



Transportation Concept Report
State Route 52
District 11
September 2015

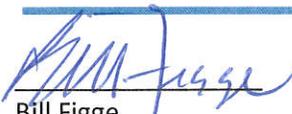


Transportation Concept Report (TCR) Purpose

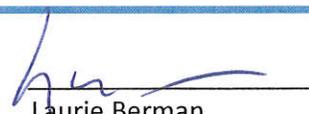
California's State Highway System needs long range planning documents to guide the logical development of transportation systems as required by CA Gov. Code §65086 and as necessitated by the public, stakeholders, and system users. The purpose of the TCR is to evaluate current and projected conditions 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, and operational improvements, and travel demand management components of the corridor.

California Department of Transportation

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


Bill Figge
Deputy District Director, Planning


Date


Laurie Berman
District 11 Director

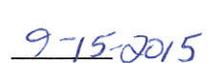

Date

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ABOUT THE TRANSPORTATION CONCEPT REPORT

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.

The System Planning process is primarily composed of four parts: the District System Management Plan (DSMP), the Transportation Concept Report (TCR), the Corridor System Management Plan (CSMP), and the DSMP Project List. The district-wide DSMP is the strategic policy and planning document that focuses on maintaining, operating, managing, and developing the transportation system. The TCR is a planning document that identifies the existing and future route conditions as well as future needs for each route on the SHS. The CSMP is a complex, multi-jurisdictional planning document that identifies future needs within corridors experiencing or expected to experience high levels of congestion. The CSMP serves as a TCR for segments covered by the CSMP. The DSMP Project List is a list of planned and partially programmed transportation projects used to recommend projects for funding. These System Planning products are also intended as resources for stakeholders, the public, regional, and local agencies.

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.

For the State Route (SR-52) the following external stakeholders were consulted: San Diego Association of Governments (SANDAG), City of San Diego, City of Santee, the City of El Cajon, and the County of San Diego.

EXECUTIVE SUMMARY

The California Department of Transportation (Caltrans) has prepared this TCR for SR-52. The TCR is intended to assist Caltrans as well as other public agencies and stakeholders in planning and managing the route. The report includes an assessment of current and future operating conditions and identifies proposed improvements that meet future needs.

CONCEPT SUMMARY

SR-52 is a four to six lane east/west freeway for almost the entire route. It covers Post Miles (PM) San Diego (SD) 000.000-017.271. The western end is at the junction of Interstate 5 (I-5) (PM SD 000.000), and the eastern terminus is at State Route 67 (SR-67) (PM 17.271). From the beginning of the route in La Jolla at the junction with I-5, the SR-52 continues east through the City of San Diego traversing the communities of University, Clairemont, Kearny Mesa, Tierrasanta, and East Elliott, before proceeding east through Mission Trails Regional Park into the City of Santee. The route passes through communities with varied land uses, transit networks, and diverse ecosystems. The entire route is known as both the Soledad and the San Clemente Canyon Freeway.

CONCEPT RATIONALE

The SANDAG 2050 Regional Transportation Plan (2050 RTP), adopted in 2011, planned for two projects on SR-52. The first project is the SR-52 East Expansion Project. The Expansion Project was completed and opened to motorists in 2011. The project extended the route from State Route 125 (SR-125) to SR-67, with a full interchange at SR-67. The new interchange allows motorists to connect from eastern communities surrounding SR-67 to the job centers located in the communities surrounding SR-52. The expansion benefits the San Diego region by reducing congestion on the other east/west freeway, Interstate 8 (I-8).

As part of the revenue constrained plan, the second of the two SR-52 projects outlined in the 2050 RTP, the SR-52 West Managed Lanes project will construct one general purpose lane in both east and west directions, and two reversible managed lanes from I-15 to SR-125. Due to budget limitations, work on this section of the SR-52 Managed Lanes project was delayed. The most recent 2050 RTP contains plans for the Managed Lanes project. The SR-52 West project will allow for adapting traffic needs by reversing traffic with movable lanes. Managed lane facilities use moveable barriers in areas where there is a streaming flow of traffic to redistribute unused capacity from the off-peak traffic direction to give more lanes to the peak traffic direction. Currently, the morning commute westbound and evening commute eastbound would greatly benefit from this improvement.

As part of the unconstrained revenue scenario outlined in the RTP, SANDAG and Caltrans are planning to expand SR-52 from 4 to 6 lanes at both the western and eastern termini of the SR-52. This lane expansion will occur from I-5 to Interstate 805 (I-805) and from SR-125 to SR-67. This expansion will improve mobility by increasing roadway capacity.

Table 1: Concept Summary

Segment	Segment Description	Existing Facility	Post-25 Year Concept
1	I-5 to I-805	4 Lane Freeway (F)	6F
2	I-805 to I-15	6F	6F+2 Managed Lanes (ML)
3	I-15 to Mast Boulevard	6F	6F+2 Reversible ML
4	Mast Boulevard to SR-125	4F	6F+2 Reversible ML
5	SR-125 to SR-67	4F	6F

Map 1: State Route 52 Route Segmentation



CORRIDOR OVERVIEW

ROUTE SEGMENTATION

For the purpose of this document, the route is configured into five segments beginning with I-5 to I-805, I-805 to I-15, I-15 to Mast Boulevard, Mast Boulevard to SR-125, and SR-125 to State SR-67. Each segment is discussed in relation to its specific characteristics. This includes community characteristics, land use, bicycle and pedestrian facilities, transit, freight and environmental considerations.

Table 2: Route Segmentation

Segment	Location Description	County_Route_ Beg. PM	County_Route_ End PM
1	I-5 to I-805	SAN_52_000.000	SAN_52_003.761
2	I-805 to I-15	SAN_52_003.761	SAN_52_7.314
3	I-15 to Mast Boulevard	SAN_52_007.314	SAN_52_013.273
4	Mast Boulevard to SR-125	SAN_52_013.273	SAN_52_014.962
5	SR-125 to SR-67	SAN_52_014.962	SAN_52_017.271

Route Location

SR-52 is a four to six lane east/west freeway. The western terminus is the I-5 Junction (PM SD 000.000) and the eastern terminus is at SR-67 (PM 17.271). The Route continues east within the City of San Diego through the communities of University, Clairemont, Kearny Mesa, Tierrasanta, and East Elliott, before proceeding east through Mission Trails Regional Park into the City of Santee.

Route Purpose

The primary purpose of SR-52 is to provide east/west mobility for east county areas. SR-52 assists in providing some congestion relief to the already heavily traveled east/west I-8. SR 52 connects with SR 67 to facilitate direct access to job centers including those in East County. SR-52 also serves as a major commuter route, by directly connecting eastern San Diego County communities with employment centers located in University, Kearny Mesa, Mira Mesa, and Sorrento Valley.

Major Route Features

SR-52 is a State Highway that serves as a major east and west route in the northern portion of the City of San Diego and the City of Santee, from I-5 to SR-67. It is a freeway for the entire length. From a regional perspective, SR-52 connects major north/south freeways to east and west communities. SR-52 allows drivers access to I-5, I-805, SR-163, I-15, SR-125 and SR-67 to the City of Santee.

SR-52 begins just west of I-5 at the eastern end of La Jolla Parkway and runs through San Clemente Canyon after it intersects I-5. SR-52 intersects I-805 before exiting the canyon and traveling along the southern edge of the United States Marine Corps Air Station (MCAS) Miramar military base.

After passing the Miramar landfill and an interchange with Convoy Street, SR-52 intersects SR-163 and Kearny Villa Road before an interchange with I-15.

After the I-15 interchange, the freeway leaves the edge of the military base and enters the San Diego neighborhood of Tierrasanta. The route then continues to a junction with Santo Road, before traversing Mission

Trails Regional Park, an open space preserve. The freeway ascends to Mission Trails Summit (1,194 feet) north of the summit of Fortuna Mountain.

A dedicated two-way bicycle path exists on the northern side of the freeway between Santo Road and Mast Boulevard, with access from both termini. East of the Mast Boulevard interchange, SR-52 crosses and begins to parallel the San Diego River. The freeway enters the City of Santee alongside Mission Gorge Road. SR-52 intersects SR-125, and the freeway continues east through Santee with on/off ramps at Fanita Drive and interchanges at Cuyamaca Street and Magnolia Avenue before ending at SR-67.

