

05-SLO-101-PM 29.1/30.2
40.50.201.210
0Q450K
08/2007

PROJECT STUDY REPORT

To

Request for Programming in the 2008 Year SHOPP

Highway Planting Restoration

In San Luis Obispo from Route 1/101 Separation to San
Luis Obispo Creek Bridge at Various Locations.

APPROVAL RECOMMENDED:


PROJECT MANAGER - Amy Donatello

APPROVED:

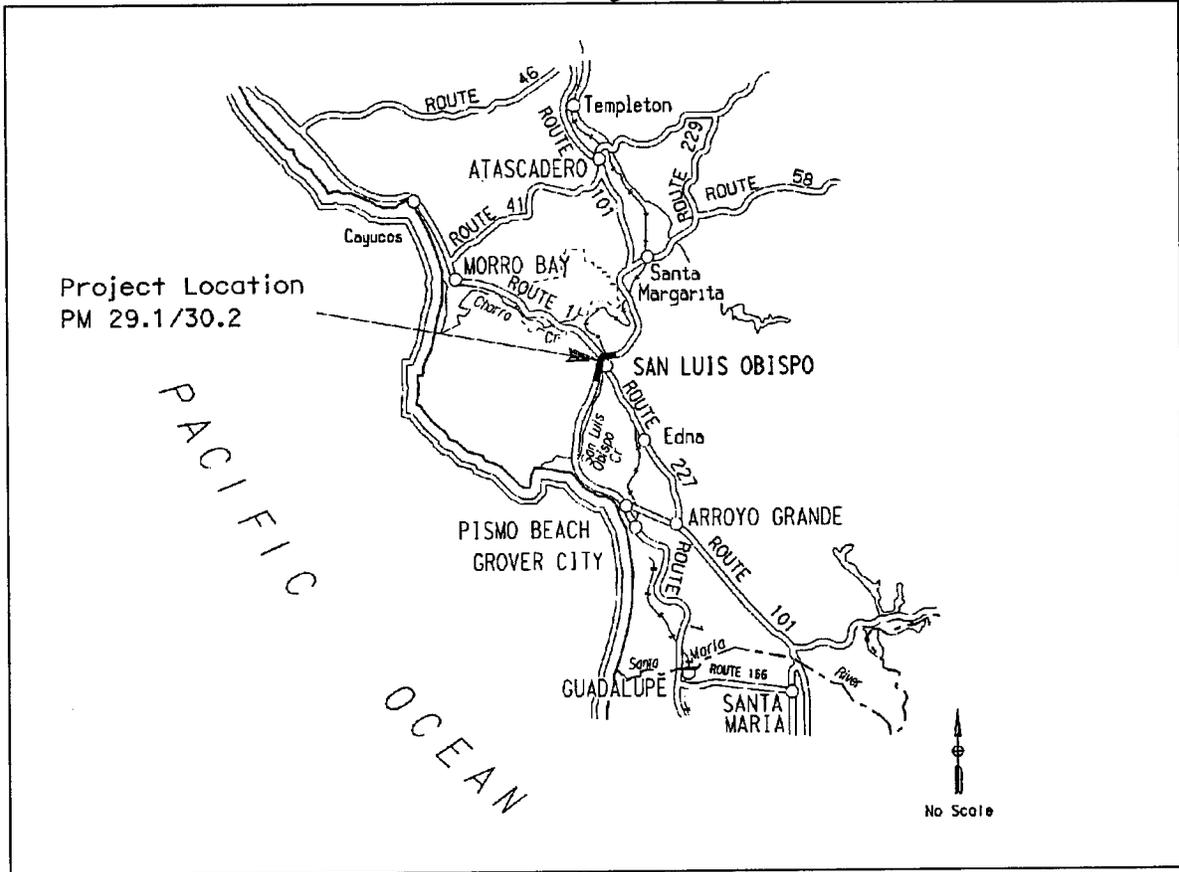

DISTRICT DIRECTOR - RICHARD KRUMHOLZ

10/2/07
DATE

Project Scope & Technical Data are valid for three years from Director Approval.
Cost & Work Plan must be updated prior to use for Programming

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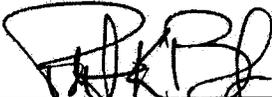
Vicinity Map



Highway Planting Restoration

In San Luis Obispo from Route 1/101 Separation to San Luis Obispo Creek Bridge at Various Locations.

This Project Study Report has been prepared under the direction of the following Registered Landscape Architect. The registered Landscape Architect attests to the technical information contained therein and has judged the qualifications of any technical specialists providing engineering data upon which recommendations, conclusions, and decisions are based.



REGISTERED LANDSCAPE ARCHITECT

8/28/07
DATE



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1. INTRODUCTION

This Project Study Report (PSR) proposes to expand the use of recycled water throughout San Luis Obispo on Route 101. The project will upgrade and replace irrigation pressure supply lines, lateral lines, and sprinkler heads. Where applicable, valve manifolds and other equipment will be relocated to more desirable locations and improve safe work location deficiencies. Shrubs and trees will be replaced to help restore the visual character of the corridor. This project will help contribute to the Department's herbicide reduction goal by careful plant material selection and the use of mulch.

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

Project Limits (Dist., Co., Rte., PM)	05-SLO-101-PM 29.1/30.2
Number of Alternatives:	2 (Build/No Build)
Programmed or Proposed Capital Construction Costs	\$1,400,000
Programmed or Proposal Capital Right of Way Costs:	\$14,000
Funding Source:	SHOPP
Type of Facility	4-Lane Freeway
Number of Structures:	0
Anticipated Environmental Determination/Document	CE
Legal Description	In San Luis Obispo from Route 1/101 Separation to San Luis Obispo Creek Bridge at Various Locations
Project Development Category	5

2. BACKGROUND

The existing highway planting and irrigation was installed and/or modified in 1969, 1982, 1983, 1995, and is beyond its expected service life. Additionally, in 2003 valves were retrofitted with recycled water compatible components and the gore systems were replaced. The project area is currently irrigated with potable water only. Within this project's limits, there is a currently programmed project, (EA 05-0H1901) that will convert a small portion of this project area from potable water to recycled water. This project will expand that recycled water use.

On May 17th the project's scope was discussed and outlined with John Gleason, District 5 Landscape Maintenance Supervisor and Roy Freer, District 5 Landscape Specialist. A focused PDT/Meeting was then held on June 20 and 21, 2007, with Don Chin, Headquarters Landscape Architecture, and Dennis Reeves, District 5 Landscape Architect to further develop and refine the scope of the project.

3. PURPOSE AND NEED STATEMENT

This project provides the opportunity to expand the recycled water program, improve maintenance worker safety, reduce annual water use costs, and replace the declining existing corridor vegetative screen.

4. DEFICIENCIES

The existing irrigation within this project is supplied by City of San Luis Obispo Potable Water Sources. This project would benefit the state by expanding the District's Recycled Water

Program, reducing dependency of potable water, and saving the District 10% on annual water use fees.

Most of the screen vegetation planted in the corridor is in a state of decline and is requiring increased time for the landscape maintenance crews. Additionally, the current valve manifolds are located near the edge of pavement and this project proposes moving these further away to a safer and more easily accessible area.

