

**REQUEST TO CPUC STAFF FOR AUTHORIZATION TO  
ALTER HIGHWAY-RAIL CROSSING  
PURSUANT TO GENERAL ORDER 88-B**



**1. Date Submitted:** September 9, 2010

**2. Applicant Info**

Organization Name:	California Department of Transportation
Contact Person:	Denny Fong, P.E.
Title:	Senior Transportation Engineer
Street Address:	1120 N Street, MS-37
City:	Sacramento, CA
Zip:	95814
Phone:	(916) 654-3070
Email:	Denny_fong@dot.ca.gov

**3. Crossing proposed to be altered**

PUC Crossing Number:	001BM-513.40-A
U.S. DOT Crossing Number:	761634W
Street Name:	Orange FWY (SR 57) OH, known as Douglass OH
City:	Anaheim
County:	Orange
Railroad Responsible for Crossing:	Union Pacific Railroad
Other Railroads Operating on Tracks:	N/A

**4. Describe Proposed Alterations (including any temporary reduced clearance variance requests):**

The California Department of Transportation, in cooperation with the Orange County Transportation Authority (OCTA), proposes to widen the northbound State Route (SR) 57, between 0.31 miles south of Katella Avenue and 0.31 miles north of Lincoln Avenue within the city of Anaheim in Orange County, California. Douglass Overhead (OH) is within the project limits and will be widened approximately 20'6" to accommodate the widening of the SR 57. Douglass OH crosses over the single track mainline of the Union Pacific Railroad (UPRR) and Cerritos Avenue.

A CPUC G.O. 26-D variance is required for this location for the temporary construction vertical clearance of 21'0" in order to construct temporary falsework.

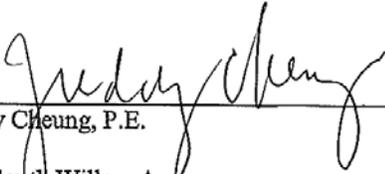


Attachments:

1. Exhibit A – Vicinity Map and Title Sheet
2. Exhibit B – Structure General Plan
3. Exhibit C – Negative Declaration

**10. Evidence of Agreement:**

I, Freddy Cheung, P.E., am an employee of Union Pacific Railroad Company and authorized to sign this letter of agreement on its behalf, hereby declare that Union Pacific Railroad Company concurs with the proposed project described above as the SR 57 northbound widening project between Katella Avenue and Lincoln Avenue in Orange County, CA.

 9/10/2010  
\_\_\_\_\_  
Freddy Cheung, P.E. Signature and date  
2015 South Willow Avenue  
Bloomington, CA 92316  
\_\_\_\_\_  
Address

INDEX OF PLANS

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 PROJECT PLANS FOR CONSTRUCTION ON  
 STATE HIGHWAY  
 IN ORANGE COUNTY  
 IN ANAHEIM  
 FROM 0.3 MILE SOUTH OF  
 KATELLA AVENUE UNDERCROSSING  
 TO 0.3 MILE NORTH OF  
 LINCOLN AVENUE OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	12.2/15.2		

LOCATION MAP

APPROVED AS TO IMPACT ON STATE FACILITIES AND CONFORMANCE WITH APPLICABLE STATE STANDARDS AND PRACTICES AND THAT TECHNICAL OVERSIGHT WAS PERFORMED.

