

CALIFORNIA DEPARTMENT OF TRANSPORTATION

**ROUTE CONCEPT FACT SHEET
DISTRICT 8**

STATE ROUTE 18



**08-SBd-18-PM 0.0/115.9
07-LA-18-PM 0.0/4.5**

**DIVISION OF PLANNING
March 2002**

STATEMENT OF PLANNING INTENT

This route concept report (RCR) is a planning document that describes the Department's basic approach to development of a given route. Considering financial constraints, characteristics of the highway and projected travel demand over an approximate 20-year planning period, the RCR defines the type of facility and level of service (LOS) for each route. The objective of this effort is to provide a better basis for the development of the State Transportation Improvement Program (STIP) and to determine the appropriate concept for future highway projects.

Government Code Section 65086 requires the Department of Transportation to carry out long-term State highway system planning through the preparation of RCR's to identify future highway improvements and new transportation corridors.

District staff and local and regional agencies have opportunity for input to and preparation and review of the RCR. Regional Improvement Program (RIP) and Interregional Improvement Program (IIP) funded improvements are included in the RCR. The RCR will be updated when necessary as conditions or new information is obtained.

RCR's are preliminary planning documents that lead to subsequent programming and project development processes. As such, the specific nature of proposed improvements (e.g., roadway width, number of lanes, access control, etc.) may change in later project development stages, with final determinations made during the project report and design phases.

CALTRANS DISTRICT 8
ROUTE CONCEPT FACT SHEET
STATE ROUTE 18

I approve this Route Concept Fact Sheet, as the guide toward which today's decisions and/or recommendations for highway capacity improvements should be directed.

Signed by Anne E. Mayer

March 5, 2002

ANNE E. MAYER
DISTRICT DIRECTOR
DISTRICT 8

DATE

2002 ROUTE CONCEPT FACT SHEET
STATE ROUTE 18
08-SBd-18 (PM 0.0/115.9)
07-LA-18 (PM 0.0/4.5)

ROUTE DESCRIPTION

State Route 18 (SR-18) in San Bernardino and Los Angeles Counties is a two to four-lane conventional highway with expressway sections. The District 8 portion of SR-18, located entirely within the County of San Bernardino, includes 6.2 miles of unconstructed highway and 109.7 miles of constructed highway. In District 7 (Los Angeles County), SR-18 is a two-lane conventional highway. The District 7 portion is 4.5 miles in length.

The constructed portion of SR-18 begins at State Route 210 (SR-210) in the City of San Bernardino in the County of San Bernardino (District 8). It extends northeasterly, then northwesterly through the San Bernardino Mountains and the Mojave Desert. The route terminates at its junction with State Route 138 (SR-138) in the County of Los Angeles (District 7). In San Bernardino County, the route traverses the Cities of San Bernardino, Big Bear Lake and Victorville, the Town of Apple Valley and the communities of Big Bear City and Lucerne Valley.

PURPOSE AND CLASSIFICATION

SR-18 serves interregional, intraregional and local traffic. High demand occurs on weekends and holidays due to recreational trips to the San Bernardino Mountains and desert areas. Traffic is more stable in the Victorville and Apple Valley areas with a significant amount of commuter and local trips. Average daily traffic (ADT) ranges from 4,800 to 40,600 in San Bernardino County. In Los Angeles County the ADT is 6,200.

SR-18 has federal functional classification as a rural minor arterial (MA) for Segments 2 through 7 (Segment 1 is unconstructed), part of Segments 11 and 12 (PM 55.2-86.2), and Segments 17 through 18. SR-18 is classified as an extension of a rural minor arterial into an urban area (P1M) for Segments 8 through 10, part of 11 and 12 (PM 53.9/55.2 and PM 86.2/87.9), and 13 through 16. Segments 3 through 14 (PM R11.2/96.6) are included in the Interregional Road System (IRRS) as a Non-High Emphasis Interregional Route. A portion of SR-18, Segments 4 through 11 (PM R17.7/73.8), is eligible as a State Scenic Highway but not officially designated. SR-18 is not included in the Strategic Highway Corridor Network (STRAHNET) nor the Department of Defense 26,000 Mile Priority Network. Segments 15 through 18, in Victorville from I-15 to SR-138 east of Palmdale (SBd PM R96.6/115.9, LA PM 0.0/4.5), are included in the National Highway System. SR-18 is listed in the California Freeway and Expressway System for its entire length. SR-18 is included in the "12 Foot Wide Arterial System" for a portion of Segment 2 (T6.2/T7.55) and again from Segments 12 through 18, junction of SR-247 through the Los Angeles County segment (SBd PM 73.8/ 115.9, LA PM 0.0/4.5).

