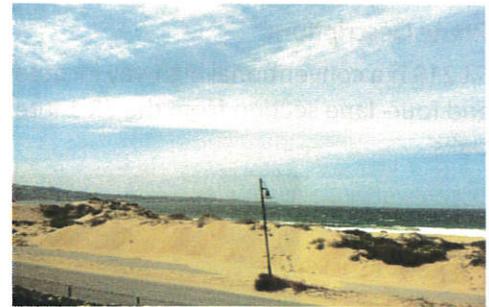




Transportation Concept Report

SR 218
District 5
June 2016



Disclaimer: The information and data contained in this document are for planning purposes only and should not be relied upon for final design of any project. Any information in this TCR is subject to modification as conditions change and new information is obtained. Although planning information is dynamic and continually changing, the District 5 System Planning Division makes every effort to ensure the accuracy and timeliness of the information contained in the TCR. The information in the TCR does not constitute a standard, specification, or regulation, nor is it intended to address design policies and procedures and shall not be used as a substitute for project specific analysis, including but not limited to, traffic impact studies, that pertain to any private or public development proposal.

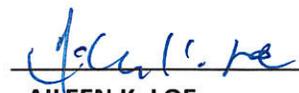
California Department of Transportation

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

Approvals:


TIMOTHY M. GUBBINS
District Director

6/14/16
Date


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Deputy District Director
Planning & Local Assistance

6/10/16
Date

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 TCRs are 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.

Route Description:

SR 218 is a conventional highway located in both urban and rural areas. It is predominately two lanes, with a three- and four- lane section from the SR 1 interchange in the city of Seaside to Fremont Boulevard in the city of Del Rey Oaks.



Figure 1.1: SR 218 Location Reference Map

Source: Systems Planning Caltrans District 5

Corridor Performance Key Findings:

- Base Year (2013) Conditions: Congestion is low throughout the corridor in both directions.
- Horizon Year (2040) Conditions: Congestion remains low in both directions.
- Route continuity for pedestrian and bicyclists should be a priority.
- Potential relinquishment to the local jurisdictions.

Corridor Performance and Concept:

The traffic forecasts used in setting the capital facility concept and the system operations and management concept focus on 2040 forecasts for average daily traffic, peak hour traffic, vehicle miles traveled, commuting patterns, average speed, and truck volume. Qualitative data factors were also analyzed including a review of pertinent plans and literature, field observations, and stakeholder input.

Future growth and development is projected to have minimal impacts on SR 218. The 20-25+ year concept includes small-scale multimodal capacity improvements. The concept also includes system management strategies that focus on maintaining and managing transportation facilities, strengthening system continuity for bike and pedestrian and potential route relinquishment. The future concept of the corridor is similar to the existing concept of a two- to four-lane conventional highway with an emphasis on multimodal accessibility.

Table 1.1: SR 218 Concept

Segment	Route Concept
Segment 1 MON (PM R0.0) to MON (PM 1.956)	Maintain two- to four-lane conventional highway.
	Multimodal Concept
Segments 1 MON (PM R0.0) to MON (PM 1.956)	Increase shoulder width where necessary to accommodate Class II/III bike facilities.
Segments 1b MON (PM R0.220) to MON (PM L0.920)	Close gaps in pedestrian network.

Multimodal Improvements
<ul style="list-style-type: none"> • Ongoing collaboration will be required to integrate planning for SR 218, the local road network, the local transit system, and local land use. • Evaluate possible connections to existing Class I and Class II bicycle facilities. • Evaluate opportunities to close gaps in pedestrian and bicycle network.

Multimodal/Operational Improvements
<ul style="list-style-type: none"> • Increase shoulder width at strategic locations to accommodate Class II facilities. • Evaluate opportunities to improve bus stops, including ADA upgrades, to support transit routes serving the corridor.

Maintenance Preservation

- Maintain two- to four-lane conventional highway.
- Maintenance efforts will focus on keeping the facility functional and extending the service life of the existing facility.
- Maintain facility in a state of good repair to minimize traveler cost and delays.

STAKEHOLDER REVIEW

The TCR was provided to key stakeholders as an opportunity to review the existing conditions and the general overview of the corridor. The draft included preliminary modeling forecasts depicting 2040 conditions and shared Caltrans' concept of the corridor with stakeholders to consider consistency with local/regional long-range land use planning efforts. Table 1.2 lists the key stakeholders of SR 218.

Table 1.2: SR 218 Key Stakeholders

Stakeholder	Role
Association of Monterey Bay Area Governments	Metropolitan Planning Organization
City of Del Rey Oaks	Local municipality
City of Seaside	Local municipality
City of Monterey	Local municipality
Transportation Agency Monterey County	Regional Transportation Planning Agency
Monterey-Salinas Transit	Transit District

CHAPTER 2: CORRIDOR OVERVIEW

ROUTE DESCRIPTION

The route, also known as Canyon Del Rey Boulevard, travels within the cities of Seaside and Del Rey Oaks. SR 218 is a two- to four-lane conventional highway 2.85 miles in length. It begins at SR 1 and travels easterly through flat terrain and rolling hills terminating at SR 68.

