



Transportation Concept Report
State Route 35
District 5
November 2015



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California Department of Transportation

Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability

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CHAPTER 1: EXECUTIVE SUMMARY

Caltrans mission is to provide a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability. Transportation Concept Reports (TCRs) play an active role in achieving this mission to serve the traveling public. The TCR is primarily a technical document that: (1) identifies trends and deficiencies within a transportation corridor, and (2) provides a basis for considering future actions to preserve the integrity of the corridor over the long-term. This information is valuable to Caltrans and its local and regional partners as they consider needs and priorities for future investments.

The TCR is unique and complementary to the Regional Transportation Plan/Metropolitan Transportation Plan – Sustainable Communities Strategy (RTP-SCS or MTP-SCS) developed by Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPAs). These documents guide decision making in support of transportation facilities that sustain mobility into the future. The TCR is a technical document, focused on one specific corridor, and identifies projected future corridor deficiencies. The scope expands multiple counties and provides an interregional perspective on travel. By contrast, the RTP-SCS is a policy element that interprets the land use and transportation interrelationship, evaluates future growth scenarios, considers overall transportation needs, and applies regional priorities and funding constraints to establish an action plan for implementing specific improvements.

The regional travel demand model from the approved Association of Monterey Bay Area Governments (AMBAG) 2035 Metropolitan Transportation Plan/Sustainable Communities Strategy (2014) and Caltrans historical data, served as a basis for the technical analysis presented in the TCR. These projections forecast future demand on SR 35 in a 2040 horizon year¹. The model forecasts traffic volumes for SR 35 show little growth. A strategic combination of system management and preservation will improve the existing corridor to continue to serve the anticipated volumes.



SR 35

The SR 35 connects the mountain community to the surrounding cities of Santa Cruz and Los Gatos via SR 17 and SR 9.

¹ Note that the AMBAG regional travel demand model developed for the MTP-SCS sets 2035 as the horizon year. For this analysis, District 5 Advanced Planning extrapolated using the AMBAG model to develop forecasts for horizon year 2040; this was completed according to standard modeling practices. The 2040 horizon year is used to align with the 2040 California Transportation Plan. Additional information about technical methodology and performance measures are provided in Appendix A: SR 35 Data Sheet.

