

TRADE CORRIDORS IMPROVEMENT FUND
Amended and Restated PROJECT BASELINE AGREEMENT
Port of Los Angeles I-110 C Street Interchange Improvements
(replacing Project Baseline Agreement effective July 1, 2008)

1. PARTIES AND DATE

- 1.1** This Project Baseline Agreement (Agreement) for the West Basin Road Rail Access Improvements, effective on xxxx, 2011, is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), and the City of Los Angeles (“City”), acting through its Board of Harbor Commissioners (Project Sponsor), sometimes collectively referred to as the “Parties”.

2. RECITAL

- 2.1** Whereas at its April 10, 2008 Meeting the California Transportation Commission programmed the Trade Corridors Improvement Fund and included in this program of projects the I-110 C Street Interchange Improvements, the parties are entering into this Amended Project Baseline Agreement to document the amended project cost, amended schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as Exhibit A, the I-110 C Street Interchange Improvements Project Study Report attached hereto as Exhibit B, and the Project Benefits Form attached hereto as Exhibit C, as the baseline for project monitoring by the California Transportation Commission and its Project Delivery Council. The undersigned Project Sponsor certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

3. GENERAL PROVISIONS

The Project Sponsor and Caltrans agree to abide by the following provisions:

- 3.1** To meet the requirements of Government Code Section 8879.23(c)(1), as added by Proposition 1B, and of Government Code Section 8879.50, as enacted through implementing legislation in 2007 (Senate Bill 88 and Assembly Bill 193).
- 3.2** To adhere to the provisions of the California Transportation Commission Resolution TCIF-P-0708-01, “Adoption of Program of Projects for the Trade Corridors Improvement Fund (TCIF),” dated April 10, 2008.
- 3.3** To adhere to the California Transportation Commission’s Trade Corridors Improvement Fund Guidelines.
- 3.4** To adhere to the California Transportation Commission’s Accountability Implementation Plan and policies, and program and baseline amendment processes.

- 3.5 The Sponsoring Agency agrees to secure funds for any additional costs of the project. Any change to the funding commitments outlined in this agreement requires an amendment.
- 3.6 To report to the California Transportation Commission on a quarterly basis on the progress made toward the implementation of the project, including scope, cost, and schedule.
- 3.7 To report to the California Transportation Commission on the progress, on a quarterly basis, and outcomes, at the end of the environmental phase, of the environmental process with regard to air quality impacts due to emissions from diesel or other particulates and related mitigation strategies. Whereas the Bond Act mandates that the Commission shall allocate TCIF for trade infrastructure improvements in a manner that places emphasis on projects that improve trade corridor mobility while reducing emissions of diesel particulate and other pollutant emissions, the Department of Transportation, the Sponsoring Agency, and the Corridor Coalition understand and agree that the California Transportation Commission will only allocate TCIF to projects that can demonstrate compliance with applicable environmental requirements. If environmental clearance is conditioned to the implementation of mitigation measures, the sponsoring agency must commit, in writing, to the implementation of those mitigation measures.
- 3.8 To maintain and make available to the California Transportation Commission and/or its designated representative, all work related documents, including engineering and financial data, during the course of the project and retain those records for four years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.
- 3.9 The California Transportation Commission and/or its designated representative, has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Sponsoring Agency, and any subconsultants at any time during the course of the project and for four years from the date of the final closeout of the project. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

4. SPECIFIC PROVISIONS AND CONDITIONS

4.1 Project Schedule and Cost (Amended June 2011)

See Project Programming Request Form, attached as Exhibit A.

4.2 Project Scope

See Project Study Report/Project Study Report Equivalent, attached as Exhibit B.

4.3 Project Benefits

See Project Benefits Form, attached as Exhibit C.

4.4 Other Project Specific Provisions and Conditions

- |
- 4.4.1 This Amended Project Baseline Agreement is subject to the provisions of the Los Angeles City Charter which, among other things, precludes the City from making any expenditure of funds or incurring any liability, including contractual commitments, in excess of the amount currently appropriated. Nothing in this Amended Project Baseline Agreement shall be interpreted to conflict with such requirements. However, the Board of Harbor Commissioners, in approving this Amended Project Baseline Agreement has expressed its intended commitment to the specific projects covered by this Amended Project Baseline Agreement, subject to Section 4.4.2 herein, and the identified sources of funds and expects such funds to be available and to appropriate such funds in the fiscal years they are to be expended.
- 4.4.2 The approval of any project by the Board of Harbor Commissioners is subject to the requirements of the California Environmental Quality Act (CEQA) where applicable.
- 4.4.3 If the TCIF funds indicated in the attached schedules are not received in the identified amount and time, the City may amend such schedules to take into account delays caused by the lack of TCIF funding. Despite such amendments and delays, the projects shall remain eligible for future allocations of TCIF funds.

SIGNATURE PAGE
TO
TRADE CORRIDORS IMPROVEMENT FUND
Amended and Restated PROJECT BASELINE AGREEMENT
Port of Los Angeles I-110 C Street Interchange Improvements
(replacing Project Baseline Agreement effective July 1, 2008)

Geraldine Knatz, Ph.D. **Date**
Executive Director
The City of Los Angeles,
acting through its Board of Harbor Commissioners

Cindy McKim **Date**
Director
California Department of Transportation

Andre Boutros **Date**
Executive Director
California Transportation Commission

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 2/10)

General Instructions

<input type="checkbox"/> New Project		<input checked="" type="checkbox"/> Amendment (Existing Project)		Date:	04/19/11
Caltrans District	EA	PPNO	MPO ID	TCRP No.	
07			LAOF030		
County	Route/Corridor	PM Bk	PM Ahd	Project Sponsor/Lead Agency	
LA	I-110			City of Los Angeles Harbor Department (Port of Los Angeles)	
				MPO	Element
					MT
Project Mgr/Contact		Phone		E-mail Address	
Mimi Gutierrez		310-732-3339		migutierrez@portla.org	
Project Title					
I-110 Freeway & C Street Interchange Improvements					
Location, Project Limits, Description, Scope of Work, Legislative Description					
The project is located at the I-110/C Street interchange and adjacent congressionally designated National Highway System (NHS) Intermodal Connector Routes, all within the Port of Los Angeles, on the border with the Wilmington Community of the City of Los Angeles. The project entails: (1) Consolidation of two closely spaced intersections on the NHS: I-110/C Street/Figueroa Street interchange intersection and the intersection of Harry					
Component	Implementing Agency			Reimbursements	
PA&ED	POLA				
PS&E	POLA				
Right of Way	POLA				
Construction	POLA				
Legislative Districts					
Assembly:	54		Senate:	27	
Congressional:	46				
Purpose and Need					
The POLA/POLB handled 14.1 million twenty-foot equivalent units (TEUs) in 2010. By 2035, the Ports are projected to handle 43 million TEUs. The I-110/C Street Interchange-National Highway System Improvements are a crucial transportation improvement serving the ports and the region. It will improve connections to the I-110 and SR 47 which together with I-710 carry approximately 30% of all U.S. waterborne container volume (the I-110 alone carries approximately 10% of all U.S. waterborne containers). Many intersections, roadways, and freeways within the Ports' area currently operate at unacceptable levels of service. The poor operating conditions are expected to deteriorate within the next 20 years as determined in numerous recent studies,					
Project Benefits					
<ul style="list-style-type: none"> Existing and future peak period hour levels of service will improve from an unacceptable F to C. Under Year 2035 conditions, total vehicular delay on a daily basis will be reduced by approximately 2,580 vehicle-hours (150 and 220 vehicle-hours during the morning and afternoon peak hours, respectively). As a result of the intersection consolidation, relocated ramp, free flow movements, and improved freeway system, accident rates would be reduced 					
Project Milestone				Existing	Proposed
Project Study Report Approved					01/23/07
Begin Environmental (PA&ED) Phase					07/01/08
Circulate Draft Environmental Document			Document Type ND/FONSI		06/15/11
Draft Project Report					07/15/11
End Environmental Phase (PA&ED Milestone)					08/15/11
Begin Design (PS&E) Phase					07/01/08
End Design Phase (Ready to List for Advertisement Milestone)					08/29/12
Begin Right of Way Phase					NA
End Right of Way Phase (Right of Way Certification Milestone)					NA
Begin Construction Phase (Contract Award Milestone)					02/01/13
End Construction Phase (Construction Contract Acceptance Milestone)					02/28/15
Begin Closeout Phase					03/01/15
End Closeout Phase (Closeout Report)					02/28/16

ADA Notice

For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 2/10)

Date: 04/19/11

County	CT District	PPNO	TCRP Project No.	EA
LA	07			26480
Project Title: I-110 Freeway & C Street Interchange Improvements				

Existing Total Project Cost									Implementing Agency
Component	Prior	10/11	11/12	12/13	13/14	14/15	15/16+	Total	
E&P (PA&ED)	620	0	0	0	0	0	0	620	POLA
PS&E	2,400	150	0	0	0	0	0	2,550	POLA
R/W SUP (CT)	0	0	0	0	0	0	0	0	POLA
CON SUP (C	0	0	0	247	1,150	694	0	2,091	POLA
R/W	0	0	0	0	0	0	0	0	POLA
CON	0	0	2,914	10,580	8,228	2,258	0	23,980	POLA
TOTAL	3,020	150	2,914	10,827	9,378	2,952	0	29,241	
Proposed Total Project Cost									
E&P (PA&ED)	0	58	0	0	0	0	0	58	
PS&E	1,800	350	635	0	0	0	0	2,785	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (C	0	0	0	247	1,150	694	0	2,091	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	6,779	13,792	7,222	0	27,793	
TOTAL	1,800	408	635	7,026	14,942	7,916	0	32,727	

Fund No. 1:									Program Code
Existing Funding									
Component	Prior	10/11	11/12	12/13	13/14	14/15	15/16+	Total	Funding Agency
E&P (PA&ED)	620		0	0	0	0	0	620	Port General Revenue Funds
PS&E	600		0	0	0	0	0	600	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (C	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	0	0	0	0	0	0	
TOTAL	1,220	0	0	0	0	0	0	1,220	
Proposed Funding									Notes
E&P (PA&ED)		58						58	
PS&E	1,800	350	635					2,785	
R/W SUP (CT)								0	
CON SUP (CT)				247	1,150	694		2,091	
R/W								0	
CON				3,865	5,470	3,511		12,846	
TOTAL	1,800	408	635	4,112	6,620	4,205	0	17,780	

Fund No. 2:									Program Code
Existing Funding									
Component	Prior	10/11	11/12	12/13	13/14	14/15	15/16+	Total	Funding Agency
E&P (PA&ED)	0	0	0	0	0	0	0	0	Metro-Call for Projects-Prop C
PS&E	0	0	0	0	0	0	0	0	
R/W SUP (CT)	0	0	0	0	0	0	0	0	
CON SUP (C	0	0	0	0	0	0	0	0	
R/W	0	0	0	0	0	0	0	0	
CON	0	0	1,614	3,322	1,711	0	0	6,647	
TOTAL	0	0	1,614	3,322	1,711	0	0	6,647	
Proposed Funding									Notes
E&P (PA&ED)								0	
PS&E								0	
R/W SUP (CT)								0	
CON SUP (CT)								0	
R/W								0	
CON				1,614	3,322	1,711		6,647	
TOTAL	0	0	0	1,614	3,322	1,711	0	6,647	

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 2/10)

Complete this page for amendments only

Date: 04/19/11

District	Co	Route	EA	PPNO	TCRP No.
7	LA		26480		

SECTION 1 - All Projects**Project Background**

TCIF project #20; initial baseline agreement executed in 2008; RTL anticipated in January 2013.

Programming Change Requested

Revise total project cost and schedule.

Reason for Proposed Change

Additional time required for utility relocation design, study of alternatives developed during the Value Engineering study, and Caltrans structural approval of bridge overpass and retaining wall designs. The total cost increased due to refined cost estimate from when the TCIF baseline agreement was executed in 2008.

If proposed change will delay one or more components, clearly explain 1) reason the delay, 2) cost increase related to the delay, and 3) how cost increase will be funded

Schedule delays have been encountered due to extended utility coordination, required studies of alternatives developed during the Value Engineering Study, and Caltrans structural approval of bridge overpass and retaining wall designs. Costs have increased due to delays. Additional project costs to be funded by the local/sponsoring agency, the Port of Los Angeles (see attached letter requesting baseline agreement amendment for TCIF project).

Other Significant Information**SECTION 2 - For TCRP Projects Only**

- Alternative Project Request (Please follow Instructions at <http://www.dot.ca.gov/tcrp/LETTERguidelines>)
- Letter of No Prejudice (LONP) (Please follow Guidelines at <http://www.dot.ca.gov/tcrp/docs/042706.pdf>)

SECTION 3 - All Projects**Approvals**

I hereby certify that the above information is complete and accurate and all approvals have been obtained for the processing of this amendment request.*

Name (Print or Type)	Signature	Title	Date

Attachments

- 1) Concurrence from Implementing Agency and/or Regional Transportation Planning Agency
- 2) Project Location Map

PROJECT PROGRAMMING REQUEST

DTP-0001 (REV. 2/10)

Date: 04/19/11

County	CT District	PPNO	TCRP Project No.	EA
LA	07			26480
Project Title: I-110 Freeway & C Street Interchange Improvements				

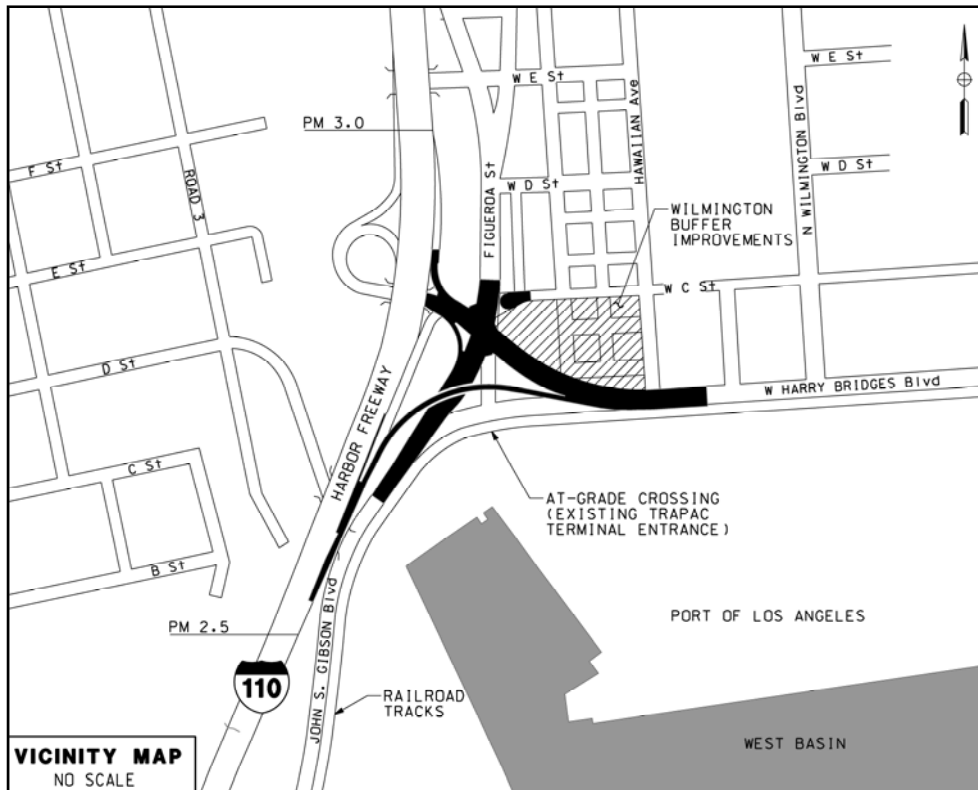
Existing Total Project Cost									Implementing Agency
Component	Prior	10/11	11/12	12/13	13/14	14/15	15/16+	Total	
E&P (PA&ED)	620							620	
PS&E	2,400	150						2,550	
R/W SUP (CT)									
CON SUP (CT)				247	1,150	694		2,091	
R/W									
CON			2,914	10,580	8,228	2,258		23,980	
TOTAL	3,020	150	2,914	10,827	9,378	2,952		29,241	
Net Change									
E&P (PA&ED)	-620	58						-562	
PS&E	-600	200	635					235	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			-2,914	-3,801	5,564	4,964		3,813	
TOTAL	-1,220	258	-2,279	-3,801	5,564	4,964		3,486	
Proposed New Result									
E&P (PA&ED)		58						58	
PS&E	1,800	350	635					2,785	
R/W SUP (CT)									
CON SUP (CT)				247	1,150	694		2,091	
R/W									
CON				6,779	13,792	7,222		27,793	
TOTAL	1,800	408	635	7,026	14,942	7,916		32,727	

Fund No. 1:	Existing Funding								Program Code
Component	Prior	10/11	11/12	12/13	13/14	14/15	15/16+	Total	Funding Agency
E&P (PA&ED)	620							620	General Port Revenue
PS&E	600							600	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	1,220							1,220	
Change									Notes
E&P (PA&ED)	-620	58						-562	
PS&E	1,200	350	635					2,185	
R/W SUP (CT)									
CON SUP (CT)				247	1,150	694		2,091	
R/W									
CON				3,865	5,470	3,511		12,846	
TOTAL	580	408	635	4,112	6,620	4,205		16,560	
Proposed Funding									
E&P (PA&ED)		58						58	
PS&E	1,800	350	635					2,785	
R/W SUP (CT)									
CON SUP (CT)				247	1,150	694		2,091	
R/W									
CON				3,865	5,470	3,511		12,846	
TOTAL	1,800	408	635	4,112	6,620	4,205		17,780	

Fund No. 2:		Existing Funding							Program Code
Component	Prior	10/11	11/12	12/13	13/14	14/15	15/16+	Total	Funding Agency
E&P (PA&ED)									Metro Call for Projects- Prop C
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			1,614	3,322	1,711			6,647	
TOTAL			1,614	3,322	1,711			6,647	
Change									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			-1,614	-1,708	1,611	1,711			
TOTAL			-1,614	-1,708	1,611	1,711			
Proposed Funding									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON				1,614	3,322	1,711		6,647	
TOTAL				1,614	3,322	1,711		6,647	

Fund No. 3:		Existing Funding							Program Code
Component	Prior	10/11	11/12	12/13	13/14	14/15	15/16+	Total	Funding Agency
E&P (PA&ED)									TCIF
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			1,300	5,000	2,000			8,300	
TOTAL			1,300	5,000	2,000			8,300	
Change									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			-1,300	-3,700	3,000	2,000			
TOTAL			-1,300	-3,700	3,000	2,000			
Proposed Funding									
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON				1,300	5,000	2,000		8,300	
TOTAL				1,300	5,000	2,000		8,300	

DRAFT PROJECT REPORT



C Street/I-110 Access Ramp Improvements

On Route I-110
From 0.30-mile south of C Street
To 0.20-mile north of C Street

The Right-of-Way Data Sheet was completed by a consultant, I have reviewed the Right-of-Way information contained in this Project Report and the Right-of-Way Data Sheet attached hereto, and find the data to be complete as to form and procedure only. No inference or assertions are made as to the validity of the data or the values implied by the R/W Data Sheet.

APPROVAL RECOMMENDED BY:

Gabe Hamidi, Project Manager

Andrew P. Nierenberg, Deputy District Director, R/W


APPROVED BY:

APPROVED BY:

William H. Reagan, Deputy District Director, Design Date

Antonio V. Gioiello, Chief Harbor Engineer Date
Port of Los Angeles

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


Steven R. Leathers, P.E.
Registered Civil Engineer

APRIL 20, 2010
Date



PREPARED BY:

HDR Engineering, Inc.
3230 El Camino Real, Suite 200
Irvine, CA 92602
Tel.: (714) 730-2300
Fax.: (714) 730-2301

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1. INTRODUCTION

The Port of Los Angeles (POLA), in conjunction with the California Department of Transportation District 07 (Caltrans) proposes to improve the Interstate 110 (I-110)/C Street Interchange, in the City of Los Angeles. The improvements are intended to increase traffic circulation, reduce queuing of trucks and improve safety for all roadway users on local roadways by providing a more direct connection between I-110 and the POLA terminals. The proposed improvements include the reconfiguration of the C Street northbound off-ramp to provide direct access to Harry Bridges Boulevard, modification of the C Street northbound on-ramp, realignment of Harry Bridges Boulevard, and combining the I-110 ramp termini/C Street/Figueroa Street Intersection with the John S. Gibson Boulevard/Harry Bridges Boulevard/Figueroa Street Intersection (Attachment A).

This project has been assigned the Project Development Processing Category 3 because it involves improvements to a previously constructed access controlled route requiring a revised freeway agreement, but not a route adoption.

The project will be funded using Proposition C (\$6.6 million), Trade Corridor Improvement Funds (\$8.3 million), and POLA local match (\$21.3 million).

A No Build and one Build alternative was studied:

Alternative 1: No Build

The No Build Alternative would have no change to the existing ramps and intersections.

Alternative 2: Northbound Off-Ramp to Harry Bridges Boulevard

The Alternative 3 geometrics depicted in the approved PSR have been modified as a part of this Project Report and carried forward as Alternative 2 in this DPR. The modifications do not constitute changes to the overall project features, but rather enhance some of the specific design components to reduce project cost and minimize the number of non-standard features associated with the geometric design. These changes include reducing the number of bridge spans from five to four on the new northbound I-110 off-ramp, increasing the horizontal radius of the new northbound I-110 off-ramp, elimination of the “free” right turn from northbound Figueroa Street onto eastbound Harry Bridges Boulevard, accommodating two lanes on the northbound I-110 on-ramp, and minor geometric changes to the local roadway alignments to reduce non-standard features.

This alternative proposes the following improvements:

- Combine the two existing intersections at (1) C Street and Figueroa Street and (2) John S. Gibson Boulevard, Harry Bridges Boulevard and Figueroa Street into one by realigning Harry Bridges Boulevard and John S. Gibson Boulevard. The new intersection will provide a “free” right turn from the I-110 southbound off-ramp to southbound John S. Gibson Boulevard and dual, left-turn pockets from westbound Harry Bridges Boulevard to southbound John S. Gibson Boulevard.
- Permanently close C Street access to Figueroa Street and provide an offset cul-de-sac at the existing intersection.
- Replace the existing northbound off-ramp with a direct off-ramp from northbound I-110 to eastbound Harry Bridges Boulevard. This would involve the widening of the

existing Union Oil Undercrossing (Bridge No. 53-1033) and the construction of a new bridge structure over the re-aligned John S. Gibson Boulevard.

The estimated cost of this alternative is \$36.2 million, which includes \$12.7 million for right of way acquisition and utility relocation, and \$23.5 million for construction.

2. RECOMMENDATION

It is recommended that the Draft Environmental Document (DED) be publicly circulated and a public hearing be scheduled based on the viable alternatives. The document will be made available at facilities in Caltrans, the Port of Los Angeles and nearby local libraries. All comments will be taken into consideration and incorporated into the final document, as appropriate.

3. BACKGROUND

3.1. Project History

The POLA completed a study of existing and projected future traffic conditions of its West Basin area, which includes the Yang Ming, China Shipping, and Trapac terminals. As a result of this study, a plan was developed to relocate terminal gates and railroad tracks, modify the existing internal roadway networks, and improve connections to the I-110 Freeway.

Three terminal entrance and exit gates along the West Basin affect the operation of the immediate roadway system. The first gate is located at the intersection of Harry Bridges Boulevard, Figueroa Street, and John S. Gibson Boulevard. The second gate is located along John S. Gibson Boulevard, which is opposite to the I-110 northbound ramps. The third gate is located along Front Street, which is opposite Knoll Drive. The Port is seeking to relocate the gate at Harry Bridges Boulevard and Figueroa Street to the proposed South Wilmington grade separation at Fries Avenue. The second gate at John S. Gibson Boulevard is underused and the Port is seeking to increase its use significantly. The third gate at Knoll Drive will remain. However, with the enhanced use of the Gibson Gate, the Knoll Drive Gate will only allow outbound truck traffic.

Through an extensive planning process, which includes traffic modeling, operation analysis, and public input, the Port of Los Angeles has determined that the modifications to the existing C Street Interchange are necessary to accommodate planned roadway and port facilities improvements. The proposed modifications essentially make the C Street/I-110 Interchange a key access point that distributes truck traffic to all Port terminals south and east of the interchange.

Caltrans approved a Project Study Report (PSR) on January 23, 2007 for this project, and Alternative 2 (PSR Alternative 3) was recommended for programming.

3.2. Community Interaction

The POLA has already conducted a number of public outreach efforts in both the San Pedro and Wilmington communities, in April 2006, during the development of the PSR. The conceptual improvements were presented using a variety of visual graphics and oral

presentations. The community generally supported the improvements but expressed concerns with the northbound connector to Figueroa Street, as proposed in Alternative 2 from the PSR, citing that this connector will increase traffic, noise, and air pollution to the residential and business district of Wilmington. The community of Wilmington voiced a strong desire to separate the truck traffic from the local circulation and residential neighborhood. In addition, they expressed a desire to have more separation between the port terminal facilities and the residential areas. Both communities have expressed their desire to reduce the existing noise levels, improve the air quality and congestion, and to remove the port-related traffic from their communities and business districts.

In response, the POLA is sponsoring the Wilmington Buffer Improvement Project, which proposes constructing landscaping and pedestrian walkways between C-Street and Harry Bridges Boulevard east of Figueroa Street and west of Hawaiian Street. These improvements are supported by the community. The Alternatives carried forward into this Draft Project Report (DPR) strive to better channel port-related traffic away from the residential communities and businesses and directly to the port terminals.

The most recent community workshop was held at Banning's Landing, in Wilmington on January 7, 2009. The conceptual improvements were again presented and generally supported by the community.

While the general public, including business groups, legislators, and local politicians were notified and participated in the community outreach meetings, no separate meetings with special interest groups, minorities, elderly, physically challenged, non-drivers (transit-dependent), pedestrians, bicyclists, and the economically disadvantaged have been conducted.

The proposed project is scheduled to have a public hearing and circulation period after approval of the Draft IS/EA by Caltrans. The public meeting is tentatively scheduled for June 2010, with a public circulation period between May 11, 2010 to June 21, 2010.

3.3. Existing Facility

The Harbor Freeway (I-110) begins at Gaffey Street in San Pedro, where it travels north to the Santa Monica Freeway (Interstate 10) south of downtown Los Angeles. I-110 is primarily within the city limits of Los Angeles, running through the Harbor Gateway, a two-mile wide north-south corridor that was annexed by the City of Los Angeles specifically to connect San Pedro, Wilmington and the Port of Los Angeles with the rest of the city. I-110 currently has four 12-foot wide mixed flow lanes with 10-foot wide right and left shoulders in each direction of travel. A concrete barrier (Type 50E) separates opposing traffic.

The C Street Interchange is configured as a trumpet interchange (Type L-11) as described in the Highway Design Manual (HDM). C Street generally runs in an east-west direction terminating at I-110 to the west. It is a standard collector roadway as classified by the City of Los Angeles General Plan. Eastbound access to C Street from Figueroa Street is currently prohibited by a raised concrete island.

Figueroa Street parallels I-110 to the east and intersects C Street near the interchange. Figueroa Street terminates at the John S. Gibson Boulevard/Harry Bridges Boulevard Intersection south of C Street. The Trapac Terminal entrance is located on the south side of this intersection, where an at-grade railroad crossing currently exists. Figueroa Street is a Class II Major Highway as classified by the City of Los Angeles General Plan.

John S. Gibson Boulevard and Harry Bridges Boulevard are also classified as Class II Major Highways per the City of Los Angeles General Plan.

3.4. Existing Non-Standard Features

Based on current design standards, the following non-standard design features have been identified within the project limits:

- The existing southbound loop on-ramp does not provide additional lane width for trucks (HDM Index 504.3A).
- The existing southbound off-ramp does not provide adequate deceleration length prior to the first curve (HDM Index 504.2).
- The existing concrete barriers for the C Street undercrossing and the Union Oil undercrossing do not meet current standards (HDM Index 210.6).

These non-standard features were discussed with the Caltrans Headquarters Reviewer at the meeting held at Caltrans District 7 on _____, it was agreed that these features would not be included as part of the Exceptions to Design Standards since no work is performed on these facilities. The mandatory and advisory non-standard features being documents for this project are discussed in Section 5.2.2.

3.5. Existing Structures

The Union Oil Undercrossing (Br. No. 53-1033) provides access between John S. Gibson Boulevard and the Union Oil facility located on the west side of I-110. The undercrossing provides a 25-foot wide roadway and 21-foot minimum vertical clearance; access is controlled by a chain link gate.

3.6. Existing Drainage

The project is located within the Dominguez Channel Watershed. The watershed has no Total Maximum Daily Load (TMDL) regulation in effect at this time. Runoff is generally collected within drainage inlets and conveyed to the Pacific Ocean via subsurface storm drainage systems. A double 14-foot wide by 12-foot high Reinforced Concrete Box (RCB) culvert located within Figueroa Street conveys storm runoff to the harbor.

3.7. Existing Utilities

John S. Gibson Boulevard and Harry Bridges Boulevard are two major utility corridors within the City of Los Angeles. Utilities known to exist based on available atlases and record drawings are shown in the utility plans included in Attachment D.

3.8. Site Geotechnical Conditions

The proposed project site is composed of fills underlain by alluvial soils. Subsurface conditions include soils that are predominantly silty sands and sands with varying amounts of silts and gravel. The soils are generally medium dense with occasional very dense consistency with compaction tests resulting in approximately 90 percent relative compaction.

The field investigation for the proposed project consisted of drilling 15 borings and advancing five cone penetrating tests (CPTs) to depths ranging from 22-feet to 124-feet. Soils encountered in the test borings were classified in general accordance with ASTM Soil Classification System (ASTM D2487 and 2488).

Groundwater was encountered at an approximate depth of 12-feet below existing grade during the field investigation.

3.9. Other Projects

The POLA is currently proceeding with the design and construction of numerous projects within the vicinity of the C-Street Interchange, these projects include:

1. Wilmington Buffer Improvements:

Construction was initiated in February 2009 on the Wilmington Buffer Improvements. These improvements abut the proposed C Street project. The Wilmington Buffer is generally bounded by Figueroa Street to the west, C Street to the north, Hawaiian Avenue to the east, and Harry Bridges Boulevard to the south. This project is intended to provide a landscape buffer between the port operations and the residents north of C Street in the City of Wilmington.

2. Harry Bridges Boulevard Widening from Figueroa Street to Lakme Avenue:

Harry Bridges Boulevard will be widened from Hawaiian Avenue to Lakme Avenue. This project is currently under construction. The C Street improvements would match the widened roadway section on Harry Bridges Boulevard.

3. Grade Separation at Fries Avenue:

A new grade separation is planned at Fries Avenue to minimize traffic delays associated with the at grade railway crossing. The construction of the C Street improvements would permit the closure of the Trapac Terminal entrance and re-direct port traffic to the terminal entrance facilitated by the new Fries Avenue grade separation.

4. Relocation of the Trapac Terminal to China Shipping Terminal:

Upon completion of the Fries Avenue grade separation and C Street improvements, the existing Trapac Terminal Entrance at Figueroa Street/John S. Gibson Boulevard will be relocated to the China Shipping Terminal.

5. John S. Gibson Interchange Improvements:

The John S. Gibson Boulevard improvement project, which includes the SR-47/I-110 connector widening is currently in the Project Authorization/Environmental Documentation (PA/ED) phase (EA 260600).

Future transportation improvement projects identified by the POLA include: (1) Harbor Boulevard and I-110 interchange, (2) I-110 SB on-ramp at Mira Flores, (3) SR-47/I-110 connector widening.

4. PURPOSE AND NEED

4.1. Problem, Deficiencies, Justification

Increased queuing of trucks and other port traffic on Figueroa Street, Harry Bridges Boulevard, and John S. Gibson Boulevard has caused traffic to be often delayed as a result of the at-grade rail crossing near the Trapac Terminal entrance. These delays have resulted in increased traffic on C Street and other adjacent local roadways. The surrounding community has expressed a desire to remove truck traffic from their residential streets. Therefore, as an interim response to the community's concerns, the City of Los Angeles installed a raised concrete island to prohibit through traffic onto C Street from the I-110 ramps and Figueroa Street. However, this has not addressed the queuing on Figueroa Street, Harry Bridges Boulevard, and John S. Gibson Boulevard.

The Port of Los Angeles terminals are expected to expand their cargo throughput significantly by the year 2035. Based on the current growth projections, the existing I-110 ramps/C-Street/Figueroa Street Intersection is expected to operate at an unacceptable Level of Service F (LOS F) for both the AM and PM peak hours based on 2035 traffic projections.

This project, in conjunction with other Port improvements, propose to channel truck traffic directly to and from the I-110 Freeway and port terminals to minimize truck traffic on the local roadways.

4.2. Regional & System Planning

4.2.1. Federal and State Systems

The proposed project on Interstate 110 (I-110) is part of the Interstate System, a subsystem of the National Highway System (NHS).

4.2.2. State Planning

The Transportation Concept Report (TCR) dated January 1991 indicates a year 2010 concept facility of eight mixed flow (MF) lanes based on plans identified in the Southern California Association of Government (SCAG)'s Regional Transportation Plan (RTP), Metro's Long Range Plan and the Caltrans' District Management Plan. An ultimate section of eight MF lanes and two High Occupancy Vehicle (HOV) lanes (8 MF + 2 HOV) is considered the maximum reasonable development within the corridor; as cited in the TCR.

4.2.3. Regional Planning

Regional Transportation Plans (RTPs) are prepared by the Regional Transportation Planning Agencies (RTPAs) are required by California Government Code Section 65080 et seq., and United States Code, Title 23, Sections 134 and 135 et seq. The California Transportation Commission cannot program projects that are not consistent with an adopted RTP. The RTPA for Los Angeles County is the Metropolitan Transportation Authority (MTA); the state and federally designated Southern California Association of Governments (SCAGs) is the Metropolitan Organization (MPO), the RTPA and the Council of Government (COG) for the 6-county region represented by the SCAG.

The 2008 Regional Transportation Plan (RTP) includes plans for Port access improvements including short-term initiatives to improve access to Terminal Island and removing bottlenecks to truck movements. These plans include the replacement of the Gerald Desmond Bridge, SR-47 Truck Expressway/Heim Bridge replacement, I-110/SR-47 Connectors Improvement Program, and the SR-47/Navy Way Interchange.

The 2008 Multi-County Goods Movement Plan (MCGMP) recommends funding over \$100 million for goods movement projects in Los Angeles County between 2007 and 2012 through the 2007 Call for Projects. The proposed project is identified in the SCAG prepared, federally approved 2008 Regional Transportation Improvement Program (RTIP), Los Angeles County Highways, Page 70 of 83, project ID# LA0F030.

The C Street/I-110 Access Ramp Improvements are consistent with the above Regional Planning programs.

4.2.4. Local Planning

The proposed improvements are consistent with the City of Los Angeles General Plan adopted August 8, 2001.

Class II bike lanes exist on John S. Gibson Boulevard. Class III bike routes are on Figueroa Street.

The Metropolitan Transportation Authority (MTA) operates transit systems within the project area. Metro Bus Express Line numbers 445, 446, and 447 run through the project limits, generally along John S Gibson Boulevard, Harry Bridges Boulevard, and Figueroa Street.

The Waterfront Red Car Trolley System provides a public transit link to waterfront attractions. This system is proposed to be extended to Harry Bridges Boulevard within the vicinity of the C Street interchange.

This project will increase mobility within the area and therefore, improve the operation of these transit systems.

4.3. Traffic

An approved Traffic Operations Analysis Report (Traffic Study) dated November 11, 2009 has been prepared for this project and the findings are summarized in this section.

4.3.1. Current Traffic Analysis

An existing 2008 model was developed based on the SCAG 2008 Regional Transportation Plan (RTP) Model to simulate traffic around the Port of Los Angeles. The model uses 2007 Quick Trip Data prepared by the Ports, and the 2008 regional Socio-Economic Data (SED) for the trip generation in the port and non-port areas.

To ensure that the model can duplicate existing conditions, a validation process was completed to compare traffic counts to model estimates which can be found in the approved Traffic Study.

The project is located in an area that can be categorized as being both industrial and residential. The port facilities are directly south of the proposed project, and industrial warehouse type facilities are located east of the northbound on-ramp. Queuing of trucks and other port traffic on Figueroa Street, Harry Bridges Boulevard, and John S. Gibson Boulevard is an ongoing issue within the area. Traffic is often delayed as result of the at-grade rail crossing near the Trapac Terminal entrance. These delays have resulted in increased traffic on C Street and other local roadways. The table below identifies the percentage of daily trucks that currently travel through segments within the project limits.

Table 1: Existing Year 2009 % Total Trucks

Freeway Segment	AM Peak Hour	PM Peak Hour	Daily
NB I-110 South of C St Off-Ramp	4%	8%	11%
NB I-110 Off-Ramp to C Street	1%	3%	4%
NB I-110 Between C St Off & On-Ramps	4%	9%	11%
NB I-110 On-Ramp from C Street	17%	16%	31%
NB I-110 Between C St On-Ramp & Anaheim St Off-Ramp	5%	10%	14%

4.3.2. Forecasted Traffic

Future traffic conditions were estimated by adding traffic due to regional traffic growth and traffic increases resulting from Port terminal throughput growth. Local traffic growth was forecast based on a computerized traffic analysis tool known as the Port Area Travel Demand Model, which includes traffic growth for the port and local area.

Table 2: Existing (2009) and Future (2035) Traffic Volumes

Freeway Segment	Existing Year (2009)				Future Year (2035)			
	A.M. Peak Hour	P.M. Peak Hour	ADT	DDHV	A.M. Peak Hour	P.M. Peak Hour	ADT	DDHV
NB I-110 South of C St Off-Ramp	4,544	2,989	42,717	4,544	5,617	5,115	61,578	5,617
NB I-110 Off-Ramp to C Street	289	293	3,286	293	355	385	5,100	385
NB I-110 Between C St Off & On-Ramps	4,255	2,696	39,431	4,255	5,262	4,731	56,478	5,262
NB I-110 On-Ramp from C Street	133	226	5,994	226	582	732	6,510	732
NB I-110 Between C St On-Ramp & Anaheim St Off-Ramp	4,388	2,922	45,425	4,388	5,844	5,463	62,989	5,844

Notes:

Average Daily Traffic (ADT)
 Directional Daily Hourly Volume (DDHV)
 Source: Iteris, 2009

Table 2 above identifies an increase in traffic volumes from the existing to future year, showing a significant increase in Average Daily Traffic (ADT) when compared to the existing year.

Table 3: Intersection Levels of Service (Build and No Build Alternative)

Local Roadway Intersection	Existing Year (2009)						Future Year (2035)					
	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
	LOS	Delay (Sec)	V/C	LOS	Delay (Sec)	V/C	LOS	Delay (Sec)	V/C	LOS	Delay (Sec)	V/C
Figueroa Street & I-110 Ramps/C Street Intersection	B	11.1	0.37	C	15.8	0.75	F	165.1	1.919	F	280.0	2.778
Figueroa Street & John S. Gibson Blvd/Harry Bridges Blvd Intersection	A	8.1	0.44	A	7.5	0.45	C	21.5	0.80	C	22.8	0.92
I-110 Ramps/Figueroa Street/John S. Gibson Blvd/Harry Bridges Blvd Intersection	N/A	N/A	N/A	N/A	N/A	N/A	C	20.5	0.59	C	24.4	0.59

Notes:

HCM 2000 Operations Methodology.
 Level of Service (LOS), Delay (D) = Average Vehicle Delay (Seconds), Volume-to-Capacity Ratio (V/C)

Table 3 above indicates that the existing intersections currently operate at an acceptable level of service (LOS) during peak hours. However, the intersection of Figueroa Street & I-110 Ramps/ C Street will operate at an unacceptable LOS for projected year 2035 under the No Build Alternative. The combined intersection proposed in the Build alternative will operate at an acceptable LOS (LOS C or better) for the projected year 2035.

4.3.3. Freeway Analysis

Current and future year AM and PM peak hour Levels of Service (LOS) for the freeway segments within the study area for No Build (Table 4) and Build (Table 5) scenarios are summarized below.

Table 4: Freeway Segment Levels of Service (No Build Alternative)

Freeway Segment	Existing Year (2009)								Future Year (2035)							
	AM Peak Hour			PM Peak Hour			HCM Average Speed (mph) ¹		AM Peak Hour			PM Peak Hour			HCM Average Speed (mph) ¹	
	V	D	LOS	V	D	LOS	AM Peak	PM Peak	V	D	LOS	V	D	LOS	AM Peak	PM Peak
NB I-110 South of C St Off-Ramp	4,544	18.4	C	2,989	12.1	B	65	65	5,617	22.5	C	5,115	20.7	C	65	65
NB I-110 Off-Ramp to C Street	289	22.9	C	293	16.5	B	60	60	355	26.4	C	385	24.6	C	60	60
NB I-110 Between C St Off & On-Ramps	4,255	17.2	B	2,696	10.9	A	65	65	5,262	21.1	C	4,731	19.2	C	65	65
NB I-110 Between C St On-Ramp & Anaheim St Off-Ramp	4,388	16.6	B	2,922	10.8	B	55	60	5,844	25.5	C	5,463	23.9	C	50	50

Notes:

¹ Average passenger-car speed based on HCS output

Density (D) is denoted in pc/mi/ln.

Volume (V) is denoted in PCE (passenger car equivalents).

Level of Service (LOS) criteria are provided in the *Highway Capacity Manual*, and are based on density.

Table 4 above indicates that the I-110 freeway segments are currently operating at an acceptable level of service (LOS C or better) and will continue to operate at an acceptable LOS for projected year 2035 traffic conditions. The northbound I-110 on-ramp from C Street is in a weaving configuration between C Street On-Ramp and Anaheim Street Off-Ramp.

Table 5: Freeway Segment Levels of Service (2035 Build Alternative)

Freeway Segment	AM Peak Hour			PM Peak Hour			HCM Average Speed (mph) ¹	
	V	D	LOS	V	D	LOS	AM Peak	PM Peak
NB I-110 South of Off-Ramp to Harry Bridges Blvd	5,617	22.7	C	5,115	21.0	C	65	65
NB I-110 Off-Ramp to Harry Bridges Blvd	355	26.2	C	385	25.0	C	60	60
NB I-110 Between Harry Bridges Blvd Off & On-Ramps	5,262	21.3	C	4,731	19.0	C	65	65
NB I-110 Between Harry Bridges Blvd On-Ramps & Anaheim St Off-Ramps	5,844	25.5	C	5,463	23.9	C	50	50

Notes:

- ¹ Average passenger-car speed based on HCS output
- Density (D) is denoted in pc/mi/ln.
- Volume (V) is denoted in PCE (passenger car equivalents).
- Level of Service (LOS) criteria are provided in the *Highway Capacity Manual*, and are based on density.

Table 5 above indicates that the Build alternative results in acceptable levels of service during both the AM and PM peak hours for the proposed segments under projected year 2035 build conditions. The northbound I-110 on-ramp from C Street is in a weaving configuration between C Street On-Ramp and Anaheim Street Off-Ramp.

Table 6 below indicates the recommended storage lengths based on the calculated queuing derived from the traffic model for the Build alternative.

Table 6: Intersection Queue Lengths (2035 Build Alternative)

Local Roadway Intersection	Movement	2035 Build Scenario		Recommended Storage (ft)
		AM Peak Hour	PM Peak Hour	
		Queue Length (ft) 95th Percentile	Queue Length (ft) 95th Percentile	
I-110 Ramps/Figueroa Street/John S. Gibson Blvd/Harry Bridges Blvd Intersection	SBL	105	139	150
	NBR	57	59	100
	NBL	11	0 ²	100
	EBR	0	0	100
	EBL	55 ¹	110	125
	WBR	19	22	100
	WBL	255 ¹	308	325

Notes:

- ¹ 95th percentile volume exceeds capacity, queue may be longer
- ² Values not reported by Synchro

4.3.4. Accident Analysis

The accident data obtained from Caltrans Traffic Accident Surveillance and Analysis System (TASAS) Table B, for a three year period, from April 1, 2005 to March 31, 2008, indicates that the northbound I-110 within the project limits has an accident rate less than the state average accident rate for a similar facility. The accident rates at the on and off-ramps at the C Street Interchange are also less than

the average accident rates. Total number of accidents, accident rates, and accident history are summarized in Table 7 and Table 8 below from TASAS Table B (Attachment G).

Table 7: Accident Rates for I-110 NB Mainline and Ramps at C Street

Freeway Segment	Number of Accidents				Actual Accident Rates			Average Accident Rates		
	Fatal	Injury	Fatal & Injury	Total	Fatalities	Injuries & Fatalities	Total ¹	Fatalities	Injuries & Fatalities	Total ¹
I-110 NB Mainline (PM 2.5 – PM 3.0) ²	0	8	8	16	0.00	0.33	0.66	0.004	0.23	0.72
I-110 NB On-Ramp from C St (PM 2.9) ²	0	0	0	1	0.00	0.00	0.25	0.003	0.22	0.60
I-110 NB Off-Ramp to C St (PM 2.7) ²	0	0	0	1	0.00	0.00	0.45	0.006	0.33	0.90
I-110 SB On-Ramp from C Street (PM 2.8) ³	0	0	0	0	0.00	0.00	0.00	0.004	0.20	0.70
I-110 SB Off-Ramp to C Street (PM 2.9) ³	0	1	1	8	0.00	0.36	2.91	0.005	0.20	0.60

Notes:

¹ Accident rate listed in Per Million Vehicles for ramps and mainline segments.

² Accident History from April 1, 2005 to March 31, 2008.

³ Accident History from April 1, 2005 to March 31, 2007.

Source: Caltrans District 7 TASAS Table B

Table 8: I-110/C Street Accident History by Accident Type

Freeway Segment	Total Accidents	Rear End	Sideswipe	Hit Object	Others ¹
I-110 NB Mainline (PM 2.5 – PM 3.0) ²	16	2 (12%)	3 (19%)	6 (38%)	5 (31%)
I-110 NB On-Ramp from C Street (PM 2.9) ²	1	0 (0%)	0 (0%)	1 (100%)	0 (0%)
I-110 NB Off-Ramp to C Street (PM 2.7) ²	1	0 (0%)	1 (100%)	0 (0%)	0 (0%)
I-110 SB On-Ramp from C Street (PM 2.8) ³	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)
I-110 SB Off-Ramp to C Street (PM 2.9) ³	8	0 (0%)	4 (50%)	1 (12%)	3 (38%)

Notes:

¹ Other accident types include broadside, overturn and head-on.

² Accident History from April 1, 2005 to March 31, 2008.

³ Accident History from April 1, 2005 to March 31, 2007.

Source: Caltrans District 7 TASAS Table B

Table 9 below summarizes the accident history and total number of accidents, for a three year period (January 1, 2004 to December 31, 2008), for the local roadway intersections within the project limits. This data was provided from the City of

Los Angeles Department of Transportation Collision Report Summary included in Attachment G.

Table 9: Intersection Accident History by Accident Type

(Period: 01/01/2004 – 12/31/2008)

Local Roadway Intersection	Total Accidents	Rear End	Sideswipe	Hit Object	Others ¹
Harry Bridges Boulevard at Mar Vista Avenue	3	1 (33%)	1 (33%)	1 (33%)	0 (0%)
Harry Bridges Boulevard at Hawaiian Avenue	3	1 (33%)	0 (0%)	1 (33%)	1 (33%)
Harry Bridges Boulevard at King Avenue	1	0 (0%)	0 (0%)	0 (0%)	1 (100%)
Figueroa Street at C Street	12	3 (25%)	4 (33%)	1 (8%)	4 (33%)
John S. Gibson Boulevard/Harry Bridges Boulevard at Figueroa Street	35	3 (8%)	8 (23%)	14 (40%)	10 (29%)

Notes:

¹ Other accident types include broadside, overturn, head-on and vehicle-pedestrian.

Source: City of Los Angeles Department of Transportation (LADOT).

5. ALTERNATIVES

A No Build and one Build alternative were evaluated for this project.

5.1. Alternative 1: No Build

The No Build alternative would maintain existing ramp and roadway configurations. This alternative does not address the purpose and need as outlined in Section 4 of this report. This alternative is not consistent with local planning (see section 3.9 Other Projects of this report).

5.2. Alternative 2: Northbound Off-Ramp to Harry Bridges Boulevard

This alternative proposes to re-align the I-110 northbound off-ramp at C Street to directly connect to eastbound Harry Bridges Boulevard. The current project includes modifications to the Alternative 3 geometrics depicted in the approved PSR. The modifications do not constitute changes to the overall project features, but rather enhance some of the specific design components to reduce project cost and minimize the number of non-standard features associated with the geometric design. These changes include reducing the number of bridge spans from five to four on the new northbound I-110 off-ramp, increasing the horizontal radius of the new northbound I-110 off-ramp, elimination of the “free” right turn from northbound Figueroa Street onto eastbound Harry Bridges Boulevard, accommodating two lanes on the northbound I-110 on-ramp, and minor geometric changes to the local roadway alignments to improve sight distance. The improvements consist of the following:

- Combine the two existing intersections at (1) C Street and Figueroa Street and (2) John S. Gibson Boulevard, Harry Bridges Boulevard and Figueroa Street into one by realigning Harry Bridges Boulevard and John S. Gibson Boulevard. The new

intersection will provide a “free” right turn from the I-110 southbound off-ramp to southbound John S. Gibson Boulevard and dual, left-turn pockets from westbound Harry Bridges Boulevard to southbound John S. Gibson Boulevard.

- Permanently close C Street access to Figueroa Street and provide an offset cul-de-sac at the existing intersection.
- Replace the existing northbound off-ramp with a direct off-ramp from northbound I-110 to eastbound Harry Bridges Boulevard. This would involve the widening of the existing Union Oil Undercrossing (Bridge No. 53-1033) and the construction of a new bridge structure over the re-aligned John S. Gibson Boulevard.

Refer to Attachments for typical sections and preliminary layout sheets.

5.2.1. Proposed Engineering Features

The proposed I-110 northbound off-ramp to Harry Bridges Boulevard includes a 12-foot wide travel lane, 12-foot wide right shoulder, and a 2-foot wide left shoulder. The right shoulder width is 12-foot wide to facilitate stopping sight distance within the horizontal curve. The ramp design includes a new 500-foot long, four-span bridge structure to cross John S. Gibson Boulevard.

The proposed northbound on-ramp to I-110 from C Street includes one 12-foot wide and one 14-foot wide travel lane, a 4-foot wide left shoulder, and a varying right shoulder (4-foot to 10-foot) to match existing.

The proposed lane configuration on John S. Gibson Boulevard/Figueroa Street consists of two 12-foot wide travel lanes in each direction, a 5-foot wide Class II bike lane in each direction, and a 10-foot wide concrete sidewalk along the easterly side of the roadway. The roadway section widens near the proposed intersection with Harry Bridges Boulevard/C Street to accommodate left and right turn lanes. A variable width raised concrete median south of the C Street/Harry Bridges Boulevard Intersection protects the proposed bridge column supporting the new I-110 northbound off ramp.

Harry Bridges Boulevard will provide two 12-foot wide travel lanes with 12-foot right shoulders in each direction and a 10-foot wide concrete sidewalk along the northerly side. The roadway widens near the C Street/Figueroa Street Intersection to accommodate left and right turn lanes. A variable width painted median is proposed east of Figueroa Street to facilitate the left turn pockets. A 4-foot wide raised concrete median is proposed west of Figueroa Street to match existing near the C Street Bridge.

5.2.2. Non-Standard Mandatory and Advisory Design Features

Exceptions from mandatory and advisory design standards are detailed in the Fact Sheets. Please refer to the associated non-standard design items, which are not meeting the HDM standards in brackets.

5.2.2.1. Exception to Mandatory Design Standards

- Design Exception #1 – Non-standard stopping sight distance at the beginning of the northbound on-ramp. [Section 201.1]
- Design Exception #2 – Non-standard superelevation rate on the northbound on-ramp. [Section 202.2]
- Design Exception #3 – Non-standard horizontal curve radius on the northbound on-ramp. [Section 203.2]
- Design Exception #4 – Non-standard right shoulder on the northbound on-ramp. [Section 504.3(1)(c)]

5.2.2.2. Exception to Advisory Design Standards

- Design Exception #1 – Non-standard superelevation transition at the northbound on-ramp.
 - Superelevation transition length [Section 202.5(1)]
 - Superelevation runoff [Section 202.5(2)]
 - Reversing Curves [Section 203.6]
- Design Exception #2 – Non-standard side slopes (2:1) within project limits. [Section 304.1]
- Design Exception #3 – Non-standard design speed at the northbound on-ramp. [504.3(1)(a)]

5.2.3. Ramp Metering

The Northbound I-110 on-ramp at C Street is currently metered. This existing ramp meter will remain in place. The meter is currently turned off and the proposed project will maintain this condition.

5.2.4. Park and Ride Facilities

There are no existing park and ride facilities in the vicinity of the project. No park and ride facilities are proposed as part of this project.

5.2.5. Utility and Other Owner Involvements

John S. Gibson Boulevard and Harry Bridges Boulevard are two major utility corridors within the City of Los Angeles. The intent of this project is to maintain utility corridors along the existing John S. Gibson Boulevard and Harry Bridges Boulevard alignments in order to minimize relocation of the existing subsurface facilities. The existing overhead utilities will be relocated. A right of way data sheet, including a utility data sheet and right of way acquisition map is included in Attachment F. Table 10 summarizes the utilities that have been identified to be in conflict with the proposed project improvements.

Table 10: Potential Utility Conflicts

Owner	Utility Description ¹	Approximate Length (LF)
Conoco Philips	1" Cable	200
	12" Fire Water	200
	8" Gas	200
	24" Waste Water	300
	30" Storm Drain	200
	63" Storm Drain	500
	24" Sewer	200
Golden Eagle Refinery	6" Oil	500
Kinder Morgan Energy Partners	6" Oil	200
	6" Oil	200
	8" Oil	200
Los Angeles Department of Water and Power	12" Fire Water	100
	8" Water	500
	4" Water	50
	12" Water	100
	20" Water	1800
	10" Water	300
	Duct	2300
Pacific Telephone & Telegraph	Power Duct	200
	Buried Cable	2200
	Telephone (OH)	12000
Southern California Gas	4" Gas	300
	12" Gas	200
Texaco	8" Oil	1800
	6" Oil	500
	8" Oil	100
Ultramar	6" Oil	1500
Los Angeles Department of Water and Power	Electric (OH)	8400

Note:

1. Unless otherwise noted with a (OH), all utility conflicts identified are underground.

5.2.6. Railroad Involvement

The Wilmington Railroad owned by the Port of Los Angeles runs along the southerly side of Harry Bridges Boulevard and easterly side of John S. Gibson Boulevard. The existing at-grade crossing at Figueroa Street that provides access to the Port facilities will be closed to vehicular traffic as part of this project. A California Public Utilities Commission (CPUC) permit will be obtained to remove the signal gates. A right of way data sheet, including a railroad data sheet, is included as Attachment F.

5.2.7. Highway Planting

The existing landscaping within the project area would be disturbed by construction activities.

The existing maintenance agreement will be updated to define the roles and responsibilities of each agency.

5.2.8. Erosion Control

Erosion control measures prescribed in the Storm Water Data Report (SWDR) shall be implemented to meet water quality discharge requirements and provide adequate slope protection. An allocation for water pollution control is included in the preliminary cost estimate.

5.2.9. Noise Barriers

No noise barriers are proposed as part of this project.

5.2.10. Nonmotorized and Pedestrian Features, etc.

Concrete sidewalks are proposed along the local roadways to provide a clear and unobstructed path for pedestrians within the project limits. Curb ramps will be constructed at intersections and street crossings. Pedestrian signals and cross walk pavement delineation will also be provided.

Class II bicycle lanes will be incorporated into the local roadway design along John S. Gibson Boulevard and Figueroa Street consistent with the local agency master plan.

5.2.11. Needed Roadway Rehabilitation and Upgrading

No roadway rehabilitation and/or upgrading in addition to the proposed improvements are recommended at this time.

5.2.12. Needed Structure Rehabilitation and Upgrading

The Harry Bridges Boulevard UC is a new structure and will follow the American Association of State Highway and Transportation Officials (AASHTO) Load and Resistance Factor Design (LRFD) Design Specifications, 2007 4th Edition with the latest Caltrans Supplements.

Seismic evaluation and design for Harry Bridges Boulevard UC will be in accordance with the Caltrans 2009 Seismic Design Criteria (Appendix B) and applicable portions of Bridge Memo to Designers 20-4.

The existing Union Oil UC is currently being analyzed and evaluated for possible seismic retrofit. Preliminary results indicate that the existing slab bridge will not require rehabilitation. However, final conclusions will be provided during the Type Selection phase.

The design requirements and seismic evaluation for the Union Oil UC will follow the same criteria as Harry Bridges UC.

The new retaining walls (numbers 318 and 320) will be designed based on the current Caltrans Bridge Design Specifications.

5.2.13. Cost Estimates

A preliminary cost estimate is included in Attachment D. The cost of the project is estimated at \$36.2 million which includes \$12.7 million in right of way and utility relocation, and \$23.5 million in construction.

5.2.14. Right of Way Data

A right of way data sheet has been prepared and is included in Attachment F. The properties affected are owned by Caltrans, City of Los Angeles and Port of Los Angeles. Private property acquisition is not anticipated for this project. The right of way at the C-Street ramp termini/John S. Gibson Boulevard/Harry Bridges Boulevard Intersection would be revised to accommodate the new intersection configuration. Table 11 below summarizes the right of way transfers between public agencies.

Table 11: Summary of Right of Way Transfers

APN	Current Owner	Approximate Area To Be Transferred	Proposed Owner Of Transferred Portion
7417-001-900	Port of Los Angeles	54,970 SF	Caltrans
7417-007-905	Port of Los Angeles	350 SF	Caltrans
7417-007-906	Port of Los Angeles	2,070 SF	Caltrans
7417-007-907	Port of Los Angeles	3,470 SF	Caltrans
7417-001-908	Port of Los Angeles	10,180 SF	Caltrans
7417-001-909	Port of Los Angeles	4,550 SF	Caltrans
7417-001-913	Port of Los Angeles	3,320 SF	Caltrans
7417-001-914	Port of Los Angeles	6,860 SF	Caltrans
Alley (Abandoned)	Port of Los Angeles	1,160 SF	Caltrans
Local Road (Figueroa Street)	City of Los Angeles	8,650 SF	Caltrans
Local Road (Mar Vista Avenue)	City of Los Angeles	1,350 SF	Caltrans
Local Road (Harry Bridges Blvd)	City of Los Angeles	19,000 SF	Caltrans
N/B off-ramp terminus at C Street	Caltrans	25,780 SF	City of Los Angeles

The existing subsurface utilities within John S. Gibson Boulevard, Figueroa Street, and Harry Bridges Boulevard would remain as currently aligned. Aerial services such as electrical and telecommunications would be relocated along the new local roadway alignments.

5.3. Rejected Alternatives

Alternative 2 (PSR): Northbound Off-Ramp to Harry Bridges Boulevard and Figueroa Street

This Alternative has been dropped from further consideration because of community opposition. Concerns over additional traffic being directed onto northbound Figueroa Street, increased air and noise pollution, and visual impacts associated with the additional bridge structure were expressed during a community workshop held by the Port of Los Angeles in April 2006.

6. CONSIDERATIONS REQUIRING DISCUSSION

6.1. Hazardous Waste

A Phase II Hazardous Waste Investigation dated June 17, 2009, was prepared for the Port of Los Angeles. Seventy soil samples were collected from 15 boring locations and were tested for aerially deposited lead (ADL), pesticides, total recoverable petroleum hydrocarbons (TRPH) and volatile organic compounds (VOCs).

It was determined the highest concentration of ADL was in the upper 2.5-feet of soil within a 150-foot radius of boring B-10, generally located near the southeast corner of the Figueroa Street and C-Street intersection. The recommendation is to remove and dispose of offsite, the upper 3-feet of soil within the 150-foot radius. This will reduce the remaining composite soil to below the CCR Title 22 limit. A significant portion of this material will be remediated as part of the Port of Los Angeles' Wilmington Buffer Improvement project to be completed prior to the construction of the C Street Access Ramp Improvement Project.

Spoils from deep excavations (greater than 6-feet) will be stockpiled and secured as potential regulated waste pending environmental evaluation and laboratory testing to determine appropriate disposal or reuse of the excavated soils.

Yellow thermoplastic paint markings on the pavement will be tested for lead based paint (LBP) according to the Caltrans guidelines prior to removal.

The estimated cost for cleaning and monitoring the site for hazardous material is \$400,000. Alternatives to avoid the hazardous waste are not feasible.

6.2. Value Analysis

Value engineering recommendations to reduce project costs were developed following the approval of the Project Study Report (PSR). The current proposal reduces the northbound I-110 off-ramp bridge span to 500-feet versus the original 780-foot span shown in the approved PSR. This change results in a project cost savings of approximately \$680,000.

A formal Value Engineering Analysis (VA) is mandated by the National Highway System (NHS) Act of 1995 for projects that exceed \$25 million in capital cost. The VA will be conducted following the submittal of the 35% Plans, Specifications and Estimates (PS&E).

6.3. Resource Conservation

The use of recycled asphalt concrete pavement will be considered during the PS&E phase of the project. Existing asphalt concrete pavement will be obliterated to accommodate the realignment of the local roadways. This material may be used as miscellaneous base or recycled asphalt pavement.

The jointed plain concrete pavement to be removed from the existing northbound ramps may be used as concrete rock slope protection and/or miscellaneous base.

Salvaged materials will be used in the new construction to the maximum extent practicable. Salvaged materials may consist of metal frames, grates, and covers for storm drains, existing metal beam guard railing, chain link fencing, sign panels, and other suitable materials.

Drought- tolerant plant material will be considered as part of the landscape design. Efficient irrigation system technologies will be employed to conserve the use of water.

Energy-efficient lighting will be designed to reduce the use of electricity. Solar power may also be considered for irrigation controllers.

6.4. Right of Way Issues

6.4.1. Right of Way Required

The properties affected are owned by Caltrans, City of Los Angeles and the Port of Los Angeles. Properties will be transferred to Caltrans at no-cost to the State per the terms of the cooperative agreement. Private party acquisitions are not anticipated for this project. See section 5.2.14 and Attachment F for right of way data.

6.4.2. Relocation Impact Studies

The proposed project does not displace any person or business. Therefore, a community impact assessment is not warranted for this project.

6.4.3. Airspace Lease Areas

Airspace leases are not required as a part of this project.

6.5. Environmental Issues

A Draft Initial Study/Environmental Assessment (IS/EA) has been prepared in accordance with Caltrans' environmental procedures, as well as State and federal environmental regulations. The attached Draft IS/EA is the appropriate document for the proposal based on the Preliminary Environmental Analysis Report (PEAR) dated January 2007.

