



Transportation Concept Report

State Route 54

District 11

October 2014



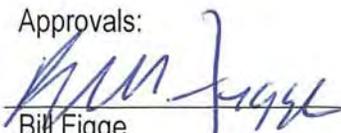
Photo Credit: Phil Konstantin

Transportation Concept Report (TCR) Purpose

California's State Highway System needs long range planning documents to guide the logical development of transportation systems as required by CA Gov. Code §65086 and as necessitated by the public, stakeholders, and system users. The purpose of the TCR is to evaluate current and projected conditions along the route and communicate the vision for the development of each route in each Caltrans District during a 20-25 year planning horizon. The TCR is developed with the goals of increasing safety and health, providing excellent stewardship and efficiency, maintaining system performance, and meeting community and environmental needs of sustainability, livability and economy along the corridor through integrated management of the transportation network, including highway, transit, pedestrian, bicycle, freight, operational improvements and travel demand management components of the corridor.

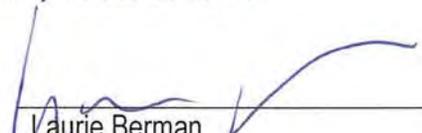
California Department of Transportation
Caltrans Improves Mobility Across California

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ABOUT THE TRANSPORTATION CONCEPT REPORT

California's State Highway System needs long range planning documents to guide the logical development of transportation systems as required by CA Gov. Code §65086 and as necessitated by the public, stakeholders, and system users. The purpose of the TCR is to evaluate current and projected conditions along the route and communicate the vision for the development of each route in each Caltrans District during a 20-25 year planning horizon. The TCR is developed with the goals of increasing safety and health, providing excellent stewardship and efficiency, maintaining system performance, and meeting community and environmental needs of sustainability, livability and economy along the corridor through integrated management of the transportation network, including highway, transit, pedestrian, bicycle, freight, and operational improvements, as well travel demand management components of the corridor.

System Planning is the long-range transportation planning process for the California Department of Transportation (Caltrans). The System Planning process fulfills the statutory responsibility of Caltrans as owner/operator of the State Highway System (SHS) by evaluating conditions and proposing enhancements to the SHS (Gov. Code §65086). Through System Planning, Caltrans focuses on developing an integrated multimodal transportation system that meets the Caltrans goals of safety and health, stewardship and efficiency, sustainability, livability and economy, system performance, and organizational excellence.

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 Transportation Concept Report (TCR) is subject to modification as conditions change and new information is obtained. Although planning information is dynamic and continually changing, the District 11 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.

STAKEHOLDER PARTICIPATION

Outreach to internal and external stakeholders is a fundamental component of a TCR's development. Internal District functional units are relied upon to provide input related to their particular specializations to obtain data and/or verify data accuracy. After a thorough internal review, the final draft document is provided to key external stakeholders. Typically, external stakeholder outreach consists of the regional planning authorities and local jurisdictions that the route traverses. A more extensive outreach plan might be developed to address a route's unique characteristics and issues.

A list of the internal and external stakeholders and a summary of their input and review comments are provided in the report's appendix.

EXECUTIVE SUMMARY – STATE ROUTE 54

Route Overview

Within District 11, State Route 54 (SR-54) is a major east-west facility serving an urban area within the southwest region of San Diego County. The route primarily serves intraregional traffic, providing access to National City, Chula Vista, Bonita, Spring Valley, Rancho San Diego and El Cajon. The route is divided into two state owned and operated roadways. The first is a six mile, six lane freeway from the Interstate 5 (I-5) interchange to the State Route 125 (SR-125) Interchange. The freeway is intersected by Interstate 805 (I-805) and SR-125. From the SR-125 juncture to State Route 94 (SR-94)/Campo Road is an approximate six mile gap of unconstructed SR-54. To travel to the next state owned and operated portion of SR-54, at the intersection of SR-94/Campo Road and Jamacha Road, eastbound travelers either exit the freeway and proceed on San Diego County Route 17 (S17) or continue northbound on SR-125 for approximately four miles to eastbound SR-94 and continue four additional miles. The second roadway is a three mile segment of SR-54/Jamacha Road that ends at the jurisdictional boundary of the City of El Cajon. A former SR-54 segment on Jamacha Road, from approximately Grove Road to Interstate 8 (I-8) was relinquished to the City of El Cajon in 1999.

The unconstructed SR-54 gap, S17, is classified as a traversable highway¹. The traversable highway segment is a San Diego County Route and the street name is Jamacha Boulevard. This segment on Jamacha Boulevard does not meet existing highway standards and is not maintained by the State. District 11 is currently working on a proposal for the California Transportation Commission (CTC) to recommend adoption of a “Notice of Intent to Consider Rescinding” resolution² for the non freeway segment of SR-54 (please refer to Exhibit B, pages 8-12 for maps depicting the proposed route rescission). The rescission proposal is supported by the County of San Diego and other key stakeholders.

Route History

Legislative Route 54 (formerly Legislative Route 280) was created as part of the California Freeway and Expressway System in 1959. SR-54 became an adopted freeway from I-5 to I-8 in 1965. A traversable routing in El Cajon was adopted by the Highway Commission in 1968, beginning the traversable route at SR-94 and proceeding northbound on Jamacha Road to I-8. As stated previously, the former portion of SR-54 within the City of El Cajon was relinquished to the city in 1999.

In 2006, a project report was approved to convert part-time HOV lanes on SR-54 back to general purpose lanes.

The SR-54 east and west bound HOV lanes, from Post Mile (PM) 2.5 to PM 6.4 failed to function as designed.



Vicinity map, Go California HOV Conversion project.

¹ A Traversable Highway is defined in Section 81 of the California Streets and Highway Code: <http://www.oelaw.org/research/code/ca/SHC/81./content.html>

² Project Development and Procedures Manual, Chapter 23, Article 9 - http://www.dot.ca.gov/hq/oppd/pdpm/chap_pdf/chapt23.pdf

The primary reasons for the failure of these HOV lanes was difficulty in enforcement due to a lack of safe pull off areas and the short length of the lanes. Converting the existing part time HOV to full time, general purpose lanes provided an inexpensive way to relieve congestion and is expected to keep this segment of SR-54 functioning through 2016 at Level of Service (LOS) E during peak hour traffic. This project was named the Go-California HOV Conversion Project.³ The HOV lanes were originally installed to support a mandated goal to meet an Average Vehicle Ridership target of 1.41 to improve air quality. The mandate was later rescinded due to an air quality reclassification from "Severe" to "Serious" by the federal government's Environmental Protection Agency.

The seven mile stretch of SR-54 from I-5 to SR-125 is designated as the Filipino-American Highway via California Assembly Concurrent Resolution (ACR) 157. On October 6, 2007, California State and local officials, including Philippine Consul General Mary Jo Aragon, unveiled signs denoting the first designated Filipino-American Highway in the United States. This segment is also known as the South Bay Freeway, a distinction that continues east on SR-125 to the SR-94 Interchange.

Route Concept – Proposed Projects and Strategies

At the time of this TCR update, Caltrans is in the early stage of developing a Project Study Report to explore the relinquishment of the conventional highway segment of SR-54. This proposed strategy would relinquish to the County of San Diego the segment on Jamacha Road from the SR-94/Campo Road junction up to the City of El Cajon jurisdictional limit.

Caltrans Project Initiation – Relinquishment Study						
Completion Year	Freeway	From	To	Existing	Project	Cost
TBD	SR-54	SR-94/Campo Rd	Grove Rd/ City of El Cajon	6C	Relinquish	TBD

There are two proposed improvements for the SR-54 freeway (F) segments. These proposed highway projects are identified in the San Diego Association of Governments (SANDAG) 2050 Regional Transportation Plan (RTP). The SANDAG vision is to provide managed lanes (ML) on all urban freeways as a strategy to maximize the person through-put volumes.

SANDAG 2050 RTP Phased Highway Projects – Revenue Constrained Plan						
Year Built By	Freeway	From	To	Existing	Improvements	Cost (\$ millions – 2010 dollars)
2050	SR-54	I-5	SR-125	6F	6F+2ML	\$100

SANDAG 2050 RTP Revenue Constrained Operational & Auxiliary Lane Projects						
Year Built By	Freeway	From	To	Existing	Improvements	Cost
2020	SR-54	Sweetwater Road (PM 2.3)	Reo Drive (PM 2.9)	6F	Westbound (WB) Auxiliary Lane	TBD

³ The Expenditure Authorization number for the HOV Conversion Project Report is 28190K.

⁴ 2050 SANDAG RTP – Appendix A: <http://www.sandag.org/uploads/2050RTP/F2050rtpA.pdf>

Current and Future Route Considerations

On average SR-54 operates at acceptable service levels and is not a high priority for major improvements. The following conditions should be monitored and/or evaluated to determine system performance impacts and to identify new improvement opportunities:

- The morning peak hour queue on WB SR-54 connectors to Northbound I-5 and the I-5 segment of I-5 from post mile (PM) 8.6 to PM 11.3 ranks 7th in District 11's Spring 2012 Top Ten Congested Segments.⁶
- Use of the South Bay Expressway, the 125 Toll Road, is exceeding projections. If the trend continues, SR-54 could see increased volumes that may result in freeway connector bottlenecks.
- Planned improvements for the Chula Vista waterfront and the National City Marine Terminal could increase SR-54 traffic volumes.
- Rescission of the unconstructed SR-54 segment and potential relinquishment of the conventional highway segment of SR-54 in Rancho San Diego to the County of San Diego may require updated signage and other projects to support the transition.
- Inconsistent Class II Bicycle Lane treatments at right-turn pockets in the conventional highway segment of SR-54 in Rancho San Diego could be improved to include bike lanes to the left of right-turn pockets.
- Sidewalks in the conventional highway segment of SR-54 in Rancho San Diego are inconsistent and spotty.
- The I-5 and SR-54 interchange features two landscaped, irrigated gore areas between two-lane on and off ramps. District 11 Maintenance Division recommends modifying the gore treatments to lessen worker exposure to traffic.

⁵ The operational, auxiliary lane improvements are not cited in the published RTP but are incorporated into the region's model as assumed future highway system conditions.

⁶ http://onramp.dot.ca.gov/dist11/trafops/trafops/images/rampMeter/Spring_2012_AM_Congestion_Mitigation_Projects_Map.pdf

CORRIDOR OVERVIEW

SR-54 is a mix of different facility types. From I-5 to I-805 it consists of a six lane, divided freeway straddling the Sweetwater River channel. Notable features of this segment include four I-5 and SR-54 interchange ramps that fly over the existing Light Rail Transit (LRT) “Blue Line” and the South Bay Bike Path that parallels SR-54, running along the north side of the channel.

SR-54 continues as a six lane freeway with a landscaped median up to the SR-125 interchange (the northern limit of the SR-125 South Bay Expressway Toll facility).

From the SR-125/South Bay Expressway interchange, SR-54 is an unconstructed State highway. Eastbound SR-54 travelers use Northbound SR-125 and then travel east on SR-94 to the next state owned and operated segment of SR-54. County Route Jamacha Boulevard parallels the formerly proposed alignment (see Exhibit A) from SR-125 to SR-94/Campo Road and serves as the designated SR-54 traversable route pending future construction (construction no longer deemed necessary, has been removed from the RTP and is currently in the process of being formally rescinded). The state has no owner/operator responsibilities for Jamacha Boulevard as a traversable route.

The eastern segment of SR-54 from SR-94/Campo Road to the southern limit of the City of El Cajon, near Grove Road is mostly a four lane conventional highway.

Route Segmentation

Route Segment ID No	Segment Begin PM	Segment End PM	Location Description
54-1	0.0	1.9	I-5 IC to the I-805 IC
54-2	1.9	7.7	I-805 to SR-125/So Bay Expwy Toll Rd IC
54-3	N/A	N/A	SR-125/So Bay Expwy Toll Rd IC to SR-94/Campo Rd (unconstructed SR-54)
54.4	T11.0	T14.2	SR-94/Campo Rd to Grove Rd/El Cajon city limit (Jamacha Rd)

Route Regional Governance

County	Metropolitan Planning	Regional Transportation	Congestion Management	Tribal Governments	Air District
San Diego County	SANDAG	SANDAG	SANDAG	None (Jamul Indian Village in close proximity on SR-94)	County of San Diego APCD

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⁷ San Diego Association of Governments (SANDAG) and the County of San Diego Air Pollution Control District (APCD)