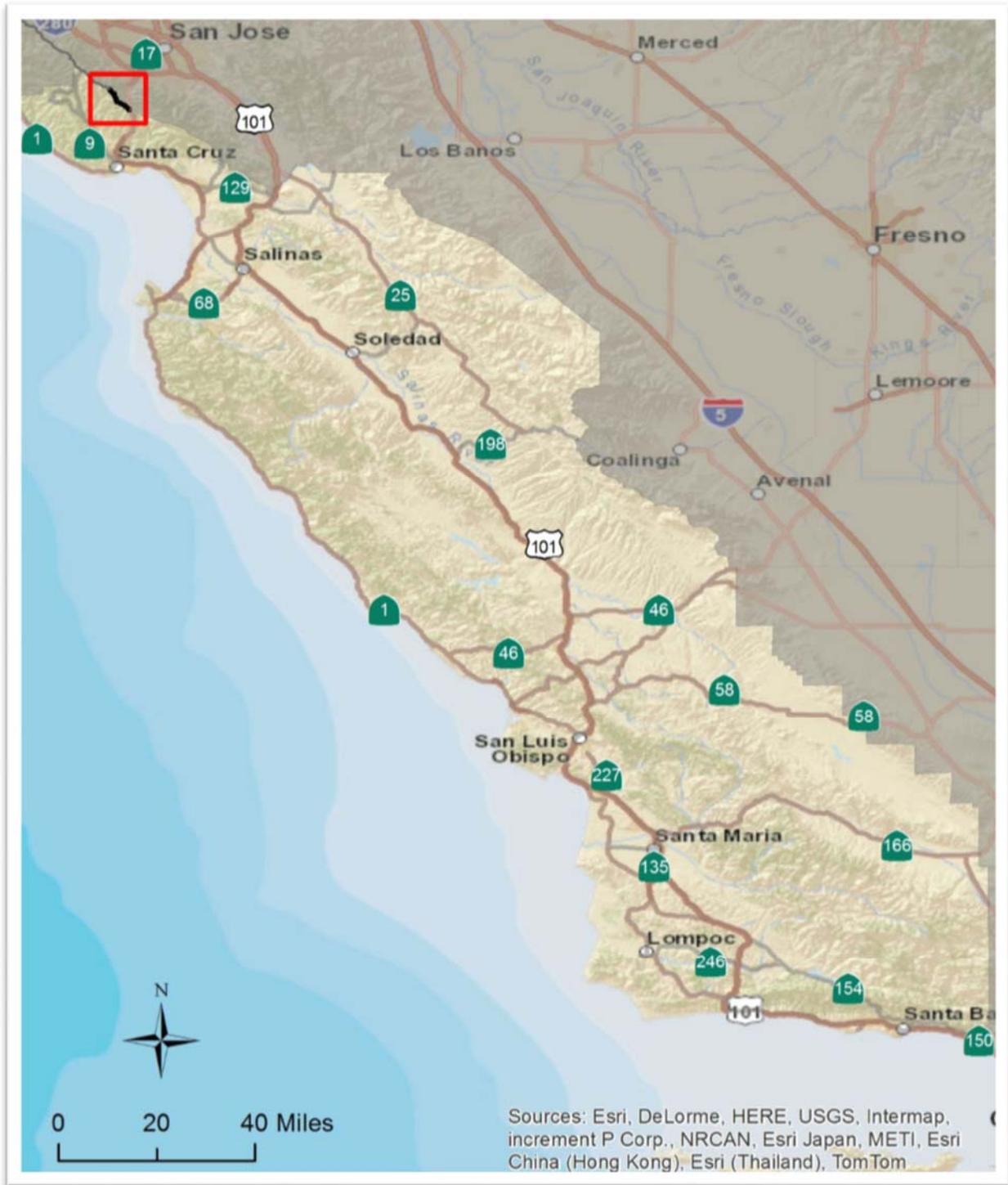


Figure 1: Location Reference Map

SR 35 CORRIDOR VISION

Caltrans' vision for the SR 35 corridor is to:

- Maintain and preserve the corridor through preventative maintenance and implementation of regulatory mandates.
- Consider the route a candidate for relinquishment. State Route serves as a principal arterial for residential and recreational purposes and is a candidate for relinquishment as identified in the Caltrans 2015 *District 05 District System Management Plan*.

SR 35 TCR KEY FINDINGS

- The functional role and future concept of SR 35 continues unchanged over the 20-25 year TCR horizon.
- The projected forecasts indicate that there will be low congestion and low growth along this route.
- This supports the concept of maintaining the existing two-lane conventional highway with no anticipated capacity improvements.

CORRIDOR PERFORMANCE AND CONCEPT

Projected low future growth and development is anticipated to have minimal operational impact on SR 35. The concept also includes system management strategies that focus on maintaining and managing transportation facilities, optimizing the efficiency of the existing system, and prolonging the functional lifespan of SR 35.

Table 1: SR 35 Route Concept

Segments	Route Concept
Segment 1 PM R0.053 to PM 7.680 (Summit Road/SR 17 to SCI/SCr County Line)	Maintain two-lane conventional highway.
Maintenance and Preservation	
<ul style="list-style-type: none"> • Pavement resurfacing. • Continued improvement of drainage facilities as needed. • Continuation of Safety Program partnership with the California Highway Patrol. 	

Table 2: Key SR 35 Stakeholders

Stakeholder	Role
Association of Monterey Bay Area Governments (AMBAG)	Metropolitan Planning Organization
Santa Cruz County Regional Transportation Commission (SCRTC)	Regional Transportation Planning Agency
Santa Cruz County	County

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CHAPTER 2: CORRIDOR OVERVIEW & PERFORMANCE

SR 35 ROUTE SEGMENTATION

SR 35 is only one segment due to its short length and similarity of route features. Most routes are broken into segments based on district boundaries, county boundaries, change in functional classification, significant changes in terrain, and changes in the function or use of the route.

Table 3: State Route 35 Segmentation

Segment #	Location Description	County_ Route_ Beg. PM	County_ Route_ End PM
1	From SR 17 on Summit Road northwesterly to Bear Creek Road. West on Bear Creek Road to Skyline Blvd. Continue on Skyline Blvd.	PM R0.053	PM 7.680

