles trips per day, almost a 90 percent increase (Merced County 2000). This impact is considered adverse because the increase in

traffic can negatively affect a neighborhood's use of outdoor space, but it would not present a substantial change because Olive and Yosemite Avenues will be relatively busy with or without the Campus Parkway project.

In the community of Celeste, the right-of-way for Campus Parkway and the proposed roadway connection to SR 140 would result in the take of four parcels within the Celeste SUDP. However, no homes are currently associated with the potentially affected parcels. Furthermore, because the impact would occur in the westernmost portion of the Celeste SUDP area, the impact would not separate or divide the community.

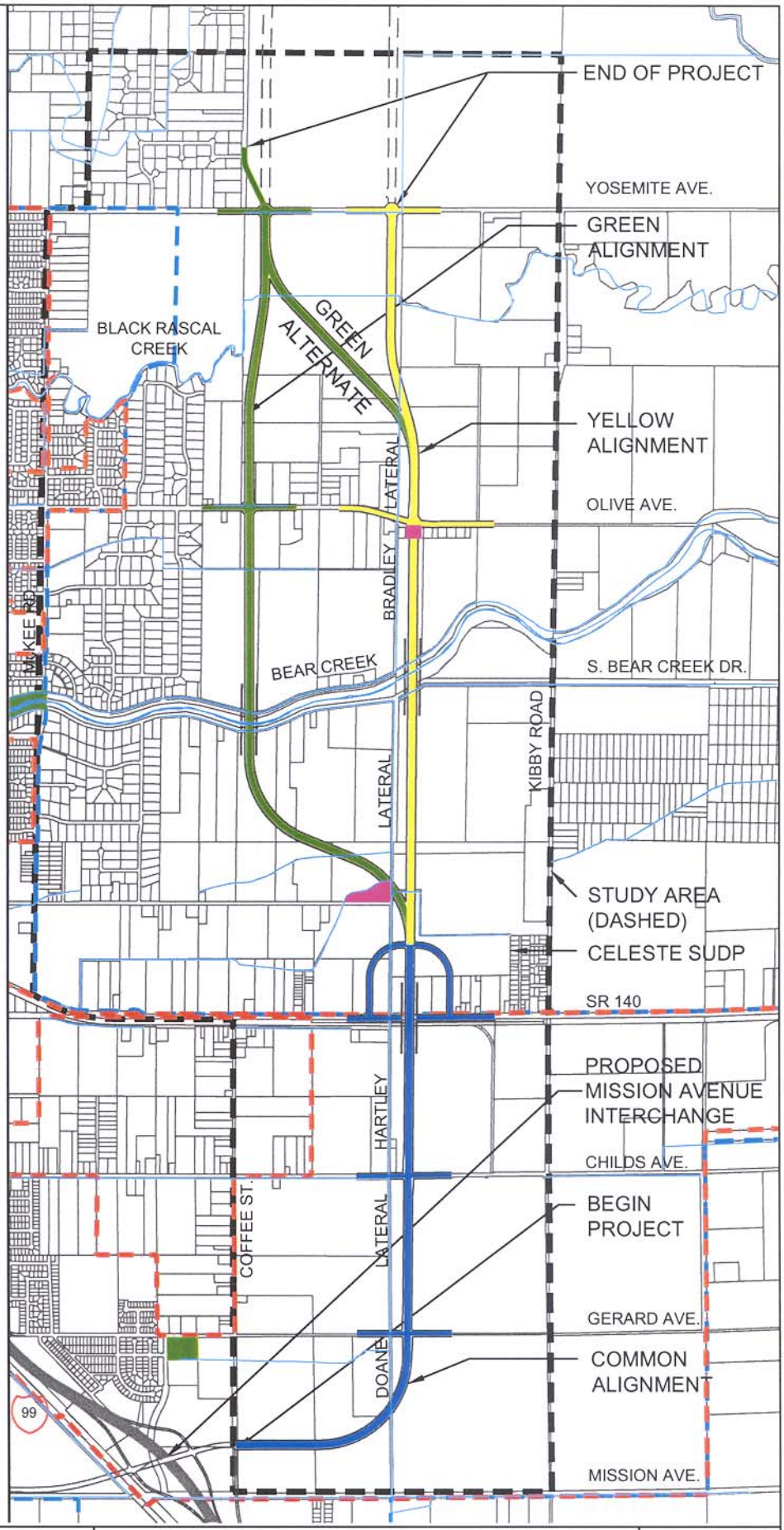
Relocation Impacts

Relocation impacts of the proposed project would occur at only one location, depending on the alignment selected. If the Green Alignment is chosen, the property at 3477 Stretch Road would be purchased and the property owner relocated. If the Yellow Alignment – Preferred Alternative or Green Alternate is selected, the property at 3533 East Olive Avenue would be purchased. Figure 3.14-2 shows the location of the two potentially affected properties. No homes are located along the right-of-way for the common alignment. No businesses would be displaced by Campus Parkway.

Merced County would be the public agency responsible for carrying out the Relocation Assistance Program for the proposed project. Relocation assistance payments and counseling would be provided to persons and businesses in accordance with the Federal Uniform Relocation Assistance and Real Properties Acquisition Policies Act, as amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All eligible displacees would be entitled to moving expenses. All benefits and services would be provided equitably to all residential and business relocatees without regard to race, color, religion, age, national origins, and disability as specified under Title VI of the Civil Rights Act of 1964. The Relocation Assistance Program as it relates to residential and business displacements is briefly described below.

LEGEND

- PARCEL ON E. OLIVE AVE.
- PARCEL ON STRETCH RD.



NOTE:

BOTH HOUSES ARE LOCATED IN MERCED COUNTY.

J:\CADSHARED\CAMPUS_PARKWAY\EIS\FIGURE3.14-2.DWG 08/29/02 COLOR_01.PCP

Campus Parkway Project	PARCELS WITH HOUSING POTENTIALLY RELOCATED	Figure 3.14-2

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Relocation Assistance Services

The individuals or family displaced by the project would be offered relocation assistance services for purposes of locating a suitable replacement property, in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended. A relocation adviser from Merced County would contact the displacee personally and explain relocation services and payments for which the displacee is eligible. The displacee would not be required to move unless at least one comparable replacement dwelling is made available to him or her. The county can also provide the displacee with information concerning other federal, state, and local housing programs that offer assistance to displaced persons and would provide counseling to minimize hardships. The displacee would also be provided with a booklet that explains his or her rights and benefits under the Uniform Relocation Assistance Program.

Relocation Payment Program

An eligible displacee is also entitled to relocation payments to relieve the financial hardship of locating and acquiring replacement housing.

The eligible displaced household would be entitled to reimbursement of the moving costs and related expenses incurred in moving. Replacement housing payments would be paid to the displaced household to complete a successful relocation. These payments are separated into three types: purchase supplements, rental assistance, and downpayments. The type of payment depends on whether the displacee is an owner or a tenant and how long the displacee has been living in the property before the start of negotiations.

When the available housing and housing assistance is insufficient to allow the successful relocation of the displacee, the county would resolve the problem using an administrative process called Last Resort Housing. The county may provide a replacement housing payment in excess of the limits set forth in 49 CFR 24.401 or 24.402. The county would evaluate the displacement and use other options only if considered necessary.

Depending on the goals of each displacee, comparable housing could be located within the same or similar desired neighborhoods, so that displacement impacts would be minimized. However, each displacee is free to use the provided funds within the rules of the relocation assistance program. In compliance with Title VI of the 1964 Civil

Rights Act, all services and benefits would be administered to the general public without regard to race, color, national origin, or sex.

Economic Impacts

Tax Revenue

A potential reduction in tax revenue of the county would occur following the acquisition of private property for the project right-of-way. The acreage to be acquired for the Green Alignment would be approximately 70 ha (172 acres); 74 ha (182 acres) for the Yellow Alignment – Preferred Alternative; and 73 ha (180 acres) for the Green Alternate. These acreages represent about 1/100th of 1 percent of the total acreage of the county. Therefore, there would be a minor reduction and minimal impact on the county's tax revenues.

Agricultural Economy

Besides the loss of farmland resources described in Section 3.13 (Farmlands/ Agricultural Lands), the proposed project could also diminish the land base that supports farm-related jobs as well as affect the county's revenues from the cultivation of agricultural products and the agricultural support services that process or transport agricultural goods.

The proposed project would affect four of the top 12 agricultural commodities by value, as reported by the Merced County 2000 Annual Report of Agriculture. These crops include tomatoes, almonds, cotton, and alfalfa. The project right-of-way would have different impacts on the different crops depending on which alignment is chosen (Figure 3.13-1 in Section 3.13). The common alignment would mostly affect lands used for row crops (alfalfa and tomatoes) and almond orchards. The Green Alignment would affect lands used primarily for row crops (cotton, tomatoes, and alfalfa). The Yellow Alignment – Preferred Alternative would convert primarily almond orchards, with some impacts to fields used for growing cotton. Countywide, these four crops made up approximately 22 percent of the total revenues generated in 2000.

Project-specific impacts to row crops are much more difficult to quantify than a perennial crop such as almonds. Row crops are mostly rotated by the season, and a farmer's choice of crop often depends on market predictions on the upcoming season's prices as well as soil fertility, cost of maintenance (pest control), and a crop's labor intensity.

Approximately 70 percent of the common alignment would convert almond orchard into transportation infrastructure. About 63 percent of the Yellow Alignment – Preferred Alternative and 62 percent of the Green Alternate right-of-way would convert almond orchards. Less than 10 percent of the Green Alignment would convert almond orchards. These impacts would not be considerable when compared to the acreage of almond orchards in the county but could negatively impact individual farming operations. In addition, loss of farmed acreage could impact jobs that are directly tied to the farm operations affected.

The conversion of agricultural lands as a result of the proposed project could cause the loss of jobs. However, this is likely to only affect the farming operations in the study area that have employees. If a farm with employees were to lose crop acreage as a result of the project, its operators could lay off permanent employees or not rehire returning seasonal employees due to reduced labor needs. As many of the farms potentially impacted by the project are family operations, they would not be impacted by job loss unless the entire farm became inoperable due to the loss of crop acreage. This impact is difficult to quantify because the results may take years to manifest, but the magnitude of the impact is not expected to be substantial to regional farming.

General Economic Impacts to Nearby Properties

Because Campus Parkway is an all new roadway, there is an unknown potential for the project to affect the economic values of properties in closest proximity to the alignments. This effect, if any, is unquantifiable. The primary potential affect would be from noticeable noise level increases, or visual effects to adjacent or nearby properties. In almost all cases, existing residences are already along traveled roadways. Adverse visual impacts are primarily limited to properties in close proximity to the proposed bridge crossings at Bear Creek or at SR 140 or where Campus Parkway is adjacent to a rural residential parcel. For a noticeable economic impact to occur to a property's value, the adverse affect would have to dominate the existing setting to the point that substantially fewer buyers would consider purchasing the property. Although the noise and visual impacts are identified as adverse at some locations, it is not clear that this effect on its own would substantially change the desire to purchase properties in east Merced, including those close to the proposed alignments. This impact, if any, is unknown.

Impacts to Businesses Along Existing Routes

Although the project would provide an alternative north-south corridor east of the city, any change in traffic patterns is unlikely to adversely affect businesses located there.

As is currently the case, motorists who travel north or south through Merced to do business downtown use existing north-south streets such as G Street, M Street, and R Street. However, those that do not wish to patronize downtown businesses must currently use these same routes if they want to get across town from south to north or vice versa. Campus Parkway would provide an alternative to north- or south-bound motorists who want to avoid traffic associated with the downtown area. Although some downtown businesses may currently benefit from the unanticipated business of north-south through-traffic, the decision to patronize one of these businesses depends on a shopper's preference and is not contingent on the provision of an alternate north-south route for the City of Merced.

3.14.3 Avoidance, Minimization, and Mitigation Measures

No mitigation measures are required. Measures to reduce noise and visual resources impacts are discussed in separate sections of this document. The effects of these measures on nearby property values cannot yet be quantified.

3.15 Utilities/Emergency Services

3.15.1 Affected Environment

Utilities

A 230-kilovolt transmission line crosses the study area from the southwest to the northeast between Kibby Road and Hatch Road. Various phone and electrical utilities are located within easements adjacent to local roads in the study area. The city has water mains under Gerard Avenue, Childs Avenue, and Olive Avenue that extend into the study area. The only city sewer main within the study area is along SR 140 and serves the community of Celeste.

A system of irrigation canals and pipes runs throughout the study area. The major irrigation features include the Doane, Hartley, and Bradley Laterals (which form a canal running north-south through the entire study area), Bear Creek, and Black Rascal Creek. Bear Creek is channelized through the entire study area, and Black Rascal Creek is culverted where the proposed alignments would cross it. Much of the public irrigation infrastructure is maintained and managed by the MID. Most of the water used for irrigation in the study area is delivered by MID via the canals, but wells are also used. Irrigation of the fields is accomplished primarily with sprinkler systems and/or gravity flow.

Fire

The only fire station within the study area is the McKee Station, located at 3360 North McKee Road. This Merced County Fire Department facility serves all of the county land within the study area. The County Fire Department is currently studying the planned and proposed growth that may occur in the vicinity of the city, such as UC Merced and the University Community, to determine when and where future stations may be needed (Wells 2001).

Fire protection for all city portions of the study area is provided by the City of Merced Fire Department Station 53 (at 610 Loughborough Drive) and Station 51 (at East 16th Street). A new station (Station 55) is scheduled for construction at a location near the corner of Parsons Avenue and Silverado Street (Franklin 2001). This new station would become the nearest city fire station to the study area and serve the small residential city neighborhood in the study area at the corner of Olive Avenue and McKee Road. This station will be in a location that also serves existing and future land uses.

Public Safety

Public safety services are also divided by city/county jurisdiction. All unincorporated areas within the study area are served by the County Sheriff's Department. No city police stations or county sheriff's offices exist within the study area. All of these public services facilities are located in and around downtown Merced. The Merced County Sheriff's Department is responsible for all county portions of the study area, and the City of Merced Police Department is responsible for all city portions. The Central Station at 611 West 22nd Street serves all city lands between SR 99 and Bear Creek. The Northern Station at 1109 Loughborough Drive serves all city areas north of Bear Creek.

Hospitals

Mercy Medical Center is the only hospital that serves the greater Merced area. It has two campuses, both located in the City of Merced, to serve the community. The Dominican Campus is located at 2740 M Street, and the Community Campus is located at East 13th Street. Both sites have emergency services. Neither site is within the study area.

Schools

Two schools are located along Coffee Street, Pioneer Elementary and Weaver Elementary. Both are within the Weaver School District. Pioneer Elementary School is located just outside the study area on the northwest corner of Coffee Street and Gerard Avenue. It serves kindergarten to third grade. Weaver Elementary School is located within the study area on the northeast corner of Coffee Street and Childs Avenue. Weaver serves grades four through eight. The City General Plan identifies a potential future school site between Coffee Street and the proposed Parkway, south of Childs Avenue.

The study area also covers a portion of the Merced City School District, but no schools occur within the area.

Parks and Recreation

There are no parklands within the project's study area. The Bear Creek corridor is shown as open space in the City General Plan, to the west. There is a small community park immediately east of Pioneer Elementary School, just outside the study area.

Merced County maintains bike paths along portions of Bear Creek, McKee Avenue, Yosemite Avenue, Bellevue Road, and Lake Road, all of which are located around the City of Merced. The City of Merced maintains the most comprehensive network of

bike paths in the county. Most of the bikeway system is made up of Class II bike lanes that run within the urban areas of the city. The MCAG adopted a Regional Bikeway System in 1998.

A Class I bicycle path (which includes pedestrian traffic) runs along Bear and Black Rascal Creeks from McKee Road westward toward downtown. From the Bear Creek bridge on McKee Road, a Class III bike lane (road shoulder with no striping) heads northward along McKee Road to Yosemite Avenue. Where McKee Road crosses Black Rascal Creek, the bike lane becomes a Class II bike lane (8 feet wide with striping) until Yosemite Avenue. This intersects another Class II bike lane running east-west along Yosemite Avenue, between Lake Road and R Street. As discussed in Chapter 2 (Project Alternatives), Class I and/or Class II bike lanes are proposed along Campus Parkway, with proposed Class II bike lanes along Olive Avenue and Childs Avenue as the east-west connections to the city.

3.15.2 Permanent Impacts

The project would have no adverse effects on public services. Campus Parkway would not change access routes for emergency vehicles and would maintain good levels of service in the future that would help avoid congestion and potentially decrease response times. Because Campus Parkway would increase access into the study area, the project would have a net benefit to most public services.

Planned growth in accordance with the City and County General Plans may result in an increase of population in the study area, which could create a demand for more public services. However, as discussed in Section 3.12, development of land would have to occur in accordance with land use designations and zoning ordinances already established by the city or county. The City and County General Plans also address the need for associated infrastructure and public services. The adequacy of public services and infrastructure must be analyzed during environmental review, which is required if the city or county intends to amend its general plan.

All irrigation infrastructure would be bridged, culverted, or otherwise avoided so as to not affect its function of delivering water to the region. The Campus Parkway right-of-way would also pass under a large power line that crosses the study area from the southwest to the northeast between Kibby Road and Hatch Road. This transmission line is crossed by all three alignments, and the Green Alternate parallels it. The alignment alternatives would have no impact to this corridor.

3.15.3 Construction and Other Temporary Impacts

Construction of the proposed Campus Parkway would not interfere with any existing utilities. Where the alignments cross existing roadways, traffic could be temporarily disrupted during construction activities, which in turn could interfere with fire protection and police service response times in the construction vicinity. However, the construction contractor would be required to implement a traffic control plan to ensure that adequate access would be maintained throughout the construction period. Therefore, no construction-related or other temporary adverse effects to public services or utilities would result from the proposed project.

3.15.4 Avoidance, Minimization, and Mitigation Measures

Traffic circulation plans would be developed for construction staging and should include provisions to maintain access and manage potential traffic disruption. The plans should be developed in coordination with emergency service providers to minimize service delays and avoid potential confusion.

3.16 Traffic and Transportation

3.16.1 Affected Environment

No roadway currently exists where Campus Parkway is proposed. Access to areas east and north of the City of Merced use the north- and south-running Kibby and Arboleda Roads, which are both east of the proposed alignments, and the roadway networks within the City of Merced.

2025 Regional Traffic Conditions

According to the County General Plan, a Level of Service (LOS)[24] of C is generally acceptable for roadways in rural areas and an LOS of D is acceptable for roadways within Highway Interchange Centers (HICs), SUDPs or unincorporated areas, and RRCs. LOS C is a desirable goal for avoiding long-range peak-hour congestion problems and for determining lane requirements (Merced County 1990). According to the City General Plan an LOS of D is generally acceptable (City of Merced 2000).

Under the modeled development scenario of 2025[25], many segments of arterial and collector roadways within and near the City of Merced would have an LOS of D or F. Congestion on G Street would have an LOS of mostly E and F from downtown Merced to Yosemite Avenue. Yosemite Avenue would operate at LOS E and F on segments east of G Street and east of McKee Road. Olive Avenue would have an LOS of E and D between G Street and Parsons Avenue. East of SR 99, Childs Avenue would operate at LOS F. Bellevue Road would function at LOS of E on most of the segments between SR 59 and M Street (Dowling 2000).

A regional analysis of vehicles mile traveled (VMT), vehicle hours traveled (VHT), and the ratio of VMT/VHT (or miles per hour [mph]) are indicators of the efficiency of traffic movement. VMT is an indicator of the amount of traffic activity and length of vehicle trips. VHT is an indicator of congestion levels and represents the amount of

[24] Level of Service is a measurement of the efficiency or congestion of a roadway or intersection. It is represented by six levels of service, with LOS A representing free-flowing conditions and LOS F, highly congested conditions.

[25] The regional traffic modeling tool used for analysis of traffic for the Campus Parkway project was developed by the MCAG. This model includes only roadway improvements and regional land use developments that are likely to be programmed for funding within the time frame of the years modeled. Phase 1 of the UC Merced Campus, which opened in 2005, was included in the baseline of project developments that were projected to the study year of 2025. Buildout of the campus beyond Phase 1 as well as the University Community were evaluated as cumulative growth conditions, which are discussed in Section 3.22.14.

time required to complete trips. When comparing different modeled development scenarios, higher VMT would indicate higher traffic volume levels and longer travel routes and lower VHT would indicate less congestion and faster travel times. Mph represents the regional "speed" of a traffic model (i.e., an average level of expected speed of the roadway network). Any increase in speed can be interpreted as a positive regional benefit. The 2025 regional traffic model for the City of Merced vicinity showed the following daily VMT, VHT, and mph. VMT and VHT are the totals for a single day, while mph is an average:

VMT	VHT	mph
2,189,558	108,675	20.1

Source: Dowling 2000

3.16.2 Permanent and Temporary Impacts

Regional Traffic and Travel

To address impacts of the project alternatives, conditions in the year 2025 were modeled. Campus Parkway would alter regional travel patterns at the design year of 2025. Traffic would be diverted (or attracted) to Campus Parkway from other congested and more indirect roadways. This would result in lower traffic volumes compared to the No Action alternative on some roadway segments and higher traffic volumes on others. For all three alignments, traffic volumes would generally increase on the roadway segments feeding directly into Campus Parkway, such as Olive Avenue between McKee Road and Campus Parkway. Traffic volumes would generally decrease on many of the regional roadway segments to the east of Merced, such as Arboleda Drive and Lake Road (Dowling 2000, 2004).

Addition of Campus Parkway to the regional roadway network would improve the LOS of some roadway segments. For instance, with all three proposed alignment alternatives, Childs Avenue west of Campus Parkway would improve from LOS F to LOS E or better; M Street south of Olive Avenue would change from LOS F to LOS E; and South Bear Creek Drive west of Glen Avenue would change from LOS F to LOS D. In addition, as traffic shifts to the parkway alignment, the LOS would worsen on some segments of Olive Avenue, and to a lesser extent on Yosemite Avenue, because these local roadways provide a connection to the new expressway (Dowling 2000, 2004).

An analysis of project-facilitated changes in the volume-to-capacity (V/C) ratios, which are a major component of the level of service for each roadway, provides a more sensitive analysis in service changes to the regional roadway network. The

higher a V/C ratio becomes, the worse the level of service becomes. A change in the V/C ratio of 5 percent or more represents a change noticeable to drivers and was used in the traffic study as a criteria to evaluate the alternatives' effects on local circulation. Notable V/C ratio changes for all three alignment alternatives include decreases on Arboleda Drive; Yosemite Avenue and Olive Avenue east of Campus Parkway; portions of Childs Avenue and Gerard Avenue; and portions of Bellevue Road, Lake Road, McKee Road, Tyler Road, and Glen Avenue. Increases in V/C ratio for all three alignment alternatives would result on Yosemite Avenue and Olive Avenue west of Campus Parkway; SR 140 east of Campus Parkway; portions of Childs Avenue and Gerard Avenue; Mission Avenue west of SR 99; and a portion of G Street north of Yosemite Avenue. In general, the addition of the proposed project would reduce the V/C ratio on more roadway segments than would experience an increase (Dowling 2000).

The regional speed increases as a result of Campus Parkway. This is a beneficial impact. The regional speed would have a greater increase over the No Action alternative with the Green Alignment, Green Alternate, and Yellow Alignment – Preferred Alternative (the improvement is the same for the Green Alternate and Green Alignment alternatives). The changes in regional speed are shown in Table 3.6-1 of Section 3.6.

Campus Parkway Operations

Table 3.16-1 represents the lane requirements needed for the Campus Parkway roadway segments to have a peak hour LOS of D (which is an adequate LOS for the proposed project) or better in 2025. These lane requirements represent a worst-case scenario for the year 2025 assuming buildout of the City General Plan.

Table 3.16-1 Campus Parkway Lane Requirements

Campus Parkway Segments	Green, Green Alternate, and Yellow Alignments (number of lanes)
Yosemite Avenue to Olive Avenue	4
Olive Avenue to SR 140	4
SR 140 to Childs Avenue	4
Childs Avenue to Gerard Avenue	4
Gerard Avenue to Mission Avenue Interchange	4

Source: Dowling 2004

The Campus Parkway would have either signalized intersections or roundabouts. Most intersections would have acceptable levels of service. Table 3.16-2 shows the modeled peak hour LOS for the Campus Parkway intersections.

Table 3.16-2 2025 Campus Parkway Intersection Levels of Service

Intersection	Type	Green Alignment LOS AM Peak	Green Alignment LOS PM Peak	Green Alternate LOS AM Peak	Green Alternate LOS PM Peak	Yellow Alignment – Preferred Alternative LOS AM Peak	Yellow Alignment – Preferred Alternative LOS PM Peak
Campus Parkway &							
Yosemite Avenue	Roundabout	B	B	B	B	A	B
Olive Avenue	Roundabout	D	C	D	C	D	B
Connector to SR 140	Signal	B	D	B	C	B	D
Childs Avenue	Signal	A	B	A	B	A	B
Gerard Avenue	Signal	A	B	A	B	A	B
SR 140 &							
Connector to Campus Parkway	Signal	C	B	C	C	C	C

Source: Dowling 2001, 2004

Temporary Impacts

Campus Parkway construction is expected to create temporary traffic delays when work that requires temporary detours or lane reductions is performed on existing roadways. Because the project is a new roadway, most construction work would not affect existing roads, except at crossings. Temporary construction impacts are not expected to be substantial because of their temporary nature and the use of construction staging, detours, and traffic management to minimize disruption.

3.16.3 Avoidance, Minimization, and Mitigation Measures

The county will have to develop construction staging and traffic management plans for the construction period. These plans would detail temporary access and detour measures, notification and signage, and contractor requirements during construction.

3.17 Visual/Aesthetics

3.17.1 Affected Environment

The Campus Parkway project is proposed in an area of agricultural, suburban, and industrial land uses. The predominant land use is agriculture, consisting of a mix of orchards, dairy land, and row crops. The orchards are primarily almond trees, and current row crops include cotton, tomatoes, and alfalfa. These agricultural lands are managed in large blocks that correspond to partial and full sections,[26] resulting in a patchwork of agricultural areas. The agricultural landscape does not always appear uniform because of changes in types of orchards and row crops. The agricultural land uses include occasional farmhouses with associated farm structures, equipment, and landscaping, which also break up the uniformity of the landscape.

Other land uses include suburban housing along Bear Creek, South and North Bear Creek Roads, and Olive Avenue. Residential subdivision tracts lie west of the project alignments and outside of the immediate project area, including northwest of Yosemite Avenue and west of the Green Alignment between Olive Avenue and SR 140. The housing tracts to the west create a distinct change in the visual character of the region between urban and rural land uses. Along SR 140 near the intersection of the proposed Parkway are orchards to the north and the BNSF railroad to the south. To the east and west is the rural community of Celeste and scattered housing.

The project location is not a visually sensitive area. It is relatively rural with low viewer exposure, and there are no recreational lands or designated areas of historic or cultural significance at or near the project alternatives.

3.17.2 Permanent and Temporary Impacts

Visual Impacts by Landscape Unit and Project Alternative

Project impacts have been identified for four landscape units and by project alternative. The assessment of impacts followed the criteria recommended in the FHWA's Visual Impact Assessments for Highway Projects guidelines (FHWA 1981). The assessment defined landscape units as areas selected to represent the visual characteristics of areas

[26] A "section" of land is a 259 ha (640 acre) square that measures 1.6 km by 1.6 km (1 mile by 1 mile), laid out geographically in the federal Township and Range grid system. The 259 ha (640 acre) sections are commonly divided into "half" sections (0.8 by 1.6 km [0.5 by 1 mile] in size) and "quarter sections" (64.7 ha [160 acres], 0.8 km [0.5 mile] square in size). Within agricultural areas, land ownership and leases are typically subdivided using this system, hence resulting in a grid pattern of agricultural land crop patterns.

in the vicinity of the Campus Parkway alignment where physical changes associated with the project might be seen. A suburban landscape unit was defined for housing developments that are 300 meters to 1,100 meters (984 feet to 3,609 feet) west of the Green and Green Alternate/Yellow Alignments. Existing fencing and landscaping runs along the border of these housing developments. Only the easternmost residents in these developments have potential views to the east in the direction of the project area. Where unobstructed views to the east exist, they are of agricultural land uses, primarily with cropland in the foreground (Figure 3.17-1). The Green Alignment would retain foreground views of the agricultural lands, but result in background views of north and southbound traffic potentially visible 300 meters (984 feet) to the east. At Bear Creek, the bridge would be approximately 6.5 meters (21 feet) high and would be partially visible by residents who currently have an unobstructed view of the Bear Creek riparian area to the east (Figures 3.17-2 and 3.17-3). The overall impact to the visual quality of this landscape unit was rated as changing from moderately high to moderate, and from moderately high to low for homes with views in the immediate vicinity of Bear Creek. For the Green Alternate and Yellow Alignment – Preferred Alternative, the roadway would be more distant and existing orchard trees would continue to screen views of much of the corridor. Traffic may be visible but relatively distant. There would be no overall change in visual quality.

A landscape unit for agricultural areas and rural homes north of SR 140 was defined for the agricultural orchards, row crops, irrigation canals, and rural housing north of SR 140. The presence and use of the parkway within this unit would have impacts primarily at specific locations where the project is most visible. The Green Alternate would potentially impact views from residences along Olive Avenue, SR 140, and some relatively isolated farm/residence complexes. A simulation of the proposed bridge structure at SR 140, looking east and west, is shown in Figures 3.17-4 and 3.17-5. The SR 140 bridge structure and connecting ramp may be visible to a farm/residence at the western extent of the community of Celeste, and potentially visible in the distance from homes in Celeste that have views along SR 140. However, these views are already affected by the existing highway, railroad line, and utilities. Views from residences along Olive Avenue at the proposed intersection with the parkway and from a rural residence adjacent to the proposed alignment north of Bear Creek are considered potentially substantial impacts because of the proximity of the alignment and changes. The Green Alternate and Yellow Alignment – Preferred Alternative are less visible as the corridor passes through mature orchards, or along a transition between row crops and orchards. The most affected view would be from

View from Hartley Lateral near point of separation of the Green and Yellow Alignments, looking northeast

Campus Parkway Project	**VIEW OF AGRICULTURAL LANDS**	Figure 3.17-1

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Campus Parkway Project	**GREEN ALIGNMENT SIMULATION OF BEAR CREEK BRIDGE, SOUTH BEAR CREEK DRIVE, LOOKING EAST**	Figure 3.17-2

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Campus Parkway Project	**GREEN ALIGNMENT SIMULATION OF BEAR CREEK BRIDGE, SOUTH BEAR CREEK DRIVE, LOOKING WEST**	Figure 3.17-3

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Campus Parkway Project	**SIMULATION OF BRIDGE OVER SR 140, LOOKING EAST**	Figure 3.17-4

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Campus Parkway Project	**SIMULATION OF BRIDGE OVER SR 140, LOOKING WEST**	Figure 3.17-5

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residences along Olive Avenue that would have views of the alignment where it crosses near the homes. Views from these residences would be potentially substantially impacted by the presence of the roadway.

A mixed use and planned industrial zone landscape unit south of SR 140 was rated as having no adverse impact, as the visual quality of this area would already be adversely impacted by the conversion to industrial use included in the current City General Plan.

The Campus Parkway alignments would perpendicularly cross the Bear Creek riparian corridor landscape unit with a bridge spanning the creek, adjacent roads, and a canal. For residents nearest these alignments, views could be substantially impacted where existing vegetation does not screen these structures.

The Campus Parkway would offer views of agricultural land uses, the Sierra Nevada foothills, and on clear days, the Sierra Nevada Mountains. Overpasses would provide views of the eastern edge of Merced City and the riparian corridor of Bear Creek. Depending on the alignment, the proposed project would travel near or directly adjacent to a stand of oak trees, shown in Figure 3.8-1. These oak trees, which are currently isolated from any major roadway or view, would become prominent and visually important elements of Campus Parkway.

Views from important visual resources, such as Lake Yosemite to the north of the project, would not be adversely impacted. The project would also not conflict with existing county or city planning goals relevant to visual or scenic resources.

Summary of Visual Resource Impacts

The substantial impacts to visual resources from the project alternatives are summarized in Table 3.17-1. These impacts include the potential visibility of the expressway, new structures, and light and glare from vehicles using the roadway.

3.17.3 Avoidance, Minimization, and Mitigation Measures

The following measures are recommended along the proposed alignments. Mitigation measures for specific portions of the alignment address the impacts summarized above. Overall mitigation measures are also listed. These measures would be developed in detail in landscaping plans for the project, during the project design phase.

Table 3.17-1 Summary of Visual Resource Impacts

Potential Impact	Applicable Alignments
Potential visibility of vehicles on the roadway, viewed from suburban areas located to the west.	Green Alignment
Visual encroachment of the parkway and intersection at residences along or near Olive Avenue, nearest the proposed alignments.	All alignments
Visual encroachment of the parkway roadway and potentially the northern extent of the Bear Creek structure to the adjacent rural residence/farm complex located north of Bear Creek.	Green Alignment
Potential visibility of the SR 140 structure from residences east and west of the crossing.	All alignments
Visual encroachment of the Bear Creek bridge to residences nearest the structure.	All alignments

- Design and place landscaping along the right-of-way to help provide screening of the roadway and associated vehicles.
- For the Green Alignment, focus the above measure on developing a vegetation screen between intersections on the west side of the right-of-way. The intent is to screen views of the roadway and traffic from the residential areas of Merced located to the west of the Green Alignment. This measure could also be applied to the Green Alternate and Yellow Alignment – Preferred Alternative, but it is less critical because the roadway is more than 0.8 km (0.5 mile) away and existing orchards would remain along most of the route, which may effectively achieve this objective.
- For acquired areas that currently contain orchard trees and where the right-of-way is not needed for the roadways, drainage, or other facilities, identify and mark trees that can be preserved. This would be most effective where the common alignment is parallel to the Doane and Hartley Lateral canal systems, and the "excess" right-of-way between the canal and the roadway could remain or be developed as a landscape screen.
- At the proposed Bear Creek bridge structure, landscaping plans should include placement (or preservation) of vegetation that can be grouped to partially screen the new structures. The most affected viewers for this mitigation measure are the residences nearest the proposed structures.
- Include architectural elements such as decorative fences and rails in bridge designs to enhance the structures' aesthetic quality.

- Design or select lighting at or in the vicinity of residences, such as on Olive Avenue, which includes shielding or downcast features that minimize intrusion of stray light to adjacent areas or properties.

3.18 Historical Resources

3.18.1 Affected Environment

The following briefly summarizes the historical background of Merced County, as a context to the evaluation of impacts.

Historical Background

Transportation

Merced and the proposed project vicinity were settled by Euro-Americans in the mid-19th century, but serious population growth did not occur until Merced was linked to the Southern Pacific Railroad in 1872. This railroad line travels parallel to the current SR 99 and through the middle of Merced, south of the Campus Parkway project. The BNSF railroad, built in the 1890s, passes through the project right-of-way traveling the distance of the San Joaquin Valley and currently provides service to freight businesses and Amtrak. Built starting in 1915 and improved in the mid-1920s, SR 140 runs parallel to the BNSF rail line, connecting Yosemite National Park to SR 99. The Campus Parkway is proposed on the eastern side of the City of Merced, which is served by a grid pattern of streets and roads, transitioning to the rural county roads crossed by the proposed project alignments.

Irrigation

A series of canals serve the agricultural lands of eastern Merced County. The MID was formed in 1919 and purchased an older private water delivery system by 1921. Most of the canals and laterals within and near the Campus Parkway right-of-way were built by private irrigation companies before the MID was created. Following the end of World War II, all MID canals had been upgraded to improve water delivery. Many of the canals were lined with concrete and a few were placed underground. Since the 1960s, MID canals have been maintained and improved as needed to meet the changing needs of the irrigation district.

Farming

Irrigation transformed Merced County into an important state agricultural center. It allowed per-farm acreage to decrease and the crop mix to change from grains to dairy, row, and field crops. The largest-acreage planted crops in Merced County are hay, tree crops, and cotton (USDA 2001). The county is among the top five dairy counties in the state and has been so for many decades. At one time, most of the land east of Merced was occupied by dairy farms, which have now been replaced with row crops or

developed into residential housing. Many pre-1956 buildings and structures in this area include dairies.

Residence

Merced County and other counties in the San Joaquin Valley have a history of subdividing farmland into smaller parcels in concert with the expansion of water delivery systems and new suburbs. Between 1890 and 1910, entrepreneurs gambled on subdividing large ranches into agricultural colonies and promoting these colonies to would-be buyers in the United States and Europe. The fledgling colonies depended on a reliable source of irrigation water, largely through the establishment of irrigation districts. Several of these colonies were established in the vicinity of Merced. During the post–World War II era, these colonies gave rise to ranchettes, which were small rural farms served by irrigation systems and which could include a small orchard, row crops, and perhaps a dairy.

The community of Celeste differs from other residential development patterns near Campus Parkway. Located at the intersection of SR 140 and Kibby Road, the community was developed before World War II as low-cost housing.

Historical Resource Investigations

A study area was defined to inventory and evaluate the potential for architectural or other “built” resources. The architectural study area extended one parcel back along each of the proposed alignments. The architectural study area, along with the archaeological study area discussed below, originally extended north to Bellevue Road. Changes in the project design moved the project limit south to Yosemite Avenue with a short local road connection north of Yosemite Avenue, linking the Green and Green Alternate alignments to Lake Road. The following assessment only addressed resources within the refined project limits.

Pre-field research was conducted to gain general historic background information and to investigate the locations of buildings and structures that may have been constructed in 1955 or earlier. Pre-field research was conducted at various locations in the Merced and Sacramento areas, including the Main Branch of the Merced County Library; the library of Merced College in Merced; the California State Library in Sacramento; the Shields Library at the University of California, Davis; the Merced County Assessor; the Merced County Recorder; and the MID. The First American Real Estate Solutions Real Property Files online database was also researched to identify parcels within the architectural study area that may include buildings constructed in 1955 or earlier.

Letters were sent to the Merced County Historical Society and Courthouse Museum and the Atwater Historical Society regarding individuals and/or organizations with concerns regarding specific historic resources. All correspondence related to these communications is included in Appendix B of the Historic Properties Survey Report prepared for this project.

Each parcel within the architectural study area was inspected. Determinations were made as to whether structures built after 1955 were of "exceptional significance," meeting the criteria for listing in both the National Register of Historic Places (NRHP) and the California Register of Historic Resources (CRHR). Buildings or structures constructed prior to 1955 were evaluated for listing in the NRHP. Buildings and structures constructed after 1955 were examined to determine if they had "exceptional significance" as defined by the NRHP. Detailed field recordings were made on structures of "exceptional significance" built after 1955 and on all structures with an archival, pre-1955 construction date.

Historical Resources

One property within the study area has been determined eligible for listing in both the NRHP and the CRHR. In February 2002, the State Historic Preservation Officer concurred with the findings of the FHWA that the 1927 Sunshine Dairy is eligible for listing in the NRHP and CRHR under criteria A and C at the local level of significance, as a significant example of a property type associated with the theme of agriculture and colonization in the Merced area (concurrence letter is included in Appendix A). Located on the right-of-way common to all proposed alignments, this property has several historically distinguishing characteristics: it is remarkably intact, retaining a large collection of buildings and structures from the 1920s and 1930s; it is associated with the Merced County "Grade A" dairy industry of the early decades of the 20th century; and the architectural design is a very unusual example, especially in the San Joaquin Valley, of the Mission Revival style.

No other buildings and structures within the study area were determined to meet the NRHP/CRHR criteria. None of the 10 MID canals or the rail line section of the BNSF railroad within the study area meet the criteria for listing in the National Register (JRP 2001). The analysis of the canals and rail lines in the architectural study area are further discussed in the Historic Architectural Survey Report/ Historic Resource Evaluation Report. The study area contains no existing bridges.

3.18.2 Permanent and Construction Impacts

As described in Section 2.3.4, as a result of determining that the Sunshine Dairy is eligible for listing in the NRHP and CRHR, the intersection of Childs Avenue at Campus Parkway would be designed to avoid the property. The project would not have an adverse effect on the property and would not affect the qualities that make the property eligible for the NRHP and CRHR. The State Historic Preservation Officer concurred in the finding of no effect (see the State Historic Preservation Officer letter of June 19, 2003, included in Appendix A).

3.18.3 Avoidance, Minimization, and Mitigation Measures

No mitigation is required.

3.19 Archaeological Resources

An Archaeological Survey Report and related addenda (including a Negative Historic Property Survey Report attached to Addendum 2) and a Historic Property Survey Report were prepared for the proposed project to comply with the applicable sections of the National Historic Preservation Act and the implementing regulations of the Advisory Council on Historic Preservation. The addendum reports were prepared to provide supplemental surveys necessary to address the entire archaeological study area, which includes all three proposed project alternative right-of-ways and a local road connection between the Green and Green Alternate alignments and Lake Road, north of Yosemite Avenue. As for historic resources, the original study area extended north of the current project limits; only resources within the current project limits are discussed and evaluated in this section.

3.19.1 Affected Environment

Regional Background

Archaeological data found in the San Joaquin Valley show that cultural activities took place as early as about 12,000 years Before Present. These sites are located on the paleo-shoreline ("paleo" meaning old or ancient) of Tulare Lake in the southern part of the San Joaquin Valley. Composite archaeological records show continuous human occupation of the San Joaquin Valley for at least the last 6,500 years.

Although a detailed cultural chronology has not been developed for the project area, archaeological investigations conducted at the Pacheco Pass area (located west of the project area) and the Buchanan Reservoir area (located approximately 45 km [28 miles] east of the project area) have led to detailed local chronologies. The Pacheco Pass sequence contains archaeological data from approximately 5,500 to 150 years Before Present. The Buchanan Reservoir sequence has archaeological data from 300 BC to 1550 AD. Detailed archaeological information on the Pacheco Pass and Buchanan Reservoir sites is discussed to varying extents by Olsen (1968, 1969, 1983), Pritchard (1970), Mikkelsen (1990), Bennyhoff (1994), Moratto (1969, 1984), and Caltrans (1999).

Ethnographic Background

The Northern Valley Yokuts lived throughout the San Joaquin Valley and its foothills (Wallace 1978). Few Northern Valley Yokuts survived the transition to the historic

period and European influences. Missionization,[27] disease, and the onrush of gold miners during the mid-19th century devastated the culture. Three tribes signed land cessation treaties in exchange for large reservations, but the reservations never materialized because they were not ratified by the U.S. Senate. Many of these peoples became low-paid laborers on ranches in the region (Wallace 1978).

Cultural Resources Investigations

An archaeological study area was defined where field investigations were conducted to identify and, if needed, evaluate archaeological properties. The study area included all of the proposed alternative alignments.

Pre-field research was conducted to identify known resources within and near the project area. An archaeological record search (File No. 3305I) was conducted on December 5, 1998, by personnel at the Central California Information Center of the Office of Historic Preservation's California Historical Resources Information System in Turlock, California. The record search encompassed the project area and included a 0.4 km (0.25 mile) radius for reports and a 1.6 km (1 mile) radius for resources. This records search was updated in May 2002.

A historical resources literature search was completed using the following:

- California Inventory of Historic Resources (OHP 1976)
- National Register of Historic Places (NPS 1998a, 1998b)
- California Historical Landmarks (OHP 1990)
- California Points of Historical Interest listing (OHP 1992 and updates)
- Historic Property Directory, Listing by City (OHP 1998)
- Caltrans Local Bridge Survey (Caltrans 1989 and updates)
- Survey of Surveys (OHP 1989)

Four sets of field surveys were conducted (June 2000, October 2000, July 2001, and May 2002). The Merced County Agricultural Commissioner and local farmers were consulted to time survey dates with crop harvests to allow for the completion of the corn and cotton harvests on certain parcels to obtain better ground exposure for surveying. The entire study area was surveyed, covering all alternative alignments.

[27] Missionization is the act or process of conducting a mission.

Consultation

The California Native American Heritage Commission (NAHC) was contacted for a list of Native American groups and/or individuals with direct or indirect knowledge of cultural resources within or near the project area. These consultations also sought to identify any sacred lands within the proposed project area (including a 1.6 km [1 mile] radius beyond the archaeological study area) identified in the NAHC's Sacred Lands File. An initial record search of the NAHC's Sacred Lands File did not indicate the presence of Native American cultural resources or sacred lands in the immediate project area.

Caltrans and the FHWA provided copies of each of the studies and their findings to the Office of Historic Preservation's State Historic Preservation Officer (SHPO). The SHPO concluded that the FHWA's effort to identify historic properties within the project's Area of Potential Effect (APE) is adequate in accordance with the applicable section of the Code of Federal Regulations. Copies of correspondence are included in Appendix A.

Archaeological Resources

Field surveys yielded findings of two resources within the study area. One historical archaeological site (P-24-001658, CA-MER-000380H) and one isolated cultural resource (P-24-001659) were documented. P-24-001659 consists of a piece of agricultural equipment known as a heavy chisel.

Site CA-MER-000380H is the bulldozed remnant of the Caseretta brothers' pig farm. This site is located along the potential Green Alignment. All of the structures on the property burned down and the property has been bulldozed. This site has been determined not eligible for the NRHP.

3.19.2 Permanent and Temporary Impacts

One historical archaeological site was identified as CA-MER-000380H, a pig farm located on the Green Alignment dating from the late 1920s. The site has been evaluated and determined not to be eligible for the NRHP. An isolated plow, known as a heavy chisel (P-24-001659), was also identified on the Green Alignment. Neither property is eligible for the NRHP, and therefore no protected historic resources would be affected by the project alternatives. The plow can be moved if needed. The Yellow Alignment – Preferred Alternative does not affect either of these features.

3.19.3 Avoidance, Minimization, and Mitigation Measures

Since no significant archaeological properties were identified within the project APE, no mitigation measures are needed.

If unanticipated cultural resources (historic or prehistoric artifacts, burnt or unburnt bone, stone features, etc.) are uncovered during grading or construction activities, work in the vicinity of the find would be halted and a qualified archaeologist would be consulted for an on-site evaluation. If human remains or suspected human remains are found on the site, work in the vicinity would halt, the remains would be protected from further disturbance, and the project owner would immediately contact the Merced County coroner. If the coroner determines the remains are Native American and not under his or her purview, he or she would contact the Native American Heritage Commission as mandated by California Public Resources Code Section 5097. The project environmental inspector would be responsible for oversight on compliance with these provisions.

3.20 The Relationship Between Local Short-Term Uses of the Human Environment and the Maintenance and Enhancement of Long-Term Productivity

Short-term uses of the environment include impacts identified in this document that could result from construction. These would include impacts to the following:

- The permanent filling of a small amount of wetlands (less than 0.04 ha [0.1 acre]) and approximately 0.2 ha (0.6 acre) of nonwetland waters of the United States, and the short-term disturbance (temporary) of less than 0.016 ha (0.04 acre) of waters of the United States that would be restored
- The removal of up to two oak trees (avoided by the Yellow Alignment – Preferred Alternative) and some vegetation at Bear Creek
- The permanent use of farmland for a transportation corridor
- Acquisition of one home
- Changes to the visual setting
- Increased noise from traffic using the proposed Campus Parkway

Maintenance and enhancement of long-term productivity, in terms of benefits of the project, include planning for a transportation corridor that would serve potential growth anticipated and planned through future years. Mitigation measures specifically address the impacts listed above and others identified in this report.

3.21 Any Irreversible and Irretrievable Commitments of Resources That Would Be Involved in the Proposed Action

Implementation of the proposed action involves a commitment of a range of natural, physical, human, and fiscal resources. Land used in the construction of the proposed facility is considered an irreversible commitment during the time period that the land is used for a highway facility. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion would ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway construction materials such as cement, aggregate, and bituminous material are expended. Additionally, large amounts of labor and natural resources are used in the fabrication and preparation of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use would not have an adverse effect upon continued availability of these resources. Any construction would also require a substantial one-time expenditure of both state and federal funds, which are not retrievable.

The commitment of these resources is based on the concept that residents in the immediate area, state, and region would benefit by the improved quality of the transportation system. These benefits would consist of improved accessibility and safety, savings in time, and greater availability of quality services, which are anticipated to outweigh the commitment of these resources.

3.22 Cumulative Impacts

According to the Council on Environmental Quality (CEQ), cumulative impacts result from the "incremental consequences of an action when added to other past and reasonably foreseeable future actions" (40 CFR 1508.7). Projects not impacting a resource after mitigation are not considered to cumulatively impact that resource.

The Draft EIS/EIR addressed cumulative impacts for each topic area at the end of each individual impact discussion. This document combines those discussions in this single comprehensive section. For each resource topic, cumulative impacts are discussed to the extent that they can be defined. Some of the proposed projects have undergone some level of documented review, such as an environmental impact review for approval of a land use development plan or a specific project. When that information was available, it was reviewed and summarized if it would was relevant and could contribute to cumulative impacts associated with Campus Parkway. The following summarizes the various projects and proposals in the project or regional area.

University of California, Merced

In 1995, the Regents of the University of California identified an 809 ha (2,000 acre) site in Merced County as a potential location for their tenth campus. The site is located approximately 3.2 km (2 miles) northeast of Merced city limits on property owned by the Virginia Smith Trust and Merced County. The site is immediately east of Lake Yosemite Regional Park and a portion of Lake Road. Preliminary planning calls for about 368 ha (910 acres) of this property to be used for campus development, while 113 ha (280 acres) would be held in reserve. The University would also set aside approximately 303 ha (750 acres) of land as a Campus Natural Reserve. The University of California concurrently initiated creating its Long Range Development Plan (LRDP) and the first phase of the campus development with the EIR process. The LRDP is a guide for the physical planning and development of the campus and presents a 25-year plan that begins in 2005, the projected completion of selected buildings and the official opening date of the campus. The campus is expected to reach its projected enrollment level of 25,000 full-time students by 2046. The Phase 1 Campus consists of the first set of buildings for the 2005 opening of UC Merced and the provision of adequate space for envisioned programs until 2008. The Phase 1 Campus footprint is on a portion of the former site of the Merced Hills Golf Course. The final EIR for this project has been completed (UC Merced 2002), and the campus opened in Fall 2005.

University Community Plan

In 1996, the Merced County Board of Supervisors amended its General Plan to establish the University Community SUDP area. This SUDP identifies an approximately 4,168 ha (10,300 acre) location for the UC Merced Campus and surrounding supportive development and infrastructure. The University Community Plan would be adopted as a component of the County General Plan. Merced County concurrently initiated the University Community Plan and its EIR process. The University Community would encompass about 850 ha (2,100 acres), and at full buildout would have a population of 31,250; 11,600 dwelling units; and 2,023,000 square feet of commercial, office, and business park development. The community is sized in anticipation of off-campus development generated directly or indirectly by the campus. The Draft EIR was issued for the University Community Plan (EIP 2001), and a Supplemental Draft EIR was issued in July 2004 (EIP 2004). A Final EIR was prepared and certified by the Board of Supervisors on December 21, 2004. No formal date for construction of the community plan has been issued.

The University Community Plan will include a major road arterial extending from Yosemite Avenue to Bellevue Road, connecting or extending from the northern terminus of Campus Parkway. This extension was evaluated as a cumulative project in studies completed for the proposed Campus Parkway project.

City of Merced Major Planned Developments

Table 3.22-1 summarizes the major planned developments in the City of Merced, their acreage, major land uses, and status. The locations of these projects or plans are shown in Figure 3.22-1. Most of these projects are within the Specific Urban Development Plan (SUDP) area for the City of Merced. The SUDP has set aside land to accommodate most of the city's projected growth needs through 2015. The acreages in the table fall well within the projected acreage planned for development in the City General Plan.[28]

[28] Source: Table 3.22-1, *Merced Planned Land Use Summary*, Merced Vision 2015 General Plan. Information and status was updated in October 2004 through communication with the City of Merced Planning Department.

Table 3.22-1 City of Merced Approved, Planned, and Proposed Developments

Project Name	Size Hectares (Acres)	Primary Proposed Land Uses	Status[1]
Land Use Plans Approved or Under Construction			
Fahrens Park Specific Plan	121 ha (306 ac)	Residential, Commercial/Office	C
Campus North Specific Plan	32 ha (78.4 ac)	Residential, Commercial/Office	C
Northeast Yosemite Specific Plan	300 ha (640 ac)	Residential, Commercial/Office	C
Bellevue Ranch Development	552 ha (1,365 ac)	Residential, Commercial/Office, Parks	C
Lyons Annexation	196 ha (484 ac)	Industrial	A
Fahrens Creek II	111 ha (274 ac)	Residential, Commercial/Office	C
Fahrens Creek North	61 ha (150 ac)	Residential, Commercial/Office	A
Hunt Family Annexation	73 ha (181 ac)	Residential	A
Weaver Development		Residential	C
UC Merced (Phase 1)	39 ha (96 ac)	University, Residential	C
Proposed Development Plans			
UC Merced (Main Campus beyond Phase 1)	368 ha (910 ac)	University, Residential, Natural Reserve	P
University Community	863 ha (2,133 ac)	Residential, Commercial/Office, Parks	P
South Thornton	142 ha (350 ac)	Residential, Commercial/Office	P
South Merced – West	259 ha (640 ac)	Residential, Commercial/Office	P
South Merced – East	518 ha (1.280 ac)	Residential, Commercial/Office	P
The Dominion	70 ha (174 ac)	Residential, Commercial/Office	P
Yosemite Lake Estates	265 ha (655 ac)	Residential, Commercial/Office, Parks	P
Franco	32 ha (79 ac)	Residential	P
Bandoni	31 ha (76 ac)	Residential, Commercial/Office	P
Absolute-Leeco	40 ha (100 ac)	Residential	P
Mission	56 ha (139 ac)	Residential, Commercial/ Office, School, Park	P
Ranchwood South	18 ha (45 ac)	Residential	P
Reinero	195 ha (481 ac)	Residential, Commercial/ Office, Park, School	P
Bright	47 ha (117 ac)	Residential, Commercial/Office	P
Five Bridges	115 ha (285 ac)	Residential, Commercial/Office	P
Burnell	30 ha (73 ac)	Residential	P

[1] C = Under construction as of October 2004. A = Approved but construction has not started. P = Proposed or planned but not fully approved.

LEGEND

ADOPTED DEVELOPMENT PLAN

- 1 — FAHRENS PARK SPECIFIC PLAN (306 ACRES - 717 UNITS) *
- 2 — CAMPUS NORTH SPECIFIC PLAN (78.4 ACRES / 605 HOUSING UNITS) *
- 3 — NORTHEAST YOSEMITE SPECIFIC PLAN (640 ACRES / 2,010 HOUSING UNITS) *
- 4 — BELLEVUE RANCH MASTER DEVELOPMENT PLAN (1,365 ACRES / 4,843 - 6,648 HOUSING UNITS) *
- 5 — LYONS ANNEXATION (484 ACRES/INDUSTRIAL) (Within Proposed Site of Walmart Distribution Center)
- 6 — FAHRENS CREEK/FAHRENS CREEK NORTH *
- 7 — HUNT FAMILY ANNEXATION (181 ACRES)
- 8 — WEAVER DEVELOPMENT *

PROPOSED DEVELOPMENT PLANS

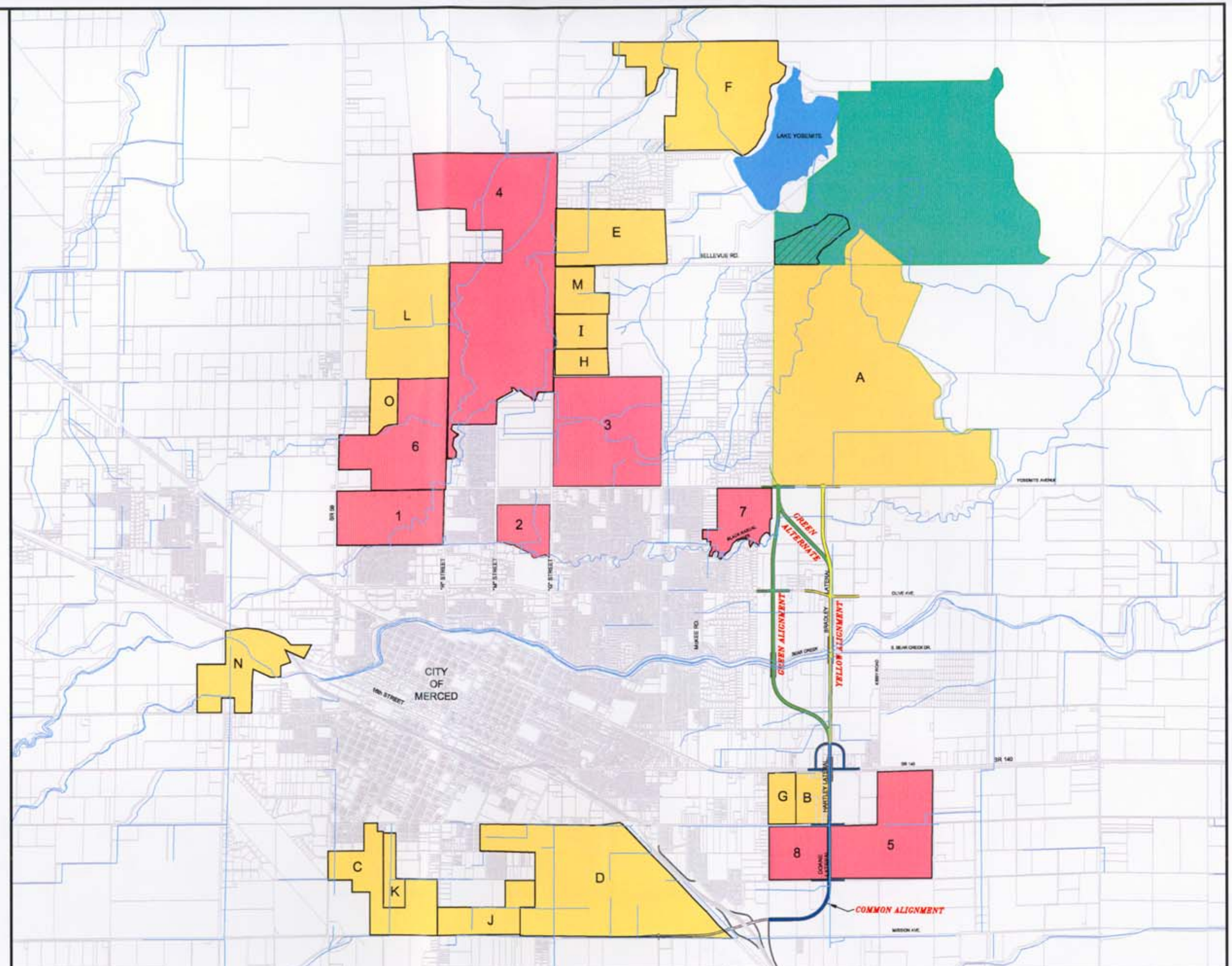
- A — UNIVERSITY COMMUNITY (2,133 ACRES)
- B — RENNAISSANCE (-- ACRES)
- C — SOUTH MERCED - WEST (640 ACRES)
- D — SOUTH MERCED - EAST (1,280 ACRES)
- E — THE DOMINION (174 ACRES)
- F — YOSEMITE LAKE ESTATES (655 ACRES)
- G — FRANCO (79 ACRES)
- H — BANDONI (76 ACRES)
- I — ABSOLUTE-LEECO (100 ACRES)
- J — MISSION (139 ACRES)
- K — RANCHWOOD SOUTH (45 ACRES)
- L — REINERO (481 ACRES)
- M — BRIGHT (117 ACRES)
- N — FIVE BRIDGES (285 ACRES)
- O — BURNELL (73 ACRES)

UNIVERSITY OF CALIFORNIA MERCED

- UC MERCED
- UC MERCED PHASE 1

* DEVELOPMENT/SUDP IS BUILT OUT OR UNDER CONSTRUCTION AS OF OCTOBER 2004

SOURCE: CITY OF MERCED, 1997, UPDATED OCTOBER 2004



Campus Parkway Project

ADOPTED AND PROPOSED DEVELOPMENT PLANS

Figure 3.22-1

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Regional Transportation Improvements

Section 2.6 summarizes the SR 99/Mission Avenue interchange and the Bradley Overhead on SR 140, which are listed as Related Transportation Projects because of their proximity to Campus Parkway. Other transportation improvements in the Merced area are being considered at a more regional or planning level. The following describes how that planning process advances and how potential future improvements were included in the traffic-related studies for Campus Parkway. The Atwater-Merced Expressway corridor is also discussed as it may ultimately provide the City of Merced with the western portion of the beltway transportation concept.

Merced County Association of Governments Transportation Planning

Transportation planning at a regional level consists of a sequence of steps ranging from conceptual identification of a need at a local level, to designation of funding and proceeding into design for projects that been advanced for implementation. Public and environmental review is part of the project development process. The MCAG is the regional planning organization that helps coordinate this planning process for major projects, by playing a key role in the funding and definition of project priorities. The MCAG's list of project priorities was used to develop the traffic model for the Campus Parkway project, and that model incorporates projects that are funded, or are partially funded or designated for funding, into the assumptions for the different future year traffic conditions. Therefore, at a regional and local level, the traffic analysis performed for this project included the cumulative programmed or planned transportation improvements in the evaluation of future travel conditions. The *Analysis of Travel Characteristics Traffic Report* and supplement (Dowling 2000, 2004) includes the list of improvements assumed for future year cumulative conditions.

Atwater-Merced Expressway

Section 2.1.1 describes the transportation planning documented in the MCAG's 1997 *State Route 99 Merced/Atwater Major Investment Study*, or MIS, that identified the "beltway" concept to address future transportation demand. The western portion of the beltway concept was identified or represented by the Atwater-Merced Expressway (Campus Parkway alternatives represent the eastern segment). Early conceptual alignments for the Atwater-Merced Expressway are shown in Figure 2.1-1 in Section 2.1.1. The project is proceeding with preliminary design and review.

3.22.1 Geology

Potential impacts such as risk of damage to a structure from seismic shaking, or impact to a structure from earth subsidence or movement, do not cumulatively increase at an individual site because of development at other locations. Increased exposure of populations to these risks can occur, however, with continued development. Geologic or geohazard impacts related to earthquake shaking, fault rupture, and soil conditions are site-specific, and Campus Parkway and other infrastructure and community development projects include design measures and mitigation unique to each project and site to address these hazards or conditions. The environmental and planning documents prepared for the proposed or planned projects in the local and regional area identify site-specific impact findings for geologic conditions or state that these measures will be individually developed for each site at the time each project advances to its design stage, as noted below. For this reason, no cumulative or overlapping impacts are identified for seismic, geologic, or soil stability issues. The potential for cumulative erosion impacts is discussed in Section 3.2 for hydrology, water quality, and storm water runoff.

For all of the planned projects, new construction would have a site-specific geotechnical study performed by a Certified Engineering Geologist or Licensed Geotechnical Engineer to assess detailed seismic, geologic, and soil conditions per requirements of the Uniform Building Code. The study would include an evaluation of liquefaction potential, slope stability, landslide potential, expansive and compressible soils, and other structural characteristics and would identify specific geotechnical recommendations for individual site conditions designed to mitigate for seismic hazards.

3.22.2 Hydrology, Water Quality, Storm Water Runoff

Surface Water

The Campus Parkway, UC Merced Campus, University Community, SR 99/Mission Avenue interchange, and land use development projects could cumulatively affect surface water in the region from Lake Yosemite to the southern extent of Campus Parkway. However, all of these projects would have to comply with NPDES permits and prepare SWPPPs to prevent any construction-related impacts to surface water quality or quantity. In addition, these projects would have to incorporate retention basins and drainage facilities that would prevent flooding during storm events consistent with adopted City of Merced design standards. The Campus Parkway would drain runoff in excess of the detention/retention ponds to Bear Creek and Black Rascal

Creek drainages. The campus and community developments would convey their drainage water from retention basins to Fairfield Canal, which would then drain into Bear Creek. The campus and community would have control systems that would regulate the flow of storm water to Fairfield Canal. The discharges from these projects would be coordinated and overseen by the MID (UC Merced 2002). Regarding some of the local land use development projects, the Fahrens Creek and Yosemite Lake Estates proposals would drain storm water to Fahrens Creek, the Hunt property development would drain to existing storm water systems beneath Parsons and Silverado Avenues, and the Lyons property annexation would drain to Miles Creek. Drainage from the various projects is dispersed to some extent, and each of the development projects includes the same requirements for drainage retention/detention controls. Assuming adherence of each project to regulatory requirements for control of surface water runoff and quality, no substantial cumulative impacts are anticipated.

In regard to urban contaminants in surface runoff, all future land use development in incorporated and unincorporated areas of Merced County will be required to meet the requirements of the NPDES Phase II program. This program requires source control and nonpoint-source BMPs to be employed to control potential effects on water quality. Storm water quality control devices are required to be incorporated into storm water collection systems to collect sediment and other pollutants. Merced County, the City of Merced, and other local jurisdictions have commenced the preparation of a storm water management program in compliance with NPDES Phase II requirements.

Groundwater

The UC Merced Campus and Merced County's University Community planning have undertaken coordination with the City of Merced and the MID to update and refine the 1995 Water Supply Plan. The 2001 update implements measures that reduce cumulative groundwater impacts from those projects.

Growth and development within the City of Merced identified for each of the development projects will increase the amount of impervious surfaces overlying the groundwater basin, reducing the surface area available for groundwater recharge. Each of the land use development projects would require water from existing or expanded city water delivery systems, and demand for this water for residential and business use will withdraw groundwater supplies. The MID's 1995 Water Supply Plan and 2001 Update include groundwater management as one of their goals. As a component of this plan, the MID is implementing programs designed to maintain the basin's groundwater table at 1999 levels through the year 2040, accounting for cumulative growth in the

region and its effect on groundwater supplies. These programs include intentional recharge of groundwater basins, drought release wells, system improvements, surface water conservation, agricultural capacity improvements, water conservation, and urban groundwater and surface water conservation. With implementation of these programs by the developers and the MID, the cumulative impact of development on groundwater supply was determined by the city to be mitigated, based on each of the land use development project's environmental review findings. For Campus Parkway, water requirements would be limited to potential irrigation of limited landscaping in medians or alongside the expressway. A portion of this irrigated water for landscaping could also be expected to infiltrate or return to groundwater. With incorporation of detention/retention basins that are necessary to manage surface water runoff from the roadway surfaces, there would be some capture of runoff that could percolate or recharge to groundwater supplies. Therefore, loss of existing recharge from addition of Campus Parkway road surfaces and use of water for any minor landscape irrigation requirements would be minimized and would not result in an adverse cumulative impact.

3.22.3 Hazardous Waste and Materials

The ISA for Campus Parkway identifies one primary location of concern, south of SR 140, where contamination exists because of past leakage and spread of hazardous materials. The sites contributing to this contamination are undergoing remediation. The UC Merced Campus, the University Community project, and all of the proposed land use development projects discussed at the beginning of Section 3.22 are well north of the contaminated area of concern between SR 140 and Childs Avenue. There would be no overlapping or cumulative impacts to site contamination issues between Campus Parkway and other planned projects. The known sites of contamination (the former Wellmade Metal Products location and Weaver Elementary School) are already undergoing or have completed remediation. Mitigation measures for Campus Parkway are also specified to avoid contamination-related impacts during project construction. No cumulative impacts are anticipated.

3.22.4 Air Quality

The impact assessment incorporates cumulative traffic growth consistent with regional land use plan forecasts and includes the contribution of traffic potentially associated with UC Merced, the University Community, and land use development projects. This was achieved by using the MCAG travel forecast model to generate trip volumes for

roadways in the Merced region. These forecasts include growth data based on County and City General Plan land use projections through 2015 and 2025. Thus, the predicted traffic levels are considered representative of cumulative local and regional growth for the future study years, as the modeling is based on the growth levels consistent with general plan development or expansion. The air quality analysis therefore represents cumulative analysis of future traffic-related pollutant emissions within the regional area.

Construction emissions from dust and from equipment operation could create adverse cumulative impacts if the individual projects overlap in time and are in close proximity, and if dust is not controlled at the work sites. However, mitigation measures, most recently based on the *Revised Guide for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2002), have been required for each project to minimize air quality emissions. Those mitigation measures include stabilizing or suppressing dust emissions at all disturbed areas, earth material storage piles, unpaved roads or access areas, and areas where vegetation has been removed. Transported materials also have to be covered or effectively wetted. The exhaust from mobile construction equipment used during construction can result in a temporary source of NO_x, ROG, and PM_{10} emissions. These emissions can be reduced by imposing construction contract requirements on the use of catalytic converters, requiring limitations on the length of time heavy equipment is allowed to remain idling when not in use, requiring maintenance checks or service on equipment, and incorporating use of non-diesel powered equipment. The potential for cumulative air quality impacts is therefore minimized; if impacts occurred, they would be for a relatively short duration. No adverse cumulative impacts are identified.

3.22.5 Noise

Potential for Cumulative Noise Impacts from Proximity of Land Uses

The various proposed land use development projects are all far enough away from Campus Parkway that site-generated noise (either from Campus Parkway or from the planned or proposed land use development) would not overlap, with the potential exception of the southern extent of the University Community development, the eastern extent of the Hunt Property development, and proposed residential development between Childs Avenue/Hartley Lateral and SR 140, west of the Doane Lateral. These potential impacts are discussed below.

The University Community's southern border is Yosemite Avenue and would front the existing traffic already using this roadway. Designation of "planning areas" for the University Community may include residential uses along or near Yosemite Avenue. These uses would be affected by future traffic-generated noise associated with cumulative development. The Campus Parkway alternative alignments, by diverting or attracting traffic, would reduce traffic volumes and traffic-generated noise along Yosemite Avenue east of where either the Yellow Alignment – Preferred Alternative or Green Alignment intersect with Yosemite Avenue, and would increase volumes and noise levels west of the intersection. Mitigation measures proposed for the University Community include site planning to maximize shielding by planned structures or other on-site features, and construction of noise-reduction barriers along roadways. These measures should mitigate for traffic-related cumulative noise impacts.

The Hunt Property development, if it includes housing or noise-sensitive uses adjacent to its eastern boundary, could be affected by traffic noise from the northern portions of Campus Parkway (the Green Alignment would be closest in proximity). The environmental review of the Hunt Property project included site planning measures that incorporate design/site layouts to maintain noise-sensitive land uses away from major noise sources, architectural treatments, and barriers and berms to mitigate noise impacts. No further cumulative impacts are identified from, or at, these planned land use locations.

As of October 2004, two land use development proposals have been submitted to the City of Merced that might locate residential uses between SR 140 and Childs Avenue and Hartley Lateral, west of the Doane Lateral. Campus Parkway would be just to the east of the Doane Lateral and would be elevated to rise over SR 140 and the adjacent BNSF railroad tracks. Residential uses within these current agricultural parcels may be exposed to traffic noise from Campus Parkway. These development projects have not been approved at the time this environmental document was completed. The Merced County Public Works Department has commented on these proposed plans and advised that planning should incorporate measures to avoid noise-sensitive uses near Campus Parkway or incorporate barriers.

A proposed development south of SR 140, referred to as the Lyons Annexation, would consist of industrial uses and would not be sensitive to Campus Parkway traffic noise. The traffic that would be generated from this proposed land use was included in the Campus Parkway traffic modeling.

Potential for Cumulative Impacts from Traffic Noise Increases

Noise impacts from Campus Parkway were also evaluated assuming that the UC Merced Campus, University Community, SR 99/Mission Avenue interchange, and other planned transportation improvements and community land use development projects are built out to the study year 2025. Table 3.5-4 in Section 3.5.2 indicates that two of the receptors (Sites 3 and 5, located west of the Green Alignment, north of Olive Avenue) would have cumulative noise increases of 12 dBA or more, which qualify as substantial noise increases under Caltrans' criteria. The 12 to 13 dBA increase at these locations would occur only under the Green Alignment.

3.22.6 Energy

Consistent with the energy evaluation of the proposed alternatives, cumulative energy use was estimated using regional traffic levels predicted considering the Campus Parkway project, the UC Merced Campus, the University Community, and planned transportation improvements and land use development projects in northern Merced. The evaluation method calculated the total energy "cost" of Campus Parkway combined with the University Community proposal to extend the roadway north toward Bellevue Road. This cost was divided by the total energy "savings" that is predicted to occur with the longer road. The additional length of Campus Parkway to Bellevue Road would require approximately 25 percent more in construction dollars, which was used to estimate the total energy construction requirement. With the extension of Campus Parkway to Bellevue Road as a part of the University Community, the energy payback period for construction of the entire Campus Parkway (from SR 99 to Bellevue Road) is between 7.2 and 8.0 years. This construction energy payback period is also within the design period of the project and is not considered an adverse cumulative impact. Table 3.22-2 presents the estimated energy requirements and energy savings under cumulative conditions. Cumulative energy savings, when compared to the No Build scenario, are estimated to save 18,740 liters (4,951 gallons) of fuel per day for the Green Alignment and Green Alternate and 19,099 liters (5,046 gallons) of fuel per day for the Yellow Alignment – Preferred Alternative. Regionally, the project would facilitate fewer gallons of fuel used per day, resulting in a conservation of energy when compared to the No Build scenario. No adverse cumulative energy use impacts are predicted.

Table 3.22-2 Estimated Total Fuel Consumption per Day for the Merced Area with the UC Merced Campus and University Community in 2025

	Kilometers per Liter (Miles per Gallon)	Total Liters (Gallons) per Day	Energy Savings in Liters (Gallons) per Day
No Action	9.78 (23.0)	383,909 (101,429)	--
Green Alignment	9.90 (23.3)	365,169 (96,478)	18,740 (4,951)
Green Alternate Alignment	9.90 (23.3)	365,169 (96,478)	18,740 (4,951)
Yellow Alignment – Preferred Alternative	9.90 (23.3)	364,810 (96,383)	19,099 (5,046)

3.22.7 Wetlands and Other Waters of the United States

Waters of the United States have been filled or otherwise affected throughout the Central and San Joaquin Valleys. These waters include streams, canals, and wetlands. Wetlands in the region fall into several categories, including seasonal wetland marshes and seeps, riparian areas, cultivated wetlands, and vernal pools and swales. Some statistics are available regarding the presence and trends of some wetland categories. For example, freshwater marshes were once much more widespread in the Central Valley, covering as much as 4 million acres. Through cumulative land use changes including farming and development, marshlands are now estimated to have decreased to about 300,000 acres. Within the San Joaquin Valley, marshlands are now primarily located along the fringes of waterways and channels of the San Joaquin River, especially the east and west Grasslands areas (Merced County 1990). Another class of wetlands, vernal pool habitat, was estimated at approximately 282,000 acres within Merced County in 1987, and is estimated in 1997 at about 250,000 acres, a decrease of 30,000 acres over a 10-year period.

The following describes impacts identified from transportation and major development projects on the eastern side of Merced County, City of Merced planned or proposed land use development projects, and cumulative impacts of all projects and plans.

UC Merced, University Community, SR 99/Mission Avenue Interchange, and Campus Parkway

Wetlands and other jurisdictional waters of the United States have been delineated for the UC Merced Campus area, the University Community area, the SR 99/Mission Avenue interchange, and a conceptual extension of Campus Parkway to Bellevue

Road (being considered as part of the University Community). These quantified impacts are summarized in Table 3.22-3.

Table 3.22-3 Summary of UC Merced, University Community, and Eastern Merced Transportation Project Impacts to Wetland and Associated Habitats

Project	Potentially Affected Wetlands, Vernal Pools, Marshes, and Drainages (ha [acres])
Campus Parkway	• 0.035 ha (0.086 acre) seasonal marsh
UC Merced	• 31 ha (78 acres) clay playas, vernal pool, and swale wetlands • 5.6 ha (14 acres) seasonal freshwater marshes/ponding
University Community	• 8.2 ha (20.4 acres) vernal pools, swales, and seasonal wetlands • 6.4 ha (15.9 acres) freshwater marsh, wooded channel, drainages, and stock pond
SR 99/Mission Avenue Interchange	• 2.7 ha (6.7 acres) wetlands
TOTAL	• 55 ha (135 acres) wetlands, vernal pools, marshes, and drainages

Cumulative Development in the City of Merced

Loss or adverse modification of jurisdictional wetlands and Other Waters of the U.S. may occur as a result of other planned or reasonably foreseeable development within each of the SUDP planning areas in the City of Merced (other potential cumulative projects are described in the introduction to Section 3.22). Although it is impossible to definitively assess the magnitude of effects of development within these SUDPs at this time, it should be noted that much of the land within these planning areas consists of agricultural land and grazed annual grassland. The primary jurisdictional wetlands and waters of the U.S. within these areas consist of vernal pools and swales, seasonal seeps, seasonal marshes, riparian forest and scrub, perennial streams, and irrigation canals. If wetlands or other waters of the U.S. (and associated special-status species) would be affected within these areas, it is expected that the incremental contribution of residual effects would be minimized because of the various regulatory permitting processes for which compliance would be required. These regulatory processes, which include but are not limited to the federal and state Endangered Species Act and CWA require that direct as well as cumulative impacts be fully mitigated prior to the issuance of incidental take statements or permits and associated wetlands permits. The City General Plan has goals and policies for the protection of wildlife habitats:

Policy OS-1.1 - *Identify and Preserve Wildlife Habitats Which Support Rare, Endangered, or Threatened Species*. Implementing actions under this policy require identification of wetlands subject to special Federal and State rules and U.S. Army Corps of Engineers guidelines, and direct urban development away from identified sensitive habitat through the use of development review procedures to minimize impacts to sensitive species and habitats.

Policy OS 1.2 – *Preserve and Enhance Creeks in Their Natural State Throughout the Planning Area*. Implementing actions under this policy protect riparian corridors by designating them as Open Space and requiring a minimum 50-foot dedication from the centerline (or 25 feet from the crown, whichever is greater) of all creeks within the planning area to maintain them as open space.

These policies and implementation measures require avoidance and, if necessary, compensation for wetland impacts.

Information on approved, proposed, and preliminary applications for development activity within the City of Merced and adjacent county area was obtained and reviewed. Table 3.22-4 summarizes known (at the time planning and environmental documents were prepared) potential impacts to wetlands for each development. This table represents the proposed and adopted plans for which information was available.

The cumulative total impacts for the UC Merced and University Community developments, Campus Parkway, the SR 99/Mission Avenue interchange, and community development projects (those listed above) are approximately 97 ha (240 acres).

Campus Parkway impacts contribute to the overall cumulative wetland fill of these major projects, but the amount of fill associated with Campus Parkway (less than one tenth of an acre for any one of the alternative alignments) does not measurably change the total cumulative impact acreage for wetland loss. Impacts to other Waters of the United States are primarily to open-water canals that do not provide substantial habitat. Campus Parkway would not contribute to any cumulative impacts to local or regional vernal pool habitat.

Table 3.22-4 Summary of Cumulative Development Project Impacts to Wetland and Waters of the United States

Project	Potentially Affected Wetlands, Vernal Pools, Marshes, Pastures, and Drainages (ha [acres])
Hunt Family Annexation	None
Fahrens Creek Annexation	None
Fahrens Creek North	Potentially present but not quantified
Yosemite Lake Estates	Present on site, but impacts may be minimized/avoided: • 7 ha (17 acres) vernal pools/swales • 77 ha (190 acres) irrigated pasture • 16 ha (40 acres) canals, lagoon marsh • 9 ha (23 acres) riparian scrub
Bellevue Ranch	Present on site and impacted with site development: • 1 ha (2.5 acres) vernal pools • 1.6 ha (4 acres) seasonal wetlands • 8 ha (20 acres) intermittent streams
Lyons Annexation	None
TOTALS	• 7.9 ha (19.5 acres) vernal pools • 1.6 ha (4 acres) seasonal wetlands • 16 ha (40 acres) canals, lagoon marsh • 8 ha (20 acres) intermittent streams • 9 ha (23 acres) riparian scrub • Total 43 ha (106 acres) Wetlands, Vernal Pools, Marshes, Pastures, and Drainages

All projects would ultimately have to implement mitigation measures requiring full compensation for impacts to wetland habitats. In addition, all projects will be subject to the regulatory and permitting requirements imposed by the USACE, USFWS, CDFG, and RWQCB. Projects subject to these requirements must demonstrate that (1) mitigation for loss of wetland habitats will result in no net loss of wetland function and values, and (2) mitigation is sufficient to ensure that adverse impacts will not occur to special-status species that might be affected by filling of wetland habitat. Potential cumulative impact mitigation may include use of the conservation banks discussed below, if eligible. Separate mitigation sites are being developed for large projects such as UC Merced and the University Community.

3.22.8 Vegetation and Wildlife

Analyses of cumulative impacts to vegetation and wildlife considered the area to the north and east of Merced, which includes the University Community SUDP; the

proposed footprint of the UC Merced Campus; the SR 99/Mission Avenue interchange; and the regional, proposed, or planned development projects listed at the beginning of Section 3.22. Habitat types within these areas include annual grasslands, agricultural lands, vernal pool and swale complexes, seasonal seeps and marshes, stock ponds, riparian forest and scrub, perennial streams, and scattered areas of ruderal vegetation.

Cumulatively, annual grassland[29] would be the most heavily impacted habitat from the UC Merced Campus and the University Community. A total of approximately 455 ha (1,124 acres) of grassland would be impacted from those projects at full development. Among the proposed land use development projects that quantified impacts, the Yosemite Estates project would also affect grasslands, estimated at 155 ha (385 acres). Other land use developments and the SR 99/Mission Avenue interchange would be located on active grazing or agricultural lands where limited or no grassland habitat remains. Campus Parkway would have a minimal contribution to cumulative grassland habitat impacts, as almost no grassland habitat exists within the alternative corridors.