ROUTE SEGMENTATION

SR 218 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. Figure 2.1 shows the segmentation map of SR 218. The route was broken up into sub-segments that reflect the locations of the existing census count stations that are along the route. Table 2.1 provides the count station location descriptions for SR 218.

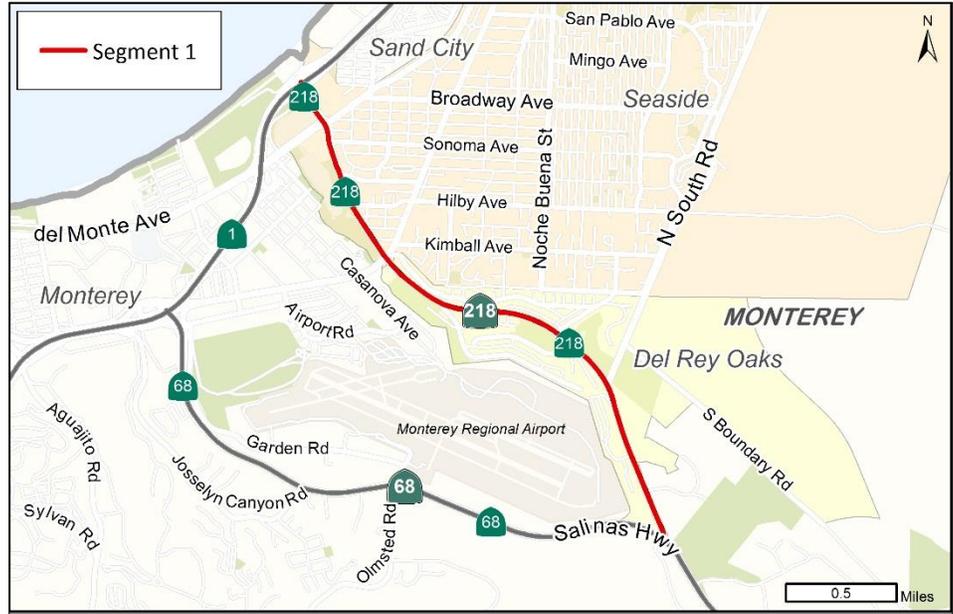


Figure 2.1: SR 218 Segmentation Map
Source: Systems Planning Caltrans District 5

Table 2.1: SR 218 Count Station Locations

Count Station #	Location Description	County_SR_Beg. PM	County_SR_End PM	Post Mile Equation
1a	SR 1/Del Monte Avenue	MON_218_R 0.00	MON_218_R 0.220	-
1b	Del Monte Avenue/ Fremont Boulevard	MON_218_R 0.220	MON_218_L 0.920	R0.222 = L0.250
1c	Fremont Boulevard/Del Rey Oaks	MON_218_L 0.920	MON_218_1.000	L0.992 = 0.000
1d	Del Rey Oaks/SR 68	MON_218_1.000	MON_218_1.956	-

ROUTE PURPOSE

The purpose of SR 218 is to primarily serve local residential and commercial traffic. SR 218 connects SR 1 to SR 68 and travels through the cities of Seaside and Del Rey Oaks. SR 218 is the primary connection from SR 1 to the Laguna Seca Raceway, a major destination for spectators and racers at a variety of events. SR 218 also functions as a north/south route connecting SR 1 and SR 68 allowing an alternate from the city of Seaside to the city of Salinas and areas south of Salinas.

MAJOR ROUTE FEATURES

SR 218 serves as a connector through the foothills of the Santa Lucia Range to the coast joining SR 68 and SR 1. The cities of Del Rey Oaks and Seaside use SR 218 as its primary thoroughfare to access local and regional destinations. The portion of the route within the city of Seaside intersects with two arterial roadways: Del Monte Boulevard and Fremont Boulevard. SR 218 is signed as the primary connection from SR 1 to the Laguna Seca Raceway, a major destination for motor sports.

The majority of the route is a two-lane conventional highway that provides vital connectivity from the region to the cities of Seaside, Del Rey Oaks and Monterey.

Many access points occur in the city of Seaside, including two major intersections: Del Monte Boulevard and Fremont Boulevard.

ROUTE DESIGNATIONS AND CHARACTERISTICS

According to the Streets and Highways Code Chapter 2, Article 3, Section 518, “Route 218 is from Route 1 to Route 68 via Canyon del Rey.” Table 2.2 provides the route designations and characteristics for SR 218.

Table 2.2: SR 218 Designations and Characteristics

Segment	1
Freeway & Expressway	No
Access Control	Conventional
National Highway System	No
Strategic Highway Network	No
Scenic Highway	No
Interregional Road System	No
Federal Functional Classification	Minor Arterial
Goods Movement Route	No
Truck Designation	California Legal
Primary & Secondary System	Secondary System
Rural/Urban/Urbanized	Urban
Metropolitan Planning Organization	AMBAG
Regional Transportation Planning Agency	TAMC
Congestion Management Agency	TAMC
Local Agency	City of Del Rey Oaks, City of Seaside and City of Monterey
Tribes	None
Air District	Monterey Bay Unified Pollution Control Air District
Terrain	Mostly Flat areas with rolling hills

LAND USE

There is a direct nexus between land use and transportation; changes to one will inevitably impact the other. A better understanding of future development growth and transportation trends will help determine how to best plan for a transportation system that can accommodate future growth. The transportation system includes a network of local routes as well as state routes that serve different functions. Local routes are intended to serve transportation needs within a community.