DATE SIGNED

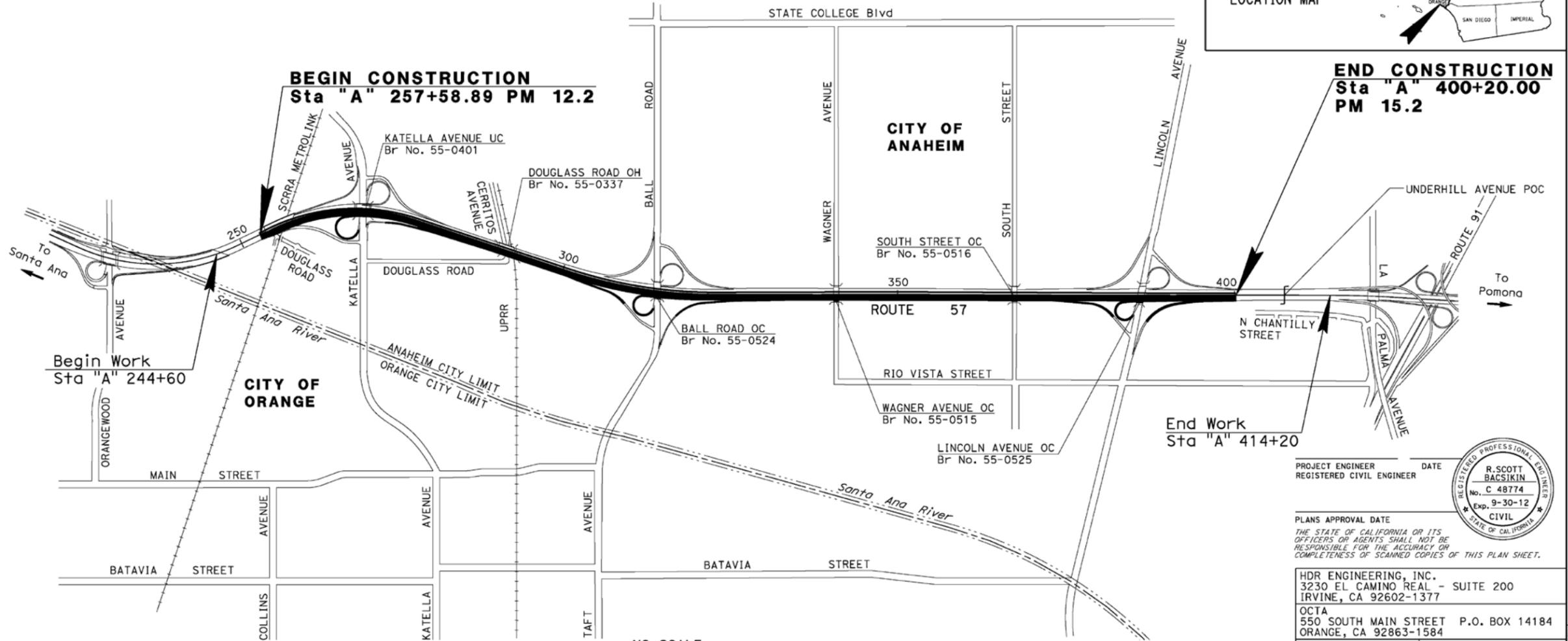
LICENSE EXP. DATE  
6-30-12

REGISTRATION NO.  
C 48436

CALTRANS DESIGN OVERSIGHT APPROVAL

KAMRAN MAZHAR

CONSULTANT DESIGN ENGINEER  
R. SCOTT BACSIKIN



NO SCALE

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

PROJECT ENGINEER DATE REGISTERED CIVIL ENGINEER



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

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

OCTA 550 SOUTH MAIN STREET P.O. BOX 14184 ORANGE, CA 92863-1584

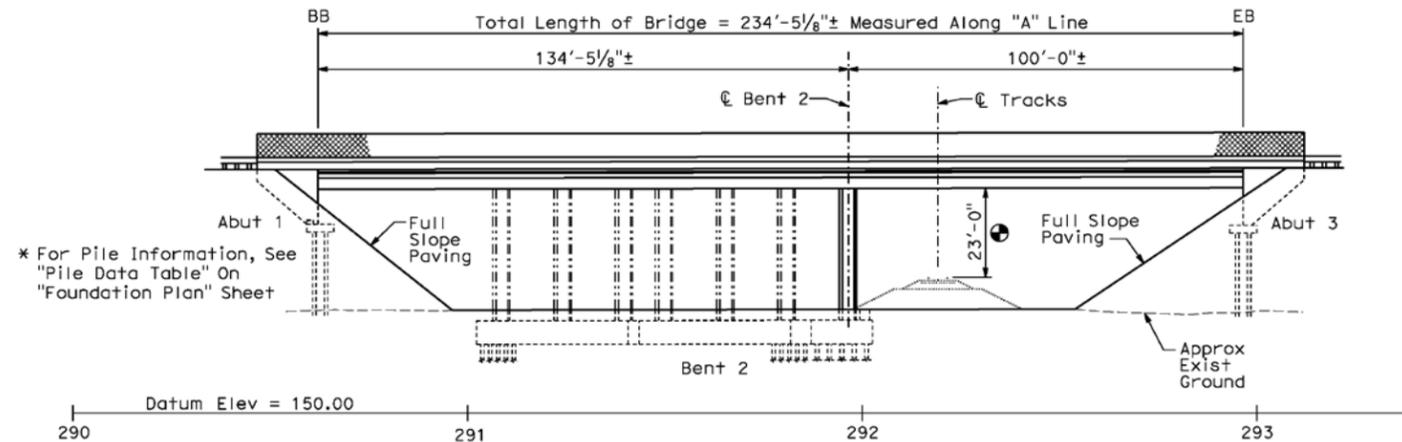
CONTRACT No.	<b>12-0F0404</b>
PROJECT ID	<b>120000109</b>