Two oak trees would be affected by the Green Alignment of Campus Parkway. Although oak trees occur in the local and regional area, no impacts to any oak trees or oak woodland were reported for any of the land use development proposals occurring in the City of Merced or for the UC Merced Campus or University Community.

Impacts to riparian habitat would occur to segments of the Fairfield Canal, Cottonwood Creek, Fahrens Creek, Bear Creek, and Black Rascal Creek. Campus Parkway would impact short segments of Bear Creek and Black Rascal Creek where they are crossed by the roadway. However, these crossings would consist of elevated bridges, and most areas affected during construction would be revegetated. The potential for cumulative impacts to these resources is therefore minimized.

The University of California intends to develop and implement a Resource Mitigation Program to be reviewed and approved by the USACE, USFWS, and CDFG through the state and federal permit processes. The Resource Mitigation Program would result in the acquisition and preservation of vernal pool-dominated grassland habitat in eastern Merced County. In addition, the University Community Plan would implement

[29] It should be noted that vernal pool and clay playa habitats are found within or adjacent to grassland habitats. As with other vernal pool ecosystems of the Central Valley, the vernal pools and clay playas of this area occupy a mosaic of depressions and swales in a matrix of California annual grasslands that occupy slightly higher elevations. Annual grasses cover the watersheds of the vernal pools, vernal swales, and clay flat wetlands.

policies that provide guidance to address loss of annual grassland through compensatory mitigation. Wetland impacts would be mitigated through enhancement, restoration, and creation to achieve no net loss of wetlands functions. Special-status species shall be mitigated through establishment of conservation easements, preconstruction surveys and construction limitations, and enhancement of ponds.

3.22.9 Threatened and Endangered Species

Outside of the already developed or developing housing, commercial, and industrial areas of eastern and northern Merced, habitat consists of active farmlands and orchards from generally SR 99 north to the area around Yosemite Avenue. North of Yosemite Avenue, remaining habitat is predominantly grasslands and dryland farming areas. Riparian and wooded areas occur occasionally along creeks and drainages and sometimes along the boundaries of large properties or sections. Protected species that could be directly or indirectly impacted by the cumulative development of the UC Merced Campus, University Community project, transportation corridors, and proposed or planned land used developments include the following:

- Merced kangaroo rat
- Yuma myotis bat
- Greater western mastiff bat
- Mountain plover
- Horned lark
- Bald eagle
- Ferruginous hawk
- California tiger salamander
- California linderiella
- Molestan blister beetle
- Succulent owl's clover
- San Joaquin kit fox
- Pallid bat
- Swainson's hawk
- Tricolored blackbird
- White-faced ibis
- Burrowing owl
- Golden eagle
- Vernal pool fairy shrimp
- Midvalley fairy shrimp
- Shining navarretia

The Campus Parkway would not contribute to grassland habitat impacts and would contribute less than 0.5 percent to the cumulative wetlands impacts. The combination of mitigation measures proposed for the UC Merced Campus, University Community, Campus Parkway, and the various development projects including compliance with the regulatory and permitting requirements imposed by the USACE, USFWS, CDFG, and RWQCB would reduce the magnitude of the cumulative impacts to a level that would not be substantial.

3.22.10 Floodplains

Cumulative floodplain impacts would not be adverse following mitigation. All development projects in the City of Merced are required to include storm water detention/retention basins to collect and temporarily hold runoff flow it so that it can be released at a controlled rate or allowed to percolate into the underlying soils. The MID regulates its canal flows and discharges in coordination with discharges from other major sources. These combined efforts of the MID and other agencies in the area are designed to avoid flood impacts at the major waterways of the region. Most of the proposed or planned projects do not directly overlap with Campus Parkway but have the potential to cumulatively increase flood flows. These projects and their flood control requirements include the following:

- The Bellevue Ranch project would install a master storm drainage system that would discharge to Fahrens Creek, Cottonwood Creek, and Parkinson Creek. The Fahrens Creek and Yosemite Lake Estate developments would drain primarily to Fahrens Creek. These drainages do not overlap with Campus Parkway.
- The Hunt Family development west of Campus Parkway would drain to Black Rascal Creek, utilizing existing drainage lines in Parsons Avenue and Silverado Avenue near the site. The project is required to provide drainage facilities to control and meter flow from full buildout of the site, under the jurisdiction of the Merced County Flood Control District.
- The UC Merced Campus will be built with the ability to capture an entire 100-year, 24-hour storm event and discharge this water into the Fairfield Canal at a rate that will not induce flooding. Campus Parkway does not cross the Fairfield Canal.
- The storm water system in the University Community would be sized to capture only the 10-year, 24-hour storm volume. Thus, storm water runoff from the University Community could exacerbate flooding conditions by increasing water surface elevations in areas subject to the 100-year flood hazard. Mitigation defined for that impact includes developing a management plan for controlling flooding and drainage associated with future development in the Merced area.
- The Lyons development project, south of SR 140 in the Campus Parkway area, includes mitigation to update the Merced County Critical Area Flooding and Drainage Plan to account for expanded land uses in Merced. Similar to other development projects, development of final site plans must demonstrate how storm drainage will be handled with consideration of future planned uses. This project would also include measures to capture and control or meter flood flow discharges from the site.

As previously discussed, Campus Parkway would impact flood flows only at the SR 140 crossing, which would be mitigated as described in Section 3.10.4. Each of these projects mitigates flood hazards, and no cumulative impacts are predicted.

3.22.11 Land Use, Planning, and Growth

Cumulative Land Use

The proposed Campus Parkway is consistent with the land use plans and policies of the City and County General Plans. Construction of Campus Parkway would accommodate traffic demands in the area associated with adopted City and County General Plans. The UC Merced project and University Community project identified the potential for substantial adverse cumulative impacts to land use. These impacts were associated with off-site adverse effects from urban uses, visual change, noise, traffic and the overall effect of change to those living in an existing rural setting. The area of concern is the RRC planned area along Lake Road. The proposed or planned land use development projects in the regional area (e.g., Fahrens Creek, Yosemite Lake Estates, Bellevue Ranch, Lyons Annexation, Hunt Family Annexation, etc.) all identify the land use impact of changing from an existing undeveloped or agricultural use to future housing and, in the case of the Lyons Annexation, industrial uses. These developments show a trend of conversion from agricultural/rural and grazing lands to suburban communities and industrial use. This is generally consistent with the General Plan land use designations for growth of the City of Merced but constitutes a cumulative change in land use patterns. Development pressures for new housing in particular are occurring, even without increased traffic capacity and roadway connections in place. At a regional level, the Campus Parkway project would serve or accommodate these land use changes or trends by constructing a roadway to the east and south of the above projects.

Cumulative Growth Inducement

The UC Merced Campus and the University Community projects identify substantial increases in employment and population in Merced County with implementation of those plans. The majority of this growth would be on the Campus and within the planned University Community, although the environmental analyses for these projects also indicate that some growth (which cannot be reasonably defined) may also occur within the existing community. This impact was identified as significant in those projects' EIRs. Land use development proposals and environmental documents for the various housing and community expansion projects in Merced document the new population resulting from the projects, but note that this growth is consistent with

the City's General Plan and community planning efforts. Some projects, such as Bellevue Ranch at the northern extent of current development proposals, acknowledge that the Villages Concept Plan area expansion over a 15-year time period would create additional demand for public services, utilities, and market services, that, when combined with the UC Merced Campus and University Community Plan, would greatly increase development pressure on the SUDP boundaries.

Campus Parkway, combined with the SR 99/Mission Avenue interchange and any future roadway systems added by the University Community between Yosemite Avenue and Bellevue Road, would create a new transportation corridor within predominantly agricultural and planned industrial lands. In the case of the lands north of Yosemite Avenue, these agricultural and grazing lands have current development proposals for suburban uses (and expansion of UC Merced beyond its current Phase 1 area). The combined effect of these projects may also encourage some additional growth along the corridor that might not otherwise occur. A major difference between these projects is that the UC Merced Campus and the University Community are by nature specific planned growth areas, while Campus Parkway is associated with serving the approved land use planning included in the City and County General Plans. Campus Parkway would serve growth in the UC Merced Campus and University Community areas, but it is not needed to serve additional growth south of Yosemite Avenue except for that which is already planned. Because Campus Parkway would serve planned development that has been identified as having an adverse growth impact and may itself contribute to regional or local growth pressures, this cumulative effect has been identified as adverse.

3.22.12 Farmlands/Agricultural Lands

Other planned or proposed actions could also affect farmlands within the vicinity of the Campus Parkway project. These include the development of the City of Merced, the UC Merced Campus, and the University Community SUDP area. These projects would directly affect, or have the potential to indirectly affect, lands categorized as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. Information on projects with identified farmland impacts are summarized in Table 3.22-5. Additional projects have been proposed or planned (see Table 3.22-1 and Figure 3.22-1) that, if approved, would likely increase the total farmland impacts shown below.

Table 3.22-5 Planned or Proposed Projects With Cumulative Impacts to Farmlands

Project	Estimated Farmland Impacts (ha [acres])[1]
Campus Parkway	22 to 33 ha (56 to 83 acres) farmland
UC Merced Campus	277 ha (684 acres) grazing land
University Community	262 ha (647 acres) Prime Farmland 308 ha (760 acres) Unique Farmland 10 ha (24 acres) Farmland of Statewide Importance
SR 99/Mission Avenue Interchange	8 to 26 ha (20 to 65 acres) farmland
Hunt Family Annexation	6 to 8 ha (15 to 20 acres) Prime Farmland 73 ha (181 acres) total prime and grazing land
Fahrens Creek Annexation	110 ha (274 acres) limited dry farming
Fahrens Creek North	60 ha (149 acres) in grazing use
Yosemite Lake Estates	Grasslands/no active farming use
Bellevue Ranch	229 ha (568 acres) Prime Farmland
Lyons Annexation	196 ha (484 acres) agricultural use
TOTALS	1145 ha (2,830 acres) farmland 111 ha (274 acres) limited dry farming 337 ha (833 acres) grazing lands

[1] As reported in environmental review or planning documents.

The *Merced Vision 2015 General Plan Final Program EIR* (City General Plan EIR) analyzed farmland impacts to all agricultural/undeveloped areas within the City's proposed SUDP area, which includes the area south of SR 140 that lies within the study area. The City General Plan EIR concluded that the proposed SUDP expansion would result in the loss of farmland in the region but that mitigation would not be feasible. The City General Plan EIR determined that implementation of the City General Plan and its policies would minimize these unavoidable, significant (under CEQA) agricultural impacts (City of Merced 1997b). The City General Plan EIR (City of Merced 1997b) specifically states:

> With exception of a large area of "prime" land in southeast [City of] Merced, most of the soils designated for urban development in the Merced Vision 2015 General Plan are classified as non-prime. Of those prime soil areas in southeast [City of] Merced, nearly all are designated for industrial development. Economic studies have concluded that most of these industrial lands will be developed with uses that are related to agriculture product processing or some other agriculturally related production.

The majority of the projects approved by the City General Plan are located in the northern portion of the city's SUDP area, which was extended northward to try to minimize impacts to prime farmlands. Although some of these projects would affect

farmland listed as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on the Merced County Important Farmland Map, the city's guiding land use principle and various policies to grow northward minimize the potential for much larger farmland impacts that could occur by growing eastward or westward. The City General Plan EIR estimated a loss of 2914.4 ha (7,286 acres) of agriculturally productive cropland out of 4857.6 ha (12,144 acres) of agriculturally used land in the proposed SUDP would be converted if the General Plan were implemented (City of Merced 1997a).

UC Merced, the only large development project in the City of Merced vicinity that is not a city or county project, is located northeast of the City of Merced and north of Campus Parkway. According to the UC Merced Draft EIR, none of the four FMMP farmland categories would be affected by the development of the UC Merced Campus, but nearly 280 ha (700 acres) of grazing land would be affected by the total buildout of the campus (UC Merced 2002). The UC Merced Draft EIR also indicated that the demand for housing, commercial, and other community services in the area could affect farmland off-site. Development of the University Community SUDP area by Merced County would account for the remaining housing and community needs not accommodated by UC Merced on-campus.

In summary, the City General Plan focuses on minimizing planned growth impacts to farmlands, but an estimated 2,950 ha (7,286 acres) would be affected if the city's SUDP is fully built out. The UC Merced project affects grazing lands but avoids impacts to designated farmland, with its location to the north of currently productive lands. The Campus Parkway would directly affect 34 ha (83 acres) of farmland for the Yellow Alignment – Preferred Alternative, 23 ha (56 acres) for the Green Alignment, and 31 ha (72 acres) for the Green Alternate. The development of the Campus Parkway project in conjunction with these proposed and planned projects would result in a cumulative reduction in farmland in Merced County.

3.22.13 Community Impacts

The proposed Campus Parkway would accommodate traffic demands in the area associated with the future planned growth as addressed by the City and County General Plans. The Campus Parkway would not contribute to a need for new housing or employment and thus would not contribute to a cumulative impact relative to housing and employment. The Campus Parkway has the potential to encourage

unplanned growth in the study area. This is discussed in Section 3.22.11, "Cumulative Growth Inducement."

3.22.14 Traffic and Transportation

In general, traffic generated from the major land use developments described at the beginning of Section 3.22 would increase regional traffic *volumes* associated with developed housing and industrial and commercial land uses. However, as noted previously, each of the Campus Parkway alternatives would result in an overall decrease in miles traveled, because the Parkway would offer a shorter trip for drivers who would otherwise avoid congestion in Merced and divert to longer routes such as Arboleda Drive. This results in a decrease in the overall vehicle miles traveled for each of the Campus Parkway alternatives in comparison to the No Action alternative. This would be a beneficial impact. Table 3.22-6 shows the slight decrease in regional miles traveled and a slight increase in vehicle speeds with development projected to 2025 when comparing No Action (no Campus Parkway) with the three proposed alternatives.

Table 3.22-6 Changes in Regional Vehicle Travel and Speed Under Cumulative Development

Alternative	Vehicle Miles Traveled (VMT)	Vehicle Hours Traveled (VHT)	Miles per Hour (MPH = VMT/VHT)
No Action	2,189,558	108,675	20.1
Green Alignment	2,121,543	104,025	20.4
Green Alternate	2,121,543	104,025	20.4
Yellow Alignment – Preferred Alternative	2,129,083	105,101	20.3

Source: Dowling 2000

With the expansion of UC Merced beyond Phase 1, and with the University Community and other northern Merced housing developments assumed completed in the year 2025, traffic on Yosemite Avenue east of Lake Avenue would increase from about 800 cars per day in the base study year of 2000 to approximately 3,500 vehicles per day with drivers using Arboleda Drive. Traffic on Olive Avenue would double in volume, from 2,000 vehicles per day to over 4,000, between McKee Road and Arboleda Drive. Lake Road would increase from about 200 cars per day in 2000 to more than 2,500 vehicles, and with UC Merced and the University Community, Lake Road would have a demand of almost 9,000 cars per day without Campus Parkway in place. In general, the future traffic volume projections indicate that constructing

Campus Parkway to an end point at Yosemite Avenue would divert traffic off of Yosemite Avenue, Olive Avenue, and Arboleda Avenue and streets within central Merced; however, Lake Road (which is north of Yosemite Avenue) would be impacted by substantial increases in traffic, especially from the UC Merced and University Community projects. With a road system or extension north of Yosemite Avenue in place, which is proposed as part of the University Community project, Lake Road would return to traffic volume levels similar to the year 2000 (200 to 300 vehicles per day).

3.22.15 Visual Resources

The implementation of the planned residential, commercial, and industrial growth, together with the UC Merced Campus and proposed new transportation facilities (e.g., SR 99/Mission Avenue interchange, Campus Parkway, Merced-Atwater Expressway) would result in a visual change in the vicinity of these projects from a rural and agricultural setting to a more developed urbanized setting. This is potentially a substantial change in the visual character of the area.

The UC Merced Campus and University Community development plans include measures to mitigate visual impacts. These include guidelines and policies that are intended to provide for well-planned and aesthetically coherent land use development. Landscaping and design features would be incorporated that enhance and mitigate the planned uses. The Campus Parkway would create a similar change in the visual landscape as these projects. The parkway would appear as a planned roadway incorporating visual elements such as a landscaping along the right-of-way and pedestrian and bikeway facilities. As noted above, the UC Merced Campus, the University Community, and Campus Parkway will be a substantial change from the existing undeveloped and agricultural/rural landscape but will be visually compatible.

As, or if, planned developments expand in the City of Merced, large tracts or parcels currently in agricultural or grazing use will transition to housing and other suburban and urban uses, especially from the vicinity of Yosemite Avenue to north of Bellevue Road and the Lake Yosemite area. As this development occurs, the city's urban/ suburban development boundary would shift from its current location to the north and east. The cumulative development of these areas would create a visual change in this part of eastern Merced County from an agricultural, rural, and undeveloped setting to a developed area, including a combination of urban, suburban, and rural residential uses.

3.22.16 Other Resources

A review of environmental documentation for the other projects and planned development discussed at the beginning of Section 3.22 did not identify any impacts to utilities or cultural resources that would contribute to or overlap with impacts to these resources from the Campus Parkway project. No cumulative impacts to utilities or cultural resources are anticipated.

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Chapter 4 California Environmental Quality Act Evaluation

This chapter was included in the Draft EIS/EIR but is not applicable to this Final Environmental Impact Statement (a NEPA-only document) and has therefore been omitted.

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Chapter 5 Required Approvals, Public Involvement, and Agency and Native American Coordination

A number of agencies are involved in the review and oversight of the proposed Campus Parkway project. In addition, the process of identifying environmental issues of concern, performing studies and documentation, informing the community and resource agencies, and gaining input to the project development process involved many related steps and coordination. This chapter summarizes the agency coordination and required approval process, including steps completed. Appendix A contains letters and records of consultation with regulatory and resource agencies relevant to the project development and review process. Appendix E contains a summary of the comments received on the NOP and NOI.

5.1 Initial Coordination and Notices

5.1.1 Preliminary Environmental Study Form

Merced County was responsible for the project's environmental studies and preliminary engineering, supported by federal-aid assistance funding, a program that is administered at the local level by Caltrans and overseen by the FHWA. A field review was conducted and a Preliminary Environmental Study Form was completed. This form and process identified potential environmental effects of the project, the appropriate studies needed, necessary coordination with federal and state agencies, and required permits and approvals. This form was completed by the county and approved by Caltrans and the FHWA in September 1999. Among its determinations was that an EIS should be prepared in compliance with NEPA.

5.1.2 Notice of Intent, Notice of Preparation, and Request of Cooperating Agency Status

As a NEPA requirement, a Notice of Intent (NOI) was first published in the Federal Register on January 25, 2001, to announce the intent to prepare an Environmental Impact Statement for the proposed Campus Parkway project and to describe the alternatives being considered. The NOI described four alternatives: No Action, Green Alignment, Green Alternate, and Yellow Alignment. At that time, the alternatives were described as running from the SR 99/Mission Avenue interchange to Bellevue Road.

The FHWA included a request in the NOI for interest in Cooperating Agency status. During the NEPA/Section 404 Memorandum of Understanding (MOU) coordination process described in Section 5.3.3, all involved agencies requested continued involvement in the project but declined formal Cooperating Agency status. No state or local agencies requested Responsible Agency status.

As a part of the CEQA requirements, a Notice of Preparation (NOP), dated November 29, 2000, was distributed by the Merced County Department of Public Works and through the State Clearinghouse. The NOP also included a description of the studies and alternatives being considered. Comments received on the NOI and NOP are summarized in Appendix E.

Based on the change to the project length limits in March 2001, a revised NOI reflecting those changes was published in the Federal Register on April 26, 2001, and a revised NOP was received and distributed by the State Clearinghouse on April 18, 2001. Additional comments received are also summarized in Appendix E.

5.2 Public Participation and Project Development Team Coordination

The major components of the public participation program included meetings, direct mailings, and newsletters.

Public Hearings, Open House Meetings, and Presentations

Public open houses were held on March 18, 1999; June 30, 1999; and May 10, 2001. The general public was notified of these public meetings through press releases, newsletters, newspaper advertisements, meeting flyers, and newspaper articles. These meetings were used to inform the public about the project, provide updates on project progress, and obtain input. The public input that resulted from the early meetings was considered in the process of eliminating some of the proposed alternative alignments from further review and also helped identify some of the public concerns to be addressed in the environmental review process. The May 10, 2001, meeting provided input on the technical studies being performed. Each meeting was attended by about 150 people. Summary reports were prepared to describe each meeting and document the public notification process (press release, information flyer, newsletter, and newspaper advertisements). These reports were made available on Merced County's Web site and on compact discs that were distributed upon request and available at the

public hearing. Meeting attendees who signed up for the mailing list (described below) were sent newsletters, meeting announcements, and other project information.

Displays at the open houses provided information about the project to the public. Merced County Department of Public Works staff and consultants were available at all meetings to answer questions. The second and third meetings had representatives from Caltrans, the MCAG, and the University of California available to answer questions.

Eleven presentations were made between 1999 and 2001 by the Merced County Department of Public Works to various clubs and interested groups about the Campus Parkway project. One purpose of meeting with these groups was to identify individuals with interest in the project who were then added to the project mailing list and provided follow-up information on the project and review process. Presentations were made to the following groups:

- Merced Rotary Club
- Adhoc Concerned Citizens Group in Le Grand
- Merced County Farm Bureau Board of Directors
- Merced Kiwanis Club
- Consulting Engineers and Land Surveyors of California
- Merced Breakfast Lions
- Atwater Breakfast Kiwanis
- Merced County Association of Realtors
- Modesto Engineers Club
- UC Merced Committee
- Whitegate Neighborhood Meeting

A public workshop to announce the availability of the Draft EIS/EIR was held in the City of Merced on April 28, 2005, and a public hearing was held in the City of Merced on June 21, 2005. Comments received at the hearing and during the public review period are addressed in Appendix G.

Mailing List

Through coordination with Merced County staff, other local government staff, and community representatives, individuals and groups interested in the study or affected by the project were identified. A comprehensive mailing list was developed for dissemination of information about the project. The list included federal, state, and local agencies; elected and appointed officials and city and county staff; special interest

groups; owners of property likely to be affected by the project; renters; and the general public.

Newsletters

Direct mailings were used to keep households informed of project progress and announced meetings. Three newsletters were distributed in coordination with the public meetings.

Project Development Team Coordination

The Merced County Department of Public Works organized a Project Development Team (PDT) at the beginning of the project, consisting of representatives from the FHWA, Caltrans, county departments, the City of Merced, and the MCAG. Meetings were held periodically to report and coordinate progress and receive input on the project.

5.2.1 Summary of Issues Identified

As a result of the notification and public meeting efforts, a range of issues were raised by members of the public and individuals representing organizations that are concerned with Campus Parkway and other regional proposed projects. The major issues are summarized below.

Potential Impacts to Biological Resources

A number of commenters on the NOP raised concerns about Campus Parkway's impacts to regionally sensitive biological resources, including wetlands, vernal pool habitat, the general San Joaquin Valley habitats, endangered wildlife species (such as the San Joaquin kit fox), and rare plants. Commenters had focused concerns about cumulative impacts to biological species from the Campus Parkway project combined with potential effects from the UC Merced Campus and the University Community development plan. Many of these concerns were initially raised when the Campus Parkway northern project limit extended north to Bellevue Road. Moving the northern project limit south from Bellevue Road to Yosemite Avenue substantially reduces the extent of habitat impacts from the various alternatives.

Selecting an Alignment Prior to UC Merced Campus Location Identification

Early scoping comments identified the concern of selecting an alignment that could affect decision-making regarding alternatives for the UC Merced Campus site. The studies for Campus Parkway include consideration of alternatives in various locations,

and UC subsequently selected a preferred site since comments were received on the Campus Parkway project.

Impacts to Agricultural Lands

Concerns were raised regarding constructing a roadway through agricultural lands east of the City of Merced, and the potential for growth inducement, especially possible project-facilitated urban growth, and cumulative growth effects from all regionally proposed projects. Preservation of regional farmlands, planning for growth and potential changes from further reduction in agricultural lands was a concern raised in written comments and discussed at the public meetings. Development of potential strategies for minimizing impacts to farmlands through agricultural buffers, zoning, urban limit lines, land preservation, and mitigation were raised.

Land Use and Planning

Consistency of the project with local and regional plans was raised. Growth inducement and consideration of urban growth boundaries was a concern.

"Independent Utility" of the Project and Cumulative Impact Assessment

Comments concerned whether Campus Parkway should be considered independently of the other currently proposed major projects (UC Merced and University Community), and the overall need for the project. In addition, evaluation of cumulative and long-term impacts for all projects combined was requested.

Location and Identification of an Alternative

Written and public meeting comments included opinions or preferences regarding location of alignments, such as benefits to the city circulation system or agricultural protection from alignments nearby the city boundaries.

Traffic Studies

Some commenters raised questions about the traffic studies, including separation of UC Merced and University Community traffic origins and impacts, alternatives with a no project scenario, and re-examination of growth projections.

Air and Water Quality

The project's impacts to air and water quality were identified.

5.3 Required Approvals and Resource and Regulatory Agency Coordination

5.3.1 County and City Approvals

The Merced County Department of Public Works is the local lead agency. The Merced County Board of Supervisors has approved a Final EIR and has selected the Yellow Alignment as the preferred alternative. The existing County General Plan will also have to be amended by Merced County to include the definition of an expressway and the location of the selected alignment for the parkway in the Circulation Element. Table 5.3-1 shows the proposed changes (in shading) to the General Plan roadway definitions.

The definition of an expressway includes the notation that expressways are a special class of arterial. Although the existing general plan includes for consideration of frontage roads for arterials where appropriate, no frontage roads are proposed for Campus Parkway.

Table 5.3-1 Proposed Revisions to Table II-1 of the Merced County General Plan, Circulation Element

Road Type	Typical Right-of-Way Width (feet)	Typical Access Controls	Typical Interval Distances (miles)	Typical Speeds (mph)	Typical Traffic Volumes (Average Daily Trips)	Other Design Features
Local Roads	50 – 70	Direct access[1] generally allowed but controlled in exceptional circumstances	0 – ½ in urban areas, larger intervals in rural areas	5 – 30 in urban areas and higher speeds in rural areas	0 – 3,000	Designed to prevent through traffic in residential areas
Minor Collectors	50 – 80	Direct access[1] generally allowed but should be minimized	¼ - ¾ in urban areas, larger intervals in rural areas	20 – 40 in urban areas and higher speeds in rural areas	2,800 – 10,000	Collects traffic from local roads and connects with roads that carry higher volumes of traffic at greater speeds

1. Direct access points should be from roads that are designed for access, not movement; i.e., first to local roads, then to minor collector roads, and so on.

Table 5.3-1 (Continued) Proposed Revisions to Table II-1 of the Merced County General Plan, Circulation Element

Road Type	Typical Right-of-Way Width (feet)	Typical Access Controls	Typical Interval Distances (miles)	Typical Speeds (mph)	Typical Traffic Volumes (Average Daily Trips)	Other Design Features
Major Collectors	50 – 100	Direct access[1,2] points generally allowed but at greater intervals; shared access should be encouraged	¾ - 2 in urban areas, larger intervals in rural areas	30 – 50 in urban areas, possibly higher in rural areas	3,800 – 20,000	Similar to minor collectors but vehicle trips are typically longer distances. On-street parking is generally undesirable
Arterials	80 – 120	Controlled[1,2] access for new subdivisions; shared access should be encouraged	1 – 3 intervals in urban areas, larger intervals in rural areas	35 – 55 in urban and rural areas	9,600 – 40,000	Similar to major collector but vehicle trips are typically longer distances. Frontage roads should be considered. On-street parking is undesirable
Expressways[3]	120 +	Fully controlled access	½ - 1 in urban areas, larger intervals in rural areas	40 – 55 in urban and rural areas	9,600 – 40,000	Emergency parking only. All new utilities located within right-of-way shall be placed underground (no overhead utilities).

1. Direct access points should be from roads that are designed for access, not movement; i.e., first to local roads, then to minor collector roads, and so on.
2. Left-turn movements from specific projects may be prohibited.
3. Expressways are a special class of arterial. Wherever arterials are mentioned in the text and policies of this Chapter, expressways are assumed to be included.

Table 5.3-1 (Continued) Proposed Revisions to Table II-1 of the Merced County General Plan, Circulation Element

Road Type	Typical Right-of-Way Width (feet)	Typical Access Controls	Typical Interval Distances (miles)	Typical Speeds (mph)	Typical Traffic Volumes (Average Daily Trips)	Other Design Features
Freeways	120 +	Fully controlled access	As determined by Caltrans	55+	15,000 – 90,000	Frontage roads are necessary to direct traffic to access points. Emergency parking only

The Circulation Element of the *Merced Vision 2015 General Plan* will need to be amended to include the Campus Parkway project, and encroachment permits will need to be issued by the City of Merced.

5.3.2 California Department of Transportation and Federal Highway Administration

Because the proposed project has federal funding, the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) have review and oversight authority. Both Caltrans and the FHWA must approve the Final EIS and concur on the preferred alternative.

5.3.3 NEPA/Section 404 Memorandum of Understanding Coordination

The project as originally proposed in the January 25, 2000, NOI (in which the northern project limit was identified as Bellevue Road) would have required an individual Section 404 Clean Water Act permit from the USACE. In compliance with the NEPA/Section 404 MOU between the FHWA, Caltrans, the USEPA, the USFWS, and the USACE, the NEPA/Section 404 MOU process was initiated for concurrence on purpose and need and the criteria for defining alternatives. NEPA/Section 404 MOU agency coordination meetings were held on March 31, 2000; June 28, 2000; August 1, 2000; January 25, 2001; February 9, 2001; and March 15, 2001.

Concerns discussed at these meetings included the project's purpose and need and independent utility. During the March 15, 2001, meeting, Merced County presented

traffic projections and evaluations showing need for Campus Parkway between the SR 99/Mission Avenue interchange and Yosemite Avenue. Without the UC Merced Campus and the University Community, an extension of Campus Parkway north of Yosemite Avenue was not projected to be needed to serve the urban area of Merced until approximately 2047. Based on this finding, Merced County presented a revision of the proposed project in which the northern limit of the Campus Parkway construction was Yosemite Avenue. With this revision, the impacts to jurisdictional waters of the U.S. were substantially reduced. It was concluded at the March 15, 2001, meeting that further coordination was not necessary within the formal NEPA/Section 404 MOU process.

5.3.4 Delineation of Waters of the U.S. and Consultation with U.S. Army Corps of Engineers

The USACE was involved in the NEPA/Section 404 MOU coordination process and was consulted on the formal delineation of jurisdictional waters of the U.S. within the project's study area. Jurisdictional waters of the U.S. include irrigation canals, seasonal marsh, riparian marsh, and perennial streams. Cultivated wetlands are also present within the project study area, but they are not currently regulated by the USACE. An initial delineation of the study area was confirmed by letter, dated December 13, 2001 (Appendix A). As a result of the change in the northern project limits, a revised delineation was submitted and confirmed by a June 18, 2002, letter from the USACE. In addition, Merced County requested and received concurrence that a cultivated wetland within the project study area is isolated with no apparent interstate commerce connection (Appendix A, USACE letter dated June 18, 2002), and is therefore not regulated by the USACE under the Clean Water Act.

The total potential impact to jurisdictional wetlands is 0.04 ha (0.09 acre) for any of the three project alternatives. Impacts to other waters of the United States range from 0.19 to 0.23 ha (0.47 to 0.57 acre). The impacts to wetlands and other waters of the U.S. appear to qualify the project for approval under the USACE nationwide authorization program.

5.3.5 Consultation and Correspondence with U.S. Fish and Wildlife Service

Coordination with the USFWS began at an early stage in project development. On October 7, 1998, the USFWS delivered a preliminary list of species that may occur in the project area. The USFWS was also consulted on, issued several permits for, and

confirmed surveys for several listed species for the proposed project. Copies of correspondence regarding survey protocols, methodology, and authorization to perform the surveys and evaluations are included in the *Natural Environment Study/Biological Assessment* (URS 2004). The study was submitted by the FHWA to the USFWS with a request for formal review on May 17, 2002. The USFWS has requested additional information about the project, maps, habitat areas, impacts to kit fox, project schedule, and construction employee training in a letter dated June 17, 2002. The county responded on July 15, 2002. An updated Biological Assessment was prepared in January 2006 that addressed the San Joaquin kit fox and valley elderberry longhorn beetle.

The USFWS issued its Biological Opinion on April 21, 2006 (Reference 1-1-06-F-0099; USFWS 2006). The Biological Opinion addresses two species, the San Joaquin kit fox and the valley elderberry longhorn beetle. The findings and requirements of the Biological Opinion have been summarized in this document. Issuance of the Biological Opinion by the USFWS completes the required Section 7 consultation process for this project.

5.3.6 Consultation and Correspondence with State Historic Preservation Officer

Caltrans and the FHWA must consult with the State Historic Preservation Officer (SHPO) in compliance with Section 106 of the National Historic Preservation Act and implementing regulations in 36 CFR Part 800. The cultural resources studies completed for this project include an Archaeological Survey Report and addenda (which includes a Negative Historic Property Survey Report for the proposed local road between the Green and Green Alternate alignments and Lake Road), a Historic Architectural Survey Report/Historic Resource Evaluation Report, and a Historic Property Survey Report. The FHWA submitted this documentation to the State Office of Historic Preservation. The State Historic Preservation Officer concurred with the study findings for all historic properties on October 1, 2002 (Office of Historic Preservation, letter dated October 1, 2002).

The Sunshine Dairy, a property affected by all three alignment alternatives, was determined eligible for the National Register of Historic Places. The potential impacts to this property were evaluated and concluded with a Finding of No Adverse Effect. The SHPO has concurred with this finding (Office of Historic Preservation, letter dated June 19, 2003).

In the course of the historic properties evaluations, requests were sent to the Merced County Historical Society, the Courthouse Museum, and the Atwater Historical Society. The requests asked that any individuals or organizations with concerns regarding specific historic resources reply. These communications are included in Appendix B of the project's Historic Properties Survey Report.

5.3.7 California Department of Fish and Game

Sections 1600–1606 of the California Fish and Game Code give the CDFG regulatory permit authority over construction or fill activities proposed within the bed, channel, and banks of all streams, rivers, and lakes. Alteration of these features may require submission of a Streambed Alteration Notification and approval by the CDFG. Work within the Bear Creek Channel would likely require this authorization.

5.3.8 Regional Water Quality Control Board and State Water Resources Control Board

Any permit issued by the USACE will stipulate that the state must provide a certification or waiver of water quality, issued by the RWQCB, consistent with Section 401 of the federal CWA, and may be required to submit a Report of Waste Discharge (RWD) for wetlands that are waters of the State. The RWQCB and State Water Resources Control Board will review the USACE's proposed permit and the project when considering approval of this water quality certification. The 1992 amendments to the CWA require that a project that involves the disturbance of 0.4 ha (1 acre) or more must be covered by a National Pollutant Discharge Elimination System (NPDES) storm water permit. This will be initiated for Campus Parkway with the filing of an RWQCB Notice of Intent before construction, and the preparation of a Storm Water Pollution Prevention Plan (SWPPP) for the project.

5.3.9 State Reclamation Board

Bear Creek is identified by the State Reclamation Board as a regulated flood control stream. Bear Creek would be crossed by all three of the proposed alternatives, and work would be necessary within its banks. A permit will be required by the State Reclamation Board prior to any construction work. Due to the creek's status as a regulated stream, no work would be allowed in the creek channel during the flood season (from November 1 to April 15 of each year).

5.3.10 Merced Irrigation District

Storm drainage from Campus Parkway discharged to any Merced Irrigation District (MID) facility would require an amendment to the existing Agency Agreement between the Merced Irrigation District Improvement District No. 1 and Merced County. Project construction that impacts a MID fee property or easement for irrigation laterals and creeks would require a Construction Agreement and a Joint Use Agreement between the MID and the County.

5.4 Native American Coordination

The Native American Heritage Commission (NAHC) was contacted for a list of Native American groups and/or individuals with direct or indirect knowledge of cultural resources within or near the area of the proposed project. These consultations also sought to identify any sacred lands within an approximate 1-mile radius beyond the study area identified in the NAHC's Sacred Lands File. An initial record search of the Sacred Lands File failed to indicate the presence of Native American cultural resources or sacred lands in the immediate project area.

Letters and maps were sent to identified groups and individuals identified by the NAHC and through the Field Directory of the California Indian Community. Follow-up phone calls were made, and copies of the cultural resources studies for the Campus Parkway project were sent for review. Initial contacts and correspondence are summarized in Table 5.4-1. For detailed information on Native American consultation and correspondence, please consult Appendix C of the Historic Properties Survey Report.

Copies of the Draft Archeological Survey Report (ASR) and Draft ASR Letters were sent to the following local Native American individuals listed in Table 5.4-2. Follow-up telephone calls were made after a 2-week comment period had elapsed.

Final ASR letters were mailed to the individuals listed in Table 5.4-2, explaining that the Draft ASR that they had received had been approved by Caltrans. No further follow-up telephone calls were made. A Final ASR and ASR Addenda were sent to Ms. Osborne per her request in July 2006.

Table 5.4-1 Initial Informational Letters Sent to Local Native Americans

Name (Tribal Affiliation)	Mail Correspondence	Response to Mail/Letter?	Telephone Correspondence
Mr. Stanley J. Alec (Choinumni)	• Letter of Contact Sent 12/18/98 • Letter of Contact Returned; Addressee Unknown • Letter of Contact Re-sent with Correct Address 08/24/99	• No • NA • No	• None • None
Ms. Lorrie Planas (Choinumni, Wobonuch Mono)	• Letter of Contact Sent 12/18/98 • Letter of Contact Unclaimed; Returned to Sender • Letter of Contact Resent 8/24/99 • Letter of Contact Hand Delivered 5/26/00 • Response to Inquiry Hand Delivered 08/14/00	• No • NA • No • Yes: Native plant species inquiry requested • NA	• Left msg. 9/07/99 • Left msg. 9/15/99 • Left msg. 8/07/00 • Reached 8/08/00
Ms. Angie Osborne (Choinumni)	• Letter of Contact Hand Delivered 5/26/00	• No	• Left msg. 8/07/00 • Left msg. 8/09/00 • Reached 10/11/00
Mr. Jay Johnson (American Indian Council of Mariposa County)	• Letter of Contact Hand Delivered 5/30/00	• No	• Reached 8/07/00
Mr. Bill Leonard (American Indian Council of Mariposa County)	• No letter sent	• NA	• Left msg. 8/07/00

Table 5.4-2 Draft ASR and Draft ASR Letters Sent to Local Native American Individuals

Name	Draft ASR Delivered	Response to Draft ASR Letter	Telephone Correspondence
Ms. Angie Osborne	3/9/01	Ms. Osborne had no comments on the Draft ASR. She is interested in receiving the Final ASR.	Reached 6/4/01
Mr. Jay Johnson	3/9/01	Left msg. to contact Ms. R. Egherman, URS Archaeologist, by 6/6/01 if he had comments. No comments were received by 6/6/01.	Left msg. 6/1/01
Mr. Bill Leonard	3/9/01	Left msg. to contact Ms. R. Egherman, URS Archaeologist, by 6/6/01 if he had comments. No comments were received by 6/6/01.	Left msg. 6/1/01

Chapter 6 List of Preparers

This document was prepared under the supervision of the California Department of Transportation (Caltrans) District 10. The following Caltrans staff oversaw the preparation of this document:

- Laurie Barton, District Local Assistance Engineer
- Charlese Brown, Senior Environmental Coordinator
- Gina Moran, Senior Environmental Planner
- Margaret Lawrence, District 10 Environmental MPS and Local Assistance Branch Chief
- Pat Robledo, DLAE
- Dave S. Nelson, Coordinator

The following individuals at Merced County supervised the preparation of this document:

- Paul Fillebrown, Director of Public Works, Merced County
- Steve Rough, P.E., Project Manager, Merced County Department of Public Works

URS Corporation, under contract to Merced County Department of Public Works, prepared technical reports and this document. The following individuals from URS Corporation, and their experience and roles, are summarized below:

Bryon Bass, Ph.D, Archaeology, University of Edinburgh; 12 years of experience in cultural resource management and archaeological research. Contribution: Prepared Historic Property Survey Report and Archaeological Survey Report.

Sandy Davidson, B.S., Forest Management Science, Oregon State University; 20 years of experience in natural resource and database management. Contribution: Prepared Hydrology and Water Quality Study Report.

Sean Dexter, B.A., Anthropology, California State University, Chico; 10 years of experience in historic and prehistoric archaeology. Contribution: Assisted in the preparation of the Archaeological Study Report.

Senarath Ekanayake, Ph.D, Water Resources Engineering, Louisiana State University; 14 years of experience in water resources engineering and hydraulic analyses. Contribution: Prepared Floodplain Risk Assessment and Location Hydraulic Study Report.

Clark Fenton, Ph.D, Neotectonics and Paleoseismicity, University of Glasgow; 10 years of experience in seismic geology and geologic hazards. Contribution: Prepared Geologic Hazards Report.

Orion Fulton, B.A., Urban Studies and Planning, University of California, San Diego; 5 years of experience in environmental planning and socioeconomic analysis. Contribution: Prepared Community Impact Report; Assistant Environmental Project Manager.

Michael Greene, B.S., Applied Mechanics, University of California, San Diego; 13 years of experience in environmental engineering, with an emphasis on acoustics. Contribution: task leader for Noise Report.

Rob Greene, B.S., Environmental Science, Pacific Western University; over 25 years of experience in several specialty branches of acoustics and project management. Contribution: Senior reviewer of Noise Study.

Brian Hatoff, M.A., Anthropology, University of California, Davis; 25 years of experience in cultural resource management. Contribution: Senior reviewer and manager of Cultural Resources Studies.

Steve Leach, M.A., Vegetation Ecology, University of California, Davis; 9 years of experience in conducting biological impact assessments. Contribution: Managed biological resources studies and reports.

Corinna Lu, M.A., Geography, University of California, Los Angeles; 5 years of experience in conducting biological surveys and research. Contribution: Prepared Wetlands Study.

Jeff Luengo, B.S., Environmental Toxicology, University of California, Davis; 6 years experience in site assessments and investigations. Contribution: Prepared Initial Site Assessment.

Jon Stead, B.S., Biology, University of California, San Diego; 4 years experience preparing natural resource studies, field research, and ecological studies. Contribution: Prepared Natural Environment Study.

Geoff Thornton, B.S. Biochemistry, University of California, San Diego; 2 years experience in environmental document preparation, environmental regulatory permitting and air quality analysis. Contribution: Prepared Energy Report and Visual Analysis Report; Assistant Environmental Project Manager.

Cheri Velzy, B.S., Meteorology, San Jose State University; 10 years experience in air quality analysis. Contribution: Prepared Air Quality Report.

Jeff Zimmerman, B.S., Conservation of Natural Resources, University of California, Berkeley; 19 years of experience in environmental documentation. Contribution: Environmental and document project manager.

Technical reports and project support were provided by subcontractors to URS. The following individuals contributed to the document:

JRP Historical Consulting Services:

Rand Herbert, M.A., History, University of California, Davis; Contribution: Prepared the Finding of No Adverse Effect.

Bryan Larson, B.A., History, University of California, Los Angeles; Contribution: Assisted in the preparation of the Historic Architectural Survey Report / Historic Resource Evaluation Report.

Stephen Mikesell, M.A., History, University of California, Davis; Contribution: Prepared the Historic Architectural Survey Report / Historic Resource Evaluation Report.

Dowling Associates, Inc:

Joe Holland, B.S., Electrical Engineering, University of California, Davis; Contribution: Prepared Traffic Report.

Merced County Association of Governments

Jami Westervelt, newsletter preparation and distribution.

Public Affairs Management

Melisa Luccesi, public outreach and meeting coordination

Gina Bartlett, public outreach and meeting coordination

Chapter 7 Distribution List

Individuals and agencies were notified of the availability of the Draft EIS/EIR. Its availability was published in the Federal Register and local newspapers. A Notice of Completion was provided to the State Clearinghouse, which distributes copies to state resource and regulatory agencies that may have an interest in the project or expertise in the issues involved.

The Draft EIS/EIR was distributed to the following list of key individuals, interested parties, and elected and appointed officials. It was made available in electronic or paper form to those who request a copy. The document was also available to review at the following location:

Merced County Department of Public Works
345 W. 7th Street
Merced, CA 94530

The following is a list of those who received the Draft EIS/EIR.

Federal Agencies

U.S. Environmental Protection Agency
Region 9, EIS Coordinator
75 Hawthorne Street
San Francisco, CA 94105

U.S. Environmental Protection Agency
Office of Federal Activities, EIS Filing Section
Mail Code 2252-A, Room 7241
Ariel Rios Building (South Oval Lobby)
1200 Pennsylvania Avenue NW
Washington, D.C. 20240
(Shipping zip code: 20004)

National Marine Fisheries Services
Central Valley Office
650 Capitol Mall, Room 8-300
Sacramento, CA 95814

Office of Policy and Plans
Federal Railroad Administration
400 7th Street, SW
Washington, D.C. 20590

U.S. Army Corps of Engineers
Regulatory Branch
Sacramento District
1325 J Street
Sacramento, CA 95814

USDA – Natural Resources Conservation Service
2135 W. Wardrobe Avenue, Suite C
Merced, CA 95340

U.S. Fish & Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

State Agencies

Office of Planning and Research
(State Clearinghouse)
P.O. Box 3044 (1400 Tenth Street)
Sacramento, CA 95812-3044
(Shipping zip code: 95814)

State Clearinghouse Distribution:[*]

- Air Resources Board
- California Highway Patrol
- Conservation, Department of
- Fish & Game, Region 4
- Native American Heritage Commission
- Office of Historic Preservation
- DWR – Reclamation Board
- Regional Water Quality Control Board Region 5
- State Water Resources Control Board
- Water Resources, Department of

Regional

San Joaquin Valley Air Pollution Control District
4230 Kiernan Avenue, Suite 130
Modesto, CA 95356

Federal Elected Officials

Barbara Boxer
United States Senator
1130 O Street, Suite 2450
Fresno, CA 93721

Dianne Feinstein
United States Senator
1130 O Street, Suite 2446
Fresno, CA 93721

Dennis Cardoza
United States Congress 18th District
2222 M Street, Suite 305
Merced, CA 95340

State Elected Officials

Governor Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

Barbara Matthews
California State Assembly 17th District
806 West 18th Street
Merced, CA 95340

Jeff Denham
California State Senate District 12
1640 N Street, Suite 210
Merced, CA 95340

Regional Elected Officials

Merced County Supervisors,
Districts 1 through 5:
John Pedrozo
Kathleen M. Crookham
Mike Nelson
Deidre F. Kelsey
Jerry O'Banion
2222 M Street
Merced, CA 95340

Local Government

City of Atwater
Mr. Mo Khatami
750 Bellevue Road
Atwater, CA 95301

City of Merced Planning Department
Mr. Jack Lesch
678 W. 18th Street (2nd Floor)
Merced, CA 95340

[*] Distribution to these state and local agencies is through the State Clearinghouse, Governor's Office of Planning and Research.

Merced County Association of Governments (MCAG)
Mr. Jesse Brown
369 W. 18th Street
Merced, CA 95340

Merced County Library – Main Branch
2100 O Street
Merced, CA 95340

Merced County Planning Department
Mr. Bill Nicholson, Director
2222 M Street (2nd Floor)
Merced, CA 95340

Merced Irrigation District
Mr. Ted Selb
720 W. 20th Street
Merced, CA 95340

Special Interest

Burlington Northern–Santa Fe Railroad
Mr. Roy Ketring
740 East Carnegie Drive
San Bernardino, CA 92408

California Native Plant Society
Dr. David H. Chipping
1530 Bayview Heights Drive
Los Osos, CA 93402

Central Valley Safe Environment Network
P.O. Box 64
Merced, CA 95341
cvsen@bigvalley.net

Community Alliance with Family Farmers
Mr. Mike Fuller
210 Las Flores Avenue
Modesto, CA 95354

Great Valley Center
911 13th Street
Modesto, CA 95354

Merced County Farm Bureau
P.O. Box 1232
Merced, CA 95341

Merced County Farmland & Open Space Trust
Ms. Linda Macedo
4890 S. Healy Road
Merced, CA 95340

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Appendix A Coordination and Consultation

This appendix contains letters and records of consultation with regulatory and resource agencies relevant to the environmental documentation and review process. A short description of each dated letter follows. A discussion of the consultation process with the various regulatory and resource agencies and the comments received by the public for Campus Parkway is in Chapter 5. Appendix E contains a summary of the comments received on the Notice of Preparation (NOP) and Notice of Intent (NOI).

U.S. Army Corps of Engineers (USACE)

- December 13, 2001 – The USACE concurred with the project's delineation of waters of the United States, including wetlands.

- June 18, 2002 – The USACE concurred with the revised project's delineation of waters of the United States, based on the change in project limits. This letter also concurred that a cultivated wetland is isolated with no apparent interstate commerce connection and is not regulated by the USACE, but noted that other regulatory requirements may apply to this resource.

- September 17, 2002 – The USACE review of the project's estimated impacts to waters of the United States and applicability of the Nationwide Permit program was requested.

- November 8, 2002 – The USACE concurred with the methods used to quantify affected waters of the United States. The letter also stated that each crossing may qualify for separate verification under Nationwide Permit No. 14 provided that each crossing can be undertaken as a single project and would have minimal cumulative adverse affects to the aquatic environment.

U.S. Fish and Wildlife Service (USFWS)

- A table listing coordination with USFWS personnel is provided.

- December 28, 1998, and February 2, 2000 – The USFWS issued authorizations for vernal pool branchiopod surveys.

- August 1, 2000, and August 2, 2000 – The USFWS issued authorizations for kit fox surveys.

- May 17, 2002 – The Federal Highway Administration (FHWA) submitted the *Natural Environment Study/Biological Assessment,* initiating formal Section 7 consultation regarding the federally threatened valley elderberry longhorn beetle. The FHWA requested that the Campus Parkway project be appended to the FHWA's existing Programmatic Biological Opinion as the impacts to the beetle are relatively small. The FHWA determined that the work is not likely to adversely affect San Joaquin kit fox and requested concurrence.

- June 17, 2002 – The USFWS requested additional information regarding the project, mapping, habitat types, analysis of impacts to the kit fox, construction schedule, and construction personnel training. The USFWS noted that it would not initiate the formal consultation process until receipt of the information.

- March 21, 2006 – The USFWS provided an updated list of species potentially occurring within the regional area of the project. The letter that accompanied the list is included in Appendix A, and the complete species list is included in Appendix F.

Office of Historic Preservation

- February 26, 2002 – The State Historic Preservation Officer (SHPO) acknowledged the consultation process in compliance with Section 106 of the National Historic Preservation Act, concurred with the FHWA's findings regarding the eligibility of properties within the project's study area, and requested additional information regarding the project's archaeological surveys and documentation.

- October 1, 2002 – The SHPO concurred that the FHWA has adequately identified historic properties within the project's APE.

- April 3, 2003 – The SHPO concurred with the FHWA's addition to the original APE (at Yosemite Avenue and Lake Road) and to its negative findings of historic properties within the area that was added to the APE.

- June 19, 2003 – The SHPO concurred with the FHWA's finding of no adverse effect to the Sunshine Dairy.

Floodplain Review

- September 14, 2004 – The Merced County Department of Public Works review of the Floodplain Risk Assessment and Location Hydraulic Study.

Merced County Association of Governments (MCAG)

- November 18, 2005 – The MCAG responded to comments about the inclusion of industrial land uses in the area south of SR 140, north of Mission Avenue, and east of the Doane and Hartley Laterals in the traffic model assumptions.

- June 16, 2006 – The MCAG determined that the project does not require a $PM_{2.5}$ hot-spot conformity assessment under the March 2006 USEPA Transportation Conformity Guidance and requested interagency concurrence from the FHWA, Caltrans, and local and regional transportation planning and air quality regulatory agencies included in the attached e-mail distribution list.

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

REPLY TO
ATTENTION OF

December 13, 2001

Regulatory Branch (200000782)

Steve Rough
Merced County DPW
715 Martin Luther King Jr. Way
Merced, California 95340

Dear Mr. Rough:

This letter concerns the delineation of waters of the United States, including wetlands, for the Campus Parkway Project. The April 16, 2001 verification was submitted to this office by the URS Corporation for verification on behalf of the County of Merced. This site is located in Sections 15, 16, 21, 22, 27, 28, 33, & 34, Township 7 South, Range 14 East, M.D.B.&M., in Merced, Merced County, California.

Based on information provided and a site inspection conducted by Nancy Haley of this office on September 17, 2001, we concur with the estimate of waters of the United States, as depicted on the original wetland delineation as well as the revised delineation and supplemental information submitted on October 15, 2001, November 27, 2001, December 6, 2001 and December 11, 2001. Approximately 24.37 acres of waters of the United States, including wetlands, are present on the site. These areas are regulated by this office under Section 404 of the Clean Water Act since they are tributary to the San Joaquin River.

Under Section 404 of the Clean Water Act, a Department of the Army (DA) permit is required prior to discharging dredged or fill materials into waters of the United States. The type of permit required will depend on a number of factors, including the type and amount of waters affected by the discharge. For more information on how to obtain a DA permit from our office, please visit our website at http://www.spk.usace.army.mil/cespk-co/regulatory/.

This verification is valid for five years from the date of this letter unless new information warrants revision of the determination before the expiration date. A notice of appeal options is enclosed.

Please reference identification number 200000782 in future correspondence concerning this project. If you have any questions, please write to me, Room 1480 at the letterhead address, or telephone (916)557-7772.

Sincerely,

ORIGINAL SIGNED

Nancy A. Haley
Chief, San Joaquin Valley Office

Enclosure

Copies Furnished w/o enclosure:

Steve Leach, URS Corporation, 500 12th Street, Suite 200, Oakland, California 94607-4014

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

REPLY TO
ATTENTION OF

June 18, 2002

RECEIVED
JUN 19 2002
MERCED COUNTY
DPW/PROFESSIONAL SERVICES DIVISION

Regulatory Branch (200000782)

Steve Rough
Merced County Department of Public Works
715 Martin Luther King Jr. Way
Merced, California 95340

Dear Mr. Rough:

This letter concerns the delineation of waters of the United States, for the Campus Parkway Project and supersedes the December 13, 2001, delineation verification letter based on new information. This site is located in Sections 15, 16, 21, 22, 27, 28, 33, & 34, Township 7 South, Range 14 East, M.D.B.& M., in Merced, Merced County, California.

On January 18, 2002, Steve Leach of URS Corporation, provided a revised delineation and maps for this project. The revision includes an increase of 3.24 acres of waters of the United States. On March 8, 2002, Mr. Leach provided further information requesting a review of the Cultivated Wetlands in light of the SWANCC Supreme Court decision.

Based on the March 8, 2002, letter from URS, the Cultivated Wetland (4.05 acres) is isolated with no apparent interstate commerce connection as depicted on Figure 1, "Location of the Cultivated Wetlands Relative to Bear Creek and the Hartley Lateral" drawing and Map 2A. This wetland is not currently regulated by the Corps under the Clean Water Act. This disclaimer of jurisdiction is only for Section 404 of the Federal Clean Water Act. Other Federal, State, and local laws may apply to your activities. In particular, you may need authorization from the California State Water Resources Control Board and/or the U.S. Fish and Wildlife Service.

According to the January 28, 2002, letter and a site visit by Nancy Haley, we concur that approximately 23.57 acres of waters of the United States, including wetlands, are present on the site. These areas are regulated by this office under Section 404 of the Clean Water Act since they are tributary to the San Joaquin River.

This verification is valid for five years from the date of this letter unless new information warrants revision of the determination before the expiration date. A notice of appeal options is enclosed.

Please reference identification number 200000782 in any future correspondence concerning this project. If you have any questions, please write to Nancy Haley at the letterhead address, or email Nancy.A.Haley@usace.army.mil, or telephone 916-557-7772.

Sincerely,

Michael S. Jewell
Chief, Central California/Nevada
Section

Enclosure

Copies Furnished without enclosure:

Mr. Oscar Balaguer, Chief, Water Quality Certification Unit, California State Water Resources Control Board, 1001 I Street, Sacramento, California 95814
Dale Harvey, California Regional Water Quality Control Board, 3614 East Ashlan Avenue, Fresno, California 93726-3595
Steve Leach, URS Corporation, 500 12th Street, Suite 200, Oakland, California 94607-4014

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant:	File Number: 200000782	Date: 06/18/02
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the DISTRICT engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the DISTRICT engineer. Your objections must be received by the DISTRICT engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the DISTRICT engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the DISTRICT engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the DISTRICT engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the DIVISION (not district) engineer (address on reverse). This form must be received by the DIVISION engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the DIVISION (not district) engineer (address on reverse). This form must be received by the DIVISION (not district) engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the DIVISION (not district) engineer (address on reverse). This form must be received by the DIVISION engineer within 60 days of the date of this notice. Exception: JD appeals based on new information must be submitted to the DISTRICT engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

URS

September 17, 2002

Ms. Nancy Haley
Regulatory Branch
U.S. Army Corps of Engineers
1325 J Street, Room 1480
Sacramento, California 95814-2922

Subject: **Request for Review of Nationwide Permit Consistency for the Campus Parkway Project, Merced County, California**
ACOE File # 2000-00782 URS Project No. 26813284

Dear Ms. Haley:

The purpose of this letter is to provide the U.S. Army Corps of Engineers (USACE) with an updated estimate of the Campus Parkway project's potential impacts to waters of the U.S. and to confirm the applicability of the Nationwide Permit (NWP) program for the proposed project. The updated impact estimates are summarized by individual crossing as proposed in your June 21, 2002 e-mail to Steve Rough of Merced County Department of Public Works. The following sections briefly review the proposed project, the methods used to assess impacts to jurisdictional waters of the U.S. and the estimated temporary and permanent impacts to wetlands and other waters of the U.S.

The proposed Campus Parkway project is located in Merced County, directly east of the City of Merced. It is proposed to be a new 6.5 mile expressway running in a north/south direction between the Caltrans proposed Mission Avenue/State Route 99 interchange project and Yosemite Avenue. The expressway would have one to three lanes running in each direction. There are three alternative expressway alignments under consideration for the proposed project. The Campus Parkway project under consideration is subject to both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The Federal Highway Administration (FHWA) and Caltrans are serving as joint lead federal agencies and the County of Merced is serving as the lead state agency. The County of Merced is responsible to prepare a combined Environmental Impact Statement/Environmental Impact Report (EIS/EIR), which will be reviewed and approved by the FHWA and Caltrans. Based on earlier consultation and coordination, the environmental review process has proceeded with NEPA/404 with the understanding that the proposed project would qualify for a Section 404 Nationwide Permit.

URS Corporation
500 12th Street, Suite 200
Oakland, CA 94607-4014
Tel: 510.893.3600
Fax: 510.874.3268

The proposed project would cross several jurisdictional waters of the U.S. In a letter dated June 18, 2002, the USACE concurred with the County of Merced that approximately 23.57 acres of jurisdictional waters of the U.S., including wetlands, are present in the project study area.[1]

The proposed project would permanently impact waters of the U.S. associated with irrigation canals and seasonal marsh wetlands. Irrigation canals crossed by the proposed project would be placed in culverts under the proposed expressway. Construction of new embankments for the proposed project would permanently fill some of the seasonal marsh wetlands in the project study area.

Non-wetland waters and riparian wetlands located at Bear Creek and Black Rascal Creek would be spanned by the proposed project, however these waters of the U.S. would be temporarily affected during construction. Temporary impacts in the Bear Creek channel subject to regulation under Section 404 would be limited to excavation or the placement of fill during construction. Therefore, temporary impacts are based on the footprint of the falsework structures that would support the forms and equipment used during construction of the bridges that would span Bear Creek. All falsework structures would be completely removed upon completion of the bridges. Temporary impacts are estimated based on the footprint of the falsework supports, which are assumed to be placed at 10 foot intervals and occupy an area equal to the width of the bridge multiplied by 1 foot.

The attached table summarizes the estimated impacts of the proposed project to jurisdictional waters of the U.S. The proposed project has been divided into 15 separate crossings, as defined in Nationwide Permit Number 14. Each crossing is a discreet location where an alignment would affect jurisdictional waters of the U.S. For instance, Crossing #11 in the table corresponds to the Green Alignment crossing of the Hartley Lateral canal north of Stretch Road; and Crossing # 8 corresponds to the Green Alternate Alignment and the Yellow Alignment crossing of the Merced Lateral, Bear Creek, and the Hartley Lateral canal. Crossing #8 groups these different waters into one crossing because they would all be spanned by one bridge, as a single crossing. Each crossing would permanently and temporarily impact less than 0.5 acre regardless of the alternative. Each of the alignment alternatives is consistent with the conditions of Nationwide Permits 14 and 33.

The Merced County Public Works Department understands that compliance with the Nationwide permit program is ultimately determined when a project has proceeded to the regulatory permit application and review stage. However, this determination affects the NEPA review process. For this reason, the County is seeking confirmation of their understanding that the methods used to quantify the affected jurisdictional waters of the U.S. for the proposed project are acceptable and the potential applicability of the current Nationwide Permits are

[1] The study area includes land within 300 feet of the proposed project right-of-way and does not represent the potential impact area. This larger area was used during project planning to develop a context for the affected resources and evaluate potential avoidance and minimization measures.

URS

valid. It is understood that changes in the project and changes in the Nationwide permit program may affect this status in the future.

If you have any questions or if need additional clarification, please contact me at (510) 874-3205.

Sincerely,

URS Corporation

Steve Leach
Senior Biologist

Attachment: Table 1 – Potential Impacts to Waters of the U.S.

cc: Steve Rough, P.E., Merced County, Department of Public Works
Laurie Barton, Caltrans District 10

Table 1
Potential Impacts To Jurisdictional Waters Of The U.S. by Crossing [2]

Crossing ID	Green Alignment				Green Alternate				Yellow Alignment			
	Wetlands		Non-Wetland Waters		Wetlands		Non-Wetland Waters		Wetlands		Non-Wetland Waters	
	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)
1			0.04 canal				0.04 canal					
4											0.05 canal	
6		0.015 riparian scrub		0.015 perennial stream								
7			0.1 canal									
8						0.019 riparian scrub		0.015 perennial stream		0.019 riparian scrub		0.015 perennial stream
9			0.11 canal									
10[1]	0.086 seasonal marsh		0.015 canal		0.086 seasonal marsh		0.015 canal		0.086 seasonal marsh		0.015 canal	
11[1]			0.04 canal				0.04 canal				0.04 canal	
12[1]			0.01 canal				0.01 canal				0.01 canal	
13[1]			0.061 canal				0.061 canal				0.061 canal	
14[1]			0.14 canal				0.14 canal				0.14 canal	
15											0.21 canal	
16							0.12 canal					
17							0.04 canal					
18			0.05 canal									

[1] For these crossings, all three project alternatives share a common alignment.
[2] The following are assumptions that were made in calculating the impacts to waters of the U.S.:

- Temporary impacts are limited to temporary excavation and/or fill of wetlands and non-wetland waters
- Irrigation canals crossed by the project would be placed in a culvert. This is a permanent impact.
- No work, temporary or permanent, would be required in canals that are parallel to the proposed project. For example, in several areas, the proposed alignments would run parallel to Bradley Lateral, Doane Lateral, and Hartley Lateral. No work is proposed in canals except where the proposed project crosses a canal.
- No temporary or permanent fill or excavation would be required within Black Rascal Creek. This stream would be spanned.
- No temporary or permanent fill or excavation would be required in the canals adjacent to Bear Creek.
- Seasonal marsh wetlands at SR 140 would be impacted north of SR 140 due to road widening and at one point between the BNSF railroad tracks and SR 140 due to the placement of a bridge pier. No other fill or excavation would be required within seasonal marsh wetlands.

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

REPLY TO
ATTENTION OF

November 8, 2002

Regulatory Branch (200000782)

Steve Rough
Merced County Department of Public Works
715 Martin Luther King Jr. Way
Merced, California 95340

Dear Mr. Rough:

I am writing in response to the September 17, 2002, letter written on your behalf by Steve Leach at URS Corporation for the Campus Parkway Project. The letter requests our determination of whether the methods used for quantifying affected waters of the United States are acceptable and if potential applicability of the current Nationwide Permits are valid. If each crossing can be undertaken as a single and complete project, and cumulatively there are minimal adverse effects to the aquatic environment, then each crossing may qualify for separate verification under Nationwide Permit number 14.

Please reference identification number 200000782 in any future correspondence concerning this project. If you have any questions, please write to me at the letterhead address, or email Nancy.A.Haley@usace.army.mil, or telephone 916-557-7772.

Sincerely,

Nancy A. Haley
Chief, San Joaquin Valley Office

RECEIVED
NOV 4 2002
MERCED COUNTY
DPW/PROFESSIONAL SERVICES DIVISION

Record of Consultation with the U.S. Fish and Wildlife Service

Date	From/ To	Type	Regarding	Available in
10/7/98	Chris Davis USFWS/ URS	Memo	Preliminary species list from USFWS	Project file
12/28/98	Cay C. Goude USFWS/ Steve Leach URS	Letter	Authorization to conduct reconnaissance level wet-season branchiopod surveys	This appendix
2/2/00	Cay C. Gould USFWS/ Steve Leach URS	Letter	Authorization to conduct wet-season surveys for listed branchiopods	This appendix
4/19/00	Jonathan Stead URS/ Jean Battle USFWS	Letter	Proposed kit fox survey methodology	Project file
5/3/00	Jonathan Stead URS/ Jean Battle USFWS	Fax	Supplemental maps to proposed methodology	Project file
5/16/00	Jean Battle USFWS/ Jonathan Stead URS	Documented telephone conversation	Comments on proposed kit fox survey methodology	Project file
5/24/00	Jonathan Stead URS/ Jean Battle USFWS	Letter	Kit fox early evaluation	Appended to the Kit Fox Survey Report in the Natural Environment Study
6/6/00	Jean Battle USFWS/ Jonathan Stead URS	Documented telephone conversation	Comments on kit fox early evaluation, recommendations for survey methodology	Appended to the Kit Fox Survey Report in the Natural Environment Study
6/22/00	Jonathan Stead URS/ Jean Battle USFWS	Letter	Proposed kit fox survey methodology (2nd proposal)	Appended to the Kit Fox Survey Report in the Natural Environment Study
6/22/00	Karen J. Miller USFWS/ Orion Fulton URS	Letter	Species list from USFWS	Project file
7/18/00	Jonathan Stead URS/ Jean Battle USFWS	Fax	Submittal of resumes of anticipated kit fox survey personnel	Resumes appended to the Kit Fox Survey Report in the Natural Environment Study
7/19/00	Jonathan Stead URS/ Jean Battle USFWS	Fax	Additional resume of survey personnel	Project file
7/27/00	Jean Battle USFWS/ Jonathan Stead URS	Documented telephone conversation	Acceptance of kit fox survey methodology proposed on 5/24/00	Project file
8/1/00	Jean Battle USFWS/ Jonathan Stead URS	E-mail	Authorization to conduct San Joaquin kit fox surveys	This appendix
8/2/00	Jean Battle USFWS/ Jonathan Stead URS	E-mail	Follow up to authorization to conduct kit fox surveys	This appendix
week of 10/30/00	Jean Battle USFWS/ Jonathan Stead URS	Documented telephone conversation	Whether submittal of a red-legged frog site assessment would be necessary	Project file
week of 11/13/00	Deblyn Mead USFWS/ Corinna Lu URS	Documented telephone conversation	Vernal pool mitigation banks in Merced County	Project file
12/12/00	Jean Battle USFWS/ Jonathan Stead URS	Documented voicemail	Jennings' kit fox sighting	Project file

Record of Consultation with the U.S. Fish and Wildlife Service (Continued)

Date	From/ To	Type	Regarding	Available in
5/17/02	Larry Vinzant (for Michael Ritchie) FHWA/Wayne White USFWS	Letter	Request for formal consultation	This appendix
6/17/02	Jan Knight USFWS/ Michael Ritchie FHWA	Letter	Response to request for formal consultation	This appendix
6/07/04	Endangered Species Division USFWS/URS	Letter	Species list from USFWS	Project file
4/21/06	Endangered Species Division USFWS/ Corinna Lu URS	Letter	Species list from USFWS	This appendix
4/21/06	Peter Cross, Kenneth Sanchez USFWS/ Michael Ritchie FHWA	Letter	Biological Opinion on Campus Parkway regarding San Joaquin kit fox and valley elderberry longhorn beetle	Project file (over 150 pages including attachments)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
3310 El Camino Avenue, Suite 130
Sacramento, California 95821-6340

IN REPLY REFER TO:
1-1-98-PR-0307

December 28, 1998

Mr. Steve Leach
Woodward-Clyde
500 12th Street, Suite 100
Oakland, California 94607-4014

Subject: Authorization to Conduct Reconnaissance-level Wet-season Vernal Pool Branchiopod Surveys in the Campus Parkway Study Area, Merced County, California (PRT-810313)

Dear Mr. Leach:

This letter has been prepared in response to your December 3, 1998, facsimile letter which requested U.S. Fish & Wildlife Service (Service) authorization for wet-season surveys for federally-listed vernal pool branchiopods in the Campus Parkway Study Area (study area), Merced County, California. This letter confirms the December 7, 1998, verbal authorization you received from Chris Davis to initiate reconnaisance (recon) surveys in the study area. The purpose of the recon-level surveys is to establish the location and extent of vernal pools in the study area to facilitate the future authorization of representative vernal pool sampling. The results of these recon-level surveys shall not be used to determine presence or absence of listed vernal pool branchiopods within the study area.

Recon-level surveys shall be conducted during the 1998-1999 wet season and in accordance with the conditions on permit PRT-810313 and those listed below.

1. Additional focused surveys in accordance with the Guidelines will be required in subsequent seasons after recon-level surveys have been completed.

2. Only Service-approved biologists listed on permit PRT-810313, or other personnel working under their direct supervision, may conduct recon-level surveys for the federally-listed vernal pool branchiopods in the Campus Parkway Study Area, Merced County, California.

3. The permittee shall notify the Service within 10 working days by letter or telephone if any new locality, or if any new information regarding the range, distribution, ecology, or other pertinent life history data of any of the federally-endangered or threatened species, State-listed species, and rare or sensitive species is obtained during the course of the permittee's authorized activities under this permit. This information also shall be submitted to the California Department of Fish and Game (CDFG), using completed California Native Species Field Survey Forms or their equivalent, no more than 90 calendar days after

completing the last field visit of the season at each project site. Each form shall have an accompanying scale map of the site (such as a photocopy of a portion of the appropriate 7.5 minute U.S. Geological Survey map) and shall provide at least the following information for a single species: township, range, and quarter section; name of the 7.5 minute or 15 minute quadrangle; dates (day, month, year) of field work; number of individuals and life stage (where appropriate) for each species encountered by the permittee; and a description of the habitat by community-vegetation type.

Please note that all information obtained during activities conducted under the authority of this permit is required to be submitted to the Service and the CDFG to remain in compliance with section 10(a)(1)(A) permit Terms and Conditions. Failure to report, or disclose upon request by the Service and/or the CDFG, any information obtained during activities conducted under the authority of this permit could result in the revocation, suspension, or non-renewal of this permit. Please contact the Service at the letterhead address for reporting new locality or new life history data. The CDFG contact is listed below:

Natural Diversity Data Base
California Department of Fish and Game - NHD
1416 9th Street, 12th Floor
Sacramento, California 95814
Telephone: 916/324-3812

4. Any changes to the above specified survey methods, personnel, or areas to be surveyed will require the permittee to request and receive written approval from the Service before any such surveys commence.

Please contact Chris Davis or Peter Cross of my staff at (916) 979-2728 if you have any questions concerning this authorization.

Sincerely,

Robert J. Pine Acting

Cay C. Goude
Chief, Endangered Species Division

cc: FWS-AES, Portland, OR
CDFG, Rancho Cordova, CA (Attn: D. Zezulak)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, W-2605
Sacramento, California 95825

IN REPLY REFER TO:
1-1-00-PR-0481

February 2, 2000

Steve Leach
URS Greiner Woodward Clyde
500 12th Street, Suite 200
Oakland, California 94607

Subject: Authorization to Conduct a Wet-season Survey for Federally-listed Vernal Pool Branchiopods at the U.C. Campus Parkway Project, Merced County, California (Permit 810313)

Dear Mr. Leach:

This letter verifies the U. S. Fish and Wildlife Service's (Service) verbal approval on November 30, 1999, and December 16, 1999, of your request, dated November 29, 1999, to commence a wet-season survey for federally-listed vernal pool branchiopods at the U.C. Campus Parkway Project in Merced County, California. You are authorized, under Service permit 810313 and this letter, to determine the presence of federally-listed vernal pool branchiopods within the above project area. The wet-season survey shall be conducted during the 1999-2000 wet season and in accordance with the protocols specified in the *Interim Survey Guidelines to Permittees under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods*, dated April 19, 1996. Surveys shall also be conducted following the conditions on permit 810313, and those stated below.

1. Only Service-approved biologists listed on permit 810313, or other personnel working under their direct supervision, may conduct wet-season surveys for the federally-listed vernal pool branchiopods at the U.C. Campus Parkway Project.

2. The permittee shall notify the Service within 10 working days by letter or telephone of any new locality, or any new information regarding the range, distribution, ecology, or other pertinent life history data for any of the federally-endangered or threatened species, State-listed species, and rare or sensitive species obtained during the course of the permittee's authorized activities under this permit.

   This information also shall be submitted to the California Department of Fish and Game (CDFG), using completed California Native Species Field Survey Forms or their equivalent, no more than 90 calendar days after completing the last field visit of the season at each project site. Each form shall have an accompanying scale map of the site (such as a photocopy of a portion of the appropriate 7.5 minute U.S. Geological Survey map) and shall provide at least the following information for a single species: township, range, and quarter section; the name of the 7.5' or 15' quadrangle; dates (day, month, year) of field work; number of individuals and life stage (where appropriate) for each species

encountered by the permittee; and a description of the habitat by community-vegetation type.

Note: All information obtained during activities conducted under the authority of this permit is required to be submitted to the Service and the CDFG to remain in compliance with section 10(a)(1)(A) permit Terms and Conditions. Failure to report, or disclose upon request by the Service and/or the CDFG, any information obtained during activities conducted under the authority of this permit could result in the revocation, suspension, or non-renewal of this permit. For reporting a new locality or new life history data, the Service contact is Chief of the Endangered Species Division, Sacramento Fish and Wildlife Office, phone number (916) 979-2725. The CDFG can be contacted at the following address:

Wildlife Habitat Data Analysis Branch
California Department of Fish and Game - HCD
1416 9th Street, 12th Floor
Sacramento, California 95814
Telephone 916/324-3812

3. Any changes to the above-specified survey methods, survey times, personnel, or areas to be surveyed will require the permittee to request and receive approval from the Service before any such surveys commence.

Please contact Jesse Wild or Diane Elam of my staff at (916) 414-6600 if you have any questions concerning this authorization.

Sincerely,

Cay C. Goude

Cay C. Goude
Acting Field Supervisor

cc: AES, Portland, OR (Attn: L. Belluomini)
FWS-LE, Sacramento, CA (Attn: S. Pearson)
CDFG, Fresno, CA (Attn: G. Nokes)

Jean_Battle@fws.gov
08/01/2000 03:46 PM

To: jonathan_stead@urscorp.com
cc:
Subject: Campus Parkway Kit Fox Survey

Jonathan,

We have reviewed your June 22, 2000, proposal for surveying for San Joaquin kit fox in the area of the proposed Campus Parkway. As we discussed, this is not a presence/absence survey, since kit foxes have been seen in the area, and habitat is present in the general area, especially at the north end of the proposed Parkway. It is more to determine patterns of use, to guide impact avoidance and minimization efforts in project design.

The June 22 survey proposal is acceptable, as is the list of biologists submitted by fax on July 18, 2000 (Sue Townsend- lead biologist; Colleen Lenihan, Bryan Mori- assistants.) If you make changes in the survey methodology, or the biologists conducting the survey, please contact us beforehand.

I would like to come down during the survey. Please call me to set up a date for this. Thanks.

Jean Battle

Jean_Battle@fws.gov
08/02/2000 09:54 AM

To: jonathan_stead@urscorp.com
cc:
Subject: Campus Parkway kit fox surveys

Jonathan,

This is a follow-up to my 8/1/00 e-mail authorizing the start of kit fox surveys along the proposed Campus Parkway route in Merced.

Re: those assisting Sue Townsend (lead biologist) in the survey

Sue is free to include others in the survey work, but if the principal assistants change, we should be notified. As lead biologist, she should be directly supervising the project (verifying identification during sightings, verifying kit fox sign that is found.)

If you have questions, give me a call.

Jean Battle

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CALIFORNIA DIVISION
980 Ninth Street, Suite 400
Sacramento, CA. 95814-2724

May 17, 2002

IN REPLY REFER TO
HDA-CA
File #: 06-MER, Campus Parkway
Document #: 40202

Mr. Wayne White, Field Supervisor
U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room E-1803
Sacramento, California 95825-1846

Dear Mr. White:

Attention: Jan Knight

SUBJECT: **Section 7 Consultation For Campus Parkway**

Merced County, in conjunction with the California Department of Transportation and the Federal Highway Administration (FHWA), is proposing to construct the Campus Parkway between State Route 99 and Yosemite Avenue to serve the east side of the City of Merced. The parkway would be from one to three lanes in each direction with a divided median, bike lanes and sidewalks. Also included would be two separated grade crossings located over Bear Creek and State Route 140.

Enclosed is one copy of the Natural Environment Study/Biological Assessment and Conceptual Mitigation Plan for your use. Depending the alignment chosen, either one or two elderberry bushes, the host plant of the federally threatened Valley elderberry longhorn beetle (VELB), would be impacted. We are initiating formal Section 7 consultation pursuant to the Endangered Species Act for VELB and request that this project be appended to our existing Programmatic Biological Opinion (#1-1-96-R-156) for relatively small impacts to VELB.

In addition, FHWA has determined that San Joaquin kit fox may be affected. However, we have concluded that the work is not likely to adversely affect the fox and are requesting your concurrence in that determination.

If you have any questions, contact Larry Vinzant at (916) 498-5048 or Brian Zewe at (916) 498-5348.

Sincerely,

/s/ Larry Vinzant
For
Michael G. Ritchie
Division Administrator

Enclosure

cc:
Gary Winters, Caltrans Headquarters, Environmental Program
Charlese Brown, Caltrans, District 6

E-Mail:
Steve Healow
Brian Zewe
Scott McHenry
Larry Vinzant

LVinzant/bsg

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W2605
Sacramento, California 95825

RECEIVED
JUN 21 2002
FHWA, Sacramento

IN REPLY REFER TO:
1-1-02-F-0215

June 17, 2002

RECEIVED
JUN 26 2002
MERCED COUNTY
DPW/PROFESSIONAL SERVICES DIVISION

Mr. Michael G. Ritchie
U.S. Department of Transportation
Federal Highway Administration
980 Ninth Street, Suite 400
Sacramento, California 95814-2724

Subject: Request to Initiate Formal Endangered Species Consultation on the Campus Parkway, Merced County, California (HDA-CA File #: 06-MER, Campus Parkway, Document #: 40202)

Dear Ms. Haley:

This letter is in response to your May 17, 2002, request for formal consultation, pursuant to section 7(a) of the Endangered Species Act, as amended (Act), on the proposed Campus Parkway (project), Merced County, California. Your letter was received by the U.S. Fish and Wildlife Service (Service) on May 20, 2002. The purpose of this project is to construct a parkway between State Route 99 and Yosemite Avenue to serve the east side of the City of Merced. The parkway would be from one to three lanes in each direction with a divided median, bike lanes, and sidewalks. Also included would be two separated grade crossings located over Bear Creek and State Route 140, and intersections at four avenues. This project may adversely affect the federally-listed valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), the San Joaquin kit fox (*Vulpes macrotis mutica*), and the bald eagle (*Haliaeetus leucocephalus*). The mountain plover (*Charadrius montanus*), a species proposed for listing as threatened, may also be adversely affected. The following comments are based on a review of the *Natural Environment Study/Biological Assessment, Merced Campus Parkway* (BA) dated April 2001, and the *Conceptual Mitigation Plan, Merced Campus Parkway* dated April 2002.

The Service has not received all of the information necessary to initiate formal consultation on this project as outlined in the regulations governing interagency consultations (50 CFR §402.14). To complete the initiation package, we require the following information:

1. Please provide a clearly written, complete, and precise project description. We need to know how many lanes the project is going to be. How wide (in feet and meters) will the traffic lanes, bike lanes, divided median, sidewalk, and any right-of-ways be? There are three different possible alignments proposed and described in the BA. In order to analyze impacts from the project and determine how the project may affect listed species, we need to know which alternative to consult on.

2. Include an aerial map that shows where rare, threatened, and endangered species have been documented in, and on lands adjacent to, the project action area. The map should be large enough to show habitat type. Overlay the project footprint on the map. Habitat types should be labeled on

the map (i.e. agriculture, grazing, residential, etc). For lands in agriculture specify what the use is. I have included copies of recent California Natural Diversity Database occurrences, which are lacking in the *Description of Biotic Resources* chapter of the BA, for the San Joaquin kit fox.

3. Include a table listing the different habitat types found throughout the project area and an approximation of acreage for each. List the characteristics used to define the habitat type.

4. Please provide additional descriptions and analysis of the specific manner in which the proposed action may affect the San Joaquin kit fox. The effects include, but are not limited to, mortality, harassment, disrupted reproduction and/or loss of reproduction, loss of forage and/or foraging potential, loss of shelter/dens, vehicular strikes, sensitivity to noise and vibrations, and increased predation.

5. Include a time line for construction, months that construction is expected to occur in, and hours in which project related activities will take place.

