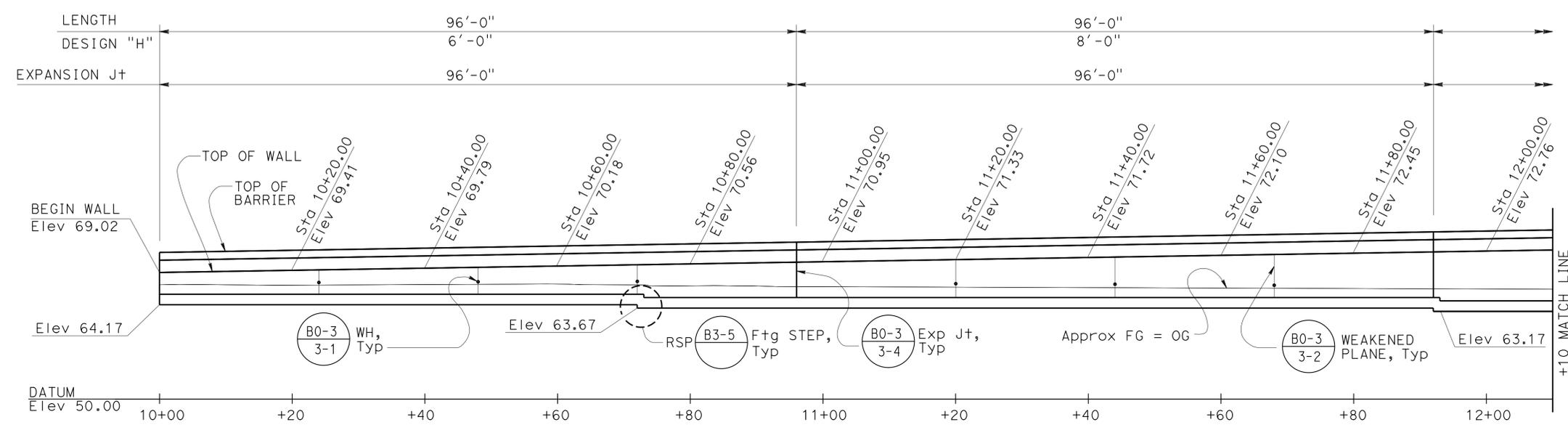
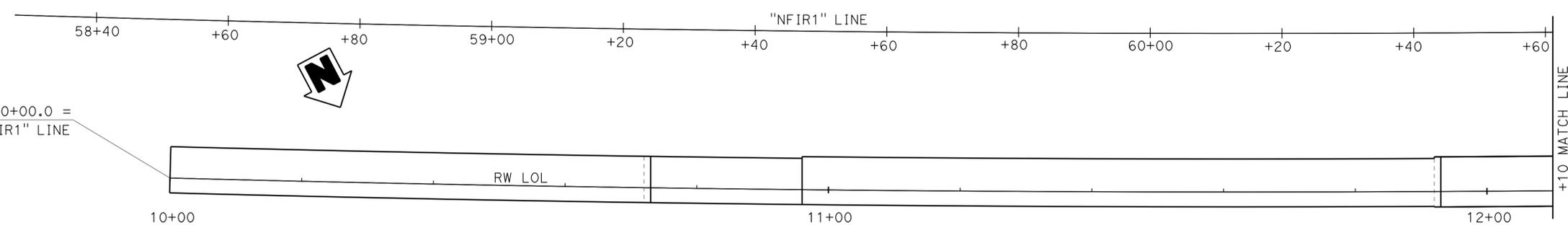


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Orca	5	0.0/1.5, 44.3/44.4	1501	1622

REGISTERED CIVIL ENGINEER DATE 3-18-15  
 PLANS APPROVAL DATE 1-25-16  
 REGISTERED PROFESSIONAL ENGINEER  
 DARYOUSH TAVATLI  
 No. 56183  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



**ELEVATION**  
1" = 10'-0"



**PLAN**  
1" = 10'-0"

DESIGN	BY Yeo Yoon	CHECKED Daryoush Tavatli
DETAILS	BY Anthony Valdez	CHECKED Daryoush Tavatli
QUANTITIES	BY Fred Fong	CHECKED Christine Chan

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

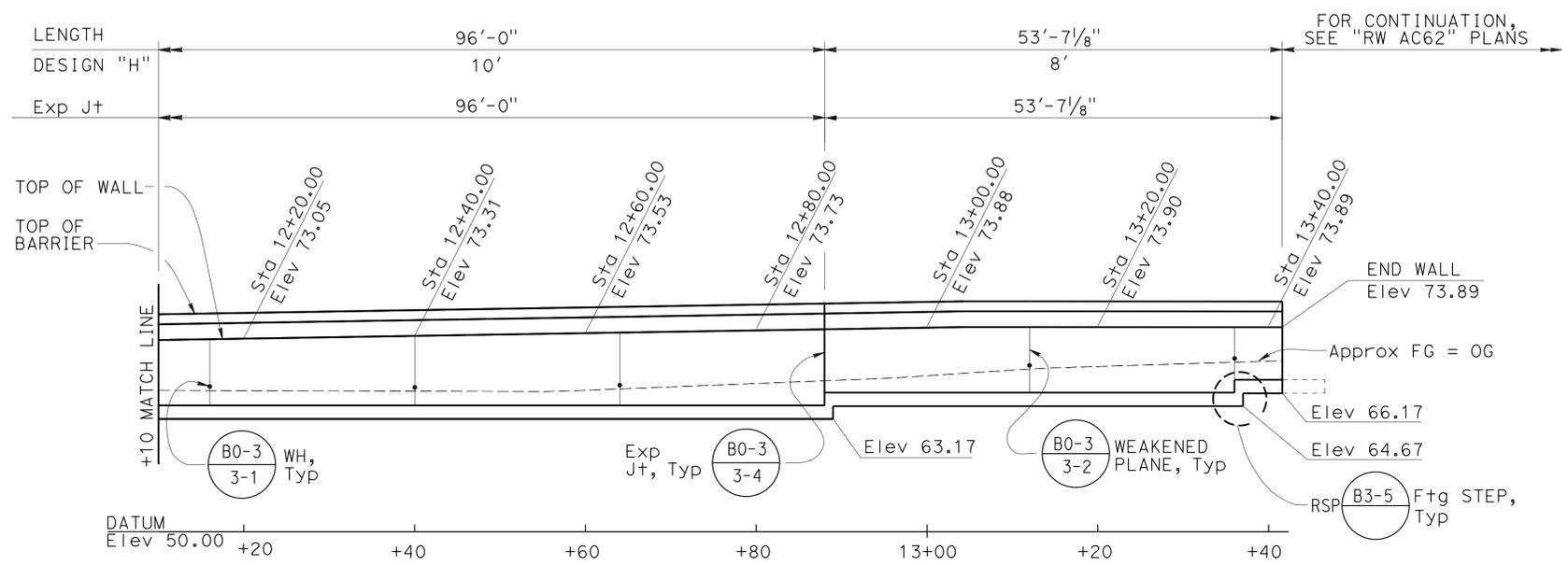
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	
RW NF60	
POST MILE	0.25

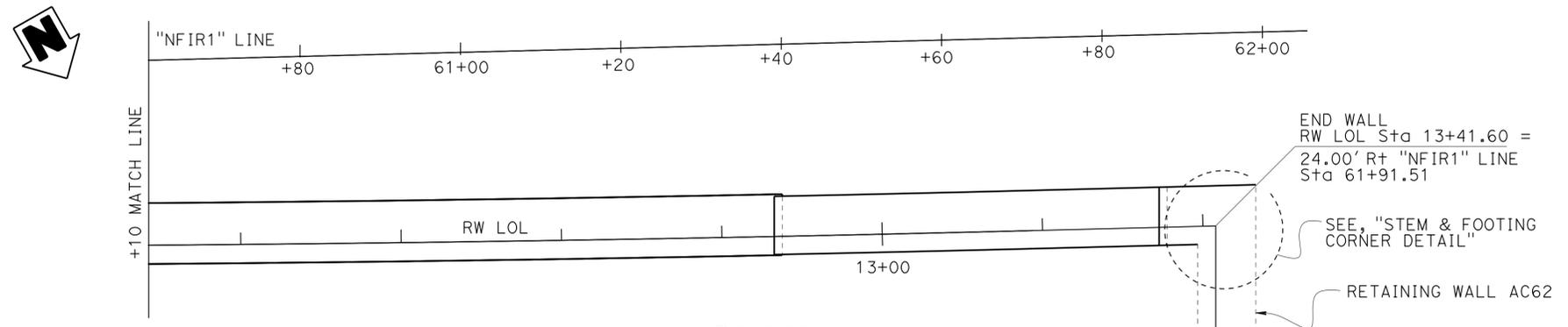
**RETAINING WALL NF60  
STRUCTURE PLAN NO. 1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1502	1622

REGISTERED CIVIL ENGINEER DATE 3-18-15  
 1-25-16  
 PLANS APPROVAL DATE  
 No. 56183  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA  
 DARYOUSH TAVATLI  
 REGISTERED PROFESSIONAL ENGINEER  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



**ELEVATION**  
1" = 10'-0"



**PLAN**  
1" = 10'-0"

DESIGN	BY Yeo Yoon	CHECKED Daryoush Tavatli
DETAILS	BY Anthony Valdez	CHECKED Daryoush Tavatli
QUANTITIES	BY Fred Fong	CHECKED Christine Chan

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
 DESIGN BRANCH 11

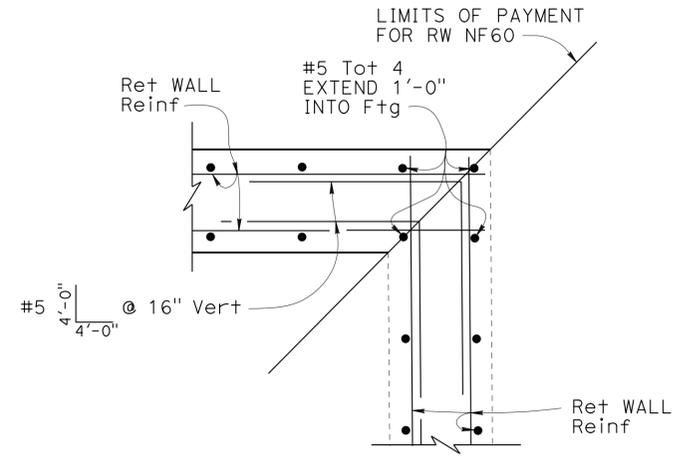
BRIDGE NO.	RW NF60
POST MILE	0.25

**RETAINING WALL NF60**  
**STRUCTURE PLAN NO. 2**

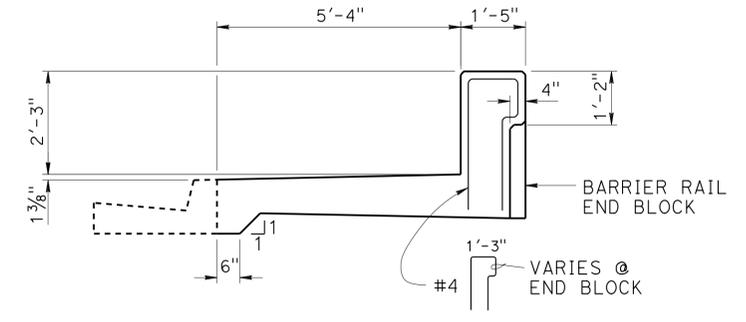
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1503	1622

3-18-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER  
 DARYOUSH TAVATLI  
 No. 56183  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

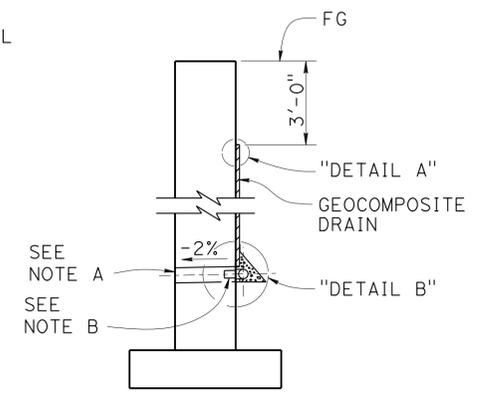


**STEM CORNER DETAIL**  
NO SCALE

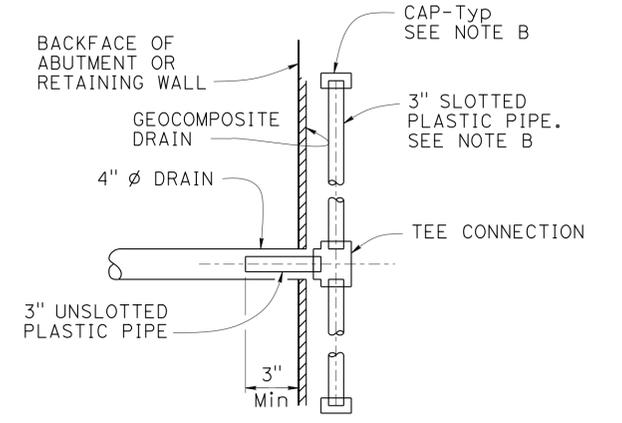


**BARRIER RAIL TYPE 26A MOD**

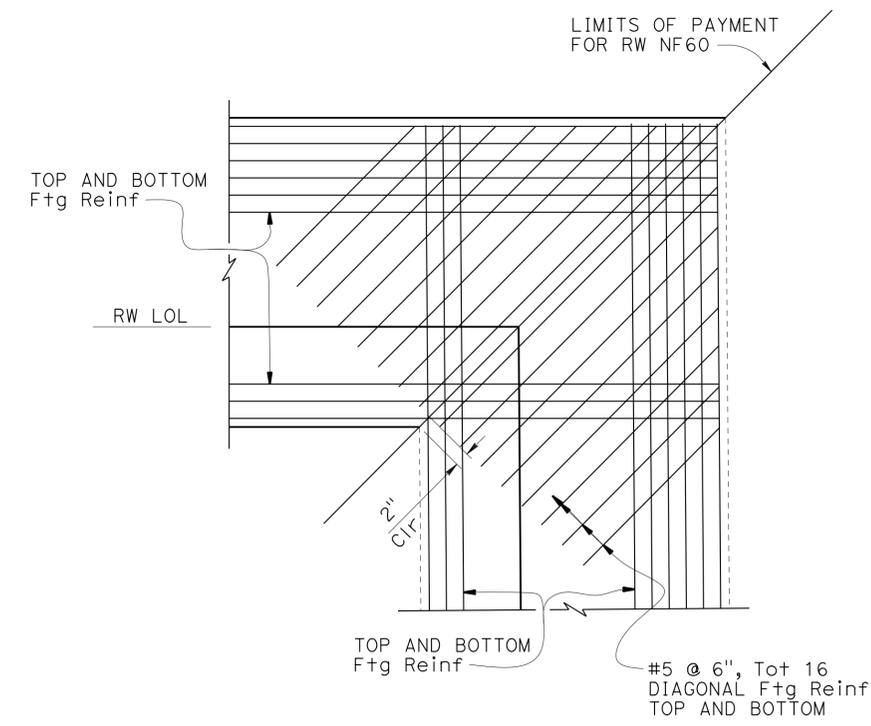
NOTE: For details and reinforcement not shown see RSP **B11-54**



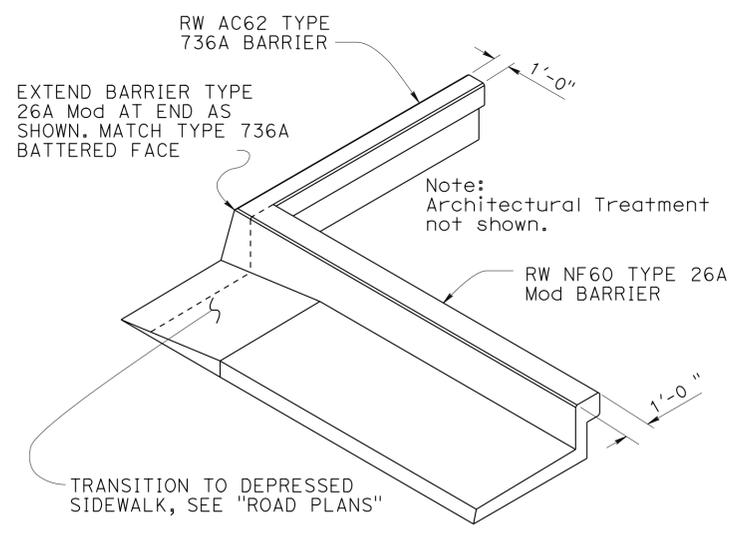
**WALL SECTION**



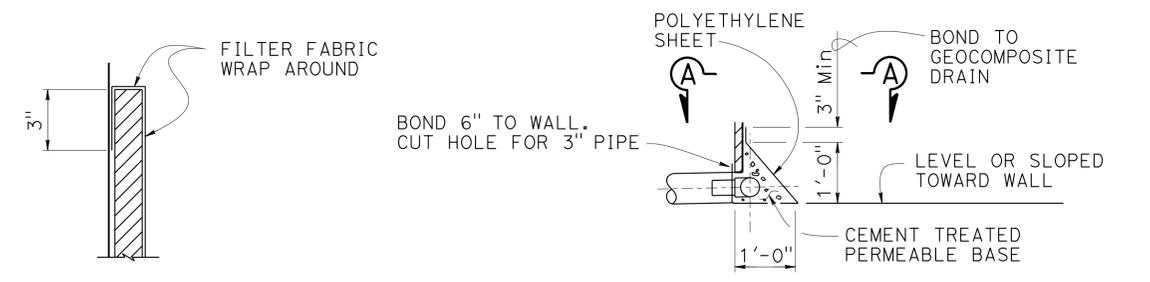
**SECTION A-A**



**FOOTING CORNER DETAIL**  
NO SCALE



**BARRIER TRANSITION DETAIL**  
NO SCALE



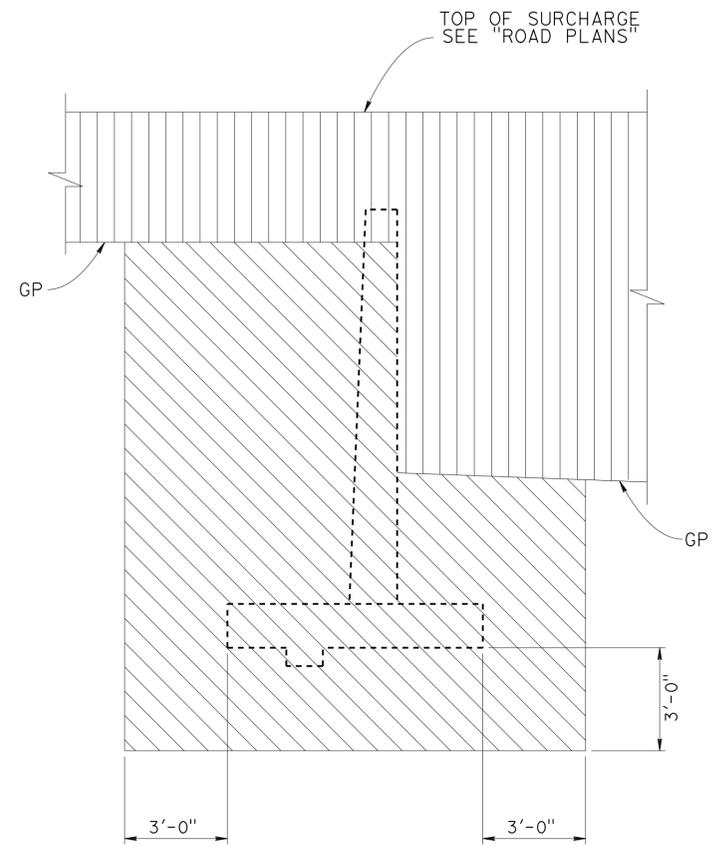
**DETAIL A**  
**DETAIL B**  
**WEEP HOLE AND GEOCOMPOSITE DRAIN**  
NO SCALE

- NOTES: (GEOCOMPOSITE DRAIN)
- 4" Ø drains at intermediate sag points and at 25'-0" center to center (9'-0" c-c for Type 3 and 9'-2" c-c for Type 4 retaining walls). For walls adjacent to sidewalks or curbs, provide 4" Ø cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3" ± above finished grade.
  - Geocomposite drain, cement treated permeable base, and 3" Ø slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Ø drain.
  - Connect the low end of plastic pipe to the main outlet pipe as applicable.

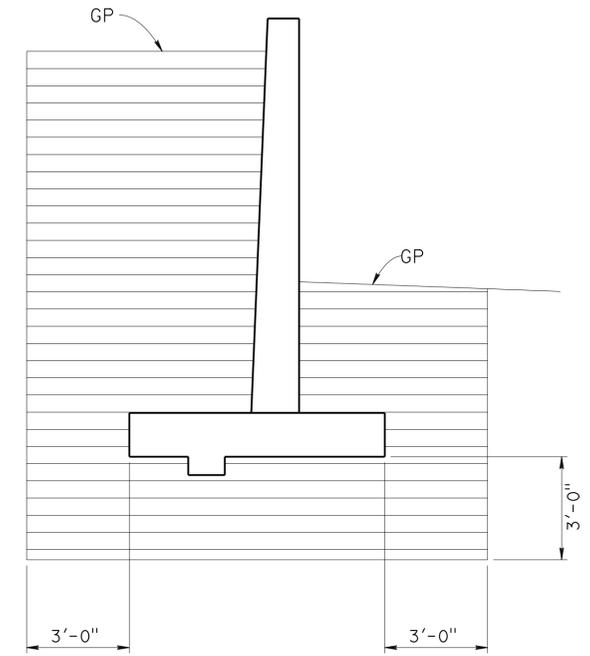
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Yeo Yoon	CHECKED Daryoush Tavatli	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL NF60 RETAINING WALL DETAILS		
	DETAILS	BY Anthony Valdez	CHECKED Daryoush Tavatli			RW NF60			
	QUANTITIES	BY Fred Fong	CHECKED Christine Chan			POST MILE 0.25			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 4 OF 8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Ord	5	0.0/1.5, 44.3/44.4	1504	1622

REGISTERED CIVIL ENGINEER DATE 3-18-15  
 REGISTERED CIVIL ENGINEER No. 56183  
 PLANS APPROVAL DATE 1-25-16 Exp. 12/31/16  
 CIVIL  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



**EXCAVATION**



**BACKFILL**

LEGEND:

-  STRUCTURE EXCAVATION
-  ROADWAY EXCAVATION
-  STRUCTURE BACKFILL

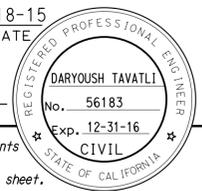
GP - PLANNED GRADING PLANE

**LIMITS OF EXCAVATION AND BACKFILL**  
NO SCALE

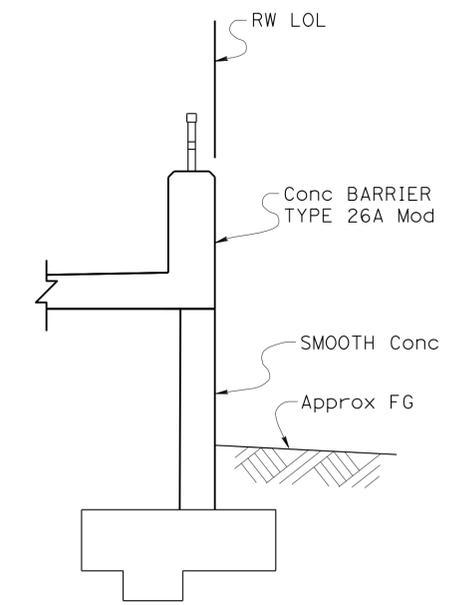
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Yeo Yoon	CHECKED Daryoush Tavatli	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL NF60			
	DETAILS	BY Jaime Ramirez	CHECKED Daryoush Tavatli			RW NF60				
	QUANTITIES	BY Fred Fong	CHECKED Christine Chan			POST MILE 0.25				
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3587	PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 5 OF 8

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:34

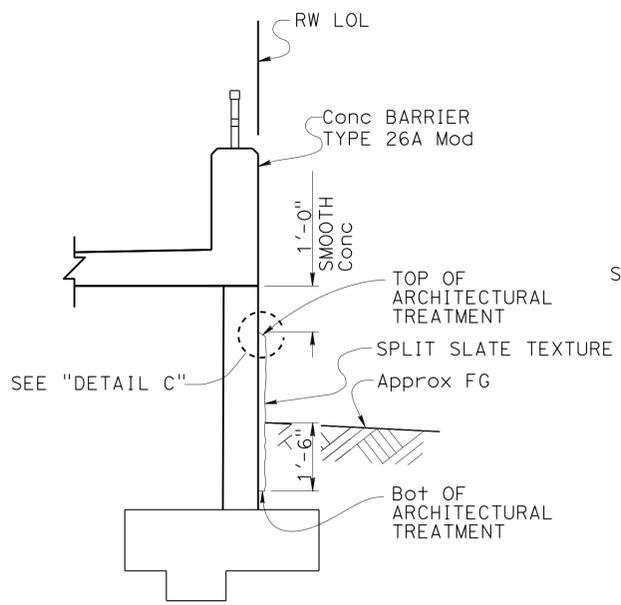
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1505	1622
			3-18-15	DATE	
			1-25-16	PLANS APPROVAL DATE	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



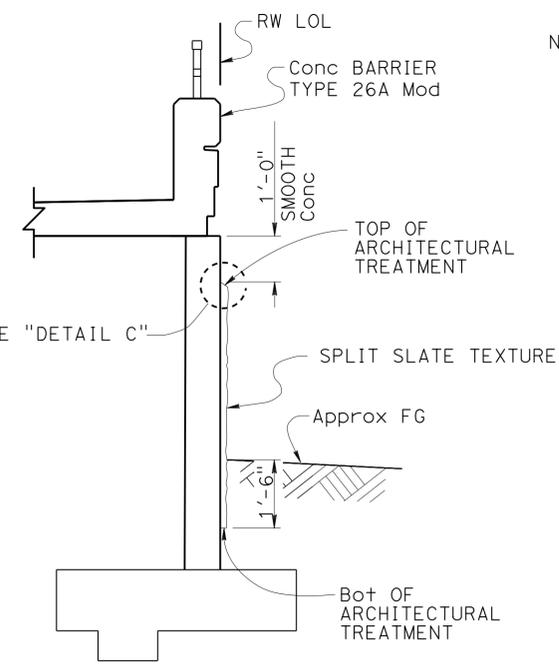
NOTE:  
All surface relief and texture shall be measured from RW LOL, Typ



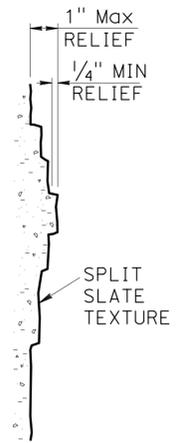
**SECTION B-B**  
NO SCALE



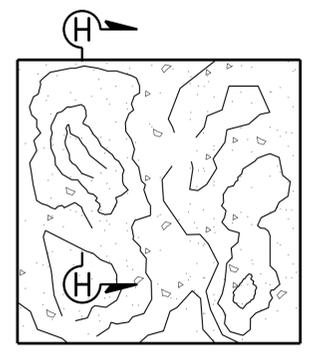
**SECTION C-C**  
NO SCALE



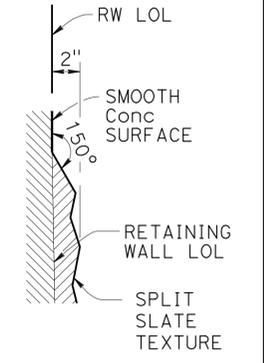
**SECTION D-D**  
NO SCALE



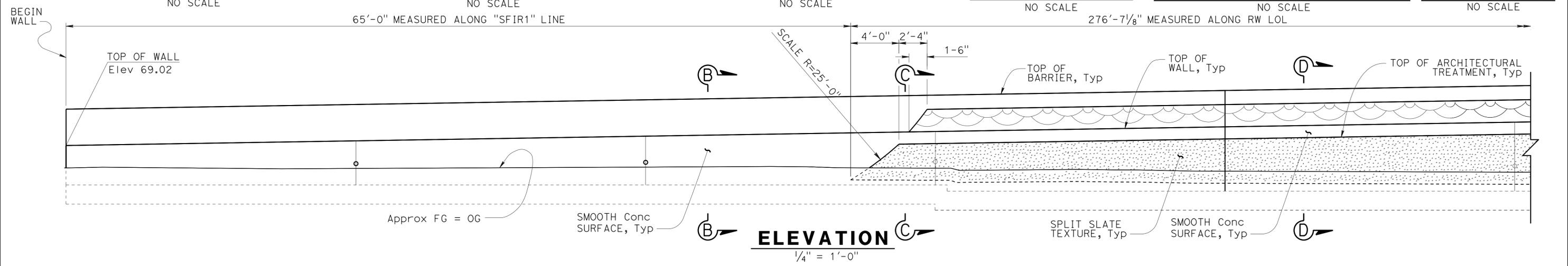
**SECTION H-H**  
NO SCALE



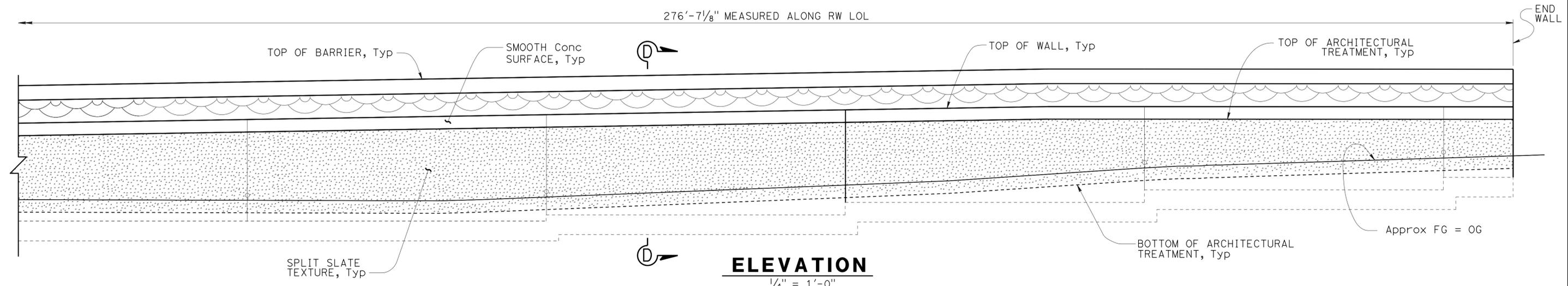
**SPLIT SLATE TEXTURE**  
NO SCALE



**DETAIL C**  
NO SCALE



**ELEVATION**  
1/4" = 1'-0"



**ELEVATION**  
1/4" = 1'-0"

DESIGN	BY H. Javier Chavez	CHECKED Issac Tasabia
DETAILS	BY Anthony Valdez	CHECKED Issac Tasabia
QUANTITIES	BY Fred Fong	CHECKED Christine Chan

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

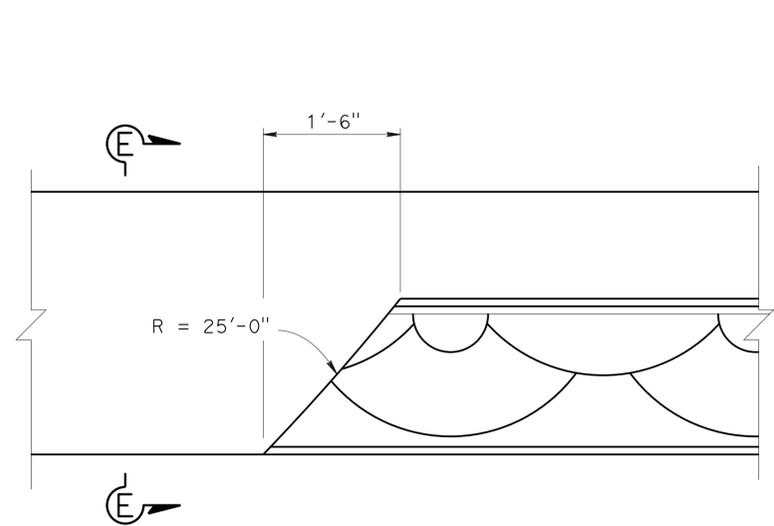
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	RW NF60
POST MILE	0.25

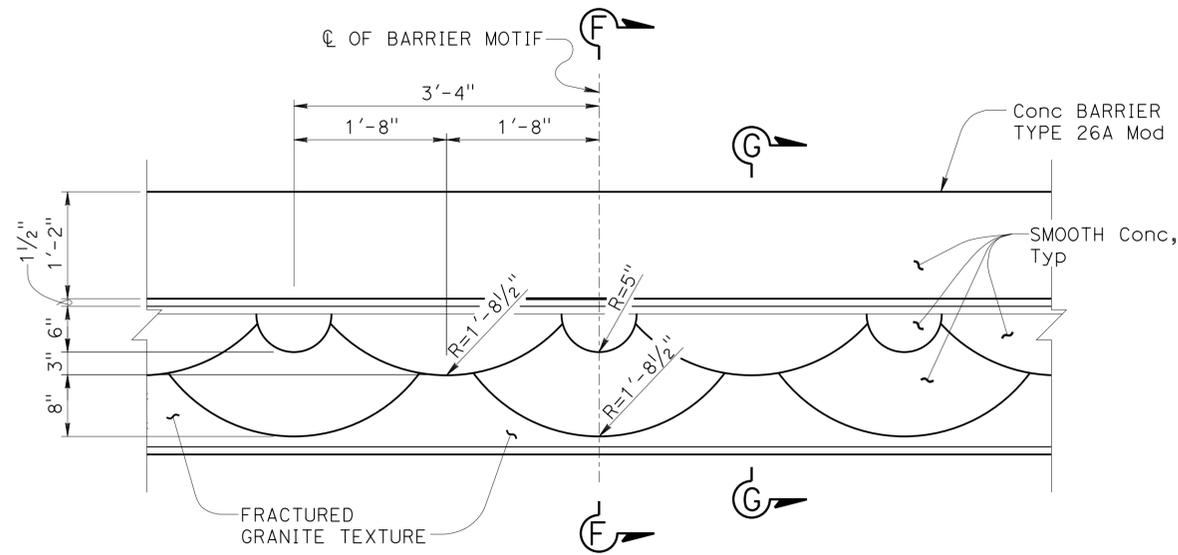
**RETAINING WALL NF60**  
**ARCHITECTURAL TREATMENT DETAILS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Ord	5	0.0/1.5, 44.3/44.4	1506	1622

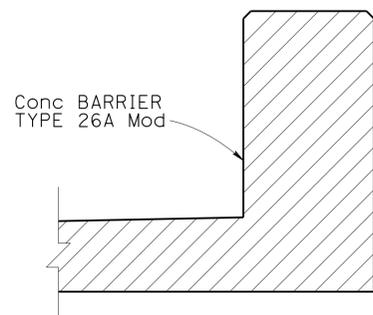
REGISTERED CIVIL ENGINEER DATE 3-18-15  
 1-25-16 PLANS APPROVAL DATE  
 DARYOUSH TAVATLI No. 56183 Exp. 12-31-16 CIVIL  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



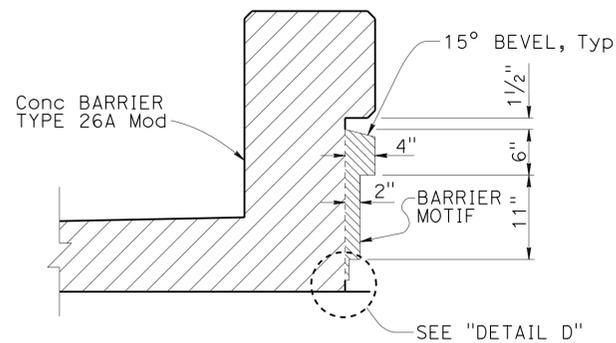
**BARRIER END DETAIL**  
NO SCALE



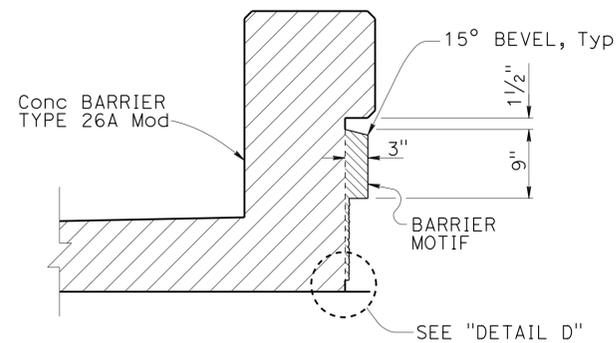
**ELEVATION - BARRIER MOTIF**  
NO SCALE



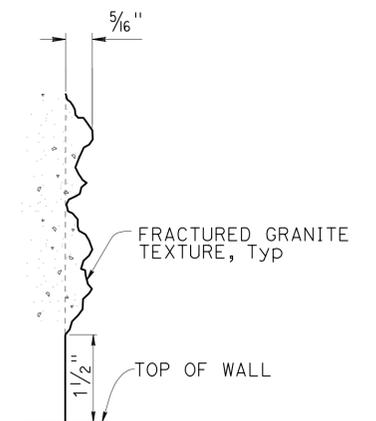
**SECTION E-E**  
1" = 1'-0"



**SECTION F-F**  
1" = 1'-0"



**SECTION G-G**  
1" = 1'-0"



**DETAIL D**  
NO SCALE

DESIGN BY H. Javier Chavez CHECKED Isaac Tasabia DETAILS BY Anthony Valdez CHECKED Isaac Tasabia QUANTITIES BY Fred Fong CHECKED Christine Chan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 11</b>	BRIDGE NO.	<b>RETAINING WALL NF60</b> <b>BARRIER MOTIF DETAILS</b>				
			RW NF60					
			0.25					
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 08-27-12 03-18-13 06-02-13 1-25-13	SHEET 7 OF 8

**BENCH MARK**

GPS 0887  
 ELEVATION 65.915 FT  
 FD 2-1/2 CADT DISK IN CONC. CURB  
 FLUSH, STAMPED "LA-5-1.0, 1995"  
 LOCATED 90' N OF THE SOUTH SIDE  
 FIRESTONE BLVD 0.2 MI SE OF VALLEY VIEW  
 NORTHING 542395.636  
 EASTING 1997613.893  
 DATUM NAVD88

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1507	1622

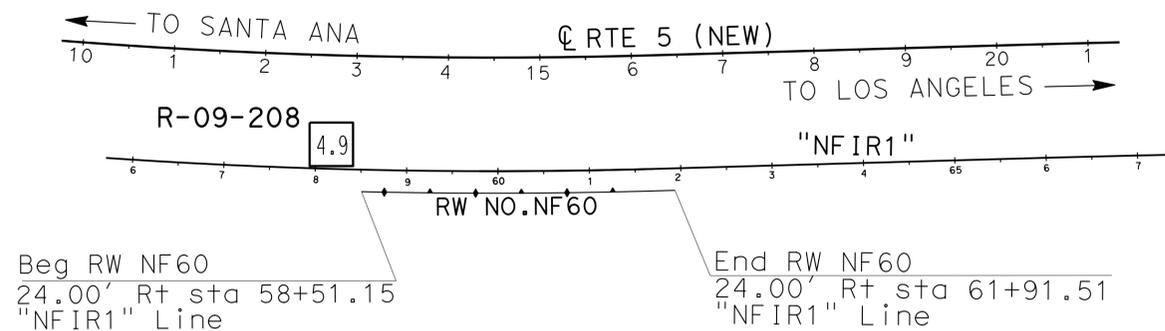
05/20/15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

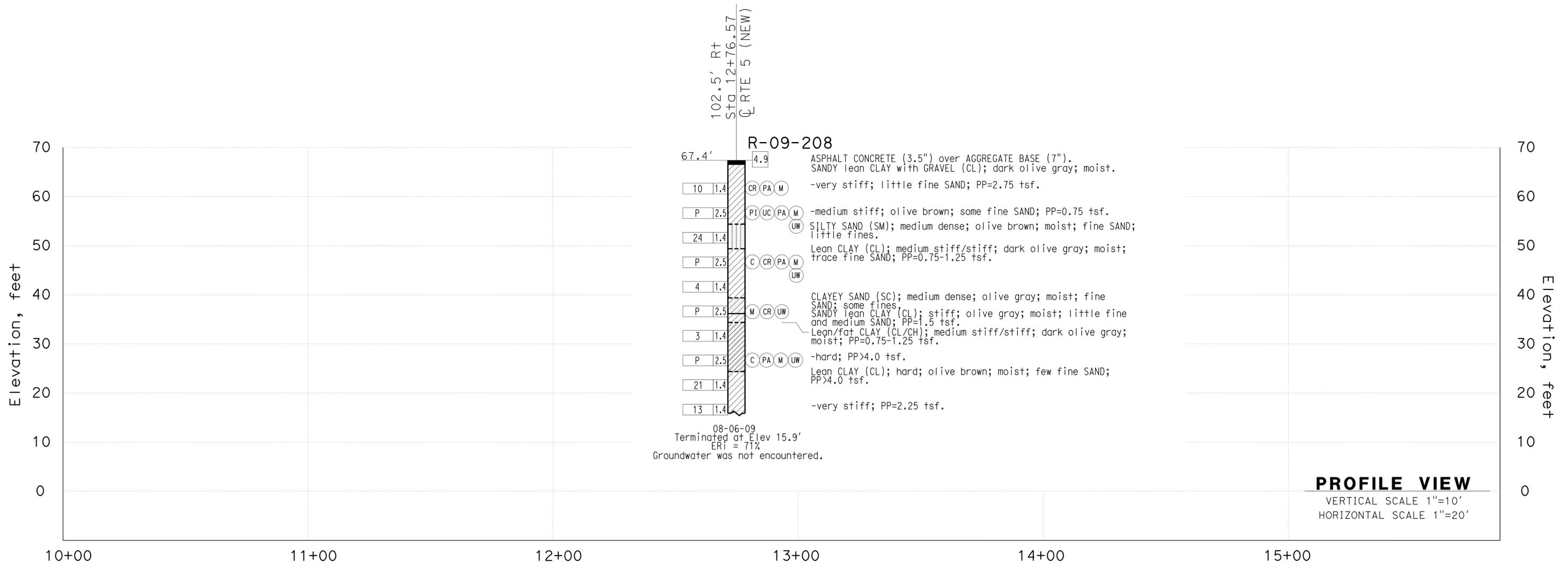
MICHAEL G. SMITH  
 No. 2229  
 Exp. 03/31/16  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 GEOTECHNICAL

URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705

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**PLAN**  
 SCALE 1"=100'



F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH (URS CORP)	EJ.JEON FIELD INVESTIGATION BY: DATE: 08/06/09	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. RW NF60 POST MILES 0.25	RETAINING WALL NO. NF60 LOG OF TEST BORINGS SHEET 1 OF 1
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	CONTRACT NO.: 07-2159U4	REVISION DATES 5/12/15

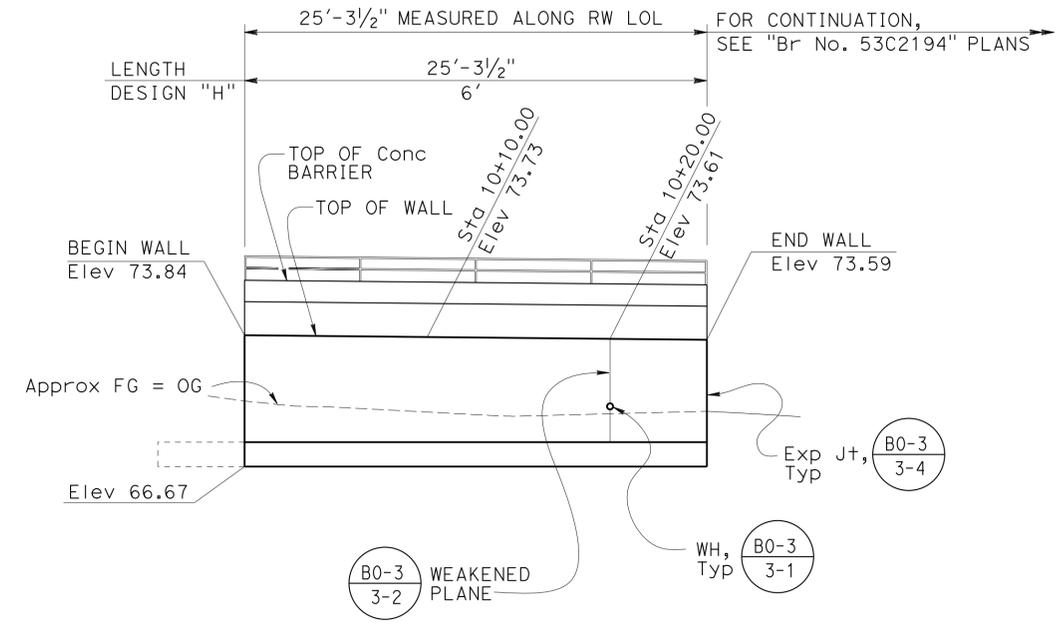
FILE => rwnf60-z-1otb1.dgn

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:34

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1508	1622

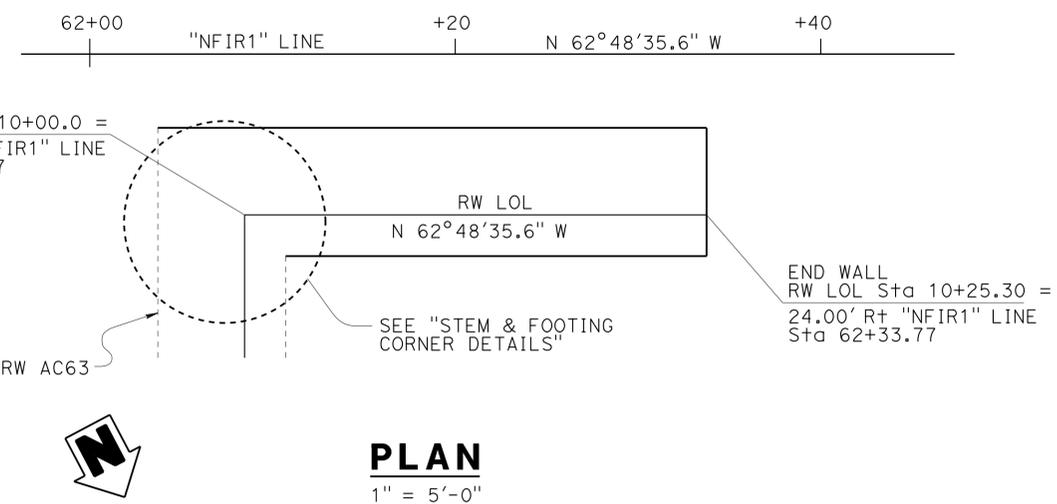
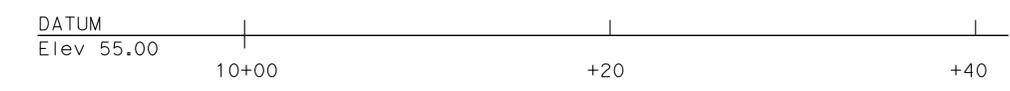
3-18-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER  
 DARYOUSH TAVATLI  
 No. 56183  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA



**ELEVATION**

1" = 5'-0"

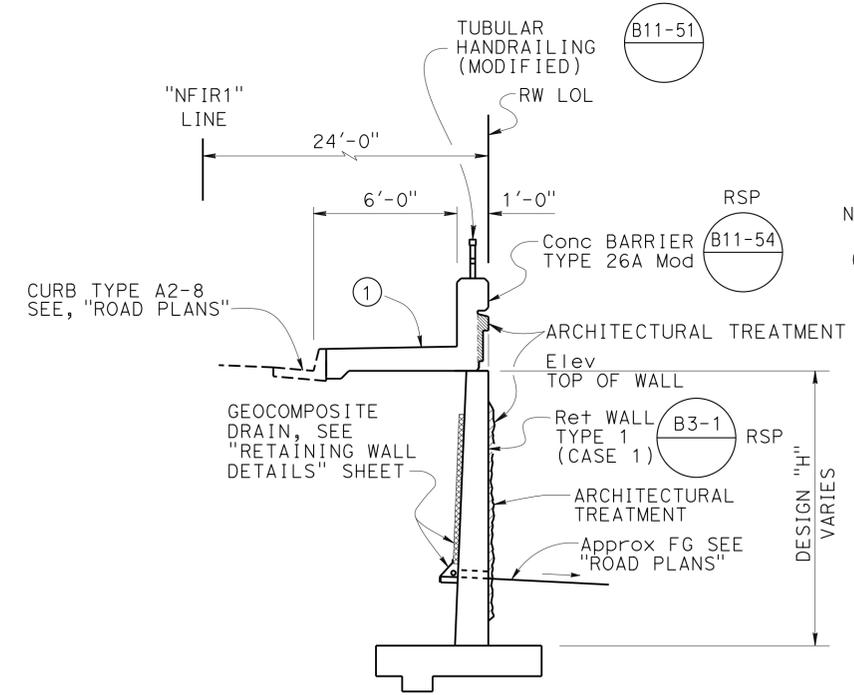


**PLAN**

1" = 5'-0"

**QUANTITIES**

STRUCTURE EXCAVATION (RETAINING WALL)	118	CY
STRUCTURE BACKFILL (RETAINING WALL)	100	CY
STRUCTURAL CONCRETE, RETAINING WALL	15	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	93	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	2,193	LB
TUBULAR HANDRAILING (MODIFIED)	25	LF
CONCRETE BARRIER (TYPE 26 MODIFIED)	25	LF



**TYPICAL SECTION**

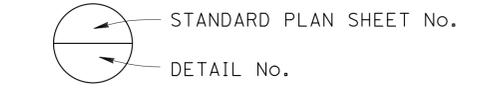
NO SCALE

**INDEX TO PLANS**

SHEET No.	TITLE
1	GENERAL PLAN
2	RETAINING WALL DETAILS
3	LIMITS OF EXCAVATION AND BACKFILL
4	ARCHITECTURAL TREATMENT DETAILS
5	LOG OF TEST BORINGS SHEET 1 OF 1

**STANDARD PLANS DATED MAY 2010**

A10A	ABBREVIATIONS (SHEET 1 OF 2)
A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
A10F	LEGEND - SOIL (SHEET 1 OF 2)
A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL- BRIDGE SURCHARGE AND WALL
B0-3	BRIDGE DETAILS
B3-1A	RETAINING WALL TYPE 1 (CASE 1)
B3-5	RETAINING WALL DETAILS NO. 1
B11-51	TUBULAR HAND RAILING
B11-56	CONCRETE BARRIER TYPE 736



NOTE:  
 ① Transition to Depressed Sidewalk between Sta 10+00.00 and Sta 10+06.52, see "ROAD PLANS"

Ramin Rashedi 3-18-15 DESIGN ENGINEER	DESIGN	BY Yeo Yoon	CHECKED Daryoush Tavatli	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL NF62 GENERAL PLAN	
	DETAILS	BY Anthony Valdez	CHECKED Daryoush Tavatli	LAYOUT	BY Yeo Yoon			CHECKED Daryoush Tavatli		POST MILE
	QUANTITIES	BY Daryoush Tavatli	CHECKED Christine Chan	SPECIFICATIONS	BY X. Li			CHECKED X. Li		0.314

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3  
 UNIT: 3587  
 PROJECT NUMBER & PHASE: 0715000160-1  
 CONTRACT NO.: 07-2159u4  
 DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
07-27-12	1	5

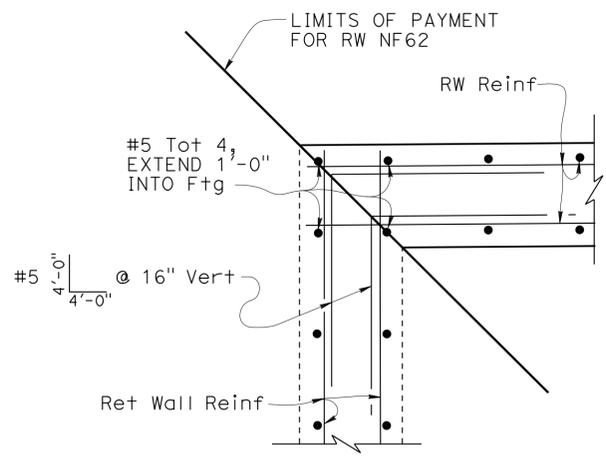
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)  
 FILE => rwnf62-a-gp.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1509	1622

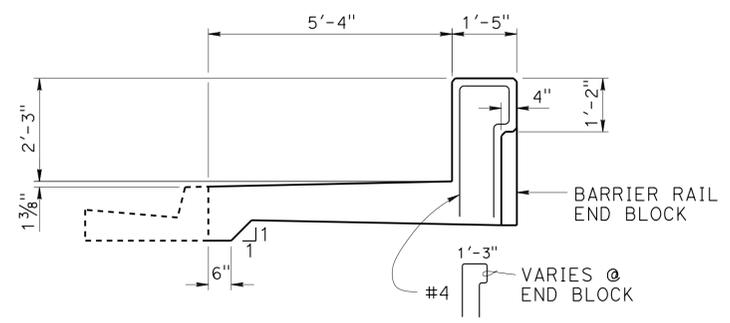
REGISTERED CIVIL ENGINEER DATE 3-18-15  
 REGISTERED PROFESSIONAL ENGINEER  
 DARYOUSH TAVATLI  
 No. 56183  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

1-25-16  
 PLANS APPROVAL DATE

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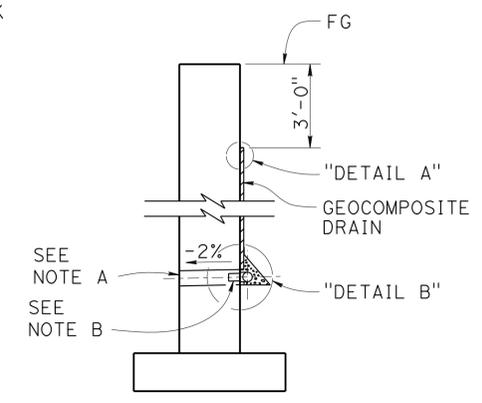


**STEM CORNER DETAIL**  
NO SCALE

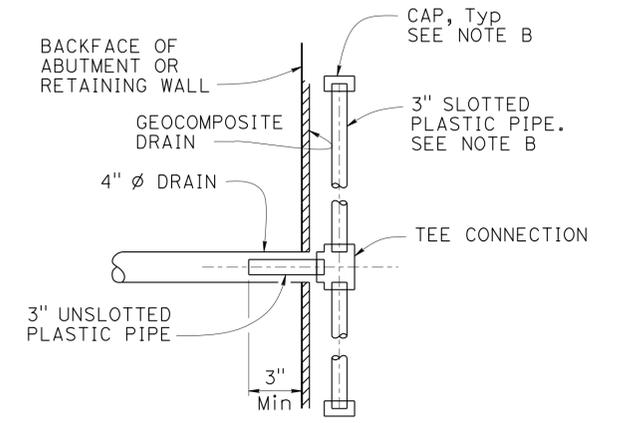


**BARRIER RAIL TYPE 26A MOD**  
1/2" = 1'-0"

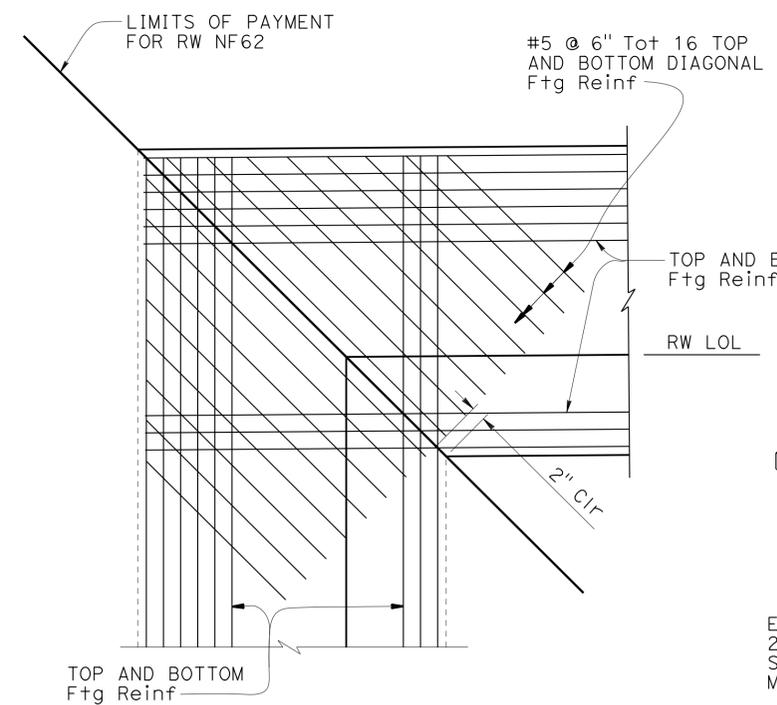
NOTE: For details and reinforcement not shown see RSP B11-54



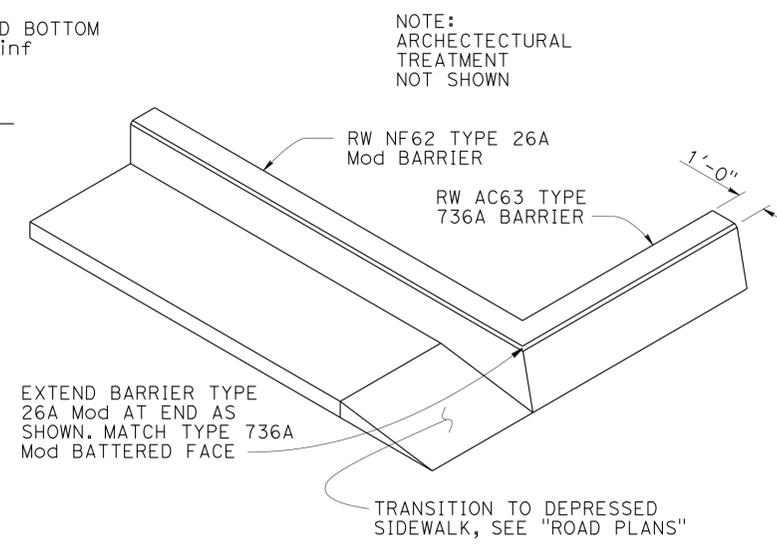
**WALL SECTION**



**SECTION A-A**

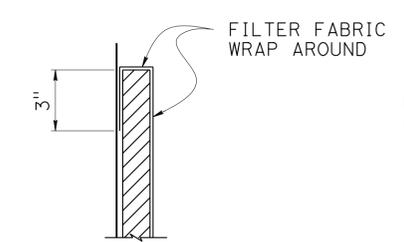


**FOOTING CORNER DETAIL**  
NO SCALE

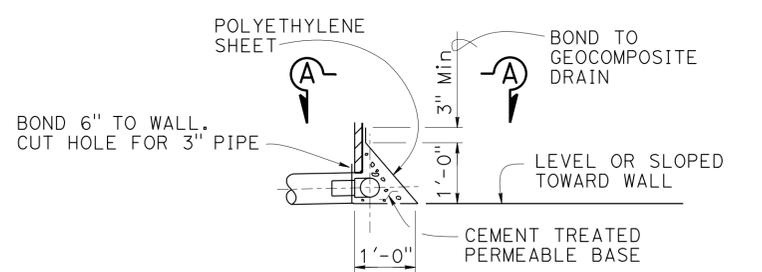


**BARRIER TRANSITION DETAIL**  
NO SCALE

NOTE: ARCHTECTURAL TREATMENT NOT SHOWN



**DETAIL A**



**DETAIL B**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**  
NO SCALE

NOTES: (GEOCOMPOSITE DRAIN)

- A. 4" Ø drains at intermediate sag points and at 25'-0" center to center. For walls adjacent to sidewalks or curbs, provide 4" Ø cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3" ± above finished grade.
- B. Geocomposite drain, cement treated permeable base, and 3" Ø slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Ø drain.
- C. Connect the low end of plastic pipe to the main outlet pipe as applicable.