Caltrans is the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) lead agency for the Initial Study/Environmental Assessment (IS/EA) that has been prepared for this proposed project.

6.6. Air Quality Conformity

In accordance with Section 93.114 of the EPA transportation conformity regulations, the proposed project is included in SCAG's 2008 *Regional Transportation Plan: Making the Connections* (2008 RTP) under Project ID# LA0F030 and the description "I-110 Freeway/C Street Interchange Improvements—Modification of Existing Interchange" (Southern California Association of Governments 2008a). In addition, the project is included in the final 2008 RTIP project listing under Project ID# LA0F030 and the description "Project Will Improve Flow of Traffic from I-110 Freeway On/Off-Ramps at C Street by Consolidating Two Closely Spaced Intersections into One" (Southern California Association of Governments 2008b).

The proposed project is compatible with the design concept and scope described in the 2008 Regional Transportation Plan (RTP) as well as the 2008 Federal Regional Transportation Improvement Program (FRTIP) which the Federal Highways Administration (FHWA) have determined to conform to the State Implementation Plan (SIP) for air quality. The regional emissions analysis for the proposed project found that regional emissions will not exceed the SIP's emission budgets for mobile sources in 1) the build year, 2) a horizon year at least 20 years from when conformity analysis started, or 3) any additional years meeting conformity regulation requirements for periodic analysis.

On December 4, 2008, the SCAG Regional Council (RC) adopted Amendment #1 to the 2008 RTP and Amendment # 08-01 to the RTIP. On October 1, 2009, SCAG released Draft Amendment #2 (approval pending) to the 2008 RTP and Draft Amendment # 08-24 to the RTIP. The Amendments were developed as a response to changes to projects in the 2008 RTP.

Provided the proposed project has not been significantly altered in design concept or scope since inclusion in both the 2008 RTP and 2008 RTIP, this project can be said to conform to the Federal Clean Air Amendments (FCAAs) of 1990 and can therefore, proceed.

Transportation control measures to improve air quality are included as part of the proposed project. John S. Gibson Boulevard provides Class II bike lanes, and Figueroa Street provides Class III bike lanes. The proposed improvements would accommodate the existing bike lane classifications.

6.7. Title VI Considerations

The proposed project incorporates provisions for low-mobility and minority groups. Accessible sidewalks with curb ramps at intersection crossings provide an accessible route between residential, business, and port attractions.

7. OTHER CONSIDERATIONS AS APPROPRIATE

7.1. Public Hearing Process

The POLA has conducted a number of public outreach efforts in both the San Pedro and Wilmington communities during the development of the PSR. The conceptual improvements were presented to the community, and comments have been incorporated in this Draft Project Report.

Similarly, a public workshop sponsored by the POLA, in conjunction with Caltrans, was held on January 7, 2009 to provide first-hand information about the project.

The Draft IS/EA will be circulated for public comment prior to finalizing the Project Report. A public hearing will be held during the public circulation period.

7.2. Route Matters

7.2.1. Freeway Agreements

The existing freeway agreement between Caltrans and the City of Los Angeles needs to be revised to incorporate the proposed interchange modification. A Modified Access Report (MAR) is being prepared for submittal to the Federal Highway Administration (FHWA) to be approved in conjunction with the Project Report.

7.2.2. Relinquishments

The reconfiguration of the local roadways and freeway ramps requires the transfer of property among the Port of Los Angeles, City of Los Angeles, and Caltrans. Refer to the Right of Way Data Sheet for details.

7.3. Permits

The following permits, reviews, and approvals will be required:

- Air Quality Conformity Determination from FHWA
- California Public Utilities Commission Form G
- Regional Water Quality Control Board 401 permit
- City of Los Angeles Bureau of Engineering E Permit
- City of Los Angeles Bureau of Engineering B Permit
- Caltrans Encroachment Permit
- Coastal Development Permit from California Coastal Commission

7.4. Cooperative Agreements

A cooperative agreement between the Department of Transportation and the Port of Los Angeles (POLA) was executed on November 25, 2008. An agreement for the

construction phase will be required. The POLA will advertise, administer and award the project. Caltrans will provide engineering and construction oversight at no cost to the POLA.

7.5. Other Agreements

Franchise Agreements between utility owner(s) and the City of Los Angeles may be required for relocation of existing utilities to new roadway alignments.

7.6. Transportation Management Plan for Use During Construction

Construction of the proposed improvements would be staged with minimum interruption to the freeway mainline traffic. Coordination of all construction activities would be a major component of the Transportation Management Plan (TMP), which will be prepared during the design phase and may include the following strategies:

- A public awareness campaign prior to and during construction – including the use of public meetings, press releases, paid advertisements, and brochures and mailers;
- Real-time communications with motorist including changeable message signs;
- Other elements and strategies of traffic management as defined in the TMP.

7.7. Stage Construction

Construction is estimated to last approximately 22 months and all traffic lanes are expected to remain open with the development of appropriate TMP measures. A detailed Stage Construction and Traffic Handling Plan will be completed during the design phase. Construction staging for major activities are described in this section. A conceptual stage construction drawing is provided in Attachment K.

Stage 1:

- Construct the new northbound off-ramp bridge structure. Structure constructed over active Figueroa Street;
- Construct ramp approach from I-110 to new northbound off-ramp bridge abutment number 1, including Union Oil Bridge widening and retaining wall construction;
- Construct new John S. Gibson Boulevard roadway improvements between C-Street and existing John S. Gibson Boulevard/Harry Bridges Boulevard;
- Construct new Harry Bridges Boulevard between Figueroa Street and existing Harry Bridges Boulevard;
- Construct C-Street cul-de-sac;
- Construct temporary intersection new John S. Gibson Boulevard (south) to existing John S. Gibson Boulevard/Harry Bridges Boulevard;
- Construct temporary intersection new John S. Gibson Boulevard (north) to existing Figueroa Street;
- Construct temporary connection between new and existing Harry Bridges Boulevard;

- Relocate aerial utilities from existing Figueroa Street to new John S. Gibson Boulevard;
- Relocate aerial utilities from existing Harry Bridges Boulevard to new Harry Bridges Boulevard.

Stage 2:

- Transfer traffic onto newly constructed John S. Gibson Boulevard. Temporary intersections with existing roadways maintains traffic circulation;
- Close existing Harry Bridges Boulevard between existing Figueroa Street and new northbound ramp terminus;
- Relocate subsurface utilities within existing Harry Bridges Boulevard;
- Phased construction of new Harry Bridges Boulevard/Figueroa Street/John S. Gibson Boulevard intersection;
- Construct ramp approach (east of new bridge) to Harry Bridges Boulevard;
- Open new northbound off-ramp.

Stage 3:

- Close existing northbound off-ramp, remove existing ramp.
- Night-time closures of northbound on-ramp, construct northbound on-ramp improvements;
- Construct SB ramp termini/C-Street and permanent Figueroa Street/Harry Bridges Boulevard/John S Gibson Boulevard intersection improvements;
- Remove CPUC vehicular grade crossing at existing Trapac terminal entrance;
- Remove temporary intersection improvements at John S. Gibson Boulevard/Harry Bridges Boulevard (exist).
- Construct remaining contract items, including landscape and irrigation.

7.8. Accommodation of Oversize Loads

John S. Gibson Boulevard and Harry Bridges Boulevard are part of the Strategic Highway Network (STRAHNET) system of public highways, which provides access, continuity, and emergency transportation of personnel and equipment in times of peace and war according to the Federal Highway Administration (FHWA).

John S. Gibson Boulevard and Harry Bridges Boulevard are also part of the State Highway Extra Legal Load (SHELL) Route System. The 1998 California Transportation Plan states that “Caltrans, in cooperation with Metropolitan Planning Organizations (MPOs)/Regional Transportation Planning Agencies (RTPAs), and private industry, shall identify and address the existing and projected corridors, routes, and facilities and demands for the movement of extra-legal permit loads.” These routes are commonly used “high routes” (for loads up to 20-feet high) to haul specialty loads that cannot be cost effectively assembled on site, such as rocket motors, transformers, cooling towers, and fuselages.

The proposed improvements accommodate STRAHNET and SHELL oversized loads by providing a minimum of 20-feet of vertical clearance beneath the new northbound off-ramp bridge.

8. PROGRAMMING

8.1. Programming and Funding

The project will be funded using Proposition C (\$6.6 million), Trade Corridor Improvement Funds (\$8.3 million), and POLA local match (\$21.3 million). The POLA may also pursue additional grant funding for this project through the 2009 American Recovery and Reinvestment Act.

8.2. Schedule

Table 12: Project Schedule

Milestones	Expected Completion Date
Project Approval/Environmental Document (PA/ED) Phase	August 2010
Initial Study/Environmental Assessment (IS/EA)	July 2010
Right of Way Certification	October 2011
Design PS&E	February 2012
Ready to List	February 2012
Begin Construction	July 2012
End Construction	June 2014

9. REVIEWS

PDT meetings and reviews have been conducted during the development of this Draft Project Report.

This Draft Project Report was reviewed by Mr. JD Bamfield, Headquarter Design Reviewer on _____ and he concurred with the findings.

The Modified Access Report will be sent to _____, FHWA Engineer for approval on _____.

10. PROJECT PERSONNEL

PORT OF LOS ANGELES

Mimi Gutierrez, Civil Engineering Associate (310) 732-3339
Engineering Division

Sue Lai, Senior Transportation Engineer (310) 732-3649
Engineering Division

Sal Zambrano, Harbor Engineer - Chief of Design (310) 732-3654
Engineering Division

CALTRANS DISTRICT 7

Gabe Hamidi, Project Manager (213) 897-5354
Office of Program Management

Hamid Toossi, Design Manager (213) 897-2923
Office of Design D

Kirk Patel, Senior Transportation Engineer (213) 897-1825
Office of Freeway Operations

Karl Price, Senior Environmental Planner (213) 897-1839
Division of Environmental Planning

Linda Tong, Senior R/W Agent (213) 897-2024
Office of Right of Way and Local Programs

Steve Chan, Branch Chief (213) 897-3646
District Hazardous Waste Coordinator, South Region

CALTRANS HEADQUARTERS (STRUCTURES)

Patricia McCauley, Senior Bridge Engineer (916) 227-8772
Office of Special Funded Projects, Caltrans Headquarters

HDR ENGINEERING, INC.

Steve Leathers, Project Manager (714) 368-5657
HDR Engineering, Inc.

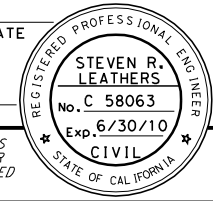
11. LIST OF ATTACHMENTS


- Attachment A – Project Location Map
- Attachment B – Typical Sections
- Attachment C – Layouts, Profiles, and Superelevation Diagrams
- Attachment D – Utility Plans
- Attachment E – Cost Estimates
- Attachment F – R/W Data Sheet
- Attachment G – Accident Data
- Attachment H – TMP Data Sheet
- Attachment I – Advance Planning Studies
- Attachment J– Storm Water Data Report Cover Sheet
- Attachment K – Stage Construction Plans
- Attachment L – Traffic Study
(Under Separate Cover)

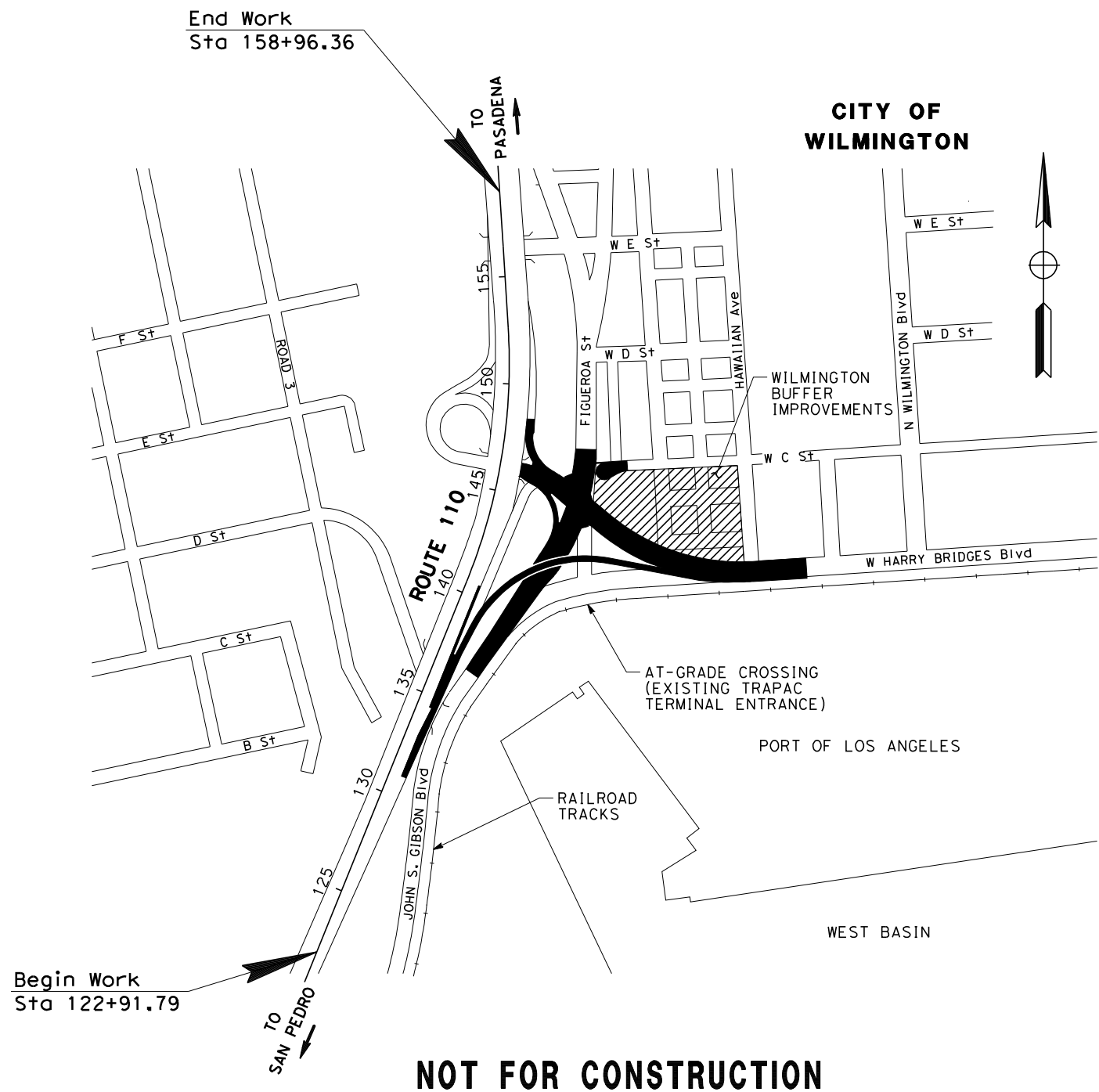
ATTACHMENT A

PROJECT LOCATION MAP

**IN LOS ANGELES COUNTY
ON ROUTE 110 BETWEEN 0.30 MILES SOUTH OF C STREET
AND 0.20 MILES NORTH OF C STREET**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		
REGISTERED CIVIL ENGINEER DATE					
					
PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
PORT OF LOS ANGELES 425 S. PALOS VERDES STREET SAN PEDRO, CA 90731			HDR ENGINEERING, INC. 3230 EL CAMINO REAL SUITE 200 IRVINE, CA 92602-1377		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE
	HAMID TOOSI	R. SHAH	S. LEATHERS		



PROJECT LOCATION
NO SCALE

LAST REVISION DATE PLOTTED => 04/20/10
00-00-00 TIME PLOTTED => 2:17:26 PM

ATTACHMENT B

TYPICAL SECTIONS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		

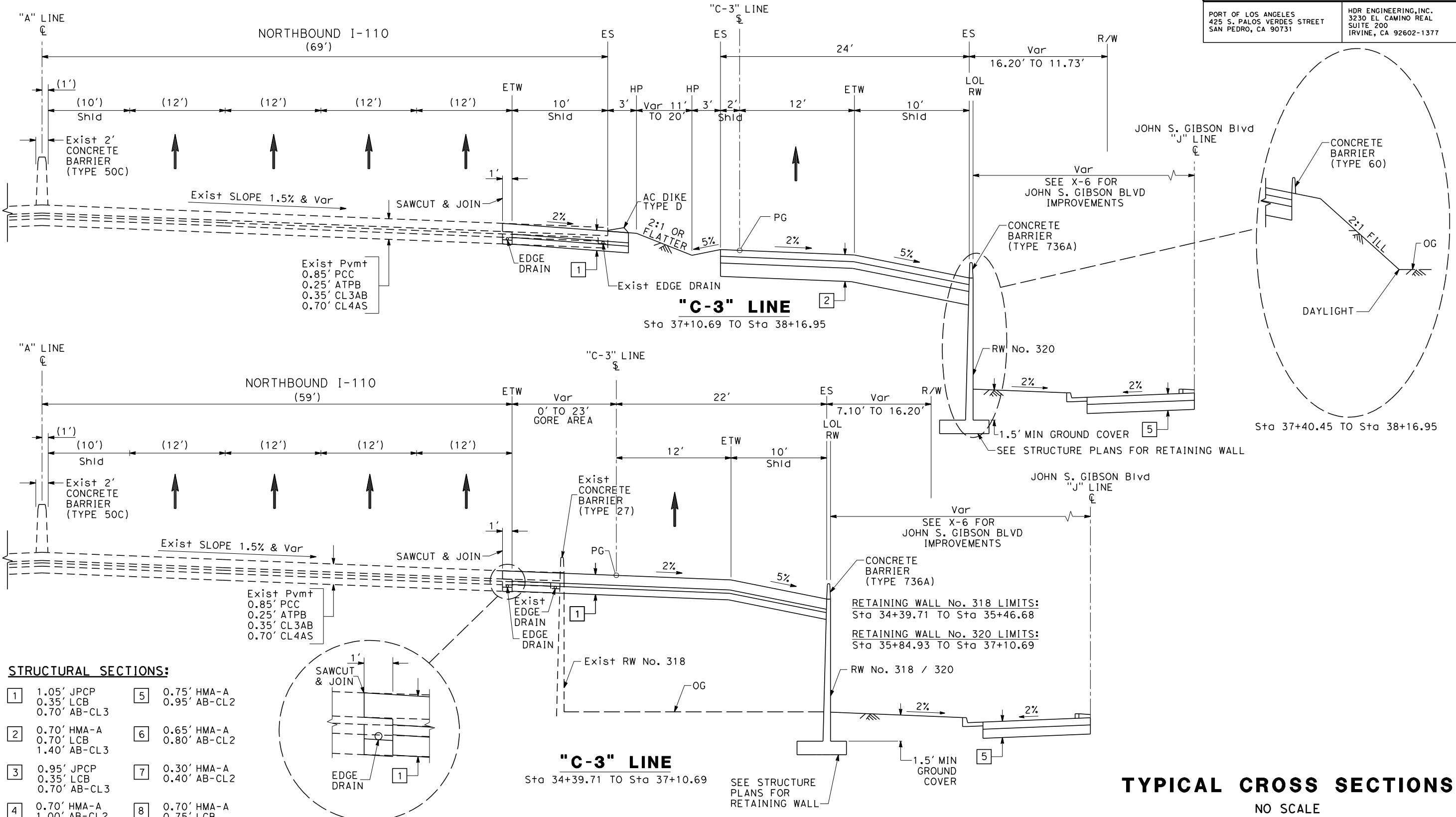
REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.	HDR ENGINEERING, INC. 425 S. PALOS VERDES STREET SAN PEDRO, CA 90731
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NOTES:

- FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTION) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATION ARE SHOWN ON THE SUPERELEVATION DIAGRAM.
- EXACT LOCATIONS AND TYPES OF DIKES, CURBS, GUARD RAILING, AND CONCRETE BARRIER ARE SHOWN ON THE LAYOUTS AND THE SUMMARY OF QUANTITY SHEETS.



TYPICAL CROSS SECTIONS
NO SCALE

NOT FOR CONSTRUCTION

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CONSULTANT: R. SHAH, S. LEATHERS, HAMID TOOSI
 REVISIONS: 00-00-00, 00-00-00, 00-00-00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		

REGISTERED CIVIL ENGINEER DATE _____

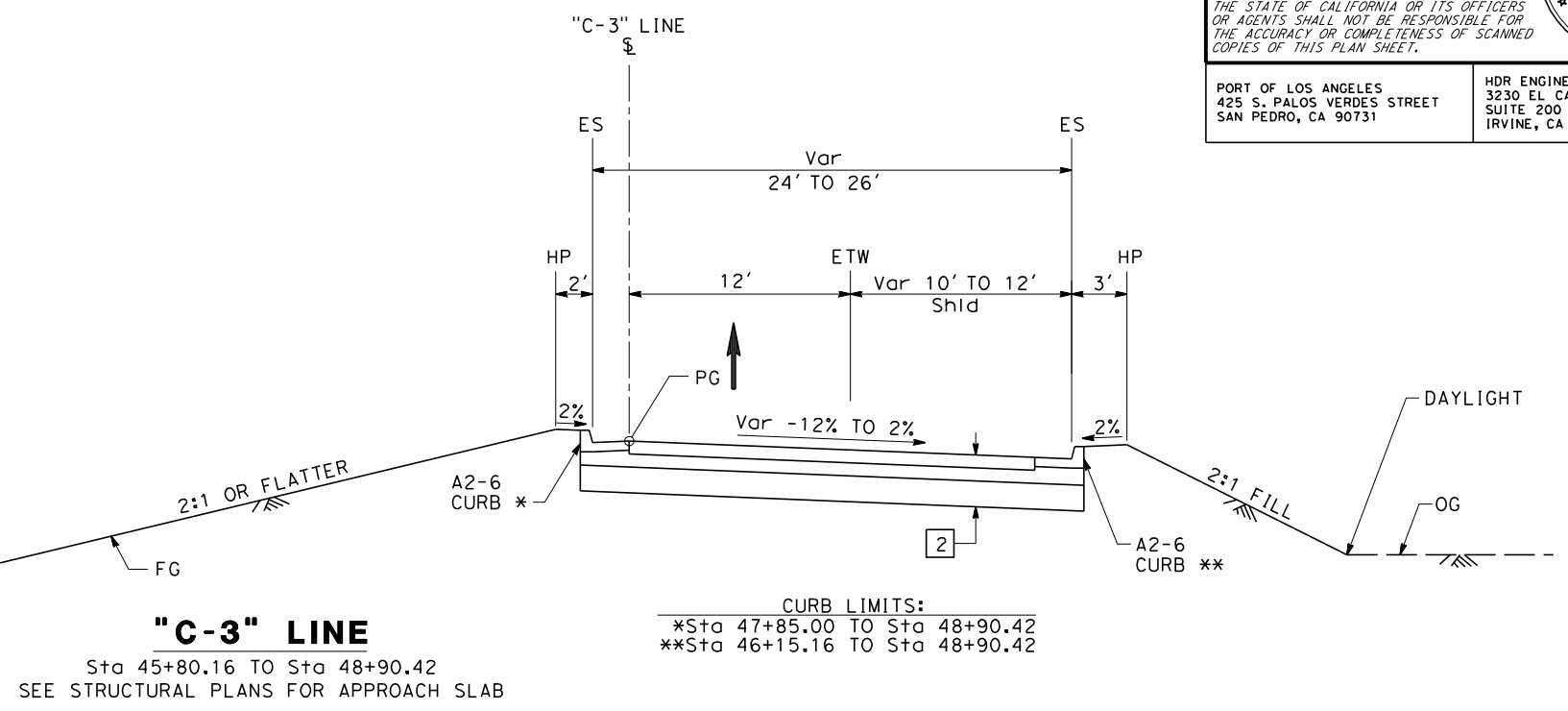
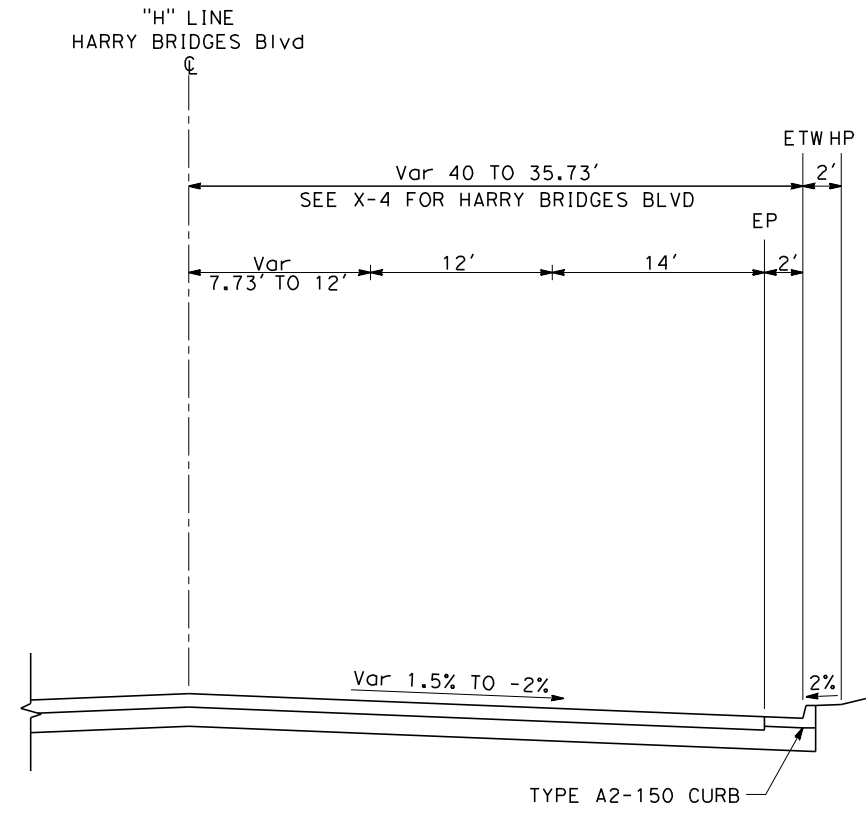
PLANS APPROVAL DATE _____

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



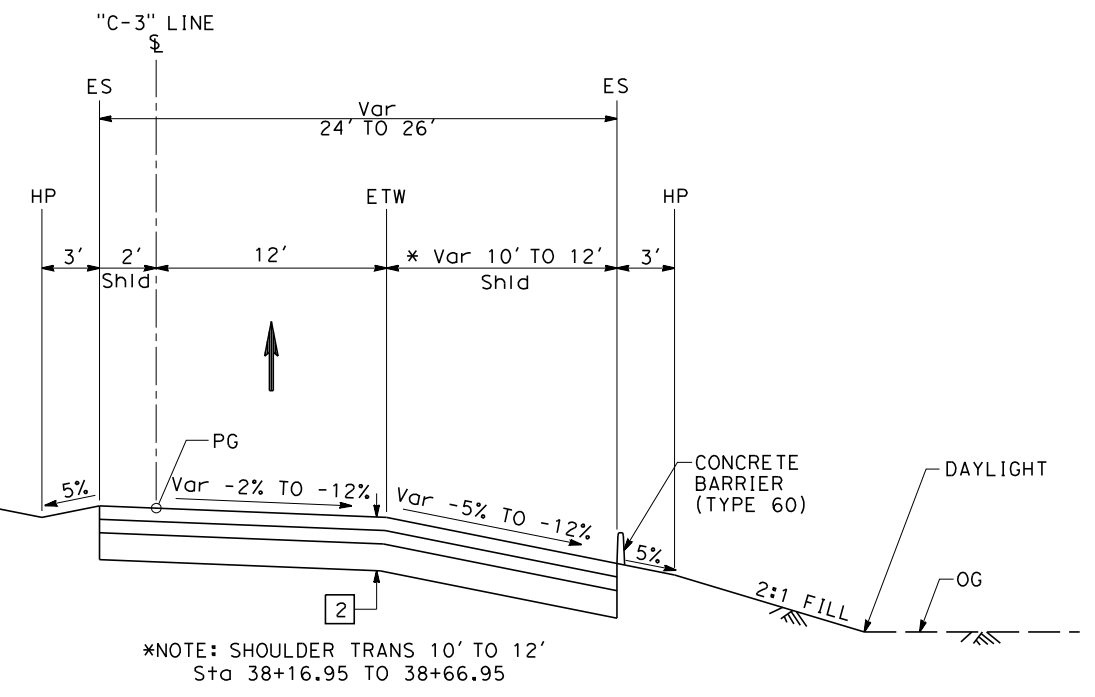
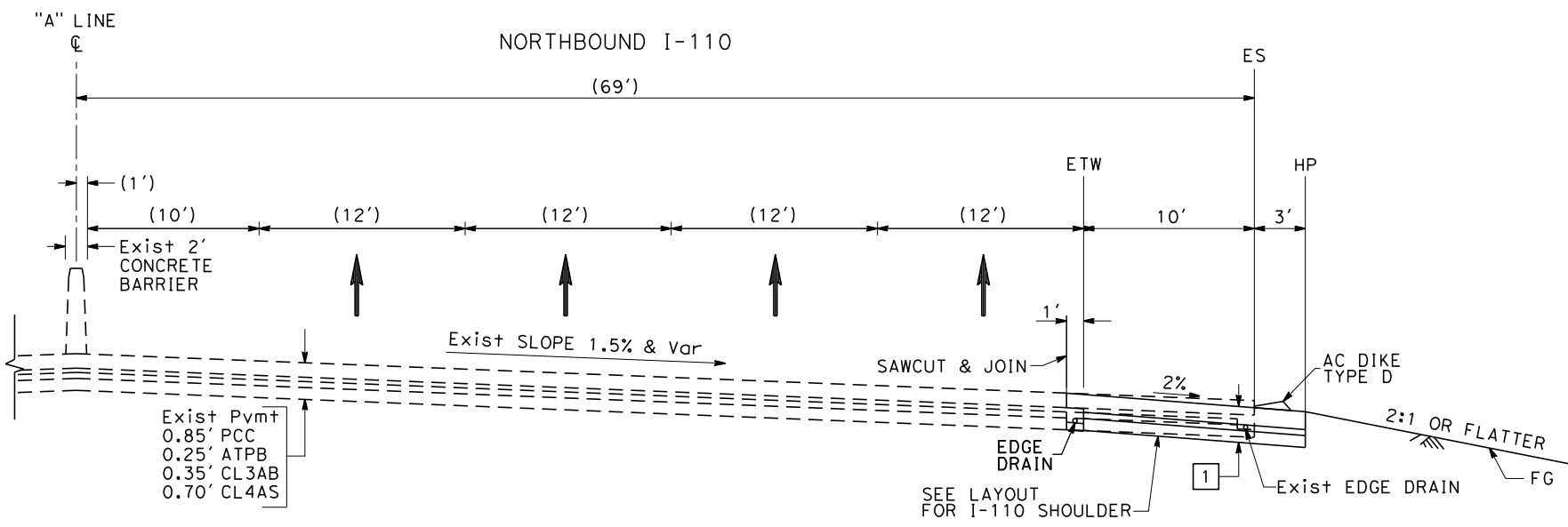
PORT OF LOS ANGELES
425 S. PALOS VERDES STREET
SAN PEDRO, CA 90731

HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377



"C-3" LINE
Sta 45+80.16 TO Sta 48+90.42
SEE STRUCTURAL PLANS FOR APPROACH SLAB

"C-3" LINE
Sta 40+80.16 TO Sta 45+80.16
BRIDGE NO. 53-3048S - SEE STRUCTURAL PLANS



"C-3" LINE
Sta 38+16.95 TO Sta 40+80.16
SEE STRUCTURAL PLANS FOR APPROACH SLAB

TYPICAL CROSS SECTIONS
NO SCALE

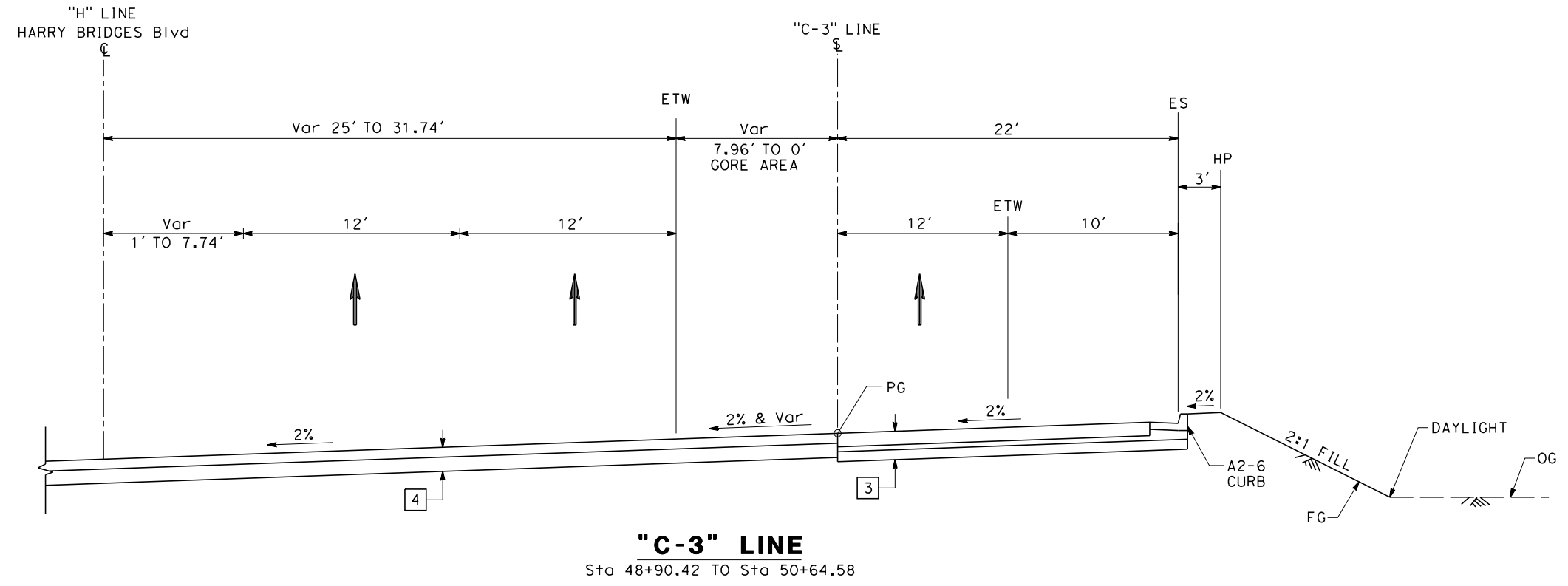
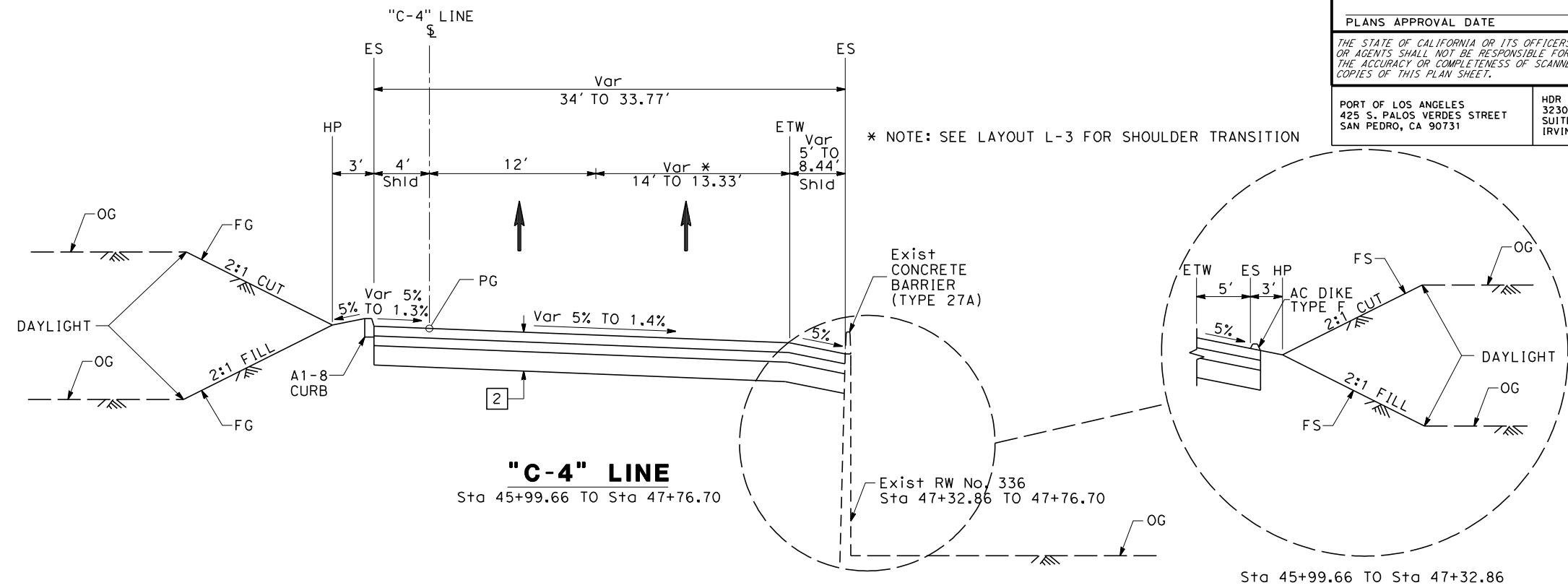
NOT FOR CONSTRUCTION

X-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CONSULTANT: R. SHAH, S. LEATHERS
 CALCULATED/DESIGNED BY: R. SHAH, S. LEATHERS
 CHECKED BY: S. LEATHERS
 SUPERVISOR: HAMID TOOSSI
 DATE: 4/11/2008

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: HAMID TOOSSI
 CALCULATED/DESIGNED BY: R. SHAH
 CHECKED BY: S. LEATHERS
 REVISED BY: DATE
 REVISIONS: 1, 2, 3, 4

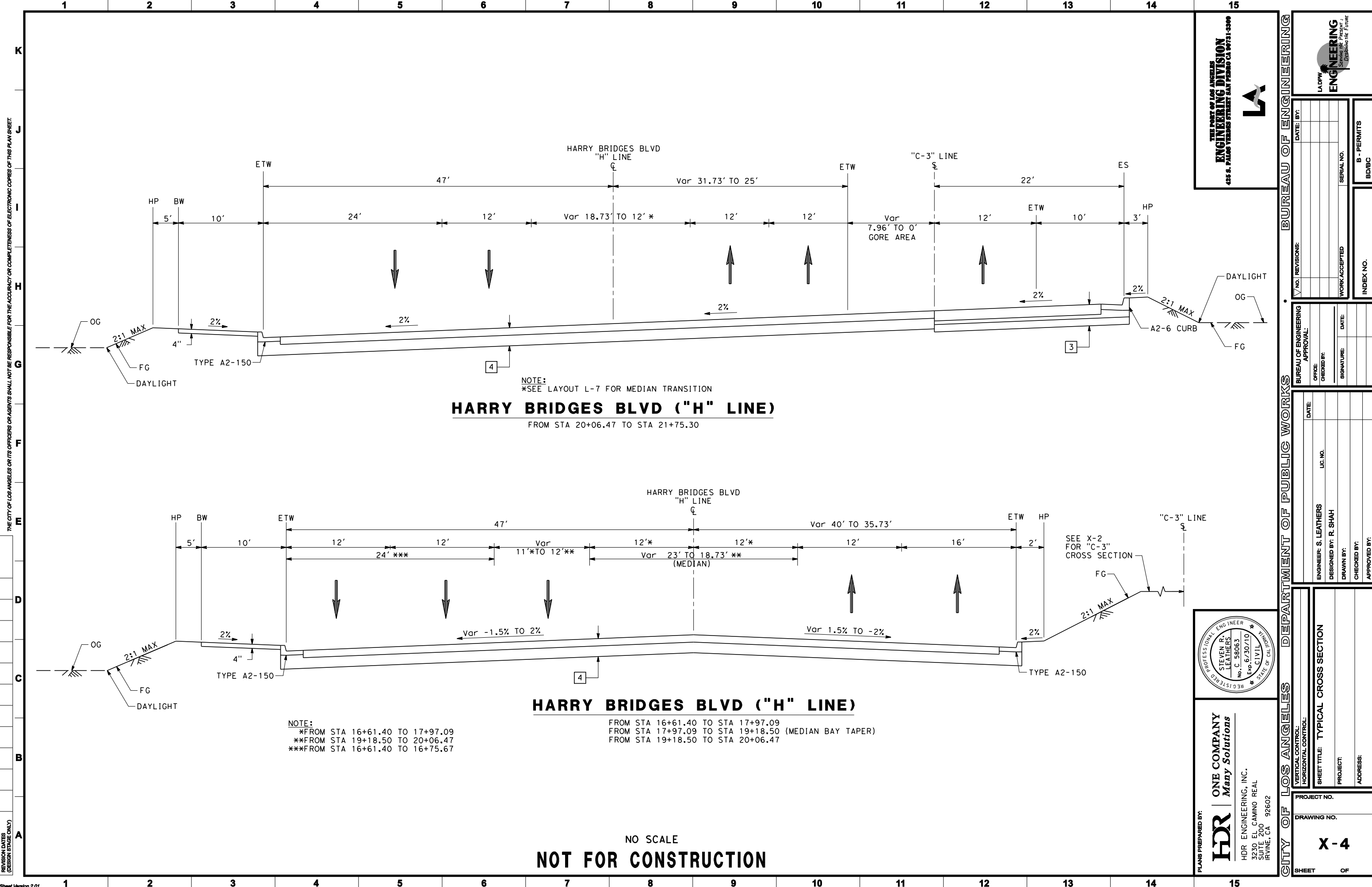
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		
REGISTERED CIVIL ENGINEER DATE					
PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
PORT OF LOS ANGELES 425 S. PALOS VERDES STREET SAN PEDRO, CA 90731			HDR ENGINEERING, INC. 3230 EL CAMINO REAL SUITE 200 IRVINE, CA 92602-1377		



TYPICAL CROSS SECTIONS
NO SCALE

NOT FOR CONSTRUCTION

X-3



HARRY BRIDGES BLVD ("H" LINE)
FROM STA 20+06.47 TO STA 21+75.30

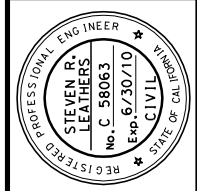
HARRY BRIDGES BLVD ("H" LINE)

NOTE:
*FROM STA 16+61.40 TO 17+97.09
**FROM STA 19+18.50 TO 20+06.47
***FROM STA 16+61.40 TO 16+75.67

FROM STA 16+61.40 TO STA 17+97.09
FROM STA 17+97.09 TO STA 19+18.50 (MEDIAN BAY TAPER)
FROM STA 19+18.50 TO STA 20+06.47

NO SCALE
NOT FOR CONSTRUCTION

THE CITY OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALMS VENEZUELA STREET, SUITE 200, PEBBLE BEACH, CA 92071-3300



PLANS PREPARED BY:
HDR ONE COMPANY
Mazy Solutions
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602

BUREAU OF ENGINEERING

DATE: BY: _____

NO. REVISIONS: _____

WORK ACCEPTED: _____

INDEX NO. _____

BUREAU OF ENGINEERING APPROVAL:

OFFICE: _____

CHECKED BY: _____

SIGNATURE: _____

DATE: _____

DATE: _____

LIC. NO. _____

ENGINEER: S. LEATHERS

DESIGNED BY: R. SHAH

DRAWN BY: _____

CHECKED BY: _____

APPROVED BY: _____

SHEET TITLE: **TYPICAL CROSS SECTION**

PROJECT: _____

ADDRESS: _____

PROJECT NO. _____

DRAWING NO. _____

X - 4

SHEET OF _____

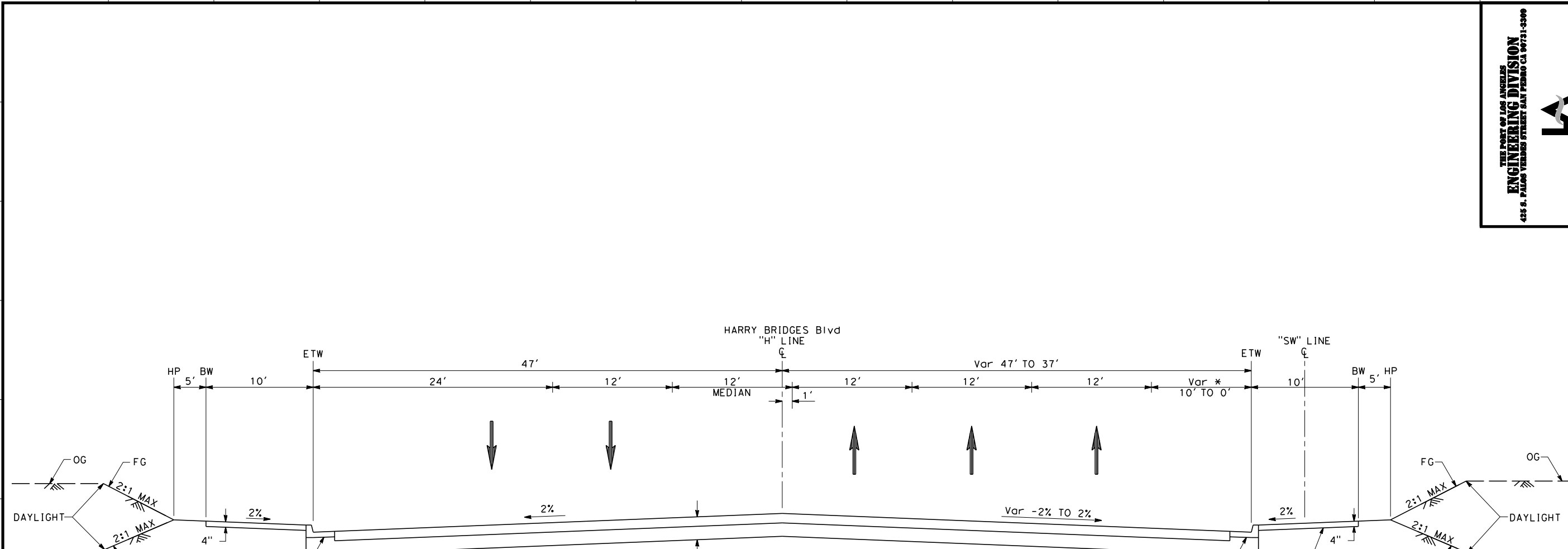
REVISION DATES (DESIGN CHANGE ONLY)

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REVISION DATES (DESIGN OFFICE ONLY)

K
J
I
H
G
F
E
D
C
B
A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



HARRY BRIDGES BLVD ("H" LINE)
FROM STA 21+75.30 TO STA 26+75.00

NOTE:
*SEE LAYOUT L-7 FOR SHOULDER TRANSITION

NO SCALE
NOT FOR CONSTRUCTION

THE CITY OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALMS VENEZUELA STREET, SALT PIEDRA CA 90731-3300

BUREAU OF ENGINEERING

DATE: BY:

NO. REVISIONS:

WORK ACCEPTED: SERIAL NO. DATE: B - PERMITS
BD/BC

INDEX NO.

BUREAU OF ENGINEERING APPROVAL:

OFFICE: CHECKED BY: SIGNATURE: DATE:

DATE: LIC. NO. ENGINEER: S. LEATHERS
DESIGNED BY: R. SHAH
DRAWN BY: CHECKED BY: APPROVED BY:

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

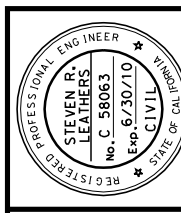
VERTICAL CONTROL: HORIZONTAL CONTROL:

SHEET TITLE: **TYPICAL CROSS SECTION**

PROJECT: ADDRESS:

PROJECT NO. DRAWING NO. **X-5**

SHEET OF



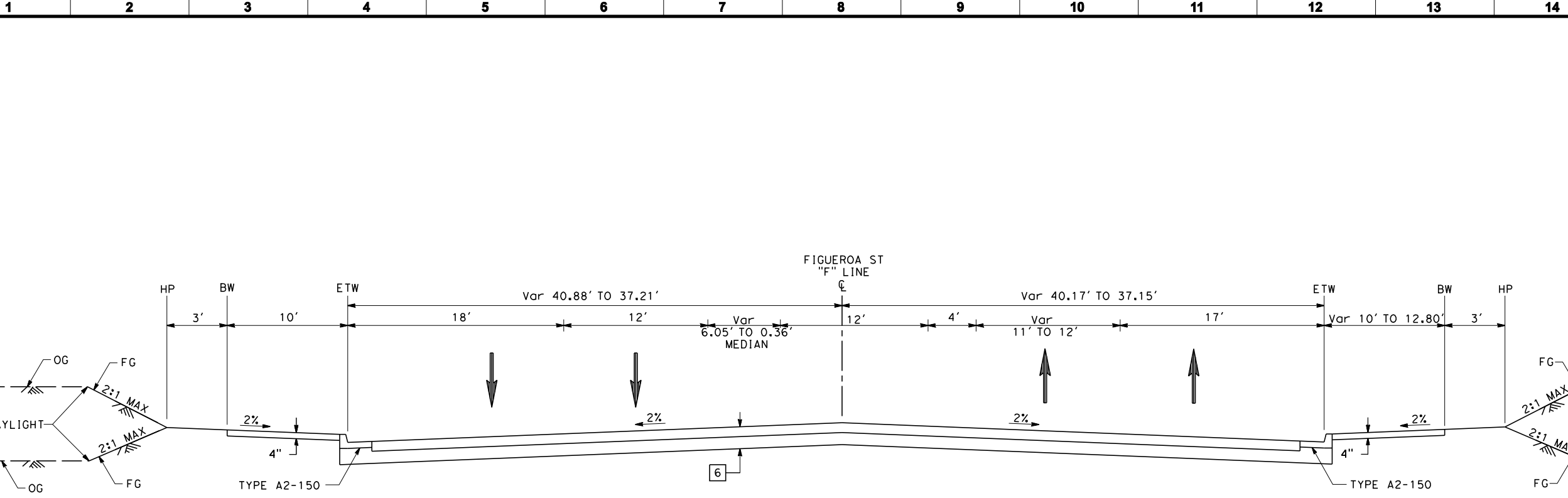
PLANS PREPARED BY:
HDR ONE COMPANY
Mazy Solutions

HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602

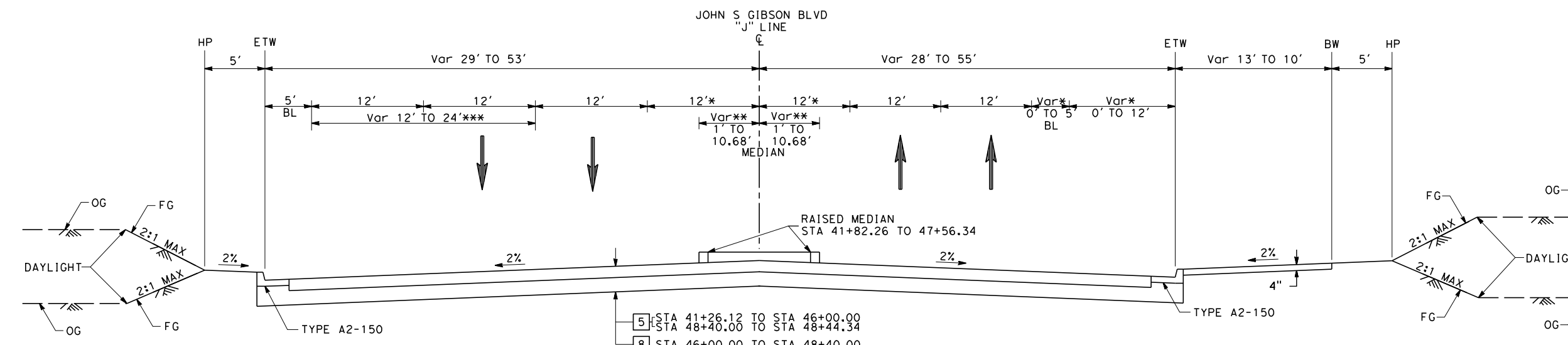
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

REVISION DATES (DESIGN USE ONLY)

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



FIGUEROA STREET ("F" LINE)
FROM STA 52+08.23 TO STA 53+16.37



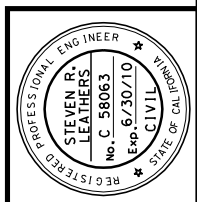
JOHN S. GIBSON BLVD ("J" LINE)

NOTE:
 *FROM STA 47+89.00 TO 48+44.34
 **FROM STA 41+26.12 TO 46+69.00
 ***FROM STA 41+96.12 TO 47+43.71

FROM STA 41+26.12 TO STA 46+69.00
 FROM STA 46+69.00 TO STA 47+89.00 (BAY TAPERS)
 FROM STA 47+89.00 TO STA 48+44.34

NO SCALE
NOT FOR CONSTRUCTION

THE CITY OF LOS ANGELES
ENGINEERING DIVISION
 425 S. PALMS VENEZUELA STREET, 9TH FLOOR, LOS ANGELES, CA 90071-3300



PLANS PREPARED BY:
HDR ONE COMPANY
 Mazy Solutions
 HDR ENGINEERING, INC.
 3230 EL CAMINO REAL
 SUITE 200
 IRVINE, CA 92602

BUREAU OF ENGINEERING

DATE: BY:

NO. REVISIONS:

WORK ACCEPTED SERIAL NO. B - PERMITS BD/BC

BUREAU OF ENGINEERING APPROVAL:

OFFICE: LIC. NO. ENGINEER: S. LEATHERS
 CHECKED BY: DESIGNED BY: R. SHAH
 SIGNATURE: DATE: DRAWN BY: CHECKED BY: APPROVED BY:

DATE: LIC. NO. PROJECT: ADDRESS:

SHEET TITLE: TYPICAL CROSS SECTION

PROJECT NO. DRAWING NO. **X-6**

SHEET OF

ATTACHMENT C

LAYOUTS, PROFILES, AND SUPERELEVATION DIAGRAMS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR
 HAMID TOOSSI

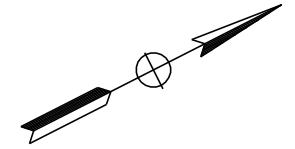
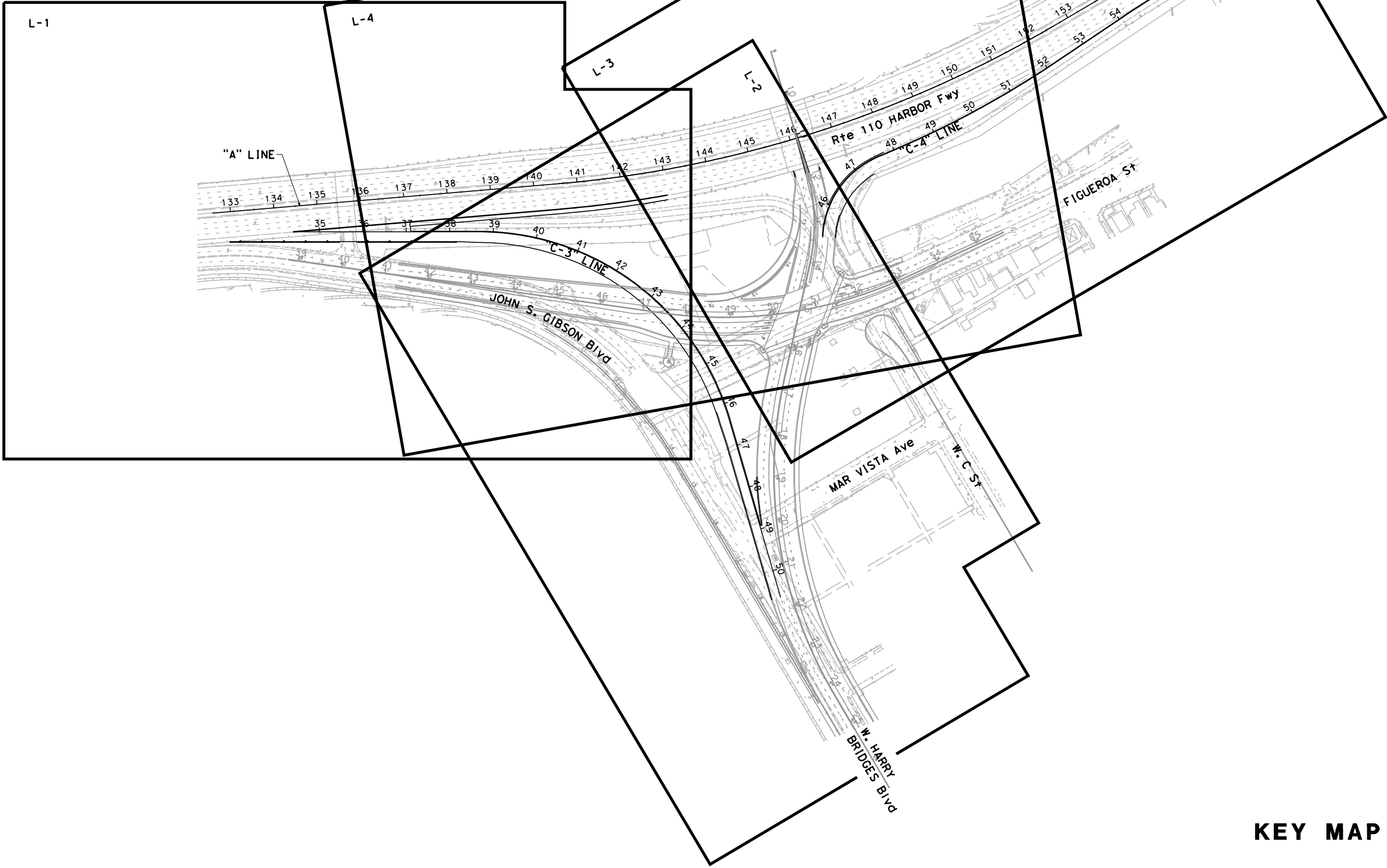
CALCULATED-DESIGNED BY
 CHECKED BY

R.SHAH
 S.LEATHERS

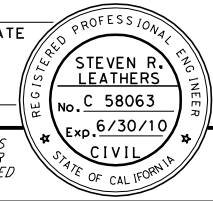
REVISED BY
 DATE REVISED

NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		
REGISTERED CIVIL ENGINEER DATE					
PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
PORT OF LOS ANGELES 425 S. PALOS VERDES STREET SAN PEDRO, CA 90731			HDR ENGINEERING, INC. 3230 EL CAMINO REAL SUITE 200 IRVINE, CA 92602-1377		



KEY MAP AND LINE INDEX
 NO SCALE

K-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR
 HAMID TOOSSI

CALCULATED-DESIGNED BY
 CHECKED BY
 R. SHAH
 S. LEATHERS

REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		

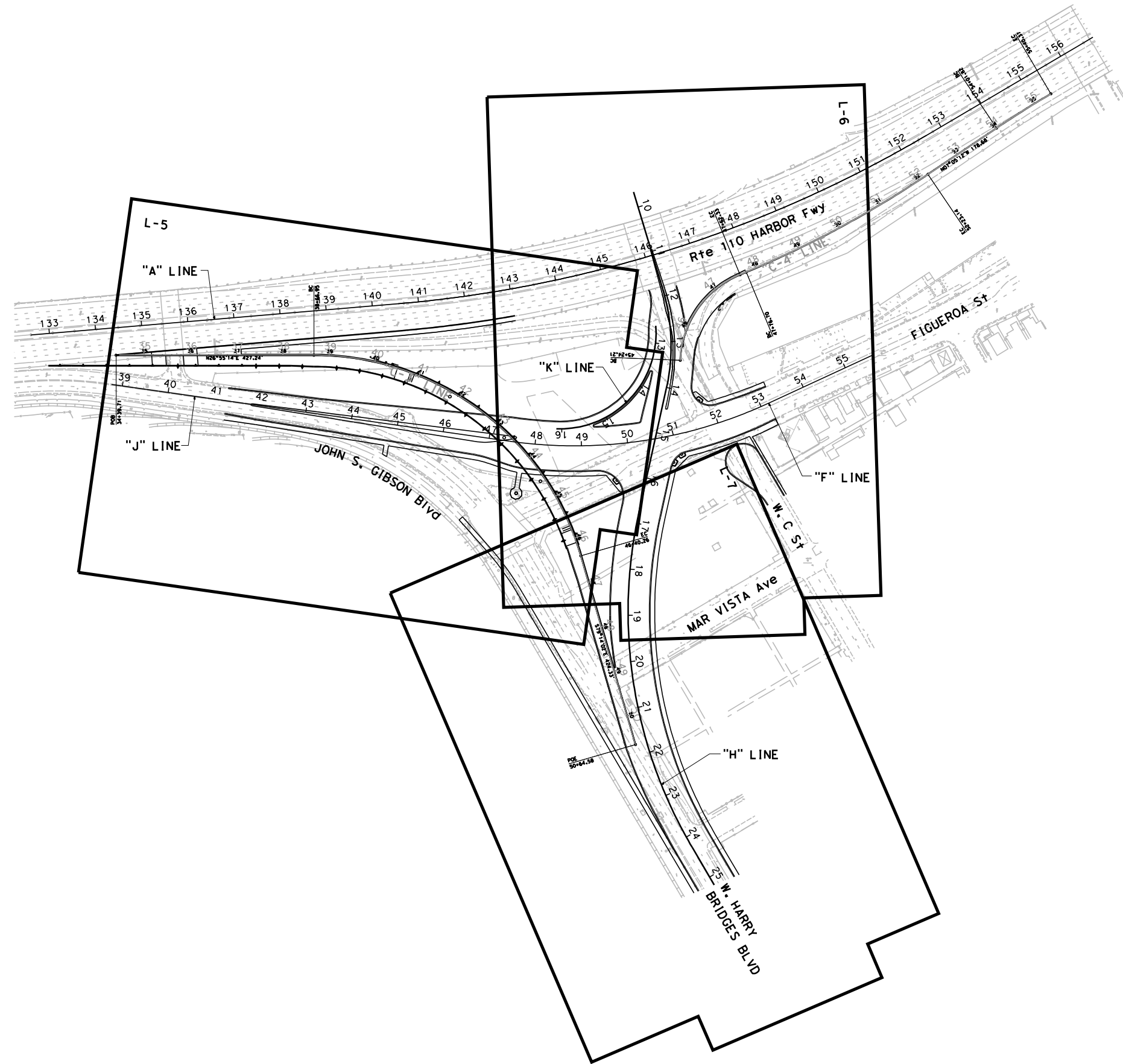
REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

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

PORT OF LOS ANGELES
 425 S. PALOS VERDES STREET
 SAN PEDRO, CA 90731

HDR ENGINEERING, INC.
 3230 EL CAMINO REAL
 SUITE 200
 IRVINE, CA 92602-1377



KEY MAP AND LINE INDEX
 NO SCALE

K-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		
REGISTERED CIVIL ENGINEER DATE					
PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
PORT OF LOS ANGELES 425 S. PALOS VERDES STREET SAN PEDRO, CA 90731			HDR ENGINEERING, INC. 3230 EL CAMINO REAL SUITE 200 IRVINE, CA 92602-1377		