The portion of the route in San Bernardino County, Segment 3 through part of Segment 11 (PM T8.3/65.8) is listed as a route not advised for tractor-semis with kingpin to rear axle length over posted length in the National Network for Surface Transportation Assistance Act (STAA) trucks. South of Junction 247, part of Segment 11 through Los Angeles County Segment 18 (SBd PM 65.8/115.9, LA PM 0.0/4.5), have STAA classification as a Terminal Access Route to the National Network.

ROUTE CONCEPT FOR 2020 CONCEPT RATIONALE

In urbanized areas or where urbanization is anticipated, a concept level of service "E" is assigned. This includes Segment 2 and Segment 3 (south of the San Bernardino National Forest Boundary) and Segment 12 (west of Bear Valley Road) through Segment 17 (west of the City of Adelanto). There are no plans to construct Segment 1.

Segments 3 (north of the National Forest Boundary) through 12 (east of Bear Valley Road) traverse rural/small urban areas that do not have an IRRS "High Emphasis", "Focus" or "Gateway" classification. These segments have a concept of "maintain only" that allows for safety and operational improvements. Due to increasing traffic, there are some operational improvements needed in the mountain areas, such as passing lanes.

Segment 17 (west of the City of Adelanto) and Segment 18 are also rural segments that do not have an IRRS "High Emphasis", "Focus" or "Gateway" classification. However, though the High Desert Corridor Study effort (see OTHER STUDIES), a need was recognized for capacity improvement to accommodate projected traffic growth between Hesperia-Apple Valley and the Lancaster-Palmdale urbanized areas. A four-lane facility on a new alignment is recommended for Segments 12 (west of Bear Valley Road) through Segment 18 with relinquishment of the exiting facility (Segments 12 through 18) to local jurisdictions. Steps should be taken immediately to preserve adequate right of way for the new alignment. Regional Improvement Program (RIP) or other local fund sources are needed to fund these improvements including right of way.

IMPROVEMENTS NECESSARY TO ATTAIN ROUTE CONCEPT

Seg.	CO.	P.M.	Limit	2020		Lanes Added
				Existing Facility	Concept Facility	
1	SBd	0.0/T6.2	Jct. I-10 to Jct. SR- 210	unconstructed	-	-
2	SBd	T6.2/T8.3	Jct. SR-210 to Sierra Way	4C	4C	0
3	SBd	T8.3/R17.7	Sierra Way to Jct. SR-138 N.	4E	4E	0
4	SBd	R17.7/20.6	Jct. SR-138 N. to Jct. SR-189 N.	2E	2E	0
5	SBd	20.6/24.7	Jct. SR-189 N to Jct. SR-173 N.	2C	2C	0
6	SBd	24.7/31.7	Jct. SR-173 N to Jct. SR-330	2C	2C	0
7	SBd	31.7/44.3	Jct. SR-330 to Jct. SR-38 N.E.	*2C/4C	2C/4C	0
8	SBd	44.3/49.1	Jct. SR-38 N.E. to Pine Knot Ave.	2C	2C	0
9	SBd	49.1/51.6	Pine Knot Ave. to Stanfield Cutoff	4C	4C	0
10	SBd	51.6/53.9	Stanfield Cutoff to Jct. SR-38 E.	2C	2C	0
11	SBd	53.9/73.8	Jct. SR-38 E. to Jct. SR-247	2C	2C	0
12	SBd	73.8/87.9	Jct. SR-247 to Central Rd.	2C	4E	0/4E