DESIGN	BY	Yeo Yoon	CHECKED	Daryoush Tavatli	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL NF62 RETAINING WALL DETAILS	
	DETAILS	BY	Anthony Valdez	CHECKED			Daryoush Tavatli		POST MILE
	QUANTITIES	BY	Daryoush Tavatli	CHECKED			Christine Chan		0.314

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1 CONTRACT NO.: 07-2159u4 DISREGARD PRINTS BEARING EARLIER REVISION DATES

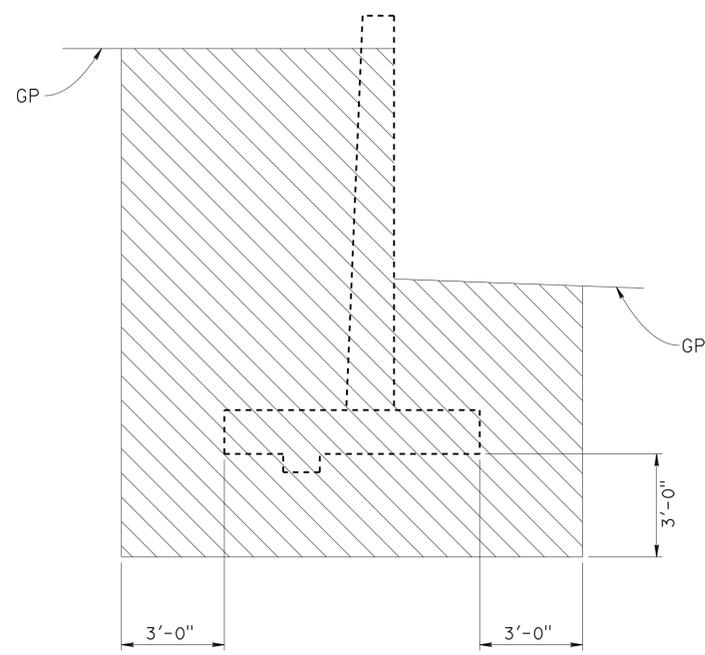
REVISION DATES	SHEET	OF
08-02-12 05-19-13 12-01-13 8-01-15	2	5

FILE => rwnf62-b-retat.dgn

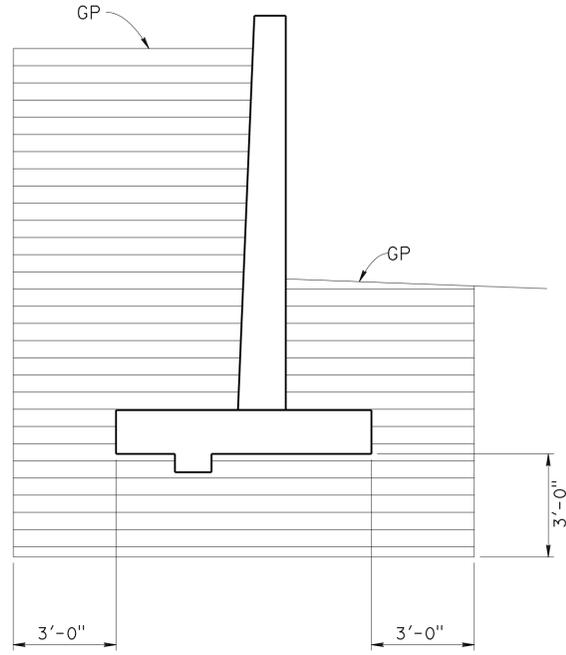
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1510	1622

REGISTERED CIVIL ENGINEER DATE 3-18-15  
 PLANS APPROVAL DATE 1-25-16  
 No. 56183  
 Exp. 12/31/16  
 CIVIL  
 STATE OF CALIFORNIA

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**EXCAVATION**



**BACKFILL**

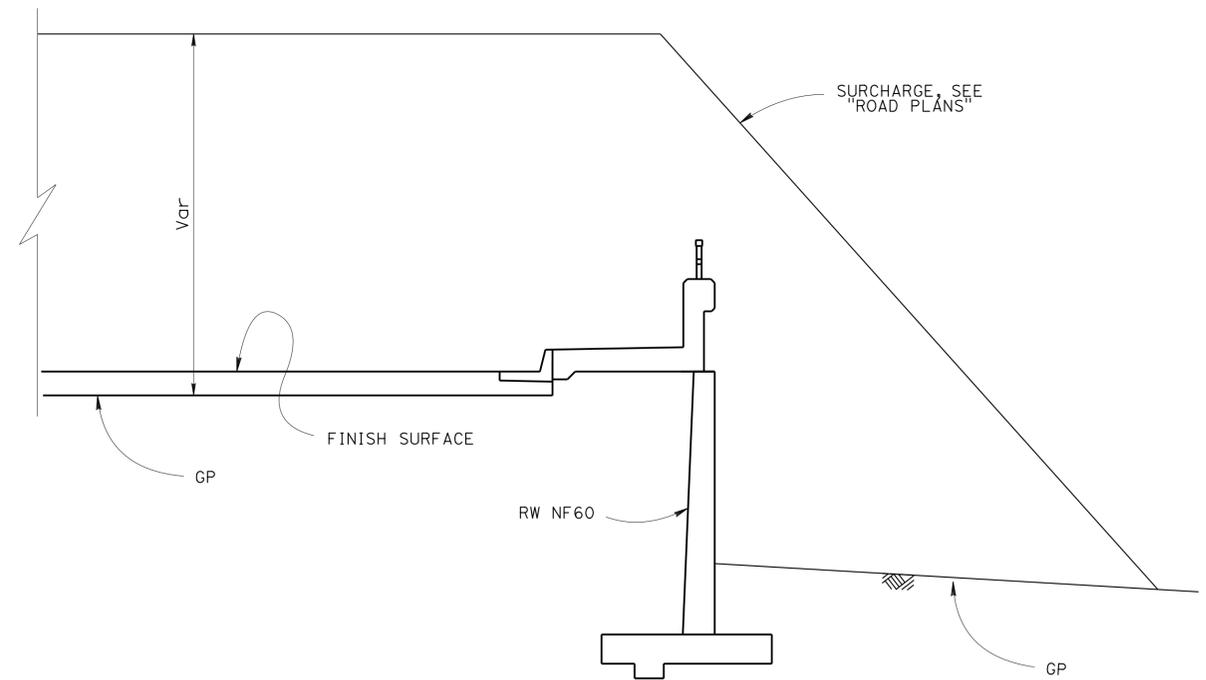
LEGEND:

- STRUCTURE EXCAVATION
- STRUCTURE BACKFILL

GP - PLANNED GRADING PLANE

**LIMITS OF EXCAVATION AND BACKFILL**

NO SCALE



**EMBANKMENT SURCHARGE**

NO SCALE

DESIGN	BY Yeo Yoon	CHECKED Dauryoush Tavatli
DETAILS	BY Jaime Ramirez	CHECKED Dauryoush Tavatli
QUANTITIES	BY Dauryoush Tavatli	CHECKED Christine Chan

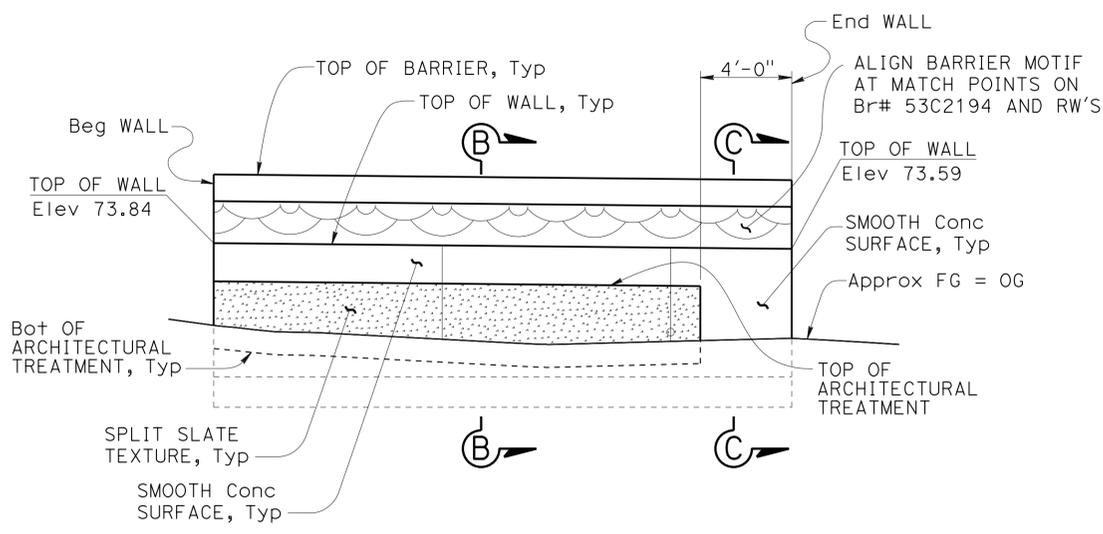
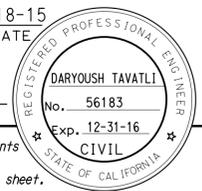
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

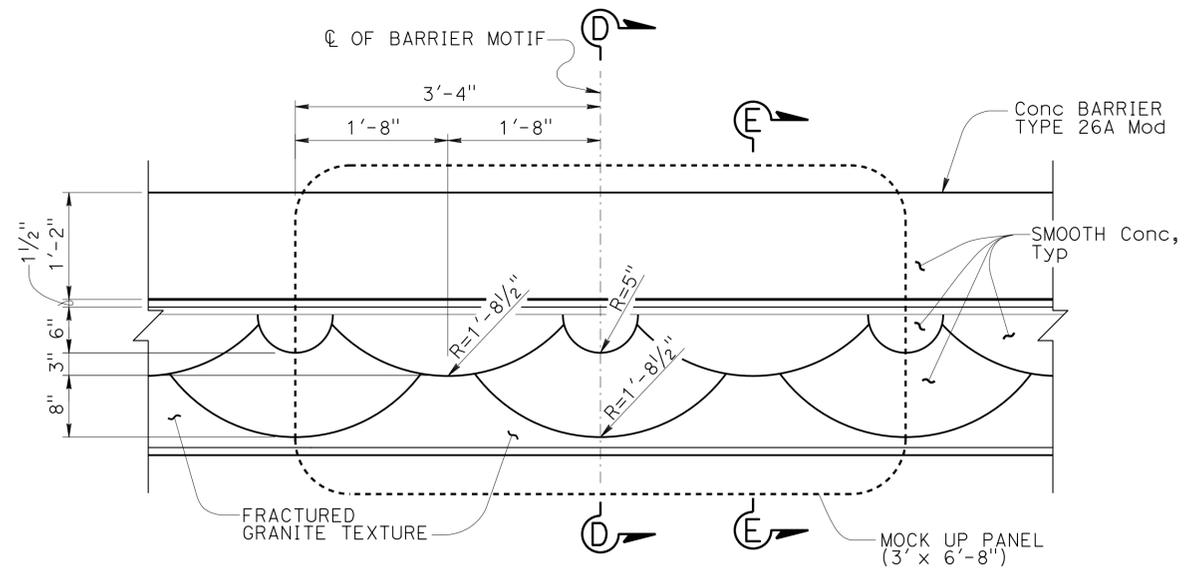
BRIDGE NO.	RW NF62
POST MILE	0.314

RETAINING WALL NF62  
LIMITS OF EXCAVATION AND BACKFILL

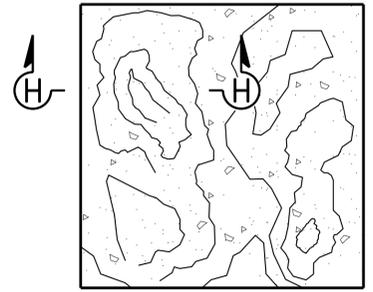
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07	LA,Ord	5	0.0/1.5, 44.3/44.4	1511	1622
REGISTERED CIVIL ENGINEER			DATE	3-18-15	
PLANS APPROVAL DATE			1-25-16		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



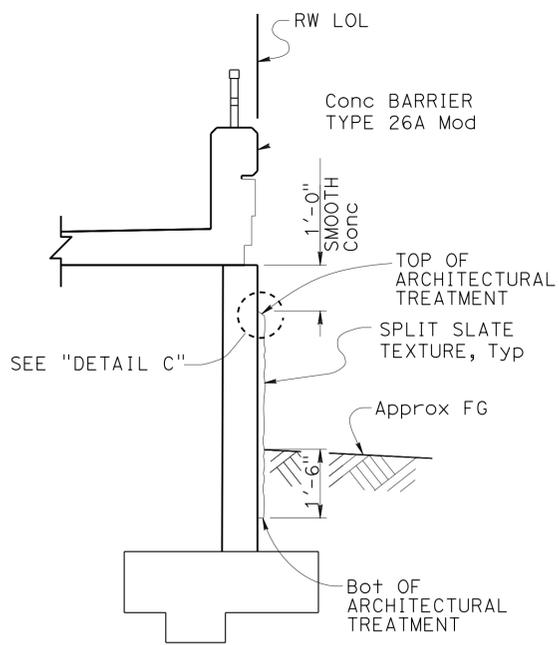
**ELEVATION**  
1/4" = 1'-0"



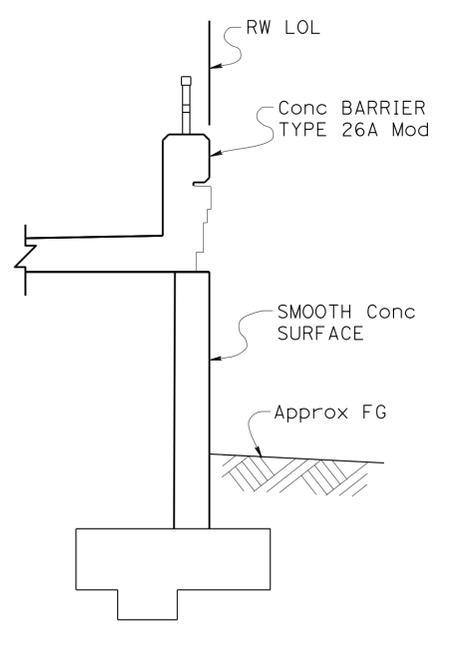
**ELEVATION - BARRIER MOTIF**  
NO SCALE



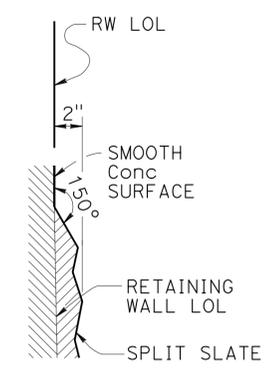
**SPLIT SLATE TEXTURE**  
NO SCALE



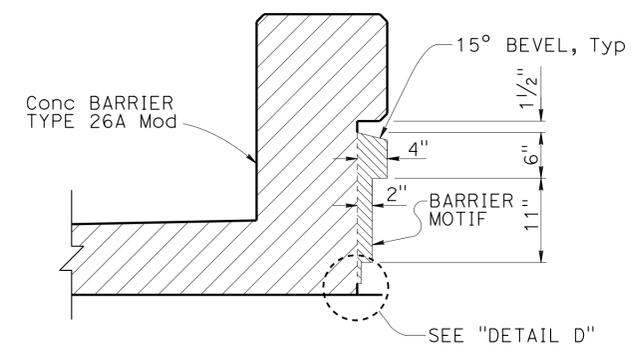
**SECTION B-B**  
NO SCALE



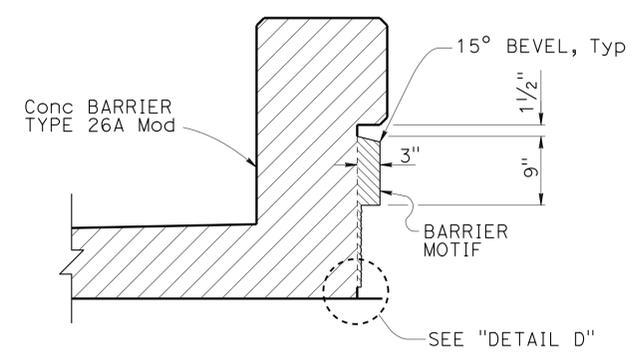
**SECTION C-C**  
NO SCALE



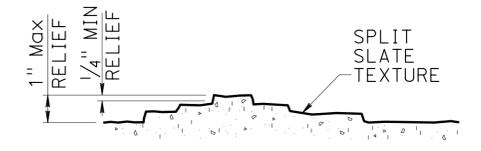
**DETAIL C**  
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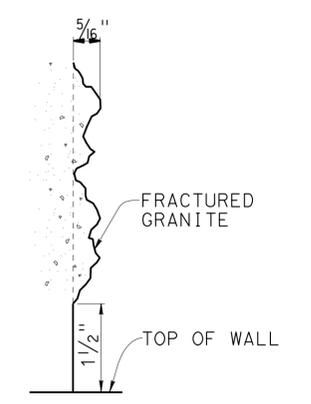
**SECTION D-D**  
1" = 1'-0"



**SECTION E-E**  
1" = 1'-0"



**SECTION H-H**  
NO SCALE



**DETAIL D**  
NO SCALE

DESIGN	BY H. Javier Chavez	CHECKED Daryoush Tavatli
DETAILS	BY Anthony Valdez	CHECKED Daryoush Tavatli
QUANTITIES	BY Daryoush Tavatli	CHECKED Christine Chan

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

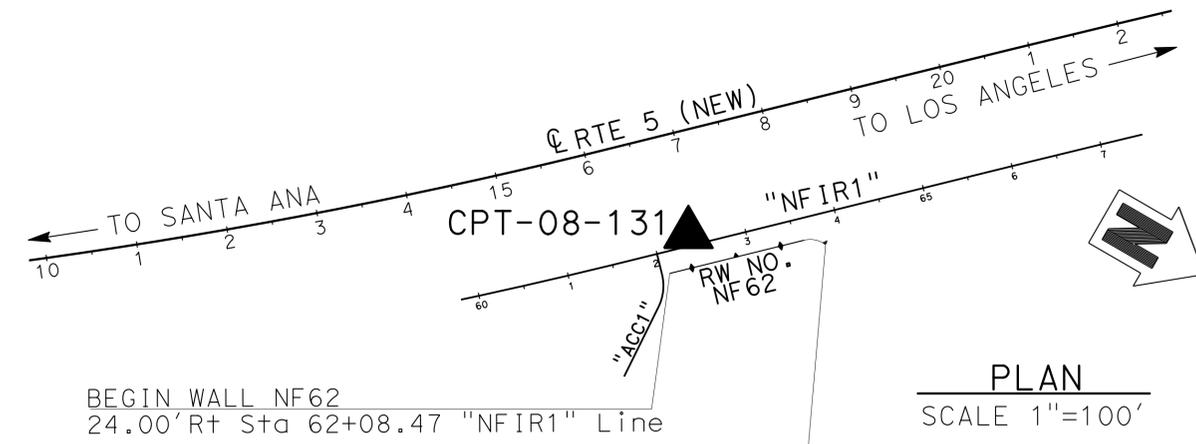
BRIDGE NO.	RW NF62
POST MILE	0.314

**RETAINING WALL NF62**  
**ARCHITECTURAL TREATMENT DETAILS**

**BENCH MARK**  
 GPS 0887  
 ELEVATION 65.915 FT  
 FD 2-1/2 CADT DISK IN CONC. CURB  
 FLUSH, STAMPED "LA-5-1.0, 1995"  
 LOCATED 90' N OF THE SOUTH SIDE  
 FIRESTONE BLVD 0.2 MI SE OF VALLEY VIEW  
 NORTHING 542395.636  
 EASTING 1997613.893  
 DATUM NAVD88

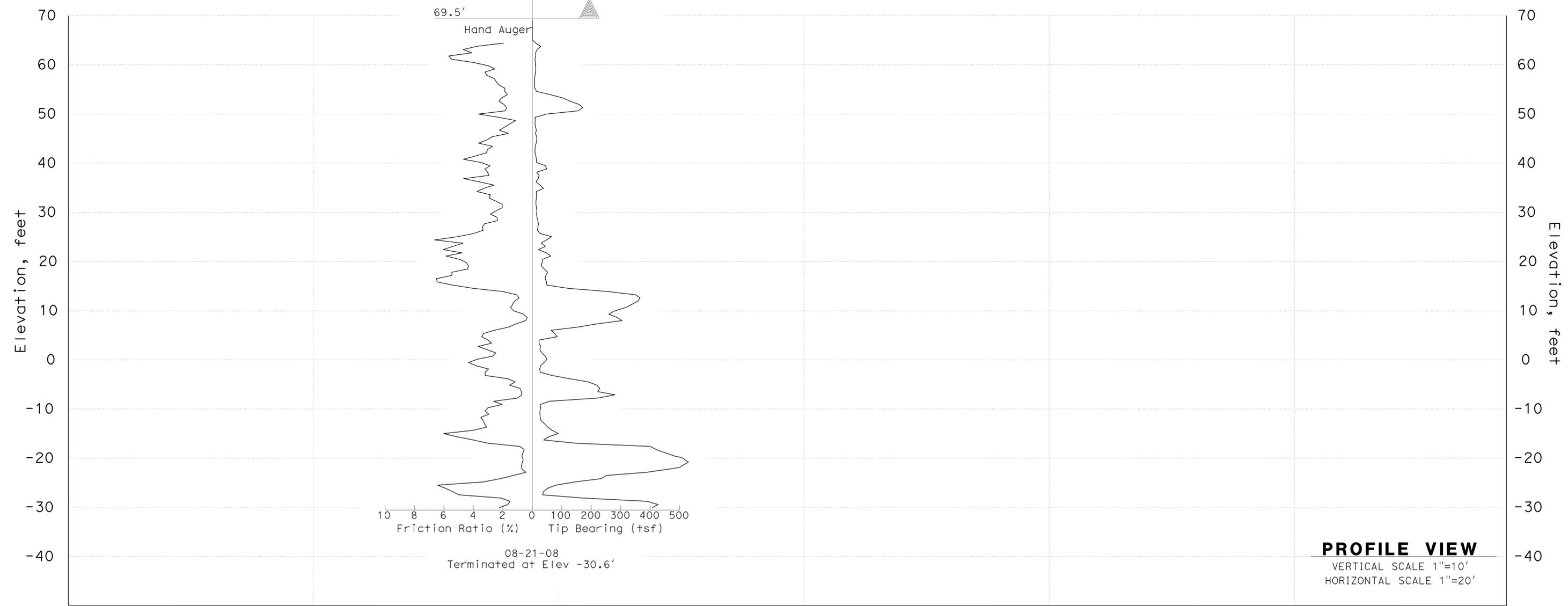
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1512	1622

05/20/15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
 URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705  
 No. 2229  
 Exp. 03/31/16  
 MICHAEL G. SMITH  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA  
 GEOTECHNICAL  
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**PLAN**  
 SCALE 1"=100'

1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.5" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.



**PROFILE VIEW**  
 VERTICAL SCALE 1"=10'  
 HORIZONTAL SCALE 1"=20'

15+00                      16+00                      17+00                      18+00                      19+00                      19+00

F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH	P.MCDONALD FIELD INVESTIGATION BY: DATE: 08/21/08	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. RW NF62 POST MILES 0.314	<b>RETAINING WALL NO. NF62</b> <b>LOG OF TEST BORINGS SHEET 1 OF 1</b>
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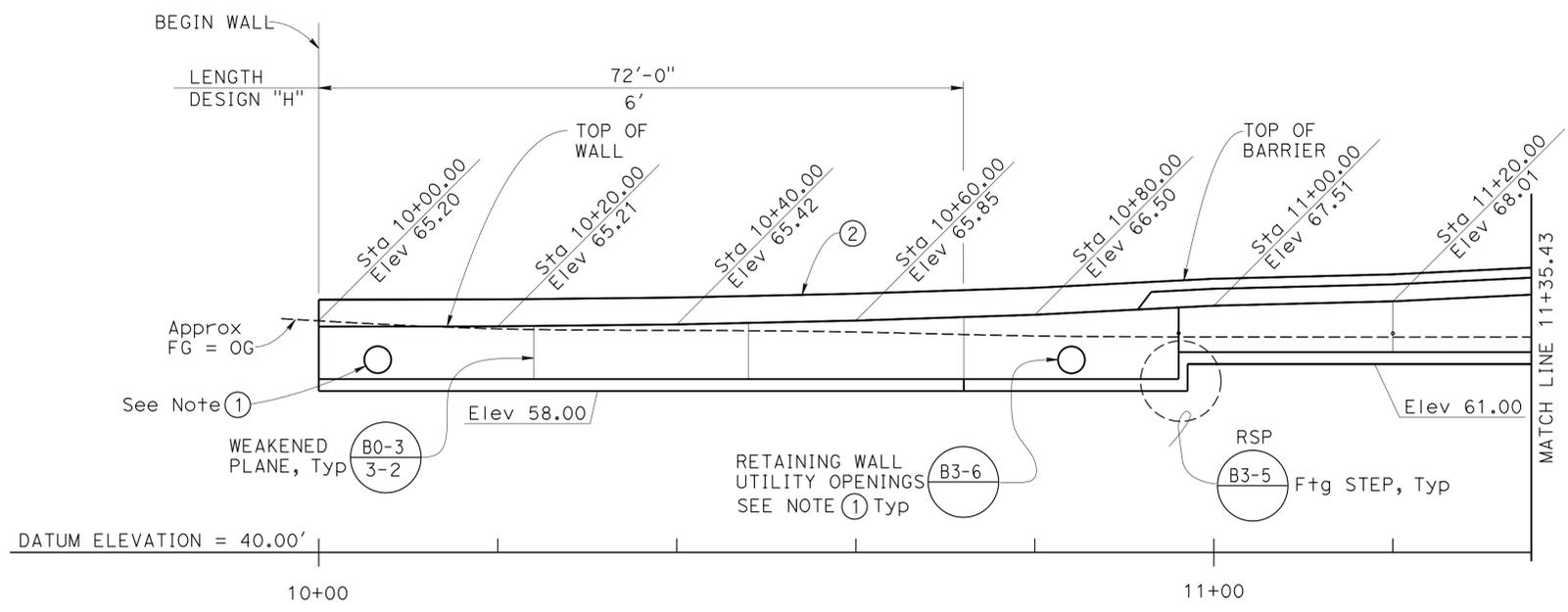
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07	LA,Ord	5	0.0/1.5, 44.3/44.4	1514	1622

*William Kemp* 3-18-15  
REGISTERED CIVIL ENGINEER DATE

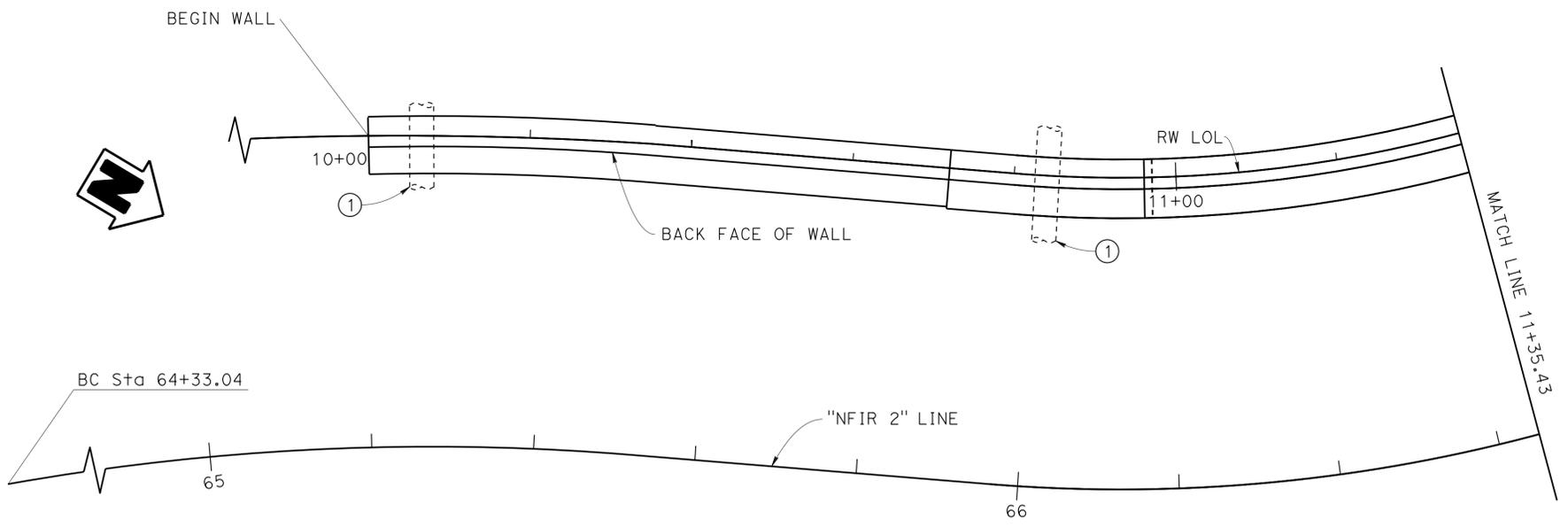
1-25-16  
PLANS APPROVAL DATE

William D. Kemp  
No. 55730  
Exp. 12-31-16  
CIVIL  
STATE OF CALIFORNIA

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**MIRRORED AND DEVELOPED ELEVATION**  
1" = 10'-0"



**PLAN**  
1" = 10'-0"

- Notes:
- ① For Wall Opening for Drainage Systems, see "ROAD PLANS"
  - ② Tubular Hand Railing not shown

DESIGN	BY Ruperd Wilson	CHECKED Cipriano Manansala
DETAILS	BY Jaime Ramirez	CHECKED Ruperd Wilson
QUANTITIES	BY Fred Feng	CHECKED Lin Barnard

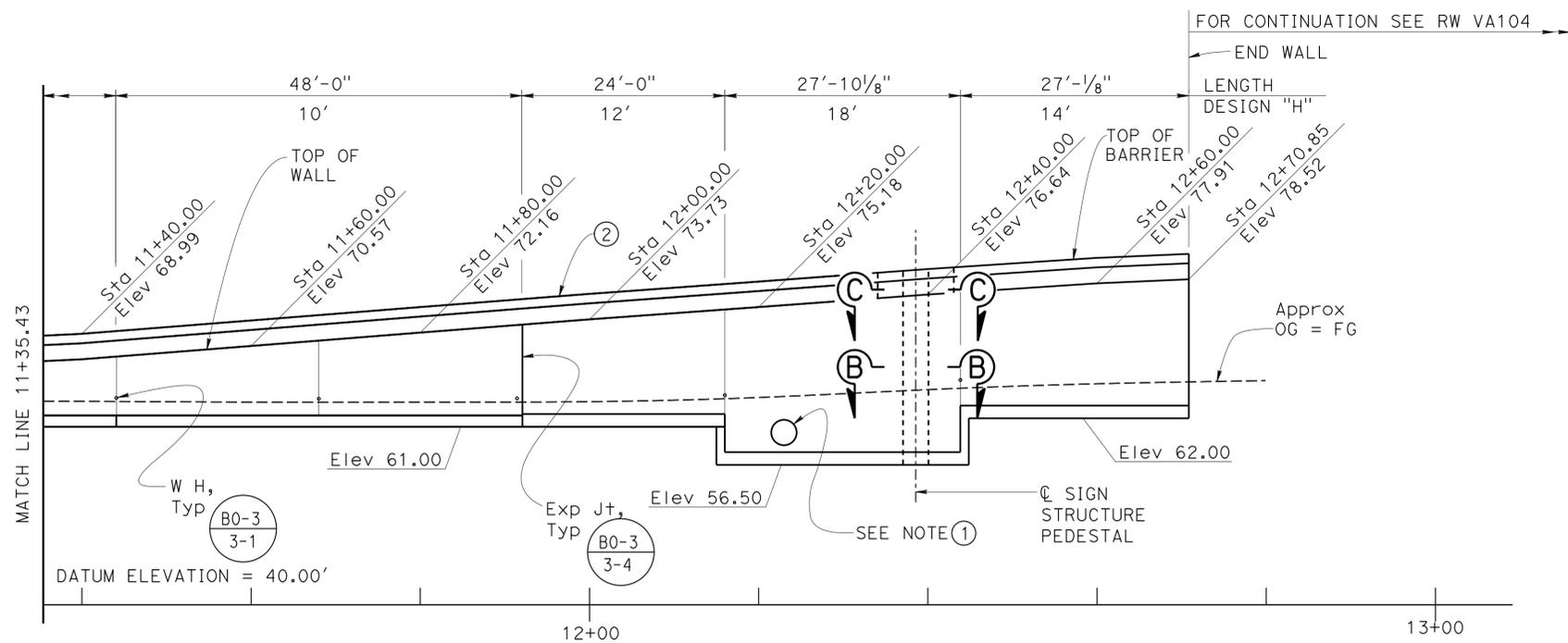
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	RW NF65
POST MILE	1.21

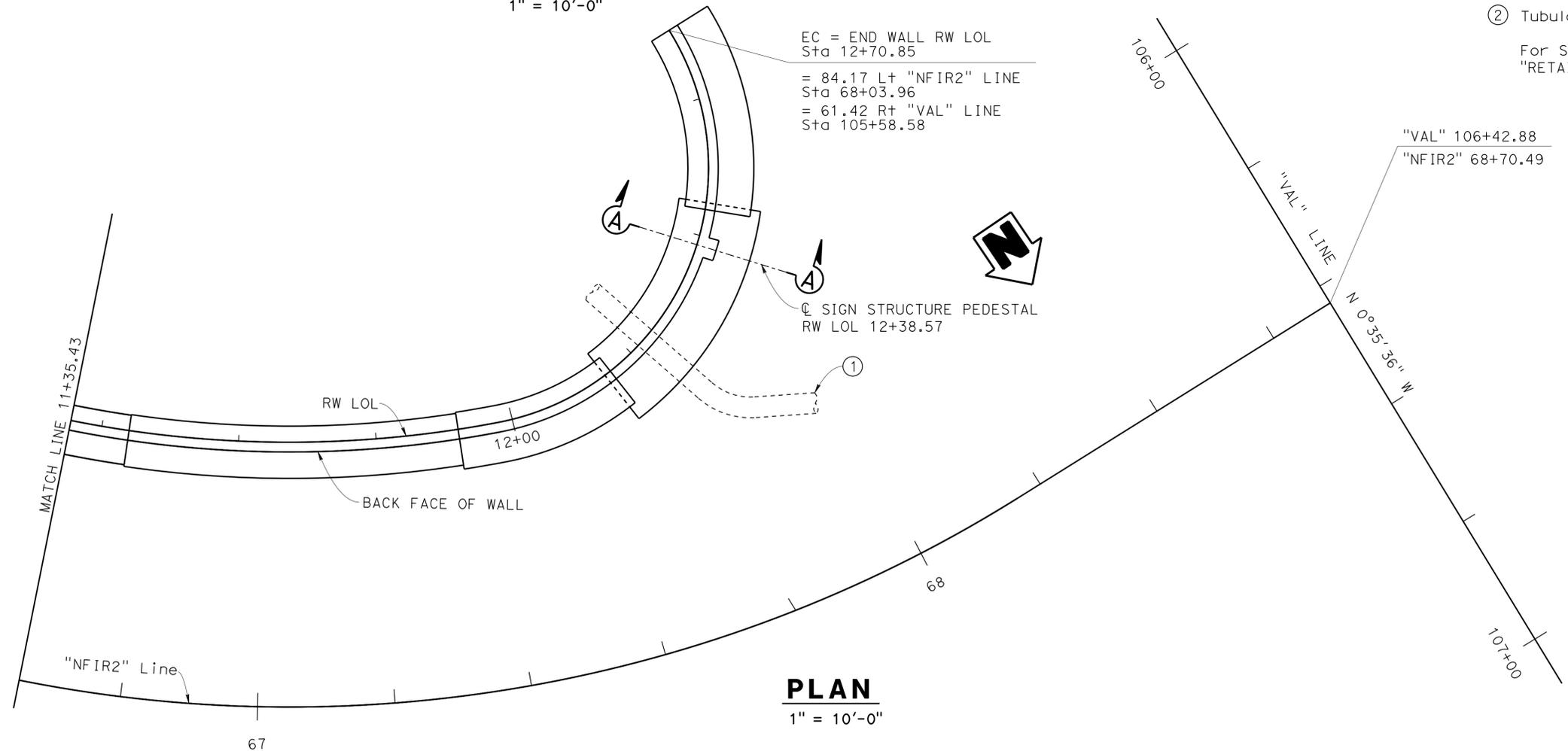
**RETAINING WALL NF65  
STRUCTURE PLAN NO. 1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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			3-18-15		
			REGISTERED CIVIL ENGINEER		
			DATE		
			1-25-16		
			PLANS APPROVAL DATE		
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**MIRRORED AND DEVELOPED ELEVATION**  
1" = 10'-0"

- Note:
- ① For Drainage system, see "ROAD PLANS"
  - ② Tubular Hand Railing not shown
- For Sections A-A, C-C & B-B see "RETAINING WALL DETAILS NO. 1" sheet



DESIGN	BY Ruperd Wilson	CHECKED Cipriano Manansala
DETAILS	BY Jaime Ramirez	CHECKED Ruperd Wilson
QUANTITIES	BY Fred Feng	CHECKED Lin Barnard

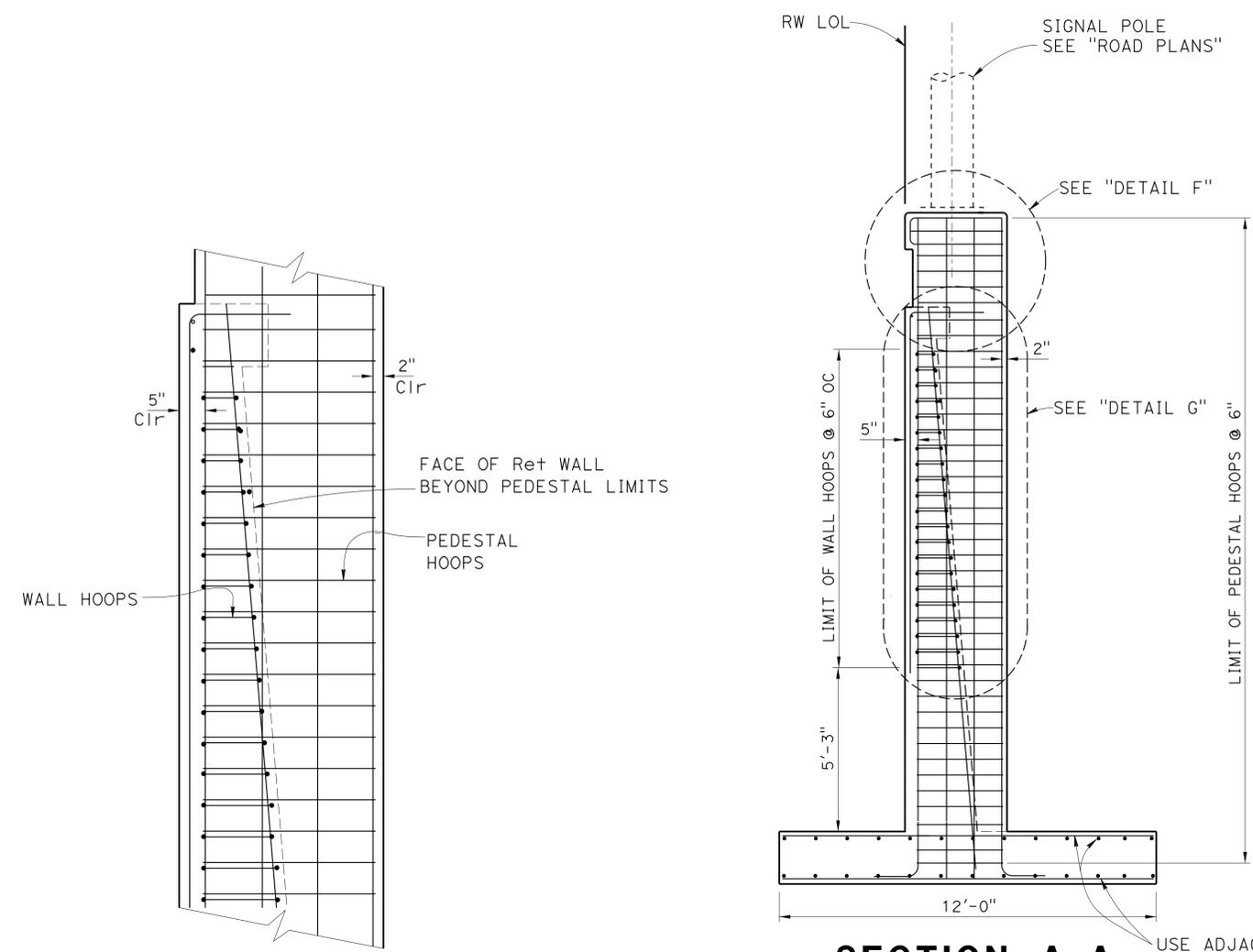
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

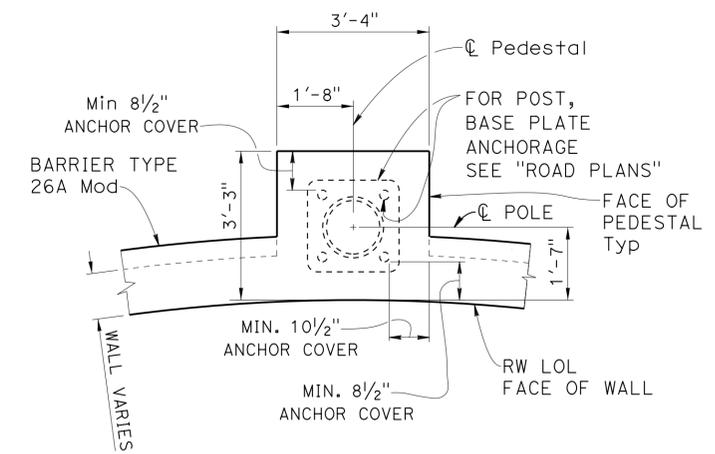
BRIDGE NO.	RW NF65
POST MILE	1.21

**RETAINING WALL NF65  
STRUCTURE PLAN NO. 2**

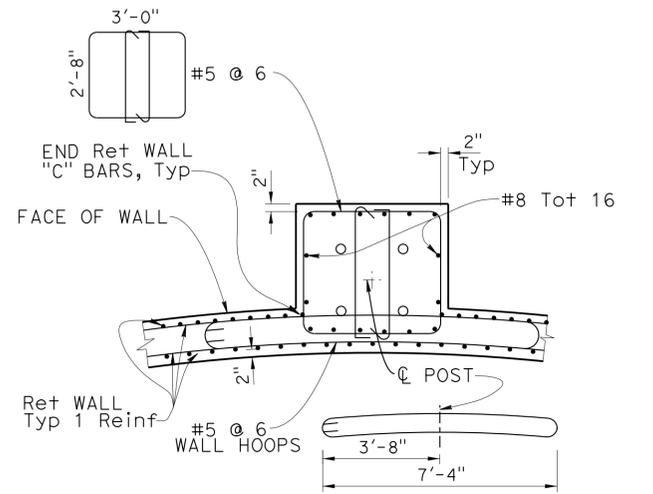
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1516	1622
			3-18-15	DATE	
			1-25-16	PLANS APPROVAL DATE	
			REGISTERED CIVIL ENGINEER William D. Kemp No. 55730 Exp. 12-31-16 CIVIL STATE OF CALIFORNIA		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



**SECTION A-A**  
3/8" = 1'-0"

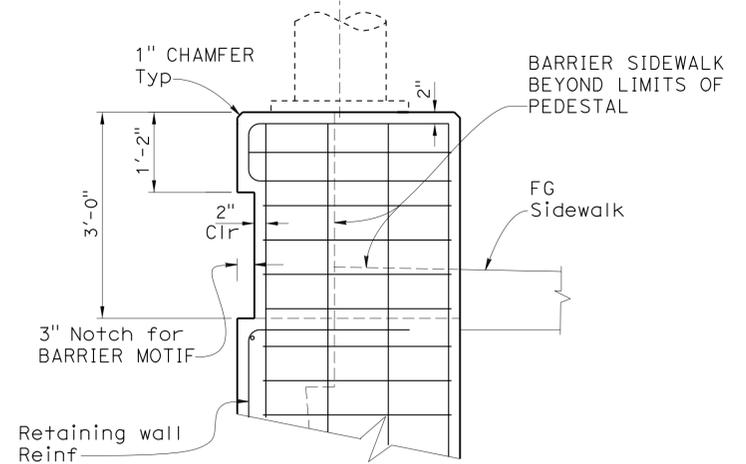
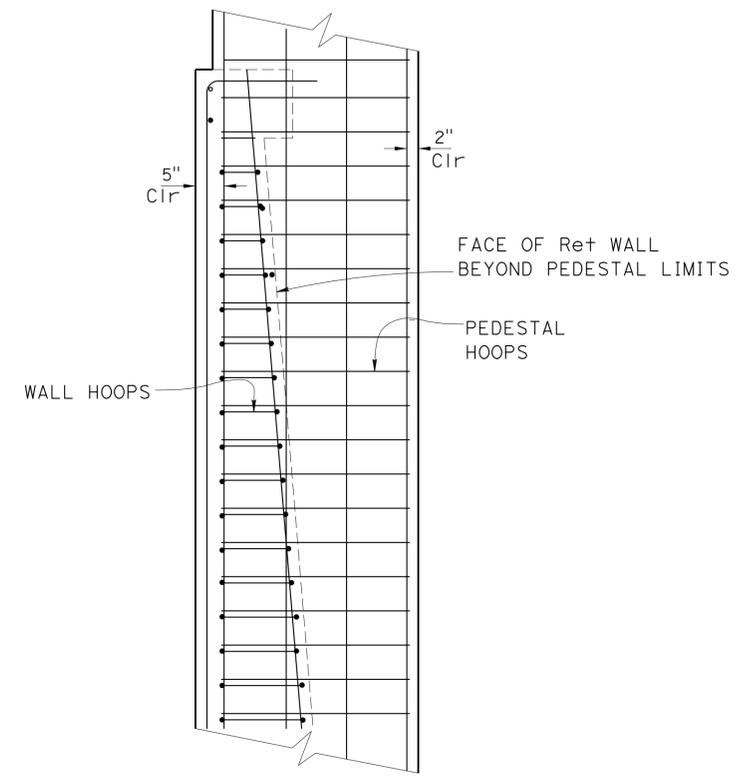


**DETAIL D**  
1/2" = 1'-0"

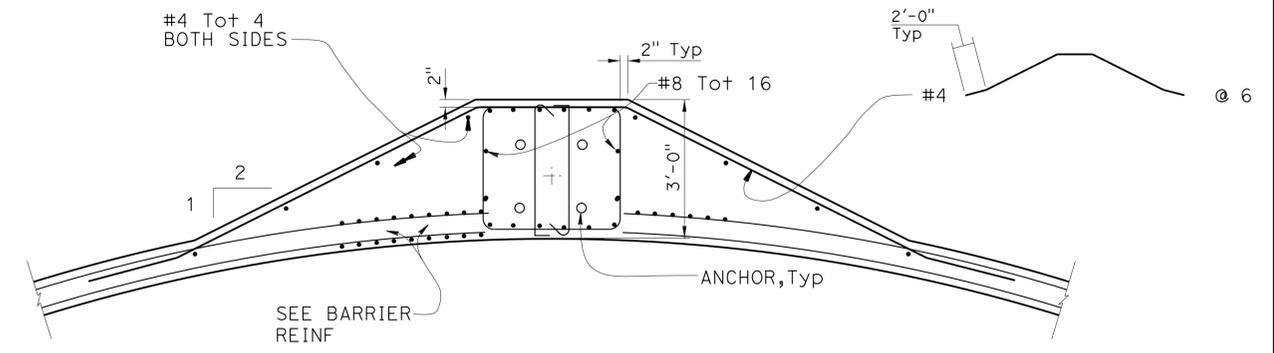


**SECTION B-B**  
1/2" = 1'-0"

**DETAIL G**  
3/4" = 1'-0"



**DETAIL F**  
3/4" = 1'-0"



**SECTION C-C**  
1/2" = 1'-0"

- NOTES:
- 1 For Reinforcing Steel not shown see "REVISED STANDARD PLANS RETAINING WALL TYPE 1", B3-1A.
  - 2 For base plate & Anchor Bolts, See "ROAD PLANS".
  - 3 Concrete strength shall be achieved and wall backfilled prior to installation of Sign structure/Pole.
  - 4 Conc for Pedestal shall be poured simultaneously with Retaining Wall Conc. There shall be no construction Joint between Pedestal and Retaining Wall.

DESIGN	BY	Ruperd Wilson	CHECKED	Cipriano Manansala	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RW NF65	RETAINING WALL NF65 RETAINING WALL DETAILS NO. 1						
	DETAILS	BY	Jaime Ramirez	CHECKED			Ruperd Wilson	POST MILE		1.21					
QUANTITIES	BY	Bichvan Thach	CHECKED	Lin Barnard	UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET	OF				
										10-31-12	7-25-13	12-28-12	3-26-15	4	9

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:34

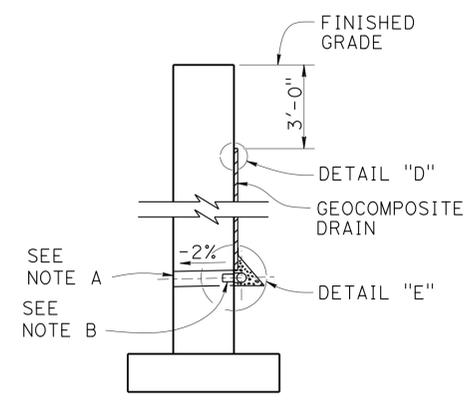
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Orca	5	0.0/1.5, 44.3/44.4	1517	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

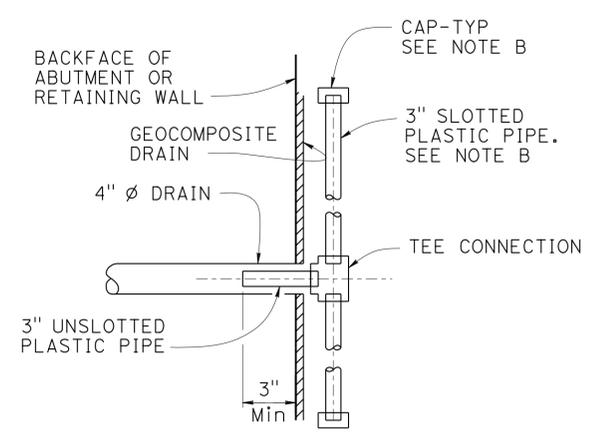
1-25-16  
 PLANS APPROVAL DATE

William D. Kemp  
 No. 55730  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

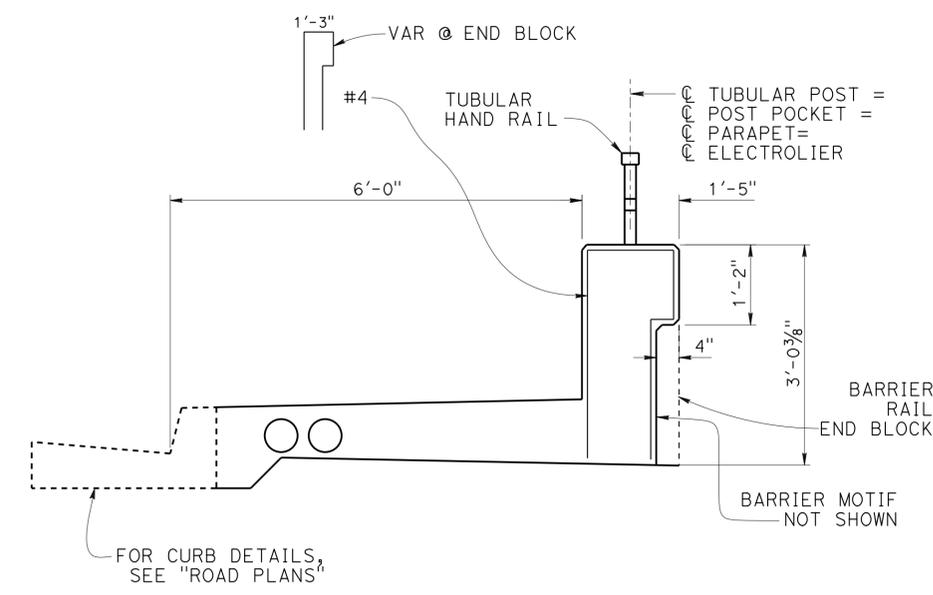
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



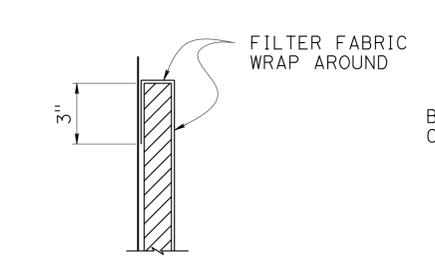
**WALL SECTION**



**SECTION K-K**

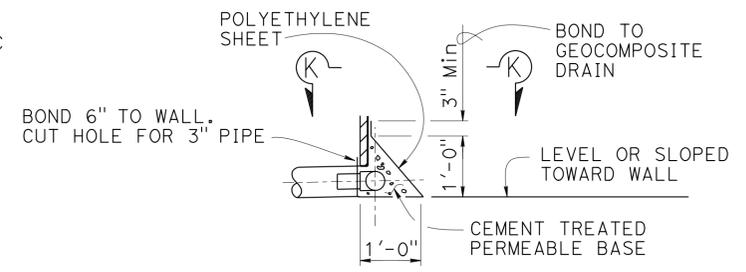


**CONCRETE BARRIER TYPE 26A MOD**  
 $\frac{3}{4}'' = 1'-0''$



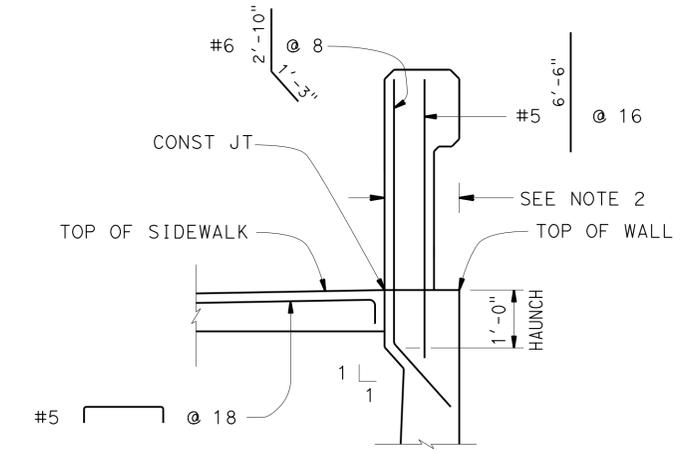
**DETAIL "D"**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**  
 NO SCALE



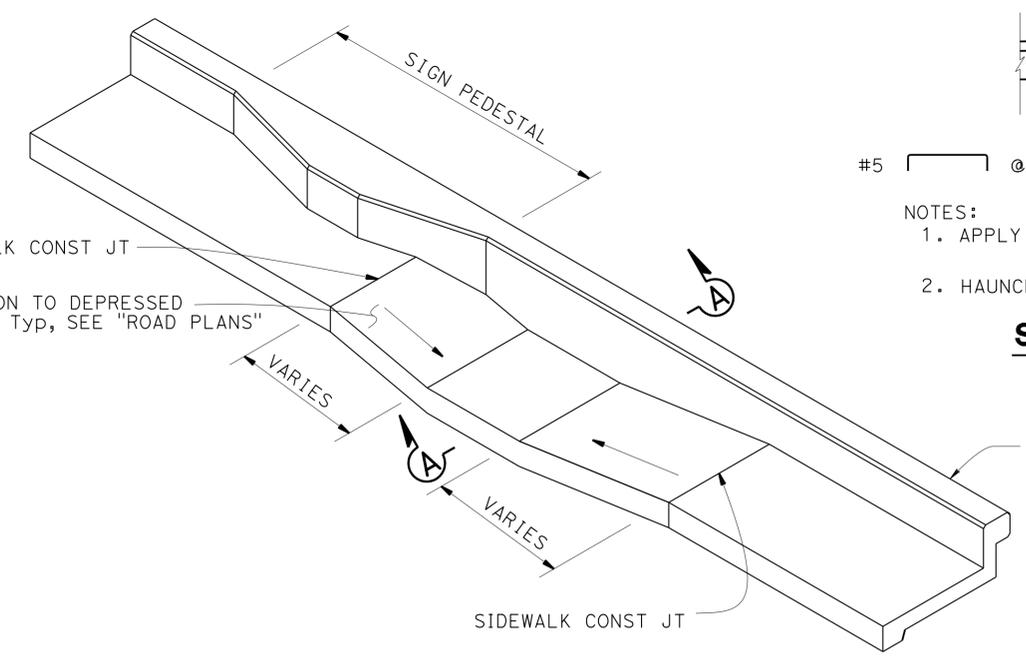
**DETAIL "E"**

Note: For details not shown see RSP B11-54



**SECTION A-A**  
 NO SCALE

- NOTES:
1. APPLY DETAIL BETWEEN SIDEWALK CONSTRUCTION JOINTS
  2. HAUNCH WIDTH MUST MATCH BARRIER RAIL WIDTH



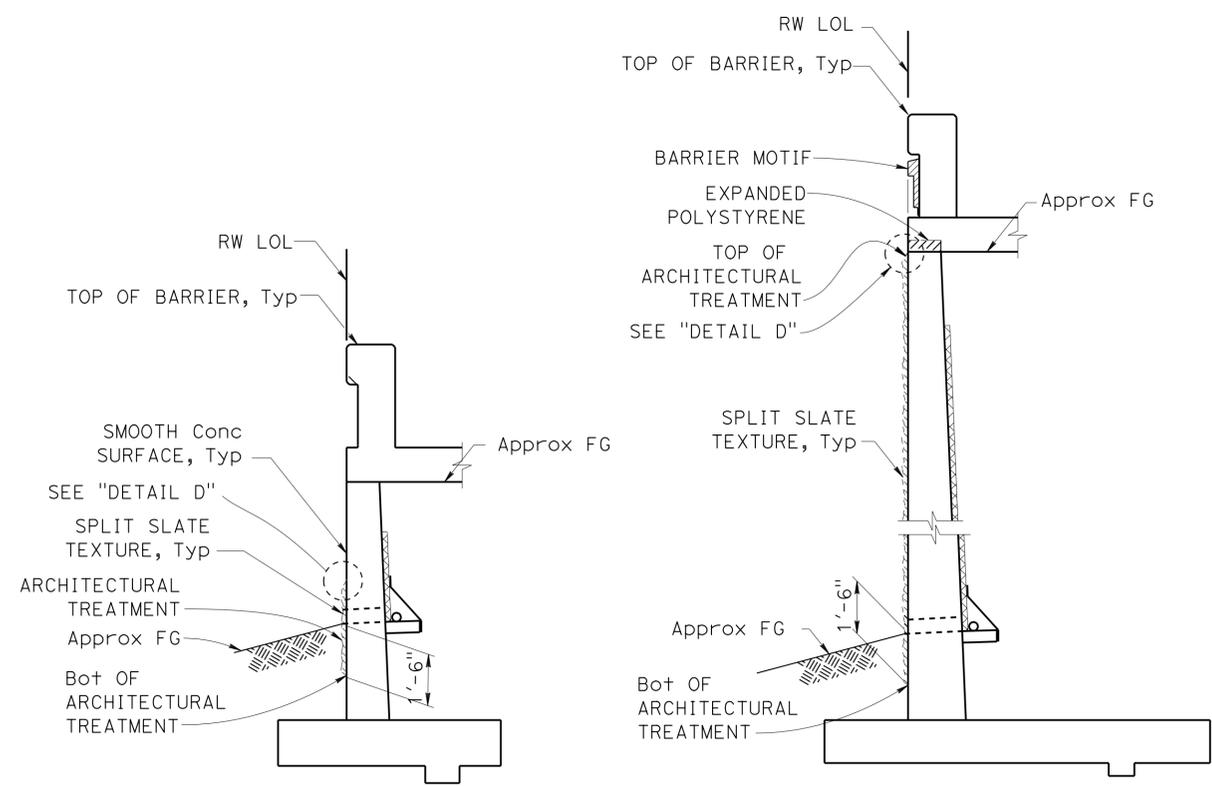
**SIDEWALK TRANSITION DETAIL**  
 NO SCALE

**Notes:**

- 4" Ø drains at intermediate sag points and at 25'-0" center to center (9'-0" c-c for Type 3 and 9'-2" c-c for Type 4 retaining walls). For walls adjacent to sidewalks or curbs, provide 4" Ø cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3" ± above finished grade.
- Geocomposite drain, cement treated permeable base, and 3" Ø slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Ø drain.
- Connect the low end of plastic pipe to the main outlet pipe as applicable.

