Date: **August 01, 2011**

07-LA- 1- PM 7.7 – 9.24
91- PM 6.00 – 8.43
105-PM 0.30 - 6.76
110- PM 6.52 – 13.5
405- PM 8.7 - 22.47
EA- 286700K

DESCRIPTION:

201.335 Program, Design and Construct Permanent BMPs
In Los Angeles County.

Project ID No. **0700020923**

Storm Water Mitigation

Sign off Checklist

Position	Name	Initial	Date
Office of Project Studies Project Engineer	**Abdol Hajipour**		8-1-11
Office of Project Studies STE	**Albert Andraos**		8-1-11
Office of Project Studies Chief	**Elaheh Yadegar**		8-3-11
District 7 Program Advisor	**Robert Wu**		8/8/2011
Deputy District Director Right of Way	**Andrew Nierenberg**		8/8/2011
Project Manager	**Ojas Sheth**		8/3/11
SHOPP Program Manger	**Steven Tran**	ST	8/3/11
Environmental Planning Division Chief	**Ronald Kosinski**		8/8/11
Deputy District Director, Planning, Public Transportation & Local Assistance	**James McCarthy**		8/8/11
Deputy District Director Design	**William H. Reagan**		8/30/11
Interim Deputy District Director	**Lindy K. Lee Lovell**		
District Director	**Michael Miles**		8/30/11

After Initiating or Signing please call Abdol Hajipour at 7-6278.

~~07 - LA - SR-01- PM 7.70-9.24~~ ~~SR-91-PM 6.00-8.43~~
I-110-PM 6.52-13.5 I-105-PM 0.30-6.76
I-405-PM 8.7-22.47

EA 28760 K Project ID 0700020923
SHOPP 201.335 August, 2011

PROJECT SCOPE SUMMARY REPORT (STORM WATER MITIGATION) To Request Programming in the 2014 SHOPP

On Route 07 - LA - **01 - PM 7.70 - 9.24** **91 - PM 6.00 - 8.43**
105 - PM 0.30 - 6.76 **110 - PM 6.52 - 13.50**
405 - PM 8.7 - 22.47

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:

Andrew Nierenberg, Deputy District Director, Right of Way

APPROVAL RECOMMENDED:

8/3/2011

Ojas Sheth, Project Manager

CONCURRED:

James McCarthy, Deputy District Director,
Division of Planning, Public Transportation & Local Assistance

William H. Reagan, Deputy District Director, Division of Design

APPROVED:

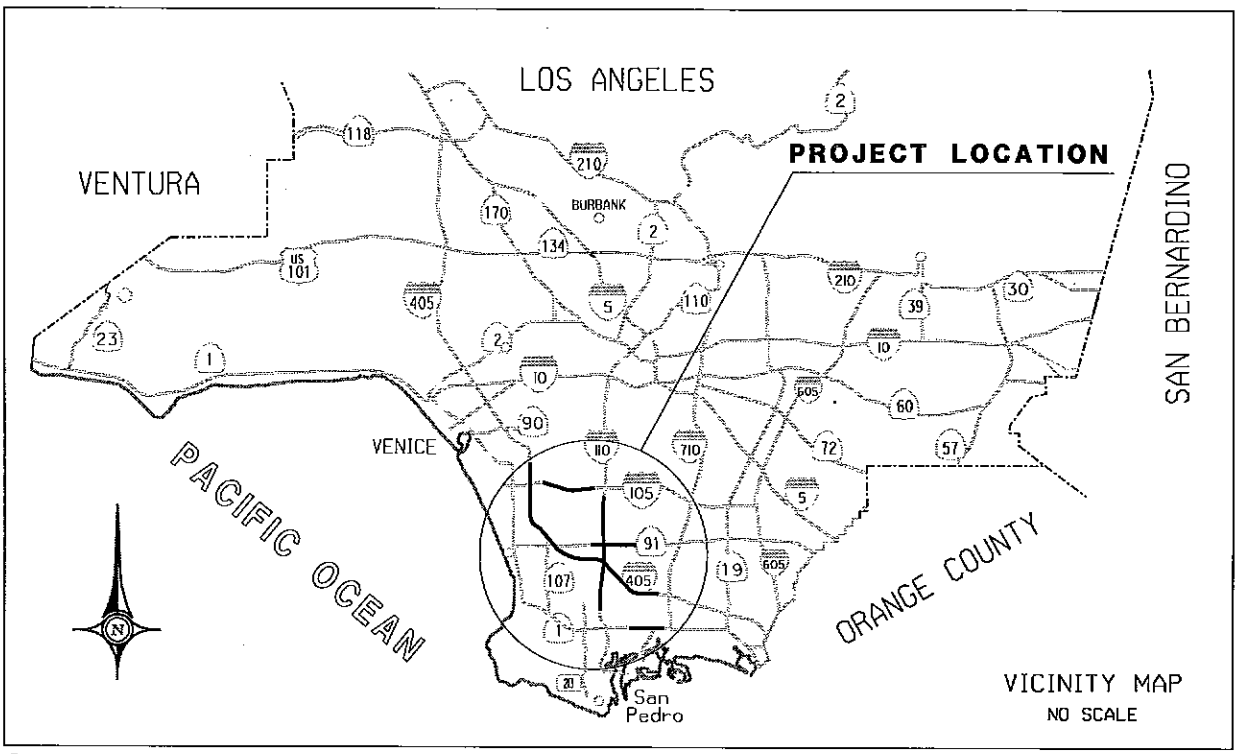
Michael Miles, *District* Director

8/31/11
Date

07 - LA - SR-01- PM 7.70-9.24
I-110-PM 6.52-13.5

EA 28670 K
SHOPP 201.335

SR-91-PM 6.00-8.43
I-105-PM 0.30-6.76
I-405-PM 8.7-22.47
Project ID 0700020923
August, 2011



On Route

SR-01- PM 7.70-9.24 SR-91- PM 6.00-8.43
I - 105-PM 0.30-6.76 I - 110-PM 6.52 -13.5
I - 405-PM 8.70-22.47

Between:

SR-01	East of Santa Fe Ave. and E. of Alameda St.
SR-91	S. Vermont Ave. and S. Central Ave.
I-105	East of Sepulveda Ave/Imperial E/B off ramp to Vermont Ave.
I-110	223rd St. to North of 120th St.
I-405	223rd St. to North of Century Blvd

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

REGISTERED PROFESSIONAL ENGINEER
ABDOL MOHAMMAD HAJIPOUR
No. 61189
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

8-1-11

REGISTERED CIVIL ENGINEER *DATE*

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PROJECT SCOPE SUMMARY REPORT

Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL

1. Project Limits (Dist., Co., Rte., PM):

07 - LA - 001 - PM 7.70 - 9.24
105 - PM 0.30 - 6.76
405 - PM 8.70 - 22.47
091 - PM 6.00 - 8.43
110 - PM 6.52 - 13.50

2. Project Description:

The Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants Total Maximum Daily Load (TMDL) Implementation Project comprises segments of Routes SR-01, SR- 91, I- 110, I-105, and I-405. This project lies within the limits of the Los Angeles County Municipal Separate Storm Sewer System (MS4s) area in the cities of Los Angeles, Long Beach, Carson, El Segundo, and Hawthorne.

This Project Scope Summary Report (PSSR) proposes the design and construction of Gross Solid Removal Devices (GSRDs), natural trash-capturing devices (e.g., Bio-swales/strips) and other treatment Best Management Practices (BMPs) including media filters and infiltration basins at various storm drain outfall/discharge point locations within the above project limits. The purpose is to attain water quality standards for pollutants in the Dominguez Channel Watershed and its tributaries as required by the California Regional Water Quality Control Board, Los Angeles Region (LARWQCB).

All of the outfalls within SR-01 (PM 7.7 - 9.24), SR-107 (PM 2.25 - 4.80), SR- 91(PM 6.00 - 8.43), I- 110 (PM 6.52 - 13.5), I-105 (PM 0.30 - 6.76), and I-405 (PM 8.7 - 22.47) lie in, and drain into the Dominguez Channel Watershed. Upon review of Corridor Water Management Studies and detailed field review and analysis of 253 outfall locations a total of 177 locations are found to be feasible and recommended for the construction of total of 90 treatment BMPs (Table-8.2 and Attachment C-1). This project proposes the installation of GSRD at 8 locations, Bio-swales/Bio-strips at 57 locations, Media Filters at 23 locations, Infiltration Basin at 1 location, and Detention Device at 1 location, within Caltrans right-of-way along the above project limits. Total of 4 bio-filtration BMPs are proposed at the interchange of SR-1 and SR-103 to treat storm water discharged from SR-1 and SR-103. In SR-107 there are no outlets that can be accessed without major Right of Way impact, therefore it was determined not to provide BMPs. SR-107 was removed from the scope of this project.

The construction cost for this project is estimated at $62 million in 2011 dollars (Attachment H). Funding for this project is expected from the 2014 State Highway Operation and Protection Program (SHOPP) - Storm Water Mitigation Program.

3. Environmental Status:

This project is determined to be categorically exempt under Class 1 of State CEQA guidelines and categorically excluded (CE) under NEPA guidelines. (Attachment E1).

Date Approved: April 1, 2011.

4. Traffic Data and Impact: (N/A: Not Applicable)

Present ADT: Table - 4.1 20-Year ADT: N/A

DHV: N/A % Trucks: N/A

Safety Field Review: N/A

Latest 3-Year Accident Data: N/A

Location(s) of Accident Concentration: N/A Corrective Strategy: N/A

Table - 4.1
Present Traffic Data

Rte.	PM	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
001	8.266	LONG BEACH, JCT. RTE. 103, TERMINAL ISLAND	3,150	35,500	28,500	2,750	31,000	25,500
091	7.426	CARSON, AVALON BLVD INTERCHANGE	15,400	199,000	196,000	15,700	202,000	199,000
105	3.053	HAWTHORNE, HAWTHORNE BLVD INTERCHANGE	14,200	204,000	197,000	15,000	221,000	215,000
110	8.775	CARSON, JCT. RTE. 405, SAN DIEGO FRWY	16,000	222,000	218,000	22,700	272,000	264,000
405	15.210	HUNTINGTON BEACH, MAGNOLIA ST. INTERCHANGE	19,500	312,000	307,000	16,900	271,000	266,000

5. Roadway Geometry

Facility	Minimum Curve Radius	Through Traffic Lanes			Paved Shoulder Width		Median Width	Median Barrier
		No. of Lanes	Lane Width	Type (AC, PCC, or AC over PCC)	Left	Right		Yes or No
*								
**		Not Applicable						
Mand. Stds.								

6. Structures Information:

Structure	Width Between Curbs			Standards Met?		Vertical Clearance Over Main-Line			Existing Condition	
				Bridge Rail	Bridge Appr. Rail				Bridge Appr. Slab	AC Overlay
Name/No.	Exist.	Mand Std.	Prop.	Yes or No		Exist.	Mand Std.	Prop.	Yes or No	
				Not Applicable						

7. Background:

The California Water Quality Control Plan for the Los Angeles Region (Basin Plan), adopted by the LARWQCB, sets standards for surface waters and groundwater in the Region. The standards identify numeric and narrative objectives necessary to support beneficial uses and the State's Anti-degradation Policy, and is mandated for all water bodies within the state pursuant to the Porter-Cologne Water Quality Control Act.

Section 305(b) of the Federal Clean Water Act (CWA) mandates biennial assessments of the nation's water resources, and these water quality assessments are used to identify and list impaired waters. The resulting list is referred to as the 303(d) list. The CWA also requires the State to establish a priority ranking for impaired waters and to develop and implement TMDLs, which specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and allocates pollutant loadings to point and non-point sources. The United States Environmental Protection Agency (USEPA) has oversight authority for the 303(d) program. The USEPA approves the State's 303(d) lists and each specific TMDL.

The LARWQCB on May 5, 2011 adopted the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL (TMDL). The TMDL is anticipated to become effective in the near future when the USEPA approves the TMDL. Targeted pollutants are copper, lead, zinc, PAH, DDT, PCBs, Benzopyrene and Dieldrin for water column in the channel and harbors, and for sediments in the harbors.

There are total of 253 outfalls lie within the project implementation zone along the length of the considered Routes and their PMs. Los Angeles County Highway Outfall Inventory Database has identified 246 and Corridor Storm Water Management Studies has identified another 7 outfalls and discharge point with total of 708 acres of tributary drainage area, discharge into Dominguez Channel.

It is anticipated that construction of Treatment BMPs at certain outfall/discharge point locations could have impacts on Right of Way, existing traffic, underground utilities, and may have environmental issues. Full-scale investigations to determine such impacts at all locations would not be possible at this time due to time constraint. Therefore, only the locations without impacts are included in this PID.

8. Need and Project Proposal:

The purpose of this project is primarily to attain water quality standards for pollutants in the Dominguez Channel Watershed and the Los Angeles and Long Beach Harbors in a progressive manner by implementing the proposed Treatment BMPs in response to the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL A list of concerned pollutants that can be treated by the proposed Treatment BMPs is provided in Table 8.1.

Table 8.1: Applicable Treatment BMPs and Targeted Pollutants of Concern[1]

Pollutants	Treatment BMPs			
	Gross Solids Removal Devices (GSRD)	Biofiltration Systems	Media Filters	Infiltration Devices
Total Suspended Solids		✓	✓	✓
Nutrients			✓[2]	✓
Pesticides				✓
Particulate Metals		✓	✓	✓
Dissolved Metals		✓	✓	✓
Pathogens				✓
Litter	✓	✓	✓	✓
Biochemical Oxygen Demand				✓
Total Dissolved Solids				✓

Notes: 1 Reference - Table 2.2 of Caltrans Storm Water Quality Handbook, Project Planning and Design Guide, July 2010.
2 Phosphorus and Nitrogen for the Austin Sand Filter; Phosphorus only for the Delaware Sand Filter.

The scope of this project includes design and construction of Treatment BMPs at, or adjacent to outfall or discharge point locations within Caltrans right-of-way. The Treatment BMPs considered for implementation are GSRDs, such as Inclined Screen and Linear Radial type devices. Other devices considered for this project are Media Filters, Infiltration Basins, Bio-Swales/Strips and Detention Basin.

According to the inventory database, total of 253 outfalls/discharge points are located within the limits of this project. Upon detailed analysis and field review of these 253 sites, a total of 177 locations are found to be feasible and recommended for the construction of Treatment BMPs (Table-8.2 and Attachment C1). The estimated total cost for this project is $62 million in 2011 dollars.

Table - 8.2: Recommended Treatment BMPs

BMP / Route	1	91	105	110	405	Total
GSRD				6	2	8
Media Filter		2		4	17	23
Detention Basin				1		1
Infiltration Basin		1				1
Bio-Swale/Strip	4	8	3	13	29	57
PROJECT TOTAL BMPs						**90**

9. Environmental Issues:

No environmental issues have been identified in this project, and it is determined to be categorically exempt under Class 1 of State CEQA guidelines and categorically excluded (CE) under NEPA guidelines (Attachment E1). The CE certification was given on April 1, 2011.

10. Other Agencies Involved (Permits/Approvals from Fish & Game, Corps of Engineers, Coastal Commission, etc.)**:**

The LARWQCB will enforce and monitor the implementation of the various TMDLs. No other agency's involvement is expected in this implementation.

11. Other Considerations:

A. Hazardous waste disposal site required?

According to an Initial Site Assessment by the District's Hazardous Waste Unit, aerially deposited lead (ADL) contamination exists in some locations where Treatment BMPs will be installed. Further ADL site investigations will need to be conducted at the PS&E phase. It is recommended that the contaminated soils from these sites be disposed and hauled to designated Class 1 waste facilities only. A Lump Sum of $2.3M for possible handling and disposal of lead contaminated soils and other hazardous materials has been included in the total project costs.

B. Materials and or disposal site needs and availability? None

C. Storm Water:

A Long Form Storm Water Data Report is prepared in accordance to the Storm Water Quality Handbook-PPDG, July 2010 and is approved on August 08, 2011 by the District NPDES and TMDL Coordinators (Reference 1).

D. Transportation Management Plan (TMP):

A TMP Data Sheet was approved on February 16, 2011 (Attachment G). The need for lane closures, detours, and traffic control should be minimal, since most of the work areas will be off the traveled way.

E. Effects on Bicycle Traffic: None

F. Utility Involvement - ITS: According to the Office of ITS (Intelligent Transportation Systems), fiber optic communications conduits exist in the outside shoulders of following routes: SR-91 at 3 Locations, I-110 at 4 Locations, I-405 at 25 locations all within the project limits. Pull boxes are located in the areas adjacent to the freeway shoulder and existing underground conduits are in the vicinity of closed- circuit TV (CCTV) cameras, changeable message signs, and ramp metering locations. Thus, design plans should be

sent to the Office of ITS when available to determine possible impacts to the system. A $1,400,000 is allocated for ITS Fiber Optic Lines mitigation in cost estimate.

Utility Involvement - Other: None

G. Railroad Involvement: None

H. Right-of-Way:

No Right of Way required. All work is within the existing R/W (Attachment F).

I. Consistency with Other Planning:

This project is consistent with the following current projects in the vicinity.

EA	Route	Work Type	Post Mile	PAED	RTL	CCA
4Y150K	07-LA-001	Bridge Preservation	00.0/28.6	12/08/10	03/07/12	06/14/16
274301	07-LA-091	Upgrade Safety	06.8/13.4	09/02/09	06/29/12	03/01/16
4Y2401	07-LA-110	Bridge Preservation	01.2R/31.0	01/12/11	06/07/11	05/25/16
27310K	07-LA-110	Structural Rehabilitation	9.8/14.0	07/02/10	12/26/13	11/16/16
2X9400	07-LA-110	Repair Slope Erosions	1.1/8.8	10/31/11	05/22/12	07/15/16
2X9501	07-LA-405	Repair Slope Erosions	0.4/10.5	05/14/10	04/30/12	04/05/16

J. Salvaging and recycling of hardware and other non-renewable resources: N/A

K. Prolonged temporary ramp closures: None

L. What are the consequences of not doing this entire project?

Not implementing this project would be considered non-compliant by the LARWQCB. It would certainly invoke enforcement action by the LARWQCB. Consequently, implementation of the program would remain a legal requirement. The cost and resources needed for implementation would likely be much higher due to an accelerated schedule if a "No Project" alternative were to be chosen.

12. Cost Estimate

Total Cost of this project is estimated to $62 million (Attachment H).

13A. Project Field Reviewed By:

Others (District TMDL Coordinator Office) Jimmy Chan Date: 03/05/2011

Office of Project and Special Studies Abdol Hajipour, Tommy Tran and Keith Hong
Date: 11/30/2010, 12/06/2010, 12/07/2010, 12/13/2010, 01/04/2011, and 1/11/2011

District Maintenance George Castillo, Robert Henry
(Storm Water Crew Supervisor)
David W. Lawrence, Levin Katanian, Date: 05/11/2011 & 05/16/2011

13B. Project Reviewed by:

District Quality Review:		Date:	6/22/2011
District Storm Water Mitigation Program Advisor:	Jai Paul Thakur	Date:	08/08/2011
District TMDL Coordinator:	Robert Wu	Date:	08/08/2011
Office of Maintenance Support:	Richard Gordon	Date:	05/09/2011
Type of Federal involvement:	None	Date:	
Others:	None	Date:	

14. Proposed Funding:

This project will be submitted in the 2014 State Highway Operation Protection Program and will be funded from the Storm Water Mitigation program 20.XX.201.335. The proposed program year is 2014/2015. The cost for the project as of July 2011 is $62 million. The cost of the project in the proposed program year (2014/2015) is $71.8 million. The escalation factor used is 5% per year.

15. Project Support:

Proposed Program FY	District $(1000)			Engineering Service Center ($1000)					FY Total ($1000)	Other Costs ($1000)
				METS and Others		Structures		Office		
	Design	R/W	Constr.	Design	Constr.	Design	Constr.	Engr.		
2014/15	6975	775	7800						15,550	
TOTAL ESTIMATED PROJECT PYs AND OTHER SUPPORT COSTS:									15,550	

16. Project Schedule:

The following milestone completion dates are anticipated:

Milestone	Completion Date
PS&E	08/01/2014
R/W Certification	11/03/2014
Ready to List	12/01/14
Advertising	02/02/15
Construction Start	07/31/2015
Complete Construction	08/01/2018
Working Days	750

17. Remarks

This project is expected to eliminate pollutants into the Dominguez Chanel along above project post miles limits. This will also enhance water quality in the Los Angeles Region, and will fulfill the LARWQCB requirements. Therefore, it is recommended that this project be funded.

~~18. List of Attachments~~

A. Project Location Map

B. Outfall Location Plans:

L-1: Outfall Locations Plan – SR - 01
L-2: Outfall Locations Plan – SR – 91
L-3, L-4: Outfall Locations Plan – I – 105
L-5, L-6 Outfall Locations Plan – I – 110
L-7 to L-10 Outfall Locations Plan – I – 405

C. Outfall Data Lists:

C1: Preliminary Treatment BMP Recommendations
C2: Corridors Outfall Database.

D. Project Work Plan

E. Environmental Documents:

E1: Categorical Exemption/Exclusion Form
E2: Hazardous Waste Initial Site Assessment

