



**ROUTE CONCEPT REPORT
DISTRICT 8**

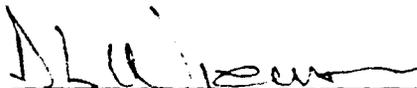
June 1985

STATE ROUTE 74

We approve this Route Concept Report as the guide toward which today's decisions and/or recommendations should be directed.



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STATEMENT OF PLANNING INTENT

The Route Concept Report (RCR) is a planning document which expresses the Department's judgment on what the characteristics of the State highway should be to respond to the projected travel demand over the 20-year planning period.

The RCR contains the Department's goal for the development of each route in terms of level of service and broadly identifies the nature and extent of improvements needed to reach those goals. The RCR then provides the basis for the preparation of route development plans and the system analysis which indicates the level of service provided on the system at a given level of funding.

Route Concept Reports are prepared in the districts and represent the combined expertise of district staff. Facility dimensions (e.g., roadway widths or number of lanes on a multi-laned facility) discussed in the RCR represent an initial planning approach to scoping candidate improvement and determining estimated costs.

All information in the Route Concept Report is subject to change as conditions change and new information is obtained. Consequently, the nature and size of identified improvements may change as they move through the project development stages, with final determinations made at the time of project planning and design. If the nature and size of improvements change from that included in this report during later project development stages, this will be cause to review the Route Concept Report for this route.

ROUTE CONCEPT

<u>Segment</u>	<u>P.M. Limit</u>	<u>Concept LOS</u>	<u>Facility</u>	<u>Restricting Characteristics</u>
1	0.0/11.8	E-27	2-Lane Conventional	Mountainous
2-4	11.8/25.1	D-35	4-Lane Conventional	None
5	25.1/27.5	E-15	4-Lane Conventional	Urban
6	27.5/34.3	D-35	4-Lane Conventional	None
7	34.3/46.9	E-15	6-Lane Conventional	Urban/Downtown
8	46.9/59.3	E-27	2-Lane Conventional	Mountainous
9	59.3/71.8	D-35	2-Lane Conventional	None
10	71.8/93.4	E-27	2-Lane Conventional	Mountainous
11	93.4/96.0	E-27	4-Lane Conventional	Urban
12	96.0/101.5	E-27	2-Lane Conventional Unconstructed	Urban

CONCEPT RATIONALE

A base concept of LOS D has been established for all routes in District 8 with the exception of those routes in the Principal Arterial System. Where significant urbanization is expected by the year 2005 and/or where substantial restrictions to improvement exist, the appropriate LOS would be E.

AREAS OF CONCERNCurrent (1983):Volume/Capacity (V/C) Ratio

The following segment is currently operating above the threshold levels for V/C Ratios established by the RCR Guidelines:

<u>Segment</u>	<u>Urban/Rural Area</u>	<u>Actual Rate</u>	<u>Threshold V/C</u>
5	Urban	2.53	0.95

Accidents

The following segments have accident levels (triennial basis) exceeding or equaling the threshold levels established by the RCR Guidelines.

<u>Segment</u>	<u>Type</u>	<u>Actual Rate</u>	<u>Threshold</u>
1	F+I/MVM	3.6	1.5
2	F+I/MVM	1.6	1.5
3	F+I/MVM	3.6	1.9
8	F+I/MVM	2.0	1.5
10	F+I/MVM	1.5	1.5
1	F+I/M/Y	3.5	2.0
4	F+I/M/Y	2.8	2.0
1	A/MVM	5.3	3.7
3	A/MVM	6.3	6.0
1	A/M/Y	5.1	3.2
4	A/M/Y	5.1	3.2

Future (2005 NO BUILD):

<u>Segment</u>	<u>P.M. Limit</u>	<u>D/C</u>	<u>Threshold</u>	<u>Operating LOS</u>	<u>Concept LOS</u>
2	11.8/R14.2	1.87	0.95	F<27	D-35
3	R14.2/17.3	1.50	0.95	F<27	D-35
4	17.3/25.1	0.95	0.70	E-29	D-35
5	25.1/27.5	4.36	0.95	F<15	E-15
7	34.3/46.9	1.61	0.95	F<27	E-15

IMPROVEMENTS

Segments 2-5 and 7 would require two additional lanes of capacity to achieve the Concept LOS.

