FINAL

MAR 13 1986

SUMMARY

ROUTE CONCEPT REPORT
ROUTE 101
SCL 0.00 TO SON 56.24

This report defines the concept for Route 101 in District 4 for a 20-year planning period (1985-2005).

ROUTE CONCEPT

Segment A	SCl	0.00-29.00	F-15	4-8-lane freeway
*Segment B	SCl	29.00-52.55	F-15	8-lane freeway
*Segment C	SM	0.00-26.10	F-15	8-lane freeway
Segment D	SF	0.00-6.71	F-15	8-6-lane freeway,
*Segment E	MRN	0.00-27.63	F-10	8-lane freeway
*Segment F	SON	0.00-22.81	F-10	8-lane freeway
Segment G	SON	22.81-56.24	D-30	4-6-lane freeway

* 2005 traffic demand indicates a need for 12-16 lanes. The 12-16 lane concept is based on the assumption that public transit is not provided. The concept will be reassessed at the Route Development Plan stage.

CONCEPT RATIONALE

Route 101 is a principal arterial facility serving commuter, commercial and recreational traffic. The route is a major transportation corridor being the primary north-south travelway for local and inter-regional traffic.

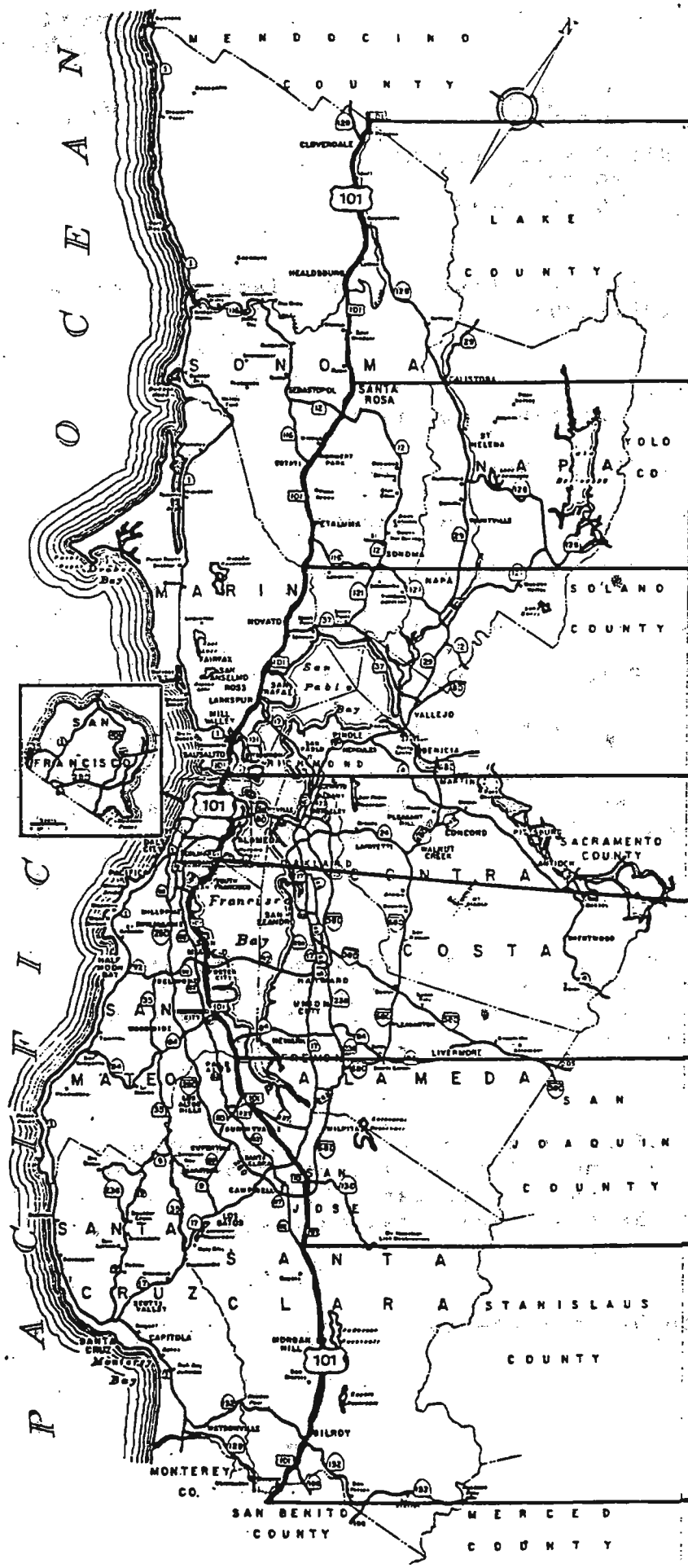
AREAS OF CONCERN

Significant increase in traffic demand caused by expansion of residential, industrial and commercial development from Gilroy to South San Francisco and San Francisco to Santa Rosa has prompted transportation studies by the concerned local agencies.

IMPROVEMENTS

Widen where appropriate to bring route to concept.

LOCATION MAP
ROUTE 101



SON 56.24	G
SON 22.81	F
SON 0.00	
MRN 27.63	E
MRN 0.00	
SF 6.71	D
SF 0.00	
SM 26.10	C
SM 0.00	
SCL 52.55	B
SCL 29.00	A
SCL 0.00	

ROUTE CONCEPT REPORT

ROUTE 101

SCL 00.00 to SON 56.24

Prepared under the direction of:

Cecil L. Smith 3/12/86

CECIL L. SMITH, Chief — Date
Transportation Planning
District 4

Recommended Approval:

17 Mar '86

GEORGE GRAY — Date
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 3/17/86

BURCH C. BACHTOLD — Date
District Director
District 4

Approved:

D. L. WIEMAN, Chief — Date
Division of Transportation
Planning

Approved:

ALLAN HENDRIX, Chief — Date
Division of Highways
and Programming

Approved:

VINCE PAUL, Chief — Date
Division of Project
Development

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 101
SCL 0.00 to SON 56.94

I. ROUTE DESCRIPTION

Route 101 is approximately 807 miles long and traverses 14 counties: Los Angeles, Ventura, Santa Barbara, San Luis Obispo, Monterey, San Benito, Santa Clara, San Mateo, San Francisco, Marin, Sonoma, Mendocino, Humbolt and Del Norte. The route begins at Route 5 in the City of Los Angeles and proceeds northward near the coast to the Oregon state line via Crescent City.

Within District 4, Route 101 begins at the San Benito/Santa Clara County line (P.M. 0.0) and terminates at the Sonoma/Mendocino County line (P.M. 56.94). For most of this length Route 101 is a 4-8 lane freeway with a 10-lane roadway 1.4 miles long south of the route 280 interchange in San Francisco. A four lane freeway transitions into a 2-lane conventional highway approximately 21 miles north of Santa Rosa. This 2 lane conventional highway (6.5 miles long) passes through the City of Cloverdale and continues to the Sonoma/Mendocino County line. The route traverses flat and rolling terrain and most grades are moderate.

Throughout its length, Route 101 is designated as a SHELL route and federally classified as Federal Aid Primary.

II. PURPOSE OF THE ROUTE

Route 101 has three primary uses: commuter, commercial and recreational.

During peak travel periods commuters are the primary users of Route 101. San Francisco's financial district and other commercial and industrial activity centers, and the high technology enclave in Santa Clara County (Silicon Valley) are the primary traffic generators which are served by and impact Route 101. To a lesser extent commercial, industrial, and governmental activity centers in San Mateo, Marin and Sonoma Counties also impact 101.

Since 101 traverses over 30 cities within District 4, it is a significant factor in the transportation (distribution) of goods and services. Agricultural products from the Napa and Salinas Valleys are readily shipped to market via 101, as are raw materials and finished manufactured products. Route 101

also enhances the ability of the expanding service industry to function.

As a primary north-south arterial, Route 101 also carries significant recreational traffic. Many Bay Area residents and tourists visit the quaint coastal inns of Mendocino County, the wineries of Napa and Sonoma Counties, the sites of San Francisco (Fisherman's Wharf, Chinatown, etc.), the attractions of the Peninsula and San Jose, and the unique ambience of the Carmel/Monterey Area.

III. STUDIES IN PROGRESS

The following is a brief description of the two major studies in the Route 101 corridor: the "Peninsula Route 101 Study" prepared by the Metropolitan Transportation Commission (MTC), September 1984, and the "Highway 101 Corridor Plan and Program, Phase I" prepared for the Highway 101 Action Committee of Marin County by Parsons, Brinckerhoff, Quade & Douglas, Inc. and Jefferson Associates, Inc. (May 1984).

A. Peninsula Route 101 Study

The Peninsula Route 101 Study was conducted under the auspices of the MTC Peninsula Transit Alternatives Project (PENTAP) Committee. The study was initiated in response to estimates by ABAG of a more than 27% increase in peak hour vehicle traffic over 1980 levels, due to the significant amount of development in and near the 101 corridor. The study addresses mitigation of future transportation problems, alternatives for mass transit improvements, highway improvement programs and coordinated transportation efforts.

B. Highway 101 Corridor Plan and Program, Phase I

This study, undertaken by Parsons, Brinckerhoff, Quade & Douglas, Inc., and Jefferson Associates, Inc., for the Marin and Sonoma County Highway 101 Action Committee, was in response to increased traffic projections in the corridor by the year 2000. Forecasts were based on: (1) the existing commuter travel pattern as derived from the 1980 census Journey-to-Work data, and (2) the growth in corridor commuter population (employed residents) and employment between 1980 and 2000 as projected by ABAG.

In Phase I, the study evaluated relevant demographic data and postulated several transportation alternatives which adressed highways, light rail, busways, and water-borne transportation systems. The consultant recommended a

preferred alternative which was accepted by the governing bodies of the participating jurisdictions (see Appendix Phase II which will address modal choices in more detail and explore funding sources will commence with selection of a consultant. This phase will also include an analysis of alternative land use impacts to determine if changes in land use will affect projected improvement needs.

C. Project Study Report in San Rafael Proposed Reconstruction of the Route 101/580 Interchange.

The California Department of Transportation in response to a request from the California Transportation Commission, has prepared a project study report for the Route 101/580 Interchange. The report was completed in March, 1985, presented to the California Transportation Commission in the spring and summer of 1985 and continued by the Commission for consideration in the development of the 1985/86 State Transportation Improvement Program.

The Report identifies the need to reconstruct the eastbound I-580 flyover, widen Route 101 to eight to ten lanes including relocation of Francisco Boulevard, and reconstruct all of the interchange ramps to meet current geometric standards and improve the accident record. These improvements are identified as a State responsibility due to the high traffic volumes and inadequate storage in the close frontage road and tight diamond confirguration.

IV. USE OF 1982 TRAFFIC DATA

The traffic data in this report (AADT and AM Peak) was taken from the "1982 Traffic Volumes" book which was the latest information available when this system planning cycle began. Traffic forecasts were projected from this data base. Subsequently, this data base has been updated; however, for consistency and uniformity, the 1982 data base has been retained for this cycle of the Route Concept analysis.

V. SEGMENTATION

Route 101 is divided into seven segments (A-G) within District 4 starting at the Santa Clara/San Benito County line and terminating at the Sonoma/Mendocino County line. The following is a detailed description of each segment.

A. Segment A

(SCL-101 P.M. 0.0 - 29.0)

This segment of U.S. Highway 101 begins at the District 4/District 5 boundary (Santa Clara/San Benito County) and proceeds through the Santa Clara Valley to 0.9 mi. north of the Routes 101/82 I/C at Blossom Hill Road.

1. Existing Facilities

a. Highway Facility

This freeway segment is 29.00 miles long. There are 2 lanes in each direction with the first 4.12 miles being a 4 lane divided freeway, 10 to 13 foot shoulders and a 30-70 foot median. The terrain is flat. From Cochrane Rd. (P.M. 17.82) to Blossom Hill Rd. (29.00), Highway 101 is a 4-6 lane freeway.

1985 STIP Projects:

F.Y. 86/87
P.M. 21.2/21.4 Construct Interchange at Scheller Avenue (City of San Jose)
P.M. 23.1/23.2 Construct Interchange at Bailey Ave. (City of San Jose)

b. Public Transit

Currently Santa Clara County Transit offers service from the City of Gilroy north into San Jose along the Monterey Highway which closely parallels Route 101.

c. Bicycle

Bicycles are prohibited on 101, except for a 2 miles section of 101 south of Bloomfield Road. For the remainder of the route there are other bicycle routes which closely parallel this route.

d. Park and Ride

There are two county owned lots located in this segment. One at Tilton Avenue/Hale Avenue in Morgan Hill with 23 spaces and the other at San Martin Avenue/Monterey Highway in San Martin with 50 spaces.

e. Rail

Southern Pacific operates a rail line parallel to Route 101 between San Jose and San Francisco. Studies are beng conducted by Caltrans on the possibility of extending Caltrain on the existing track to Morgan Hill.

2. Current Operating Conditions

The latest available data on the freeway section which opened in March 1984 is as follows:

Rte 101 P.M. 25.81 Date: Thursday, August 7, 1985

Northbound

Total ADT	32,912 vehicles
AM Peak	2,654 vehicles/hr
PM Peak	2,942 vehicles/hr

Southbound

Total ADT	31,413 vehicles
AM Peak	2,031 vehicles/hr
PM Peak	2,525 vehicles/hr

3. Accident Rate 1/81-12/83

A total of 1,214 accidents occurred in this segment. There were seven fatalities and 827 injuries. The accident rate in this segment is .72 MVM which is below the statewide average of 1.71.

4. Future Operating Conditions

The 1995 and (2005) AADT ranges from 41,000 (62,000) at the Santa Clara/San Benito County line to 88,000 (117,000) just north of 101/82 JCT. The southbound peak hour volumes for 1995 range from 2,200 to 5,800 southbound figures for 2005 are 3,900 to 8,800. The D/C ratio for 1995 is 1.07 with a LOS of F-20, year 2005 D/C ratio is 1.62 with a LOS of F-10.

5. Route Concept

From Jct 101/152 northbound, the route concept is 8 lanes. Due to high projected growth in the Gilroy/Morgan Hill area, Route 101 may not be able to satisfy the total demand; other modes of transportation will have to be considered. To be consistent with District 5, Route 101 will be a 4 lane freeway at the San Benito/Santa Clara County line.

6. Route Improvement

Widen to 8 lanes. The new freeway section which bypasses Monterey Highway between south San Jose and Morgan Hill opened in March 1984. This 4 to 6 lane freeway has improved traffic operations and enhanced safety.

B. Segment B

(SCL 101-P.M. 29.00 - 52.55)

Segment B extends from Blossom Hill Road (0.9 mi. north of the 101/82 I/C) through the heavily populated and industrialized south bay to the Santa Clara/San Mateo County line.

Segment B borders what is termed the "Golden Triangle" which is Routes 880 (formerly 17), 237, and 101. During the past 5-8 years the semi-conductor industry has generated explosive growth in this area.

Measure A, passed by the voters of Santa Clara County in November 1984, increased the sales tax by 1/2 cent. It is estimated that this tax will generate approximately a billion dollars during the next 10 years. These revenues will be used for improvements on Routes 101, 237 and 85.