BORDER LAST REVISED 7/2/2010 CALTRANS WEB SITE IS: HTTP://WWW.DOT.CA.GOV/

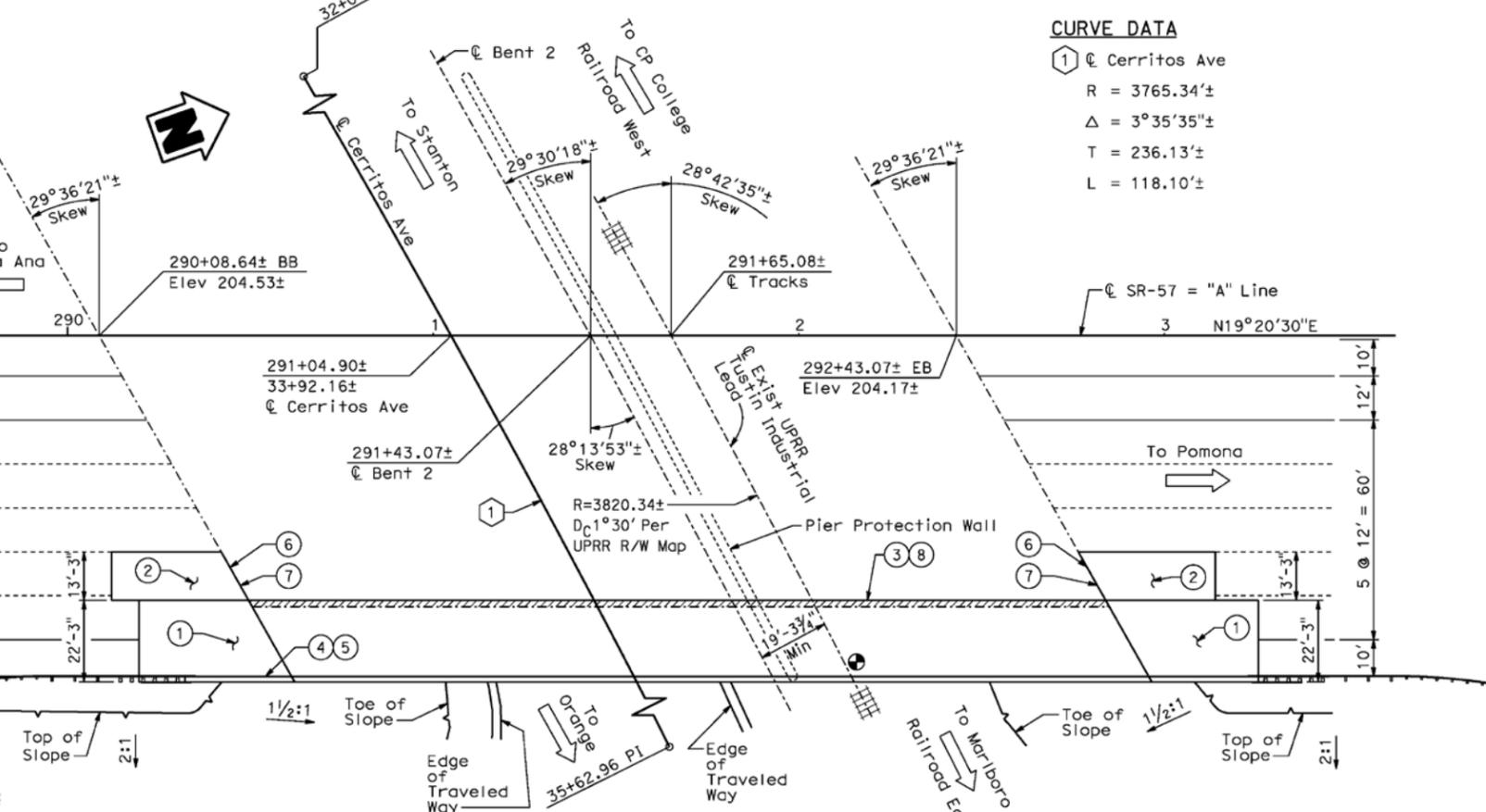
RELATIVE BORDER SCALE 0 1 2 3 15 IN INCHES USERNAME => 8121614 DGN FILE => c0f040cb001.dgn

UNIT 12-2998 PROJECT NUMBER & PHASE 1200001091

DATE PLOTTED => 23-APR-2015 TIME PLOTTED => 10:11



**ELEVATION**  
SCALE 1"=20'



**PLAN**  
SCALE 1"=20'

**NOTE:**  
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering Or Fabricating Any Materials.

**LEGEND**

- ① Structure Approach Slab Type N(30D)
  - ② Structure Approach Slab Type R(30D)
  - ③ Remove Exist Type 9 Barrier And Salvage Metal Railing
  - ④ Paint "DOUGLASS OVERHEAD"
  - ⑤ Paint "BRIDGE No. 55-0337" And Year Constructed
  - ⑥ Joint Seal Replacement (Exist)
  - ⑦ Paving Notch Extension
- Indicates Bridge Removal (Portion)  
 Indicates New Construction  
 Indicates Foundation or Hidden Lines  
 Indicates Existing Structure  
 Min Vert Clearance 23'-0" (Structure)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	12.2/15.2		

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.*

OCTA  
550 S. MAIN STREET  
ORANGE, CA 92863

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



**CURVE DATA**

- ① @ Cerritos Ave
- R = 3765.34±
- Δ = 3°35'35"±
- T = 236.13±
- L = 118.10±

**Vehicular Traffic**

1. \_\_\_ New alignment. No traffic at the site.
2. \_\_\_ Traffic will be detoured away from the site.
3.  Traffic will be carried on the structure. Stage construction will/will not be required.
4.  Traffic will pass under the structure on Douglass Rd
  - A. \_\_\_ No falsework allowed over traffic.
  - B.  Falsework opening(s) required:
 

Temporary Vertical Clearance	Width of Traffic Opening
___ Bnd	___
___ Bnd	___
<input checked="" type="checkbox"/> Two-way 15'-0"	48'-0"
  - C. \_\_\_ Temporary traffic lane reduction needed for footing excavation.