Figure 2.2 identifies the land uses with in the areas surrounding SR 218. The land use characteristics of SR 218 are primarily Urban Reserve. Urban Reserve areas are planned for urban growth within the next 20 years. The Monterey Regional Airport is located adjacent to SR 218, but travelers access the airport from SR 68. The city of Del Rey Oaks (1997) has established that the City will not support the potential north side access from SR 218 and Del Rey Oaks Gardens Drive or any airport access road in the city of Del Rey Oaks. Other land uses include commercial along SR 218, and industrial off of Ryan Ranch Road and Del Rey Gardens Drive. Residential land uses also encompass most of the route north of General Jim Moore Boulevard.

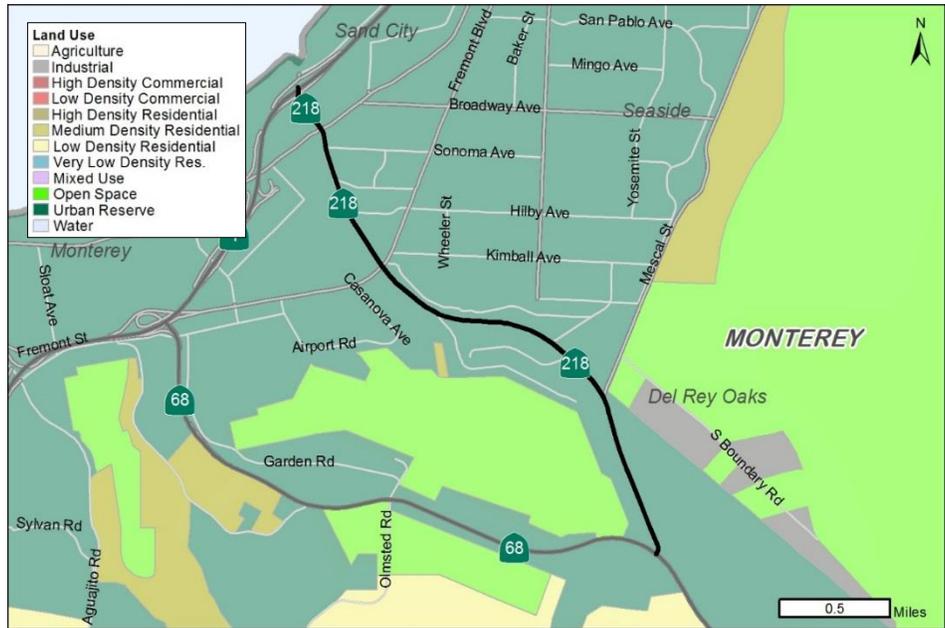


Figure 2.2: SR 218 Land Use Map
 Source: Systems Planning Caltrans District 5

The city of Monterey identified in its 2005 General Plan that less than one percent of the city land area is devoted to industrial uses. In an attempt to broaden the city's economic base and provide an area for industrial development, a 300-acre Ryan Ranch area east of the city at the intersection of SR 68 and SR 218 was annexed in 1968 and is the primary reservoir of industrial land.

SYSTEM CHARACTERISTICS

SR 218 is a two- to four-lane conventional highway that is 2.85 miles in length. In the city of Seaside, SR 218 is three to four-lanes and features left-turn channelization, a center median beginning just south of Sonoma Ave and ending at the SR 1 interchange and narrow shoulders that are non-conductive to cyclists. In the city of Del Ray Oaks, SR 218 is 2-lanes and features a class II bike lane on both sides of the roadway. Table 2.3 details the existing facility characteristics for SR 218.

Table 2.3: SR 218 Existing Facility Characteristics

Segment	1
Facility Type	Conventional
General Purpose Lanes	2-4
Lane Miles	6.76
Centerline Miles	2.85
Pavement Condition Right	Minor
Pavement Condition Left	Minor
Shoulder Width Right (ft)	0-4 ft
Shoulder Width Left (ft)	0-4 ft

BICYCLE FACILITY

Although Class III designations exist on the route, shoulder widths vary allowing Class II bicycle lanes to exist where they can be accommodated.

The Monterey Bay Coastal Recreation Trail connects inland to Roberts Lake Park on a short connection under the overpass of SR 1. The remaining portion from the NB SR 1 off ramp to Fremont Boulevard has no existing facilities.

The Bicycle and Pedestrian Master Plan (2011) produced by TAMC shows proposed Class II bike facilities from Fremont Street to Del Monte Boulevard and SR 68 to General Jim Moore Boulevard and SR 68 to General Jim Moore Boulevard westbound shoulder. There are no facilities planned between Del Monte Boulevard and NB SR 1 off ramp. Figure 2.3 identifies the shoulder widths along SR 218.