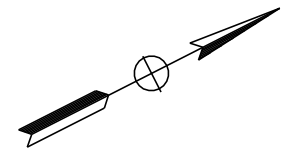
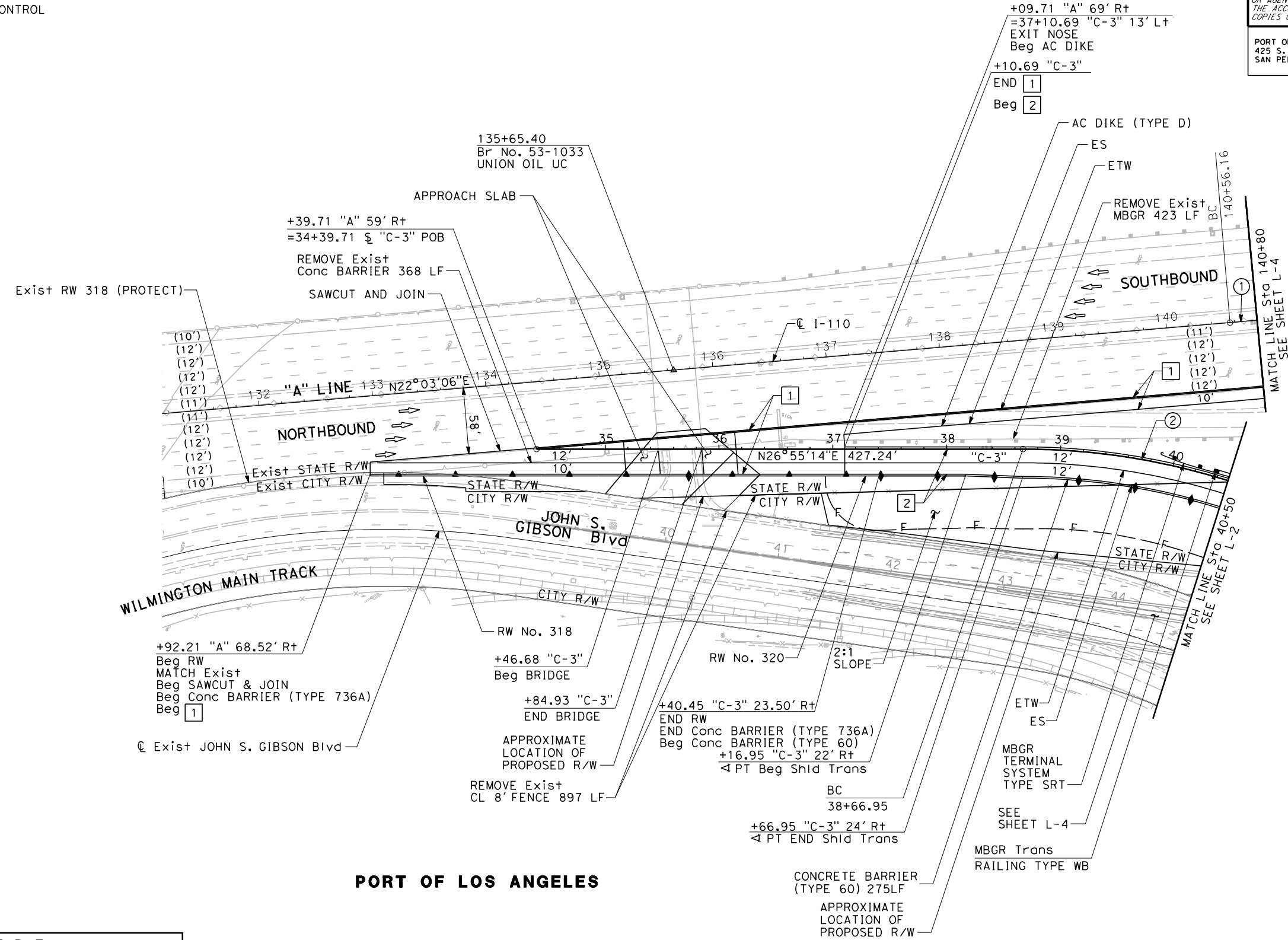
NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

LEGEND:

ACCESS CONTROL

REVISED BY	DATE REVISED
R. SHAH	S. LEATHERS
CALCULATED-DESIGNED BY	CHECKED BY
HAMID TOOSSI	
CONSULTANT FUNCTIONAL SUPERVISOR	
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	



CURVE DATA				
NO.	R	Δ	T	L
①	2700.00'	25°37'44"	614.14'	1207.73'
②	600.00'	73°50'44"	450.87'	773.31'

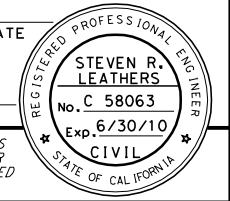
PORT OF LOS ANGELES

NOT FOR CONSTRUCTION

LAYOUT
SCALE: 1" = 50'

L-1

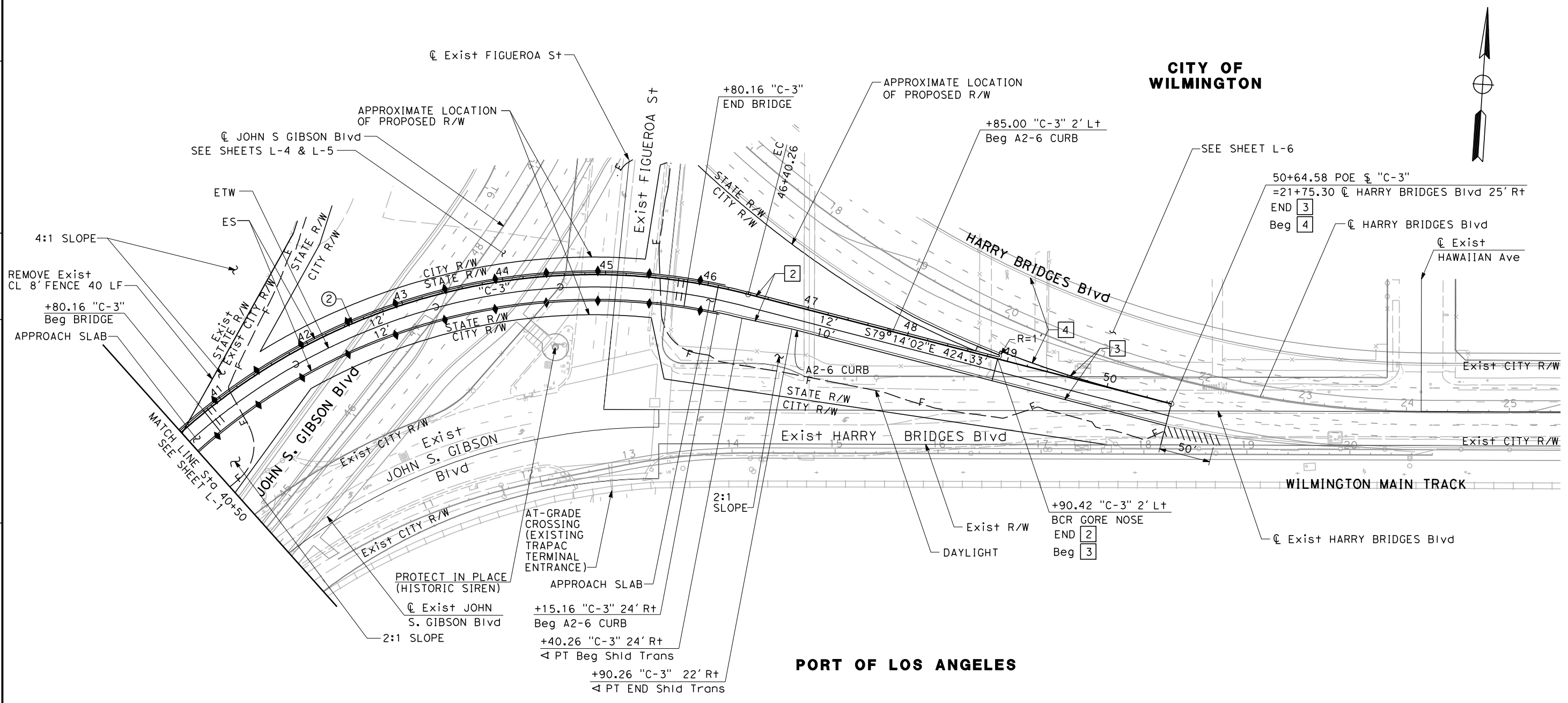
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		
REGISTERED CIVIL ENGINEER DATE					
PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
PORT OF LOS ANGELES 425 S. PALOS VERDES STREET SAN PEDRO, CA 90731			HDR ENGINEERING, INC. 3230 EL CAMINO REAL SUITE 200 IRVINE, CA 92602-1377		



NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT	FUNCTIONAL SUPERVISOR	CHECKED BY	DESIGNED BY	REVISIONS
	HAMID TOOSI	R. SHAH	S. LEATHERS		



NO.	R	Δ	T	L
②	600'	73°50'44"	450.87'	793.31'

NOT FOR CONSTRUCTION

LAYOUT
SCALE: 1" = 50'

L-2

LAST REVISION: DATE PLOTTED => 04/20/10
 00-00-00 TIME PLOTTED => 2:18:18 PM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT: FUNCTIONAL SUPERVISOR: HAMID TOOSSI
 CALCULATED-DESIGNED BY: CHECKED BY:

REVISOR: R. SHAH
 DESIGNER: S. LEATHERS

REVISED BY: DATE REVISION

NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		

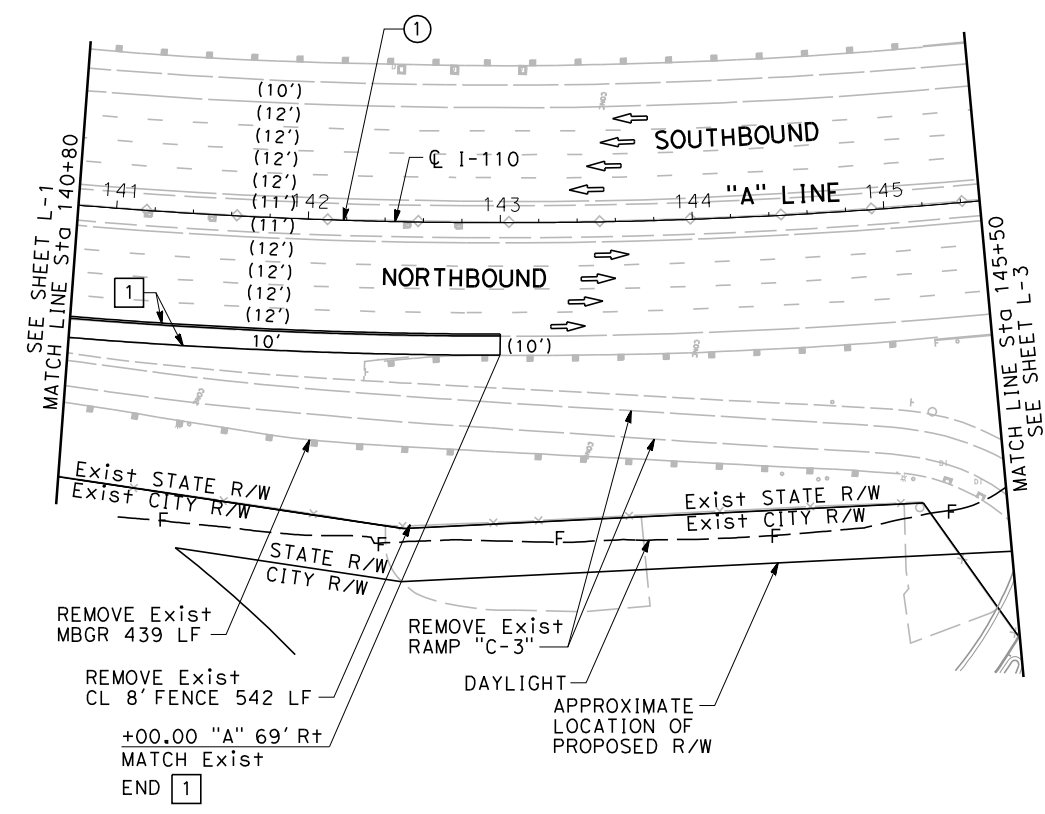
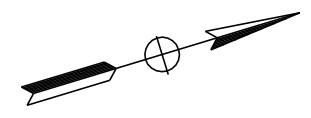
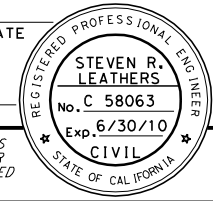
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

PORT OF LOS ANGELES
 425 S. PALOS VERDES STREET
 SAN PEDRO, CA 90731

HDR ENGINEERING, INC.
 3230 EL CAMINO REAL
 SUITE 200
 IRVINE, CA 92602-1377



CITY OF WILMINGTON

CURVE DATA				
NO.	R	Δ	T	L
①	2700.00'	25°37'44"	614.14'	1207.73'

NOT FOR CONSTRUCTION

LAYOUT
 SCALE: 1" = 50'

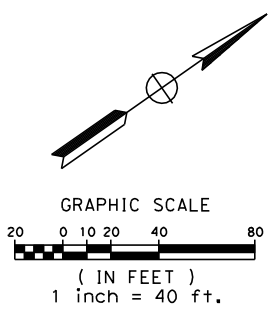
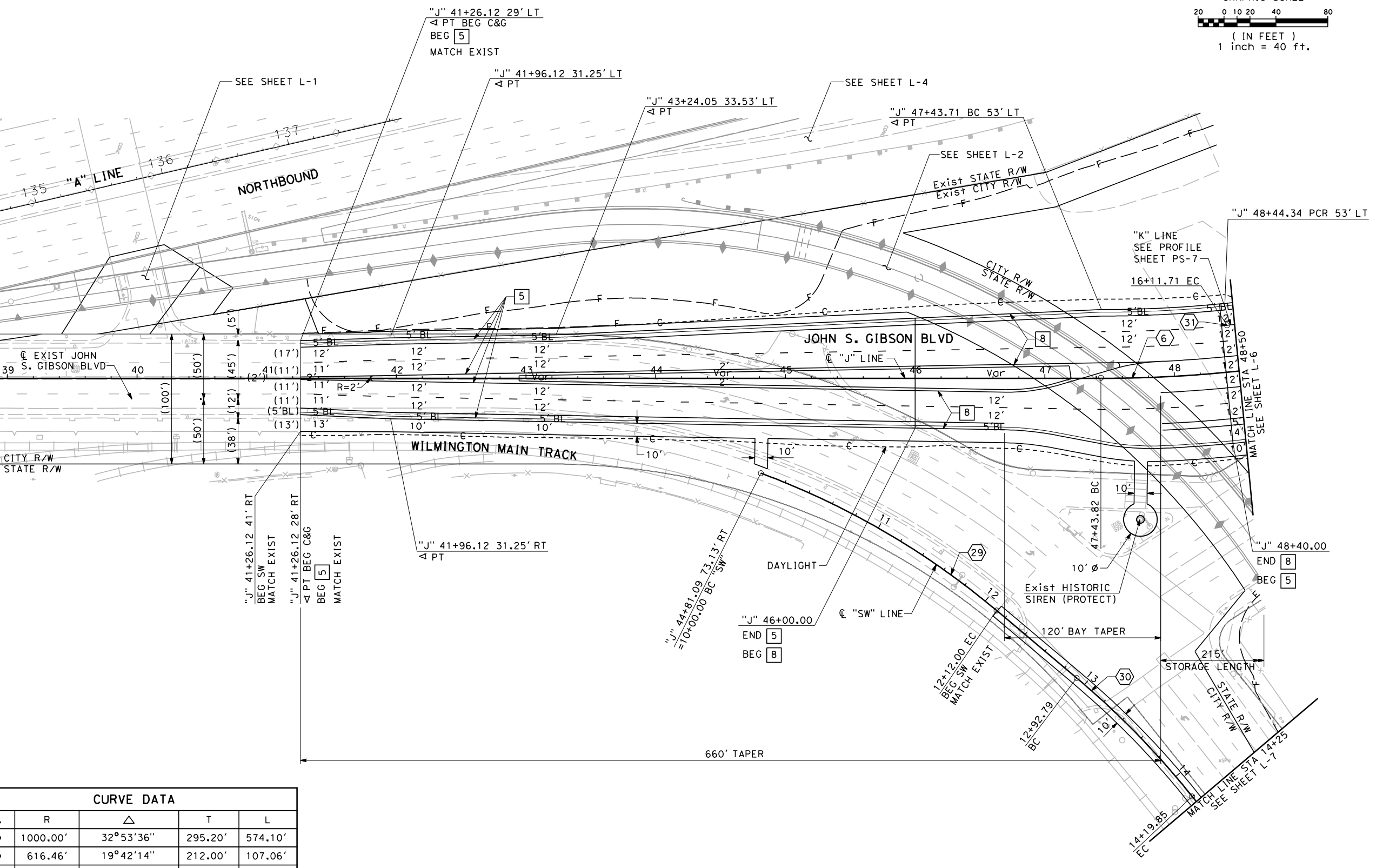
L-4

LAST REVISION: DATE PLOTTED => 04/20/10 00-00-00 TIME PLOTTED => 2:18:29 PM

REVISION DATES (DESIGN STORAGE ONLY)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

K
J
I
H
G
F
E
D
C
B
A



CURVE DATA				
NO.	R	Δ	T	L
6	1000.00'	32°53'36"	295.20'	574.10'
29	616.46'	19°42'14"	212.00'	107.06'
30	645.00'	11°17'14"	63.74'	127.06'
31	207.00'	96°40'26"	232.63'	349.27'

THE PORT OF LOS ANGELES
ENGINEERING DIVISION
 425 S. PALMS VENEZ STREET, SAN PEDRO CA 90731-3300

LA

ENGINEERING
 LADPW
 Statewide Public Works Division
 Disabling the Future

DATE: BY:

WORK ACCEPTED SERIAL NO.

B - PERMITS
 BD/BC

BUREAU OF ENGINEERING

NO. REVISIONS: _____

BUREAU OF ENGINEERING APPROVAL:
 OFFICE: _____
 CHECKED BY: _____
 SIGNATURE: _____
 DATE: _____

DATE: _____

U.C. NO. _____

ENGINEER: _____
 DESIGNED BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 APPROVED BY: _____

PLANS PREPARED BY:
HDR ONE COMPANY
 Mazy Solutions
 HDR ENGINEERING, INC.
 3230 EL CAMINO REAL
 SUITE 200
 IRVINE, CA 92602

REGISTERED PROFESSIONAL ENGINEER
 STEVEN R. LEATHERS
 No. C 58063
 Exp. 6/30/10
 CIVIL
 STATE OF CALIFORNIA

VERTICAL CONTROL: _____
 HORIZONTAL CONTROL: _____

SHEET TITLE: LAYOUT

PROJECT: _____
 ADDRESS: _____

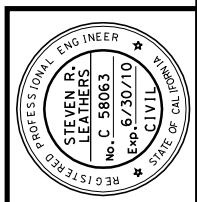
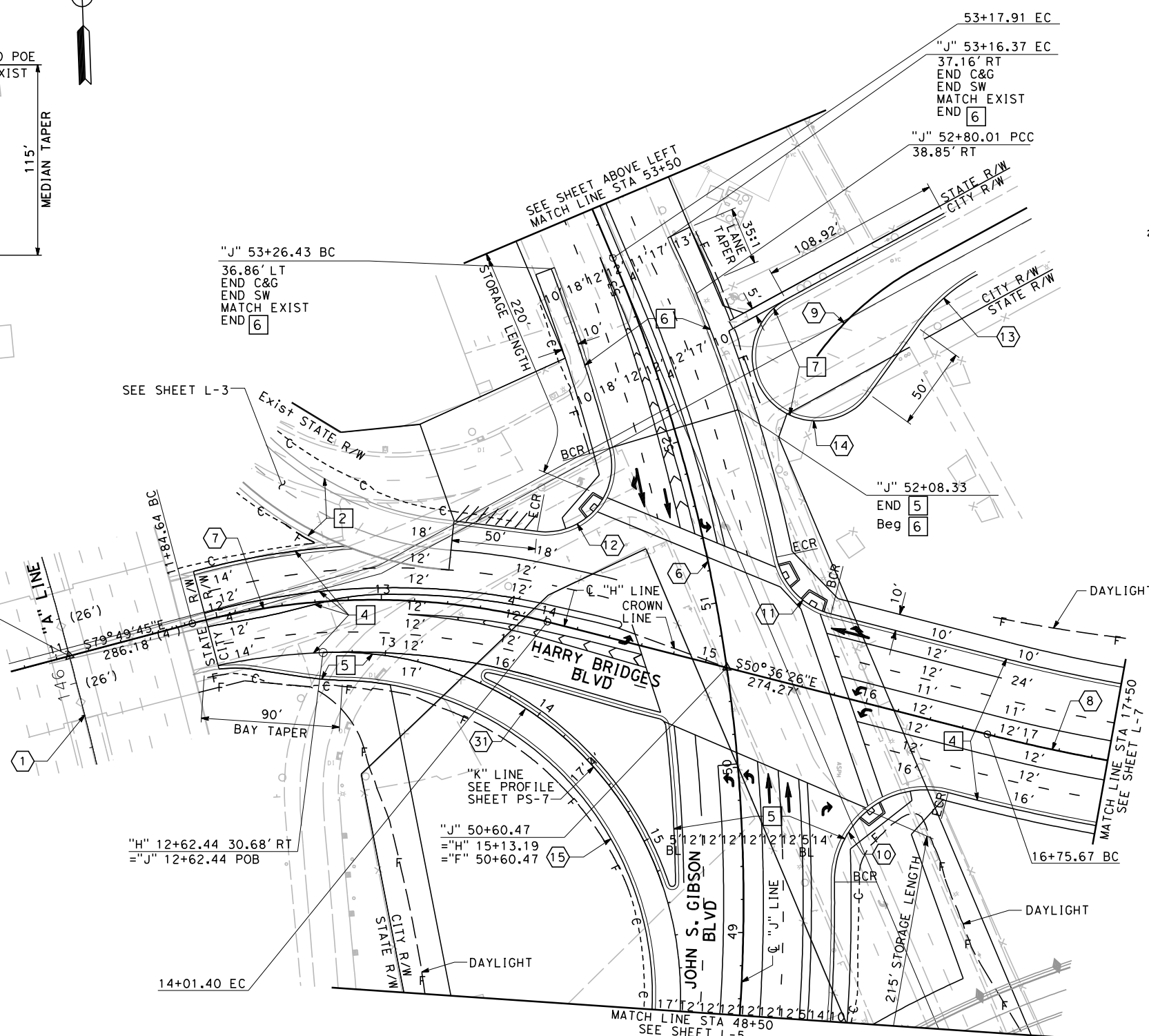
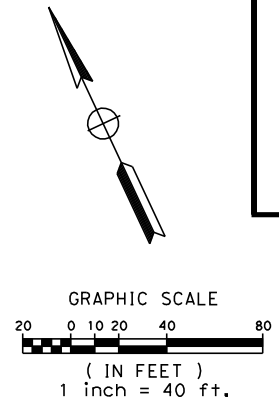
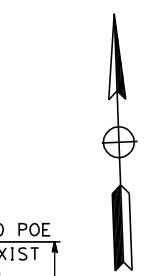
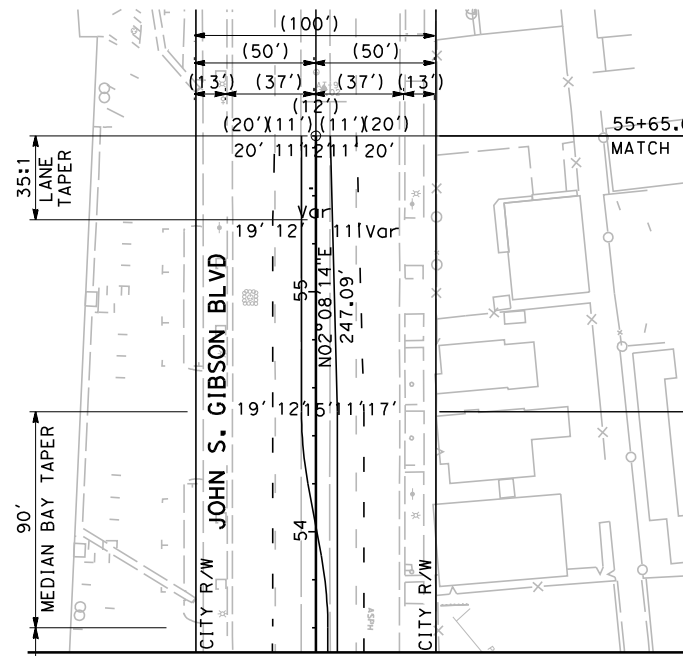
PROJECT NO. _____
 DRAWING NO. _____
L - 5
 SHEET OF

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

REVISION DATES (DESIGN OFFICE ONLY)

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

CURVE DATA				
NO.	R	Δ	T	L
1	2700.00'	25°37'44"	614.14'	1207.73'
6	1000.00'	32°53'36"	295.20'	574.10'
7	425.00'	29°13'19"	110.79'	216.76'
8	1000.00'	42°57'51"	393.55'	749.87'
9	184.35'	25°31'44"	41.76'	82.14'
10	55.00'	105°01'32"	71.71'	100.82'
11	35.00'	82°12'09"	30.53'	50.11'
12	40.00'	112°21'19"	59.70'	78.44'
13	109.00'	25°31'32"	24.69'	48.56'
14	39.00'	205°31'49"	172.14'	139.90'
15	190.00'	93°13'56"	201.03'	309.17'
31	207.00'	96°40'26"	232.63'	349.27'



PLANS PREPARED BY:
HDR ONE COMPANY
 Many Solutions
 HDR ENGINEERING, INC.
 3230 EL CAMINO REAL
 SUITE 200
 IRVINE, CA 92602

THE PORT OF LOS ANGELES
ENGINEERING DIVISION
 425 S. PALMS VENEZUELA STREET, SAN PEDRO, CA 90731-3300



BUREAU OF ENGINEERING

DEPARTMENT OF PUBLIC WORKS

CITY OF LOS ANGELES

SHEET TITLE: LAYOUT

PROJECT: LAYOUT

ADDRESS: LAYOUT

DATE: LAYOUT

LIC. NO. LAYOUT

ENGINEER: LAYOUT

DESIGNED BY: LAYOUT

DRAWN BY: LAYOUT

CHECKED BY: LAYOUT

APPROVED BY: LAYOUT

DATE: LAYOUT

OFFICE: LAYOUT

CHECKED BY: LAYOUT

SIGNATURE: LAYOUT

DATE: LAYOUT

BUREAU OF ENGINEERING APPROVAL:

DATE: LAYOUT

NO. REVISIONS: LAYOUT

DATE: LAYOUT

WORK ACCEPTED: LAYOUT

SERIAL NO. LAYOUT

INDEX NO. LAYOUT

B - PERMITS

BD/BC

PROJECT NO. LAYOUT

DRAWING NO. LAYOUT

SHEET OF LAYOUT

L - 6

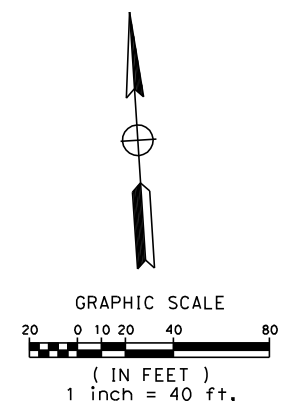
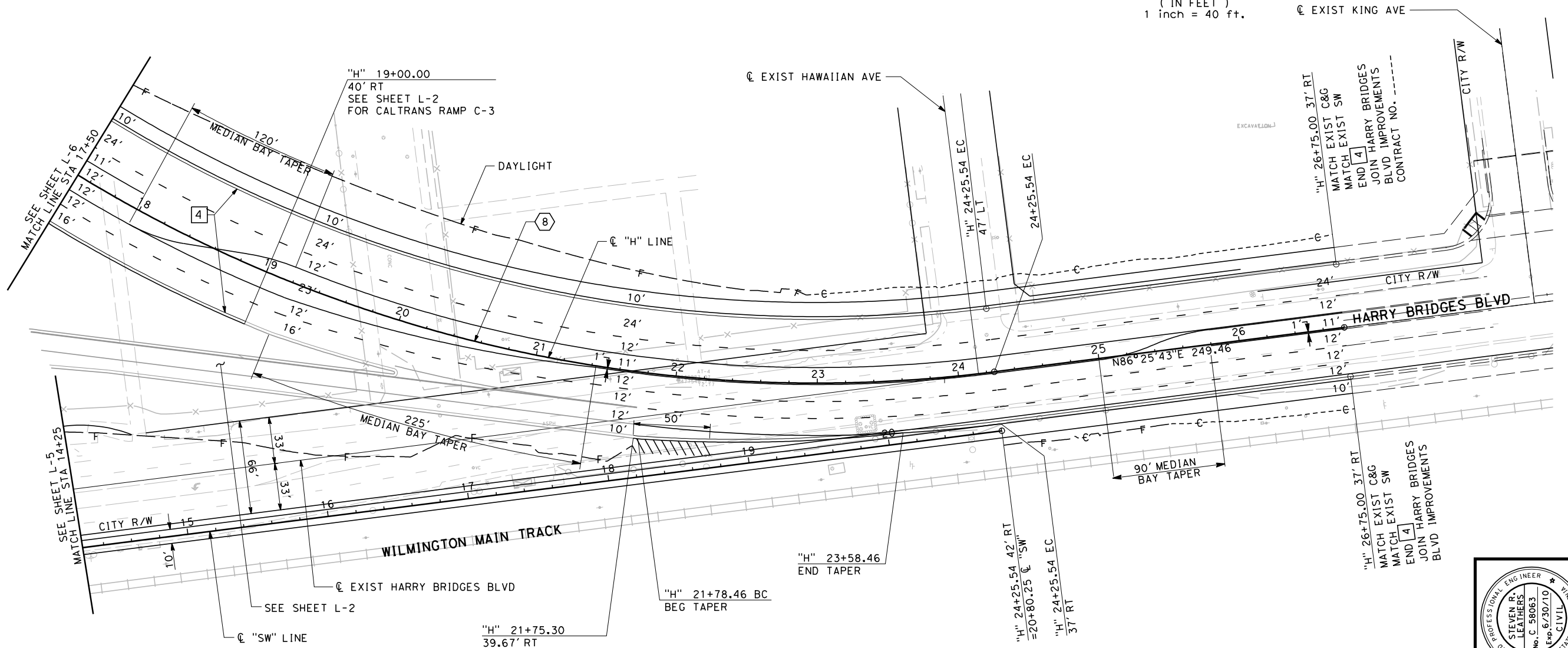
REVISION DATES (DESIGN OFFICE ONLY)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

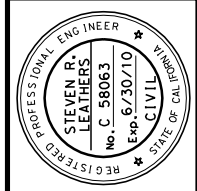
K
J
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E
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

CURVE DATA				
NO.	R	Δ	T	L
8	1000.00'	42°57'51"	393.55'	749.87'



THE CITY OF LOS ANGELES
ENGINEERING DIVISION
 425 S. PALMS VENEZUELA STREET, 8TH FLOOR, CA 90071-3300



PLANS PREPARED BY:
HDR ONE COMPANY
Mazy Solutions
 HDR ENGINEERING, INC.
 3230 EL CAMINO REAL
 SUITE 200
 IRVINE, CA 92602

BUREAU OF ENGINEERING

DEPARTMENT OF PUBLIC WORKS

CITY OF LOS ANGELES

DATE: BY: _____

NO. REVISIONS: _____

BUREAU OF ENGINEERING APPROVAL:

OFFICE CHECKED BY: _____

SIGNATURE: _____ DATE: _____

ENGINEER: _____ LIC. NO. _____

DESIGNED BY: _____

DRAWN BY: _____

CHECKED BY: _____

APPROVED BY: _____

PROJECT: **LAYOUT**

ADDRESS: _____

PROJECT NO. _____

DRAWING NO. _____

L-7

SHEET OF _____

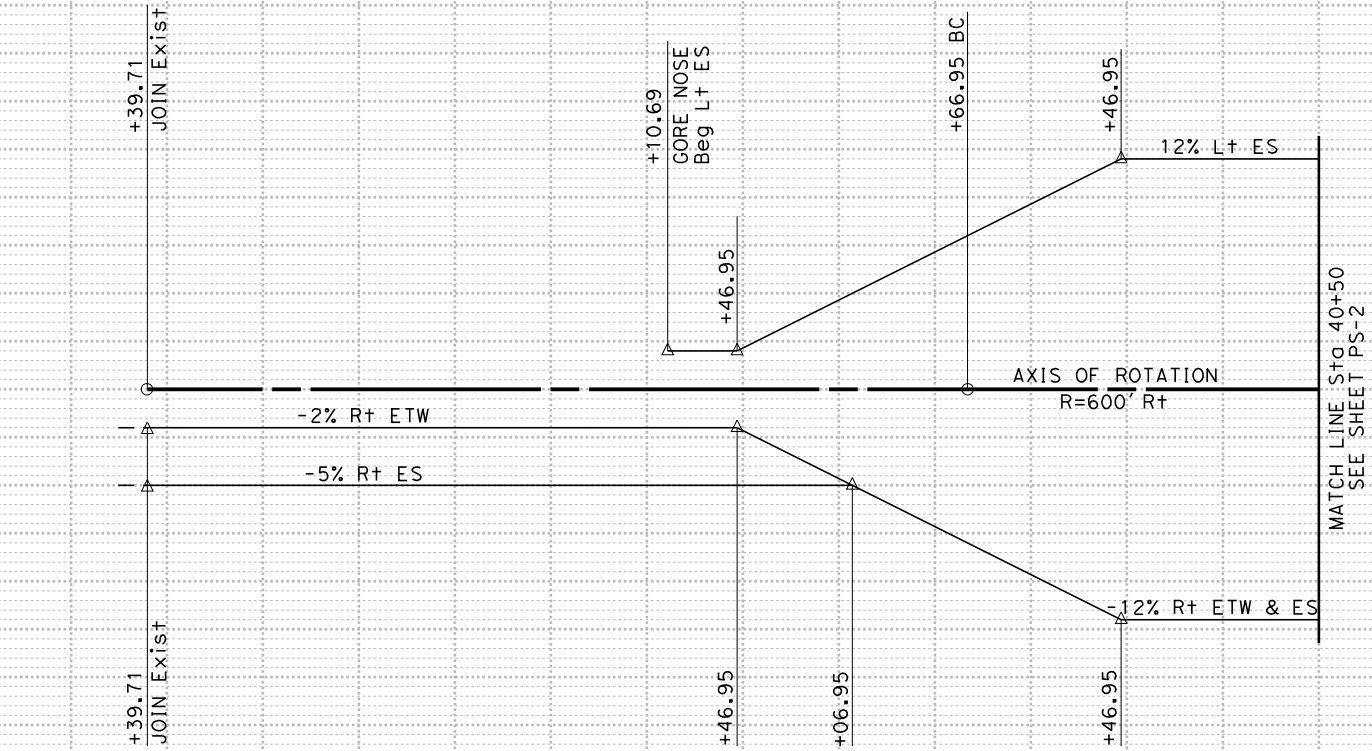
LADPW
ENGINEERING
 15000 VAN DYKE BLVD
 DOWNTOWN, CA 90047

B - PERMITS
 BD/BC

INDEX NO. _____

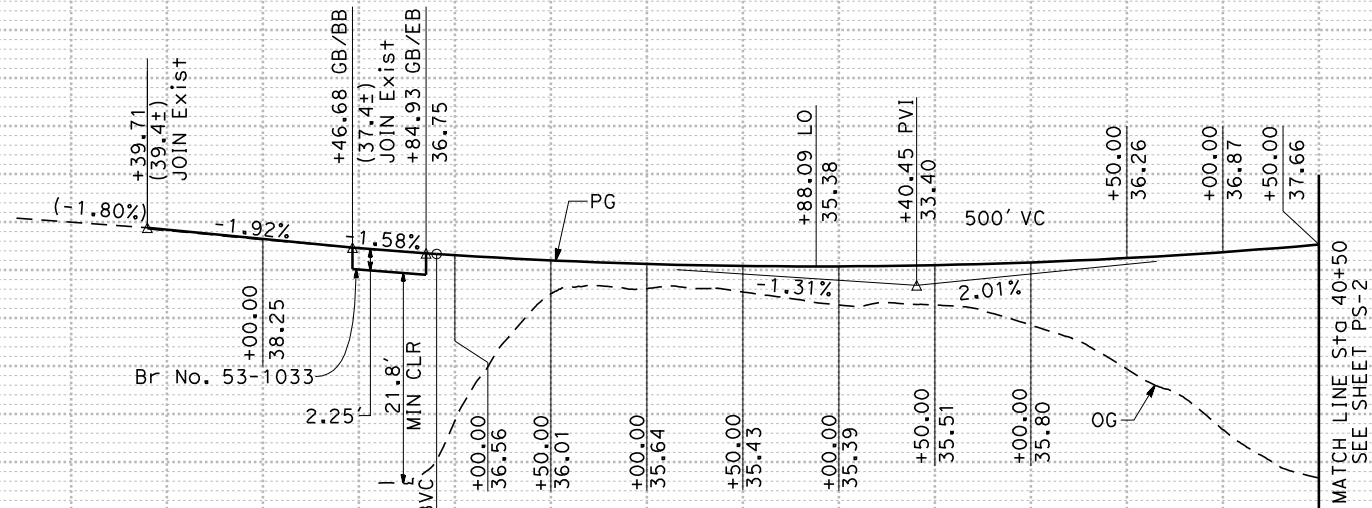
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans	CONSULTANT FUNCTIONAL SUPERVISOR	HAMID TOOSSI
	CALCULATED-DESIGNED BY	CHECKED BY
R-SHAH	REVISOR	DATE
S.LEATHERS	REVISOR	DATE
	15%	
	10%	
	5%	
	0%	
	-5%	
	-10%	
	-15%	
STATION		
Exc		
Emb		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		
REGISTERED CIVIL ENGINEER					DATE
PLANS APPROVAL DATE					
PORT OF LOS ANGELES 425 S. PALOS VERDES STREET SAN PEDRO, CA 90731			HDR ENGINEERING, INC. 3230 EL CAMINO REAL SUITE 200 IRVINE, CA 92602-1377		



SUPERELEVATION DIAGRAM

"C-3" LINE
NB OFF-RAMP



PROFILE

"C-3" LINE
NB OFF-RAMP

NOT FOR CONSTRUCTION

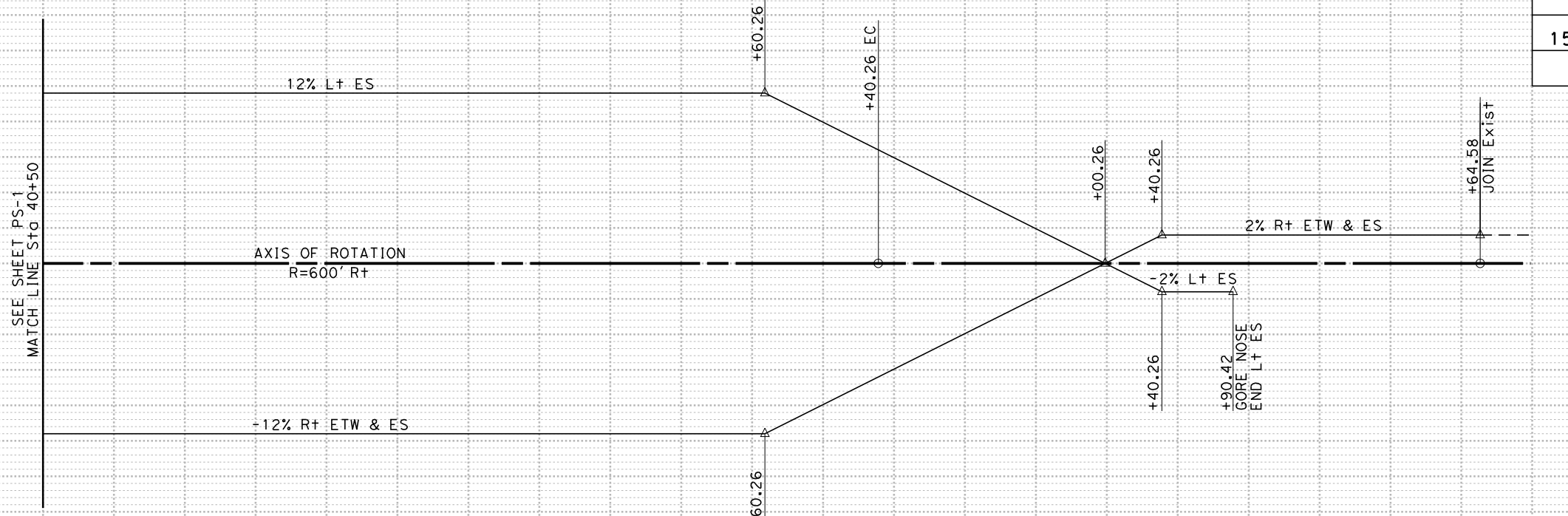
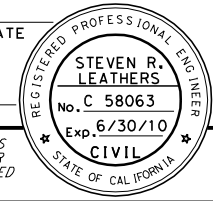
PROFILE AND SUPERELEVATION DIAGRAM

SCALE: HORIZ 1"=50'
VERT 1"=5'

PS-1

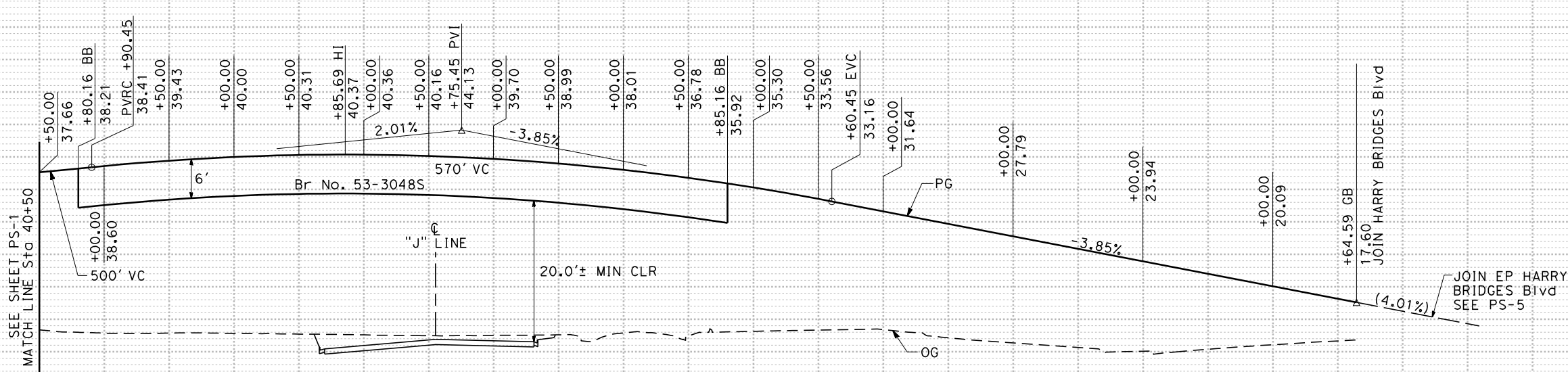
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans	CONSULTANT SUPERVISOR	FUNCTIONAL SUPERVISOR	CHECKED BY	DESIGNED BY	CHECKED BY	REVISOR	DATE					
	HAMID TOOSSI			R-SHAH	S.LEATHERS							
STATION	40	41	42	43	44	45	46	47	48	49	50	51
Exc												
Emb												

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		
REGISTERED CIVIL ENGINEER					DATE
PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
15%	PORT OF LOS ANGELES 425 S. PALOS VERDES STREET SAN PEDRO, CA 90731		HDR ENGINEERING, INC. 3230 EL CAMINO REAL SUITE 200 IRVINE, CA 92602-1377		



SUPERELEVATION DIAGRAM

"C-3" LINE
NB OFF-RAMP



PROFILE

"C-3" LINE
NB OFF-RAMP

PROFILE AND SUPERELEVATION DIAGRAM

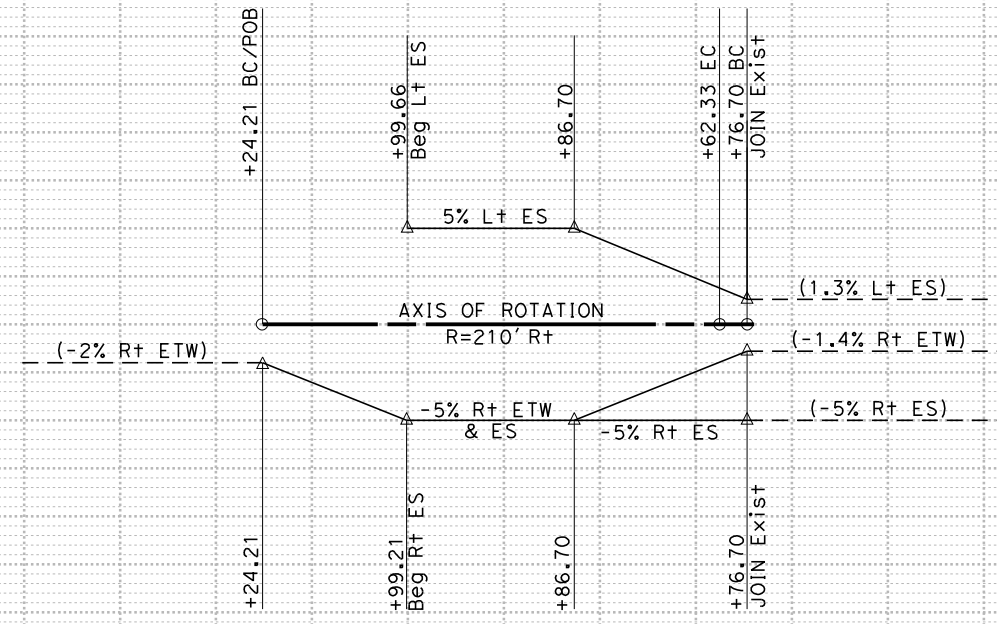
SCALE: HORIZ 1"=50'
VERT 1"=5'

NOT FOR CONSTRUCTION

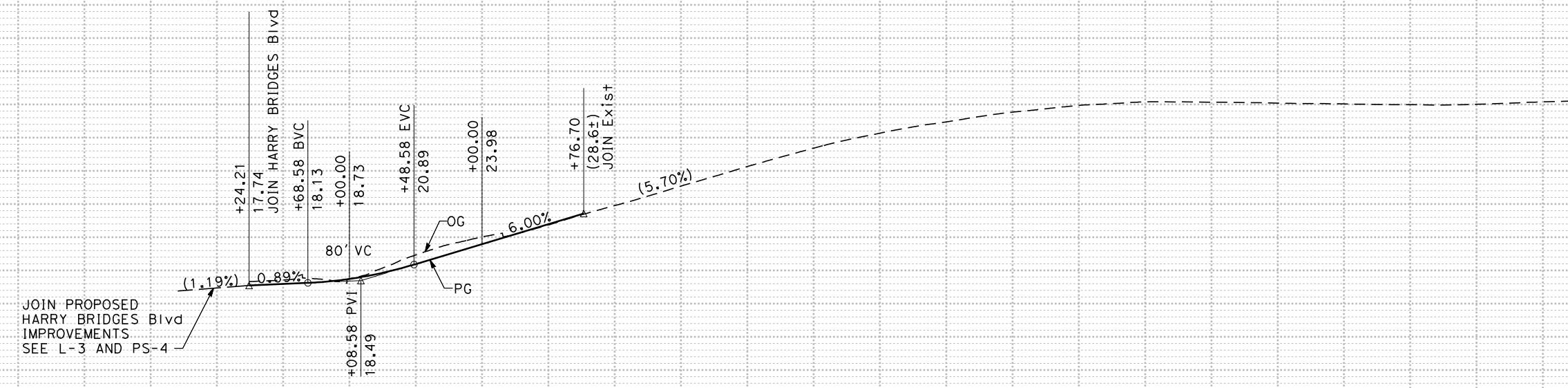
PS-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	R. SHAH	REVISOR	DATE
				REVISOR	DATE
CALTRANS	HAMID TOOSSI	CHECKED BY	S. LEATHERS	10%	
				5%	
				0%	
				-5%	
				-10%	
STATION					
Exc					
Emb					

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		
REGISTERED CIVIL ENGINEER DATE					
PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
PORT OF LOS ANGELES 425 S. PALOS VERDES STREET SAN PEDRO, CA 90731			HDR ENGINEERING, INC. 3230 EL CAMINO REAL SUITE 200 IRVINE, CA 92602-1377		
10%					5%



SUPERELEVATION DIAGRAM



PROFILE
"C-4" LINE
NB ON-RAMP

PROFILE AND SUPERELEVATION DIAGRAM

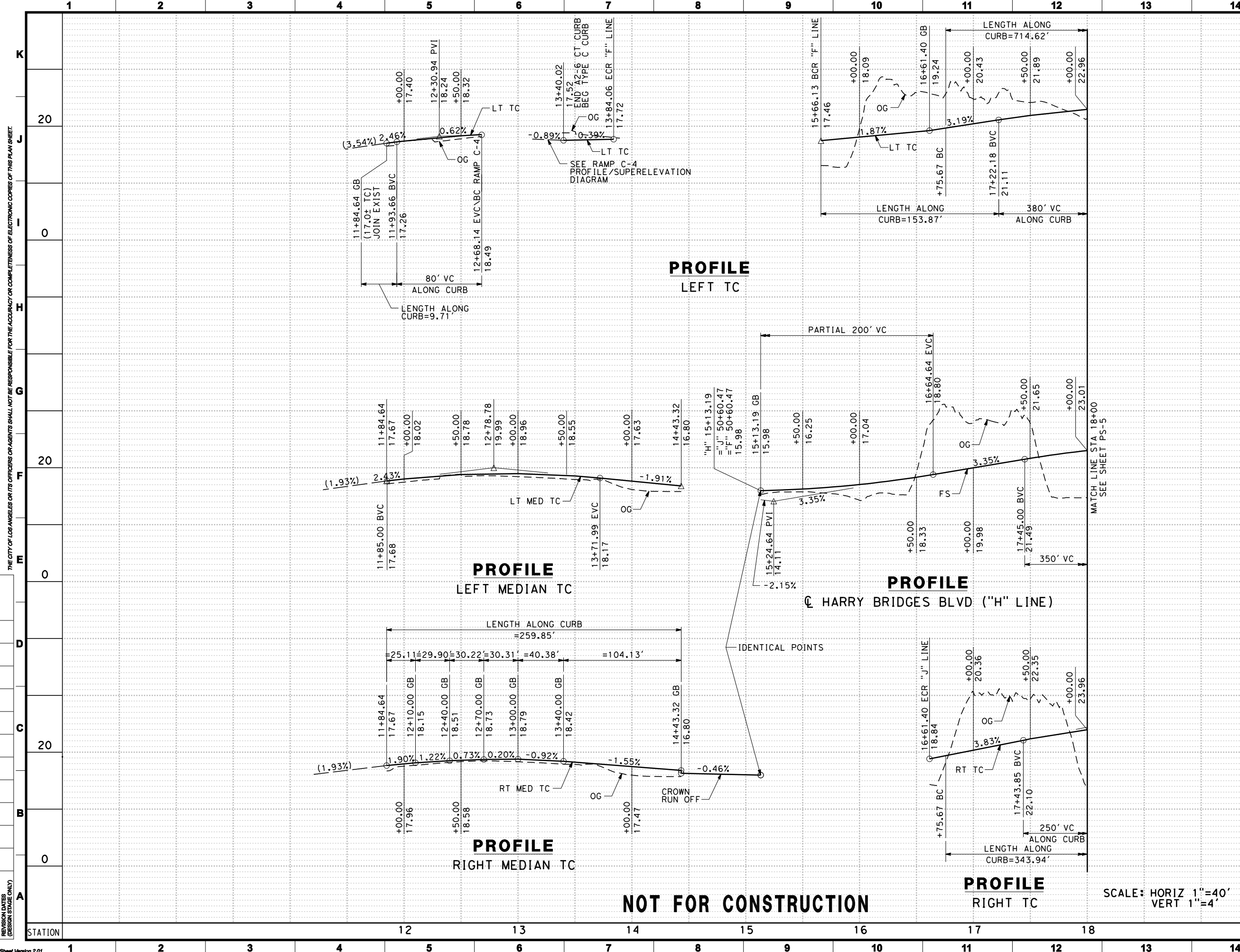
SCALE: HORIZ 1"=50'
VERT 1"=5'

NOT FOR CONSTRUCTION

PS-3

REVISION DATES (DESIGN STORAGE ONLY)

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



NOT FOR CONSTRUCTION

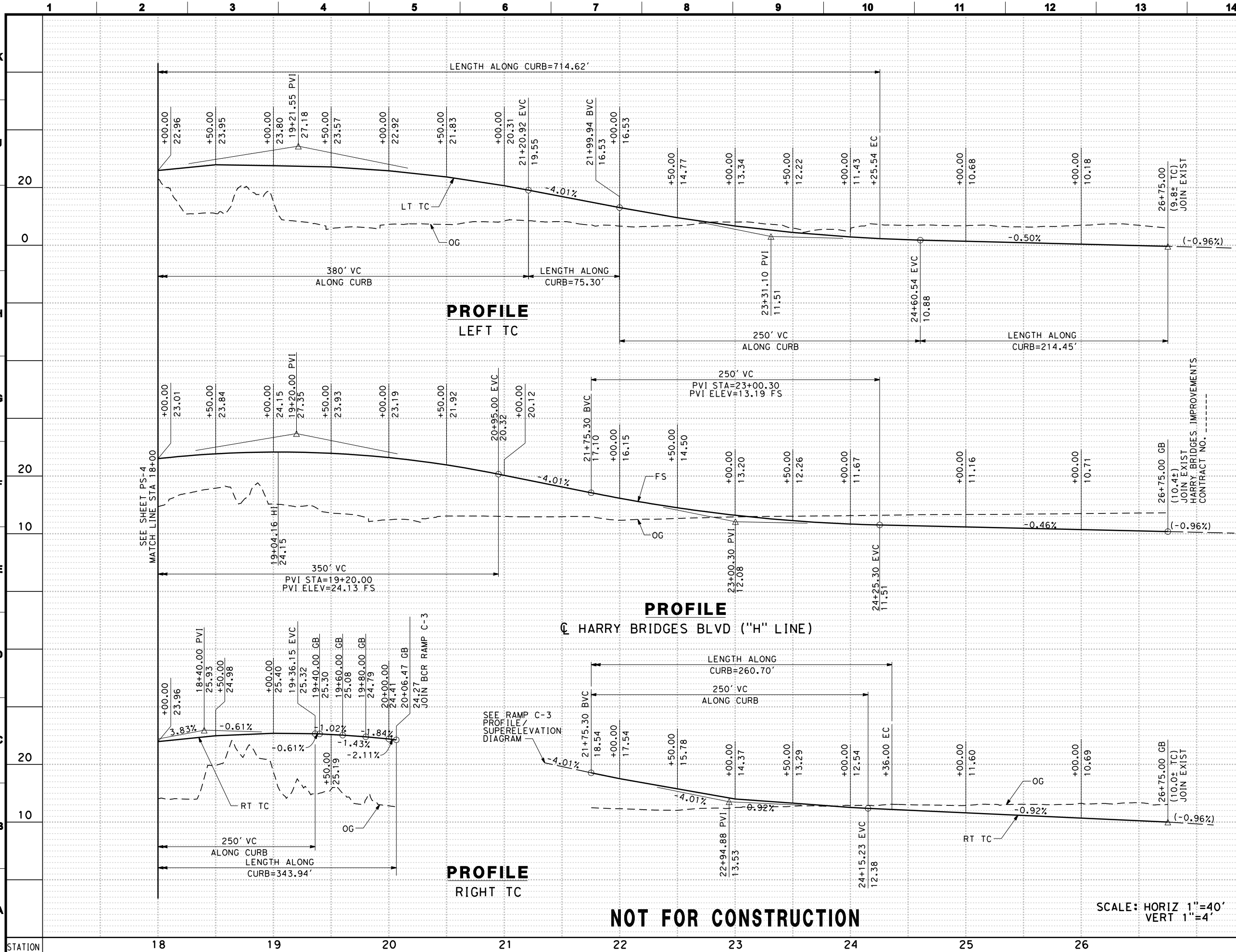
SCALE: HORIZ 1"=40'
VERT 1"=4'

STATION 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

	20		20		20		20		20		20		20		20		
PLANS PREPARED BY:		HDR		ONE COMPANY Many Solutions		HDR ENGINEERING, INC. 3230 EL CAMINO REAL SUITE 200 IRVINE, CA 92602		VERTICAL CONTROL:		HORIZONTAL CONTROL:		SHEET TITLE: PROFILE		PROJECT:		ADDRESS:	
BUREAU OF ENGINEERING APPROVAL:		OFFICE:		CHECKED BY:		SIGNATURE:		DATE:		NO. REVISIONS:		DATE BY:		WORK ACCEPTED:		SERIAL NO.:	
INDEX NO.:		B - PERMITS:		BD/BC:		DRAWN BY:		CHECKED BY:		APPROVED BY:		LIC. NO.:		DATE:		INDEX NO.:	
DRAWING NO.		PS-4		SHEET		OF											

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REVISION DATES
(DESIGN STORAGE ONLY)



**PROFILE
LEFT TC**

**PROFILE
HARRY BRIDGES BLVD ("H" LINE)**

**PROFILE
RIGHT TC**

NOT FOR CONSTRUCTION

SCALE: HORIZ 1"=40'
VERT 1"=4'

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
K														
J														
I														
H														
G														
F														
E														
D														
C														
B														
A														
STATION	18	19	20	21	22	23	24	25	26					



PLANS PREPARED BY:
HDR ONE COMPANY
 Many Solutions
 HDR ENGINEERING, INC.
 3230 EL CAMINO REAL
 SUITE 200
 IRVINE, CA 92602

THE CITY OF LOS ANGELES
ENGINEERING DIVISION
 425 S. PALM VIEW STREET, SUITE 2000, LOS ANGELES, CA 90071-3300

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

VERTICAL CONTROL: _____
 HORIZONTAL CONTROL: _____

SHEET TITLE: **PROFILE**

PROJECT: _____
 ADDRESS: _____

DATE: _____
 LIC. NO.: _____

ENGINEER: _____
 DESIGNED BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 APPROVED BY: _____

BUREAU OF ENGINEERING APPROVAL:
 OFFICE: _____
 CHECKED BY: _____
 SIGNATURE: _____
 DATE: _____

NO. REVISIONS: _____
 DATE: _____

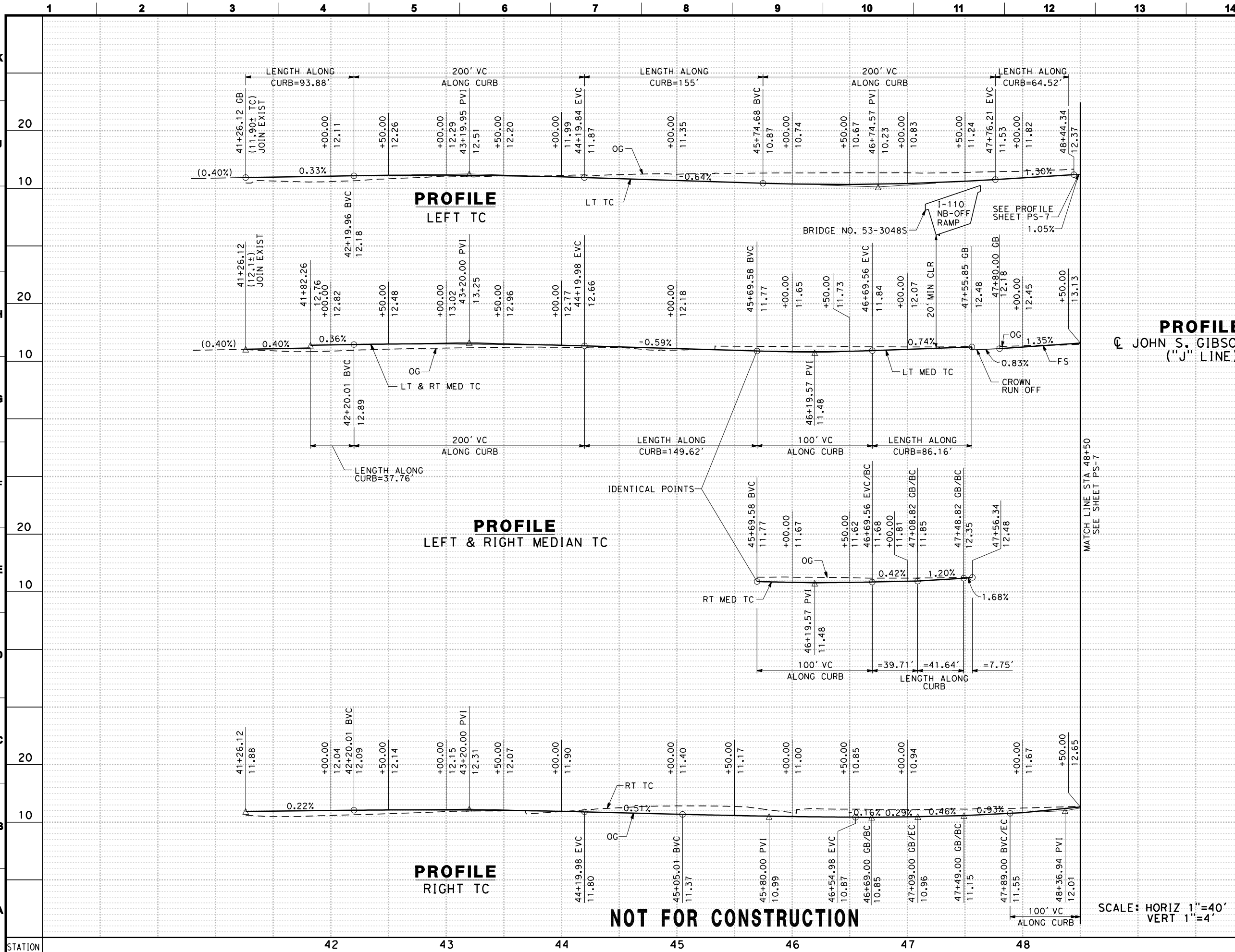
WORK ACCEPTED: _____
 SERIAL NO.: _____
 DATE: _____

B - PERMITS
 BD/BC

INDEX NO.: _____

PROJECT NO. _____
 DRAWING NO. **PS-5**
 SHEET OF _____

REVISION DATES (DESIGN STUDIO ONLY) THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



NOT FOR CONSTRUCTION

SCALE: HORIZ 1"=40' VERT 1"=4'

Grid lines A through K and stationing 1 through 15.