**Pedestrian Traffic**

Falsework opening required on Cerritos Ave

Location	Height	Width
___ EB	7'-0"	5'-0"

**Railroad Traffic**

Falsework opening required over UPRR

Vertical Clearance	Horizontal Clear Width
21'-0"	12'-0"

DESIGN OVERSIGHT	DESIGN BY J. Ramirez	CHECKED W. Chu	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/ "LOW-BOY" PERMIT DESIGN VEHICLE	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 55-0337	<b>DOUGLASS OH (WIDEN) GENERAL PLAN NO. 1</b>
SIGN OFF DATE	DETAILS BY E. Gray	CHECKED W. Chu	LAYOUT BY J. Ramirez	CHECKED W. Chu	PROJECT ENGINEER ERIC A. JOHNSON	POST MILES 13.0	
DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 06-01-09)	QUANTITIES BY J. Ramirez	CHECKED Z. Daniel	SPECIFICATIONS BY E. Johnson	PLANS AND SPECS COMPARED	CU 12231 EA OF0401	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 1 OF 27

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	12.2/15.2		

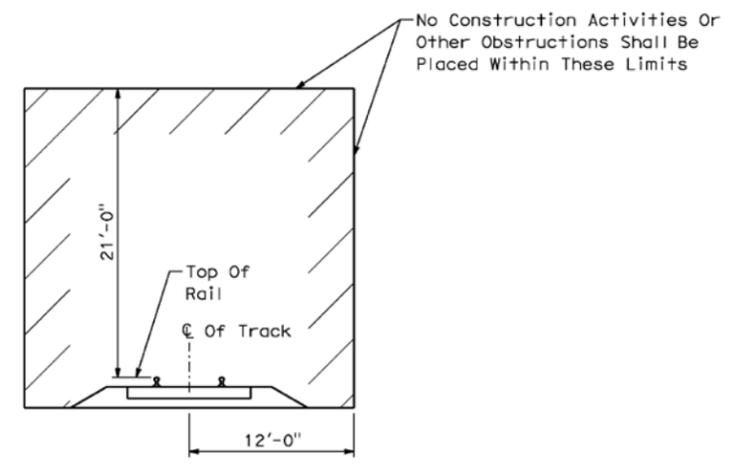
REGISTERED CIVIL ENGINEER	DATE
ERIC A. JOHNSON	
No. C57355	
Exp. 12/31/11	
CIVIL	
STATE OF CALIFORNIA	

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.
OCTA 550 S. MAIN STREET ORANGE, CA 92863
HDR ENGINEERING, INC. 3230 EL CAMINO REAL, SUITE 200 IRVINE, CA 92602-1377