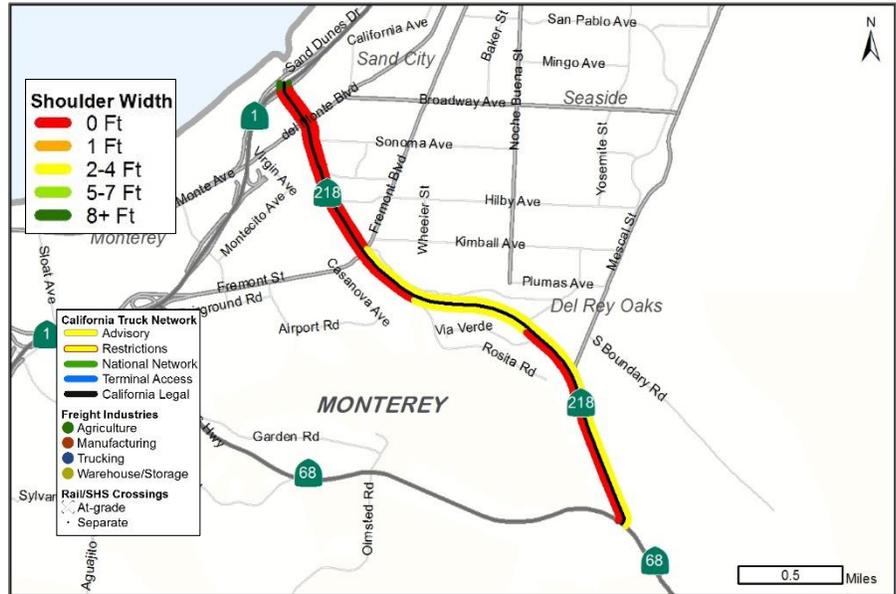


Figure 2.3: SR 218 Shoulder Width

Source: Systems Planning Caltrans District 5

PEDESTRIAN FACILITY

The areas that have pedestrian access are provided commonly in form of local streets and roads with sidewalks within urban areas. Pedestrian access is allowed on the entire segment of SR 218. Pedestrian facilities along SR 218 from SR 68 to Canyon Street are limited. From Canyon Street to SR 1, sidewalks are more prevalent but can be noncontiguous and in some places only on one side of the roadway. Throughout the route, intersections and driveways are very wide and can pose barriers for pedestrian accessibility.

TRANSIT FACILITY

There are four public transit routes that operate along SR 218. The following bus routes operate along SR 218:

- Route 7: Del Rey Oaks – Monterey
- Route 8: Ryan Ranch – Sand City
- Route 18: Monterey – The Dunes
- DRO: Del Rey Oaks Special Service

FREIGHT

The communities within Monterey County are major producers of agricultural products including related agricultural processing and warehousing. Trucks using SR 218 would primarily carry goods to commercial uses along and near the Route. The Route is designated as California Legal under the California Truck Network and carries 8% truck traffic. Figure 2.4 identifies the truck network along and within the vicinity of SR 218.

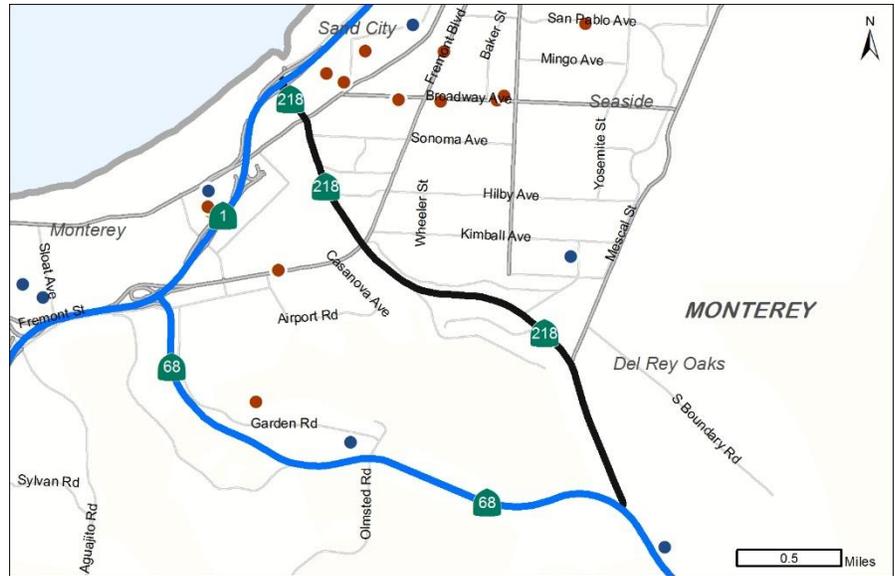


Figure 2.4: SR 218 Truck Network
 Source: Systems Planning Caltrans District 5

AVIATION

The Monterey Peninsula Airport is located three miles east of Monterey. The California Aviation System Plan classifies the airport as a primary commercial service airport of regional significance. It is a 498 acre facility, serving as a “Medium Non-Hub” airport with two parallel runways. The regional transportation network that provides access to the airport include U.S. 101, SR 68, SR 1, as well SR 218, Blanco, Davis, Reservation and Imjin Parkway. Table 2.4 describes airport forecasts for Monterey County which predict an increase in aviation operations. An increase in aviation operation can cause an increase use of the transportation network.