THE CITY OF LOS ANGELES ENGINEERING DIVISION 425 S. PALM TREES STREET, SUITE 200, SAN PEDRO, CA 90731-3309

LA BUREAU OF ENGINEERING

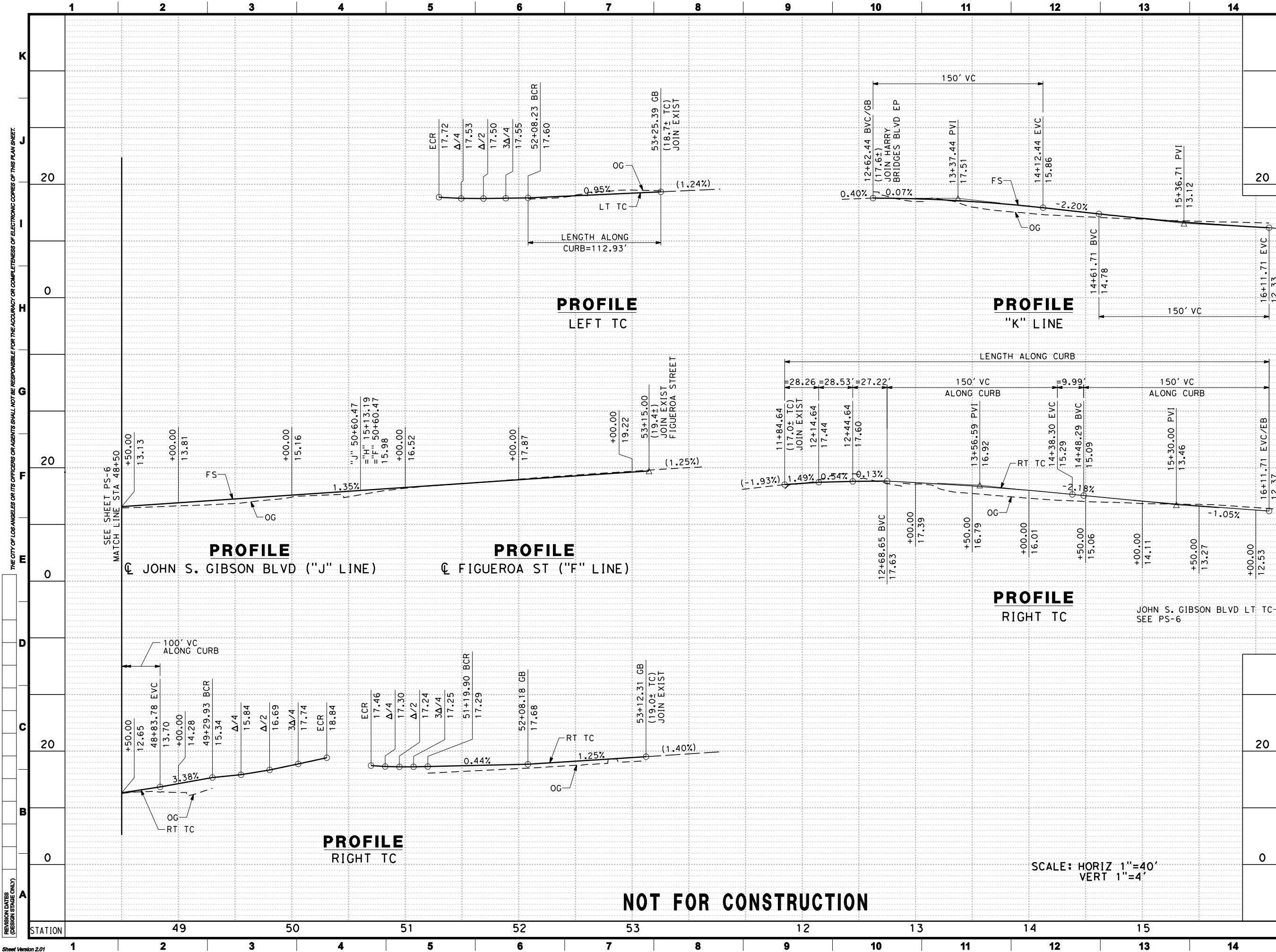
DEPARTMENT OF PUBLIC WORKS

PLANS PREPARED BY: HDR ONE COMPANY | Mary Solutions HDR ENGINEERING, INC. 3230 EL CAMINO REAL SUITE 200 IRVINE, CA 92602

Approval and revision table with columns for DATE, BY, NO. REVISIONS, APPROVAL, CHECKED BY, SIGNATURE, DATE, ENGINEER, DESIGNED BY, DRAWN BY, CHECKED BY, APPROVED BY, LIC. NO., PROJECT, ADDRESS, SHEET TITLE, DRAWING NO., PROJECT NO.

PS-6

REVISION DATES (DESIGN STORAGE ONLY)



THE CITY OF LOS ANGELES
ENGINEERING DIVISION
 425 S. PALM TREES STREET, 9TH FLOOR, LOS ANGELES, CA 90071-3300

PLANS PREPARED BY:
HDR
 HDR ENGINEERING, INC.
 3230 EL CAMINO REAL
 SUITE 200
 IRVINE, CA 92602

REGISTERED PROFESSIONAL ENGINEER
 STEVEN R. LEATHERS
 No. C 58063
 Exp. 6/30/10
 CIVIL
 STATE OF CALIFORNIA

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

DATE: _____
 NO. REVISIONS: _____
 BUREAU OF ENGINEERING APPROVAL: _____
 OFFICE CHECKED BY: _____
 SIGNATURE: _____ DATE: _____
 ENGINEER: _____ LIC. NO. _____
 DESIGNED BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 APPROVED BY: _____

PROJECT TITLE: **PROFILE**
 PROJECT: _____
 ADDRESS: _____

PROJECT NO. _____
 DRAWING NO. **PS-7**
 SHEET OF _____

INDEX NO. _____
 B - PERMITS
 BD/BC

NOT FOR CONSTRUCTION

SCALE: HORIZ 1"=40'
 VERT 1"=4'

ATTACHMENT D

UTILITY PLANS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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PORT OF LOS ANGELES
425 S. PALOS VERDES STREET
SAN PEDRO, CA 90731

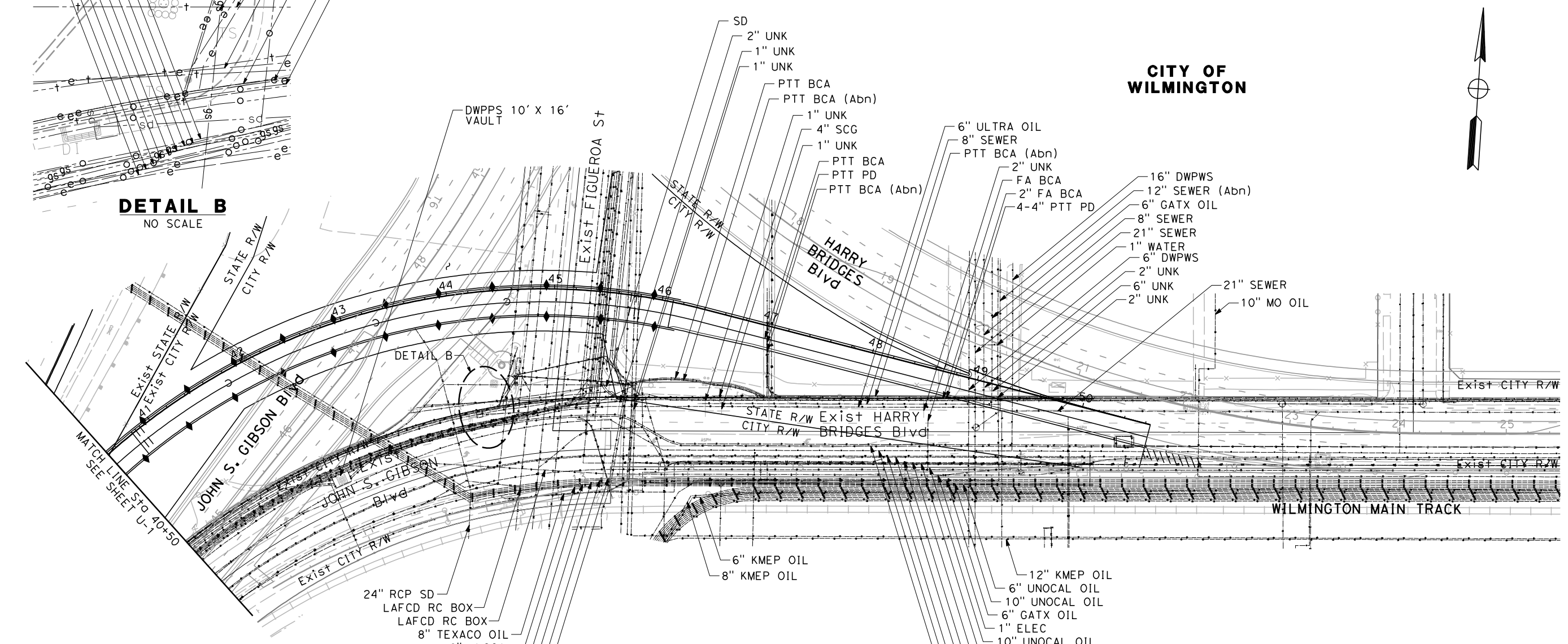
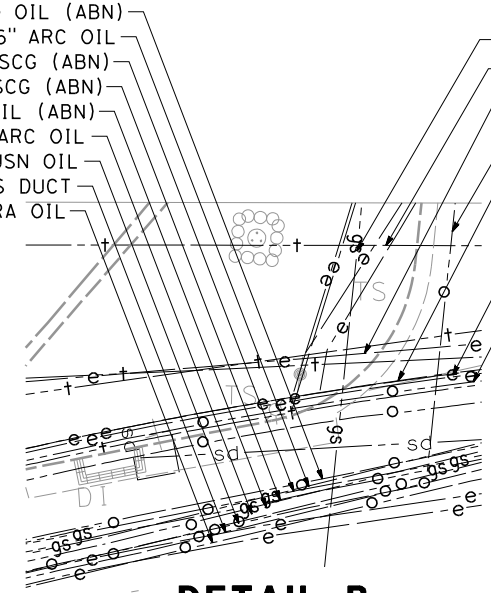
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377



NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

- 8" TEXACO OIL (ABN)
- 6" ARC OIL
- 10" SCG (ABN)
- 4" SCG (ABN)
- 8" ARC OIL (ABN)
- 8" ARC OIL
- 6" USN OIL
- DWPPS DUCT
- 6" ULTRA OIL
- 12" SCG
- PTT BCA (ABN)
- PTT BCA (ABN)
- 6" USN OIL
- PTT PD
- PTT BCA
- 6" TEXACO OIL



CITY OF WILMINGTON

PORT OF LOS ANGELES

No.	DESCRIPTION	OWNER	TOP EL
1	XXXX.XX	XXX.XX	XXX.XX
2			
3			
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5			
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8			
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10			

- 24" RCP SD
- LAFCD RC BOX
- LAFCD RC BOX
- 8" TEXACO OIL
- 8" UNOCAL
- 12" UNOCAL
- 6" UNOCAL OIL
- 6" UNOCAL OIL
- 10" UNOCAL OIL
- 6" KMEP OIL
- 8" KMEP OIL
- 12" KMEP OIL
- 6" UNOCAL OIL
- 10" UNOCAL OIL
- 6" GATX OIL
- 1" ELEC
- 10" UNOCAL OIL
- 4" SCG (Abn)
- 6" GER OIL
- 12" SD Abn
- 8" MO OIL (Abn)
- 8" MO OIL (Abn)
- 20" DWPPS
- DWPPS DUCT

UTILITY PLAN

SCALE: 1" = 50'

U-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT: R. SHAH, S. LEATHERS

FUNCTIONAL SUPERVISOR: HAMID TOOSS

REVISIONS:

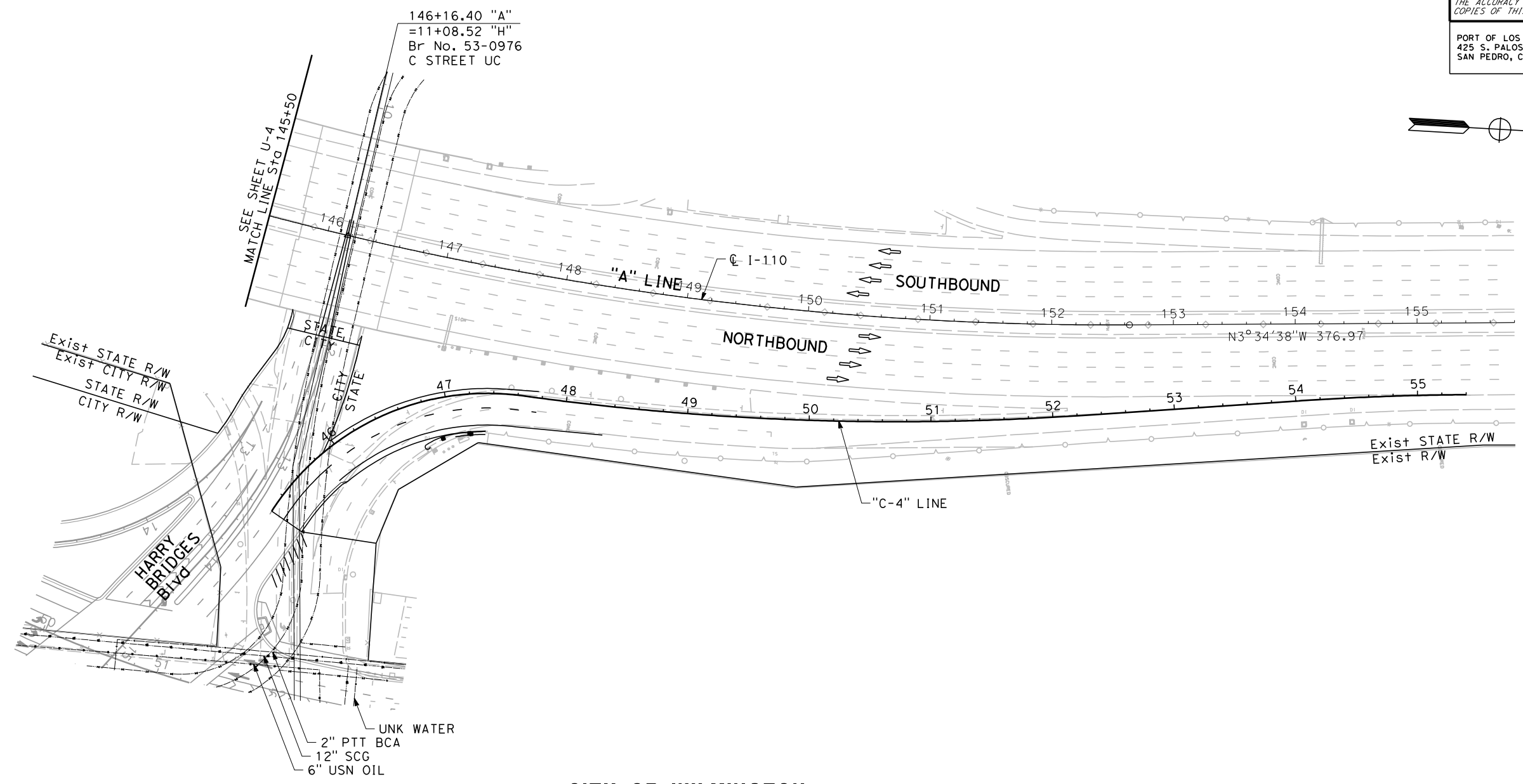
NO.	DESCRIPTION	DATE	BY

LAST REVISION: DATE PLOTTED => 04/20/10
00-00-00 TIME PLOTTED => 2:19:37 PM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		
REGISTERED CIVIL ENGINEER DATE					
PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
PORT OF LOS ANGELES 425 S. PALOS VERDES STREET SAN PEDRO, CA 90731			HDR ENGINEERING, INC. 3230 EL CAMINO REAL SUITE 200 IRVINE, CA 92602-1377		

NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



CITY OF WILMINGTON

No.	DESCRIPTION	OWNER	TOP EL
1	XXXX.XX	XXX.XX	XXX.XX
2			
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8			
9			
10			

UTILITY PLAN

SCALE: 1" = 50'

U-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

REVISOR
R. SHAH
S. LEATHERS

DESIGNER
R. SHAH
S. LEATHERS

CHECKED BY
S. LEATHERS

CONSULTANT FUNCTIONAL SUPERVISOR
HAMID TOOSI

DATE PLOTTED => 04/20/10
TIME PLOTTED => 2:19:45 PM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT: FUNCTIONAL SUPERVISOR: HAMID TOOSSI
 CALCULATED-DESIGNED BY: CHECKED BY:

R. SHAH
 S. LEATHERS

REVISED BY: DATE REVISED:

NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/3.0		

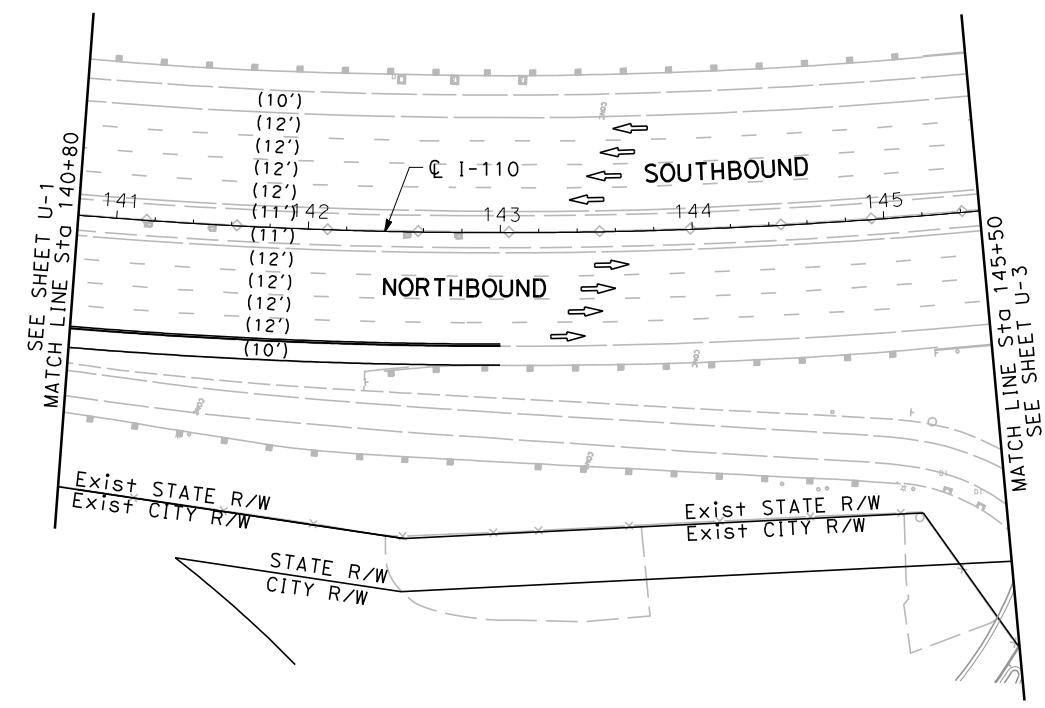
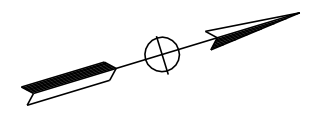
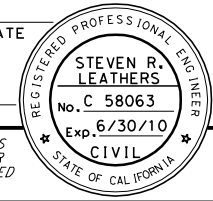
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

PORT OF LOS ANGELES
 425 S. PALOS VERDES STREET
 SAN PEDRO, CA 90731

HDR ENGINEERING, INC.
 3230 EL CAMINO REAL
 SUITE 200
 IRVINE, CA 92602-1377

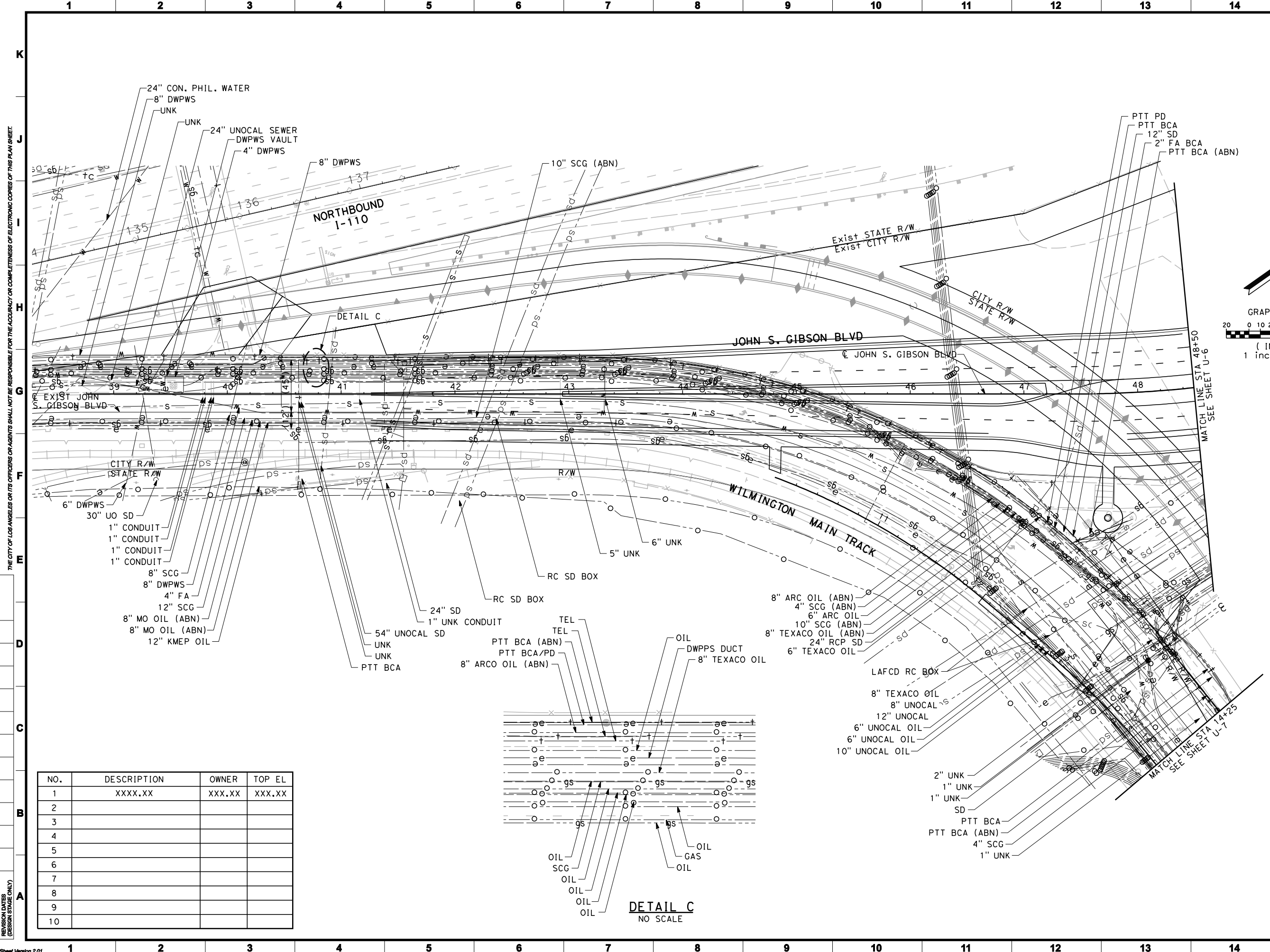


CITY OF WILMINGTON

No.	DESCRIPTION	OWNER	TOP EL
1	XXXX.XX	XXX.XX	XXX.XX
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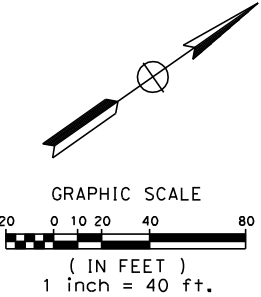
UTILITY PLAN
 SCALE: 1" = 50'

U-4

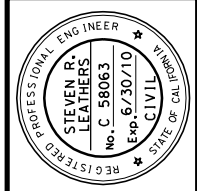
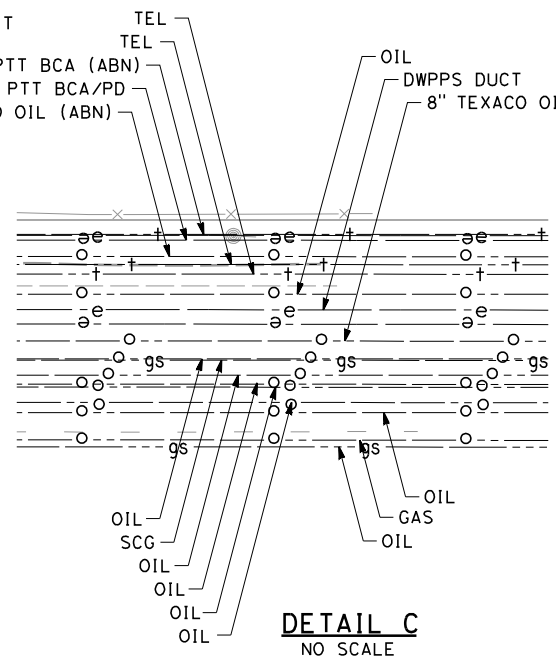


THE CITY OF LOS ANGELES
ENGINEERING DIVISION
 425 S. PALMS VENEZUELA STREET, SUITE 200, PEBBLE BEACH, CA 92071-3300

LA



NO.	DESCRIPTION	OWNER	TOP EL
1	XXXX.XX	XXX.XX	XXX.XX
2			
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9			
10			



PLANS PREPARED BY:
HDR ONE COMPANY
Mazy Solutions
 HDR ENGINEERING, INC.
 3230 EL CAMINO REAL
 SUITE 200
 IRVINE, CA 92602

BUREAU OF ENGINEERING

DATE: BY: _____

NO. REVISIONS: _____

WORK ACCEPTED: _____ SERIAL NO. _____

B - PERMITS
 BD/BC

INDEX NO. _____

BUREAU OF ENGINEERING

APPROVAL: _____

OFFICE: _____ CHECKED BY: _____

SIGNATURE: _____ DATE: _____

DATE: _____

LIC. NO. _____

ENGINEER: _____ DESIGNED BY: _____

DRAWN BY: _____ CHECKED BY: _____

APPROVED BY: _____

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

VERTICAL CONTROL: _____

HORIZONTAL CONTROL: _____

SHEET TITLE: _____

PROJECT: _____ ADDRESS: _____

PROJECT NO. _____

DRAWING NO. _____

U - 5

SHEET OF _____

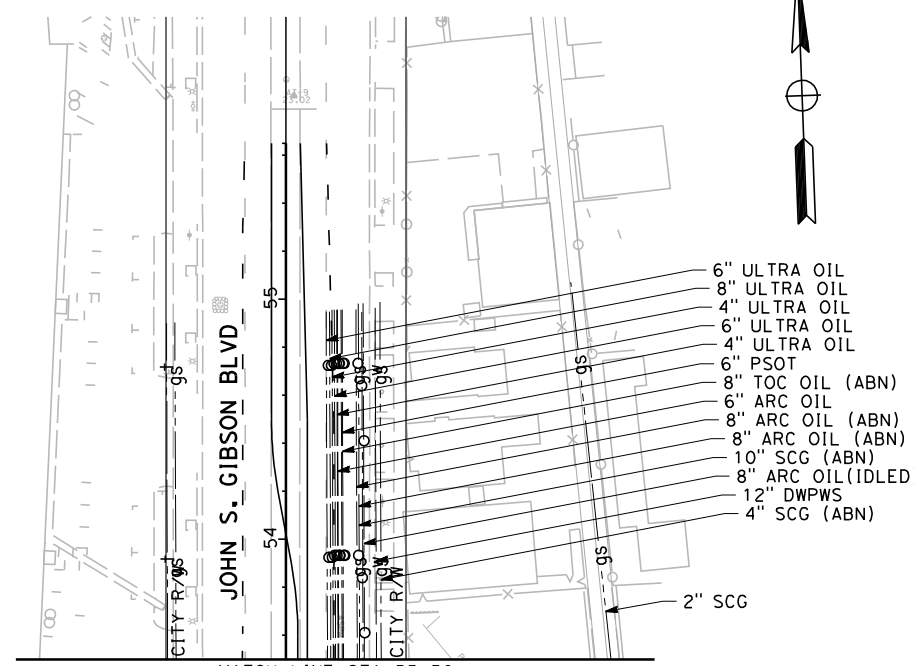
REVISION DATES (DESIGN STORAGE ONLY)

REVISION DATES (DESIGN STAGE ONLY)

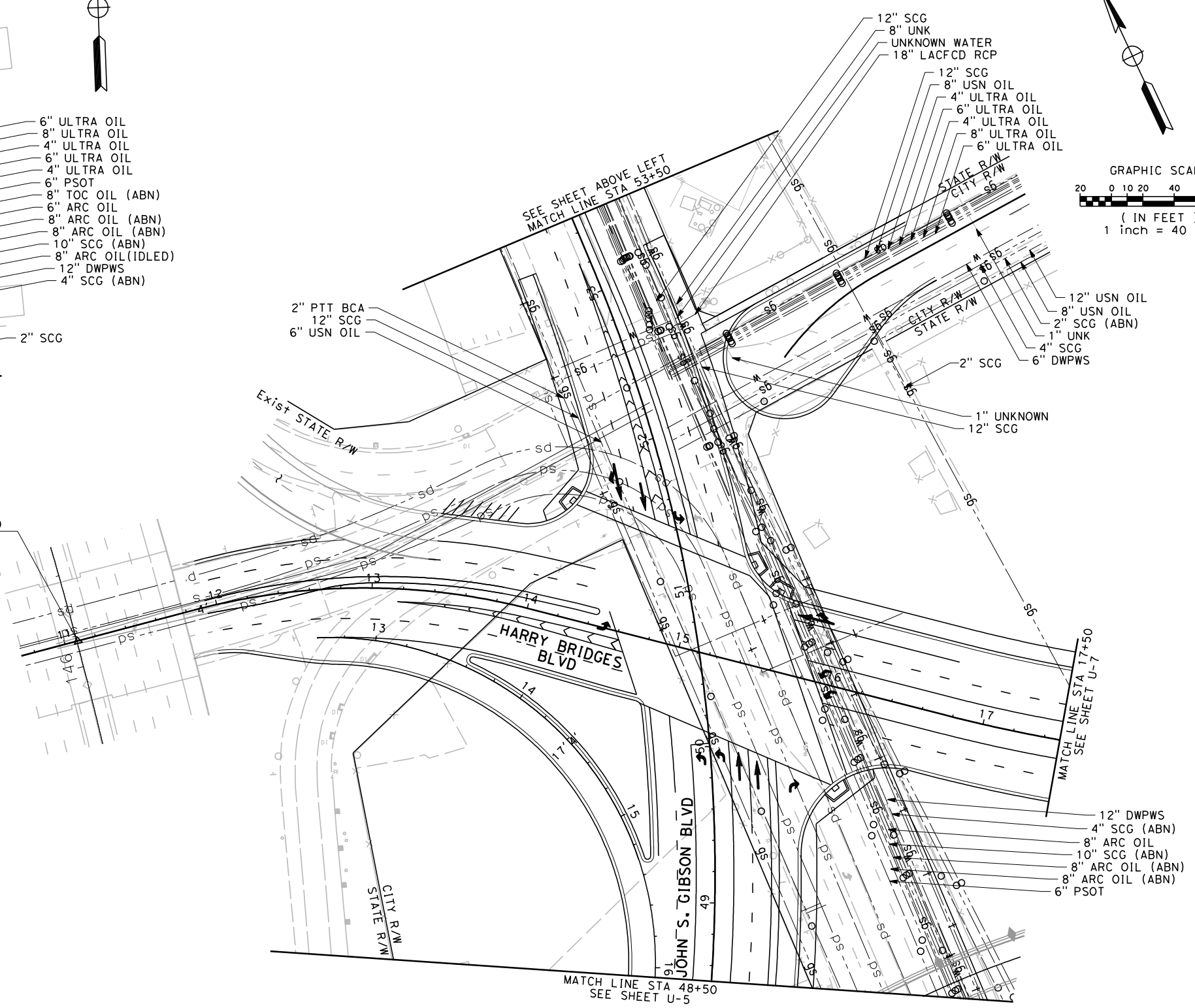
THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

NO.	DESCRIPTION	OWNER	TOP EL
1	XXXX.XX	XXX.XX	XXX.XX
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146+16.40 @ I-110
=11+08.52± "H"
BR NO. 53-0976
C STREET UC

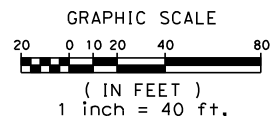


MATCH LINE STA 53+50
SEE SHEET BELOW RIGHT



MATCH LINE STA 48+50
SEE SHEET U-5

MATCH LINE STA 17+50
SEE SHEET U-7



PLANS PREPARED BY:
HDR
ONE COMPANY
Mazy Solutions
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602

THE CITY OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALMS VENEZUELA STREET, 5TH FLOOR, CA 90071-3300



CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

VERTICAL CONTROL: _____
HORIZONTAL CONTROL: _____

SHEET TITLE: _____
PROJECT: _____
ADDRESS: _____

PROJECT NO. _____
DRAWING NO. **U-6**
SHEET OF

DATE: _____
LIC. NO. _____

ENGINEER: _____
DESIGNED BY: _____
DRAWN BY: _____
CHECKED BY: _____
APPROVED BY: _____

DATE: _____
OFFICE: _____
CHECKED BY: _____
SIGNATURE: _____
DATE: _____

BUREAU OF ENGINEERING APPROVAL:

NO. REVISIONS: _____
DATE: _____

WORK ACCEPTED: _____
SERIAL NO. _____
DATE: _____

B - PERMITS
BD/BC
INDEX NO. _____

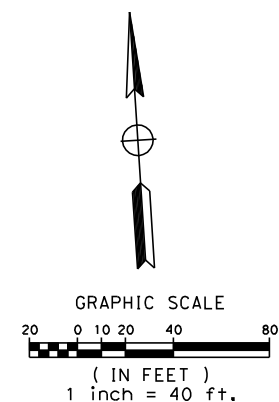
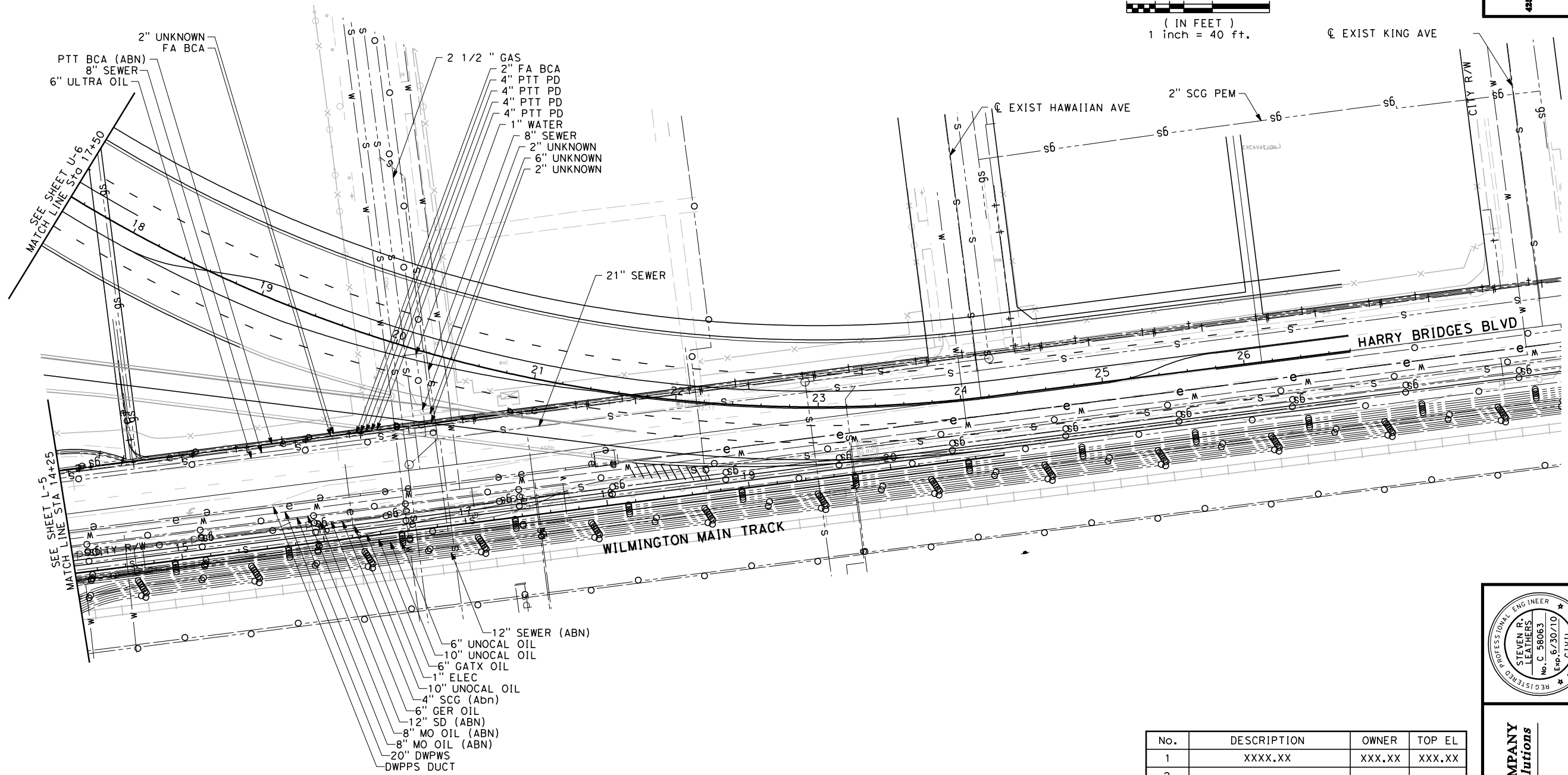


REVISION DATES (DESIGN OFFICE ONLY)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

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I
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C
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



THE CITY OF LOS ANGELES
ENGINEERING DIVISION
 425 S. PALMS VENEZUELA STREET, SUITE 200, PALM BEACH, CA 90731-3300

BUREAU OF ENGINEERING

DATE: BY: _____

NO. REVISIONS: _____

WORK ACCEPTED: _____

INDEX NO. _____

B - PERMITS
BD/BC

BUREAU OF ENGINEERING APPROVAL:

OFFICE CHECKED BY: _____

SIGNATURE: _____

DATE: _____

DATE: _____

LIC. NO. _____

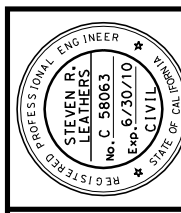
ENGINEER: _____

DESIGNED BY: _____

DRAWN BY: _____

CHECKED BY: _____

APPROVED BY: _____



PLANS PREPARED BY:
HDR ONE COMPANY
 | *Mazy Solutions*
 HDR ENGINEERING, INC.
 3230 EL CAMINO REAL
 SUITE 200
 IRVINE, CA 92602

No.	DESCRIPTION	OWNER	TOP EL
1	XXXX.XX	XXX.XX	XXX.XX
2			
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10			

VERTICAL CONTROL: _____

HORIZONTAL CONTROL: _____

SHEET TITLE: _____

PROJECT: _____

ADDRESS: _____

PROJECT NO. _____

DRAWING NO. _____

U-7

SHEET OF _____

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

ATTACHMENT E

COST ESTIMATES

Alternative 2 Cost Estimate Summary

District-County-Route 07-LA-110

PM 2.5/3.0

EA 264800

Program Code 20.30.600.624

PROJECT DESCRIPTION:

Limits: Ramp and intersection improvements on northbound Interstate 110 between 0.30 miles south of C Street and .20 miles north of C Street.

Proposed Improvement (Scope): This alternative provides removal of the existing northbound I-110 off-ramp in order to provide a new, more direct off-ramp from the northbound I-110 to eastbound Harry Bridges Blvd. The proposed improvements will replace the two existing intersections at (1) C Street and Figueroa Street and (2) John S. Gibson Boulevard, Harry Bridges Boulevard and Figueroa Street with one new widened intersection that would realign Harry Bridges Boulevard and John S. Gibson Boulevard, to the C Street Interchange. Access to C Street via Figueroa Street will be closed with the use of an offset Cul-de-Sac at the existing intersection.

Alternate: #02

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	\$ <u>16,000,000</u>
TOTAL STRUCTURE ITEMS	\$ <u>7,500,000</u>
SUBTOTAL CONSTRUCTION COSTS	\$ <u>23,500,000</u>
TOTAL RIGHT OF WAY ITEMS	\$ <u>12,700,000</u>
TOTAL PROJECT CAPITAL OUTLAY COSTS	\$ <u>36,200,000</u>

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

Phone No. _____

District-County-Route 07-LA-110
 PM 2.5/3.0
 EA 264800

I. ROADWAY ITEMS

<u>Section 1 Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Roadway Excavation	27,000	CY	\$ 24	\$ 648,000	
Imported Borrow	80,000	CY	\$ 21	\$ 1,680,000	
Clearing & Grubbing	1	LS	\$ 30,000	\$ 30,000	
Develop Water Supply	1	LS	\$ 40,000	\$ 40,000	
Top Soil Reapplication	_____	_____	\$ _____	\$ _____	
Stepped Slopes and Slope Rounding (Contour Grading)	_____	_____	\$ _____	\$ _____	

Subtotal Earthwork \$ 2,398,000

<u>Section 2 Pavement Structural Section*</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Jointed Plain Concrete Pavement	1,400	CY	\$ 245	\$ 343,000	
Hot Mix Asphalt, Type A	13,200	TON	\$ 90	\$ 1,188,000	
Asphalt Treated Permeable Base	30	CY	\$ 270	\$ 8,100	
Hot Mix Asphalt, Type D	340	LF	\$ 10	\$ 3,400	
Lean Concrete Base	950	CY	\$ 180	\$ 171,000	
Cement-Treated Base	_____	_____	\$ _____	\$ _____	
Aggregate Base (CL 2)	7,200	CY	\$ 32	\$ 230,400	
Aggregate Base (CL 3)	1,900	CY	\$ 55	\$ 104,500	
Edge Drains	_____	_____	\$ _____	\$ _____	
Minor Concrete (Curb & Gutter)	500	CY	\$ 700	\$ 350,000	
Minor Concrete (Sidewalk)	500	CY	\$ 500	\$ 250,000	
Minor Concrete (Curb Ramps)	4	EA	\$ 2,000	\$ 8,000	
Remove Concrete (Curb & Gutter)	6,000	LF	\$ 5	\$ 30,000	
Remove Sidewalk	43,000	SF	\$ 2	\$ 86,000	
Remove Asphalt Concrete	60,000	SF	\$ 1	\$ 60,000	

Subtotal Pavement Structural Section \$ 2,832,400

<u>Section 3 Drainage</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Storm Drainage Improvements	1	LS	\$ 640,000	\$ 640,000	

Subtotal Drainage \$ 640,000

District-County-Route 07-LA-110
 PM 2.5/3.0
 EA 264800

<u>Section 4: Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Retaining Walls	_____	_____	\$ _____	\$ _____	
Noise Barriers	_____	_____	\$ _____	\$ _____	
MBGR	_____	_____	\$ _____	\$ _____	
Terminal System (Type SRT)	2	EA	\$ 3,000	\$ 6,000	
Transition Railing (Type WB)	2	EA	\$ 4,000	\$ 8,000	
Concrete Barrier (Type K)	3,000	LF	\$ 32	\$ 96,000	
Concrete Barrier (Type 60)	300	LF	\$ 60	\$ 18,000	
Water Pollution Control	1	LS	\$ 230,000	\$ 230,000	
Contaminated Soil Removal	1	LS	\$ 400,000	\$ 400,000	
Environmental Compliance	_____	_____	\$ _____	\$ _____	
Resident Engineer Office Space	1	EA	\$ 80,000	\$ 80,000	
SWPPP	1	LS	\$ 25,000	\$ 25,000	
Permits	1	LS	\$ 5,000	\$ 5,000	

Subtotal Specialty Items \$ 868,000

<u>Section 5: Traffic Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Lighting	1	LS	\$ 200,000	\$ 200,000	
Pavement Delineation Items	1	LS	\$ 30,000	\$ 30,000	
Traffic Signals	1	LS	\$ 280,000	\$ 280,000	
Overhead Sign Structures	1	LS	\$ 260,000	\$ 260,000	
Roadside Signs	1	LS	\$ 10,000	\$ 10,000	
Traffic Handling Systems	1	LS	\$ 680,800	\$ 680,800	
Temporary Detection System	_____	_____	\$ _____	\$ _____	
Staging					
Ramp Metering System	1	LS	\$ 35,000	\$ 35,000	
Sign Overlay	1	LS	\$ 50,000	\$ 50,000	

Subtotal Traffic Items \$ 1,545,800

District-County-Route 07-LA-110
 PM 2.5/3.0
 EA 264800

<u>Section 6 Planting and Irrigation</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Planting	_____	_____	\$ _____	\$ _____	
Replacement Planting	_____	_____	\$ _____	\$ _____	
Irrigation Modification	_____	_____	\$ _____	\$ _____	
Relocate Existing Irrigation Facilities	_____	_____	\$ _____	\$ _____	
Irrigation Crossovers	_____	_____	\$ _____	\$ _____	
Landscaping & Irrigation	1	LS	\$ 2,115,000	\$ 2,115,000	

Subtotal Planting and Irrigation Section \$ 2,115,000

<u>Section 7: Roadside Management and Safety Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Vegetation Control Treatments	_____	_____	\$ _____	\$ _____	
Gore Area Pavement	_____	_____	\$ _____	\$ _____	
Pavement beyond the gore area	_____	_____	\$ _____	\$ _____	
Miscellaneous Paving	_____	_____	\$ _____	\$ _____	
Erosion Control (Type D)	100,000	SF	\$ 0.25	\$ 25,000	
Slope Protection	_____	_____	\$ _____	\$ _____	
Side Slopes/Embankment Slopes	_____	_____	\$ _____	\$ _____	
Maintenance Vehicle Pull outs					
Off-freeway Access (gates, stairways, etc.)					
Roadside Facilities (Vista Points, Transit, Park and Ride, etc.)	_____	_____	\$ _____	\$ _____	
Relocating roadside facilities/features	_____	_____	\$ _____	\$ _____	

Subtotal Roadside Management and Safety Section \$ 25,000

TOTAL SECTIONS: 1 thru 7 \$ 10,424,200

District-County-Route	<u>07-LA-110</u>
PM	<u>2.5/3.0</u>
EA	<u>264800</u>

Section 8: Minor Items

\$ 10,424,200 x (10%) = \$ 1,042,420
 (Subtotal Sections 1 thru 7)

TOTAL MINOR ITEMS \$ 1,042,420

Section 9: Roadway Mobilization

\$ 11,466,620 x (10%) = \$ 1,146,662
 (Subtotal Sections 1 thru 8)

TOTAL ROADWAY MOBILIZATION \$ 1,146,662

Section 10 Roadway Additions

Supplemental Work

\$ 11,466,620 x (10%) = \$ 1,146,662
 (Subtotal Sections 1 thru 8)

Contingencies

\$ 11,466,620 x (20%) = \$ 2,293,324
 (Subtotal Sections 1 thru 8)

TOTAL ROADWAY ADDITIONS \$ 3,439,986

TOTAL ROADWAY ITEMS \$ 16,053,268
 (Subtotal Sections 1 thru 10) Use: \$ 16,000,000

Estimate Prepared By: Ravi Shah Phone# 714-368-5659 Date 04/12/2010
 (Print Name)

Estimate Checked By: Steven R. Leathers, P.E. Phone# 714-368-5657 Date 04/12/2010
 (Print Name)

** Use appropriate percentage per Chapter 20.

District-County-Route 07-LA-110
 PM 2.5/3.0
 EA 264800

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)	Structure (4)
Bridge Name	N/B Off-Ramp	Union Oil UC	Retaining Wall 318	Retaining Wall 320
Structure Type	CIP/PS Box Girder	CIP Reinforced Slab	_____	_____
Width (out to out) - (ft)	29.00	23.42	_____	_____
Span Lengths - (ft)	490.83	38.50	_____	_____
Total Area - (ft ²)	14,234.20	901.80	_____	_____
Footing Type (pile/spread)	_____	_____	_____	_____
Cost Per ft ² (incl. 10% mobilization and 20% contingency)	\$ 254	\$ 432	_____	_____
Total Cost for Structure	\$ 3,620,000	\$ 390,000	\$1,180,000	\$2,350,000

SUBTOTAL STRUCTURES ITEMS \$ 7,540,000
 (Sum of Total Cost for Structures)

Railroad Related Costs:	_____	_____	_____	\$ _____
	_____	_____	_____	\$ _____
	_____	_____	_____	\$ _____

SUBTOTAL RAILROAD ITEMS \$ _____

TOTAL STRUCTURES ITEMS \$ 7,540,000
 (Sum of Structures Items plus Railroad Items)Use: \$ 7,500,000

COMMENTS:

Estimate Prepared By: Eric A. Johnson, P.E. Phone# 714-368-5664 Date 04/12/2010
 (Print Name)

NOTE: If appropriate, attach additional pages and backup.

District-County-Route 07-LA-110
PM 2.5/3.0
EA 264800

III. RIGHT OF WAY ITEMS

ESCALATED VALUE

A. Acquisition, including excess lands, damages to remainder(s) and Goodwill \$ _____
B. Utility Relocation (Port Share) \$ 12,667,793
C. Relocation Assistance \$ _____
D. Clearance/Demolition \$ _____
E. Title and Escrow Fees \$ _____

TOTAL RIGHT OF WAY ITEMS \$ 12,667,793
(Escalated Value) Use: \$12,700,000

Anticipated Date of Right of Way Certification March 2012
(Date to which Values are Escalated)

F. Construction Contract Work

Brief Description of 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 Right of Way Items.

COMMENTS:

Estimate Prepared By: Mike Williams Phone# 714-730-2438 Date 04/12/2010
(Print Name)

NOTE: If appropriate, attach additional pages and backup.

ATTACHMENT F

R/W DATA SHEET

RIGHT OF WAY DATA SHEET
(Form #)

To: Caltrans District 07

Date 04-12-10

Dist 07 Co LA Rte 110 PM 2.5/3.0

Attention:

EA 264800

Project Description: C Street / I-110 Access Ramp Improvements

Subject: Right of Way Data Sheet

Alternate No.: 2

This Alternate meets the criteria for a Design/Build project: Yes No

1. Right of Way Cost Estimate: To be entered into PMCS COST RW1-5 Screens.

	Current Value Future Use	Escalation Rate	Escalated Value
A. Total Acquisition Cost:			<u>0</u>
Acquisition, including Excess Lands, Damages, and Goodwill (see supplemental attachment).	\$ <u>0</u>	<u>0</u> %	\$ <u>0</u>
Project Permit Fees.	\$ <u>0</u>	<u>0</u> %	\$ <u>0</u>
B. Utility Relocation (Port Share)	\$ <u>11,516,175</u>	<u>5</u> %	\$ <u>12,667,793</u>
C. Relocation Assistance	\$ <u>0</u>	<u>0</u> %	\$ <u>0</u>
D. Clearance/Demolition	\$ <u>0</u>	<u>0</u> %	\$ <u>0</u>
E. Title and Escrow	\$ <u>0</u>	<u>0</u> %	\$ <u>0</u>
F. Total Estimated Cost	\$ <u>11,516,175</u>		\$ <u>12,667,793</u>
G. Construction Contract Work	\$ <u> </u>		<i>(These are construction costs that are to be included in the projects PS&E.)</i>

2. Current Date of Right of Way Certification March 2012

3. Parcel Data: To be entered into PMCS EVNT RW Screen.

Type	Dual/Appr	Utilities	RR Involvements
X <u> </u>		U4-1 <u>17</u>	None <u> </u>
A <u>13</u>		-2 <u> </u>	C&M Agrmt <u> </u>
B <u> </u>		-3 <u>15</u>	Svc Contract <u> </u>
C <u> </u>		-4 <u> </u>	Design <u>1</u>
D <u> </u>		U5-7 <u> </u>	Const. <u>1</u>
E <u>XXXX</u>		-8 <u> </u>	Lic/RE/Clauses/ OE Clearance <u>1</u>
F <u>XXXX</u>		-9 <u>32</u>	Misc. R/W Work <u> </u>
Total <u>13</u>			RAP Displ <u> </u>
			Clear/Demo <u> </u>
			Const Permits <u>1</u>
			Condemnation <u> </u>
			Excess <u> </u>

Areas: R/W 3.25 Acres No. Excess Parcels N/A

Entered PMCS

Screens

Entered AGRE Screen by
(Railroad data only) / / / By

RIGHT OF WAY DATA SHEET

(Form #)

4. Are there any major items of construction contract work? Yes No (If "Yes," explain.)

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.) No right of way required.

The properties affected are owned by City of Los Angeles and Port of Los Angeles. Properties will be transferred to Caltrans at no-cost to the State per the terms of the cooperative agreement. Private party acquisitions are not anticipated for this project.

6. Is there an effect on assessed valuation? Yes Not Significant No (If "Yes," explain.)

7. Are utility facilities or rights of way affected?

Yes No (If "Yes," attach Utility Information Sheet, Exhibit 4-EX-5.)

The following checked items may seriously impact lead time for utility relocation:

Longitudinal policy conflict(s)

Environmental concerns impacting acquisition of potential easements

Power lines operating in excess of 50 KV and substations

(See attached Exhibit 4-EX-5 for explanation.)

8. Are Railroad facilities or rights of way affected?

Yes No (If "Yes," attach Railroad Information Sheet, Exhibit 4-EX-6.)

RIGHT OF WAY DATA SHEET

(Form #)

9. Were any previously unidentified sites with hazardous waste and/or material found?
 Yes None Evident (If "Yes," attach memorandum per R/W Manual, Chapter 4, Section 4.01.10.00.)

Please refer to the approved Phase II Hazardous Waste Investigation dated June 17, 2009.

10. Are RAP displacements required? Yes No (If "Yes," provide the following information.)

No. of single family _____ No. of business/nonprofit _____

No. of multi-family _____ No. of farms _____

Based on Draft/Final Relocation Impact Statement/Study dated _____ N/A _____, it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

11. Are there Material Borrow and/or Disposal Sites required? Yes No (If "Yes," explain.)
 Imported borrow will be required for the project to construct the embankments. Hazardous waste excavated from the project will be required to be disposed of at a landfill accepting hazardous or regulated waste.

12. Are there potential relinquishments and/or abandonments? Yes No (If "Yes," explain.)
 There is a potential for relinquishment and/or abandonment of utility easements and/or public right of way.

13. Are there any existing and/or potential airspace sites? Yes No (If "Yes," explain.)

RIGHT OF WAY DATA SHEET

(Form #)


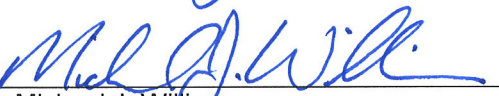
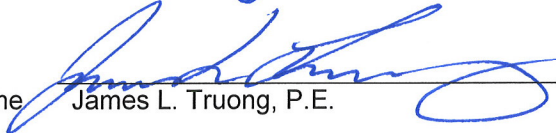
- 14. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if district proposes less than PMCS lead-time and/or if significant pressures for project advancement are anticipated.)

Based on the R/W requirements on Page 1 of this Data Sheet, R/W will require a lead-time of N/A months from the date regular appraisals can begin to project certification.

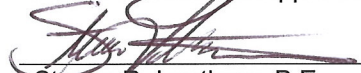
In any event, RW Maps will require 4 months from Final Maps to project certification.

- 15. Is it anticipated that Caltrans staff will perform all Right of Way work? Yes No (If "No," discuss.)
The Port of Los Angeles will perform the necessary Right of Way work.

Evaluation Prepared By:

Right of Way:	 Name <u>Michael J. Williams</u>	Date <u>04/12/2010</u>
Railroad:	 Name <u>Michael J. Williams</u>	Date <u>04/12/2010</u>
Utilities:	 Name <u>James L. Truong, P.E.</u>	Date <u>04/12/2010</u>

Recommended for Approval:


 Steven R. Leathers, P.E.
 HDR Engineering

I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and I find this Data Sheet complete and current.

 Antonio V. Gioiello, P.E.
 Chief Harbor Engineer,
 Engineering Division

 Date

RAILROAD INFORMATION SHEET

(Form #)

1. Describe railroad facilities or right of way affected.

Existing at-grade crossing, CPUC# 121W-502.90, at the intersection of Harry Bridges Boulevard, John S. Gibson Boulevard and Figueroa Street will be removed as a result of the realignment to the north of the intersection mentioned above and the closing of the Trapac Terminal entrance.

2. When branch lines or spurs are affected, would acquisition and/or payment of damages to business and/or industries served by the railroad facility be more cost effective than construction of a facility to perpetuate the rail service? Yes _____ No X (If yes, explain)

3. Discuss types of agreements and right required from the railroads. Are grade crossings requiring service contracts or grade separations requiring construct and maintenance agreements involved?

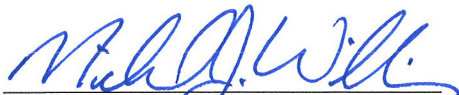
The Wilmington Railroad, owned by the Port of Los Angeles, runs along the southerly side of Harry Bridges Boulevard and easterly side of John S. Gibson Boulevard. The existing at-grade crossing (CPUC# 121W-502.90) at Figueroa Street that provides access to the Port facilities will be closed to vehicular traffic as a part of this project. A California Public Utilities Commission (CPUC) Form G will be filed with the CPUC within 30 days after the crossing is closed. Additional agreements may be required by the owner of the railroad (Port of Los Angeles) and the City of Los Angeles for the construction phase of the project.

4. Remarks (non-operating railroad right of way involved?):

5. PMCS Input Information

<u>RR Involvements</u>	
None	_____
C&M Agreement	_____
Service Contract	_____
Design	_____ 1
Const.	_____ 1
Lic/RE/Clauses	_____ 1

Prepared By:



Michael J. Williams
Right of Way Railroad Coordinator

04/12/2010

Date

UTILITY INFORMATION SHEET

(Form #)

1. Name of utility companies involved in project:

The utility companies that require relocation are Conoco Philips (oil), Golden Eagle Refinery (oil), Kinder Morgan Energy Partners (oil), Los Angeles Department of Public Works (LADPW) (sewer), Los Angeles Department of Water and Power (LADWP) (water and electrical), Pacific Telephone and Telegraph (PTT) (communication), Southern California Gas (SCG) (gas), Texaco (oil) and Ultramar (oil).

2. Types of facilities and agreements required:

Types of utilities include communication, electric (transmission and distribution), sewer, water, gas and oil. Potholing/survey, utility relocation agreements/Prior rights agreements may be necessary.

3. Is any facility a longitudinal encroachment in existing or proposed access controlled right of way? Explain.

An existing longitudinal encroachment exists on the mainline I-110 near the beginning of the exit nose of the N/B Off-ramp. The proposed geometrics will result in a longitudinal encroachment along the N/B Off-ramp within the new proposed State right-of-way. The longitudinal encroachment will occur below the existing surface and will not be contained in the proposed off-ramp bridge structure.

Disposition of longitudinal encroachment(s):

- Relocation required.
- Exception to policy needed.
- Other. Explain.

4. Additional information concerning utility involvements on this project, i.e., long lead-time materials, growing or species seasons, customer service seasons (no transmission tower relocations in summer).

John S. Gibson Boulevard and Harry Bridges Boulevard are two major utility corridors within the City of Los Angeles. The intent of this project is to maintain utility corridors along the existing John S. Gibson and Harry Bridges Boulevard alignments in order to minimize relocation of the existing subsurface facilities. This will require a longitudinal encroachment permit from Caltrans. Aerial services such as electrical and telecommunications would be relocated along the new local roadway alignments.

5. PMCS Input Information

Total estimated cost of Port of Los Angeles obligation for utility relocation on this project:

\$ 12,667,793

Note: Total estimated cost to include any Port of Los Angeles obligation to relocate longitudinal encroachments in access controlled right of way and acquire any necessary utility easements.

		<u>Utility Involvements</u>	
U4-1	<u>17</u>	U5-7	<u> </u>
-1	<u> </u>	-7	<u> </u>
-2	<u> </u>	-8	<u> </u>
-3	<u>15</u>	-9	<u>32</u>
-4	<u> </u>		

Prepared By:


James L. Truong, P.E.