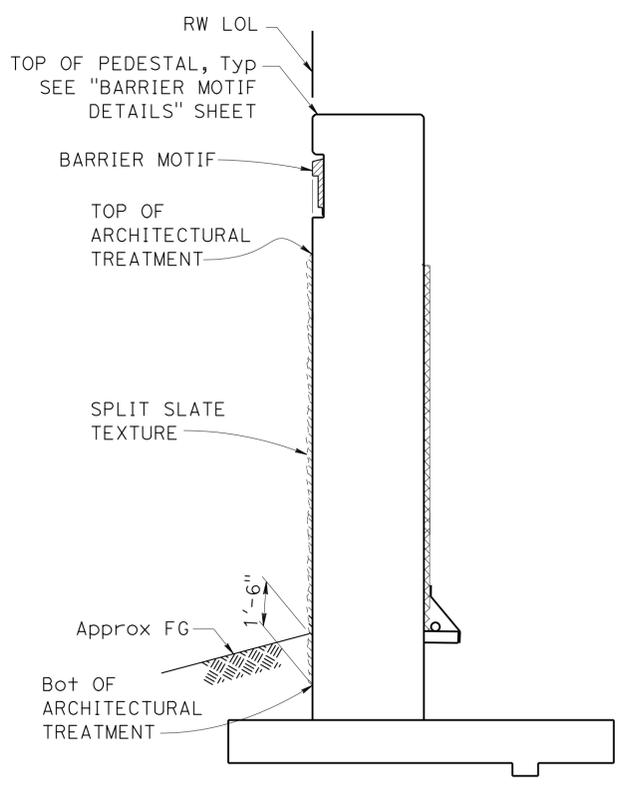
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Ruperd Wilson	CHECKED Cipriano Manansala	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL NF65	RETAINING WALL DETAILS NO 2	
	DETAILS	BY Jaime Ramirez	CHECKED Ruperd Wilson			POST MILE			1.21
	QUANTITIES	BY Bichvan Thach	CHECKED Lin Barnard			CONTRACT NO.:			07-2159u4
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.:	07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 5 OF 9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1518	1622
			3-18-15	DATE	
			1-25-16	PLANS APPROVAL DATE	
			REGISTERED CIVIL ENGINEER William D. Kemp No. 55730 Exp. 12-31-16 CIVIL STATE OF CALIFORNIA		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

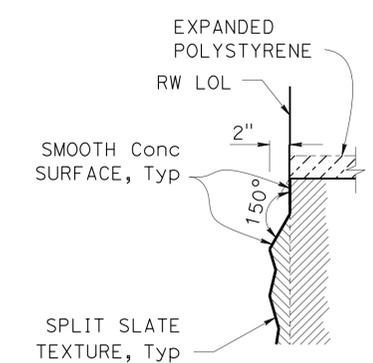


**SECTION A-A**  
NO SCALE

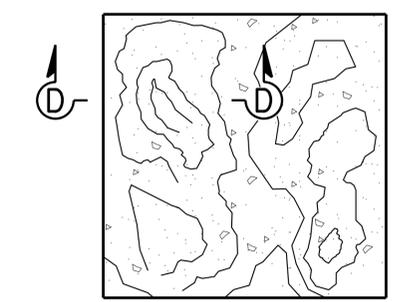
**SECTION B-B**  
NO SCALE



**SECTION C-C**  
NO SCALE

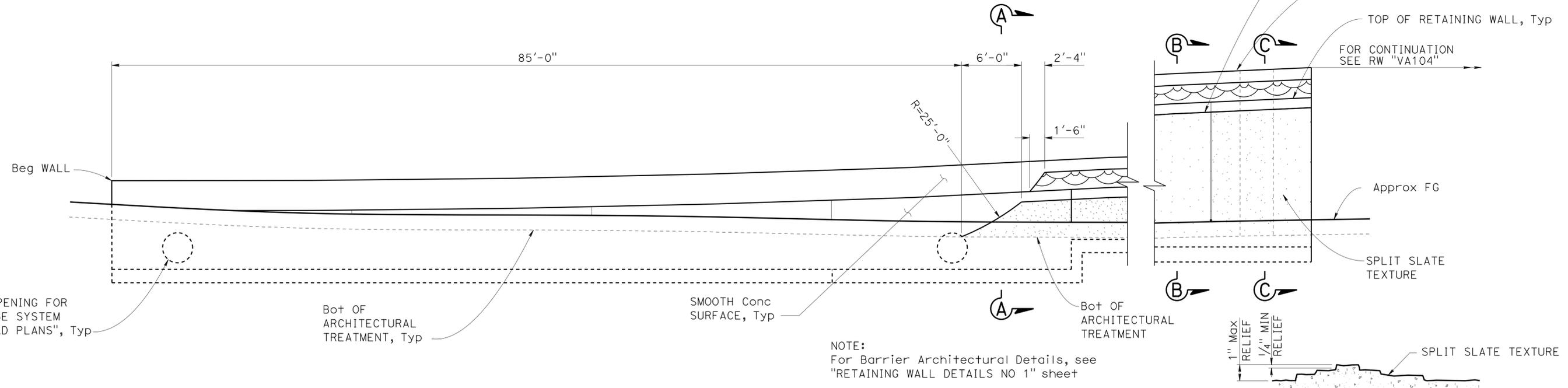


**DETAIL D**  
NO SCALE



**SPLIT SLATE TEXTURE**  
NO SCALE

NOTE:  
All surface relief and texture shall be measured from RW LOL, Typ



**MIRRORED AND DEVELOPED ARCHITECTURAL TREATMENT**  
NO SCALE



**SECTION D-D**  
NO SCALE

NOTE:  
For Barrier Architectural Details, see "RETAINING WALL DETAILS NO 1" sheet

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	DESIGN	BY Ruperd Wilson	CHECKED Cipriano Manansala	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	<b>RETAINING WALL NF65</b> <b>ARCHITECTURAL TREATMENT DETAILS</b>	SHEET OF 6 9
	DETAILS	BY Jaime Ramirez	CHECKED Ruperd Wilson			POST MILE		
	QUANTITIES	BY Fred Feng	CHECKED Lin Barnard			1.21		
					UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1 CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES 4-28-12 7-28-13 12-5-13 3-26-15		

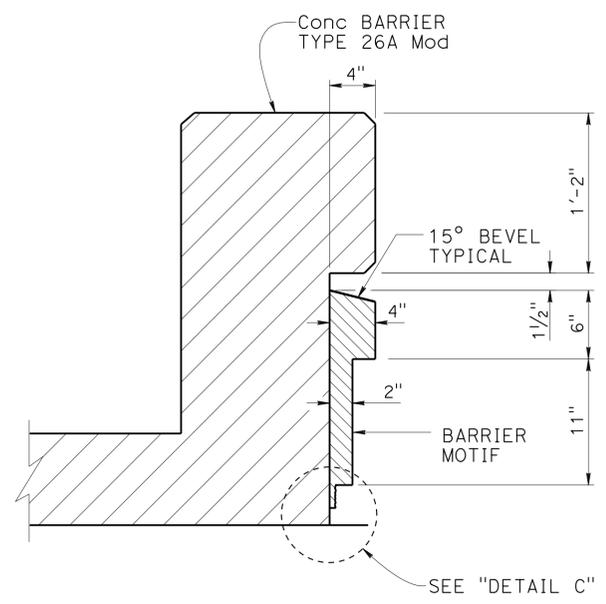
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Ord	5	0.0/1.5, 44.3/44.4	1519	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

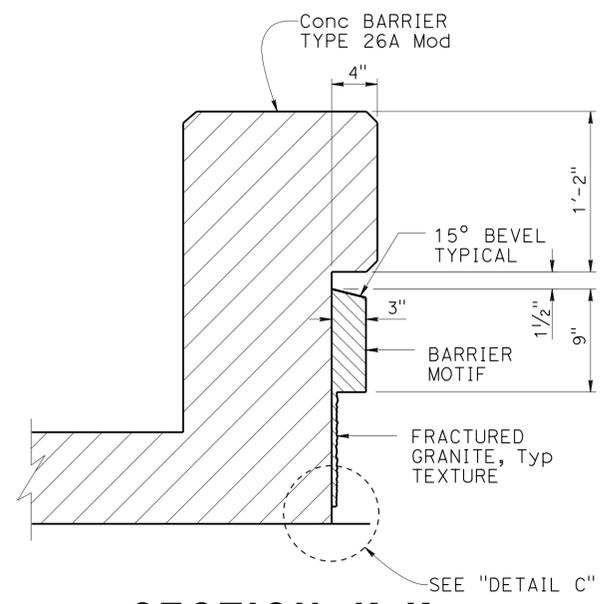
1-25-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 WILLIAM D. KEMP  
 No. 55730  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

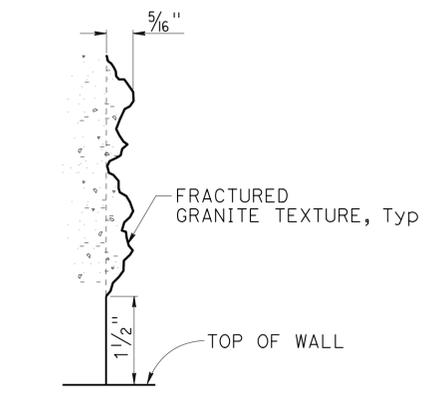
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



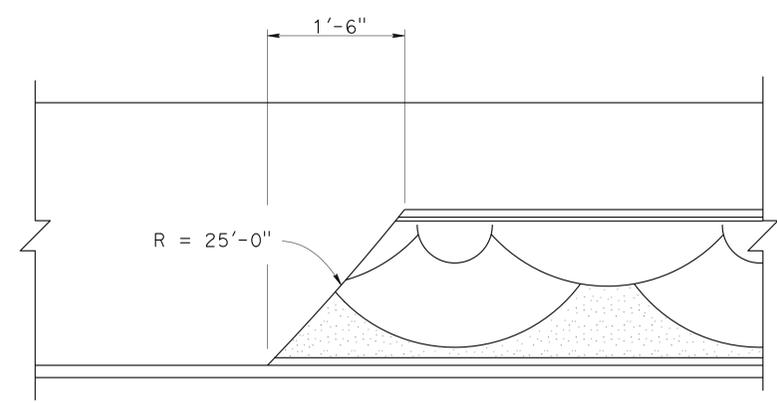
**SECTION J-J**  
 1/2" = 1'-0"



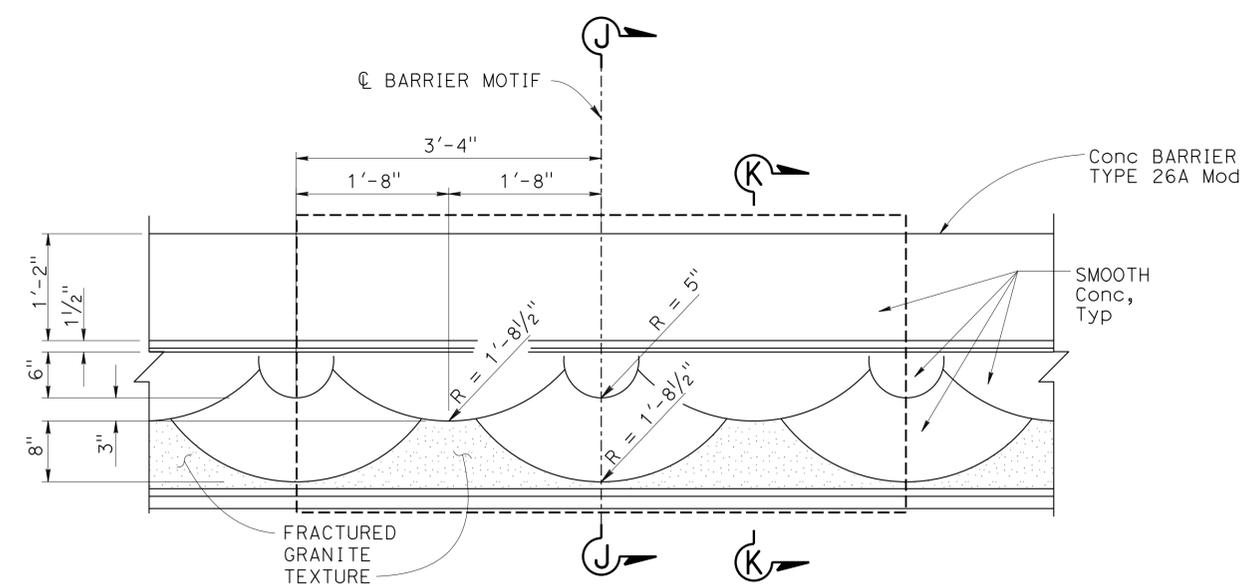
**SECTION K-K**  
 1/2" = 1'-0"



**DETAIL C**  
 NO SCALE



**BARRIER END DETAIL**  
 1" = 1'-0"



**PARTIAL ELEVATION - BARRIER MOTIF**  
 1" = 1'-0"

DESIGN	BY Herman Mauroschat	CHECKED Bill Kemp
DETAILS	BY Herman Mauroschat	CHECKED Bill Kemp
QUANTITIES	BY Fred Feng	CHECKED Lin Barnard

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
 DESIGN BRANCH 11

BRIDGE NO.	RW NF65
POST MILE	1.21

RETAINING WALL NF65  
 BARRIER MOTIF DETAILS

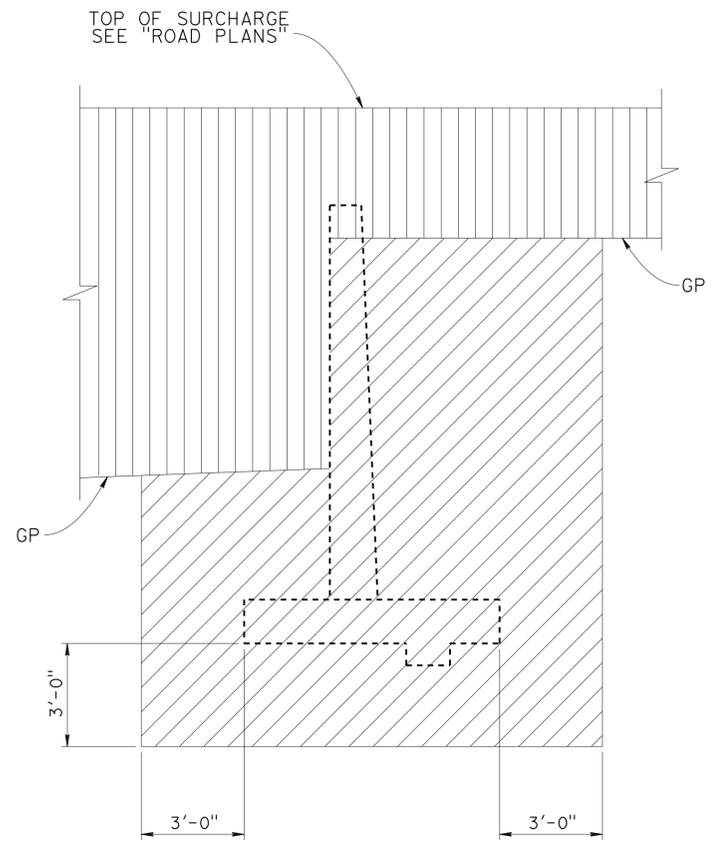
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07	LA,Orca	5	0.0/1.5, 44.3/44.4	1520	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

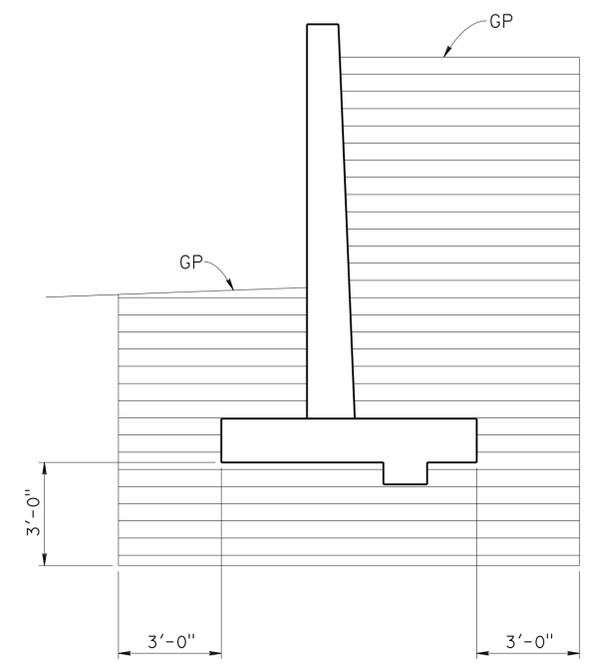
1-25-16  
 PLANS APPROVAL DATE

William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 CIVIL  
 STATE OF CALIFORNIA

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**EXCAVATION**



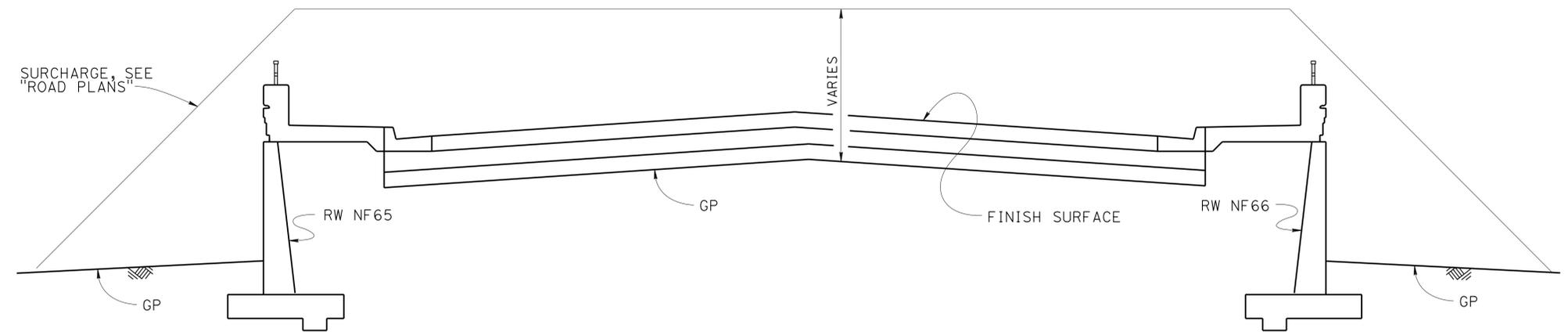
**BACKFILL**

LEGEND:

- STRUCTURE EXCAVATION
- ROADWAY EXCAVATION
- STRUCTURE BACKFILL

GP - PLANNED GRADING PLANE

**LIMITS OF EXCAVATION AND BACKFILL**  
NO SCALE



**EMBANKMENT SURCHARGE**  
NO SCALE

DESIGN	BY Ruperd Wilson	CHECKED B. Kemp
DETAILS	BY Jaime Ramirez	CHECKED B. Kemp
QUANTITIES	BY Fred Feng	CHECKED Lin Barnard

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	RW NF65
POST MILE	1.21

**RETAINING WALL NF65**  
**LIMITS OF EXCAVATION AND BACKFILL**

**BENCH MARK**

GPS 0887  
 ELEVATION 65.915 FT  
 FD 2-1/2 CADT DISK IN CONC. CURB  
 FLUSH, STAMPED "LA-5-1.0, 1995"  
 LOCATED 90' N OF THE SOUTH SIDE  
 FIRESTONE BLVD 0.2 MI SE OF VALLEY VIEW  
 NORTHING 542395.636  
 EASTING 1997613.893  
 DATUM NAVD88

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1521	1622

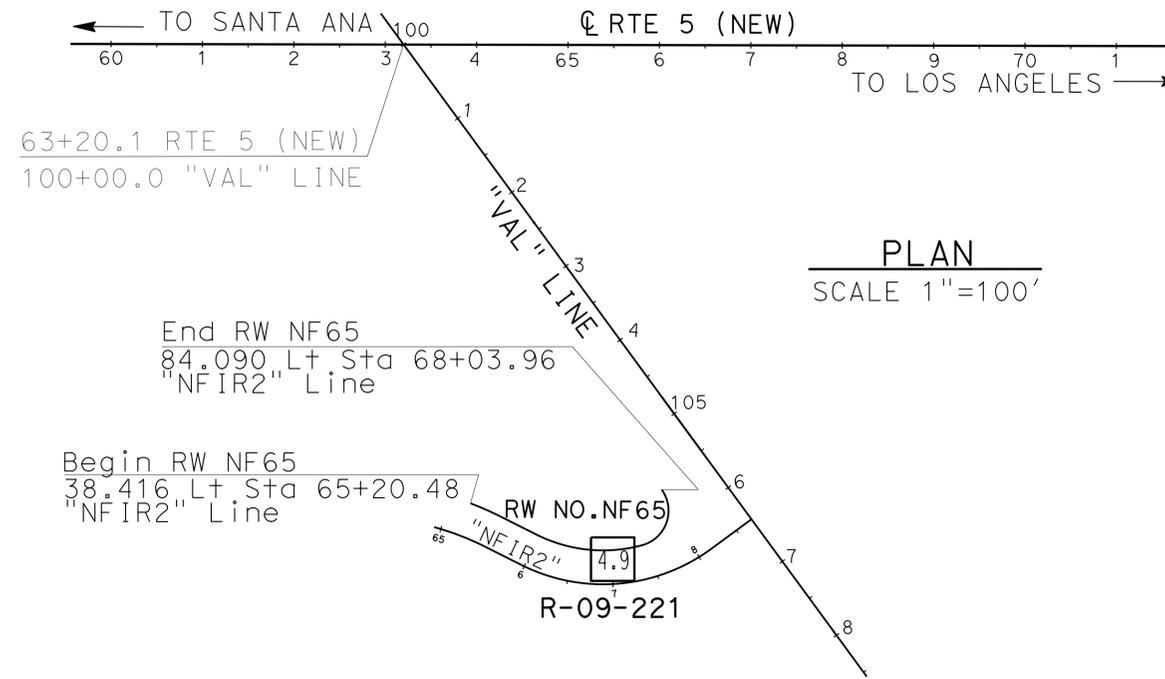
05/20/15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

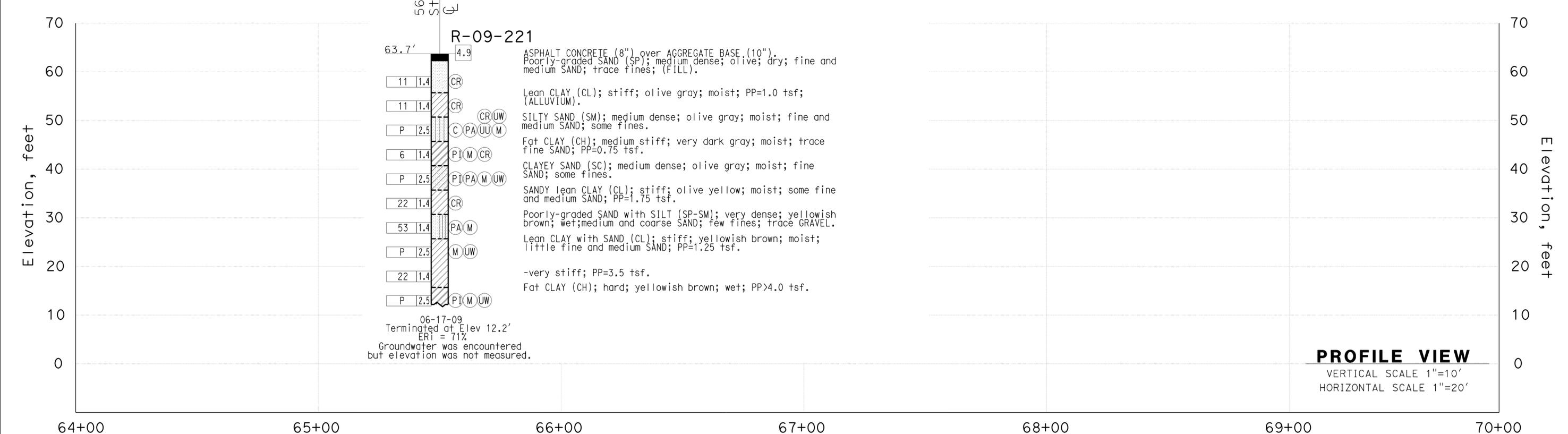
URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705

Michael G. Smith  
 No. 2229  
 Exp. 03/31/16  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 GEOTECHNICAL

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**PLAN**  
 SCALE 1"=100'



**PROFILE VIEW**  
 VERTICAL SCALE 1"=10'  
 HORIZONTAL SCALE 1"=20'

F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH	EJ.JEON FIELD INVESTIGATION BY: DATE: 06/17/09	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. RW NF65 POST MILES 1.21	<b>RETAINING WALL NO. NF65</b> <b>LOG OF TEST BORINGS SHEET 1 OF 1</b>
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# INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	STRUCTURE PLAN NO. 1
3	STRUCTURE PLAN NO. 2
4	RETAINING WALL DETAILS
5	ARCHITECTURAL TREATMENT DETAILS
6	BARRIER MOTIF DETAILS
7	LIMITS OF EXCAVATION AND BACKFILL
8	LOG OF TEST BORING SHEET 1 OF 1

## QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	562	CY
STRUCTURE BACKFILL (RETAINING WALL)	789	CY
STRUCTURAL CONCRETE, RETAINING WALL	314	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	1,865	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	44,100	LB
TUBULAR HANDRAILING (MODIFIED)	310	LF
CONCRETE BARRIER (TYPE 26 MODIFIED)	310	LF

NOTE:

① For location of Drainage Pipe, see "ROAD PLANS"

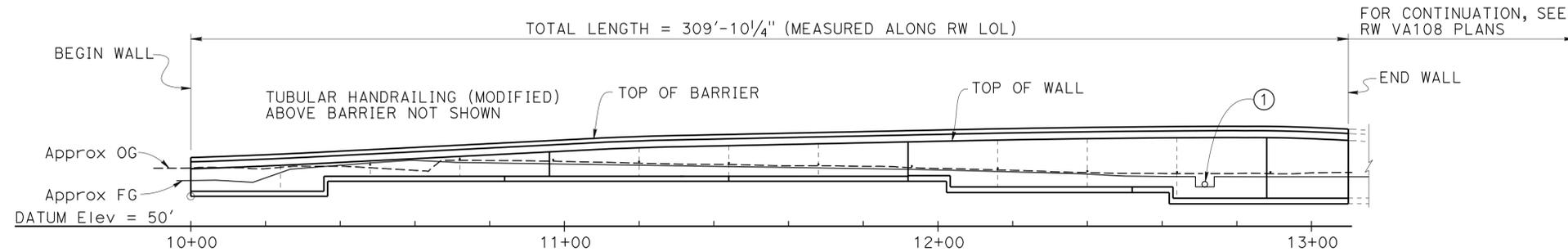
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1522	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

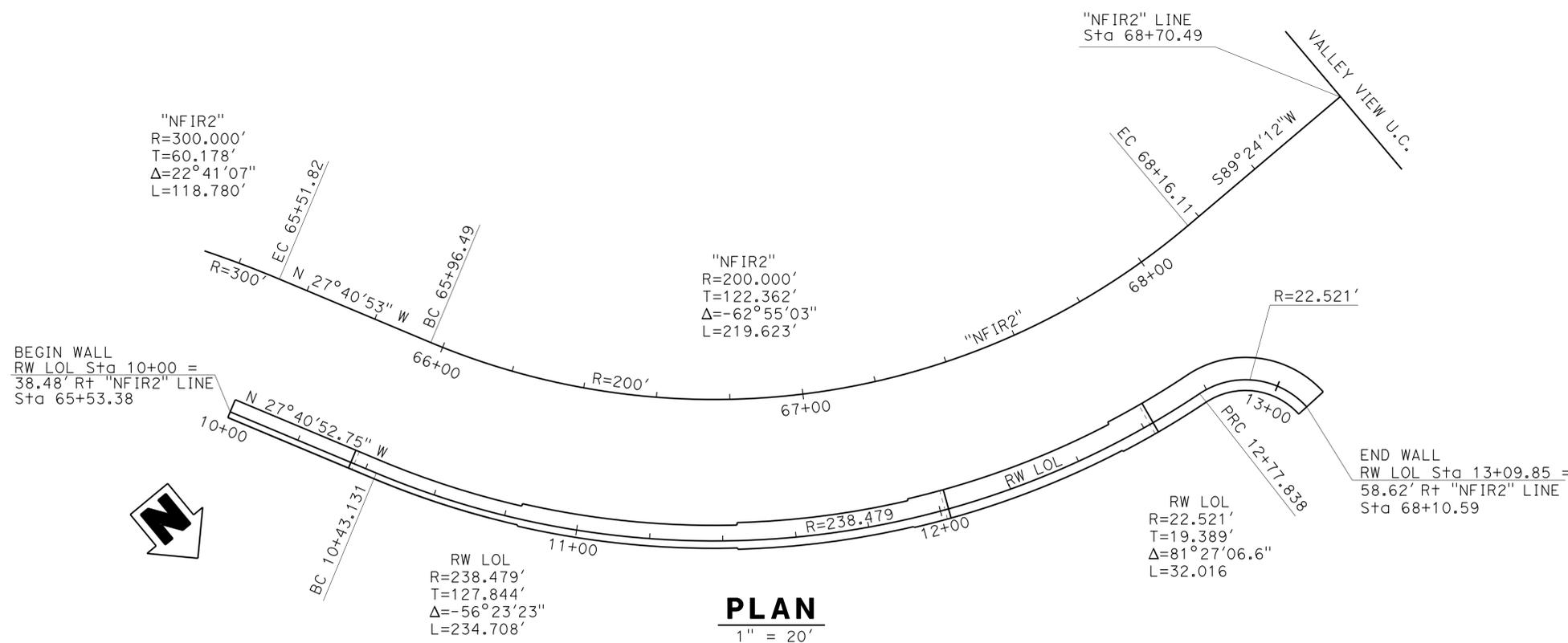
William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 CIVIL  
 STATE OF CALIFORNIA

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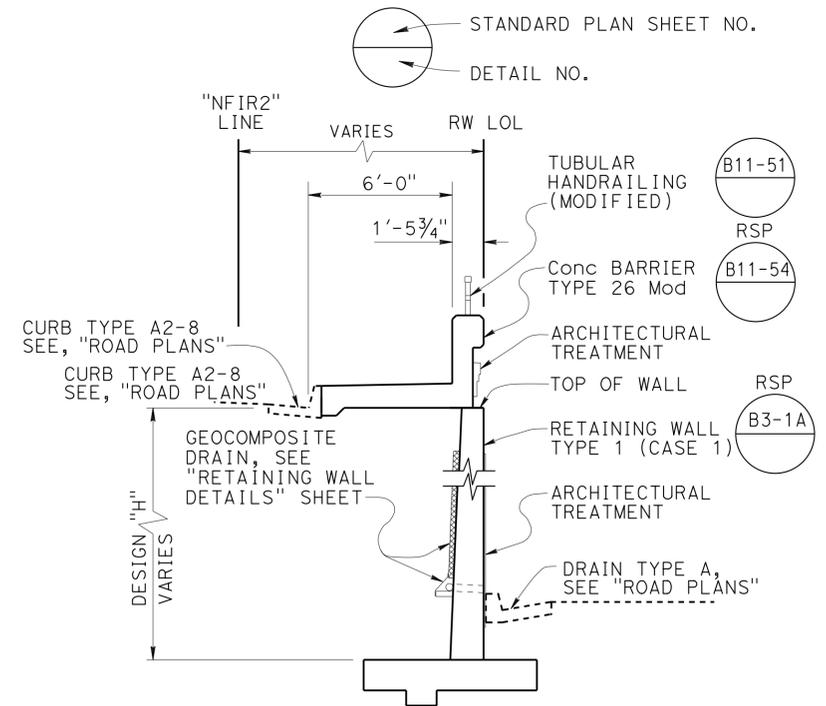
## DEVELOPED ELEVATION

1" = 20'



## PLAN

1" = 20'



## TYPICAL SECTION

NO SCALE

## STANDARD PLANS DATED MAY 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINE AND SYMBOLS (SHEET 1 OF 3)
A10D	LINE AND SYMBOLS (SHEET 2 OF 3)
A10E	LINE AND SYMBOLS (SHEET 3 OF 3)
RSP A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL- BRIDGE SURCHARGE AND WALL
BO-3	BRIDGE DETAILS
RSP B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP B3-5	RETAINING WALL DETAILS NO. 1
B3-6	RETAINING WALL DETAILS NO. 2
B11-51	TUBULAR HAND RAILING
RSP B11-54	CONCRETE BARRIER TYPE 26

Ramin Rashedi 3-18-15  
DESIGN ENGINEER

DESIGN BY Daryoush Tavatli  
CHECKED Cipriano Manansala  
DETAILS BY T. Bittermann  
CHECKED Cipriano Manansala  
QUANTITIES BY Fred Fong  
CHECKED Li Bernard

LOAD & RESISTANCE FACTOR DESIGN BY Daryoush Tavatli  
LAYOUT BY Daryoush Tavatli  
SPECIFICATIONS BY Xiahong Li

LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE  
CHECKED Cipriano Manansala  
PLANS AND SPECS COMPARED Xiahong Li

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO. RW NF66  
POST MILE 1.21

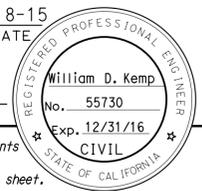
RETAINING WALL NF66  
GENERAL PLAN

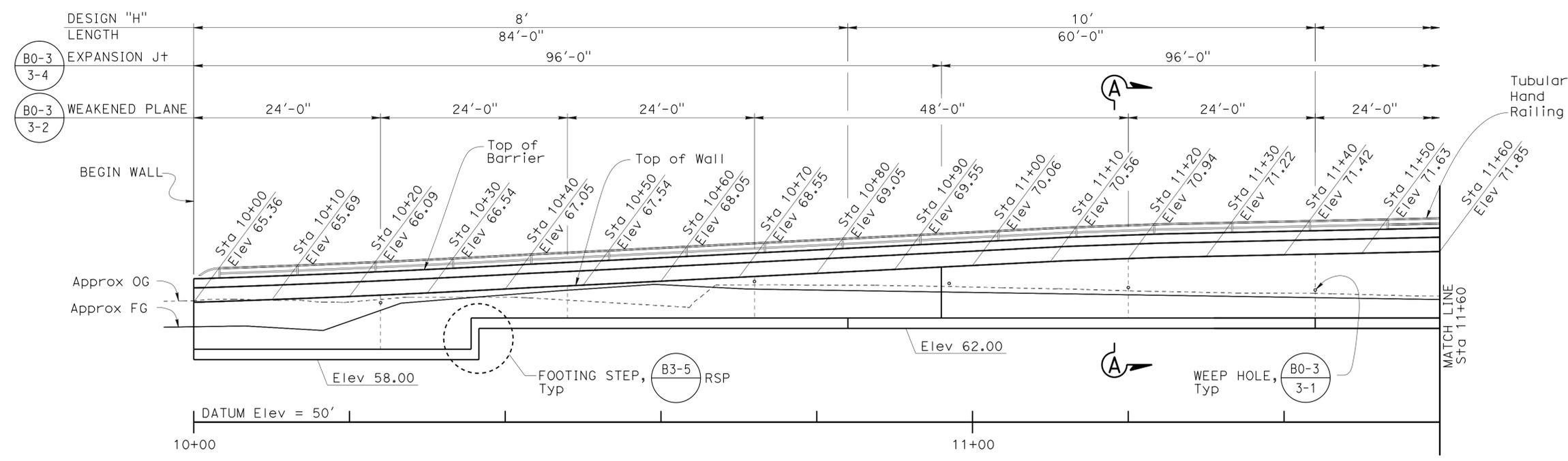
UNIT: 3587  
PROJECT NUMBER & PHASE: 0715000160-1

CONTRACT NO.: 07-2159u4

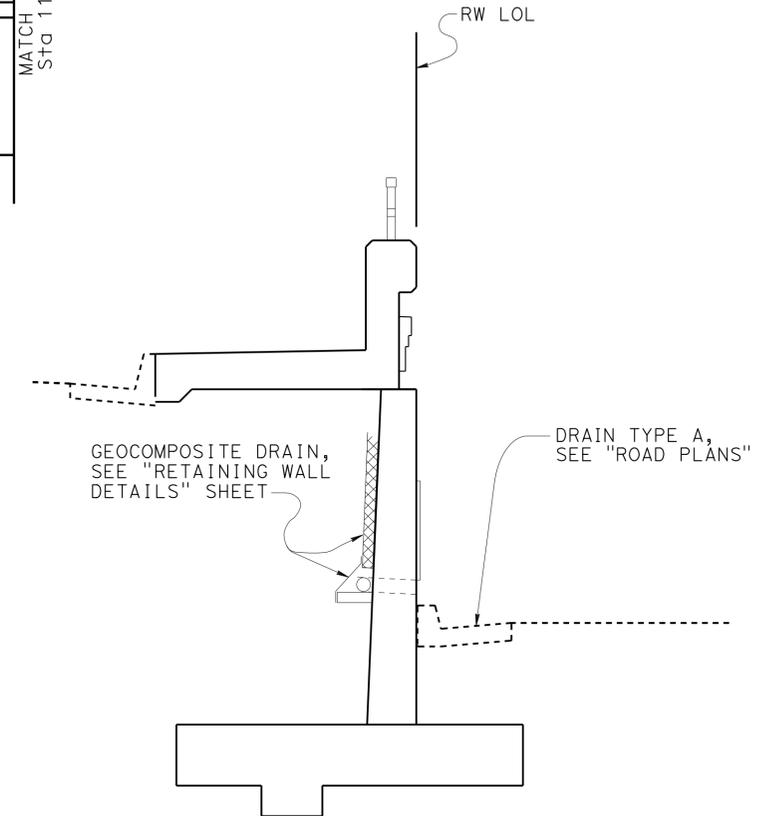
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
5-09-12 6-14-13 7-23-13 5-21-15	1	8

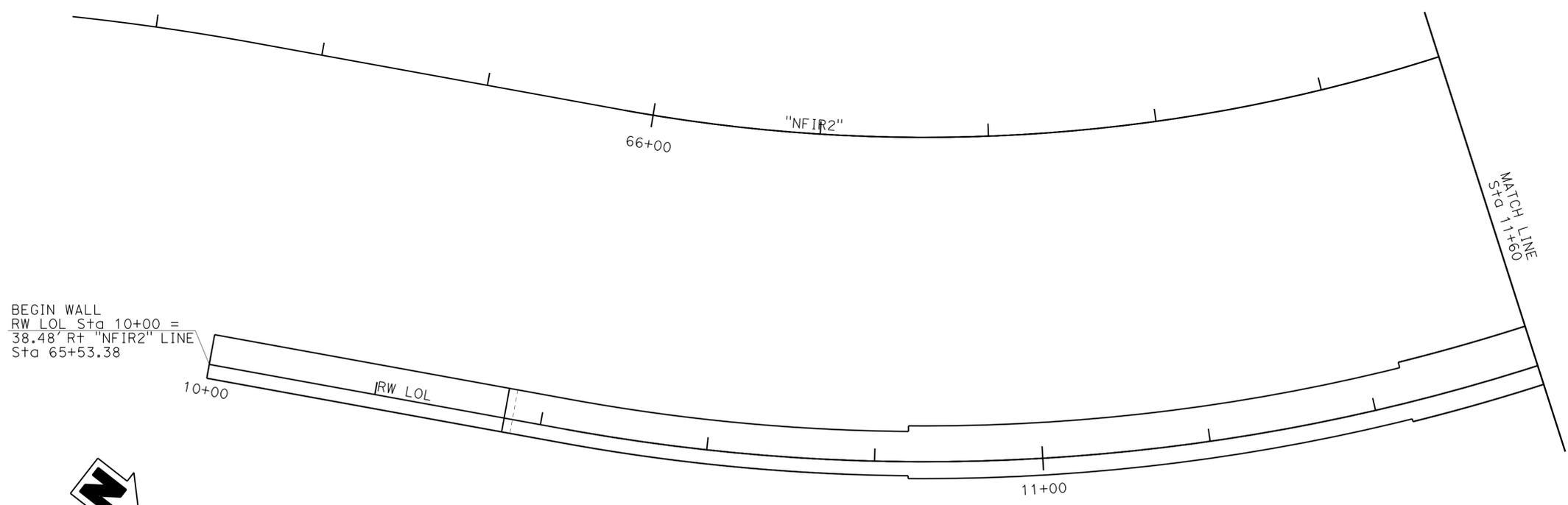
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1523	1622
			3-18-15		
REGISTERED CIVIL ENGINEER			DATE		
1-25-16			PLANS APPROVAL DATE		
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**DEVELOPED ELEVATION**  
1/8" = 1'-0"



**SECTION A-A**  
1/2" = 1'-0"



**PLAN**  
1/8" = 1'-0"

BEGIN WALL  
RW LOL Sta 10+00 =  
38.48' R+ "NFIR2" LINE  
Sta 65+53.38

DESIGN	BY Daryoush Tavatli	CHECKED Cipriano Manansala
DETAILS	BY Pauline Tong	CHECKED Cipriano Manansala
QUANTITIES	BY Fred Fong	CHECKED Li Bernard

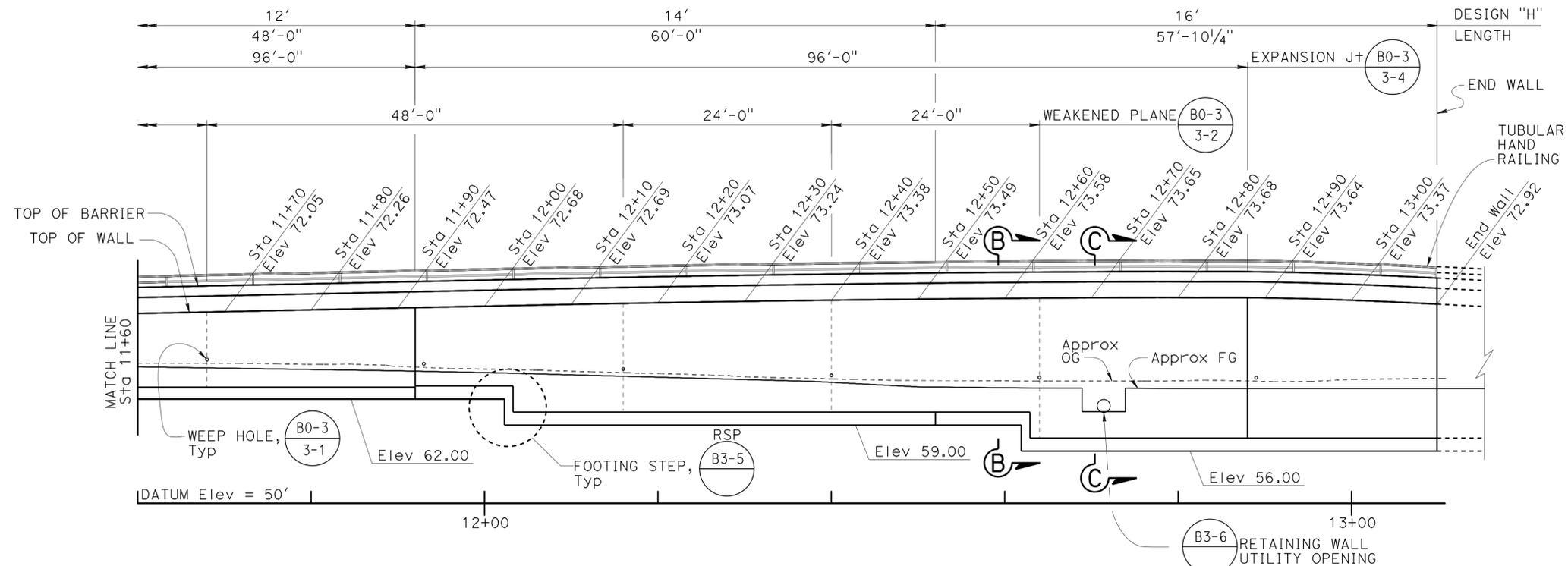
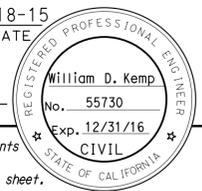
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

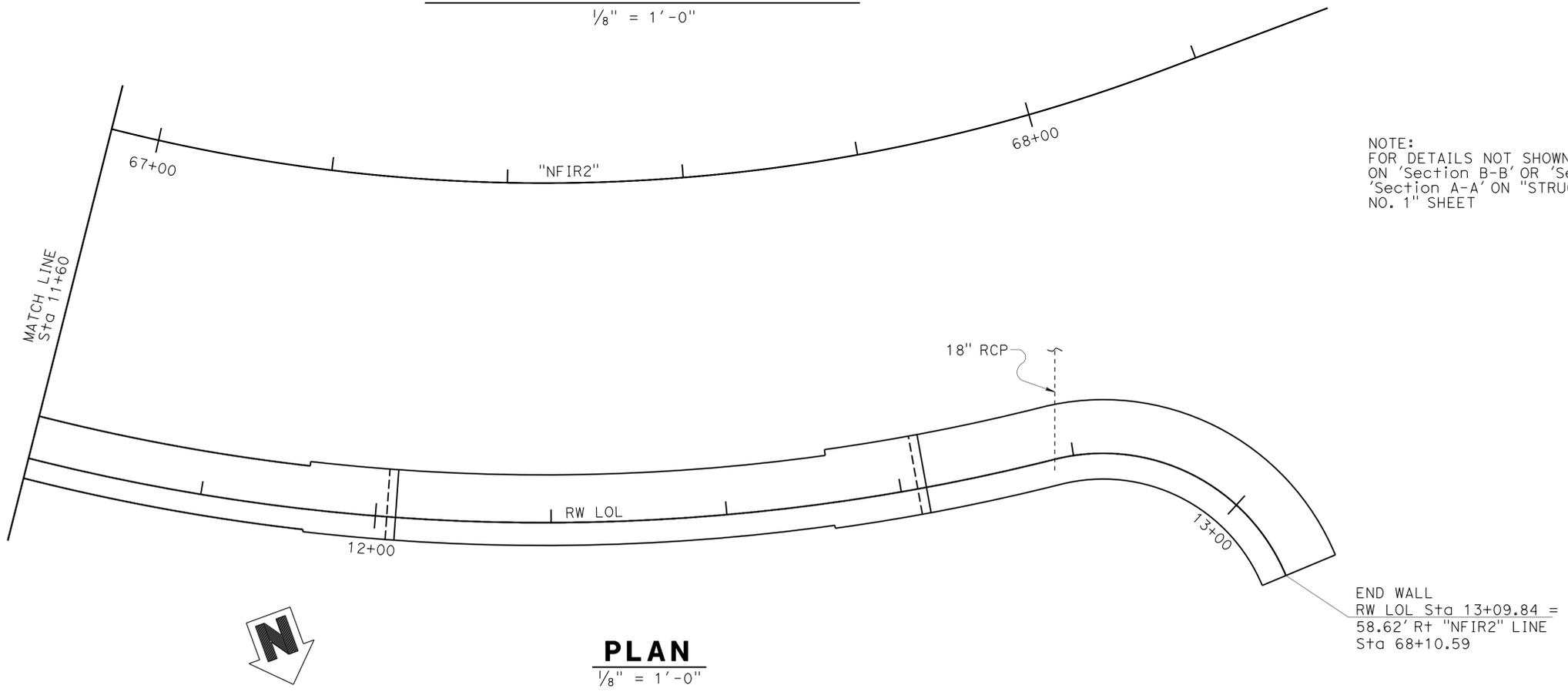
BRIDGE NO.	RW NF66
POST MILE	1.21

**RETAINING WALL NF66  
STRUCTURE PLAN NO. 1**

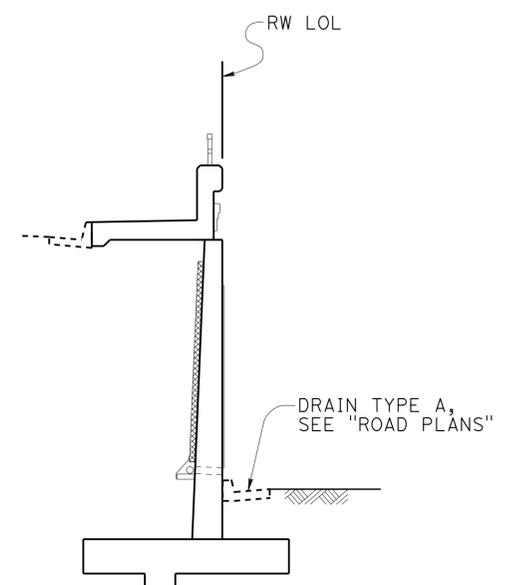
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1524	1622
			3-18-15		
			DATE		
			1-25-16		
			PLANS APPROVAL DATE		
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**DEVELOPED ELEVATION**  
1/8" = 1'-0"

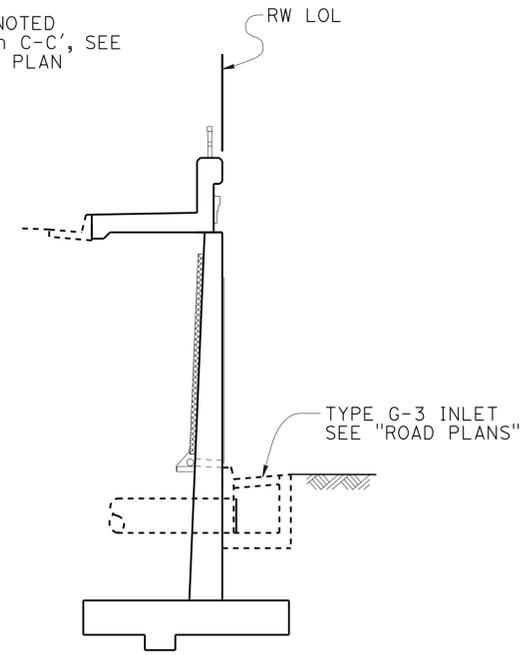


**PLAN**  
1/8" = 1'-0"



**SECTION B-B**  
1/4" = 1'-0"

NOTE:  
FOR DETAILS NOT SHOWN OR NOTED,  
ON 'Section B-B' OR 'Section C-C', SEE  
'Section A-A' ON "STRUCTURE PLAN  
NO. 1" SHEET



**SECTION C-C**  
1/4" = 1'-0"

END WALL  
RW LOL Sta 13+09.84 =  
58.62' R+ "NFIR2" LINE  
Sta 68+10.59

DESIGN	BY Daryoush Tavlati	CHECKED Cipriano Manansala
DETAILS	BY Pauline Tong	CHECKED Cipriano Manansala
QUANTITIES	BY Fred Fong	CHECKED Li Bernard

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	RW NF66
POST MILE	1.21

**RETAINING WALL NF66  
STRUCTURE PLAN NO. 2**



REVISION DATES	SHEET	OF
5-09-12 07-23-13 8-20-12 3-27-13	3	8

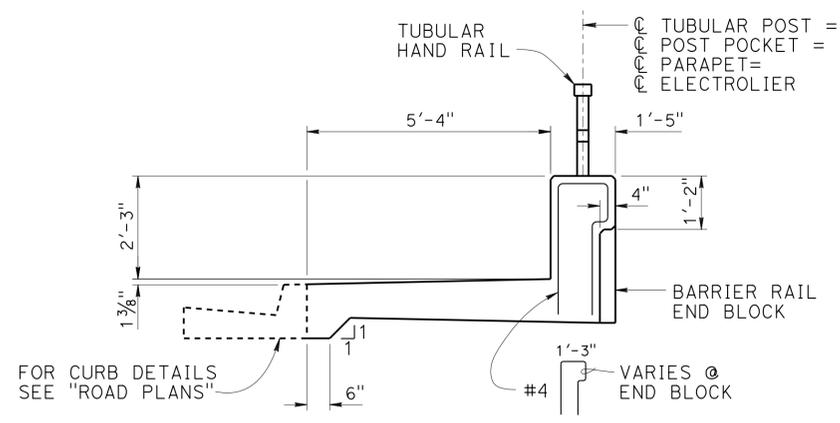
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1525	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

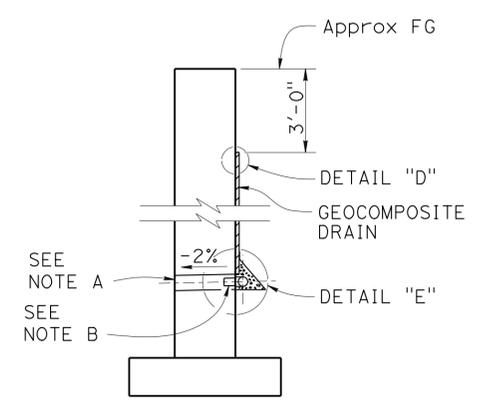
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REGISTERED PROFESSIONAL ENGINEER  
 William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 CIVIL  
 STATE OF CALIFORNIA

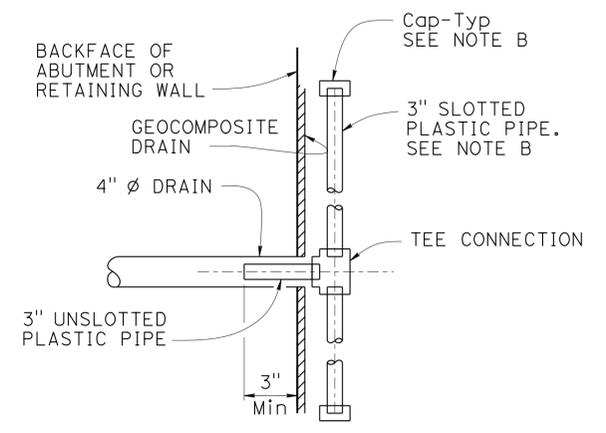


**BARRIER RAIL TYPE 26A Mod**  
 NO SCALE

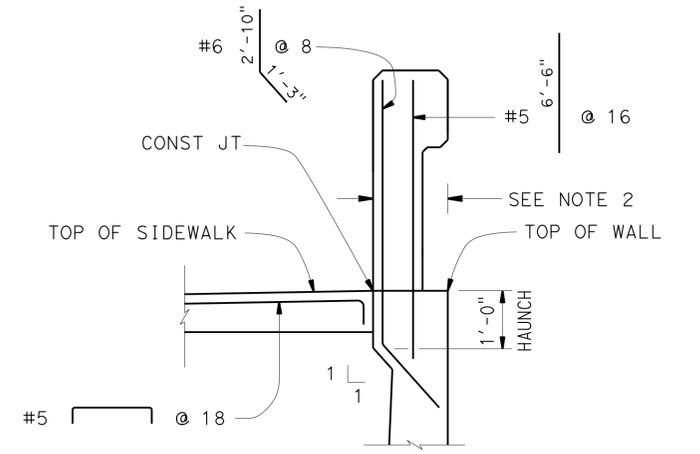
NOTE: For details and reinforcement not shown see RSP B11-54



**WALL SECTION**

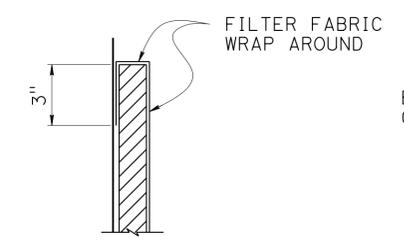


**SECTION K-K**



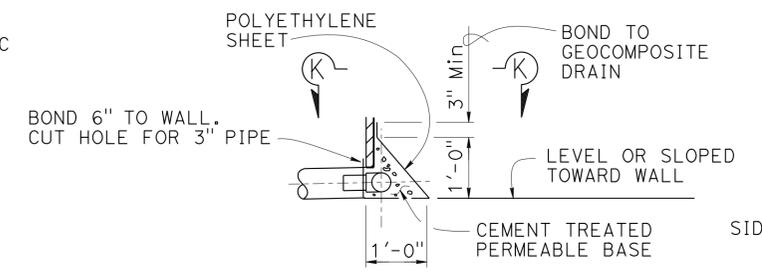
NOTES:  
 1. APPLY DETAIL BETWEEN SIDEWALK CONSTRUCTION JOINTS  
 2. HAUNCH WIDTH MUST MATCH BARRIER RAIL WIDTH

**SECTION F-F**  
 NO SCALE



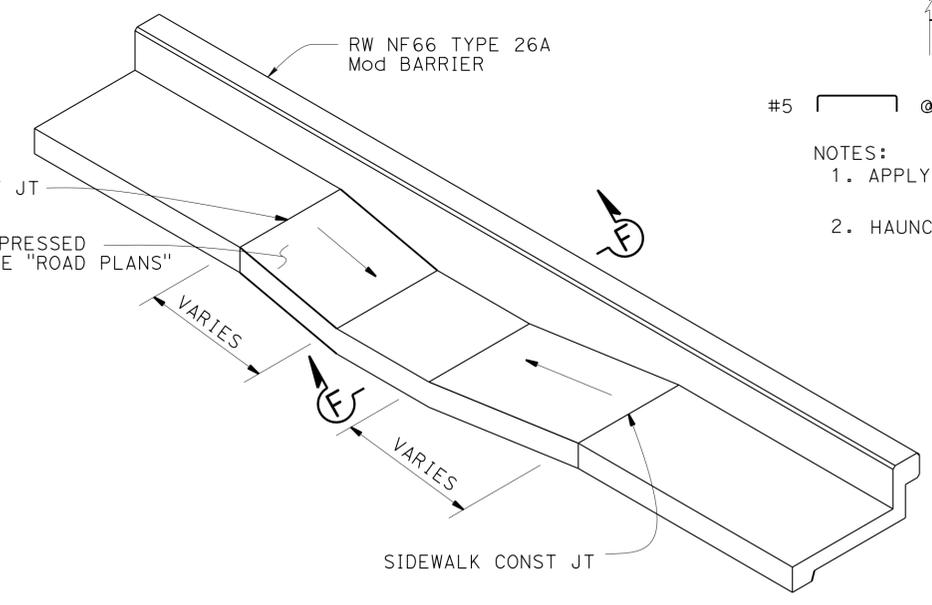
**DETAIL "D"**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**  
 NO SCALE



**DETAIL "E"**

SIDEWALK CONST JT  
 CURB RAMP TO DEPRESSED SIDEWALK Typ, SEE "ROAD PLANS"



**SIDEWALK CURB RAMP DETAIL**  
 NO SCALE

NOTES (GEOCOMPOSITE DRAIN):

- A. 4"  $\phi$  drains at intermediate sag points and at 25'-0" center to center. For walls adjacent to sidewalks or curbs, provide 4"  $\phi$  cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3"  $\pm$  above finished grade.
- B. Geocomposite drain, cement treated permeable base, and 3"  $\phi$  slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4"  $\phi$  drain.
- C. Connect the low end of plastic pipe to the main outlet pipe as applicable.