Exhibit A – State Route 54 Segment Map

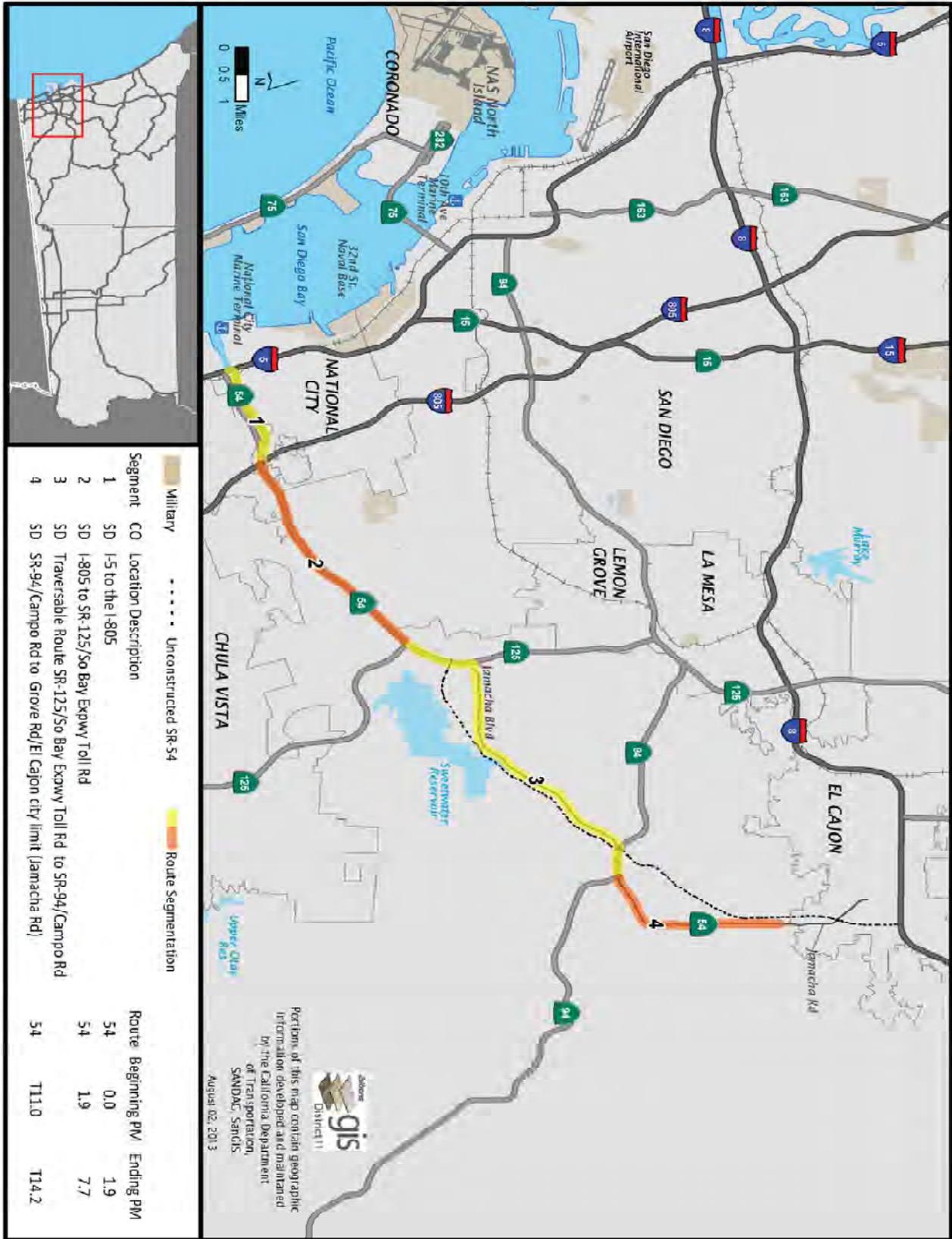


Exhibit B – Sheet 1
 Unconstructed SR-54 and Proposed Rescission Parcels
 (Route Segment ID No. 54-3)

Exhibit B – Sheet 4
 Unconstructed SR-54 and Proposed Rescission
 (Route Segment ID No. 54-3)

State Route 54 Rescission Map

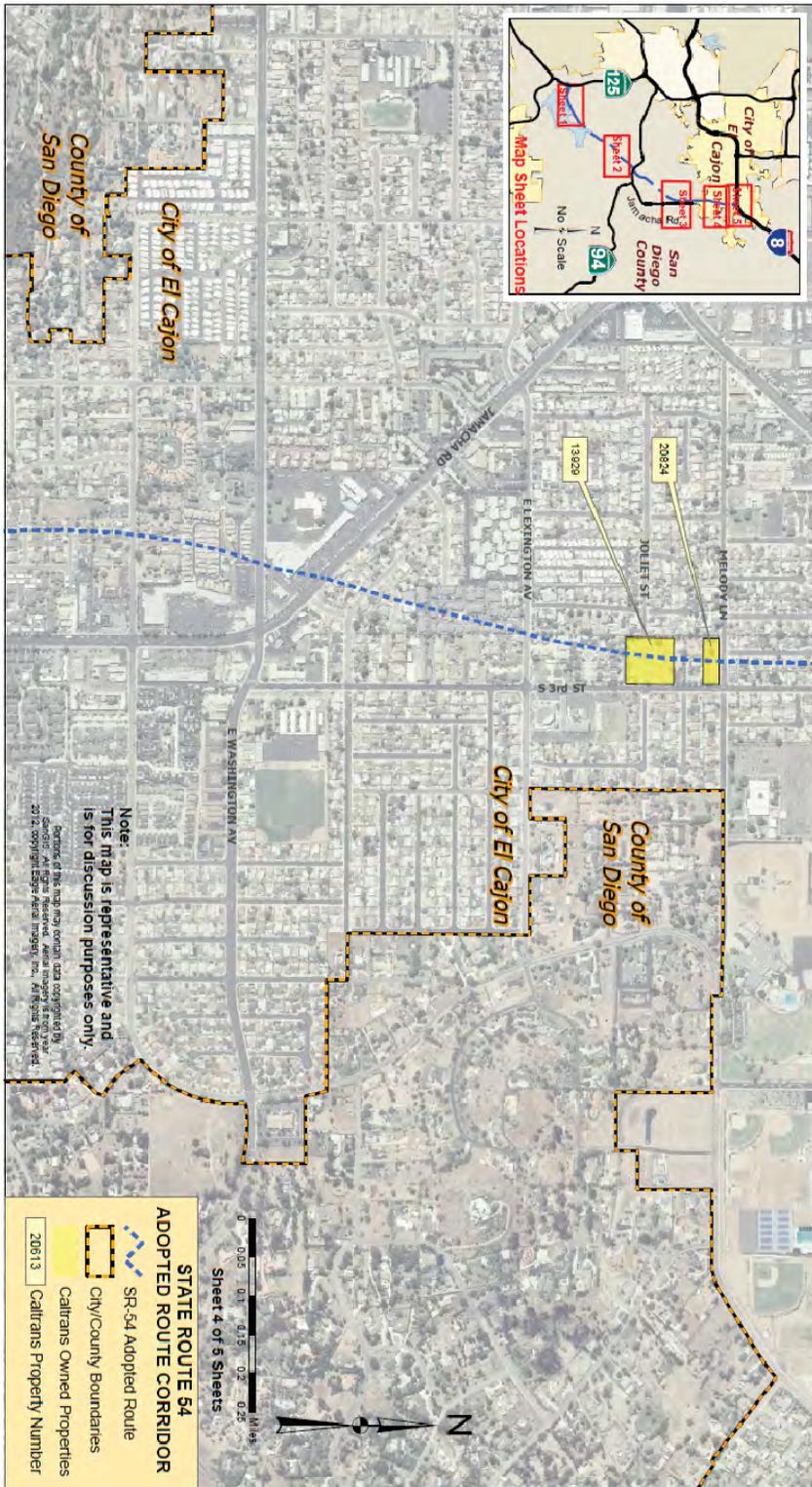
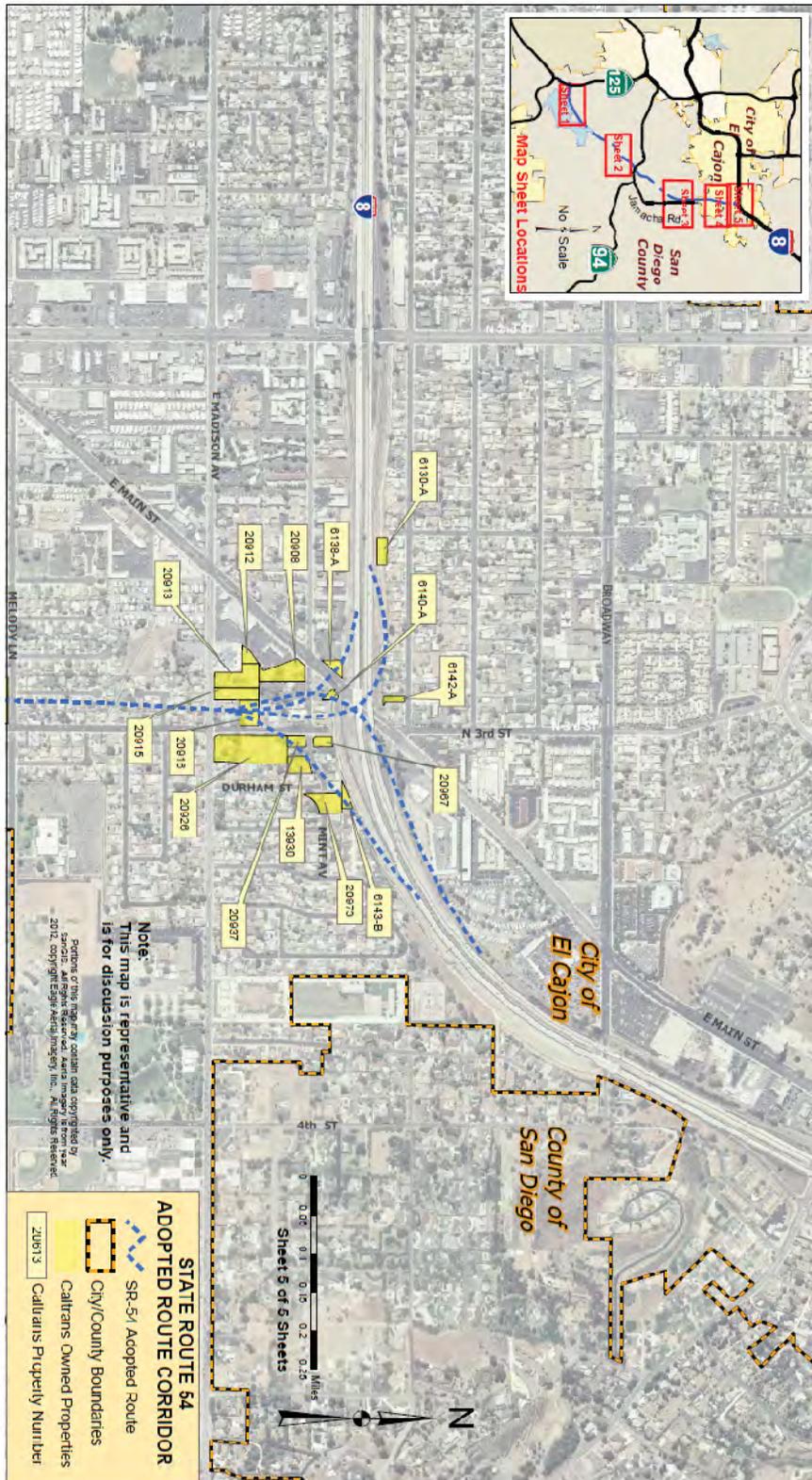


Exhibit B – Sheet 5
 Unconstructed SR-54 and Proposed Rescission
 (Route Segment ID No. 54-3)

State Route 54 Rescission Map



Route Destinations and Characteristics

54-1 I-5 IC to the I-805 IC

Segment Begin PM: 0.0 Segment End PM: 1.9 Rural/Urban/Urbanized: Urbanized

Local Agency(ies): National City and the City of Chula Vista

Federal Functional Classification: Other Fwys or Expwy

Truck Designation: CA Legal Only

Terrain/Topography: Rolling

- | | |
|--|--|
| <input checked="" type="checkbox"/> Freeway or Expressway? | <input type="checkbox"/> Scenic Hwy? |
| <input type="checkbox"/> National Hwy System? | <input type="checkbox"/> High Emphasis? |
| <input type="checkbox"/> Strategic Hwy Network? | <input type="checkbox"/> Focus Route? |
| <input type="checkbox"/> Interregional Road System? | <input type="checkbox"/> Goods Movement Route? |

54-2 I-805 to SR-125/So Bay Expwy Toll Rd IC

Segment Begin PM: 1.9 Segment End PM: 7.7 Rural/Urban/Urbanized: Urbanized

Local Agency(ies): National City, City of San Diego and the County of San Diego (Community of Bonita)

Federal Functional Classification: Other Fwys or Expwy

Truck Designation: CA Legal Only

Terrain/Topography: Rolling

- | | |
|--|--|
| <input checked="" type="checkbox"/> Freeway or Expressway? | <input type="checkbox"/> Scenic Hwy? |
| <input type="checkbox"/> National Hwy System? | <input type="checkbox"/> High Emphasis? |
| <input type="checkbox"/> Strategic Hwy Network? | <input type="checkbox"/> Focus Route? |
| <input type="checkbox"/> Interregional Road System? | <input type="checkbox"/> Goods Movement Route? |

54-3 SR-125/So Bay Expwy Toll Rd IC to SR-94/Campo Rd (unconstructed SR-54)

Segment Begin PM: N/A Segment End PM: N/A Rural/Urban/Urbanized: Urban

Local Agency(ies): County of San Diego (Communities of La Presa and Spring Valley)

Federal Functional Classification: Minor Arterial

Truck Designation: N/A

Terrain/Topography: Rolling

- | | |
|---|--|
| <input type="checkbox"/> Freeway or Expressway? | <input type="checkbox"/> Scenic Hwy? |
| <input type="checkbox"/> National Hwy System? | <input type="checkbox"/> High Emphasis? |
| <input type="checkbox"/> Strategic Hwy Network? | <input type="checkbox"/> Focus Route? |
| <input type="checkbox"/> Interregional Road System? | <input type="checkbox"/> Goods Movement Route? |

54-4 SR-94/Campo Rd to Grove Rd/El Cajon city limit (Jamacha Rd)

Segment Begin PM: T11.0 Segment End PM: T14.2 Rural/Urban/Urbanized: Urban

Local Agency(ies): County of San Diego (Community of Rancho San Diego)

Federal Functional Classification: Other Principal Arterial

Truck Designation: N/A

Terrain/Topography: Rolling

- | | |
|--|--|
| <input type="checkbox"/> Freeway or Expressway? | <input type="checkbox"/> Scenic Hwy? |
| <input type="checkbox"/> National Hwy System? | <input type="checkbox"/> High Emphasis? |
| <input type="checkbox"/> Strategic Hwy Network? | <input type="checkbox"/> Focus Route? |
| <input checked="" type="checkbox"/> Interregional Road System? | <input type="checkbox"/> Goods Movement Route? |

⁸ The report appendix provides a glossary of acronyms and terms.

Community Characteristics and Land Use

The western segment of SR-54 serves the South Bay region of San Diego County and traverses through National City, the City of Chula Vista, the City of San Diego and the unincorporated community planning areas of Spring Valley, Sweetwater and Valley De Oro. South of SR-54 is the Jamul-Dulzura served by SR-94. Prominent neighborhoods served by SR-54 are Paradise Hills, Bonita, La Presa and Rancho San Diego. The major employers along the corridor are the local municipalities, schools, hospitals and large retailers, including National City's "Mile of Cars," and Westfield Plaza Bonita shopping mall. The Port of San Diego operates the National City and Tenth Avenue Marine Terminals just northwest of the I-5/SR-54 interchange and southwest of the interchange is the Sweetwater Marsh National Wildlife Refuge.