04/12/2010

Date

R/W ESTIMATOR'S INFORMATION SHEET FOR DEVELOPMENTAL FEES

<u>ORGANIZATION PERMIT REQUESTED FROM:</u>	<u>TYPE OF PERMIT/SERVICE REQUESTED</u>	<u>DOLLAR AMOUNT OF PERMIT</u>
Caltrans	Encroachment Permit	\$ 0
		\$
		\$
		\$
		\$
		\$
		\$

TOTAL NUMBER OF PERMITS: 1

TOTAL DOLLAR AMOUNT OF PERMITS: \$0

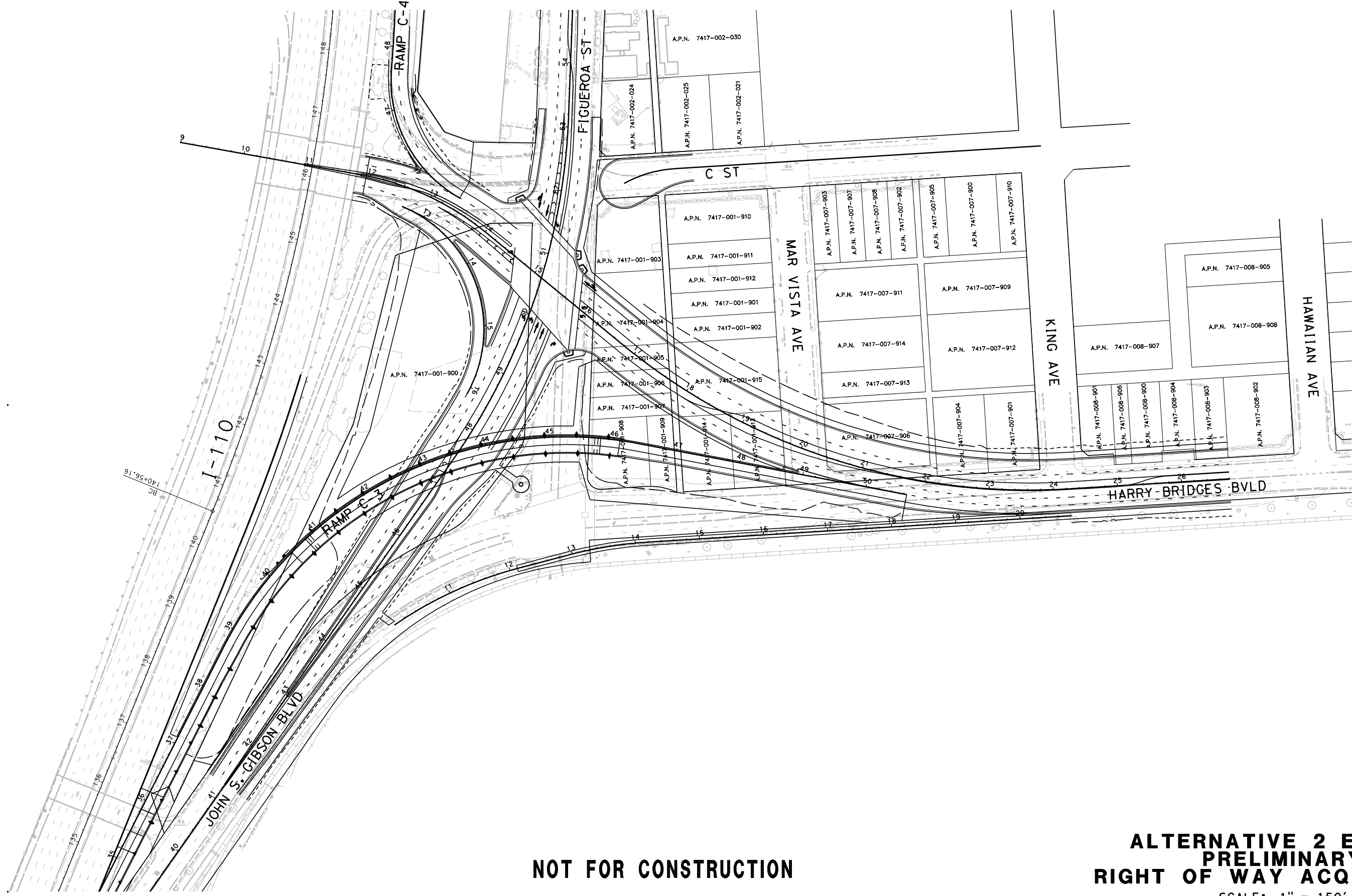
Prepared By: Mich. J. Will.
R/W ESTIMATOR

APRIL 12, 2010
DATE



NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



NOT FOR CONSTRUCTION

**ALTERNATIVE 2 EXHIBIT
 PRELIMINARY
 RIGHT OF WAY ACQUISITIONS**

SCALE: 1" = 150'

RW-1

ATTACHMENT G

ACCIDENT DATA

TRAFFIC ACCIDENT SURVEILLANCE AND ANALYSIS SYSTEM
(TASAS TABLE B)

California Department of Transportation

OTM22130

Table B - Selective Accident Rate Calculation

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

1. TASAS - TSN has officially replaced the TASAS - "Legacy" database.
2. Reports from TSN are to be used and interpreted by the California Department of Transportation (Caltrans) officials or authorized representative.
3. Electronic versions of these reports may be emailed between Caltrans' employees only using the State computer system.
4. The contents of these reports shall be considered confidential and may be privileged pursuant to 23 U.S.C. Section 409, and are for the sole use of the intended recipient(s). Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message. Do not print, copy or forward.

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 2723568

Request Name: Don 107

Ref Date: 02/18/2009

Request- & Line	D I S C R C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Com- Type bine?	Excl Ramp?	
							Inj%	Fat%	Main	Cross				
1 1	H N I	07 LA 110 002.500 - 07 LA 110 002.991	01-APR-05	31-MAR-08	N	L						N	N	Y

Event Log:

Job id is : 395112 Accidents Table B Request Don 107 Submitted by T7HELTAW
07 LA 110 2.5 - 07 LA 110 2.991 04/01/2005 TO 03/31/2008

Location Description	Rate Group (RUS)	No. of Accidents / Significance	No. of Accidents / Significance			Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Actual		Accident Rates		Tot
			Tot	Fat	Inj				F+I	Fat	F+I	Fat	
07 LA 110 002.500 - 07 LA 110 002.990	491 MI H 65	16	0	8	8	0	45.3	24.40	0.000	.33	0.004	.66	.23
0001-0001 2005-04-01 2008-03-31	36 mo. NORTH U					21							.72

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

1. TASAS - TSN has officially replaced the TASAS - "Legacy" database.
2. Reports from TSN are to be used and interpreted by the California Department of Transportation (Caltrans) officials or authorized representative.
3. Electronic versions of these reports may be emailed between Caltrans' employees only using the State computer system.
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California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

REPORT PARAMETERS:

REPORT DATE : 02/18/2009
REFERENCE DATE : 02/18/2009
SUBMITTOR : T7HELTAW
REPORT TITLE : All Hwy acc. for N/B LA 110, PM 2.5/2.99.
EVENT ID : Don. Log# 107.

LOCATION CRITERIA:

2723579

FROM: 07-LA-110 002.500 TO: 07-LA-110 002.991

SELECTION CRITERIA:

1 1 AND 508 - FILE TYPE = H
1 2 AND 514 - SIDE OF HIGHWAY = N

Accidents Date Range:

From -- 04/01/2005 To -- 03/31/2008

TASAS SELECTIVE TRD RETRIEVAL
TSAR - ACCIDENT SUMMARY
All Hwy acc. for N/B LA 110, PM 2.5/2.99. For the time period of 04/01/05-03/31/08. Don. Log# 107.

TOTAL ACCIDENTS	FATAL	INJURY	PDO	KILLED	PERSONS INJURED	MOTOR VEHICLES INVOLVED	<---LINES CODED---
NUMBER	PCT	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
16	0	8	8	0	21	7	7
						43.8	43.8
						1	1
						43.8	43.8
						2	2
						7	7
						43.8	43.8
						2	2
						1	1
						6.3	6.3
						3	3
						1	1
						6.3	6.3
						4	4
						1	1
						6.3	6.3
						5	5
						0	0
						0.0	0.0
						6	6
						0	0
						0.0	0.0
						7	7
						0	0
						0.0	0.0
						8	8
						0	0
						0.0	0.0
						9	9
						0	0
						0.0	0.0

<--- HOUR OF DAY --->			<--- ACCESS CONTROL --->			<--- SIDE OF HIGHWAY --->		
NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE
0	0.0	00- 12 MID.	0	0.0	C-CONVENTIONAL	16	100.0	N-NORTHBOUND
1	6.3	01- 1 A.M.	0	0.0	E-EXPRESSWAY	0	0.0	S-SOUTHBOUND
1	6.3	02- 2 A.M.	16	100.0	F-FREEWAY	0	0.0	E-EASTBOUND
1	6.3	03- 3 A.M.	0	0.0	S-1-WAY CITY ST	0	0.0	W-WESTBOUND
0	0.0	04- 4 A.M.	0	0.0	--INVALID DATA			
0	0.0	05- 5 A.M.	0	0.0	+--NO DATA			
0	0.0	06- 6 A.M.						
3	18.8	07- 7 A.M.						
1	6.3	08- 8 A.M.						
0	0.0	09- 9 A.M.						
0	0.0	10- 10 A.M.						
2	12.5	11- 11 A.M.						
0	0.0	12- 12 NOON						
0	0.0	13- 1 P.M.						
0	0.0	14- 2 P.M.						
1	6.3	15- 3 P.M.						
0	0.0	16- 4 P.M.						
1	6.3	17- 5 P.M.						
1	6.3	18- 6 P.M.						
3	18.8	19- 7 P.M.						
0	0.0	20- 8 P.M.						
0	0.0	21- 9 P.M.						
0	0.0	22- 10 P.M.						
1	6.3	23- 11 P.M.						
0	0.0	25- UNKNOWN						

<--- YEAR --->			<--- MONTH --->			<--- DAY OF WEEK --->		
NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE
0	0.0	1998	0	0.0	01-JANUARY	3	18.8	1-SUNDAY
0	0.0	1999	1	6.3	02-FEBRUARY	3	18.8	2-MONDAY
0	0.0	2000	3	18.8	03-MARCH	0	0.0	3-TUESDAY
0	0.0	2001	2	12.5	04-APRIL	5	31.3	4-WEDNESDAY
0	0.0	2002	1	6.3	05-MAY	2	12.5	5-THURSDAY
0	0.0	2003	1	6.3	06-JUNE	1	6.3	6-FRIDAY
0	0.0	2004	0	0.0	07-JULY	2	12.5	7-SATURDAY
4	25.0	2005	1	6.3	08-AUGUST			
8	50.0	2006	4	25.0	09-SEPTEMBER			
2	12.5	2007	0	0.0	10-OCTOBER			
2	12.5	2008	0	0.0	11-NOVEMBER			
0	0.0	2009	1	6.3	12-DECEMBER			

TASAS SELECTIVE ORD RETRIEVAL
TSAR - ACCIDENT SUMMARY

All Hwy acc. for N/B LA 110, PM 2.5/2.99, for the time period of 04/01/05-03/31/08. Don. Log# 107.

<--- PRIMARY COLLISION FACTOR --->

NUMBER	PCT	CODE
4	25.0	1-INFLUENCE ALCOHOL
0	0.0	2-FOLLOW TOO CLOSE
0	0.0	3-FAILURE TO YIELD
6	37.5	4-IMPROPER TURN
3	18.8	5-SPEEDING
3	18.8	6-OTHER VIOLATIONS
0	0.0	B-IMPROPER DRIVING
0	0.0	C-OTHER THAN DRIVER
0	0.0	D-UNKNOWN
0	0.0	E-FELL SLEEP
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<----- WEATHER ----->

NUMBER	PCT	CODE
13	81.3	A-CLEAR
2	12.5	B-CLOUDY
0	0.0	C-RAINING
0	0.0	D-SNOWING
1	6.3	E-FOG
0	0.0	F-OTHER
0	0.0	G-WIND
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<--- TYPE OF COLLISION --->

NUMBER	PCT	CODE
1	6.3	A-HEAD-ON
3	18.8	B-SIDESWIPE
2	12.5	C-REAR END
1	6.3	D-BROADSIDE
6	37.5	E-HIT OBJECT
3	18.8	F-OVERTURN
0	0.0	G-AUTO-PEDESTRIAN
0	0.0	H-OTHER
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<----- LIGHTING ----->

NUMBER	PCT	CODE
7	43.8	A-DAY LIGHT
2	12.5	B-DUSK/DAWN
5	31.3	C-DARK-STREET LIGHT
2	12.5	D-DARK-NO STREET LIGHT
0	0.0	E-DARK-INOPR STREET LIGHT
0	0.0	F-DARK-NOT STATED
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<---- ROADWAY CONDITION ---->

NUMBER	PCT	CODE
0	0.0	A-HOLES, RUTS
0	0.0	B-LOOSE MATERIAL
1	6.3	C-OBSTRUCTION ON ROAD
0	0.0	D-CONSTRUCT-REPAIR-ZONE
0	0.0	E-REDUCED ROAD WIDTH
0	0.0	F-FLOODED
0	0.0	G-OTHER
15	93.8	H-NO UNUSUAL CONDITION
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<----- ROAD SURFACE ----->

NUMBER	PCT	CODE
16	100.0	A-DRY
0	0.0	B-WET
0	0.0	C-SNOWY, ICY
0	0.0	D-SLIPPERY
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<----- RIGHT OF WAY CONTROL ----->

NUMBER	PCT	CODE
0	0.0	A-CONTROL FUNCTIONING
0	0.0	B-CONTROL NOT FUNCTIONING
0	0.0	C-CONTROLS OBSCURED
16	100.0	D-NO CONTROLS PRESENT
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<----- HIGHWAY GROUP ----->

NUMBER	PCT	CODE
0	0.0	R-IND. ALIGN RIGHT
0	0.0	L-IND. ALIGN LEFT
16	100.0	D-DIVIDED
0	0.0	U-UNDIVIDED

<- INTERSECTION/RAMP ACCIDENT LOCATION ->

NUMBER	PCT	CODE
0	0.0	1-RAMP INTERSECTION (EXIT)
0	0.0	2-RAMP
0	0.0	3-RAMP ENTRY
0	0.0	4-RAMP AREA, INTERSECTION STREET
0	0.0	5-IN INTERSECTION
0	0.0	6-OUTSIDE INTRSECT-NONSTATE RTE
16	100.0	--DOES NOT APPLY

TASAS SELECTIVE JRD RETRIEVAL
TSAR - PARTY SUMMARY

All Hwy acc. for N/B LA 110, PM 2:52:99. For the time period of 04/01/05-03/31/08. Don. Log# 107.

NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE
15	93.8	A-PASNGR CAR/STA WAGON	2	12.5	A-STOPPED	0	0.0	1-INFLUENCE ALCOHOL	0	0.0	0
0	0.0	B-PASNGR CAR W/TRAILER	13	81.3	B-PROCEEDED STRAIGHT	0	0.0	2-FOLLOW TOO CLOSE	0	0.0	0
0	0.0	C-MOTORCYCLE	0	0.0	C-RAM OFF ROAD	0	0.0	3-FAILURE TO YIELD	0	0.0	0
3	18.8	D-PICKUP/PANEL TRUCK	0	0.0	D-MAKING RIGHT TURN	2	12.5	4-IMPROPER TURN	0	0.0	0
0	0.0	E-PICKUP/PANEL W/TRAILER	0	0.0	E-MAKING LEFT TURN	3	18.8	5-SPEEDING	0	0.0	0
1	6.3	F-TRUCK/TRUCK TRACTOR	0	0.0	F-MAKING U TURN	1	6.3	6-OTHER VIOLATIONS	0	0.0	0
0	0.0	G-TRUCK/TRACTOR & 1 TRAILER	0	0.0	G-BACKING	0	0.0	A-CELL PHONE* (INATTN)	0	0.0	0
0	0.0	H-TRUCK/TRACTOR & 2 TRAILER	0	0.0	H-SLOWING, STOPPING	0	0.0	B-ELECTRC EQUIP* (INATTN)	0	0.0	0
0	0.0	I-TRUCK/TRACTOR & 3 TRAILER	0	0.0	I-PASS OTHER VEHICLE	0	0.0	C-RADIO/CD/HDPH* (INATTN)	0	0.0	0
0	0.0	J-SINGLE UNIT TANKER	3	18.8	J-CHANGING LANES	0	0.0	D-SMOKING* (INATTN)	0	0.0	0
0	0.0	K-TRUCK/TRA & 1 TANK TRAILER	0	0.0	K-PARKING	0	0.0	E-VISION OBSCUREMENT	0	0.0	0
0	0.0	L-TRUCK/TRA & 2 TANK TRAILER	0	0.0	L-ENTER FROM SHLDR	0	0.0	F-INATTENTION - OTHER	0	0.0	0
0	0.0	M-SCHOOL BUS	0	0.0	M-OTHER UNSAFE TURN	0	0.0	G-STOP & GO TRAFFIC	0	0.0	0
0	0.0	N-OTHER BUS	0	0.0	N-CROSS INTO OPP LN	0	0.0	H-ENTER/LEAVE RAMP	0	0.0	0
0	0.0	O-EMERGENCY VEHICLE	0	0.0	O-PARKED	2	12.5	I-PREVIOUS COLLISION	0	0.0	0
0	0.0	P-HIGHWAY CONST EQUIP.**	0	0.0	P-MERGING	0	0.0	J-UNFAMILIAR WITH ROAD	0	0.0	0
0	0.0	Q-BICYCLE	0	0.0	Q-TRAVEL WRONG WAY	0	0.0	K-DEFECT VEHICLE EQUIP	0	0.0	0
1	6.3	R-OTHER-MOTOR VEH	6	37.5	R-OTHER	0	0.0	L-UNINVOLVED VEHICLE	0	0.0	0
0	0.0	S-OTHER-NON-MOTOR VEH	0	0.0	<-NOT STATED	0	0.0	M-OTHER	0	0.0	0
0	0.0	T-SPILLED LOADS	0	0.0		13	81.3	N-NONE APPARENT	0	0.0	0
0	0.0	U-DISENGAGED TOW	0	0.0		0	0.0	P-WIND	0	0.0	0
0	0.0	V-UNINVOLVED VEHICLE	0	0.0		0	0.0	R-RAMP ACCIDENT	0	0.0	0
0	0.0	W-PEDESTRIAN	0	0.0	PEDESTRIAN	0	0.0	S-RUNAWAY VEHICLE	0	0.0	0
0	0.0	X-DISMOUNT PEDESTRIAN	0	0.0	0 2- XING XWALK - INTRST	0	0.0	T-EATING* (INATTN)	0	0.0	0
0	0.0	Y-ANIMAL - LIVESTOCK	0	0.0	0 3- XING XWALK - NOT INTR	0	0.0	U-CHILDREN* (INATTN)	0	0.0	0
0	0.0	Z-ANIMAL - DEER	0	0.0	0 4- XING NOT XWALK	0	0.0	V-ANIMALS* (INATTN)	0	0.0	0
0	0.0	OTHER	0	0.0	0 5- ROADWAY - INCL SHLDR	0	0.0	W-PERSNL HYGIENE* (INATTN)	0	0.0	0
0	0.0		0	0.0	0 6- NOT IN ROADWAY	0	0.0	X-READING* (INATTN)	0	0.0	0
0	0.0		0	0.0	0 7- APRH-LEAVE SCHL BUS	0	0.0	Y-DOES NOT APPLY	16	100.0	<-NOT STATED
0	0.0		0	0.0	0 8- INVALID CODES	0	0.0	Z-INVALID CODES	0	0.0	<-DOES NOT APPLY

NUMBER	PCT	CODE	NUMBER	PCT	CODE
16	100.0	N-N, NE, NW BOUND	0	0.0	A-HAZARDOUS MATERIALS
0	0.0	S-S, SE, SW BOUND	0	0.0	B-CELL PHONE IN USE*
0	0.0	E-EASTBOUND	16	100.0	C-CELL PHONE NOT IN USE*
0	0.0	W-WESTBOUND	0	0.0	D-CELL PHONE NONE/UNKNOWN*
0	0.0	<-NOT STATED	0	0.0	<-NOT STATED
0	0.0	--DOES NOT APPLY	0	0.0	--DOES NOT APPLY
0	0.0	-INVALID CODES	0	0.0	-INVALID CODES

** INCLUDES EQUIPMENT ENGAGED IN CONST/MAINT ACTIVITIES AS OF 00-02-22

* SPECIAL INFORMATION CODES EFF. 04-01-01

<----- DIRECTION OF TRAVEL ----->

<----- SPECIAL INFORMATION ----->

* INATTENTION CODES EFF. 01-01-01

<----- PARTY TYPE ----->

<----- MOVEMENT PRECEDING COLLISION -->

<----- OTHER ASSOCIATED FACTORS ----->

All Hwy acc. for N/B LA 110, PM 2.5/2.99. For the time period of 04/01/05-03/31/08. Don. Log# 107.

PRIMARY			OTHERS			LOCATION OF COLLISION			
NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE	
0	0.0	01-SIDE OF BRIDGE RAILING	0	0.0	0	0.0	0.0	A-BEYOND MEDIAN OR STRIPE-LEFT	
0	0.0	02-END OF BRIDGE RAILING	0	0.0	4	25.0	1	6.3	B-BEYOND SHLDER DRIVERS LEFT
0	0.0	03-PIER, COLUMN, ABUTMENT	0	0.0	0	0.0	0	0.0	C-LEFT SHOULDER AREA
0	0.0	04-BOTTOM OF STRUCTURE	0	0.0	5	31.3	1	6.3	D-LEFT LANE
0	0.0	05-BRIDGE END POST IN GORE	0	0.0	8	50.0	3	18.8	E-INTERIOR LANES
0	0.0	06-END OF GUARD RAIL	0	0.0	1	6.3	0	0.0	F-RIGHT LANE
0	0.0	07-BRIDGE APPROACH GUARD RAIL	0	0.0	0	0.0	1	6.3	G-RIGHT SHOULDER AREA
0	0.0	10-LIGHT OR SIGNAL POLE	0	0.0	0	0.0	0	0.0	I-GORE AREA
0	0.0	11-UTILITY POLE	0	0.0	0	0.0	0	0.0	J-OTHER
0	0.0	12-POLE (TYPE NOT STATED)	0	0.0	0	0.0	0	0.0	V-HOV LANE(S)
0	0.0	13-TRAFFIC SIGN/SIGN POST	0	0.0	0	0.0	0	0.0	W-HOV LANE BUFFER AREA
0	0.0	14-OTHER SIGNS NOT TRAFFIC	0	0.0	0	0.0	0	0.0	<-NOT STATED
1	6.3	15-GUARDRAIL	0	0.0	4	25.0	16	100.0	--DOES NOT APPLY
4	25.0	16-MEDIAN BARRIER	0	0.0	0	0.0	0	0.0	-INVALID CODES
0	0.0	17-WALL (EXCEPT SOUND WALL)	0	0.0					
0	0.0	18-DIKE OR CURB	0	0.0					
0	0.0	19-TRAFFIC ISLAND	0	0.0					
0	0.0	20-RAISED BARS	0	0.0					
0	0.0	21-CONCRETE OBJ (HDWL, D.I.)	0	0.0					
0	0.0	22-GUIDEPOST, CULVERT, PM	0	0.0					
0	0.0	23-CUT SLOPE OR EMBANKMENT	0	0.0					
0	0.0	24-OVER EMBANKMENT	0	0.0					
0	0.0	25-IN WATER	0	0.0					
0	0.0	26-DRAINAGE DITCH	0	0.0					
0	0.0	27-FENCE	0	0.0					
0	0.0	28-TREES	0	0.0					
0	0.0	29-PLANTS	0	0.0					
0	0.0	30-SOUND WALL	0	0.0					
0	0.0	40-NATURAL MATRL ON ROAD	0	0.0					
0	0.0	41-TEMP BARRICADES, CONES	1	6.3					
1	6.3	42-OTHER OBJECT ON ROAD	0	0.0					
0	0.0	43-OTHER OBJECT OFF ROAD	0	0.0					
3	18.8	44-OVERTURNED	1	6.3					
0	0.0	45-CRASH CUSHION (SAND)	0	0.0					
0	0.0	46-CRASH CUSHION (OTHER)	0	0.0					
0	0.0	51-CALL BOX	0	0.0					
0	0.0	98-UNKNOWN OBJECT STRUCK	0	0.0					
0	0.0	99- NO OBJECT INVOLVED	0	0.0					
7	43.8	V1 THRU V9 VEHICLE 1 TO 9	4	25.0					
0	0.0	<< NOT STATED	0	0.0					
4	25.0	-- DOES NOT APPLY	16	100.0					
0	0.0	- INVALID CODES	0	0.0					

PRIMARY			OTHERS			DRUG/PHYSICAL		
NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE
14	87.5	A-HAD NOT BEEN DRINKING	0	0.0	0	0.0	0.0	A-HAD NOT BEEN DRINKING
4	25.0	B-HBD - UNDER INFLUENCE	0	0.0	0	0.0	0.0	B-HBD - UNDER INFLUENCE
0	0.0	C-HBD - NOT UNDER INFLUENCE	0	0.0	0	0.0	0.0	C-HBD - NOT UNDER INFLUENCE
0	0.0	D-HBD - IMPAIRMENT UNKNOWN	0	0.0	0	0.0	0.0	D-HBD - IMPAIRMENT UNKNOWN
0	0.0	E-UNDER DRUG INFLUENCE	0	0.0	0	0.0	0.0	E-UNDER DRUG INFLUENCE
0	0.0	F-OTHER PHYSICAL IMPAIRMENT	0	0.0	0	0.0	0.0	F-OTHER PHYSICAL IMPAIRMENT
1	6.3	G-IMPAIRMENT NOT KNOWN	0	0.0	0	0.0	0.0	G-IMPAIRMENT NOT KNOWN
1	6.3	H-NOT APPLICABLE	0	0.0	0	0.0	0.0	H-NOT APPLICABLE
0	0.0	I-FATIGUE	0	0.0	0	0.0	0.0	I-FATIGUE
0	0.0	< NOT STATED	16	100.0				< NOT STATED
0	0.0	--DOES NOT APPLY	0	0.0				--DOES NOT APPLY
0	0.0	-INVALID CODES	0	0.0				-INVALID CODES

California Department of Transportation

OTM22130

Table B - Selective Accident Rate Calculation

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

1. TASAS - TSN has officially replaced the TASAS - "Legacy" database.
2. Reports from TSN are to be used and interpreted by the California Department of Transportation (Caltrans) officials or authorized representative.
3. Electronic versions of these reports may be emailed between Caltrans' employees only using the State computer system.
4. The contents of these reports shall be considered confidential and may be privileged pursuant to 23 U.S.C. Section 409, and are for the sole use of the intended recipient(s). Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message. Do not print, copy or forward.

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 2723583

Request Name: Don 109

Ref Date: 02/18/2009

Request- & Line	L D L O I S C R C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Com- Type bine?	Excl Ramp?
							Rate	Inj%	Fat%	Main	Cross		
11	R T I	07 LA 110 002.875 - 07 LA 110 002.876	01-APR-05	31-MAR-08	N	L						N	N

Event Log:

Job id is : 395120 Accidents Table B Request Don 109 Submitted by TTHELTAW
07 LA 110 2.875 - 07 LA 110 2.876 04/01/2005 TO 03/31/2008

Location Description	Rate Group (RUS)	No. of Accidents / Significance	No. of Accidents / Significance			Pers		ADT Main X-St	Total MV+ or MVM	Fat	Actual F+I	Accident Rates Average		
			Tot	Fat	Inj	F+I	Wet					Dark	Kid Inj	Tot
07 LA 110 002 875 110NB ON FR WB C ST	R 20	1	0	0	0	0	3.7	4.08 +	0.000	.00	.25	0.003	.22	.60
0001-0001 2005-04-01 2008-03-31	U					0	.0							

36 mo.

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

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California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

REPORT PARAMETERS:

REPORT DATE : 02/18/2009
REFERENCE DATE : 02/18/2009
SUBMITTOR : T7HELTAW
REPORT TITLE : All ramp acc. for LA 110, PM 2.875. For
the time period of 04/01/05-03/31/08.
EVENT ID : Don. Log# 109.

LOCATION CRITERIA: 2723692

FROM: 07-LA-110 002.875 TO: 07-LA-110 002.876

SELECTION CRITERIA:

1 1 AND 508 - FILE TYPE = R

Accidents Date Range:

From -- 04/01/2005 To -- 03/31/2008

TASAS SELECTIVE ROAD RETRIEVAL
TSAR - ACCIDENT SUMMARY

All ramp acc. for LA 110, PM 2:875. For the time period of 04/01/05-03/31/08. Don. Log# 109.

TOTAL ACCIDENTS	FATAL	INJURY	PDO	KILLED	PERSONS INJURED	MOTOR VEHICLES INVOLVED	NUMBER	PCT	CODE	NUMBER	PCT	CODE
1	0	0	1	0	0	1	100.0	1	100.0	1	100.0	1
0	0	0	0	0	0	0	0.0	2	0.0	0	0.0	2
0	0	0	0	0	0	0	0.0	3	0.0	0	0.0	3
0	0	0	0	0	0	0	0.0	>3	0.0	0	0.0	4
0	0	0	0	0	0	0	0.0	5	0.0	0	0.0	5
0	0	0	0	0	0	0	0.0	6	0.0	0	0.0	6
0	0	0	0	0	0	0	0.0	7	0.0	0	0.0	7
0	0	0	0	0	0	0	0.0	8	0.0	0	0.0	8
0	0	0	0	0	0	0	0.0	9	0.0	0	0.0	9

<----- HOUR OF DAY ----->

<--- ACCESS CONTROL --->

<--- SIDE OF HIGHWAY --->

NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE
0	0.0	00- 12 MID.	0	0.0	C-CONVENTIONAL	1	100.0	N-NORTHBOUND
0	0.0	01- 1 A.M.	0	0.0	E-EXPRESSWAY	0	0.0	S-SOUTHBOUND
0	0.0	02- 2 A.M.	1	100.0	F-FREEWAY	0	0.0	E-EASTBOUND
0	0.0	03- 3 A.M.	0	0.0	S-1-WAY CITY ST	0	0.0	W-WESTBOUND
0	0.0	04- 4 A.M.	0	0.0	--INVALID DATA			
0	0.0	05- 5 A.M.	0	0.0	+NO DATA			
0	0.0	06- 6 A.M.						
0	0.0	07- 7 A.M.						
0	0.0	08- 8 A.M.						
0	0.0	09- 9 A.M.						
0	0.0	10- 10 A.M.						
0	0.0	11- 11 A.M.						
0	0.0	12- 12 NOON						
0	0.0	13- 1 P.M.						
0	0.0	14- 2 P.M.						
0	0.0	15- 3 P.M.						
0	0.0	16- 4 P.M.						
0	0.0	17- 5 P.M.						
0	0.0	18- 6 P.M.						
0	0.0	19- 7 P.M.						
0	0.0	20- 8 P.M.						
0	0.0	21- 9 P.M.						
0	0.0	22- 10 P.M.						
1	100.0	23- 11 P.M.						
0	0.0	25- UNKNOWN						

<----- YEAR ----->

<----- MONTH ----->

<----- DAY OF WEEK ----->

NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE
0	0.0	1998	0	0.0	01-JANUARY	0	0.0	1-SUNDAY
0	0.0	1999	0	0.0	02-FEBRUARY	0	0.0	2-MONDAY
0	0.0	2000	0	0.0	03-MARCH	0	0.0	3-TUESDAY
0	0.0	2001	1	100.0	04-APRIL	1	100.0	4-WEDNESDAY
0	0.0	2002	0	0.0	05-MAY	0	0.0	5-THURSDAY
0	0.0	2003	0	0.0	06-JUNE	0	0.0	6-FRIDAY
0	0.0	2004	0	0.0	07-JULY	0	0.0	7-SATURDAY
0	0.0	2005	0	0.0	08-AUGUST			
0	0.0	2006	0	0.0	09-SEPTEMBER			
1	100.0	2007	0	0.0	10-OCTOBER			
0	0.0	2008	0	0.0	11-NOVEMBER			
0	0.0	2009	0	0.0	12-DECEMBER			

PRIMARY COLLISION FACTOR -->	
NUMBER	PCT CODE
0	0.0 1-INFLUENCE ALCOHOL
0	0.0 2-FOLLOW TOO CLOSE
0	0.0 3-FAILURE TO YIELD
0	0.0 4-IMPROPER TURN
0	0.0 5-SPEEDING
0	0.0 6-OTHER VIOLATIONS
0	0.0 B-IMPROPER DRIVING
1	100.0 C-OTHER THAN DRIVER
0	0.0 D-UNKNOWN
0	0.0 E-FELL SLEEP
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

TYPE OF COLLISION ---->	
NUMBER	PCT CODE
0	0.0 A-HEAD-ON
0	0.0 B-SIDESWIPE
0	0.0 C-REAR END
0	0.0 D-BROADSIDE
1	100.0 E-HIT OBJECT
0	0.0 F-OVERTURN
0	0.0 G-AUTO-PEDESTRIAN
0	0.0 H-OTHER
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

ROADWAY CONDITION ---->	
NUMBER	PCT CODE
0	0.0 A-HOLES, RUTS
0	0.0 B-LOOSE MATERIAL
0	0.0 C-OBSTRUCTION ON ROAD
0	0.0 D-CONSTRUCT-REPAIR-ZONE
0	0.0 E-REDUCED ROAD WIDTH
0	0.0 F-FLOODED
0	0.0 G-OTHER
1	100.0 H-NO UNUSUAL CONDITION
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

WEATHER ----->	
NUMBER	PCT CODE
1	100.0 A-CLEAR
0	0.0 B-CLOUDY
0	0.0 C-RAINING
0	0.0 D-SNOWING
0	0.0 E-FOG
0	0.0 F-OTHER
0	0.0 G-WIND
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

LIGHTING ----->	
NUMBER	PCT CODE
0	0.0 A-DAY LIGHT
0	0.0 B-DUSK/DAWN
1	100.0 C-DARK-STREET LIGHT
0	0.0 D-DARK-NO STREET LIGHT
0	0.0 E-DARK-INOPR STREET LIGHT
0	0.0 F-DARK-NOT STATED
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

ROAD SURFACE ----->	
NUMBER	PCT CODE
1	100.0 A-DRY
0	0.0 B-WET
0	0.0 C-SNOWY, ICY
0	0.0 D-SLIPPERY
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

RIGHT OF WAY CONTROL ----->	
NUMBER	PCT CODE
0	0.0 A-CONTROL FUNCTIONING
0	0.0 B-CONTROL NOT FUNCTIONING
0	0.0 C-CONTROLS OBSCURED
1	100.0 D-NO CONTROLS PRESENT
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

HIGHWAY GROUP ----->	
NUMBER	PCT CODE
0	0.0 R-IND. ALIGN RIGHT
0	0.0 L-IND. ALIGN LEFT
1	100.0 D-DIVIDED
0	0.0 U-UNDIVIDED

INTERSECTION/RAMP ACCIDENT LOCATION -->	
NUMBER	PCT CODE
0	0.0 1-RAMP INTERSECTION (EXIT)
0	0.0 2-RAMP
1	100.0 3-RAMP ENTRY
0	0.0 4-RAMP AREA, INTERSECTION STREET
0	0.0 5-IN INTERSECTION
0	0.0 6-OUTSIDE INTRSCCT-NONSTATE RTE
0	0.0 --DOES NOT APPLY

<----- PARTY TYPE ----->

<-- MOVEMENT PRECEDING COLLISION -->

<----- OTHER ASSOCIATED FACTORS ----->

NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE
0	0.0	A-PASNGR CAR/STA WAGON	0	0.0	A-STOPPED	0	0.0	1-INFLUENCE ALCOHOL	0	0.0	1-INFLUENCE ALCOHOL
0	0.0	B-PASNGR CAR W/TRAILER	0	0.0	B-PROCEEDED STRAIGHT	0	0.0	2-FOLLOW TOO CLOSE	0	0.0	2-FOLLOW TOO CLOSE
0	0.0	C-MOTORCYCLE	0	0.0	C-RAN OFF ROAD	0	0.0	3-FAILURE TO YIELD	0	0.0	3-FAILURE TO YIELD
0	0.0	D-PICKUP/PANEL TRUCK	0	0.0	D-MAKING RIGHT TURN	0	0.0	4-IMPROPER TURN	0	0.0	4-IMPROPER TURN
0	0.0	E-PICKUP/PANEL W/TRAILER	1	100.0	E-MAKING LEFT TURN	0	0.0	5-SPEEDING	0	0.0	5-SPEEDING
0	0.0	F-TRUCK/TRUCK TRACTOR	0	0.0	F-MAKING U TURN	0	0.0	6-OTHER VIOLATIONS	0	0.0	6-OTHER VIOLATIONS
0	0.0	G-TRUCK/TRACTOR & 1 TRAILER	0	0.0	G-BACKING	0	0.0	A-CELL PHONE* (INATTN)	0	0.0	A-CELL PHONE* (INATTN)
0	0.0	2-TRUCK/TRACTOR & 2 TRAILER	0	0.0	H-SLOWING, STOPPING	0	0.0	B-ELECTRC EQUIP* (INATTN)	0	0.0	B-ELECTRC EQUIP* (INATTN)
0	0.0	3-TRUCK/TRACTOR & 3 TRAILER	0	0.0	I-PASS OTHER VEHICLE	0	0.0	C-RADIO/CD/HDPHN* (INATTN)	0	0.0	C-RADIO/CD/HDPHN* (INATTN)
0	0.0	4-SINGLE UNIT TANKER	0	0.0	J-CHANGING LANES	0	0.0	D-SMOKING* (INATTN)	0	0.0	D-SMOKING* (INATTN)
0	0.0	5-TRUCK/TRA & 1 TANK TRAILR	0	0.0	K-PARKING	0	0.0	E-VISION OBSCUREMENT	0	0.0	E-VISION OBSCUREMENT
0	0.0	6-TRUCK/TRA & 2 TANK TRAILR	0	0.0	L-ENTER FROM SHLDR	0	0.0	F-INATTENTION - OTHER	0	0.0	F-INATTENTION - OTHER
0	0.0	H-SCHOOL BUS	0	0.0	M-OTHER UNSAFE TURN	0	0.0	G-STOP & GO TRAFFIC	0	0.0	G-STOP & GO TRAFFIC
0	0.0	I-OTHER BUS	0	0.0	N-CROSS INTO OPP LN	0	0.0	H-ENTER/LEAVE RAMP	0	0.0	H-ENTER/LEAVE RAMP
1	100.0	J-EMERGENCY VEHICLE	0	0.0	O-PARKED	0	0.0	I-PREVIOUS COLLISION	0	0.0	I-PREVIOUS COLLISION
0	0.0	K-HIGHWAY CONST EQUIP.**	0	0.0	P-MERGING	0	0.0	J-UNFAMILIAR WITH ROAD	0	0.0	J-UNFAMILIAR WITH ROAD
0	0.0	L-BICYCLE	0	0.0	Q-TRAVEL WRONG WAY	0	0.0	K-DEFECT VEHICLE EQUIP	0	0.0	K-DEFECT VEHICLE EQUIP
0	0.0	M-OTHER-MOTOR VEH	0	0.0	R-OTHER	0	0.0	L-UNINVOLVED VEHICLE	0	0.0	L-UNINVOLVED VEHICLE
0	0.0	N-OTHER-NON-MOTOR VEH	0	0.0	<-NOT STATED	0	0.0	M-OTHER	0	0.0	M-OTHER
0	0.0	O-SPILLED LOADS	0	0.0		1	100.0	N-NONE APPARENT	0	0.0	N-NONE APPARENT
0	0.0	P-DISENGAGED TOW	0	0.0		0	0.0	P-WIND	0	0.0	P-WIND
0	0.0	Q-UNINVOLVED VEHICLE	0	0.0		0	0.0	R-RAMP ACCIDENT	0	0.0	R-RAMP ACCIDENT
0	0.0	R-MOPED	0	0.0	PEDESTRIAN	0	0.0	S-RUNAWAY VEHICLE	0	0.0	S-RUNAWAY VEHICLE
0	0.0	T-TRAIN	0	0.0	0 0.0 2- XING XWALK - INTRST	0	0.0	T-EATING* (INATTN)	0	0.0	T-EATING* (INATTN)
0	0.0	U-PEDESTRIAN	0	0.0	0 0.0 3- XING XWALK - NOT INTR	0	0.0	U-CHILDREN* (INATTN)	0	0.0	U-CHILDREN* (INATTN)
0	0.0	V-DISMOUNT PEDESTRIAN	0	0.0	0 0.0 4- XING NOT XWALK	0	0.0	V-ANIMALS* (INATTN)	0	0.0	V-ANIMALS* (INATTN)
0	0.0	W-ANIMAL - LIVESTOCK	0	0.0	0 0.0 5- ROADWAY - INCL SHLDR	0	0.0	W-PERSNL HYGIENE* (INATTN)	0	0.0	W-PERSNL HYGIENE* (INATTN)
0	0.0	X-ANIMAL - DEER	0	0.0	0 0.0 6- NOT IN ROADWAY	0	0.0	X-READING* (INATTN)	0	0.0	X-READING* (INATTN)
0	0.0	Z-ANIMAL - OTHER	0	0.0	0 0.0 7- APRH-LEAVE SCHL BUS	0	0.0	<-NOT STATED	1	100.0	<-NOT STATED
			0	0.0	0 0.0 - INVALID CODES	0	0.0		0	0.0	
			0	0.0		0	0.0		0	0.0	

<----- DIRECTION OF TRAVEL -----> * INATTENTION CODES EFF. 01-01-01

NUMBER	PCT	CODE	NUMBER	PCT	CODE
0	0.0	N-N, NE, NW BOUND	0	0.0	A-HAZARDOUS MATERIALS
0	0.0	S-S, SE, SW BOUND	0	0.0	B-CELL PHONE IN USE*
0	0.0	E-EASTBOUND	1	100.0	C-CELL PHONE NOT IN USE*
1	100.0	W-WESTBOUND	0	0.0	D-CELL PHONE NONE/UNKNOWN*
0	0.0	<-NOT STATED	0	0.0	<-NOT STATED
0	0.0	--DOES NOT APPLY	0	0.0	--DOES NOT APPLY
0	0.0	-INVALID CODES	0	0.0	-INVALID CODES

** INCLUDES EQUIPMENT ENGAGED IN CONST/MAINT ACTIVITIES AS OF 00-02-22

* SPECIAL INFORMATION CODES EFF. 04-01-01

OBJECT STRUCK				LOCATION OF COLLISION			
PRIMARY NUMBER	PCT	OTHERS NUMBER	CODE	PRIMARY NUMBER	PCT	OTHERS NUMBER	CODE
0	0.0	0	01-SIDE OF BRIDGE RAILING	0	0.0	0	A-BEYOND MEDIAN OR STRIPE-LEFT
0	0.0	0	02-END OF BRIDGE RAILING	1	100.0	1	B-BEYOND SHLDR DRIVERS LEFT
0	0.0	0	03-PIER, COLUMN, ABUTMENT	0	0.0	0	C-LEFT SHOULDER AREA
0	0.0	0	04-BOTTOM OF STRUCTURE	0	0.0	0	D-LEFT LANE
0	0.0	0	05-BRIDGE END POST IN GORE	0	0.0	0	E-INTERIOR LANES
0	0.0	0	06-END OF GUARD RAIL	0	0.0	0	F-RIGHT LANE
0	0.0	0	07-BRIDGE APPROACH GUARD RAIL	0	0.0	0	G-RIGHT SHOULDER AREA
0	0.0	0	10-LIGHT OR SIGNAL POLE	0	0.0	0	H-BEYOND SHLDR DRIVERS RIGHT
0	0.0	0	11-UTILITY POLE	0	0.0	0	I-GORE AREA
0	0.0	0	12-POLE (TYPE NOT STATED)	0	0.0	0	J-OTHER
0	0.0	0	13-TRAFFIC SIGN/SIGN POST	0	0.0	0	V-HOV LANE(S)
0	0.0	0	14-OTHER SIGNS NOT TRAFFIC	0	0.0	0	W-HOV LANE BUFFER AREA
0	0.0	0	15-GUARDRAIL	0	0.0	0	<-NOT STATED
0	0.0	0	16-MEDIAN BARRIER	0	0.0	0	--DOES NOT APPLY
0	0.0	0	17-WALL (EXCEPT SOUND WALL)	1	100.0	1	-INVALID CODES
0	0.0	0	18-DIKE OR CURB	0	0.0	0	
0	0.0	0	19-TRAFFIC ISLAND	0	0.0	0	
0	0.0	0	20-RAISED BARS	0	0.0	0	
0	0.0	0	21-CONCRETE OBJ (HDWL, D.I.)	0	0.0	0	
0	0.0	0	22-GUIDEPOST, CULVERT, PM	0	0.0	0	
0	0.0	0	23-CUT SLOPE OR EMBANKMENT	0	0.0	0	
0	0.0	0	24-OVER EMBANKMENT	0	0.0	0	
0	0.0	0	25-IN WATER	0	0.0	0	
0	0.0	0	26-DRAINAGE DITCH	0	0.0	0	
0	0.0	0	27-FENCE	0	0.0	0	
0	0.0	0	28-TREES	0	0.0	0	
0	0.0	0	29-PLANTS	0	0.0	0	
0	0.0	0	30-SOUND WALL	1	100.0	0	A-HAD NOT BEEN DRINKING
0	0.0	0	40-NATURAL MATRL ON ROAD	0	0.0	0	B-HBD - UNDER INFLUENCE
0	0.0	0	41-TEMP BARRICADES, CONES	0	0.0	0	C-HBD - NOT UNDER INFLUENCE
1	100.0	0	42-OTHER OBJECT ON ROAD	0	0.0	0	D-HBD - IMPAIRMENT UNKNOWN
0	0.0	0	43-OTHER OBJECT OFF ROAD	0	0.0	0	E-UNDER DRUG INFLUENCE
0	0.0	1	44-OVERTURNED	0	0.0	0	F-OTHER PHYSICAL IMPAIRMENT
0	0.0	0	45-CRASH CUSHION (SAND)	0	0.0	0	G-IMPAIRMENT NOT KNOWN
0	0.0	0	46-CRASH CUSHION (OTHER)	0	0.0	0	H-NOT APPLICABLE
0	0.0	0	51-CALL BOX	0	0.0	0	I-FATIGUE
0	0.0	0	98-UNKNOWN OBJECT STRUCK	0	0.0	0	< NOT STATED
0	0.0	0	99- NO OBJECT INVOLVED	0	0.0	1	100.0
0	0.0	0	V1 THRU V9 VEHICLE 1 TO 9	0	0.0	0	--DOES NOT APPLY
0	0.0	0	<< NOT STATED	0	0.0	0	-INVALID CODES
0	0.0	1	-- DOES NOT APPLY	0	0.0	0	
0	0.0	0	INVALID CODES	0	0.0	0	

<----- DRUG/PHYSICAL ----->

OTM22130

Table B - Selective Accident Rate Calculation

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

1. TASAS - TSN has officially replaced the TASAS - "Legacy" database.
2. Reports from TSN are to be used and interpreted by the California Department of Transportation (Caltrans) officials or authorized representative.
3. Electronic versions of these reports may be emailed between Caltrans' employees only using the State computer system.
4. The contents of these reports shall be considered confidential and may be privileged pursuant to 23 U.S.C. Section 409, and are for the sole use of the intended recipient(s). Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message. Do not print, copy or forward.

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 2726588

Request Name: Don 110

Ref Date: 02/18/2009

Request- & Line	L D L O I S C R C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Com- Type bine?	Excl Ramp?
							Rate	Inj%	Fat%	Main	Cross		
11	R T I	07 LA 110 002.677 - 07 LA 110 002.678	01-APR-05	31-MAR-08	N	L						N	N

Event Log:

Job id is : 395123 Accidents Table B Request Don 110 Submitted by T7HELTAW
07 LA 110 2.677 - 07 LA 110 2.678 04/01/2005 TO 03/31/2008

Location Description	Rate Group (RUS)	No. of Accidents / Significance						Pers Kid Inj	ADT Main X-St	Total MV+or MVM	Actual			Accident Rates Average		
		Tot	Fat	Inj	F+I	Multi Veh	Wet				Dark	Fat	F+I	Tot	Fat	F+I
07 LA 110 002 677 110NB OFF TO EB C ST	R 18	1	0	0	0	1	0	0	2.0	2.24	0.000	.00	.45	0.006	.33	.90
0001-0001 2005-04-01 2008-03-31	U							0	.0							

36 mo.

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

1. TASAS - TSN has officially replaced the TASAS - "Legacy" database.
2. Reports from TSN are to be used and interpreted by the California Department of Transportation (Caltrans) officials or authorized representative.
3. Electronic versions of these reports may be emailed between Caltrans' employees only using the State computer system.
4. The contents of these reports shall be considered confidential and may be privileged pursuant to 23 U.S.C. Section 409, and are for the sole use of the intended recipient(s). Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message. Do not print, copy or forward.

California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

REPORT PARAMETERS:

REPORT DATE : 02/18/2009
REFERENCE DATE : 02/18/2009
SUBMITTOR : T7HELTAW
REPORT TITLE : All ramp acc. for LA 110, PM 2.677. For
the time period of 04/01/05-03/31/08.
EVENT ID : Don. Log# 110.

LOCATION CRITERIA: 2723703

FROM: 07-LA-110 002.677 TO: 07-LA-110 002.678

SELECTION CRITERIA:

1 1 AND 508 - FILE TYPE = R

Accidents Date Range:

From -- 04/01/2005 To -- 03/31/2008

TASAS SELECTIVE ROAD RETRIEVAL
TSAR - ACCIDENT SUMMARY

All ramp acc. for LA 110, PM 2.677. For the time period of 04/01/05-03/31/08. Don. Log# 110.

<--- PRIMARY COLLISION FACTOR --->
 NUMBER PCT CODE
 0 0.0 1-INFLUENCE ALCOHOL
 0 0.0 2-FOLLOW TOO CLOSE
 0 0.0 3-FAILURE TO YIELD
 1 100.0 4-IMPROPER TURN
 0 0.0 5-SPEEDING
 0 0.0 6-OTHER VIOLATIONS
 0 0.0 B-IMPROPER DRIVING
 0 0.0 C-OTHER THAN DRIVER
 0 0.0 D-UNKNOWN
 0 0.0 E-FELL ASLEEP
 0 0.0 <-NOT STATED
 0 0.0 -INVALID CODES

<--- TYPE OF COLLISION --->
 NUMBER PCT CODE
 0 0.0 A-HEAD-ON
 1 100.0 B-SIDESWIPE
 0 0.0 C-REAR END
 0 0.0 D-BROADSIDE
 0 0.0 E-HIT OBJECT
 0 0.0 F-OVERTURN
 0 0.0 G-AUTO-PEDESTRIAN
 0 0.0 H-OTHER
 0 0.0 <-NOT STATED
 0 0.0 -INVALID CODES

<--- ROADWAY CONDITION --->
 NUMBER PCT CODE
 0 0.0 A-HOLES, RUTS
 0 0.0 B-LOOSE MATERIAL
 0 0.0 C-OBSTRUCTION ON ROAD
 0 0.0 D-CONSTRUCT-REPAIR-ZONE
 0 0.0 E-REDUCED ROAD WIDTH
 0 0.0 F-FLOODED
 0 0.0 G-OTHER
 1 100.0 H-NO UNUSUAL CONDITION
 0 0.0 <-NOT STATED
 0 0.0 -INVALID CODES

<--- WEATHER --->
 NUMBER PCT CODE
 1 100.0 A-CLEAR
 0 0.0 B-CLOUDY
 0 0.0 C-RAINING
 0 0.0 D-SNOWING
 0 0.0 E-FOG
 0 0.0 F-OTHER
 0 0.0 G-WIND
 0 0.0 <-NOT STATED
 0 0.0 -INVALID CODES

<--- LIGHTING --->
 NUMBER PCT CODE
 1 100.0 A-DAY LIGHT
 0 0.0 B-DUSK/DAWN
 0 0.0 C-DARK-STREET LIGHT
 0 0.0 D-DARK-NO STREET LIGHT
 0 0.0 E-DARK-INOPR STREET LIGHT
 0 0.0 F-DARK-NOT STATED
 0 0.0 <-NOT STATED
 0 0.0 -INVALID CODES

<--- ROAD SURFACE --->
 NUMBER PCT CODE
 1 100.0 A-DRY
 0 0.0 B-WET
 0 0.0 C-SNOWY, ICY
 0 0.0 D-SLIPPERY
 0 0.0 <-NOT STATED
 0 0.0 -INVALID CODES

<--- RIGHT OF WAY CONTROL --->
 NUMBER PCT CODE
 0 0.0 A-CONTROL FUNCTIONING
 0 0.0 B-CONTROL NOT FUNCTIONING
 0 0.0 C-CONTROLS OBSCURED
 1 100.0 D-NO CONTROLS PRESENT
 0 0.0 <-NOT STATED
 0 0.0 -INVALID CODES

<--- HIGHWAY GROUP --->
 NUMBER PCT CODE
 0 0.0 R-IND. ALIGN RIGHT
 0 0.0 L-IND. ALIGN LEFT
 1 100.0 D-DIVIDED
 0 0.0 U-UNDIVIDED

<--- INTERSECTION/RAMP ACCIDENT LOCATION --->
 NUMBER PCT CODE
 1 100.0 1-RAMP INTERSECTION (EXIT)
 0 0.0 2-RAMP
 0 0.0 3-RAMP ENTRY
 0 0.0 4-RAMP AREA, INTERSECTION STREET
 0 0.0 5-IN INTERSECTION
 0 0.0 6-OUTSIDE INTRSCCT--
 0 0.0 --DOES NOT APPLY

TASAS SELECTIVE JRD RETRIEVAL
TSAR - PARTY SUMMARY

All ramp acc. for LA 110, PM 2.677. For the time period of 04/01/05-03/31/08. Don. Log# 110.

PARTY TYPE		MOVEMENT PRECEDING COLLISION		OTHER ASSOCIATED FACTORS	
NUMBER	PCT	CODE	NUMBER	PCT	CODE
1	100.0	A-PASNGR CAR/STA WAGON	0	0.0	1-INFLUENCE ALCOHOL
0	0.0	B-PASNGR CAR W/TRAILER	0	0.0	2-FOLLOW TOO CLOSE
0	0.0	C-MOTORCYCLE	0	0.0	3-FAILURE TO YIELD
0	0.0	D-PICKUP/PANEL TRUCK	0	0.0	4-IMPROPER TURN
0	0.0	E-PICKUP/PANEL W/TRAILER	0	0.0	5-SPEEDING
0	0.0	F-TRUCK/TRACTOR	0	0.0	6-OTHER VIOLATIONS
1	100.0	G-TRUCK/TRACTOR & 1 TRAILER	0	0.0	A-CELL PHONE* (INATFN)
0	0.0	H-TRUCK/TRACTOR & 2 TRAILER	0	0.0	B-ELECTRC EQUIP* (INATFN)
0	0.0	I-TRUCK/TRACTOR & 3 TRAILER	0	0.0	C-RADIO/CD/HDPHN* (INATFN)
0	0.0	J-TRUCK/TRA & 1 TANK TRAILR	0	0.0	D-SMOKING* (INATFN)
0	0.0	K-TRUCK/TRA & 2 TANK TRAILR	0	0.0	E-VISION OBSCUREMENT
0	0.0	L-SCHOOL BUS	0	0.0	F-INATTENTION - OTHER
0	0.0	M-OTHER BUS	0	0.0	G-STOP & GO TRAFFIC
0	0.0	N-EMERGENCY VEHICLE	0	0.0	H-ENTER/LEAVE RAMP
0	0.0	O-HIGHWAY CONST EQUIP.**	0	0.0	I-PREVIOUS COLLISION
0	0.0	P-BICYCLE	0	0.0	J-UNFAMILIAR WITH ROAD
0	0.0	Q-MOTOR-MOTOR VEH	0	0.0	K-DEFECT VEHICLE EQUIP
0	0.0	R-NON-MOTOR VEH	0	0.0	L-UNINVOLVED VEHICLE
0	0.0	S-SPILLED LOADS	0	0.0	M-OTHER
0	0.0	T-DISENGAGED TOW	1	100.0	N-NONE APPARENT
0	0.0	U-UNINVOLVED VEHICLE	0	0.0	P-WIND
0	0.0	V-TRAIN	0	0.0	R-RAMP ACCIDENT
0	0.0	W-PEDESTRIAN	0	0.0	S-RUNAWAY VEHICLE
0	0.0	X-DISMOUNT PEDESTRIAN	0	0.0	T-EATING* (INATFN)
0	0.0	Y-ANIMAL - LIVESTOCK	0	0.0	U-CHILDREN* (INATFN)
0	0.0	Z-ANIMAL - DEER	0	0.0	V-ANIMALS* (INATFN)
0	0.0	- OTHER	0	0.0	W-PERSNL HYGIENE* (INATFN)
			0	0.0	X-READING* (INATFN)
			1	100.0	<-NOT STATED
			0	0.0	--DOES NOT APPLY
			0	0.0	-INVALID CODES

DIRECTION OF TRAVEL		SPECIAL INFORMATION		INATTENTION CODES EFF.	
NUMBER	PCT	CODE	NUMBER	PCT	CODE
1	100.0	N-N, NE, NW BOUND	0	0.0	A-HAZARDOUS MATERIALS
1	100.0	S-S, SE, SW BOUND	0	0.0	B-CELL PHONE IN USE*
0	0.0	E-EASTBOUND	1	100.0	C-CELL PHONE NOT IN USE*
0	0.0	W-WESTBOUND	0	0.0	D-CELL PHONE NONE/UNKNOWN*
0	0.0	<-NOT STATED	0	0.0	<-NOT STATED
0	0.0	--DOES NOT APPLY	0	0.0	--DOES NOT APPLY
0	0.0	-INVALID CODES	0	0.0	-INVALID CODES

** INCLUDES EQUIPMENT ENGAGED IN CONST/MAINT ACTIVITIES AS OF 00-02-22

* SPECIAL INFORMATION CODES EFF. 04-01-01

* INATTENTION CODES EFF. 01-01-01

TASAS SELECTIVE JRD RETRIEVAL
TSAR - PARTY SUMMARY

All ramp acc. for LA 110, PM 2.677. For the time period of 04/01/05-03/31/08. Don. Log# 110.

OBJECT STRUCK				LOCATION OF COLLISION			
PRIMARY NUMBER	PCT	OTHERS NUMBER	CODE	PRIMARY NUMBER	PCT	OTHERS NUMBER	CODE
0	0.0	0	01-SIDE OF BRIDGE RAILING	0	0.0	0	A-BEYOND MEDIAN OR STRIPE-LEFT
0	0.0	0	02-END OF BRIDGE RAILING	0	0.0	0	B-BEYOND SHLDR DRIVERS LEFT
0	0.0	0	03-PIER, COLUMN, ABUTMENT	0	0.0	0	C-LEFT SHOULDER AREA
0	0.0	0	04-BOTTOM OF STRUCTURE	0	0.0	0	D-LEFT LANE
0	0.0	0	05-BRIDGE END POST IN GORE	1	100.0	0	E-INTERIOR LANES
0	0.0	0	06-END OF GUARD RAIL	1	100.0	0	F-RIGHT LANE
0	0.0	0	07-BRIDGE APPROACH GUARD RAIL	0	0.0	0	G-RIGHT SHOULDER AREA
0	0.0	0	10-LIGHT OR SIGNAL POLE	0	0.0	0	H-BEYOND SHLDR DRIVERS RIGHT
0	0.0	0	11-UTILITY POLE	0	0.0	0	I-GORE AREA
0	0.0	0	12-POLE (TYPE NOT STATED)	0	0.0	0	J-OTHER
0	0.0	0	13-TRAFFIC SIGN/SIGN POST	0	0.0	0	V-HOV LANE(S)
0	0.0	0	14-OTHER SIGNS NOT TRAFFIC	0	0.0	0	W-HOV LANE BUFFER AREA
0	0.0	0	15-GUARDRAIL	0	0.0	0	<-NOT STATED
0	0.0	0	16-MEDIAN BARRIER	0	0.0	1	--DOES NOT APPLY
0	0.0	0	17-WALL (EXCEPT SOUND WALL)	0	0.0	0	-INVALID CODES
0	0.0	0	18-DIKE OR CURB	0	0.0	0	
0	0.0	0	19-TRAFFIC ISLAND	0	0.0	0	
0	0.0	0	20-RAISED BARS	0	0.0	0	
0	0.0	0	21-CONCRETE OBJ (HDWL, D.I.)	0	0.0	0	
0	0.0	0	22-GUIDEPOST, CULVERT, PM	0	0.0	0	
0	0.0	0	23-CUT SLOPE OR EMBANKMENT	0	0.0	0	
0	0.0	0	24-OVER EMBANKMENT	0	0.0	0	
0	0.0	0	25-IN WATER	0	0.0	0	
0	0.0	0	26-DRAINAGE DITCH	0	0.0	0	
0	0.0	0	27-FENCE	0	0.0	0	
0	0.0	0	28-TREES	0	0.0	0	
0	0.0	0	29-PLANTS	0	0.0	0	
0	0.0	0	30-SOUND WALL	1	100.0	0	A-HAD NOT BEEN DRINKING
0	0.0	0	40-NATURAL MATRNL ON ROAD	0	0.0	0	B-HBD - UNDER INFLUENCE
0	0.0	0	41-TEMP BARRICADES, CONES	0	0.0	0	C-HBD - NOT UNDER INFLUENCE
0	0.0	0	42-OTHER OBJECT ON ROAD	0	0.0	0	D-HBD - IMPAIRMENT UNKNOWN
0	0.0	0	43-OTHER OBJECT OFF ROAD	0	0.0	0	E-UNDER DRUG INFLUENCE
0	0.0	0	44-OVERTURNED	0	0.0	0	F-OTHER PHYSICAL IMPAIRMENT
0	0.0	0	45-CRASH CUSHION (SAND)	0	0.0	0	G-IMPAIRMENT NOT KNOWN
0	0.0	0	46-CRASH CUSHION (OTHER)	0	0.0	0	H-NOT APPLICABLE
0	0.0	0	51-CALL BOX	0	0.0	0	I-FATIGUE
0	0.0	0	98-UNKNOWN OBJECT STRUCK	0	0.0	1	< NOT STATED
0	0.0	0	99- NO OBJECT INVOLVED	0	0.0	0	--DOES NOT APPLY
1	100.0	0	V1 THRU V9 VEHICLE 1 TO 9	0	0.0	0	-INVALID CODES
0	0.0	0	<< NOT STATED	0	0.0	0	
0	0.0	1	-- DOES NOT APPLY	0	0.0	0	
0	0.0	0	- INVALID CODES	0	0.0	0	

<----- DRUG/PHYSICAL ----->

California Department of Transportation

OTM22130

Table B - Selective Accident Rate Calculation

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

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OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 2891082
Request Name: Don 588
Ref Date: 03/11/2010

Request- & Line	L D O I S C R C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
							Rate	Inj%	Fat%	Main	Cross			
1 1	R T I	07 LA 110 002.824 - 07 LA 110 002.825	01-APR-05	31-MAR-07	N	L						N	N	N
1 2	R T I	07 LA 110 002.824 - 07 LA 110 002.825	01-APR-05	31-MAR-06	N	L						N	N	N
1 3	R T I	07 LA 110 002.824 - 07 LA 110 002.825	01-APR-06	31-MAR-07	N	L						N	N	N

Event Log:

Job id is : 3846 Accidents Table B Request Don 588 Submitted by TTHELTAW
07 LA 110 2.824 - 07 LA 110 2.825 04/01/2005 TO 03/31/2007
07 LA 110 2.824 - 07 LA 110 2.825 04/01/2005 TO 03/31/2006
07 LA 110 2.824 - 07 LA 110 2.825 04/01/2006 TO 03/31/2007

Location Description	Rate Group (RUS)	No. of Accidents / Significance	No. of Accidents / Significance			No. of Accidents / Significance			ADT Main X-St	Total MV+ or MVM	Actual		Accident Rates		Average Fat F+I	Tot	Tot	
			Tot	Fat	Inj	F+I	Multi Veh	Wet			Dark	Kid Inj	Pers	Fat				F+I
07 LA 110.002.824 110/SB ON FR WB C ST 0001-0001 2005-04-01 2007-03-31	R 40 U	0	0	0	0	0	0	0	0	0	0	0	0	0.000	.00	0.004	.20	.70
07 LA 110.002.824 110/SB ON FR WB C ST 0001-0002 2005-04-01 2006-03-31	R 40 U	0	0	0	0	0	0	0	0	0	0	0	0	0.000	.00	0.004	.20	.70
07 LA 110.002.824 110/SB ON FR WB C ST 0001-0003 2006-04-01 2007-03-31	R 40 U	0	0	0	0	0	0	0	0	0	0	0	0	0.000	.00	0.004	.20	.70

Accident Rates expressed as: # of accidents / Million vehicle miles
+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).
For Ramps RUS only considers R(Rural) U(Urban)

California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

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California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

REPORT PARAMETERS:

REPORT DATE : 03/11/2010
REFERENCE DATE : 03/11/2010
SUBMITTOR : T7HELTAW
REPORT TITLE : ' All ramp acc. for LA 110, PM 2.824. For
EVENT ID : the time period of 04/01/05-03/31/07.
Don. Log# 588. '

LOCATION CRITERIA:

2891136

FROM: 07-LA-110 002.824 TO: 07-LA-110 002.825

SELECTION CRITERIA:

1 1 AND 508 - FILE TYPE = R

Accidents Date Range:

From -- 04/01/2005 To -- 03/31/2007

No Data Selected With This Request

TASAS SELECTIVE RECORD RETRIEVAL
TSAR - ACCIDENT SUMMARY

' All ramp acc. for L.A 110, PM 2.824. For the time period of 04/01/05-03/31/07. Don. Log# 588.'