13	SBd	87.9/90.9	Central Rd. to Apple Valley Inn Rd.	4C	4E	4E
14	SBd	90.9/96.6	Apple Valley Inn Rd to N. Jct. I-15	4C	4E	4E
15	SBd	R96.6/97.0	S. Jct. I-15 to Amargosa Rd.	4C	4E	4E
16	SBd	97.0/101.0	Amargosa Rd. to Jct. US-395	**4C/2C	4E	4E
17	SBd	101.0/115.9	Jct. US- 395 to SBd/LA Co. Line	2C	4E	4E
18	LA	0.0/4.5	SBd/LA Co. Line to Jct. SR-138 W.	2C	4E	4E

*Segment 7 is a two-lane conventional highway from PM 31.7 to PM 39.0 then a four-lane conventional highway
 **Segment 16 is a four-lane conventional highway from PM 97.0 to PM 98.7 then a two-lane conventional highway
 Concept facility = Type of facility needed to meet and/or exceed the concept LOS
 Lanes added = Additional lanes added to meet concept LOS
 2E and 4E = Two-lane and four-lane expressway
 2C and 4C = Two and four-lane conventional highway

OPERATIONAL IMPROVEMENTS

The following is a list of proposed or programmed projects for SR-18:

<u>County</u>	<u>Postmile</u>	<u>Cross Street</u>	<u>Description</u>	<u>Status</u>
SBd	23.6	Near Rim Forest/Rim H.S.	Install left turn lane	Complete 8/01
SBd	36.1/36.2	1.3 MI S. of Snow Valley Dr.	Widen lane & shoulder	Complete 8/01
SBd	44.2/44.7	Big Bear Lake Dam	Replace bridge	Complete 1/06
SBd	52.7	Big Bear Lake/Division Dr.	Install traffic signal	Complete 7/01
SBd	52.7	Big Bear Lake/Division Dr.	Widen rd/modify signal	Complete 2/04
SBd	66.7/66.8	NR Lucerne Valley at Cushenberry Creek Bridge	Construct bridge	Complete 10/04
SBd	72.112	SR-18/ South of Meridian	Change grade/sight restriction	Study
SBd	73.4	CrossRoads Center Entrance	Move speed sign	Study
SBd	73.4	SR-18/ Crystal Creek	4-way stop/realign	Study
SBd	73.7/84.3	SR-247 to Bear Valley C/O	Shoulders/realign/ passing lanes	Complete 11/06
SBd	73.9	Highland Road	Right lane	Study
SBd	75.0	Lucerne Valley/ Baker Rd.	Install left turn chan.	Complete 11/01
SBd	78.6	Lucerne Valley/ High Rd.	Widen rd/left turn lane	Complete 6/02
SBd	95.6	In Victorville from 9 th St.	Install traffic signal	Complete 1/03
SBd	98.9	In Victorville/ Amethyst Rd.	Widen, install traffic signal & safety lighting	Complete 8/01
SBd	65.4/84.5	Nat'l Forest/Bear Valley C/O	Truck bypass	Study

ULTIMATE TRANSPORTATION CORRIDOR (UTC)

The UTC describes the long-term right of way needs for a route or transportation facility considering "build-out" of development portrayed in the surrounding local general plans. The ultimate facility for Segments 12 through 18 is an eight-lane facility including adequate right of way to accommodate other modes of transportation, e.g. High Occupancy Vehicle (HOV) lanes, exclusive bus or truck lanes or high speed rail. The UTC for all other segments of SR-18 (Segments 2 through 11) is the existing facility. There are no plans to construct Segment 1.

FUNDING

Caltrans is responsible for planning, design, construction, operation and maintenance of the State highway system. State Transportation Improvement Program (STIP) funds, which are used for highway system improvements, are apportioned twenty-five percent to Caltrans and seventy-five percent to regional transportation planning agencies (RTPAs). Caltrans manages improvements to rural highways through the Interregional Improvement Program (IIP) process using the "twenty-five percent funds."

RTPAs normally program the "seventy-five percent funds" for improvements to the urban/urbanized areas through the Regional Improvement Program (RIP) process. The State may partner with RTPAs on a route by route basis for other selected route improvements; however, most IIP investments will be in IRRS "High Emphasis," "Focus," and "Gateway" route segments. Any needed improvements, as a result of local development, will require funding from local governments or private sources.