Figure 2.5: Monterey Regional Airport
 Source: Systems Planning Caltrans District 5

Table 2.4: Aviation Forecasts

Annual Aviation Operations	2005	2010	2015
Monterey Peninsula	78,565	92,890	98,850

Source: 2014 Monterey County Regional Transportation Plan

CHAPTER 3: CORRIDOR PERFORMANCE

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 for the current round of District 5 TCRs to align with the 2040 California Transportation Plan. Performance of the SR 218 corridor is analyzed in one segment. The following are evaluated:

- **System Operation** is evaluated through regional traffic models and Caltrans historical data. For all segments, the base year Annual Average Daily Traffic is based on Caltrans historical data. Horizon year AADT projections were based on regional traffic model data.
- **Peak Hour** analysis evaluated congestion during the PM Peak period as congestion is typically higher than during the AM Peak period. With commute traffic, when one direction is heavy in the morning commute, the opposite direction is typically heavy during the afternoon commute.

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 for the current round of the District 5 TCRs to align with the 2040 California Transportation Plan. Additional information about technical methodology and performance measures are provided in Appendix A.

SR 218: MONTEREY COUNTY

SR 1 to SR 68 (Mon PM R0.000-1.956)

System Characteristics

SR 218 starts at SR 1 in the city of Seaside and travels through a mixture of park, residential housing, and commercial land uses before arriving as SR 68. SR 218 is a four- to three-lane facility from SR 1 to Fremont Boulevard. Del Monte Boulevard and Fremont Boulevard are two major signalized interchanges with SR 218. Del Monte Boulevard and Fremont Boulevard are four-lane roadways with left- and right-turn channelization that provide travelers with north-south connection within the region. Based on increasing traffic volumes, it is recommended a traffic signal analysis be completed along SR 218.

System Operations

2013 AADT segment volume ranges from 12,350 to 23,000 vehicles per day (**Table 3.1**). Historical AADT data indicates minor growth in volumes between 1992 and 2013 (**Figure 3.1**) for all locations except the immediately vicinity of SR 1 and SR 68, which experienced rapid growth between 2006 and 2008. According to the SBCAG regional model (corrected with counts), the segment volume ranges from 14,250 to 27,190 vehicles per day by 2040. Trucks make up 8% of total traffic along Segment 1.

PM Peak Hour Data

In the base year and horizon year, congestion is low along the entire segment. Demand reaches 47% of capacity in 2040 (Appendix A2).

Bottlenecks

In both the base year and horizon year, there are no bottlenecks. Most delay occurs at the eight signalized intersections along SR 218. Further analysis or input from the city of Seaside would be required to get a better understanding of the queuing effects of these signalized intersections.

Table 3.1: SR 218 Daily System Operations

AAADT Base Year 2013	12,350 to 23,000
AAADT Horizon Year 2040	14,250 to 27,190
AAADT: Growth Rate (Vehicles/Year)	70 to 160
VMT Base Year 2013 ²	40,920
VMT Horizon Year 2040	47,140

