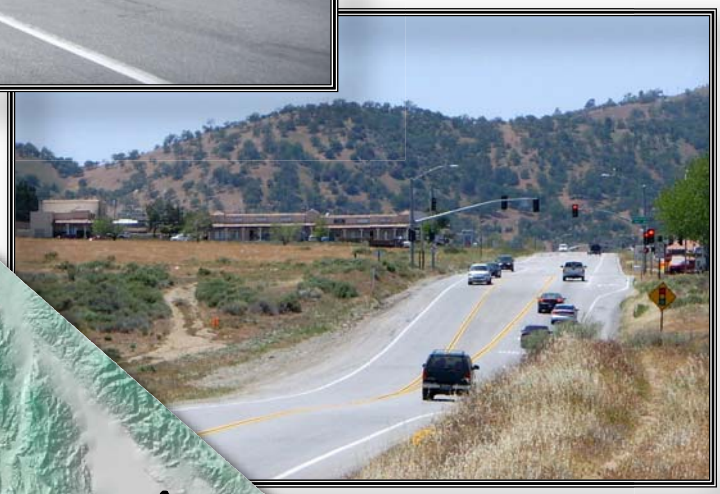
State Route 202
Transportation Concept Report



Caltrans District 9
Office of System Planning
June 2009

THIS PAGE IS LEFT INTENTIONALLY BLANK

STATE ROUTE 202

TRANSPORTATION CONCEPT REPORT

PREPARED
BY
CALTRANS
DISTRICT 9
OFFICE OF SYSTEM PLANNING

JUNE 2009

Additional Information

For additional information regarding the Transportation Concept Report for State Route 202, please contact:

California Department of Transportation
Office of System Planning
500 South Main Street
Bishop, California 93514
www.dot.ca.gov/dist9

For individuals with sensory disabilities, this document is available in Braille, large print, and on audiocassette or computer disk. To obtain a copy in one of these alternate formats, please contact the Equal Employment Opportunity Officer at the above address.

REPORT SIGNATURE SHEET

APPROVAL RECOMMENDED BY:

6/30/09.

BRAD R. METTAM
Deputy District Director
Planning and Programming

DATE

6/30/09

CRAIG HOLSTE
Deputy District Director
Maintenance and Operations

DATE

6/30/09

BRYAN WINZENREAD
Deputy District Director
Program/Project Management
and Local Assistance

DATE

APPROVED BY:

7/1/09

THOMAS P. HALLENBECK
District 9 Director

DATE

Approval for State Route 202 Transportation Concept Report

TABLE OF CONTENTS

CALIFORNIA STATE ROUTE 202 (SR 202) MAP 1

STATE ROUTE 202 SEGMENTS MAP 2

ELEVATION PROFILE OF SR 202 3

INTRODUCTION 4

ROUTE CONCEPT AND CONCEPT FACILITY 5

Table 1 - SR 202 Facility Summary 5

ROUTE SYNOPSIS 6

ROUTE HISTORY 6

PURPOSE OF SR 202 7

Table 2 - SR 202 Facility Purpose 7

TRANSPORTATION PLANNING, OPERATIONAL, AND LAND USE ISSUES 8

COMMUNITY ISSUES & PUBLIC OUTREACH 9

SR 202 SEGMENT FACT SHEETS 10

Segment 1: CCI to Woodford-Tehachapi Rd 10

Segment 2: Woodford-Tehachapi Rd to Tucker Rd 12

Segment 3: Tucker Rd to Tehachapi Blvd 14

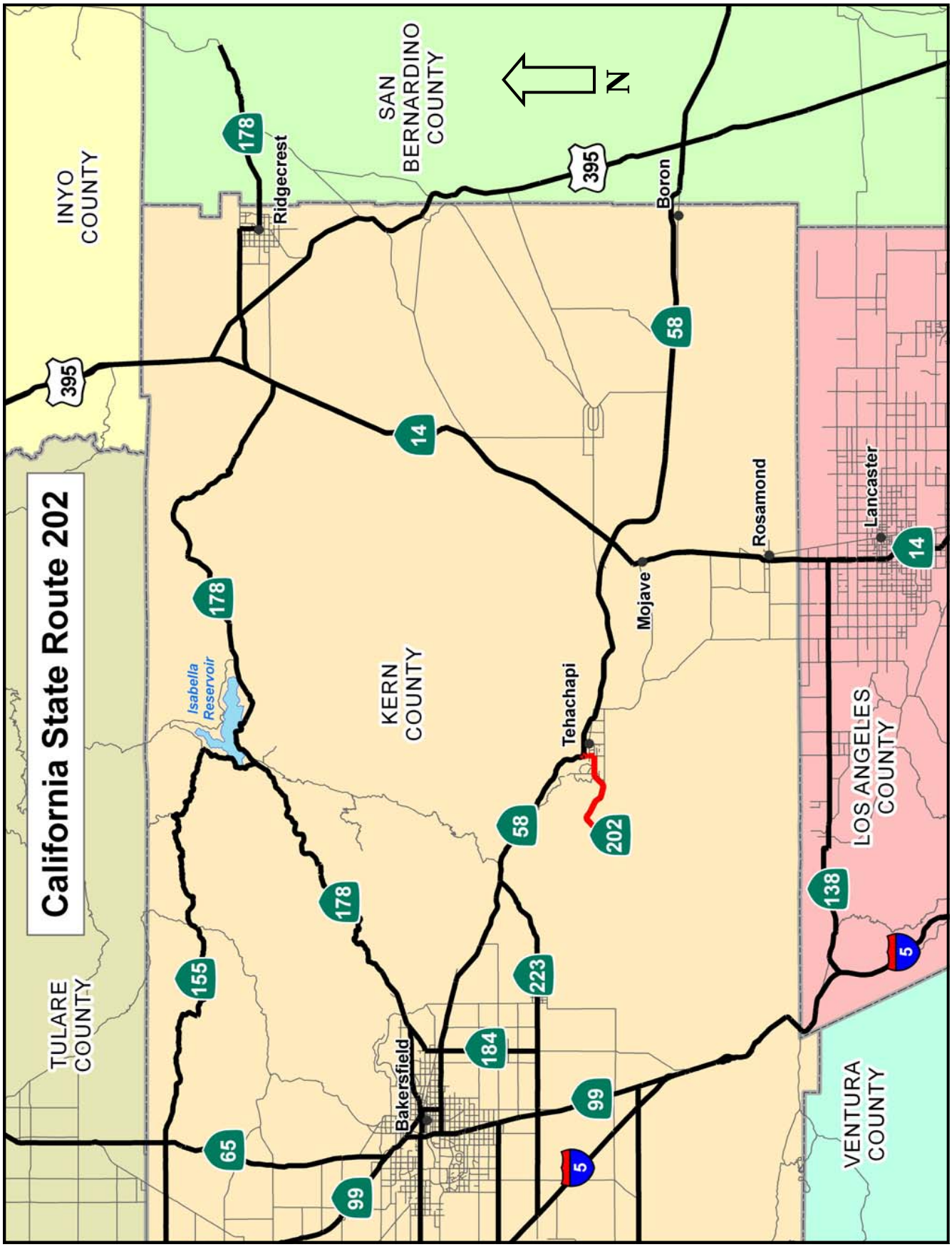
Segment 4: Tehachapi Blvd to SR 58 Interchange 16