F. Right-of-Way Data Sheet

G. TMP Data Sheet

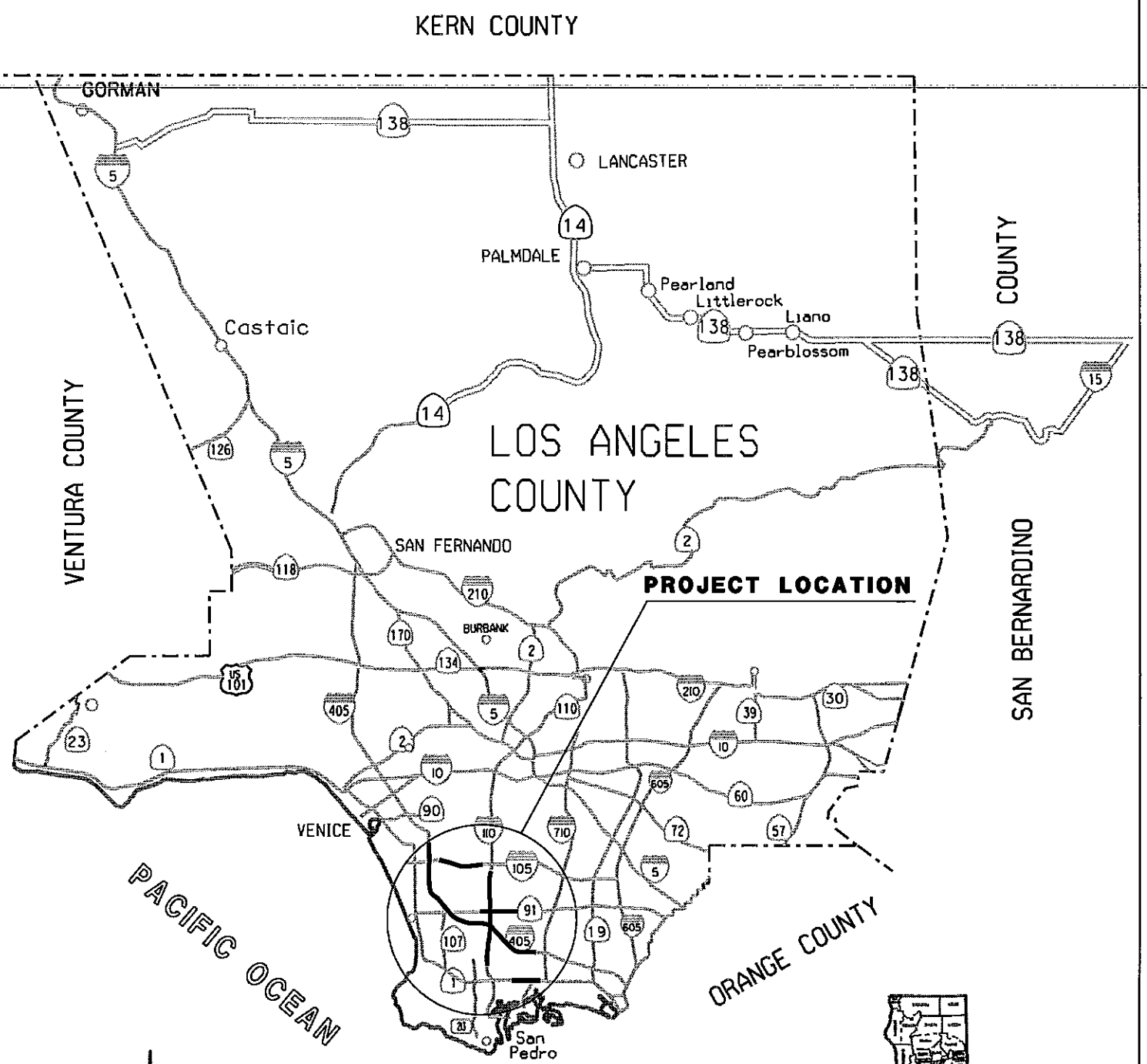
H. Project Cost Estimate

I. SHOPP Project Performance Output

Reference 1: Storm Water Data Report

ATTACHMENT A

Project Location Map



EA: 28670K

07-LA-001 PM7.70/ 9.24
07-LA-091 PM6.00/ 8.43
07-LA-105 PM0.30/ 6.76
07-LA-110 PM6.52/ 13.50
07-LA-405 PM8.70/ 22.47

VICINITY MAP

NO SCALE

Location Map.dgn 6/7/2011 10:03:24 AM

ATTACHMENT B

Outfall Location Plans

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	7.70 / 9.24		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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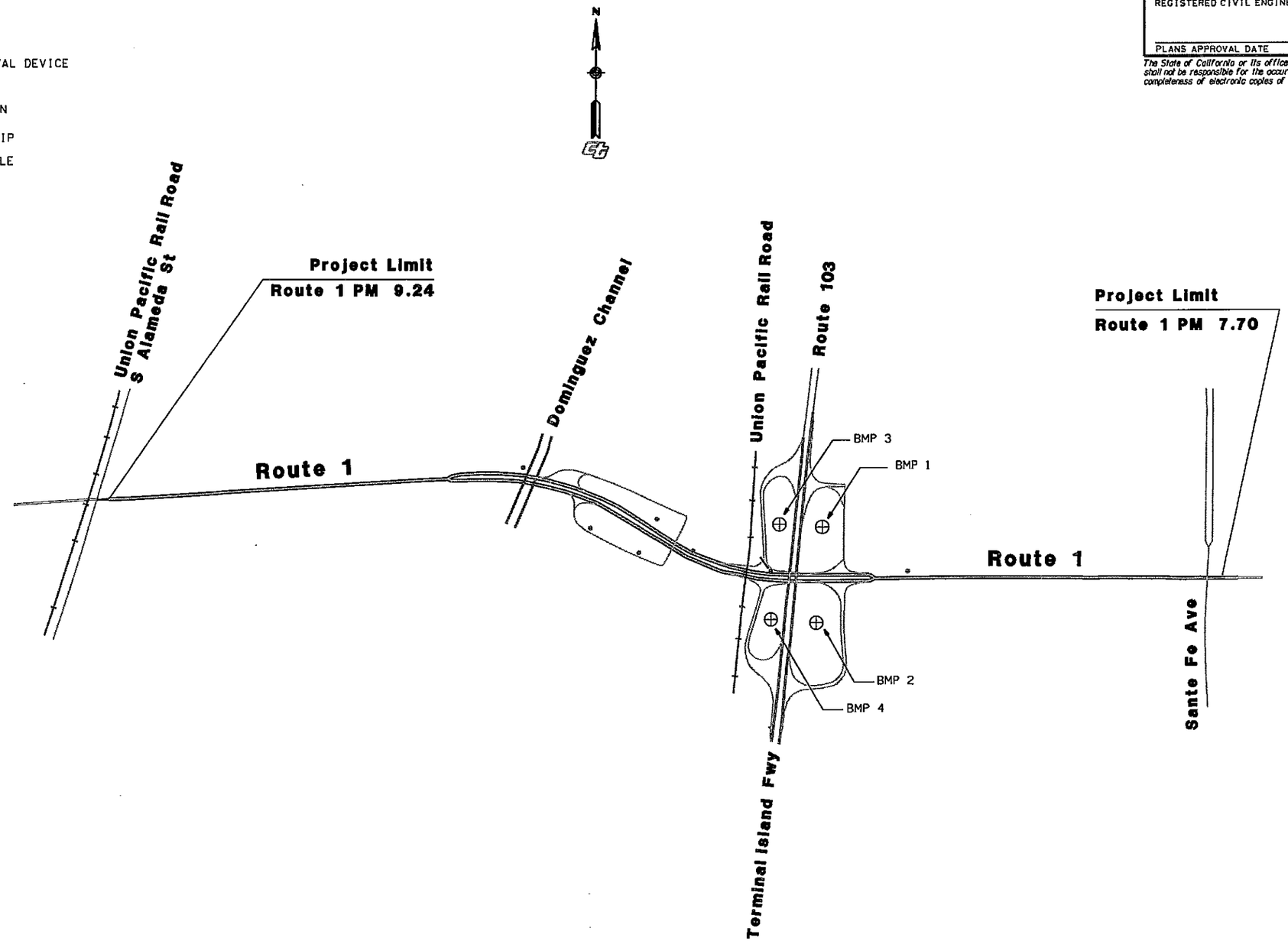
LEGEND:

RECOMMENDED TREATMENT:

- GROSS SOLID REMOVAL DEVICE
- MEDIA FILTER
- INFILTRATION BASIN
- BIOFILTRATION STRIP
- BIOFILTRATION SWALE
- DETENTION DEVICE
- EXISTING OUTFALL



NOTE: THESE LOCATIONS ARE APPROXIMATE ONLY.

ATTACHMENT B
OUTFALL LOCATION PLAN
ROUTE LA-1

NO SCALE

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
PLANNING

PROJECT ENGINEER: ABDOL HAJIPOUR

CALCULATED/DESIGNED BY | CHECKED BY | DATE | REVISED BY | DATE REVISED

LAST REVISION 00-00-00

TIME PLOTTED => $$$$$$$SYTIME$$$$$$$

FORM DC-OE-92-PF (REV. 3/88)

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DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$

CU 1786

EA 28670K

OutFall Location Layout(2nd Draft)_NU.dgn 6/1/2011 12:46:56 PM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	91	6.00 / 8.43		

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — NO. — EXP. — CIVIL — STATE OF CALIFORNIA

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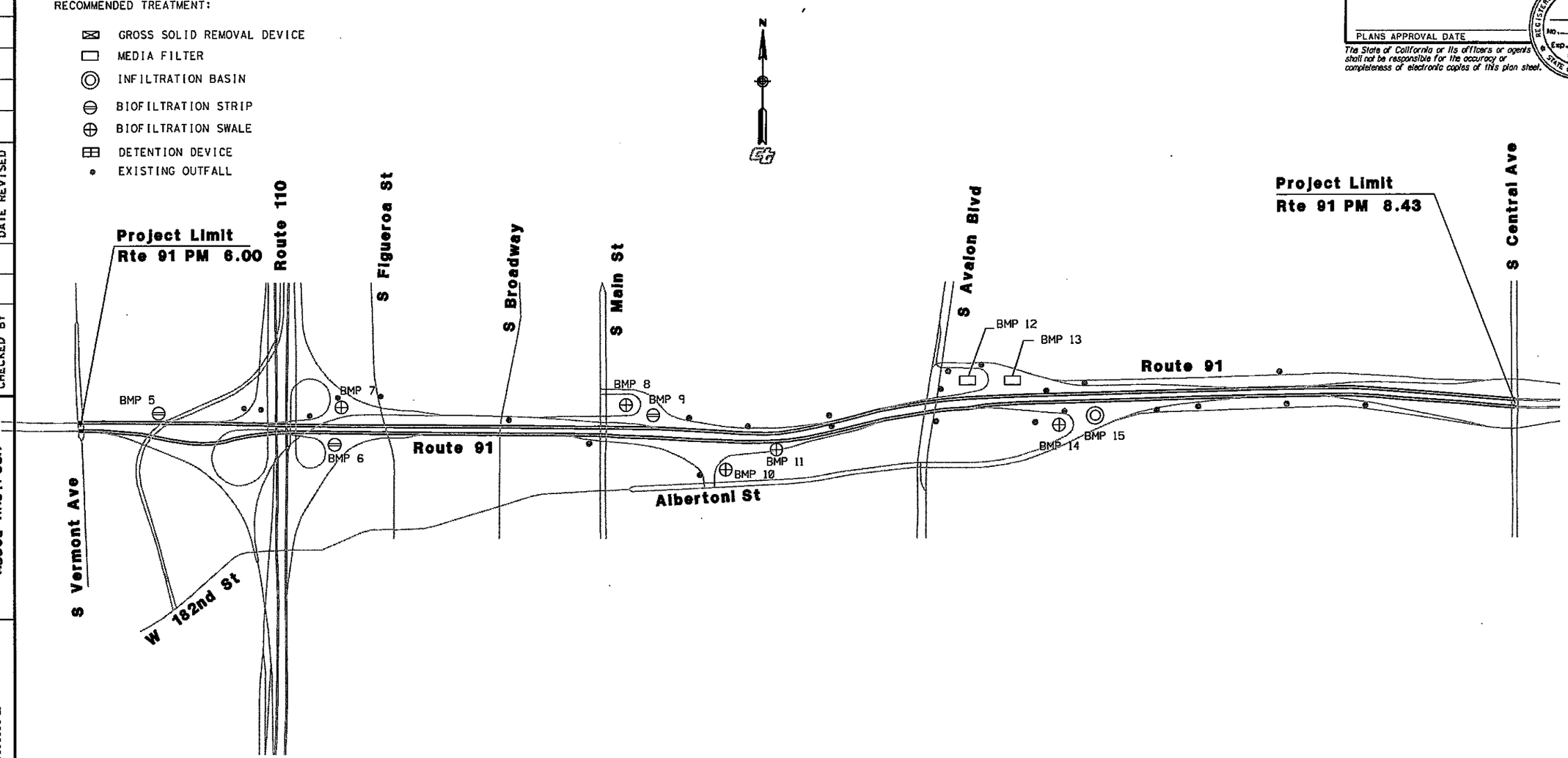
LEGEND:

RECOMMENDED TREATMENT:

- GROSS SOLID REMOVAL DEVICE
- MEDIA FILTER
- INFILTRATION BASIN
- BIOFILTRATION STRIP
- BIOFILTRATION SWALE
- DETENTION DEVICE
- EXISTING OUTFALL



NOTE: THESE LOCATIONS ARE APPROXIMATE ONLY.

ATTACHMENT B
OUTFALL LOCATION PLAN
ROUTE LA-91

NO SCALE

L-2

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

PROJECT ENGINEER: ABDOL HAJIPOUR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PLANNING

Caltrans

LAST REVISION 00-00-00

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FORM DC-OE-92-PF (REV. 3/88)

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CU 1786

EA 28670K

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	105	0.30 / 6.76		

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NO. EXP. CIVIL STATE OF CALIFORNIA

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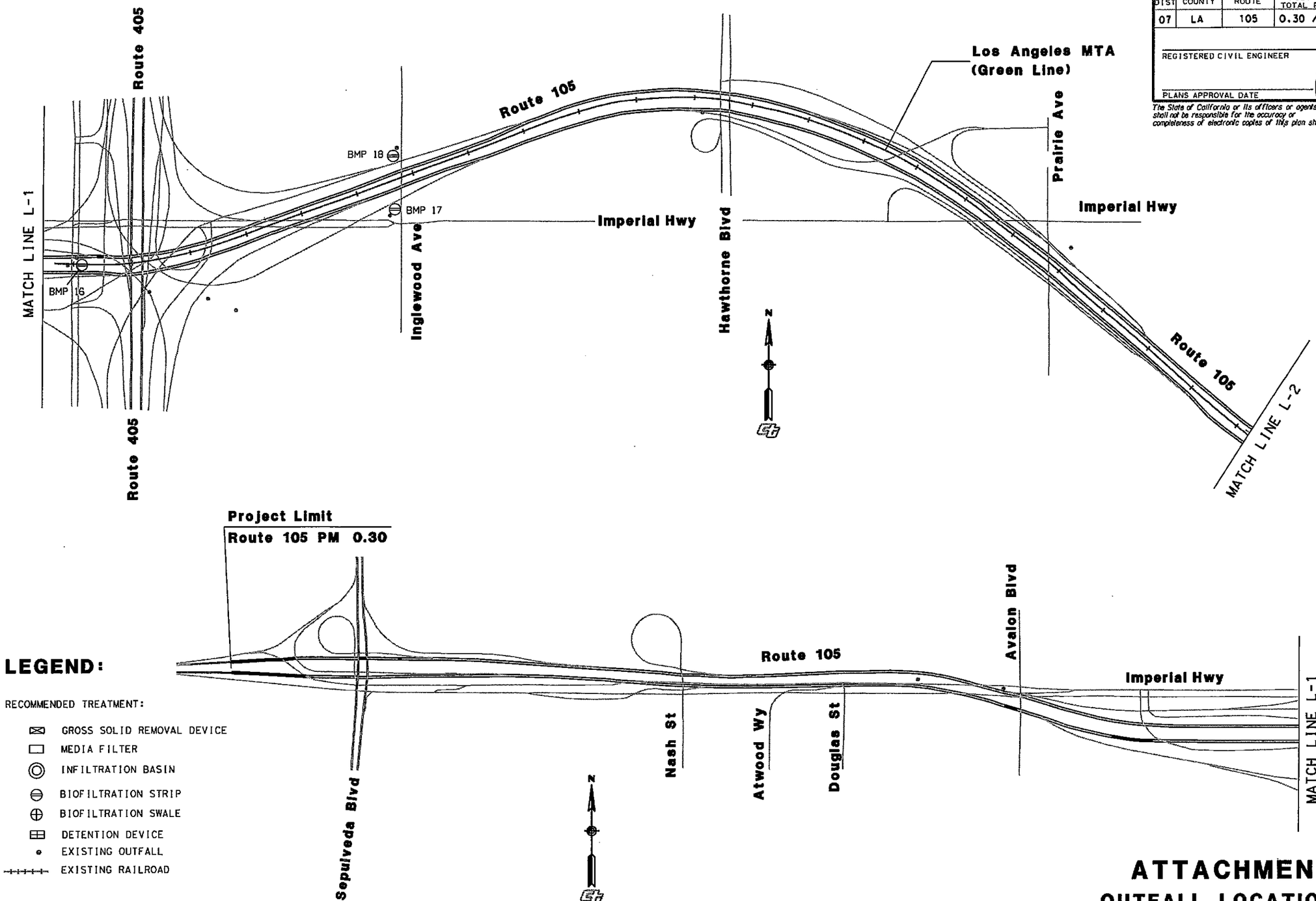

LEGEND:

RECOMMENDED TREATMENT:

- GROSS SOLID REMOVAL DEVICE
- MEDIA FILTER
- INFILTRATION BASIN
- BIOFILTRATION STRIP
- BIOFILTRATION SWALE
- DETENTION DEVICE
- EXISTING OUTFALL
- EXISTING RAILROAD

NOTE: THESE LOCATIONS ARE APPROXIMATE ONLY.

ATTACHMENT B
OUTFALL LOCATION PLAN
ROUTE LA-105

NO SCALE

L-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PLANNING

PROJECT ENGINEER ABDOL HAJIPOUR

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LAST REVISION 00-00-00

TIME PLOTTED => $$$$$$$SYTIME$$$$$$

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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CU 1786

EA 28670K

OutFall Location Layout(2nd Draft).dgn 5/20/2011 10:04:14 AM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	105	0.30 / 6.76		

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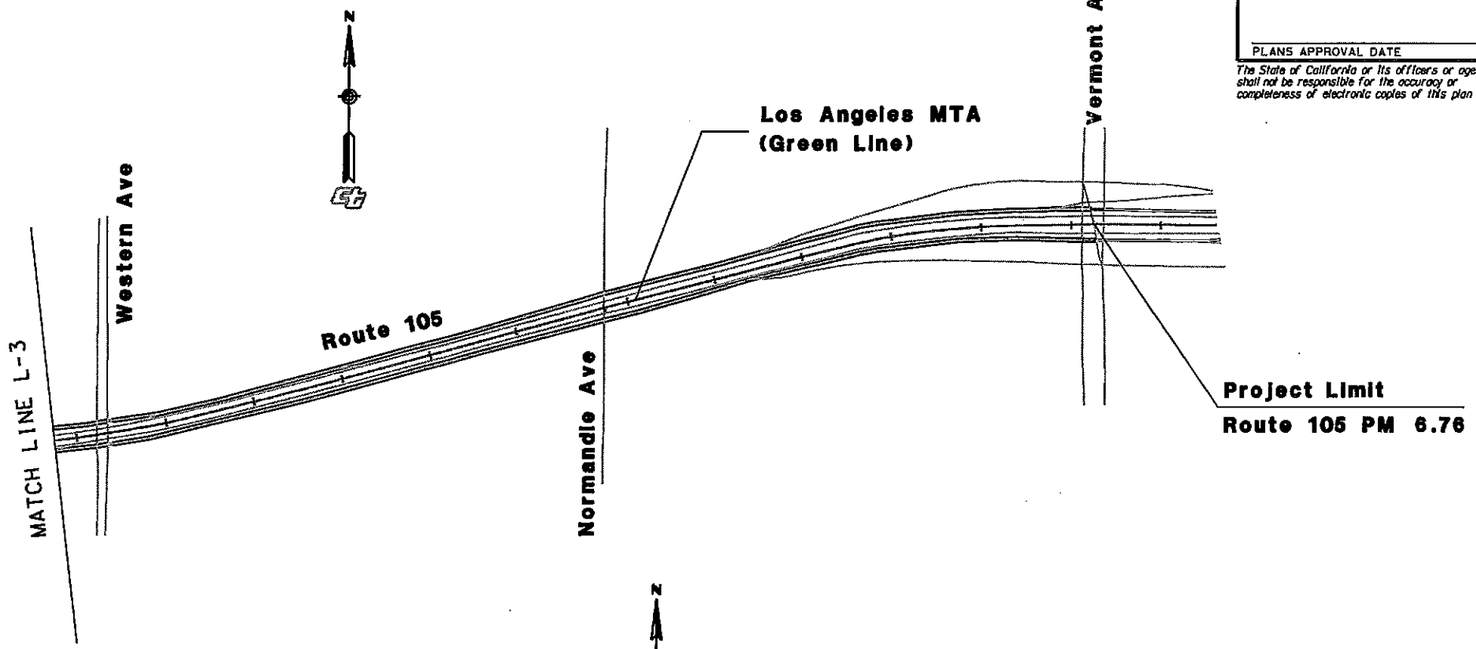
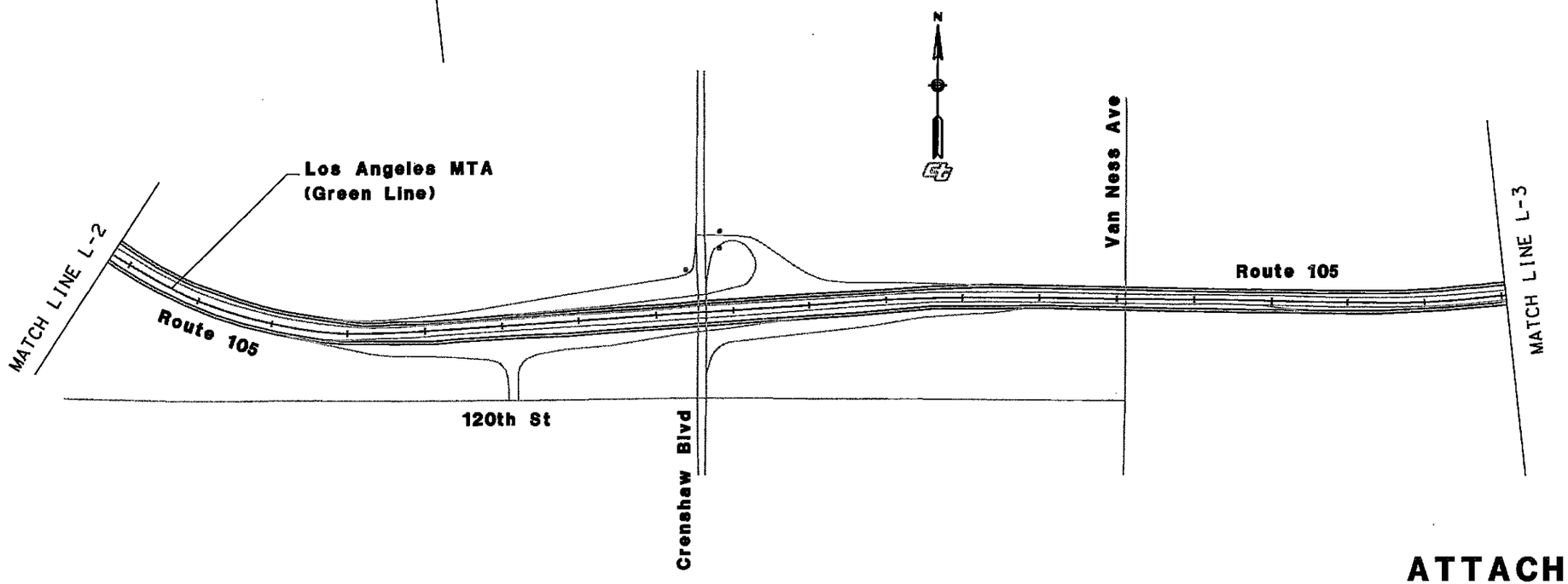
LEGEND:

RECOMMENDED TREATMENT:

- GROSS SOLID REMOVAL DEVICE
- MEDIA FILTER
- INFILTRATION BASIN
- BIOFILTRATION STRIP
- BIOFILTRATION SWALE
- DETENTION DEVICE
- EXISTING OUTFALL
- EXISTING RAILROAD





NOTE: THESE LOCATIONS ARE APPROXIMATE ONLY.

ATTACHMENT B
OUTFALL LOCATION PLAN
ROUTE LA-105

NO SCALE

L-4

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

PROJECT ENGINEER ABDOL HAJIPOUR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PLANNING

Caltrans

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TIME PLOTTED => $$$$$$$$SYTIME$$$$$$$

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => $$$$$$$USER$$$$$$$
DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$$

CU 1786

EA 28670K

OutFall Location Layout(2nd Draft).dgn 5/20/2011 10:04:30 AM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	6.52 / 13.5		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — NO. — EXP. — CIVIL — STATE OF CALIFORNIA

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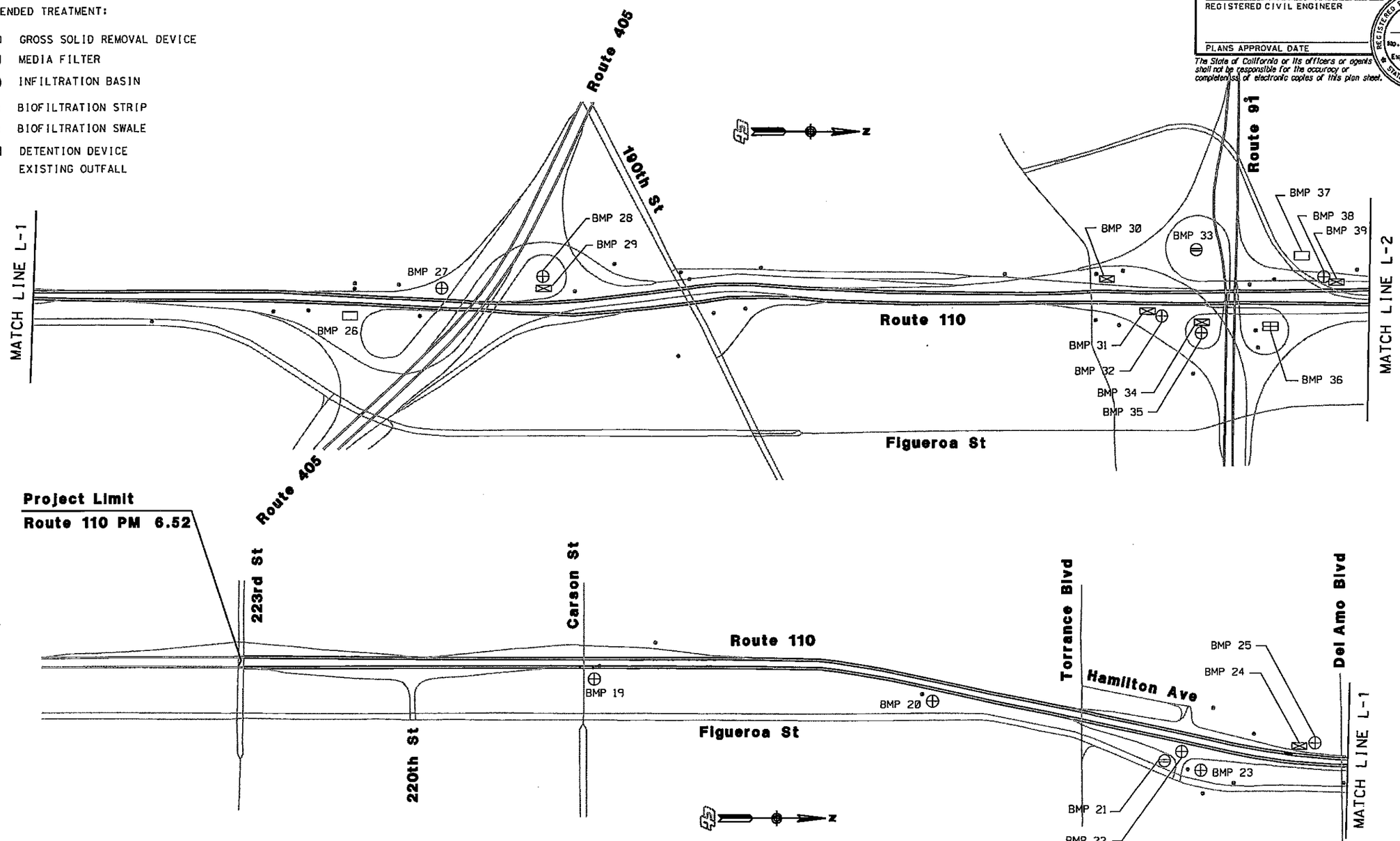
LEGEND:

RECOMMENDED TREATMENT:

- GROSS SOLID REMOVAL DEVICE
- MEDIA FILTER
- INFILTRATION BASIN
- BIOFILTRATION STRIP
- BIOFILTRATION SWALE
- DETENTION DEVICE
- EXISTING OUTFALL



ATTACHMENT B

OUTFALL LOCATION PLAN

ROUTE LA-110

NO SCALE

L-5

NOTE: THESE LOCATIONS ARE APPROXIMATE ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PLANNING

PROJECT ENGINEER: ABDOL HAJIPOUR

CALCULATED/DESIGNED BY | CHECKED BY | DATE | REVISED BY | DATE REVISED

LAST REVISION 00-00-00

TIME PLOTTED => $$$$$$$$SYTIME$$$$$$$$

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => $$$$$$USER$$$$$$
DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$$

CU 1786

EA 28670K

OutFall Location Layout(2nd Draft).dgn 5/24/2011 10:19:16 AM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	6.52 / 13.5		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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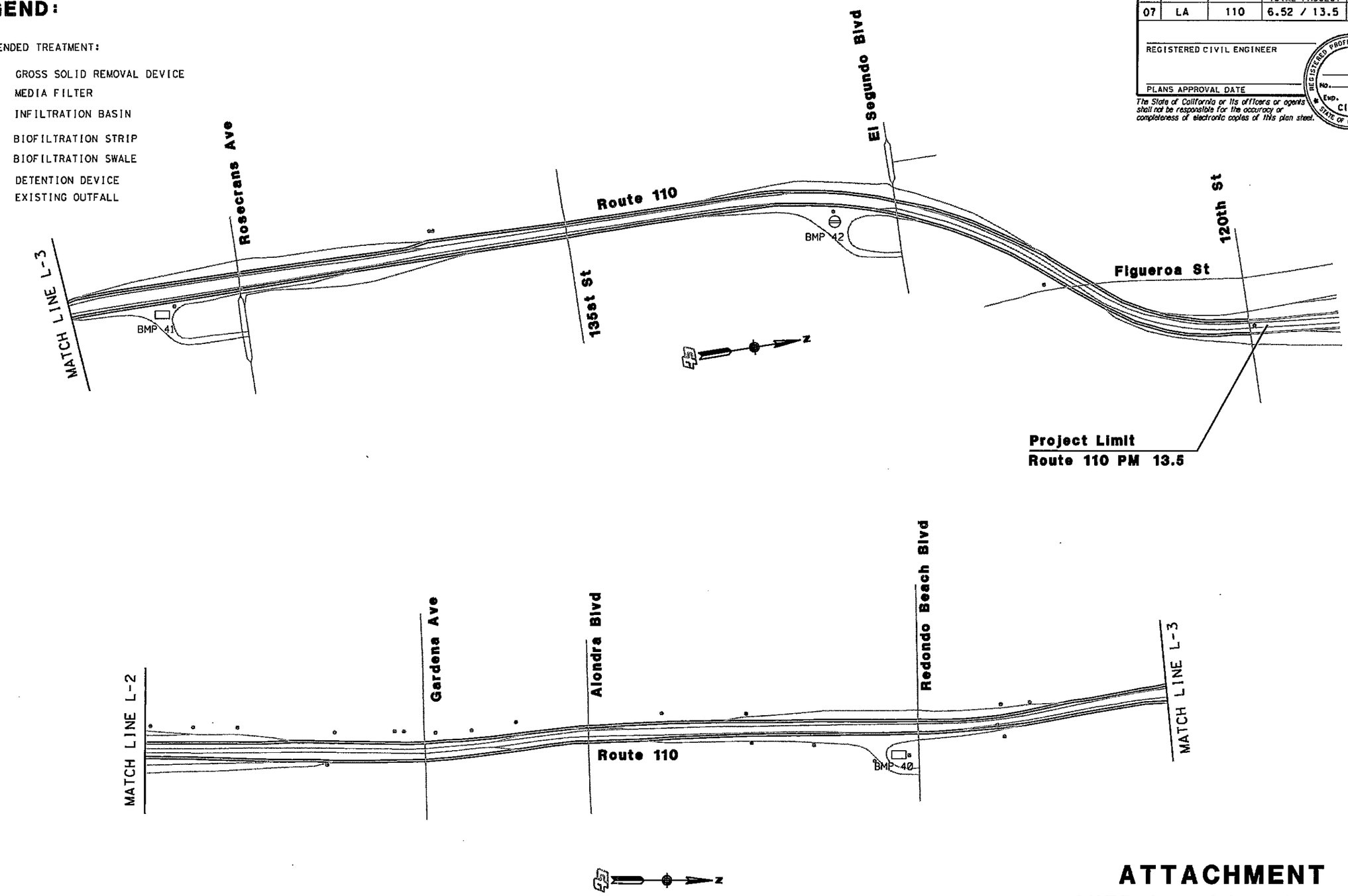
LEGEND:

RECOMMENDED TREATMENT:

- GROSS SOLID REMOVAL DEVICE
- MEDIA FILTER
- INFILTRATION BASIN
- BIOFILTRATION STRIP
- BIOFILTRATION SWALE
- DETENTION DEVICE
- EXISTING OUTFALL



NOTE: THESE LOCATIONS ARE APPROXIMATE ONLY.

ATTACHMENT B
OUTFALL LOCATION PLAN
ROUTE LA-110

NO SCALE

L-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
PLANNING

PROJECT ENGINEER: ABDOL HAJIPOUR

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LAST REVISION 00-00-00

TIME PLOTTED => $$$$$$$$SYTIME$$$$$$$

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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DGN FILE => $$$$$$$$$$$DGNSPEC$$$$$$$$$$$

CU 1786

EA 28670K

OutFall Location Layout(2nd Draft).dgn 5/24/2011 10:19:29 AM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	405	8.70 / 22.47		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NO. EXP. CIVIL STATE OF CALIFORNIA

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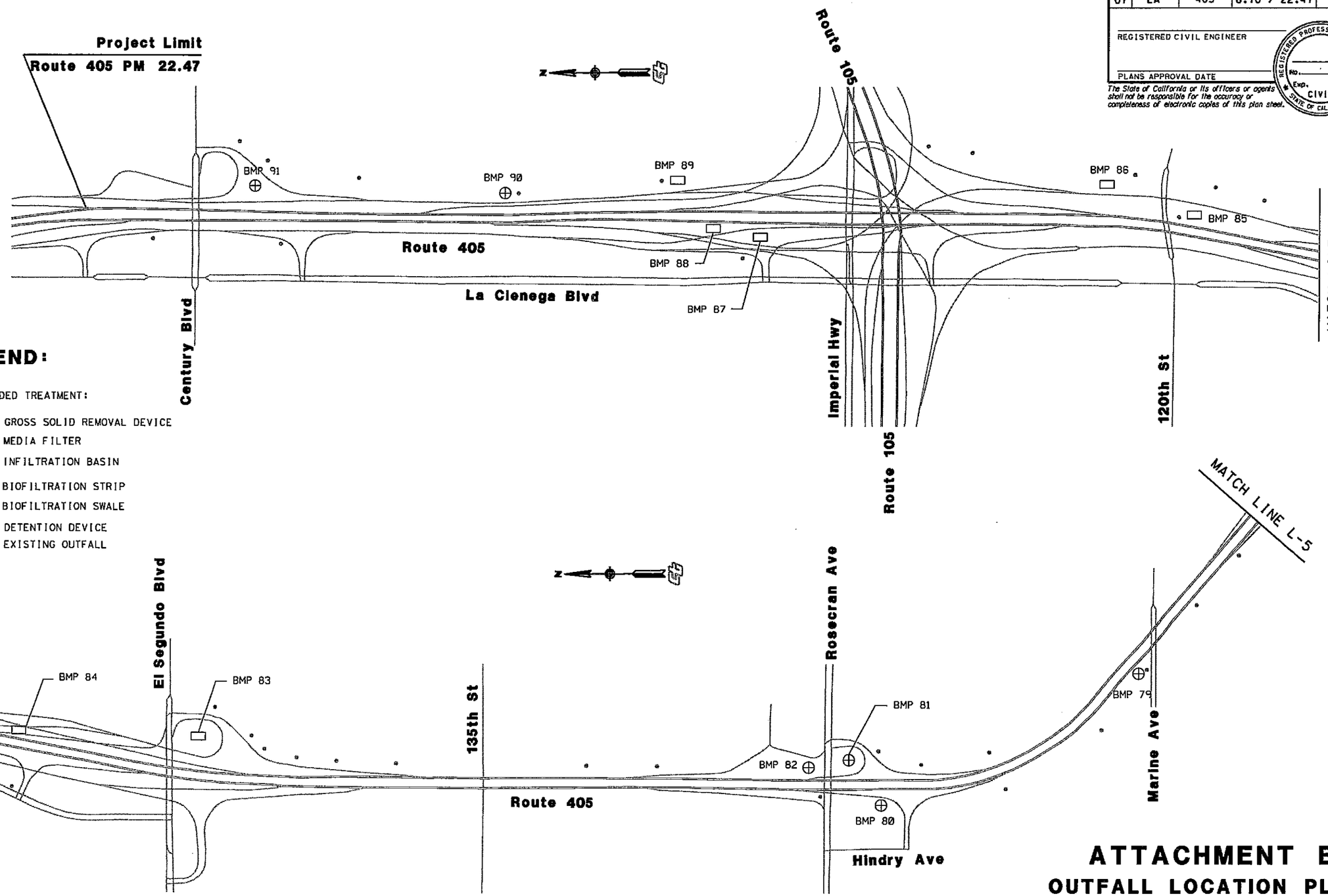

LEGEND:

RECOMMENDED TREATMENT:

- GROSS SOLID REMOVAL DEVICE
- MEDIA FILTER
- INFILTRATION BASIN
- BIOFILTRATION STRIP
- BIOFILTRATION SWALE
- DETENTION DEVICE
- EXISTING OUTFALL

NOTE: THESE LOCATIONS ARE APPROXIMATE ONLY.

ATTACHMENT B
OUTFALL LOCATION PLAN
ROUTE LA-405

NO SCALE

L-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
PLANNING
Caltrans

PROJECT ENGINEER: ABDOL HAJIPOUR

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LAST REVISION 00-00-00

TIME PLOTTED => $$$$$$$SYTIME$$$$$$

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => $$$$$$$USER$$$$$$
DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$$

CU 1786

EA 28670K

OutFall Location Layout(2nd Draft)_NU.dgn 6/1/2011 12:46:31 PM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	405	8.70 / 22.47		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NO. EXP. CIVIL STATE OF CALIFORNIA

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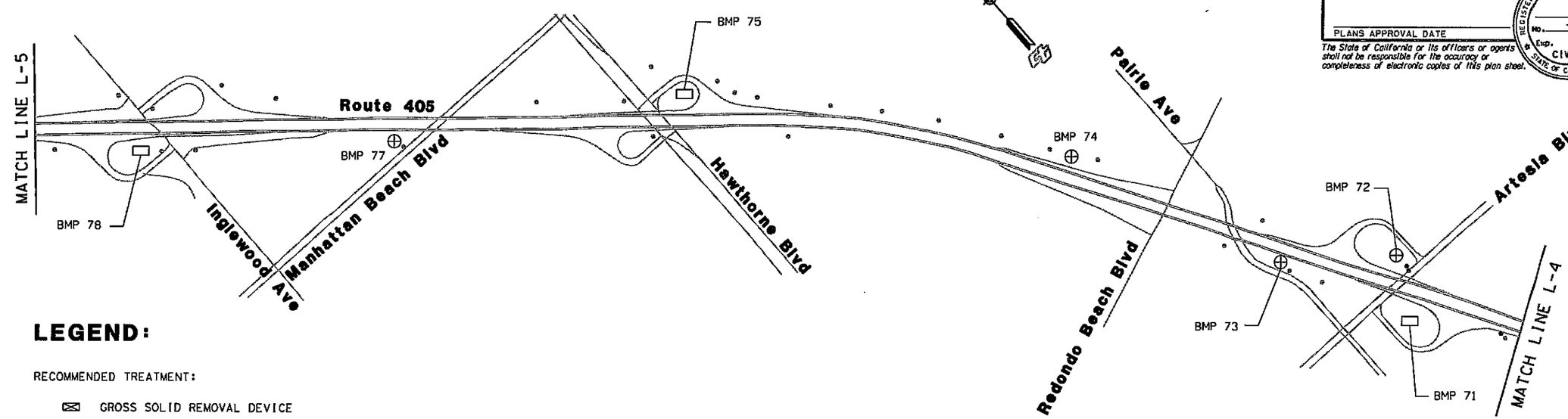
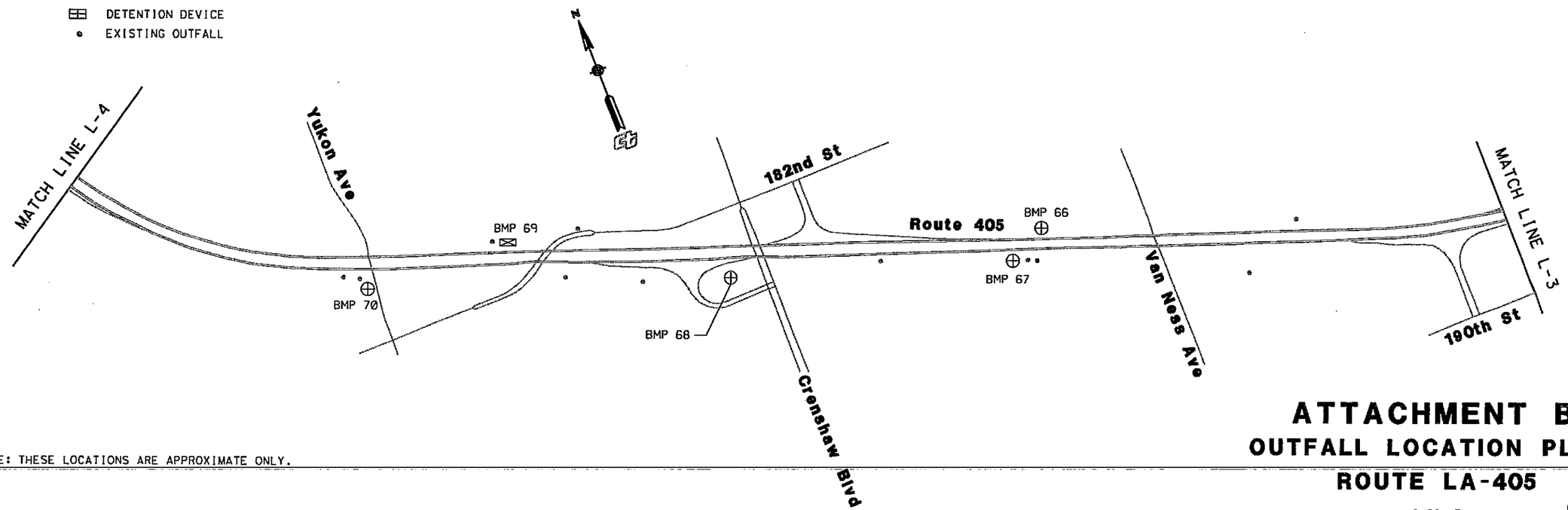


LEGEND:

RECOMMENDED TREATMENT:

- GROSS SOLID REMOVAL DEVICE
- MEDIA FILTER
- INFILTRATION BASIN
- BIOFILTRATION STRIP
- BIOFILTRATION SWALE
- DETENTION DEVICE
- EXISTING OUTFALL



NOTE: THESE LOCATIONS ARE APPROXIMATE ONLY.

ATTACHMENT B
OUTFALL LOCATION PLAN
ROUTE LA-405

NO SCALE

L-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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PROJECT ENGINEER: ABDOL HAJIPOUR

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TIME PLOTTED => $$$$$$$SYTIME$$$$$$

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => $$$$$$$USER$$$$$$
DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$$

CU 1786

EA 28670K

OutFall Location Layout(2nd Draft)_NU.dgn 6/1/2011 12:46:24 PM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	405	8.70 / 22.47		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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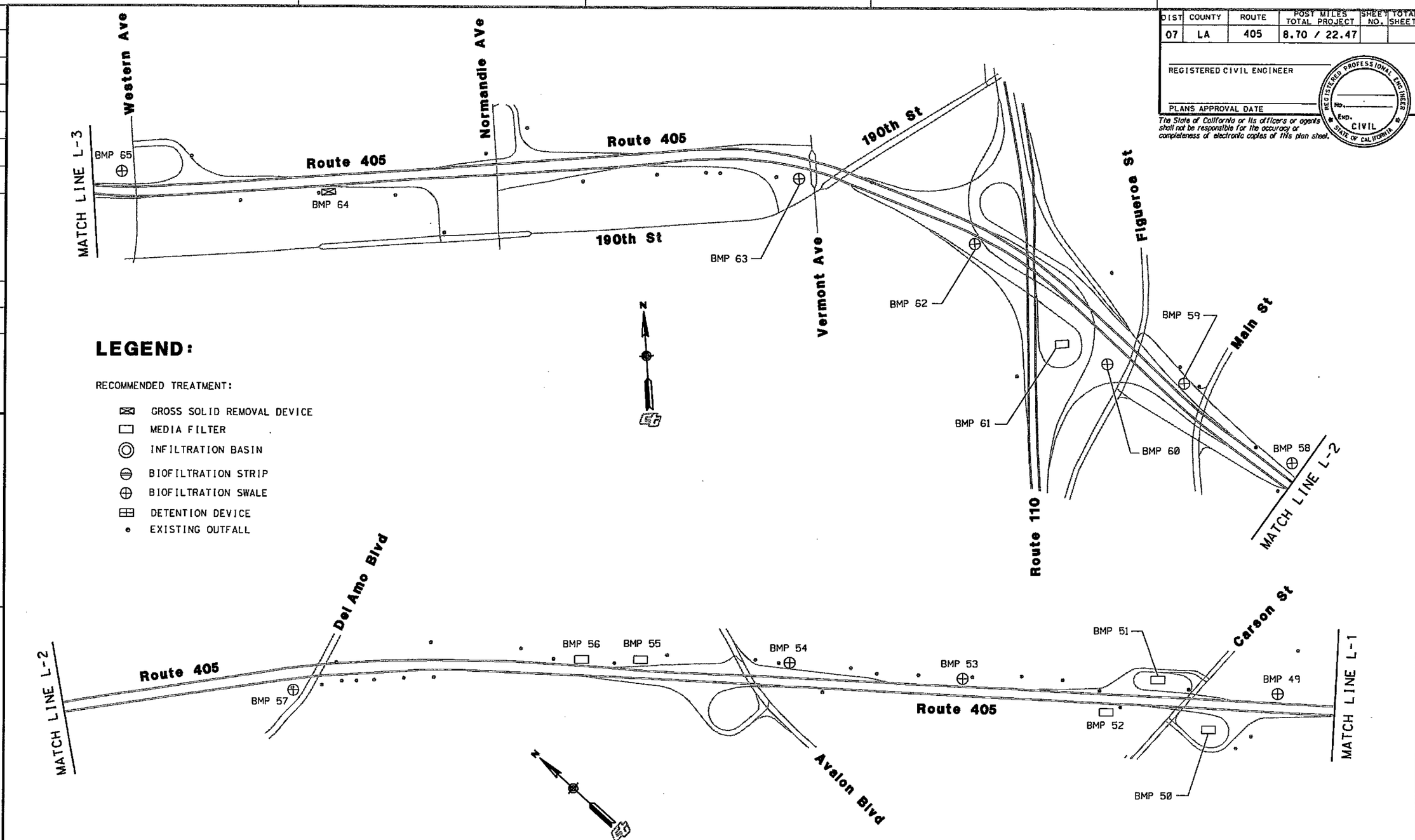

LEGEND:

RECOMMENDED TREATMENT:

- GROSS SOLID REMOVAL DEVICE
- MEDIA FILTER
- INFILTRATION BASIN
- BIOFILTRATION STRIP
- BIOFILTRATION SWALE
- DETENTION DEVICE
- EXISTING OUTFALL

NOTE: THESE LOCATIONS ARE APPROXIMATE ONLY.

ATTACHMENT B
OUTFALL LOCATION PLAN
ROUTE LA-405

NO SCALE

L-9

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

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PROJECT ENGINEER ABDOL HAJIPOUR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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LAST REVISION 00-00-00

TIME PLOTTED => $$$$$$$$SYTIME$$$$$$

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => $$$$$$USER$$$$$$

DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$$

CU 1786

EA 28670K

OutFall Location Layout(2nd Draft)_NU.dgn 6/1/2011 12:46:16 PM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	405	8.70 / 22.47		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NO. EXP. CIVIL STATE OF CALIFORNIA

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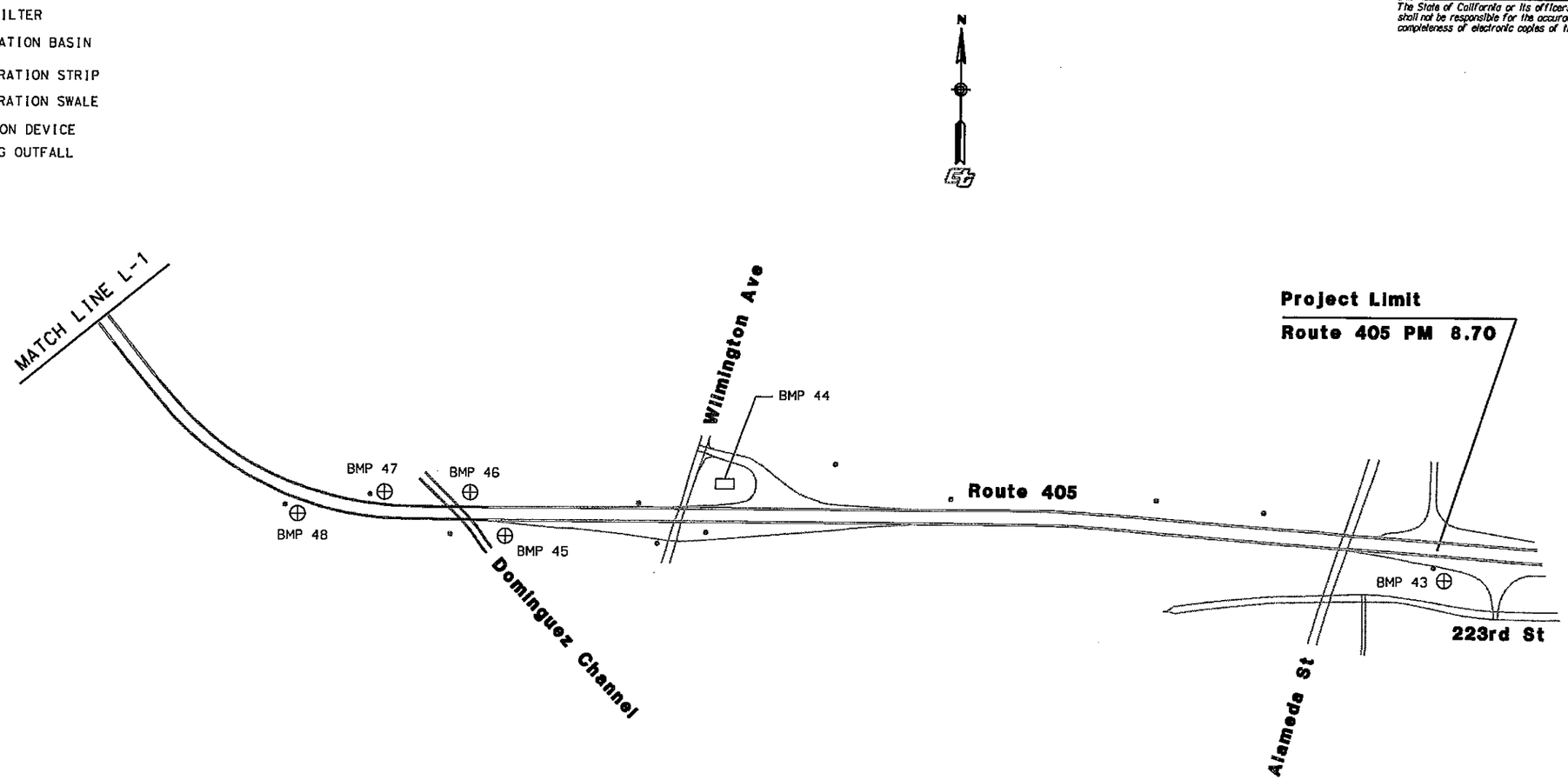
LEGEND:

RECOMMENDED TREATMENT:

- GROSS SOLID REMOVAL DEVICE
- MEDIA FILTER
- INFILTRATION BASIN
- BIOFILTRATION STRIP
- BIOFILTRATION SWALE
- DETENTION DEVICE
- EXISTING OUTFALL



NOTE: THESE LOCATIONS ARE APPROXIMATE ONLY.

