

10 – SJ – 12 – PM 5.0/9.5
20.10.201.120 Program
EA 28150K
September/2007

PROJECT SCOPE SUMMARY REPORT (ROADWAY REHABILITATION)

To Request Programming in the 2008 SHOPP

On Route 12 in San Joaquin County

Between PM 5.0, Near Terminous from Potato Slough Bridge

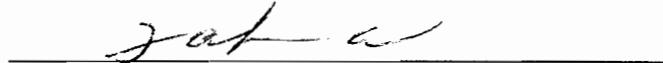
And PM 9.5, 0.12 miles East of Guard Road

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



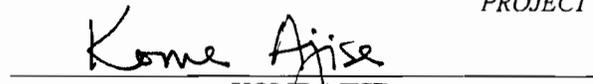
SPIROS KARIMBAKAS
ACTING CENTRAL REGION DIVISION CHIEF-
RIGHT OF WAY

APPROVAL RECOMMENDED:



IORZUA AKUVA
PROJECT MANAGER

APPROVED:



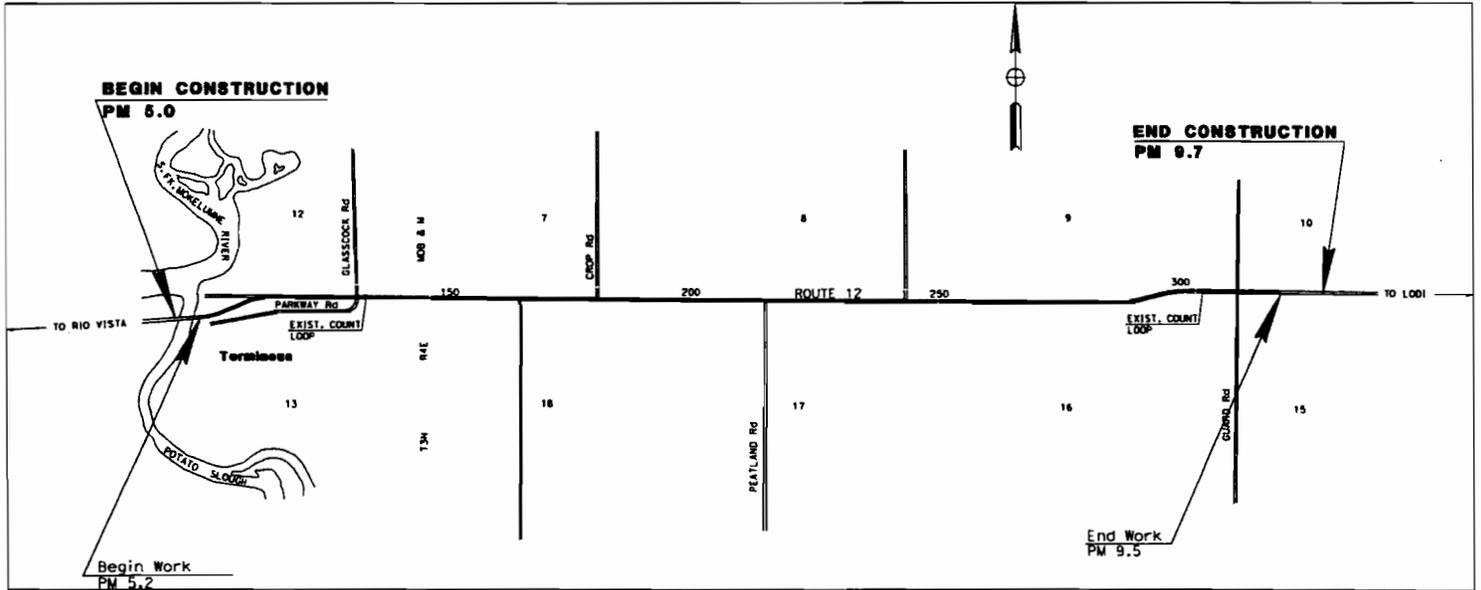
KOME AJISE
DISTRICT DIRECTOR

10/19/07

DATE

PROJECT SCOPE & TECHNICAL DATA ARE VALID THROUGH: _____
(Two years from Director approval for PSSR, and three years for PSRs)
COST & WORKPLAN MUST BE UPDATED PRIOR TO USE FOR PROGRAMMING

10 - SJ - 12 - PM 5.0/9.5
20.10.201.120 Program
EA 28150K
September/2007



On Route 12 in San Joaquin County

Between PM 5.0, Near Terminous from Potato Slough Bridge

And PM 9.5, 0.12 miles East of Guard Road

06 - SJ - 12 - PM 5.0/9.5

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



THAAR JAWHAR
REGISTERED CIVIL ENGINEER

9-13-07

DATE



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1. INTRODUCTION AND BACKGROUND

Brief Project Description:

It is proposed to rehabilitate the existing roadway by digging out and repairing localized areas of severe failure, correcting cross slopes, cold plane 2.4 inches and place 2.4 inches of Rubberized Asphalt Concrete (RAC-G) on Route 12 in San Joaquin County, from the east side of Potato Slough (PM 5.0) to 0.68 miles east of Guard Road (PM 9.5).

A PSSR was signed in September 1999, but was never programmed. In 2004 this project was initiated again. A Preliminary Geotechnical Report dated December 6, 2004 recommended that the pavement is structurally failing. The recommendation was based on similar project in the area. An addendum to this report dated January 27, 2006 provided more specific recommendation provided (see section 6Q Alternative 3). The Deflection Study Report dated December 14, 2004 indicated that reflective crack retardation governed the rehabilitation strategy design except for post mile 7.0/9.0 in the eastbound direction which was governed by structural adequacy.

See the Cost estimate for specific work items included in this project.

Project Limits 10 – SJ – 12	PM 5.0/9.5
Current Capital Costs:	\$10 million
Escalated Right of way Costs:	\$741,459
Funding Source:	20.10.201.120
Number of Alternatives:	3
Recommended Alternative (for programming and scheduling):	Alternative 1
Type of Facility (Conventional, expressway, freeway):	2 Lane Undivided Conventional Highway
Number of Structures:	0
Anticipated Environmental Determination/Document:	Initial Study (IS) with an Categorical Exclusion (CE) documents
Legal Description	Roadway Rehabilitation

2. RECOMMENDATION

It is recommended to approve and program this project and proceed to Project Approval/Environmental Document phase (PA/ED).

3. PURPOSE AND NEED STATEMENT

Provide 10 years of service at minimum maintenance cost by rehabilitating the existing roadway.

4. EXISTING FACILITY, DEFICIENCIES AND TRAFFIC DATA

State Route 12 is an undivided conventional highway with two-12-ft paved asphalt concrete lanes and 8-ft shoulders constructed on embankment. The project lies in rural area, a flat and almost at sea level. The drainage is generally channeled into irrigation ditches throughout the area.

The Deflection Study report indicated the existing pavement surface is chip seal (CS) with isolated to intermittent alligator cracks and intermittent to nearly continuous pumping and bleeding.

4A. ROADWAY GEOMETRIC INFORMATION

	Facility (1)	Minimum	Through Traffic Lanes (2)			Paved Shoulder Width (3)		Median (4)	Shoulder is a Bicycle Lane (Y/N) (5)	Other Bicycle Lane Width (6)	Bicycle Route (7)	Facilities Adjacent to the Roadbed (8)
	Location	Curve Radius	No. of Lanes	Lane Width	Type (Flex, Rigid, or Composite))	Left	Right	Width	Width	Width	(Y/N)	(Code/Width)
Existing	* PM 5.0 / 9.5	2690.3 ft	2	12.0 ft	AC	8.0 ft	8.0 ft	None	N	N	N	None
Proposed	** PM 5.0 / 9.5	2690.3 ft	2	12.0 ft	AC	8.0 ft	8.0 ft	None	N	N	N	None
	Min. 3R Stds.	2000 ft	2	12.0 ft		4.0 ft	4.0 ft		N	N	N	None

Column "Other Bicycle Lane Width": Width of a bicycle lane that is outside the shoulder and is part of the traveled way.

Code for Column "Facilities Adjacent to the Roadbed":

B: Bicycle Path

P: Pedestrian Walkway

B/P: Shared Bicycle and Pedestrian Path

L: Landscaped area between the curb and sidewalk

* EXISTING Post Mile

** PROPOSED Post Mile

Remarks: None

4B. CONDITION OF EXISTING FACILITY

(1) Traveled Way Data

PM 5.00/5.09

PMS Category (1-29): 8

Priority Classification (0.1-0.4): 0.2

Ride Score: 28

*AC Pavement

* From latest PMS-Pavement Condition Inventory Survey Data

Alligator B Cracking%: 44%

Faulting: No

Patching%: No

Rutting: No

Bleeding: No

Pumping: No

Raveling: No

PM 5.10/5.29

PMS Category (1-29): 8

Priority Classification (0.1-0.4): 0.2

Ride Score: 24

*AC Pavement

* From latest PMS-Pavement Condition Inventory Survey Data

Alligator B Cracking%: 44%

Faulting: No

Patching%: No

Rutting: No

Bleeding: No

Pumping: No

Raveling: No

PM 5.29/6.79

PMS Category (1-29): Not Provided

Priority Classification (0.1-0.4): 0.2

Ride Score: 20

*AC Pavement

* From latest PMS-Pavement Condition Inventory Survey Data

Alligator B Cracking%: 0%

Faulting: No

Patching%: No

Rutting: No

Bleeding: Yes

Pumping: No

PM 6.79/8.19

PMS Category (1-29): 10

Priority Classification (0.1-0.4): 0.2

Ride Score: 23

*AC Pavement

* From latest PMS-Pavement Condition Inventory Survey Data

Alligator B Cracking%: 19%

Faulting: No
Rutting: No
Pumping: No

Patching%: No
Bleeding: No

PM 8.19/9.59

PMS Category (1-29): Not Provided
Ride Score: 10

Priority Classification (0.1-0.4): 0.2

***AC Pavement**

* From latest PMS-Pavement Condition Inventory Survey Data

Alligator B Cracking%: 5%

Faulting: No
Rutting: No
Pumping: No

Patching%: No
Bleeding: No

The 2005 Pavement Condition Survey (PCS) indicates that the pavement has a maximum ride quality of 185 in/mile in terms of International Roughness Index (IRI). The pavement defect varies from high ABC (What is ABC?) alligator cracking to rutting and bleeding at some locations. See Attachment C.

Locations(s) of subsurface or ponded surface-water problem: None

Deflection Study Results (if available):

The recommendation contained in the Deflection Study dated December 14, 2004, should be used for the rehabilitation strategy for this project (as-per Materials Lab email confirmation dated 02/1/07). An updated Deflection Study has been requested. The quantity of the Asphalt Concrete (AC) was based on the 2004 Deflection Study. See Attachment D.

Shoulder Data

Condition:

The existing shoulders are chip seal pavement with 8 ft wide and rumble strips.

Deficiencies:

Isolated to intermittent cracks.

(2) Pedestrian Facility Data

Facility Type and Location(s)	Meets ADA Standards?	If Facility does not meet ADA Standards, what feature(s) are not ADA compliant?	Status of Each Noncompliant Location
Sidewalks: <i>None</i>	<u>N/A</u>		
Curb Ramps: <i>None</i>	<u>N/A</u>		
Crosswalks: <i>None</i>	<u>N/A</u>		
Driveways: <i>None</i>	<u>N/A</u>		
Shared bicycle/ pedestrian path: <i>None</i>	<u>N/A</u>		
Others:			

Remarks

The project is located in a rural and agricultural area.

(3) Bicycle Path Data

Deficiency	Location
N/A	

Remarks

This project will maintain a 2-ft rumble strips of the 8-ft shoulder to accommodate bicycle traffic throughout the project limits.

4C. STRUCTURES INFORMATION

Structures	Width Between Curbs			Replace Bridge Railings (Y or N)	Vertical Clearance			Work Identified in STRAIN (Y or N)	Replace Bridge Approach Rail (Y or N)	Replace Bridge Approach Slab	
	Exist	3R Std	Prop		Exist	3R Std	Prop			(Y/N)	#
None											

Remarks

N/A. There are no structures within the project limits.

4D. VEHICLE TRAFFIC DATA

Present Year ADT 17,300

Construction Year ADT _____ 10-Year ADT 22,600

DHV 3,150 20-Year ADT _____

D _____ % Trucks 12%

*T.I. (10-Year) 12.5 ESAL (10-Year) _____

Must correlate with T.I. in Materials Report

Field Task Force Review 06/21/07

(date)

Latest 3-Year Accident Data: July 1, 2003 to June 30, 2006

LATEST 3-YEAR ACCIDENT DATA: July 1, 2003 to June 30, 2006

TYPE	ACTUAL (ACC/MVM)	AVERAGE (ACC/MVM)
FATAL	0.058	0.035
FATAL AND INJURY	0.290	0.450
TOTAL	0.700	0.920

There were 60 accidents between July 1, 2003 to June 30, 2006 with 20 injury accidents and 5 fatal accidents. Breakdowns of the accident types are: Sideswipe (20), Head-on (10), Rear End (12), Broadside (3), Hit Object (9), Overturn (6). Although the actual fatal accident is above the state average, the fatal and injury total is below state average.

Corrective Strategy: A state transportation improvement project (STIP) EA 0A840- Route 12 improvements project is in Project Approval/Environmental documents (PA&ED) phase. The project will upgrade some of the intersections and provide additional intelligent transportation systems (ITS) within this project limits. In addition to maintain safety feature that were installed recently; EA 0K4501 PM 0.0/14.9-Rumble Strips and raised thermoplastic Strips project. EA 0A8400 is also in Project Approval/Environmental Document (PA/ED) phase. This project is to provide passing lanes between PM 0.1/10.1.