Safety projects, operational improvements and pavement rehabilitation are funded through the State Highway Operations and Protection Plan (SHOPP) funding.

OTHER STUDIES

District 8, prepared a Project Study Report (PSR) dated August 1998 (supplemental PSR dated June 13, 2000) that proposed a new alignment for SR-18 from 1.3 miles south of Joshua Road in Apple Valley (PM 85.5) to US-395 in Adelanto (PM R105.2) in San Bernardino County, Segments 12 through 17. This alignment in the High Desert (later to become known as the High Desert Corridor) could be the first phase of proposed SR-18 improvements now being considered for programming as an east-west, four-lane expressway extending into the Palmdale-Lancaster area. These improvements in addition to those already programmed for construction are to accommodate the expected continuing growth in the rapidly developing Victor Valley and Antelope Valley of San Bernardino and Los Angeles Counties.

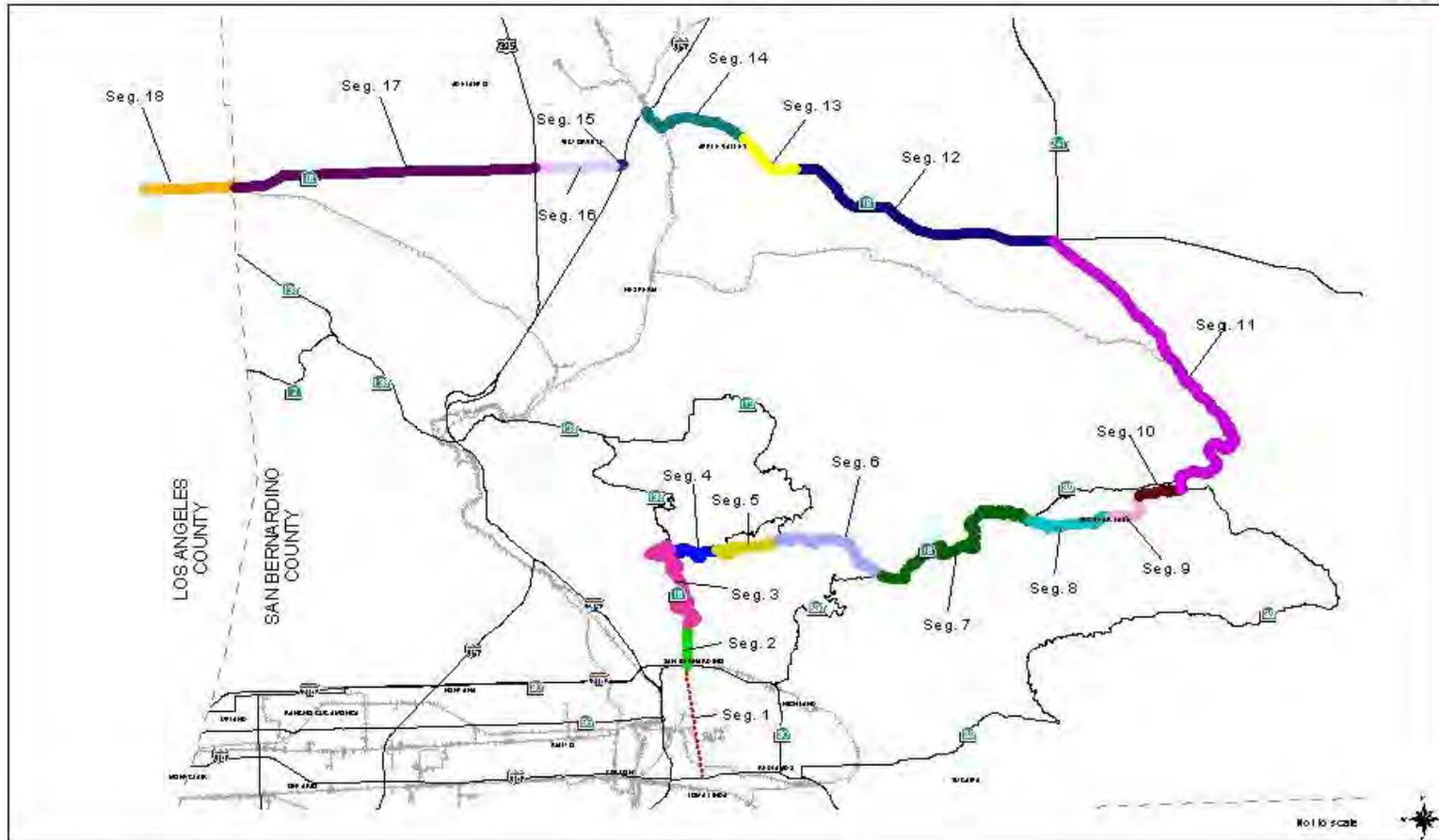
Documentation of the efforts focusing on the Los Angeles County portion of the High Desert study area is being prepared and finalized by Caltrans District 7 staff. The study area is bounded by SR-14 in Palmdale and Lancaster to the west, Joshua Road in Apple Valley to the east, Avenue D in Lancaster to the north and SR-138 in Palmdale/Littlerock to the south. This multi-modal analysis considers highways, rail and buses and transportation system management improvements. Initially, a total of four (4) highway/expressway alternatives are being considered. The steering committee's (including Federal, State and local stakeholders) preferred alternative is a new east-west alignment to the north of SR-18 and connecting with Palmdale.