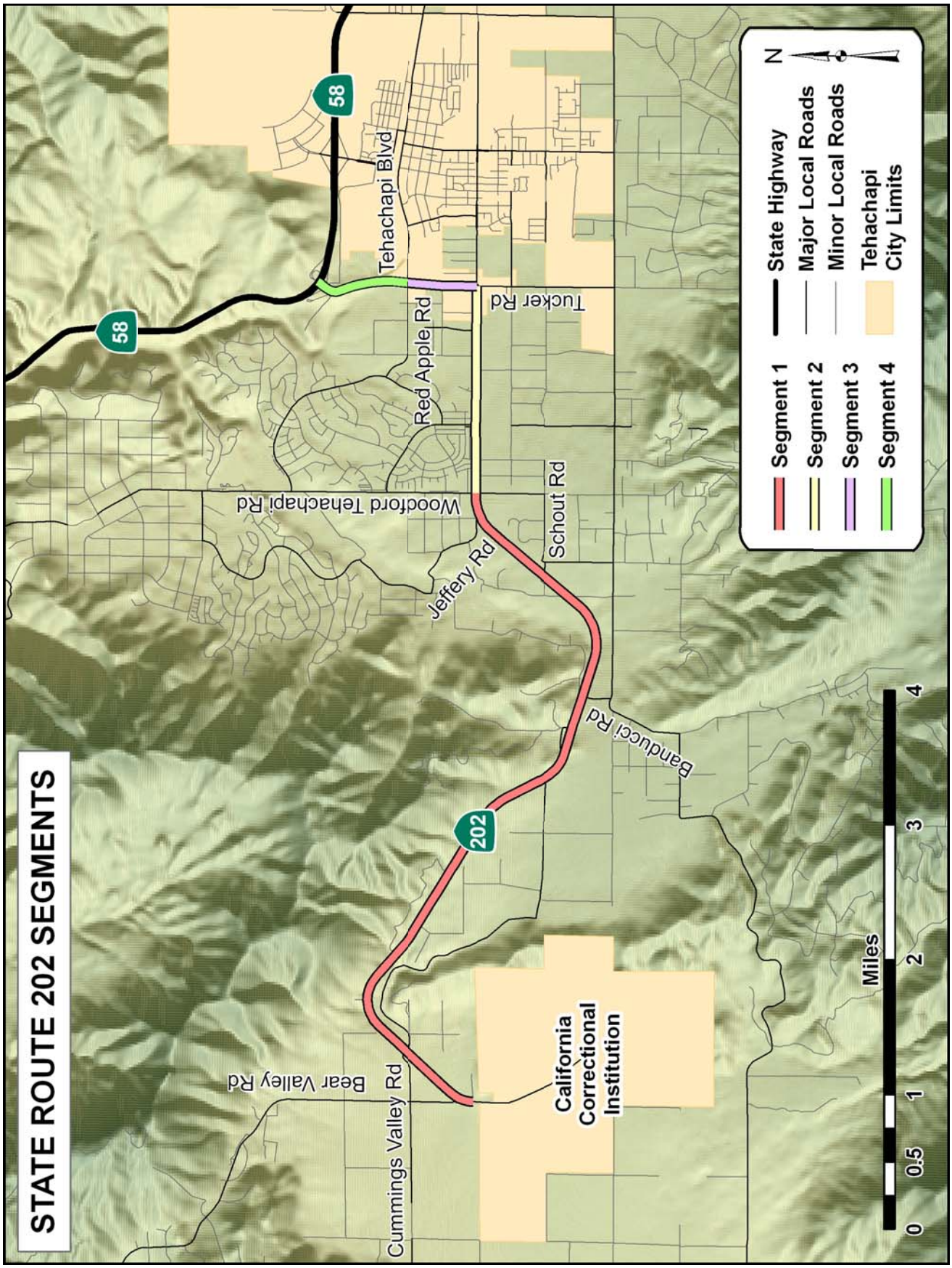
APPENDIX A - 2007 AADT SR 202 & LOCAL ROADS 18

ACRONYMS 20

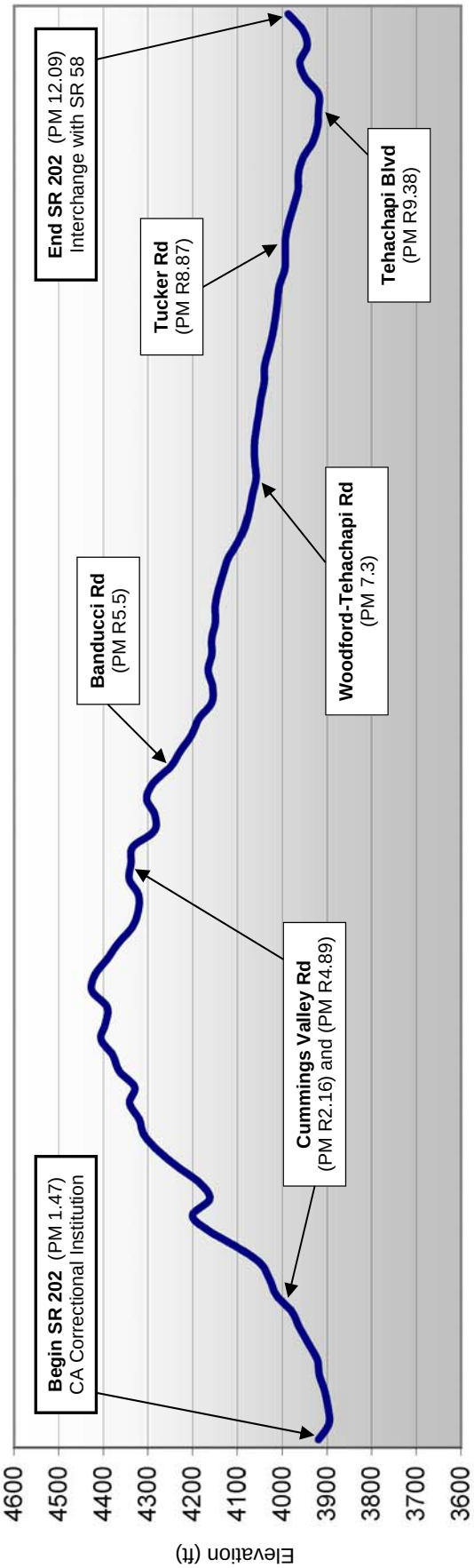
GLOSSARY 21

REFERENCES & INFORMATION 22


California State Route 202
INYO COUNTY
TULARE COUNTY
SAN BERNARDINO COUNTY
KERN COUNTY
LOS ANGELES COUNTY
VENTURA COUNTY
N
Ridgecrest
Boron
Rosamond
Lancaster
Mojave
Tehachapi
Bakersfield
Isabella Reservoir
178
395
14
58
202
138
5
155
65
99
184
223


STATE ROUTE 202 SEGMENTS
58
58
202
Tehachapi Blvd
Tucker Rd
Red Apple Rd
Woodford Tehachapi Rd
Schout Rd
Jeffery Rd
Banducci Rd
Bear Valley Rd
Cummings Valley Rd
California Correctional Institution
Segment 1
Segment 2
Segment 3
Segment 4
State Highway
Major Local Roads
Minor Local Roads
Tehachapi City Limits
N
Miles
0
0.5
1
2
3
4

SR 202 ELEVATION PROFILE *
Kern PM R1.47 - 12.09



* For planning purposes, not to scale

State Route 202 Transportation Concept Report

INTRODUCTION

The Transportation Concept Report (TCR) establishes a twenty-year planning concept that describes the current characteristics of State Route (SR) 202 transportation corridor. The TCR defines the California Department of Transportation's (Caltrans) goals for the development of the highway in terms of facility type and Level of Service (LOS), while broadly identifying the improvements needed to reach those goals.

LOS calculations are based on the year 2000 Highway Capacity Manual (HCM). The 2000 HCM includes changes to capacity calculations as compared to past editions. As a result, LOS calculations will differ from former reports or studies based on earlier editions of the HCM. Urban Street and Conventional Highway methodology were used to calculate LOS for segments of SR 202 in this report.

District 9 performs various functions in Eastern Kern County (District 6), including preparation of the TCR for SR 202, which is part of the maintenance, operations, and planning area of District 9. This report is prepared in collaboration with District 6 and local and regional agencies in Kern County.

All information in this TCR is subject to revision as conditions change and new information is obtained. Thus, the nature and scope of identified improvements may change during project development and environmental analysis stages. Final determinations are made at the time of project planning and design.