To help achieve the chemical reduction goal in Caltrans' Vegetation Control Program as described in Deputy Directive DD 03/04-02 mulch will be applied to all proposed trees and shrubs at the time of planting.

5. TRAFFIC DATA AND SYSTEM PLANNING

TRAFFIC DATA

The Design Designation for the existing facility is as follows:

YEAR	2005	2010	2020
DHV	6,400	7,054	8,361
AADT	56,000	61,559	72,678

% Trucks in PH: 4.0%

% Trucks in ADT: 8.2%

Directional Split: 55%

SYSTEM PLANNING

The existing facility is a four-lane freeway. This portion of Route 101 is eligible for designation as a Scenic Highway. The Transportation Concept Report (TCR) identifies and recommends improvements be considered along this portion of Route 101. The proposed project is not expected to have a significant affect on any of the future improvements recommended by the TCR.

6. ALTERNATIVES

Due to the specific scope of the project being highway planting restoration there are only two alternatives – build or no build.

Build Alternative- The work proposed to be performed under this alternative includes but not limited to the following:

- Reduce dependency of potable water by connecting to the City of San Luis Obispo's Recycled Water Program.
- Replant and enhance the existing vegetative screen in the corridor.
- Relocate irrigation equipment away from the edge of shoulders to reduce maintenance exposure to traffic and increase safety.
- Install a booster pump to supply the new irrigation system.
- Provide a three year plant establishment period to help insure the success of the project.
- Install drought tolerant site appropriate plantings to help reduce water needs.
- No additional Right of Way is required and in areas where improvements are proposed near existing utilities positive location studies will be conducted and utilities avoided.

No Build Alternative- This alternative assumes no improvements are made.

Mandatory Standards- No exceptions are anticipated to the mandatory design standards.

7. COMMUNITY INVOLVEMENT

No formal community involvement is anticipated for this project. Caltrans will work with the City of San Luis Obispo when designing the irrigation system and landscape concept.

8. TRAFFIC MANAGEMENT PLAN

A TMP will be required for this project. To minimize delays to the public during peak commuter hours, it is anticipated that both lanes will be maintained during the construction period. Shoulder closures and a few ramp closures will be instituted. (Please see Attachment G).

9. ENVIRONMENTAL DETERMINATION/DOCUMENT

On July 27, 2007, this project was issued a Categorical Exemption (EC) under Class I of the California Environmental Quality Act (CEQA) Guidelines. Under the National Environmental Policy Act (NEPA), a 6004 Categorical Exclusion was issued. (Please see Attachment B).

10. FUNDING

This project is a candidate for programming in the 2008 SHOPP to be funded in the 2011/12 fiscal year. As of July 2007, the estimated project cost is \$1,400,000. The proposed escalated estimated resources and schedule for this project are summarized below:

Project Cost Component	Fiscal Years						Total
	07/08	08/09	09/10	10/11	11/12	Future	
R/W Capital				\$14			\$14
Construction Capital					\$1,835		\$1,835
PA&ED		\$134					\$134
PS&E			\$442				\$442
R/W Support			\$5				\$5
Construction Support					\$614		\$614
Total	\$	\$134	\$447	\$14	\$2,473	\$	\$3,044

Note: All costs x \$1,000. Support categories are the same as those identified by SB45. Construction Capital escalated at 7%. Right of Way Capital estimate is escalated. Support cost escalated at 5%

Support Cost ratio: 65% [All Support Costs () divided by the sum of the escalated Construction Capital (**) and the escalated R/W Capital].*

11. SCHEDULE

HQ Milestones	Fiscal Year
PID Approval	09/01/2007
Public Hearing	N/A
PA&ED	10/01/2009

PS&E	05/01/2011
RTL	11/01/2011
Begin Construction	03/01/2012
CCA	04/01/2016

12. RISK MANAGEMENT PLAN

A Risk Management Plan (RMP) has been prepared to assess, respond and monitor identified project risks that may occur throughout the life of a project. (Please see Attachment I for identified risks).

13. FHWA COORDINATION

No FHWA action is required for this project.

14. PROJECT CONTACTS

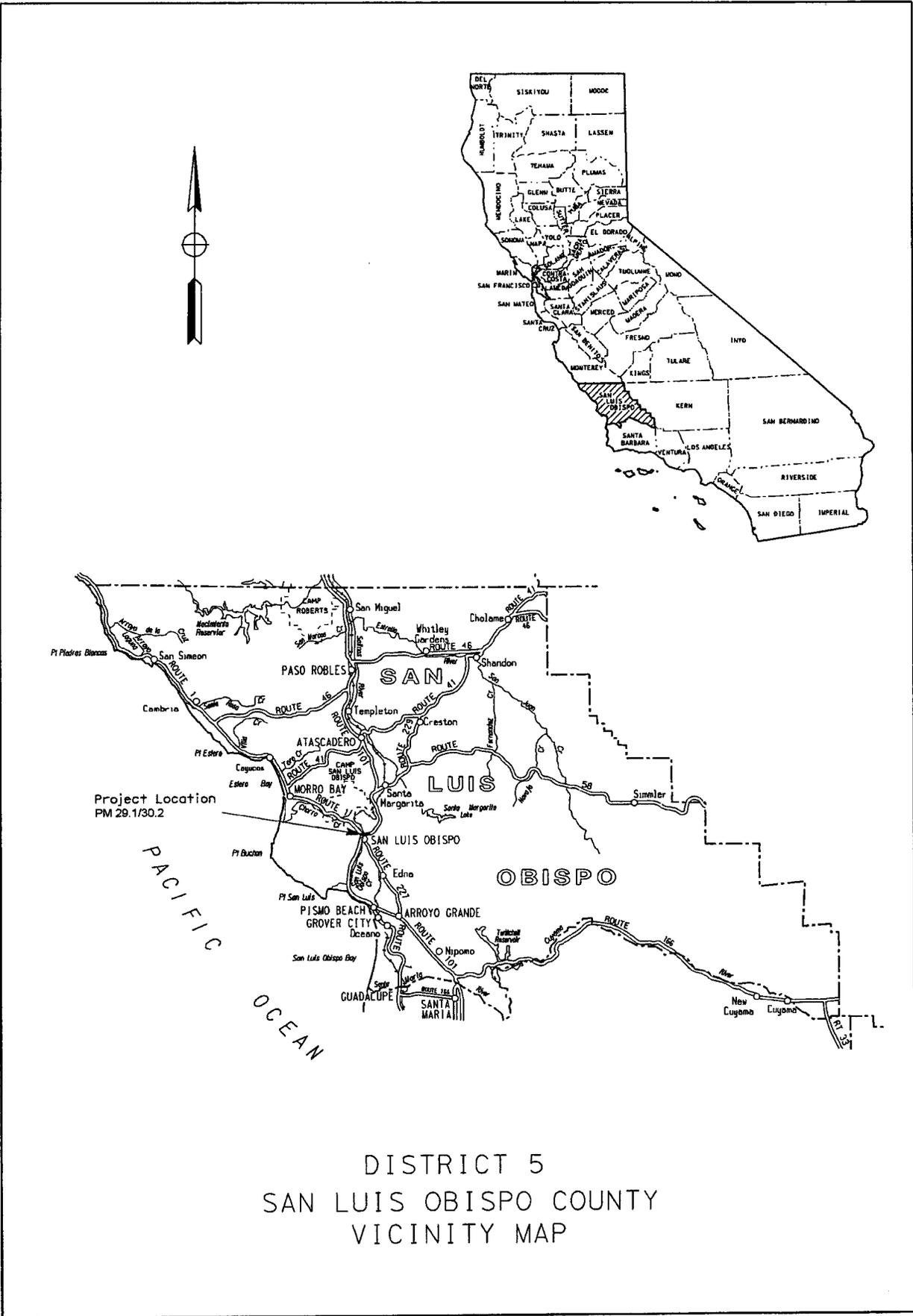
Amy Donatello	Project Manager	District 5	(805) 549-3014
Dennis Reeves	District Landscape Architect	District 5	(805) 549-3509
Patrick Bolger	Project Landscape Architect	District 5	(805) 549-3001
Yvonne Hoffman	Environmental	District 5	(805) 542-4759
Roy Freer	Landscape Specialist Maintenance	District 5	(805) 549-3124
Shane Sandeman	Traffic Management Plan Coordinator	District 5	(805) 594-6196