SR-54/Jamacha Rd. and Cuyamaca College Dr. West in Rancho San Diego

The unconstructed SR-54 alignment is entirely within the jurisdiction of the County of San Diego and is south of, and roughly paralleling Jamacha Boulevard (Exhibit A). This segment of Jamacha Boulevard serves the communities of La Presa and Spring Valley and provides access to the Spring Valley County Park and the Sweetwater Reservoir. The route provides direct access predominantly to single family homes and small retailers.

City/Community	2008 Population ⁹	2008 Total Housing Units	2008 Employment Density ¹⁰	2008 Residential Density ¹¹	2008 Median Income ¹²	2050 Population Forecast	2050 Total Housing Units
City of Chula Vista	230,397	77,484	14.5	8.4	\$53,265	330,381	107,011
National City	56,144	15,773	16.5	10.7	\$33,214	90,070	24,663
City of San Diego – Paradise Hills** ¹³	37,287	10,610	13.2	7.9	\$51,105	41,691	11,040
Spring Valley*	63,608	20,515	12.0	5.9	\$49,667	72,371	21,952
Sweetwater*	13,574	4,520	3.5	2.5	\$74,281	15,877	4,732
Valle De Oro*	43,167	15,482	7.2	2.4	\$69,517	47,989	15,968
Jamul-Dulzura*	9,885	3,166	1.4	0.2	\$84,698	17,633	5,263

** Unincorporated community planning areas within the County of San Diego / *** Community within the City of San Diego

The eastern segment of SR-54/Jamacha Road is in the community of Rancho San Diego. At the intersection of SR-54 and SR-94/Campo Road is a large retail center with a multiplex theater. This segment of SR-54 also serves Cuyamaca Community College and neighboring parks supporting equestrian trails. The route is access controlled via medians from the SR-94/Campo Road intersection up to Jamacha Way. From that junction up to the Eastern termination of SR-54 the route provides access to local streets and private driveways.

⁹ SANDAG 2008 and 2050 Forecast source: <http://profilewarehouse.sandag.org/>

¹⁰ SANDAG - Civilian jobs per developed employment acre (industrial, retail, office, schools, and half of mixed use acres).

¹¹ SANDAG - Total housing units per developed residential acre (single family, multiple family, mobile home, other, and half of mixed use acres).

¹² SANDAG Median Household Income - adjusted for inflation (\$1999)

¹³ 92139 Zip Code

There is one pending development in National City, the "Gateway Project," that proposes to mitigate trip generation impacts by improving the WB SR-54 off ramp onto National City Boulevard. The mitigation proposal provides for a dual right hand turning movement onto National City Boulevard.

System Characteristics

SR-54 is a six lane freeway between I-5 and SR-125 with auxiliary lanes in some locations. Between SR-125 and SR-94, the roadway is classified as a Traversable Highway, defined in Section 81 of the California Streets and Highways Code as "an existing road or street between the termini of and approximately along the State highway routes described in the Streets and Highways Code". For this segment, Jamacha Boulevard is the Traversable Highway. This segment does not meet existing highway standards and is not maintained by the State. It is signed as San Diego County Route S17. SR-54 signage resumes north of SR-94. From SR-94 to Brabham Street, SR-54 is a six lane conventional highway. From Brabham Street to the end of the route at Grove Road/South El Cajon City Limits, SR-54 is a four lane conventional highway.

Characteristics of the Existing System

54-1 Segment Description: I-5 IC to the I-805 IC

Facility Type: Freeway **General Purpose Lanes:** 6 **Lane Miles:** 11.4 **Centerline Miles:** 1.9

Median Characteristics: Hwy divided by Sweetwater Channel, adequate recovery zone in unpaved median.

ROW Characteristics: Unconstrained – The roadside width of the entire segment could accommodate expansion of one lane in each direction without ROW acquisition.

Auxiliary Lanes: EB and WB Auxiliary Lanes from Highland Ave to National City Blvd.

Passing Lanes: N/A **Truck Climbing Lanes:** N/A **Percent Distressed Pavement:** 0

HOV Lanes: 0 **HOV Characteristics:** N/A **HOT/Express Lanes:** 0 **HOT/Express Lanes Characteristics:** N/A

Toll Lanes: 0 **Toll Lanes Characteristics:** N/A **BRT Lanes:** 0 **BRT Lanes Characteristics:** N/A

54-2 Segment Description: I-805 to SR-125/So Bay Expwy Toll Rd IC

Facility Type: Freeway **General Purpose Lanes:** 6 **Lane Miles:** 34.8 **Centerline Miles:** 5.8

Median Characteristics: Unpaved barrier separated median with adequate recovery zone and minimal landscaping for most of the segment.

ROW Characteristics: Unconstrained - however, outside widening would require earthwork balancing and retaining walls.

Auxiliary Lanes: EB and WB Auxiliary Lanes from Briarwood Rd to SR-125/So Bay Expwy Toll Rd.

Passing Lanes: N/A **Truck Climbing Lanes:** N/A **Percent Distressed Pavement:** 0

HOV Lanes: 0 **HOV Characteristics:** N/A **HOT/Express Lanes:** 0 **HOT/Express Lanes Characteristics:** N/A

Toll Lanes: 0 **Toll Lanes Characteristics:** N/A **BRT Lanes:** 0 **BRT Lanes Characteristics:** N/A

54-3 Segment Description: SR-125/So Bay Expwy Toll Rd IC to SR-94/Campo Rd (unconstructed SR-54)

Facility Type: Traversable Highway **General Purpose Lanes:** 0 **Lane Miles:** 0 **Centerline Miles:** 0

Median Characteristics: N/A

ROW Characteristics: ROW will be put up for sale and some parcels retained for mitigation pending recession approval.

Auxilliary Lanes: N/A

Passing Lanes: N/A **Truck Climbing Lanes:** N/A **Percent Distressed Pavement:** N/A

HOV Lanes: 0 **HOV Characteristics:** N/A **HOT/Express Lanes:** 0 **HOT/Express Lanes Characteristics:** N/A

Toll Lanes: 0 **Toll Lanes Characteristics:** N/A **BRT Lanes:** 0 **BRT Lanes Characteristics:** N/A

54-4 Segment Description: SR-94/Campo Rd to Grove Rd/El Cajon city limit (Jamacha Rd)

Facility Type: Conventional **General Purpose Lanes:** 6 **Lane Miles:** 19.2 **Centerline Miles:** 3.2

Median Characteristics: From SR/94/Campo Rd to Calle Albara St, traffic is separated by a curb and/or landscaped median, the remaining segment is largely undivided allowing for turn movements.

ROW Characteristics: Constrained – Probable need for ROW acquisition to widen route segment.

Auxilliary Lanes: N/A

Passing Lanes: N/A **Truck Climbing Lanes:** N/A **Percent Distressed Pavement:** 6 %

HOV Lanes: 0 **HOV Characteristics:** N/A **HOT/Express Lanes:** 0 **HOT/Express Lanes Characteristics:** N/A

Toll Lanes: 0 **Toll Lanes Characteristics:** N/A **BRT Lanes:** 0 **BRT Lanes Characteristics:** N/A

System Connectivity and Complete Streets

Under the guidance of Deputy Directive 64-R1, in support of the "Complete Streets" initiative, Caltrans develops integrated multimodal projects in balance with community goals, plans, and values. All projects must consider the safety and mobility of bicyclists, pedestrians, and transit users in all projects, regardless of funding. Bicycle, pedestrian, and transit travel is facilitated by creating "complete streets" beginning early in system planning and continuing through project delivery, maintenance, and operations. Transit options, Park and Ride locations, and safe pedestrian crossings are some examples of efforts to meet these goals.



Sweetwater Bikeway parallels SR-54 from I-5 to the SR-125 South Bay Expressway

Deputy Directive DD 42-R3 supports the federal Americans with Disability Act (ADA) and the State's disability laws. ADA project design features include the installation or upgrade of curb ramps, sidewalk improvements, crosswalks, traffic signals and/or obstruction removal to accommodate ADA accessibility. Non-ADA work such as drainage improvements, utility relocation and signal relocation, may also be necessary for improved pedestrian accessibility and safety.



SR-54 EB on-ramp from Reo Drive

Local Street Intersections – Pedestrian and Bicycle Access

The following section addresses local street connectivity and existing facilities either on or adjacent to the SR-54 that support pedestrian and bicycle access and public transit mode choices. There are six local streets that crossover (OC) and one local street undercrossing (UC) SR-54 from I-5 to the SR-125 South Bay Expressway interchange. The conventional highway segment has seven signalized at grade intersections. All the grade separated local street crossings and key at grade intersections are listed in the following “Complete Streets – Corridor Characteristics” table.

Complete Streets - Corridor Characteristics

54-1 Location Description: I-5 IC to the I-805 IC

Junction Location/Description: A) National City Blvd - 4 Lane OC

Junction Type: EB Cloverleaf on-ramp and EB Diamond off ramp

On Ramps Metered?

Large Corner Radii?

Adjacent Land Use: Retail

Signalization: Signalized T Intersection

Crosswalks: Pedestrian SB/NB crossings controlled by traffic signals - WB/EB crossings restricted

Sidewalks: Yes, 5' on both sides

Curbcuts: Yes

Bicycle Accommodation: Class III Bike Route

Other Notable Features: Uncontrolled free right onto EB ramp

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Junction Location/Description: B) Highland Ave., 4 lane OC **Junction Type:** Full Diamond IC
On Ramps Metered?
Large Corner Radii? **Adjacent Land Use:** Retail
Signalizaton: 4-Leg Signalized Intersections
Crosswalks: SB/NB un-marked crossings controlled by traffic signals on both sides. WB/EB ped crossings at South leg
Sidewalks: Yes - 5' **Curbcuts:** Yes
Bicycle Accommodation: Class III Bike Route
Other Notable Features: Bridge median

.....

Junction Location/Description: C) N. 2nd Ave., 2-lane UC **Junction Type:** No fwy access
On Ramps Metered?
Large Corner Radii? **Adjacent Land Use:** Retail and KOA Campgrounds
Signalizaton: N/A
Crosswalks: N/A
Sidewalks: Sidewalk on west side of local street - 5' **Curbcuts:** N/A
Bicycle Accommodation: Class III Bike Route
Other Notable Features:

54-2 Location Description: I-805 to SR-125/So Bay Expwy Toll Rd IC

Junction Location/Description: A) Sweetwater Rd, 6-lane OC **Junction Type:** No fwy access
On Ramps Metered?
Large Corner Radii? **Adjacent Land Use:** Residential
Signalizaton:
Crosswalks:
Sidewalks: On east side of street - 5' **Curbcuts:** N/A
Bicycle Accommodation: None.
Other Notable Features:

.....

Junction Location/Description: B) Reo Dr., 6-lane OC **Junction Type:** Full Diamond IC
On Ramps Metered?
Large Corner Radii? **Adjacent Land Use:** Residential
Signalizaton: All ramps controlled by 4-Leg Signalized Intersections
Crosswalks: SB/NB marked crossings controlled by traffic signals - estricted WB/EB crossings
Sidewalks: Yes, 5' on both sides **Curbcuts:** Yes
Bicycle Accommodation: No
Other Notable Features: Inner two lanes of bridge accommodate turn movements

.....

Junction Location/Description: C) So. Woodman St., 4-lane OC **Junction Type:** Full Diamond IC
On Ramps Metered?
Large Corner Radii? **Adjacent Land Use:** Residential
Signalization: EB on and off ramps controlled by signalized T-Intersection WB on and off ramps are signalized
Crosswalks: N/A
Sidewalks: N/A **Curbcuts:** N/A
Bicycle Accommodation: None
Other Notable Features: UC provides fwy access only - No Bikes/Peds allowed - Woodman terminates on the south end of bridge.

Junction Location/Description: D) Briarwood Rd., 8-lane OC **Junction Type:** Three leg diamond IC with a WB off-ramp cloverleaf
On Ramps Metered?
Large Corner Radii? **Adjacent Land Use:** Residential
Signalization: EB on/off ramps controlled by 4-leg signalized Intersection, WB on/off ramps controlled by a signalized T-Intersection.
Crosswalks: SB/NB marked crossings controlled by traffic signals - restricted WB/EB crossings
Sidewalks: Yes, 5' on both sides **Curbcuts:** Yes, at marked crossing
Bicycle Accommodation: No
Other Notable Features: Inner four lanes on bridge accommodate turn movements

54-4 Location Description: **SR-94/Campo Rd to Grove Rd/El Cajon city limit (Jamacha Rd)**

Junction Location/Description: A) Fury Lane at grade intersection **Junction Type:** T-Intersection - Fury St terminates at SR-54
On Ramps Metered?
Large Corner Radii? **Adjacent Land Use:** Retail/Residential
Signalization: Yes
Crosswalks: Yes - 3 legs, marked crossing, restricted N/S at West leg
Sidewalks: Yes - 5' **Curbcuts:** Yes
Bicycle Accommodation: Class II Bike Lanes - ends before and begins again just after Intersection
Other Notable Features: Hillsdale Middle School, equestrian crossing signs and bus stop

Junction Location/Description: B) Willow Glen Drive at grade intersection **Junction Type:** 4-leg intersection (one leg transitions into shopping mall)
On Ramps Metered?
Large Corner Radii? **Adjacent Land Use:** Retail/Residential
Signalization: 4-leg signal
Crosswalks: Yes - marked crossing for all four legs
Sidewalks: Yes - 5' **Curbcuts:** Yes
Bicycle Accommodation: Class II Bike Lanes - ends before and begins again just after Intersection
Other Notable Features: Willow Glen Dr terminates at SR-54, transitions into retail center parking lot. Bus stop

Junction Location/Description: C) Hilton Head Road

Junction Type: 4-leg intersection (one leg transitions into shopping mall)

On Ramps Metered?

Large Corner Radii?