4E. MATERIALS

The recommendation contained in the Deflection Study dated December 14, 2004, should be used for the rehabilitation strategy for this project. (As-per Materials Lab email conformation dated 02/1/07) See Attachment D.

5. CORRIDOR AND SYSTEM COORDINATION

SR 12 is the main east-west corridor for truck movement in the Delta. The entire length of SR 12 is part of the Federal Service Transportation Assistance Act (STAA) highway network as identified by Caltrans. Highways that belong to the STAA network can accommodate trucks that are longer than the California legal standard. The nearest east west corridor in the Delta is SR 4, which is not entirely a STAA highway, and therefore cannot accommodate trucks longer than the California Legal standard.

SR 12 is also a major Department of Defense (DoD) Truck Route. It is a significant corridor for shipments into and out of Travis Air Force Base (AFB) and vital link to the Pacific. It is used daily for high priority shipments from the Defense Logistics Agency Distribution Center in Tracy, California to Travis AFB, California.

6. ALTERNATIVES

6A. REHABILITATION STRATEGY:

Alternative 1: Rehabilitate Existing Roadway

1. Digging out and repairing localized areas of severe failure, cross slope corrections, and cold plane 2.4-inch existing asphalt concrete (AC) and replace with 2.4-inch rubberized asphalt concrete (RAC-G).
2. Intersection improvements at Guard Road (PM8.8) would include removal and replacement of existing corrugated metal pipe (CMP) culvert with reinforced concrete pipe (RCP) and installation of flared end sections. A maintenance hole 48-inch diameter should be installed northeast of the intersection.
3. Existing corrugated metal pipe (CMP) cross culverts would be removed and replaced with RCP and new flared end sections at PM 6.1, PM 6.5, and PM 7.0.
4. At Glasscock Road (PM 5.5), replace the existing 72-inch double CMP with 6x6 feet double concrete box culvert and remove and replace the existing cross culvert.
5. New guardrail would be constructed on the northwest corner of Guard Road. The existing guardrail on the south side of SR 12 would be upgraded to current standard.
6. Construction of new traffic operation system elements (CMS) at, or near, Guard Road.

The total improvement estimated cost is \$10 million.

6B. DESIGN EXCEPTIONS:

None

6C. ENVIRONMENTAL COMPLIANCE:

It is anticipated that the environmental document for this project would be an Initial Study (IS), with an anticipated Categorical Exclusion as decision documents. The California Department of Transportation would act as a lead agency in the preparation of the IS, while Federal Highway Administration would act as lead agency in the preparation of the CE. Anticipated start date of environmental studies is 09/01/08 with anticipated completion date of 02/01/11. Environmental studies and construction coordination is required with locally funded project, EA 0A8400- Route 12 Improvements Project during the Project Approval/Environmental Document (PA&ED) phase and construction phase.

6D. HAZARDOUS WASTE DISPOSAL SITE REQUIRED? IF YES, WHERE ARE SITES?

There is an existing Lead Study with non-hazardous findings throughout the project area.

6E. OTHER AGENCIES INVOLVED (PERMITS/APPROVALS FROM FISH & GAME, CORPS OF ENGINEERS, COASTAL COMMISSION, ETC.):

Permits from Fish and Wildlife Service, Department of Fish and Game, and the Corps of Engineers will be needed.

6F. MATERIALS AND OR DISPOSAL SITE NEEDS AND AVAILABILITY?

N/A

6G. HIGHWAY PLANTING AND IRRIGATION:

N/A

6H. ROADSIDE DESIGN AND MANAGEMENT:

N/A

6I. STORMWATER COMPLIANCE:

This project will have a soil disturbance of 0.23 acres. The Department's storm water management requires to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) during the construction.

6J. RIGHT OF WAY ISSUES: INCLUDE UTILITY ISSUES IN GUIDANCE:

It is anticipated that PG&E electric poles will need to be relocated at Guard and Correia Roads. Contingency Right of Way capital is allocated to purchase additional land for the purpose of potential environmental mitigation.

6K. RAILROAD INVOLVEMENT:

N/A

6L. SALVAGING AND RECYCLING OF HARDWARE AND OTHER NON-RENEWABLE RESOURCES:

N/A

6M. PROLONGED TEMPORARY RAMP CLOSURES:

N/A

6N. RECYCLED MATERIALS:

Per Deflection Study Report, recycling is not a viable option due to a small quantities involved.

6O. WHAT ARE THE CONSEQUENCES OF NOT DOING THIS ENTIRE PROJECT?

The existing pavement will continue to deteriorate and would initiate continuous funding to maintain the existing roadway as pavement surface distress conditions persist.

6P. LOCAL AND REGIONAL INPUT:

Environmental studies and construction coordination is required with locally funded project, EA 0A8400- Route 12 Improvements Project during the Project Approval/Environmental Document (PA&ED) phase and construction phase.

6Q. LIST ALL ALTERNATIVES STUDIED, COST, REASONS NOT RECOMMENDED, ETC.:

Alternative 1: Rehabilitate Existing Roadway
Signed PSSR dated 09/30/99

1. Digging out and repairing localized areas of severe failure, cross slope corrections, and overlay 6-inch with Dense Graded Asphalt Concrete (DGAC). Intersection improvements at Guard Road (PM8.8) would include removal and replacement of existing corrugated metal pipe (CMP) culvert with reinforced concrete pipe (RCP) and installation of flared end sections. A maintenance hole 48-inch diameter should be installed northeast of the intersection.
2. Existing corrugated metal pipe (CMP) cross culverts would be removed and replaced with RCP and new flared end sections at PM 6.1, PM 6.5, and PM 7.0.
3. At Glasscock Road (PM 5.5) replace existing 72-inch existing double CMP with 6x6 feet double concrete box culvert and replace existing cross culvert.
4. New guardrail would be constructed on the northwest corner of Guard Road. The existing guardrail on the south side of SR 12 would be upgraded to current standard.
5. Construction of new traffic operation system elements (CMS) at, or near, Guard Road.

The total cost for alternative 1 is \$3.3 million. December 6, 2004 Geotechnical report indicated that overlay asphalt concrete adds additional weight to the existing pavement and foundation.

Alternative 2: Full Depth Structural Section Replacement

In addition to item 2, 3, 4 and 5 of Alternative 1, this Alternative recommends to remove undesirable soils on Route 12 in San Joaquin County, from the west side of Potato Slough PM 5.1 to 0.10 mi east of Guard Road 9 at PM 9.0 and replace with lightweight fill. Removing the weak and compressible soils from the site will reduce future settlement within that zone. See Preliminary Geotechnical Report recommendation dated December 6, 2004. The total improvement estimated cost is \$50 million. The high cost does not allow this alternative to compete well. This alternative was not recommended.

Alternative 3: Structural Section Repair

In addition to the item 2, 3, 4 and 5 of Alternative 1, this Alternative recommends using geosynthetic reinforcement in the structural section of the pavement from PM 5.0 to 8.0. Existing asphalt should be removed completely in this area and sub-base re-graded. Outside these limits, a typical overly is applicable. The cost estimate in February 2006 was \$ 11.1 M. This Alternative was not recommended.

Alternative 4: No build alternative

This alternative was rejected because the existing pavement will continue to deteriorate and would initiate continuous funding to maintain the existing roadway as pavement surface distress conditions persist.

The District Materials Branch, Maintenance and Head Quarter (HQ) Maintenance advisor did recommend Alternative 2 and/or 3. See Attachment D

7. TRAFFIC MANAGEMENT

7A. TRAFFIC MANAGEMENT PLAN

It is anticipated that lane closures will be required during construction. Funds are included for portable changeable message signs and COZEEP to enhance safety of the construction zone. The media will be used to disseminate project information to the motoring public. They will be informed and kept abreast of the construction progress and information pertaining to delays, closures and major changes in the traffic patterns. Real-time highway condition information should be provided through Caltrans Highway Information Network (CHIN) accessible via telephone (1-800-427-ROAD) and the Internet (www.dot.ca.gov).

7B. VEHICLE DETECTION SYSTEMS

Construct new traffic operation system elements (one CMS Model 510, one Weather Station, and one Incident Detector Station).

8. ENVIRONMENTAL DETERMINATION/DOCUMENT

It is anticipated that the environmental document for this project would be an Initial Study (IS), with an anticipated Categorical Exclusion as decision documents. The California Department of Transportation would act as a lead agency in the preparation of the IS, while Federal Highway Administration would act as lead agency in the preparation of the CE. Please check with

Vertical Alignment	<u>No</u>	<u> </u>
Horizontal Alignment	<u>No</u>	<u> </u>
Left/Right-Turn Storage/Widening/Lengthening	<u>No</u>	<u> </u>
Signal Upgrade	<u>No</u>	<u> </u>
Median Barrier (State type: e.g., PCC, Thrie Beam)	<u>No</u>	<u> </u>
Metal Beam Guardrails and end section (2 location)	<u>Yes</u>	<u>70,000</u>
Concrete Guardrail (New)	<u>No</u>	<u> </u>
Roadside Cleanup	<u>No</u>	<u> </u>
Gore Cleanup	<u>No</u>	<u> </u>
Electroliers	<u>No</u>	<u> </u>
<u>Roadside Management</u>	<u>Yes/No*</u>	<u>Cost</u>
Gore Area Pavement	<u>No</u>	<u> </u>
Pavement beyond Gore Area	<u>No</u>	<u> </u>
Miscellaneous Paving	<u>No</u>	<u> </u>
Maintenance Vehicle Pull outs	<u>No</u>	<u> </u>
Off-Freeway Access (gates, stairways, etc.)	<u>No</u>	<u> </u>
Roadside Facilities	<u>No</u>	<u> </u>
<u>Traffic cost estimate</u>		
Construction Area Signs	<u>Yes</u>	<u>11,500</u>
Pavement Delineation/Sign	<u>Yes</u>	<u>51,000</u>
Traffic Handling (changeable Message signs)	<u>Yes</u>	<u>84,000</u>
Maintain Traffic	<u>Yes</u>	<u>158,000</u>
<u>Traffic Management Plan</u>		
Caltarns Public Information office	<u>Yes</u>	<u>32,000</u>
COZEEP	<u>Yes</u>	<u>378,000</u>
<u>CMS and Vehicle Detection System</u>	<u>Yes</u>	<u>30,000</u>
<u>Minor Items</u>	<u>Yes</u>	<u>593,000</u>
<u>Mobilization</u>	<u>Yes</u>	<u>653,000</u>
	SUM OF SUBTOTALS	<u>7,785,500</u>
	20% Contingency (of Subtotals)	<u>1,557,100</u>
<u>Utility Relocation</u>	<u>Yes</u>	<u>8,250</u>
<u>Railroad Agreements</u>	<u>No</u>	<u> </u>
<u>Right of Way</u>	<u>Yes</u>	<u>640,500</u>
<u>Environmental Compliance</u>	<u>Yes</u>	<u>5,800</u>

TOTAL PROJECT COST \$10,000,000

9B. PROJECT SUPPORT:

The Capital and Support Cost Summary for this project is as follows:

Project Cost Component	Fiscal Years						Total
	07/08	08/09	09/10	10/11	11/12	12/13	
R/W Capital			\$741				\$741
Construction Capital					\$10,812		\$10,812
PA&ED		\$1,075					\$1,075
PS&E			\$997				\$997
R/W Support			\$70				\$70
Construction Support						\$1,474	\$1,537
Total		\$1,075	\$1,808		\$10,812	\$1,474	\$15,169

Note:

All costs x\$1000. Support Categories are the same as those identified by SB45. Construction Capital escalated at 3%. Right of Way capital costs are escalated at 25%. Support Costs escalated at 3.1%.

9C. PROJECT SCHEDULE:

Milestones	Delivery Date (Month, Day, Year)
PA & ED	03/01/2011
PS&E to DOE	09/01/2011
Project PS&E	12/01/2011
Right of way Certification	03/01/2012
Ready to List	03/15/2012
Project Award	06/01/2012
Approve Contract	07/01/2012
Contract Acceptance	09/01/2014

10. FEDERAL COORDINATION

Jeff Heaven, FHWA Liaison Engineer, reviewed this Report on 5/25/2007. Per TEA-21, this project is eligible for federal-aid funding and is considered to be STATE-AUTHORIZED under current FHWA-Caltrans Stewardship Agreements.

11. SCOPING TEAM FIELD REVIEW ATTENDANCE ROSTER:

Attachment G: Scoping Team Field-Review Attendance Roster Date 06/21/07

12. CONSTRUCTIBILITY REVIEW MEETING:

Constructibility Review meeting was held on 06/21/2007.