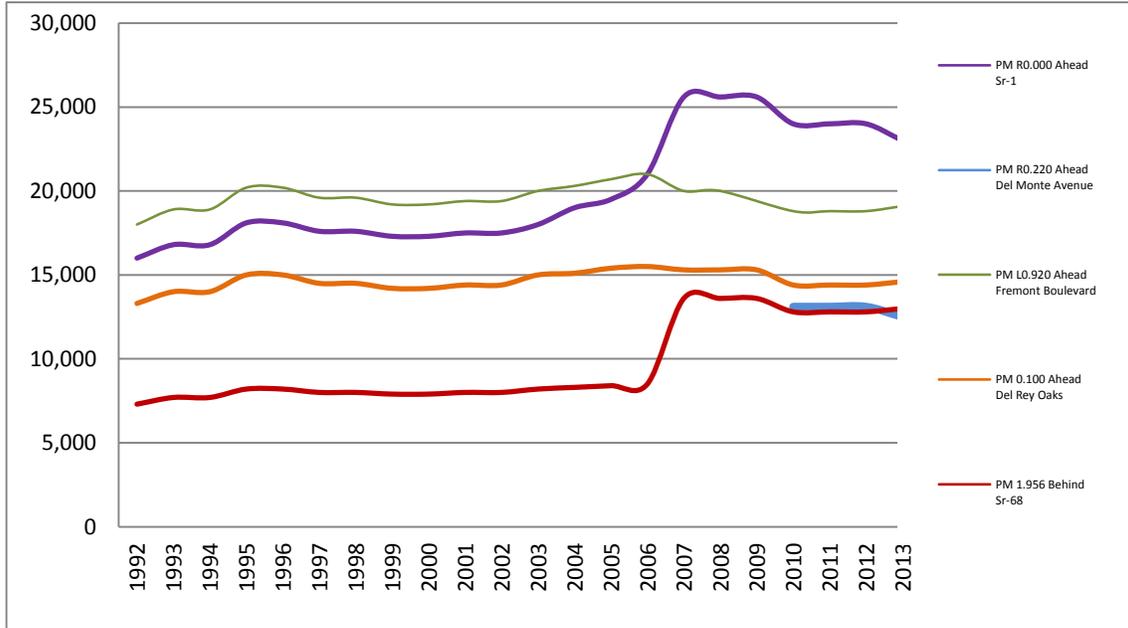


Figure 3.1: SR 218 Historical AADT by Year

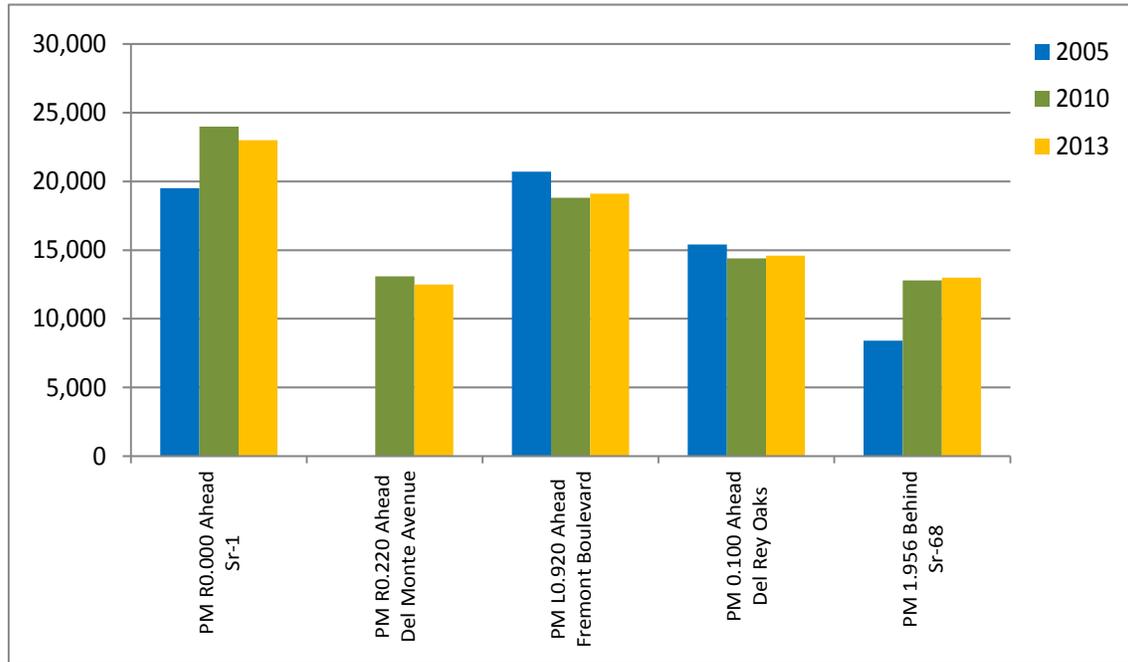


Figure 3.2: SR 218 Historical AADT by Location

Table 3.2: SR 218 Peak Hour Traffic Data

	Eastbound	Westbound
Segment Length (Miles)	2.85	
PM Peak Hour Directional Split Base Year 2013	42.7% to 54.9%	45.1% to 57.3%
PM Peak Hour Directional Split Horizon Year 2040	31.4% to 55.1%	44.9% to 68.6%
PM Peak Hour Volume Base Year 2013	960 to 1,790	
	460 to 820	430 to 430
PM Peak Hour Volume Horizon Year 2040	1,000 to 2,190	
	310 to 1,200	560 to 1,170
PM Peak Hour Growth Rate (vehicles/year)	2 to 15	
PM Peak Hour VMT Base Year 2013	1,470	1,720
PM Peak Hour VMT Horizon Year 2040	1,700	1,830
PM Peak Hour VHT Base Year 2013	50	61
PM Peak Hour VHT Horizon Year 2040	62	62
PM Peak Hour V/C Base Year 2013	0.190 to 0.348	0.156 to 0.468
PM Peak Hour V/C Horizon Year 2040	0.113 to 0.472	0.247 to 0.430
PM Speed (mph) Base Year 2013	25.9 to 35.0 mph	25.5 to 35.0 mph
PM Speed (mph) Horizon Year 2040	25.0 to 35.0 mph	26.1 to 35.0 mph
Posted Speed (mph)	45 mph	45 mph