SR 202 - Westbound at Tucker Road

ROUTE CONCEPT AND CONCEPT FACILITY

A Route Concept is comprised of a Concept LOS and a description of the Concept Facility. The description of a facility reflects its number of travel lanes and degree of access onto the highway by local streets and driveways. The Concept Facility will establish the amount of vehicle-carrying capacity necessary to achieve the Concept LOS with forecasted traffic volumes. Concept LOS reflects the quality of operations that is appropriate for each route segment, and is considered to be reasonably attainable within the 20-year planning period.

Caltrans Districts 6 and 9, Kern County, and the Kern Council of Governments (KCOG) work together to balance regional goals and Caltrans policies for planning, programming, and delivering projects on SR 202. Caltrans District 9 consults with Kern County and the City of Tehachapi for maintenance and operational activities. Recommendations proposed by Caltrans Traffic Operations are intended to improve safety and access to the state highway. Caltrans will emphasize continued rehabilitation and operational improvements on SR 202.

SR 202 provides commuter, local, commercial, and residential travelers access to/from SR 58, the City of Tehachapi, and the California Correctional Institution (CCI). The 2007 Average Annual Daily Traffic (AADT) for the route ranges from the lowest AADT of 2,500 to the highest AADT of 21,800 vehicles (Caltrans 2007 AADT for SR 202). Appendix A illustrates the 2007 AADT for SR 202 and local roads. The facility is approximately 8.5 miles in length. Although the end of SR 202 at the SR 58 interchange is recorded as PM 12.09, the beginning of the route was realigned in 1970 to PM R1.47. Recent realignments of SR 202 to Tucker Rd in 2001 subtracted an additional 2.12 miles from the highway. The combined improvements shortened the total route by 3.59 miles, although the terminus of SR 202 remains as PM 12.09.

Table 1 summarizes the segment length, current and concept facility, and the current and concept LOS for SR 202. The Ultimate Facility Concept is the goal for the route beyond the 20-year planning horizon. It also shows the projected LOS for a 10-year and 20-year period, based on the region's 2007 calculated growth rate.

Table 1 – SR 202 Facility Summary

Segment County Post-Mile	Segment Length	Current Facility	Concept Facility	Ultimate Facility	2007 AADT	Current LOS	10-Yr LOS	20-Yr LOS	Route Concept LOS
1 Kern R1.47 - R7.3	5.75 miles	2-C	4-C	4-C	9,350	C/D	D	D	C
2 Kern R 7.3 - R8.87	1.54 miles	2-C	4-C	4-C	18,400	D	D	D	C
3 Kern R8.87 - R9.38	0.51 miles	4-C	4-C	4-C	15,000	C	C	C	C
4 Kern R9.38 - 12.0	0.70 miles	2-C	4-C	4-C	10,900	D	D	E	C

For acronyms used in this table, see page 20

ROUTE SYNOPSIS

SR 202 begins near the California Correctional Institution, in Kern County, runs easterly through Cummings Valley and the City of Tehachapi, to its end at the SR 58 interchange. The route is functionally classified as a Minor Arterial through the rural area of SR 202 (PM R1.47 - R5.5) and a Principal Arterial through a more developed portion of the Tehachapi area (PM R5.5 -12.09).

SR 202 - Eastbound at Woodford-Tehachapi Rd

The facility begins as a 2-lane conventional highway, in rolling terrain and has posted speed limits of 45 to 55 mph. It becomes a 2-lane conventional with a two-way-left-turn lane from Woodford-Tehachapi Rd to Golden Hills Blvd, and a posted speed limit of 40 mph. From Golden Hills Blvd to Tucker Rd the highway reverts back to a 2-lane conventional, with a 40 mph posted speed limit. The facility makes a 90 degree left-turn at Tucker Rd becoming a 4-lane conventional highway with a two-way-left-turn lane to West Tehachapi Blvd and a posted speed limit of 45 mph. From West Tehachapi Blvd it resumes as a 2-lane conventional to its end at the SR 58 interchange with 45-50 mph posted speed limit. SR 202 shoulders are generally 0-2 feet in rural areas and 4-8 feet in developed areas. There is a four-way-stop at Lower Cummings Valley road and signalized intersections at Woodford-Tehachapi Rd, Golden Hills Blvd, Tucker Rd, and West Tehachapi Blvd.

ROUTE HISTORY

Hailed as one of the greatest engineering feats of its day the “Tehachapi Loop” (circa 1876) is one of the world's busiest single-track mainline rails. The line was built by Southern Pacific Railroad. To support the railroad construction, the town of Summit Station was founded. Soon after, many of the buildings were relocated and the town was renamed Tehachapi.

In 1909, the Tehachapi settlement and the town of Tehachapi was legally established. An act of the state legislature in 1946 incorporated the town, which officially changed the name to City of Tehachapi. The greater Tehachapi area has a 25-mile radius and elevation ranges from approximately 4,000 ft to 8,000 ft at Double Mountain. It includes the Community Service Districts of Golden Hills, Bear Valley Springs, and Stallion Springs.

In 1932, the first state women's prison was built in Cummings Valley. A magnitude 7.7 earthquake in 1952 did major damage to the City, including the prison. The state repaired the facility in 1953, and made it a branch of the California Institution for Men at Chino. In the mid-1960s, a new medium-security facility was built at Tehachapi and by the mid-1980s, two maximum security prisons were constructed. Now known as the California Correctional Institution, the prison was annexed by the City in 1998, and is the area’s largest employer.

Legislative SR 202 was signed as Route 144 from 1933 until the 1960’s. SR 202 has been realigned twice. In 1970, the west end of the route was relinquished and realigned to PM R1.47. In 2001 approximately 2.12 miles of the route were relinquished to the City of Tehachapi. Relinquished segments are: West Tehachapi Blvd to South Curry St; South Curry St to Cummings Valley Blvd; Cummings Valley Blvd to Tucker Rd. The new alignment connects the Red Apple Ave and West Tehachapi Blvd intersection (PM R9.381) with the Cummings Valley Blvd and Tucker Rd intersection (PM R8.87). All combined, relinquishments subtracted 3.59 miles from the ending post mile of SR 202 (PM 12.09), thus the highway is actually 8.5 miles in length.

PURPOSE OF SR 202

SR 202 serves residential, commercial, commuter, local, and CCI traffic. It provides access to SR 58 as a primary arterial for the greater Tehachapi area. SR 58 traverses Tehachapi Pass (4,000 ft elev.) and is one of the primary east/west goods movement corridors in California.

The CCI uses SR 202 as its primary access to the state highway system. This, and the fact that the CCI is currently the largest employer in the Tehachapi area, with approximately 2,000 employees, highlights the importance of SR 202 and SR 58 to California and the greater Tehachapi area.

Begin SR 202 (PM R1.47)
California Correctional Institution (CCI)

SR 202 is listed in the National Truck Network (NTN) as a California Legal Network Route from its west end to Tucker Rd (PM R1.47 - PM R8.87), which provides truck access to the entire state highway system, except where prohibited. From Tucker Rd to its interchange with SR 58, SR 202 is listed in the NTN as a STAA Terminal Access Route, which provides reasonable access to facilities for limited purposes.