13. PROJECT REVIEWED BY:

Field Review	<u>Ron Jones</u>	Date	<u>06/21/07</u>
District Maintenance	<u>Long Huynh</u>	Date	<u>06/21/07</u>
District Safety	<u>Mark Orr</u>	Date	<u>06/26/07</u>
District Materials	<u>Dave Whaling</u>	Date	<u>06/11/07</u>
HQ Design Coordinator/Reviewer	<u>Mike Janzen</u>	Date	<u>06/21/07</u>
HQ Maintenance Program	<u>Ron Jones</u>	Date	<u>06/21/07</u>
FHWA	<u>Jeff Heaven</u>	Date	<u>5/25/07</u>
Others	<u>N/A</u>	Date	<u></u>

14. ATTACHMENTS

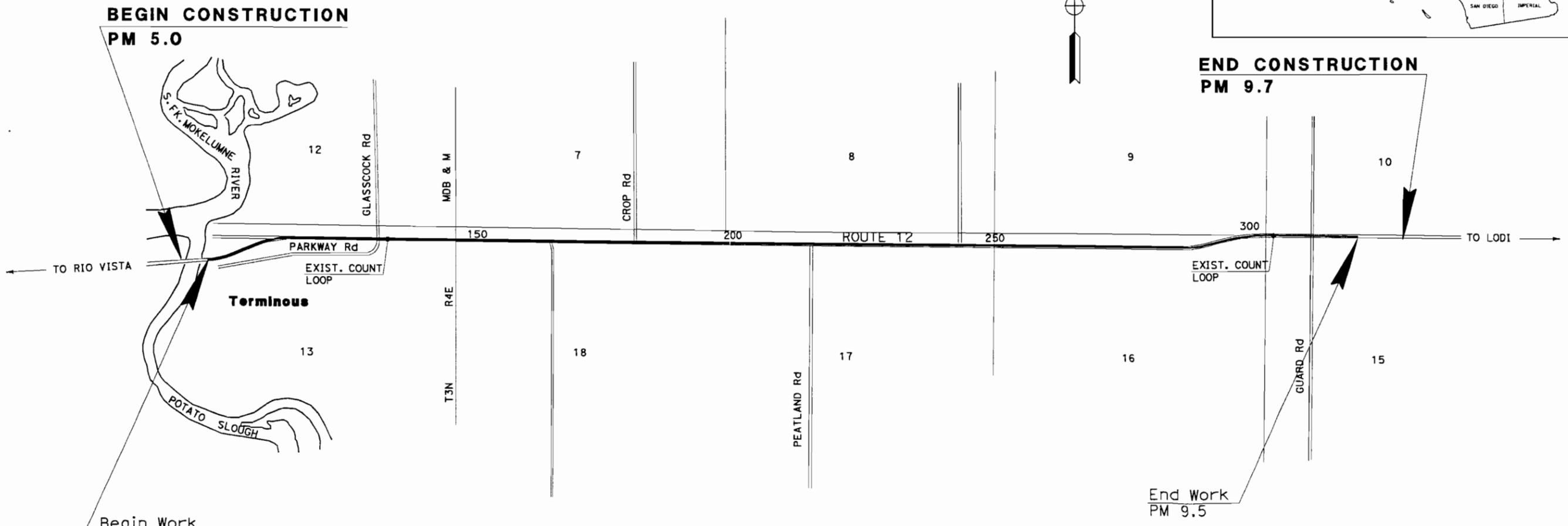
- A. Strip Map
- B. Typical Section(s)
- C. PMS Inventory Data
- D. Deflection Study Recommendation/Preliminary Geotechnical Report
- E. Preliminary Environmental Analysis Report
- F. Right of Way Data Sheet
- G. Scoping Team Field-Review Attendance Roster
- H. Structural Section Recommendation
- I. Traffic Management Plan – Data Sheet
- J. Storm Water Drainage Report
- K. Risk Management Plan

INDEX OF PLANS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY**
 ON STATE ROUTE 12 FROM THE WEST SIDE OF POTATO
 SLOUGH AT PM 5.0 TO 0.68 MILES EAST OF GUARD ROAD
 AT PM 9.5 IN SAN JOAQUIN COUNTY

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	12	5.0/9.5		



PROJECT MANAGER
KEVIN SHERIDAN

DESIGN ENGINEER
THAAR JAWHAR

PROJECT ENGINEER _____ DATE _____
 REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



CONTRACT No. _____

CU 06261 EA 28150K

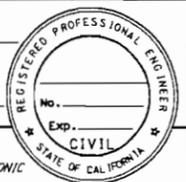
ATTACHMENT A

LAST REVISION 05-17-07 DATE PLOTTED => 15-AUG-2007 13:18

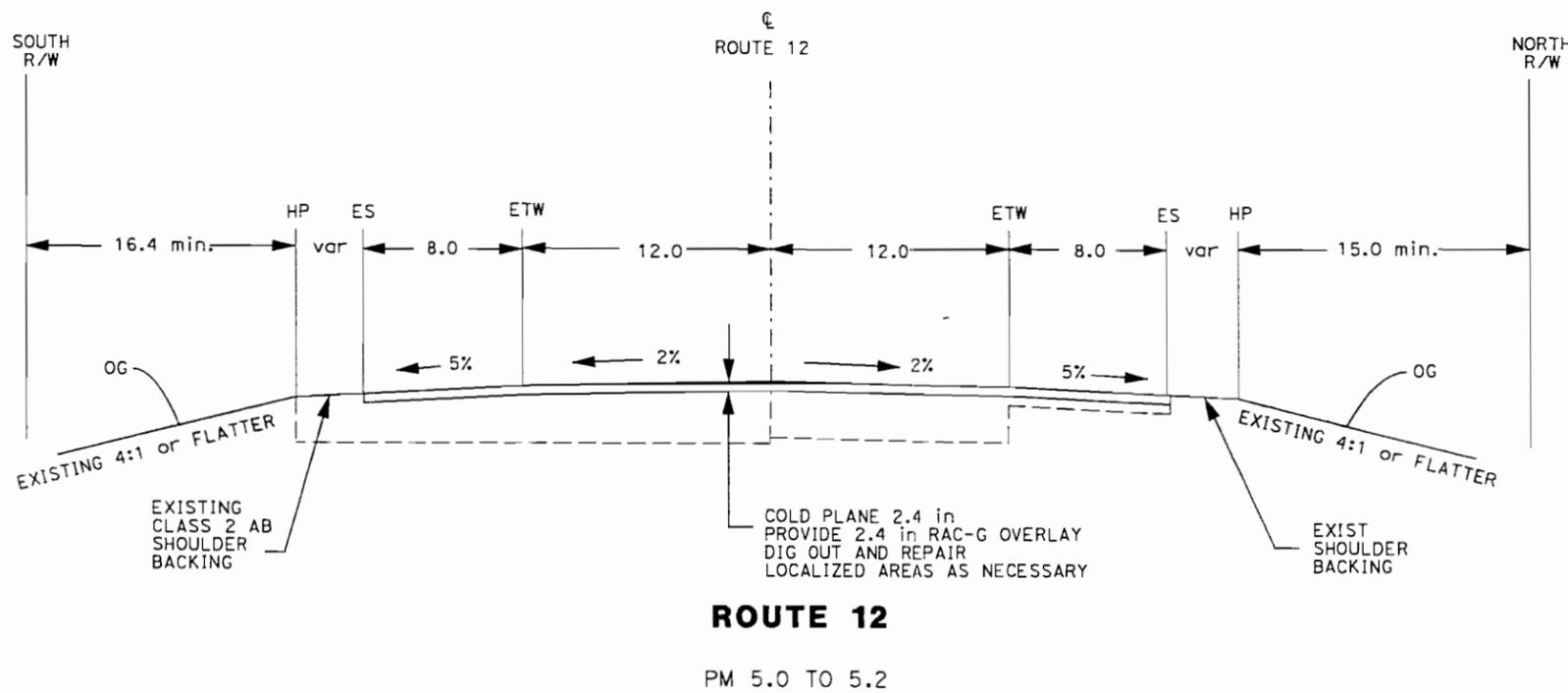
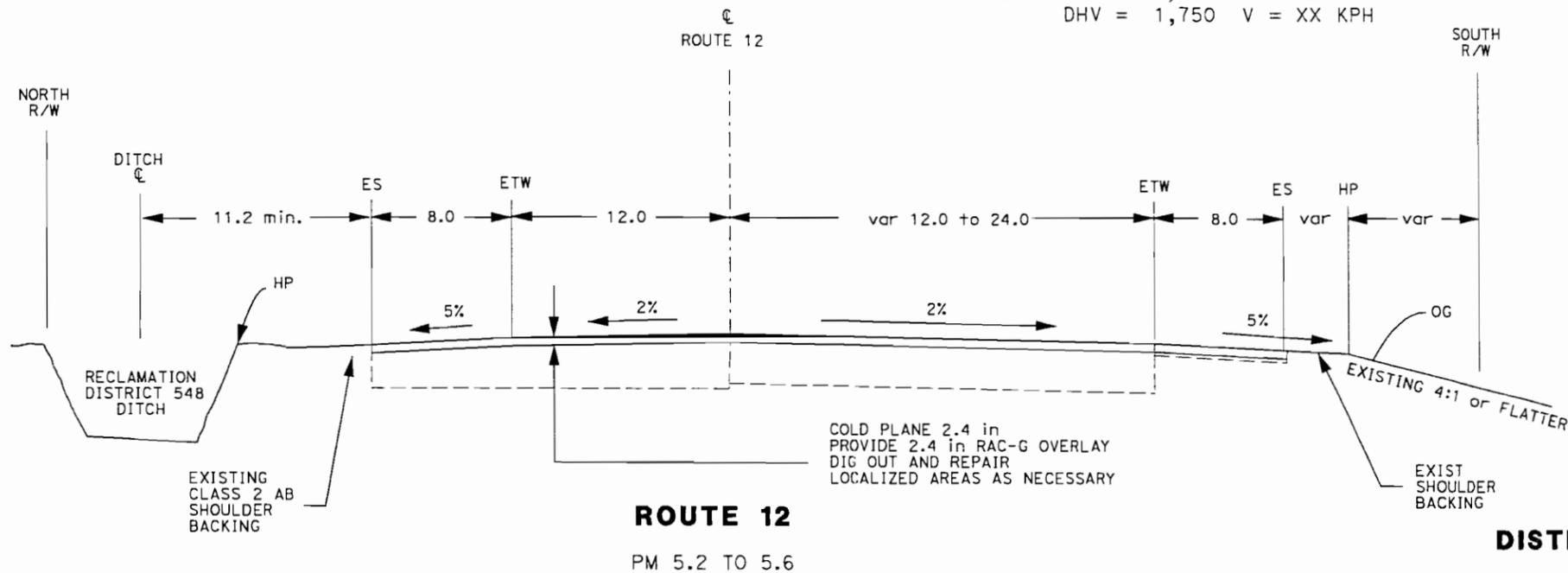
DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER

DESIGN DESIGNATION [ROUTE 12]
 2024 ADT = 30,000 T = 14% ; [10/04]
 2014 ADT = 22,600 D = 60%
 DHV = 2,300 V = XX KPH
 2004 ADT = 17,300 T = 12%
 DHV = 1,750 V = XX KPH

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	12	5.0/9.5		

REGISTERED CIVIL ENGINEER DATE	
PLANS APPROVAL DATE	

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



DISTRICT 548

ATTACHMENT B

TYPICAL CROSS SECTIONS

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION


REVISOR BY
 DATE REVISED

CALCULATED-DESIGNED BY
 CHECKED BY

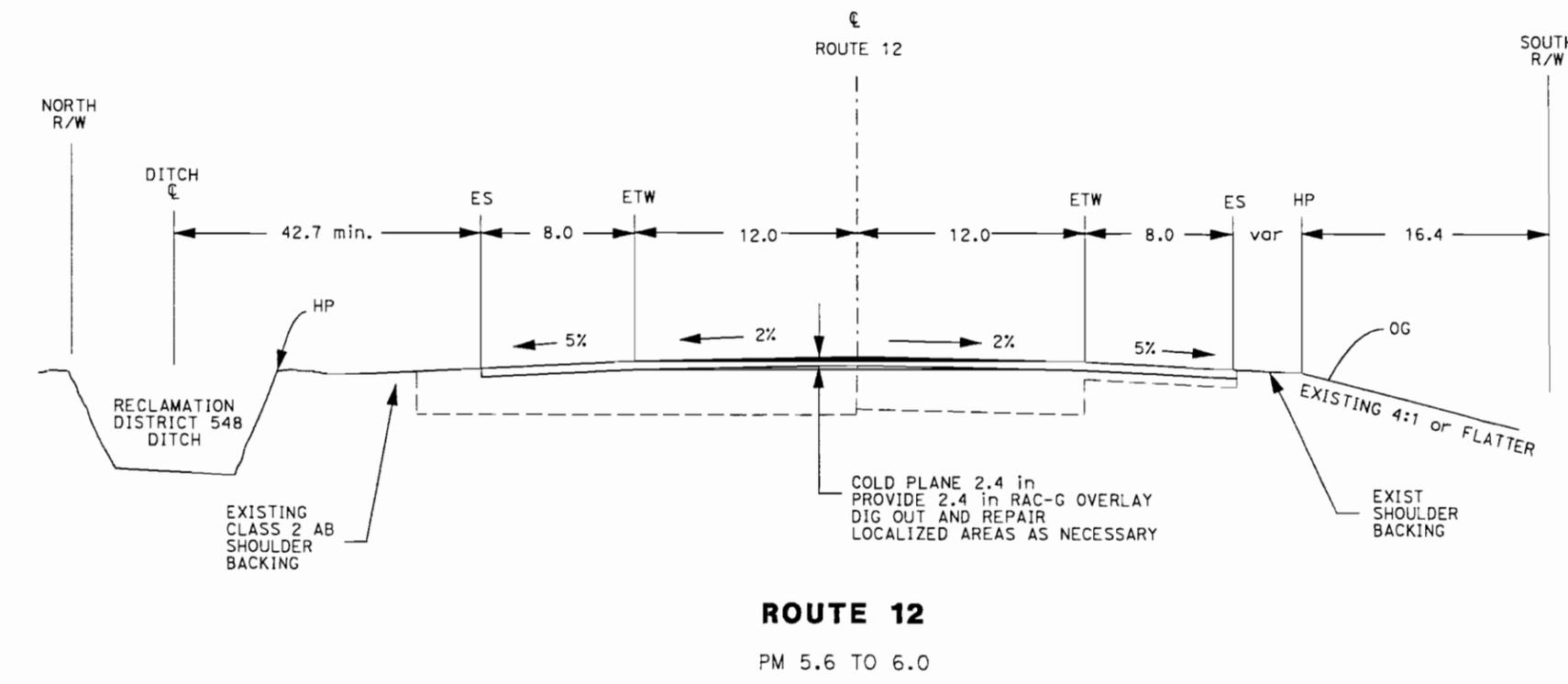
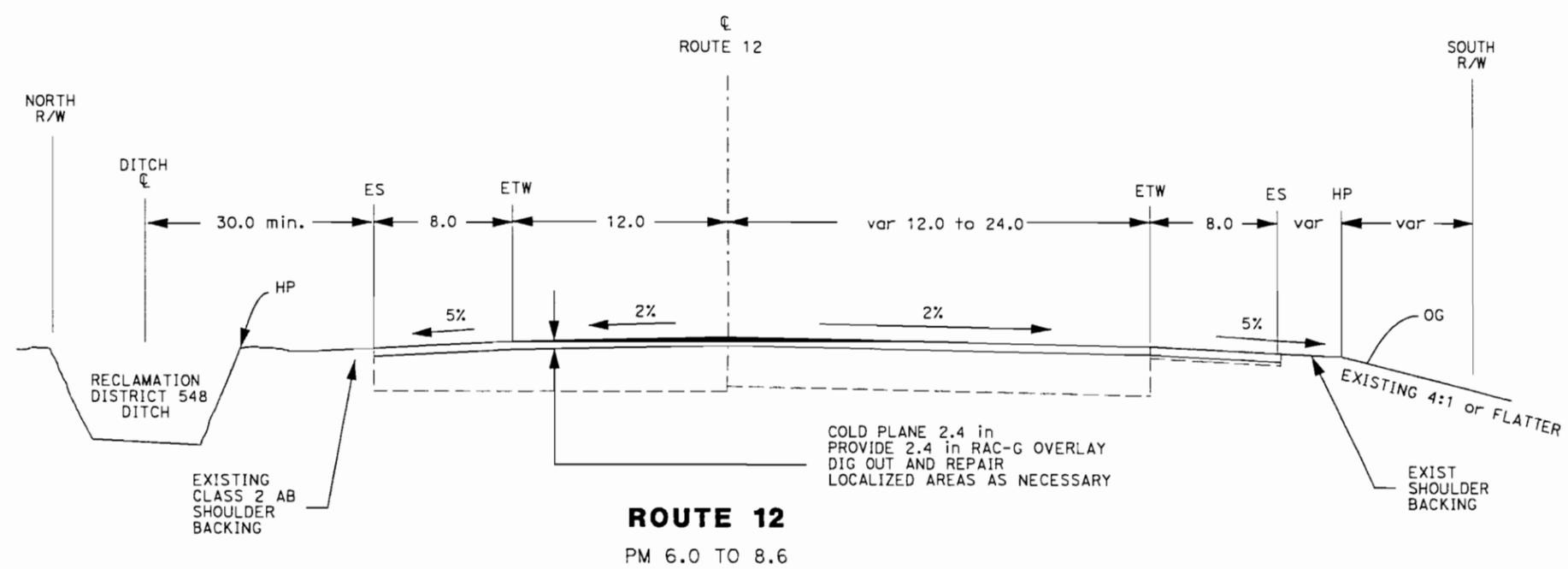
SUPERVISING ENGINEER