15. PROJECT REVIEWS

Field Review	<u>Patrick Bolger, Dennis Reeves, Don Chin</u>	Date	<u>6/20,6/21 2007</u>
District Maintenance	<u>Roy Freer, John Gleason</u>	Date	<u>05/17/2007</u>
District Safety Review	<u>N/A</u>	Date	<u>-</u>
Constructability Review	<u>N/A</u>	Date	<u>08/23/2007</u>
HQ Design Coordinator	<u>Don Chin, Landscape Architecture</u>	Date	<u>05/21/2007</u>
Project Manager District Safety Review	<u>N/A</u>	Date	<u>-</u>
District SHOPP Program Advisor	<u>N/A</u>	Date	<u>-</u>
HQ SHOPP Program Advisor	<u>N/A</u>	Date	<u>-</u>

16. LIST OF ATTACHMENTS

- A. Vicinity Map
- B. Environmental Determination
- C. Fact Sheet
- D. Right of Way Data Sheet
- E. Project Study Report Data Sheet
- F. Storm Water Data Report
- G. Traffic Management Plan
- H. Final Distribution List
- I. Risk Management Plan



DISTRICT 5
 SAN LUIS OBISPO COUNTY
 VICINITY MAP

CATEGORICAL EXEMPTION/6004 CATEGORICAL EXCLUSION DETERMINATION FORM

Revised June 7, 2007

05-SLO-101

29.1/30.2

0Q450K

Dist.-Co.-Rte. (or Local Agency)

P.M/P.M.

E.A. (State project)

Federal-Aid Project No. (Local project)/ Proj. No.

PROJECT DESCRIPTION: (Briefly describe project, purpose, location, limits, right-of-way requirements, and activities involved.)

The proposed project is known as the SLO SR 101 Rehabilitate Roadside Project: Removal and Replacement of Aging Vegetation and Irrigation Systems. The proposed work would occur in the right of way and fall within the project limits of the SLO Rehabilitation Project (05-0H190). The project begins in San Luis Obispo from Route 1/101 Separation to San Luis Obispo Creek Bridge at Various Locations. See attached sheet for project details.

CEQA COMPLIANCE (for State Projects only)

Based on an examination of this proposal, supporting information, and the following statements (See 14 CCR 15300 et seq.):

- If this project falls within exempt class 3, 4, 5, 6 or 11, it does not impact an environmental resource of hazardous or critical concern where designated, precisely mapped and officially adopted pursuant to law.
There will not be a significant cumulative effect on this project and successive projects of the same type in the same place, over time.
There is not a reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances.
This project does not damage a scenic resource within an officially designated state scenic highway.
This project is not located on a site included on any list compiled pursuant to Govt. Code § 65962.5 ("Cortese List").
This project does not cause a substantial adverse change in the significance of a historical resource.

CALTRANS CEQA DETERMINATION

Exempt by Statute. (PRC 21080[b]; 14 CCR 15260 et seq.)

Based on an examination of this proposal, supporting information, and the above statements, the project is:

Categorically Exempt. Class 1. (PRC 21084; 14 CCR 15300 et seq.)

Categorically Exempt. General Rule exemption. [This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (CCR 15061[b][3])]

Signatures and dates for Environmental Branch Chief and Project Manager.

NEPA COMPLIANCE

In accordance with 23 CFR 771.117, and based on an examination of this proposal and supporting information, the State has determined that this project:

- does not individually or cumulatively have a significant impact on the environment as defined by NEPA and is excluded from the requirements to prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS), and
has considered unusual circumstances pursuant to 23 CFR 771.117(b)
(http://www.fhwa.dot.gov/hep/23cfr771.htm - sec.771.117).

In non-attainment or maintenance areas for Federal air quality standards, it is determined that this project comes from a currently conforming Regional Transportation Plan and Transportation Improvement Program or is exempt from regional conformity.

CALTRANS NEPA DETERMINATION

The State has been assigned, and hereby certifies that it has carried out, the responsibility to make this determination pursuant to Chapter 3 of Title 23, United States Code, Section 326 and a Memorandum of Understanding (MOU) dated June 7, 2007, executed between the FHWA and the State. The State has determined that the project is a Categorical Exclusion under:

- 23 CFR 771 activity (c)(7)
23 CFR 771 activity (d)
Activity listed in the MOU between FHWA and the State

Signatures and dates for Environmental Branch Chief and Project Manager/DLA Engineer.

Briefly list environmental commitments on continuation sheet. Reference additional information, as appropriate (e.g. air quality studies, documentation of exemption from regional conformity, or use of CO Protocol; §106 commitments; § 4(f); § 7 results; Wetlands Finding; Floodplain Finding; additional studies; and design conditions). Revised June 7, 2007

CATEGORICAL EXEMPTION/CATEGORICAL EXCLUSION DETERMINATION FORM
Continuation Sheet

0Q450K

The proposed work is part of an effort to expand the use of reclaimed water, remove some of the exotic and declining plant material, and replant shrubs and trees in appropriate locations to maintain the scenic quality of the corridor. The project will help reduce maintenance and solve numerous irrigation issues.

The project includes:

- Remove and replace outdated irrigation equipment with recycled water irrigation system to reduce use of potable water. A booster pump will be added. Irrigation pressure supply lines, lateral lines and sprinkler heads will be upgraded. When appropriate, valve manifolds will be relocated to areas off the edge of the shoulder to reduce maintenance worker exposure to traffic.
- Remove exotic and declining plant material.
- Replace with drought tolerant plants with the emphasis on native where possible. There will be a reasonable plant establishment period.