ROUTE CONCEPT REPORT

STATE ROUTE 74

8-Riv-74 PM 0.0-101.5

ROUTE DESCRIPTION

Route 74 begins at Interstate Route 5 near San Juan Capistrano in Orange County and proceeds easterly to Interstate Route 10 north of Palm Desert in Riverside County. This report covers only the 101.5 mile section in District 8 from the Orange County Line to Interstate 10 including an unconstructed 5.5 mile long section between Route 111 and Interstate 10. The route is primarily a two-lane conventional highway with four-lane sections through urban areas. The cities of Lake Elsinore, Perris, Hemet and Palm Desert, as well as unincorporated parts of Riverside County are traversed by the route.

ROUTE PURPOSE

Primary Purpose - Interregional

Secondary Purpose - Intraregional/Local.

Route 74, links San Juan Capistrano in Orange County to Palm Desert in Riverside County via the cities of Lake Elsinore, Perris and Hemet. Intraregional and local usage is manifested by the highest Average Daily Traffic (ADT) occurring within these urban areas. ADT ranges from 1,400 to 28,000.

Access to four recreational areas: Cleveland National Forest, Lake Elsinore, San Bernardino National Forest and Palm Springs generates substantial traffic.

Route 74 is not a SHELL (The Subsystem of Highways for the Movement of Extra-Legal Permit Loads) Route nor is it included on the Federal Highway Administration's (FHWA) Final Designation of Routes for Larger Trucks. It is a Federal-Aid Primary route and is included in the Freeway and Expressway System.

The portion of Route 74 from the Orange County Line to the San Bernardino National Forest Boundary (P.M. 0.0/48.3) is in the State Scenic Highway System, but not officially designated as a Scenic Highway. The remainder of the route (P.M. 48.3/96.0, San Bernardino National Forest Boundary to the junction with Route 111), is officially designated as a State Scenic Highway.

Route 74 has two Federal Functional Classifications; MA and P1M. An MA is a minor arterial and P1M is the extension of a rural minor arterial into an urban area.

PARALLEL ROUTES ✓

Between the Orange County Line and Route 215, no parallel routes are available. Alternate access to Palm Desert from the Perris area is provided by Routes 60 and 10 to the north and Routes 79 and 371 to the south. However, neither of these alternative routes are as direct and most likely would not be used unless Route 74 were closed. Within the City of Hemet several city streets parallel Route 74.

EXISTING FACILITY ✓

Route 74 consists entirely of a two to four-lane conventional highway with varying lane, shoulder and median widths (See attached maps). A bicycle lane, ranging from 3 to 4 feet wide has been designated and striped on both outside shoulders of Segment 2 (Grand Avenue to Lakeshore Drive).

Related facilities such as transit centers and park and ride lots are non existant on route 74. A park and ride lot at the junction of routes 74 and 15 is scheduled for construction in the 1986/87 fiscal year.

1984 STIP AND CURRENT CONSTRUCTION PROJECTS

<u>Segment</u>	<u>Post Mile</u>	<u>Description</u>
1*	2.0/2.3	Widen shoulders
1*	4.1/4.3	Realign curves and widen shoulders
2	13.2	Widen bridge
10	75.8/77.0	Curve widening
11	93.4/94.4	Widen roadway to 4 lanes

The widening project on Segment 11 is the only STIP or current construction project which would significantly increase capacity.

*Minor A projects, expanded and included in 1985 PSTIP.

CURRENT OPERATING CONDITIONS - 1983

Accidents

The following segments have accident levels (triennial basis) exceeding or equaling the threshold levels established by the Route Concept Report (RCR) Guidelines. These segments will require further analysis and evaluation to determine appropriate courses of action.

<u>Segment</u>	<u>Type</u>	<u>Actual Rate</u>	<u>Threshold</u>
1	F+I/MVM ¹	3.6	1.5
2	F+I/MVM	1.6	1.5
3	F+I/MVM	3.6	1.9
8	F+I/MVM	2.0	1.5
10	F+I/MVM	1.5	1.5
1	F+I/M/Y ²	3.5	2.0
4	F+I/M/Y	2.8	2.0
1	A/MVM ³	5.3	3.7
3	A/MVM	6.3	6.0
1	A/M/Y ⁴	5.1	3.2
4	A/M/Y	5.1	3.2

Volume to Capacity Ratio (V/C)

The following segment is currently operating above the threshold level for V/C ratios established by the RCR Guidelines:

<u>Segment</u>	<u>Urban/Rural Area</u>	<u>Actual V/C</u>	<u>Threshold V/C</u>
5	Urban	2.53	0.95

¹ Fatalities plus injuries per million vehicle miles.