California Department of Transportation

OTM22130

Table B - Selective Accident Rate Calculation

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

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OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 2891079
Request Name: Don 589
Ref Date: 03/11/2010

Request- & Line	L D O I S C R C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
							Rate	In%	Fat%	Main	Cross			
1 1	R T I	07 LA 110 002.876 - 07 LA 110 002.877	01-APR-05	31-MAR-07	N	L						N	N	N
1 2	R T I	07 LA 110 002.876 - 07 LA 110 002.877	01-APR-05	31-MAR-06	N	L						N	N	N
1 3	R T I	07 LA 110 002.876 - 07 LA 110 002.877	01-APR-06	31-MAR-07	N	L						N	N	N

Event Log:

Job id is : 3843 Accidents Table B Request Don 589 Submitted by TTHELTAW
07 LA 110 2.876 - 07 LA 110 2.877 04/01/2005 TO 03/31/2007
07 LA 110 2.876 - 07 LA 110 2.877 04/01/2005 TO 03/31/2006
07 LA 110 2.876 - 07 LA 110 2.877 04/01/2006 TO 03/31/2007

Location Description	Rate Group (RUS)	No. of Accidents / Significance	No. of Accidents / Significance			Pers			ADT Main X-St	Total MV+ or MVM	Actual		Accident Rates									
			Tot	Fat	Inj	F+I	Multi Veh	Wet			Dark	Kid Inj	Fat	F+I	Tot	Fat	F+I	Tot				
07 LA 110 002.876 110/SB OFF TO EB C ST 0001-0001 2005-04-01 2007-03-31	R06 U	8 H99	0	0	1	1	1	2	0	0	1	2	0	1	3.8 .0	2.75+	0.000	.36	2.91	0.005	.20	.60
07 LA 110 002.876 110/SB OFF TO EB C ST 0001-0002 2005-04-01 2006-03-31	R06 U	5 H99	0	0	1	1	2	0	1	0	1	0	1	0	3.9 .0	1.42+	0.000	.70	3.51	0.005	.20	.60
07 LA 110 002.876 110/SB OFF TO EB C ST 0001-0003 2006-04-01 2007-03-31	R06 U	3 H92	0	0	0	0	3	1	1	0	1	0	0	0	3.6 .0	1.33+	0.000	.00	2.26	0.005	.20	.60

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

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California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

REPORT PARAMETERS:

REPORT DATE : 03/11/2010
REFERENCE DATE : 03/11/2010
SUBMITTOR : T7HELTAW
REPORT TITLE : ' All ramp acc. for LA 110, PM 2.876. For
EVENT ID : the time period of 04/01/05-03/31/07.
Don. Log# 589. '

LOCATION CRITERIA: 2891139

FROM: 07-LA-110 002.876 TO: 07-LA-110 002.877

SELECTION CRITERIA:

1 1 AND 508 - FILE TYPE = R

Accidents Date Range:

From -- 04/01/2005 To -- 03/31/2007

TASAS SELECTIVE RECORD RETRIEVAL

TSAR - ACCIDENT SUMMARY

' All ramp acc. for LA 110, PM 2.876. For the time period of 04/01/05-03/31/07. Don. Log# 589. '

--- PRIMARY COLLISION FACTOR --->	
NUMBER	PCT CODE
0	0.0 1-INFLUENCE ALCOHOL
0	0.0 2-FOLLOW TOO CLOSE
1	12.5 3-FAILURE TO YIELD
2	25.0 4-IMPROPER TURN
3	37.5 5-SPEEDING
1	12.5 6-OTHER VIOLATIONS
0	0.0 B-IMPROPER DRIVING
0	0.0 C-OTHER THAN DRIVER
0	0.0 D-UNKNOWN
0	0.0 E-FELL SLEEP
1	12.5 <-NOT STATED
0	0.0 -INVALID CODES

<--- TYPE OF COLLISION --->	
NUMBER	PCT CODE
0	0.0 A-HEAD-ON
4	50.0 B-SIDESWIPE
0	0.0 C-REAR END
1	12.5 D-BROADSIDE
1	12.5 E-HIT OBJECT
2	25.0 F-OVERTURN
0	0.0 G-AUTO-PEDESTRIAN
0	0.0 H-OTHER
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

<--- ROADWAY CONDITION --->	
NUMBER	PCT CODE
0	0.0 A-HOLES, RUTS
0	0.0 B-LOOSE MATERIAL
0	0.0 C-OBSTRUCTION ON ROAD
0	0.0 D-CONSTRUCT-REPAIR-ZONE
0	0.0 E-REDUCED ROAD WIDTH
0	0.0 F-FLOODED
0	0.0 G-OTHER
8	100.0 H-NO UNUSUAL CONDITION
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

<----- WEATHER ----->	
NUMBER	PCT CODE
7	87.5 A-CLEAR
1	12.5 B-CLOUDY
0	0.0 C-RAINING
0	0.0 D-SNOWING
0	0.0 E-FOG
0	0.0 F-OTHER
0	0.0 G-WIND
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

<----- LIGHTING ----->	
NUMBER	PCT CODE
6	75.0 A-DAY LIGHT
0	0.0 B-DUSK/DAWN
0	0.0 C-DARK-STREET LIGHT
2	25.0 D-DARK-NO STREET LIGHT
0	0.0 E-DARK-INOPR STREET LIGHT
0	0.0 F-DARK-NOT STATED
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

<----- ROAD SURFACE ----->	
NUMBER	PCT CODE
7	87.5 A-DRY
1	12.5 B-WET
0	0.0 C-SNOWY, ICY
0	0.0 D-SLIPPERY
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

<----- RIGHT OF WAY CONTROL ----->	
NUMBER	PCT CODE
3	37.5 A-CONTROL FUNCTIONING
0	0.0 B-CONTROL NOT FUNCTIONING
0	0.0 C-CONTROLS OBSCURED
5	62.5 D-NO CONTROLS PRESENT
0	0.0 <-NOT STATED
0	0.0 -INVALID CODES

<----- HIGHWAY GROUP ----->	
NUMBER	PCT CODE
0	0.0 R-IND. ALIGN RIGHT
0	0.0 L-IND. ALIGN LEFT
8	100.0 D-DIVIDED
0	0.0 U-UNDIVIDED

<- INTERSECTION/RAMP ACCIDENT LOCATION ->	
NUMBER	PCT CODE
3	37.5 1-RAMP INTERSECTION (EXIT)
2	25.0 2-RAMP
1	12.5 3-RAMP ENTRY
2	25.0 4-RAMP AREA, INTERSECTION STREET
0	0.0 5-IN INTERSECTION
0	0.0 6-OUTSIDE INTRSC-T-NONSTATE RTE
0	0.0 --DOES NOT APPLY

TASAS SELECTIVE RECORD RETRIEVAL
TSAR - PARTY SUMMARY

' All ramp acc. for LA 110, PM 2.876. For the time period of 04/01/05-03/31/07. Don. Log# 589. '

PARTY TYPE ----->		MOVEMENT PRECEDING COLLISION -->		OTHER ASSOCIATED FACTORS ----->	
NUMBER	PCT	CODE	NUMBER	PCT	CODE
5	62.5	A-PASNGR CAR/STA WAGON	2	25.0	A-STOPPED
0	0.0	B-PASNGR CAR W/TRAILER	4	50.0	B-PROCEEDED STRAIGHT
1	12.5	C-MOTORCYCLE	0	0.0	C-RAN OFF ROAD
0	0.0	D-PICKUP/PANEL TRUCK	3	37.5	D-MAKING RIGHT TURN
0	0.0	E-PICKUP/PANEL W/TRAILER	1	12.5	E-MAKING LEFT TURN
0	0.0	F-TRUCK/TRUCK TRACTOR	0	0.0	F-MAKING U TURN
4	50.0	G-TRUCK/TRACTOR & 1 TRAILER	0	0.0	G-BACKING
0	0.0	2-TRUCK/TRACTOR & 2 TRAILER	0	0.0	H-SLOWING, STOPPING
0	0.0	3-TRUCK/TRACTOR & 3 TRAILER	0	0.0	I-PASS OTHER VEHICLE
0	0.0	4-SINGLE UNIT TANKER	1	12.5	J-CHANGING LANES
0	0.0	5-TRUCK/TRA & 1 TANK TRAILR	0	0.0	K-PARKING
0	0.0	6-TRUCK/TRA & 2 TANK TRAILR	0	0.0	L-ENTER FROM SHLDR
0	0.0	H-SCHOOL BUS	0	0.0	M-OTHER UNSAFE TURN
0	0.0	I-OTHER BUS	0	0.0	N-CROSS INTO OPP LN
3	37.5	J-EMERGENCY VEHICLE	0	0.0	O-PARKED
0	0.0	K-HIGHWAY CONST EQUIP. **	0	0.0	P-MERGING
0	0.0	L-BICYCLE	0	0.0	Q-TRAVEL WRONG WAY
0	0.0	M-OTHER-MOTOR VEH	0	0.0	R-OTHER
0	0.0	N-OTHER-NON-MOTOR VEH	0	0.0	<-NOT STATED
0	0.0	O-SPILLED LOADS	0	0.0	
0	0.0	P-DISENGAGED TOW	6	75.0	
0	0.0	Q-UNINVOLVED VEHICLE	0	0.0	
0	0.0	R-MOPED	0	0.0	
0	0.0	T-TRAIN	0	0.0	
0	0.0	U-PEDESTRIAN	0	0.0	
0	0.0	V-DISMOUNT PEDESTRIAN	0	0.0	
0	0.0	W-ANIMAL - LIVESTOCK	0	0.0	
0	0.0	X-ANIMAL - DEER	0	0.0	
0	0.0	Z-ANIMAL - OTHER	0	0.0	

DIRECTION OF TRAVEL ----->		SPECIAL INFORMATION ----->		INATTENTION CODES EFF. 01-01-01	
NUMBER	PCT	CODE	NUMBER	PCT	CODE
1	12.5	N-N, NE, NW BOUND	0	0.0	A-HAZARDOUS MATERIALS
5	62.5	S-S, SE, SW BOUND	0	0.0	B-CELL PHONE IN USE*
3	37.5	E-EASTBOUND	7	87.5	C-CELL PHONE NOT IN USE*
0	0.0	W-WESTBOUND	1	12.5	D-CELL PHONE NONE/UNKNOWN*
0	0.0	<-NOT STATED	0	0.0	<-NOT STATED
0	0.0	--DOES NOT APPLY	0	0.0	--DOES NOT APPLY
0	0.0	-INVALID CODES	0	0.0	-INVALID CODES

** INCLUDES EQUIPMENT ENGAGED IN CONST/MAINT ACTIVITIES AS OF 00-02-22

TASAS SELECTIVE RECORD RETRIEVAL
TSAR - PARTY SUMMARY

' All ramp acc. for LA 110, PM 2.876. For the time period of 04/01/05-03/31/07. Don. Log# 589.'

PRIMARY			OTHERS			LOCATION OF COLLISION		
NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE
0	0.0	01-SIDE OF BRIDGE RAILING	0	0.0	0	0.0	0.0	A-BEYOND MEDIAN OR STRIPE-LEFT
0	0.0	02-END OF BRIDGE RAILING	0	0.0	3	37.5	37.5	B-BEYOND SHLDR DRIVERS LEFT
0	0.0	03-PIER, COLUMN, ABUTMENT	0	0.0	0	0.0	0.0	C-LEFT SHOULDER AREA
0	0.0	04-BOTTOM OF STRUCTURE	0	0.0	0	0.0	0.0	D-LEFT LANE
0	0.0	05-BRIDGE END POST IN GORE	1	12.5	0	0.0	0.0	E-INTERIOR LANES
0	0.0	06-END OF GUARD RAIL	3	37.5	0	0.0	0.0	F-RIGHT LANE
0	0.0	07-BRIDGE APPROACH GUARD RAIL	6	75.0	0	0.0	0.0	G-RIGHT SHOULDER AREA
0	0.0	10-LIGHT OR SIGNAL POLE	0	0.0	0	0.0	0.0	H-BEYOND SHLDR DRIVERS RIGHT
0	0.0	11-UTILITY POLE	0	0.0	0	0.0	0.0	I-GORE AREA
0	0.0	12-POLE (TYPE NOT STATED)	0	0.0	0	0.0	0.0	J-OTHER
0	0.0	13-TRAFFIC SIGN/SIGN POST	1	12.5	0	0.0	0.0	V-HOV LANE (S)
0	0.0	14-OTHER SIGNS NOT TRAFFIC	0	0.0	0	0.0	0.0	W-HOV LANE BUFFER AREA
0	0.0	15-GUARDRAIL	0	0.0	0	0.0	0.0	<-NOT STATED
0	0.0	16-MEDIAN BARRIER	0	0.0	0	0.0	0.0	--DOES NOT APPLY
0	0.0	17-WALL (EXCEPT SOUND WALL)	0	0.0	8	100.0	100.0	-INVALID CODES
1	12.5	18-DIKE OR CURB	0	0.0	0	0.0	0.0	
0	0.0	19-TRAFFIC ISLAND	0	0.0	0	0.0	0.0	
0	0.0	20-RAISED BARS	0	0.0	0	0.0	0.0	
0	0.0	21-CONCRETE OBJ (HDWL, D.I.)	0	0.0	0	0.0	0.0	
0	0.0	22-GUIDEPOST, CULVERT, PM	0	0.0	0	0.0	0.0	
0	0.0	23-CUT SLOPE OR EMBANKMENT	0	0.0	0	0.0	0.0	
0	0.0	24-OVER EMBANKMENT	0	0.0	0	0.0	0.0	
0	0.0	25-IN WATER	0	0.0	0	0.0	0.0	
0	0.0	26-DRAINAGE DITCH	0	0.0	0	0.0	0.0	
0	0.0	27-FENCE	0	0.0	0	0.0	0.0	
0	0.0	28-TREES	0	0.0	0	0.0	0.0	
0	0.0	29-PLANTS	0	0.0	0	0.0	0.0	
0	0.0	30-SOUND WALL	0	0.0	0	0.0	0.0	
0	0.0	40-NATURAL MATRL ON ROAD	0	0.0	0	0.0	0.0	
0	0.0	41-TEMP BARRICADES, CONES	0	0.0	0	0.0	0.0	
0	0.0	42-OTHER OBJECT ON ROAD	0	0.0	0	0.0	0.0	
0	0.0	43-OTHER OBJECT OFF ROAD	0	0.0	0	0.0	0.0	
2	25.0	44-OVERTURNED	0	0.0	0	0.0	0.0	
0	0.0	45-CRASH CUSHION (SAND)	0	0.0	0	0.0	0.0	
0	0.0	46-CRASH CUSHION (OTHER)	0	0.0	0	0.0	0.0	
0	0.0	51-CALL BOX	0	0.0	0	0.0	0.0	
0	0.0	98-UNKNOWN OBJECT STRUCK	0	0.0	8	100.0	100.0	
0	0.0	99- NO OBJECT INVOLVED	0	0.0	0	0.0	0.0	
5	62.5	V1 THRU V9 VEHICLE 1 TO 9	0	0.0	0	0.0	0.0	
0	0.0	<< NOT STATED	0	0.0	0	0.0	0.0	
0	0.0	-- DOES NOT APPLY	8	100.0	0	0.0	0.0	
0	0.0	- INVALID CODES	0	0.0	0	0.0	0.0	

<----- DRUG/PHYSICAL ----->

PRIMARY			OTHERS		
NUMBER	PCT	CODE	NUMBER	PCT	CODE
8	100.0		0	0.0	A-HAD NOT BEEN DRINKING
0	0.0		0	0.0	B-HBD - UNDER INFLUENCE
0	0.0		0	0.0	C-HBD - NOT UNDER INFLUENCE
0	0.0		0	0.0	D-HBD - IMPAIRMENT UNKNOWN
0	0.0		0	0.0	E-UNDER DRUG INFLUENCE
0	0.0		0	0.0	F-OTHER PHYSICAL IMPAIRMENT
0	0.0		0	0.0	G-IMPAIRMENT NOT KNOWN
0	0.0		0	0.0	H-NOT APPLICABLE
0	0.0		0	0.0	I-FATIGUE
0	0.0		8	100.0	< NOT STATED
0	0.0		0	0.0	--DOES NOT APPLY
0	0.0		0	0.0	-INVALID CODES

COLLISION REPORT SUMMARY

LOS ANGELES DEPARTMENT OF TRANSPORTATION (LADOT)

Settings Used For Query

Parameter

Street Name
Cross Street
Starting Date
Ending Date
Distance from Intersection

Setting

HARRY BRIDGES BOULEVARD
MAR VISTA AVENUE
01/01/2004
12/31/2008
>= 0' for non rear-end collisions
>= 0' for rear-end collisions

**City of Los Angeles
Department of Transportation**

Collision Report Summary

03/10/2010

Date Range Reported: 1/1/04 - 12/31/08

Total Number of Collisions: 3

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil. Ver.	Page
2692008	6/14/06	07:55	Harry Bridges Boulevard & Mar Vista Avenue	0'	In Int.	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Slowing/Stopping	Following Too Closely	1	0	1
2939838	11/6/06	09:20	Harry Bridges Boulevard & Mar Vista Avenue	2'	East	Hit Object	Fixed Object	East	Proceeding Straight				0	0	0
3284740	5/20/07	22:20	Harry Bridges Boulevard & Mar Vista Avenue	12'	East	Sideswipe	Fixed Object	East	Ran Off Road				1	0	1

Settings Used For Query

<u>Parameter</u>	<u>Setting</u>
Street Name	HARRY BRIDGES BOULEVARD
Cross Street	HAWAIIAN AVENUE
Starting Date	01/01/2004
Ending Date	12/31/2008
Distance from Intersection	>= 0' for non rear-end collisions >= 0' for rear-end collisions

**City of Los Angeles
Department of Transportation**

Collision Report Summary

03/10/2010

Date Range Reported: 1/1/04 - 12/31/08

Total Number of Collisions: 3

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil. Ver.
1412088	3/27/04	04:15	Hawaiian Avenue & Harry Bridges Boulevard	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped in Road	Unsafe Speed	1	0
3220694	4/24/07	11:20	Harry Bridges Boulevard & Hawaiian Avenue	0'	In Int.	Hit Object	Fixed Object	West	Ran Off Road			Unsafe Speed	0	0
3367086	8/15/07	05:25	Harry Bridges Boulevard & Hawaiian Avenue	0'	In Int.	Head-On	Fixed Object	East	Ran Off Road			Unsafe Speed	1	0

Settings Used For Query

Parameter

Street Name
Cross Street
Starting Date
Ending Date
Distance from Intersection

Setting

HARRY BRIDGES BOULEVARD
KING AVENUE
01/01/2004
12/31/2008
>= 0' for non rear-end collisions
>= 0' for rear-end collisions

**City of Los Angeles
Department of Transportation
Collision Report Summary**

03/10/2010
Date Range Reported: 1/1/04 - 12/31/08
Total Number of Collisions: 1

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.	Page
2792200	8/15/06	17:30	Harry Bridges Boulevard & King Avenue	15'	East	Head-On	Other Motor Vehicle	East	Proceeding Straight	West	Proceeding Straight	Wrong Side of Road	2	0		1

Settings Used For Query

<u>Parameter</u>	<u>Setting</u>
Street Name	C STREET
Cross Street	RT 110*
Starting Date	01/01/2004
Ending Date	12/31/2008
Distance from Intersection	>= 0' for non rear-end collisions >= 0' for rear-end collisions

City of Los Angeles
Department of Transportation

Collision Report Summary

03/10/2010

Date Range Reported: 1/1/04 - 12/31/08

Total Number of Collisions: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF
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Settings Used For Query

<u>Parameter</u>	<u>Setting</u>
Street Name	C STREET
Cross Street	FIGUEROA STREET
Starting Date	01/01/2004
Ending Date	12/31/2008
Distance from Intersection	>= 0' for non rear-end collisions >= 0' for rear-end collisions

**City of Los Angeles
Department of Transportation**

Collision Report Summary

03/10/2010

Date Range Reported: 1/1/04 - 12/31/08

Total Number of Collisions: 12

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
1473102	3/9/04	06:00	Figueroa Street & C Street	200'	Not Stated	Broadside	Not Stated	East	Entering Traffic	South	Proceeding Straight	Auto RW Violation	1	0	0
1751163	11/4/04	19:10	Figueroa Street & C Street	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	North	Making Left Turn	Traffic Signals and Signs	1	0	0
1961550	3/3/05	12:15	C Street & Figueroa Street	20'	West	Sideswipe	Other Motor Vehicle	East	Making Right Turn	East	Making Right Turn	Improper Turning	0	0	0
2133525	6/3/05	09:40	C Street & Figueroa Street	28'	West	Sideswipe	Other Motor Vehicle	East	Making Right Turn	East	Stopped in Road	Improper Turning	0	0	0
2789971	8/5/06	07:25	Figueroa Street & C Street	100'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped in Road	Unsafe Speed	0	0	0
2939848	10/23/06	11:00	C Street & Figueroa Street	0'	In Int.	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Lane Change	0	0	0
2995513	12/8/06	10:50	Figueroa Street & C Street	10'	South	Hit Object	Fixed Object	East	Making Right Turn	East	Making Right Turn	Other Improper Driving	0	0	0
3367070	8/15/07	12:20	Figueroa Street & C Street	10'	North	Sideswipe	Other Motor Vehicle	South	Making Right Turn	South	Stopped in Road	Improper Turning	1	0	0
3540217	12/6/07	09:30	C Street & Figueroa Street	0'	In Int.	Rear-End	Other Motor Vehicle	East	Stopped in Road	West	Backing	Unsafe Starting or Backing	0	0	0
3891792	8/23/08	22:00	Figueroa Street & C Street	150'	North	Broadside	Other Motor Vehicle	Not State	Entering Traffic	South	Proceeding Straight	Auto RW Violation	4	0	0
4035705	12/21/08	13:40	C Street & Figueroa Street	14'	East	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped in Road	Unsafe Speed	1	0	0
4035709	12/23/08	17:15	Figueroa Street & C Street	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	West	Proceeding Straight	Traffic Signals and Signs	2	0	0

Settings Used For Query

<u>Parameter</u>	<u>Setting</u>
Street Name	C STREET
Cross Street	MAR VISTA AVENUE
Starting Date	01/01/2004
Ending Date	12/31/2008
Distance from Intersection	>= 0' for non rear-end collisions >= 0' for rear-end collisions

City of Los Angeles
Department of Transportation

Collision Report Summary

03/10/2010

Date Range Reported: 1/1/04 - 12/31/08

Total Number of Collisions: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF
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Settings Used For Query

<u>Parameter</u>	<u>Setting</u>
Street Name	C STREET
Cross Street	HAWAIIAN AVENUE
Starting Date	01/01/2004
Ending Date	12/31/2008
Distance from Intersection	>= 0' for non rear-end collisions >= 0' for rear-end collisions

City of Los Angeles
Department of Transportation

Collision Report Summary

03/10/2010

Date Range Reported: 1/1/04 - 12/31/08

Total Number of Collisions: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj. Kll. Ver.
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Settings Used For Query

<u>Parameter</u>	<u>Setting</u>
Street Name	JOHN S GIBSON BOULEVARD
Cross Street	FIGUEROA STREET
Starting Date	01/01/2004
Ending Date	12/31/2008
Distance from Intersection	>= 0' for non rear-end collisions >= 0' for rear-end collisions

**City of Los Angeles
Department of Transportation
Collision Report Summary**

03/10/2010

Date Range Reported: 1/1/04 - 12/31/08

Total Number of Collisions: 35

Report#	Date	Time	Location	Dist. Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil. Ver.
1337882	1/2/04	06:50	John S Gibson Boulevard & Harry Bridges Boulevard	1259' South	Sideswipe	Fixed Object	South	Proceeding Straight			Unsafe Speed	0	0
1541354	7/6/04	02:05	Harry Bridges Boulevard & Figueroa Street	1424' West	Hit Object	Fixed Object	East	Ran Off Road			Driving Under Influence	0	0
1541334	7/7/04	12:20	Figueroa Street & Harry Bridges Boulevard	33' North	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Stopped in Road	Unsafe Speed	0	0
1541917	7/7/04	12:20	Figueroa Street & Harry Bridges Boulevard	33' North	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Stopped in Road	Unsafe Speed	0	0
1646747	8/10/04	11:20	John S Gibson Boulevard & Figueroa Street	960' West	Hit Object	Fixed Object	North	Ran Off Road			Driving Under Influence	1	0
1680848	9/12/04	02:15	John S Gibson Boulevard & Figueroa Street	1320' North	Hit Object	Fixed Object	South	Ran Off Road			Unsafe Speed	0	0
1862135	11/28/04	03:40	John S Gibson Boulevard & Harry Bridges Boulevard	300' South	Hit Object	Other Object	North	Proceeding Straight			Unsafe Speed	0	0
1862131	11/28/04	03:41	John S Gibson Boulevard & Harry Bridges Boulevard	240' South	Hit Object	Other Object	North	Proceeding Straight			Other Than Driver or Ped	0	0
1918436	2/7/05	21:20	John S Gibson Boulevard & Figueroa Street	706' West	Hit Object	Fixed Object	West	Proceeding Straight			Unsafe Speed	1	0
2031031	3/20/05	03:00	Figueroa Street & John S Gibson Boulevard	27' North	Head-On	Fixed Object	South	Making Right Turn			Driving Under Influence	2	0
2031294	4/10/05	06:15	John S Gibson Boulevard & Figueroa Street	1255' South	Other	Fixed Object	South	Proceeding Straight			Other Improper Driving	1	0
2133392	6/7/05	13:00	Figueroa Street & John S Gibson Boulevard	0' In Int.	Broadside	Other Motor Vehicle	South	Making Right Turn	South	Making Right Turn	Improper Turning	1	0
2256000	9/20/05	10:35	John S Gibson Boulevard & Figueroa Street	1000' South	Sideswipe	Other Motor Vehicle	North	Merging	Not Stat	Proceeding Straight	Unsafe Lane Change	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj. Kil. Ver.
2295437	9/24/05	18:00	Harry Bridges Boulevard & Figueroa Street	0'	In Int.	Hit Object	Fixed Object	West	Proceeding Straight			Unsafe Speed	1 0
2381494	12/4/05	08:50	John S Gibson Boulevard & Figueroa Street	150'	West	Hit Object	Fixed Object	West	Ran Off Road			Unsafe Speed	1 0
2667837	5/18/06	09:30	John S Gibson Boulevard & Figueroa Street	400'	West	Sideswipe	Other Motor Vehicle	West	Making Right Turn	North	Stopped in Road	Other Improper Driving	1 0
2792253	7/17/06	04:45	John S Gibson Boulevard & Figueroa Street	600'	South	Sideswipe	Fixed Object	North	Proceeding Straight			Unsafe Speed	1 0
2995474	10/29/06	00:45	John S Gibson Boulevard & Figueroa Street	1584'	West	Hit Object	Fixed Object	West	Proceeding Straight			Other Improper Driving	1 0
3026409	1/4/07	19:25	John S Gibson Boulevard & Figueroa Street	500'	South	Hit Object	Fixed Object	North	Ran Off Road			Unsafe Speed	3 0
3147805	3/28/07	23:40	John S Gibson Boulevard & Figueroa Street	1320'	West	Head-On	Other Motor Vehicle	West	Making U Turn	West	Proceeding Straight	Driving Under Influence	1 0
3153353	4/9/07	11:25	John S Gibson Boulevard & Figueroa Street	0'	In Int.	Sideswipe	Other Motor Vehicle	East	Changing Lanes	East	Changing Lanes	Unsafe Lane Change	1 0
3220623	4/20/07	16:30	John S Gibson Boulevard & Figueroa Street	150'	West	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Slowing/Stopping	Unsafe Speed	2 0
3266600	6/28/07	18:20	John S Gibson Boulevard & Figueroa Street	928'	South	Head-On	Other Motor Vehicle	North	Traveling Wrong Way	South	Proceeding Straight	Unsafe Speed	1 1
3359932	8/20/07	10:50	John S Gibson Boulevard & Figueroa Street	0'	In Int.	Sideswipe	Other Motor Vehicle	East	Changing Lanes	East	Proceeding Straight	Unsafe Lane Change	0 0
3370084	9/14/07	16:40	Harry Bridges Boulevard & Figueroa Street	0'	In Int.	Broadside	Other Motor Vehicle	East	Slowing/Stopping	North	Proceeding Straight	Traffic Signals and Signs	0 0
3414754	9/22/07	02:30	John S Gibson Boulevard & Figueroa Street	276'	West	Hit Object	Fixed Object	West	Proceeding Straight			Other	3 0
3457151	10/16/07	17:00	Harry Bridges Boulevard & Figueroa Street	0'	In Int.	Broadside	Other Motor Vehicle	East	Making Left Turn	West	Proceeding Straight	Auto RW Violation	0 0
3608042	1/6/08	22:00	Harry Bridges Boulevard & John S Gibson Boulevard	2288'	East	Vehicle - Pedestrian	Pedestrian	West	Proceeding Straight	Not Stat	Proceeding Straight	Other Improper Driving	1 0
3834584	7/8/08	16:35	Figueroa Street & Harry Bridges Boulevard	8'	South	Hit Object	Fixed Object	South	Making Left Turn			Unsafe Speed	0 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil. Ver.
3859154	8/4/08	17:50	John S Gibson Boulevard & Figueroa Street	1728'	South	Head-On	Other Motor Vehicle	South	Proceeding Straight	North	Proceeding Straight	Wrong Side of Road	3	0
3896292	8/16/08	07:05	Harry Bridges Boulevard & Figueroa Street	51'	East	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped in Road	Unsafe Speed	1	0
4071732	9/13/08	08:00	John S Gibson Boulevard & Figueroa Street	1000'	West	Hit Object	Fixed Object	East	Proceeding Straight	East	Proceeding Straight	Unsafe Speed	1	0
4018793	10/24/08	16:50	John S Gibson Boulevard & Figueroa Street	0'	In Int.	Hit Object	Fixed Object	West	Proceeding Straight	West	Proceeding Straight	Unsafe Speed	1	0
4007713	11/24/08	17:10	Harry Bridges Boulevard & Figueroa Street	0'	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	East	Proceeding Straight	Auto R/W Violation	2	0
4035739	12/17/08	06:50	John S Gibson Boulevard & Figueroa Street	34'	West	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Proceeding Straight	Driving Under Influence	2	0

ATTACHMENT H

TMP DATA SHEET

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

(Preliminary TMP Elements and Costs)

Co/Rte/PM 07-LA-110 PM 2.5/3.0 EA 264800 Alternative No. Build Alternative

Project Limit I-110 between 0.30 miles south of C Street and 0.20 miles north of C Street

Project Description C Street//I-110 Freeway Improvements

1) Public Information

<input checked="" type="checkbox"/> a. Brochures and Mailers	<u>\$ 10,000</u>
<input checked="" type="checkbox"/> b. Press Release	
<input type="checkbox"/> c. Paid Advertising	<u>\$</u>
<input type="checkbox"/> d. Public Information Center/Kiosk	<u>\$</u>
<input checked="" type="checkbox"/> e. Public Meeting/Speakers Bureau	<u>\$ 8,000</u>
<input type="checkbox"/> f. Telephone Hotline	
<input checked="" type="checkbox"/> g. Internet	
<input type="checkbox"/> h. Others _____	<u>\$</u>

2) Motorists Information Strategies

<input type="checkbox"/> a. Changeable Message Signs (Fixed)	<u>\$</u>
<input checked="" type="checkbox"/> b. Changeable Message Signs (Portable)	<u>\$ 120,000</u>
<input checked="" type="checkbox"/> c. Ground Mounted Signs	<u>\$ 40,000</u>
<input type="checkbox"/> d. Highway Advisory Radio	<u>\$</u>
<input type="checkbox"/> e. Caltrans Highway Information Network (CHIN)	
<input type="checkbox"/> f. Others _____	<u>\$</u>

3) Incident Management

<input checked="" type="checkbox"/> a. Construction Zone Enhanced Enforcement Program (COZEEP)	<u>\$ 304,000</u>
<input checked="" type="checkbox"/> b. Freeway Service Patrol	<u>\$ 69,600</u>
<input type="checkbox"/> c. Traffic Management Team	
<input type="checkbox"/> d. Helicopter Surveillance	<u>\$</u>
<input type="checkbox"/> e. Traffic Surveillance Stations (Loop Detector and CCTV)	<u>\$</u>
<input checked="" type="checkbox"/> f. Others <u>CHP Traffic Handling</u>	<u>\$ 79,200</u>

4) Construction Strategies

<input checked="" type="checkbox"/> a. Lane Closure Chart	
<input type="checkbox"/> b. Reversible Lanes	
<input checked="" type="checkbox"/> c. Total Facility Closure	
<input type="checkbox"/> d. Contra Flow	
<input type="checkbox"/> e. Truck Traffic Restrictions	\$
<input type="checkbox"/> f. Reduced Speed Zone	\$
<input checked="" type="checkbox"/> g. Connector and Ramp Closures	
<input type="checkbox"/> h. Incentive and Disincentive	\$
<input type="checkbox"/> i. Moveable Barrier	\$
<input checked="" type="checkbox"/> j. Others <u>Temporary Traffic Signal</u>	\$ 50,000

5) Demand Management

<input type="checkbox"/> a. HOV Lanes/Ramps (New or Convert)	\$
<input type="checkbox"/> b. Park and Ride Lots	\$
<input type="checkbox"/> c. Rideshare Incentives	\$
<input type="checkbox"/> d. Variable Work Hours	
<input type="checkbox"/> e. Telecommute	
<input type="checkbox"/> f. Ramp Metering (Temporary Installation)	\$
<input type="checkbox"/> g. Ramp Metering (Modify Existing)	\$
<input type="checkbox"/> h. Others _____	\$

6) Alternative Route Strategies

<input type="checkbox"/> a. Add Capacity to Freeway Connector	\$
<input type="checkbox"/> b. Street Improvement (widening, traffic signal... etc)	\$
<input type="checkbox"/> c. Traffic Control Officers	\$
<input type="checkbox"/> d. Parking Restrictions	
<input type="checkbox"/> e. Others _____	\$

7) Other Strategies

<input type="checkbox"/> a. Application of New Technology	\$
<input type="checkbox"/> e. Others _____	\$

TOTAL ESTIMATED COST OF TMP ELEMENTS = \$ 680,800

Project Notes:

The project includes closing C Street and converting into a cul-de-sac at its junction with Figueroa Street. I-110 northbound off ramp would be modified to connect with the new Harry Bridges Boulevard realignment. I-110 northbound on ramp would be modified. Harry Bridges Boulevard would be realigned between Hawaiian Ave and I-110. John S. Gibson Boulevard would be realigned between Sta. 41+26 and Sta. 55+65.

CHANGEABLE MESSAGE SIGN (PORTABLE):

It is assumed that a total of six portable Changeable Message Signs (CMS) would be used for this project. 2 of them are going to be used for weekends and nights closures of connectors, ramps and local streets in stages 1, 2 and 3 and the other 4 will be used for signing the detour. The total estimated cost for 16 months construction is \$120,000 (6@20,000/each).

GROUND MOUNTED SIGN:

It is assumed that approximately 100 ground mounted signs would be needed at a cost of \$400 per sign.

STAGE CONSTRUCTION:

Construction is to be completed in 3 stages:

During Stage 1, the new NB off-ramp bridge structure would be constructed over active Figueroa Street. The ramp approach from I-110 to new NB off-ramp bridge abutment number 1 would be constructed, including Union Oil Bridge widening and retaining wall construction. The construction would be performed for new John S. Gibson roadway improvements between C-Street and existing John S. Gibson/Harry Bridges Boulevard; and for new Harry Bridges Boulevard between Figueroa Street and existing Harry Bridges Boulevard. Cul-de-sac would be constructed on west end of C Street. Temporary intersections would be constructed for new John S. Gibson (south)/existing John S. Gibson/Harry Bridges Boulevard and new John S. Gibson (north)/existing Figueroa Street. A temporary connection would be constructed between new and existing Harry Bridges Boulevard. The aerial utilities would be relocated from existing Figueroa Street to new John S. Gibson Blvd. and from existing Harry Bridges Boulevard to new Harry Bridges Boulevard.

During Stage 2, the traffic would be transferred onto the newly constructed John S. Gibson Blvd. The existing Harry Bridges Boulevard between existing Figueroa Street and new NB ramp terminus would be closed. The subsurface utilities within existing Harry Bridges Boulevard would be relocated. The ramp approach (east of new bridge) to Harry Bridges Boulevard would be constructed and the new I-110 northbound off-ramp would be opened for vehicular traffic.

During Stage 3, the existing NB off-ramp would be demolished. The night-time closures of NB on-ramp would be implemented so that the construction of this ramp can take place. The permanent Figueroa/Harry Bridges/John S Gibson intersection improvements would be implemented. The CPUC vehicular grade crossing at the existing Trapac terminal entrance would be removed. The temporary intersection improvements at John S. Gibson/Harry Bridges Boulevard (exist) would be removed. The landscaping and irrigation would be restored.

LONG TERM CLOSURES:

There will be long term I-110 NB shoulder closures during the construction within the project limit. Thus, we have included Freeway Service Patrol as a part of the TMP.

COZEEP:

It is assumed that CHP enforcement will occur at 5 times a week for a total of 40 hours a week per officer. Using two officers for a 16 month construction period, the total hours are $40 \times 2 \text{ hrs} \times 52 \text{ weeks} \times 1.33 \text{ years} = 5533 \text{ hours total}$.

$\$55/\text{Officer}/\text{Hour}$ (per 8 hour shift) per 2 cars. ($\$55 \text{ times } 5,533 \text{ hrs} = \$304,000$)

CHP Traffic Handling:

It is assumed 90 days of overnight and weekend closures at connectors, ramps and local streets for the duration of construction. 2 CHP officers are assumed at 8 hours per overnight closures per officers per location. $90 \text{ days} \times 8 \text{ hours} \times 2 \text{ officers} = 1440 \text{ hours}$

$\$55/\text{Officer}/\text{Hour}$ (per 8 hour shift) per 2 cars. ($\$55 \text{ times } 1440 \text{ hrs} = \$79,200$)

FREEWAY SERVICE PATROL (FSP):

It is assumed about 16 month construction period for the I-110 NB Auxiliary lane and retaining wall construction.

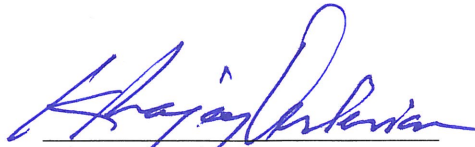
FSP cost were determined as follows:

FSP Truck service: 6 hrs/day during peak hour weekday.

$(6 \text{ hrs} \times 7 \text{ days per week} \times 52 \text{ weeks} \times 1.33 \text{ years} = 2900 \text{ hrs})$

$\$40 \text{ hr}/\text{truck} \times 2900 \text{ hrs} = \$116,000$

Assume 60% for FSP support cost, $\$116,000 \times 60\% = \$69,600$


Khajag Derderian, TE

4/14/2010
DATE

PREPARED BY

APPROVAL RECOMMENDED BY

DATE

APPROVED BY

DATE

ATTACHMENT I

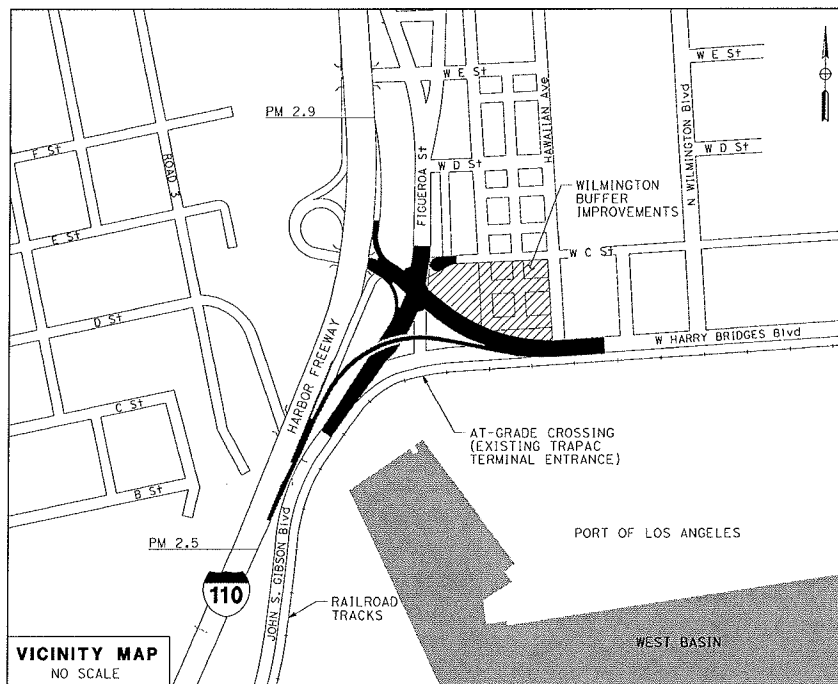
ADVANCE PLANNING STUDIES

C Street/ Interstate 110 Access Ramp Improvement Project

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 – LA – 110 (PM 2.5/3.0)
Between the Cities of San Pedro and Wilmington
EA 07-26480K

Advance Planning Study Harry Bridges Boulevard UC (53-3048)

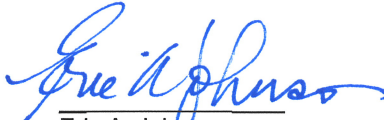
Prepared by HDR for the
State of California Department of Transportation
in coordination with the Port of Los Angeles

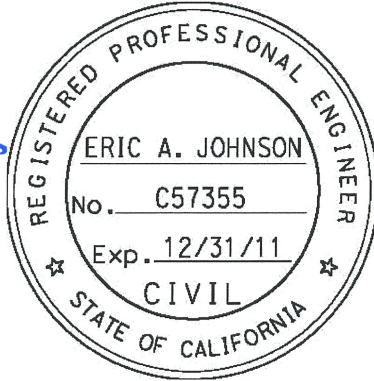


March 18, 2010



This Advance Planning Study 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.


Eric A. Johnson



March 18, 2010
Date

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Chapter 1 Proposed Project

1.1 Introduction

The Port of Los Angeles (POLA), in conjunction with the California Department of Transportation District 07 (Department) proposes to improve the Interstate 110 (I-110)/C Street interchange, in the City of Los Angeles. The improvements are intended to increase traffic circulation and reduce queuing of trucks on local roadways by providing a more direct route between I-110 and the POLA terminals. The proposed improvements include the reconfiguration of the northbound off-ramp to directly access Harry Bridges Boulevard, modification of the northbound on-ramp, realignment of Harry Bridges Boulevard, and combining the I-110 ramp termini/C Street/Figueroa Street intersection with the John S. Gibson Boulevard/Harry Bridges Boulevard/Figueroa Street intersection.

The significant structures affected by this project include the following:

- Harry Bridges Boulevard Undercrossing (53-3048)
- Union Oil Undercrossing (53-1033)
- Retaining Wall No. 318
- Retaining Wall No. 320

This Advanced Planning Study documents the assumptions and design considerations for the Harry Bridges Boulevard Undercrossing (53-3048).

1.2 Existing Structures

- **Union Oil Road Undercrossing (53-1033)**

The Union Oil UC (53-1033) was constructed in 1956. The existing structure is a Reinforced Concrete Slab Bridge according to the as-built plans.

In 1992, I-110 was widened to provide four 12-foot wide mixed flow lanes with 10-foot wide right and left shoulders in each direction of travel. The Union Oil UC was widened as part of these improvements. The widening of the Union Oil UC consisted of a Reinforced Concrete Slab per available as-built records.

- **Retaining Wall No. 318**

Retaining Wall No. 318 was constructed in 1956. The wall extends north from Abutment 2 of the Union Oil Overhead (53-977) to Abutment 1 of the Union Oil Undercrossing (53-1033). The wall is broken down into segments as follows:

- From Abutment 2 of the Union Oil Overhead at station 316+52.10 to approximately station 318+10.00 of the as-built plans, the retaining wall is a Type 4 Counterfort retaining wall. The height of the Type 4 wall ranges from 32 to 36 feet.
- From the end of the counterfort wall (sta. 318+10.00) to approximately station 318+90.00 of the as-built plans, Retaining Wall No. 318 is a Standard Type 2 retaining wall with heights varying from 24 to 28 feet.
- From approximately station 318+90.00 to station 320+80.00, the retaining wall is a Standard Type 1 Retaining Wall with heights varying from 10 to 22 ft.
- From station 320+80.00 to Abutment 1 of the Union Oil Undercrossing, the retaining wall is a Type 2 retaining wall with heights of 24 and 26 feet.

Retaining Wall No. 318 was reconstructed as part of the widening of I-110 in 1992. From approximately station 318+59.1 of the as-built plans to Abutment 1 of Union Oil Undercrossing, the existing retaining wall stem and footing were removed. The existing piles remained. The Type 4 Counterfort retaining wall and the Type 2 retaining wall up to approximately station 318+59.1 discussed previously were maintained.

Behind the remaining Type 2 and Type 4 walls, an anchor slab was constructed. The anchor slab is approximately 200'-0" long and 23'-6" wide. It rests on and cantilevers over the existing retaining wall. The back side of the slab comprises of a grade beam that rests on driven "H" piles for vertical support. There are ties that anchor the grade beam for lateral support also.

Beyond station 318+59.10 of the as-built plans, a Type 1 retaining wall was built approximately 70'-6" from the centerline of I-110 which replaced the original retaining wall.

1.3 Proposed Structures

- **Harry Bridges Boulevard Undercrossing (53-3048)**

This new 500-foot bridge structure is proposed to span over John S. Gibson Boulevard. The bridge will accommodate a single lane off-ramp from I-110 and will directly connect to Harry Bridges Boulevard. The ramp will provide a 12-foot wide travel lane with a 12-foot wide right shoulder and a 2-foot wide left shoulder. A standard Type 736 barrier is proposed along the right edge of shoulder, and a standard Type 742 barrier is proposed along the left edge of shoulder.

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This is a single span reinforced concrete slab structure with a span length of 38'-6". It carries both northbound and southbound I-110 traffic. The proposed widening is along the east end of the structure and is necessary to accommodate the new northbound off-ramp to Harry Bridges Boulevard. The existing structure will be widened an average of 20'-0". The widened section connects to the existing deck through a closure pour, consisting of the traffic lane, shoulder, and a Type 732 concrete barrier.

- **Retaining Wall No. 318**

Retaining Wall No. 318 is a modified wall that is approximately 241' - 10 ³/₄" long that is necessary to accommodate the new northbound off-ramp to Harry Bridges Boulevard. Approximately 72 feet will be a specialized wall with stiffeners. Approximately 96 feet will be a modified Caltrans Type 1 wall with its foundation integrated with the existing retaining wall foundation, and approximately 74 feet will be a Caltrans Type 1 wall on pile foundation. All will support a standard Caltrans Type 732A concrete barrier.

- **Retaining Wall No. 320**

Retaining Wall No. 320 is a Standard Type 1 retaining wall that is approximately 153'-8 ³/₄" long. The structure is necessary to accommodate the new northbound off-ramp to Harry Bridges Boulevard. The wall will be a Caltrans Type 1 wall on a pile foundation which will support a Caltrans Standard Type 732A concrete barrier.

Chapter 2 Harry Bridges Boulevard UC (53-3048)

2.1 Design Memo

2.1.1 Structure Type

The proposed bridge is a four-span, cast-in-place/prestressed (CIP/PS) concrete box girder bridge at approximately 500'-0" in length. The bridge has a radius of 600 feet with a 12 percent crossfall. The structure is continuous along the entire length of the bridge. The bridge span lengths are 100'-0" at Span 1, 150'-0" at Span 2, and 125'-0" at Spans 3 and 4. The structure depth is approximately 6'-0", which gives the bridge a maximum depth to span ratio of 0.04. The structure has a 2 to 1 (vertical to horizontal) exterior shape. A standard type 736 barrier is proposed along the right edge of shoulder, and a standard type 742 barrier is proposed along the left edge of shoulder.

The proposed abutments are seat type founded on 24" CISS piles, and the columns at the bents are 5'-6" type 1 octagonal columns on 24" CISS piles.

2.1.2 Clearances

The minimum vertical clearance along the proposed bridge at John S. Gibson Boulevard is approximately 20.01'. It is higher than the standard 15'-0" minimum vertical clearance due to the fact that the future John S. Gibson Boulevard is part of the ExtraLegal Load Network Corridor. The ExtraLegal Load Network is a Caltrans supported network which is used by extralegal permit vehicles up to 20' in height.

2.1.3 Falsework Issues

Falsework will be required for constructing the fourth span of the superstructure over the existing Figueroa Street. According to the Department's *Highway Design Manual*, Section 204.8 and the *Bridge Design Aids*, pg. 10-4, the minimum vertical falsework clearance over Figueroa Street shall be 15'-0".

The minimum vertical clearance of the proposed bridge over Figueroa Street is 16'-7 3/4". The falsework traffic opening for the proposed bridge is 28'-0". The calculated required falsework depth for a 28'-0" traffic opening is 1'-8 1/4". In addition, approximately 3" of existing roadway will be ground to provide additional clearance.

2.1.4 Impact on Existing Utilities

Existing utilities within or near the bridge have been identified. The location of the column and footing at Bent 2 has been adjusted in order to protect in place six existing oil lines. An existing gas line lies within the location of the footing at Bent 4, and will be relocated. An existing oil line also lies near the proposed footing of Bent 4 and will be protected in place.

2.1.5 Aesthetics

The design will conform to the Corridor Aesthetics Guidelines with the following aesthetic requirements:

- Fractured fin texture on columns
- Fractured fin texture on exterior faces of concrete barriers
- Fractured fin texture on abutment walls and retaining walls

The added cost for these aesthetic treatments has been included as incidental to project contingencies in the cost estimate.

2.1.6 Geotechnical Issues

The site vicinity is underlain by up to 9,000 to 11,000 feet of Tertiary and Quaternary sediments, which have filled the presently subsiding basin since Miocene time (approximately 24 million years ago). According to CDMG (1998), old Quaternary alluvium (Qoa), consisting of sand, silt, clay and gravel, directly underlies the Project site. In addition, an isolated are, underlain by Pleistocene to Holocene nonmarine terrace deposits (Qter), is present near the I-110 freeway and John S. Gibson Boulevard. These nonmarine terrace deposits consist of calcareous sands, shell fragments and scattered gravels and cobbles. Man-made fill materials are also reported to be present east of the I-110 Freeway and south of C Street. According to Group Delta Consultants (GDC; 2007), the man-made materials are up to 10 to 15 feet thick and were placed in the area as a part of harbor development and to reach the current grade.

The site conditions were characterized by an idealized profile. The subsurface soils at the site chiefly consisted of varying thicknesses of sands and silty sands to the bottom of the borings and CPTs. The subsurface soils at the site were classified as soil profile C in accordance with seismic design criteria (SDC; Caltrans, 2009d). However, site-specific liquefaction analyses indicated that some of the subsurface soils have the potential to liquefy during a design seismic event. Based on the magnitude of the liquefaction-induced settlement, the depth from the existing surface and the thickness of liquefiable layers, discontinuity of the liquefiable layers, and consultation with a Caltrans seismic specialist (Islam, 2009), for the preliminary design purposes soil profile type D is recommended. Based on the correlations to shear wave velocity for the upper 30 meters (100 feet) of soils (V_{s30}) to the standard penetration test (SPT) values, a shear wave velocity value of 340 meters per second (m/s) was calculated. The SPT values considered the correlations to the non-standard samplers to the standard sampler and hammer efficiency.

Groundwater was detected in the borings (R-09-013 and R-09-014) to elevations of approximately +1 to 0 feet MSL. However, the depth to historically-highest groundwater levels is judged to be approximately 10 feet bgs (CDMG, 1998), which corresponds to an elevation +3 feet MSL.

Four sets of corrosion tests were conducted for selected soils samples obtained during the current subsurface investigation for the Project. Based on Caltrans corrosion guidelines (Caltrans, 2003), a corrosive environment was present to the structural elements. It is recommended that a corrosion specialist be consulted.

Several foundation types were reviewed for the Harry Bridges Boulevard Undercrossing. They were:

- Precast/Prestressed Driven Piles
- Small Diameter CIDH Piles
- Large Diameter CIDH Piles
- Driven “H” Piles
- Driven CISS Piles

Driven precast/prestressed driven piles were considered unfavorable because hard driving is anticipated.

The CIDH options were eliminated because the area has a high water table and potential caving during drilling is high. There may be large down-drag forces on the piles from the liquefiable layer(s), the piles will have no end bearing capacity, and the piles will require long shaft lengths. CIDH is not an option where battered piles are typically required, such as at abutments and retaining walls.

The CISS pile option was selected over the “H” piles because of their larger surface area, and larger axial and lateral capacities. Shorter lengths are typically found when comparing CISS piles against CIDH piles. A review of similar projects in the area suggests CISS piles are the preferred foundation type.

2.1.7 Seismic Design

The site is located within a seismic active region. The PGA for the Project site was shown to be in between 0.6g and 0.7g in the Caltrans deterministic PGA map (Caltrans 2007). The deterministic PGA does not incorporate any site correction factors such as soil amplification and near fault factor. Therefore, the deterministic PGA based on this map should not be used for final seismic analysis or design. Based on the current Caltrans seismic design procedure, the PGA for the site was calculated to be 0.6g. The current procedure considers both deterministic and probabilistic approaches. The new generation attenuation (NGA) relationships were used to determine the spectral accelerations. Basin effect (depth to rock, $Z_{1.0}$, and $Z_{2.5}$), near fault effects, and hanging/footing wall effects were considered in the NGA models.

A concealed trace of Palo Verdes fault was reported to be located 1,000 feet from the Project site (Bryant et al., 1987). However, it is understood based on discussions with Caltrans seismic experts that for the ground motion study, the available tools and response spectrum spreadsheets are adequate to determine the site response analysis.

The Project site was located within a California designated liquefaction CGS seismic hazard zone. The potential for soil liquefaction at the site was evaluated using procedures suggested by Idriss and Boulanger et al. (2008). Based on the analyses, some of the loose to medium-dense sands and silts below the groundwater will liquefy during or after the design earthquakes.

No known active faults were located within the Project site boundaries, and the Project site was not located within the Alquist-Priolo Earthquake Fault Zone (APEFZ; CDMG, 1999). However, a possible concealed trace of the Palos Verdes fault within 1,000 feet of the proposed bridge site

was reported (Bryant et al., 1987). Therefore, the possibility of surface rupture at the proposed bridge site is considered to be low.

Design of the Harry Bridges Boulevard UC structure will follow the AASHTO LRFD Design Specification, 2007 4th Edition with latest Caltrans Supplements. Design live load shall include HL93 with permit loads. Load combinations shall follow the CT-AASHTO LRFD Code Section 3.4.1. Seismic evaluation and design will be in accordance with the Caltrans Seismic Design Criteria (SDC) Version 1.4, dated June 2006 and applicable portions of Bridge Memo to Designers 20-4.

2.1.8 Hazardous Materials

Based on the results of limited, random environmental screening of soil samples obtained during the Phase II environmental investigation, it appears there is the potential for subsurface soils at some locations to be impacted by petroleum hydrocarbons associated with the petroleum refinery located northwest (up gradient) of the Project area. For additional information, see DYA's Phase II Hazardous Waste Investigation report (DYA, 2009).

DYA recommends that spoils from deep excavations (i.e. cast-in-drilled-hole [CIDH], or cast-in-steel-shell [CISS] pile foundations) be stockpiled and secured as potential regulated waste pending environmental evaluation and laboratory testing to determine appropriate disposal or reuse of the excavated soils.

2.1.9 Construction Considerations

A preliminary constructability review was performed. No special construction requirements or limited site access is recommended at this time.

2.1.10 Cost

The total cost for the bridge is \$3,620,000, which includes 10% mobilization and 25% contingency. See Section 2.3, Planning Cost Estimate, for bridge cost estimates.

2.2 APS CHECKLIST

Consultant Prepared Advance Planning Study (APS) Checklist

Sheet 1 of 2

Date: 3/18/2010	Consultant Firm (for structures): HDR Engineering, Inc.	Phone No: (714) 730-2300
Designed by: Eric A. Johnson, P.E.		Phone No: (714) 368-5664
EA: 07-26480K	County: Los Angeles	Rte: I-110
PM 2.5/3.0		
Project Description: C Street - Interstate 110 Access Ramps Improvements		
Bridge No(s): 53-3048S	Bridge Name(s): Harry Bridges Boulevard Undercrossing	
Total number of bridges in project: 2 + Retaining Wall		APS Alternative Letter or Number (if more than one):
Purpose of this APS: Initial APS Cost & Feasibility <input checked="" type="checkbox"/> Revised scope <input type="checkbox"/> Update cost <input type="checkbox"/>		

Part A Items to collect and considerations prior to beginning the APS

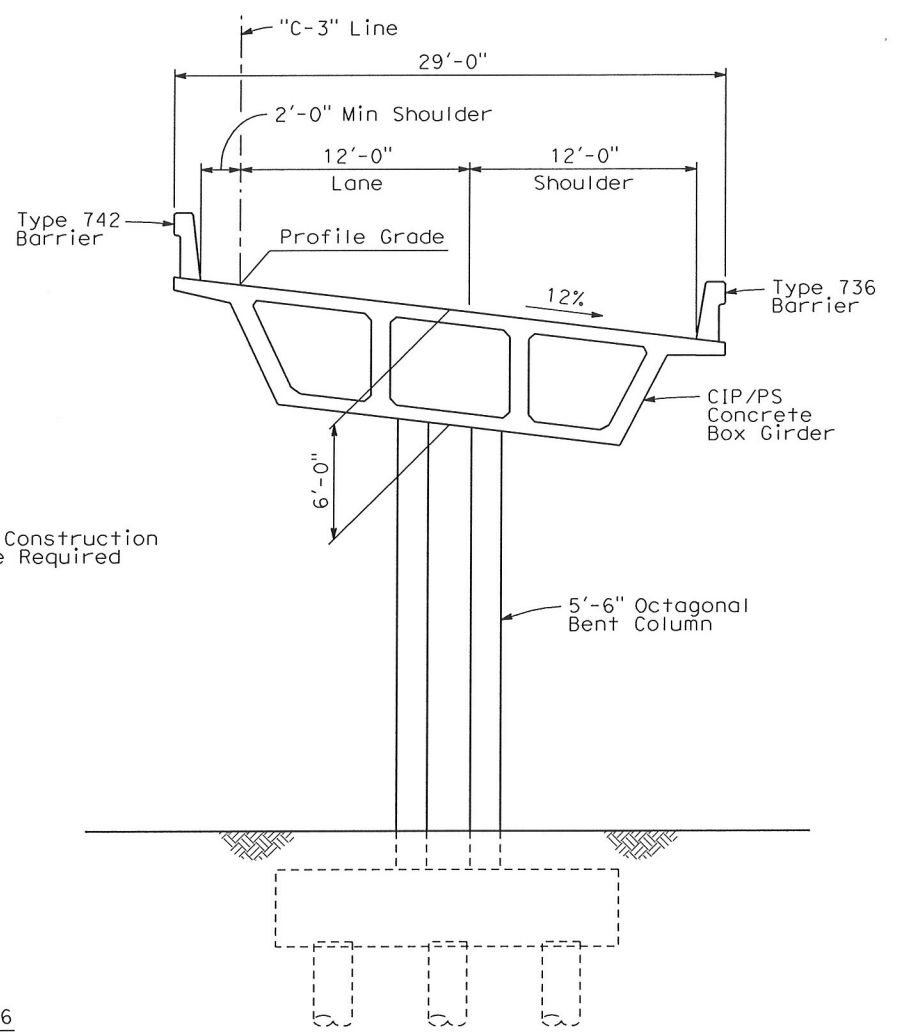
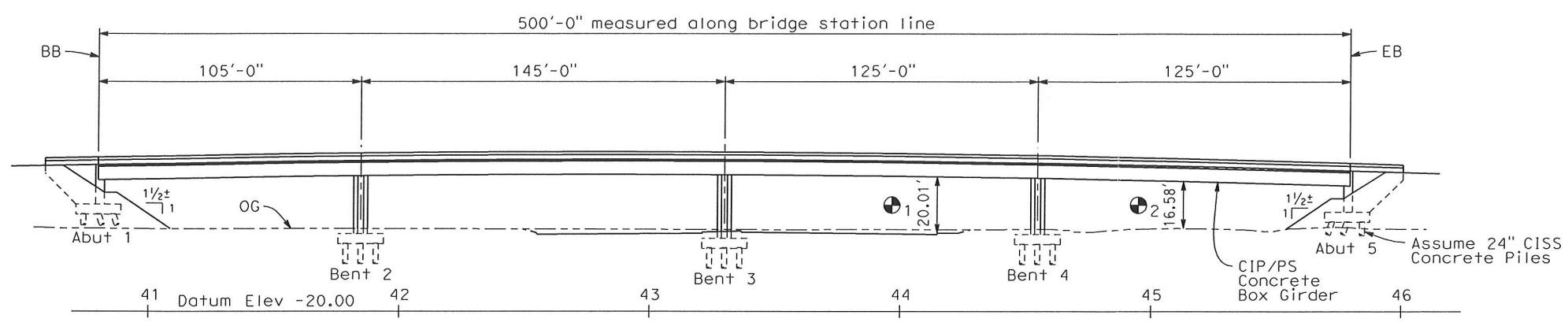
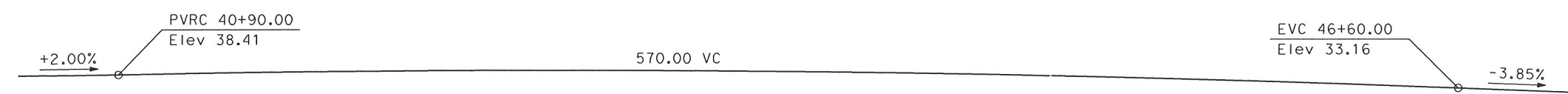
All items listed in Part A are to be made available and submitted if requested by the Liaison Engineer.
(Mark **N/A** if not applicable)

- Preliminary profile grade of proposed structure.
- Typical section of the proposed structure. (Including barrier type, sidewalks, cross slope %, etc.)
- Grades or spot elevations of roadway below the structure.
- Typical section of roadway below the structure. (Including shoulders, gutters, embankment slope.)
- Site map: including horizontal alignment of new structure and the roadway below, topo, contours, etc.
- N/A Stage construction or detour plan for traffic on the structure.
(number of lanes to remain open, Temp Railing, etc.)
- Stage construction or detour plan for the roadway below the structure.
(falsework openings for each stage and any restrictions.)
- "As Built" plans for existing structures.
- N/A Future widening plans of upper and lower roadway (verify with Route Concept Report).
- Site aerial photograph (at the proposed structure).
- Environmental and/or permit requirements (areas of potential impact, construction windows, etc.)
- Overhead and underground utility plans
- Any other information that you feel is necessary to complete the study. (Other concerns that may affect the APS: local agency requirements such as aesthetics, improvements in vicinity of structure, airspace usage, other obstructions, etc.)