The functional classification, description, facility type, right of way width and rights, route purpose, and truck networks for each segment in this TCR are defined in Table 2:

Table 2 - SR 202 Facility Purpose

Segment County Post-Mile	Functional Class	Description	Present Facility	R/W Width & Rights	Route Purpose	National Truck Network	See Page #
1 Kern R1.47 - R7.3	Rural Minor Arterial (PM 5.5) ********* Urban Principal Arterial (PM 7.3)	CCI to Banducci Rd ********** to Woodford-Tehachapi Rd	2-C	50-350 ft, Prescriptive, Fee	Residential, Commuter, CA Correctional Institution	CA Legal Network CL-40	10
2 Kern R7.3 - R8.87	Urban Principal Arterial	Woodford-Tehachapi Rd to Tucker Rd	2-C	60-110 ft, Fee	Local, Commuter, CA Correctional Institution	CA Legal Network CL-40	12
3 Kern R8.87 - R9.38	Urban Principal Arterial	Tucker Rd to Tehachapi Blvd	4-C	110-115 ft, Fee	Local, Commuter, CA Correctional Institution	STAA Terminal Access Route	14
4 Kern R9.38– 12.09	Urban Principal Arterial	Tehachapi Blvd to SR 58 junction	2-C	115-225 ft, Fee	Commuter, CA Correctional Institution/SR 58	STAA Terminal Access Route	16

For acronyms used in this table, see page 20

TRANSPORTATION PLANNING, OPERATIONAL, AND LAND USE ISSUES

Rural Residential Area of Kern County (PM R1.47 - 7.3)

Segment 1 of SR 202 is located in Kern County, with residential developments and the California Correctional Institution being the primary traffic generators. Bear Valley Springs (25,000 acres /3,500 homes) and Stallion Springs (10,560 acres /763 homes) are Community Services Districts which are authorized as "special districts" under Government Code 66100 of the State of California. Segment 1 has an AADT of 9,350, with LOS C. This is projected to deteriorate to LOS D by 2010.

The Kern County General Plan, 2007 identifies the following Policy: "If traffic resulting from projects such as General Plan amendment (s) would exceed current volume to capacity projections, then mitigation is required if development causes roadways to fall below LOS D and LOS C for Caltrans roadways." (Circulation Element, 2.4.2 Tehachapi-Antelope Valley)

In 2004, Kern COG prepared the Southeast Kern County Regional Fee Nexus Study which suggested widening SR 202 to a 4-lane highway. Caltrans hopes to work with Kern County to insure their land use and development policies are consistent with widening the facility in this rural area. Currently, funding for the improvements identified in the study does not exist.

Urban Area - Tehachapi Sphere of Influence and City of Tehachapi (PM R7.3 - R9.38)

The urbanizing area of SR 202 has a series of streets, which connect to the greater Tehachapi area. Traffic volumes are expected to rise with ongoing development within the sphere of influence of the City of Tehachapi. Completion of development projects in the City of Tehachapi are expected to increase volumes of all modes of traffic.

SR 202 provides access to the City of Tehachapi, functioning as an urban street with commercial and residential development in segments 2 & 3. Frontage roads on both sides of the highway in segment 2 have numerous access points and provide connections to strip-mall type development adjacent to the facility. A lack of standard shoulder width along segment 2 presents challenges to pedestrians, vehicles, bicycles, and buses. As stated in the City of Tehachapi General Plan, *"Transportation System Management and Transportation Demand Management are the applicable strategies for the mitigation of traffic and parking congestion. Public transit, traffic management, encouragement of ridesharing in the public and private sector, and parking management are to be used…..to implement transportation management strategies."* (Goal 9b: Transportation System Management, City of Tehachapi General Plan, Circulation Element,1999).

In segment 4 (PM R9.38 - 12.09), *"provision for park-and-ride facilities adjacent to the regional transportation system"*, which would involve an interchange with SR 58, is identified as a policy under Goal 9a: Transportation System Management (City of Tehachapi General Plan, Circulation Element, 1999).

COMMUNITY ISSUES & PUBLIC OUTREACH

Improvements to SR 202 will be planned utilizing a collaborative, interdisciplinary approach involving all stakeholders. This approach will attempt to integrate and balance community, aesthetic, historic, and environmental values with regard to transportation safety, maintenance, and performance goals. Stake-holders in the SR 202 planning area are community members and agencies, including, but not limited to: Kern County, Kern Council of Government, City of Tehachapi, Bear Valley Unified and Tehachapi Unified School Districts, BLM, Department of Fish and Game, Kern County Air Pollution Control District, Central Valley Regional Water Quality Control Board, Kern County Farm Bureau, and Kern Regional Transit Authority. Caltrans continuously consults with these stakeholders regarding SR 202 proposed projects.

Kern COG underwent an extensive community outreach effort in 2008 in order to identify issues, opportunities, and principles for growth to develop a Regional Blueprint Plan and associated growth scenario model. Many town hall meetings were held throughout Kern County, including ones in Tehachapi and other Kern County mountain sub-region communities.

Though much of the blueprint planning process relates to challenges regarding housing, economic sustainability, resource conservation, and air quality, transportation remains a key component. Some transportation related results from the surveys and meetings conducted in Tehachapi are as follows with prioritized transportation choices in this order:

1. Maintaining local streets and roads (highest priority);
2. Improving public transportation to other cities;
3. Reducing traffic congestion and expanding local bus services;
4. Expanding highways; Maintaining and improving sidewalks and bike lanes (lowest priority).

Tehachapi, being a more rural community, stressed the need for safe and efficient road systems to connect communities and specialized transit services such as dial-a-ride.

- Participants commented: the local government agencies are not doing enough to manage the issue of *"Reducing traffic congestion and improving public transportation."*
- The majority did not feel that *"local governments have adequate funding to provide the roads and public transportation projects needed to accommodate future population growth."*
- The majority did not feel that *"roads throughout Kern County are safe and adequate to handle the current population."*
- Participants commented: roadway planning should include additional lanes on heavily traveled corridors; safety improvements to better protect pedestrians, cyclists and drivers; and improvements to highway entrances and exits.

THIS PAGE IS LEFT INTENTIONALLY BLANK

STATE ROUTE 202 - SEGMENT FACT SHEET

Segment 1

Length Miles	5.75
Back PM	R1.47
Ahead PM	R7.3
Present Facility	2-C
Present LOS	C/D
Concept Facility	4-C
Concept LOS	C
Ultimate Facility	4-C

Segment Location

Segment Description

This segment is a 2-lane conventional highway located on rolling terrain in Kern County that begins 1,000 ft from the California Correctional Institution (CCI) and ends at the signal controlled intersection with Woodford-Tehachapi Blvd. The facility is classified as a Rural Minor Arterial to Banducci Rd (PM 5.5), then as a Principal Arterial to Woodford-Tehachapi Blvd (PM 7.3). The majority of the road is in good condition, with a posted speed limits of 45 to 55 mph, and shoulders from 0 to 2 ft. A four-way stop on SR 202 was installed in 2009 at the intersection of Lower Cummings Valley Rd. This rural portion of the route serves residential, commuter, agricultural, and CCI traffic. For maintenance funding purposes, the California State Highway system uses Maintenance Service Level (MSL), which classifies the highway according to its role and volumes. On a MSL scale of 1 to 3 (high emphasis to low emphasis), this segment is a Class 3.

Route Concept Improvement Recommendations

To correct projected LOS D in 2010, work should begin to widen this segment to 4 lanes, with standard shoulders and rumble strips. When the highway is scheduled for rehabilitation, shoulders and intersections should be constructed to meet current standards. Consider operational and safety improvements for turning and cross-traffic access to and from the facility. In cooperation with Kern County, a project to replace the 4-way stop at the intersection of Lower Cummings Valley Road with signal is currently in the planning phase. New development should be required to provide road improvements along the project frontage, and/or pay a transportation development fee.

Programmed Projects

Proposed projects at the writing of this report: Install a 4-phase signal at Lower Cummings Valley Rd (PM R2.16) and adjust intersection geometry to meet current standards; construct EB passing lane with 8' shoulder widening (PM R2.65-R4.89); Provide left-turn refuge at 5 intersections : EB Bear Valley Rd (PM R1.63), WB Lower Cummings Valley Rd (PM R2.16), WB Upper Cummings Valley Rd (PM R4.89), EB and WB Shout Rd (PM R6.58), and EB Jeffrey Rd (PM R7.22). There are no programmed projects for this segment at this time.

