Transportation Concept Report
Interstate 210
District 7
June 2013

Approvals:

District Director
Date 7/23/13

Deputy Diistrict Director
Planning, Public Transportation & Local Assistance
Date: 7-22-2013

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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 modifications as conditions change and new information is obtained. Although planning information is dynamic and continually changing, the D7 Office of Transportation Planning 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.

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 Caltrans' statutory responsibility as owner/operator of the State Highway System (SHS) (Gov. Code §65086) by identifying deficiencies and proposing improvements to the SHS. Through System Planning, Caltrans focuses on developing an integrated multimodal transportation system that meets Caltrans' goals of safety, mobility, delivery, stewardship, and service.

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 Transportation System Development Plan (TSDP). The district-wide **DSMP** is a 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 **TSDP** 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, and partner regional and local agencies.

TCR Purpose

California's State Highway System needs long range planning documents to guide the logical development of transportation systems as required by law and as necessitated by 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, improving mobility, providing excellent stewardship, and meeting community and environmental needs along the corridor through integrated management of the transportation network, including the highway, transit, pedestrian, bicycle, freight, operational improvements and travel demand management

STAKEHOLDER PARTICIPATION

Stakeholder participation was sought throughout the development of the Interstate 210 TCR. Outreach involved internal and external stakeholders. Both internal and external stakeholders were asked to review the document for comments, edits, and for consistency with the intent of existing plans, policies, and procedures. The process of including and working closely with stakeholders adds value to the TCR, allows for outside input and ideas to be reflected in the document, increases credibility and helps strengthen public support and trust.

EXECUTIVE SUMMARY

The Interstate 210 (I-210) Transportation Concept Report (TCR) is divided into several major sections; three of the sections – the Corridor Performance, System Characteristics and Corridor Concept – are the core of the document. All of the remaining sections provide a context for analyzing the I-210 corridor and document the data resources.

The main purpose of this TCR is to evaluate current and projected conditions along the route and suggest a configuration for I-210 that will meet projected demand within a framework of programming and implementation constraints and regional policy.

Historically the freeway system in Southern California is highly congested and this trend will continue into the future. Due to financial, environmental, right of way and political constraints, it is very difficult for Caltrans to continue adding more lanes to the system. With these limitations, Caltrans District 7 office has established LOS F0 as the minimum acceptable level of service on the freeway system when the freeway is currently operating at LOS F or worse. (1996 District System Management Plan) The 2035 concept facility intent is to show how much additional capacity is needed to achieve the desired LOS.

Concept Rationale

Interstate 210 is congested during peak periods, with delays, backups and bottlenecks and stop-and-go conditions. In addition, a mix of trucks, cars and recreational vehicles and a limited number of lanes combine to present numerous driving challenges which further constrains capacity and reduces travel times through the corridor. The Gold Line, a light rail project assists in absorbing some of the traffic together with a network of bus systems, bicycle and pedestrian traffic on adjacent local streets. In order to maintain continuity, I-210 was recently extended fourteen miles from Foothill Blvd. in the City of La Verne in Los Angeles County to Day Creek Blvd. in the City of Rancho Cucamonga in San Bernardino County.

Proposed Projects and Strategies

Alternative transportation methods are being considered for all routes in Los Angeles County including I-210. Caltrans is partnering with Metro, San Gabriel Valley Council of Governments (SGVCOG), and the communities the route traverses to develop alternative means of transportation such as mass transportation, bicycle and pedestrian facilities. Together with high-tech methods, we are likely to reduce congestion on our heavily traveled highways and reduce environmental impacts to the region. No new major projects are proposed for I-210 presently but maintenance and upkeep are scheduled on a regular basis.

Concept – 2035 Facility

SEGMENTS	ADT	Dir. Split	PEAK HOUR P.H. %	TRUCK P.H. TRUCK P.H. %	2035 Baseline RTP (Both Directions)		LOS "D" Attainment (Both Directions)	CONCEPT Attainment (Both Directions)
1	107,300	64.6%	9,700 (9.1%)	1,216 (12.5%)	6 MF		8	6
					V/C	LOS		
					1.077	F0		
2	155,000	57.2%	15,300 (9.8%)	1,916 (12.5%)	8 MF		11	9
					V/C	LOS		
					0.996	E		
3	164,800	53.2%	14,400 (8.8%)	1,225 (8.5%)	8 MF		10	8
					V/C	LOS		
					0.986	E		
4	348,000	52.2%	25,700 (7.4%)	2,077 (8.1%)	10 MF+2HOV		17	12
					V/C	LOS		
					1.177	F0		
5	288,500	53.0%	22,000 (7.6%)	2,152 (9.8%)	8 MF + 2HOV		15	11
					V/C	LOS		
					1.232	F0		
6	298,800	52.8%	21,500 (7.2%)	2,315 (10.8%)	8 MF + 2HOV		14	11
					V/C	LOS		
					1.200	F0		
7	214,100	53.9%	17,600 (8.2%)	1,954 (11.1%)	6MF+2HOV		12	10
					V/C	LOS		
					1.116	F0		
8	198,900	56.3%	17.200 (8.6%)	1,843 (10.7%)	6MF+2HOV		12	9
					V/C	LOS		
					1.139	F0		

SOURCE: 2012 RTP

** The number of lanes in the LOS D Attainment column is for both directions. LOS D Attainment indicates how many lanes it would require to achieve LOS D. It is meant to show the severity of future conditions and what it would take to achieve LOS D. Caltrans is not suggesting that it is our plan to build the facility to achieve the LOS D.*

**The number of lanes in the LOS F0 attainment column is for both directions. The data in the LOS F0 attainment column is only meant to show the severity of congestion on our system and what it would require to achieve that level of service. We recognize the difficulty in achieving the desired LOS given the financial, environmental, right of way and political constraints. However, it is Caltrans' goal to provide improved mobility when feasible.*

** The 2035 Baseline includes all planned and programmed projects in the 2012 RTP*

** We used 2008 for existing and 2035 for future to be consistent with the 2012 RTP*

**sometimes the model output implies that there would be aux lanes (each direction) and aux. lanes are given only half capacity. That is why there are instances where we have odd number of lanes for both directions.*

CORRIDOR OVERVIEW

Route Description

Pursuant to statutes relating to the California Department of Transportation, Interstate 210 (I-210) is an interregional freeway (also known as the Foothill Freeway). In District 7, I-210 spans a total distance of 55 miles within Los Angeles County.

The Caltrans Statutes Relating to the California Department of Transportation describes I-210 as follows: extending from I-5 near Tunnel Station to State Route 57 (SR-57) near San Dimas via the vicinity of San Fernando, and SR-57 near San Dimas to I-10 in the Redlands.

Route Segmentation

With regards to the I-210, its segments are generally defined as “freeway interchange to freeway interchange”, “county line to freeway interchange” or “freeway interchange to end of freeway”. The table below depicts the segments for I-210.

SEGMENTS	DESCRIPTION	BEGINNING P.M.	ENDING P.M.
1	Rte. 5 to Rte. 118	R0.00	R5.91
2	Rte. 118 to Rte.2	R5.91	R18.88
3	Rte. 2 to Rtes.134/710	R18.88	R24.96
4	Rtes. 134/710 to Rte. 164	R24.96	R29.49
5	Rte. 164 to Rte. 605	R29.49	R36.41
6	Rte. 605 to Rte. 57	R36.41	R44.37
7	Rte. 57 to Rte. 66	R44.37	R46.62
8	Rte. 66 to SBD. Cty. Line	R46.62	R52.15

Purpose of Route:

It provides a by-pass for through-traffic traveling east from Los Angeles County, avoiding the more heavily traveled Los Angeles Central Business District (LACBD) freeways, such as I-5, I-10 and SR-60. I-210 is a commuter route from eastern San Gabriel Valley to Pasadena and is listed as a Goods Movement route.

Foothill Freeway

Seg.	P.M.	Limits	Rte. Purpose	Facility Type
1-8	R0.00-R52.15	I-5 to Sbdo. Cty. Line	Interstate/Interregional Commute Corridor	Freeway

Functional Classification/Route Designation:

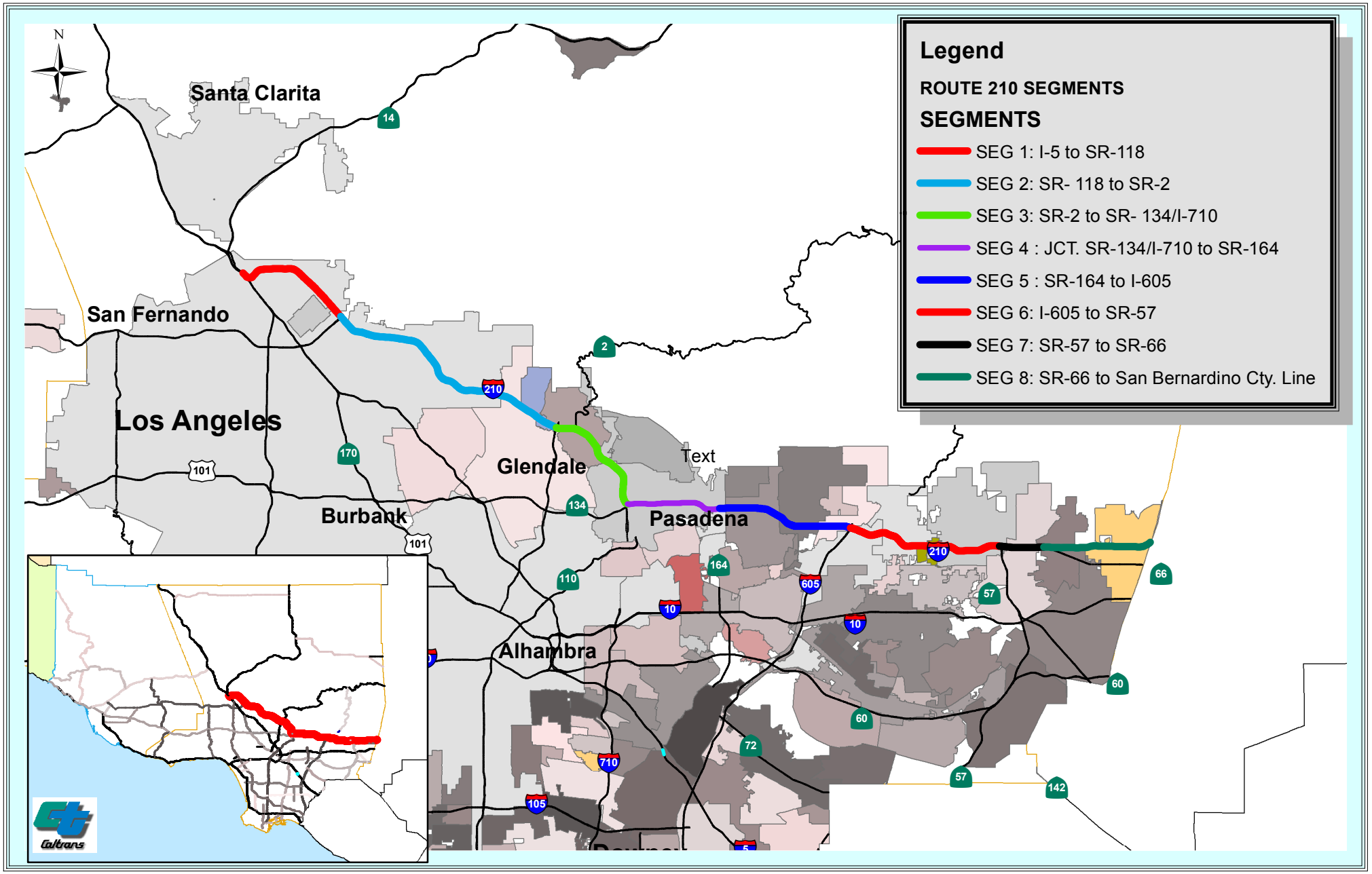
I-210 is an Interstate/Interregional freeway from I-5 to SR-57 (segments 1 through 6) and a State Highway east of SR-57 to the San Bernardino County Line (segments 7 & 8). Segments 1 through 6 are classified as an Interstate, Urban, and Principal Arterial. Its Functional Classification is P1P – an Urban Extension of a rural Principal Arterial into urban areas. This route is a part of the Federal Surface Transportation Assistance Act (STAA) network for oversized trucks and the National Highway System (NHS). Caltrans Draft 2012 Interregional Transportation Strategic Plan (ITSP) lists I-210 as a major international trade highway route.

Foothill Freeway

Seg.	P.M.	Limits	Functional Classification
1-6	R0.00-R44.37	I-5 to SR-57	P1P – Urban Principal Interstate/Interregional Freeway
6-8	R44.37-R52.15	SR-57 to Sbdo. Cty. Line	State Highway
1-8	R0.00-R52.15	I-5 to Sbdo. Cty. Line	STAA and NHS

I-210 Route Designation and Characteristics								
Segment	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Freeway and Expressway System	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
National Highway System	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategic Highway Network	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Scenic Highway	No	No	No	No	No	No	No	No
Interstate/Inter--Regional Road System Route	Yes	Yes	Yes	Yes	Yes	Yes	No	No
High Emphasis Route	No	No	No	No	No	No	No	No
Focus Route	No	No	No	No	No	No	No	No
Goods Movement Route	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Truck Designation	STAA/NHS	STAA/NHS	STAA/NHS	STAA/NHS	STAA/NHS	STAA/NHS	STAA/NHS	STAA/NHS
Conventional Highway	No	No	No	No	No	No	No	No
Rural/Urban/	Urbanized	Urbanized	Urbanized	Urbanized	Urbanized	Urbanized	Rural/Urban	Rural/Urban
Terrian	Rolling	Rolling	Rolling	Flat	Flat	Rolling	Rolling	Rolling
MPO	SCAG	SCAG	SCAG	SCAG	SCAG	SCAG	SCAG	SCAG
Regional Transp. Agency	METRO	METRO	METRO	METRO	METRO	METRO	METRO	METRO
Congestion Manag. Agency	METRO	METRO	METRO	METRO	METRO	METRO	METRO	METRO
Tribes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Air District	AQMD	AQMD	AQMD	AQMD	AQMD	AQMD	AQMD	AQMD

I-210 SEGMENTS MAP



District 7 - Advance Planning
Map by - Skb. June 2013

State of California Map

I-210 VICINITY MAP

CALTRANS D7 - OFFICE OF ADVANCE PLANNING

Community Characteristics

Interstate 210 traverses six Southern California Regional Statistical Areas (RSA). These RSAs include Pomona, Covina, Pasadena, Glendale San Fernando and Angeles Forest. Some Cities in the above mentioned RSAs are listed in the table and graph below. The City of Pasadena shows the highest population, households and employment while the City of Bradbury shows the lowest of all three categories.

In addition, Caltrans, Southern California Association of Governments (SCAG) and the Los Angeles County Metropolitan Transportation Authority (METRO) all support Transit Oriented Developments (TODs) as established by Senate Bill 375 (SB 375). Further information may be obtained on TODs by referring to SCAG's 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) web address; http://www.scagrtp.net/MediaViewer/10951?print=true). TOD is a moderate to higher density development located within easy walk of a major transit stop. Generally with a mix of residential, employment and shopping opportunities designed for pedestrians. Research have shown that these types of development increase the number of trips made by transit, walking and cycling thus reducing the number of car trips and reducing tailpipe emissions. A few TODs exist in the vicinity of I-210 and Gold Line light rail at Del Mar, Memorial Park and Sierra Madre – Phase 1. All three are in Pasadena and are completed. Phase 2 of Sierra Madre TOD is under consideration by METRO.

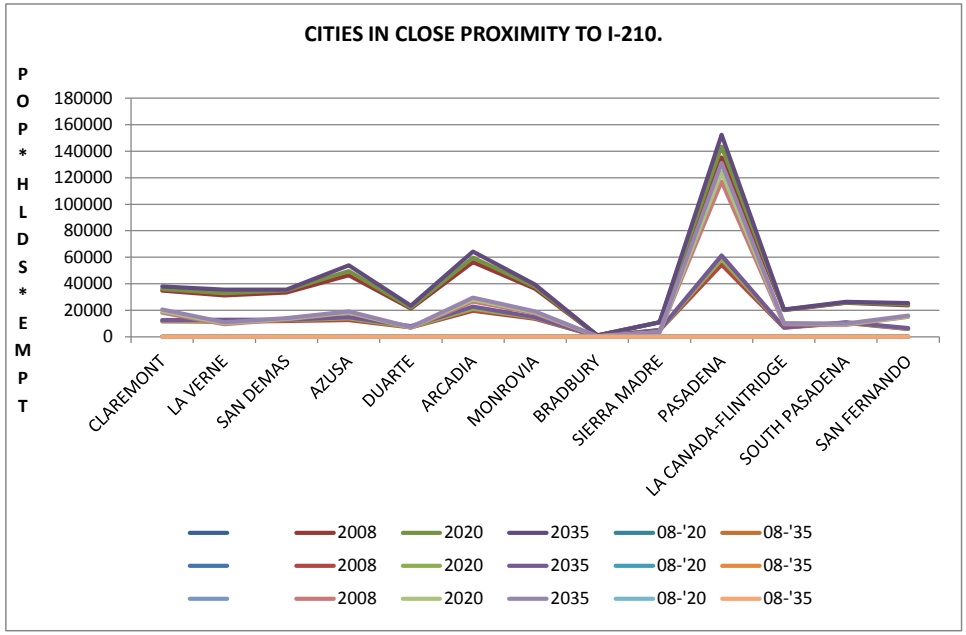
LAND USE: Land use along the route 210 corridor varies from residential to commercial, and industrial.

The terrain is rolling hills between Interstate 5 and SR-134 with some grades exceeding 3% including from the Big Tujunga Wash to the Glendale City limits (through Verdugo Hills) where the terrain includes grades of 4% and 5%.

Major trip generators along the I-210 include the Rose Bowl and California Institute of Technology in Pasadena, Santa Anita horse racing tracks and Westfield Santa Anita Mall in Arcadia and Raging Waters Amusement Park in San Dimas.