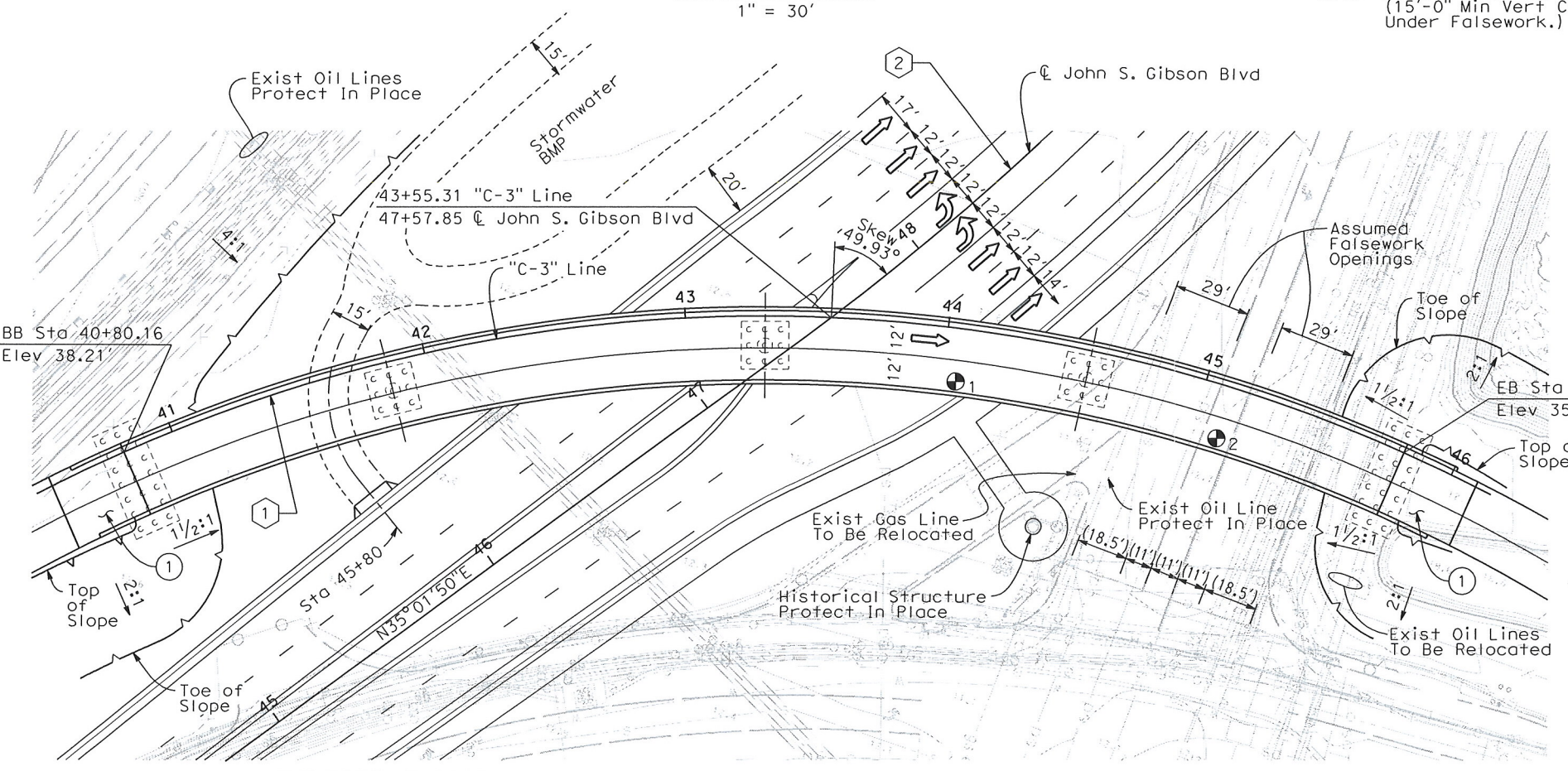
2.3 PLANNING COST ESTIMATE

2.4 APS BRIDGE GENERAL PLAN

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
7	LA	110	2.5/3.0
Port of Los Angeles 425 S. Palos Verdes Street San Pedro, CA 90731			
HDR Engineering, Inc. 3230 El Camino Real Suite 200 Irvine, CA 92602			



Note: Traffic Will Pass Through Construction (15'-0" Min Vert Clearance Required Under Falsework.)



CURVE DATA

① "C-3" Line	② John S. Gibson Blvd
R = 600'	R = 1000'
Δ = 73°50'44"	Δ = 32°53'36"
T = 450.87'	T = 295.20'
L = 773.31'	L = 574.10'

PLAN
1" = 30'

NOTE:
All Existing Utilities Not Identified As Relocated Shall Be Protected In Place.

NOTES:

- ① Approach Slab Type N(30S)

LEGEND

- Indicates New Construction
- - - Indicates Foundation or Hidden Lines
- ⊕1 Indicates Min Vert Clearance 20.01' (Structure)
- ⊕2 Indicates Min Vert Clearance 16.58' (Structure)
- ➔ Indicates Direction of Traffic

Date of Estimate:	08/27/2009
Structure Depth	6'-0"
Structure Length	500'-0"
Structure Width	29'-0"
Area	14,234.2 SF
Cost/SF including 10% Mobilization 25% Contingency	\$255
Total Cost	\$3,630,000

X *Patricia McCauley*
DESIGN OVERSIGHT
X *Mar 18, 2010*
SIGN OFF DATE

DESIGNED BY	D. PEAVEY	DATE	
DRAWN BY	E. GRAY	DATE	
CHECKED BY	E. JOHNSON	DATE	
APPROVED		DATE	

ERIC A. JOHNSON PROJECT ENGINEER	PLANNING STUDY	
	HARRY BRIDGES BOULEVARD UC	
	BRIDGE NO. 53-3048	CU
	SCALE: AS NOTED	EA 26480

2.5 PRELIMINARY FOUNDATION REPORT

Please refer to the Preliminary Foundation Report, Project No. 2008-055, by Diaz•Yourman & Associates dated October 28, 2009.

Chapter 3 **Conclusions**

Advanced Planning Studies are developed for budget purposes. The basic objective of such studies is to develop, as early as possible, a feasible type of structure, cost, and controls appropriate for the specific location. It is important that careful consideration be given to span lengths, structure depths, column locations, approach slabs, falsework requirements, and other controls. Design prepares a drawing of the structure showing all significant details that would affect the cost. Preliminary quantities are then determined using any of the aids found in the design aids provided by Caltrans.

Ideal studies capture the intent of what is required on the plan sheet and in the preliminary planning estimate. This includes the scope of the structure work in the project, provides structure depths for setting profile grade lines, establishes the best cost estimate available at the time, provides an early opportunity for the Office of Structure Design to assist in project conceptualization, and describes and documents the design assumptions used in the early concept of the structure.

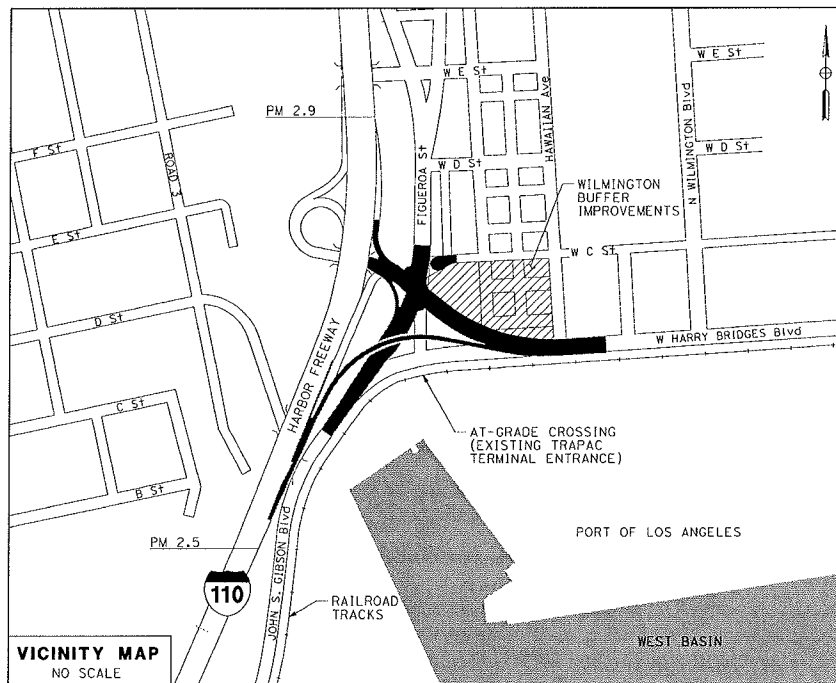
This Advance Planning Study was prepared in accordance with Caltrans requirements as stated in, but not limited to, the requirements set forth in Bridge Design Aids, Memo to Designers, Highway Design Manual, and other documents. It has identified the important items that are required for determining a reasonable cost for feasible construction.

C Street/ Interstate 110 Access Ramp Improvement Project

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 – LA – 110 (PM 2.5/3.0)
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Advance Planning Study Union Oil Road UC (53-1033)

Prepared by HDR for the
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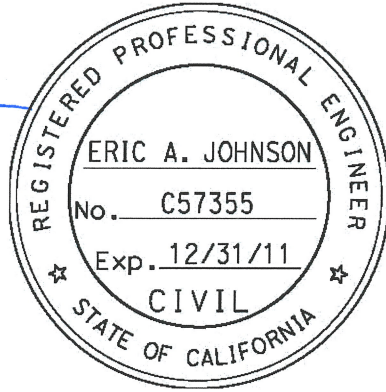


March 18, 2010



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March 18, 2010
Date

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Chapter 2 Union Oil Road UC (53-1033)

2.1 Design Memo

2.1.1 Structure Type

The proposed bridge is a cast-in-place reinforced slab bridge. The bridge is approximately 38'-6" in length with a 2 percent crossfall. The structure depth is approximately 2'-3", which matches the existing superstructure. The proposed abutments are diaphragm type founded on CISS battered piles.

2.1.2 Clearances

The minimum vertical clearance under the proposed bridge is approximately 21.81'. The minimum vertical clearance is located on the north side of Union Oil Road at the edge of the existing bridge.

2.1.3 Falsework Issues

Falsework will be required for constructing the slab superstructure over the existing Union Oil Road. According to the Department's *Highway Design Manual*, Section 204.8 and the *Bridge Design Aids*, pg. 10-4, the minimum falsework depth over Union Oil Road shall be 1'-9" for a 20'-0" traffic opening. Based on the above requirements, the temporary minimum vertical clearance will be 20.06', which is greater than the required minimum clearance of 15'-0".

2.1.4 Impact on Existing Utilities

Existing utilities within or near the bridge have not been identified at this time.

2.1.5 Aesthetics

The aesthetic requirements for the widening will match the as-built plans of the existing structure.

2.1.6 Geotechnical Issues

The site vicinity is underlain by up to 9,000 to 11,000 feet of Tertiary and Quaternary sediments, which have filled the presently subsiding basin since Miocene time (approximately 24 million years ago). According to CDMG (1998), old Quaternary alluvium (Qoa), consisting of sand, silt, clay and gravel, directly underlies the Project site. In addition, an isolated are, underlain by Pleistocene to Holocene nonmarine terrace deposits (Qter), is present near the I-110 freeway and John S. Gibson Boulevard. These nonmarine terrace deposits consist of calcareous sands, shell fragments and scattered gravels and cobbles. Man-made fill materials are also reported to be present east of the I-110 Freeway and south of C Street. According to Group Delta Consultants (GDC; 2007), the man-made materials are up to 10 to 15 feet thick and were placed in the area as a part of harbor development and to reach the current grade.

The site conditions were characterized by an idealized profile. The subsurface soils at the site chiefly consisted of varying thicknesses of sands and silty sands to the bottom of the borings and CPTs. The subsurface soils at the site were classified as soil profile C in accordance with seismic design criteria (SDC; Caltrans, 2009d). However, site-specific liquefaction analyses indicated that some of the subsurface soils have the potential to liquefy during a design seismic

event. Based on the magnitude of the liquefaction-induced settlement, the depth from the existing surface and the thickness of liquefiable layers, discontinuity of the liquefiable layers, and consultation with a Caltrans seismic specialist (Islam, 2009), for the preliminary design purposes soil profile type D is recommended. Based on the correlations to shear wave velocity for the upper 30 meters (100 feet) of soils (V_{s30}) to the standard penetration test (SPT) values, a shear wave velocity value of 340 meters per second (m/s) was calculated. The SPT values considered the correlations to the non-standard samplers to the standard sampler and hammer efficiency.

Ground water encountered in Boring R-09-012 at elevation -1 feet MSL. However, the depth to historically-highest groundwater levels is judged to be approximately 10 feet below the ground surface (CDMG, 1998), which corresponds to an elevation +3 feet MSL.

Two sets of corrosion tests were conducted for selected soils samples obtained during the current subsurface investigation for the Project. Based on Caltrans corrosion guidelines (Caltrans, 2003), a corrosive environment was present to the structural elements. Therefore, it is recommended a corrosion specialist be consulted.

Several foundation types were reviewed for the Union Oil Road Undercrossing. They were:

- Precast/Prestressed Driven Piles
- Small Diameter CIDH Piles
- Large Diameter CIDH Piles
- Driven “H” Piles
- Driven CISS Piles

Driven precast/prestressed driven piles were considered unfavorable because hard driving is anticipated.

The CIDH options were eliminated because the area has a high water table and potential caving during drilling is high. There may be large down-drag forces on the piles from the liquefiable layer(s), the piles will have no end bearing capacity, and the piles will require long shaft lengths. CIDH is not an option where battered piles are typically required, such as at abutments and retaining walls.

The CISS pile option was selected over the “H” piles because of their larger surface area, and larger axial and lateral capacities. Shorter lengths are typically found when comparing CISS piles against CIDH piles. A review of similar projects in the area suggests CISS piles are the preferred foundation type.

2.1.7 Seismic Design

The Project site is located within a seismic active region. The peak ground acceleration (PGA) for the Project site was shown to be in between 0.6g and 0.7g in the Caltrans deterministic PGA map (Caltrans 2007). The deterministic PGA does not incorporate any site correction factors such as soil amplification and near fault factor. Therefore, the deterministic PGA based on this map should not be used for final seismic analysis or design. Based on the current Caltrans seismic design procedures, the PGA for the site was calculated to be 0.6g. The current procedure considers both deterministic and probabilistic approaches. The new generation attenuation (NGA) relationships were used to determine the spectral accelerations. Basin effect (depth to rock, $Z_{1.0}$, and $Z_{2.5}$), near fault effects, and hanging/footing wall effects were considered in the NGA models.

As noted above, a concealed trace of the Palos Verdes fault was reported to be located 500 feet from the Project site (Bryant et al., 1987). However, it is understood based on discussions with Caltrans seismic experts that for the ground motion study, the available tools and response spectrum spreadsheets are adequate to determine the site acceleration response analysis.

The Project site was located within a California designated liquefaction CGS seismic hazard zone. The potential for soil liquefaction at the site was evaluated using procedures suggested by Idriss and Boulanger et al. (2008). Based on the analyses, some of the loose to medium-dense sands and silts below the groundwater will liquefy during or after the design earthquakes.

No known active faults were located within the Project site boundaries, and the Project site was not located within the Alquist-Priolo Earthquake Fault Zone (APEFZ; CDMG, 1999). However, a possibility of a concealed trace of the Palos Verdes fault within 500 feet of the proposed bridge site was reported (Bryant et al., 1987). Therefore, the possibility of surface rupture at the proposed bridge site is considered to be low.

Design of the Union Oil Road UC structure will follow the AASHTO LRFD Design Specification, 2007 4th Edition with latest Caltrans Supplements. Design live load shall include HL93 with permit loads. Load combinations shall follow the CT-AASHTO LRFD Code Section 3.4.1. Seismic evaluation and design will be in accordance with the Caltrans Seismic Design Criteria (SDC) Version 1.4, dated June 2006 and applicable portions of Bridge Memo to Designers 20-4.

2.1.8 Hazardous Materials

Based on the results of limited, random environmental screening of soil samples obtained during the Phase II environmental investigation, it appears there is the potential for subsurface soils at some locations to be impacted by petroleum hydrocarbons. Based on the presence of a high concentration of isopropylbenzene in one boring (R-09-012, referenced as B-1 in the Phase II environmental investigation report [DYA, 2009d]), the hydrocarbons appear to be associated with the petroleum refinery located northwest (up gradient) of the Project area. For additional information, see DYA's Phase II Hazardous Waste Investigation report (DYA, 2009).

DYA recommends that spoils from deep excavations (i.e., cast-in-drilled-hole [CIDH], or cast-in-steel-shell [CISS] pile foundations) be stockpiled and secured as potential regulated waste pending environmental evaluation and laboratory testing to determine appropriate disposal or reuse of the excavated soils.

2.1.9 Seismic Retrofit Recommendations

A preliminary seismic evaluation was performed on the existing structures. No retrofit modifications are recommended at this time.

2.1.10 Construction Considerations

A preliminary constructability review was performed. No special construction requirements or limited site access is recommended at this time.

2.1.11 Improvements

Review of the Department, *Structure Maintenance and Investigation Report*, dated 7/15/2008, indicates the need for the following improvements to the existing structure:

- Repair shallow spall with rebar exposed on northbound lane #4 near the departure slab
- Replace existing joint seals, type “A”, at both abutments

2.1.12 Cost

The total cost for the bridge is \$360,000, which includes 10% mobilization and 25% contingency. See Section 2.3, Planning Cost Estimate, for bridge cost estimates.

2.2 APS CHECKLIST

Consultant Prepared Advance Planning Study (APS) Checklist

Sheet 1 of 2

Date: 3/18/2010	Consultant Firm (for structures): HDR Engineering, Inc.	Phone No: (714) 730-2300
Designed by: Eric A. Johnson, P.E.		Phone No: (714) 368-5664
EA: 07-26480K	County: Los Angeles	Rte: I-110
Project Description: C Street - Interstate 110 Access Ramps Improvements		
Bridge No(s): 53-1033	Bridge Name(s): Union Oil Undercrossing	
Total number of bridges in project: 2 + Retaining Wall		APS Alternative Letter or Number (if more than one):
Purpose of this APS: Initial APS Cost & Feasibility <input checked="" type="checkbox"/> Revised scope <input type="checkbox"/> Update cost <input type="checkbox"/>		

Part A Items to collect and considerations prior to beginning the APS

All items listed in Part A are to be made available and submitted if requested by the Liaison Engineer.
(Mark **N/A** if not applicable)


- Preliminary profile grade of proposed structure.
- Typical section of the proposed structure. (Including barrier type, sidewalks, cross slope %, etc.)
- Grades or spot elevations of roadway below the structure.
- Typical section of roadway below the structure. (Including shoulders, gutters, embankment slope.)
- Site map: including horizontal alignment of new structure and the roadway below, topo, contours, etc.
- Stage construction or detour plan for traffic on the structure.
(number of lanes to remain open, Temp Railing, etc.)
- Stage construction or detour plan for the roadway below the structure.
(falsework openings for each stage and any restrictions.)
- "As Built" plans for existing structures.
- N/A Future widening plans of upper and lower roadway (verify with Route Concept Report).
- Site aerial photograph (at the proposed structure).
- Environmental and/or permit requirements (areas of potential impact, construction windows, etc.)
- Overhead and underground utility plans
- Any other information that you feel is necessary to complete the study. (Other concerns that may affect the APS: local agency requirements such as aesthetics, improvements in vicinity of structure, airspace usage, other obstructions, etc.)

Consultant Prepared Advance Planning Study (APS) Checklist

Sheet 2 of 2

Part B Considerations during the APS design and cost estimate preparation

- | | | | | |
|-------|---|--|---|--|
| 1. | Has this project been discussed with: | the OSFP Liaison Engineer? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | | the Caltrans District Project Manager? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | | the roadway consultant? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 2. | Have the Caltrans Structures Maintenance records been reviewed? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| | If the records recommend any work for the structure, is it included in the APS? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 3. | Are there special aesthetic considerations? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| <hr/> | | | | |
| 4. | (Widenings and Modifications) | | | |
| | Has this project been reviewed for seismic retrofit requirements? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | Are seismic retrofit requirements included in the APS? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 5. | Any special Railroad requirements? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | Shoofly required? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | Cost of shoofly included as a separate item in the project cost estimate? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| <hr/> | | | | |
| 6. | Any special foundation requirements, including scour critical work, special excavation such as Type A, Type D, and/or hazardous or contaminated material? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 7. | Any special construction requirements, including limited site accessibility or seasonal work? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| <hr/> | | | | |
| 8. | Other items to be included in the cost such as slope paving, approach slabs, and/or adjacent retaining walls? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 9. | Remove existing bridge? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | Total Deck Area: | | | |
| <hr/> | | | | |
| 10. | Any other unusual or special requirements? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| <hr/> | | | | |
| 11. | Provide and attach a consultant prepared Design Memo to summarize and document any important assumptions, discussions, decisions, unusual items, local agency requirements such as aesthetics, improvements in vicinity of the structure, airspace usage, other obstructions, or any items noted above. | Summary attached? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

Designer: (Printed Name) Eric A. Johnson, P.E.	Designer's Signature: 	Date: 3/18/2010
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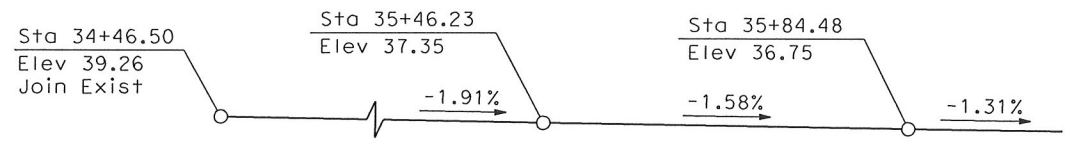
2.3 PLANNING COST ESTIMATE

2.4 APS BRIDGE GENERAL PLAN

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
7	LA	110	2.5/3.0

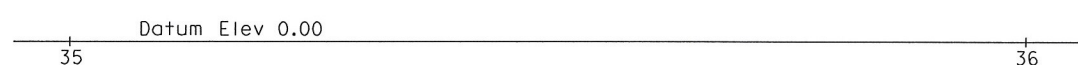
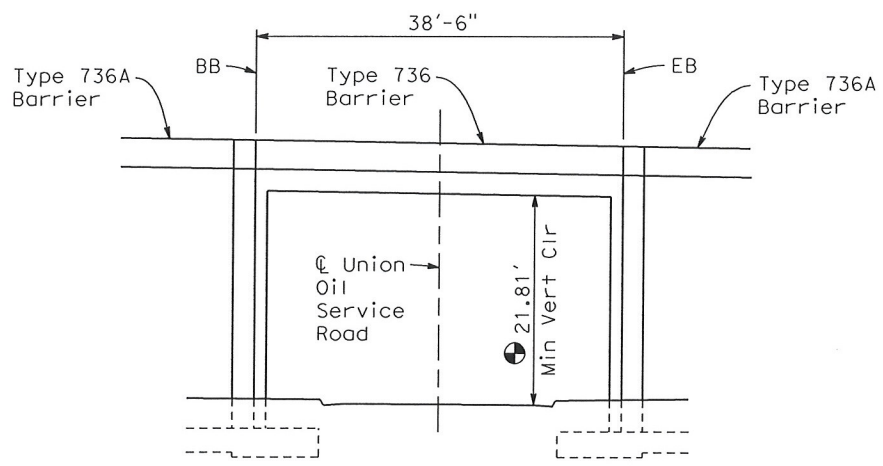
Part of Los Angeles
425 S. Palos Verdes Street
San Pedro, CA 90731

HDR Engineering, Inc.
3230 El Camino Real
Suite 200
Irvine, CA 92602



PROFILE

No Scale
@ "C-3" Line

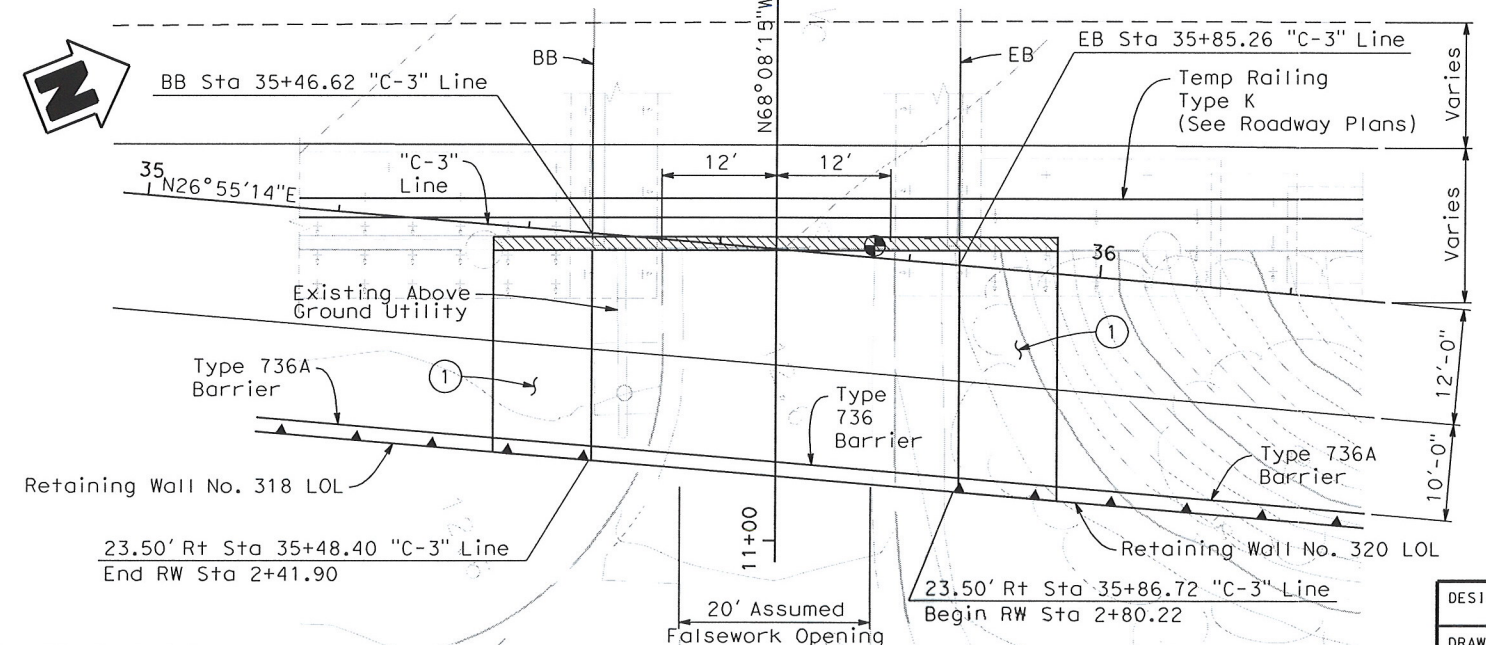
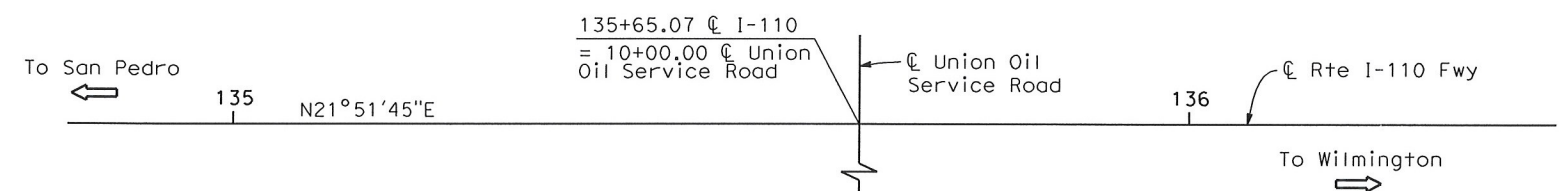


ELEVATION

1" = 10'-0"

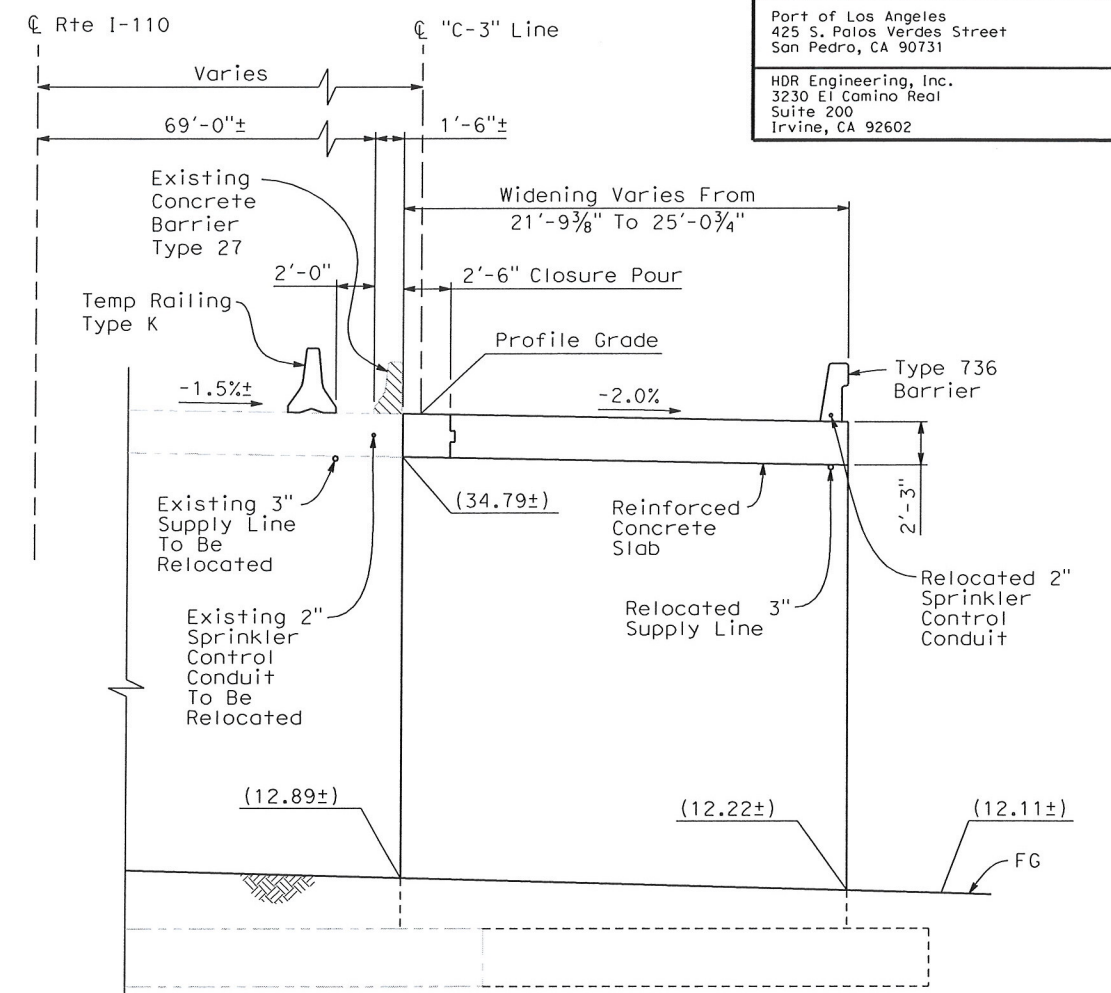
Note: Piles Not Shown For Clarity

Note: Traffic Will Pass Through Construction (15'-0" Min Vert Clearance Required Under Falsework.)



PLAN

1" = 10'-0"



CROSS SECTION

1" = 5'-0"

Note: Piles Not Shown For Clarity

NOTES:

- ① Approach Slab Type EQ(10).

LEGEND

- Indicates Exist Bridge Removal
- Indicates New Construction
- Indicates Foundation or Hidden Lines
- Indicates Existing Structure
- Indicates Min Vert Clearance 21.81' (Exist And Proposed)
- Indicates Direction of Traffic

Date of Estimate: 09/03/2009	
Structure Depth (Average)	2'-3"
Structure Length	38'-6"
Structure Width	23'-5" Average Total
Area	901.8 SF
Cost/SF including 10% Mobilization 25% Contingency	\$432
Total Cost	\$390,000

DESIGNED BY	D. PEAVEY	DATE	
DRAWN BY	E. GRAY	DATE	
CHECKED BY	E. JOHNSON	DATE	
APPROVED		DATE	

PLANNING STUDY	
UNION OIL UC WIDENING	
BRIDGE NO. 53-1033	CU
SCALE: AS NOTED	EA 26480

X *Patricia McCauley*
DESIGN OVERSIGHT
X *Mar 18, 2010*
SIGN OFF DATE

2.5 PRELIMINARY FOUNDATION REPORT

Please refer to the Preliminary Foundation Report, Project No. 2008-055, by Diaz•Yourman & Associates dated October 27, 2009.

2.6 BRIDGE AS-BUILT PLANS

Chapter 3 Conclusions

Advanced Planning Studies are developed for budget purposes. The basic objective of such studies is to develop, as early as possible, a feasible type of structure, cost, and controls appropriate for the specific location. It is important that careful consideration be given to span lengths, structure depths, column locations, approach slabs, falsework requirements, and other controls. Design prepares a drawing of the structure showing all significant details that would affect the cost. Preliminary quantities are then determined using any of the aids found in the design aids provided by Caltrans.

Ideal studies capture the intent of what is required on the plan sheet and in the preliminary planning estimate. This includes the scope of the structure work in the project, provides structure depths for setting profile grade lines, establishes the best cost estimate available at the time, provides an early opportunity for the Office of Structure Design to assist in project conceptualization, and describes and documents the design assumptions used in the early concept of the structure.

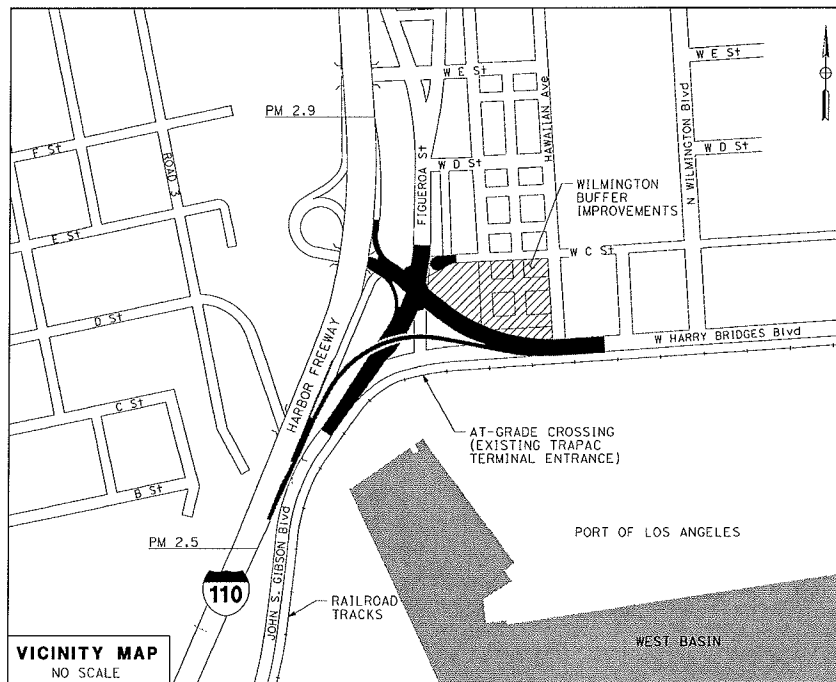
This Advance Planning Study was prepared in accordance with Caltrans requirements as stated in, but not limited to, the requirements set forth in Bridge Design Aids, Memo to Designers, Highway Design Manual, and other documents. It has identified the important items that are required for determining a reasonable cost for feasible construction.

C Street/ Interstate 110 Access Ramp Improvement Project

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 – LA – 110 (PM 2.5/3.0)
Between the Cities of San Pedro and Wilmington
EA 07-26480K

Advance Planning Study Retaining Wall No. 318

Prepared by HDR for the
State of California Department of Transportation
in coordination with the Port of Los Angeles

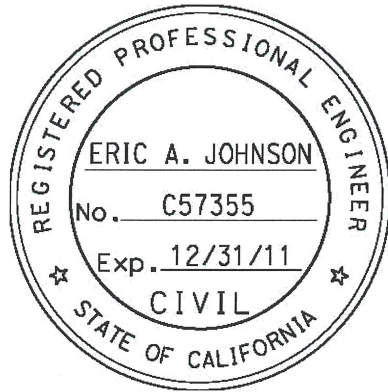


March 18, 2010



This Advance Planning Study 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.


Eric A. Johnson



March 18, 2010
Date

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Chapter 1 Proposed Project

1.1 Introduction

The Port of Los Angeles (POLA), in conjunction with the California Department of Transportation District 07 (Department) proposes to improve the Interstate 110 (I-110)/C Street interchange, in the City of Los Angeles. The improvements are intended to increase traffic circulation and reduce queuing of trucks on local roadways by providing a more direct route between I-110 and the POLA terminals. The proposed improvements include the reconfiguration of the northbound off-ramp to directly access Harry Bridges Boulevard, modification of the northbound on-ramp, realignment of Harry Bridges Boulevard, and combining the I-110 ramp termini/C Street/Figueroa Street intersection with the John S. Gibson Boulevard/Harry Bridges Boulevard/Figueroa Street intersection.

The significant structures affected by this project include the following:

- Harry Bridges Boulevard Undercrossing (53-3048)
- Union Oil Undercrossing (53-1033)
- Retaining Wall No. 318
- Retaining Wall No. 320

This Advanced Planning Study documents the assumptions and design considerations for the Retaining Wall No. 318.

1.2 Existing Structures

- **Union Oil Road Undercrossing (53-1033)**

The Union Oil UC (53-1033) was constructed in 1956. The existing structure is a Reinforced Concrete Slab Bridge according to the as-built plans.

In 1992, I-110 was widened to provide four 12-foot wide mixed flow lanes with 10-foot wide right and left shoulders in each direction of travel. The Union Oil UC was widened as part of these improvements. The widening of the Union Oil UC consisted of a Reinforced Concrete Slab per available as-built records.

- **Retaining Wall No. 318**

Retaining Wall No. 318 was constructed in 1956. The wall extends north from Abutment 2 of the Union Oil Overhead (53-977) to Abutment 1 of the Union Oil Undercrossing (53-1033). The wall is broken down into segments as follows:

- From Abutment 2 of the Union Oil Overhead at station 316+52.10 to approximately station 318+10.00 of the as-built plans, the retaining wall is a Type 4 Counterfort retaining wall. The height of the Type 4 wall ranges from 32 to 36 feet.
- From the end of the counterfort wall (sta. 318+10.00) to approximately station 318+90.00 of the as-built plans, Retaining Wall No. 318 is a Standard Type 2 retaining wall with heights varying from 24 to 28 feet.
- From approximately station 318+90.00 to station 320+80.00, the retaining wall is a Standard Type 1 Retaining Wall with heights varying from 10 to 22 ft.
- From station 320+80.00 to Abutment 1 of the Union Oil Undercrossing, the retaining wall is a Type 2 retaining wall with heights of 24 and 26 feet.

Retaining Wall No. 318 was reconstructed as part of the widening of I-110 in 1992. From approximately station 318+59.1 of the as-built plans to Abutment 1 of Union Oil Undercrossing, the existing retaining wall stem and footing were removed. The existing piles remained. The Type 4 Counterfort retaining wall and the Type 2 retaining wall up to approximately station 318+59.1 discussed previously were maintained.

Behind the remaining Type 2 and Type 4 walls, an anchor slab was constructed. The anchor slab is approximately 200'-0" long and 23'-6" wide. It rests on and cantilevers over the existing retaining wall. The back side of the slab comprises of a grade beam that rests on driven "H" piles for vertical support. There are ties that anchor the grade beam for lateral support also.

Beyond station 318+59.10 of the as-built plans, a Type 1 retaining wall was built approximately 70'-6" from the centerline of I-110 which replaced the original retaining wall.

1.3 Proposed Structures

- **Harry Bridges Boulevard Undercrossing (53-3048)**

This new 500-foot long bridge structure is proposed to span over John S. Gibson Boulevard. The bridge will accommodate a single lane off-ramp from I-110 and will directly connect to Harry Bridges Boulevard. The ramp will provide a 12-foot wide travel lane with a 12-foot wide right shoulder and a 2-foot wide left shoulder. A standard Type 736 barrier is proposed along the right edge of shoulder, and a standard Type 742 barrier is proposed along the left edge of shoulder.

- **Union Oil Road Undercrossing (53-1033)**

This is a single span reinforced concrete slab structure with a span length of 38'-6". It carries both northbound and southbound I-110 traffic. The proposed widening is along the east end of the structure and is necessary to accommodate the new northbound off-ramp to Harry Bridges Boulevard. The existing structure will be widened an average of 20'-0". The widened section connects to the existing deck through a closure pour, consisting of the traffic lane, shoulder, and a Type 732 concrete barrier.

- **Retaining Wall No. 318**

Retaining Wall No. 318 is a modified wall that is approximately 241'-10 ³/₄" long that is necessary to accommodate the new northbound off-ramp to Harry Bridges Boulevard. Approximately 72 feet will be a specialized wall with stiffeners. Approximately 96 feet will be a modified Caltrans Type 1 wall with its foundation integrated with the existing retaining wall foundation, and approximately 74 feet will be a Caltrans Type 1 wall on pile foundation. All will support a standard Caltrans Type 732A concrete barrier.

- **Retaining Wall No. 320**

Retaining Wall No. 320 is a Standard Type 1 retaining wall that is approximately 153'-8 ³/₄" long. The structure is necessary to accommodate the new northbound off-ramp to Harry Bridges Boulevard. The wall will be a Caltrans Type 1 wall on a pile foundation which will support a Caltrans Standard Type 732A concrete barrier.

Chapter 2 Retaining Wall No. 318

2.1 Design Memo

2.1.1 Structure Type

The proposed retaining wall is a modified wall at approximately 241'-10 ³/₄" in length. The retaining wall height varies from 28 to 32 feet. The wall is founded on a CISS pile footing with battered and vertical piles.

For the wall height of 28 feet, the proposed structure will be a Caltrans Type 1 cantilevered wall on pile foundation. This wall will be separated from the existing retaining wall. For the wall height of 30 feet, the proposed structure will be a Caltrans Type 1 cantilevered wall on pile foundation also. However, a small portion of the heel of the new wall's footing will be truncated and the remaining portion of the footing will be attached to the existing retaining wall's footing toe. For the wall height of 32 feet, the proposed structural retaining system will be a cast-in-place structural section that will have vertical stiffeners attached between the existing retaining wall stem and the new structural section.

A portion of the existing anchor slab will be extended to accommodate the start of the off-ramp. This last 20 feet of cantilevered slab will be widened from zero to approximately two feet.

Alternative designs will be considered at the Type Selection phase. Effects of settlement on the combined pile footings, constructability of stiffeners, compaction of backfill, and drainage of the proposed wall types will be considered during type selection. The widening of the anchor slab will also be carefully evaluated as design loads have significantly increased since the original construction.

2.1.2 Impact on Existing Utilities

Existing utilities near the retaining wall have been identified, and there are no known impacts.

2.1.3 Aesthetics

No special aesthetic requirements are specified. It is expected that any aesthetic requirements can be accommodated in the later design stage.

2.1.4 Geotechnical Issues

The site vicinity is underlain by up to 9,000 to 11,000 feet of Tertiary and Quaternary sediments, which have filled the presently subsiding basin since Miocene time (approximately 24 million years ago). According to CDMG (1998), old Quaternary alluvium (Qoa), consisting of sand, silt, clay and gravel, directly underlies the Project site. In addition, an isolated are, underlain by Pleistocene to Holocene nonmarine terrace deposits (Qter), is present near the I-110 freeway and John S. Gibson Boulevard. These nonmarine terrace deposits consist of calcareous sands, shell fragments and scattered gravels and cobbles. Man-made fill materials are also reported to be present east of the I-110 Freeway and south of C Street. According to Group Delta Consultants (GDC; 2007), the man-made materials are up to 10 to 15 feet thick and were placed in the area as a part of harbor development and to reach the current grade.

The site conditions were characterized by an idealized profile. The subsurface soils at the site chiefly consisted of varying thicknesses of sands and silty sands to the bottom of the borings and CPTs. The subsurface soils at the site were classified as soil profile C in accordance with seismic design criteria (SDC; Caltrans, 2009d). However, site-specific liquefaction analyses indicated that some of the subsurface soils have the potential to liquefy during a design seismic event. Based on the magnitude of the liquefaction-induced settlement, the depth from the existing surface and the thickness of liquefiable layers, discontinuity of the liquefiable layers, and consultation with a Caltrans seismic specialist (Islam, 2009), for the preliminary design purposes soil profile type D is recommended. Based on the correlations to shear wave velocity for the upper 30 meters (100 feet) of soils (V_{s30}) to the standard penetration test (SPT) values, a shear wave velocity value of 340 meters per second (m/s) was calculated. The SPT values considered the correlations to the non-standard samplers to the standard sampler and hammer efficiency.

Groundwater was encountered in Boring R-09-012 at an elevation of approximately -1 feet MSL. However, the depth to historically-highest groundwater levels is judged to be approximately 10 feet below the ground surface (CDMG, 1998), which corresponds to an elevation +3 feet MSL.

Two sets of corrosion tests were conducted for selected soils samples obtained during the current subsurface investigation for the Project. Based on Caltrans corrosion guidelines (Caltrans, 2003), a corrosive environment was present to the structural elements. Therefore, it is recommended that a corrosion specialist be consulted.

Several foundation types were reviewed for the Retaining Wall No. 318. They were:

- Precast/Prestressed Driven Piles
- Small Diameter CIDH Piles
- Large Diameter CIDH Piles
- Driven “H” Piles
- Driven CISS Piles

Driven precast/prestressed driven piles were considered unfavorable because hard driving is anticipated.

The CIDH options were eliminated because the area has a high water table and potential caving during drilling is high. There may be large down-drag forces on the piles from the liquefiable layer(s), the piles will have no end bearing capacity, and the piles will require long shaft lengths. CIDH is not an option where battered piles are typically required, such as at abutments and retaining walls.

The CISS pile option was selected over the “H” piles because of their larger surface area, and larger axial and lateral capacities. Shorter lengths are typically found when comparing CISS piles against CIDH piles. A review of similar projects in the area suggests CISS piles are the preferred foundation type.

2.1.5 Seismic Design

The site is located within a seismic active region. No known active faults were located within the Project site boundaries, and the Project site was not located within the Alquist-Priolo Earthquake Fault Zone (APEFZ; CDMG, 1999). However, a possibility of a concealed trace of the Palos Verdes fault within 500 feet of the proposed site should be considered. Therefore, the possibility of surface rupture at the proposed bridge site to be low.

The peak ground acceleration (PGA) for the Project site was shown to be in between 0.6g and 0.7g in the Caltrans deterministic PGA map (Caltrans 2007). The deterministic PGA does not incorporate any site correction factors such as soil amplification and near fault factor. Therefore the deterministic PGA based on this map should not be used for final seismic analysis or design.

Based on the current Caltrans seismic design procedure, the PGA for the site was calculated to be 0.6g. The current procedure considers both deterministic and probabilistic approaches. The new generation attenuation (NGA) relationships were used to determine the spectral accelerations. Basin effect (depth to rock, $Z_{1.0}$, and $Z_{2.5}$), near fault effects, and hanging/footing wall effects were considered in the new generation attenuation models.

As noted above, a concealed trace of the Palos Verdes fault was reported to be located 500 feet from the Project site (Bryant et al., 1987). However, it is understood based on discussions with Caltrans seismic experts that for the ground motion study, the available tools and response spectrum spreadsheets are more than enough to determine the site acceleration response analysis.

The Project site was located within a California designated liquefaction seismic hazard zone. The potential for soil liquefaction at the site was evaluated using procedures suggested by Idriss and Boulanger et al. (2008). Based on the analyses, a medium-dense sand layer below the design groundwater will liquefy during or after the design earthquakes.

Design of the Retaining Wall No. 320 structure will follow the AASHTO LRFD Design Specification, 2007 4th Edition with latest Caltrans Supplements. Design live load shall include HL93 with permit loads. Load combinations shall follow the CT-AASHTO LRFD Code Section 3.4.1. Seismic evaluation and design will be in accordance with the Caltrans Seismic Design Criteria (SDC) Version 1.4, dated June 2006 and applicable portions of Bridge Memo to Designers 20-4.

2.1.6 Hazardous Materials

Based on the results of limited, random environmental screening of soil samples obtained during the Phase II environmental investigation, it appears there is the potential for subsurface soils at some locations to be impacted by petroleum hydrocarbons. Based on the presence of a high concentration of isopropylbenzene in one boring (R-09-012, reference as B-1 in the Phase II environmental investigation report [DYA, 2009d]), the hydrocarbons appear to be associated with the petroleum refinery located northwest (up gradient) of the Project area. For additional information, see DYA's Phase II Hazardous Waste Investigation report (DYA, 2009).

DYA recommends that spoils from deep excavations (i.e. cast-in-drilled-hole [CIDH], or cast-in-steel-shell [CISS] pile foundations be stockpiled and secured as potential regulated waste

pending environmental evaluation and laboratory testing to determine appropriate disposal or reuse of the excavated soils.

2.1.7 Construction Considerations

A preliminary constructability review was performed. No special construction requirements or limited site access is recommended at this time.

2.1.8 Cost

The total cost for the retaining wall is \$2,350,000, which includes 10% mobilization and 25% contingency. See Section 2.3, Planning Cost Estimate, for bridge cost estimates.

2.2 APS CHECKLIST

Consultant Prepared Advance Planning Study (APS) Checklist

Sheet 1 of 2

Date: 3/18/2010	Consultant Firm (for structures): HDR Engineering, Inc.	Phone No: (714) 730-2300
Designed by: Eric A. Johnson, P.E.		Phone No: (714) 368-5664
EA: 07-26480K	County: Los Angeles	Rte: I-110
PM 2.5/3.0		
Project Description: C Street - Interstate 110 Access Ramps Improvements		
Retaining Wall No(s): 318	Retaining Wall Name(s): Retaining Wall No. 318	
Total number of bridges in project: 2 + Retaining Wall		APS Alternative Letter or Number (if more than one):
Purpose of this APS: Initial APS Cost & Feasibility <input checked="" type="checkbox"/> Revised scope <input type="checkbox"/> Update cost <input type="checkbox"/>		

Part A Items to collect and considerations prior to beginning the APS

All items listed in Part A are to be made available and submitted if requested by the Liaison Engineer.
(Mark **N/A** if not applicable)

- Preliminary profile grade of proposed structure.
- Typical section of the proposed structure. (Including barrier type, sidewalks, cross slope %, etc.)
- Grades or spot elevations of roadway below the structure.
- Typical section of roadway below the structure. (Including shoulders, gutters, embankment slope.)
- Site map: including horizontal alignment of new structure and the roadway below, topo, contours, etc.
- Stage construction or detour plan for traffic on the structure.
(number of lanes to remain open, Temp Railing, etc.)
- Stage construction or detour plan for the roadway below the structure.
(falsework openings for each stage and any restrictions.)
- "As Built" plans for existing structures.
- N/A Future widening plans of upper and lower roadway (verify with Route Concept Report).
- Site aerial photograph (at the proposed structure).
- Environmental and/or permit requirements (areas of potential impact, construction windows, etc.)
- Overhead and underground utility plans
- Any other information that you feel is necessary to complete the study. (Other concerns that may affect the APS: local agency requirements such as aesthetics, improvements in vicinity of structure, airspace usage, other obstructions, etc.)

2.3 PLANNING COST ESTIMATE

2.4 APS BRIDGE GENERAL PLAN

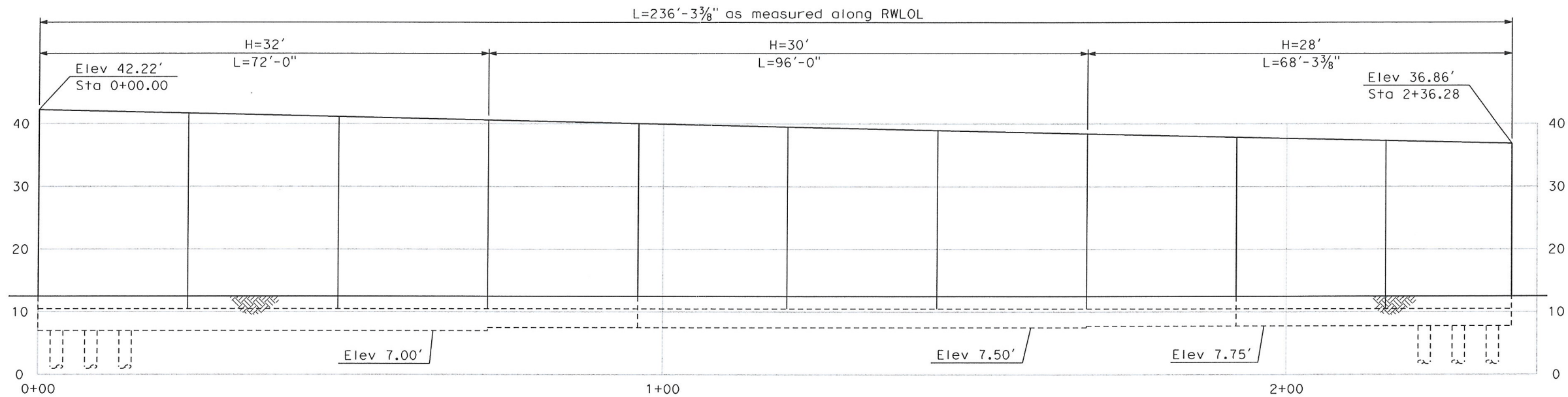
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7	LA	110	2.5/3.0
Port of Los Angeles 425 S. Palos Verdes Street San Pedro, CA 90731			
HDR Engineering, Inc. 3230 El Camino Real Suite 200 Irvine, CA 92602			

Sta 34+46.50
Elev 39.26
Join Exist

Sta 35+46.23
Elev 37.35
-1.91%
-1.58%

PROFILE

No Scale
@ "C-3" Line



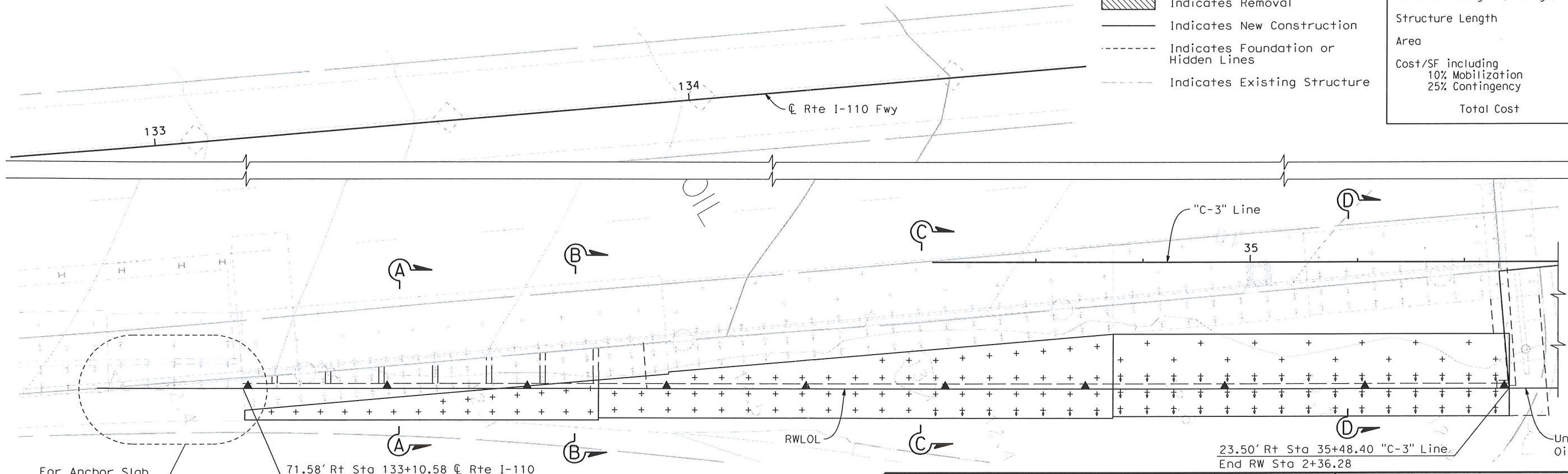
ELEVATION

1" = 10'-0"

LEGEND

- Indicates Removal
- Indicates New Construction
- Indicates Foundation or Hidden Lines
- Indicates Existing Structure

Date of Estimate:	10/26/2009
Structure Height (Average)	29'-1/4"
Structure Length	241'-10 3/4"
Area	SF
Cost/SF including 10% Mobilization 25% Contingency	\$314
Total Cost	\$2,210,000



PLAN

1" = 10'-0"



For Anchor Slab
Improvements See
Sheet 3

71.58' Rt Sta 133+10.58 @ Rte I-110
Begin RW Sta 0+00.00

23.50' Rt Sta 35+48.40 "C-3" Line
End RW Sta 2+36.28

X *Patricia McCauley*
DESIGN OVERSIGHT
X *Mar 18, 2010*
SIGN OFF DATE

DESIGNED BY	D. PEAVEY	DATE	
DRAWN BY	E. GRAY	DATE	
CHECKED BY	E. JOHNSON	DATE	
APPROVED		DATE	

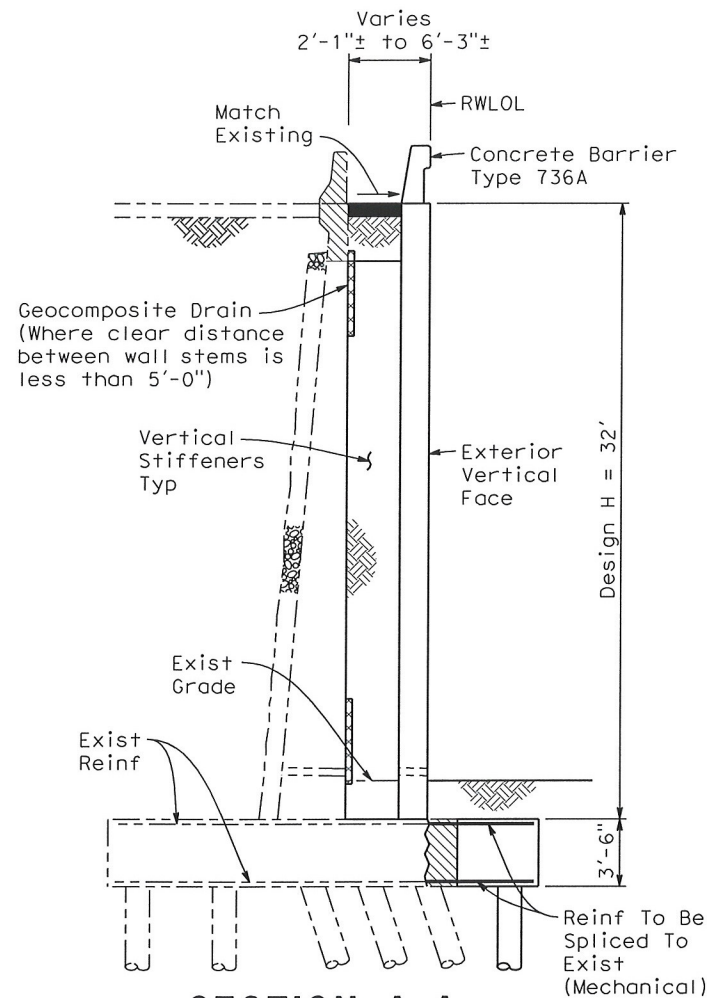
ERIC A. JOHNSON
PROJECT ENGINEER

PLANNING STUDY

RETAINING WALL NO. 318

BRIDGE NO.	CU
SCALE: AS NOTED	EA 26480

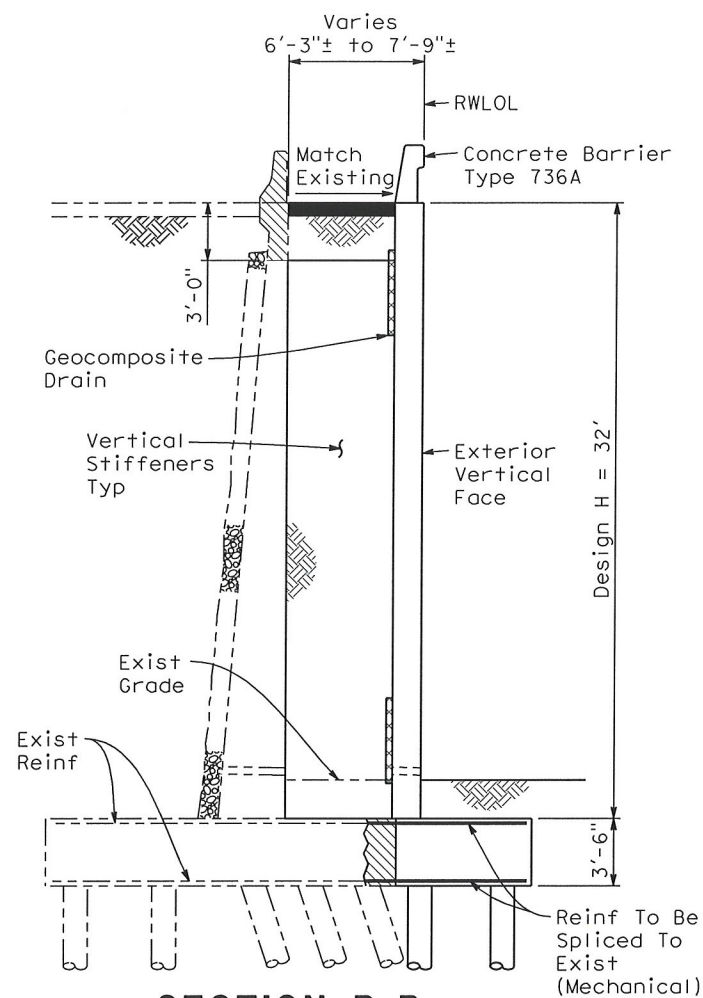
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
7	LA	110	2.5/3.0
Port of Los Angeles 425 S. Palos Verdes Street San Pedro, CA 90731			
HDR Engineering, Inc. 3230 El Camino Real Suite 200 Irvine, CA 92602			