ATTACHMENT B
OUTFALL LOCATION PLAN
ROUTE LA-405

NO SCALE

L-10

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

PROJECT ENGINEER ABDOL HAJIPOUR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PLANNING

TIME PLOTTED => $$$$$$$SYTIME$$$$$$

LAST REVISION 00-00-00

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => $$$$$$$USER$$$$$$

DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$$

CU 1786

EA 28670K

OutFall Location Layout(2nd Draft)_NU.dgn 6/1/2011 12:46:04 PM

ATTACHMENT C

Outfall Data Lists

Project: Trash TMDL Implementation Project

8/18/2011 2:16 PM

Location: Route 1, 91, 105, 110, and 405

Dominguez Channel Watershed in County of Los Angels

Prepared By: Office of Project and Special Studies

	FWY ID			PRELIMINARY TREATMENT BMP RECOMMENDATIONS (Per Field, As-built Review and Corridor Studies)						
NO.	OUTFALL ID.	BMP No./ Outfall PM	N-S Dir.	80% - 100 % WQV (3,476 - 4,345 ft^3) (ft3)	Drainage Area (acres)	Drainage Area (HA)	Recommended	Treated by BMP (Type)	Screened Out	Comments (See Notes)
				Route - 101						
1	1-0813	1/8.25	NB	0	1.18	0.48	✓	Biofiltration		
2	1-0825	1/8.25	NB		3.7	1.50	✓	Biofiltration		New
3	1-0827	2/8.25	SB	0	2.30	0.93	✓	Biofiltration		New
4	1-0829	3/8.28	NB		2.67	1.08	✓	Biofiltration		New
5	1-0829	4/8.28	SB		2.70	1.09	✓	Biofiltration		
6	1-0841		NB	0	0.73	0.29			✓	1 & 2
7	1-0850B		SB	0	1.04	0.42			✓	1 & 2
8	1-0850A		NB	0	1.15	0.46			✓	1 & 2
9	1-0856B		SB	0	0.97	0.39			✓	1 & 2
10	1-0866		NB	0	1.66	0.67			✓	1 & 2
11	91-0611	5-8.61	WB		3.44	1.39	✓	Biofiltration		New
12	91-0626		WB		0.546514	0.22				
13	91-0629		WB		0.00	0.00			✓	1 & 2
14	91-0636		WB		0.127325	0.05			✓	1 & 2
15	91-0640	6/6.40	EB		0.5	0.20	✓	Biofiltration		New
16	91-0643	7/6.43	WB		0.561123	0.23	✓	Biofiltration		
17	91-0650		WB		3.180568	1.29				
18	91-0671		WB		3.864704	1.56			✓	1 & 2
19	91-0687		EB		0.686082	0.28			✓	1 & 2
20	91-0704A	10/7.04	EB		0.780132	0.32	✓	Biofiltration		
21	91-0704B	8/7.04	WB		0.515816	0.21	✓	Biofiltration		
22	91-0711	11/7.11	EB		0.63	0.25	✓	Biofiltration		New
23	91-0714	9/7.14	WB		1.267987	0.51	✓	Biofiltration		
24	91-0729B		WB		2.634583	1.07			✓	1 & 2
25	91-0729A	10/7.29	EB		2.676956	1.08	✓	Biofiltration		
26	91-0746		EB		3.155229	1.28			✓	1 & 2
27	91-0747B	12/7.47	WB		2.40456	0.97	✓	Media Filter		
28	91-0747A	12/7.47	WB		0.890815	0.36	✓	Media Filter		
29	91-0754	13/7.54	WB		1.322774	0.54	✓	Media Filter		
30	91-0760	14/7.6	EB		TBD	TBD	✓	Biofiltration		
31	91-0766	13/7.66	WB		3.119715	1.26	✓	Media Filter		
32	91-0768	15/7.68	EB		2.554263	1.03	✓	Infiltration Basin		
33	91-0772	13/7.72	WB		1.146392	0.46	✓	Media Filter		
34	91-0783	15/7.83	EB		1.12184	0.45	✓	Infiltration Basin		
35	91-0790	15/7.9	EB		2.344045	0.95	✓	Infiltration Basin		
36	91-0805		WB		1.255338	0.51			✓	1 & 2
37	91-0806		EB		2.750909	1.11			✓	1 & 2
38	91-0820		EB		5.536263	2.24			✓	1 & 2
39	105-0137		WB		2.481023	1.00			✓	1 & 2
40	105-0150		WB		23.021049	9.32			✓	1 & 2
41	105-0200		EB		21.458414	8.68			✓	1 & 2
42	105-0204	16/2.04	WB		1.266114	0.51	✓	Biofiltration		
43	105-0210		EB		4.194072	1.70			✓	1 & 2
44	105-0217		EB		0.553426	0.22			✓	1 & 2
45	105-0228		EB		2.678987	1.08			✓	1 & 2
46	105-0248	17/2.48	EB		2.186838	0.88	✓	Biofiltration		
47	105-0251	18/2.51	WB		4.776374	1.93	✓	Biofiltration		
48	105-0307		WB		37.321081	15.10			✓	1 & 2
49	105-0361		WB		34.836833	14.10			✓	1 & 2
50	107-0245		NB		4.131473	1.67			✓	1 & 2
51	107-0261		NB		1.091951	0.44			✓	1 & 2
52	107-0285		NB		3.739383	1.51			✓	1 & 2

53	107-0303		SB		0.926009	0.37			✓	1 & 2
54	107-0305		SB		2.725198	1.10			✓	1 & 2
55	107-0348		NB		4.708229	1.91			✓	1 & 2
56	107-0378		SB		4.795787	1.94			✓	1 & 2
57	107-0403		NB		2.431385	0.98			✓	1 & 2
58	107-0418		NB		2.46688	1.00			✓	1 & 2
59	107-0437		SB		1.444155	0.58			✓	1 & 2
60	107-0449		NB		1.814891	0.73			✓	1 & 2
61	107-0464		NB		2.597937	1.05			✓	1 & 2
62	107-0472		NB		0.81916	0.33			✓	1 & 2
63	107-0476		SB		0.879288	0.36			✓	1 & 2
64	110-0702	19/7.02	NB		22.828683	9.24	✓	Biofiltration		New
65	110-0703	19/7.03	NB		6.808996	2.76	✓	Biofiltration		New
66	110-0749	20/7.49	NB		3.777388	1.53	✓	Biofiltration		New
67	110-0794	21/7.94	NB		8.243338	3.34	✓	Biofiltration		
68	110-0794A	24 & 25/7.94	SB		1.4375	0.58	✓	Biofiltration/GSRD		
69	110-0794B	21/7.94	NB		TBD	TBD	✓	Biofiltration		
70	110-0795	22 & 23/7.95	NB		3.426113	1.39	✓	Biofiltration		
71	110-0798	24 & 25/7.98	SB		0.079394	0.03	✓	Biofiltration/ GRDS		
72	110-0813		NB		2.384964	0.97			✓	1 & 2
73	110-0826		NB		3.463892	1.40			✓	1 & 2
74	110-0835	26/8.35	NB		2.802796	1.13	✓	Media Filter		
75	110-0840	26/8.4	NB		2.035925	0.82	✓	Media Filter		
76	110-0847	27/8.47	SB		0.168669	0.07	✓	Biofiltration		
77	110-0866	27/8.66	SB		TBD	TBD	✓	Biofiltration		
78	110-0870	26/8.7	NB		4.199704	1.70	✓	Media Filter		
79	110-0892	28 & 29/8.92	SB		10.054259	4.07	✓	Biofiltration/ GRDS		
80	110-0898	28 & 29/8.98	SB		0.359127	0.15	✓	Biofiltration/ GRDS		
81	110-0904		NB		3.292943	1.33			✓	1 & 2
82	110-0907		SB		2.352053	0.95			✓	1 & 2
83	110-0907B		SB		0	0.00			✓	1 & 2
84	110-0912		NB		1.304331	0.53			✓	1 & 2
85	110-0917		NB		2.993769	1.21			✓	1 & 2
86	110-0918		NB		8.475309	3.43			✓	1 & 2
87	110-0956	30/9.66	SB		5.826432	2.36			✓	1 & 2
88	110-0966	30/9.66	NB		0.506518	0.20	✓	GSRD		
89	110-0967	31 & 32/9.67	NB		2.378008	0.96	✓	Biofiltration/ GRDS		
90	110-0968	31 & 32/9.68	NB		TBD	TBD	✓	Biofiltration/ GRDS		
91	110-0969	33/9.69	SB		1.803193	0.73	✓	Biofiltration		
92	110-0977	34 & 35/9.77	NB		0.556371	0.23	✓	Biofiltration/ GRDS		
93	110-0988	31 & 32/9.68	SB		7.900668	3.20	✓	Biofiltration/ GRDS		
94	110-0989	36/9.89	NB		5.226229	2.11	✓	Detention Device		
95	110-0990A	37/9.9	SB		TBD	TBD	✓	Media Filter		
96	110-0990B	36/9.9	NB		TBD	TBD	✓	Detention Device		
97	110-0997	37/9.97	SB		1.726749	0.70	✓	Media Filter		
98	110-1006	38 & 39/10.06	SB		1.394306	0.56	✓	Biofiltration/ GRDS		
99	110-1009		SB		0.924936	0.37			✓	1 & 2
100	110-1017		SB		1.829094	0.74			✓	1 & 2
101	110-1025		SB		0	0.00			✓	1 & 2
102	110-1034		SB		0.991853	0.40			✓	1 & 2
103	110-1035		NB		2.408148	0.97			✓	1 & 2
104	110-1044		SB		0.710765	0.29			✓	1 & 2
105	110-1045		SB		0.373202	0.15			✓	1 & 2
106	110-1049		SB		2.112385	0.85			✓	1 & 2
107	110-1055		SB		1.923571	0.78			✓	1 & 2
108	110-1061		SB		6.570743	2.66			✓	1 & 2
109	110-1089		SB		1.725828	0.70			✓	1 & 2
110	110-1095		SB		1.103827	0.45			✓	1 & 2
111	110-1097		NB		2.114217	0.86			✓	1 & 2
112	110-1112		NB		4.375782	1.77			✓	1 & 2
113	110-1125		NB		3.185309	1.29			✓	1 & 2

114	110-1125A	42/11.25	NB		2.04	0.83	✓	Media Filter		
115	110-1125B		NB		1.505389	0.61				1 & 2
116	110-1133		SB		0.584181	0.24			✓	1 & 2
117	110-1136		SB		18.42069	7.45			✓	1 & 2
118	110-1137A		NB		0.636417	0.26			✓	1 & 2
119	110-1137B		NB		3.002006	1.21			✓	1 & 2
120	110-1218		SB		1.965359	0.80			✓	1 & 2
121	110-1187	41/11.87	NB		8.233	2.61	✓	Media Filter		New
122	110-1219		SB		24.535548	9.93			✓	1 & 2
123	110-650	40/12.65	NB		1.48	0.60	✓	Media Filter		New
124	110-1313		NB		9.555046	3.87			✓	1 & 2
125	110-1347		SB		3.852299	1.56			✓	1 & 2
126	405-0870	43/8.7	SB		TBD	TBD	✓	Biofiltration		
127	405-0890	44/8.9	NB		TBD	TBD	✓	Media Filter		
128	405-0908	44/9.08	NB		TBD	TBD	✓	Biofiltration		
129	405-0926	44/9.26	NB		TBD	TBD	✓	Biofiltration		
130	405-0939	44/9.39	NB		TBD	TBD	✓	Biofiltration		
131	405-0958	44/9.58	SB		TBD	TBD	✓	Biofiltration		
132	405-0971	45/9.71	SB		TBD	TBD	✓	Biofiltration		
133	405-0977	46/9.77	NB		TBD	TBD	✓	Biofiltration		
134	405-0985	48/9.85	SB		TBD	TBD	✓	Biofiltration		
135	405-0994	47/9.94	NB		TBD	TBD	✓	Biofiltration		
136	405-1003	48/10.03	SB		TBD	TBD	✓	Biofiltration		
137	405-1040	49/10.4	NB		TBD	TBD	✓	Biofiltration		
138	405-1046	50/10.46	SB		TBD	TBD	✓	Media Filter		
139	405-1048	50/10.48	SB		TBD	TBD	✓	Media Filter		
140	405-1055B	51/10.55	NB		TBD	TBD	✓	Media Filter		
141	405-1066	52/10.66	SB		TBD	TBD	✓	Media Filter		
142	405-1069	51/10.69	NB		TBD	TBD	✓	Media Filter		
143	405-1076	52/10.76	NB		TBD	TBD	✓	Media Filter		
144	405-1082	52/10.82	NB		TBD	TBD	✓	Media Filter		
145	405-1090	52/10.9	NB		TBD	TBD	✓	Media Filter		
146	405-1098	52/10.98	NB		TBD	TBD	✓	Biofiltration		
147	405-1109	53/11.09	NB		TBD	TBD	✓	Biofiltration		
148	405-1113B	54/11.13	SB		TBD	TBD	✓	Biofiltration		
149	405-1113	54/11.13	SB		TBD	TBD	✓	Biofiltration		
150	405-1121	54/11.21	NB		TBD	TBD	✓	Biofiltration		
151	405-1124	54/11.24	NB		TBD	TBD	✓	Biofiltration		
152	405-1138	55/11.38	NB		TBD	TBD	✓	Media Filter		
153	405-1147	56/11.47	NB		TBD	TBD	✓	Media Filter		
154	405-1156	56/11.56	NB		TBD	TBD	✓	Media Filter		
155	405-1156B	57/11.56	SB		0.285322	0.12	✓	Biofiltration		
156	405-1161	56/11.61	NB		TBD	TBD	✓	Biofiltration		
157	405-1166	57/11.66	SB		0.229523	0.09	✓	Biofiltration		
158	405-1170	56/11.7	SB		TBD	TBD	✓	Biofiltration		
159	405-1175	57/11.75	SB		0.337745	0.14	✓	Biofiltration		
160	405-1179	57/11.79	NB		TBD	TBD	✓	Biofiltration		
161	405-1179B	57/11.79	SB		0.305673	0.12	✓	Biofiltration		
162	405-1184	57/11.84	SB		0.240165	0.10	✓	Biofiltration		
163	405-1189	57/11.89	SB		0.542824	0.22	✓	Biofiltration		
164	405-1194	57/11.94	NB		11.198696	4.53	✓	Biofiltration		
165	405-1247	58/12.47	NB		0.756074	0.31	✓	Biofiltration		
166	405-1247B	58/12.47	SB		1.813471	0.73	✓	Biofiltration		
167	405-1265	59/12.65	NB		1.317197	0.53	✓	Biofiltration		
168	405-1269	59/12.69	NB		2.751685	1.11	✓	Biofiltration		
169	405-1290	60/12.9	NB		0.689633	0.28	✓	Biofiltration		
170	405-1297	61/12.97	SB		TBD	TBD	✓	Media Filter		
171	405-1328	62/13.28	NB		3.249258	1.31	✓	Biofiltration		
172	405-1342	63/13.42	SB		0.503495	0.20	✓	Biofiltration		
173	405-1351	63/13.51	SB		3.523417	1.43	✓	Biofiltration		
174	405-1353	63/13.53	SB		2.054471	0.83	✓	Biofiltration		

175	405-1361	63/13.61	SB		2.025949	0.82	✓	Biofiltration		
176	405-1371	63/13.71	SB		2.613147	1.06	✓	Biofiltration	8/18/2011 2:16 PM	
177	405-1380	63/13.8	SB		0.413919	0.17	✓	Biofiltration		
178	405-1386	63/13.86	SB		0.523921	0.21	✓	Biofiltration		
179	405-1394	64/13.94	SB		0.90757	0.37	✓	GSRD		
180	405-1401	64/14.01	SB		3.043526	1.23	✓	GSRD		
181	405-1413	64/14.13	SB		2.435256	0.99	✓	GSRD		
182	405-1426	64/14.26	SB		4.419955	1.79	✓	GSRD		
183	405-1434	64/14.34	NB		1.9671	0.80	✓	GSRD		
184	405-1475	65/14.75	NB		1.9671	0.80	✓	Biofiltration		
185	405-1479	65/14.79	SB		3.178562	1.29	✓	Biofiltration		
186	405-1509	66/15.09	NB		1.701658	0.69	✓	Biofiltration		
187	405-1511	67/15.11	SB		7.490948	3.03	✓	Biofiltration		
188	405-1530	67/15.3	SB		1.160926	0.47	✓	Biofiltration		
189	405-1562	68/15.62	SB		1.253289	0.51	✓	Biofiltration		
190	405-1573	69/15.73	NB		2.851609	1.15	✓	GSRD		
191	405-1576	69/15.76	SB		2.356534	0.95	✓	GSRD		
192	405-1600	70/16	SB		0.496334	0.20	✓	Biofiltration		
193	405-1602	70/16.02	SB		7.918652	3.20	✓	Biofiltration		
194	405-1642	71/16.42	SB		2.099917	0.85	✓	Media Filter		
195	405-1644	71/16.44	SB		1.255021	0.51	✓	Media Filter		
196	405-1655	72/16.55	NB		2.565109	1.04	✓	Biofiltration		
197	405-1659	72/16.59	NB		3.965915	1.60	✓	Biofiltration		
198	405-1666	73/16.66	NB		0.445412	0.18	✓	Biofiltration		
199	405-1671	73/16.71	SB		1.160315	0.47	✓	Biofiltration		
200	405-1677	73/16.77	NB		0.662016	0.27	✓	Biofiltration		
201	405-1700	74/17	NB		2.281025	0.92	✓	Biofiltration		
202	405-1707	74/17.07	NB		2.193398	0.89	✓	Biofiltration		
203	405-1713	74/17.13	NB		0.642522	0.26	✓	Biofiltration		
204	405-1722	75/17.22	NB		0.711426	0.29	✓	Media Filter		
205	405-1727	75/17.27	NB		1.030542	0.42	✓	Media Filter		
206	405-1736	75/17.36	SB		3.699422	1.50	✓	Media Filter		
207	405-1742	75/17.42	SB		0.942004	0.38	✓	Media Filter		
208	405-1746	75/17.46	NB		0.807453	0.33	✓	Media Filter		
209	405-1749	75/17.49	NB		1.839061	0.74	✓	Media Filter		
210	405-1751	75/17.51	NB		0.51358	0.21	✓	Media Filter		
211	405-1758	75/17.58	NB		1.512674	0.61	✓	Media Filter		
212	405-1760		SB		2.011654				✓	1 & 2
213	405-1763		NB		0.759356				✓	1 & 2
214	405-1774		NB		4.816398				✓	1 & 2
215	405-1796	77/17.96	SB		4.773765	1.93	✓	Biofiltration		
216	405-1809	78/18.09	NB		2.55971	1.04	✓	Media Filter		
217	405-1816	78/18.16	NB		0.251112	0.10	✓	Media Filter		
218	405-1821	78/18.21	SB		0.578663	0.23	✓	Media Filter		
219	405-1823	78/18.23	SB		2.23036	0.90	✓	Media Filter		
220	405-1826	78/18.26	NB		0.813162	0.33	✓	Media Filter		
221	405-1829	78/18.29	NB		0.747107	0.30	✓	Media Filter		
222	405-1838	78/18.38	SB		2.044113	0.83	✓	Media Filter		
223	405-1847	78/18.47	SB		1.695781	0.69	✓	Media Filter		
224	405-1857	78/18.57	SB		1.836615	0.74	✓	Media Filter		
225	405-1869	79/18.69	SB		3.103555	1.26	✓	Biofiltration		
226	405-1881	79/18.81	SB		3.464865	1.40	✓	Biofiltration		
227	405-1896	79/18.96	SB		4.576436	1.85	✓	Biofiltration		
228	405-1897	81/18.97	NB		1.364895	0.55	✓	Biofiltration		
229	405-1909	81/19.09	NB		0.152046	0.06	✓	Biofiltration		
230	405-1915	81/19.15	NB		0.225773	0.09	✓	Biofiltration		
231	405-1924	80/19.24	SB		3.417125	1.38	✓	Biofiltration		
232	405-1949	82/19.49	NB		3.934292	1.59	✓	Biofiltration		
233	405-1960	82/19.6	NB		3.007471	1.22	✓	Biofiltration		
234	405-1988	83/19.88	NB		1.584677	0.64	✓	Media Filter		
235	405-1997	83/19.97	NB		5.233863	2.12	✓	Media Filter		

236	405-2004	83/20.04	NB		3.946138	1.60	✓	Media Filter		
237	405-2009	83/20.09	NB		0.640671	0.26	✓	Media Filter	8/18/201	1 2:16 PM
238	405-2011	83/20.11	NB		0.339684	0.14	✓	Media Filter		
239	405-2017	83/20.17	NB		1.49208	0.60	✓	Media Filter		
240	405-2046	84/20.46	SB		5.817602	2.35	✓	Media Filter		
241	405-2061	85/20.61	NB		2.546885	1.03	✓	Media Filter		
242	405-2069	85/20.69	NB		1.581234	0.64	✓	Media Filter		
243	405-2074	85/20.74	NB		1.126055	0.46	✓	Media Filter		
244	405-2081	86/20.81	NB		2.459191	1.00	✓	Media Filter		
245	405-2104	86/21.04	NB		11.732929	4.75	✓	Media Filter		
246	405-2111	86/21.11	NB		1.898889	0.77	✓	Media Filter		
247	405-2148	89/21.48	SB		9.243134	3.74	✓	Media Filter		
248	405-2176	90/21.76	SB		15.264696	6.18	✓	Biofiltration		
249	405-2190	87 & 88/21.9	SB		0.939354	0.38	✓	Media Filter		
250	405-2198	91/21.98	NB		16.350916	6.62	✓	Biofiltration		
251	405-2212	91/22.12	SB		1.091151	0.44	✓	Biofiltration		
252	405-2219	91/22.19	NB		0.516123	0.21	✓	Biofiltration		
253	405-2229		NB		TBD	TBD		Biofiltration	✓	1 & 2
Total of Area Treated					430.50					

Route	1	91	105	107	110	405	Total
			699.44				
GSRD (Linear)					6	2	8
Media Filter		2			4	17	23
Bioswale	4	5			10	29	48
Biostrip		3	3		3	0	9
Infiltration Basin		1			0	0	1
Detention Basin					1	0	1
Total Recommended BMPs	4	11	3		24	48	90

Project Total

Total Outfalls treated: 173

Total Outfalls not treated: 72

(' The number of recommended BMPs differs from the number of outfalls treated because some outfalls have been combined.)

Notes:

* Post Mile, PM is approximated

1. Proposed BMP does not work with culvert, ditch, open channel, overside drain, non-circular outlet, pump station, inlet.
2. Proposed BMP not utilized due to Right of Way constraints.