Segment B also includes the Guadalupe Corridor project which consists of a multimodal transportation facility, light rail transit, four-lane expressway, bicycle provisions, light rail transit maintenance site, expressway ramp improvements and provisions for lanes in the median on a portion of Route 101 from the Guadalupe Parkway, (PM 39.91) to the Lawrence Expressway (PM 43.85).

Encompasssing an area approximately 16 miles long and five miles wide, the Guadalupe Corridor extends from the heavily populated Almaden and Edenvale residential areas of South San Jose through downtown San Jose to the electronics industrial parks of Santa Clara.

1. Existing Facilities

a. Highway Facilities

This segment is 24.24 miles long. There are 2 to 3 lanes in each direction with 8 to 10 foot shoulders and 46 foot median. The terrain is flat.

Since June 1985, 1 additional lane in each direction has been constructed from Capital Expressway to Tully road (P.M. 31.5 to 33.3); there are now 6 through lanes in this section.

b. <u>1985 STIP Segment B</u>

F.Y. 85/86
P.M. 39.2/39.8 Construct on-ramp (NB) at North 1st Street.

P.M. 47.9/52.5 R. Meter-HOV Bypass Lanes-Aux Lane SB-Moffett Blvd. to SM Co. Line.

P.M. 31.0/32.1 Construct Interchange at Yerba Buena and Sylvandale OC.

F.Y. 86/87
P.M. 26.0/52.5 Widen freeway to 8 Lanes

F.Y. 87/88
P.M. 35.3/36.6 Modify 101/130 I/C widen freeway

P.M. 37.8/38.2 Roadway Reconstruction
P.M. 39.8/40.0 New overcrossings at Guadalupe Parkway.

P.M. 49.2/49.9 Modify I/C and widen overcrossing at the Rengstorff Ave. I/C.

F.Y. 88/89
P.M. 48.6/49.1 Modify I/C and widen overcrossing at Stierlin Rd. I/C.

c. <u>Public Transit</u>

Santa Clara County Transit operates extensive routes throughout this corridor.

d. <u>Bicycles</u>

Bicycles are used in this corridor for commuting purposes. It does not, however, have a major impact on traffic in the corridor.

e. Park and Ride

At present there are two joint use park and ride lots located in the 101 corridor in San Jose. One is at Capitol Expressway/Tully Road and has a capacity of 65 cars. The other is located at N. Capitol Ave./McKee and has a capacity of 60 cars.

f. Rail

Caltrans operates the Peninsula Commute Service between San Francisco and San Jose. In July 1980, Caltrans executed a "purchase of service" contract with SP to prevent discontinuance of the Peninsula commuter service.

Under the purchase of service arrangement, the SP continues to operate the trains while local government and Caltrans administer the service in cooperation with the 3 counties involved. A fundamental part of this administration has been a planned improvement program to purchase new rolling stock, acquire and improve station facilities, revise train schedules and frequencies, coordinate connections with local transit and provide increased public information.

Ridership on the commuter line peaked at 9.5 million annual riders in 1984 and bottomed out at 4.3 million annual riders in 1977 and 1978.

Positive measures have been and are being taken by Caltrans to modernize the equipment, increase efficiency in the service and enhance convenience to the patrons. Sixty-three new passenger cars and 18 new locomotives are currently being put into service. The system will have push-pull capability that will increase efficiency by saving time and advancing safety standards. For riders' convenience, Caltrans is providing shuttle service from 4th and Townsend to downtown San Francisco. In addition, it is anticipated that within 3 to 7 years, the Peninsula Commute Service will extend to new intermodal terminals in downtown San Francisco and San Jose.

As improvements are made in the commuter service, Caltrans anticipates that ridership will continue to increase as it has in 1984 and 1985. An

average increase of 4% was realized in the last 2 years.

Caltrans expects an increase in ridership of from 5 to 7% in the next 3 years. In addition, an increase to 100,000 riders a day by the year 2000 is projected as opposed to approximately 20,000 daily riders at the present time.

The Peninsula Commute Service represents a vastly underutilized element of the Route 101 corridor and offers a significant opportunity to increase the movement of commuters. The service provides an immediate answer to a serious and growing congestion problem on the Peninsula. The freeway system at many locations on the Peninsula is currently at capacity and opportunities for expansion are limited. Yet, development along the Route 101 corridor between San Francisco and San Jose continues to occur at a rapid rate. MTC and ABAG project a 30% increase in travel demand by the year 2000. This projected increase cannot be accommodated by the present highway facility alone.

2. Current Operating Conditions

The AADT for 1982 ranges from 73,000 north of Hellyer Avenue to 164,000 at the junction of Route 85 south. Northbound peak hour volumes range from 2,400 to 7,300. Southbound peak hour volumes range from 2,300 to 7,200. The V/C ratio is 1.13 with a level of service "F-20".

The peak period of travel in this segment lasts for two to three hours.

3. Accident Rate 1/81-12/83

The total accidents in this segment were 5,459 with 3,125 persons injured and 51 fatalities. The accident rate for this segment is 1.34/MVM.

4. Future Operating Conditions

AADT for the year 1995 ranges from 85,000 south of Hellyer Avenue to 181,000 at the junction of Route 85 south. The 1995 northbound peak hour demand ranges from 6,400 to 9,400. Southbound 1995 peak hour demand ranges from 4,000 to 8,600. AADT for 2005 ranges from

117,000 at Hellyer Avenue to 208,000 at the junction of Route 85 south. The 2005 NB peak hour demand ranges from 6,600 to 9,900, SB peak hour ranges are 5,200 to 10,900. The D/C ratio for 1995 is 1.20 with an LOS of F. The D/C ratio for 2005 is 1.50 with an LOS of F.

5. Route Concept

The route concept is a basic 8 lanes with 10 lane sections where development and R/W availability permit. The highway within this segment is limited to 8 lanes in most areas due to limited right of way.

6. Route Improvement

At the present time, segments B, C, and D are operating at capacity. With the planned development in the 101 corridor, the demand on Route 101 will reach far greater proportions. Alternate modes of transportation will have to be evaluated or present means of transit will have to be expanded.

C. Segment C

(04-SM-101 P.M. 0.00 - 26.10)

Segment C runs from the Santa Clara/San Mateo County line through the heavily developed eastern Peninsula to the San Mateo/San Francisco County line.

Approximately 10,000 peak hour trips will be generated in this segment from developments that are either completed or under construction. Thirty thousand peak hour trips will be generated if planned developments are approved. The development of the Marine World property in Redwood City will provide 1.5 million square feet and employ 6,700 people at the planned hotel and office space.

A majority of the people that will be employed at these new developments are expected to live across the Bay, where lower cost housing is located. This will put an increased demand on the already crowded Dumbarton and San Mateo Bridges.

1. Existing Facilities

a. Highway Facility

Segment C is 26.10 miles long. There are 3 to 4 lanes in each direction. Shoulders are 8 to 10 feet in width and median widths range from 12 to 46 feet. The terrain is generally flat.

b. 1985 STIP Segment C

F.Y. 85/86

P.M. 7.9/8.0	Modify I/C, park and ride at Holly Street I/C.
P.M. 9.6/9.7	Widen OC - Modify Interchange at Ralston Ave. I/C.
P.M. 16.5/21.6	Roadway Reconstruction Broadway to Colma Ck.
P.M. 22.0/24.1	Roadway Reconstr. SSF overhead to SF Co. Line.

F.Y. 86/87

P.M. 5.7/6.2	Add ramps and widen bridge on Maple St. (RWC)
P.M. 7.4/7.8	New Freeway Connection at Brittain Ave. in San Carlos.
P.M. 15.7/16.2	Construct NB on and off-ramps from N/Peninsula Ave. OC to S/Broadway.
P.M. 23.1/23.3	Construct on and off ramps 0.4 miles North of Oyster Pt. Blvd.

F.Y. 88/89

P.M. 22.6/22.8	Modify I/C at Oyster Pt.

c. Public Transit

SamTrans (San Mateo County Transit) provides service from Palo Alto to the City of San Francisco.

d. Bicycles

Bicycles are used extensively throughout this corridor for both recreation and commuting purposes. Bicycles are not allowed on 101 but there is a bike route that closely parallels 101.

e. Park and Ride

There are one State-owned and two joint use lots located along this segment. The State-owned lot is at 101 and 3rd Avenue. It has 17 spaces with all 17 spaces used and is located in the City of San Mateo. One of the joint use lots is located at the Payless Drug Store located on Concar Drive in San Mateo and has 30 spaces with 12 spaces

being used. The other joint use lot is located at Breuners Furniture Store on Industrial Road in San Carlos and has 40 spaces with only 2 being used.

f. Rail

The City of Brisbane has recommended a new Caltrain station at Central Brisbane or Sierra Point to accommodate the projected 20,000 new jobs in the area within the next 20 years. The recommendation has been submitted to Caltrain's Rail Operations Branch.

See Segment B.

2. Current Operating Conditions

The 1982 AADT volume ranges from 127,000 at both Marsh Road and the JCT of Route 114 to 188,000 at San Bruno Avenue. NB peak hour volumes range from 5,600 to 8,700. SB peak hour volumes range from 5,600 to 7,500. The V/C ratio is 1.00 with a level of service "F-20".

3. Accidents (1/1/81 to 12/31/83)

During this three year period, 4,511 accidents occurred in this segment, 2,845 persons were injured and there were 36 fatalities. Accident occurrence is fairly consistent, but there is a small increase between the hours of 3 p.m. and 6 p.m. The total accident rate for this segment is .77/MVM which is below the statewide rate of 1.29/MVM.

4. Future Operating Conditions

The projected 1995 and (2005) AADT volumes range from 144,000 (158,000) at Marsh Road to 203,000 (225,000) north of the San Francisco Airport. The NB peak hour volumes for 1995 are 6,800 to 10,600. The SB figures range from 6,000 to 8,800. NB peak hour volumes for 2005 range from 7,200 to 11,900. SB ranges are 6,600 to 11,300. The D/C ratio for 1995 is 1.39 with a LOS of "F-10", 2005 D/C ratio is 1.58 and a level of service "F-5".

5. Route Concept

Route concept for this segment is 8 lanes.

6. Route Improvements

Additional lanes and auxiliary lanes will be considered where possible.

D. Segment D

(04-SF-101, P.M. 0.00 to 6.71)

Segment D Route 101 extends from the San Francisco/San Mateo County Freeway through San Francisco to the intersection of Lombard Street and Van Ness Avenue. During the morning and evening peak periods it is heavily used by commuters most of whom originate on the peninsula and travel to work destinations in San Francisco. Because 101 provides a direct connection to the Bay Bridge via Route 80 and connects to the Golden Gate Bridge via the Van Ness Avenue - Lombard Street corridor, many commuters with origins and destinations in the east bay and Marin County also use it. The route, of course, gets considerable use throughout the day by trucks, commercial interest and others.

1. Existing Facilities

a. Highway Facility

From the San Francisco/San Mateo County boundary to just south of Golden Gate Avenue (P.M. 5.09) 101 is a 6 to 8 lane freeway. The route continues along Van Ness Avenue from its intersection with Golden Gate Avenue (P.M. 5.261 to the intersection of Lombard Street (P.M. 6.71). Van Ness Avenue is a 6 lane conventional city street with a 14 foot curbed median and left turn channelization at selected intersections.

Route 101 is designated as Federal-Aid Primary. The functional classification is designated under the expressway and highway system for the freeway section and other primary arterial for the conventional city street section.

b. 1985 STIP

F.Y. 84/85 SF 101
P.M. 0.0/0.8 Repl. Slabs & BR, AC Overlay & Med. Barr. - SF Co. Line to Paul Avenue.

P.M. 1.1/3.0 Repl. Med. Barr., Provide Aux Lane - Paul Avenue to Army Street.

c. Public Transit

The San Francisco Municipal Railway operates an extensive bus and light rail service throughout the city and County of San Francisco. Express busses run on Route 101 (freeway) and extensive bus service is available on Van Ness Avenue.

d. Bicycles

Bicycles are not allowed on any portion of 101 except along Van Ness Avenue and Lombard Street which are conventional city streets.

e. Park and Ride

No Park and Ride lots are located in the County of San Francisco.

f. Rail

BART (Bay Area Rapid Transit) operates several lines that run from the East Bay to Daly City. S.F. Muni operates light rail service downtown San Francisco and outlying areas of the City.

2. Current Operating Conditions

The 1982 AADT varies from 149,000 at the San Francisco/San Mateo County boundary to 210,000 just south of its connection with Route 80. AADT drops to 120,000 at the Mission Street - South Van Ness Avenue connections, and to 23,000 at the end of the freeway.

Corresponding northbound peak hour volumes are 7,100, 10,500, 5,300, and 2,300.

Corresponding southbound peak hour volumes are 5,900, 8,000, and 6,000.

V/C ratios generally exceed 1.0 and level of service is F.

3. Accident Rate (1/81 to 12/83)

There were 3,937 accidents with 2,335 injuries and 15 fatalities. The accident rate for this segment is

2.46/MVM which is above the statewide average of 1.66/MVM for this type of facility.

4. Future Operating Conditions

The projected AADT for 1995 varies from 157,000 at the San Francisco/San Mateo County boundary to 234,000 just south of its connection with Route 80. Projected AADT drops to 146,000 at the Mission Street - South Van Ness Connections, and to 34,000 at the end of the freeway.

Corresponding projected northbound peak hour volumes are 9000, 9800, 6600, and 3400.

Corresponding projected southbound peak hour volumes are 6000, 6600, and 6600.

D/C ratios average approximately 1.25 and level of service is F.

The projected AADT for 2005 varies from 172,000 at the San Francisco/San Mateo County boundary to 256,000 just south of its connection with Route 80. Projected AADT drops to 159,000 at the Mission Street - South Van Ness connections, and to 36,000 at the end of the freeway.

Corresponding projected northbound peak hour volumes are 9800, 10,700, 7200, and 3600.

Corresponding projected southbound peak hour volumes are 6500, 7200, and 7200.

D/C ratios average approximately 1.5 and level of service is F.

5. Route Concept

Maintain present number of lanes.

6. Route Improvements

San Francisco City and County policy strongly supports public transit. The Master Plan states that new person trips should be made via transit. The City has historically opposed highway capacity increases in the corridors leading into and within the City.

E. Segment E

(04-MRN-101, P.M. 0.00 to P.M. 27.63)

This segment of Route 101 begins at the north end of the Golden Gate Bridge in Marin County and proceeds north through San Rafael and Novato to the Marin/Sonoma County boundary. There is heavy commute traffic southbound from Sonoma and Marin Counties to San Francisco in the morning and northbound from the City and Marin County in the evening. This route also serves those traveling between San Francisco and northern California recreational areas. Because Route 101 the primary north/south route in Marin County, it is also used by commercial vehicles.

1. Existing Facilities

a. Highway Facility

Starting from the north end of the Golden Gate Bridge, Route 101 is mostly 4 lanes in each direction. This section continues for approximately 8.4 miles long with median widths varying from 4 to 70 feet. At Larkspur, the road transitions to 3 lanes in each direction. For this 14 mile stretch, the median width varies from 10 to 54 feet (30-55 feet from field observation). The freeway ends just north of Novato and the route continues as a 2 lane on each side conventional highway to the Marin/Sonoma County boundary. Median widths vary from 24 to 31 feet. Grades range from 4-6% at Waldo UC to areas as flat as 0-3%.

