FINAL

APR 12 1985

SUMMARY

Route Concept Report
Route 9
SCr 0.05 to SCl 11.45

This report defines the concept for development of Route 9 in District 4 for a 20-year planning period (1985-2005).

Route Concept

Segment A SCr PM 0.05 to 0.63
4-lane conventional F-15
PM 0.63 to 6.46
2-lane conventional F-10

Segment B SCr PM 6.46 to 13.11
2-lane conventional F-10

Segment C SCr PM 13.11 to 27.09
2-lane conventional E-25

Segment D SCl PM 0.00 to 7.40
2 lane conventional F-15

Segment E SCl PM 7.40 to 11.45
2-4 lane conventional F-15

Concept Rationale

The majority of Route 9 is located in the Santa Cruz Mountains. The route is one of the most scenic routes in District 4. Route 9 goes through or near many state parks, county parks and large groves of redwood trees. This route is both a recreational and a commuter route.

Areas of Concern

There are short radius curves and narrow or no shoulders at various locations along the route.

Improvements

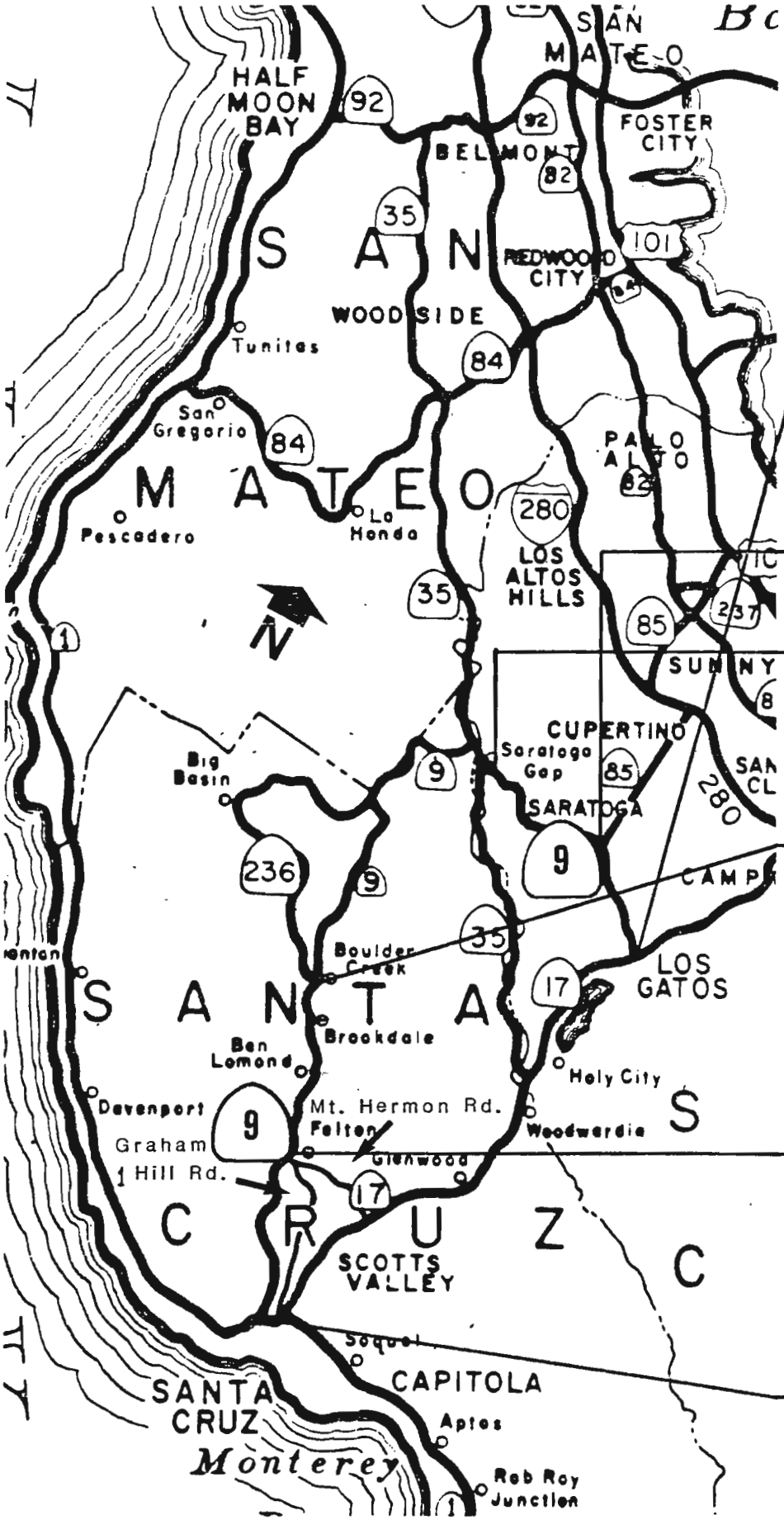
The shoulders should be widened where environmentally feasible for safety reasons and to acccommodate the large amount of bicycle traffic that this route receives.

Two way left turn lanes should be provided where deemed necessary in the towns of Felton, Ben Lomond and Boulder Creek.

Consider providing left turn pockets and/or two way left turn lanes from Graham Hill Road to Glen Arbor Road (PM SCr 6.46 to 8.11).