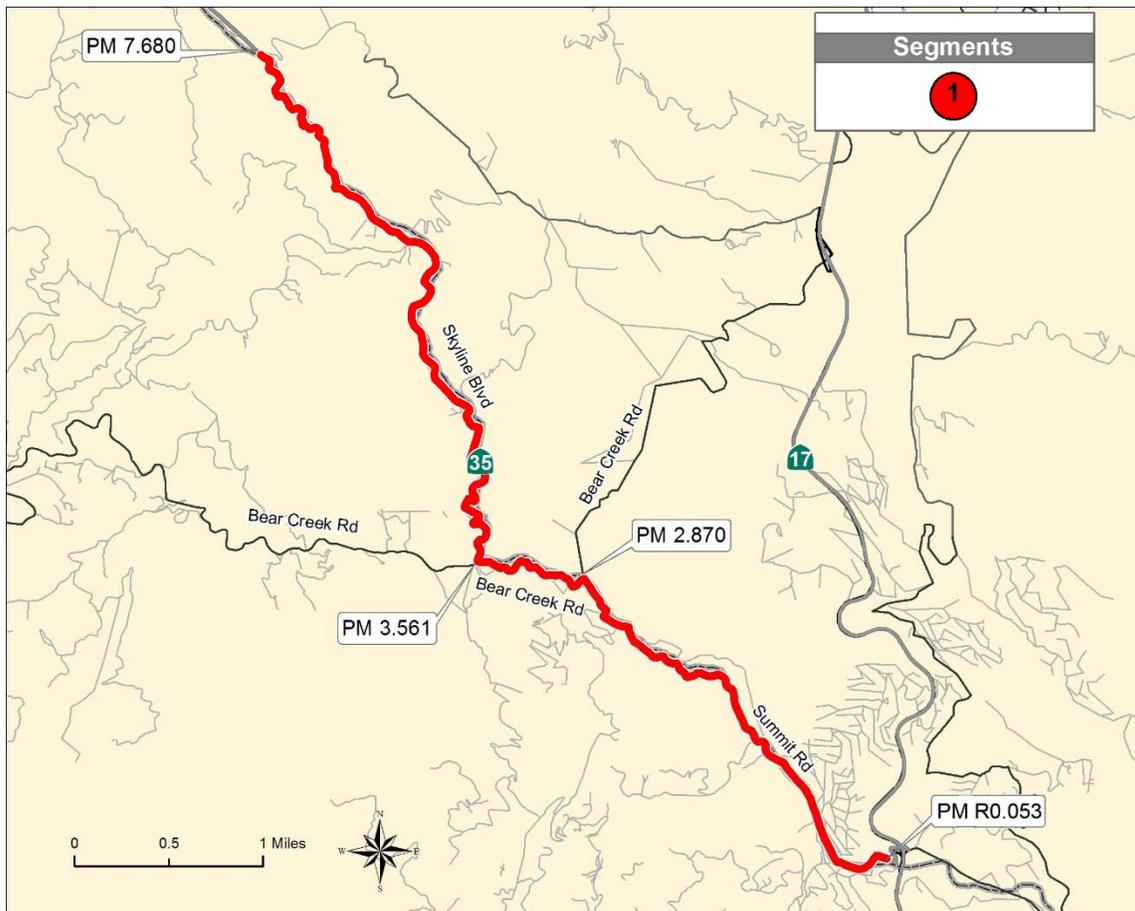


Figure 2: State Route 35 Segmentation

ROUTE DESCRIPTION

According to the Streets and Highways Code Chapter 2, Article 3, Section 335, "Route 35 is from Route 17 at Summit Road to Route 92 via Skyline Boulevard." In its entirety the route extends approximately 40 miles from SR 17 in Santa Cruz County to SR 92, four miles east of Half Moon Bay. There is also a small portion of SR 35 that extends east on SR 92 to I-280. The majority of this route extends over mountainous terrain and has minimal shoulder. There are no bridges, but the lane widths decreases below 12 feet and shoulders are less than a foot in some areas. The portion of SR 35 in District 5 is primarily a two-lane conventional highway with portions of the route one lane in both directions. The route is 7.45 miles in length.

SR 35 accommodates rural traffic that serve mostly residential and recreational use. Common trip purposes related to daily living, including the journey-to-work, account for a high percentage of trips. SR 35 serves as an entryway to the Bear Creek Redwoods Open Space Preserve (Summit Road at Bear Creek Road) and Castle Rock State Park (Skyline Boulevard), both located in the Santa Cruz Mountain Range.

A section of SR 35, Bear Creek Road, is being used as the commuter route for residents that live in the Boulder Creek area and work in Santa Clara County and the southern San Francisco Bay Area. Traffic counts are generally higher on Bear Creek Road than any other segment of SR 35.

SYSTEM CHARACTERISTICS

SR 35 begins at PM R0.053 at SR 17 (Summit Road) and travels through mountainous terrain with portions of the road widths under 20 feet. The route is very windy and steep with elevations of up to 3,000 feet. Because of its scenic views, the route attracts a lot of recreational traffic. Trucks make up 21.6 percent of total traffic along the route.

