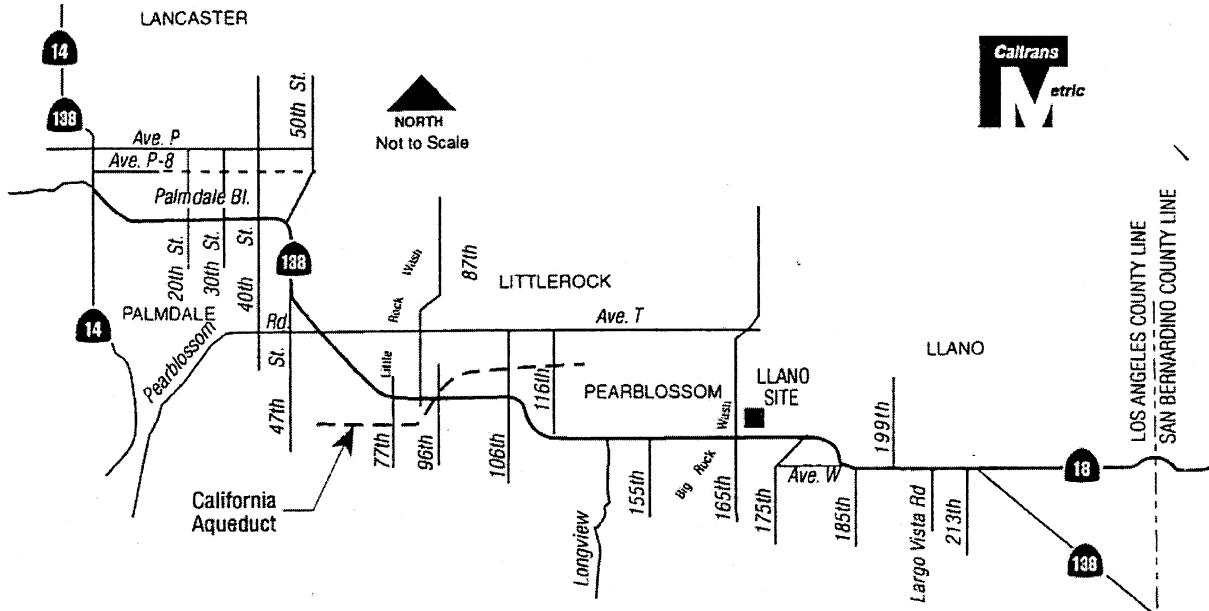
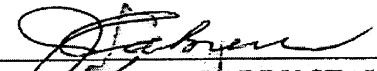


PROJECT REPORT

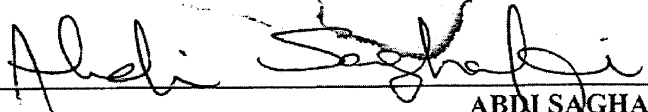


State Route 138 from Avenue T to the Junction with State Route 18 in Los Angeles County


I have reviewed the right of way information contained in this Project Report and the R/W Data Sheet attached hereto, and find the data to be complete, current, and accurate:

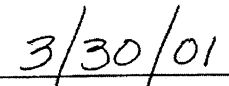

LARRY STALEY
District Manager - Right Of Way

APPROVAL RECOMMENDED:


ABDI SAGHAFI
Project Manager

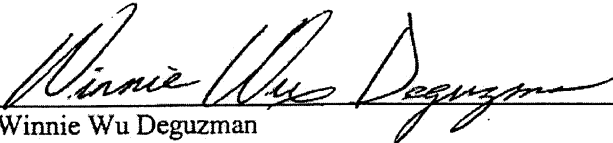
APPROVED:


WILLIAM H. REAGAN, Acting Division Chief
Division of Design


Date



This Project Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.



Winnie Wu Deguzman
Registered Civil Engineer

3/30/01
Date





1. INTRODUCTION

It is proposed to widen State Route 138 from a two (2) lane undivided highway to a standard four (4) lane conventional highway from Avenue T to the Junction with State Route 18 in Los Angeles County. See Attachment A "Vicinity Map," Attachment B "Location Map," and Attachment C "Route 138 Widening Project." It is intended to provide additional highway capacity and enhance safety to accommodate travel demands resulting from regional growth and alleviate congestion on Pearblossom Highway. The cost of this project is estimated at \$142,000,000. The estimate includes \$8,000,000 for right of way, \$12,000,000 for utility relocation, \$10,500,000 for bridgework, and \$111,500,000 for roadway construction. These estimates do not include support costs.

The project is to be funded from State program code HE-13, adding new lanes under the Interregional Transportation Improvement Program (ITIP) and Regional Transportation Improvement Program (RTIP). The project construction is scheduled to commence in the summer of 2003. This project has been assigned the Project Development Processing Category 4A, as classified in Section 2-10.50 of the Project Development Procedures Manual, because the project requires substantial new right of way and will increase traffic capacity.

The purpose of this document is to serve as the general project report for the entire length of State Route 138 from Avenue T to the Junction with State Route 18. The overall project is divided into five segments for funding and construction purposes.

The Preferred Alternative proposes to widen the highway to a full four (4) lane standard facility. It is further discussed in Section 5 "Alternatives" of this report.

2. RECOMMENDATION

It is recommended that this Project Report, with its accompanying Final Environmental Impact Report/Environmental Assessment (FEIR/EA) be approved. It is also recommended that the Preferred Alternative to widen State Route 138 to a full standard four (4)-lane conventional highway facility be approved. The project limits for the highway-widening project should be as follows:

Highway Widening Project

07-LA-138 82.7/111.7 (KP)

Pearblossom Highway (State Route 138) from Avenue T to the Junction with State Route 18

The overall project, for the purpose of funding, is divided into five segments as follows:

EA 127200; Pearblossom Highway from Avenue T to Longview Road.

EA 104830; Pearblossom Highway from Longview Road to 165th Street East.

EA 188410; Pearblossom Highway from 165th Street East to Avenue W.

EA 188420; Pearblossom Highway from Avenue W to 199th Street East.

EA 188430; Pearblossom Highway from 199th Street East to the Junction with State Route 18.



The affected local agencies have been consulted with respect to the Preferred Alternative and their views have been considered in preparing this report. The local agencies are in general accord with the Preferred Alternative.

3. BACKGROUND

A. Project History

A Project Study Report (PSR) to widen State Route 138 was approved on June 28, 1991. The widening proposed includes adding one lane in each direction. This will make State Route 138 a standard four (4) lane conventional highway with a median turning lane and standard shoulders. According to the PSR, increased traffic due to the economic and population growth in the Antelope Valley is expected in the next 25 years. The recent and planned developments have led to significant concerns about traffic congestion and accidents on State Route 138. Some of the existing operational features that contribute to the highway deficiencies are caused by a lack of adequate traffic circulation and maneuverability at the intersections. The existing slopes on the side of the road do not provide sufficient recovery area for errant drivers. In addition, inadequate visibility due to an existing rolling profile reduces the driver's opportunity to pass.

The PSR identified the need to upgrade State Route 138 as essential due to slow-moving truck traffic, significant number of accidents, as well as increased traffic demand. A Supplemental PSR was approved on October 7, 1991 to incorporate further studies done for the widening project. The studies recommended a reduction in the project cost based on the elimination and/or reduction of both hazardous waste removal work and environmental mitigation.

Since the approval of the PSR and the Supplemental PSR in 1991, preliminary design studies have identified the following additional work, which will be added to the widening project:

- ◆ Various segments of the highway profile would be raised to eliminate the rolling profile and the drainage dips.
- ◆ In the community of Pearblossom the highway would be widened on the north side to avoid affecting the existing businesses located along the south side. The roadway alignment would be shifted north of the existing highway centerline.
- ◆ The existing horizontal curves would be realigned to provide standard curvature for this type of facility.
- ◆ The junction with State Route 18 would be reconfigured to provide a direct connector for eastbound traffic.
- ◆ A segment of the highway near 165th Street East would be realigned south of the existing alignment to avoid the historic ruins at the Llano Del Rio Colony.



Right of Way acquisition for the widening of State Route 138 is anticipated but no properties have been acquired.

B. Community Interaction

Caltrans management and staff have held several meetings informing the local citizens, business owners, local elected officials, town council members, and private groups about the widening project on State Route 138. The main topics presented in these meetings included schedules, safety, speed, and impacts on the communities and improvements on the highway. Many local citizens have voiced their opinions and have discussed safety issues on the existing and proposed conditions of the highway.

From these meetings, Caltrans has determined that most of the residents, business owners and local officials take a strong position in favor of widening State Route 138. Caltrans has also received numerous letters from the general public supporting the widening project. The local elected U.S. Congressman has indicated his strong support for widening and is committed to work at the agency level to accelerate the project's construction schedule.

The following is a list of the meetings, which have been held:

- ◆ Public Scoping Meeting in Littlerock on August 26, 1998.
- ◆ Cultural Meeting with the Big Pines Historical Society on July 15, 1999.
- ◆ Antelope Valley Transportation Summit Meeting in Palmdale on Jan. 28, 2000.
- ◆ Town Council Meeting in Littlerock on March 20, 2000.
- ◆ Informational Meeting with Pearblossom Chamber of Commerce on June 1, 2000.
- ◆ Antelope Valley Transportation Summit Meeting in Palmdale on June 15, 2000.
- ◆ Informational Meeting with Littlerock Town Council on June 22, 2000.
- ◆ Informational Meeting with Littlerock Chamber of Commerce on July 19, 2000.
- ◆ Informational Meeting with City of Palmdale on August 2, 2000.
- ◆ Informational Meeting with Llano Community Association on October 24, 2000.
- ◆ Public Hearing at Littlerock High School on October 30, 2000.

The purpose of the above informational meetings was to present the design alternatives, to gather information about the communities' concerns and needs, and to obtain the local's support for the project.

A group known as the Highway 138 Safety Corridor Task Force has also held other meetings to discuss safety issues along Route 138. The main function of this group is to provide public education on highway safety, increase law enforcement, and identify and make recommendations for safety and operational improvements where necessary prior to the widening project. State Route 138, between State Route 14 in Palmdale and Interstate Freeway 15, a 76 kilometer stretch, has been designated a Safety Corridor.



The group was formed through the efforts of the area elected State Assemblyman. The group includes members from Caltrans Districts 7 and 8, California Highway Patrol officers from Los Angeles and San Bernardino Counties, the Los Angeles County Sheriff Department, the City of Palmdale, the communities of Littlerock, Pearblossom, and Llano and other agencies representing the various communities along State Route 138 highway.

C. Existing Facility

State Route 138 from Avenue T to the State Route 18 Junction is mostly a two-lane highway, with a few locations being a three-lane facility or a four-lane facility near Avenue T and in the community of Pearblossom. This highway passes through the communities of Littlerock, Pearblossom, and Llano is located in a rural, desert area with businesses widely scattered along the sides. Most of the existing businesses are in the communities of Littlerock and Pearblossom, while only a few exist in Llano. The properties consist of residential dwellings, retail stores, and automobile service stations. There are post offices, one in each town, and an elementary school in Littlerock, all located along State Route 138. The majority of the highway traverses the desert and its open space. Along the side of the road, there are large electrical towers on both sides of the roadbed, near Avenue V-8. There are also power poles, and numerous access roads and streets intersecting the highway.

State Route 138 traverses an alluvial fan at the foot of the San Gabriel Mountains. The flows reached the highway in the form of sheet flow without the benefit of well-defined channels. A characteristic of an alluvial fan is that there are not well defined physical barriers, the natural channels, in most instances, are not large enough and consequently the flows leak from one drainage area to the other. Existing culverts in most cases provide capacity for small discharges only.

The results of a Location Hydraulics Study dated August 12, 1998 indicate that State Route 138 encroaches on floodplains that are located transversely at various locations throughout the limits of the project. See excerpts of the memorandum in Attachment I "Location Hydraulics Study". A complete copy of the report is available in the project files for review.

The California Aqueduct crosses the highway at two locations, one near 106th Street East in the form of an underground pipe system and one near 96th Street East in the form of a trapezoidal concrete channel.

There are four bridges along the highway within the limits of the project:

<u>Bridge Number</u>	<u>Bridge Name</u>	<u>KP Location</u>
Bridge No. 53-0303 (L/R)	Littlerock Creek Bridge (Left/Right)	KP 86.2
Bridge No. 53-2098	Littlerock Bridge (California Aqueduct)	KP 90.2
Bridge No. 53-0313	Big Rock Wash Bridge	KP 101.4
Bridge No. 53-0314	Big Rock Wash Bridge	KP 101.5



There is also one bridge structure, which will be impacted by the proposed project located along a local street. The bridge is identified as:

<u>Bridge Name</u>	<u>KP Location</u>	<u>Remarks</u>
96 th Street East Bridge	Near KP 90.5	Over the California Aqueduct

The existing dimensions of the structural section within the limits of the State Route 138 widening project are typically 177 mm (0.58 feet) of Asphalt Concrete (AC) over 204 mm (0.67 feet) of Aggregate Base (AB). The existing dimensions of the roadway are shown on the typical sections labeled, "X-1" for each of the communities of Littlerock, Pearblossom, and Llano. See Attachment D "Existing Typical Section."

Near the vicinity of Big Rock Wash, weather sensors elements are embedded in the pavement surface. An existing weather station, which monitors the pavement temperature, is located on the southwest end of the Big Rock Wash Bridge, Bridge No. 53-0313. Any pavement alteration (such as a pavement profile change) or cold planing would render these weather sensors inoperative.

The existing right of way width varies from 7.62 m (25 feet) to 15.24 m (50 feet) measured from the State Route 138 centerline.

4. NEED AND PURPOSE

A. Problem, Deficiencies, Justification

State Route 138, as part of the Inter Regional Road System, is a vital east-west route through the Antelope Valley, linking Northern Los Angeles County with San Bernardino County. The Antelope Valley is a fast-growing region that has experienced tremendous demographic changes in the last 15 years. The on-going residential, commercial and industrial growth in this region is expected to continue at an accelerated rate. Without transportation related improvements, traffic conditions within the region, will continue to deteriorate as congestion increases on the existing roadways. The existing Level of Service (LOS) for State Route 138, which varies from LOS "E" to LOS "D", is projected to deteriorate to a constant Level of Service "E", if no improvements are made. See Section 4-C "Traffic" in this project report for a definition of Level of Service. The proposed road-widening project will accommodate future traffic volumes and place the facility into a functioning and maintainable condition.

The existing roadway currently accommodates local traffic for the Antelope Valley as well as San Bernardino and Riverside Counties. It is also increasingly being used as a by-pass route for recreational vehicles with destinations such as Las Vegas, Laughlin, Barstow, Victorville, and the ski resort area in Mountain High. In addition, there are a large number of trucks that travel through the area. According to current traffic data, the percentage of trucks is 15% at Avenue T and 11% near the Junction of State Route 138/18. The amount of slow moving vehicles, such as trucks, causes a queuing effect on the highway. Motorists that are in need of traveling faster are



forced to use the opposite traffic lane to pass slow-moving vehicles. Accident data shows that several types of collision such as rear end, broadside, hit object, head-on and auto-pedestrian occur on this roadway. The highest percentage of collisions (29 percent) taking place on this roadway is of the rear-end type accidents. It is anticipated that the number of accidents will be reduced as a result of adding lanes, improving traffic circulation and improving sight distance.

The accident data for State Route 138 indicates that the actual total accident rate, 0.81 accidents per million vehicle miles (acc/mvm), is lower than the statewide-expected rate for similar routes (1.02 acc/mvm). However, the fatal accident rate (0.049 fatal acc/mvm) is higher than the statewide-expected rate for similar routes (0.038 fatal acc/mvm). As a result of efforts by local elected officials and local residents, a 76 kilometer (47-mile) stretch of State Route 138, between State Route 14 in Palmdale and Interstate 15, has been designated as a Safety Corridor.

The main function of this group is to provide public education on highway safety, increase law enforcement, and identify and make recommendations for safety improvements where necessary prior to the widening project.

Currently, there is a section of the highway that has a vertical rolling profile with deep depressions on the roadway that limits passing opportunities. This condition exists east of the community of Pearblossom. The vertical profile was originally designed to accommodate the passage of flash drainage flows. These depressions on the pavement have the effect of reducing the stopping and passing sight distance for the driver. In addition, due to these numerous dips, this section of the highway experiences some flooding during storm events. The regional maintenance station has identified the most common areas that experience ponding conditions throughout the rainy season. These locations are:

- ◆ Southeast corner of Route 138 and 165th Street East.
- ◆ South side of Route 138 from Llano Post Office to 175th Street East.
- ◆ Southwest corner of Route 138 and 213th Street East.
- ◆ North and south side of State Route 138 at the Junction with State Route 18.

At the present time, the highway also experiences a deficiency in traffic circulation caused by the lack of left turn channelization. Left turn lanes are one of the desirable and most efficient traffic features, which could be used on at-grade intersections to reduce the incidence of, rear-end collisions, to improve circulation, and to increase capacity. In addition, restricted roadway widths, trucks and other slow moving traffic adversely affect operational practices of this highway.

Currently, with the existing highway conditions, the cost of maintaining the highway could increase significantly. Elements of the roadway that require frequent roadway repairs include: drainage pipes, headwalls, crack sealing, pavement delineation, damaged signs and dented metal beam guard rails. As a result, the demands of maintaining the roadway involve continuous exposure to traffic of maintenance workers along the highway.



To address some of the deficiencies just mentioned, the project's preferred alternative proposes to upgrade the State Route 138 highway by considering the following objectives:

- ◆ Provide adequate roadway capacity by upgrading the existing level of service and to accommodate future projected volumes.
- ◆ Implement improvements to improve the safety of the facility, which would reduce the number of accidents.
- ◆ Eliminate the need for fast-moving vehicles to cross over the median to pass slow-moving traffic.
- ◆ Decrease vehicle hours of travel.
- ◆ Minimize maintenance activities and reduce the level of exposure of Caltrans maintenance forces.
- ◆ To conform to State, Regional and Local Plans and Policies.
- ◆ Facilitate the efficient flow of goods and services through this area.

The corrective actions for the above objectives are described below.

- ◆ All roadway geometric elements and features would be designed for a minimum of 110 kph (70 mph), unless the geometric feature is identified in Section 5-A-(b), Non Standard Mandatory and Advisory Design Features in this report.
- ◆ Provisions for a continuous median lane for left turn channelization would be part of the proposed project requirements to improve the capacity of the roadway, reduce accidents, and provide better traffic circulation.
- ◆ Provide free right turns lanes at the major intersections to improve circulation.
- ◆ Widening of the roadway and adding new lanes and standard shoulders to the highway would provide a greater separation of opposing traffic.
- ◆ The potential for centerline crossover accidents caused by motorists trying to pass slow-moving vehicles, can be reduced by the addition of new traffic lanes. Passing operation can be effectively accomplished using the two lanes provided in each direction. These additional lanes will also increase median separation between traffic traveling on opposite directions.

- ◆ The existing roadside features such as traffic signing, utility poles, culvert headwalls, sign supports, guardrails, curbs, dikes, and similar features, would be placed at an adequate distance from the main lanes of travel to provide the standard recovery area for errant vehicles.
- ◆ The side slopes would be graded at a slope of 1(V): 6(H) or flatter, where feasible, to provide adequate clear recovery areas.
- ◆ The roadway profile would be raised at various locations between two (2) km west of Big Rock Wash Bridges and the Junction with State Route 18. This will eliminate existing dips in the profile and accommodate a new drainage system consisting of culverts and ditches to convey the flows from one side of the highway to the other.
- ◆ The ditches or channels, on both sides of the roadway, would restore natural flow patterns and would eliminate the concentration of flows.
- ◆ Raising the roadway profile would provide standard stopping sight distance.
- ◆ The elimination of the rolling profile would also improve the level of service on the facility.
- ◆ Improving the hydraulic adequacy of the Big Rock wash.

See Section 5-A "Preferred Alternative" in this project report for a list of the design features of State Route 138 widening project.

B. Regional and System Planning

The Route Concept Report, dated March 1991, describes the Department's basic approach to the development of State Route 138 over a 20-year planning period. This report indicates a need for an additional lane in each direction, from Avenue T to the Junction with State Route 18 to accommodate future traffic demand. See Attachment F "Route Concept Report."

State Route 138 is listed under the California National Highway System. It is also listed in the 1998 Interregional Road System Strategic Plan. The Strategic Plan provides for a dependable and reasonable Level of Service for the interregional movement of people and goods.

State Route 138 is also part of the truck network of highways. This network is known as the State Highway System (SHS). This ensures oversized vehicles on the state highway system would be safely routed. See Attachment G "Truck Network on California State Highways and Route Information Map for Oversize and Overweight Vehicles" dated January 1998.

This project as identified in the Preferred Alternative is included in the Los Angeles County-Metropolitan Transit Authority (LACMTA) 20 year Long Range Plan, and is strongly supported



by the City of Palmdale and the County of Los Angeles. Relieving traffic congestion will save energy, improve safety, increase circulation, improve air quality, and improve regional community access. The upgrading of this regional facility linking Los Angeles with San Bernardino County is crucial to provide safe and efficient regional transportation to this rapidly growing region.

C. Traffic

A traffic study was completed on June 5, 2000, with revisions dated June 12, 2000, that covers data from 1995 to the present. See Attachment H "Traffic Study Report".

The traffic study includes the current traffic data, as well as the forecasted traffic data based on the proposed widening of State Route 138. A summary of the study of the current conditions versus the future conditions is as follows.

a) Existing Conditions

The Traffic Study Report indicates that the current (year 1998) Average Daily Traffic (ADT) varies from 17,500 vehicles per day in the vicinity of Avenue T to 10,600 vehicles per day in the vicinity of the Junction with State Route 18. The existing traffic data was used to analyze the current Level of Service (LOS) as well.

The concept of LOS is a qualitative measure of traffic flow factors, which affect the driver's perception of the roadway conditions. Some factors include grade (level, slope, etc), lane width, roadway separation (divided, undivided), lateral clearance, travel time, speed, capacity utilization and interruption. Level of Service is rated LOS "A" through LOS "F" with LOS "A" representing the best operating conditions, while LOS "F" representing the worst. The LOS is typically measured based on the ratio of traffic volume to the design capacity of the facility.

The study performed between major intersections along Route 138, reveals that the current Level of Service varies from LOS "E" in the vicinity of Avenue T to LOS "D" in the vicinity of the Junction with State Route 18. The following table indicates the Level of Service Analysis calculated for the existing two-lane highway condition:

Table 1, Level of Service (Two Lane Highway)

Location	LOS 1998
Avenue T to Littlerock Creek	E
Littlerock Creek to 96th Street East	E
96th Street East to Longview Road	D
Longview Road to 165th Street East	D
165th Street East to Junction with State Route 18	D

Source: Caltrans Traffic Study Revision dated June 12, 2000



The existing peak hour traffic volumes, for both directions, range from 1,600 vehicles (east of Avenue T) to 960 vehicles (west of Junction with State Route 18). The study shows that during the morning peak hour (8:00 AM-9:00 AM), the westbound traffic volume on State Route 138 is approximately equal to the eastbound volume. However, the afternoon peak period (4:00 PM-

6:00 PM) shows a directional split (55% - 45%), indicating that eastbound traffic increases during the afternoon peak hours. Truck traffic volumes, along State Route 138, vary between 11% and 15% of the ADT.

There are only two signalized intersections within the project limits. The first one is located at Avenue T, in the city of Palmdale and the second one is located at 82nd Street East, in the community of Littlerock. There are many other intersections along State Route 138 and they are not signalized.

A speed zone study was completed in 1996 to obtain speed measurements along State Route 138. The speed zone study was mainly based on the following factors:

- ◆ Highway, traffic and roadside conditions not readily apparent to the driver.
- ◆ Accident Records.
- ◆ Prevailing speeds as determined by traffic engineering measurements. Two characteristics developed from the prevailing speed data are the critical (85th percentile) speed, and the pace speed.
 - The critical speed is the speed at or below which 85% of the traffic is moving.
 - The pace speed is the 16 kph (10 mph) range of speed containing the largest number of speed observations.

The speed zone study indicated critical 85% percentile speeds, within the project limits, varying from developed areas (urban) to undeveloped areas (rural). In the community of Littlerock it was observed that the speed fluctuates between 72 kph and 97 kph (45 mph and 60 mph). In the community of Pearblossom the speed was found to fluctuate between 80 kph and 89 kph (50 mph and 55 mph). Between Llano and Junction Route 18, the speeds were observed to fluctuate between 105 kph and 113 kph (65 mph and 70 mph).

b) Future Conditions (With Project)

Based on current growth trends, it is anticipated that population, housing and employment, within the communities along State Route 138, will increase significantly between the years 1998 and 2025.

The projected traffic analysis, to determine the impacts of the proposed widening project, was conducted for the year 2024 by the Los Angeles Regional Transportation Study (LARTS). Their



study is based on a year model (1998) used to formulate traffic projection. The LARTS model is based on demographic data provided by the Southern California Association of Governments (SCAG).

The following table shows the LOS results:

Table 2, Level of Service (Two Lane Highway and Four Lane Highway)

Location	LOS 2024 With No Improvements	LOS 2024 With Improvements
Type of Facility	Two Lane Highway	Four Lane Highway
Avenue T to Littlerock Creek	F	B
Littlerock Creek to 96th Street East	E	B
96th Street East to Longview Road	E	B
Longview Road to 165th Street East	F	B
165th Street East to Junction with State Route 18	F	B

Source: Caltrans Traffic Study Revision dated June 12, 2000

According to the Traffic Study, the Level of Service analysis for the projected traffic volume in the year 2024, with no road improvements, would be LOS "E". These roadway conditions indicate that the projected traffic volumes will exceed the actual capacity of the highway. In contrast, the analysis shows that, for the same amount of projected traffic, after the proposed improvements to make State Highway Route 138 a four-lane highway are completed, the projected Level of Service would vary between LOS "A" and LOS "B". It is expected that the proposed widening of Highway 138 would accommodate future increase in traffic demand.

c) Existing Accident Rates

The Traffic Study Report presented the most recent four-year (January 1, 1995 to December 12, 1999) composite accident rates for State Route 138. The information is derived from the Traffic Accident Surveillance and Analysis System (TASAS) Table B.

The Caltrans 2-3 Lane Cross-Centerline Accident-Monitoring Program has identified State Route 138 as having a substantial number of cross-centerline fatal accidents. The Accident analysis indicates that for the period of 1994 to 1998, there were 10 fatalities related to cross-centerline accidents. The accidents associated with wet pavement conditions are relatively high, about 9 percent of the total accident are attributed to wet conditions. See Attachment H, "Traffic Study Report" (Table B).



It is expected that the number of accidents will be reduced because of the added lanes, traffic circulation improvements, and sight distance improvements. Improvements to the overall

operation of the facility will allow better distribution of the traffic stream composed of trucks, recreational vehicles and automobiles. It is also expected that modifying the existing drainage conditions would significantly reduce accidents caused by wet conditions. The existing system would be replaced with an underground system sized to carry most of the drainage flows from one side of the roadway to the other. With respect to the roadway users, it will be expected that the roadway will remain opened to traffic during most storm events.

The total Accident Rates are as follows:

Table 3, Total Accident Rates

Location Kilo post	Dates Year	Accident Rate ACC/MVM*					
		Actual			State Average		
		Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
82.736 to 111.618	1/1/95 to 12/31/99	0.049	0.42	0.81	0.038	0.53	1.02

Source: Caltrans Traffic Study Report dated June 5, 2000

* ACC/MVM means the rate of accident per million vehicle miles (MVM), where MVM represents the million vehicle miles of travel on the segment being studied.

Table 4, Total Accidents/Significance

Location Kilo post	Dates Year	Number of Accidents/Significance			
		Vehicles	Fatal + Injury	Wet	Dark
82.736 to 111.618	1/1/95 to 12/31/99	263	180	25	113

Source: Caltrans Traffic Study Report dated June 5, 2000



5. ALTERNATIVES

A. Preferred Alternative:

This alternative proposes to widen State Route 138 from Avenue T to the Junction with State Route 18 from 2 to 4 lanes. It would improve the safety and operational characteristics of the highway. Adding a lane in both directions would add capacity to the highway and prevent the

level of service from deteriorating to an uncontrollable level. In addition, this alternative would eliminate the need for fast moving vehicles to cross over the centerline to pass slow-moving traffic therefore reducing the number of cross-centerline accidents.

During and after the public hearing, the majority of the responses received were in favor of the preferred alternative.

(a) Proposed Project Features

The proposed engineering features for the preferred alternative are described below:

- ◆ In general, the proposed typical cross section will consist of four (4) 3.6 meter lanes, a 4.8 meter striped median, and 2.4 meter shoulders in the rural area; and for the urban area, four (4) 3.6 meter lanes, a 4.8 meter striped median. A 2.4 meter-wide sidewalk with curb and gutter will be constructed on both sides in the developed area of Littlerock and on the south side in the developed area of Pearblossom.
- ◆ Left turn lanes will be provided at public and private intersections along State Route 138 and a two-way left turn lane will be striped within the 4.8-meter median through the urban areas.
- ◆ The structural section consists of 450 mm of Asphalt Concrete (Type B) and 105 mm of Aggregate Base (Class 3). The cross slope for the lanes will be at 2% and 5% for the shoulders. The side slopes will be graded at 1V:6H or flatter, where feasible, to provide adequate clear recovery areas. See Attachment E "Proposed Typical Sections".
- ◆ The five curves at or near 72nd Street East; 116th Street East; 175th Street East; Avenue W, and Junction with State Route 18 will be realigned in order to meet the current design standards. The design speed for these curves would be 110 km/h. The proposed horizontal and vertical sight distances would be improved.
- ◆ The existing Littlerock Creek Bridge (Bridge No.53-0303L) will be removed and the existing Littlerock Creek Bridge (Bridge No.53-0303R) will be widened to the north side to accommodate the proposed width and to eliminate the opening in the median separating the two bridges. (See Attachment R "Littlerock Wash Bridge Study").

Pearblossom Highway from Avenue T to Junction with State Route 18

- ◆ The existing Littlerock (California Aqueduct) Bridge (Bridge No.53-2098) will be widened on both sides to accommodate the proposed width. (See Attachment S " Littlerock Bridge over the California Aqueduct Study")
- ◆ A bridge for equestrians on 96th Street East adjacent to an existing bridge over the aqueduct will be constructed. The proposed width is 3.6 m. (See Attachment Q "Existing and Proposed 96th Street East Trail and Equestrian Trail Bridge Study")
- ◆ The two existing Big Rock Wash Bridges (Bridge No.53-0313 and No. 53-0314) will be replaced with a single structure. (See Attachment T " Big Rock Wash Bridge Study").
- ◆ The weather sensors elements embedded in the pavement surface at the Big Rock wash will be replaced.
- ◆ The weather station, which monitors the pavement temperature, located on the southwest end of the Big Rock Wash Bridge, Bridge No. 53-0313 will be relocated.
- ◆ The highway will be realigned approximately 3.6 meters to the north to avoid impacting the commercial areas on the south side of the highway in the community of Pearblossom from 121st Street East to Longview Road.
- ◆ The highway profile will be raised approximately 2 meters to accommodate the drainage systems between 2 km west of the Big Rock Wash Bridges and the Junction with State Route 18.
- ◆ The highway will be realigned approximately 25 meters to the south to avoid impacting the Hotel at the Llano Del Rio Colony ruins and to accommodate the proposed 900 mm x 600 mm corrugated metal pipe arches.
- ◆ The junction of State Route 138 and State Route 18 will be modified by adding a direct connector from eastbound State Route 138 to eastbound State Route 18. The connector consists of one 3.6-meter lane and one 2.4-meter shoulder on each side of the traveled way. (See Attachment U "Junction of State Route 138/18 Study").

(b) Non-Standard Mandatory and Advisory Design Features

For the preferred alternative most of the roadway elements are being designed to a minimum of 110 km/hour. However, there may be a need to request an exception to the mandatory design standards. The exception is because of the lack of corner sight distance at an alley near the Alpine Elementary School. Further engineering studies will be required at this location, and at other public and private driveways along the highway. At this time, all of the mandatory and advisory standards are met.



Any design exceptions required would be identified and approval will be obtained during the PS&E phase of the project.

(c) Interim Features

Listed below are minor contract projects, which are presently in the design phase and are scheduled for construction in the following fiscal year, provided sufficient funds are available.

Fiscal Year 2000/2001:

- ◆ Raise the roadway profile approaching and departing the Big Rock Wash Bridges.

Fiscal Year 2001/2002:

- ◆ Provide a left-turn lane in both directions at 96th Street East.
- ◆ Provide a right-turn lane for eastbound traffic at 165th Street East.
- ◆ Provide a left-turn lane for westbound traffic at 175th Street East.

Two other minor projects were constructed within the last year and they are as follow:

- ◆ Provide a rumble strip in the median from 1.6 km west of Big Rock Wash bridges to 0.5 km east of Avenue W. This rumble strip project is a demonstration project.
- ◆ Install a safety lighting at the intersection of Avenue W.

These minor projects were developed as interim projects to address the safety concerns identified by the Highway 138 Safety Task Force.

(d) Park and Ride Facilities

Park and Ride (P&R) facilities are parking lots located adjacent to the highway that are provided for public transportation for commuters to carpool.

Currently, there are two Park and Ride facilities used as staging areas for the commuters in the Antelope Valley Region. These lots are situated along State Route 14. One of the lots is located in the City of Palmdale, at the intersection of Avenue S and Geiger Avenue, and the second one is located in the City of Lancaster, at 1601 West Avenue K.

These Park and Ride facilities serve the neighborhood commuters from these cities that use public transportation to travel to destinations in Los Angeles County and San Bernardino County. The existing P&R facilities accommodate the existing commuter's demand. This project does not propose to construct new Park and Ride facilities. The decision not to build new facilities was based on the following:

- ◆ The improvements to the highway do not propose to build express lanes, High Occupancy Vehicles (HOV) lanes or other incentives for transit use and carpooling.



- ◆ There are not enough transit transfer services. This can be seen on the low operating frequency of the bus service in the area.
- ◆ Currently, there are no rail lines or commuter train services along State Route 138. If in the future commuter rail lines are brought to the area, the need for park and ride facilities should be re-evaluated and the construction of these facilities should be associated with the commuter rail project.
- ◆ Development of park and ride facilities should be in cooperation and coordination with regional and local agencies. At the present time, there are no agencies interested in funding park and ride facilities in this project.
- ◆ Although park and ride facilities could also be found in rural areas, congested commute corridors in urban areas offer maximum benefits. This segment of Route 138 traverses a rural area with a scarce population. The low number of potential long distance commuters does not justify building a new park and ride facility.
- ◆ Park and ride facilities are designed with community support. The local residents have not expressed interest in building or increasing new park and ride facilities in the region.
- ◆ The existing park and ride facilities in the region should not be increased until higher demand or potential for higher demand is determined.

(e) Utility and Other Owner Involvement

Existing utilities will be impacted by the widening project. These impacts will require relocation of utility lines located within or along the proposed right-of-way. See Attachment J "Right of Way Data Sheet".

The following utilities were found to be in conflict with the proposed improvements:

- ◆ Edison Company - power poles and overhead lines.
- ◆ General Telephone & Electric Company - poles and overhead lines.
- ◆ Southern California Gas Company – underground gas lines.
- ◆ Pacific Bell – underground cables.
- ◆ Los Angeles County Water Works District – underground water lines.
- ◆ Littlerock Irrigation District – underground water lines.
- ◆ MCI – underground lines.

As mentioned in Section 1, titled, "Introduction," there are five separate projects that comprise the widening of Route 138. The Right of Way utility relocation cost pertaining to each one of the projects are as follows: See Attachment J "Right of Way Data Sheet"

◆ EA 127200	Utility R/W Cost = \$7,950,987
◆ EA 104830	Utility R/W Cost = \$3,127,200
◆ EA 188410	Utility R/W Cost = \$ 143,600
◆ EA 188420	Utility R/W Cost = \$ 701,660
◆ EA 188430	Utility R/W Cost = \$ 390,000

(f) Highway Planting

Any vegetation that is removed will be replaced in accordance with Caltrans policy. The Caltrans Environmental Planning, Natural Science Unit and the Landscape Architecture Unit will prepare a revegetation plan and their recommendations will be incorporated in the final PS&E package.

(g) Erosion Control

Erosion control will be applied during and after construction where required to protect the transportation facility and to meet water quality discharge requirements set forth by the resource agencies. An erosion control plan and the applicable specifications will be incorporated in the final PS&E package.

(h) Noise Barriers

According to the Physical Environmental Report dated February 1998, noise mitigation is not considered feasible and it is not recommended for this project since residences abutting the highway have openings for driveways and walkways. It is anticipated that the noise will travel through these openings.

(i) Non-Motorized and Pedestrian Features

As indicated in the Traffic Study dated June 5, 2000 there are no existing or proposed bike paths along State Route 138 within the project limits. For this reason, provisions for a bike lane are not recommended.

For the Preferred Alternative, 2.4-meter wide sidewalks will be constructed on both sides of the highway between 72nd Street East and 89th Street East in Littlerock, and on the south side of the highway between 121st Street East and Longview Road in Pearblossom.

At the intersections of 77th Street East, 80th Street East, and 87th Street East in the community of Littlerock, a 2.4 m wide x 6.6 m long pedestrian refuge island will be constructed in the median. It is also proposed to construct the intersections with a different surface texture. This contrast in surface texture treatment will provide a rumble effect, which would alert the drivers that they are entering a different condition area.



Conceptual approval has been received to construct these raised curb facilities. Formal Headquarters approval will be pursued during the PS&E phase of the project.

(j) Needed Roadway Rehabilitation and Upgrading

A preliminary evaluation of the existing pavement was also made. An Asphalt Concrete Pavement Deflection Study Report, dated March 10, 1998, indicates that the existing asphalt concrete pavement within the project limits is poor and warrants rehabilitation. It was recommended by Engineering Service Center, Office of Materials Engineering and Testing Services to cold plane the existing pavement from 30 mm to 105 mm and to repair any localized failed areas that still exist within the pavement and to seal all pavement cracks wider than 5 mm.

A Materials Report is required for the proposed widening. A rehabilitation strategy based on the Traffic Index for the widening and deflection studies shall also be part of the Materials Report.

(k) Cost Estimates

See Section 8, titled "Programming" of this report for the project cost estimates.

(l) Right of Way Data

See Section 6D, titled "Right of Way Issues" of this report for discussions of the right of way subject.

B. Rejected Alternatives

- a) **No Build Alternative** – This alternative has been rejected since it would not improve the operational and safety characteristics and would be inconsistent with local and regional transportation planning which has intended to improve this highway.

- b) **Other Studies Rejected** – There are several design variations at three different locations of the highway that were studied and rejected. These three locations are in Littlerock, at Pearblossom, and at the Llano ruins.

In the community of Littlerock, two design variations were considered. These two design variations proposed to bypass the town of Littlerock by realigning the highway a substantial distance to the south of the existing alignment. One of the design variations is the same as the Preferred Alternative, except that near 72nd Street East the new alignment would shift south, which then continues along Avenue V and rejoins the highway at the intersection of Avenue V and Pearblossom Highway.



The other design variation is the same as the Preferred Alternative, except that near 72nd Street East the new alignment would shift south, which then continues along Avenue V. As the alignment approaches near 82nd Street East, it will then continue along Fort Tejon Road and rejoins the highway at the intersection of 116th Street East and Pearblossom Highway. These two design variations were rejected because of the following reasons:

- ◆ Business owners, who attended several informational meetings in Littlerock, were not in favor of the design proposals because their businesses would be impacted.
- ◆ Major Los Angeles Department of Water and Power transmission towers and high voltage overhead lines would need to be relocated at an extremely high cost. Because of the number of towers located along the proposed alignments, the relocation time, and the actual cost may be an impeding factor to the project delivery.
- ◆ Two superstructure bridges would need to be constructed with one spanning over the Littlerock Wash and the other over the California Aqueduct. An extremely high cost would most likely incur if this proposal were implemented.

In the community of Pearblossom, the design variation proposed to widen along the existing alignment of the highway on both sides through the town between 121st Street East and Longview Road. The reason why this design variation was rejected is as follows:

- ◆ Since most of the businesses and residential units are located on the south side of the highway and only three businesses are located on the north side of the highway, the community of Pearblossom would be greatly impacted by the widening on both sides of the highway.

In Llano, three design variations at the Llano Del Rio Colony ruins were studied. The Llano Del Rio Colony ruins are considered a historic site and by law, Caltrans is required to evaluate avoidance alternative solutions and to select the alternative that causes the least environmental impact.

One design variation proposed to widen along the highway on both sides. This variation was rejected because it would impact the ruins of the Llano Hotel located on the north side of the highway.

The second design variation proposed to realign the highway approximately 120 m to the south to avoid impacting the ruins, and to raise the profile approximately 5 m in order to accommodate a drainage system with 2.4 m x 2.4 m reinforced concrete box culverts. The shift in the alignment would begin just east of 165th Street East and join the existing State Route 138 west of 175th Street East. This variation was rejected because according to Caltrans' historians and archeologist, this proposal would have a significant visual impact on the Llano Del Rio site. It was explained that if a person stands on the south side of the highway, this person would not be able to see the hotel ruins because of the raised highway profile.



The third design variation proposed to widen the highway on the south side and the proposed profile would be at grade. This variation was also rejected because the drainage issue would not be accommodated.

6. CONSIDERATIONS REQUIRING DISCUSSION

A. Hazardous Waste

Results of an Initial Site Assessment (ISA) dated January 27, 1998 conducted for this project revealed the existence of nine (9) potential hazardous material sites located along Route 138. See Attachment L "Initial Site Assessment". This ISA was prepared for Caltrans by the consultant: Professional Service Industries, Inc (PSI). Each of the nine locations will warrant additional investigation to properly determine the likelihood of encountering contaminated soil, underground storage tanks, and/or above ground storage tanks. The potential sites of concern include:

- ◆ Concrete and metal piping remains located on the southwest corner of the Point of Origin (Four Points). Property can be found in Assessor's Map No. 3051-023-012 and No. 3051-023-020.
- ◆ Valco Transmission, 7826 Pearblossom Highway. Property can be found in Assessor's Map No. 3050-002-012 and No. 3050-002-013.
- ◆ C-Bar-B Plaza (Littlerock Liquor, Gas, and Market), 8062 Pearblossom Highway. Property can be found in Assessor's Map No. 3049-029-048 and No. 3049-029-049.
- ◆ Black gold Service Station No. 147, 8157 Pearblossom Highway. Property can be found in Assessor's Map No. 3049-020-019.
- ◆ Pacific Bell Facility, 9550 Pearblossom Highway. Property can be found in Assessor's Map No. 3046-024-800.
- ◆ Jerry's Minute Mart, 12515 Pearblossom Highway. Property can be found in Assessor's Map No. 3038-022-024.
- ◆ Kwik Tune-Lube-And-Oil, 13100 Pearblossom Highway. Property can be found in Assessor's Map No. 3037-008-013.
- ◆ Buchanon Ent-Union 76 (Jack's Gas and Mini-Mart), 17326 Pearblossom Highway. Property can be found in Assessor's Map No. 3036-023-070.
- ◆ Unidentified residential property located approximately 26 km (16 miles) east of the Point of Origin. Property can be found in Assessor's Map No. 3083-010-022.



B. Value Analysis

A formal Value Analysis (VA) study using the eight phases of the Value Analysis Job Plan will be conducted for the individual design projects during the design phase.

C. Resource Conservation

The existing Asphalt Concrete (AC) to be removed would be incorporated into the new pavement structural section of the proposed project. The traffic signal at 82nd Street East along with the existing metal beam guardrail (MBGR) found along the roadway will be salvaged for future use. The proposed project intends to maximize the use of the existing hardware items as well. This can be achieved by relocating the existing signs. The signs identified for removal will be available for recycling.

D. Right of Way Issues

a) Right of Way Requirements

The right of way (R/W) requirements for the Preferred Alternative as described in Section 5 under "Alternatives" are as follows:

Preferred Alternative:

- ◆ Proposed R/W Limits
 - In Littlerock, the right of way limits are 15.85 m on the north and on the south side of the centerline through town. In the undeveloped areas, the right of way on north side ranges from 24.38 m to 30.66 m while the south side ranges from 24.38 m to 30.48 m.
 - In Pearblossom, the right of way limits range from 18.29 m to 45.72 m on the north side and from 15.85 m to 16.17 m on the south side through town. In the undeveloped areas, the north side ranges from 24.38 m to 57.92 m while the south side ranges from 24.38 m to 42.67 m.
 - In Llano, the area is mostly undeveloped. The right of way width ranges from 54.86 m to 67.06 m on the north side and 42.67 m on the south side of the centerline.
- ◆ There are various locations that would require raising the roadway profile, which will require right of way widths ranging from 24.38 m to 67.06 m on the north and from 24.38 to 42.67 m on the south side of the proposed centerline.
- ◆ The segment near the Llano ruins will require right of way widths of 34.00 m on both the north and on the south side of the proposed centerline.



- ◆ Temporary Construction Easements (TCE) will be required to match the new grades with the existing driveway elevations. The exact number of easements will be determined during the design phase. It is anticipated that the easements will be 3 m wide.

As mentioned in Section 1, titled, "Introduction," there are five separate projects that comprise the widening of State Route 138. The Right of Way acquisition cost pertaining to each one of the projects are as follows: See Attachment J "Right of Way Data Sheet".

◆ EA 127200	R/W Cost = \$4,454,332
◆ EA 104830	R/W Cost = \$1,010,395
◆ EA 188410	R/W Cost = \$ 828,058
◆ EA 188420	R/W Cost = \$ 629,866
◆ EA 188430	R/W Cost = \$ 600,064

b) Relocation Impact Study

A Draft Relocation Impact Report dated August 5, 1998 describes the plan for relocating residential and commercial properties impacted by the widening of State Route 138. Most of the displacement impact will be in the community of Littlerock.

The draft relocation impact study concluded that there are adequate sites for relocation of businesses within the immediate vicinity. Under consideration for absorbing the displacements are the communities of Littlerock, Pearblossom, Llano, Palmdale, and Lancaster. The residential displacement was found to be minimal and would have no significant impact in finding replacement properties within the area. The State's relocation program was reported to be adequate to successfully relocate all displacements.

The number of displacements and relocation impacts is fully discussed in the attached Final EIR/EA Report. See Attachment V "Final Environmental Impact Report/Environmental Assessment". A Final Relocation Impact Study is currently under study for the Preferred Alternative for the final number of displacements and relocation impacts, it is expected that the outcome of the final study would reflect similar data as the draft study.

b) Airspace Lease Areas

No airspace lease areas are planned or exist within the project limits.

c) Other Right of Way Issues

- ◆ Setback
 - At some locations in the business area in Littlerock, the proposed R/W will be located near or at the face of the existing buildings. Per discussions with Los Angeles County Regional Planning department, there is no building setback



requirement (minimum width) in the community of Littlerock for the areas presently zoned as business areas. Therefore, an exception (or variance) is not required at those existing buildings where the setback is either being reduced or eliminated by the proposed widening project.

- The right of way limits proposed in the communities of Pearblossom and Llano will not have an impact on the building setback.
- ◆ Additional Right of Way
Pending further detailed studies, additional right of way may be required as part of the environmental mitigations, or for hazardous waste disposal, and/or for drainage requirements.

E. Environmental Issues

See Attachment V " Final Environmental Impact Report/Environmental Assessment (FEIR/EA)". Other Environmental Issues studied are listed below. See the Final Environmental Impact Report/Environmental Assessment (FEIR/EA) and designated sections in this project report for further discussion:

a) Alpine Elementary School

Numerous meetings with the school administration and board members of the Keppel Union School District involved discussion on how to provide a safe loading and unloading area for the students when the widening of State Route 138 is in place. The agreement reached was to relocate the loading and unloading area to the back of the school. For details of the relocation, see Section 7 K titled, "Alpine Elementary School."

b) Equestrian Trails

Detailed studies were conducted and engineering evaluations have been made on how best to accommodate the crossing of equestrian traffic from one side of the highway to the other along the proposed State Route 138 widening. The results of these studies are discussed in Section 7 J titled, "Equestrian Trails" of this project report.

c) Hazardous Waste

An Initial Site Assessment Report dated January 27, 1998 has been prepared for the widening of State Route 138 from Avenue T to the State Route 18 Junction. The consultant firm of Professional Service Industries, Inc prepared this report. See excerpts of the report in Attachment L.



d) **Llano Del Rio Site and Archaeological Studies**

Existing in the Antelope Valley are sites once occupied in 1914 by a community known as the Llano Del Rio Colony. Some of the ruins of these sites are located along side the State Route 138 just east of 165th Street. Realignment of State Route 138 is proposed at this location to avoid impacting this historical site.

e) **Safety Task Force**

As mentioned in the section titled, "Community Interaction" of this project report, the State Route 138 Safety Task Force was formed to educate the public, and to study and make recommendations for safety improvement to the existing State Route 138. Numerous meetings have been held for group discussions and recommendations for temporary improvements to the highway prior to the widening of State Route 138. A significant number of recommendations have been already implemented and it is anticipated that the group's effort will continue until such time as the Route 138 is widened.

F. Air Quality Conformity

The State Route 138 improvements would have a beneficial impact on the air quality as a result of congestion reduction. The preferred alternative, discussed in Section 5 "Alternatives", is fully compatible with the design concept and scope described in the current Regional Transportation Plan (RTP) that further the goals of the Clean Air Act. The proposed project is also included in the current Federal Regional Transportation Improvement Program (FRTIP), which the Regional Agency has determined to conform to the State Implementation Plan (SIP) for air quality.