LOCATION MAP

ROUTE 9



SCL 11.448	E
SCL 7.400	
SCL 0.00	D
SCR 27.094	C
SCR 13.110	
SCR 6.460	B
SCR 0.046	A

ROUTE CONCEPT REPORT

ROUTE 9

SCR 0.46 to SCL 11.45

Prepared under the direction of:

CECIL L. SMITH, Chief
Transportation Planning, District 4

Recommended Approval:

JOHN J. VOSTREZ
Deputy District Director
Planning and Programming

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

Approved:

BURCH C. BACHTOLD
District Director of
Transportation

Approved:

D. L. WIEMAN, Chief
Division of Transportation
Planning

Approved:

ALLAN H. HENDRIX
Division of Highways and
Programming

Approved:

VINCE PAUL Chief
Division of Project
Development

ROUTE DESCRIPTION

Route 9 is approximately 38 miles long and traverses two counties, Santa Cruz and Santa Clara. Route 9 begins at Route 1 in the City of Santa Cruz and ends at Route 17 near the City of Los Gatos.

Route 9 is part of the state scenic highway system.

The legislative description is as follows:

"Route 9 is from Route 1 near Santa Cruz to Route 17 near Los Gatos via Waterman Gap and Saratoga Gap and along the ridge between San Lorenzo and Pescadero Creek."

Purpose of Route

Route 9 serves several purposes. Route 9 serves as a recreational route through the Santa Cruz Mountains to 5 State or county parks in the area. The route also serves as a connector to the small communities located along the route. The route is classified as a major collectors.

Route Segment

A. Segment A (04-SCr-9, PM 0.046-6.460)

This segment of Route 9 begins at Route 1 in the City of Santa Cruz and proceeds through the Henry Cowell Redwood State Park to the town of Felton.

(1) Existing Facilities

a. Highway Facility

There is one lane in each direction with 0 to 8 foot shoulders. Terrain is mountainous and the grade is moderate with grades greater than 6% for 1/2 or less of the segment length and sustained grades 1/4 to 3/4 miles in length.

1984 STIP Projects

None

b. Public Transit

Buses are operated by the Santa Cruz Metropolitan Transportation District. Buses operate along Route 9 as far north as the small community of Sylvan, through Boulder Creek, Brookdale, Ben Lomond and Felton to Santa Cruz. Bus service begins at 6:50 a.m. and ends at midnight. The buses operate at approximately 30 minute intervals Monday through Friday with limited service on weekends.

c. Bicycle

Santa Cruz County promotes the usage of bicycles. Route 9 can be used by bicyclists from San Jose to Santa Cruz. Bicyclists must exercise great caution when riding along Route 9 due to winding roads, mountainous terrain and narrow shoulders.

d. Park and Ride

There are no park and rides lots located in this segment at this time. In March of 1985, a shared use lot with 59 spaces will be located at the First Baptist Church of San Lorenzo Valley in Felton.

e. Rail

There are no available rail services located nearby.

(2) Current Operating Conditions

The 1982 AADT ranges from 4,000 at the northern limits of the City of Santz Cruz to 18,000 at the junction of Route 1. Southbound AM peak hour volumes range from 200 at the junction of Route 1 and the northern limits of the City of Santa Cruz to 1,000 south of Mt. Hermon Road. Northbound AM peak hour volumes range from 100 at the northern limits of the City of Santa Cruz to 500 south of Mt. Hermon Road.

The V/C ratio is .55 with a Level of Service C-40.

A possible explanation for the low AADT is that a majority of vehicles travel on either Mt. Hermon Road or Graham Hill Road; these roads have more lanes and less curves than Route 9. Mt. Hermon Road and Graham Hill Road are more direct to Route 17.

(3) Accident Rate (1/81-12/83)

There were 151 accidents during this period with a total of 126 people injured and 2 fatalities. Saturday and Sunday had the highest percentage of accidents with a total of 38.2%. The hours of the day with the highest accident rate are from 4 to 7 p.m. 58.2% of the accidents occurred in the southbound lane. This may indicate recreational users are driving from the Bay Area to the Santa Cruz area south on Route 9 and returning north via another route.

The accident rate for this segment is 3.24 per MVM. This is below the statewide average of 3.43 per MVM.

(4) Future Operating Conditions

The projected 1995 (2005) AADT ranges from 6,000 (7,000) at the Santa Curz City limits to 29,000 (36,000) at the junction of Route 1. The southbound AM peak hour volume for 1995 (2005) range from 600 (800) at the northern limits of the City of Santa Cruz to 3,000 (3,800) at the junction of Route 1.

The D/C ratio for 1995 is 1.04 with a Level of Service of F-20, the D/C ratio for 2005 is 1.65 with an LOS of F-5.

(5) Route Concept

The Route Concept is to widen the present 2-lane conventional facility to a 4-lane conventional facility, from the Junction of Route 1 to approximately the Santa Cruz city limits. (PM 0.05 to 0.63)

The remainder of the segment should remain with its present number of lanes.

The City of Santa Cruz is currently in the process of conducting a traffic study to determine future traffic demand within the city limits. Any traffic data pertinent to Route 9 resulting from this study will be included in future reports.

(6) Route Improvement

Widen 2-lanes to 4-lanes (PM 0.05 to 0.63). Provide Operational Improvements where necessary.

(7) Future Considerations

Discussions have been held in the past to relinquish Segment A of Route 9 to the County of Santa Cruz. The State would maintain one of two alternatives; either Graham Hill or Mt. Hermon Road (see location map). Further meetings can be held at the request of local officials.