Route 101 is a Federal-Aid Primary road and is functionally classified as Type I Principal Arterial. Route 101 is also part of the State's Scenic Highway System in two locations: from the north end of the Golden Gate Bridge (P.M. 0.00) to Richardson Bay Bridge (P.M. 4.03) and an 0.89 mile stretch in Novato.

b. Programmed Construction Projects (1985 STIP)

F.Y. 84/85 MRN 101
P.M. 8.0/8.5 Raise freeway grade - Helen Avenue to Corte Madera Creek.

F.Y. 87/88 MRN 101
P.M. 8.6/9.7 Bike Path - Sir Francis Drake

Blvd. to Anderson Dr.

F.Y. 84/85 MRN 101
P.M. 9.8/10.7 Rdwy. recon. replace median barrier - JCT 17 to San Rafael viaduct.

F.Y. 88/89
P.M. 15.6/19.1 Construct SB HOV lane at Miller Creek I/C to Route 37.

F.Y. 87/88 MRN 101
P.M. 13.5/13.6 Construct OC at Merrydale Rd.

F.Y. 86/87 MRN 101
P.M. 13.7/13.8 Construct new NB on-ramp at Manuel Freitas I/C.

F.Y. 85/86 MRN 101
P.M. R20.2/R20.3 Modify I/C at Rowland Blvd.

c. Public Transit

In addition to operating and maintaining the Golden Gate Bridge, the Golden Gate Bridge Highway and Transportation District (GGBHTD) provides public transit services within Marin County and between San Francisco, Marin, and Sonoma Counties.

In the morning peak period between 6 and 9 a.m. and in the evening peak period between 3:30 and 6:30 p.m., Monday through Friday, Golden Gate Transit operates 19 different commute routes initiating in Marin and Sonoma Counties and terminating in downtown San Francisco. In addition, Golden Gate Transit operates 4 continual service routes during commute and non-commute hours. These four trunk lines operate from Tiburon, San Anselmo, Novato and Santa Rosa to San Francisco on a daily schedule including weekends and holidays.

Within Marin County, Golden Gate Transit operates 25 local routes - most of which do not use Route 101.

Direct transportation to the San Francisco Airport is provided by a private airport service, the Marin Airporter. This service carries 400

passengers daily, which is approximately 50% of the total Sonoma/Marin Airport bound passengers.

d. Bicycles

Marin County maintains five sections of exclusive bicycle path totalling seven miles along the 101 corridor. Most of these paths exist between Marin City and Corte Madera. From San Rafael to Novato, bicyclists can ride on undesignated city streets and county roads.

Bicyclists can ride on the shoulders of Route 101 on the Richardson Bay Bridge and from north of Novato to Petaluma Blvd. in Sonoma County. This is the only stretch where bicycles are allowed on the shoulders of Route 101 in Marin County, except for a 0.3 mile stretch in the northbound direction, only, between Vista Point (North of the Golden Gate Bridge) to the Sausalito exit.

e. Park and Ride

There are 7 State-owned park and ride lots with a total of 856 spaces. There are no joint use lots on the 101 corridor. The following is a list of park and ride lots in Marin County:

Location	P.M.	City	No. of Spaces	No. of Spaces Used
Rte. 101 @ Manzanita	4.1	Marin City	298	298
Rte. 101 @ Seminary Dr.	5.4	Mill Valley	90	90
Rte. 101 @ Alameda Del Prado	16.6	Novato	93	93
Rte. 101 @ Atherton	22.0	Novato	63	36
Rte. 101 @ Lucas Valley Rd.	14.7	San Rafael	212	56
Rte. 101 @ Spencer Ave.	1.5	Sausalito	45	45
Rte. 101 @ Lincoln Ave.	12.2	San Rafael	47	17

f. Rail Service

At present, there is no passenger rail service within the corridor. However, GGBHTD has bought portions of the abandoned Northwestern Pacific Railroad (NWPRR) right of way from Ignacio (P.M. 24.8) to the Richardson Bay Bridge (P.M. 4.03). The NWPRR R/W, which is within or near the Route 101 corridor, may eventually become a transportation corridor that would carry high

occupancy vehicles such as buses and van pools, and eventually trains.

g. HOV Lanes

HOV lanes are currently employed in the southbound direction from 6-9 a.m. and in the northbound direction from 4-7 p.m.. The HOV lane limits are from the Richardson Bay Bridge to Greenbrae. An additional HOV lane will be constructed in 1985 from north of San Pedro Road in San Rafael to north of the Miller Creek interchange. During the evening peak period Golden Gate Transit utilizes the southbound lanes of Route 101 to run buses in the northbound direction (contra-flow). These lanes run through the Waldo grade and end at the south end of the Richardson Bay Bridge.

2. Current Operating conditions

The 1982 AADT ranges from 132,000 at San Pedro Road to 50,000 south of the Marin/Sonoma County line. Maximum peak hour volumes are 11,300 in the southbound direction and 3,200 in the northbound direction at San Pedro Road. The level of service south of San Pedro Road is generally D, with a V/C ratio being 0.87. North of San Pedro Road, the level of service is generally E, with the V/C ratio being 0.96.

3. Accident Rate (1/1/81 to 12/31/83)

During this period, there were 4,273 accidents with 32 fatalities and 2,625 injuries in Marin County. The total accident rate is 1.03/MVM which is below the statewide average of 1.17/MVM.

4. Future Operating Conditions (1995 and 2005)

The 1995 AADT ranges from 160,000 at San Pedro Road to 59,000 south of Marin/Sonoma County line. In 2005, the AADT ranges from 173,000 to 68,000 at the same respective locations. The 1995 peak hour volume at San Pedro Road for the northbound direction is 3,500 and 14,100 for the southbound direction. Likewise, the 2005 peak hour volume is 3,600 in the northbound direction and 15,500 in the southbound direction. The V/C ratio at San Pedro Road in 1995 is 1.98 with a level of service (LOS) F. The 2005 V/C ratio is 2.15 with an LOS F.

5. Route Concept

An 8-lane freeway that traverses the whole length of Marin County is the route concept for Route 101.

6. Route Improvement

Since Route 101 is currently operating near capacity, a transportation study is currently under way (see III, "Studies in Process") to mitigate future congestion along the corridor. Several alternatives have been introduced, including busways, light rail, additional park and ride lots, expansion of ferry services, the introduction of water-borne vehicles and HOV Lanes from Santa Rosa to San Francisco.

F. Segment F

(04-SON-101, P.M. 0.00 to P.M. 22.81)

This segment of Route 101 begins at the Marin/Sonoma County line and ends at the Mendocino Avenue Interchange in the City of Santa Rosa. The route serves as a primary arterial for commuters to Marin and San Francisco Counties. It also serves as an important link connecting the cities of Cotati, Rohnert Park, Petaluma and Santa Rosa as approximately 50% of the population of Sonoma County live in these cities. Commercial use of the route is becoming more significant as population and industry grow rapidly.

1. Existing Facilities

a. Highway Facility

Starting from the Marin/Sonoma County line and ending 0.36 miles north of Kastania Road, Route 101 is a four-lane conventional highway. This section is 2.59 miles long and the median width varies from 34 to 46 feet. A four-lane freeway begins at P.M. 2.59 and continues until the end of the segment at the Mendocino Avenue Interchange. This section is 20.22 miles long and the median width varies from 36 to 48 feet. The terrain is essentially flat throughout the segment, the maximum grade being 3%.

While this segment of Route 101 is a Federal-Aid Primary Road and is functionally classified as a

Type I Principal Arterial, it is not a part of the Scenic Highway System.

b. Programmed Construction Projects (1985 STIP)

F.Y. 84/85 SON 101
P.M. 4.8/5.5 Construct I/C and Aux. Lanes at Ratner Avenue in Petaluma.

F.Y. 85/86
P.M. 13.8/13.9 Park and Ride Facility Rte 101 & Rohnert Park I/C.
P.M. 16.0/18.0 Roadway Reconstruction 0.5 mi. N of Santa Rosa Ave. OC to 0.5 mi. S of Hearn Ave. OC.

F.Y. 86/87
P.M. 15.0/15.1 Bridge widening at the Wilfred OH.

c. Public Transit

Three bus systems exist in this segment: Golden Gate Transit (GGBHT), Sonoma County Transit (SCT) and Santa Rosa Transit (SRT). GGBHT is the primary public transportation system for passengers traveling and commuting between Sonoma County and San Francisco. Interconnected with GGBHT is SCT, which serves the intra-Sonoma County needs. SRT, which interfaces with SCT and GGBHT, provides bus service within the city limits of Santa Rosa.

GGBHT provides basic service in the Route 80 corridor daily, connecting Santa Rosa, Rohnert Park and Petaluma with the San Francisco Civic Center and the Transbay Terminal. GGBHT also provides commute service (Routes 74, 76 and 78) Mondays through Fridays, except holidays between Santa Rosa and the San Francisco Civic Center and Financial District with several intermediate stops. Service is provided during the morning and evening commute periods only. These routes are efficient considering that an average of 60% of San Francisco commuters ride the bus rather than drive from Sonoma. The buses normally operated approximately 81% of capacity. Sonoma County Transit (SCT) intra-county bus service, serving the major cities and regions of Sonoma County. GGBHT and SRT intersect at common locations in Santa Rosa. Of the ten routes that SCT

operates, 9 partially serve the cities of Cotati, Rohnert Park, Petaluma and Santa Rosa. Three of these routes (Routes 10, 44, and 48) are on Highway 101.

SRT is an intra-city carrier operating buses over 10 routes in and around the City of Santa Rosa. Only Route 3 uses Highway 101 as part of its route. Direct transportation to the San Francisco airport is provided by three private airport services: Santa Rosa Airporter serving Santa Rosa/Petaluma, Airport Express serving Santa Rosa/Petaluma/Rohnert Park, and Sonoma Airporter serving other Sonoma County communities. The daily ridership of the above airport services approximately 400 per day. These services utilize Highway 101.

The City of Petaluma has its own Municipal Transit System, which does not use Highway 101.

d. Bicycles

There are no exclusive bicycle paths through Sonoma County that service the Highway 101 corridor. Caltrans recommends the shared use of Highway 101's parallel arterials through this corridor. Bicycles are allowed to use Highway 101 between San Marin Drive in Novato (Marin County) and Petaluma Boulevard (Sonoma County) because no arterials parallel Highway 101 through this section. From Petaluma Boulevard to Bicentennial Avenue in Santa Rosa, bicyclists can use arterials which parallel Highway 101.

e. Park and Ride

STATE OWNED	3 LOTS		322 TOTAL SPACES	
Description	P.M.	City	No. of Spaces	No. of Spaces Occupied
Rte. 101/116	12.7	Cotati	186	138
Rte. 101/116 @ Lakeville Blvd.	3.5	Petaluma	89	89
Rte. 121/116 Shellville West	6.7	Unincorporated	47	47

JOINT USE	6 LOTS	382 TOTAL SPACES	
Description	City	No. of Spaces	No. of Spaces Occupied
Veteran's Memorial Auditorium 8505 Park Avenue	Cotati	36	6
Sonoma/Marin Fairgrounds Washington Boulevard/N. Petaluma	Petaluma	71	58
Cattlemen's Restaurant 5013 Petaluma Boulevard	Petaluma	20	5
Self-Service Furniture 6595 Commerce Boulevard	Rohnert Park	25	3
K-Mart 3771 Cleveland Boulevard	Santa Rosa	50	38
Veteran's Memorial Auditorium 1951 Maple Avenue	Santa Rosa	175	95

f. Rail

Northwest Pacific Railroad (NWPR) is the only rail facility in the 101 corridor. In addition to the main rail line through the corridor, there are two rail spur lines: The Sebastopol spur line and the Sonoma spur line. The Sebastopol spur line runs between Santa Rosa and Petaluma via Sebastopol. The Sonoma line runs from the junction of Highway 101/37 to Sonoma. The Sebastopol spur line is not being used at this time. The spur line to Sonoma is used as needed.

Currently, there are two freight trains per day (except Sunday) using the NWPR. Using Petaluma as point of origin, one train (averaging 15 cars) runs from Petaluma to Ukiah and returns daily. A second train runs daily from Petaluma to Shellville (approx. SON P.M. 6.7) and returns, with runs to San Rafael as needed.

2. Current Operating Conditions

The AADT for 1982 ranges from 45,000 at Bicentennial Avenue in northern Santa Rosa to 71,000 at Baker Avenue (0.65 miles south of Route 101/12 intersection). The southbound peak hour volumes range from 5,300 at Rohnert Park Expressway to 2,000 at Steele Lane. The northbound peak hour volume ranges from 3,200 at Baker Avenue to 1,200 at Railroad Avenue. The V/C ratio is 0.57 with an LOS C.

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

During this period, there were a total of 1,650 accidents with 21 fatalities and 887 injuries in this segment.

The total accident rate is 1.01/MVM. This rate is below the statewide average of 1.11/MVM.

4. Future Operating Conditions

The 1995 AADT ranges from 56,000 at JCT 101/116 to 95,000 at College Avenue in Santa Rosa. The 2005 AADT ranges from 69,000 to 116,000 at the same locations. The northbound AM peak at College Avenue ranges from 3,500 in the year 1995 to 3,600 in the year 2005. The southbound AM peak at the same location ranges from 7,800 in 1995 to 9,900 in 2005. The V/C ratio will be 0.89 with an LOS D in 1995 and a V/C ratio of 2.75 with a LOS F in 2005.

5. Route Concept

As a continuation of Segment E, 8 lanes are needed between the Marin/Sonoma County line and Mendocino Avenue in north Santa Rosa. From this point northward, a 6 lane freeway will suffice to accommodate increased traffic volume.

6. Route Improvement

No STIP projects are listed in this segment. The anticipated growth of this area will probably increase congestion on the Route 101 corridor. Some of the congestion would be alleviated if the HOV lanes to connect Santa Rosa with San Francisco are constructed. (This improvement are identified in the Highway 101 Corridor Study)

G. Segment G

(04-SON-101, P.M. 22.81 to P.M. 56.24)

This segment of Route 101 begins at the Mendocino Avenue Interchange in Santa Rosa and runs to the Sonoma/Mendocino County line. The route serves primarily as a recreational thoroughfare to the northern part of Sonoma County and beyond to Northern California's vacation spots, such as Clearlake, Redwood National Park, and the Klumath River. Since only 5 % of Sonoma County's population lives near the Route 101 corridor, commuter traffic is minimal. Future industrial, commercial and population growth will not impact the corridor significantly by the year 2000.

1. Existing Facilities

a. Highway Facility

Starting from the Mendocino Avenue Interchange (P.M. 22.81) and ending 0.56 miles north of Dutcher Creek Road Interchange, Route 101 is mainly a 4-lane freeway. This section is 20.55 miles long and the median width varies from 22 to 54 feet. At P.M. 49.61, the 4-lane freeway transitions into a 2-lane conventional highway. This section continues to the Sonoma/Mendocino County line and is 6.56 miles long. The median width varies from 0 to 12 feet with gentle grades. The last 2 miles before the Sonoma/Mendocino County line, however, feature rolling terrain with grades which vary from 3 to 5%.