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL No. SHEETS
10	SJ	12	5.0/9.5	

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

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TYPICAL CROSS SECTIONS

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 SUPERVISING ENGINEER
 CALCULATED-DRAWN BY
 CHECKED BY
 REVISED BY
 DATE REVISED

LAST REVISION 05-17-07
 DATE PLOTTED => 15-AUG-2007
 TIME PLOTTED => 13:12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

REVISOR BY
 DATE REVISED

CALCULATED-DESIGNED BY
 CHECKED BY

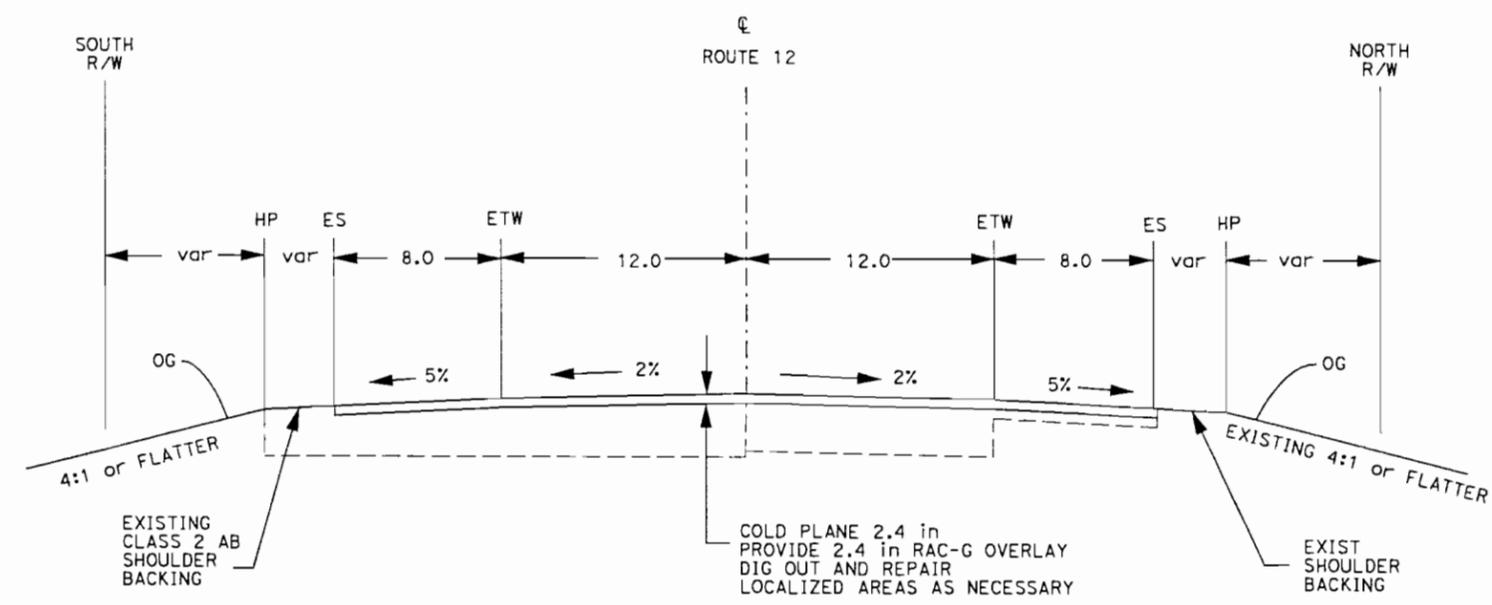
SUPERVISING ENGINEER

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	12	5.0/9.5		

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

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ROUTE 12
 PM 8.8 TO 9.5

TYPICAL CROSS SECTIONS

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

NO SCALE

X-3

Caltrans Maintenance Program 2005 Pavement Condition Survey Inventory Caltrans Drive Order

District 10, SJ, Rte 012, PM 5.0 - 9.5

District 10 County SJ Route 012

Begin PM - End PM	Lane	Surface Type	Length			LaneMi. (Est.)	Type	AADT (,000)			MSL	Faulting	Patching		Ride, IRI	Priority	Skid	Defect
			Alligator Cracking A %	B %	C (Y/N)?			Slab Cracking 1st %	3rd %	Corner %			Area %	Poor Cond.?				
3.959	-		4.227	0.268		0.536	2LNU	15		2								
	L1	F-CS	0	58			Rutting						22	154	8			HIGH ABC
	R1	F-CS	0	38			Rut./ Bldng						18	139	8			HIGH ABC
R 4.227	- R		4.802	0.575		1.150	2LNU	15		2								
	L1	F-CS	0	58			Rutting						27	173	8			HIGH ABC
	R1	F-CS	0	38			Rut./ Bldng						25	165	8			HIGH ABC
M 4.802	- M		5.087	0.285		0.570	2LNU	15		2								
	L1	F-CS	0	58			Rutting						25	167	8			HIGH ABC
	R1	F-CS	0	38			Rut./ Bldng						22	152	8			HIGH ABC
5.099	-		5.186	0.087		0.174	2LNU	15		2								
	L1	F-CS	0	58			Rutting						23	159	8			HIGH ABC
	R1	F-CS	0	38			Rut./ Bldng						14	122	8			HIGH ABC
5.186	-		6.486	1.300		2.600	2LNU	17		2								
	L1	F-CS	11	6			Rut./ Bldng						15	125	10			BLEEDING & RUTTING
	R1	F-CS	13	21									16	128	10			MOD ABC
6.486	-		7.486	1.000		2.000	2LNU	17		2								
	L1	F-CS	0	29									13	119	10			MOD ABC
	R1	F-CS	0	0			Rutting						30	185	31			RUTTING
7.486	-		8.686	1.200		2.400	2LNU	17		2								
	L1	F-CS	0	33									8	99	8			HIGH ABC
	R1	F-CS	0	4									15	127	32			FINE RAVEL
8.686	-		10.167	1.481		5.924	MLD	17		2								
	L1	F-MS	0	31									8	98	8			HIGH ABC
	R1	F-MS	0	0									10	106	33			MISC. UNSEALED CRACKS
10.167	-		11.486	1.319		5.276	MLD	12		2								
	L1	F-CS	0	50									13	118	8			HIGH ABC
	R1	F-CS	0	50									10	107	8			HIGH ABC

ATTACHMENT C

*Surface type of 'EB' is Enhanced Binder.

Memorandum

To: Dave Dhillon, P.E.
Central Region Materials Engineer
District 9 & 10

Date: December 14, 2004

File: 10- SJ-12
Project Limits: KP 8.0/15.4
(PM 5.0/9.6)
EA: 10-28150K
Equipment No.: JILS-1314

From: **DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
MATERIALS ENGINEERING AND TESTING SERVICES - MS #6
OFFICE OF PAVEMENT REHABILITATION**

Subject: **Flexible Pavement Deflection Study Report-Mainline**

In accordance with your request, we have developed pavement rehabilitation recommendations for the above referenced project. This project is an undivided two lane highway.

The design recommendations are based on the deflection study conducted on October 27, 2004 by the personnel of the Office of Pavement Rehabilitation, OPR and cores were taken by the district 10 materials section. The deflection tests were performed in five test sections in each direction on lane No.1. No photos of core were taken during the coring operation.

A pavement surface distress condition survey was made at the time of deflection testing to assess the severity of pavement distresses. The survey indicated that the pavement surface is chip seal (CS) with isolated to intermittent alligator cracks, intermittent to nearly continuous pumping and bleeding. The 2002 Pavement Condition Survey (PCS) indicates that the pavement has a maximum ride quality of 2.083 m/km (132 in/mile) in terms of International Roughness Index (IRI); which is within the acceptable value of 3.550 m/km (225 in/mile).

The district reports that the ten-year Traffic Index (TI₁₀) is 12.5 for the project.

The TI₁₀, the 80th percentile of the measured deflections, tolerable deflections, core data, as well as 2002 PCS data are summarized in Table 1, and were all used to develop rehabilitation strategies.

The collected data were analyzed for structural adequacy, reflective crack retardation and ride quality. Reflective crack retardation governed the rehabilitation design except

ATTACHMENT D

KM 11.3/14.5 (PM 7.0/9.0) in eastbound direction which was governed by the structural adequacy.

Table 1: Data used in developing rehabilitation strategies.

Direction	TL ₁₀	Location KP/KP (PM/PM)	¹ Base Type	² Avg. AC Thickness mm (ft)	² Avg. 90 th Percentile Deflection mm (inch)	Tolerable Deflection mm (inch)	³ Maximum IRI m/km (in/mile)
Eastbound	12.5	8.0/11.3 (5.0/7.0)	AB	185 (0.61)	0.304 (0.012)	0.229 (0.009)	2.083 (132)
		11.3/14.5 (7.0/9.0)	AB	161 (0.53)	0.432 (0.017)	0.229 (0.009)	
		14.5/15.4 (9.0/9.6)	AB	152 (0.50)	0.152 (0.006)	0.229 (0.009)	
Westbound	12.5	8.0/11.3 (5.0/7.0)	AB	250 (0.82)	0.152 (0.006)	0.229 (0.009)	1.768 (112)
		11.3/12.9 (7.0/8.0)	AB	274 (0.90)	0.406 (0.016)	0.229 (0.009)	
		12.9/15.4 (8.0/9.6)	AB	158 (0.52)	0.229 (0.009)	0.229 (0.009)	

¹AB : Aggregate Base, ²Avg.: Average, AC: Asphalt Concrete.
³IRI: International Roughness Index.

Ten-Year Rehabilitation Recommendations

KP 8.0/15.4 (PM 5.0/9.6)

Eastbound direction & westbound direction

Alternative 1 – Rubberized Asphalt Concrete-Gap Graded (RAC-G) Overlay:

- Conduct a field-review and locate specific areas of severe distress identified by rutting greater than 15 mm and/or loose or spalling pavement.
- Mill off 45 mm to remove CS from the existing pavement. Then, repair the localized distressed areas that have been found prior to milling and seal all cracks in the milled surface wider than 5 mm.
- Place 60 mm of RAC-G.
- This alternative will increase the existing profile grade 15 mm.

Alternative 2 – Dense Graded Asphalt Concrete (DGAC) Overlay:

KP 8.0/15.4 (PM 5.0/9.6)

Eastbound direction & westbound direction

- Conduct a field-review and locate specific areas of severe distress identified by rutting greater than 15 mm and/or loose or spalling pavement.

- Mill off 30 mm to remove CS from the existing pavement. Then, repair the localized distressed areas that have been found prior to milling and seal all cracks in the milled surface wider than 5 mm.
- Place 105 mm of DGAC.
- This alternative will increase the existing profile grade 75 mm.

Alternative 3 – Cold Plane Existing & Replace with RAC-G:

i) KP 8.0/12.9 (PM 5.0/8.0) of both directions,

KP12.9/15.4 (PM 8.0/9.6) of eastbound direction.