DESIGN	BY Daryoush Tavlati	CHECKED Cipriano Manansala
DETAILS	BY Pauline Tong	CHECKED Cipriano Manansala
QUANTITIES	BY Fred Fong	CHECKED Li Bernard

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 11**

BRIDGE NO.	RW NF66
POST MILE	1.21

**RETAINING WALL NF66**  
**RETAINING WALL DETAILS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1526	1622

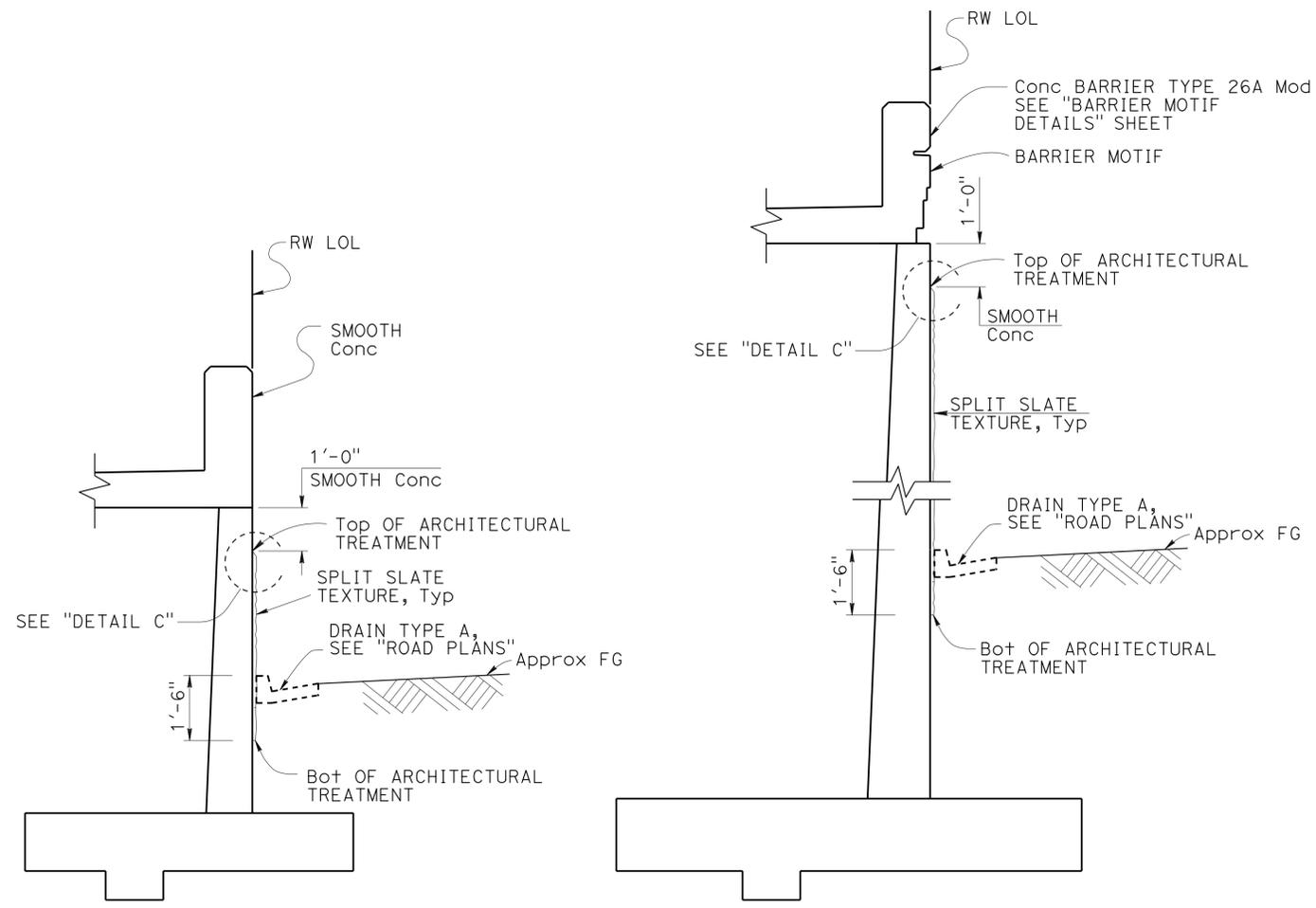
Note: All surface relief and texture shall be measured from RW LOL, Typ

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

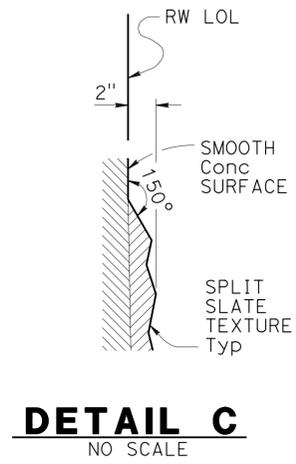
William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 CIVIL  
 STATE OF CALIFORNIA

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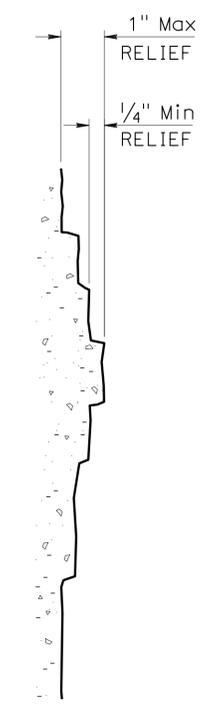


**SECTION E-E**  
 1/2" = 1'-0"

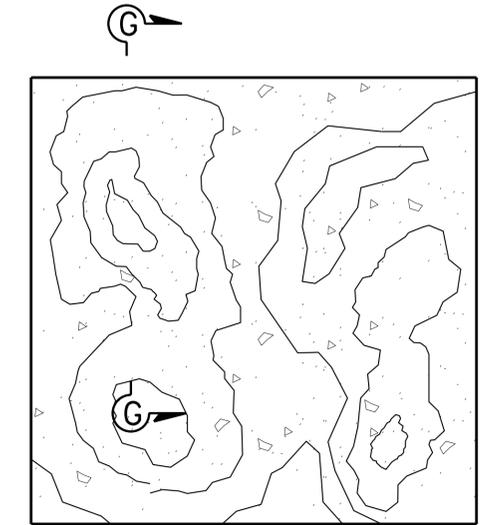
**SECTION F-F**  
 1/2" = 1'-0"



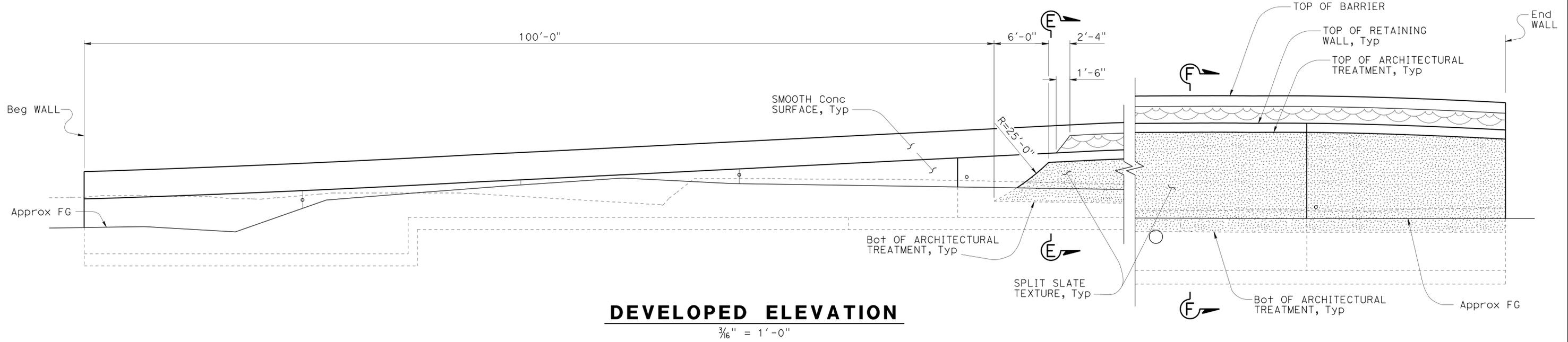
**DETAIL C**  
 NO SCALE



**SECTION G-G**  
 NO SCALE



**SPLIT SLATE TEXTURE**  
 NO SCALE



**DEVELOPED ELEVATION**  
 3/16" = 1'-0"

DESIGN	BY Daryoush Tavatli	CHECKED Cipriano Manansala
DETAILS	BY Jaime Ramirez	CHECKED Cipriano Manansala
QUANTITIES	BY Fred Fong	CHECKED Li Bernard

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 11**

BRIDGE NO.	RW NF66
POST MILE	1.21

**RETAINING WALL NF66**  
**ARCHITECTURAL TREATMENT DETAILS**

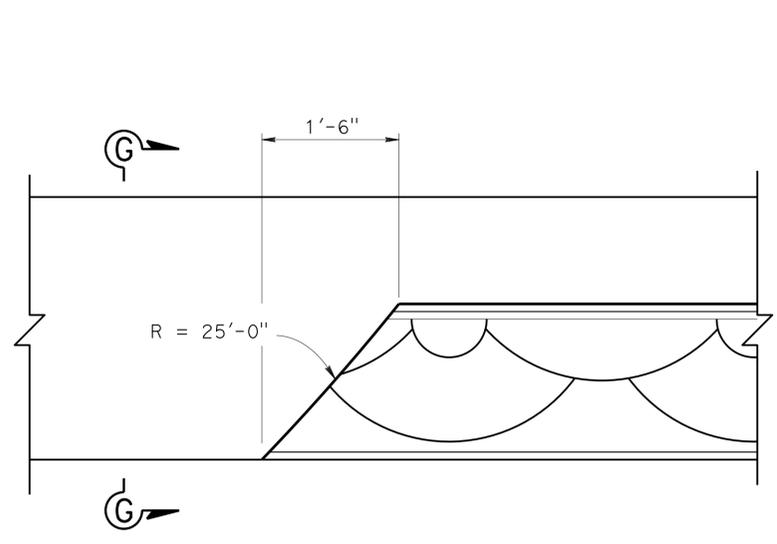
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1527	1622

*William Kemp* 3-18-15  
REGISTERED CIVIL ENGINEER DATE

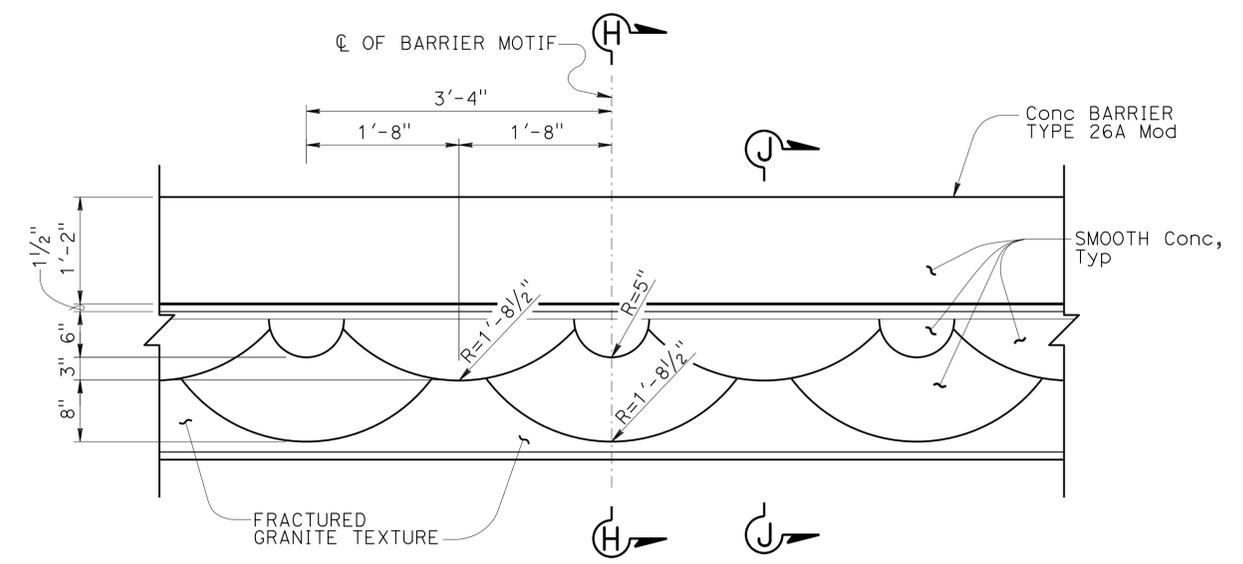
1-25-16  
PLANS APPROVAL DATE

William D. Kemp  
No. 55730  
Exp. 12-31-16  
CIVIL  
STATE OF CALIFORNIA

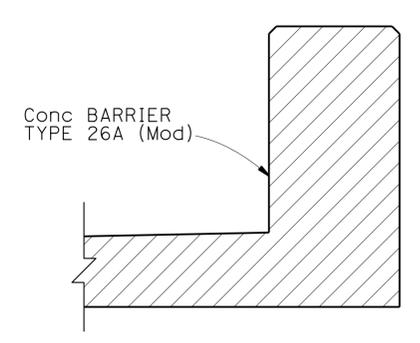
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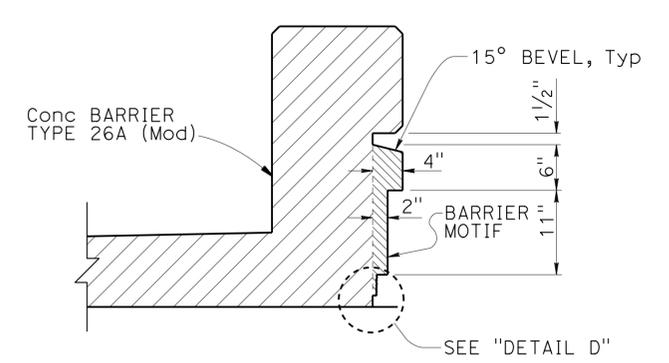
**BARRIER MOTIF END DETAIL**  
No Scale



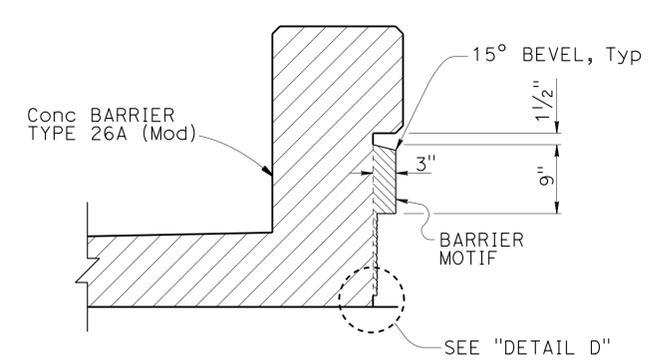
**ELEVATION - BARRIER MOTIF**  
No Scale



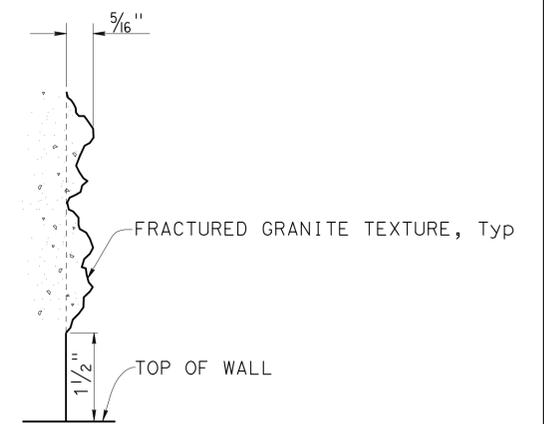
**SECTION G-G**  
1" = 1'-0"



**SECTION H-H**  
1" = 1'-0"



**SECTION J-J**  
1" = 1'-0"



**DETAIL D**  
No Scale

DESIGN	BY	H. Javier Chavez	CHECKED	Isaac Tasabia	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL NF66 BARRIER MOTIF DETAILS		
	DETAILS	BY	Anthony Valdez	CHECKED			Cipriano Manansala		RW NF66	
	QUANTITIES	BY	Fred Fong	CHECKED			Li Bernard		POST MILE	1.21
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 6 OF 8

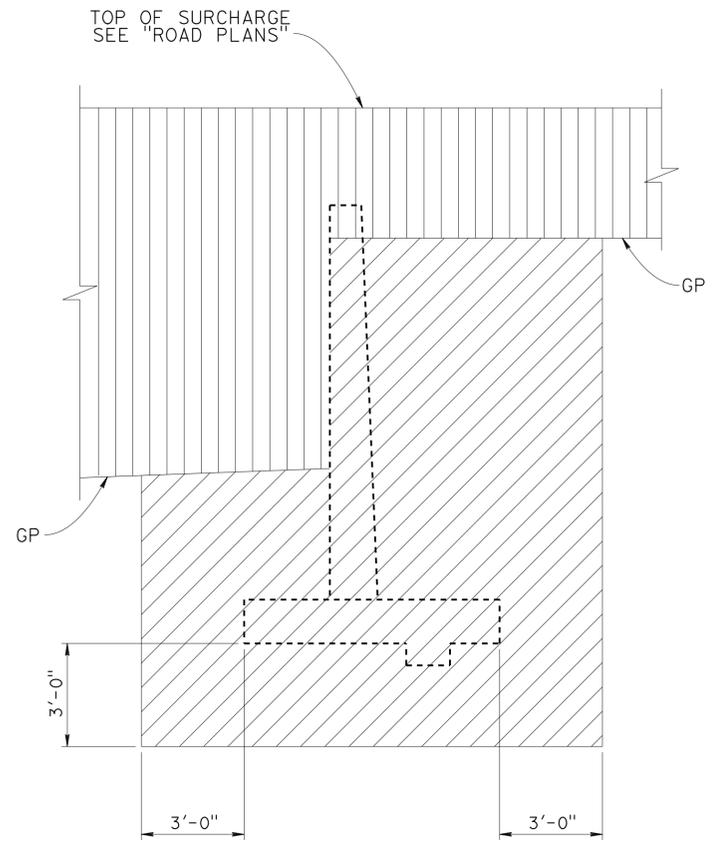
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1528	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

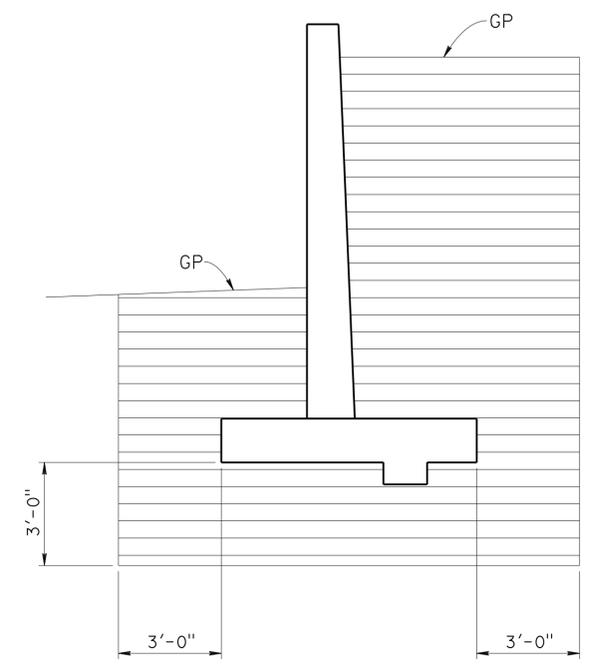
1-25-16  
 PLANS APPROVAL DATE

William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 CIVIL  
 STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



**EXCAVATION**



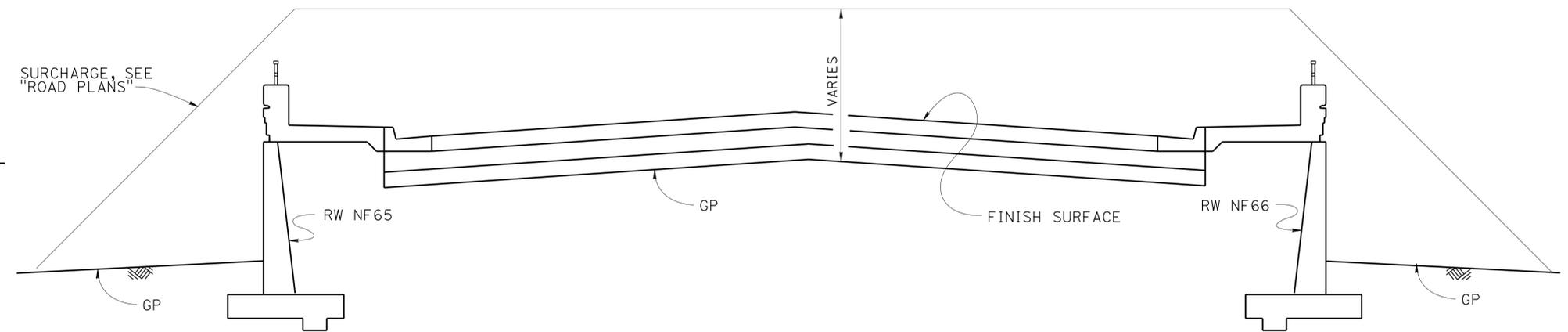
**BACKFILL**

LEGEND:

- STRUCTURE EXCAVATION
- ROADWAY EXCAVATION
- STRUCTURE BACKFILL

GP - PLANNED GRADING PLANE

**LIMITS OF EXCAVATION AND BACKFILL**  
 NO SCALE



**EMBANKMENT SURCHARGE**  
 NO SCALE

DESIGN	BY Daryoush Tavatli	CHECKED B. Kemp
DETAILS	BY Jaime Ramirez	CHECKED B. Kemp
QUANTITIES	BY Fred Fong	CHECKED Li Bernard

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
 DESIGN BRANCH 11

BRIDGE NO.	RW NF66
POST MILE	1.21

**RETAINING WALL NF66**  
**LIMITS OF EXCAVATION AND BACKFILL**

**BENCH MARK**

GPS 0887  
 ELEVATION 65.915 FT  
 FD 2-1/2 CADT DISK IN CONC. CURB  
 FLUSH, STAMPED "LA-5-1.0, 1995"  
 LOCATED 90' N OF THE SOUTH SIDE  
 FIRESTONE BLVD 0.2 MI SE OF VALLEY VIEW  
 NORTHING 542395.636  
 EASTING 1997613.893  
 DATUM NAVD88

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1529	1622

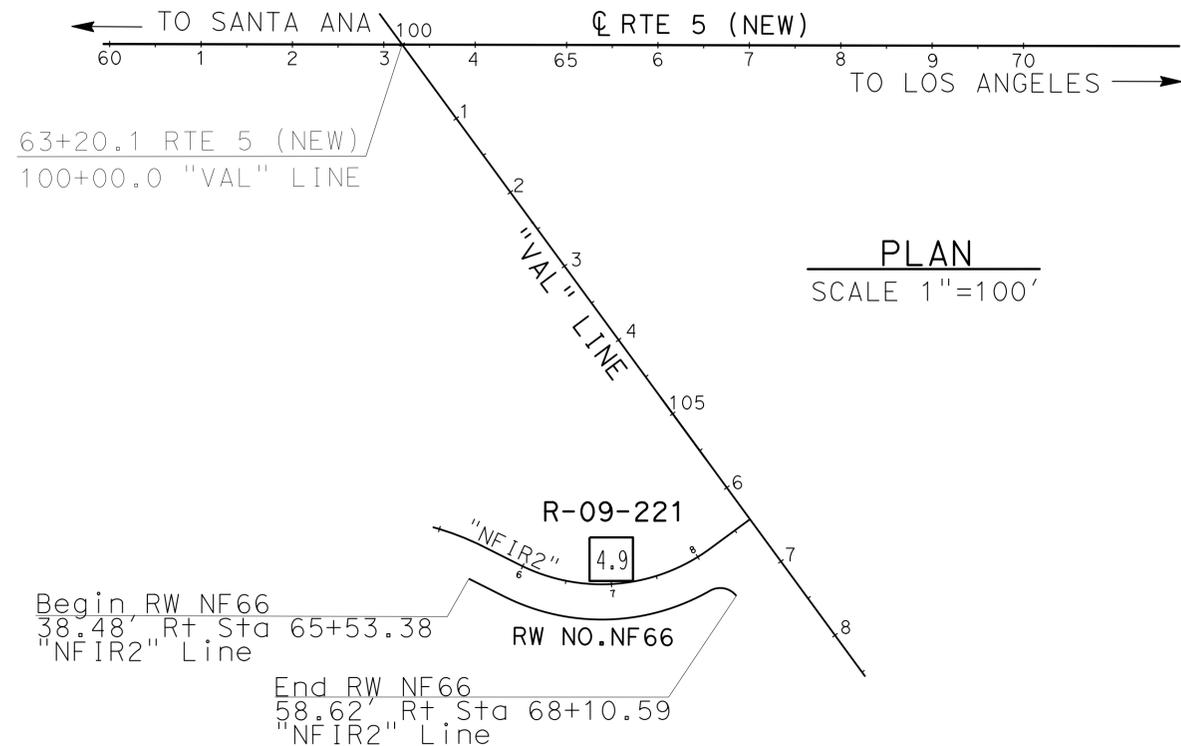
05/20/15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

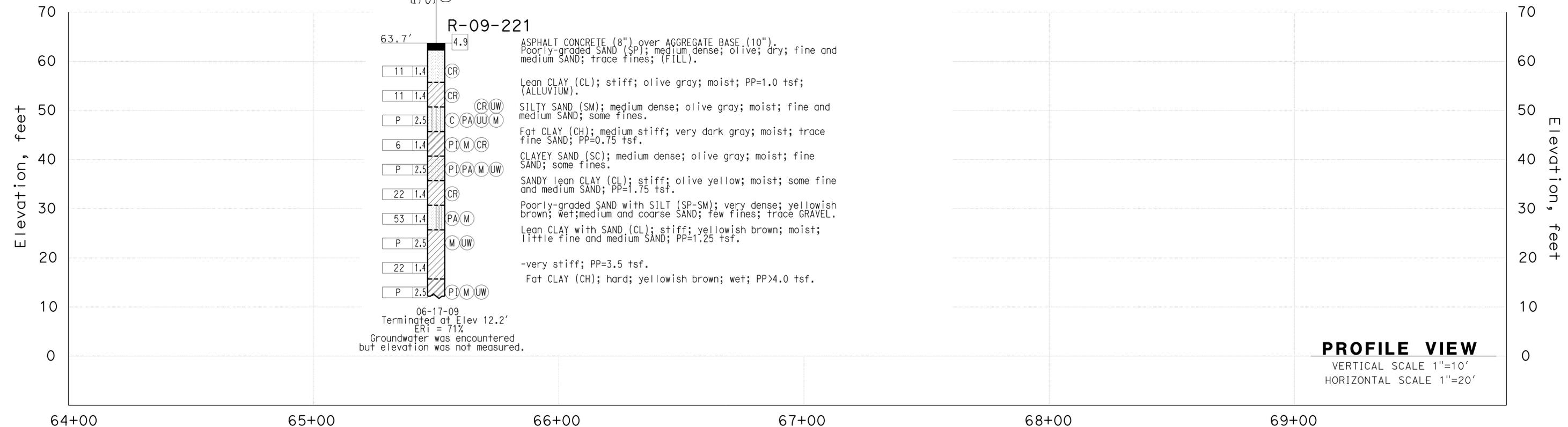
URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705

Michael G. Smith  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 2229  
 Exp. 03/31/16  
 STATE OF CALIFORNIA  
 GEOTECHNICAL

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**PLAN**  
 SCALE 1"=100'



**PROFILE VIEW**  
 VERTICAL SCALE 1"=10'  
 HORIZONTAL SCALE 1"=20'

F. MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T. PANAH	EJ. JEON FIELD INVESTIGATION BY: DATE: 06/17/09	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. RW NF66 POST MILES 1.21	<b>RETAINING WALL NO. NF66</b> <b>LOG OF TEST BORINGS SHEET 1 OF 1</b>
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	3658 CONTRACT NO.: 07-2159U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:35

**STANDARD PLANS**  
Dated May 2010

RSP	A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP	A10B	ABBREVIATIONS (SHEET 2 OF 2)
	A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
	A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
	A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
RSP	A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP	A10G	LEGEND - SOIL (SHEET 2 OF 2)
A62B		LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE SURCHARGE AND WALL
B0-3		BRIDGE DETAILS
B2-5		PILE DETAILS - CLASS 90 AND CLASS 140
RSP	B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP	B3-5	RETAINING WALL DETAILS NO. 1
B11-51		TUBULAR HAND RAILING
RSP	B11-54	CONCRETE BARRIER TYPE 26

**INDEX TO PLANS**

SHEET NO.	TITLE
1	GENERAL PLAN
2	PILE LAYOUT
3	RETAINING WALL DETAILS
4	ARCHITECTURAL TREATMENT DETAILS
5	LOG OF TEST BORINGS SHEET 1 OF 3
6	LOG OF TEST BORINGS SHEET 2 OF 3
7	LOG OF TEST BORINGS SHEET 3 OF 3

QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	818	CY
STRUCTURE BACKFILL (RETAINING WALL)	590	CY
FURNISH PILING (CLASS 90) (ALTERNATIVE W)	2,321	LF
DRIVE PILE (CLASS 90) (ALTERNATIVE W)	50	EA
STRUCTURAL CONCRETE, RETAINING WALL	226	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	1,800	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	36,500	LB
TUBULAR HANDRAILING (MODIFIED)	197	LF
CONCRETE BARRIER (TYPE 26 MODIFIED)	197	LF

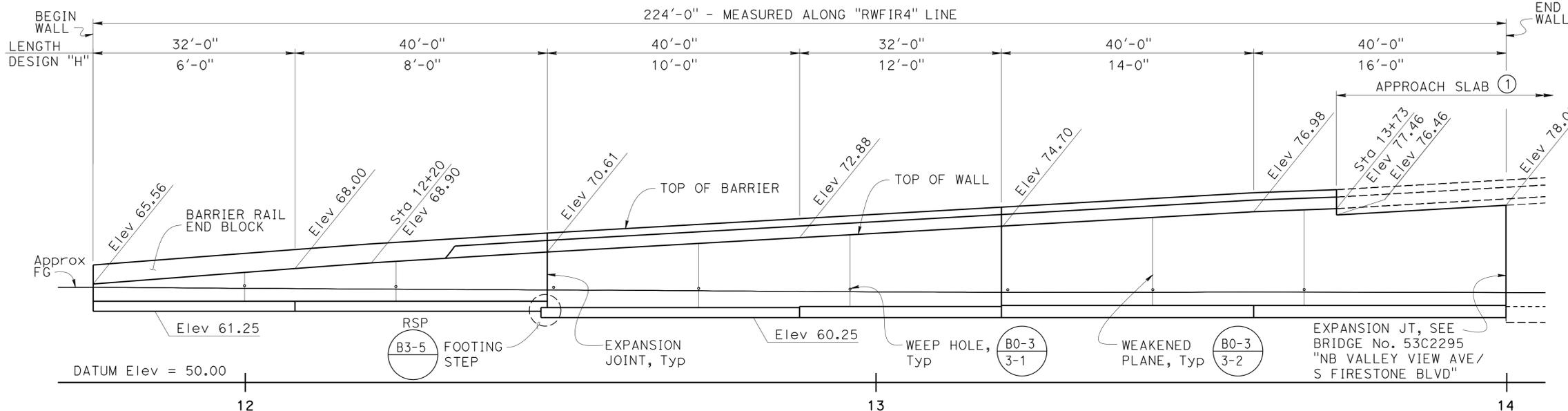
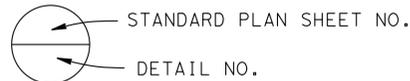
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1530	1622

1-26-15  
REGISTERED CIVIL ENGINEER DATE

1-25-16  
PLANS APPROVAL DATE

Phu V. Nguyen  
No. 60358  
Exp. 6-30-16  
CIVIL  
STATE OF CALIFORNIA

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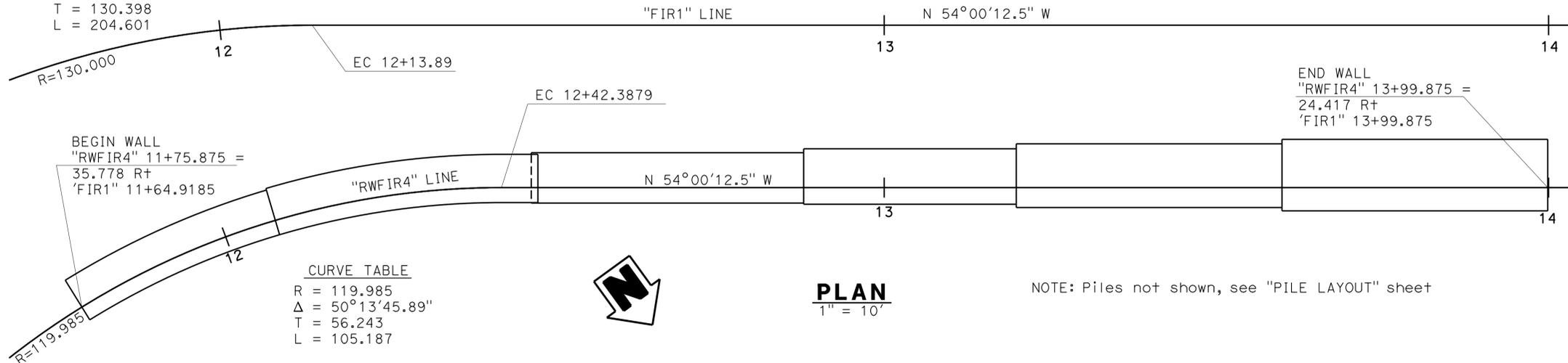
**DEVELOPED ELEVATION**

1" = 10'

NOTE: Piles and Tubular Hand Railing not shown

CURVE TABLE

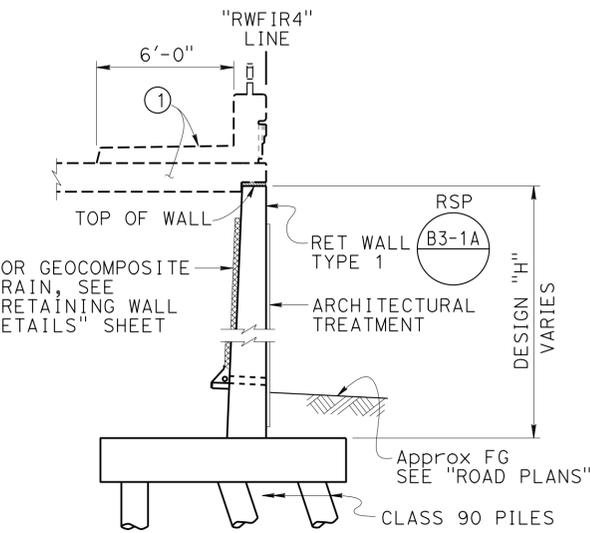
R = 130.000'  
Δ = 90°10'31.16"  
T = 130.398  
L = 204.601



**PLAN**

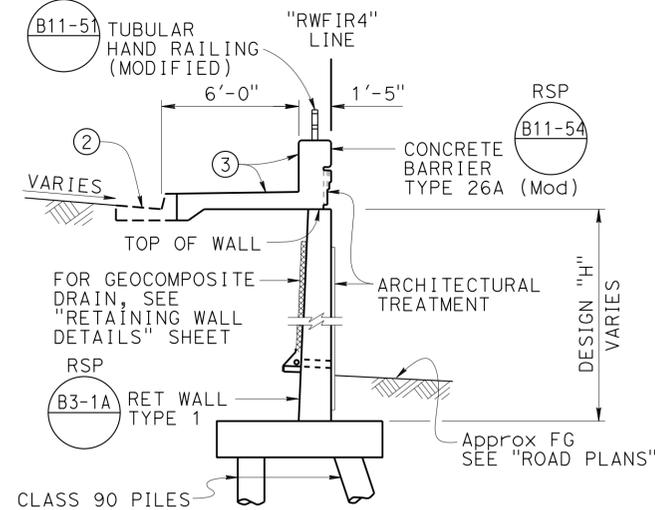
1" = 10'

NOTE: Piles not shown, see "PILE LAYOUT" sheet



**TYPICAL SECTION AT STRUCTURE APPROACH**

1/4" = 1'-0"



**TYPICAL SECTION**

1/4" = 1'-0"

NOTES:

- Concrete Barrier Type 26 (Mod) and Approach Slab, see Bridge No. 53c2295 "NB VALLEY VIEW AVE/ S FIRESTONE BLVD"
- Curb Type A2-8, see "ROAD PLANS"
- Match face to Concrete Barrier Type 26 (Mod) at Structure Approach

Ramin Rashedi DESIGN ENGINEER	DESIGN	By Phu Nguyen	CHECKED R. Wilson	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	53E0285	<b>RETAINING WALL RWFIR4</b> <b>GENERAL PLAN</b>	
	DETAILS	By Pauline Tong	CHECKED R. Wilson	LAYOUT	By Phu Nguyen			CHECKED R. Wilson	POST MILE		1.15
	QUANTITIES	By Phu Nguyen	CHECKED D. Pato	SPECIFICATIONS	By Xiahong Li			PLANS AND SPECS COMPARED	Xiahong Li		

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1531	1622

<i>Phu V. Nguyen</i>	3-18-15
REGISTERED CIVIL ENGINEER	DATE
1-25-16	
PLANS APPROVAL DATE	

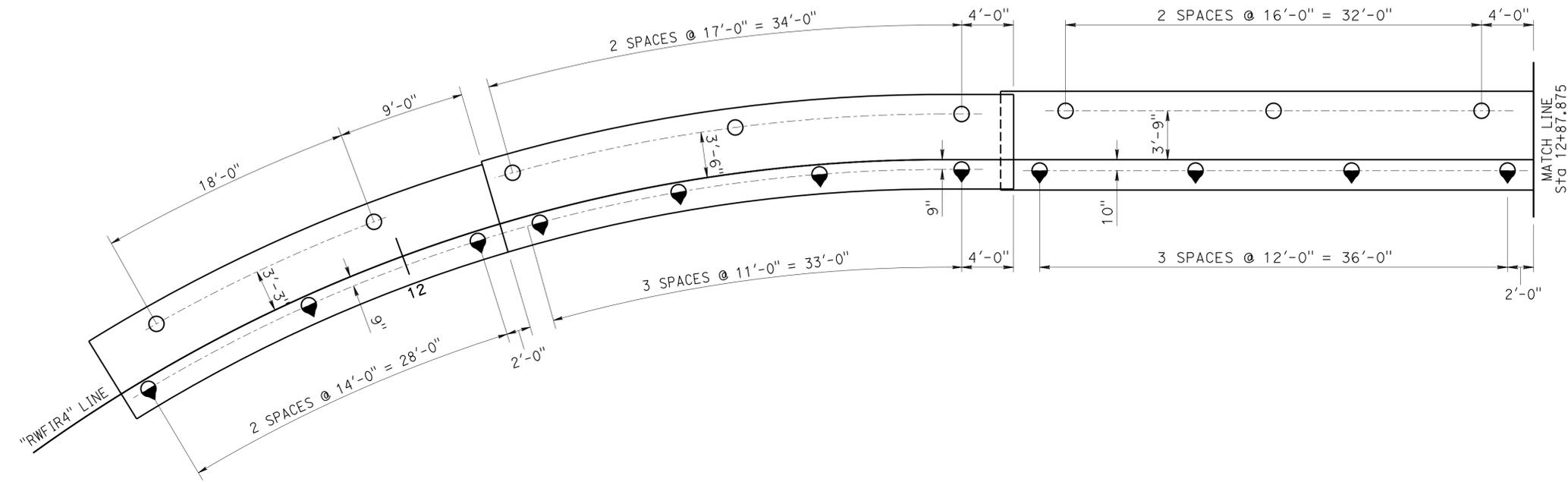
Phu V. Nguyen
No. 60358
Exp. 6/30/16
CIVIL

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### PILE DATA TABLE

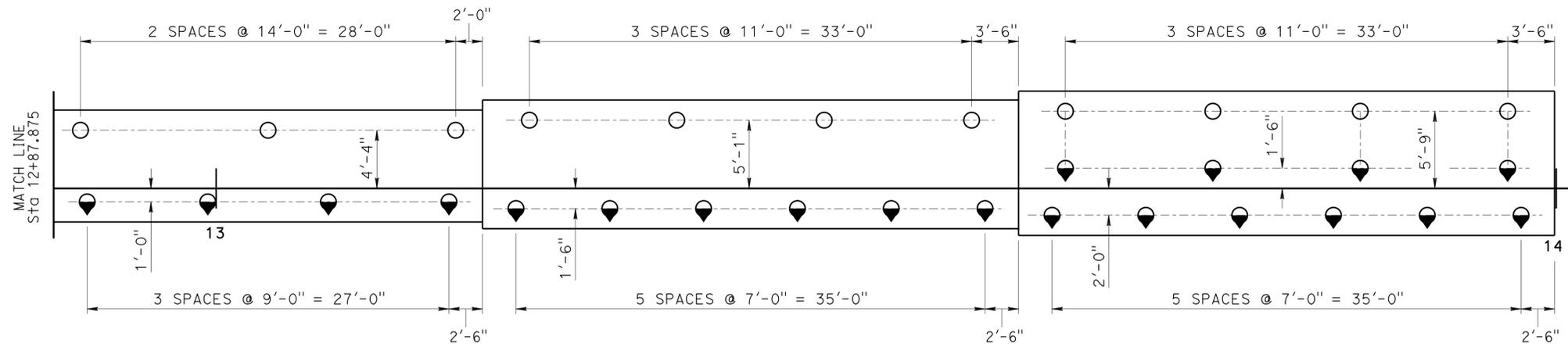
PILE TYPE	NOMINAL RESISTANCE (kips)		DESIGN TIP ELEVATIONS (ft)	SPECIFIED TIP ELEVATION (ft)	NOMINAL DRIVING RESISTANCE (kips)
	COMPRESSION	TENSION			
PP14x0.375	160	10	16(a) 51(b) 32(c)	16	160

NOTES: 1. Design tip elevations are controlled by: (a) Compression (b) Tension, (c) Settlement  
 2. The specified tip elevation for driven piles shall not be raised above the design tip elevations for tension load and tolerable settlement



NOTE: All piles are Class 90 Alternative "W" B2-5

LEGEND:  
 ○ Indicates vertical pile  
 ▽ Indicates 1:3 battered pile



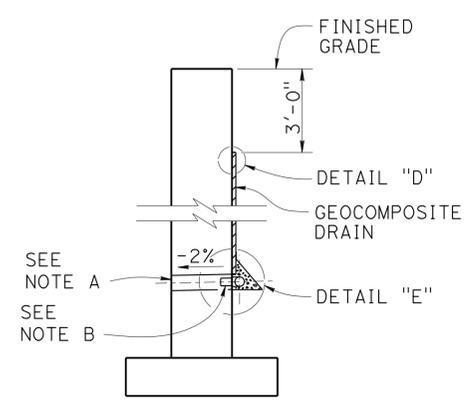
**PLAN**  
 $\frac{3}{16}'' = 1' - 0''$

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">DESIGN</td> <td style="width: 30%;">BY Phu Nguyen</td> <td style="width: 30%;">CHECKED R. Wilson</td> </tr> <tr> <td>DETAILS</td> <td>BY Pauline Tong</td> <td>CHECKED R. Wilson</td> </tr> <tr> <td>QUANTITIES</td> <td>BY Phu Nguyen</td> <td>CHECKED D. Pato</td> </tr> </table>	DESIGN	BY Phu Nguyen	CHECKED R. Wilson	DETAILS	BY Pauline Tong	CHECKED R. Wilson	QUANTITIES	BY Phu Nguyen	CHECKED D. Pato	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 11</b>	BRIDGE NO. 53E0285 POST MILE 1.15	<b>RETAINING WALL RWFIR4</b> <b>PILE LAYOUT</b>
DESIGN	BY Phu Nguyen	CHECKED R. Wilson											
DETAILS	BY Pauline Tong	CHECKED R. Wilson											
QUANTITIES	BY Phu Nguyen	CHECKED D. Pato											
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1 CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES									
			REVISION DATES	SHEET 2 OF 7									

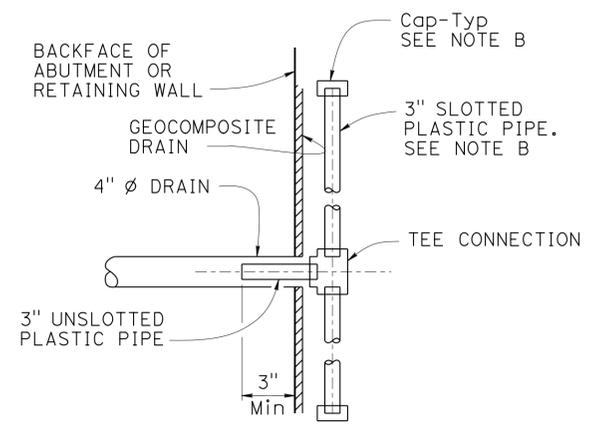
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1532	1622

3-18-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
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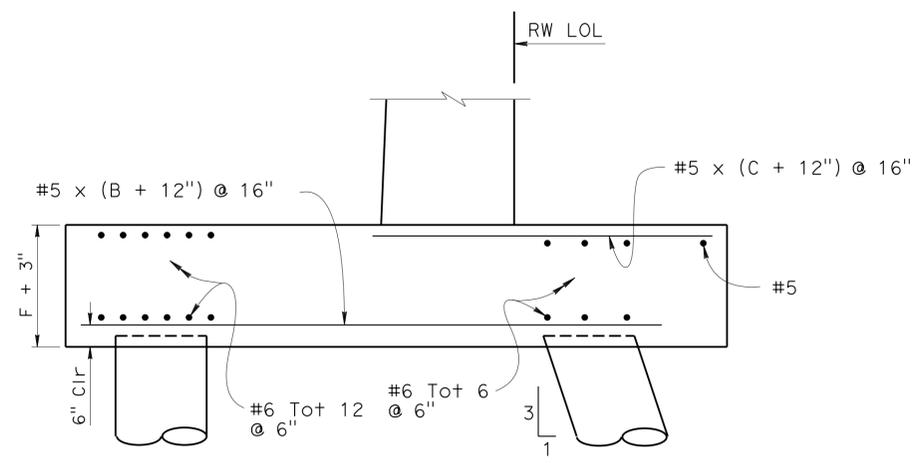
REGISTERED PROFESSIONAL ENGINEER  
 Phu V. Nguyen  
 No. 60358  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA



**WALL SECTION**



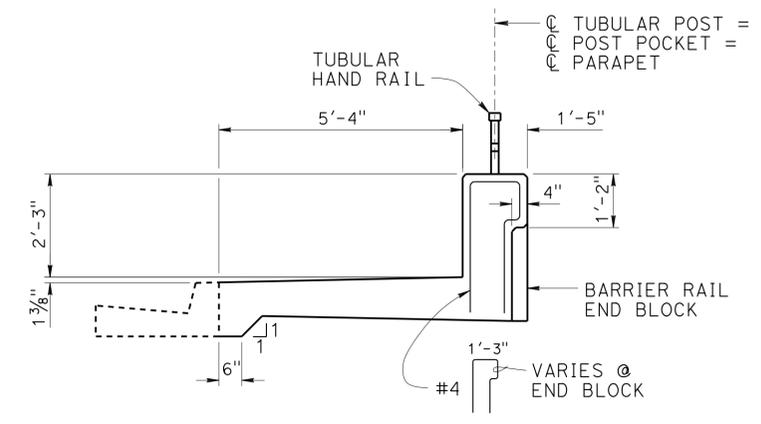
**SECTION K-K**



**PILE FOOTING SECTION**  
NO SCALE

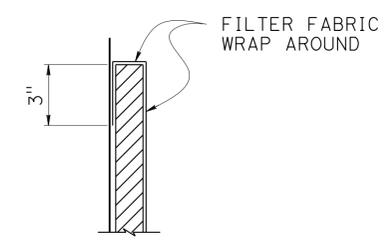
NOTES:

- Reinforcement shown is in addition to that shown in RSP B3-1A
- All Piles not shown, see "PILE LAYOUT" sheet RSP B3-1A
- For "F", "B" and "C" dimensions, see RSP B3-1A

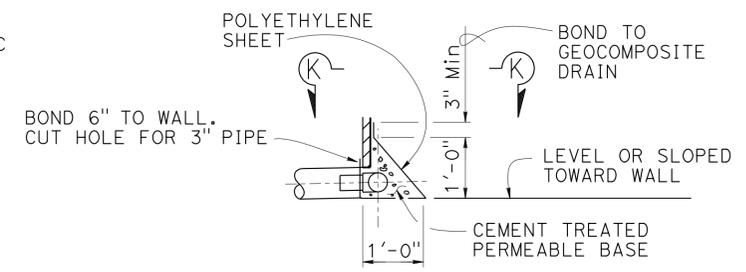


**CONCRETE BARRIER TYPE 26A MOD**

1/2" = 1'-0"  
 NOTE: For details and reinforcement not shown see RSP B11-54



**DETAIL "D"**

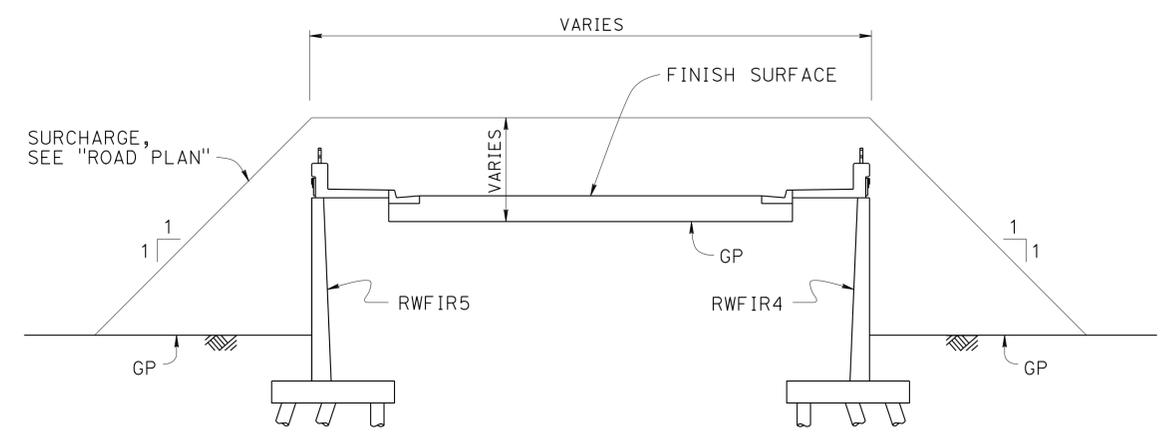


**DETAIL "E"**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**  
NO SCALE

NOTES (GEOCOMPOSITE DRAIN):

- 4" Ø drains at intermediate sag points and at 25'-0" center to center. For walls adjacent to sidewalks or curbs, provide 4" Ø cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3" ± above finished grade.
- Geocomposite drain, cement treated permeable base, and 3" Ø slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Ø drain.
- Connect the low end of plastic pipe to the main outlet pipe as applicable.

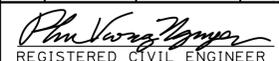
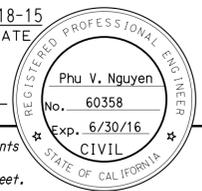


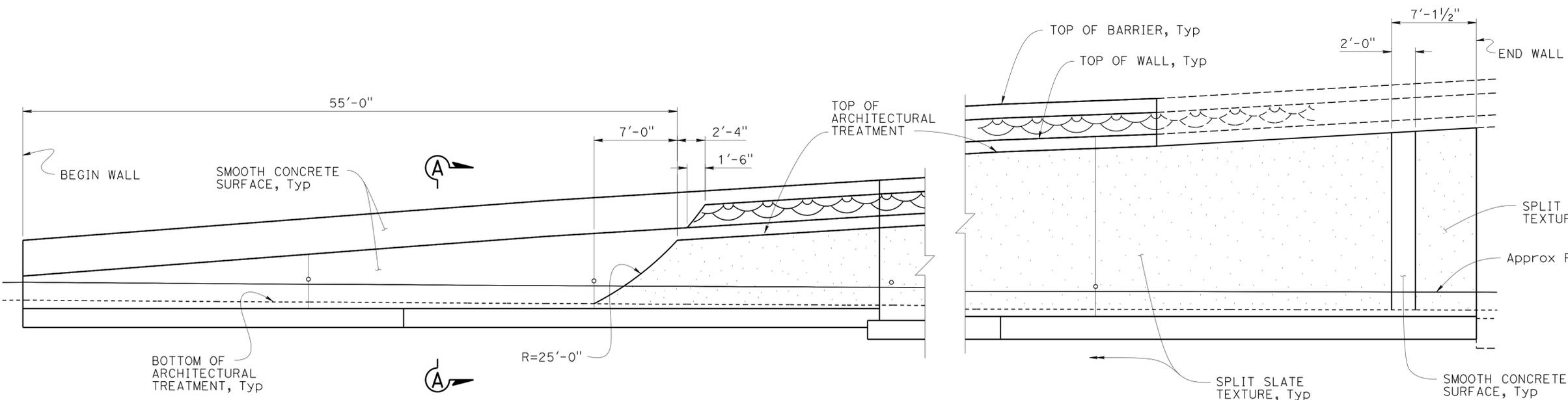
**EMBANKMENT SURCHARGE**  
NO SCALE

NOTE: For excavation limits, see "BRIDGE EMBANKMENT SURCHARGE" on "STANDARD PLANS A62B" sheet

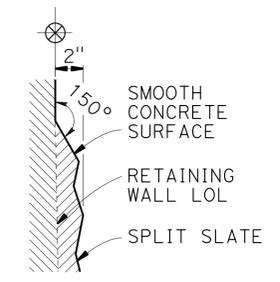
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Phu Nguyen	CHECKED R. Wilson	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL RWFIR4 RETAINING WALL DETAILS
	DETAILS	BY Pauline Tong	CHECKED R. Wilson			53E0285	
	QUANTITIES	BY Phu Nguyen	CHECKED D. Pato			POST MILE 1.15	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	
0 1 2 3				REVISION DATES		SHEET 3	OF 7

FILE => rwfir4-d-rwdt.dgn  
 USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:35

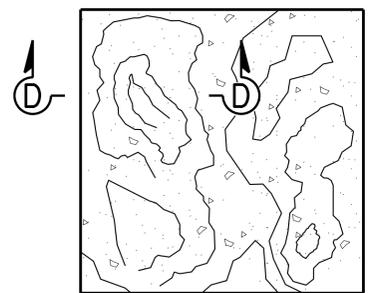
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1533	1622
 REGISTERED CIVIL ENGINEER			3-18-15	DATE	
1-25-16 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.</small>					



**DEVELOPED ELEVATION**  
1" = 5'-0"



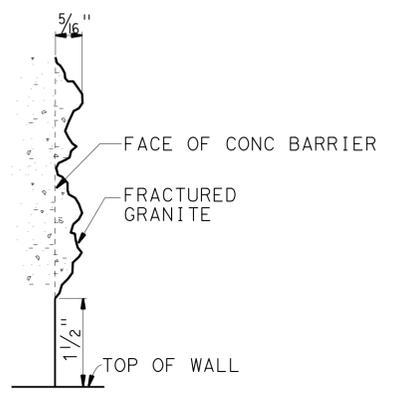
**DETAIL A**  
NO SCALE



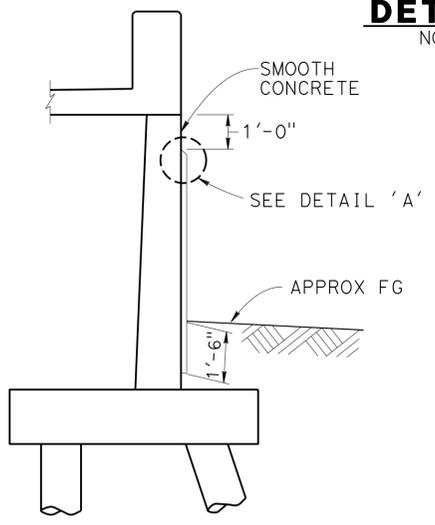
**SPLIT SLATE TEXTURE**  
NO SCALE



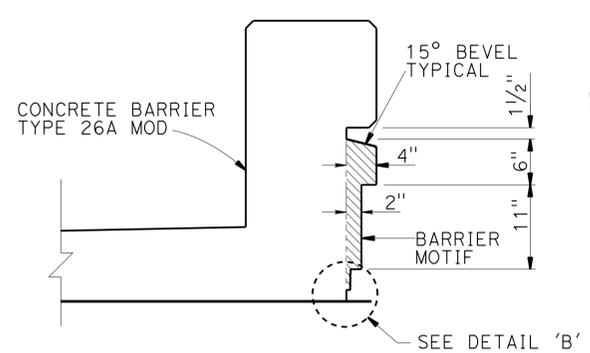
**SECTION D-D**  
NO SCALE



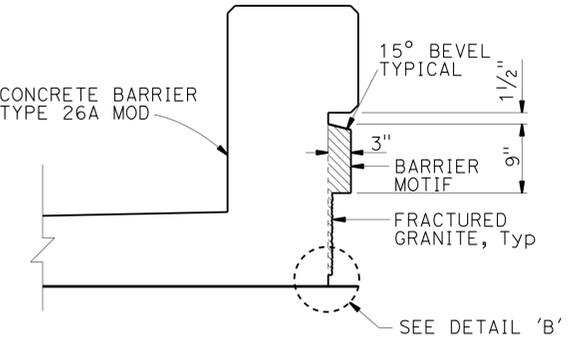
**DETAIL B**  
NO SCALE



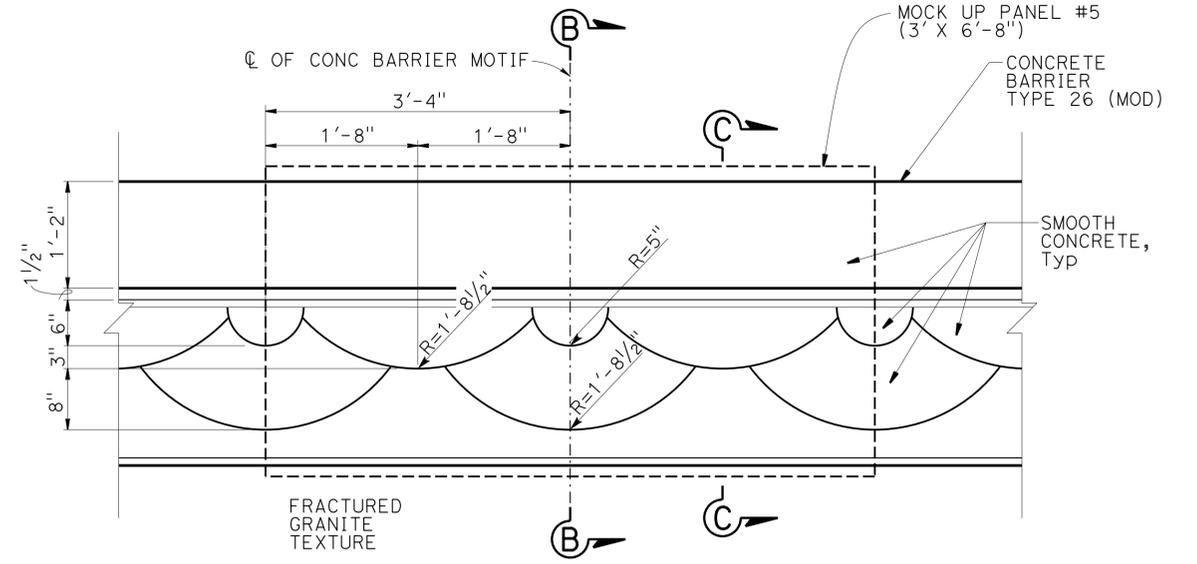
**SECTION A-A**  
3/8" = 1'-0"



**SECTION B-B**  
1" = 1'-0"



**SECTION C-C**  
1" = 1'-0"



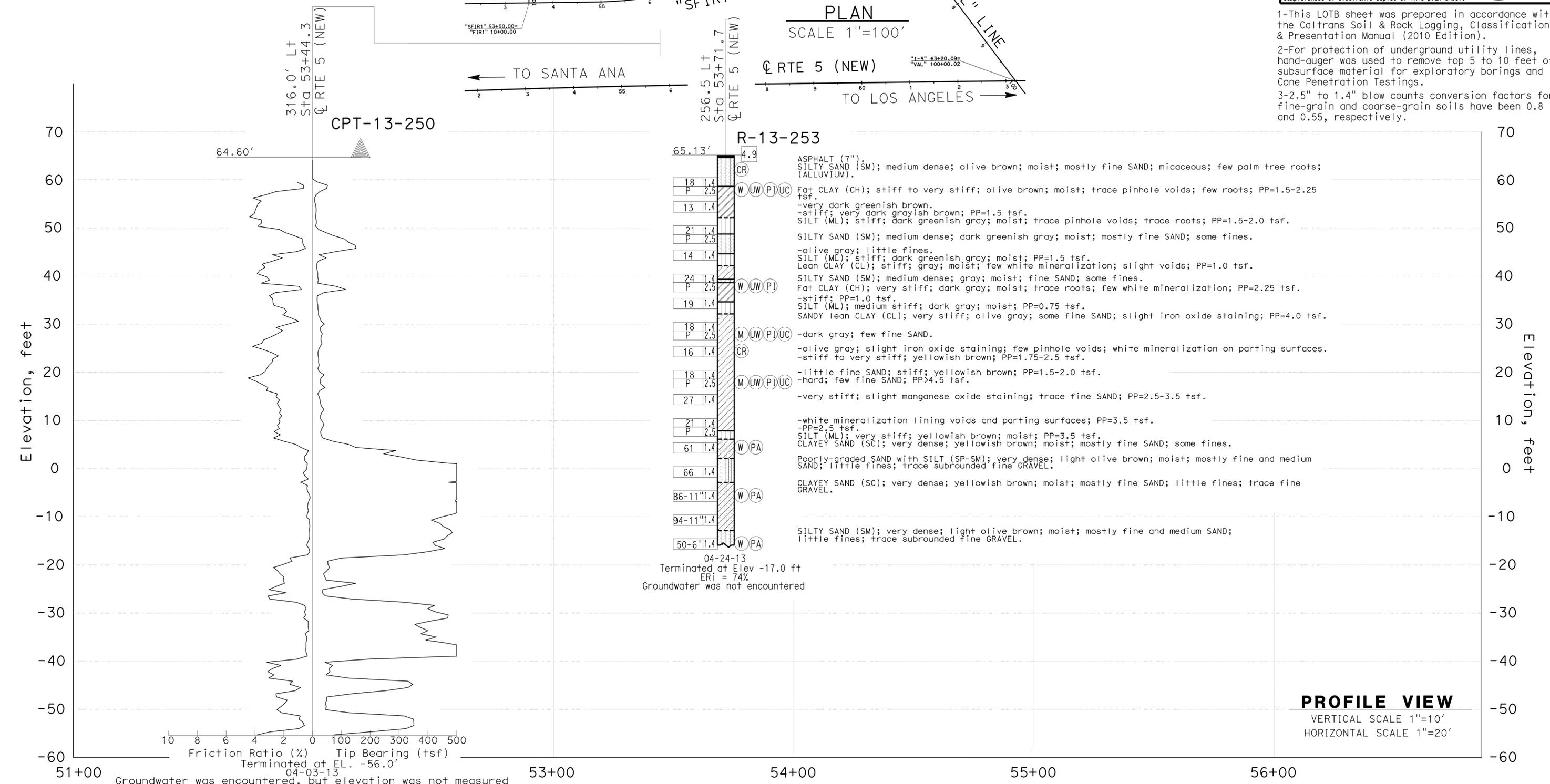
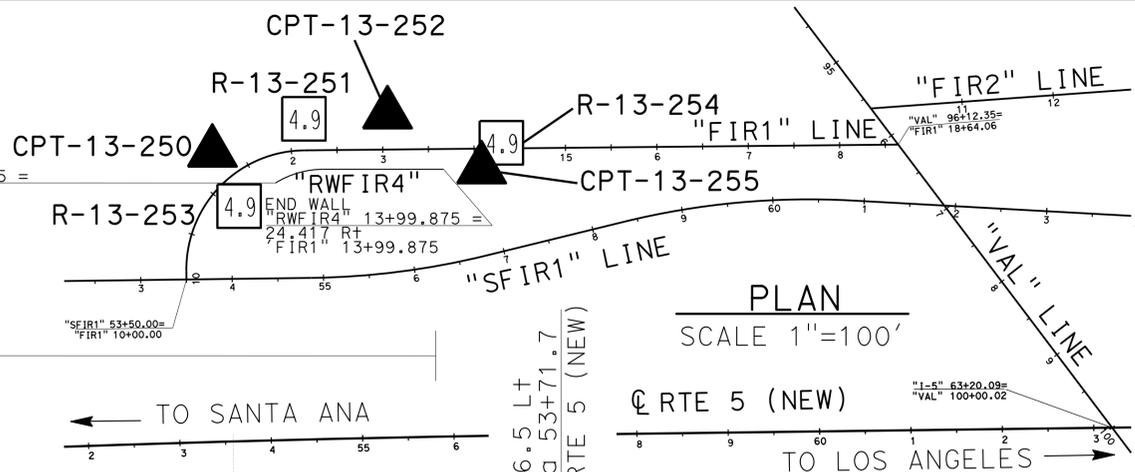
**ELEVATION - BARRIER MOTIF**  
1" = 1'-0"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY H. Javier Chavez	CHECKED Isaac Tasabia	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 11</b>	BRIDGE NO.	<b>RETAINING WALL RWFIR4</b> <b>ARCHITECTURAL TREATMENT DETAILS</b>		
	DETAILS	BY Pauline Tong	CHECKED R. Wilson			53E0285			
	QUANTITIES	BY Phu Nguyen	CHECKED D. Pato			POST MILE 1.15			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES			
				0	1	2	3	REVISION DATES: 3-18-15, 4-9-15, 4-28-15, 9-11-15	SHEET 4 OF 7

**BENCH MARK**

GPS 0888  
 ELEVATION 63.317 FT  
 FOUND 2-1/2 INCH CADT DISK IN CONCRETE CURB, FLUSH,  
 STAMPED "LA51.2 1995"  
 THE MARK IS LOCATED 0.1 MI NORTHERLY OF THE VALLEY  
 VIEW OVERCROSSING OF THE 5 (SANTA ANA) FWY ON THE  
 SOUTHWESTERLY CURB OF FIRESTONE BLVD AT THE FIRST  
 DRIVEWAY CUT NORTH OF THE FWY.  
 NORTHING 542603.017  
 EASTING 1997274.832  
 DATUM NAVD88

BEGIN WALL  
 "RWFIR4" 11+75.875 =  
 35.778 RT  
 "FIR1" 11+64.9185



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1534	1622

05/20/15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705

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MICHAEL G. SMITH  
 No. 2229  
 Exp. 03/31/16  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 GEOTECHNICAL

1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.5" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.

F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH	D.ORRIS/T.PANAH FIELD INVESTIGATION BY: DATE: 04/03/13 - 04/24/13	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. 53E0285 POST MILES 1.15	RETAINING WALL RWFIR4 LOG OF TEST BORINGS SHEET 1 OF 3
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	3658 CONTRACT NO.: 07-2159U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES
				REVISION DATES	SHEET	OF
				5/12/15	5	7

FILE => rwfir4-w-lotb1.dgn

FOR PLAN VIEW, SEE  
"LOG OF TEST BORINGS" SHEET 1 OF 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1535	1622

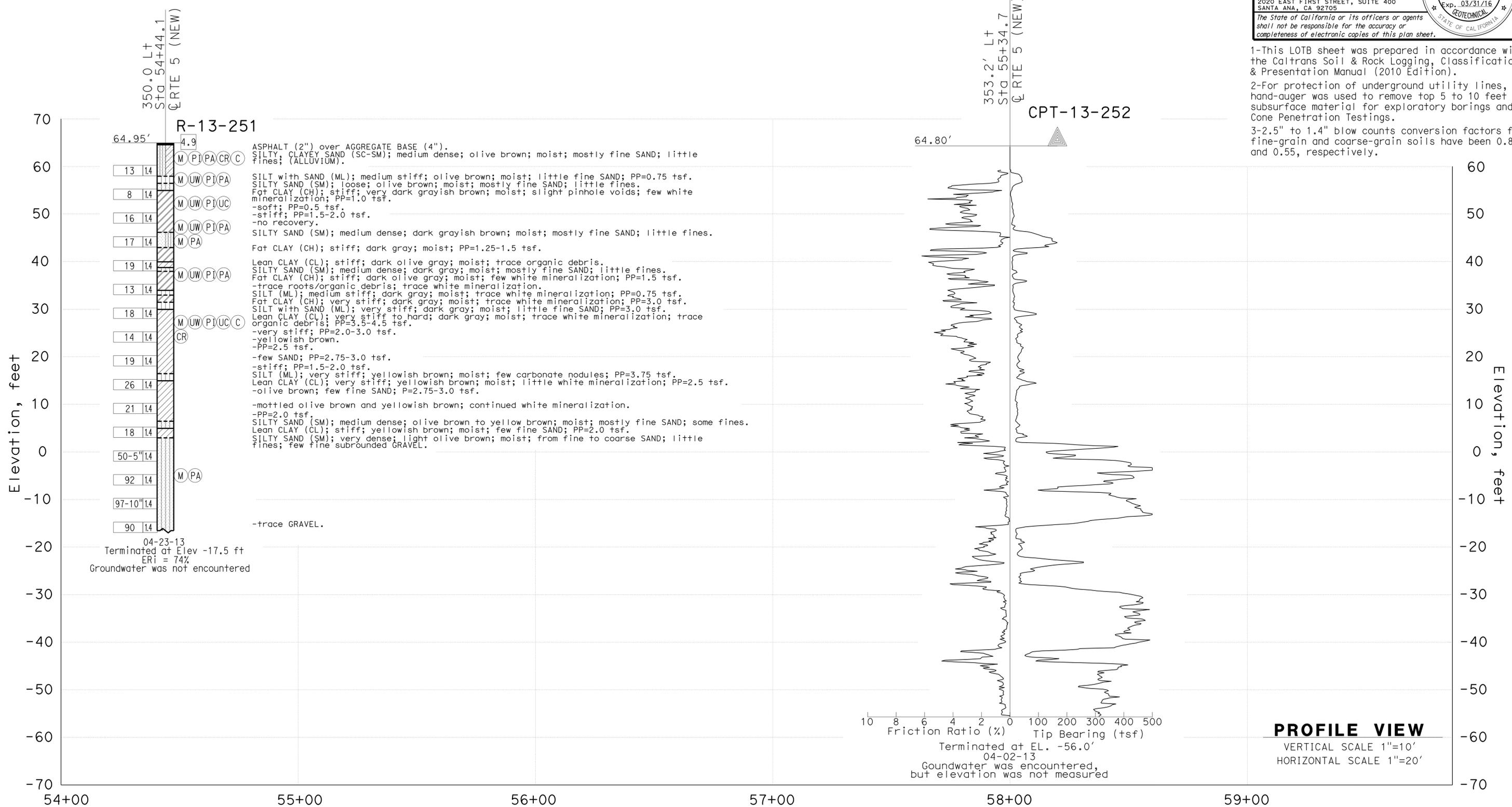
<i>Michael G. Smith</i>	05/20/15
REGISTERED CIVIL ENGINEER	DATE
1-25-16	
PLANS APPROVAL DATE	

URS CORPORATION	2020 EAST FIRST STREET, SUITE 400	SANTA ANA, CA 92705
No. 2229		
Exp. 03/31/16		
STATE OF CALIFORNIA		

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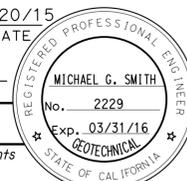
1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
3-2.5" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.