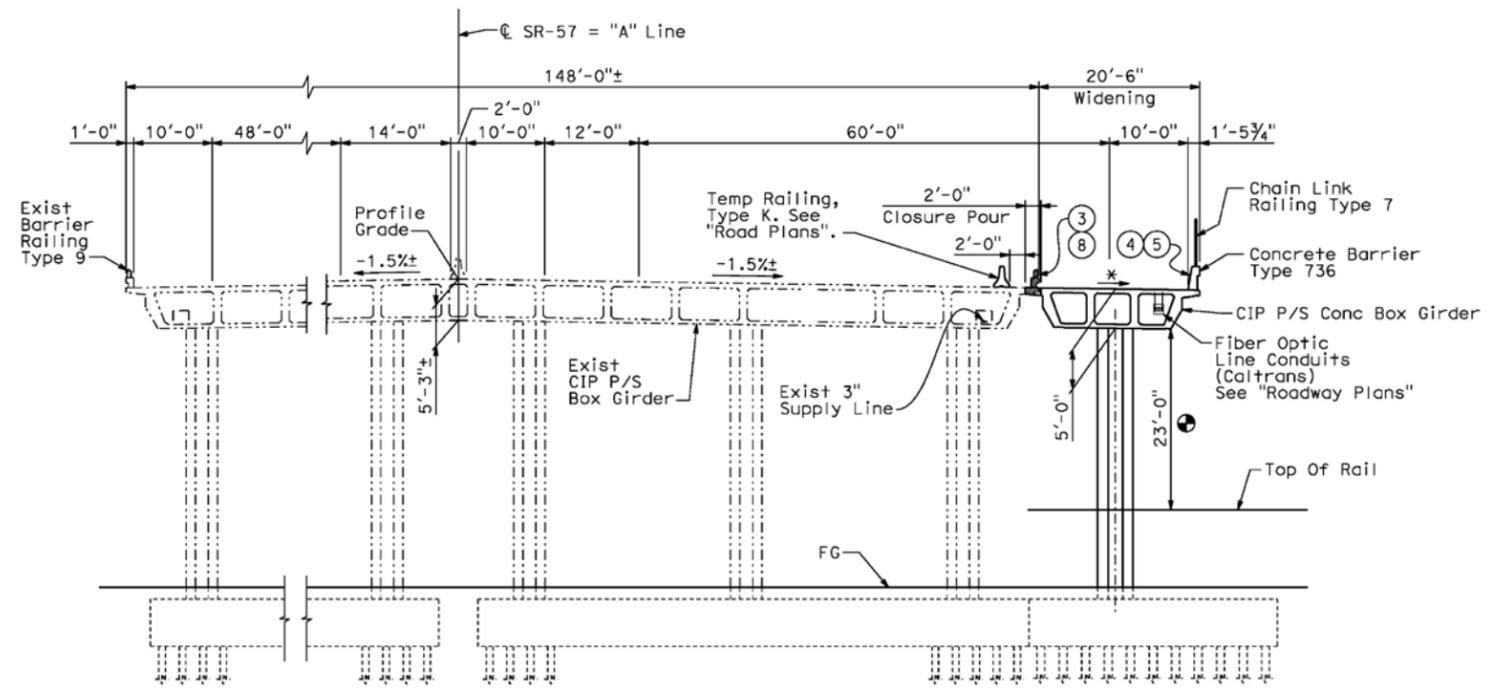
**LEGEND**

- ③ Remove Exist Type 9 Barrier And Salvage Metal Railing
- ④ Paint "DOUGLASS OVERHEAD"
- ⑤ Paint "BRIDGE No. 55-0337" And Year Constructed
- ▨ Indicates Bridge Removal (Portion)
- Indicates New Construction
- ⋯⋯⋯ Indicates Foundation or Hidden Lines
- ⋯⋯⋯ Indicates Existing Structure
- ⊕ Min Vert Clearance 23'-0" (Structure)



**MINIMUM CONSTRUCTION CLEARANCE ENVELOPE**

NTS



**TYPICAL SECTION**

SCALE 1"=10'  
\* Match Existing

**NOTE:**  
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering Or Fabricating Any Materials.

**FINAL PAY QUANTITIES**

STRUCTURE EXCAVATION (BRIDGE)	239	CY
STRUCTURE BACKFILL (BRIDGE)	148	CY
STRUCTURAL CONCRETE, BRIDGE FOOTING	70	CY
STRUCTURAL CONCRETE, BRIDGE	394	CY
STRUCTURAL CONCRETE, APPROACH SLAB N(TYPE 30D)	46	CY
STRUCTURAL CONCRETE, APPROACH SLAB R(TYPE 30D)	33	CY
PAVING NOTCH EXTENSION	1	CY
BAR REINFORCING STEEL (BRIDGE)	118,458	LB
SLOPE PAVING (CONCRETE)	22	CY
CONCRETE BARRIER (TYPE 736)	165	LF
CHAIN LINK RAILING (TYPE 7)	267	LF

**APPROXIMATE QUANTITIES**

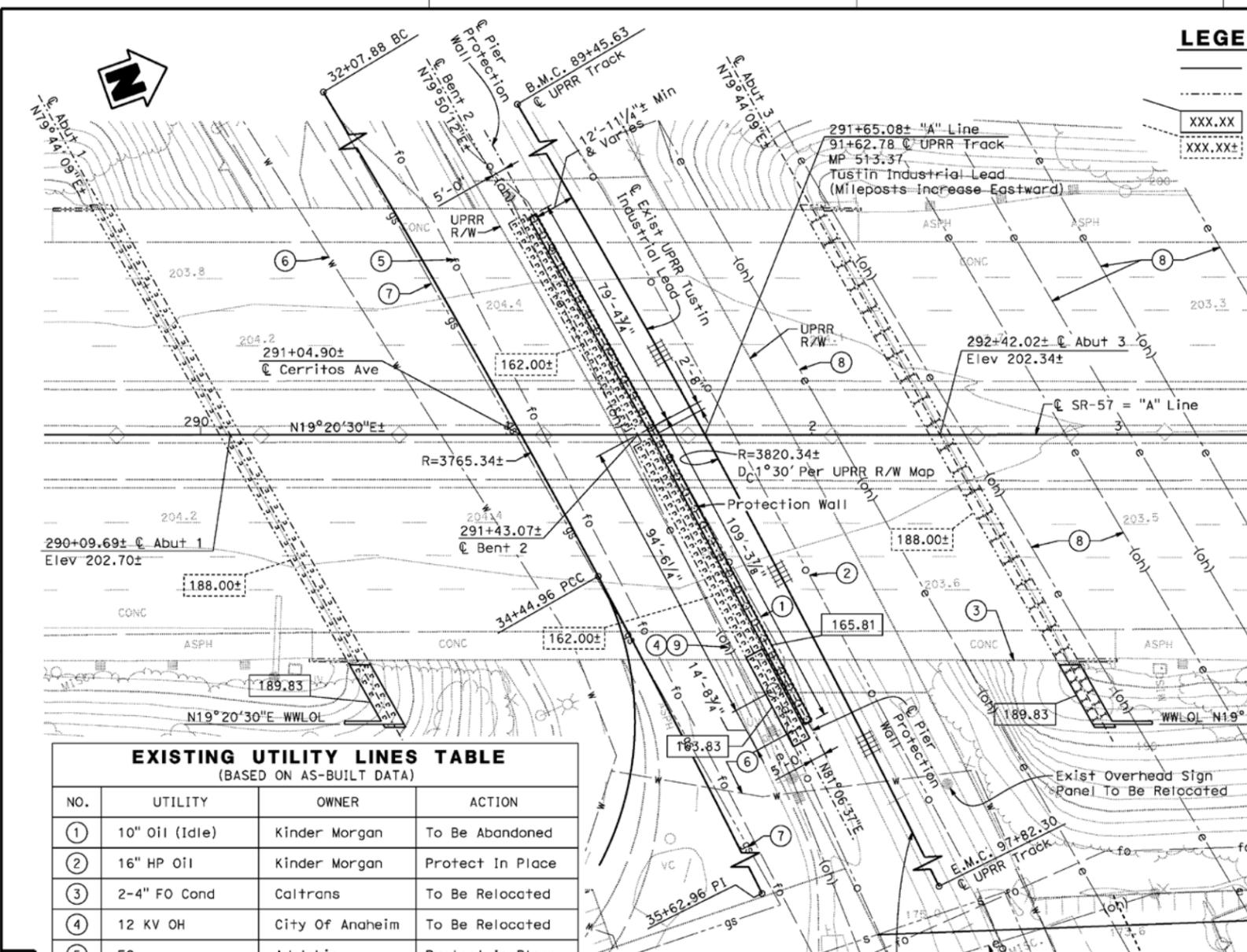
TEMPORARY RAILING (TYPE K)	520	LF
SALVAGE METAL BRIDGE RAILING	267	LF
REMOVE CONCRETE (WINGWALL)	4	CY
BRIDGE REMOVAL (PORTION)	LUMP	SUM
FURNISH STEEL PILING (HP 10 X 42)	564	LF
DRIVE STEEL PILE (HP 10 X 42)	11	EA
FURNISH PILING (CLASS 90)	1,212	LF
DRIVE PILE (CLASS 90)	33	EA
PRESTRESSING STEEL	23,617	LB
DRILL AND BOND DOWEL	47	LF
JOINT SEAL (MR 2")	82	LF
SHORING	2,760	SF
WELDED STEEL PIPE CASING	79	LF