Graham Hill Road parallels Route 9 near the town of Felton. This road is a straighter more direct route to the City of Santa Cruz. The traffic that would normally use Route 9 is diverted onto this faster alternative.

This segment of Route 9 traverses Henry Cowell Redwoods State Park. For this reason, widening of the small State highway is probably environmentally unfeasible.

B. Segment B (04-Scr-9, PM 6.46-13.110)

Segment B extends from the town of Felton through the towns of Ben Lomond and Brookdale. The segment ends at the town of Boulder Creek and the southern intersection of Route 236

(1) Existing Facilities

a. Highway Facility

The segment is 6.65 miles long. There is one lane in each direction with 0-8 foot shoulders. The terrain is mountainous.

1984 STIP Projects

FY 83/84
PM 8.4/8.5 Storm Damage Restoration

FY 84/85
PM 9.7/9.8 Replace Bridge

FY 85/86
PM 8.1/13.1 Shoulder Widening CL-2 Bike Path
PM 13.0/13.1 Install Traffic Signals

b. Public Transit

Same as Segment A

c. Bicycle

Same as Segment A

d. Park and Ride

There are no park and ride facilities available at this time. In March of 1985, a shared use lot is planned at St. Peter's Church and St. Paul's Church in Ben Lomond. The lot will have 19 spaces.

e. Rail

There is no rail transportation available.

(2) Current Operating Conditions

The AADT for 1982 ranges from 8,000 at Mt. Hermon Road to 20,000 at Alameda Avenue in Brookdale. The southbound AM peak hour volume ranges from 300 north of the towns of Brookdale and Boulder Creek to 1,400 at Mt. Hermon Road. Northbound AM peak hour volume ranges from 200 at Brookdale and Boulder Creek to 600 at Mt. Hermon Road. The V/C ratio is .63 with a Level of Service "B-40".

(3) Accident Rate (1/81-12/83)

A total of 488 accidents occurred in this segment. There were 372 injuries and 6 fatalities. Accidents were fairly evenly distributed during the hours from 12 p.m. to 7 p.m. A higher percentage of the accidents occurred on Friday, Saturday and Sunday.

The accident rate is 4.33 per MVM. The statewide average is 2.81 per MVM.

(4) Future Operating Conditions

The projected AADT for year 1995 (2005) range from 18,000 (22,000) at the junction of Route 236 south to 38,000 (48,000) north of Mt. Hermon Road and the town of Ben Lomond. Southbound AM peak hour volume for 1995 (2005) range from 1,100 (1,700) at the junction of Route 236 south to 2,900 (3,400) north of Mt. Hermon Road and Ben Lomond. Northbound AM peak hour volume for 1995 (2005) range from 700 (1,100) to 1,200 (1,500) at the same locations as the southbound volumes

The 1995 D/C ratio is 1.82 with a Level of Service F-5, 2005 D/C ratio is 2.25 with an LOS of F-5.

(5) Route Concept

The route concept is to maintain the current 2-lane conventional facility throughout the entire segment, with particular emphasis on providing left turn pockets and/or two-way left turn lane from Graham Hill Road to Glen Arbor Road (PM SCr 6.46 to 8.11).

(6) Route Improvement

The improvement to this segment is to consider providing left turn prockets and/or two-way left turn lanes from Graham Hill Road to Glen Arbor Road.

Segment C
(04-SCr-9, PM 13.11-27.09)

Segment C extends from Boulder Creek to the Santa Cruz/Santa Clara County line.

(1) Existing Facilities

a. Highway Facility

This segment is approximately 13 miles long. It has one lane in each direction with shoulders 0 to 5 feet wide. The grade and terrain are mountainous.

1984 STIP Projects

None

b. Public Transit

There are no buses that operate in this segment.

c. Bicycle

This segment has recreational bike use only.

d. Park and Ride

There are no park and ride lots in this segment at this time. A 50 space lot is planned at Schwarzbach Realty in Boulder Creek. The completion date is March 1985.

e. Rail

None

(2) Current Operating Conditions

The 1982 AADT ranges from 3,000 at the northern junction of Route 236, Waterman Switch and the Santa Cruz/Santa Clara county line to 9,000 at the southern junction of Route 236. Southbound AM peak hour volume range from 200 at the SCr/SCl county line to 400 at Bear Creek Road and Kings Creek Road. Northbound AM peak hour volume range from 100 at Waterman Switch to 400 at Bear Creek Road and Kings Creek Road.

The V/C ratio is .33 with a Level of Service of B-45.

(3) Accident Rate (1/81-12/83)

43.0% of the accidents occur on Saturday and Sunday. The majority of the accidents occur during the time period from 2 p.m. to 6 p.m. 56.2% of the accidents took place in the southbound lane. There were a total of 134 accidents. The accidents on this segment involved 135 injuries and no fatalities.

The total accident rate is 3.37 per MVM, while the statewide average is 2.94 per MVM.

(4) Future Operating Conditions

The projected AADT for 1995 (2005) range from 5,000 at Waterman Swtich and the Santa Cruz/Santa Clara county line to 18,000 (22,000) at the southern junction of Route 263. Southbound AM peak hour volumes for 1995 (2005) range from 200 at Waterman Switch to 700 (1,100) north of Bear Creek Road. Northbound AM peak hour volumes range from 700 (800) to 1,000 (1,300) at the same locations as the southbound volumes.

The 1995 V/C ratio is .72 with a Level of Service C-40, 2005 V/C ratio is .92 with a LOS of E-25.