In December of 1996, the "Big Bear Enhanced Ground Access Feasibility Study" was completed by consultants for the City of Big Bear Lake and San Bernardino Associated Governments (SANBAG). The purpose was to build upon past findings and to provide a more detailed evaluation of both highway and non-highway transportation alternatives improving access between the San Bernardino Valley and the Big Bear Mountain Recreation Area. Preliminary candidate corridors were evaluated as well as four different types of transit technologies including Aerobus

and Monorail Systems. After the City of Big Bear Lake and SANBAG reviewed the study, the final Highway/Transit Improvement Alternative Report was prepared recommending highway improvements for SR-18 and SR-330. Passing lanes are being considered.

There was an alignment study prepared by SANBAG in 1993 entitled, "Harrison Canyon Realignment Study." The purpose of the study was to identify candidate route(s) for access via SR-18 in the northern portion of the City of San Bernardino to the foothill area. No project has moved forward.

STATE ROUTE 18 SEGMENT MAP



Seg.	Description	Seg.	Description	Seg.	Description
1	Jct. I-10 to Jct. SR-210 (unconstructed)	8	Jct. SR-38 N.E. to Pine Knot Ave.	15	N. Jct. I-15 to Amargosa Rd.
2	Jct. SR-210 to Sierra Way	9	Pine Knot Ave. to Stanfield Cutoff	16	Amargosa Rd. to Jct. U.S. 395
3	Sierra Way to Jct. SR-138 N.	10	Stanfield Cutoff to Jct. SR-38 E.	17	Jct. U.S. 395 to SBd/LA Co. Line
4	Jct. SR-138 N. to Jct. SR-189 N.	11	Jct. SR-38 E. to Jct. SR-247	18	SBd/LA Co. Line to Jct. SR-138 W.
5	Jct. SR-189 N. to Jct. SR-173 N.	12	SR-247 to Central Rd.		Rail
6	Jct. SR-173 N. to Jct. SR-330	13	Central Rd. to Apple Valley Inn Rd. (Aztec Rd.)		County Line
7	Jct. SR-330 to Jct. SR-38 N.E.	14	Apple Valley Inn Rd. (Aztec Rd.) to N. Jct. I-15		