- Conduct a field-review and locate specific areas of severe distress identified by rutting greater than 15 mm and/or loose or spalling pavement.
- Mill off 60mm of the existing pavement.
- Repair the localized distressed areas that have been found prior to milling and seal all cracks in the milled surface wider than 5 mm.
- Place 60 mm of RAC-G.
- This alternative will maintain the existing profile grade.

ii) KP12.9/15.4 (PM 8.0/9.6) of westbound direction.

- Conduct a field-review and locate specific areas of severe distress identified by rutting greater than 15 mm and/or loose or spalling pavement.
- Mill off 30 mm of the existing pavement.
- Repair the localized distressed areas that have been found prior to milling and seal all cracks in the milled surface wider than 5 mm.
- Place 30 mm of RAC-G.
- This alternative will maintain the existing profile grade.

Alternative 4 – Cold Plane Existing & Replace with DGAC:

i) KP 8.0/11.3 (PM 5.0/7.0) of eastbound direction,

KP 12.9/14.5 (PM 8.0/9.0) of westbound direction &

KP 14.5/15.4 (PM 9.0/9.6) of both directions

- Conduct a field-review and locate specific areas of severe distress identified by rutting greater than 15 mm and/or loose or spalling pavement.
- Mill off 60mm of the existing pavement.
- Repair the localized distressed areas that have been found prior to milling and seal all cracks in the milled surface wider than 5 mm.
- Place 60 mm of DGAC.
- This alternative will maintain the existing profile grade.

ii) KP 8.0/11.3 (PM 5.0/7.0) of westbound direction

- Conduct a field-review and locate specific areas of severe distress identified by rutting greater than 15 mm and/or loose or spalling pavement.

- Mill off 90 mm of the existing pavement.
- Repair the localized distressed areas that have been found prior to milling and seal all cracks in the milled surface wider than 5 mm.
- Place 90 mm of DGAC.
- This alternative will maintain the existing profile grade.

iii) KP 11.3/14.5 (PM 7.0/9.0) of eastbound direction

- Conduct a field-review and locate specific areas of severe distress identified by rutting greater than 15 mm and/or loose or spalling pavement.
- Mill off 165 mm (entire asphalt concrete to the top of aggregate base), and compact if the base is disturbed.
- Repair the localized distressed areas that have been found prior to milling and seal all cracks in the milled surface wider than 5 mm.
- Place 165 mm of DGAC.
- This alternative will maintain the existing profile grade.

iv) KP 11.3/12.9 (PM 7.0/8.0) of westbound direction

- Conduct a field-review and locate specific areas of severe distress identified by rutting greater than 15 mm and/or loose or spalling pavement.
- Mill off 150 mm of the existing pavement.
- Repair the localized distressed areas that have been found prior to milling and seal all cracks in the milled surface wider than 5 mm.
- Place 150 mm of DGAC.
- This alternative will maintain the existing profile grade.

Remarks

1. The recommended rehabilitation strategies should provide ten years of service at minimum maintenance cost.
2. Recycling is not a viable option due to a small quantities involved.
3. Water may infiltrate gap-graded pavement. Saturation of pavement promotes stripping of binder from aggregate. Therefore, it is important to design cold-planed pavement cross-sections containing gap-graded mix in such a way that infiltrated water may drain.
4. After you have selected the alternative(s) that would be used in the rehabilitation of the pavement, please notify us with your final selection and provide us with electronic copies of the Materials Report and related typical sections.

If you have any questions regarding the above recommendations, please contact Waheed Maroof at CALNET 498-5838 or Imad Basheer at CALNET 498-5840.


WAHEED MAROOF
Pavement Rehabilitation Design Branch
Office of Pavement Rehabilitation


BAHMAN J. PANAH, P.E.
Pavement Rehabilitation Design Branch
Office of Pavement Rehabilitation

Chk: BJP

Attachments: Yes

C: BFarnbach
RMarsh
DWhaling
SLee



DISCLAIMER

All preceding analyses and rehabilitation strategies were based on deflection test results obtained in the field, core data, input parameters obtained from various sources within Caltrans or provided to us by the district materials engineer's office, as well as assumption pertinent to the design methodology adopted for the analysis. Any variations from the values provided could have a significant impact on the results and recommendations presented in this report. This office bears no responsibility for any alterations that are made, for whatever reason, to the preceding design(s), without prior discussion with this office, for that such alterations could lead to inadequate performance and premature failure of the constructed pavement structural section. Also, while this office makes every effort to precisely follow the available standard methods for testing and design combined with sound engineering judgement, improper construction practices can have a negative impact on pavement performance irrespective of the accuracy practiced in the engineering analysis for obtaining the proposed rehabilitation strategies.

RADIOACTIVE MATERIAL LICENSE

Pursuant to the California Code of Regulations, Division 1, Title 17, Chapter 5, Subchapter 4, Group 2, Licensing of Radioactive Material, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, use, possess, transfer, or dispose of radioactive material listed below; and to use such radioactive material for the purpose(s) and at the places(s) designated below. This license is subject to all applicable rules, regulations, and orders of the Department of Health Services now or hereafter in effect and to any standard or specific condition specified in this license.

1. Licensee: California Department of Transportation District 10	3. License Number: 1546-39 Amendment Number: 34
2. Address: 1976 East Charter Way, P.O. Box 2048 Stockton, CA 95201	4. Expiration date: April 21, 2009 (5)
Attention: David K. Whaling, P.E. Radiation Safety Officer	5. Inspection agency: Radiologic Health Branch Sacramento

In response to the letter dated May 2, 2005, and the letter dated September 12, 2005, with attachments, both signed by David K. Whaling, License Number 1546-39 is hereby amended as follows:

6. Nuclide	7. Form	8. Possession Limit
A. Cesium-137/Americium-241:Be	A. Sealed sources (CPN #131)	A. 26 source pairs not to exceed 10 mCi of Cesium-137 and 50 mCi of Americium-241 each.*
B. Cesium-137/Americium-241:Be	B. Sealed sources (Troxler Dwg. No. A-102112 and A-102451)	B. 26 source pairs not to exceed 9 mCi of Cesium-137 and 44 mCi of Americium-241 each.*
C. Cesium-137/Americium-241:Be	C. Sealed sources (HSI Dwgs. 2200064 and 2200067)	C. 26 source pairs not to exceed 11 mCi of Cesium-137 and 44 mCi of Americium-241 each.*
D. Americium-241:Be	D. Sealed sources (Troxler Dwg. No. A-100537)	D. 2 sources not to exceed 300 mCi each.
E. Cobalt-60	E. Sealed sources (Training source set, SCV-778)	E. 6 sources not to exceed 5 mCi each.
F. Cesium-137	F. Sealed sources (Troxler Dwg. No. A-102112)	F. 6 sources not to exceed 9 mCi each.

* Total of subitems A., B., and C. not to exceed 26 gauges.

9. Authorized Use

- A. To be used as components of gauges, CPN Corporation Models A, BR, MC, or 500 series, for determination of moisture/density in engineering materials.
- B. To be used as components of gauges, Troxler Model 3400 series, for determination of moisture/density in engineering materials.
- C. To be used as components of gauges, Humboldt Scientific, Inc. Model 5000 Series, for determination of moisture/density in engineering materials.
- D. To be used as components of gauges, Troxler Model 3241 series, for measurement of asphalt content.
- E. To be used for temporary storage during training courses for RADEF monitors.

03 OCT 08 12:15 PM

559-243-3829

— Forwarded by Thaar Jawhar/D06/Caltrans/CAGov on 02/01/2007 03:11 PM —

Dave

Whaling/D10/Caltrans/CAGo

v

02/01/2007 09:15 AM

To Thaar Jawhar/D06/Caltrans/CAGov@DOT

cc

Subject EA 10-28150K

As per our discussion on Feb 1, 2007, the recommendation contained in the Deflection Study dated December 14, 2004, should be used for the rehab strategy for this project.

Ron
Jones/HQ/Caltrans/CAGov
12/15/2005 04:01 PM

To Thaar Jawhar/D06/Caltrans/CAGov@DOT
cc Raymond Prado/D06/Caltrans/CAGov@DOT, Robert
Hedrick/D10/Caltrans/CAGov@DOT, Long
Huynh/D10/Caltrans/CAGov@DOT, Angela
Jackson/D10/Caltrans/CAGov@DOT, Getachew
Eshete/D06/Caltrans/CAGov@DOT, Alvin
Mangindin/D10/Caltrans/CAGov@DOT, Dave
Whaling/D10/Caltrans/CAGov@DOT, Wesley
Zinke/D10/Caltrans/CAGov@DOT, Kevin
Sheridan/D10/Caltrans/CAGov@DOT
bcc
Subject Re: Lodi rehab project SJ-12-28150k

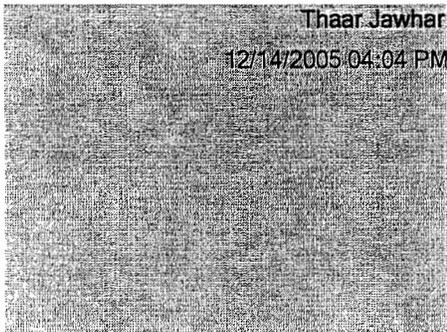
Hello Thaar

I think you understood something that I was not saying. I did not recommend to use the Preliminary Geotechnical Report recommendations. I have not had a chance to read the geotechnical report or its recommendations, so I cannot suggest to use the recommendations at this time. One thing I did notice in the report when I thumbed through it during our site visit, which surprised, was that no field testing or soil sampling had been done on the project (no Log of Test Boring were available for review). If the geotech engineer does not know what is going on at the site it is hard for him/her to make a recommendation.

Please clarify to people required and please do not move forward with the project with the suggestion that I am recommending the use of the Preliminary Geotechnical Report recommendations.

Thanks

Ron Jones
Pavement Management Engineer - (D10,12)
Maintenance Division, MS31
PH: (916) 651-9186 cell PH: (916) 221-0909
e-mail: ron_jones@dot.ca.gov
Thaar Jawhar



To: Ron Jones/HQ/Caltrans/CAGov@DOT, Rob
Marsh/HQ/Caltrans/CAGov@DOT
cc: Raymond Prado/D06/Caltrans/CAGov@DOT, Robert
Hedrick/D10/Caltrans/CAGov@DOT, Long
Huynh/D10/Caltrans/CAGov@DOT, Angela
Jackson/D10/Caltrans/CAGov@DOT, Getachew
Eshete/D06/Caltrans/CAGov@DOT, Alvin
Mangindin/D10/Caltrans/CAGov@DOT, Dave
Whaling/D10/Caltrans/CAGov@DOT, Wesley
Zinke/D10/Caltrans/CAGov@DOT, Kevin
Sheridan/D10/Caltrans/CAGov@DOT
Subject: Lodi rehab project SJ-12-28150k

The purpose of the Task Force Field Review meeting was to define the scope, need and purpose. As well as consult with functional units, especially maintenance and HQ Program Advisor regarding strategies and alternatives for this project.

The meeting started with introductions. Attendance included:
Thaar Jawhar

559-243-3829

Design

Ray Prado	559-243-3837	Design
Bob Hedrick	209-948-7824	Field Maintenance
Long Huynh represents Alvin Mangindin	209-948-7195	Maintenance Design
Ron Jones represents Rob Marsh	916-221-0909	HQ Maintenance
Angela Jackson	209-948-7852	R/W Utilities

History of the project:

State route 12 project is located approximately 15 km west of the City of Lodi in San Joaquin County, California, from KP 8.0 to KP 15.3 (PM 5.0/9.5). Route 12 is a 2-3.6 meter lane highway paved with asphalt concrete with 1.2-meter shoulders constructed on embankment. It is proposed to rehabilitate the existing roadway, construct an acceleration lane at Tower Park Way road, and improve the intersection at Glasscock road.

Briefly, three alternatives are being considered:

This alternative includes digging out and repairing localized areas of severe failure, cross slope corrections, and placing 105 mm of Dense Graded AC (DGAC) with an current estimated construction cost of approximately 7 million dollars.

Alternative 2, based on the Preliminary Geotechnical Report recommendations (dated 12/06/04). The geotechnical report suggested removing the undesirable soil and reconstructing a new structural section. The preliminary current estimated construction for this alternative cost is 45 million dollars.

Alternative 3, No Build Alternative.

Additional issues were discussed:

- Minimum excavation depth will be 6 meters.
- Design should consider worst case scenario for design cost estimate.
- Increase roadbed width to spread load weight over larger surface area.
- Possible shift in road alignment if needed.
- Utilities are south of the existing roadway
- Environmental may need more biological study around Potato Slough Bridge (KP 8.0)

Ron Jones, HQ HA22 Advisor representative recommendation was to proceed with the project based on the Preliminary Geotechnical Report recommendation.

Attached are very rough draft of 6-page estimate for alternatives, alternative descriptions and geotechnical report.



6page_SJ12_Full Structural Section Replacemer 6page_SJ12_Overlay.xl Route 12 in San Joaquin County.d



materials.pdf

Thanks,

Memorandum

*Flex your power!
Be energy efficient!*

To: **MR. WESLEY ZINKE**
Project Manager
District 10

Date: January 27, 2006

File: 10-SJ-12-PM 5.1/9.5
KP 8.2/15.3
10-28150K

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES – MS 5

Subject: Addendum to Preliminary Geotechnical Report dated December 6, 2004

Per your request, we are providing an addendum to the Preliminary Geotechnical Report (PGR) for State Highway 12 from KP 8.2 to KP 15.3 (PM 5.1/9.5), located approximately 15 km west of the city of Lodi in San Joaquin County, California. At this location, a project is proposed to rehabilitate the existing roadway surface, construct an acceleration lane at Tower Park Way, and improve the intersection at Glasscock Road.

A meeting was held at the District Office in Stockton on January 25, 2006 to discuss the project scope. This report provides the information requested at that meeting. Refer to the original PGR for all other relevant information.