Table 4: Existing Facility Characteristics

Segment	1
Facility Type	Conventional
General Purpose Lanes	2
Lane Miles	14.90
Centerline Miles	7.450

Table 5: Major Route Designations and Characteristics

Segment	1
Freeway & Expressway	No
Access Control	Conventional
National Highway System	No
Strategic Highway Network	No
Scenic Highway	Eligible
Interregional Road System	No
Federal Functional Classification	Minor Collector
Goods Movement Route	No
Truck Designation	CA Legal Advisory Route
Primary & Secondary System	Secondary
Rural/Urban/Urbanized	Rural
Metropolitan Planning Organization	AMBAG
Regional Transportation Planning Agency	SCCRTC
Congestion Management Agency	SCCRTC
Local Agency	Santa Cruz County
Tribes	None
Air District	Monterey Bay Unified Pollution Control Air District
Terrain	Mountainous

System Operations

The 2013 Annual Average Daily Traffic (AADT) volumes range from 210 to 750 vehicles per day (Table 6). Historic AADT data indicates a decrease in volumes between 1992 and 2013 (Figure 3). According to the AMBAG regional model (corrected with counts), volumes are expected to range between 60 and 790 vehicles per day by 2040. Volumes decrease as the route heads north, with the lowest 2013 daily volume being 200 near the Santa Clara County line at PM 7.68 (Figure 4). Daily volumes are low on this route, and the regional model predicts little growth to negative growth along the segment. The route travels through a very remote part of Santa Cruz, and 2013 daily traffic is estimated at 200 vehicles and 2040 daily traffic is estimated at 60 vehicles. Daily Vehicle Miles Traveled (VMT) is projected at 2,990 in 2013 and 2,370 in 2040.

PM Peak Hour Data

In the base year and horizon year, congestion is low along the entire route. Demand reaches 12% of capacity in 2040 (Appendix A: SR 35 TCR Data Sheet).

Bottlenecks

In both the base year and horizon year, there are no bottlenecks.

Table 6: Daily System Operations

AADT Base Year 2013	210 to 750
AADT Horizon Year 2040	60 to 790
AADT: Growth Rate (Vehicles/Year)	-5 to 1
VMT Base Year 2013	2,990
VMT Horizon Year 2040	2,370

*2013 base year is established by Caltrans historic data and 2040 horizon year projections are based on the AMBAG ver1.4 regional traffic model.