G. Title VI Considerations

Considerations and provisions made for access to transportation facilities as well as impacts are as follows:

- ◆ Curb ramps will be constructed at all the intersections that have proposed sidewalks within the project limits. The curb ramps designed will conform to the Americans with Disabilities Act (ADA) requirements and will provide adequate access for the safe and convenient movement of physically disabled persons.
- ◆ Raised median islands will be constructed at or near intersections, in urban areas, to serve as a refuge for pedestrians and disabled persons crossing the roadway. This feature will facilitate the movement of pedestrians from one side of the roadway to the other side since the highway will be widened from two lanes (12 m or 40 feet) to four lanes (31.7 m or 104 feet).

Conceptual approval has been received to construct these raised curb facilities. However, formal Headquarters approval will be pursued during the PS&E phase of the project.



- ◆ At unsignalized intersections, specifically at 77th Street East, 80th Street East, and 87th Street East in the town of Littlerock, will be constructed with a special pavement surface texture, which could include a different color and/or a riding surface. This type of pavement treatment provides a driver a sense of having to slow down as it travels through the towns.

Additional information regarding considerations and provisions for transportation facilities are discussed in the following sections of the Environmental Document:

- ◆ Socioeconomic Characteristics
- ◆ Growth Inducing
- ◆ Elderly or Specific Interest Groups, Housing and Employment
- ◆ Minority
- ◆ Community Facilities

7. OTHER CONSIDERATIONS

A. Public Hearing Process

A public hearing was held on October 30, 2000 at the Littlerock High School located at 10833 East Avenue R, Littlerock, CA 93543 to present the local communities the developed viable alternatives for public comments. An Open Forum Public Hearing map showing was held from 4:00 p.m. to 7:00 p.m. and the Formal Public Hearing was held from 7:00 p.m. to 9:00 p.m. to solicit public comment and record formal testimony.

As a result of the environmental document circulation and the public hearing process, there were some concerns raised by members of the affected communities, which required Caltrans to conduct additional studies. However, it should be noted that the majority of the comments received from the local agencies and the residents favored the project to widen State Route 138 as presented at the public hearing.

The main issues of concern raised at the hearing included:

- ◆ Some local citizens were concerned about the equestrian volumes. Caltrans had conducted equestrian counts on April 4, 2000. The data was analyzed and the results of the study revealed that the volumes were very low and that no special equestrian facilities would be required.
- ◆ The same group of individuals was concerned about crossing the highway once the facility was widened. They also the questioned the data Caltrans used in making their determination. The equestrian trail advocates were advised to provide additional information and data about the equestrian population in order to justify the need for the department to conduct additional studies.



- ◆ Another area of concern was the parking conditions if the project's preferred alternative is implemented. The preliminary parking studies have shown that the build alternative will eliminate the existing perpendicular parking stalls in front of the many of the businesses. In an effort to minimize this impact, mitigation measures will be included as part of the final striping plan. One of the proposed mitigation includes parallel parking in the downtown areas along the highway. This measure was presented at the public hearing as part of the preferred alternative. Caltrans is also currently working with the County of Los Angeles on the possibility of widening the cross streets to provide additional parking spaces near the intersection. The final mitigation measures for the proposed parking study would be finalized during the design phase of the project and then they would be incorporated in the final contract plans. At some of the businesses additional off street parking would be provided. The cost of these added spaces would be included as part of the right of way negotiations.

- ◆ The owner of the single-family home located at 5680 East Pearblossom Highway raised another concern. The owner does not want to move and the preliminary studies would require the taking of some of the existing improvements. The owner was informed that at this location the highway is already a four-lane facility with no further widening required. However, additional right of way would be required to provide adequate recovery area at the existing fixed objects, such as power poles, a water well, and others. In an effort to satisfy the owner's concerns the department agreed to conduct additional studies and to prepare detail plans to determine the exact impact.

At this location Caltrans is conducting two additional avoidance alternatives to see if we can avoid the need to take the property. The solutions will then be presented to the owner before making a final decision. The final decision, if different from the preferred alternative, will be discussed as part of a supplemental project report.

The two avoidance alternatives under study are:

- a) **Avoidance Alternative X:** Construct curb and gutter and a 2.4 m sidewalk and 3.6 m parking lane to join the existing edge of travel way. With this avoidance alternative, the property would be saved with minimum right of way partial take at the corner of State Route 138 and Cheseboro Road and the existing fixed objects such as power poles would be relocated within the state's right of way. This alternative may require a design exception because of the use of isolated curbs.

- b) **Avoidance Alternative Y:** Realign the highway 4.37 m to the north. This avoidance alternative would require that the limits of realignment be moved approximately 640 m west of Avenue T and end at approximately 460 m east of Cheseboro Road, which would completely avoid the property. However, it would involve acquiring additional right of way on the north side and would also require

Pearblossom Highway from Avenue T to Junction with State Route 18

additional roadway work. This alternative would also involve additional utility relocation. Furthermore, modifications of the intersections at Avenue T and Cheseboro Rd would also be required.

B. Route Matters

As part of the preferred alternative discussed in Section 5 "Alternatives", the highway widening proposes to add a direct connector at the Junction with State Route 18 for the eastbound State Route 138 to the eastbound State Route 18. The connector begins approximately 260 m east of 213th Street East, and then it continues with a bridge that spans approximately 100 m long over State Route 138 (approximately 300 m southeast of the 138/18 Junction). This connector then joins the eastbound State Route 18 (approximately 1300 m east of the 138/18 Junction). The overall length of the connector is 1683 m. A freeway agreement with any other local agencies will not be required since this connector will be part of the state's highway system.

C. Permits

Coordination with the following agencies will be required in the widening of Route 138 due to the possible impact on environmentally sensitive habitat areas. This guideline is identified in the "Statewide Interpretive Guidelines For Wetlands And Other Wet Environmentally Sensitive Habitat Areas" adopted by the California Coastal Commission, and in the Caltran's Project Development Procedure Manual (PDPM) 7th Edition dated July 1, 1999.

The potential permits include the following regulatory agencies:

- ◆ California Department of Fish and Game (CDFG) 1601 Permit.
- ◆ U. S. Army Corps of Engineers (USACE) 404 Permit.
- ◆ California Regional Water Quality Control Board (RWQCB) 401 Certification.
- ◆ United States Fish and Wildlife Services.
- ◆ State of California Department of Water Resources.

D. Agreements

It is anticipated that agreements will be entered between the State and the County of Los Angeles for the realignment of some of the existing minor cross streets. The cross streets involved are Longview Road and Avenue V-8. Longview Road on the north side of the highway is not on the same tangent alignment with the opposite side of the street on the south side of the highway. It is proposed to realign the north side of Longview Road slightly to the west. As for Avenue V-8, the distance to the next minor street (116th Street East) does not meet the current highway design standards for spacing between local street intersections. It is proposed to shift the intersection of Avenue V-8 and State Route 138 to the west. Other cooperative agreements for features such as street lighting will be further pursued during the design phase of the project. It is anticipated that the agreements will be executed with the County of Los Angeles.



Maintenance Agreements will be entered between the State and the County of Los Angeles for the maintenance of the local streets intersecting the highway. The agreement will also cover the maintenance of the existing and new drainage systems, which will be owned and/or maintained by the County.

Agreements will be entered between the State and Los Angeles County Department of Parks and Recreation for the realignment of the equestrian trail along 96th Street East.

Agreements will be entered between the State and the State Department of Water Resources for the widening of the Littlerock Bridge (California Aqueduct) and for the construction of a new bridge over the California Aqueduct on 96th Street East.

E. Involvement with a Navigable Waterway

There is no involvement with a Navigable Waterway within the limits of the State Route 138 widening project.

F. Transportation Management Plan (TMP) for Use During Construction

A Transportation Management Plan shall be prepared for each project in the final design stage where significant construction delays are anticipated.

The following stage construction features would be included during the construction of the widening project:

- ◆ Construction of the widening will be completed in two stages.
- ◆ Access to existing cross streets, businesses and homes will be maintained at all times.
- ◆ Construction staging does not require detours.
- ◆ Emergency vehicles such as fire truck, ambulances, and police vehicles will have access at all times.

Public Information will be provided to the communities that are directly affected by the construction of the project. The information will be available through the following sources:

- ◆ A project Web site will provide up to date information about project schedules, right of way, design issues local issues, construction information, etc.
- ◆ Press releases to all local media outlets, including newspapers, local cable access stations; local radio stations, etc. will be made available prior to any closures.



- ◆ Community meetings will be scheduled, as necessary, to maintain the community informed on the status of the project.

G. Stage Construction

This 29-kilometer (18 mile) widening project on State Route 138 is currently divided into five segments for construction. As shown on Attachment M "State Route 138 Improvement Projects", the five projects are identified as projects No. 4, 5, 6, 7 and 8 for project EA 127200, 108430, 188410, 188420 and 188430, respectively. There is a possibility that these projects may be combined or that the limits may be changed to facilitate construction.

In general, the widening project will be constructed in two stages. See Attachment N "Stage Construction". During Stage 1, construction will be performed on one side of the highway, while the traffic traverses the existing highway. During Stage 2, the traffic will be moved to the already completed portion of the highway while the other side is being constructed. Access to residents' houses, school, retail stores and other businesses fronting the highway will be maintained at all times. Temporary railing (Type K) will be used for this project where extensive earthwork is anticipated.

H. Accommodation of Oversize Loads

The widening of Route 138 from two lanes to four lanes will be designed to provide passage for vehicles of unrestricted height while moving in and out of the project limits. The connector from eastbound Route 138 to eastbound Route 18 will be designed to provide standard vertical clearance. At the existing overhead electrical lines near Avenue V-8 sufficient vertical clearance will be provided or maintained.

I. Graffiti Control

A graffiti-prone area is defined as an urban area in the Los Angeles County. Since the project limits of State Route 138 are located in a rural area surrounded by desert plains, it is concluded that the State Route 138 highway-widening project is not in a graffiti-prone area.

J. Equestrian Trails

There are multiple trail crossings used by equestrians and hikers along the State Route 138. In an effort to accommodate the existing trail users and their concerns, Caltrans will maintain these crossings as part of the highway-widening project.

A non-profit organization known as the Antelope Valley Trails, Recreation & Environmental Council (AVTREC) requested, through a letter dated October 6, 1998, that the trails be maintained after Caltrans improves State Route 138. See Attachment O "AVTREC Correspondence."

Pearblossom Highway from Avenue T to Junction with State Route 18

Caltrans has agreed to continue to monitor this intersection in the upcoming months to determine if the volumes increase sufficiently to warrant a traffic signal at 96th Street East.

b) 89th Street East Crossing

This crossing is located in the community of Littlerock. The project proposes to maintain the trail in its present condition as identified in the County of Los Angeles Department of Parks and Recreation master plan.

c) 165th Street East Crossing

This crossing is located in the community of Pearblossom. The project proposes to maintain the trail in its present condition as identified in the County of Los Angeles Department of Parks and Recreation master plan.

d) 121st Street Crossing

This trail travels north on the west side of 121st Street and then crosses the Route 138 highway. The project proposes to maintain the trail in its present condition as identified in the County of Los Angeles Department of Parks and Recreation master plan.

e) Largo Vista Street Crossing

This route travels north on the east side of Largo Vista Street and then across Route 138. The project proposes to maintain the trail in its present condition as identified in the County of Los Angeles Department of Parks and Recreation master plan.

f) Big Rock Creek Crossing

This trail crosses under the west side of Big Rock Wash Bridge No. 53-0313. A minimum of 3.1 m (10 feet) vertical clearance under the bridge will be maintained so riders can pass under the bridge. Due to restrictions of creek crossing during or after a storm, consideration has been made to use the existing 165th Street East Crossing as an alternative route, which is 1.15 km (0.68 miles) east of the bridge.

g) Littlerock Creek Crossing

This trail crosses under the east side of the bridge. A minimum of 3.1 m (10 feet) vertical clearance under the bridge will be maintained so riders can pass under the bridge.

Since the widening of State Route 138 from two lanes to four lanes will increase the crossing width for horses, an analysis to provide equestrian traffic signals was conducted, however, the results indicate that at this time the volumes are not sufficient to warrant signals.

K. Alpine Elementary School

Pearblossom Highway from Avenue T to Junction with State Route 18

The widening project on State Route 138 requires relocation of the existing bus loading and unloading area in front of the Alpine Elementary School to the back of the school.

The current bus stop is also used as a parking lot for night school and special events. Caltrans has developed in cooperation with the Keppel Union School District officials a new loading and unloading area, a traffic circulation plan and a parking plan. Caltrans and the school district have reached a preliminary agreement for the above-mentioned modifications. Through the right of way negotiations with the school, Caltrans will provide the school with the funds necessary to construct the agreed upon improvements.

The proposed bus loading and unloading area will be relocated directly to the east of the school's maintenance building. An additional lane will be created to accommodate the school buses, which leaves the other lane for the passenger vehicles only. A lot consisting of 58 parking spaces will be provided in the area just southeast of the main campus. It is also proposed to add more staff parking spaces to the alley east of 82nd Street East and to improve the circulation of the existing northeasterly parking lot. In addition, new landscaping and lighting will be placed in the new parking areas. See Attachment P "Alpine Elementary School Improvements" for the existing parking and proposed bus route and parking for the Alpine Elementary School and for correspondence with the school district.

8. PROGRAMMING

The length of the State Route 138 project between Avenue T to the Junction with State Route 18 is divided into five projects for programming, funding, and construction purposes. The five projects with assigned project expenditure authorization are: 127200, 104830, 188410, 188420, and 188430.

All five projects are proposed to be funded from the State program code HE-13, adding new lanes under the Inter-regional Transportation Improvement Program. They are all programmed through the State Transportation Improvement Program (STIP). Projects EA 127200 and 104830 are programmed for the 2002/2003 fiscal year and projects EA 188410, 188420, and 188430 are currently not programmed, but it is anticipated that they will be programmed for the 2003/2004 fiscal year.

See Attachment K "Preliminary Estimate of Cost" for the construction cost breakdown for each of the projects. It is noted that the data from the approved Supplemental Project Study Report dated October 7, 1991 was prorated to reflect the environmental cost. The office of environmental planning is currently conducting additional biological surveys to identify the amount of work required. Based on the survey results, consultation with the resource agencies will take place to determine the appropriate mitigation measures.

The following figures show the dollar amounts for the current project cost. The estimate includes right of way and construction costs. The right of way cost includes utility relocation costs and right of way acquisition. The table also shows the dollar amounts voted as part of the 1996 STIP.

**Table 5, Right of Way and Construction Costs**

Project Expenditure	Current Estimate		Current STIP Estimate	
	Right of Way Costs	Construction Costs	Right of Way Costs	Construction Costs
127200	12,405,319	47,400,000	10,900,000	20,243,000
104830	4,137,595	27,900,000	4,000,000	10,740,000
188410	971,658	10,600,000	Not Programmed	Not Programmed
188420	1,331,526	8,480,000	Not Programmed	Not Programmed
188430	990,064	27,200,000	Not Programmed	Not Programmed

Source: Caltrans Preliminary Estimate of Cost dated March 21, 2001 – Attachment K
Caltrans R/W Data Sheet dated March 26, 2001 – Attachment J

9. REVIEWS

Headquarters

This project was reviewed by Mr. J.D. Bamfield, Headquarters Project Development Coordinator on September 22, 2000 and he concurs with the proposed project.

This project was reviewed by Mr. Jerry Champa, Headquarters Traffic Reviewer on September 22, 2000 and he concurs with the proposed project.

10. PROJECT PERSONNEL

Winnie Wu Deguzman, P.E. _____ (213) 897-0127
Project Engineer
Office of Project Development B

Art Correa, P.E. _____ (213) 897-0122
Design Manager
Office of Project Development B

Peter Hsu _____ (213) 897-4281
Chief, Office of Project Development B

Abdi Saghafi _____ (213) 897-9810
Project Manager
Program and Project Management



Cathy Wright _____ (213) 897-0687
 Senior Environmental Planner
 Office of Environmental Planning

Daniel Dunn _____ (213) 897-4811
 Right of Way Reviewer
 Office of Right of Way

11. ATTACHMENTS

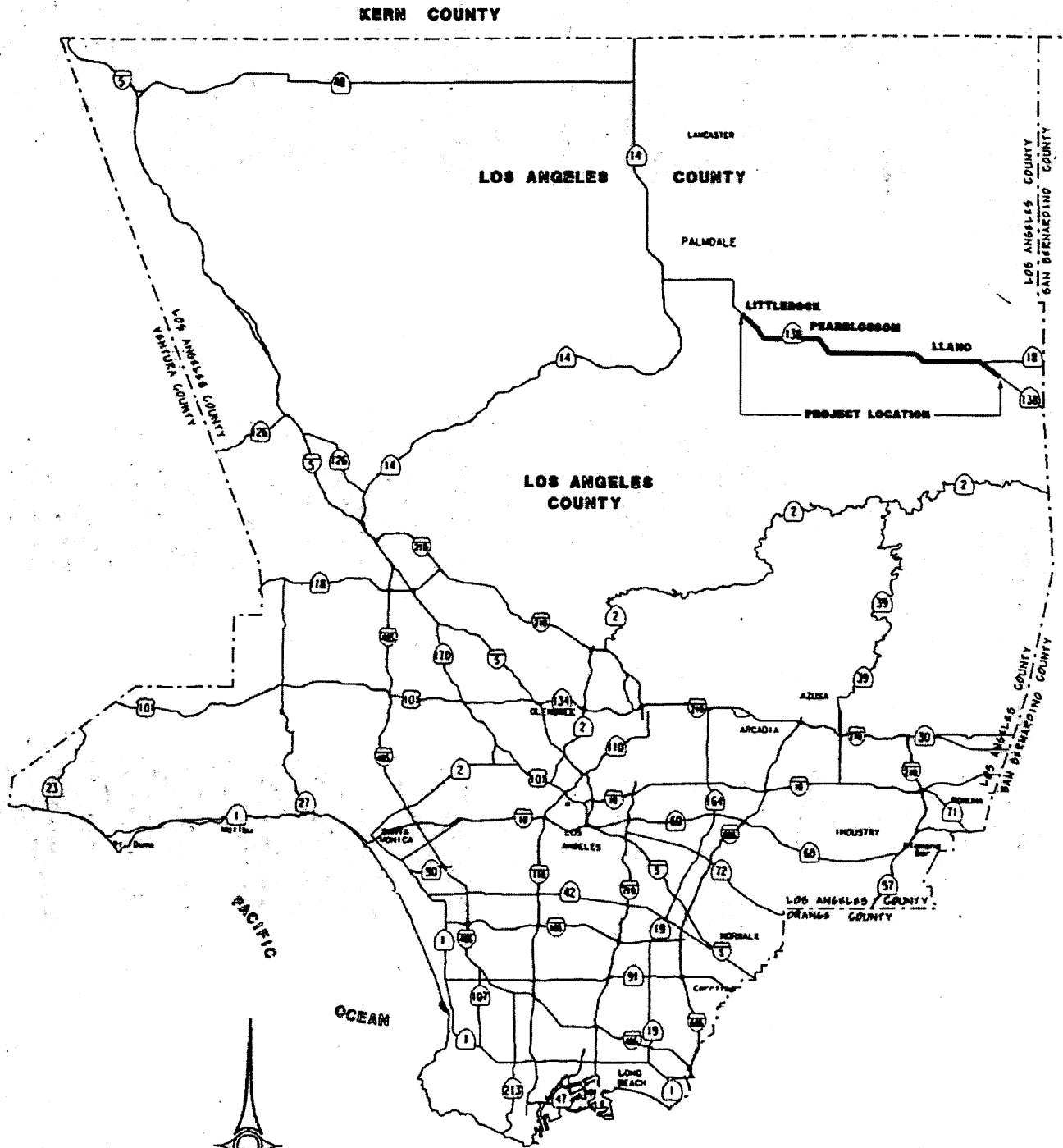
- A. Vicinity Map.
- B. Location Map.
- C. Route 138 Widening Project.
- D. Existing Typical Section.
- E. Proposed Typical Section.
- F. Route Concept Report dated March 1991.
- G. Truck Network on California State Highways and Route Information for Oversize and Overweight Vehicles dated January 1998.
- H. Traffic Study Report dated June 5, 2000 and Traffic Study Revision dated June 12, 2000, Updated Traffic Projections for year 2025 dated October 11, 2000.
- I. Location Hydraulics Study (excerpts) dated August 12, 1998.
- J. Right of Way Data Sheet dated March 26, 2001
- K. Preliminary Cost Estimate dated March 21, 2001.
- L. Initial Site Assessment (excerpts) dated January 27, 1998.
- M. Proposed State Route 138 Improvement Projects.
- N. Stage Construction.
- O. AVTREC Correspondence.
- P. Alpine Elementary School Improvements and correspondence.
- Q. Existing and Proposed 96th Street Equestrian Trail Bridge Planning Study dated July 3, 2000.
- R. Littlerock Wash Bridge Study.
- S. Littlerock Bridge over the California Aqueduct Study.
- T. Big Rock Wash Bridge Study.
- U. Junction of State Route 138/18 Study.
- V. Final Environmental Impact Report /Environmental Assessment

07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

VICINITY MAP







 0 5 10 15

 KILOMETERS

 CALTRANS

 DISTRICT OF

 HIGHWAY SYSTEM

VICINITY MAP

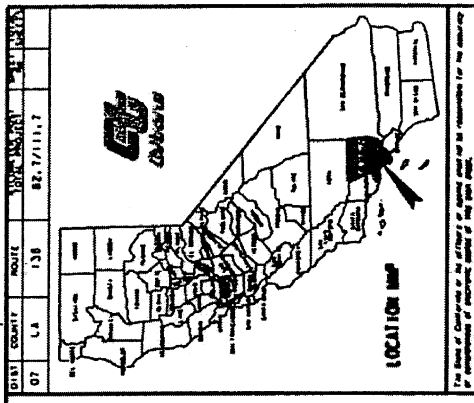
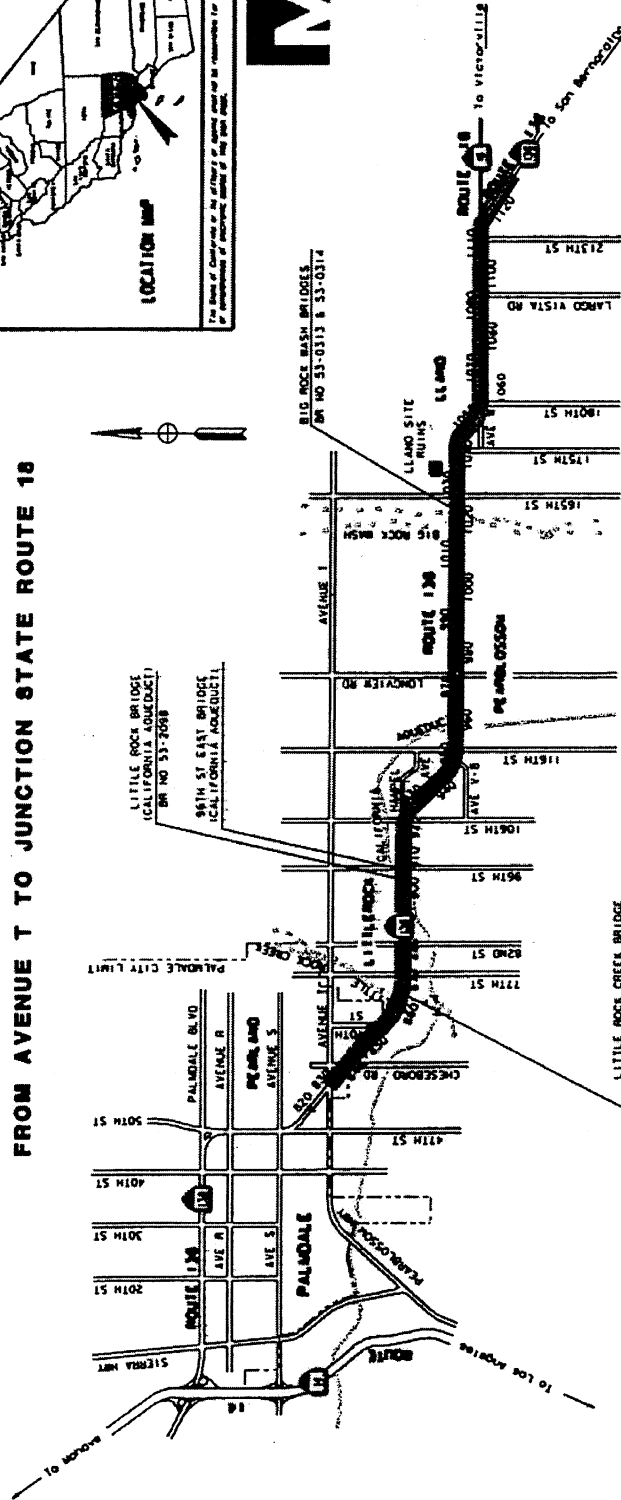
07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

LOCATION MAP



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY
 IN LOS ANGELES COUNTY
 IN PALMDALE, LITTLE ROCK, PEARLBLOSSOM, AND LLANO
 FROM AVENUE T TO JUNCTION STATE ROUTE 18



LOCATION MAP
 NO SCALE

07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

ROUTE 138 WIDENING PROJECT

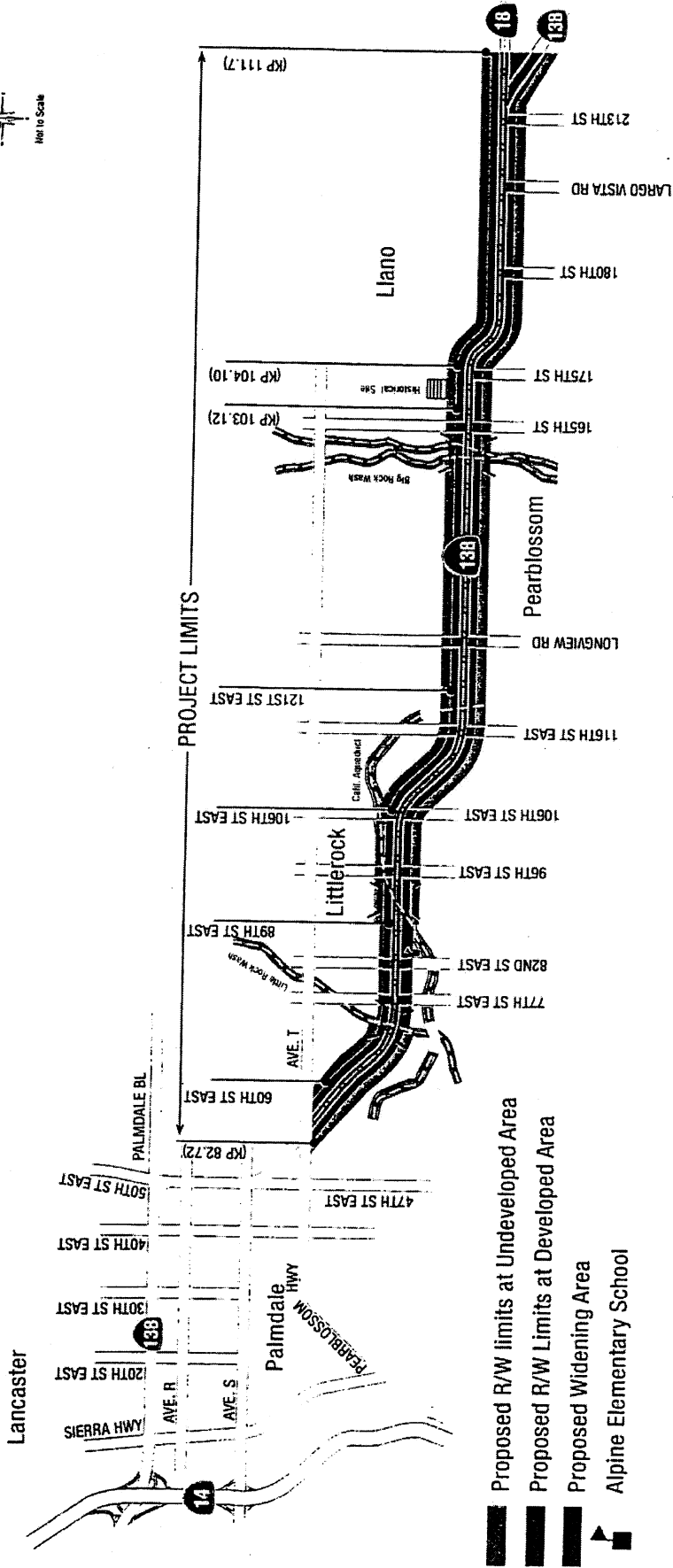
Final Project Report





ATTACHMENT C



ROUTE 138 WIDENING PROJECT

Avenue T to Route 18



-  Proposed R/W Limits at Undeveloped Area
-  Proposed R/W Limits at Developed Area
-  Proposed Widening Area
-  Alpine Elementary School

(Subject to Change)



07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

EXISTING TYPICAL SECTIONS

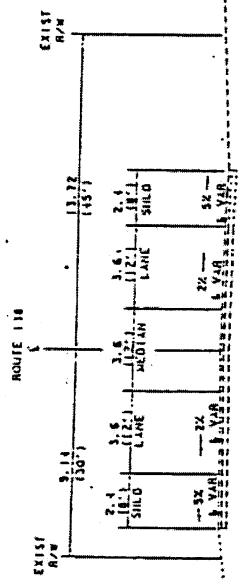


DATE	NO.	BY	REVISION
01	LA	131	12.7/11.6

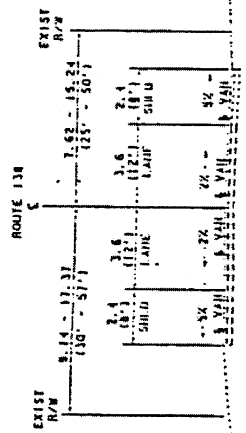
ARCHITECTS CIVIL ENGINEERS

ALIST IPROPRAL BITE

IN THE STATE OF CALIFORNIA



EXISTING
TYPICAL CROSS SECTION
FROM 72nd ST EAST TO 75th ST EAST
IN LITTLE ROCK



EXISTING
TYPICAL CROSS SECTION
FROM 75th ST EAST TO 80th ST EAST
IN LITTLE ROCK

EXISTING
TYPICAL
CROSS SECTION
1/80 SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

FOR REVISIONS PLEASE ORIGINAL SCALE IS 1/80

DATE 12/11/11

1/80

CU 01241

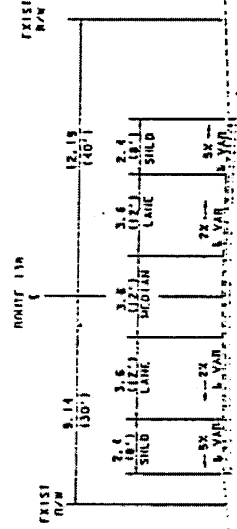
EA 121200

X-1

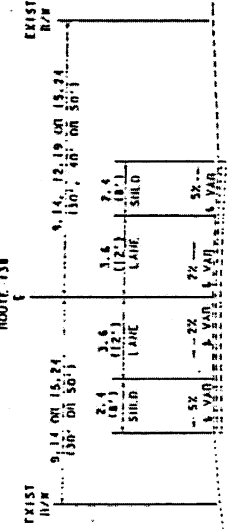
12-11-2011 11:30 AM

PROJECT NO.	LA 127200
SHEET NO.	138
DATE	07/17/11

REGISTERED CIVIL ENGINEER
 PEARBLOSSOM, CALIFORNIA
 2011



EXISTING CROSS SECTION
 IN PEARBLOSSOM
 FROM 121ST STREET EAST TO 126TH STREET EAST



EXISTING CROSS SECTION
 IN PEARBLOSSOM

EXISTING
 TYPICAL
 CROSS SECTION
 1/8" SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ON PEARBLOSSOM STREET

X-1

LA 127200

CU 01241

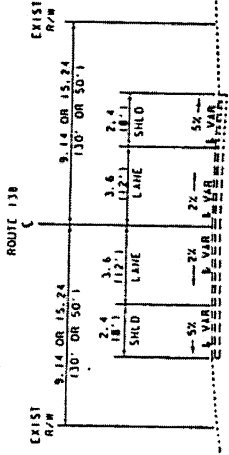
DATE	NO.	BY	REVISION
01	138	EA	22.7.11.13



REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

The State of California, Department of Transportation, hereby certifies that the above-named engineer is duly qualified to practice his profession in the State of California.



EXISTING
TYPICAL CROSS SECTION
IN LLANO

PRELIMINARY PLANS
SUBJECT TO CHANGE
JULY 01 2000

EXISTING
TYPICAL
CROSS SECTION
NO SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		PROJECT: ENCINER	
ST/Caltrans PROJECT DEVELOPMENT		DATE: _____	
DESIGNED BY	CHECKED BY	REVISOR	DATE REVISED

07-LA 138 82.7/111.7 (KP)

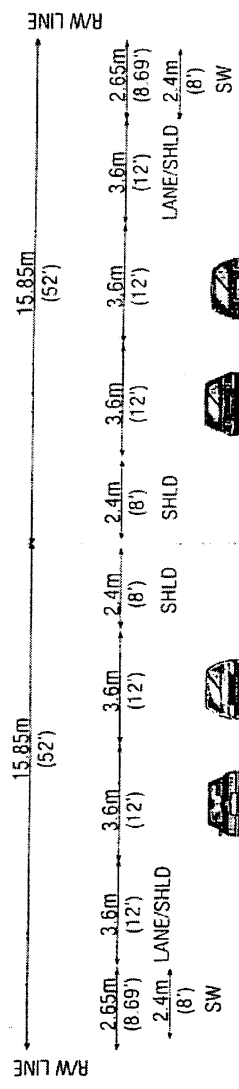
Pearblossom Highway from Avenue T to Junction with State Route 18

PROPOSED TYPICAL SECTION

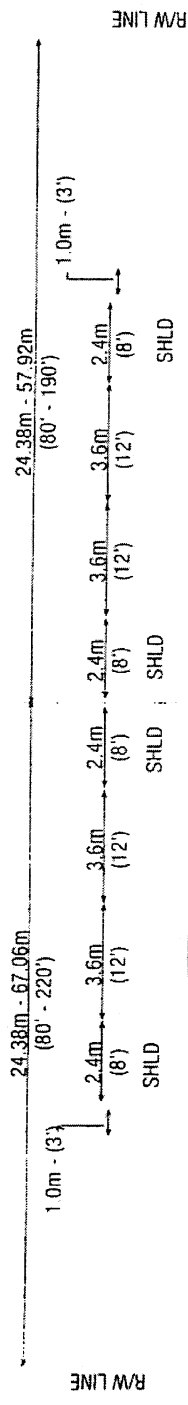




ROUTE 138 WIDENING PROJECT



Preliminary Typical Cross Section for Urban Area 2



Preliminary Typical Cross Section for Rural Area 1



07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

ROUTE CONCEPT REPORT

Final Project Report

ATTACHMENT F



ROUTE CONCEPT REPORT SUMMARY
ROUTE 138
07-LA-138 PM R0.00/74.97

<u>Segment</u>	<u>Postmile (PM) Limits</u>	<u>Concept Facility</u>	<u>Concept</u>
1	R0.00/R1.89 Rte 5 to End Fwy	4 lane freeway	A
2	R1.89 to 6.22 End Fwy/Rte 48	2 lane conv'l highway	C
3	6.22/43.4 Rte 48/Rte 14 (Break in Route)	Delete from system	
4	43.42/51.41 Rte 14 to Ave T	8 lane freeway	FO
5	51.41/69.3 Ave T to Rte 18	4 lane conv'l highway	C
6	69.3/74.97 Rte 18 to LA- San Bernardino County Line	2 lane conv'l highway	B

CONCEPT RATIONALE: The proposed improvement for segment 4 from a conventional highway to a freeway facility will be required to relieve the traffic congestion resulting from projected growth in the most urbanized area of Route 138 and to achieve a more acceptable Level of Service (LOS). There is already an adopted freeway route extending from Route 5 to the Los Angeles-San Bernardino County Line and alternative freeway alignments are currently under study. That part of the route constituted by segment 5 will require an additional conventional lane to accommodate future traffic demand. The 1990 State Transportation Program (STIP) has already allocated funding for passing lanes in this area.

ULTIMATE TRANSPORTATION CORRIDOR: Beyond the year 2010, it is envisioned that the north-south alignment of Route 138, in common with Route 14, will be a ten lane freeway facility or that an alternate facility will be constructed parallel to Route 14. Depending upon growth in the corridor communities and public receptivity at that time, the east-west alignments will either remain as conceptually proposed above or will be widened to accommodate new population and traffic growth. In particular, the District is considering upgrading segment 5 (see above) to an expressway or freeway facility along one of three alternative alignments.

ROUTE CONCEPT REPORT

ROUTE 138

07-LA-138 P.M. R0.00/74.97

I. STATEMENT OF PLANNING INTENT

This Route Concept Report (RCR) is a planning document describing the Department's basic approach to development of Route 138. Considering reasonable financial constraints and projected travel demand over a 20 year planning period, the RCR defines an appropriate type of facility and level of service (LOS) for this route. The objective of this effort is to provide a better basis for the development of the State Transportation Improvement Program (STIP) and for determination of the appropriate concept for future highway projects.

Route Concept Reports are prepared by District staff, referring as needed to local and/or regional agency studies for support data. They will be updated as conditions change or new information is obtained.

The Route Concept Report is a preliminary planning phase that leads to subsequent programming and the project development process. As such, the specifics nature of proposed improvements (i.e., roadway width, number of lanes, access control, etc.) may change in later project development stages, with final determinations made during the project report and design phases. Roadway widths, as discussed in the Report Concept Reports, are used for the purpose of estimating improvement costs, and may change depending upon operating conditions and design standards at the time of actual project development.

II. ROUTE ANALYSIS

Route Description: Route 138 is the state route connecting Interstate 5 near Gorman with Interstate 15 near Cajon Pass in San Bernardino County. In District 7, Route 138 is approximately 70.57 miles long (all within Los Angeles County), including 32.8 miles of Route 48, which is also signed as Route 138. This portion of the route is not included in this RCR as pertinent data for this section relates to Route 48. It is the major east-west route through the Antelope Valley and the main artery in the city of Palmdale. According to the 1988 District 7 Highway Inventory, Route 138 is essentially flat; the entire route being under three percent grade. There is some rolling terrain of the roadway in some segments.

Route Segmentation: For purposes of this RCR, Route 138 has been segmented where it intersects with other state highways and by

type of facility, i.e., freeway, rural conventional highway and urban/suburban conventional highway. (See Exhibits A and B).

Purpose of Route: Route 138 is functionally classified as a rural minor arterial (MA) between Route 5 and Route 48 (PM 0.00 to PM 6.2) and between Avenue R in Palmdale and the San Bernardino county line (PM 49.0 to PM 74.97). The section of Route 138 between Route 14 and Avenue R in Palmdale (PM 43.4 to 49.0) is functionally classified as an urban principal arterial connecting link (PLP). The primary significance of Route 138 is regional and local rather than national or state; it is part of the Federal Aid Primary system.

Land Use: Land use along the Route 138 corridor varies from rural to residential, commercial, and industrial. Intensive residential, commercial, and industrial development is taking place in the Palmdale-Lancaster area.

The Southern California Association of Governments (SCAG) Regional Statistical Area (RSA) Analysis (March 1989 version) indicates that population, housing, and employment in the Lancaster-Palmdale area will increase tremendously between 1987 and the year 2010, well above the Los Angeles county overall growth rates for these demographic categories for the same time period. These growth rates are as follows:

	<u>Lancaster</u>	<u>Palmdale</u>	<u>Los Angeles County</u>
Population:	256%	179%	18%
Housing:	293%	208%	26%
Employment:	243%	244%	25%

Existing Facility: Exhibit B describes the highway characteristics pertinent to the development of the route concept. At the western inception of Route 138, where it intersects with Route 5, the route is a four lane freeway for two miles and then becomes a two lane undivided rural highway to Route 48 (PM 6.2). At this point, the highway is designated Route 48 but signed as Route 138 (Route 48 = PM 0.00 to 32.8) to its junction with Route 14 (Rte 14=PM 74.0). From the junction of Routes 48/138 and 14 southbound along the Route 14 alignment, there is a break in the constructed and signed alignment of Route 138. At the junction of Route 14 (PM 59.8) and Palmdale Boulevard, Route 138 (PM 43.4) becomes a four lane divided urban highway to Avenue T (PM 51.4). It then becomes a two lane conventional highway to the Los Angeles-San Bernardino County Line (PM 43.4)

In addition to the existing route, there is an adopted freeway route (138 Metropolitan Bypass Freeway) from Route 5 to the Los Angeles-San Bernardino County line. Exhibit B shows the alignment of the adopted route.

Alternate Routes: There are several routes that parallel portions of Route 138. These are as follows:

<u>Parallel Route</u>	<u>Distance From Route 138</u>	<u>PM/PM Served</u>
Lancaster Road	(4± miles south)	LA-48 17.98/32.8
Pine Cyn Rd/ Elizabeth Lake Rd	(11± miles south)	LA-48 8.95/32.8
Pearblossom Hwy	2± miles south)	LA-138 43.4/51.4
Palmdale Bl/ San Bd Co L	(5± miles north)	LA-138 50.65/74.97
Rte 18	(9± miles north)	LA-138 69.3/74.97
Rte 58 (interregional)	(35± miles north)	Bakersfield to Barstow
Rte 14 (interregional)	(18± miles south)	Rte 5 to Pear- blossom Hwy
Rtes 210/10 (interregional)	(20± miles south)	Rte 5 to SBd Rte 15

Transit Services and Park-and-Ride Facilities: Antelope Valley Transit provides city bus service Monday through Friday in Lancaster, Palmdale, and Littlerock. There are no park and ride facilities that directly serve Route 138.

Operating Conditions--Present and Future: Transportation system planning uses two primary measures to evaluate state highway deficiencies. One measure is Level of Service (LOS). LOS is expressed as ratio of traffic demand to capacity. Deficiencies in LOS consist of segments of highway operating below their route concept LOS. The other measure of deficiency is safety, defined and analyzed at the District's discretion as it relates to the route concept and expressed as a ratio of expected to actual accidents and fatalities. Refer to Exhibit B for data regarding these deficiencies.

Accidents: Refer to Exhibit B for accident data relevant to state and 3-year average accident rates for the period May 31, 1987 to May 31, 1990.

Deficiencies--Current and Future: Congestion results primarily from a lack of capacity to accommodate existing and projected

traffic demand. By the year 2010, projected traffic demand on Route 138 will exceed capacity from the junction of Route 14 and Palmdale Boulevard in downtown Palmdale (PM 43.42) to Route 18 (PM 69.3). An acceptable LOS will be possible by the year 2010 only if Route 138 is upgraded to an eight lane freeway facility from Route 14 to Avenue T, also known as Pearblossom Highway, (PM 43.42/51.41). From Avenue T to Route 18 (PM 51.41/69.3) year 2010 traffic congestion can be mitigated by adding a conventional lane in each direction.

The Los Angeles Regional Transportation Study (LARTS) 1987 base year model was used to formulate current and year 2010 traffic projections as presented in this RCR. The LARTS model is based on demographic data provided by SCAG.

For purposes of this RCR, existing and year 2010 capacity is equal to 2000 vehicles per hour per lane for the freeway portion of Route 138, 1200 vehicles per hour per lane for the two lane conventional highway portion and 1500 vehicles per lane per hour for the four lane conventional highway portion.

III. ROUTE CONCEPT

The Route 138 concept is to provide a level of service "F0" for the most urbanized area of downtown Palmdale (segment 4) and an LOS "C" for segment 5. Improvements necessary to meet the concept of LOS are listed in the summary section of this RCR and Exhibit A. The route concept is based on "worst case" peak direction traffic volumes. Therefore, improvements that will result in a particular LOS or demand to capacity ratio in one direction for any given segment may provide a better LOS in the reverse direction. At this time it is proposed that due to the tremendous growth anticipated in the downtown area of Palmdale and the concomitant traffic congestion projected, only a freeway facility can mitigate traffic to an acceptable LOS. Traffic congestion figures indicate that an eight lane facility would be required to achieve the route concept LOS. However, actual number of lanes will ultimately be determined by route location studies and the environmental process.

IV. CONCEPT RATIONALE

As noted above in Section II of this RCR, there is already an adopted freeway route extending from Route 5 to the Los Angeles-San Bernardino County Line. The proposed improvements recommended for segments 4 and 5 from a conventional highway to a freeway facility and from a two lane to a four lane conventional highway respectively, will be required in order to relieve the traffic congestion resulting from projected growth in the Route 138 corridor communities. Implementation of the concept improvement will achieve an acceptable LOS ranging from F0 (segment 4) to C (segment 5) by the year 2010. Segment 4 limits are between Route 14 (Antelope Valley Freeway--PM 43.42) and

Avenue T (Pearblossom Highway--PM 51.41) on the existing Route 138. Segment 5 limits are between Avenue T and Route 18 (PM 51.41/69.3). Only segments 4 and 5 traffic growth projections warrant capacity enhancement construction. An "F0" LOS is considered "acceptable" because District 7 has determined that in the highly urbanized areas of Los Angeles County, a better LOS is not feasible. The other segments of Route 138 will have an acceptable year 2010 LOS ranging from "A" to "C".

Current average daily traffic volumes (ADTs) range from a low of 2300 between the end of Route 5 (Golden State Freeway--PM R1.89) and Route 48 (PM 6.22), a two lane conventional highway, to a high of 38,500 between Route 14 (Antelope Valley Freeway--PM 43.42) and Avenue T (Pearblossom Highway--PM 51.41), a four lane conventional highway. Year 2010 ADTs range from 5,000 to 144,000 at the same locations as cited above.

Existing peak-hour period directional volumes vary from a low of 135 eastbound in the morning and westbound in the evening between the end of Route 5 and Route 48, to a high of 1,733 eastbound during the morning peak period between Route 14 and Avenue T. Year 2010 peak hour directional volumes range from a low of 179 eastbound a.m. to a high of 8,247 eastbound in the morning at the same location as cited immediately above. Refer to preceding paragraph, page 4 for postmiles at these locations.

The Los Angeles Regional Transportation Study (LARTS) 1987 base year model was used to develop the current year 2010 traffic projections. This model uses the Southern California Association of Governments (SCAG) socio-economic data, which incorporates each city's general plan, as the base for its projections.

V. ALTERNATIVE CONCEPTS CONSIDERED

District executive and management staff have been meeting with representatives of Palmdale and Lancaster and local elected officials to discuss the relocation of the adopted freeway alignment. The following alternatives have been discussed:

- (1) Extend the adopted route easterly of Route 14 (where it intersects with Route 48) so as to bypass Lancaster and Palmdale and join the adopted freeway route east of Palmdale. However, it was determined that most trips would use Route 14 southbound to the metropolitan Los Angeles area or to the more urbanized areas in Palmdale.
- (2) The Policy Advisory Committee of SCAG's Antelope Valley Study recently recommended that the Route 138 Freeway be Avenue D to Route 14, south along Route 14 to Avenue P-8, and joining the already adopted route east of Palmdale.

This alternative would probably entail widening Route 14 to at least 10 lanes between Palmdale and Lancaster.

- (3) Construct the freeway along the already adopted freeway alignment. See Exhibit B for location of the officially adopted freeway alignment.
- (4) The same study as cited above also recommended upgrading Avenue P-8 to a divided multi-lane highway and protecting the necessary right-of-way for staged development of a highway facility that could eventually be a freeway. The freeway would provide a northeast bypass from Route 5 to Route 15.
- (5) Improve the existing Route 138 by correcting curves, and constructing passing lanes and channelization. Refer to Section VIII of this RCR for more detail regarding these programmatic improvements. However, improving the existing route as a conventional highway will not mitigate projected traffic congestion to an acceptable LOS in downtown Palmdale (segment 4).
- (6) The SCAG Antelope Valley Study Policy Advisory Committee determined that the Route 138 Freeway, regardless of alternative, would not relieve congestion on local arterial streets in the Palmdale/Lancaster area. There was consensus that an additional east-west and north-south facility had to be considered as a part of the study.

VI. ULTIMATE TRANSPORTATION CORRIDOR

A 1991 "Director's Policy Memo states the following:

"It is the policy of Caltrans to work on a partnership basis with local land use authorities to accomplish early identification of transportation corridors and to explore all appropriate means for the acquisition and preservation of those corridors."

In line with this policy, it is envisioned that beyond the year 2010 the north-south alignment of Route 138, in common with Route 14, may have to be widened to a ten lane freeway facility or that an alternative facility will be constructed parallel to and east of Route 14. The east-west alignment between Route 5 and Route 48 will most likely remain as conceptually proposed in this RCR or will be widened to accommodate new population and traffic growth. Three alternative alignments for the east-west portion of Route 138 from Avenue T to Route 18 (segment 5) are now being considered by the District. The selected alignment will be upgraded to an expressway or freeway as part of an ultimate Route 138/18 corridor between Palmdale and Victorville.

VII. OTHER PLANNING CONSIDERATIONS

State Transportation Improvement Program (STIP) - 1990:

The 1990 STIP includes the following project, programmed under Flexible Congestion Relief (FCR) funding:

Correct curves five miles east of Route 5 (PM 5.3 to 6.2 - Project No. 0692H

Interregional Road System (IRRS) Plan:

The IRRS Plan was prepared in response to Section 164.3 of the Streets and Highways Code. Its purpose is to identify projects on IRRS routes that will provide the most adequate and cost efficient IRRS to all economic centers in the state. The projects must be on routes located outside the boundaries of urbanized areas of over 50,000 population. The 1990 IRRS Plan defines the IRRS as "a series of interregional state highway routes, outside of urbanized areas, that provides access to and links between, the state's economic centers, major recreational areas, urban and rural regions." Route 138 has been identified as an "other priority" IRRS route. "Other Priority" IRRS routes are defined as "vital links between urbanized areas". Final selection of IRRS projects is dependent on the programming process for inclusion in the STIP.