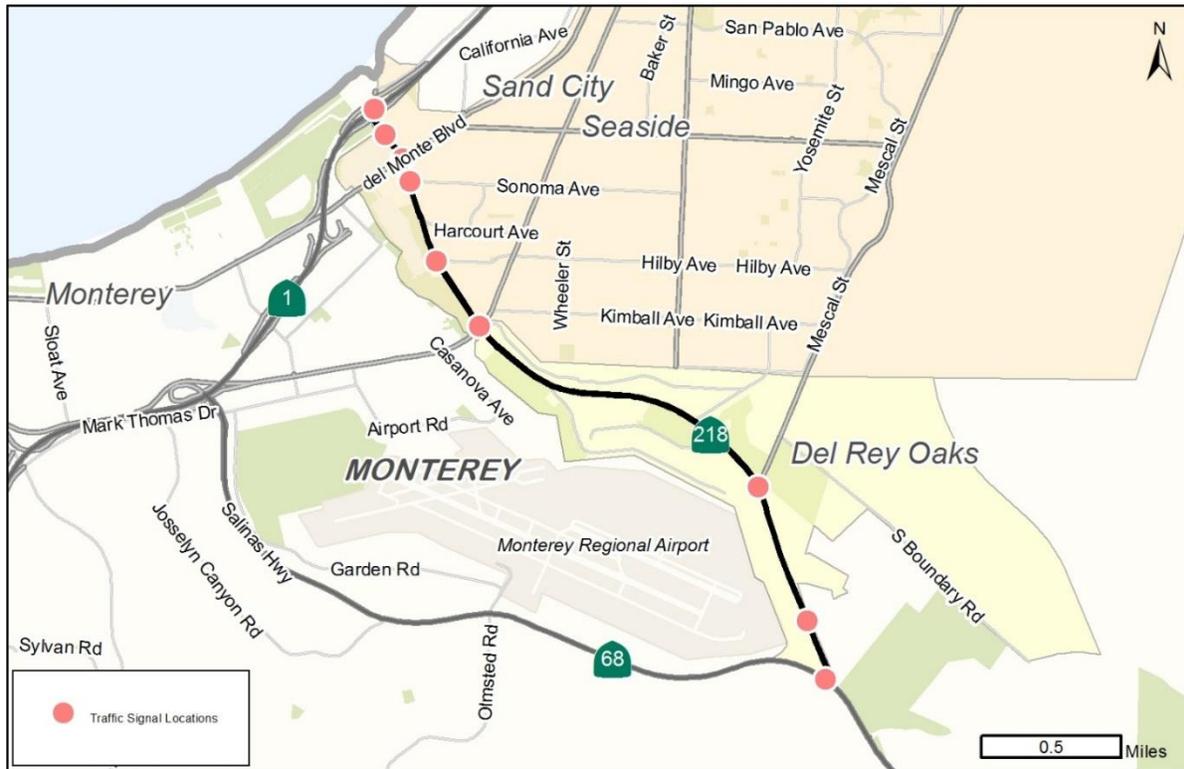


Figure 3.3: SR 218 Traffic Signal Locations
 Source: Systems Planning Caltrans District