While this segment of route 101 is a Federal-Aid Primary road and is functionally classified as a Type I Principal Arterial, it is not a part of the Scenic Highway System.

b. Programmed Construction Projects (1985 STIP)

F.Y. 85/86

P.M. T49.8/54.2	N of Hiat Rd. to Preston OH (Cloverdale Bypass) Construct 4 lane freeway
P.M. 50.0/51.2	Kelly Rd to Muscat Creek Widen shoulders and channelization
P.M. T50.2/T50.9	At the South Cloverdale I/C Construct I/C - Frontage road.

c. Public Transit

Sonoma County Transit (SCT) is the only public transit system serving this segment. Routes 50 and 60 connect Santa rosa with Healdsburg, Geyserville, Asti, and Cloverdale. Highway 101 is utilized by SCT, but the impact is minimal. SCT runs 17 buses northbound from Santa Rosa and 15 buses southbound to Santa Rosa daily Monday through Friday with 10 total trips on Saturdays. Sunday bus service is not available.

As of April 1984, there were 18 Golden Gate Transit club buses operating between San Francisco and north Sonoma County along Highway 101. These club buses are used by commuters on a contract basis.

d. Bicycles

From Bicentennial Avenue in Santa Rosa to north of Asti, bicyclists can use arterials parallel to Highway 101. From Asti through Cloverdale and beyond the Sonoma/Mendocino County line, bicyclists can use the shoulders of Highway 101 as there are no parallel arterials for bicycle users. After the Cloverdale Bypass is built, bicycle riders will be able to use the existing Route 101.

e. Park and Ride

There are no State-owned or joint use Park and Ride lots in this segment.

f. Rail

There is only one rail facility paralleling Highway 101. This is owned by the Northwest Pacific Railroad. Round trip freight service

between Petaluma and Ukiah is provided twice a day.

2. Current Operating Conditions

The AADT for 1982 ranges from 7,000 at the Sonoma/Mendocino County line to 39,000 at Hopper Avenue just north of Santa Rosa. The southbound peak hour volume ranges from 1,600 at Hopper Avenue in northern Santa Rosa to 300 at the Sonoma/Mendocino County boundary. The northbound peak hour volume ranges from 1,800 at Mendocino Avenue to 400 at the Sonoma/Mendocino County line.

The V/C ratio ranges from 0.89, with LOS D on Cherry Creek Road in Cloverdale to 0.14 with LOS A at Independence Lane.

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

There were a total of 675 accidents with 9 fatalities and 419 injuries within this segment.

The total accident rate is 0.84/MVM. This rate is below the statewide average of 1.04/MVM.

4. Future Operating Conditions

The AADT for the year 1995 ranges from 12,000 at the Sonoma/Mendocino County line to 60,000 at Mendocino Avenue in Santa Rosa. The AADT for the year 2005 ranges from 14,000 to 73,000 at the same locations. The northbound AM peak for the year 1995 varies from 500 at the same county line to 2,800 at Mendocino Avenue. The southbound peak varies from 1,400 to 6,200 at the same locations.

The northbound AM peak for the year 2005 varies from 500 at the Sonoma/Mendocino County line to 2,500 at Mendocino Avenue in Santa Rosa. The southbound AM peak for the same location varies from 1,800 to 7,900.

The V/C ratios will be 0.71 in 1995 and 0.94 in 2005 with LOS of C and E respectively.

5. Route Concept

From the Bicentennial Avenue Interchange in Santa Rosa to north of Cloverdale, the concept is a 6 lane freeway. North of Cloverdale (beyond the Cloverdale

Bypass) to the Sonoma/Mendocino County line, a 4 lane conventional highway will be sufficient for the traffic volumes forecast for this section. This is consistent with the route concept of District 1.

6. Route Improvement

There are no STIP projects listed. However, the Cloverdale bypass is currently being constructed.

Minimal growth is anticipated in this segment. The current facility should be adequate to meet moderate demands through the year 2005.

EXHIBITS

A Level of Service, Accidents and General Terrain Table

B AADT, Peak Hour Volume and V/C Table

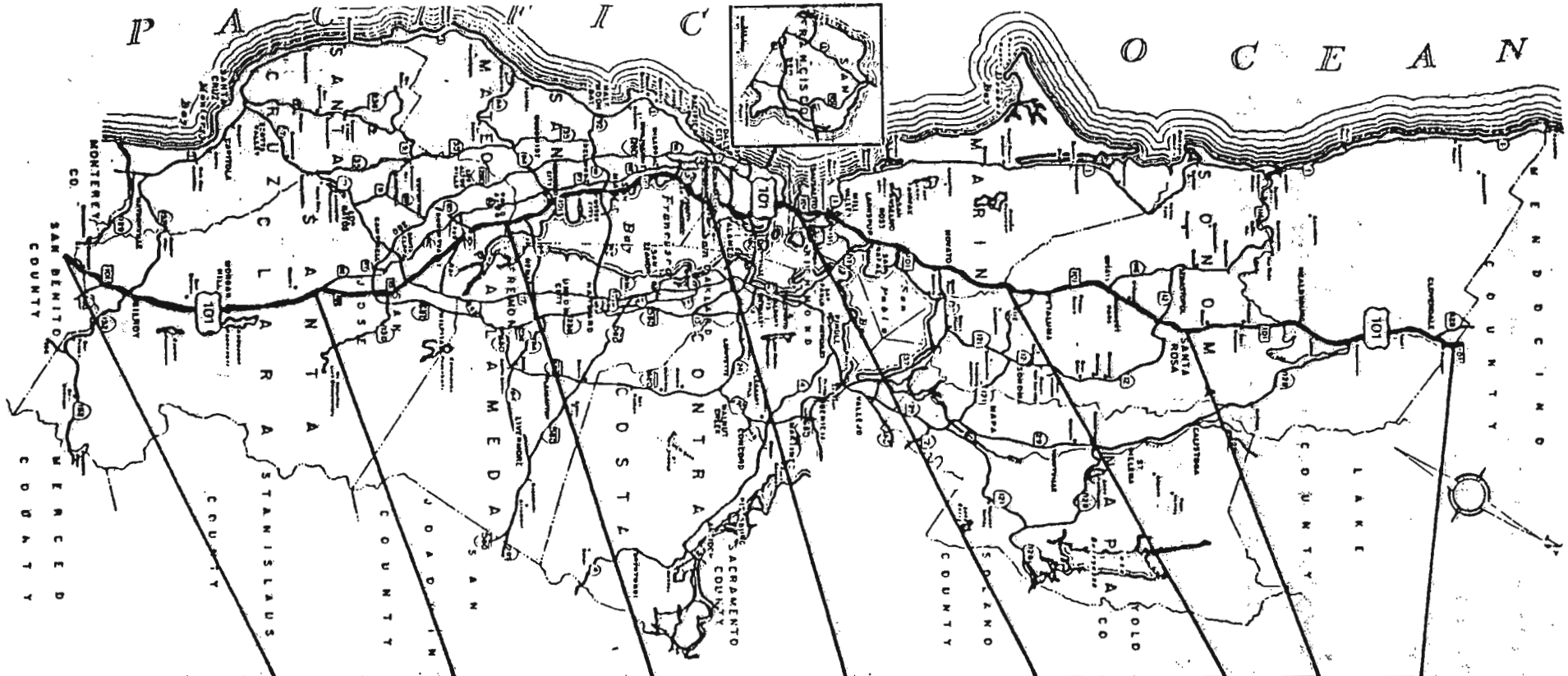
C Explanation of Level of Service

D Accident Summary

E Traffic Projections on Route 101 with Explanation of Symbols

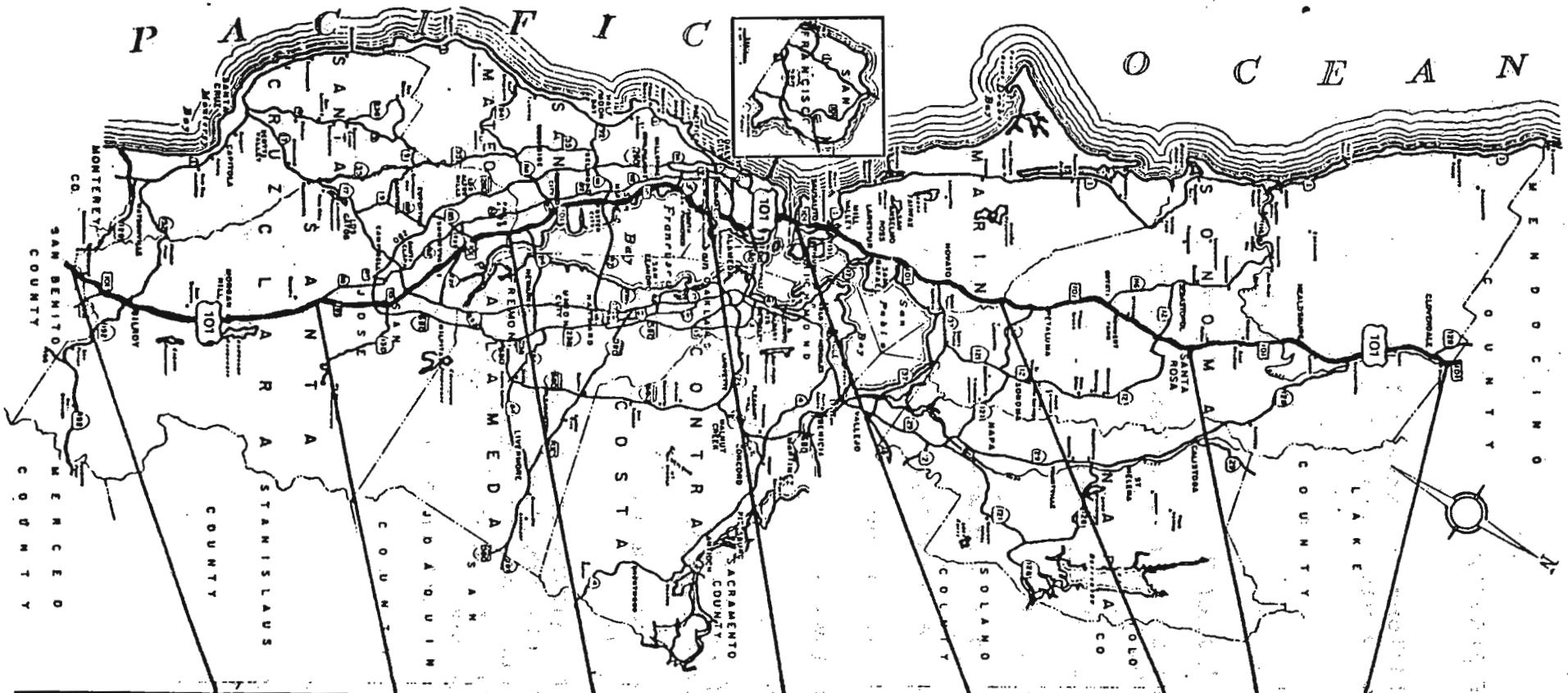
F Marin/Sonoma Route 101 Corridor Study - Alternative IV (DRAFT PREFERRED ALTERNATIVE)

G Caltrain Peninsula Commuter Rail Service Map



SEGMENT		SCL 0.00 A SCL 29.00	B SCL 52.55	SM 0.00 C SM 26.10	SF 0.00 D SF 6.71	MRN 0.00 E MRN 27.63	SON 0.00 F SON 22.81	SON 56.24 G
NO. OF LANES	PRESENT	4-6	4-8	6-8	4-10	4-8	4	2-4
	1995	4-8	8	8		6-8	6	4
	2005	4-8	8	8		8	6	4-6
LEVEL OF SERVICE	PRESENT	B-55	F-20	F-20	F-20	E-30	C-40	C-40
	1995	F-20	F-15	F-10	F-15	F-15	D-30	C-35
	2005	F-10	F-5	F-5	F-5	F-10	F-10	D-30
TERRAIN		FLAT	FLAT	FLAT	FLAT	F - R	FLAT	FLAT
GRADES		0-3%	0-3%	0-3%	0-3%	0-6%	0-3%	0-5%
ACTUAL	Accidents Per MVM	.72	1.34	.77	2.46	1.03	1.01	0.84
	Statewide Average MVM	1.71	1.39	1.29	1.66	1.17	1.11	1.04

EXHIBIT A



SEGMENT		A (SCL 0.00 – SCL 29.00)	B (SCL 52.58)	C (SM 0.00 – SM 26.10)	D (SF 0.00 – SF 6.71)	E (MRN 0.00 – MRN 27.83)	F (SON 0.00 – SON 22.81)	G (SON 56.24)
A.A.D.T. (000)	1982	24-73	73-164	127-188	23-224	50-132	45-71	7-39
	1995	41-88	85-181	144-203	34-240	59-160	56-95	12-60
	2005	62-117	117-208	158-225	36-260	68-173	69-116	14-73
P.H.V. (00)	1982	16	58	80	87	58	26	8
	1995	39	75	98	92	77	38	13
	2005	68	87	110	98	89	46	17
AVE. HWY SPEED		55	55	55	55	55	55	55
OPERATING SPEED		55	35	35	35	40	40	45
V/C	1982	.56	1.13	1.00	1.02	0.96	0.57	0.71
	1995	1.07	1.22	1.39	1.33	1.98	.89	0.71
	2005	1.62	1.67	1.58	1.56	2.15	2.75	0.94
YEAR CAPACITY WILL BE REACHED		1990	1982	1982	1982	1980	1980	----

EXHIBIT B

LEVEL OF SERVICE

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

Exhibit 2

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	40 MPH
C	Two-lane conventional highways	40 MPH
D	Freeways 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 roadway varies inversely as some function of the traffic volume.

EXHIBIT C

EXHIBIT D

ROUTE 101 Accident Summary

Route 101 Accident Report from 1/80 to 12/83

Location P.M.	Segment No.	No. of Accidents Total	Fatal	Inj.	F+I	Persons Killed	Persons Injured	Accident Rate * Fatal	F+I	Total	Statewide Rate Fatal	F+I	Total
SCl 0.00 to 29.00	A	1214	7	506	513	7	827	.004	.30	.72	.032	.71	1.71
SCl 29.00 to 52.55	B	5459	47	2123	2170	51	3125	.011	.53	1.34	.014	.53	1.39
SM 0.00 to 26.10	C	4511	36	1840	1876	36	2845	.006	.32	.77	.012	.49	1.29
SF 0.00 to 6.71	D	3937	14	1473	1487	15	2335	.008	.92	2.46	.015	.64	1.66
Mrn 0.00 to 27.63	E	3830	28	1601	1629	30	237.9	.007	.44	1.03	.016	.46	1.17
Son 0.00 to 22.81	F	1358	17	520	537	20	783	.012	.40	1.01	.022	.46	1.11
Son 22.81 to 56.24	G	585	7	235	242	9	361	.010	.34	0.84	.033	.48	1.04

* Rates are per MVM (Million Vehicle Miles)
Statewide averages for this type of facility

EXPLANATION TO TRAFFIC VOLUME TABLES

COLUMN	DESCRIPTION
SEGMENT	Route Segment
CO	County Abbreviations
MILE POST	Mile Post in County
DESCRIPTION	Description of the Route Segment
AADT	Annual Average Daily Traffic County (Thousands)
AM PK	Morning Peak Hour Traffic
AH	Volumes Ahead Direction (Hundreds)
BK	Volumes Back Direction (Hundreds)
NO L	Number of Lanes (Exiting) One Direction
V/C	Volume Capacity: Ratio Volume Traffic to Maximum of Traffic/hour
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
% TRUCK AADT	Truck % of Average Annual Daily Traffic Count
% TRUCK PK HR	Truck % at Peak Hour

Note:

In certain places on the route, tachogram (which records speed) readings are taken into account to determine the LOS, irregardless of the V/C ratio. This attempt to upgrade the figures may result in the LOS not corresponding to the V/C ratio in the traditional manner.