6. Will biologists conduct an employee orientation and education program for all project personnel? Who will facilitate the program? We recommend that the program include a discussion of the occurrence and distribution of listed species and other sensitive resources in the project area, measures being implemented to protect these sensitive resources, and applicable definitions and prohibitions under State and Federal endangered species acts. We request an orientation be videotaped and sent to the Service within the first week of construction.

The Service is charged with the responsibility of implementing the Act, and is authorized to determine whether an action will impact threatened and endangered species. Hence, we may seek additional minimization and compensation measures during formal consultation unless the applicant revises the proposed project to better avoid, minimize, and/or offset project impacts to the San Joaquin kit fox and its habitat.

Until we receive all of the information, the Service will not begin the formal consultation process for the project. We will notify your office when we receive this additional information. If we have not received this information within 30 days of the date of this letter, we no longer track this action as an active endangered species consultation. Reinitiation of consultation will require a letter from you that includes the requested information.

If you have any questions or concerns about this consultation or the consultation process in general, please contact Karen Harvey or Susan Jones of the Sacramento Fish and Wildlife Office at (916) 414-6600.

Sincerely,

Cliff Weagen

for Jan C. Knight
Chief, Endangered Species Division

Enclosures

cc:
USFWS, Sacramento Field Office, California (Attn: Mark Littlefield)
California Department of Fish and Game, Fresno, California (Attn: Bill Loudermilk)

California Native Species Field Survey Form

Mail to:
Natural Diversity Database
California Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Species Found? ☑ yes ☐ no _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Howard Clark, Jr.
Address: 1910 N Gateway Blvd., #101
Fresno, CA 93727

Email Address: bolnik@esrp.org
Phone: (559) 453-1103

Plant Information

Phenology: 100.00 % vegetative _____ % flowering _____ % fruiting

Animal Information

Age Structure: 1 # adults _____ # juveniles _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ roosting ☐ resting ☑ other

Location *(please also attach or draw map on back)*

County: Merced Landowner / Mgr.: Ishurd Ranch

Quad Name: Planada Elevation: 225 ft

T 7 S R 13 E SW 1/4 of SW 1/4 of Section 32 T ____ R ____ ____ 1/4 of ____ 1/4 of Section ____

UTM: Zone: 11 (10, 11) Datum: _____ (NAD83, NAD27, WGS84, other)

Source: GPS (GPS, map & type, etc.) Point Accuracy: 10 Meters

UTM Coordinates 0732481 4136380

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope)*
Excellent habitat - mix of native and non-native grasses and annuals. No shrubs. A network of canals and dry streams run through the landscape. It's currently being grazed by cattle. Coyotes are present in the area.

Other rare species? Burrowing Owl, badger

Site Information Overall site quality: ☑ Excellent ☐ Good ☐ Fair ☐ Poor

Current / surrounding land use: Ranch land, grazed

Visible disturbances / possible threats: coyotes

Comments: Fox was spotted by Howard Clark and Debbie Smith during fox surveys in Eastern Merced Co. Got excellent looks at it. Appeared to be an adult. No other foxes seen in the area. Cheryl Johnson of CALTRANS spotted 3 foxes several miles to the west of this area in June 2001.

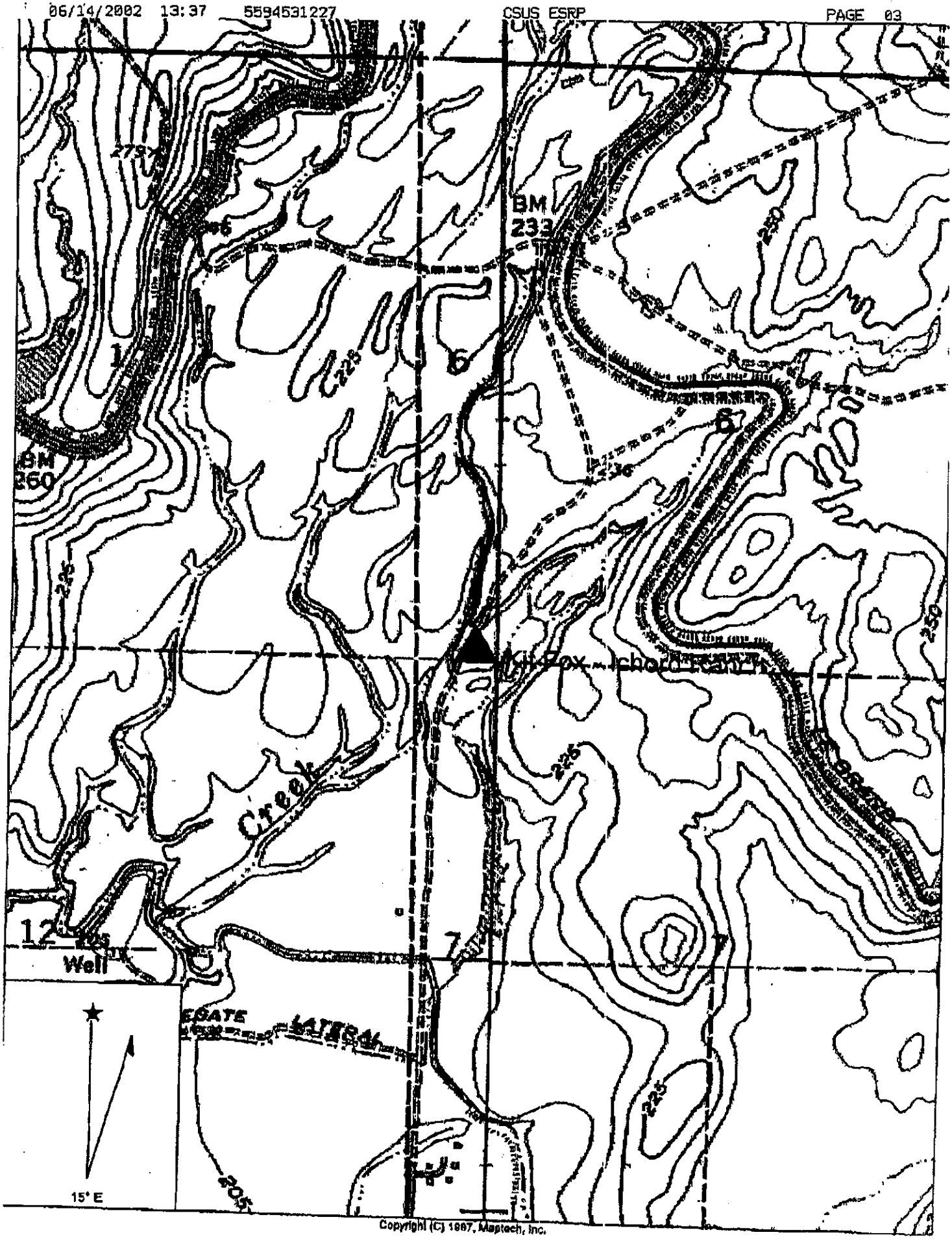
Determination: *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☑ Other: experience

Photographs: *(check one or more)*

	Slide	Print
Plant / animal	☐	☐
Habitat	☐	☑
Diagnostic feature	☐	☐

May we obtain duplicates at our expense? ☑ yes ☐ no

FGW/HDAB/1747 Rev.1186



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California Native Species Field Survey Form

Mail to:
Natural Diversity Database
California Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: 05 (month (mm)) - 03 (date (dd)) - 2001 (year (yyyy))

Scientific Name: Vulpes macrotis mutica

Common Name: San Joaquin kit fox

Species Found? ☑ yes ☐ no _____ If not, why?

Total No. Individuals 2 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ (Yes, Occ. #) ☑ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Tamra M. Nunes, Cheryl D. Johnson - Caltrans Biologists
Address: 2015 E. Shields Ave., #100
Fresno, CA 93726

Email Address: Tamra_Nunes@dot.ca.gov/Cheryl_Johnson@dot.ca.go
Phone: ( ) 243-8204/-8202

Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information

Age Structure: 2 # adults _____ # juveniles _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ resting ☐ other

Location ***(please also attach or draw map on back)***
Mariposa Road, about 0.25 mi east of intersection with Whoalan Road. Animals appeared to be foraging in furrows of an almond orchard.

County: Merced Landowner / Mgr.: Private
Quad Name: Planada Elevation: ~210 ft.
T ____ R ____ ____ 1/4 of ____ 1/4 of Section ____ T ____ R ____ ____ 1/4 of ____ 1/4 of Section ____
UTM: Zone: 10 (10, 11) Datum: NAD83 (NAD83, NAD27, WGS84, other)
Source: GPS (GPS, map & type, etc.) Point Accuracy: _____ Meters
UTM Coordinates 10 S 0736035, 4126055

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope)*
Almond orchard with alfalfa to the west of the road.

Other rare species?

Site Information Overall site quality: ☐ Excellent ☐ Good ☑ Fair ☐ Poor

Current / surrounding land use: Agriculture, almond orchard, alfalfa.

Visible disturbances / possible threats: Agricultural practices (orchard maintenance, pesticides, etc.).

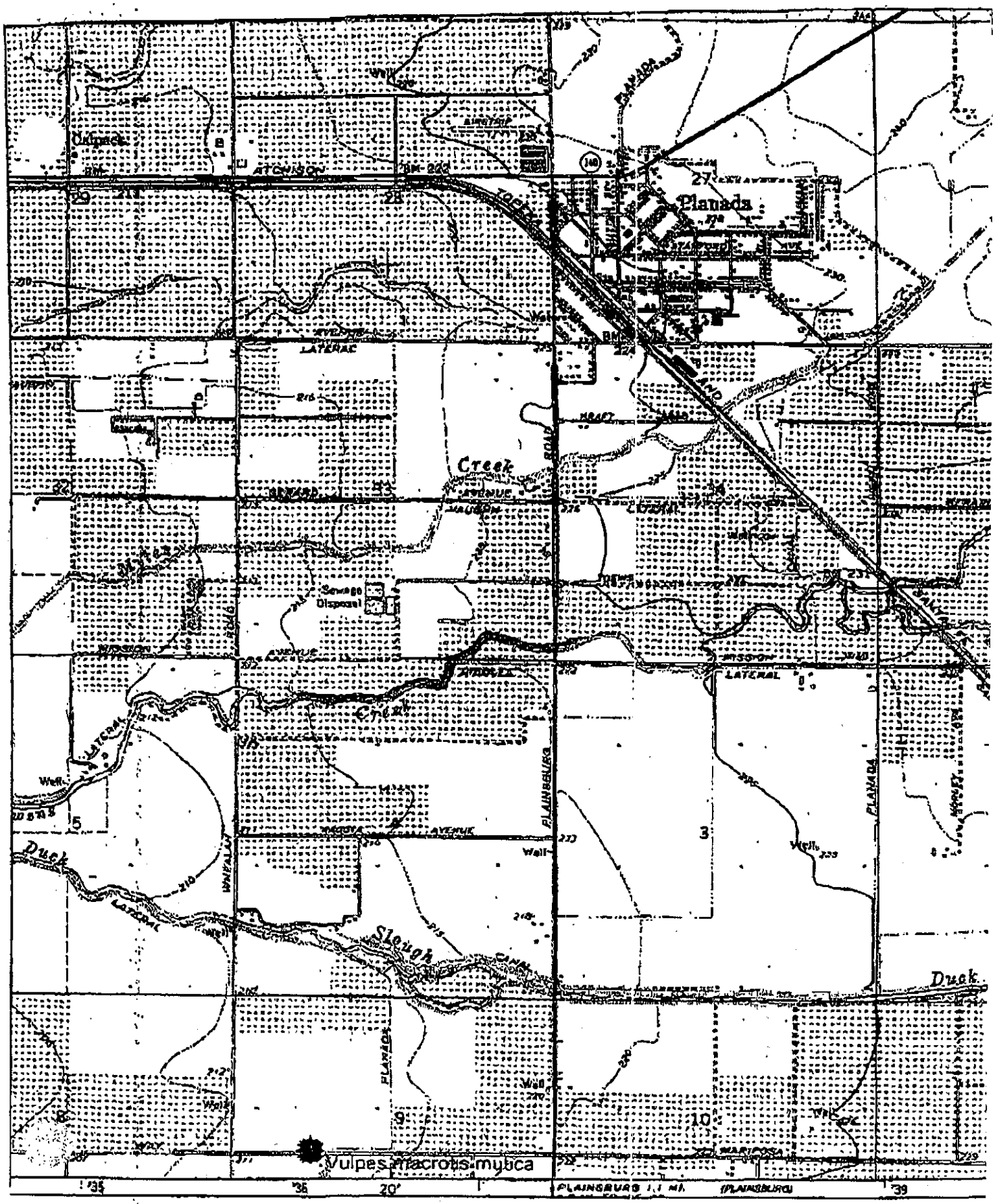
Comments:

Determination: *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print
Plant / animal	☐	☐
Habitat	☐	☐
Diagnostic feature	☐	☐

May we obtain duplicates at our expense? ☐ yes ☐ no



Name: PLANADA
Date: 5/8/101
Scale: 1 inch equals 2000 feet

Location: 10 736919 4128836
Caption: San Joaquin Kit Fox Sighting
Tamra M. Nunes
Cheryl D. Johnson

California Native Species Field Survey Form

Mail to:
Natural Diversity Database
California Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: 4 (month (mm)) - 18 (day (dd)) - 2001 (year (yyyy))

Scientific Name: Vulpes macrotis mutica

Common Name: San Joaquin kit fox

Species Found? ☑ yes ☐ no _____ If not, why?

Total No. Individuals _____ Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ (Yes, Occ. #) ☑ no ☐ unk.

Collection? If yes: _____ (Number) _____ (Museum / Herbarium)

Reporter: Cheryl D. Johnson - Caltrans Associate Biologist
Address: 2015 E. Shields Ave., #100
Fresno, CA 93726
Email Address: Cheryl_Johnson@dot.ca.gov
Phone: (559) 243-8202

Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information

Age Structure: 1 # adults _____ # juveniles _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ roosting ☐ nesting ☐ other

Location ***(please also attach or draw map on back)***

On Cunningham Road, about 6 mi south of intersection with State Route 140, and about 1/4 mi north of intersection with Santa Fe Avenue in Le Grand.

County: Merced Landowner / Mgr.: Private

Quad Name: Plainsburg Elevation: 253 feet

T _____ R _____ _____ 1/4 of _____ 1/4 of Section _____ T _____ R _____ _____ 1/4 of _____ 1/4 of Section _____

UTM: Zone: 10S (10, 11) Datum: NAD83 (NAD83, NAD27, WGS84, other)

Source: GPS (GPS, map & type, etc.) Point Accuracy: _____ Meters

UTM Coordinates 10S 0743703.4125148

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspect/slope)*

Almond orchards, annual grasses, vernal pool complex with associated species.

Other rare species?

Site Information Overall site quality: ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Current / surrounding land use: Annual Grassland w/vernal pool complex to the east of sighting; Agriculture (orchards) to the west. Some rural residential.

Visible disturbances / possible threats: Agricultural practices; residential w/dogs and cats.

Comments: Annual Grassland on east is contiguous, with intermixed rural residential, north to, and beyond, State Route 140. Contiguous Annual Grassland begins to the west, approximately 1.5 miles north of sighting.

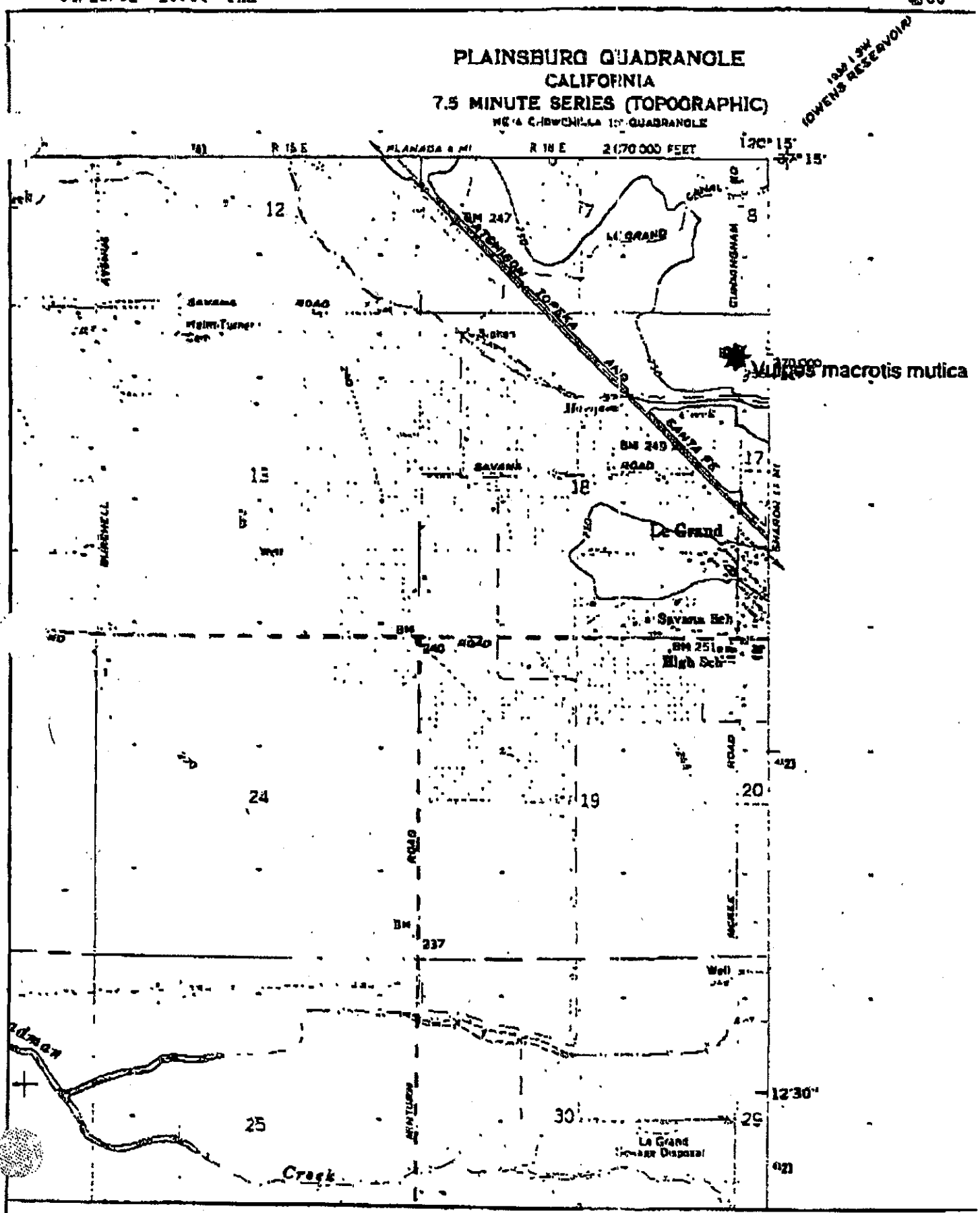
Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference):
☐ Compared with specimen housed at:
☐ Compared with photo / drawing in: _____
☐ By another person (name):
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print
Plant / animal	☐	☐
Habitat	☐	☐
Diagnostic feature	☐	☐

May we obtain duplicates at our expense? ☐ yes ☐ no



Name: PLAINSBURG
Date: 4/19/101
Scale: 1 inch equals 2000 feet

[redacted]

Department of the Interior logo

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Fish & Wildlife Service logo

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

March 21, 2006

Document Number: 060321053948

Corinna Lu
URS Corporation
1333 Broadway, Suite 800
Oakland, Ca 94612

Subject: Species List for Campus Parkway

Dear: Ms. Lu

We are sending this official species list in response to your March 21, 2006 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7Â½ minute quad or quads you requested. You have stated that this list is not for consultation with the Fish & Wildlife Service.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be June 19, 2006.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at www.fws.gov/sacramento/es/branches.htm.

Endangered Species Division

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, Governor

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-9624 Fax (916) 653-9824
calshpo@ohp.parks.ca.gov

February 26, 2002

Reply To: FHWA020109A

Michael G. Ritchie, Division Administrator
U.S. Department of Transportation
Federal Highway Administration
California Division
980 Ninth Street, Suite 400
Sacramento, CA 95814-2724

Re: Findings of National Register Eligibility for the Proposed Construction of the Campus Parkway, Merced County, CA

Dear Mr. Ritchie:

You have provided me with the results of your efforts to determine whether the area of potential effect (APE) for the undertaking described above contains historic properties. You have done this, and are consulting with me, in order to comply with Section 106 of the National Historic Preservation Act and implementing regulations codified at 36 CFR Part 800.

Buildings, Structures and Objects

The Federal Highway Administration (FHWA) has found that the following properties are not eligible for the National Register of Historic Places (NRHP):

- 3131 E Gerard Avenue, Merced, CA
- 3345 E Gerard Avenue, Merced, CA
- 3663 E Gerard Avenue, Merced, CA
- 3200 E Gerard Avenue, Merced, CA
- 392 S Coffee Street, Merced, CA
- Childs Avenue, APN 061-340-08, Merced, CA
- 3464, 3446, 3474 Childs Avenue, Merced, CA
- 3506 Childs Avenue, Merced, CA
- Childs Avenue, APN 061-340-15, Merced, CA
- 3397 Baker Street, Merced, CA
- 3421, 3431, 3445, 3457, 3461, 3463 Baker Street, Merced, CA
- 3370 Highway 140, Merced, CA
- 3185 Stretch Road, Merced, CA
- 3287 & 3297 Stretch Road, Merced, CA
- 3435 Stretch Road, Merced, CA
- 2924 E South Bear Creek Drive, Merced, CA
- 3237 E South Bear Creek Drive, Merced, CA
- 3313 E South Bear Creek Drive, Merced, CA
- 1435 Kibby Road, Merced, CA
- 2801 E North Bear Creek Drive, Merced, CA
- 3066 E North Bear Creek Drive, Merced, CA
- 3304 E North Bear Creek Drive, Merced, CA
- 3085 E Olive Avenue, Merced, CA
- 3149 E Olive Avenue, Merced, CA

- 3183 E Olive Avenue, Merced, CA
- 3611 E Olive Avenue, Merced, CA
- 2891 E Olive Avenue, Merced, CA
- 3180 E Olive Avenue, Merced, CA
- 2164 Leeds Road, Merced, CA
- 2831 Crown Road, Merced, CA
- 3515 E Yosemite Avenue, Merced, CA
- 2966 E Yosemite Avenue, Merced, CA
- 3758 Lake Road, Merced, CA
- 2901 E Highway 140, Merced, CA
- 3106 E Highway 140, Merced, CA
- 3142, 3158, 3160 E Highway 140, Merced, CA
- 3176 & 3180 E Highway 140, Merced, CA
- 521 & 523 Moomjean Avenue, Merced, CA
- 3700 E Highway 140, Merced, CA
- 3704, 3724, 3728 E Highway 140, Merced, CA
- 590 Dell Street, Merced, CA
- 572, 585, 590, seven unaddressed Dell Street, Merced, CA
- 490 Dell Street, Merced, CA
- 3800, 3830-3850 E Highway 140, Merced, CA
- 3880 E Highway 140, Merced, CA
- 521 N Easy Street, Merced, CA
- 496 N Easy Street, Merced, CA
- 510 N Easy Street, Merced, CA
- 3962 E Highway 140, Merced, CA
- 541 Kibby Road, Merced, CA
- Le Grand Canal
- Fairfield Canal
- Tower Lateral
- Sells Lateral
- Yosemite Lateral
- Bradley Lateral
- Merced Lateral
- Robinson Lateral
- Hartley Lateral
- Doane Lateral
- Burlington Northern-Santa Fe Railroad

The FHWA has also found that the Sunshine Dairy, located at 3223 E Childs Avenue in Merced is eligible for the NRHP under criteria A and C at the local level of significance. The period of significance dates from 1927 to 1950. Under criterion A, the dairy is significant as a rare surviving example of the early generations of dairies in this area. Under criterion C, the property is significant architecturally as both an example of dairy operations from the 1920s and 1930s and also for its distinctiveness as a Mission Revival complex of farm buildings. This complex is important because it includes a large number of different types of buildings from the 1920s and 1930s. The loaf barn and the concrete hay storage structure are non-contributors to the dairy complex. The rest of the buildings that make up the complex are considered to be contributors.

Based on review of the submitted documentation, I concur with the foregoing FHWA findings.

Archeology

- The records search for the subject undertaking was done on December 5, 1998 at the Central California Information Center (CCIC File No. 33051) for fieldwork that was conducted in June and October of 2000 and reported on in June 2001. Please indicate why FHWA did not update the original record search information to better inform the effort to identify historic properties in this undertaking's APE.

- The descriptions of the field methods for the original (June 2001 *Archaeological Survey Report: Merced Campus Parkway*) and addendum (October 2001 *Archaeological Survey Report—Addendum 1: Merced Campus Parkway*) archaeological surveys do not provide clear statements on the extent or the location of the areas in the APE where ground visibility was "less than optimal." I would like to know where these areas are, what the ground visibility was in each of them, and why, with reference to the results of the record search and local geomorphology, the examination of "recent rodent burrows and any ground disturbances" is adequate information on which to base assessments that historic properties of an archaeological nature are not present in these areas.

Thank you for considering historic properties during project planning. If you have any questions, please call Natalie Lindquist at (916) 654-0631 and e-mail at nlind@ohp.parks.ca.gov or Mike McGuirt at (916) 653-8920 and e-mail at mmcguirt@ohp.parks.ca.gov.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

STATE OF CALIFORNIA – THE RESOURCES AGENCY

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.cal-parks.ca.gov

GRAY DAVIS, *Governor*

1 October 2002

In Reply Refer To
FHWA020109A

Gary N. Hamby
Division Administrator
California Division
Federal Highway Administration
980 Ninth Street, Suite 400
Sacramento, California 95814-2724

RE: HDA-CA, FILE NO. 10-MER-0-CR / E.A.10-4A0701, DOCUMENT NO. P41000 [FURTHER SECTION 106 CONSULTATION ON THE PROPOSED CONSTRUCTION OF CAMPUS PARKWAY, CITY OF MERCED, MERCED COUNTY]

Dear Mr. Hamby,

The purpose of this letter is to respond to the additional information that the Federal Highway Administration (FHWA) sent me on the subject undertaking. My comments here are made pursuant to 36 CFR Part 800, the regulations that implement Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f), as amended.

On the basis of my review of your 14 August 2002 letter and enclosures, I am now able to concur that the FHWA's effort to identify historic properties in the undertaking's APE is adequate pursuant to 36 CFR § 800.4(b)(1).

Please direct any questions or concerns that you may have to Project Review Unit archaeologist Mike McGuirt at 916.653.8920 or at mmcguirt@ohp.parks.ca.gov.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

WKM:mdm

RECEIVED
OCT 07 2002
FHWA

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
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calshpo@ohp.parks.ca.gov
www.ohp.cal-parks.ca.gov

3 April 2003

In Reply Refer To
FHWA020109A

Gary N. Hamby
Division Administrator
California Division
Federal Highway Administration
980 Ninth Street, Suite 400
Sacramento, California 95814-2724

RE: HDA-CA, FILE NO. 10-MER-0-CR, DOCUMENT NO. P43831 [FURTHER SECTION 106 CONSULTATION ON THE PROPOSED CONSTRUCTION OF CAMPUS PARKWAY, CITY OF MERCED, MERCED COUNTY]

Dear Mr. Hamby,

This letter is a response to your request that I review the September 2002 *Historic Property Survey Report: Yosemite Avenue and Lake Road Connection–Merced Campus Parkway* (HPSR) for the subject undertaking. Your request and my comments here are made pursuant to 36 CFR Part 800, the regulations that implement Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f), as amended.

You request in your letter of 11 March 2003 that I concur with the adequacy, pursuant to 36 CFR § 800.4(a)(1), of the Federal Highway Administration's (FHWA) determination and documentation of a 4 June 2002 addition to the undertaking's original area of potential effects (APE), and with the adequacy of the HPSR.

On the basis of my review of the HPSR, I concur that the FHWA's effort to determine and document the subject addition to the undertaking's original APE is adequate pursuant to 36 CFR § 800.4(a)(1). I understand the addition to be the area described in the *1. Highway Project Description* section of the Negative Archaeological Survey Report (Negative ASR) that is Attachment 1 to the HPSR and depicted in Figure 3 (*Campus Parkway Project: Addition to APE*) of the Negative ASR.

I further concur that the FHWA's effort to identify historic properties in the 4 June 2002 addition to the undertaking's original APE is adequate pursuant to 36 CFR § 800.4(b).

Please direct any questions or concerns that you may have to Project Review Unit archaeologist Mike McGuirt at 916.653.8920 or at mmcguirt@ohp.parks.ca.gov.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

WKM:mdm

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov

June 19, 2003

Reply To: FHWA020109A

Gary Hamby, Division Administrator
U.S. Department of Transportation
Federal Highway Administration
California Division
980 Ninth Street, Suite 400
Sacramento, CA 95814-2724

Re: Determination of Effect for the Proposed Construction of the Campus Parkway, Merced County, CA [HAD-CA, FILE # 01-MER-0-CR, RPHP21L, 0484(001), DOCUMENT # P43840]

Dear Mr. Hamby:

The Federal Highway Administration (FHWA) is proposing to construct a north-south direction expressway between State Route 99 and Yosemite Avenue in eastern Merced County, CA. The FHWA is consulting with me about this undertaking in order to comply with Section 106 of the National Historic Preservation Act and implementing regulations codified at 36 CFR Part 800.

The Sunshine Dairy was previously determined eligible for the National Register of Historic Places (NRHP). The FHWA has determined that the proposed undertaking will have no adverse effect on historic properties. The project would take a sliver of the northeastern corner of a dairy parcel to provide room to widen Childs Avenue, relocate a segment of the Harley Lateral running between Childs Avenue and the dairy parcel to accommodate the widening of Childs Avenue, and install a signalized intersection in the Campus Parkway and Childs Avenue. These actions would have no adverse effect on the Sunshine Dairy's significance as a historic resource.

Based on review of the submitted documentation, I concur that the proposed undertaking will have no adverse effect on historic properties.

Thank you for considering historic properties during project planning. If you have any questions, please call Natalie Lindquist at (916) 654-0631 and e-mail at nlind@ohp.parks.ca.gov.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

MERCED COUNTY

DEPARTMENT OF PUBLIC WORKS

Paul A. Fillebrown
Director

715 Martin Luther King Jr. Way
Merced, CA 95340-6041
(209) 385-7602
(209) 725-3989 Fax
www.co.merced.ca.us

Building Services
Countywide Transit
Parks and Recreation
Road
Fleet Management
County Surveyor
Solid Waste
Professional Services
Building & Safety

Equal Opportunity Employer

September 14, 2004

Mr. Steven E. Rough
Merced County Department of Public Works
345 W. 7th Street
Merced, CA 95340

Dear Mr. Rough:

This letter is to verify consultation and review of the Floodplain Impact Analysis for the Campus Parkway Project.

The Merced County Department of Public Works, Administration Division serves as the Floodplain Administrator for Merced County.

This function includes the administration of the Merced Streams Group, local sponsor for the State of California Department of Water Resources (DWR) Flood Control Projects, Local sponsor for the Army Corps of Engineers (ACOE) Flood Control Projects, local administration of the National Flood Insurance Program and administration of the County of Merced Special Flood Hazard Ordinance #1654.

We have reviewed the administrative Draft EIS-EIR for the campus Parkway Project and the September 2001 Floodplain Risk Assessment and Location Hydraulic Study prepared for Caltrans by URS.

It is our opinion that the Campus Parkway Project will have no significant impact on the surrounding floodplain, the existing base flood elevations as well as the ACOE and DWR flood control features located in the project area.

Please contact me if you have any questions regarding this review.

Very truly yours,

Curt Royer
Administrative Engineer

CLR:ant

M:\Word Files\LETTERS\FILES\CampusPkwyPrjSteveRoughLtr04.doc

STRIVING FOR EXCELLENCE

Merced County Association of Governments

369 W. 18th Street • Merced, CA 95340 • Phone (209)723-3153 • FAX (209)723-0322

MEMORANDUM (by email)

DATE: November 18, 2005
FROM: Matt Fell, Senior Planner
TO: Jeff Zimmerman, URS Corporation
CC: Steve Rough, Merced County Public Works

SUBJECT: Traffic Model Land Use Assumptions

This memo is a follow-up to our phone conversation in which you asked about the land use assumptions included in MCAG's regional traffic model. Specifically, the area in and around the City of Merced's industrial park in the southeastern portion of the city. This area of land south of Highway 140, north of Mission Ave., and east of the Doane and Hartley laterals, is designated by the City of Merced's General Plan for Manufacturing or Industrial uses.

First, some brief background. As you know, MCAG performs a number of forecasting activities. We forecast regional population, housing, and employment growth. We also produce forecasts for each city and community in the county. Finally, we produce forecasts of dwelling units and employment in six categories for the 500 "traffic analysis zones" (TAZs) in our regional traffic model. The model was created under federal mandates and is used primarily for regional planning purposes. But it is also often used for background traffic numbers in traffic studies and cumulative impact studies for individual development or transportation project proposals.

Now to the area in question. For many years, MCAG has assumed substantial growth in industrial use in this area. Briefly, this is because it has long been designated by the City of Merced as industrial, and most of the "capacity" for industrial growth is in this area.

The industrial park spans portions of three TAZs in the regional traffic model. 2,800 new industrial-sector jobs are assumed in these TAZs from 2000 and 2025. This assumption has existed in the model for at least ten years. We update the land use every few years, but have not needed to make major changes in this area. This is standard procedure. Development project proposals are documented in project-specific analyses which are the responsibility of the project proponent – they do not make it into the regional traffic model unless/until there is a major change in formal land use designations via a General Plan adoption or amendment. Often we find that development projects are in accordance with planned uses and we need make no adjustment. Also important to note is that actual construction is tracked and reviewed. Where deviations occur between the forecast and actual growth, appropriate adjustments are made. For example, if an area develops faster than was forecast, the assumed growth may be "front-loaded" into earlier years and/or the long-range forecast may be adjusted upward. In the area of the industrial park, no such adjustments have been needed or made in many years.

In conclusion, assumptions about the character and size of cumulative growth in the industrial park area have not changed and I don't believe any changes need be made to traffic analyses which were based on them.

I hope this helps answer your question. If I can be of further assistance please contact me at 209-723-3153 x320 or via email at "matt@mcag.cog.ca.us"

Merced County Association of Governments

369 W. 18th Street • Merced, CA 95340 • Phone (209)723-3153 • FAX (209)723-0322

MEMORANDUM

DATE: June 16, 2006

TO: Interagency Consultation Partners

FROM: Matthew Fell, Senior Planner

SUBJECT: Consultation on PM 2.5 Hot-spot Conformity Assessment for the Campus Parkway project.

The Merced County Association of Governments is providing the following PM 2.5 Hot-spot Conformity assessment of the Campus Parkway project in Merced County for Inter-agency Consultation. It is requested that the Inter-agency Consultation Partners concur that the project is not a "Project of Air Quality Concern" (POAQC).

Project Description:

The Merced County Department of Public Works, in cooperation with the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), proposes to construct a new four-lane expressway on the east side of the City of Merced, California. The alternatives are all located between the proposed State Route 99 (SR 99) Mission Avenue interchance and Yosemite Avenue and Lake Road.

PM2.5 Hot-spot Conformity Requirements: The Campus Parkway project is in the San Joaquin Valley PM2.5 non-attainment area. According to the Environmental Protection Agency (EPA) Transportation Conformity Guidance, PM 2.5 hot-spot analysis is required for Projects of Air Quality Concern (POAQC) in non-attainment areas, according to 40 CFR 93.123 (b) (1). Projects that are exempt or not POAQC do not require hot-spot analysis.

According to the EPA Transportation Conformity Guidance (final Rule), March 10 2006, the following are the projects of air quality concern:

1. New or expanded highway projects with greater than 125,000 Annual Average Daily Traffic (AADT) and 8% or more of such AADT is diesel truck traffic;
2. New or expanded highway projects that affect a transportation facility at a level of Service D, E, F, or will become a Level of Service D, E, and F;
3. New or expanded highway projects that will significantly increase the amount of diesel truck traffic.

PM 2.5 Hot-spot Conformity Assessment:

AADT for Campus Parkway South of SR 140

Year	AADT	10% Trucks
2010	6,500	650
2030	18,900	1,890

AADT for Campus Parkway North of SR 140

Year	AADT	10% Trucks
2010	8,900	890
2030	25,000	2,500

The project will not exceed the AADT threshold through 2030. The project will improve the Level of Service at some intersections. The project will relieve congestion and provide air quality improvement.

Based on the above, the County of Merced, as a project sponsor, has completed this PM2.5 assessment and has determined that this project is not a "Project of Air Quality Concern", therefore, no further analysis is required.

If you have any further questions, please contact me at 209-723-3153 x320 or "matt@mcag.cog.ca.us"

Sincerely,

Matthew Fell

Matthew Fell
Senior Planner

To:
"Dennis Wade" <dwade@arb.ca.gov>,
"Jeff Lindberg" <jlindber@arb.ca.gov>,
"Cari Anderson" <cari@caconsulting.org>,
"Christina Lehn" <CLehn@co.kings.ca.us>,
"Terri King" <TKing@co.kings.ca.us>
"Dennis Mills" <dmills@co.tulare.ca.us>,
"Marvin Demmers" <MDemmers@co.tulare.ca.us>,
"Scott Cochran" <SCochran@co.tulare.ca.us>,
"Ted Smalley" <tsmalley@co.tulare.ca.us>,
<ewendt@cotulare.ca.us>,
"Cathy Gomes" <Cathy_Gomes@dot.ca.gov>,
"Mac Cavalli" <mac_cavalli@dot.ca.gov>,
"Mike Brady" <mike_brady@dot.ca.gov>,
<penny.gray@dot.ca.gov>,
<rachel.falsetti@dot.ca.gov>,
"Sally Rodeman" <Sally_Rodeman@dot.ca.gov>,
<Steve_Curti@dot.ca.gov>,
"Doris Lo" <lo.doris@epa.gov>,
"David Wampler" <wampler.david@epa.gov>,
"Karina O'Connor" <OConnor.Karina@epamail.epa.gov>,
"Leigh Levine" <Leigh.Levine@fhwa.dot.gov>,
"Mayela Sosa" <Mayela.Sosa@fhwa.dot.gov>,
"Steve Luxenberg" <Steve.Luxenberg@fhwa.dot.gov>,
"Jason Paukovits" <jasonp@fresnocog.org>,
"Kristine Cai" <kcai@fresnocog.org>,
"Mike Bitner" <mbitner@fresnocog.org>,
<alex.smith@fta.dot.gov>,
<ted.matley@fta.dot.gov>
"Renee DeVere" <rdevere@fresnocog.org>,
CC:
"Barbara Goodwin" <bgoodwin@fresnocog.org>,
"Bill Zumwalt" <BZumwalt@co.kings.ca.us>,
"George Finney" <gfinney@co.tulare.ca.us>,
"Ron Brummett" <RBrummett@kerncog.org>,
"Patricia Taylor" <patricia@maderactc.org>,
"Jesse B Brown" <jesse@mcag.cog.ca.us>,
"Andy Chesley" <achesley@sjcog.org>,
"Vince Harris" <vharris@stancog.org>

Interagency Consultation Partners
Response to Consultation Request on Campus Parkway $PM_{2.5}$
Hot Spot Conformity Assessment

A $PM_{2.5}$ hot spot assessment was completed for the Campus Parkway Project. An interagency consultation memo (see the preceding letter from Merced County Association of Governments, dated June 16, 2006) was prepared documenting that the project is not a "Project of Air Quality Concern." The memo was transmitted to the San Joaquin Valley Transportation Director's Association Model Coordinating Committee via e-mail for review and concurrence on July 25, 2006. The San Joaquin Valley Unified Air Pollution Control District, the Federal Highway Administration, and the U.S. Environmental Protection Agency concurred with the assessment. No additional interagency comments were received. The concurring e-mail correspondence listed below follows this page:

- Lauren Dawson, San Joaquin Valley Unified Air Pollution Control District, dated (incorrectly) January 9, 2006, forwarded on August 8, 2006
- Steven Luxenberg, Federal Highway Administration, sent July 28, 2006
- Karina O'Connor, U.S. Environmental Protection Agency, forwarded August 8, 2006

"Steven Rough"
<SRough@co.merced.ca.us>

08/08/2006 01:58 PM

To "Jeff Zimmerman" <Jeff_Zimmerman@URSCorp.com>
cc
bcc
Subject Fwd: FW: Interagency Consultation Draft PM2.5 Conformity Analysis

>>> "Cari Anderson" <cari@caconsulting.org> 8/8/2006 >>>

Copy of District concurrence...

Cari Anderson Consulting
1023 E Montebello Ave
Phoenix, AZ 85014
P 602.277.1640
F 602.277.1664

-----Original Message-----
From: Lauren Dawson [mailto:Lauren.Dawson@valleyair.org]
Sent: Monday, January 09, 2006 11:00 AM
To: Matt Fell (E-mail)
Cc: Cari Anderson (E-mail)
Subject: Re: Interagency Consultation Draft PM2.5 Conformity Analysis

Good Morning Matt,

In order to comply with the requirements for interagency consultation, the
San Joaquin Valley Air Pollution Control District has received and reviewed
your Draft PM2.5 Air Quality Conformity Analysis. I found no areas for
comment or suggestions for changes. Thank you for the opportunity to review
your document.

Lauren Dawson
Air Quality Specialist
Plan Development

San Joaquin Valley Air Pollution Control District 1990 E. Gettysburg Ave.
Fresno, CA 93726-0244
(559) 230-5846
lauren.dawson@valleyair.org

"Steven Rough"
<SRough@co.merced.ca.us>

08/08/2006 01:57 PM

To "Jeff Zimmerman" <Jeff_Zimmerman@URSCorp.com>
cc
bcc
Subject Fwd: FW: IAC Memo for Campus Parkway in Merced County

>>> "Cari Anderson" <cari@caconsulting.org> 8/8/2006 >>>

A copy of the FHWA concurrence...

Cari Anderson Consulting
1023 E Montebello Ave
Phoenix, AZ 85014
P 602.277.1640
F 602.277.1664

-----Original Message-----
From: Luxenberg, Steve [mailto:Steve.Luxenberg@fhwa.dot.gov]
Sent: Friday, August 04, 2006 7:41 AM
To: Cari Anderson
Cc: Karina O'Connor
Subject: FW: IAC Memo for Campus Parkway in Merced County

See below.

Steven Luxenberg, AICP
Air Quality Specialist
Federal Highway Administration
California Division
650 Capitol Mall, Suite 4-100
Sacramento, CA 95814
Phone: 916-498-5066
Fax: 916-498-5008
steve.luxenberg@fhwa.dot.gov

-----Original Message-----
From: Luxenberg, Steve
Sent: Friday, July 28, 2006 4:10 PM
To: 'Matthew Fell'
Cc: dwade@arb.ca.gov; Mike Brady; Karina O'Connor
(oconnor.karina@epa.gov);
Lauren Dawson
Subject: RE: IAC Memo for Campus Parkway in Merced County

Matt,
FHWA concurs that the Merced Campus Parkway project is not a project of air
quality concern that would require a qualitative analysis. Recall that once
there is a consensus among the interagency consultation partners, and the

public comment period has concluded, any comments will need to be addressed
and FHWA will need a letter requesting a project-level conformity determination for those projects that have already completed NEPA. Then,
FHWA will send a conformity determination letter to each requesting agency.
For projects that have not yet completed NEPA, the project-level conformity
determination will be taken care of through the NEPA approval process.

Steve

Steven Luxenberg, AICP
Air Quality Specialist
Federal Highway Administration
California Division
650 Capitol Mall, Suite 4-100
Sacramento, CA 95814
Phone: 916-498-5066
Fax: 916-498-5008
steve.luxenberg@fhwa.dot.gov

-----Original Message-----
From: Matthew Fell [mailto:MFell@mcag.cog.ca.us]
Sent: Tuesday, July 25, 2006 11:22 AM
To: dwade@arb.ca.gov; jlindber@arb.ca.gov; CLehn@co.kings.ca.us; tking@co.kings.ca.us; twebster@co.kings.ca.us; DMills@co.tulare.ca.us; Ewendt@co.tulare.ca.us; MAHays@co.tulare.ca.us; MDemmers@co.tulare.ca.us; tsmalley@co.tulare.ca.us; agnes_jenkins@dot.ca.gov; annette_clark@dot.ca.gov; cathy_gomes@dot.ca.gov; john_gedney@dot.ca.gov; juven.alvarez@dot.ca.gov; Mike_Brady@dot.ca.gov; penny.gray@dot.ca.gov; Rachel.falsetti@dot.ca.gov; steve_curti@dot.ca.gov; Lo.Doris@epamail.epa.gov; OConnor.Karina@epamail.epa.gov; Levine, Leigh; Sosa, Mayela; Luxenberg, Steve; beshears@fresnocog.org; jasonp@fresnocog.org; kcai@fresnocog.org; mbitner@fresnocog.org; rdevere@fresnocog.org; Alex.smith@fta.dot.gov; Ted.Matley@fta.dot.gov; JStramaglia@kerncog.org; MBeardslee@kerncog.org; RBall@kerncog.org; rpacheco@kerncog.org; zliu@kerncog.org; bob@maderactc.org; derek@maderactc.org; patricia@maderactc.org; Matthew Fell; dkochman@sjcog.org; ito@sjcog.org; Jswanson@sjcog.org; kkloeb@sjcog.org; Babanathie@StanCOG.org; LarkDowns@StanCOG.org; skaur@StanCOG.org; Vangelino@StanCOG.org; Donald.Hunsaker@valleyair.org; lauren.dawson@valleyair.org; tom.jordan@valleyair.org
Cc: bzumwalt@co.kings.ca.us; gfinney@co.tulare.ca.us; bgoodwin@fresnocog.org; Jesse Brown; achesley@sjcog.org; Cowell@sjcog.org; VHarris@StanCOG.org; robrumm@zeus.kern.org
Subject: Re: IAC Memo for Campus Parkway in Merced County (withattachment
this time)

Interagency Consultation Partners:

MCAG is providing on behalf of the County of Merced, the attached PM 2.5
Hot-spot Conformity Assessment of the proposed Campus Parkway project. A
PM2.5 hot-spot assessment is necessary to move the project forward.

The County of Merced has determined that the project is NOT a "Project of
Air Quality Concern" (POAQC).

The interagency consultation partners are requested to reply to this email
to confirm their concurrence by noon on Tuesday, August 2, 2006.
A conference call will be conducted upon request. Please contact me if you
have questions or need additional information.

Thank you.

Matt Fell
Senior Planner
Merced County Association of Governments (MCAG)
369 West 18th Street, Merced CA 95340
209-723-3153 ext. 320

"Steven Rough"
<SRough@co.merced.ca.us>

08/08/2006 01:57 PM

To "Jeff Zimmerman" <Jeff_Zimmerman@URSCorp.com>
cc
bcc
Subject Fwd: FW: IAC Memo for Campus Parkway in Merced County (with attachment this time)

>>> "Cari Anderson" <cari@caconsulting.org> 8/8/2006 >>>

A copy of the EPA concurrence...

Cari Anderson Consulting
1023 E Montebello Ave
Phoenix, AZ 85014
P 602.277.1640
F 602.277.1664

-----Original Message-----
From: OConnor.Karina@epamail.epa.gov
[mailto:OConnor.Karina@epamail.epa.gov]

Sent: Friday, August 04, 2006 8:48 AM
To: cari@caconsulting.org
Cc: steve.luxenberg@fhwa.dot.gov
Subject: Re: IAC Memo for Campus Parkway in Merced County (with attachment
this time)

fyi
----- Forwarded by Karina OConnor/R9/USEPA/US on 08/04/2006 08:47 AM

Karina OConnor

07/31/2006 11:17 AM

To: Matthew Fell <MFell@mcag.cog.ca.us>
cc:
Subject: Re: IAC Memo for Campus Parkway in Merced County (with attachment this time) (Document link: Karina OConnor)

EPA agrees that this project does not meet the criteria for "projects of air quality concern" as defined in the Transportation Conformity Rule and EPA guidance.

Matthew Fell

<MFell@mcag.cog.c To:
dwade@arb.ca.gov,
jlindber@arb.ca.gov, CLehn@co.kings.ca.us,
a.us> tking@co.kings.ca.us,
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penny.gray@dot.ca.gov, Rachel.falsetti@dot.ca.gov,

steve_curti@dot.ca.gov,
Doris Lo/R9/USEPA/US@EPA, Karina

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skaur@StanCOG.org, Vangelino@StanCOG.org,

Donald.Hunsaker@valleyair.org, lauren.dawson@valleyair.org,

tom.jordan@valleyair.org

cc:
bzumwalt@co.kings.ca.us, gfinney@co.tulare.ca.us,

bgoodwin@fresnocog.org,
Jesse Brown <jbrown@mcag.cog.ca.us>, achesley@sjcog.org,
Cowell@sjcog.org,

VHarris@StanCOG.org, robrumm@zeus.kern.org

Subject: Re: IAC Memo for Campus Parkway in Merced County (with attachment this time)

Interagency Consultation Partners:

MCAG is providing on behalf of the County of Merced, the attached PM 2.5 Hot-spot Conformity Assessment of the proposed Campus Parkway project. A PM2.5 hot-spot assessment is necessary to move the project forward.

The County of Merced has determined that the project is NOT a "Project of Air Quality Concern" (POAQC).

The interagency consultation partners are requested to reply to this email to confirm their concurrence by noon on Tuesday, August 2, 2006. A conference call will be conducted upon request. Please contact me if you have questions or need additional information.

Thank you.

Matt Fell
Senior Planner
Merced County Association of Governments (MCAG)
369 West 18th Street, Merced CA 95340
209-723-3153 ext. 320
(See attached file: IAC_CampusParkway.pdf)

IAC_CampusParkway.pdf

Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
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SACRAMENTO, CA 94273-0001
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Be energy efficient!

January 14, 2005

TITLE VI
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, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

WILL KEMPTON
Director

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Appendix C Section 4(f) Properties

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law as 49 United States Code 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl, and historic sites."

Section 4(f) specifies that "[t]he Secretary [of Transportation] may approve a transportation program or project…requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if—

(1) there is no prudent and feasible alternative to using that land; and

(2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use."

As noted in Section 3.11 of this Environmental Impact Statement, no designated public parks, recreation areas, or wildlife and waterfowl refuges lie within or adjacent to the study area of the Campus Parkway project. One property in the area of the proposed Campus Parkway project, the 1927 Sunshine Dairy on Childs Avenue, is eligible for the National Register of Historic Places and the California Register of Historic Resources. It is near the common alignment for all three of the proposed project alternatives. The dairy buildings are set back more than 300 meters (1,000 feet) from the proposed alignment, the property is geographically separated from Campus Parkway by the Doane Lateral canal, and vehicular use of the roadway at its proposed location would not affect the architecturally distinguishing characteristics of the buildings. No adverse impacts would occur to this property, or to any public parks, recreation areas, or wildlife and waterfowl refuges that might qualify as Section 4(f) properties.

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Appendix D Glossary of Technical Terms

This appendix briefly explains the technical terms and names used in this document. A list of acronyms appears directly before Chapter 1.

Best Management Practice (BMP)	Any program, technology, process, operating method, measure or device that controls, prevents, removes or reduces pollution.
Basin Plan	A specific plan for control of water quality within one of the nine hydrologic basins of the State under the regulation of a Water Quality Control Board.
Bypass	An arterial highway that permits traffic to avoid all or part of a certain area such as an urban area or park.
Conventional highway	A highway with no control of access roads onto the highway, which may or may not be divided or have grade separations at interchanges.
Cooperating Agency	An agency, other than the lead agency, that has jurisdiction by law or other expertise, which is formally involved in a proposed project.
Corridor	A strip of land between two termini within which traffic, topography, environment, and other characteristics are evaluated for transportation purposes.
Cumulative effects	Project effects that are related to other actions with individually insignificant but cumulatively significant impacts.
DBH	Diameter (of a tree) measured at breast height.
Decibel	A numerical expression of the relative loudness of a sound.
Draft EIS/EIR	Draft Environmental Impact Statement (federal), Environmental Impact Report (state).
Encroachment (floodplain)	An action within the limits of the 100-year floodplain.
Endangered	Plant or animal species that are in danger of extinction throughout all or a significant portion of its range.
Erosion	The wearing away of the land surface by running water, wind, ice, or other geological agents.
Expressway	An arterial highway with at least partial control of access, where limits are placed on number and type of intersecting streets, roads and driveways. An expressway may or may not be divided or have separations at intersections.

Federal Register	A federal publication that provides official notice of federal administrative hearings and issuance of proposed and final federal administrative rules and regulations.
Floodplain (100-year)	The area subject to flooding by a flood or tide that has a 1 percent chance of being exceeded in any given year.
Freeway	A divided arterial highway with full control of access and with grade separations at intersections.
Habitat	The place or type of site where a plant or animal naturally or normally lives and grows.
Hectare	A unit of surface measure in the metric system, equal to 10,000 square meters.
Initial Site Assessment (ISA)	A Caltrans term for an initial study to determine hazardous waste issues on a project.
LEDPA	Least Environmentally Damaging Practicable Alternative. The Clean Water Act Section 404(b)(1) (Alternatives Analysis) is a specific evaluation to determine the LEDPA to waters of the U.S. (including wetlands) while meeting the project purpose. A Section 404 Permit can only be issued for the LEDPA.
L_{eq}	A unit used for evaluation of sound impacts, L_{eq} is the measurement of the fluctuating sound level received by a receptor averaged over a time interval (usually 1 hour).
Level of Service (LOS)	A measurement of capacity of a roadway.
Median	The area of a divided highway that separates the traveled way for traffic in opposite directions.
Mitigation	Compensation for an impact by replacement or provision of substitute resources or environments. Mitigation can include avoiding an impact by not taking a certain action, minimizing impacts by limiting the degree of an action, or rectifying an impact by repairing or restoring the affected environment.
NEPA/Section 404 MOU process	Integration of NEPA and Section 404 of the Clean Water Act by FHWA, Caltrans, USEPA, USFWS, and USACE for transportation projects that also require regulatory approval under Section 404 of the Federal Clean Water Act.
NOD	Notice of Determination. A decision statement that indicates that a project has been approved subject to the requirements of CEQA.

NOI	Notice of Intent, part of the NEPA process. A notice placed in the Federal Register to advise the public that an environmental impact statement will be prepared for a project.
NOP	Notice of Preparation, part of the CEQA process. Notice sent to responsible agencies and others stating that an environmental impact report will be prepared for a project.
NPDES	National Pollutant Discharge Elimination System. A permit regulated by the Regional Water Quality Control Board that is required if more than 0.4 ha (1 acre) of original ground is graded. One condition of this permit is that the contractor submit a Storm water Pollution Prevention Plan (SWPPP), which is similar to the Water Pollution Control Plan required by Caltrans' Standard Specification 7-1.01G.
Practicable	An action that is capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.
Receptors	Term used in air quality and noise studies that refers to houses or businesses that could be affected by a project.
Regulatory agency	An agency that has jurisdiction by law.
Responsible agency	A public agency other than the Lead Agency that has responsibility for carrying out or approving a project under CEQA.
Right-of-way	A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.
Riparian	Pertaining to the banks and other adjacent terrestrial (as opposed to aquatic) environs of freshwater bodies, watercourses, estuaries, and surface-emergent aquifers, whose transported freshwater provides soil moisture sufficient in excess of that available through local precipitation to potentially support the growth of vegetation.
ROD	Record of Decision, part of the NEPA process. This statement explains and concludes why an alternative has been selected and summarizes mitigation and efforts made to minimize environmental impacts.
RTP	Regional Transportation Plan, prepared by the regional agency responsible for transportation planning and funding. In Merced, the RTP is prepared by the Merced County Association of Governments to identify transportation improvement priorities.

SHPO	State Historic Preservation Officer is responsible, among other duties, for administrating the requirements of the National Historic Preservation Act at the state level.
Special-status species	Plant or animal species that are either (1) federally listed, proposed for or a candidate for listing as threatened or endangered; (2) bird species protected under the federal Migratory Bird Treaty Act; (3) protected under state endangered species laws and regulations, plant protection laws and regulations, Fish and Game codes, or species of special concern listings and policies; (4) recognized by national, state, or local environmental organizations (e.g., California Native Plant Society).
STIP	The State Transportation Improvement Program, updated every 2 years, is the California Transportation Commission's priorities for improvements on and off the state highway system.
SWPPP	A Storm Water Pollution Prevention Plan is prepared to evaluate sources of discharges and activities that may affect storm water runoff, and implement measures or practices to reduce or prevent such discharges.
Threatened	A species that is likely to become endangered in the foreseeable future in the absence of special protection.
TSM	Transportation Systems Management; refers to measures that maximize the efficiency of the existing roadway or travel corridor.
Underground Storage Tanks (USTs)	Tanks that typically store fuel or liquid chemicals underground.
Waters of the United States	As defined by the USACE in 33 Code of Federal Regulations 328.3(a): 1. All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; 2. All interstate waters including interstate wetlands; 3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, including any such waters: (i) Which are or could be used by interstate or foreign

travelers for recreational or other purposes; or

(ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(iii) Which are used or could be used for industrial purposes by industries in interstate commerce;

4. All impoundment of waters otherwise defined as waters of the United States under this definition;

5. Tributaries of waters identified in paragraphs 1-4;

6. The territorial seas;

7. Wetlands adjacent to waters (waters that are not wetlands themselves) identified in paragraphs 1-6.

Wetlands	When used in a formal context, such as in this document, wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances will support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas [33 CFR 328.3(b)].

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Appendix E Comments on the Notice of Preparation and Notice of Intent (NOP and NOI)

The following summarizes the comments received on the NOP and NOI.

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
Comments for Original Notice of Preparation and Notice of Intent					
1	Butte Environmental Council	Barbara Vlamis	X		• Project location when the UC Merced Campus location is undecided • The UC Merced Campus project should provide funding for part of the Campus Parkway project • Impacts to vernal pool ecosystem • Concern about project sources of water
2	NA	Justin Bastow	X		• Project location when the campus location is undecided
3	California Native Plant Society	Dr. David H. Chipping	X		• Request for biological impacts to be addressed for each alignment alternative • Discuss land use changes of areas adjacent to the project under build and No Action alternatives • Discuss project-facilitated growth beyond the project area • Request for discussion of cumulative impacts of project-facilitated growth on biological resources • Request for an impact assessment on east-west traffic that is using the proposed UC Merced Campus site and entering the UC Merced Campus site from the north along SR 99 • Explain "Build-out" traffic volumes, traffic volumes developed by the Campus, and the origin of traffic generated by the campus • Request explanation of why traffic models have a high north-south loading along the northern portion of the project if the traffic relief effects are designed to be "felt" in the eastern industrial areas of the City of Merced

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
3 cont.					• Request for a traffic/air analysis study of all project alternatives, taking into account cumulative effects of the UC Merced Campus alternatives, which addresses and explains location, type and density of growth, and the correlation of growth on route-dependent and route-independent factors
4	California Native Plant Society, East Bay Chapter	Barbara Ertter, Ph.D	X		• Impacts to vernal pool ecosystem • Project location when the UC Merced Campus location is undecided • Impacts under a no-campus scenario • Independent utility
5	California Regional Water Quality Control Board	Brian Erlandsen	X		• Necessity of NPDES General Permit • Prior to construction, a Notice of Intent to comply with the NPDES permit must be submitted and a SWPPP must be prepared • If Caltrans is the responsible agency, a NPDES Permit for Storm Water Discharges is required, a Notification of Construction must be submitted, and a SWPPP must be prepared • Necessity of a Section 404 permit from the USACE and submission of the 404 permit application to the Board for reviewing purposes
6	S.F. Bay Citizens Committee to Complete the Refuge	Florence M. LaRiviere	X		• Impacts on vernal pools ecosystem, wetlands, and endangered, threatened, and special-status species • Facilitation of urban growth in the region • Independent utility
8	NA	Susan M. D'Alcamo	X		• Project location when the UC Merced Campus location is undecided • Project-facilitated urban growth • Preserving farmland
9	NA	Gary A. Falxa, Ph.D	X		• Impacts to vernal pool ecosystem • Impacts to movements of the San Joaquin kit fox through the area • Independent utility • Request for assessment of direct, indirect, cumulative, interrelated, and interdependent impacts of project-facilitated development to sensitive biology

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
9 cont.					• Request that construction should not begin until public review of the comprehensive project plan, which should include associated infrastructure and project-facilitated development
10	NA	Alan B. Harper	X		• Project location when the campus location is undecided • Impacts under a no-UC Merced Campus scenario • Request for analysis of an alternative of widening existing roads
11	NA	Megan Konar	X		• Project location when the UC Merced Campus location is undecided • Project facilitated urban growth • Impacts to air quality of the San Joaquin Valley • Impacts to vernal pool ecosystem • Independent utility • Request for long-term impacts to be assessed for the project, UC Merced Campus, and UC community as one entity
12	LAFCO of Merced County	William Nicholson	X		• Request for the EIS/R to address the relation of each alternative alignment with the City of Merced Sphere of Influence boundaries • Request for the EIS/R to address the relation of the alignment alternatives with existing growth boundaries and policies of city and county General Plans • Request for an evaluation of facilitated growth resulting from each alternative that may lead the city and county to amend their urban growth boundaries • Request an assessment of what resource values would be impacted because of growth facilitated by each project alternative
13	NA	Ted Lorona	X		• Project location when the UC Merced Campus location is undecided • Impacts to vernal pool ecosystem • Project-facilitated urban growth
14	NA	Avila Lawrence	X		• Project location when the UC Merced Campus location is undecided • Impacts to vernal pool ecosystem • Impacts of project-facilitated urban growth on general valley ecosystems • Request that project site be relocated to a less environmentally sensitive area

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
15	NA	Staci Markos	X		• Request for a cumulative impact assessment of possible development facilitated by the project • Impacts to vernal pool ecosystem • Impacts of project-facilitated growth on general valley ecosystems
16	NA	Jeff Maurer	X		• Independent utility • Project location when the UC Merced Campus location is undecided • Impacts to vernal pool ecosystem • Impacts to agricultural land • Impacts to nesting raptors • Long-term, indirect impacts on biology from habitat fragmentation • Project-facilitated urban growth • Request that project assessment include a cumulative impacts analysis of all foreseeable development as a result of the UC Merced Campus site
17	NA	Camille McNeely	X		• Project location when the UC Merced Campus location is undecided • Project impact on surrounding ecosystems • Project facilitated urban growth because of the project's location outside of Merced's Urban Growth Boundary • Project location when the UC Merced Campus location is undecided
18	Trish & Chris Meyer	Trish Meyer	X		• Project location when the campus location is undecided • Impacts to vernal pool ecosystem • Project facilitated urban growth • Impacts to general Valley ecosystems • Suggestion of a "no new roads approach" to the project area
19	Occidental College	Gretchen North	X		• Project location when the UC Merced Campus location is undecided
20	PG&E Company	Dennis Garcia	X		• Request that project proponents coordinate with PG&E early in the project planning stages
21	NA	Thomas C. Patterson	X		• Impacts to vernal pool ecosystem • Project location when the UC Merced Campus location is undecided

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
22	NA	Ed Perillo	X		• Project location when the UC Merced Campus location is undecided • Impacts to vernal pool ecosystem, surrounding wetlands, and endangered species
23	Ravens Hill Foundation	Lori Hubbart	X		• Project location when the UC Merced Campus location is undecided • Impacts to vernal pool ecosystem • Project-facilitated urban growth • Impacts to general Valley ecosystems
24	UC Davis	Jim Richards	X		• Independent utility • Project-facilitated urban growth • Impacts to vernal pool ecosystem • Necessity of project
25	NA	Debbie Rudnick	X		• Project location when the UC Merced Campus location is undecided • Independent utility • Project-facilitated urban growth • Impacts to areas and resources identified in the PES report • Consistency of the project with the plans and goals adopted by the community, including the Central Valley environmental community • Increased need for public utilities, including electrical services, roadside assistance, and additional police enforcement of this new road • Project providing incentive for UC Merced Campus siting in regard to public utilities that would be required at the UC Merced Campus site
26	San Joaquin Raptor Rescue Center	Lydia Miller	X		• Independent utility • Request for environmental review process to begin as early as possible • Request for specific citation and description of requirements for Caltrans and the FHWA under CEQA/NEPA and an explanation of any required or suggested methodology and computer models • Request for clarification of the term "expressway," including a description of the speed limit • Request for a description of roadway access point • Request for a description of land uses in the Campus Parkway Corridor

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
26 cont.					• Request for a discussion of urban growth and development construction scenarios • Request for a description of assumptions used to estimate for project impact intensities • Impacts under a no-UC Merced Campus scenario • Request for an analysis of cumulative impacts • Request for a discussion of rural, suburban, and urban environmental settings • Inconsistencies in the traffic report relative to independent utility • Merced County's reliance on the City of Merced's 2015 population growth estimates, as stated in the Traffic Report • Request for a discussion of correspondences between the department of Finance, City of Merced, and Merced County regarding UC Merced, city, and county growth • Request for a description of the eastern industrial area, and areas north of Merced planned for growth, what actions made these areas a part of the General Plan of Merced County, and whether any environmental impact assessment was conducted in the county adopting these areas of growth • Request for an explanation of inconsistencies of City and County General Plans • GP Text Amendments and Initial Study of 1996 • Request for an explicit definition of "area plans" mentioned in implementation no. 2 proposed for Land Use Policy 4, Goal 1 of the GP Text Amendments • Request for an analysis of the consistency with the current Merced General Plan of the no-UC Merced Campus alternative • Request for an alternatives analysis under federal and state ESAs • Request for an EIR/EIS to incorporate an analysis of the Least Damaging Practicable Alternatives Analysis (LEDPA) • Clean Water Act Section 404 permit • Request for a definition of how the project is "water dependent" • "No impact" findings in the Environmental Checklist • Incorporation of the 1994 EIR significant impacts findings

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
26 cont.					• Request for the incorporation of other, independent studies of the area • Secondary, UC-dependent development • Request for an analysis of mitigation measures • Request for the EIR/S to consider Merced County's "pattern and practice of being lax on CEQA compliance and environmental and zoning enforcement" • Request that the EIR/S specifies consumption; plans for supply, treatment, and disposal of water; and concomitant impacts and mitigation • Cumulative impacts to wetlands • Erosion and water quality • Request for an air quality report to measure foreseeable tonnage from growth scenarios, list anticipated pollutants and their amounts, per day, list environmental impacts, and show how the project will affect and be integrated into local air district's plan to meet federal ozone attainment standards by 2005 • Quality of open space after University Community is completed • Request for an analysis of impacts and mitigation of operation of Lawrence Laboratories on the Virginia Smith Trust lands • Request for an analysis of endangered or threatened species and species of concern under FESA and CESA • Request for a discussion of species takes, and quantification of direct and indirect habitat loss • Cumulative impacts on kit fox and fairy shrimp • Request for an analysis and application of mitigation guidelines dictated by the California Department of Fish and Game of species protected under the Migratory Bird Act • Cumulative impacts to flora and fauna • Project facilitated urban growth • Request for a discussion of the potential of the City of Merced to annex any of the UC Community • Request for a description of the UC's, county's, and city's roles in the coordinated planning process envisioned by AB2838

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
26 cont.					• Request for an analysis of housing needs and housing options for individuals using the campus, specific commuting options, and relative impacts from the different housing and commuting options • Request that the EIR/S identify each significant and unavoidable impact that the county and UC intend to adopt in a statement of overriding consideration • Request for a resolution of inconsistencies of the Merced County General Plan with the Merced Hills, Campus Parkway, and UC Merced and University Community • The General Plan for Merced County not providing justification for the Campus Parkway • Request that the project alternatives must be evaluated in connection with General Plan Review • Campus Parkway alignment requiring amendment to the Circulation Element of Merced County's General Plan
27	NA	Jamie Self	X		• Project location when the UC Merced Campus location is undecided
28	Sierra Club, Merced Group, Tehipite Chapter	Marsh Pitman	X		• Project location when the UC Merced Campus location is undecided
29	NA	Shawn Smallwood, Ph.D.	X		• Independent utility • Purpose of the Campus Parkway under a no campus scenario • Request for a "broader array" of Parkway alternatives • Request that an environmental settings described in the EIR includes "the period of time into the past in which at least one full cycle period of rainfall, fire, and vegetation succession has occurred" • Request that the environmental settings include the entire area "influenced by the most widely-ranging special-status species" • Request that the EIR establish the likelihood of the presence and demographic unit support of special-status species to assess impacts and mitigation measures • Methodology of assessing the presence of special-status species • Methodology of assessing impact of special-status species habitat

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
29 cont.					• Methodology of assessing cumulative impacts to the environment • Request for an analysis of the how the Campus Parkway, in bypassing the City of Merced and fragmenting agricultural lands, will effect the economy of the city and the long-term economic condition of the county's agriculture • Request for air, light, and noise pollution analysis' • Development of an adaptive management plan as a form of mitigation • Request that the EIR explain alternative mitigation measures and state why these alternatives were not used • Methodology of creating proportional mitigation measures
30	VernalPools.Org	Carol W. Witham	X		• Independent utility • Request for a revision of the Traffic Report Summary which will clearly distinguishes UC related traffic and reduction of future anticipated congestion • Request for a revision of the Traffic Report Summary which will discuss anticipated development, including the eastern industrial area, as a justification of the Campus Parkway • Request for a revision of the Traffic Report Summary to justify independent utility • Comment on accuracy of the growth projections presented in the Traffic Report Summary • Request for a revision of the Traffic Report Summary to provide more detailed documentation of the trip origins and terminations before proceeding with an EIR/S • Alternatives with no UC Merced Campus scenario • Adequacy of alternative alignments relative to Merced County's Specific Urban Development Plans • Methodology of assessing baseline environmental settings • Methodology for assessing baseline settings for special-status species • Request that a wetlands delineations and a LEDPA analysis be prepared • Request that an LEDPA analysis consider numerous alternatives for reducing future anticipated traffic congestion • Standards for direct, indirect, and cumulative impact assessments

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
30 cont.					• Methodology and standards for a quantitative cumulative impact assessment and mitigation planning
31	Dept of Environmental Sciences	Matt Wacker	X		• Project location when the UC Merced Campus location is undecided • Methodology for biological assessment of vernal pool ecosystem • Request for an analysis of project facilitated growth
32	NA	Robert Wood	X	X	• Independent utility • Request that approval of the Campus Parkway project must not occur prior to approval of the entire U.C campus project
Comments for reissued Notice of Preparation and Notice of Intent					
34	USFWS	Dale A Pierce		X	• Independent utility • Recommends using TEA-21 funding to identify environmentally preferred locations for the UC Merced Campus and community before proceeding with the project
35	California Regional Water Quality Control Board	Christine M. Palisoc	X		• Construction Activity Storm Water General Permit • Water quality certification • Project compliances for in-stream construction • Criteria for the project to be covered under the Dewatering Permit, Order No. 5-00-175
36	San Joaquin Raptor Rescue Center	Lydia Miller	X	X	• Request that an explanation be provided telling why the new alignment was chosen • Request for a discussion of the interconnection of the project with other Caltrans projects in the area • Independent utility • Request for an air quality analysis • Request that a mass transit option be addressed
37	Sierra Club California	Bill Allayaud	X		• Independent utility • Request for an analysis of a no UC Merced scenario • Request for an analysis of the impact of the project on the alternative site analysis for the UC Merced Campus

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
38	Caltrans	Tom Dumas	X		• Request that the project be consistent with two Caltrans projects located at SR 99 and Mission Avenue and new interchange proposed on SR 140 • Request that the traffic study should include Caltrans projects at SR 99 and Mission Avenue and the interchange proposed on SR 140
39	S.F. Bay Citizens Committee to Complete the Refuge	Florence M. LaRiviere	X		• The legality of using TEA-21 funding for the UC Merced Campus Parkway loop system for construction of the limited access expressway • Impact to fragmentation of a vernal pool-upland complex • Project facilitation of growth and urban sprawl • Impacts to wetlands • Impacts to endangered, threatened, and special-status species • Impacts to water quality • Impacts to air quality • Impacts to agricultural lands • Independent utility • Request for a traffic study and alternatives analysis made available to the public
40	NA	Camille McNeely	X		• The legality of decreasing the project size, as the author's interpretation of the revised NOP, "in an effort to put off the most environmentally damaging portions of the project to a later date in order to receive initial regulatory approval"
41	California Native Plant Society	Allen Barnes	X		• Independent utility • Request for a revision of Traffic Report Summary justifying project need and discussing developments not in Merced County's General Plan • Request for a project alternative analysis to include consideration of county's Specific Urban Development Plans and the City of Merced's planned growth areas • Request for a project alternative analysis address widening of existing streets to reduce congestion • Request that a biology assessment include plants listed or proposed for listing under the FESA

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
41 cont.					• Request that a biology assessment include plants that are Category 1 or 2 candidates for possible future listing under the FESA • Request that a biology assessment include plants that meet CEQA's definition of rare or endangered species • Request that a biology assessment include plants considered by the CNPS to be "rare, threatened, or endangered" in California, providing the following URL is given as a resource: http://www.cnps.org/rareplants/inventory/6thEdition.htm • Request that a biology assessment include plants listed by CNPS as not well documented and plants of limited distribution • Request that a biology assessment include plants listed by the California Lichen Society as rare in California • Request that a biology assessment include plants listed or proposed for listing under the CESA • Request that a biology assessment include plants listed under the CNPPA • Request that a biology assessment include plants considered sensitive by other government agencies or jurisdictions • Requests that direct project impacts be addressed • Request that indirect impacts resulting from altered hydrology, unseasonal runoff, habitat fragmentation (including loss of gene flow corridors), introduction of non-native species (including invasive exotics), herbicide use adjacent to natural areas, altered nutrient and sediment loading, altered and introduced disturbance cycles, and introduction to high density human habitation be addressed • Request that a cumulative impact assessment include development and land use changes that may result or be facilitated by the project be addressed • Request that a cumulative impact assessment include the full environmental impact of each special-status species by discussing its vulnerability throughout its range

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
41 cont.					• Methodology for mitigation strategies for special-status plant species and unique plant communities should be "avoidance and preservation", and mitigation strategies for all native plant resources take the suggested mitigation policies and justifications listed by the CNPS into consideration • Request that a new site selection alternative analysis be conducted because of previously "undisclosed" significant impacts to biology and new information regarding impacted biology that have come about since the original 1994 site selection took place • Request that the project be delayed until after a new UC Merced Campus site selection process is complete • Request that alternatives to relieve traffic congestion in the Merced area under a no UC Merced Campus scenario be considered
42	VernalPools.Org	Carol W. Witham	X		• Independent utility
43	Merced County Farm Bureau	Russell Felch	X		• Support for the green alternative • Request that the DEIS/R address the use of agriculture buffers to minimize impacts on current agricultural operations • Request that the DEIS/R contains identification of right-to farm zoning and agricultural zoning to minimize impacts on agricultural operations • Request that the DEIS/R address permanent urban limit lines to minimize impacts on agricultural operations • Request that the DEIS/R address strategies for agricultural land preservation, including opportunities for Williamson Act and Super Williamson Act contracts, agricultural easements, etc., to minimize impacts on agricultural operations • Request that the DEIS/R address a minimum of 4:1 mitigation of taken agricultural land, including all land in the Merced County Agricultural Preserve, to minimize impacts on agricultural operations • Request that the DEIS/R contains a cumulative impact analysis regarding corridors between Yosemite Avenue and Bellevue Road

Comment Letter No.	Organization	Individual	Comment on NOP	Comment on NOI	Issue Raised
44	Native American Heritage Commission	Debbie Pilas-Treadway	X		• Recommendation to list actions to assess the impact on archaeological resources • Request that provisions be made in DEIS/R for accidental discovery of archaeological resources as mandated by CEQA, the Health and Safety Code, and the Public Resources Code
45	NA	Jesse Arthur	X		• Potential for the citizens of the City of Merced to have greater benefit from the project if it were closer to the city • Loss of agricultural land resulting from the Green Alternative
46	NA	Judi Arthur	X		• Potential for the citizens of the City of Merced to have greater benefit from the project if it were closer to the city
47	NA	Dennis Murphy	X		• Construction impacts of the UC Merced Campus on the city and county road facilities if the campus construction begins prior to 2005 and the proposed project is to be completed by 2005 • Accommodations for commercial growth along the project area to support the proposed university

Appendix F U.S. Fish and Wildlife Service Species List and Summary of Potential to Occur or Not Occur in Project Area

This appendix contains two species lists. The first is the latest official species list provided by the USFWS (presented in a reduced side-by-side format), which shows all species that might occur within the U.S. Geological Survey quadrangles surrounding the project area. The second list is a table that includes the species identified from the USFWS list as well as from the California Natural Diversity Data Base (CNDDB) and the California Native Plant Society database. The second list summarizes the potential for each species to occur in the area or be affected by the project. These lists summarize which species are of most concern and are most likely to occur within the proposed project impact area.

United States Department of the Interior

Department of the Interior logo

FISH AND WILDLIFE SERVICE

Fish & Wildlife Service logo

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

March 21, 2006

Document Number: 060321053948

Corinna Lu
URS Corporation
1333 Broadway, Suite 800
Oakland, Ca 94612

Subject: Species List for Campus Parkway

Dear: Ms. Lu

We are sending this official species list in response to your March 21, 2006 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7Â½ minute quad or quads you requested. You have stated that this list is not for consultation with the Fish & Wildlife Service.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be June 19, 2006.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at www.fws.gov/sacramento/es/branches.htm.