CORRIDORS OUTFALL DATABASE

ROUTES: 1, 91, 105, 107, 110, and 405

No.	Outfall ID	Post Mile	DIRECTION	Cross Street	CITY NAME	OutFall TYPE	Outfall SIZE (in.)	COMMENTS	SOIL TYPE	SURFACE TYPE	RWBODY	DRAIN AREA (m2)	DRAIN AREA (acres)	HYDRO AREA
1	1-0813	8.13	NB	Judson Ave	LongBeach	RCP	15		D	Asphalt - 90%, Natural Vegetation - 10%	Dominguez Channel	4763.48	1.1771	405.12
2	1-0829	8.29	NB	103 Freeway	LongBeach	RCP	18		D	Asphalt - 100%	Dominguez Channel	2740.93	0.677296	405.12
3	1-0841	8.41	NB	East Rd	LongBeach	RCP	18		D	Asphalt - 100%	Dominguez Channel	2937.33	0.725827	405.12
4	1-0850B	8.50	SB	East Rd	LongBeach	CMP	15		D	Asphalt - 60%, Natural Vegetation - 40%	Dominguez Channel	4222.77	1.043465	405.12
5	1-0850A	8.50	NB	East Rd	LongBeach	CMP	15		D	Asphalt - 60%, Natural Vegetation - 40%	Dominguez Channel	4642.19	1.147105	405.12
6	1-0856B	8.56	SB	103 Freeway	Los Angeles	RCP	15		D	Asphalt - 50%, Natural Vegetation - 50%	Dominguez Channel	3913.57	0.967061	405.12
7	1-0866	8.66	NB	103 Freeway	Los Angeles	RCP	24		D	Asphalt - 100%	Dominguez Channel	6734.90	1.664222	405.12
8	91-0626	6.26	WB	Harbor Freeway	Los Angeles	RCP	18	FINAL OUTFALL 91-N018	D	Concrete - 50%, Asphalt-50%	Dominguez Channel	2211.67	0.546514	405.12
9	91-0629	6.29	WB	Harbor Freeway	Los Angeles	APC	18	FINAL OUTFALL 91-N018	D	Concrete - 50%, Asphalt-50%	Dominguez Channel	0.00	0.00	405.12
10	91-0636	6.36	WB	Harbor Freeway	Los Angeles	APC	24	FINAL OUTFALL 91-N018	D	Concrete - 100%	Dominguez Channel	515.27	0.127325	405.12
11	91-0643	6.43	WB	Harbor Freeway	Los Angeles	APC	24	FINAL OUTFALL 91-N018	D	Concrete - 100%	Dominguez Channel	2270.79	0.561123	405.12
12	91-0650	6.5	WB	Figueroa Avenue	Carson	RCP	30		D	Concrete - 90%, Natural Vegetation-10%	Dominguez Channel	12871.35	3.180568	405.12
13	91-0671	6.71	WB	Broadway Blvd	Carson	RCP	36	FINAL INLET TAKEN AS OUTFALL LOCATIC	D	Concrete - 100%	Dominguez Channel	15639.97	3.864704	405.12
14	91-0687	6.87	EB	Main St	Carson	RCP	24	FINAL INLET TAKEN AS OUTFALL LOCATIC	D	Concrete - 100%	Dominguez Channel	2776.49	0.686082	405.12
15	91-0704A	7.04	EB	Main St	Carson	CULVERT	N/A	FINAL INLET TAKEN AS OUTFALL LOCATIC	D	Asphalt - 100%	Dominguez Channel	3157.10	0.780132	405.12
16	91-0704B	7.04	WB	Main St	Carson	INLET	N/A	FINAL OUTFALL 91-N023	D	Concrete - 50%, Asphalt-50%	Dominguez Channel	2087.44	0.515816	405.12
17	91-0714	7.14	WB	E/O Main St	Carson	INLET	N/A	FINAL INLET TAKEN AS OUTFALL LOCATIC	D	Concrete-90%, Asphalt - 10%	Dominguez Channel	5131.38	1.267987	405.12
18	91-0729B	7.29	WB	Avalon Blvd	Carson	CSP	12	OUTFALL LOCATED IN UNSAFE PLACE	D	Concrete -100%	Dominguez Channel	10661.82	2.634583	405.12
19	91-0729A	7.29	EB	Avalon Blvd	Carson	RCP	36	OUTFALL LOCATED IN UNSAFE PLACE	D	Concrete - 100%	Dominguez Channel	10833.30	2.676956	405.12
20	91-0746	7.46	EB	S Frontage Rd & Avalon	Carson	CMP	24		D	Concrete - 100%	Dominguez Channel	12768.81	3.155229	405.12
21	91-0747B	7.47	WB	Avalon Blvd	Carson	RCP	18		D	Asphalt-10%, Natural Vegetation - 90%	Dominguez Channel	9730.95	2.40456	405.12

No.	Outfall ID	Post Mile	DIRECTION	Cross Street	CITY NAME	OutFall TYPE	Outfall SIZE (in.)	COMMENTS	SOIL TYPE	SURFACE TYPE	RWBODY	DRAIN AREA (m2)	DRAIN AREA (acres)	HYDRO AREA
22	91-0747A	7.47	WB	Avalon Blvd	Carson	RCP	24		D	Natural Vegetation - 100%	Dominguez Channel	3605.02	0.890815	405.12
23	91-0754	7.54	WB	Avalon Blvd	Carson	RCP	18		D	Asphalt-100%	Dominguez Channel	5353.10	1.322774	405.12
24	91-0760	7.6	EB	Between Avalon & Central A	Carson	RCP	96	FINAL INLET TAKEN AS OUTFALL LOCATIC	D	Concrete - 85%, Asphalt-10%	Dominguez Channel	0.00	0.00	405.12
25	91-0766	7.66	WB	E/o Avalon Blvd	Carson	RCP	18	FINAL INLET TAKEN AS OUTFALL LOCATIC	D	Concrete - 100%	Dominguez Channel	12625.09	3.119715	405.12
26	91-0768	7.68	EB	Between Avalon & Central A	Carson	CSP	18		D	Concrete - 80%, Asphalt - 10%	Dominguez Channel	10336.78	2.554263	405.12
27	91-0772	7.72	WB	Between Avalon & Central A	Carson	RCP	18	FINAL INLET TAKEN AS OUTFALL LOCATIC	D	Asphalt-100%	Dominguez Channel	4639.30	1.146392	405.12
28	91-0783	7.83	EB	Lysander Dr	Carson	APC	18	FINAL INLET TAKEN AS OUTFALL LOCATIC	D	Concrete-80%, Asphalt-20%	Dominguez Channel	4539.94	1.12184	405.12
29	91-0790	7.9	EB	Lysander Dr	Carson	APC	18		D	Concrete - 70%, Asphalt-10%	Dominguez Channel	9486.05	2.344045	405.12
30	91-0805	8.05	WB	W/o Central Av	Carson	RCP	18		D	Asphalt-70%, Natural Vegetation-30%	Dominguez Channel	5080.19	1.255338	405.12
31	91-0806	8.06	EB	Bauchard Ct	Carson	RCP	18		D	Concrete-80%, Natural Vegetation-20%	Dominguez Channel	11132.58	2.750909	405.12
32	91-0820	8.2	EB	Wellfleet Av	Carson	RCP	24		D	Concrete-80%, Asphalt-20%	Dominguez Channel	22404.55	5.536263	405.12
33	105-0137	1.37	WB	W Of Aviation Blvd	El Segundo	RCP	30	FINAL INLET TAKEN AS OUTFALL LOC	D	Concrete -100%	Dominguez Channel	10040.38	2.481023	405.12
34	105-0150	1.5	WB	Aviation Blvd	El Segundo	RCP	60X72		D	Concrete -100%	Dominguez Channel	93163.26	23.02105	405.12
35	105-0200	2	EB	La Cienega Blvd	El Segundo	RCP	24		D	Concrete -100%	Dominguez Channel	86839.48	21.45841	405.12
36	105-0204	2.04	WB	La Cienega Blvd	El Segundo	RCP	24		D	Asphalt- 100%	Dominguez Channel	5123.80	1.266114	405.12
37	105-0210	2.1	EB	Route 405 Freeway	Hawthorne	CMP	24		D	Concrete -100%	Dominguez Channel	16972.88	4.194072	405.12
38	105-0217	2.17	EB	Felton Ave	Hawthorne	RCP	24		D	Asphalt - 100%	Dominguez Channel	2239.64	0.553426	405.12
39	105-0228	2.28	EB	Felton Av	s Angeles County Uni	RCP	30		D	Asphalt-100%	Dominguez Channel	10841.52	2.678987	405.12
40	105-0248	2.48	EB	Inglewood Av	s Angeles County Uni	RCP	24		D	Concrete - 60%, Asphalt-40%	Dominguez Channel	8849.86	2.186838	405.12
41	105-0251	2.51	WB	Inglewood Av	s Angeles County Uni	RCP	24		D	Asphalt - 100%	Dominguez Channel	19329.38	4.776374	405.12
42	105-0307	3.07	WB	Hawthorne Blvd	Hawthorne	N/A	N/A	PICTURE ID 105-N001	D	Concrete - 90%, Natural Vegetation-10%	Dominguez Channel	151033.68	37.32108	405.12
43	105-0361	3.61	WB	Prairie Av	Hawthorne	N/A	N/A	PICTURE ID 105-N002	D	Concrete - 90%, Natural Vegetation-10%	Dominguez Channel	140980.24	34.83683	405.12
44	107-0245	2.45	NB	Emerald St	Torrance	CMP	30		D	Asphalt - 100%	Santa Monica Bay	16719.55	4.131473	405.12
45	107-0261	2.61	NB	Emerald St	Torrance	CMP	18		D	Asphalt - 100%	Santa Monica Bay	4418.99	1.091951	405.12
46	107-0285	2.85	NB	Spencer St	Torrance	CMP	24		D	Asphalt - 100%	Santa Monica Bay	15132.81	3.739383	405.12
47	107-0303	3.03	SB	Del Amo Blvd	Torrance	CMP	24	FINAL INLET TAKEN AS OUTFALL LOC	D	Asphalt - 100%	Santa Monica Bay	3747.44	0.926009	405.12
48	107-0305	3.05	SB	Del Amo Blvd	Torrance	CMP	N/A	FINAL INLET TAKEN AS OUTFALL LOC	D	Asphalt - 100%	Santa Monica Bay	11028.53	2.725198	405.12
49	107-0348	3.48	NB	Talisman St	Torrance	RCB	16X12	FINAL INLET TAKEN AS OUTFALL LOC	D	Asphalt - 100%	Santa Monica Bay	19053.60	4.708229	405.12

No.	Outfall ID	Post Mile	DIRECTION	Cross Street	CITY NAME	OutFall TYPE	Outfall SIZE (in.)	COMMENTS	SOIL TYPE	SURFACE TYPE	RWBODY	DRAIN AREA (m2)	DRAIN AREA (acres)	HYDRO AREA
50	107-0378	3.78	SB	190th Street	Torrance	CMP	42	FINAL INLET TAKEN AS OUTFALL LOC	D	Asphalt - 100%	Dominguez Channel	19407.94	4.795787	405.12
51	107-0403	4.03	NB	186th St	Torrance	CMP	18		D	Asphalt - 100%	Dominguez Channel	9839.51	2.431385	405.12
52	107-0418	4.18	NB	182nd Street	Torrance	CMP	18		D	Asphalt - 100%	Dominguez Channel	9983.15	2.46688	405.12
53	107-0437	4.37	SB	179th St	Torrance	RCB	48X12		D	Asphalt - 100%	Dominguez Channel	5844.31	1.444155	405.12
54	107-0449	4.49	NB	178th St	Torrance	RCP	18	NO INLETS FOUND	D	Asphalt - 100%	Dominguez Channel	7344.63	1.814891	405.12
55	107-0464	4.64	NB	176th St	Torrance	CMP	24		D	Asphalt - 100%	Dominguez Channel	10513.52	2.597937	405.12
56	107-0472	4.72	NB	Artesia Blvd	Torrance	CMP	24		D	Asphalt - 100%	Dominguez Channel	3315.04	0.81916	405.12
57	107-0476	4.76	SB	Artesia Blvd	Torrance	CMP	24		D	Asphalt - 100%	Dominguez Channel	3558.37	0.879288	405.12
58	110-0702	7.02	NB	Javelin Street	Carson	RCP	54		D	Concrete - 90%, Asphalt -5%	Dominguez Channel	92384.78	22.82868	405.12
59	110-0703	7.03	NB	Javelin Street	Carson	RCP	30		D	Concrete - 90%, Asphalt -5%	Dominguez Channel	27555.14	6.808996	405.12
60	110-0749	7.49	NB	Javelin Street	Carson	RCP	24	FINAL OUTFALL 110-0794 ACCORDING	D	Concrete - 100%	Dominguez Channel	15286.61	3.777388	405.12
61	110-0794	7.94	NB	Del Amo Blvd	Carson	RCB	144X144	SUBOUTFALLS ARE 110-0749, 110-079	D	Concrete - 90%, Asphalt-5%	Dominguez Channel	33359.74	8.243338	405.12
62	110-0794A	7.94	SB	Del Amo Blvd	Carson	RCP	24	FINAL OUTFALL 110-0794	D	Asphalt - 70%, Natural Vegetation - 30%	Dominguez Channel	5817.38	1.4375	405.12
63	110-0794B	7.94	NB	Del Amo Blvd	Carson	RCP	54	FINAL OUTFALL 110-0794	D	Concrete - 90%, Asphalt -5%	Dominguez Channel	0.00	0	405.12
64	110-0795	7.95	NB	Del Amo Blvd	Carson	RCP	24	FINAL OUTFALL 110-0794	D	Concrete - 100%	Dominguez Channel	13865.04	3.426113	405.12
65	110-0798	7.98	SB	Del Amo Blvd	Los Angeles	RCP	24		D	Concrete - 100%	Dominguez Channel	321.30	0.079394	405.12
66	110-0813	8.13	NB	Del Amo Blvd	Carson	RCP	24		D	Concrete - 100%	Dominguez Channel	9651.65	2.384964	405.12
67	110-0826	8.26	NB	Francisco Street	Carson	RCB	84X48		D	Concrete - 100%	Dominguez Channel	14017.93	3.463892	405.12
68	110-0835	8.35	NB	Figueroa St	Carson	RCP	24	FINAL OUTFALL 110-0847	D	Concrete - 100%	Dominguez Channel	11342.56	2.802796	405.12
69	110-0840	8.4	NB	Figueroa St	Carson	RCP	24	FINAL OUTFALL 110-0847	D	Asphalt - 100%	Dominguez Channel	8239.13	2.035925	405.12
70	110-0847	8.47	SB	Rt 405 At Main Street	Carson	RCB	84X72		D	Concrete - 70%, Asphalt-10%	Dominguez Channel	682.58	0.168669	405.12
71	110-0866	8.66	SB	Hamilton Av	Los Angeles	RCP	24	FINAL OUTFALL 110-0847	D	Concrete - 60%, Natural Vegetation - 20%	Dominguez Channel	0.00	0	405.12
72	110-0870	8.7	NB	San Diego Freeway	Carson	RCP	24	FINAL OUTFALL 110-0847	D	Concrete - 50%, Natural Vegetation - 30%	Dominguez Channel	16995.67	4.199704	405.12
73	110-0892	8.92	SB	San Diego Freeway	Los Angeles	N/A	N/A		D	Concrete - 40%, Asphalt-30%	Dominguez Channel	40688.31	10.05426	405.12

No.	Outfall ID	Post Mile	DIRECTION	Cross Street	CITY NAME	OutFall TYPE	Outfall SIZE (in.)	COMMENTS	SOIL TYPE	SURFACE TYPE	RWBODY	DRAIN AREA (m2)	DRAIN AREA (acres)	HYDRO AREA
74	110-0898	8.98	SB	190th St	Los Angeles	RCP	24	FINAL OUTFALL 110-0904	D	Asphalt - 100%	Dominguez Channel	1453.34	0.359127	405.12
75	110-0904	9.04	NB	190th St	Los Angeles	RCB	96X36	LOCATION TAKEN WHERE OUTFALL I	D	Concrete - 80%, Asphalt -20%	Dominguez Channel	13326.12	3.292943	405.12
76	110-0907	9.07	SB	190th St	Los Angeles	CSB	18		D	Concrete - 90%, Natural Vegetation-10%	Dominguez Channel	9518.46	2.352053	405.12
77	110-0907B	9.07	SB	190th Street At Ramp 49	Los Angeles	RCP	24		D	Concrete - 90%, Natural Vegetation - 10%	Dominguez Channel	0.00	0	405.12
78	110-0912	9.12	NB	190th St	Los Angeles	RCP	24		D	Concrete - 100%	Dominguez Channel	5278.46	1.304331	405.12
79	110-0917	9.17	NB	190th St	Los Angeles	RCP	24		D	Concrete - 100%	Dominguez Channel	12115.40	2.993769	405.12
80	110-0918	9.18	NB	190th St	Los Angeles	RCP	42		D	Concrete - 100%	Dominguez Channel	34298.50	8.475309	405.12
81	110-0956	9.56	SB	Hoover St	Los Angeles	CMP	24	FINAL OUTFALL 110-0918	D	Concrete - 100%	Dominguez Channel	23578.83	5.826432	405.12
82	110-0966	9.66	NB	182nd Street	Los Angeles	CMP	24		D	Concrete - 40%, Asphalt -30%	Dominguez Channel	2049.81	0.506518	405.12
83	110-0967	9.67	NB	182nd St	Los Angeles	CSB	18		D	Concrete - 80%, Asphalt -20%	Dominguez Channel	9623.50	2.378008	405.12
84	110-0968	9.68	NB	182nd St	Los Angeles	APC	24	FINAL OUTFALL 110-0967	D	Natural Vegetation - 100%	Dominguez Channel	0.00	0	405.12
85	110-0969	9.69	SB	182nd St	Los Angeles	CSP	18		D	Concrete - 100%	Dominguez Channel	7297.29	1.803193	405.12
86	110-0977	9.77	NB	91 Freeway	Los Angeles	APC	24	FINAL OUTFALL 110-0988	D	Concrete - 70%, Natural Vegetation - 30%	Dominguez Channel	2251.56	0.556371	405.12
87	110-0988	9.88	SB	Route 91	Los Angeles	CONCRE	120X60		D	Concrete - 90%, Natural Vegetation - 10%	Dominguez Channel	31973.00	7.900668	405.12
88	110-0989	9.89	NB	Connector	Los Angeles	CMP	60	FINAL OUTFALL 110-0988	D	Concrete - 80%, Natural Vegetation - 20%	Dominguez Channel	21149.89	5.226229	405.12
89	110-0990A	9.9	SB	Connector	Los Angeles	RETE CH	48X36	FINAL OUTFALL 110-0988	D	Concrete - 95%, Natural Vegetation - 5%	Dominguez Channel	0.00	0	405.12
90	110-0990B	9.9	NB	Connector	Los Angeles	CMP	30	FINAL OUTFALL 110-0988	D	Concrete - 95%, Natural Vegetation - 5%	Dominguez Channel	0.00	0	405.12
91	110-0997	9.97	SB	91 Freeway	Los Angeles	CMP	24	FINAL OUTFALL IS 110-0988	D	Concrete - 95%, Natural Vegetation - 5%	Dominguez Channel	6987.93	1.726749	405.12
92	110-1006	10.06	SB	172nd St	Los Angeles	ACP	18	FINAL OUTFALL 110-0988	D	Concrete - 100%	Dominguez Channel	5642.58	1.394306	405.12
93	110-1009	10.09	SB	171st St	Los Angeles	CSP	18	FINAL OUTFALL 110-0988	D	Concrete - 100%	Dominguez Channel	3743.10	0.924936	405.12
94	110-1017	10.17	SB	169th St	Los Angeles	CSP	24	FINAL OUTFALL 110-0988	D	Concrete - 100%	Dominguez Channel	7402.11	1.829094	405.12

No.	Outfall ID	Post Mile	DIRECTION	Cross Street	CITY NAME	OutFall TYPE	Outfall SIZE (in.)	COMMENTS	SOIL TYPE	SURFACE TYPE	RWBODY	DRAIN AREA (m2)	DRAIN AREA (acres)	HYDRO AREA
95	110-1025	10.25	SB	168th Pl	Los Angeles	CSP	18	FINAL OUTFALL 110-0988	D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
96	110-1034	10.34	SB	168th St	Los Angeles	CSP	18		D	Concrete - 100%	Dominguez Channel	4013.90	0.991853	405.12
97	110-1035	10.35	NB	168th St	Los Angeles	CSP	18		D	Concrete - 100%	Dominguez Channel	9745.47	2.408148	405.12
98	110-1044	10.44	SB	Gardena Blvd	Los Angeles	RCB	120X60		D	Concrete - 100%	Dominguez Channel	2876.38	0.710765	405.12
99	110-1045	10.45	SB	Gardena Blvd	Los Angeles	CSP	18		D	Concrete - 100%	Dominguez Channel	1510.30	0.373202	405.12
100	110-1049	10.49	SB	Gardena Blvd	Los Angeles	CMP	24		D	Concrete - 100%	Dominguez Channel	8548.55	2.112385	405.12
101	110-1055	10.55	SB	164th St	Los Angeles	CMP	24		D	Concrete - 100%	Dominguez Channel	7784.45	1.923571	405.12
102	110-1061	10.61	SB	N Of 164th St	Los Angeles	CSP	18		D	Concrete - 100%	Dominguez Channel	26590.96	6.570743	405.12
103	110-1089	10.89	SB	159th St	Los Angeles	RCP	18		D	Concrete - 100%	Dominguez Channel	6984.21	1.725828	405.12
104	110-1095	10.95	SB	157th St	Los Angeles	CSP	18	FINAL OUTFALL 110-1089, OUTFALL L	D	Concrete - 100%	Dominguez Channel	4467.05	1.103827	405.12
105	110-1097	10.97	NB	157th St	Los Angeles	CMP	24	FINAL INLET TAKEN AS OUTFALL LOC	D	Concrete - 100%	Dominguez Channel	8555.97	2.114217	405.12
106	110-1112	11.12	NB	155th Street	Los Angeles	RCP	27		D	Concrete - 100%	Dominguez Channel	17708.23	4.375782	405.12
107	110-1125	11.25	NB	Redondo Beach Blvd / Fi	Los Angeles	RCP	60	FINAL INLET TAKEN AS OUTFALL LOC	D	Concrete - 40%, Asphalt -30%	Dominguez Channel	12890.54	3.185309	405.12
108	110-1125A	11.25	NB	Redondo Beach Blvd	Los Angeles	RCP	18	FINAL INLET TAKEN AS OUTFALL LOC	D	Concrete - 50%, Asphalt -30%	Dominguez Channel	0.00	0	405.12
109	110-1125B	11.25	NB	Redondo Beach Blvd	Los Angeles	APC	24	FINAL INLET TAKEN AS OUTFALL LOC	D	Asphalt - 70%, Natural Vegetation - 30%	Dominguez Channel	6092.12	1.505389	405.12
110	110-1133	11.33	SB	152nd St At Frontage Ro	Los Angeles	RCB	4 x8' x2'	FINAL INLET TAKEN AS OUTFALL LOC	D	Concrete - 90%, Natural Vegetation - 10%	Dominguez Channel	2364.11	0.584181	405.12
111	110-1136	11.36	SB	152nd St At Frontage Ro	Los Angeles	RCP	42	FINAL INLET TAKEN AS OUTFALL LOC	D	Concrete - 100%	Dominguez Channel	74545.95	18.42063	405.12
112	110-1137A	11.37	NB	152nd St	Los Angeles	CMP	24	FINAL INLET TAKEN AS OUTFALL LOC	D	Concrete - 100%	Dominguez Channel	2575.50	0.636417	405.12
113	110-1137B	11.37	NB	152nd St	Los Angeles	RCP	30		D	Concrete - 100%	Dominguez Channel	12148.74	3.002006	405.12
114	110-1218	12.18	SB	138th Street	Los Angeles	RCB	N/A		D	Concrete - 100%	Dominguez Channel	7953.56	1.965359	405.12
115	110-1219	12.19	SB	138th Street	Los Angeles	RCB	5' x 3'		D	Concrete - 95%, Natural Vegetation - 5%	Dominguez Channel	99292.25	24.53555	405.12
116	110-1313	13.13	NB	Figueroa St	Los Angeles	CMP	24	FINAL OUTFALL 110-1219	D	Concrete - 80%, Natural Vegetation - 20%	Dominguez Channel	38668.06	9.555046	405.12
117	110-1347	13.47	SB	120th St	Los Angeles	N/A	N/A	PHOTO TAKEN OF FINAL INLET	D	Concrete - 90%, Natural Vegetation - 10%	Dominguez Channel	15589.76	3.852299	405.12

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118	405-0870	8.7	SB	Near 223rd St Exit Ramp	Los Angeles	RCP	24		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
119	405-0890	8.9	NB	N Of Alameda St	Carson	CMP	24		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
120	405-0908	9.08	NB	Wilmington Ave	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
121	405-0926	9.26	NB	N/A	Carson	CMP	12		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
122	405-0939	9.39	NB	Near Wilmington Ave Exi	Carson	CMP	12		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
123	405-0958	9.58	SB	Wilmington Ave	Carson	RCB	84X84		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
124	405-0971	9.71	SB	Wilmington Ave Exit Ram	Carson	CONCRE	24		D	Concrete - 70%, Irrigated Vegetation - 30%	Dominguez Channel	0.00	0	405.12
125	405-0977	9.77	NB	Near 405 & Dominguez C	Carson	CONCRE	24		D	Concrete - 70%, Irrigated Vegetation - 30%	Dominguez Channel	0.00	0	405.12
126	405-0985	9.85	SB	Intersection Of 405 Fwy &	Carson	CMP	12		D	Concrete - 90%, Asphalt - 10%	Dominguez Channel	0.00	0	405.12
127	405-0994	9.94	NB	Dominguez Chennel	Carson	CMP	12		D	Concrete - 90%, Asphalt - 10%	Dominguez Channel	0.00	0	405.12
128	405-1003	10.03	SB	Dominguez Chennel	Carson	CMP	12		D	Concrete - 90%, Asphalt - 10%	Dominguez Channel	0.00	0	405.12
129	405-1040	10.4	NB	S Of Carson St	Carson	RCB	60X48		D	Concrete - 90%, Asphalt - 10%	Dominguez Channel	0.00	0	405.12
130	405-1046	10.46	SB	S Of Carson St	Carson	RCP	24		D	Irrigated Vegetation - 100%	Dominguez Channel	0.00	0	405.12
131	405-1048	10.48	SB	S Of Carson St	Carson	RCP	24		D	Concrete - 60%, Irrigated Vegetation - 40%	Dominguez Channel	0.00	0	405.12
132	405-1055B	10.55	NB	Nb Carson St Exit Ramp	Carson	RCP	24		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
133	405-1066	10.66	SB	500' N Of Carson St	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
134	405-1069	10.69	NB	Carson St	Carson	RCP	24		D	Concrete - 80%, Asphalt - 20%	Dominguez Channel	0.00	0	405.12
135	405-1076	10.76	NB	Carson St	Carson	CMP	18		D	Concrete - 80%, Asphalt - 20%	Dominguez Channel	0.00	0	405.12
136	405-1082	10.82	NB	S Of 213th St	Carson	CMP	18		D	Concrete - 90%, Asphalt - 10%	Dominguez Channel	0.00	0	405.12
137	405-1090	10.9	NB	N Of 213th St	Carson	CMP	18		D	Concrete - 90%, Asphalt - 10%	Dominguez Channel	0.00	0	405.12
138	405-1098	10.98	NB	N Of 213th St	Carson	CMP	18		D	Concrete - 90%, Asphalt - 10%	Dominguez Channel	0.00	0	405.12
139	405-1109	11.09	NB	N Of 213th St	Carson	CMP	18		D	Concrete - 90%, Asphalt - 10%	Dominguez Channel	0.00	0	405.12
140	405-1113B	11.13	SB	S Of Avalon Blvd	Carson	CMP	18		D	Concrete - 80%, Asphalt - 20%	Dominguez Channel	0.00	0	405.12