The following environmental conditions/design features shall be included in this project:

1. Ground disturbance, compaction and excavation activities will be kept to a minimum - work zones will be delineated on layout sheets and fenced in the field.
2. No sediment, construction debris, trenching or grading will be placed in or allowed to enter Waters of the US (i.e. San Luis Creek and adjacent wetland areas).
3. An ESA boundary will be delineated on plans and fenced in the field as an Environmentally Sensitive Area in order to minimize ground disturbance at the edge of the work area and to protect native habitat down slope from the work area. All construction equipment should be working within delineated work areas. This requirement will be included in the Resident Engineer's file.
4. In order to avoid impacts to Migratory birds, all trees removal should take place outside the period of February 15th - September 30th (Migratory bird nesting season). If this is not practicable then pre-construction surveys for nesting bird will occur two weeks before start of construction. A SSP for General Migratory Bird Protection will be included in construction plans.
5. Drought tolerant native seed, shrubs and trees should be used to permanently revegetate as determined by the Landscape Architecture Department.
6. Staging areas have not yet been designated for the project. If eventual staging areas are outside project limits or are in previously undisturbed areas, please contact Environmental Planning for additional field review to determine whether a reevaluation may be required.
8. The use of water trucks or sprinkler systems in sufficient quantities throughout the project area will prevent airborne dust from leaving the site.
9. All storm drain inlets that will receive runoff from disturbed areas during construction must have inlet protection installation.

August 29, 2007

**FACT SHEET
Highway Planting Restoration**

05-SLO-101-PM 29.1/30.2
06-341-0Q450K
40.50.201.210 SHOPP
2010/2011 F.Y.

In San Luis Obispo from Route 1/101 Separation to San Luis Obispo Creek Bridge at Various Locations.

PROJECT PURPOSE AND NEED – This project provides the opportunity to expand the recycled water program, improve maintenance worker safety, reduce annual water use costs, and replace the declining existing corridor vegetative screen.

PROPOSAL – The project will expand the use of recycled water through the San Luis Obispo Route 101 Corridor. The project will upgrade and replace irrigation pressure supply lines, lateral lines and sprinkler heads that were not addressed in previous projects. Shrubs and trees will be replaced to help restore the visual character of the corridor.

WATER SUPPLY – Existing potable water supply connections will be removed and the recycled water point of connection will be expanded.

COST FOR PROJECT - The total capital outlay is \$1,400,000. A 3-year plant establishment period is included.

SUPPORT FOR PROJECT – The community of City of San Luis Obispo has always valued the visual character of the community. This project will help further enhance this image.

CATEGORY 9, CTC Project Policy

ATTACHMENT C

Memorandum

To: AMY DONATELLO

Date: 8/22/2007

File: EA 0Q450K ALT NA

Attn: PATRICK BOLGER

<p>DESCRIPTION: REHABILITATE ROADSIDE - SPLIT FROM EA 0Q390K</p>
--

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

Subject: RIGHT OF WAY DATA SHEET

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

6/18/2007

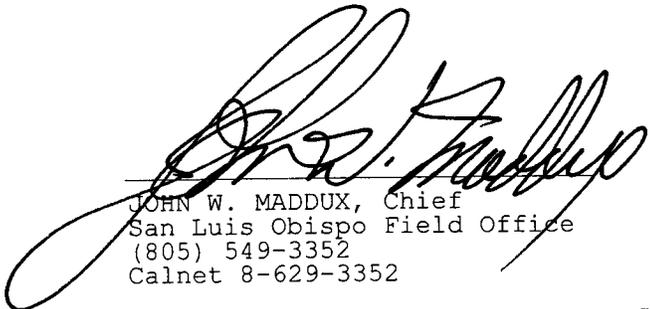
The following assumptions and limiting conditions were identified:

Additional information includes the following:

Route 101 within the limits of the project is designated Freeway. Permit search indicates the following utilities are in the R/W: PG&E, AT&T, Charter Comm., Level 3 Comm., city of SLO water and sewer, Union Oil, ConocoPhillips and Southern CA Gas. Utility relocations should be avoided on highway planting projects. \$10,000 included for positive location.

Revision to correct escalation year from 2007 to 2010.

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.



JOHN W. MADDUX, Chief
San Luis Obispo Field Office
(805) 549-3352
Calnet 8-629-3352

REQUEST DATE 6/18/2007

EA 0Q450K ALT NA

REVISED DATE 8/22/2007 CO/RTE/KP-KP[route 1 _route 2] SLO/101/46.8-48.6 & /0/-0.0

RIGHT OF WAY COST ESTIMATE	CURRENT YR 2007	CONTINGENCY RATE	RIGHT OF WAY ESCALATION RATE	ESCALATED YEAR (Rounded) 2010
ACQUISITION	\$0	25.00%	6.00%	\$0
PERMIT FEES	\$0	25.00%	6.00%	\$0
MITIGATION	\$0.00	25.00%	6.00%	\$0
STATE SHARE OF UTILITIES	\$12,500	25.00%	5.00%	\$14,000
RAP	\$0	25.00%	6.00%	\$0
CLEARANCE/DEMO	\$0	25.00%	6.00%	\$0
TITLE AND ESCROW	\$0	25.00%	6.00%	\$0
EXPERT WITNESS	\$0	25.00%	6.00%	\$0
SUPPORT HOURS				
TOTAL CURRENT VALUE *				\$14,000

ESTIMATED CONSTRUCTION CONTRACT WORK

R/W LEAD TIME/MONTH

PARCEL DATA			
# OF PCL TYPE X	0	# OF DUAL APPR X	0
# OF PCL TYPE A	0	# OF DUAL APPR A	0
# OF PCL TYPE B	0	# OF DUAL APPR B	0
# OF PCL TYPE C	0	# OF DUAL APPR C	0
# OF PCL TYPE D	0	# OF DUAL APPR D	0
# OF MITIGATION	0		
TOTALS	0	TOTALS	0
# OF EXCESS PARCEL 0			

UTILITIES	
U4-1	0
U4-2	0
U4-3	0
U4-4	0
U5-7	9
U5-8	0
U5-9	0

RR INVOLVEMENT	
ARE RAILROAD FACILITIES OR RIGHTS OF WAY	NO
CONST/MAINT AGREEMENT	NO
SERVICE CONTRACT	NO
RIGHT OF ENTRY	NO
CLAUSES	YES

MISC R/W WORK	
# OF RAP DISPLACEMENT	0
# OF CLEARANCE/DEMO	0
# OF CONST PERMITS	0
# OF CONDEMNATION	0

* IF R/W COST ESTIMATE FIELDS ARE BLANK, TOTAL CURRENT VALUE = \$0

ARE UTILITIES OR OTHER RIGHTS OF WAY AFFECTED

RAILROAD LEADTIME REQUIRED

PARCEL AREA

UNIT:

TOTAL R/W TAKE	0
TOTAL EXCESS AREA	0
TOTAL MITIGATION AREA	0

TOTAL R/W FEE	\$0
TOTAL EXCESS COST	\$0

PROVIDE GENERAL DESCRIPTION OF R/W AND EXCESS LANDS REQUIRED (ZONING, USE, MAJOR IMPROVEMENTS, CRITICAL OR SENSITIVE PARCELS, ETC.):

This project is a split from 0Q390K.

Per Mitigation Cost Compliance Estimate form (MCCE) dated 6/7/07, there are no fees for this project.

IS THERE A SIGNIFICANT EFFECT ON ASSESSED VALUATION?

WERE ANY PREVIOUSLY UNIDENTIFIED SITES WITH HAZARDOUS WASTE OR MATERIAL FOUN

ARE RAP DISPLACEMENTS REQUIRE

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?