SECTION A-A

1" = 5'-0"

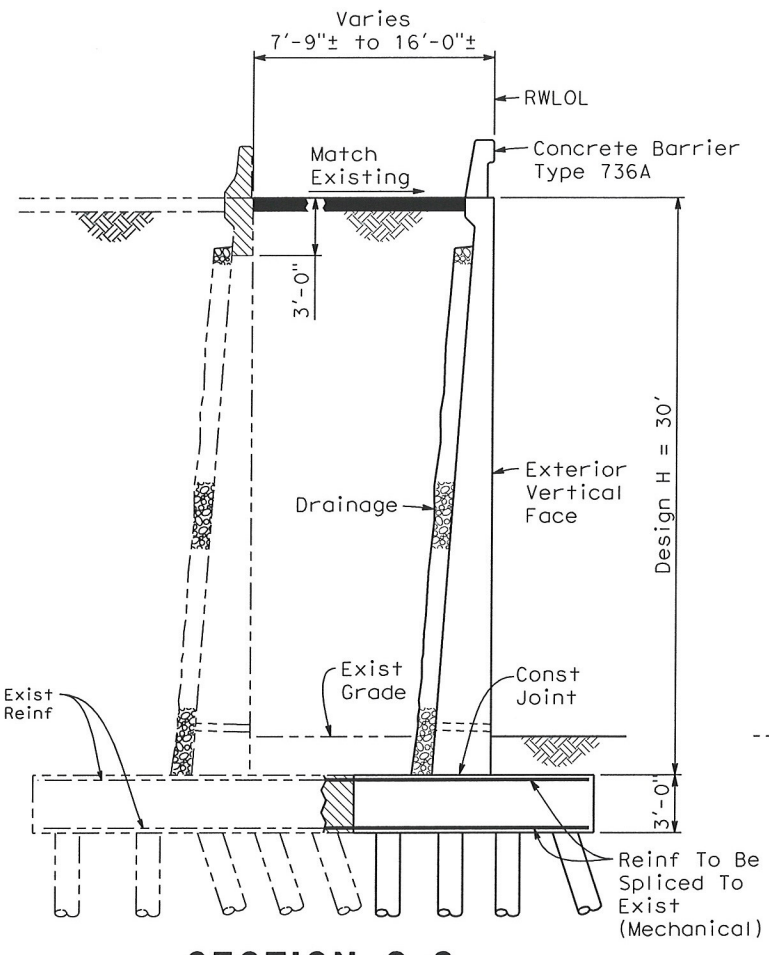
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SECTION B-B

1" = 5'-0"

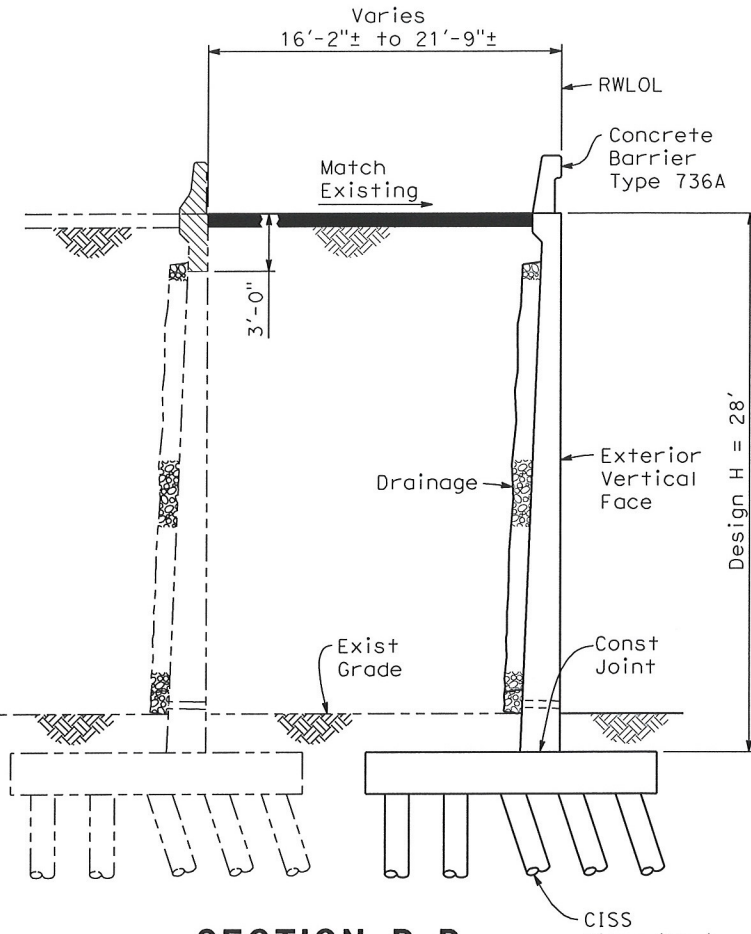
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SECTION C-C

1" = 5'-0"

(@ Sta 133+82± To 134+79± Along Cℓ Rte I-110 Fwy)



SECTION D-D

1" = 5'-0"

(@ Sta 34+80± To 35+40± Along "C-3" Line)

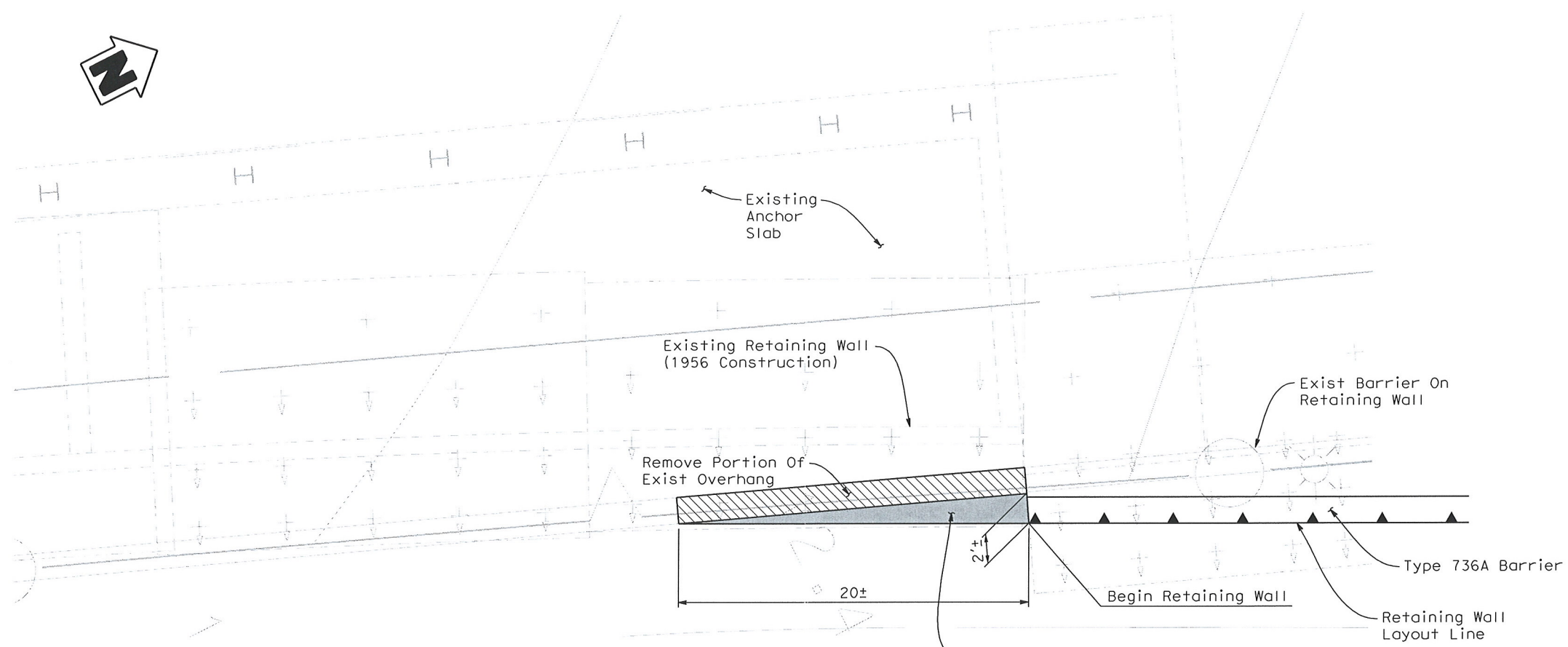


X *Patricia McCaul*
DESIGN OVERSIGHT
X *April 15, 2010*
SIGN OFF DATE

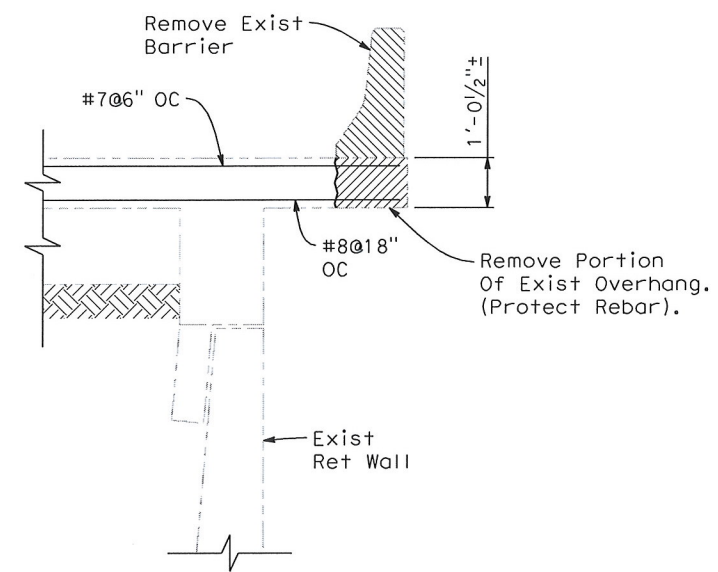
DESIGNED BY	D. PEAVEY	DATE
DRAWN BY	E. GRAY	DATE
CHECKED BY	E. JOHNSON	DATE
APPROVED		DATE

ERIC A. JOHNSON PROJECT ENGINEER	PLANNING STUDY	
	RET WALL NO. 318 TYPICAL SECTIONS	
	BRIDGE NO.	CU
	SCALE:	EA 26480

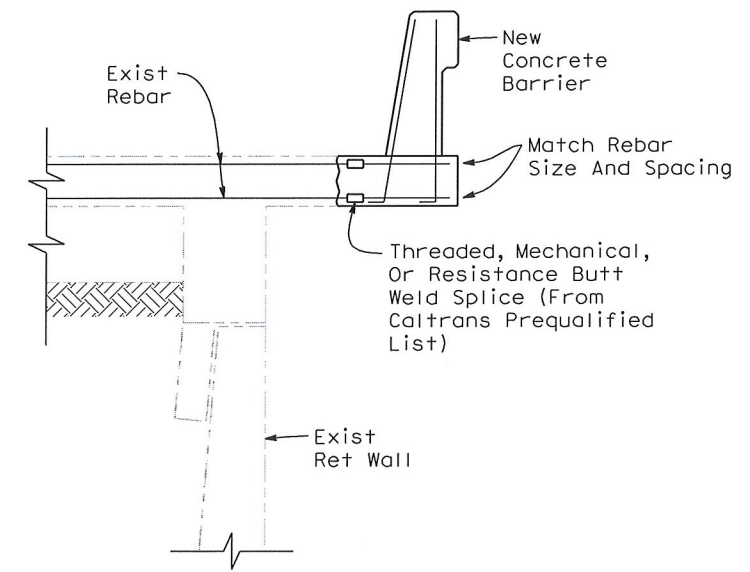
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
7	LA	110	2.5/3.0
Port of Los Angeles 425 S. Palos Verdes Street San Pedro, CA 90731			
HDR Engineering, Inc. 3230 El Camino Real Suite 200 Irvine, CA 92602			



PLAN
1/4" = 1'-0"



EXISTING SECTION
(NTS)



PROPOSED SECTION
(NTS)

X *Patricia McLaury*
DESIGN OVERSIGHT
X *April 15, 2010*
SIGN OFF DATE

DESIGNED BY	D. PEAVEY	DATE
DRAWN BY	E. GRAY	DATE
CHECKED BY	E. JOHNSON	DATE
APPROVED		DATE

ERIC A. JOHNSON PROJECT ENGINEER	PLANNING STUDY	
	RETAINING WALL NO. 318 ANCHOR SLAB IMPROVEMENTS	
	BRIDGE NO.	CU
	SCALE: AS NOTED	EA 26480

2.5 PRELIMINARY FOUNDATION REPORT

Please refer to the Preliminary Foundation Report, Project No. 2008-055, by Diaz•Yourman & Associates dated October 27, 2009.

2.6 AS-BUILT PLANS

Chapter 3 Conclusions

Advanced Planning Studies are developed for budget purposes. The basic objective of such studies is to develop, as early as possible, a feasible type of structure, cost, and controls appropriate for the specific location. It is important that careful consideration be given to span lengths, structure depths, column locations, approach slabs, falsework requirements, and other controls. Design prepares a drawing of the structure showing all significant details that would affect the cost. Preliminary quantities are then determined using any of the aids found in the design aids provided by Caltrans.

Ideal studies capture the intent of what is required on the plan sheet and in the preliminary planning estimate. This includes the scope of the structure work in the project, provides structure depths for setting profile grade lines, establishes the best cost estimate available at the time, provides an early opportunity for the Office of Structure Design to assist in project conceptualization, and describes and documents the design assumptions used in the early concept of the structure.

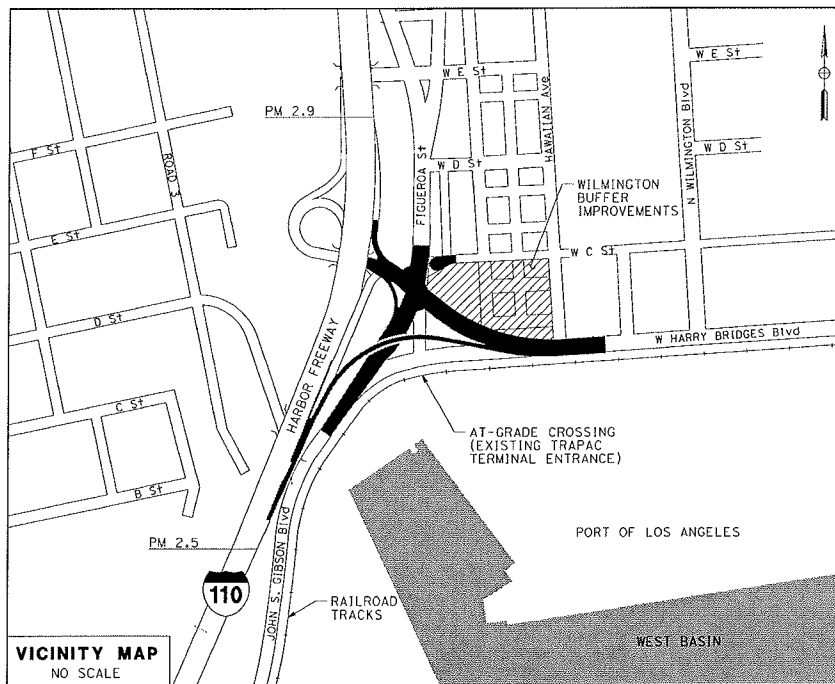
This Advance Planning Study was prepared in accordance with Caltrans requirements as stated in, but not limited to, the requirements set forth in Bridge Design Aids, Memo to Designers, Highway Design Manual, and other documents. It has identified the important items that are required for determining a reasonable cost for feasible construction.

C Street/ Interstate 110 Access Ramp Improvement Project

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 – LA – 110 (PM 2.5/3.0)
Between the Cities of San Pedro and Wilmington
EA 07-26480K

Advance Planning Study Retaining Wall No. 320

Prepared by HDR for the
State of California Department of Transportation
in coordination with the Port of Los Angeles



March 18, 2010



This Advance Planning Study 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.


Eric A. Johnson



March 18, 2010
Date

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Chapter 1 Proposed Project

1.1 Introduction

The Port of Los Angeles (POLA), in conjunction with the California Department of Transportation District 07 (Department) proposes to improve the Interstate 110 (I-110)/C Street interchange, in the City of Los Angeles. The improvements are intended to increase traffic circulation and reduce queuing of trucks on local roadways by providing a more direct route between I-110 and the POLA terminals. The proposed improvements include the reconfiguration of the northbound off-ramp to directly access Harry Bridges Boulevard, modification of the northbound on-ramp, realignment of Harry Bridges Boulevard, and combining the I-110 ramp termini/C Street/Figueroa Street intersection with the John S. Gibson Boulevard/Harry Bridges Boulevard/Figueroa Street intersection.

The significant structures affected by this project include the following:

- Harry Bridges Boulevard Undercrossing (53-3048)
- Union Oil Undercrossing (53-1033)
- Retaining Wall No. 318
- Retaining Wall No. 320

This Advanced Planning Study documents the assumptions and design considerations for the Retaining Wall No. 320.

1.2 Existing Structures

- **Union Oil Road Undercrossing (53-1033)**

The Union Oil UC (53-1033) was constructed in 1956. The existing structure is a Reinforced Concrete Slab Bridge according to the as-built plans.

In 1992, I-110 was widened to provide four 12-foot wide mixed flow lanes with 10-foot wide right and left shoulders in each direction of travel. The Union Oil UC was widened as part of these improvements. The widening of the Union Oil UC consisted of a Reinforced Concrete Slab per available as-built records.

- **Retaining Wall No. 318**

Retaining Wall No. 318 was constructed in 1956. The wall extends north from Abutment 2 of the Union Oil Overhead (53-977) to Abutment 1 of the Union Oil Undercrossing (53-1033). The wall is broken down into segments as follows:

- From Abutment 2 of the Union Oil Overhead at station 316+52.10 to approximately station 318+10.00 of the as-built plans, the retaining wall is a Type 4 Counterfort retaining wall. The height of the Type 4 wall ranges from 32 to 36 feet.
- From the end of the counterfort wall (sta. 318+10.00) to approximately station 318+90.00 of the as-built plans, Retaining Wall No. 318 is a Standard Type 2 retaining wall with heights varying from 24 to 28 feet.
- From approximately station 318+90.00 to station 320+80.00, the retaining wall is a Standard Type 1 Retaining Wall with heights varying from 10 to 22 ft.
- From station 320+80.00 to Abutment 1 of the Union Oil Undercrossing, the retaining wall is a Type 2 retaining wall with heights of 24 and 26 feet.

Retaining Wall No. 318 was reconstructed as part of the widening of I-110 in 1992. From approximately station 318+59.1 of the as-built plans to Abutment 1 of Union Oil Undercrossing, the existing retaining wall stem and footing were removed. The existing piles remained. The Type 4 Counterfort retaining wall and the Type 2 retaining wall up to approximately station 318+59.1 discussed previously were maintained.

Behind the remaining Type 2 and Type 4 walls, an anchor slab was constructed. The anchor slab is approximately 200'-0" long and 23'-6" wide. It rests on and cantilevers over the existing retaining wall. The back side of the slab comprises of a grade beam that rests on driven "H" piles for vertical support. There are ties that anchor the grade beam for lateral support also.

Beyond station 318+59.10 of the as-built plans, a Type 1 retaining wall was built approximately 70'-6" from the centerline of I-110 which replaced the original retaining wall.

1.3 Proposed Structures

- **Harry Bridges Boulevard Undercrossing (53-3048)**

This new 500-foot long bridge structure is proposed to span over John S. Gibson Boulevard. The bridge will accommodate a single lane off-ramp from I-110 and will directly connect to Harry Bridges Boulevard. The ramp will provide a 12-foot wide travel lane with a 12-foot wide right shoulder and a 2-foot wide left shoulder. A standard Type 736 barrier is proposed along the right edge of shoulder, and a standard Type 742 barrier is proposed along the left edge of shoulder.

- **Union Oil Road Undercrossing (53-1033)**

This is a single span reinforced concrete slab structure with a span length of 38'-6". It carries both northbound and southbound I-110 traffic. The proposed widening is along the east end of the structure and is necessary to accommodate the new northbound off-ramp to Harry Bridges Boulevard. The existing structure will be widened an average of 20'-0". The widened section connects to the existing deck through a closure pour, consisting of the traffic lane, shoulder, and a Type 732 concrete barrier.

- **Retaining Wall No. 318**

Retaining Wall No. 318 is a modified wall that is approximately 241' - 10 ³/₄" long that is necessary to accommodate the new northbound off-ramp to Harry Bridges Boulevard. Approximately 72 feet will be a specialized wall with stiffeners. Approximately 96 feet will be a modified Caltrans Type 1 wall with its foundation integrated with the existing retaining wall foundation, and approximately 74 feet will be a Caltrans Type 1 wall on pile foundation. All will support a standard Caltrans Type 732A concrete barrier.

- **Retaining Wall No. 320**

Retaining Wall No. 320 is a Standard Type 1 retaining wall that is approximately 153'-8 ³/₄" long. The structure is necessary to accommodate the new northbound off-ramp to Harry Bridges Boulevard. The wall will be a Caltrans Type 1 wall on a pile foundation which will support a Caltrans Standard Type 732A concrete barrier.

Chapter 2 Retaining Wall No. 320

2.1 Design Memo

2.1.1 Structure Type

The proposed retaining wall is a standard Caltrans Type 1 retaining wall at approximately 153'-8 3/4" in length. The retaining wall height varies from 24 to 26 feet. The retaining wall is founded on a CISS pile footing with battered and vertical piles.

Alternatives will be considered during the Type Selection phase.

2.1.2 Impact on Existing Utilities

Existing utilities near the retaining wall have been identified, and there are no known impacts.

2.1.3 Aesthetics

No special aesthetic requirements are specified. It is expected that any aesthetic requirements can be accommodated in the later design stage.

2.1.4 Geotechnical Issues

The site vicinity is underlain by up to 9,000 to 11,000 feet of Tertiary and Quaternary sediments, which have filled the presently subsiding basin since Miocene time (approximately 24 million years ago). According to CDMG (1998), old Quaternary alluvium (Qoa), consisting of sand, silt, clay and gravel, directly underlies the Project site. In addition, an isolated are, underlain by Pleistocene to Holocene nonmarine terrace deposits (Qter), is present near the I-110 freeway and John S. Gibson Boulevard. These nonmarine terrace deposits consist of calcareous sands, shell fragments and scattered gravels and cobbles. Man-made fill materials are also reported to be present east of the I-110 Freeway and south of C Street. According to Group Delta Consultants (GDC; 2007), the man-made materials are up to 10 to 15 feet thick and were placed in the area as a part of harbor development and to reach the current grade.

The site conditions were characterized by an idealized profile. The subsurface soils at the site chiefly consisted of varying thicknesses of sands and silty sands to the bottom of the borings and CPTs. The subsurface soils at the site were classified as soil profile C in accordance with seismic design criteria (SDC; Caltrans, 2009d). However, site-specific liquefaction analyses indicated that some of the subsurface soils have the potential to liquefy during a design seismic event. Based on the magnitude of the liquefaction-induced settlement, the depth from the existing surface and the thickness of liquefiable layers, discontinuity of the liquefiable layers, and consultation with a Caltrans seismic specialist (Islam, 2009), for the preliminary design purposes soil profile type D is recommended. Based on the correlations to shear wave velocity for the upper 30 meters (100 feet) of soils (V_{s30}) to the standard penetration test (SPT) values, a shear wave velocity value of 340 meters per second (m/s) was calculated. The SPT values considered the correlations to the non-standard samplers to the standard sampler and hammer efficiency.

Groundwater was encountered in Boring R-09-012 at an elevation of approximately -1 feet MSL. However, the depth to historically-highest groundwater levels is judged to be approximately 10 feet below the ground surface (CDMG, 1998), which corresponds to an elevation +3 feet MSL.

Two sets of corrosion tests were conducted for selected soils samples obtained during the current subsurface investigation for the Project. Based on Caltrans corrosion guidelines (Caltrans, 2003), a corrosive environment was present to the structural elements. Therefore, it is recommended that a corrosion specialist be consulted.

Several foundation types were reviewed for the Retaining Wall No. 320. They were:

- Precast/Prestressed Driven Piles
- Small Diameter CIDH Piles
- Large Diameter CIDH Piles
- Driven “H” Piles
- Driven CISS Piles

Driven precast/prestressed driven piles were considered unfavorable because hard driving is anticipated.

The CIDH options were eliminated because the area has a high water table and potential caving during drilling is high. There may be large down-drag forces on the piles from the liquefiable layer(s), the piles will have no end bearing capacity, and the piles will require long shaft lengths. CIDH is not an option where battered piles are typically required, such as at abutments and retaining walls.

The CISS pile option was selected over the “H” piles because of their larger surface area, and larger axial and lateral capacities. Shorter lengths are typically found when comparing CISS piles against CIDH piles. A review of similar projects in the area suggests CISS piles are the preferred foundation type.

2.1.5 Seismic Design

The site is located within a seismic active region. No known active faults were located within the Project site boundaries, and the Project site was not located within the Alquist-Priolo Earthquake Fault Zone (APEFZ; CDMG, 1999). However, a possibility of a concealed trace of the Palos Verdes fault within 500 feet of the proposed site should be considered. Therefore, the possibility of surface rupture at the proposed bridge site to be low.

The peak ground acceleration (PGA) for the Project site was shown to be in between 0.6g and 0.7g in the Caltrans deterministic PGA map (Caltrans 2007). The deterministic PGA does not incorporate any site correction factors such as soil amplification and near fault factor. Therefore the deterministic PGA based on this map should not be used for final seismic analysis or design. Based on the current Caltrans seismic design procedure, the PGA for the site was calculated to be 0.6g. The current procedure considers both deterministic and probabilistic approaches. The new generation attenuation (NGA) relationships were used to determine the spectral accelerations. Basin effect (depth to rock, $Z_{1.0}$, and $Z_{2.5}$), near fault effects, and hanging/footing wall effects were considered in the new generation attenuation models.

As noted above, a concealed trace of the Palos Verdes fault was reported to be located 500 feet from the Project site (Bryant et al., 1987). However, it is understood based on discussions with Caltrans seismic experts that for the ground motion study, the available tools and response spectrum spreadsheets are more than enough to determine the site acceleration response analysis.

The Project site was located within a California designated liquefaction seismic hazard zone. The potential for soil liquefaction at the site was evaluated using procedures suggested by Idriss and Boulanger et al. (2008). Based on the analyses, a medium-dense sand layer below the design groundwater will liquefy during or after the design earthquakes.

Design of the Retaining Wall No. 320 structure will follow the AASHTO LRFD Design Specification, 2007 4th Edition with latest Caltrans Supplements. Design live load shall include HL93 with permit loads. Load combinations shall follow the CT-AASHTO LRFD Code Section 3.4.1. Seismic evaluation and design will be in accordance with the Caltrans Seismic Design Criteria (SDC) Version 1.4, dated June 2006 and applicable portions of Bridge Memo to Designers 20-4.

2.1.6 Hazardous Materials

Based on the results of limited, random environmental screening of soil samples obtained during the Phase II environmental investigation, it appears there is the potential for subsurface soils at some locations to be impacted by petroleum hydrocarbons. Based on the presence of a high concentration of isopropylbenzene in one boring (R-09-012, reference as B-1 in the Phase II environmental investigation report [DYA, 2009d]), the hydrocarbons appear to be associated with the petroleum refinery located northwest (up gradient) of the Project area. For additional information, see DYA's Phase II Hazardous Waste Investigation report (DYA, 2009).

DYA recommends that spoils from deep excavations (i.e. cast-in-drilled-hole [CIDH], or cast-in-steel-shell [CISS] pile foundations be stockpiled and secured as potential regulated waste pending environmental evaluation and laboratory testing to determine appropriate disposal or reuse of the excavated soils.

2.1.7 Construction Considerations

A preliminary constructability review was performed. No special construction requirements or limited site access is recommended at this time.

2.1.8 Cost

The total cost for the retaining wall is \$1,180,000, which includes 10% mobilization and 25% contingency. See Section 2.3, Planning Cost Estimate, for bridge cost estimates.

2.2 APS CHECKLIST

Consultant Prepared Advance Planning Study (APS) Checklist

Sheet 1 of 2

Date: 3/18/2010	Consultant Firm (for structures): HDR Engineering, Inc.	Phone No: (714) 730-2300
Designed by: Eric A. Johnson, P.E.		Phone No: (714) 368-5664
EA: 07-26480K	County: Los Angeles	Rte: I-110
PM 2.5/3.0		
Project Description: C Street - Interstate 110 Access Ramps Improvements		
Retaining Wall No(s): 320	Retaining Wall Name(s): Retaining Wall No. 320	
Total number of bridges in project: 2 + Retaining Wall		APS Alternative Letter or Number (if more than one):
Purpose of this APS: Initial APS Cost & Feasibility <input checked="" type="checkbox"/> Revised scope <input type="checkbox"/> Update cost <input type="checkbox"/>		

Part A Items to collect and considerations prior to beginning the APS

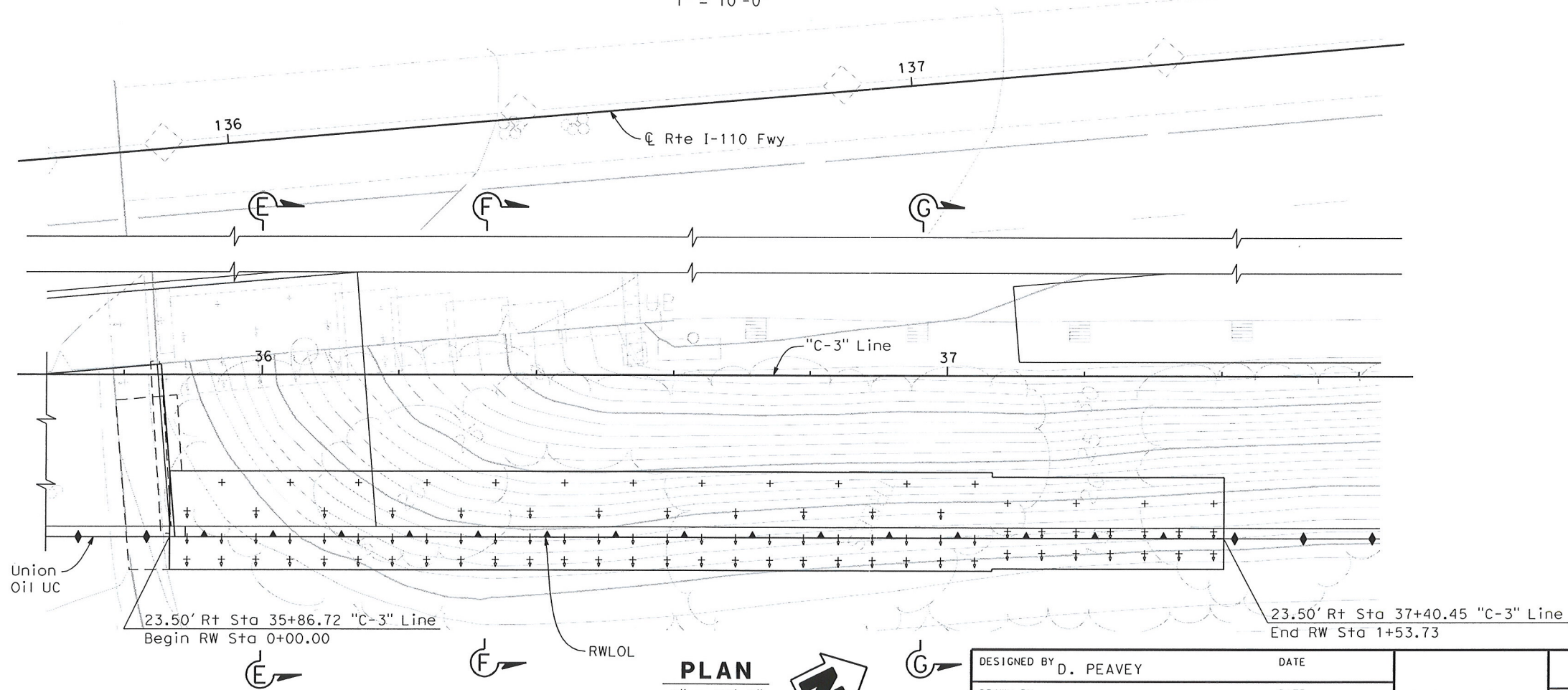
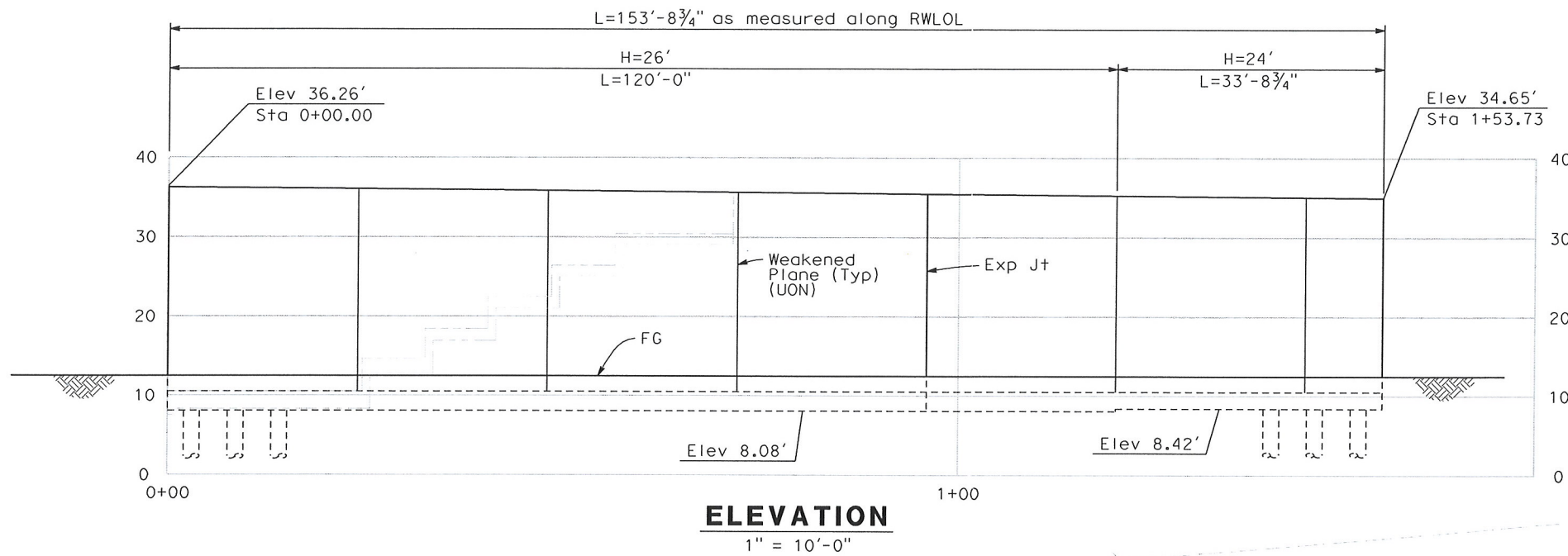
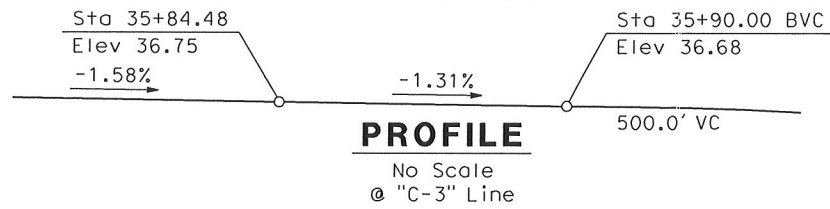
All items listed in Part A are to be made available and submitted if requested by the Liaison Engineer.
(Mark **N/A** if not applicable)

- Preliminary profile grade of proposed structure.
- Typical section of the proposed structure. (Including barrier type, sidewalks, cross slope %, etc.)
- Grades or spot elevations of roadway below the structure.
- Typical section of roadway below the structure. (Including shoulders, gutters, embankment slope.)
- Site map: including horizontal alignment of new structure and the roadway below, topo, contours, etc.
- Stage construction or detour plan for traffic on the structure.
(number of lanes to remain open, Temp Railing, etc.)
- Stage construction or detour plan for the roadway below the structure.
(falsework openings for each stage and any restrictions.)
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- N/A Future widening plans of upper and lower roadway (verify with Route Concept Report).
- Site aerial photograph (at the proposed structure).
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- Overhead and underground utility plans
- Any other information that you feel is necessary to complete the study. (Other concerns that may affect the APS: local agency requirements such as aesthetics, improvements in vicinity of structure, airspace usage, other obstructions, etc.)

2.3 PLANNING COST ESTIMATE

2.4 APS BRIDGE GENERAL PLAN

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
7	LA	110	2.5/3.0
Port of Los Angeles 425 S. Palos Verdes Street San Pedro, CA 90731			
HDR Engineering, Inc. 3230 El Camino Real Suite 200 Irvine, CA 92602			



LEGEND

- Indicates Removal
- Indicates New Construction
- Indicates Foundation or Hidden Lines
- Indicates Existing Structure

Date of Estimate:	10/26/2009
Structure Height (Average)	25'-1 1/2"
Structure Length	153'-8 3/4"
Area	3,862.5 SF
Cost/SF including 10% Mobilization 25% Contingency	\$306
Total Cost	\$1,180,000

X *Patricia McCauley*
DESIGN OVERSIGHT
X *Mar 10, 2010*
SIGN OFF DATE

PLAN
1" = 10'-0"



DESIGNED BY	D. PEAVEY	DATE	
DRAWN BY	E. GRAY	DATE	
CHECKED BY	E. JOHNSON	DATE	
APPROVED		DATE	

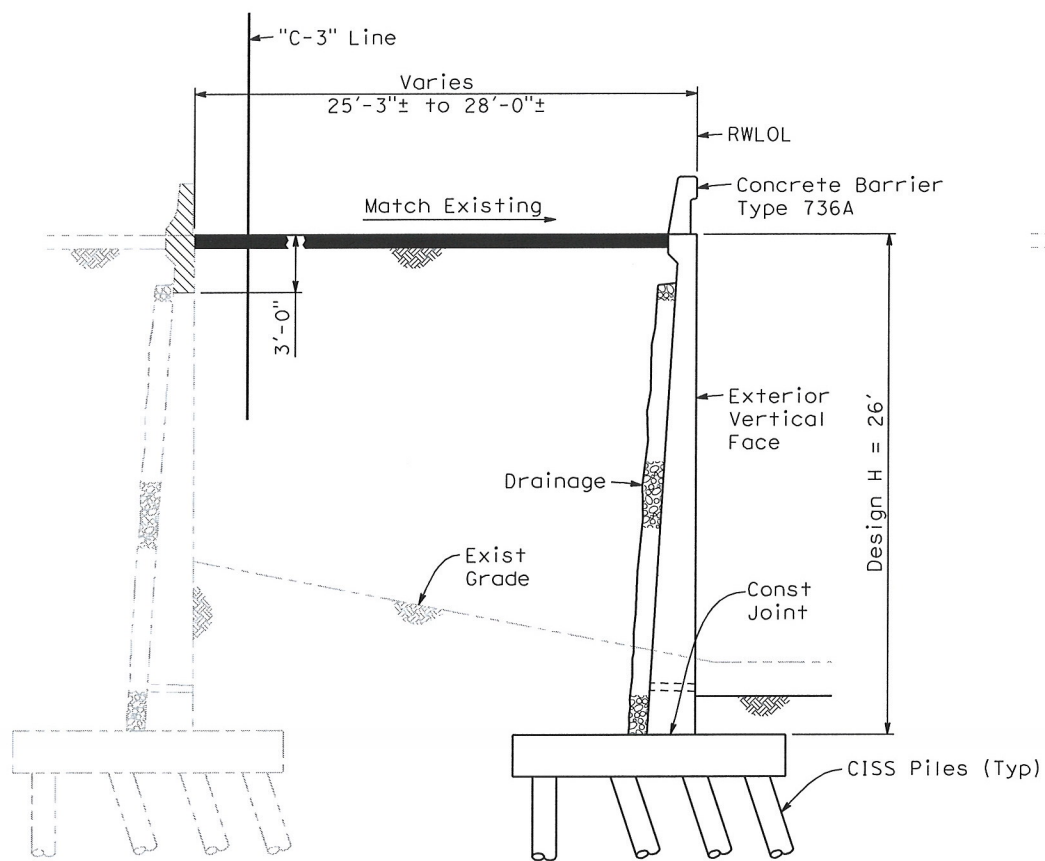
ERIC A. JOHNSON
PROJECT ENGINEER

PLANNING STUDY

RETAINING WALL NO. 320

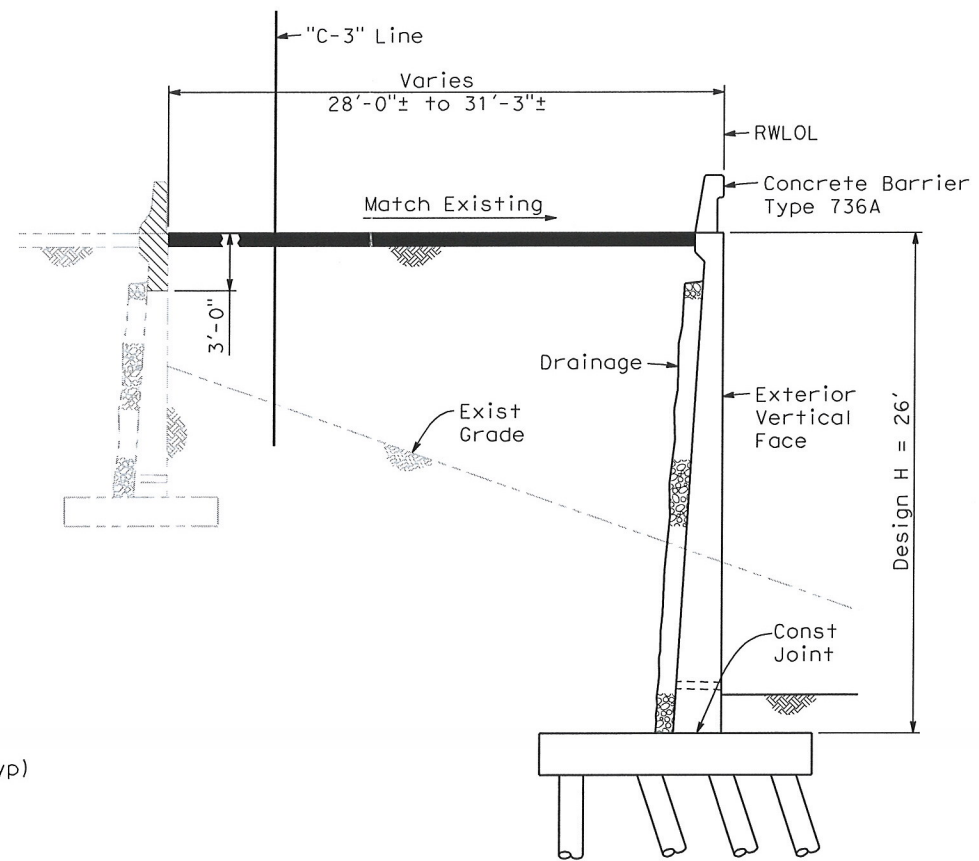
BRIDGE NO.	CU
SCALE:	AS NOTED EA 26480

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
7	LA	110	2.5/3.0
Port of Los Angeles 425 S. Palos Verdes Street San Pedro, CA 90731			
HDR Engineering, Inc. 3230 El Camino Real Suite 200 Irvine, CA 92602			



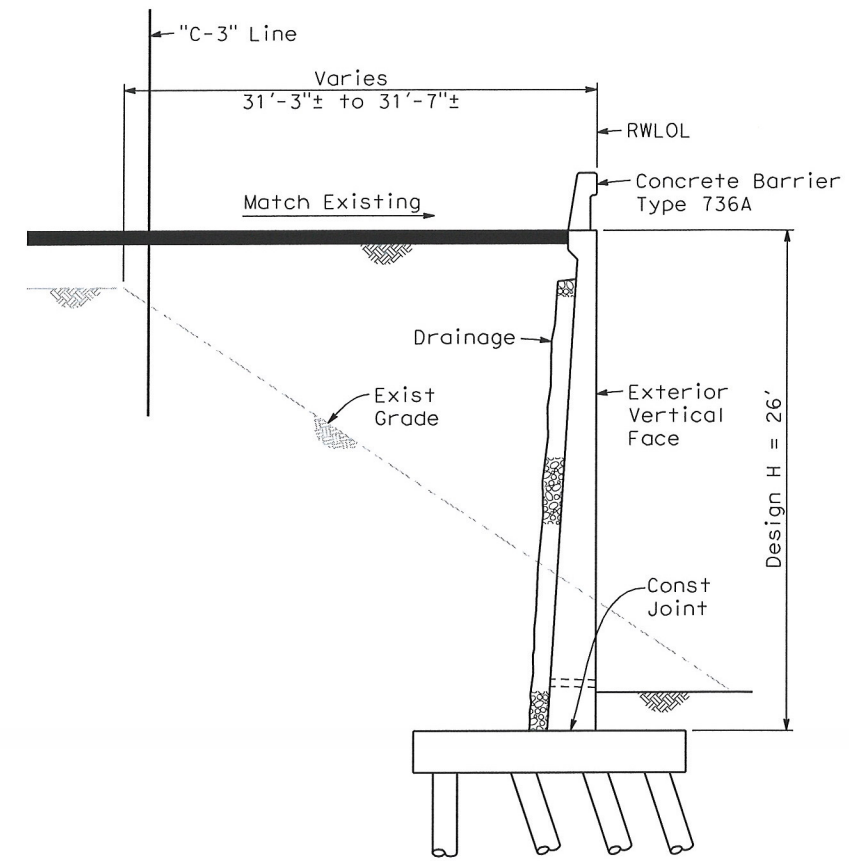
SECTION E-E

1" = 5'-0"



SECTION F-F

1" = 5'-0"



SECTION G-G

1" = 5'-0"



X *Patricia McLaury*
 DESIGN OVERSIGHT
 X *April 15, 2010*
 SIGN OFF DATE

DESIGNED BY	D. PEAVEY	DATE
DRAWN BY	E. GRAY	DATE
CHECKED BY	E. JOHNSON	DATE
APPROVED		DATE

ERIC A. JOHNSON
 PROJECT ENGINEER

PLANNING STUDY	
RET WALL NO. 320 TYPICAL SECTIONS	
BRIDGE NO.	CU
SCALE:	EA 26480

2.5 PRELIMINARY FOUNDATION REPORT

Please refer to the Preliminary Foundation Report, Project No. 2008-055, by Diaz•Yourman & Associates dated October 27, 2009.

2.6 AS-BUILT PLANS

Chapter 3 **Conclusions**

Advanced Planning Studies are developed for budget purposes. The basic objective of such studies is to develop, as early as possible, a feasible type of structure, cost, and controls appropriate for the specific location. It is important that careful consideration be given to span lengths, structure depths, column locations, approach slabs, falsework requirements, and other controls. Design prepares a drawing of the structure showing all significant details that would affect the cost. Preliminary quantities are then determined using any of the aids found in the design aids provided by Caltrans.

Ideal studies capture the intent of what is required on the plan sheet and in the preliminary planning estimate. This includes the scope of the structure work in the project, provides structure depths for setting profile grade lines, establishes the best cost estimate available at the time, provides an early opportunity for the Office of Structure Design to assist in project conceptualization, and describes and documents the design assumptions used in the early concept of the structure.

This Advance Planning Study was prepared in accordance with Caltrans requirements as stated in, but not limited to, the requirements set forth in Bridge Design Aids, Memo to Designers, Highway Design Manual, and other documents. It has identified the important items that are required for determining a reasonable cost for feasible construction.

ATTACHMENT J

STORM WATER DATA REPORT COVER SHEET

Long Form - Storm Water Data Report



Dist-County-Route: 07-LA-110

Post Mile (Kilometer Post) Limits: PM 2.5/2.9 (4.1/4.8)

Project Type: Interchange Improvement

EA: 264800

RU: 07-271

Program Identification: 20.30.600.624

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

Regional Water Quality Control Board(s): Los Angeles (Region 4)

Is the project required to consider incorporating Treatment BMPs? [x] Yes [] No

If yes, can Treatment BMPs be incorporated into the project? [x] Yes [] No

If No, a Technical Data Report must be submitted to the RWQCB

at least 60 days prior to PS&E Submittal. List submittal date:

Total Disturbed Soil Area: 14.6 acres

Estimated Construction Start Date: 07/23/2012 Construction Completion Date: 06/20/2014

Notice of Intent (NOI) Date to be submitted: 03/19/2012

Notification of ADL reuse (if Yes, provide date) [] Yes Date: [x] No

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

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

Keith Gillfillan, Registered Project Engineer

Hamid R. Toossi, Caltrans Designated Oversight Representative

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

Gabe Hamidi, Project Manager Date

Roger E. Castillo, Designated Maintenance Representative Date

Ron Russak, Designated Landscape Architect Representative Date

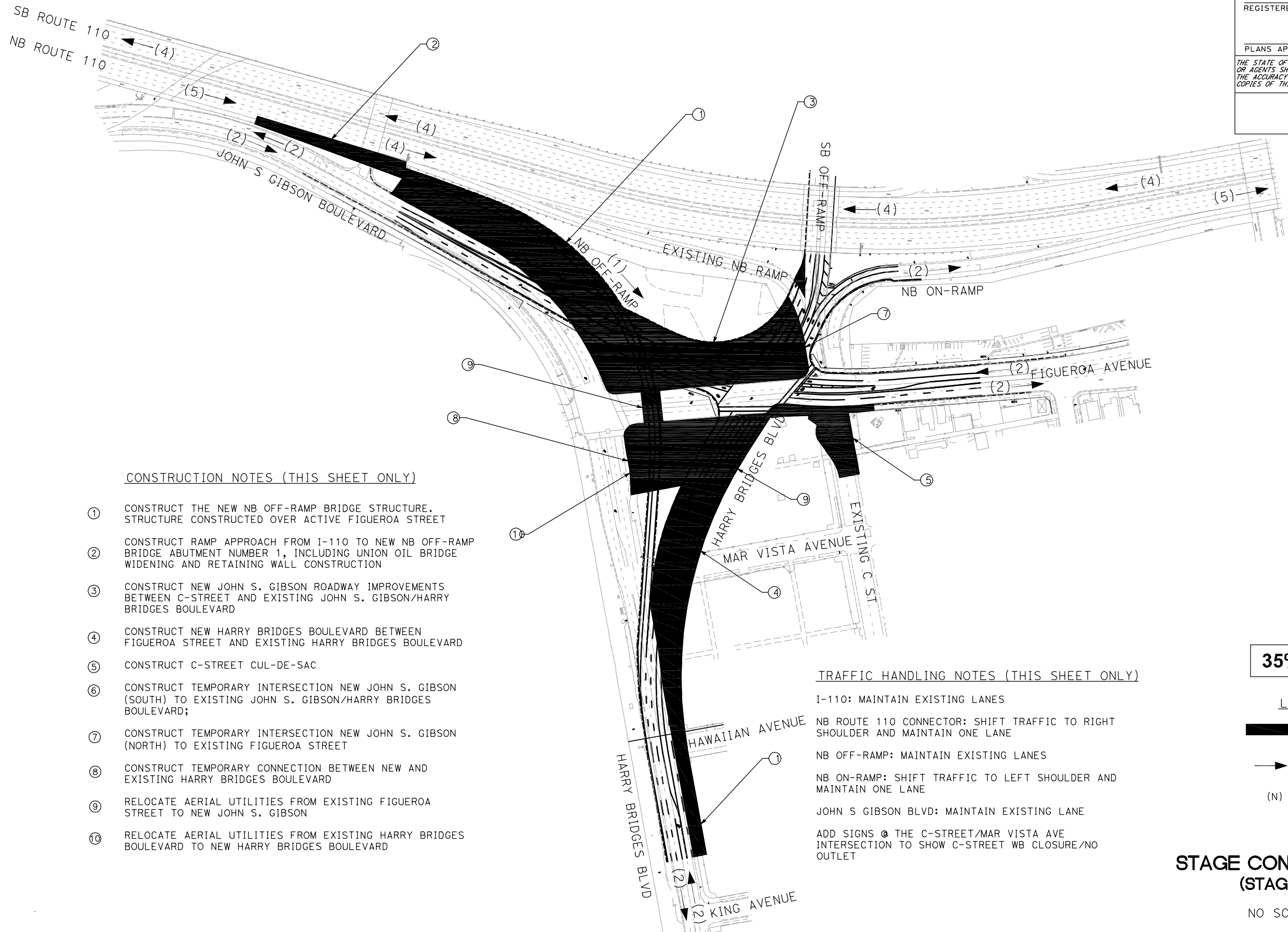
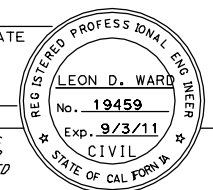
Shirley Pak, District/Regional SW Coordinator or Designee Date

STAMP [Required for PS&E only]

ATTACHMENT K

STAGE CONSTRUCTION PLANS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110			
REGISTERED CIVIL ENGINEER			DATE		
LEON D. WARD			No. 19459		
Exp. 9/3/11			CIVIL		
PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



CONSTRUCTION NOTES (THIS SHEET ONLY)

- ① CONSTRUCT THE NEW NB OFF-RAMP BRIDGE STRUCTURE. STRUCTURE CONSTRUCTED OVER ACTIVE FIGUEROA STREET
- ② CONSTRUCT RAMP APPROACH FROM I-110 TO NEW NB OFF-RAMP BRIDGE ABUTMENT NUMBER 1, INCLUDING UNION OIL BRIDGE WIDENING AND RETAINING WALL CONSTRUCTION
- ③ CONSTRUCT NEW JOHN S. GIBSON ROADWAY IMPROVEMENTS BETWEEN C-STREET AND EXISTING JOHN S. GIBSON/HARRY BRIDGES BOULEVARD
- ④ CONSTRUCT NEW HARRY BRIDGES BOULEVARD BETWEEN FIGUEROA STREET AND EXISTING HARRY BRIDGES BOULEVARD
- ⑤ CONSTRUCT C-STREET CUL-DE-SAC
- ⑥ CONSTRUCT TEMPORARY INTERSECTION NEW JOHN S. GIBSON (SOUTH) TO EXISTING JOHN S. GIBSON/HARRY BRIDGES BOULEVARD;
- ⑦ CONSTRUCT TEMPORARY INTERSECTION NEW JOHN S. GIBSON (NORTH) TO EXISTING FIGUEROA STREET
- ⑧ CONSTRUCT TEMPORARY CONNECTION BETWEEN NEW AND EXISTING HARRY BRIDGES BOULEVARD
- ⑨ RELOCATE AERIAL UTILITIES FROM EXISTING FIGUEROA STREET TO NEW JOHN S. GIBSON
- ⑩ RELOCATE AERIAL UTILITIES FROM EXISTING HARRY BRIDGES BOULEVARD TO NEW HARRY BRIDGES BOULEVARD

TRAFFIC HANDLING NOTES (THIS SHEET ONLY)

- I-110: MAINTAIN EXISTING LANES
- NB ROUTE 110 CONNECTOR: SHIFT TRAFFIC TO RIGHT SHOULDER AND MAINTAIN ONE LANE
- NB OFF-RAMP: MAINTAIN EXISTING LANES
- NB ON-RAMP: SHIFT TRAFFIC TO LEFT SHOULDER AND MAINTAIN ONE LANE
- JOHN S GIBSON BLVD: MAINTAIN EXISTING LANE
- ADD SIGNS @ THE C-STREET/MAR VISTA AVE INTERSECTION TO SHOW C-STREET WB CLOSURE/NO OUTLET

35% SUBMITTAL

LEGEND

- CONSTRUCTION (THIS STAGE)
- DIRECTION OF TRAVEL
- (N) NUMBER OF LANES

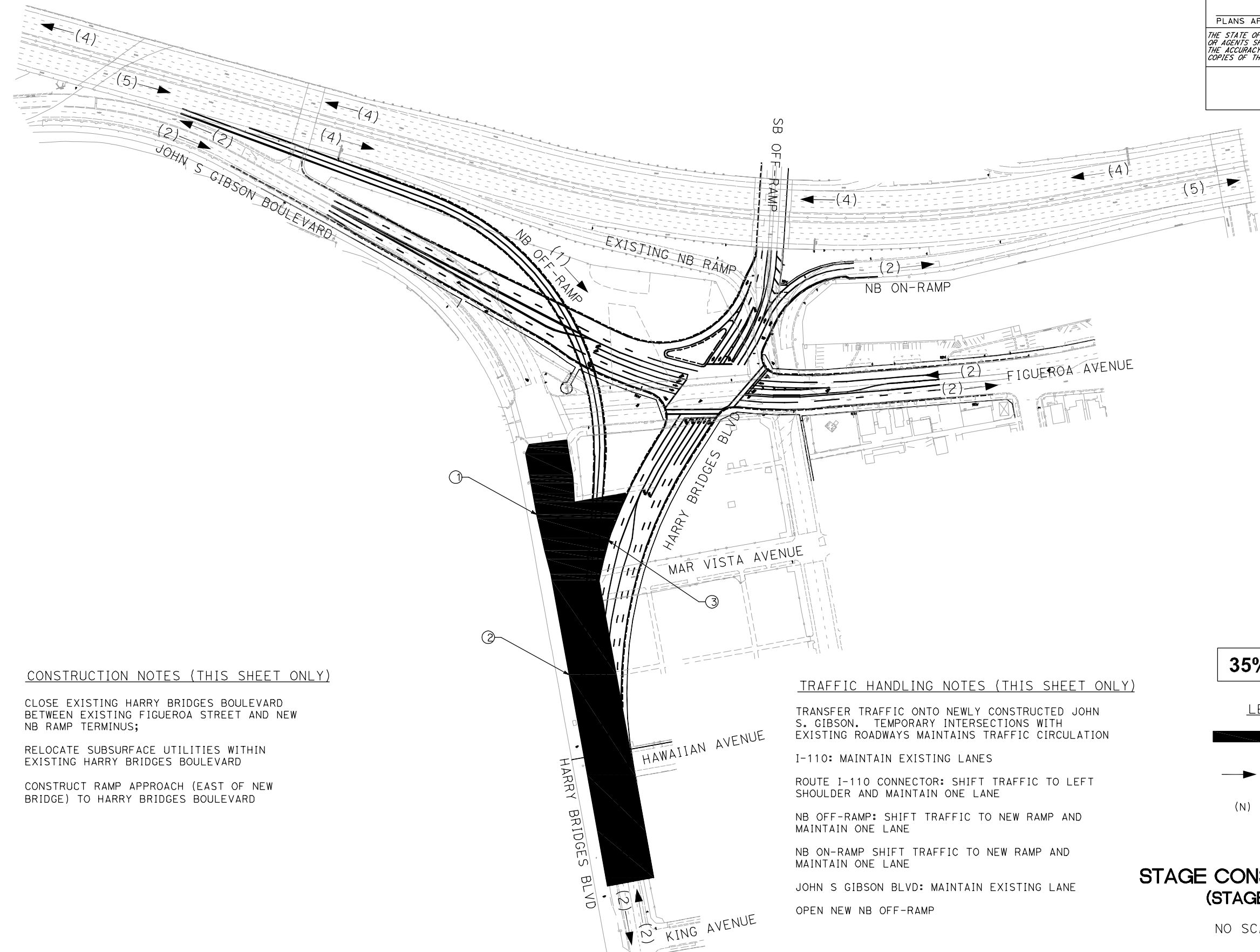
**STAGE CONSTRUCTION
(STAGE 1)**

NO SCALE

SC-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CONSULTANT FUNCTIONAL SUPERVISOR
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110			
REGISTERED CIVIL ENGINEER			DATE		
LEON D. WARD			No. 19459		
PLANS APPROVAL DATE			Exp. 9/3/11		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



CONSTRUCTION NOTES (THIS SHEET ONLY)



- ① CLOSE EXISTING HARRY BRIDGES BOULEVARD BETWEEN EXISTING FIGUEROA STREET AND NEW NB RAMP TERMINUS;
- ② RELOCATE SUBSURFACE UTILITIES WITHIN EXISTING HARRY BRIDGES BOULEVARD
- ③ CONSTRUCT RAMP APPROACH (EAST OF NEW BRIDGE) TO HARRY BRIDGES BOULEVARD

TRAFFIC HANDLING NOTES (THIS SHEET ONLY)

- TRANSFER TRAFFIC ONTO NEWLY CONSTRUCTED JOHN S. GIBSON. TEMPORARY INTERSECTIONS WITH EXISTING ROADWAYS MAINTAINS TRAFFIC CIRCULATION
- I-110: MAINTAIN EXISTING LANES
- ROUTE I-110 CONNECTOR: SHIFT TRAFFIC TO LEFT SHOULDER AND MAINTAIN ONE LANE
- NB OFF-RAMP: SHIFT TRAFFIC TO NEW RAMP AND MAINTAIN ONE LANE
- NB ON-RAMP SHIFT TRAFFIC TO NEW RAMP AND MAINTAIN ONE LANE
- JOHN S GIBSON BLVD: MAINTAIN EXISTING LANE
- OPEN NEW NB OFF-RAMP

35% SUBMITTAL

LEGEND

-  CONSTRUCTION (THIS STAGE)
-  DIRECTION OF TRAVEL
- (N) NUMBER OF LANES

STAGE CONSTRUCTION (STAGE 2)

NO SCALE

SC-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CONSULTANT FUNCTIONAL SUPERVISOR
 CALCULATED-DRAWN BY
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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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ATTACHMENT L

TRAFFIC STUDY

(Under Separate Cover)

I-110 C Street Interchange Project Benefits

- Existing and future peak period hour levels of service will improve from an unacceptable F to C.
- Under Year 2035 conditions, total vehicular delay on a daily basis will be reduced by approximately 2,580 vehicle-hours (150 and 220 vehicle-hours during the morning and afternoon peak hours, respectively).
- As a result of the intersection consolidation, relocated ramp, free flow movements, and improved freeway system, accident rates would be reduced
 - The accident rates at the I-110 C Street interchange are less than the statewide average, except for the SB off-ramp to C Street, where the accident rates are nearly five times higher than the statewide average. According to the data collected (see PR), there were four accidents due to sideswipe, one accident due to broadside, one accident due to hit-object and two accidents due to overturn on the SB off-ramp during the reporting period. The realignment of the NB off-ramp will eliminate the off-ramp traffic merging with SB off-ramp traffic approaching the intersection with Figueroa Street. As a result, it is expected that these accidents will be reduced.
- Emissions Reductions (Year 2035, kg/day): VOC 15.42, CO 66.45, No_x 12.97