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141	405-1113	11.13	SB	S Of Avalon Blvd	Carson	CMP	18		D	Concrete - 80%, Asphalt - 20%	Dominguez Channel	0.00	0	405.12
142	405-1121	11.21	NB	Nb Avalon Exit Ramp	Carson	RCB	60X72		D	Concrete - 70%, Irrigated Vegetation - 30%	Dominguez Channel	0.00	0	405.12
143	405-1124	11.24	NB	Nb Avalon Blvd On Ramp	Carson	CMP	18		D	Asphalt - 100%	Dominguez Channel	0.00	0	405.12
144	405-1138	11.38	NB	Avalon Blvd On Ramp Si	Carson	RCP	24		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
145	405-1147	11.47	NB	Avalon Blvd On Ramp Si	Carson	CMP	18	OUTFALL COULD NOT BE LOCATED, F	D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
146	405-1156	11.56	NB	Avalon Blvd On Ramp Si	Carson	CMP	18	OUTFALL COULD NOT BE LOCATED, F	D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
147	405-1156B	11.56	SB	Avalon Av	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	1154.66	0.285322	405.12
148	405-1161	11.61	NB	N/A	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
149	405-1166	11.66	SB	Avalon Av	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	928.85	0.229523	405.12
150	405-1170	11.7	SB	N/A	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
151	405-1175	11.75	SB	Avalon Av	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	1366.81	0.337745	405.12
152	405-1179	11.79	NB	Avalon Av	Carson	CMP	18	FINAL INLET COULD NOT BE LOCATED DU	D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
153	405-1179B	11.79	SB	Avalon Av	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	1237.02	0.305673	405.12
154	405-1184	11.84	SB	Avalon Av	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	971.92	0.240165	405.12
155	405-1189	11.89	SB	Avalon Av	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	2196.74	0.542824	405.12
156	405-1194	11.94	NB	Avalon Av	Carson	RCP	60		D	Concrete - 100%	Dominguez Channel	45319.70	11.1987	405.12
157	405-1247	12.47	NB	Nb Main St Exit Ramp	Carson	RCP	24		D	Concrete - 100%	Dominguez Channel	3059.74	0.756074	405.12
158	405-1247B	12.47	SB	Nb Main St Exit Ramp	Carson	RCP	24		D	Concrete - 80%, Asphalt - 20%	Dominguez Channel	7338.89	1.813471	405.12
159	405-1265	12.65	NB	Main St	Carson	CMP	24		D	Concrete - 100%	Dominguez Channel	5330.53	1.317197	405.12
160	405-1269	12.69	NB	Btwn Main St & Moneta A	Carson	RCB	96X108		D	Concrete - 100%	Dominguez Channel	11135.72	2.751685	405.12
161	405-1290	12.9	NB	Near 110 & 405 Intersect	Carson	RCP	24		D	Concrete - 100%	Dominguez Channel	2790.86	0.689633	405.12
162	405-1297	12.97	SB	Sb 405 To Nb 110 On Ra	s Angeles County Uni	RCP	24		D	Concrete - 100%	Dominguez Channel	0.00	0	405.12
163	405-1328	13.28	NB	405 & 190th St	s Angeles County Uni	RCB	120X84	FINAL OUTFALL COULD NOT BE LOCA	D	Concrete - 100%	Dominguez Channel	13149.33	3.249258	405.12
164	405-1342	13.42	SB	Vermont Ave & Sb Exit R	Los Angeles	RCP	24		D	Concrete - 80%, Irrigated Vegetation - 20%	Dominguez Channel	2037.58	0.503495	405.12

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165	405-1351	13.51	SB	Louise Av	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	14258.82	3.523417	405.12
166	405-1353	13.53	SB	Pacific Gateway Dr	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	8314.18	2.054471	405.12
167	405-1361	13.61	SB	Pacific Gateway Dr	Carson	CMP	18		D	Concrete - 100%	Dominguez Channel	8198.76	2.025949	405.12
168	405-1371	13.71	SB	Mariposa Ave & 187th Pl	Los Angeles	CMP	18		D	Concrete - 100%	Dominguez Channel	10575.07	2.613147	405.12
169	405-1380	13.8	SB	Mariposa Ave & 187th Pl	Los Angeles	CMP	18		D	Concrete - 100%	Dominguez Channel	1675.08	0.413919	405.12
170	405-1386	13.86	SB	Normandie Ave	Los Angeles	RCB	96X36		D	Concrete - 100%	Dominguez Channel	2120.24	0.523921	405.12
171	405-1394	13.94	SB	Sb Normandie Ave Exit F	Los Angeles	CONCRE	24		D	Asphalt - 100%	Dominguez Channel	3672.82	0.90757	405.12
172	405-1401	14.01	SB	Sb Normandie Ave Exit F	Los Angeles	CONCRE	24		D	Concrete - 100%	Dominguez Channel	12316.76	3.043526	405.12
173	405-1413	14.13	SB	Denker Av	Los Angeles	CMP	24		D	Concrete - 100%	Dominguez Channel	9855.17	2.435256	405.12
174	405-1426	14.26	SB	Normandie Ave	Los Angeles	CMP	18		D	Concrete - 100%	Dominguez Channel	17887.00	4.419955	405.12
175	405-1434	14.34	NB	Nb Western Ave Exit Ra	Los Angeles	CMP	18		D	Concrete - 90%, Irrigated Vegetation - 10%	Dominguez Channel	7960.60	1.9671	405.12
176	405-1475	14.75	NB	Illinois	Torrance	CMP	18		D	Concrete - 100%	Dominguez Channel	22630.63	5.592127	405.12
177	405-1479	14.79	SB	Haas Av	Torrance	RCP	24		D	Concrete - 100%	Dominguez Channel	12863.24	3.178562	405.12
178	405-1509	15.09	NB	Spring Ave	Torrance	CMP	18		D	Concrete - 100%	Dominguez Channel	6886.39	1.701658	405.12
179	405-1511	15.11	SB	N Of Arlington Ave	Torrance	RCP	30		D	Concrete - 100%	Dominguez Channel	30314.92	7.490948	405.12
180	405-1530	15.3	SB	S Of Crenshaw Blvd	Torrance	CMP	18		D	Concrete - 100%	Dominguez Channel	4698.12	1.160926	405.12
181	405-1562	15.62	SB	183rd St & 405 Fwy	Torrance	CMP	18		D	Concrete - 100%	Dominguez Channel	5071.90	1.253289	405.12
182	405-1573	15.73	NB	Glenburh Ave & 182nd S	Torrance	CMP	18		D	Concrete - 100%	Dominguez Channel	11540.10	2.851609	405.12
183	405-1576	15.76	SB	N/A	Torrance	RCP	30		D	Concrete - 100%	Dominguez Channel	9536.59	2.356534	405.12
184	405-1600	16	SB	Yukon Ave	Torrance	RCB	48X24	ID ON PHOT SHOULD BE 405-1600	D	Concrete - 100%	Dominguez Channel	2008.60	0.496334	405.12
185	405-1602	16.02	SB	Yukon Ave	Torrance	RCP	24		D	Concrete - 100%	Dominguez Channel	32045.78	7.918652	405.12
186	405-1642	16.42	SB	S Of Artesia Blvd	Torrance	RCB	60X24		D	Concrete - 100%	Dominguez Channel	8498.10	2.099917	405.12
187	405-1644	16.44	SB	S Of Artesia	Torrance	CMP	18	PHOTO WAS NOT TAKEN BECAUSE C	D	Concrete - 100%	Dominguez Channel	5078.91	1.255021	405.12
188	405-1655	16.55	NB	Artesia Blvd & 405 Fwy	Torrance	CMP	36		D	Irrigated Vegitation - 50%, Concrete - 50%	Dominguez Channel	10380.67	2.565109	405.12

No.	Outfall ID	Post Mile	DIRECTION	Cross Street	CITY NAME	OutFall TYPE	Outfall SIZE (in.)	COMMENTS	SOIL TYPE	SURFACE TYPE	RWBODY	DRAIN AREA (m2)	DRAIN AREA (acres)	HYDRO AREA
189	405-1659	16.59	NB	Nb Artesia Bl Exit Ramp	Torrance	CMP	18		D	Irrigated Vegitation - 50%, Concrete - 50%	Dominguez Channel	16049.55	3.965915	405.12
190	405-1666	16.66	NB	Artesia	Torrance	CMP	18		D	Concrete - 100%	Dominguez Channel	1802.53	0.445412	405.12
191	405-1671	16.71	SB	Near 171st St	Torrance	RCP	24		D	Irrigated Vegitation - 20%, Concrete - 80%	Dominguez Channel	4695.65	1.160315	405.12
192	405-1677	16.77	NB	171st	Torrance	CMP	18		D	Concrete - 100%	Dominguez Channel	2679.09	0.662016	405.12
193	405-1700	17	NB	N Of Redondo Beach Blv	Lawdale	RCP	39		D	Concrete - 100%	Dominguez Channel	9231.02	2.281025	405.12
194	405-1707	17.07	NB	S Of 166th St	Lawdale	RCP	18		D	Concrete - 100%	Dominguez Channel	8876.40	2.193398	405.12
195	405-1713	17.13	NB	166th St & 405 Fwy	Lawdale	CMP	18		D	Concrete - 100%	Dominguez Channel	2600.20	0.642522	405.12
196	405-1722	17.22	NB	165th St 405 Fwy	Lawdale	RCB	48X36		D	Concrete - 100%	Dominguez Channel	2879.05	0.711426	405.12
197	405-1727	17.27	NB	N/A	Lawdale	RCP	42		D	Concrete - 100%	Dominguez Channel	4170.47	1.030542	405.12
198	405-1736	17.36	SB	163rd St	Lawdale	RCP	36		D	Concrete - 100%	Dominguez Channel	14971.09	3.699422	405.12
199	405-1742	17.42	SB	163rd St & 405 Fwy	Lawdale	RCP	24		D	Concrete - 100%	Dominguez Channel	3812.17	0.942004	405.12
200	405-1746	17.46	NB	Hawthorne Blvd	Lawdale	RCP	24		D	Concrete - 100%	Dominguez Channel	3267.66	0.807453	405.12
201	405-1749	17.49	NB	Hawthorne Blvd	Lawdale	RCP	24		D	Asphalt - 40%, Cocrete - 60%	Dominguez Channel	7442.45	1.839061	405.12
202	405-1751	17.51	NB	Hawthorne Blvd	Lawdale	CMP	18		D	Concrete - 100%	Dominguez Channel	2078.39	0.51358	405.12
203	405-1758	17.58	NB	Hawthorne Blvd Nb Exit	Lawdale	RCP	24		D	Irrigated Vegetation - 60%, Concrete - 40%	Dominguez Channel	6121.60	1.512674	405.12
204	405-1760	17.6	SB	Hawthorne Blvd Sb On R	Lawdale	RCB	66X36		D	Asphalt - 20%, Irrigated Vegetation - 60%	Dominguez Channel	8140.91	2.011654	405.12
205	405-1763	17.63	NB	Hawthorne Blvd & 405 Fv	Lawdale	CMP	18		D	Concrete - 100%	Dominguez Channel	3073.02	0.759356	405.12
206	405-1774	17.74	NB	159th St & Grevillea Ave	Lawdale	RCP	24		D	Concrete - 100%	Dominguez Channel	19491.35	4.816398	405.12
207	405-1796	17.96	SB	N Of Manhattan Beach B	Lawdale	RCP	36		D	Concrete - 100%	Dominguez Channel	19318.82	4.773765	405.12
208	405-1809	18.09	NB	S Of Inglewood Ave	Lawdale	RCB	72X36		D	Concrete - 100%	Dominguez Channel	10358.82	2.55971	405.12
209	405-1816	18.16	NB	Nb Inglewood Ave Exit R	Lawdale	CMP	18		D	Concrete - 100%	Dominguez Channel	1016.22	0.251112	405.12
210	405-1821	18.21	SB	Inglewood Ave On Ramp	Lawdale	RCP	24	FINAL INLET TAKEN AS OUTFALL	D	Concrete - 100%	Dominguez Channel	2341.78	0.578663	405.12
211	405-1823	18.23	SB	Sb Inglewood Ave On Ra	Lawdale	RCP	18	FINAL INLET TAKEN AS OUTFALL	D	Concrete - 100%	Dominguez Channel	9025.98	2.23036	405.12

No.	Outfall ID	Post Mile	DIRECTION	Cross Street	CITY NAME	OutFall TYPE	Outfall SIZE (in.)	COMMENTS	SOIL TYPE	SURFACE TYPE	RWBODY	DRAIN AREA (m2)	DRAIN AREA (acres)	HYDRO AREA
212	405-1826	18.26	NB	Inglewood Ave	Redendo Beach	RCP	24	FINAL INLET TAKEN AS OUTFALL	D	Asphalt - 100%	Dominguez Channel	3290.76	0.813162	405.12
213	405-1829	18.29	NB	Inglewood Ave Nb On Ra	Redendo Beach	RCP	24		D	Asphalt - 100%	Dominguez Channel	3023.45	0.747107	405.12
214	405-1838	18.38	SB	N Of Inglewood	Redendo Beach	RCP	24		D	Concrete - 100%	Dominguez Channel	8272.27	2.044113	405.12
215	405-1847	18.47	SB	N Of Inglewood	Redendo Beach	CMP	18		D	Concrete - 100%	Dominguez Channel	6862.61	1.695781	405.12
216	405-1857	18.57	SB	N Of Inglewood Ave	Redendo Beach	CMP	18		D	Concrete - 100%	Dominguez Channel	7432.55	1.836615	405.12
217	405-1869	18.69	SB	Compton Blvd	Hawthorne	CMP	18		D	Concrete - 100%	Dominguez Channel	12559.69	3.103555	405.12
218	405-1881	18.81	SB	Marine Ave	Hawthorne	RCP	69		D	Concrete - 100%	Dominguez Channel	14021.87	3.464865	405.12
219	405-1896	18.96	SB	S Of Roscrans Ave	Hawthorne	RCP	30	COMBINES 405-1920, 405-1917, 405-19	D	Concrete - 100%	Dominguez Channel	18520.26	4.576436	405.12
220	405-1897	18.97	NB	S Of Rosecrans Ave	Hawthorne	CMP	18		D	Concrete - 100%	Dominguez Channel	5523.56	1.364895	405.12
221	405-1909	19.09	NB	Rose Crans	Hawthorne	CMP	18		D	Concrete - 100%	Dominguez Channel	615.31	0.152046	405.12
222	405-1915	19.15	NB	Nb Rosecrans Ave Exit F	Hawthorne	CMP	18		D	Concrete - 100%	Dominguez Channel	913.67	0.225773	405.12
223	405-1924	19.24	SB	Rosecras Ave & 405 Fwy	Hawthorne	RCP	27		D	Concrete - 100%	Dominguez Channel	13828.67	3.417125	405.12
224	405-1949	19.49	NB	139th Street	Hawthorne	RCP	24		D	Concrete - 100%	Dominguez Channel	15921.58	3.934292	405.12
225	405-1960	19.6	NB	N Of 137th St	Hawthorne	RCP	18		D	Concrete - 100%	Dominguez Channel	12170.85	3.007471	405.12
226	405-1988	19.88	NB	W 134th Place	Hawthorne	CMP	24		D	Concrete - 100%	Dominguez Channel	6412.99	1.584677	405.12
227	405-1997	19.97	NB	132nd St	Hawthorne	RCP	24		D	Concrete - 100%	Dominguez Channel	21180.78	5.233863	405.12
228	405-2004	20.04	NB	S Of El Segundo Blvd	Hawthorne	RCP	24		D	Concrete - 100%	Dominguez Channel	15969.52	3.946138	405.12
229	405-2009	20.09	NB	134th St	Hawthorne	CMP	24		D	Concrete - 100%	Dominguez Channel	2592.71	0.640671	405.12
230	405-2011	20.11	NB	El Segundo Blvd Exit Ra	Hawthorne	CMP	18		D	Concrete - 100%	Dominguez Channel	1374.66	0.339684	405.12
231	405-2017	20.17	NB	S Of El Segundo Blvd	s Angeles County Uni	RCB	60X24		D	Concrete - 100%	Dominguez Channel	6038.26	1.49208	405.12
232	405-2046	20.46	SB	Sb La Cienega Blvd Exit	s Angeles County Uni	RCP	18		D	Concrete - 100%	Dominguez Channel	23543.10	5.817602	405.12
233	405-2061	20.61	NB	S Of 122nd St	s Angeles County Uni	CURB-IN	24		D	Irrigated Vegetation - 40%, Concrete - 60%	Dominguez Channel	10306.92	2.546885	405.12
234	405-2069	20.69	NB	N/A	s Angeles County Uni	RCB	72X36		D	Concrete - 100%	Dominguez Channel	6399.05	1.581234	405.12
235	405-2074	20.74	NB	120th St & 405 Fwy	s Angeles County Uni	RCP	24		D	Concrete - 100%	Dominguez Channel	4557.00	1.126055	405.12
236	405-2081	20.81	NB	119th Pl & 405 Fwy	s Angeles County Uni	RCP	18		D	Irrigated Vegetation - 50%, Concrete - 50%	Dominguez Channel	9952.03	2.459191	405.12

No.	Outfall ID	Post Mile	DIRECTION	Cross Street	CITY NAME	OutFall TYPE	Outfall SIZE (in.)	COMMENTS	SOIL TYPE	SURFACE TYPE	RWBODY	DRAIN AREA (m2)	DRAIN AREA (acres)	HYDRO AREA
237	405-2104	21.04	NB	117th St & Tahoe Ave	s Angeles County Uni	RCP	33		D	Concrete - 80%, Asphalt - 20%	Dominguez Channel	47481.67	11.73293	405.12
238	405-2111	21.11	NB	405 & 105 Intersection	s Angeles County Uni	RCP	24		D	Concrete - 100%	Dominguez Channel	7684.56	1.898889	405.12
239	405-2148	21.48	SB	N/A	s Angeles County Uni	RCP	24	OUTFALL UNDERGROUND, FINAL INL	D	Asphalt - 100%	Dominguez Channel	37405.79	9.243134	405.12
240	405-2176	21.76	SB	N/A	s Angeles County Uni	RCB	60X36	COMBINES 405-2156, 405-2162, 405-21	D	Concrete - 100%	Dominguez Channel	61774.29	15.2647	405.12
241	405-2190	21.9	SB	Century Blvd	s Angeles County Uni	CONCRE	N/A		D	Concrete - 100%	Dominguez Channel	3801.45	0.939354	405.12
242	405-2198	21.98	NB	104th St	s Angeles County Uni	RCP	18	MANHOLE TAKEN AS OUTFALL	D	Concrete - 100%	Dominguez Channel	66170.08	16.35092	405.12
243	405-2211	22.11	SB	Sb Anza Ave Exit Ramp	s Angeles County Uni	RCP	24		D	Concrete - 100%	Dominguez Channel	1666.66	0.411839	405.12
244	405-2212	22.12	SB	W Century Blvd	Los Angeles	RCP	24		D	Asphalt - 60%, Irrigated Vegetation - 40%	Dominguez Channel	4415.75	1.091151	405.12
245	405-2219	22.19	NB	Nb Century Blvd Exit Ran	Los Angeles	RCP	24		D	Asphalt - 60%, Irrigated Vegetation - 40%	Dominguez Channel	2088.68	0.516123	405.12
246	405-2229	22.29	NB	99th St & 405 Fwy	Inglewood	CURB-IN	N/A		D	Concrete - 100%	Dominguez Channel	34684.15	8.570606	405.12

ATTACHMENT D

Project Work Plan

WBS Code	Activity Description	% Comp	Orig Dur	Rem Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
0.100	PROJ MGMT	0	2,088*	2,002*	03/22/11A	07/17/19	03/22/11A	07/17/19	0
0.100.05	PROJ MGMT - PID CMPNT	0	134*	48*	03/22/11A	09/30/11	03/22/11A	09/30/11	0
0.100.10	PROJ MGMT - PA&ED CMPNT	0	543*	543*	10/03/11	12/02/13	03/28/12	12/02/13	0
0.100.15	PROJ MGMT - PS&E CMPNT	0	398*	398*	12/03/13	07/02/15	12/03/13	07/02/15	0
0.100.20	PROJ MGMT - CONST CMPNT	0	993*	993*	08/03/15	07/17/19	08/06/15	07/17/19	0
0.100.25	PROJ MGMT - R/W CMPNT	0	1,411*	1,411*	12/03/13	07/17/19	12/03/13	07/17/19	0
1.150	DEVELOP PID	0	139	48	03/22/11A	09/30/11	03/22/11A	09/30/11	0
2.160	PERF PREL ENGRG STUDIES &	0	124*	124*	10/03/11	04/02/12	03/28/12	06/25/12	59
2.160.05	UPDD PROJ INFO	0	62	62	10/03/11	01/03/12	03/28/12	06/25/12	121
2.160.10	ENGRG STUDIES	0	62	62	10/03/11	01/03/12	03/28/12	06/25/12	121
2.160.15	DRAFT PR	0	62	62	01/04/12	04/02/12	03/28/12	06/25/12	59
2.160.20	ENGRG & LAND NET SRVYS	0	62	62	10/03/11	01/03/12	03/28/12	06/25/12	121
2.160.30	ESR	0	62	62	10/03/11	01/03/12	12/29/11	03/27/12	59
2.160.40	NEPA DLGN	0	62	62	10/03/11	01/03/12	03/28/12	06/25/12	121
2.165	PERF ENV STUDIES & PREP	0	122*	122*	10/03/11	03/28/12	01/03/12	06/25/12	61
2.165.05	ENV SCPG OF ALTS IFS IN PID	0	62	62	10/03/11	01/03/12	01/03/12	03/29/12	61
2.165.10	GENL ENV STUDIES	0	62	62	10/03/11	01/03/12	01/03/12	03/29/12	61
2.165.15	BIOL STUDIES	0	62	62	10/03/11	01/03/12	01/03/12	03/29/12	61
2.165.20	CLTRL RSRC STUDIES	0	62	62	10/03/11	01/03/12	01/03/12	03/29/12	61
2.165.25	DED	0	84	84	11/29/11	03/28/12	02/27/12	06/25/12	61
2.165.30	NEPA DLGN	0	62	62	10/03/11	01/03/12	03/28/12	06/25/12	121
2.170	PMTS AGRES & RAS DURING	0	124	124	03/29/12	09/24/12	06/26/12	12/21/12	61
2.175	CIRC DED & SLT PRFD PROJ	0	124*	124*	04/03/12	09/26/12	06/26/12	12/21/12	59
2.175.05	DED CIRCN	0	62	62	04/03/12	06/28/12	06/26/12	09/21/12	59
2.175.10	PUB HRG	0	62	62	04/03/12	06/28/12	06/26/12	09/21/12	59
2.175.15	PUB CMNT RESPS & CRNC	0	62	62	04/03/12	06/28/12	06/26/12	09/21/12	59
2.175.20	PROJ PRFD ALT	0	62	62	06/29/12	09/26/12	09/24/12	12/21/12	59
2.180	PREP & APV PR & FED	0	236*	236*	09/27/12	09/05/13	12/24/12	12/02/13	59
2.180.05	FPR	0	220	220	09/27/12	08/13/13	12/24/12	11/05/13	59
2.180.10	FED	0	220	220	09/27/12	08/13/13	12/24/12	11/05/13	59
2.180.15	CMPLTD ENV DOC	0	16	16	08/14/13	09/05/13	11/06/13	12/02/13	59
3.185	BASE MAPS & PLAN SHEETS	0	54*	54*	12/03/13	02/19/14	12/03/13	02/19/14	0
3.185.05	UPDD PROJ INFO	0	5	5	12/03/13	12/09/13	12/03/13	12/09/13	0
3.185.10	SRVYS & PHTGR MPG FOR	0	54	54	12/03/13	02/19/14	12/03/13	02/19/14	0
3.185.15	PREL DSN	0	49	49	12/10/13	02/19/14	12/10/13	02/19/14	0
3.185.20	ENGRG RPTS	0	30	30	01/08/14	02/19/14	01/08/14	02/19/14	0
3.185.25	R/W RQMTS DTRMTN	0	6	6	12/10/13	12/17/13	02/12/14	02/19/14	43
3.185.30	STRUC SITE PLANS	0	1	1	12/10/13	12/10/13	01/07/14	01/07/14	18
4.195	R/W PROP MGMT & EXCS	0	1	1	02/21/14	02/21/14	07/17/19	07/17/19	1,355
4.200	UTIL RELOCN	0	1	1	02/21/14	02/21/14	07/17/19	07/17/19	1,355
3.205	PMTS AGRES & RAS DURING	0	20	20	04/03/12	04/30/12	07/07/14	08/01/14	567
4.220	PERF R/W ENGRG	0	1	1	02/20/14	02/20/14	02/20/14	02/20/14	0
4.225	OBN R/W INTST FOR PROJ	0	1	1	02/21/14	02/21/14	11/03/14	11/03/14	177
3.230	PREP DRAFT PS&E	0	70	70	02/20/14	05/30/14	02/20/14	05/30/14	0
3.235	MIT ENV IMPTS & CLEAN UP	0	20	20	02/20/14	03/19/14	07/07/14	08/01/14	94
3.240	DRAFT STRUCS PS&E	0	23	23	02/21/14	03/25/14	02/21/14	03/25/14	0
4.245	POST R/W CERTN WRK	0	20	20	11/04/14	12/04/14	06/19/19	07/17/19	1,158
3.250	PREP FNL STRUCS PS&E	0	90	90	03/26/14	08/01/14	03/26/14	08/01/14	0
3.255	CIRC RVW & PREP FNL DIST	0	44	44	06/02/14	08/01/14	06/02/14	08/01/14	0