Endangered Species Division

Take Pride in America

<< Revise Selection

Make Official Letter >>

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 060321053948

Database Last Updated: March 1, 2006

Quad Lists

PLAINSBURG (401A)

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)

Branchinecta conservatio - Critical habitat, Conservancy fairy shrimp (X)

Branchinecta lynchi - Critical habitat, vernal pool fairy shrimp (X)

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - Critical habitat, vernal pool tadpole shrimp (X)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Amphibians

Ambystoma californiense - California tiger salamander, central pppulation (T)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Mammals

Dipodomys nitratoides exilis - Fresno kangaroo rat (E)

Vulpes macrotis mutica - San Joaquin kit fox (E)

Plants

Castilleja campestris ssp. succulenta - Critical habitat, succulent (=fleshy) owl's-clover (X)

Orcuttia inaequalis - Critical habitat, San Joaquin Valley Orcutt grass (X)

Tuctoria greenei - Critical habitat, Greene's tuctoria (=Orcutt grass) (X)

Species of Concern

Invertebrates

Branchinecta mesovallensis - Midvalley fairy shrimp (SC)

Linderiella occidentalis - California linderiella fairy shrimp (SC)

Lytta molesta - molestan blister beetle (SC)

Fish

Lampetra ayresi - river lamprey (SC)

Lampetra tridentata - Pacific lamprey (SC)

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)

Buteo Swainsoni - Swainson's hawk (CA)

Calypte costae - Costa's hummingbird (SC)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Chaetura vauxi - Vaux's swift (SC)

Charadrius montanus - mountain plover (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Falco peregrinus anatum - American peregrine falcon (D)

Grus canadensis tabida - greater sandhill crane (CA)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Picoides nuttallii - Nuttall's woodpecker (SLC)

Plegadis chihi - white-faced ibis (SC)

Selasphorus rufus - rufous hummingbird (SC)

Mammals

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Dipodomys heermanni dixoni - Merced kangaroo rat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Phacelia ciliata var. opaca - Merced phacelia (SC)

EL NIDO (401B)

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)

Branchinecta lynchi - Critical habitat, vernal pool fairy shrimp (X)

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - Critical habitat, vernal pool tadpole shrimp (X)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Amphibians

Ambystoma californiense - California tiger salamander, central pppulation (T)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Mammals

Dipodomys nitratoides exilis - Fresno kangaroo rat (E)

Vulpes macrotis mutica - San Joaquin kit fox (E)

Plants

Neostapfia colusana - Critical habitat, Colusa grass (X)

Species of Concern

Invertebrates

Branchinecta mesovallensis - Midvalley fairy shrimp (SC)

Linderiella occidentalis - California linderiella fairy shrimp (SC)

Lytta molesta - molestan blister beetle (SC)

Fish

Lampetra ayresi - river lamprey (SC)

Lampetra tridentata - Pacific lamprey (SC)

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)

Buteo Swainsoni - Swainson's hawk (CA)

Calypte costae - Costa's hummingbird (SC)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Chaetura vauxi - Vaux's swift (SC)

Charadrius montanus - mountain plover (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Falco peregrinus anatum - American peregrine falcon (D)

Grus canadensis tabida - greater sandhill crane (CA)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Picoides nuttallii - Nuttall's woodpecker (SLC)

Plegadis chihi - white-faced ibis (SC)

Selasphorus rufus - rufous hummingbird (SC)

Mammals

Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Dipodomys heermanni dixoni - Merced kangaroo rat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Atriplex persistens - vernal pool (=persistent-fruited, Sacramento) saltbush (=smallscale, saltscale) (SC)

Atriplex subtilis - subtle orache (SLC)

SANDY MUSH (402A)

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)

Branchinecta conservatio - Critical habitat, Conservancy fairy shrimp (X)

Branchinecta longiantenna - longhorn fairy shrimp (E)

Branchinecta lynchi - Critical habitat, vernal pool fairy shrimp (X)

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - Critical habitat, vernal pool tadpole shrimp (X)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Amphibians

Ambystoma californiense - California tiger salamander, central pppulation (T)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Mammals

Dipodomys nitratoides exilis - Fresno kangaroo rat (E)

Vulpes macrotis mutica - San Joaquin kit fox (E)

Plants

Chamaesyce hooveri - Critical habitat, Hoover's spurge (X)

Neostapfia colusana - Colusa grass (T)

Neostapfia colusana - Critical habitat, Colusa grass (X)

Species of Concern

Invertebrates

Branchinecta mesovallensis - Midvalley fairy shrimp (SC)

Linderiella occidentalis - California linderiella fairy shrimp (SC)

Lytta molesta - molestan blister beetle (SC)

Fish

Lampetra ayresi - river lamprey (SC)

Lampetra tridentata - Pacific lamprey (SC)

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Anniella pulchra pulchra - silvery legless lizard (SC)

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)

Buteo Swainsoni - Swainson's hawk (CA)

Calypte costae - Costa's hummingbird (SC)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Chaetura vauxi - Vaux's swift (SC)

Charadrius montanus - mountain plover (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Falco peregrinus anatum - American peregrine falcon (D)

Grus canadensis tabida - greater sandhill crane (CA)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Picoides nuttallii - Nuttall's woodpecker (SLC)

Plegadis chihi - white-faced ibis (SC)

Selasphorus rufus - rufous hummingbird (SC)

Mammals

Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Dipodomys heermanni dixoni - Merced kangaroo rat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Atriplex depressa - brittlescale (SC)

Atriplex persistens - vernal pool (=persistent-fruited, Sacramento) saltbush (=smallscale, saltscale) (SC)

Eryngium racemosum - delta coyote-thistle (=button-celery) (CA)

HAYSTACK MTN. (421A)

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)

Branchinecta conservatio - Critical habitat, Conservancy fairy shrimp (X)

Branchinecta lynchi - Critical habitat, vernal pool fairy shrimp (X)

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Amphibians

Ambystoma californiense - California tiger salamander, central pppulation (T)

Ambystoma californiense - Critical habitat, CA tiger salamander, central population (X)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Mammals

Vulpes macrotis mutica - San Joaquin kit fox (E)

Plants

Castilleja campestris ssp. succulenta - Critical habitat, succulent (=fleshy) owl's-clover (X)

Castilleja campestris ssp. succulenta - succulent (=fleshy) owl's-clover (T)

Neostapfia colusana - Colusa grass (T)

Neostapfia colusana - Critical habitat, Colusa grass (X)

Orcuttia inaequalis - Critical habitat, San Joaquin Valley Orcutt grass (X)

Orcuttia inaequalis - San Joaquin Valley Orcutt grass (T)

Tuctoria greenei - Critical habitat, Greene's tuctoria (=Orcutt grass) (X)

Tuctoria greenei - Greene's tuctoria (=Orcutt grass) (E)

Candidate Species

Fish

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Species of Concern

Invertebrates

Branchinecta mesovallensis - Midvalley fairy shrimp (SC)

Helminthoglypta allynsmithi - Merced Canyon shoulderband snail (SC)

Linderiella occidentalis - California linderiella fairy shrimp (SC)

Lytta molesta - molestan blister beetle (SC)

Fish

Lampetra ayresi - river lamprey (SC)

Lampetra tridentata - Pacific lamprey (SC)

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Amphispiza belli belli - Bell's sage sparrow (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)

Calypte costae - Costa's hummingbird (SC)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Chaetura vauxi - Vaux's swift (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Falco peregrinus anatum - American peregrine falcon (D)

Grus canadensis tabida - greater sandhill crane (CA)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Picoides nuttallii - Nuttall's woodpecker (SLC)

Plegadis chihi - white-faced ibis (SC)

Selasphorus rufus - rufous hummingbird (SC)

Mammals

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Dipodomys heermanni dixoni - Merced kangaroo rat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis evotis - long-eared myotis bat (SC)

Myotis thysanodes - fringed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Agrostis hendersonii - Henderson's bent grass (SC)

Calycadenia hooveri - Hoover's caycadenia (SLC)

Clarkia rostrata - beaked clarkia (SC)

Gratiola heterosepala - Boggs Lake hedge-hyssop (CA)

Navarretia myersii spp. myersii - pincushion navarretia (SC)

YOSEMITE LAKE (421B)

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)

Branchinecta conservatio - Critical habitat, Conservancy fairy shrimp (X)

Branchinecta lynchi - Critical habitat, vernal pool fairy shrimp (X)

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Oncorhynchus mykiss - Critical habitat, Central Valley steelhead (X)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)

Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Ambystoma californiense - California tiger salamander, central pppulation (T)

Ambystoma californiense - Critical habitat, CA tiger salamander, central population (X)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Mammals

Vulpes macrotis mutica - San Joaquin kit fox (E)

Plants

Castilleja campestris ssp. succulenta - Critical habitat, succulent (=fleshy) owl's-clover (X)

Castilleja campestris ssp. succulenta - succulent (=fleshy) owl's-clover (T)

Neostapfia colusana - Critical habitat, Colusa grass (X)

Orcuttia inaequalis - Critical habitat, San Joaquin Valley Orcutt grass (X)

Orcuttia inaequalis - San Joaquin Valley Orcutt grass (T)

Tuctoria greenei - Critical habitat, Greene's tuctoria (=Orcutt grass) (X)

Candidate Species

Fish

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Species of Concern

Invertebrates

Branchinecta mesovallensis - Midvalley fairy shrimp (SC)

Linderiella occidentalis - California linderiella fairy shrimp (SC)

Lytta molesta - molestan blister beetle (SC)

Fish

Lampetra ayresi - river lamprey (SC)

Lampetra hubbsi - Kern brook lamprey (SC)

Lampetra tridentata - Pacific lamprey (SC)

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Amphispiza belli belli - Bell's sage sparrow (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)

Buteo Swainsoni - Swainson's hawk (CA)

Calypte costae - Costa's hummingbird (SC)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Chaetura vauxi - Vaux's swift (SC)

Charadrius montanus - mountain plover (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Grus canadensis tabida - greater sandhill crane (CA)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Picoides nuttallii - Nuttall's woodpecker (SLC)

Plegadis chihi - white-faced ibis (SC)

Selasphorus rufus - rufous hummingbird (SC)

Mammals

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Dipodomys heermanni dixoni - Merced kangaroo rat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Agrostis hendersonii - Henderson's bent grass (SC)

MERCED (421C)

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)

Branchinecta conservatio - Critical habitat, Conservancy fairy shrimp (X)

Branchinecta lynchi - Critical habitat, vernal pool fairy shrimp (X)

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)

Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Ambystoma californiense - California tiger salamander, central pppulation (T)

Ambystoma californiense - Critical habitat, CA tiger salamander, central population (X)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Mammals

Vulpes macrotis mutica - San Joaquin kit fox (E)

Plants

Castilleja campestris ssp. succulenta - Critical habitat, succulent (=fleshy) owl's-clover (X)

Castilleja campestris ssp. succulenta - succulent (=fleshy) owl's-clover (T)

Neostapfia colusana - Colusa grass (T)

Neostapfia colusana - Critical habitat, Colusa grass (X)

Orcuttia inaequalis - Critical habitat, San Joaquin Valley Orcutt grass (X)

Orcuttia pilosa - hairy Orcutt grass (E)

Tuctoria greenei - Critical habitat, Greene's tuctoria (=Orcutt grass) (X)

Candidate Species

Fish

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Species of Concern

Invertebrates

Branchinecta mesovallensis - Midvalley fairy shrimp (SC)

Linderiella occidentalis - California linderiella fairy shrimp (SC)

Lytta molesta - molestan blister beetle (SC)

Fish

Lampetra ayresi - river lamprey (SC)

Lampetra tridentata - Pacific lamprey (SC)

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)

Buteo Swainsoni - Swainson's hawk (CA)

Calypte costae - Costa's hummingbird (SC)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Chaetura vauxi - Vaux's swift (SC)

Charadrius montanus - mountain plover (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Grus canadensis tabida - greater sandhill crane (CA)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Picoides nuttallii - Nuttall's woodpecker (SLC)

Plegadis chihi - white-faced ibis (SC)

Selasphorus rufus - rufous hummingbird (SC)

Mammals

Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Dipodomys heermanni dixoni - Merced kangaroo rat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Phacelia ciliata var. opaca - Merced phacelia (SC)

Sagittaria sanfordii - valley sagittaria (=Sanford's arrowhead) (SC)

PLANADA (421D)

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)

Branchinecta conservatio - Critical habitat, Conservancy fairy shrimp (X)

Branchinecta lynchi - Critical habitat, vernal pool fairy shrimp (X)

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - Critical habitat, vernal pool tadpole shrimp (X)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)

Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Ambystoma californiense - California tiger salamander, central pppulation (T)

Ambystoma californiense - Critical habitat, CA tiger salamander, central population (X)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Mammals

Vulpes macrotis mutica - San Joaquin kit fox (E)

Plants

Castilleja campestris ssp. succulenta - Critical habitat, succulent (=fleshy) owl's-clover (X)

Castilleja campestris ssp. succulenta - succulent (=fleshy) owl's-clover (T)

Neostapfia colusana - Colusa grass (T)

Orcuttia inaequalis - San Joaquin Valley Orcutt grass (T)

Tuctoria greenei - Critical habitat, Greene's tuctoria (=Orcutt grass) (X)

Tuctoria greenei - Greene's tuctoria (=Orcutt grass) (E)

Candidate Species

Fish

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Species of Concern

Invertebrates

Branchinecta mesovallensis - Midvalley fairy shrimp (SC)

Linderiella occidentalis - California linderiella fairy shrimp (SC)

Lytta molesta - molestan blister beetle (SC)

Fish

Lampetra ayresi - river lamprey (SC)

Lampetra tridentata - Pacific lamprey (SC)

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)

Buteo Swainsoni - Swainson's hawk (CA)

Calypte costae - Costa's hummingbird (SC)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Chaetura vauxi - Vaux's swift (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Grus canadensis tabida - greater sandhill crane (CA)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Picoides nuttallii - Nuttall's woodpecker (SLC)

Plegadis chihi - white-faced ibis (SC)

Selasphorus rufus - rufous hummingbird (SC)

Mammals

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Dipodomys heermanni dixoni - Merced kangaroo rat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis evotis - long-eared myotis bat (SC)

Myotis thysanodes - fringed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Phacelia ciliata var. opaca - Merced phacelia (SC)

WINTON (422A)

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)

Branchinecta conservatio - Critical habitat, Conservancy fairy shrimp (X)

Branchinecta lynchi - Critical habitat, vernal pool fairy shrimp (X)

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Oncorhynchus mykiss - Critical habitat, Central Valley steelhead (X)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)

Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Ambystoma californiense - California tiger salamander, central pppulation (T)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Plants

Castilleja campestris ssp. succulenta - Critical habitat, succulent (=fleshy) owl's-clover (X)

Castilleja campestris ssp. succulenta - succulent (=fleshy) owl's-clover (T)

Neostapfia colusana - Critical habitat, Colusa grass (X)

Orcuttia inaequalis - Critical habitat, San Joaquin Valley Orcutt grass (X)

Tuctoria greenei - Critical habitat, Greene's tuctoria (=Orcutt grass) (X)

Candidate Species

Fish

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Species of Concern

Invertebrates

Branchinecta mesovallensis - Midvalley fairy shrimp (SC)

Linderiella occidentalis - California linderiella fairy shrimp (SC)

Lytta molesta - molestan blister beetle (SC)

Fish

Lampetra hubbsi - Kern brook lamprey (SC)

Lampetra tridentata - Pacific lamprey (SC)

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Anniella pulchra pulchra - silvery legless lizard (SC)

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)

Buteo Swainsoni - Swainson's hawk (CA)

Calypte costae - Costa's hummingbird (SC)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Chaetura vauxi - Vaux's swift (SC)

Charadrius montanus - mountain plover (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Grus canadensis tabida - greater sandhill crane (CA)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Picoides nuttallii - Nuttall's woodpecker (SLC)

Plegadis chihi - white-faced ibis (SC)

Selasphorus rufus - rufous hummingbird (SC)

Mammals

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Dipodomys heermanni dixoni - Merced kangaroo rat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

ATWATER (422D)

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)

Branchinecta longiantenna - longhorn fairy shrimp (E)

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)

Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Ambystoma californiense - California tiger salamander, central pppulation (T)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Mammals

Vulpes macrotis mutica - San Joaquin kit fox (E)

Plants

Neostapfia colusana - Colusa grass (T)

Candidate Species

Fish

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Species of Concern

Invertebrates

Branchinecta mesovallensis - Midvalley fairy shrimp (SC)

Linderiella occidentalis - California linderiella fairy shrimp (SC)

Lytta molesta - molestan blister beetle (SC)

Fish

Lampetra tridentata - Pacific lamprey (SC)

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Anniella pulchra pulchra - silvery legless lizard (SC)

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)

Buteo Swainsoni - Swainson's hawk (CA)

Calypte costae - Costa's hummingbird (SC)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Chaetura vauxi - Vaux's swift (SC)

Charadrius montanus - mountain plover (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Grus canadensis tabida - greater sandhill crane (CA)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Picoides nuttallii - Nuttall's woodpecker (SLC)

Plegadis chihi - white-faced ibis (SC)

Selasphorus rufus - rufous hummingbird (SC)

Mammals

Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Dipodomys heermanni dixoni - Merced kangaroo rat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

County Lists

No county species lists requested.

Key:

- (E) Endangered - Listed (in the Federal Register) as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed (in the Federal Register) for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Marine Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (CA) Listed by the State of California but not by the Fish & Wildlife Service.
- (D) Delisted - Species will be monitored for 5 years.

- (SC) Species of Concern/(SLC) Species of Local Concern - Other species of concern to the Sacramento Fish & Wildlife Office.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7Â½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regard-less of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the quad or quads covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the nine surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

State-Listed Species

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern. However you

should contact the California Department of Fish and Game Wildlife and Habitat Data Analysis Branch for official information about these species.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR Â§17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our critical habitat page for maps.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

Your list may contain a section called Species of Concern. This is an informal term that refers to those species that the Sacramento Fish and Wildlife Office believes might be in need of concentrated conservation actions. Such conservation actions vary depending on the health of the populations and degree and types of threats. At one extreme, there may only need to be periodic monitoring of populations and threats to the species and its habitat. At the other extreme, a species may need to be listed as a Federal threatened or endangered species. Species of concern receive no legal protection and the use of the term does not necessarily mean that the species will eventually be proposed for listing as a threatened or endangered species.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be June 19, 2006.

Special-Status Species Potentially Occurring in the Project Vicinity
Based on Lists Generated by the USFWS, CNDDB, and the CNPS Database
March 2006

Scientific Name COMMON NAME	Federal/ State Status[1]	CNPS/ R-E-D[2]	Other Status[3]	Preferred Habitat	Potential to Occur in the Project Vicinity
Perognathus inornatus inornatus SAN JOAQUIN POCKET MOUSE	None/ None	Not applicable	SC	grasslands, blue oak savannas, needs friable soils	not likely to occur; not observed in the project area vicinity
Sylvilagus bachmanii riparius RIPARIAN BRUSH RABBIT	E/E	Not applicable	-	Valley riparian forests, brushy riparian vegetation	not likely to occur; not observed in the project area vicinity
Neotoma fuscipes riparia RIPARIAN WOODRAT	E/None	Not applicable	SC	Valley riparian forests, brushy riparian vegetation	not likely to occur; not observed in the project area vicinity
Dipodomys nitratoides exilis FRESNO KANGAROO RAT	E/E	Not applicable	-	grassland and savanna communities; needs fine, deep, well drained soils for burrowing; frequents dry, grassy plains with partly open, friable soil;. There are no known populations within the historical geographic range in Merced, Madera and Fresno counties	not likely to occur; project area lacks suitable habitat
Dipodomys heermanni dixoni MERCED KANGAROO RAT	None/ None	Not applicable	SC	grassland and savanna communities in eastern Merced and Stanislaus counties; needs fine, deep, well drained soils for burrowing; frequents dry, grassy plains with partly open, friable soil; occurs on hillsides, knolls, and ridges with sparse to moderate chaparral cover	potential to occur; grasslands in the project area may provide supporting habitat
Ammospermophilus nelsoni SAN JOAQUIN ANTELOPE SQUIRREL	None/ T	Not applicable	SC	western San Joaquin Valley from 200-1200 feet on dry, sparsely vegetated loam soils; dig burrows or use kangaroo rat burrows, need widely scattered shrubs, forbs, and grasses in broken terrain with gullies and washes	not likely to occur; project area is outside known range
Vulpes macrotis mutica SAN JOAQUIN KIT FOX	E/ T	Not applicable	-	annual grassland or grassy open stages with scattered shrubby vegetation, need loose-textured sandy soils for burrowing, and suitable prey base	potential to occur; suitable habitat present in project area
Myotis thysanodes FRINGED MYOTIS	None/ None	Not applicable	HP/SC	widespread in California, occurring in all but the Central Valley and Colorado and Mojave deserts; generally at 1300-2200 meters	not likely to occur; project area is outside known range
Myotis volans LONG-LEGGED MYOTIS	None/ None	Not applicable	HP/SC	coast ranges, Cascade/Sierra ranges, Mojave Desert mountains, common above 1200 meters	not likely to occur; project area is outside known range

Special-Status Species Potentially Occurring in the Project Vicinity
Based on Lists Generated by the USFWS, CNDDB, and the CNPS Database
March 2006

Scientific Name COMMON NAME	Federal/ State Status[1]	CNPS/ R-E-D[2]	Other Status[3]	Preferred Habitat	Potential to Occur in the Project Vicinity
Myotis yumanensis YUMA MYOTIS	None/ None	Not applicable	SSC/SC	forests and woodlands with sources of water over which to feed, roosts in buildings, mines, caves, crevices, occasionally under bridges	potential to occur; may forage over grassland, riparian, and vernal pool habitats within the project area
Myotis evotis LONG-EARED MYOTIS	None/ None	Not applicable	SC	widespread in California, avoids the arid Central Valley and hot deserts	not likely to occur; project area is outside known range
Myotis ciliolabrum SMALL-FOOTED MYOTIS	None/ None	Not applicable	SC	arid woody or brushy uplands, near water, west and east sides of Sierra Nevada; 0-2700 meters	not likely to occur; suitable roosting and nesting habitat not present in the project area vicinity
Eumops perotis californicus GREATER WESTERN MASTIFF BAT	None/ None	Not applicable	HP/ SSC/SC	roosts in crevices in cliff faces, high buildings, trees and tunnels	potential to occur; may forage over vernal pool, grassland, and riparian habitats in the project area
Corynorhinus townsendii townsendii TOWNSEND'S WESTERN BIG-EARED BAT	None/ None	Not applicable	SSC/ HP/SC	prefers mesic areas; roosts in caves or similar structures	not likely to occur; project area is outside known range
Antrozous pallidus PALLID BAT	None/ None	Not applicable	SSC/HP	grasslands, shrublands, woodlands, and forests from sea level up through mixed conifers	potential to occur; may forage over grassland, vernal pool, and riparian habitat in project area
Lasiurus blossevillii RED BAT	None/ None	Not applicable	HP/ proposed SSC	roosts in trees within forests and woodlands; in the Central Valley, especially the cottonwood and sycamore riparian habitat along large rivers; feeds over a wide variety of habitats	not likely to occur; suitable roosting and nesting habitat is not present in the project area vicinity
RUFOUS HUMMINGBIRD	None/ None	Not applicable	SC	Chaparral, and in meadows, forest edges, and riparian thickets of coniferous woodlands	not likely to occur; suitable roosting and nesting habitat is not present in the project area vicinity
GREATER SANDHILL CRANE	None/ T	Not applicable	-	River valleys, marshes, open grasslands and flooded agricultural fields.	not likely to occur; project area lacks wetlands or flooded agricultural fields suitable for foraging

Special-Status Species Potentially Occurring in the Project Vicinity (Continued)
Based on Lists Generated by the USFWS, CNDDB, and the CNPS Database
March 2006

Scientific Name COMMON NAME	Federal/ State Status[1]	CNPS/ R-E-D[2]	Other Status[3]	Preferred Habitat	Potential to Occur in the Project Vicinity
VAUX'S SWIFT	None/ None	Not applicable	SC	Typically roost and nest in natural cavities with vertical entranceways, such as hollow trees. Foraging habitat is open sky over woodlands, lakes, and rivers, where flying insects are abundant. Nesting habitat is forest, either coniferous or mixed, but primarily old growth forests with snags for nesting and roosting.	not likely to occur; project area lacks forest or old growth forest suitable for nesting
COSTA'S HUMMINGBIRD	None/ None	Not applicable	SC	Sonoran desert scrub, the Mojave desert, California chaparral, California coastal scrub, and the Cape deciduous forest of Baja California.	not likely to occur; suitable roosting and nesting habitat is not present in the project area vicinity
Falco peregrinus anatum AMERICAN PEREGRINE FALCON	D/ E	Not applicable	SSC	nests on protected cliffs near large waterbodies where prey is abundant; uncommonly found in the Central Valley as a winter resident,	not likely to occur; project area lacks cliffs suitable for nesting and large aquatic foraging habitat
Haliaeetus leucocephalus BALD EAGLE	PD/ E	Not applicable	Protected	nests and roosts in large diameter trees or snags near large waterbodies where prey is abundant.	known to occur; observed within grassland habitats in the northern project study area
Branta canadensis leucopareia ALEUTIAN CANADA GOOSE	T/ None	Not applicable	-	nests in the Aleutian Islands and winters in the Central Valley; roosts on open water forages in grain fields.	not likely; project area lacks suitable aquatic roosting habitat
Agelaius tricolor (nesting colony) TRICOLORED BLACKBIRD	None/ None	Not applicable	SSC/SC	nests next to open water where there is extensive emergent vegetation, blackberry or wild rose bushes; frequently forages in grainfields.	potential to occur; may forage within agricultural areas, emergent or dense riparian understory habitat suitable for nesting is not present in the project area
Buteo regalis FERRUGINOUS HAWK	None/ None	Not applicable	SSC/SC	nests from Oregon to Canada; winters in grassland or desert habitats throughout California.	known to occur; observed within grassland habitat in the northern project study area
Athene cunicularia hypugea WESTERN BURROWING OWL	None/ None	Not applicable	SSC/SC	nests and winters in grassland and sparse shrubland habitats throughout California; uses abandoned burrows of burrowing mammals for shelter and nest sites.	known to occur, observed within grassland habitat in the northern project study area
Buteo swainsoni (nesting) SWAINSON'S HAWK	None/ T	Not applicable	-	nests in the Central Valley within riparian areas and oak woodlands as well as isolated and roadside trees close to grassland or agricultural foraging habitat; winters in Mexico, Central and South America	potential to occur, suitable nest trees and agricultural and grassland foraging habitat is present in the project area

Special-Status Species Potentially Occurring in the Project Vicinity
Based on Lists Generated by the USFWS, CNDDB, and the CNPS Database
March 2006

Scientific Name COMMON NAME	Federal/ State Status[1]	CNPS/ R-E-D[2]	Other Status[3]	Preferred Habitat	Potential to Occur in the Project Vicinity
Charadrius montanus MOUNTAIN PLOVER	PT / None	Not applicable	SSC	Nests in Montana, New Mexico, Oklahoma, Colorado, and Texas; winters primarily within the Central and Imperial Valleys of California within cultivated fields and grasslands.	known to occur, observed within grassland habitat in the project area
Aquila chrysaeto GOLDEN EAGLE	None/None	Not applicable	SSC/ Fully Protected	rolling foothills, mountain areas, sage-juniper flats, and deserts; nests in large trees and on cliffs	known to occur; observed foraging over grassland habitat in the northern project study area, suitable nesting habitat is not present in the project area
Empidonax trailii brewsteri (nesting) LITTLE WILLOW FLYCATCHER	None/ E	Not applicable	SC	Nests in isolated meadows and riparian systems of northern and central California; winters in Central and South America.	not likely to occur; project area is outside known range, suitable riparian and meadow habitat is not present in the project area
Plegadis chihi WHITE-FACED IBIS	None/ None	Not applicable	SSC/SC	Nests in a few isolated areas within the Central Valley; places nests within dense stands of fresh water emergent vegetation near shallow water or muddy fields for foraging; winters mainly in the San Joaquin Valley and Imperial Valley.	potential to occur; species may occasionally forage within grassland, irrigated pasture, and seasonal wetland habitats in the project area, unlikely to nest in the project area due to lack of emergent wetlands
Amphispiza belli belli BELL'S SAGE SPARROW	None/ None	Not applicable	SSC/SC	nests within dense chaparral and sage scrub habitat, winters in more open habitat; known from Shasta, San Diego, El Dorado, and Mariposa Counties	not likely to occur; project area is outside known range, supporting chaparral and sage scrub habitats are not present within the project area
Elanus leucurus WHITE-TAILED KITE	SC	Not applicable	Fully protected	tops of dense oak, willow, or other tree stands,, and forages over grasslands, marshes, agricultural areas, and wetlands	potential to nest in project area
Lanius ludovicianus LOGGERHEAD SHRIKE	SC	Not applicable	-	open habitat with scattered shrubs, trees, posts, fences, utility lines or other perches in open conopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian and juniper habitat	observed in study area in 1999-2000, and potential to nest in project area

Special-Status Species Potentially Occurring in the Project Vicinity (Continued)
Based on Lists Generated by the USFWS, CNDDB, and the CNPS Database
March 2006

Scientific Name COMMON NAME	Federal/ State Status[1]	CNPS/ R-E-D[2]	Other Status[3]	Preferred Habitat	Potential to Occur in the Project Vicinity
Melanerpes lewis LEWIS' WOODPECKER	SSC	Not applicable	-	breeds in open woodland and forest, including oak woodland and riparian woodland, and uses open canopy brushy understory with ground cover and abundant insect prey, dead or downed woody material , and available perches.	potential to forage in study area, although not observed during field surveys
Numenius americanus LONG-BILLED CURLEW	SC	Not applicable	SC	breeds in northwester portion of the state in grassland or wet meadow habitats that are usually adjacent to lakes or marshes	observed during 1999 and 2000 surveys, although nesting habitat for this species is not present
Picoides nuttallii NUTTALL'S WOODPECKER	SSC	Not applicable	-	found in oak woodland, riparian woodland and chaparral, and forages primarily in oaks	potential to nest and forage in study area, although not observed during field surveys
Carduelis lawrencei LAWRENCE'S GOLDFINCH	SC	Not applicable	-	found in oak and riparian woodland, chaparral and weedy areas near water	Potential to nest and forage in study area although not observed during field surveys
Thamnophis gigas GIANT GARTER SNAKE	T/ T	Not applicable	-	prefers freshwater marsh and low gradient streams, has adapted to drainage canals and irrigation ditches	not likely to occur; project area is outside of known range, no documented occurrences in eastern San Joaquin Valley
Anniella pulchra pulchra SILVERY LEGLESS LIZARD	None/ None	Not applicable	SC	coastal dune, valley-foothill, chaparral, and coastal scrub	not likely to occur; suitable habitat is not present in the project area vicinity
Phrynosoma coronatum frontale CALIFORNIA HORNED LIZARD	None/ None	Not applicable	SSC/SC/ Protected	valley-foothill hardwood, conifer, and riparian habitats, as well as pine-cypress, juniper, and annual grass habitats, bask on low boulders or rocks, burrow into soil or under objects for cover and hibernation	not likely to occur; project area lacks suitable sandy substrate
Gambelia (Crotaphytus) silus BLUNT-NOSED LEOPARD LIZARD	E/ E	Not applicable	Protected /Fully Protected	sparsely vegetated alkali and desert scrub habitats, alkali flats, large washes, arroyos and canyons; find shade under shrubs or in mammal burrows; 30-900 meters	not likely; project area lacks bare ground and suitable prey source
Clemmys marmorata WESTERN POND TURTLE	None/ None	Not applicable	SSC/ protected/ SC	ponds, marshes, rivers, streams, irrigation ditches, need basking sites such as partially submerged logs or rocks, and suitable upland habit (sandy banks or grassy open fields) for egg laying	potential to occur; canals, creeks and adjacent grasslands may provide suitable habitat

Special-Status Species Potentially Occurring in the Project Vicinity
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March 2006

Scientific Name COMMON NAME	Federal/ State Status[1]	CNPS/ R-E-D[2]	Other Status[3]	Preferred Habitat	Potential to Occur in the Project Vicinity
Ambystoma californiense CALIFORNIA TIGER SALAMANDER	C/ None	Not applicable	SSC	annual grasslands and grassy understory of valley-foothill hardwood habitats, need underground refuges, need vernal pools or other seasonal water sources for breeding	potential to occur; vernal pools and Black Rascal Creek in northern portion of the study area may provide suitable breeding habitat, grasslands may provide suitable aestivation habitat
Scaphiopus hammondii WESTERN SPADEFOOT	None/ None	Not applicable	SSC/SC	grassland and valley-foothill hardwood woodlands, vernal pools or seasonal wetlands are essential for egg laying	potential to occur; vernal pools and adjacent uplands in northern portion of the study area may provide suitable breeding and aestivation habitat
Rana aurora draytonii CALIFORNIA RED-LEGGED FROG	T/ None	Not applicable	SSC/ protected	pools in marshes, streams, ponds, with emergent vegetation, and typically without predatory fish, require adequate hibernacula such as small mammal burrows and moist leaf litter	not likely to occur; believed extirpated from the Central Valley, habitat in the project area is generally unsuitable
Oncorhynchus tshawytscha FALL-RUN CHINOOK SALMON	C/ None	Not applicable	SSC	Pacific Ocean, spawn in large, permanent coastal streams and rivers, over gravel beds	not likely to occur; diversion dams downstream prevent access to the project area
Oncorhynchus tshawytscha SPRING-RUN CHINOOK SALMON	T/ T	Not applicable	-	Pacific Ocean, spawn in large, permanent coastal streams and rivers, over gravel beds	not likely to occur; diversion dams downstream prevent access to the project area
Oncorhynchus tshawytscha WINTER-RUN CHINOOK SALMON	E/ E	Not applicable	-	Pacific Ocean, spawn in large, permanent coastal streams and rivers, over gravel beds	not likely to occur; diversion dams downstream prevent access to the project area
Hypomesus transpacificus DELTA SMELT	T/ T	Not applicable	-	low-mid reaches of San Joaquin-Sacramento Delta	not likely to occur; diversion dams downstream prevent access to the project area
Oncorhynchus mykiss CENTRAL VALLEY STEELHEAD	T/ None	Not applicable	-	Pacific Ocean, spawn in coastal streams and rivers, over gravel beds	not likely to occur; diversion dams downstream prevent access to the project area
Lampetra tridenta PACIFIC LAMPREY	None/ None	Not applicable	SC	Pacific Ocean, spawn over gravel beds in coastal streams and rivers	not likely to occur; project area is outside known range

Special-Status Species Potentially Occurring in the Project Vicinity (Continued)
Based on Lists Generated by the USFWS, CNDDB, and the CNPS Database
March 2006

Scientific Name COMMON NAME	Federal/ State Status[1]	CNPS/ R-E-D[2]	Other Status[3]	Preferred Habitat	Potential to Occur in the Project Vicinity
Lampetra ayresi RIVER LAMPREY	None/ None	Not applicable	SSC/SC	San Joaquin-Sacramento Delta and northward, including the Sacramento River	not likely to occur; project area is outside known range
Lampetra hubbsi KERN BROOK LAMPREY	None/ None	Not applicable	SSC/SC	San Joaquin rivers and waterways	potential to occur; Bear and Black Rascal Creeks may provide supporting habitat
Acipenser medirostris GREEN STURGEON	None/ None	Not applicable	SSC/SC	Pacific Ocean, seldom migrates inland beyond estuaries of large rivers	not likely to occur; project area is outside known range
Lavinia symmetricus ssp. SAN JOAQUIN VALLEY ROACH	None/ None	Not applicable	SSC	streams of a variety of types, including intermittent, perennial, and human modified	may occur in Bear Creek or Black Rascal Creek
Pogonichthys macrolepidotus SACRAMENTO SPLITTAIL	Threatened/ None	Not applicable	SSC	backwater sloughs of major rivers	not likely to occur; project area is outside known range
Spirinchus thaleichthys LONGFIN SMELT	None/ None	Not applicable	SSC/SC	moderately saline water, bays and estuaries	not likely to occur; diversion dams downstream prevent access to the project area
Mylopharodon conocephalus HARDHEAD	None/ None	Not applicable	SSC	clear, deep pools with sand-gravel-boulder bottoms and slow water velocity, not found where exotic centrarchids dominate	potential to occur; Bear and Black Rascal Creeks may provide supporting habitat
Branchinecta conservatio CONSERVANCY FAIRY SHRIMP	E/ None	Not applicable	-	found in large, turbid pools in the northern 2/3 of the Central Valley, inhabit astatic pools located in swales formed by old, braided alluvium, filled by winter/spring rains, last until June	not likely to occur; not detected during focused surveys
Branchinecta lynchi VERNAL POOL FAIRY SHRIMP	T/ None	Not applicable	-	vernal pools, inhabit small, clear-water sandstone depression pools and grassed swale, earth slump, or basalt-flow depression pools	known to occur; observed in vernal pools within project area
Branchinecta mesovallensis MIDVALLEY FAIRY SHRIMP	None/ None	Not applicable	-	vernal pools in grasslands in Sacramento, Solano, Contra Costa, Madera, Merced and Fresno Counties	known to occur; observed in vernal pools within project area
Linderiella occidentalis CALIFORNIA LINDERIELLA	None/ None	Not applicable	SC	seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan, or in sandstone depressions; water has very low alkalinity, conductivity and TDS	known to occur; observed in vernal pools within project area

Special-Status Species Potentially Occurring in the Project Vicinity
Based on Lists Generated by the USFWS, CNDDB, and the CNPS Database
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Scientific Name COMMON NAME	Federal/ State Status[1]	CNPS/ R-E-D[2]	Other Status[3]	Preferred Habitat	Potential to Occur in the Project Vicinity
Lepidurus packardi VERNAL POOL TADPOLE SHRIMP	E/ None	Not applicable	-	seasonal pools in unplowed grassland with old alluvial soils underlain by hardpan or in sandstone depressions, water in the pools has very low alkalinity and conductivity	known to occur; observed in vernal pools within project area
Branchinecta longiantenna LONGHORN FAIRY SHRIMP	E/None	Not applicable	-	vernal pools	not likely to occur; suitable habitat is not present in the project area
Desmocerus californicus dimorphus VALLEY ELDERBERRY LONGHORN BEETLE	T/ None	Not applicable	-	elderberry shrubs	potential to occur; supporting host plant is present along Bear Creek and small irrigation drainages in the project area
Lytta molesta MOLESTAN BLISTER BEETLE	None/ None	Not applicable	SC	Central Valley of California, from Contra Costa to Kern and Tulare Counties, found on vernal pool vegetation	potential to occur; grasslands in the project area may provide supporting habitat
Helminthoglypta allynsmithi MERCED CANYON SHOULDERBAND SNAIL	None/ None	Not applicable	SC	Merced Canyon, from 3 to 6 miles below El Portal, at 1,500 feet	not likely to occur; project area is outside known range
Agrostis hendersonii HENDERSON'S BENT GRASS	None/ None	3/ 3-2-2	SC	moist places in valley and foothill grasslands, vernal pools, however little information exists; 70-305m	potential to occur; vernal pools in the northern portion of the study area may provide supporting habitat
Eryngium racemosum DELTA BUTTON-CELERY	None/ Endangered	1B/ 2-3-3	SC	seasonally inundated floodplain on clay, in riparian scrub communities; 3-30 meters	not likely to occur; project area does contain supporting riparian scrub habitat
Downingia pusilla DWARF DOWNINGIA	None/ None	2/ 1-2-1	-	clay soils, mesic valley and foothill grasslands, vernal pools	potential to occur; grasslands in the project area may provide supporting habitat
Clarkia rostrata BEAKED CLARKIA	None/ None	1B/ 2-1-3	SC	cismontane woodland, valley and foothill grassland	potential to occur; grasslands in the project area may provide supporting habitat
Navarretia myersii ssp.myersii PINCUSHION NAVARRETIA	None/ None	1B/ 3-3-3	-	vernal pools on clay soils within nonnative grasslands, valley and foothill grasslands; 70-95m	potential to occur; vernal pools in the northern portion of the study area may provide supporting habitat

Special-Status Species Potentially Occurring in the Project Vicinity (Continued)
Based on Lists Generated by the USFWS, CNDDB, and the CNPS Database
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Scientific Name COMMON NAME	Federal/ State Status[1]	CNPS/ R-E-D[2]	Other Status[3]	Preferred Habitat	Potential to Occur in the Project Vicinity
Navarretia nigelliformis ssp. *radians* SHINING NAVARRETIA	None/ None	1B/ 2-2-3	-	alkali flats, valley and foothill grasslands	known to occur in the northern portion of the study area
Phacelia ciliata var opaca MERCED PHACELIA	None/ None	1B/ 3-1-3	SC	adobe or clay soils of valley floors, open hills, or alkaline flats, endemic to Merced County	potential to occur; grasslands in the project area may provide supporting habitat
Sagittaria sanfordii SANFORD'S ARROWHEAD	None/ None	1B/ 2-2-3	SC	standing or slow moving freshwater ponds, marshes, and ditches	not likely to occur; supporting emergent marsh habitat is not present in the project area
Tuctoria greenei GREENE'S TUCTORIA	E/ R	1B/ 2-3-3	-	dry bottoms of vernal pools in open valley and foothill grasslands; 30-1065m	potential to occur; vernal pools in the northern portion of the study area may provide supporting habitat
Neostapfia colusana COLUSA GRASS	T/ E	1B/ 1-3-3	-	large, deep vernal pools with adobe soils; 5-200 meters	potential to occur; vernal pools in the northern portion of the study area may provide supporting habitat
Orcuttia pilosa HAIRY ORCUTT GRASS	E/ E	1B/ 2-3-3	-	vernal pools, endemic to the Sacramento Valley; 25-125 meters	potential to occur; vernal pools in the northern portion of the study area may provide supporting habitat
Orcuttia inaequalis SAN JOAQUIN VALLEY ORCUTT GRASS	T/ E	1B/ 2-3-3	-	vernal pools; 30-755 meters	potential to occur; vernal pools in the northern portion of the study area may provide supporting habitat
Gratiola heterosepala BOGGS LAKE HEDGE-HYSSOP	None/E	1B/ 2-3-3	-	vernal pools	not likely to occur; suitable habitat is not present in the project area vicinity
Orcuttia inaequalis SAN JOAQUIN VALLEY ORCUTT GRASS	T/	1B/ 2-3-3	-	vernal pools	not likely to occur; suitable habitat is not present in the project area vicinity
Chamaesyce hooveri HOOVER'S SPURGE	T/None	1B/ 2-3-3	-	vernal pools	not likely to occur; suitable habitat is not present in the project area vicinity
Castilleja campestris ssp. *succulenta* SUCCULENT OWL'S CLOVER	T/ E	1B/ 2-2-3	-	vernal pools and moist places, often in acidic soils, in valley and foothill grasslands; 25-750 meters	known to occur in the northern portion of the study area

Special-Status Species Potentially Occurring in the Project Vicinity
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Scientific Name COMMON NAME	Federal/ State Status[1]	CNPS/ R-E-D[2]	Other Status[3]	Preferred Habitat	Potential to Occur in the Project Vicinity
Calycadenia hooveri HOOVER'S CALYCADENIA	None/ None	1B/ 2-1-3	SC	cismontane woodland, valley and foothill grasslands, on exposed, rocky, barren soil; 65-260m	potential to occur; vernal pools in the northern portion of the study area may provide supporting habitat
Atriplex cordulata HEARTSCALE	None/ None	1B/ 2-2-3	SC	alkaline flats and scalds, on sandy soils in chenopod scrub, valley and foothill grassland, and meadow environments; 1-275 meters	not likely to occur; supporting alkali soils do not occur in the project area
Atriplex depressa BRITTLESCALE	None/ None	1B/ 2-2-3	-	chenopod scrub, meadows, playas, valley and foothill grassland, and vernal pools; usually in alkali scalds or alkali clay in meadows or annual grasslands; rarely associated w/ riparian, marshes or vernal pools; 1-320 meters	not likely to occur; supporting alkali soils do not occur in the project area
Atriplex minuscula LESSER SALTSCALE	None/ None	1B/ 3-3-3	-	alkali sink and grassland in sandy, alkaline soils; chenopod scrub, playas, and foothill grassland; 15-200 meters	not likely to occur; supporting alkali soils do not occur in the project area
Atriplex persistens PERSISTENT-FRUITED SALTSCALE	None/ None	1B/ 2-2-3	-	silty, slightly alkaline beds of dried vernal pools, or shallow depressions within chenopod scrub	not likely to occur; supporting alkali soils do not occur in the project area
Atriplex subtilis NO COMMON NAME	None/ None	1B/ 2-2-3	-	valley and foothill grassland, chenopod scrub	not likely to occur; supporting alkali soils do not occur in the project area
Eryngium spinosepalum SPINY COYOTE THISTLE	None/ None	1B/ 3-2-3	SC	vernal pools	potential to occur; vernal pools in the northern portion of the study area may provide supporting habitat

Special-Status Species Potentially Occurring in the Project Vicinity (Continued)
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[1] Federal and California Endangered Species Act

E - Endangered
T- Threatened
C- Candidate for listing status
PT - Proposed for listing as Threatened
D - Delisted

[2] California Native Plant Society (CNPS)

1B Plant species that are rare, threatened, or endangered in California and elsewhere
2 Plant species that are rare, threatened, or endangered in California but more common elsewhere
3 Plant species about which we need more information (a review list)
4 Plant species of limited distribution (a watch list).

R-E-D Code (Rarity, Endangerment, and Distribution) for plants ranks a value for each category as a 1, 2, or 3

R - Rarity
- 1 – Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time
- 2 – Distributed in a limited number of occurrences, occasionally more if each occurrence is small
- 3 – Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported

E - Endangerment
- 1 – Not very endangered in California
- 2 – Fairly endangered in California
- 3 – Seriously endangered in California

D - Distribution
- 1 – More or less widespread outside California
- 2 – Rare outside California
- 3 – Endemic to California

[3] Other Status

SC – United States Fish and Wildlife Service (Sacramento Office) Species of Concern
SSC- California Department of Fish and Game Species of Special Concern
Protected and Fully Protected – Species which cannot be taken or possessed without a permit from the Fish and Game Commission and/ or Department of Fish and Game
HP – High Priority species are designated by the Western Bat Working Group as a species imperiled, or at a high risk of imperilment

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Appendix G Comments and Responses on the Draft EIS/EIR

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Introduction

Appendix G presents comments received on the *Campus Parkway Project Draft Environmental Impact Statement/Environmental Impact Report* (EIS/EIR) and responses to those comments from the Merced County Department of Public Works. Any text changes resulting from the comments are summarized in the responses and have been incorporated into the text of this Final EIR. As discussed in "General Information About This Document" (see back of front cover), the draft report issued for public review and comment was a joint EIS/EIR. The following discussion therefore refers to the Draft EIS/EIR and the process involved in preparing and releasing it for public review and comment.

Comment Period

A Notice of Availability of the Draft EIS/EIR was published in the Federal Register (70[87]: 24037) on May 6, 2005. The State Clearinghouse comment period officially began on April 22, 2005, and ended on July 5, 2005. To announce the availability of the Draft EIS/EIR, a public workshop was held in the City of Merced on April 28, from 6 to 9 p.m. Merced County representatives were available at the meeting to address questions, and displays were provided showing the project alternatives and summarizing the project impacts and mitigation.

The Draft EIS/EIR was provided to the individuals and agencies listed in Chapter 7. Electronic copies of the Draft EIS/EIR on CD were provided upon request at the April 28 public workshop and throughout the review period from the Merced County Department of Public Works. Paper copies of the Draft EIS/EIR were available for purchase. Paper copies were also made available for public review at the April 28 public workshop and at the following locations during the review period:

- Merced County Public Works, 345 West 7th Street, Merced
- Merced County Planning, 2222 M Street, Merced
- Merced County Library, Main Branch, 2100 O Street, Merced
- Merced County Association of Governments (MCAG), 369 West 18th Street, Merced
- City of Merced Planning, 678 West 18th Street, Merced

The technical documents that were prepared to support the Draft EIS/EIR were also available on CD. Paper copies of the technical documents were available for public review at Merced County Public Works, 345 West 7th Street, Merced.

A public hearing for comment on the Draft EIS/EIR was held at 5:30 p.m. on Tuesday, June 21, 2005, in the Board of Supervisors Chambers at the County Administration Building at 2222 M Street in Merced. Comments were recorded at the meeting and a transcript was prepared. Comments received by mail and email or transcribed at the public hearing are presented and addressed in this Final EIR, as described below.

Responses to Comments

During the comment period, federal, state, and local agencies and representatives as well as 14 private organizations and businesses and 27 members of the public submitted both written and spoken comments. Each letter, e-mail, petition, note, and public hearing comment was reviewed and substantive comments were identified. Responses to each comment are organized and presented in the following sections of this appendix:

- Section G.1, Master Responses to Comments
- Section G.2, Comments from Individuals
- Section G.3, Comments from Public Hearing
- Section G.4, Comments from Petition
- Section G.5, Comments from Private Organizations and Businesses
- Section G.6, Comments from Public Agencies

G.1 Master Responses to Comments

This section provides an overview of the most prevalent topics and issues that emerged from the body of comments received on the Draft EIS/EIR. These issues (Master Comments) were identified by a number of commenters or touch on subjects of common interest. The representative Master Comments that were developed are summarized and shown in italics below by topic. Following each issue summary is a response (Master Response) that may be referred to in responses to individual comments regarding the same topics or issues.

Many issues are interrelated and cannot be considered in isolation. The divisions among and sequence of the comments and responses that follow are for organizational purposes only and do not reflect the importance of any single issue in relation to all of the others.

Roadway Safety

Master Comment-1

Several commenters argued that the proposed curves in the roadway design present increased risks to drivers, including inexperienced drivers that might be associated with the new University of California, Merced (UC Merced) Campus.

Master Response-1

The location of the proposed alignments were selected to evaluate a range of potential alternatives to provide better traffic service and connectivity of the road network in Merced. The roadway designs are intended to minimize adverse effects to the existing environment and local communities.

More specifically, the proposed alignments and curvature were designed to minimize impacts to existing land uses while meeting state and federal design standards. The curve at the southern end of the Common Alignment (where Campus Parkway connects to the Mission Avenue interchange) was included to avoid the land uses between the Doane and Hartley Laterals and the existing and planned land uses to the west. These land uses include two schools, as discussed in Section 2.2.1 of the Draft EIS/EIR. The Green Alignment was designed to provide a choice of an alignment that is reasonably close to the existing development of Merced without directly conflicting with it. The Green Alignment was also intended to potentially minimize effects to farmland if any future growth of the City of Merced is extended beyond the existing eastern boundary. To help achieve this, the Green Alignment north of State Route (SR) 140 was curved to the west. All of the alternatives for Campus Parkway, including the curves, will be designed to conform to the most current standards established by Caltrans and the Federal Highway Administration (FHWA). Appropriate signage and lighting will be provided, as necessary, to advise motorists of the road alignment.

Master Comment-2

The safety of bicyclists is at risk because of the proximity of the bicycle path to major proposed and existing roadways.

Master Response-2

The construction of a bicycle path alongside the proposed Campus Parkway is intended to provide safe access along the corridor for bicycle users. As depicted in the roadway cross sections shown in Figures 2.3-1 and 2.3-2 of the Draft EIS/EIR, the right-of-way would ultimately include both a Class I bike path and a bike lane. The Class I bike path is a dedicated path for pedestrians and bicyclists and is physically separated from the proposed expressway. For bicyclists who want to avoid the Class I path due to pedestrian traffic, a paved shoulder that also functions as a Class II bike lane would be provided within the roadway cross-section. The bike lane would be alongside the vehicle travel lanes on each side of the expressway. (Bicyclists would travel in only one direction on each side of the expressway.) At nearly 8 feet wide, the lanes exceed the minimum

Caltrans design standard width and would allow users sufficient room to adequately avoid adjacent vehicle traffic.

Master Comment-3

The safety of roundabouts, particularly along Olive Avenue in the Yellow Alignment, is questionable. Roundabouts at that location will also make access to homes in the immediate vicinity more difficult.

Master Response-3

As described in Section 2.3.4, roundabouts are being considered as an alternative traffic control measure to standard traffic signals at two of the proposed Campus Parkway intersections with local roads: Yosemite and Olive Avenues.

Roundabouts are being considered for several reasons. First, roundabouts reduce delays associated with four-way intersections. This is because a roundabout allows continuous traffic flow and merging, without the interruptions necessitated by a signal. Improving traffic flow and avoiding the stop-and-go action associated with a signalized intersection can also have air quality benefits, as vehicle emissions are lower with a more steady traffic flow. Second, a roundabout requires a smaller footprint than a major intersection. Constructing a roundabout at this location would minimize the right-of-way acquisitions at the approaches to these intersections because right- and left-turn lane pockets are not required, and therefore the width of the roadway cross section can be narrower. This reduces impacts to the residential communities in the vicinity but does not avoid them. If an intersection were constructed at this location, right-of-way for left-turn lanes would likely affect more residents in the vicinity. Third, roundabouts may have a lower potential for accidents than intersections due to the traffic flow patterns. The physical configuration of a roundabout includes a yield at entry, followed by a right turn into the roundabout; this forces a driver to reduce speed coming into the roundabout to both yield to traffic and make a turn. A standard intersection design, with a signal at a cross street, allows drivers to proceed without speed reduction during a green light, and drivers may even accelerate when the signal is changing to yellow and then red, with cars potentially accelerating through a just-changing (or changed) red signal. In contrast, once a driver has yielded and entered or merged into a roundabout, the remaining movement is a right turn to exit the roundabout to continue along the Campus Parkway or to enter a cross street. This reduces left-turn movements where a driver has to decide when to cross oncoming traffic, with a higher exposure to risk or conflicts.

The concern regarding the proximity of the roundabout to residences and the difficulty of access is noted. At the Yellow Alternative intersection at Olive Avenue near the Bradley Lateral, the roadway (Olive Avenue) and roundabout would be shifted northward toward two residences and away from a residence just to the south. Driveway access would be realigned and some property frontage bordering Olive Avenue would need to be acquired. This change is necessary to realign the existing curve in Olive Avenue to provide adequate sight distance for drivers at the proposed Campus Parkway alignment and intersection.

Analysis of Alternatives

Master Comment-4

The Draft EIS/EIR provided an insufficient basis for the comparison of the alternatives presented. The impacts should be quantified in terms of the number of people affected under each alternative. Based on housing density and the different locations of individual homes (and their proximity to each alignment), the environmental impacts (noise, visual, dust, fumes) will vary, and all impacts should not be treated equally. Direct and indirect effects to quality of life should be addressed.

Master Response-4

The Draft EIS/EIR presented impacts, both direct and indirect, to various resources that constitute the natural environment, and impacts to the community, or human environment. Chapter 3 of the Draft EIS/EIR

contained discussions of the range of impacts associated with each of 19 resource areas. The discussions of impacts capture those that are direct and most immediate, as well as indirect and short-term impacts of the project.

Table S-2 in the Summary (Section S.3) of the Draft EIS/EIR presents a comparison of the alternatives considered, based on impacts analyzed in the document. It states, for example, that each of the three action alternatives considered would have one housing displacement. The analysis presented in the Draft EIS/EIR also reflects the differences in impacts in the discussions regarding traffic volume and service projections for the various road segments, as presented in Sections 3.16.2 and 3.16.3. These differences in traffic volumes are also associated with traffic-related impacts, such as the potential for increased noise at nearby residences. Therefore, the number of locations where Caltrans and Merced County noise criteria would be exceeded is compared in Table S-2 for each alternative. With regard to community impacts, the following information on numbers of homes affected and traffic, visual, noise, and construction impacts is summarized from the Draft EIS/EIR.

Summary of Impacts to the Community

Using information presented in the Draft EIS/EIR, data were compiled on impacts to biological resources, farmland, neighborhoods, and traffic/circulation, which are presented in the alternative ranking tables in new Appendix H.

Proximity of Alignments to Residences. The three alternative alignments would have impacts of varying magnitude to the residences along the routes, in terms of numbers of homes and relative distance from each alignment. Table H-5 in Appendix H shows the estimate of residences along each alternative alignment (plus the Common Alignment) by distance from the road. The numbers of residences near the alignments are relatively similar for all three alternatives, except when considering the number of homes that would be located between 500 and 1,000 feet from each route. A greater number of residences are within 500 to 1,000 feet from the Green Alignment than from the other two alignments. This difference is primarily associated with the subdivisions located west of the Green Alignment between approximately Yosemite Avenue and just south of Bear Creek. For all of these homes and residents, changes in traffic, visual setting, and noise would be the primary effect to the existing environment, as described below.

Traffic. Changes in traffic volumes resulting from the Campus Parkway would vary by alternative. These changes affect volumes on existing local roads with existing residential areas, such as Olive and Yosemite Avenues. The following table summarizes forecasted year 2025 traffic projections for the No Action alternative and the three build alternatives for six roadway segments, including difference in volumes west and east of Campus Parkway:

Comparison of Traffic Volumes East and West of Campus Parkway (vehicles per day)

Roadway Segment	No Action	Green and Green Alternate		Yellow	
		West of Parkway	East of Parkway	West of Parkway	East of Parkway
Yosemite Avenue	8,959	10,834	67	8,795	163
Olive Avenue	4,120	8,197	227	7,046	117
SR 140	15,867	14,366	14,923	14,287	14,808
Childs Avenue	3,948	6,230	3,059	6,165	2,940
Gerard Avenue	1,106	1,704	805	1,567	812
Mission Avenue	669	14,491	59	13,497	61

The table shows a sharp decline in traffic volumes on each of the local roadways east of the intersections with the proposed alternative alignments (except for SR 140). This means that if the Green Alternative is selected, fewer homes on Olive Avenue east of the Parkway would be affected by the projected future traffic volumes on that road. This same conclusion applies to the other local roads listed above, with the exception of SR 140,

which as a regional highway would continue to serve traffic independent of the Campus Parkway alignments.

Visual. The Draft EIS/EIR described the changes in the visual setting within the different landscape units characterized in the study area. With reference to the comments that the Draft EIS/EIR should provide additional information on potential impacts to nearby residents, Table H-5 in Appendix H shows that within 500 feet of the alternatives, approximately the same number of residences along each alignment could be affected by changes to the visual setting. As noted above, at a distance of 500 to 1,000 feet, more residences are near the Green Alignment due to the subdivisions west of the alignment between Yosemite Avenue and just south of Bear Creek. The backyards of these homes face the existing agricultural lands east of the alternative alignments, and in most cases, the homes have existing fencing and landscaping along the property boundaries. As described in Section 3.17.2, where unobstructed views exist to the east of these homes, the views are of agricultural cropland in the foreground. With the Green Alignment in place, if backyard landscaping and fencing allows a view, traffic would be visible at approximately 0.25 to 0.5 mile away. The Parkway would appear at-grade except for the elevated crossing of Bear Creek, which would be more visible to homes near the crossing. The Yellow Alignment would be approximately 0.5 mile farther from these homes than the Green Alignment.

Noise. Noise level changes are described in Draft EIS/EIR Section 3.5. Tables 3.5-4 and 3.5-5 list the changes in noise levels at various study locations with respect to federal, state, and local noise impact and mitigation criteria. For the residences in the subdivision areas discussed above, noise levels with the Green Alignment would increase by between 2 and 10 A-weighted decibels (dBA) through the year 2025 depending on location, which can be a noticeable and significant increase in an area where ambient noise levels are relatively low (e.g., 45 to 55 dBA). The Yellow Alignment and Green Alternate Alignment would increase noise levels at residences along Campus Parkway and Olive Avenue by between 1 and 5 dBA. With buildout of the UC Merced Campus and University Community through the year 2025, cumulative noise levels would further increase by several dBA, as listed in Tables 3.5-4 and 3.5-5. With the increase in noise levels, many of the residential areas still remain below the local noise threshold criteria of 65 dBA. Traffic noise levels depend on a number of factors, an important one being the distance between the source of the noise (the traffic on the road) and the receptor (a person or home). The number of homes in close proximity to the either the Green or Yellow/Green Alternate Alignments is about the same, but more homes are within 500 to 1,000 feet of the Green Alignment than the Yellow Alignment or Green Alternate Alignment. Noise barriers could provide some reduction to noise impacts where the Campus Parkway is closest to homes. For this reason, Merced County has proposed to consider construction of berms and/or soundwalls to reduce noise levels for homes within 200 feet of the selected alternative.

Construction Dust, Fumes, and Noise. Residential areas directly adjoining the Campus Parkway would be impacted temporarily by dust and noise during construction, and residences nearby (e.g., closer than 500 feet) may also be temporarily affected. Contractors will be required to adhere to construction practices and specifications to mitigate these impacts to the extent feasible. The Draft EIS/EIR specified types of mitigation requirements, which include restrictions on hours of operation for construction activities, construction equipment restrictions, and the use of dust control measures.

Implementation Cost

Master Comment-5

A shorter, direct alignment with fewer curves in the road will be more cost-effective to construct and to maintain than a route with more turns.

Master Response-5

The Yellow Alignment is slightly shorter than the Green Alignment, although the difference in length is less than 0.1 mile. Differences in construction costs are associated with the different alignments. These differences are due in part to the length of the paved surface and in part due to design details such as differences in the footprint of the proposed bridges along each alignment. Even though the total length of the Yellow Alignment is slightly shorter than that of the Green Alignment, the bridge over Bear Creek for the Yellow Alignment would be longer than the Bear Creek crossing for the Green Alignment. The increased bridge length is due to the fact that the Yellow Alignment would cross Bear Creek on a diagonal. As a result, the cost to construct each alternative would be relatively similar (see Table 2.3-2 in the Draft EIS/EIR).

Growth Inducement and General Plan

Master Comment-6

The General Plan encourages development northward rather than eastward. With the location of the proposed alignments to the east of the city limits, there are risks of encroachment and of housing and other development to replace important agricultural lands. Some commenters argued that growth might be more likely if the alignment is closer to the existing developments, while others stated that it could provide a barrier to prevent further expansion to the east.

Master Response-6

The *Merced Vision 2015 General Plan* (City General Plan) envisions development generally north of the city, including the development of the UC Merced Campus to the northeast. Figure 3-1 of the Draft EIS/EIR shows the adopted and proposed developments in the vicinity of the city. Most of the new development is concentrated in the north, although developments are proposed to the northeast and south of Merced as well. Eastern areas with prime agricultural soils are avoided in the proposed plans, to the extent practicable.

Section 3.12.2 describes the potential impacts of the Campus Parkway project on growth. The direct access provided into the study area from SR 99 via the approved Mission Avenue interchange would serve the projected future growth in northern and eastern Merced. The pressure for conversion of land uses in Merced already exists, as demonstrated by the increase in building activity in the past several years (for example, see the approved and proposed projects shown in Table 3-1 and Figure 3-1). The projections for traffic that were developed for the Draft EIS/EIR were based on future year buildout projections of land use development from the Merced County Association of Governments (MCAG), consistent with the existing City General Plan and *Merced County 2000 General Plan* (County General Plan) for future land use patterns. The vehicular access provided by the Campus Parkway project is planned to serve those forecasted, or planned, future conditions. Land use conversions would still require a decision by the Merced County Board of Supervisors to change the land use designations, which would require environmental and public review under the California Environmental Quality Act (CEQA).

Master Comment-7

A few commenters noted that the County General Plan was last updated or adopted in 1990 and is relatively out-of-date. Concerns were raised about reliance on the plan, and commenters requested that the plan be updated before further planning and project approvals proceed.

Master Response-7

Although the County General Plan was issued in December 1990, it is the existing, adopted general plan and therefore was the appropriate plan to consider in the Draft EIS/EIR. The studies in the Draft EIS/EIR did not rely solely on material from that plan and instead used information that is

relatively current. For example, traffic trip generation was based on MCAG's latest model, which is updated every two years with new land use information and changes in traffic conditions. The noise and traffic studies were based on information on existing traffic conditions and future growth, and buildout conditions were modeled for each study year.

Rationale for Location of Northern Project Terminus

Master Comment-8

Some comments questioned the rationale for the selection of the northern terminus of the proposed alternatives and why there are multiple termini (i.e., the Green Alignment/Green Alternate Alignment and the Yellow Alignment end at different locations on or near Yosemite Avenue). By terminating on higher-traffic roadways such as Yosemite Avenue and Lake Road, traffic on those roadways may increase without additional roadway improvements. With worsened traffic conditions, there are likely to be more adverse impacts to air and noise in the vicinity of the project.

Master Response-8

The northern terminus for each of the alternatives would be at the intersection of Campus Parkway and Yosemite Avenue. The rationale for providing connectivity to Yosemite Avenue is provided in Chapter 1 of the Draft EIS/EIR. Sections 2.1.1 (under the heading "Traffic Analysis and Modifications of Alternatives") and 5.3.3 discuss how the northern terminus of the project was defined at Yosemite Avenue for the Yellow Alignment and at Yosemite Avenue with a short connection to Lake Road for the Green and Green Alternate Alignments.

The following additional information has been added to Final EIR Section 2.1.1 (under the heading "Traffic Analysis and Modifications of Alternatives"). In the initial stages of project development and alternative identification, the northern termini for all alternatives was a connection to Bellevue Road, about 2 miles north of Yosemite Avenue. Essentially, the Green and Yellow Alignments were originally planned to extend north from their present termini at Yosemite Avenue to Bellevue Road. This northern limit was shifted south to Yosemite Avenue after detailed traffic modeling was completed and during consultation with federal and state resource agencies following the adopted National Environmental Policy Act (NEPA)/Section 404 coordination process for transportation projects. The traffic modeling indicated that with only Phase 1 of the proposed UC Merced Campus completed and without the development of the University Community, the volumes of traffic predicted to use the northern extension of Campus Parkway (north of Yosemite Avenue) would not require substantial new roadway capacity, and that Lake Road and Yosemite Avenue could handle the future traffic volumes without substantial improvements. The analysis determined that if Campus Parkway continued north of Yosemite Avenue, the northerly extension would not get significant use and most traffic would still turn onto Yosemite Avenue.

Development of the University Community project, which is an independent action, would include its own internal road and traffic circulation system connecting to Yosemite Avenue and to the UC Merced Campus. The need for a roadway continuing north of Yosemite Avenue could be met by the University Community development.

Master Comment-9

Some commenters questioned why the alignments do not continue directly north into the new University Community. One commenter noted that keeping the alignments west of the proposed University Community avoids bifurcating the community and maintains cohesion.

Master Response-9

Providing connectivity to the UC Merced Campus is one of five objectives of the project as outlined in Section 1.1 of the Draft EIS/EIR. In addition to facilitating access to the UC Merced Campus and University Community, Campus Parkway would provide access between the City of Merced and SR 99. It would also satisfy the need for an eastern "Beltway" adjacent to

the City of Merced, to serve all of the proposed and planned developments to the north and east of the current city limits. In addition, Campus Parkway would provide additional emergency service access that is not restricted by the (Burlington Northern–Santa Fe) BNSF railroad tracks. For these reasons, Campus Parkway would improve connectivity in Merced and help alleviate future traffic congestion in the region, extending beyond the UC Merced Campus and University Community. The Parkway would serve drivers traveling between northern Merced and SR 99 as well as the campus-related land uses.

The alternative alignments do not continue north into the University Community because traffic modeling indicates that the need for Campus Parkway for the year 2025 ends at Yosemite Avenue. (See Master Response 8.) Developers of the University Community will be responsible for extending Campus Parkway north of Yosemite Avenue to meet the needs of the community.

Alternative Alignments

Master Comment-10

Some commenters stated that consideration should have been given to an alternative farther to the east of the three alternatives evaluated in the Draft EIS/EIR. These comments focused primarily on looking at a route alignment along Kibby Road (located east of the proposed Yellow Alignment).

Master Response-10

Kibby Road was examined as a possible alternative at the beginning of the studies for the Draft EIS/EIR. Two public meetings were held in 1999 regarding potential study alternatives. In March 1999, a public meeting was held to explain the concept of the project and its background (including its purpose and need), and the preliminary alternatives that had been identified that might serve the needs of the project. They included a "Green A" alignment (essentially an extension of Kibby Road) and "Pink A and B" alignments (parallel to and east of Kibby Road). Following that meeting, preliminary traffic, land use, and environmental constraints were examined to refine the alternatives, eliminate those that had unacceptable or significant impacts or issues, and advance the most promising alternatives for further evaluation. The findings of that evaluation are summarized in Section 2.5, and the extension of Kibby Road is discussed in Section 2.5.3. Among other factors, it was determined that directing or connecting the expressway onto Kibby Road would not serve much traffic that is destined for land uses in northern Merced. Kibby Road is also a rural two-lane roadway, and if traffic were directed to it, the existing land uses alongside the road would be adversely impacted by the traffic and necessary improvements or reconstruction.

Resource Impact Issues: Noise and Farmlands

Master Comment-11

Some commenters expressed concern about future noise level increases due to changes in traffic volume and/or proximity of the Campus Parkway to their neighborhood or home. Concerns were also expressed about traffic noise mitigation.

Master Response-11

An increase in traffic volume or speed can result in an increase in noise at nearby land uses, depending on the distance from the roadway to the home and yard area, existing terrain and barriers, and the future noise levels predicted without the project. (That is, a residential area would have an increase in traffic noise in the future if growth in land use and traffic is expected without the project, which is the case with eastern Merced and Olive Avenue. This is taken into account when evaluating the change in traffic conditions by comparing the proposed alternatives against the future No Action conditions.) Noise measurements were performed along the alternative alignments at representative locations within the developed residential areas that could be most exposed to changes in traffic with the

project alternatives completed (see Figure 3.5-2 in the Draft EIS/EIR). Noise levels were modeled for future conditions with and without the Campus Parkway alternatives in place. Noise barriers were considered using Caltrans and Federal Highway Administration (FHWA) evaluation methods and criteria, as well as the County of Merced criteria (discussed in Draft EIS/EIR Section 3.5). Where noise-sensitive land uses exceeded the federal, state, or local criteria, the effectiveness of a barrier was modeled or evaluated and considered for its ability to reduce or mitigate the predicted future (2025) noise levels. In all cases where future noise levels exceed the applicable federal, state, or local impact criteria, the evaluated noise barriers were not considered effective in reducing noise levels or were not cost effective in mitigating the impact. The evaluation of cost effectiveness was consistent with the Caltrans and FHWA method for evaluating "reasonableness" of a barrier. This outcome does not mean that the federal and state criteria consider this type of situation unaffected; rather, the minimum level at which federal funding can be used for noise abatement was not achieved.

Under local planning criteria, however, noise levels at modeled locations nearest the proposed alignments were either projected to increase by more than about 5 dBA, which is considered more than a perceptible change in noise levels, or to exceed Merced County's minimum ambient noise impact level. Because federal and state noise abatement criteria do not result in any locations along the project alternatives qualifying for noise abatement protection, Merced County will consider incorporation of noise abatement measures in the design of the project, which would be funded by local or county funds. Noise barriers would be provided (where feasible) to minimize the effect of noise from the Campus Parkway for existing residential structures that are within 200 feet of the right-of-way. Noise barriers that Merced County will consider may consist of berms, soundwalls, or a combination of the two. The goal for the noise barriers would be to reduce future traffic noise between 3 and 5 dBA. Noise barriers would be considered for residential structures located on the following parcels (listed by alternative).

Parcels Where Noise Abatement Will Be Considered by Merced County (by Assessors Parcel Number)

Green Alignment	Green Alternate Alignment	Yellow Alignment
061-340-010	061-340-010	061-340-010
061-010-025	008-120-025	008-120-025
008-120-037	008-120-027	008-120-027
008-120-001	008-090-039	008-090-039
008-090-033		

Source: Merced County 2005

Master Comment-12

Concerns were expressed about impacts to farmlands. Some individuals voiced concerns about impacts in a range of issues, including the general loss or conversion of farmlands. A few comments were more specific about farmland concerns, especially impacts and mitigation for farmlands that cannot be avoided.

Master Response-12

Farmland impacts were identified at the earliest stage of project and alternative development. One of the first alignments to be conceptually developed was the Yellow Alignment, which provides a relatively straight connection to SR 99. In response to concerns that the Yellow Alignment would leave agricultural lands isolated within an area bordered by the eastern boundary of the City of Merced and the Yellow Alignment, the Green Alignment was developed, which curved the road west and closer to the eastern side of the existing suburban land uses in Merced. The routes considered in the Draft EIS/EIR allowed evaluation and consideration of alternatives with different impacts to existing agricultural lands.

Some specific comments included concern about mitigation for impacted farmlands. The Draft EIS/EIR noted that Merced County does not have an adopted farmland mitigation policy. The Draft EIS/EIR noted that if a policy were to be adopted during the course of this project's development

and environmental review process, then requirements for farmland mitigation would be included by Merced County as a requirement of the project. Merced County will require mitigation for the loss of productive agricultural lands in conformance with any countywide program adopted by Merced County. In the event that such a program is not adopted prior to the initiation of grading for the Campus Parkway project, equivalent protection of farmland of comparable value will be considered at a ratio of 1:1 for productive farmland converted with project implementation. Equivalent protection is defined as acquisition of conservation easements by the County (or appropriate third party designated by the County) that would protect 1 acre of productive farmland for each acre converted through fee title, easement, or other measure. Section 3.13.4 of the Final EIR has been amended to include a requirement for the acquisition of conservation easements.

Alignment Preferences

A majority of the individual commenters voiced preferences for, or opposition to, a particular alignment in the written and spoken public comments. Some businesses and private organizations also indicated preferences for specific alignments. Many of those who commented indicated that they would be directly impacted by the selection of one of the alternatives. Although the selection of an alternative is not predicated on the popularity of any particular alignment, this discussion is presented to summarize the public sentiments that surfaced during this comment period.

With the exception of a petition that included 135 signatures opposing the Yellow Alignment, many individual commenters indicated support for the Yellow Alignment based on the argument or opinion that it presents fewer adverse environmental impacts to the largest group of local residents. Some of the reasons cited for support for the Yellow Alignment included fewer curves and greater safety; lower cost; fewer visual, air, and noise impacts; and the preservation of quality of life for residents in the eastern part of the City of Merced.

Another group of commenters stated preference for the Green Alignment. These commenters indicated that the Green Alignment would have lower-magnitude impacts on residents in the project vicinity. They also felt that maintaining an alignment close to the current city limits would limit encroachment, loss of agricultural lands, and new development to the east.

Commenters opposed to the Yellow or Green Alignment cited personal and emotional losses as some reasons for opposition to one or more of the alignments. Adverse impacts to wildlife were also cited by at least one commenter.

Each of these subject areas is addressed in the responses to comments.

G.2 Comments from Individuals

Comments received from individuals are presented below in alphabetical order by the author's last name. Individual issues within each comment submission are numbered (e.g., Name-1, Name-2, etc.). Multiple comment submissions from the same author are presented in chronological order. Responses follow each comment submission.

Name	Address	City	State	ZIP	Date of Comment
Greg Aveller (1)	3595 E. Olive Avenue	Merced	CA	95340	4/26/2005
Greg Aveller (2)	3595 E. Olive Avenue	Merced	CA	95340	6/17/2005
Irene Barbour	3356 E.N. Bear Creek Drive	Merced	CA	95340	none
Dr. & Mrs. Lester Barger (1)	3401 E. Olive Avenue	Merced	CA	95340	6/18/2005
Dr. & Mrs. Lester Barger (2)	3401 E. Olive Avenue	Merced	CA	95340	6/18/2005
Stephen Cooper	none				6/24/2005
Noel Douglas	3330 E. Olive Avenue	Merced	CA	95340	6/28/2005
Thomas L. Fife	2950 Whitegate Drive	Merced	CA	95340	7/1/2005
Rod Harris (1)	none				6/22/2005
Rod Harris (2)	none				5/16/2005
Gil & Brenda Hassen	2880 Bedford	Merced	CA	95340	5/24/2005
Mary Haygood	2910 Atlantic Street	Merced	CA	95340	7/5/2005
Nancy B. Holmes	2913 Whitegate Drive	Merced	CA	95340	6/22/2005
Diana Hylton, M.D.	none				6/29/2005
Jesse R. Martin Sr.	2977 Whitegate Drive	Merced	CA	95340	none
Jacki & Lawrence Mercando	3202 N. Leaf Drive	Merced	CA	95340	5/23/2005
Deanna & Len Morgan	2967 Whitegate Drive	Merced	CA	95340	6/20/2005
Bryant Owens	2683 S. Plainsburg Road	Merced	CA	95340	7/6/2005
Audrey Peguero	3222 E. S. Bear Creek Drive	Merced	CA	95340	6/27/2005
Teresa A. Pimentel (1)	3533 E. Olive Avenue	Merced	CA	95340	4/20/2005
Teresa A. Pimentel (2)	3533 E. Olive Avenue	Merced	CA	95340	6/2/2005
David & Caroline Rogina	1605 Ridge Drive	Merced	CA	95340	7/5/2005
Don Stewart, Jr.	2651 Cooper Avenue	Merced	CA	95348	7/5/2005
Mark Sverha	2910 Whitegate Drive	Merced	CA	95340	none
Mike Sverha	179 Leslie Drive	Atwater	CA	95301	none
Theresa Sverha	2910 Whitegate Drive	Merced	CA	95340	none
Rick Wallace	none				6/24/2005

Comment: Greg Aveller (1 of 2)

April 26, 2005

Merced County Department of Public Works
Steve Rough, Project Engineer
715 Martin Luther King Jr. Way
Merced, CA 95340

Dear Mr. Rough:

1 I am opposed to the location of the Campus Parkway Highway between the Aveller & Pimentel residences.

I reside at 3595 E Olive Ave Merced, CA, a single family residence which is immediately adjacent to the easterly boundary line of the proposed C.P. Highway.

I purchased my parcel in 1975 and began construction with my water system, built an ag building, next my home and finished with the garage in 1996. When I say "I built my home", I drew the plans, dug the foundation footings by hand, poured the concrete, framed the structures and roofed them as well. The roof on my home took me 8 months to complete, 7 days a week with just 2 days off for Christmas and Easter. What a job; a darn good job-it doesn't leak. You probably think that I built it single handed. NO, I did hire some help and had help from friends and neighbors.

My home is very energy efficient. I insulated it very well and tightly fit. There are two skins on the 2x6 walls with vapor barriers. I love my home for many reasons not just because it is energy efficient but also due to the location in the northeast area of Merced and the proximity to my great neighbors. I also feel that the Campus Parkway right next
2 to my home would be too much of a negative influence for me to live there; noise, auto pollution and right next to a major traffic generator.

3 I believe the Campus Parkway should be aligned to the west approximately one half mile to align the Campus Parkway route to eliminate curves that would surely generate auto accidents if constructed in this alignment. If the new route to the Merced University was straight and approximately one half mile west of my property I believe that it would serve the University and provide a safe route for the future growth of Merced .

Sincerely Greg Aveller

GREG AVELLER

Responses: Greg Aveller (1 of 2)

Aveller (1)-1

The commenter's opinion on the location of the proposed Campus Parkway is noted.

Aveller (1)-2

The proposed locations of the Yellow Alignment and Green Alternate Alignment would be near the commenter's property on Olive Avenue. Olive Avenue in the vicinity of these alignments is a rural major collector street and one of the few east-west roads north of Bear Creek (along with Yosemite Avenue to the north) that provides a continuous route for traffic to leave or enter Merced from the east side of the city. The traffic volume on Olive Avenue was estimated at less than 1,000 trips per day in the year 2000. With predicted land use growth, vehicle trips per day on Olive Avenue between Kibby and McKee Roads are projected to increase to 2,724 in 2015 and to 4,407 by 2025 (see Table 1-1 in the Draft EIS/EIR). These volumes are projected without the Campus Parkway in place. The predicted changes in traffic volume are based on regional planning data projections from the Merced County Association of Governments (MCAG). The forecasted increases in traffic reflect a greater reliance on Olive Avenue as an east-west arterial as growth in the region continues, even without the proposed Campus Parkway project. With the increase in the number of vehicles using Olive Avenue, vehicle emissions would also increase.

Under the Green, Yellow, or Green Alternate Alignments, traffic traveling east-west on Olive Avenue would change in two ways. Traffic volumes on Olive Avenue on the west side of Campus Parkway would be higher than with the No Action alternative, as additional drivers use Olive Avenue from northern and central to reach SR 140 and SR 99. Traffic volumes on Olive Avenue east of the Campus Parkway alignment would decrease, as the traffic that would have continued east to Arboleda Drive and then south to SR 140 and SR 99 instead uses the Parkway. The Green Alignment would avoid the property by approximately 0.5 mile.

Air quality impacts are discussed in Section 3.4.2 of the Draft EIS/EIR. Traffic changes predicted to result from the project would affect the amount and location of vehicle emissions. Many vehicle-emitted pollutants are of greatest concern at a regional level, and carbon monoxide is an emission that can have localized impacts. Pollutant emissions would increase under the No Action alternative, the Yellow Alignment, and the Green Alternate Alignment because of increases in traffic. The changes in traffic are not predicted to result in any additional exceedances of air quality standards at any location, including the standard for carbon monoxide (for which Merced County is in attainment).

Increases in noise near the proposed alternative alignments, including this residence, are discussed in Master Response-11. Noise measurements were taken near the commenter's location (Site No. 9 in the noise study; see Figure 3.5-2 in the Draft EIS/EIR). Noise levels were modeled for future conditions with and without the Campus Parkway alternatives in place and show a predicted maximum increase at this property from 59 A-weighted decibels (dBA) (with either the No Action or the Green Alignment, which avoids this property) to 64/65 dBA (with the Green Alternate Alignment or Yellow Alignment, which would be near this property). Traffic noise levels would not increase at this location with the Green Alignment and may even decrease because of the diversion of traffic to the Campus Parkway. At a potential maximum level of 65 dBA in the future, the noise level with the Green Alternate Alignment or Yellow Alignment falls below the FHWA criteria at which noise abatement is considered for a project involving federal financing. This does not mean that the federal criteria consider this type of situation unaffected; instead, it is the minimum level at which federal funding can be used for noise abatement. The modeling also shows that an estimated increase of 5 dBA in ambient and peak-hour noise levels would occur at this location with the implementation of either the Yellow Alignment or Green Alternate Alignment. This predicted increased future level is more than a 3 dBA difference (considered a perceptible change in noise levels) and is considered impacted under Merced County planning

criteria. Noise abatement was evaluated. It was determined that a soundwall for the commenter's property could achieve a 5 dBA reduction, but the soundwall (or berm if right-of-way is available) would have to be approximately 1,140 feet long, 8 to 16 feet high, and extend along and around the property. This soundwall was not considered feasible under state and federal criteria because future noise levels would not exceed the minimum threshold of 65 dBA for an impacted receptor under federal guidelines, and construction of a wall would be at a high cost per residence under Caltrans and FHWA "reasonableness" criteria for evaluating effectiveness. As noted in Master Response-11, however, Merced County will consider construction of a barrier at this location using local funding.

Aveller (1)-3

The location of each proposed alignment was initially selected to evaluate a range of potential alignments to provide better traffic service and connectivity of the road network in Merced. The commenter's opinion that the alignment should be moved west by approximately 0.5 mile is noted. The Green Alternate Alignment considered in the Draft EIS/EIR is located to the west, about 2,800 feet or slightly more than 0.5 mile, which generally represents the suggested alternative, at least north of Bear Creek and at Olive Avenue. See Master Response-1 for discussion of why the alignments include curves in the design, the relative length of each alternative, and safe design speed.

Comment: Greg Aveller (2 of 2)

Campus Parkway Proposal

17 June 2005

Merced County Board of Supervisors
2222 M Street
Merced , CA 95340

Dear Mr. Rough;

On March 18, 1999 I attended a public meeting on the proposed Campus Parkway. There were several routes proposed for discussion. The YELLOW route tied in at the south at the proposed highway 99 new interchange and ran north. This north-south route as proposed will pass immediately adjacent to my home on the west side of my property. This is a totally unacceptable location for this project.

1 May 5, 1999 I received a letter from the County Road Dept. with an aerial photo showing the proposed routes, the Yellow route being adjacent to my home. I called Mr. Steven Rough at the County Road Dept. Later that day I reviewed the routes with special attention to the route next to my home. Apparently the residents in the white gate area did not like the GREEN route even though it was about one quarter mile east of the closest home – thus, the alternate route was moved to the position immediate west of my westerly property line, MUCH TOO CLOSE TO A RESIDENTIAL AREA.

2 THIS ROUTE IS TOTALY UNACCEPTABLE! Why? The noise from the vehicle traffic will make the peaceful country disappear. And, a sound wall or berm the length of my parcel will not abate this problem. It will just block off my northwest breeze and view. The visual degradation of the entire area

3 where the proposed Campus Parkway is planned and the turnabout will totally destroy the view surrounding my home. My property value will surely plummet. Auto exhaust pollution will also be a

4 significant negative impact to the area residents and to the environment.

5 The environment will most likely be heavily impacted by the construction of the Campus Parkway road if built adjacent to my home. There is a bird of prey(red tailed hawk) nesting in the cottonwood tree at the southeast corner of my parcel, (about 200 feet east of the project). A pair of nesting owls are also in the area. These wildlife are very important to the surrounding ecosystems and to the surrounding residents.

6 If the Campus Parkway corridor is planned in a northward direction, then the route to the west closer to the "City of Merced" would be a more logical route since it is planned to "TIE-IN" with the existing Lake Road alignment. Or possibly Kibby Road would make a good route.

I've built my residence over the last three decades with my own two hands. It's an accomplishment I'm proud of and it is very energy efficient. And it shows every month in my utility bill. This structure is also very well constructed. There were no short-cuts. In fact there are many extras: One extra #4 rebar in the perimeter footings, extra wide & deep footings 18 inches by 36 inches deep even in the areas of single story construction. The water lines in the house are insulated with hard formed urethane insulation. These are just some reasons why I will not be able to exist if this Campus Parkway is constructed next to my home.