EXHIBIT E

1983/4 ROUTE CONCEPT STUDY
ROUTE 101 SHEET 1 of 16

SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Ah	1982 Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Ah	1995 Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Ah	2005 Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
A	SCL	0.03	SANTA CLARA CO LINE	25	9	8	2	0.25	A	2	41	27	22	2	0.75	C	4	62	46	38	2	1.28	F	3	13	13
			SEVERAL INTERSECTIONS	25	9	8	2	0.25	A	2	48	34	28	2	0.94	E	5	65	53	44	2	1.47	F	3	13	13
		320	JCT. RTE. 180 E.																							
		T.4.18	BEGIN FREEWAY	26	9	8	2	0.25	A	2	52	34	22	2	0.94	E	5	78	54	45	2	1.50	F	3	13	13
		R4.95	MONTEREY RD.	24	8	8	3	0.15	A	3	44	27	22	3	0.50	B	3	66	48	39	3	0.89	D	3	13	13
		R6.08	JCT. RTE. 152 EAST	30	10	9	3	0.19	A	3	50	31	25	3	0.57	C	3	75	54	45	3	1.0	E	4	13	13
		R7.53	JCT. RTE. 152 WEST	36	12	11	3	0.22	A	3	64	38	31	3	0.70	C	3	96	68	55	3	1.26	F	5	13	13
		R10.27	MASTEN AVE.	36	12	11	3	0.22	A	3	64	38	31	3	0.70	C	4	96	68	55	3	1.26	F	5	13	13
		R12.45	SAN MARTIN AVE.	36	12	11	3	0.22	A	3	64	39	32	3	0.72	C	4	96	69	57	3	1.28	F	5	13	13
		R15.07	TENANT RD.	36	12	11	3	0.22	A	3	64	39	32	3	0.72	C	4	96	63	63	3	1.17	F	5	13	13
		R16.01	E. DUNNE AVE.																							
		T17.55	END FREEWAY	36	12	11	2	0.22	A	3	64	35	35	2	0.97	E	3	96	62	62	2	1.72	F	4	13	13
		T18.71	COCHRANE RD.	57	17	15	2	0.47	B	2	74	47	47	2	1.31	F	3	101	65	65	2	1.81	F	4	13	11

1983/4 ROUTE CONCEPT STUDY
ROUTE 101 SHEET 2 of 16

SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L N/S	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L N/S	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % AA Pk Hr
A			SEVERAL INTERSECTIONS	60	20	18	2	0.56	C	2	78	50	50	2	1.39	F	4	108	69	69	2	1.91	F	5	13	10
		23.12	BAILEY AVE.	60	20	18	2	0.56	C	2	80	52	52	2	1.44	F	4	108	70	70	2	1.94	F	5	13	11
		24.87	METCALF RD.	60	20	18	2	0.56	C	2	88	55	55	2	1.53	F	4	113	72	72	2	2.0	F	5	13	10
			SEVERAL INTERSECTIONS	73	24	22	2	0.67	C	2	85	55	55	2	1.53	F	4	117	87	87	2	2.44	F	6	13	10
A		28.11	JCT. RTE. 82 NORTH																							
		28.31	BEGIN FREEWAY	73	24	23	2	0.67	C	2	85	70	58	2	1.94	F	5	117	88	88	2	2.44	F	6	13	10
		30.10	HELLYER AVE.																							
B				73	24	23	2	1.0	F	3	85	65	53	2	1.81	F	4	117	81	81	2	2.25	F	5	13	10
		31.70	CAPITOL EXPWY.	82	22	27	2	1.0	F	3	108	74	61	2/3	2.06	F	5	139	99	99	2/3	2.75	F	7	13	8
		33.03	TULLY RD.	108	36	34	4	0.90	D	4	133	88	72	4	1.22	F	6	163	98	98	4	1.36	F	7	13	4
		34.55	STORY RD.	115	38	36	2	1.06	E	3	142	86	70	2	2.39	F	6	175	96	96	2	2.67	F	6	12	4

1983/4 ROUTE CONCEPT STUDY
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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
B	SCL	34.87	JCT. RTE. 280 WEST JCT. RTE. 680 NORTH	103	45	45	3	1.0	F	4	111	66	44	4	0.92	E	5	126	69	57	4	0.96	E	5	12	4
		35.76	JCT. RTE. 130 E.	110	48	48	3	1.0	F	4	116	70	46	4	0.97	E	5	133	73	60	4	1.01	F	5	11	5
		36.12	MCKEE RD.	120	53	53	3	1.0	F	4	129	84	45	4	1.17	F	6	147	88	59	4	1.22	F	6	10	4
		37.73	OAKLAND RD.	130	64	57	4/3	1.0	F	5/4	144	94	50	4	1.31	F	6	165	99	66	4	1.38	F	7	10	3
		38.30	JCT. RTE. 17	115	56	51	3	1.0	F	4	120	78	42	3	1.44	F	5	136	82	54	3	1.52	F	6	7	5
		38.80	N. FOURTH ST.	100	58	44	3	1.0	F	4	113	73	40	3	1.35	F	5	128	77	52	3	1.43	F	5	7	5
		39.39	N. FIRST ST.	108	59	47	3	1.0	F	4	116	76	41	3	1.41	F	5	141	85	56	3	1.57	F	6	7	5
		39.91	GUADALUPE PKWY.	130	73	57	4/3	1.0	F	4	147	88	59	4	1.22	F	6	179	98	81	4	1.36	F	7	7	4
		40.70	DE LA CRUZ	126	57	55	3	1.0	F	4	141	85	56	4	1.18	F	6	172	95	77	4	1.32	F	6	8	4
		41.98	SAN TOMAS AQUINO	122	55	54	4	1.0	F	5	146	87	58	4	1.21	F	6	165	91	74	4	1.26	F	6	8	4
		42.73	BOWER AVE.	122	44	54	3	1.0	F	4	146	87	58	4	1.21	F	6	165	91	74	4	1.26	F	6	8	4

1983/4 ROUTE CONCEPT STUDY
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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
	B	43.85	LAWRENCE EXPRESSWAY	137	57	57	3	1.0	F	4	133	73	67	3	1.35	F	5	162	81	81	3	1.50	F	5	8	4
		44.85	FAIR OAKS AVE.	130	57	57	3	1.0	F	3	133	73	67	3	1.35	F	5	162	81	81	3	1.50	F	5	8	4
		45.63	S. MATHILDA AVE.	113	50	50	3/4	0.92	E	3/4	127	70	57	3/4	1.30	F	5	155	78	78	3/4	1.44	F	5	8	4
		46.13	JCT. RTE. 237	129	57	56	3	1.0	F	3	144	69	69	3	1.28	F	5	165	71	85	3	1.31	F	5	7	4
		47.01	MOFFETT FIELD	121	54	53	3	1.0	F	3	136	64	64	3	1.19	F	4	155	66	81	3	1.50	F	6	8	4
		47.89	MOFFETT BLVD.	121	54	53	3	1.0	F	3	136	64	64	3	1.19	F	4	155	66	81	3	1.50	F	6	8	4
		48.10	JCT RTE 85 SOUTH	164	72	77	4	1.0	F	5	181	86	86	4	1.19	F	6	208	89	109	4	1.51	F	7	8	4
		48.60	STIERLIN RD.	160	71	71	3	1.0	F	5	174	83	83	4	1.15	F	6	201	88	105	4	1.46	F	7	8	4
		48.97	MIDDLEFIELD RD.	140	61	62	3	1.0	F	4	153	66	80	3	1.63	F	5	177	67	101	3	1.87	F	7	8	4
		49.61	RENSTROFF AVE.	126	55	56	3	1.0	F	4	140	66	80	3	1.48	F	5	162	67	101	3	1.87	F	7	8	4
		50.32	SAN ANTONIO RD.	138	60	61	3	1.0	F	4	152	65	79	3	1.46	F	5	164	67	100	3	1.85	F	7	8	4

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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L N/S	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L N/S	2005 V/C	2005 LOS	2005 LN	AADT	Pk Hr
B		52.17	EMBARCADERO RD.																							
B		52.55	SANTA CLARA CO. LINE																							
C	SM	0.00	SAN MATEO CO. LINE	135	60	60	3	1.0	F	4	151	77	77	3	1.43	F	5	176	81	99	3	1.83	F	7	8	4
		0.89	UNIVERSITY AVE.	135	60	60	3	1.0	F	4	154	73	73	3	1.35	F	5	179	77	94	3	1.74	F	6	8	4
		1.87	JCT. RTE. 84 EAST	130	57	57	3	1.0	E	4	150	71	71	3	1.31	F	5	175	75	92	3	1.70	F	6	8	4
		3.59	MARSH RD.	127	56	56	3	1.0	E	4	144	68	68	3	1.26	F	5	155	72	88	3	1.63	F	6	8	4
		5.39	JCT. RTE. 114	127	56	56	3	1.0	E	4	151	72	72	3	1.33	F	5	176	76	92	3	1.70	F	6	7	4
		6.62	WHIPPLE RD.	142	62	62	4	0.86	D	4	166	79	79	4	1.10	F	5	193	83	101	4	1.40	F	6	7	4
		8.40	HOLLY ST.	151	67	67	4	0.93	E	5	178	85	85	4	1.18	F	6	207	89	109	4	1.51	F	6	7	4
		9.55	RALSTON AVE.	158	70	70	4	0.97	E	5	185	88	88	4	1.22	F	6	216	93	113	4	1.57	F	6	6	4
		11.15	HILLSDALE BLVD.	169	78	71	4	1.0	F	5	196	102	84	5	1.13	F	7	228	109	109	5	1.21	F	7	6	4

1983/4 ROUTE CONCEPT STUDY
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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
C	SM	11.90	JCT. RTE. 92	178	82	74	4	1.0	F	5	196	102	84	4	1.42	F	7	228	119	98	4	1.65	F	8	6	4
		12.69	KEHOE AVE.	178	82	74	4	1.0	F	5	193	101	83	4	1.40	F	7	225	118	96	4	1.64	F	8	6	4
		13.46	THIRD AVE.	177	82	74	4	1.0	F	5	194	102	83	4	1.42	F	7	211	110	90	4	1.53	F	7	6	4
		14.33	POPLAR-DORE AVE.	170	78	71	4	1.0	F	5	191	100	82	4	1.39	F	7	207	108	88	4	1.50	F	7	6	4
		14.69	PENINSULAR AVE.	167	77	70	4	1.0	F	5	191	100	82	4	1.39	F	7	207	108	88	4	1.50	F	7	6	4
		16.58	BROADWAY	164	76	69	4	1.0	F	5	191	100	82	4	1.39	F	7	207	108	88	4	1.50	F	7	6	4
		17.95	MILLBRAE AVE.	172	80	72	4/5	1.0	F	5	199	104	86	4/5	1.44	F	7	216	113	92	4/5	1.57	F	7	6	4
		19.12	SF AIRPORT	180	83	75	4/5	1.0	F	5	203	106	87	4/5	1.47	F	7	220	115	94	4/5	1.60	F	8	5	4
		R20.39	SAN BRUNO AVE.	188	87	79	4	1.0	F	6	189	99	81	4	1.38	F	7	203	106	87	4	1.47	F	7	5	4
		R20.72	EXT. RTE. 380 WEST S. AIRPORT BLVD. IS MISSING. 3 LANES IN BOTH DIRECTIONS.	158	76	63	5/4	0.88	D	5	170	89	65	5/4	1.24	F	6	185	105	70	5/4	1.46	F	7	6	4

1983/4 ROUTE CONCEPT STUDY
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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L N/S	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L N/S	2005 V/C	2005 LOS	2005 LN	AADT	Pk Hr
B		52.17	EMBARCADERO RD.																							
B		52.55	SANTA CLARA CO. LINE																							
C	SM	0.00	SAN MATEO CO. LINE	135	60	60	3	1.0	F	4	151	77	77	3	1.43	F	5	176	81	99	3	1.83	F	7	8	4
		0.89	UNIVERSITY AVE.	135	60	60	3	1.0	F	4	154	73	73	3	1.35	F	5	179	77	94	3	1.74	F	6	8	4
		1.87	JCT. RTE. 84 EAST	130	57	57	3	1.0	E	4	150	71	71	3	1.31	F	5	175	75	92	3	1.70	F	6	8	4
		3.59	MARSH RD.	127	56	56	3	1.0	E	4	144	68	68	3	1.26	F	5	155	72	88	3	1.63	F	6	8	4
		5.39	JCT. RTE. 114	127	56	56	3	1.0	E	4	151	72	72	3	1.33	F	5	176	76	92	3	1.70	F	6	7	4
		6.62	WHIPPLE RD.	142	62	62	4	0.86	D	4	166	79	79	4	1.10	F	5	193	83	101	4	1.40	F	6	7	4
		8.40	HOLLY ST.	151	67	67	4	0.93	E	5	178	85	85	4	1.18	F	6	207	89	109	4	1.51	F	6	7	4
		9.55	RALSTON AVE.	158	70	70	4	0.97	E	5	185	88	88	4	1.22	F	6	216	93	113	4	1.57	F	6	6	4
		11.15	HILLSDALE BLVD.	169	78	71	4	1.0	F	5	196	102	84	5	1.13	F	7	228	109	109	5	1.21	F	7	6	4