*VMT = Vehicle Miles Traveled and AADT = Annual Average Daily Traffic

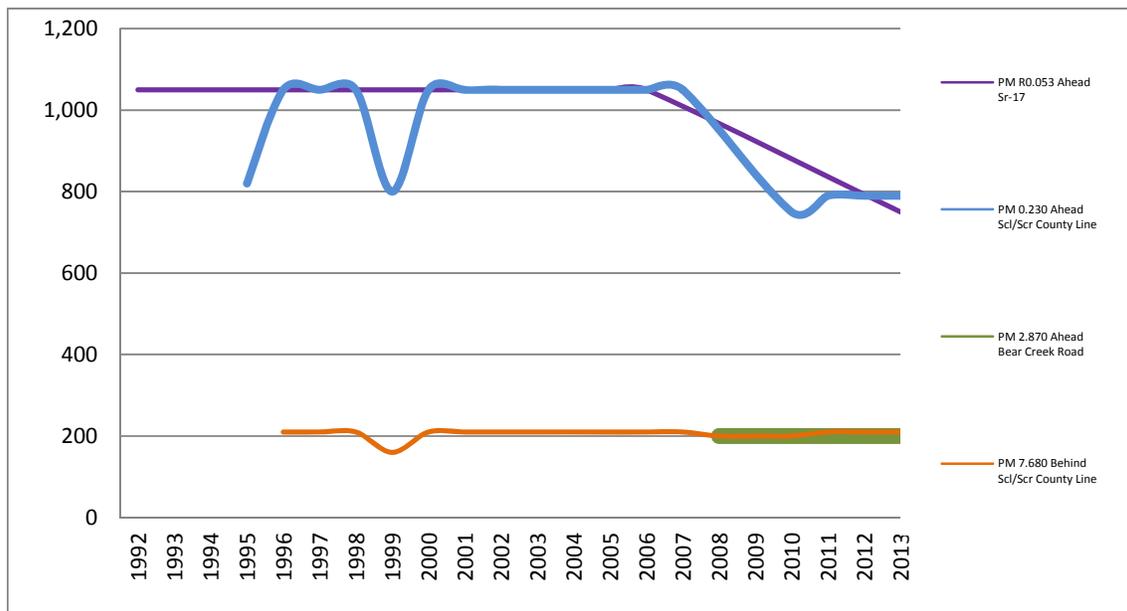


Figure 3: Historical AADT by Year

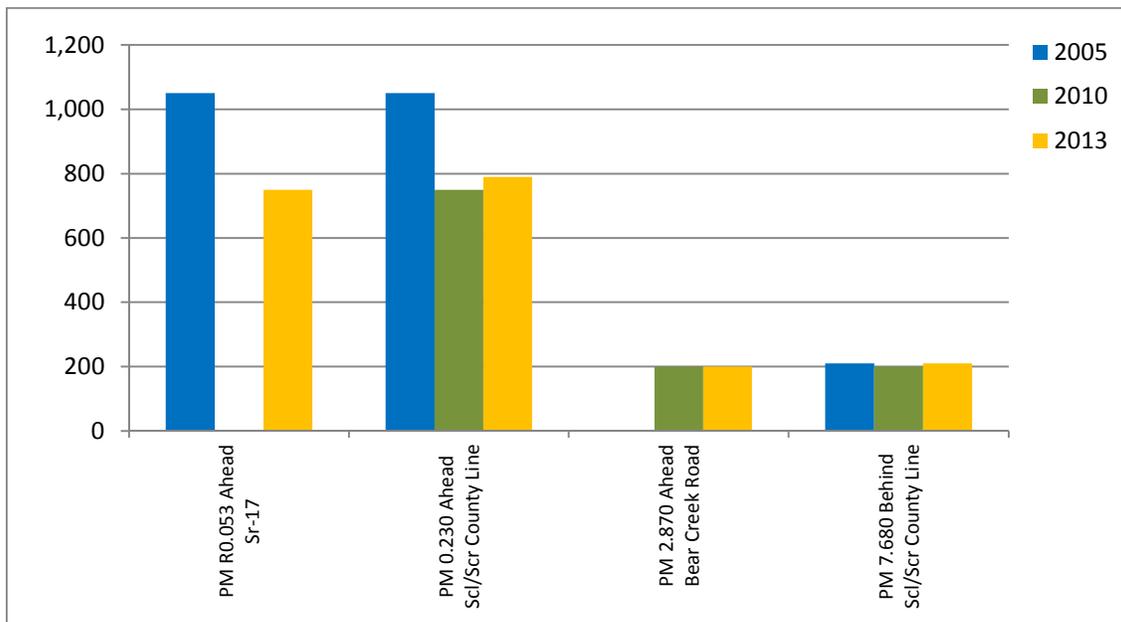


Figure 4: Historical AADT by Location

Table 7: Peak Hour Traffic Data

	Northbound	Southbound
Segment Length (Miles)	7.653	
AM Peak Hour Directional Split Base Year 2013	14.2% to 22.7%	77.3% to 85.8%
AM Peak Hour Directional Split Horizon Year 2040	7.1% to 8.2%	91.8% to 92.9%
AM Peak Hour Volume Base Year 2013	20 to 70	
	20 to 20	10 to 10
AM Peak Hour Volume Horizon Year 2040	40 to 120	
	00 to 10	40 to 110
AM Peak Hour Growth Rate (vehicles/year)	1 to 2	
AM Peak Hour VMT Base Year 2013	50	230
AM Peak Hour VMT Horizon Year 2040	40	490
AM Peak Hour VHT Base Year 2013	02	09
AM Peak Hour VHT Horizon Year 2040	02	18
AM Peak Hour V/C Base Year 2013	0.005 to 0.011	0.016 to 0.069
AM Peak Hour V/C Horizon Year 2040	0.003 to 0.011	0.046 to 0.124
AM Speed (mph) Base Year 2013	25.0 to 29.2 mph	25.0 to 29.2 mph
AM Speed (mph) Horizon Year 2040	25.0 to 29.2 mph	25.0 to 29.2 mph