Table 3: State Route Designations and Characteristics

Segment #	1	2	3	4	5
Freeway & Expressway	Yes	Yes	Yes	Yes	Yes
National Highway System	No	No	No	No	No
Strategic Highway Network	No	No	No	No	No
Scenic Highway	No/ eligible	No/ eligible	No/ eligible	No/ eligible	No/ eligible
Interregional Road System	Yes	Yes	Yes	Yes	Yes
*High Emphasis	No	No	No	No	No
*Focus Route	No	No	No	No	No
Federal Functional Classification	Other Principal Arterial	Other Principal Arterial	Other Principal Arterial	Other Principal Arterial	Other Principal Arterial
Goods Movement Route	No	No	No	No	No
Truck Designation	Surface Transportation Assistance Act (STAA)/ National Network	Surface Transportation Assistance Act (STAA)/ National Network	Surface Transportation Assistance Act (STAA)/ National Network	Surface Transportation Assistance Act (STAA) /Terminal Access	Surface Transportation Assistance Act (STAA) /Terminal Access
Rural/Urban/Urbanized	urbanized	urbanized	urbanized	urbanized	urbanized
Metropolitan Planning Organization	SANDAG	SANDAG	SANDAG	SANDAG	SANDAG
Regional Transportation Planning Agency	SANDAG	SANDAG	SANDAG	SANDAG	SANDAG
Congestion Management Agency	SANDAG	SANDAG	SANDAG	SANDAG	SANDAG
County Transportation Commission	SANDAG	SANDAG	SANDAG	SANDAG	SANDAG
Local Agency	City of San Diego	City of San Diego	City of San Diego	City of Santee	City of Santee
Tribes	N/A	N/A	N/A	N/A	N/A
Air District	San Diego Air Pollution Control District	San Diego Air Pollution Control District	San Diego Air Pollution Control District	San Diego Air Pollution Control District	San Diego Air Pollution Control District
Terrain	Rolling	Rolling	Rolling	Rolling	Rolling

* High Emphasis and Focus Routes are eligible for Interregional Transportation Improvement Program (ITIP) funding.

COMMUNITY CHARACTERISTICS AND LAND USE

The SR-52 corridor traverses diverse communities with varied land uses. The western portion of the freeway begins in the City of San Diego, home to 1.3 million residents. The western terminus of SR-52 begins in the University community which houses the University of California San Diego (UCSD) and supports a vibrant and busy business district. Commercial centers such as University Town Center (UTC), industrial development, different types of residential housing and the Marine Corps Air Station (MCAS) surround the SR-52 throughout the City of San Diego. SR-52 continues into the City of Santee, a suburb to the City of San Diego with a little over 55,000 inhabitants. In the City of Santee, the SR-52 connects housing to commercial and recreational land uses.

CITY OF SAN DIEGO COMMUNITY PLANNING AREAS

More than five community planning areas surround SR-52 within the City of San Diego. The community plans, all combined together, constitute the Land Use Element of the City of San Diego General Plan. Each community plan describes the unique characteristics and varied land uses of each community along the SR-52 corridor.

University

The University Community Planning Area is located north of SR-52 and encompasses approximately 8,500 acres. The area is bounded by Los Peñasquitos Lagoon and Sorrento Valley on the north, the railroad, and the Marine Corps Air Station (MCAS) Miramar. The University community planning area is accessible from I-805 on the east, SR-52 on the south, and I-5, which passes through the community.

Established in 1960, the University of California San Diego (UCSD) has been the center of the community and the reason for the community planning area being called University. A second major focus of the area is University Towne Centre (UTC), a major regional commercial center. The University planning area is also home to the research, corporate headquarters and medical centers of the Salk Institute and Scripps Clinic and Research Foundation, and the Torrey Pines State Reserve.

To accommodate the movement of people in and out of the University Community, the bus rapid transit system, called Super Loop was developed. The Loop began interim service in 2009 with buses running at 10 minute intervals during peak periods and every 15 minutes at non-peak periods. In 2012, service was extended to east of the University Town Center shopping center.

Other land uses within the University Community include corporate offices, regional shopping centers, and business parks that contribute to daily and peak hour trips using SR-52.

(Source: <http://www.sandiego.gov/planning/community/profiles/university/plan.shtml>)

Clairemont Mesa

The Clairemont Mesa community, encompasses approximately 13.3 square miles, lies south of SR-52, west of I-805, north of the Linda Vista community, and east of I-5.

Several significant commercial centers serve Clairemont Mesa and are located at the intersections of major transportation corridors, such as Clairemont Drive and Clairemont Mesa Boulevard as well as Balboa Avenue and Genesee Avenue. Smaller commercial developments are located throughout the community and along Morena Boulevard.

In addition to commercial, residential is the other predominant use within the Clairemont Mesa Community. While the commercial centers invite people from surrounding communities to visit the area via SR-52, many residents utilize SR-52 as a main commuter corridor.

(Source: <http://www.sandiego.gov/planning/community/profiles/clairemontmesa/index.shtml>)

Kearny Mesa

Kearny Mesa has traditionally functioned as an industrially based regional employment center. The planning area, which encompasses approximately 4,000 acres, is located between SR-52 on the north and I-805 and I-15 on the west and east, respectively. The southern boundary of the planning area consists of properties lying to the south of Aero Drive and properties extending to Friars Road along the western edge of I-15, abutting the Serra Mesa Community Planning Area.

The first development in Kearny Mesa started in with Gibbs Airfield, now called Montgomery Field. In 1948, the City of San Diego acquired the airfield and 1,400 acres of surrounding property as a replacement site for the San Diego International Airport. Airspace conflicts with MCAS Miramar prevented the proposed airport. The excess acreage became an industrial park.

As a result of the industrial park being zoned by the City, numerous aerospace, electronic, and other industrial and office uses moved to the area. Portions of Kearny Mesa, predominantly west of SR-163, also include commercial development. Residential development is limited but has increased in recent years, particularly with the development of Stonecrest in the southeast corner of the community and the redevelopment of the former General Dynamics site, now known as Spectrum.

The industrial land uses support industry and jobs. Most people accessing the Kearny Mesa community from SR-52 would be doing so during peak hours for work.

(Source: <http://www.sandiego.gov/planning/community/profiles/kearnymesa/plan.shtml>)

Tierrasanta

The Tierrasanta community, encompassing approximately 11 square miles, lies roughly northwest of the San Diego River, north of Friars Road, south of SR- 52, and east of I-15.

Originally, Tierrasanta was part of the East Elliott planning area. When the City adopted the boundaries for Mission Trails Regional Park, the Elliott planning area was divided into two areas. Mission Trails Park and the newly-developing section to the west were severed from the Elliott Community Plan, and a new planning area was formed with the adoption of the Tierrasanta Community Plan.

Mission Trails Regional Park comprises approximately half of the Tierrasanta planning area. The southern boundary of the community is outlined by the San Diego River. Canyons run throughout the community, interconnecting to the Mission Trails Regional Park canyon systems. Now, at build-out, the majority of developed land in Tierrasanta is devoted to residential uses. The southwest sector of Tierrasanta contains a United States Navy housing development. In addition to residential uses, there are several small commercial centers scattered throughout the community and light industrial near the intersection of I-15 and SR-52.

Most who access Tierrasanta from SR-52 are residents. Year round visitors to the Mission Trails Regional Park can access the park from 9 am to 5 pm.

(Source: <http://www.sandiego.gov/planning/community/profiles/tierrasanta/plan.shtml>)

East Elliott

The East Elliott area is bounded by MCAS Miramar to the north and west, SR-52 and Mast Boulevard to the south, and the City of Santee to the east. To form present day East Elliott, the Tierrasanta community, and a portion of Mission Trails Regional Park, were declared excess land and sold. A separate community plan for Tierrasanta and East Elliot was adopted.

As its own community planning area, the Multiple Species Conservation Program identified the majority of East Elliott as a Multiple Habitat Planning Area (MHPA), where preservation of the natural habitat would be maintained. The East Elliott Community Plan was amended at that time to designate the MHPA as open space. The community is dominated by native vegetation, including sage scrub, chaparral, native grassland, and oak and sycamore woodland. It constitutes one of the largest and biologically most important remaining open space areas in San Diego with a number of endangered and threatened wildlife species. Due to the natural resources on site and the factors described above, urban development is largely infeasible in much of East Elliott. Therefore, a majority of this area is designated for long term open space use.

Although much of East Elliott will remain undeveloped, there are some active uses such as the Sycamore Landfill expansion and various telecommunication facilities.

Other development proposed for remaining usable space includes the Castlerock housing development approved by the San Diego planning commission in 2013. As part of the plan, the Castlerock development will be annexed to the City of Santee. These active developments are contributing to improvements to Mast Boulevard and SR-52.

(Source: <http://www.sandiego.gov/planning/community/profiles/eastelliott/>)

United States Marine Corps Air Station Miramar

Marine Corps Air Station (MCAS) Miramar is a Marine Corps base and airfield located north of SR-52 in the City of San Diego. MCAS Miramar is a major military airport and heliport serving the Marine Corps in the San Diego region. The base has a long military history including serving as the early training facility for the famed World War II Navajo Code Talkers. Miramar is one of the largest military installations in the region. Over 10,000 people are stationed, work, and/or live on the base. In addition to its flying units, Miramar is home to a major Marine Corps Museum and Cemetery, and hosts one of California's largest military air shows annually.

Most visitors to the Air Station are during the annual Miramar Air Show, with an estimated 700,000 people in attendance. The remainder of the year, the SR-52 supports employees and residents of the base.