The 1990 STIP includes the following projects, funded under the IRRS Plan:

Passing lanes, bridge widening, channelization from Avenue T to Route 18 (PM 51.6 to 69.4 (excluding PM 57.2 to 60.2) - Project No. 0695P.

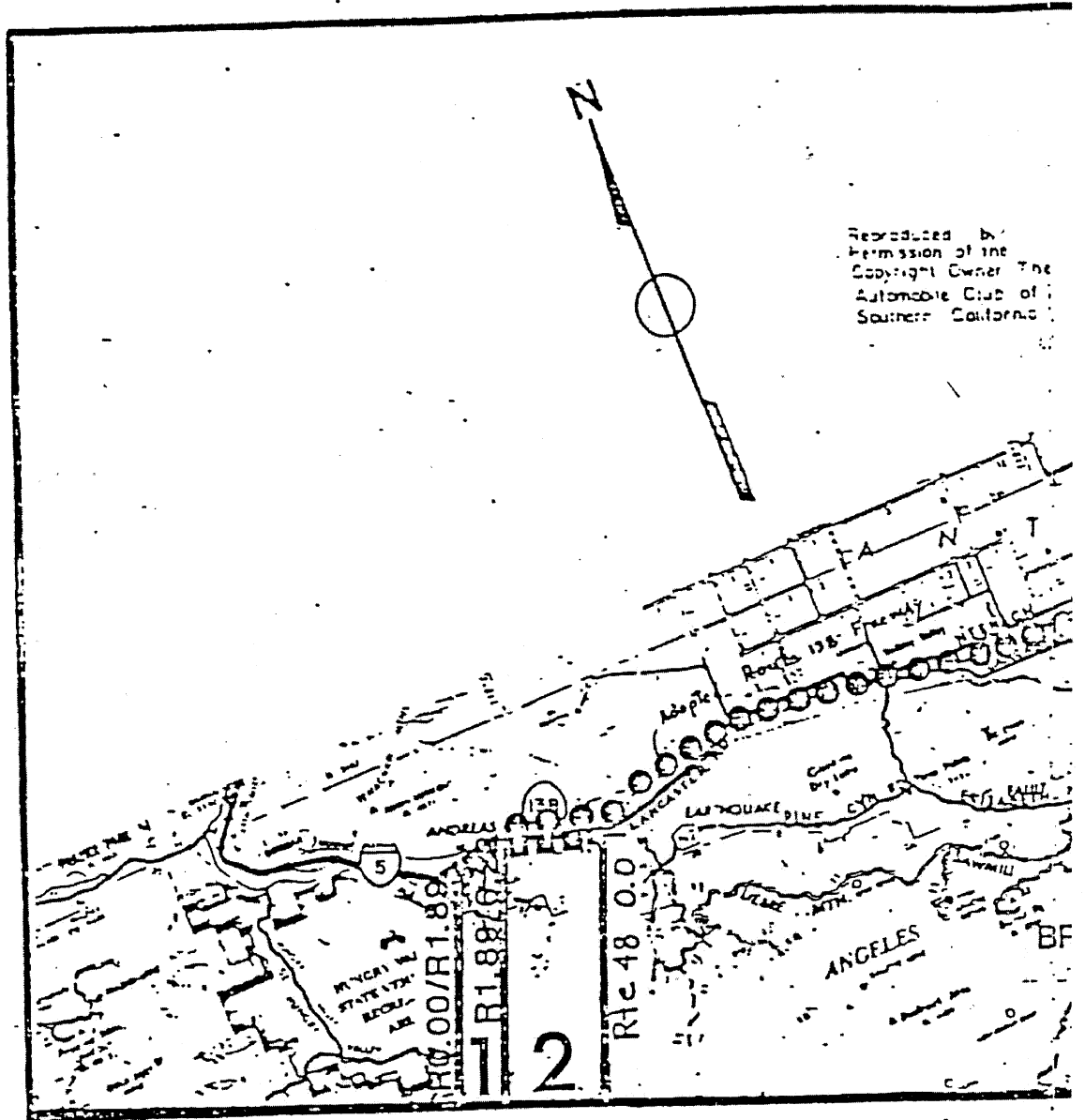
Air Quality Management Plan (AQMP) - 1989: All of Route 138 falls within the jurisdiction of the South East Desert Air Basin which is administered according to the guidelines set forth under the Southern California AQMP. Caltrans is obligated to implement AQMP control measures, some of which are new; others of which are expansions of Caltrans' existing programs. The following list includes but is not limited to the types of control measures to be provided:

Transportation System Management Program: ramp meters, bypass and auxiliary lanes, changeable message signs, upgraded traffic operations centers, demonstration and evaluation of "smart" technology on a corridor basis.

Transportation Demand Management Program: conduct planning studies on user fees, and based on study results develop user fee pilot testing/demonstration program.

Highway Improvement Program/Mixed-Flow and HOV: develop and program list of priority improvements.

Reproduced by
permission of the
Copyright Owner The
Automobile Club of
Southern California



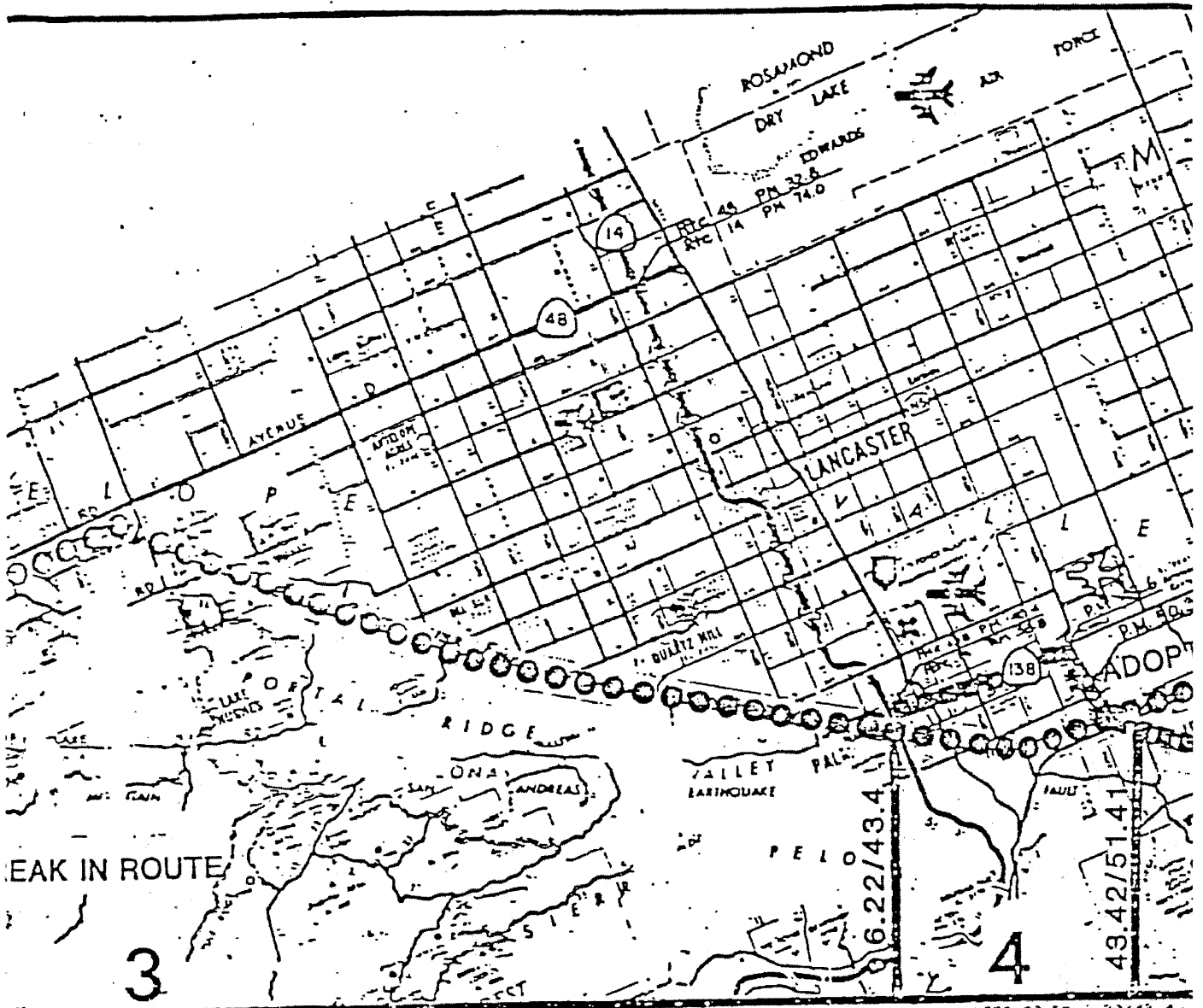
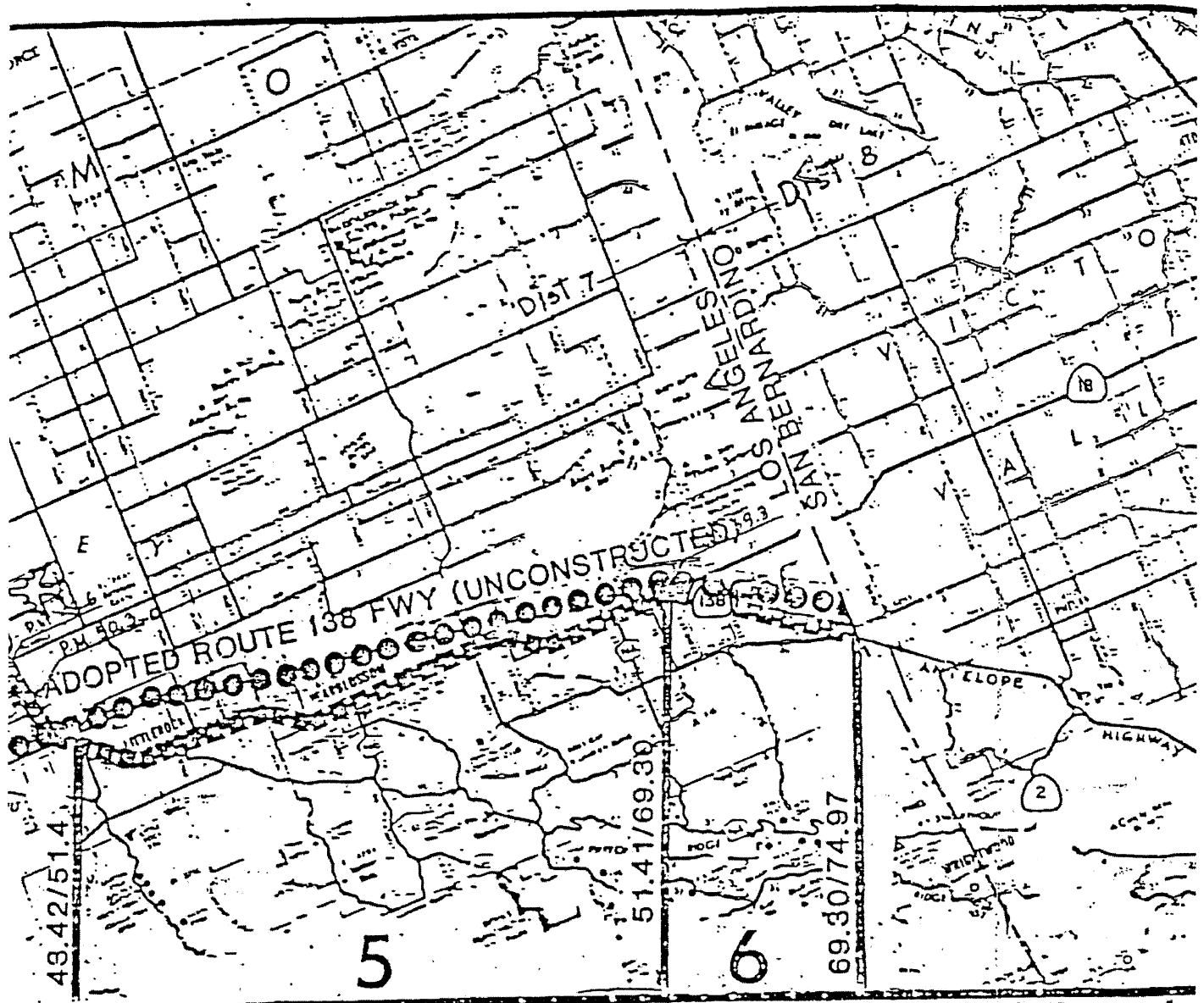


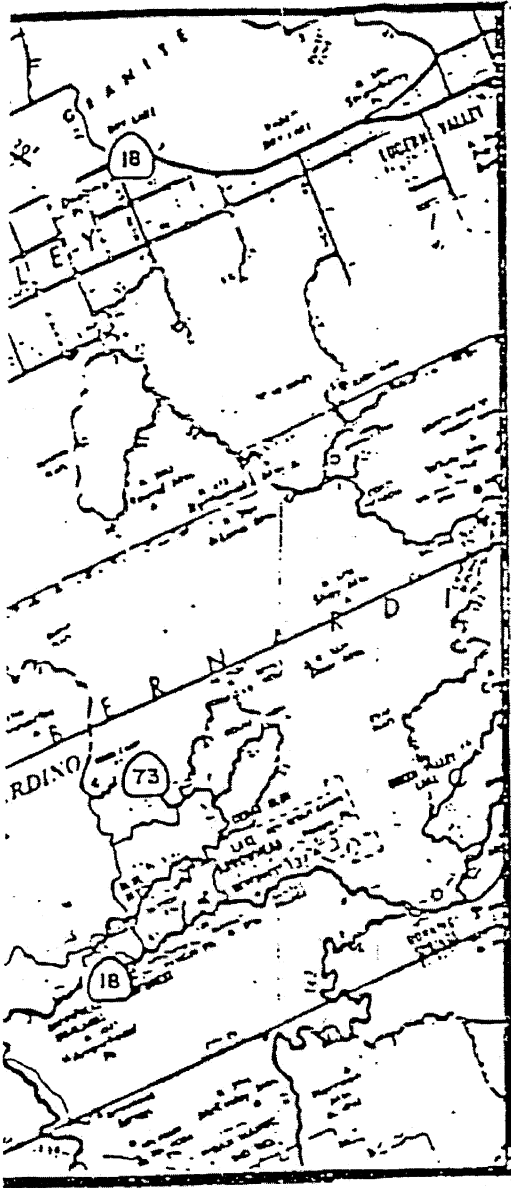
EXHIBIT B ROUTE: LA 138 Date: 10-5-90				SEG 01 PN-R0.00/R1.09 RTE S/END FUY			SEG 02 PN-R1.89/6.22 END FUY/RTE 48			SEG 03 PN-6.22/43.4 BREAK IN ROUTE/RTE 14		
PERMENT DESCRIPTION	EXIST	2010 NULL	2010 IMP.	EXIST	2010 NULL	2010 IMP.	EXIST	2010 NULL	2			
FUNCT. CLASS.	MA			MA								
TERRAIN	ROLLING			ROLLING								
TRUCKS (% OF PK MPD)	6			6								
TRUCKS/OUT SHLD. (FT)	100/10			0/8-10								
R/W (FT)	247			60								
POST	3100	5000	5000	2300	3900	3900						
PK. HR. DEMAND	EXIST	210	311	311	165	281	281					
	WEST	228	367	367	165	332	332					
NUMBER OF LANES	EXIST	2F	2F	2F	1C	1C	1C					
	WEST	2F	2F	2F	1C	1C	1C					
CAPACITY RATIO	EXIST	0.05	0.08	0.08	0.25	0.43	0.43					
	WEST	0.06	0.09	0.09	0.25	0.43	0.43					
EFFICIENT 3-YR RATIO		1.14			.17							

BREAK IN ROUTE













1-6.22/43.4 ROUTE/RTE 14			SEG 04 Pn-43.42/51.41 RTE 14/AVE T (PEARBLOSSON HWY)			SEG 05 Pn-51.41/69.3 AVE T (PEARBLSN HWY)/RTE 18			SEG 06 Pn-69.3/74.97 RTE 18/LA-SB COUNTY LINE		
2010 NULL	2010 IMP.	EXIST	2010 NULL	2010 IMP.	EXIST	2010 NULL	2010 IMP.	EXIST	2010 NULL	2010 IMP.	
		PIP			NR			NR			
		FLAT			FLAT			FLAT			
		B			6			2			
		B-16/4-8			G/6-8			O/B			
		80			60			150			
		38500	144000	144000	16000	35400	35400	6600	10900	10900	
		1733	8247	8247	675	1826	1826	409	563	563	
		1575	7069	7069	900	1992	1992	374	563	563	
		2C	2C	4F	1C	1-PRS LN	2C	1C	1C	1C	
		2C	2C	4F	1C	1-PRS LN	2C	1C	1C	1C	
		0.56	2.75	1.03	0.56	1.35	0.61	0.34	0.47	0.47	
		C	F	FD	C	F	C	B	B	B	
		0.53	2.38	0.88	0.75	1.40	0.66	0.31	0.47	0.47	
		C	F	D	D	F	C	B	B	B	
		2.20			1.00			.73			
		2.78			1.19			1.22			

K-IN ROUTE



LEGEND

-  AIRPORT (EXISTING)
-  AIRPORT (PROPOSED)
-  UNIVERSITIES
-  MAJOR SHOPPING CENTER
-  MAJOR EMPLOYMENT CENTER
-  PARK AND RIDE FACILITY
-  PROPOSED DEVELOPMENTS
-  OTHER TRAFFIC GENERATORS
-  ROUTE 138 LOCATION
-  ADOPTED FREEWAY ROUTE 138

ROUTE 138

RTE 5 to SBd. Co. Line

PM R0.00 to 74.97 (LA Co.)

L RATIOS

- .25
- .35
- .45

Route Segments
Facilities
Traffic Data

EXHIBIT B

PROJECT NO: 10-Sep-90 File: KH130L

ROUTE: LA 130

LIMITS: RTE 5 (PH RD. 000) TO LOS ANGELES - SAN BERNARDINO COUNTY LINE (PH 7-1-97)

LEVEL OF SERVICE

:F0
 :F1
 :F2
 :F3



29 MPH
 26 MPH
 23 MPH
 20 MPH

SEG	POST MILE	LIMITS	EASTBOUND LINES			WESTBOUND LINES			EXIST	2010	2010	2010
			A.M. PEAK	P.M. PEAK	A.M. PEAK	P.M. PEAK	A.M. PEAK	P.M. PEAK				
			EXIST	2010	2010	EXIST	2010	2010	EXIST	2010	2010	2010
			MULL	IMP.	IMP.	MULL	IMP.	IMP.	MULL	IMP.	IMP.	IMP.
1	00.00/01.09	RTE 5/END FWY										
2	01.09/06.22	END FWY/RTE 40										
3	06.22/43.41	BREAK IN ROUTE/RTE 1-1										
4	43.42/51.41	RTE 14/AVE T (PERROLOSSION IMP)/RTE 10	F	F	F	F	F	F	F	F	F	F
5	51.41/59.3	AVE T (PERROLOSSION IMP)/RTE 10	E	E	E	E	E	E	E	E	E	E
6	59.3/74.97	RTE 10/LA-SB COUNTY LINE	D	D	D	D	D	D	D	D	D	D

**TRUCK NETWORK ON
CALIFORNIA STATE
HIGHWAYS AND ROUTE
INFORMATION FOR
OVERSIZE AND
OVERWEIGHT VEHICLES**



Truck Networks on California State Highways

This map identifies the state highway routes on which defined trucks can operate and where there are operational restrictions. Road signs identifying and/or providing additional information have been posted on terminal access routes, routes with kingpin to rear axle advisories, and routes with operational restrictions.



NATIONAL NETWORK FOR STAA TRUCKS



TERMINAL ACCESS ROUTES TO THE NATIONAL NETWORK



ROUTES FOR TRACTOR-SEMIS WITH 65-FOOT OVERALL LENGTH & 40-FOOT KINGPIN TO REAR AXLE LENGTH (CA. LEGAL)



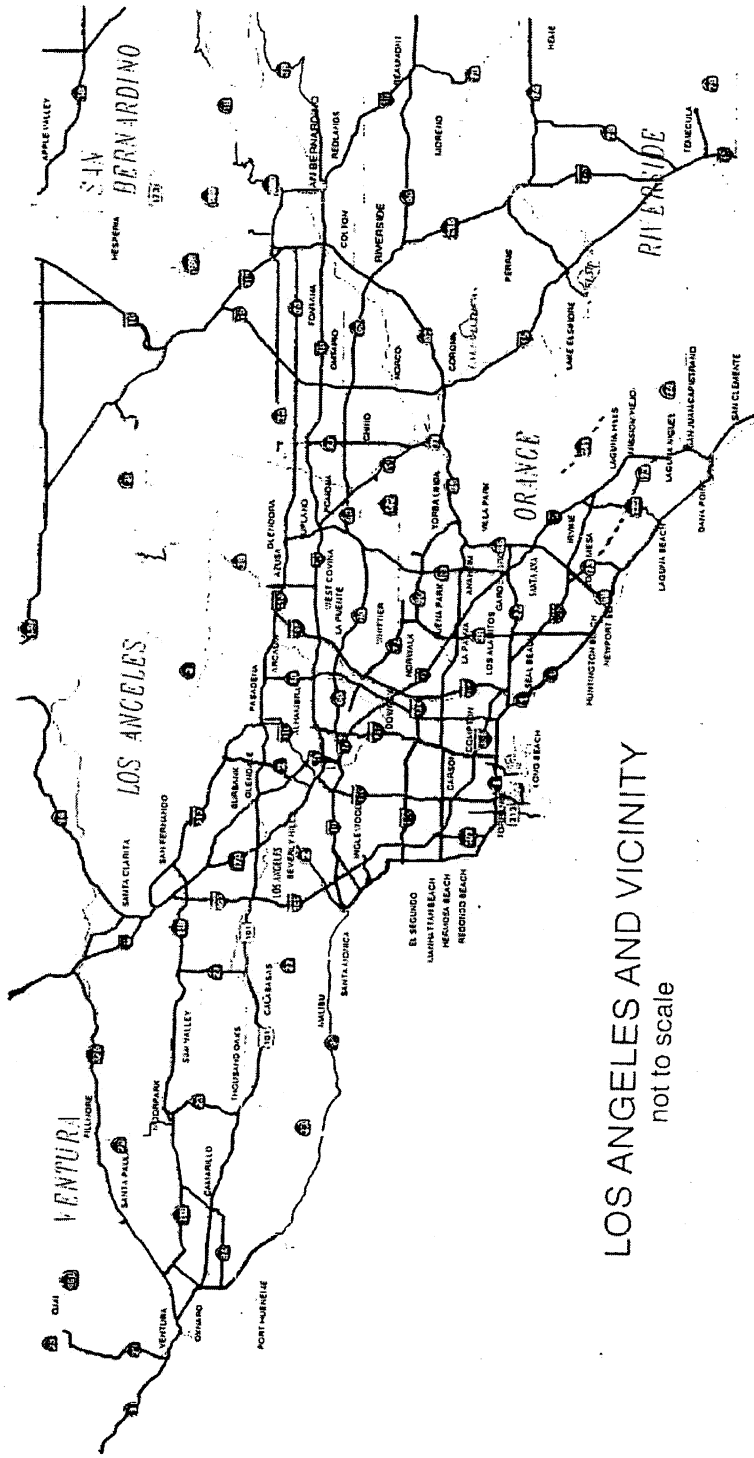
ROUTES NOT ADVISED FOR TRACTOR-SEMIS WITH KINGPIN TO REAR AXLE LENGTH OVER POSTED VALUE (KP-RA ADVISORY)



ROUTES WITH OPERATIONAL RESTRICTIONS



TOLL ROAD TERMINAL ACCESS



LOS ANGELES AND VICINITY
not to scale



Caltrans

January 1998

Produced by Traffic Operations GIS

07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

TRAFFIC STUDY REPORT

Final Project Report

ATTACHMENT H



Memorandum

To: ART CORREA
Senior Transportation Engineer
Office of Project Development B

Date: June 12, 2000
File: 07-LA-138 PM 51.4/69.4
Pearlblossom Hwy.
From Avenue T
To Junction SR-18

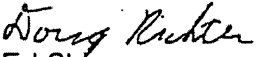
From: ED SHIAO
Senior Transportation Engineer
Office of Traffic Investigations

Subject: TRAFFIC STUDY REVISION

Please revise the following Level of Service Analysis to supersede our previous document dated June 5, 2000:

Location	LOS 1998	LOS 2024 (No Build)	LOS 2024 (Build)	
			E/B	W/B
Avenue T to Littlerock Creek	E ¹	F ¹	B ²	B ²
Littlerock Creek to 96 th St. E.	E ¹	E ¹	B ²	B ²
96 th St. E. to Longview Road	D ¹	E ¹	B ²	B ²
Longview Road to 165 th St. E.	D ¹	F ¹	B ²	B ²
165 th St. E. to Junction Route 18	D ¹	F ¹	B ²	B ²

NOTE: ¹ Two-lane highway calculation
² Four-lane highway calculation (two lanes in each direction)

for 
Ed Shiao
Senior Transportation Engineer
Office of Traffic Investigations

cc. Ron Kosinski

Memorandum

To: ART CORREA
Senior Transportation Engineer
Office of Project Development B

Date: June 5, 2000

From: ED SHIAO
Office of Traffic Investigations

File No.: 07-LA-138 PM 51.4/69.4
Pearblossom Hwy.
From Avenue T
To Junction SR-18
07241- 127200
07241- 104830
07241- 172600
07241- 188400
Category: 480

Subject: TRAFFIC STUDY

This document supercedes our previous document dated December 6, 1999, Subject: Same As Above.

This traffic study is to be used to assist in completing the Environmental Impact Report/ Environmental Impact Statement (EIR/EIS).

1. Current Traffic Data on SR-138. See attachment 1.

- ◆ **Mainline Annual Average Daily Traffic (Annual ADT).** Based on 1998 traffic volumes, the current traffic volume varies from 17,500 (vicinity Avenue T) to 10,600 (vicinity Junction Route 18).
- ◆ **Peak Hour Volumes.** Peak hour volumes vary from 1,600 (east of Avenue T) to 960 (west of Junction Route 18).
- ◆ **Directional Split Volumes.** We estimate directional split volumes from numerous manual traffic counts conducted along Route 138 in 1999.
 - AM Peak Period (8:00-9:00). The W/B Route 138 traffic volume is approximately equal to the E/B Traffic volume (50/50-split).
 - Noon Peak Period (11:00-1:00). The E/B Route 138 traffic volume is approximately equal to the W/B Traffic volume (50/50-split).
 - PM Peak Period (4:00-6:00). The E/B Route 138 traffic volume is higher than the W/B Traffic volume (55/45-split).

♦ **Truck Volumes:**

- Based on 1997 Annual Average Daily Truck Traffic, published in December 1998, the truck volumes comprise approximately 11% to 15% of the ADT.
- There are no major arterial roads with significant truck traffic that intersect SR-138. Recreational vehicle volumes are not available.

2. **Intersection Analysis.**

Current and future intersection capacity analysis will be provided at a later time.

There is one signalized intersection within the project limits – at 82nd Street East within the community of Littlerock. This traffic signal is an isolated signal justified by the school protection warrant. Avenue T (PM 51.410) is also signalized and currently being upgraded under a separate project (EA 1150U).

Currently there are no intersections within the proposed project limits that meet current or design year traffic signal warrants. *For this reason, we do not recommend installation of new traffic signals within the project limits.*

In general, the frequency of intersections is highest within the unincorporated communities of Littlerock and Pearblossom (generally from 72nd Street East to 87th Street East and 121st Street East to Longview Road). The existing spacing and alignment of the cross streets appears compatible with the anticipated future development.

Some of the intersections outside these limits present design challenges for a variety of reasons. In general, all unsignalized intersections should provide the driver on the minor street adequate corner and stopping sight distance (See HDM table 405.1C). *In our opinion, existing intersections that may require unique design considerations after widening to meet the corner and stopping sight distance criteria are 165th Street East, Largo Vista Road and 213rd Street East.* At these locations, the elevation of the ground adjacent to the cross street may potentially interfere with driver visibility and potentially restrict sight distance.

Along this route there are existing intersections located on the curves on the three existing "reverse S" curves, located at: (1) west of Littlerock (*Old Fort Tejon Road*); (2) between the 106th Street East/116th Street East intersections and (3) between the 175th Street East/Avenue W intersections. These intersections are a result of the historical alignment of the highway. *In our opinion, these intersections are at undesirable locations and may require unique design considerations and/or relocation.* Factors influencing this recommendation include superelevation, sight distance, and facilitating future traffic signals.

3. Projected Traffic Data. See attachment 2 for the 2024 build and no-build traffic projections.

4. Level of Service Analysis.

<u>Location</u>	<u>LOS 1998</u>	<u>LOS 2024 (No Build)</u>	<u>LOS 2024 (Build)</u>
Ave T to Littlerock Creek	E ¹	E ¹	A ²
Littlerock Creek to 96 th Street East	E ¹	E ¹	B ²
96 th Street East to Longview Road	D ¹	E ¹	B ²
Longview Road to 165 th Street East	D ¹	E ¹	A ²
165 th Street East to Junction Route 18	D ¹	E ¹	A ²

Note 1. Two-lane highway calculation.

Note 2. Four-lane highway calculation.

5. Accident Analysis. See attachments 3 and 4.

- **Current Total Accident Rate.** Analysis of the 5-year accident data indicates that the actual total accident rate (0.81 acc/mvm) is lower than the Statewide Average for similar highways (1.02 acc/mvm). The actual fatality accident rate (0.049 fatal acc/mvm) is higher than the Statewide Average for similar highways (0.038 fatal acc/mvm).
- **Current Intersection Accident Rates.** Analysis of the 5-year accident data for 37 intersections indicates accident rates higher than the State Average for similar intersections at 82nd Street East, 85th Street East, 96th Street East, 130th Street East, 165th Street East, Avenue W, Largo Vista Road, and Junction Route 18.
- **Current Accident Rates by Segments.** Five segments were selected for comparison based on current development.
 - **Avenue T to the Community of Littlerock.** The 5-year accident rate is significantly below the State Average for similar highways.
 - **Community of Littlerock (Littlerock Creek to 87th Street East).** The 5-year total accident rate (2.42 acc/mvm) is higher than the State Average for similar highways. The existing total accident rate is comparable to State Averages for two-lane conventional highway base rate groups H08/H11 (suburban/urban areas with average speeds >45 mph (~ 2.00 acc/mvm)).

- **Between the Communities of Littlerock and Pearblossom (87th Street East to 121st Street East).** The 5-year fatal accident rate (0.051 fatal acc/mvm) is higher than the State Average for similar highways (0.035 fatal acc/mvm).
- **Community of Pearblossom (121st Street East to 133rd Street East).** The 5-year accident rates are similar to the State Average rates for similar highways.
- **Community of Pearblossom to Junction Route 18.** The 5-year fatal accident rate (0.072 fatal acc/mvm) is significantly higher than the State Average for similar highways (0.039 fatal acc/mvm).
- **Current TASAS Accident Summary Analysis.**
 - **Primary Collision Factors.** 28% speeding, 22% other violations, 20% improper turns.
 - **Type of Collisions.** 29% rear end, 22% broadside, 20% hit object; Also: 7.5% head-on, 2.5% auto-pedestrian
 - **Party Type.** 80% passenger cars; 46% pickup, 9% trucks. Also: 2% pedestrians
- **Current Accident Concentration Locations.** There exist several unique accident concentration locations along Route 138 where changes to the existing highway geometry should reduce historical accident concentration patterns. These locations are the 96th Street East intersection, Big Rock Wash (Twin Bridges), horizontal curve near Avenue W, and Junction with Route 18. *In our opinion, these locations warrant special design considerations.*
- **Current Cross-Centerline Accident Analysis.** The Caltrans 2-3 lane cross-centerline accident monitoring program has identified a pattern of cross-centerline accidents between PM 56.25 to PM 72.00. For the 5-year analysis period of 1994 to 1998, there were 10 fatal cross-centerline accidents between 96th Street East and Junction Route 18.

In November 1998, Caltrans District 7 Office of Traffic Investigations completed a study to determine the feasibility of the use of concrete median barriers to mitigate the existing pattern of cross-centerline accidents on the highway. Although the use of concrete median barriers was not recommended, the best long-term strategy for reducing the frequency and severity of head-on accidents was determined to be widening the highway. Over half of the fatal cross-centerline accidents are the result of passing maneuvers, adding an additional lane in each direction should significantly reduce the cross-centerline accident rate. See report titled "Median Barrier Investigation Report for State Route 138" dated November 1998.

6. Engineering and Traffic Survey (Speed Zone Study).

The latest engineering and traffic survey was approved on 3/19/97.

Speed measurements were obtained in 1996. The observed critical (85% percentile) speeds were generally around 65 to 70 mph outside developed areas, with 45 to 60 mph speeds in the Community of Littlerock and 50 to 55 mph speeds in the Community of Pearblossom.

In our opinion, analysis of the speed measurements suggests a comfort level among the majority of drivers to drive at higher speeds. This is possibly due to a high percentage of highway users that frequently use the highway and feel that they adequately know the existing roadway features.

However, there are existing roadway features that are incompatible with higher speeds. The two horizontal curves of the highway at 175th Street East and Avenue W have an existing radius of 1000 feet, where a maximum speed of 55 mph is more prudent. This is a current roadway feature not readily apparent to a driver. Another example of a not readily apparent roadway feature is at the twin bridges at Big Rock Wash (PM 63.0), where the existing stopping sight distance is below acceptable minimums.

7. Pedestrian and Bicycle Study

- Within the community of Littlerock, current roadside development is greatest between 77th Street East and 85th Street East. Along this segment lies a public library, a post office, a bank, Alpine Elementary School, and other businesses that generate pedestrian activity. Since the only existing marked cross walk is located at the signalized intersection at 82nd Street East, pedestrians currently desiring to cross the highway should do so at unmarked crosswalk locations.

When the highway is widened in Littlerock, a pedestrian will be expected to cross the highway over a distance being increased from 24 feet to possibly 60 feet or more.

In our opinion, we do not believe that the installation of additional traffic signals or pedestrian overcrossings are currently warranted.

- Within the Community of Pearblossom, current roadside development is primarily south of the highway. There are currently minimal activities north of the highway that would require pedestrians to cross the highway. *In our opinion, it is reasonable to accommodate pedestrians crossing the highway by using unmarked crosswalks within the Community of Pearblossom.*
- We spoke with the Caltrans District 7 Bicycle Coordinator, Mr. Alec Mardirossian from the Office of ITS Development. He stated that he had no knowledge of any existing or proposed bike path along SR-138 within the project limits. *We do not recommend the placement of a bike lane along SR-138 within the project limits.*

8. Equestrian Traffic Study. No current equestrian trails crossing the highway have been identified to date.

9. School Zone Study. Alpine Elementary School is located east of 82nd Street East adjacent to the highway. A response letter dated 6/10/99 from Mr. Tom Niekamp, Assistant Superintendent, Keppel Union School District containing pertinent data on Alpine Elementary School.

Representatives from Caltrans' District 7 Offices of Project Development B, Environmental Planning, and Traffic Investigations met with the Principal of Alpine Elementary School during Summer 1999 to discuss issues that can potentially impact the school. *In our opinion, we believe that the highway widening project can proceed in a manner that will improve the safety of school children during their trips to and from Alpine Elementary School.*

10. Parking Study

- Parking adjacent to the highway is a current concern within the Communities of Littlerock and Pearblossom. Currently both communities have some lots adjacent to the highway with curb and sidewalks. The majority of businesses adjacent to the highway have asphalt or gravel parking areas – some of which have perpendicular parking immediately outside the state right of way. *In our opinion, parking on or adjacent to the highway that requires vehicles to back up on the highway should be avoided.*
- Although there is an associated drainage issue, we believe that placement of curbs and sidewalks are justifiable within the Community of Littlerock generally between 77th Street East and 85th Street East. *In our opinion, sufficient pedestrian traffic is being generated to justify construction of curbs and sidewalks.* Factors influencing this recommendation include pedestrian safety, better control of parking on or adjacent to the highway, and access control to the highway.

11. Other Safety Considerations

- Elevating the existing roadway at various locations. *In our opinion, we believe that elevating the existing roadway where the existing vertical profile is below the surrounding terrain is the best design alternate (from a traffic engineering perspective).* Factors influencing this recommendation are listed below.
 - **Sight distances.** It is desirable to provide as much sight distance as possible because it provides drivers the ability to readily perceive roadway features and conditions. There are existing locations where sight distance is restricted. Conditions that typically reduce sight distances are depressed highways with horizontal curves or highways over rolling (hummocky) terrain – both examples exist on this highway.

- **Critical speeds are greater than 70 mph.** This influences the design criteria being used, primarily stopping sight distance and corner sight distance. *In our opinion, we believe that critical speeds will increase at several locations due to the highway widening.* Failure to increase sight distances to accommodate the anticipated increases in critical speeds will result in an increase in accident numbers and severity.
- **Provide at least 6 meters of recovery area.** Currently at those locations where the highway is below the adjacent terrain we do not consistently have 6 meters available to drivers.
- **Prevent sand accumulation on the highway.** We have documented problems with sand on the highway in the vicinity of 165th Street East – a location where the highway is below the adjacent terrain. This poses a safety concern that can be significantly reduced or eliminated by elevating the highway.
- **Best traffic engineering alternative to accommodate for drainage.** When we consider drainage alternatives based solely from a traffic engineering perspective, we believe elevating the existing highway is the best choice. Without elevating the highway, we believe that (1) the earthen berms on the outer edges of the roadway will continue to exist (we assume they prevent water from entering the highway); and (2) vertical grade changes for either culverts or roadway dips will be required. These pose safety concerns that can be avoided with an elevated highway design.
- **Recessed pavement markers.** In our opinion, use of recessed pavement markers is justified east of the Community of Pearblossom (Longview Road to vicinity Junction Route 18). We have observed that this segment is subject to ice and snow conditions in winter where snow removal operations have resulted in a significant loss of raised pavement markers.
- **Safety lighting.** Currently there is continuous safety lighting on the highway within the Communities of Littlerock and Pearblossom. If affected by construction, the existing safety lighting systems in these communities should be reconstructed to current standards. All existing rural intersections with safety lighting should be upgraded to current standards.

A review of warrants for safety lighting indicates two locations where safety lighting should be considered based on existing conditions. They are Big Rock Wash (Twin Bridges) (vertical curvature of the roadway) and 175th Street East to east of Avenue W (horizontal curvature of the roadway).

- **Rumble strips.** Centerline rumble striping is currently located between vicinity 155th Street East to east of Avenue W. No shoulder rumble strips currently exist.

We are aware of no significant bicycle activity on the highway segment between Avenue T to Littlerock; between Littlerock to Pearblossom; and between Pearblossom to Junction Route 18. *In our opinion, shoulder rumble strips should be considered between Pearblossom and Junction Route 18.* This recommendation is based on existing highway conditions and accident patterns. This recommendation may change based on the final design.

- **Highway Safety Task Force.** A Highway Safety Task Force for Highway 138 between Route 14 and Route 15 was formed in 1998.
 - Enhanced enforcement likely contributed to a reduction in total accidents in 1999.
 - The project limits are currently a double fine zone.

12. Analysis of Design Alternatives.

Alternative 1. No additional comments.

Alternative 2 and 3. Our analysis is based on data limited to a proposed change in route alignment. Based solely on this criteria, we perceive no significant difference between alternatives 2 and 3.

We are unable to identify the preferred alternative based on a proposed change in route alignment.

13. Traffic management plan and/or recommendations for construction strategies

These plans will be developed during design preparation.

If you have any question please contact Jeff Le of my staff at (213) 897-0241.

Ed Shiao

ED SHIAO
Senior Transportation Engineer
Office of Traffic Investigations

Attachments

RTE 137, Tul Co

1998 TRAFFIC VOLUMES

RTE 138, SBd Co

Mile-post	Description	Peak Hour	ADT	
			Pk. Mo.	Annual
16.12	Tulare, Cherry Avenue	2,050	19,500	19,100
16.49	Tulare, Blackstone Avenue	1,950	18,200	17,800
16.63	Tulare, Jct. Rte. 99	1,550	14,400	14,100
17.01	Tulare, Laspina Street (Road 112)	1,250	15,400	15,100
17.51	Jct. Rte. 63 North, Mooocy Boulevard	1,100	13,900	13,600
		830	10,200	10,000
		550	6,700	6,600
20.46	Lovers Lane (Road 140)	600	7,700	7,300
		590	7,600	7,200
23.90	Farmersville Road (Road 168)	650	8,800	7,700
27.40	Cairns Corner, Jct. Rte. 65			

Mile-post	Description	Peak Hour	ADT	
			Pk. Mo.	Annual
46.73	Palmdale, 30th Street East	1,850	21,300	20,500
47.25	Palmdale, 35th Street East	1,700	19,200	18,500
48.59	Palmdale, 47th Street East (Right on 47th Street East)	1,700	19,000	18,300
		1,650	19,000	18,300
51.41	Pearblossom Highway (Avenue T)	1,600	18,200	17,500
53.55	Little Rock Creek	1,350	15,600	15,000
		1,350	15,600	15,000
56.17	Little Rock, 96th Street East	1,350	15,600	15,000
		1,250	14,300	13,700
60.17	Pearblossom, Longview Road	1,200	14,000	13,400
		1,100	12,900	12,300
63.68	Llano, 165th Street East	1,100	12,400	11,900
		1,150	13,200	12,600
69.30	Jct. Rte. 18 East	960	11,100	10,600
		620	7,200	6,900
74.97	Los Angeles-San Bernardino County Line	630	7,400	7,000

ROUTE 138. Routes 5 Near Gorman to Route 18 in Crestline

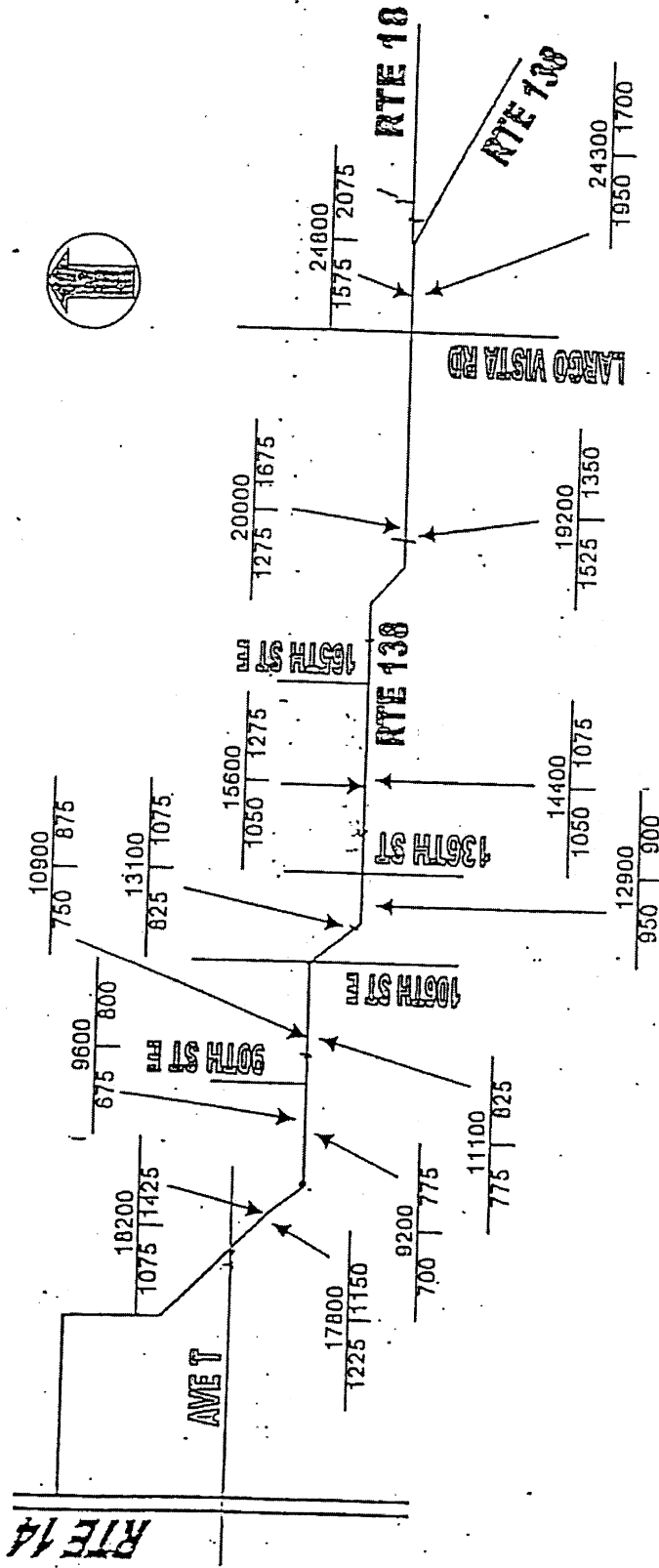
DISTRICT 7

Los Angeles County				
0.00	Jct. Rte. 5, Golden State Freeway			
1.70	End Freeway	490	3,700	3,400
1.71	Gorman Post Road	490	4,150	3,800
4.11	Old Ridge Route Road	360	3,250	3,000
		340	3,400	3,100
28.05	110th Street West	350	3,800	3,500
36.87	Jct. Rte. 14 North, Antelope Valley Freeway			
	(Break in Route)			
43.42	Palmdale, Jct. Rte. 14, Antelope Valley Freeway	2,400	30,000	29,000
		3,000	36,500	35,500
44.42	Palmdale, Sierra Highway	2,850	34,000	33,000
		2,650	31,000	30,000
44.69	Palmdale, 10th Street East	2,650	31,000	30,000
		2,450	28,500	27,500
45.71	Palmdale, 20th Street East			
46.73	Palmdale, 30th Street East			

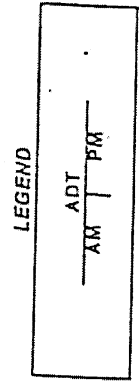
DISTRICT 8

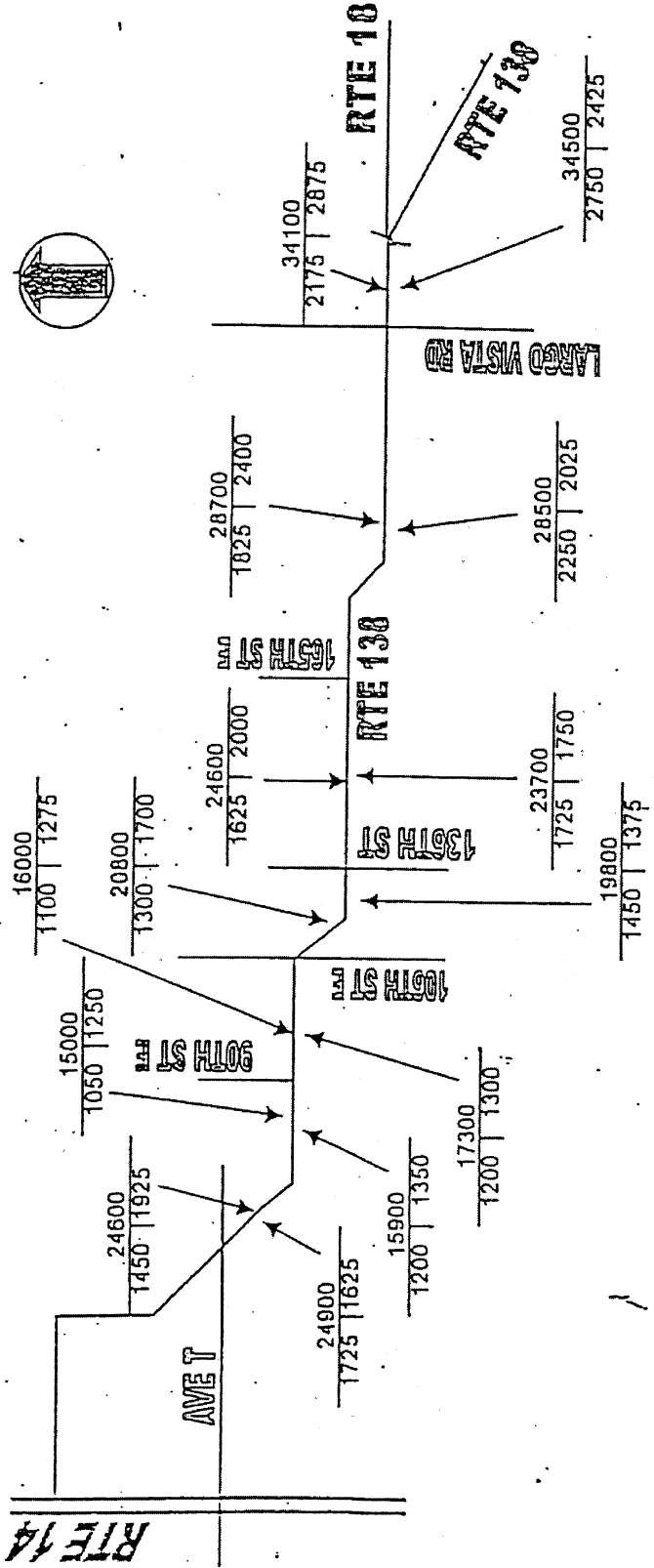
Los Angeles-San Bernardino County Line				
0.00	Los Angeles-San Bernardino County Line	630	7,400	7,000
6.66	Jct. Rte. 2 West (to Wrightwood)	1,400	15,300	14,800
		1,300	14,200	13,600
R15.20	Cajon, Jct. Rte. 15			
T16.40 =16.76	Milepost Equation	360	1,800	1,550
R23.96	Jct. Rte. 173 East	270	1,350	1,150
R26.47	Cleghorn Canyon Road	170	940	850
R30.87 =31.50	Milepost Equation	200	1,050	950
33.66	Old Mill Road	360	1,750	1,650
35.74	Waters Drive	1,050	5,700	5,500
36.27	Crestline, Knapps Cutoff	1,050	6,600	6,500