SR-18 DATA SHEET

1/7/2002

Seg.	Post Mile	Limit	2000	R/U	2000	Peak	2-Way	Truck	Direct	###	2000
			<u>Facility</u>	<u>UB</u>	<u>ADT</u>	<u>Hr %</u>	<u>Hr Vol</u>	<u>Hr %</u>	<u>Split %</u>	<u>V/C</u>	<u>LOS</u>
SBd											
1	0.0/T6.2	Jct. I-10 to Jct. SR-210	UNCONSTRUCTED			~	~	~	~	~	~
2	T6.2/T8.3	Jct. SR-210 to Sierra Way	4C	UB	25,600	10	2,560	7	65	0.6	C
3	T8.3/R17.7	Sierra Way to Jct. SR-138 N.	4E	UB/R	19,600	9	1,764	8	70	0.5	C
4	R17.7/20.6	Jct. SR-138 N. to Jct. SR-189 N.	2E	R	10,600	10	1,060	15	65	0.7	E
5	20.6/24.7	Jct. SR-189 N. to Jct. SR-173 N.	2C	R	10,800	10	1,080	12	65	0.7	E
6	24.7/31.7	Jct. SR-173 N. to Jct. SR-330	2C	R	9,030	11	993	9	65	0.6	E
7	31.7/44.3	Jct. SR-330 to Jct. SR-38 N.E.	*2C/4C	R	8,300	13	1,079	7	60	0.5	E
8	44.3/49.1	Jct. SR-38 N.E. to Pine Knot Ave.	2C	R/U	11,200	13	1,456	9	75	0.7	E
9	49.1/51.6	Pine Knot Ave. to Stanfield Cutoff	4C	U	16,900	12	2,028	8	75	0.5	C
10	51.6/53.9	Stanfield Cutoff to Jct. SR-38 E.	2C	U	13,000	11	1,430	8	60	0.7	E
11	53.9/73.8	Jct. SR-38 E. to Jct. SR-247	2C	U/R	4,800	11	528	9	55	0.3	E
12	73.8/87.9	Jct. SR-247 to Central Rd.	2C	R/UB	8,300	9	747	6	55	0.4	D
13	87.9/90.9	Central Rd. to Apple Valley Inn Rd.	4C	UB	16,000	8	1,280	5	60	0.3	A
14	90.9/96.6	Apple Valley Inn Rd. to N. Jct. I-15	4C	UB	36,700	9	3,303	6	65	0.7	D
15	96.6/97.0	S. Jct. I-15 to Amargosa Rd.	4C	UB	40,600	10	4,060	3	65	0.70	D
16	97.0/101.0	Amargosa Rd. to Jct. US-395	**4C/2C	UB/U	24,500	10	2,450	3	60	0.4	B
17	101.0/115.9	Jct. US-395 to SBd/LA Co. Line	2C	U/R	8,200	10	820	2	60	0.3	C
LA											
18	0.0/4.5	SBd/LA Co. Line to Jct. SR-138 W.	2C	R	6,200	12	744	4	65	0.3	C

Seg.	Post Mile	Limit	2020	Peak	2-Way	Truck	Direct	2020	2020	Concept	Lanes	Concept
			<u>ADT</u>	<u>Hr %</u>	<u>Hr Vol.</u>	<u>Hr %</u>	<u>Split %</u>	<u>V/C</u>	<u>LOS</u>	<u>Facility</u>	<u>Added</u>	<u>LOS</u>
SBd												
1	0.0/T6.2	Jct. I-10 to Jct. SR-210	UNCONSTRUCTED			~	~	~	~	~	~	~
2	T6.2/T8.3	Jct. SR-210 to Sierra Way	38,700	9	3,483	7	65	0.74	D	4C	0	E
3	T8.3/R17.7	Sierra Way to Jct. SR-138 N.	35,600	9	3,204	8	70	0.88	E	4E	0	E/MO
4	R17.7/20.6	Jct. SR-138 N. to Jct. SR-189 N.	17,900	8	1,432	11	68	1.03	F	2E	0	MO
5	20.6/24.7	Jct. SR-189 N. to Jct. SR-173 N.	13,300	10	1,330	12	65	0.96	F	2C	0	MO
6	24.7/31.7	Jct. SR-173 N. to Jct. SR-330	14,700	10	1,470	9	65	0.83	F	2C	0	MO
7	31.7/44.3	Jct. SR-330 to Jct. SR-38 N.E.	13,100	9	1,179	7	70	0.54	E	* 2C/4C	0	MO
8	44.3/49.1	Jct. SR-38 N.E. to Pine Knot Ave.	14,700	10	1,470	9	75	0.74	E	2C	0	MO
9	49.1/51.6	Pine Knot Ave. to Stanfield Cutoff	20,200	11	2,222	8	75	0.52	C	4C	0	MO
10	51.6/53.9	Stanfield Cutoff to Jct. SR-38 E.	18,600	8	1,488	8	75	0.70	E	2C	0	MO
11	53.9/73.8	Jct. SR-38 E. to Jct. SR-247	10,300	10	1,030	8	60	0.56	E	2C	0	MO
12	73.8/87.9	Jct. SR-247 to Central Rd.	17,900	10	1,790	4	65	0.83	E	*** 2C/4E	0/4E	E
13	87.9/90.9	Central Rd. to Apple Valley Inn Rd.	32,250	10	3,225	8	60	0.53	D	4E	4E	E
14	90.9/96.6	Apple Valley Inn Rd. to N. Jct. I-15	58,600	10	5,860	8	50	0.92	F	4E	4E	E
15	96.6/97.0	S. Jct. I-15 to Amargosa Rd.	43,100	10	4,310	6	50	0.64	D	4E	4E	E
16	97.0/101.0	Amargosa Rd. to Jct. US-395	37,800	10	3,780	6	50	0.57	D	4E	4E	E
17	101.0/115.9	Jct. US-395 to SBd/LA Co. Line	48,808	8.5	4,148	7.5	60	1.57	F	4E	4E	E
LA												
18	0.0/4.5	SBd/LA Co. Line to Jct. SR-138 W.	59,058	5.5	3,248	7.5	65	1.19	F	4E	4E	E