* VHT = Vehicle Hours Traveled and VMT = Vehicle Miles Traveled

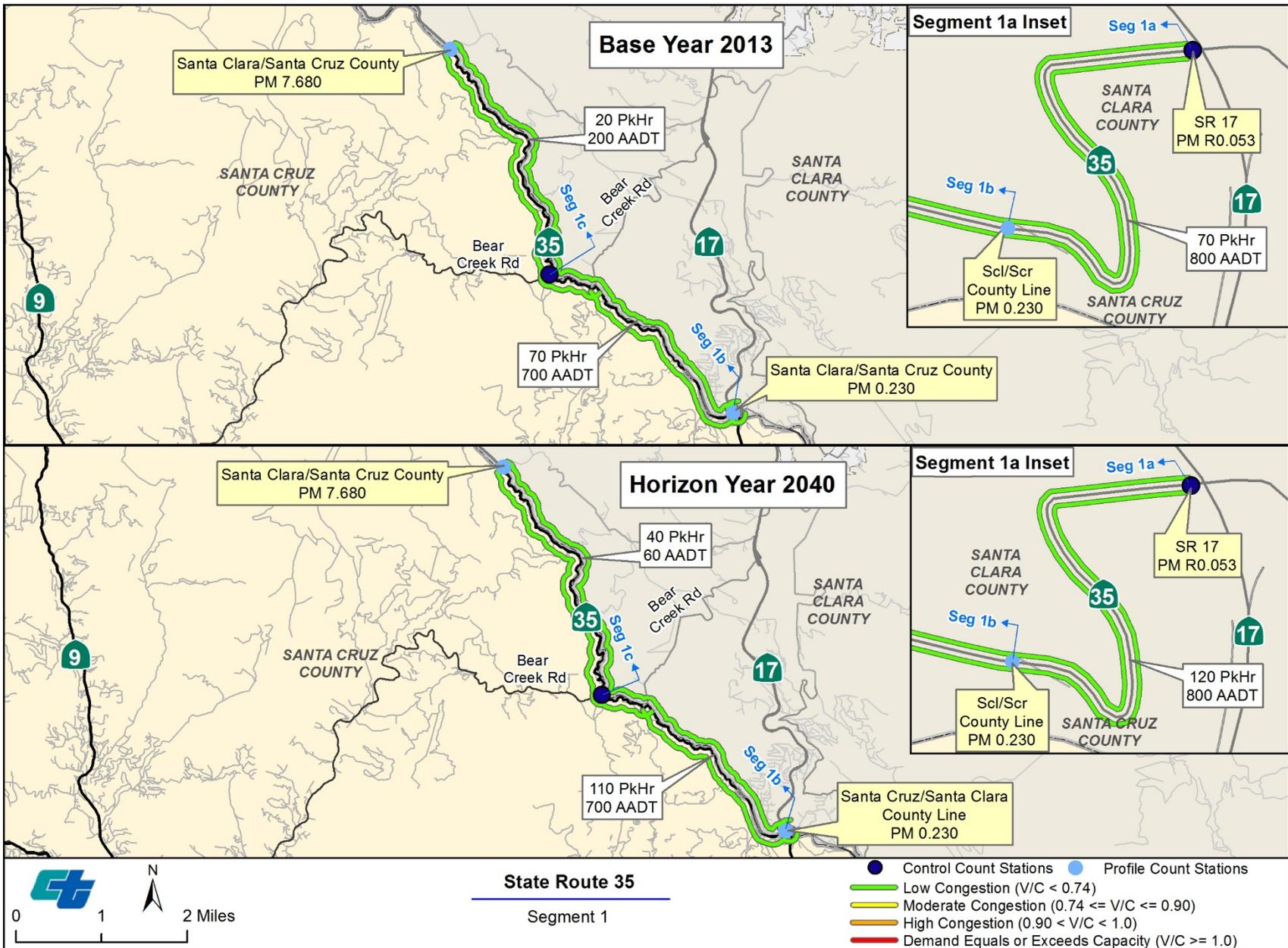


Figure 5: Base Year/ Horizon Year Congestion

BICYCLE FACILITY

SR 35 is a conventional highway with low volumes that makes it a popular recreational bicycle route. Currently there are no shoulders or parallel facilities for bicyclists (*Figure 6*). The *Santa Cruz County Bicycle Plan (2011)* does not identify any proposed projects along this route. However, there is a community desire to increase shoulder widths at strategic locations where possible to accommodate bicyclists. Future shoulder widening at strategic locations may be beneficial to avoid conflict between users.