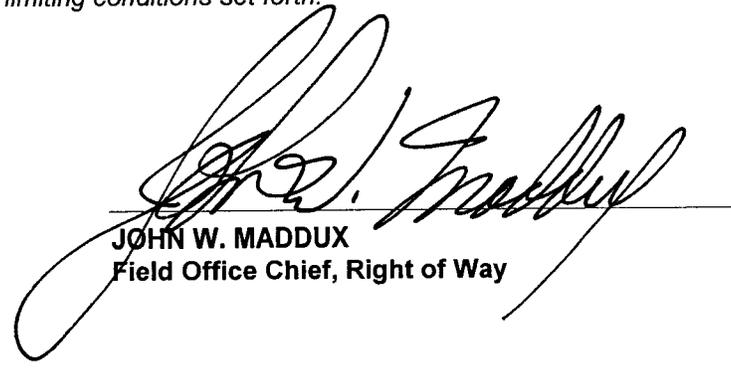
ARE THERE ANY EXISTING OR POTENTIAL AIRSPACE SITES

ARE ENVIRONMENTAL MITIGATION PARCELS REQUIRED

DATA FOR EVALUATION PROVIDED BY

ESTIMATOR	NOT REQUIRED	NANCIE THO,AS	7/2/2007
RAILROAD LIAISON AGENT		SALLY A. HOPKINS	7/2/2007
UTILITY RELOCATION COORDINATOR		Terilyn Thompson	6/21/2007

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.



JOHN W. MADDUX
Field Office Chief, Right of Way

DATE ENTERED PMCS 7/5/2007
BY NANCIE THOMAS

ADD RECORD

CLOSE FORM

FIND RECORD

PRINT

UTILITIES DATA SHEET

EA 00450K

ALT NA

STATE SHARE OF R/W UTILITY RELOCATION COST \$10,000

CONTINGENCY RATE 25.00% STATE SHARE OF UTIL + CONTINGENCY \$12,500

UTILITY ESCALATION RATE 5.00% ESCALATED YR 2007

OF ESCALATED YRS 0 ESCALATED STATE SHARE OF UTIL \$12,500

U4-1 0 U4-2 0 U4-3 0 U4-4 0 U5-7 9 U5-8 0 U5-9 0

ARE UTILITIES OR OTHER RIGHTS OF WAY AFFECTED? YES List companies involved

ELECTRIC PG&E GAS Southern CA Gas TELEPHONE AT&T

CABLE TV Charter WATER city of San Luis Obispo SEWER city of San Luis Obispo

FIBER OPTICS Charter, Level 3 OTHER Union Oil ConocoPhillips

UTILITY	UNIT COST	% STATE LIABILITY *	TOTAL
GAS LINE @	\$0.00 /LF		\$0.00
GAS LINE SIZE			
UG ELEC	\$0.00 /LF		\$0.00
UG TELE	\$0.00 /LF		\$0.00
UG CABLE TV	\$0.00 /LF		\$0.00
WOOD POLES TELE	\$0.00 /WOOD POLE TELE		\$0.00
WOOD POLES ELEC	\$0.00 /WOOD POLE ELEC		\$0.00
JOINT POLES	\$0.00 /POLE		\$0.00
POLE ANCHORS	\$0.00 /EA		\$0.00
STEEL POLES	\$0.00 /STEEL POLE		\$0.00
STEEL TOWERS	\$0.00 /TOWER		\$0.00
WATER LINE	\$0.00 /FH		\$0.00
WATER LINE SIZE			
SEWER LINE	\$0.00 /LINE		\$0.00
TELE JUNCTION BOXES	\$0.00 /LF		\$0.00
ELEC VAULTS	\$0.00 /VAULT		\$0.00
TELE VAULTS	\$0.00 /EACH		\$0.00

* 1.0 = 100%, .50 = 50

TOTAL ESTIMATE OF STATE COST \$0.00

ADDITIONAL INFORMATION CONCERNING UTILITY INVOLVEMENTS ON THIS PROJECT

Route 101 within the limits of the project is designated Freeway. Permit search indicates the following utilities are in the R/W: PG&E, AT&T, Charter Comm., Level 3 Comm., city of SLO water and sewer, Union Oil, ConocoPhillips and Southern CA Gas. Utility relocations should be avoided on highway planting projects. \$10,000 included for positive location.

ARE VERIFICATION PLANS REQUIRED? YES IF YES, HOW MANY MONTHS? 6

UTILITY RELOCATION COORDINATOR Terilyn Thompson DATE 6/21/2007

**PROJECT STUDY REPORT (PSR) DATA SHEET
HIGHWAY PLANTING RESTORATION**

Revised 02/24/05

Enter date in 1/1/00 format

Date June 19, 2007
Prepared By Dennis Reeves
Calnet 8-629-3509
Proj. Land. Arch. Patrick Bolger

Priority Index No. 24.52
CTC Project Category No. 11
SHOPP Proj Prog. No. (PPNo) _____
Program Code 201.210

Total Estimated Project Cost \$1,400,000
Base Estimate Date January 2007
Project Size in Acres (ac) 12.0
Cost per Acre to State \$116,667
Adjusted Cost Per Acre (ac) \$46,979
Estimated Payback Period 11 Years

Dist. 05 Co. SLO Rte. 101
PM 29.1/30.2
EA 0Q450K
Proposed FY 10/11
Plant Establishment Period 3 years

PROJECT DESCRIPTION (LIMITS):

In San Luis Obispo from Route 1/101 Separation to the San Luis Obispo Creek Bridge at Various Locations.

DEFICIENCIES:

The existing highway planting and irrigation was installed in 1969, 1982, 1983, 1995 and is beyond its expected service life. Additionally, in 2003 valves were replaced with recycled water compatible components and the gore irrigation systems were replaced. The project area is currently irrigated with potable water only. Much of the planting is in decline and portions of the corridor screen have deteriorated. Additionally, many of the current valve manifolds are located near the edge of pavement and should be moved to more easily accessible locations.

PROPOSED IMPROVEMENT (SCOPE):

The project will further expand the use of recycled water in San Luis Obispo on Route 101 from California Boulevard to the San Luis Obispo Creek Bridge. The project will add a booster pump, upgrade and replace irrigation pressure supply lines, lateral lines and sprinkler heads that were not addressed in recent projects. Where appropriate, valve manifolds will be relocated to areas off the edge of the shoulder to reduce maintenance worker exposure to traffic.

Shrubs and trees will be replanted to help restore the visual character of the corridor.