1983/4 ROUTE CONCEPT STUDY
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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
C	SM	11.90	JCT. RTE. 92	178	82	74	4	1.0	F	5	196	102	84	4	1.42	F	7	228	119	98	4	1.65	F	8	6	4
		12.69	KEHOE AVE.	178	82	74	4	1.0	F	5	193	101	83	4	1.40	F	7	225	118	96	4	1.64	F	8	6	4
		13.46	THIRD AVE.	177	82	74	4	1.0	F	5	194	102	83	4	1.42	F	7	211	110	90	4	1.53	F	7	6	4
		14.33	POPLAR-DORE AVE.	170	78	71	4	1.0	F	5	191	100	82	4	1.39	F	7	207	108	88	4	1.50	F	7	6	4
		14.69	PENINSULAR AVE.	167	77	70	4	1.0	F	5	191	100	82	4	1.39	F	7	207	108	88	4	1.50	F	7	6	4
		16.58	BROADWAY	164	76	69	4	1.0	F	5	191	100	82	4	1.39	F	7	207	108	88	4	1.50	F	7	6	4
		17.95	MILLBRAE AVE.	172	80	72	4/5	1.0	F	5	199	104	86	4/5	1.44	F	7	216	113	92	4/5	1.57	F	7	6	4
		19.12	SF AIRPORT	180	83	75	4/5	1.0	F	5	203	106	87	4/5	1.47	F	7	220	115	94	4/5	1.60	F	8	5	4
		R20.39	SAN BRUNO AVE.	188	87	79	4	1.0	F	6	189	99	81	4	1.38	F	7	203	106	87	4	1.47	F	7	5	4
		R20.72	EXT. RTE. 380 WEST S. AIRPORT BLVD. IS MISSING. 3 LANES IN BOTH DIRECTIONS.	158	76	63	5/4	0.88	D	5	170	89	65	5/4	1.24	F	6	185	105	70	5/4	1.46	F	7	6	4

1983/4 ROUTE CONCEPT STUDY
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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Ah	1982 Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1995 AADT	1995 AM Ah	1995 Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	2005 AADT	2005 AM Ah	2005 Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	TRUCK % AADT	TRUCK % Pk Hr
C	SM	21.92	GRAND AVE.																				
				153	76	60	4	1.0	F 5	178	102	68	4	1.42	F 7	192	110	73	4	1.53	F 7	8	4
		22.55	LINDEN AVE.																				
				147	71	58	4	1.0	E 5	167	95	63	4	1.32	F 6	180	103	69	4	1.43	F 7	8	4
		22.71	OYSTER PT. BLVD.																				
				150	72	59	4	1.0	E 5	160	91	61	4	1.26	F 6	174	99	66	4	1.38	F 7	7	4
		23.39	OLD BAYSHORE																				
				140	68	56	4	0.94	E 5	158	90	60	4	1.25	F 6	173	99	66	4	1.38	F 7	7	4
C		25.70	CANDLE STICK PARK																				
		26.11	SAN MATEO CO. LINE																				
D	SF	0.00	SF CO. LINE																				
				149	71	59	4	1.0	E 5	157	90	60	4	1.25	F 6	172	98	65	4	1.36	F 7	6	3
		0.77	THIRD ST.																				
				160	77	63	5	0.86	D 5	158	90	60	5	1.00	E 6	173	99	66	5	1.10	F 7	5	3
		1.11	PAUL AVE.																				
				162	78	64	3	1.0	F 5	152	90	60	3	1.67	F 6	173	99	66	3	1.83	F 7	5	3
		1.77	SILVER AVE.																				
				163	80	65	3	1.0	F 5	162	91	61	3	1.69	F 6	184	99	66	3	1.83	F 7	5	3
		1.98	JCT. RTE. 280																				
				213	102	84	4/5	1.0	F 6	237	100	66	4/5	1.39	F 7	258	109	73	4/5	1.51	F 7	5	3
		2.92	ARMY ST.																				
				224	108	88	4	1.0	F 7	240	100	67	4	1.39	F 7	260	109	73	4	1.51	F 7	5	3

1983/4 ROUTE CONCEPT STUDY
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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
D	SF	4.10	VERMONT ST.	218	105	71	4	0.99	E	5	234	98	66	4	1.36	F	7	256	107	72	4	1.49	F	7	4	3
		R4.24	JCT. RTE. 80 E.																							
		R5.14	MISSION ST.	120	58	58	3	1.0	F	4	146	66	66	3	1.22	F	5	159	72	72		1.33	F	5	4	3
		R5.14	COUPLET NORTH ONE WAY																							
		R5.14	MISSION ST.																							
		5.47/4.54	EQUATION	51	51		2	1.0	F	3	62	62		2	1.72	F	4	68	68		2	1.89	F	5	4	3
		4.76	FELL ST.																							
		5.09	END FREEWAY	23	23		2	0.64	C	2	34	34		2	0.94	E	3	36	36		2	1.0	E	3	4	3
		5.17	FRANKLIN ST.																							
				31	31		2N/S	0.86	D	2	34	34		2	0.94	E	3	36	36		2	1.00	E	3	4	3
		5.26	GOLDEN GATE AVE.																							
		R5.14	COUPLET S. ONE WAY																							
		R5.14	S. VAN NESS AVE.																							
		R5.47/4.54	EQUATION	54		54	3	1.0	F	4	60		60	3	1.11	F	4	66		66	3	1.22	F	5	4	3
		4.76	OAK ST.																							
		5.09	END FREEWAY	33		33	2	0.92	E	3	34		34	2	0.94	E	3	36		36	2	1.00	F	3	4	3
		5.25	TURK ST.																							
				33		33	3	0.92	E	3	34		34	3	0.94	E	2	36		36	3	1.0	F	4	4	3
		L5.44	TURK ST.																							
		5.26	COUPLET ENDS-BEGIN 2 WAY																							
		5.26	VAN NESS AVE.																							
			GOLDEN GATE	64	24	35	3	1.0	F	6	68	26	39	3	1.73	F	6	74	28	42	3	1.87	F	7	4	2
		5.35	VAN NESS AVE.																							
				59	22	34	3	1.0	F	5	63	24	36	3	1.60	F	6	68	26	39	3	1.60	F	6	4	2
			SEVERAL INTERSECTIONS																							
				56	21	32	3	1.0	F	5	59	20	36	3	1.60	F	6	65	21	40	3	1.78	F	6	4	2

1983/4 ROUTE CONCEPT STUDY
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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
D	SF	5.94	CALIFORNIA ST.	51	17	32	3	1.0	F	5	54	18	34	3	1.51	F	5	59	20	37	3	1.64	F	6	4	2
			SEVERAL INTERSECTIONS	51	17	32	3	1.0	F	5	54	18	34	3	1.51	F	5	59	20	37	3	1.64	F	6	4	2
D		6.71	JCT. RTE. 480 BREAK-IN RTE.																							
		0.00	MARIN CO. LINE																							
E	MRN	0.00	NORTHEND GOLDEN GATE BR.	100	29	60	4	0.83	D	4	118	18	111	4	1.54	F	7	127	17	113	4	1.57	F	7	2	2
		0.32	SOUTH SAUSALITO	91	26	54	4	0.75	C	4	109	17	104	4	1.44	F	7	118	16	105	4	1.46	F	7	2	2
		1.68	SPENCER AVE.	92	27	55	4	0.76	D	4	109	17	103	4	1.43	F	7	118	16	104	4	1.44	F	7	2	2
		2.43	RODEO AVE.	91	26	54	4	0.75	C	4	109	17	103	4	1.43	F	7	118	16	104	4	1.44	F	7	2	2
		3.33	BRIDGEWAY BLVD.	112	32	67	5	0.74	C		132	20	125	5	1.39	F	8	143	19	126	5	1.40	F	8	2	2
		4.13	JCT. RTE. 1 WEST	102	30	61	6/4	0.85	D	5/4	120	18	114	6/4	1.58	F	7	130	17	115	6/4	1.60	F	7	2	2
		4.75	RICARDO ROAD STRAWBERRY PT. CONNECT	101	29	60	5/4	0.83	D	5/4	114	18	108	5/4	1.50	F	7	124	16	110	5/4	1.53	F	7	2	2

1983/4 ROUTE CONCEPT STUDY
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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	TRUCK % AADT	TRUCK % Pk Hr
E	MRN	5.40	WEST FRONT RD. CON.	101	27	60	5	0.67	C 5	119	18	112	5	1.24	F 7	129	17	114	5	1.27	F 7	3	2
		5.69	JCT RTE 101 EAST ALTO I/C	130	31	62	5	0.69	C 5	145	22	137	5	1.52	F 9	157	21	139	5	1.54	F 9	3	2
		7.37	TAMALPAIS DR. (HOV)	128	31	61	4	0.85	D 4	144	22	136	4	1.84	F 9	156	21	138	4	1.92	F 9	3	2
		7.66	MADERA BLVD.	129	31	62	4	0.86	D 4	145	22	137	4	1.90	F 9	157	21	139	4	1.92	F 9	3	2
		8.25	LUCKY DRIVE	129	31	62	4	0.86	D 4	145	22	137	4	1.90	F 9	157	21	139	4	1.39	F 9	3	2
		8.60	SIR FRANCIS DRAKE	108	26	52	3	0.93	E 4	130	29	114	3	2.11	F 7	140	29	125	3	2.31	F 8	4	3
		9.96	JCT RTE 17 SAN QUENTIN U/C	127	31	60	4/3	1.0	F 4	143	32	127	4/4	1.76	F 8	155	33	139	4/4	1.93	F 9	4	2
		10.60	IRWIN ST.	83	20	40	3	0.75	C 3	100	22	88	3	1.63	F 6	108	23	97	3	1.80	F 6	4	2
		11.25	MISSION ST.	116	28	56	3	1.04	F 4	140	31	124	4/3	2.30	F 8	152	32	136	4/3	2.52	F 9	4	2
		12.19	LINCOLN-VILLA AVE.	132	31	63	4	0.88	D 4	160	35	141	5/4	1.96	F 9	173	36	155	5/4	2.15	F 10	4	2
		12.69	SAN PEDRO RD.	116	27	55	3	1.0	F 4	134	30	118	5/4	1.64	F 8	146	30	130	5/4	1.81	F 8	4	2

1983/4 ROUTE CONCEPT STUDY
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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
E	MRN	13.10	LOS GALLINAS RD.	116	27	55	3	1.0	F	4	134	30	118	5/4	1.64	F	8	146	30	130	5/4	1.81	F	8	4	2
		13.71	MANUEL FREITAS PARKWAY	104	24	49	3	0.9	E	4	120	26	106	5/4	1.47	F	7	130	27	116	5/4	1.61	F	8	4	2
		14.71	LUCAS VALLEY	99	23	47	3	0.87	D	3	125	26	111	5/4	1.54	F	7	144	28	129	5/4	1.79	F	8	4	2
		15.57	MILLER CREEK ROAD	99	23	47	4	0.65	C	4	124	26	111	4	1.54	F	6	143	28	129	4	1.79	F	8	4	2
		16.64	HAMILTON FIELD	93	22	44	3	0.81	D	3	114	24	102	3	1.87	F	7	132	26	119	3	2.20	F	8	4	2
		18.01	IGNACIO BLVD.	83	19	30	3	0.72	C	3	111	23	98	3	1.81	F	7	128	25	114	3	2.11	F	7	5	3
		19.09	JCT RTE 37 S. NOVATO BLVD.	75	19	39	3	0.72	C	3	98	22	95	3	1.76	F	6	126	29	131	3	2.43	F	9	5	3
		R20.19	ROWLAND AVE.	64	16	61	3	1.0	F	4	84	21	87	3	1.61	F	6	108	25	112	3	2.07	F	7	5	3
		R21.11	DELONG AVE.	52	13	49	3	0.91	E	4	67	17	70	3	1.30	F	5	86	20	90	3	1.67	F	6	5	3
		R22.00	ATHERTON AVE.	50	13	47	3	0.87	D	3	59	13	57	3	1.06	F	4	68	15	66	3	1.22	F	5	5	3
		R23.27	END FREEWAY	50	13	47	2	1.0	F	6	59	13	57	2	1.58	F	7	68	15	66	2	1.83	F	5	5	3

1983/4 ROUTE CONCEPT STUDY
ROUTE 101 SHEET 12 of 16

SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % AM Pk Hr
E	MRN	26.90	SAN ANTONIO RD.	50	13	47	2	1.0	F	6	59	13	57	2	1.58	F	7	68	15	66	2	1.83	F	5	5	3
E		27.63/0.00	COUNTY LINE	50	16	44	2	1.0	F	6	59	16	60	2	1.67	F	8	72	17	75	2	2.08	F	5	5	3
F	SON	2.23	KASTANIA RD.	50	16	44	2	1.0	F	6	60	16	61	2	1.69	F	8	74	17	77	2	2.14	F	5	5	3
		2.59	BEGIN FWY.	50	16	44	2	1.05	F	3	60	16	61	2	1.69	F	4	74	17	77	2	2.14	F	5	7	3
		2.93	SO. PETALUMA	46	13	24	2	0.67	C	2	56	15	56	2	1.56	F	4	69	16	71	2	1.97	F	5	7	3
		3.66	JCT RTE 116 PETALUMA-SONOMA HWY.	48	15	25	2	0.69	C	2	68	17	64	2	1.78	F	4	81	19	89	2	2.47	F	6	9	4
		4.76	WASHINGTON ST.	27	15	24	2	0.67	C	3	66	17	63	2	1.75	F	8	79	19	87	2	2.42	F	6	9	4
		7.65	OLD REDWOOD HWY.	52	14	25	2	0.69	C	3	69	17	65	2	1.81	F	8	83	20	90	2	2.50	F	6	7	4
		8.80	PEPPER ROAD	51	17	24	2	0.67	C	3	68	17	64	2	1.78	F	8	81	19	89	2	2.47	F	6	7	4
		10.67	RAILROAD AVE.	51	17	23	2	0.64	C	3	68	17	64	2	1.78	F	8	81	19	89	2	2.47	F	6	7	4

1983/4 ROUTE CONCEPT STUDY
ROUTE 101 SHEET 13 of 16

SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
F	SON	12.00	SIERRA AVE.	49	17	22	2	0.61	C	2	65	16	62	2	1.72	F	4	77	19	85	2	2.35	F	6	10	5
		12.68	JCT 116 WEST GRAVENSTEIN HWY	52	18	22	2	0.61	C	2	64	17	65	2	1.81	F	4	74	17	77	2	2.14	F	5	9	4
		13.88	ROHNERT PARK EXP.	60	22	53	2	1.0	F	4	77	21	78	2	2.17	F	5	88	20	92	2	2.56	F	6	9	4
		15.02	WILFRED AVE.	64	25	49	2	1.0	F	3	81	33	72	2	2.0	F	5	99	34	92	2	2.56	F	6	9	4
		15.53	SANTA ROSA AVE.	59	24	45	2	1.0	F	3	74	30	66	2	1.83	F	5	90	31	84	2	2.33	F	6	9	4
		16.54	TODD ROAD	62	26	44	2	1.0	F	3	80	29	64	2	1.78	F	4	97	30	81	2	2.25	F	5	9	4
		18.49	HEARN AVE.	68	29	48	2	1.0	F	3	90	33	72	2	2.00	F	5	109	34	92	2	2.56	F	6	9	4
		19.00	BAKER AVE.	71	32	50	2	1.0	F	3	90	33	73	2	2.03	F	5	109	35	93	2	2.58	F	6	7	3
		19.65	JCT RTE 12 THIRD STREET	59	27	25	2	0.75	C	2	78	28	63	2	1.75	F	4	95	30	80	2	2.22	F	5	7	3
		20.10	FOURTH ST.	69	32	29	2	0.89	D	2	95	35	78	2	2.17	F	5	116	36	99	2	2.75	F	7	5	2