CITIES IN CLOSE PROXIMITY TO I-210

LOS ANGELES COUNTY CITIES:	POPULATION						HOUSEHOLDS						EMPLOYMENT				
				% change	% change					% change	% change					% change	% change
CITIES	2008	2020	2035	08-'20	08-'35		2008	2020	2035	08-'20	08-'35		2008	2020	2035	08-'20	08-'35
CLAREMONT	34,800	36,100	37,900	3.74%	8.91%		11,600	12,100	12,600	4.31%	8.62%		18,100	19,400	20,600	7.18%	13.81%
LA VERNE	31,100	33,000	35,600	6.11%	14.47%		11,300	12,000	12,900	6.19%	14.16%		9,400	10,100	10,800	7.45%	14.89%
SAN DEMAS	33,400	35,000	35,600	4.79%	6.59%		12,000	12,600	12,900	5.00%	7.50%		13,100	13,600	14,100	3.82%	7.63%
AZUSA	46,300	49,500	53,800	6.91%	16.20%		12,700	13,800	14,800	8.66%	16.54%		18,200	18,500	19,200	1.65%	5.49%
DUARTE	21,200	22,100	23,400	4.25%	10.38%		7,000	7,400	7,900	5.71%	12.86%		6,700	7,000	7,300	4.48%	8.96%
ARCADIA	56,200	59,600	64,300	6.05%	14.41%		19,500	21,000	22,700	7.69%	16.41%		26,700	28,100	29,500	5.24%	10.49%
MONROVIA	36,300	37,700	39,400	3.86%	8.54%		13,600	14,300	14,800	5.15%	8.82%		17,700	18,300	19,100	3.39%	7.91%
BRADBURY	1,000	1,100	1,100	10.00%	10.00%		300	400	400	33.33%	33.33%		200	300	300	50.00%	50.00%
SIERRA MADRE	10,900	10,900	11,000	0.00%	0.92%		4,800	4,900	5,000	2.08%	4.17%		3,400	3,400	3,400	0.00%	0.00%
PASADENA	135,300	143,400	152,500	5.99%	12.71%		54,500	58,400	61,400	7.16%	12.66%		117,300	124,400	131,300	6.05%	11.94%
LA CANADA-FLINTRIDGE	20,200	20,400	20,600	0.99%	1.98%		6,800	7,000	7,100	2.94%	4.41%		9,500	10,200	10,300	7.37%	8.42%
SOUTH PASADENA	25,600	25,900	26,300	1.17%	2.73%		10,500	10,600	10,800	0.95%	2.86%		9,000	9,500	10,000	5.56%	11.11%
SAN FERNANDO	23,600	24,400	25,500	3.39%	8.05%		5,900	6,200	6,600	5.08%	11.86%		15,000	15,300	15,900	2.00%	6.00%



SOURCE: SCAG's 2012 RTP Growth Forecast.

SYSTEM CHARACTERISTICS

This Transportation Concept Report (TCR)[1] is an internal Caltrans planning tool intended to provide an initial look at developments within the I-210 corridor over the next twenty years. Its primary focus is on identifying needed improvements—to provide necessary added capacity in response to anticipated travel demand. It analyzes this need in three primary ways:

1). Documents current conditions;

2). Contrasts projected future demand with planned facilities (capacity); and

3). Proposes future development alternatives to address the shortfalls between demand and capacity.

As an initial step in the planning process, observations and conclusions stated in this document serve as reference for more complex and specific studies such as Feasibility Studies, Major Investment Studies, and Project Studies. This report was prepared based on research of Regional, State, and Federal policies, plans and documents. The references are addressed in footnotes, and the Appendix Sections.

This TCR analyzes I-210 conditions using the “segment” as the study unit. Segments are generally defined as “freeway interchange to freeway interchange”, “county line to freeway interchange” or “freeway interchange to end of freeway”. The map on page 9 illustrates these segments.

The table on page 14 shows the I-210 System Characteristics.

1. This TCR is an update of the Interstate 210 Transportation Concept Report, 2003.

I-210 SYSTEM CHARACTERISTICS

Segments	Limits	Post Miles	Facility Type	Mixed Flow Lanes	HOV Lanes	Centerline Miles	Lane Miles
1	Rte. 5 to Rte. 118	R0.00-R5.91	Interstate	3	-	5.91	17.73
2	Rte. 118 to Rte.2	R5.91-R18.88	Interstate	4	-	12.97	51.88
3	Rte. 2 to Rtes.134/710	R18.88-R24.96	Interstate	4	-	6.08	24.32
4	Rtes. 134/710 to Rte. 164	R24.96-R29.49	Interstate	5	1	4.53	27.18
5	Rte. 164 to Rte. 605	R29.49-R36.41	Interstate	4	1	6.92	34.6
6	Rte. 605 to Rte. 57	R36.41-R44.37	Interstate	4	1	7.99	39.95
7	Rte. 57 to Rte. 66	R44.37-R46.62	State Highway	4	1	2.09	8.36
8	Rte. 66 to SBD. Cty. Line	R46.62-R52.15	State Highway	3	1	5.16	22.12

TRANSIT COMPONENT

BUS TRANSIT:

Currently, Foothill Transit runs several buses along the I-210 corridor. Foothill Transit operates an express bus that runs from the Montclair Transit Station to the City of Pasadena. Foothill Transit extended the 184-bus line when METRO completed the Gold Line Transit Station at Sierra Madre. The 184 line runs parallel to the I-210 freeway from Colorado Boulevard to Huntington Drive. It is anticipated that this line will extend through the cities of Arcadia and Pasadena.

Orange Line Extension Busway

Construction of the Orange Line offers faster travel times, improved bus connections, and provides better access to destinations throughout Los Angeles County. This is a four mile extension from Canoga Station to the Chatsworth Metrolink Station in San Fernando Valley.

RAIL TRANSIT:

Metrolink Commuter Rail runs from San Fernando to the Los Angeles Central Business District (Union Station) and east to the Inland Empire several times a day. Metro began service on the Pasadena Gold Line Metro Rail in July 2003. Phase I of the Gold Line project has been fully funded with state and local money and has been fully constructed using a design–build contract. This area covers from the Los Angeles Union Station to Sierra Madre Villa Avenue station in Pasadena, a distance of about 14 miles.

Metro and the San Gabriel Valley Council of Governments (SGVCOG) pursued a Phase II extension of the Gold Line east to Claremont in late 2000. SGVCOG took the lead in seeking the funds necessary for Phase II. Phase II of the Gold Line will serve the cities of Pasadena, Arcadia, Monrovia, Duarte, Irwindale, Azusa, Glendora, San Dimas, La Verne, Pomona and Claremont, as well as, some unincorporated areas of Los Angeles County.

Amtrak currently operates a transcontinental rail line called the Southwest Chief. It runs from Los Angeles through Pasadena to Chicago once a day. The San Joaquin runs from Los Angeles through Pasadena to Bakersfield.

Regional Connector Transit Corridor

Federal Transit Administration (FTA) has granted Metro a record of decision for a $1.37 billion underground light rail project in downtown Los Angeles. The nearly two mile Regional Connector Transit Corridor will connect the Metro Gold Line, Blue Line and Expo Line through downtown Los Angeles allowing easier access between San Gabriel Valley, Long Beach and the Westside. Officials estimate that three new light rail stations in downtown LA will provide access to 88,200 passengers. Metro estimates construction to begin in August 2013 and the project could be open to the public in 2019 if fully funded.

Eastside Transit Corridor:

Although Metro is currently carrying out an EIR/EIS for this transit corridor, it will serve the proposed State Route 60 Light Rail Transit to Washington Blvd.

West Santa Ana Transit Corridor:

A railroad right-of-way that extends almost twenty miles between the City of Paramount in Los Angeles County and Santa Ana in Orange County. This project should provide commuters access to transit service opportunities and reduce congestion and pollution.

Union Station Upgrades

Caltrans, Southern California Regional Rail authority (SCRRA) together with their partners recently completed three new rail tracks and a platform at the Los Angeles Union Station. The reconstruction of Platform 7 and three additional tracks will allow for greater flexibility for local, regional and national commuter services.

Funding for the project came from Proposition 1B; the 2006 voter approved transportation measure bond and, resources from Congestion Mitigation and Air Quality (CMAQ) Improvement Program and OCTA's Measure M. Of the $24.8 million earmarked for the project, $21.8 million came from Proposition 1B.

Union Station serves as a major transportation hub in Los Angeles with bus, taxi and rail connections extending throughout Los Angeles County and to other Southern California counties and the nation. Union Station is the fifth busiest rail station in the nation serving nearly two million passengers annually.

Los Angeles Union Station

Los Angeles Union Station

Los Angeles International Airport (LAX) Connection

Metro is also examining ways to connect the growing Metro Rail system to Los Angeles International Airport (LAX). The focus of this study is a four square mile area bounded by La Cienega Blvd. on the east, Manchester Avenue to the north, Imperial Highway to the south and the LAX airport terminals on the west. Initial alternatives under consideration include Light Rail Transit (LRT), Automated People Mover (APM) and Bus Rapid Transit (BRT). Metro is currently analyzing the various options for each transit type in order to narrow down the number of alternatives that will be carried forward to the environmental review phase.

Project Goals:

1. Provide a reliable, fast, and convenient connection for passengers traveling between the airport and the regional transit system
2. Satisfy the surface transportation travel demand associated with a modern, world-class international airport
3. Increase the share of transit trips to and from LAX and reduce regional traffic congestion
4. Integrate with existing and future transit connections and airport facilities

The above listed transit components together would, hopefully encourage further transit usage, thus reducing the demand on our freeways including I-210 currently and into the future.

PARALLEL ROUTES:

Interstate 5, I-10 and SR-60 serve as parallel alternative freeway routes to I-210. From I-5 in the vicinity of Sylmar to La Canada/Flintridge, Foothill Boulevard parallels I-210. In Pasadena, Colorado Boulevard is a consistent parallel route that merges with Huntington Drive in Arcadia and continues through Monrovia and Duarte, it changes into Foothill Boulevard in Irwindale. In Azusa the route diverges from Foothill Boulevard via Alosta Avenue through Glendora. At Amelia Avenue in Glendora, the route again changes name to Foothill Boulevard and continues east to San Dimas Avenue in the City of San Dimas. The parallel route then follows San Dimas Avenue to Via Verde/Raging Waters Drive near the easterly end of I-210.