Adjacent Land Use: Retail/Residential

Signalization: 4-leg signal

Crosswalks: Yes - marked crossing for all four legs

Sidewalks: Yes - 5'

Curbcuts: Yes

Bicycle Accommodation: Class II Bike Lanes - ends before and begins again just after Intersection

Other Notable Features: Hilton Head Rd terminates at SR-54, transitions into retail center parking lot. Bus stop

.....

Junction Location/Description: D) Brabham St. at grade intersection

Junction Type: 4-leg intersection

On Ramps Metered?

Large Corner Radii?

Adjacent Land Use: Residential

Signalization: 4-leg signal

Crosswalks: Yes - marked crossing for all four legs

Sidewalks: Yes - 5'

Curbcuts: Yes

Bicycle Accommodation: Class II Bike Lanes - ends before and begins again just after Intersection

Other Notable Features: Hillsdale Middle School, Bus Stop and the San Miguel Fire Department Station

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Junction Location/Description: E) Calle Albara at grade intersection

Junction Type: T-intersection

On Ramps Metered?

Large Corner Radii?

Adjacent Land Use: Residential

Signalization: 3-leg signal

Crosswalks: One marked crossing / ped access restricted

Sidewalks: Yes - 5'

Curbcuts: Curbcuts on west side, project planned for installing curbcuts on the east side

Bicycle Accommodation: Class II Bike Lanes

Other Notable Features: Bus stop

.....

Junction Location/Description: F) Hillsdale Rd

Junction Type: T-intersection

On Ramps Metered?

Large Corner Radii?

Adjacent Land Use: Commercial/Residential

Signalization: 3-leg signal

Crosswalks:

Sidewalks: Yes - 5' Sidewalk terminates east of the intersection on both sides

Curbcuts: Yes

Bicycle Accommodation: Class II Bike Lanes

Other Notable Features: Vahalla High School and Bus Stop

.....

Junction Location/Description: G) Fuerte Heights Lane

On Ramps Metered?

Large Corner Radii?

Signalization:

Crosswalks: One un-marked cross walk

Sidewalks: Dirt path on East side and cement sidewalk up to SW quadrant - dirt path on N direction.

Bicycle Accommodation: Class II Bike Lanes

Other Notable Features:

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Junction Location/Description: H) Sundale Rd

On Ramps Metered?

Large Corner Radii?

Signalization:

Crosswalks: Un-marked cross walk

Sidewalks: None

Bicycle Accommodation: Class II Bike Lanes

Other Notable Features:

.....

Junction Location/Description: I) E Chase Ave at grade IS

On Ramps Metered?

Large Corner Radii?

Signalization: 4-leg signal

Crosswalks: Only one direction is marked

Sidewalks: Yes, 5' in WB direction only - limited distance

Bicycle Accommodation: Class II Bike Lanes

Other Notable Features:

Junction Type: 4-leg Intersection

Adjacent Land Use: Residential

Curbcuts: Only one curbcut at the SW quadrant

Junction Type: 4-leg intersection

Adjacent Land Use: Residential

Curbcuts: N/A

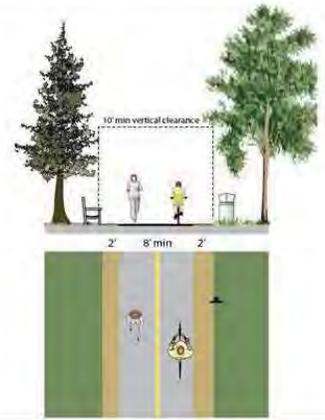
Junction Type: 4-leg intersection

Adjacent Land Use: Retail/Residential

Curbcuts: Yes

Bicycle Accommodations

Bicycle riders and pedestrians have a legal right to access most public roads in California as specified in California Vehicle Code (CVC) (Sections 21200-21212), and Streets and Highways Code (Sections 890 – 894.2). Bicyclists, pedestrians, and non-motorized traffic are permitted on all State facilities, unless prohibited (CVC, section 21960). While bicycles are not allowed on the freeway shoulders of SR-54, the Class I Sweetwater Bikeway parallels SR-54 from I-5 to I-805 and Class II bike lanes exist parallel to the SR-54 corridor. From the junction of SR-54 and SR-94 to the Route's terminus at the southern border of the City of El Cajon, class II bike lanes exist on the outside shoulder of SR-54.

<p>Class I – Bike Path</p> <p>Bike paths are bikeways that are physically separated from vehicular traffic. Also termed shared-use paths, bike paths accommodate bicycle, pedestrian, and other non-motorized travel. Paths can be constructed in roadway right-of-way or independent right-of-way. Bike paths provide critical connections in the region where roadways are absent or are not conducive to bicycle travel.</p>	 <p>The diagram illustrates a Class I Bike Path. It shows a cross-section of a path with a minimum vertical clearance of 10 feet. The path width is at least 8 feet, with 2-foot buffers on both sides. A top-down view shows a person walking and a person on a bicycle within the path boundaries.</p>
<p>Class II - Bike Lanes</p> <p>Bike lanes are defined by pavement markings and signage used to allocate a portion of a roadway for exclusive or preferential bicycle travel. Within the regional corridor system, bike lanes should be enhanced with treatments that improve safety and connectivity by addressing site-specific issues. Such treatments include innovative signage, intersection treatments, and bicycle loop detectors.</p>	 <p>The diagram illustrates a Class II Bike Lane. It shows a cross-section with a 6-foot stripe on the left, a 4-foot stripe on the right, and a 5-foot parking area. The lane width is 10-12 feet. A top-down view shows a car, a bicycle, and a car in a parking space.</p>
<p>Class III - Bike Routes</p> <p>Bike routes are located on shared roadways that accommodate vehicles and bicycles in the same travel lane. Established by signs, bike routes provide continuity to other bike facilities or designate preferred routes through corridors with high demand. Within the regional corridor system, bike routes should be enhanced with treatments that improve safety and connectivity by addressing site-specific issues.</p>	 <p>The diagram illustrates a Class III Bike Route. It shows a cross-section with a D11-1 Bike Route Sign and a 14-foot preferred minimum width. A top-down view shows a car and a bicycle in the same travel lane.</p>

Riding to 2050 – San Diego Regional Bike Plan, Table 3.3 - SANDAG, April 2014.

SR-54 Bike Facilities

54-1 Location Description: **I-5 IC to the I-805 IC**

Bike Access Prohibited?: Yes

Bike Section

Bike Facility Class Type: N/A

Description: Bikes not allowed on fwy shoulder.

Outside Paved Shoulder Width: N/A

Distressed Shoulder Pavement: N/A

Parallel Facility Present?

Posted Road Speed Limit: N/A

Describe Paralell Bike Facilities: The Sweetwater bikeway (path) parallels the Sweetwater River Channel and SR-54 on the Southside of the WB lanes. Path terminates at Plaza Bonita Drive, just east of I-805.

Role (level of import to the regional bike system): High - Sweetwater River Bikeway (SRB)

54-2 Location Description: **I-805 to SR-125/So Bay Expwy Toll Rd IC**

Bike Access Prohibited?: Yes

Bike Section

Bike Facility Class Type: N/A

Description: Bikes not allowed on fwy shoulder.

Outside Paved Shoulder Width: N/A

Distressed Shoulder Pavement: N/A

Parallel Facility Present?

Posted Road Speed Limit: N/A

Describe Paralell Bike Facilities: The Sweetwater Bikeway transitions into a bike route onto Plaza Bonita Rd., cyclists proceed east by turning right onto Sweetwater Rd. A bike lane is provided near the intersection of Plaza Bonita Way to Briarwood Rd. The bike lane continues on Sweetwater Rd. until the SR-54/125 So Bay Expwy Toll Rd IC. A bike path is provided via Quarry Rd. (mtce access rd) until the intersection of Jamacha Blvd.

Role (level of import to the regional bike system): High (SRB)

54-3 Location Description: **SR-125/So Bay Expwy Toll Rd IC to SR-94/Campo Rd (unconstructed SR-54)**

Bike Access Prohibited?: Yes

Bike Section

Bike Facility Class Type: N/A

Description: Bike lane is provided on Jamacha Blvd/Co Hwy S17 from the Quarry Rd. intersection up to Omega St. There is no bike lane up to Spring Glen Lane. The bike lane begins again on Jamacha Blvd to the Campo Rd/SR-94/SR-54 intersection.

Outside Paved Shoulder Width: N/A

Distressed Shoulder Pavement: N/A

Parallel Facility Present?

Posted Road Speed Limit: N/A

Describe Paralell Bike Facilities: No parallel facility. The route provides access to the Sweetwater Regional Park and Sweetwater Reservoir.

Role (level of import to the regional bike system): High

54-4 Location Description: **SR-94/Campo Rd to Grove Rd/El Cajon city limit (Jamacha Rd)**

Bike Access Prohibited?: No

Bike Section

Bike Facility Class Type: Class II Bike L

Description: Bike lane is provided from the Jamacha Blvd and Campo Rd/SR-94/SR-54 intersection and onto Jamacha Rd until the east terminus of SR-54. The bike lane continues on Jamacha Rd up to Gustavo St. in the City of El Cajon.

Outside Paved Shoulder Width: N/A

Distressed Shoulder Pavement: N/A

Parallel Facility Present?

Posted Road Speed Limit:

Describe Paralell Bike Facilities:

Role (level of import to the regional bike system): High

Transit

The conventional highway segment of SR-54 serves as the primary route for Metropolitan Transit Service (MTS) Route 816, between Cuyamaca College and the El Cajon Transit Center. The table below provides additional information on the conventional buses that serve the SR-54 corridor. Additionally, SR-54 connects with the MTS San Diego Trolley “Blue Line” from the San Ysidro Border Crossing to Downtown San Diego and the “Orange Line” roughly parallels SR-54 with service between Downtown San Diego and the City of El Cajon.

Future transit service is based on the Regional Transit Plan component of the final 2050 Regional Transportation Plan (RTP). The “Urban Area Transit Strategy” serves as the basis of the 2050 RTP regional transit network. The freeway segments of SR-54 from I-5 to I-805 fall within the defined “Coastal South Bay” urban area.

The 2050 RTP established transit mode share¹⁴ goals. The idea behind setting transit mode share goals for specific subareas of the region was to recognize that transit service levels can and should be higher where greater land use concentrations already exist or are anticipated in the future, especially during peak period commute times when congestion levels tend to be the highest. The first step to creating mode share goals was to understand current mode shares. The 2008 transit mode share for the Coastal South Bay area was 7.5% and the 2050 goal for the peak period transit mode share ranges from 10%-15%.¹⁵

Public Transit Serving the SR-54 Corridor

54-1 Location Description: I-5 IC to the I-805 IC

Name of Bus Provider and Route Descriptions: MTS "962" Bus Route parallels SR-54 to the North

Key Stops/Destinations within the Segment: National City - 8th St. Trolley Station and National City Blvd/Plaza Blvd.

Peak Hour Weekday Headway: 30 minutes

Bikes Allowed? Yes

Name of Bus Provider and Route Descriptions: MTS "961" Bus Route parallels SR-54 to the North serving National City

Key Stops/Destinations within the Segment: 24th St. Trolley Station, 30th St./Highland Ave. and Sweetwater High School

Peak Hour Weekday Headway: 15 minutes

Bikes Allowed? Yes

Name of Bus Provider and Route Descriptions: MTS "705" Bus Route parallels SR-54 to the South on E St. in Chula Vista

Key Stops/Destinations within the Segment: E St. Trolley Station, E St./3rd, Bonita Rd./Bonita Glen Dr., and the Plaza Bonita Mall

Peak Hour Weekday Headway: 30 minutes

Bikes Allowed? Yes

¹⁴ Mode share refers to the proportion of people using a particular form of transportation to get from one place to another. – page TA 7-16

¹⁵ 2050 RTP Urban Area Transit Strategy - web source: <http://www.sandag.org/uploads/2050RTP/F2050RTPTA7.pdf>

54-2 Location Description: I-805 to SR-125/So Bay Expwy Toll Rd IC

Name of Bus Provider and Route Descriptions: MTS "705" Bus Route parallels SR-54 to the South on Bonita Rd. in Chula Vista, then travels South on Otay Lakes Road to serve Southwestern College

Key Stops/Destinations within the Segment: Plaza Bonita Mall, Bonita Rd./Willow St. (Kaiser Medical Center) and Bonita Rd./Otay Lakes Rd.

Peak Hour Weekday Headway: 30 minutes **Bikes Allowed?** Yes

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Name of Bus Provider and Route Descriptions: MTS "961" Bus Route parallels SR-54 crossing the freeway to serve Plaza Bonita to the South, and crossing back to the North via the Reo Dr. UC. paralleling the fwy up to Woodman St.

Key Stops/Destinations within the Segment: Plaza Bonita Mall, the Paradise Hills, Encanto and Skyline Hills Communities, Parkside Ave./Reo Drs and the 62nd St/Encanto Trolley Station

Peak Hour Weekday Headway: 15 minutes **Bikes Allowed?** Yes

.....

Name of Bus Provider and Route Descriptions: MTS "962" Bus Route parallels SR-54 to the North

Key Stops/Destinations within the Segment: Community of Paradise Hills - Plaza Blvd./Euclid Ave., Cumberland St./Reo Dr., Paradise Valley Rd./Woodman St., and Paradise Valley Rd./Deep Dell Rd.

Peak Hour Weekday Headway: **Bikes Allowed?** Yes

54-3 Location Description: SR-125/So Bay Expwy Toll Rd IC to SR-94/Campo Rd (unconstructed SR-54)

Name of Bus Provider and Route Descriptions: MTS "856" Bus Route parallels the unconstructed SR-54 alignment on Sweetwater Rd. and Jamacha Blvd.

Key Stops/Destinations within the Segment: SDSU Transit Center, Lemon Grove Depot Trolley Station, Gillispie Dr. /Jamacha Blvd, and Jamacha Blvd./Lamplighter Village Dr. and Cuyamaca College

Peak Hour Weekday Headway: 30 minutes **Bikes Allowed?** Yes

.....

Name of Bus Provider and Route Descriptions: MTS "962" Bus Route parallels SR-54 to the North

Key Stops/Destinations within the Segment: Community of Spring Valley - Gillispie Dr./Jamacha Blvd. and Orville St./Brucker Ave.