This Office conducted a site review on January 27, 2006 to assess the existing road surface and determine the limits of where geosynthetic reinforcement will be beneficial. Based on this site review and a review of the USDA soils map for the area, we recommend geosynthetic reinforcement be placed within the structural section from KP 8.2 (from the Potato Slough Bridge approach slab) to KP 12.8.

The recommendations made in the original PGR are still applicable. However, based on discussions at the meeting described above, more specific recommendations are provided in this memo. We recommend using a geosynthetic reinforcement within the structural section of the pavement from KP 8.2 to 12.8. Existing asphalt should be removed completely in this area and the subbase re-graded. Outside of these limits, a typical overlay is applicable. Use of lightweight fill and/or surcharge loading is recommended for the widening for the acceleration lane at Tower Park Way. An estimate of time required for the application of the preload is 3 months. This estimate can vary based upon the properties and thickness of the underlying peat and clay. During the PS&E

Mr. Wesley Zinke
January 27, 2006
Page 2

phase, this Office will likely perform a subsurface exploration using drilling equipment.

An estimate for the cost of using geogrid within the structural section is \$30,000 per mile. Using a geotextile the estimated cost is \$20,000 per mile. Geogrids are known to be stronger and easier to work with than geotextiles, so a cost/value analysis may be utilized to decide which product to use. The District should contact the pavement design group for additional recommendations and design of the structural section.

If the scope of this project changes, the Office of Geotechnical Design North should be notified as the amount of geotechnical exploration may need to be revised. If you have any questions or comments, please call Eric McGrath at (916) 227-5504.

ERIC MCGRATH, P.E.
Transportation Engineer – Civil
Geotechnical Design – North

Attachments

c: Qiang Huang
GDNFile
GSFileroom

Memorandum

*Flex your power!
Be energy efficient!*

To: **MR. STEVE M. LEE**
Project Engineer
District 6

Date: December 6, 2004

File: 10-SJ-12-PM 5.1/9.0
KP 8.2/14.5
10-28150K

From: **DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES – MS 5**

Subject: Preliminary Geotechnical Report

Introduction

Per your request, we are providing a Preliminary Geotechnical Report (PGR) for State Highway 12 from KP 8.2 to KP 14.5 (PM 5.1/9.0), located approximately 15 km west of the city of Lodi in San Joaquin County, California. At this location, a project is proposed to rehabilitate the existing roadway surface, construct an acceleration lane at Tower Park Way, and improve the intersection at Glasscock Road. A vicinity map showing the project location is attached as Plate 1.

This report includes a review of published data and a site visit conducted on October 12, 2004. As this is a preliminary geotechnical evaluation, subsurface explorations and related laboratory analyses were not performed.

The purpose of this report is to assist planners, project studies personnel, and environmental personnel. Information from this report will be included in the Geotechnical Design Report (GDR) as necessary.

Pertinent Reports and Investigations

In preparing this report, we have utilized the following documents:

1. Microsoft Expedia Streets 98, 1988-1997
2. Topographic map, found at <http://topozone.com/>
3. Western Regional Climate Center for 1931-2004 (www.wrcc.dri.edu)
4. "Air Resources Board Map of California Showing Principal Asbestos Deposits", prepared by the State of California

5. "California Seismic Hazard Map", prepared by Caltrans, dated 1996, rev. 1997
6. Geologic Map of California – Sacramento Sheet, 1987
7. USDA Soil Survey-San Joaquin County, 1992
8. Geotechnical Investigation For The Proposed Potato Slough Bridge Approach Embankments, Caltrans (10-230201), 1987
9. Foundation Recommendations (Br. # 29-101), Caltrans, 1987

Existing Facilities and Proposed Improvements

Within the project limits, Highway 12 is a 2-lane highway paved with asphalt concrete with 3.6-meter lanes and 1.2 to 2.4-meter shoulders constructed on embankment. Above ground electrical and telephone utilities were observed within the project area.

The proposed project involves adding an acceleration lane along Eastbound Highway 12 from Tower Park Way, improving the intersection at Glasscock Rd, and rehabilitating the roadway surface. A changeable message sign (CMS) located at the intersection of Highway 12 and Tower Park Way is also being considered.

Physical Setting

The physical setting of the project site and the surrounding area was reviewed to provide climate, topography and drainage, man-made and natural features, geology and seismicity characteristics to aid in preliminary project design and construction planning. The following is a discussion of our review:

Climate

Information regarding the climate in the project area is provided by the Western Regional Climate Center period of record from 1955 to 2004. The weather station closest to the site is located approximately 22 km to the southwest, at the Antioch Pumping Plant. The average annual precipitation is 332 mm (13.07 in) with the majority of this precipitation (over 89 percent) falling between November and April. The average daily minimum air temperature ranges from 2.7° C (36.9° F) in January to 14.0° C (57.2° F) in July while the average daily maximum temperature ranges from 12.1° C (53.7° F) in January to 32.8° C (91.0° F). Freezing temperatures and snowfall are not common at the project site. Yearly updates are available at the Western Regional Climate Center's web site.

Topography & Drainage

The site is located within the Sacramento Delta region. The terrain is typically flat with an elevation at about sea level. The localized drainage is generally channeled into irrigation ditches throughout the area. Plate No. 2 illustrates the sight topography.

Man-made and Natural Features of Engineering and Construction Significance

Man-made features that will be considered during geotechnical design include the existing embankments, drainage ditches, and utilities. Natural features that will be considered during design are the existing soil types and ground water levels.

Regional Geology and Seismicity

The California Department of Conservation, Division of Mines and Geology Geologic Map of California, Sacramento Sheet, 1987, was used to help determine the geologic formations at the project location. Within the western portion of the project, the existing material is classified as Intertidal Deposits of Quaternary age (peaty mud). To the East of this deposit the material is classified as Modesto Formation (alluvium). Bedrock is expected to be deep (>10m). A portion of the geologic map is included as Plate 3.

The State of California, Air Resources Board Map of California Showing Principal Asbestos Deposits was reviewed to determine whether asbestos deposits might be encountered in the project area. According to this map, the project site is not located in an area of naturally occurring asbestos.

The Department's California Seismic Hazard Map, 1997 revision, was also reviewed. The map indicates that the controlling fault is the Coast Ranges-Sierran Block fault. The fault is located approximately 28 km west of the project location and is expected to be capable of producing a Maximum Credible Earthquake (MCE) of magnitude 7.0. The MCE from this source is expected to produce peak bedrock acceleration on the order of 0.2 g at the project location.

Local Geology

Information regarding the local soil conditions was extracted from the USDA Soil Survey of San Joaquin County. Soil scientists who sampled the soils to a depth of about 1.5 meters established the soil map. The soil map shows the alignment passing through five soil units (refer to Plate 4). Soil borings from nearby Potato Slough Bridge and the bridge

approaches provides information to a depth of about 30.5 meters. In general, these sources indicate that the foundation soil consists of a thin layer (<1 m) of sandy topsoil, followed by intermittent layers of very soft silty peat, organic clays, and silty clays to a depth of about 5.5 meters. Below 5.5 meters, clayey sand and silty sand was documented. The thickness of the very soft, compressible organic soils varies from 1.2 to 5.0 meters. The water table was measured by both sources to be within 1 meter of the ground surface.

Site Visit

A site visit was performed for this report on October 12th, 2004. No subsurface exploration, sampling, or testing was performed. In general, the condition of the existing road within the project limits showed significant signs of differential settlement in the area between Potato Slough Bridge and Tower Park Way. The traveled way appeared to have little damage in this area but the shoulders have severe cracks, probably due to lateral spreading. East of Tower Park Way, the Highway 12 appears to be in good condition.

Geotechnical Recommendations

It is anticipated that peat and clay layers of varying thickness underlie the site. These soil types exhibit significant settlement potential and low initial shear strength, especially if they are of soft consistency. The limits of the soft, compressible soils are not known at this time. From observations of the existing road, it appears that the area most problematic due to these soil types is the area between the intersection at Tower Park Way and the approach slab of Potato Slough Bridge. East of this area the roadway appears to have less adverse impact from poor foundation soils.

The following alternatives are typically evaluated when constructing embankments on weak and compressible foundation material adjacent to an existing embankment where little disturbance to the existing traveled way is desired. The most appropriate method will be recommended after this Office performs subsurface investigations and laboratory testing to determine the properties and extent of the soft soil. At this time, it is anticipated that ground improvements will only be considered for new embankment construction.

- **Remove existing asphalt concrete and replace with geosynthetic reinforced structural section:** the weight of additional asphalt concrete overlays has resulted in additional (unnecessary) stress increases on the foundation soils. The stress increase causes the underlying soil to compress, deform and settle. Cracks in the underlying asphalt concrete then propagate to the surface over time. Removing the existing asphalt concrete and replacing it with a reinforced structural section will reduce the load on the foundation soils and reduce cracking. Geogrids or geotextiles can be placed under or within the structural section to reduce cracking by distributing forces over a larger area
- **Use lightweight fill:** this will reduce the total load applied to the compressible foundation soils, in-turn reducing the total settlements. There are many types of lightweight material available at various weights and costs. Geofoam blocks are the lightest of these materials. Shredded rubber tires are possibly the most cost effective solution as they may be available to the State at no cost through the California Integrated Waste Management Board. These materials are buoyant and may require an anchorage system to avoid damage in the case of the surrounding area being flooded due to farming or levee failure. Surcharging of the lightweight embankment will be evaluated during final design.
- **Ground improvements:** improving the existing foundation soils to reduce long-term settlements and increase strength can be accomplished by installing stone columns, installing piles, jet grouting, or deep soil mixing. These improvements are typically cost prohibitive, but may be considered for short segments such as the acceleration lane. *new construction*
- **Reinforce the embankment with geosynthetics:** geogrids or geotextiles can be installed between lifts during embankment construction. The addition of the geosynthetic reinforcements reduces differential settlements by distributing the load. However, additional secondary settlement of the existing roadway is possible due to the addition of the load and cracking between the existing and newly constructed embankment is possible. The application of geosynthetics within the embankment will be evaluated during final design.
- **Remove undesirable soils and replace with lightweight fill:** removing the weak and compressible soils from the site will alleviate future settlement within that zone. However, excavations along the existing road embankment will have to

Mr. Steve Lee
December 6, 2004
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Craig Hannanian Assistant/Replacement
Called 6/24/05
6m considered shallow.
(Minimum) Conservative Estimate

remain shallow or extensive shoring may have to be utilized. It is assumed that a thick clay layer exists below a thin layer of peat. If the peat layer is found to be shallow and thin, removal of that layer and constructing the embankment with a lightweight fill will be considered.

A combination of any of the above alternatives may be recommended based upon future investigations and analyses. The thickness of compressible soils is assumed to be variable and certain improvements may or may not be advantageous for certain conditions. Since the soil underlying the existing embankment has already experienced much of its secondary consolidation, the addition of lightweight fill for the acceleration lane, removal of excess asphalt on the existing roadway, and use of geosynthetics within the structural section will minimize differential movements and is preferred at this time.

Addressing the undesirable foundation conditions may significantly increase the project's cost. It is anticipated that installation of instrumentation such as piezometers, inclinometers, settlement plates, and/or elevation benchmarks will be recommended.

Proposed Future Investigations

During the design phase (Geotechnical Design Report, or GDR), it will be necessary to perform geotechnical drilling and laboratory testing for the segment of road that will receive additional fill for the acceleration lane near Tower Park Way. As the depths of peat and clay will vary, it is anticipated that this project will involve the drilling of approximately 6 borings to a depth of about 18 meters. Additional borings will be required if a CMS or retaining wall is to be added to this project. During the drilling operation, down-hole vane shear tests may be performed, as well as standard penetration tests (SPT) and sampling using Shelby tubes. The use of vane shear tests and Shelby sampling will be more time consuming than traditional SPT sampling. Additional time will be needed for laboratory testing of the samples as well, since consolidation tests are time consuming. We anticipate that our investigation will require eight to ten months to complete once we have been granted access to the properties to perform our drilling operations.

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If the scope of this project changes, the Office of Geotechnical Design North should be notified as the amount of geotechnical exploration may need to be revised. If you have any questions or comments, please call Eric McGrath at (916) 227-5504 or ~~Craig Hannenian at (916) 227-7237.~~
7555

Diong Huang
916-227-7237



ERIC MCGRATH, P.E.
Transportation Engineer – Civil
Geotechnical Design – North

Attachments

c: CraigHannenian
GDNFile

Central Region Environmental Division
Mitigation Cost Compliance Estimate Form

PEAR Draft ED Final ED PS&E

Dist.-Co.-Rte.-PM: 10-SJ-12-PM 5.0/9.5EA: 10-28150KProject Name: Lodi Rehab #1Alternative #: 1

Project Description: The project proposes to rehabilitate the existing roadway with standard shoulders, expand the existing drainage system, replace culverts, and the construction of new traffic operation system elements on Route 12 in San Joaquin County between PM 5.0 and 9.5.

Environmental Manager: Gail MillerPhone Number: 559-243-8274Environmental Planner: Ravchel SkeenPhone Number: 559-243-8266Project Manager: Kevin SheridanPhone Number: 209-948-7854Design Manager: Getachew EschetePhone Number: 559-243-3890Date: 6-19-07

Numbers are in thousands

	Right of Way Capital (Prior to Construction – Biology only) (050)	Construction Capital (During and Post Construction) (042)
Archaeological (N.A. monitoring)		
Historical		
Paleontology		
Hazardous Waste Remediation		
Noise		
Biological (GGS, wetlands)		
Mitigation parcels (# of acres only)		
Mitigation/Bank Credits (\$-amt)	\$500	
Endowment (\$-amt)		
Monitoring (\$-amt)		
Permit Costs (401,404)	\$4	
DFG Doc Review	\$1.8	
Other		
Total (add only \$-amounts from Bio/Permits/Review fees)	\$505.8	0

- This form is completed as part of the PEAR for all candidate projects, at completion of the Draft Environmental Document, at the completion of the Final Environmental Document, and during preparation of the PS&E.
- This form is to be completed for all SHOPP, STIP, and Minor A & B projects (**even those without Mitigation**).
- Include all costs necessary to complete the commitment including: capital outlay (non-staffing support costs); cost of right-of-way or easements; long-term monitoring and reporting by consultants during the construction phase, and any follow-up maintenance post construction.