CITY OF SANTEE

The City of Santee was incorporated in December 1980. It has a population of 54,700 and is located in eastern San Diego County. With approximately half of its land undeveloped, Santee is one of the few cities in the county with space to grow.

As a Master Plan, the Santee City Council approved the Town Center Specific Plan, a 700-acre mixed-use development that will serve as a hub for commercial, civic, business and residential uses.

This project includes a high-tech office park, multi-family residential buildings, open space, and a planned 55-acre community park for recreational activities. To support the connection between transit and land development, the San Diego Trolley has its eastern terminus in the Town Center at Santee Trolley Square.

The undeveloped northern portion of Santee, encompasses almost 25% of the City, and is known as Fanita Ranch. In addition to the Town Center Specific Plan, this 2600-acre Fanita Ranch site is envisioned as a significant master-planned community. Although in the very early planning stages, Fanita Ranch has unique characteristics with town centers surrounded by housing and supported by transit.

(Source: City of Santee website: <http://www.ci.santee.ca.us/>)

The SR-52 corridor is indicative of the varied communities and land uses that exist in San Diego County that affect transportation. The specific geography of SR-52 which includes university, industrial, commercial, recreational and military land uses are economically significant and relevant to transportation because they contribute to commuter and travel patterns for the SR-52. Proposed projects such as Castlerock and Fanita Ranch are relevant to the corridor because they are anticipated to contribute to the growth of the SR-52 corridor.

Table 4: SR-52 Land Use by Place and Type

Segment	Place Type North/South
<i>1</i>	<i>Residential/Residential</i>
<i>2</i>	<i>Military/Open Space/Town Center</i>
<i>3</i>	<i>Open Space/Residential/Industrial</i>
<i>4</i>	<i>Open Space/Industrial</i>
<i>5</i>	<i>Town Center/Airport</i>

SYSTEM CHARACTERISTICS

SR- 52 is a State Highway that serves as a major east and west route in the northern portion of the City of San Diego, from I-5 to SR-67. It is a freeway for the entire length and connects major north south freeways including I-5, I-805, SR-163, I-15, and SR-67. SR-52 is part of the California Freeway and Expressway System and is eligible for the State Scenic Highway System. The City of San Diego is pursuing the Scenic Highway designation for the portion between Santo Road and Mast Boulevard and is developing the required corridor protection plan to gain approval. SR-52 is not part of the National Highway System. The entire Route is known as both the Soledad Freeway and the San Clemente Canyon Freeway. In 2011, SR-52 had an annual average daily traffic (AADT) of 37,000 between the western terminus at La Jolla Parkway and I-5, and 103,000 trips between Convoy Street and SR-163, the latter of which was the highest AADT for the highway.

Table 5: System Characteristics

Segment #	1	2	3	4	5
Existing Facility					
Facility Type	Freeway (F)	F	F	F	F
General Purpose Lanes	4	6	6	4	4
Centerline Miles	3.3	3.9	6	1.5	2.3
Lane Miles	13.2	23.4	36	6	9.2
Median Characteristics	Unpaved	Unpaved	Unpaved	Paved	Paved
Auxiliary Lanes	2	2	0	0	0
Passing Lanes	0	0	0	0	0
Truck Climbing Lanes	0	0	0	0	0
Distressed Pavement	17%	0	0	0	0
Current ROW	constrained	constrained	constrained	constrained	constrained
Post 25 Year Concept Facility					
Facility Type	F	F	F	F	F
General Purpose Lanes	6	6	6	6	6
Centerline Miles	3.27	5.1	6	1.5	2.3
Lane Miles	19.62	30.6	36	9	13.8
Managed Lanes	0	2	2	2	0

BICYCLE FACILITIES

Existing bicycle facilities in the SR-52 corridor include on-street shared and Class I bike path facilities between the beginning of the Route and Santo Road. Bicyclists are accommodated with a two way bike path on the westbound shoulder of SR-52 between Santo Road and Mast Boulevard. This path experiences a large amount of debris build-up due to its proximity to traveled lanes and its location between two landfills, the Sycamore Canyon Landfill and Miramar Landfill. The path would benefit from increased maintenance activities or a bike path adoption program. Between Mast Boulevard and the Route terminus at SR-67, bicycle facilities return to local streets, and parallel facilities exist on both sides of SR-52, comprised of on-street shared, Class I, II, and III accommodations.

Planned bicycling facilities in the SR-52 corridor include a Class I bike path that is included in the 2011 City of San Diego Bicycle Master Plan Update and in SANDAG’s Regional Bicycle Master Plan, *Riding to 2050*. The proposed SR-52 Bike Path will extend from the Rose Creek Bike Path at the I-5/SR-52 interchange to the SR-52/Santo Road interchange where it will connect to the existing bike path that extends to Mast Boulevard. In the City of Santee, the locally and regionally planned San Diego River Bikeway is complete in some segments and planned in others within the SR-52 corridor.

Table 6: Bicycle Facilities

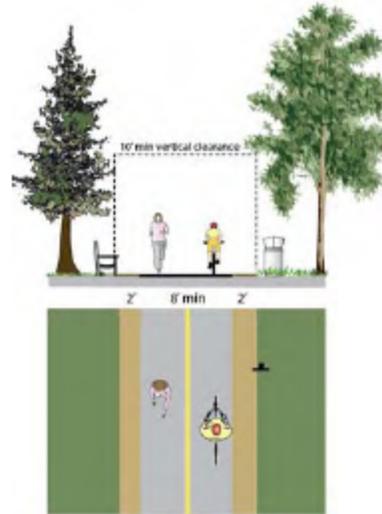
Segment	State Bicycle Facility											Parallel Bicycle Facility				
	Segment ID	Post Mile	Location Description	Bicycle Access Prohibited	Facility Type	Outside Paved Shoulder Width	Facility Description	Distressed Shoulder	Vol.	Role	Posted Speed Limit	Parallel Facility Present	Segment ID	Name	Location Description	Facility Type
1,2	A	0.03-7.2	I-5 to Santo Rd.	Yes	Freeway						65	Yes	A	Various local roads	Local Street access	I, II, and III
3,4	B	7.2-13.2	Santo Rd. to Mast Blvd.	No	Freeway						65	No	B	SR-52 Bike Path	Parallel bike path on north side of SR-52 (Westbound direction)	Class I
5	C	13.2-17	Mast Blvd. to SR-67	Yes	Freeway						65	Yes	C	Various local roads	Local Street access	I, II, and III

Map 2: State Route 52 Bike Path



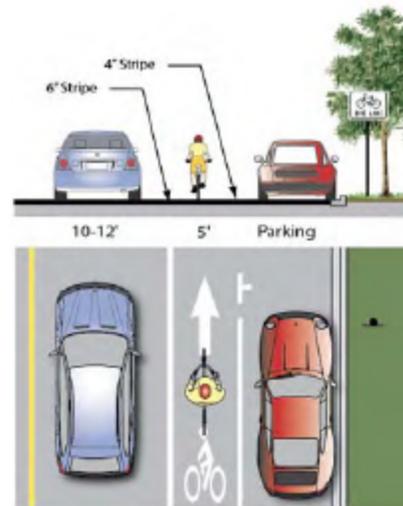
Class I – Bike Path

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.



Class II - Bike Lanes

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.



Class III - Bike Routes

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.



Source: 2010 SANDAG Regional Bicycle Master Plan, "Riding to 2050"

PEDESTRIAN FACILITIES

The SR-52 corridor does not currently include an all-weather, 24/7 pedestrian facility until it enters the urbanized areas within the City of Santee, east of Mast Boulevard. The corridor does benefit from regional and local trails, parks, and open spaces. These areas provide a rich network of formal and informal trails and non-motorized connections, but use may be difficult for pedestrians in inclement weather. In the City of San Diego, the network begins with the San Clemente/Rose Canyon Hiking trail within the Marian R. Bear Memorial Park, which extends just east of the Los Angeles - San Diego-San Luis Obispo (LOSSAN) rail line in Rose Canyon to Clairemont Mesa Boulevard, just east of I-805. Clairemont Mesa Boulevard becomes the only pedestrian route until it terminates at the Mission Trails Regional Park. A network of trails within the park allows pedestrian access to both Mission Gorge Road and Mast Boulevard.

On-street pedestrian facilities pick up on the east side of Mission Trails Park. Several local roads parallel SR-52, including Mission Gorge Road on the north side of SR-52 and Prospect Avenue on the south side. Mission Gorge Road includes sidewalks on both sides of the street, while Prospect Avenue has intermittent sidewalk coverage between Fanita Drive and Cuyamaca Street.