PLEASE, DO NOT CONSIDER THE YELLOW ALIGNMENT.

Sincerely

GREG AVELLER

Greg Aveller, Homeowner

Responses: Greg Aveller (2 of 2)

Aveller (2)-1

The commenter's opinion on the location of the proposed Campus Parkway with respect to his property is noted. The Yellow Alignment was the first alignment identified by Merced County during the development of potential alternatives. The Green Alignment was identified to evaluate whether impacts to farmlands could be minimized by a route that was located west of the Yellow Alignment.

Aveller (2)-2

See Responses to Aveller (1)-2 and (1)-3 and Master Response-11. Traffic noise levels will increase on Olive Avenue as forecasted growth occurs, even without the project. Future noise levels would be higher with the proposed Yellow Alignment or Green Alternate Alignment in place, as discussed in Response to Aveller (1)-2. Mitigation in the form of a soundwall was considered. A soundwall of at least 14 to 16 feet could reduce noise levels by up to 10 dBA compared to predicted future conditions without the project.

Aveller (2)-3

The Draft EIS/EIR addresses visual impacts in Section 3.17 and impacts to the Olive Avenue neighborhood in Section 3.17.2. The discussion notes that the proposed expressway would affect views at residences closest to the intersection of Olive Avenue and any of alternative alignments. Landscaping would provide some mitigation but would not shield or offset the total impact of this change in the visual setting.

Aveller (2)-4

See Response to Aveller (1)-2 in regard to impacts of vehicle emissions.

Aveller (2)-5

Extensive habitat and wildlife surveys were performed for the project, as discussed in Sections 3.8 and 3.9 of the Draft EIS/EIR. Red-tailed hawks are not an endangered species, but impacts to any raptor species that might affect reproduction or nesting should be avoided, as discussed in Section 3.8.2. Preconstruction surveys are proposed as mitigation. These surveys would involve verification of nesting activities prior to the start of construction and development of measures to avoid affecting raptor activities during nesting periods. The same measures would also apply to owls.

Aveller (2)-6

See Response to Aveller (1)-3 regarding selection of a route closer to the City of Merced. Kibby Road was considered as an alignment during the early stages of project and alternative development but was not advanced for further consideration (see Section 2.5.3 of the Draft EIS/EIR). Kibby Road is farther east than the Green, Yellow, or Green Alternate Alignments. It did not meet the project's basic purpose and need of alleviating traffic congestion or improving connectivity problems with the existing roadway network, and as such the traffic modeling showed relatively low volumes. This indicated that few drivers would consider a Kibby Road alignment an effective or beneficial route.

Comment: Irene Barbour

Irene Barbour
3356 E.N. Bear Ck.
Merced, Ca.
95340

Kathleen Crookham, Supervisor
County of Merced
2222 M Street
Merced, CA 95340

Re: Campus Parkway

Dear Supervisor Crookham,

I strongly urge you to support the "Yellow Alignment" option for the proposed UC Campus Parkway. The other alternatives will negatively impact several homes and neighborhoods along the corridor.

1 The Yellow Alignment offers the safest and most direct route to the campus, and minimizes noise pollution to existing neighborhoods.

Thank you for your attention to this matter. I look forward to your vote for the Yellow Alignment.

Sincerely,

Irene Barbour

Response: Irene Barbour

Barbour-1

The commenter's support for the Yellow Alignment is noted. The commenter's opinion regarding the benefits of the Yellow Alignment is also noted. The more densely populated areas are located to the west of all of the proposed alignments. All of the proposed alignments are designed to minimize potential impacts to neighborhoods and communities.

Comment: Dr. and Mrs. Lester J. Barger (1 of 2)

June 18, 2005

County Supervisor Kathleen Crookham
2222 M Street
Merced, CA 95340

Dear Supervisor Crookham,

1 We would like to express our opinion and grave concern about the proposed alignments of the Campus Parkway. Based on what we believe are very significant direct adverse impacts to our neighborhood, we oppose the proposed Yellow Alignment for the Campus Parkway.

2 The Olive Avenue crossing site for the Yellow Alignment is within a few hundred yards of our home. The planned roundabout wedged into the vicinity of many homes in our area (one of which will be destroyed) will undeniably affect the quality of life for all of the residents in these homes. We question the safety of placing a roundabout so close to these homes in terms of even being able to drive onto the street in front of our homes. On our property, we will be losing acreage with the planned realignment of the curve in Olive Avenue, which also brings the noise, traffic, roadside garbage and pollution that much closer to our home, orchard, gardens, and pastures.

3 While there will also be impacts with the Green Alignment, the relative density of housing along Olive Avenue in the immediate area of crossing of the Green Alignment is much less. Unlike the Yellow Alignment, the impact on most homes with the Green Alignment is much more indirect in terms of visual or noise impact, which we believe favors choice of the Green Alignment.

There is no doubt that there is significant reason to develop the southern approach from Highway 99 to the northern end of town and to the new UC Merced. But the traffic going west towards town on Olive Avenue will unnecessarily impact many more homes directly with the Yellow Alignment than the Green. We realize there are a large number of persons who perceive the Green Alignment as affecting their neighborhoods, but they would not have the traffic passing directly in front of their homes.

We hope that you seriously consider our concerns. The Yellow Alignment would change the nature of our neighborhood forever, is poorly positioned and disproportionate in direct adverse impacts, and should be rejected in favor of the Green Alignment.

Sincerely,

Dr & Mrs Lester Barger

Dr. and Mrs. Lester J. Barger
3401 East Olive Avenue
Merced, CA 95340

Responses: Dr. and Mrs. Lester J. Barger

Barger (1)-1

The commenters' opinions on the proposed alignments are noted.

Barger (1)-2

The commenters' concern regarding the potential roundabout at Olive Avenue under the Yellow Alignment is noted. As described in Section 2.3.4, a roundabout at Olive Avenue is being considered as an alternative traffic control measure to signaling. Roundabouts are being considered for Olive and Yosemite Avenues because these intersections are projected to have the highest traffic volumes. A roundabout is being considered for the Olive Avenue intersection for a number of reasons, including the potential to reduce delays by eliminating the need for a signal and the potential reduction in accidents. See Master Response-3 for additional discussion of roundabouts.

The realignment of Olive Avenue where it intersects the Yellow Alternative would bring the roadway closer to the residence(s) (nearest the canal), which would require acquisition of a portion of that parcel and reconstruction of the driveway where it connects with Olive Avenue.

The operation of Campus Parkway would increase noise levels along Olive Avenue. Traffic noise impacts were evaluated for each of the alternatives at representative locations along Olive Avenue. Figure 3.5-1 shows these locations, and Table 3.5-5 shows the modeling results. Existing noise levels on Olive Avenue (with the No Action alternative) range from 52 to 59 dBA. With the Green Alignment, noise levels would increase by 2 to 5 dBA, and with the UC Merced/University Community buildout to 2025, the increases would be 3 to 7 dBA. Existing noise levels at locations on Olive Avenue in the vicinity of the Yellow Alignment/Green Alternate Alignment range from 54 to 59 dBA (with the No Action alternative) and would increase to 57/58 to 64 dBA, a change of up to 5 dBA. The noise level changes from any of the alignments would exceed Merced County criteria for significant noise impacts. Merced County will consider providing mitigation for traffic noise impacts for residences that are within 200 feet of the Campus Parkway right-of-way. This mitigation, which is discussed in Master Response-11, will protect the most exposed homes.

Barger (1)-3

The commenters note the difference in housing density between the Yellow and Green Alignments along Olive Avenue. Portions of residential properties are in the vicinity of (or are crossed by) the right-of-way of the Yellow Alignment and the Green Alignment along Olive Avenue. Consequently, partial property acquisitions or "sliver takes," where a portion of a property is acquired and compensated, may be needed, but these acquisitions would not involve the entire property or require acquisition of the residence. The designated right-of-way for the project encompasses the maximum footprint for the local road connection to Campus Parkway from Olive Avenue.

Olive Avenue would provide a connection between the existing roadway network and the proposed Campus Parkway. As such, homes along different portions of the three alternative alignments would experience impacts with varying magnitudes. The number of homes within different distance ranges from the three alternatives is discussed in Master Response-4.

Comment: Dr. and Mrs. Lester J. Barger (2 of 2)

June 18, 2005

RECEIVED
JUN 21 2005
MERCED COUNTY
DPW/PROFESSIONAL SERVICES DIVISION

Steve Rough
Merced County Department of Public Works
345 W. 7th Street
Merced, CA 95340

Dear Mr. Rough,

1 We would like to express our opinion and grave concern about the proposed alignments of the Campus Parkway. Based on what we believe are very significant direct adverse impacts to our neighborhood, we oppose the proposed Yellow Alignment for the Campus Parkway.

2 The Olive Avenue crossing site for the Yellow Alignment is within a few hundred yards of our home. The planned roundabout wedged into the vicinity of many homes in our area (one of which will be destroyed) will undeniably affect the quality of life for all of the residents in those homes. While there will also be impacts with the Green Alignment, the relative density of housing along Olive Avenue in the immediate area of crossing of the Green Alignment is much less. We believe this very direct impact in our neighborhood with the Yellow Alignment is disproportionate and unfair. Nowhere else in the plan is there a significant group of homes so close to a major intersection or roundabout.

3 As part of the documents on Disk 3 distributed with the EIR is an overhead photo depicting the proposed roundabout at Olive with the Yellow Alignment. Curiously, there is no similar picture for the Green Alignment. While we cannot know the reason or perhaps motive behind this omission, we think a similar portrayal of the roundabout for the Green Alignment might demonstrate better why it is a superior choice in terms of impact for Olive Avenue residents. Picture #22 in the photo tour shows the wide-open nature of the vicinity of the Green Alignment north of Olive. While there are residences to the south, the density of nearby homes is less. We believe the Draft EIR is lacking in terms of comparison of the visual, traffic, and noise impacts on the two alternatives along Olive Avenue.

4 Section 2.2.2 of the Draft EIR (Page 2-8) describes the advantages of the Green Alignment. The noise and visual impact to the suburban neighborhoods several hundred yards to the west, in our opinion, has nowhere near the direct adverse impact of the Yellow Alignment in our neighborhood. While the decibel level increase may not need abatement in many places, it is undeniable that our homes will be more impacted than most of those under the Green Alignment. There are many more persons who live near the roundabout in the Yellow Alignment area than the Green Alignment. While decibel levels might not vary between the sites, the number of nearby impacted persons does.

In section 3.5.5, which deals with noise abatement, it appears clear that no barrier system will be effective or feasible. It appears there is no mechanism even proposed to abate noise for the homes just west of the Yellow Alignment roundabout. But it also states that the distance of homes from the Green Alignment makes a barrier unneeded. Unlike the Yellow Alignment, the impact on homes with the Green Alignment is much more indirect in terms of visual or noise impact, which we believe should favor choice of the Green Alignment.

4, cont. We have lived at 3401 East Olive Avenue for over 40 years, and have seen increasing traffic and speed on our road. We easily hear the traffic starting to mount in the early morning. With a roundabout in the neighborhood, every car will be accelerating and creating extra noise as they finish the curved area and travel past our homes towards downtown. Without a traffic signal or even a stop sign (that we at least have at Kibby Road now), and with a steady flow of traffic into town, one might have to turn east from our house and make a full 360 degree turn around the roundabout just to go to town, which is unacceptable.

5 Many of the homes in our area have 5-10 acres attached. While these properties don't have huge function from an agricultural standpoint, they were purchased with a way of life in mind for each of us. The congestion, noise, and pollution that this roadway will bring is going to markedly impact our ability to enjoy our home. On our property, we will be losing acreage with the planned realignment of the curve in Olive Avenue which also brings the noise, traffic, roadside garbage and pollution that much closer to our home, orchard, gardens, and pastures.

6 We also believe that the placement of the Parkway in the Yellow Alignment will encourage increasing encroachment of housing in the areas between the Green and Yellow Alignments. Currently, there is plenty of housing units planned north of town. We believe there will be pressure to change the land use in our area as well. While that might be financially advantageous for some, we see this again as a disruption in the nature of how current homeowners are able to enjoy their properties.

7 There is no doubt that there is significant reason to develop the southern approach from Highway 99 to the northern end of town and to the new UC Merced. But the Yellow Alignment also confers unnecessary additional traffic to the segment of Olive Avenue between the areas of the Yellow and Green Alignments. Those persons traveling north on the parkway who wish to go to the mall or any of the high concentration of businesses along West Olive between G Street and Highway 59 will be coming into town on Olive Avenue. Those living closer to town will be affected by both alignments, but the Yellow Alignment will put the same traffic along a longer segment of the road.

We hope that you seriously consider our concerns. The Yellow Alignment would change the nature of our neighborhood forever, is poorly positioned and disproportionate in direct adverse impacts, and should be rejected in favor of the Green Alignment.

Sincerely,

Dr. and Mrs. Lester J. Barger
3401 East Olive Avenue
Merced, CA 95340

Response: Dr. and Mrs. Lester J. Barger (2 of 2)

Barger (2)-1

The commenters' opposition to the Yellow Alignment is noted.

Barger (2)-2

See Response to Barger (1)-2, above.

Barger (2)-3

See Responses to Barger (1)-2 and (1)-3 and Master Response-4. A roundabout intersection would work for either the Green or Yellow Alignments.

Barger (2)-4

The proximity of residences to the proposed alignments and the characteristics of traffic flow along those portions of the alignments would affect the magnitude of visual and noise impacts experienced along different segments of the alignments. As described in Response to Barger (1)-3 and Master Response-4, Olive Avenue would have higher traffic volumes on the west side of Campus Parkway than on the east side. The expressway would provide a new, efficient crossing of Bear Creek, SR 140, and the BNSF railroad, and it would provide a new connection to SR 99. With Campus Parkway in place, drivers can avoid having to travel on local roadways all the way to Arboleda Drive to the east. Consequently, traffic diverted onto Campus Parkway results in a drop in future traffic volumes east of the Parkway on segments of Olive and Yosemite Avenues and on Arboleda Road.

In selecting a Campus Parkway alignment, impacts along all segments of the proposed alignments will be taken into account. The proximity of homes to the optional roundabout on Olive Avenue would be one of these factors, as would impacts along other portions of the proposed alignments.

See Response to Barger (1)-2 for a more detailed discussion of the rationale for the consideration of roundabouts in the design of the alignments. Merced County will consider installation of noise barriers for homes within 200 feet of Campus Parkway, as discussed in Master Response-11.

Barger (2)-5

The commenters' opinion on this issue is noted. The subject property would require some right-of-way acquisition to allow for the wider road and the partial realignment of the curve in Olive Avenue.

The anticipated changes in traffic volumes under the No Action alternative demonstrate an increased reliance on Olive Avenue as an east-west arterial. Therefore, the traffic and associated noise will increase with or without the Campus Parkway project. As the City continues to develop, additional traffic on the east side of Merced will increase over future years, affecting the existing setting as noted in this comment, with or without the Parkway. As discussed in Response to Barger (1)-3 and Master Response-4, the Parkway would divert this traffic and benefit the homes on Olive Avenue to the east of whichever alternative alignment is selected. At the same time, Campus Parkway would also draw additional traffic from the west.

Barger (2)-6

The commenter's opinion regarding the project's potential to affect growth is noted. Growth inducement from the project is addressed in Draft EIS/EIR Section 3.12.2. See Master Response-6 for additional discussion.

Barger (2)-7

The commenters' concern regarding traffic on Olive Avenue with the implementation of the Yellow Alignment is noted. See Response to Barger (2)-5 above regarding changes in traffic along this segment with and without the project. With respect to Olive Avenue, the Yellow Alignment will attract more traffic to the segment between the Green and Yellow Alignments because some Merced drivers would use the Parkway to go to and from their destinations, instead of other local streets, which is the intent of the project. In addition, the case of this property, a portion of the parcel is proposed for acquisition to accommodate the change in the width and alignment of Olive Avenue, near where it connects to the proposed Yellow Alignment.

Comment: Stephen Cooper

From: <StpnTrngC@wmconnect.com>
To: <srough@co.merced.ca.us>
Date: 6/24/2005 2:13 PM
Subject: Mucho Kudos To You

Hi There,
I have been mulling over the Campus Parkway Draft from time to time since I first set eyes on it back when from the school over on Coffee Street and want to now take this moment to say what an outstanding job you folks have done with it.
1 You did a great job whichever way the alternate route goes, and I trust the best decision will be made on the matter.
My only hope is that someday we see a Macy's mall visible from Hwy. 99 somewhere around the area where the project begins. It would save on an added exit when Macy's does come to town without any additional travel on the Parkway by out-of-towners, all while giving Mercedians excellent access to the mall; something nice at both ends of the Parkway.
Anyway, mucho kudos on a job well done.

Sincerely,
Stephen Cooper

Response: Stephen Cooper

Cooper-1

The commenter's opinion is noted.

Comment: Noel Douglas

Date: 6/28/2005

To: Steve Rough
Merced County Public Works Supervising Engineer
Merced, Ca. 95340

From: Noel Douglas
3330 E. Olive Ave.
Merced, Ca. 95340

Subject: Campus Parkway Alignment

After attending the June 21st, 2005 hearing to give people a chance to comment on the campus parkway express alignment – green, yellow or pink not one person, especially a supervisor expressed concern over the 90 degree turn in the parkway to line up the route with the off ramp on Highway 99.

1 Since the off ramp was moved west (toward the Farmer Insurance property) the alignment of the Parkway has been wrong. How many people will have to die to correct this problem? I have never seen a highway, with a turn of 90 degrees, and where the speed will be in excess of 50 mph. I think the time to correct such problems should be before the Campus Parkway is built, not after; we do not have the funds for this kind of mistake.

2 As to the green or yellow alignment I would hope our Board of Supervisors will support a route that would save our prime agricultural land, help contain urban sprawl, and meet the expressed needs of the U. C. by choosing the green route for a straight alignment up Lake Road to the campus.

Response: Noel Douglas

Douglas-1

The proposed curves would meet established design criteria for the speed of the road and would not introduce unsafe conditions. See Master Response-1 for additional information.

Douglas-2

The commenter's preference for the Green Alignment is noted. The northern terminus of the Campus Parkway is at Yosemite Avenue. Northern connections to the UC Merced Campus would be facilitated with any of the proposed alignments, but none of the alignments would extend directly to the campus.

Comment: Thomas L. Fife

Steven Rough - Campus Parkway Draft EIS-EIR Comment

From: Tom Fife <ltf16@yahoo.com>
To: Steve Rough <srough@co.merced.ca.us>
Date: 7/1/2005 5:49 PM
Subject: Campus Parkway Draft EIS-EIR Comment

July 1, 2005

Steve Rough

Merced County DPW

345 W. 7th Street

Merced, CA

Re: Draft EIS-EIR

Dear Mr. Rough:

I wish to express my opinion that the Yellow Alignment is the preferred alignment for the Campus Parkway. Additionally, I wish to address three apparent deficiencies in the Draft Report.

My reasons for preferring the Yellow Alignment are the following:

1) It is straight and therefore will be much safer.

2) It is shorter and therefore, over time, will be much less expensive to maintain.

1 3) It is less costly to construct. It is very possible that with the change in property values occurring in the Merced area over the last few years that the acquisition costs of the Green Alignment may have significantly increased.

4) It has less visual, noise and a variety of pollution effects on a enormously larger number of current homes and properties compared to the Green Alignment

5) Aesthetically, it will bring traffic into the UC Merced Campus through beautiful, unique agriculture land rather than mundane domestic developments.

6) It avoids the terrible traffic congestion which inevitably will occur if the Campus Parkway ends at Lake Road and Yosemite Avenue.

2 I respectfully request that the final report addresses quantitatively the numbers of home owners that will be affected by the various alignments. It seems obvious that the comparison is staggeringly one-sided, with far fewer families and individuals impacted by the Yellow Alignment. If we can quantify various habitat and species affected, we certainly should be able to do similarly for the current property owners.

file://C:\Documents and Settings\User\Local Settings\Temp\GW}00001.HTM 7/6/2005

3 Secondly, I would request that a more in-depth analysis be made of the traffic congestion which will result from of the termination of the Parkway at the Lake Road and Yosemite Avenue intersection. It would seem much more logical to have two access points to the campus off Yosemite avenue.

4 Finally, I request that a reassessment of property acquisition and over-all costs be made for the various alternatives in light of rapidly changing real estate prices in the Merced area.

Thank you very much for your attention and for your fine work on the entire project.

Sincerely yours,

L. Thomas Fife

2950 Whitegate Drive

Merced, CA 95340

Response: Thomas L. Fife

Fife-1

The commenter's reasons for preferring the Yellow Alignment are noted. Regardless of the alternative selected, the design would adhere to federal and state standards to ensure that road conditions are safe for drivers. See Master Response-1 for additional discussion of the roadway design.

Fife-2

Information on the number of residences along each alternative alignment is provided in Response to Barger (1)-3 and Master Response-4.

Fife-3

At the northern terminus of the Green and Green Alternate Alignments at Lake Road and Yosemite Avenue, Campus Parkway would connect with the existing roadway network. The separate University Community Plan also calls for additional roadways south of the proposed community developments, which would ultimately tie into the Campus Parkway project at Yosemite Avenue.

The northern terminus at Yosemite Avenue was determined as a result of the project's traffic studies. That evaluation and process is described in Appendix G.6, in Response to USEPA-4.

Fife-4

The assessment of property values and costs for various alternatives was prepared based on information on property values and construction costs available at the time that the Draft EIS/EIR was prepared. Specific appraisals of individual properties are not performed until after the environmental review process has defined. Real estate costs have increased over recent years, and current appraisal information would be used at the time of right-of-way acquisition. Section 2.3.7 presents the difference in costs among the proposed alternatives.

Comment: Rod Harris (1 of 2)

ALL BOARD & CEO RECEIVED

RECEIVED Clerk of the Board JUN 22 2005

Supervisor Kathleen Crookham
2222 M Street
Merced, CA 95340

Re: Campus Parkway Selection

Dear Supervisor Kathleen Crookham

1 I strongly urge your vote for the selection of the Yellow Alternative for the following reasons:

1. Aesthetically the approach to the campus should highlight the vital and distinctive feature of our area: richly beautiful agricultural land. Could there be a better visual representation of our county? Think of the comparison between a major thorough-fare that goes through a housing development versus the beauty of agriculture. No comparison!

2. The Yellow Alternative, without any curves is safer and shorter, thus being more economical and better serving the well-being of the community.

3. The negative impact on current homeowners will be vastly greater for the Green Alternative.

Please vote for the Yellow Alternative.

Thank you very much.

Sincerely yours,

Rod Harris

Response: Rod Harris (1 of 2)

Harris (1)-1

The commenter's support for the Yellow Alignment is noted. The aesthetic impacts of the project, including impacts to the existing agricultural setting, are evaluated in Section 3.17. See Master Response-1 in regard to safe roadway design.

Comment: Rod Harris (2 of 2)

From: <royerharris@sbcglobal.net>
To: <srough@co.merced.ca.us>
Date: 5/16/2005 10:42 PM
Subject: Written Comment Draft EIS-EIR

Dear Steve Rough,

This is a Written Comment on the Draft EIS-EIR for the Campus Parkway Project.

1 I favor the Yellow Alignment.

The Yellow alignment has the least noise, visual, and air pollution impact on existing residences and on the users of the Lake Road Bicycle Path.

2 The Green and Alternate Green alignments dictate that the planned future Campus Parkway Extension between Yosemite Avenue and Bellevue Road would be very close to Lake Road. The existing Bicycle Path would be between Lake Road and the 4-6 lane Campus Parkway expressway. This would be a noisy, polluted environment; unsafe and unhealthy for the current users, many of whom are children. The 4-6 lane Campus Parkway expressway would replace the flowing stream to the South of Cardella and Vernal wetlands and wildlife to the North of Cardella the currently border the Lake Road Bicycle Path on its East side.

None of these problems would occur with the Yellow Alignment. The new planned developments North of Yosemite Avenue and East of Lake Road could be specifically constructed to maximize the benefits of the Campus Parkway and minimize the negative impacts.

Sincerely, Rod Harris

Response: Rod Harris (2 of 2)

Harris (2)-1

The commenter's preference for the Yellow Alignment based on the impacts to residences and bicyclists is noted.

Harris (2)-2

The northern terminus of the Campus Parkway is at Yosemite Avenue, but it is expected that the development of roads within the University Community north of Yosemite Avenue would connect or align to Campus Parkway. Impacts near Cardella Road would be from the University Community development. Detailed surveys of these areas have been performed and will be used in the planning and development of the University Community to minimize impacts to biological and other resources. The most sensitive resources are well north of Yosemite Avenue, so any alignment of the Campus Parkway (Yellow or Green/Green Alternate) could be joined by a road system in the University Community in a way that minimizes these

impacts by implementing avoidance and minimization measures during the planning and design phases.

See Master Response-1 for a discussion of design-related safety of the proposed alignments. The inclusion of a standard-width bike lane (nearly 8 feet wide) on each side of the road will provide adequate room for bicyclists in each travel direction. It is not anticipated that their safety would be compromised.

Comment: Gil and Brenda Hassen

From: Gil Hassen <hassen@cell2000.net>
To: <srough@co.merced.ca.us>
Date: 5/24/2005 2:29:59 PM
Subject: Yellow or Green?

Just my opinion on the two choices for the new road to the U.C.:

1 Yellow gives more room for growth as well as preserves the quality of life that the people who live near the edge of town enjoy. Pick yellow.

Thank you,
Gil and Brenda Hassen
2880 Bedford

Response: Gil and Brenda Hassen

Hassen-1

The commenters' preference for the Yellow Alignment is noted.

Comment: Mary Haygood

July 5, 2005
2910 Atlantic Street
Merced, CA 95340

Re: Comment on EIS-EIR Draft for Campus Parkway

Dear Persons:

Merced's residents including myself were unaware that the change in the location for University of California, Merced, making it closer to existing homes, may have predetermined the Parkway's location at least in the minds of the Campus Leaders.

Please reflect on historical decisions- such as restoring the Old Court House rather than removing it- remember it was local political leaders listening to the citizens. We are all in agreement that this was a wise decision. Once again I am asking you to listen the local citizenry and at least modify your plans to lessen the impact this decision will have on our lives and homes. *I am asking you to modify and challenge the thought that the Parkway must intersect at Lake and McKee Roads.*

1 I am a native Mercedian and I see planning issues being greatly influenced lately by political issues. I am asking that you consider placing the Parkway further south, as originally indicated; namely closer to Kibby Road, so as not to impact my neighborhood.

2 *It is very important to place a buffer zone between Lake Road and the new Campus Parkway.* There needs to be a large amount of vegetation to block noise and air pollution. I presume that you have already provisioned to disallow any type of advertising.

3 I hope you will consider the home values, as well as the quality of life for our families and ourselves and for future families in this neighborhood. Please give the people and their concerns as much detailed attention as the fairy shrimp and the environment: as the people need to be included in this equation.

The Land now occupied by Hunt Farms is to be developed in the future. Hopefully existing homes and neighborhoods will be given priority first and then new areas can be planned.

We all agree the U.C. is a plus for Merced. Careful and innovative planning can keep this aspect of the development from being a negative element. It was us, the community, who welcomed its coming. But remember before the U.C. existed, we lived and worked in and for the community of Merced, earning a living and raising our families.

Sincerely,

Mary Haygood

Mary Haygood
C: Dr. Fife

Response: Mary Haygood

Haygood-1

The commenter's opinion and preference for location of Campus Parkway is noted. The Parkway would intersect Yosemite Avenue but not McKee Road. Aligning the Parkway along Kibby Road was initially examined, but it was rejected for a number of reasons, as discussed in Section 2.5.3. A Kibby Road alignment would not adequately serve the purpose and need of the project, as its location to the east of the City of Merced reduces its usefulness as a direct and efficient route for drivers heading from SR 99 to Merced. A Kibby Road alignment would also result in adverse impacts because of the need to purchase substantial right-of-way along an existing road, which would require the acquisition of more homes and businesses than the alternatives studied in the Draft EIS/EIR.

Haygood-2

The proposed alignments would be near some homes and residences, such as those along Olive Avenue, but would be separated from most of the suburban housing between SR 140 and Yosemite Avenue by open ground or agricultural fields. Landscaping would be included where feasible to screen the Parkway from homes. Advertising will not be allowed within the right-of-way of the project. Outside of the right-of-way, the placement of advertising, if any, by a private property owner would have to comply with City of Merced and Merced County zoning and land use controls. Signage regulations are provided on the Merced County Web site, and Chapter 18.42 of the County Code addresses the signage regulations that will apply to the project.

Haygood-3

The commenter's recommendation is noted.

Comment: Nancy B. Holmes

RECEIVED
Clerk of the Board

JUN 2 2 2005

Supervisor Jerry O'Bannion
2222 M Street
Merced, California 95340

ALL BOARD &
CEO RECEIVED

Dear Supervisor O'Bannion,

1 I am writing to you to urge you to support the Yellow Road alignment for the Campus Parkway. It appears that there is little to choose between the two main alternatives with regards to initial cost and environmental impact. The noise and the particulate matter generated by putting the road closer to existing housing are my main reasons for opposing the green road(s). The Yellow Road would be shorter and therefore should be less costly and safer without any curves.

I hope that you will give careful consideration to impact of the Campus Parkway on the existing homes that are along the edge of the proposed green alignment .

Thank you for your consideration to this important decision.

Sincerely

Nancy B. Holmes
2913 Whitegate Drive
Merced, California 95340
209 725 8749
June 19, 2005

Response: Nancy B. Holmes

Holmes-1

The commenter's preference for the Yellow Alignment is noted. See Master Response-4 for a discussion of community-related impacts, including noise and dust. The Yellow Alignment would be only slightly shorter and less costly to construct, as discussed in Master Response-5.

Comment: Diana Hylton, M.D.

June 29, 2005

Attention: Steve Rough
Merced County Public Works Department
345 West 7th Street
Merced, CA 95340

Dear Steve:

1 I Diana Hylton, M.D. choose the Green alignment to avoid the noise and other environmental impact on residential are of Kibby Rd. Thank you.

Best regards,

Diana Hylton, M.D.

Response: Diana Hylton, M.D.

Hylton-1

The commenter's preference for the Green Alignment is noted.

Comment: Jesse R. Martin, Sr.

Kathleen Crookham, Supervisor
County of Merced
2222 M Street
Merced, CA 95340

Re: Campus Parkway

Dear Supervisor Crookham,

1 I strongly urge you to support the "Yellow Alignment" option for the proposed UC Campus Parkway. The other alternatives will negatively impact several homes and neighborhoods along the corridor.

The Yellow Alignment offers the safest and most direct route to the campus, and minimizes noise pollution to existing neighborhoods.

Thank you for your attention to this matter. I look forward to your vote for the Yellow Alignment.

Sincerely,
Jesse R Martin Sr.
2977 Whitegate Dr.
Merced Ca 95340

Response: Jesse R. Martin, Sr.

Martin-1

The commenter's preference for the Yellow Alignment is noted. See Master Response-4 for a discussion of community-related impacts, including noise and dust.

Comment: Jacki and Lawrence Mercando

Jacki & Lawrence Mercando
3202 N. Leaf Drive
Merced, CA 95340

May 23, 2005

Mr. Steve Rough
Project Engineer
Merced County Department of Public Works
345 West 7th Street
Merced, CA 95340

Subject: Campus Parkway Project

Dear Mr. Rough:

1 I am writing to express our strong support for the Yellow Alignment. Although we will be directly affected by the selection of the route for the Campus Parkway because we live on Leaf Drive, our concerns are far more then the "not in my back yard" syndrome. We have always been very concerned with community affairs and desire changes and improvements which will be best for the community. We believe the selection of the Yellow Alignment will have the least negative impact on the community overall and will not have as large a negative impact on the largest number of residents as would the other alternatives.

Some of the reasons for our support of the Yellow Alignment are summarized as follows:

- Lower noise level for a larger number of residents during and after construction
- Less dust for a larger number of residents during and after construction
- Less exhaust fumes, particular matter, and undesirable odors for a larger number of residents
- Lower initial costs for the shorter route
- Lower maintenance costs for the shorter route
- Less dangerous driving conditions – The extra curves in the parkway in this 1st phase and possible future phases could result in serious or deadly accidents, particularly with a large number of university students using the parkway and the heavy foggy season that we experience in Merced.
- Provides better options for a possible 2nd phase which would extend into the University area.
- Lower impact for a larger number of residents if and when trash is thrown from vehicles
- Lower risk of children or pets from a larger number of homes leaving their back yards and wandering on to the parkway and being injured or killed.

Thank you for considering our comments.

Sincerely
Jacki & Lawrence Mercando

RECEIVED
JUN 27 2005
MERCED COUNTY
DPW/PROFESSIONAL SERVICES DIVISION

Response: Jacki and Lawrence Mercando

Mercando-1

The commenters' preference for the Yellow Alignment is noted. See Master Response-4 for a discussion of community impacts and mitigation related to noise, dust, and air quality. The cost of the alternatives is discussed in Master Response-5, and safety issues are discussed in Master Response-1.

Comment: Deanna and Len Morgan

6/20/05

Dear Supervisor Crookham:

1 Please help us maintain the quality of our beloved "Whitegate Farms" neighborhood (we've been here almost 28 yrs now) and support the "Yellow" routing of the Campus Parkway project. The alternate brings heavy vehicle traffic too close to the Whitegate & Leaf residential areas. The fields east of Whitegate Drive are a precious feature of our neighborhood.

Go Yellow! Thank you.
(Green is mean)

Deanna & Len Morgan
2967 Whitegate

Response: Deanna and Len Morgan

Morgan-1

The commenters' preference for the Yellow Alignment is noted. Concerns about proximity of the alignments to residential areas and potential visual impacts are discussed in Master Response-4.

Comment: Bryant Owens

BRYANT OWENS 2683 S. PLAINSBURG RD. MERCED CA 95340-9550
(209) 389-4344 fax recall@mercednet.com (209) 769-0832 Cell

July 6, 2005

Via facsimile (209) 722-7690

Mr. Stephen Rough, Engineer
Merced County Public Works Dept.
715 Martin Luther King Jr. Way
Merced, CA 95340

Re: Campus Parkway Draft EIR/EIS; Project RPHP21L-0484 (001); EA 10-4A0701L; SCH # 2000121003.

To Mr. Rough,

Due to technical difficulties I was unable to submit comments before the deadline on July 5th. I spoke today with Jennifer to request permission to submit comments today and was given the okay. Please accept these comments for the record. As a frequent commentator on various projects within the County of Merced, I must formally object to the piecemeal fashion in which the environmental review is being handled for this 'separate' project. The Campus Parkway is clearly an inseparable part of the larger and interconnected infrastructure in support of the UC campus. 1

This project must of necessity tier from the same environmental documentation as the Campus, the Long Range Development Plan, The Sewer and Water extension from the City of Merced To the Campus, the proposed Campus Community, the future annexation of the Campus Community into the City of Merced, and the Gallo urban development on the north eastern shore of Lake Yosemite, to name just a few.

It seems clear, to the public, that discrete examination of the broader impacts of this aspect of the large UCM infrastructure is neither wanted nor appreciated by this 'Lead Agency'. I refer to the CD format provided of the DEIR. Using this means to disseminate the information to the public is a technological affront to those who would like to participate in the process (and who trust the paper a document is printed on) and imposes an unsubstantiated financial burden on the public in order even to participate in the process. CEQA guidelines soundly advise agencies to thoroughly document the 'paper trail' of the environmental documentation on which they rely, and to make all such documentation 'readily' available to the interested public. 2

If there are costs to be born in satisfying California and US legislative fiats regarding environmental impacts, then the cost of disseminating hard copy to the public should be the responsibility of the lead agency. If that cost is not recoverable as a benefit to the public, which the project pretends to serve, then it may be fairly argued that the project is likely not the best interest of the affected public and the lead agency would do well to abandon the project.

This project has much P-R appeal for the city and county, however the impacts of the project are falling on the average citizen to whom little if any benefit will accrue. The cumulative socioeconomic impact of disenfranchising the many may well represent Merced County's Boston Harbor incident.

3 I cannot see the citizens of Merced County sitting still to be taxed for a new highway that will do nothing but continue to encourage the sprawl that threatens to wear out our existing transportation infrastructure and overwhelm our ability to maintain what we already have. The Parkway, UCP and other UCM infrastructure related projects are logically and legally impossible to separate. All are in furtherance of a UC campus on the Smith Trust lands.

As such the County and UC must prepare a Joint EIR/EIS under CEQA and NEPA to address these matters as ***one project*** to deal with the anticipated and reasonably foreseeable secondary growth and urbanization rapidly accreting to Merced City and County as cumulative impacts.

4 The County's General Plan is internally inconsistent in several fundamental respects, and pending projects without clear current unified direction will substantially worsen, these inconsistencies. A reasonably comprehensive General Plan update, with EIR, is long overdue.

There is now, more than enough information to undertake a ***comprehensive environmental review*** addressing all these environmental impacts and enhancing the threadbare documents that serve as planning tools for Merced County. Any further delays in the same constitute an arbitrary, capricious and prejudicial abuse of discretion, and a waste of taxpayer monies.

Respectfully Submitted

Bryant Owens

Response: Bryant Owens

Owens-1

The Campus Parkway proceeded as its own project because it serves its own purpose and need, as do the other projects listed in this comment. The Parkway is proposed to meet planned or anticipated future land use growth and to address existing roadway connectivity problems in eastern Merced that adversely affect traffic circulation. For additional discussion, see Response to San Joaquin Raptor Center & Protect Our Water-2 in Appendix G5.

Owens-2

The documentation for the proposed project was made available for public review, as discussed in the Introduction to Appendix G. A public meeting was advertised and held at the beginning of the public review period to announce the availability of the document, paper copies were available at the meeting for review, and CDs containing the electronic version of the Draft EIS/EIR and supporting information were distributed to anyone who requested a copy. Paper copies were available at Merced County offices and other locations to review on-site. CEQA allows for the use of electronic media, and it allows a Lead Agency to charge a reasonable fee for the cost of reproducing copies (CEQA Guidelines and Appendices, Section 15045).

Owens-3

See Response to Owens-1, above.

Owens-4

The commenter's statement regarding the General Plan is noted.

Comment: Audrey Peguero

From: Audrey Peguero <apeguero@farmersagent.com>
To: <srough@co.merced.ca.us>
Date: 6/27/2005 5:53:01 PM
Subject: CAMPUS PARKWAY

Steve,

My husband Richard and I own approximately 60 acres of farm ground (pistachio trees) between the proposed yellow and green lines for the Campus Parkway.

1 We prefer the yellow alignment because we feel that it is the most logical choice based on the following reasons:

1. It is a straight road, therefore economically more suitable and safer for all concerned.

2. It is the furthest road proposed from the city limits, therefore the least disruptive for residential homeowners who live in the proposed campus parkway areas.

3. Many are concerned about residential development up to the new parkway, therefore the green would provide a barrier to eastward residential development. This is not necessarily true. The soil in this area is one of the best soils in our county. As Farmers, we've spent thousands of dollars to plant, grow, and nurture trees to full development and crop production. Our plan is to continue to grow trees, not houses.

Overall, Steve, the Yellow alignment in our opinion is more practical for all parties concerned.

Have a great day,

Audrey Peguero
3222 E. S. Bear Creek Drive
Merced, Ca. 95340
(209)723-2729

Response: Audrey Peguero

Peguero -1

The commenter's preference for the Yellow Alignment is noted. See Master Response-5 regarding the length of the route and costs, and Master Response-1 regarding safety of the alternative alignments.

The Yellow Alignment is the farthest of the proposed alignments from the eastern developed area of the City of Merced. As noted in Master Response-12, the initial concept of the Yellow Alignment was to provide an alternative that is separate from the existing developed city area (a relatively direct route to SR 99), while the Green Alignment was to provide an alternative closer to the City (to keep the road near existing development and minimize fragmentation of farmlands). The concept of the Green Alternate Alignment was to provide a hybrid of the Yellow and Green Alignments. Impacts to residential land uses within 500 feet of each alignment would be similar for all three alternatives. A greater number of residences are within 500 to 1,000 feet from the Green Alignment than from the other two alignments.

Commenters have expressed opinions about the potential for the different alternatives to create a barrier to growth in the City of Merced. The Green and Yellow Alignments have both been noted as routes that may provide a physical eastern land use planning boundary. Ultimately, any changes in land use planning would require a decision by the City of Merced and Merced County.

Comment: Teresa A. Pimentel (1 of 2)

april 20, 2005

Dept of Public Works
Parkway Progress
State of Calif. 7/1993. The Beginning:

Dear Steve Rough;

I direct this letter to you because you are the person that I have always contacted through this worrisome project.

I Teresa A. Pimentel have lived at 3533 E. Olive ave for 34 years.
This Home is the only home I know other than living with my Parents.
I have a lot of pride and have put a lot of work in my home.
From a bare lot with weeds, to the construction of my custom home.
Nothing was given to me.
I worked hard in my profession "School of Cosmetology" and devoted endless years to my home.
when I say hard work that is what I mean, a lot of work to establish my landscaping
I planted all my trees with a little help.
My estate consists of the following: producing Tree's, 35 Total.

3 lemons, 1 moro orange, 2 grapefruit
2 walnut, 1 persimmon, 3 mandarine,
6 orange, 1 Sevo olive (curing kind)
2 apricot, 5 diff. cherrie, 3 nectarine,
2 peach, 1 comquat 2 apple, 1 pomagranate

all these Trees need pruning, spraying and love & care all year long
I have provided their care every year.
My landscaping is constructed with cement walkways all the way around the yard, front & back & sides.
Never having to step in soil.
I have a very large back yard with a very large custom built barbecue pit, with shutters to accomodate wood or charcoal and barbecue utensils.
This brick is from Ceres, almost in Modesto Calif.
I hand picked all the bricks to produce the quality and color of brick I wanted.
I had 4 huge European plant urn in the four corners of my landscaping, plus all the brick planters all around the yard.

I have cement curbing all the way around the front and back yard. To all the guy wires, I was not happy with the existing wooden fence and had Flannery Fencing co from Turlock replace the old fence with a 6 foot custom Redwood with decorator slats, very nice.
at this time I also had a fence added to my road side, to protect anyone from driving off the road and demolishing my home.

Mr. Baugh, all this takes a lot of money.
In 1992 I had a 25 year. red roof replaced on my home, re-painted 2004.
I have many numerous additions.
a new car port this year and also I restored the outside walls of my patio, and just had the exterior re-painted.
I want you to know that I have many sleepless nights!
This is like death waiting to happen and very wearing and trying on a persons nervous system.
The most worldly possession a person has is their home.

please if you will place yourself in my shoes and tell me if I am wrong in my feelings.

I am 66 years of age and there is no way I could replace or have an extensive landscaped yard as they built again.
I am on a fixed income.
Where would I get the money to start again at realestate prices today.

1 I hope you will not take my precious home to built the Campus Parkway here.

Every night I pray thinking strongly what our Country stands for.
Land of the free and home of the brave, and I do not want the Campus Parkway going through my property.
Sincerely,
Teresa A. Pimentel

Response: Teresa A. Pimentel (1 of 2)

Pimentel (1)-1

This letter refers to the single-family home on Olive Avenue that would require acquisition if the Yellow Alignment is selected. (The Green Alignment also requires one home to be acquired, but not the same one.)

It is recognized that there is significant personal history and association with a home and property that cannot be replaced, especially one that has been occupied over a long time period and enhanced with personal improvements

as noted in this comment. It is also recognized that relocation can impact a long-time resident's personal network of neighborhood and community support that has become well established over time. Alternatives to avoiding this property (besides those already covered in the Draft EIS/EIR) would have to involve a shift of the location of the Yellow Alignment, which would inevitably impact some other home in the immediate area. Monetarily, a resident that is ultimately displaced by selection of the final, preferred alternative is eligible for relocation benefits and support. These benefits include compensation for the value of the home, and, if necessary and eligible, additional benefits to ensure relocation to an equivalent residence. Other expenses may also be compensated depending on eligibility, such as moving and setup of the new home. Relocation program benefits are summarized in Section 3.14.2 of the Draft EIS/EIR, and more detailed information and assistance would be provided during the right-of-way acquisition process. These benefits offset, or compensate for, the monetary impact of a residential relocation but cannot fully mitigate for the nonfinancial personal loss, with regard to the issues raised in the comment letter. These effects will be considered in the selection of the preferred alternative.

Comment: Teresa A. Pimentel (2 of 2)

6/12/05

Dept of Public Works
Parkway Campus Project
Steven E. Pough Supervising Engineer

Dear Steve Pough:
I Teresa A. Pimentel would like to take this opportunity to give the Parkway Campus project a background of the parcel of land where I live, at 3533 E. Olive ave, Merced Calif 95340.
My father and mother Mr. Dante and Mrs. Pimentel lived at 4030 E. Olive ave in Merced Calif 95340. This is where I lived before I had my home built in 1972.
In the sixties my father purchased the land where my home is and subdivided it into three equal lots. The first parcel was sold to me. In the early seventies I had my home built.
Mr. Gregory Queller my neighbor became very interested in this area and he approached my father and in 1975 Mr. Queller bought a lot. In 1976 Mr. Queller built his garage and in 1978 he built his home. The original relationship Mr. Queller and my

home. My parents wanted to buy so that they could some day when they retired build a home. Unfortunately this never did happen.
My parents have both passed away and this parcel between McCoy Lane and I my parents gifted to me.
I inherited this from them.
Mr. Rough can you understand why this land is very sentimental to me.
1 I do not want to see this property turned into a paved freeway.
This would break my heart.

Sincerely,
Teresa A. Pimentel

Response: Teresa A. Pimentel (2 of 2)

Pimentel (2)-1

The comment and recommendation is noted. See Response to Pimentel (1)-1.

Comment: David and Caroline Rogina

From: <Ridgero@aol.com>
To: <srough@co.merced.ca.us>
Date: 7/5/2005 7:50 PM
Subject: Attn:Steve Rough-Campus Parkway project

1 We prefer the yellow alignment for the following reasons: 1) It impacts the least amount of existing homes. 2) It is the most economical; keeping the traffic on the eastern border of the property maintains a direct route to the UC campus. 3) As property owners we prefer the yellow alignment because it disrupts the existing property the least, allowing the land to be utilized in the most effective way.

David and Carolyn Rogina
1605 Ridge Drive
Merced, Ca.
95340

Response: David and Caroline Rogina

Rogina-1

The commenters' preference for the Yellow Alignment is noted. See Master Response-4 regarding community impacts, including to residences. Master Response-5 discusses differences in costs and length of each alternative.

Comment: Don Stewart, Jr.

Don Stewart, Jr.
2651 Cooper Ave.
Merced, Ca 95348

July 5, 2005

Steve Rough
Merced County DPW
345 W. 7th Street
Merced, CA 95340

Dear Mr. Rough:

I own land off of Leeds Road which is in the Campus Parkway Project area and I also own land east of Kibby which is just east of the Campus Parkway Project.

1 I am for the yellow alignment and against the green alignment based on the following reasons:

1) Noise

2 The EIR makes it clear that the noise impact would be a significant negative for a large number of residences near the green alignment. Additionally, as the parcels designated rural residential (north of Olive) are developed, the number of residences adjacent to the green alignment negatively impacted by noise from the project will increase further. This will detract from the quality of life in what should be one of the most desirable places to live in Merced.

2) Farmland Protection

3 I feel that farmland will be better protected with the yellow alignment vs. the green alignment. I realize that the EIR states that 83 acres of farm land will be converted from farmland with the yellow alignment vs. 56 acres with the green alignment, I've also heard the argument that the Parkway itself will serve as a "line in the sand" to development moving east. How can it be designated a "line in the sand" when half of the line has already been crossed? (The land north of Olive and east of the green alignment is designated as rural residential). With the green alignment I feel development will progress eastward basically unabated.

If the preservation of farmland and the rural feeling of Merced are important, and I feel they are, then the yellow alignment with no rural residential designations east of it will serve as a much stronger "line in the sand" in protecting our farmland and quality of life over time.

I should also state that I am a member of the Farm Bureau; I believe that they are in favor of the green alignment as a way to protect farmland but I disagree with their stance for the reason stated.

3) Aesthetics

The EIR seems to feel that the views towards the mountains in northeast Merced are not significantly beautiful. I strongly disagree. The fact is they are some of the finest views on the planet and the particular section of the Sierras visible from northeast Merced is indeed, world famous. Looking east at sunrise from what would be the Campus Parkway the scene seems the inspiration for the phrase "purple mountains majesty above thy fruited plain".

4 With the green alignment, the land north of Olive and east of the Parkway (rural residential) will be developed almost as soon as the Parkway route has been determined. Most likely the developers will build a wall east of the Parkway to protect the residences from the noise, etc. That will completely wall off the view from half of the green alignment. Most likely similar development will soon follow suit, south of Olive and east of the green alignment, with the final result being a totally walled in "Parkway".

With the yellow alignment I feel we would have a significant enough "line in the sand" that development wouldn't happen east of the Parkway and hopefully we could preserve the majestic view for ourselves and to greet our visitors who arrive in Merced via the Parkway. Above all else we need to preserve what is special about Merced for ourselves and for those who follow.

Sincerely,

Don Stewart, Jr.

Response: Don Stewart, Jr.

Stewart-1

The commenter's preferences are noted.

Stewart-2

The comment is noted. Homes west of the Green Alignment, although separated from the roadway, would experience a noticeable increase in traffic-generated noise levels, as discussed in Draft EIS/EIR Section 3.5.4. A comparison of the existing and predicted noise levels at representative

locations along the alternatives is shown in Tables 3.5-4 and 3.5-5. See Master Response-4 for additional discussion of noise impacts.

Stewart-3

The commenter's preference for the Yellow Alignment and opinions regarding farmland protection are noted. The comment is consistent with (or is based on) Figure 3.12-1 in the Draft EIS/EIR, which shows current designations for land use from the City General Plan. The area south of Olive Avenue and east of the current residential development shown in Figure 3.12-1 consists of farmland and is designated as such in the General Plan. If the Parkway is constructed (on any of the three alternative alignments), it would not directly change any land use designations outside of the roadway right-of-way. The roadway's potential to influence growth limits or expansion of the City of Merced eastward is discussed in the Draft EIS/EIR, although any conclusions would be speculative. A General Plan amendment for this area would ultimately require a separate decision by the Merced County Board of Supervisors. See also Master Response-6.

Stewart-4

The comment refers to potential cumulative impacts, or impacts that could result from growth and development in the area, potentially contributed to by the presence and/or location of the Parkway. These impacts are addressed in Draft EIS/EIR Section 3.17.3. It is noted that the projects and development activity could together potentially result in a substantial change in the visual character of the area. Section 3.17.3 also describes the potential for the City of Merced's suburban growth to shift to the north and east. Whether or not the Green, Green Alternate, or Yellow Alignment may better contain or limit any potential growth, such as the "line in the sand" mentioned in the comment, would be speculative to state.

Comment: Mark Sverha

Mr. Steve Rough
Project Engineer
Merced County Dept. of Public Works
345 W. 7th Street
Merced, CA 95340

Re: Campus Parkway

Dear Mr. Rough:

1 I strongly urge you to support the "Yellow Alignment" option for the proposed UC Campus Parkway. It is the safest most direct route. It will impact the least amount of your county's residents, and their households! All you need to do is look at the aerial photography maps with the green and yellow alignments. Common sense and logic will clearly show you that the yellow alignment is the only choice you can make!

Thank you for your attention in this matter, and I appreciate your vote for the Yellow Alignment.

Sincerely,

Mark Sverha

Mark Sverha
2910 Whitegate Dr.
Merced, CA 95340

Response: Mark Sverha

Sverha (Mark)-1

The commenter's preference for the Yellow Alignment is noted. See Master Response-1 regarding the safety and placement of the alternatives. Master Response-4 discusses potential community impacts, including to numbers of homes affected by each alternative.

Comment: Mike Sverha

Mr. Steve Rough
Project Engineer
Merced County Dept. of Public Works
345 W. 7th Street
Merced, CA 95340

Re: Campus Parkway

Dear Mr. Rough:

1 I strongly urge you to support the "Yellow Alignment" option for the proposed UC Campus Parkway. It is the safest most direct route. It will impact the least amount of your county's residents, and their households! All you need to do is look at the aerial photography maps with the green and yellow alignments. Common sense and logic will clearly show you that the yellow alignment is the only choice you can make!

Thank you for your attention in this matter, and I appreciate your vote for the Yellow Alignment.

Sincerely,

Mike Sverha

Mike Sverha
179 Leslie Dr.
Atwater, CA 95301

Response: Mike Sverha

Sverha (Mike)-1

See Response to Sverha (Mark)-1.

Comment: Theresa Sverha

Mr. Steve Rough
Project Engineer
Merced County Dept. of Public Works
345 W. 7th Street
Merced, CA 95340

Re: Campus Parkway

Dear Mr. Rough:

1 I strongly urge you to support the "Yellow Alignment" option for the proposed UC Campus Parkway. It is the safest most direct route. It will impact the least amount of your county's residents, and their households! All you need to do is look at the aerial photography maps with the green and yellow alignments. Common sense and logic will clearly show you that the yellow alignment is the only choice you can make!

Thank you for your attention in this matter, and I appreciate your vote for the Yellow Alignment.

Sincerely,

Theresa Sverha

Theresa Sverha
2910 Whitegate Dr.
Merced, CA 95340

Response: Theresa Sverha

Sverha (Theresa)-1

See Response to Sverha (Mark)-1.

Comment: Rick Wallace

From: "Rick and Karen Wallace" <the.wallaces@comcast.net>
To: <Dist2@co.merced.ca.us>
Date: 6/24/2005 9:59:44 AM
Subject: New Expressway

1 Dear Kathleen:
As you know, while I live in your district I will not personally be affected by the choice of the location of the new expressway to the UC. I am however aware of recent studies showing that Merced County has some of the most dangerous roads in the State. As an attorney, I have personally represented a number of families who have lost loved ones on roads where a safer selection could have made a difference.
One of the most dangerous roads in our county is J59 between Merced and El Nido and what makes it dangerous is the curve around Sandy Mush.
I have seen the "Green" road and the "Yellow" road. Why a county would even consider creating a road with curves in it when there is a safer option of having a straight road is beyond me. I do realize that there are special interest groups that may feel the Green is for their purposes better. However, that road will be there for many generations and we should not be even slightly responsible for creating a dangerous condition. I am overly concerned due to the fact that some of our youngest and brightest from various parts of our country (or world) will be attending UC Merced, they may not be prepared to drive in our fog and they may not always be driving in the best of conditions.
Believe me when I say attorneys (my profession) do not want to have injured clients we want to protect our children from harm. You have an opportunity to avoid creating a risk that would place many in harms way. The few hundred yards difference in the placement of the road will not significantly affect Merced County as a whole, it may however effect the lives of many families if they have to suffer the loss of a loved one. I welcome your call if you would like to discuss my experiences. By copy of this email I am also expressing my concerns to the other Supervisors.
Rick Wallace
383-0720

CC: <Dist1@co.merced.ca.us>, <Dist3@co.merced.ca.us>, <Dist4@co.merced.ca.us>, <Dist5@co.merced.ca.us>

Response: Rick Wallace

Wallace-1

The commenter's recommendations are noted. Roadway design and driver safety are also addressed in Master Response-1.

G.3 Comments from Public Hearing

A public hearing for comment on the Draft EIS/EIR was held at 5:30 PM on Tuesday, June 21, 2005,* in the Board of Supervisors Chambers at the County Administration Building at 2222 M Street in Merced. The official transcript for the hearing is presented below. Responses to comments received during the hearing are presented after the complete transcript. Individual comments and responses are labeled by commenter name and number. Comment numbering restarts with each different commenter.

Name	Street Address
Fife, Tom	2950 Whitegate Drive
Gormly, Don	2536 Piedmont
Mercando, Larry	3202 North Leaf Drive
Owens, Bryant	2683 South Plainsburg Road
Rogina, Kim	6780 East South Bear Creek Drive
Harris, Rod	3698 Marlyn Court
Aveller, Gregory	3595 East Olive Avenue
Desrochers, Lindsay	1715 Canal Street
Michaelson, Edward	3611 East Olive Avenue
Callister, Jerry	2901 Whitegate Drive
Temple, Ralph	650 West 20th Street
Bates, Terry	632 West 13th Street
Walker, Helen	2895 East Stretch Road
Gary	No address stated
Raggio, John	3164 North Leaf Drive
Holmes, Dan	5781 Hillcrest Road
Aveller, Gregory (second of two comments)	3595 East Olive Avenue

Note: All addresses are in Merced, California.

* The first page of the transcript lists the date as June 21, 2004, but this appears to be a typographical error.

Public Hearing Transcript.txt

BEFORE THE MERCED COUNTY BOARD OF SUPERVISORS

--ooo--

UNIVERSITY OF CALIFORNIA, MERCED

CAMPUS PARKWAY PUBLIC HEARING

--ooo--

Merced, California

Tuesday, June 21, 2004, at 5:00 p.m.

REPORTER'S TRANSCRIPT

Reported by: Christine Oljace, CSR No. 11245

Associated Reporters

Certified Shorthand Reporters
728 West 19th Street
Merced, California 95340
(209) 384-0165

Campus Parkway Public Hearing - 6-21-05

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RALPH TEMPLE	24
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APPEARANCES

PRESENTATION BY:

STEVEN ROUGH, Merced County Department of Public Works

LEGAL ADVISOR TO THE BOARD OF SUPERVISORS:

MERCED COUNTY COUNSEL
BY: RUBEN CASTILLO, ESQ.
DEPUTY COUNTY COUNSEL
2222 M Street, Suite 310
Merced, California 95340
(209) 385-7564

BOARD OF SUPERVISORS PRESENT:

John Pedrozo, District 1
Kathleen Crookham, District 2
Michael G. Nelson, District 3
Deidre F. Kelsey, District 4
Jerry O'Banion, District 5

--oOo--

(Discussion held of unrelated matters: 5:00 to 5:29 p.m.)

CHAIRMAN O'BANION: Good evening. I would like to call the meeting back to order and we are going to continue with the agenda for this evening.

The next item on the agenda or the last item on the agenda is a public hearing to consider comments on

the draft EIS-EIR Environmental Impact Statement and Environmental Impact Report, for the Campus Parkway project. Campus Parkway is proposed to be a four-lane limited-access expressway located on the east side of the City of Merced and is proposed to extend from the planned Mission Interchange to Yosemite Avenue, a length of approximately 4.5 miles.

We are going to have a brief presentation before we open up for public comment. I also want to inform you that there will not be action taken by the Board of Supervisors tonight on this item. This is solely a public opportunity for individuals like yourself to give your input into the documents to be recorded.

We have a court reporter here this evening who will take all of the statements from each individual that wishes to make comment, so when you come up to the podium, please state your name and your address so that

it can be recorded. In addition, each of you will be limited to five minutes, so please keep your comments within the time period.

At this time I would like to turn the presentation over to Steve Rough from the Public Works Department.

MR. ROUGH: Thank you, Chairman O'Banion. You said almost everything that I was going to say. Just to repeat some of that, we are here -- this is a public hearing for Campus Parkway. We are here just to take

testimony of the public. We are not going to present any new information tonight that isn't in the environmental document. We are not here to try to answer questions that you may have at this particular point, and what is on the screen right now is the public notice that was published in the Merced Sun-Star and the Modesto Bee and was handed out to a lot of folks.

Supervisor O'Banion basically described what Campus Parkway is and it's a new multi-lane roadway, expressway that is going to be on the east side of the City of Merced extending from the new Mission Avenue interchange to Yosemite Avenue. There are three alternative alignments that are presented in the environmental document; the yellow alignment, the green alignment and the alternate green alignment, which is

kind of a permutation of yellow and green. Let me just bring up another map here.

This map is a map that I have handed out probably for several years to a lot of folks, and it doesn't show anything new other than to show the city of Merced, the UC campus area and the location of Campus Parkway on the east side of the city of Merced.

And we do have a court reporter here to take testimony. After the meeting if somebody wants a copy of the environmental document on CD, I do have copies available, so after the meeting I will be able to do that. And as Chairman O'Banion said, there is no action that is going to be taken today.

That is all I have.

CHAIRMAN O'BANION: Thank you.

Does the board have any questions of staff before we open the public hearing? Okay. Then at this time we will open the public hearing and anyone who wishes to speak in regards to the proposed alternatives may come forward and do so. And again, please state your name and address for the record.

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TOM FIFE

2950 Whitegate Drive, Merced, California

CHAIRMAN O'BANION: Good evening.

MR. FIFE: Hi. My name is Tom Fife. I live at 2950 Whitegate Drive.

I am pleased to just make a comment or two, and first of all, I am not at all an expert on environmental impact reports, but I certainly would like to congratulate Steve and his department for something that seems very exhaustive and detailed to me, and I know he has worked hard at it and I think it's been presented in a very clear way.

I think that as I have looked at it, again, not with great expertise but with some detail, there is one omission that I would like to comment on and hope that it can be addressed by the staff, and that is the

Fife 1

omission of comparative data that actually identifies the number of homes, families, human beings that are impacted in a different way by the alternative routes.

1, cont.

It's a marvel to read the report and see the quantitative data about bushes and beetles and all kinds of things and habitat. There are some general references to neighborhoods and developments, but there are no numbers that compare the alternative routes with regard to current homeowners, current people, current

property owners that would be impacted by the different alternatives, so I think this is an omission in the report and I think that it should be very clear how many individuals are affected in terms of visual, noise, pollution and so forth when comparing the various routes.

I would like to say that this is a very faded yellow shirt, but I promise it's yellow. We have a large group of very interested persons that are in favor of the yellow alignment and I personally, as I read these -- this report and look at the data, they all look very similar to me with again the exception of what seems to be, although not quantified, a huge difference in the number of current homeowners and families that will be impacted, so I would like to -- I don't know how you do that any more formally than that, but I would like to request that that be addressed by the staff and that somehow it's very clear how many homeowners are involved. Thank you.

2

CHAIRMAN O'BANION: Thank you.

Maybe as a comment, the comments that are received tonight will be incorporated into the final document with responses to the comments.

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DON GORMLY

2536 Piedmont, Merced, California

CHAIRMAN O'BANION: Welcome.

MR. GORMLY: Thank you.

My name is Don Gormly. I live at 2536 Piedmont. I believe my property will be affected by the selection that the board makes.

Gormly 1

There was comment that -- about the grading and artificial barrier to further residential development in an easterly direction. All of my reading about the general plan for Merced tells me that the general -- that that general plan intends to push the city limits northward rather than -- and development northward rather than eastward, so to the extent that the general plan deviates from what is contained in the statement, I think that it's important for the supervisors to consider that may be a red herring, if you will.

2

So like the rest of us all attired in yellow, I encourage you to follow a mantra that we have all known since childhood and that is to follow the Yellow Brick Road.

CHAIRMAN O'BANION: Thank you.

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LARRY MERCANDO

3202 North Leaf Drive, Merced, California

MR. MERCANDO: Good evening. My name is Larry Mercando, and I live at 3202 North Leaf Drive, which is adjacent to the locations of -- proposed locations for the Campus Parkway. I think my yellow shirt makes up for Tom's yellow shirt. I couldn't find one more yellow than that.

Mercando 1

But I am here to voice my support for the yellow alternative, the yellow alignment. I feel strongly that we do need a parkway, but I think we need to have a selection that has the least negative impacts on the least number of people, and I believe that is the yellow alignment.

Now, I have heard some say that people -- comments from people like myself or those that are affected directly by this should not be really considered strongly because it's like not in your backyard. It's the syndrome that we all hear about that. I take exception to that for three reasons. One is I have always cared about my community. I have dedicated my life to providing service to the community and protecting the environment. Two, I am not speaking alone. There are hundreds of families that could be negatively affected if we select the green routing and,

2 as Tom says, I don't think the draft environmental impact statement adequately addresses the number of people that would be affected by it. And the third reason is that I truly believe the yellow alignment is the superior selection. I think it is better for the community as a whole.

Now, I recognize that government people do care about the community, but I think they have to recognize that the citizens also care about the community, and believe me, if I felt that the yellow alternative was not the best interests of the community, I would support -- maybe reluctantly, but I would support another alternative but I truly believe that is by far the best routing.

Now, I mentioned before there are hundreds of families that are affected by this and can be negatively impacted by it and could suffer by it and their suffering could be in vain, because I really see no advantages, substantial advantages, that have been outlined for the green alternative, and as I say, their suffering would be in vain.

Now, the draft EIS probably addresses endangered species and protected species, but I feel it doesn't address what should be a very important protected species, and that is the citizens of this

community. We need your protection. We need your protection because this is about people's lives, not only about farmland or zoning or where we are going to expand. It's about people's lives who live here right now, so I think it's very important to take that into consideration.

3 Now, I believe the closer the routing is to the more populated areas, the greater the impact on noise, building construction, noise when the road is put into operation, dust during construction, dust when it's in operation, fumes from exhaust, and you have probably heard there is many others like that, but I feel the draft EIS has not addressed another important fact and that is the condition of the road. The green alignment by its nature requires some 90-degree turns in there, and I think every time you put a major curve in a road, you are adding to the danger of that road. We are going to have college kids driving this road, a lot of them, and they don't always obey the speed limits, and I think it's just setting up dangerous conditions. I feel that in the future we are going to have a serious accident. Some morning, some foggy morning, either a college student or one of our own citizens is going to miss that turn and go off there and cause a fatality and at that time we will wonder how did we select this? Why did we

select this? Who was responsible for it? The time to consider that is now, not after we have a fatal accident.

So with due respect to you, please don't make a decision that will adversely impact hundreds of families without some benefit to the community, which it will not get, and the second, please don't make a decision that will add to the dangers of the road that could increase the possibility of a fatal accident.

Thank you for your time.

CHAIRMAN O'BANION: Thank you.

BRYANT OWENS

2683 South Plainsburg Road, Merced, California

CHAIRMAN O'BANION: Good evening.

MR. OWENS: Good evening, Supervisors. My name is Bryant Owens, 2683 South Plainsburg Road.

Owens 1

I basically can't support any of these alignments, and I wanted to add for the record I don't understand why -- since the Hunt property north of Yosemite is going to be dedicated to the eventual development of the campus community, why a road dedication couldn't -- I mean, why does this have to line up with Lake Road? Why isn't there some way to

line it straight up into the new proposed community that you have already approved? Thank you.

CHAIRMAN O'BANION: Thank you.

KIM ROGINA

6780 East South Bear Creek Drive, Merced, California

CHAIRMAN O'BANION: Good evening.

MS. ROGINA: Hi. My name is Kim Rogina, 6780 East South Bear Creek Drive, Merced, California, and I wish they would have got the news out about the yellow because no one told me. I would have worn yellow.

Rogina 1

We own 165 acres located on Yosemite Avenue. We have owned it for about 12 years. We farm tomatoes. We farm up and down Yosemite Avenue and we strongly support the yellow alignment. Not only does it make more sense and has less impacts on all of the neighbors around there, but it just makes more sense for us who own the land, and the one alignment that we strongly discourage you to endorse would be the alternate route because that would make the land virtually useless for us.

Also, I would like to encourage you to expedite this decision. We have lots of workers who are driving tractors, who are picking the fields, who are -- their

safety is going to be endangered because right now there is a lot of trucks who are traveling down Arboleda and Yosemite Avenue, and if you have traveled that way recently, you will see that it's already being used as an expressway so thank you very much and I strongly support the yellow alignment. Thank you.

CHAIRMAN O'BANION: Thank you.

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ROD HARRIS

3698 Marlyn Court, Merced, California

MR. HARRIS: I am Rod Harris. I live at 3698 Marlyn Court.

Harris 1

Every day -- almost every day I walk down the recreational facility that our public sector has provided on Lake Road, the Lake Road bike path, and as I understand this project, it doesn't end where "End Project" states. Instead, it will eventually go upward towards the university and turn on Bellevue somewhere.

2

My understanding is the proposed project -- if we use the green or green alternative, there will be Lake Road, which currently has concrete trucks and other semis coming out to the university at about 60 miles an hour, there will be the bike path between, and then there will be an expressway.

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I look at the other people using the bike path and I see a lot of kids. I am really worried about the safety of the individuals using that bike path with on one side what is an expressway and on the other side will be another expressway. I hope we will have a way to mitigate from this.

CHAIRMAN O'BANION: Thank you.

GREG AVELLER

3595 East Olive Avenue, Merced, California

MR. AVELLER: Good evening. My name is Greg

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Aveller (1) 1

Aveller. I live at 3595 East Olive Avenue, Merced. I am for the -- either the green alignment or possibly a new alignment, but not the yellow alignment. That is 20 feet from my property as it exists right now in the planning stages.

We have contacted a lot of people in the area and we have a petition here and there is probably around 80 to 100 signatures of people who are opposed to the yellow alignment. I have got that for the board here.

I have also got a letter from my neighbor, Teresa Pimentel, who lives in the yellow house, and that is probably why they called it the yellow route because it is going to go right through her house, and she has a

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letter here and she would like to submit that stating the fact that she built her home. She has lived there for around 34 years and does not want to see the yellow alignment come through her home. There is also another neighbor. They are the Bargers, and they have a couple letters here that they have also given to me to pass on.

2

The thing that really bothers me is the fact that it will go through farmland and it doesn't seem like it would tie into anything at the northern terminus at Yosemite Avenue. I don't know what is planned beyond there, but the original plan that I have seen would go up parallel with Lake Road but over several hundred feet is what I was led to believe was the route, and that looked like the best route available at that time.

Now, I have also heard that they also have a

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2 third alignment and I am not sure if that is the Kibby Road alignment or not, but there is a lot of people here tonight and most of the people here are against the yellow or the green, and of course I am against the yellow, but I don't think that is a great plan, especially with that turnabout for safety concerns that has been proposed recently.

CHAIRMAN O'BANION: If you will leave those in the basket, we will get those.

MR. AVELLER: Just leave them right here?

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CHAIRMAN O'BANION: Yes, please. Thank you.

MR. AVELLER: You are welcome.

LINDSAY DESROCHERS

1715 Canal Street, Merced, California

CHAIRMAN O'BANION: Good evening.

MS. DESROCHERS: Good evening, Members of the Board of Supervisors, Mr. Chairman.

CHAIRMAN O'BANION: I saw your picture in the paper.

MS. DESROCHERS: I haven't seen it yet. Was it okay? I bet it was about construction up on the campus.

I am Lindsay Desrochers, vice chancellor for the university for admission. I am also serving on the governing board of the University Community Land Company, which owns the northern 1240 acres of the proposed university community, and I would like to

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extend greetings from the chancellor, Carol Tomlinson-Keasey, who added her commendation to the work of the county. A lot more county work. The county seems to be just plugging along with all these issues, but the commendation for the work in particular tonight on the parkway is what we have in mind in conjunction with the Federal Highway Commission and Caltrans

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bringing for this parkway project.

The university is going to open with 1,000 students plus. We are very, very cognizant of the impacts that the university are going to have in this community, and therefore, we are of course quite interested that appropriate transportation is developed to the campus.

The county has engaged in a lengthy and comprehensive planning process. We worked with Mr. Rough. We have seen the documents. We would agree that a proposed expressway from Route 99 is essential. The interchange location seems appropriate. The city is rapidly growing north and east, and the campus and the university community, along with several other sectors, will benefit from this access from 99 going north to accommodate the growth that is already upon us.

Desrochers 1

In summary, we support the proposed parkway development and we recognize that it is an important improvement. It will also be an important improvement that should aid the condensing new businesses to locate to Merced. Transportation is going to be needed for

Page 17

22 them as well.
23 We endorse neither of the alternatives per se,
24 but we would urge you to terminate the parkway, whatever
25 the route is, at Lake and Yosemite, and we would like to

1, cont.

1 thank the Board of Supervisors for bringing this matter
2 up, and after reviewing your EIS, we may have some
3 additional written comments to provide you.
4 Thank you.
5 CHAIRMAN O'BANION: Thank you.
6
7
8 EDWARD MICHAELSON
9 3611 East Olive Avenue, Merced, California
10 CHAIRMAN O'BANION: Good evening.
11 MR. MICHAELSON: Good evening. My name is
12 Edward Michaelson. I live at 3611 East Olive Avenue,
13 about 400 feet from where the yellow projected plan is
14 and it will affect our property seriously but not near
15 as seriously as the house right next to me and the house
16 that is being removed.
17 I would make a comment on the yellow shirts,
18 that they are making a great effort. The hundreds of
19 people that are going to be affected by the parkway I
20 believe is a little bit exaggerated. As far as the
21 number of people, I think if you count on the map, there
22 is like 31 properties that will be affected probably 800
23 or 900 feet from the parkway, and it will be at their
24 backyards, so there are hundreds of people in the

Michaelson 1

25 Whitegate community, but they are not all within the

1, cont.

1 same distance of some other affected people.
2 They had discounted the possibility of the pink
3 route down Kibby Road because they didn't want to extend
4 the city limits that direction and to eliminate more
5 farmland. By doing the yellow route, they are going to
6 be eliminating probably 40 or 50 -- 40 to 50 acres of
7 prime farmland by moving it out to the yellow line,
8 which is about a quarter of a mile from Kibby Road. And
9 as we look at this, we are going to see that the city
10 limit line is going to be moved out to the yellow line
11 instead of the green line, so it's going to incorporate
12 all of that property and turn it -- all of that farmland
13 property into housing developments, so they won't only
14 be affected by the -- the people that come in next to
15 that are going to be affected as well. So I think that
16 when you look at the people that are affected the
17 greatest is what should be considered.
18 If Teresa's home is removed, and she has the
19 building lot right beside it, that would be two
20 properties that are going to be lost to her as well as
21 she has lived there for many, many years. And I know
22 that progression takes away properties on occasion, but
23 I think that the seriously affected part is to -- is
24 that if you look at the development, there is a lot of
25 wells that are very close to -- you look at the maps,

2

2

there is a lot more wells that are closer to the parkway on the yellow route than there are on the green route, and that could affect many properties as far as their drinking water is concerned. I don't know about any of the other facts except that the noise -- and the further you go out, the further the traffic is going to come out of the city to hit the parkway, so I just think that the green route would be a better route and you would preserve more farmland and you would put a city limit line there instead of at the yellow line. Thank you.

CHAIRMAN O'BANION: Thank you.

JERRY CALLISTER

2901 Whitegate Drive, Merced, California

MR. CALLISTER: My name is Jerry Callister. I live at 2901 Whitegate Drive.

I just wanted to point out that both routes as they go through is going to take up farmland and both routes are taking up good farmland and about the same amount of farmland. To me the real issue has to do with whether there really will be pressure to utilize some of that farmland in between in the future and we are trying to preserve the farmland. There is no question about it. But to me, it comes down to this issue. The green

Callister 1

route will absolutely affect all the homeowners who are

1, cont.

close to that route. The noise, the pollution, everything that happens on a busy route will affect property values and their quality of life and there is nothing you can do if you select that green route to change it. It will just happen. That impact will happen.

The yellow route, on the other hand, won't impact all of those neighborhoods. It would have the potential, yes, of having the city extended out there, but it doesn't have to happen and we all know that is good farmland and I think there is a lot of pressure to have that not happen and particularly with the city already indicating they want to go north, so the green route does impact people and absolutely does and you can't change it. The yellow doesn't, has the potential, but those who are in your positions have the potential -- have the ability to prevent having the city move out further and so do all of us. That is just a potential detriment where the other is an absolute detriment. I hope you will keep that in mind. I am also in favor of that yellow route because of it.

CHAIRMAN O'BANION: Thank you.

Anyone else?

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RALPH TEMPLE

650 West 20th Street, Merced, California

MR. TEMPLE: Mr. Chairman, Members of the Board of Supervisors, thank you for the opportunity to speak

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tonight. My name is Ralph Temple, 650 West 20th Street, Merced, and I speak to you tonight in two capacities; one as a citizen in this town for about 35 years, but more importantly as chairman of the University Community Land Company. That is the LLC that owns the 1240 acres directly south of the UC Merced campus, a 50/50 division between the Virginia Smith Trust and the university and hopefully a part of the university community.

As chairman of that management committee, we have looked at this, at the routes, which obviously to a great extent are there to serve not only the university but the community that we hope to design and build, and that is going to be a community, of course, that will afford student housing, housing for faculty and housing for staff. In addition, of course, we intend to have retail uses. There will be recreation uses. There are school sites that were planned on that 1240 acres. And as you can well imagine, it is certainly important to the LLC that we have another access to not only the campus but of course this community. I am not here tonight speaking for the Hunts, but of course they own a

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substantial amount of property directly to the south of the LLC holdings.

Temple 1

And I think looking in the long view as a long-time citizen of this community, we certainly need a route to the east. The city's general plan is certainly on a north-south access along G Street. We do not need to further impact city streets. The Campus Parkway is

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an excellent answer to serve not only the community but the university -- the campus, excuse me, but also the university community and in the long run hopefully will help us to service the north part of Merced and I desperately hope that at some point down the way, this Campus Parkway will be part one of what will be a loop that will allow traffic essentially to go from 99 north of currently what we view as the city limits to the west perhaps along Bellevue and then ultimately back to Highway 99. I think in the long term that is a wonderful plan for the community and the county, but I speak tonight, as I say, from -- principally for the LLC, the University Land Company.

For the record, I am wearing blue, which means I have no preference except we desperately want this

1, cont.

Campus Parkway. If we had a preference, yes, it makes some sense to bring it as close to the Yosemite and Lake Road interchange -- I envision perhaps Lake Road down

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the line might be a frontage, but those plans are a long way off. It seems to make some sense to do that.

But above all, I would like to leave you with this: The Campus Parkway is a tremendous project. We are very enthusiastic about it. It's good for the community. We sincerely appreciate all of the staff work that has been done by the county and other agencies in bringing this issue to our community.

Thank you very much.

CHAIRMAN O'BANION: Thank you.

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TERRY BATES

632 West 13th Street, Merced, California

MR. BATES: Chairman O'Banion, Members of the Board, Mr. Jones, my name is Terry Bates, 632 West 13th Street in Merced. I am here tonight representing the Virginia Smith Trust. You have heard from a couple of the other folks on the University Land Company LLC that talked about the wonderful prospects that we have for that project.

Bates 1

Very briefly, the Virginia Smith Trust takes the position that we don't support either particular alignment, but we do see the need for the Campus Parkway will be a viable cross-town method of getting from 99

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all the way to the north part of Merced where the growth is occurring, and we think it's a wonderful project in support of the Campus Parkway. If we do have a recommendation, it would be that the terminus point for the planned parkway that you have in front of you now will be as close to the intersection of Yosemite Avenue and Lake Road as possible.

Thank you for the opportunity to speak.

CHAIRMAN O'BANION: Thank you.

HELEN WALKER

2895 East Stretch Road, Merced, California

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MS. WALKER: My name is Helen Walker. I live at 2895 East Stretch Road in Merced. We have a piece of property there, 14 acres with an almond orchard on it. Our son lives in one house and we have the other house.

Walker 1

The green alignment would -- wouldn't go through our property, but it would go right to the side, to the east side, and we intend to -- we bought this property about three years ago and we intend to keep it in an almond orchard, keep it open, because we like the feeling of being out in the country and yet close to the city. We are getting older and our son is living on the same property so we will be taken care of, and I just

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want to encourage you to choose the yellow line because I think it would be the best. Thank you.

CHAIRMAN O'BANION: Thank you.

Anyone else wish to speak? For time's sake, I would ask if some of you individuals would like to speak, come down towards the front.

GARY

Gary 1

GARY: My name is Gary. I have a question about the Yosemite Parkway. Everytime I ride on the streets right there it is very dangerous as far as safety, and, you know, it's very dangerous and, you know, I just ride the bike all the time on Yosemite Parkway because I go there, too, and ride the bike on Yosemite Parkway. It's very dangerous out there.

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1, cont.

I would like to ask a question, Supervisors, and see about the safety for the bike trail because that is where important is because that is very dangerous and a lot of kids got hurt on it that I seen, so you think they work on it. I appreciate that. Thank you.

CHAIRMAN O'BANION: Thank you.

MR. AVELLER: For the record, again, my name is Greg Aveller.

CHAIRMAN O'BANION: You have already spoken?

MR. AVELLER: Yes.

CHAIRMAN O'BANION: Could we ask that maybe other folks have the opportunity if they wish and then you can come back.

MR. AVELLER: Sure.

CHAIRMAN O'BANION: Anyone else wish to speak? Thank you.

JOHN RAGGIO

3164 North Leaf Drive, Merced, California

Raggio 1

MR. RAGGIO: Good evening, Mr. Chairman. My name is John Raggio and I live at 3164 North Leaf Drive. I am here tonight to speak as a citizen regarding the alignments of both the green and the yellow. My preference is that of the yellow. It would have the least impact on those neighborhoods, but the other concern that I have, as engineers know, and Dan Holmes over here, is that the more curves you put in a road,

the more danger there is to traffic and more costly the road is. My question is why can't you extend the yellow straight through to Yosemite, take all those curves out and enter it through the community right up to the campus? That has always been my question. It's never been proposed. So I would like you to consider that as

1, cont.

well.

I think that Yosemite and Lake Road are impacted now and if you continue to dump more traffic into that location, it's going to cause more of a traffic block out there and they are not going to be able to handle the traffic unless they do some major reconstruction in that area.

Thank you for the opportunity to comment.

CHAIRMAN O'BANION: Thank you.

Hold on one second, please.

Diedre, you had a question you wanted to ask?

SUPERVISOR KELSEY: I wanted to ask Mr. Raggio if he has explained that alternative a little bit, his proposal if he could.

MR. RAGGIO: Where the project ends now on the yellow line, I would propose that you take that right through the community facility, the community housing up there and bring it right into the university. What you have now is you have curves here, you have two curves up there whatever route you choose. These are dangerous curves when you get people traveling at high speeds. You have --

CHAIRMAN O'BANION: You need to come over to the microphone. I apologize. We do have the court reporter.