ATTACHMENT 1

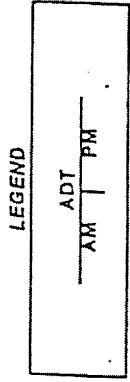


07-138-51.4/69.4
 EA 127200
 WIDENING PROJECT
 2024 No Build projections





07-138-51.4/69.4
 EA 127200
 WIDENING PROJECT
 2024 Build projections



ATTACHMENT 2

5-Year TASAS Table B with Annual Data

AMR253-A 06-01-00		TASAS TABLE B DISTRICT 07 SELECTIVE ACCIDENT RATE CALCULATION										PAGE 1									
LOCATION	DESCRIPTION	RA	NUMBER OF ACCIDENTS/SIGNIFICANCE*		PER *ADT *		TOTAL *--ACCIDENT RATE		ACCS/HV+ OR HVH--*		AVERAGE										
0138 LA	51.411 THRU LA 069.358	H	TOT FAT	INJ	F+I	VEH	WET	DARK	INJ	X-ST	MVM	MV+ OR	ACTUAL	TOT	FAT	F+I	TOT	FAT	F+I	TOT	
07-0001	17.883M 95-01-01 99-12-31 60 MO NA	H	349	21	159	180	263	25	113	26	13.3	432.66	.049	.42	.81	.038	.93	1.02			
			H90 346																		
0138 LA	51.411 THRU LA 069.358	H	67	7	31	38	49	4	28	10	13.2	86.08	.081	.44	.78	.038	.53	1.02			
07-0002	17.883M 95-01-01 95-12-31 12 MO NA	H	H95 72																		
0138 LA	51.411 THRU LA 069.358	H	75	3	35	38	60	4	28	3	13.2	86.31	.035	.44	.87	.038	.53	1.02			
07-0003	17.883M 96-01-01 96-12-31 12 MO NA	H	70																		
0138 LA	51.411 THRU LA 069.358	H	60	5	30	35	47	3	19	5	13.2	86.08	.058	.41	.70	.038	.53	1.02			
07-0004	17.883M 97-01-01 97-12-31 12 MO NA	H	71																		
0138 LA	51.411 THRU LA 069.358	H	87	3	36	39	63	13	27	5	13.2	85.94	.035	.45	1.01	.038	.53	1.02			
07-0005	17.883M 98-01-01 98-12-31 12 MO NA	H	H97 71																		
0138 LA	51.411 THRU LA 069.358	H	60	3	27	30	44	1	11	3	13.6	88.49	.034	.34	.68	.038	.53	1.01			
07-0006	17.883M 99-01-01 99-12-31 12 MO NA	H	62																		

ATTACHMENT 3

5-Year TASAS Table B By Segments

AXR253-A 06-01-00		TASAS TABLE B DISTRICT 07 SELECTIVE ACCIDENT RATE CALCULATION										PAGE 1						
L O C A T I O N D E S C R I P T I O N		ROUTE SEQUENCE										AVERAGE						
RA *-NUMBER OF ACCIDENTS/SIGNIFICANCE* PER *ADT * TOTAL *-ACCIDENT RATE ACCS/HV+ OR HVH-*		GRF		MULTI		WET DARK INJ X-ST		HAIN		ACTUAL		TOT						
(RUS) TOT FAT		INJ F+I VEH		H95 H99		H95 H90		H95 H90		FAT F+I		TOT FAT F+I						
0138 LA	51.411 THRU LA 053.600	H	39	0	22	22	30	2	14	0	16.2	64.87	.000	.34	.60	.033	.66	1.34
07-0001	2.190M 95-01-01 99-12-31 60 MO NA																	
0138 LA	53.601 THRU LA 055.211	H	109	1	40	41	102	7	22	1	15.3	45.01	.022	.91	2.42	.036	.49	.93
07-0001	1.611M 95-01-01 99-12-31 60 MO (R)																	
	(Community of Littlerock)																	
0138 LA	55.212 THRU LA 059.100	H	44	5	25	30	32	2	18	5	14.0	97.66	.051	.31	.45	.035	.55	1.09
07-0001	3.824M 95-01-01 99-12-31 60 MO (R)																	
	(87th St East to 121st St East)																	
0138 LA	59.101 THRU LA 060.394	H	22	1	9	10	20	2	9	1	13.3	31.48	.032	.32	.70	.039	.49	.93
07-0001	1.294M 95-01-01 99-12-31 60 MO (R)																	
	(Community of Peartblossom)																	
0138 LA	60.395 THRU LA 069.358	H02	135	14	63	77	79	12	50	19	11.8	193.63	.072	.40	.70	.039	.49	.93
07-0001	8.964H 95-01-01 99-12-31 60 MO (R)																	
	(133rd St East to Junction Route 18)																	

TASAS TABLE B DISTRICT
SELECTIVE ACCIDENT RATE CALCULATION

O C A T I O N	D E S C R I P T I O N	CRP (RUS)	RA * -NUMBER OF ACCIDENTS/SIGNIFICANCE* (RUS)	PER *ADT * KID MAIN X-ST	TOTAL *-ACCIDENT RATE ACES/MV+ OR HVH-+ MVH FAT F+I	ACTUAL FAT F+I	AVERAGE FAT F+I	TOT	FAT	F+I	TOT	FAT	F+I	TOT				
															INJ	F+I	VEH	WET
38 LA 17-0001	51.601 57TH ST E LT & CHESEBOR 95-01-01 99-12-31 60 MO (U)	I12	6	0	2	2	6	0	3	0	17.3	31.90+	.000	.06	.19	.001	.10	.24
38 LA 17-0001	51.881 60TH ST E 95-01-01 99-12-31 60 MO (U)	I11	2	0	1	1	2	0	0	0	17.0	31.30+	.000	.03	.06	.000	.03	.06
38 LA 17-0001	53.311 OLD FT TESSON RD RT 95-01-01 99-12-31 60 MO (R)	I17	8	0	7	7	8	0	4	0	15.3	27.92+	.000	.25	.29	.004	.10	.22
38 LA 17-0001	53.951 75TH ST. E 95-01-01 99-12-31 60 MO (R)	I02	2	0	0	0	1	0	0	0	15.4	28.27+	.000	.00	.07	.011	.17	.34
38 LA 17-0001	54.201 77TH ST. E. 95-01-01 99-12-31 60 MO (R)	I02	7	0	2	2	7	1	1	0	15.3	28.28+	.000	.07	.25	.011	.17	.34
38 LA 17-0001	54.451 80TH ST. E 95-01-01 99-12-31 60 MO (R)	I02	8	0	3	3	7	1	0	0	15.3	28.11+	.000	.11	.28	.011	.17	.34
38 LA 17-0001	54.706 82ND ST. E 95-01-01 99-12-31 60 MO (R)	I02	19	0	9	9	19	2	3	0	15.3	28.21+	.000	.32	.67	.011	.17	.34
38 LA 17-0001	54.951 85TH ST. E LT 95-01-01 99-12-31 60 MO (R)	I17	10	0	3	3	9	1	2	0	15.2	27.95+	.000	.11	.36	.004	.10	.22
38 LA 17-0001	55.211 87TH ST E 95-01-01 99-12-31 60 MO (R)	I02	8	0	4	4	8	0	1	0	15.2	28.41+	.000	.14	.28	.011	.17	.34
38 LA 17-0001	55.411 89TH ST. E, LT. 95-01-01 99-12-31 60 MO (R)	I17	2	0	1	1	1	0	1	0	15.1	27.77+	.000	.04	.07	.004	.10	.22
38 LA 17-0001	56.170 96TH ST. EAST 95-01-01 99-12-31 60 MO (R)	I02	11	2	6	8	11	1	2	2	13.7	25.28+	.079	.32	.44	.011	.17	.34
38 LA 17-0001	57.181 106TH ST. EAST 95-01-01 99-12-31 60 MO (R)	I02	7	0	5	5	5	1	4	0	13.6	24.99+	.000	.20	.28	.011	.17	.34
38 LA 17-0001	57.339 HAMPEL AVE-LT 95-01-01 99-12-31 60 MO (R)	I17	0	0	0	0	0	0	0	0	13.6	25.02+	.000	.00	.00	.004	.10	.22
38 LA 17-0001	57.941 AVENUE "V" DIRT RT 95-01-01 99-12-31 60 MO (R)	I17	0	0	0	0	0	0	0	0	13.6	24.80+	.000	.00	.00	.004	.10	.22
38 LA 17-0001	58.591 AVENUE V-B RT 95-01-01 99-12-31 60 MO (R)	I17	0	0	0	0	0	0	0	0	13.5	24.71+	.000	.00	.00	.004	.10	.22
38 LA 17-0001	59.671 116TH ST. E 95-01-01 99-12-31 60 MO (R)	I02	3	0	2	2	1	0	2	0	13.5	24.85+	.000	.08	.12	.011	.17	.34

* DENOTES MV USED IN RATES

TASAS TABLE B DISTRICT SELECTIVE ACCIDENT RATE CALCULATION

O C A T I O N	D E S C R I P T I O N	R A # - NUMBER OF ACCIDENTS/SIGNIFICANCE* PER *ADT * TOTAL ** ACCIDENT RATE ACES/HV+ OR HVN+*	R O U T E S E Q U E N C E										A V E R A G E									
			(RUS)	TOT	FAT	INJ	F+I	VEH	WET	DARK	INJ	X-ST		MVH	FAT	F+I	TOT	FAT	F+I	TOT		
38 LA 07-0001	59.171 121ST ST. ERT. PAVED 95-01-01 99-12-31 60 MO (R)	I17	0	0	0	0	0	0	0	0	0	0	0	0	13.5	24.78+	.000	.00	.00	.004	.10	.22
38 LA 07-0001	59.421 123RD ST E RT 95-01-01 99-12-31 60 MO (R)	I17	4	0	3	3	4	0	2	0	13.5	24.71+	.000	.12	.16	.004	.10	.22				
38 LA 07-0001	59.671 126TH ST. E RT 95-01-01 99-12-31 60 MO (R)	I17	1	0	0	0	1	1	0	0	13.4	24.62+	.000	.00	.04	.004	.10	.22				
38 LA 07-0001	59.921 128TH ST E RT 95-01-01 99-12-31 60 MO (R)	I17	2	0	0	0	2	0	0	0	13.4	24.85+	.000	.00	.08	.004	.10	.22				
38 LA 07-0001	60.001 129TH ST E - RT 95-01-01 99-12-31 60 MO (R)	I17	1	0	0	0	0	0	0	0	13.4	24.57+	.000	.00	.04	.004	.10	.22				
38 LA 07-0001	60.090 130TH ST E RT 95-01-01 99-12-31 60 MO (R)	I17	6	0	5	5	6	0	3	0	13.4	24.56+	.000	.20	.24	.004	.10	.22				
38 LA 07-0001	60.170 LONGVIEW RD RT 95-01-01 99-12-31 60 MO (R)	I17	3	0	1	1	3	0	2	0	12.3	23.80+	.000	.04	.13	.004	.10	.22				
38 LA 07-0001	60.394 133RD ST E-RT 95-01-01 99-12-31 60 MO (R)	I16	2	0	0	0	2	0	1	0	12.3	22.49+	.000	.00	.09	.003	.07	.13				
38 LA 07-0001	60.700 136TH ST. LT. DIRTY. 95-01-01 99-12-31 60 MO (R)	I16	1	0	0	0	1	0	0	0	12.2	22.43+	.000	.00	.04	.003	.07	.13				
38 LA 07-0001	62.668 RD TO ROCK PRODUCT INC 95-01-01 99-12-31 60 MO (R)	I01	0	0	0	0	0	0	0	0	12.0	22.11+	.000	.00	.00	.004	.06	.13				
38 LA 07-0001	63.680 165TH ST. EAST 95-01-01 99-12-31 60 MO (R)	I02	9	0	1	1	9	0	2	0	12.6	23.91+	.000	.04	.38	.011	.17	.34				
38 LA 07-0001	64.681 175TH ST. EAST RT. 95-01-01 99-12-31 60 MO (R)	I17	2	0	2	2	2	0	2	0	12.3	22.60+	.000	.09	.09	.004	.10	.22				
38 LA 07-0001	65.461 AVE "H" RT 95-01-01 99-12-31 60 MO (R)	I17	8	3	5	8	6	0	6	5	12.1	22.09+	.136	.36	.36	.004	.10	.22				
38 LA 07-0001	66.374 190 TH ST E LT 95-01-01 99-12-31 60 MO (R)	I17	1	0	0	0	0	0	0	0	11.8	21.58+	.000	.00	.05	.004	.10	.22				
38 LA 07-0001	66.871 195 TH ST E- 95-01-01 99-12-31 60 MO (R)	I02	0	0	0	0	0	0	0	0	11.6	21.31+	.000	.00	.00	.011	.17	.34				
38 LA 07-0001	67.255 199TH ST E-LT 95-01-01 99-12-31 60 MO (R)	I16	4	0	4	4	2	0	2	0	11.5	21.09+	.000	.19	.19	.003	.07	.13				

+ DENOTES HV USED IN RATES

XR253-A 06-01-00

TASAS TABLE B DISTRICT
SELECTIVE ACCIDENT RATE CALCULATION

PAGE 3

O C A T I O N	D E S C R I P T I O N	RA	*-(RUS)	TOT FAT	INJ	F+I	VEH	WET	DARK	INJ	X-ST	MV+	OR	TOTAL	*-(ACCIDENT RATE ACES/MV+ OR MVH-*	ACTUAL			
																FAT	F+I	TOT	
38 LA 7-0001	67.881 LARGO VISTA RD - RT 95-01-01 99-12-31 60 MO (R)	117	6	0	2	2	5	1	1	1	0	11.3	20.98+	.000	.10	.29	.004	.10	.22
38 LA 7-0001	68.222 207TH ST. LT DIRT. 95-01-01 99-12-31 60 MO (R)	116	1	0	0	0	1	1	1	1	0	11.2	20.50+	.000	.00	.05	.003	.07	.13
38 LA 7-0001	68.885 213TH ST. E. DIRT RT. 95-01-01 99-12-31 60 MO (R)	117	2	0	2	2	0	0	0	2	0	11.0	20.14+	.000	.10	.10	.004	.10	.22
38 LA 7-0001	69.358 AHTELOPE HWY RTE 138 95-01-01 99-12-31 60 MO (R)	117	14	0	6	6	9	0	5	0	10.0	28.87+	.000	.21	.48	.004	.10	.22	

+ DENOTES MV USED IN RATES

330-CONTROLS
NO 1474

ALL ACCIDENTS LA

138 PM 051.410--069.359

04-01-94 THRU 03-31-99

T.LANGLEY

PAGE
NO. 660

1

SUBMITTORS DISTRICT 72

SUBMITTORS NAME ZABALA

ACCIDENTS SELECTED 372

- MESSAGES -

LOCATION CRITERIA

DISTRICT 07 POSTMILE FROM 051.410 TO 069.359
ROUTE 138 OR FROM TO
COUNTY LA OR FROM TO

DATE RANGE FROM 04-01-94 TO 03-31-99
OR FROM TO
OR FROM TO

ACCIDENT AND HIGHWAY CRITERIA - NONE

PRIMARY COLLISION FACTOR		TYPE OF COLLISION		ROADWAY CONDITION	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
31	8.3	28	7.5	2	0.5
16	4.3	42	11.2	2	0.5
49	13.1	107	28.7	2	0.5
74	19.8	80	21.5	13	3.4
105	28.2	73	19.6	1	0.2
80	21.5	24	6.4	5	1.3
5	1.3	9	2.4	345	92.7
5	1.3	9	2.4	1	0.2
4	1.0	0	0.0	1	0.2
3	0.8	0	0.0		
0	0.0	0	0.0		
0	0.0	0	0.0		

WEATHER		LIGHTING		ROAD SURFACE	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
312	83.8	238	63.9	336	90.3
44	11.8	19	5.1	30	8.0
12	3.2	38	10.2	4	1.0
3	0.8	77	20.6	0	0.0
0	0.0	0	0.0	2	0.5
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0

RIGHT OF WAY CONTROL		HIGHWAY GROUP		INTERSECTION OR RAMP ACCIDENT LOCATION	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
114	30.6	0	0.0	0	0.0
1	0.2	0	0.0	0	0.0
0	0.0	67	18.0	0	0.0
256	68.8	305	81.9	0	0.0
1	0.2	0	0.0	73	19.6
				9	2.4
				290	77.9

--- PARTY SUMMARY ---

PARTY TYPE		MOVEMENT PRECEDING COLLISION		SPECIAL INFORMATION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
296	79.5 A-PASHGR CAR/STA WAGON	74	19.8 A-STOPPED	1	0.2 A-HAZARDOUS MATERIALS
2	0.5 B-PASHGR CAR W/TRALR	262	70.4 B-PROCEEDED STRAIGHT	0	0.0 B-FIRE INVOLVED
1	0.2 C-MOTORCYCLE	57	15.3 C-RAN OFF ROAD	0	0.0 C-TIRE DEFECT/FAILURE
171	45.9 D-PICKUP/PANEL TRUCK	12	3.2 D-HAKING RIGHT TURN	372	100.0 C--NOT STATED
18	4.8 E-PICKUP/PANEL W/TRALR	52	13.9 E-HAKING LEFT TURN	0	0.0 --DOES NOT APPLY
9	2.4 F-TRUCK/TRUCK TRACTOR	6	1.6 F-HAKING U TURN	0	0.0 -INVALID CODES
29	7.7 G-TRK/TRACTOR & 1 TRALR	2	0.5 G-BACKING	0	
4	1.0 2-TRK/TRACTOR & 2 TRALR	38	10.2 H-SLOWING, STOPPING		
0	0.0 3-TRK/TRACTOR & 3 TRALR	32	8.6 I-PASS OTHER VEHICLE		
0	0.0 4-SINGLE UNIT TANKER	6	1.6 J-CHANGING LANES		
0	0.0 5-TRK/TRA & 1 TANK TRLR	0	0.0 K-PARKING		
0	0.0 6-TRK/TRA & 2 TANK TRLR	7	1.8 L-ENTER FROM SHLDR		
0	0.0 H-SCHOOL BUS	19	5.1 M-OTHER UNSAFE TURN		
2	0.5 I-OTHER BUS	22	5.9 N-CROSS INTO OPP LN		
4	1.0 J-EMERGENCY VEHICLE	2	0.5 O-PARKED		
0	0.0 K-HIGHWAY CONST EQUIP	2	0.5 P-MERGING		
0	0.0 L-BICYCLE	2	0.5 Q-TRVL WRONG WAY		
10	2.6 M-OTHER-NON-MOTOR VEH	9	2.4 R-OTHER		
4	1.0 N-OTHER-NON-MOTOR VEH	1	0.2 S--NOT STATED		
4	1.0 O-SPILLED LOADS				
2	0.5 P-DISENGAGED TOV				
0	0.0 Q-UNINVOLVED VEHICLE				
0	0.0 R-HOPED				
0	0.0 T-TRAIL				
0	2.1 U-PEDESTRIAN				
1	0.2 V-DISHOUNT PEDESTRIAN				
0	0.0 W-ANIMAL - LIVESTOCK				
0	0.0 X-ANIMAL - DEER				
1	0.2 Z-ANIMAL - OTHER				

----- DIRECTION OF TRAVEL -----

NUMBER	PCT CODE
50	13.4 N-N, HE, NW BOUND
48	12.9 S-S, SE, SW BOUND
203	54.5 E-EASTBOUND
211	56.7 W-WESTBOUND
10	2.6 S--NOT STATED
0	0.0 --DOES NOT APPLY

----- OTHER ASSOCIATED FACTOR -----

# 1		# 2	
NUMBER	PCT	NUMBER	PCT CODE
0	0.0	0	0.0 1-INFLUENCE ALCOHOL
4	1.0	0	0.0 2-FOLLOW TOO CLOSE
5	1.3	0	0.0 3-FAILURE TO YIELD
12	3.2	0	0.0 4-IMPROPER TURN
17	4.5	0	0.0 5-SPEEDING
29	7.7	0	0.0 6-OTHER VIOLATIONS
3	0.8	0	0.0 F-IMATTENTION
63	16.9	0	0.0 G-STOP & GO TRAFFIC
4	1.0	0	0.0 H-ENTER/LEAVE RAMP
0	0.0	0	0.0 I-PREVIOUS COLLISION
3	0.8	0	0.0 J-UNFAHILAR WITH ROAD
4	1.0	0	0.0 K-DEFECT VEHICLE EQUIP
1	0.2	0	0.0 L-UNINVOLVED VEHICLE
4	1.0	0	0.0 M-OTHER APPARENT
2	0.5	0	0.0 N-WIND ACCIDENT
320	86.0	0	0.0 R-RAMP ACCIDENT
12	3.2	0	0.0 S-RUNAWAY VEHICLE
0	0.0	0	0.0 T-100.0 <-NOT STATED
0	0.0	0	0.0 U--DOES NOT APPLY
23	6.1	372	100.0 <-NOT STATED
0	0.0	0	0.0 V--DOES NOT APPLY

330 ACC-SUMMARY
NO 1474

ALL

ACCIDENTS LA 138 PH

TASAS SELECTIVE RECORD RETRIEVAL
051.410--069.359

04-01-94 THRU 03-31-99

T.LANGLAY

02-04-00 PAGE 5
NO. 660

PRIMARY		OBJECT STRUCK		LOCATION OF COLLISION		OTHERS	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
1	0.2	1	0.2	01-SIDE OF BRIDGE RAILING	8	2.1	0.8
0	0.0	0	0.0	02-END OF BRIDGE RAILING	46	12.3	7.2
1	0.2	0	0.0	03-PIER, COLUMN, ABUTMENT	27	7.2	0.0
0	0.0	0	0.0	04-BOTTOM OF STRUCTURE	102	27.4	4.8
0	0.0	0	0.0	05 BRIDGE END POST IN GORE	4	1.0	0.0
1	0.2	0	0.0	06-END OF GUARD RAIL	231	62.0	12.6
0	0.0	0	0.0	07-BRIDGE APPROACH GRD RAIL	11	2.9	0.2
2	0.5	2	0.5	10-LIGHT OR SIGNAL POLE	58	15.5	9.1
12	3.2	4	1.0	11-UTILITY POLE	1	0.2	0.0
0	0.0	2	0.5	12-POLE (TYPE NOT STATED)	12	3.2	0.5
3	0.8	4	1.0	13-TRAFFIC SIGN/SIGN POST	0	0.0	0.0
0	0.0	0	0.0	14-OTHER SIGNS NOT TRAFFIC	0	0.0	0.0
4	1.0	5	1.3	15-GUARDRAIL	0	0.0	0.0
1	0.2	0	0.0	16-BARRIER	0	0.0	0.0
0	0.0	1	0.2	17-WALL (EXCEPT SOUND WALL)	67	18.0	99.4
3	0.8	4	1.0	18-DIKE OR CURB	0	0.0	0.0
0	0.0	0	0.0	19-TRAFFIC ISLAND	0	0.0	0.0
0	0.0	0	0.0	20-RAISED BARS	0	0.0	0.0
1	0.2	0	0.0	21-CONCRETE OBJ(HDWL, D.I.)	0	0.0	0.0
2	0.5	1	0.2	22-GUIDEPOST, CULVERT, PH	0	0.0	0.0
8	2.1	3	0.8	23-CUT SLOPE OR EMBANKMENT	0	0.0	0.0
5	1.3	4	1.6	24-OVER EMBANKMENT	0	0.0	0.0
0	0.0	2	0.5	25-IN WATER	370	99.4	0.0
5	1.3	2	0.5	26-DRAINAGE DITCH	0	0.0	0.0
2	0.5	2	0.5	27-FENCE	0	0.0	0.0
0	0.0	0	0.0	28-TREES	0	0.0	0.0
0	0.0	0	0.0	29-PLANTS	342	91.9	0.0
0	0.0	0	0.0	30-SOUND WALL	30	8.0	0.0
0	0.0	0	0.0	40-NATURAL MATRIL ON ROAD	5	1.3	0.0
1	0.2	0	0.0	41-TEMP BARRICADES, CONES	4	1.0	0.0
3	0.8	0	0.0	42-OTHER OBJECT ON ROAD	0	0.0	0.0
14	3.7	3	0.8	43-OTHER OBJECT OFF ROAD	0	0.0	0.2
24	6.4	36	9.6	44-OVERTURNED	46	12.3	0.5
2	0.5	0	0.0	45-CRASH CUSHION(SAND)	0	0.0	0.0
0	0.0	0	0.0	46-CRASH CUSHION(OTHER)	0	0.0	0.0
0	0.0	1	0.2	51-CALL BOX	10	2.6	0.0
0	0.0	0	0.0	98-UNKNOWN OBJECT STRUCK	363	97.5	0.0
6	1.6	5	1.3	99-NO OBJECT INVOLVED	0	0.0	0.0
269	72.3	45	12.0	V1 THRU V9-VEHICLE 1 TO 9	0	0.0	0.0
0	0.0	0	0.0	<<-NOT STATED	0	0.0	0.0
59	15.8	370	99.4	---DOES NOT APPLY	0	0.0	0.0
0	0.0	0	0.0	--INVALID CODES	0	0.0	0.0

-----SOBRIETY-----
NUMBER PCT
342 91.9
30 8.0
5 1.3
4 1.0
0 0.0
0 0.0
46 12.3
0 0.0
0 0.0
20 5.3
0 0.0

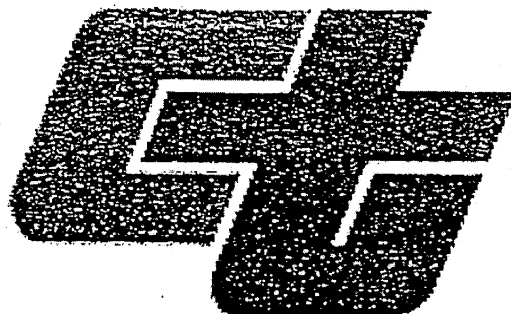
-----DRUG/PHYSICAL CODE
NUMBER PCT
0 0.0
0 0.0
0 0.0
0 0.0
1 0.2
2 0.5
0 0.0
0 0.0
10 2.6
363 97.5
0 0.0
0 0.0

A-HAD NOT BEEN DRINKING
B-HBD - UNDER INFLUENCE
C-HBD - NOT UNDER INFLUENCE
D-HBD - IMPAIRMENT UNKNOWN
E-UNDER DRUG INFLUENCE
F-OTHER PHYSICAL IMPAIRMENT
G-IMPACTMENT NOT KNOWN
H-NOT APPLICABLE
I-FATIGUE
--NOT STATED
--INVALID CODES

Caltrans District 7-Division of Operations
OFFICE OF TRAFFIC INVESTIGATIONS

*Median Barrier
Investigation Report*

for State Route



Caltrans

November 1998

TABLE OF CONTENTS

	<u>Page</u>
Executive Summary.....	1
I. Purpose.....	2
II. Background Information.....	2
a. Highway 138 Safety Corridor	
b. Daytime Headlight Safety Program	
c. Scheduled Long-term Improvements	
d. Annual Two and Three Lane Safety Monitoring Program	
III. Description of the Highway.....	3
a. Overview	
b. Traffic Volumes	
IV. Accident History.....	5
a. Total Accidents	
b. Types of Accidents	
c. Primary Collision Factors	
d. Cross-centerline accidents	
V. Analysis.....	9
a. Median Barriers on 2/3-lane Highways	
b. Analysis of 23-miles by segments	
c. Identification of cross-centerline accident concentration locations	
VI. Recommendations.....	16
VII. Conclusion.....	18

ATTACHMENTS

	<u>Page</u>
A. Location Map.....	A-1
B. TASAS Printout of cross-centerline accidents.....	B-1
C. Caltrans Deputy Directive (DD-50): "Installation of Barrier on Two- or Three-lane Facilities"-dated March 15, 1996.....	C-1
D. Proposed Route 138 Widening Project.....	D-1

LIST OF FIGURES

	<u>Page</u>
1. Average Annual ADT for Pearblossom Highway.....	4
2. 5-Year Accident Severity for Pearblossom Highway.....	5
3. 5-Year Accident Rate for Pearblossom Highway.....	5
4. 5-Year Accident Type for Pearblossom Highway.....	6
5. 5-Year Accident Primary Collision Factors for Pearblossom Highway ...	6
6. 5-Year Cross-centerline Accidents with Severity / Side of Highway for Pearblossom Highway.....	8

POINT OF CONTACT

This report was prepared by Caltrans District 7 Office of Traffic Investigations. Should there be questions regarding the contents of this report, please contact Mr. Edward Shiao, the Area Engineer for Pearblossom Highway (Route 138), at Caltrans District 7, 120 South Spring Street, Los Angeles, CA 90012, or (213) 897-0246.

EXECUTIVE SUMMARY

The Los Angeles County Board of Supervisors wrote a letter to Caltrans on September 2, 1998 requesting an investigation of the feasibility to install center barriers on Pearblossom Highway (Route 138) on the curves near Little Rock Creek, 106th Street East, Avenue W, and any other location with a history of fatal head-on collisions.

- In this report, the resulting investigation reviewed the feasibility of concrete median barriers on Pearblossom Highway from 60th Street East to the Los Angeles / San Bernardino County Line - a distance of approximately 23 miles. The investigation considered the existing safety programs, accident history, existing highway conditions, and the advantages / disadvantages of concrete median barriers.

There are several locations along Pearblossom Highway that were determined to have a history of cross-centerline accidents. Each location has an existing centerline striping pattern typical of most conventional two-lane highways. Options such as barrier striping, buffer zones, etc., have not been previously considered.

This investigation concluded that the use of concrete median barriers is not the most appropriate improvement at this time. Although concrete median barriers will eliminate most, if not all of the cross-centerline accidents, median barriers will probably increase the total accident rate, reduce recovery area, reduce sight distance, and restrict access to the highway - all contributing to increased driver frustration. For these reasons, alternatives that have been proven to reduce cross-centerline accidents need to be tried first.

Applicable examples that appear feasible for Pearblossom Highway include installing soft median barriers by adding centerline buffer zones, using raised profile thermoplastic striping, and adding left-turn pockets. These proven and cost-effective alternatives discourage drivers from unintentionally crossing the centerline.

The best long-term improvement is to widen Pearblossom Highway to four lanes. A project is currently scheduled, with an estimated completion date of December 2004 (subject to total funding availability).

The recently formed Highway 138 Safety Task Force offers a comprehensive "corridor approach" to improving safety on Pearblossom Highway. After only two months, incorporating enhanced enforcement and public education activities with the highway engineering improvements already indicates a significant reduction in accidents. We will continue to work with the Safety Task Force to improve Pearblossom Highway.

I. PURPOSE

This is a median barrier investigation report for Pearblossom Highway (Route 138) from approximately 60th Street East to the Los Angeles / San Bernardino County Line, a distance of approximately 23 miles, to determine the advisability of installing median barriers.

This investigation is in response to a request from the Los Angeles County Board of Supervisors on September 2, 1998. They requested a feasibility study of installing median barriers on portions of State Route 138 at the curves near Littlerock Creek, 106th Street East / Avenue V-8, 175th Street East / Avenue W, and any other location where there is a history of fatal head-on collisions. A fatal accident that occurred on August 21, 1998 at post mile 65.46 prompted this investigation.

II. BACKGROUND INFORMATION

A. This portion of Pearblossom Highway was designated a Safety Corridor on September 2, 1998.

At the request of Assemblyman George Runner, 36th District of the California Assembly, Caltrans assembled a task force comprising members of Caltrans, California Highway Patrol, Los Angeles County Department of Public Works, and other local city and community leaders and organizations.

The goal of the task force is implement immediate and effective measures to improve the safety of Pearblossom Highway. The corridor approach offers the advantage of assembling a diverse team with differing perspectives of how to improve safety. The task force has developed an action plan based on enhancing enforcement, highway engineering, and community awareness.

During the first two months, task force members have identified over 80 highway engineering suggestions and comments. The suggestions include a variety of issues, such as signing and striping, turn pockets, and parking along the highway. As of November 1998, six highway-engineering recommendations have been turned into completed improvements. Many more are anticipated.

The success of the task force and the safety corridor concept has received much well deserved attention. We will continue to work with the task force to improve safety on Pearblossom Highway.

B. A voluntary Daytime Headlight Safety Program was implemented along this portion of Pearblossom Highway in 1991.

At the request of Supervisor Michael Antonovich, 5th District Supervisor of the County of Los Angeles, Caltrans initiated a Daytime Headlight Safety Program on Pearblossom Highway in 1991.

This voluntary program appears to be a contributing factor in reducing head-on collisions during daylight hours and reducing the total number of accidents. The increased use of headlights during daylight hours encourages motorists to be more aware of on-coming vehicles, more alert, and provides better overall visibility.

C. The long-term scheduled improvement for Pearblossom Highway (Route 138) is widening the highway to four lanes from Avenue T to the Junction with Route 18.

The preliminary design recommends a 16 foot paved median with an 8 foot outside shoulder. At this time, widening the highway is the recommended long-term improvement alternative for reducing the frequency and severity of cross-centerline accidents.

D. The Annual Two and Three Lane Monitoring Program report for Pearblossom Highway (Route 138) was completed on July 2, 1998 and recommends continuing with the Daytime Headlight Safety Program until the proposed widening improvements are implemented.

The Two and Three Lane Safety Monitoring Program monitors fatal head-on collisions along Pearblossom Highway between post miles 51.88 and 65.50. This program established in 1996 focuses on reducing the number of head-on cross-centerline accidents on two and three-lane roadways. The program requires investigations for fatal head-on collisions and helps identify locations requiring improvements.

III. DESCRIPTION OF THE HIGHWAY

A. Overview.

The 23-miles of Pearblossom Highway being investigated is a rural two-lane conventional highway located between the City of Palmdale and the Los Angeles / San Bernardino County Line. There are two short segments of three and four-lane highway. As the highway passes through the unincorporated communities of Littlerock and Pearblossom there is light business / residential development along the highway. East of Pearblossom, the highway passes through the unincorporated community of Llano and has minimal roadside development.

The highway is generally on an east-west alignment. There are three curved segments within the 23 miles that are best described as extended reverse curves. These three curved segments are located at (1) west of Little Rock Creek Bridge, (2) between 106th Street East and 116th Street East, and (3) between 175th Street East and Avenue W.

The elevation of the highway increases to the east, with most of the 23-miles over 3,000 feet. There are sections of highway, particularly east of the Community of Pearblossom, where the highway crosses rolling terrain. This occasionally limits passing sight distance and requires no-passing zones.

Located in the high desert, the highway is subject to a particularly harsh climate. This creates problems for highway maintenance. Snow removal in the winter often results in loss of pavement markers. Together with the hot summers, thermoplastic applications on the highway rapidly deteriorate. There are numerous north flowing ephemeral streams along the 23-miles that occasionally flood the highway.

B. Traffic Volumes.

The 1997 annual average daily traffic (Annual ADT) decreases from approximately 15,000 to 7,000 along the 23 miles, as shown in figure 1. Truck traffic generally accounts for approximately 10% of the total vehicles.

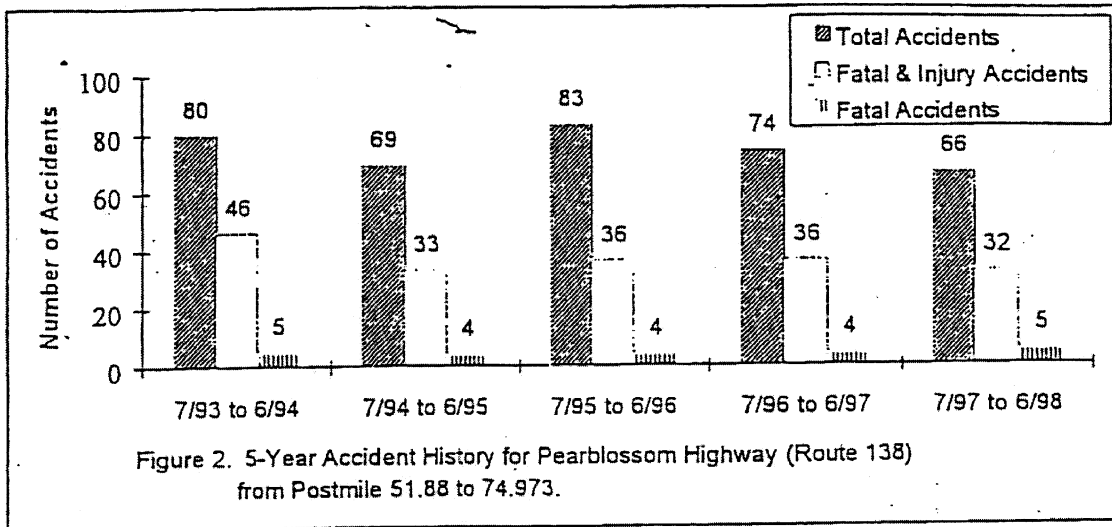
<u>PM</u>	<u>Description</u>	<u>Peak Hour</u>	<u>ADT Pk MO</u>	<u>ADT Annual</u>
53.55	Little Rock Creek	1,350	15,600	15,000
56.17	Little Rock, 96th St E	1,350	15,600	15,000
60.17	Pearblossom, Longview Rd	1,250	14,300	13,700
63.68	Llano, 165th St E	1,100	12,900	12,300
69.30	Junction Route 18	1,150	13,200	12,600
		620	7,200	6,900

Figure 1. Average Annual ADT for Pearblossom Highway.

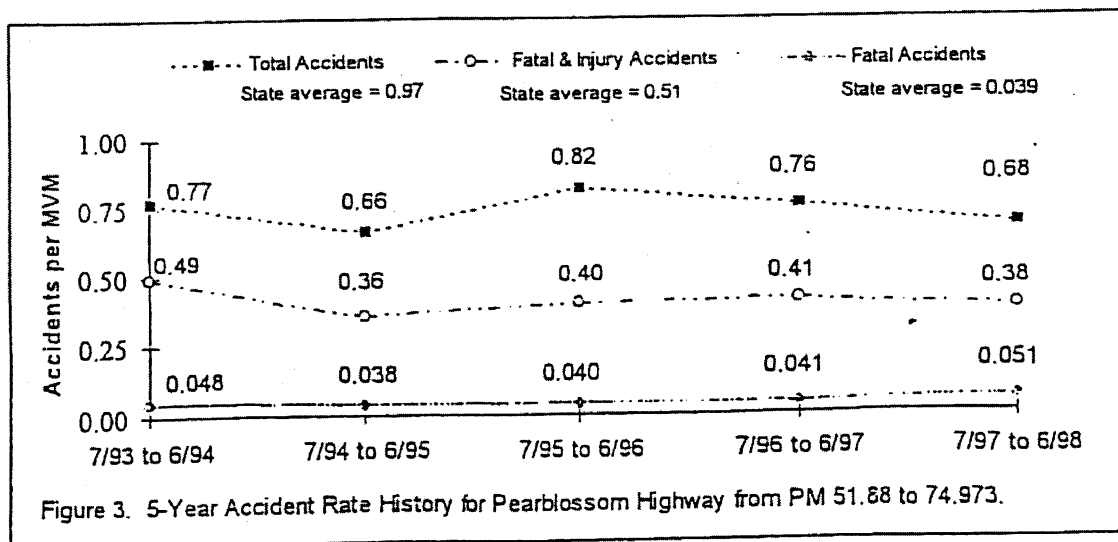
IV. ACCIDENT HISTORY

A. Total Accidents.

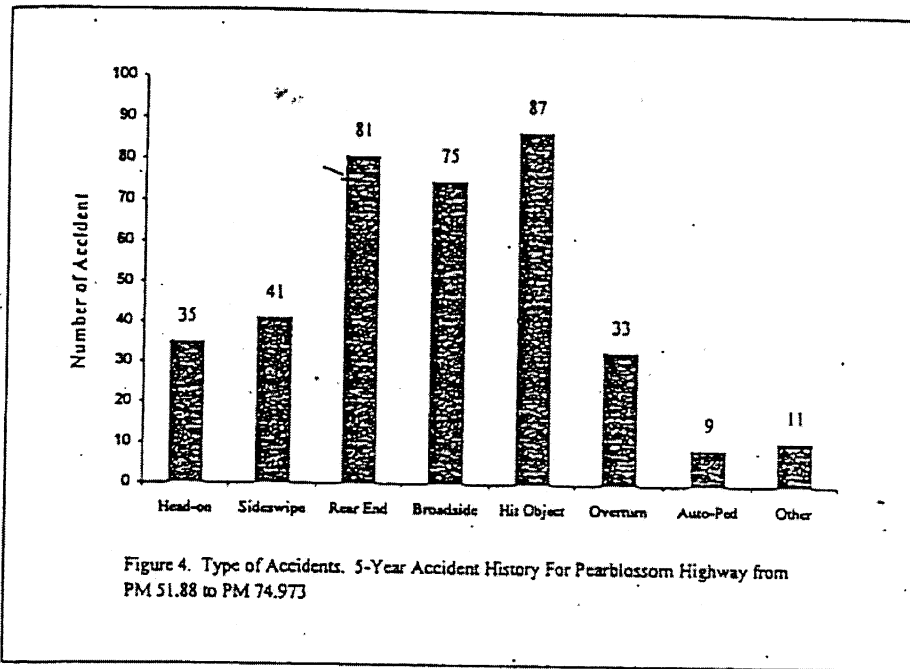
The annual data for the entire 23-mile segment of Pearblossom Highway shows an annual trend of decreasing injury and property damage only accidents in recent years. However, the number of fatality accidents has remained constant. See figure 2.



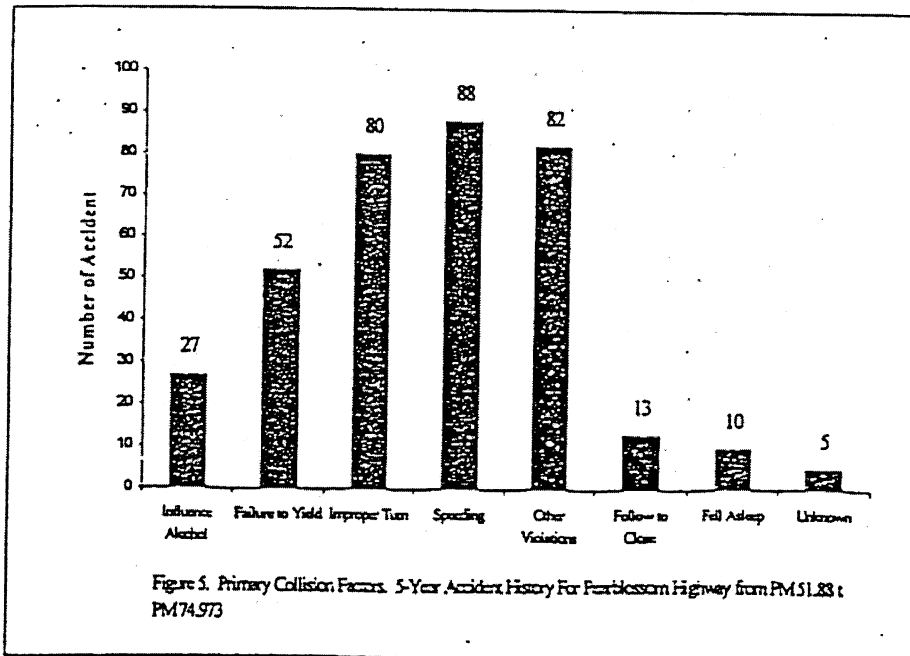
Accident rate data accounts for annual variations in traffic volumes. The annual accident rates show the same trend as the data for total number of accidents. This also allows comparison with the state average for similar highways. See figure 3.



B. Types of Accidents. Hit object, rear end, and broadside accidents account for 65% of all accidents. See Figure 4.



C. Primary Collision Factors. Speeding is the primary collision factor in 24% of the accidents along the 23-miles, followed closely by Other Violations (22%) and Improper Turns (22%). See figure 5.



D. Cross-centerline Accidents.

The criteria used to identify cross-centerline accidents were: (1) A minimum of one vehicle from each opposing direction was involved in a collision; and (2) intentional movements such as left-turns or U-turns are excluded.

The cross-centerline accident history was developed using TASAS (Traffic Accident Surveillance and Analysis System) data for the 5-year period from 7/93 to 6/98. This represents the most current data available.

	<u># OF FATAL Cross-centerline Accidents</u>	<u># OF TOTAL Cross-centerline Accidents</u>
7/93 to 6/94	4	9
7/94 to 6/95	3	12
7/95 to 6/96	1	5
7/96 to 6/97	2	10
7/97 to 6/98	2	9
	<hr/>	<hr/>
Total for 5 years (7/93 to 6/98)	12	45

In figure 6, the cross-centerline accident data is organized to show the accident locations by year and post mile. The side of highway and severity data is included to further allow identification of problem locations.

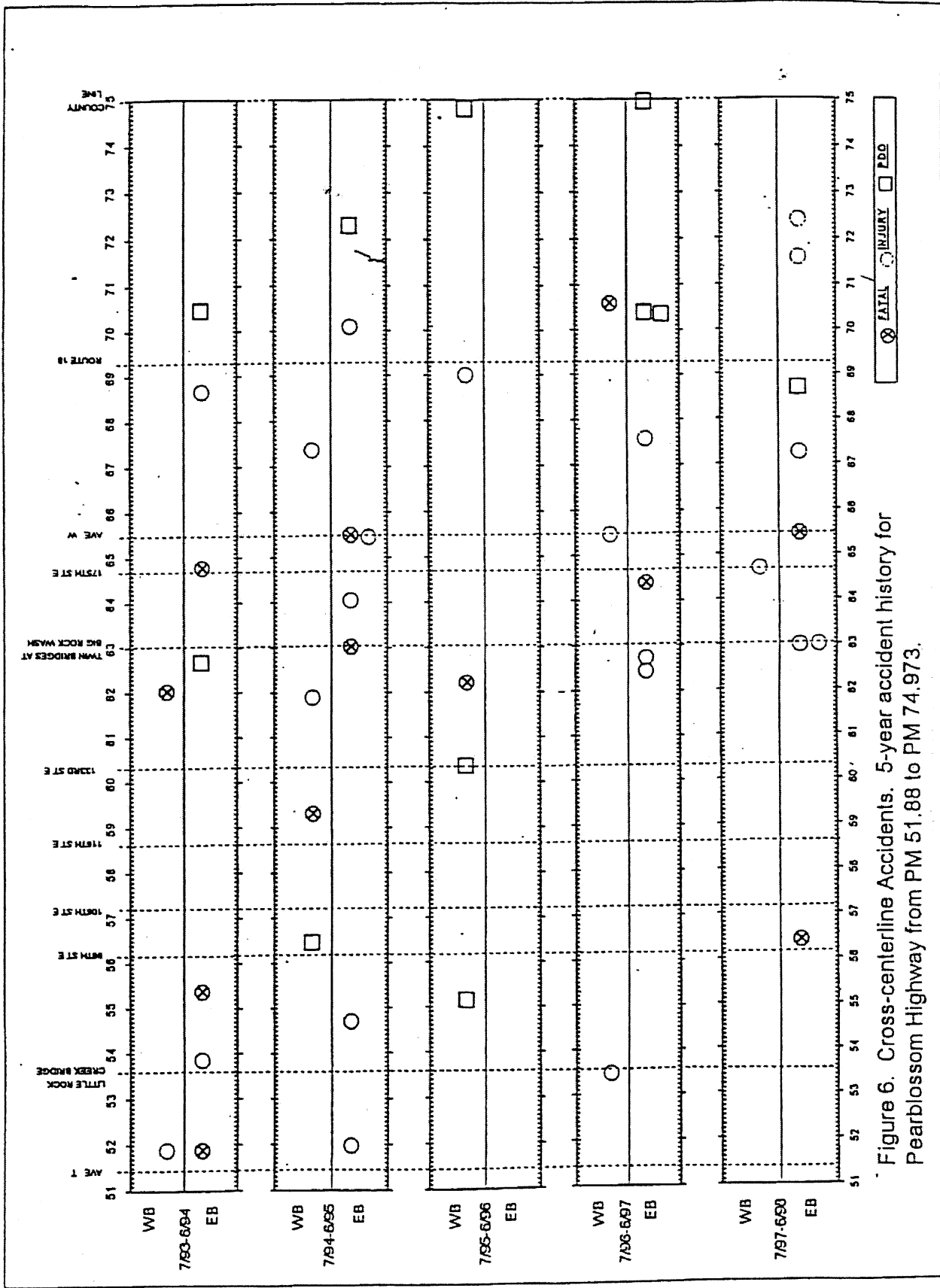


Figure 6. Cross-centerline Accidents. 5-year accident history for Pearblossom Highway from PM 51.88 to PM 74.973.