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WBS Code	Activity Description	% Comp	Orig Dur	Rem Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
3.260	CONTR BID DOCS RTL	0	82	82	08/04/14	12/01/14	08/04/14	12/01/14	0
3.265	AWDD & APVD CONST CONTR	0	106	106	02/03/15	07/02/15	02/03/15	07/02/15	0
5.270	CE & GCA	0	750*	750*	08/03/15	07/27/18	08/06/15	08/01/18	3
5.270.10	CONST STAKING PCKG &	0	734	734	08/03/15	07/05/18	08/06/15	07/10/18	3
5.270.15	CONST STAKES	0	660	660	08/31/15	04/18/18	11/20/15	07/10/18	57
5.270.20	CE WRK	0	660	660	08/03/15	03/20/18	11/20/15	07/10/18	77
5.270.25	CONST CONTR ADMIN WRK	0	660	660	08/03/15	03/20/18	11/20/15	07/10/18	77
5.270.30	CONTR ITEM WRK INSPN	0	660	660	08/03/15	03/20/18	11/20/15	07/10/18	77
5.270.35	CONST MTL S&T	0	660	660	08/03/15	03/20/18	11/20/15	07/10/18	77
5.270.40	SAFETY & MTCE RVWS	0	10	10	07/06/18	07/19/18	07/11/18	07/24/18	3
5.270.45	RLF FROM MTCE PROCESS	0	1	1	07/20/18	07/20/18	07/25/18	07/25/18	3
5.270.55	FNL INSPN & ACPTC RCMDN	0	5	5	07/23/18	07/27/18	07/26/18	08/01/18	3
5.270.60	PLANT ESTABLISHMENT	0	120	120	01/27/16	07/15/16	02/12/18	08/01/18	513
5.270.65	TMP IMPLN DURING CONST	0	734	734	08/03/15	07/05/18	08/06/15	07/10/18	3
5.270.70	UPDD ECR	0	746	746	08/07/15	07/27/18	08/12/15	08/01/18	3
5.270.75	RSRC AGENCY PMT RNWL &	0	750	750	08/03/15	07/27/18	08/06/15	08/01/18	3
5.270.80	L-TRM ENV MITIGN/MNTG	0	750	750	08/03/15	07/27/18	08/06/15	08/01/18	3
5.275	CE & GCA OF STRUCS WRK	0	750	750	08/03/15	07/27/18	08/06/15	08/01/18	3
5.285	CCO ADMIN	0	993*	993*	08/03/15	07/17/19	08/06/15	07/17/19	0
5.290	RSLV CONTR CLAIMS	0	993*	993*	08/03/15	07/17/19	08/06/15	07/17/19	0
5.295	ACPT CONTR PREP FE & FR	0	240	240	08/02/18	07/17/19	08/02/18	07/17/19	0
4.300	PERF FNL R/W ENGRG ACTS	0	20	20	08/03/15	08/28/15	06/19/19	07/17/19	973
M000	ID NEED	100	0	0		03/22/11A		03/22/11A	
M010	APPROVE PID	0	0	0		09/30/11*		09/30/11*	0
M015	PROG PROJ	0	0	0		09/30/11		12/28/11	59
M020	BEGIN ENVIRO	0	0	0		09/30/11		12/30/11	61
M040	BEGIN PROJ	0	0	0		09/30/11		12/28/11	59
M060	CIRC DPR & DED	0	0	0		03/28/12		06/25/12	61
M100	APPROVE DPR	0	0	0		04/02/12		06/25/12	59
M160	APPROVE FED	0	0	0		09/26/12		12/21/12	59
M200	PA&ED	0	0	0		12/02/13*		12/02/13*	0
M221	BRIDGE SITE DATA ACCEPTED	0	0	0		02/20/14		10/31/14	177
M222	BEGIN BRIDGE	0	0	0		02/20/14		10/31/14	177
M224	R/W MAPS	0	0	0		02/19/14		02/19/14	0
M225	REGULAR R/W	0	0	0		02/20/14		10/31/14	177
M275	GENERAL PLANS	0	0	0		02/20/14		02/20/14	0
M300	CIRC PLANS IN DIST	0	0	0		05/30/14		05/30/14	0
M318	DESIGN SAFETY REVIEW	0	0	0		05/30/14		05/30/14	0
M328	CONSTRUCTABILITY REVIEW	0	0	0		05/30/14		05/30/14	0
M377	PS&E TO DOE	0	0	0		05/30/14		05/30/14	0
M378	DRAFT STRUC PS&E	0	0	0		03/25/14		03/25/14	0
M380	PROJ PS&E	0	0	0		08/01/14*		08/01/14*	0
M410	R/W CERT	0	0	0		11/03/14*		11/03/14*	0
M460	RTL	0	0	0		12/01/14*		12/01/14*	0
M480	HQ ADVERT	0	0	0		02/02/15*		02/02/15*	0
M495	AWARD	0	0	0		07/17/15		07/17/15	0
M500	APPROVE CONTRACT	0	0	0		07/31/15*		07/31/15*	0
M588	FINAL SAFETY REVIEW	0	0	0		07/05/18		08/01/18	19
M600	CONTRACT ACCEPT	0	0	0		08/01/18*		08/01/18*	0
M700	FINAL REPORT	0	0	0		07/17/19		07/17/19	0
M800	END PROJ	0	0	0		07/17/19		07/17/19	0

ATTACHMENT E

Environmental Document

CATEGORICAL EXEMPTION/ CATEGORICAL EXCLUSION DETERMINATION FORM

07-LA-various	various	28670	0700020923/ CE# 201103008
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.)

Project proposes to construct various treatment BMPs, including but not limited to Gross Solid Removal Devices, Media Filters, and Infiltration Basins at various existing storm drain outfall/discharge locations (please see continuation sheet for locations). A total of 92 BMPs will be constructed at within State right-of-way on Routes 1, 91, 105, 110, and 405 within Los Angeles County. Please see continuation sheet for 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 by 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 (Check one)

☐ **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** 3(d). (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])

Garrett Damrath		Ojas Sheth	
Print Name: Environmental Branch Chief		Print Name: Project Manager/DLA Engineer	
Signature	Date 4/1/11	Signature	Date 4/1/11

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, the project is either exempt from all conformity requirements, or conformity analysis has been completed pursuant to 42 USC 7506(c) and 40 CFR 93.

CALTRANS NEPA DETERMINATION (Check one)

☒ **Section 6004:** 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, 2010, executed between the FHWA and the State. The State has determined that the project is a Categorical Exclusion under:

- ☐ **23 CFR 771.117(c): activity (c)(___)**
- ☐ **23 CFR 771.117(d): activity (d)(___)**
- ☒ **Activity _1_ listed in the MOU between FHWA and the State**

☐ **Section 6005:** Based on an examination of this proposal and supporting information, the State has determined that the project is a CE under Section 6005 of 23 U.S.C. 327.

Garrett Damrath		Ojas Sheth	
Print Name: Environmental Branch Chief		Print Name: Project Manager/DLA Engineer	
Signature	Date 4/1/11	Signature	Date 4/1/11

Briefly list environmental commitments on continuation sheet. Reference additional information, as appropriate (e.g., air quality studies, documentation of conformity exemption, FHWA conformity determination if Section 6005 project; §106 commitments; §4(f); §7 results; Wetlands Finding; Floodplain Finding; additional studies; and design conditions). **Revised June 7, 2010**

CATEGORICAL EXEMPTION/CATEGORICAL EXCLUSION DETERMINATION FORM
Continuation Sheet

07-LA-various	various	28670	0700020923/ CE# 201103008
Dist.-Co.-Rte. (or Local Agency)	P.M/P.M.	E.A. (State project)	Federal-Aid Project No. (Local project)/ Proj. No.

Project Locations (some BMPs treating more than one outfall, 92 total BMPs)

Route 1 (limits PM 7.70/9.24)

Outfall ID	BMP number/outfall PM	Direction	BMP type
1-0813	1/8.25	NB	Biofiltration
1-0825	1/8.25	NB	Biofiltration
1-0827	2/8.25	SB	Biofiltration
1-0829	3/8.28	NB	Biofiltration
1-0829	4/8.28	SB	Biofiltration

Route 91 (limits PM 6.0/8.43)

91-0611	5/8.61	WB	Biofiltration
91-0640	6/6.40	EB	Biofiltration
91-0643	7/6.43	WB	Biofiltration
91-0704A	10/7.04	EB	Biofiltration
91-0704B	8/7.04	WB	Biofiltration
91-0711	11/7.11	EB	Biofiltration
91-0714	9/7.14	WB	Biofiltration
91-0729A	10/7.29	EB	Biofiltration
91-0747B	12/7.47	WB	Media Filter
91-0747A	12/7.47	WB	Media Filter
91-0754	13/7.54	WB	Media Filter
91-0760	14/7.6	EB	Biofiltration
91-0766	13/7.66	WB	Media Filter
91-0768	15/7.68	EB	Infiltration Basin
91-0772	13/7.72	WB	Media Filter
91-0783	15/7.83	EB	Infiltration Basin
91-0790	15/7.9	EB	Infiltration Basin

Route 105 (limits 0.3/6.76)

105-0204	16/2.04	WB	Biofiltration
105-0248	17/2.48	EB	Biofiltration
105-0251	18/2.51	WB	Biofiltration

Route 110 (limits 6.52/13.5)

110-0702	19/7.02	NB	Biofiltration
110-0703	19/7.03	NB	Biofiltration
110-0749	20/7.49	NB	Biofiltration
110-0794	21/7.94	NB	Biofiltration
110-0794A	24 & 25/7.94	SB	Biofiltration/GSRD
110-0794B	21/7.94	NB	Biofiltration
110-0795	22 & 23/7.95	NB	Biofiltration
110-0798	24 & 25/7.98	SB	Biofiltration/ GRDS
110-0835	26/8.35	NB	Media Filter
110-0840	26/8.4	NB	Media Filter
110-0847	27/8.47	SB	Biofiltration
110-0866	27/8.66	SB	Biofiltration
110-0870	26/8.7	NB	Media Filter
110-0892	28 & 29/8.92	SB	Biofiltration/ GRDS
110-0898	28 & 29/8.98	SB	Biofiltration/ GRDS
110-0966	30/9.66	NB	GSRD

CATEGORICAL EXEMPTION/CATEGORICAL EXCLUSION DETERMINATION FORM
Continuation Sheet

110-0967	31 & 32/9.67	NB	Biofiltration/ GRDS
~~110-0968~~	~~31 & 32/9.68~~	~~NB~~	~~Biofiltration/ GRDS~~
110-0969	33/9.69	SB	Biofiltration
110-0977	34 & 35/9.77	NB	Biofiltration/ GRDS
110-0988	31 & 32/9.68	SB	Biofiltration/ GRDS
110-0989	36/9.89	NB	Detention Device
110-0990A	37/9.9	SB	Media Filter
110-0990B	36/9.9	NB	Detention Device
110-0997	37/9.97	SB	Media Filter
110-1006	38 & 39/10.06	SB	Biofiltration/ GRDS
110-1125A	42/11.25	NB	Media Filter
110-1187	41/11.87	NB	Infiltration Basin
110-650	40/12.65	NB	Biofiltration

Route 405 (limits 8.7/22.47)

405-0870	43/8.7	SB	Biofiltration
405-0890	44/8.9	NB	Media Filter
405-0908	44/9.08	NB	Biofiltration
405-0926	44/9.26	NB	Biofiltration
405-0939	44/9.39	NB	Biofiltration
405-0958	44/9.58	SB	Biofiltration
405-0971	45/9.71	SB	Biofiltration
405-0977	46/9.77	NB	Biofiltration
405-0985	48/9.85	SB	Biofiltration
405-0994	47/9.94	NB	Biofiltration
405-1003	48/10.03	SB	Biofiltration
405-1040	49/10.4	NB	Biofiltration
405-1046	50/10.46	SB	Media Filter
405-1048	50/10.48	SB	Media Filter
405-1055B	51/10.55	NB	Media Filter
405-1066	52/10.66	SB	Media Filter
405-1069	51/10.69	NB	Media Filter
405-1076	52/10.76	NB	Media Filter
405-1082	52/10.82	NB	Media Filter
405-1090	52/10.9	NB	Media Filter
405-1098	52/10.98	NB	Biofiltration
405-1109	53/11.09	NB	Biofiltration
405-1113B	54/11.13	SB	Biofiltration
405-1113	54/11.13	SB	Biofiltration
405-1121	54/11.21	NB	Biofiltration
405-1124	54/11.24	NB	Biofiltration
405-1138	55/11.38	NB	Media Filter
405-1147	56/11.47	NB	Media Filter
405-1156	56/11.56	NB	Media Filter
405-1156B	57/11.56	SB	Biofiltration
405-1161	56/11.61	NB	Biofiltration
405-1166	57/11.66	SB	Biofiltration
405-1170	56/11.7	SB	Biofiltration
405-1175	57/11.75	SB	Biofiltration
405-1179	57/11.79	NB	Biofiltration
405-1179B	57/11.79	SB	Biofiltration
405-1184	57/11.84	SB	Biofiltration
405-1189	57/11.89	SB	Biofiltration
405-1194	57/11.94	NB	Biofiltration

CATEGORICAL EXEMPTION/CATEGORICAL EXCLUSION DETERMINATION FORM
Continuation Sheet

405-1247	58/12.47	NB	Biofiltration	
405-1247B	58/12.47	SB	Biofiltration	
405-1265	59/12.65	NB	Biofiltration	
405-1269	59/12.69	NB	Biofiltration	
405-1290	60/12.9	NB	Biofiltration	
405-1297	61/12.97	SB	Media Filter	
405-1328	62/13.28	NB	Biofiltration	
405-1342	63/13.42	SB	Biofiltration	
405-1351	63/13.51	SB	Biofiltration	
405-1353	63/13.53	SB	Biofiltration	
405-1361	63/13.61	SB	Biofiltration	
405-1371	63/13.71	SB	Biofiltration	
405-1380	63/13.8	SB	Biofiltration	
405-1386	63/13.86	SB	Biofiltration	
405-1394	64/13.94	SB	GSRD	
405-1401	64/14.01	SB	GSRD	
405-1413	64/14.13	SB	GSRD	
405-1426	64/14.26	SB	GSRD	
405-1434	64/14.34	NB	GSRD	
405-1475	65/14.75	NB	Biofiltration	
405-1479	65/14.79	SB	Biofiltration	
405-1509	66/15.09	NB	Biofiltration	
405-1511	67/15.11	SB	Biofiltration	
405-1530	67/15.3	SB	Biofiltration	
405-1562	68/15.62	SB	Biofiltration	
405-1573	69/15.73	NB	GSRD	
405-1576	69/15.76	SB	GSRD	
405-1600	70/16	SB	Biofiltration	
405-1602	70/16.02	SB	Biofiltration	
405-1642	71/16.42	SB	Media Filter	
405-1644	71/16.44	SB	Media Filter	
405-1655	72/16.55	NB	Biofiltration	
405-1659	72/16.59	NB	Biofiltration	
405-1666	73/16.66	NB	Biofiltration	
405-1671	73/16.71	SB	Biofiltration	
405-1677	73/16.77	NB	Biofiltration	
405-1700	74/17	NB	Biofiltration	
405-1707	74/17.07	NB	Biofiltration	
405-1713	74/17.13	NB	Biofiltration	
405-1722	75/17.22	NB	Media Filter	
405-1727	75/17.27	NB	Media Filter	
405-1736	75/17.36	SB	Media Filter	
405-1742	75/17.42	SB	Media Filter	
405-1746	75/17.46	NB	Media Filter	
405-1749	75/17.49	NB	Media Filter	
405-1751	75/17.51	NB	Media Filter	
405-1758	75/17.58	NB	Media Filter	
405-1760	76/17.6	SB	Biofiltration	
405-1763	76/17.63	NB	Biofiltration	
405-1774	76/17.74	NB	Biofiltration	
405-1796	77/17.96	SB	Biofiltration	
405-1809	78/18.09	NB	Media Filter	
405-1816	78/18.16	NB	Media Filter	
405-1821	78/18.21	SB	Media Filter	

405-1823	78/18.23	SB	Media Filter
~~405-1826~~	~~78/18.26~~	~~NB~~	~~Media Filter~~
405-1829	78/18.29	NB	Media Filter
405-1838	78/18.38	SB	Media Filter
405-1847	78/18.47	SB	Media Filter
405-1857	78/18.57	SB	Media Filter
405-1869	79/18.69	SB	Biofiltration
405-1881	79/18.81	SB	Biofiltration
405-1896	79/18.96	SB	Biofiltration
405-1897	81/18.97	NB	Biofiltration
405-1909	81/19.09	NB	Biofiltration
405-1915	81/19.15	NB	Biofiltration
405-1924	80/19.24	SB	Biofiltration
405-1949	82/19.49	NB	Biofiltration
405-1960	82/19.6	NB	Biofiltration
405-1988	83/19.88	NB	Media Filter
405-1997	83/19.97	NB	Media Filter
405-2004	83/20.04	NB	Media Filter
405-2009	83/20.09	NB	Media Filter
405-2011	83/20.11	NB	Media Filter
405-2017	83/20.17	NB	Media Filter
405-2046	84/20.46	SB	Media Filter
405-2061	85/20.61	NB	Media Filter
405-2069	85/20.69	NB	Media Filter
405-2074	85/20.74	NB	Media Filter
405-2081	86/20.81	NB	Media Filter
405-2104	86/21.04	NB	Media Filter
405-2111	86/21.11	NB	Media Filter
405-2148	89/21.48	SB	Media Filter
405-2176	90/21.76	SB	Biofiltration
405-2190	87 & 88/21.9	SB	Media Filter
405-2198	91/21.98	NB	Biofiltration
405-2212	91/22.12	SB	Biofiltration
405-2219	91/22.19	NB	Biofiltration
405-2229	92/22.29	NB	Biofiltration

Biological Resources

Runoff from this project is not permitted to enter any existing waterways. If runoff is anticipated from this project, permits and coordination with regulatory agencies may be required.

All landscaping plans must be reviewed by the Division of Environmental Planning and a comprehensive set must be submitted to the Division during 65% PS&E. When feasible and practicable, the planting pallet should include native and non-invasive plant species.

Bird nesting season takes place from February 15-September 1. If work is scheduled to take place during bird nesting season, the Division of Environmental Planning must be notified and a nesting bird survey must occur two (2) weeks prior to any construction related activities. If nesting birds are discovered in the project area, all work must immediately stop and the Division must be notified.

Hazardous Waste

Site investigation will be performed during the PS&E phase to determine the actual extent of soil and groundwater contamination. At that time appropriate special provisions will be provided.

Memorandum

Flex your power!
Be energy efficient!

To: Albert Andraos, STE
Office of Project and Special Studies
Division of Planning

Attn: Abdol Hajipore
Project Engineer

Date: March 8, 2011

File: 07-LA-1, 91, 105, 107, 110, & 405 PM-various
BMP for Storm Water Mitigation
Various Locations in Los Angeles County

EA: 07-333-28670K
PN: 1846-0700020923-K

From: **DEPARTMENT OF TRANSPORTATION**
OEECS- HAZARDOUS WASTE BRANCH, SOUTH REGION, MS-16

Subject: *Preliminary Hazardous Waste Assessment for Draft Project Scope Study Report (PSSR)*

The Office of Environmental Engineering and Corridor Studies is in receipt of your memorandum dated February 2, 2011 requesting a Preliminary Hazardous Waste Assessment for the subject draft Project Scope Study Report (PSSR). The project proposes to construct Best Management Practice (BMP) devices for Storm Water Mitigation in the following Interstate and State Routes 1, 91, 105, 107, 110, and 405, to comply with the California Regional Water Quality Control Board's (RWQCB) Metals Total Maximum Daily Load (TMDL) requirements.

Based on the draft PSSR, there are five (5) BMP devices proposed for the storm water treatment:

- Gross Solids Removal Devices (GSRDs); mainly Linear Radial Device – one location
- Bio-filtration Swale/Strip – 61 locations
- Media Filter - 23 locations
- Infiltration Basins- 2 locations
- Detention Device – one location

Actual location and post-mile for the proposed BMP devices can be referenced in the draft PSSR.

Background:

The California Water Quality Control Plan for the Los Angeles Region (Basin Plan), adopted by the Los Angeles Regional Water Quality Control Board (LARWQCB) establishes Standards for surface waters and groundwater in the Region. The Standards identify numeric and narrative

objectives necessary to support beneficial uses and the State's Anti-degradation Policy, and is mandated for all water bodies within the state pursuant to the Porter-Cologne Water Quality Control Act.

Section 305(b) of the Federal Clean Water Act (CWA) mandates biennial assessments of the nation's water resources, and these water quality assessments are used to identify and list impaired waters. The resulting list is referred to as the 303(d) list. The CWA also requires the State to establish a priority ranking for impaired waters and to develop and implement TMDLs, which specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and allocates pollutant loadings to point and non-point sources. The United States Environmental Protection Agency (USEPA) has oversight authority for the 303(d) program. The USEPA approves the State's 303(d) lists and each specific TMDL.

As part of California's 1996 and 1998 303(d) list submittals, the LARWQCB identified the reaches of the Los Angeles River and other water bodies as being impaired due to trash. In September of 2001, the LARWQCB amended the Basin Plan to incorporate a Trash TMDL for the Los Angeles River. The numeric standard for the Trash TMDLs is currently set at zero. The Trash TMDLs specify a two-year optional baseline monitoring, then followed by a ten-year implementation program that requires reduction of trash discharge into the Los Angeles River by 10% each year until the zero discharge is achieved.

An inventory of the District's storm drain outfalls and discharge points in the Los Angeles County was completed in 2000. Based on the inventory database, 2197 outfalls and discharge points (with a total of 6865 acres of tributary drainage area) discharge into the Los Angeles River. Of these locations, a total of 246 outfalls/discharge points lie within the Phase VI Implementation zone at Route 01(PM 7.7 – 9.24), Route 91 (PM 6.00 – 8.43), Route 105 (PM 0.30 - 6.73), Route 107 (PM 2.25 - 4.80), Route (110 - PM 6.52 – 13.5), and Route 405 (PM 8.7 - 22.47).

It is anticipated that construction of treatment BMPs at certain outfall/discharge point locations could have impacts on existing traffic, underground utilities, and may have environmental issues. Full-scale investigations to determine such impacts at all locations would not be possible at this time due to time constraint. Therefore, only the locations without impacts are included in Phase VI. Selected outfall locations include more than the required 10% of the total watershed drainage area, anticipating that some of the recommended locations could be deleted due to unforeseen issues.