Below is a list of local streets that parallel I-210 in Los Angeles County:

INTERSTATE 210 PARALLEL ARTERIALS

Arterial	Segment	City	# of Lanes	Bike Lockers
Foothill Blvd.	1, 2, 3	Sylmar La Canada Flintridge	4	None
Colorado Blvd. / Huntington Drive	4, 5, 6	Pasadena Arcadia Monrovia Duarte	4	None
Foothill Blvd. / Alosta Ave.	7, 8	Azusa Glendora San Dimas	4	None
Baseline Road	6, 7, 8	Azusa Glendora San Dimas La Verne Claremont	4	None

PARK AND RIDE:

Currently, there are five State owned and operated Park and Ride lots with a total of 680 parking stalls serving the I-210 corridor.

INTERSTATE 210 PARK AND RIDE LOTS

PM	Location	City	Bike Lockers	# of Stalls	Owner
6.0	12501 Foothill Blvd. At I-210 & Paxton Street	Pacoima	0	114	State
16.1	I-210 at 3930 Lowell Ave.	Glendale	0	150	State
29.4	Sierra Madre Blvd. at I-210	Pasadena	8	76	State
41.5	I-210 at 628 W. Baseline Rd. & Grand Ave.	Glendora	8	190	State
44.2	I-210 at Lone Hill Ave.	Glendora	8	150	State

GOODS MOVEMENT:

Goods movement or freight transportation is essential to supporting the Southern California regional economy and quality of life. The goods movement system in the SCAG region is a multimodal, coordinated network that includes deep-water marine ports, international border crossings, Class I rail lines, interstate highways, state routes and local roads, air cargo facilities, intermodal facilities, and regional distribution and warehousing clusters. In 2010, over 1.15 billion tons of cargo valued at almost $2 trillion moved across the region's transportation system. Whether carrying imported goods from the San Pedro Bay Ports to regional distribution centers, supplying materials for local manufacturers, or delivering consumer goods to SCAG residents, the movement of freight provides the goods needed to sustain regional industries and consumers on a daily basis. Working with its public and private partners, SCAG has established a vision for a comprehensive regional goods movement system that is reflected in the 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). This vision promotes the improvement of the goods movement system by:

- Maintaining the long-term economic competitiveness of the region
- Promoting local and regional job creation and retention
- Increasing freight and passenger mobility
- Improving the safety of goods movement activities
- Mitigating environmental impacts of goods movement operations

In support of this vision, the 2012–2035 RTP/SCS describes a goods movement system with regional initiatives and projects totaling nearly $50 billion through 2035. Key regional initiatives include a comprehensive system of zero- and/or near-zero-emission freight corridors, alleviation of major bottlenecks, a rail package totaling approximately $12 billion, and an environmental strategy to address emissions through both near term initiatives and a long term action plan for technology advancement. The comprehensive system of zero- and/or near-zero-emission freight corridors includes I-710, which is currently undergoing environmental review, and an east-west corridor extending to an initial segment of I-15. The rail package includes main line capacity enhancements, on-dock and near-dock rail facility improvements, and 71 grade separations. In addition, critical projects to facilitate access to the San

Pedro Bay Ports (e.g., improvements to the Gerald Desmond Bridge) and the Port of Hueneme, and to alleviate congestion at critical border crossings, are underway.

Components of the Regional Goods Movement System

Both international and domestic trade thrives in Southern California in large part due to the extensive existing transportation and goods movement infrastructure in the SCAG region. This system is comprised of the following major elements:

Seaports

The ports in the SCAG region (Los Angeles, Long Beach, and Hueneme) handled just under 120 million metric tons of cargo imports and exports, valued at $336 billion in 2010. The Ports of Los Angeles and Long Beach represent the largest container port complex in the U.S., and the sixth largest in the world. In 2010 the San Pedro Bay Ports handled 14.1 million twenty-foot equivalent units (TEUs) of containerized cargo. The Port of Hueneme, in Ventura County, specializes in the import and export of automobiles, fresh fruit, and produce, and serves as the primary support facility for the offshore oil industry.

Air Cargo Facilities

The SCAG region is home to numerous air cargo facilities, including Los Angeles International Airport (LAX) and Ontario International Airport (ONT), which combined handled over 96 percent of the region's air cargo in 2010.

Interstate, Highways, and Local Roads

The region has about 53,400 road miles, 1,630 miles of which are interstate and freeway type. Sections of I-710, I-605, SR-60, and SR-91 carry the highest volumes of truck traffic in the region, averaging over 25,000 trucks per day in 2008. In 2010, the Annual Average Daily Truck Traffic for I-210 ranged from 3.85% to 8.30% of total ADT. By 2030 on a regional basis, truck traffic is expected to increase by over 60%. Other major components of the regional highway network also serve significant numbers of trucks, including I-5, I-10, I-15, and I-210, with some sections carrying over 20,000 trucks per day. These roads carry a mix of local, domestic trade, and international cargo. The arterial roadway system also plays a critical role, providing "last mile"

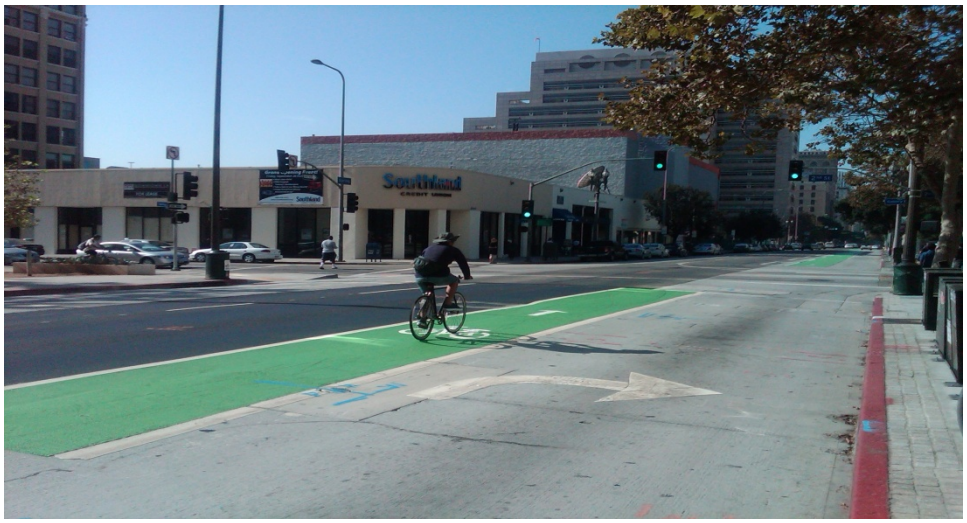
connections to the ports, manufacturing facilities, intermodal terminals, warehouses, and distribution centers.

Railroads

Two Class I railroads, the Burlington Northern Santa Fe Railway (BNSF) and Union Pacific (UP), carry international and domestic cargo to and from distant parts of the country. The BNSF operates on the Transcontinental Line (Cajon and San Bernardino Subdivisions) as well as the Orange and Olive Subdivisions. The UP operates on the Coast, Santa Clarita, Alhambra, Los Angeles, Mojave, and Yuma Subdivisions. Both railroads operate on the Alameda Corridor that connects directly to the San Pedro Bay Ports. The railroads are served by six major intermodal terminals in the region as well as multiple on-dock rail yards at the Ports of Los Angeles and Long Beach. The SCAG region also has Class III railroads (Pacific Harbor Line, Los Angeles Junction Railway, and the Ventura County Railway).

ACTIVE TRANSPORTATION

SCAG's 2012-2035 RTP/SCS invests $6.7 billion towards increasing bikeways, bringing sidewalks into compliance with Americans with Disability Act (ADA), safety improvements and other active transportation strategies. Under MAP-21, CMAQ would provide funds to states for walking and bicycling which reduces congestion and air pollution. Local streets are open for pedestrian and bicycle use including the alternate or parallel routes listed on page 19. Future improvements to I-210 corridor interchanges must not sever existing bicycle and pedestrian access facilities crossing the corridor and new or planned projects at interchanges must provide safe bicycle and pedestrian access.



Bicycle Lane

Bicycle Lockers

RAMP METERING

Ramp metering is one of Traffic Management's tools to regulate the flow of traffic entering the freeways during the peak traffic hours. Ramp metering will:

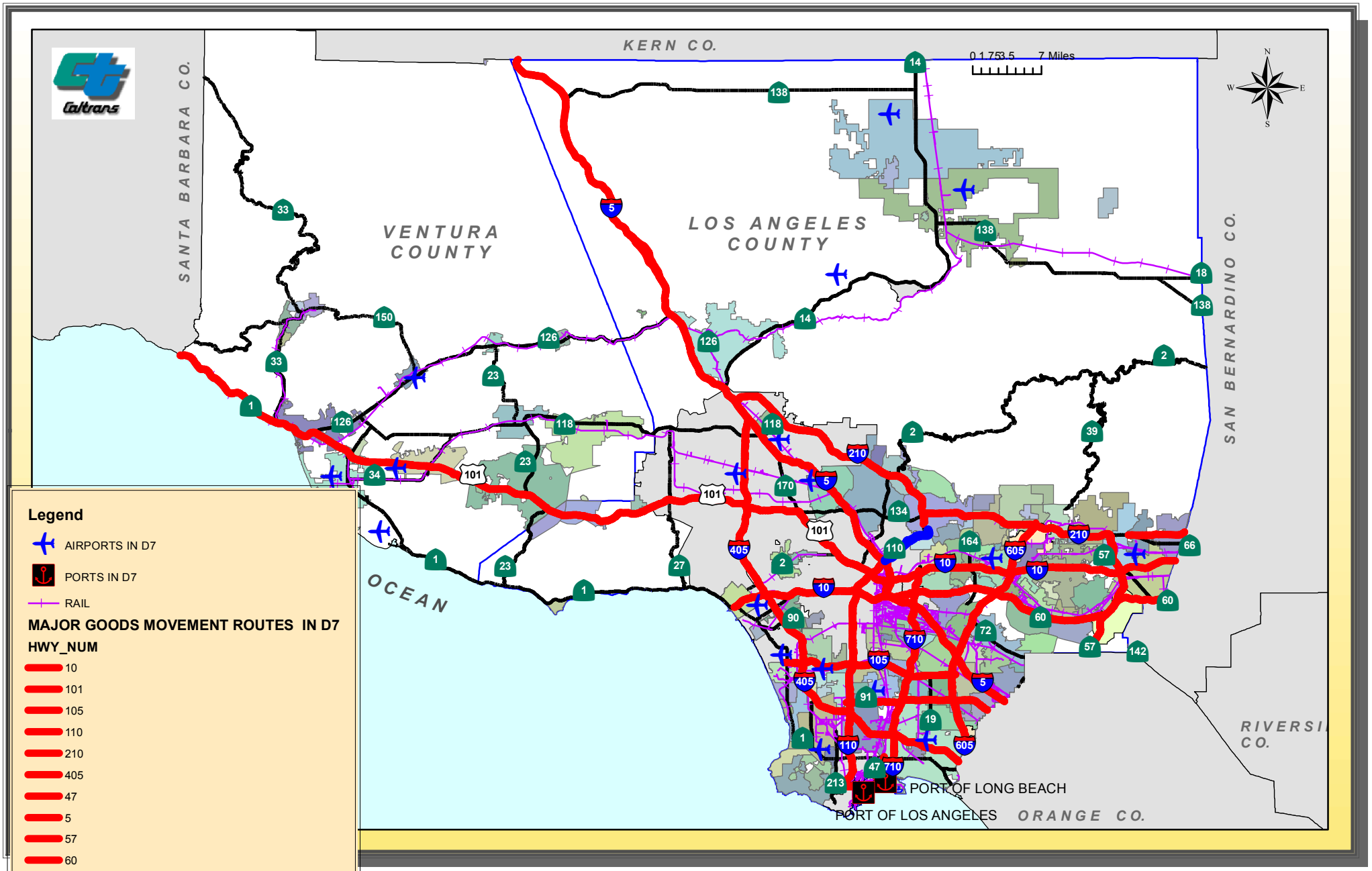
a. Smooth the overall flow of freeway traffic
b. Accommodate more vehicles per hour on the freeway
c. Decrease commuting travel times
d. Increase safety on the freeway.

Ramp metering reduces traffic congestion on the freeway. This increases the capacity of the mixed flow lane and enables traffic to flow at greater speeds. The number of traffic accidents is reduced as well. Freeway congestion is most often caused by a "bottleneck", where the freeway demand exceeds the freeway capacity. This condition usually occurs during the weekday peak hours, but some freeways experience congestion during mid-day and weekends. When demand exceeds capacity congestion creates queues of stop-and-go traffic. Ramp metering limits the amount of traffic entering the freeway so that the demand at the bottleneck does not exceed the capacity. A free-flowing traffic lane can carry 33% more cars than a congested lane. It is in the public interest to keep the freeways moving freely.

On weekdays, meters operate 5 to 6 hours during AM and PM during traffic periods, depending on recurrent directional freeway congestion. Some ramps are also metered during the mid-day hours, and some are even metered on weekends. The ramp volume as well as the volume on the freeway determines the rate at which cars are allowed onto the freeway. The mainline responsive controllers react to the volumes on the freeway, such that if the volumes decrease significantly, then the meter will adjust and allow more cars onto the freeway. If the freeway volumes are light, the meter may go to continuous green. The average cost for a complete installation of a ramp meter is $50,000. This cost as a percentage of the freeway construction varies depending on the type of freeway.

In addition to ramp meters, a system of electronic traffic sensors, changeable message signs, and closed-circuit television cameras have been installed district-wide to monitor traffic flow and respond to congestion in a variety of ways. These, plus a Highway Advisory Radio and 24 hour traffic condition cable access "Freeway Vision" are controlled from a state-of-the-art Traffic Management Center. Please refer to; http://www.dot.ca.gov/hq/traffops/systemops/ramp_meter/ for detailed information on ramp metering.

D7 GOODS MOVEMENT CORRIDOR MAP



California Department of Transportation
District 7, Los Angeles
Office of Advance Planning

Date: 6/3/13
map by - skb

TECHNOLOGY

Technological innovations will continue to provide increasing opportunities for improvements to the transportation system in several ways including; monitoring and control devices, employer/employee rideshare incentives, Intelligent Transportation Systems (ITS), goods movement and mass transit operators, and automated highways and Collision Avoidance Systems (CAS).

Monitoring and Control Devices

Several technologies deployed to assist in the smooth running of highways, thereby reducing congestion. They include loop detectors, ramp meters, changeable message signs, Closed Caption Television (CCTV) and cameras, etc. These devices compliment Freeway Service Patrols (FSP), and working in cooperation with the California Highway Patrol via a Traffic Management Center (TMC) to observe and respond to incidents quickly.

Employer/Employee Rideshare Incentives

Employers are provided with incentives to encourage their employees participate in several congestion reduction programs such as ridesharing, vanpooling, telecommuting, and work from home and/or flexible work hours.

Intelligent Transportation Systems

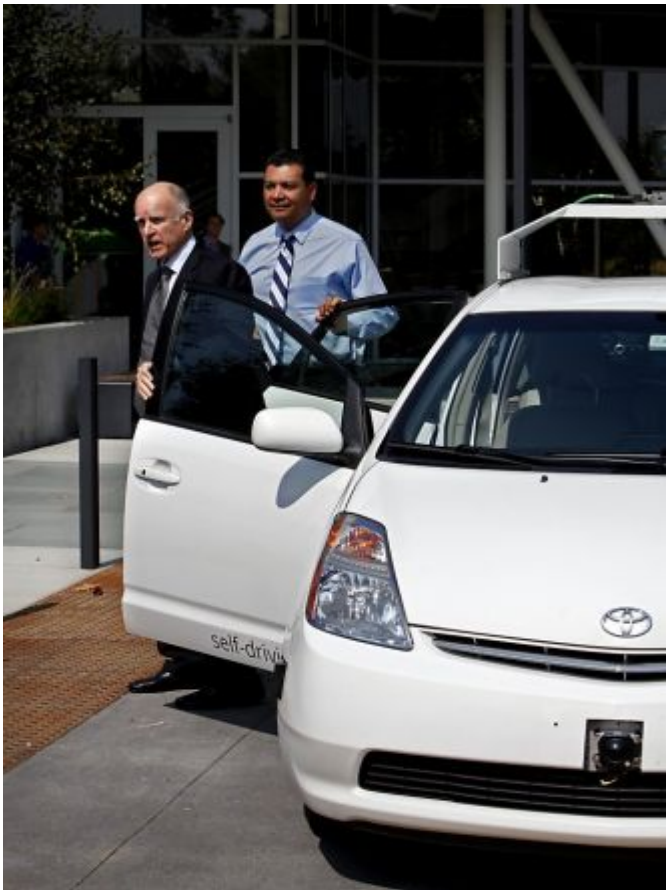
Components of traveler information available via the internet, kiosks, personal communication devices, provide travel information with which to make informed travel decisions. They include Geographic Information Systems (G.I.S) and Global Positioning Systems (GPS).

Goods Movement and Mass Transit Operators

Goods movement and mass transit benefits from automatic vehicle location and identification, vehicle routing, transponders with permit and weigh-in-motion information, smart cards and traffic signal preemption.

Automated Highways

Senate Bill 1298 (SB1298) sponsored by Senator Alex Padilla and signed into law by Governor Jerry Brown on September 25, 2012, will allow the operation of autonomous vehicles on California highways. This new bill allows driverless vehicles to be operated on California roadways. These technologies incorporate Vehicle to Vehicle (V2V) and Vehicle to Infrastructure (V2I) communication Systems together with computers and cameras to be successful. Self-driving or driverless cars eliminates human errors thereby reducing congestion and increasing safety on our highways.



Gov. Jerry Brown arrives at Google headquarters in a Google driverless car in Mountain View, Calif., Tuesday, September 25, 2012. Gov. Brown signed a new bill regulating the ability of still-experimental driverless vehicles to operate on California roads.

Photo: by Sarah Rice; San Francisco Chronicle.

Environmental Consideration

Southern California is known for traffic congestion and its impacts. Pollution of various types is typical in this region. Air quality, noise and water pollution are common. The table below shows general environmental concerns in the vicinity of I-210.

I-210 Environmental Scan Table

Segments	Section 4(f) Land	Farmland/ Timberland	Environmental Justice	Cultural Resources	Visual Aesthetics	Geology/Soils/ Seismic	Floodplain	Climate Change Vulnerability	Hazardous Materials	Naturally Occurring Asbestos	Air Quality				Noise	Waters and Wetlands	Special Status Species	Fish Passage	Habitat Connectivity
											Ozone	PM 2.5	PM 10	CO					
1-8	Low	None	Low	Low	Medium	Medium	Low	General	Medium	Low	Non-Attainment	Non-Attainment	Non-Attainment	Attainment	High	Low	Medium	None	Low

Source: *South Coast Air Basin (SCAB) Los Angeles County*

CORRIDOR PERFORMANCE

The I-210 corridor has some major trip generators including the Rose Bowl and California Institute of Technology in Pasadena, Santa Anita horse racing tracks and Westfield Santa Anita Mall in Arcadia and Raging Waters Amusement Park in San Dimas. The route traverses over fifteen cities and communities which all use it for local commute on weekdays and weekends in Los Angeles County. It also provides an alternate by-pass route for through traffic traveling to and from northern California thereby avoiding the Los Angeles Central Business District (LACBD).