Highway Network Affiliation

Functional Classification: Rural: Minor Arterial, Principle Arterial

National Hwy System	No	**Scenic Highway**	Non-Scenic
California Freeway Expressway System	No	**National Truck Network**	California Legal Network
STRAHNET	No	**Life Line**	No
Regionally Significant	No	**IRRS**	No

Highway Information

	Feet
Average Median Width	0
Average Shoulder Width	2
Average Lane Width	12

STATE ROUTE 202 - SEGMENT FACT SHEET

Air Quality Comments

This route is located within the Kern County Air Pollution Control District. For National Ambient Air Quality Standards (NAAQS), this area is non-attainment for both ozone (8 hour) and particulate matter (PM-10). For State of California Ambient Air Quality Standards, this area is non-attainment for both ozone (8 hour) and particulate matter (PM-10). All other parameters are either within attainment, or are unclassified.

Transit Service / Modal Options

Public transit services are provided by Kern Regional Transit with a combination of demand-response, fixed-route, and intercity transit services. Dial-A-Ride service is available in the City of Tehachapi and intercity service is available via the Eastern Kern Express between the communities of Bakersfield, Keene, Tehachapi, Mojave, Rosamond, and Lancaster. Passengers may transfer to other regional carriers in Bakersfield, Mojave and Lancaster. Charter air travel is available at the Tehachapi Municipal Airport, but no commercial passenger air travel is available. Bicycles are allowed on the route.

Land Use

This portion of the route is predominately rural residential, resource agricultural lands, and public land use. The CA Correctional Institution for Men (CCI) is on incorporated City of Tehachapi land.

Environmental Concerns

There are no endangered species listed in this area. This segment of SR 202 has numerous oak trees and that can constitute oak woodland habitat. Kern County General Plan Section 1.10.10 "Oak Tree Conservation" stipulates that oak trees should be protected where possible and that only diseased trees should be removed. Caltrans will attempt to preserve existing oak trees within the right-of-way, providing they don't impact public safety. Caltrans considers this a culturally sensitive area. The highway runs through both historic and prehistoric culturally sensitive areas. Any future work done along State Route 202, that goes beyond the current edge of pavement, or disturbs any natural ground, would require cultural resource evaluation by a qualified Caltrans archaeologist.

Right of Way Comments

The highway right-of-way (R/W) varies in width from 50-350 ft, and is claimed and held by prescriptive rights and fee title.

Traffic Analysis Comments

In this segment, SR 202 functions as a rural highway, and as a primary corridor for residential and California Correctional Institution (CCI) traffic. Access management, deteriorating LOS, and 0 - 2 ft shoulders are the primary issues. There are (8) eight intersections along SR 202 with increasing AADT from growing residential development and agricultural operations that enter the highway at Bear Valley Rd (PM R1.63); Lower Cummings Valley Rd (PM R2.16); Upper Cummings Valley Rd (PM R4.89); Banducci Rd (PM R5.5); Schout Rd (PM R6.58), and Jeffrey Rd (PM R7.22). Fatality + Injury and Total Actual Accident Rates are below the statewide average for a similar facility. The primary collision factors are failure to yield and speeding. At the intersection of SR 202 and Lower Cummings Valley Road the primary collision type is broadside, and the primary collision factor is failure to yield. Slow moving vehicles on rolling terrain reduce passing opportunities. Narrow shoulders, high speeds, rolling terrain, and high AADT negatively impact the ability of Caltrans Maintenance crews to perform work on or adjacent to SR 202. Winter snow and ice conditions can impact the road surface, and as a result, chain requirements and/or road closures occur on SR 202.

Highway Operation Factors

Traffic Forecasts		Design Hour Volumes		Level of Service	
2007 AADT	9,350	2007 DHV	795	2007	C/D
2017 AADT	12,800	2017 DHV	1,120	2017	D
2027 AADT	15,300	2027 DHV	1,300	2027	D

Calculation Factors

Fatality + Injury Actual Accident Rate	0.35	Total Actual Accident Rate	0.71	% Traffic Growth 0-10 Years	3.2%
Fatality + Injury Statewide Avg Rate	0.41	Total Statewide Average Rate	0.98	% Traffic Growth 10-20 Years	2.5%
Directional Split	50/50	Terrain	Rolling	Percent Trucks	2.0%

STATE ROUTE 202 - SEGMENT FACT SHEET

Segment 2

		Length Miles	1.54
		Back PM	R7.3
Present Facility	2-C	**Ahead PM**	R8.87
Present LOS	D		
Concept Facility	4-C		
Concept LOS	C		
Ultimate Facility	4-C		

Segment Location

Segment Description

This segment is 2-lane conventional highway located on rolling terrain in Kern County. The highway is classified as a Principal Arterial, which begins at the Woodford-Tehachapi Rd intersection and ends at the Tucker Rd intersection. A two-way-left-turn lane runs from Woodford-Tehachapi Rd to Golden Hills Blvd, and for a 1,000 ft on the eastbound approach to Tucker Rd. There are signal controlled intersections, with turn lanes, at Woodford-Tehachapi Rd, Golden Hills Blvd, and Tucker Rd. The majority of the road is in good condition, with a posted speed limit of 40 mph, and shoulders from 0 - 8 ft. Tehachapi City limits extend on SR 202 from just east of Sierra Vista Rd to the Union Pacific railroad bridge, north of Tehachapi Blvd. This segment serves residential, commercial, commuter, and California Correctional Institution (CCI) traffic. For maintenance funding purposes, the California State Highway system uses Maintenance Service Level (MSL), which classifies the highway according to its role and volumes. On a MSL scale of 1 to 3 (high emphasis to low emphasis), this segment is a Class 3.

Route Concept Improvement Recommendations

To correct current LOS D, work should begin to widen this segment to 4 lanes, with standard shoulders. Curbs, gutters, sidewalks, and turn lanes should be provided as appropriate. When the facility is scheduled for rehabilitation, shoulders and intersections should be constructed to meet current standards. Consider safety and operational improvements for access, bicycle, pedestrian and turn-movements. Caltrans endorses developing multi-modal improvements along this segment. New development should be required to provide road improvements along the project frontage, and/or pay a transportation development fee.

Programmed Projects

There are no programmed projects for this segment at this time. Kern COG, Kern Co. and the City of Tehachapi have proposed a regional fee, in the Greater Tehachapi Area Circulation Study that would raise funds to widen SR 202 to a 4-lane facility between Woodford-Tehachapi Rd and Tucker Rd.

Highway Network Affiliation

Functional Classification: Principal Arterial

National Hwy System	No	**Scenic Highway**	Non-Scenic
California Freeway Expressway System	No	**National Truck Network**	California Legal Network
STRAHNET	No	**Life Line**	No
Regionally Significant	No	**IRRS**	No

Highway Information

	Feet
Average Median Width	0
Average Shoulder Width	4
Average Lane Width	12

STATE ROUTE 202 - SEGMENT FACT SHEET

Air Quality Comments

This route is located within the Kern County Air Pollution Control District. For National Ambient Air Quality Standards (NAAQS), this area is non-attainment for both ozone (8 hour) and particulate matter (PM-10). For State of California Ambient Air Quality Standards, this area is non-attainment for both ozone (8 hour) and particulate matter (PM-10). All other parameters are either within attainment, or are unclassified.

Transit Service / Modal Options

Public transit services are provided by Kern Regional Transit with a combination of demand-response, fixed-route, and intercity transit services. Dial-A-Ride service is available in the City of Tehachapi and intercity service is available via the Eastern Kern Express between the communities of Bakersfield, Keene, Tehachapi, Mojave, Rosamond, and Lancaster. Passengers may transfer to other regional carriers in Bakersfield, Mojave and Lancaster. Charter air travel is available at the Tehachapi Municipal Airport, but no commercial passenger air travel is available. Bicycles are allowed on the route.

Land Use

This portion of the route is predominately commercial land use and public lands.

Environmental Concerns

There are no identified endangered species listed in this area. The highway runs through both historic and prehistoric culturally sensitive areas. Any future work done on State Route 202, that goes beyond the current edge of pavement or disturbs any natural ground, would require cultural resource evaluation by a qualified Caltrans archaeologist.

Right of Way Comments

The highway right-of-way (R/W) varies in width from 60-110 ft, and is held by fee title.