Table 7: Pedestrian Facilities

Segment	Segment ID	Post mile	Location Description	Ped. Access Prohibited	Sidewalk Present	Facility Description	Volume	Junction				
								Location	Role	Type	Large Corner	Alternate Facility
1,2	A	0.03-7.2	I-5 to Santo Rd.	Yes	No	Freeway	N/A	Regents Rd.	Minor	Grade separated, signalized, crosswalks, ped heads, current ADA		
								Genesee Ave.	Minor	Grade separated, signalized		
								Convoy St.	Minor	Grade separated, signalized		
								Santo Rd.	Minor	Grade separated, not signalized		
3	B	7.2-13.2	Santo Rd. to Mast Blvd.	Yes	No	Freeway	N/A	Mast Blvd.	major	Grade separated, signalized		
4,5	C	13.2-17	Mast Blvd. to SR-67	Yes	No	Freeway	N/A	Mission Gorge Rd.	Minor	Grade separated, signalized		
								Cuyamaca St.	Major	Grade separated, signalized, crosswalks, ped heads, current ADA		
								Magnolia Ave.	Major	Grade separated, signalized, crosswalks, ped heads, current ADA		

TRANSIT FACILITIES

Currently, Metropolitan Transit System (MTS) Route 960 operates on the western portion of SR-52 from I-805 to Kearny Villa Road. This route offers only peak hour service with 30 minute headways from the Euclid Trolley station to the Kearny Mesa Transit Center and the University Towne Center (UTC). In December 2005, a two year pilot project was implemented using Route 960, on SR-52 (between Convoy Street and I-805) and I-805 (between SR-52 and Nobel Drive) to evaluate the effectiveness of using the freeway shoulder for transit lanes. The pilot project demonstrated that “Bus on Shoulder” could be a successful strategy for transit to bypass congested freeway segments. However, the pilot program was not maintained as a permanent service due to construction on I-805 where the transit shoulder transitioned into the general purpose lanes. There is potential for future transit only shoulder use.

MTS Bus Route 870 operates on the east end of SR-52 between Kearny Mesa and the Santee Trolley Station. This route is a Premium Express route providing two transit trips in the morning and two transit trips in the evening. MTS also provides local bus service around the western portion of the corridor along parallel and perpendicular arterials.

There are additional specialized transit services serving the SR-52 corridor. MTS provides demand-responsive paratransit service within this area.

Commuter Rail service between Oceanside and downtown San Diego is provided by North County Transit District (NCTD) with the Coaster on tracks running perpendicular to SR-52 under the ramps connecting the highway to I-5. The nearest commuter rail connection to SR-52 is the Sorrento Valley Coaster Station located adjacent to I-5 just south of SR-56.

The Green line trolley travels from Santee Town Center Station to the 12th and Imperial Transit Center downtown, where commuters can connect to other trolley lines.

A future Mid-Coast Corridor Transit Project will extend trolley service (light rail) from downtown San Diego to the University community. The Mid-Coast trolley line will serve major activity centers such as Old Town, UCSD, and Westfield UTC. The trolley tracks will run parallel to the existing heavy rail tracks and will deviate from the heavy rail tracks at Rose Canyon. The Trolley line will cross SR-52, but no transit stops are proposed along the state corridor.

Table 8: Transit Facilities

S segment	Mode and Collateral Facility	Name	Route End Points	Ridership	Headway	Operating Period	ITS and Technology	Stations		Amenities	Bikes Allowed on Transit	Location Description	# Parking Spaces
								Cities	Postmiles				
1	Rail	Amtrak: CA Pacific Surfliner	San Diego to San Luis Obispo	2,640,342	22 Daily		N/A	San Diego, Los Angeles, Santa Barbara, San Luis Obispo	1.1	N/A	Y		
	Light Rail	Regional Transit: Coaster	San Diego to Oceanside	355,245	30 minute	AM/PM Peak	N/A	San Diego	1.1	N/A	Y		
2	Express Bus 960	Metropolitan Transit System (MTS)	Euclid Trolley to Kearny Mesa	308 ADR (Average Daily)	Long	Peak Hour Weekday	N/A	San Diego	5.2-6.8	N/A	Y	Express Bus 960	
2-4	Express Bus 870	Metropolitan Transit System (MTS)	Kearny Mesa to Santee Trolley Station	67 ADR	High		N/A	San Diego and City of Santee	7.2-17.0	N/A	Y	Express Bus 870	
4	Park & Ride	Lot 70						Santee				Big Rock Dr.	36.0
5		Lot 72						Santee				Magnolia Ave.	22.0

FREIGHT

SR-52 serves both the Miramar and Sycamore Landfills. The Miramar Landfill is located just north of SR-52 between I-805 and SR-163. The Sycamore Landfill is located north of SR-52 at Mast Boulevard. (see Map 3)

Miramar Landfill

The Miramar Landfill covers over 1,500 acres within the Miramar community of the City of San Diego. Approximately 446,000 vehicles bring trash and recyclables to the Miramar Landfill each year. Almost 910,000 tons of waste is currently disposed of annually at this site.

Sycamore Landfill

The Sycamore Landfill is located in the East Elliott community area of the City of San Diego. The Average Daily Traffic for the Sycamore Landfill is 2,070 vehicles.

(Source: San Diego County website: <http://sdpublic.sdcountry.ca.gov/>)

AVIATION

There are two public use airports located near SR-52. Gillespie Field is located in the City of El Cajon, and just south of the City of Santee. Montgomery Field is located in Kearny Mesa, south of SR-52, between SR-163 and I-15.

Gillespie Field

Gillespie Field is the busiest general aviation (GA) airport in San Diego County. It generates over \$400 million dollars a year to the local economy, provides roughly 3,200 jobs, and generates enough income to pay for all other County GA airports expenses. The airport has a large amount of undeveloped land inside its boundaries, and the East County Economic Development Council wants to build a transportation and business economic development hub on some of its 757 acres. The airport has multiple access points to four major freeways SR 52, I-8, SR 67, and SR 125. Its functional class is Regional-business/Corporate, and it is also a FAA national reliever airport. Aviation services include: air traffic control tower, aircraft fuel sales, disaster/emergency services, aero medical emergency flights, sport flying, aircraft rental and sales, search and rescue, fire and law enforcement, major aircraft repair facilities, flight training, oxygen, charter service, on airport restaurant, and an aviation museum. 732 based aircraft, 28 helicopters, and 5 gliders are base at the airport. There were 184,895 operations for the 12 month period ending December 31, 2012. The airport is served by transit.

Montgomery Field

Montgomery Field is one of the other busiest GA airports in San Diego County. It is located 4 miles from the Marine Corps Air Station Miramar. The airport state functional class is Regional/Business/Corporate, and it is also a FAA regional reliever. Aviation services include: fire and law enforcement, search and rescue, tourism, major aircraft repair facilities, disaster/emergency services, flight training, rental car facility, aircraft rental/sales, both piston and jet fuel sales, oxygen, medical flight services, sport flying, specialty flight operations, charter, and on airport restaurant. The East County Economic Development Council is targeting some of the airport's 549 acres for further economic development as a transportation and business hub to take advantage of the location near Otay Mesa. 491 aircraft, 4 helicopters, and 1 glider are based at the airport, and there were 183,363 operations for the 12 month period ending December 31, 2012.