Preliminary Environmental Analysis Report

Project Information

District 10 County SJ Route 12 Post Mile 5.0/9.5 EA 28150K

Project Title: Lodi Rehab #1 (Structural Section Repair)

Project Manager: Kevin Sheridan Phone # (209) 298-7894

Design Manager: Getachew Eshete Phone # (559) 243-3890

Environmental Manager: Gail Miller Phone # (559) 243-8274

Environmental Planner Generalist: Raychel Skeen Phone # (559) 243-8266

Project Description

Purpose and Need:

The purpose of this project is to rehabilitate the existing roadway on Route 12 to meet Caltrans "Roadway Rehabilitation" standards, as defined in the Highway Design Manual under section 603.4 *Roadway Rehabilitation*, which defines the requirements to "return roadways that ride rougher than established thresholds, and/or exhibit major structural distress, to good condition." Also, there is the need to upgrade drainage facilities, structures, and signal (or message) controls within the project limits.

Description of work:

The project would rehabilitate the existing roadway on Route 12 in San Joaquin County, from the east side of Potato Slough to 1.1 km east of Guard Road (PM: 5.09/9.5). The proposed rehabilitation work includes:

- Digging out and repairing localized areas of severe failure, cross slope corrections, and cold plane 60 mm existing asphalt concrete (AC) and replace with 60 rubberized asphalt concrete (RAC-G).
- Intersection improvements at Guard Road (PM 8.8) would include removal and replacement of existing corrugated metal pipe (CMP) culvert with reinforced concrete pipe (RCP) and installation of flared end sections. A maintenance hole 48" should be installed northeast of the intersection.
- Existing corrugated metal pipe (CMP) cross culverts would be removed and replaced with RCP and new flared end sections at PM 6.1, PM 6.5, and PM 7.0.
- At Glasscock Road (PM 5.5) replace existing 72 inch existing double CMP with 6x6 feet double concrete box culvert and replace existing cross culvert.
- New guardrail would be constructed on the northwest corner of Guard Road. The existing guardrail on the south side of SR 12 would be upgraded to current standard.
- Construction of new traffic operation system elements (CMS) at, or near, Guard Road.

Alternatives:

Two alternatives have been identified, the No Build and one build alternative.

Funding

The source of the funding is anticipated to be from the 2008 SHOPP.

Anticipated Environmental Approval**CEQA**

- Categorical Exemption/Statutory Exemption
 Negative Declaration/Mitigated ND
 Environmental Impact Report

NEPA

- Categorical Exclusion/Programmatic CE
 Finding of No Significant Impact
 Environmental Impact Statement

PSR Summary Statement

The appropriate environmental document for this project would be an Initial Study (IS), with an anticipated Categorical Exclusion (CE) as the decision documents. The California Department of Transportation would act as lead agency in the preparation of the IS, while Federal Highway Administration would act as lead agency in the preparation of the CE.

Assuming a start date of 9/1/2008 for environmental Studies, final environmental determination is anticipated by 2/1/2011. (31 months).

Assumptions and Risks

Assumptions are based on the mapping dated March 5, 2007 and PEAR request dated 2/20/07.

Assumptions

1. No right of way acquisition will be required, for either the proposed project itself or for materials and disposal sites. Any such areas identified in the future would require complete environmental evaluation as part of the project.
2. Assume Formal Section 7 consultation with USFWS as the project would be impacting waterways that are considered jurisdictional wetlands and habitat for GGS.

Risks

1. Moderate Probability/High Risk: Discovery of archaeological sites necessitating a Phase II evaluation would add 12 months to schedule.
2. Moderate Probability/Moderate Risk: If Section 7 Consultation with US Fish and Wildlife service takes longer than expected due to removal of contract position at USFWS, 4-8 months would be added to schedule.
3. Low Probability/Moderate Risk: Significant public controversy necessitating a public meeting would add 4-6 months to schedule.
4. Moderate Probability/High Risk: Utility relocation impacts outside environmental study area for this project.

Permits

401, 404, and 1600 permit coordination with the Army Corps of Engineers and California Department of Fish and Game.

Mitigation**Right of Way Capital (050)**

Purchase land for GGS habitat and wetland mitigation. \$500,000

Disclaimer

This report is not an environmental document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in this report. The estimates and conclusions provided are approximate and are based on cursory analysis of probable effects. This report is to provide a preliminary level of environmental analysis to supplement the Project Initiation Document. Changes in project scope, alternatives, or environmental laws would require a reevaluation of this report.

Reviewed by:



Environmental Manager

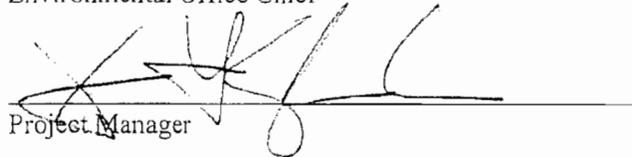
Date: 6/20/07



Environmental Office Chief

Keracawich

Date: 6/20/07



Project Manager

Date: 6/22/07

Environmental Technical Reports or Studies Required

Study – requires thorough analysis including field surveys, database searches, and reports

Document – does not require field surveys; issue is incidental and may only require memo to file and brief explanation in the environmental document.

N/A – Issue is not applicable to the proposed project.

	Study	Document	N/A
Community Impact Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Farmland	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Section 4(f) Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Visual Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Floodplain Evaluation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Noise Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Air Quality Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Paleontology	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wild and Scenic River Consistency	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cumulative Impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cultural			
ASR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HRER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HPSR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section 106	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SHPO Concurrence	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Native American Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Finding of Effect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Data Recovery Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hazardous Waste			
ISA (Additional)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PSI	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other			
Biological			
Endangered Species (Federal)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Endangered Species (State)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Species of Concern (CNPS, USFS, BLM, S, F)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biological Assessment (USFWS, NMFS, State)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wetlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invasive Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Natural Environment Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NEPA 404 Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Permits			
401 Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
404 Permit Coordination (NW)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1600 SAA Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City/County Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
State Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NPDES Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
US Coast Guard (Section 10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
State 2081 Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion of Technical Review

Socio-economic and Community Effects There is a community south and west of the western terminus for the project. The community's main access is located on State Route 12 at Tower Parkway Road. Also, there is a home and a business located adjacent to the project at Glasscock Road intersection. There may be temporary impacts during construction but effects would be minimized with the implementation of a Traffic Management Plan. No study would be required.

Farmlands The project scope does not require the purchase of additional right of way.

Section 4(f) Impacts No 4(f) properties would be affected by the proposed project.

Visual Effects No Visual Effects study would be required.

Water Quality and Erosion The site should be evaluated for potential water quality impacts associated with the project. If site dewatering is required for new construction, a dewatering plan is required. Site access for construction must be included in any water quality analysis.

Floodplain A floodplain evaluation report would need to be prepared to analyze the effects of the alterations to the bridge footings on the 100-year floodplain.

Air N/A. According to the Transportation Conformity Rule (40 CFR Section 93.126, Table 2), this project is exempt from all emissions analysis. No further analysis is required.

Noise N/A. This project is not considered a Type 1 Project under NEPA and no further analysis is required.

Paleontology N/A. The CSUF Paleontology Sensitivity Mapping Project database ranks paleontology sensitivity within the post miles as Low. If the scope of the project changes to include excavation more than 2 meters deep, a new report is required. Otherwise, no further studies are anticipated.

Wild and Scenic River N/A. There are no rivers classified as "Wild and Scenic" in the project study area.

Cultural Resources The project area is located within the Delta region, which is considered highly sensitive for the presence of prehistoric archaeological resources. A record search has determined that there has been no previous survey work conducted within the proposed project area. The record search did identify one prehistoric site located close to the project, to the west, outside the footprint of the proposed project area. Surveys for cultural resources and concurrence from SHPO would be required. For the purposes of this report, a Phase I investigation only is anticipated. If cultural resources are identified, a Phase II investigation would add 18 months to the schedule.

Native American Coordination Native American Consultation would be required through out the duration of the project development process.

Hazardous Waste/Materials N/A. There is an existing Lead Study with non-hazardous findings throughout the project area.

Biological Resources Biological studies would need to include Botanical surveys between March 1 and July 31, giant garter snake surveys between April 1 and June 3, Swainson's Hawk surveys during the Spring and Summer, and wetland delineation, which could probably be conducted along with the giant garter snake survey. There is the potential that formal Section 7 consultation would be required, due to the

observation of wetland conditions and giant garter snake habitat along the banks of the adjacent canal. The National Marine Fisheries Service (NMFS) should be consulted to concur with a "no impact" finding to anadromous fish and Essential Fish Habitat. There is a high potential that mitigation would be required for wetland and giant garter snake habitat.

Wetland conditions may exist on the banks of the drainage ditch located at Peatland Road and Guard Road above and below the Ordinary High Water Mark (OHWM), which defines the area classified as jurisdictional waters. Fish passage issues would not be a factor because the water is pumped out into the San Joaquin River. No sensitive plant species were observed, however a survey should be completed during the blooming season. Giant Garter snake habitat is present within the project limits and surveys would be required.

The project falls within the critical habitat for the Delta smelt, however this project should have no impact to habitat or species. The drainage ditch that parallels State Route 12 is a closed water system, which does not allow fish passage. Water is collected and pumped out into the San Joaquin River by means of two (2) siphon pipes located at the far west end of the island.

Wetlands A delineation of jurisdictional wetlands and waters of the United States needs to be done. Executive Order 11990 requires an avoidance alternative analysis for wetland impacts unless there is no practicable avoidance alternative available. Impacts to waters of the U.S. and wetlands from the project and any temporary access roads would need to be quantified.

Invasive Pest Plant Species N/A. No invasive pest plant species are in the project area.

Right-of-Way Relocation or Staging Area No new Right-of-Way is indicated for this project. Material sites and disposal sites are not identified. If these areas are identified in the future, they would require complete environmental evaluation as part of this project.

Permits Permits from the U. S. Army Corps of Engineers (an individual or nationwide 404 Permit would probably be required because wetland/waters impacts may exceed the threshold acreage), a Caltrans Statewide NPDES, and the Regional Water Quality Control Board (401) would be required. The canal on the north side of SR 12 has the potential of being jurisdictional waters, which may require an Individual 404 Permit and 1600 coordination, if impacted by the project. If the project should widen to the south, a Nationwide 404 Permit would be needed.

Coastal Zone N/A. This project is not within the County coastal jurisdiction and would not require a County Coastal Development Permit.

List of Preparers

Hazardous Waste Review Prepared by Raychel Skeen	Date 5/22/07
Biological Review Prepared by Premavera Parker	Date 5/22/07
Cultural Review Prepared by Bill Ray	Date 3/30/07
Community Impact Prepared by Raychel Skeen	Date 5/23/07
Visual Review Prepared by Raychel Skeen	Date 5/23/07
Air, Noise, Water Review Prepared by Chris Timofet	Date 5/23/07
Paleontology prepared by Richard Stewart	Date 5/29/07
Preliminary Environmental Analysis Report by Raychel Skeen	Date 6/15/07

Memorandum

To: K. Sheridan
Stockton PPM

Attn: Thaar Jawhar
Fresno D-1, B-L
Getachew Eshete
Fresno Design-1, B-L

From: Department of Transportation
Division of Right of Way Central Region

Subject: RIGHT OF WAY DATA SHEET

Date: 9/12/2007

File: CD 10 EA 28150K Alt 1(U3)
Co SJ RTE 12

DESCRIPTION:

Lodi Rehab. #1 - Near Terminous from Potato Slough Bridge
0.12 miles east of Guard Rd, PM 5.0/9.5.

We have completed an estimate of the right of way costs for the above-referenced project based on the Right of Way Data Sheet Request Form dated 8/30/2007

The following assumptions and limiting conditions were identified:

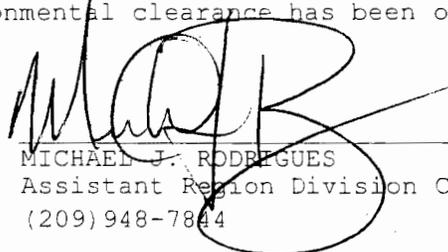
Appraisal

Potential hazardous waste sites were not evident. This data sheet is revised because the 3.5 acres previously estimated for mitigation is no longer required.

Utility

12 potholes will be required per design cost is \$6,600. Per design two (2) PG&E overhead electric poles will need relocation. These poles appear to be in the State's R/W, if so the cost will be 100% owner expense.

Right of Way Lead Time will require a minimum of 6 months after we receive certified Appraisal Maps, the necessary environmental clearance has been obtained, and freeway agreements have been approved.