**PROJECT STUDY REPORT (PSR) DATA SHEET
HIGHWAY PLANTING RESTORATION**

EA 0Q450K

ESTIMATE:

Replacement of planting due to roadway construction	#ac		@	\$		/ac = \$	
Rehabilitation of planting	#ac	7.0	@	\$	20,000	/ac = \$	140,000
Mitigation planting	#ac		@	\$		/ac = \$	
Replacement of irrigation due to roadway construction	#ac		@	\$		/ac = \$	
Renovation of irrigation	#ac	7.0	@	\$	35,000	/ac = \$	245,000
Irrigation for retrofit	#ac	1.0	@	\$	25,000	/ac = \$	25,000

ADDITIONAL ITEMS:

Water Meter	\$	
Water Cost	\$	16,000
Traveler and Worker Safety	\$*	107,000
Roadside Management	\$*	235,000
Water Assessment Fee	\$*	
Is nonpotable water available? If yes: Cost of transmission / supply lines	\$*	100,000
Other costs associated with conversion from potable to nonpotable water	\$*	147,000
Remote Irrigation Control System (RICS)	\$*	25,000
Resident Engineer's Field Office	\$*	15,000
Hazardous Material (Aerially deposited lead contamination in soil, etc.)	\$*	
Storm Water Pollution Prevention	\$*	40,000
Electrical Service	\$	25,000
Other:	\$	

* Not included in maximum cost per acre.

SUBTOTAL	\$	1,120,000
25% Contingency	\$	280,000
TOTAL ESTIMATED PROJECT COST	\$	1,400,000
Less Local Contribution	\$	
TOTAL ESTIMATED STATE COST	\$	1,400,000
CALL		\$1,400,000

**PROJECT STUDY REPORT (PSR) DATA SHEET
HIGHWAY PLANTING RESTORATION**

EA 0Q450K

COST BREAKDOWN FOR ESTIMATE - ADDITIONAL ITEMS ON PAGE 2

Traveler and Worker Safety:

<u>Item</u>	<u>Quantity</u>	<u>Cost</u>
Mulch (CY)	800	\$64,000
Walk gates (EA)	1	\$2,000
Relocate Mainlines (LS)	1	\$25,000
Relocate valves (EA)	50	\$16,000
	Total	\$107,000

Roadside Management:

<u>Item</u>	<u>Cost</u>
Eliminate or relocate pull boxes in shoulder or near pavement edge	\$5,000
Plant Establishment (3 Years)	\$230,000
	Total
	\$235,000

PROJECT STUDY REPORT (PSR) DATA SHEET
HIGHWAY PLANTING RESTORATION

EA 0Q450K

Other costs associated with conversion from potable to nonpotable water:

<u>Item</u>	<u>Cost</u>
Booster Pumps	\$35,000
Pressure Reducing Valves	\$1,000
Remote Irrigation Control System	\$20,000
Rerouting of Control and Neutral Conductors	\$85,000
Recycled Water Identification	\$6,000

Total \$147,000

PRIORITY RATING SHEET HIGHWAY PLANTING RESTORATION

Revised 07/20/06

EA 0Q450K

A. Rehabilitation (irrigation and/or planting)

1. Effectiveness Ratio

a) Present Condition	Maximum Points	X	Percent of Project Cost to correct deficiencies (Based on \$) (Combined Total not to exceed 100%)	= Rating
Deficiency/Hazard				
1) Irrigation				
• Tank truck watering	10		<u>0 %</u>	<u>0.00</u>
• Manual irrigation	6		<u>0 %</u>	<u>0.00</u>
• Automated irrigation	1		<u>20 %</u>	<u>0.20</u>
2) Planting				
• Bare ground areas	2		<u>5 %</u>	<u>0.10</u>
• Dying/dead vegetation	1		<u>5 %</u>	<u>0.05</u>
• Overgrown vegetation/pruning	1		<u>10 %</u>	<u>0.10</u>
• Pruning for visibility	2		<u>5 %</u>	<u>0.10</u>
			Sum of Rating	= <u>0.55</u>

b) Deficiency/hazard Reduction And Safety Improvements	Maximum Points	X	Percent of Existing Hazard & Safety Items Being Corrected (Based on \$) (Combined Total not to exceed 100%)	= Rating
1) Irrigation				
• Eliminate tank truck watering	3		<u>0 %</u>	<u>0.00</u>
• Eliminate quick coupling valve	2		<u>0 %</u>	<u>0.00</u>
• remove nozzle line	1		<u>0 %</u>	<u>0.00</u>
2) Planting				
• Provide permanent cover for bare soil	3		<u>5 %</u>	<u>0.15</u>
• Remove dead/diseased plants, declining plants or plants nearing life expectancy	2		<u>5 %</u>	<u>0.10</u>
• Remove and replace vegetation hazardous to traffic and adjacent property	3		<u>5 %</u>	<u>0.15</u>
			Sum of Rating	= <u>0.40</u>

PRIORITY RATING SHEET HIGHWAY PLANTING RESTORATION

EA 0Q450K

c) Additional Hazard Reduction and Safety Improvements	Maximum Points	X	Percent of Existing Hazard & Safety Items being corrected	= Rating
1) Work to eliminate lane closures	10		<u>0</u> %	<u>0.00</u>
2) Additional Work to Reduce Vegetation Control Requirements (i.e., spraying, mowing) and maintenance activities				
• Contrasting surface treatment beyond the gore and in narrow areas	2		<u>0</u> %	<u>0.00</u>
• Reduce or eliminate weed growth under guardrail or fixed objects	2		<u>0</u> %	<u>0.00</u>
• Remove and treat invasive plant volunteers	2		<u>5</u> %	<u>0.10</u>
• Provide planting for graffiti abatement	1		<u>5</u> %	<u>0.05</u>
3) Additional Work to Reduce Erosion				
• Correct erosion at concentrated flow lines	1		<u>5</u> %	<u>0.05</u>
• Repair surface erosion problems	2		<u>5</u> %	<u>0.10</u>
Sum of Rating				= <u>0.30</u>

d) Age of Previous Planting

Years since previous planting 3 X 0.05 = 0.15

Construction date of previous planting (Month/Year) 9/2004

2. Total (a) .55 +(b) .4 +(c) .3 +(d) .15 = 1.40

B. Cost Effectiveness Ratio

(Average Daily Traffic (ADT): 56,000) (ADT Rating Score from figure 1 0.81)

$$\text{Cost Effectiveness Ratio} = \frac{A2 \times 1000 \times \text{ADT Rating Score}}{\text{Adjusted Cost Per Acre}} = \frac{1.4 \times 1000 \times 0.81}{\$46,979} = \underline{0.024}$$

**PRIORITY RATING SHEET
HIGHWAY PLANTING RESTORATION**

EA 0Q450K

C. Credits

1. Credit for Converting to Nonpotable Water (If Yes: 3 Points, If No: 0 Points)	<u>Yes</u>	(Select Yes or No)	=	<u>3.00</u>
2. Providing access				
a) Access Gates (If Yes: 1 Point. If No: 0 Points)	<u>Yes</u>	(Select Yes or No)	=	<u>3.00</u>
b) Access Roads (If Yes: 1 Point. If No: 0 Points)	<u>No</u>	(Select Yes or No)	=	<u>0.00</u>
c) Safe Parking (MVP) (If Yes: 2 Point. If No: 0 Points)	<u>No</u>	(Select Yes or No)	=	<u>0.00</u>
3. Context Sensitive Objectives:				
a) Stakeholders and their needs identified (List Attached) (If Yes: 0.25 Point. If No: 0 Points)	<u>Yes</u>	(Select Yes or No)	=	<u>0.25</u>
b) Community support/involvement plan (If Yes: 0.25 Point. If No: 0 Points)	<u>yes</u>	(Select Yes or No)	=	<u>0.25</u>
4. LOS Maintenance Needs Index (Year of the LOS Score <u>2007</u>):	Select Rating	<u>3</u>	=	<u>0.50</u>
5. Installation of Rics (If Yes: 0.5 Points, If No: 0 Points)	<u>Yes</u>	(Select Yes or No)	=	<u>0.5</u>
6. Continuation/expansion of Corridor Theme (If Yes: 0.5 Points, If No: 0 Points)	<u>Yes</u>	(Select Yes or No)	=	<u>0.5</u>
	Sum of Rating		=	<u>8</u>