Map 3: State Route 52 Truck Network

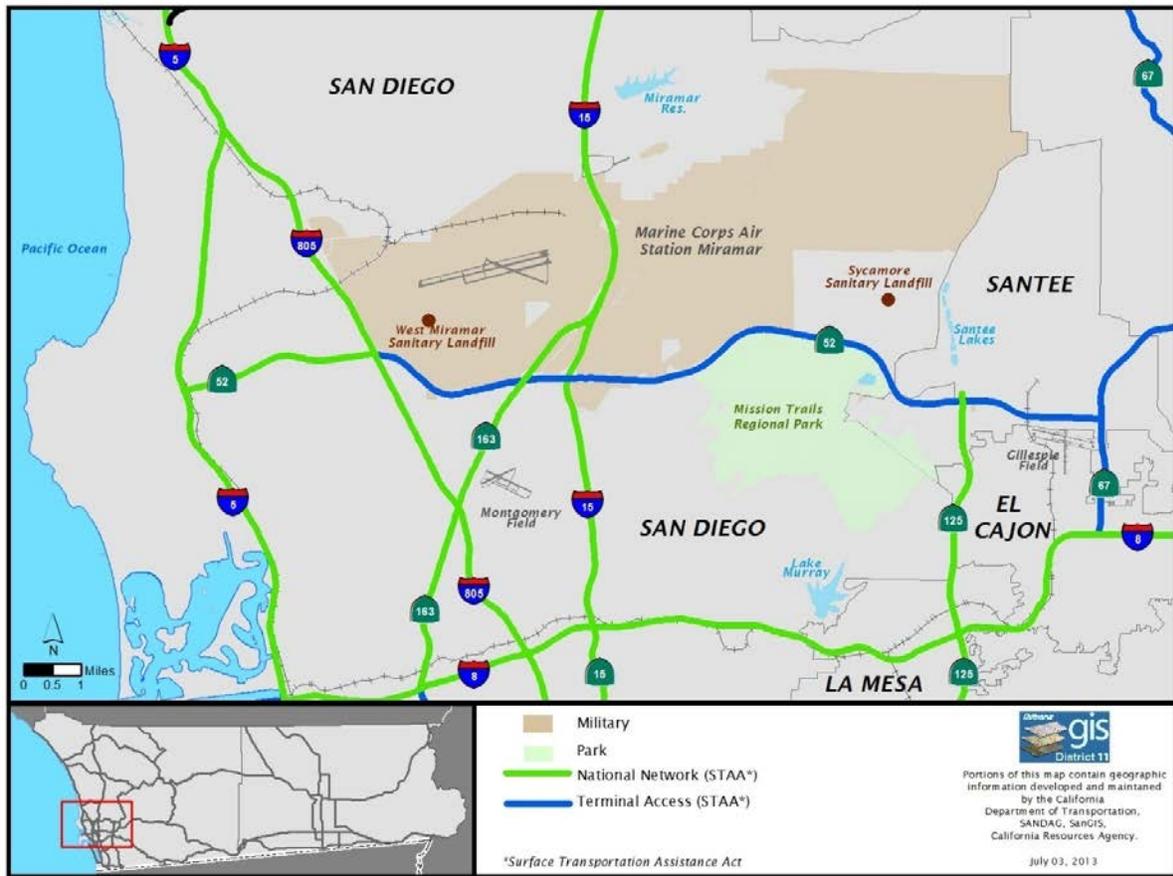


Table 9: Freight Types

Facility Type/Freight Generator	Location	Mode	Name	Major Commodity/ Industry	Comments/Issues
Highway	N/A				
Freight Generator	Miramar, City of San Diego	Truck	Miramar Landfill	Solid Waste	
Freight Generator	East Elliot, City of San Diego	Truck	Sycamore Landfill	Solid Waste	

Table 10: Aviation

Facility Type	Location	Mode	Name	Major Commodity/ Industry	Comments/Issues
Airport	City of El Cajon	Airplane	Gillespie Field	General Aviation	
Airport	City of San Diego	Airplane	Montgomery	General Aviation	

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 Caltrans District 11 staff. Environmental factors included in this section are as follows:

CRITICAL HABITAT

Much of the land within segment 3 to the north and south of SR-52 is undeveloped open space consisting of native habitat communities including coastal sage scrub, chaparral, grasslands, and several riparian associated habitats. Many of these areas were burned in the Cedar fire of 2003 and many of the habitat types have converted into one or more transitional habitat types. These areas are in a disturbed condition. Segment 3 intersects the San Diego River and its associated riparian habitats.

SR-52 crosses five creeks including San Clemente Creek, three small ephemeral creeks in Oak Canyon, Spring Canyon, and Little Sycamore Canyon, and the San Diego River. In addition, there are several small, un-vegetated drainages that flow under the eastern portion of SR-52. Vernal pools have also been observed both within and outside of the Caltrans right of way from just west of Convoy Street to just east of Santo Road.

Nesting swallows and bats may also gather under the bridges that cross over San Clemente Creek, Oak Canyon, Spring Canyon, and the San Diego River.

BIOLOGICAL AND WETLAND RESOURCES

San Clemente Canyon runs along the south of the western portion of SR-52. This canyon is designated as park and open space and consists of native riparian habitat, which is dominated by sycamore and oak trees; and upland, which is dominated by coastal sage scrub habitats along with pockets of non-native grasses and disturbed habitats. Continuing east along SR-52 to its intersection with I-805 the freeway passes over San Clemente Creek and its associated riparian habitat.

The portion of the State Route adjacent to MCAS Miramar and Mission Trails Regional Park is primarily undeveloped open space consisting of native habitats including coastal sage scrub, chaparral, grasslands, and various riparian habitats including vernal pool complexes. Vernal pools are highly abundant within and outside of Caltrans right of way from just west of Convoy Street to just east of Santo Road. Vernal pools occur primarily on the flat mesa portions of this section of the State Route and are highly vulnerable to hydrologic changes.

As the State Route moves farther east at the edge of Mission Trails Regional Park (MTRP), it crosses the San Diego River and shortly following, Fanita Creek with their riparian habitats. East of Fanita Creek to SR-52's terminus at SR-67 the areas adjacent to the State Route become more developed. SR-52 crosses or runs parallel to multiple wildlife corridors that connect large acreages of open space, which are surrounded by urban development.

The natural habitats within the corridor support State and Federal listed species including the San Diego fairy shrimp, the Quino checkerspot butterfly with its host plant, the dot seed plant, and the coastal California gnatcatcher. SR-52 crosses five creeks including San Clemente Creek, three small ephemeral creeks in Oak Canyon, Spring Canyon, and Little Sycamore Canyon, and the San Diego River. In addition, there are several small, un-vegetated drainages that flow under the eastern portion of SR-52. The SR-52 riparian crossings have the

potential to contain listed species such as the least Bell's vireo and these areas may require jurisdictional permits for Caltrans projects from agencies such as the Army Corps of Engineers, the California Department of Fish and Wildlife, and the Regional Water Quality Control Board.

RECREATIONAL AND PROTECTED LANDS (SECTION 4(F))

The western portion of SR-52 to I-805 runs next to San Clemente Canyon and Marian R. Bear Memorial Park. These parklands consist of open space, hiking and mountain biking trails, picnic areas and informational facilities. Moving east along the corridor, the route is the northern limit of the 5,800-acre MTRP. The park has over forty miles of hiking, mountain bike and equestrian trails, a rock climbing area, and a 46-space campground adjacent to a small lake. There is also a modern Mission Trails Regional Park Visitor and Interpretive Center. In the urban areas of the corridor there are various smaller community parks within a half-mile radius that would require a Section 4(f) review if potentially impacted by a future project.

VISUAL/AESTHETICS

Large portions of SR-52 are adjacent to open space parklands, scenic vistas, and riparian corridors. The Route is eligible to be part of the State Highway Scenic Highway System but is not currently designated. Visual concerns for open space areas would include the preservation of the natural looking viewsheds and the need to maintain compatibility with Section 4(f) requirements. The section of the corridor east of SR-125 to SR-67 passes through more urban areas and has design elements, landscaping, and architectural treatments incorporated to improve its placement within the urban area.

HAZARDOUS WASTE/MATERIALS

The portion of SR-52 between I-805 and SR-163 crosses over a former landfill. This section of roadway has frequent and various levels of subsidence within the main lanes and ramps that requires pavement overlays.

AVIATION

SR-52 passes by two airfields and serves three airfields. The U.S. Marine Corps Air Station Miramar is located to the north of SR-52. Montgomery Field is south of SR-52 in the City of San Diego and Gillespie Field is in the City of El Cajon near the eastern terminus of SR-52. Staff working on potential projects within the vicinity of these two airfields should coordinate with the operators of these airfields regarding airspace restrictions.

SOCIO-ECONOMIC AND COMMUNITY

Impacts to the community that may occur due to future projects would primarily consist of noise, traffic, visual and transportation. Various development projects are ongoing or planned within the corridor. These projects include the Fanita Ranch Specific Plan proposing residential development units and improvements at Gillespie Field.

BICYCLE FACILITIES

A barrier separated Class I Bike Path runs along SR-52 from the ingress/egress westbound ramp with Santo Road to Mast Boulevard. At the beginning and terminus points of the bike path, the route transitions off of the State Route to city streets.

Table 11: Potential Environmental Impacts

S segment	Section 4(f) Land	Coastal Zone	Farmland/ Timberland	Environmental Justice	Cultural Resources	Visual Aesthetics	Geology/Soils/ Seismic	Floodplain	Climate Change and Sea Level Rise Vulnerability	Hazardous Materials	Naturally Occurring Asbestos	Air Quality			Noise	Waters and Wetlands	Wild and Scenic Rivers	Special Status Species	Fish Passage	Habitat Connectivity												
												Ozone	2.5 PM	10 PM																		
1	High	No	High	Low	Med	Low	N/A	100 yr.	N/A	Low	Low	Attainment/Unclassified	Non-Attainment	Non-Attainment	Attainment/Maintenance	Low	Med	N/A	High	N/A	High	Med										
2	Med		Med		High					Med													High	Low	Med	N/A	N/A	N/A	High	N/A	High	Med
3-5	Low		Low		Med					Low													Low	Med	N/A	N/A	Low	Med	Med	N/A	Med	Low

SAN DIEGO COUNTY AIR QUALITY CONFORMITY

San Diego County is located in the southwest corner of California, bordering Mexico to the south, Orange County to the north, The Pacific Ocean to the west, and Imperial County to the east.

Transportation conformity is required under the federal Clean Air Act (CAA) to ensure that federally supported highway and transit project activities conform to the purpose of the State Implementation Plan (SIP). Conformity to the purpose of the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant National Ambient Air Quality Standard (NAAQS). Conformity applies to non-attainment and maintenance areas for the following transportation-related criteria pollutants: ozone, particulate matter (PM_{2.5} and PM₁₀) carbon monoxide (CO), and nitrogen dioxide (NO₂).