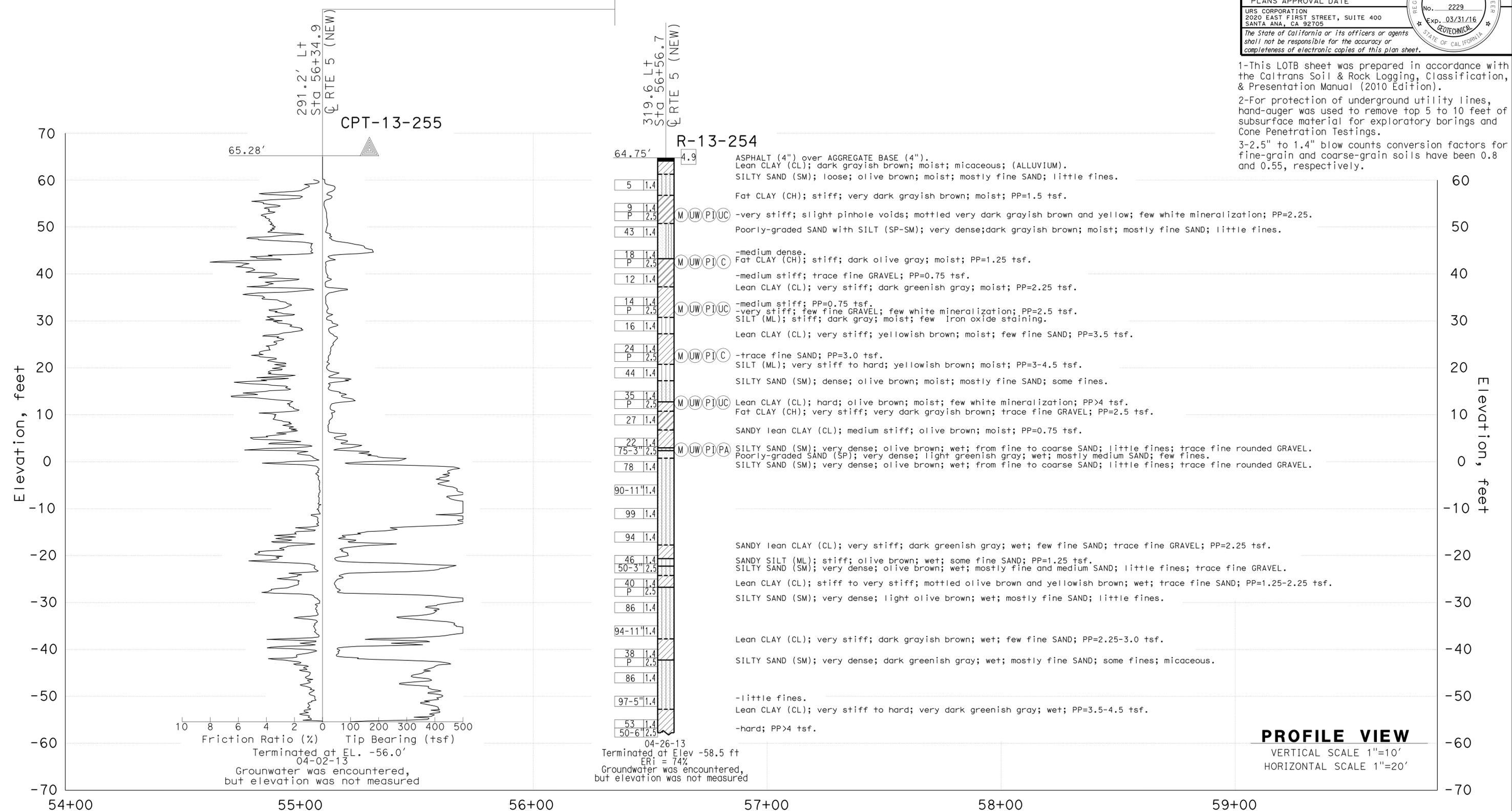
F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH	D.ORRIS/T.PANAH FIELD INVESTIGATION BY: DATE: 04/02/13 - 04/23/13	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. 53E0285 POST MILES 1.15	RETAINING WALL RWFIR4 LOG OF TEST BORINGS SHEET 2 OF 3
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	3658 CONTRACT NO.: 07-2159U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES
				REVISION DATES	SHEET	OF
				5/12/15	6	7

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:35

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1536	1622


 05/20/15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
 URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705  
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FOR PLAN VIEW, SEE  
 "LOG OF TEST BORINGS" SHEET 1 OF 3



1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.5" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.

F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH	D.ORRIS/T.PANAH FIELD INVESTIGATION BY: DATE: 04/02/13 - 04/26/13	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. 53E0285 POST MILES 1.15	<b>RETAINING WALL RWFIR4</b> <b>LOG OF TEST BORINGS SHEET 3 OF 3</b>
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 3658 07150001601	CONTRACT NO.: 07-2159U4	REVISION DATES 5/12/15

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:35

**STANDARD PLANS**  
Dated May 2010

**INDEX TO PLANS**

QUANTITIES

RSP	A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP	A10B	ABBREVIATIONS (SHEET 2 OF 2)
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	A10D	LINE AND SYMBOLS (SHEET 2 OF 3)
	A10E	LINE AND SYMBOLS (SHEET 3 OF 3)
RSP	A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP	A10G	LEGEND - SOIL (SHEET 2 OF 2)
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B2-5		PILE DETAILS - CLASS 90 AND CLASS 140
RSP	B3-1A	RETAINING WALL TYPE 1 (CASE 1)
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RSP	B11-54	CONCRETE BARRIER TYPE 26

SHEET NO.	TITLE
1	GENERAL PLAN
2	PILE LAYOUT
3	RETAINING WALL DETAILS
4	ARCHITECTURAL TREATMENT DETAILS
5	LOG OF TEST BORINGS SHEET 1 OF 3
6	LOG OF TEST BORINGS SHEET 2 OF 3
7	LOG OF TEST BORINGS SHEET 3 OF 3

STRUCTURE EXCAVATION (CONTAMINATED MATERIALS)	31	CY
STRUCTURE EXCAVATION (RETAINING WALL)	955	CY
STRUCTURE BACKFILL (RETAINING WALL)	695	CY
FURNISH PILING (CLASS 90) (ALTERNATIVE W)	2,492	LF
DRIVE PILE (CLASS 90) (ALTERNATIVE W)	54	EA
STRUCTURAL CONCRETE, RETAINING WALL	261	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	2,065	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	41,700	LB
TUBULAR HANDRAILING (MODIFIED)	229	LF
CONCRETE BARRIER (TYPE 26 MODIFIED)	229	LF

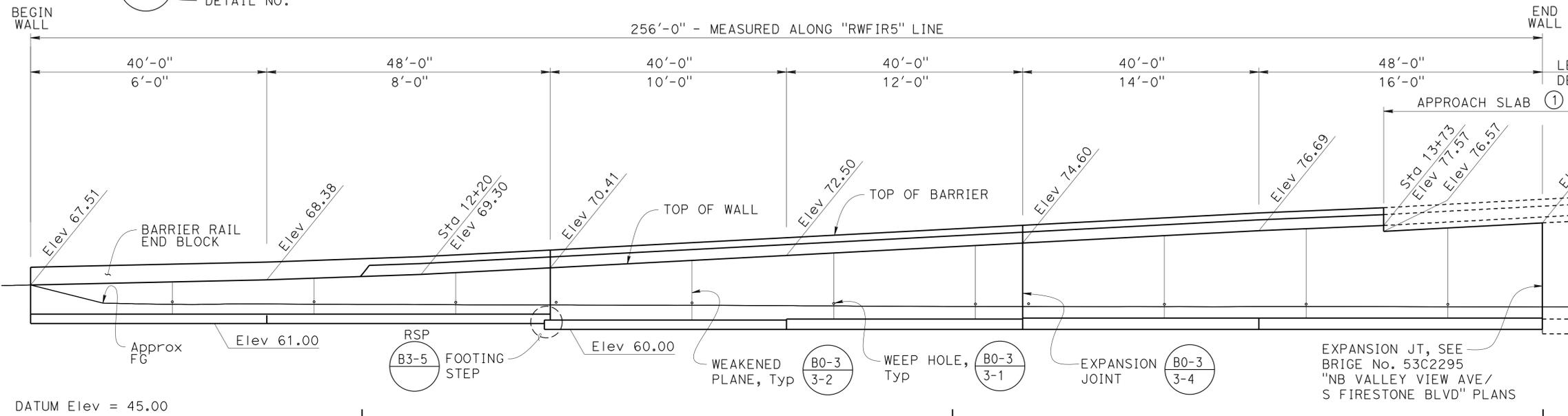
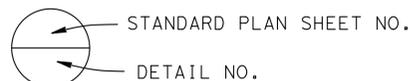
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1537	1622

Phu v. Nguyen  
REGISTERED CIVIL ENGINEER  
1-26-15 DATE

1-25-16  
PLANS APPROVAL DATE

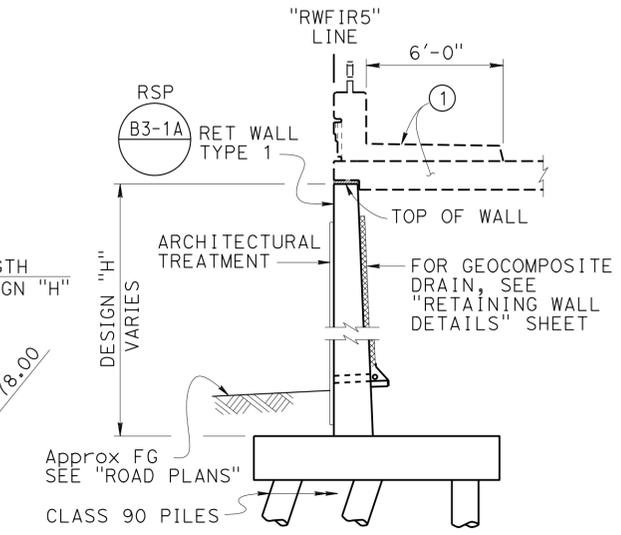
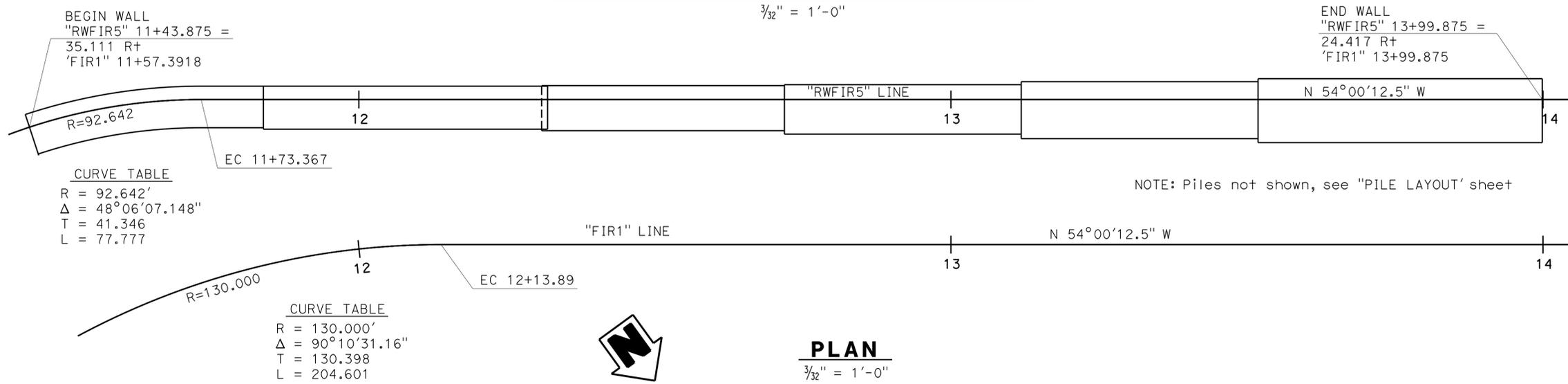
Phu v. Nguyen  
No. 60358  
Exp. 6/30/16  
CIVIL  
STATE OF CALIFORNIA

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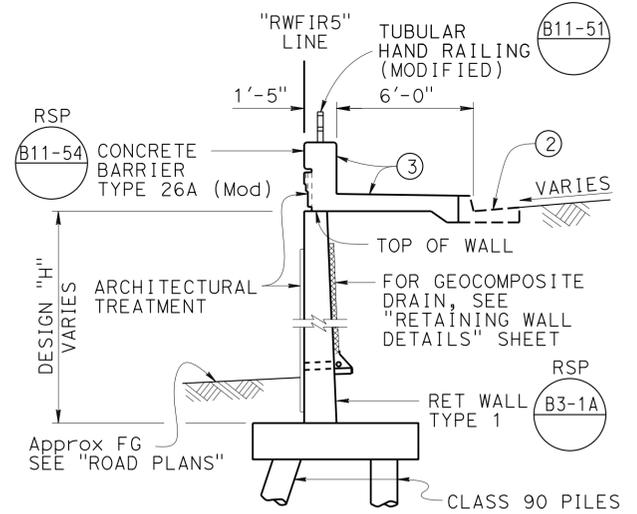
**MIRRORED DEVELOPED ELEVATION**

3/32" = 1'-0"



**TYPICAL SECTION AT STRUCTURE APPROACH**

1/4" = 1'-0"



**TYPICAL SECTION**

1/4" = 1'-0"

- NOTES:
- Concrete Barrier Type 26 (Mod) and Approach Slab, see Bridge No. 53c2295, "NB VALLEY VIEW AVE/S FIRESTONE BLVD"
  - Curb Type A2-8, see "ROAD PLANS"
  - Match face to Concrete Barrier Type 26 (Mod) at Structure Approach

DESIGN	BY Phu Nguyen	CHECKED R. Wilson	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 53E0286	<b>RETAINING WALL RWFI5</b>	
DETAILS	BY Pauline Tong	CHECKED R. Wilson	LAYOUT	BY Phu Nguyen	DEPARTMENT OF TRANSPORTATION	STRUCTURE DESIGN	POST MILE 1.15	<b>GENERAL PLAN</b>	
QUANTITIES	BY Phu Nguyen	CHECKED D. Alvarez	SPECIFICATIONS	BY Xiahong Li	PROJECT NUMBER & PHASE: 0715000160-1	DESIGN BRANCH 11	CONTRACT NO.: 07-2159u4	SHEET 1 OF 7	

Ramin Rashedi 2-11-15 DESIGN ENGINEER

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3587

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 4-2-15, 4-9-15, 4-28-15, 1-26-16

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)

FILE => rwfir5-a-gp.dgn

**PILE DATA TABLE**

PILE TYPE	NOMINAL RESISTANCE (kips)		DESIGN TIP ELEVATIONS (ft)	SPECIFIED TIP ELEVATION (ft)	NOMINAL DRIVING RESISTANCE (kips)
	COMPRESSION	TENSION			
PP14x0.375	160	10	16(a) 51(b) 32(c)	16	160

- NOTES: 1. Design tip elevations are controlled by: (a) Compression (b) Tension, (c) Settlement  
 2. The specified tip elevation for driven piles shall not be raised above the design tip elevations for tension load and tolerable settlement

NOTE: All piles are Class 90 Alternative "W" B2-5

LEGEND:

- Indicates vertical pile
- Indicates 1:3 battered pile

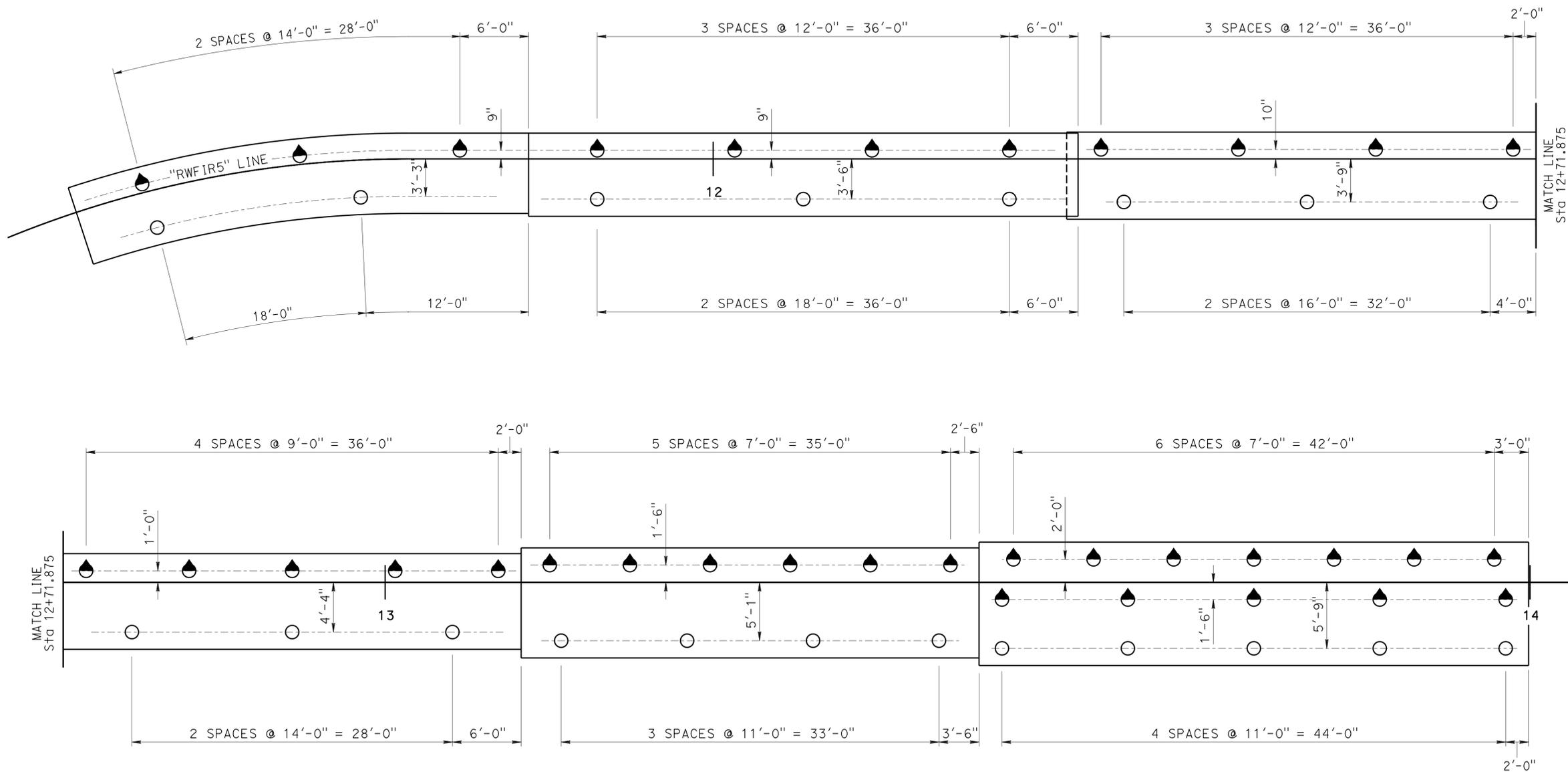
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Orca	5	0.0/1.5, 44.3/44.4	1538	1622

*Phu V. Nguyen*  
 REGISTERED CIVIL ENGINEER  
 DATE: 3-18-15

1-25-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 No. 60358  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA

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**PLAN**

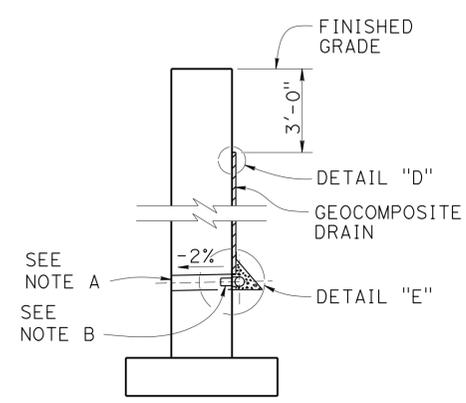
3/16" = 1'-0"

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">DESIGN</td> <td style="width: 30%;">BY Phu Nguyen</td> <td style="width: 30%;">CHECKED R. Wilson</td> </tr> <tr> <td>DETAILS</td> <td>BY Pauline Tong</td> <td>CHECKED R. Wilson</td> </tr> <tr> <td>QUANTITIES</td> <td>BY Phu Nguyen</td> <td>CHECKED D. Alvarez</td> </tr> </table>	DESIGN	BY Phu Nguyen	CHECKED R. Wilson	DETAILS	BY Pauline Tong	CHECKED R. Wilson	QUANTITIES	BY Phu Nguyen	CHECKED D. Alvarez	<p><b>STATE OF CALIFORNIA</b>              DEPARTMENT OF TRANSPORTATION</p>	<p><b>DIVISION OF ENGINEERING SERVICES</b>              STRUCTURE DESIGN  <b>DESIGN BRANCH 11</b></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>BRIDGE NO.</td> <td>53E0286</td> </tr> <tr> <td>POST MILE</td> <td>1.15</td> </tr> </table>	BRIDGE NO.	53E0286	POST MILE	1.15	<p><b>RETAINING WALL RWFI5</b>  <b>PILE LAYOUT</b></p>
DESIGN	BY Phu Nguyen	CHECKED R. Wilson															
DETAILS	BY Pauline Tong	CHECKED R. Wilson															
QUANTITIES	BY Phu Nguyen	CHECKED D. Alvarez															
BRIDGE NO.	53E0286																
POST MILE	1.15																
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">0</td> <td style="width: 10%;">1</td> <td style="width: 10%;">2</td> <td style="width: 10%;">3</td> </tr> </table>	0	1	2	3	UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES									
0	1	2	3														
				REVISION DATES	SHEET 2 OF 7												

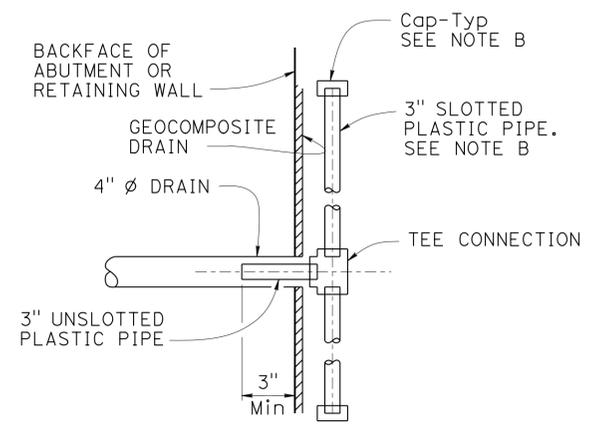
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1539	1622

3-18-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
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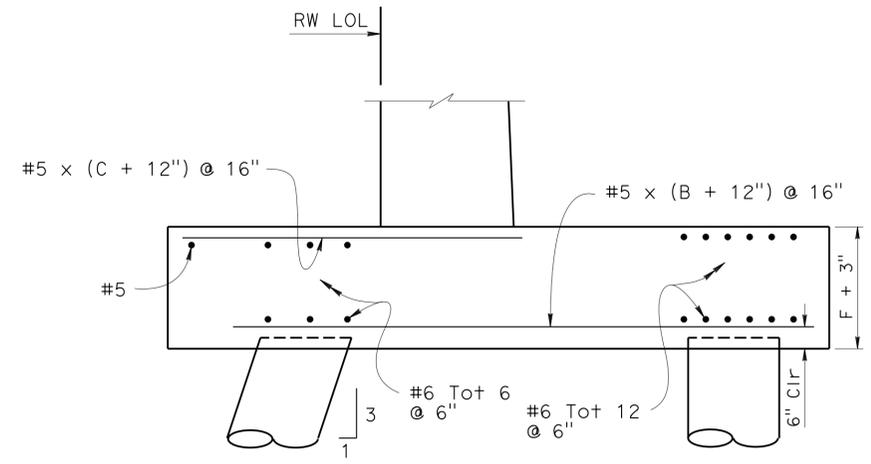
REGISTERED PROFESSIONAL ENGINEER  
 Phu V. Nguyen  
 No. 60358  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA



**WALL SECTION**



**SECTION K-K**

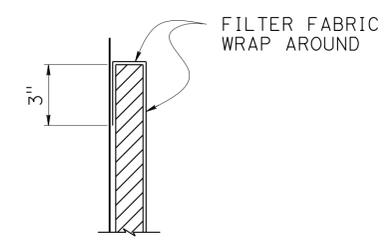


**PILE FOOTING SECTION**

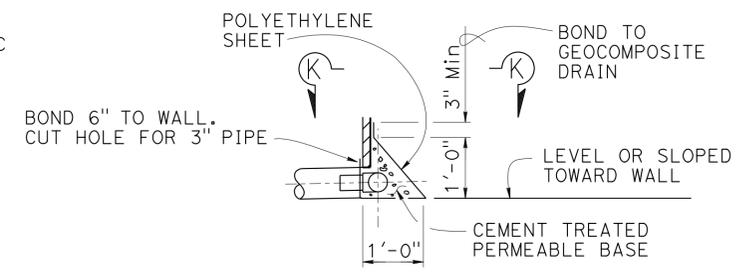
NO SCALE

NOTES:

1. Reinforcement shown is in addition to that shown in RSP B3-1A
2. All Piles not shown, see "PILE LAYOUT" sheet
3. For "F", "B" and "C" dimensions, see RSP B3-1A



**DETAIL "D"**



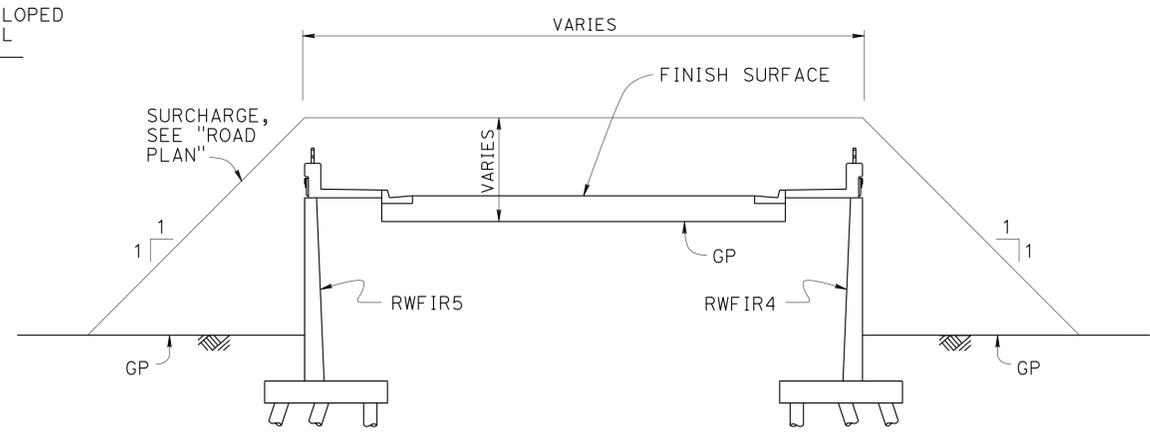
**DETAIL "E"**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**

NO SCALE

NOTES (GEOCOMPOSITE DRAIN):

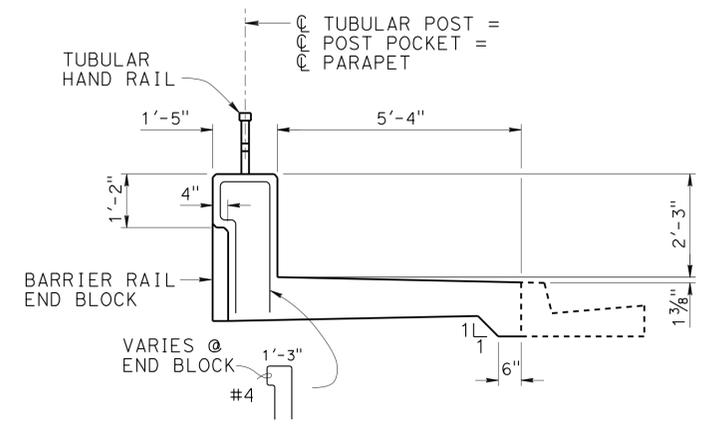
- A. 4" Ø drains at intermediate sag points and at 25'-0" center to center. For walls adjacent to sidewalks or curbs, provide 4" Ø cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3" ± above finished grade.
- B. Geocomposite drain, cement treated permeable base, and 3" Ø slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Ø drain.
- C. Connect the low end of plastic pipe to the main outlet pipe as applicable.



**EMBANKMENT SURCHARGE**

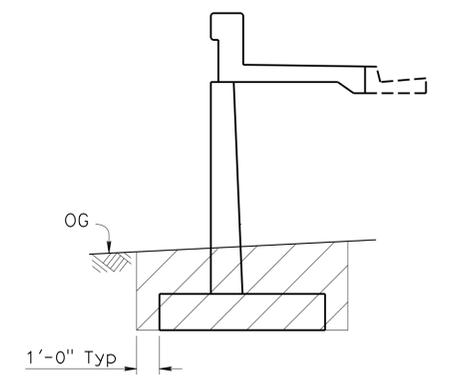
NO SCALE

NOTE: For excavation limits, see "BRIDGE EMBANKMENT SURCHARGE" on "STANDARD PLANS A62B" sheet



**CONCRETE BARRIER TYPE 26A MOD**

NOTE: For details and reinforcement not shown see RSP B11-54



FROM STATION 12+63.23 TO STATION 12+84.38

**CONTAMINATED SOIL STRUCTURE EXCAVATION**

NO SCALE

LIMIT OF STRUCTURE EXCAVATION (CONTAMINATED MATERIALS)

DESIGN	BY Phu Nguyen	CHECKED R. Wilson
DETAILS	BY Pauline Tong	CHECKED R. Wilson
QUANTITIES	BY Phu Nguyen	CHECKED D. Alvarez

<b>STATE OF CALIFORNIA</b>	
DEPARTMENT OF TRANSPORTATION	

<b>DIVISION OF ENGINEERING SERVICES</b>	
STRUCTURE DESIGN	
<b>DESIGN BRANCH 11</b>	

BRIDGE NO.	53E0286
POST MILE	1.15

<b>RETAINING WALL RW FIR5</b>	
<b>RETAINING WALL DETAILS</b>	

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



UNIT: 3587  
PROJECT NUMBER & PHASE: 0715000160-1

CONTRACT NO.: 07-2159u4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

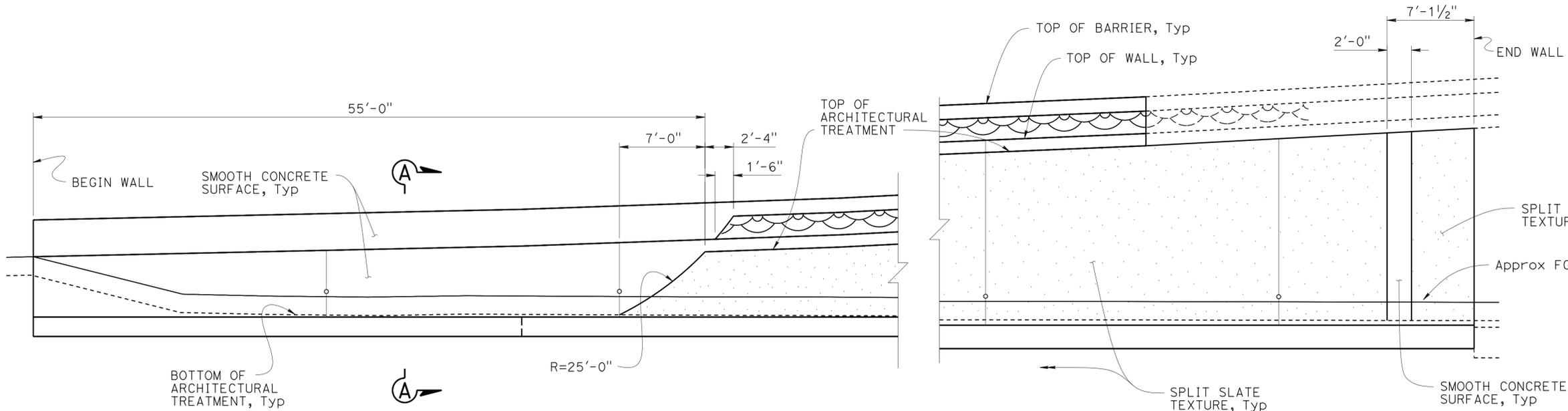
REVISION DATES	SHEET	OF
3-28-13 9-28-13 3-18-15 5-21-15	3	7

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1540	1622

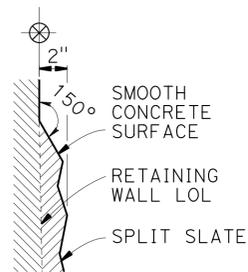
3-18-15 DATE  
 REGISTERED CIVIL ENGINEER  
 Phu V. Nguyen  
 No. 60358  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA

1-25-16  
 PLANS APPROVAL DATE

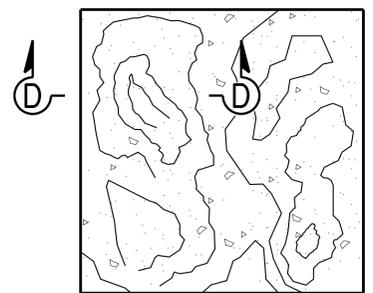
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**MIRRORED DEVELOPED ELEVATION**  
1" = 5'-0"



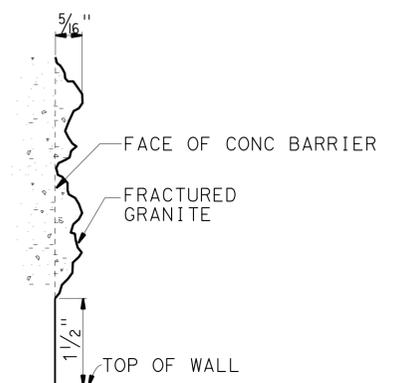
**DETAIL A**  
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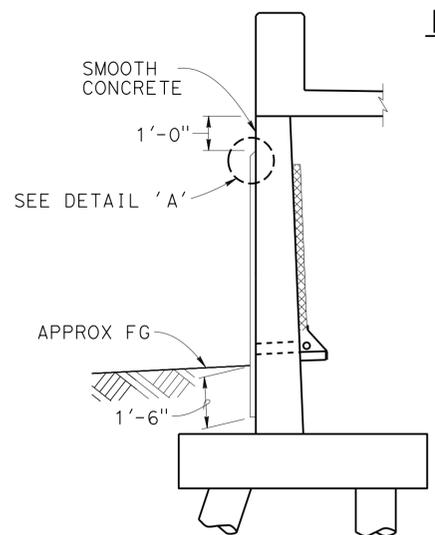
**SPLIT SLATE TEXTURE**  
NO SCALE



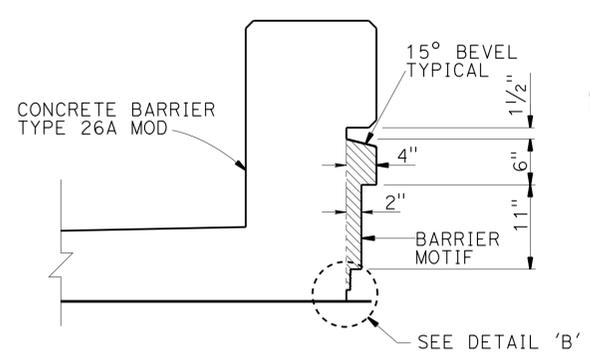
**SECTION D-D**  
NO SCALE



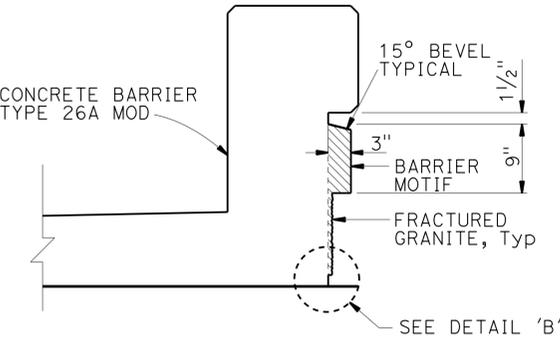
**DETAIL B**  
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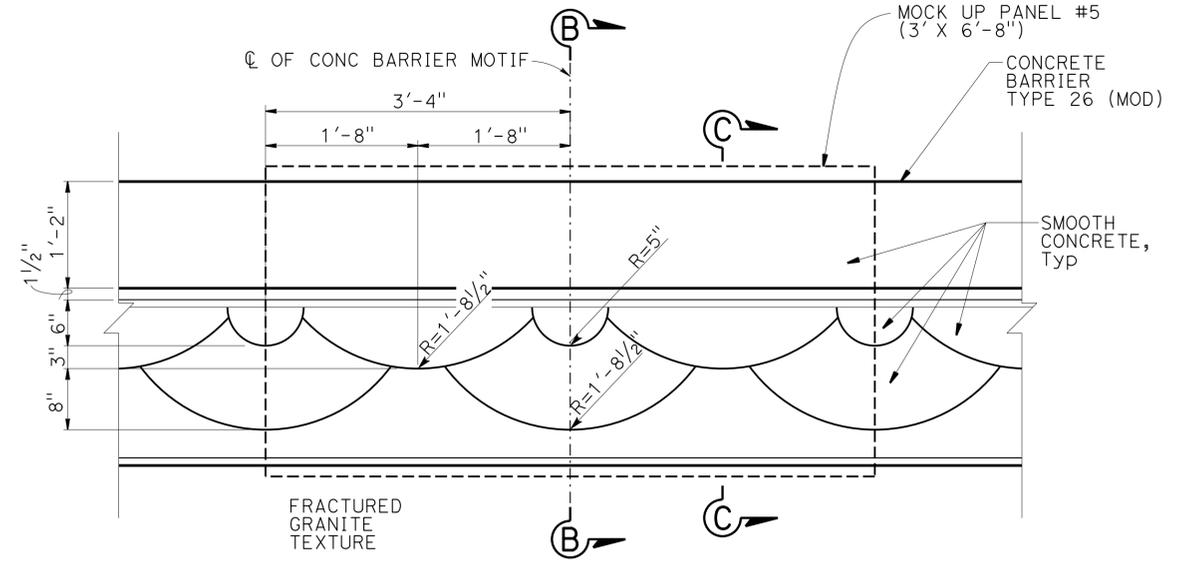
**SECTION A-A**  
3/8" = 1'-0"



**SECTION B-B**  
1" = 1'-0"



**SECTION C-C**  
1" = 1'-0"



**ELEVATION - BARRIER MOTIF**  
1" = 1'-0"

DESIGN	BY H. Javier Chavez	CHECKED Issac Tasabia
DETAILS	BY Pauline Tong	CHECKED R. Wilson
QUANTITIES	BY Phu Nguyen	CHECKED D. Alvarez

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

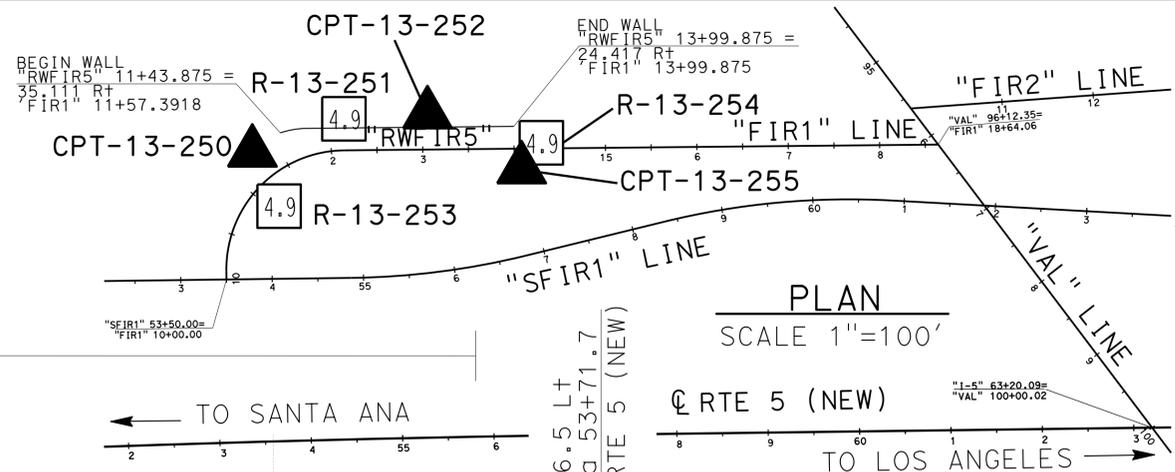
BRIDGE NO.	53E0286
POST MILE	1.15

**RETAINING WALL RWfir5**  
**ARCHITECTURAL TREATMENT DETAILS**

REVISION DATES	SHEET	OF
3-28-13 4-9-13 4-28-13 9-11-13	4	7

**BENCH MARK**

GPS 0888  
 ELEVATION 63.317 FT  
 FOUND 2-1/2 INCH CADT DISK IN CONCRETE CURB, FLUSH,  
 STAMPED "LA51.2 1995"  
 THE MARK IS LOCATED 0.1 MI NORTHERLY OF THE VALLEY  
 VIEW OVERCROSSING OF THE 5 (SANTA ANA) FWY ON THE  
 SOUTHWESTERLY CURB OF FIRESTONE BLVD AT THE FIRST  
 DRIVEWAY CUT NORTH OF THE Fwy.  
 NORTHING 542603.017  
 EASTING 1997274.832  
 DATUM NAVD88



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1541	1622

05/20/15  
 REGISTERED CIVIL ENGINEER DATE

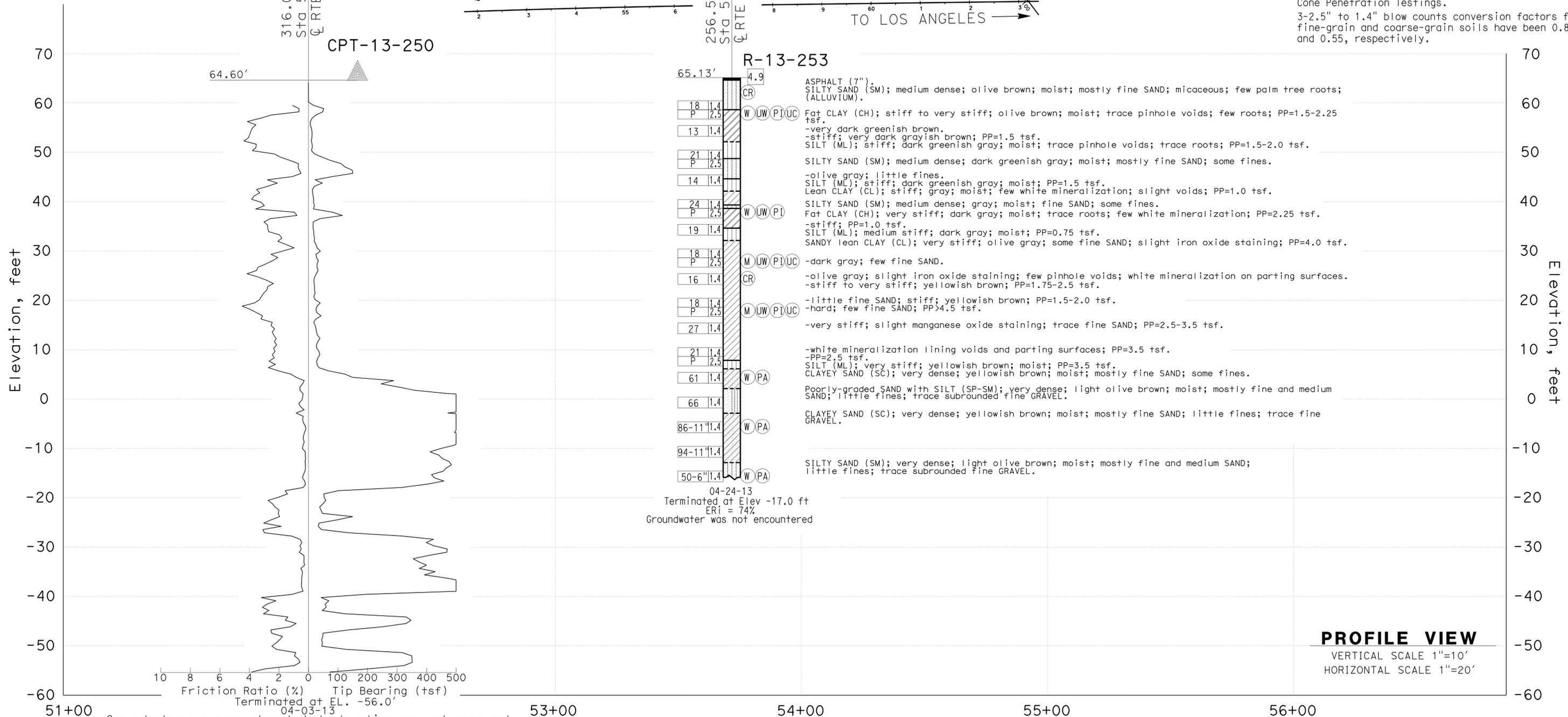
1-25-16  
 PLANS APPROVAL DATE

URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705

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MICHAEL G. SMITH  
 No. 2229  
 Exp. 03/31/16  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 GEOTECHNICAL

1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.5" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.



F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH	D.ORRIS/T.PANAH FIELD INVESTIGATION BY: DATE: 04/03/13 - 04/24/13	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. 53E0286 POST MILES 1.15	<b>RETAINING WALL RWFIR5</b> <b>LOG OF TEST BORINGS SHEET 1 OF 3</b>
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	3658 CONTRACT NO.: 07-2159U4	REVISION DATES 5/12/15

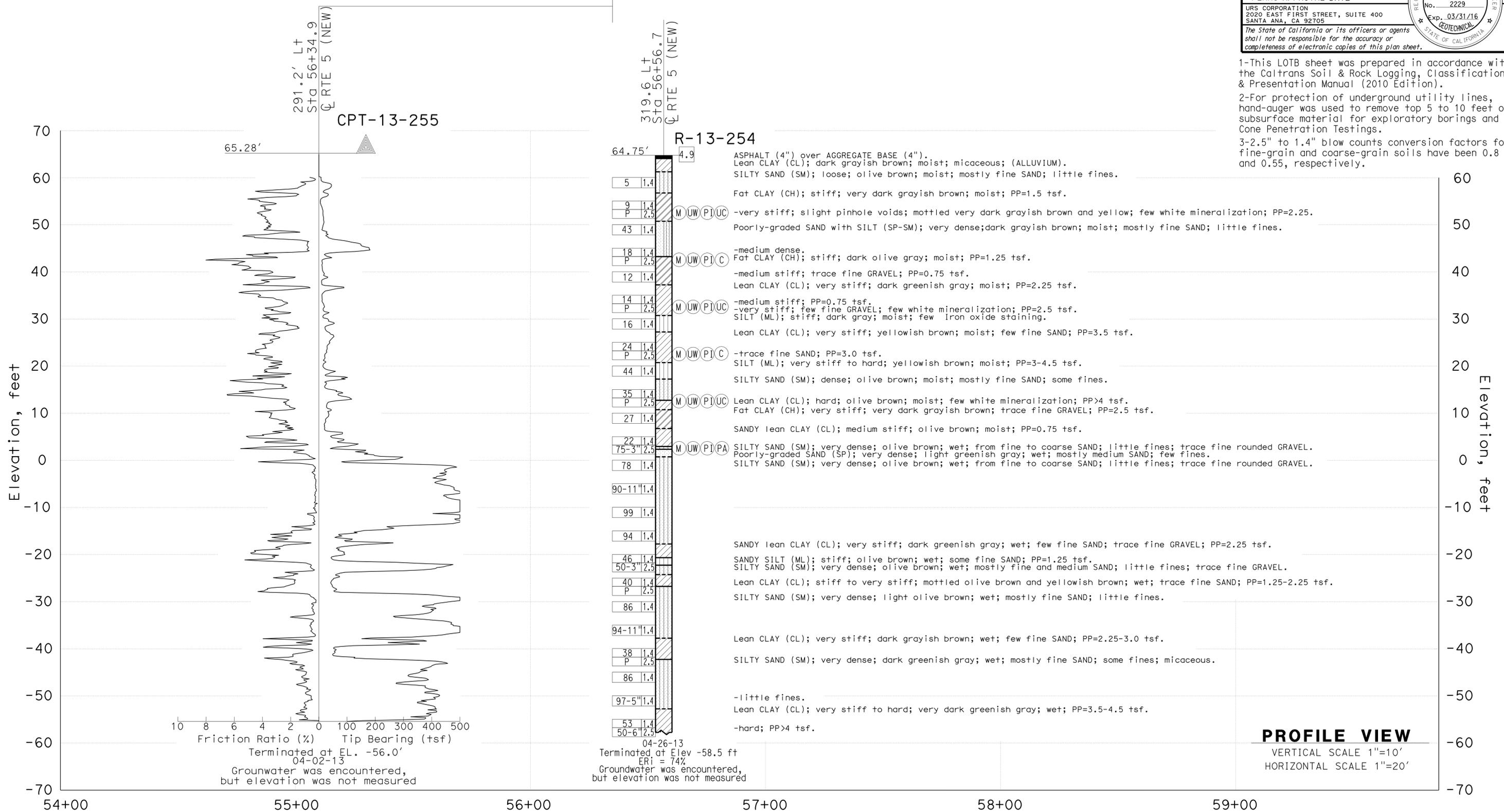
DISREGARD PRINTS BEARING EARLIER REVISION DATES

FILE => rwfir5-w-lotb1.dgn



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1543	1622
			05/20/15		
REGISTERED CIVIL ENGINEER			DATE		
1-25-16			PLANS APPROVAL DATE		
URS CORPORATION			2020 EAST FIRST STREET, SUITE 400 SANTA ANA, CA 92705		
MICHAEL G. SMITH			No. 2229 Exp. 03/31/16 STATE OF CALIFORNIA		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

FOR PLAN VIEW, SEE  
"LOG OF TEST BORINGS" SHEET 1 OF 3



1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
3-2.5" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.

**PROFILE VIEW**  
VERTICAL SCALE 1"=10'  
HORIZONTAL SCALE 1"=20'

F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH	D.ORRIS/T.PANAH FIELD INVESTIGATION BY: DATE: 04/02/13 - 04/26/13	BRIDGE NO. 53E0286	<b>RETAINING WALL RWFIR5</b>	
05/20/15 SIGN OFF DATE	CHECKED BY E.PINTARD		POST MILES 1.15	<b>LOG OF TEST BORINGS SHEET 3 OF 3</b>	
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			UNIT: PROJECT NUMBER & PHASE: 3658 07150001601	CONTRACT NO.: 07-2159U4	REVISION DATES 5/12/15
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			0 1 2 3	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 7

**STANDARD PLANS**  
Dated May 2010

**INDEX TO PLANS**

RSP	A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP	A10B	ABBREVIATIONS (SHEET 2 OF 2)
	A10C	LINE AND SYMBOLS (SHEET 1 OF 3)
	A10D	LINE AND SYMBOLS (SHEET 2 OF 3)
	A10E	LINE AND SYMBOLS (SHEET 3 OF 3)
RSP	A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP	A10G	LEGEND - SOIL (SHEET 2 OF 2)
A62B		LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE SURCHARGE AND WALL
B0-3		BRIDGE DETAILS
B2-5		PILE DETAILS - CLASS 90 AND CLASS 140
RSP	B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP	B3-5	RETAINING WALL DETAILS NO. 1
B11-51		TUBULAR HAND RAILING
RSP	B11-54	CONCRETE BARRIER TYPE 26

SHEET NO.	TITLE
1	GENERAL PLAN
2	FOUNDATION PLAN
3	PILE LAYOUT
4	RETAINING WALL DETAILS
5	ARCHITECTURAL TREATMENT DETAILS
6	LOG OF TEST BORINGS SHEET 1 OF 3
7	LOG OF TEST BORINGS SHEET 2 OF 3
8	LOG OF TEST BORINGS SHEET 3 OF 3

QUANTITIES		
STRUCTURE EXCAVATION (RETAINING WALL)	2,035	CY
STRUCTURE BACKFILL (RETAINING WALL)	1,508	CY
FURNISH PILING (CLASS 90)	5,717	LF
(ALTERNATIVE W)		
DRIVE PILE (CLASS 90)	114	EA
(ALTERNATIVE W)		
STRUCTURAL CONCRETE, RETAINING WALL	527	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	4,110	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	88,400	LB
TUBULAR HANDRAILING (MODIFIED)	406	LF
CONCRETE BARRIER (TYPE 26 MODIFIED)	406	LF

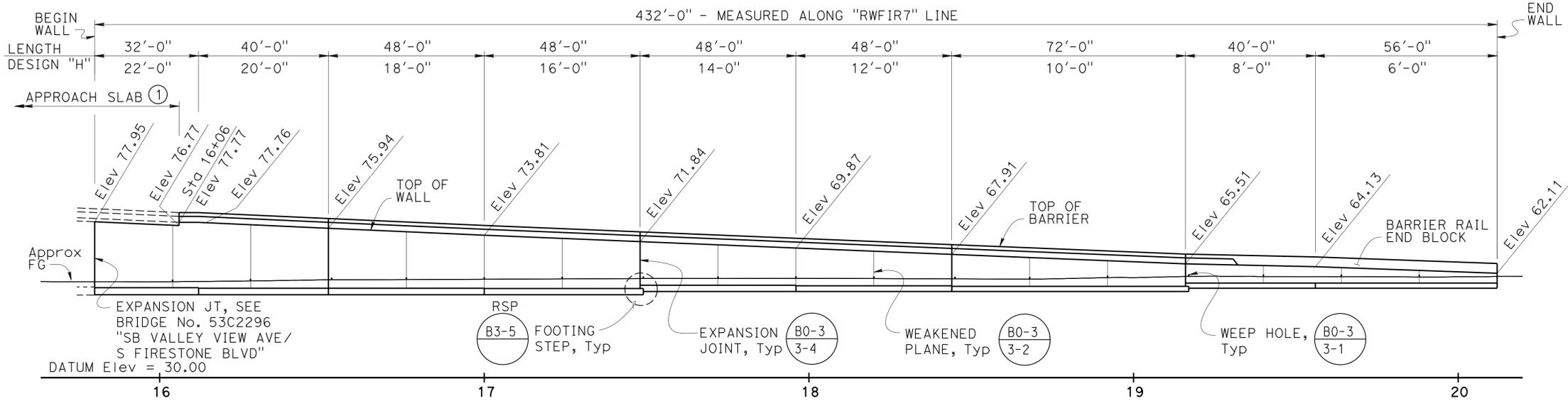
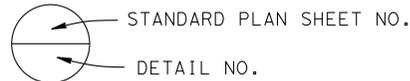
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1544	1622

Phu V. Nguyen  
REGISTERED CIVIL ENGINEER  
1-26-15 DATE

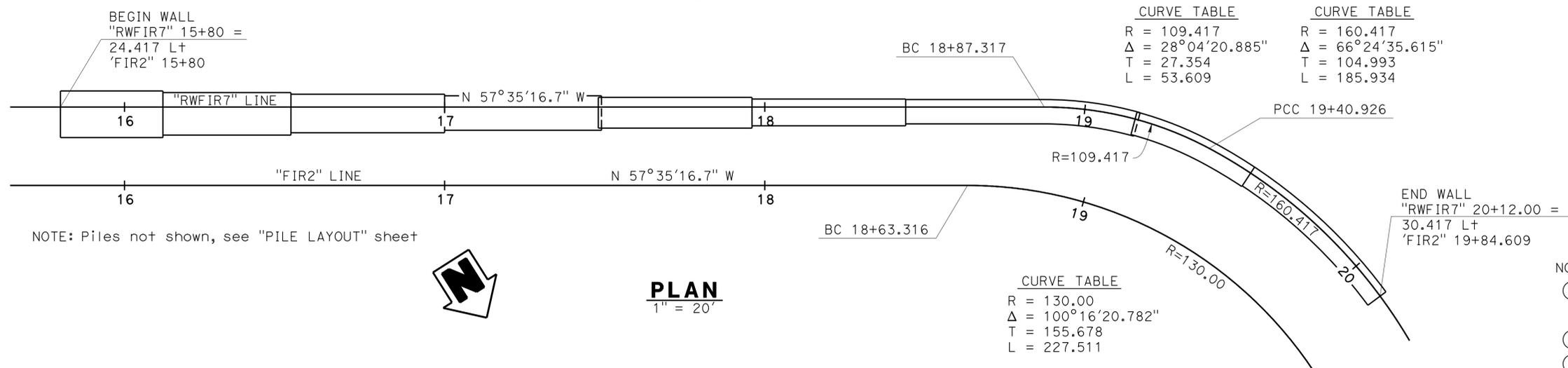
1-25-16  
PLANS APPROVAL DATE

Phu V. Nguyen  
No. 60358  
Exp. 6/30/16  
CIVIL

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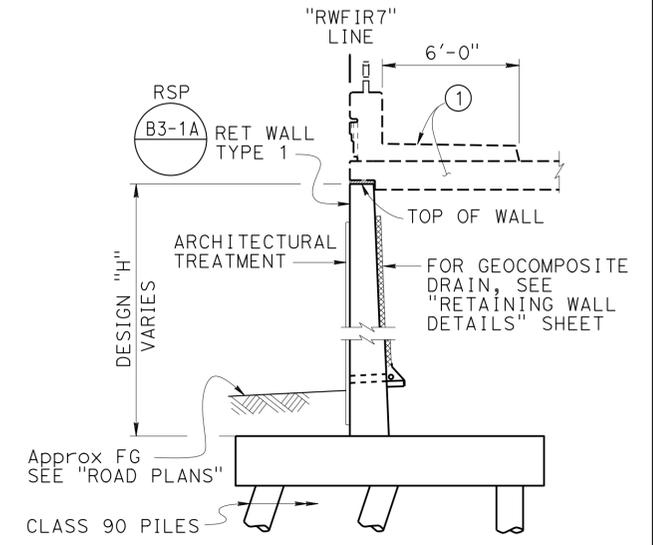
**MIRRORED DEVELOPED ELEVATION**  
1" = 20'



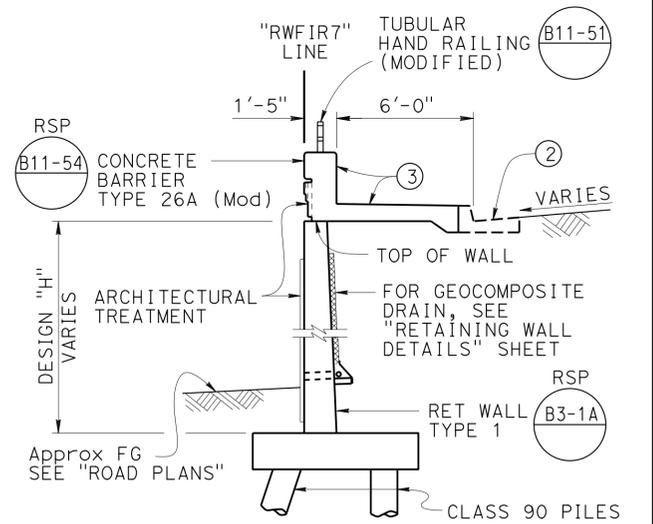
**PLAN**  
1" = 20'

CURVE TABLE	
R = 109.417	R = 160.417
Δ = 28°04'20.885"	Δ = 66°24'35.615"
T = 27.354	T = 104.993
L = 53.609	L = 185.934

CURVE TABLE	
R = 130.00	
Δ = 100°16'20.782"	
T = 155.678	
L = 227.511	



**TYPICAL SECTION AT STRUCTURE APPROACH**  
1/4" = 1'-0"



**TYPICAL SECTION**  
1/4" = 1'-0"

- NOTES:
- Concrete Barrier Type 26 (Mod) and Approach Slab, see Bridge No. 53c2296 "SB VALLEY VIEW AVE/ S FIRESTONE BLVD"
  - Curb Type A2-8, see "ROAD PLANS"
  - Match face to Concrete Barrier Type 26 (Mod) at Structure Approach