Preliminary Research Findings:

OEECs performed a general review of the State Water Resources Control Board (SWRCB) environmental database (GEOTRACKER) for the project corridor (approximately in excess of 40 lineal miles of freeway right of way). The database review revealed/reported numbers of recognized environmental conditions (RECs) sites nearby the project vicinity that may impact the planned improvements. The REC sites reported with both soil and contaminations which include hydrocarbons, metals, volatile organic compounds, and possibly methane and hydrogen sulfide in soils and groundwater from past and/or current industrial operations. Additionally, there are number of locations identified in the project vicinity having a history of underground

storage tanks (USTs) and above ground storage tanks (ASTs), including sites where leaking USTs have been discovered/reported with "Open Cleanup" cases. To accurately assess the potential hazardous waste impact to the project, it will depend on a number of issues: the design features of the proposed BMP devices, location of the BMPs relative to the reported REC sites; and site investigation to confirm the subsurface condition of the BMP excavation areas. For PSSR planning purpose, the general hazardous waste assessment is disclosed as follow:

In order to determine the actual extent of potential soil and groundwater contamination, OEECS recommends that a site investigation to be performed during design phase (PS&E). A formal request for the site investigation is required as soon as detail design information is available. The duration to complete a site investigation ranges between 3-6 months. The internal staff supports cost to complete the site investigation ranges between 500-600 hours (this resource needs to be allocated in the workload under Cost Center 1846). The estimated site investigation cost (based on Caltrans A/E Contract) ranges between $100,000 and $150,000.

For the PSSR cost estimate purpose, it is recommended that all excess soil/dewatering shall be treated as California hazardous waste that require off-site disposal. Refer to the Caltrans Contract Cost Data for the average bid cost of these work items *(http://t8web/design/contractcost/)*.

Please note that this is a preliminary hazardous waste assessment for the PSSR and does not consider as a final clearance for PS&E. A formal Hazardous Waste Assessment request shall be required during PS&E in order to evaluate the project scope of work and to provide the necessary special provisions (if required).

If you have any question, I can be reached at steve.chan@dot.ca.gov 897-3646, or contact Samuel Yang of my staff at samuel.yang@dot.ca.gov 897-4058.

Steve Chan

Steve Chan, P.E., STE
District Hazardous Waste Coordinator, South Region
Office of Environmental Engineering and Corridor Studies

cc: File

Attachments: *(1) Layout plans sheets 1 through 12*

Reference: *(1) http://www.geotracker.swrcb.ca.gov/.*

ATTCHMENT F

Right of Way Data Sheet

TO Albert Andraos
ATTN Abdol Hajipour
PHONE (213) 897-6278
SENIOR R/W P&M
ROUTE 405,110,107,105,91 and 1
PM_KM Varies
EA 28670K
ALT 0700020923

R/W DATA SHEET

Date of Data Sheet 3-28-2011
WBS
REVISED
UPDATED
PROJ. DESC Storm Water Mitigation

ID NO
1816

This cost estimate is pursuant to the following statements which are based on information provided by Albert Andraos.

This cost estimate is valid for the above scoping report only. This is an estimate only and not an appraisal. It may be based on worse case scenarios. The estimate is subject to change and revision.

The mapping did not provide sufficient nor adequate detail to determine the limits of thr Right of Way required and effects on the improvements.

The transportation facilities have not been sufficiently designed for our estimator to determine the damages to any of the remainder parcels affected by the project.

Residential displacement is not involved .

Utility facilities or Utility Right of Way are not affected.

Railroad facilities or R.R. Right of Way are not affected.

Right of Way work will be performed by Caltrans staff.

Major items of Construction Contract Work are not anticipated.

It is not known at this time whether there are any material borrow and/or disposal sites are required.

There are no potential relinquishments and/or abandonments.

Hazardous waste parcels are not evident

Time constraints precluded a detailed cost estimate.

The time schedule provided by the requesting party allowed for a field inspection.

RW COST ESTIMATE

	CURRENT VALUE	ESCALATED VALUE
R/ w acq.(incl.contingency G.w-condem.-adm.s'tl.)Permits	NONE	NONE
Clearance	NONE	NONE
RAP (cont rate.)	NONE	NONE
Escrow costs (cont rate.)	NONE	NONE
Utility relocation costs	NONE	NONE
Estimate of Reimbursed Appraisal Fee	NONE	NONE
Total estimated cost	NONE	NONE

ESCALATION RATE RW .07
ESCALATION RATE Utilities
CERT.DATE 11/1/14

According to Abdol Hajipour, no RW is required for this job.

ROUTE 405,110,107,105,91 and 1
PM_KM Varies
EA 28670K
ALT 0700020923

PARCEL COUNT

PARCEL TYPES	DUAL APPR.
A	
B	
C	
D	
F	
W	

RIGHTS NEEDED	
FEE	
EASE	
TCE	

TAKES	
FULL	
PART	
TOTAL	

DISPLACEMENT OF UNITS	
SFR	
MULTI	
BUS	

PARCELS WITH RAP
0

POTENTIAL CLEARANCE PARCELS

POTENTIAL CONDEMNATION PARCELS

POTENTIAL EXCESS PARCELS
not known at this time.

ESTIMATE OF PY'S

APPRAISALS

	PY	HOURS
A		
B		
C		
D		
F		
W		
Dual		

ACQUISITIONS

	PY	HOURS
A		
B		
C		
D		
F		

UTILITIES

	PY	HOURS
PY U4 1		
PY U4 2		
PY U4 3		
PY U4 4		
PY U5 7		
PY U5 8		
PY U5 9		

RAILROAD

	PY	HOURS
C & M		
SC		
LIC/RE		

CONDEMNATION

PY	HOURS

CLEARANCE

PY	HOURS

RELOCATION

PY	HOURS

PERMITS

PY	HOURS

UTILITY INFORMATION

Are Utilities affected: no

	Quantities	Estimated Costs	Escalated Costs
None			

Are utility easements required _____ No. of easements _____ Are Utility agreements required _____

Types of Util. Facilities & agrmts. required Description _____

TOTAL CURRENT COST NONE

CONST. COMPLETION DATE 8-1-2018

UTILITY ESCALATION RATE _____

ESCALATED VALUE TO UTILITY CONSTRUCTION COMPLETION DATE NONE

RR INFORMATION

Are RR affected: no

Describe affected RR: UPRR
LACMTA (Green Line)

WHEN BRANCH LINES OR SPURS ARE AFFECTED ,WOULD ACQUISITION AND OR PAYMENT OF DAMAGES TO BUSINESSES AND OR INDUSTRIES SERVED BY THE RAILROAD FACILITY BE MORE COST EFFECTIVE THAN SERVICE CONTRACTS ,OR GRADE SEPARATIONS REQUIRING CONSTRUCTION AND MAINTENANCE AGREEMENTS INVOLVED? 0

Explain Branch lines: N/A

DISCUSS TYPES OF AGREEMENTS AND RIGHTS REQUIRED FROM THE RAILROADS. ARE GRADE XING REQUIRING SERVICE CONTRACTS ,OR GRADE SEPARATIONS REQUIRING CONSTRUCTION AND MAINTENANCE AGREEMENTS INVOLVED.

N/A

ESTIMATED COST TO THE STATE FOR ALL R.R. INVOLVEMENTS. $0

		DATE
Right of Way Estimate prepared by	Roy Gallegos	3/24/11
Railroad Estimate prepared by	Arlene Chung	3/11/11
Utilities Estimate prepared by	Sonya Carter	3/15/11

I have personally reviewed this R/W Data Sheet and all supporting information I certify that the probable highest and best use estimated values and assumptions are reasonable and proper subject to the limiting conditions set forth and I find this Data Sheet complete and current.

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

Senior Right of Way Agent: [signature] 8.8.11

ATTACHMENT G

Traffic Management Plan Data Sheet

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: **ALBERT ANDRAOS**
Office of Project Studies

Date: February 16, 2011

File: 07-LA-Var Locations
1 (PM 7.70-9.24), 91 (6.00/8.43),
105 (0.30/6.73), 107 (2.25/4.80),
110 (PM 6.52/13.5) and 405 (8.7/22.47)
EA 28670K
Project No. 0700020923

From: **DENIS KATAYAMA**
Office of District Traffic Manager (South)
DEPARTMENT OF TRANSPORTATION

Subject: Transportation Management Plan (TMP)

Attached for your use is the approved TMP Data Sheet for the above-mentioned project. The TMP was developed based on the preliminary information provided by Office of Project Studies on February 2, 2011. Any changes in the scope of the project will require a re-evaluation of the TMP.

If you have any questions, please contact me at (213) 897-6143, or Isaias Maldonado of my staff at (213) 897-7402.

Denis Katayama
Office of District Traffic Manager

Attachment

c: File

TRANSPORTATION MANAGEMENT PLAN DATA SHEET
(TMP Elements and Costs)

Co/Rte/PM LA-VAR EA: 28670K (0700020923) Alternative No. PSSR
Project Limit LA 1(PM 7.70-9.24), 91 (PM 6.00/8.43), 105 (PM 0.30/6.73), 107 (PM 2.25/4.80), 110 (PM 6.52/13.50), and 405 (PM 8.70/22.47)
Project Description Various Treatment BMPs (Best Management Practices)

1) Public Information

- ☐ a. Brochures and Mailers $ _____
- ☑ b. Press Release
- ☐ c. Paid Advertising $ _____
- ☐ d. Public Information Center/Kiosk $ _____
- ☐ e. Public Meeting/Speakers Bureau
- ☐ f. Telephone Hotline
- ☑ g. Internet
- ☐ h. Other _____ $ _____

2) Motorists Information Strategies

- ☐ a. Changeable Message Signs (Fixed) $ _____
- ☐ b. Changeable Message Signs (Portable) $ _____
- ☐ c. Ground Mounted Signs $ _____
- ☐ d. Highway Advisory Radio $ _____
- ☐ e. Caltrans Highway Information Network (CHIN)
- ☐ f. Other: _____ $ _____

3) Incident Management

- ☑ a. Construction Zone Enhanced Enforcement Program (COZEEP) $ 20,000
- ☐ b. Freeway Service Patrol $ _____
- ☐ c. Traffic Management Team
- ☐ d. Helicopter Surveillance $ _____
- ☐ e. Traffic Surveillance Stations (Loop Detector and CCTV) $ _____
- ☐ f. Others _____ $ _____

4) Construction Strategies

- [x] a. Lane Closure Chart
- [ ] b. Reversible Lanes
- [ ] c. Total Facility Closure
- [ ] d. Contra Flow
- [ ] e. Truck Traffic Restrictions $ _____
- [ ] f. Reduced Speed Zone $ _____
- [ ] g. Connector and Ramp Closures
- [ ] h. Incentive and Disincentive $ _____
- [ ] i. Moveable Barrier $ _____
- [ ] j. Others _____ $ _____

5) Demand Management

- [ ] a. HOV Lanes/Ramps (New or Convert) $ _____
- [ ] b. Park and Ride Lots $ _____
- [ ] c. Rideshare Incentives $ _____
- [ ] d. Variable Work Hours
- [ ] e. Telecommute
- [ ] f. Ramp Metering (Temporary Installation) $ _____
- [ ] g. Ramp Metering (Modify Existing) $ _____
- [ ] h. Others _____ $ _____

6) Alternative Route Strategies

- [ ] a. Add Capacity to Freeway Connector $ _____
- [ ] b. Street Improvement (widening, traffic signal … etc.) $ _____
- [ ] c. Traffic Control Officers $ _____
- [ ] d. Parking Restrictions
- [ ] e. Others _____ $ _____

7) Other Strategies

- [ ] a. Application of New Technology $ _____
- [ ] b. Others _____ $ _____

TOTAL ESTIMATED COST OF TMP ELEMENTS = $ 20,000

Project Notes:

2/14/11

1) This project consists of the following Treatment BMP at drainage outfalls
   a) Gross Solid Removal Devices (GSRD)
   b) Media Filters
   c) Infiltration Basins
2) Public Awareness Campaign cost estimate provided by Media Affairs -no cost. Construction shall notify Media Relations a minimum of one month prior to the start of construction to commence the PAC.
3) The COZEEP cost estimate was prepared by the Construction Traffic Advisor on February 11, 2011. COZEEP funding is to be included in State Furnished Materials, BEES Item 066062.
4) Maintaining Traffic Specification shall be developed by DTM and be apart of the PS&E package. Any local street closure requirements shall be requested and provided by the Office of Traffic Investigations.
5) Any change in the scope of work will need a re-evaluation of TMP elements and Strategies.

PREPARED BY _____ DATE 2/16/2011
Isaias Maldonado,
Transportation Engineer

APPROVAL RECOMMENDED BY _____ DATE 2/16/11
Denis Katayama,
Senior Transportation Engineer

APPROVED BY _____ DATE 2/16/11
John Yang, District Traffic Manager

PUBLIC AWARENESS CAMPAIGN

GRSD INSTALLATION ON ROUTES 1, 91, 105, 107,110 AND 405 AT VARIOUS LOCATIONS, EA28670K (070000020923)

1. PRESS RELEASE ANNOUNCING UPCOMING PROJECT WILL BE SENT TO LOCAL MEDIA OUTLETS, ELECTED OFFICIALS AND OTHERS. PRESS RELEASE WILL INCLUDE:

    * START OF WORK, EXPLANATION OF PROJECT
    * LANE CLOSURES
    * COMPLETION

2. FUNDING ELEMENTS

    - NONE

JUDY GISH, February 11, 2011
Public Information Officer/Media Relations/Public Affairs
(213) 897-3487

MEMORANDUM

TO: DENIS KATAYAMA, TMP MANAGER

FROM: AMJAD OBEID, CONSTRUCTION TRAFFIC ADVISOR

SUBJECT: COZEEP COST ESTIMATE, PROJECT # EA 07-28670K
0700020923

07-LA-1	P.M. 7.7-9.24	07-LA-91	P.M. 6.0-8.43
07-LA-105	P.M. 0.3-6.73	07-LA-107	P.M. 2.25-4.8
07-LA-110	P.M. 6.52-13.5	07-LA-405	P.M. 8.7-22.47

BMP / GSRD

DATE: 2/11/2011

CC: TMP ESTIMATE FILES

The total estimate cost for providing COZEEP to construct GSRD on various routes at various locations per your memo dated February 10, 2011 is approximately **$20,000.00.**

If you have any questions or comments, please call me at (562) 401-3333 x224

ATTACHMENT H

Project Cost Estimate

PROJECT SCOPE SUMMARY REPORT
COST ESTIMATE

DIST-CO-RTE 07-LA-001 PM 7.70/9.24
07-LA-091 PM 6.00/8.43
07-LA-105 PM 0.30/6.76
07-LA-110 PM
07-LA-405 PM
Project: 0700020923 (EA28670K)
Program Code: 20.20.201.335

Project Description:

Limits: LA-1 between Alameda St. & Santa Fe Ave.; LA-91 b/w Vermont Ave.& Central Ave. LA-105 b/w Sepuveda Blvd.& Vermont Ave; LA-110 between 223rd St.& 120th St.; and LA-405 b/w 223rd St.& Century Blvd.

Proposed Improvement (Scope): Treatment BMPs for Storm Water Mitigation within the project limits

TOTAL ROADWAY ITEMS (including 10% TRO)	$	61,848,956
TOTAL STRUCTURE ITEMS	$	
SUBTOTAL CONSTRUCTION COSTS	$	61,848,956
RIGHT OF WAY ITEMS	$	
TOTAL PROJECT CAPITAL OUTLAY COSTS	$	61,848,956
USE (incl 10% TRO)		**62,000,000**

Program Manager _____ 213-897-0126 Phone No.

Project Manager _____ _____ Phone No.

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	1,815,690	CF	$1.50	$2,723,535	
Structure Backfill	363,138	CF	$3.00	$1,089,414	
Testing for Hazardous Waste	1	LS		$150,000	
Clearing & Grubbing	1	LS	$100,000	$100,000	
				Subtotal of Earthwork Items	$4,063,000

Section 2 Pavement Structure	Quantity	Unit	Unit Price	Item Cost	Section Cost
JPCP Pavement (1.0 ft depth)					
Lean Concrete Base					
Asphalt Concrete					
Cement-Treated Base					
Aggregate Base, Class 3					
Aggregate Subbase					
Edge Drains					
Maintenance Access					
				Subtotal Pavement Structural Section	

Section 3 Drainage Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Biofiltration Strip	9	EA.	$60,000	$ 540,000	
Biofiltration Swale	48	EA.	$60,000	$ 2,880,000	
Infiltration Basin	1	EA.	$600,000	$ 600,000	
Detention Device	1	EA.	$600,000	$ 600,000	
Media Filter Device	23	EA.	$450,000	$10,350,000	
Gross Solid Removal Devices :	8	EA.	$250,000	$ 2,000,000	
Drainage Modification	90	EA.	$80,000	$ 7,200,000	
				Subtotal Drainage Section	$24,170,000

DIST-CO-RTE 07-LA-001 PM 7.70/9.24
07-LA-091 PM 6.00/8.43
07-LA-105 PM 0.30/6.76
07-LA-110 PM
07-LA-405 PM
Project: 0700020923 (EA28670K)

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Maintenance Vehicle Pullouts	1	LS	$4,200,000	$4,200,000	
End Treatment	16	EA	$1,000	$16,000	
Metal Beam Guardrail	400	FT	$55	$22,000	
Equipment/Animal Passes					
Highway Replacement Planting	1	LS	$1,003,000	$1,003,000	
Erosion Control	1	LS	$71,400	$71,400	
Plant Establishment Work	1	LS	$150,000	$150,000	
Design Polution Prevention Plan	1	LS	$1,500,000	$1,500,000	
Hazardous Waste Mitigation Work	1	LS	$2,257,733	$2,257,733	
Environmental Mitigation					
Construction Site Management	1	LS	$350,000	$350,000	
SWPPP Plan Preparation & WPC	1	LS	$200,000	$200,000	
Resident Engineer Office	1	LS	$413,600	$413,600	
				Subtotal Specialty Items	$10,183,733

Section 5 Traffic Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
ITS (Fiber Optic Line Mitigation))	1	LS	$1,400,000	$1,400,000	
Traffic Delineation Items					
Traffic Signals					
Overhead Sign (Retro-Relective)					
Ground Mounted Signs					
Traffic Control System	1	LS	$500,000	$500,000	
Traffic Management Plan	1	LS	$10,000	$10,000	
COZEEP	1	LS	$20,000	$20,000	
Construction Area Signs	1	LS	$15,000	$15,000	
Temporary Crash Cushions	528	Module	$200	$105,600	
Temporary Railing Type K	10,000	FT	$10.00	$100,000	
				Subtotal Traffic Items	$2,150,600

SUBTOTAL SECTIONS 1-5 $40,567,333

DIST-CO-RTE 07-LA-001 PM 7.70/9.24
07-LA-091 PM 6.00/8.43
07-LA-105 PM 0.30/6.76
07-LA-110 PM
07-LA-405 PM
Project: 0700020923 (EA28670K)

Section 6 Minor Items

$40,567,333 Subtotal Sections 1-5	X	5.00% (x%)	$2,028,367	
		TOTAL MINOR ITEMS		$2,028,367
		SUBTOTAL SECTIONS 1-6		$42,595,700

Section 7 Roadway Mobilization

$42,595,700 Subtotal Sections 1-6	X	10.00% (x%)	$4,259,570	
		TOTAL ROADWAY MOBILIZATION		$4,259,570
		SUBTOTAL SECTIONS 1-7		$46,855,270

Section 8 Roadway Additions

Supplemental $46,855,270 Subtotal Sections 1-7	X	5.00% (x%)	$2,342,763	
Contingencies $46,855,270 Subtotal Sections 1-7	X	15.00% (x%)	$7,028,290	
		TOTAL ROADWAY ADDITIONS		$9,371,054

TOTAL ROADWAY ITEMS (Total of sections 1-8)	$56,226,324
TOTAL ROADWAY ITEMS + 10% TRO	**$61,848,956**

Estimate Prepared By Tommy Tran (Print Name) Phone # 7-5726 Date: 07/20/11

Estimate Checked By Abdol Hajipour (Print Name) Phone # 7-6728 Date: 07/20/11

DIST-CO-RTE 07-LA-001 PM 7.70/9.24
07-LA-091 PM 6.00/8.43
07-LA-105 PM 0.30/6.76
07-LA-110 PM
07-LA-405 PM

Project: 0700020923 (EA28670K)

II. STRUCTURES ITEMS

	STRUCTURE			
Bridge Name				
Structure Type				
Width (Replacement) - (ft)				
Widening Width - (ft)				
Span Lengths - (ft)				
Total Area - (ft^2)				
Footing Type (Pile/Spread)				
Cost Per ft^2				
(include 10% mobilization				
and 20% contingency)				
Total Cost for Structure				
Removal Cost				
Remove Approach/Departure Slabs				
Approach/Departure Slabs				
Joint Seal				

Railroad Related Costs

SUBTOTAL STRUCTURES ITEMS _____

SUBTOTAL RAILROAD ITEMS _____

TOTAL STRUCTURES ITEMS _____

USE _____

Estimate Prepared By (If appropriate, attach additional pages and backup)

Tommy Tran	7-5726	Date: 07/20/11
Print Name	Phone #	

DIST-CO-RTE 07-LA-001 PM 7.70/9.24
07-LA-091 PM 6.00/8.43
07-LA-105 PM 0.30/6.76
07-LA-110 PM
07-LA-405 PM
Project: 0700020923 (EA28670K)

III. RIGHT OF WAY

	Current Values	Escalated Values*
A. R/W Acquisition		
B. Utility Relocation (State Share)		
C. RAP (cont rate.)		
D. Clearance/Demolition		
E. Title and Escrow Fees		
TOTAL ESTIMATE COST		

Anticipated Date of Right of Way Certificaiton
(Date to which Values are escalated)

F. Construction Contract Work

Right of Way Branch Cost Estimate for Work
(This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. Do not include in Rigth of Way Items.)

COMMENTS:

Estimate Prepared By (If appropriate, attach additional pages and backup)	Tommy Tran	7-5726	Date: 07/20/11
	Print Name	Phone #	Date

ATTACHMENT I

SHOPP Project Performance Output

SHOPP Project Performance Output

Update Date:	Source		Program	Fiscal	RTL	Programming Information ($1,000)
District - County - Rte -PM	EA	PPNO	Code	Year	Date	R/W 0.00 Construction $ 62,000 Support $ 15,500
07-LA-1, 91, 105,110, 405-PM Vary	28670K	4387	201-335	2011/12	12/01/14	Project Manager: Ojas Sheth
Location: Los Angeles county						HQ Program Manager: Jagjiwan S Grewal
Project Discription: Storm Water Mitigation						

PROGRAM	ACCT. CODE 20.XX.	Quantity of Performance Output: Ten Year Plan	PID		PA&ED	RTL		CCA	After Construction	PERFORMANCE units
Approval Date										
Construction Cost ($1,000)				Output Cost ($1,000)			Output Cost ($1,000)			
Right of Way Cost ($1,000)										
Support Cost Cost ($1,000)										
EMERGENCY RESPONSE										
Major Damage Restoration	201.130									Locations
Permanent Restoration	201.131									Locations
COLLISION REDUCTION										
Safety Improvements	201.010									Collision Reduce
Collision Severity Reduction	201.015									Collision Reduce
Median Barrier Upgrade	201.020									Centerline Miles
MANDATES										
Relinquishments	201.160									Lane Miles
Noise Attenuation for Schools	201.270									Locations
Railroad	201.325									Locations
Hazardous Waste Mitigation	201.330									Locations
Storm Water	201.335			$62,000					430.50	Acres Treated / Pollutant
ADA Compliance	201.361									Curb Ramps
SHOPP TEA	201.736									Locations
BRIDGE PRESERVATION										
Bridge Rehabilitation	201.110									Bridges
Bridge Scour Mitigation	201.111									Bridges
Bridge Rail Replacement/Upgrade	201.112									Linear Feet
Bridge Seismic Restoration	201.113									Bridges: 01
Bridge Widening	201.114									Bridges
Trans Permit Requirements for Bridges	201.322									Bridges
ROADWAY PRESERVATION										
Roadway Rehabilitation (3R)	201.120									Lane Miles
Pavement Preservation (CAPM)	201.121									Lane Miles
Pavement Rehabilitation (2R)	201.122									Lane Miles
Long-Life Pavement Corridors (4R)	201.125									Lane Miles
Roadway Protective Betterment	201.150									Locations
Drainage System Restoration	201.151									Culverts
Signs and Lighting Rehabilitation	201.170									Signs Light Fixtures
MOBILITY										
Operational Improvements	201.310									Daily Vehicle Hours of delay
Transportation Management Systems	201.315									Field Elements Miles of fiber
Truck Inspection & WIM Facilities	201.321									Locations
ROADSIDE PRESERVATION										
Highway Planting Restoration	201.210									Acres
Freeway Maintenance Access	201.230									Locations
Roadside Enhancement	201.240									Locations
Beautification and Modernization	201.245									Centerline Miles
Safety Roadside Rest Area Restoration	201.250									Locations
New Safety Roadside Rest Areas	201.260									Locations
FACILITIES										
Equipment Facilities	201.351									Locations
Maintenance Facilities	201.352									Locations
Office Buildings	201.353									Locations
Materials Lab	201.354									Locations
Additional Performance Units										
Paved Shoulders										