In order to ease congestion and provide better connectivity, the I-210 freeway was recently extended 14 miles from Foothill Boulevard in the City of La Verne in Los Angeles County to Day Creek Boulevard in the City of Rancho Cucamonga in San Bernardino County. This connected I-210 with a six-mile section of the freeway that opened in November 2002 from Day Creek Boulevard to Sierra Avenue in the City of Fontana in San Bernardino County.

I-210 Corridor Performance will consider Basic Systems Operations, Truck Traffic and Peak Hour (PH) traffic data in determining the corridor performance. Please refer to enclosed tables for more details.

I-210 Basic System Operations							
Segment	**AADT 2008**	**AADT 2035**	**LOS 2008**	**LOS 2035**	**LOS CONCEPT**	**VMT 2008**	**VMT 2035**
1	83,300	107,300	E	F0	6	419,700	542,800
2	144,100	155,900	F0	F0	8	1,630,900	1,771,500
3	148,600	164,800	E	E	8	757,300	841,200
4	321,700	348,000	F0	F0	12	1,267,300	1,371,500
5	264,700	288,500	F1	F0	10	1,554,600	1,694,100
6	279,900	298,800	F1	F0	10	1,915,500	2,048,300
7	190,900	214,100	F0	F0	9	270,300	303,800
8	174,700	198,900	F0	F0	9	887,400	1,037,300

I-210 TRUCK TRAFFIC

	2008	2008	TOTAL	5 WHEEL	5 WHEEL AXLE
SEGMENT	TOTAL AADT	TRUCK AADT	TRUCK %	AXLE TRUCKS	TRUCK %
1	83,300	8,100	8.30%	4,800	59.70%
2	144,100	10,400	7.20%	6,500	61.90%
3	148,600	10,700	8.80%	7,200	66.80%
4	321,700	15,100	5.30%	8,300	55.20%
5	264,700	19,600	7.60%	10,600	54.30%
6	279,900	18,700	7.40%	11,830	63.20%
7	190,900	8,400	4.80%	4,700	56.60%
8	174,700	11,400	6.5%	6,900	60.6%

CORRIDOR CONCEPT AND CONCLUSION

Concept Rationale

Interstate 210 is congested during peak periods, with delays, backups and bottlenecks and stop-and-go conditions. In addition, a mix of trucks, cars and recreational vehicles and a limited number of lanes combine to present numerous driving challenges which further constrain capacity and reduce travel times through the corridor. The Gold Line, a light rail project assists in absorbing some of the traffic together with a network of bus systems, bicycle and pedestrian traffic on adjacent local streets. In order to maintain continuity, I-210 was recently extended fourteen miles from Foothill Blvd. in the City of La Verne in Los Angeles County to Day Creek Blvd. in the City of Rancho Cucamonga in San Bernardino County.

PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES

Segment	Description	Planned or Programmed	Location	Source	Purpose
5 to 7	Closed Circuit TV System.	Programmed	In LA CTY. At Various Locations	PMCS Data	Traffic Monitoring
5 to 6	Construct Sound Wall	Programmed	Between Santa Anita Ave and California Ave	PMCS Data	Safety and Noise Reduction
6	Construct Sound Wall	Programmed	City of Duarte	PMCS Data	Safety and Noise Reduction
6	Construct Sound Wall	Programmed	City of Glendora	PMCS Data	Safety and Noise Reduction
4 to 5	Construct Sound Wall	Programmed	Cities of Pasadena/Arcadia	PMCS Data	Safety and Noise Reduction
4 to 8	Rehabilitate Concrete	Programmed	Los Angeles County	PMCS Data	Concrete Rehabilitation
5 to 7	Bridge Preservation	Programmed	Huntington Dr. UC to San Demas Ave. UC	PMCS Data	Bridge Preservation
4 to 5	Transportation Enhancement	Programmed	Pasadena	PMCS Data	Transportation Enhancement

FEDERAL TRANSPORTATION IMPROVEMENT PROGRAM (FTIP)			
PROJECT ID	ROUTE	COUNTY	DESCRIPTION
LA0G411	210	Los Angeles	Soundwalls-Between Pennsylvania Ave. to Lowell Ave..
LA0G121	210	Los Angeles	Design 2 Soundwalls @ La Canada Flintridge
LAE0219	210	Los Angeles	Construct Soundwalls along I-210 between Arroyo Blvd. and Orange Grove

FINANCIALLY CONSTRAINED RTP PROJECTS			
RTP ID	ROUTE	COUNTY	DESCRIPTION
LAE219	210	Los Angeles	Construct Soundwalls along I-210 between Arroyo Blvd. and Orange Grove

STRATEGIC PROJECT			
RTP ID	ROUTE	COUNTY	DESCRIPTION
S1120036	210	Los angeles	Soundwalls. From Berkshire Ave. to OceanView Blvd.

DEMONSTRATION PROJECT FROM COMPASS BLUEPRINT IN THE I-210 VICINITY
1. LA County TOD Access Study.
2. San Gabriel Valley Arrow Highway Corridor Plan

METRO 2009 LONG RANGE TRANSPORTATION STRATEGIC PLAN

1. I-210 Soundwalls from Berkshire Ave. to Ocean View Blvd.
   (Arroyo Verdugo COG/La Canada Flintridge)
2. SR134/I-210 Interchange Improvements (Arroyo Verdugo COG/La Canada Flintridge)

CONCLUSION:

Traffic volume is forecasted to increase on Interstate 210 due to the growth in population, housing and employment along this route and throughout the region. Growth in the region will continue to create mobility challenges and put additional stresses on our transportation system. Southern California is not only an important component of California's economy but it is also vital to the United States and world's economy as a whole. It is critical that mobility be maintained and improved in order to sustain the economic growth that is expected. In addition to sustaining the economic vitality of the region, mobility is also an important component in enhancing the quality of life for the residents in this region. I-210 is only one component of the transportation infrastructure but it plays a critical role in providing mobility for the region. In order to improve mobility, additional capacity will be required beyond those planned and programmed in the 2012 RTP to maintain an acceptable level of service through 2035.

District 7 Office employs a variety of strategies to address current congestion challenges including:

- High Occupancy Vehicle Lane (HOV)
- Ramp Metering
- Congestion Pricing (Toll Lanes)

• Changeable Message Signs (CMS)

Several regional freeway capacity expansion projects are in the planning process, under development or under construction which will assist in decreasing congestion. Constructing an HOV or Managed Lane system continues to be a priority. The highway system is only one component of the transportation infrastructure; but it plays a very important role in providing mobility for the region. To achieve the desired minimum acceptable level of service, additional lanes will be needed beyond those planned and programmed in the 2012 RTP/SCS.

APPENDIX A – Glossary of Terms and Acronyms

AADT: (Average Annual Daily Traffic) Denotes that the daily traffic is averaged over one calendar year.

ADT: (Average Daily Traffic) The average number of vehicles passing a specified point during a 24-hour period.

AQMD: (Air Quality Management District) A regional agency, which adopts and enforces regulations to achieve and maintain state and federal air quality standards.

AQMP: (Air Quality Management Plan) The plan for attaining state air quality as required by the California Clean Air Act of 1988. The plan is adopted by air quality districts and is subject to approval by the California Air Resources Board.

ATIS: (Advanced Traveler Information Systems)

ATMS: (Advanced Traffic Management Systems)

AV: (Antelope Valley Transit)

AVCS: (Automated Vehicle Control Systems)

AVO: (Average Vehicle Occupancy) The average number of persons occupying a passenger vehicle along a roadway segment intersection, or area, as typically monitored during a specified time period. For the purpose of the California Clean Air Act, passenger vehicles include autos, light duty trucks, passenger vans, buses, passenger rail vehicles and motorcycles.

AVR: (Average Vehicle Ridership) The number of employees who report to a worksite divided by the number of vehicles driven by those employees, typically averaged over an established time period. This calculation includes crediting vehicle trip reductions from telecommuting, compressed workweeks and non-motorized transportation.

Caltrans: (California Department of Transportation) As the owner/operator of the state highway system, state agency responsible for its safe operation and maintenance. Proposes projects for intercity rail, interregional roads, and sound walls. Also responsible for the SHOPP, Toll Bridge, and Aeronautics programs.

Caltrans is the implementing agency for most state highway projects, regardless of program, and for the Intercity Rail program.

CBD: (Central Business District) The downtown core area of a city, generally an area of high land valuation, traffic flow, and concentration of retail business offices, theaters, hotels, and service businesses.

CCTV: (Closed Circuit Television)

CEQA: (California Environmental Quality Act) A statute that requires all jurisdictions in the State of California to evaluate the extent of environmental degradation posed by proposed development or project.

CHP: (California Highway Patrol)

CIP: (Capital Improvement Program) A seven-year program of projects to maintain or improve the traffic level of service and transit performance standards developed and to mitigate regional transportation impacts identified by the CMP Land Use Analysis Program, which conforms to transportation-related vehicle emissions air quality mitigation measures.

CMA: (Congestion Management Agency) The agency responsible for developing the Congestion Management Program and coordinating and monitoring its implementation.