Traffic Analysis Comments

In this segment, SR 202 functions as a rural highway transitioning to an urban street. It is a primary arterial for local and California Correctional Institution (CCI) traffic with access management and deteriorating LOS as primary issues. The LOS in this segment was derived by using an Urban Street methodology since the facility is restricted by speed limits and traffic signals. Fatality + Injury and Total Actual Accident Rates are below the statewide average for a similar facility. The primary collision factor is speeding and the primary collision type is rear end. Winter snow and ice conditions can impact the road surface, and as a result, chain requirements and/or road closures occur on SR 202.

Highway Operation Factors

Traffic Forecasts		Design Hour Volumes		Level of Service	
2007 AADT	18,400	2007 DHV	1,700	2007	D
2017 AADT	23,500	2017 DHV	2,170	2017	D
2027 AADT	30,100	2027 DHV	2,780	2027	D

Calculation Factors

Fatality + Injury Actual Accident Rate	0.37	Total Actual Accident Rate	1.04	% Traffic Growth 0-10 Years	2.5%
Fatality + Injury Statewide Avg Rate	0.62	Total Statewide Average Rate	1.55	% Traffic Growth 10-20 Years	2.5%
Directional Split	50/50	Terrain	Level	Percent Trucks	2.0%

STATE ROUTE 202 - SEGMENT FACT SHEET

Segment 3

Length Miles	0.51
Back PM	R8.87
Ahead PM	R9.38
Present Facility	4-C
Present LOS	C
Concept Facility	4-C
Concept LOS	C
Ultimate Facility	4-C

Segment Location

Segment Description

This segment is a 4-lane conventional highway that is classified as a Principal Arterial. It is located on rolling terrain within the City of Tehachapi, in Kern County. Beginning at Tucker Rd and ending at the Tehachapi Blvd signal controlled intersections, the posted speed limit is 45 mph. The majority of the road is in good condition with 8 ft shoulders and a two-way-left-turn lane along the entire segment. This segment serves local, commercial, commuter, and California Correctional Institution (CCI) traffic. For maintenance funding purposes, the California State Highway system uses Maintenance Service Level (MSL), which classifies the highway according to its role and volumes. On a MSL scale of 1 to 3 (high emphasis to low emphasis), this segment is a Class 3.

Route Concept Improvement Recommendations

An Access Management Plan (AMP) that focuses on cross-traffic, bicycle, and pedestrian movements, should be considered. Curbs, gutter, and sidewalks should be provided as appropriate. Caltrans endorses developing multi-modal improvements along this segment. Consideration should be given to a park and ride facility for this segment. New development should be required to provide road improvements along the project frontage, and/or pay a transportation development fee.

Programmed Projects

There are no programmed projects for this segment at this time.

Highway Network Affiliation

Functional Classification: Principal Arterial

National Hwy System	No	**Scenic Highway**	Non-Scenic
California Freeway Expressway System	No	**National Truck Network**	STAA Terminal Access Route
STRAHNET	No	**Life Line**	No
Regionally Significant	No	**IRRS**	No

Highway Information

	Feet
Average Median Width	14
Average Shoulder Width	8
Average Lane Width	12

STATE ROUTE 202 - SEGMENT FACT SHEET

Air Quality Comments

This route is located within the Kern County Air Pollution Control District. For National Ambient Air Quality Standards (NAAQS), this area is in non-attainment for both ozone (8 hour) and particulate matter (PM-10). For State of California Ambient Air Quality Standards, this area is at non-attainment for both ozone (8 hour) and particulate matter (PM-10). All other parameters are either within attainment, or are unclassified.

Transit Service / Modal Options

Public transit services are provided by Kern Regional Transit with a combination of demand-response, fixed-route, and intercity transit services. Dial-A-Ride service is available in the City of Tehachapi and intercity service is available via the Eastern Kern Express between the communities of Bakersfield, Keene, Tehachapi, Mojave, Rosamond, and Lancaster. Passengers may transfer to other regional carriers in Bakersfield, Mojave and Lancaster. Charter air travel is available at the Tehachapi Municipal Airport, but no commercial passenger air travel is available. Bicycles are allowed on the route.

Land Use

This portion of the route is predominately commercial, state/federal, and residential land use.

Environmental Concerns

There are no identified endangered species listed in this area. The highway runs through both historic and prehistoric culturally sensitive areas. Any future work done on State Route 202, that goes beyond the current edge of pavement or disturbs any natural ground, would require cultural resource evaluation by a qualified Caltrans archaeologist.

Right of Way Comments

The highway right-of-way (R/W) varies in width from 110-115 ft, and is held by fee title.

Traffic Analysis Comments

In this segment, SR 202 functions as a urban street, and as a primary arterial for local and California Correctional Institution (CCI) traffic. Access management is a primary issue. The LOS in this segment was derived by using an Urban Street methodology since the facility is restricted by speed limits and traffic signals. Fatality + Injury and Total Actual Accident Rates are below the statewide average for a similar facility. The primary collision factor is speeding and the primary collision type is rear end. In 2006/07, Red Apple Rd connected to SR 202 at the Tehachapi Blvd intersection. This improves local traffic circulation by providing alternative connectivity to the community of Golden Hills. Winter snow and ice conditions can impact the road surface, and as a result, chain requirements and/or road closures occur on SR 202.

Highway Operation Factors

Traffic Forecasts		Design Hour Volumes		Level of Service	
2007 AADT	15,000	2007 DHV	1,450	2007	C
2017 AADT	19,200	2017 DHV	1,850	2017	C
2027 AADT	24,500	2027 DHV	2,370	2027	C

Calculation Factors

Fatality + Injury Actual Accident Rate	0.42	Total Actual Accident Rate	1.25	% Traffic Growth 0-10 Years	2.5%
Fatality + Injury Statewide Avg Rate	0.63	Total Statewide Average Rate	1.60	% Traffic Growth 10-20 Years	2.5%
Directional Split	50/50	Terrain	Level	Percent Trucks	2.0%

STATE ROUTE 202 - SEGMENT FACT SHEET

Segment 4

Length Miles	0.7
Back PM	R9.38
Ahead PM	12.09
Present Facility	2-C
Present LOS	D
Concept Facility	4-C
Concept LOS	C
Ultimate Facility	4-C

Segment Location

Segment Description

This segment is a 2-lane conventional highway that is classified as a Principal Arterial on rolling terrain in Kern County. Beginning at the Tehachapi Blvd signal controlled intersection and ending at the SR 202/SR 58 interchange, the highway has posted speed limits from 45 to 50 mph. The majority of the road is in good condition with 8 ft shoulders. Tehachapi City limits extend on SR 202 from east of Sierra Vista Rd to the Union Pacific railroad bridge (#50-0486). There is an 8 ft median on the Union Pacific railroad bridge. This segment provides access to a Caltrans maintenance facility, located just west of SR 202 and adjacent to the SR 58 interchange. This segment serves commercial, commuter, goods movement, and California Correctional Institution (CCI) traffic. For maintenance funding purposes, the California State Highway system uses Maintenance Service Level (MSL), which classifies the highway according to its role and volumes. On a MSL scale of 1 to 3 (high emphasis to low emphasis), this segment is a Class 3.

Route Concept Improvement Recommendations

To correct current LOS D, work should begin to widen this segment to 4 lanes, with standard shoulders. Curbs, gutters, and sidewalks should be provided as appropriate An Access Management Plan (AMP) that focuses on cross-traffic, bicycle, and pedestrian movements, should be developed. Caltrans endorses developing multi-modal improvements along this segment. Consideration should be given to a park and ride facility for this segment. New development should be required to provide road improvements along the project frontage, and/or pay a transportation development fee. The City of Tehachapi has indicated a need for two additional travel lanes on the Tehachapi Creek Bridge in the Southeast Kern County Regional Fee Nexus Study. Kern COG, Kern Co. and the City of Tehachapi have proposed a regional fee that would raise funds to widen SR 202 between Tehachapi Blvd and SR 58.

Programmed Projects

There are no programmed projects for this segment at this time.