D. Project Category Points

= **15.00**

E. Total Project Priority Index Number (B) 0.02 + (C) 8 + (D) 15

= **23.02**



Dist-County-Route: 05-SLO-101

PM 29.1/30.2

Post Mile (Kilometer Post) Limits: (KP 46.8/48.6)

Project Type: Rehabilitate Roadside

EA: 0Q450

RU:

Program Identification: 201/210

Phase: XPID PA/ED PS&E

Regional Water Quality Control Board(s): Central Coast Regional Water Quality Control Board

- 1. Is the project required to consider incorporating Treatment BMPs? Yes XNo
- 2. Does the project disturb more than 0.25 acres of soil? Yes XNo
- 3. Is the project part of a Common Plan of Development? Yes XNo
- 4. Does the project potentially create permanent water quality impacts? Yes XNo
- 5. Does the project require a notification of ADL reuse? Yes XNo

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

Estimated Construction Start Date: ~~December 2010~~ ^{MARCH 2012} Construction Completion Date: ~~February 2015~~ ^{APRIL 2010}

Separate Dewatering Permit (if Yes, permit number) Yes Permit #: XNo ^{PSR 0/29/07 FKB} ^{FKB} ^{PSR 8/24/07}

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.

Patrick K. Bolger, Registered Landscape Architect

JULY 3/07

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]

Marissa Nishikawa, SW Coordinator

7/3/07

Date

FOR

ATTACHMENT F

1. Project Description

- The project will expand the use of recycled water in San Luis Obispo along the Route 101 corridor. The project will add booster pumps, upgrade and replace irrigation pressure supply lines, lateral lines and sprinkler heads that were not addressed in recent projects. Shrubs and trees will be replaced to help restore the visual character of the corridor.

The principal receiving water body of the project is San Luis Obispo Creek.

- Based on auguring holes for plant material and trenching of irrigation pipe the project yields less than 0.5 acres of total disturbed area..

4,000 ft of trenching for irrigation x 1' width of disturbance = 4,000 square feet

2,000 Plant Group A x 1.57 sq ft/plant = 3,140 square feet

300 Plant Group U x 3.14 sq ft/plant = 942 square feet

4,000 + 3,140 + 942 = **8,082 square feet of disturbance. Approx. 0.2 Acres at various locations.**

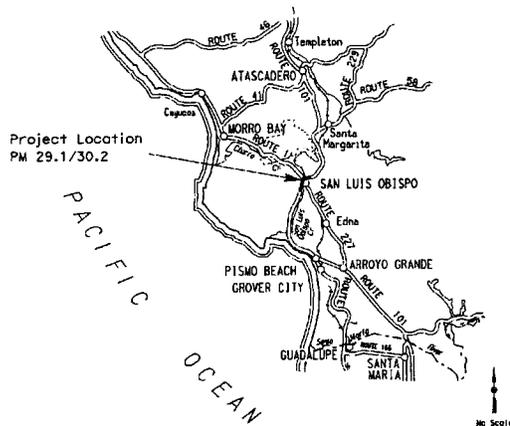
The project will take place within the City of San Luis Obispo MS4 Area.

2. Construction Site BMPs

- At this point in the process this project should require a WPCP.
- Construction Site BMP's that may be considered as separate Bid Line Items may include the following: fiber rolls, inlet protection, and silt fencing. Two percent of the total construction budget is being estimated for these items.
- Given the scope, impacts of the project and the anticipated amount of disturbance specific details and storm water protection strategy will be considered at a later date once programmed.
- The Construction Storm Water Coordinator for this project area will be consulted at PS&E regarding the temporary construction site BMP implementation strategy.

REQUIRED ATTACHEMENTS

- Vicinity Map



DATE: 6/14/07

See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPS

A: 0Q450K

NO.	CRITERIA	YES	NO	SUPPLEMENTAL INFORMATION FOR EVALUATION
1.	Begin Project Evaluation regarding requirement for consideration of Treatment BMPs	<input checked="" type="checkbox"/>		Go to 2
2.	Is this an emergency project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If Yes , go to 11. If No , continue to 3.
3.	Have TMDLs OR OTHER Pollution Control Requirements been established for surface waters within the project limits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If Yes , contact the District/Regional NPDES coordinator to discuss the Department's obligations under the TMDL (if Applicable) or Pollution Control Requirements, go to 10 or 4 (as determined by the NPDES Coordinator). <u>PSR</u> (Dist./Reg. SW Coordinator initials) If No , continue to 4.
4.	Is the project within an urban MS4?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If Yes , continue to 5. <i>City of San Luis Obispo</i> If No , go to 11.
5.	Is the project directly or indirectly discharging to surface waters?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If Yes , continue to 6. If No , go to 11.
6.	Is this a new facility or major reconstruction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If Yes , continue to 8. If No , go to 7.
7.	Will there be a change in line/grade or hydraulic capacity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If Yes , continue to 8. If No , go to 11.
8.	Is the Disturbed Soil Area (DSA) created by the project <u>greater than or equal to 3.0 acres</u> or does the project result in a <u>net increase of one acre or more of new impervious surface</u> ?	<input type="checkbox"/>	<input type="checkbox"/>	If Yes , continue to 10. If No , go to 9. (Total DSA quantity)
9.	Is the project part of a Common Plan of Development?	<input type="checkbox"/>	<input type="checkbox"/>	If Yes , continue to 10. If No , go to 11.
10.	Project is required to consider approved Treatment BMPs.	<input type="checkbox"/>		See Sections 2.4 and either Section 5.5 or 6.5 for BMP Evaluation and Selection Process. Complete Checklist T-1 in this Appendix E.
11.	Project is not required to consider Treatment BMPs. <u>PSR</u> (Dist./Reg. SW Coord. Initials) <u>KES</u> (Project Engineer Initials) ____ (Date)	<input checked="" type="checkbox"/>		Document for Project Files by completing this form, and attaching it to the SWDR.