SUPERVISOR KELSEY: I understand, John. I would like to get it on the record.

1, cont.

MR. RAGGIO: What I would propose and what I would like to see is you take the yellow route and extend it across Yosemite Parkway through the campus community and eliminate -- bring it all out over onto Lake Road and Yosemite. Lake Road and Yosemite are [illegible] now, and there is housing going in just to the [illegible] the green line or the green alignment at this time, which means there is going to be more traffic in that area, and in order to push traffic through on [illegible] and Lake Road, it's really going to create a [illegible] jam. You are going to have two roads that are offset out there, Yosemite and Lake. You are going to have Lake bumping into Yosemite, which is a dead-end, and then you are going to have traffic coming in off of the alignment, whatever one you choose, whether it is the green or yellow, if you choose the curved route, which is going to cause more confusion out there. I would say you need to take it straight through and go right through the community, and that is the least interruption to anybody out there.

SUPERVISOR KELSEY: Thank you.

MR. RAGGIO: The more curves you put, the more cost there is.

Thank you.

SUPERVISOR KELSEY: Thank you.

CHAIRMAN O'BANION: Dan, I apologize. Thank you.

DAN HOLMES

5781 Hillcrest Road, Merced, California

MR. HOLMES: My name is Dan Holmes. I live at 5781 Hillcrest Road in Merced. This is not green or yellow, so I am not here as an organized member here.

Holmes 1

A couple of technical questions that occurred to me as I read through the EIS-EIR, the phasing of the project talked about potentially constructing the first phase with a continuous left turn lane. That seems to be -- since there are no access points along that route, it seems kind of silly to build 12 or 14 feet of additional pavement. I would propose that in the first phase you build the westerly half of the project and then eliminate a continuous left turn lane and build the bicycle lane under your first phase, so the first project would include a two-way rural roadway with a Class 1 bicycle path on the west side, which your cross section showed it on the west side.

2

I also would like to have you entertain the

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2, cont.

option of connecting directly to South Bear Creek Drive and bringing that -- right now in the document you show that as a fly-over intersection or with the Yosemite Parkway crossing over South Bear Creek, and there are a lot of people who use South Bear Creek and would use South Bear Creek as a connection to the parkway, so you can take all those people who live south of Olive Avenue and even those living a little bit south of Bear Creek and provide them with a direct route onto the parkway rather than not putting the intersection there, so I think you at least need to consider that.

As far as the actual where you drop it off at Yosemite Avenue, the concern that I have had as we worked through the community plan north of there is the fact that if we have a four-lane road through the middle of the UC community, it will in a sense bifurcate the community and create a very difficult situation, whereas if you keep the path, the road towards the west side, eventually, as Mr. Temple said, terminate the road near the intersection of Lake and Yosemite, it will be a lot easier to create a coherent community as we get into the master planning of the UC community.

Thank you.

CHAIRMAN O'BANION: Thank you.

Anyone else wish to come forward at this time?

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Anyone else? Sir, do you want to come back?

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GREG AVELLER

3595 East Olive Avenue, Merced, California

Aveller (2) 1

MR. AVELLER: Yes. Thank you. My name, again, is Greg Aveller. I live at 3595 East Olive Avenue, and as I said, the yellow alignment comes 20 feet from my property and I think it's a poor alignment for that reason, plus it will impact a lot of ag land. And I believe that if they had looked at a route further to the east such as Kibby Road, it would make more sense and have much less impact on any of the individuals in the area. I hope that the board will instruct the county road department to look at that. I don't know why they didn't do that in the first spot. They originally had a pink route for that back in '99 and then when they had the meeting out at the lake, they threw all of the alignments out except the green and yellow, and there were no reasons given for that, but I still think that that would be the best route and have the least impact on the residential area.

Thank you.

CHAIRMAN O'BANION: Thank you.

Anyone else wish to speak? Anyone else?

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Okay. Then at this time we will close the public hearing and there is no action, as I stated at the beginning of the meeting that will be taken by the Board of Supervisors this evening. The comment period continues until July 5th, 2005, so if you have written comments you wish to send in, you may do so, and after

the comment period has ended, the Department of Public Works will begin preparation of the responses to the comments on the final EIS-EIR. The environmentally preferred alignment for the Campus Parkway will be presented in the final EIS-EIR, and then there will be a scheduled hearing for the Board of Supervisors for a decision.

And are there any other comments for the board before we close the meeting?

MS. CROOKHAM: What is the time line for that?

CHAIRMAN O'BANION: Paul, do you have a time line?

PAUL: Estimated time for the final EIR adoption and hearing would be November, December of this year.

CHAIRMAN O'BANION: Thank you.

Supervisor Kelsey.

SUPERVISOR KELSEY: I just want to say that I hope that any of the alternatives that are presented to

us will have bike lanes attached to them. I mean, obviously people already ride their bikes up and down and there was one speaker that talked about the trucks that were coming down Yosemite Avenue at 55 miles an hour and that is really true because I sat out at the Starbucks Coffee and I couldn't believe to see how fast those gravel trucks were traveling in town, but I do know a lot of people ride their bikes and we need to have something going up to the university. This is

supposed to be the smart community and we need to have those bike lines so I hope they are there.

CHAIRMAN O'BANION: Other comments for the board? Then the meeting is adjourned. Thank you all for coming.

(Whereupon at 6:14 p.m the proceedings were concluded.)

STATE OF CALIFORNIA,)
: Ss.
COUNTY OF MERCED)

I, Christine Oljace, do hereby certify:

That I am a licensed, Certified Shorthand Reporter, duly qualified and certified as such by the State of California;

That the foregoing was by me recorded stenographically at the time and place first therein mentioned; and the foregoing pages constitute a full, true, complete and correct record;

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That I am a disinterested person, not being in any way interested in the outcome of said action, nor connected with, nor related to any of the parties in said action, or to their respective counsel, in any manner whatsoever.

Dated this 8th day of July 2005.

Christine Oljace, CSR No. 11245

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Responses: Tom Fife

Fife-1

See Master Response-4 for a discussion of additional data that quantify the number of homes in the vicinity of each alternative, by distance from each alignment. These homes would not be directly impacted (each alternative involves one residential relocation impact) but are in relative proximity of the proposed alignment. The three alternatives have relatively similar numbers of residences within 500 feet. At a distance of 500 to 1,000 feet, more homes are in the vicinity of the Green Alignment than the Green Alternate or Yellow Alignment. The number of homes near a route can be used to reasonably represent the potential numbers of families and individuals along each route, for comparative purposes.

Table S-2 in the Summary (Section S.3) of the Draft EIS/EIR also presents a comparison of the alternatives considered, based on impacts analyzed in the document. It states, for example, that each of the three action alternatives considered would have one housing displacement. The number of locations where Caltrans and Merced County noise criteria would be exceeded is also specified. In addition, Section 3.14 describes the community impacts from the project under each alternative. Quantitative analysis is presented, but not to the level of specificity alluded to in the comment.

Fife-2

The commenter's preference for the Yellow Alignment is noted. The number of homes near each alternative is discussed in Response to Fife-1, above, and Master Response-4.

Responses: Don Gormly

Gormly-1

The City General Plan envisions northward development and the development of the UC Merced Campus northeast of the city. Current development activities are shown in the Draft EIS/EIR in Figure 3-1. Land use planning (General Plan) designations for the project area are shown in

Figure 3.12-1. Rural Residential land uses basically extend to the Yellow Alignment north of Olive Avenue and approach the Green Alternate Alignment south of Olive Avenue. Industrial land use designations have been assigned to the areas along the Common Alignment south of SR 140. Figures 3-1 and 3.12-1, which represent the General Plan as well as current development patterns, show land uses developing north of Yosemite Avenue and along major segments of the proposed route between Yosemite Avenue and SR 140. The project is not inconsistent with these planned land uses. The traffic analysis evaluated the projected use of the Campus Parkway, with trips to and from areas west of the Parkway, and found a significant drop in traffic demand east of the Parkway (see the Response to San Joaquin Raptor Center & Protect Our Water-25, in Appendix G-5). The Parkway would serve the existing and planned land uses in eastern Merced, but the traffic study does not show that increased demand (which would indicate future growth pressures) from east of the Parkway would occur because the area would remain relatively rural.

Gormly-2

The commenter's preference for the Yellow Alignment is noted.

Responses: Larry Mercando

Mercando-1

The commenter's preference for the Yellow Alignment is noted.

Mercando-2

See Response to Fife-1, above, and Master Response-4.

Mercando-3

Traffic noise and construction noise, dust, and exhaust are generally expected to be higher with closer proximity to sensitive land uses, such as residences along the alignments. Traffic noise levels are addressed in the Draft EIS/EIR in Section 3.5, and construction impacts are addressed for each environmental and community topic in Chapter 3.

See Master Response-1 for a discussion of the roadway design. The curves in the Campus Parkway are required to avoid land uses and offer differences in alternatives that still meet the project's purpose and need. The roadway design would meet safety standards. Nevertheless, the commenter's concern regarding the safety of users under the Green Alignment, particularly with respect to young drivers, is noted.

Response: Bryant Owens

Owens-1

The Green and Green Alternate Alignments are actually offset to the east from Lake Road. South of Yosemite Avenue, this allows the Green Alignment to be constructed apart from the existing residential development to the east, instead of adjacent to it where it would have greater impacts from traffic. Both the Green/Green Alternate and Yellow Alignments can connect with the potential future roadway system for the University Community development area. The Merced County Department of Public Works and City of Merced Planning Department have coordinated on both projects, including their alignments.

Response: Kim Rogina

Rogina-1

The commenter's preference for the Yellow Alignment and request for a quick decision is noted.

Responses: Rod Harris

Harris-1

The northern terminus for each of the alternatives would be Yosemite Avenue. The rationale for providing connectivity to Yosemite Avenue is provided in Chapter 1 of the Draft EIS/EIR. Under the Green and Green Alternate Alignments, connection to Lake Road is included. Ultimately, the University Community, when constructed, would include its own road system. Early plans for the University Community included an arterial

road that connects to Yosemite Avenue in the vicinity of the Green and Green Alternate Alignments.

Regardless of which proposed Campus Parkway alignment is selected, any University Community roadway would independently connect Yosemite Avenue to Bellevue Road, as part of the University Community Plan and not the Campus Parkway project. The roadway would primarily serve the planned University Community and the UC Merced Campus.

Harris-2

The bike lane would be constructed along the shoulder of the road and would be almost 8 feet wide. The project also includes a separated Class I path adjacent to the bike lane, intended for pedestrians and bicyclists.

Responses: Gregory Aveller (1 of 2)

Aveller (1)-1

The commenter's preference for either the Green Alignment or a new alignment, and opposition to the Yellow Alignment, is noted.

Aveller (1)-2

As described in Chapter 1 of the Draft EIS/EIR, Olive Avenue and Yosemite Avenue are two primary east-west arterials north of Bear Creek that provide a connection between Arboleda Drive and Merced. According to Merced County traffic projections, reliance on these roads will grow by approximately 40 percent between 2015 and 2025 as drivers bypassing the congested downtown city streets use these routes. Based on the analysis of traffic projections and prospective changes in traffic patterns, Yosemite Avenue was selected as the logical northern terminus for the Campus Parkway project. The Green Alignment maintains a northern terminus at Yosemite Avenue, just over 0.5 mile west of the Yellow Alignment. The third alignment is the Green Alternate Alignment, which is described in the Draft EIS/EIR. This alignment follows the Yellow Alignment then diverges westward, joining with the Green Alignment to the north of Olive Avenue. The Green A Alignment, which was proposed to extend to Kibby Road, was eliminated from detailed analysis in the Draft EIS/EIR because it did not satisfy the project's purpose and need of alleviating future traffic. This is described in greater detail in Section 2.5.3.

Response: Lindsay Desrochers

Desrochers-1

The commenter's preference for the Campus Parkway project is noted.

Responses: Edward Michaelson

Michaelson-1

The comment is noted. See Master Response-4 regarding the number of residential properties along each alternative alignment.

Michaelson-2

The Green A Alignment, which was proposed to extend Kibby Road, was eliminated from further consideration in the Draft EIS/EIR for several reasons, as described in Section 2.5.3. Since this alternative would have extended an existing local road, possibilities for widening it would be necessarily more limited as residences and businesses already exist adjacent to the roadway. The integrity of the existing uses would have to be maintained to the extent practicable, and access to these properties would have to be maintained; meanwhile, a 150-foot right-of-way with additional right-of-way at intersections would be required. Therefore, expanding the existing Kibby Road was not considered optimal for the proposed Campus Parkway. The Pink A and B Alignments (see Section 2.5.5) would have provided a more indirect and longer route from Bellevue Road through agricultural lands to the east of the Yellow Alignment. Due to the low demand for these routes shown in the traffic analysis, these alignments were not advanced for further consideration.

Most wells in the project vicinity are used for residential purposes and primarily affect the parcel on which they are located. As noted in Section 3.2.3, at least one groundwater well would be closed and sealed in accordance with state and local requirements as a result of a property

acquisition that would occur at one of two parcels corresponding with either the Green or Yellow Alignments. However, since the residence is being acquired for the Campus Parkway, a replacement well would not be needed or appropriate. For all other properties, any active wells that are directly affected by the project would be closed and capped in accordance with local and state requirements, and a new well would be installed if needed.

The commenter's preference for the Green Alignment is noted.

Response: Jerry Callister

Callister-1

The commenter's preference for the Yellow Alignment is noted.

Response: Ralph Temple

Temple-1

The University Community Land Company's recommendation for the Campus Parkway project is noted.

Response: Terry Bates

Bates-1

The Virginia Smith Trust's recommendation for the Campus Parkway project is noted.

Response: Helen Walker

Walker-1

The commenter's preference for the Yellow Alignment is noted.

Response: Gary (Last Name Not Provided)

Gary-1

See Master Response-1 for discussion of safe roadway design for the proposed alignments and Master Response-2 in regard to bike lanes and paths. With appropriate design standards in place, it is not anticipated that the safety of bicyclists would be compromised.

Response: John Raggio

Raggio-1

The commenter's preference for the Yellow Alignment is noted.

See Master Response-1 for discussion of safe roadway design for the proposed alignments and Master Response-2 in regard to bike lanes and paths.

The commenter recommends extending the Yellow Alignment to Yosemite Avenue (all three alignments already terminate at Yosemite Avenue or Lake Road) and extending the Parkway northward to the UC Merced Campus. The location of each of the proposed alignments was initially selected to evaluate a range of potential alignments to provide better traffic service and connectivity of the road network in the City of Merced. Extending the roadway north of Yosemite Avenue was originally evaluated, but it was determined that insufficient traffic demand would exist until the UC Merced Campus (post-Phase 1 construction) and the University Community projects were developed. The northern extension of the roadway between Yosemite Avenue and the Bellevue Road/UC Merced Campus area was therefore dropped from further consideration. If the University Community and subsequent phases of the UC Merced Campus move forward, additional access requirements would be addressed as part of those projects. Draft plans for the University Community include a roadway system that connects with the Campus Parkway.

Providing access to the UC Merced Campus is only one of five objectives of the project, as outlined in Section 1.1 of the Draft EIS/EIR. In addition to facilitating access to the UC Merced Campus and University Community, Campus Parkway would provide access between the City of Merced and SR 99. It would also satisfy the need for an eastern "Beltway" adjacent to the City of Merced to serve all of the proposed and planned developments to the north and east of the current city limits. Finally, Campus Parkway would also provide additional emergency service access that is not restricted by the BNSF railroad tracks. For these reasons, Campus Parkway

is envisioned to alleviate traffic congestion in the region, extending beyond the UC Merced Campus and University Community. The road alignment should, therefore, serve drivers traveling between northern Merced and SR 99 as well as the campus-related land uses.

Responses: Dan Holmes

Holmes-1

The reference to the continuous left-turn lane has been deleted from Section 2.3.1 of the Final EIR. The first phase of the project would have left turn lanes at the intersections only, but not along the midblock portions of the route. The proposed Phase 1 construction would provide for two-way traffic (one lane in each direction), turning lanes at the intersections (but not midblock), and a bike lane in each direction.

Holmes-2

No connection to North or South Bear Creek Roads is proposed because they are designated as local roads and not arterials, and as such they are not intended to carry heavy loads of traffic.

Response: Gregory Aveller (2 of 2)

Aveller (2)-1

See Master Response-10 and Response to Aveller (1)-2, above.

G.4 Comments from Petition

The following petition was submitted by residents of Merced County. The response is provided after the petition.

Comment: Petition-1

Board of Supervisors
Sincerely, Kevin A. Lombardo

PETITION
AGAINST the proposed YELLOW ROUTE
of the
CAMPUS PARK WAY HIGHWAY

1 We, the undersigned residents of Merced County, hereby oppose the construction of the CAMPUS PARK WAY route, (Yellow Route) shown in the Draft Environmental Impact Statement/Report, May 2005. PROJECT: RPHP2IL-0484(001) EA:10-4A0701L

RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

PRINT NAME	SIGNATURE	ADDRESS
1 Albert Lencioni	Albert Lencioni	1625 Rose Ave
2 Ernie Lencioni	Ernie Lencioni	3121 Carmel Rd.
3 Gloria Lencioni	Gloria Lencioni	1625 Rose Ave
4 Rosie Brown	Rosie Brown	P.O. Bx 1464 Merced 95344
5 Herbert Brown	Herbert Brown	1127 W. 22nd St. Merced
6 Mary Gonzales	Mary Gonzales	2240 E. Yosemite Pkway Merced
7 Olivia Barroso	Olivia Barroso	452 Gerard Ave Merced
8 Mike Barroso	Mike Barroso	452 Egerard Ave. Merced
9 Kathleen Holly	Kathleen Holly	2140 Hampden Ct Merced
10 Cynthia A. Temple	Cynthia A. Temple	611 University Drive-Merced
11 Richard S Graves	Richard S Graves	3307 Lagoon Ave, Atwater
12 Ron Harkreader	Ron Harkreader	3780 Brandy Ly Merced
13 Alan Brymer	Alan Brymer	1190 N. Buhach, Merced
14 Stephen Killebrew	Steph Killebrew	1518 E. Olive Ave Merced
15 Stacha Andrada	Stacha Andrada	20645 Mervel Rd Los Banos
16 David A Cardella		2768 W Cardella Rd Merced
DAVID A. CARDELLA		

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RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

PRINT NAME	SIGNATURE	ADDRESS
1 Shelley Meller		981 Lake Forest CA 95348
2 LeVen Goodin		2871 Rambler CN Merced
3 Anna Gonzales	Anna Gonzales	2543 Briarwood
4 Jon Hawthorne	Jon Hawthorne	974 Wyoming Dr Merced
5 Marilynn Thornhill	Marilynn Thornhill	1563 Eucalyptus Atwater
6 Glenn Hilmer	Glenn Hilmer	1625 Mondo Dr., Merced
7 Nancy Hladek	Nancy L. Hladek	827 W. 25th Merced
8 Cherrie Hilmer	Cherrie Hilmer	1625 Mondo Dr Merced
9 Josephine Pulido	Josephine Pulido	149 E 23 St Merced
10 Ann Lashbrook	Ann Lashbrook	166 E 23rd St, Merced
11 Deborah Gray	Deborah Gray	7110 Santa Fe, Winton
12 Lori Mcmillan	Lori Mcmillan	2987 Westminster Ct, Merced
13 Donald E. Thornhill		1563 Eucalyptus - Atwater
14 Barbara Ervin	Barbara Ervin	319 Broadway Ave - Atwater
15 Edward Hladek	Edward Hladek	827 W 25th Street Merced
16 Roy A Johnson	Roy A Johnson	5563 White Crandall Atwater

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RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

PRINT NAME	SIGNATURE	ADDRESS
1 Olivia Beck	Olivia Beck	342 - Brimmer Rd
2 Linda Perry	Linda Perry	2484 Hawthorne St.
3 Jack Nolan	Jack Nolan	285 Cedar Atwater
4 Cynthia Nolan	Cynthia Nolan	285 Cedar Atwater
5 Marvin Bohems	Marvin Bohems	24496 Cornwall Merced
6 Judy Justice	Judy Justice	1424 W. 21st - MERCED
7 Lorraine Dragovich	Lorraine Dragovich	5525 E. Worden Ave Merced
8 Margie Montoya	Margie Montoya	595 Ramsden Rd, Merced 95348
9 Flora Cromwell	Flora Cromwell	2268 Reed Merced
10 Leroy Cromwell	Leroy Cromwell	2268 Reed Rd Merced
11 Ted Justice	Ted Justice	1424 W. 21st Merced
12 Jack Perry	Jack Perry	2484 Hawthorne St. Merced
13 Lupe Chavez	Lupe Chavez	938 Emery W. Merced
14 Joe Chavez	Joe Chavez	938 Emery W. Merced
15 Robert Trindade	Robert Trindade	2934 N. Trindade Rd Merced
16 Jeannette Fermanti	Jeannette Fermanti	2025 Willow Merced

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RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

PRINT NAME	SIGNATURE	ADDRESS
1 Ruth A. Scheer	Ruth A. Scheer	4716 N. Central Ave. ATW.
2 Salvatori, Ursula	Ursula Salvatori	3039 Bel Mira Dr Atwater
3 Kathryn Schelby	Kathryn Ay	114 Nutmeg Atwater
4 Aldora Dias	Aldora Dias	2340 Village Cir Dr Atwater
5 Tokiko Harper	Tokiko Harper	2755 Atwater Blvd
6 Jane Hunt	Jane E. Hunt	2217 Eucalyptus
7 Carol Hanks	Carol Hanks	2704 Station Ave Atwater
8 Vivian Macias	Vivian Macias	3300 Herrod Atwater
9 Frances J. Sikora	Frances J. Sikora	1595 Bulice Atwater, CA. 95301/507
10 Caroline Nakashima	Caroline Nakashima	10397 W. Walnut Livingston
11 Kay L. Fish	Kay L. Fish	8693 Atwater-Jordan Rd Atwater 95 334
12 Greta Weimer	Greta Weimer	4768 N. Central Ave. Atw
13 Weimer St	Weimer St	4768 N. Central
14 Jimmy Young	Jimmy Young	339 St. Michelle Dr. Merced
15 Carolyn Weimer	Carolyn Weimer	4850 N. Cressey Way - Atwater
16 Robert J. Weimer	Robert J. Weimer	5120 N. Arrean Atwater Calif

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RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

PRINT NAME	SIGNATURE	ADDRESS
1 Lydia Ellington	Lydia Ellington	1640 Battle St Merced
2 Kristin Weimer	Kristin Weimer	4621 N. Sultana, Atwater
3 Eduardo Vasquez	Eduardo Vasquez	9836 North Ave Planada
4 Douglas P. Forte	Douglas P. Forte	4650 N. Central, Atwater Ca.
5 Jean B Mancera	Jean B Mancera	4596 N Central Ave Atwater
6 Walter R Weimer	Walter R Weimer	4850 N Cressey Atwater Ca
7 Janet Jones	Janet Jones	5754 Orchid Ct Atwater CA 9530
8 James Jones	James A. Jones	5754 Orchid CT Atwater, CA 9530
9 James R. Foley	[illegible]	11304 E. Hwy 140 Planada CA
10 Mary L. Foley	Mary L. Foley	11304 E Hwy 140 Planada CA 95365
11 Eric A. Sanson	[illegible]	4630 Lauskam Ave, Merced, 95340
12 Bernice Testa	BERNICE TESTA	3511 E. Olive Ave #7 Merced, Ca 95340
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RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

PRINT NAME	SIGNATURE	ADDRESS
1 Betty Rockholt	Betty Rockholt	3167 Woodsdale Av.
2 Douglas Co Atinas	[illegible]	686 Gateway Circle
3 Carole Thomas	Carole Thomas	1463 W. 21st St Merced
4 Donald R Post	Donald R Post	4613 W 4th N/S Swain Rd 95340
5 William Elliott	William Elliott	3340 Yosemite Pky #16, Merced CA 95340
6 Ruby Bandoni	Ruby Bandoni	1452 Quiet Ct. Merced, Ca
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RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

	PRINT NAME	SIGNATURE	ADDRESS
1	Cecilia Kinney	C Kinney	744 Redwing Dr. Merced
2	ANTHONY KINNEY	Anthony Kinney	744 REDWING DRIVE, MERCED
3	Hope Zepeda-Ruiz	Hope Zepeda-Ruiz	2138 E. 27th St. Merced
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RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

	PRINT NAME	SIGNATURE	ADDRESS
1	GEORGE ROOKER	George Rooker	3489 E. Olive
2	IRENE ROOKER	Irene Rooker	3489 E Olive
3	Marjorie Barger	Marjorie Barger	3401 E. Olive
4	Lester Barger	Lester Barger	3401 E Olive
5	Ramon Rodriguez	[illegible]	3481 E. Olive
6	MANUELA ARMENDARIZ	[illegible]	3635 E. Olive
7	ISRAEL ARMENDARIZ	Israel Armendariz	3635 E. Olive
8	WILMA PLANT	Wilma Plant	3665 E Olive
9	ELMER NELSON	Elmer Nelson	3665 E. OLIVE
10	Byrl Pearson	Byrl Pearson	3665½ E Olive AVE
11	Andy Di Falco	Andy Di Falco	1997 La Costa Ct
12	Doug Colwell	Douglas Colwell	3115 E Olive Ave
13	C.T. Daniel	CT. DANIEL	3693 E OLIVE AVE
14	Irene Daniel	Irene Daniel	3693 E Olive Ave
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RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

	PRINT NAME	SIGNATURE	ADDRESS
1	Robbie Jensen	Robbie Jensen	1653 Sussex Ct merced CA
2	Jack Zeigler	Jack Zeigler	2568 Clydesdale Ave., Atwater
3	Jerry Sanders	[illegible]	591 Bobolink, Atwater
4	Tom Driscoll	[illegible]	2466 Lake Ave Merced CA 95340
5	Amy Pirtle	Amy Pirtle	19160 E.S. Bear Creek Mc Cy
6	Jennifer Correa	Jennifer Correa	800 Olivewood Dr #2, Merce CA
7	Young CAS	[illegible]	2889 G. St.
8	Scott CARR	Scott Carr	3133 Kingsland Ave
9	Donna Duran	Donna Duran	579 Redwing Ct
10	Larry Cortinas	Larry Cortinas	3513 Vernal Ct - Mere
11	ELVIA QUINLEY	Elvia Quinley	1160 W. 20TH ST., MERCED
12	STAVE MURPHY	[illegible]	2034 Normandy Ln Merced
13	Luis Murrieta	Luis D. Murrieta	201 Broadoak Dr. Merced, CA
14	RITA SANDINO	Rita Sandino	1532 Monte grande merced
15	Teresa Vega	Maria T Vega	3506 Paseo Verde Ave
16	Delia Garza	Delia Garza	650 Olivewood Dr. merced

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RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

	PRINT NAME	SIGNATURE	ADDRESS
1	Jeff Gomes	[illegible]	20721 W. HWY 140 P.O. Box 202 Stevinson CA.
2	John Stribe	[illegible]	3800 Pigeon Ave, Merced, CA
3	MARK TERRY	Mark Terry	949 Cottonwood Dr. Los Banos CA.
4	Ed Montiel	[illegible]	647 Cornell Ct Merced CA
5	JOYCE WERT	Joyce C. Wert	1420 DAVENPORT DR MERCED CA 95340
6	Gilbert Cisneros	[illegible]	45 E. 22nd, Merced Ca 95340
7	Mike Thibault	[illegible]	2200 N. Quinty Merced CA 953
8	KAREN Milliken	[illegible]	31 Fairview Ave, Gustine 95
9	KEN Cooper	[illegible]	2040 Yosemite Pkwy #64 Merced
10	LYNN MCCULLICK	[illegible]	202 FIR AVE, ATWATER, CA 950
11	MARSHALL MAGSEY	Marshall Magsey	2025 PINEHURST CT, MER 95
12	FRANK BAGR	[illegible]	1920 CEDARCREST, MERCED 95348
13	[illegible]	Jerry M Fatchell	3350 M St #64 Merced
14	JOSEPH SANCHEZ	[illegible]	22 W. 25TH STREET MERCED 95340
15	Joy O'Hagan	Joy O'Hagan	3274 Cherokee Ave Merced 95340
16	CINDY KANE	Cindy Kane	624 Elm Ave - Atwater, CA 95301

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RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

	PRINT NAME	SIGNATURE	ADDRESS
1	Jeffrey J. Stevens	[illegible]	106 Madrona, Atwater
2	Joshua Chandler	[illegible]	3350 M St. #50, Merced
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RESIDENTS OF MERCED COUNTY OPPOSED TO THE YELLOW ROUTE, sign below:

	PRINT NAME	SIGNATURE	ADDRESS
1	Floyd E. De La Cruz	[illegible]	568 Sonora Ave, Merced
2	Edward N Michaelson	[illegible]	3611 E Olive
3	Peggy Michaelson	[illegible]	3611 E Olive
4	GREG AVELLER	GREGORY AVELLER	3595 E. OLIVE AV
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Response: Petition-1

The commenters' opposition to the Yellow Alignment is noted.

G.5 Comments from Private Organizations and Businesses

Comments received from private organizations and businesses are presented below in alphabetical order by the organization or business name. Individual issues within each comment submission are numbered (e.g., Name-1, Name-2, etc.). Responses follow each comment submission.

Name of Organization or Business	Signatory	Address	City	Date of Comment
Community Alliance with Family Farmers	not legible	10916 Amsterdam Road	Winton	7/5/2005
Herum Crabtree Brown	Steven A. Herum	2291 W. March Lane, Suite B100	Stockton	6/30/2005
Lennar Communities	Don Larson	6121 Bollinger Canyon Road, Suite 500	San Ramon	7/5/2005
McCormick, Barstow, Sheppard, Wayte & Carruth LLP	Jeffrey M. Reid	P.O. Box 28912	Fresno	7/5/2005
Merced County Farm Bureau	Board of Directors	646 S. Highway 59	Merced	7/5/2005
Merced Irrigation District	Rory Randol	P.O. Box 2288	Merced	6/30/2005
The Nature Conservancy	Susan A. Austin	3144 North "G" Street	Merced	7/5/2005
O'Dell Engineering	Dan Holmes	1165 Scenic Drive	Modesto	7/5/2005
PG&E	Dennis Garcia	none		4/29/2005
Protect Our Water (POW)	Steve Burke	3105 Yorkshire Lane	Modesto	7/5/2005
San Joaquin Raptor/Wildlife Rescue Center	Lydia Miller	P.O. Box 778	Merced	7/5/2005
University Community Land Company, LLC	Ralph Temple	none		6/21/2005
University Community Land Company, LLC	Lindsay A. Desrochers	1715 Canal Street	Merced	6/21/2005
VernalPools.Org	Carol Witham	1141 37th Street	Sacramento	7/5/2005

Comment: (Name Unavailable) Community Alliance with Family Farmers

CAFF

COMMUNITY ALLIANCE WITH FAMILY FARMERS

July 5, 2005 Sent Via Fax to 722-7690

Steve Rough, Project Engineer,
Merced County Public Works Department
345 West 7th Street
Merced, CA 95340

Re: Campus Parkway Draft Environmental Impact Comments

On behalf of the Merced Chapter of Community Alliance with Family Farmers we submit our comments for the Draft Campus Parkway Environmental Impact Report

For our organization to make serious comment towards the future growth of Merced County we have to discuss our General Plan which is the guideline for our decision makers to follow. When we look at how outdated our General Plan is and what has happened to us in the past 5 years, it puts these comments and our vision off track.

1 CAFF is recommending that all variances, zone changes, General Plan amendments and annexations be denied prior to a new General Plan. This is essential. Our water is our lifeline and we cannot make any sound decisions prior to a full comprehensives study on what our resources allow. We believe we are now already overcommitted. We are concerned about the encroachment into the Bear Creek Watershed.

2 We stand strong on creating urban limit lines to minimize the impacts on agricultural operations. We were to believe that when this was originally proposed that this was to be a parkway to the Campus and not a road to build another city. Therefore we would like to address that this prime agricultural land be put into permanent easements east of the parkway. We call for a 6:1 mitigation of agricultural land that will be taken for use for the parkway.

3 We also believe that this draft did not take into account the many other projects that are now being reviewed; Yosemite Lake, R.V. Park and Golf Course and also the Critical Habitat designation. All of these associated projects due to the U.C. has or will put extreme pressure on our resources and prime agricultural lands.

Merced County is in the largest growth phase it has ever experienced. We are an organization that works to protect the family farm which is the face of so many Merced County Farmers. Every project that is approved with the loss of agricultural land is one more hurdle for us to succeed in agriculture. This is a farming region and this project will negatively impact neighboring agricultural operations.

Please notify us when the Final EIR is completed. We can be reached at: 10916 Amsterdam Rd, Winton, CA 95388

Sincerely,

Community Alliance of Family Farmers

536355 Russell Blvd., Davis, CA 95616 ✝ P.O. Box 363, Davis, CA 95617-0363
Phone: 530.756.8518 ✝ Fax: 530.756.7857 ✝ E-mail: caff@caff.org ✝ Web site: www.caff.org

1

Response: (Name Unavailable) Community Alliance with Family Farmers

Community Alliance with Family Farmers-1

The commenter's recommendation is noted.

Community Alliance with Family Farmers-2

One of the stated purposes of the project is to provide access to the UC Merced Campus (see Section 1.1 of the Draft EIS/EIR). However, the Draft EIS/EIR also states that prior to the planning and design of UC Merced Campus site, the concept of the "eastern beltway" was identified and recommended to improve access and circulation on the east side of Merced (Section 2.1.1, under the heading "Transportation Planning"). While the need for additional capacity and connections within eastern Merced is a primary project goal, Campus Parkway would also help to accommodate traffic generated by UC Merced as the campus expands.

Section 3.13.2 discusses impacts to farmlands. The commenter's recommendation regarding the mitigation ratio for impacted agricultural land is noted. Merced County does not have an established mitigation policy regarding farmlands. Until any such policy is adopted, farmland impacts from the Campus Parkway project would be mitigated at a 1:1 ratio by acquisition of conservation easements. This mitigation has been added to the Final EIR in Section 3.13.4.

Community Alliance with Family Farmers-3

The City of Merced Planning Department was contacted during the preparation of the Draft EIS/EIR about potential new, planned, or conceptual developments. The input was used to create Table 3-1 and Figure 3-1 of the Draft EIS/EIR, which identify both changes in development that have already been adopted or approved and proposed developments where an application or pre-application information has been submitted to the City of Merced.

Comment: Steven A. Herum, Herum Crabtree Brown

HERUM CRABTREE BROWN
Attorneys At Law

Steven A. Herum
sherum@herumcrabtree.com

June 30, 2005

Mr. Steve Rough
Merced County Department of Public Works
345 W. 7th Street
Merced, California 95340

Re: Campus Parkway Project
Draft Environmental Impact Statement/
Environmental Impact Report
Project RPHP21L-0484 (001)
EA 10-4A0701L
May 2005

Dear Mr. Rough:

This office represents Lyons Investments, owner of substantial real property that is affected by the proposed Campus Parkway Project described and evaluated in the Draft EIS/EIR. A portion of the Lyons Investments property is more specifically described at Figure 3-1 at ADOPTED DEVELOPMENT PLAN number 5 and consists of approximately 484 acres. The acreage is identified as the Lyons Annexation in the draft EIS/EIR.

Please be advised that Lyons Investments owns approximately 406 additional acres contiguous to those properties shown in Figure 3-1 on page 3-6. All of Lyons Investments property, totaling approximately 890 acres, is devoted or planned for industrial uses as allowed by the City of Merced land use regulations. All of the Lyons Investments industrial property totaling approximately 890 acres and the other +/-80 acres of industrial property not owned by Lyons must be identified and included in the draft EIS/EIR, especially the documents study of Growth and Traffic analysis. This property is located south of Highway 140 and east of the Doane and Hartley laterals. This area is depicted in blue on the Existing Land Use exhibit (Figure 3.12-1) on page 3-162. All this property should be considered for growth related impacts, cumulative impacts, and traffic modeling and analysis.

Lyons Investments asked me to review the draft EIS/EIR and evaluate whether the joint document sufficiently addresses environmental effects flowing from the proposal that may adversely affect the real property. In addition, Lyons Investments retained the services of Fehr

2291 West March Lane Suite B100 Stockton, CA 95207
• Tel 209.472.7700 • Fax 209.472.7986 • Modesto Tel. 209.525.8444
A Professional Corporation

Mr. Steve Rough
June 30, 2005
Page 2

and Peers, a qualified traffic engineering consulting firm, to provide comments about the joint document and the proposal. Their written report is attached to this letter.

1 1. The draft EIS/EIR needs to evaluate the direct, secondary and cumulative impacts to all of the Lyons 890 acres of industrially zoned land plus the additional industrial land that is not owned by Lyons Investments. All of the Lyons Investments industrial property totaling approximately 890 acres and the other +/-80 acres of industrial property not owned by Lyons needs to be identified in the draft EIS/EIR and evaluated. These comments are set forth earlier in this comment letter and incorporated herein by this reference.

The Fifth District Court of Appeals recently criticized an underinclusive cumulative impact analysis. *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1213-1219. As explained later, the Project has the potential to adversely affect the Lyons property. Therefore it is vital that the entire landownership be acknowledged and evaluated in the context of CEQA.

2 2. As developed, Lyons Investments industrial property will significantly create family wage jobs in the Merced area. The Merced region faces chronic high levels of underemployment and unemployment. The lack of medium and high paying jobs, or stated differently the absence of a reasonable balance between jobs and houses cause secondary environmental effect as defined by Sections 15064(d) and (e) of the CEQA Guidelines. See, for example, *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1204-05 ["section 15064, subdivision (d) mandates that both primary (direct) and 'reasonable foreseeable' secondary (indirect) consequences be considered in determining the significance of a project's environmental effect."].

If the project provides inferior or more difficult access to the industrial property, vacant industrial property will develop slower or not at all. This fact triggers a chain of events resulting in secondary environmental issues. First, Merced area workers will have to commute long hours to reach better paying jobs that could otherwise be available at the Lyons Industrial park. This results in two significant environmental effects: 1) there is an environmental effect of increased traffic on major freeways; and, 2) the vehicular traffic causes increase automobile emissions. The relationship between increased automobile emissions and increases in adverse health risks such as human respiratory health are well established and recognized by California courts in binding legal authority. *Id.* at 1219-20.

Therefore, the Draft EIS/EIR is defective unless it recommends a mitigation measure providing reasonable assurance that access to and from Merced's largest industrial area will not diminish as a result of the project's construction and operation. Without this condition the EIS/EIR must study area wide traffic impacts, the air pollution generated from these longer vehicular trips and then correlate this increase in air pollution to increases in respiratory ailments. The secondary impacts are not addressed in the draft EIS/EIR.

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Mr. Steve Rough
June 30, 2005
Page 3

3 3. The discussion of the interchanges affecting the Lyons industrial property should be discussed in greater detail. In particular, and in order to fulfill CEQA's mandate to provide relevant information and data about the proposal, the EIS/EIR should provide more detail about the treatment of the intersection of State Route 140 and the Common Alignment; the intersection of State Route 140 and Kibby Road; the intersection of Childs Avenue and the Common Alignment; and, the intersection of Gerard Avenue and the Common Alignment.

4 4. Page 3-42 to 3-43 discusses mitigation measures for contaminated soil. Indeed soils in the area are subject to the GE plume. Please clarify that the mitigation measures identified at 3.2.4 relate only the real property acquired for the Project and not for adjoining property that is not part of the Project.

5 5. Page 3-76, Item 3.5.4 Cumulative Impacts, Potential for Cumulative Noise Impacts from Proximity of Land Uses. Based on the findings in this section, can we state that no noise reduction barriers or mitigation measures will be required on the Lyons property adjacent to the Campus Parkway?

6 6. Attached are the comments of Fehr and Peers Traffic Engineer Consultants. Please treat their comments as though set forth in this letter in full.

7. The draft EIS/EIR does not sufficiently discuss potential environmental effects if the Lyons property must design, construct and install alternate utility lines due to the Project severing existing utilities locations from the property or curtailing the landowner's ability to implement existing utility master plans. Section 2.3.5 indicates the "placement of utilities or provisions of new services is not included or proposed as part of this project." However, the Project may require significant physical changes involving the placement of utilities or provisions for utility services. The statement at Section 2.3.5 does not cohere to the emphatic CEQA rule that project "means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." CEQA Guideline §15377(a). Indeed a very strong CEQA policy prohibits piecemealing of environmental evaluations.

If the Project conflicts with policies or plans the conflict must be evaluated in the context of an environmental impact report. *The Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 930. For example, existing industrial users located in the subject area use Well 154 Pipeline for storm drain purposes. The Project may sever the property from Well 154 Pipeline, the approved storm drain plan for the industrial property. The draft EIS/EIR cannot ignore the fact that Project may force the landowner to provide alternate storm drain structures at different locations. This example is provided for illustrative purposes only, and other public utilities, existing or planned, including sewer, water, gas, electrical and telephone face the precise and identical problem. In order for this draft EIS/EIR to satisfy minimum standard under CEQA, it must either evaluate the impact in detail or offer a mitigation measure that the Project will not interfere with existing public utility services or will not conflict with plans to provide

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Mr. Steve Rough
June 30, 2005
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6 cont. utility service to vacant industrial land In short, it is not enough to claim that utilities are beyond the Project's scope or that plans for parallel water and sewer lines depend upon county encroachment permits that would be subject to future CEQA review. There is a foreseeable physical change to the environment from the Project should utility service be severed or should utility plans become compromised. The draft EIS/EIR needs to offer meaningful mitigation measures to lessen the severity of this environmental effect.

Very truly yours,

STEVEN A. HERUM
Attorney-at-Law

SAH:lac

Response: Steven A. Herum, Herum Crabtree Brown

Herum Crabtree Brown-1

The traffic modeling and growth evaluation was based on the industrial land uses contained in the MCAG county model, regardless of the ownership of those land uses. Table 3-1 and Figure 3-1 in the Draft EIS/EIR identify the Lyons Annexation as an upcoming (approved) project that is within the overall industrial land use designation. The traffic analysis and studies associated with the land use projections do account for the future industrial uses in this area, of which the Lyons property is one element.

The MCAG was contacted regarding this comment, and the response has been added to Appendix A of this Final EIR. MCAG confirmed that they included substantial growth in industrial use within their traffic model for the area in question. Their model is based on traffic analysis zones (TAZs), and the industrial area spans three TAZs included in their regional model. Specifically, 2,800 new industrial-sector jobs are assumed in these TAZs from 2000 and 2025. To compare the relative scale of this assumption to current development proposals in the area, a proposal to locate a Wal-Mart distribution center in this industrial area was announced in an August 19, 2005, press release, which reported an initial creation of 600 jobs. Additional expansion of Wal-Mart may occur as well as other industrial development, but MCAG reports that the character and size of the overall cumulative growth in the industrial zones modeled for this area have not changed and no changes to the traffic model are necessary.

Herum Crabtree Brown-2

The commenter proposes that the Draft EIS/EIR must provide adequate access to the industrial parcel to allow it to expand to its full potential or secondary adverse environmental impacts would occur. There are several points in this issue to consider. Campus Parkway is not an approved project, and the purpose of the Draft EIS/EIR is to inform decision makers of the potential consequences and mitigation for each alternative considered. A required alternative that must be studied in the Draft EIS/EIR is the No Action alternative, which can be selected by the Merced County Board of Supervisors. The Draft EIS/EIR addresses the potential effects of not building Campus Parkway. Traffic modeling was performed for the No Action alternative and used as a basis for comparison to the other build alternatives (the Green, Green Alternate, and Yellow Alignments). The traffic model was regional and provided projections for roadway volumes throughout the City of Merced and adjoining Merced County roads for 2025. Studies performed for noise, air quality, energy, and other resources also evaluated the No Action alternative. In some cases, where appropriate, the analyses for those resource area evaluations were based on the traffic modeling.

The commenter also requests a mitigation measure to provide assured access to the industrial land and future development. Campus Parkway crosses the planned industrial area within the City of Merced (between SR 140 and Mission Avenue, west of the Doane and Hartley Laterals). The City of Merced evaluated the Lyons development in 1998, and Merced Department of Public Works staff noted that the roads entering and leaving

the planned development area should be constructed to a standard that can accommodate the additional traffic that would result from development of these properties.[1] A finding of the approved Initial Study was that the industrial development area would result in substantial additional vehicular movement unless mitigation is incorporated. Consequently, the Initial Study included a mitigation measure that the Lyons project would be responsible for construction of all roadway improvements on collector and local streets, within the project boundaries, including the collector portion of any arterial streets (Childs and Mission Avenues), "and expressways (Campus Parkway) within the Project Boundary."[2]

Herum Crabtree Brown-3

The connection between Campus Parkway and SR 140 would be built north of SR 140. The existing railroad tracks south of SR 140, where the Lyons property is located, prevent consideration of a connection there. The proposed connection to SR 140 also would not extend to Kibby Road and therefore would not affect it. The intersections of Campus Parkway and Childs and Gerard Avenues would be signalized, and one or more turning lanes may be included where these streets connect to Campus Parkway (see Section 2.3.4 in the Draft EIS/EIR). The specific lengths of the turning lanes, if any, at each intersection would be determined during final design. The study area used for determination of potential impacts included sufficient room to allow for these elements of the project to be included and evaluated for impacts.

Herum Crabtree Brown-4

The mitigation measures cited are for the areas within the proposed Campus Parkway right-of-way. The text at the beginning of Section 3.3.4 has been modified to clarify this.

[1] Expanded Initial Study #97-22 for Lyons Annexation to the City of Merced (SCH# 98041094), Final, September 1998, Appendix B, Letter No. 4.

[2] Expanded Initial Study #97-22 for Lyons Annexation to the City of Merced (SCH# 98041094), Final, September 1998, p. 69.

Herum Crabtree Brown-5

No noise barriers were recommended within the area in question.

Herum Crabtree Brown-6

The statement in Section 2.3.5 regards the inclusion of utility easements along roads, a common practice since the roadway corridors provide an accessible right-of-way for utility access and maintenance. The proposed project does not include the placement of any specific utilities within the right-of-way. Because Campus Parkway is a new road, utility lines do not exist within the any of the proposed alignment rights-of-way. For existing utilities that may be crossed by Campus Parkway, service would continue during and after project construction. The study area and the proposed right-of-way were wide enough to include the potential for moving utility lines, if necessary.

Comment: Richard Lee, Fehr & Peers Transportation Consultants

FEHR & PEERS
TRANSPORTATION CONSULTANTS

July 5, 2005

Mr. Steve Rough, Project Engineer
Merced County Public Works Department
345 West 7th Street
Merced, CA 95340

Subject: ***Comments on Campus Parkway Project Draft EIS/EIR***

Dear Mr. Rough:

Fehr & Peers has been retained by Lyons Investments to assist in the development of circulation and access plans for the industrial property owned by Lyons east of the Doane and Hartley Lateral Canals and south of State Route (SR) 140. In this capacity, we have reviewed the *Campus Parkway Project Draft Environmental Impact Statement/Environmental Impact Report* (DEIS/DEIR) dated May 2005.

Our comments are summarized by chapter and focus mainly on issues of traffic and transportation that affect existing and planned industrial development east of the Doane and Hartley Lateral Canals and south of SR 140.

COMMENTS ON CHAPTER 1 – PURPOSE AND NEED

Page I-9 notes that: "The City of Merced's General Plan shows substantial additional future growth..." It further notes "the eastern portion of the City of Merced contains a large area south of State Route 140 (SR 140) with industrial designations...which will generate additional truck traffic in project area." This statement acknowledges that industrial traffic in general and truck traffic in particular are expected.

1 Please acknowledge in the DEIS/DEIR that serving traffic associated with the City of Merced General Plan including the planned industrial development in the southeast area is one purpose of the proposed Parkway.

2 Also worth noting is the fact that this area contains much of the City's and region's planned industrial acreage and its largest undeveloped industrial parcels. As such, the area is a unique resource for the City, County and region. Since the DEIS/DEIR indicates that City of Merced will more than double in population between 2000 and 2025 (Page 3-166, Table 3.12-1), demand for industrial uses and other employment uses is also likely to grow significantly. Hence, proper planning for this industrial area is important. Please confirm that the traffic analysis and findings assume full build out of this area within the timeframes stated in the DEIS/DEIR. If the DEIS/DEIR does not do so, the Final EIS/EIR must include consideration of reasonably foreseeable development in the industrial area.

3 Page 1-13 (Table 1-1) indicates projected volumes on three key roadways that serve the industrial area – Childs Avenue, Gerard Avenue and Mission Road. We note with some concern that projected volumes for 2015 show an increase of less than 1,000 daily vehicle trips over year 2000 traffic levels on these three roadways in total. Projected volumes for 2025 show a greater increase but the total increase over year 2000 traffic volumes on these three roadways is still less than 3,000 daily vehicle trips. These increments seem low compared to what would be generated by full development of the approximately 970 acres of industrial land in southeast Merced City. If future traffic levels are understated, this could also lead to underestimates of other traffic-related effects, e.g. air quality and noise impacts.

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FEHR & PEERS
TRANSPORTATION CONSULTANTS

Please clarify what development levels were assumed on the 970 acres of industrial development in the southeast portion of Merced.

COMMENTS ON CHAPTER 2 – PROJECT ALTERNATIVES

4 Page 2-20 (last paragraph) notes that the Childs Avenue/Campus Parkway intersection may be constrained by limitations imposed by the historic character of the Sunshine Dairy as well as by the Hartley Lateral Canal, both on the southwest quadrant of that planned intersection.

It is important that this intersection provide an adequate level of service for traffic, including truck traffic, traveling to and from the existing and future industrial facilities along Childs Avenue. Please confirm that there will be sufficient right of way on the western leg of the Childs Avenue/Campus Parkway intersection to develop Childs Avenue as an arterial as it is designated in the City of Merced's 1997 General Plan. (A 118-foot right of way is required for a divided arterial per the City of Merced's Standard Design ST-2 dated 11/15/04).

COMMENTS ON CHAPTER 3 – AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES

This is the longest chapter, and many of the impacts affect the rural agricultural areas north of SR 140. The focus of much of the discussion is on the Alternative alignments (i.e., the Green, Green Alternate and Yellow Alignments) north of SR 140. These alternative alignments are shown to differ somewhat in terms of physical impacts caused by the construction of the Parkway itself.

5 Page 3-3 (Table 3-1) and page 3-5 (Figure 3-1) note that that the 484-acre Lyons Annexation is an approved development plan. The entire industrial area of southeastern Merced comprises approximately 970 acres. Please confirm that this has been addressed in the growth-related impact and traffic modeling analyses.

Page 3-168 notes that:

> *"The only area with planned growth within the study area is south of SR 140. The City annexed this portion of the SUDP [Specific Urban Development Plan] in June 1999 but land uses were designated as early as 1997 when the City General Plan was issued (Richardson 2001). Currently the City is actively considering industries interested in this area that have large parcel size needs, such as food processing or warehousing/trucking, although there are no active proposals (Lesch 2001)."*

This statement underscores that the area has long been planned for industrial uses, and that it constitutes a unique resource for the region.

6 Pages 3-216 to 3-220 discuss "Traffic and Transportation" and find no major differences among project alternatives north of SR 140 using standard traffic measures (e.g. roadway Levels of Service, vehicle trips, Vehicle Miles Traveled, Vehicle Hours Traveled, and average speed). However, the Summary of Major Potential Impact from Alternatives (Table S-2 in the DEIS/DEIRS Summary document) does not address impacts associated with the Common Alignment (south of the SR 140 connector).

Please clarify whether the southern portion of the Parkway (i.e. the Common Alignment) has any significant impacts or needed mitigation measures associated with it.

Mr. Steve Rough
July 5, 2005
Page 3 of 3

FEHR & PEERS
TRANSPORTATION CONSULTANTS

7 Page 3-219 Table 3.16-2 indicated that Campus Parkway's intersections with Gerard Avenue, Childs Avenue, and the SR 140 connector will be signalized. Please confirm that these signals are part of the project.

CHAPTER 4 – CALIFORNIA ENVIRONMENTAL QUALITY ACT EVALUATION

8 Page 4-10 notes that traffic impacts in 2025 are "less than significant."

Page 4-12 notes that cumulative impacts (i.e., the effect of the Campus Parkway Project in conjunction with past, current and probable future projects) are less than significant with mitigation.

Since the industrial areas of southeast Merced constitute a subset of "probable future projects," this suggests that the effects of the industrial development of the area east of the Doane and Hartley Lateral Canal and south of SR 140 would be less than significant with mitigation. Please confirm what development levels were assumed on the 970 acres designated for industrial development in southeast Merced in making this finding.

CHAPTER 5 – REQUIRED APPROVALS, PUBLIC INVOLVEMENT, AND AGENCY AND NATIVE AMERICAN COORDINATION

9 This chapter outlines the coordination with other agencies and the project's public outreach plan. The City of Merced is not mentioned as an agency involved in the review and oversight of the Campus Parkway project. Please confirm what is the role of the City of Merced's in the development and implementation of the project.

CHAPTERS 6 – 9

These chapters consist of lists (of preparers, recipients, and references) and an index. As no analysis or project information is presented in these chapters, we have no comments.

We thank you for this opportunity to comment on the DEIS/DEIR and look forward to your responses to these comments.

Sincerely,

Fehr & Peers

Richard Lee, Ph.D, AICP
Senior Transportation Engineer

1041-2129

Response: Richard Lee, Fehr & Peers Transportation Consultants

Fehr & Peers-1

The purposes of the project are stated in Section 1.1. One of the purposes listed is to "Provide standard access to the City of Merced to and from State Route (SR) 99." This includes the needs stated by the commenter.

Fehr & Peers-2

The Draft EIS/EIR considered City of Merced land uses, including the industrial parcels, to the study year 2025. See the Response to Herum Crabtree Brown-1.

Fehr & Peers-3

The traffic analysis was based on MCAG's forecasts for future land uses. As noted in the previous comment responses, these comment concerns were shared with MCAG, and their response was added to the end of Appendix A of this document. Substantial industrial land use development was included in the model forecasts for the traffic analysis zones (TAZs), which were used to predict the future levels of traffic. The 970-acre industrial development specifically questioned was included in the traffic model assumption of an overall growth rate of 2,800 new industrial-sector jobs for the TAZs that include the subject parcel(s). Because of how the model is designed and used for regional travel forecasting, the TAZs do not correspond geographically with individual parcel boundaries, but instead cover a larger area of parcels that have the same general planning designation, such as industrial.

Fehr & Peers-4

The constraints noted in the Draft EIS/EIR would remain as long as the dairy is present. When and if a development plan is submitted for this parcel, intersection improvements (or at least right-of-way acquisition or dedication) would be made a requirement. If no development plan is advanced for this parcel, the intersection is still functional.

Fehr & Peers-5

The area in question was included in the traffic model for industrial future use. See the Responses to Fehr & Peers-4 and Herum Crabtree Brown-1.

Fehr & Peers-6

No significant impacts to traffic were identified in the Draft EIS/EIR that would require mitigation. Traffic signals and turning lanes are included in the project at intersections with local streets, as described in Section 2.3.4.

Fehr & Peers-7

The proposed Gerard Avenue, Childs Avenue, and SR 140 connector ramps would ultimately be controlled by signals. However, the project would be constructed in phases as permitted by available funding.

Fehr & Peers -8

See the Responses to Herum Crabtree Brown-1 and Fehr & Peers-3 and -5.

Fehr & Peers -9

Information about the City of Merced's responsibilities has been added to the Final EIR in Section 5.3.1.

Comment: Don Larson, Lennar Communities

LENNAR
Quality. Value. Integrity.

July 5, 2005

Mr. Steve Rough
Merced County DPW
345 W. 7th Street
Merced, CA 95340

Re: Campus Parkway Project
Draft Environmental Impact Statement/Environmental Impact Report

Dear Mr. Rough,

Lennar Communities ("Lennar") appreciates the opportunity to submit comments on the Draft Environmental Impact Statement/Environmental Impact Report ("DEIS/DEIR") for the Campus Parkway. Lennar has entered into an Exclusive Negotiating Agreement ("ENA") with the University Community Land Company, LLC ("UCLC") to serve as the master developer for the land located within the University Community Plan that is owned by UCLC. As such, Lennar has a vital interest in the ultimate alignment of the Campus Parkway, which will feed directly into the University Community. For the reasons outlined below, Lennar supports the selection of the Green or Alternate Green Alignment for the Campus Parkway.

Although the DEIS/DEIR does not discuss the issue, the alignment selected for the Campus Parkway will have a significant impact on the design and livability of the University Community. The University Community Plan includes numerous goals, objectives and policies all designed to promote a cohesive community with a strong sense of place. The fundamental organizing principle of the University Community is the establishment of a high density mixed-use Town Center abutted by and integrated with a number of distinct Residential Villages.

1 If the Yellow Alignment is selected, the Campus Parkway will cut through a portion of the University Community, force outside traffic to traverse city streets within the community, and divide neighborhoods. In contrast, the Green Alignment or the Alternate Green Alignment will keep the Campus Parkway on the perimeter of the University Community. Both configurations will promote the orderly development of the University Community in a manner that is consistent with the University Community Plan. Indeed, the land use diagrams included in the University Community Plan that provide examples of how the community may develop show the Campus Parkway feeding into the University Community at the approximate location of the Green or Alternate Green Alignment.

2 The University Community will be developed in phases. Accordingly, the two mile extension of the Campus Parkway north of Yosemite to Bellevue Road will not occur all at once, but will be built in stages as the University Community develops. Until the full extension is complete, motorists and bicyclists using the Campus Parkway will need to use all or a portion of Lake Road to access the area north of Yosemite Avenue. If the Yellow Alignment is selected, a potentially complex maneuver would be required to transition the ½ mile between where the Campus Parkway would end and Lake Road begins. The Green and Alternate Green Alignments do not present this complication.

3 The Campus Parkway will do much more than simply provide access from Highway 99 to the UC Merced campus. It is the easterly leg of a loop that will eventually circumnavigate the northern portion of Merced and the eastern portion of Atwater. A large number of the vehicle trips on this roadway will have nothing to do with the Campus or the Community. We do not believe an alignment such as the Yellow Alignment that directs this traffic through the community is consistent with the University Community Plan.

Respectfully submitted,

Don Larson
Vice President
Lennar Communities
6121 Bollinger Canyon Rd., Suite 500
San Ramon, CA 94583

Response: Don Larson, Lennar Communities
Lennar Communities-1, -2, and -3

The commenter's recommendation for the Green and Green Alternate Alignments is noted. It should be emphasized, however, that the University Community was in a conceptual planning stage at the time of preparation of this document. The actual layout of the University Community Plan will be determined during a future Specific Plan development stage. A detailed plan has not been approved to date, and no neighborhoods exist at present that would be divided. The comment refers to the potential for a Campus Parkway alternative to impact the planning for a future University Community.

Comment: Jeffrey M. Reid, McCormick, Barstow, Sheppard, Wayte & Carruth LLP

McCormick, Barstow, Sheppard, Wayte & Carruth LLP
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July 5, 2005

VIA EMAIL TO: srough@co.merced.ca.us
& U.S. REGULAR MAIL
Mr. Steve Rough
Merced County DPW
345 W. 7th Street
Merced, CA 95340

RE: Campus Parkway Project

Dear Mr. Rough:

The purpose of this letter is to set forth comments on behalf of L.J. Steiner, LLC regarding the Draft EIS-EIR for the Campus Parkway project.

1 We support the Yellow Alignment Alternative. Table S-2, Summary of Significant Impacts, demonstrates that the Yellow Alignment reflects a lesser impact than the Green Alignment in several types of impacts. For other types of impacts, the Yellow Alignment simply creates no more of an impact than the Green Alignment. It is therefore the environmentally superior choice.

We also wish to set forth some deficiencies that exist in the Draft EIS-EIR concerning the environmental evaluation of the Green Alignment.

2 **Noise Impact Analysis Deficiencies**. At page 2-8, the Draft EIS-EIR describes the Green Alignment and discusses certain impacts of the Green Alignment. It notes that the Green Alignment is closer to existing residential uses than the Yellow Alignment. It also notes that the Green Alignment, because of its closer proximity to residences, has a greater potential for impacts from traffic using the new expressway, including noise and visual effects. It also notes the need for an overhead structure at Bear Creek and South and North Bear Creek Drives.

Mr. Steve Rough
July 5, 2005
Page 2

3 In the Noise analysis information, it is apparent that the noise impacts for a significant number of residential properties is greater for the Green Alignment than for the Yellow Alignment. Unfortunately, the EIR's exclusive reliance on the cumulative CNEL metric does not provide a true or complete picture of the noise environment or impact on residences caused by spike noise incidents. (See Berkeley Keep Jets Over the Bay Committee v Board of Port Com'rs (2001) 111 Cal.Rptr.2d 598, 91 Cal.App.4th 134). As a result, the true impact of the additional noise impacts associated with the Green Alignment are not fully or fairly disclosed in the EIS-EIR.

4 The EIS-EIR also includes an improper analysis concerning the need to mitigate the noise impacts. At page 3-78, the EIS-EIR decided to not adopt a mitigation measure for the identified noise impacts. The EIS-EIR cites the Caltrans and FHWA noise abatement policies which state that proposed noise abatement must also be reasonable in terms of cost effectiveness for the number of residences benefitted, and describes those agencies' formulaic approach in determining whether a noise abatement investment is cost effective.

In adopting the FHWA/Caltrans formulaic approach for mitigating noise impacts, the EIS-EIR does not incorporate the proper test for mitigation measures under CEQA. CEQA requires that all "feasible" mitigation measures be adopted. "Feasible" is defined as capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. The EIS-EIR determines that certain berming, soundwalls, and pavements, might be installed with County funds. (See page S-iv and 3-84). This suggests that feasibility is being based on the source of the funding. While the FHWA federal funds may create a legal impediment to feasibility, no such legal impediment exists with respect to Caltrans' state-only funds. However, the Environmental Check List (at page 4-13), simply adopts the FHWA/Caltrans formulaic approach in unreasonably concluding that no "feasible" mitigation measures exist.

In addition, the Draft EIS-EIR appears to impermissibly defer the determination of whether to adopt a feasible mitigation measure until a later project date, without any monitoring plan or standards of evaluation in place to ensure that the later analysis is completed and any mitigation measure is adopted. Specifically, the EIS-EIR at Page 3-84, states that "A final decision on abatement measures will be made upon completion of the project design and the public involvement process. Possible installation of berms by the county would depend upon the availability of sufficient right-of-way and a cost effective source of fill material." This is both an insufficient analysis of a feasible mitigation measure, and an impermissible deferral of mitigation requirements.

5 **View Impact Analysis Deficiencies.** At page 2-8, the Draft EIS-EIR notes the need for an overhead structure at Bear Creek and South and North Bear Creek Drives. At Page 3-222 the

Mr. Steve Rough
July 5, 2005
Page 3

5 cont. Draft EIS-EIR notes that, for the Green Alignment, this Bear Creek bridge would be approximately 6.5 meters high (21 feet) and would be partially visible by residents who currently have an unobstructed view of the Bear Creek riparian area to the east (Figures 3.17-2 and 3.17-3). The overall impact to the visual quality of this landscape unit was rated as changing from moderately high to moderate, and from moderately high to low for homes with views in the immediate vicinity of Bear Creek. However, because of the Yellow Alignment's greater distance from these homes, the Yellow Alignment would result in no overall change in visual quality. The difference in the impacts from the two Alignments is noted in Table 3.17-1.

The fact that the Green Alignment will have a greater impact on these views than the Yellow Alignment, while acknowledged in Chapter 3, is entirely ignored in Table S-2. Table S-2 suggests that the visual impact of the two projects are the "same". That is inconsistent with the analysis of the EIS-EIR.

6 Section 3.17.4 describes a number of mitigation measures for the visual impacts caused primarily by the Green Alignment. However, there is no discussion as to whether those mitigation measures will reduce the impacts to a level of less than significant. Instead, the EIS-EIR attempts to identify the level of significance of impacts, and the consequents of mitigation measures, through the use of the CEQA Environmental Check List in Chapter 4. However, the visual impacts of the Bear Creek crossing of the Green Alignment on the views is entirely ignored in CEQA Environmental Check List in Chapter 4. Indeed, there is a failure to even mention the Bear Creek overpass in the Check List. The intent may have been to have this impact, and effect of the proposed mitigation measures, reflected in certain conclusory statements in the Check List. However, these statements are devoid of analysis and therefore fail to meet an appropriate standard of informative discussion for an EIR as required under CEQA.

7 **Right-of-Way Analysis Deficiencies.** The Green Alignment runs down the middle of properties owned by L.J. Steiner, LLC. As a result, it would cause the properties to have no remaining economically viable use. Because of this circumstance, the EIS-EIR fails to incorporate a description of the full extent of the Right-of-Way, and the resulting project costs, that would be required for the Green Alignment. By failing to incorporate the full extent of Right-of-Way take, the EIS-EIR also fails to analyze the full extent of the impact on a number of other resources.

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DPW/PROFESSIONAL SERVICES DIVISION

Sincerely,

McCORMICK, BARSTOW, SHEPPARD,
WAYTE & CARRUTH LLP

Jeffrey M. Reid

c: L.J. Steiner, LLC

Response: Jeffrey M. Reid, McCormick, Barstow, Sheppard, Wayte & Carruth LLP

McCormick-1

The commenter's recommendation for the Yellow Alignment is noted.

McCormick-2

All of the alternatives would require an overhead structure at Bear Creek. Up to approximately 500 feet from the Campus Parkway, the number of residences near either the Green, Green Alternate, or Yellow Alignments are generally the same in quantity. At more than 500 feet from the Parkway, more residences would be affected by noise and visual impacts from the Green Alignment than from the other alignments. See Master Response-4.

McCormick-3

The Draft EIS/EIR evaluates noise levels using two criteria or metrics: dBA L_{eq} or Equivalent Sound Level, and L_{dn} or Night-Day Average Sound Level. These metrics are defined in the footnote on page 3-65 of the Draft EIS/EIR. L_{eq} is used by Caltrans and FHWA. L_{dn} is used by the City of Merced and Merced County. L_{eq} is an averaging method but also represents short periods of time (depending on the measurement period) and captures peak noise periods associated with traffic conditions as they change hourly or even over shorter periods. Potentially higher levels of traffic noise, especially from trucks, are taken into account in the mix of traffic that is analyzed, because the noise model requires inputting a percentage breakdown of cars, motorcycles, trucks and multi-axle vehicles. The noise model and the inputs and assumptions used are based on accepted methods recommended and applied by federal, state, and local agencies for measuring and predicting noise levels associated with traffic. The descriptors used are considered representative to evaluate existing and predicted future traffic conditions and impacts.

McCormick-4

The Caltrans/FHWA approach to evaluating noise barriers first considers whether a barrier should and could be built from a feasibility standpoint. The evaluation process considers whether the noise is at a level of concern or impact, and if so, whether a barrier that can be feasibly installed would lower the noise perceptibly and to an acceptable level. The criteria used in this study specify a minimum of 5 dBA reduction as a threshold, which is reasonable considering that a 3 dBA change in noise is generally considered the threshold of perceptible change by the human ear. A 5 dBA reduction or more is considered an effective reduction in noise, and less than 5 dBA is not considered reasonably effective. These criteria are based on federal noise abatement program procedures but are commonly accepted and used for nonfederal projects and noise mitigation analysis. They were therefore used for this analysis as a reasonable test of the effectiveness of the mitigation measures studied. The other criterion applied was whether the barrier can physically "break the line of sight" between a noise source and the location being protected (e.g., an outside yard at a residence adjacent to or facing a road). From an acoustical perspective, if the barrier cannot physically shield the noise source from the receptor, it will not be effective. This criterion is applicable regardless of whether federal or local noise guidelines are applied. Table 3.5-6 in the Draft EIS/EIR details the results of applying these criteria, regardless of the cost of the barrier or mitigation measure, and Section 3.5.5 discusses the evaluation process. Table 3.5-8 shows how effective berms might be in reducing noise levels as an alternative to soundwalls. Therefore, practicable and feasible mitigation measures to reduce noise from the project changes were considered and described in the Draft EIS/EIR.

The decision to include sound mitigation includes evaluation of cost as well as some of the other factors mentioned in this comment. Barriers that meet the feasibility criteria described above are listed in Table 3.5-7 with regard to estimated cost. Construction of soundwalls can be expensive because the soundwall must extend well beyond the home or property it is intended

to protect in order to serve as an effective shield from traffic noise. Not providing sufficient length or height for a soundwall or other barrier can render it ineffective. In general, many of the soundwalls studied protected only one residence or property, which results in high construction costs with respect to the number of homes that receive effective mitigation. Caltrans and FHWA use their adopted reasonableness evaluation to help determine which barriers should be considered for inclusion in the project, but reasonableness is not the only factor. Public input gained throughout the review of the project is considered, and Merced County can separately fund mitigation. All of these factors will be considered when the Merced County Board of Supervisors makes a decision on this project, and when Caltrans and FHWA make a final Record of Decision on the NEPA review process for the project.

The statement that a final decision on abatement measures will be made upon completion of the project design and public involvement process is a requirement of the Caltrans and FHWA review process. It is included to allow for input in addition to the technical evaluation described in the Draft EIS/EIR. The possible installation of berms is discussed only as an alternative to soundwalls.

Merced County will consider including soundwalls for the selected preferred alternative. Master Responses 4 and 11 provide additional discussion of noise impacts and mitigation, respectively.

McCormick-5

The Yellow Alignment's greater distance does avoid a reduction in view quality. Table S-2 has been revised accordingly.

McCormick-6

The Bear Creek Bridge was not specifically mentioned in Section 4.3, as noted in this comment. Information about the bridge from Sections 3.17.2 and 3.17.4 has been added to Section 4.3 of the Final EIR (under the heading "Impacts Mitigated to a Less Than Significant Level" and subheading "Aesthetics"). Sections 3.17.2 and 3.17.4 discussed the visual and aesthetic impacts of the Bear Creek Bridge and recommended vegetation/landscape screening for residences with views that are affected by the proposed structure.

The checklist and discussion presented in Section 4 are not intended to serve as a stand-alone analysis, as they draw information and findings from the more in-depth discussion material presented in Section 3. The information in the entire environmental document, and its supporting technical reports, should be considered.

McCormick-7

The properties in question are two parcels adjacent to and north of Bear Creek on the Green Alignment (Assessors Parcel Numbers 008-130-44 and 008-130-37). The Green Alignment approximately splits (and overlaps with) these two adjoining parcels. All right-of-way acquisition would be compensated. The right-of-way acquisition process can include acquisition of "excess" land, where more than just the minimum right-of-way is acquired because of site-specific or project circumstances/needs. The acquisition of this entire parcel is not envisioned at this point in the project development process because of the size of the remaining portions of the parcel(s). If a portion is determined unusable for to the project for any reason, it can be considered for excess right-of-way acquisition.

Comment: Board of Directors, Merced County Farm Bureau

Merced County Farm Bureau

July 5, 2005

Steve Rough
Project Engineer
Merced County Public Works Department
345 West 7th Street
Merced, CA 95340

Re: Comments on the Draft Environmental Impact Statement/Environmental Impact Report for the Campus Parkway

The Merced County Farm Bureau (MCFB) submits the following comments on the Draft Environmental Impact Statement/Environmental Impact Report for the Campus Parkway:

1 The Merced County General Plan is seriously out of date and needs to be updated before any new project is approved. Piecemeal development is having a tremendous impact on natural resources and infrastructure for all of Merced County. Without an update of our blueprint—the General Plan—how can a true picture of today's decisions be evaluated for the future? What is the capacity for urban development along the Bear Creek watershed east of Merced? The Campus Parkway is going to be growth inducing and that is not addressed or evaluated in this document.

The hydrologic studies for Eastern Merced County have not been completed. Merced County cannot use "the successful implementation of the Merced Water Supply Plan" as a justification for an adequate water supply for any established or new communities in the Eastern Merced County Region. The Merced County General Plan must be updated and the needed hydrologic studies done for Eastern Merced County before approving any new growth inducing projects, minor subdivisions, parcel splits or establishing new towns.

2 The MCFB Board of Directors continues to support the Green Route, remaining as close to the current city limits of Merced and aligning with Lake Road.

3 We had requested that the Draft EIR/S include the following information and it was not addressed. We once again request the FEIS/R:

- address the use of agriculture buffers to minimize impacts on current ag operations
- contain identification of right-to-farm zoning and ag zoning to minimize impacts on ag operations
- address permanent urban limit lines to minimize impacts on ag operations
- address a minimum of 4:1 mitigation of taken agricultural land, including all land in the Merced County Agricultural Preserve, to minimize impacts on agricultural operations
- contain a cumulative impact analysis regarding corridors between Yosemite Avenue and Bellevue Road

(209) 723-3001 - FAX (209) 722-3814 - 646 South Highway 59 - P.O. Box 1232 - Merced, CA 95341
E-mail: mcfb@pacbell.net

4 The DEIS/R stated that the "Merced County Board of Supervisors recently voted to participate in an agricultural mitigation program only if such a program is adopted countywide."

***Mitigation has been required for previous projects without a "countywide program". We continue to ask for 4:1 mitigation or a $20,000 per acre in-lieu fee. (See comments below* 3.13 Farmlands/Agricultural Lands).**

The DEIS/R acknowledged that "the parkway has the potential to encourage pressures in the vicinity of the project to develop lands north of SR140 that are currently designated for agricultural use. However, existing land use controls require that any such changes require approval by the Merced County Board of Supervisors for a new Specific Use Development Plan, expansion of the existing Rural Residential Center, or an annexation request by the city."

This is a statement that is used throughout the document in addressing cumulative impacts on farmland. As the Land Use Authority, the Board of Supervisors needs to take a stand for no development east of the Campus Parkway Project to ensure that urban development will not encroach into the Bear Creek Watershed.

The Draft EIR/S Incorrect Statements

3.2 Hydrology, Water Quality, Storm Water Runoff

5 3.24 Surface Water, page 3-32
The report states: "Regarding other cumulative development, an overall water contamination issue exists in the San Joaquin River and its tributary rivers. This contamination is related to storm flows and irrigation return flows associated with agricultural operations. While similar contamination can be found in urban storm waters, the relative concentrations of such contaminants in urban storm flows are lower than in flows from agricultural areas. To the extent that cumulative growth and development in Merced County results in the conversion of agricultural land to urban uses, the relative quality of receiving waters will not decline and may improve compared with existing conditions."

Stating that urbanizing a large area will improve water quality is not factual. Where is the data to support this statement? Instead, current studies conclude that increasing the amount of impervious surface in any drainage degrades water quality. A report for Caltrans that will be released soon indicates that 92% of the sites and events sampled over a 3-year period were toxic. Given the large range of "urban" chemicals that cities dump into water (pharmaceuticals, cosmetics, pesticides, etc), the cornucopia of urban contaminants is equal to or larger than those from agricultural areas. Agriculture is only responsible for 1/3 of the pesticides applied in the State of California. The majority of pesticide use is structural, commercial or industrial. The residue finds it way into our waterways since a majority of cities and unincorporated communities discharge into our rivers and streams. That is certainly the case in Merced County.

2

Chapter 7 Distribution List

6 *Page 7-3* *Merced County Farm Bureau (MCFB) is listed under Local Government. MCFB should be listed under the Special Interest heading.*

Thank you for the opportunity to comment. Please notify MCFB when the Final EIR/S is completed. If you have any questions about our comments, please contact the office at 209-723-3001.

Sincerely,

Merced County Farm Bureau
Board of Directors

Response: Board of Directors, Merced County Farm Bureau

Merced County Farm Bureau-1

The commenter's recommendation that the County General Plan should be updated is noted. Growth inducement was addressed in the Draft EIS/EIR in Section 3.12 (see in particular Section 3.12.2, under the heading "Growth and Potential for Growth Inducement"). Also see Master Response-6 and Master Response-7.

Merced County Farm Bureau-2

The commenter's recommendation for the Green Alignment is noted.

Merced County Farm Bureau-3 and -4

Merced County has considered mitigation options for the final environmental document and will require mitigation in conformance with any farmland protection or mitigation program adopted by the County Board of Supervisors. In the event that such a program is not adopted prior to the initiation of grading for the Campus Parkway project, equivalent protection of farmland of comparable value will be considered at a ratio of 1:1 for productive farmland converted with project implementation. Equivalent protection is defined as acquisition of conservation easements by the County (or appropriate third party designated by the County) that would protect 1 acre of productive farmland for each acre converted through fee title, easement, or other measure. Section 3.13.4 the Final EIR has been revised to include this mitigation measure.

Urban limit lines are boundaries that establish the planned growth limits for each community and significantly restrict consideration of new growth outside of the limit line, except under specific circumstances that would be identified in the adoption of any such boundaries. Establishment of limit lines is normally an action of the Board of Supervisors. An urban limit line should be considered at a countywide level as part of updating the General Plan. Any adopted urban limit line would apply to overall development within the County, and by its very nature would have to be adopted to apply to each incorporated city, as applicable.

Cumulative impacts to farmlands were considered in the Draft EIS/EIR in Section 3.13.3. The projects with potential cumulative impacts to farmlands are listed in Table 3.13-2 and include the UC Merced Campus and the planned University Community, both of which are north of Yosemite Avenue. Based on the information in the University Community Plan, an extension of the Campus Parkway north of Yosemite Avenue, on either the Green or Yellow Alignment (the Green Alternate is the same as the Green Alignment at Yosemite Avenue), would cross similar agricultural and grazing lands. They consisted most recently of row crops (e.g., tomatoes) between Yosemite Avenue and Dunn Road, grazing land and corn/wheat/oat crops between Dunn Road and Cardella Road, and irrigated pasture and noncrop lands between Cardella and Bellevue Roads. The amount of cumulative agricultural lands impacted for only the roadway element extending north from Yosemite Avenue into the University Community would increase by approximately 30 percent above the 58 to 86 acres of impacts listed in Figure 3.13-2. Again, the overall University Community Plan impacts to farmlands estimated above were already included within the University Community Plan acreages listed in Table 3.13-2, which shows all farmland impacts and other projects affecting farmlands in the regional area.

Merced County Farm Bureau-5

The comment is noted. This paragraph was deleted from Section 3.2.4 in the Final EIR.

Merced County Farm Bureau-6

The Merced County Farm Bureau was moved to the Special Interest section of the Distribution List in Chapter 7 of the Final EIR.

Comment: Rory Randol, Merced Irrigation District

MERCED IRRIGATION DISTRICT

June 30, 2005

Steven Rough, Supervising Engineer
Merced County Department of Public Works
345 W. 7th Street
Merced, CA 95340

Subject: Draft EIS-EIR for Campus Parkway

Dear Mr. Rough:

The Merced Irrigation District (MID) has reviewed the above referenced project and offers the following comments:

The subject property is located within the Merced Irrigation District Drainage Improvement District No. 1 (MIDDID No. 1) and also the Merced Irrigation District (MID). There are several irrigation facilities within the study area which also convey storm water. The impacted MID facilities (depending upon final alignment) may include the following Laterals and Creeks:

- Hartley
- Hartley A, B & C
- Bradley
- Bradley A & B
- Doane
- Fairfield A
- Robinson
- Merced
- Bear Creek

744 West 20th Street P.O. BOX 2288 Merced, California 95344-0288
Administration / Electric Services (209) 722-5761 / FAX (209) 722-6421 / Water Resources Engineering (209) 722-5761 / FAX (209) 726-4176
Finance \ Billing Dept. (209) 722-3041 / FAX (209) 722-1457 / Irrigation Operations (209) 722-2720 / FAX (209) 722-1457

1 If Parkway storm drainage is discharged to any MID facilities, the Agency Agreement between MIDDID No. 1 and Merced County will have to be amended to reflect the additional service provided.

Campus Parkway construction that impacts MID fee property or easements for irrigation laterals and creeks will require a "Construction Agreement" and a "Joint Use Agreement" between MID and Merced County.

Thank you for the opportunity to comment on the above referenced project. If you have any questions, please contact me at 722-5761.

Sincerely,

Rory Randol
Facilities Specialist

cc: Garith Krause, General Manager
Ted Selb, Deputy General Manager
Robert Acker, Director of Facilities and Streams
Hicham ElTal, Assistant General Manager - Water Resources Engineering
Ron Price, Associate Engineer - Water Resources
Larry Williams, MIDDID No. 1

Response: Rory Randol, Merced Irrigation District

Merced Irrigation District-1

The Final EIR has been revised to discuss the requirements identified in the comment. See new Section 5.3.10.

Comment: Susan A. Austin, The Nature Conservancy

The Nature Conservancy
SAVING THE LAST GREAT PLACES ON EARTH

Merced Grasslands Project
3144 North G Street #125-133
Merced, California 95340

tel [209] 723-3725
fax [209] 723-3745
nature.org

July 5, 2005

Steve Rough
Merced County DPW
345 W. 7th Street
Merced, CA 95340

Re: Comments on the Campus Parkway Project Draft Environmental Impact Statement/Environmental Impact Report (May 2005; Project RPHP21L-0484 (001); EA 10-4A0701L)

Dear Mr. Rough:

The following are comments on the draft Environmental Impact Statement/Environmental Impact Report for the Campus Parkway Project (May 2005).

Our main concern is that the cumulative impacts analysis throughout the draft EIS/EIR understates probable levels of impact on important natural habitats and farmlands by assuming a greater degree of commitment to conservation planning than currently exists in Merced County. To the best of our knowledge, the regional conservation planning effort referenced in the draft EIS/EIR collapsed several years ago and has not been revived:

1 The University of California and Merced County are initiating a regional conservation planning effort for eastern Merced County. This effort is planned to culminate in the adoption of a combined Natural Community Conservation Plan under the Natural Community Conservation Planning Act and Habitat Conservation Plan under Section 10 of the federal Endangered Species Act. This combined plan is being designed to comprehensively promote the long-term survival of eastern Merced County ecosystems and habitats and the species that are dependant upon those ecosystems and habitats. (Page 3-117).