V. ANALYSIS

A. Median Barriers on 2/3-lane Highways.

The use of concrete median barriers will eliminate most, if not all cross-centerline accidents. However, there are two key negative impacts:

- A probable increase in the overall accident rate due to vehicles striking the barrier and a reduced recovery area
- The restriction or elimination of vehicle access to the highway caused by the barrier may result in reduced sight distance at barrier openings, restricted access for emergency vehicles, increased driving costs, increased driver frustration, and possible economic losses to local business establishments

Current policy on concrete barriers is outlined in the Caltrans Deputy Directive, "Installation of Barrier on Two- or Three-Lane Facilities", dated March 15, 1996. The document outlines the criteria that must be met before installing concrete median barriers on 2/3-lane highways. The required criteria is listed below:

- An increasing trend of severe cross-centerline accidents
- Improvements such as adding lanes or upgrading to an expressway or freeway are not viable options due to funding and/or environmental constraints
- Other reasonable options such as buffer zones, barrier striping, etc., have proven ineffective at the location under study
- Operational features of the roadway include high speeds, high volumes, minimal ingress/egress, and few intersections
- After installation, the roadway meets all minimum design standards as outlined by the State and Local Project Development Program

Based on this Caltrans policy, installation of concrete median barriers on Pearblossom Highway is not recommended at this time. The highway is scheduled for upgrading to a 4-lane highway. Also, other reasonable options such as buffer zones have not been tried.

The appropriate course of action for locations that have a pattern of cross-centerline accidents is to first try reasonable options such as buffer zones, barrier striping, rumble strips, turn lanes, turn outs, channelizers, black pavement markers, reducing or eliminating passing areas, or other innovative solutions.

B. Analysis by segments.

The 23-miles of Pearblossom Highway are better analyzed in shorter segments. Nine segments are used, generally selected on the terrain and roadside development.

SEGMENT 1: 60th Street East to Little Rock Creek Bridge (PM 51.880 to PM 53.579) (1.7 miles)

Highway Type = 2-lane conventional transitioning to 4-lane with 16' median

Number of Fatal Cross-Centerline Accidents = 1 (0.12 fatal acc/mi/yr)

Number of Cross-Centerline Accidents = 4 (0.47 acc/mi/yr)

Segment 1 includes the first of three curved sections identified by the Los Angeles County Board of Supervisors. There is approximately a one-mile tangent section with curves on both ends (extended reverse curve). The reverse curve is widened to four lanes with a 16' median and 8' outside shoulders. The section has one intersection. The 1997 ADT was approximately 16,000 vehicles.

The one fatal cross-centerline accident occurred in November 1993 when an eastbound vehicle drifted into the westbound lane at PM 51.9 (east of 60th Street East). Two additional cross-centerline accidents occurred in the same vicinity in 1994 and 1995 along this 0.7-mile two-lane stretch of highway located between two four-lane segments. These 3 accidents comprise the majority of accidents along this stretch of two-lane highway.

The extended reverse curve does not have a history of cross-centerline accidents.

SEGMENT 2: Little Rock Creek Bridge to 96th Street East (Community of Littlerock) (PM 53.580 to PM 56.199) (2.6 miles)

Highway Type = 3-lane w/TWLTTL transitioning to 2-lane conventional

Number of Fatal Cross-Centerline Accidents = 1 (0.08 fatal acc/mi/yr)

Number of Cross-Centerline Accidents = 4 (0.31 acc/mi/yr)

This section includes the Community of Littlerock. The highway has three lanes with a two-way left-turn lane and transitions to a conventional two-lane highway at 77th Street East. There are numerous intersections, including the only signalized intersection along the 23-mile segment at 82nd Street East. The 1997 ADT was approximately 15,000 vehicles.

The one fatal cross-centerline accident occurred in August 1993 when an eastbound vehicle drifted into the westbound lane at PM 55.4 (west of 89th Street East). There are three cross-centerline accident locations over 0.7-mile distance east of signalized 82nd Street East intersection. This stretch of highway has limited right of way (60') with locations where vehicles

parked off the right of way have the potential to back onto the highway. Without additional right of way, initiating projects along this stretch that place the traveled way closer to the edge of the existing right of way is not advisable.

SEGMENT 3: 96th Street East to 106th Street East
(PM 56.200 to PM 57.119) (0.9 miles)

Highway Type = 2-lane conventional
Number of Fatal Cross-Centerline Accidents = 1 (0.22 fatal acc/mi/yr)
Number of Cross-Centerline Accidents = 2 (0.47 acc/mi/yr)

This is a tangent section of 2-lane conventional highway between the Communities of Littlerock and Pearblossom. It is located between two intersections with no roadside development or other intersections. The 1997 ADT was approximately 13,700 vehicles.

The one fatal cross-centerline accident occurred in May 1997 when a westbound vehicle drifted into the eastbound lane at PM 56.4 (Approximately mid-way in the stretch). The other cross-centerline accident also occurred at approximately the same vicinity in January 1995.

SEGMENT 4: 106th Street East to 116th Street East
(PM 57.120 to PM 58.699) (1.6 miles)

Highway Type = 4-lane conventional
Number of Fatal Cross-Centerline Accidents = 0
Number of Cross-Centerline Accidents = 0

This section includes the second of three curved sections identified by the Los Angeles County Board of Supervisors. Although this segment of highway is within the Community of Pearblossom, there is little roadside development and few intersections. The highway is widened to four-lanes with a 4' median and 8' outside shoulders. The 1997 ADT was approximately 13,600 vehicles.

This segment of Pearblossom Highway does not have a history of cross-centerline accidents over the last 5 years.

SEGMENT 5: 116th Street East to 133rd Street East
(Community of Pearblossom)
(PM 58.700 to PM 60.439) (1.7 miles)

Highway Type = 2-lane with two-way left-turn lane
Number of Fatal Cross-Centerline Accidents = 1 (0.12 fatal acc/mi/yr)
Number of Cross-Centerline Accidents = 2 (0.23 acc/mi/yr)

This section is within the Community of Pearblossom. The highway is a two-lane conventional highway with a two-way left-turn from 121st Street East to 126th Street East. There is minimal development along the northside of the highway and there are numerous cross-street intersections. The 1997 ADT was approximately 13,300 vehicles.

The one fatal cross-centerline accident occurred in January 1995 between 121st Street East and 123rd Street East when a westbound vehicle that was weaving on the highway drifted left upon entering Pearblossom and struck an eastbound vehicle head-on. The other cross-centerline accident occurred in 1996 by 133rd Street East.

In discussion with local community leaders and the CHP, the problem within this segment appears to be drivers who used the two-way left-turn lane (TWLTL) to pass slower vehicles. This is an enforcement issue. The TWLTL appears to contribute to a relatively low overall accident rate within the Community of Pearblossom.

SEGMENT 6: 133rd Street East to 175th Street East
(PM 60.440 to PM 64.629) (4.2 miles)

Highway Type = 2-lane conventional

Number of Fatal Cross-Centerline Accidents = 4 (0.19 fatal acc/mi/yr)

Number of Cross-Centerline Accidents = 11 (0.53 acc/mi/yr)

Located to the east of the Community of Pearblossom, this is a tangent section of conventional two-lane highway that marks a significant decrease in roadside development. There is one major intersection located at 165th Street East. This section also includes two narrow bridges located at Big Rock Creek Wash. The 1997 ADT was approximately 12,200 vehicles.

Currently passing is permitted for the 2.3-mile stretch of highway between 133rd Street East to the vicinity of 155th Street East, restricted for one-mile around the twin bridges at Big Rock Wash, and permitted for 2300' between 165th Street East and 175th Street East. There are several locations that passing is restricted because of limited passing sight distance due to dips in the roadway.

There are six cross-centerline accidents in the past 5 years on the two-lane tangent section between PM 61.9 and PM 62.7, including 2 fatal accidents. All of the accidents occurred during the daytime, with the westbound drivers initiating the collisions around PM 62.0 and the eastbound drivers initiating the collisions around PM 62.7. A field investigation of the location suggests two explanations for the accident pattern: (1) Vertical crests on the highway requiring a no-passing zone beginning at PM 62.7; and (2) An over-all lack of passing zones along the highway that may encourage drivers to take ill-advised risks.

There are two vertical crests in the highway between PM 62.7 and the twin bridges at PM 63.0. The existing double yellow no-passing zone meets highway design standards. However, there is the possibility that vehicles could be partially obscured by dips in the roadway and

problems compounded by vehicles exceeding the posted 55-mph regulatory speed limit. There is a vertical dip immediately east of the bridges that also obscure vehicles for both approaches.

The current passing zone between Pearblossom and 155th Street East (PM 60.4 to PM 62.7) provides one of the few long stretches of highway where passing is permitted. To the east of this stretch, the highway is a two-lane conventional highway with fewer passing zones. No-passing zones are required because of limited passing sight distance due to horizontal and vertical curves of the highway and required centerline tapers for left-turn pockets at intersections.

There are 3 cross-centerline accidents located at the twin bridges at Big Rock Wash in the past 5 years, including one fatal accident. This location has been previously identified as an accident concentration location in 1996. These two narrow (non-standard width) bridges will ultimately be improved as part of the highway-widening project. In the interim, numerous improvements have been made at this location with a noticeable reduction in the total number of accidents. However, two cross-centerline accidents have occurred since November 1997 - after completion of most of the improvements. Both accidents were due to eastbound drivers passing in a no-passing zone.

SEGMENT 7: 175th Street East to Avenue W
(PM 64.630 to PM 65.509) (0.9 miles)

Highway Type = 2-lane conventional
Number of Fatal Cross-Centerline Accidents = 3 (0.68 fatal acc/mi/yr)
Number of Cross-Centerline Accidents = 6 (1.37 acc/mi/yr)

This section includes the third of the three extended reverse curves identified by the Los Angeles County Board of Supervisors. This section of highway is a conventional two-lane highway with 8' outside shoulders. There are two curves separated by a 0.6-mile tangent section. The 1997 ADT was approximately 12,100 vehicles.

There are currently no left or right-turn pockets at both the 175th Street East and Avenue W intersections with Pearblossom Highway. Both of these intersections lie on or near curves. There is a 2000-foot passing zone located on the tangent section between the two curves.

This segment has the highest cross-centerline accident rate. Four of the six cross-centerline accidents occurred on the curve by the intersection with Avenue W, two on the curve by the intersection with 175th Street East. The August 1998 fatal cross-centerline accident occurred (not included in the accident history) occurred near the intersection with Avenue W. Overall, 16 of the 17 accidents along this segment have resulted in injuries.

All four of the identified accidents at the Avenue W curve occurred at night, as did the August 1998 accident. Speeding and driver errors in judgment are the primary contributing factors. A field investigation suggests that westbound motorists may not be perceiving the highway configuration correctly - possibly having a distorted view of the true highway

alignment. The westbound drivers approaching the curve are driving downhill and see a valley in front of them. Avenue W, a Los Angeles County Road, is on the same horizontal alignment as Pearblossom Highway - and gives the appearance that the highway continues straight. This is especially true at night with a dark highway on the light desert background. There are utility poles along the northside of Pearblossom Highway that continue onto Avenue W and contribute to the illusion.

The other two cross-centerline accidents that occurred at the curve near 175th Street East includes a fatality in July 1993. The curve is well marked for westbound drivers with chevron curve warning signs.

As a result of the mandatory investigation for the fatal cross-centerline accident that occurred at Avenue W in August 1998, chevron curve warning signs were placed for westbound drivers approaching the curve at Avenue W. This was considered a prudent immediate solution to a location with a changing accident pattern.

When considering what types of additional improvements might be made along this section, two facts should be strongly considered. First of all, this extended curve has very similar geometry to the other two extended curves along this 23-mile segment. It has two 1000-foot radius curves separated by approximately a 0.7-mile tangent section. However, the other two curves have been widened to 4-lanes and have no record of cross-centerline accidents. Secondly, this is the first curved section encountered by a westbound driver. As indicated by the August 1998 fatal accident, even experienced drivers familiar with this road forget where this curve is located.

SEGMENT 8: Avenue W to Junction Route 18
(PM 65.510 to PM 69.349) (3.8 miles)

Highway Type = 2-lane conventional
Number of Fatal Cross-Centerline Accidents = 0
Number of Cross-Centerline Accidents = 6 (0.31 acc/mi/yr)

This is a tangent section of two-lane conventional two-lane highway with 8' outside shoulders. There is minimal roadside development and few intersections. The 1997 ADT was approximately 11,200 vehicles.

All six accidents appear to be located near the intersections at 199th Street East (PM 67.25) or Largo Vista Road (PM 67.88). Two of the accidents are alcohol related, one related to passing in windy conditions, and the other three accidents are due to miscellaneous driver violations.

Overall, this segment does not have a significant cross-centerline accident problem. The junction of Pearblossom Highway with Route 18 has been identified by the Safety Corridor Task Force as a location that needs to be studied, however this intersection does not appear to have a cross-centerline accident history.

SEGMENT 9: Junction Route 18 to Los Angeles / San Bernardino County Line
(PM 69.350 to PM 74.973) (5.6 miles)

Highway Type = 2-lane conventional

Number of Fatal Cross-Centerline Accidents = 1 (0.04 fatal acc/mi/yr)

Number of Cross-Centerline Accidents = 10 (0.36 acc/mi/yr)

This is a tangent section of two-lane conventional highway. There is no paved outside shoulder. There is minimal roadside development and few intersections. The 1997 ADT was approximately 7,000 vehicles.

Unlike the other segments, this segment traverses a washboard terrain with numerous passing zone restrictions due to limited passing sight distance. Five of the 10 cross-centerline accidents involve passing, suggesting the restricted sight distance is a problem. However, the primary collision factors for this segment indicate that 5 accidents are due to miscellaneous driver violations, 3 accidents are due to alcohol, 1 driver fell-asleep, and 1 unknown cause.

There are five cross-centerline accidents located from PM 70.09 to PM 70.60, a distance of approximately a half-mile. This is centered on the California Aqueduct Bridge, located at PM 70.20. One-direction passing zones are located within this stretch of highway. The accident pattern indicates that the existing centerline striping of alternating passing and no-passing zones needs to be modified. Much like the vertical curves located west of the twin bridges, the existing striping meets highway design criteria. However, the increased frequency of cross-centerline accidents suggests that the existing centerline striping needs to be re-evaluated.

C. Identification of the cross-centerline accident concentration locations.

Based on the cross-centerline accident history and the segment analysis, there are three locations along the 23-mile stretch of Pearblossom Highway that warrant interim corrective measures. The three locations are:

(1) A 1.2-mile section of highway west of and including the twin bridges at Big Rock Wash (PM 61.9 to 63.1) located within Segment 6. Selection is based on 9 accidents, including 3 fatal accidents in the past 5 years.

(2) The extended reverse curve between 175th Street East and Avenue W (PM 64.7 to PM 65.7) located within Segment 7. Selection is based on 6 accidents, including 3 fatal accidents in the past 5 years.

(3) A 0.5-mile section of highway adjacent to the California Aqueduct Bridge near 223rd Street East (PM 70.10 to 70.60) located within Segment 9. Selection is based on 5 accidents, including 1 fatal accident in the past 5 years.

VI. RECOMMENDATIONS

Do not install concrete median barriers on Pearblossom Highway at this time.

Concrete median barriers will eliminate most, if not all of the cross-centerline accidents. However, the use of concrete median barriers usually results in an increase of the total number of accidents. Other undesirable effects include a reduced recovery area, reduced sight distance, and restricted access to the highway - all potentially contributing to increased driver frustration.

Installation of concrete median barriers will require openings at intersections, producing blunt ends that will require protection by energy absorbing devices. Also, the existing highway will have to be widened to provide the required inside shoulders between the traveled way and the barrier.

After considering the disadvantages of installing concrete median barriers, it seems prudent to first try alternatives that have been proven successful at reducing cross-centerline accidents. Examples of these alternatives include:

- Black raised pavement markers within the standard striping pattern
- Raised or inverted profile thermoplastic for the edge line or barrier stripe
- Shoulder rumble strip
- Centerline rumble strip
- Flexible delineators or channelizers
- Pavement contrast treatment for shoulders and centerlines
- Painted islands, raised islands, or other channelization
- Left or right-turn lanes
- Centerline buffer zone using various combinations of black or other raised pavement markers, raised or inverted profile thermoplastic, rumble strip, and channelizers
- Reducing or eliminating passing areas (possible application of centerline buffer zone) or improving passing sight distance

The decision on which alternatives to use depends on the geometric and operating characteristics of the highway. These cost-effective improvements can create a visual, tactile, and auditory effect for motorists crossing the centerline.

For each of the three identified locations that have a history of cross-centerline accidents, the following alternatives appear to be feasible and are being considered. These improvements, together with the "corridor approach" of integrating enhanced enforcement and public education activities, offers the best cost-effective strategy for improving the safety of Pearblossom Highway until the highway can be widened.

Location 1:

(PM 61.9 to 63.1)

A 1.2-mile section of highway west of and including the twin bridges at Big Rock Wash located within Segment 6.

Short-term Improvements

- Install larger Narrow Bridge signs at the narrow bridges at Big Rock Wash
- Extend the existing no-passing zone approximately 0.3 miles to the west

Intermediate-term Improvements

- Add centerline buffer zone to the no-passing zone
- Use raised profile thermoplastic striping
- Use black pavement markers in the passing zone to the west

Location 2:

(PM 64.7 to PM 65.7)

The extended reverse curve between 175th Street East and Avenue W - located within Segment 7.

Short-term Improvements

- Install chevron curve warning signs for westbound motorists approaching Avenue W (completed 11/98)
- Change the existing 2000' passing zone between 175th Street East and Avenue W to a no-passing zone
- Install a no-passing zone approximately 1000' to the east of Avenue W

Intermediate-term Improvements

- Install a left-turn pocket at Avenue W
- Add centerline buffer zone to the no-passing zone
- Use raised profile thermoplastic striping
- Install safety lighting at the intersection at Avenue W

Location 3:

(PM 70.10 to 70.60)

A 0.5-mile section of highway adjacent to the California Aqueduct Bridge near 223rd Street East - located within Segment 9.

Short-term Improvements

- Install a no-passing zone in the vicinity of the California Aqueduct Bridge (PM 70.20)

Intermediate-term Improvements

- Use black raised pavement markers in the existing centerline striping pattern
- Use raised profile thermoplastic striping

VII. CONCLUSION

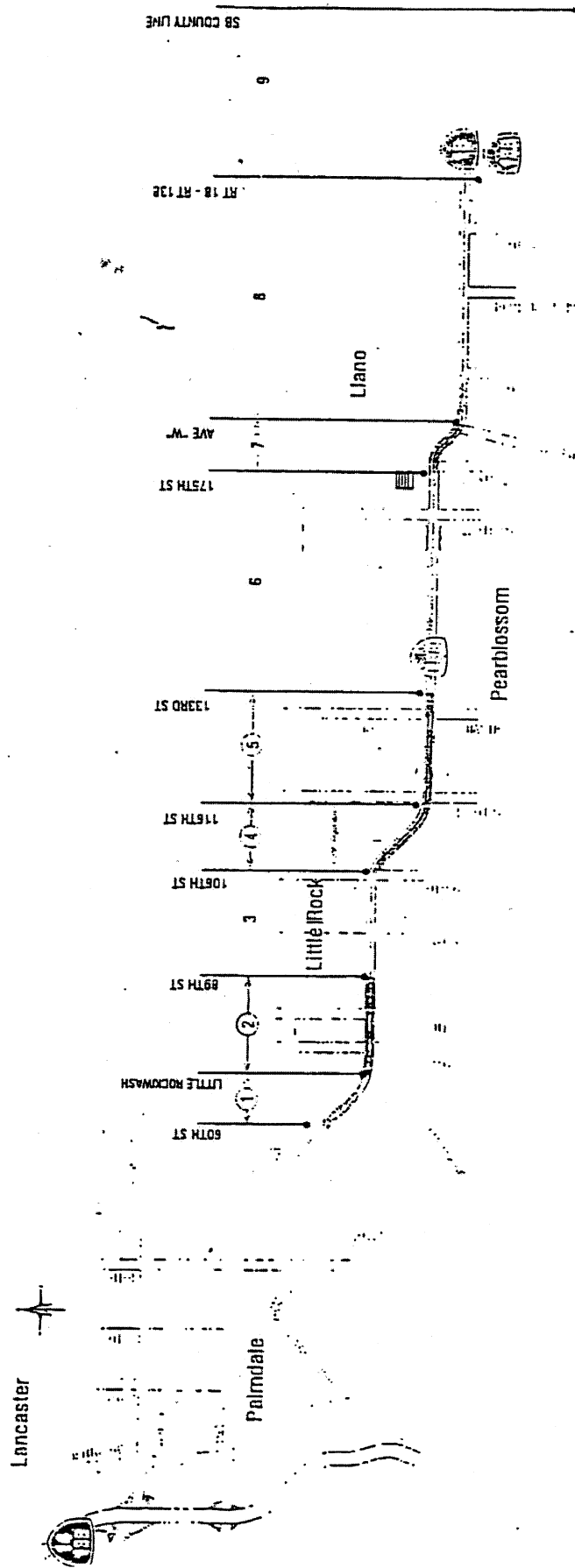
In response to the Los Angeles County Board of Supervisors, this investigation found three locations along Pearblossom Highway with a history of cross-centerline accidents. One of these locations was a curved segment between 175th Street East and Avenue W - one of the locations specifically requested for investigation by the Los Angeles County Board of Supervisors.

However, the use of concrete median barriers is not considered the most appropriate improvement for these locations at this time. Although the use of concrete median barriers will eliminate the cross-centerline accident problem, they will probably produce other undesirable effects, such as increasing the overall accident rate.

A course of action that first tries other alternative improvements is preferred. There are cost-effective alternatives such as centerline buffer zones, installing left-turn pockets, and using innovative thermoplastic and raised marker applications that have been proven successful at similar problematic locations. Together with the increased enforcement and public awareness activities of the Highway 138 Safety Task Force, these improvements should result in a significant reduction in the frequency and severity of cross-centerline accidents.

Improving Pearblossom Highway by reducing the number of cross-centerline accidents is an integral part of improving the overall safety of the highway. Based on this investigation, the proposed highway-widening project is the best long-term solution for reducing the frequency and severity of head-on accidents along this route. In the interim, improvements that enhance the safety of the highway are prudent.

ROUTE 138 LOCATION MAP



Pearblossom Highway
 Cross-Centerline Accidents
 PM 51.88 to PM 74.973
 7/93 to 6/98

RTE	LOC	I S D	ACCIDENT	COMMON	P ENVR	R R T	NO	P D V	S	PERSONS	OL	OL	OL	OL	O A M S D
NO	CO MILE	F R O A	DATE	TIME	ACCIDENT	C COND	C W D MTR	T I H I	K I	S O	S O	S O	S O	1 2 V 12	
		T L H Y	MO DA YR	HHMM	NUMBER	F W L S	C C VEH	R I		PC	QC	QC	QC		
(SEGMENT 1)															
138	LA 51.880	H - E 5	11 18 93	1510	190044869	6 A A	A H D B	4	A E	1 < 0	2	V2D	V3D	V4D	N < N A <
									G W	1 < 0	0	V1F			N < B A <
									F W	1 < 0	1		440		N < B A <
									M W	1 < 0	2		V1F	44H	N < B A <
138	LA 51.890	H - W 3	1 25 94	1205	190084855	2 A A	A H D A	2	A W	1 < 0	2	V2D			N < N A <
									F E	1 < 0	0	V1F			N < B A <
138	LA 51.980	H - E 6	4 21 95	850	190099889	6 A A	A H A A	2	A E	1 < 0	2	V2D	44H		F < N A <
									G W	1 < 0	0	V1F			N < B A <
138	LA 53.480	H - W 1	6 29 97	1630	954510031	5 A A	A H D A	3	A W	1 < 0	1	V2A	V3A		N < B A <
									A E	1 < 0	2	V1D			N < B A <
									A E	1 < 0	0		V1F		N < B A <
(SEGMENT 2)															
138	LA 53.850	H - E 6	1 7 94	1430	954509872	5 A A	A H D A	2	H E	1 < 0	1	V2D			N < B A <
									D W	1 < 0	1	V1F			N < B A <
138	LA 54.710	H - E 6	3 10 95	820	954507325	5 C A	B H A B	2	G E	1 < 0	0	V2D			N < B A <
									A W	1 < 0	1	V1F			N < B A <
138	LA 55.150	H - W 7	2 3 96	715	954511460	6 B B	A H D E	2	D W	1 < 0	0				N < Q G <
									D E	1 < 0	0	27H			N < C A <
138	LA 55.380	H - E 1	8 1 93	115	954512250	6 A C	A H D A	2	A W	1 < 1	1	V2D			N < N A <
									A E	1 < 2	3	V1F			N < B A <
(SEGMENT 3)															
138	LA 56.410	H - E 7	5 16 98	1420	954511330	6 A A	A H D A	5	G E	1 < 0	2	V2D	V3D		N < N A <
									A W	1 < 0	0	V1F			N < B A <
									D W	1 < 1	1		V1F	V4C	N < B A <
									A E	1 < 0	2		V3G		N < B A <
									A W	1 A	0		V6F		N < B A <
									N W	1 < 0	0		V5F		N < R <
138	LA 56.470	H - W 6	1 20 95	1830	954511655	C B D	A H D H	2	A E	1 < 0	0	V3F			N < B A <
									A W	1 < 0	0				N < B A <
									N W	1 < 0	0	V1D			N < N <
(SEGMENT 5)															
138	LA 59.320	H - W 2	1 9 95	612	954507325	6 B D	B H A A	2	A W	1 < 1	0	V2D			F < N A <
									D E	1 < 0	1	V1F			N < B A <
138	LA 60.370	H - W 1	4 14 96	1200	954510343	C A A	A H D A	2	M W	1 < 0	0	V2D			N < B G <
									A E	1 < 0	0	V1F			N < B A <
(SEGMENT 6)															
138	LA 61.900	H - W 1	7 10 94	1630	954508585	6 A A	A H D B	5	A W	1 < 0	2	V5F	V3D	V2D	N < I A <
									A E	1 < 0	0		V1F		N < B A <
									A E	1 < 0	1		V1F	V4D	N < B A <
									A W	1 < 0	1		V3F		N < B A <
									G W	1 < 0	0	V1F			N < B G <
138	LA 62.030	H - W 3	3 29 94	1330	954511655	6 A A	A H D A	2	A W	1 < 0	2	V2D			F < N A I
									A E	1 < 1	1	V1F			N < B A <
138	LA 62.220	H - W 5	8 10 95	1445	954511330	4 A A	A H D A	2	A W	1 < 1	0	V2D			N < N G <
									A E	1 < 0	1	V1F			N < B A <
138	LA 62.440	H - E 7	8 17 96	1000	954512156	6 A A	A D D A	2	A E	1 < 0	1	V2D	44B		N < N A <
									A W	1 < 0	1	V1F			N < B A <
138	LA 62.680	H - E 5	6 2 94	1430	954504615	6 A A	A H A E	2	A E	1 < 0	0	26B			N < I A <
									A W	1 < 0	0		V3F		N < B A <
									H E	1 < 0	0		V2D		N < R <
138	LA 62.740	H - E 4	1 15 97	1325	954512220	5 B A	C H D A	3	A E	1 < 0	2	V2F			N < B A <
									F W	1 < 0	0	V1D			N < B A <
									A E	1 < 0	0				N < N G <
138	LA 62.990	H - E 7	5 2 98	1025	954512168	6 A A	A H A C	4	A E	1 < 0	0				N < I G <
									A W	1 < 0	1	V3F			N < H A <
									A W	1 < 0	2	V2F	V4F		N < H A <
									D W	1 < 0	0		V3F		N < H A <
138	LA 63.000	H - E 7	11 29 97	1110	954508867	6 A A	A H D B	4	A E	1 < 0	0	V4D	V2D		N < I A <
									A W	1 < 0	0		V1F		N < B A <
									A W	1 < 0	0		V5F		N < B A <
									M E	1 < 0	1	V1F			N < B A <
									H E	1 < 0	0		V3D		N < R <
138	LA 63.030	H - E 2	5 15 95	220	954506585	1 B D	A H D A	2	A E	1 < 1	0	V2D			N < B B <
									D W	1 < 2	10	V1F			N < B A <
138	LA 64.050	H - W 4	12 21 94	2305	954510343	6 A D	A H A A	3	A W	1 < 0	2	V2F	15H		N < B A <
									A E	1 < 0	0	V1D	V3F		N < I G <
									G E	1 < 0	0		V2F		N < B A <
138	LA 64.400	H - E 6	9 27 96	700	954509655	6 A A	A H D A	2	A E	1 < 1	0	V2D			E < N G <
									2 W	1 < 0	1	V1F			N < B A <

Pearblossom Highway
Cross-Centerline Accidents
PM 51.88 to PM 74.973
7/93 to 6/98

RTE NO	LOC CO MILE	I S D F R O A T L H Y	ACCIDENT DATE MO DA YR	COMMON ACCIDENT TIME HHMM	COMMON NUMBER	P C F	EMV R W L S	R R C	T W O	N O M T R	P O V T I H I K I	S PERSONS	OL SO PC	OL SO OC	OL SO OC	OL SO OC	O A M S O F O P	1 2 V 1 2	
(SEGMENT 7)																			
138	LA 64.690	H - W 4	2 18 98	445	954509872	6	A D A H D A	2	D W 1	< 0	1	V2D	—	—	—	—	N < N A I		
									D E 1	< 0	1	V1F	—	—	—	—	N < B A <		
138	LA 64.780	H - E 7	7 24 93	1950	954504615	6	A B A H A A	3	C E -	< 1	0	V3D	V2F	44F	—	—	N < N O <		
									C E -	< 0	2	—	V1F	44F	—	—	N < B A <		
									F W -	< 0	0	V1F	—	—	—	—	N < B A <		
138	LA 65.450	H - E 5	10 6 94	400	954508087	6	A D A H D A	2	G E 1	< 0	0	V2C	—	—	—	—	5 < I A <		
									D W 1	< 0	1	V1G	—	—	—	—	N < B A <		
138	LA 65.461	I S E 3	12 10 96	555	954508867	6	A D A H D B	2	A W 1	< 0	1	V2D	—	—	—	—	5 < I A <		
									D E 1	< 0	1	V1F	44F	—	—	—	N < B A <		
138	LA 65.470	H - E 6	8 29 97	2240	954512156	1	A D A H D A	2	A W 1	< 1	0	V2D	24B	—	—	—	N < B B <		
									D E 1	< 0	2	V1F	—	—	—	—	N < B A <		
138	LA 65.500	H - E 6	6 9 95	2050	954508410	6	A D A H D A	2	D E 1	< 1	1	V2D	—	—	—	—	N < I A <		
									A W 1	< 0	1	V1F	—	—	—	—	N < B A <		
(SEGMENT 8)																			
138	LA 67.250	H - E 2	5 25 98	1905	954512168	6	B A A H D E	2	A E 1	< 0	0	—	—	—	—	—	P < I A <		
									A W 1	< 0	3	11H	—	—	—	—	N < B A <		
138	LA 67.370	H - W 7	10 22 94	2025	954506156	1	A D A H D B	4	D W 1	< 0	1	V2D	V3D	15B	44D	—	5 < N B <		
									B E 1	< 0	0	V1F	—	—	—	—	N < B A <		
									A E 1	< 0	2	—	V1F	—	—	—	N < B A <		
									A E 1	< 0	0	—	V1F	—	—	—	N < B A <		
138	LA 67.580	H - E 2	7 8 96	1230	954509375	6	A A A H D H	2	A E 1	< 0	0	—	—	—	—	—	N < N G <		
									A W 1	< 0	3	99H	44F	—	—	—	N < C A <		
138	LA 68.660	H - E 5	9 30 93	1545	954512090	6	A A A H D E	2	D E -	< 0	0	—	—	—	—	—	N < N G <		
									A W -	< 0	2	15H	—	—	—	—	N < C A <		
138	LA 68.690	H - E 7	3 28 98	300	954511470	1	C D B H D B	3	A E 1	< 0	0	V2D	—	—	—	—	6 < N B <		
									D W 1	< 0	0	V1F	V3F	—	—	—	N < B A <		
									A W 1	< 0	0	—	V2F	—	—	—	N < H A <		
138	LA 69.010	H - W 3	8 1 95	1940	954509147	6	A A A H D A	2	A W 1	< 0	0	V2D	—	—	—	—	N < N A <		
									D E 1	< 0	1	V1F	—	—	—	—	N < B A <		
(SEGMENT 9)																			
138	LA 70.090	H - E 7	2 18 95	1425	954512090	6	A A A H D A	3	A E 1	< 0	0	—	—	—	—	—	8 < I G <		
									G E 1	< 0	0	V3D	—	—	—	—	5 < B A <		
									D W 1	< 0	5	V2F	44H	—	—	—	N < B A <		
138	LA 70.360	H - E 4	6 4 97	2028	954510118	6	A D A H D H	2	A E 1	< 0	0	—	—	—	—	—	6 < N G <		
									A W 1	< 0	0	V3F	—	—	—	—	N < B A <		
									H E 1	< 0	0	V2D	—	—	—	—	4 < R <		
138	LA 70.400	H - E 3	12 3 96	1510	954510118	6	A A A H D E	2	A E 1	< 0	0	—	—	—	—	—	N < I A <		
									A W 1	< 0	0	18B	—	—	—	—	N < B A <		
138	LA 70.470	H - E 5	2 17 94	1900	954507469	6	A D A H D A	2	D E 1	< 0	0	V2D	—	—	—	—	F < I A <		
									A W 1	< 0	0	V1F	—	—	—	—	N < B A <		
138	LA 70.600	H - W 1	3 30 97	1325	954508585	1	A A A H D A	2	C W 1	< 1	0	V2D	44B	—	—	—	N < I B E		
									D E 1	< 0	0	V1F	—	—	—	—	N < B A <		
138	LA 71.580	H - E 1	8 3 97	305	954508087	1	A D A H D B	2	D E 1	< 0	0	V2D	Z1B	—	—	—	N < N B <		
									A W 1	< 0	2	V1F	—	—	—	—	N < B A <		
138	LA 72.310	H - E 3	2 28 95	850	954509147	8	B A A H A E	2	A E 1	< 0	0	43B	44B	—	—	—	5 < I A <		
									F W 1	< 0	0	—	V3F	—	—	—	N < B A <		
									N E 1	< 0	0	—	V2D	—	—	—	4 < R <		
138	LA 72.400	H - E 6	11 28 97	1430	954510343	E	A A A H D F	2	A E 1	< 0	0	—	—	—	—	—	6 < N A I		
									A W 1	< 0	3	44F	—	—	—	—	N < B A <		
138	LA 74.808	I S W 4	8 30 95	1830	190048079	1	A A A H A D	2	A W 1	< 0	0	V2D	—	—	—	—	6 < B < E		
									A E 1	< 0	0	V1D	—	—	—	—	N < B A <		
138	LA 74.960	H - E 7	4 19 97	1605	954508087	D	B A A H D A	2	A E 1	< 0	0	V2D	—	—	—	—	F < N A <		
									A W 1	< 0	0	V1D	—	—	—	—	F < N A <		

DEPUTY DIRECTIVE

Number: DD-50
Refer to
Director's Policy: 03-Safety and Health
Effective Date: 3-15-96
Supersedes: New

Title: Installation of Barrier on Two-
or Three-Lane Facilities

INTERIM POLICY

The Department will continue to install barriers on freeways, expressways, and multi-lane conventional highways when studies initiated by the median barrier monitoring system identify the installation as the appropriate and best solution. On two- or three- lane facilities, installation of a barrier may be approved on a case-by-case basis when all other reasonable options have been evaluated. Monitoring of cross center line accidents on two- and three-lane highways, will be initiated as part of the evaluation process. The evaluation report shall be approved by the District Director or the District Division Chief for Traffic Operations.

Installation on two- or three-lane facilities further depends on meeting all or most of the following minimum criteria:

1. An apparent increasing trend of severe cross-center-line accidents;
2. The normal long-term improvements, such as adding lanes or facility upgrading are not immediately viable options due to funding or environmental constraints;
3. Other reasonable options, such as buffer zone, barrier striping, etc., have already proven ineffective at the location under study;
4. Operation features of the roadway include high speeds, high volumes, minimal ingress/egress, and few intersections;
5. After installation the roadway meets all minimum design standards as outlined by the State and Local Project Development Program.

BACKGROUND

Historically, barrier is not used on two- or three-lane roadways. In the past these facilities have been upgraded to multi-lane roadways or freeways as warranted by traffic volumes. However, with funds to provide upgraded improvements diminishing, the placement of a barrier may be an interim option if all other alternatives have not proven effective at reducing head-on accidents.

RESPONSIBILITIES

The Traffic Operation Program Manager will:

- Approve the installation of barrier, case-by-case, based on input from all other responsible parties.
- Develop final departmental policy.

The State and Local Project Development Program Manager will provide the Program Manager for Traffic Operations with documented approval that the proposed barrier project meets the minimum criteria within his/her functional area.

District Directors will:

- Provide the program manager for Traffic Operations and the program manager for Project Development with all documentation required to meet the interim policy.
- Meet all other departmental directives to support any project resulting from this interim policy.

APPLICABILITY

All Caltrans employees involved with the development of barrier projects on two- or three-lane facilities.

ORIGINAL SIGNED BY
ANDREW POAT

ANDREW POAT
Deputy Director

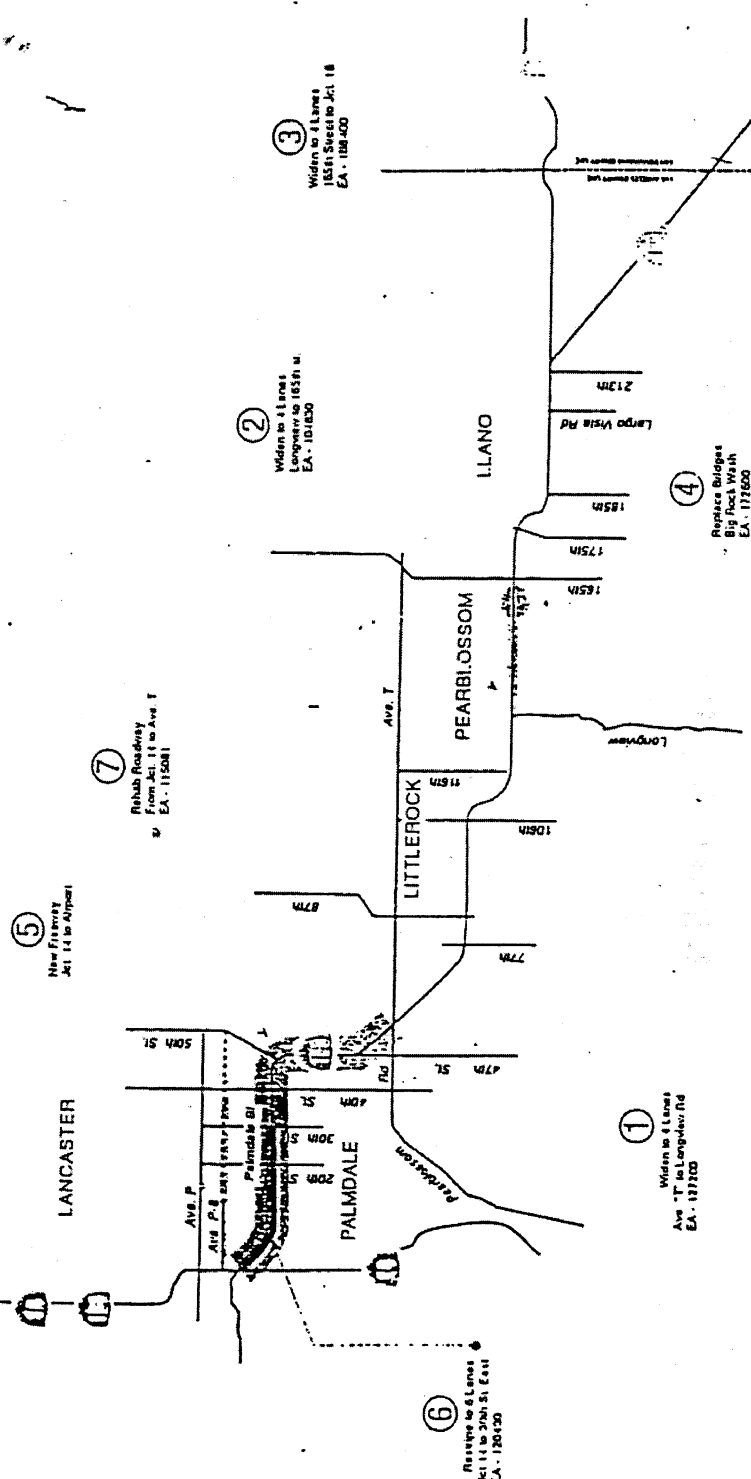
Distribution B

State Route 138 Improvements

Los Angeles County



Int. No.	Co.	Improvement Type	Project Limit	Project Status	Program Document	Estimated Capital Cost (millions)	Estimated Completion
1	LA	Widen Highway from 2 Lanes to 4 Lanes	Ave. T to Longview Rd.	PR	96 STP	\$19,763	DEC. 2004
2	LA	Widen Highway from 2 Lanes to 4 Lanes	Longview Rd. to 165th St.	PR	96 STP	\$14,739	DEC. 2004
3	LA	Widen Highway from 2 Lanes to 4 Lanes	165th St. to Route 18	PR	Beyond 96 STP	\$43,031	Subject to Funding - DEC. 2004
4	LA	Replace Bridge (2,000')	Big Rock Wash	PR	Beyond 96 STP	\$18,000	Subject to Funding - DEC. 2004
5	LA	Construct Freeway & Conventional Highway	On Ave. P-8 from SR 14 to 50th St. E	WAC/PRC (Performance)	Beyond 96 STP	\$156,900	TBD
6	LA	Re-sign 4-Lane Arterial Highway to 6-Lane Highway	10th St. W to 30th St. E	PR	96 STP undesignated	\$1,356	Subject to Funding - JAN. 2001
7	LA	Rehabilitate Roadway	SR-14 to Ave. T	PS&E	VG SHOPP	\$8,919	JAN. 2001

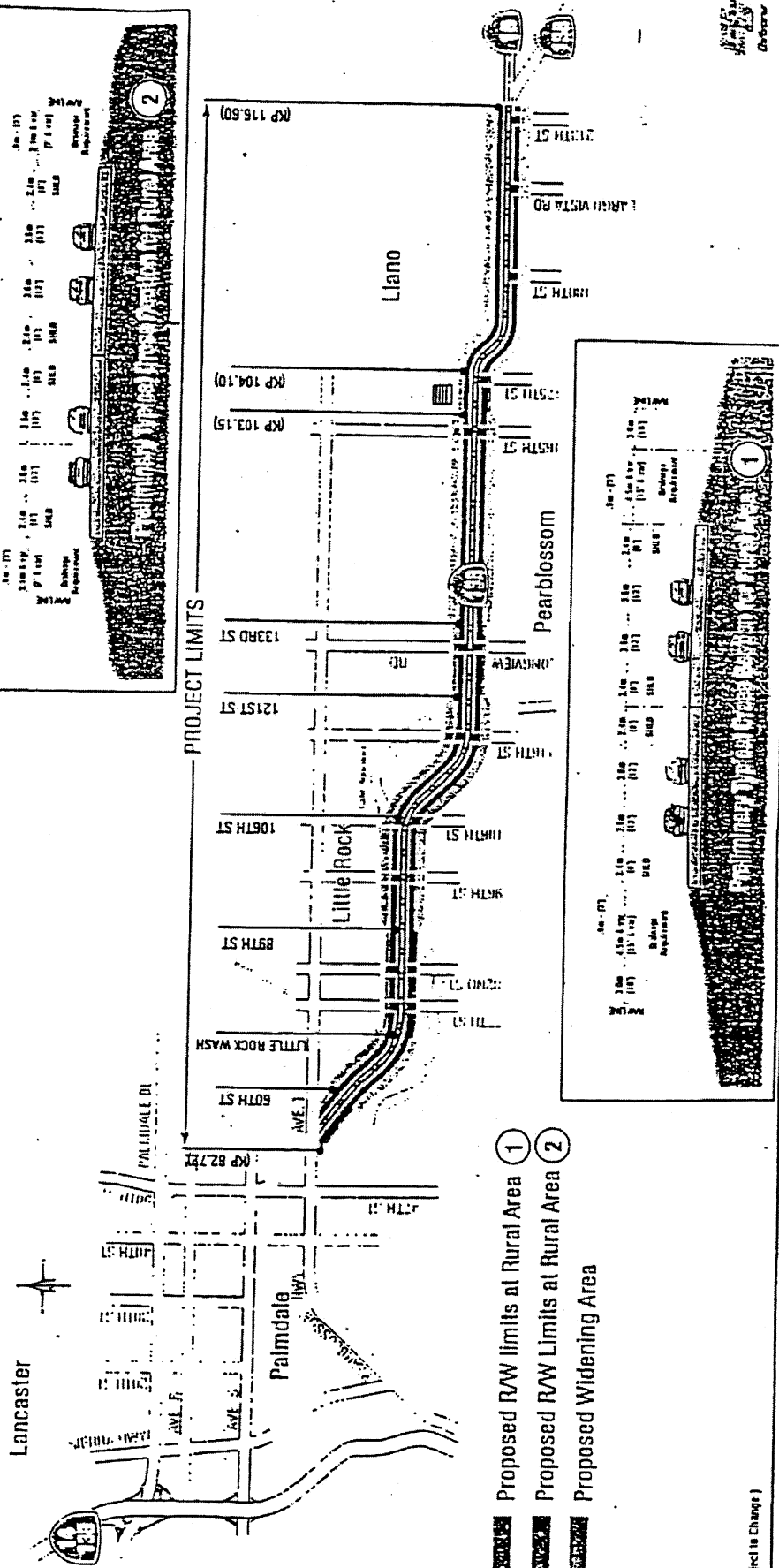





9108 - 12/10/03 (Revised 1.0)

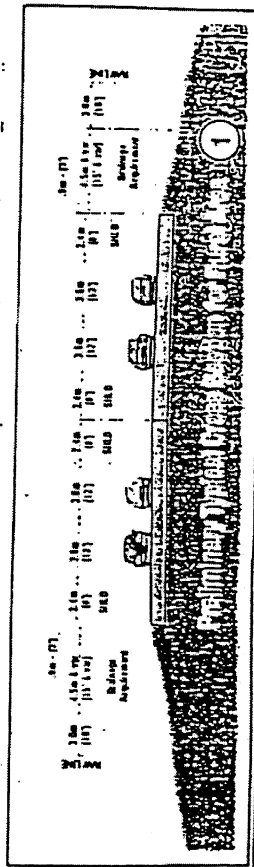
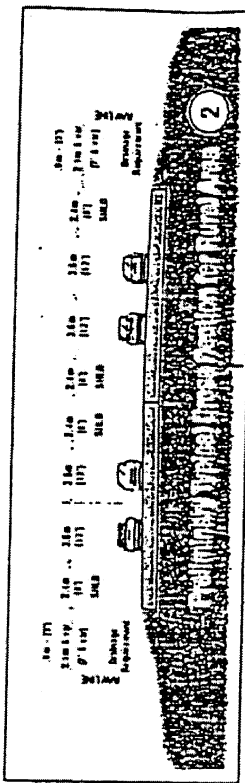
Not to Scale

ROUTE 138 WIDENING PROJECT

Avenue T to Route 18



-  Proposed RW limits at Rural Area 1
-  Proposed RW Limits at Rural Area 2
-  Proposed Widening Area



DATE: 01/21/01
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]

Memorandum

To: Chris D. Benz-Blumberg
Noelle C. Storey
Office of Environmental Planning

Date: October 11, 2000

File: 07-LA-138 51.4/69.4
Hwy widening from Ave. T
to LA/San Bernardino Co. Lr.
EA 127200 and 116720

From: DAVE GILSTRAP
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING & LARTS

Subject: Updated Traffic Projections for year 2025

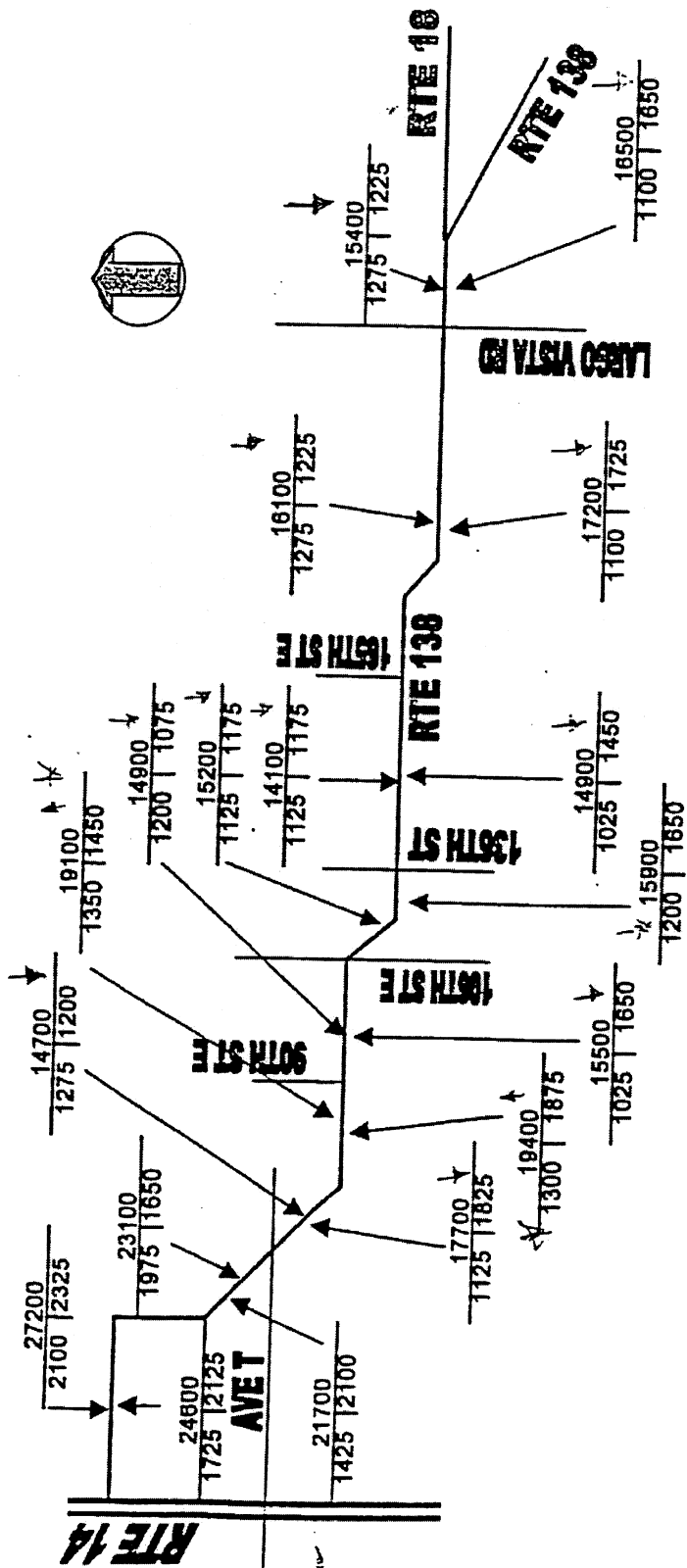
Attached please find the updated 2025 traffic projections for the above referenced project. Included are ADT, AM peak and PM peak hour volumes. These projections supersede any projections previously submitted.