DESIGN ENGINEER Ramin Rashedi 2-11-15	DESIGN	BY Phu Nguyen	CHECKED U. Inyang	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	53E0287	RETAINING WALL RWFIR7 GENERAL PLAN
	DETAILS	BY Pauline Tong	CHECKED U. Inyang	LAYOUT	BY Phu Nguyen			POST MILE	1.27	
	QUANTITIES	BY Phu Nguyen	CHECKED R. Melko	SPECIFICATIONS	BY Xiahong Li			PLANS AND SPECS COMPARED	Xiahong Li	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3587  
PROJECT NUMBER & PHASE: 0715000160-1  
CONTRACT NO.: 07-2159u4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

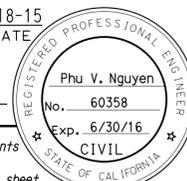
REVISION DATES	SHEET	OF
4-5-13	1	8
4-28-13		
5-21-13		
1-26-15		

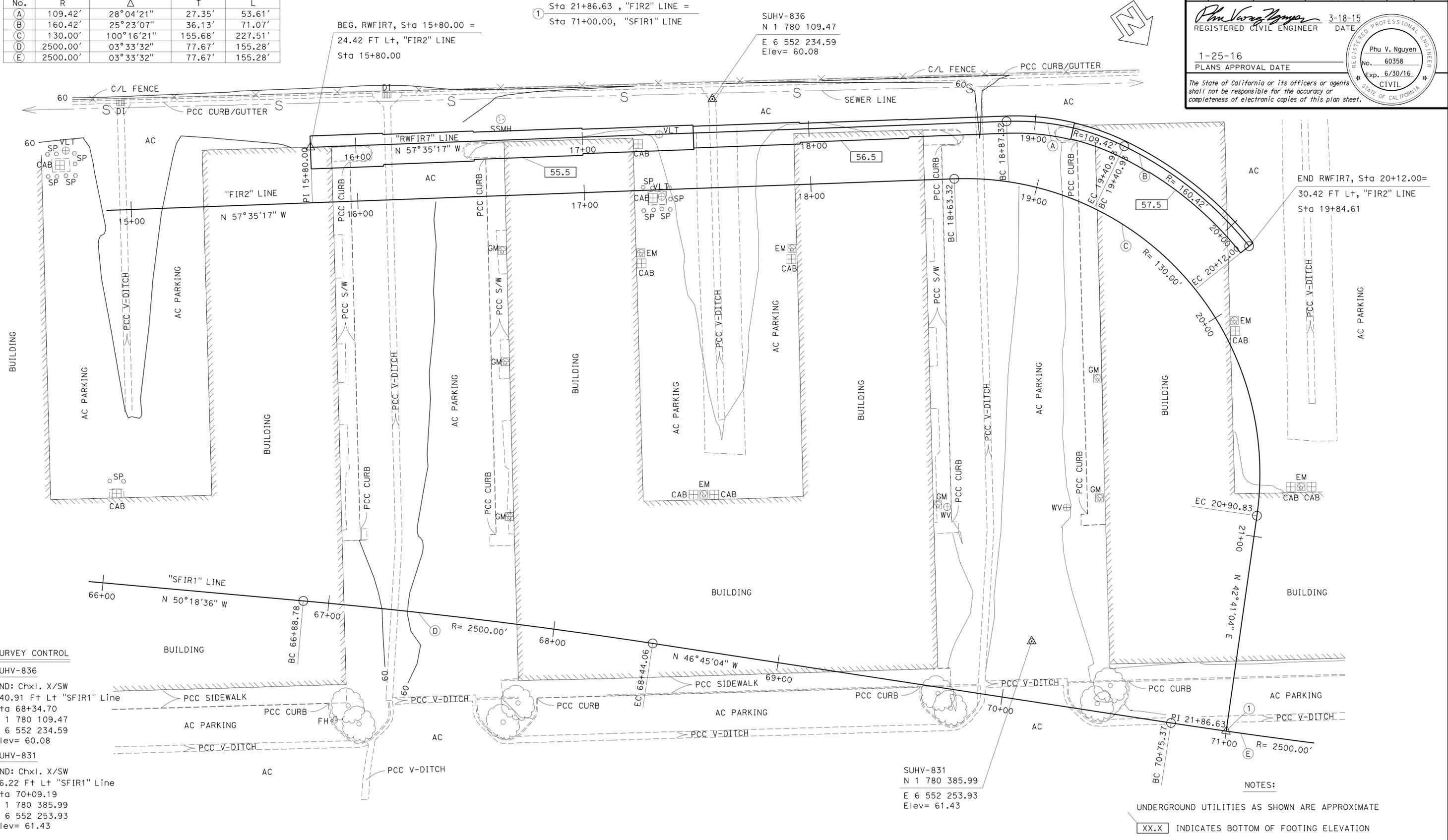
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)

FILE => rwfir7-a-gp.dgn

CURVE DATA				
No.	R	Δ	T	L
(A)	109.42'	28°04'21"	27.35'	53.61'
(B)	160.42'	25°23'07"	36.13'	71.07'
(C)	130.00'	100°16'21"	155.68'	227.51'
(D)	2500.00'	03°33'32"	77.67'	155.28'
(E)	2500.00'	03°33'32"	77.67'	155.28'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.07/1.5, 44.3/44.4	1545	1622


  
 REGISTERED CIVIL ENGINEER DATE 3-18-15  
 1-25-16  
 PLANS APPROVAL DATE  
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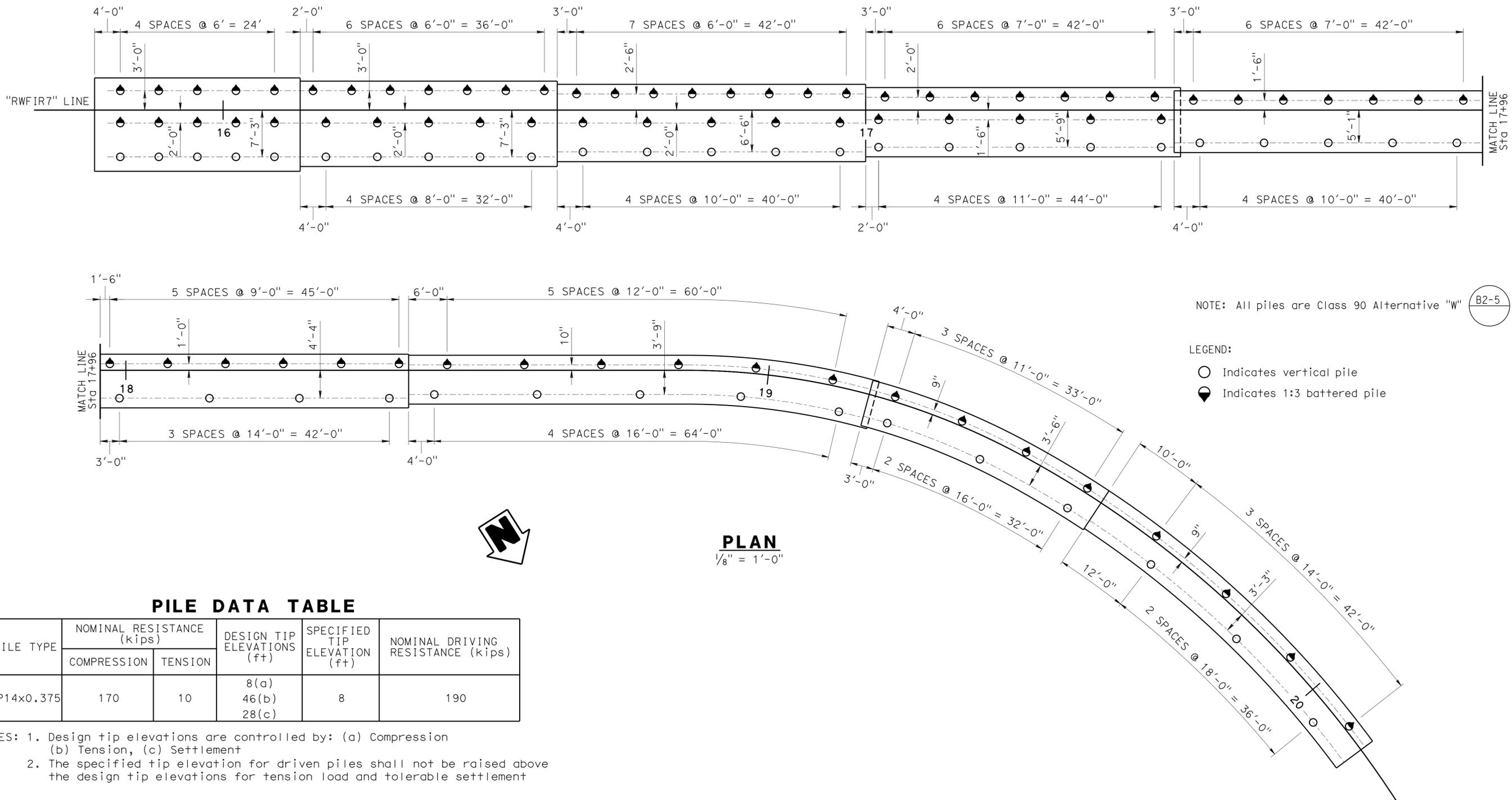
**SURVEY CONTROL**  
 SUHV-836  
 FND: Chl. X/SW  
 240.91 Ft Lt "SFIR1" Line  
 Sta 68+34.70  
 N 1 780 109.47  
 E 6 552 234.59  
 Elev= 60.08  
 SUHV-831  
 FND: Chl. X/SW  
 26.22 Ft Lt "SFIR1" Line  
 Sta 70+09.19  
 N 1 780 385.99  
 E 6 552 253.93  
 Elev= 61.43

SUHV-831  
 N 1 780 385.99  
 E 6 552 253.93  
 Elev= 61.43

**NOTES:**  
 UNDERGROUND UTILITIES AS SHOWN ARE APPROXIMATE  
 XX.X INDICATES BOTTOM OF FOOTING ELEVATION

<b>PRELIMINARY INVESTIGATION SECTION</b>				DESIGN BY Phu Nguyen	CHECKED U. Inyang	<b>STATE OF CALIFORNIA</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>DIVISION OF ENGINEERING SERVICES</b> <b>STRUCTURE DESIGN</b> <b>DESIGN BRANCH 11</b>	BRIDGE NO. 53E0287	<b>RETAINING WALL RWfir7</b> <b>FOUNDATION PLAN</b>	
SCALE: VERT. DATUM NAVD 88	PHOTOGRAMMETRY AS OF: X	DETAILS BY Pauline Tong	CHECKED U. Inyang	POST MILE 1.27						
1"=20' HORZ. DATUM NAD 83 (1991.35)	SURVEYED BY T. PHUNG 03/2013	CHECKED BY C. STEWART 03/2013	CHECKED U. Inyang							
ALIGNMENT TIES Dist. Traverse Sheet		DRAFTED BY V. PHAM 04/2013	CHECKED BY S. ALIVIO 04/2013	QUANTITIES BY Phu Nguyen	CHECKED R. Melko	UNIT: 3647	PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 04/22/13 05/24/13 5-21-13 SHEET 2 OF 8

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 FILE => rwfir7-b-fp.dgn



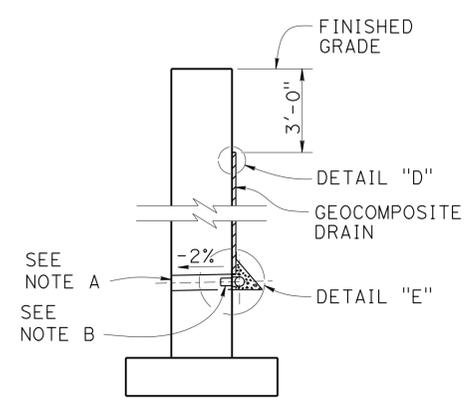
**PILE DATA TABLE**

PILE TYPE	NOMINAL RESISTANCE (kips)		DESIGN TIP ELEVATIONS (ft)	SPECIFIED TIP ELEVATION (ft)	NOMINAL DRIVING RESISTANCE (kips)
	COMPRESSION	TENSION			
PP14x0.375	170	10	8(a) 46(b) 28(c)	8	190

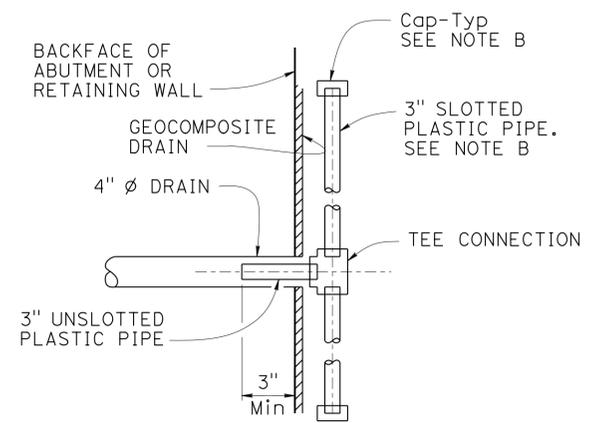
NOTES: 1. Design tip elevations are controlled by: (a) Compression (b) Tension, (c) Settlement  
 2. The specified tip elevation for driven piles shall not be raised above the design tip elevations for tension load and tolerable settlement

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Ord	5	0.0/1.5, 44.3/44.4	1547	1622

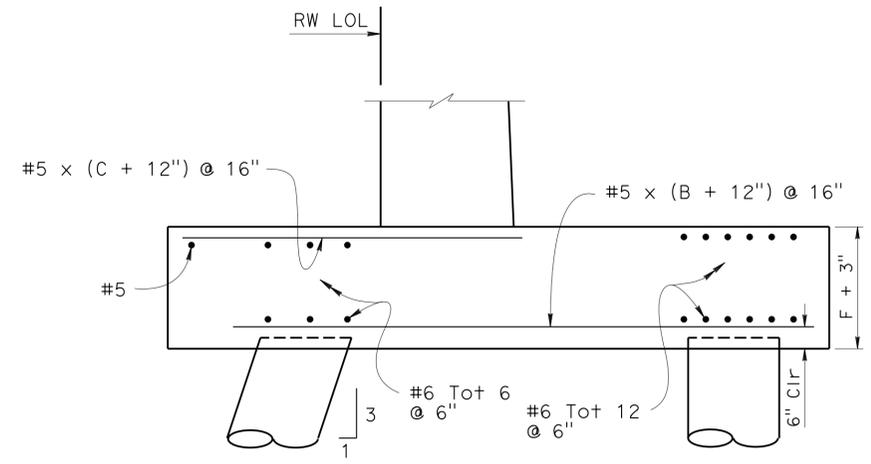
3-18-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
 Phu V. Nguyen  
 No. 60358  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA  
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**WALL SECTION**

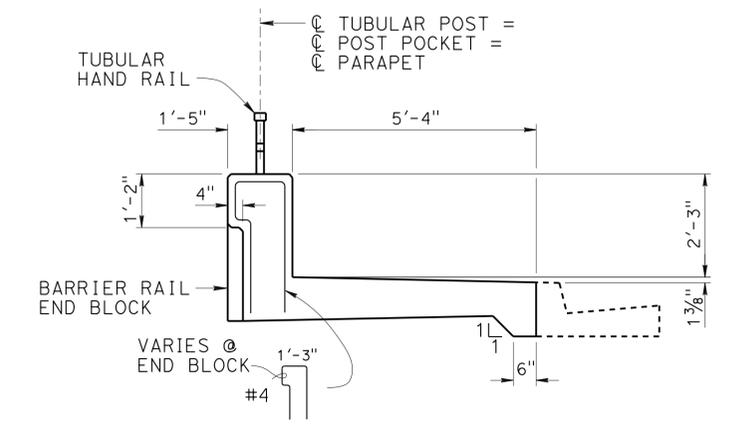


**SECTION K-K**



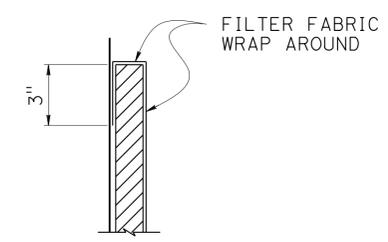
**PILE FOOTING SECTION**  
NO SCALE

- NOTES:
1. Reinforcement shown is in addition to that shown in RSP  
B3-1A
  2. All Piles not shown, see "PILE LAYOUT" sheet
  3. For "F", "B" and "C" dimensions, see RSP  
B3-1A

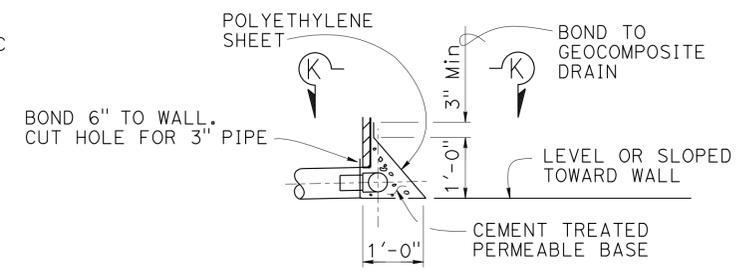


**CONCRETE BARRIER TYPE 26A MOD**  
1/2" = 1'-0"

NOTE: For details and reinforcement not shown see RSP  
B11-54



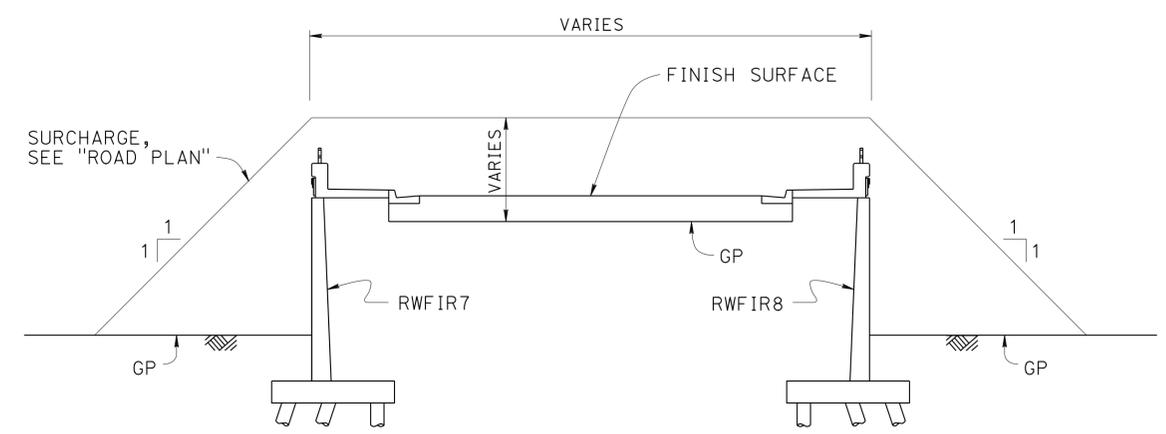
**DETAIL "D"**



**DETAIL "E"**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**  
NO SCALE

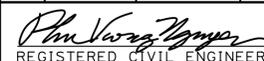
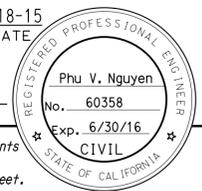
- NOTES (GEOCOMPOSITE DRAIN):
- A. 4" Ø drains at intermediate sag points and at 25'-0" center to center. For walls adjacent to sidewalks or curbs, provide 4" Ø cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3" ± above finished grade.
  - B. Geocomposite drain, cement treated permeable base, and 3" Ø slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Ø drain.
  - C. Connect the low end of plastic pipe to the main outlet pipe as applicable.

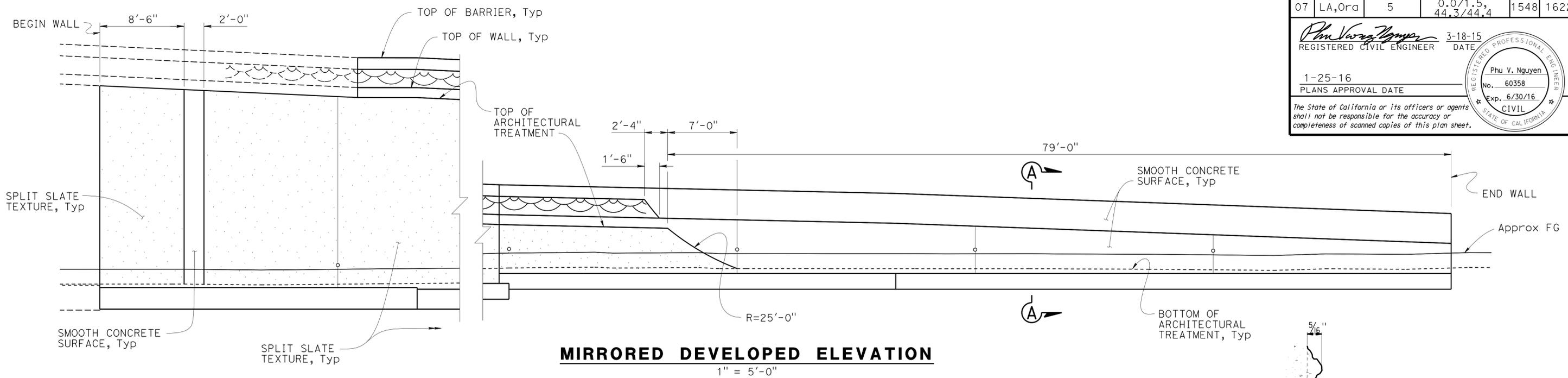


**EMBANKMENT SURCHARGE**  
NO SCALE

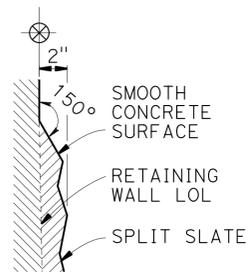
NOTE: For excavation limits, see "BRIDGE EMBANKMENT SURCHARGE" on "STANDARD PLANS A62B" sheet

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Phu Nguyen	CHECKED U. Inyang	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO. 53E0287	RETAINING WALL RWFIR7 RETAINING WALL DETAILS					
	DETAILS	BY Pauline Tong	CHECKED U. Inyang			POST MILE 1.27						
	QUANTITIES	BY Phu Nguyen	CHECKED R. Melko									
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0	1	2	3	UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 4 OF 8

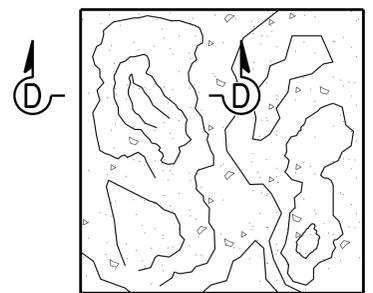
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1548	1622
 REGISTERED CIVIL ENGINEER			3-18-15	DATE	
1-25-16 PLANS APPROVAL DATE					
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**MIRRORED DEVELOPED ELEVATION**  
1" = 5'-0"



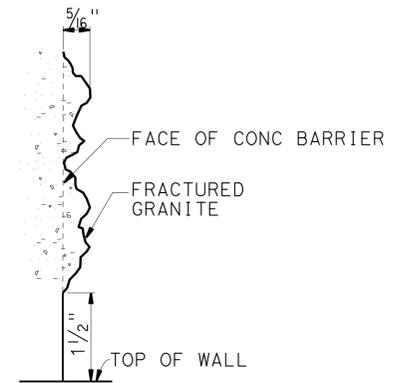
**DETAIL A**  
NO SCALE



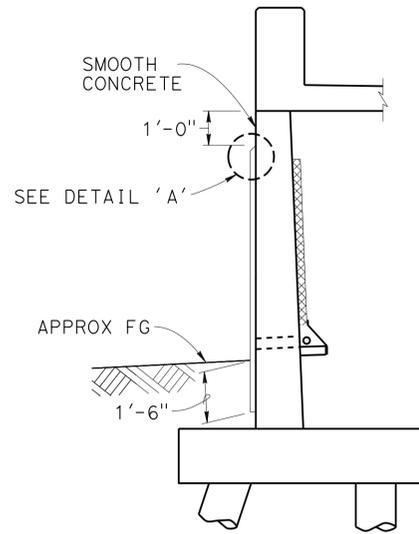
**SPLIT SLATE TEXTURE**  
NO SCALE



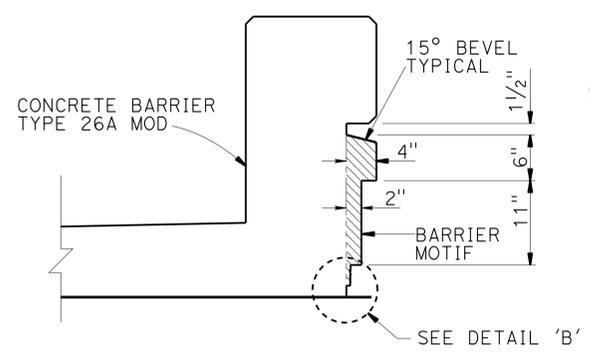
**SECTION D-D**  
NO SCALE



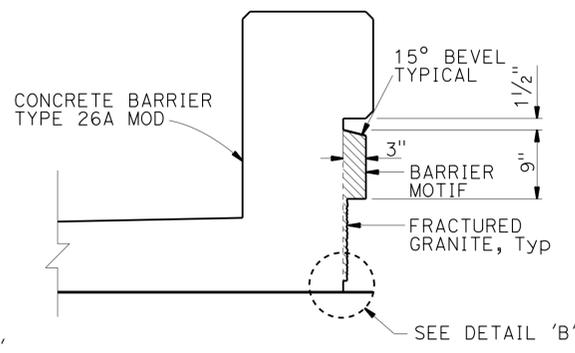
**DETAIL B**  
NO SCALE



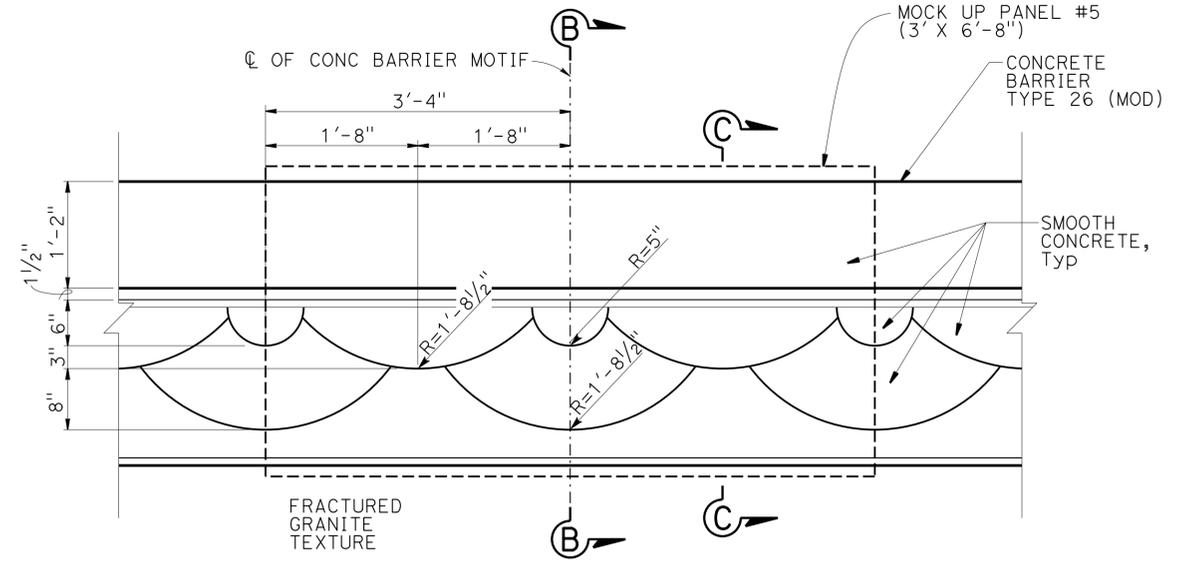
**SECTION A-A**  
3/8" = 1'-0"



**SECTION B-B**  
1" = 1'-0"



**SECTION C-C**  
1" = 1'-0"

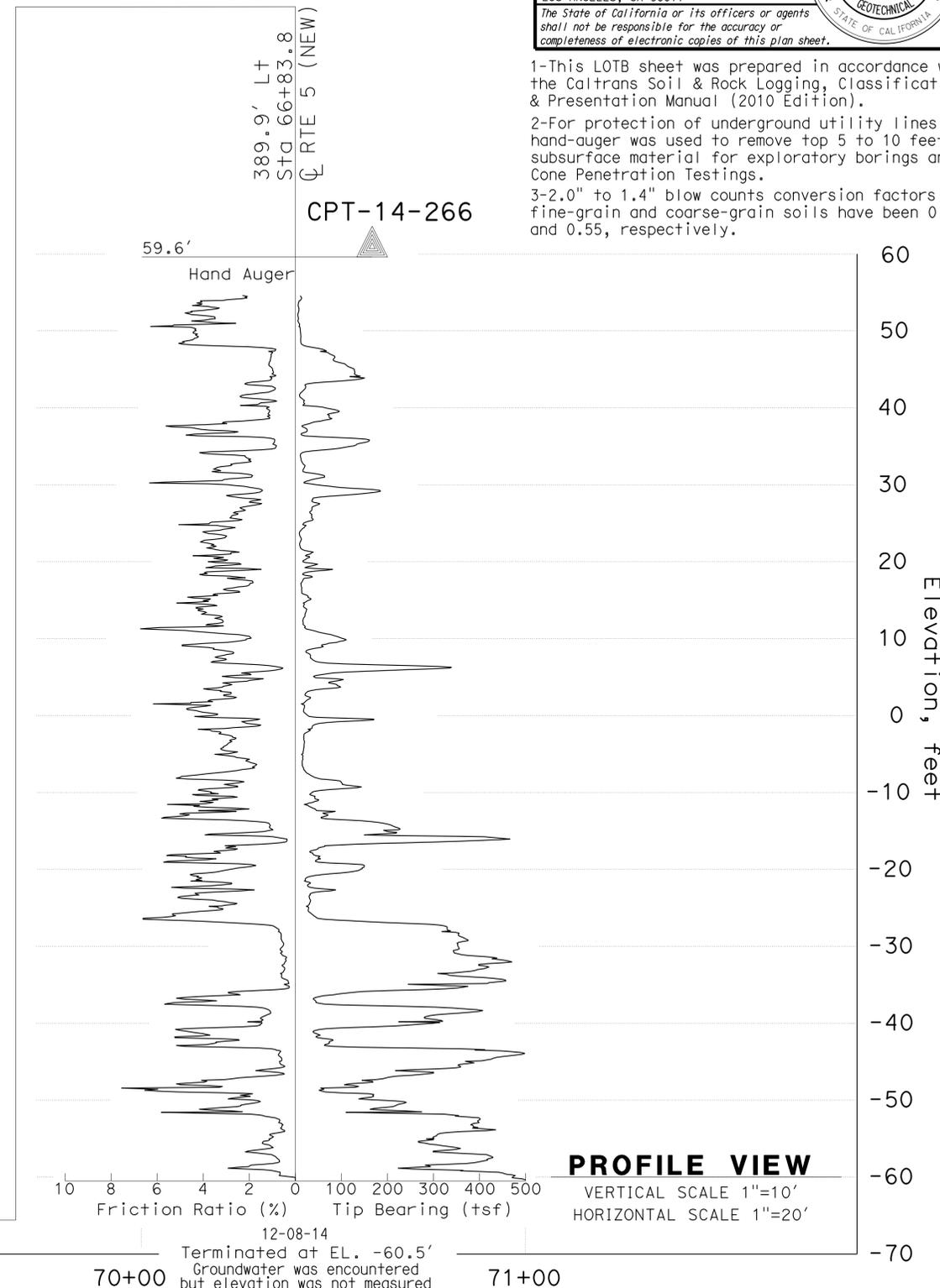
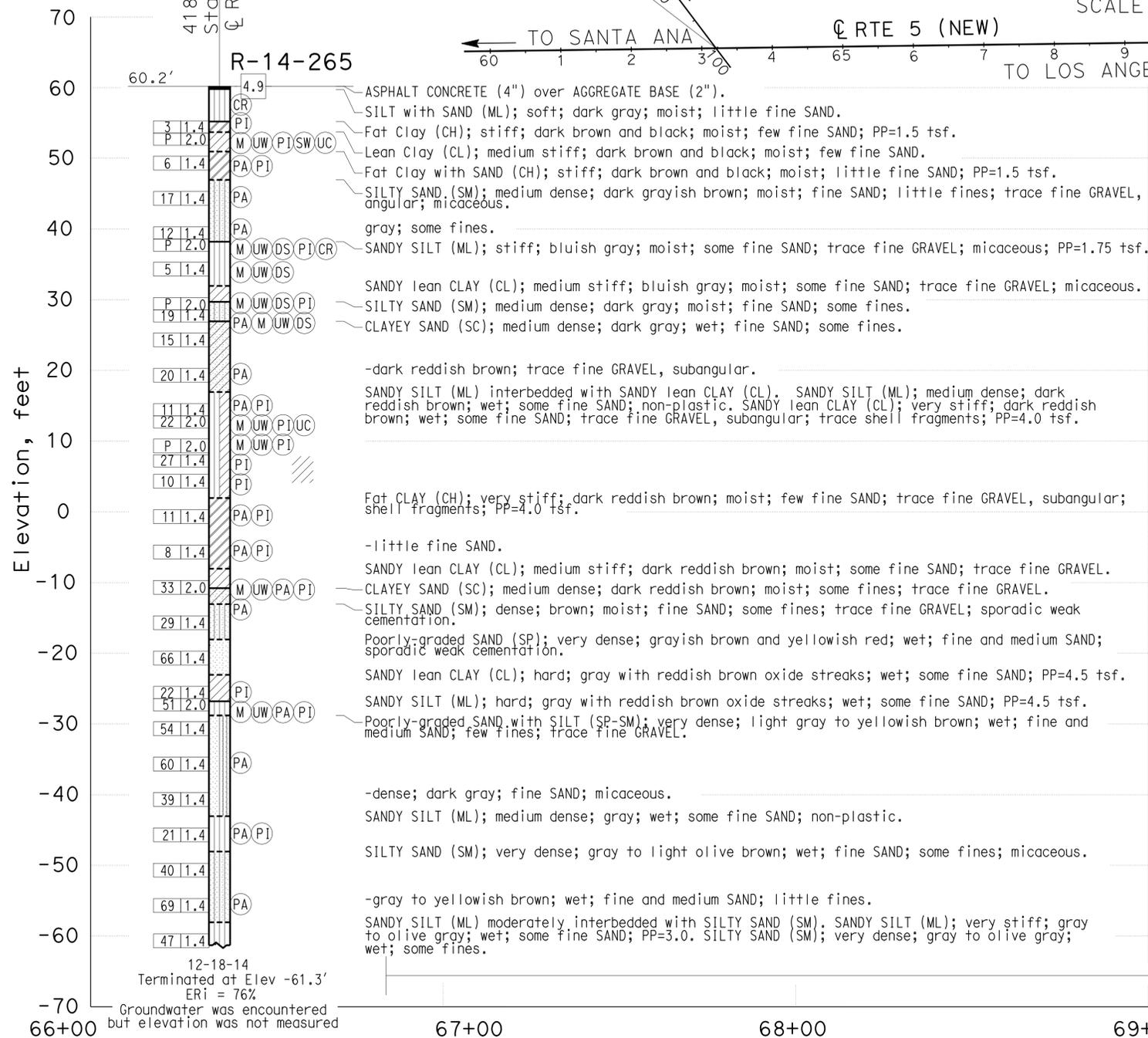
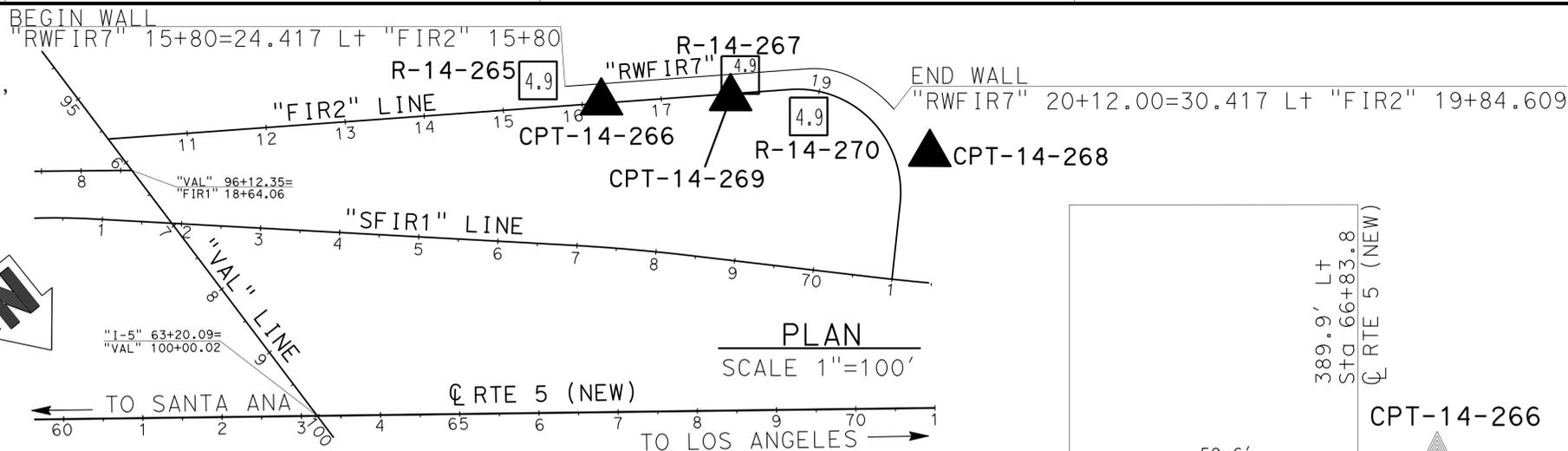


**ELEVATION - BARRIER MOTIF**  
1" = 1'-0"

DESIGN	BY H. Javier Chavez	CHECKED Issac Tasabia	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 11</b>	BRIDGE NO.	<b>RETAINING WALL RWFIR7</b> <b>ARCHITECTURAL TREATMENT DETAILS</b>
DETAILS	BY Pauline Tong	CHECKED U. Inyang			53E0287	
QUANTITIES	BY Phu Nguyen	CHECKED R. Melko			POST MILE 1.27	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1 CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 4-18-13 4-28-13 9-11-13 SHEET 5 OF 8

**BENCH MARK**

GPS 0888  
 ELEVATION 63.317 FT  
 FOUND 2-1/2 INCH CADT DISK IN CONCRETE CURB, FLUSH,  
 STAMPED "LA51.2 1995"  
 THE MARK IS LOCATED 0.1 MI NORTHERLY OF THE VALLEY  
 VIEW OVERCROSSING OF THE 5 (SANTA ANA) FWY ON THE  
 SOUTHWESTERLY CURB OF FIRESTONE BLVD AT THE FIRST  
 DRIVEWAY CUT NORTH OF THE FWY.  
 NORTHING 542603.017  
 EASTING 1997274.832  
 DATUM NAVD88



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1549	1622

Farid Motamed 07/16/15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

FUGRO CONSULTANTS  
 700 S. FLOWER STREET, SUITE 2116  
 LOS ANGELES, CA 90017

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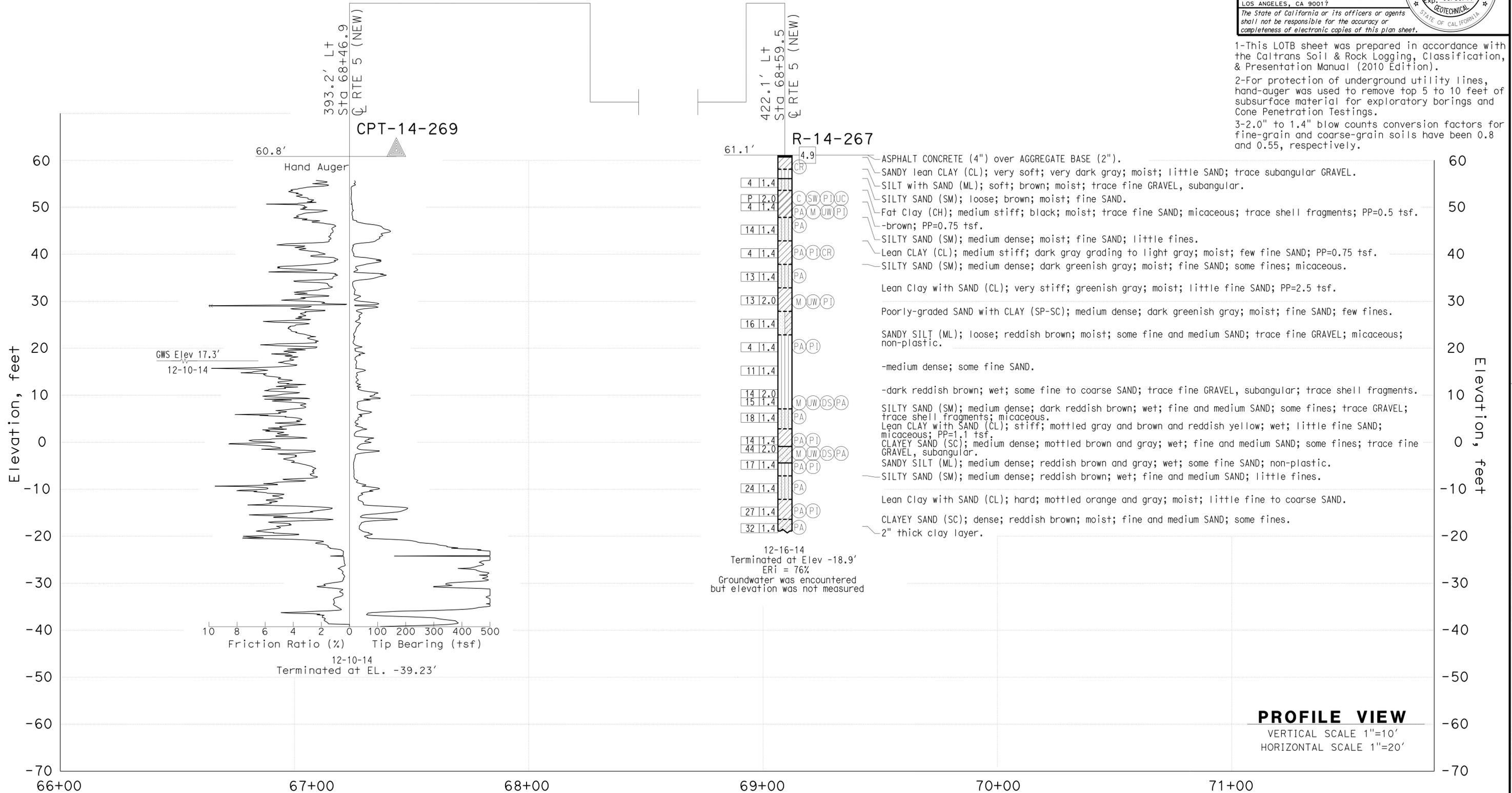
REGISTERED PROFESSIONAL ENGINEER  
 FARID MOTAMED  
 No. 2738  
 Exp. 06/30/17  
 STATE OF CALIFORNIA

1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.0" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.

F.MOTAMED DESIGN OVERSIGHT 07/16/15 SIGN OFF DATE	DRAWN BY T.PANAH	M.MARIN FIELD INVESTIGATION BY: DATE: 12/08/14 - 12/18/14	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	F.MOTAMED PROJECT ENGINEER	BRIDGE NO. 53E0287 POST MILES 1.27	RETAINING WALL RWFIR7 LOG OF TEST BORINGS SHEET 1 OF 3
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	3658 CONTRACT NO.: 07-2159U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES
				REVISION DATES	SHEET	OF
				5/12/15	07/16/15	6
				FILE => rwfir7-w-lotb1.dgn		8

FOR PLAN VIEW, SEE  
"LOG OF TEST BORINGS" SHEET 1 OF 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1550	1622
Farid Motamed REGISTERED CIVIL ENGINEER DATE 07/16/15			1-25-16 PLANS APPROVAL DATE		
FUGRO CONSULTANTS 700 S. FLOWER STREET, SUITE 2116 LOS ANGELES, CA 90017			No. 2738 Exp. 06/30/17 GEOTECHNICAL STATE OF CALIFORNIA		
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1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.0" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.

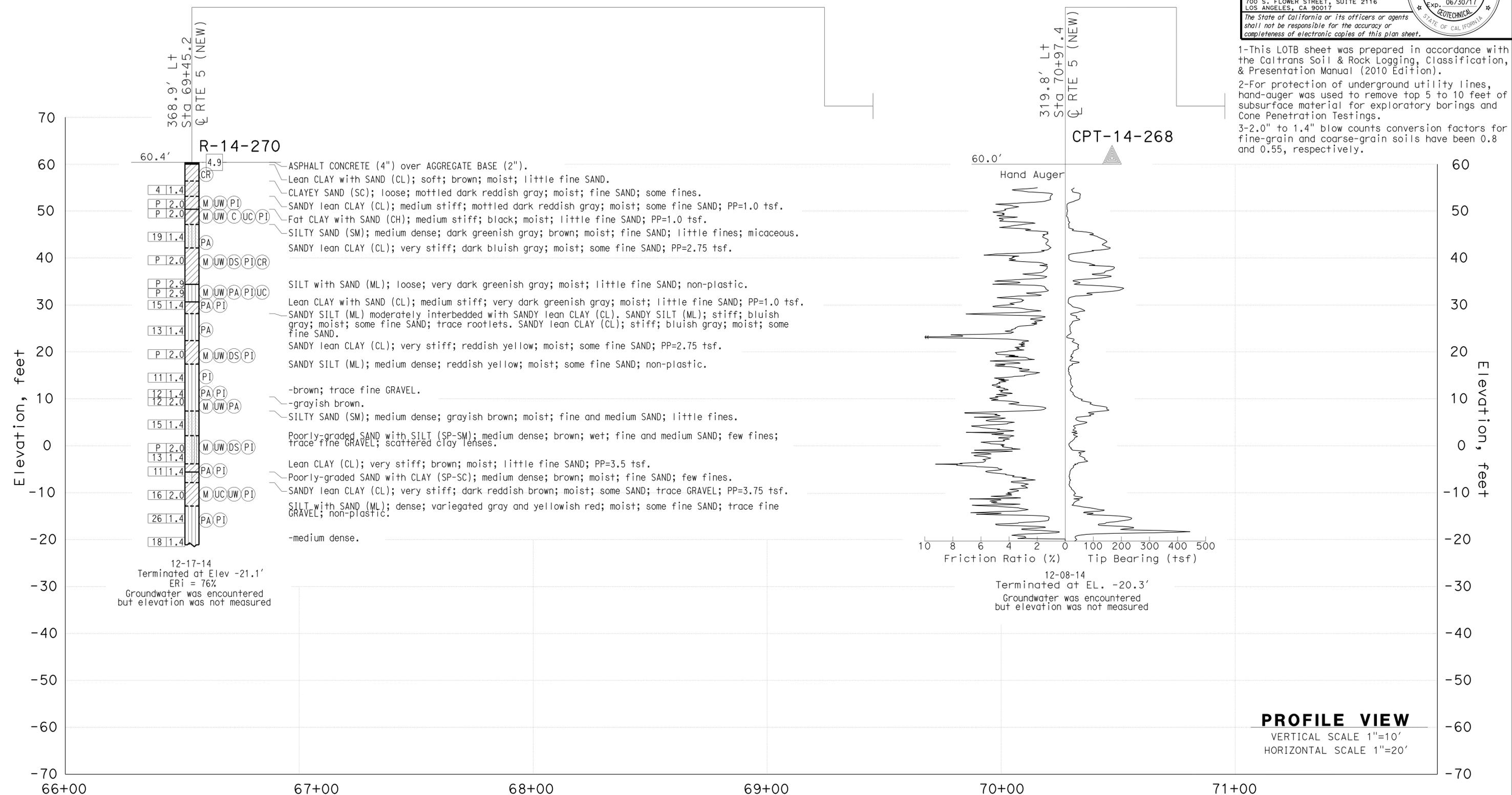
F.MOTAMED DESIGN OVERSIGHT 07/16/15 SIGN OFF DATE	DRAWN BY T.PANAH	M.MARIN FIELD INVESTIGATION BY: DATE: 12/10/14 - 12/16/14	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	F.MOTAMED PROJECT ENGINEER	BRIDGE NO. 53E0287 POST MILES 1.27	RETAINING WALL RWFIR7 LOG OF TEST BORINGS SHEET 2 OF 3
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	CONTRACT NO.: 07-2159U4	REVISION DATES 5/12/15 07/16/15
				DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET 7 OF 8

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:35

FILE => rwfir7-w-lotb2.dgn

FOR PLAN VIEW, SEE  
"LOG OF TEST BORINGS" SHEET 1 OF 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1551	1622
Farid Motamed REGISTERED CIVIL ENGINEER DATE 07/16/15			1-25-16 PLANS APPROVAL DATE		
FUGRO CONSULTANTS 700 S. FLOWER STREET, SUITE 2116 LOS ANGELES, CA 90017			No. 2738 Exp. 06/30/17 GEOTECHNICAL STATE OF CALIFORNIA		



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 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.0" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.

F.MOTAMED DESIGN OVERSIGHT 07/16/15 SIGN OFF DATE	DRAWN BY T.PANAH	M.MARIN FIELD INVESTIGATION BY: DATE: 12/08/14 - 12/17/14	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	F.MOTAMED PROJECT ENGINEER	BRIDGE NO. 53E0287 POST MILES 1.27	RETAINING WALL RWFIR7 LOG OF TEST BORINGS SHEET 3 OF 3
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: PROJECT NUMBER & PHASE: 07150001601	CONTRACT NO.: 07-2159U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES
				REVISION DATES 5/7/15 07/16/15		SHEET OF 8 8

**STANDARD PLANS**  
Dated May 2010

**INDEX TO PLANS**

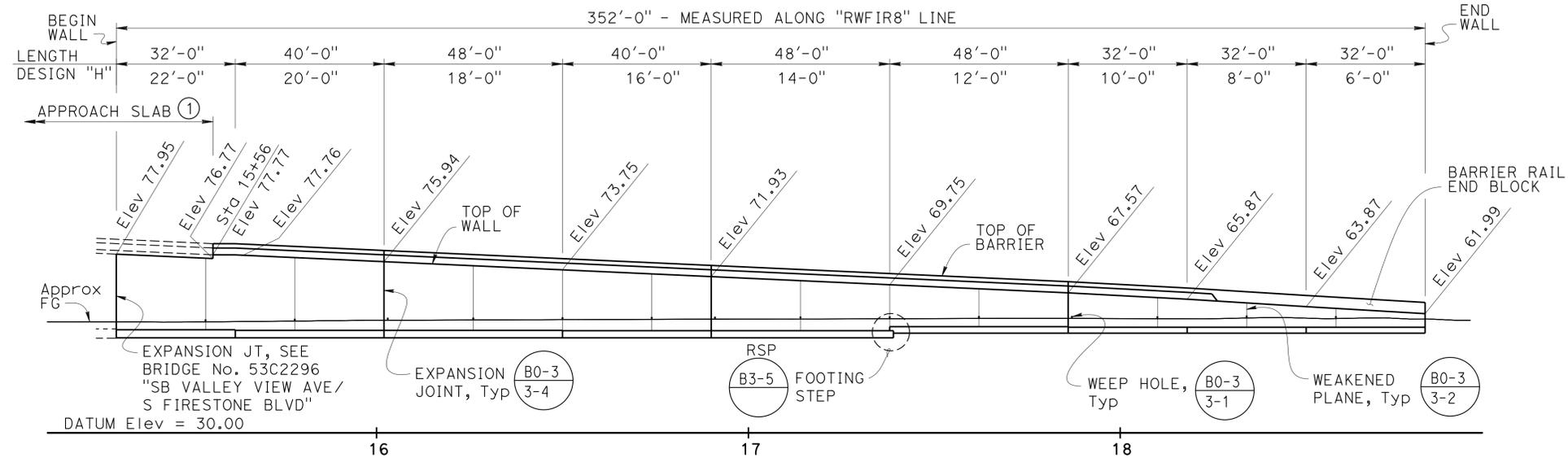
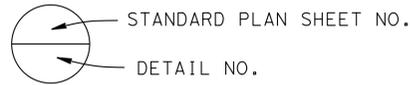
RSP	A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP	A10B	ABBREVIATIONS (SHEET 2 OF 2)
	A10C	LINE AND SYMBOLS (SHEET 1 OF 3)
	A10D	LINE AND SYMBOLS (SHEET 2 OF 3)
	A10E	LINE AND SYMBOLS (SHEET 3 OF 3)
RSP	A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP	A10G	LEGEND - SOIL (SHEET 2 OF 2)
A62B		LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE SURCHARGE AND WALL
B0-3		BRIDGE DETAILS
B2-5		PILE DETAILS - CLASS 90 AND CLASS 140
RSP	B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP	B3-5	RETAINING WALL DETAILS NO. 1
B11-51		TUBULAR HAND RAILING
RSP	B11-54	CONCRETE BARRIER TYPE 26

SHEET NO.	TITLE	QUANTITIES
1	GENERAL PLAN	STRUCTURE EXCAVATION (RETAINING WALL) 1,829 CY
2	FOUNDATION PLAN	STRUCTURE BACKFILL (RETAINING WALL) 1,365 CY
3	PILE LAYOUT	FURNISH PILING (CLASS 90) 5,028 LF
4	RETAINING WALL DETAILS	(ALTERNATIVE W)
5	ARCHITECTURAL TREATMENT DETAILS	DRIVE PILE (CLASS 90) 101 EA
6	LOG OF TEST BORINGS SHEET 1 OF 3	(ALTERNATIVE W)
7	LOG OF TEST BORINGS SHEET 2 OF 3	STRUCTURAL CONCRETE, RETAINING WALL 467 CY
8	LOG OF TEST BORINGS SHEET 3 OF 3	ARCHITECTURAL TREATMENT (SPLIT SLATE) 3,725 SOFT
		BAR REINFORCING STEEL (RETAINING WALL) 78,475 LB
		TUBULAR HANDRAILING (MODIFIED) 326 LF
		CONCRETE BARRIER (TYPE 26 MODIFIED) 326 LF

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1552	1622

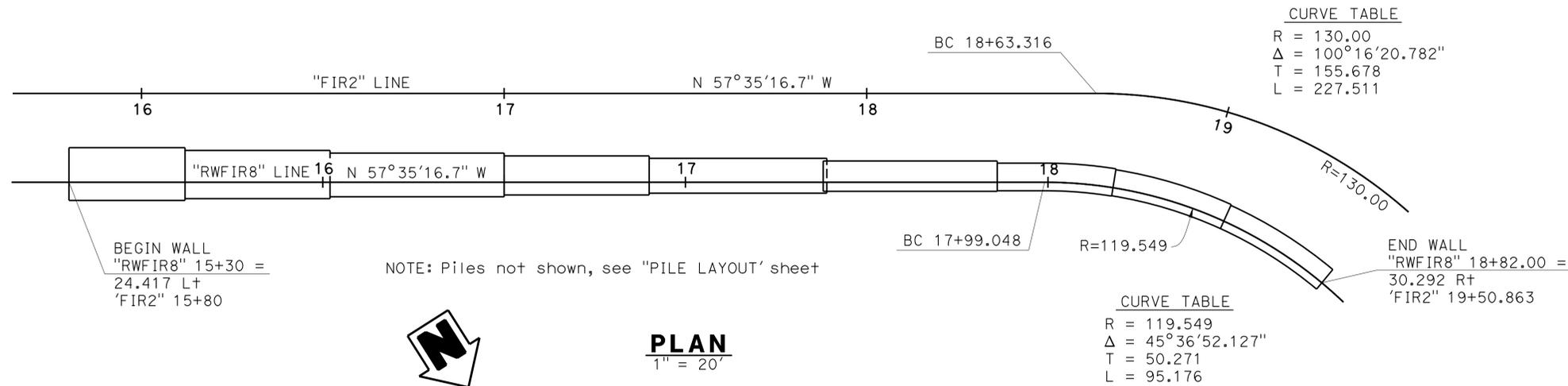
REGISTERED CIVIL ENGINEER  
Phu V. Nguyen  
No. 60358  
Exp. 6/30/16  
CIVIL  
DATE 1-26-15  
PLANS APPROVAL DATE 1-25-16

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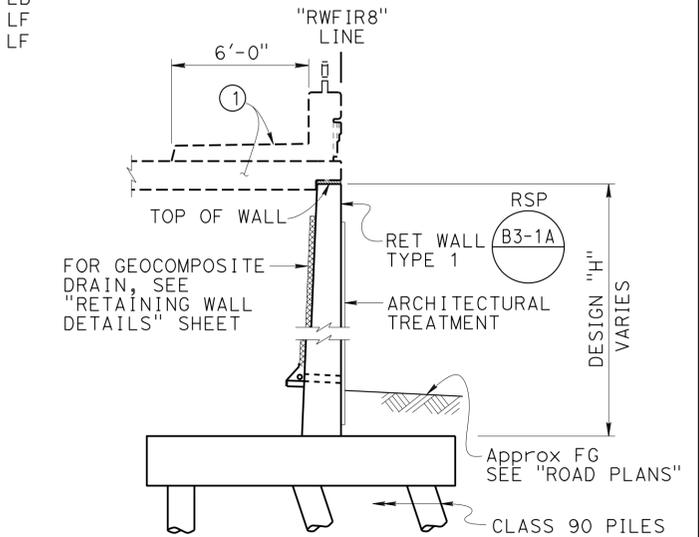
NOTE: Piles and Tubular Hand Railing not shown

**DEVELOPED ELEVATION**  
1" = 20'

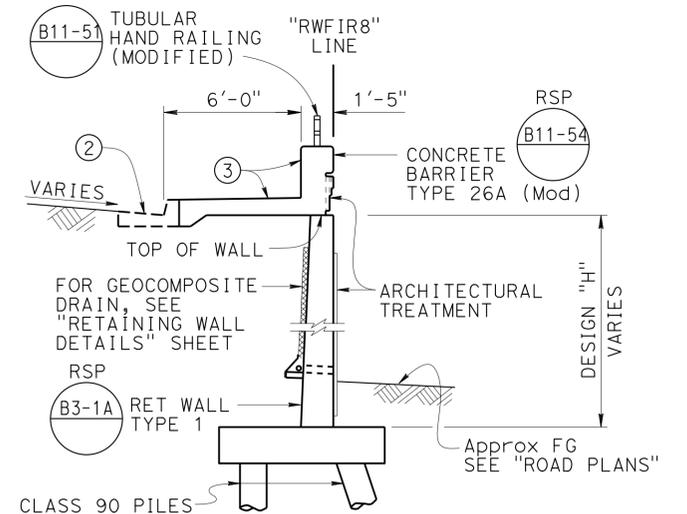


NOTE: Piles not shown, see "PILE LAYOUT" sheet

**PLAN**  
1" = 20'



**TYPICAL SECTION AT STRUCTURE APPROACH**  
1/4" = 1'-0"



**TYPICAL SECTION**  
1/4" = 1'-0"

NOTES:

- Concrete Barrier Type 26 (Mod) and Approach Slab, see Bridge No. 53c2296 "SB VALLEY VIEW AVE/ S FIRESTONE BLVD"
- Curb Type A2-8, see "ROAD PLANS"
- Match face to Concrete Barrier Type 26 (Mod) at Structure Approach

DESIGN ENGINEER Ramin Rashedi 2-11-15	DESIGN	BY Phu Nguyen	CHECKED U. Inyang	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	53E0288	RETAINING WALL RWFIR8 GENERAL PLAN	
	DETAILS	BY Pauline Tong	CHECKED U. Inyang	LAYOUT	BY Phu Nguyen			CHECKED U. Inyang	POST MILE		1.27
	QUANTITIES	BY J. Posey	CHECKED Susan Ng	SPECIFICATIONS	BY Xiahong Li			PLANS AND SPECS COMPARED Xiahong Li			

CURVE DATA				
No.	R	$\Delta$	T	L
(A)	119.55'	39°45'21"	43.22'	82.95'
(B)	130.00'	100°16'21"	155.68'	227.51'
(C)	2500.00'	03°33'32"	77.67'	155.28'
(D)	2500.00'	03°33'32"	77.67'	155.28'

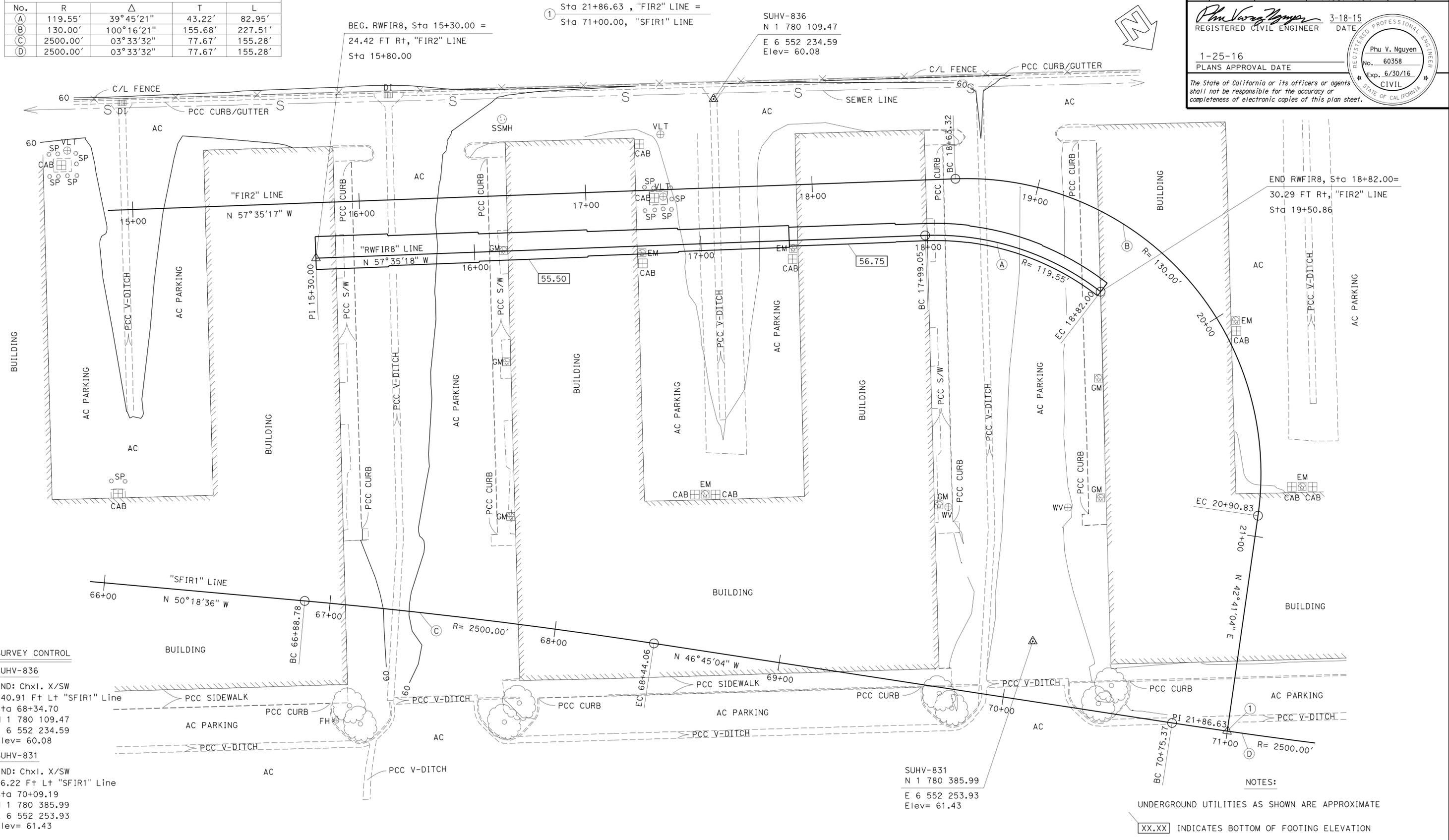
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1553	1622