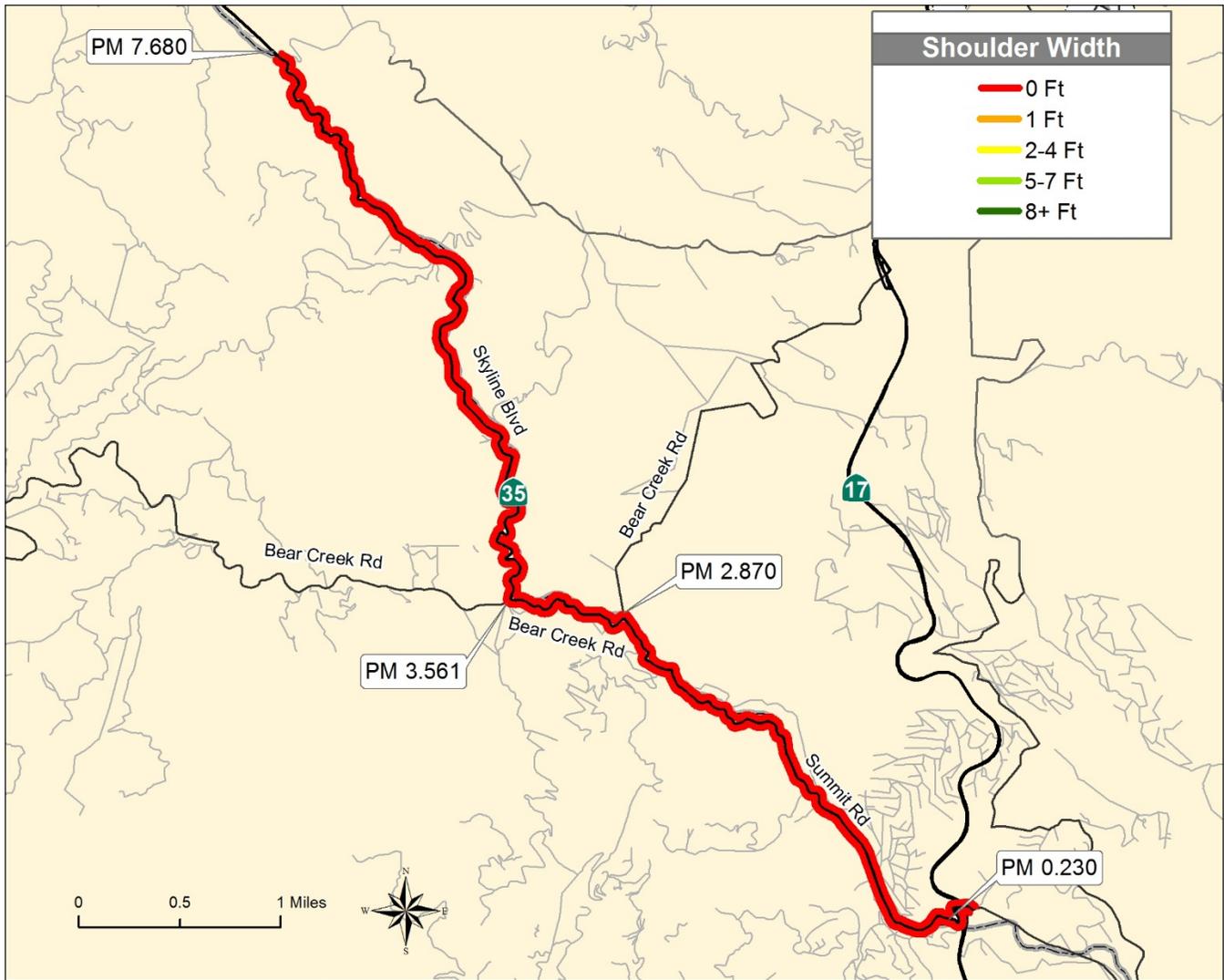


Figure 6: Shoulder Widths

PEDESTRIAN FACILITY

SR 35 is a rural route without sidewalks or shoulders for pedestrians.

TRANSIT FACILITY

There is no transit service along the SR 35 corridor. Santa Cruz Metropolitan Transit District (SCMTD) 17 Express Route does not stop at the SR 35 (Summit Road)/SR 17 Interchange.

FREIGHT

SR 35 is a designated advisory truck route. Trucks make up 21.6 percent of the corridor's daily volume. Most of the truck movement is for the transport of goods to commercial businesses to the towns in the San Lorenzo Valley through the Bear Creek Road segment of SR 35 from the connection with SR 17.

LAND USE

There is a direct nexus between land use and transportation; changes to one will inevitably impact the other. The land use characteristics of the communities along SR 35 are mostly low density residential and open space.