DESIGN	BY J. Ramirez	CHECKED W. Chu	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY" PERMIT DESIGN VEHICLE	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 55-0337	<b>DOUGLASS OH (WIDEN)</b> <b>GENERAL PLAN NO. 2</b>		
DESIGN OVERSIGHT	BY E. Gray	CHECKED W. Chu	LAYOUT	BY J. Ramirez	ERIC A. JOHNSON PROJECT ENGINEER	POST MILES 13.0			
SIGN OFF DATE	BY J. Ramirez	CHECKED Z. Daniel	SPECIFICATIONS	BY E. Johnson	PLANS AND SPECS COMPARED				
DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 06-01-09)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 12231 EA OF0401	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET 2 OF 27

**EXHIBIT B**

USERNAME => 6121614 DATE PLOTTED => 23-APR-2015 TIME PLOTTED => 10:12





**LEGEND**

- Indicates New Construction
- - - - - Indicates Existing
- XXX.XX Indicates Bottom Of Footing Elevation
- XXX.XX± Indicates Bottom Of Exist Footing Elevation

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Orca	57	12.2/15.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

ERIC A. JOHNSON  
No. C57355  
Exp. 12/31/11  
CIVIL  
STATE OF CALIFORNIA

OCTA  
550 S. MAIN STREET  
ORANGE, CA 92863

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

**PILE DATA TABLE (DRIVEN PILES)**

Location	Pile Type	Nominal Resistance (kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance (kips)
		Compression	Tension			
Abut 1	Conc Pile, Class 90 Alt X	170	-	141.0(a) 144.0(c) 169.0(d)	141.0	170
Bent 2	Conc Pile, Class 90 Alt X	180	-	122.0(a) 132.0(c) 143.0(d)	122.0	180
Abut 3	HP 10x42 Steel Pile	140	-	134.0(a) 139.0(c) 169.0(d)	134.0	140

- Notes:
- Design Tip Elevations Are Controlled By:  
(a) Compression; (c) Settlement; (d) Lateral Load.
  - The Specified Tip Elevation Shall Not Be Raised Above The Design Tip Elevations For Lateral And Tolerable Settlement.

**PILE DATA TABLE (CIDH PILES)**

Location	Pile Type	Cut-off Elevation (ft)	Nominal Resistance (kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)
			Compression	Tension		
Protection Wall	24" Dia CIDH	166.06	35	-	159.0(a) 159.0(c) 139.0(d)	139.0

- Notes:
- Design Tip Elevations Are Controlled By:  
(a) Compression; (c) Settlement; (d) Lateral Load.
  - The Specified Tip Elevation Shall Not Be Raised Above The Design Tip Elevations For Compression, Lateral, And Tolerable Settlement.