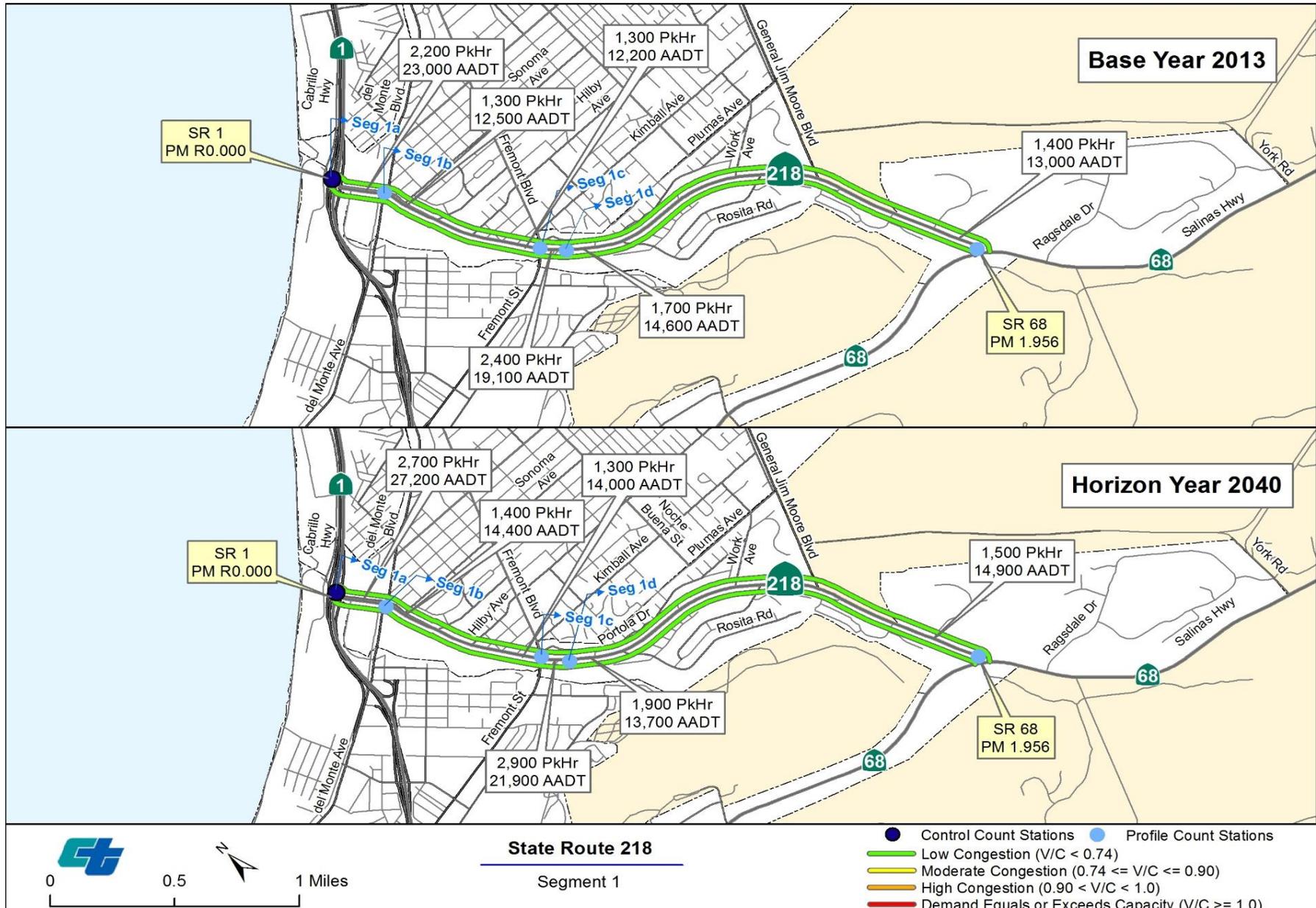


Figure 3.4: SR 218 Base Year/ Horizon Year Congest

CHAPTER 4: CORRIDOR CONCEPT

CONCEPT RATIONALE

The primary purpose of the SR 218 TCR is to develop strategies to manage the corridor and sustain existing transportation investments. Within the 20-25 year planning horizon, Table 4.1 identifies management strategies that should be pursued to manage SR 218.

Seaside’s 2005 General Plan identified Planned Circulation Improvements under policy D3 Regional Improvements as widening SR 218 between General Jim Moore Boulevard and SR 68 to four lanes. Taking this policy under consideration, traffic volumes would not trigger increasing capacity over the planned horizon, as well many topographical and environmental constraints exist creating challenges in achieving policy. Since SR 218 is not a primary route, potential relinquishment to the local jurisdictions would allow greater flexibility on roadway concepts.

In addition, Monterey Regional Airport’s Draft Final Airport Master Plan (June 2015) proposes a Future North Side Access Point connecting Del Rey Gardens Drive with Airport Circle. There has been discussion with Caltrans that the proposed connection would trigger a need for a 4-lane signalized intersection where SR 218 meets Del Rey Gardens Drive.

Route continuity for pedestrians and bicyclists should be a priority in the urban areas. Increasing walkability along the corridor by controlling access points for vehicles and implementing Main Street Strategies where necessary. The portion of SR 218 between Del Monte Boulevard and Fremont Boulevard is proposed to have class II bike lane as identified in the Bicycle and Pedestrian Master Plan (Dec 2011) produced by TAMC.

Table 4.1: SR 218 Concept

Segment	Route Concept
Segment 1 MON (PM R0.0) to MON (PM 1.956)	Maintain two- to four-lane conventional highway.
Multimodal Concept	
Segments 1 MON (PM R0.0) to MON (PM 1.956)	Increase shoulder width where necessary to install Class II/III bike facilities.
Segments 1b MON (PM R0.220) to MON (PM L0.920)	Close gaps in pedestrian network.

Multimodal Improvements
<ul style="list-style-type: none"> Ongoing collaboration will be required to integrate planning for SR 218, the local road network, the local transit system, and local land use. Evaluate possible connections to existing Class I and Class II bicycle facilities. Evaluate opportunities to close gaps in pedestrian and bicycle network.

Multimodal/Operational Improvements

- Increase shoulder width at strategic locations to accommodate Class II facilities.
- Evaluate opportunities to improve bus stops, including ADA upgrades, to support transit routes serving the corridor.

Maintenance and Preservation

- Maintain two- to four-lane conventional highway.
- Maintenance efforts will focus on keeping the facility functional and extending the service life of the existing facility.
- Maintain facility in a state of good repair to minimize traveler cost and delays.

CORRIDOR PERFORMANCE KEY FINDINGS

- Base Year (2013) Conditions: Congestion is low throughout the corridor in both directions.
- Horizon Year (2040) Conditions: Congestion remains low in both directions.
- Route continuity for pedestrian and bicyclists should be a priority.
- Potential relinquishment to the local jurisdictions.

RESOURCES

LIST OF PREPARERS

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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[Espino, Claudia – PE Senior Transportation Engineer](#)

Seventeen years of experience in Project Development in addition to nine years in Advanced Planning and Technical Support. Responsibilities include overseeing the technical input of this TCR.

[Berkman, Jeff - Transportation Modeler](#)

Ten years of experience in transportation demand modeling. Responsible for analyzing existing and future traffic conditions in Chapter 5.

[Monroy-Ochoa, Orchid – Associate Transportation Planner](#)

Five years of experience in preparing concept reports and TCRs. Responsible for preparation and management of TCR.

[Coles, Charlie – Student Assistant](#)

Master of City and Regional Planning and Civil Engineering with a specialization in Transportation Planning Candidate at California Polytechnic, San Luis Obispo. Responsible for preparation of TCR.

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http://www.tamcmonterey.org/programs/bikeped/pdf/TAMC_BPMP_December_2011.pdf

APPENDICES

The following appendices can be accessed at:

http://www.dot.ca.gov/dist05/planning/system_planning.htm#TCRs

Appendix A: SR 218 Data Sheet

Appendix B: About the TCR