Ozone (O₃):

San Diego County is classified as maintenance for the 1997 Eight-Hour ozone standard of 0.08 parts per million (ppm). San Diego County submitted a Redesignation Request and Maintenance Plan for the 1997 Nation Ozone Standard in December 2012. Effective April 4, 2013, USEPA found that the motor vehicle emissions budgets for ozone for the years 2020 and 2025 are adequate for transportation conformity purposes.

USEPA has promulgated the 2008 ozone standard of 0.075 ppm. On May 21, 2012 the USEPA classified San Diego County as marginal nonattainment. For this nonattainment designation, tribal areas that were previously excluded are now included as part of the San Diego region nonattainment designation. However, one small portion (approximately 119 acres) of the Pechanga Band of Luiseno Indians purchased within the north portion of San Diego County piece of tribal land was excluded from the San Diego region 2008 Eight-Hour ozone nonattainment designation. All other tribal lands within San Diego County were included in the designation. As of July 20, 2013 the 1997 ozone standard was revoked and replaced with the 2008 ozone standard.

Particulate Matter (PM₁₀):

San Diego County is classified as attainment for PM₁₀.

Fine Particulate Matter (PM_{2.5}):

San Diego County is classified as attainment for the Annual and the 2006 PM_{2.5} standard.

Carbon Monoxide (CO) and Nitrogen Dioxide (NO₂):

San Diego County is classified as a Maintenance area for CO, and attainment for NO₂.

CORRIDOR PERFORMANCE

Current corridor performance for SR-52 operates at Level of Service (LOS) “C” to “E” with the worst congestion between I-15 and Mast Blvd during the evening eastbound commute. This condition is forecasted to worsen to “F” if additional improvements are not made. The major bottlenecks are caused by merging eastbound I-15 traffic and limited capacity under the SR-163 junction bridge structure where SR-52 drops to 2 general purpose lanes under the I-15 bridge structure. This takes place during the 3 hour window from 3:00pm to 6:00pm. The limited capacity will eventually not be able to meet the forecasted traffic volumes. The steep incline past Santo Road is also a contributing factor to the congestion in this segment, causing trucks and other vehicles to slow down. A third bottleneck is caused by the loss of a lane eastbound at Mast Blvd. SANDAG completed a traffic study on October 3, 2014 for the I-5 Mid-Coast Trolley extension. This study analyzed the I-5 junction and congestion on the SR-52 ramps at the La Jolla portion of the route. The study showed congestion on the westbound SR-52 to northbound I-5 as LOS “F” in the AM Peak. (See Table 4-2) The congestion at these peak periods can also be noted at La Jolla Drive and the SR-52 ramps.

Table 4-2. 2050 Conditions Freeway Weave Analysis Results

Location	Existing				2050			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Density*	LOS	Density*	LOS	Density*	LOS	Density*	LOS
I-5 Northbound								
SR 52 to Gilman Dr/La Jolla Colony Dr	44.53	F	28.26	D	32.03	D	19.48	B
Gilman Dr/La Jolla Colony Dr to Nobel Dr	37.15	E	24.03	C	28.26	D	18.09	B
I-5 Southbound								
Nobel Dr to Gilman Dr/La Jolla Colony Dr	17.10	B	34.01	D	13.03	B	25.16	C
Gilman Dr/La Jolla Colony Dr to SR 52	17.14	B	39.14	E	16.6	B	35.84	E

Based on the future concept for the State Route, the addition of general purpose and managed lanes will help relieve forecasted congestion from LOS “F” to LOS “D”. The limited capacity between SR-163 to I-15 would greatly benefit from tolled single occupancy vehicles being allowed access to the managed lanes at that location and could alleviate merging bottleneck traffic at Santo Road and Mast Blvd. Though no dedicated Bus Rapid Transit (BRT)

lane is planned, potential future BRT service would also benefit from use of the managed Lanes.

Table 13: Corridor Performance

SR-52 Corridor Performance Base Year (BY 2010) and Horizon Year (HY 2040)

Segment #		1	2	3	4	5
		I-5 to I-805	I-805 to I-15	I-15 to Mast Blvd	Mast Blvd to SR-125	SR-125 to SR-67
Basic System Operations						
AADT Base Year (BY)		92,458	114,142	96,549	85,338	72,608
AADT Horizon Year (HY) General Purpose (GP)		120,608	167,936	123,252	118,360	126,341
AADT (HY) Managed Lanes (ML)		N/A	13,517	18,918	13,850	N/A
Total AADT (HY)		120,608	181,453	142,170	132,210	126,341
AADT: Growth Rate/Year		.92 %	1.72 %	1.49 %	2.11%	2.11 %
LOS Method		HCM	HCM	HCM	HCM	HCM
LOS (BY)		see Peak Hour tables				
LOS (HY)		see Peak Hour tables				
LOS Concept		D	D	D	D	D
Segment Length		3	3.9	5.59	1.91	2.3
VMT (BY)		277,374	445,154	539,709	162,996	166,998
VMT (HY)		361,824	707,667	794,730	252,521	290,584
Vehicle Occupancy Rate (BY)		1.11 %	1.11 %	1.11 %	1.11 %	1.11 %
Vehicle Occupancy Rate (HY)		1.13%	1.13%	1.13%	1.13%	1.13%
Truck Traffic						
Total Average Annual Daily Truck Traffic (AADTT) (BY)		3,051	3,767	2,993	2,219	1,888
Total Average Annual Daily Truck Traffic (AADTT) (HY)		3,980	5,988	4,407	3,437	3,285
Total Trucks (% of AADT) (BY)		3.30%	3.30%	3.10%	2.60%	2.60%
Total Trucks (% of AADT)(HY)		3.30%	3.30%	3.10%	2.60%	2.60%
5+ Axle Average Annual Daily Truck Traffic (AADTT)(BY)		458	565	287	160	136
5+ Axle Average Annual Daily Truck Traffic (AADTT)(HY)		597	898	423	247	237
5+ Axle Trucks (as % of AADT)(BY)		15%	15%	9.60%	7.20%	7.20%
5+ Axle Trucks (as % of AADT)(HY)		15%	15%	9.60%	7.20%	7.20%
Bottlenecks						
Bottleneck Existing (PeMS)		NO	YES	YES	YES	No
Bottleneck Location			West of I-15	Santo Road	Mast Blvd	
Bottleneck Queue (length)			1.4 Miles	1.6 miles	2 Miles	

Bottleneck Causality			Traffic Volumes Exceed Capacity	Merging Traffic From I-15 Connector	3 Lanes Merge to 2 Lanes	
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SR-52 Corridor Performance Base Year (BY 2010) and Horizon Year (HY 2040)

Peak Hour Traffic Data						
Peak Period Length		3 Hours				
Peak Hour Direction		WB in AM, EB in PM				
Peak Hour Time of Day AM		8:00-9:00 AM	7:00-8:00 AM	7:00-8:00 AM	7:00-8:00 AM	7:00-8:00 AM
Peak Hour Time of Day PM		5:00-6:00 PM	4:00-5:00 PM	4:00-5:00 PM	4:00-5:00 PM	4:00-5:00 PM
Peak Hour Directional Split (AM, Base Year)		WB 50%; EB 50%	WB 65%; EB 35%	WB 75%; EB 25%	WB 65%; EB 35%	WB 65%; EB 35%
Peak Hour Directional Split (PM, Base Year)		WB 45%; EB 55%	WB 60%; EB 40%	WB 30%; EB 70%	WB 35%; EB 65%	WB 35%; EB 65%
Peak Hour Directional Split (AM, Horizon Year)		WB 50%; EB 50%	WB 65%; EB 35%	WB 70%; EB 30%	WB 65%; EB 35%	WB 65%; EB 35%
Peak Hour Directional Split (PM, Horizon Year)		WB 45%; EB 55%	WB 60%; EB 40%	WB 30%; EB 70%	WB 35%; EB 65%	WB 35%; EB 65%
Segment Length		3.3	3.9	6	1.5	2.3
Proposed Managed Lane Horizon Year (HY) Performance						
AADT (HY)			18,635	14,500	13,255	
LOS Method		HCM	HCM	HCM	HCM	HCM
LOS (HY)			C	C	C	
LOS Concept			C	C	C	
VMT (HY)			72,677	108,750	35,317	

AM and PM Peak Hour Performance Tables for Base Year (BY), and Horizon Year (HY).