**EXISTING UTILITY LINES TABLE**  
(BASED ON AS-BUILT DATA)

NO.	UTILITY	OWNER	ACTION
①	10" Oil (Idle)	Kinder Morgan	To Be Abandoned
②	16" HP Oil	Kinder Morgan	Protect In Place
③	2-4" FO Cond	Caltrans	To Be Relocated
④	12 KV OH	City Of Anaheim	To Be Relocated
⑤	FO	Adelphia	Protect In Place
⑥	10" Water	City Of Anaheim	Protect In Place
⑦	4" Gas	So Cal Gas	Protect In Place
⑧	High Tension OH	So Cal Edison	Protect In Place
⑨	CATV OH	Adelphia	To Be Relocated
⑩	12 KV OH	City Of Anaheim	Protect In Place

**NOTE:**  
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering Or Fabricating Any Materials.

**PLAN**  
SCALE 1"=20'

**ABBREVIATIONS**  
HP = High Pressure  
FO = Fiber Optic  
KV = Kilovolts

DESIGN OVERSIGHT	SCALE: 1"=20'	VERT. DATUM	HORZ. DATUM	DESIGN BY J. Ramirez	CHECKED W. Chu	<b>PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION</b>	BRIDGE NO. 55-0337	<b>DOUGLASS OH (WIDEN) FOUNDATION PLAN</b>
SIGN OFF DATE	PHOTOGRAMMETRY AS OF:	ALIGNMENT TIES	DETAILS BY E. Gray	CHECKED W. Chu	PROJECT ENGINEER ERIC A. JOHNSON		POST MILE 13.0	
FOUNDATION PLAN SHEET (ENGLISH) (REV. 06-01-09)	SURVEYED BY E. Martinez	DRAFTED BY	QUANTITIES BY J. Ramirez	CHECKED Z. Daniel	EA 0F0404		DISREGARD PRINTS BEARING EARLIER REVISION DATES	

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

REVISION DATES (PRELIMINARY STAGE ONLY):

FILE => 55-0337r-e-fp101.dgn

DATE PLOTTED => 23-APR-2015

USERNAME => 8121614

**FINAL PAY QUANTITIES**

STRUCTURE EXCAVATION (RETAINING WALL)	410 CY
STRUCTURE BACKFILL (RETAINING WALL)	190 CY
STRUCTURE CONCRETE (RETAINING WALL)	362 CY
BAR REINFORCING STEEL (RETAINING WALL)	135,561 LB

**APPROXIMATE QUANTITIES**

SHORING	2,723 SF
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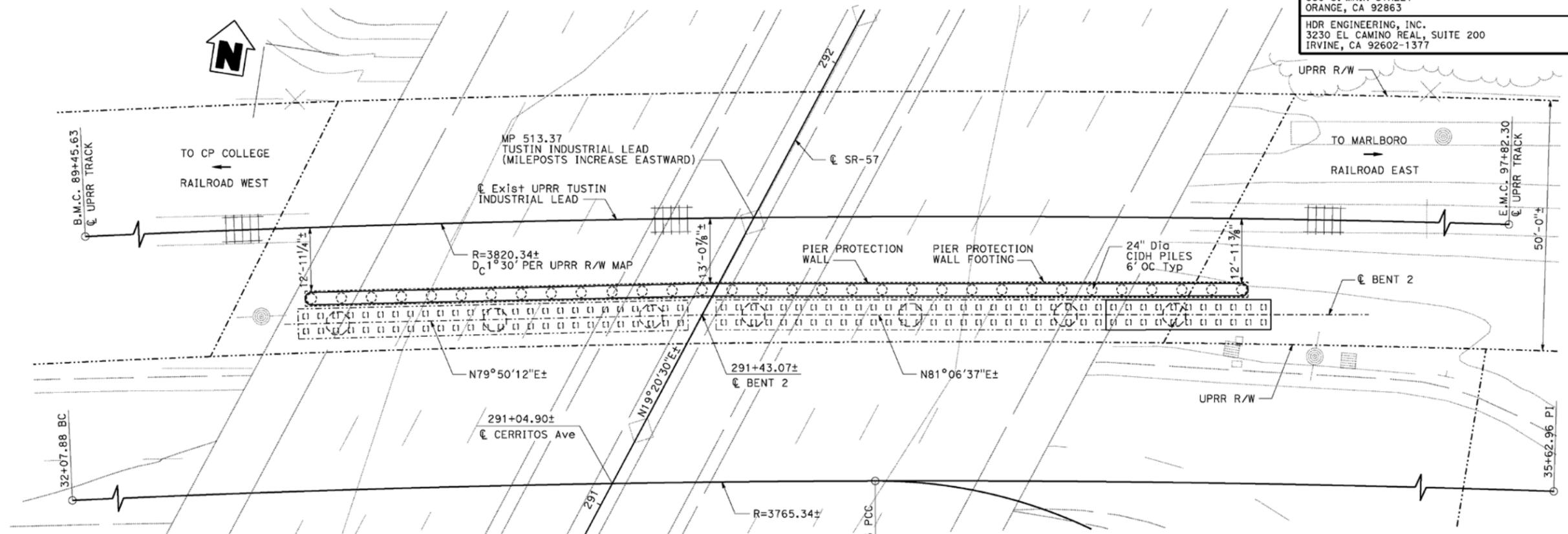
**INDEX TO PLANS**

SHEET No.	DESCRIPTION	SHEET No.	DESCRIPTION
1	GENERAL PLAN	6	SHORING DETAIL
2	FOUNDATION PLAN	7	LOG OF TEST BORINGS - SHEET 1 OF 4
3	PARTIAL PLAN AND ELEVATION	8	LOG OF TEST BORINGS - SHEET 2 OF 4
4	TYPICAL SECTION	9	LOG OF TEST BORINGS - SHEET 3 OF 4
5	TYPICAL WALL DETAILS	10	LOG OF TEST BORINGS (AS-BUILT) - SHEET 4 OF 4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	12.2/15.2		