MICHAEL J. RODRIGUES
Assistant Region Division Chief, Right of Way
(209) 948-7844

Right Of Way Cost Estimate

	Current Year 2007	Contingency Rate	Right of Way Escalation Rate	Escalated Year 2010
Acquisition:	\$0	25%	5%	\$0
Mitigation:	\$632,250	25%	5%	\$731,908
State Share of Utilities:	\$8,250	25%	5%	\$9,550
Expert Witness:	\$0	25%	5%	\$0
Relocation Assistance:	\$0	25%	5%	\$0
Demolition and Clearance:	\$0	25%	5%	\$0
Title and Escrow:	\$0	25%	5%	\$0
Total Current Value: If RW Cost Est fields are blank, Costs = \$0	\$640,500			\$741,459

Estimated Construction Contract Work (CCW): 0 R/W LEAD TIME/Mo. 6

Cost Break Down	
Pot Hole	6,600
Mitigation	
Land	
Bank	505,800
Permit Fee	

RR Involvement

Railroad Facilities or Right of Way Affected?	NO
Const/Maint Agreement:	NO
Service Contract:	NO
Right of Entry:	NO
Clauses:	NO
Estimated Lead-time	

Parcel Data

# of Parcel Type X:	0		
# of Parcel Type A: less than \$10,000 non-complex	0		
# of Parcel Type B: more than \$10,000 non-complex	0		
# of Parcel Type C: complex, special valuation	0		
# of Parcel Type D: most complex and time consuming	0	# of Duals Needed:	0
Totals:	0	Totals:	0

of Excess Parcels:

Misc R/W Work

# of RAP Displacements:	0
# of Clearance/Demos:	0
# of Const Permits:	0
# of Condemnations:	0

Utilities

U4-1: Owner Expense	2
U4-2: State Expense, Conventional no Fed Aid	1
U4-3: State Expense, Freeway no Fed Aid	0
U4-4: State Expense, Both no Fed Aid	0
U5-7: Utility verification, no relocation/potholing	0
U5-8: Utility verification, w/ some relocation/potholing	0
U5-9: Utility verifications, relocation/potholing required	3

EA: 10-28150K ALT: 1(U3)

Parcel Area	
Total R/W Required:	0
Total Excess Area:	0

Unit: ACRE	
Total R/W Cost:	\$0
Total Excess Cost:	\$0

General Description of R/W and Excess Lands Required (zoning, use, major improvements, critical or sensitive parcels, etc.):

No right of way or mitigation parcels are required at this time.

General Description of Utility Involvement:

Privately owned irrigation cost should be captured in the appraisal. There is approximately 30- Joint poles- High Voltage, 15- conduits - fiber optic, and 1-gas line, two overhead poles transversely cross the conventional highway.

Is there a significant effect on assessed valuation:

Were any previously unidentified sites with hazardous waste or material found:

Are RAP displacements required:

of single family: # of multi-family: # of business/nonprofit: # of farms:

Sufficient replacement housing will be available without last resort housing:

Are material borrow or disposal sites required:

Are there potential relinquishments or abandonments:

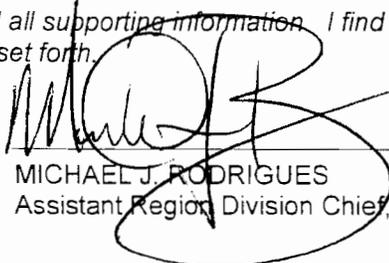
Are there any existing or potential airspace sites:

Are environmental mitigation parcels required:

Data for evaluation provided by:

Estimator:	Nancy Mazzeo	9/5/2007
Railroad Liason Agent:	Maria Toles	7/24/2007
Utilty Relocation Coordinator:	Jacqueline McColium	9/10/2007

I have personally reviewed this Right of Way Sheet and all supporting information. I find this Data Sheet complete and current, subject to the limiting conditions set forth.



MICHAEL J. RODRIGUES
Assistant Region Division Chief, Right of Way

Date
ENTERED PMCS 9/12/2007
BY: B GARRETT

Field TASK FORCE REVIEW 6/21/07

Thaar Jawhar	Design	243-3839
Roy Prado	Design	243-3837
Ron Jones	HQ Maint	916-221-0909
LONG HUYNH	D-10 Maint (ZOA)	948-7195

ATTACHMENT G

Memorandum

To: GETACHEW ESHETE
Design Senior, Branch L

Date: March 1, 2006

Attn: DANIEL GIBBS

File: 10-SJ-12-5.1/9.0
Pavement Rehabilitation
10-28150K

From: **DEPARTMENT OF TRANSPORTATION**
District 10 – Materials Branch

Subject: Structural Section

The following structural sections, based on a 10 year TI of 12.5, are recommended for placement over basement soils with a minimum R-value of 5. These structural sections can be used for the Tower Park Way acceleration lane and the improvements to Glasscock Road.

MAINLINE ROUTE 12								TI = 12.5
RAC	60mm		60mm		60mm		60mm	
AC	200mm or 80mm	or 200mm	or 80mm	or 335mm	or 215mm	or 520mm	or 400mm	
AB	305mm	305mm	745mm	745mm	-----	-----	-----	-----
AS	490mm	490mm	-----	-----	490mm	490mm	-----	-----

SHOULDER ROUTE 12								TI = 8.0
RAC	60mm		60mm		60mm		60mm	
AC	120mm or -----	or 120mm	or -----	or 215mm	or 95mm	or 305mm	or 185mm	
AB	185mm	185mm	460mm	460mm	-----	-----	-----	-----
AS	290mm	290mm	-----	-----	275mm	275mm	-----	-----

Attached you will find the latest Deflection Study for this project (I am not sure whether you received a copy as I only obtained a copy this week). The recommendations contained in this report seem to preclude the need to reconstruct the structural section using geosynthetic reinforcement. The measured deflections are well within the norms for standard rehabilitation strategies. Should you decide to reconstruct, the required thickness of asphalt for the reconstruction should be 230mm DGAC or 60mm RAC over 165mm DGAC.

If you have any questions or comments, please contact me at (209) 948-7951.



Dave Whaling, P.E.
District Materials engineer

D-10 TRANSPORTATION MANAGEMENT PLAN CHECKLIST

District / EA: 10-281501
 Date Prepared: June 12, 2007
 Prepared By: Christian Jensen
 Requested By: Raymond Prado

Co.Rte.-PM.(KP) SJ-12-PM 5.1/9.0 (KP 8.2/14.5)
 Location: In SJ Co on SR 12 East of Potato Slough near Terminous to 0.16 KM west of Guard Rd.

Stage of Project (X box) PID PSR PR PS&E

Description: Rehabilitate roadway, add shoulders and left turn lanes.

Date Signed

 Date Signed

 Date Signed

 Date Signed

REQUIRED	RECOMMENDED	NOT APPLICABLE	BEEES Item No.	COMMENTS	ITEM COST	REQUIRED IN SPEC.
----------	-------------	----------------	-------------------	----------	-----------	-------------------

1.0 Public Information Strategies

- 1.1 Brochures and Mailers
- 1.2 Media Releases (& minority media sources)
- 1.3 Paid Advertising
- 1.4 Public Information Center
- 1.5 Public Meetings/Speakers Bureau
- 1.6 Project Telephone Hotline
- 1.7 Internet, E-Mail
- 1.8 Local cable TV and News
- 1.9 Notification to Impacted groups
(i.e. bicycle users, pedestrians with disabilities, others)
- 1.10 Project Web Page
- 1.11 Caltrans Public Information Office
- 1.12 Consultant Public Information Office
- 1.13 Other items

X				RE to hand-deliver to business/residences.		
X						
	X					
	X			See comments below		
	X		066063	See comments below		
		X				
		X				
X				Designer to verify impacted groups.		
		X				
X			066063	Items 1.1 to 1.11 to be handled by CT PIO.	\$32K	
		X				
		X				

2.0 Traveler Information Strategies

- 2.1 Changeable Message Signs (permanent)
- 2.2 Changeable Message Signs (portable)
- 2.3 Special Construction Signs
- 2.4 Traveler Information Systems (CHIN/Internet)
- 2.5 Highway Advisory Radio "HAR" (fixed or mobile)
- 2.6 Radar Speed Sign
- 2.7 Traffic Management Team
- 2.8 Revised Transit Schedules/ Maps
- 2.9 Bicycle community information
- 2.10 Other item

		X				
X			128650	1.5 pr cms (16 mo.) (3.5K/mo.) = \$84k	\$84K	X
		X	120690			
X			861985	As required.		X
X			880520	See comment below.		
		X	066064			
		X				
		X				
X				Same as Item 1.9.		
		X				

3.0 Incident Management

- 3.1 COZEOP
- 3.2 Freeway Service Patrol (tow truck service patrol)
- 3.3 Traffic Surveillance Stations (loops or CCTV)
- 3.4 Transportation Management Center
- 3.5 Traffic Control Inspector (Caltrans)
- 3.6 Traffic Management Team
- 3.7 On-site Traffic Advisor (contractor)
- 3.8 Other Items

X			066062	2 chp (8 hr) (\$75/hr) (315 days) = \$378K	\$378K	X
		X	066065			
X			066876	Existing to remain &/or provide new stations.		
	X			RE to notify for incident & status closure.		
		X				
	X			TMC will contact TMT as needed.		
		X				
		X				

4.0 Construction Strategies

- 4.1 Delay damage clause
- 4.2 Night work
- 4.3 Weekend Work
- 4.4 Extended Weekend Closures
- 4.5 Planned Lane Closures
- 4.6 Planned Ramp/Connector Closures
- 4.7 Total Facility Closure
- 4.8 Project Phasing
- 4.9 Truck Traffic Restrictions
- 4.10 Reduced Lane Widths

		X				
X				Per Lane Closure Charts		X
		X				
		X				
X				Per Lane Closure Charts		X
		X				
		X				
	X			As per stage construction if any.		
		X				
X				Per drawings/data sheet if any.		

ATTACHMENT I

4.0 Construction Strategies (Continued)

- 4.11 Temporary K-Rail
- 4.12 Temporary Traffic Screens
- 4.13 Reduced Speed Zones
- 4.14 Traffic Control Improvements
- 4.15 Contingency Plans
 - 4.15.1 Material Plant on standby
 - 4.15.2 Extra Critical Equipment on site
 - 4.15.3 Material Testing Plan
 - 4.15.4 Alternate Material on site
(In case of failure or major delays)
 - 4.15.5 Emergency Detour Plan
 - 4.15.6 Emergency Notification Plan
 - 4.15.7 Weather Conditions Plan
 - 4.15.8 Delay Timing and Documentation Plan
 - 4.15.9 Late Closure Reopening Notification
- 4.16 Signal timing modification
- 4.17 Coordination with adjacent construction
- 4.18 Double Fine Zone (signs)
- 4.19 Right of Way Delay
- 4.20 Other Items

REQUIRED	RECOMMENDED	NOT APPLICABLE	BEES Item No.	COMMENTS	ITEM COST	REQUIRED IN SPEC.
		X	129000			
		X	129150			
		X				
X				As necessary.		
X				As needed to open closure on time.		X
		X				
		X				
		X				
X						
X						
X						
		X				
X			07850	RE to confirm prior to scheduling of closures.		X
		X				
		X	066022			
X				See comments below.		

5.0 Demand Management

- 5.1 HOV Lanes/Ramps
- 5.2 Ramp metering
- 5.3 Park-and-Ride Lots
- 5.4 Parking Management/Pricing
- 5.5 Rideshare Incentives
- 5.6 Rideshare Marketing
- 5.7 Transit, Train, or Light-Rail Incentives
- 5.8 Transit Service Modification
- 5.9 Variable Work Hours
- 5.10 Telecommute
- 5.11 Other Items

		X				
		X				
		X				
		X				
		X				
		X	066069			
		X	066066			
		X				
		X				
		X				
		X				

6.0 Alternate Route Strategies

- 6.1 Ramp Closures
- 6.2 Street Improvements
- 6.3 Reversible Lanes
- 6.4 Temporary Lanes or Shoulders Use
- 6.5 Freeway to freeway connector closures

		X				
		X				
		X				
		X				
		X				

7.0 Other Strategies

- 7.1 Application of new technology
- 7.2 Other Items

		X				
		X				

Total Estimate of TMP Elements = \$494K

Comments:

- ** Estimated project for 315 construction days. If this differs, please contact our office so that we can reevaluate the TMP.
- 1.4 Information should be also available at local Public Works, Chamber of Commerce Offices, and CT Maintenance Offices.
- 1.5 Designer to add to budget of 1.11 if public meeting is added.
- 1.9 Impacted groups need to be notified and informed about upcoming construction. During construction, access across job site will be needed for them (Bicyclists, pedestrians, students, etc.).
- 1.11 PIO estimated at \$2k/mo. Or per stage construction or per major milestone. Lumpsum of \$32K.
- 2.5 HAR to be used during beginning of construction to advise traffic of upcoming construction.
- 4.20 RE/Inspector shall maintain access to all business & residences at all times.

Approved by:

Christian P. Jensen 6-12-07

DISTRICT TRAFFIC MANAGER DATE

Short Form - Storm Water Data Report



Dist-County-Route: 10-SJ-12

Post Mile (Kilometer Post) Limits: 5.0-9.5

Project Type: Pavement Rehabilitation

EA: 10-28150K

RU: 06-261

Program Identification: SHOPP

Phase: [X]PID []PA/ED []PS&E

Regional Water Quality Control Board(s): Central Valley Region (5S)

- 1. Is the project required to consider incorporating Treatment BMPs? []Yes [X]No
2. Does the project disturb more than 0.25 acres of soil? []Yes [X]No
3. Is the project part of a Common Plan of Development? []Yes [X]No
4. Does the project potentially create permanent water quality impacts? []Yes [X]No
5. Does the project require a notification of ADL reuse? []Yes [X]No

If the answer to any of the preceding questions is "Yes", prepare a Long Form - Storm Water Data Report.

Estimated Construction Start Date: 7/15/2013 Construction Completion Date: 9/15/2014

Separate Dewatering Permit (if Yes, permit number) []Yes Permit #: []No

This Short Form - Storm Water Data Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

[Signature] 8-13-07
Thaar Jawhar, Registered Project Engineer Date

I have reviewed the storm water quality design issues and find this report to be complete, current, and accurate:

STAMP [Required for PS&E only]

[Signature] 8-16-07
Marissa Nishikawa, District/Regional SW Coordinator or Designee Date