	SR-52 Westbound - PM PEAK HOUR					SR-52 Eastbound - PM PEAK HOUR					
	segment 1	segment 2	segment 3	segment 4	segment 5		segment 1	segment 2	segment 3	segment 4	segment 5
Peak Hour Vols (BY)	3395	3840	2361	2398	2099	Peak Hour Vols (BY)	4150	5760	5508	4454	3898
Peak Hour Vols (HY)	4396	6097	3455	3702	3626	Peak Hour Vols (HY)	5373	9145	8061	6875	6734
ML Peak Hour Vols - Assumed 12% of total HY peak hour trips (by direction) use the managed lanes.	na	732	415	444	na	ML Peak Hour Vols - Assumed 12% of total HY peak hour trips (by direction) use the managed lanes.	na	1097	967	825	na
Gen. Purpose Peak Hour Volumes - with ML vols subtracted out.	4396	5365	3040	3258	3626	Gen. Purpose Peak Hour Volumes - with ML vols subtracted out.	5373	8048	7094	6050	6734
Lanes/ by direction (BY)	2 fwy + 1 aux	3 fwy + 0 aux	3 fwy + 0/1 aux*	2 fwy + 0 aux	2 fwy + 0/1 aux**	Lanes/ by direction (BY)	2 fwy + 1 aux	3 fwy + 0 aux	3 fwy + 0/1 aux	2 fwy + 0 aux	2 fwy + 0/1 aux**
Lanes/ by direction (HY)	3 fwy + 1 aux	3 fwy+ ML + 1 aux	3 fwy + ML + 1 aux	3 fwy + 1 ML	3 fwy + 0 aux	Lanes/ by direction (HY)	3 fwy + 1 aux	3 fwy+ ML + 1 aux	3 fwy + ML + 1 aux	3 fwy + 1 ML	3 fwy + 0 aux
Vol./Capacity ratio (BY)	0.65	0.64	0.33	0.60	0.52	Vol./Capacity ratio (BY)	0.80	0.96	0.92	1.11	0.97
Vol./Capacity ratio (HY) -NO Improvements	0.85	1.02	0.48	0.93	0.91	Vol./Capacity ratio (HY) -NO Improvements	1.03	1.52	1.12	1.72	1.68
Vol./Capacity ratio (HY) -With Improvements	0.61	0.75	0.42	0.54	0.60	Vol./Capacity ratio (HY) -With Improvements	0.75	1.12	0.99	1.01	1.12
Level of Service (BY)	C	D	B	C	B	Level of Service (BY)	D	E	D	F	E
Level of Service (HY) - NO Improvements	D	F	B	E	D	Level of Service (HY) - NO Improvements	F	F	F	F	F
Level of Service (HY) - With Improvements	C	C	B	C	C	Level of Service (HY) - With Improvements	D	F	E	F	F

	SR-52 Westbound - AM PEAK HOUR						SR-52 Eastbound - AM PEAK HOUR					
	segment 1	segment 2	segment 3	segment 4	segment 5		segment 1	segment 2	segment 3	segment 4	segment 5	
Peak Hour Vols (BY)	4527	6240	5902	4454	3898	Peak Hour Vols (BY)	3018	3360	1967	2398	2099	
Peak Hour Vols (HY)	6577	9772	7734	5783	6369	Peak Hour Vols (HY)	4385	5262	3314	3114	3429	
ML Peak Hour Vols - Assumed 12% of total HY peak hour trips (by direction) use the managed lanes.	na	1173	928	694	na	ML Peak Hour Vols - Assumed 12% of total HY peak hour trips (by direction) use the managed lanes.	na	631	398	374	na	
Gen. Purpose Peak Hour Volumes - with ML vols subtracted out.	6577	8599	6806	5089	6369	Gen. Purpose Peak Hour Volumes - with ML vols subtracted out.	4385	4630	2917	2740	3429	
Lanes/ by direction (BY)	2 fwy + 1 aux	3 fwy + 0 aux	3 fwy + 0/1 aux*	2 fwy + 0 aux	2 fwy + 0/1 aux**	Lanes/ by direction (BY)	2 fwy + 1 aux	3 fwy + 0 aux	3 fwy + 0 aux	2 fwy + 0 aux	2 fwy + 0/1 aux**	
Lanes/ by direction (HY)	3 fwy + 1 aux	3 fwy+ ML + 1 aux	3 fwy + ML + 1 aux	3 fwy + 1 ML	3 fwy + 1 aux	Lanes/ by direction (HY)	3 fwy + 1 aux	3 fwy+ ML + 1 aux	3 fwy + 1 ML + 1 aux	3 fwy + 1 ML	3 fwy + 0 aux	
Vol./Capacity ratio (BY)	0.87	1.04	0.82	1.11	0.97	Vol./Capacity ratio (BY)	0.58	0.56	0.33	0.60	0.52	
Vol./Capacity ratio (HY) -NO Improvements	1.26	1.63	1.07	1.45	1.59	Vol./Capacity ratio (HY) -NO Improvements	0.84	0.88	0.55	0.78	0.86	
Vol./Capacity ratio (HY) -With Improvements	0.91	1.19	0.95	0.85	0.88	Vol./Capacity ratio (HY) -With Improvements	0.61	0.64	0.46	0.52	0.57	
Level of Service (BY)	D	F	D	F	D	Level of Service (BY)	C	C	B	C	B	
Level of Service (HY) - NO Improvements	F	F	E	F	F	Level of Service (HY) - NO Improvements	D	D	C	D	D	
Level of Service (HY) - With Improvements	D	F	E	D	D	Level of Service (HY) - With Improvements	C	C	B	B	B	

KEY CORRIDOR ISSUES

SR-52 DIPS

The traveled-way asphalt/concrete section of segments 2 and 3 of SR-52 (PM 5.0 to 6.2), continues to settle due to biodegradation and consolidation of the Municipal Solid Waste (MSW) that underlies the highway. Caltrans Office of Geotechnical Design evaluated the site and prepared a District Preliminary Geotechnical Report (DPGR) Study and determined that the current maximum rate of settlement is estimated to be 0.3 feet per year. The rate and severity of the biodegradation settlement is exacerbated by the infiltration of runoff, the saturation of MSW by the perched groundwater table, and the thickness of the composition of the MSW. The uneven settlement of the MSW creates dips along the SR-52 roadway and uncomfortable driving conditions.

In order to gather information on the highway time rate of settlement and the precise geometry of the settlement, consistent, long-term surveys are conducted of the highway and surrounding depressions in the landscape where runoff occurs. This data is used to efficiently manage the periodic overlay program, calculate quantities of material needed for overlay, monitor the rate of settlement, and predict future settlement.

Source: Project Scope Summary Report (PSSR) Roadway Rehabilitation for SR-52 Dips Project

In 2015, the City of Santee began a SR-52 Corridor Study to examine the route from I-805 to SR-125. The main focus of the study is to identify operational improvements to SR-52 in the near term in anticipation of the larger planned widening and managed lanes project identified in the SANDAG RTP. Other areas of the Study include developing a TDM strategy and improving regionally transit connections. The study will be finalized in 2016.

CORRIDOR CONCEPT

CONCEPT RATIONALE

SR-52 is a vital transportation corridor in San Diego County that accommodates local traffic between eastern San Diego County, and the City center, connecting to major routes such as I-5, I-805, and I-15. To continue the concept that SR-52 serves the greater San Diego region by providing access to major freeways, and based on the Corridor Performance analysis and the SANDAG RTP, Managed Lanes are necessary to improve congestion. Specifically, near the Santo Road segment of SR-52. Peak Hour AM congestion is due to the westbound San Diego River Bridge overcrossing, which merges from five lanes into two lanes, creating a bottleneck. Managed lanes will help relieve the bottleneck by allowing flexibility for the flow of traffic.

In addition to Managed Lanes improvements, Caltrans and SANDAG are planning for growth in the future. The SR-52 West project will accommodate expected growth by widening the corridor. Adding one general purpose lane in both the east and west directions as well as two reversible managed lanes will increase roadway capacity. The Managed Lanes project was originally planned to be completed by 2040. SANDAG have been developing its RTP update and is currently moving the SR-52 improvements to 2025. As part of the Managed Lanes project, MTS is coordinating dedicated BRT service on the planned facilities. As part of this service, optimizing existing Park and Ride lots and the Santee Transit Center is recommended.

Transportation Demand Management (TDM) should be considered for this route. TDM programs are designed to reduce or shift demand for transportation by commuters through various means, such as the use of public transportation, carpooling, vanpooling, bicycling, walking, and telework. The peak hour volumes from and to Santee could be elevated with TDM strategies. SANDAG has established the iCommute¹ program to provide resources for those interested in TDM options. The program's goal is to manage and reduce traffic congestion, as well as reduce greenhouse gas emissions and other environmental pollutants that result from commuters driving alone each day. Some of the services provided are free online ridematching for commuters to find and organize carpools, a regional vanpool program that includes a guaranteed ride home, bicycle encouragement program to incentivize employers to educate, promote and encourage bicycling as a viable transportation choice. The iCommute website also provides free resources to employers to help establish custom TDM programs that fit employee and business needs.

Another strategy would be using a Transportation Systems Management (TSM) approach. TSM is used to identify improvements to enhance the capacity of existing system of an operational nature. For the SR-52, the removal of the bottlenecks through auxiliary lanes or restriping the existing facility could be of benefit at the freeway interchanges were they are currently lacking. The planned widening past Mast Boulevard would help alleviate the bottleneck cause by the loss of the third lane at that location.