See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPS

DATE: 6/14/07

Project Evaluation Process for the Consideration of Construction Site BMPs

A: 0Q450K

NO.	CRITERIA	YES	NO	SUPPLEMENTAL INFORMATION
1.	Will construction of the project result in areas of disturbed soil as defined by the Project Planning and Design Guide (PPDG)?	X	<input type="checkbox"/>	If Yes , Construction Site BMPs for Soil Stabilization (SS) will be required. Complete CS-1, Part 1. Continue to 2. If No , Continue to 3.
2.	Is there a potential for disturbed soil areas within the project to discharge to storm drain inlets, drainage ditches, areas outside the right of way, etc?	X	<input type="checkbox"/>	If Yes , Construction Site BMPs for Sediment Control (SC) will be required. Complete CS-1, Part 2. Continue to 3.
3.	Is there a potential for sediment or construction related materials and wastes to be tracked offsite and deposited on private or public paved roads by construction vehicles and equipment?	X	<input type="checkbox"/>	If Yes , Construction Site BMPs for Tracking Control (TC) will be required. Complete CS-1, Part 3. Continue to 4.
4.	Is there a potential for wind to transport soil and dust offsite during the period of construction?	X	<input type="checkbox"/>	If Yes , Construction Site BMPs for Wind Erosion Control (WE) will be required. Complete CS-1, Part 4. Continue to 5.
5.	Is dewatering anticipated or will construction activities occur within or adjacent to a live channel or stream?	<input type="checkbox"/>	X	If Yes , Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Part 5. Continue to 6.
6.	Will construction include saw-cutting, grinding, drilling, concrete or mortar mixing, hydro-demolition, blasting, sandblasting, painting, paving, or other activities that produce residues?	X	<input type="checkbox"/>	If Yes , Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Part 5. Continue to 7.
7.	Are stockpiles of soil, construction related materials, and/or wastes anticipated?	X	<input type="checkbox"/>	If Yes , Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6. Continue to 8.
8.	Is there a potential for construction related materials and wastes to have direct contact with precipitation; storm water run-on, or storm water runoff; be dispersed by wind; be dumped and/or spilled into storm drain systems?	X	<input type="checkbox"/>	If Yes , Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6. Continue to 9.
9.	End of checklist.	X		Document for Project Files by completing this form, and attaching it to the SWDR.

PE to initialize after concurrence with Construction (PS&E only)

Date

DISTRICT 5 TRAFFIC MANAGEMENT PLAN DATA SHEET/CHECKLIST

District / EA: 05/0Q450K
 Project Engineer: Patrick Bolger
 Date Prepared: 7/5/2007

Co.-Rte-PM: SLO-101 29.1-30.2
 Description: Recycle Water
 Working Days: 180

Check each box and reference your attachments to the item(s) number(s) shown on the list.

Required	Recommended	Not required	COMMENTS
----------	-------------	--------------	----------

1.0 Public Information

- 1.1 Public Awareness Campaign
- 1.2 Other Strategies

x			Include \$5,000
x			

2.0 Motorist Information Strategies

- 2.1 Changeable Message Signs - Portable
- 2.2 Construction Area Signs
- 2.3 Highway Advisory Radio (fixed and mobile)
- 2.4 Planned Lane Closure Web Site
- 2.5 Caltrans Highway Information Network (CHIN)

x			Estimate \$50,000
x			
		x	
x			Construction to provide information to TMC
		x	Construction to provide information to TMC

3.0 Incident Management

- 3.1 COZEEP (during k-rail moving & work in live traffic)
- 3.2 Freeway Service Patrol

x			Estimate \$15,000
		x	

4.0 Traffic Management Strategies

- 4.1 Lane/Ramp Closures Charts
- 4.2 Total Facility Closure
- 4.3 Coordination with adjacent construction
- 4.4 Contingency Plan
 - 4.4.1 Material/Equipment Standby
 - 4.4.2 Emergency Detour Plan
 - 4.4.3 Emergency Notification Plan
- 4.5 SSP 12-220 and Others
- 4.6 Other Strategies:

x			provided during PS&E anticipate nightwork
		x	
		x	
x			Standard SSP
		x	Construction/Contractor to provide
		x	Construction/Contractor to provide
		x	Construction/Contractor to provide
x			
x			Include \$300/day for Supplemental Funds
			Include in Maintain Traffic - 066070
			Ramp closures may need detour sign packages
			if detour route does not appear readily apparent to the driver

5.0 Anticipated Delays

- 5.1 Lane Closure Review Committee (for anticipated delays over 30 minutes)
- 5.2 Planned freeway closures

		x	
		x	

- 5.3 Minimal delay anticipated - no further action required

yes no If no, explain additional measures on attached sheet.

6.0 Placement of CMS

x			Per RE

PID FINAL DISTRIBUTION LIST

FHWA - Dominic Hoang
Design Report Routing (2)
HQ Division of Engineering Services Advisor
Division of Engineering Services (5)
HQ Transportation Programming SHOPP Rick Guevel
HQ Environmental - Kelly Dunlap
Project Manager – Amy Donatello
Design Manager (2)
Resident Engineer Dan Miller
Dist Maintenance - Lance Gorman
Dist Maintenance SHOPP – Kelly McClain
Dist Traffic Safety – Steve Talbert
Region Traffic Design - Hassan Marei
Dist Traffic Operations - Paul McClintic
Region Materials – Ron Sekhon
Region Environmental – David Hyatt
Region R/W - John Maddux
Dist Planning – Claudia Espino
PPM - Teresa Rix
Surveys - Rob Isakson
Surveys - Nick Tatarian
Dist Records – Gail Hayes
Region Records – Victoria Pozuelo

PROJECT RISK MANAGEMENT PLAN

Dist - E.A 05-0Q450 Project Name San Luis Obispo Recycled Water (North)
 Co-Rte-PM SLO-101 29.1/30.2
 Date 7/23/2007
 Project Mngr Amy Donatello Telephone Number 805-549-3014

PROJECT RISK MANAGEMENT PLAN																	
Priority	Identification					Qualitative Analysis			OPTIONAL Quantitative Analysis				Risk Response Plan		Monitoring and Control		
	Status (2)	ID # (3)	Date Identified Project Phase (4)	Functional Assignment (5)	Threat/Opportunity Event (6)	Risk Trigger (7)	Type (8)	Probability (9)	Impact (10)	Risk Matrix (11)	Probability (%) (12)	Impact (\$ or days) (13)	Effect or days (14) = (12) x (13)	Strategy (15)	Response Actions including advantages and disadvantages (16)	Responsibility (Risk Manager) (17)	Last date changes made to risk and Comments (18)
1	Active	1	7/23/2007 PID	Environmental	Design changes require additional environmental analysis	Additional planting sites required.	Schedule	High	High					Transference	Have environmental review project prior to setting the schedule	Environmental	
1	Active	2	7/23/2007 PID	R/W	Utility relocation required	Unforeseen utility conflict found.	Schedule	Low	High					Acceptance	locate utilities prior to PA&ED	R/W	
1	Active	3	7/23/2007 PID	Landscape	Costs exceed programmed amount	Unforeseen cost increases.	Cost	Low	High					Acceptance	Not much we can do.	Landscape	
1	Active	4	7/23/2007 PID	Project Management	Project schedule is behind	Project schedule is too tight.	Schedule	Low	Very High					Transference	Project schedule should be verified with PDT.	Amy Donatello	
1	Active	5	7/23/2007 PID	Construction	Late discovery of aerially deposited lead	Unforeseen lead deposits	Schedule	Low	Moderate					Acceptance	Make sure hazardous waste sites have been investigated	Environmental	
1	Active	6	7/23/2007 PID	R/W	Access to adjacent properties are necessary	construction work required outside of R/W	Cost	Moderate	High					Mitigation	Make sure all easements are obtained	Design	
1	Active	7	7/23/2007	Environmental	construction noise impact residents	Noisy equipment	Quality	Moderate	Low					Mitigation	Place noise barrier during construction	Environmental	