* Segment 7 is a 2-lane conventional highway from PM 31.7 to PM 39.0

** Segment 16 is a 4-lane conventional highway from PM 97.0 to PM 98.7 then a 2-lane conventional highway

*** Segement 12 is a 2-lane conventional highway from 73.8 to 84.3 (Bear Valley Cutoff) and a 4-lane expressway from 84.3 to 87.9.

Terms:
 4E= 4-lane expressway, realignment
 R/U/UB = Rural/urban/urbanized
 ADT = Average daily traffic
 V/C = Volume to capacity ratio
 LOS = Level of service
 Concept facility = Type of facility needed to meet and/or exceed the concept LOS
 Lanes added = Additional lanes added to meet concept LOS
 2C and 4C = 2 and 4-Lane conventional highway
 MO = Maintain only

SR-18**CONVERSION TABLE**

SEGMENTS/ CO	DESCRIPTION	POSTMILE	KILOMETERS
1	SBd Jct. I-10 to Jct. SR-210	0.0/T6.2	0.0/T10.0
2	SBd Jct. SR-210 to Sierra Way	T6.2/T8.3	T10.0/T13.4
3	SBd Sierra Way to Jct. SR-138 N.	T8.3/R17.7	T13.4/R28.5
4	SBd Jct. SR-138 N. to Jct. SR-189 N.	R17.7/20.6	R28.5/33.2
5	SBd Jct. SR-189 N. to Jct. SR-173 N.	20.6/24.7	33.2/39.8
6	SBd Jct. SR-173 N. to Jct. SR-330	24.7/31.7	39.8/51.0
7	SBd Jct. SR-330 to Jct. SR-38 N.E.	31.7/44.3	51.0/71.3
8	SBd Jct. SR-38 N.E. to Pine Knot Ave.	44.3/49.1	71.3/79.0
9	SBd Pine Knot Ave. to Stanfield Cutoff	49.1/51.6	79.0/83.0
10	SBd Stanfield Cutoff to Jct. SR-38 E.	51.6/53.9	83.0/86.7
11	SBd Jct. SR-38 E. to Jct. SR-247	53.9/73.8	86.7/118.8
12	SBd Jct. SR-247 to Central Rd.	73.8/87.9	118.8/141.5
13	SBd Central Rd. to Apple Valley Inn Rd.	87.9/90.9	141.5/146.3
14	SBd Apple Valley Inn Rd. to N. Jct. I-15	90.9/96.6	146.3/155.5
15	SBd S. Jct. I-15 to Amargosa Rd.	R96.6/97.0	R155.5/156.1
16	SBd Amargosa Rd. to Jct. US-395	97.0/101.0	156.1/162.5
17	SBd Jct. US-395 to SBd/LA Co. Line	101.0/115.9	162.5/186.5
18	LA SBd/LA Co. Line to Jct. SR-138 W.	0.0/4.5	0.0/7.2

ENGLISH TO METRIC CONVERSION FACTORS

1 Mile = 1.609344 KM