REGISTERED CIVIL ENGINEER DATE  
 ERIC A. JOHNSON  
 No. C97355  
 Exp. 12/31/11  
 CIVIL  
 STATE OF CALIFORNIA

OCTA  
 550 S. MAIN STREET  
 ORANGE, CA 92863  
 HDR ENGINEERING, INC.  
 3230 EL CAMINO REAL, SUITE 200  
 IRVINE, CA 92602-1377



**DESIGN CRITERIA**

**DESIGN:** UPRR GUIDELINES FOR DESIGN OF HIGHWAY SEPARATION STRUCTURES OVER RAILROAD, 1999; AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2007

**SEISMIC DESIGN:** MANUAL FOR RAILWAY ENGINEERING, 2009; AND CALTRANS SEISMIC DESIGN CRITERIA (SDC), VERSION 1.4, JUNE 2006

**LIVE LOAD:** LOAD OF 400 kips-[AASHTO 3.6.5.2]

**SEISMIC LOADING:** CALTRANS MTD 20-1, SDC APPENDIX B (SEPTEMBER, 2009)  
 ARS: AS SHOWN  
 SOIL PROFILE: INITIAL  $V_{s30} = 880$  (ft/sec), LIQUEFACTION:  YES,  NO  
 NON-LIQUEFACTION CASE:  $PGA = 0.48$  (in g),  $M$  (FOR  $PGA$ ) = 6.6 ( $M_{mode}$ )

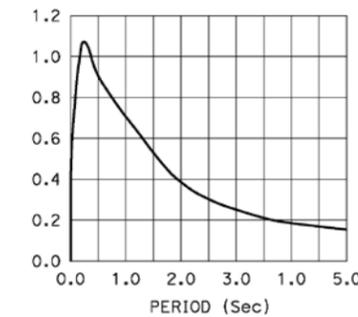
**REINFORCED CONCRETE:**  $f'_c = 4,000$  psi  
 $f_y = 60,000$  psi

**PILES:** 24" CIDH CONCRETE PILES

**NOTE:**

The Contractor shall verify all controlling field dimensions before ordering or fabricating any materials.

**PLAN**



**ARS CURVE FOR SAFETY EARTHQUAKE EVENTS (NON-LIQUEFACTION CASE)**

DESIGN OVERSIGHT	DESIGN BY J. Ramirez	CHECKED W. Chu	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/ "LOW-BOY" PERMIT DESIGN VEHICLE	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 55-0337	<b>DOUGLASS OH (WIDEN) GENERAL PLAN NO. 1</b>
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12-ORA-57-PM 12.2/15.2  
EA No.: 0F0400  
SCH No. 2009031085

State Route 57 (SR-57), widen the northbound side between 0.31 mile south of Katella Avenue to 0.31 mile north of Lincoln Avenue (Post Mile [PM] 12.2 to PM 15.2) within the City of Anaheim in Orange County, California.

**INITIAL STUDY WITH NEGATIVE DECLARATION**  
**Submitted Pursuant to: Division 13, California Public Resources Code**

THE STATE OF CALIFORNIA  
Department of Transportation

Nov 24, 2009  
Date of Approval

  
CINDY QUON  
District Director, District 12  
California Department of Transportation

**NEGATIVE DECLARATION**

STATE OF CALIFORNIA  
DEPARTMENT OF  
TRANSPORTATION

SCH No. 2009031085

12-ORA-57-PM 12.2/15.2  
EA No.: 0F0400

**NEGATIVE DECLARATION**

Pursuant to: Division 13, Public Resources Code

Description

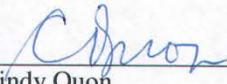
The California Department of Transportation District 12 (the Department), in cooperation with the Orange County Transportation Authority (OCTA), proposes to widen northbound State Route 57 (SR-57) between Katella Avenue and Lincoln Avenue within the City of Anaheim in Orange County, California. This project would reduce traffic congestion and maximize mainline mobility.

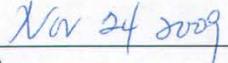
Determination

An Initial Study and Supplemental Initial Study have been prepared by the Department, District 12. On the basis of these studies it is determined that the proposed action will not have a significant effect upon the environment for the following reasons:

The Proposed Project would have no effect on: Farmland/Timberlands, Relocations, Floodplains, Paleontological Resources, Natural Communities, Plant Species, Threatened and Endangered Species, and Invasive Species.

In addition, the Proposed Project would have no significant effect on: Land Use, Growth, Community Character and Cohesion, Environmental Justice, Utilities/Emergency Services, Traffic/Transportation/Pedestrian and Bicycle Facilities, Visual/Aesthetics, Cultural Resources, Water Quality and Storm Water Runoff, Geology/Soils/Seismicity/Topography, Hazardous Waste/Materials, Air Quality, Noise, Wetlands and Other Waters, and Animal Species.

  
\_\_\_\_\_  
Cindy Quon  
District Director  
District 12  
California Department of Transportation

  
\_\_\_\_\_  
Date