(5) Route Concept

The route concept is to maintain the current 2 lane conventional facility.

(6) Route Improvements

Widen shoulders for safety purposes.

D. Segment D
(04-SCl-9, PM 0.00-7.40)

Segment D runs from the Santa Cruz/Santa Clara County line to the junction of Route 85 and the Town of Saratoga.

(1) Existing Facilities

a. Highway Facility

Segment D is approximately 7.4 miles long. There is one lane in each direction with 0 to 8 foot shoulders. The terrain is mountainous.

1984 STIP Projects

FY 84/85 SCl 9
PM 0.0/11.4 Convert to HPS including series
PM 1.5/4.6 Install/upgrade guardrail

b. Public Transit

None

c. Bicycle

Same as Segment C

d. Park and Ride

There are no park and ride lots located in this segment.

e. Rail

None

(2) Current Operating Conditions

The 1982 AADT ranges from 3,000 at the Santa Cruz/Santa Clara County line to 12,000 west of Sixth Street in the City of Saratoga. Southbound AM peak hour volume range from 100 at the SCr/SCl county line to 400 west of the junction of Route

85 (Saratoga/Sunnyvale Road). Northbound AM peak hour volumes range from 300 at Pierce Road to 600 east of Sixth Street.

The V/C ratio is .32 with a Level of Service of B-45.

3 Accident Rate (1/81-12/83)

42.4% of the accidents within this segment occurred on Saturday and Sunday. The hours of the day with the highest percentage of accidents were from 3 p.m. to 7 p.m. 66.0% of the accidents occurred in the northbound lane.

This segment had a total of 346 accidents, 319 injuries and 7 fatalities.

The accident rate for this segment is 10.58 per MVM, while the statewide average is 3.66 per MVM.

(4) Future Operating Conditions

The projected 1995 (2005) AADT ranges from 5,000 (7,000) at the Santa Cruz/Santa Clara County line to 17,000 (21,000) west of Sixth Street. Southbound AM peak hour volumes for 1995 (2005) range from 200 (300) at the SCr/SCl county line to 900 (1,100) west of Sixth Street. Northbound AM peak hour volumes for 1995 (2005) range from 1,200 (1,400) to 2,000 (2,500) at the same locations as the southbound volumes

The 1995 D/C ratio is 1.02 with a Level of Service F-15, 2005 D/C ratio is 1.36 with an LOS of F-10.

(5) Route Concept

The route concept is to maintain the current two lane conventional facility.

(6) Route Improvement

The shoulders should be widened in various locations to facilitate bicycle traffic and also for safety purposes. It is anticipated that local policy in the area will preclude any future additional lanes in this segment.

Segment E
(04-SCl-9, PM 7.40-11.45)

Segment E runs from the City of Saratoga to the junction of Route 17 in Los Gatos.

(1) Existing Facilities

a. Highway Facility

This segment is 4.05 miles long. There are 1 to 2 lanes in each direction. The shoulders are 0 to 8 feet with 0-6 foot median.

1984 STIP Projects

FY 84/85 SCL 9
PM 9.6/10.6 A.C. Surfacing, Signals
PM 9.9 Install Signals, Lighting and Flashers

FY 85/86
PM 11.3 Repair Channel Lining

b. Public Transit

Santa Clara County Transit operates two bus routes along this segment. The buses operate from Saratoga through Los Gatos.

c. Bicycles

This is a heavily traveled bike route for both commuter and recreational users. Route 9 is the most direct route between Los Gatos and Saratoga.

d. Park and Ride

There are 20 spaces at a joint use lot located at the Ascension Catholic Church on Prospect and Miller Road. Another park and ride lot is located on the north side of Route 9 between North Santa Cruz Avenue and University Avenue in the City of Los Gatos.

e. Rail

None

(2) Current Operating Conditions

The 1982 AADT range from 20,000 east of the junction of Route 85 to 31,000 at the junction of Route 17. The southbound AM peak hour volumes range from 400 east of the junction of Route 85 to 1,100 at the junction of Route 17. Northbound AM

peak hour volumes range from 300 west of the junction of Route 85 to 1,000 west of Fruitvale Avenue.

The V/C ratio is .48 with a Level of Service of B-40.

(3) Accident Rate (1/81-12/83)

The accidents were fairly evenly spread out throughout each day of the week. The hours of the day with the highest accident rate were from 3 p.m. to 5 p.m.

There were a total of 208 accidents with 131 injured and 1 fatality.

The accident rate for this segment is 1.84 per MVM, while the statewide average is 3.21 per MVM.

The City of Saratoga has expressed concern on the number of accidents that have occurred between Big Basin Way and the westerly City limits. This concern will be addressed within the next cicyle of Route Concept Reports to be undertaken in the Fall of 1985.

(4) Future Operating Conditions

The projected AADT for 1995 (2005) ranges from 29,000 (35,000) at the junction of Route 85 to 46,000 (53,000) at both Santa Cruz Avenue and Quito Road. Southbound AM peak hour volumes for 1995 (2005) range from 2,200 (2,700) west of Quito Road to 3,100 (3,500) at the junction of Route 17. Northbound AM peak hour volumes for 1995 (2005) range from 1,300 (1,600) east of the junction of Route 85 to 2,500 (2,900) at the junction of Route 17.

The 1995 D/C ratio is .78 with a Level of Service of C-40, 2005 D/C ratio is 1.16 with an LOS of F-15.

(5) Route Concept

The route concept is to maintain the current 2-4 lane conventional facility.