² Fatalities plus injuries per mile per year.

³ Accidents per million vehicle miles.

⁴ Accidents per mile per year.

Level of Service (LOS) - 1983

Route 74 is currently operating at the following levels of service:⁵

<u>Segment</u>	<u>Urban/Rural⁶ Area</u>	<u>Post Miles (Limits)</u>	<u>Operating LOS</u>
1	Rural	Riv-0.0/11.8 Orange Co Ln-Grand Ave Post Miles	C-44
2	Urban	Riv-11.8/R14.2 Grand Ave-Lakeshore Dr	D-37
3	Urban	Riv-R14.2/17.3 Lakeshore Dr-Rte 15	C-42
4	Rural	Riv-17.3/25.1 Rte 15-Ellis Ave	C-40
5	Urban	Riv-25.1/27.5 Ellis Ave-N Jct Rte 215	F<15
Break in Route			
6	Rural	Riv-27.5/34.3 S Jct Rte 215-W Jct Rte 79	B-59
7	Urban	Riv-34.3/46.9 W Jct Rte 79-Marshall Ave	D-23
8	Rural	Riv-46.9/59.3 Marshall Ave-Rte 243	C-40
9	Rural	Riv-59.3/71.8 Rte 243-Rte 371	B-54
10	Rural	Riv-71.8/93.4 Rte 371-Cahuilla Way	D-39
11	Urban	Riv-93.4/96.0 Cahuilla Way-Rte 111	C-53
12	Urban	Riv-96.0/101.5 Rte 111-Rte 10	Unconstructed

⁵ LOS and Operating Speed are calculated values based upon empirical data and may vary from actual conditions. See attached maps for supplemental facility characteristics and operating conditions.

⁶ Based on Existing Conditions.

LOS 2005 NO BUILD (Based on 2005 ADT and Existing Facility)

The 2005 projected operating conditions are shown in the following table:

<u>Segment</u>	<u>Urban/Rural⁷ Area</u>	<u>D/C⁸</u>	<u>Operating LOS</u>
1	Rural	0.77	E-34
2	Urban	1.87	F<27
3	Urban	1.50	F<27
4	Rural	0.95	E-29
5	Urban	4.36	F<15
6	Rural	0.40	C-52
7	Urban	1.61	F<15
8	Rural	0.99	E-27
9	Rural	0.49	C-41
10	Rural	0.86	E-32
11	Urban	0.26	C-52
12	Unconstructed		

⁷ Based on anticipated 2005 Conditions.

⁸ (Demand/Capacity Ratio).

Route Concept

Concept LOS

<u>Segment</u>	<u>Post Mile</u>	<u>Concept LOS</u>	<u>Restricting Characteristics</u>
1	0.0/11.80	E-27	Mountainuous Terrain
2	11.8/R14.2	D-35	None
3	R14.2/17.3	D-35	None
4	17.3/25.1	D-35	None
5	25.1/27.5	E-15	Urban
6	27.5/34.3	D-35	None
7	34.3/46.9	E-15	Urban, Downtown
8	46.9/59.3	E-27	Mountainuous Terrain
9	59.3/71.8	D-35	None
10	71.8/93.4	E-27	Mountainuous Terrain
11	93.4/96.0	E-27	Urban
12	96.0/101.5	E-27	Urban

A base concept of LOS D has been established for all routes in District 8 with the exception of those routes in the Principal Arterial System. The Principal Arterial System is comprised of routes classified as rural Principal Arterials (PA) and their urban extensions (P1P). Where significant urbanization is expected by the year 2005, and/or where substantial restrictions to improvement (mountainous terrain, environmental constraints, etc.) exist, the appropriate LOS would be E. Routes were examined and segments classified as to degree of expected urbanization and improvement restrictions. Segments with similar characteristics were grouped together and assigned an LOS based on the preceding determinations.

The District has discussed the preceding process with the San Bernardino Associated Governments and the Riverside County Transportation Commission as well as with Caltrans DOTP and has received general approval.

Concept Facility(2005)

Two lanes of additional capacity are needed on various segments to achieve the Concept LOS. The following chart shows the number of existing lanes and lanes required to meet the Concept LOS.