These projections may not be consistent with previous data due to an analysis of our previous model run providing new traffic information, as well as the inclusion of a housing development and new college.

If you have any questions please contact me at extension 7-4643 or Guillermo Gutierrez of my staff at 7-5598.

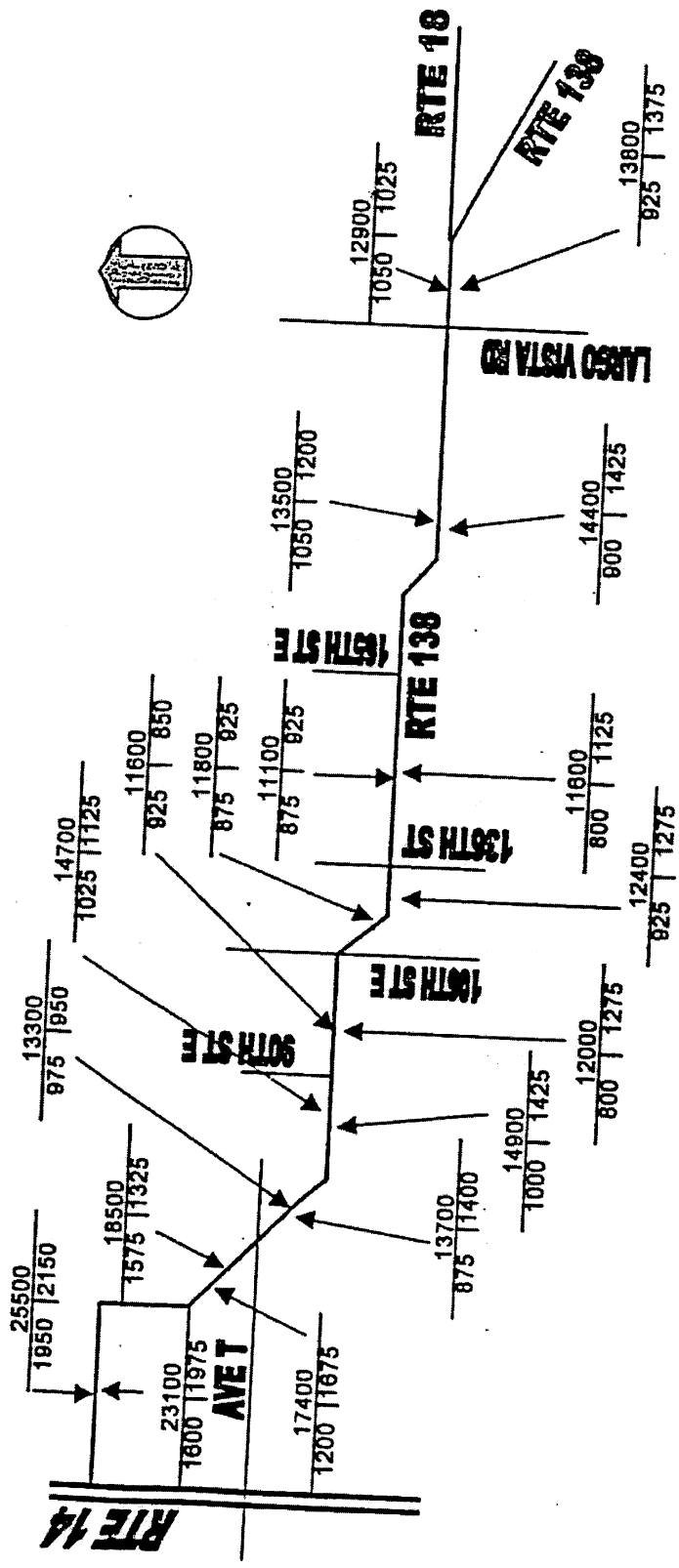


DAVE GILSTRAP
Senior Transportation Engineer,
Regional Transportation Planning
And LARTS



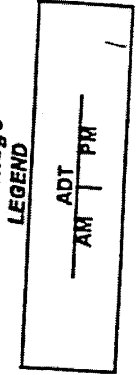
07-138-51.4/89.4
 EA 127200, 116720, 104830, 188410, 188420, 188430

2025 Build projections with
 new homes & college
 LEGEND



07-138-51.4/69.4
 EA 127200, 116720, 104830, 188410, 188420, 188430

2025 No Build projections
 with new homes & college



07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

LOCATION HYDRAULICS STUDY (EXERPTS)

ATTACHMENT I

Final Project Report



MEMORANDUM

To: Barb Pilolla
Environmental Planner

Date: August 12, 1998
File No: 07-LA-138 PM 51.4/69.4
From Ave T to SR 18.
Highway widening
EA 127200, 104830
172600, 18840K

From: RALPH M. SASAKI
DEPARTMENT OF TRANSPORTATION
Office of Project Development A/Hydraulics

Subject: LOCATION HYDRAULICS STUDY

LOCATION HYDRAULIC STUDY (SEE FHPM 6-7-3-2, PARAGRAPH 7)

- (a) The project encroaches on floodplains transversely at various locations throughout its length. These encroachments are the existing conditions and will be continued in all the design alternates of the proposed action.

Examination of the National Flood Insurance Program Maps (FIRM's) indicates that there are ten (10) locations that encroach upon the floodplains. The floodplains are predominantly designated as Zone A and B (See attached NFIP Maps for definitions and locations). Of the ten locations analyzed, it was determined that there are three areas of concern (See attached - Summary of Floodplain Encroachment).

The three (3) areas of concern are:

- | | | |
|----|------------------------------|----------|
| 1. | LITTLE ROCK CREEK Br #53-303 | PM 53.57 |
| 2. | BIG ROCK WASH Br #53-313 | PM 63.00 |
| 3. | BIG ROCK WASH Br #53-314 | PM 63.04 |

NOTE: () show paragraph 3 item to which statement responds.

(a.1/) LITTLE ROCK CREEK BR #53-303

As shown on the FIRM, the existing freeway is in a floodplain and subject to flooding. Because this location is in an alluvial fan formation, the extent and depth of flooding will vary because of the continual meandering, aggradation, and degradation of the channel with each successive storm. The risk associated with the implementation of the action is low. The risk associated with the implementation of the action is low.

(a.2/) BIG ROCK WASH BR #53-313

As shown on the FIRM, the existing freeway is in a floodplain and subject to flooding. Because this location is in an alluvial fan formation, the extent and depth of flooding will vary because of the continual meandering, aggradation, and degradation of the channel with each successive storm. The risk associated with the implementation of the action is low.

(a.3/) BIG ROCK WASH BR #53-314

As shown on the firm, the existing freeway is in a floodplain and subject to flooding. Because this location is in an alluvial fan formation, the extent and depth of flooding will vary because of the continual meandering, aggradation, and degradation of the channel with each successive storm. The risk associated with the implementation of the action is low.

- (b.1/) The existing freeway encroaches on floodplains transversely. There is no need to evaluate and discuss the practicability of alternatives to any longitudinal encroachments.
- (c.1/) Implementation of this action for all design alternates will not increase the flood risks that are presently associated with the existing highway.
- (c.2/) The design alternates will not impact on the natural and beneficial floodplain values.
- (c.3/) The action will not support incompatible floodplain development. The Cities of Palmdale, Little Rock, Pearblossom and Llano, along with Los Angeles County, are active participants in the National Flood Insurance Program. All five entities require pad elevations for new structures to be one foot above the water surface elevation of the flood that have a one percent occurrence in any given year.
- (c.4/) State freeway standard design measures would be taken to minimize floodplain impacts associated with the action. These measures would include an evaluation of the adequacy of the existing culverts and bridges. New culverts and bridges would be designed to conform with Topic 7-821.6 of the Highway Design Manual, which states:

7-821.6 Exceptions

When the greatest flood of record is so large that the cost to provide for such an exceptional flood without damage or flooding to the highway or adjacent property can be shown by

analysis to be excessive for the protection given, a lesser flood for culverts and a 50-year flood for bridges may be used for design.

Exceptions to design flood criteria for culverts and bridges require Office of Planning and Design approval.

Any mitigate measures proposed by the State to minimize flooding will need to be coordinated with the upgrading of the existing flood control facilities.

- (c.5/) The action does not impact on natural and beneficial floodplain values.
- (d/) The action does not support incompatible floodplain development. There is no need to evaluate and discuss the practicability of alternates to any support of incompatible floodplain development.
- (f/) Design studies would be coordinated with the affected City, County, State, and Federal Agencies to be consistent with existing watershed and floodplain management programs.

The Location Hydraulic Study can be summarized as follows:

1. The risk associated with the proposed widening is low.
2. The action will not impact on natural and beneficial floodplain values.
3. This action does not support incompatible floodplain development.
4. This action does not adversely affect the base floodplain.
5. Requirements to restore the site to its original condition, to the extent practicable, can be specified in the construction contract.
6. The proposal does involve transverse encroachment.
7. This action does not contain a significant encroachment.
8. Location Hydraulic Studies Documents are on file in this office.

Ralph M. Sasaki
Senior Transportation Engineer
District Hydraulics Engineer
Office of Project Development A/Hydraulics

07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

RIGHT OF WAY DATA SHEET

ATTACHMENT J

Final Project Report



R/W DATA SHEET FOR PSR SCOPING REPORT

WBS 150.15.05 REVISÉ UPDATED 3/26/01 DATE: 7/17/99 ROUTE: LA 138 PHAKM E.A.: 127200 ALT: 1 PROJ. DESC. Widening

TO: Art Corcoran ATTN: PHONE 7

Table with 2 columns: Item, DATE. Items include SENIOR R/W P&M, CAPITAL COORDINATOR, PROJECT FILE ARCHIVE COORD, PROD. COORDINATOR.

INITIAL COPY BECOMES ORIGINAL R/W D.S.

IF THIS PROJECT E.A. IS SUBSEQUENTLY DIVIDED OR CHANGED INTO ANOTHER E.A. AND / OR THE PROJECT SCOPE CHANGES, THEN THIS DATA SHEET BECOMES INVALID FOR STIP, BUDGET, AND PYS CAN PURPOSES.

- TRANSMITTED HEREWITH IS A COST ESTIMATE PURSUANT TO THE FOLLOWING CONDITION(S)
1- COST ESTIMATE IS VALID FOR THE ABOVE SCOPING REPORT ONLY AND NEED TO BE UPDATED WITHIN TWO YEARS.
2 NOTIFY THE ABOVE COORDINATORS IF THIS IS THE PREFERRED PROJECT
3- RESIDENTIAL DISPLACEMENT IS INVOLVED AND ENVIRONMENTAL DEPT NEEDS TO BE ADVISED BY YOUR DEPT
4 -MAPS WERE PROVIDED X NOT PROVIDED
5- THE MAPPING DID NOT PROVIDE SUFFICIENT NOR ADEQUATE DETAIL TO DETERMINE THE LIMITS OF THE RIGHT OF WAY REQUIRED AND EFFECTS ON THE IMPROVEMENTS
6-THE TRANSPORTATION FACILITIES HAVE NOT BEEN SUFFICIENTLY DESIGNED SO OUR ESTIMATOR COULD DETERMINE THE DAMAGES TO ANY OF THE REMAINDER PARCELS AFFECTED BY THE PROJECT
7- ADDITIONAL RIGHT OF WAY REQUIREMENTS ARE ANTICIPATED BUT ARE NOT DEFINED DUE TO THE PRELIMINARY NATURE OF EARLY DESIGN REQUIREMENTS
8- TIME CONSTRAINTS PRECLUDED A DETAILED COST ESTIMATES
9-TIME SCHEDULE PROVIDED BY REQUESTING PARTY DID NOT PERMIT TIME FOR A FIELD INSPECTION
10- OTHER (EXPLAIN)

Table with 3 columns: Description, CURRENT VALUE (FUTURE USE + CONT. RATE), ESCALATED VALUE. Includes rows for A-R/W ACQ., B-CLEARANCE, C-RAP., D-ESCROW COSTS, E-UTILITY RELOCATION COSTS, TOTAL ESTIMATED COST, and TOTAL ESCALATION.

- 17-GENERAL DESCRIPTION OF RIGHT OF WAY SEE PAGE 2- DESCRIPTION OF R/W- SEE GRID RAW INVOLVED X NO RAW
18-RELOCATION DISPLACEMENT (RAP FROM EWS) YES YES NO
19-ARE UTILITY FACILITIES OR UTIL RIGHT OF WAYS AFFECTED:(see utility attachment) YES X NO
20-DESCRIBE SEE ATTACHED UTILITY SHEET- PAGE 3 OF 4
21-ARE RAILROADS FACILITIES OR R.R. R/W AFFECTED (SEE R.R ATTACHEMENT) YES NO
21a)DESCRIBE SEE ATTACHED R.R. SHEET -PAGE 4 OF 4
22-ARE HAZARDOUS WASTE AND/OR MATERIAL FOUND YES X NONE EVIDENT NO Potential Involvement parcels 4
23-ARE EXISTING OR POTENTIAL AIR SPACE PARCELS AFFECTED YES NO X
24-IS IT ANTICIPATED THAT ALL RIGHT OF WAY WORK WILL BE PERFORMED BY C/T STAFF YES X NO
25- DO YOU ANTICIPATE ANY MAJOR ITEMS OF CONSTRUCTION CONTRACT WORK NOT KNOW AT THIS TIME X YES NO
26-ARE THERE ANY MATERIAL BORROW AND/ OR DISPOSAL SITES REQUIRED NOT KNOW AT THIS TIME X YES NO
27-ARE THERE POTENTIAL RELINQUISHMENT AND/OR ABANDONMENTS NOT KNOW AT THIS TIME YES NO

28 N/A COST DATA IS NOT VALID FOR BUDGET, STIP, PROGRAMMING NOR COST SCREENS #1

PARCEL DATA INFORMATION IS AUTHORIZED FOR THE EVENT SCREENS

UTILITIES		COUNT	PY HOURS	ROUGH EST. OF PY'S			
TYPES	COUNT	ADJ. APPR.	U4-1	ESTIMATE OF PY'S			PY'S
A	281		U4-2	PROJ. TYPE DESC.			MAX LOW
B	4		U4-3	PROJECT PY'S			1350
C			U4-4	PARCEL SUPPORT HOURS			87875.55
D			U5-7	MISC. PERMITS ODA PY			2422.5
TOTAL PAR	285		U5-8	UTIL. AND R.R. PY'S			0.7368
			U5-9	TOTALS PY HOURS			91648.787
			TOTAL	TOTAL PERSON YEARS			52.07
				ROUGH EST. OF PY'S			
RIGHTS NEEDED				FUNCTIONAL INVOLVEMENT EST.			
FEE	285			ACTIVITY	%	PERSON YRS	
EASE		285		APP.	26%	13.54	
TCE				ACC.	28%	14.58	
TAKES	COUNT			RAP	18%	9.37	
FULL	4			DEMO	14%	7.29	
PART	281			PM	8%	3.12	
TOTAL PAR	285			UTIL.	8%	4.17	
				TOTAL	100%	52.07	
				DISPLACEMENTS OF UNITS			
				Displacement from SFR.	1	PARCELS WITH	
				Displacement from MULTI	2	RAP INVOLVEMENT	
				Displacement from BUS		COUNT	2
				GENERAL DESCRIPTION ACCOUNT OF RW			
							Improved Par. Count
							2

30-POTENTIAL EXCESS PARCELS NOT KNOWN AT THIS TIME NUM. OF EXCESS PARCELS NONE

31-POTENTIAL IMPROVED PARCELS NOT KNOWN AT THIS TIME NUM. OF PARCELS 2 NONE

32-EVALUATION PREPARED BY: Steve Flores DATE 07/01/99

RIGHT OF WAY EST PREPARED BY: AL HUGHES DATE _____

RAILROAD EST PREPARED BY: AL HUGHES DATE _____

UTILITIES EST PREPARED BY: N. JUAREZ DATE 10/25/99

33-REAL PROPERTY SERVICES: CAPITAL OUTLAY SUPPORT

FUNCTION	ESCALATED COSTS	PREPARED BY MANAGER	DATE
A- ROUTINE MAINTENANCE (OBJECT CODE 058)			
B-ADVERTISING COSTS (OBJECT CODE 039)			
C-UTILITY COSTS (OBJECTS CODE 002)			

34- SR /RW AGENT APPROVES DATA SHEET J. CABRERA DATE _____

PROJECT MANAGER CONCURS WITH THIS DATA SHEET _____ DATE _____

I HAVE PERSONALLY REVIEWED THIS RW DATA SHEET AND ALL SUPPORTING INFORMATION I CERTIFY THAT THE PROBABLE HIGHEST AND BEST USE ESTIMATED VALUES AND ASSUMPTIONS ARE REASONABLE AND PROPER SUBJECT TO THE LIMITING CONDITIONS SET FORTH AND I FIND THIS DATA SHEET COMPLETE AND CURRENT.

This data sheet is not to be signed by Chief unless accompanied by final scoping report (PR,PSR,PSSR) for review and/or signature.

CHIEF _____ DATE _____

R/W DATA SHEET FOR PSR SCOPING REPORT

WBS 150.15.05
REVISED 9/11/00
UPDATED 3/26/01
DATE: 7/1/99
ROUTE: LA 138
PM/KM
E.A: 104830
ALT:
PROJ. DESC. Widening

TO: Art Correa
ATTN:
PHONE 7

Table with 2 columns: PLEASE INITIAL, DATE. Rows include SENIOR R/W P&M, CAPITAL COORDINATOR, PROJECT FILE ARCHIVE COORD, PROD. COORDINATOR.

INITIAL COPY BECOMES ORIGINAL R/W D.S.

IF THIS PROJECT E.A. IS SUBSEQUENTLY DIVIDED OR CHANGED INTO ANOTHER E.A. AND / OR THE PROJECT SCOPE CHANGES, THEN THIS DATA SHEET BECOMES INVALID FOR STIP, BUDGET, AND PYSKAN PURPOSES. NEW DATA SHEET(S) WILL NEED TO BE REQUESTED IMMEDIATELY BY YOUR SECTION.

TRANSMITTED HERewith IS A COST ESTIMATE PURSUANT TO THE FOLLOWING CONDITION(S)

- 1- COST ESTIMATE IS VALID FOR THE ABOVE SCOPING REPORT ONLY AND NEED TO BE UPDATED WITHIN TWO YEARS.
2 NOTIFY THE ABOVE COORDINATORS IF THIS IS THE PREFERRED PROJECT
3- RESIDENTIAL DISPLACEMENT IS INVOLVED AND ENVIRONMENTAL DEPT. NEEDS TO BE ADVISED BY YOUR DEPT
4 -MAPS WERE : PROVIDED X NOT PROVIDED
5- THE MAPPING DID NOT PROVIDE SUFFICIENT NOR ADEQUATE DETAIL TO DETERMINE THE LIMITS OF THE RIGHT OF WAY REQUIRED AND EFFECTS ON THE IMPROVEMENTS.
6- THE TRANSPORTATION FACILITIES HAVE NOT BEEN SUFFICIENTLY DESIGNED SO OUR ESTIMATOR COULD DETERMINE THE DAMAGES TO ANY OF THE REMAINDER PARCELS AFFECTED BY THE PROJECT
7. ADDITIONAL RIGHT OF WAY REQUIREMENTS ARE ANTICIPATED BUT ARE NOT DEFINED DUE TO THE PRELIMINARY NATURE OF EARLY DESIGN REQUIREMENTS.
8- TIME CONSTRAINTS PRECLUDED A DETAILED COST ESTIMATES
9-TIME SCHEDULE PROVIDED BY REQUESTING PARTY DID NOT PERMIT TIME FOR A FIELD INSPECTION
10- OTHER (EXPLAIN)

Table with columns: CURRENT VALUE (FUTURE USE + CONTIN. RATE), ESCALATED VALUE. Rows include A-R/W ACQ., B-CLEARANCE, C-RAP., D-ESCROW COSTS, E-UTILITY RELOCATION COSTS, TOTAL ESTIMATED COST, TOTAL ESCALATION.

- 17-GENERAL DESCRIPTION OF RIGHT OF WAY SEE PAGE 2. DESCRIPTION OF R/W-SEE GRID
18-RELOCATION DISPLACEMENT (RAP FROM EWS)
19-ARE UTILITY FACILITIES OR UTIL. RIGHT OF WAYS AFFECTED (see utility attachment)
20-DESCRIBE SEE ATTACHED UTILITY SHEET- PAGE 3 OF 4
21-ARE RAILROADS FACILITIES OR R.R. R/W AFFECTED (SEE R.R ATTACHEMENT)
22-ARE HAZARDOUS WASTE AND/OR MATERIAL FOUND.
23-ARE EXISTING OR POTENTIAL AIR SPACE PARCELS AFFECTED
24-IS IT ANTICIPATED THAT ALL RIGHT OF WAY WORK WILL BE PERFORMED BY C/T STAFF
25- DO YOU ANTICIPATE ANY MAJOR ITEMS OF CONSTRUCTION CONTRACT WORK
26-ARE THERE ANY MATERIAL BORROW AND/OR DISPOSAL SITES REQUIRED
27-ARE THERE POTENTIAL RELINQUISHMENT AND/OR ABANDONMENTS
28 N/A COST DATA IS NOT VALID FOR BUDGET, STIP, PROGRAMMING NOR COST SCREENS #1

PARCEL DATA INFORMATION IS AUTHORIZED FOR THE EVENT SCREENS

29 AGRICULTURAL COUNTY TYPE	UTILITIES		COUNT	PY HOURS	ROUGH EST. OF PY'S				F A I L S E		
	TYPES	COUNT	DUAL APPR.	UA-1-		ESTIMATE OF PY'S				PY'S	
	A	88		UA-2-		PROJ. TYPE DESC.				MAX HIGH	
	B			UA-3-		PROJECT PY'S				4060	
	C	1		UA-4-	4	PARCEL SUPPORT HOURS				22104.6	
	D			US-7		MISC. PERMITS, ODA PY				756.3	
	TOTAL PAR	89		US-8		UTIL. AND R.R. PY'S				0.5949	
				US-9	5	TOTALS PY HOURS				26921.695	
					TOTAL	TOTAL PERSON YEARS				15.30	
						TOTAL PERSON YEARS				15.30	
FEE		89	RAILROADS		COUNT	PY HRS	ROUGH EST. OF PY'S				
EASE			C&M AGRMT. ACQ.				FUNCTIONAL INVOLVEMENT EST.				
TCE		89	SVC CONT. ACQ.				ACTIVITY	%	PERSON YRS		
TAKES	COUNT		LIC/RECLAUSE ACQ.				APP.	44%	6.73		
FULL							ACQ.	28%	4.28		
PART	89						RAP				
TOTAL PAR	88						DEMO	14%	2.14		
							PM	6%	0.92		
							UTIL.	8%	1.22		
							TOTAL	100%	15.30		
MISC. R/W			COUNT	PY HRS	DISPLACEMENTS OF UNITS						
ROE. OP'S PERMITS-ACQ.			27	400.5	Displacement from SFR.						
GOVT PERMITS-ACQ.			17.8	176	Displacement from MULTI						
CONST. PERMIT-ACQ.			17.8	176	Displacement from BUS						
TOTAL PARCELS PER					TOTAL				100%		
ASSESSORS RECORDS					Displacement from SFR.						
AND/OR MAPS					Displacement from MULTI						
TOTAL	89	PARCELS			Displacement from BUS						
					TOTAL				100%		
					Displacement from SFR.						
					Displacement from MULTI						
					Displacement from BUS						
GENERAL DESCRIPTION & COUNT OF RW											
TOTAL TTD TAKES	89	CORRECT									
ACQ. TAKE TYPE	SFR	2-4 RES.	4+ RES. UNITS	COM	OFFICE	IND	AGRIC	MOBIL	HOME	GOV'T	Improved Par. Count
FULL WITH IMPS (FI)											
FULL NO IMPS (FN)											
PART WITH IMPS (PI)				3			80				
PART NO IMPS (PN)											
PERM. EASE (E)											
TEMP. CONT. EASE (TE)											
INDIV. TOTALS			0				88				89

30-POTENTIAL EXCESS PARCELS NOT KNOWN AT THIS TIME NUM. OF EXCESS PARCELS NONE

31-POTENTIAL IMPROVED PARCELS NOT KNOWN AT THIS TIME NUM. OF PARCELS NONE

32-EVALUATION PREPARED BY: _____ DATE 07/01/99

RIGHT OF WAY EST. PREPARED BY: Steve Torres _____ DATE _____

RAILROAD EST. PREPARED BY: AL HUGHES _____ DATE _____

UTILITIES EST. PREPARED BY: N. JUAREZ _____ DATE 10/25/99

33-REAL PROPERTY SERVICES: CAPITAL OUTLAY SUPPORT

FUNCTION	ESCALATED COSTS	PREPARED BY MANAGER	DATE
A-ROUTINE MAINTENANCE (OBJECT CODE 058)	_____	_____	_____
B-ADVERTISING COSTS (OBJECT CODE 039)	_____	_____	_____
C-UTILITY COSTS (OBJECTS CODE 002)	_____	_____	_____

34- SR. R/W AGENT APPROVES DATA SHEET J CABRERA _____ DATE _____

PROJECT MANAGER CONCURS WITH THIS DATA SHEET _____ DATE _____

I HAVE PERSONALLY REVIEWED THIS R/W DATA SHEET AND ALL SUPPORTING INFORMATION I CERTIFY THAT THE PROBABLE HIGHEST AND BEST USE, ESTIMATED VALUES, AND ASSUMPTIONS ARE REASONABLE AND PROPER SUBJECT TO THE LIMITING CONDITIONS SET FORTH, AND I FIND THIS DATA SHEET COMPLETE AND CURRENT.

This data sheet is not to be signed by Chief unless accompanied by final scoping report (PR, PSR, PSSR) for review and/or signature.

CHIEF _____ DATE _____

R/W DATA SHEET FOR PSR SCOPING REPORT

REVISD UPDATED 3/26/01 DATE: 7/1/99 ROUTE: LA 138 PM/KM E.A: 188410 ALT: 1 PROJ. DESC: Widening

TO: Art Corra ATTN: PHONE 7

Table with 2 columns: PLEASE INITIAL, DATE. Rows for SENIOR R/W P&M, CAPITAL COORDINATOR, PROJECT FILE ARCHIVE COORD, PROD. COORDINATOR.

INITIAL COPY BECOMES ORIGINAL R/W D.S.

IF THIS PROJECT E.A IS SUBSEQUENTLY DIVIDED OR CHANGED INTO ANOTHER E.A AND / OR THE PROJECT SCOPE CHANGES, THEN THIS DATA SHEET BECOMES INVALID FOR STIP, BUDGET, AND PYSKAN PURPOSES. NEW DATA SHEET(S) WILL NEED TO BE REQUESTED IMMEDIATELY BY YOUR SECTION.

TRANSMITTED HEREWITH IS A COST ESTIMATE PURSUANT TO THE FOLLOWING CONDITION(S)

- 1-COST ESTIMATE IS VALID FOR THE ABOVE SCOPING REPORT ONLY AND NEED TO BE UPDATED WITHIN TWO YEARS. THIS IS AN ESTIMATE ONLY AND NOT AN APPRAISAL. IT MAY BE BASED ON A WORSE CASE SCENARIOS. THE ESTIMATE IS SUBJECT TO CHANGE AND REVISION. 2 NOTIFY THE ABOVE COORDINATORS IF THIS IS THE PREFERRED PROJECT. 3- RESIDENTIAL DISPLACEMENT IS INVOLVED AND ENVIRONMENTAL DEPT.NEEDS TO BE ADVISED BY YOUR DEPT. 4-MAPS WERE: PROVIDED X NOT PROVIDED DATE. 5- THE MAPPING DID NOT PROVIDE SUFFICIENT NOR ADEQUATE DETAIL TO DETERMINE THE LIMITS OF THE RIGHT OF WAY REQUIRED AND EFFECTS ON THE IMPROVEMENTS. 6-THE TRANSPORTATION FACILITIES HAVE NOT BEEN SUFFICIENTLY DESIGNED SO OUR ESTIMATOR COULD DETERMINE THE DAMAGES TO ANY OF THE REMAINDER PARCELS AFFECTED BY THE PROJECT. 7- ADDITIONAL RIGHT OF WAY REQUIREMENTS ARE ANTICIPATED BUT ARE NOT DEFINED DUE TO THE PRELIMINARY NATURE OF EARLY DESIGN REQUIREMENTS. 8- TIME CONSTRAINTS PRECLUDED A DETAILED COST ESTIMATES. 9-TIME SCHEDULE PROVIDED BY REQUESTING PARTY DID NOT PERMIT TIME FOR A FIELD INSPECTION. 10- OTHER (EXPLAIN):

Table with 3 columns: CURRENT VALUE (FUTURE USE + CONTIN. RATE), ESCALATED VALUE, and a central column for PROVIDER. Rows include A-R/W ACQ., B-CLEARANCE, C-RAP., D-ESCROW COSTS, E-UTILITY RELOCATION COSTS, TOTAL ESTIMATED COST, and TOTAL ESCALATION.

- 17-GENERAL DESCRIPTION OF RIGHT OF WAY SEE PAGE 2: DESCRIPTION OF R/W -SEE GRID R/W INVOLVED X NO R/W. 18-RELOCATION DISPLACEMENT (RAP FROM EWS) YES NONE. 19-ARE UTILITY FACILITIES ON UTIL. RIGHT OF WAYS AFFECTED (see utility attachment) (20)-DESCRIBE SEE ATTACHED UTILITY SHEET -PAGE 3 OF 4 YES X NO. 21-ARE RAILROADS FACILITIES OR R.R. R/W AFFECTED (SEE R.R ATTACHEMENT) (21a)DESCRIBE SEE ATTACHED R.R SHEET -PAGE 4 OF 4 YES NO. 22-ARE HAZARDOUS WASTE AND/OR MATERIAL FOUND YES NONE EVIDENT Potential fire & asbestos parcels 1. 23-ARE EXISTING OR POTENTIAL AIR SPACE PARCELS AFFECTED YES X NO. 24-IS IT ANTICIPATED THAT ALL RIGHT OF WAY WORK WILL BE PERFORMED BY CIT STAFF YES X NO. 25- DO YOU ANTICIPATE ANY MAJOR ITEMS OF CONSTRUCTION CONTRACT WORK NOT KNOW AT THIS TIME X YES NO. 26-ARE THERE ANY MATERIAL BORROW AND/OR DISPOSAL SITES REQUIRED NOT KNOW AT THIS TIME X YES NO. 27-ARE THERE POTENTIAL RELINQUISHMENT AND/OR ABANDONMENTS NOT KNOW AT THIS TIME YES NO.

28 N/A COST DATA IS NOT VALID FOR BUDGET. STIP, PROGRAMMING NOR COST SCREENS #1

PARCEL DATA INFORMATION IS AUTHORIZED FOR THE EVENT SCREENS

UTILITIES		COUNT	PY HOURS	ROUGH EST. OF PY'S							
TYPES	COUNT	DUAL APPA	U4-1	ESTIMATE OF PY'S							
A			U4-2	PROJ. TYPE DESC.	PY'S						
B	48		U4-3	PROJECT PY'S	MAX LOW						
C	1		U4-4	PARCEL SUPPORT HOURS	1350						
D			U5-7	MISC. PERMITS ODA PY	12627.3						
TOTAL PAR	48		U5-8	UTL. And R.R. PY'S	416.5						
			U5-9	TOTALS PY HOURS	14394.799						
			TOTAL	TOTAL PERSON YEARS	8.18						
			TOTAL	TOTAL PERSON YEARS	8.18						
RIGHTS NEEDED		49	RAILROADS		ROUGH EST. OF PY'S						
FEE			C&M AGRMT: ACQ.	FUNCTIONAL INVOLVEMENT EST.							
EASE			SVC CONT.: ACQ.	ACTIVITY	%	PERSON YRS					
TCE			LIC/RE/CLAUSE: ACQ.	APP.	51%	4.17					
TAKES	COUNT		RR PY'S TOTAL	ACQ.	35%	2.86					
FULL	2		MISC. R/W	RAP							
PART	47		ROE, OP & PERMITS-ACQ	DEMO							
TOTAL PAR	49		GOVT PERMITS-ACQ	PM	6%	0.49					
			CONST. PERMIT-ACQ	UTIL.	8%	0.65					
TOTAL PARCELS PER			OUTDOOR ADV. SIGNS-	TOTAL	100%	8.18					
ASSESSORS RECORDS			POTENTIAL CONDEM. PAR	DISPLACEMENTS OF UNITS							
AND/OR MAPS			POTENTIAL CLEAR/DEMO PAR	Displacement from SFR.	PARCELS WITH						
TOTAL	48	PARCELS	1	Displacement from MULTI	RAP INVOLVEMENT						
				Displacement from BUS	COUNT	NONE					
TOTAL TTD TAKES	49		GENERAL DESCRIPTION & COUNT OF R/W				Improved Par. Count				
ACQ. TAKE TYPE	SFR	2-4 RES.	4+ RES. UNITS	COM	OFFICE	IND	AGRIC	MOBL	HOME	GOVT	
FULL WITH IMPS. (F1)											
FULL NO IMPS. (F4)				1							1
PART WITH IMPS. (P1)				3							
PART NO IMPS. (P4)	2						43				
PERM EASE. (E)											
TEMP CONT EASE. (TE)											
INDV. TOTALS	2			4			43				49

30-POTENTIAL EXCESS PARCELS NOT KNOW AT THIS TIME NUM. OF EXCESS PARCELS NONE

31-POTENTIAL IMPROVED PARCELS NOT KNOW AT THIS TIME NUM. OF PARCELS 1 NONE

33-EVALUATION PREPARED BY:	RIGHT OF WAY EST. PREPARED BY: Steve Flores	DATE	07/01/99
RAILROAD EST PREPARED BY:	AL HUGHES	DATE	
UTILITIES EST. PREPARED BY:	N. JUAREZ	DATE	10/25/99

33-REAL PROPERTY SERVICES: CAPITAL OUTLAY SUPPORT			
FUNCTION	ESCALATED COSTS	PREPARED BY MANAGER	DATE
A- ROUTINE MAINTENANCE (OBJECT CODE 058)			
B- ADVERTISING COSTS (OBJECT CODE 039)			
C- UTILITY COSTS (OBJECTS CODE 002)			

34- SR. R/W AGENT APPROVES DATA SHEET J. CABRERA DATE

PROJECT MANAGER CONCURS WITH THIS DATA SHEET DATE

I HAVE PERSONALLY REVIEWED THIS R/W DATA SHEET AND ALL SUPPORTING INFORMATION I CERTIFY THAT THE PROBABLE HIGHEST AND BEST USE ESTIMATED VALUES AND ASSUMPTIONS ARE REASONABLE AND PROPER SUBJECT TO THE LIMITING CONDITIONS SET FORTH AND I FIND THIS DATA SHEET COMPLETE AND CURRENT.

This data sheet is not to be signed by Chief unless accompanied by final scoping report (PR, PSR, PSSR) for review and/or signature.

CHIEF _____ DATE _____

R/W DATA SHEET FOR PSR SCOPING REPORT

WBS 150.15.05 REVISED UPDATED 3/26/01 DATE: 7/1/99 ROUTE: LA 138 PMKM E.A: 188420 ALT: 1 PROJ. DESC: Widening

ATTN: Art Corea

Table with 2 columns: PLEASE INITIAL, DATE. Rows for SENIOR R/W P&M, CAPITAL COORDINATOR, PROJECT FILE ARCHIVE COORD, and PROD. COORDINATOR.

INITIAL COPY BECOMES ORIGINAL R/W D.S.

IF THIS PROJECT E.A IS SUBSEQUENTLY DIVIDED OR CHANGED INTO ANOTHER E.A AND / OR THE PROJECT SCOPE CHANGES , THEN THIS DATA SHEET BECOMES INVALID FOR STIP,BUDGET ,AND FYSCAN PURPOSES. NEW DATA SHEET(S) WILL NEED TO BE REQUESTED IMMEDIATELY BY YOUR SECTION.

- TRANSMITTED HERewith IS A COST ESTIMATE PURSUANT TO THE FOLLOWING CONDITION(S)
1- COST ESTIMATE IS VALID FOR THE ABOVE SCOPING REPORT ONLY AND NEED TO BE UPDATED WITHIN TWO YEARS.
2 NOTIFY THE ABOVE COORDINATORS IF THIS IS THE PREFERRED PROJECT
3- RESIDENTIAL DISPLACEMENT IS INVOLVED AND ENVIRONMENTAL DEPT.NEEDS TO BE ADVISED BY YOUR DEPT.
4 -MAPS WERE PROVIDED X NOT PROVIDED
5- THE MAPPING DID NOT PROVIDE SUFFICIENT NOR ADEQUATE DETAIL TO DETERMINE THE LIMITS OF THE RIGHT OF WAY REQUIRED AND EFFECTS ON THE IMPROVEMENTS.
6-THE TRANSPORTATION FACILITIES HAVE NOT BEEN SUFFICIENTLY DESIGNED SO OUR ESTIMATOR COULD DETERMINE THE DAMAGES TO ANY OF THE REMAINDER PARCELS AFFECTED BY THE PROJECT.
7. ADDITIONAL RIGHT OF WAY REQUIREMENTS ARE ANTICIPATED BUT ARE NOT DEFINED DUE TO THE PRELIMINARY NATURE OF EARLY DESIGN REQUIREMENTS.
8- TIME CONSTRAINTS PRECLUDED A DETAILED COST ESTIMATES
9-TIME SCHEDULE PROVIDED BY REQUESTING PARTY DID NOT PERMIT TIME FOR A FIELD INSPECTION.
10- OTHER (EXPLAIN):

Table with 3 columns: CURRENT VALUE (FUTURE USE +CONTIN.RATE), ESCALATED VALUE, and descriptions of costs like A-R/W ACQ., B-CLEARANCE, C-RAP., D-ESCROW COSTS, E-UTILITY RELOCATION COSTS, TOTAL ESTIMATED COST, and TOTAL ESCALATION.

- 17-GENERAL DESCRIPTION OF RIGHT OF WAY SEE PAGE 2- DESCRIPTION OF R/W .SEE GRID R/W INVOLVED X NO R/W
18-RELOCATION DISPLACEMENT (RAP FROM EWS) YES NONE
19-ARE UTILITY FACILITIES OR UTIL RIGHT OF WAYS AFFECTED:(see utility attachment) YES X NO
21-ARE RAILROADS FACILITIES OR R R R/W AFFECTED (SEE R.R ATTACHEMENT) YES NO
22-ARE HAZARDOUS WASTE AND/OR MATERIAL FOUND YES NONE EVIDENT Potential This is abandoned parcels
23-ARE EXISTING OR POTENTIAL AIR SPACE PARCELS AFFECTED YES X NO
24-IS IT ANTICIPATED THAT ALL RIGHT OF WAY WORK WILL BE PERFORMED BY C/T STAFF YES X NO
25- DO YOU ANTICIPATE ANY MAJOR ITEMS OF CONSTRUCTION CONTRACT WORK NOT KNOW AT THIS TIME X YES NO
26-ARE THERE ANY MATERIAL BORROW AND/ OR DISPOSAL SITES REQUIRED NOT KNOW AT THIS TIME X YES NO
27-ARE THERE POTENTIAL RELINQUISHMENT AND /OR ABANDONMENTS NOT KNOW AT THIS TIME YES NO
28 N/A COST DATA IS NOT VALID FOR BUDGET , STIP , PROGRAMMING NOR COST SCREENS #1

PARCEL DATA INFORMATION IS AUTHORIZED FOR THE EVENT SCREENS

UTILITIES		COUNT	PY HOURS	ROUGH EST. OF PY'S							
TYPES	COUNT	DUAL APPR	UA-1								
A			UA-2								
B	60		UA-3								
C			UA-4	2	0.22492						
D			US-7								
TOTAL PAR	60		US-8								
			US-9	3	0.7895						
			TOTAL	0.99442							
FEE	RIGHTS NEEDED										
EASE	60	60									
TCE											
TAKES	COUNT										
FULL											
PART	60										
TOTAL PAR	60										
TOTAL PARCELS PER ASSESSORS RECORDS AND JOB MAPS			TOTAL PERSON YEARS								
TOTAL	60	PARCELS			9.73						
CORRECT			DISPLACEMENTS OF UNITS								
TOTAL TTD TAKES			PARCELS WITH RAP INVOLVEMENT								
60			COUNT								
NONE			NONE								
GENERAL DESCRIPTION & COUNT OF RW											
ACQ. TAKE TYPE	SFR	2-4 RES.	4+ RES. UNITS	COM	OFFICE	IND	AGRIC	MOBL	HOME	GOVT	Improved Par. Count
FULL WITH IMPS.(F)											
FULL NO IMPS.(FN)											
PART WITH IMPS.(PI)	1					1					2
PART NO IMPS.(PN)	1					1	56				
PERM. EASE.(E)											
TEMP. CONT. EASE.(TE)											
INDV. TOTALS	2					2	56				80

30-POTENTIAL EXCESS PARCELS NOT KNOW AT THIS TIME NUM OF EXCESS PARCELS NONE

31-POTENTIAL IMPROVED PARCELS NOT KNOW AT THIS TIME NUM OF PARCELS 2 NONE

33-EVALUATION PREPARED BY: _____ DATE 07/01/99

RIGHT OF WAY EST. PREPARED BY: Steve Flores

RAILROAD EST. PREPARED BY: AL HUGHES DATE _____

UTILITIES EST. PREPARED BY: N. JUAREZ DATE 10/25/99

33-REAL PROPERTY SERVICES: CAPITAL OUTLAY SUPPORT

FUNCTION	ESCALATED COSTS	PREPARED BY MANAGER	DATE
A- ROUTINE MAINTENANCE (OBJECT CODE 058)	_____	_____	_____
B-ADVERTISING COSTS (OBJECT CODE 039)	_____	_____	_____
C-UTILITY COSTS (OBJECTS CODE 002)	_____	_____	_____

34- SR. RAW AGENT APPROVES DATA SHEET J CABRERA DATE _____

PROJECT MANAGER CONCURS WITH THIS DATA SHEET DATE _____

I HAVE PERSONALLY REVIEWED THIS RAW DATA SHEET AND ALL SUPPORTING INFORMATION I CERTIFY THAT THE PROBABLE HIGHEST AND BEST USE, ESTIMATED VALUES, AND ASSUMPTIONS ARE REASONABLE AND PROPER SUBJECT TO THE LIMITING CONDITIONS SET FORTH, AND I FIND THIS DATA SHEET COMPLETE AND CURRENT.

This data sheet is not to be signed by Chief unless accompanied by final scoping report (PR, PSR, PSSR) for review and/or signature.

CHIEF _____ DATE _____

R/W DATA SHEET FOR PSR SCOPING REPORT

WBS 150 15.05
REVISED 9/11/00
UPDATED 3/26/01
DATE: 7/1/99
ROUTE: LA 138
PM/KM
E.A: 188430
ALT: 1
PROJ. DESC. Widening

TO: Art Corea
ATTN:
PHONE 7

Table with 2 columns: PLEASE INITIAL, DATE. Rows for SENIOR R/W P&M, CAPITAL COORDINATOR, PROJECT FILE ARCHIVE COORDINATOR, PROD. COORDINATOR.

INITIAL COPY BECOMES ORIGINAL R/W D.S.

IF THIS PROJECT E.A IS SUBSEQUENTLY DIVIDED OR CHANGED INTO ANOTHER E.A AND / OR THE PROJECT SCOPE CHANGES, THEN THIS DATA SHEET BECOMES INVALID FOR STIP, BUDGET, AND PYS CAN PURPOSES. NEW DATA SHEET(S) WILL NEED TO BE REQUESTED IMMEDIATELY BY YOUR SECTION.

- TRANSMITTED HERewith IS A COST ESTIMATE PURSUANT TO THE FOLLOWING CONDITION(S)
1- COST ESTIMATE IS VALID FOR THE ABOVE SCOPING REPORT ONLY AND NEED TO BE UPDATED WITHIN TWO YEARS.
2 NOTIFY THE ABOVE COORDINATORS IF THIS IS THE PREFERRED PROJECT
3- RESIDENTIAL DISPLACEMENT IS INVOLVED AND ENVIRONMENTAL DEPT. NEEDS TO BE ADVISED BY YOUR DEPT.
4 -MAPS WERE: PROVIDED X NOT PROVIDED
5- THE MAPPING DID NOT PROVIDE SUFFICIENT NOR ADEQUATE DETAIL TO DETERMINE THE LIMITS OF THE RIGHT OF WAY REQUIRED AND EFFECTS ON THE IMPROVEMENTS.
6-THE TRANSPORTATION FACILITIES HAVE NOT BEEN SUFFICIENTLY DESIGNED SO OUR ESTIMATOR COULD DETERMINE THE DAMAGES TO ANY OF THE REMAINDER PARCELS AFFECTED BY THE PROJECT.
7- ADDITIONAL RIGHT OF WAY REQUIREMENTS ARE ANTICIPATED BUT ARE NOT DEFINED DUE TO THE PRELIMINARY NATURE OF EARLY DESIGN REQUIREMENTS.
8- TIME CONSTRAINTS PRECLUDED A DETAILED COST ESTIMATES
9-TIME SCHEDULE PROVIDED BY REQUESTING PARTY DID NOT PERMIT TIME FOR A FIELD INSPECTION
10- OTHER (EXPLAIN)-

Table with 3 columns: CURRENT VALUE (FUTURE USE - CONT. RATE), ESCALATED VALUE, and descriptions of costs like A-R/W ACQ, B-CLEARANCE, C-RAP, D-ESCROW COSTS, E-UTILITY RELOCATION COSTS.