2 We agree with the preparers of the document that development and implementation of a regional conservation plan is a high priority.

3 In addition, as noted in the document, the general plan for Merced County is seriously out of date: "The most recent update to the Merced County General Plan was in 1990 for a planning horizon year of 2000." (Page 3-170).

July 5, 2005 Page 1 of 2

The Nature Conservancy *Comments on the Campus Parkway Project Draft EIS/EIR*

3 cont. These twin problems – reliance on an out of date general plan and the mischaracterization of the current state of conservation planning in the area – seriously compromise the usefulness of the cumulative impacts analysis of the draft EIS/EIR.

Thank you for this opportunity to comment. We are eager to work with you to find constructive solutions to these problems.

Sincerely,

Susan A. Austin

Susan A. Austin
Project Director, Merced Grasslands Project

cc: Mike Eaton, The Nature Conservancy

Response: Susan A. Austin, The Nature Conservancy

Nature Conservancy-1

The reference to the now-suspended regional conservation planning has been deleted from the Final EIR. The future phases of the UC Merced Campus and the University Community will have to include commitments to mitigation measures to offset effects to existing resources. The commitments will be required to obtain long-term permitting from various federal and state resource agencies. The same applies to the Campus Parkway project, which includes specific mitigation for impacts to biological resources, as documented in the Draft EIS/EIR.

Nature Conservancy-2

The commenter's recommendation is noted.

Nature Conservancy-3

See Master Comment 7 in regard to the use of County General Plan data in the impacts analysis for the proposed project.

Comment: Dan Holmes, O'Dell Engineering

ENGINEERING

July 5, 2005

Mr. Steven E. Rough, P.E.
Merced County
Department of Public Works
345 W. 7th Street
Merced, CA 95340

Re: Campus Parkway DEIR/EIS

1 Here are some minor clean up items for the text of the DEIR. The route selected is of major concern. The UC Community design and livability will be greatly affected but the route that is selected. It is very difficult to construct a cohesive community that is divided by a major 4-lane expressway. We support the adoption of either the Green Alignment or the Green Alternate Alignment. Either of these routes will facilitate keeping Campus Parkway on the parameter of the community and not force outside traffic to traverse the city streets of the UC Community.

2 *s-ii and 2.3.1* The continuous left turn pocket in Phase 1 appears to be a large expense in that no driveways will be allowed on the expressway. It will function as a two lane rural roadway until we can afford to construct the other half. The Class 1 bike lane should be included in phase 1. The elimination of the 12' continues left turn lane will fund this amenity.

3 *2-8* Last sentence of the first full paragraph - North Bear Creek Drive stops west of the Bradley Lateral, therefore Campus Parkway never crosses North Bear Creek Drive.

4 *2-19* I believe that you should consider connecting South Bear Creek Drive to Campus Parkway. This will facilitate better access from those living between Olive Ave. and Santa Fe. Ave.

5 *3-21* Lake Yosemite also receives water from the upland area above the main canal during winter storms.

6 *3-25* While both ground water and surface water in eastern Merced County are of good to excellent quality the chemical make up and pH of the water is quit different.

7 *3-212* The paragraph that describes the location of the city's water and sewer mains contains several errors. There is no water main in SR 140. It parallels SR 140 in Baker Ave. The sewer main that serves Celeste crosses SR 140 at Kibby Rd. it does not run along SR 140.

1165 Scenic Drive
Modesto CA 95350
Ph 209.571.1765
Fax 209.571.2466
odellengineering.com

A California Corporation

8 [*3-233* Merced Hills Golf Course no longer exists therefore the view from the golf course would not be affected. Perhaps this should read UC Merced.

Please feel free to call if you have any questions on any of my comments.

Sincerely,

Dan Holmes, P.E.

Response: Dan Holmes, O'Dell Engineering

O'Dell Engineering-1

The commenter's recommendation is noted.

O'Dell Engineering-2

The commenter's recommendation is noted. The continuous left-turn lane has been eliminated from Phase 1 of the project, and Section 2.3.1 and Figure 2.3-2 in the Final EIR have been revised to reflect this. A separate Class I bike path cannot be accommodated in Phase 1, but the bike lane adjacent to the roadway shoulder would be included in this phase.

O'Dell Engineering-3

The comment is correct only with regard to the Yellow Alignment: North Bear Creek Drive does end west of the Yellow Alignment and therefore is never crossed by that alignment. However, the Green Alignment crosses both North and South Bear Creek Drive. The paragraph was left unchanged in the Final EIR as it only refers to the Green Alignment.

O'Dell Engineering-4

A connection between either South or North Bear Creek Drive and Campus Parkway is not intended, as both roads are considered local and not designed for the higher traffic volumes that the Parkway would allow.

O'Dell Engineering-5

Section 3.2.1 of the Final EIR was revised to state that Lake Yosemite also receives winter storm runoff from the areas above the lake and Main Canal.

O'Dell Engineering-6, -7

The comments are noted.

O'Dell Engineering-8

The text identified in the comment has been deleted, and the Final EIR has been modified to indicate that the Merced Hills Golf Course is no longer at that location.

Comment: Dennis Garcia, PG&E

From: "Garcia, Dennis" <PDG2@pge.com>
To: <srough@co.merced.ca.us>
Date: 4/29/2005 1:18 PM
Subject: Campus Parkway Draft EIS-EIR

Mr. Rough,

In regards to the Campus Parkway Project, PG&E owns and operates gas and electric facilities and a 230Kv electric tower line which will cross the proposed corridor.

Attached is a copy of a letter to you dated December 18, 2000, which addresses some of our issues concerning the Campus Parkway project.

If you have any questions, please contact me at 726-6350.

<<MerCampusParkway.doc>>
Thank you,

Dennis Garcia
PG&E Land Services Merced
PDG2@PGE.com
(209) 726-6350

December 18, 2000

Mr. Steven E. Rough, Project Engineer
Department of Public Works
Road Division
715 Martin Luther King JR. Way
Merced, CA. 95340

RE: CEQA Notice of Preparation Campus Parkway Project

Dear Mr. Rough:

~~Thank you for the opportunity to review the above-referenced agreement draft.~~ PG&E has the following comments to offer regarding the proposed draft.

PG&E owns and operates not only gas and electric distribution facilities, but a 230kv electric transmission line which is located within the proposed Campus Parkway alignments. To promote the safe and reliable maintenance and operation of utility facilities, the California Public Utilities Commission (CPUC) has mandated specific clearance requirements between utility facilities and surrounding objects or construction activities. To ensure compliance with these standards, project proponents should coordinate with PG&E early in the development of their project plans.

1 Some examples of activities which could have an impact upon our facilities include permanent/temporary changes in grade over or under our facilities, and construction of structures within or adjacent to PG&E's easements.

Please keep in mind that the County could be responsible for some or all the costs associated with the relocation of existing PG&E facilities to accommodate the proposed project. Because facilities relocation's require long lead times and are not always feasible, we encourage you to consult with PG&E as early in the planning stages as possible.

PG&E remains committed to working with the County of Merced to provide timely, reliable and cost effective relocation of our facilites. Please contact me at (209) 726-6350 if you have any questions regarding our comments.

Sincerely,

Dennis Garcia
Land Agent

Response: Dennis Garcia, PG&E

PG&E-1

The commenter's recommendations for early consultation are noted. The project is in the early or preliminary design phase. The proposed alignments were developed with the understanding that a major transmission line crosses the project area (the Green Alternate Alignment parallels it but has a separation of about 200 feet between the transmission line and the edge of the proposed right-of-way). Consultation will be initiated following selection of an alternative.

Comment: Lydia Miller, San Joaquin Raptor Rescue Center and Steve Burke, Protect Our Water

From: "San Joaquin Raptor/Wildlife Rescue Center" <SJRRC@sbcglobal.net>
To: "Steven Rough" <srough@co.merced.ca.us>
Date: 7/5/2005 5:51 PM
Subject: Comments Campus Parkway
CC: <sburke3105@sbcglobal.net>

Lydia Miller, President
San Joaquin Raptor/Wildlife Rescue Center
P.O. Box 778
Merced, CA 95341
(209) 723-9283, ph. & fax
sjrrc@sbcglobal.net

Steve Burke
Protect Our Water (POW)
3105 Yorkshire Lane
Modesto, CA 95350
(209) 523-1391, ph. & fax
sburke3105@sbcglobal.net

Re: Comments on Draft EIS/EIR for the proposed Campus Parkway

Mr. Stephen Rough, Engineer
Merced County Public Works Dept.
715 Martin Luther King Jr. Way
Merced, CA 95340
(209)385-7601

Dear Mr. Rough,

Please find our comments attached. Also, please forward our comments to :

Margaret L. Lawrence, Caltrans and Khoi M. Khau,P.E. , FHWA.

Thank you,

Lydia Miller
Steve Burke

Lydia Miller, President
San Joaquin Raptor Rescue Center
P.O. Box 778
Merced, CA 95341
(209) 723-9283, ph. & fax
raptorctr@bigvalley.net

Steve Burke
Protect Our Water (POW)
3105 Yorkshire Lane
Modesto, CA 95350
(209) 523-1391, ph. & fax
sburke3105@sbcglobal.net

July 5, 2005

Via email and facsimile

Mr. Stephen Rough, Engineer
Merced County Public Works Dept.
715 Martin Luther King Jr. Way
Merced, CA 95340

Re: Campus Parkway Draft EIR/EIS; Project RPHP21L-0484 (001); EA 10-4A0701L; SCH # 2000121003.

To Mr. Rough,

We demand that the UC and County prepare a Joint EIR/EIS which folds into one comprehensive document the environmental review being conducted in connection with the LEDPA analysis, the Campus Parkway, the GP Text Amendments, and associated University Community Plan (``UCP'').

We demand that the County resolve some fundamental inconsistencies between its General Plan and its pending actions by initiating a comprehensive General Plan update with EIR to run concurrently with the UCP.

I. INTRODUCTION

1 The County and the UC are treating the Parkway, Text Amendments, LEDPA and other matters as individual ``projects''. These matters are logically and legally impossible to separate. We contend that the County and UC must prepare a Joint EIR/EIS under CEQA and NEPA to address these matters as ***one project.*** Consequently, although for procedural reasons this letter separates discussion of the Parkway and Text Amendments from our broader concerns, we refer throughout this letter to ***the ``Joint EIR/EIS''*** which is necessary to adequately evaluate the various pending actions (Campus Parkway, GP Text Amendments, and UCP).

There is more than enough information comprehensive environmental review, and any further delays in the same constitute a waste of taxpayer monies and an arbitrary, capricious and

1

prejudicial abuse of discretion.

1 cont. We further complain that the County's General Plan is internally inconsistent in several fundamental respects, and that pending projects are substantially related to, and worsen, these inconsistencies. A reasonably comprehensive General Plan update, with EIR, is long overdue.

II. JOINT EIR/EIS REQUIRED NOW FOR PENDING UC AND COUNTY ACTIONS

The Campus Parkway, Text Amendments, and LEDPA site analysis of SUDPs are all for the same UC-Merced-related project. A Joint EIR/EIS covering all of these pending matters comprehensively is compelling. CEQA prohibits piecemealing and requires that the whole of the action is analyzed. CEQA also requires comprehensive environmental review at the earliest possible time.

A. Piecemeal Environmental Review Is Impermissible

2 (1) CEQA requires that the ***whole of the action*** be encompassed within a project definition.[1] As one court has put it:

> >CEQA mandates "... that environmental considerations do not become submerged by chopping a large project into many little ones--each with a minimal potential impact on the environment--which cumulatively may have disastrous consequences." . . . The term 'project' does not mean each separate governmental approval.'[2]

3 (2) The County and UC are treating the Campus Parkway and the GP Text Amendments under separate environmental documents

4 (3) The UC and County have each made clear that it is their intent to proceed with a University Community Plan (``UCP'').[3] Indeed, there are plans for an entirely new city of 31,000 people to be located somewhere in the rolling landscape of eastern Merced County.

5 (4) The County Code defines SUDP's as follows: ``Specific Urban Development Plans (SUDP's) are maps which describe a mix of urban land use designations for each of the urban communities within the County.''[4]

[1] CEQA Guidelines ' 15378.

[2] *Citizens Assn. For Sensible Development of Bishop Area V. County of Inyo*, 172 Cal. App. 3d 151, 165 (1985)

[3] Merced County University Community Plan webpage, http://www.merceducp.org/schedule.html (as of 1/1/2001).

[4] County Code ' 18.00.06.

6 (5) The County defines another mechanism, which it terms ``Community Specific Plan'', as follows: ``Community Specific Plans are adopted for the larger SUDP's and are a document providing text and maps with a discussion of local issues and goals, objectives and implementation measures.''[5] Although the public is not given many details, it is being told, indirectly, that this SUDP will involve a paving over not only of wetlands with endangered species, but of vast tracts of prime agricultural land and open spaces in the Sierra Nevada foothills. The proposed parkway, although itself removing less than 100 acres of prime farmlands, will be the traffic conduit for development that will take out vast tracts of prime farmland, along it, on the Hunt property and beyond. The Parkway DEIR/EIS in no way addresses this growth inducement. Betraying its piece-mealing origins, it speaks of its necessity solely in terms of responding to UCM and UCP growth, not taking into account the parkway's manifest growth-inducing nature.

7 (6) Unfortunately, although the Planning Director and Board of Supervisors are expending substantial County resources toward the UCP, none of these offices seem to want to make a connection with the need to define their project: ``There is a lot of activity going on with data collecting, working on the economic analysis and trying to define the campus and the community.''[6]

8 (7) In total, these various actions are inseparable parts of the same project: 1) development of a UC campus on some wetlands in rolling, rural Sierra Nevada foothills; 2) development of an entirely new college city of 30,000 on 10,000 acres of adjacent open space; and 3) associated urbanization of tens of thousands of acres of agricultural land.

9 (11) Hence, it will be necessary to prepare a Joint EIR/EIS instead of just an EIR, but not just for the Campus Parkway, but for the entire proposed or reasonably foreseeable UC-related development. The Campus Parkway, Text Amendments, and LEDPA site analysis of SUDPs are all for the same UC-Merced-related project

B. CEQA Requires Comprehensive Environmental Review

10 (1) Adequate review under CEQA and NEPA mandates that the UC and County combine their work into one, integrated process. Environmental review must be comprehensive and planning procedures must, to the ``maximum feasible extent, run concurrently, rather than

[5] County Code ' 18.00.06.

[6] *Excerpts from the regular Board of Supervisors meeting*, Tuesday, October 3, 2000, at http://uc.merced.ca.us/UCReports/ucreports.html (as of 1/8/01).

consecutively.''[7]

11 (2) The County and UC have initiated several studies under a wide array of statutes and programs, including a LEDPA analysis. Although we recognize that the County and UC may have taken a bigger bite than these agencies can swallow, the complexity of the planning does not excuse the failure to incorporate the relevant factors from the statutes and regulations applying to programs into the Joint EIR/EIS analysis.

12 (3) The County's own Planning Director, Robert Smith, went on record as admitting the County is bound by this fundamental aspect of CEQA processing. The County's ``University Working Group'' minutes of a December, 1999 meeting reflect a comment by Mr. Smith as follows:

> ``Discussed a variety of issues relevant to the projects that are subject to environmental review - Habitat/Conservation Plan, Community Plan, Parkway Plan and the Long Range Development Plan (LRDP). Smith explained how imperative it is for the NEPA/CEQA documentation for all these projects to be coordinated.''[8]

Smith then left his position as county planning director of a special office devoted strictly to UCM and UCP planning.

C. **Review must Occur at Earliest Possible Time**

13 (1) Comprehensive environmental review must also begin *as early as possible in the environmental review process.* The California Supreme Court has reasoned, in the context of the UC's own CEQA procedures, as follows:

> ``the later the environmental review process begins, the more bureaucratic and financial momentum there is behind a proposed project, thus providing a strong incentive to ignore environmental concerns that could be dealt with more easily at an early stage of the project. . . . " EIRs should be prepared as early in the planning process as possible to enable environmental considerations to influence project, program or design . . The University's own "Procedures for implementation of the California Environmental Quality Act" state, "... in planning for each University project, environmental concerns are taken into account as early as possible ... to influence project program

[7] Public Resources Code ' 21003.

[8] *Highlights of the Merced County University Working Group Meeting,* December 20, 1999, at http://uc.merced.ca.us/UCArchives/ucarchives.html (as of 1/8/01).

13 cont. and design."[9]

14 (2) The UC's 1994 EIR stated the following constraint on its scope:

> ``the level of detail in the project description and impact analysis is based on the fact that no specific long-range physical or academic plan has been adopted for a new campus.'' (1994 EIR, p. 2-1.)

15 (4) Contrary to 1994, the UC and County today have *ample information to review a project.* There is a preferred faculty and student size in mind. There is a rough University Community development size in mind. Substantial real estate speculation has been proceeding or is pending in the County to be developed in reliance on the UC's presence. The County is now proposing a ``Campus Parkway'', which can only serve, and indeed is funded for the purpose of serving, a UC Campus.

16 (5) Over the past several years, both the County and UC have initiated substantial studies and planning while repeatedly deferring comprehensive environmental review to future project stages for lack of campus design.[10] **With all due respect, it is time for the County and UC to stop talking about doing comprehensive environmental review for the UC's and County's plans for the development, and just do it.**

17 (6) In view of the constraint imposed upon 1994 EIR's analysis due to the EIR's expressed lack of ``specific long-range physical or academic plan'', the EIR authors expressly reserved the scope of review in the following manner:

> ``Where insufficient information exists, the EIR defers assessment of specific impacts and mitigation measures until further stages of development of a UC campus including long range planning or project construction. Further environmental analysis would be required by the California Environmental Quality Act before adoption of a long range development plan or construction of any portion of campus facilities.''[11]

[9] *Laurel Heights Improvement Assn. v. Regents of University of California*, 47 Cal. 3d 376, 395 (1988).

[10] The 1994 EIR, the 1996 Text Amendments and UC Specific Urban Development Plan (ASUDP''), as well as privately initiated amendments to the Land Use Policy Diagram in furtherance of real estate speculation based on the Campus's presence, have all deferred mitigation and thorough analysis due to no specific campus design being ready.

[11] 1994 EIR, pp. 2-1 - 2-2.

18 (9) Comprehensive environmental review is, hence, both feasible and timely at this time.

19 (10) Please specifically explain all EIR tiering for the all known, suspected, possible, and/or reasonably foreseeable UC facilities, both in and outside Merced County.

III. CAMPUS PARKWAY EIR/EIS

20 (1) Caltrans/ FHWA CEQA/ NEPA manuals: Caltrans and the FHA have their own CEQA / NEPA guidelines and manuals which will apply to this project. In addition to all other applicable regulations, programs, policies and guidelines, please specifically cite and describe the requirements and assumptions set forth the manual, and then incorporate the manual by reference pursuant to CEQA. Explain any required or suggested methodology and computer models.

21 (2) ``Expressway''. The Joint EIR/EIS must clarify what is meant by ``expressway''. We assume the County is pulling the word ``expressway'' from some definition listed in a County planning document. (Please state which one, and properly incorporate by reference pursuant to CEQA.)

22 (3) Land Use in the ``Campus Parkway Corridor'': The Regional Transportation Plan (``RTP'') contains a highway networks diagram showing a wide ``Campus Parkway Corridor'' from Highway 140 directly to the edge of the Smith Trust land. [12] The EIR/EIS must specify with particularity the types of land uses which will develop in this ``corridor'', and identify and mitigate its impacts. Because the ``expressway'' may have access points at the 2 mile mark, there is certain to be substantial real estate development along the 6 mile route.

23 (4) Baseline/ Project Setting: Please specifically describe the assumed urban growth and development construction scenarios. Compare with County General Plan.

24 (5) For each identified potentially significant environmental effect, be sure to describe the assumptions underlying the estimation or projection of impact intensity.

25 (6) Project goals: Population projections directly affect project goals: existing population projections in a no-campus scenario do not justify a 6-lane highway connecting Merced City with the foothills.

[12] The Regional Transportation Plan was adopted by the Merced County Council of Governments (ACOG'') as a ''twenty year plan that outlines regional goals, transportation improvements, and funding sources.'' 1998 Regional Transportation Plan, Merced COG, p. 1; http://uc.merced.ca.us/UCStudies/ucstudies.html (as of 1/8/01.)

6

26 (7) Cumulative Effects: ``CEQA requires an EIR to discuss the cumulative effect on the environment of the subject project in conjunction with other closely related past, present and reasonably foreseeable probable future projects.''[13] Please explain the cumulative effects on air, water, land, aesthetics, and other resources will result from the Parkway.

27 (8) Environmental Setting: please thoroughly describe the rural as well as suburban and urbanized environmental setting.[14]

28 (9) The Traffic Report claims independent utility for the Parkway in the No-UC scenario, but fails miserably to support its claim. The Report makes this remarkable claim notwithstanding the fact that official Caltrans, UC and County documents make numerous references to federal and state funding being made legislatively available ***for the purpose of serving the UC project and community.*** Thus, the County's insistence upon justifying an ``independent utility'' for the Campus Parkway is questionable from the very start.

29 (10) The Traffic Report references population projections in the City of Merced General Plan (updated in 1997) as partial justification for the Campus Parkway.[15] Remarkably, the City's General Plan expressly qualifies its entire analysis (including population projections) by treating the presence of a UC campus as a first level, critical assumption.[16] That is, population from the UC campus and associated community are a crucial, underlying

[13] *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 27 Cal. App. 4th 713, 739 (1994). Quoting another case, San Joaquin Raptor stated "The purpose of this requirement [of analyzing cumulative effects] is obvious: consideration of the effects of a project or projects as if no others existed would encourage the piecemeal approval of several projects that, taken together, could overwhelm the natural environment and disastrously overburden the man-made infrastructure and vital community services. This would effectively defeat CEQA's mandate to review the actual effect of the projects upon the environment." Id. at 740.

[14] In *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 27 Cal. App. 4th 713, 723 (1994), the court quoted the CEQA Guidelines and the Remy, Thomas Guide to CEQA as follows:

> "(a) Knowledge of the regional setting is critical to the assessment of environmental impacts. Special emphasis should be placed on environmental resources that are rare or unique to that region and would be affected by the project." The Guide to CEQA explains the significance of adequate consideration of the existing environmental setting: "Because the concept of a significant effect on the environment focuses on changes in the environment, this section requires an EIR to describe the environmental setting of the project so that the changes can be seen in context. The description of the pre-existing environment also helps reviewers to check the Lead Agency's identification of significant effects." (Guide to CEQA, supra, p. 579.)

[15] Traffic Report, pp. 4-5.

[16] *See Merced Vision 2015 General Plan*, Chapter I.IV.

7

29 cont. assumption for many of the City's Plan policies. It is, therefore, completely unreasonable for the County to claim that there is an underlying independent project justification in the No-UC scenario by pointing to another document which, by its own, express terms, is critically reliant upon the assumption that there is going to be a UC.

30 (11) Another reason why the County must not rely upon the City's General Plan is that the City's plan calls for growth going ***northward,*** and ***not eastward.*** The City understandably took the responsibility of including in its plan a map showing a general outline of the Smith Trust land; the City Plan also references the possibility that the land may eventually be annexed. Unfortunately, the City has deferred the responsibility for development eastward to the County's jurisdiction. The population and sprawl anticipated for the currently unincorporated eastern County area is, hence, due primarily to the UC and associated development.

31 (12) This glaring flaw in analysis has already been identified by the United States Environmental Protection Agency, which wrote to Caltrans in August, 2000 (copy to Campus Parkway Project Manager County Steven) explaining that the County and Caltrans had failed to justify the Campus Parkway's independent utility so as to treat it as a project separate from the UC project.[17] The EPA's letter stated that the project proponents were relying upon documents which - - surprise, surprise - - assumed a UC project. The letter also pointed out that Caltrans had failed prior commitments to provide the necessary information. Nothing in the November, 2000 NOP or Traffic Report indicates that the County and Caltrans have identified the documents and data EPA requires. Consequently, as EPA points out, a ``Campus Parkway'' project planned for and approved independently of the UC Campus on the Smith Trust lands cannot be justified. Proceeding any further is a glaring violation of NEPA. Additionally, it is a glaring violation of CEQA.

32 (13) Still another reason why it is unreasonable for the county rely on the City's general plan estimates is that those estimates *grossly overstate*, by more than double, anticipated population growth from other official government sources. The City's plan projects population growth in California from 1997 to 2015 to be a stunning 20 million people, an unclearly specified ``significant percentage'' of which will occur in the San Joaquin Valley.[18] The City's number, however, is completely out-of-synch with the population growth recently estimated in an official

[17] Letter from Nancy Woo, Chief, EPA Region IX, Water Division, August 30, 2000, to Eric VonBerg, Caltrans Environmental Planner.

[18] *See Executive Summary for Merced Vision 2015 General Plan*, Ch. I.I, which states: A It has been projected that twenty million people will be added to California's population by the year 2015. A significant portion of this population growth is expected to find its way into the San Joaquin Valley.''

32 cont. report produced in 1999 by the Commission on Local Governance for the 21st Century, a California State agency.[19] That Commission found that, even by 2020, the increase would be only 11 million, or about half of the 20 million the City's plan predicts by 2015:

> ``By 2020, California will add 11million people to its current population of over 34 million, then it will grow by another 13 million in the two decades that follow.''[20]

33 (16) The Traffic Report does not explain *what percentage* of the City's 20 million-person increase would end up in the Merced area. For all of Merced County, California Department of Finance (ADOF'') population figures for 2000 show the County's population at 210,100.[21] DOF 1998 projections for County population are 319,785.[22] Meanwhile, 1998 DOF estimates for the City of Merced were projected to be only 63,300.[23] How does the increase of approximately 110,000 persons County-wide independently justify a 6-lane freeway leading from Merced City into the rural Sierra Nevada foothills?

34 (17) It will be extremely important, to support the EIR's credibility, to identify and summarize, with CEQA-authorized incorporations by reference as appropriate, the specific findings of the California Department of Finance for each of the past several years. Why has there been such a jump in population estimates for the County since the 1990 General Plan? Does the presence of a UC Merced on the Smith Trust lands have anything to do with it?

35 (18) Please also discuss the discussions and correspondence between the DOF and City and County regarding the UC-Merced campus and City and County growth.

[19] ''*Growth Within Bounds: Report of the Commission on Local Governance for the 21st Century*'' (1999), copy at http://www.clg21.ca.gov/exec_summ.html#anchor604224 (as of 1/21/01).

[20] ''*Growth Within Bounds: Report of the Commission on Local Governance for the 21st Century*'' (1999), copy at http://www.clg21.ca.gov/exec_summ.html#anchor604224 (as of 1/21/01).

[21] http://www.dof.ca.gov/html/fs_data/stat-abs/sec_B.htm (as of 1/27/01). The Cal. DOF webpage states: ''The Demographic Research Unit of the California Department of Finance is designated as the single official source of demographic data for State planning and budgeting.'' http://www.dof.ca.gov/HTML/DEMOGRAP/Druhpar.htm (as of 1/27/01). U.S. Census pre-2000 Census estimates released in July, 2000, for Merced County were lower, at 200,746 .

[22] See *County Population Projections with Age, Sex and Race/Ethnic Detail July 1, 1990-2040 in 10-year Increments* (DOF, December 1998), http://www.dof.ca.gov/HTML/DEMOGRAP/Proj_age.htm (as of 1/27/01).

[23] See *City/county Population and Housing Estimates, 1991-2000, with 1990 Census Counts* http://www.dof.ca.gov/HTML/DEMOGRAP/E-5text.htm (as of 1/27/01).

36 (19) Eastern Industrial Area The Campus Parkway is described as ``necessary''; that the ``expressway'' would ``provide access to Merced's eastern industrial area, the areas north of Merced planned for growth, and the University Community Specific Urban Development Plan (SUDP) area near Lake Yosemite, which encompasses the site for UC Merced''. (NOP, p. 1.) Please specifically describe the ``eastern industrial area, the areas north of Merced planned for growth'' referenced in the Parkway NOP description. This is not reflected in the General Plan the County has posted at its website. If this was adopted by any plan amendment or zoning action, please specify those actions and what was done to environmentally assess their impacts. What other assumptions underlay these areas?

37 (20) Explain inconsistency with City and County Plans. The Joint EIR/EIS must explain and resolve essential inconsistencies with the land use and circulation plans in the City and County General Plans. In the County's Plan, nowhere is there any indication that a Campus Parkway is to be developed.[24] It is also not included on either of the city's Circulation or Land Use Diagrams

IV. GP TEXT AMENDMENTS AND INITIAL STUDY

There is substantial evidence in the record as a whole that the GP Text Amendments may have a significant effect on the environment. An EIR would be independently merited for this matter, even if the Campus Parkway were not being proposed.

38 (1) Although the University and County characterize the Text Amendments as innocuous and environmentally friendly, in fact it is just another individual step taken toward the single goal and effect of urbanizing Eastern Merced County in furtherance of the UC-Merced development.

39 (2) We are greatly concerned about cumulatively considerable impacts of the proposed action. As noted above, we also contest the vast majority of issue-specific findings of ``no impact'' which are set forth in the environmental checklist and initial study discussion. We hereby incorporate by this reference each and every finding of significant impact recognized in the UC's 1994 EIR.

40 (3) The 1996 amendments, like the current ones, were also craftily drafted to "sound good". The initial study for that project found no impacts because no project details were shared. We cannot agree with this reasoning. Although the County and UC have discretion in determining when the first tier has to be initiated, the first tier has to begin at some time. In short, trying to pass off such a huge amount of reasonable foreseeable County and UC development by way of an initial study and negative declaration

[24] See *Merced Vision 2015 General Plan Land Use Diagram*

40 cont. make the Text Amendments a wolf in sheep's clothing.

41 (4) Also, even aside from the Parkway, an argument can be made no plan amendment, even a minor one, can be defensible if the general plan is faulty.

42 (5) ssLocal media has reported, and the City and County each recognize, a potential housing shortage which will be caused by the UC project.[25] The Text Amendments add language encouraging private developers to fulfill campus associated housing needs. This furthers existing plans and intentions to allow substantial housing development to occur in furtherance of prior and future County and UC actions. The Joint EIR/EIS must thoroughly environmentally assess the impacts of this anticipated and desired housing development.

43 (6) As the UC and County have been doing for years - again, despite at all times having the Smith Trust Lands, a student body, and associated UC Community size in mind B the Text Amendments initial study improperly defers comprehensive review. The document states: ``Until alternative sites are identified and subject to comparative assessment, it is premature (and indeed impossible) to speculate at present what those impacts will be.'' (Initial study, p. 5.)

44 (7) However, as we have pointed out above, the California Supreme Court has

[25] See *City of Merced 2000 Consolidated Plan*, p. 7, which states: ''Most importantly, the fast-growing population has outpaced growth in the City's housing inventory and, as a result, in 1990 there were few vacancies and many overcrowded units in the City.'' Although the Consolidated Plan acknowledges that housing vacancies have stabilized, it also states: ''In addition, the decision to bring the 10th campus of the University of California to Merced will dramatically effect its growth patterns in terms of numbers and demographics. State funding decisions will drive the timetable for the construction of the campus, but the Governor of the State of California, Gray Davis, has made a commitment to have students on campus by 2004.'' The Consolidated Plan envisions substantial housing necessary to occur over the next five years in order to meet the City's housing needs. As required by HUD regulations, the Draft Plan explained ''The Consolidated Plan provides an overall picture of the housing and community development needs of the City and outlines a 3 to 5 year coordinated housing and community development strategy and necessary actions and funding requirements to meet those needs'', and sets forth schedules of needs and actions just over the next 3 - 5 years. (See pp. 193, Tables 2A and 2B re: Community Development Needs, pp. 76-77, .)

Interestingly, the City's Consolidated Plan, like its General Plan and Housing Element, rests its fundamental projections of population and needs upon the UC-Merced project. The Draft Plan stated: ''These [population] projections [in the Consolidated Plan] include the U.C. Merced off-campus growth through the Year 2035 (expected build-out year of the campus); and ''These projections were derived from population projections for Merced County developed by the Merced County Association of Governments (based on California Department of Finance projections) and estimated population impacts on Merced County related to the UC campus from the *UC San Joaquin Site Selection Environmental Impact Report*.'' (Id., p. 8, italics in original.)

Note: we understand that none of these statements or representations were modified when the City Council approved the Consolidated Plan as final. HUD would have to approve any revision.

admonished:

44 cont.

``We agree that environmental resources and the public trust may be ill served if the environmental review is too early. On the other hand, the later the environmental review process begins, the more bureaucratic and financial momentum there is behind a proposed project, thus providing a strong incentive to ignore environmental concerns that could be dealt with more easily at an early stage of the project. This problem may be exacerbated where, as here, the public agency prepares and approves the EIR for its own project. For that reason, "'EIRs should be prepared as early in the planning process as possible to enable environmental considerations to influence project, program or design.'" (*Bozung, supra,* 13 Cal.3d at p. 282; Guidelines, ' 15004, subd. (b).) The University's own "Procedures for implementation of the California Environmental Quality Act" state, "... in planning for each University project, environmental concerns are taken into account as early as possible ... to influence project program and design."[26]

45

(8) The implementation no. 2 proposed for Land Use Policy 4, Goal 1, purportedly giving the County the authority to adopt ``area plans'', is either just a public relations ploy, project delay excuse, or just plain bizarre. There is absolutely no legal or logical need for the referenced ``area plans''. Please specifically describe what these ``area plans'' are. How different from a community plan or a specific plan? Why are current planning mechanisms of specific plans and community plans not available or desirable? We look forward to the County's explanation, as there is no conceivable purpose for ``area plans'' other than to make the UC's and County's efforts towards campus planning sound good on paper. Importantly, we think it is obvious the various amendments are being proposed in furtherance of the UC campus on the Smith Trust lands.

46

(9) The amendments to Goal 11 alone triggers the Joint EIR/EIS, even aside from the Campus Parkway and Merced Hills Golf Course proposals. It substantially furthers planning for a UC campus core on the Smith Trust lands, to which the existing, unamended Goal 11 text already contains substantial references. The evidence is indisputable that the amount of urbanization and growth which the UC and County anticipate will occur of a may result of a campus core on the Smith Trust lands will cause several significant, unavoidable environmental effects. It is extremely unfortunate the County and UC continue to proceed without proof that these effects will be mitigated!

[26] *Laurel Heights Improvement Assn. v. Regents of University of California*, 47 Cal. 3d 376, 395 (1988).

47

(10) Objective 1.B., policy Nos. 12 and 13 are weakly drafted and provide no assurances of mitigation. To ``encourage'' alternative transportation modes and concentrated land use is not to ``require'' them.

48

(11) The proposed amendment to Housing Element Goal No. 5 is an express affirmation of intent on the part of the County to encourage the substantial housing that will be necessary to house the County's dream University Community. The County cannot adopt this policy without addressing the impacts of the housing development. Such impacts, in turn, rest on the specific numbers of housing units which will be required, phasing, size, types, and locations. Because the County's housing element is out of date and internally inconsistent with the rest of the General Plan, the County at this time is completely in the dark with respect to its housing needs. Consequently, due to the County's own fault in delaying comprehensive general plan update to accommodate the UC (see discussion below regarding need to update general plan), the County will have to do substantial plan amendment-related work just to assess the potential impacts of this policy amendment!

V. CURRENT SITE SELECTION REVIEW MUST BE INCORPORATED

49

(1) Adequate review under CEQA and NEPA mandates that the UC and County combine their work into one, integrated process. ***Environmental review and planning procedures must, to the ``maximum feasible extent, run concurrently, rather than consecutively.''***[27]

50

(2) CEQA Mandates Alternatives Analysis Independently of all other laws, CEQA requires that specific, feasible alternatives to a project be considered where there is evidence that a project will result in a significant, unavoidable impact.[28]

[27] Public Resources Code ' 21003.

[28] Many of the principles relevant to this discussion are set forth at Section 15002 of the CEQA Guidelines:

(a) Basic Purposes of CEQA. The basic purposes of CEQA are to:

(1) Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.

(2) Identify the ways that environmental damage can be avoided or significantly reduced.

(3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.

(4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

. . . . . .

51 (3) CEQA requires that a reasonable range of feasible sites be evaluated.[29]

52 (4) Feasibility can be gauged by actual experience with satellite campus facilities elsewhere in the Valley.

(h) Methods for Protecting the Environment. CEQA requires more than merely preparing environmental documents. The EIR by itself does not control the way in which a project can be built or carried out. Rather, when an EIR shows that a project would cause substantial adverse changes in the environment, the governmental agency must respond to the information by one or more of the following methods:

(1) Changing a proposed project

(2) Imposing conditions on the approval of the project;

(3) Adopting plans or ordinances to control a broader class of projects to avoid the adverse changes;

(4) Choosing an alternative way of meeting the same need;

(5) Disapproving the project;

(6) Finding that changing or altering the project is not feasible;

(7) Finding that the unavoidable significant environmental damage is acceptable as provided in Section 15093.

[29] In *Laurel Heights*, supra, the California Supreme Court emphasized the necessity for the UC to evaluate project alternatives in planning its campuses. In interpreting provisions of CEQA, the court said:

> Section 21002.1, subdivision (a) provides, "The purpose of an environmental impact report is to identify the significant effects of a project on the environment, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided." (Italics added.) Section 21061 states that"The purpose of an environmental impact report is ... to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project." (Italics added.) Section 21100 provides that an EIR on a project proposed by a state agency shall include a detailed statement of mitigation measures and "[a]lternatives to the proposed project."(' 21100, subds. (c) and (d), italics added.) Perhaps most important, the Legislature has expressly declared that "... it is the policy of this state to: ... [r]equire governmental agencies at all levels ... to consider alternatives to proposed actions affecting the environment." (' 21001, subd. (g), italics added.) The Guidelines require that an EIR "[d]escribe a reasonable range of alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project an devaluate the comparative merits of the alternatives." (Guidelines, ' 15126, subd. (d).) These alternatives must be discussed, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."(Guidelines, ' 15126, subd. (d)(3).)
>
> The foregoing CEQA provisions and Guidelines make clear that "One of its [an EIR's] major functions ... is to ensure that all reasonable alternatives to proposed projects are thoroughly assessed by the responsible official." (*Wildlife Alive v. Chickering*(1976) 18 Cal.3d 190, 197 [132 Cal. Rptr. 377, 553 P.2d 537], italics added.) *Laurel Heights Improvement Assn. v. Regents of University of California*, 47 Cal.3d at 400.

53 (5) Nonetheless, logical Project impact mitigation analysis compels evaluation of feasible alternatives which the most urbanized methods of maximum incorporation of more urbanized sites as project alternatives. The County and UC must give key consideration to the feasible alternatives of a scenarios involving a substantially scaled-down project in more urbanized parts of Merced County and elsewhere, including in Fresno.

54 (6) Endangered Species Act Alternatives Analysis. The County and UC must take this opportunity to incorporate required alternatives analysis under ESA and CESA. Under applicable Federal regulations, ``the Federal agency and any applicant shall make no irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any *reasonable and prudent alternatives* which would avoid violating the ESA.''[30]

55 (7) Least Damaging Practicable Alternatives Analysis: Any Joint EIR/EIS must also analyze the Least Damaging Practicable Alternatives Analysis (ALEDPA'') required under the Clean Water Act, EPA's regulations under Section 404 of that Act, and applicable provisions of the Porter-Cologne Act.

56 (8) CEQA requires incorporation of LEDPA into the document: The analysis of practicable project alternatives in connection with determining whether a Section 404 permit should issue is required under CEQA.

57 (9) Whatever regulatory review and legal tests the UC to which the UC must be subject must be a part of the Joint EIR/EIS in order to make a comprehensive document.

VI. SIGNIFICANT EFFECTS ON THE ENVIRONMENT

The following is a list of key areas which the Joint EIR/EIS must consider, at a minimum, to be a legally sufficient document. This list of comments, like the rest of this letter, is equally applicable to the GP Text Amendments, the Campus Parkway EIR/EISl. It is, of course, by no means exhaustive.

58 (4) Checklist Incorporated and Disputed: We hereby incorporate the descriptions used for each of the potential significant environmental effects set forth in the Environmental Checklist prepared for the Campus Parkway and GP Text Amendments (both primarily copied from the form suggested in CEQA Guidelines). We hereby contest the findings of ``no impact'' as to most listed potential impacts.

59 (5) 1994 EIR Analysis Incorporated. We further hereby incorporate by this reference all of the analysis finding significant impacts in the 1994 EIR, in

[30] 50 C.F.R. ' 402.09, Joint Regulations (United States Fish and Wildlife Service, Department of the Interior and National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce).

59 cont. its finally certified 1995 form, and restate here each and every potentially significant physical effect on the environment addressed.

60 (6) Synthesis of Other, Completed and Pending Studies: The UC and the County must also incorporate other studies that have been done, and set forth the data and conclusions in its discussions in the Joint EIR/EIS.

61 (7) Secondary, UC-Dependent Development: Over the past several years, substantial secondary growth has been proposed and developed in Merced County in anticipation of the UC's presence.

62 (8) Mitigation measures. Please provide a detailed and comprehensive analysis of mitigation measures for each significant effect identified.

63 (9) Pattern and Practice of Poor Environmental Planning: The Joint EIR/EIS should also consider the County's pattern and practice of being lax on CEQA compliance and environmental and zoning enforcement in several significant areas. The Joint EIR/EIS should consider this as a potential constraint upon mitigation monitoring.

64 (10) Water: Please provide specific quantities of water to be consumed by the UC and UC Community, along with the plan(s) for supply, treatment, and disposal of same, and concomitant impacts and mitigation.

65 (11) Wetlands: In addition to incorporating the comments made by vernalpools.org, we emphasize that the discussion of wetlands is a pivotal element of the required Joint EIR/EIS.[31]

[31] In *San Joaquin Raptor v. Stanislaus County* (1994), the court appreciated the very serious issue arising from the presence of wetlands in the area of a project:

> The record contains documentation supporting the conclusion that wetlands are important wildlife habitats. As stated in a report prepared by the United States Department of Interior, entitled *Wetlands of the California Central Valley: Status and Trends-1939 to mid-1980's-(1989)* chapter 7: "Wildlife habitat, particularly for waterfowl, is often the major focus for wetland values. However, the Central Valley wetlands offer a myriad of other important functions. These include aesthetic, scientific, and educational interests; primary productivity in the food chain; fish habitat; endangered and threatened wildlife species habitat; shoreline and bank stabilization and protection; flood protection; groundwater recharge; and recreation opportunities."
>
> An additional report, *Sliding Toward Extinction: The State of California's Natural Heritage* (1987) prepared at the request of the California Senate Committee on Natural Resources and Wildlife (Nov. 1987) explains that ***by 1978, "wetlands in the Central valley had shrunk to only about 4 percent of their original extent [citation], and they have declined since then."*** (At p. 60.) Over 50 percent of the total wintering waterfowl in the Pacific flyway utilize these wetland areas as their habitat. The decrease in wetland areas has led to a decline in the population of waterfowl. "The declines in waterfowl and other wetland wildlife populations not only represent recreational losses to those who hunt and view these species, but also pose a long-term population threat to many species or subspecies that winter mainly or only in California." (Ibid.) The report further states that the protection of

66 (12) Runoff and Erosion: Development in undeveloped areas of the County may have substantial adverse effects upon the quality of water running off into streams, and will cause substantial, unmitigated erosion. The County has exacerbated this problem by an unjustifiable repeal of its grading ordinance.[32]

67 (13) Quality of Open Spaces: The EIR/ EIS must carefully consider the proposed impacts of the eventual quality of open spaces which are left after the University Community builds-out.

> existing wetlands may require restriction of other land uses because "wetlands are particularly susceptible to adjacent land uses that alter surface and groundwater availability." (At p. 65.) (27 Cal.App.4th 724-725, bold italics added.)

[32] By Ordinance 446, the County repealed its ''Land Leveling, Grading, and Excavation'' ordinance and gave the following explanations of substitute measures in the County Code: ''Major Excavations/Fills to be covered by New Code Section 18.43 (Surface Mining and Reclamation); - Minor Drainage an issue between property owners, not County responsibility; Major drainage-ways covered by State/Federal agencies.'' Unfortunately for the Merced County natural environment, Ordinance No. 446 spelled the death-knell for the potential of any reasonable program to assure that ground soil runoff associated with grading does not poison waterways, that sensitive or endangered species are not first taken, or significant archeological resources are not paved over, without adequate review. We intend to present substantial evidence of a consistent pattern of instances where developers have been allowed to grade and pave over property with extremely deleterious, but otherwise mitigatable, environmental effects. In short, anyone can just grade or pave over his or her property at any time, without any public review. The referenced Surface Mining Ordinance mirrors a model one which the California Division of Mines probably had to force the County to adopt in order to satisfy state mandates requiring protection of significant mineral resources and detailed environmental review of mining operations. But the ordinance, like its state agency model ordinance counterpart, *only covers mining operations and expressly excludes even major grading projects from its scope!* (Co. Code ' 18.43.03.) Further, for the County to declare that ''minor drainage'' is between private property owners, or to point to unspecified federal and state ''agencies'' as responsible for ''major drainage'', is an abdication of the County's responsibility to assure mitigation of impacts with each development. This is a ***very serious flaw*** in the County's review of development. (Table, ''NEW COUNTY ZONING CODE TITLE 18, REPEAL OF OLD ORDINANCE/CODE SECTIONSa.) Although the County Code broadly defines ''development'' to include ''Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials. Another provision of the ordinance, which defines ''start of construction'' to trigger County site plan development review, compounds the problem by expressly excluding ''land preparation, such as clearing, grading, and filling'' from the definition of ''permanent construction'' subject to review. County Code ' 18.34.02-AZ (Definitions). Although some provisions of the flooding and permit processing provisions suggest consideration of grading, the County has a pattern and practice of neither requiring nor enforcing detailed measures against erosion, runoff, endangered species takes and archeological resource losses.

Failure to have a grading program, and implement one in practice, also means the County is violating provisions of the Subdivision Map Act requiring comprehensive grading review. (Gov't Code ' 66400, *et seq.*)

68 (19) City of Merced Annexation and AB 2838 Consistency: The Joint EIR/EIS must describe the subsequent process envisioned to potentially annex any of the UC Community by the City of Merced, because the City's General Plan shows growth developing contiguously northward from the City, with an intended, eventually extended sphere of influence to include the UC.

69 (20) Analysis of the consistency with the Proposals with to Cortese-Knox Amendments of 2000 is crucial. Please provide as best a description as possible at this time about the UC's, County's and City's respective roles in the coordinated planning process envisioned by AB2838. Where is the justification for allowing the ``Campus Community'' of 30,000 people into rural, agricultural and unincorporated areas?[33]

VI. COMPREHENSIVE GP UPDATE NECESSARY

Plans for the UC and related Community will directly conflict with existing General Plan policies and provisions. Campus and Community plans also perpetuate existing internal inconsistencies.

70 (1) History: In the late 1980's, the San Joaquin Raptor Rescue Center joined another party in suing the County for, among other things, failure to have a comprehensive general plan meeting the minimum requirements of State law.[34] The court issued an order effectively barring further development for nearly five years. Our point is that, at least historically, it is only when the County has been forced to have an adequate general plan that the County has had one.

71 (2) Over a decade later, we urge resolution of the fact that the UC-Merced and associated Community development are causing, and will cause, substantial internal consistencies in the Plan unless the Plan is substantially updated.

72 (3) Fundamental Internal Inconsistencies: The Joint EIR/EIS must address the serious problem that the Merced Hills, Campus Parkway, and UCP projects are fundamentally inconsistent with the County's current General Plan.[35] The 1996 GP Amendments purportedly adopting the SUDP for

[33] Currently, the County's Assistant Deputy Planner also serves as staff to the Local Agency Formation Commission (LAFCO), which reviews all city and special district annexation and boundary change proposals within the County. One can expect LAFCO to approve virtually everything the County intends. This will certainly present a conflict in LAFCO's statutory duty to apply its objective, independent judgment in applying anti-sprawl standards in the Cortese-Knox Act.

[34] *El Nido Community Association and San Joaquin Raptor Rescue Center vs. County of Merced*, Merced Sup. Court Case No. 88446, Statement of Decision dated Aug 11, 1987, no. 83729.

[35] Section 65300.5 of the Government Code provides, in pertinent part: "the Legislature intends that the general plan and elements and parts thereof comprise an integrated, internally consistent and compatible statement of policies for the adopting agency." The County Code recognizes the

72 cont. the Smith Trust lands failed to resolve the fundamental inconsistencies.

73 (4) Adding development on the Smith Trust lands and associated County sprawl causes substantial redistribution of urbanized land, population, building intensity, and non-agricultural development. Corresponding and balanced changes must be made to the Land Use Policy Diagram and Circulation Diagram and among the Land Use, Open Space, and Circulation Elements.

74 (5) The County must consider the consistency of the Campus Parkway with the adopted plan. (Gov't Code '' 65401; 65402.) Capital facilities must be consistent with the general plan.[36] As one court has stated:

> ``a city's public works projects . . . must be consistent with its general plan . . . [the consistency requirement] encompasses all decisions involving the future growth of the state, which necessarily includes decisions by a city to proceed with public works projects. All such decisions are to be guided by an effective planning process that includes the local general plan.''[37]

75 (6) Unfortunately, the Parkway is simply not justified by the County's General Plan. What are the specified patterns of growth, development and intensity? What will the noise element look like? Noise contours of both the new freeway and all associated development must be thoroughly studied for the Plan, as well as for the Joint EIR/EIS. The environmental relationships among the substantial loss of open space, habitat, and agricultural lands must be studied, discussed, and mapped in connection with the update, as well as for the Joint EIR/EIS.

76 (7) To the extent that project alternatives are not evaluated and chosen in connection with an EIR/EIS, they must be considered in connection with

consistency rule: ''All development within the unincorporated area of Merced County must be consistent, or in agreement with, the County General Plan.'' (Co. Code ' 18.00.06.)

[36] *Friends of B Street v. City of Hayward* 106 Cal. App. 3d 988 (1980). The Office of Planning and Research's General Plan Guidelines explains this rule as follows:

> ''The network of publicly-owned facilities, such as streets, water and sewer facilities, public buildings, and parks form the framework of a community. Although capital facilities are built to accommodate present and anticipated needs, some (most notably water and sewer facilities and roads) play a major role in determining the location, intensity, and timing of development. For instance, the availability of sewer and water connections can have a profound impact upon the feasibility of preserving agricultural or open-space land.''

[37] *Friends of "B" Street V. City of Hayward*, 106 Cal. App. 3d 988, 998 (1980).

76 cont. General Plan Review.[38]

77 (8) The California Supreme Court has solidified the principle that the County must keep its General Plan updated:

> ``The law also requires that planning efforts remain current. Local agencies must periodically review and revise their general plans as circumstances warrant; housing elements must be revised no less than every five years. (Gov. Code, ' ' 65103, subd. (a), 65588, subd. (b).) ' '[39]

78 (9) Approval of the Parkway alignment will, in the very least, require an amendment to the Circulation Element.

79 (10) Any amendment to the Circulation Element will require amendments to numerous other provisions of the plan.

80 (11) The city, the two county planning offices, UC Merced and private developers are all competing a free-for-all for sewer hookups. There is no real plan except to increase rates on the existing local citizens and more bonds.

81 (12) Nor is there any political or administrative means, short of punitive bond measures on existing local citizens to pay for the wholesale overcrowding of local public schools induced by the unplanned,piece-mealed, huge growth.

82 (13) All the growth being served and induced by this parkway/expressway will pave over farmland that is a vital accumulator and filter of eastern county groundwater. The county and Merced Irrigation District failed to produce adequate studies of this groundwater basin or solutions to a situation of increasing overdraft.

VII. CONCLUSION

83 The San Joaquin Raptor Rescue Center (``Center ' ') and Protect Our Wates (POW) are nonprofit, public interest organizations dedicated to protecting the public trust in natural resources and preserving environmental quality in the Central Valley.[40]

The Parkway, Text Amendments, LEDPA, UCP are logically and legally impossible to separate. They are all in furtherance of a UC campus on the Smith Trust lands and its anticipated and reasonably foreseeable secondary growth and urbanization. The County and UC must prepare a Joint EIR/EIS under CEQA and NEPA to address these matters as ***one project.***

[38] *See Citizens of Goleta Valley v. Board of Supervisors of Santa Barbara*, 52 Cal. 3d 553, 572 (1990).

[39] *Goleta Valley*, 52 Cal. 3d at 572.

[40] Please note that, by this letter, we do not foreclose submission of additional comments. Additionally, reports and documents referenced herein are incorporated herein by this reference and we intend to enter them into the record prior to the close of the public hearings on the Campus Parkway and Text Amendments.

20

83 cont. We further complain that the County ' s General Plan is internally inconsistent in several fundamental respects, and that pending projects are substantially related to, and worsen, these inconsistencies. A reasonably comprehensive General Plan update, with EIR, is long overdue.

In short, there is more than enough information to undertake comprehensive environmental review, and any further delays in the same constitute a waste of taxpayer monies and an arbitrary, capricious and prejudicial abuse of discretion.

Respectfully submitted,

ORIGINAL SIGNED

Lydia Miller, President
San Joaquin Raptor Rescue Center

ORIGINAL SIGNED

Steve Burke
Protect Our Water (POW)

Cc: Interested parties

Response: Lydia Miller, San Joaquin Raptor Rescue Center and Steve Burke, Protect Our Water

San Joaquin Raptor Center & Protect Our Water-1

The commenters' recommendation is noted. See the next response (No. 2) regarding the recommendation to prepare a joint environmental document and Master Comment 7 regarding the General Plan update.

San Joaquin Raptor Center & Protect Our Water-2

The different projects represented by the approvals listed in the comment all have different purposes and needs, but they are all intended to provide or support public facilities and services in the regional and local area. The Long Range Development Plan for UC Merced is intended to define the land use plan for the new UC Merced Campus and to meet the demand for higher educational facilities in California, especially in Central California. The objectives of the University Community Plan include providing for community services that support the growth of UC Merced as well as the local community. Campus Parkway is intended to provide improved access

from SR 99 to eastern Merced, including the growing areas of north Merced. In the long term, Campus Parkway would also serve traffic from the buildout of the City of Merced, the UC Merced Campus, and the University Community. The circumstances do not define a single, large project that has been artificially divided (or "chopped") to minimize its impacts. Planning and site selection for the university took place over many years, culminating in selection of the Merced area in 1995 for development of the Long Range Development Plan for the campus. Prior to selection of the UC Merced site, early planning documents (discussed in Section 2.1.1 of the Campus Parkway Draft EIS/EIR) recognized the need for additional transportation access and improvements in the eastern and northern areas of Merced. The Eastern Beltway Alignment Alternatives Analysis and Circulation Plan documented this need in 1994. Selection of the UC Merced site added impetus to create another means of access between SR 99 and the UC Merced Campus and University Community in the Lake Yosemite area. However, the need to improve connectivity of the road system in eastern Merced and provide for additional transportation capacity in the future had already existed and was identified with or without the UC Merced Campus or the University Community in place. With the UC Merced Campus and the University Community in place, traffic demands for Campus Parkway would be higher, but primarily toward the longer-range planning year, 2025. Thus, the need for Campus Parkway is not dependent upon the UC Merced Campus or University Community.

San Joaquin Raptor Center & Protect Our Water-3, -4, and -5

The commenters' points are noted.

San Joaquin Raptor Center & Protect Our Water-6

The Draft EIS/EIR discusses growth inducement specifically in Section 3.12.2. The discussion addresses the potential that Campus Parkway, as a new traffic route, could contribute to increased demand for land use changes, including in farmlands near the proposed project.

San Joaquin Raptor Center & Protect Our Water-7, -8, and -9

The commenters' opinions are noted.

San Joaquin Raptor Center & Protect Our Water-10, -11, and -12

The commenters' points are noted. Coordination took place between the various projects as they proceeded through their own planning and environmental review processes. As noted in the Response to San Joaquin Raptor Center & Protect Our Water-2, the projects are proposed to meet independent and different needs and objectives, but they all address demands arising from current and future planned growth and the associated public services requirements within the Merced region. Consistent with CEQA, the Campus Parkway environmental document addresses cumulative impacts.

San Joaquin Raptor Center & Protect Our Water-13 – 19

The comments are noted. These statements appear to refer to the previous stages of site selection for the new University of California campus. It is assumed that the "UC 1994 EIR" referred to in these comments is the environmental document that the University of California prepared to support its decision on site selection.

The Campus Parkway Draft EIS/EIR has described and evaluated identified transportation/roadway alternatives with specific alignments and right-of-way requirements. Detailed environmental analyses are included in the Draft EIS/EIR and its supporting technical studies, and have not been deferred. Cumulative impact evaluations for each resource area address other related projects, including the UC Merced Campus.

San Joaquin Raptor Center & Protect Our Water-20

The Campus Parkway Draft EIS/EIR and the environmental evaluations and studies contained therein were prepared in cooperation with Caltrans and FHWA to ensure compliance with their CEQA and NEPA requirements. The Draft EIS/EIR identifies those requirements for each

resource area, such as the procedures for performing the noise impact and abatement analyses, floodplains evaluation, and biological studies. The applicable Caltrans and FHWA guidelines and requirements are also listed in Chapter 8 (References). The technical studies prepared to support the Draft EIS/EIR are listed on page viii. All technical studies were reviewed and approved by Caltrans and FHWA prior to release of the Draft EIS/EIR for public review and comment. The technical studies were available for review during the public comment period for the Draft EIS/EIR and were provided on CD to interested individuals.

San Joaquin Raptor Center & Protect Our Water-21

The Draft EIS/EIR defines the term *expressway* at the beginning of Section 2.3.1. A formal definition that is proposed for adoption in the Merced County General Plan is provided in Table 5.3-1.

San Joaquin Raptor Center & Protect Our Water-22

The City General Plan land use designations along the proposed Campus Parkway alternative alignments are shown in Figure 3.12-1. The General Plan land uses represent the types of land uses planned within the City and County of Merced.

San Joaquin Raptor Center & Protect Our Water-23

The assumptions about land use in future years are based on California Department of Finance population projections, along with City and County General Plan concepts of future land development. The County General Plan, prepared in 1989 and dated 1990, predicted that the population of the City of Merced would be 77,706 in the year 2000. By the year 2000, MCAG issued lower projections for population growth that are listed in the Draft EIS/EIR in Table 3.12-1, including a predicted population of 70,444.

San Joaquin Raptor Center & Protect Our Water-24

The assumptions used to analyze the project's effects on each resource area are explained in the Draft EIS/EIR. For example, Section 3.5 (Noise) describes the methods used for measurements and modeling (including the type of model, measurement locations, noise criteria, and impact thresholds) as well as the assumptions used in the model to generate future noise levels for impact analysis. The Draft EIS/EIR also describes the methods and assumptions used for other resource area impact assessments that required analytical studies or calculations, including air quality (Section 3.4), energy (Section 3.6), and floodplains (Section 3.10). Assumptions regarding study areas for wetlands and other waters of the United States (3.7), biological resources (Sections 3.8 and 3.9), and historical resources (Section 3.18) are detailed in their respective sections of the Draft EIS/EIR.

San Joaquin Raptor Center & Protect Our Water-25

The commenters' opinions are noted. A "threshold analysis" was one of the elements of the technical study performed for traffic, which examined how long a two-lane roadway would provide adequate peak-hour levels of service for each segment of the proposed Campus Parkway. (A segment is the stretch of roadway between intersections, such as Yosemite Avenue to Olive Avenue, Olive Avenue to SR 140, etc.) The threshold used was Level of Service (LOS) D, which is a roadway operating level at which speed and ability to maneuver is severely restricted by increasing density of vehicles. (Figure 1-4 illustrates and defines the different LOS categories.) The analysis provides an indication of the anticipated year when the LOS of Campus Parkway would drop to D conditions and additional roadway capacity would be appropriate. The following table lists the results of the LOS threshold analysis for the alternatives and the projected year when conditions for a two-lane road would decline to LOS D. Two scenarios were used to project future growth for this analysis. Projected growth of the City of Merced based on MCAG and Department of Finance estimated rates, including Phase 1 of the UC Merced Campus, is listed as "With Phase 1 UC." The same growth projection with the addition of projected growth associated with the development of the UC Merced Campus beyond Phase 1 is listed as "With Post-Phase 1 UC."

Projected Year When Two-Lane Campus Parkway Functions at LOS D

Road Segment	Scenario	Green Alignment	Green Alternate	Yellow Alignment
Yosemite Ave. to Olive Ave.	With Phase 1 UC	2020	2021	2023
	With Post-Phase 1 UC	2012	2015	2013
Olive Ave. to SR 140	With Phase 1 UC	2013	2013	2014
	With Post-Phase 1 UC	2013	2012	2013
SR 140 to Childs Ave.	With Phase 1 UC	2017	2017	2019
	With Post-Phase 1 UC	2016	2017	2016
Childs Ave. to Gerard Ave.	With Phase 1 UC	2023	2023	2023
	With Post-Phase 1 UC	2022	2022	2020
Gerard Ave. to SR 99	With Phase 1 UC	2015	2015	2015
	With Post-Phase 1 UC	2015	2015	2015

Growth in population and associated traffic increases are among the needs that the proposed project is intended to address. Additional needs include improving traffic access and circulation, as the roadway network east of Merced has many constraints (see Section 1.2 of the Draft EIS/EIR). Therefore, population projections and growth should not be viewed as the only criteria the project is intended to meet.

San Joaquin Raptor Center & Protect Our Water-26

Each resource area evaluated in the Draft EIS/EIR addresses cumulative impacts from other projects. Sections 3.4.4 (Air Quality), 3.2.4 (Hydrology, Water Quality, Storm Water Runoff), 3.12.3 (Land Use), and 3.17.3 (Visual/Aesthetics) discuss cumulative impacts for the resource areas identified in the comment.

San Joaquin Raptor Center & Protect Our Water-27

The Affected Environment discussions within Chapter 3 of the Draft EIS/EIR (Sections 3.1.1, 3.2.1, 3.3.1, etc.) describe the existing environmental setting for each resource area.

San Joaquin Raptor Center & Protect Our Water-28

The commenters' opinions are noted.

San Joaquin Raptor Center & Protect Our Water-29

Population from the UC Merced Campus beyond its approved Phase 1 stage of development was not included in the analysis of traffic or other resource areas in the Draft EIS/EIR. A "with UC" scenario is evaluated where appropriate or applicable, as discussed in Section 2.3.1.

San Joaquin Raptor Center & Protect Our Water-30

The comment is noted.

San Joaquin Raptor Center & Protect Our Water-31

USEPA and other federal and state agencies were involved in the early consultation on the proposed project. In response to agency comments, the traffic study was updated and reissued on November 30, 2000. An addendum Traffic Report was also issued in July 2004 to updated land use projections to include the Phase 1 portion of the UC Merced Campus, which is now open. Consultation between these agencies and Merced County, Caltrans, and FHWA continued through March 2001. One of the major concerns expressed by the agencies was whether the project would have "independent utility," i.e., whether it would be needed without any other dependent changes, such as the then-proposed UC Merced Campus. The coordination meetings and process concluded the decision to move the northern terminus of Campus Parkway from Bellevue Road to Yosemite Avenue, as a result of additional traffic modeling that did not show demand for a new expressway north of Yosemite Avenue until after the 2025 study year. Including the later phases of the UC Merced Campus and development of the proposed University Community would increase traffic generation considerably and accelerate the need for a new roadway corridor to meet demand. However, it is emphasized that the base case used in the Draft EIS/EIR analysis of impacts did not include development of a UC Merced Campus beyond Phase 1 construction, nor did it include development of the proposed University Community. Consistent with these findings, the "base case" or No Action traffic conditions presented in the Draft EIS/EIR included traffic generated from the first phase of the UC

Merced Campus (which is an approved project, under construction, and opened to students and faculty in September 2005) but not from subsequent UC Merced Campus phases or the proposed University Community.

The change in Campus Parkway's northern terminus resulted in avoidance of most of the wetland areas that had been identified in the project study area. Following the change in the northern terminus, the sponsor agencies (Merced County, Caltrans, and FHWA) and the agencies reviewing the project (USEPA, USACE, USFWS, and RWQCB) concluded the consultation process, and Merced County proceeded to complete the technical studies and prepare the Draft EIS/EIR. The reviewing agencies have provided additional comments about the project as part of the public review process, and those comments are addressed in this Final EIR. As a result of the consultation process, the traffic study used for impact analysis did not rely on or include the UC Merced Campus or University Community as projects in the base case alternatives but did include them in evaluations performed for cumulative analysis.

San Joaquin Raptor Center & Protect Our Water-32 and -33

The population and economic growth projections that were used in the traffic modeling were obtained from MCAG. MCAG was consulted during the development of the modeling and during the preparation of the Draft EIS/EIR. MCAG's projections are based on California Department of Finance population projections, along with input from City and County General Plan concepts or forecasts of future land development. Growth projections from MCAG were included in the Draft EIS/EIR in Table 3.12-1 (see Section 3.12.1, under the heading "Growth"), which shows predicted population increases for the City of Merced in five-year increments through 2025. A total increase of approximately 45,000 residents was projected between 2000 and 2025. The MCAG model distributes traffic throughout the countywide study area based on origin and destinations, taking into account the capacity of the existing roadway network as well as projects that are planned or programmed for future construction. The total traffic generated by the regional and local population is modeled, not just the increase. Roadways that are already at capacity, such as intersections that are experiencing delays, result in traffic diverting to other roadways. For this reason, it does not require significant increases in traffic volumes to impact roads that are already at or near capacity.

San Joaquin Raptor Center & Protect Our Water-34

The 1990 County General Plan projects a population of 77,706 for the City of Merced in the year 2000. MCAG projected a population count of 70,544 people for 2000, as shown in Table 3.12-1, which is not a jump or increase. The County General Plan accounts for the UC Merced Campus, including a UC population beginning in the year 2010. Regardless of the numbers published in the County General Plan, the Campus Parkway modeling used the MCAG model to project conditions at the time the traffic studies were prepared, initially in 2000 with an update in 2004.

San Joaquin Raptor Center & Protect Our Water-35

Merced County Department of Public Works is unaware of the discussions referred to between the California Department of Finance and the City or County. With the limited information included in this comment, it was not possible to develop a response without speculation.

San Joaquin Raptor Center & Protect Our Water-36

The "eastern industrial area" refers to the industrial-zoned lands that are east of the Doane and Hartley Laterals and between Mission Avenue and SR 140. The "areas north of Merced planned for growth" generally refers to the areas north of Yosemite Avenue and north of the older, developed area but still within the existing City of Merced boundary and the City General Plan area. Many of the Specific Use Development Plans that have been approved by the City in recent years or have been proposed and are undergoing review by the City are north of Yosemite Avenue but within the existing city limits. For developments for which environmental review has been conducted (see Table 3-1, near the beginning of Chapter 3), environmental documentation was reviewed and the information used to

address cumulative impacts in the Campus Parkway Draft EIS/EIR. In addition, the traffic modeling for Campus Parkway was based on forecasted future years (i.e., 2015 and 2025), which in turn were based on assumed development in accordance with the General Plan designations. Therefore, the Draft EIS/EIR analyses accounted for both General Plan land use changes and new developments that have been planned, proposed, or approved at the time the Draft EIS/EIR was prepared.

San Joaquin Raptor Center & Protect Our Water-37

The Campus Parkway was not included in the City or County General Plans, as the project was conceived after those plans had been adopted. The current action is a proposed adoption of a General Plan Amendment that will add the Parkway to the County General Plan, following completion of environmental review. The City of Merced will subsequently also need to adopt an amendment that incorporates the alignment selected for the Parkway.

San Joaquin Raptor Center & Protect Our Water-38

The commenters' opinions are noted. The intent of selecting and adopting an alignment for Campus Parkway is to establish a route that serves traffic needs before planned development takes place and renders it more difficult, disruptive, and expensive to obtain right-of-way for a new roadway.

San Joaquin Raptor Center & Protect Our Water-39 – 41

The comments and opinions are noted.

San Joaquin Raptor Center & Protect Our Water-42

The Draft EIS/EIR used growth projections to predict future traffic conditions, assuming development of the city and county land uses forecast through the study years 2015 and 2025. Studies for the Draft EIS/EIR also addressed growth conditions for those study years with and without development of the UC Merced Campus beyond Phase 1 and the housing and community development envisioned in the University Community Plan. These assumptions were the basis for the traffic modeling, the results of which were used to address traffic, air quality, and noise impacts (as these relate directly to growth in housing and other planned land uses). The potential for the development cited in this comment was therefore included in the evaluations conducted for the Draft EIS/EIR.

San Joaquin Raptor Center & Protect Our Water-43 – 48

The comments are noted; however, it appears that they are directed toward the General Plan and its policies rather than to the Campus Parkway Draft EIS/EIR.

San Joaquin Raptor Center & Protect Our Water-49

The commenters' opinions are noted. The proposed projects referred to in this comment do not have to be constructed together to serve their individual purposes. See Response to San Joaquin Raptor Center & Protect Our Water-2. The cumulative impacts of the various projects have been discussed for each resource area throughout Chapter 3 of the Draft EIS/EIR.

San Joaquin Raptor Center & Protect Our Water-50 – 53

Alternatives were considered for the Campus Parkway project, including a set of alternatives that were evaluated but withdrawn from further consideration (see Section 2.5) and a No Action alternative and three build alternatives that are fully evaluated and discussed in the Draft EIS/EIR (see Sections 2.2.2 through 2.2.4 and Section 2.4). The alternatives focus on actions that can meet the stated purpose and need issues in Merced (Sections 1.1 and 1.2), such as correcting the lack of connectivity of roads and the need for additional roadway capacity to accommodate future growth. The UC Merced Campus is already open to students under Phase 1 of its development plan. If a campus were to be constructed in Fresno or any other location, the alternatives and environmental analysis presented in the Campus Parkway Draft EIS/EIR would not change, as the EIS/EIR did not assume construction of campus facilities past Phase 1, and it evaluated further buildout of the campus as part of the cumulative impact evaluations.

San Joaquin Raptor Center & Protect Our Water-54 – 57

The Draft EIS/EIR addresses impacts to endangered species in Section 3.9. Impacts to potential endangered species from each of the proposed build alternatives would be similar and can be avoided or mitigated. The Draft EIS/EIR also addresses impacts to Section 404 resources such as waters of the United States, which include wetlands (Section 3.7). Consultation with the USACE, which issues permits for Section 404 activities, has been performed for the first steps of wetland delineation and for impact and mitigation identification (see Chapter 5 and Section 5.3). Also see Response to San Joaquin Raptor Center & Protect Our Water-2.

San Joaquin Raptor Center & Protect Our Water-58 – 59

The comment is noted.

San Joaquin Raptor Center & Protect Our Water-60

The Draft EIS/EIR and its technical studies were based on a review of many of the documents identified in the comment, which are already referenced in the Draft EIS/EIR.

San Joaquin Raptor Center & Protect Our Water-61

The comment is noted.

San Joaquin Raptor Center & Protect Our Water-62

The Draft EIS/EIR includes mitigation measures for the impacts identified in the document. Mitigation measures are listed in Table S-2 of the Summary (Section S.3), addressed for each resource area evaluated in Chapter 3, and summarized in Section 4.3 in regard to CEQA compliance.

San Joaquin Raptor Center & Protect Our Water-63

Mitigation measures will be required under the proposed project and will be specified as actions that are adopted in a mitigation monitoring plan. The measures will be based on the results of the environmental review process and will be an action that ultimately is approved by the County Board of Supervisors.

San Joaquin Raptor Center & Protect Our Water-64

The commenters are referred to the UC Merced Campus and University Community environmental documents.

San Joaquin Raptor Center & Protect Our Water-65

Section 3.7 of the Draft EIS/EIR discusses wetlands in the proposed project vicinity and the project's potential impacts to wetlands.

San Joaquin Raptor Center & Protect Our Water-66

Impacts to water quality from erosion are evaluated and described in Section 3.2. Section 3.2.5 discusses the regulatory requirements for construction and water quality protection with which the project must comply.

San Joaquin Raptor Center & Protect Our Water-67 – 69

The commenters are referred to the UC Merced Campus and University Community environmental documents.

San Joaquin Raptor Center & Protect Our Water-70 – 71

The comments regarding the General Plan are noted.

San Joaquin Raptor Center & Protect Our Water-73

See Response to San Joaquin Raptor Center & Protect Our Water-37.

San Joaquin Raptor Center & Protect Our Water-74 – 79

Consistency with the adopted City and County General Plans, which are in place at the time this project is being considered, is discussed in Section 3.12 of the Draft EIS/EIR. Approval of the proposed project will require an amendment of the County General Plan for adoption of an expressway, as described in Section 5.3.1.

San Joaquin Raptor Center & Protect Our Water-80 and -81

The commenters' opinions are noted.

San Joaquin Raptor Center & Protect Our Water-82

The commenters' opinions are noted. The Draft EIS/EIR discusses the effects of growth on the groundwater supply in Section 3.2.4.

San Joaquin Raptor Center & Protect Our Water-83

The commenters' opinions are noted.

Comment: Ralph Temple, University Community Land Company, LLC

Testimony
Campus Parkway Public Hearing
Merced County Board of Supervisors
Tuesday, June 21, 2005
5:30 p.m.
County Building, 2222 M Street

Good evening, I am Ralph Temple, attorney at law and chairman of the University Community Land Company, LLC, which owns the northern 1,240 acres of the proposed University Community. The University Community Land Company is a 50:50 partnership between the University of California and the Virginia Smith Trust. The UCLC governing board recognizes the extensive work of the County, in conjunction with the Federal Highway Commission and Caltrans, in advancing the planning for the Campus Parkway project.

1 The University Community is being planned as a contiguous development supportive of the UC Merced campus. The campus will add greatly to the economic prosperity of the region and provide access to a research university education for Central Valley students. The University Community is critical to the development of the campus since the lessons of history at mature UC campuses consistently point to the need for housing for faculty, staff, and students contiguous to the campus over the long term. The University Community will also provide retail services needed by the campus, entertainment venues, schools, a business park, and other features. Finally, the University Community will serve as a model of environmentally sustainable development, reducing urban sprawl, traffic, air pollution, and other adverse environmental impacts.

The UCLC Board is pleased to express support for the development of the Campus Parkway, which would connect State Route 99 through the Mission Avenue Interchange to Yosemite Avenue and Lake

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UCLC Testimony
Page 2

Road. In evaluating the options presented, the UCLC urges that the terminating point of the proposed expressway be located near the intersection of Lake Road and Yosemite. The City of Merced is growing rapidly to the north and east. The UC Merced campus and the University Community, along with many other entities, will benefit from the proposed Parkway in terms of more effective transportation.

1 cont. More specifically, the proposed Parkway represents a significant improvement to the regio.ıal transportation profile and will provide a boost to businesses requiring an efficient transportation link. The roadway will also help attract new businesses to the area which, in turn, will contribute to the economic prosperity of the area.

Thank you for the opportunity to comment on this matter before the Board of Supervisors. We are continuing our review of the Campus Parkway draft EIR/EIS documents recently made available and may provide a letter at a later date containing further comments.

Response: Ralph Temple, University Community Land Company, LLC

University Community Land Company (Temple)-1

The commenter's opinion is noted.

Comment: Lindsay A. Desrochers, University Community Land Company, LLC

Testimony
Campus Parkway Public Hearing
Merced County Board of Supervisors
Tuesday, June 21, 2005
5:30 p.m.
County Building, 2222 M Street

Good evening, I am Lindsay A. Desrochers, Vice Chancellor for Administration at the University of California, Merced, 1715 Canal Street, Merced. I also serve on the governing board of the University Community Land Company, LLC, which owns the northern 1,240 acres of the proposed University Community. Chancellor Carol Tomlinson – Keasey also extends her greetings and her con:mendation for the work of the County, in conjunction with the Federal Highway Commission and Caltrans, in bringing forward the planning for the Campus Parkway project. The UC Merced campus will open to serve our first 1,000 students in the Fall of 2005.

1 The County has engaged in a lengthy and comprehensive planning process for the Campus Parkway, and I am pleased to express support for the development of this proposed expressway that would connect State Route 99 through the Mission Avenue Interchange to Yosemite Avenue and Lake Road. In examining the options presented, the University recommends that the culminating point of the expressway be located near the intersection of Lake Road and Yosemite. The City of Merced is growing rapidly to the north and east. The UC Merced campus and the University Community, along with several other sectors, will benefit from the proposed Parkway in terms of more efficient transportation.

6/17/05

Testimony (Lindsay Desrochers)
Page 2

In summary, we support the proposed Campus Parkway development and recognize that it will be an important improvement to the regional transportation picture and will provide a boost to businesses requiring an efficient transportation link. It also will be a significant improvement that should aid in convincing new businesses to located in Merced; thereby contributing to the economic betterment of the region.

1 cont.

Thank you for the opportunity to comment on this matter before the Board of Supervisors. We are continuing our review of the Campus Parkway draft EIR/EIS documents recently made available and may provide a letter at a later date containing further comments.

Response: Lindsay A. Desrochers, University Community Land Company, LLC

University Community Land Company (Desrochers)-1

The commenter's opinion is noted.

Comment: Carol Witham, VernalPools.Org

:Carol Witham FAX NO. :9164525440 Jul. 05 2005 03:20PM P1

VernalPools.Org

dedicated to saving California's vernal pool landscapes

July 5, 2005

Mr. Stephen Rough, Engineer
Merced County Public Works Department
345 W. 7th Street
Merced, CA 95340

VIA FAX (209) 722-7690
AND srough@co.merced.ca.us

Subject: Draft EIS/EIR for the Campus Parkway Project
RPHP21L-0484, EA 10-4A0701L

Dear Mr. Rough,

I am writing in response to the Draft EIS/EIR distributed on May 6, 2005 for the Campus Parkway, Merced County.

My primary concerns with the DEIS/DEIR are not with the document itself, but rather with some of the premises behind the project and the document. The Campus Parkway project as described in the DEIS/DEIR is not now and has never been an independent project.

California Environmental Quality Act (CEQA) Guidelines Article 20 § 15378 and National Environmental Policy Act (NEPA) regulations at 40 CFR § 1502.4 require that a project be properly defined and that the whole of an action be included in the project definition. The proposed Campus Parkway is, by name and by funding under the Transportation Equity Act for the 21st Century (TEA-21), a dependent component of the proposed UC Merced campus and associated community project. Additionally, the Endangered Species Act specifies that "...the federal agency and any applicant shall make no irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternatives which would avoid violating the ESA" (50 CFR § 402.09). CEQA, NEPA and the ESA prohibit piecemeal planning and require that multiple proposals which are in effect a single course of action be considered a single project for the purposes of environmental review.

1

Numerous previous documents, and the DEIS/DEIR itself, show a "beltway" to serve the new UC Merced Campus and proposed Campus Community. In the document, Figure 2.1-1 is particularly telling in that it shows this beltway project as being segmented into three separate projects (Campus Parkway, University Community Roadway System, and Atwater-Merced Expressway). Coupled with the fact that the UCM environmental review and the Campus Community environmental review have also been undertaken as "separate" projects, this appears to be a purposeful segmenting of the entire project in violation of the letter and the spirit of state and federal resource protection and public disclosure laws.

It is disingenuous and probably downright fraudulent to segment out the least environmentally troublesome portion of the "beltway" project to review and permit first. By doing so, the lead agencies are predetermining the initial alignment of the Campus Parkway through the University Community Planning Area (UCPA). The UCPA, according to the DEIS/DEIR supporting documents, is full of endangered species. If the lead agencies approve an alignment now, before the UCPA has undergone all of its required federal permitting and review, the action would constitute an irreversible or irretrievable commitment of resources which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternatives which would avoid violating the ESA.

FROM :Carol Witham FAX NO. :9164525440 Jul. 05 2005 03:20PM P2

Campus Parkway DEIS/DEIR Comments
Carol Witham, VernalPools.Org
Page 2 of 2, July 5, 2005

2 I urge the County of Merced, CalTrans and the Federal Highway Administration to withdraw this Draft document and to prepare a more comprehensive document that considers all the environmental impacts of the entire "beltway" project including portions being attributed to the UCPA. All of these projects are interrelated.

Sincerely,

Carol W. Witham, Coordinator
VernalPools.Org
1141 37th Street
Sacramento, CA 95816
(916) 452-5440

Response: Carol Witham, VernalPools.Org

VernalPools.Org-1, -2

The commenter's opinion is noted. The Campus Parkway project has proceeded as an individual project that serves a need for transportation access and capacity improvements separate from the other undertakings cited in this comment. See Response to San Joaquin Raptor Center & Protect Our Water-2.

The Campus Parkway alternative alignments provide the flexibility to integrate with the roadway system that may ultimately be developed for the University Community. Draft plans for the University Community have shown a roadway that would align toward the western extent of the University Community study area and join with either the Green Alternate Alignment or the Green Alignment of the Campus Parkway. If the Yellow Alignment is selected for the Campus Parkway, the University Community Plan can integrate a roadway that still curves westward at its southern extent. As noted in Response to Lennar Communities-1, -2, and -3, the alignments for the University Community roadways are conceptual at this time, and a plan has not been adopted that sets forth any roadway locations.

G.6 Comments from Public Agencies

Comments received from federal, state, and local agencies are presented below in alphabetical order by agency name. Individual issues within each comment submission are numbered (e.g., Agency Name-1, Agency Name-2, etc.). Responses follow each comment submission.