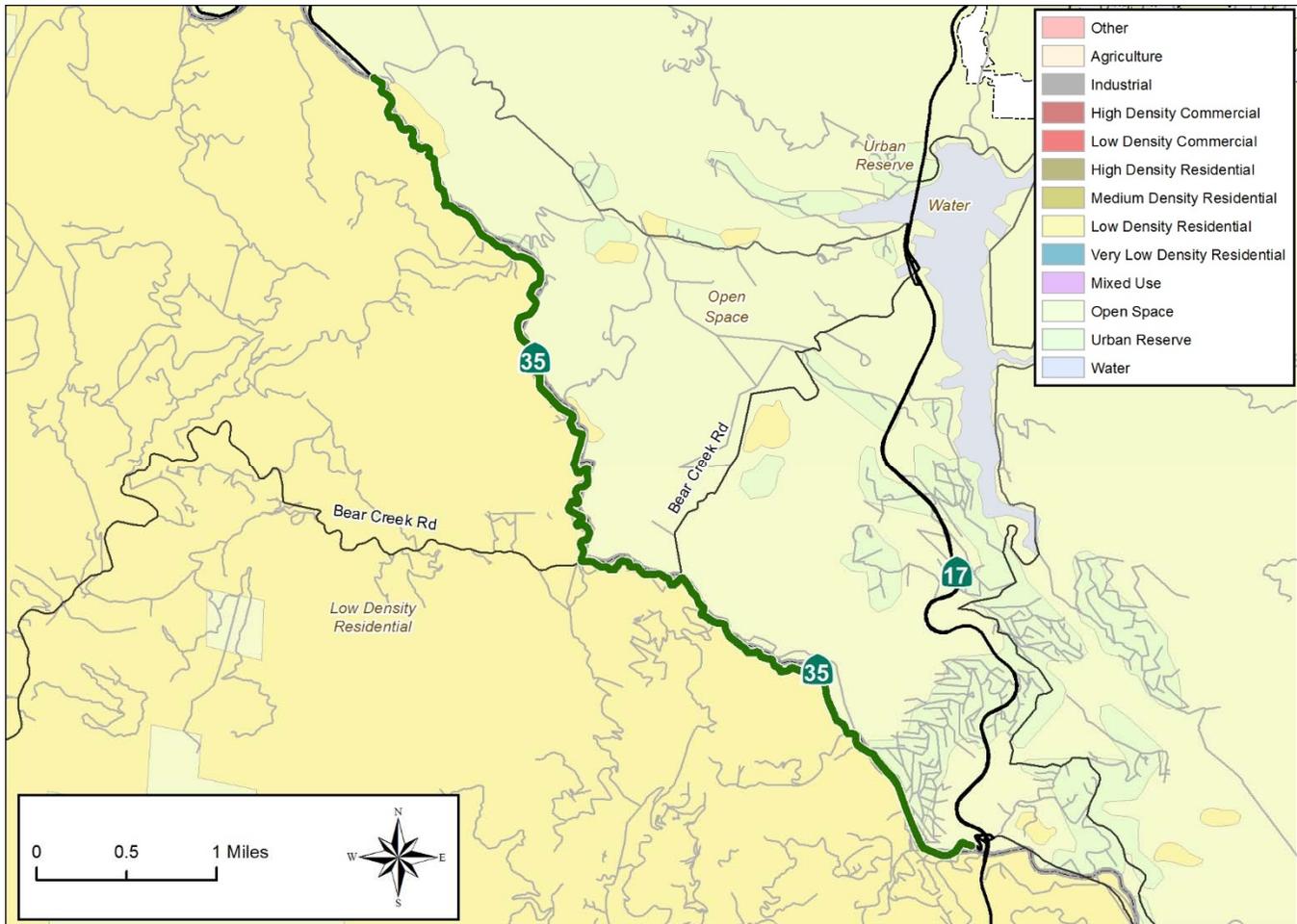


Figure 7: Generalized Land Use

CHAPTER 3: CORRIDOR CONCEPT

CONCEPT RATIONALE

The primary purpose of the SR 35 TCR is to develop strategies to manage the corridor and sustain existing transportation investments. Within the 20-25 year planning horizon, the following table identifies corridor management strategies for SR 35.

Table 8: SR 35 Route Concept

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The following people contributed directly and significantly to the production of this document and the project in general and were instrumental in managing the project through to the preparation of this document.

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SOURCES:

- Association of Monterey Bay Area Governments. (2014, June). *Monterey Bay 2035 Moving Forward: 2035 Transportation Plan/Sustainable Communities Strategy*. Retrieved from: http://ambag.org/programs/met_transp_plann/documents/Final_2035_MTP_SCS/MovingForwardMontereyBayFinal.pdf
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APPENDICES:

- The following appendices can be accessed at: http://www.dot.ca.gov/dist05/planning/system_planning.htm#TCRs.
- Appendix A: SR 146 Data Sheet
- Appendix B: About the TCR