Peak Hour Weekday Headway: 30 minutes **Bikes Allowed?** Yes

54-4 Location Description: SR-94/Campo Rd to Grove Rd/El Cajon city limit (Jamacha Rd)

Name of Bus Provider and Route Descriptions: MTS "816" Bus Route travels on SR-54/Jamacha Rd.

Key Stops/Destinations within the Segment: Cuyamaca College, El Cajon Civic Ctr., and the El Cajon Transit Center (Green & Orange Trolley lines)

Peak Hour Weekday Headway: 30 minutes **Bikes Allowed?** Yes

SR-54 Corridor Park and Ride Facilities

54-2 Location Description: I-805 to SR-125/So Bay Expwy Toll Rd IC

Park and Ride Location: I-805 and 2300 Sweetwater Rd

Map Reference Number: 9 **No of Parking Spaces:** 135 **Bike Lockers:** No
Transit: None **State ROW/Leased Agreement:** State

54-3 Location Description: SR-125/So Bay Expwy Toll Rd IC to SR-94/Campo Rd (unconstructed SR-54)

Park and Ride Location: 2782 Sweetwater Springs Blvd at Austin Drive

Map Reference Number: 71 **No of Parking Spaces:** 10 **Bike Lockers:**
Transit: MTS Bus Routes 855/856 **State ROW/Leased Agreement:** Lease with Lamden Trust

Park and Ride Location: 8627 Jamacha Blvd

Map Reference Number: 40 **No of Parking Spaces:** 22 **Bike Lockers:** No
Transit: MTS Bus Routes 962, 936, 816 and 856 **State ROW/Leased Agreement:** State

Freight

The movement of goods on SR-54 is predominantly truck traffic for local distribution. However, the National City Marine Terminal (NCMT) is located at the Northwest quadrant of I-5 and SR-54. The NCMT is a major commercial terminal at the Port of San Diego. Approximately ten percent of all imported automobiles enter the United States via the NCMT. The Trade Corridor Improvement Fund (TCIF), an element of California’s 2006 Proposition 1B, set aside \$2 billion statewide to facilitate trade by improving mobility through an integrated system of roads, ports, rail, and airport access. TCIF projects are in development to improve access to 333the terminal from I-5 to reduce travel times and address security concerns related to a the Port of San Diego’s Strategic Seaport designation. These access improvements, coupled with the LOSSAN North Rail improvements, provide the NCMT additional opportunities to increase cargo throughput by optimizing the intermodal connectivity of NCMT. Truck data, volumes and projections are listed in the “Corridor Performance” matrix of this report.

Facility Type/Freight Generator	Location	Mode	Name	Major Commodity/ Industry	Comments/Issues
Sea Port	National City	Rail, Auto, Truck	National City Terminal (Unified Port of San Diego)	Autos	TCIF Project

Environmental Considerations

The purpose of this environmental section is to conduct a high level identification of environmental factors that may need future analysis in the project development process. This information does not represent all possible environmental considerations that may exist within the area surrounding the route.

The environmental factors have been categorized based on a scale of high-medium-low probability of environmental resource issues established by district staff. Resources with a greater than "low" environmental sensitivity are explained below:

Recreational and Protected Land (Section 4(f)): SR-54 traverses numerous Park and Recreation facilities. These include Sweetwater County Park, and several neighborhood parks in close proximity to the highway.

Environmental Justice: There are four mobile home parks, as well as significant minority and low income populations located within close proximity of SR-54. Efforts would be made to include minority and low income populations during public outreach to allow for their participation in transportation planning efforts within the corridor.

Visual/Aesthetics: Visual concerns would include keeping with the nature of the existing communities, and ensuring that the existing views to the north and south of the roadway are maintained.

Flood Plain: SR-54 is subject to flash flooding during periods of heavy rain. The route crosses numerous canals and drainage ditches which could overflow during these rainstorms. SR-54 crosses the Sweetwater River which may also be subject to flooding during these rain events.

Waters and Wetlands: SR-54 crosses a number of water bodies and washes that are considered wetlands and waters of the U.S. Any work within these areas would require permits from the California Department of Fish and Wildlife, and possibly the Army Corps of Engineers and Regional Water Quality Control Board.

Special Status Species: Special status species within the SR-54 corridor include:

- 1) Quino checkerspot butterfly (*Euphydryas editha quino*) - federally listed (Endangered)
- 2) Least Bell's vireo (*Vireo bellii pusillus*) - federally listed (Endangered)
- 3) Light-footed clapper rail (*Rallus longirostris levipes*) - federally listed (Endangered)
- 4) San Diego fairy shrimp (*Branchinecta sandiegonensis*) - federally listed (Endangered), and
- 5) Coastal California gnatcatcher (*Poliioptila californica*) - federally listed (Threatened)

Habitat Connectivity: SR-54 runs primarily east to west bisecting riparian habitat. The existing highway varies from 2 to 4 lanes which limits wildlife movement. SR 54 runs adjacent to the Sweetwater River, which is an important biological resource.



SR-54 West facing view of EB freeway and Sweetwater Channel

Environmental Scan

54-1 Location Description: I-5 IC to the I-805 IC

Section 4(f) Land: Low	Coastal Zone: Low	Farmland/Timberland: Low
Environmental Justice: High	Cultural Resources: Low	Visual Aesthetics: Medium
Geology/Soils/Seismic: Low	Floodplain Designation: Medium	Climate Change/Sea Level Rise: Low Risk
Hazardous Materials: Low	Naturally Occuring Asbestos: Low	Air Quality - Ozone: Non-attainment
2.5 Particulate Matter: Unclassified	10 Particulate Matter: Unclassified	Air Q - Carbon Monoxide: Non-attainment
Noise: Low	Waters and Wetlands: High	Wild and Scenic Rivers: Medium
Fish Passage: Medium	Habitat Connectivity: Medium	Special Status Considerations: Low

54-2 Location Description: I-805 to SR-125/So Bay Expwy Toll Rd IC

Section 4(f) Land: Medium	Coastal Zone: N/A	Farmland/Timberland: Low
Environmental Justice: High	Cultural Resources: Medium	Visual Aesthetics: Medium
Geology/Soils/Seismic: Low	Floodplain Designation: Medium	Climate Change/Sea Level Rise: N/A
Hazardous Materials: Low	Naturally Occuring Asbestos: Low	Air Quality - Ozone: Non-attainment
2.5 Particulate Matter: Unclassified	10 Particulate Matter: Unclassified	Air Q - Carbon Monoxide: Non-attainment
Noise: Medium	Waters and Wetlands: Medium	Wild and Scenic Rivers: Low
Fish Passage: Medium	Habitat Connectivity: Medium	Special Status Considerations: Medium

54-3 Location Description: SR-125/So Bay Expwy Toll Rd IC to SR-94/Campo Rd (unconstructed SR-54)

Section 4(f) Land: Medium	Coastal Zone: N/A	Farmland/Timberland: Low
Environmental Justice: Medium	Cultural Resources: Medium	Visual Aesthetics: Medium
Geology/Soils/Seismic: Low	Floodplain Designation: Medium	Climate Change/Sea Level Rise: N/A
Hazardous Materials: Low	Naturally Occuring Asbestos: Low	Air Quality - Ozone: Non-attainment
2.5 Particulate Matter: Unclassified	10 Particulate Matter: Unclassified	Air Q - Carbon Monoxide: Non-attainment
Noise: High	Waters and Wetlands: High	Wild and Scenic Rivers: Low
Fish Passage: Low	Habitat Connectivity: Medium	Special Status Considerations: Medium

54-4 Location Description: SR-94/Campo Rd to Grove Rd/El Cajon city limit (Jamacha Rd)

Section 4(f) Land: Medium	Coastal Zone: N/A	Farmland/Timberland: Low
Environmental Justice: Low	Cultural Resources: Medium	Visual Aesthetics: Medium
Geology/Soils/Seismic: Low	Floodplain Designation: Low	Climate Change/Sea Level Rise: N/A
Hazardous Materials: Low	Naturally Occuring Asbestos: Low	Air Quality - Ozone: Non-attainment
2.5 Particulate Matter: Unclassified	10 Particulate Matter: Unclassified	Air Q - Carbon Monoxide: Non-attainment
Noise: High	Waters and Wetlands: Low	Wild and Scenic Rivers: Low
Fish Passage: Low	Habitat Connectivity: Medium	Special Status Considerations: Medium

¹⁶ The Environmental Scan is a planning level, qualitative assessment developed by D-11 Environmental Division, Project Analysis Branch A

Corridor Performance – Existing and Future Projections

Traffic volumes are the fundamental measurement required for highway project development, financing, cost-benefit comparisons and prioritizing transportation investments. For instance, Vehicle Miles Traveled (VMT) is a primary measurement used to calculate a region's air quality attainment goals. Caltrans develops a wide variety of metrics to understand how a route is performing, often characterized by Level of Service (LOS). Traffic Counts are conducted in various ways, the primary collection sources are census stations using radar or loop detection technology.

The roadway census data supports Caltrans' Performance Measurement System (PeMS), the primary traffic data collection, processing and analysis tool for assessing the performance of the freeway system. Users, including managers, traffic engineers, planners, researchers, and traveler information service providers, access PeMS via a Web browser (<http://pems.dot.ca.gov/Public/>). Although, there are census stations, there is very little PeMS data for the SR-54 corridor and no data is available for the unconstructed segment of SR-54 on Jamacha Boulevard.

The Annual Average Daily Traffic (AADT) indicates the overall traffic volumes¹⁷ for the route and Level of Service (LOS) is a qualitative measurement of operational conditions. LOS generally describes the conditions in terms of speed, travel time, freedom to maneuver, traffic interruption, comfort, and convenience.

The RTP plans to add manage lanes to the freeway segments of SR-54 (54-1 and 54-2) by 2050 and there are plans to add a WB auxiliary lane from Reo Drive to SB I-805 (Segment 54-2) that will address an existing bottleneck noted in the following tables. There is another noted bottleneck from Highland Avenue to I-805 without an identified project to address the issue¹⁸.



SR-54 WB from the Reo Drive Interchange

¹⁷ Detailed 2010 Traffic Volume information is provided in the Appendix.

¹⁸ Horizon Year data provided by Planning Division Travel Forecasting Branch and bottlenecks by Traffic Operations and Maintenance Divisions.

SR-54 Corridor Performance

54-1 Location Description: I-5 IC to the I-805 IC

WESTBOUND

BASE YEAR (BY): 2010

BY AADT: 58,000

BY LOS: C

BY VMT: 110,200

BY Vehicle Occupancy Rate: Not available

BY Daily Vehicle Hours of Delay (35 MPH): Not available

BY Truck Traffic AADT: 1508

BY Total Trucks (% of AADT): 2.60%

BY 5+ Axle Truck Traffic AADT: 109

BY 5+ Axle Trucks (% of AADT): 0.19%

BY Peak Hour Volume: 4,250

BY Peak Hour VMT: 8,075

BY Peak Hour V/C: 0.64

BY Peak Hour Average Speed: >60 mph

HORIZON YEAR (HY): 2040

HY AADT: 72,575

HY LOS with RTP Improvements: C

HY LOS with no RTP Improvements: D

HY VMT: 137,892.5

HY Vehicle Occupancy Rate: Not available

HY Daily Vehicle Hours of Delay (35 MPH): Not available

HY Truck Traffic AADT: 1887

HY Total Trucks (% of AADT): 2.60%

HY 5+ Axle Truck Traffic AADT: 136

HY 5+ Axle Trucks (% of AADT): 0.19%

HY Peak Hour Volume: 5,443

HY Peak Hour VMT: 10,341.7

HY Peak Hour VC: 0.82

HY Peak Hour Average Speed: >60 mph

Peak Period Length: 1 hour

Peak Hour Time of Day: 0700-0

Peak Hour Directional Split: 65%

Bottlenecks: No reoccurring observed bottlenecks

EASTBOUND

BASE YEAR (BY): 2010

BY AADT: 59,000

BY LOS: D

BY VMT: 112,100

BY Vehicle Occupancy Rate: Not available

BY Daily Vehicle Hours of Delay (35 MPH): Not available

BY Truck Traffic AADT: 1,534

BY Total Trucks (% of AADT): 2.60%

BY 5+ Axle Truck Traffic AADT: 110

BY 5+ Axle Trucks (% of AADT): 0.19%

BY Peak Hour Volume: 5,000

BY Peak Hour VMT: 9,500

BY Peak Hour V/C: 0.76

BY Peak Hour Average Speed: > 60 mph

HORIZON YEAR (HY): 2040

HY AADT: 73,825

HY LOS with RTP Improvements: D

HY LOS with no RTP Improvements: F

HY VMT: 140,267

HY Vehicle Occupancy Rate: Not available

HY Daily Vehicle Hours of Delay (35 MPH): Not available

HY Truck Traffic AADT: 1,919

HY Total Trucks (% of AADT): 2.60%

HY 5+ Axle Truck Traffic AADT: 138

HY 5+ Axle Trucks (% of AADT): 0.19%

HY Peak Hour Volume: 6,644

HY Peak Hour VMT: 12,623.6

HY Peak Hour VC: 1.01

HY Peak Hour Average Speed: < 45 mph

Peak Period Length: 1 hour

Peak Hour Time of Day: 1600-1

Peak Hour Directional Split: 55%

Bottlenecks: Highland Ave to NB and SB I-805, especially to SB I-805 during the PM peak.

54-2 Location Description: **I-805 to SR-125/So Bay Expwy Toll Rd IC**

WESTBOUND

BASE YEAR (BY): 2010

HORIZON YEAR (HY): 2040

BY AADT: 51,500

HY AADT: 64,400

BY LOS: E

HY LOS with RTP Improvements: D

HY LOS with no RTP Improvements: F

BY VMT: 298,700

HY VMT: 373,520

BY Vehicle Occupancy Rate: Not available

HY Vehicle Occupancy Rate: Not available

BY Daily Vehicle Hours of Delay (35 MPH): Not available

HY Daily Vehicle Hours of Delay (35 MPH): Not available

BY Truck Traffic AADT: 1339

HY Truck Traffic AADT: 1674

BY Total Trucks (% of AADT): 2.60%

HY Total Trucks (% of AADT): 2.60%

BY 5+ Axle Truck Traffic AADT: 96

HY 5+ Axle Truck Traffic AADT: 121

BY 5+ Axle Trucks (% of AADT): 0.19%

HY 5+ Axle Trucks (% of AADT): 0.19%

BY Peak Hour Volume: 6305

HY Peak Hour Volume: 6698

BY Peak Hour VMT: 36,569

HY Peak Hour VMT: 33,490

BY Peak Hour V/C: 0.96

HY Peak Hour VC: 1.01

BY Peak Hour Average Speed: 45-60 mph

HY Peak Hour Average Speed: < 45 mph

Peak Period Length: 1 hour

Peak Hour Time of Day: 0700-0

Peak Hour Directional Split: 65%

Bottlenecks: Reo Drive to NB I-805 during the AM peak.