CMAQ: (Congestion Mitigation Air Quality program) Part of ISTEA, this is a funding program designed for projects that contribute to the attainment of air quality goals.

CMP: (Congestion Management Program) A legislatively required countywide program, which addresses congestion problems.

CMS: (Changeable Message Sign)

CMS: (Congestion Management System) Required by ISTEA to be implemented by states to improve transportation planning.

COG: (Council of Governments) A voluntary consortium of local government representatives, from contiguous communities, meeting on a regular basis, and formed to cooperate on common planning and solve common development problems of their area. COGs can function as the RTPAs and MPOs in urbanized areas.

Commute Hours: AM and PM peak commute travel times. Generally, between the hours of 5:00 a.m. to 9:00 a.m. and 4:00 p.m. to 7:00 p.m., Monday through Friday.

Compass Blueprint: SCAG's new way to look at how Southern California grows using the 2012/2035 RTP/SCS to assist local government planning efforts. *www.compassblueprint.org*

Concept: A strategy for future improvements that will reduce congestion or maintain the existing level of service on a specific route.

Congestion: Defined by Caltrans as, reduced speeds of less than 35 miles per hour for longer than 15 minutes.

CTC: (California Transportation Commission) A body established by Assembly Bill 402 (AB 402) and appointed by the Governor to advise and assist the Secretary of the Business, Transportation and Housing Agency and the Legislature in formulating and evaluating state policies and plans for transportation.

D/C: (Demand-to-Capacity ratio) The relationship between the number of vehicle trips operating on a facility, versus the number of vehicle trips that can be accommodated on that facility.

DSMP: (District System Management Plan) A part of the system planning process. A district's long-range plan for management of transportation systems in its jurisdiction.

EIR: (Environmental Impact Report) A report prepared pursuant to CEQA that analyzes the level of environmental degradation expected to be caused by a proposed development or project.

Extended Commute: Service hours beyond the normal commute hours. Generally, in the evening, this refers to transit service until 10:00 p.m.

F+I Actual: (Fatal Plus Injury Actual) Contains specific data for accidents that are State highway related. Each accident record contains a ramp, intersection or highway postmile address that ties it to the Highway database.

F+I Average: (Fatal Plus Injury Average) The Statewide Average Accident Rate (SWA) is based on a rated segment. The accident-rating factor (ARF) indicates how the existing segment compares to other segments on the Sate Highway System. The ARF is a comparison of the segment's accident rate to the statewide average accident rate for roads of the same type and having similar characteristics. Accident severity as well as accident frequency is considered in calculating the ARF. If the total number of accidents is less than three, there will not be a calculation for the ARF. If there are more than two, but less than twenty-five total accidents, an accident-rating factor will be generated, but there will not be an accident severity flag listed. If there are more than twenty-five accidents, an accident rating factor and severity flag will be generated.

F+I/MVM: (Fatal Plus Injury per Million Vehicle Miles) The fatality rate of those killed in vehicles plus the injury rate of those injured in vehicles.

FAI: (Federal Aid Interstate) Highway program established in 1956 for national defense purposes, these roadways interconnect the major nationwide population and economic centers. Also, there is a federal funding category for these routes.

FHWA: (Federal Highway Administration)

Free-flow Speed: Speed that occurs when density and flow are “zero”.

Freeway Capacity: The maximum sustained 15 minute rate of flow that can be accommodated by a uniform freeway segment under prevailing traffic and roadway conditions in a specified direction.

FSP: (Freeway Service Patrol) A special team of tow truck drivers who continuously patrol freeways during commuter hours to help clear disabled automobiles.

FT: (Foothill Transit)

GM: (Gardena Municipal Bus Lines)

GRT: (Guaranteed Return Trip) A ridesharing strategy which provides a “Guaranteed Return Trip” to those who rideshare, in the case of an emergency or when overtime work hours are required.

HAR: (Highway Advisory Radio)

HCM: (Highway Capacity Manual) Revised in 1994 by the Transportation Research Board of the National Research Council, the HCM presents various methodologies for analyzing the operation (see Level of Service) of transportation systems as freeways, arterial, transit, and pedestrian facilities.

HOT Lanes: (High Occupancy Toll Lane) New HOV lanes that allow single occupant vehicles access for a fee.

HOV: (High Occupancy Vehicle Lane) A lane of freeway reserved for the use of vehicles with more than a preset number of occupants; such vehicles often include buses, taxis and carpools.

HSR: (High Speed Rail) A regional system that will connect major regional activity centers and significant inter-/multi-modal transportation facilities.

I/C: (Interchange) A system of interconnecting roadways in conjunction with one or more grade separations providing for the interchange of traffic between two or more roadways on different levels.

ICES: (Intermodal Corridors of Economic Significance) Significant National Highway System Corridors that link intermodal facilities most directly, conveniently and efficiently to intrastate, interstate and international markets.

IRRS: (Interregional Road System) A series of interregional state highway routes, outside the urbanized areas, that provide access to, and links between, the state's economic centers, major recreational areas, and urban and rural regions.

ISTEA: (Intermodal Surface Transportation Efficiency Act) Federal legislation and funding Program adopted in 1991. It provides increased funding and program flexibility for multi-modal transportation programs. Update: ISTEA expired on September 30, 1997. In December 1997, Congress passed and the President signed a six-month extension of the law, holding funding to current levels and keeping program structure and formulas intact. This extension expired on March 31, 1998, with an obligation deadline of May 1, 1998. On June 9, 1998, the President signed into law PL 105-178, the Transportation Equity Act for the 21st Century (TEA-21) authorizing highway, highway safety, transit and other surface transportation programs for the next 6 years. TEA-21 builds on the initiatives established in the 1991 ISTEA.

ITIP: (Interregional Transportation Improvement Program) An improvement program that makes up 25% of the STIP. 60% of this program is for improvements on Interregional Routes in non-urbanized areas and intercity rail.

40% is to fund projects of interregional significance (for the interregional movement of people and goods).

ITMS: (Intermodal Transportation Management System) A quick-response statewide sketch planning tool to assist planners in evaluating proposals in order to improve spending decisions. It provides the capability to analyze the current transportation network and to evaluate the impacts of investment options at the

corridor area or statewide level.

ITS: (Intelligent Transportation Systems) The application of electronics and computer information systems to transportation.

ITSP: (Interregional Transportation Strategic Plan) Caltrans guiding framework for implementing the Interregional Improvement Program under Senate Bill 45.

IVHS: (Intelligent Vehicle Highway Systems) The development of application of electronics, communications or information processing (including advanced traffic

management systems, public transportation systems, satellite vehicle tracking systems, and advanced vehicle communications systems) used alone or in combination to improve the efficiency and safety of surface transportation systems.

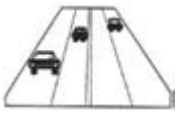
LACMTA: (Los Angeles County Metropolitan Transportation Authority) Also called METRO.

LADOT: (Los Angeles Department of Transportation)

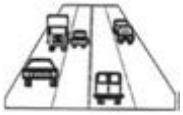
LARTS: (Los Angeles Regional Transportation Study) An organization of transportation planners and data analysts who have developed and are charged with monitoring and forecasting travel in the Los Angeles area. It has primary responsibility for predicting future travel behavior within six counties (Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial) which comprises the Southern California Association of Governments (SCAG) region. It operates under the aegis of CALTRANS, District 7, and functions with the support of SCAG, U.S. Department of Transportation, and transit districts, cities and counties of the SCAG region.

LIR: (Local Implementation Report) A report that jurisdictions must submit to LACMTA to remain in conformance with Los Angeles County Congestion Management Program (CMP) requirements. This report is submitted on an annual basis, and contains a resolution of conformance, new development activity reporting, selected mitigation strategies and credit claims and future transportation improvements.

LOS – Level of Service is a qualitative measure describing operational conditions within a traffic stream and their perception by motorists. A LOS definition generally describes these conditions in terms of speed, travel time, freedom to maneuver, traffic interruption, comfort, and convenience. Six levels of LOS 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 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.

LROP: (Long-Range Operations Plan)

LX: (Los Angeles Department of Transportation Commuter Express)

MAP-21: (Moving Ahead for Progress in the 21st Century). Latest Federal Transportation Re-Authorization Bill. It extends federal highway and transit funding through FY 2014. Refer to http://map-21-fl.com for more information.

MF: (Mixed Flow) Traffic movement having automobiles, trucks, buses, and motorcycles sharing traffic lanes. Same as general purpose lane.

Model: (1) A mathematical or conceptual presentation of relationships and actions within a system. It is used for analysis of the system or its evaluation under various conditions. (2) A mathematical description of a real-life situation, that uses data on past and present conditions to make a projection about the future.

Model, Land Use: A model used to predict the future spatial allocation of urban activities (land use), given total regional growth, the future transportation system, and other factors.

Model, Mode Choice: A model used to forecast the proportion of total person trips on each of the available transportation modes.

Model, Traffic: A mathematical equation or graphic technique used to simulate traffic movements, particularly those in urban areas or on a freeway.

MPAH: (Master Plan of Arterial Highways)

MPO: (Metropolitan Planning Organization) According to U.S. Code, the organization designated by the governor and local elected officials as responsible, together with the state, for the transportation planning in an urbanized area. It serves as the forum for cooperative decision making by principal elected officials of general local government.

MTA: (Metropolitan Transportation Authority) Metro Bus Lines

Multi-modal: Pertaining to more than one mode of travel.

NHS: (National Highway System) Will consist of 155,000 miles (plus or minus 15 percent) of the major roads in the U.S. Included will be all Interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network, and strategic highway connectors.