- 17-GENERAL DESCRIPTION OF RIGHT OF WAY SEE PAGE 2 DESCRIPTION OF R/W SEE GRID
18-RELOCATION DISPLACEMENT (RAP FROM EWS)
19-ARE UTILITY FACILITIES OR UTIL. RIGHT OF WAYS AFFECTED
21-ARE RAILROADS FACILITIES OR R.R. R/W AFFECTED
22-ARE HAZARDOUS WASTE AND/OR MATERIAL FOUND
23-ARE EXISTING OR POTENTIAL AIR SPACE PARCELS AFFECTED
24-IS IT ANTICIPATED THAT ALL RIGHT OF WAY WORK WILL BE PERFORMED BY CIT STAFF
25- DO YOU ANTICIPATE ANY MAJOR ITEMS OF CONSTRUCTION CONTRACT WORK
26-ARE THERE ANY MATERIAL BORROW AND/ OR DISPOSAL SITES REQUIRED
27-ARE THERE POTENTIAL RELINQUISHMENT AND/OR ABANDONMENTS
28- N/A COST DATA IS NOT VALID FOR BUDGET, STIP, PROGRAMMING NOR COST SCREENS #1

PARCEL DATA INFORMATION IS AUTHORIZED FOR THE EVENT SCREENS

29 SPECIAL COUNTY TYPE	UTILITIES				ROUGH EST. OF PY'S				
	TYPES	COUNT	DUAL APPR.	COUNT	PY HOURS	ESTIMATE OF PY'S			
	A					PROJ. TYPE DESC.	PY'S		
	B	54				MAX LOW	1350		
	C					PROJECT PY'S	12700.8		
	D			2	0.2282	PARCEL SUPPORT HOURS	459		
	TOTAL PAR	54				MISC. PERMITS, ODA PY	0.9987		
						UTIL. And R.R. PY'S	14518.799		
				3	0.7695	TOTALS PY HOURS	8.24		
						TOTAL PERSON YEARS			
	RAILROADS				ROUGH EST. OF PY'S				
FEE	COUNT		COUNT	PY HRS	FUNCTIONAL INVOLVEMENT EST.				
EASE		54			ACTIVITY	%	PERSON YRS		
TCE					APP.	28%	2.31		
					ACQ	44%	3.63		
TAKES	COUNT		RR PY'S	TOTAL	RAP				
FILL					DEMO	14%	1.15		
PART	54				PM	6%	0.49		
TOTAL PAR	54				UTIL.	8%	0.66		
					TOTAL	100%	8.24		
MISC. RW				DISPLACEMENTS OF UNITS					
OUTDOOR ADV. SIGNS-				PARCEL					
ASSESSORS RECORDS AND/OR MAPS				PARCELS WITH RAP INVOLVEMENT					
POTENTIAL CONDEM. PAR				COUNT					
POTENTIAL CLEAR / DEMO PAR				NONE					
CORRECT				Improved Per. Court					
TOTAL TTD TAKES									
54									
GENERAL DESCRIPTION & COUNT OF RW									
ACQ. TAKE TYPE	SFR	2-4 RES.	4+ RES. UNITS	COM	OFFICE	IND	AGRIC	MOBIL. HOME	GOV'T
FULL WITH IMPS. (FI)									
FULL NO IMPS. (FN)									
PART WITH IMPS. (PI)							54		
PART NO IMPS. (PN)									
PERM. EASE. (E)									
TEMP. CONT. EASE. (TE)									
INDV. TOTALS							54		

30-POTENTIAL EXCESS PARCELS NOT KNOWN AT THIS TIME NUM OF EXCESS PARCELS NONE

31-POTENTIAL IMPROVED PARCELS NOT KNOWN AT THIS TIME NUM OF PARCELS NONE

32-EVALUATION PREPARED BY: RIGHT OF WAY EST. PREPARED BY: Steve Flores DATE 07/01/99

RAILROAD EST PREPARED BY: AL HUGHES DATE _____

UTILITIES EST. PREPARED BY: N. JUAREZ DATE 10/25/99

33-REAL PROPERTY SERVICES: CAPITAL OUTLAY SUPPORT

FUNCTION	ESCALATED COSTS	PREPARED BY MANAGER	DATE
A- ROUTINE MAINTENANCE (OBJECT CODE 058)	_____	_____	_____
B-ADVERTISING COSTS (OBJECT CODE 039)	_____	_____	_____
C-UTILITY COSTS (OBJECTS CODE 002)	_____	_____	_____

34- SR. RW AGENT APPROVES DATA SHEET J CABRERA DATE _____

PROJECT MANAGER CONCURS WITH THIS DATA SHEET? _____ DATE _____

I HAVE PERSONALLY REVIEWED THIS RW DATA SHEET AND ALL SUPPORTING INFORMATION I CERTIFY THAT THE PROBABLE HIGHEST AND BEST USE, ESTIMATED VALUES AND ASSUMPTIONS ARE REASONABLE AND PROPER SUBJECT TO THE LIMITING CONDITIONS SET FORTH, AND I FIND THIS DATA SHEET COMPLETE AND CURRENT.

This data sheet is not to be signed by Chief unless accompanied by final scoping report (PR,PSR,PSSR) for review and/or signature.

CHIEF _____ DATE _____

07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

PRELIMINARY COST ESTIMATE

ATTACHMENT K

Final Project Report



PRELIMINARY ESTIMATE OF COST							
BID OPENING		EXPENDITURE AUTHORIZATION		BUDGET ALLOCATION		DATE	
		127200				3/21/01	
		DISTRICT	COUNTY	ROUTE	KP	SOURCE OF FUNDS	
		07	LA	138	82.7/96.9	HE-13	
DESCRIPTION				TYPE OF WORK			
Pearblossom Highway from Avenue T to Longview Road				Widen to 4 lanes			
#	ITEM CODE	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	
1	014474	Roadway Excavation (Aerially Deposited Lead)-Type Y	m ³	86100	30.00	2,583,000.00	
2	06606x	Transportation Management Plan	ls	1	250,000.00	250,000.00	
3	066244	Environmental Mitigation	ls	1	489,000.00	489,000.00	
4	070010	Progress Schedule (Critical Path)	ls	1	50,000.00	50,000.00	
5	074020	Water Pollution Control	ls	1	21,000.00	21,000.00	
6	120090	Construction Area Signs	ls	1	66,000.00	66,000.00	
7	120100	Traffic Control System	ls	1	240,000.00	240,000.00	
8	120159	100 mm Temporary Traffic Stripe (Paint)	m	82,400	3.00	247,200.00	
9	120165	Channelizers (Surface Mounted)	ea	1,840	30.00	55,200.00	
10	120300	Temporary Pavement Marker	ea	7,500	4.00	30,000.00	
11	129000	Temporary Railing (Type K)	m	1,030	40.00	41,200.00	
12	129100	Temporary Crash Cushion Module	ea	84	250.00	21,000.00	
13	150711	Remove Painted Traffic Stripe	m	64,700	5.00	323,500.00	
14	150713	Remove Pavement Marking	m ²	250	15.00	3,750.00	
15	150740	Remove Sign	ea	30	150.00	4,500.00	
16	152386	Relocate Roadside Sign (One Post)	ea	110	175.00	19,250.00	
17	152387	Relocate Roadside Sign (Two Posts)	ea	36	250.00	9,000.00	
18	153153	Cold Plane Asphalt Concrete Pavement	m ²	129,000	3.00	387,000.00	
19	160101	Clearing & Grubbing	ha	41	10,000.00	410,000.00	
20	198001	Imported Borrow	m ³	58,000	15.00	870,000.00	
21	203015	Erosion Control	ls	1	231,000.00	231,000.00	
22	260301	Class 3 Aggregate Base	m ³	20,900	30.00	627,000.00	
23	390103	Asphalt Concrete (Type B)	tonn	239,000	40.00	9,560,000.00	
24	51xxxxx	Bridge Work	ls	1	7,120,000.00	7,120,000.00	
25	62xxxxx	Drainage Work (Widening Section)	ls	1	10,300,000.00	10,300,000.00	
26	731502	Minor Concrete (Misc. Construction)	m ³	3,230	300.00	969,000.00	
27	840515	Thermoplastic Pavement Marking	m ²	490	30.00	14,700.00	
28	840561	100 mm Thermoplastic Traffic Stripe	m	82,800	4.00	331,200.00	
29	840563	200 mm Thermoplastic Traffic Stripe	m	820	4.00	3,280.00	
30	850102	Pavement Marker (Retroreflective)	ea	5,820	5.00	29,100.00	
31	86xxxxx	Electrical Work	ls	1	300,000.00	300,000.00	
Sum of Items						35,605,880.00	
32	074020A	Temporary Best Management Practices (5% Sum of items)	ls	1	1,780,294.00	1,780,294.00	
33	999990	Mobilization (0.10 * Sum of Items above)	ls	1	3,560,588.00	3,560,588.00	
LENGTH IN km		Call \$47,400,000			SUBTOTAL		\$40,946,762.00
14.2					CONTINGENCIES		15%
COST PER km					TOTAL		\$47,088,776.30
\$3,316,111							
CALCULATED BY		CHECKED BY					
N. Gobran							

PRELIMINARY ESTIMATE OF COST								
BID OPENING		EXPENDITURE AUTHORIZATION			BUDGET ALLOCATION		DATE	
		104830					3/21/01	
		DISTRICT	COUNTY	ROUTE	KP	SOURCE OF FUNDS		
		07	LA	138	96.9/102.6	HE-13		
DESCRIPTION					TYPE OF WORK			
Pearblossom Highway from Longview Road to 165th St. East					Widen to 4 lanes			
#	ITEM CODE	DESCRIPTION			UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	014474	Roadway Excavation (Aerially Deposited Lead)-Type Y			m ²	5,100	30.00	153,000.00
2	06606x	Transportation Management Plan			ls	1	250,000.00	250,000.00
3	066244	Environmental Mitigation			ls	1	139,000.00	139,000.00
4	070010	Progress Schedule (Critical Path)			ls	1	50,000.00	50,000.00
5	074020	Water Pollution Control			ls	1	11,000.00	11,000.00
6	120090	Construction Area Signs			ls	1	18,000.00	18,000.00
7	120100	Traffic Control System			ls	1	176,000.00	176,000.00
8	120159	100 mm Temporary Traffic Stripe (Paint)			m	38,500	3.00	115,500.00
9	120165	Channelizers (Surface Mounted)			ea	310	30.00	9,300.00
10	120300	Temporary Pavement Marker			ea	2,130	4.00	8,520.00
11	129000	Temporary Railing (Type K)			m	14,600	40.00	584,000.00
12	129100	Temporary Crash Cushion Module			ea	370	250.00	92,500.00
13	150711	Remove Painted Traffic Stripe			m	13,500	5.00	67,500.00
14	150713	Remove Pavement Marking			m ²	7	15.00	105.00
15	150740	Remove Sign			ea	6	150.00	900.00
16	152386	Relocate Roadside Sign (One Post)			ea	21	175.00	3,675.00
17	152387	Relocate Roadside Sign (Two Posts)			ea	12	250.00	3,000.00
18	153153	Cold Plane Asphalt Concrete Pavement			m ²	17,100	3.00	51,300.00
19	160101	Clearing & Grubbing			ha	42	10,000.00	420,000.00
20	190101	Roadway Excavation			m ²	23,500	15.00	382,500.00
21	198001	Imported Borrow			m ³	387,000	15.00	5,805,000.00
22	203015	Erosion Control			ls	1	249,000.00	249,000.00
23	260301	Class 3 Aggregate Base			m ²	12,700	30.00	381,000.00
24	390103	Asphalt Concrete (Type B)			tonne	138,000	40.00	5,520,000.00
25	51xxxx	Bridge Widening & Replacement			ls	1	2,325,000.00	2,325,000.00
26	62xxxx	Drainage Work (Widening Section)			ls	1	3,930,000.00	3,930,000.00
27	731502	Minor Concrete (Misc. Construction)			m ²	50	300.00	15,000.00
28	840515	Thermoplastic Pavement Marking			m ²	17	30.00	510.00
29	840561	100 mm Thermoplastic Traffic Stripe			m	34,900	4.00	139,600.00
30	840563	200 mm Thermoplastic Traffic Stripe			m	140	4.00	560.00
31	850102	Pavement Marker (Retroreflective)			ea	2,590	5.00	12,950.00
32	861601A	Weather Detection Scan System			ls	1	23,500.00	23,500.00
33	861601B	Relocate Remote Processing Unit (Weather Station)			ls	1	150,000.00	150,000.00
Sum of Items								21,087,920.00
34	074020A	Temporary Best Management Practices (5% Sum of items)			ls	1	1,054,396.00	1,054,396.00
35	999990	Mobilization (0.10 * Sum of Items above)			ls	1	2,108,792.00	2,108,792.00
LENGTH IN km		5.7			Call \$27,900,000		SUBTOTAL	\$24,251,108.00
COST PER km		\$4,892.767					CONTINGENCIES	
							15%	\$3,637,666.20
CALCULATED BY		CHECKED BY					TOTAL	\$27,888,774.20
N. Gobran								

Category: 141

PRELIMINARY ESTIMATE OF COST									
BID OPENING		EXPENDITURE AUTHORIZATION			BUDGET ALLOCATION		DATE		
		188410					3/21/01		
		DISTRICT	COUNTY	ROUTE	KP	SOURCE OF FUNDS			
		07	LA	138	102.6/105.5	HE-13			
DESCRIPTION					TYPE OF WORK				
Pearblossom Highway from 165th St. East to Ave. W					Widen to 4 lanes				
#	ITEM CODE	DESCRIPTION			UNIT	QUANTITY	UNIT PRICE	AMOUNT	
1	014474	Roadway Excavation (Aerially Deposited Lead)-Type Y			m3	1.280	30.00	38,400.00	
2	06606x	Transportation Management Plan			ls	1	250,000.00	250,000.00	
3	066244	Environmental Mitigation			ls	1	92,000.00	92,000.00	
4	070010	Progress Schedule (Critical Path)			ls	1	40,000.00	40,000.00	
5	074020	Water Pollution Control			ls	1	8,000.00	8,000.00	
6	120090	Construction Area Signs			ls	1	10,800.00	10,800.00	
7	120100	Traffic Control System			ls	1	92,000.00	92,000.00	
8	120159	Temporary Traffic Stripe (Paint)			m	17,100	3.00	51,300.00	
9	120300	Temporary Pavement Marker			ea	1,600	4.00	6,400.00	
10	129000	Temporary Railing (Type K)			m	4,481	40.00	179,240.00	
11	129100	Temporary Crash Cushion Module			ea	120	250.00	30,000.00	
12	150711	Remove Painted Traffic Stripe			m	5,720	5.00	28,600.00	
13	150713	Remove Pavement Marking			m2	11	15.00	165.00	
14	152386	Relocate Roadside Sign (One Post)			ea	18	175.00	3,150.00	
15	152387	Relocate Roadside Sign (Two Posts)			ea	5	250.00	1,250.00	
16	153153	Cold Plane Asphalt Concrete Pavement			m2	5,330	3.00	15,990.00	
17	160101	Clearing & Grubbing			ha	16	10,000.00	160,000.00	
18	190101	Roadway Excavation			m3	13,400	15.00	201,000.00	
19	198001	Imported Borrow			m3	102,000	15.00	1,530,000.00	
20	203015	Erosion Control			ls	1	87,000.00	87,000.00	
21	260301	Class 3 Aggregate Base			m3	7,130	30.00	213,900.00	
22	390103	Asphalt Concrete (Type B)			tonne	76,600	40.00	3,064,000.00	
23	62xxxx	Drainage Work (Widening Section)			ls	1	1,800,000.00	1,800,000.00	
24	840515	Thermoplastic Pavement Marking			m2	25	30.00	750.00	
25	840561	100 mm Thermoplastic Traffic Stripe			m	16,500	4.00	66,000.00	
26	840563	200 mm Thermoplastic Traffic Stripe			m	140	4.00	560.00	
27	850102	Pavement Marker (Retroreflective)			ea	1,200	5.00	6,000.00	
Sum of Items								7,976,505.00	
28	074020A	Temporary Best Management Practices (5% Sum of items)			ls	1	398,825.25	398,825.25	
29	999990	Mobilization (0.10 * Sum of Items above)			ls	1	797,650.50	797,650.50	
	LENGTH IN km	Call \$10,600,000					SUBTOTAL		
	2.9								
	COST PER km						CONTINGENCIES		
	\$3,637,561						15%	\$1,375,947.11	
	CALCULATED BY	CHECKED BY					TOTAL		
	N. Gobran								\$10,548,927.86

PRELIMINARY ESTIMATE OF COST						
BID OPENING		EXPENDITURE AUTHORIZATION		BUDGET ALLOCATION		DATE
		188420				3/21/01
		DISTRICT	COUNTY	ROUTE	MP	SOURCE OF FUNDS
		07	LA	138	105.5/108.4	HE-15
DESCRIPTION				TYPE OF WORK		
Pearblossom Highway from Ave. W to 199th St. East				Widen to 4 lanes		
#	ITEM CODE	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	06606x	Transportation Management Plan	ls	1	250,000.00	250,000.00
2	066244	Environmental Mitigation	ls	1	93,700.00	93,700.00
3	070010	Progress Schedule (Critical Path)	ls	1	40,000.00	40,000.00
4	074020	Water Pollution Control	ls	1	9,000.00	9,000.00
5	120090	Construction Area Signs	ls	1	9,600.00	9,600.00
6	120100	Traffic Control System	ls	1	92,000.00	92,000.00
7	120159	100 mm Temporary Traffic Stripe (Paint)	m	20,000	3.00	60,000.00
8	120165	Channelizers (Surface Mounted)	ea	290	30.00	8,700.00
9	120300	Temporary Pavement Marker	ea	1,770	4.00	7,080.00
10	129000	Temporary Railing (Type K)	m	2,380	40.00	95,200.00
11	129100	Temporary Crash Cushion Module	ea	140	250.00	35,000.00
12	150711	Remove Painted Traffic Stripe	m	6,350	5.00	31,750.00
13	150713	Remove Pavement Marking	m	5	15.00	75.00
14	150740	Remove Sign	ea	1	150.00	150.00
15	152386	Relocate Roadside Sign (One Post)	ea	12	175.00	2,100.00
16	152387	Relocate Roadside Sign (Two Posts)	ea	2	250.00	500.00
17	153153	Cold Plane Asphalt Concrete	m ²	23,900	3.00	71,700.00
18	160101	Clearing & Grubbing	ha	14.5	10,000.00	145,000.00
19	190101	Roadway Excavation	m ³	27,100	15.00	406,500.00
20	198001	Imported Borrow	m ³	57,000	15.00	855,000.00
21	203015	Erosion Control	ls	1	75,000.00	75,000.00
22	260301	Class 3 Aggregate Base	m ³	4,640	30.00	139,200.00
23	390103	Asphalt Concrete (Type B)	tonne	52,600	40.00	2,104,000.00
24	62xxx	Drainage Work (Widening Section)	ls	1	1,800,000.00	1,800,000.00
25	840515	Thermoplastic Pavement Marking	m ²	25	30.00	750.00
26	840561	100 mm Thermoplastic Traffic Stripe	m	17,600	4.00	70,400.00
27	840563	200 mm Thermoplastic Traffic Stripe	m	30	4.00	120.00
28	850102	Pavement Marker (Retroreflective)	ea	1,230	5.00	6,150.00
Sum of Items						6,408,675.00
29	074020A	Temporary Best Management Practices (5% Sum of items)	ls	1	320,433.75	320,433.75
30	999990	Mobilization (0.10 * Sum of Items above)	ls	1	640,867.50	640,867.50
LENGTH IN km		Call \$8,480,000			SUBTOTAL	
2.9					\$7,369,976.25	
COST PER km					CONTINGENCIES	
\$2,922,577					15% \$1,105,496.44	
CALCULATED BY		CHECKED BY			TOTAL	
N. Gobran					\$8,475,472.69	

Category: 141

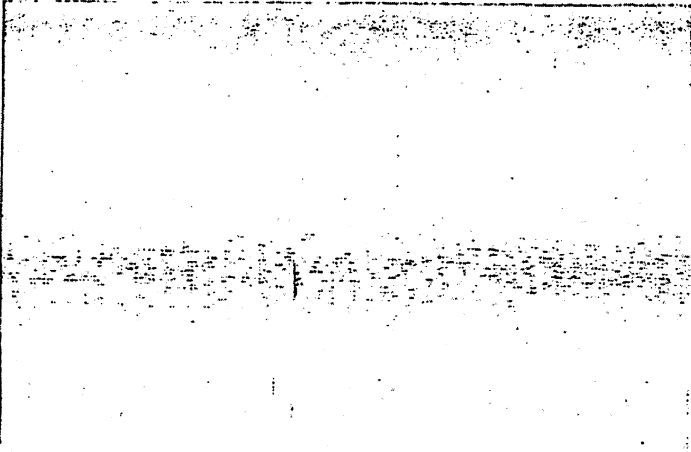
PRELIMINARY ESTIMATE OF COST								
BID OPENING		EXPENDITURE AUTHORIZATION			BUDGET ALLOCATION		DATE	
		188430					3/21/01	
		DISTRICT	COUNTY	ROUTE	KP	SOURCE OF FUNDS		
		07	LA	138	108.4/111.7	HE-13		
DESCRIPTION					TYPE OF WORK			
Pearblossom Highway from 199th St. East to Rte. 18					Widen to 4 lanes			
#	ITEM CODE	DESCRIPTION			UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	06606x	Transportation Management Plan			ls	1	250,000.00	250,000.00
2	066244	Environmental Mitigation			ls	1	134,000.00	134,000.00
3	070010	Progress Schedule (Critical Path)			ls	1	40,000.00	40,000.00
4	074020	Water Pollution Control			ls	1	11,000.00	11,000.00
5	120090	Construction Area Signs			ls	1	10,200.00	10,200.00
6	120100	Traffic Control System			ls	1	38,000.00	38,000.00
7	120159	100 mm Temporary Traffic Stripe (Paint)			m	26.200	3.00	78,600.00
8	120165	Channelizers (Surface Mounted)			ea	300	30.00	9,000.00
9	120300	Temporary Pavement Marker			ea	2,330	4.00	9,320.00
10	129000	Temporary Railing (Type K)			m	8,750	40.00	350,000.00
11	129100	Temporary Crash Cushion Module			ea	200	250.00	50,000.00
12	150711	Remove Painted Traffic Stripe			m	14,800	5.00	74,000.00
13	150713	Remove Pavement Marking			m ²	56	15.00	840.00
14	150740	Remove Sign			ea	2	150.00	300.00
15	152386	Relocate Roadside Sign (One Post)			ea	35	175.00	6,125.00
16	152387	Relocate Roadside Sign (Two Posts)			ea	15	250.00	3,750.00
17	153153	Cold Plane Asphalt Concrete			m ²	12,200	3.00	36,600.00
18	160101	Clearing & Grubbing			ha	49.5	10,000.00	495,000.00
19	190101	Roadway Excavation			m ³	15,700	15.00	235,500.00
20	198001	Imported Borrow			m ³	557,000	15.00	8,355,000.00
21	203015	Erosion Control			ls	1	318,000.00	318,000.00
22	260301	Class 3 Aggregate Base			m ³	12,900	30.00	387,000.00
23	390103	Asphalt Concrete (Type B)			tonne	146,000	40.00	5,840,000.00
24	51xxxx	Bridge Work Quantities			ls	1	1,040,000.00	1,040,000.00
25	62xxxx	Drainage Work (Widening Section)			ls	1	2,520,000.00	2,520,000.00
26	840515	Thermoplastic Pavement Marking			m ²	33	30.00	990.00
27	840561	100 mm Thermoplastic Traffic Stripe			m	36,100	4.00	144,400.00
28	840563	200 mm Thermoplastic Traffic Stripe			m	530	4.00	2,120.00
29	850102	Pavement Marker (Retroreflective)			ea	2,360	5.00	11,800.00
30	86xxxx	Electrical Work			ls	1	45,000.00	45,000.00
Sum of Items								20,496,545.00
31	074020A	Temporary Best Management Practices (5% Sum of items)			ls	1	1,024,827.25	1,024,827.25
32	999990	Mobilization (0.10 * Sum of Items above)			ls	1	2,049,654.50	2,049,654.50
	LENGTH IN km	Call \$27,200,000					SUBTOTAL	
	3.33							
	COST PER km						CONTINGENCIES	
	\$8,140,144	15%	\$3,535,634.01					
	CALCULATED BY	CHECKED BY					TOTAL	
	N. Gobran							\$27,106,680.76

07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

INITIAL SITE ASSESSMENT (EXCERPT)





INITIAL
SITE ASSESSMENT

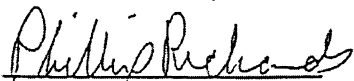
TASK ORDER # 07-12720K-HE
PROPOSED WIDENING OF STATE
ROUTE-138 BETWEEN AVENUE T
AND STATE ROUTE 18, PALMDALE,
LITTLEROCK, PEARBLOSSOM, AND
LLANO, IN LOS ANGELES COUNTY
CONTRACT # 43Y097

Prepared for

State of California
Department of Transportation
District 7 Environmental Planning
Branch
120 South Spring Street
Los Angeles, California 90012

PSI Project #: 559-7E005

January 27, 1998



Phillip Richards
Environmental Professional



Martin L. Falk, REA 05047
Senior Author

INVESTIGATIVE SUMMARY

Professional Service Industries has performed an Initial Site Assessment in conformance with the scope and limitations of Contract Number 43Y097, Task Order # 07-12720K-HE for the proposed widening of State Route-138 between Avenue T and State Route 18. Any exceptions to, or deletions from, this standard of practice are described in the report.

The project right-of-way is a proposed widening of State Route-138 between Avenue T and State Route 18. Avenue T is located in the City of Palmdale where Pearblossom Highway, Fort Tejon Road, State Route 138, and Avenue T intersect (a.k.a. Four Points). State Route 18 begins approximately 29 kilometer (\approx 18 miles) to the east in the City of Llano where State Route 138 to San Bernardino and State Route 18 to Victorville split. The project right-of-way is located in a mixed setting. The adjoining properties consist of widely scattered residential dwellings, retail stores/markets, automobile service stations, and vacant and undeveloped land.

No National Priorities List (NPL) sites, Resource Conservation and Recovery Act Treatment Storage and/or Disposal Facility (RCRA TSDF) sites, or State Priority List (SPL) sites are listed within one-eighth mile of the project right-of-way. No Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) sites or Solid Waste Information System (SWIS) sites were listed within one-eighth mile of the project right-of-way.

Four Leaking Underground Storage Tank (LUST) sites are listed within one-eighth mile of the project right-of-way. Three of these LUST sites may have adversely impacted the proposed right-of-way project.

Based upon the methodologies described in this report, this assessment has revealed evidence to suggest nine (9) unique locations along State Route 138 which warrant additional investigation to properly determine the likelihood of encountering contaminated soil, underground storage tanks, and/or aboveground storage tanks during activities associated with the State Route 138 right-of-way project. These sites are as follows:

- 3051-023-012 • Concrete and metal piping remains located on the southwest corner of the Point of Origin (Four Points).
3051-023-020
- 3050-002-012 • Valco Transmission located at 7826 Pearblossom Highway.
3050-002-013
- 3049-029-045 • C-Bar-B Plaza (Littlerock Liquor, Gas, and Market) located at 8062 Pearblossom Highway.
3049-029-047
- 3049-020-019 • Black Gold Service Station No. 147 located at 8157 Pearblossom Highway.
- 3046-029-000 • Pacific Bell facility located at 9550 Pearblossom Highway.
- 3038-022-029 • Jerry's Minute Mart located at 12515 Pearblossom Highway.
- 3037-008-013 • Kwik Tune-Lube-and-Oil located at 13100 Pearblossom Highway.
- 3036-023-070 • Buchanon Ent-Union 76 (Jack's Gas and Mini-Mart) located at 17326 Pearblossom Highway.
- 2033-010-022 • Unidentified residential property located approximately 16 miles east of the Point of Origin.

Asbestos and lead-based paint surveys were not performed as part of this ISA. Due to the age of many of the improvements which may be impacted by the proposed right-of-way expansion, asbestos containing building materials and lead-based paint may be present. Prior to any demolition activities, a comprehensive asbestos survey must be performed in accordance to South Coast Air Quality Management District Rule 1403. Additionally, sampling for the presence of lead paint is recommended.

This summary is not to be used alone. The report must be read in its entirety.

07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

PROPOSED STATE ROUTE 138 IMPROVEMENT PROJECTS

Final Project Report

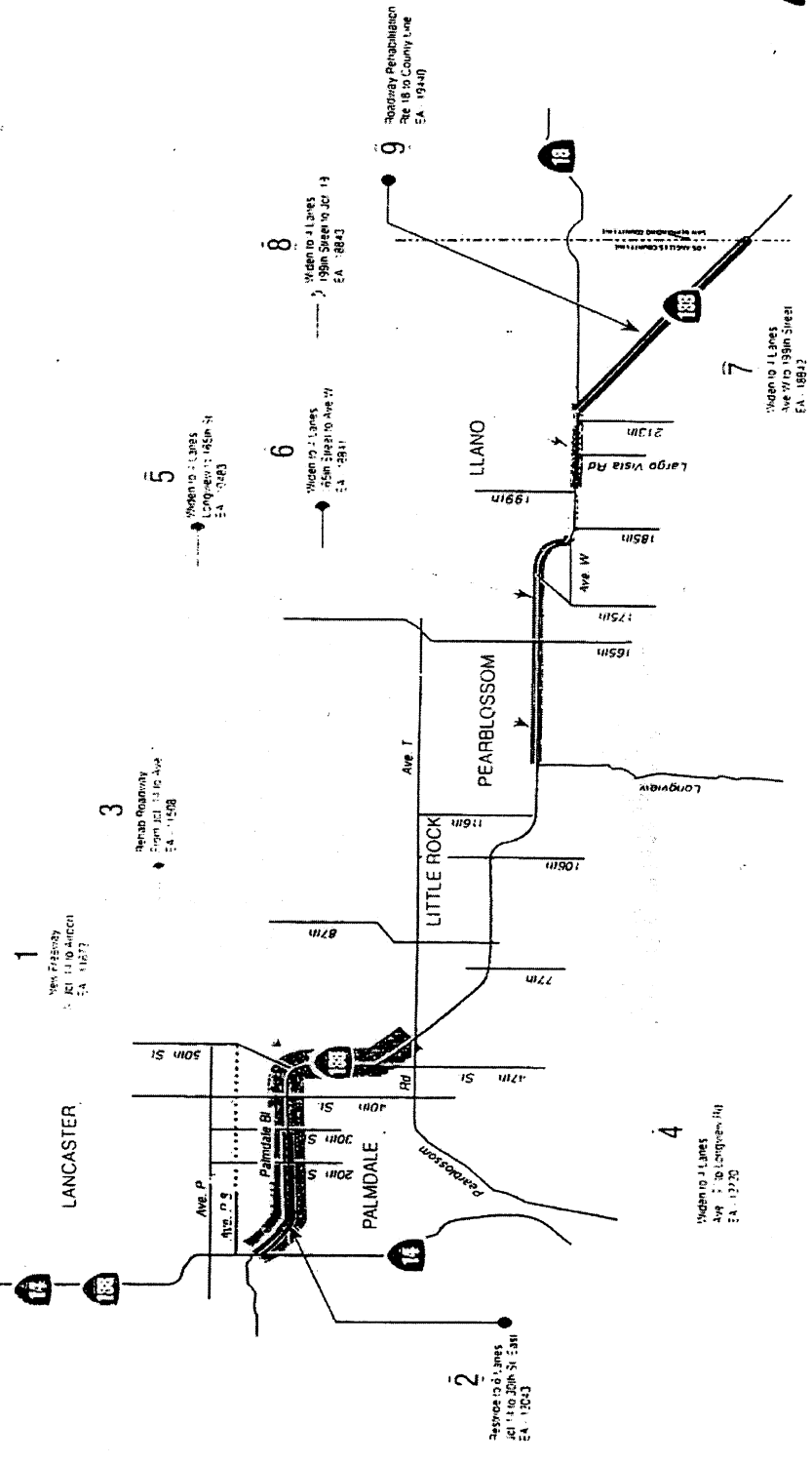
ATTACHMENT M



State Route 138 Improvements Los Angeles County



REF ID	EA	LOCATION	BKN / BNP	APN / AMP	TYPE OF WORK	PROG FY	PROG TYPE / CODE	CONST'S / RW'S (E. 1000)	PROJECT STATUS	ADV	PRD END
1	11672	In Palmdale, Ave 18 from Rte. 14 to 20th St.	33,400 / 69,007	48,700 / 78,411	RAW Open	96	STIP / HE 11	\$28,330	RAW Stage	Dec12	Feb15
2	12043	In & near Palmdale from Rte. 14 to 20th St.	33,400 / 69,007	46,700 / 75,119	Reshape 4-ln to 6-ln	96	STIP / HE 13	\$2,126	PS&E	Jan00	Aug01
3	11508	In Palmdale from Rte 14 to 20th St.	33,400 / 69,007	51,600 / 83,087	Roadway Rehabilitation	96	SHOPS / HA 22	\$8,939	PS&E	Aug00	Oct01
4	12770	Near Palmdale from Ave 1 to Computer Rd.	51,400 / 82,755	60,200 / 96,922	Widened 2-ln to 4-ln	98	STIP / HE 13	\$55,000	ED	Mar03	Jan05
5	10483	In Pearblossom from Longstreet Rd to 165th St.	60,200 / 96,922	63,700 / 102,256	Widened 2-ln to 4-ln	98	STIP / HE 13	\$45,100	ED	May03	Feb05
6	18841	In Llano from 105th St to Ave W	63,700 / 102,256	65,500 / 105,546	Widened 2-ln to 4-ln	98	STIP / HE 13	\$22,100	ED	Aug10	Oct06
7	18842	In Llano from Ave W to 199th St	65,500 / 105,546	67,300 / 108,355	Widened 2-ln to 4-ln	98	STIP / HE 13	\$16,700	ED	Aug10	Oct06
8	18843	In Llano from 199th St to Rte. 18	67,300 / 108,355	68,400 / 111,173	Widened 2-ln to 4-ln	98	STIP / HE 13	\$41,400	ED	Aug10	Oct06
9	19440	In Llano from Rte 18 to County Line	68,400 / 111,173	75,600 / 120,800	Roadway Rehabilitation	TBD	TBD	\$7000	PSR	TBD	TBD



Not to Scale

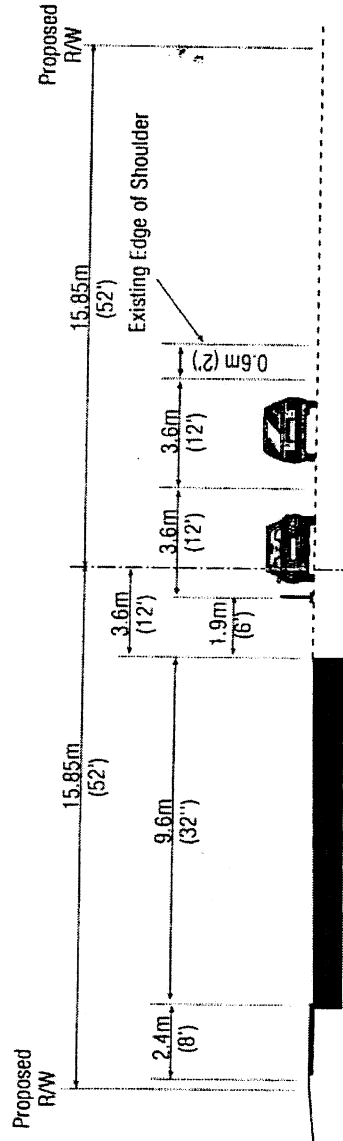
STAGE CONSTRUCTION



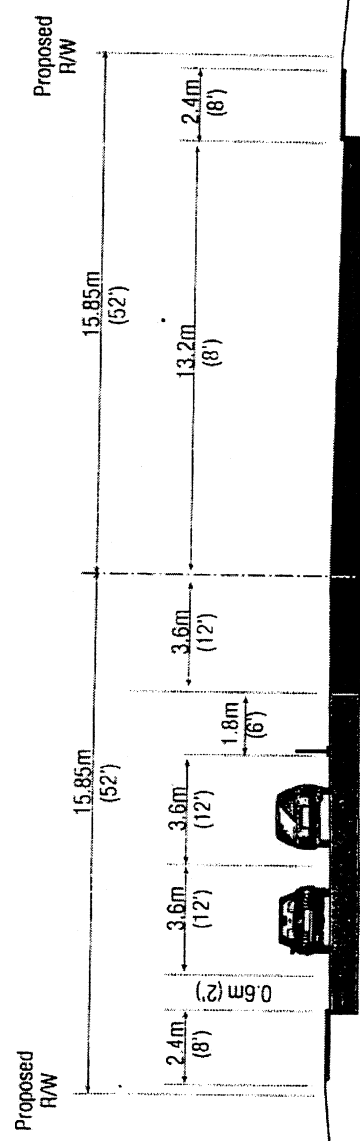
ROUTE 138 WIDENING PROJECT

Stage Construction
Developed Area

CONSTRUCT AT THIS STAGE
CHANNELIZER (SURFACE MOUNTED)



Stage 1



Stage 2



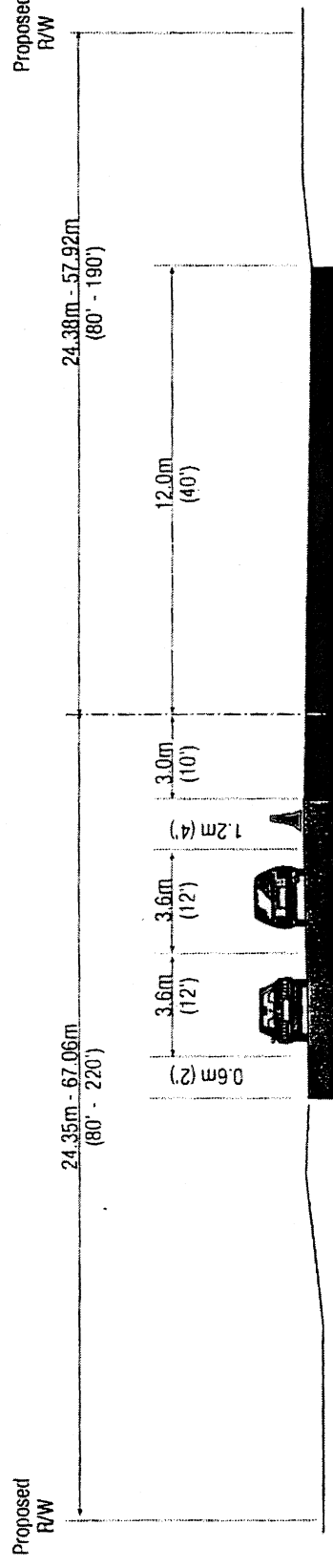
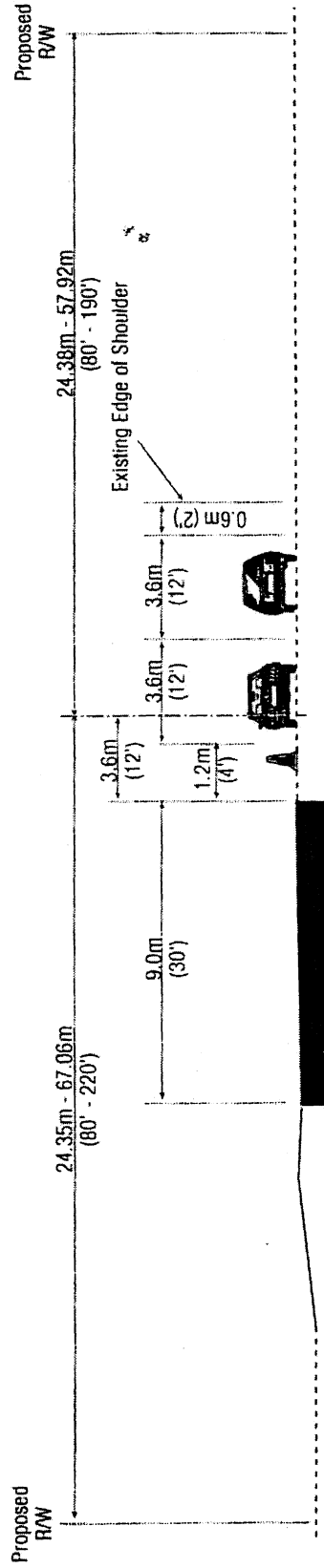


ROUTE 138 WIDENING PROJECT

Stage Construction
Undeveloped Area

CONSTRUCT AT THIS STAGE

TEMPORARY RAILING (TYPE K)

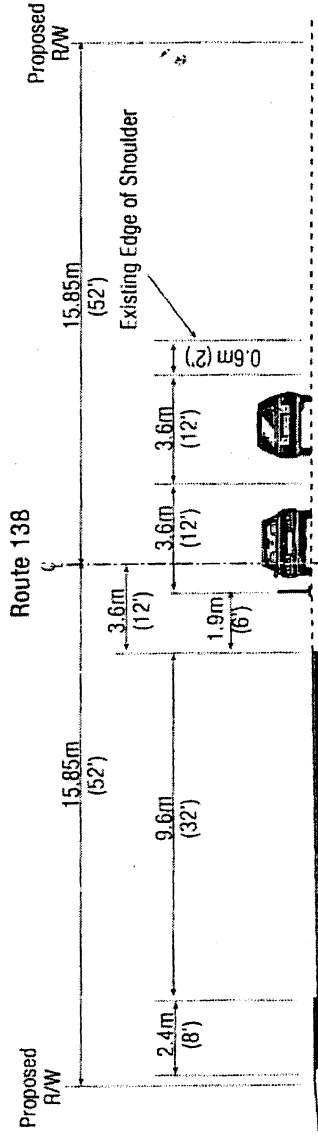




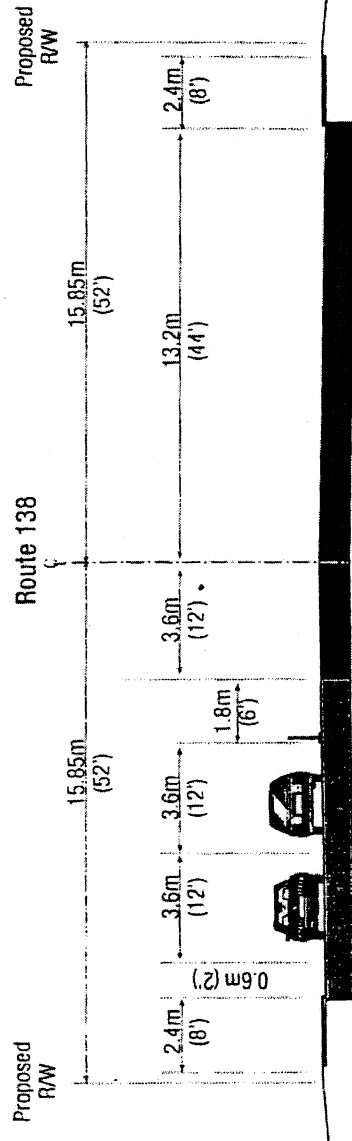
ROUTE 138 WIDENING PROJECT

Stage Construction
Littlerock (Developed Area)

CONSTRUCT AT THIS STAGE
CHANNELIZR (SURFACE MOUNTED)



Stage 1



Stage 2

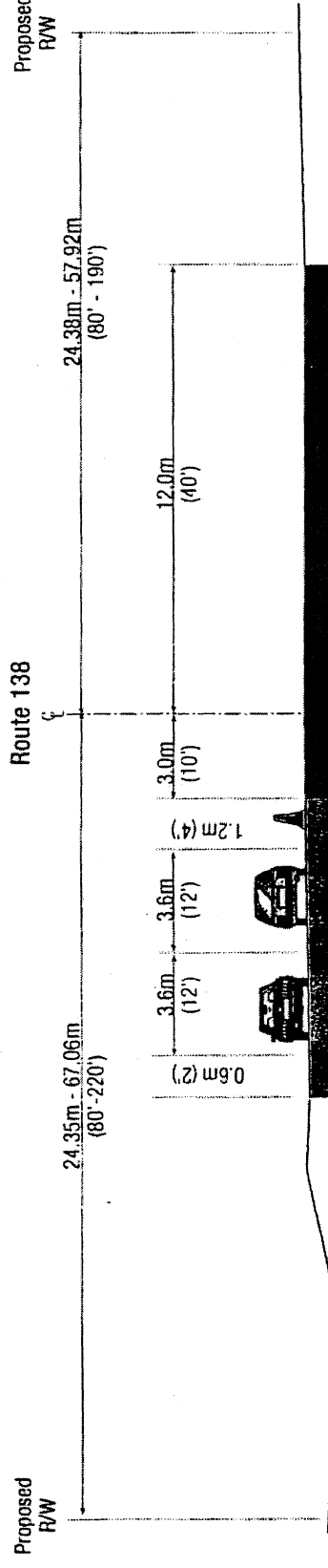
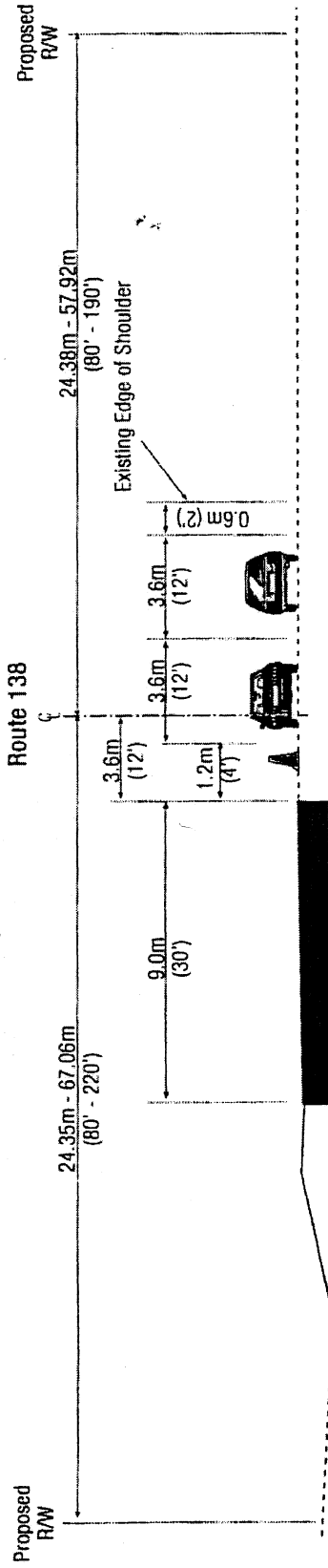




ROUTE 138 WIDENING PROJECT

Stage Construction
Littlerock (Undeveloped Area)

CONSTRUCT AT THIS STAGE
TEMPORARY RAILING (TYPE K)

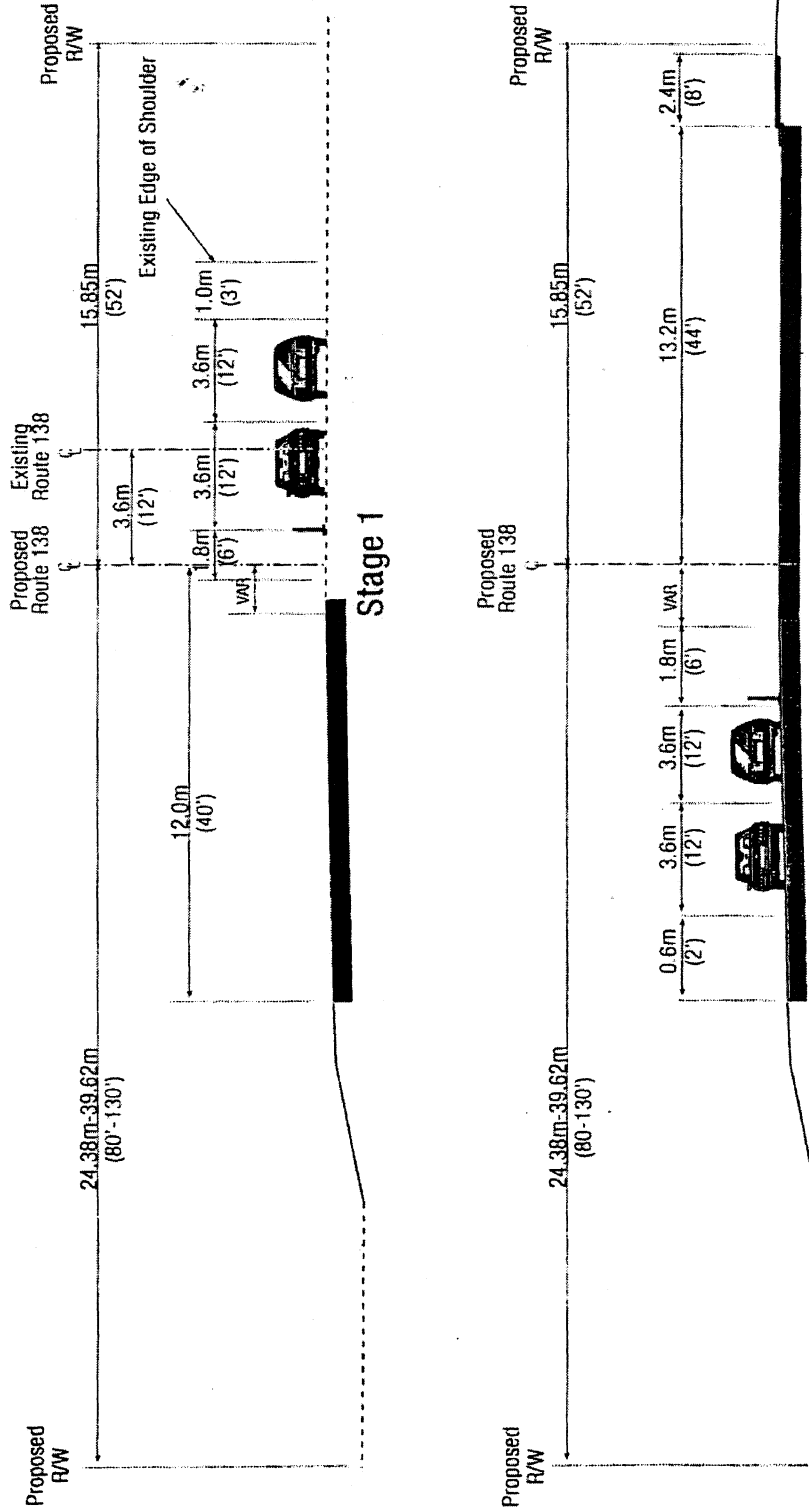




ROUTE 138 WIDENING PROJECT

Stage Construction
Pearblossom (Developed Area)

CONSTRUCT AT THIS STAGE
CHANNELIZR (SURFACE MOUNTED)