Name of Organization or Business	Signatory	Address	City	Date of Comment
California Regional Water Quality Control Board	Lisa Gymer	1685 E Street	Fresno	5/9/2005
City of Merced	Hubert Walsh	678 W. 18th Street	Merced	7/5/2005
Office of the Governor	none	Governor Arnold Schwarzenegger	Sacramento	5/12/2005
San Joaquin Valley Air Pollution Control District	Hector R. Guerra	none		6/30/2005
State of California, Department of Conservation	Dennis J. O'Bryant	801 K Street, MS 18-01	Sacramento	6/2/2005
State of California, Department of Transportation	Jay Norvell	P.O. Box 942874	Sacramento	5/18/2005
State of California, Department of Water Resources	DeeDee Jones	P.O. Box 942836	Sacramento	5/3/2005
State of California, Office of Planning and Research	Scott Morgan	P.O. Box 3044	Sacramento	5/6/2005
State of California, Office of Planning and Research	Terry Roberts	P.O. Box 3044	Sacramento	7/6/2005
University of California, Merced	Lindsay A. Desrochers	P.O. Box 2039	Merced	7/5/2005
U.S. Department of Commerce, NOAA	Michael E. Aceituno	650 Capitol Mall, Suite 8-300	Sacramento	6/13/2005
U.S. Environmental Protection Agency	Laura Fujii	75 Hawthorne Street	Merced	6/24/2005

Comment: Lisa Gymer, California Regional Water Quality Control Board

California Regional Water Quality Control Board
Central Valley Region
Robert Schneider, Chair

Alan C. Lloyd Ph.D.
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

Fresno Branch Office
1685 E Street, Fresno, California 93706
Phone (559) 445-5116 • FAX (559) 445-5910
http://www.waterboards.ca.gov/centralvalley

9 May 2005

Steven Rough
Merced County Public Works Department
345 West 7th Street
Merced, CA 95340

DRAFT ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL IMPACT REPORT, CAMPUS PARKWAY PROJECT, SCH# 2000121003, MERCED COUNTY

Your request for comments on the Draft Environmental Impact Statement / Environmental Impact Report (EIS / EIR) for the Campus Parkway Project was received on 25 April 2005. The proposed project is to construct a four-lane limited-access expressway on the east side of the City of Merced that would connect State Route 99 near Mission Avenue to Yosemite Avenue.

1 This Draft EIS / EIR document indicates disturbances to creeks and wetlands. If the project will result in the discharge of dredged or fill material into wetlands that are determined by the Corps to be non-jurisdictional, the County will not be required to obtain a Section 401 Water Quality Certification, but may be required to submit a report of waste discharge (RWD) if the wetlands are waters of the State. The Regional Board will either prescribe waste discharge requirements (WDRs) that will incorporate measures to mitigate potentially significant impacts to water quality and potential public nuisances or issue a waiver of WDRs.

Thank you for the opportunity to comment on this Draft Environmental Impact Statement / Environmental Impact Report. If you have any questions regarding our comments, please call me at (559) 445-6046.

LISA GYMER
Environmental Scientist

cc: State Clearinghouse, Sacramento

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MAY 10 2005
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DPW/PROFESSIONAL SERVICES DIVISION

C:\ceqa\campusparkway.doc

California Environmental Protection Agency

Recycled Paper

Response: Lisa Gymer, California Regional Water Quality Control Board

RWQCB-1

The Campus Parkway would impact wetland features that are both jurisdictional and nonjurisdictional with respect to Section 404 of the Clean Water Act. Within the rights-of-way of the alternative alignments, one area of irrigated pastureland has been confirmed by the U.S. Army Corps of Engineers (USACE) as meeting the definition and characteristics of an isolated wetland (see discussion of Cultivated Wetlands in Section 3.7.1). Ultimately, applications for permits from both the USACE and Regional Water Quality Control Board will be filed, at which time applicable requirements would be determined. Section 5.3.8 of the Final EIR has been revised to include the potential requirement to submit a report of waste discharge for effects to wetlands that are waters of the State.

Comment: Hubert Walsh, City of Merced

CITY OF MERCED
"Gateway to Yosemite"

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RECEIVED JUN 23 2005 MERCED COUNTY DEPUTY CLERK BOS

July 5, 2005

The Honorable Jerry O'Banion
Chairperson of the Board of Supervisors
Merced County Administrative Building
2222 M Street
Merced, CA 95340

Mr. Paul Fillebrown
Director of Merced County Dept. of Public Works
345 W 7th Street
Merced, CA 95348

RE: Comments on the Campus Parkway Draft Environmental Impact Report (May 2005)

Dear Chairperson O'Banion and Mr. Fillebrown:

INTRODUCTION

The City of Merced would like to thank the Merced County Board of Supervisors for the opportunity to comment on the Campus Parkway Draft Environmental Impact Report, May 2005. From the beginning of this long process, the City of Merced has supported the development of the Campus Parkway wholeheartedly and continues to do so enthusiastically today. We appreciate the efforts and dedication of the County staff in working towards this project and we respectfully submit the following comments to seek clarification of certain topics that are of particular interest to the City. Through these comments, the City hopes to continue the ongoing cooperative planning process with respect to the proposed parkway.

COMMENTS ON THE ENVIRONMENTAL IMPACT REPORT

Continuous Left-Turn Lane:

1 The potential construction of a continuous left-turn lane is proposed during interim phases of development. Except at the Parkway's intersection with Coffee Street, Gerard Avenue, Childs Avenue, Highway 140, Olive Avenue and Yosemite Avenue, the provision for a left-turn lane in the road segments *between* these intersections is not consistent with the project description of the Campus Parkway being a "limited access expressway." The construction of, and reference to, a lane that by definition allows left-turns anywhere along the Parkway should be approached with caution or avoidance to preclude any precedent, use, or assumption that access other than at the intersections is allowable. Alternative designs should include a median or other design that precludes left-turn lanes except at the above listed intersections.

678 West 18th Street • Merced, California 95340

Steve R.

Letter re: Campus Parkway Draft Environmental Impact Report (May 2005)
July 5, 2005
Page 2

Highway 140 On and Off-Ramps:

2 With respect to the construction of a connection on the west side of the Campus Parkway on the north side of State Highway 140, the City requests that the County give due consideration for the best long-term circulation design given the relatively short term nature of the land held under a Williamson Act contract versus the safety and operational efficiency of the long-term use of the connection by millions of vehicle trips over the life of the parkway. The cumulative impacts in safety, air quality and traffic congestion would seem to far outweigh the short-term protection of a short-term contract.

Bike, Pedestrian and Transit Facilities

3 The portion of the Project within the City's SUDP is within an urban setting containing, or planned to contain, a relatively high population density in close proximity to jobs and community facilities and services. While the EIR addresses vehicular traffic impacts, it does not address other modes of transportation. The *Merced Vision 2015 General Plan* contains numerous goals and policies that elevate the importance and utility of these facilities in the design and development of an effective transportation system. To be fully compliant with CEQA, the Project EIR needs to contain an analysis of alternate forms of transportation and the Project's impact to them. The Project description should include provisions for bike lanes, at grade pedestrian crossings at Childs, Gerard and Coffee Street, as well as designs for transit service. Since these features are lacking in the Project and the EIR, the City respectfully requests that analysis and appropriate mitigation be included in FEIR addressing that portion of the Project within the City's SUDP.

Miscellaneous

The City would also like to offer the following minor corrections/clarifications to the Campus Parkway Project:

4 • Permits: The EIR needs to recognize two additional permits (Page S-vii) required to implement the Project: (1) the City's Circulation Element of the *Merced Vision 2015 General Plan* will need to be amended to include the parkway; and (2) an encroachment permit will be needed from the City of Merced for Merced County Public Works to construct the parkway on City rights-of-way.

5 • Responsible Agency: As a responsible agency, the Merced City Council will need to make its own findings and conclusions regarding this environmental document respective to the amendment of its official circulation map in the *Merced Vision 2015 General Plan*. As such, particular attention to City comments is necessary as the City is required to utilize the Draft EIR as a basis for such determination.

6 • Figure 1-3, Correction Needed: The Figure does not include Parsons Avenue and extensions thereto, which will be a future street servicing much of the traffic from the planned growth areas from the City of Merced.

Letter re: Campus Parkway Draft Environmental Impact Report (May 2005)
July 5, 2005
Page 3

7 • Current Data: While true in 2001, the statement that there are no approved, proposed or planned developments in the study area south of Highway 140 (page 3-168), the EIR should be amended to reflect the development activity that began in 2003 and continues today. These projects have placed single-family residential developments near the proposed alignment of the Project. Recognizing that drafting of the document began in 2001, the 2005 Draft should include the most current information. City staff would be happy to provide you with a list of these projects for your use upon request.

CONCLUSION

In conclusion, the City of Merced would like clarification of issues identified in the comment letter relating to the Campus Parkway Draft Environmental Impact Report. The City appreciates the hard work and dedication of County staff, and is confident of achieving mutual resolution of all concerns regarding this important Project.

If you have any questions regarding these comments, please contact me or City Manager James G. Marshall at (209) 385-6834. You may also contact the City's Director of Development Services Jack Lesch at (209) 385-6858. Again, thank you for the opportunity to allow the City to comment on the Campus Parkway Draft Environmental Impact Report.

Sincerely,

Hubert "Hub" Walsh
Mayor

cc: Board of Supervisors
Merced City Council
Dee Tatum, County Administrator
Bill Nicholson, Planning & Community Development Director
James G. Marshall, City Manager

Response: Hubert Walsh, City of Merced

City of Merced-1

The reference to the continuous left-turn lane has been deleted from Section 2.3.1 of the Final EIR. The first phase of the project would have left-turn lanes at the intersections only, but not along the midblock portions of the roadway.

City of Merced-2

Merced County's preference to locate the proposed Campus Parkway connector north of SR 140 is described in Section 2.3.2 of the Draft EIS/EIR. The California Department of Conservation letter (see below) noted that the federal and state sponsorship of the project allows for a public acquisition process with regard to Williamson Act land. Therefore, the status of any parcels under the Williamson Act does not preclude them from being considered for the location of the project. Agricultural lands would be impacted by the connector road to SR 140 regardless of whether it is constructed on the east or west side of the Parkway. An important factor for locating the connector on the east side of the Parkway was the presence of a canal to the west, which would require construction of a bridge structure for the connector and the associated increase in project costs.

City of Merced-3

The project's design includes bicycle and pedestrian facilities. Section 2.3.1 of the Draft EIS/EIR notes that bike lanes and pedestrian sidewalks would be included, and they are shown in the typical cross section diagram in Figure 2.3-1. In the event of restricted funding and construction of the project in phases, Phase 1 would temporarily not include a separated Class I bike lane but would accommodate an 8-foot shoulder on each side of the roadway. At-grade crossings are proposed at the intersections with Childs Avenue, Gerard Avenue, and Coffee Street, which would be controlled by traffic signals that allow for pedestrian crossing. The Parkway can accommodate transit service, although pullouts are not included as they are more consistent with local streets and not with a higher-speed expressway.

City of Merced-4

These approvals have been added to Section 5.3.1 of the Final EIR. This section has also been renamed from "General Plan Amendment" to "County and City Approvals."

City of Merced-5

The comment is noted. All of the City of Merced's comments have been reviewed and responded to.

City of Merced-6

Parsons Avenue is labeled on Figure 1-3, which was intended as a background map based on the existing circulation network. At the time of the preparation of this document, no funding exists for an extension of Parsons Avenue.

City of Merced-7

The paragraph identified in the comment (Section 3.12.1, under the heading "Growth," page 3-168 of the Draft EIS/EIR) has been updated to reflect recent development. The beginning of Chapter 3 describes current land use developments and planning. The discussion includes a figure and table that show current approved and proposed developments within the City of Merced, based on information obtained from the City of Merced Planning Department in October 2004. The text identified in the comment has been revised to refer to the discussion in Chapter 3.

Comment: Office of the Governor

OFFICE OF THE GOVERNOR

May 12, 2005

Mr. Steven Rough
Supervising Engineer
Merced County
345 West 7th Street
Merced, California 95340

Dear Mr. Rough,

Thank you for your letter requesting assistance with the State's comments for your EIR. Governor Schwarzenegger appreciates hearing from his constituents on matters that are important to them.

1 On behalf of the Governor, we have directed your correspondence to the proper agency/department for review and investigation. You will hear directly from their representatives within the next 45 days. Should this time period expire, please contact the Governor's Constituent Affairs Office at:

Office of the Governor
State Capitol
Sacramento, California 95814

Thank you for your patience as this office will take all steps necessary to bring about the aid you are seeking.

Office of Constituent Affairs

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MAY 13 2005
MERCED COUNTY
DPW/PROFESSIONAL SERVICES DIVISION

GOVERNOR ARNOLD SCHWARZENEGGER • SACRAMENTO, CALIFORNIA 95814 • (916) 445-2841

Response: Office of the Governor

Office of the Governor-1

Comments received from state agency/department representatives are presented and addressed in this appendix.

Comment: Hector R. Guerra, San Joaquin Valley Air Pollution Control District

San Joaquin Valley
Air Pollution Control District

June 30, 2005

Ref. No.: N20050380

Mr. Steve Rough
Project Engineer
Merced County Public Works Department
345 West 7th Street
Merced, CA 95340

Re: DEIR/DEIS Proposed New Expressway (Campus Parkway)

The San Joaquin Valley Air Pollution Control District (District) has reviewed the Draft Environmental Impact Report (DEIR) forwarded by the County of Merced regarding the DEIR/DEIS Proposed New Expressway (Campus Parkway) (Project). The DEIR/DEIS appropriately addresses the Project's potential impact on Air Quality. This project will be subject to District rules and regulations.

1 The mitigation discussed in section 3.4.5 Mitigation Measures contains a limited discussion of Regulation VIII requirements. Please be advised that Regulation VIII was updated in August and September of 2004, and implemented on October 1, 2004. In many instances requirements of Regulation VIII have been paraphrased in the DEIR and do not fully convey the minimal requirements of the rules. Also, a glaring omission is the requirement for a Dust Control Plan. Rule 8021, section 6.3 Dust Control Plans, essential requires a non-residential project 5.0 or more acres in area to submit a Dust Control Plan as specified in Section 6.3.1 of Rule 8021. If a non-residential site is 1.0 to less than 5.0 acres, an owner/operator must provide written notification to the District at least 48 hours prior to his/her intent to begin any earthmoving activities (see section 6.4.2). A template of the District's Dust Control Plan is available at: http://www.valleyair.org/busind/comply/PM10/forms/DCP-Form%20-%2010-14-2004.pdf In order to avoid District compliance action, it would behoove the project proponents to thoroughly comprehend the full extent of Regulation VIII requirements.

2 Section 3.4.5 Mitigation Measures also summarizes construction equipment emissions. The District recommends that the following, more specific mitigations be incorporated into the Final EIR/EIS:

- Use California Air Resources Board (CARB) certified alternative fueled engines in construction equipment and/or buses where practicable. Alternative fueled equipment may be powered by Compressed Natural Gas (CNG), Propane (LPG), electric motors, or other CARB certified off-road technologies. To find engines certified by the California Air Resources Board, see their certification website http://www.arb.ca.gov/msprog/offroad/cert/cert.php.

2 Cont.

- Construction equipment should have engines that meet the current off-road engine emission standard (as certified by the California Air Resources Board), or be re-powered with an engine that meets this standard. Tier I and Tier II engines have significantly less NOx and PM emissions compared to uncontrolled engines. To find engines certified by the California Air Resources Board, see http://www.arb.ca.gov/msprog/offroad/cert/cert.php. This site lists engines by type, then manufacturer. The "Executive Order" shows what Tier the engine is certified as.
- Diesel equipment should use verified alternative diesel fuel blends, biodiesel, or Ultra Low Sulfur Diesel (ULSD). The California Air Resources Board (CARB) has verified specific alternative diesel fuel blends for NOx and PM emission reduction. Only fuels that have been verified by CARB should be used. Information on alternative diesel blends can also be found at CARB's website: http://www.arb.ca.gov/fuels/diesel/altdiesel/altdiesel.htm. Information on biodiesel can be found on the EPA's website http://www.epa.gov/oms/models/biodsl.htm.
- Idle reduction technologies save fuel and reduce diesel emissions from idling trucks and construction equipment. The applicant should incorporate idle reduction strategies that reduce the main propulsion engine idling time through alternative technologies. Examples of such technologies can be found on the U.S. Environmental Protection Agency's website: http://www.epa.gov/otaq/smartway/idlingtechnologies.htm. Idle reduction mitigation measures include:
- Require that all diesel engines be shut off when not in use on the premises to reduce emissions from idling.
- Light Duty Cars and Trucks should be alternative fueled or hybrids.

3 Other rules that will apply include:

Rule 4103 (Open Burning) regulates the burning of agricultural material. Agricultural material shall not be burned when the land use is converting from agriculture to nonagricultural purposes. In the event that the project burned or burns agricultural material, it would be in violation of Rule 4103 and be subject to District enforcement action.

Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). If asphalt paving will be used, then paving operations of this project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Asbestos In the event that any portion of an existing building will be renovated, partially demolished or removed, the project will be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants). Prior to any demolition activity, an asbestos survey of existing structures on the project site may be required to identify the presence of any asbestos containing building material (ACBM). Any identified ACBM having the potential for disturbance must be removed by a certified asbestos-contractor in accordance with CAL-OSHA requirements. If you have any questions concerning asbestos related requirements, please contact Mr. Dwayne England of this office at (559) 230-5973, or contact CAL-OSHA at (559) 454-1295. An Asbestos Requirements Bulletin has been enclosed for the applicant.

Mr. Steve Rough *June 30, 2005*
DEIR/DEIS Proposed New Expressway (Campus Parkway) *Page 3 of 3*

3 Cont. Finally, if a portable concrete batch plant will be utilized, a District permit will also be necessary.

If you have any questions or require further information, please call me at (559) 230-5807 and provide the reference number at the top of this letter.

Sincerely,

Hector R. Guerra
Senior Air Quality Planner

c: file

Response: Hector R. Guerra, San Joaquin Valley Air Pollution Control District

SJVAPCD-1

Text has been added to Section 3.4.5 (under the heading "Construction") to identify the need for a dust control plan to be developed and approved prior to construction. The requirements for the dust control plan are also referenced.

SJVAPCD-2

The suggested mitigation measures have been summarized and added to Section 3.4.5 (under the heading "Construction"). These measures are not requirements but can be considered at the time the contract is bid and awarded.

SJVAPCD-3

Open burning for land clearance would not be performed as part of the proposed project. The applicable rule and the requirements for asphalt and asbestos have been included in the Final EIR. If a portable concrete batch plant is needed, a permit would be obtained by the contractor from the San Joaquin Valley Air Pollution Control District.

Comment: Dennis J. O'Bryant, California Department of Conservation

STATE OF CALIFORNIA, RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

DEPARTMENT OF CONSERVATION

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • FAX 916 / 327-3430 • TDD 916 / 324-2555 • WEB SITE conservation.ca.gov

RECEIVED JUN - 8 2005 MERCED COUNTY DPW/PROFESSIONAL SERVICES DIVISION

TO: Project Coordinator
Resources Agency

Steven E. Rough, Project Engineer
Merced County Public Works
345 West 7th Street
Merced, CA 95348

FROM: Dennis J. O'Bryant, Acting Assistant Director
Department of Conservation, Division of Land Resource Protection

DATE: June 2, 2005

SUBJECT: Draft Environmental Impact Statement/Environmental Impact Report (DEIS/DEIR) for the Campus Parkway Project
SCH# 2000121003

The Department of Conservation's Division of Land Resource Protection (Division) monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. The Division has reviewed the above DEIS/DEIR addressing construction of a new four-lane expressway serving the City and County of Merced and the University of California (Merced) Campus and has the following comments.

California Land Conservation (Williamson) Act

1 The DEIS/DEIR notes, on Page 3-182, that two parcels under Williamson Act contract in the project area cannot be converted from their agricultural use without incurring a tax penalty. While this is true in most cases, the proposed project is a Caltrans and Federal Highway Administration project and the public acquisition process, if properly executed, can be used. The public acquisition process requires that the Department of Conservation be notified at the time of consideration of public acquisition of contracted lands and then requires subsequent notification, including findings, after acquisition. The public acquisition process is summarized on the attached sheet.

The Department of Conservation's mission is to protect Californians and their environment by: Protecting lives and property from earthquakes and landslides; Ensuring safe mining and oil and gas drilling; Conserving California's farmland; and Saving energy and resources through recycling.

Loss of Farmland and Mitigation Measures

The DEIS/DEIR notes that Merced County has no policy that standardizes mitigation for loss of farmland throughout the county. The DEIS/DEIR further notes that mitigation for the proposed project will be in accordance with an adopted agricultural mitigation program only if the program is adopted countywide and in time for construction of the project.

The Division recommends that the purchase of agricultural conservation easements on land of at least equal quality and size be considered as a mitigation measure for partial compensation for the direct loss of agricultural land, as well as for the mitigation of growth inducing and cumulative impacts on agricultural land. We highlight this measure because of its growing acceptance and use by lead agencies as mitigation under the California Environmental Quality Act.

Mitigation using conservation easements can be implemented by at least two alternative approaches: the outright purchase of conservation easements tied to the project, or via the donation of mitigation fees to a local, regional or statewide organization or agency, including land trusts and conservancies, whose purpose includes the purchase, holding and maintenance of agricultural conservation easements. Whatever the approach, the conversion of agricultural land should be deemed an impact of at least regional significance and the search for mitigation lands conducted regionally, and not limited strictly to lands within the project area. The Division recommends that the county contact the newly formed Central Valley Farmland Trust (Bill Martin (916) 687-3178)) regarding the potential for utilizing agricultural conservation easements as partial mitigation for the loss of farmland in Merced County. 2

The Division's California Farmland Conservancy Program (CFCP) is also available to provide financial assistance, in the form of grants, for acquisition of conservation easements on agricultural lands under pressure of being converted to non-agricultural uses; temporary purchase of agricultural lands that are under pressure of being converted to non-agricultural uses, as a phase in the process of placing an agricultural conservation easement; restoration of and improvements to agricultural land already under easement; and agricultural land conservation planning and policy projects. CFCP's financial assistance is not available or applicable as a direct California Environmental Quality Act mitigation measure for loss of agricultural land. Please contact Charles Tyson, CFCP Program Manager, at (916) 324-0862, for further assistance on establishing or funding agricultural conservation easements or for establishing a conservation easement program.

Thank you for the opportunity to comment on the DEIS/DEIR. If you have questions on our comments, or require technical assistance or information on agricultural land conservation, please contact the Division at 801 K Street, MS 18-01, Sacramento, California 95814; or, telephone (916) 324-0850.

Attachment

cc: East Merced RCD
2135 Wardrobe Avenue, Suite C
Merced, CA 95340

ACQUISITION NOTIFICATION PROVISIONS OF THE WILLIAMSON ACT

Notification provisions of the Williamson Act (Government Code Section 51291) require an agency to notify the Director of the Department of Conservation of the possible acquisition of Williamson Act contracted land for a public improvement. Such notification must occur when it **appears** that land enrolled in a Williamson Act contract may be required for a public use, is **acquired,** the original public improvement for the acquisition is **changed**, or the land acquired is **not used** for the public improvement. The local governing body responsible for the administration of the agricultural preserve must also be notified..

NOTIFICATION (Government Code Section 51291 (b))

The following information must be included in the notification correspondence.

1. The total number of acres of Williamson Act contracted land to be acquired and whether the land is considered prime agricultural land according to Government Code Section 51201.
2. The purpose for the acquisition and why the land was identified for acquisition. (If available, include documentation of eminent domain proceedings or a property appraisal and written offer in lieu of eminent domain per GC §§7267.1 and 7267.2 to void the contract per GC §51295; include a chronology of steps taken or planned to effect acquisition by eminent domain or in lieu of eminent domain.)
3. A description of where the parcel(s) is located.
4. Characteristics of adjacent land (urban development, Williamson Act, noncontract agricultural, etc.)
5. A vicinity map and a location map (may be the same as #8).
6. A copy of the contract(s) covering the land.
7. CEQA documents for the project.
8. **The findings required under GC §51292 , documentation to support the findings and an explanation of the preliminary consideration of §51292.** (Include a map of the proposed site and an area of surrounding land identified by characteristics and large enough to help clarify that no other, noncontract land is reasonably feasible for the public improvement.)

ACQUISITION (Government Code Section 51291 (c))

The following information must be included in the notification when land within an agricultural preserve has been **acquired**. The notice must be forwarded to the Director within **10 working days** of the acquisition of the land. The notice must also include the following:

1. A general explanation of the decision to acquire the land, and why noncontracted land is not available for the public improvement.
2. Findings made pursuant to Government Code Section 51292, as amended.
3. If the information is different from that provided in the previous notice sent upon consideration of the land, a general description of the land, and a copy of the contract covering the land shall be included in the notice.

SIGNIFICANT CHANGE IN PUBLIC IMPROVEMENT (Government Code Section 51291 (d))

Once notice is given as required, if the public agency proposed any significant change in the public improvement, the Director must be notified of the **changes** before the project is completed.

LAND ACQUIRED IS NOT USED FOR PUBLIC IMPROVEMENT (Government Code Section 51295)

If the acquiring public agency does not use the land for the stated public improvement and plans to return it to private ownership, **before** returning the land to private ownership the Director must be notified of the action. **Additional requirements apply.** The mailing address for the Director is: **Debbie Sareeram, Interim Director, Department of Conservation, 801 K Street, MS 18-01, Sacramento, CA 95814.**

Response: Dennis J. O'Bryant, California Department of Conservation

California Department of Conservation-1

The text of the Final EIR in Section 3.13.2, Project Right-of-Way Impacts, has been revised to discuss the public acquisition process under the Williamson Act, with reference to the applicable notification requirements.

California Department of Conservation-2

Merced County will comply with any farmland protection policy adopted prior to project construction or will provide mitigation in the form of conservation easements. The County has also proposed mitigation for farmland impacts for this project. This information has been added to Section 3.13.4 of the Final EIR. Please refer to Master Response-12.

Comment: DeeDee Jones, California Department of Water Resources

STATE OF CALIFORNIA – THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

May 3, 2005

Merced County Public Works Department
345 W. 7th Street
Merced, California 95340
Attention: Steven E. Rough

Campus Parkway
State Clearinghouse (SCH) Number: 2000121003

Staff for The Department of Water Resources has reviewed the Notice of Completion provided through the SCH and provides the following comments on behalf of the **State Reclamation Board**:

Portions of the proposed project are located within a regulated stream (Bear Creek) over which The Reclamation Board has jurisdiction and exercises authority. Section 8710 of the California Water Code requires that a Board permit must be obtained prior to start of any work, including excavation and construction activities, within floodways, levees, and 10 feet landward of the landside levee toes. A list of streams regulated by the Board is contained in the California Code of Regulations, Title 23, Section 112.

1 Section 8(b)(2) of the Regulations states that applications for permits submitted to the Board must include a completed environmental questionnaire that accompanies the application and a copy of any environmental documents if they are prepared for the project. For any foreseeable significant environmental impacts, mitigation for such impacts shall be proposed. Applications are reviewed for compliance with the California Environmental Quality Act.

Section 8(b)(4) of the Regulations states that additional information, such as geotechnical exploration, soil testing, hydraulic or sediment transport studies, biological surveys, environmental surveys and other analyses may be required at any time prior to Board action on the application.

For further information on where to send the documentation, please contact me at (916) 574-0373 or ddjones@water.ca.gov.

DeeDee Jones

DeeDee Jones, Chair
Environmental Review Committee

cc: Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Suite 222
Sacramento, California 95814

Response: DeeDee Jones, California Department of Water Resources

California Department of Water Resources-1

The comment regarding the requirement for a State Reclamation Board permit prior to construction is noted. A discussion of this permit requirement has been added to the Final EIR in a new section, Section 5.3.9.

Comment: Scott Morgan, State of California, Office of Planning and Research

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

Memorandum

Date: May 6, 2005
To: All Reviewing Agencies
From: Scott Morgan, Senior Planner
Re: SCH # 2000121003
Campus Parkway Project

The State Clearinghouse forwarded the above-mentioned project to your agency for review on April 22, 2005 with incorrect review dates. Please make note of the following information for your files:

1 Review period began: April 22, 2005
Review period ends: July 5, 2005

We apologize for any inconvenience this may have caused. All other project information remains the same.

RECEIVED
MAY 11 2005
MERCED COUNTY
DPW/PROFESSIONAL SERVICES DIVISION

cc: Steven E. Rough
Merced County Public Works Department
345 W. 7th Street
Merced, CA 95340

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Response: Scott Morgan, State of California, Office of Planning and Research

Office of Planning and Research (Morgan)-1

The corrected review dates are noted. The Draft EIS/EIR was circulated and all comments received or dated within that period have been included and addressed in this Final EIR.

Comment: Terry Roberts, State of California, Office of Planning and Research

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

July 6, 2005

Steven E. Rough
Merced County Public Works Dept.
345 W. 7th Street
Merced, CA 95340

Subject: Campus Parkway Project
SCH#: 2000121003

Dear Steven E. Rough:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on July 5, 2005, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

1 "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

RECEIVED
JUL - 7 2005
MERCED COUNTY
DPW/PROFESSIONAL SERVICES DIVISION

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2000121003
Project Title Campus Parkway Project
Lead Agency Merced County

Type EIR Draft EIR

Description Campus Parkway is a four-lane limited access expressway proposed to be located on the east side of the City of Merced. This new expressway will be approximately 4.5 miles in length and will connect with the proposed Mission Avenue interchange and includes new at-grade intersections with Gerard Avenue, Childs Avenue, Olive Avenue, and Yosemite Avenue. Campus Parkway will cross over the BNSF railroad and SR 140 with an overpass structure. A short hook-shaped ramp roadway will connect Campus Parkway with SR 140. An additional overpass structure will cross over Bear Creek and the adjacent Bear Creek Drives.

Lead Agency Contact

Name Steven E. Rough
Agency Merced County Public Works Dept.
Phone (209) 385-7601 **Fax**
email
Address 345 W. 7th Street
City Merced **State** CA **Zip** 95340

Project Location

County Merced
City Merced
Region
Cross Streets Yosemite Avenue / Olive Avenue / SR 140 / Childs Avenue / Gerard Avenue / Coffee Street / SR 99
Parcel No.
Township 7S **Range** 14E **Section** 15, 22 **Base** MDBM

Proximity to:

Highways SR 99, SR 140
Airports
Railways BNSF
Waterways Bear Creek, Black Rascal Creek
Schools Pioneer Elementary, Weaver, Golden Valley HS
Land Use Existing land uses is primarily agricultural. Planned land use varies from: Industrial, One-Acre Rural Residential, Low Density Residential, Regional Commercial, Business Park, and Agriculture.

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Cumulative Effects; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Growth Inducing; Noise; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian; Wildlife

Reviewing Agencies Resources Agency; Regional Water Quality Control Bd., Region 5 (Fresno); Department of Parks and Recreation; Native American Heritage Commission; Office of Historic Preservation; Department of Fish and Game, Region 4; Department of Water Resources; Department of Conservation; California Highway Patrol; Caltrans, District 10; Air Resources Board, Transportation Projects

Date Received 04/22/2005 **Start of Review** 04/22/2005 **End of Review** 07/05/2005

Note: Blanks in data fields result from insufficient information provided by lead agency.

Notice of Completion & Environmental Document Transmittal

Appendix C

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2000121003

Project Title: Campus Parkway
Lead Agency: Merced County Public Works Department **Contact Person:** Steven E. Rough
Mailing Address: 345 W. 7th Street **Phone:** (209) 385-7601
City: Merced **Zip:** 95340 **County:** Merced

Project Location:
County: Merced **City/Nearest Community:** Merced
Cross Streets: Yosemite Ave, Olive Ave, SR 140, Childs Ave, Gerard Ave, Coffee Street, SR 99 **Zip Code:** 95340
Assessor's Parcel No.: **Section:** 15, 22, 27, 34 **Twp.:** 7S **Range:** R14E **Base:** M.D.B.&M.
Within 2 Miles: **State Hwy #:** SR 99, SR 140 **Waterways:** Bear Creek, Black Rascal Creek
Airports: **Railways:** BNSF **Schools:** Pioneer Elementary, Weaver, Golden Valley HS

Document Type:
CEQA: ☐ NOP ☒ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) ☐ Early Cons ☐ Neg Dec ☐ Mit Neg Dec ☐ Other
NEPA: ☐ NOI ☐ EA ☒ Draft EIS ☐ FONSI
Other: ☒ Joint Document ☐ Final Document ☐ Other

RECEIVED APR 22 2005 STATE CLEARINGHOUSE

Local Action Type:
☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☒ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☒ Other Construction Project

Development Type:
☐ Residential: Units ____ Acres ____
☐ Office: Sq.ft. ____ Acres ____ Employees ____
☐ Commercial: Sq.ft. ____ Acres ____ Employees ____
☐ Industrial: Sq.ft. ____ Acres ____ Employees ____
☐ Educational
☐ Recreational
Total Acres (approx.) 159
☐ Water Facilities: Type ____ MGD ____
☒ Transportation: Type New roadway construction
☐ Mining: Mineral
☐ Power: Type ____ MW ____
☐ Waste Treatment: Type ____ MGD ____
☐ Hazardous Waste: Type
☐ Other:

Project Issues Discussed in Document:
☒ Aesthetic/Visual ☐ Fiscal ☐ Recreation/Parks ☒ Vegetation
☒ Agricultural Land ☒ Flood Plain/Flooding ☐ Schools/Universities ☒ Water Quality
☒ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☐ Water Supply/Groundwater
☒ Archeological/Historical ☒ Geologic/Seismic ☐ Sewer Capacity ☒ Wetland/Riparian
☒ Biological Resources ☐ Minerals ☐ Soil Erosion/Compaction/Grading ☒ Wildlife
☐ Coastal Zone ☒ Noise ☐ Solid Waste ☒ Growth Inducing
☒ Drainage/Absorption ☐ Population/Housing Balance ☒ Toxic/Hazardous ☐ Land Use
☐ Economic/Jobs ☐ Public Services/Facilities ☒ Traffic/Circulation ☒ Cumulative Effects
☐ Other

Present Land Use/Zoning/General Plan Designation:
Existing land use is primarily agricultural. Planned land use varies from: Industrial, One-Acre Rural Residential, Low Density Residential, Regional Commercial, Business Park, and Agricultural.

Project Description: *(please use a separate page if necessary)*
Campus Parkway is a four-lane limited access expressway proposed to be located on the east side of the City of Merced. This new expressway will be approximately 4.5 miles in length and will connect with the proposed Mission Avenue interchange and includes new at-grade intersections with Gerard Avenue, Childs Avenue, Olive Avenue and Yosemite Avenue. Campus Parkway will cross over the BNSF railroad and SR 140 with an overpass structure. A short hook-shaped ramp roadway will connect Campus Parkway with SR 140. An additional overpass structure will cross over Bear Creek and the adjacent Bear Creek Drives.

State Clearinghouse Contact: (916) 445-0613 5"
State Review Began: 4-22-2005
SCH COMPLIANCE 7.5 -2005

Please note State Clearinghouse Number (SCH#) on all Comments
SCH#: 2000121003
Please forward late comments directly to the Lead Agency

AQMD/APCD 18
(Resources: 4/23)

Project Sent to the following State Agencies

X Resources
___ Boating & Waterways
___ Coastal Comm
___ Colorado Rvr Bd
X Conservation
X Fish & Game # 4
___ Delta Protection Comm
___ Forestry & Fire Prot
X Historic Preservation
X Parks & Rec
___ Reclamation Board
___ Bay Cons & Dev Comm
X DWR
X OES (Emergency Svcs)

Bus Transp Hous
___ Aeronautics
X CHP
X Caltrans # 10
___ Trans Planning
___ Housing & Com Dev
___ Food & Agriculture
___ Health Services

State/Consumer Svcs
___ General Services

Cal EPA
___ ARB – Airport Projects
X ARB – Transportation Projects
___ ARB – Major Industrial Projects
___ Integrated Waste Mgmt Bd
___ SWRCB: Clean Wtr Prog
___ SWRCB: Wtr Quality
___ SWRCB: Wtr Rights
X Reg. WQCB # 5F
___ Toxic Sub Ctrl-CTC

Yth/Adlt Corrections
___ Corrections

Independent Comm
___ Energy Commission
X NAHC
___ Public Utilities Comm
___ Santa Monica Mtns
___ State Lands Comm
___ Tahoe Rgl Plan Agency

___ Other:

Response: Terry Roberts, State of California, Office of Planning and Research

Office of Planning and Research (Roberts)-1

All comments issued by the reviewing agencies have been included and addressed in this Final EIR.

Comment: Lindsay A. Desrochers, University of California, Merced

UNIVERSITY OF CALIFORNIA

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO SANTA BARBARA • SANTA CRUZ

VICE CHANCELLOR FOR ADMINISTRATION
UNIVERSITY OF CALIFORNIA, MERCED
LINDSAY A. DESROCHERS

UNIVERSITY OF CALIFORNIA, MERCED
P.O. BOX 2039
MERCED, CALIFORNIA 95344
(209) 724-4430

July 5, 2005

Steve Rough, Project Engineer
Merced County Public Works Department
345 West 7th Street
Merced, CA 95340

Re: Comment on Draft EIS/EIR for the proposed Campus Parkway Project

Dear Mr. Rough:

The University of California, Merced submits the following comment letter on the draft EIS/EIR for the proposed Campus Parkway Project. The University supports the Project and believes it will achieve the Project Purpose of providing additional capacity to the regional circulation network in eastern Merced to improve existing and future circulation east of the City of Merced. As I testified on June 21, 2005, before the Board of Supervisors, the University recommends that the culmination point of the expressway be located as close as possible to the intersection of Lake Road and Yosemite Avenue.

1 As the EIS/EIR discusses, there are three proposed alignments for the Campus Parkway. However, in the summary section, the EIS/EIR does not make clear which alignment best satisfies the Project Purpose without causing unnecessary impacts on the environment. For example, summary table S-2 lists the respective impacts, but does not distinguish between the alignments in terms of which one would reduce traffic impacts and result in the greatest reduction in vehicle miles traveled.

2 The EIS/EIR also describes the presence of a group of six oak trees in the project area that qualify as an "Oak Woodland" pursuant to Senate Concurrent Resolution No. 17 (1989). [EIS/EIR at p. 3-110.] These trees would be affected by the construction of the Green alignment which requires the removal of two trees. [EIS/EIR at p. 3-113.] In 2004, the State passed legislation defining acceptable mitigation measures to be applied if a county determines that a project may have a significant effect on oak woodlands. Pursuant to Public Resources Code Section 21083.4(b)(1-4), the county should require one or more of the following specific alternatives to mitigate the significant effect of converting oak woodlands: use of conservation easements, planting and maintaining replacement trees, contributing funds to the Oak Woodlands

Steve Rough
July 5, 2005
Page 2

2 Cont. Conservation Fund, and other mitigation measures developed by the county. Clearly, the removal of the two trees under the Green alignment can be appropriately mitigated through the use of one of these required mitigation measures.

3 Regarding noise and visual impacts of the project, we encourage the use of screening through landscaping, vegetation, and if feasible the construction of landscaped berms as appropriate, in order to reduce noise and visual impacts on residents west of the Parkway.

Thank you for your consideration of our additional comments on the draft EIS/EIR.

Sincerely,

Lindsay A. Desrochers
Vice Chancellor for Administration

Response: Lindsay A. Desrochers, University of California, Merced

UC Merced-1

All three proposed alignments satisfy the project's purpose and need (described in Sections 1.1 and 1.2). The three alignments have varying impacts, which are listed wherever these differences can be quantified, such as farmland acreage affected, number of locations at which Merced County or Caltrans noise criteria may be exceeded, and acreage of wetlands and Waters of the United States affected.

In regard to traffic parameters, typical measures of roadway operation such as vehicle miles traveled (VMT), vehicle hours traveled (VHT), and average speed traveled (in miles per hour, or MPH) are reported for each proposed alternative in Table 3.16-3 in the Draft EIS/EIR, which is included below. The variations among the three alternatives (Green, Green Alternate, and Yellow Alignments) are not substantially different. However, the Green and Green Alternate Alignments show virtually the same reduction in miles traveled compared to the No Action alternative. The Yellow Alignment has a slightly higher VMT than the Green and Green Alternate alignments, but the difference is not substantial. The No Action alternative has the highest predicted travel miles and times and a slightly lower average travel speed compared to the action alternatives, as shown in Table 3.16-3.

Table 3.16-3 Changes in Regional Speed Under Cumulative Development

Alternative	VMT	VHT	MPH
No Action	2,189,558	108,675	20.1
Green Alignment	2,121,543	104,025	20.4
Green Alternate	2,121,543	104,025	20.4
Yellow Alignment	2,129,083	105,101	20.3

UC Merced-2

Mitigation for the removal of the two oak trees was included in Section 3.8.4 of the Draft EIS/EIR (see page 3-117). The mitigation was also noted in the Table S-2 of the Summary (Section S.3).

UC Merced-3

The University's recommendations are noted. Mitigation for visual impacts is listed in Section 3.17.4 of the Draft EIS/EIR, and includes landscaping and the use of vegetation as screening. The use of berms for noise mitigation was evaluated in the Draft EIS/EIR (Section 3.5.5) and will be considered during final design of the project.

Comment: Michael E. Aceituno, U.S. Department of Commerce, NOAA

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Sacramento Area Office
650 Capitol Mall, Suite 8-300
Sacramento, California 95814-4706

June 13, 2005 In response refer to: 151422SWR2000SA5922:JSM

Steve Rough
Merced County Department of Public Works
345 W. 7th Street
Merced, California 95340

Dear Mr. Rough:

This letter responds to your request to NOAA's National Marine Fisheries Service (NMFS), dated April 21, 2005, for review of the Draft Environmental Impact Statement-Environmental Impact Report (EIS-EIR) for the Campus Parkway project in Merced County, California. We focused the review of the draft EIS-EIR with respect to Federally listed endangered or threatened species and critical habitat under our jurisdiction. We also assessed the project with respect to essential fish habitat (EFH) for Pacific Salmon, pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

Our data indicate the proposed project area is within the Central Valley steelhead (*Oncorhynchus mykiss*) evolutionarily significant unit (ESU) and proposed critical habitat; however, the existing habitat in the project area does not appear adequate to support Central Valley steelhead, and we are not aware of evidence that Bear or Rascal Creeks are occupied by Central Valley steelhead. In addition, current data indicate the proposed project is not within the Sacramento River winter-run Chinook salmon (*O. tshawytscha*) ESU or its designated critical habitat, nor is it within the
1 Central Valley spring-run Chinook salmon (*O. tshawytscha*) ESU and its proposed critical habitat. Therefore, we do not anticipate impacts to Federally listed salmonids or designated or proposed critical habitat as a result of the proposed Campus Parkway project.

Available information indicates the project area is within designated EFH for Pacific salmon. Bear Creek connects with the San Joaquin River and the Sacramento-San Joaquin Delta Estuary providing access for Pacific salmon. The species within the proposed Campus Parkway project area that may require EFH consultation is fall-/late fall-run Chinook salmon (*O. tshawytscha*). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently or historically accessible to salmon, with the exception of certain areas upstream of impassable man-made barriers. Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the Pacific Coast Salmon Plan (Amendment 14 to the Pacific Coast Salmon Plan, Pacific Fishery Management Council, 1999). Assessment of potential adverse effects to fall-/late fall-run Chinook salmon from the proposed action is based on this information. To adequately address impacts of the proposed project to EFH, we recommend consulting with NMFS under the MSA.

2

Please contact Jeff McLain at (916) 930-5648, or via e-mail at Jeff.Mclain@noaa.gov if you have any questions concerning this project or require additional information.

Sincerely,

Michael E. Aceituno
Supervisor, Sacramento Area Office

cc: NMFS-PRD, Long Beach, CA

Response: Michael E. Aceituno, U.S. Department of Commerce, NOAA

NOAA-1

The late fall-run chinook salmon (*Oncorhynchus tshawytscha*) is discussed in the Draft EIS/EIR on page 3-128 as the only protected fish species of concern in the project area. If late fall-run chinook salmon were to occur or pass through the project area, the water bodies they might use would be Bear Creek or Black Rascal Creek. The potential for impacts is related to sedimentation and water quality effects. The Draft EIS/EIR includes erosion and sediment control mitigation measures in Section 3.9.5 for special-status fish species to protect fish habitat in these creeks. Construction of the Parkway would not involve substantial work in the active channels of these creeks. Permit requirements will likely require that any work in the creeks crossed by the Parkway would be prohibited from mid-October to Spring. This work condition will also be a stipulation of the California Department of Fish and Game's (CDFG's) standard conditions of the Streambed Alteration Agreement permit.

Comment: Laura Fujii, U.S. Environmental Protection Agency

06/24/05 FRI 13:28 FAX 415 947 3562 U.S.EPA (CMD) 002

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

June 24, 2005

Gene K. Fong, Division Administrator
Federal Highway Administration, California Division
650 Capitol Mall, Suite 4-100
Sacramento, CA 95814

Subject: Draft Environmental Impact Statement/Environmental Impact Report for the Campus Parkway, Merced County, California (CEQ #20050175)

Dear Mr. Fong:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508) and Section 309 of the Clean Air Act. Our detailed comments are enclosed.

The Draft Environmental Impact Statement (DEIS) for this proposed project appropriately acknowledges the need to demonstrate the independent utility of this project from the proposed full buildout of the U.C. Merced Campus and Community Plan. We commend the Federal Highway Administration for preparing a Traffic Analysis-Addendum (2004) that considers the independent utility of the proposed project. The Traffic Analysis-Addendum presents projected traffic growth in the study area without the full build-out of the U.C. Merced Campus and Community Plan, but including the U.C. Merced Campus Phase 1. EPA is concerned, however, that the DEIS does not clearly present the traffic benefits of the proposed Campus Parkway under the U.C. Merced Campus Phase 1 scenario.

Through our review of the DEIS, EPA has identified specific concerns that include: (1) Traffic Analysis; 2) Range of Alternatives; 3) Connected Actions; 4) Logical Termini; 5) Air Quality; 6) Cumulative Impacts; and 7) Induced Growth.

For these reasons, we have rated the build alternatives as Environmental Concerns-Insufficient Information (EC-2). Please see the enclosed Summary of EPA Rating Definitions.

We appreciate the opportunity to review this DEIS. When the Final EIS is released for public review, please send two copies to the address above (mail code: CED-2). If you have any

Printed on Recycled Paper

06/24/05 FRI 13:28 FAX 415 947 3562 U.S.EPA (CMD) 003

questions, please contact me or Nancy Levin, the lead reviewer for this project. Nancy can be reached at 415-972-3848 or levin.nancy@epa.gov.

Sincerely,

Laura Fujii

Laura Fujii, Acting Manager
Environmental Review Office

Enclosures:
Summary of EPA Rating Definitions
EPA's Detailed Comments

cc:
Mahfoud Licha, Caltrans District
Steve Rough, Merced County Department of Public Works
Nancy Haley, U.S. Army Corps of Engineers
Mark Littlefield, U.S. Fish and Wildlife Service

EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CAMPUS PARKWAY PROJECT, JUNE 24, 2005

Traffic Analysis

The Draft Environmental Impact Statement (DEIS) states that the proposed Campus Parkway project is needed to increase capacity and connectivity to State Route (SR) 99 in response to projected growth in the City and County of Merced and the approved Phase 1 of the University of California, Merced Campus ("UC Phase 1"). It states that the project has "independent utility," in that the need for the project exists even without further expansion of the U.C. Merced Campus and Community Plan ("UC Buildout"). The 2004 Traffic Analysis Addendum (2004 Addendum) presents modeled results for alternatives under the U.C. Phase 1 scenario. We commend Federal Highway Administration (FHWA) for having recognized the need to clearly demonstrate the independent utility of this project under the UC Phase 1 scenario.

The DEIS states that the proposed project would provide traffic benefits at selected roadway segments under the UC Phase 1 scenario (p. 3-217), even if the full buildout of the U.C. Merced Campus and Community Project did not take place as indicated in Figure 1-3. However, the magnitude of project benefits under the UC Phase 1 scenario is not clear. It appears that many of the main roadways in downtown Merced will still experience heavy congestion (Level of Service D to F) even if the proposed Parkway is built. The road segments for which the Level of Service (LOS) is expected to deteriorate (Table 1-2) will remain congested even if the proposed Parkway is built. Feeder roadways such as Yosemite and Olive will experience increased congestion, with LOS D to F conditions on road segments near the Parkway. Finally, even without the proposed project, the main roadways east of the proposed Parkway location would operate at LOS C or better in 2025. (2004 Addendum, Appendix B).

Recommendation:

1 The FEIS should clearly demonstrate the traffic benefits of the proposed Campus Parkway under the U.C. Phase 1 growth scenario.

Range of Alternatives

The DEIS describes the "Western Beltway Alignment" in Section 2.5: "Alternatives Considered But Withdrawn From Further Evaluation." We understand that Turlock and Modesto, northwest of Merced, will be the major commute destinations on SR 99 for anticipated new residential growth north and northeast of downtown Merced. It appears a western beltway would serve the anticipated increased development north of Merced with less out of direction traffic than the proposed project. The DEIS states that the Western Beltway Alignment, which is now programmed as a separate project (Highway 59 Expressway project), was eliminated from consideration for this project because it does not serve the southeastern portion of Merced between SR 99 and SR 140. However, it appears that in the 2025 Base Case (No Build), the southeastern portion of Merced (east of Coffee Street) would experience Level of Service (LOS)

C. The DEIS should evaluate the importance of anticipated travel volumes from this southeastern area.

Recommendation:

2 Clearly describe why the Campus Parkway was determined to most effectively meet the projected traffic demand as compared to a western beltway alignment.

Connected Actions

The proposed project would increase congestion on feeder roads. In the 2025 U.C. Phase 1 growth scenario, the LOS would fall to "F" on portions of Yosemite Avenue and "D" on Olive Avenue that feed into the Campus Parkway (Addendum, 2004). In addition, even with the Campus Parkway, downtown Merced would experience severe congestion, with many roadways operating at LOS F. Based on the information provided, LOS C is the long-term desired goal and LOS D is the acceptable threshold for congestion in the City of Merced.

Recommendations:

3 Explain whether additional improvements to feeder roads will be necessary to accommodate the increased congestion as a result of the Campus Parkway. If these improvements are needed, they are considered "connected actions" under the Council of Environmental Quality's regulations implementing the National Environmental Policy Act (40 CFR Part 1508.25(a)(1)). The environmental impacts of connected actions, such as required improvements to Yosemite and Olive Avenues, should be included in the Final EIS (FEIS) for this project.

Discuss the transportation improvements that will be made to alleviate congestion in downtown Merced, including transit and Transportation System Management measures being considered or planned.

Logical Termini

There are several potential northern termini for the proposed project. The Green Alignment and Alternate terminate at Yosemite Avenue, proximate to Lake Road. The Yellow Alignment terminates at Yosemite Avenue approximately 0.5 miles east of Lake Road. The long-term plan for the U.C. Merced Campus and Community Plan includes a possible extension of the Campus Parkway from Yosemite to Bellevue. Based on previous studies, it is likely that this northern extension of the Parkway would require a Section 404 individual permit and be subject to EPA's Clean Water Act (CWA) Section 404(b)(1)Guidelines. The northern termini of the preferred alternative should not preclude selection of the "least environmentally damaging practicable alternative" (LEDPA) for a future Campus Parkway extension.

Recommendations:

4 Describe why the different termini were selected for the build alternatives.

Demonstrate that the northern termini of the preferred alternative for the proposed project does not preclude the selection of the LEDPA for a future extension of the Campus Parkway north of Yosemite Avenue.

Air Quality

The project is located in the San Joaquin Valley Air Basin, which is designated non-attainment under the Clean Air Act for particulate matter less than 10 microns in diameter (PM 10), PM 2.5, and Ozone. The DEIS does not reflect the San Joaquin Valley Air Basin's recently designated non-attainment status for PM 2.5. The area designations for 8-hour Ozone have also become effective. The FEIS should describe these changes and include PM 2.5 in the "Criteria Pollutants" section (p. 3-48). The DEIS states the proposed project is part of a conforming Regional Transportation Plan (RTP), but does not provide documentation. Documentation should be provided in the FEIS.

This project may have air quality impacts during construction from diesel equipment and earth movement. We commend FHWA for including a discussion of potential construction-related emissions, including fugitive dust, diesel toxics, Nitrogen Oxides, PM 10 and PM 2.5. However, while the DEIS lists several available mitigation measures, such as imposing construction contract requirements on the use of catalytic converters, idling limits, equipment maintenance, and the use of non-diesel powered equipment, FHWA does not commit to their use. Given the well-known and adverse health effects for PM 2.5 and diesel exhaust exposure, EPA urges project proponents to reduce diesel construction emissions and other construction-related air quality impacts to the greatest extent possible. The FEIS should include a fugitive dust control plan.

The proposed project footprint SR 99 and SR 140 is located near schools, parks, and low income areas. Given the extensive scientific literature on near-roadway health effects, the FEIS should qualitatively discuss the potential for localized health concerns that may result from a shifting of traffic to roadways in close proximity (less than 200 meters) to residences, businesses, and sensitive receptors. Air emissions from mobile sources can include a large number of potentially toxic constituents, described by EPA's Office of Transportation and Air Quality web site (http://www.epa.gov/otaq/toxics.htm) And the Environmental Fact Sheet entitled "Air Toxics from Motor Vehicles" (http://www.epa.gov/otaq/f020004.pdf).

Recommendations:

5 Update the Air Quality section regarding the status of area designations for Ozone and PM 2.5. Provide documentation that the project meets the requirements of transportation conformity under the Clean Air Act. Disclose projected exceedences of federal air quality

5 cont. standards, even if temporary; and specify the duration and concentration of air emissions by pollutant and location for each phase of project construction.

Identify sensitive receptors in the project area, such as children, elderly, infirm, and athletes, and minimize impacts to these populations. Discuss the potential health impacts that can result from increased exposure to mobile source pollutants in the vicinity of high traffic roadways.

Include a commitment to implement mitigation measures to minimize diesel emissions for each phase of project construction. For example, require contractors to keep the equipment fine-tuned or use alternative fueled vehicles. Include a fugitive dust control plan.

Cumulative Impacts

The Cumulative Impacts section (3.7.5) acknowledges waters of the U.S., including wetlands, have been adversely impacted in the Central San Joaquin Valley and Merced County. It appropriately recognizes the potential adverse impacts to aquatic resources from the proposed U.C. Merced Campus and University Community projects. However, the section does not include data that is fundamental to a cumulative impacts analysis. For example, the cumulative impacts study area for aquatic resources is not defined. Table 3.7-5 provides quantitative information on the anticipated direct impacts from the U.C. Merced Campus, University Community, Mission Avenue/SR99 Interchange and the Campus Parkway. It does not, however, provide information on potential indirect impacts. Furthermore, the DEIS does not include reasonably foreseeable actions in the cumulative impacts analysis. The DEIS states that if all current adopted and proposed developments were included, the total acreage of impacts would be higher (p.3-106). The cumulative impacts analysis does not include the cumulative impacts to aquatic resources of these adopted and proposed developments.

Recommendations:

6 Specify the cumulative impacts study area for the waters of the U.S., including wetlands. Provide a quantitative estimate of direct and indirect impacts to aquatic resources as a result of the current and reasonably foreseeable actions in the cumulative impacts resource study area.

Discuss potential mitigation opportunities for cumulative impacts, whether or not they are within the authority of the transportation agencies.

Induced Growth

The DEIS acknowledges that the proposed project could increase pressures to convert land from agricultural use to urban uses. It states that land adjacent to the proposed Campus Parkway would be subject to development as a result of the project and the direct access provided

from SR 99 into the study area. However, it does not discuss the potential environmental impacts as a result of the potential land use change induced by the proposed project.

Recommendation:

7 Provide detailed information on the potential environmental impacts of land use change that may occur as a result of the proposed Campus Parkway.

Waters of the U.S., including Wetlands

The DEIS provides Table 3.7-2 Summary of Wetland Functions and Values, but does not describe how this information is evaluated in the DEIS, or whether it will be used to determine compensatory mitigation for unavoidable impacts. The DEIS does not provide quantitative data differentiating between the high, medium, and low criteria for functions and values. Wetland conditions should be determined using the functions and values criteria appropriate for the specific class of wetlands being considered.

Recommendation:

8 Modify Table 3.7-2 Summary of Wetland Functions and Values, as discussed above, or delete it from the FEIS.

Roadway Design: Roundabouts

The DEIS states that the proposed Campus Parkway may include roundabouts, rather than intersections, at Olive and Yosemite Avenue in order to reduce delays and increase safety. EPA recognizes that the use of roundabouts can have congestion and safety benefits over intersections and supports FHWA's consideration of their use.

Recommendation:

9 EPA strongly recommends that the project proponent consider the use of roundabouts, given their potential for traffic, safety, and air quality benefits.

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

Response: Laura Fujii, U.S. Environmental Protection Agency

USEPA-1

Campus Parkway is intended to help correct deficiencies in access and capacity within the existing and future circulation network (Section 1.1 of the Draft EIS/EIR). Both Chapter 1 and Section 3.16 discuss projected traffic congestion conditions for two future years, 2015 and 2025, and compare those conditions to year 2000 conditions. Many of Merced's main roadways will continue to experience heavy congestion even with Campus Parkway in place. The capacity and connectivity issues discussed in Section 1.2.2, such as the limited capacity of the existing roadway network and lack of connectivity due to railroad lines, Bear Creek, and SR 140, will continue to limit or constrain traffic circulation among the different areas of Merced, especially between the developing areas of the north and the City of Merced and SR 99. Campus Parkway cannot solve or address all of the demand for future traffic growth, but it would provide an additional route that addresses some of these key circulation constraints and offers some traffic benefit and relief.

USEPA notes that the "main roadways east of the proposed Parkway location could operate at LOS C or better in 2025." East of the Parkway alignments, drivers would be diverting to relatively rural roads and traveling longer distances to reach SR 99. Although the LOS levels may not be below the threshold of C, traffic volumes are predicted to substantially increase from less than 1,000 vehicles per day on Yosemite Avenue in 2000 to more than 4,000 in 2025, and from 1,000 to 2,000 vehicles per day on Arboleda Drive in 2000 to 4,600 to 7,500 in 2025. These volumes on the eastern segments of Yosemite Avenue and Arboleda Drive represent a substantial increase in traffic going well outside of Merced to avoid circulation and congestion constraints near the center of the city. With Campus Parkway in place, traffic volumes would be substantially lower on these same eastern Merced roadway segments. For example, the 4,000 vehicles per day predicted for Yosemite Avenue under 2025 No Action conditions would drop to less than 100 vehicles per day with Campus Parkway. The 4,600 to 7,500 vehicles per day predicted for Arboleda Drive under 2025 No Action conditions would drop to 200 to 300 vehicles per day north of SR 140 and about 1,000 per day between SR 140 and SR 99. The effect will be to better consolidate or contain the expected future growth in traffic closer to the City of Merced and away from the more rural areas to the east.

USEPA-2

The concept of the western beltway is described in Section 2.5.6 and illustrated in Figure 2.1-1. The proposed Campus Parkway alternatives were advanced through local transportation planning to meet the project purpose and need, which focus on providing better traffic circulation access and capacity within northern and eastern Merced and SR 99. Within the City of Merced and adjacent Merced County areas, traffic originating in the north travels south toward the downtown area and SR 99. Because of the limited number of available crossings of Bear Creek, SR 140, and the at-grade BNSF railroad tracks adjacent to SR 140, some of this traffic will increasingly travel eastward as far as Arboleda Drive and then south to reach SR 99. Campus Parkway would serve this traffic flow on the east side of the City of Merced and would provide one of the most direct means of reaching SR 99 without having to travel along roads that were originally designed for rural traffic uses, many of which are discontinuous or segmented because of the constraints mentioned above. Construction of the western beltway or Atwater-Merced Expressway Project is expected to provide improved access across the BNSF railroad tracks and connect to SR 99, but west of the City of Merced. It is expected that drivers traveling to and from central or northern areas of Merced could use that route to travel to destinations north on SR 99 and avoid traffic on busy G Street, M Street, R Street, and SR 59 routes. Both Campus Parkway and the Atwater-Merced Expressway Project are necessary to improve connectivity to SR 99 from different sides of the City of Merced and to serve existing and future travelers. Campus Parkway would serve the eastern side of Merced,

especially for travelers connecting to and from SR 99 east of Merced. The western beltway would serve travelers on the western side of the Merced and those heading north on SR 99. For example, drivers from north Merced or the UC Merced Campus could take the Atwater-Merced Expressway to reach north Merced or Atwater, travel north on SR 99, and take Campus Parkway/eastern beltway to the eastern side of Merced and SR 99 heading south.

Serving the southeastern portion of the City of Merced is one element of improving the existing traffic constraints within eastern Merced. The Draft EIS/EIR discusses the local land use planning for the area east of Merced and south of SR 140 (illustrated in Figure 3.12-1). Anticipated growth in this area includes additional housing tracts west of the Doane and Hartley Laterals and industrial development east of the laterals. The SR 99/Mission Avenue interchange will provide improved access to SR 99 in this area. However, traffic from that area will have to use Coffee Street, Gerard Avenue, and/or Childs Avenue to reach SR 99. Between the base case study year of 2000 and the forecast year 2025, traffic volumes without Campus Parkway in place are projected to increase by a factor of 3 to 5 times on these roads. In addition to the increased residential development in this area, there are two schools west of the Doane and Hartley Laterals: Pioneer Elementary (kindergarten through grade 3) on Gerard Avenue, and Weaver School (grades 4 through 8) on Childs Avenue. Campus Parkway would allow traffic associated with the developing industrial land uses to access SR 99 and avoid the local streets west of the Doane and Hartley Laterals.

USEPA-3

Campus Parkway's connections to local roads are described in Section 2.3.4. The traffic analysis used projected or modeled traffic volumes to determine demand along each roadway link. As noted in this comment and discussed in the Draft EIS/EIR, traffic is expected to head toward and consolidate on some of the feeder routes to the Parkway. The primary potential traffic constraint points would be the turning movements onto and off of the Parkway at intersections such as Olive and Yosemite Avenues. The roadway design includes room for widening local streets that intersect the Parkway to accommodate left- and right-turn lanes, which may extend up to a few hundred feet east or west of the Campus Parkway alignment. Where turning movement demand is very high, double turn lanes can also be provided. The study areas for the various environmental impact assessments included segments of the local roads where they would connect with the Parkway alignments, in order to ensure that all aspects of the Parkway construction was addressed in the Draft EIS/EIR and supporting technical studies. The segments are depicted in the project maps. No other additional improvements to local (feeder) roads are anticipated to be required outside of the area around the intersections with the Parkway.

USEPA-4

See Master Response-8 regarding the selection of the northern terminus of the Campus Parkway alternative alignments.

Regardless of which alternative is selected for the Campus Parkway, the alignment of the University Community road that connects with the Parkway can be designed to avoid or minimize impacts to the environment north of Yosemite Avenue, including resources protected under the Clean Water Act (e.g., wetlands, vernal pools, etc.) and endangered species habitat. Extensive biological habitat surveying and mapping was performed for the Campus Parkway project north of Yosemite Avenue before the northern terminus was selected. The most sensitive biological species and habitat are far enough north of Yosemite Avenue that a roadway alignment can be designed and selected to avoid these resources. Extensions of the Campus Parkway north of Yosemite Avenue were conceptualized during early studies to avoid such habitat. Neither the Green/Green Alternate nor Yellow Alignment immediately north of

Yosemite Avenue would impact sensitive resources, allowing room to design a northern extension to minimize adverse impacts.

USEPA-5

Section 3.4.1 and Table 3.4-1 of the Final EIR have been updated to reflect the area's nonattainment status for $PM_{2.5}$ and ozone.

The Draft EIS/EIR described the project's inclusion in MCAG's most recent RTP in Section 3.4.2. The MCAG included Campus Parkway in its list of Local Projects in Appendix C of its RTP, adopted in August 2004. The RTP was also evaluated for air quality impacts by MCAG and was determined to conform to the Clean Air Act requirements; this conformity determination was also adopted in August 2004. Section 3.4.2 has been updated to include this information.

Mitigation measures have been added to Section 3.4.5 that outline the requirement to develop a dust control plan for the project. See also Response to SJVAPCD-1, above. The updated mitigation section also addresses the use of alternative fuels and the control of diesel-powered construction equipment.

Sensitive receptors within the project area include two schools (see Response to USEPA-2) but primarily consist of residences. The total number of residences that are located within approximately 500 to 1,000 feet of the proposed alternatives is 68 for the Green Alignment, 25 for the Green Alternate Alignment, and 24 for the Yellow Alignment (these totals include the entire route of each alternative, from SR 99 to Yosemite Avenue). Additional information on the health effects of vehicle emissions has been added to Section 3.4.1 (under the heading "Criteria Pollutants") with regard to increased exposure to mobile source pollutants in the vicinity of high-traffic roadways. Section 3.4.2 (under the heading "Diesel Toxics Analysis") discusses the health effects of exposure to toxic emissions.

USEPA-6

Section 3.7.5 of the Draft EIS/EIR presents background information for the Central and San Joaquin Valleys as well as Merced County to establish a context for the presence of wetlands and other waters of the United States within the area and the trends in impacts. Within the immediate project area, the discussion focuses on the cumulative impacts occurring in the City of Merced and nearby areas based on available information on development activities from the City and County planning departments. The known developments are listed in Table 3-1 and shown in Figure 3-1 of the Draft EIS/EIR. Some cumulative developments have already been approved or have applied for approval. Documentation about these developments was obtained and reviewed to provide the input on potential cumulative impacts listed in Tables 3.7-5 and 3.7-6, as referred to in the comment. Both adopted and proposed developments were included. This information is discussed in the Draft EIS/EIR, along with summaries of the total acreage potentially impacted (see Draft EIS/EIR page 3-106, which identifies the total potentially impacted area as 97 hectares [240 acres]). Because of the increase in development activity over the past several years, a number of projects are also in a pre-application stage. As such, they have not been advanced by the landowner or applicant to a point at which any usable documentation is available on potential impacted areas or the possible resources that might be affected. The statement in the Draft EIS/EIR on page 3-106 (immediately above Table 3.7-6) was incorrect and has been revised in the Final EIR; all known developments (at the time of Draft EIS/EIR preparation) were included in the estimate of 97 hectares of potential cumulative impacts. Not included in that estimate, for the reasons stated above, are the possible developments that are in a pre-application or early conceptual stage and for which no information is available.

Mitigation for cumulative impacts to wetlands and other waters of the United States is discussed at the end of Section 3.7.5, in the sense that each project that advances for approvals and permits will have to comply with the same federal and state requirements, including providing mitigation.

The same mitigation measures described in Section 3.7.6 are available for the various projects identified in Section 3.7.5. A reference to the mitigation measures in Section 3.7.6 has been added to the existing discussion of cumulative impact mitigation in Section 3.7.5.

USEPA-7

During the past 3 to 5 years, Central Valley communities have experienced above-average growth in terms of housing construction and population. This growth has consisted predominantly of housing construction, commercial and office space development, and construction of Phase I of the UC Merced Campus. Future growth in the area, based on land use plans, will consist of expansion of similar development. The Draft EIS/EIR states that the Campus Parkway will help accommodate some of the traffic generated by planned or forecasted growth in eastern and northern Merced. Growth was accounted for in the studies performed for the Draft EIS/EIR. Based on those evaluations, a discussion of the potential for impacts from growth and its associated land use changes has been added to the end of Section 3.12.2.

USEPA-8

Table 3.7-2 includes numerical ratings that were applied to the three types of wetland resources found in the project area and the totals of those ratings for each wetland type: seasonal marsh (20), riparian forest and scrub (16), and cultivated wetlands (19). Although functions and values were described in Section 3.7.2 for the impacted types of wetlands, they were not quantified beyond total area affected because of the similarity in functions and values and the small acreage impacted. Tables 3.7-3 and 3.7-4, however, have been expanded in the Final EIR to include a quantitative rating and comparative total that relates the wetland functions and values with area impacted.

USEPA-9

The recommendation for the use of roundabouts is noted.

Appendix H Alternative Ranking Tables

This appendix presents decision matrices that were developed by the Merced County Department of Public Works to evaluate and rank the three build alternatives considered in the Campus Parkway Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR). Information on impacts to biological habitat and species, farmland, neighborhoods, and circulation was taken from the Draft EIS/EIR, and a weighting factor was applied to indicate the importance or significance of each impact. Impacts to homes, such as acquisition of property or close proximity of a home to a proposed alignment, were given a relatively higher weighting factor than impacts to non-endangered wildlife species to account for the higher sensitivity and importance of the impact.

Table H-1
Average Ranking

Issue/Impact Area	Impact Value Weighting	Green Alignment		Green Alternate Alignment		Yellow Alignment - Preferred Alternative	
		Number	Impact Score	Number	Impact Score	Number	Impact Score
Biological Resources	1	3	3	2	2	1	1
Farmland	1	1	1	2	2	3	3
Neighborhood Impacts	1	3	3	2	2	1	1
Circulation	1	1	1	2	2	3	3
		Total Green	8	**Total Green Alternate**	8	**Total Yellow**	8
	Ranking	**1**		**1**		**1**	

Table H-2
Impacts to Biological Resources

Issue/Impact Area (excluding common alignment)	Impact Weighting	Green Alignment		Green Alternate Alignment		Yellow Alignment - Preferred Alternative		Notes
		Number	Impact Score	Number	Impact Score	Number	Impact Score	
Swainson's hawk	50	47	2350	37	1850	34	1700	Loss of foraging habitat (acres)
Mountain Plover	50	33	1650	32	1600	29	1450	Loss of foraging & resting habitat (acres)
Elderberry shrubs	50	34	1700	16	800	16	800	number of 2.5-7.5 cm stems impacted
Elderberry shrubs	50	29	1450	1	50	1	50	number of 7.5-12.5 cm stems impacted
Elderberry shrubs	50	6	300	0	0	0	0	number of >12.5 cm stems impacted
Tricolored blackbird	50	14	700	5	250	5	250	High quality foraging habitat removed (acres)
Tricolored blackbird	25	68	1700	85	2125	81	2025	Low quality foraging habitat removed (acres)
Horned Lark	50	33	1650	32	1600	30	1500	Loss of foraging habitat (acres)
White-faced ibis	50	14	700	5	250	5	250	Loss of foraging habitat (acres)
White-tailed kite	50	33	1650	32	1600	29	1450	Loss of foraging & resting habitat (acres)
Loggerhead shrike	50	33	1650	32	1600	29	1450	Loss of foraging & resting habitat (acres)
Lewis' woodpecker	50	0.086	4.3	0.086	4.3	0.086	4.3	Loss of seasonal marsh habitat (acres)
Long-billed curlew	50	14	700	5	250	5	250	High quality foraging habitat removed (acres)
Long-billed curlew	25	68	1700	85	2125	81	2025	Low quality foraging habitat removed (acres)
Nuttall's woodpecker	50	0.086	4.3	0.086	4.3	0.086	4.3	Loss of seasonal marsh habitat (acres)
Lawrence's goldfinch	50	0.086	4.3	0.086	4.3	0.086	4.3	Loss of seasonal marsh habitat (acres)
Seasonal Marsh	50	0.09	4.5	0.09	4.5	0.09	4.5	permanent impact (acres)
Riparian forest and scrub	50	0.015	0.75	0.019	0.95	0.019	0.95	temporary loss (no permanent impact)
Perennial stream	50	0.015	0.75	0.019	0.95	0.019	0.95	temporary loss (no permanent impact)
Canals	50	0.57	28.5	0.43	21.5	0.53	26.5	permanent impact (acres)
Oak Woodlands	50	2	100	0	0	0	0	number of impacted Valley Oak Trees
		Total Green	18047.4	**Total Green Alternate**	14140.8	**Total Yellow**	13245.8	
	Ranking	**3**		**2**		**1**		

Table H-3
Impacts to Farmland

Issue/Impact Area (excluding common alignment)	Impact Weighting	Green Alignment		Green Alternate Alignment		Yellow Alignment - Preferred Alternative		Notes
		Number	Impact Score	Number	Impact Score	Number	Impact Score	
Farmland	50	56	2800	77	3850	83	4150	Acres Impacted
Farmland	50	140	7000	142	7100	150	7500	USDA Conversion Rating
		Total Green	9800	**Total Green Alternate**	10950	**Total Yellow**	11650	
	Ranking	**1**		**2**		**3**		

Table H-4
Impacts to Neighborhoods
(Average)

Weighting Methodology	Green Alignment	Green Alternate Alignment	Yellow Alignment - Preferred Alternative	Notes
Linear Reduction (0.5)	3	2	1	
Parabolic Reduction (x^2)	3	2	1	
Average Ranking	**3**	**2**	**1**	

Table H-5
Impacts to Neighborhoods
(linear reduction - 0.5)

Issue/Impact Area (excluding common alignment)	Impact Weighting	Green Alignment		Green Alternate Alignment		Yellow Alignment - Preferred Alternative		Notes
		Number	Impact Score	Number	Impact Score	Number	Impact Score	
Homes on Alignment	1000	1	1000	1	1000	1	1000	noise, aesthetics, etc.
Vacant Residential Lots on Alignment	500	2	1000	3	1500	3	1500	noise, aesthetics, etc.
Homes within 250 feet of R/W	500	4	2000	6	3000	6	3000	noise, aesthetics, etc.
Homes between 250 feet and 500 feet of R/W	250	10	2500	8	2000	7	1750	noise, aesthetics, etc.
Homes between 500 feet and 1,000 feet of R/W	125	58	7250	15	1875	14	1750	noise, aesthetics, etc.
Impacts to potential development of existing RRC	125	2	250	3	375	1	125	potential development conflicts
		Total Green	14000	**Total Green Alternate**	9750	**Total Yellow**	9125	
	Ranking	**3**		**2**		**1**		

Table H-6
Impacts to Neighborhoods
(parabolic reduction - x^2)

Issue/Impact Area (excluding common alignment)	Impact Weighting	Green Alignment		Green Alternate Alignment		Yellow Alignment		Notes
		Number	Impact Score	Number	Impact Score	Number	Impact Score	
Homes on Alignment	1000	1	1000	1	1000	1	1000	noise, aesthetics, etc.
Vacant Residential Lots on Alignment	31.623	2	63.246	3	94.869	3	94.869	noise, aesthetics, etc.
Homes within 250 feet of R/W	31.623	4	126.492	6	189.738	6	189.738	noise, aesthetics, etc.
Homes between 250 feet and 500 feet of R/W	5.623	10	56.23	8	44.984	7	39.361	noise, aesthetics, etc.
Homes between 500 feet and 1,000 feet of R/W	2.371	58	137.518	15	35.565	14	33.194	noise, aesthetics, etc.
Impacts to potential development of existing RRC	2.371	2	4.742	3	7.113	1	2.371	potential development conflicts
		Total Green	1388.228	**Total Green Alternate**	1372.269	**Total Yellow**	1359.533	
	Ranking	**3**		**2**		**1**		

Table H-7
Circulation

Issue/Impact Area (excluding common alignment)	Impact Weighting	Green Alignment		Green Alternate Alignment		Yellow Alignment - Preferred Alternative		Notes
		Number	Impact Score	Number	Impact Score	Number	Impact Score	
Energy Use	25	72	1800	72	1800	72.3	1807.5	Regional fuel consumption rate (gal/1,000 miles)
Vehicle Hours Traveled	0.01	104,025	1040.25	104,025	1040.25	105,101	1051.01	Regional Vehicle Hours Traveled
Highest Use (2025)	1000	1	1000	2	2000	3	3000	Most Use (Ranked based on ADT) Campus Parkway between Olive & SR140 1. Green: 18,600 2. Alt-Green: 17,800 3. Yellow: 16,600
			0		0		0	
			0		0		0	
		Total Green	3840.25	**Total Green Alternate**	4840.25	**Total Yellow**	5858.51	
	Ranking	**1**		**2**		**3**		

Appendix I Wetlands – Only Practicable Alternative Finding and Floodplain Determination

Wetlands

Executive Order 11990 requires all federal agencies to avoid to the extent possible adverse impacts associated with the destruction or modification of wetlands and to avoid new construction in wetlands wherever a practicable alternative exists. Construction in wetlands is to be avoided unless there is no practicable alternative to the proposed construction and the action (project) includes all practicable measures to minimize harm to wetlands. Economic, environmental, and other pertinent factors are taken into account in making this required finding.

Alternatives to the Proposed Action

The preferred alternative for the Campus Parkway project would construct a new north-south four-lane expressway on the eastern side of Merced that would connect State Route (SR) 99 to Yosemite Avenue. Campus Parkway would include at-grade intersections at Yosemite Avenue, Olive Avenue, Childs Avenue, and Gerard Avenue. A connection would also be provided at SR 140 by way of a hook-shaped ramp located on north side of the existing highway. New bridges would be constructed over Bear Creek, South and North Bear Creek Drive, and SR 140 and the adjacent Burlington Northern–Sante Fe (BNSF) railroad tracks.

The proposed project would cross nonwetland waters of the United States and riparian wetlands, shown in Figure 3.7-2 and discussed in Sections 3.7.1 and 3.7.2. The affected jurisdictional resources are regulated by the U.S. Army Corps of Engineers (USACE) and are discussed in Appendix A in the correspondence with the USACE dated September 17, 2002. The resources affected consist primarily of irrigation canals that are nonwetland waters of the United States. The wetland resources are limited to two locations at or in the immediate vicinity of Campus Parkway's crossing of SR 140 and the adjacent BNSF railroad tracks.

Three alternatives (Yellow Alignment, Green Alignment, and Green Alternate) were considered practicable in meeting the project's purpose and need and other factors, and were evaluated in detail in the Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR). The Yellow Alignment was identified as the preferred alternative. All three alternatives had identical impacts to

wetlands and similar impacts to other waters of the United States, as shown in the Table I-1.

Table I-1 Potential Permanent Impacts to Jurisdictional Wetlands and Other Waters of the United States

Type	Impact Area by Alignment (hectares [acres])		
	Green Alignment	Green Alternate	Yellow Alignment – Preferred Alternative
Wetlands			
Riparian forest and scrub	0.00	0.00	0.00
Seasonal marsh	0.035 (0.086)	0.035 (0.086)	0.035 (0.086)
Subtotal - Wetlands	0.035 (0.086)	0.035 (0.086)	0.035 (0.086)
Nonwetlands			
Perennial stream	0.00	0.00	0.00
Canals	0.23 (0.57)	0.19 (0.47)	0.21 (0.53)
Subtotal – Other Waters of the U.S.	0.23 (0.57)	0.19 (0.47)	0.21 (0.53)
Total All Waters of the U.S.	**0.265 (0.656)**	**0.225 (0.556)**	**0.245 (0.616)**

All three of the alternatives would cross the affected wetland areas at the same location at SR 140 along a portion of the project route called the common alignment. The wetland resources that would be permanently filled are drainage areas that parallel SR 140. Changing the location of the crossing of SR 140 would not avoid or further minimize the wetland fill impact, as a realigned crossing would only impact the same resource in a different location. Lengthening the span of the crossing over SR 140 to potentially avoid the wetland resources is considered impracticable for the following reasons:

- The need to include an at-grade intersection connection between Campus Parkway and SR 140 on the north side of the existing highway
- The need to place supporting piles for a longer structure within the same wetland resource area
- The increased cost of a lengthened structure

Campus Parkway would cross jurisdictional nonwetland other waters of the United States at Black Rascal Creek, Bear Creek, Bradley Lateral, and the Doane and Hartley Laterals. At these crossings, irrigation canals would be placed in culverts, and bridge

crossings would be installed at the creeks. The three different alternative alignments would shift the location of the crossing of the resource but would not avoid it.

Other alternatives were considered but withdrawn from further evaluation, as described in Section 2.5. One of the alternatives would have the potential to reduce or avoid impacts to wetlands by improving the existing transportation network with minimal new roadway construction in Merced. That alternative, however, would not meet the purpose and need of the project. Other Campus Parkway alignments considered (extending the Green Alignment along Lake Road, the Green A and B Alignments, and the Pink A and B Alignments) would impact the same creek and canal crossings as the proposed alternative alignments but at different locations from the Yellow Alignment – Preferred Alternative. None of these withdrawn alignments would avoid impacts to wetlands. The Western Beltway Alignment alternative would not serve the purpose and need of the proposed project. The Alignment North of Yosemite Avenue was initially considered as part of the Campus Parkway project but was dropped because of potential adverse impacts to wetlands and other resources, and because it would not meet the purpose and need of the project. The Alignment North of Yosemite Avenue has been incorporated into the University Community Plan, a separate project.

The No Action alternative would avoid impacts to wetlands but would not meet the purpose and need of the project.

Measures Included to Minimize Harm to Wetlands

Measures have been adopted or incorporated into the preliminary design of the project to minimize impacts to wetlands and other waters of the United States. Nonwetland waters and riparian wetlands located at Bear Creek and Black Rascal Creek would be crossed by bridges to minimize permanent fill. Temporary impacts would result from construction, including the placement of temporary falsework structures to support forms and equipment. All falsework structures would be removed upon completion of the bridges, and the site would be revegetated.

The Doane and Hartley Laterals parallel a portion of the project alignment and would be intentionally avoided by designing the roadway with a setback from the canals. The contractors will be required to fence or otherwise protect the canals from construction disturbance.

Finding

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands, and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.

Floodplains

The project would not result in a significant encroachment of a floodplain, as documented in Section 3.10.2. Consistency of the project with the regulatory floodplain and consultation with Merced County (the floodplain administrator) is also discussed in Section 3.10.2. A Wetlands – Only Practicable Alternative finding is not required for this project.