EASTBOUND

BASE YEAR (BY): 2010

HORIZON YEAR (HY): 2040

BY AADT: 51,500

HY AADT: 64,400

BY LOS: D

HY LOS with RTP Improvements: D

HY LOS with no RTP Improvements: E

BY VMT: 298,700

HY VMT: 373,520

BY Vehicle Occupancy Rate: Not available

HY Vehicle Occupancy Rate: Not available

BY Daily Vehicle Hours of Delay (35 MPH): Not available

HY Daily Vehicle Hours of Delay (35 MPH): Not available

BY Truck Traffic AADT: 1339

HY Truck Traffic AADT: 1674

BY Total Trucks (% of AADT): 2.60%

HY Total Trucks (% of AADT): 2.60%

BY 5+ Axle Truck Traffic AADT: 96

HY 5+ Axle Truck Traffic AADT: 121

BY 5+ Axle Trucks (% of AADT): 0.19%

HY 5+ Axle Trucks (% of AADT): 0.19%

BY Peak Hour Volume: 5,335

HY Peak Hour Volume: 5,667

BY Peak Hour VMT: 30,943

HY Peak Hour VMT: 28,335

BY Peak Hour V/C: 0.81

HY Peak Hour VC: 0.86

BY Peak Hour Average Speed: .60 mph

HY Peak Hour Average Speed: >60 mph

Peak Period Length: 1 hour

Peak Hour Time of Day: 1600-1

Peak Hour Directional Split: 55%

Bottlenecks: No reoccurring observed bottlenecks

54-4 Location Description: **SR-94/Campo Rd to Grove Rd/El Cajon city limit (Jamacha Rd)**

BOTH DIRECTIONS

BASE YEAR (BY): 2010

BY AADT: 23,300

BY LOS: C

BY VMT: 74,560

BY Vehicle Occupancy Rate: Not available

BY Daily Vehicle Hours of Delay (35 MPH): Not applicable

BY Truck Traffic AADT: 909

BY Total Trucks (% of AADT): 3.90%

BY 5+ Axle Truck Traffic AADT: 110

BY 5+ Axle Trucks (% of AADT): 0.47%

BY Peak Hour Volume: 2100

BY Peak Hour VMT: 6,720

BY Peak Hour V/C: 0.68

BY Peak Hour Average Speed: >35 mph

HORIZON YEAR (HY): 2040

HY AADT: 29,155

HY LOS with RTP Improvements: D

HY LOS with no RTP Improvements: D

HY VMT: 93,296

HY Vehicle Occupancy Rate: Not available

HY Daily Vehicle Hours of Delay (35 MPH): Not applicable

HY Truck Traffic AADT: 1,137

HY Total Trucks (% of AADT):

HY 5+ Axle Truck Traffic AADT: 138

HY 5+ Axle Trucks (% of AADT): 0.47%

HY Peak Hour Volume: 2478

HY Peak Hour VMT: 7,929.6

HY Peak Hour VC: 0.81

HY Peak Hour Average Speed: >35 mph

Peak Period Length: 1 hour

Peak Hour Time of Day: 1600-1

Peak Hour Directional Split: 65%

Bottlenecks: N/A

SR-54 Operations and Maintenance

District 11's Intelligent Transportation System (ITS) Master Plan 2011 prioritizes ITS improvements, or Transportation Management System (TMS) elements such as Ramp Meters (RM), Vehicle Detection Stations (VDS), Changeable Message Signs, CCTV Cameras and Fiber Optics. SR-54 is not listed as a high priority route for ramp metering¹⁹.

SR-54	QTY	% of Build Out	Est. Cost (\$1,000)
Existing RM	6	55%	
Existing VDS	0	0%	
Construction RM	0	0%	
Construction VDS	8	100%	
Future RM	5	45%	\$750
Future VDS	0	0%	\$0

Currently there is one maintenance project (EA 2M240) under construction to place a bonded wearing course of asphalt concrete on SR-54 from PM 2.5 to 5.3. The project is schedule to be completed in June 2013.

¹⁹ D-11 Ramp Meter Development Plan – Aug. 21, 2012 Draft

APPENDIX

Exhibit C: Glossary of Acronyms and Definition of Terms**GLOSSARY OF ACRONYMS**

AADT	Annual Average Daily Traffic
AB	Assembly Bill
ADA	Americans with Disabilities Act of 1990
ADT	Average Daily Traffic
APCD	Air Pollution Control District – County of San Diego
BLM	Bureau of Land Management
BRT	Bus Rapid Transit
BY	Base Year
CALTRANS	California Department of Transportation
CEQA	California Environmental Quality Act
CMA	Congestion Management Agencies
CO	Carbon Monoxide
CO2	Carbon Dioxide
CTC	California Transportation Commission
FHWA	Federal Highway Administration
GHG	Green House Gases
GIS	Geographic Information System
GSA	United States General Service Administration
HOT	High occupancy toll lane
HOV	High Occupancy Vehicle
HY	Horizon Year
IC	Interchange
IGR	Inter-governmental Review
IRRS	Interregional Route System
IS	Intersection
ITC	Intermodal Transit Center
ITS	Intelligent Transportation System
LOS	Level of Service
MPO	Metropolitan Planning Organization
NOA	Naturally Occurring Asbestos
NAAQS	National Ambient Air Quality Standard
NEPA	National Environmental Policy Act
NHS	National Highway System
NO2	Nitrogen Dioxide
PID	Project Initiation Document
PM	Post Mile
PM	Particulate Matter
PSR	Project Study Report
ROW	Right-of-Way
RTP	Regional Transportation Plan
RTIP	Regional Transportation Improvement Program
RTPA	Regional Transportation Planning Agency
SANDAG	San Diego Association of Governments
SCS	Sustainable Community Strategy
SHOPP	State Highway Operation and Protection Program
SHS	State Highway System
SIP	State Implementation Plan
STIP	State Transportation Improvement Program
STTA	Surface Transportation Assistance Act
TCIF	Trade Corridors Improvement Fund
TCR	Transportation Concept Report
TDM	Transportation Demand Management
TMS	Transportation Management System
USEPA	United States Environmental Protection Agency
VMT	Vehicle Miles Travels

DEFINITIONS

AADT – Annual Average Daily Traffic - The total traffic volume for the year divided by 365 days. The traffic count year runs from October 1st through September 30th. Traffic counting is generally performed by electronic counting instruments moved to locations throughout the state in a program of continuous traffic count sampling. The resulting counts are adjusted to an estimate of the annual average daily traffic by compensating for seasonal influence, weekly variation and other variables which may be present. Annual ADT is necessary for presenting a statewide picture of traffic flow, evaluating traffic trends, computing accident rates, planning and designing highways and other purposes.

Base year – The year of the most current data available to Caltrans District Offices.

Bikeway Class I (Bike Path) – Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with cross flow by motorists minimized.

Bikeway Class II (Bike Lane) – Provides a striped lane for one-way bike travel on a street or highway.

Bikeway Class III (Bike Route) – Provides for shared use with pedestrian or motor vehicle traffic.

Bottlenecks – A location where traffic demand exceeds the effective carrying capacity of the roadway. In most cases, the cause of a bottleneck relates to a sudden reduction in capacity, such as a lane drop, merging and weaving, driver distractions, a surge in demand, or a combination of factors.

Capacity – The maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions.

Capital Facility Concept – The 20-25 year vision of future capital facility investments on the route. The capital investment can include capacity increases, bicycle, pedestrian, and transit facilities, grade separations and managed lanes.

Complete Streets - A transportation facility that is planned, designed, operated, and maintained, appropriate to the function and context of the facility, to provide safe mobility for all users, including bicyclists, pedestrians, transit riders, and motorists. (See Caltrans Deputy Directive number DD-64-R1).

Concept LOS – The minimum acceptable Level of Service over the next 20-25 years.

Conceptual Project– An improvement or action needed to maintain mobility or to serve multimodal users that is not currently included in a fiscally constrained plan and is not currently programmed. It could be included in a General Plan or in the unconstrained section of a long-term plan.

Corridor – A broad geographical band that follows a general directional flow connecting major sources of trips that may contain a number of streets, highways, bicycle, pedestrian, and transit route alignments. Off system facilities are included for informational purposes and are not analyzed in the TCR.

Environmental Justice – The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.
<http://www.epa.gov/environmentaljustice/>.

Goods Movement Corridor – Port-to-border transportation corridors that constitute the State's goods movement backbone. The four corridors identified in California's Goods Movement Action Plan are: Los Angeles-Long Beach-Inland Empire, Bay Area, San Diego/Border, and Central Valley.

Facility Concept – Description of a Facility and strategies that may be needed within 20-25 years. The concept can include capacity increasing, State Highway, bicycle facility, pedestrian facility, transit facility, non-capacity increasing operational improvements, new managed lanes, conversion of existing managed lanes to another managed lane type or characteristic, TMS field elements, Transportation Demand Management, and Incident Management.

Facility Type – Describes the State Highway. The facility could be freeway, expressway, conventional, or one-way city street.

Federal Functional Classification - The Federal-Aid Highway Act of 1973 required the use of functional highway classification to update and modify the Federal-aid highway systems by July 1, 1976. This legislative requirement is still effective today. http://www.fhwa.dot.gov/planning/processes/statewide/related/functional_classification/fc01.cfm

Focus Route – A phrase specific to the Interregional Transportation Specific Plan. Focus Routes are a subset of the 34 High Emphasis Routes. The routes represent 10 Interregional Road System (IRRS) corridors that should be of the highest priority for completion to minimum facility standards in the 20-year period. Completion of the Focus Routes to minimum facility standards (for most routes freeway or expressway) will assure a statewide trunk system is in place and complete for higher volume interregional trip movements.

Freight Generator – Any facility, business, manufacturing plant, distribution center, industrial development, or other location (convergence of commodity and transportation system) that produces significant commodity flow, measured in tonnage, weight, carload, or truck volume.

Headway – The time between two successive vehicles as they pass a point on the roadway, measured from the same common feature of both vehicles.

High Emphasis Route - Due to the large number of routes and capacity improvements needed on the Interregional Road System, the 1990 IRRS Plan identified 13 of the 87 routes as being the most critical IRRS routes and identified them by the term "High Emphasis Routes".

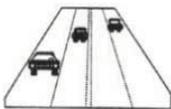
Horizon Year – The year that the future (20-25 years) data is based on.

Intermodal Freight Facility – A freight facility where different transportation modes and networks connect. The freight is transferred (or "transloaded") from one mode, such as rail, to another, such as a truck.

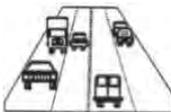
IRRS - Interregional Road System - Consists of State Routes located outside the boundaries of urbanized areas exceeding a population of over 50,000. In some cases, routes have been continued through urban areas to provide connections for continuations of the IRRS routes. Routes in urbanized areas are not eligible for IRRS funding

ITS – Intelligent Transportation System - Improves transportation safety and mobility and enhances productivity through the integration of advanced communication technologies with the transportation infrastructure and vehicles. Intelligent transportation systems encompass a broad range of wireless and wired communication-based information and electronics technologies to collect information, process it, and take appropriate actions.

LOS – Level of Service - A qualitative measurement of the perceptions of motorists to operational conditions within a traffic stream. A LOS generally describes the conditions in terms of speed, travel time, freedom to maneuver, traffic interruption, comfort, and convenience. The six levels of service can generally be categorized as follows:



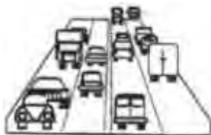
LOS A describes free flowing conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway.



LOS B is also indicative of free-flow conditions. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.



LOS C represents a range in which the influence of traffic density on operations becomes marked. The ability to maneuver with the traffic stream is now clearly affected by the presence of other vehicles.



LOS D demonstrates a range in which the ability to maneuver is severely restricted because of the traffic congestion. Travel speed begins to be reduced as traffic volume increases.



LOS E reflects operations at or near capacity and is quite unstable. Because the limits of the level of service are approached, service disruptions cannot be damped or readily dissipated.



LOS F is a stop and go, low speed conditions with little or poor maneuverability. Speed and traffic flow may drop to zero and considerable delays occur. For intersections, LOS F describes operations with delay in excess of 60 seconds per vehicle. This level, considered by most drivers unacceptable often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection.

Multi-modal – The availability of transportation options using different modes within a system or corridor, such as automobile, subway, bus, rail, or air.

Scenic Highway - When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. These local agencies must also adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program. Landscape Architecture advises the local jurisdictions of the processes and procedures involved in preparing and presenting the applications for scenic highway designations to the California Department of Transportation for approval.

Peak Hour – The hour of the day in which the maximum volume occurs across a point on the highway.

Peak Hour Volume – Amount of traffic counted during the hour of the day in which the maximum volume occurs across a point on the highway. It is generally between 6 percent and 10 percent of the ADT. The lower values are generally found on roadways with low volumes.

Peak Period – The part of the day during which traffic congestion on the road is at its highest. Normally, this happens twice a day, once in the morning and once in the evening; the time periods when the most people commute. Peak Period is defined for individual routes, not a District or statewide standard.

Planned Project– An improvement or action in a fiscally constrained section of a long-term plan, such as an approved Regional or Metropolitan Transportation Plan (RTP or MTP), Capital Improvement Plan, or measure.