REGISTERED CIVIL ENGINEER  
 No. 60358  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA

3-18-15  
 DATE

1-25-16  
 PLANS APPROVAL DATE

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**SURVEY CONTROL**  
 SUHV-836  
 FND: Chxl. X/SW  
 240.91 Ft Lt "SFIR1" Line  
 Sta 68+34.70  
 N 1 780 109.47  
 E 6 552 234.59  
 Elev= 60.08  
 SUHV-831  
 FND: Chxl. X/SW  
 26.22 Ft Lt "SFIR1" Line  
 Sta 70+09.19  
 N 1 780 385.99  
 E 6 552 253.93  
 Elev= 61.43

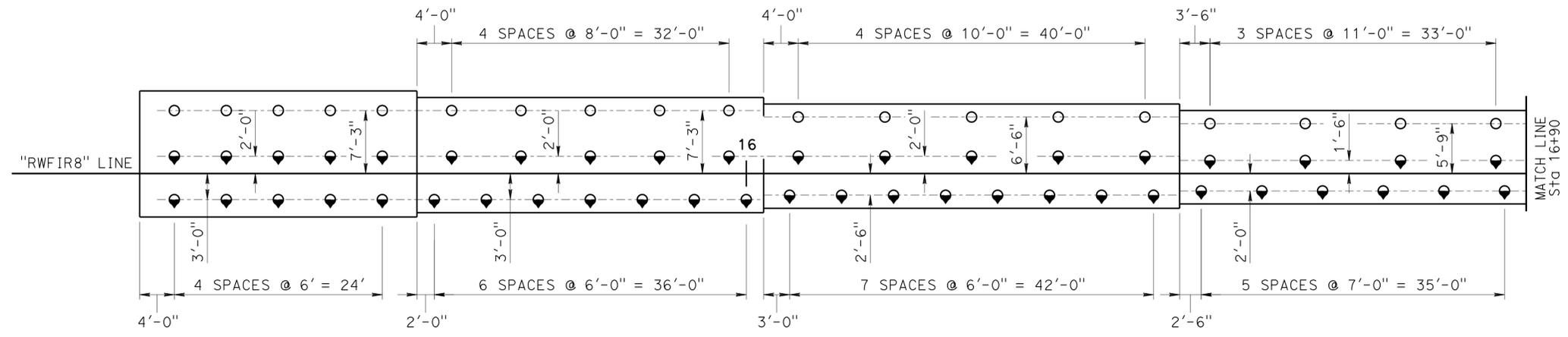
PRELIMINARY INVESTIGATION SECTION			
SCALE	VERT. DATUM	PHOTOGRAMMETRY	AS OF: X
1"=20'	NAD 83 (1991.35)	SURVEYED	BY T.PHUNG 03/2013
ALIGNMENT TIES	Dist. Traverse Sheet	DRAFTED	BY V.PHAM 04/2013
CHECKED	BY C.STEWART 03/2013	CHECKED	BY S.ALIVIO 04/2013

DESIGN	BY Phu Nguyen	CHECKED	U. Inyang
DETAILS	BY Pauline Tong	CHECKED	U. Inyang
QUANTITIES	BY J. Posey	CHECKED	Susan Ng

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

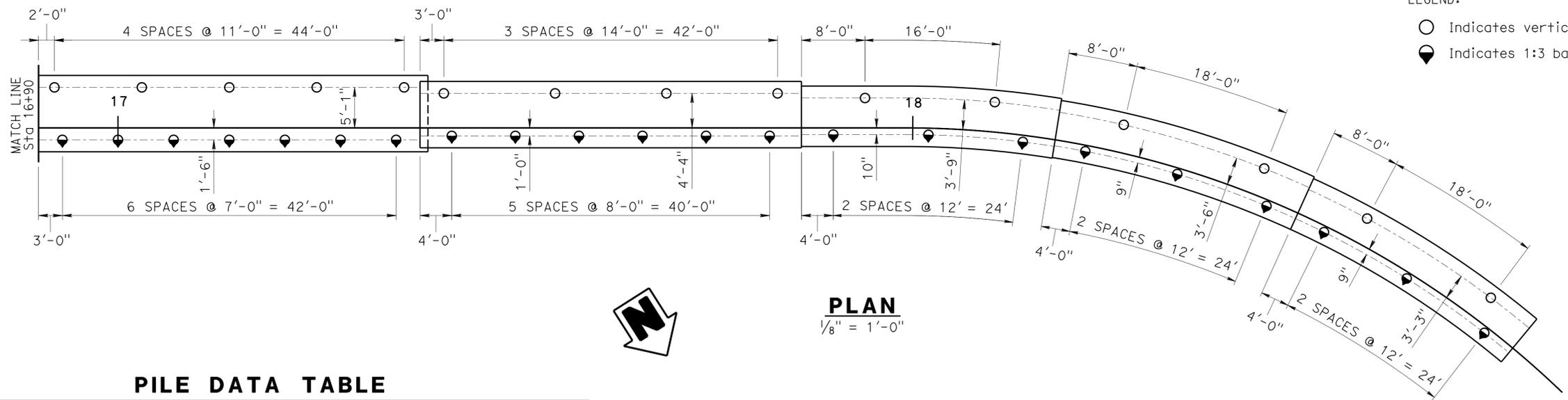
DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 11**

**RETAINING WALL RWFIR8**  
**FOUNDATION PLAN**



NOTE: All piles are Class 90 Alternative "W" B2-5

LEGEND:  
 ○ Indicates vertical pile  
 ● Indicates 1:3 battered pile



**PLAN**  
 1/8" = 1'-0"

**PILE DATA TABLE**

PILE TYPE	NOMINAL RESISTANCE (kips)		DESIGN TIP ELEVATIONS (ft)	SPECIFIED TIP ELEVATION (ft)	NOMINAL DRIVING RESISTANCE (kips)
	COMPRESSION	TENSION			
PP14x0.375	170	10	8(a) 46(b) 28(c)	8	190

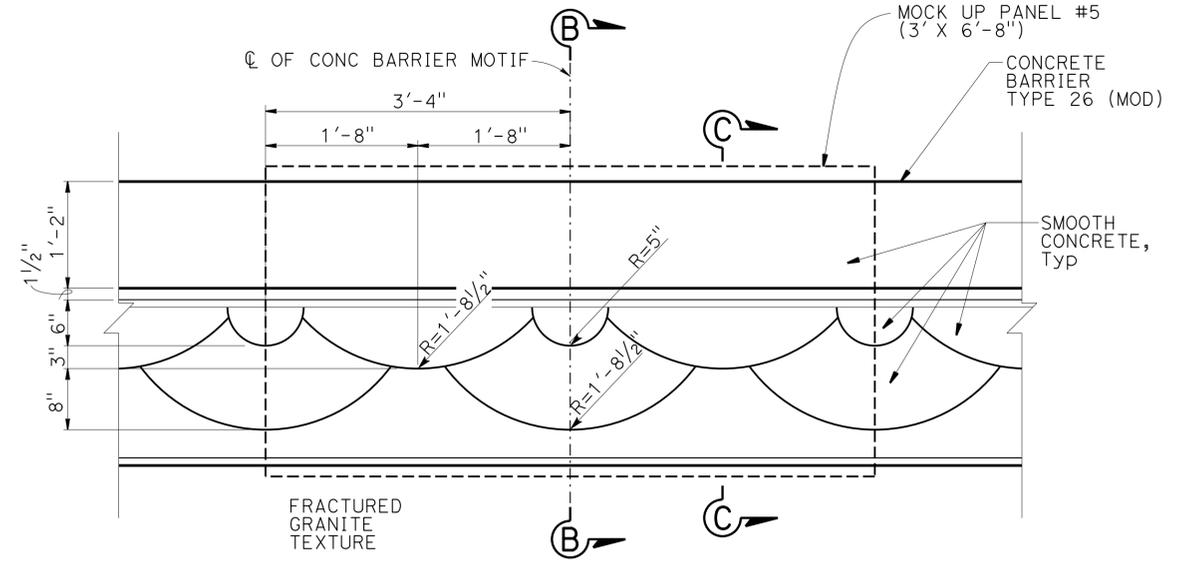
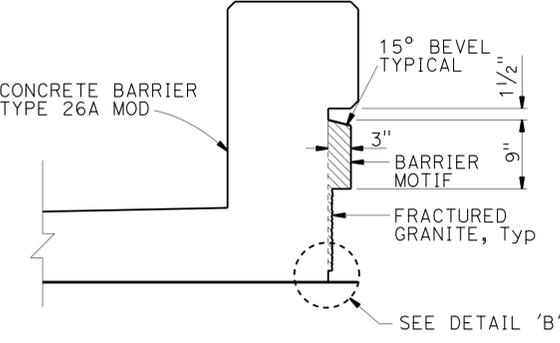
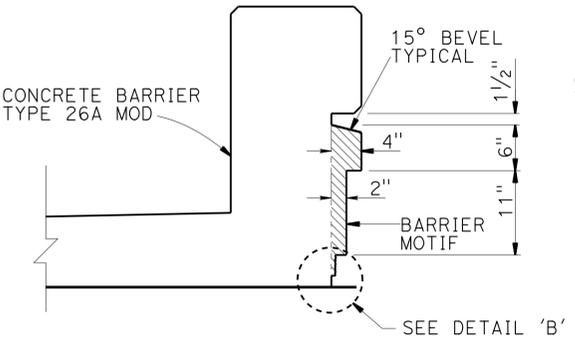
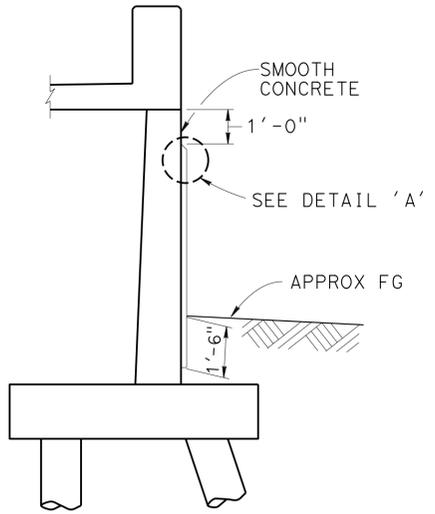
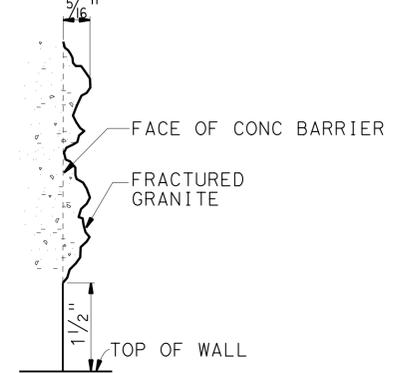
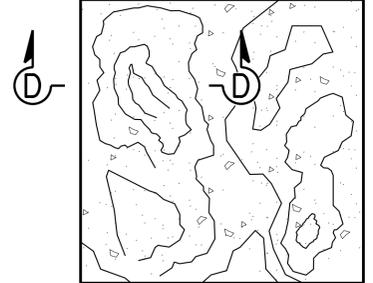
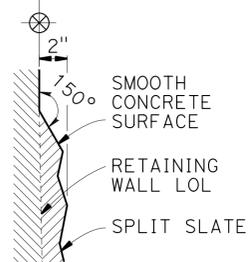
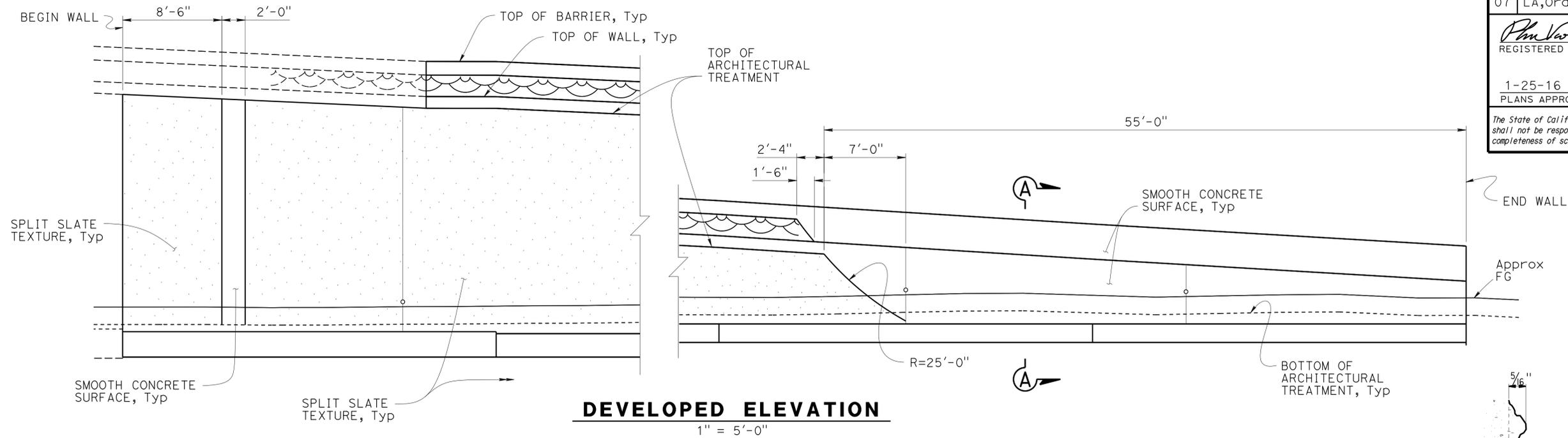
NOTES: 1. Design tip elevations are controlled by: (a) Compression (b) Tension, (c) Settlement  
 2. The specified tip elevation for driven piles shall not be raised above the design tip elevations for tension load and tolerable settlement



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Orca	5	0.0/1.5, 44.3/44.4	1556	1622

REGISTERED CIVIL ENGINEER  
 DATE 3-18-15  
 PLANS APPROVAL DATE 1-25-16  
 No. 60358  
 Exp. 6/30/16  
 CIVIL  
 STATE OF CALIFORNIA

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DESIGN	BY H. Javier Chavez	CHECKED Issac Tasabia
DETAILS	BY Pauline Tong	CHECKED U. Inyang
QUANTITIES	BY J. Posey	CHECKED Susan Ng

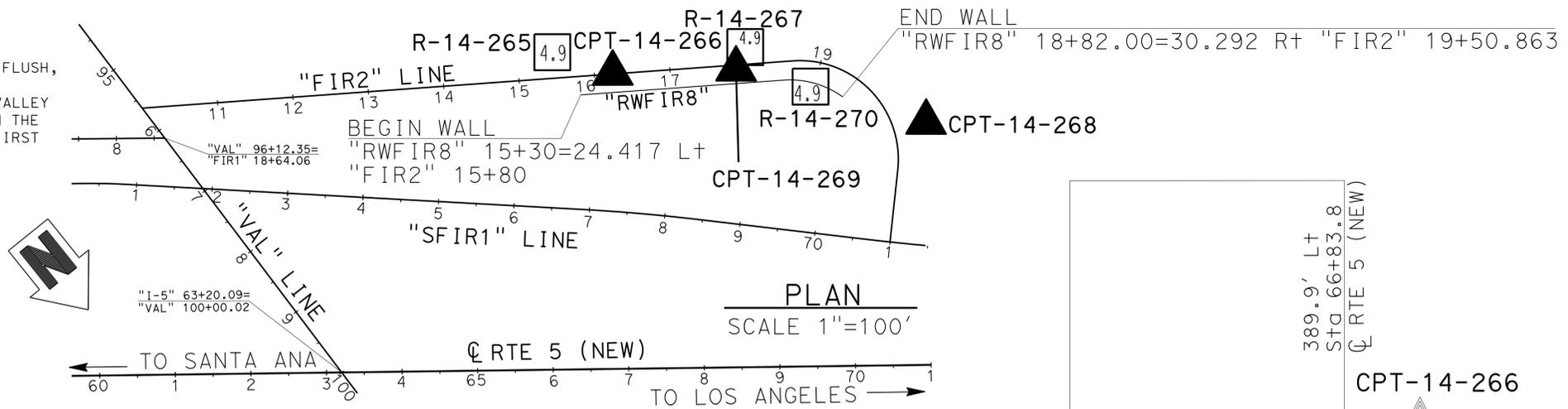
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 11**  
 BRIDGE NO. 53E0288  
 POST MILE 1.27

**RETAINING WALL RWfir8**  
**ARCHITECTURAL TREATMENT DETAILS**

**BENCH MARK**

GPS 0888  
 ELEVATION 63.317 FT  
 FOUND 2-1/2 INCH CADT DISK IN CONCRETE CURB, FLUSH,  
 STAMPED "LA51.2 1995"  
 THE MARK IS LOCATED 0.1 MI NORTHERLY OF THE VALLEY  
 VIEW OVERCROSSING OF THE 5 (SANTA ANA) FWY ON THE  
 SOUTHWESTERLY CURB OF FIRESTONE BLVD AT THE FIRST  
 DRIVEWAY CUT NORTH OF THE FWY.  
 NORTHING 542603.017  
 EASTING 1997274.832  
 DATUM NAVD88



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1557	1622

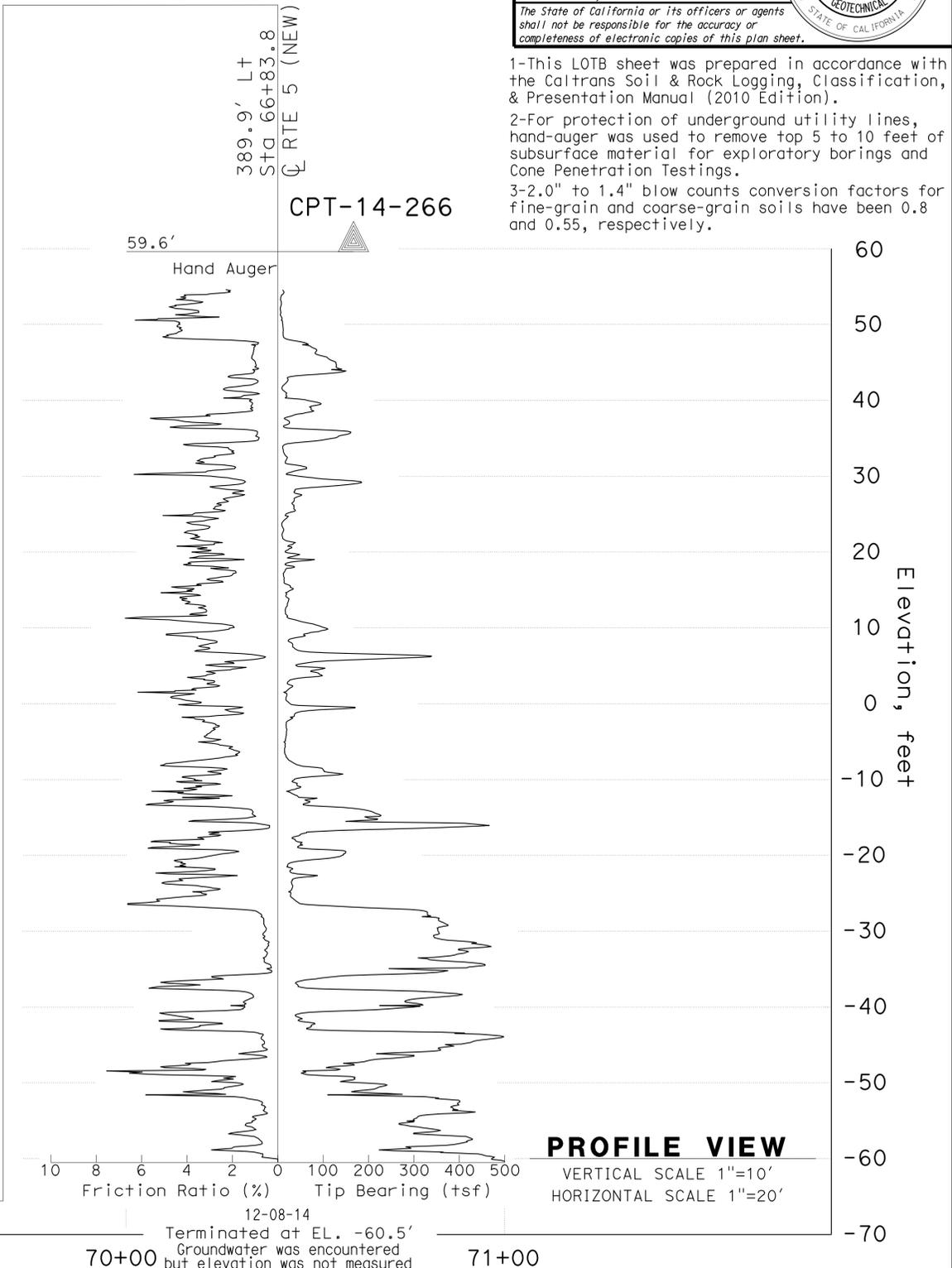
Farid Motamed 07/16/15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

FUGRO CONSULTANTS  
 700 S. FLOWER STREET, SUITE 2116  
 LOS ANGELES, CA 90017

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REGISTERED PROFESSIONAL ENGINEER  
 FARID MOTAMED  
 No. 2738  
 Exp. 06/30/17  
 STATE OF CALIFORNIA



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 3-2.0" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.

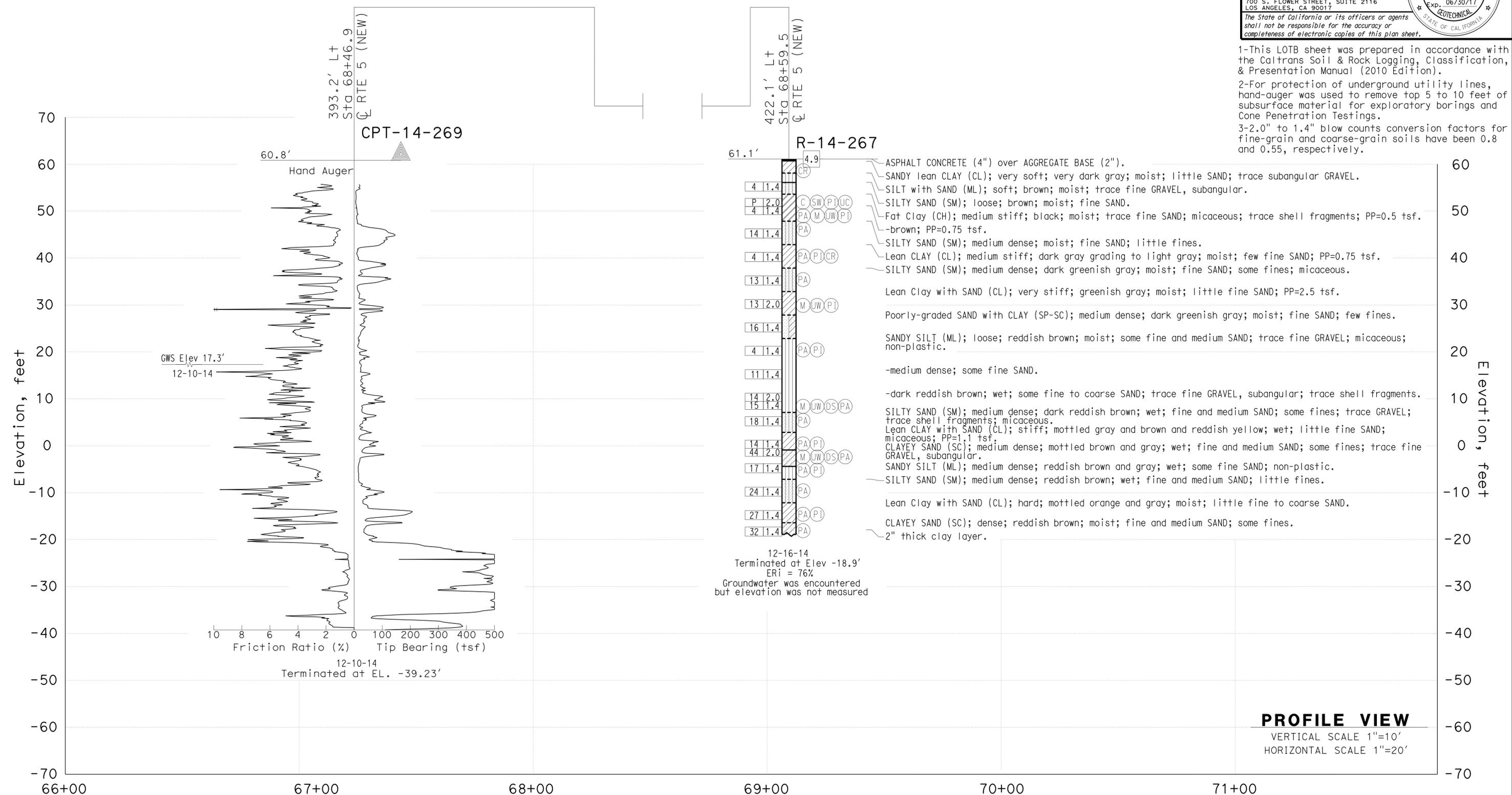
F.MOTAMED DESIGN OVERSIGHT 07/16/15 SIGN OFF DATE	DRAWN BY T.PANAH	M.MARIN FIELD INVESTIGATION BY: DATE: 12/08/14 - 12/18/14	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	F.MOTAMED PROJECT ENGINEER	BRIDGE NO. 53E0288 POST MILES 1.27	RETAINING WALL RWFIR8 LOG OF TEST BORINGS SHEET 1 OF 3
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	CONTRACT NO.: 07-2159U4	REVISION DATES 5/12/15 07/16/15

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:35

FOR PLAN VIEW, SEE  
"LOG OF TEST BORINGS" SHEET 1 OF 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1558	1622
Farid Motamed REGISTERED CIVIL ENGINEER DATE 07/16/15			1-25-16 PLANS APPROVAL DATE		
FUGRO CONSULTANTS 700 S. FLOWER STREET, SUITE 2116 LOS ANGELES, CA 90017			No. 2738 Exp. 06/30/17 GEOTECHNICAL STATE OF CALIFORNIA		
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 3-2.0" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.



**PROFILE VIEW**  
 VERTICAL SCALE 1"=10'  
 HORIZONTAL SCALE 1"=20'

F.MOTAMED DESIGN OVERSIGHT 07/16/15 SIGN OFF DATE		DRAWN BY T.PANAH CHECKED BY E.J.JEON	M.MARIN FIELD INVESTIGATION BY: DATE: 12/10/14 - 12/16/14	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	F.MOTAMED PROJECT ENGINEER	BRIDGE NO. 53E0288 POST MILES 1.27	<b>RETAINING WALL RWFIR8</b> <b>LOG OF TEST BORINGS SHEET 2 OF 3</b>
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3658 PROJECT NUMBER & PHASE: 07150001601	CONTRACT NO.: 07-2159U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES
						REVISION DATES 5/12/15 07/16/15	SHEET 7 OF 8

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:35

FOR PLAN VIEW, SEE  
"LOG OF TEST BORINGS" SHEET 1 OF 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1559	1622

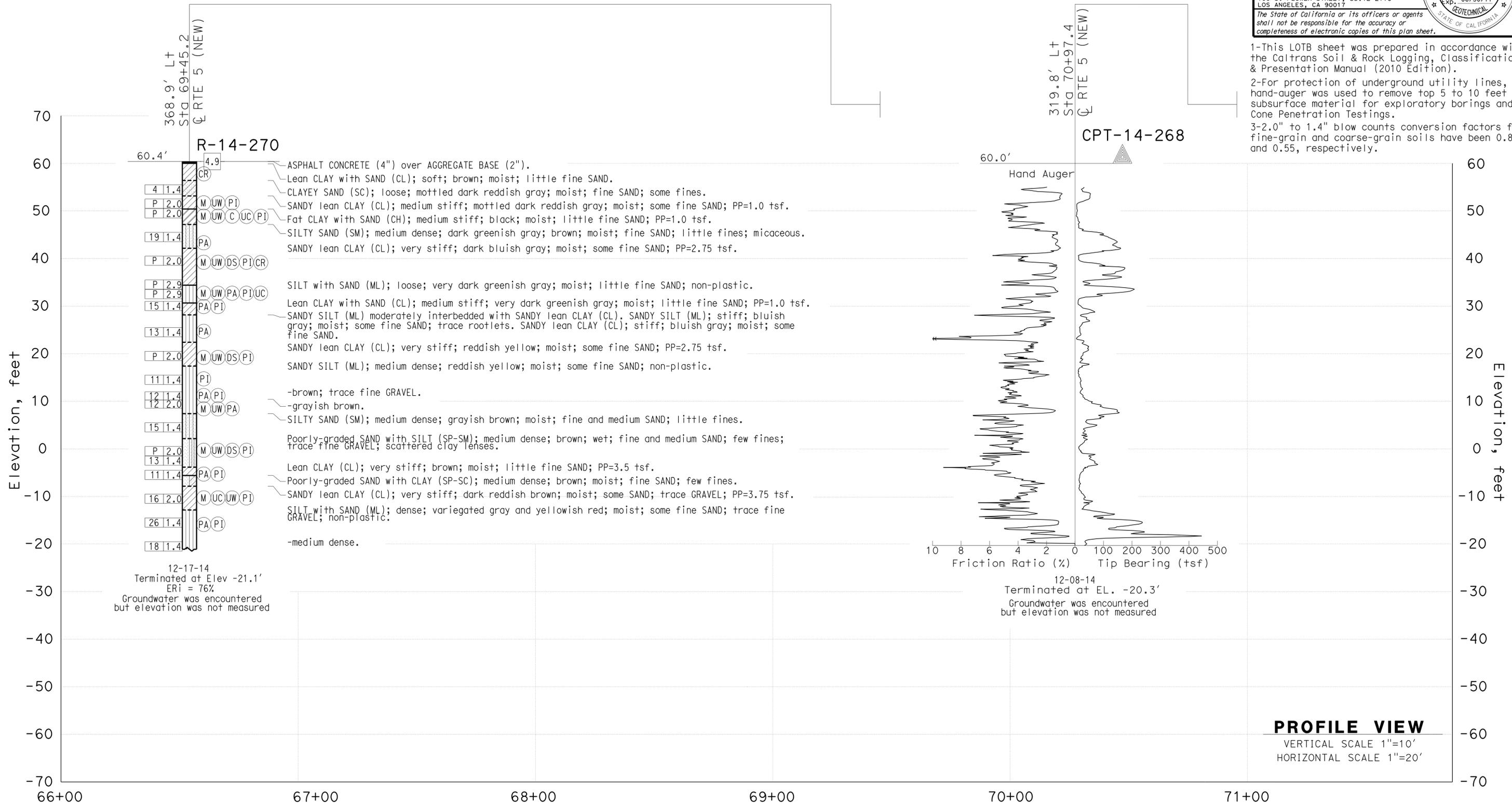
07/16/15  
REGISTERED CIVIL ENGINEER DATE

1-25-16  
PLANS APPROVAL DATE

FUGRO CONSULTANTS  
700 S. FLOWER STREET, SUITE 2116  
LOS ANGELES, CA 90017

No. 2738  
Exp. 06/30/17  
STATE OF CALIFORNIA  
REGISTERED PROFESSIONAL ENGINEER  
FARID MOTAMED

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F.MOTAMED DESIGN OVERSIGHT 07/16/15 SIGN OFF DATE	DRAWN BY T.PANAH	M.MARIN FIELD INVESTIGATION BY: DATE: 12/08/14 - 12/17/14	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	F.MOTAMED PROJECT ENGINEER	BRIDGE NO. 53E0288 POST MILES 1.27	<b>RETAINING WALL RWFIR8</b>	
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)						REVISION DATES	SHEET 8 OF 8
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			UNIT: PROJECT NUMBER & PHASE: 07150001601	CONTRACT NO.: 07-2159U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES		

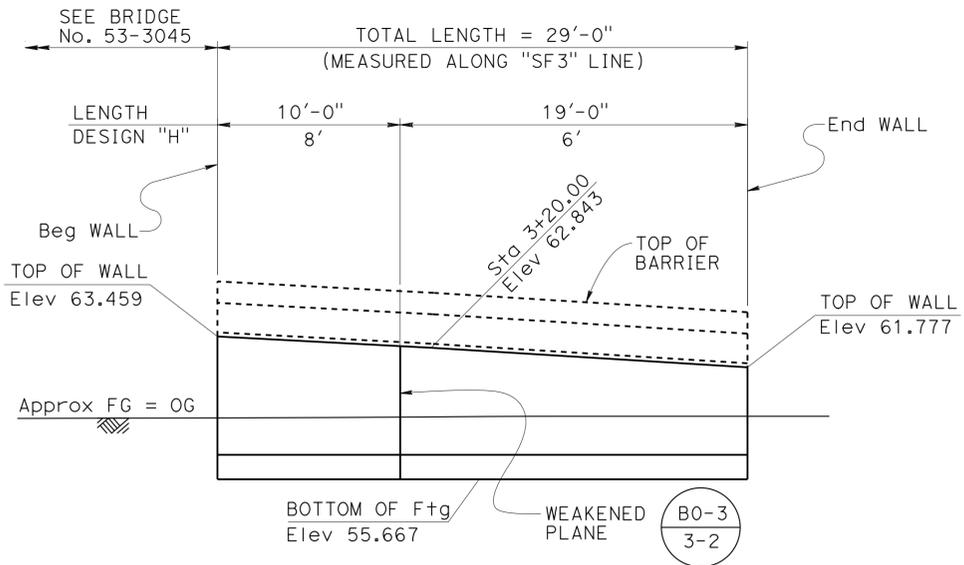
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1560	1622

3-18-15  
 REGISTERED CIVIL ENGINEER DATE  
 William Kemp  
 No. 55730  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA  
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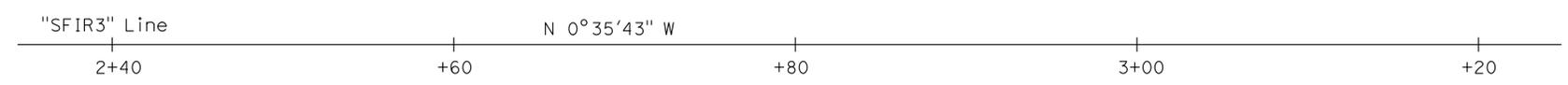
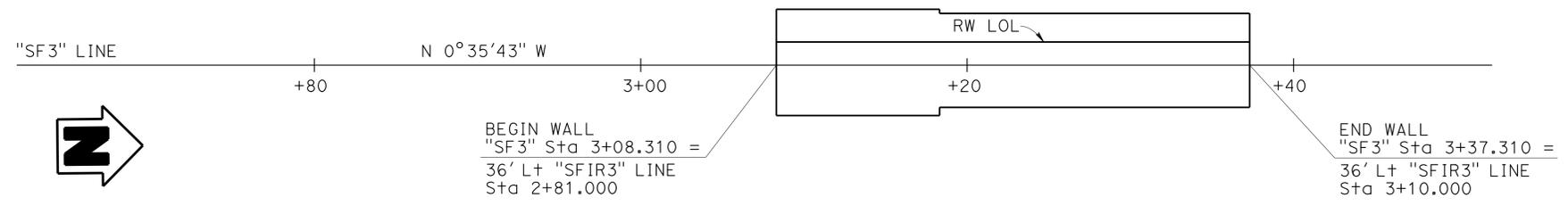
- NOTES:
- Match face to concrete barrier Type 26 Mod at Bridge No. 53-3045 "VALLEY VIEW AVE OH/OC (REPLACEMENT)"
  - Approach slab and concrete barrier rail Type 26 Mod, see Bridge No. 53-3045 "VALLEY VIEW AVE OH/OC (REPLACEMENT)"

QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	134	CY
STRUCTURE BACKFILL (RETAINING WALL)	115	CY
STRUCTURAL CONCRETE, RETAINING WALL	18	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	52	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	2,220	LB



**MIRRORED ELEVATION**  
1" = 5'



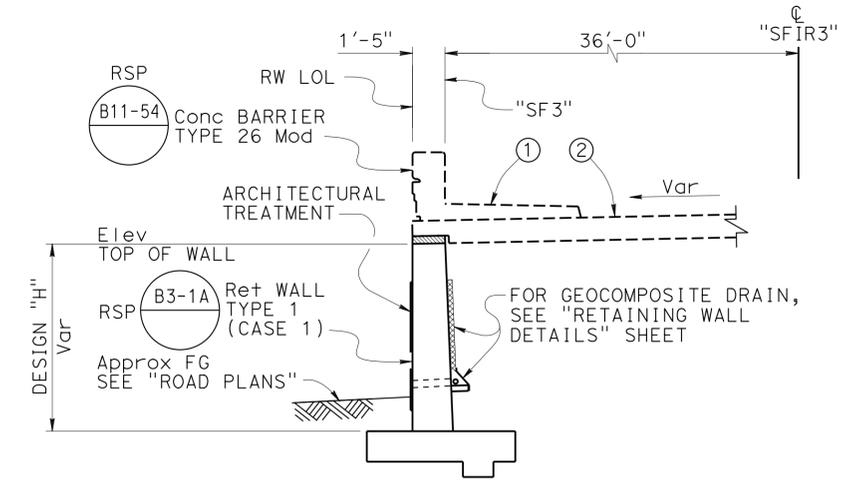
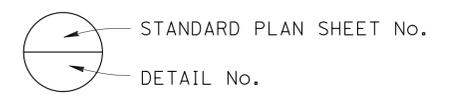
**PLAN**  
1" = 5'

**INDEX TO PLANS**

SHEET No.	TITLE
1	GENERAL PLAN
2	RETAINING WALL DETAILS
3	ARCHITECTURAL TREATMENT DETAILS
4	LIMITS OF EXCAVATION AND BACKFILL
5	LOG OF TEST BORINGS SHEET 1 OF 1

**STANDARD PLANS DATED MAY 2010**

RSP A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
RSP A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL- BRIDGE SURCHARGE AND WALL
B0-3	BRIDGE DETAILS
RSP B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP B3-5	RETAINING WALL DETAILS NO. 1
RSP B11-54	CONCRETE BARRIER TYPE 26



**TYPICAL SECTION**  
1/4" = 1'-0"

Ramin Rashedi 3-18-15  
DESIGN ENGINEER

DESIGN	BY Daryoush Tavatli	CHECKED Cipriano Manansala
DETAILS	BY Jaime Ramirez	CHECKED Cipriano Manansala
QUANTITIES	BY Fred Fong	CHECKED Daryoush Tavatli

LOAD & RESISTANCE FACTOR DESIGN	BY Daryoush Tavatli	CHECKED Cipriano Manansala
LAYOUT	BY Daryoush Tavatli	CHECKED Cipriano Manansala
SPECIFICATIONS	BY Xiahong Li	CHECKED Xiahong Li

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	RW SF3
POST MILE	1.12

**RETAINING WALL SF3**  
**GENERAL PLAN**

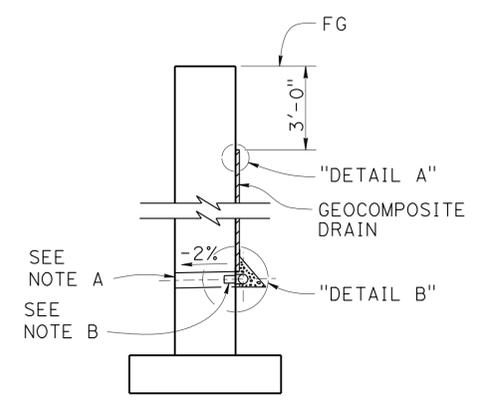
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1561	1622

*William Kemp* 3-18-15  
REGISTERED CIVIL ENGINEER DATE

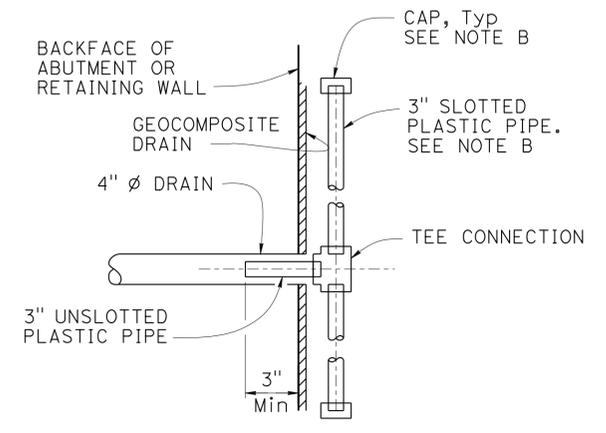
1-25-16  
PLANS APPROVAL DATE

William D. Kemp  
No. 55730  
Exp. 12-31-16  
CIVIL  
STATE OF CALIFORNIA

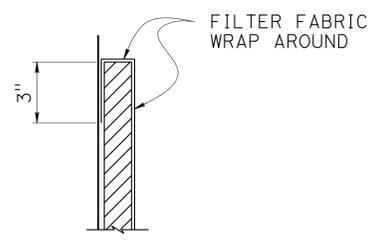
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



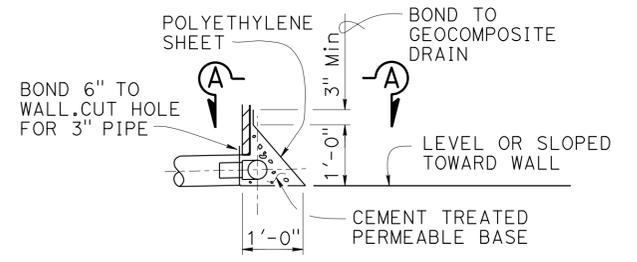
**WALL SECTION**



**SECTION A-A**



**DETAIL A**



**DETAIL B**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**

NO SCALE

NOTES:

- A. 4"  $\phi$  drains at intermediate sag points and at 25'-0" center to center. For walls adjacent to sidewalks or curbs, provide 4"  $\phi$  cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3"  $\pm$  above finished grade.
- B. Geocomposite drain, cement treated permeable base, and 3"  $\phi$  slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4"  $\phi$  drain.
- C. Connect the low end of plastic pipe to the main outlet pipe as applicable.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY P. Nguyen	CHECKED Daryoush Tavatli	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL SF3			
	DETAILS	BY Jaime Ramirez	CHECKED Daryoush Tavatli			RW SF3		RETAINING WALL DETAILS		
	QUANTITIES	BY Fred Fong	CHECKED Daryoush Tavatli			POST MILE 1.12				
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES				
				0	1	2	3	REVISION DATES	SHEET 2	OF 5

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:35

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1562	1622

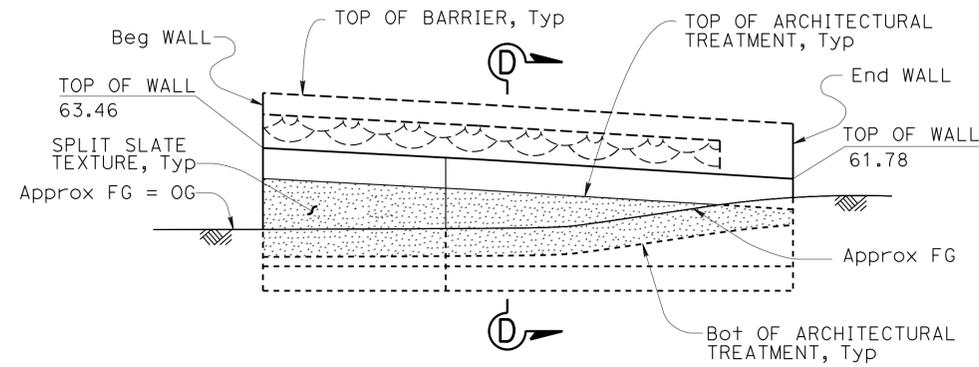
*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

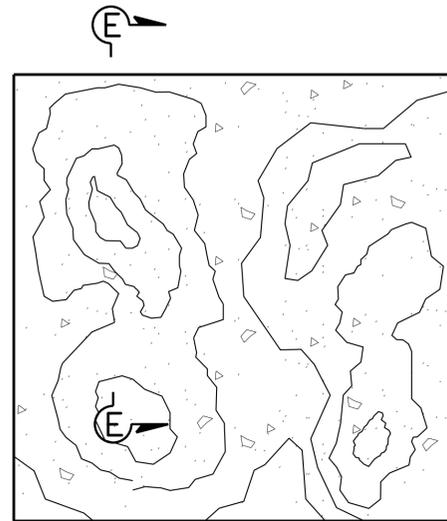
REGISTERED PROFESSIONAL ENGINEER  
 William D. Kemp  
 No. 55730  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

Note: All surface relief and texture shall be measured from RW LOL, Typ



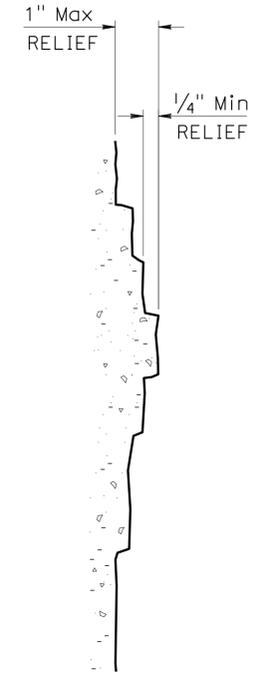
**DEVELOPED ELEVATION**

1" = 5'-0"



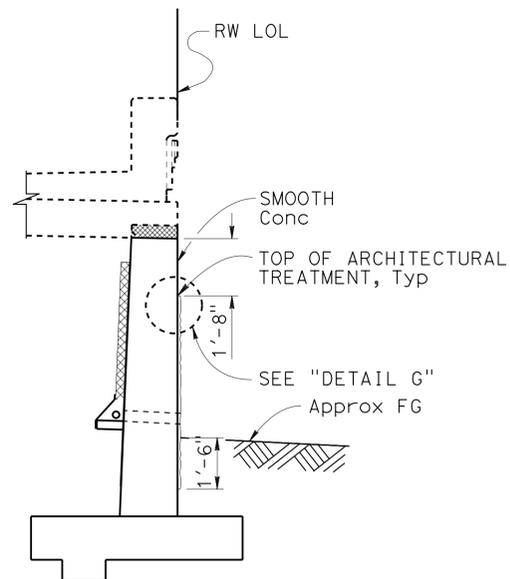
**SPLIT SLATE TEXTURE**

NO SCALE



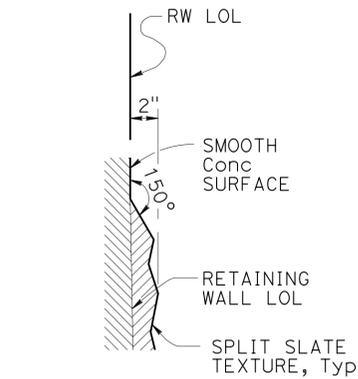
**SECTION E-E**

NO SCALE



**SECTION D-D**

3/8" = 1'-0"



**DETAIL G**

NO SCALE

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY H. Javier Chavez	CHECKED Issac Tasabia	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL SF3 ARCHITECTURAL TREATMENT DETAILS
	DETAILS	BY Jaime Ramirez	CHECKED Issac Tasabia			RW SF3	
	QUANTITIES	BY Fred Fong	CHECKED Daryoush Tavatli			POST MILE 1.12	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0	1	2	3
				REVISION DATES		SHEET 3	OF 5

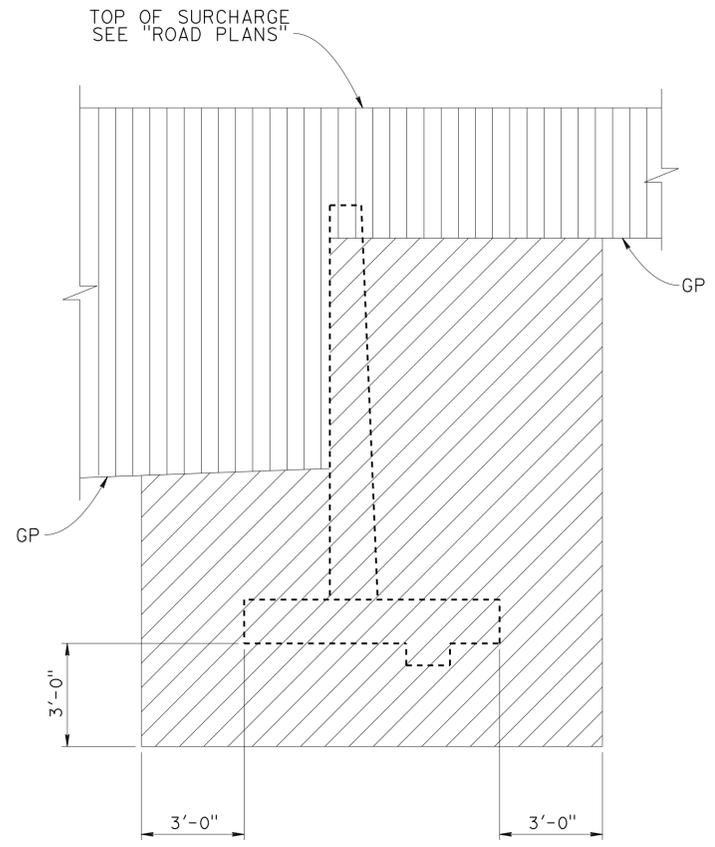
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1563	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

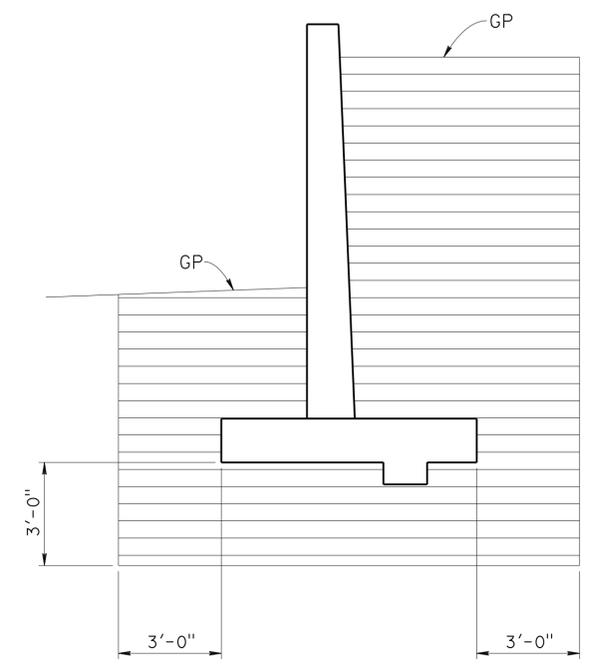
1-25-16  
 PLANS APPROVAL DATE

William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 CIVIL  
 STATE OF CALIFORNIA

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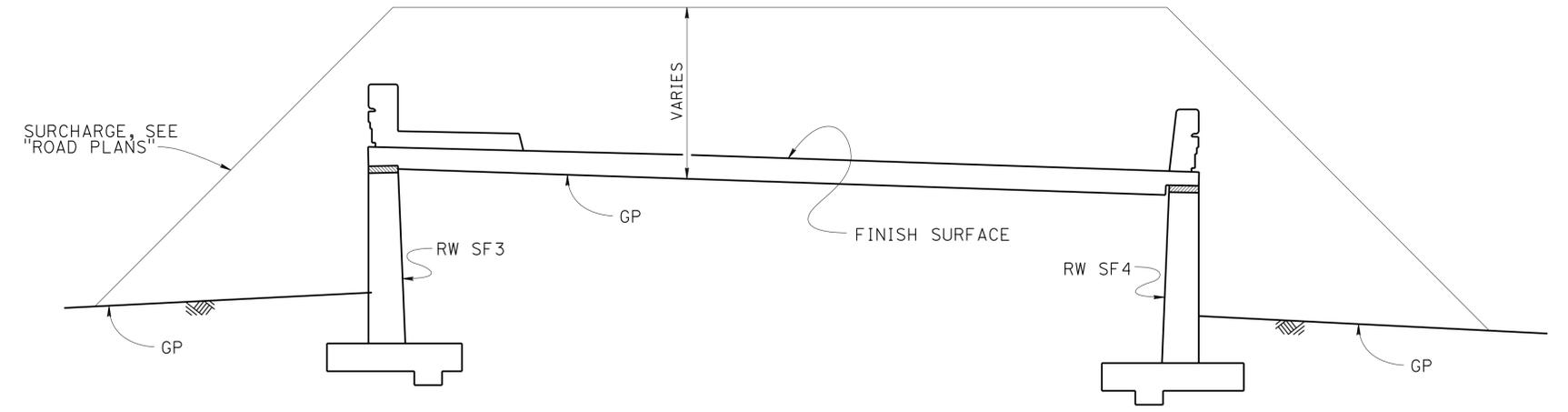
**EXCAVATION**



**BACKFILL**

- LEGEND:
- STRUCTURE EXCAVATION
  - ROADWAY EXCAVATION
  - STRUCTURE BACKFILL
  - GP - PLANNED GRADING PLANE

**LIMITS OF EXCAVATION AND BACKFILL**  
 NO SCALE



**EMBANKMENT SURCHARGE**  
 NO SCALE

DESIGN	BY Daryoush Tavatli	CHECKED Cipriano Manansala
DETAILS	BY Jaime Ramirez	CHECKED Daryoush Tavatli
QUANTITIES	BY Fred Fong	CHECKED Daryoush Tavatli

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

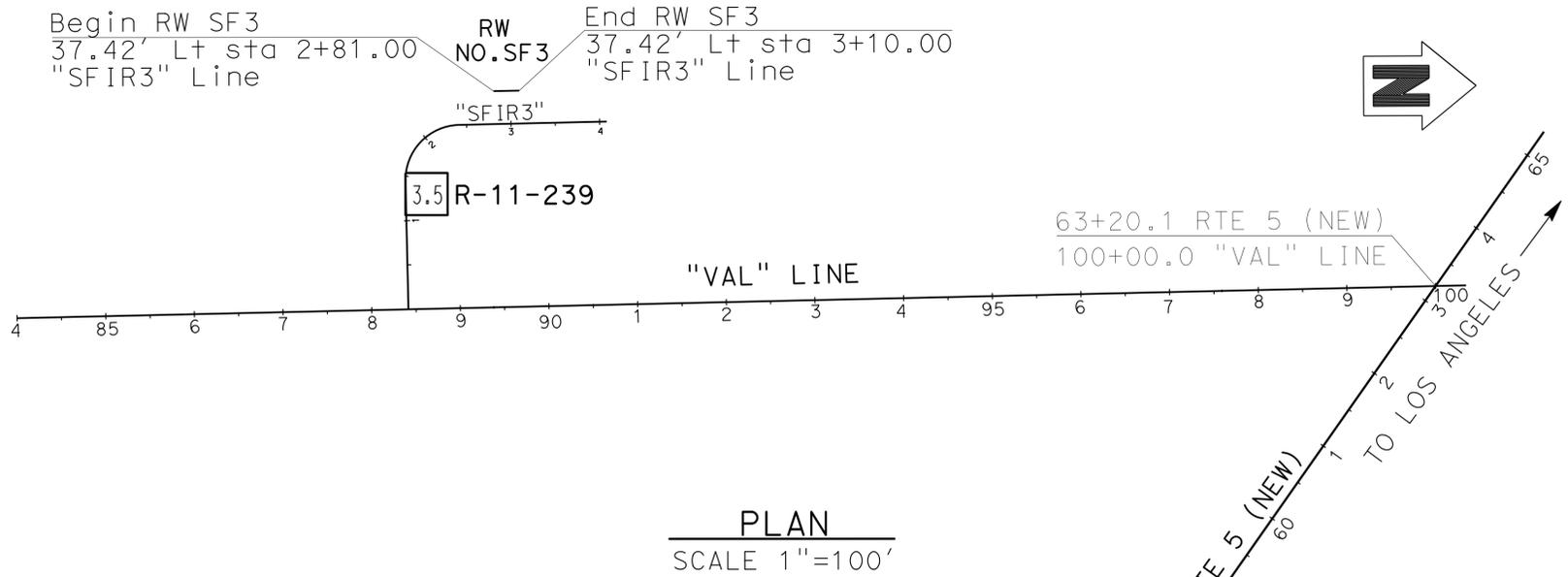
DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
 DESIGN BRANCH 11

BRIDGE NO.	RW SF3
POST MILE	1.12

**RETAINING WALL SF3**  
**LIMITS OF EXCAVATION AND BACKFILL**

**BENCH MARK**

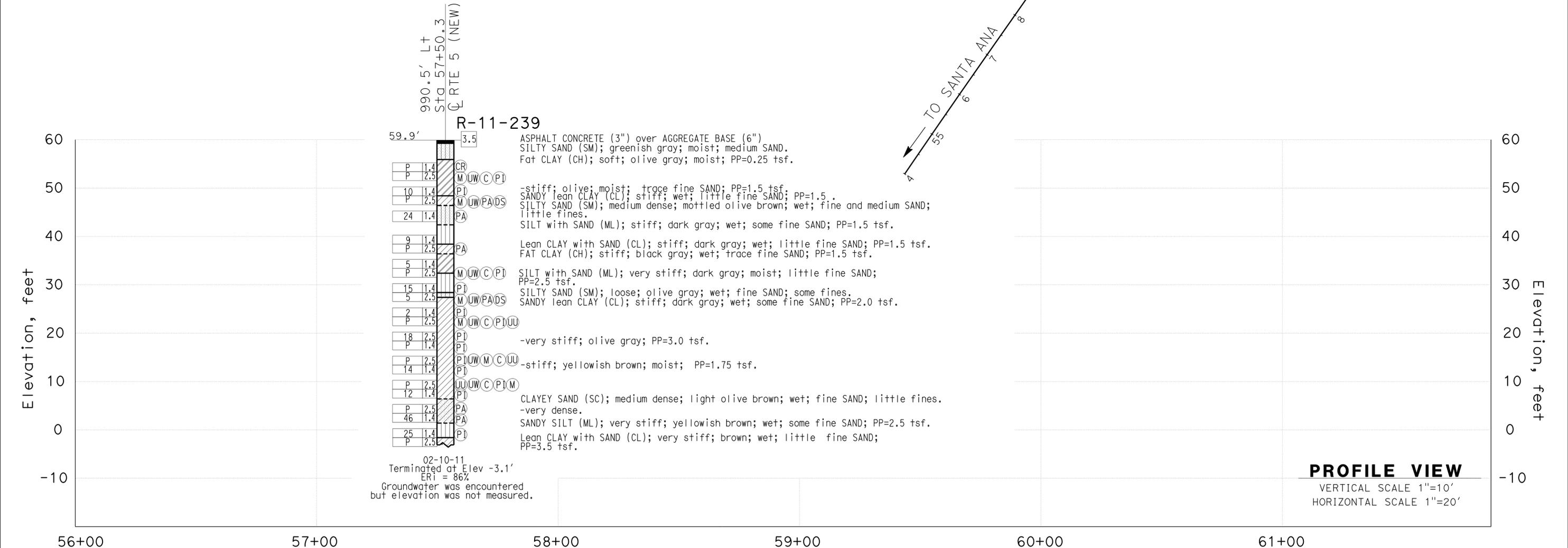
GPS 0887  
 ELEVATION 65.915 FT  
 FD 2-1/2 CADT DISK IN CONC. CURB  
 FLUSH, STAMPED "LA-5-1.0, 1995"  
 LOCATED 90' N OF THE SOUTH SIDE  
 FIRESTONE BLVD 0.2 MI SE OF VALLEY VIEW  
 NORTHING 542395.636  
 EASTING 1997613.893  
 DATUM NAVD88



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1564	1622

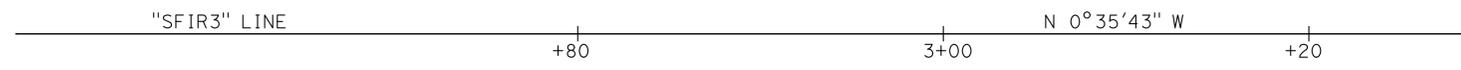
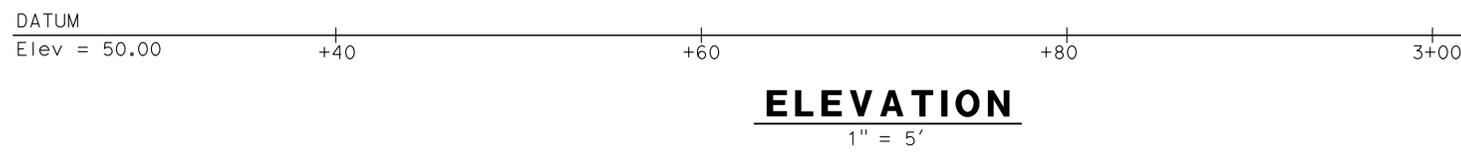
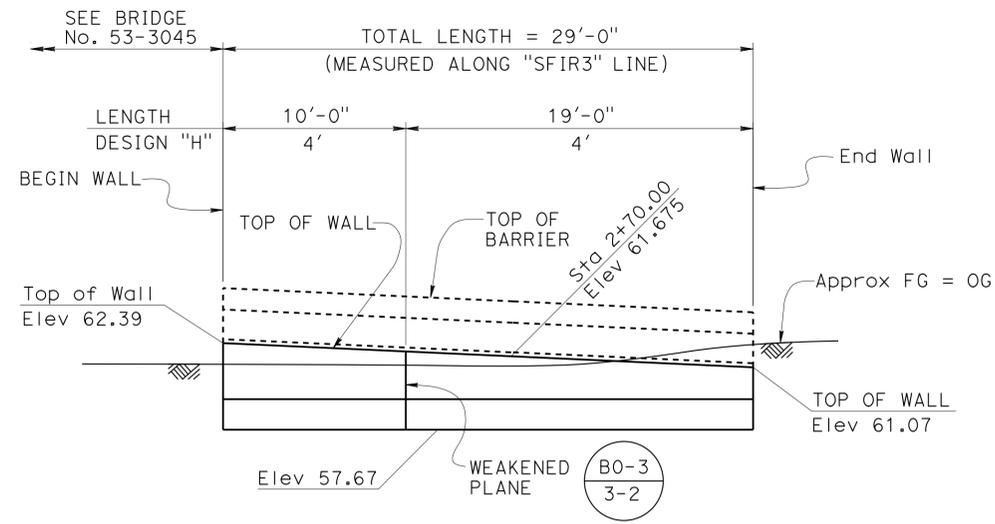
05/20/15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
 MICHAEL G. SMITH  
 No. 2229  
 EXP. 03/31/16  
 STATE OF CALIFORNIA  
 URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705  
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1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.5" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.