Night Owl: Evening transit service hours that extend beyond the normal commute service hours, but is less than 24 hour per day.

NOP: (Notice of Preparation) A notice informing potentially affected agencies that an Environmental Impact Report (EIR) is being prepared for a proposed development or project.

Null: A concept that includes only existing projects and those projects which may or may not be constructed but are programmed in the 1996 STIP.

OHC: Other Highway Construction.

Peak: (Peak Period, Rush Hours): (1) The period during which the maximum amount of travel occurs. It may be specified as the morning (a.m.) or afternoon or evening (p.m.) peak. (2) The period during which the demand for transportation service is the heaviest. (AM Peak period represents 6:30 a.m. to 8:30 a.m. and PM Peak period represents 3:00 p.m. to 6:00 p.m.)

Performance Indicator: Quantitative measures of how effective an activity, task, or function is being performed. In transportation systems, it is usually computed by relating a measure of service output or use to a measure of service input or cost.

PM: (Post Mile) Is the mileage measured from a county line or the beginning of a route to another county line or the ending of the route. Each post mile along a route in a county is a unique location on the State Highway System.

PMT: (Passenger Miles Traveled) The number of miles traveled by all passengers on a transportation mode such as transit.

PPN: (Planning and Program Number) Used in the State Transportation Improvement Program (STIP) to identify projects.

PSR: (Project Study Report) The pre-programming document required before a project may be included in the STIP.

Public Transportation: Transportation service to the public on a regular basis using vehicles that transport more than one person for compensation, usually but not exclusively over a set route or routes from one fixed point or another. Routes and schedules may be determined through a cooperative arrangement. Subcategories include public transit service, and paratransit services that are available to the general public.

RAS: (Rehabilitation and Safety)

Ridesharing: Two or more persons traveling by any mode, including but not limited to, automobile, vanpool, bus, taxi, jitney, and public transit.

RME: (Regional Mobility Element) SCAGs major policy and planning statement on the region's transportation issues and goals. It is comprised of a set of long-range policies, plans, and programs that outline a vision of a regional transportation system compatible with federal and state mobility objectives. Formerly called the Regional Mobility Plan (RMP).

RMP: (Regional Mobility Plan) The equivalent to the federal and state required Regional Transportation Plan (RTP) for the SCAG region.

Roadway Characteristics: The geometric characteristics of the freeway segment under study, including the number and width of lanes, lateral clearances at the roadside and median, free-flow speeds, grades and lane configurations.

RSA: (Regional Statistical Area) An aggregation of census tracts for the purpose of sub-regional demographic and transportation analysis within the Southern California Association of Governments (SCAG) area.

RTIP: (Regional Transportation Improvement Program) A list of proposed transportation projects submitted to the CTC by the regional transportation planning agency, as a request for state funding through the FCR and Urban and Commuter Rail Programs. The individual projects are first proposed by local jurisdictions (CMAs in urbanized counties), then evaluated and prioritized by the RTPA for submission to the CTC. The RTIP has a seven-year planning horizon, and is updated every two years.

RTP: (Regional Transportation Plan) A comprehensive 20-year plan for the region, updated every two years by the regional transportation-planning agency. The RTP includes goals, objectives, and policies, and recommends specific transportation improvements.

RTPA: (Regional Transportation Planning Agency) The agency responsible for the preparation of RTPs and RTIPs and designated by the State Business Transportation and Housing Agency to allocate transit funds. RTPAs can be local transportation commissions, COGs, MPOs or statutorily created agencies. In the Los Angeles area, SCAG is the RTPA.

SC: (Santa Clarita Transit)

SCAB: (South Coast Air Basin) A geographic area defined by the San Jacinto Mountains to the east, the San Bernardino Mountains to the north, and the Pacific Ocean to the west and south. The entire SCAB is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

SCAG: (Southern California Association of Governments) The Metropolitan Planning Organization (MPO) for Ventura, Los Angeles, Orange, San Bernardino, Riverside and Imperial counties that is responsible for preparing the RTIP and the RTP. SCAG also prepared land use and transportation control measures in the 1994 Air Quality Management Plan (AQMP).

SCAQMD: (South Coast Air Quality Management District) The agency responsible for preparing the Air Quality Management Plan (AQMP) for the South Coast Air Basin.

SCRRA: (Southern California Regional Rail Authority) Operates Metrolink.

SHELL: (Subsystem of Highways for the movement of Extra Legal Loads)

SHOPP: (State Highway Operation and Protection Program) A four-year program limited to projects related to State highway safety and rehabilitation.

SJHTC: (San Joaquin Hills Transportation Corridor)

SM: (Santa Monica Transit)

Smart Shuttle: A multiple occupant passenger vehicle equipped with advanced technology for more effective vehicle and fleet planning, scheduling and operation, as well as offering passengers more information and fare payment options.

SR: (State Route)

SRTP: (Short-Range Transit Program) A five-year comprehensive plan required by the Federal Transit Administration for all transit operators receiving federal funds. The plans establish the operator's goals, policies, and objectives, analyze current and past performance, and describe short-term operational and capital improvement plans.

STAA: (Surface Transportation Assistance Act)

STIP: (State Transportation Improvement Program) A list of transportation projects, proposed in RTIPs and the PSTIP, which are approved for funding by the CTC.

STP: (Surface Transportation Program) Part of ISTEA, this is a funding program intended for use by the states and cities for congestion relief in urban areas.

STRAHNET: (Strategic Highway Network)

TASAS: (Traffic Accident Surveillance and Analysis System) A system that provides a detailed list and/or summary of accidents that have occurred on highways, ramps or intersections in the State Highway System. Accidents can be selected by location, highway characteristics, accident data codes or any combination of these.

TCM: (Transportation Control Measure) A measure intended to reduce pollutant emissions from motor vehicles. Examples of TCMs include programs to encourage ridesharing or public transit usage, city or county trip reduction ordinances, and the use of cleaner burning fuels in motor vehicles.

TCR: (Transportation Concept Report) Formerly Route Concept Report (RCR) this report analyzes a transportation corridor service area, establishes a twenty-year transportation planning concept and identifies modal transportation options and applications needed to achieve the twenty-year concepts.

TDM: (Transportation Demand Management) Demand based techniques for reducing traffic congestion, such as ridesharing programs and flexible work schedules enabling employees to commute to and from work outside of peak hours.

TEA-21: (Transportation Equity Act for the 21st Century) Signed by President Clinton on June 9, 1998. TEA-21 builds on the initiatives established in the ISTEA Act of 1991. This new Act combines the continuation and improvement of current programs with new initiatives to meet the challenges of improving safety as traffic continues to increase at record levels, protecting and enhancing communities and the natural environment as we provide transportation, and advancing America's economic growth and competitiveness domestically and internationally through efficient and flexible transportation.

TIA: (Transportation Impact Analysis) An analysis procedure to assist local jurisdictions in assessing the impact of land use decisions on the Congestion Management Program (CMP) system for Los Angeles County.

TL: (Truck Lane)

TMC: (Transportation Management Center) A focal point that can monitor traffic and road conditions, as well as train and transit schedules, and airport and shipping advisories. From here, information about accidents, road closures and emergency notifications is relayed to travelers.

TOS: (Traffic Operation System) Computer based signal operation.

TOT/MVM: (Total Accidents Per Million Vehicle Miles)

TPMP: (Transit Performance Measurement Program) A state mandated program to evaluate transit operator system performance on the basis of operating statistics. The program monitors transit system performance of Los Angeles County operators that receive state and federal funds and analyzes the institutional relationships among operators to ensure coordination.

Traffic Conditions: Any characteristics of the traffic stream that may affect capacity or operations, including the percentage composition of the traffic stream by vehicle type and driver characteristics (such as the differences between weekday commuters and recreational drivers).

Transportation Management Association (TMA)/Organization (TMO): A private/non-profit association that has a financial dues structure joined together in a legal agreement

for the purpose of achieving mobility and air quality goals and objectives within a designated area. There are fourteen operating TMA/TMO's in Los Angeles County.

TRO: (Trip Reduction Ordinances)

TSM: (Transportation System Management) That part of the urban transportation Process undertaken to improve the efficiency of the existing transportation system. The intent is to make better use of the existing transportation system by using short-term, low capital transportation improvements that generally cost less and can be implemented more quickly than system development actions.

TT: (Torrance Transit)

TW: (Transitway)

UTPS: (Urban Transportation Planning System) A tool for multi-modal transportation planning developed by the Urban Mass Transportation Administration (now the Federal Transit Administration) and the Federal Highway Administration. It is used for both long and short-range Planning, particularly system analysis and covers both computerized and manual planning methods. UTPS consists of computer programs, attendant documentation, user guides and manuals that cover one or more of five analytical categories: highway network analysis, transit network analysis, demand estimation, data capture and manipulation, and sketch planning.

V-2-V: Vehicle to Vehicle

V-I: Vehicle to Infrastructure

VCTC: (Ventura County Transportation Commission)

Vehicle Occupancy: The number of people aboard a vehicle at a given time; also known as auto or automobile occupancy when the reference is to automobile travel only.

Vehicle Trip: A one-way movement of a vehicle between two points.

V/C: (Volume/Capacity).

VMT: (Vehicle Miles Traveled) (1) On highways, a measurement of the total miles traveled in all vehicles in the area for a specified time period. It is calculated by the number of vehicles multiplied by the miles traveled in a given area or on a given highway during the time period. (2) In transit, the number of vehicle miles operated on a given route or line or network during a specified time period.

VSM: (Vehicle Service Miles) The total miles traveled by transit service vehicles while in revenue service.

APPENDIX B - Resources

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