Stage 2

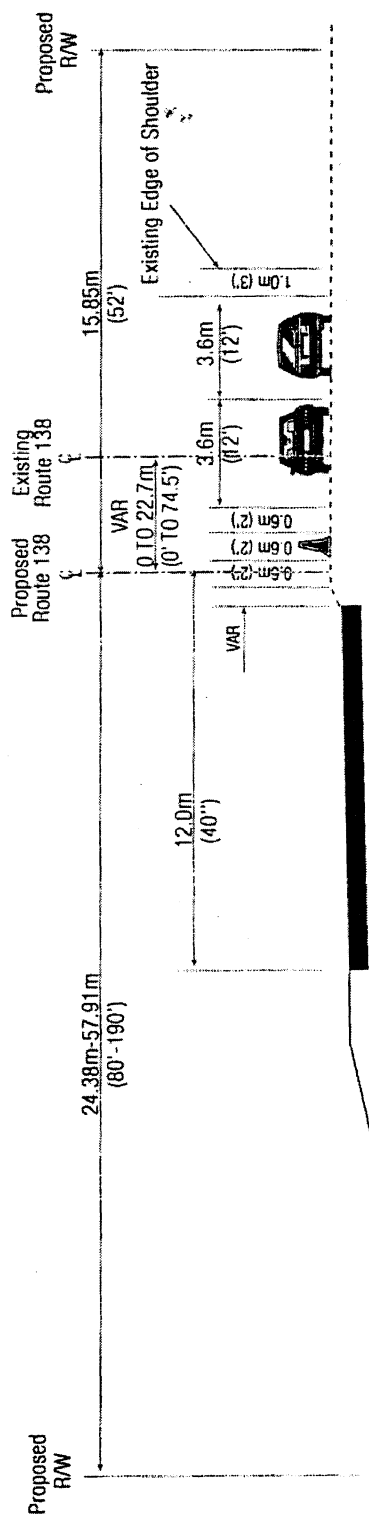




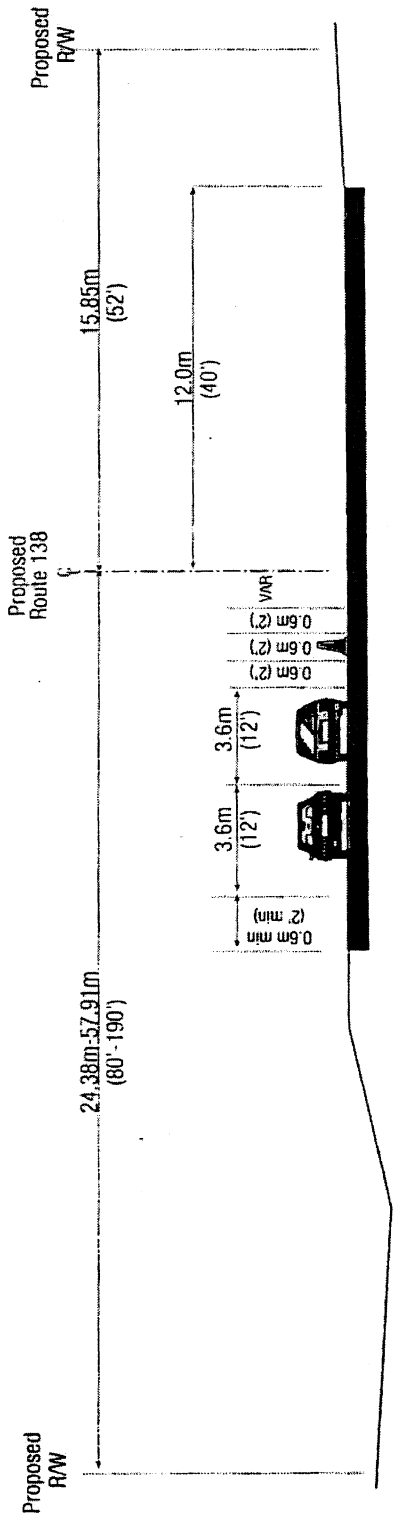
ROUTE 138 WIDENING PROJECT

Stage Construction
Pearblossom (Undeveloped Area)

CONSTRUCT AT THIS STAGE
TEMPORARY RAILING (TYPE K)



Stage 1



Stage 2

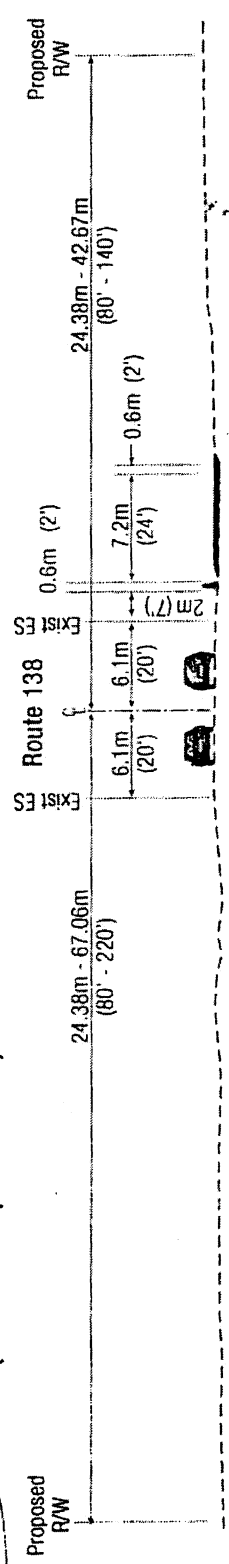




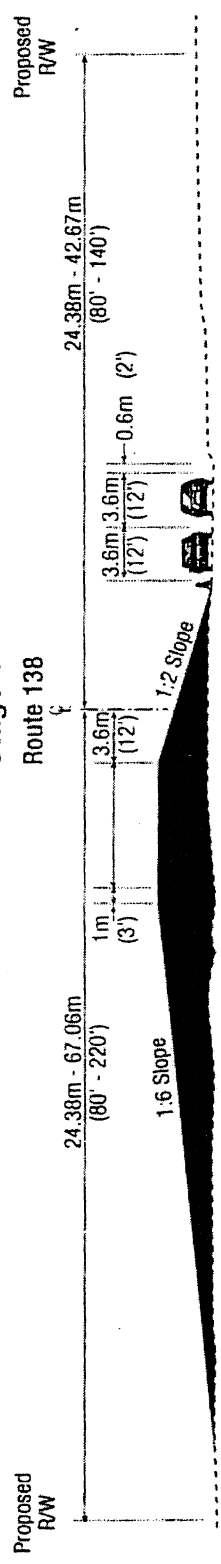
ROUTE 138 WIDENING PROJECT

Stage Construction
Llano (Undeveloped Area)

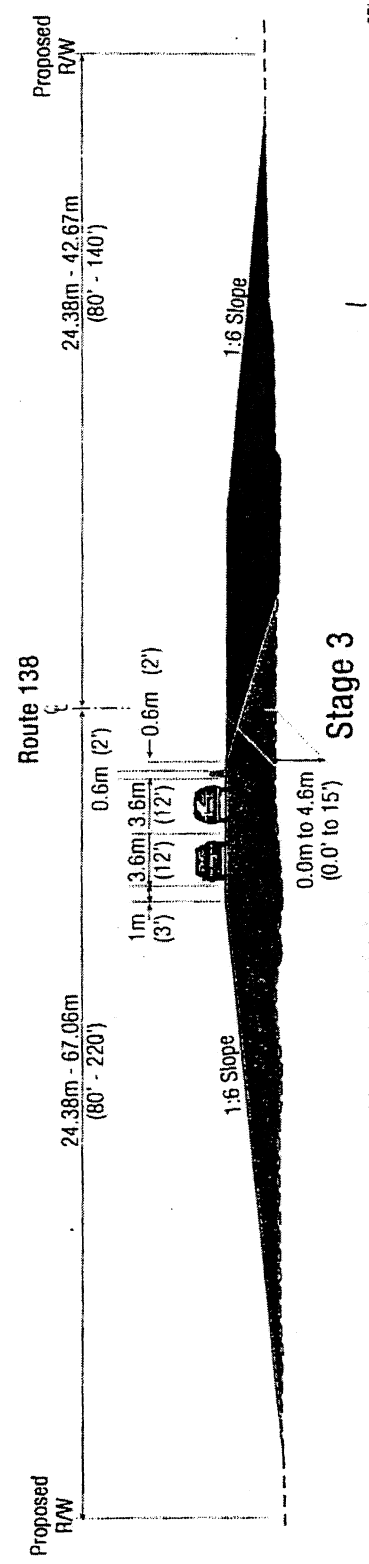
CONSTRUCT AT THIS STAGE
TEMPORARY RAILING (TYPE K)



Stage 1



Stage 2



07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

AVTREC CORRESPONDENCE

ATTACHMENT O

Final Project Report



Antelope Valley Trails, Recreation & Environmental Council
P.O. Box 3531
Quartz Hill, CA 93536-0580
(a 501 c-3 non profit organization)

CAT: 357
10/6/98

Cathy Wright
Office of Environmental Planning
Cal Trans District 7
120 South Spring Street
Los Angeles, CA 90020

October 6, 1998

RE Route 138 Widening Project - Avenue T to Route 18

Dear Ms. Wright,

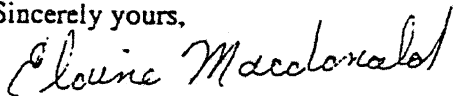
We are aware that Cal Trans has ongoing improvement projects in the North County along Highway 138. In the past, we have met with Cal Trans representative, Walley Rothbart, to make him aware of trails crossing Highway 138. The Los Angeles County Trails Plan, adopted by the Los Angeles County board of supervisors on March 14th 1996, includes various trail crossings along this highway. Residents have historically used these crossings to reach the forest and other local destinations. We ask that you recognize (in all future improvements to the Highway 138) these trails and provide the necessary elements to insure continued safe use.

The sections that are important to the trails plan are:

1. The 96th Street East crossing in Littlerock, is most important at this time. We are requesting an extra 12 foot multi-use trail easement at the aqueduct crossing to 96th Street East.
2. The 89th Street East crossing in Littlerock.
3. The 121st Street East crossing in Pearblossom.
4. Llano - Big Rock Wash - Request a 10 foot clearance underneath bridges so that trail users (including equestrians) can pass under safely.
5. 165th Street East crossing.
6. Largo Vista crossing.
7. Littlerock Creek crossing.
8. We request striping the shoulders (for bicycles) of the entire highway 138.

Suellen Hall will forward a map with the trail crossings to your office. Mrs. Hall can be reached at (805) 944-4677. You can obtain the North County adopted trail map from the Los Angeles County Parks and Recreation department. Please respond to our letter and keep us informed of any future progress along Highway 138.

Sincerely yours,



Elaine Macdonald
president, AVTREC

AVTREC brings a diverse group of people together dedicated to the acquisition and preservation of recreational trails and open space.

L - A11

cc Sam Page, president of Little rock Town Council
Jim McCarthy, LA County Trail coordinator
Michael Antonovich, supervisor 5th district
Suellen Hall and AVTREC board members

*AVTREC brings a diverse group of people together dedicated to the
acquisition and preservation of recreational trails and open space.*

07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

ALPINE ELEMENTARY SCHOOL IMPROVEMENTS AND CORRESPONDENCE

DEPARTMENT OF TRANSPORTATION

DISTRICT 7

10 S. SPRING STREET
LOS ANGELES, CA 90012
PHONE (213) 897-4231
FAX (213) 897-7023



August 2, 2000

7-LA-138
82.7/111.7 (KP)
Pearblossom Highway
from Avenue "T"
to Junction with
State Route 18
07241 127200

Category: 354

Cedric Jackson
Director
Construction, Maintenance and Operations
P.O. Box 186
340004 128th Street East
Pearblossom, California 93553

Dear Mr. Jackson:

This is in response to your letter of June 26, 2000. First of all I would like to thank you for the opportunity to meet with you and members of the Keppel Union School District to discuss the proposed widening improvements along Pearblossom Highway and the impacts to the Alpine Elementary School facilities. As you are aware, the proposed improvements along State Route 138 are not only important to the community of Littlerock but also the easterly Antelope Valley Region.

At the last meeting we had on February 11, 2000, it was agreed in principle by all parties that the plan we have developed would serve as the basis for the right of way negotiations between the school district and the California Department of Transportation. A copy of the plan is attached to this letter.

In general the plan identifies the parking measures needed to mitigate the elimination of the existing parking spaces in front of the school and the elimination of the buses loading and unloading lane in front of the school. The plan calls for 130 parking spaces, landscape, a pick-up/drop-off area, walkways, lighting, fire access provisions, and circulation improvements.

With respect to the three issues identified in your March 13, 2000 letter we offer the following comments:

The issue of safety during construction is twofold. First, the stage construction and safety plans for improvements to the school grounds will be handled by the school district. As previously discussed the school district will be responsible for the design and management of the construction contract. Caltrans will generally pay for all of the costs associated with the work required to mitigate the project impacts.

Cedric Jackson
August 2, 2000
Page Two

Secondly, with respect to the highway improvement project Caltrans will develop and provide to the school an educational program to teach children safety tips around a construction site. This is to provide safety awareness for students attending schools as early as possible during the construction phase.

Prior to beginning construction, Caltrans will submit a copy of the proposed construction schedule and detour information to potentially affected school districts and associated local agencies so that school bus routes and emergency vehicle routes can be revised.

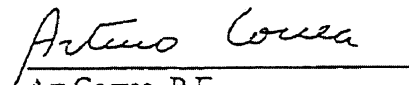
On the issue of the fence, if the proposed improvements require the removal of the existing fence; then Caltrans will generally compensate the school district accordingly. This issue will be included as part of the school district negotiations with Caltrans the right of way acquisition process.

On the issue of the existing walkway, during right of way negotiations Caltrans will survey the school grounds in more detail to determine if there is a need to improve internal pathways because of the relocation of the bus loading and parking facilities. Any improvements to the existing pathway, including replacing the asphalt concrete surface and adding additional lights should be negotiated with the right of way agent. The area of concern is shown in the attached plan entitled "Additional Work Requested".

I would appreciate any efforts your office can use to support this project. Your organization will remain on the mailing list for any relevant upcoming events. We look forward to working with you in the future.

Your interest in the project and the transportation system is appreciated. If you have any questions or if you need additional information, please contact me at 213-897-0122 or by "e" Mail at art.correa@dot.ca.gov.

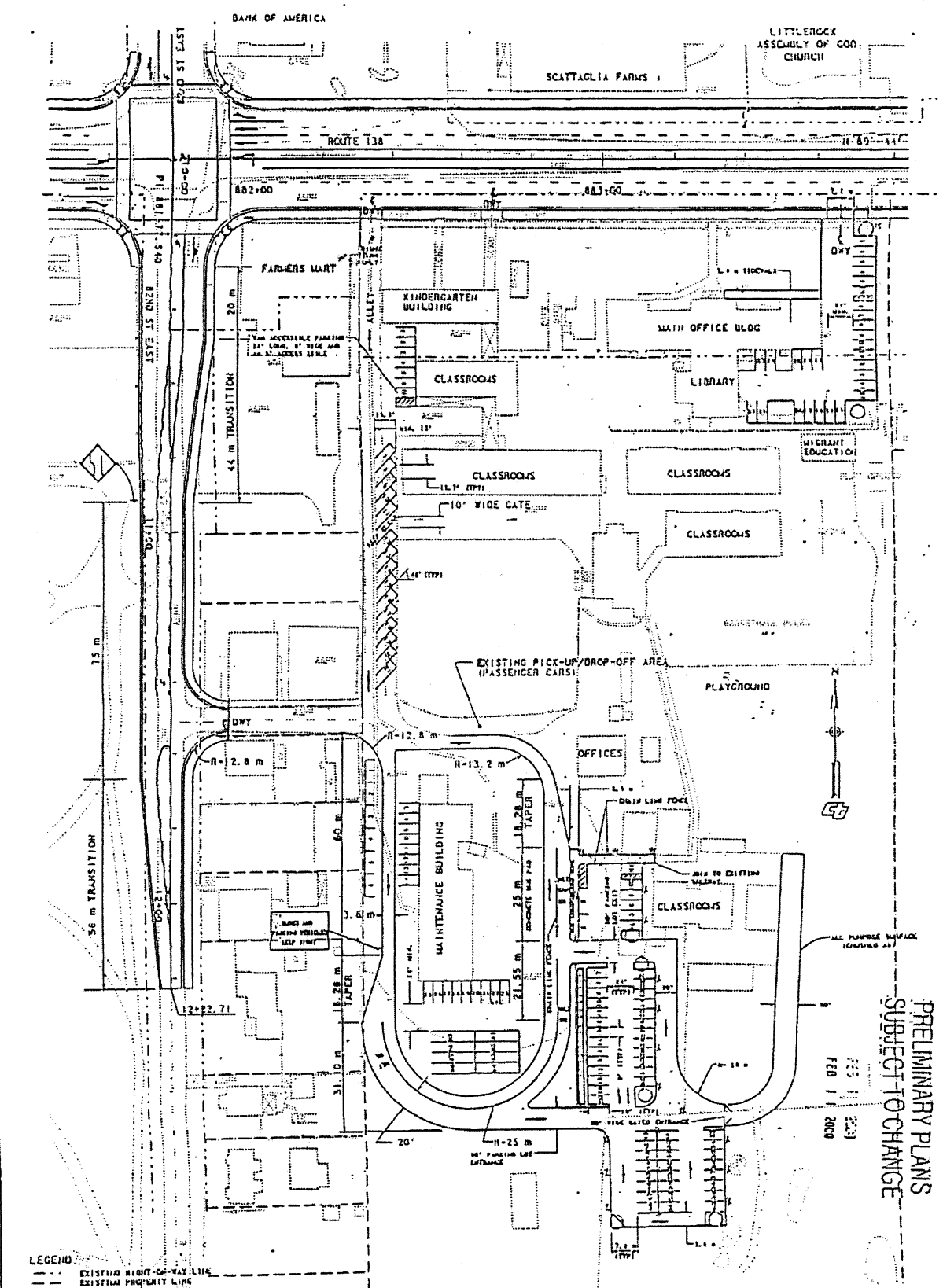
Sincerely,


Art Correa, P.E.
Design Manager
Office of Project Development B

Attachments

Cedric Jackson
August 2, 2000
Page Three

cc: Abdi Saghafi, Project Manager
Peter Hsu, Chief OPDB
Cathy Wright, Office of Environmental Planning
Joseph Brazile, Public Information
Project Files Office of Project Development B



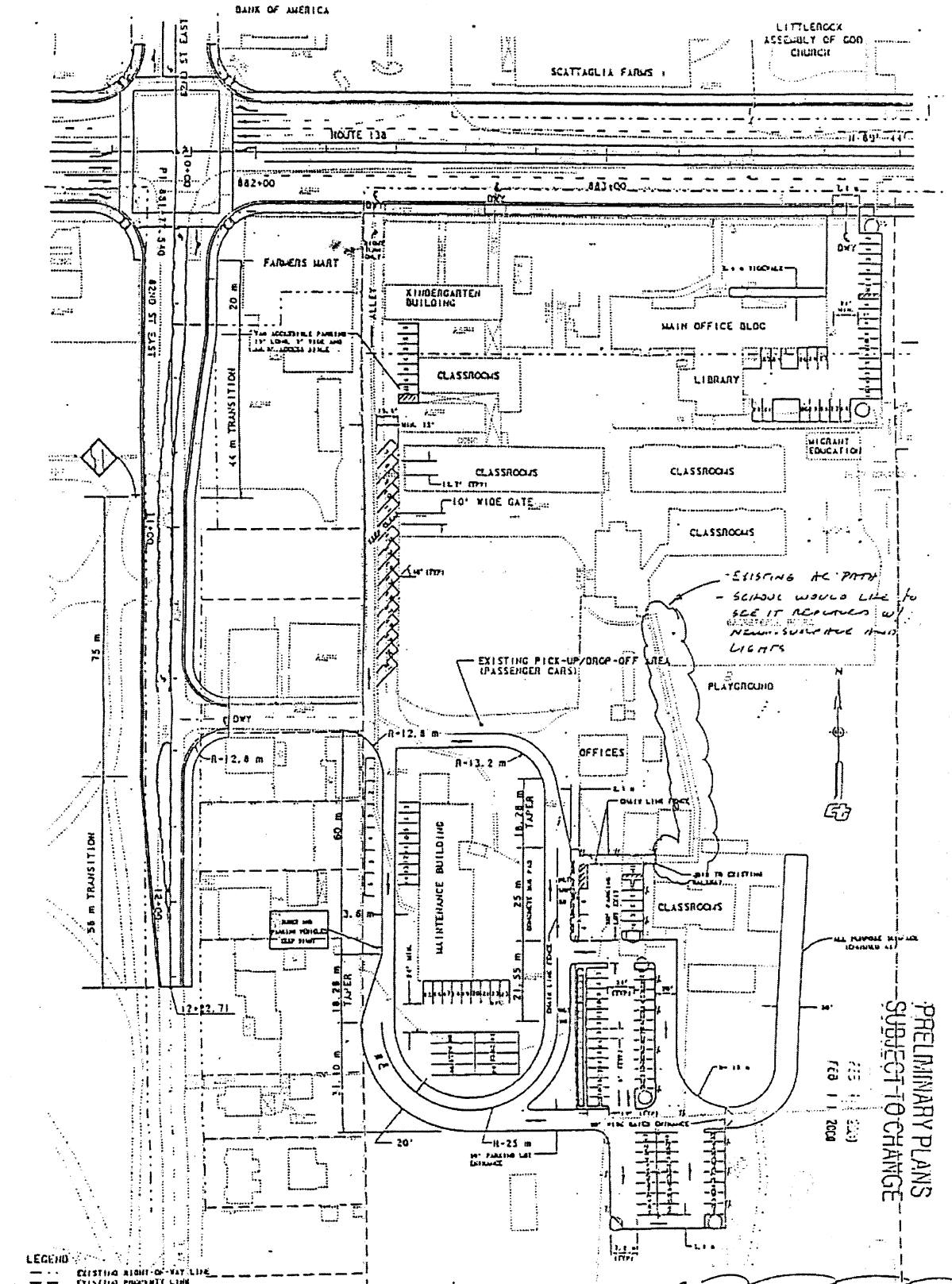
PRELIMINARY PLANS
 SUBJECT TO CHANGE
 FEB 1 2009

- LEGEND**
- - - EXISTING RIGHT-OF-WAY LINE
 - - - EXISTING PROPERTY LINE
 - ▭ PROPOSED SIDEWALK WITHIN SCHOOL PROPERTY
 - B= BUS PARKING
 - H= HANDICAP PARKING
 - ⊕ PERMANENT SOFFIT LUMINAIRE-70-V
 - LANDSCAPE

LOCATIONS	NUMBER OF PARKING SPACES		
	STAFF	VISITOR	HANDICAP
NORTHEASTERLY PARKING	21	8	1
SOUTHEASTERLY PARKING		38	2
ALLEY PARKING	20		1
EXISTING PARKING (RECALCULATED)	23		
SUBTOTAL	44	67	4

ALTERNATIVE NO. 10
 ALPINE ELEMENTARY SCHOOL
 PROPOSED BUS ROUTE &
 PARKING SPACES





PRELIMINARY PLANS
SUBJECT TO CHANGE

225 11 2009
178 11 2009

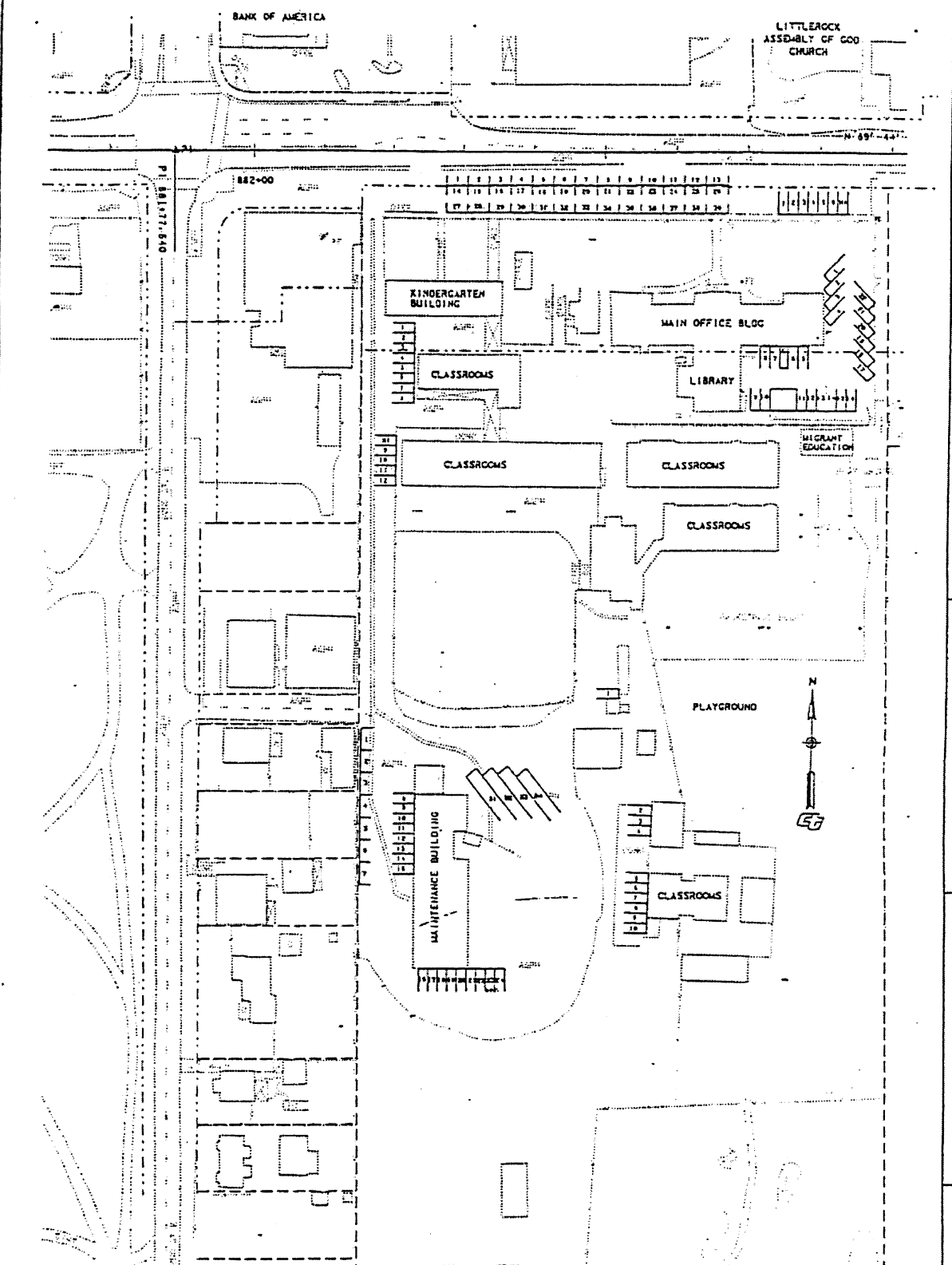
LEGEND

- EXISTING RIGHT-OF-WAY LINE
- - - EXISTING PROPERTY LINE
- ▭ PROPOSED SUBWAY WITHIN SCHOOL PROPERTY
- BUS PARKING
- HANDICAP PARKING
- PENDANT SOFFIT LUMINAIRE-TO V
- LANDSCAPE

LOCATIONS	NUMBER OF PARKING SPACES		
	STAFF	VISION	HANDICAP
NORTHEASTERLY PARKING	21	8	1
SOUTHEASTERLY PARKING	-	20	2
ALLEY PARKING	20	-	1
EXISTING PARKING NEAR 138	23	-	-
SUBTOTAL	64	28	4

Additional work requested

ALTERNATIVE NO. 10
ALPINE ELEMENTARY SCHOOL
PROPOSED BUS ROUTE &
PARKING SPACES



SCALE: 1" = 20' (SEE SHEET 1-11) (SEE SHEET 1-12)
 0 10 20 30 40 50 60 70 80 90 100
 000000 CU 000000
 000000

LEGEND
 --- EXISTING RIGHT-OF-WAY LINE
 --- EXISTING PROPERTY LINE
 B BUS PARKING
 H HANDICAP PARKING

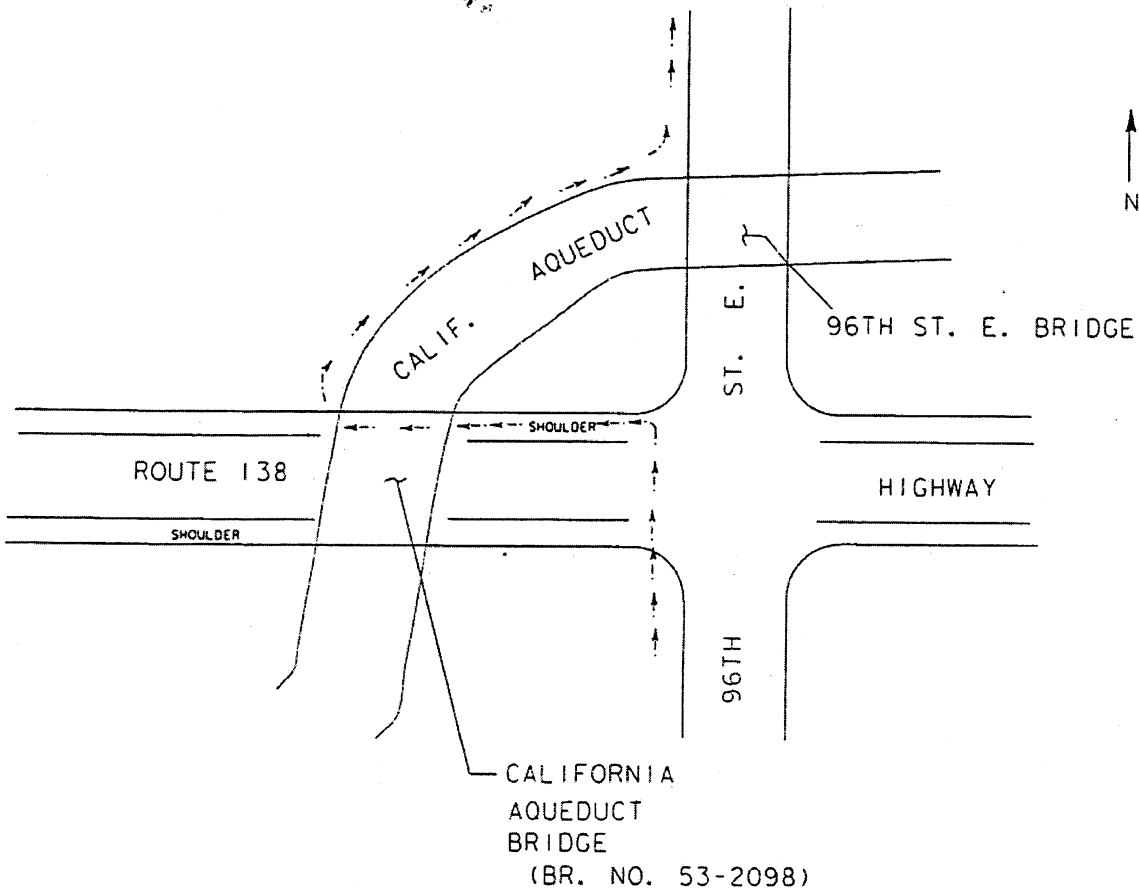
LOCATIONS	NUMBER OF PARKING SPACES		
	STAFF	VISITOR	HANDICAP
BUS LOADING/UNLOADING ZONE		39	
PARKING EAST OF BUS LOADING/UNLOADING ZONE		6	1
NORTHEASTERLY PARKING	22		
ALLEY PARKING	12		1
PARKING ALONG THE MAINTENANCE BUILDING	24		
PARKING EAST OF THE MAINTENANCE BUILDING	10		
C TOTAL	64	45	2

ALTERNATIVE NO. 7
 ALPINE ELEMENTARY SCHOOL
 EXISTING PARKING SPACES



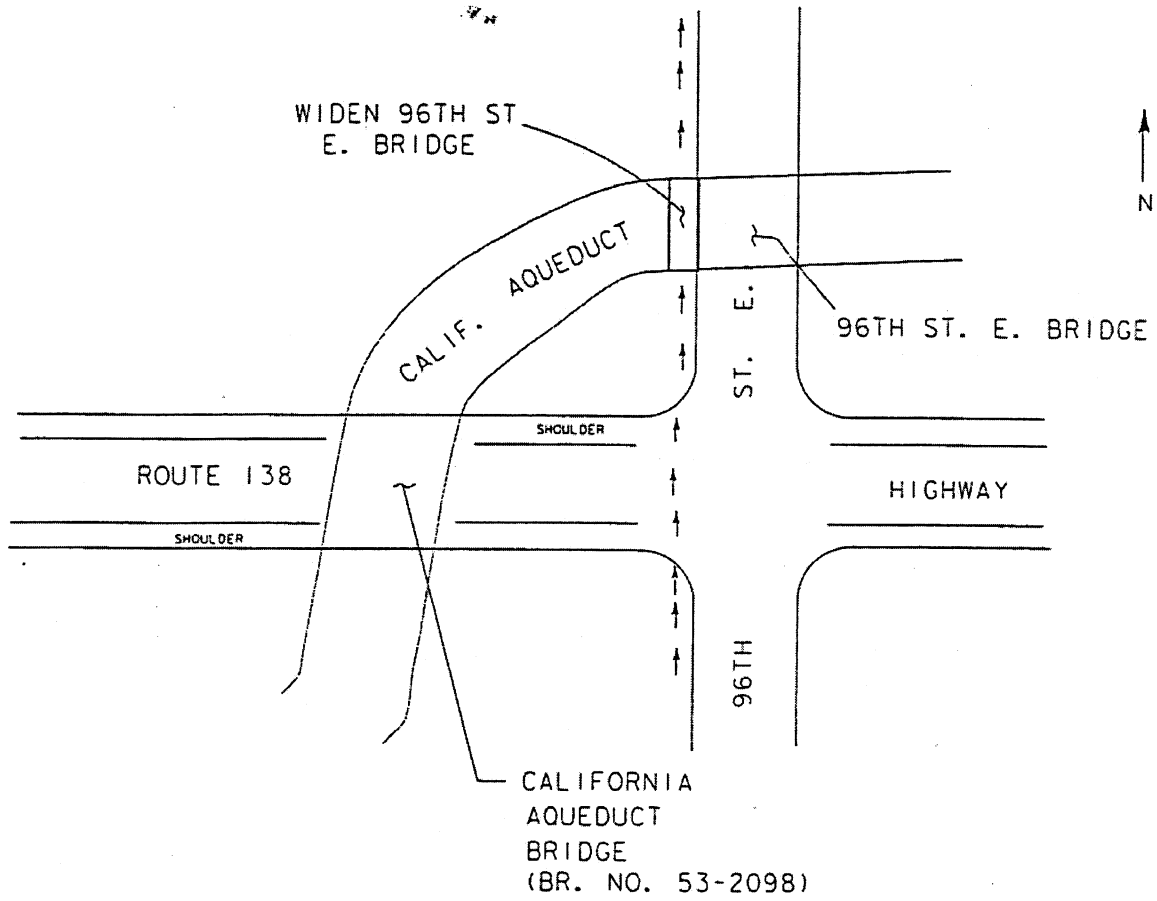
**EXISTING AND
PROPOSED 96TH STREET
EQUESTRIAN TRAIL
BRIDGE PLANNING
STUDY**

LEGEND: --- EXISTING TRAIL ROUTE



**EXISTING 96TH ST
TRAIL**
NOT TO SCALE

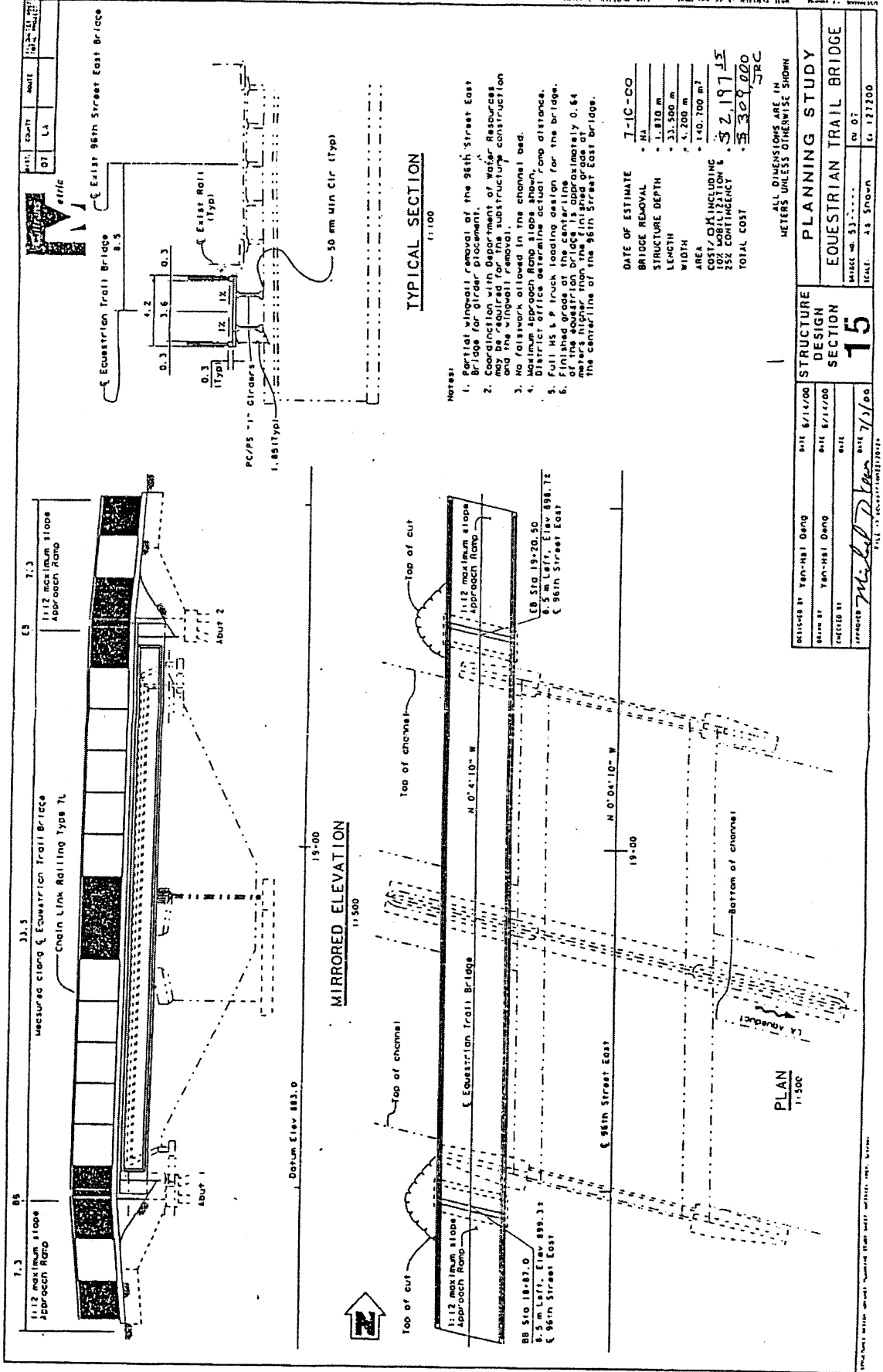
LEGEND: ← PROPOSED TRAIL ROUTE



**PROPOSED 96TH ST
TRAIL**

NOT TO SCALE

7/26/00



- Notes:
1. Partial wingwall removal of the 96th Street East Bridge for girder placement.
 2. Coordination with Department of Water Resources may be required for the substructure construction.
 3. No railroad allowed in the channel bed.
 4. Maximum Approach Ramp slope shown.
 5. District office determine actual ramp distance.
 6. Full H₅ P truck loading design for the bridge.
 7. Finished grade at the centerline of the equestrian bridge is approximately 0.64 meters above the centerline of the 96th Street East bridge.

07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

LITTLE ROCK WASH BRIDGE STUDY

Final Project Report

ATTACHMENT R



07-LA 138 82.7/111.7 (KP)

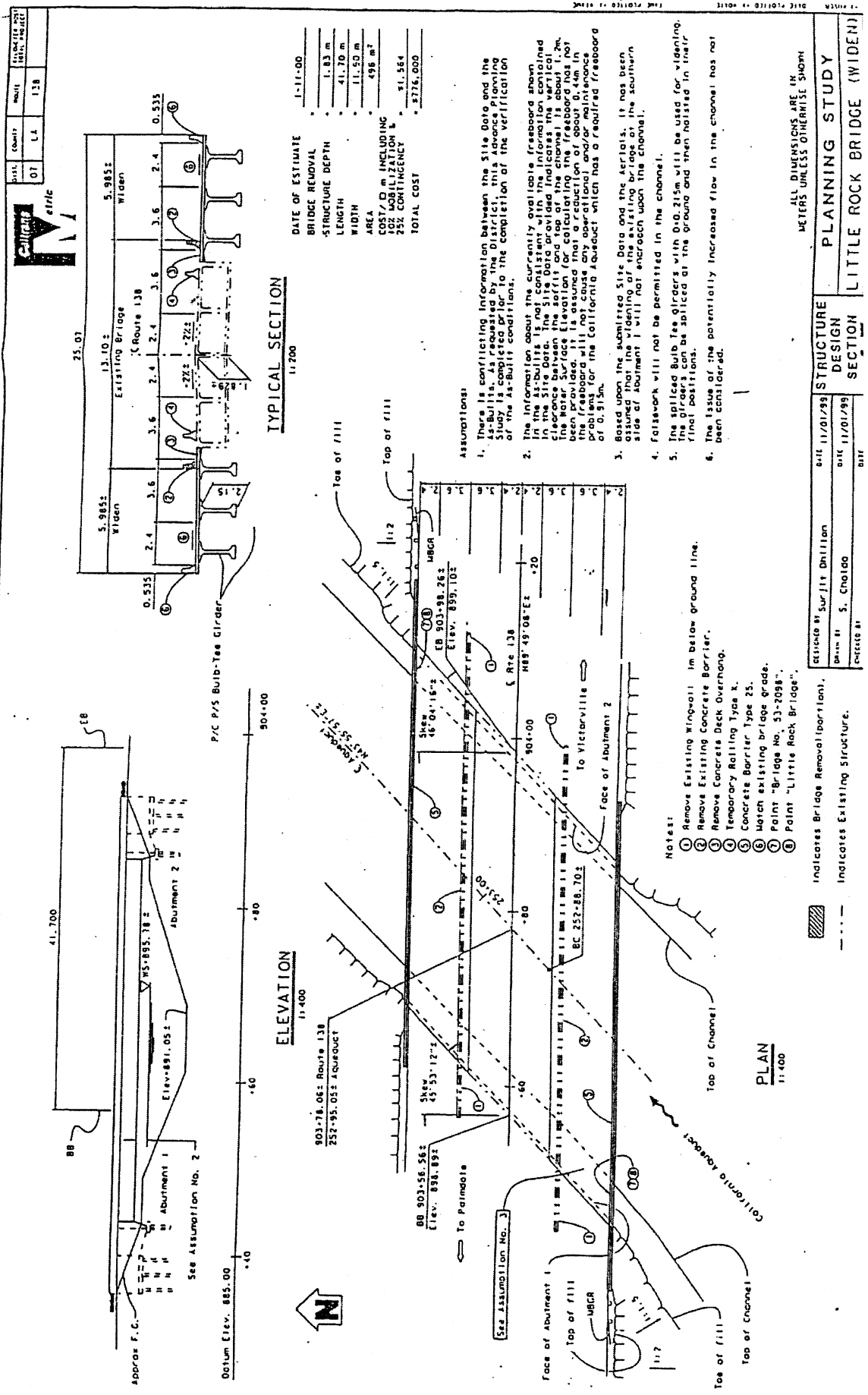
Pearblossom Highway from Avenue T to Junction with State Route 18

LITTLE ROCK BRIDGE OVER CALIFORNIA AQUEDUCT STUDY

ATTACHMENT S

Final Project Report





ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STRUCTURE DESIGN SECTION

PLANNING STUDY
LITTLE ROCK BRIDGE (WIDEN)

DATE 11/01/99
 DATE 11/01/99
 BY S. Chafco
 CHECKED BY

DATE 11/01/99
 DATE 11/01/99
 BY S. Chafco
 CHECKED BY

07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

BIG ROCK WASH BRIDGE STUDY

Final Project Report

ATTACHMENT T

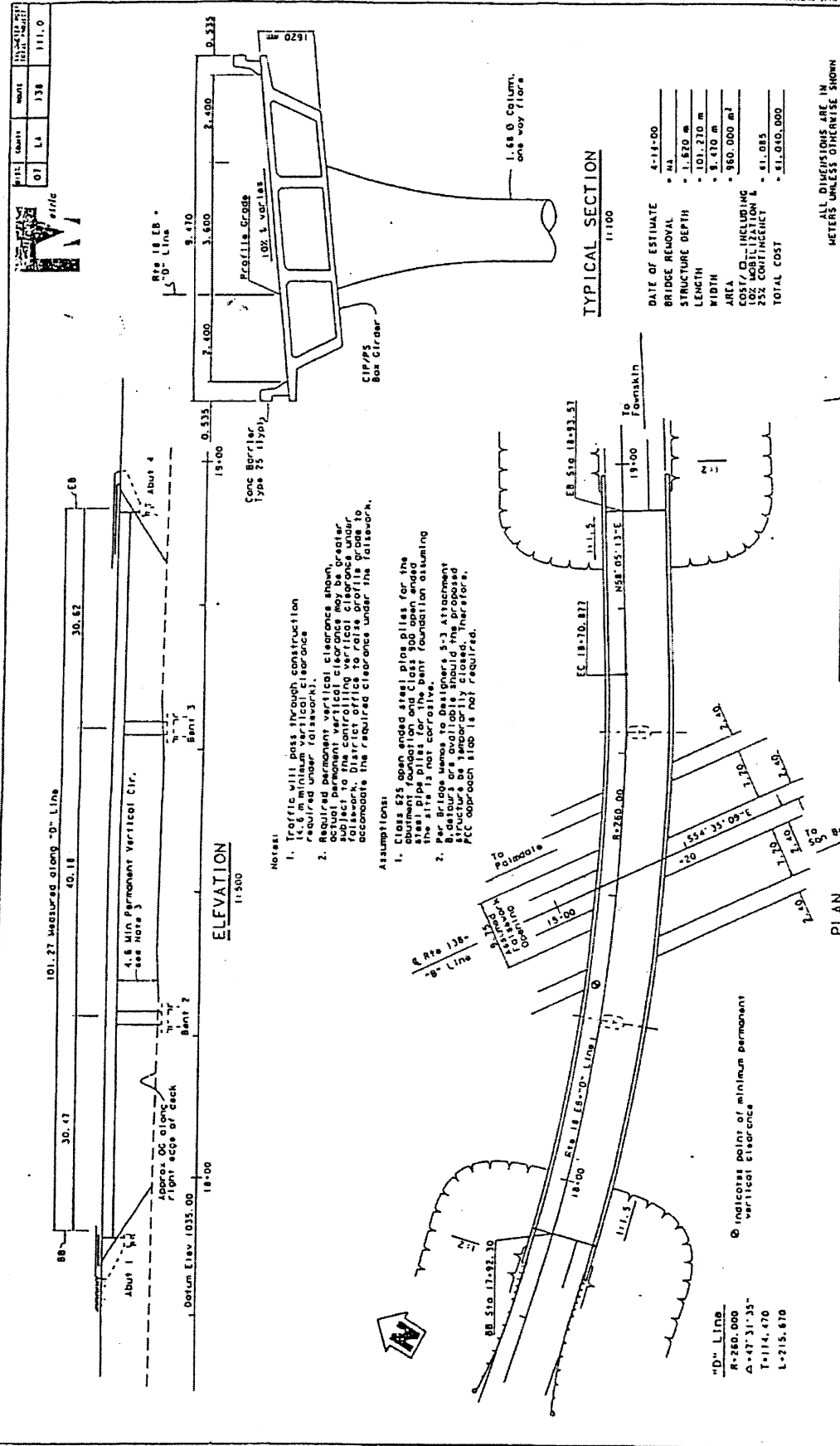


07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

JUNCTION OF STATE ROUTE 138/18 STUDY





DATE OF ESTIMATE	4-12-00
BRIDGE REMOVAL	NA
STRUCTURE DEPTH	1.670 m
LENGTH	101.210 m
WIDTH	8.470 m
AREA	860.000 m ²
COST/CL. INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	\$1.085
TOTAL COST	\$1,010,000

DESIGNED BY: Yeh-Hsi Deng
 DRAWN BY: David Kish
 CHECKED BY: Bill
 APPROVED BY: Michael Keener
 DATE: 1/20/00

STRUCTURE DESIGN BRANCH
15

PLANNING STUDY
 ROUTE 18/138 SEPARATION

DATE: 3/30/00
 DATE: 3/30/00
 DATE: 1/20/00

SCALE: AS SHOWN
 SHEET NO. 01
 OF 01

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

- Notes:**
- Traffic will pass through construction (4.6 m minimum vertical clearance required under falsework).
 - Required permanent vertical clearance shown, subject to the contract documents and falsework. District office to raise profile grade to accommodate the required clearance under the falsework.
- Assumptions:**
- Class 525 open ended steel piles for the abutment foundation and steel pipe piles for the bent foundation assuming the site is not corrosive.
 - Bridge approach slab is temporarily closed. Therefore, PCC approach slab is not required.

"D" LINE
 R=260.000
 Δ=47°31'35"
 T=114.470
 L=215.670

⊙ indicates point of minimum permanent vertical clearance

PLAN
 1:500

ELEVATION
 1:500

TYPICAL SECTION
 1:100

PROJECT NO.	138
DATE	11.1.0



THIS DRAWING IS THE PROPERTY OF THE STATE OF CALIFORNIA. IT IS TO BE USED ONLY FOR THE PROJECT AND PURPOSES SPECIFIED HEREON.

07-LA 138 82.7/111.7 (KP)

Pearblossom Highway from Avenue T to Junction with State Route 18

FINAL ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL ASSESSMENT

Final Project Report

ATTACHMENT V