Post-25 Year Concept – This dataset may be defined and re-titled at the District's discretion. In general, the Post-25 Year concept could provide the maximum reasonable and foreseeable roadway needed beyond a 20-25 year horizon. The post-25 year concept can be used to identify potential widening, realignments, future facilities, and rights-of-way required to complete the development of each corridor.

Post Mile – A post mile is an identified point on the State Highway System. The milepost values increase from the beginning of a route to the next county line. The milepost values start over again at each county line. Milepost values usually increase from south to north or west to east depending upon the general direction the route follows within the state. The milepost at a given location will remain the same year after year. When a section of road is relocated, new mileposts (usually noted by an alphabetical prefix such as "R" or "M") are established for it. If relocation results in a change in length, "milepost equations" are introduced at the end of each relocated portion so that mileposts on the remainder of the route within the county will remain unchanged.

Programmed Project– An improvement or action in a near-term programming document identifying funding amounts by year, such as the State Transportation Improvement Program or the State Highway Operations and Protection Program.

Railroad Class I – The Surface Transportation Board (STB) defines a Class I railroad in the U.S. as a carrier having annual operating revenues of \$250 million or more. This class includes the nation's major railroads. In California, Class I railroads include Union Pacific Railroad (UP) and Burlington Northern Santa Fe Railway (BNSF).

Railroad Class II – STB defines a Class II railroad in the U.S. as having annual carrier operating revenues of less than \$250 million but more than \$20 million. Class II railroads are considered mid-sized, freight-hauling railroad in terms of operating revenues. They are considered "regional railroads" by the Association of American Railroads.

Railroad Class III – Railroads with annual carrier operating revenues of \$20 million or less. The typical Class III is a short line railroad, which feeds traffic to or delivers traffic from a Class I or Class II railroad.

Route Designation – Adopted through legislation to identify what system the route is associated with on the State Highway System. A designation denotes what design standards should apply during project development and design. Typical designations include but not limited to National Highway System (NHS), Interregional Route System (IRRS), Scenic Highway System,

Rural – Fewer than 5,000 in population designates a rural area. Limits are based upon population density as determined by the U.S. Census Bureau

Section 4(f) – Department of Transportation Act "Section 4(f)" [49 USC § 303] – defines protected resources as publicly-owned public parks, recreational areas of national, state or local significance, wildlife or waterfowl refuges; or lands from a historic site of national, state or local significance. Recreational areas include formal and informal facilities, including after-school public use of school playgrounds and recreational facilities.

Segment – A portion of a facility between two points.

Special Route (Truck) Restrictions – A Caltrans list of restrictions on routes pertaining to truck weight, number of axles, or carrying of hazardous materials, etc.

Special Status Consideration - Species of Special Concern Includes fish, amphibians, reptiles, birds, and mammals that the Department of Fish and Game (DFG) has determined are potentially at risk to become threatened or endangered.

Strategic Highway Network (STRAHNET) - Routes that provide defense access, continuity, and emergency capabilities for movement of personnel and equipment in both peace and war. In addition, STRAHNET connectors link important military installations and ports to STRAHNET.

System Operations and Management Concept – Descriptions of system operations and management elements that may be needed within 20-25 years. This can include non-capacity increasing operational improvements (Aux. lanes, channelization's, turnouts, etc.), conversion of existing managed lanes to another managed lane type or characteristic (e.g. HOV land to HOT lane), TMS Field Elements, Transportation Demand Management, and Incident Management.

TASAS - Traffic Accident Surveillance and Analysis System (TASAS) is a source for highway data and collision data. The highway data is updated via construction plan reviews and District TASAS Coordinators. The accident data is provided by the California Highway Patrol (CHP) from their SWITRS database. Caltrans is responsible for coding the accident location and CHP is responsible for coding all other accident information.

TDM – Transportation Demand Management - Programs designed to reduce or shift demand for transportation through various means, such as the use of public transportation, carpooling, telework, and alternative work hours. Transportation Demand Management strategies can be used to manage congestion during peak periods and mitigate environmental impacts.

Terrain – Terrain refers to the natural slopes and topography of the land. Per AASHTO Section 3.4.1, "To characterize variations in topography, engineers generally separate it into three classifications according to terrain – level, rolling, and mountainous." AASHTO goes further describing each of these types of terrain in detail. The Caltrans Highway Design Manual refers to terrain type to aid the designer in selection of design speeds and maximum vertical grades. The terrain data in the TCR describes the topography surrounding each route segment and is obtained from TASAS and is characterized subjectively as "Flat," "Rolling," or "Mountainous."

TMS – Transportation Management System - The business processes and associated tools, field elements and communications systems that help maximize the productivity of the transportation system. TMS includes, but is not limited to, advanced operational hardware, software, communications systems and infrastructure, for integrated Advanced Transportation Management Systems and Information Systems, and for Electronic Toll Collection System.

Truck Designation - The California "Truck Network" Route List provides the state route segments and their truck access designations (such as National Network, Terminal Access, California Legal, Advisory, or Restricted) with each segment's beginning and ending postmiles, and beginning and ending cross streets.

Urban - 5,000 to 49,999 in population designates an urban area. Limits are based upon population density as determined by the U.S. Census Bureau.

Urbanized - Over 50,000 in population designates an urbanized area. Limits are based upon population density as determined by the U.S. Census Bureau.

VMT - Vehicle Miles of Travel - The total number of miles traveled by motor vehicles on a road or highway segment.

Appendix Exhibit D: Pavement Assessment Details

Route 54 Pavement Assessment											
<i>(Data source - Maria Rivera, D-11 Pavement Management Branch)</i>											
Segment	PM	PM	Centerline Miles	Number of Lanes	Lane Miles	2007 Distress Lane Miles	2007 % of Distress Lane miles	2008 Distress Lane Miles	2008 % of Distress Lane miles	2009 Distress Lane Miles	2009 % of Distress Lane miles
1	0.00	1.90	1.90	6	11.4	1.9	17%	0	0%	0	0%
	1.90	T5.0	3.10	6	18.6	0.468	3%	0	0%	0	0%
	T5.0	7.7	2.70	6	16.2	0	0%	0	0%	0	0%
2	1.90	7.7	5.80	6	34.8	0.468	3%	0	0	0	0
3	7.70	T11.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	T11.0	T14.2	3.20	6	19.2	0	0%	0	0%	1.085	6%
Corridor Total						2.836		0		1.085	

Appendix Exhibit E: SANDAG 2050 Revenue Constrained Highway Network Map (RTP Figure A.2)



Appendix Exhibit F: Listing of SR-54 State Bridge Structures

11-SD-054

Postmile	Bridge Number	OU	Structure Name or Route Information	Structure Types Main Appr	City	Bridge Length	Width	Num Spans	Min VC over Rdway
_006.00	57 1173L	U	SWEETWATER ROAD UC	505		77.5	17.7	2	9.62
_006.00	57 1173R	O	SWEETWATER ROAD UC	505		76.5	17.7	2	10.89
_006.00	57 1173R	U	SWEETWATER ROAD UC	505		76.5	17.7	2	10.89
_006.00	57 1178G	U	N-125/W-54 CONNECTOR (SWEETWAT	505		62.0	12.6	2	5.21
_006.07	57 1182L	O	W54-S125 CONNECTOR UC	505		111.0	17.7	3	0
_006.07	57 1182R	O	W54-S125 CONNECTOR UC	505		78.0	17.7	3	0
_006.10	57 1179G	O	E54-S125 CONNECTOR (SWEETWATER	505		45.0	12.6	1	4.64
_006.20	57 1180G	O	E54-S125 CONNECTOR (SWEETWATER	505 004		454.0	12.6	8	0

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²⁰ California Log of State Bridges on State Highways – January 2013 <http://www.dot.ca.gov/hq/structur/strmaint/brlog/logpdf/logd11.pdf>

Appendix Exhibit G: SR-54 PROJECT AS BUILTS

File Name	Map Date	Description	Start PM	End PM
11-183184.set	07/27/1992	Place asphalt rubber concrete, modify signal and lighting at Washington avenue	014.200	014.200
11-161234_0002.set	10/01/1992	Install signal interconnection system from Granite Hills drive to Oakdale avenue	014.200	014.200
11-046584_0002.set	10/02/1992	Construct 6 to 8-lane freeway, SD5 and SD805 connectors	000.000	002.100
11-135494_0002.set	10/19/1992	Install traffic control interconnect system	000.400	000.400
11-049284.set	11/05/1992	Signalization, signage, delineation and lighting	012.300	012.600
11-010284.set	11/24/1993	Construct freeway and interchanges	001.800	003.600
11-161534_0001.set	06/28/1994	Install signal interconnection system	012.000	013.700
11-175804.set	08/29/1994	Cold plane & place rubberized AC on 2nd street, install signal at Madison	016.100	016.300
11-94-6uf1160.set	12/16/1994	Relocate overhead powerline and pole, Nasland Engineering	000.900	000.900
11-172904.set	11/14/1995	Reconstruct bike path, construct drainage swale	000.100	000.900
11-094794_0001.set	01/23/1996	Seismic retrofit interchange structures	001.500	002.600
11-95-nmc1122.set	05/05/1997	Construct Willow Glenn drive intersection, County of San Diego	011.900	011.900
11-060604_0003.set	06/23/1999	Install changeable message sign with maintenance pullout pad	003.500	003.500
11-2320u4_0007.set	03/07/2000	Replace Type A asphalt concrete on roadway at Washington street	014.200	014.200
11-2320u4_0008.set	03/07/2000	Replace Type A asphalt concrete on roadway north of Madison street	014.200	014.200
11-96-6mc0856.set	05/16/2000	Improve North 4th avenue intersection, Nasland Engineering	000.900	000.900
11-246204.set	01/31/2001	Install thrie beam barriers in median	002.700	005.600
11-011224.set	04/09/2001	Establish existing planting, irrigation at Bonita mitigation site	005.000	005.000
11-075904_0002.set	09/06/2001	Median soil stabilization, install thrie beam barrier	002.100	002.700
11-077204_0002.set	10/30/2001	Coldplane and apply rubberized asphalt concrete overlay	002.500	005.300
11-231204_0002.set	03/02/2002	Construct erosion control and soil stabilization on median	001.900	003.000
11-001924_0001.set	05/14/2002	Construct 6-lane freeway, from Worthington street to Quarry road	010.993	010.993
11-247404_0002.set	07/08/2002	Install traffic signal battery backup systems	011.200	013.200
11-amber_0003.set	11/19/2002	Upgrade changeable message sign to Xenon or LED panels, Director's Order	003.500	003.500
11-259503.set	01/31/2003	Repair pipe joint at 60 foot depth which is causing sinkhole, Director's Order	005.300	005.300
11-249504_0024.set	04/16/2003	Install vertical clearance signage at Sweetwater road undercrossing	002.700	002.700
11-005604.set	10/29/2003	Construct soundwall	002.500	002.500
11-011404_0001.set	09/29/2004	Planting and irrigation	010.993	010.993
11-065704_0002.set	08/01/2005	Replace planting and irrigation	001.300	002.300
11-074904.set	09/14/2005	Replace planting and irrigation	002.300	003.600
11-236304.set	12/31/2005	Cold plane and place rubberized asphalt concrete Type G	012.200	014.200
11-079204.set	03/24/2006	Replace planting and irrigation	003.600	005.600
11-281904.set	12/27/2006	Remove pavement markings and roadside signs	001.800	003.600
11-248404_0013.set	03/12/2007	Replace bridge deck joint seals, pavement markers and striping	001.600	001.600
11-234204_0002.set	03/01/2008	Cold plane, widen and rubberized AC overlay roadway, City of San Diego plans	011.400	012.300
11-249804.set	04/23/2008	Remove above ground facilities, and replant mitigation site on Bonita road	005.000	005.000

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11-291504_0003.set	10/29/2009	Replace structural concrete and joint seals, S5 connector	000.000	000.000
11-291504_0004.set	10/29/2009	Patch and methacrylate treat deck, replace joint seals, National City blvd. OC	000.400	000.400
11-291504_0005.set	10/29/2009	Replace structural concrete and joint seals, Sweetwater river bridge	001.400	001.400
11-294404_0003.set	11/01/2009	Replace ramp and connector exit signs with relocated breakaway signs	000.500	007.200
11-284304_0015.set	08/05/2010	Replace metal beam guardrail with Type 60 concrete barrier, extend conduit	001.300	001.500
11-003004_0002.set	09/20/2010	Construct SD125 interchange (also EA. 11-001964)	005.100	006.700
11-0786u4_0002.set	02/14/2011	Remove and replace planting and irrigation	000.000	001.800
11-081644_0002.set	05/18/2011	Widen roadway, ramps and structure, construct retaining wall, revise irrigation	001.600	002.500
11-2m0204_0007.set	06/15/2012	Structure and approach slab maintenance	001.800	001.800
11-2m0204_0023.set	06/15/2012	Structure and approach slab maintenance	005.000	005.000

Source: Caltrans Document Retrieval System

Appendix Exhibit H: SR-54 2010 Traffic Volumes and Census Station Locations

Dist	Rte	CO	Postmile		Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
11	54	SD	0	R	BEGIN RIGHT ALIGN RTE. 5				5,000	53,000	52,000
11	54	SD	0.401	R	NATIONAL CITY BLVD	5,000	53,000	52,000	4,600	60,000	59,000
11	54	SD	0.899	R	NTL CITY, HIGHLAND OVRCCR	4,600	60,000	59,000	4,900	64,000	61,000
11	54	SD	1.753	R	END RIGHT ALIGN	4,900	64,000	61,000	4,850	48,500	47,000
11	54	SD	0.406	L	NATIONAL CITY	4,850	48,500	47,000	4,250	54,000	54,000
11	54	SD	0.904	L	NTL CITY, HIGHLAND OVRCCR	4,250	54,000	54,000	4,700	60,000	58,000
11	54	SD	1.797	L	END LEFT ALIGN	4,700	60,000	58,000	4,700	60,000	58,000
11	54	SD	1.88		JCT. RTE. 805	9,500	123,000	120,000	10,600	130,000	126,000
11	54	SD	2.968		REO DRIVE	10,600	130,000	126,000	9,700	118,000	117,000
11	54	SD	4.207		WOODMAN ST	9,700	118,000	117,000	8,700	105,000	103,000
11	54	SD	4.994		BRIARWOOD RD	8,700	105,000	103,000	7,600	100,000	95,000
11	54	SD	6.3	X	JCT RTE 125	7,500	99,000	94,000	6,800	89,000	84,000
11	54	SD	T 10.993		JCT. RTE. 94	6,800	89,000	84,000	3,100	36,000	35,500