(6) Route Improvement

No improvements.

It is anticipated that local policy will preclude any future lane additions.

SEGMENT	A	B	C	D	E
	SCR 0.046	SCR 6.460	SCR 13.110	SCL 0.00 / SCR 27.094	SCL 7.400 / SCL 11.448
NO. OF LANES PROPOSED: PRESENT	2	2	2	2	2-4
NO. OF LANES PROPOSED: 1995	2	2	2	2	2-4
NO. OF LANES PROPOSED: 2005	2	4	2	2	2-4
LEVEL OF SERVICE PROPOSED: PRESENT	C-40	B-40	B-45	B-45	B-40
LEVEL OF SERVICE PROPOSED: 1995	F-15	F-5	C-40	F-15	C-40
LEVEL OF SERVICE PROPOSED: 2005	F-15	F-20	E-25	F-10	F-15
TERRAIN	MTN	MTN	MTN	ROLLING	ROLLING
GRADES	6%	6%	6%	3-6%	3-6%
ACTUAL: Accidents Per MVM	3.24	4.33	3.37	10.58	1.84
ACTUAL: Fatalities Per 100MVM	.042	.053	.000	.214	.008

EXHIBIT A

SEGMENT	A	B	C	D	E
	SCR 0.046	SCR 6.460	SCR 13.110	SCL 0.00	SCL 7.400 / SCL 11.448
A.A.D.T. (.000) 1982	4–18	8–20	3–9	3–12	20–31
A.A.D.T. (.000) 1995	6–30	18–38	5–18	5–17	29–46
A.A.D.T. (.000) 2005	7–38	22–48	6–22	7–21	35–53
P.H.V. (00) 1982	7	11	4	4	9
P.H.V. (00) 1995	17	27	9	15	26
P.H.V. (00) 2005	25	32	14	20	34
AVE. HWY SPEED	42	40	40	45	50
OPERATING SPEED	31	31	31	30	37
V/C 1982	.55	.63	.33	.32	.48
V/C 1995	1.04	1.82	.72	1.02	.78
V/C 2005	1.65	1.30	.92	1.36	1.16
YEAR CAPACITY WILL BE REACHED	1994	1985	------	1994	1997

EXHIBIT B

ROUTE 9 ACCIDENT REPORT BETWEEN 1/81 to 12/83

Location P.M.	Segment	Total	No of Accidents Fatal	Inj.	F+I	Persons Killed	Persons Injured	Accident Rate * Fatal	F+I	Total	Statewide Rate * ⊞ Fatal	F+I	Total
SCr 0.046 to 6.460	A	151	2	79	8	2	126	.042	1.74	3.24	.068	1.66	3.43
SCr 6.460 to 13.110	B	488	6	253	259	6	372	.053	2.30	4.33	.075	1.52	2.81
SCR 13.110 to 27.094	C	134	0	93	93	0	135	.000	2.34	3.37	.079	1.59	2.94
SCl 0.00 to 7.400	D	346	7	218	346	7	319	.214	6.88	10.58	.082	1.85	3.66
SCl 7.400 to 11.448	E	208	1	92	93	1	131	.008	.82	1.84	.029	1.26	3.21

* Rates are per MVM (Million Vehicle Mile)

⊞ Statewide averages for this type of facility

This chart indicates the relationship between Level of Service and minimum operating speed for a given facility type.

Assigned Level of Service	Facility Type	Minimum Operating Speed
B	Freeways, expressways, or multilane conventional highways	55 MPH
B	Two-lane conventional highways	50 MPH
C	Freeways or expressways	50 MPH
C	Multilane conventional highways	45 MPH
C-45	Two-lane conventional highways	45 MPH
C	Two-lane conventional highway	40 MPH
D	Freeway or expressways	40 MPH
D	Conventional Highways	35 MPH
D	Conventional Highways with controlling traffic signals	15-30 MPH*

* This condition is shown on the tabulation of route segments under the "LOS" headings as D35.

Operating level of service on a roadway is a measure of the speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort, convenience, and operating cost. A roadway designed for a certain level of service will actually operate at different levels throughout the day. The level of service on a raodway varies inversely as some function of the traffic volume.