1983/4 ROUTE CONCEPT STUDY
ROUTE 101 SHEET 14 of 16

SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
F	SON	20.74	COLLEGE AVE.	61	28	26	2	0.78	D	2	87	32	70	2	1.94	F	5	105	33	89	2	2.47	F	6	5	3
		21.74	STEELE LANE	45	21	20	2	0.58	C	2	60	28	62	2	1.72	F	4	73	29	79	2	2.19	F	5	5	3
F	SON	22.52	BICENTENNIAL AVE.	35	18	14	2	0.86	D	4	60	28	62	2	1.72	F	4	73	29	79	2	2.19	F	5	5	3
G	SON	22.81	MENDOCINO AVE.	36	18	15	2	0.78	D	4	60	24	53	2	1.47	F	4	73	25	67	2	1.86	F	5	5	3
		23.30	HOPPER AVE.	39	20	16	2	0.83	D	4	60	24	53	2	1.47	F	4	73	25	67	2	1.86	F	5	5	3
		24.86	RIVER ROAD	32	16	13	2	0.69	B	3	45	18	39	2	1.08	F	3	54	18	50	2	1.39	F	5	5	3
		25.90	FULTON RD.	33	17	13	2	0.69	C	3	45	18	39	2	1.08	F	3	54	18	50	2	1.39	F	5	5	3
		26.33	AIRPORT BLVD.	32	16	13	2	0.75	C	3	45	13	41	2	1.14	F	6	51	15	50	2	1.39	F	5	5	3
		27.62	SHILOH ROAD	30	15	12	2	0.42	B	2	42	12	38	2	1.06	F	5	48	14	46	2	1.28	F	5	11	3
		29.35	WINDSOR RIVER RD.	24	12	10	2	0.56	C	3	35	10	31	2	0.86	F	4	39	11	37	2	1.03	F	5	11	3

1983/4 ROUTE CONCEPT STUDY
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SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L S/N	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L S/N	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
G	SON	33.48	GRANT AVE.	22	10	9	2	0.50	B	2	44	9	30	2	0.83	D	2	44	11	36	2	1.00	F	3	12	5
		34.55	SO. HEALDSBURG	16	7	5	2	0.39	B	2	28	7	22	2	0.61	C	2	28	8	26	2	0.72	C	2	12	5
		34.88	WESTSIDE RD.	16	7	6	2	0.39	B	2	30	7	23	2	0.64	C	2	30	8	28	2	0.78	D	2	12	5
		36.27	DRY CREEK RD.	13	5	5	2	0.33	A	2	20	6	19	2	0.53	C	3	22	7	24	2	0.67	C	3	13	5
		R38.56	LYTTON SPRINGS RD.	13	5	5	2	0.14	A	2	20	6	19	2	0.54	C	3	22	7	24	2	0.67	C	3	13	5
		R40.03	INDEPENDENCE LN.	13	5	5	2	0.33	A	2	18	6	18	2	0.50	C	3	20	7	22	2	0.61	C	3	14	5
		R41.44	SO. GEYSERVILLE	11	5	4	2	0.28	A	2	17	5	17	2	0.47	C	3	19	6	21	2	0.58	C	3	14	5
		R43.37	JCT. 128 EAST CANYON RD.	11	5	4	2	0.28	A	2	17	5	17	2	0.47	C	3	19	6	21	2	0.58	C	3	12	5
		R47.85	ASTI I/C	11	4	4	2	0.28	A	2	17	5	16	2	0.44	B	2	19	6	19	2	0.53	C	3	12	5
		R49.05	DUTCHER CREEK RD.	12	5	5	1	0.56	D	2	18	5	17	1	0.94	E	3	20	6	21	1	1.17	F	3	12	5

1983/4 ROUTE CONCEPT STUDY
ROUTE 101 SHEET 16 of 16

SEGMENT	CO	MILE POST	DESCRIPTION	1982 AADT	1982 AM Pk Ah	1982 AM Pk Bk	1982 No. L S/N	1982 V/C	1982 LOS	1982 LN	1995 AADT	1995 AM Pk Ah	1995 AM Pk Bk	1995 No. L N/S	1995 V/C	1995 LOS	1995 LN	2005 AADT	2005 AM Pk Ah	2005 AM Pk Bk	2005 No. L N/S	2005 V/C	2005 LOS	2005 LN	TRUCK % AADT	TRUCK % Pk Hr
G	SON	R49.61	END FWY.	15	6	6	1	0.78	D	2	24	7	23	2	0.64	C	3	27	8	28	2	0.78	D	4	12	5
		51.21	HOT SPRINGS RD.	17	7	7	1	0.83	D	2	26	8	24	2	0.67	C	3	29	9	29	2	0.81	D	4	12	5
		51.64	CHERRY CREEK RD.	19	8	8	1	0.89	D	2	29	8	26	2	0.72	C	4	32	10	32	2	0.89	D	4	8	3
		52.40	FIRST ST.	15	6	7	1	0.39	B	1	23	7	22	2	0.61	C	3	26	8	26	2	0.72	C	4	12	5
		53.40	JCT 125 WEST	8	4	3	1	0.39	B	1	14	4	14	2	0.39	B	2	15	5	17	2	0.47	C	3	16	6
		54.61	GEYSERS RD.	7	4	3	1	0.39	B	1	12	5	15	1	0.83	D	2	14	5	18	1	1.0	F	3	16	6
		56.24	COUNTY LINE																							

ATTACHMENT F

DRAFT PREFERRED ALTERNATIVE
(Alternative IV)

INTRODUCTION

In the course of the Phase I study of Highway 101 Corridor Plan and Program, three preliminary program alternatives have been developed for consideration by the Action Committee. The elements of each alternative are described in the Preliminary Program Alternatives Report dated July 10, 1984. The three alternatives propose a range of corridor transportation improvement concepts and approaches to meet the following objectives:

- Maintain an acceptable peak period level of service (Level of Service D) for Highway 101 traffic by year 2005 and beyond.
- Increase corridor-wide person-carrying capacity through travel and highway improvements to meet the projected year 2005 travel demand
- Increase the role of waterborne transportation service in serving commuter travel needs.

The Action Committee is now in the process of selecting a preferred program alternative for development and implementation. To support the Action Committee in the effort, the consultant team has prepared the following description of a Draft Preferred Alternative as a basis for focused discussions. Referred to as Alternative IV, this proposed action program represents a strategic combination of transit, highway, and other transportation improvement elements of the three preliminary program alternatives (with appropriate modifications and refinements) and reflects the following:

Exhibit F

- Consensus reached thus far on specific corridor transportation improvement elements during Action Committee discussions.

- The consultant team's judgment of the type of program that could ultimately gain support from all of the jurisdictions.

- A program that meets the common corridor-wide transportation objectives and the improvement criteria set forth for corridor transportation projects.

- The same modal split objectives that were established for Alternative III; they are shown in Table 1. The modal split numbers and percentages shown in Table I are not ridership projections for transit systems. Rather, they are the minimum levels of ridership required of any transit system to meet the Level of Service (LOS) D criteria for Highway 101.

The elements of Alternative IV are discussed below. It should be noted that in some cases, the descriptions are for improvement concepts rather than specific projects. Often, an improvement concept can be implemented in several different ways involving different types of projects. The selection of projects for an approved concept will be subject to more detailed investigation of project-level options during subsequent phases of the project development and implementation process.

TRANSIT IMPROVEMENTS

1. <u>Transitway between Novato and Larkspur Landing via NWP Right-of-Way</u>

The existing NWP right-of-way between Novato and the Larkspur ferry landing area would be developed into an exclusive transitway for trunk line transit service in Marin County. The appropriate mode of operation on the transitway (bus, light rail, or other system types) would be investigated and

TABLE I
HIGHWAY VS. TRANSIT USAGE BY COMMUTER GROUP
(Southbound Highway 101 Commuter during A.M. 3-HR. Peak Period)

	Existing (Yr. 1980)	Alternative IV
Transbay Commuters		
Highway 101	22,500 (72%)	20,300 (42%)
Bus (or Rail)	7,700 (25%)	23,700 (48%)
Ferry	900 (3%)	4,900 (10%)
Total	31,100(100%)	48,900(100%)
Sonoma-Marin Commuters		
Highway 101	6,000 (95%)	10,800 (92%)
Bus	300 (5%)	1,000 (8%)
Total	6,300(100%)	11,800(100%)
Intra-Sonoma Commuters		
Highway 101	12,300(98.5%)	20,200 (96%)
Bus	200 (1.5%)	800 (4%)
Total	12,500 (100%)	21,000(100%)
Intra-Marin Commuters		
Highway 101	18,000 (96%)	21,600 (90%)
Bus	800 (4%)	2,400 (10%)
All Commuter Groups		
Highway 101	58,800 (86%)	72,900 (69%)
Bus (or Rail)	9,000 (13%)	27,900 (26%)
Ferry	900 (1%)	4,900 (5%)
Total	68,700(100%)	105,700(100%)

determined during subsequent phases of this study. Additional grade-separations would be provided at selected locations for transitway operation, including the route segment through downtown San Rafael. Depending on the selected mode of operations and planned operations, additional right-of-way may be required for transitway segments and stations.

As an objective, the transitway would be extended into Sonoma County when opportunity arises to secure the use of additional right-of-way north of Highway 37. Similarly, the transitway could be extended in the future to downtown San Francisco or to interface with the City's planned transitway system when needs and opportunities arise.

2. Continue to Acquire NWP Right-of-Way Through Santa Rosa as Opportunities Arise

Consistent with the transitway objective, an active element of Alternative IV is to preserve future options for transitway extensions into Sonoma County. Efforts by the public sector to acquire NWP right-of-way through Santa Rosa as sections are abandoned, or to pursue a joint-operating agreement as opportunities arise should be continued.

3. Marin/Sonoma-San Francisco Express Bus Service in HOV Lanes and Transit Preferential Streets

Non-stop or limited-stop express bus service would be provided via HOV lanes on Highway 101 between Sonoma and Marin communities and downtown San Francisco, via the following route segments.

- Santa Rosa to Novato: Express buses would operate in a new peak period HOV lane added to Highway 101 in both directions (see Highway Improvements below).

- Novato to Sir Francis Drake Blvd: Several HOV lane segments are currently committed or planned for this route segment. Additional HOV

segments would be added to correct the currently committed or planned segments so that express buses would operate in a continuous HOV lane through this route segment in both directions. As an operational option, express buses through this route segment could also operate on the transitway; a connection between the transitway and Highway 101 is included in the reconstruction of the Sir Francis Drake interchange. (See Highway Improvements below.) However, this option would be possible only if the selected transitway operation is compatible with bus operations.

- Sir Francis Drake Blvd. to Highway 1: Express buses would operate in the existing HOV lane on Highway 101 in both directions.

- Highway 1 to North End of GGB: Through this segment, an existing lane in the reverse peak directions would be used during the peak period as a contra-flow bus lane for express buses in the peak directions. This would reduce the existing Highway 101 vehicle carrying capacity in the reverse directions by one to two traffic lanes during the peak period.

- Golden Gate Bridge: Express buses could operate on a second deck added exclusively for transit use. Before the second deck is in place, or if it is not erected, an existing lane in the peak directions would be designated as a peak period HOV lane and express buses would operate in this HOV lane. This would leave three traffic lanes in the peak direction for non-high-occupancy vehicles during the peak periods. (Alternatively, a traffic lane in the reverse peak direction could be used during the peak period as a contra-flow lane for express buses in the peak direction. However, this would leave only one lane for all traffic in the reverse peak directions. Because of the potential capacity deficiency in the reverse peak directions and traffic operations and safety problems inherent in this scheme, it will not be considered further.)

- South End of GGB to Downtown San Francisco: Express buses would follow the existing Financial District and Civic Center routes in HOV

lanes and transit preferential streets. Doyle Drive would be reconstructed to four lanes in each direction (see Highway Improvements below). One of the four lanes would be designated as an HOV lane and express buses would operate in this HOV lane. Along Richardson and Lombard streets, a reversible bus lane could be added for exclusive bus use in the peak direction. This would require removal of parking on both sides of streets and substantial street modifications. Additional right-of-way may also be required to provide adequate widths. Alternatively, a peak-period-only exclusive bus lane could be provided within existing street width for express buses in the peak directions. This would restrict parking on one side and reduce one traffic lane during the peak period. A peak-period-only exclusive bus lane would be provided on Van Ness, North Point/Bay, and Battery/Sansome streets for express buses in the peak directions. San Francisco has a transit preferential street system in the downtown area; alternative routes for express bus service in San Francisco should be investigated, taking advantage of the City's transit preferential street systems.

4. Conduct a Feasibility and Impact Study on the Need for a Second Deck for Transit on the Golden Gate Bridge

A second deck for transit could be a potentially crucial link in the ultimate transit way systems for the Highway 101 corridor. In the near term, it would enhance the effectiveness and increase the usage of express bus service to San Francisco. A second deck for transit use is consistent with the corridor transit objective and with San Francisco's policies to reduce auto traffic into the City. Therefore, the need for a second bridge deck for transit use should be studied, documented and pursued as a matter of policy for transportation improvements in the Highway 101 corridor.

The San Francisco portion of any corridor transit improvements will have an impact on the City and will become integral parts of the City's future transit systems. Therefore, the development of such transit improvements, including

a second bridge deck, should be integrated by the City into its ongoing transit planning effort, and the timing for implementation of these improvements should be coordinated with the City's transit improvement plans.

5. Increased Waterborne Transit Level of Service

As an objective, waterborne transit level-of-service would be substantially increased to help meeting commuter travel needs. The proposed improvement concept would include the following elements:

- Increased peak period schedules on existing routes
- Additional routes and schedules
- Addition of larger capacity and faster vessels, including Hovercraft
- New terminal sites and terminal park-and-ride facilities
- Improved feeder transit and auto access to ferry service.

The location of new terminal sites, the type of new vessels, and the required level-of-service will be investigated further during subsequent phases of this study.

6. Improved Intra-County Bus Service

This would include an increase in existing intra-Marin and intra-Sonoma bus service. The proposed improvement concept would have the following elements:

- New routes and restructuring of existing routes to provide direct connection between intra-county activity centers in Marin and Sonoma, and to provide feeder connections to the transitway service along NWP right-of-way and the express bus service

- Increased peak period service frequency on new and existing routes

- Additional buses and support facilities required for increases in level of service.

HIGHWAY AND ROAD IMPROVEMENTS

1. Third Lane on Highway 101 Both Directions Between Santa Rosa and Novato

A new lane would be added in each direction to the existing four lane segment of Highway 101 between Santa Rosa and Novato. The additional lanes would be designated as HOV lanes during peak periods and would be constructed to freeway standards.

2. HOV Lanes Both Directions Between Novato and Sir Francis Drake Boulevard, Including Reconstruction of Sir Francis Drake Interchange

In addition to the currently committed or planed HOV improvements on Highway 101, a new lane would be added in each direction between Novato and Highway 37, a northbound lane from Miller Creek Road to Highway 37, and a new lane in each direction between Puerto Suello Hill (N. San Pablo) and Sir Francis Drake Boulevard. Together with the currently committed or planned HOV improvements (see descriptions below), the additional lanes would provide a continuous HOV lane in each direction between Novato and Sir Francis Drake Boulevard. Existing interchanges, including Sir Francis Drake interchange, would be reconstructed or modified to accommodate the new lanes and to improve traffic operations. The reconstruction of Sir Francis Drake interchange would include a connection to the transitway in the NWP right-of-way.