Caltrans D-11 SR-54 TCR

11	54		SD	T	11.261		WEST CUYAMACA COLLEGE	3,100	36,000	35,500	3,200	37,000	36,500
11	54		SD	T	11.846		WILLOW GLEN DRIVE	3,200	37,000	36,500	2,100	23,900	23,300
11	54		SD	T	13.71		CHASE AVE	2,100	23,900	23,300	2,000	22,800	22,900
11	54		SD	T	14.212		END ROUTE 54	2,000	22,800	22,900			

[2010 Traffic Volumes - http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/index.htm](http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/index.htm)

CALIFORNIA DEPARTMENT OF TRANSPORT

REPORT : OTM32420
 REPORT TITLE : PRINT TRAFFIC BOOK

PARAMETERS

YEAR : 2010

OTM32420
 08/18/2011
 14:42:12

CALTRANS TRAFFIC VOLUMES
 LATEST TRAFFIC YEAR SELECTED
 PEAK HOUR VOLUME DATA

PAGE # 15

DI	RTE	CO	PRE	PM	CS	LEG	YR	Dir	1 WAY			HR	DAY	MNT	Dir	PM PEAK			HR	DAY	MNT		
										%	%					%	%	%					
11	054	SD		1.88	814	A	10	W	6906	8.16	67.28	5.49	7	TUE	APR	E	6246	8.48	58.6	4.97	16	FRI	MAR
11	054	SD		4.207	815	B	10	W	6144	8.04	65.31	5.25	7	MON	MAR	E	5453	8.4	55.51	4.66	17	THU	SEP
11	054	SD		4.207	816	A	10	W	5322	8.25	62.77	5.18	7	WED	NOV	E	4807	8.41	55.62	4.68	16	WED	DEC

District 11 Census Station Locations

ID	RT	CO		Post Mile	Dir	Name	Y_COORD =LAT	X_COORD =LON	Device Type	Detector Type
812	054	SD		00.00 R	EW	JCT. RTE. 5			ADR-79	LP-71
814	054	SD		001.880	EW	JCT. RTE. 805			ADR-80	LP-72
815	054	SD		004.207	EW	WOODMAN STREET			ADR-81	LP-73
816	054	SD		004.207	EW	WOODMAN STREET			ADR-82	LP-74
817	054	SD	T	011.846	EW	WILLOW GLEN DRIVE	33-17-20	117-13-31	ADR-83	LP-75
818	054	SD			EW	JCT RTE 125				

<http://onramp.dot.ca.gov/dist11/traffops/operations/TraffOpsHome.html>

2010 Annual Average Daily Truck Traffic for D11 SD SR-54

POST MILE	L E G	DESCRIPTION	VEHICLE AADT TOTAL	TRUCK AADT TOTAL	TRUCK % TOT VEH	TRUCK AADT TOTAL				% TRUCK AADT				EAL 2-WAY (1000)	YEAR VER/ EST
						----	By Axle	----	----	2	3	4	5+		
1.88	A	JCT. RTE. 805	126,000	3,276	2.60	2,568	413	59	236	78.40	12.60	1.80	7.20	218	96E
2.968	B	REO DRIVE	126,000	2,394	1.90	1,877	302	43	172	78.40	12.60	1.80	7.20	159	96E
T 10.993	A	JCT. RTE. 94	35,500	1,385	3.90	1,006	198	14	168	72.60	14.30	1.00	12.10	113	87V

2010 Annual Average Daily Truck Traffic on the California State Highway System
<http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/truck2010final.pdf>

Appendix Exhibit I: Stakeholder Participation

The report was circulated internally to obtain corrective comments, input and qualitative assessments. All corrective comments were addressed and the following input and assessment comments were received

Elisa Arias, San Diego Association of Governments (SANDAG): The SR-54 TCR is consistent with SANDAG's planning documents.

Chi Vargas, Senior Transportation Engineer, Caltrans District 11 Advance Planning Branch: Endorsed the new addition of providing a listing of route As-built plans (Exhibit G).

Frank Santibanez, Maintenance South Bay Area Superintendent, Caltrans District 11: Confirmed a bottleneck condition at Eastbound SR-54 from Highland Ave to the I-805 North and South ramps, especially the south location.

Ray Aguiar, Maintenance Manager – Staff Support, Caltrans District 11: Provided high-level maintenance concerns for the PID/PSR developers and external agencies:

- *The need for field maintenance to close lanes and traffic control requirements and time windows to perform required work*
- *Reducing the need for reoccurring maintenance by designing for safety and landscape sustainability (more hardscape)*
- *Access (parking, equipment staging, maintenance vehicle pull outs, etc.)*
- *Relocating certain items (water valves, electrical cabinets, signs, etc.) away from shoulder/roadway*
- *Increase time period for plant establishment*
- *Roadside designs that are suitable to be adopted by volunteers through the Adopt A Highway program, Local/Public partnerships and Co-op's to maintain highway inventory*

Paul C. Moore, Caltrans Office of System and Freight Planning: Optional "Bicycle Facilities" and "Environmental Consideration" sections are well done.

The following functional experts provided extensive input and corrective comments:

- Joe Hull, Deputy District Director, Caltrans District 11 Traffic Operations Division
- Chris Thomas, Design Manager, Caltrans District 11
- Julie Ann Jacinto, Acting Branch Chief, Operations Planning and Project Support, Caltrans District 11
- Raina Ford, Branch Chief, Airspace & Wireless Branch, Excess Land Branch, and Relocation Assistance Program, Caltrans District 11:
- Allie Scrivener, Environmental Planner, Caltrans District 11
- David Rowland, Transportation Engineer, Caltrans District 11
- Cristina Nunez, Transportation Engineer, Operations Planning and Project Support, Caltrans District 11

Maria Rivera, Transportation Engineer, Pavement Management, Caltrans District 11

Internal and external feedback was also received via Survey Monkey that solicited the following information.

1. Please provide your name and job title.
2. Provide the name of the agency/organization and department you represent.
3. The TCR will be a useful reference tool.
4. The TCR data and narrative are clear and concise.
5. The TCR is comprehensive - the scope is appropriate for this type of planning study document.
6. The TCR footnotes and/or appendix of data references and data glossary are adequate to aid in comprehension of the report.
7. If you think additional information is needed, please provide your recommended additions in the comment box:
8. If applicable, please provide specific comments and/or suggested revisions and cite the corresponding TCR section and/or page number in the box below.
9. 9. If applicable, please provide additional feedback and/or questions.

The following the reviewers participated in the Survey Monkey questionnaire and the results are included on the following page (Exhibit J).

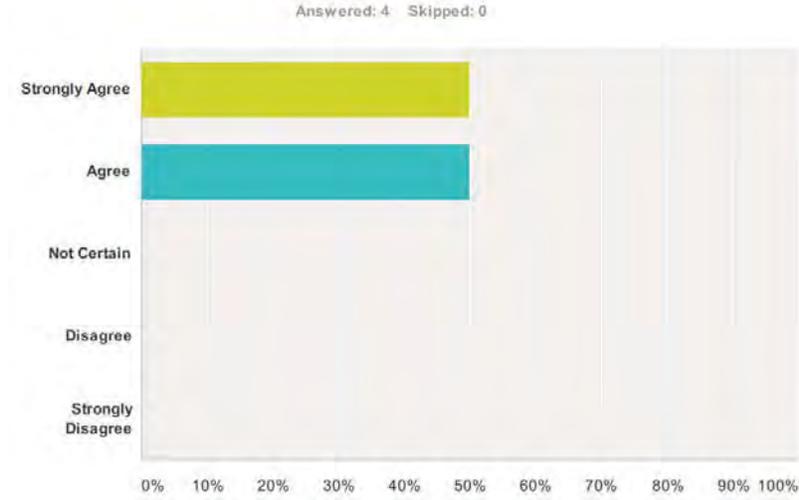
Gary Chui, Senior Traffic Engineer, City of San Diego
David Rowland, Project Engineer, Caltrans D-11 (developed SR-54 draft Rescission Report)
Everett Townsend, Deputy District Director, D-11 Maintenance
Gary Vettese, Deputy District Director, D-11 Design

No comments were received from the County of San Diego, City of Chula Vista and National City.

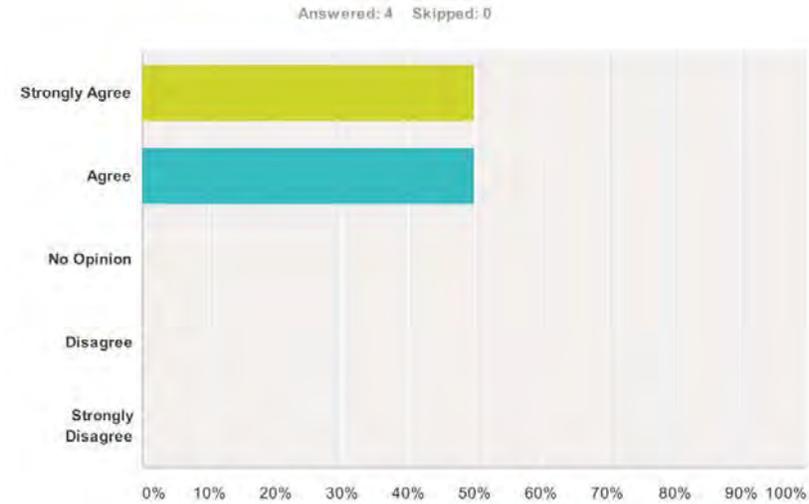
Appendix Exhibit J: Draft Review Survey Responses

Caltrans D-11 Transportation Concept Report (TCR) SR-54 Draft TCR Review Survey

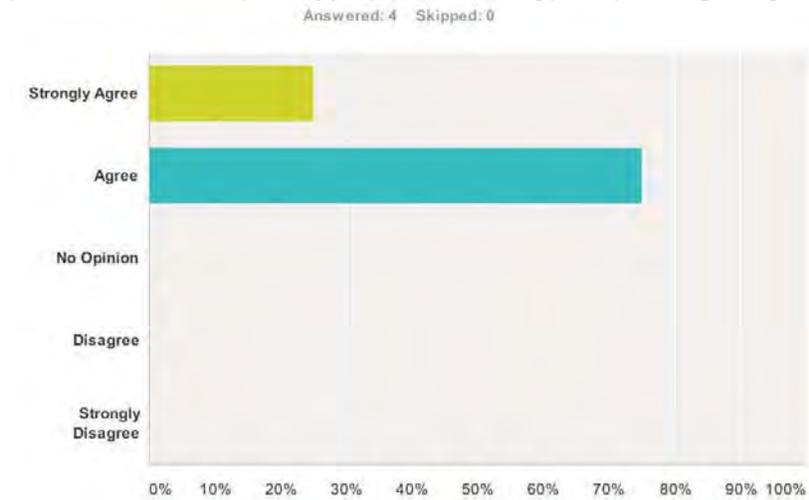
Q3 - The TCR will be a useful reference tool:



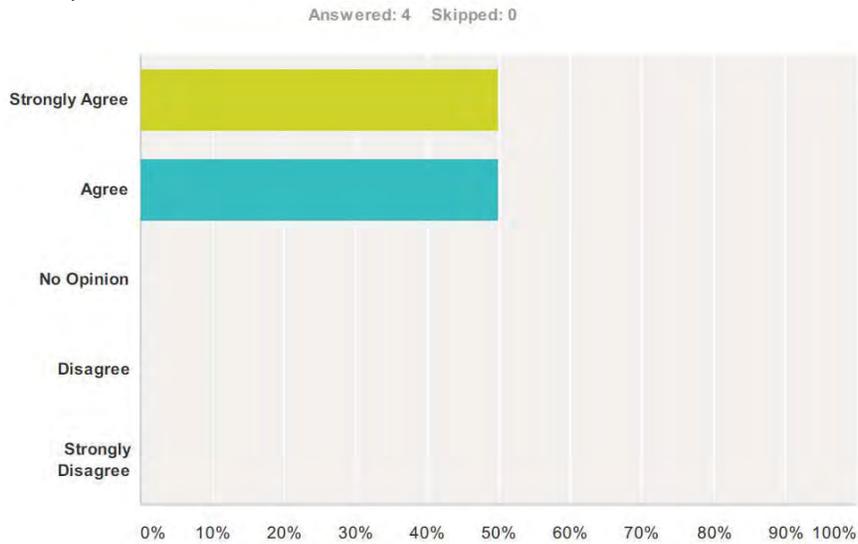
Q4 - The TCR data and narrative are clear and concise:



Q5 - The TCR is comprehensive - the scope is appropriate for this type of planning study document.



Q6 - The TCR footnotes and/or appendix of data references and data glossary are adequate to aid in comprehension of the report.



Q7 - If you think additional information is needed, please provide your recommended additions in the comment box:

This document is very helpful for developing our PID's and PA/ED's. I especially agree with the emphasis put on complete streets and transit which the designer needs to consider/accommodate in the project design. May also want to include references to our ADA Transition plan to ensure non-compliant curb ramps/sidewalks are addressed. We also might want to touch on Sustainability in the Environmental section as it relates to meeting our Roadside Sustainability goals to reduce water usage and roadside maintenance as well as improving worker safety opportunities within the corridor as new projects come on-board. *Gary Vettese, Deputy District Director of Design*

Q8 - If applicable, please provide specific comments and/or suggested revisions and cite the corresponding TCR section and/or page number in the box below:

In addition to the information provided in the SR-54 Transportation Concept Report, even though it is not applicable in this case, we recommend that future reports address existing conflicts between different modes of transportation (vehicular, bike and pedestrian facilities) at City boundaries with State Facilities. *Gary Chui, Senior Traffic Engineer, City of San Diego*

Q9 - If applicable, please provide additional feedback and/or questions.

Great job, the color scheme gave each section distinction. The report was not difficult to follow. *David Rowland, D-11*