TRAFFIC PROJECTION

1983/4 ROUTE CONCEPT STUDY
ROUTE 9 SHEET 1 OF 3

SEGMENT	CO	ROUTE 9 POST MILE	DESCRIPTION	TRUCK % AADT	TRUCK % PK HR	1982 AADT	1982 NB AM AH	1982 PK BK	1982 NO L	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM AH	1995 PK BK	1995 NO L	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM AH	2005 PK BK	2005 NO L	2005 V/C	2005 LOS	2005 LN
	SCR																									
	SCR	0.05	JCT. ROUTE 1																							
				11	9	18	1	2	1	0.6	A	1	29	10	30	1	2.00	F	3	36	13	38	1	2.53	F	8
		0.63	SANTA CRUZ																							
				4	3	4	1	2	1	0.6	A	1	6	2	6	1	0.40	B	1	7	3	8	1	0.53	B	1
		0.63	SANTA CRUZ CITY LIMITS																							
				4	3	4	2	4	1	0.26	B	1	6	2	6	1	0.80	D	1	7	3	8	1	1.06	F	
A																										
				4	3	6	2	4	1	0.53	C	1	8	3	9	1	1.20	F	3	10	4	11	1	1.46	F	
		5.64	FELTON SAN LORENZO AVE																							
				4	3	10	4	6	1	0.80	D	2	13	5	15	1	2.00	F	5	16	6	18	1	2.40	F	
				6	5	15	5	10	1	1.0	F	3	30	9	27	1	3.60	F	8	36	10	31	1	4.13	F	
		6.46	FELTON MOUNT HERMAN RD.																							
				3	3	20	6	14	1	1.0	F	3	38	10	29	1	2.42	F	3	48	11	34	1	2.83	F	
				4	3	16	5	12	1	1.0	F	3	38	10	29	1	2.42	F	3	48	11	34	1	2.83	F	
		8.11	BEN LOMND,O BLVD. GLEN ARBOR RD.																							
				4	3	12	3	9	1	0.75	C	2	27	9	28	1	2.33	F	3	35	11	34	1	2.83	F	
				4	3	16	3	9	1	0.75	C	2	38	10	28	1	2.33	F	3	42	15	36	1	3.00	F	
		9.71	SAN LORENZO RIVER BRIDGE																							
				4	3	16	20	5	1	0.40	B	1	32	12	28	1	2.33	F	3	42	15	36	1	3.00	F	
B																										
				4	3	9	2	3	1	0.25	B	1	21	11	20	1	1.67	F	2	27	14	26	1	2.16	F	

TRAFFIC PROJECTION

1983/4 ROUTE CONCEPT STUDY
ROUTE 9 SHEET 2 OF 3

SEGMENT	CO	ROUTE 9 POST MILE	DESCRIPTION	TRUCK % AADT	TRUCK % PK HR	1982 AADT	1982 NB AM AH	1982 PK BK	1982 NO L	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM AH	1995 PK BK	1995 NO L	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM AH	2005 PK BK	2005 NO L	2005 V/C	2005 LOS	2005 LN
		11.30	BROOKDALE ALAMEDA AVENUE																							
				4	3	8	2	3	1	0.25	B	1	20	10	19	1	1.53	F	2	25	13	23	1	1.92	F	
				5	4	11	3	4	1	0.33	B	1	21	11	17	1	1.42	F	2	27	14	27	1	2.25	F	
		13.04	BOULDER CREEK JCT. RTE. 236 W																							
				4	3	9	2	3	1	0.25	B	1	18	7	11	1	2.92	E	2	22	12	17	1	1.42	F	
		13.24	BEAR CREEK RD.																							
				3	2	7	2	4	1	0.35	B	1	13	7	7	1	2.53	C	1	16	11	11	1	0.92	E	
				2	2	5	5	4	1	0.23	B	1	9	9	5	1	0.75	D	1	11	11	8	1	0.92	E	
		15.34	KINGS CREEK ROAD																							
				1	1	4	2	4	1	0.33	B	1	9	10	5	1	0.83	D	1	11	13	6	1	1.08	F	
C				1	1	3	1	3	1	5.25	B	1	5	7	2	1	0.58	C	1	6	8	2	1	0.67	C	
		20.83	WATERMAN SWITCH JCT. RTE 236 SW																							
				1	1	3	1	3	1	0.25	B	1	5	8	2	1	0.67	C	1	6	10	3	1	0.83	D	
		20.83	WATERMAN SWITCH JCT. RTE 236 SW																							
				1	1	3	1	3	1	2.25	B	1	5	8	2	1	0.66	C	1	6	10	3	1	0.83	D	
				1	1	3	6	2	1	0.17	B	1	5	10	2	1	0.83	D	1	7	13	2	1	1.08	F	
		27.09	SANTA CRUZ CO. LINE																							
	SCL	0.00	SANTA CLARA CO. LINE JCT. RTE 35																							
				1	1	3	3	1	1	0.25	B	1	5	12	2	1	1.00	E	2	7	14	3	1	1.16	F	
				1	1	4	4	2	1	0.33	B	1	7	12	3	1	1.00	E	2	9	16	4	1	1.33	F	
		4.89	SANBORN ROAD																							
				1	1	4	3	2	1	0.25	B	1	8	14	4	1	1.16	F	2	10	17	4	1	1.42	F	
				1	1	4	7	1	1	0.25	B	1	8	14	4	1	1.16	F	2	10	17	4	1	1.42	F	

TRAFFIC PROJECTION

1983/4 ROUTE CONCEPT STUDY
ROUTE 9 SHEET 3 OF 3

SEGMENT	CO	ROUTE 9 POST MILE	DESCRIPTION	TRUCK % AADT	TRUCK % PK HR	1982 AADT	1982 NB AM AH	1982 PK BK	1982 NO L	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM AH	1995 PK BK	1995 NO L	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM AH	2005 PK BK	2005 NO L	2005 V/C	2005 LOS	2005 LN
D		5.71	SARATOGA PIERCE ROAD																							
				1	1	4	8	1	1	0.20	A	1	8	15	4	1	1.00	E	2	10	11	8	1	0.73	C	
				1	1	5	9	1	1	2.27	A	1	11	20	9	1	1.33	F	2	14	25	10	1	1.67	F	
		7.09	SARATOGA SIXTH STREET																							
				2	1	6	3	1	1	0.20	A	1	15	20	9	1	1.33	F	2	19	25	11	1	1.67	F	
				3	2	12	6	3	1	0.40	B	1	17	15	7	1	1.00	E	2	21	19	8	1	1.27	F	
		7.40	SARATOGA JCT. RTE 85 N																							
				2	2	20	7	4	1	0.40	C	1	29	10	24	1	1.60	F	2	35	12	29	1	1.98	F	
				3	2	20	8	5	1	0.60	C	1	32	13	25	1	1.67	F	2	38	16	30	1	2.00	F	
		8.84	SARATOGA FRUITVALE AVENUE																							
				3	2	26	10	7	2	0.26	A	2	36	17	26	2	0.72	C	2	43	21	31	2	0.86	D	
E																										
				3	2	26	10	7	2	0.28	A	2	35	18	22	2	0.61	C	2	43	22	27	2	0.75	C	
		9.88	QUITO ROAD																							
				3	2	28	15	9	1	0.00	B	1	43	24	29	1	1.61	F	2	50	27	33	1	1.83	F	
				3	2	29	16	10	2	0.28	B	2	46	25	30	2	0.83	D	2	53	28	35	2	0.97	E	
		11.06	LOS GATOS, SANTA CRUZ AVENUE																							
				3	2	31	1	11	2	0.37	A	2	46	25	31	2	0.86	D	2	53	29	35	2	0.97	E	
		11.435	LOS GATOS, JCT. RTE. 17																							