<u>Segment</u>	<u>Existing Lanes (1983)</u>	<u>Concept Facility Lanes</u>
1	2	2
2	2	4
3	2	4
4	2	4
5	2	4*
6	4	4
7	4	6*
8	2	2
9	2	2
10	2	2
11	4	4

*Also require signal coordination

LOS 2005 Concept (Based on 2005 ADT and Concept Facility)

<u>Segment</u>	<u>Urban/Rural⁹ Area</u>	<u>D/C</u>	<u>Operating LOS</u>
Segments 1,6 and 8-11 same as 2005 No Build			
2	Urban	0.52	D-38
3	Urban	0.38	D-41
4	Rural	0.32	C-47
5	Urban	1.03	E-15
7	Urban	1.10	E-15

Caltrans may not be able to provide the necessary improvements due to projected financial constraints and the possibility of higher priority needs. As a stipulation of land development, local jurisdictions (Cities and Counties) should mandate dedication of adequate right of way to meet their general plans (See Exhibit 1). Where appropriate (developments with extensive State Highway frontage) the developer should be required to improve the Route to meet the local jurisdictions' general plan.

⁹ Based on anticipated 2005 conditions.

OTHER CONSIDERATIONS

Realignment of a short portion of Segment 3 (P.M. R15.3/R16.3) is being considered by the State and local jurisdictions. The purpose of the realignment is to eliminate two right angle turns one at the intersection of Riverside Drive and Collier Avenue and the second at the intersection of Collier and Central Avenues.

Existing Route 74 ends at the junction with State Route 111. To help ease congestion on Route 111, Riverside County has proposed extending Route 74, 5.5 miles, from Route 111 northerly to Route 10 at Kubic Road. This extension would run along Monterey Avenue from Route 111 to Country Club Drive where Monterey Avenue terminates. North of Country Club Drive, the County would construct a new roadbed.

The proposed extension will consist of two lanes with treated shoulders and preservation of adequate right of way for possible expansion to four lanes. Caltrans has received and approved an Environmental Impact Report from Riverside County. The County has also submitted construction plans which are currently under review within the District. Inclusion of the proposed extension into the State system will be considered after completion.

TRAFFIC ANALYSIS METHODOLOGY

The 2005 ADT was calculated utilizing the Growth Rate found in the 1984 State Highway Inventory. The existing (1983) ADT was taken from the 1983 Traffic Volumes Book. The percent of ADT in the Design Hour and Peak Direction were also taken from the 1984 State Highway Inventory. The 2005 Demand-Capacity (D/C) Ratios were calculated using the Geometric Factor and the Truck Grade Factor found in the Inventory. A Peak Hour Factor of 1.0 was used in calculating both current and 2005 operating levels of service.

COORDINATION

This Route Concept Report has been discussed with and will be reviewed by both District 7 and District 11. At such time as the Route Concept Report for the portion of Route 74 within District 7 is available, any significant differences in concept will be reconciled.

EXHIBIT 1

The following table describes Route 74 according to local jurisdiction's (City or County) general plans. All segment descriptions originate from Riverside County general plan unless otherwise noted.*

RCR Segment	Limits	Type	MASTER PLAN	
			Pavement Half Width	Right of Half Width
1	Orange Co Ln to Grand Ave PM 0.0/11.8	Mountain Arterial Interim	32' 20'	55' 55'
2	Ortega Hwy to Riv Dr PM 11.8/12.5 *Lake Elsinore	Major Highway	38'	50'
2-3	Grand Ave to Central Ave PM 12.5/R16.2 *Lake Elsinore	General Collector	31'	38'
3	Central Ave to Jct I-15 PM R16.2/17.3	Arterial Highway	43'	55'
4	Jct I-15 to Mountain Ave, Perris PM 17.3/24.3	Major Highway	38'	50'
4-5	Mountain Ave to Indian Circle PM 24.3/25.8 Perris*	Arterial Highway	43'	55'
5	Indian Circle to Jct I-215 PM 25.8/27.5 *Perris	Secondary Highway	32'	44'
6-7	Jct I-215 to Sanderson Ave, Hemet PM 27.5/38.5	Major Highway	38'	50'
7	Sanderson Ave to Kirby St PM 38.5/39.0 *Hemet	Major Highway	40'	50'
7-8	Kirby St to Nat. Forest Bdy. PM 39.0/48.3 *Hemet	Major Highway	38'	50'
8,9-11	Nat. Forest Bdy to Portola Ave Palm Desert PM 48.3/94.1	Mountain Arterial Interim	32' 20'	55' 55'
11	Portola Ave to Jct Rte 111 PM 94.1/96.0	Arterial Highway	43'	55'
12	Jct Rte 111 to Jct I-10 PM 96.0/101.5	Arterial Highway (Unconstructed)	43'	43'