Highway Network Affiliation

Functional Classification: Principal Arterial

National Hwy System	No	**Scenic Highway**	Non-Scenic
California Freeway Expressway System	No	**National Truck Network**	STAA Terminal Access Route
STRAHNET	No	**Life Line**	No
Regionally Significant	No	**IRRS**	No

Highway Information

	Feet
Average Median Width	0
Average Shoulder Width	8
Average Lane Width	12

STATE ROUTE 202 - SEGMENT FACT SHEET

Air Quality Comments

This route is located within the Kern County Air Pollution Control District. For National Ambient Air Quality Standards (NAAQS), this area is in non-attainment for both ozone (8 hour) and particulate matter (PM-10). For State of California Ambient Air Quality Standards, this area is at non-attainment for both ozone (8 hour) and particulate matter (PM-10). All other parameters are either within attainment, or are unclassified.

Transit Service / Modal Options

Public transit services are provided by Kern Regional Transit with a combination of demand-response, fixed-route, and intercity transit services. Dial-A-Ride service is available in the City of Tehachapi and intercity service is available via the Eastern Kern Express between the communities of Bakersfield, Keene, Tehachapi, Mojave, Rosamond, and Lancaster. Passengers may transfer to other regional carriers in Bakersfield, Mojave and Lancaster. Charter air travel is available at the Tehachapi Municipal Airport, but no commercial passenger air travel is available. Bicycles are allowed on the route.

Land Use

This portion of the route is predominately light industrial, commercial, railroad, and resource reserve land use.

Environmental Concerns

There are no identified endangered species listed in this area. The highway runs through both historic and prehistoric culturally sensitive areas. Any future work done on State Route 202, that goes beyond the current edge of pavement or disturbs any natural ground, would require cultural resource evaluation by a qualified Caltrans archaeologist.

Right of Way Comments

The highway right-of-way (R/W) varies in width from 115-225 ft, and is held by fee title.

Traffic Analysis Comments

In this segment, SR 202 functions as a primary arterial for local, commuter, goods movement, and California Correctional Institution (CCI) traffic. Access management and deteriorating LOS are the primary issue. Fatality + Injury and Total Actual Accident Rates are below the statewide average for a similar facility. The primary collision factor is speeding and the primary collision type is rear end. Winter snow and ice conditions can impact the road surface, and as a result, chain requirements and/ or road closures occur on SR 202.

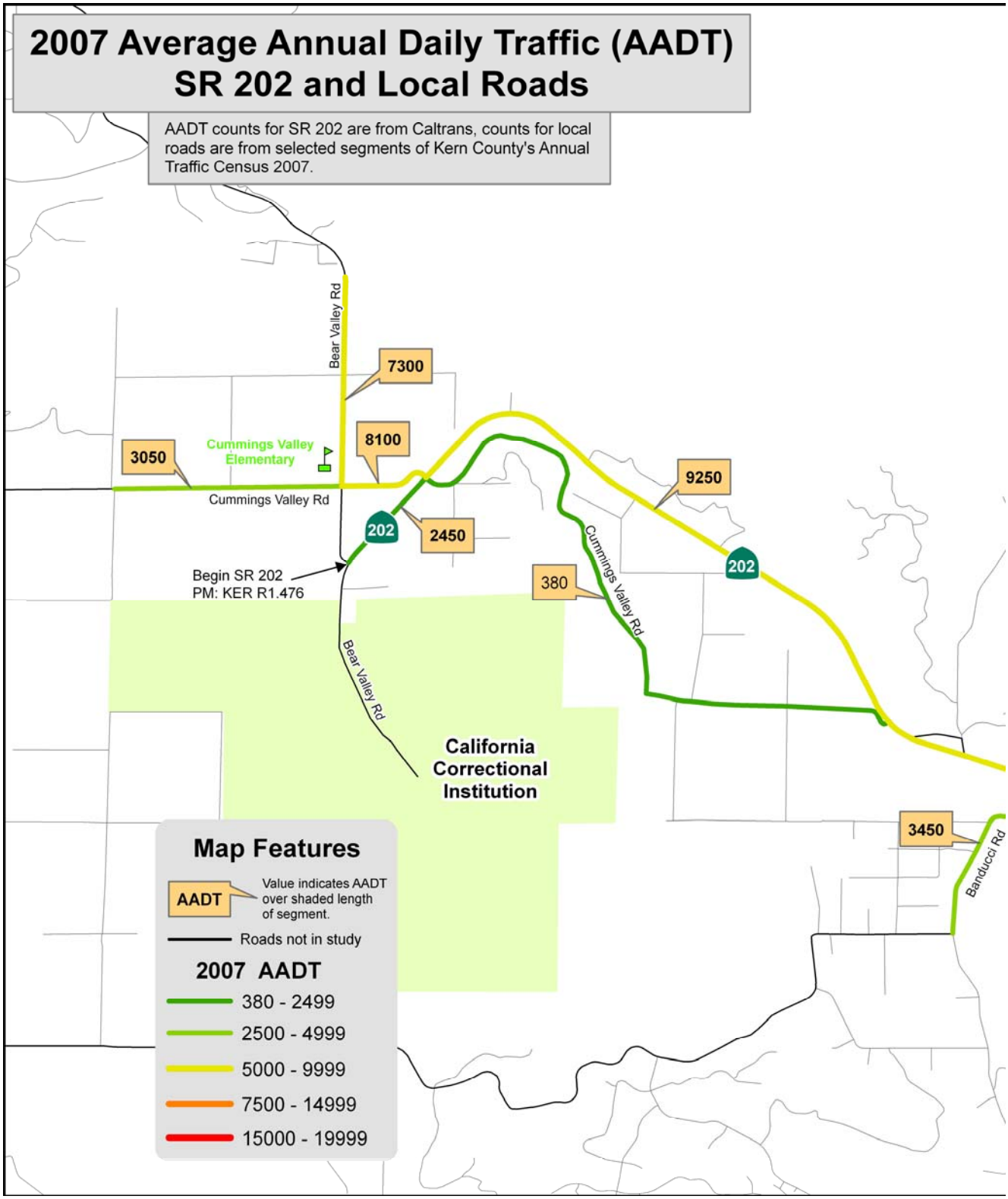
Highway Operation Factors

Traffic Forecasts		Design Hour Volumes		Level of Service	
2007 AADT	10,900	2007 DHV	980	2007	D
2017 AADT	13,950	2017 DHV	1,250	2017	D
2027 AADT	17,850	2027 DHV	1,610	2027	E