¹ <http://www.icommutesd.com>

Table 14: Planned and Programmed Projects and Strategies

Segment	Existing/Proposed	Planned or Programmed	Location	Source	Purpose	Implementation Phase
1	4F 2Aux/6F 2Aux	Planned	I-5 to I-805	SANDAG RTP Appendix A Table A.1	Capacity Increase to Address Projected Growth	Long Term (2050)
2	6F 2Aux/6F 2ML 2Aux	Planned	I-805 to I-15	SANDAG RTP Appendix A Table A.1	Capacity Increase to Address Projected Growth	Near Term (2035)
3	6F 2Aux/6F 2 reversible ML 2Aux	Planned	I-15 to Mast Boulevard	SANDAG RTP Appendix A Table A.1	Capacity Increase to Address Projected Growth	Long Term (2040)
4	4F 2 Aux/6F 2Aux	Planned	Mast Boulevard to SR-125	SANDAG RTP Modeled Operational Projects	Capacity Increase to Address Projected Growth	Long Term
5	4F 2Aux/6F 2Aux	Planned	SR-125 to SR-67	SANDAG RTP Modeled Operational Projects	Capacity Increase to Address Projected Growth	Long Term

APPENDICES

APPENDIX A

GLOSSARY OF TERMS AND ACRONYMS

ADT	Average Daily Traffic
APCD	Air Pollution Control District
CAA	Clean Air Act
CMP	Congestion Management Program
CTC	California Transportation Commission
DU	Dwelling Unit
EA	Environmental Assessment
EPA	Environmental Protection Agency
F&E	Freeway and Expressway System
FHWA	Federal Highway Administration
IBTC	International Border Trade Corridor
ICES	Intermodal Corridors of Economic Significance
IRRS	Interregional Route System
ISC	Indirect Source Control
ISTEA	Intermodal Surface Transportation Efficiency Act
ITIP	Interregional Transportation Improvement Program
ITMS	Integrated Traffic Management System
LOS	Level of Service
MSL	Maintenance Service Level
MTDB	Metropolitan Transit Development Board
NAAQS	National Ambient Air Quality Standards
NAFTA	North American Free Trade Agreement
NHS	National Highway System
PHV	Peak Hour Volume
PM	Post Mile
POE	Port of Entry
RAQS	Regional Air Quality Strategy
RAS	Regional Arterial System
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
R/W	Right of Way
SANDAG	San Diego Association of Governments
SCAG	Southern California Associations of Governments
SD&IV	San Diego and Imperial Valley Railroad
SHOPP	State Highway Operation and Protection Plan
STAA	Surface Transportation Assistance Act
STIP	State Transportation Improvement Program
TASAS	Traffic Accident Surveillance and Analysis System
TCM	Transportation Control Measure
TCR	Transportation Concept Report
TDM	Transportation Demand Management
TSM	Transportation Systems Management
V/C	Demand Volume to Capacity Ratio
VMT	Vehicles Miles Traveled

APPENDIX B

RESOURCES

<http://www.sandiego.gov/>
<http://sdpublic.sdcounty.ca.gov/>
<http://www.ci.santee.ca.us/>
<http://onramp.dot.ca.gov/tsi/ohsip/seqlisting.php>
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=shc&group=00001-01000&file=250-257>
http://www.dot.ca.gov/hq/tsip/hseb/highway_systems/NHS_statehighways.pdf
<http://www.dot.ca.gov/hq/LandArch/scenic/cahisys.htm>
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=shc&group=00001-01000&file=163-164.56>
http://www.dot.ca.gov/hq/tpp/corridor-mobility/documents/library/Caltrans_High_Emphasis_Routes_HER.doc
http://www.dot.ca.gov/hq/tpp/corridor-mobility/documents/library/List_of_Focus_Routes.doc
http://www.dot.ca.gov/hq/tsip/hseb/crs_maps/
<http://www.dot.ca.gov/hq/traffops/trucks/truckmap/truck-route-list.xlsx>
<http://www.dot.ca.gov/hq/traffops/trucks/truckmap/>
<http://www.dot.ca.gov/hq/tsip/gis/datalibrary/gisdatalibrary.html>
http://www.dot.ca.gov/hq/tpp/offices/orip/index_files/Updated%20Files/MPO_RTPA_Map_June_2012.pdf
http://www.dot.ca.gov/hq/tpp/offices/orip/list/agencies_files/regional_6-12.xls
http://www.dot.ca.gov/hq/tpp/offices/orip/list/agencies_files/regional_6-12.xls
http://www.dot.ca.gov/hq/tpp/offices/orip/list/agencies_files/regional_6-12.xls
http://www.dot.ca.gov/hq/tpp/offices/orip/list/agencies_files/regional_6-12.xls
http://dot.ca.gov/hq/tpp/offices/ocp/nalb/District_Contacts_and_Maps.html
http://dot.ca.gov/hq/tpp/offices/ocp/nalb/District_Contacts_and_Maps.html
<http://www.arb.ca.gov/ei/gislib/gislib.htm>
www.census.gov
www.dof.ca.gov
<http://www.dot.ca.gov/hq/tpp/offices/ocp/smf.html>
<http://www.dot.ca.gov/ser/vol1/sec3/physical/ch12noise/chap12noise.htm>
<http://www.dot.ca.gov/ser/vol1/sec3/physical/ch11air/chap11.htm>
<http://onramp.dot.ca.gov/tsi/ohsip/tasas/districtinformation/distphone.pdf#xml=http://ctsearch.dot.ca.gov/cgi-bin/texis/webinator/search/pdfhi.txt?query=district+TASAS+coordinator&pr=default&prox=page&rorder=250&rprox=500&rdfreq=500&rwfreq=750&rlead=1000&sufs=0&order=r&cq=&id=4fc4f246153>
<http://pems.dot.ca.gov/>
http://onramp.dot.ca.gov/photolog/roadview_index.htm
<http://svhqdhipp:8080/dhipp/view.html>
http://onramp/hq/traffops/otrafopr/branch/managed_lanes_pr/hov/files/contact.pdf
http://onramp/hq/traffops/otrafopr/branch/managed_lanes_pr/hov/files/HOVInvDec2009.xls
<http://www.dot.ca.gov/hq/traffops/systemops/hov/>
<http://earth.dot.ca.gov/>
<http://www.dot.ca.gov/hq/tpp/offices/bike/contacts.html>
<http://pems.dot.ca.gov/?dnode=photolog>
<http://www.dot.ca.gov/hq/oppd/hdm/pdf/english/chp0100.pdf>
<http://environment.fhwa.dot.gov/4f/index.asp>
<http://imaps.dfg.ca.gov/viewers/biospublic/app.asp>
<http://www.calands.org/>
<http://www.nps.gov/nr/research/index.htm>
http://redirect.conservation.ca.gov/DLRP/fmmp/product_page.asp
<ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf>
<http://www.census.gov/>
<http://www.dof.ca.gov/>
http://admin.dot.ca.gov/bfams/admin_svcs/sw_policy/dd/dd_31.pdf
<http://www.dot.ca.gov/hq/LandArch/scenic/cahisys.htm>
<http://www.dot.ca.gov/ser/vol1/sec3/community/ch27via/chap27via.htm#early>
<http://www.dot.ca.gov/hq/structur/strmaint/historic.htm>
http://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=firnetteHelp_A&title=FIRMettes
<http://gov.ca.gov/news.php?id=11036>
http://www.dot.ca.gov/ser/downloads/sealevel/guide_incorp_slr.pdf

<http://www.climatechange.ca.gov/>
<http://cal-adapt.org/>
http://admin.dot.ca.gov/bfams/admin_svcs/sw_policy/dp/dp_30.pdf
http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/index.aspx
<http://www.dot.ca.gov/ser/vol1/sec2/ch7topography/chap7.htm#References>
<http://www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm>
<http://www.dot.ca.gov/ser/vol1/sec3/physical/ch10haz/chap10.htm>
http://onramp.dot.ca.gov/hq/maint/roadway_rehab/gis/nao.htm
http://env.dot.ca.gov/haz_waste/haz_contaminant_waste/hw_noa.shtml
<http://www.epa.gov/oaqps001/greenbk/index.html>
<http://arbis.arb.ca.gov/desig/adm/adm.htm>
<http://www.dot.ca.gov/hq/env/noise/index.htm#2011catnap>
<http://water.usgs.gov/maps.html>
<http://137.227.242.85/wetland/wetland.html>
<http://www.dot.ca.gov/ser/vol1/sec3/special/ch19wsrivers/chap19.htm#WildAgencies>
http://env.dot.ca.gov/bio/wildlife/special_status.shtml
<http://www.dfg.ca.gov/biogeodata/cnddb/>
<http://www.calfish.org/DataampMaps/CalFishGeographicData/tabid/91/Default.aspx>
<http://www.dfg.ca.gov/habcon/connectivity/>
http://www.dot.ca.gov/hq/env/bio/wildlife_crossings/
<http://www.dot.ca.gov/ser/contact.htm#districcoord>
<http://www.dot.ca.gov/ser/>
<http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/index.htm>