EXPLANATION TO TRAFFIC VOLUME TABLES

COLUMN	DESCRIPTION
SEGMENT	Description of the Route Segment
CO	County Abbreviations
MILE POST	Mile Post in County
AADT	Annual Average Daily Traffic Count
AM PK	Morning Peak Hour Traffic
AH	Volumes Ahead Direction
BK	Volumes Back Direction
NO L	Number of Lanes (Existing) One Direction
V/C	Volume/Capacity: Ratio Volume Traffic to Max. No. of Traffic/Hr.
LOS	Level of Service According to the Functional Classification of the Route Relative to the Terrain and Facility
LN	Number of Lanes Needed to Meet LOS "D" One Direction/Urban
	Number of Lanes Needed to Meet LOS "B" One Direction/Rural
% Truck AADT	Truck % of Average Annual Daily Traffic Count
% Truck PK HR	Truck % at Peak Hour

Route 9

COMPARISON OF FUTURE LOS WITH ROUTE CONCEPT

SEGMENT	NO. LANES/LOS			ROUTE CONCEPT		NEEDS	
	1982	1995	2005	Proposed Lanes	LOS	Lanes	Target LOS
A SCr 0.05 to 0.63	2/D-35	2/F-20	2/F-5	4	F-5	6	B-45
SCr 0.63 to 6.46	2/C-40	2/F-20	2/F-5	2	F-5	6	B-45
B SCr 6.46 to 13.11	2/B-40	2/F-5	2/F-5	2	F-5	6	B-45
C SCr 13.11 to 27.09	2/B-45	2/C-40	2/C-40	2	F-25	4	B-45
D SCl 0.00 to 7.40	2/B-45	2/F-15	2/F-10	2	F-10	4	B-45
E SCl 7.40 to 11.45	2-4/B-40	2-4/C-35	2-4/F-15	2-4	F-15	6	D-35

BRIDGE NUMBER		NAME OR DESCRIPTION	RTE	POST MILE	CITY	STRUCTURE TYPE OR PUC NUMBER OR PUMP DATA	WID	LENGTH (PROT)	WIDTH
		04-SCR-9							
		JCT RTE 1	9	005	SCR				
36	37	RINCON CREEK	9	197		CG		161	24
35	38	SIDEHILL VIAD	9	211		CG		162	29
36	39	RINCON GR XNG	9	220		OOEC 012400		2K	
36	41	SIDEHILL VIAD	9	367		CG		62	21
36	42	SIDEHILL VIAD	9	387		CG		163	20
36	43	SIDEHILL VIAD	9	427		CG		82	18
36	45	FALL CREEK	9	701		SADTS		92	23
36	46	SAN LORENZO R	9	776		CAOCG		307	21
36	47	SAN LORENZO R	9	787		CAOCS		151	24
36	48	SAN LORENZO R	9	933		QB CB		168	45
36	49	SAN LORENZO R	9	971		STPTS		161	23
36	50	MARSHALL CREEK	9	985		CG	CS	26	28
		JCT RTE 236 LT	9	1304					
36	51	BOULDER CREEK	9	1311		CAOCS		95	30
36	52	SAN LORENZO R	9	1361		SS CG	SS	107	23
36	54	KINGS CREEK	9	1549		CG		88	21
36	55	SAN LORENZO R	9	1920		MP		13	
37	73	WBR SARATOGA C	9	360		CG	CG	56	30
37	74	SARATOGA CREEK	9	485		CAF		165	24
37	75	SARATOGA CREEK	9	550		CGC		210	20
37	76	SARATOGA CREEK	9	630		CC		23	
37	77	SARATOGA CREEK	9	640		CC		17	
37	78	SARATOGA CREEK	9	670	SAR	CG SS		28	27
		JCT RTE 85 AH	9	740	SAR	RT ON 9			
37	138	LOS GATOS CREEK	9	1130	LGTS	CGC	CGC	130	62
37	144	RTE 9 17 SEP	9	1143	LGTS	CGC	CGC	197	62
		JCT RTE 17	9	1145	LGTS	END RTE 9			22

EXPLANATIONS TO: Existing Facilities (Bridges) Tables

1. Bridge number: Suffix, when used, is coded as follows:

J = Outer Outer Left
K = Left Outer Highway Structure
L = Left Structure or Left Inner Structure
C = Center Structure
R = Right Structure or Right Inner structure
S = Right Outer Highway Structure
T = Outer Outer Right
Y = Structure or Grade Xing on State-owned and Maintained connections not on main Hwy (may be closed)
W = Drainage Pumping Plant
M = Buried Hazard or Miscellaneous Structure
Z = Access to Private Property or Closed w/no access
E = Connector Structure
F = Connector Structure
G = Connector Structure
H = Connector Structure

2. Name or description - may contain miscellaneous information. Additional miscellaneous information may be found on the same line under the heading "Structure Type of PUC number or Pump Data".)