3. Peak Period Contra-flow Lane between Highway 1 and GGB

Provide bus access connections for peak period contra-flow bus lane operations on Highway 101 between Highway 1 and the Golden Gate Bridge.

4. Reconstruct Doyle Drive to Four Lanes in Each Direction

Existing Doyle Drive structure would be reconstructed to four lanes in each direction. One of the lanes would be designated as an HOV lane and would be connected to the transit deck on the GGB if the deck were constructed.

5. Additional Lane on Stony Pt. Road Both Directions Between Highway 12 and Old Redwood Highway

Stony Pt. Road would be widened between Highway 12 in Santa Rosa and Old Redwood Highway in Petaluma to include an additional lane in each direction. Additional right-of-way may be required for adequate width and design to conform with four lane road standards.

6. Civic Center Drive Extension to Smith Ranch Road Contiguous to NWP Right-of-Way

Civic Center Drive would be extended to Smith Ranch Road. The extensions would be contiguous to NWP right-of-way. This extention would provide a needed parallel arterial to a heavily congested section of Highway 101 for intra-Marin travel.

7. Lincoln Avenue-Los Ranchitos Rd. Connection

A road connection would be provided between Lincoln Avenue and Los Ranchitos Road. With this connection, Lincoln and Los Ranchitos would provide a parallel arterial alternative to Highway 101 for intra-Marin travel and help to relieve congestion on this critical section of Highway 101.

8. Currently Committed or Planned Improvements

This would include implementing the following currently committed and planned highway and road improvements:

- HOV lanes on Highway 101 from Miller Creek Road to Puerto Suello Hill

- Northbound onramp at Manual Frietas Parkway interchange

- Southbound HOV lane on Highway 101 from Highway 37 to Miller Creek Road

- Merry Dale flyover

- Hearn Avenue interchange and extension to Farmers Lane

- Additional lane on Southbound Highway 101 approach to Highway 17.

9. Transportation Systems Management (TSM) Improvements

To enhance the effectiveness of proposed transit improvements, as well as to help achieve the desired level of diversion from auto to transit, Alternative IV calls for implementing the following TSM concepts:

- Adding a motorist information system on Highway 101 (variable message signs, etc.)

- Ramp metering at selected locations on Highway 101

- Parking management programs in downtown San Rafael and downtown San Francisco

- Commuter discounts, employer participation program, and carpool/vanpool programs

- Implementing auto congestion pricing measures

- Park/ride lots.

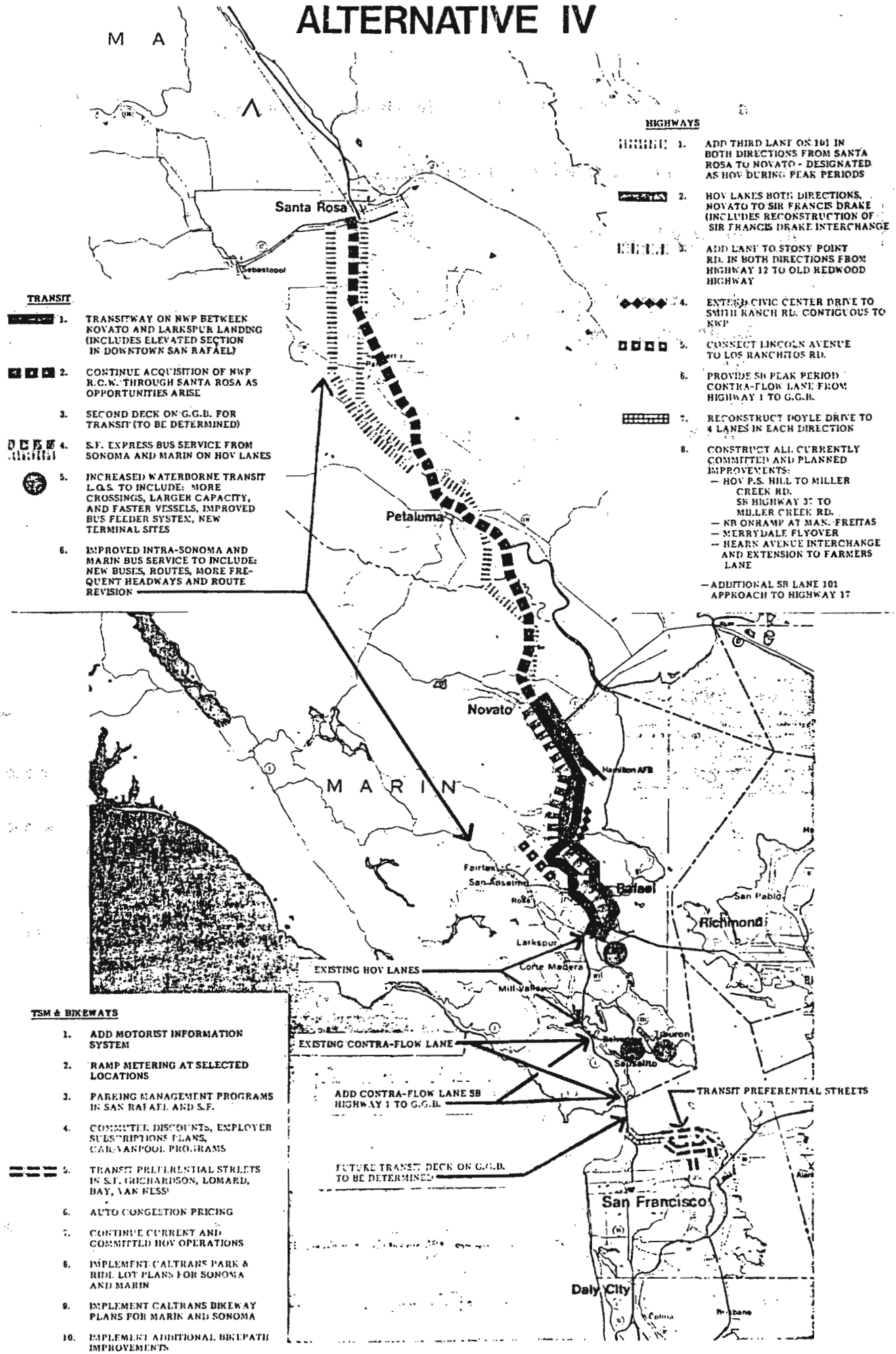
- Transit preferential streets in downtown San Francisco

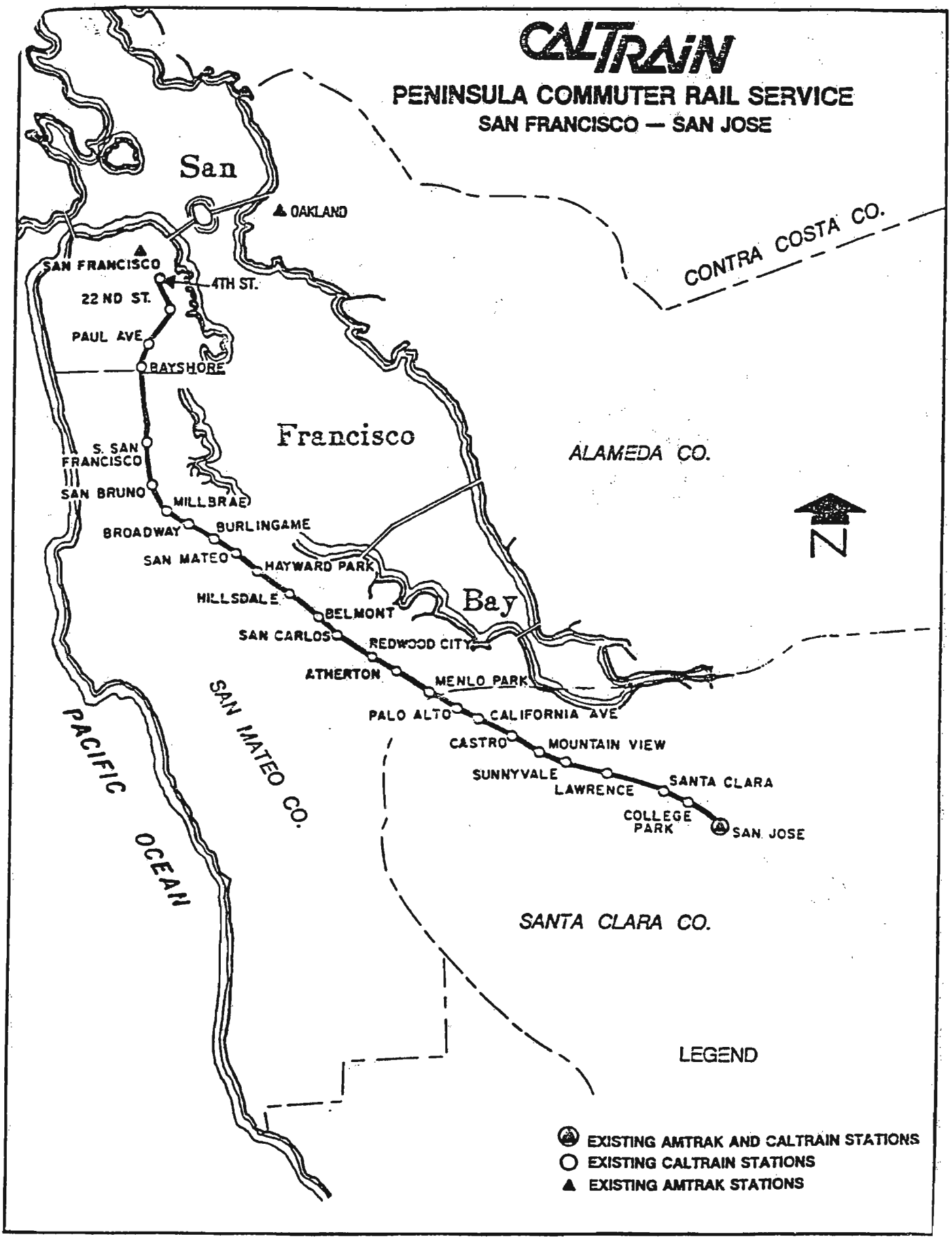
- Computer ride information system.

10. Bikeway Improvements

Alternative IV calls for implementing Caltran's current bikeway plans for Marin and Sonoma counties. Certain elements of the plans may conflict with the transit improvements proposed in this alternative. Therefore, this alternative also includes additional bike paths for any replaced existing paths. The location of replacement bike paths would require further study during the project development phase.

ALTERNATIVE IV




CALTRAIN
PENINSULA COMMUTER RAIL SERVICE
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San
Francisco
Bay
OAKLAND
SAN FRANCISCO
4TH ST.
22 ND ST.
PAUL AVE
BAYSHORE
S. SAN FRANCISCO
SAN BRUNO
MILLBRAE
BROADWAY
BURLINGAME
SAN MATEO
HAYWARD PARK
HILLSDALE
BELMONT
SAN CARLOS
REDWOOD CITY
ATHERTON
MENLO PARK
PALO ALTO
CALIFORNIA AVE
CASTRO
MOUNTAIN VIEW
SUNNYVALE
LAWRENCE
SANTA CLARA
COLLEGE PARK
SAN JOSE
CONTRA COSTA CO.
ALAMEDA CO.
SAN MATEO CO.
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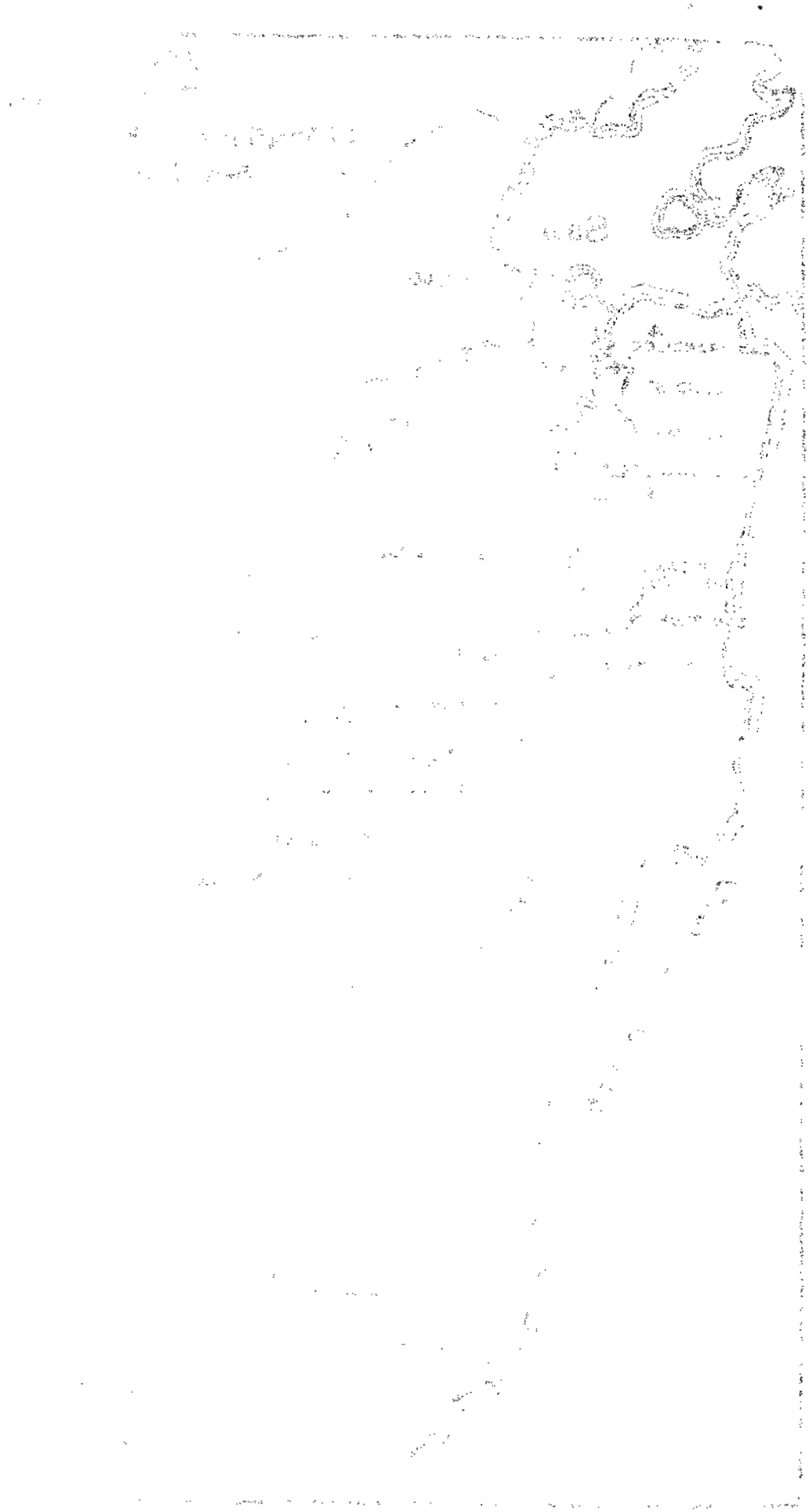
Exhibit G