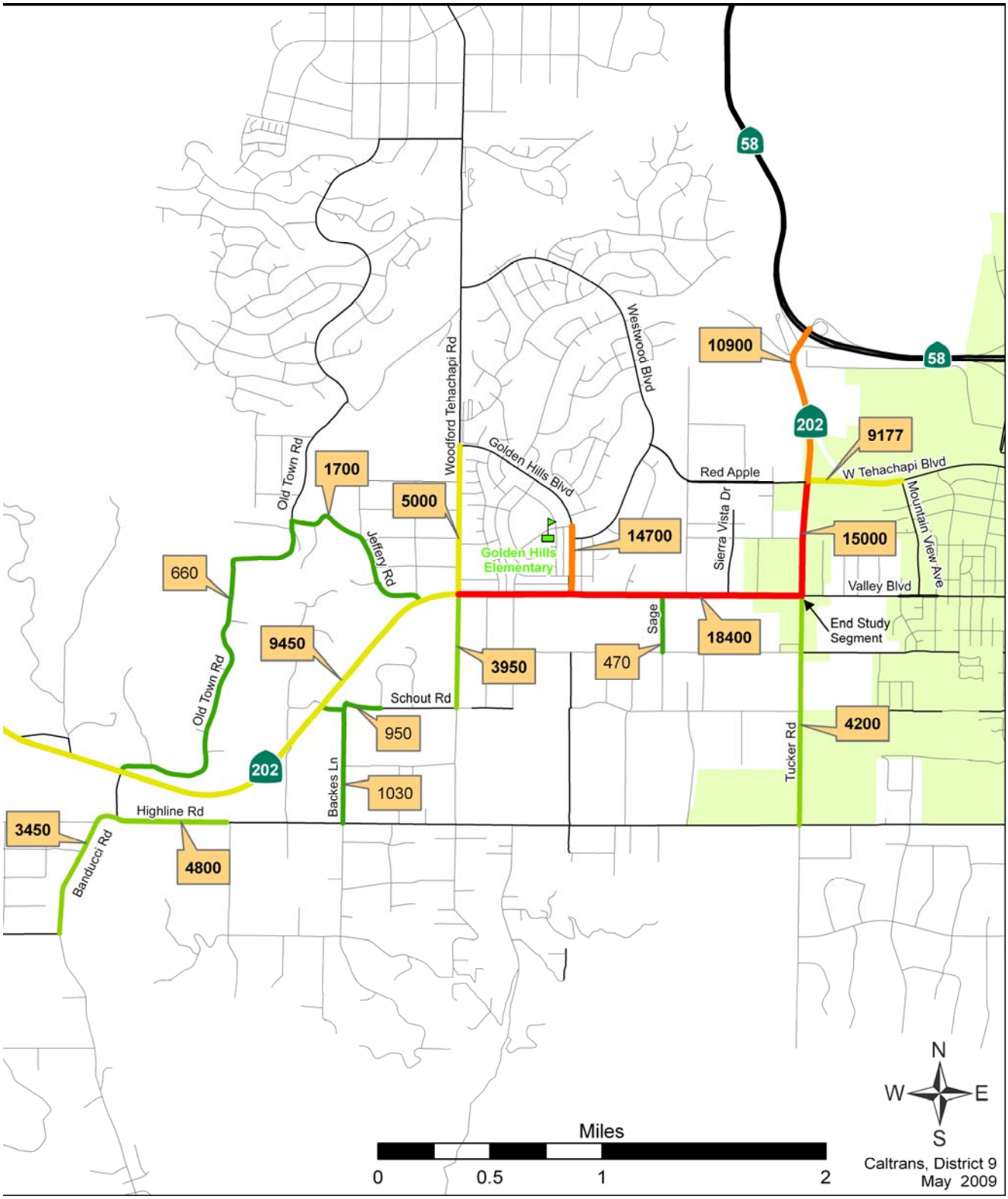
Calculation Factors

Fatality + Injury Actual Accident Rate	0.21	Total Actual Accident Rate	0.52	% Traffic Growth 0-10 Years	2.5%
Fatality + Injury Statewide Avg Rate	0.62	Total Statewide Average Rate	1.55	% Traffic Growth 10-20 Years	2.5%
Directional Split	50/50	Terrain	Level	Percent Trucks	9.0%

Appendix A - 2007 AADT for SR 202 and Local Roads



Appendix A - 2007 AADT for SR 202 and Local Roads



ACRONYMS

2-C	Two-Lane Conventional Highway
4-C	Four-Lane Conventional Highway
AADT	Average Annual Daily Traffic
AMP	Access Management Plan
BLM	Bureau of Land Management
Caltrans	California Department of Transportation
CCI	California Correctional Institution
FHWA	Federal Highway Administration
HCM	Highway Capacity Manual
IRRS	Interregional Road System
KCOG	Kern Council of Governments
LOS	Level of Service
MSL	Maintenance Service Level
NAAQS	National Ambient Air Quality Standards
NHS	National Highway System
NTN	National Truck Network
PM	Post Mile
R/W	Right-of-Way
SHOPP	State Highway Operation and Protection Program
SR	State Route
STAA	Surface Transportation Assistance Act of 1982

GLOSSARY

Annual Average Daily Traffic - AADT
The average 24-hour volume of traffic that is calculated over a year

Concept Facility
Highway facility type and characteristics considered viable with or without improvement within the 20-year planning period given financial, environmental, planning, and engineering factors

Concept LOS
Highest and best Level of Service that can be achieved in the 20-year planning period based on the concept facility

Conventional Highway
A highway without controlled access. Grade separations at intersections and access control may be used when justified.

Design Hour Volume - DHV
The 30th highest hour traffic volume in a selected year for a given segment

Directional Split
The percentage of traffic in the peak direction during the peak hour

Functional Classification
Guided by Federal legislation, refers to a process by which streets and highways are grouped into classes or systems according to the character of the service that is provided (i.e. Principal and Minor Arterial Roads, Collector Roads, and Local Roads)

Interregional Road System - IRRS
Statewide network of legislatively identified interregional routes, outside urbanized areas, that provide access to, and links between, the state's economic centers, major recreational areas, urban, and rural regions

Level of Service - LOS
A qualitative rating of the effectiveness of a transportation system in serving travel, ranks A (best) through F (worst)

National Highway System - NHS
Federal-designated system of major highways in each state, including all interstate highways

Programmed Projects
Capacity-enhancing, safety, and/or operational improvement projects programmed through STIP or SHOPP

Route Designations
Identifies whether or not the subject segment of a route is designated as being part of the National Highway System, Interregional Highway System, California Freeway/Expressway, Scenic Highway, National Truck Network, Strategic Highway Network, and highways of regional significance

Strategic Highway Corridor Network - STRAHNET
A network of highways that provide defense access, continuity, and emergency capabilities to military bases for defense purposes

Surface Transportation Assistance Act of 1982
The FHWA provides standards for STAA trucks. These standards designate the minimum truck size that all states must allow on highways in the National Truck Network.

REFERENCES AND INFORMATION

Bureau of Land Management, Bakersfield, CA <http://www.blm.gov/ca/st/en/fo/bakersfield.html>
California Department of Transportation Traffic Operations, 2007 AADT
<http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/index.htm>
City of Tehachapi, <http://www.tehachapicityhall.com>
City of Tehachapi General Plan Update, 1999
Digital Highway Inventory Photography Program (DHIPP), Caltrans HQ Project Delivery, 2002
Federal Highway Administration, <www.fhwa.dot.gov>
Greater Tehachapi Area Circulation Study - 2004, Omni-Means, LTD
Highway Capacity Manual, 2000
Kern County Air Pollution Control District
Kern County General Plan, Circulation Element, 1999, and 2007
2004 Kern COG, Southeastern Kern County Regional Fee Nexus Study, Omni-Means, LTD
2007 Destination 2030, Regional Transportation Plan, Kern Council of Governments
Central Valley Regional Water Quality Control Board
Long-Term Socio-Economic 2008 Forecasts, Caltrans, <www.dot.ca.gov/hp/tpp/offices/ote/>
Post Mile Log, Caltrans District 9, 2007z
Table B Collision Data, SR 202, 2003–2007
Transportation Concept Report SR 58, Office of System Planning - District 6, December 2004
Transportation System Development Plan, Caltrans District 9, 2006
SR 58 Origin & Destination Truck Study, SANBAG, KERN COG, CALTRANS, 2009
SR 202 Route Concept Report, Caltrans District 9, 1986

Environmental Sources of Information for SR 202:

Kern County Air Pollution Control District
2700 “M” Street, Suite 302
Bakersfield, CA 93301-2370
(661) 862-5250

Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA. 95670
(916) 464-3291

California Natural Diversity Database (CNDDB), 2008
On SR 202, an initial assessment of known biological resources in a 2000-foot wide corridor is listed under Environmental Concerns within the segment fact sheets. This information does not represent all possible environmental constraints that may exist, such as cultural resources (historic and pre-historic), floodplain encroachment, hazardous materials, noise, and visual impacts. Any project that is being considered for programming would require environmental clearance in compliance with all Federal, State, and Local environmental laws and regulations.

California Climate Change Law: AB 32 and SB 375
Caltrans is working through the project development process to help local agencies understand, prepare, and comply with the new California climate change laws, AB 32 and SB 375, by incorporating planning, environmental, construction, and maintenance strategies that may reduce greenhouse gas emissions, which are based upon sound and current science.