3. State Highway Route

4. Post Mile (To 1/100 Mile)
Prefixes of R, M, and N Refer to realigned routes. C refers to commercial routing. L refers to section paralleling another route (non-add).

5. City (Caltrans "ALPHA" code)

6. Structure type or PUC number or pump data

A. Structure type-Three types may be shown for multiple-type structures. Spacings are 3-column, 3-column and 3-column.

CODING 1ST 2 COLUMNS OF ALL 3 TYPES

LS - Log Stringer
TS - Timber Stringer
TT - Timber Truss
TA - Timber Arch
SP - Steel Pipe (Girder)
SS - Steel Stringer (Rolled Sections)
SG - Steel Plate Girder
TB - Timber Slab (Laminated)
SB - Steel Box Girder
ST - Steel Truss
SA - Steel Arch
CS - Concrete Slab
PS - Precast Concrete Slab
PB - Precast Concrete Box Girder
CA - Concrete Arch

CG - Concrete Girder
CP - Concrete Pipe
CU - Concrete Arch Culvert
PG - Precast Concrete Girders

QB - Cast in place prestressed box Girder
QG - Cast in place prestressed Girder (Not Box)
QS - Cast in place prestressed slab
QX - Precast prestressed box girder
QI - Precast prestressed "I" girder
QJ - Precast prestressed Double "T" Girder
QK - Precast prestressed "T" Girder

CB - Concrete Box Girder
CC - Concrete Box Culvert
CG - Concrete Girder
CP - Concrete Pipe
CU - Concrete Arch Culvert
PG - Precast Concrete Girder

QT - Precast prestressed inverted "T" Girder SA - Steel Arch
QU - Precast prestressed inverted "U" Girder
QW - Precast prestressed inverted "W" Girder
QA - Precast prestressed slab

SU - Suspension
MP - CMP or Multi Plate
TU - Tunnel
MA - Masonary Arch
CT - Combination Truss (Steel and timber)
TW - Timber retaining wall
CW - Concrete retaining wall
SW - Steel retaining wall
CD - Concrete Dam
ED - Earth Dam
SLS - Seal Slab
FER - Ferry Boat

6. Structure type or PUC Number or Pump Data (cont'd) Third column is coded, where it applies, as follows:

A = Welded
B = Welded Continuous
T = Through
L = Through Continuous
D = Deck
H = Deck Continuous
P = Pony
O = Open Spandrel
F = Earth Fill
B = Box (Box Girder)
C = Continuous
E = Continuous with Std. Cantilevered Ends (No Abuts.)
W = Sidewalk
K = Pier or Tower Span

I - Continuous Over Inclined Bents
Q - Prestressed (Use other coding if possible)
S - Stayed
R - Orthotropic

B. Drainage Pumps - Spacings are 2-columns, 3-columns and I-column

The first two columns will show the number of pumps (pit pumps not included) and the type of pit.

Code for Type of Pit: W - Wet Pit
U - Dry Pit
G - Gravity
S - Submerged

Second three columns will show information on auxiliary power supply, if such power is available. The following will be shown:

A. Number of Pumps that operate from auxiliary power supply
B. Type of motor for auxiliary power supply

Code for Type of Motor: G - Gasoline Motor
D - Diesel Motor
N - Natural Gas

C. The Type of Drive from the Auxiliary Power Supply to the Pumps
Code for type of Drive: M - Mechanical (Direct)
V - Electrical (Generator)

Third single column will show the type of control device for the pumps.
Code for control device: E - Electrode
F - Floats
P - Pressure
C - Combination

C. PUC Number (For Railroad Grade Crossings)

D. Wid. or Ext. Type: Latest widening or extension. See code explanation in (6).

7. Total bridge length (ft) or grade crossing protection. Main Type of signal only coded as follows:

FLC - Flashing Lights on Cantilever Arms
FL - Flashing Light Signals
G - Manual Gates
H - Human Flagmen
K - Automatic Gates
M - Flashing Lights Signals with Rotating Stop Banner
O - Standard Overhead Sign
T - Traffic Signals Synchronized
W - Standard Wigwag
WM - Magnetic Wigwag Flagment or Other Type of Wigwag with Flashing Light Aspect
X - Standard Crossbuck
XR - Reflectorized Crossbuck

8. Bridge Width (Feet)

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 (RDP) 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 improvements and determining estimated costs.

All information in the RCR 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 RCR for this route.

ROUTE CONCEPT REPORT

ROUTE 9

SCR 0.46 to SCL 11.45

Prepared under the direction of:

CECIL L. SMITH, Chief
Transportation Planning, District 4

Recommended Approval:

JOHN J. VOSTREZ
Deputy District Director
Planning and Programming

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

Approved:

BURCH C. BACHTOLD
District Director of
Transportation

Approved:

D. L. WIEMAN, Chief
Division of Transportation
Planning

Approved:

For ALLAN H. HENDRIX
Division of Highways and
Programming

Approved:

VINCE PAUL Chief
Division of Project
Development