F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH CHECKED BY A.GHAZINOOR/L.KHALKHALI	L.LOEBUCK FIELD INVESTIGATION BY: DATE: 02/10/11	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. RW SF3 POST MILES 1.12	RETAINING WALL NO. SF3 LOG OF TEST BORINGS SHEET 1 OF 1
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: PROJECT NUMBER & PHASE: 07150001601	3658 CONTRACT NO.: 07-2159U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES 5/12/15 SHEET 5 OF 5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1565	1622
			REGISTERED CIVIL ENGINEER	DATE	
			1-25-16	PLANS APPROVAL DATE	
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QUANTITIES

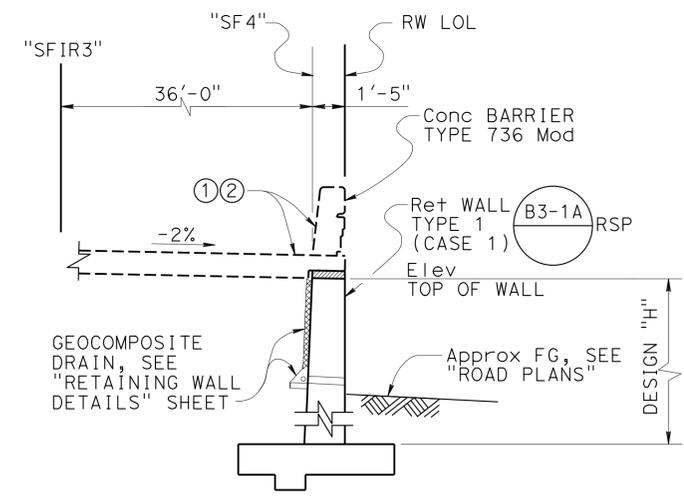
STRUCTURE EXCAVATION (RETAINING WALL)	93	CY
STRUCTURE BACKFILL (RETAINING WALL)	79	CY
STRUCTURAL CONCRETE, RETAINING WALL	14	CY
BAR REINFORCING STEEL (RETAINING WALL)	1,840	LB

**STANDARD PLANS DATED MAY 2010**

RSP A10A	ABBREVIATIONS (SHEET 1 OF 2)
A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
RSP A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL- BRIDGE SURCHARGE AND WALL BRIDGE DETAILS
RSP B3-1A	RETAINING WALL TYPE 1 (Case 1)
RSP B3-5	RETAINING WALL DETAILS NO. 1
RSP B11-54	CONCRETE BARRIER TYPE 26

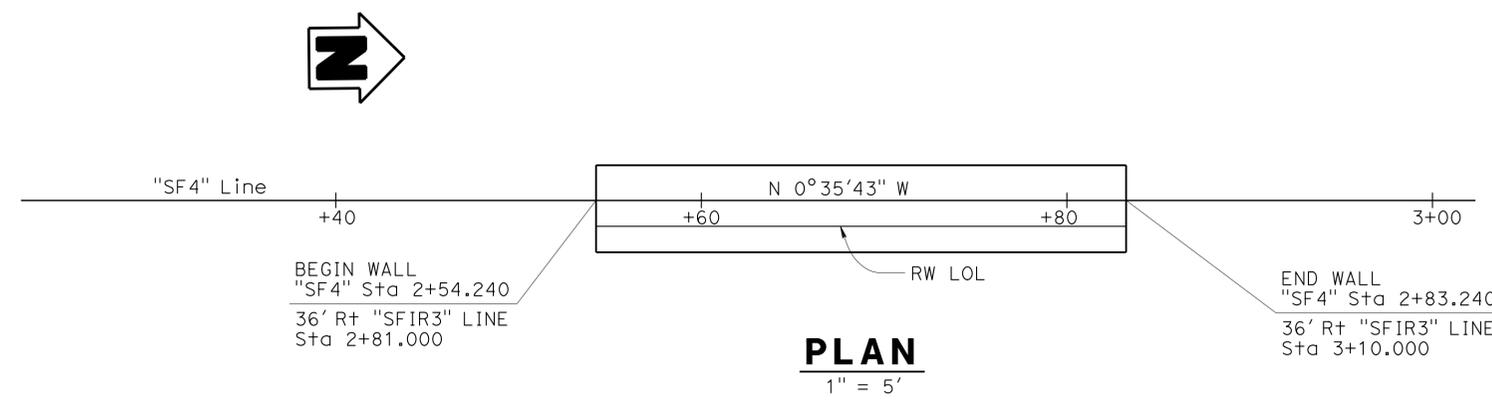
**INDEX TO PLANS**

Sheet No.	Title
1	GENERAL PLAN
2	RETAINING WALL DETAILS
3	ARCHITECTURAL TREATMENT DETAILS
4	LIMITS OF EXCAVATION AND BACKFILL
5	LOG OF TEST BORINGS SHEET 1 OF 1



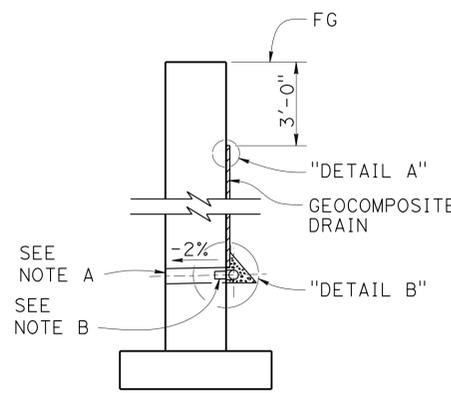
**TYPICAL SECTION AT STRUCTURAL APPROACH**

- NOTES:
- Match face to concrete barrier Type 26 Mod at Bridge No. 53-3045 "VALLEY VIEW AVE OH/OC (REPLACEMENT)"
  - Approach slab and concrete barrier rail Type 26 Mod, see Bridge No. 53-3045 "VALLEY VIEW AVE OH/OC (REPLACEMENT)"

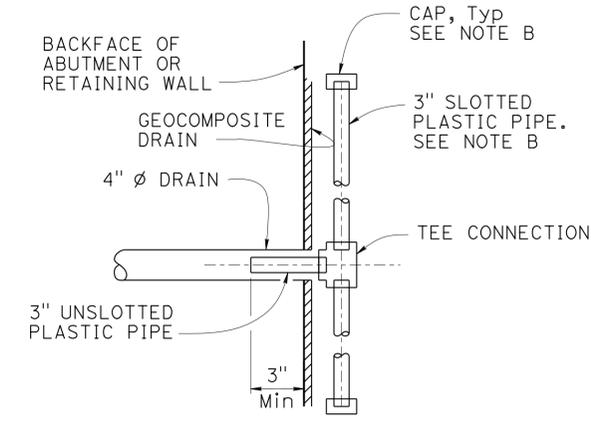


Ramin Rashedi 3-18-15 DESIGN ENGINEER	DESIGN	BY Daryoush Tavatli	CHECKED Cipriano Manansala	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 11</b>	BRIDGE NO.	<b>RETAINING WALL SF4</b> <b>GENERAL PLAN</b>
	DETAILS	BY Jaime Ramirez	CHECKED Cipriano Manansala	LAYOUT	BY Daryoush Tavatli			CHECKED Cipriano Manansala	
	QUANTITIES	BY Fred Fong	CHECKED Daryoush Tavatli	SPECIFICATIONS	BY Xiahong Li	CHECKED Xiahong Li	POST MILE	1.10	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1		CONTRACT NO.: 07-2159u4	
DISREGARD PRINTS BEARING EARLIER REVISION DATES								REVISION DATES 8-12-11 7/25/13 07-19-12 5-28-13	SHEET 1 OF 5

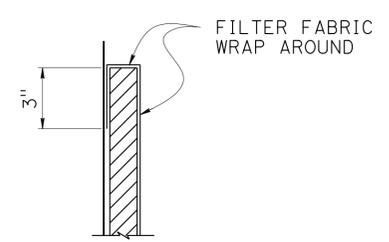
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Orca	5	0.0/1.5, 44.3/44.4	1566	1622
			3-18-15	DATE	
			1-25-16	PLANS APPROVAL DATE	
REGISTERED CIVIL ENGINEER William D. Kemp No. 55730 Exp 12-31-16 CIVIL STATE OF CALIFORNIA					
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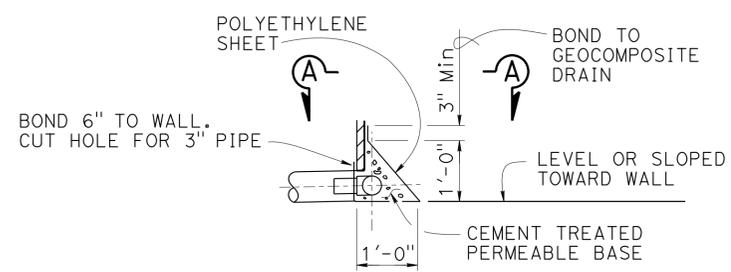
**WALL SECTION**



**SECTION A-A**



**DETAIL A**



**DETAIL B**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**  
NO SCALE

NOTES:

- A. 4" Ø drains at intermediate sag points and at 25'-0" center to center. For walls adjacent to sidewalks or curbs, provide 4" Ø cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3" ± above finished grade.
- B. Geocomposite drain, cement treated permeable base, and 3" Ø slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Ø drain.
- C. Connect the low end of plastic pipe to the main outlet pipe as applicable.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY P. Nguyen	CHECKED Daryoush Tavatli	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 11</b>	BRIDGE NO.	<b>RETAINING WALL SF4</b> <b>RETAINING WALL DETAILS</b>
	DETAILS	BY T. Bittermann	CHECKED Daryoush Tavatli			RW SF4	
	QUANTITIES	BY Fred Fong	CHECKED Daryoush Tavatli			POST MILE 1.10	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3587	PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 7-18-11, 07-18-12, 3-28-13, 7-25-13 SHEET 2 OF 5

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:35

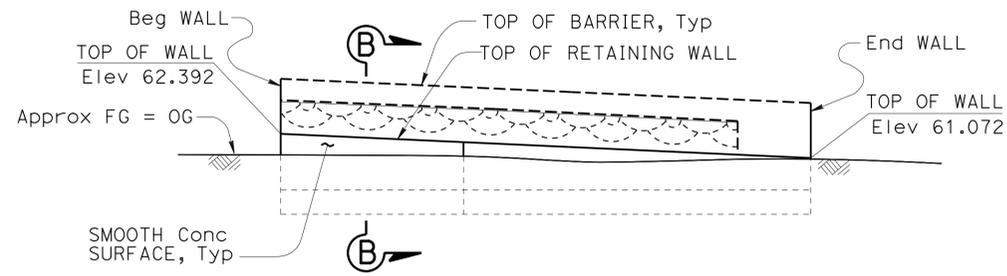
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1567	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

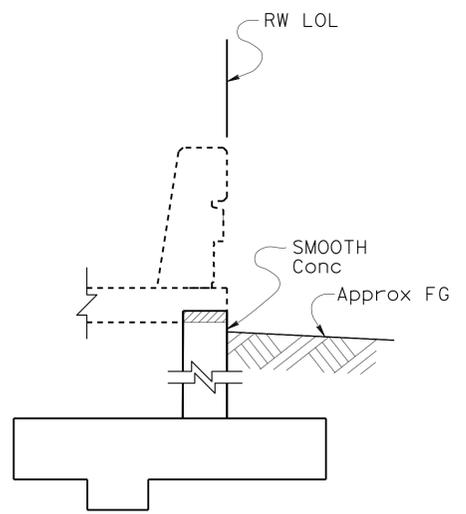
William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 CIVIL  
 STATE OF CALIFORNIA

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**ELEVATION**  
1" = 5'-0"

Note: All surface relief and texture shall be measured from RW LOL, Typ



**SECTION B-B**  
1/2" = 1'-0"

DESIGN	BY H. Javier Chavez	CHECKED Issac Tasabia
DETAILS	BY Jaime Ramirez	CHECKED Issac Tasabia
QUANTITIES	BY Fred Fong	CHECKED Daryoush Tavatli

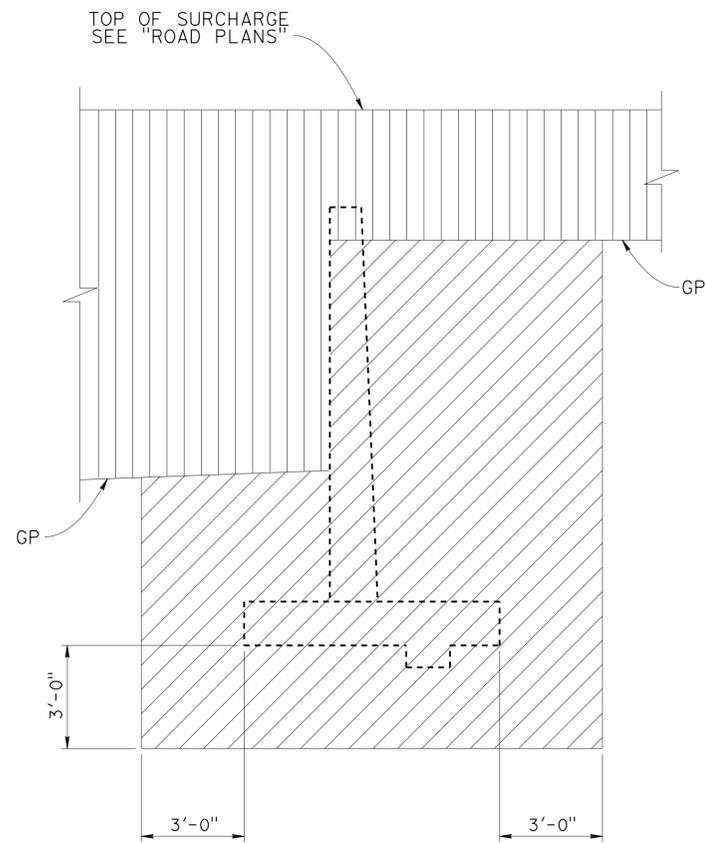
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

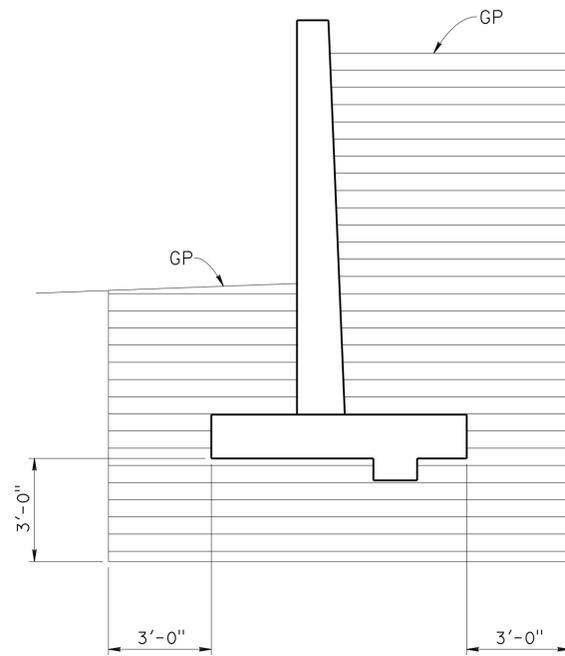
BRIDGE NO.	RW SF4
POST MILE	1.10

RETAINING WALL SF4  
ARCHITECTURAL TREATMENT DETAILS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1568	1622
			3-18-15		
REGISTERED CIVIL ENGINEER			DATE		
1-25-16			PLANS APPROVAL DATE		
			REGISTERED PROFESSIONAL ENGINEER William D. Kemp No. 55730 Exp. 12/31/16 CIVIL STATE OF CALIFORNIA		
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**EXCAVATION**



**BACKFILL**

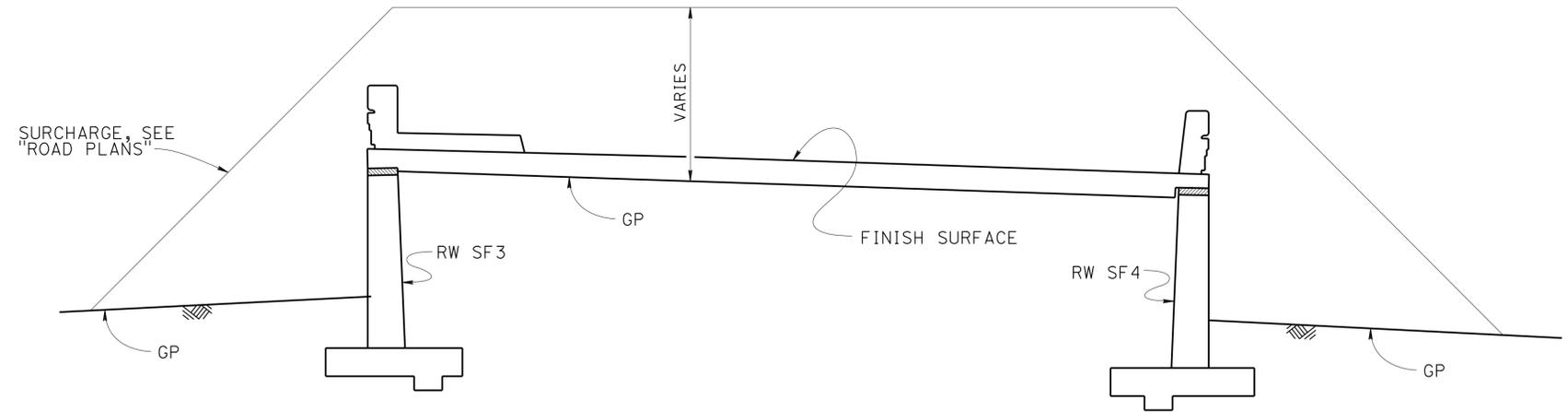
LEGEND:

-  STRUCTURE EXCAVATION
-  ROADWAY EXCAVATION
-  STRUCTURE BACKFILL

GP - PLANNED GRADING PLANE

**LIMITS OF EXCAVATION AND BACKFILL**

NO SCALE



**EMBANKMENT SURCHARGE**

NO SCALE

DESIGN	BY Daryoush Tavatli	CHECKED B. Kemp
DETAILS	BY Jaime Ramirez	CHECKED B. Kemp
QUANTITIES	BY Fred Fong	CHECKED Daryoush Tavatli

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

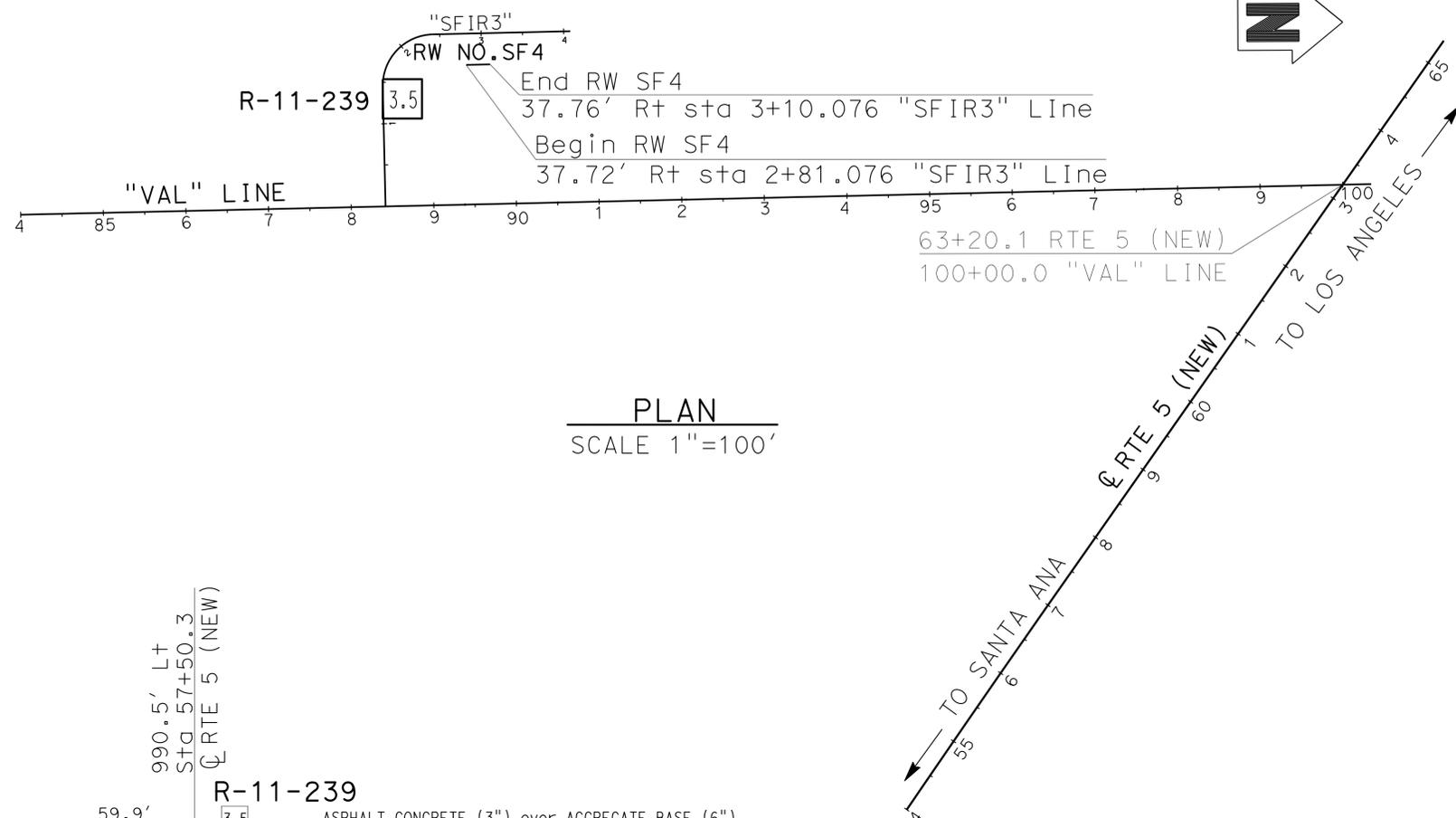
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	RW SF4
POST MILE	1.10

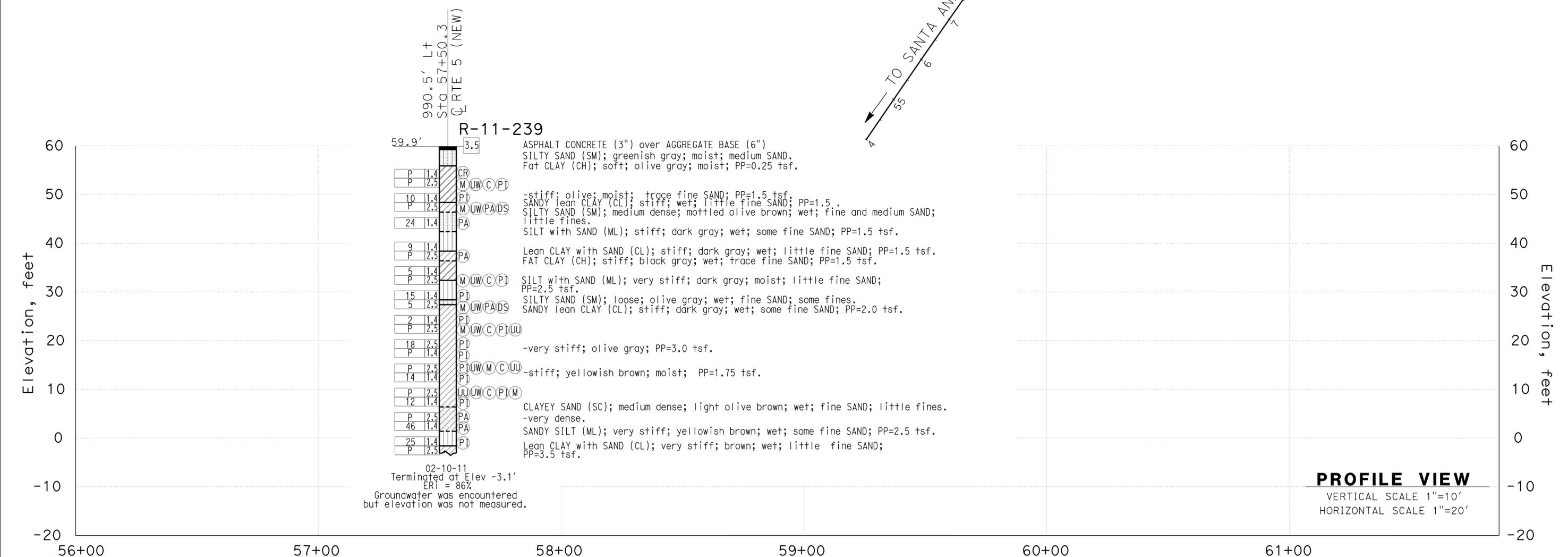
RETAINING WALL SF4  
LIMITS OF EXCAVATION AND BACKFILL

**BENCH MARK**

GPS 0887  
 ELEVATION 65.915 FT  
 FD 2-1/2 CADT DISK IN CONC. CURB  
 FLUSH, STAMPED "LA-5-1.0, 1995"  
 LOCATED 90' N OF THE SOUTH SIDE  
 FIRESTONE BLVD 0.2 MI SE OF VALLEY VIEW  
 NORTHING 542395.636  
 EASTING 1997613.893  
 DATUM NAVD88



**PLAN**  
 SCALE 1"=100'



**PROFILE VIEW**

VERTICAL SCALE 1"=10'  
 HORIZONTAL SCALE 1"=20'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1569	1622

05/20/15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

MICHAEL G. SMITH  
 No. 2229  
 Exp. 03/31/16  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 GEOTECHNICAL

URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.5" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.

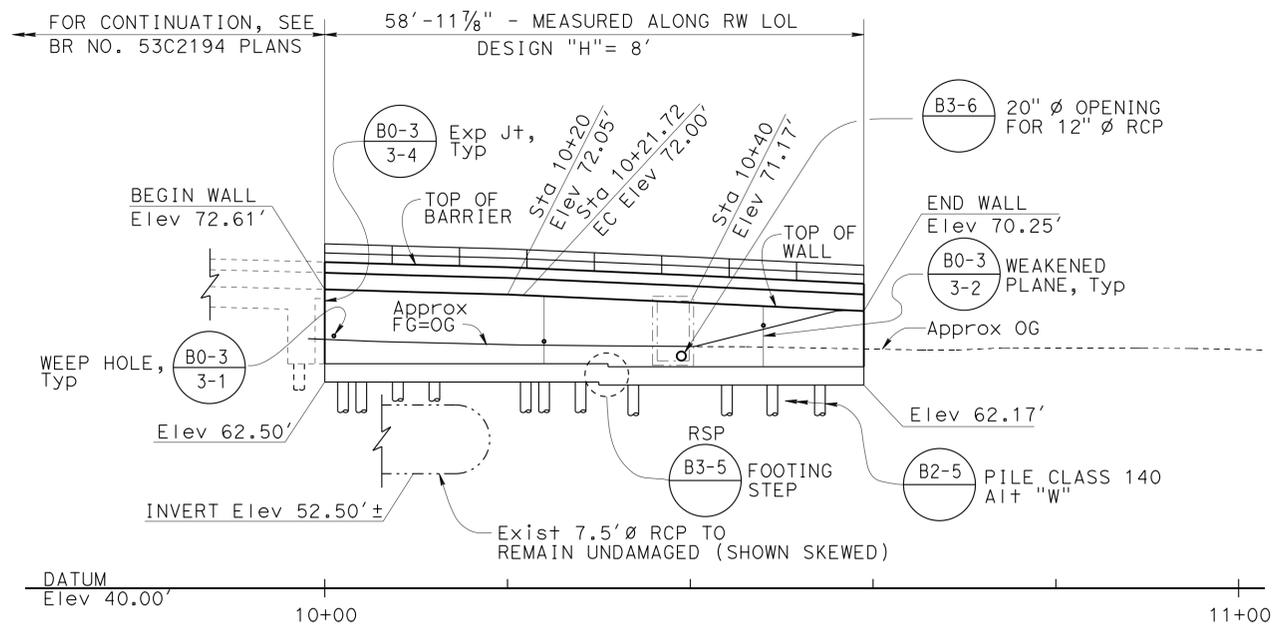
F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH	L.LOEBUCK FIELD INVESTIGATION BY: DATE: 02/10/11	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. RW SF4 POST MILES 1.10	<b>RETAINING WALL NO. SF4</b> <b>LOG OF TEST BORINGS SHEET 1 OF 1</b>
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	3658 CONTRACT NO.: 07-2159U4	REVISION DATES 5/12/15

DISREGARD PRINTS BEARING EARLIER REVISION DATES

FILE => rwsf4-j-1otb.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1570	1622

3-18-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
 Daryoush Tavatli  
 No. 56183  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



**DEVELOPED ELEVATION**  
1" = 10'-0"

- NOTES:
- Match Face to Concrete Barrier Type 26 Mod at Bridge No. 53C2194
  - Curb Type A2-8, see "ROAD PLANS"
  - Existing Culvert location shown is approximate. Contractor shall verify field location.
  - For Drainage Detail and location of 20" Ø RCP, see "ROAD PLANS".

**INDEX TO PLANS**

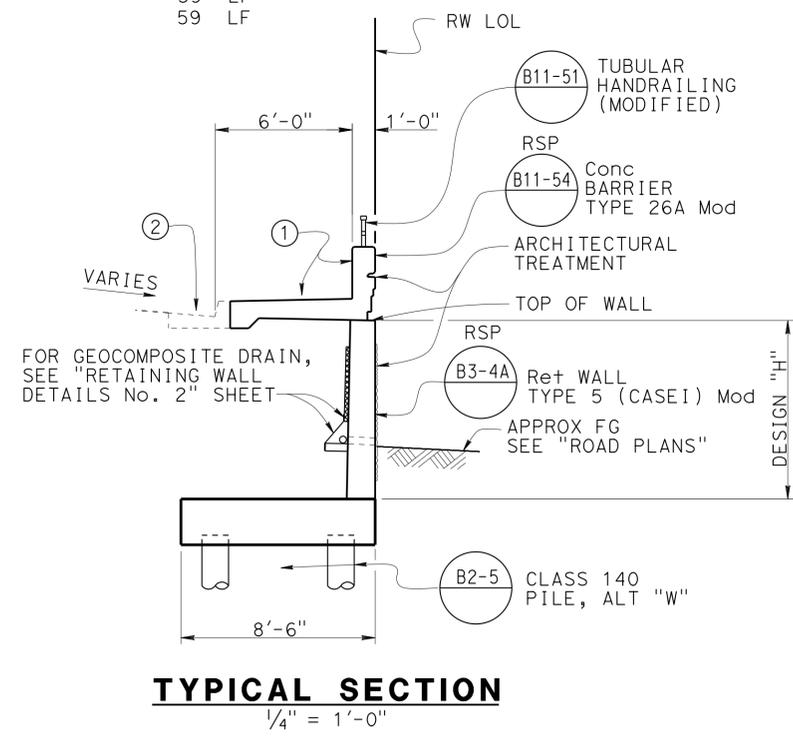
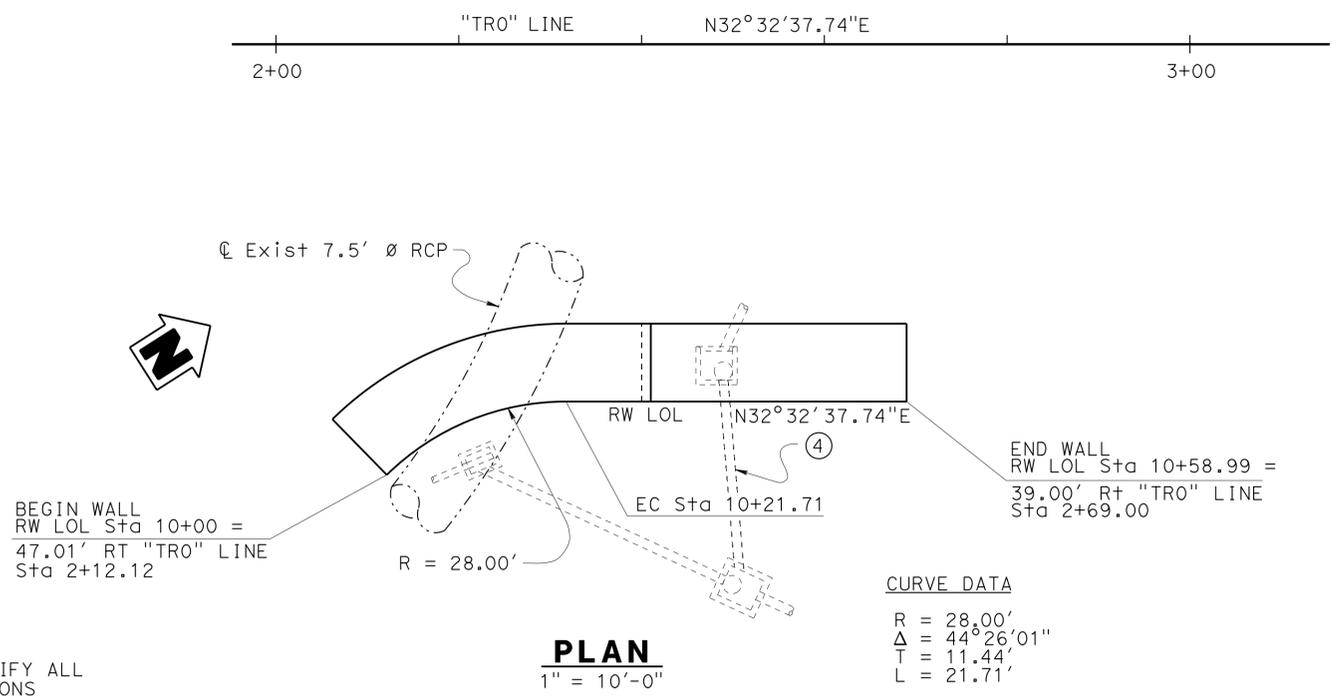
SHEET No.	TITLE
1	GENERAL PLAN
2	RETAINING WALL DETAILS No. 1
3	RETAINING WALL DETAILS No. 2
4	ARCHITECTURAL TREATMENT DETAILS
5	BARRIER MOTIF DETAILS
6	LOG OF TEST BORINGS SHEET 1 OF 1

**STANDARD PLANS DATED MAY 2010**

A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINE AND SYMBOLS (SHEET 1 OF 3)
A10D	LINE AND SYMBOLS (SHEET 2 OF 3)
A10E	LINE AND SYMBOLS (SHEET 3 OF 3)
RSP A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL- BRIDGE SURCHARGE AND WALL
B0-3	BRIDGE DETAILS
B2-5	PILE DETAILS CLASS 90 AND CLASS 140
RSP B3-4A	RETAINING WALL TYPE 5 (CASE 1)
RSP B3-5	RETAINING WALL DETAILS NO. 1
B3-6	RETAINING WALL DETAILS NO. 2
RSP B11-54	CONCRETE BARRIER TYPE 26

QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	375	CY
STRUCTURE BACKFILL (RETAINING WALL)	325	CY
FURNISH PILING (CLASS 140) (ALTERNATIVE W)	666	LF
DRIVE PILE (CLASS 140) (ALTERNATIVE W)	16	EA
STRUCTURAL CONCRETE, RETAINING WALL	56	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	290	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	11,820	LB
TUBULAR HANDRAILING (MODIFIED)	59	LF
CONCRETE BARRIER (TYPE 26A MODIFIED)	59	LF



**TYPICAL SECTION**  
1/4" = 1'-0"

NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

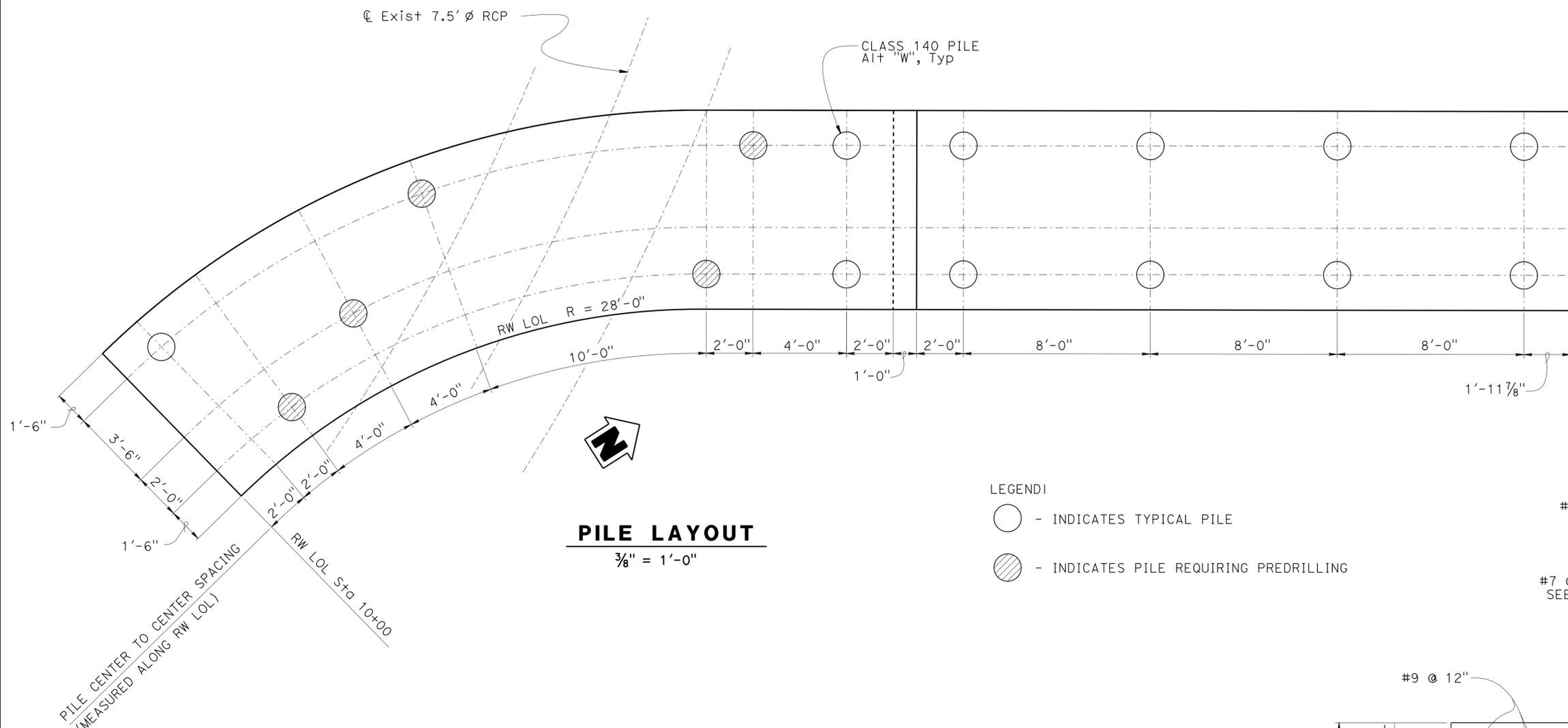
DESIGN	BY Yeo Yoon	CHECKED D. Tavatli/R. Wilson	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL TR3 GENERAL PLAN	
DETAILS	BY Pauline Tong	CHECKED D. Tavatli/R. Wilson	LAYOUT	BY Yeo Yoon			CHECKED Daryoush Tavatli		53E0250
QUANTITIES	BY Daryoush Tavatli	CHECKED Christine Chan	SPECIFICATIONS	BY X. Li			PLANS AND SPECS COMPARED X. Li		POST MILE 0.35

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS  
 0 1 2 3  
 UNIT: 3587  
 PROJECT NUMBER & PHASE: 0715000160-1  
 CONTRACT NO.: 07-2159u4  
 DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 REVISION DATES: 10-19-11, 8-13-13, 5-8-15, 1-26-15  
 SHEET 1 OF 6  
 USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:36  
 FILE => rwtr03-g-gp.dgn

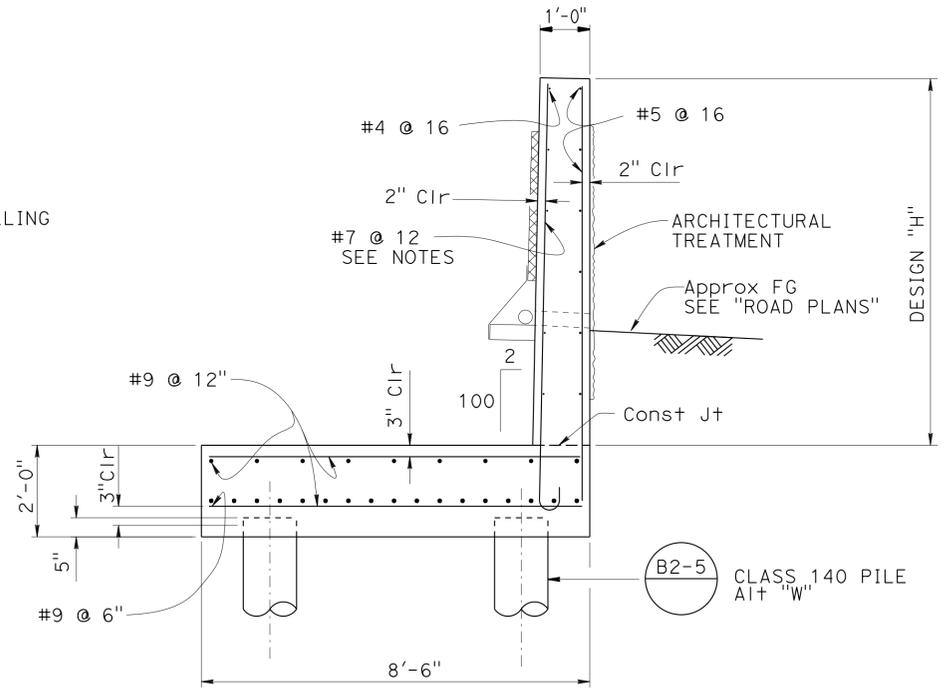
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1571	1622

REGISTERED CIVIL ENGINEER: Daryoush Tavatli  
 DATE: 3-18-15  
 PLANS APPROVAL DATE: 1-25-16  
 No. 56183  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

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**PILE LAYOUT**  
3/8" = 1'-0"



**RETAINING WALL TYPE 5 (CASE 1) MOD**  
1/2" = 1'-0"

PILE TYPE	NOMINAL RESISTANCE (kips)		CUT-OFF Elev (ft)	DESIGN TIP ELEV (ft)	SPECIFIED TIP ELEV (ft)	NOMINAL DRIVING RESISTANCE (kips)
	COMPRESSION	TENSION				
CLASS 140 A1+ "W"	150	10	62.59 & 62.92	24(a) 15(a)* 57(b) 45(b)* 37(c) 32(c)* 42(d) 42(d)	24 15*	150

- NOTES:
- Design Tip Elevations is controlled by: (a) Compression (b) Tension (c) Settlement (d) Lateral Load.
  - The specific tip elevation shall not be raised above the design tip elevation Tension, Settlement, and Lateral Load.
  - Holes of the piles requiring predrilling should be predrilled to Elev 47.0.
  - \* indicates Tip Elevations of the piles requiring predrilling.

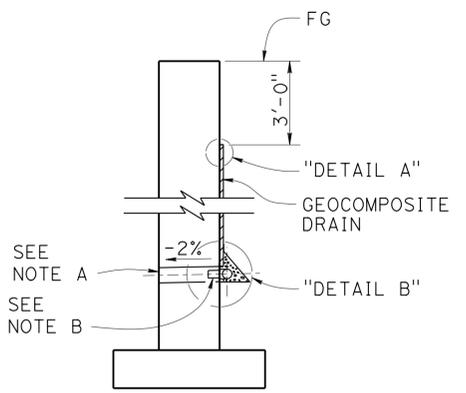
- NOTES:
- No splices are allowed within "H"/4 above the top of footing.
  - Provide #6 @ 8" bars in addition to #7 bars over a distance of 8'-0" measured from all expansion joints, begin wall and end wall locations.

DESIGN BY: Yeo Yoon CHECKED: Daryoush Tavatli DETAILS BY: Loren Goldthwait CHECKED: Daryoush Tavatli QUANTITIES BY: Daryoush Tavatli CHECKED: Christine Chan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO. 53E0250	<b>RETAINING WALL TR3</b> <b>RETAINING WALL DETAILS NO.1</b>
			POST MILE 0.35	
			UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1 CONTRACT NO.: 07-2159u4	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	
0 1 2 3			DISREGARD PRINTS BEARING EARLIER REVISION DATES	
FILE => rwt03-b-retdt1.dgn			REVISION DATES: 09-26-11, 1-08-13, 05-26-13, 07-26-13 SHEET 2 OF 6	

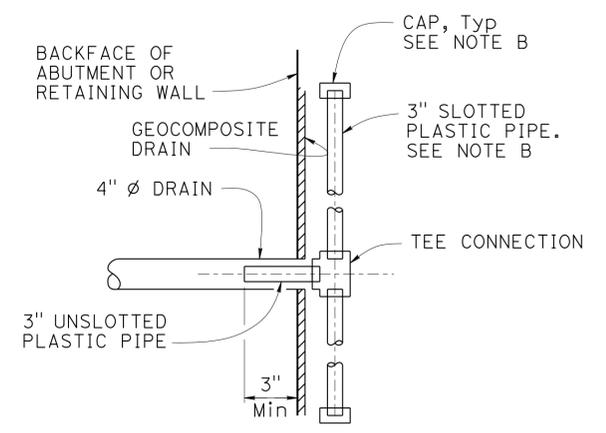
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1572	1622

3-18-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
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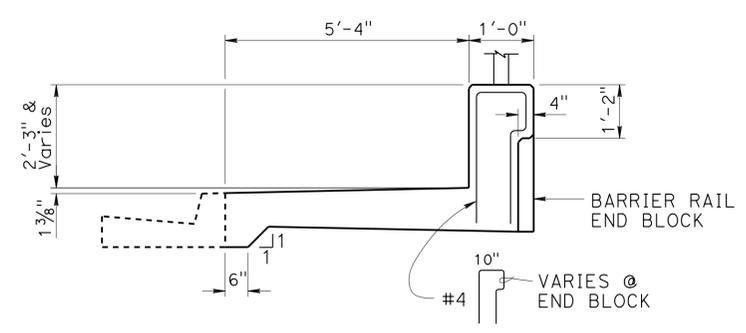
REGISTERED PROFESSIONAL ENGINEER  
 Daryoush Tavatli  
 No. 56183  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA



**WALL SECTION**

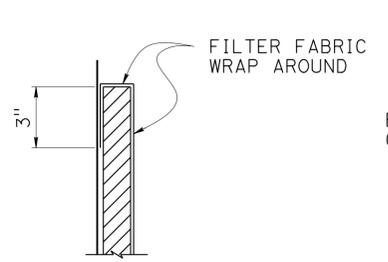


**SECTION A-A**

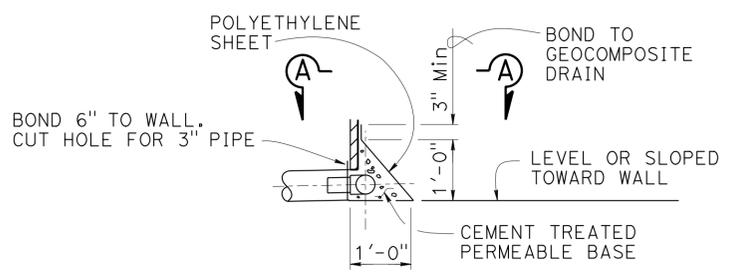


**BARRIER RAIL TYPE 26A MOD**

NOTE: For details and reinforcement not shown see RSP B11-54



**DETAIL A**



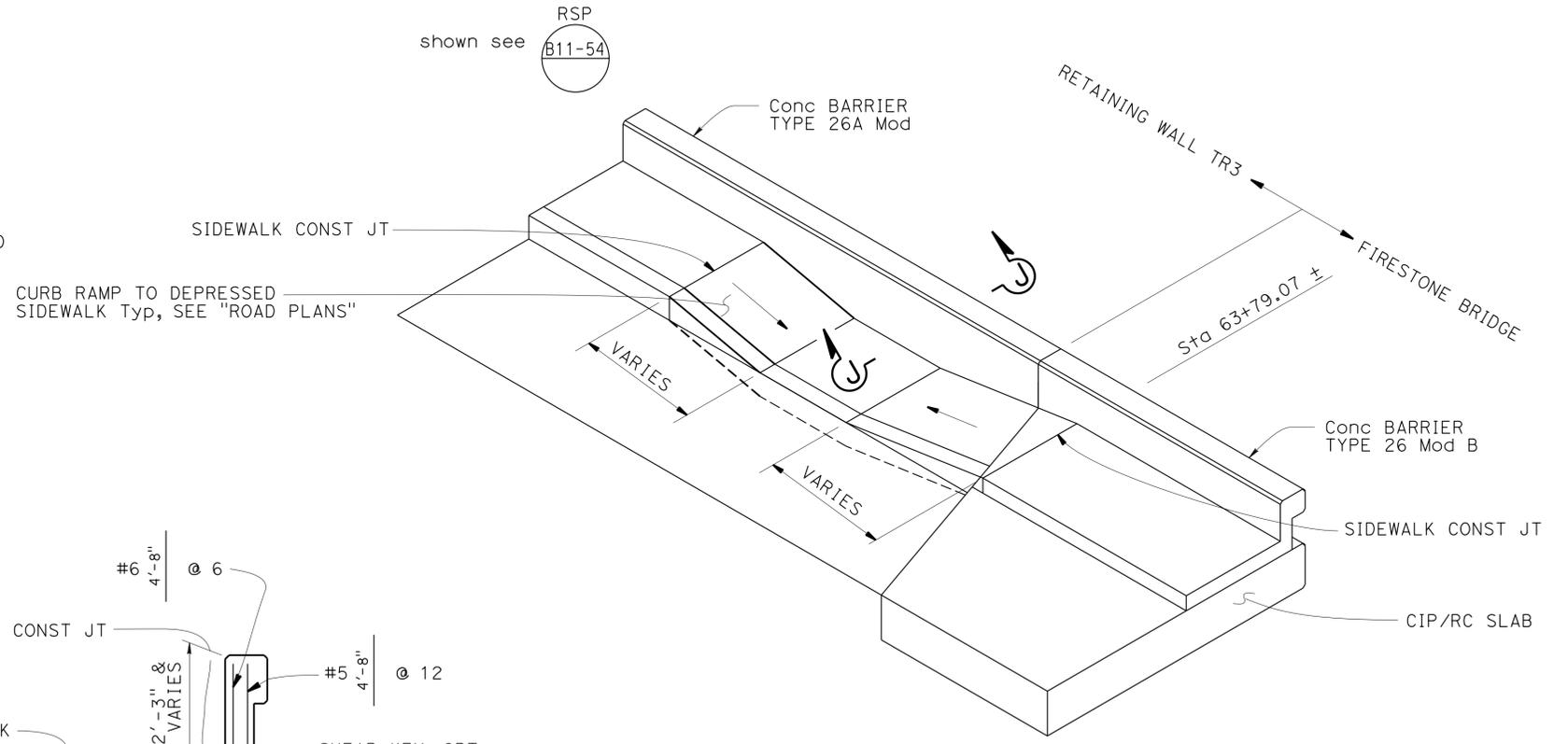
**DETAIL B**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**

NO SCALE

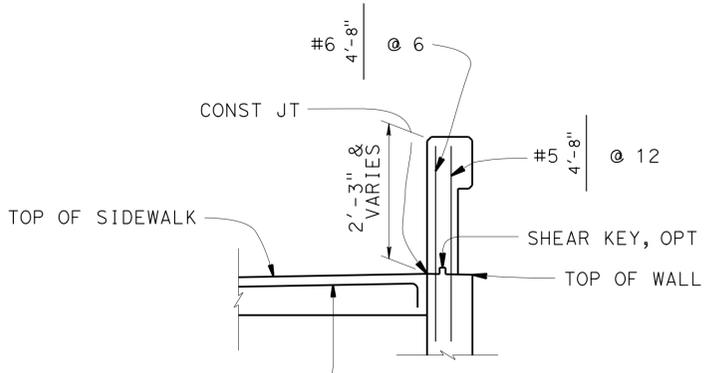
NOTES: (GEOCOMPOSITE DRAIN)

- A. 4" Ø drains at intermediate sag points and at 25'-0" center to center. For walls adjacent to sidewalks or curbs, provide 4" Ø cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3" ± above finished grade.
- B. Geocomposite drain, cement treated permeable base, and 3" Ø slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Ø drain.
- C. Connect the low end of plastic pipe to the main outlet pipe as applicable.



**SIDEWALK CURB RAMP DETAIL**

NO SCALE



**SECTION J-J**

- NOTES:
1. APPLY DETAIL FROM BEGIN WALL TO SIDEWALK CONSTRUCTION JOINT
  2. ALL HORIZONTAL REINFORCING STEELS MUST BE CONTINUOUS, NO SPLICING ALLOWED WHERE THIS DETAIL APPLIES PLUS A DISTANCE OF 1'-0" BEYOND SIDEWALK CONSTRUCTION JOINT

DESIGN	BY	Yeo Yoon	CHECKED	Daryoush Tavatli	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	53E0250	RETAINING WALL TR3 RETAINING WALL DETAILS NO.2						
	DETAILS	BY	Stan Cholda	CHECKED			Daryoush Tavatli	POST MILE		0.35					
QUANTITIES	BY	Daryoush Tavatli	CHECKED	Christine Chan	UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET	OF				
										06-27-12	3-28-13	07-26-13	1-10-15	3	6

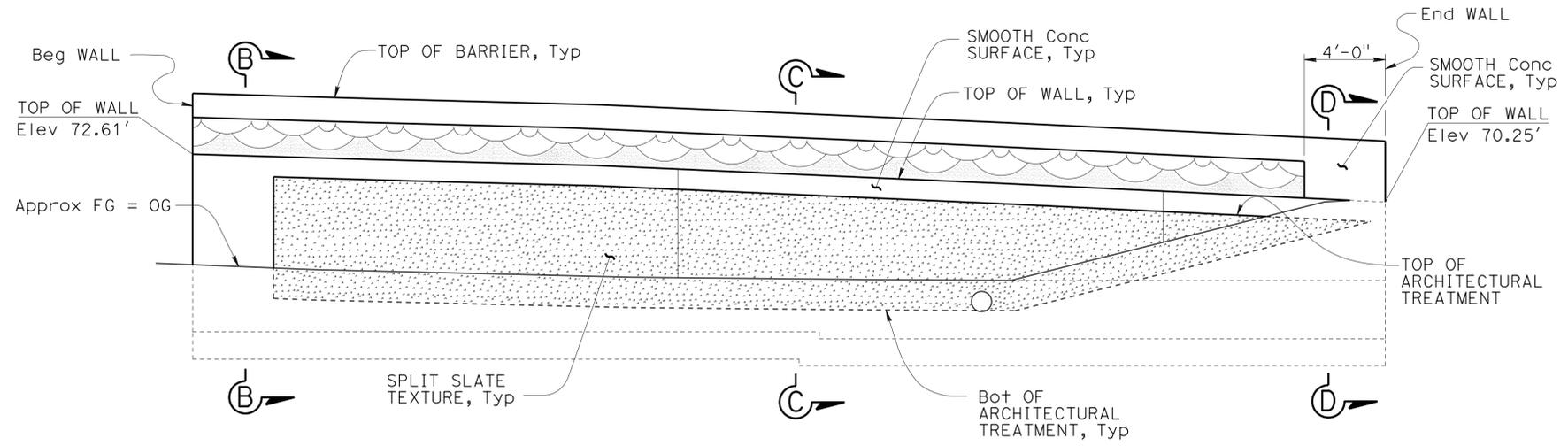
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

FILE => rwt03-b-ret+d+2.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1573	1622

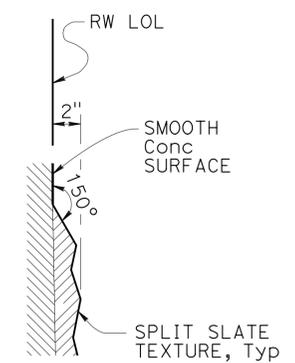
REGISTERED CIVIL ENGINEER: Daryoush Tavatli  
 No. 56183  
 Exp. 12-31-16  
 DATE: 3-18-15  
 PLANS APPROVAL DATE: 1-25-16

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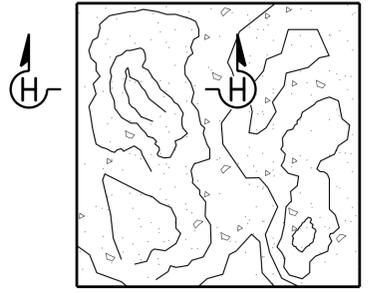


**ELEVATION**  
1/4" = 1'-0"

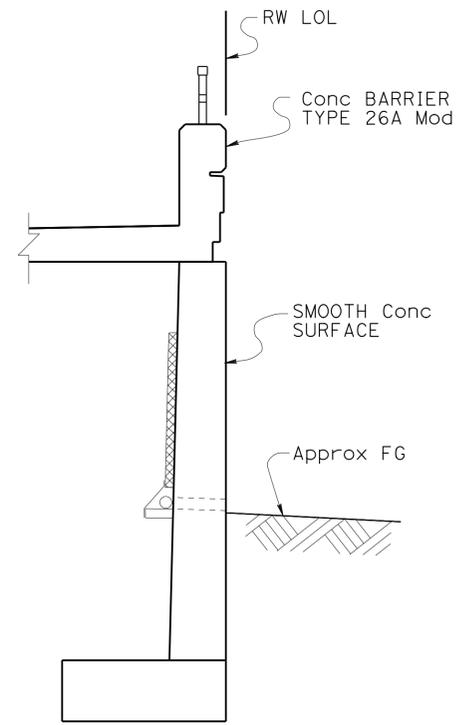
Note: All surface relief and texture shall be measured from RW LOL, Typ



**DETAIL C**  
NO SCALE

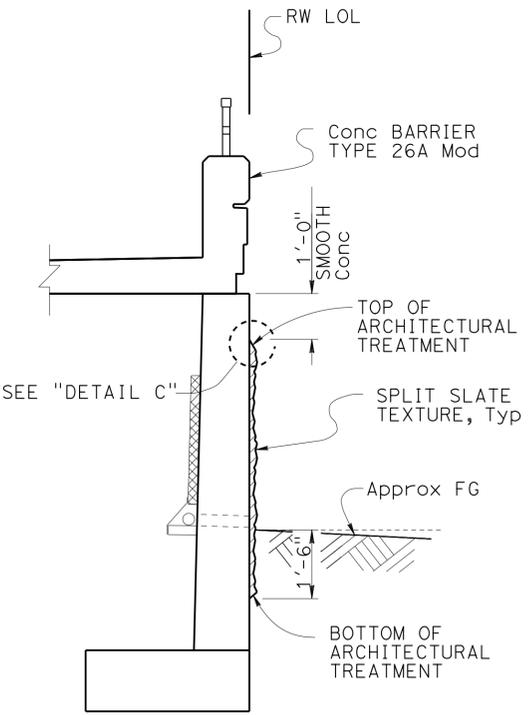


**SPLIT SLATE TEXTURE**  
NO SCALE

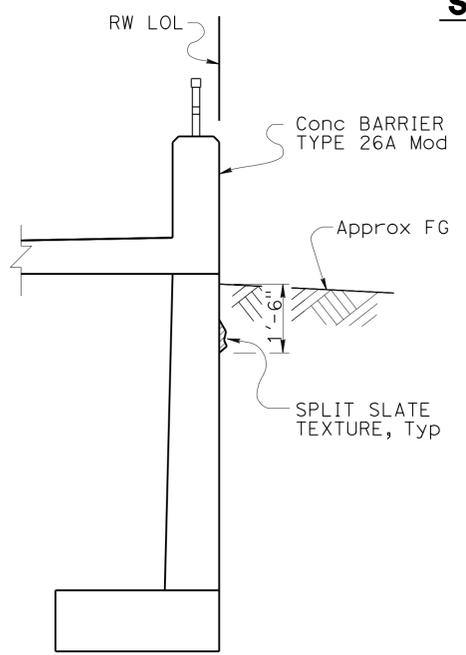


**SECTION B-B**  
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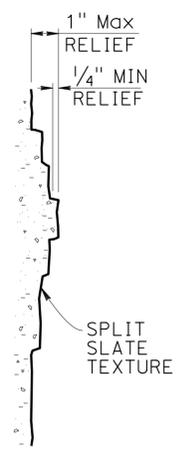
NOTE: Piles not shown



**SECTION C-C**  
NO SCALE



**SECTION D-D**  
NO SCALE

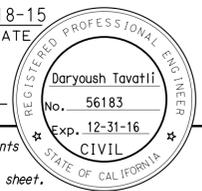


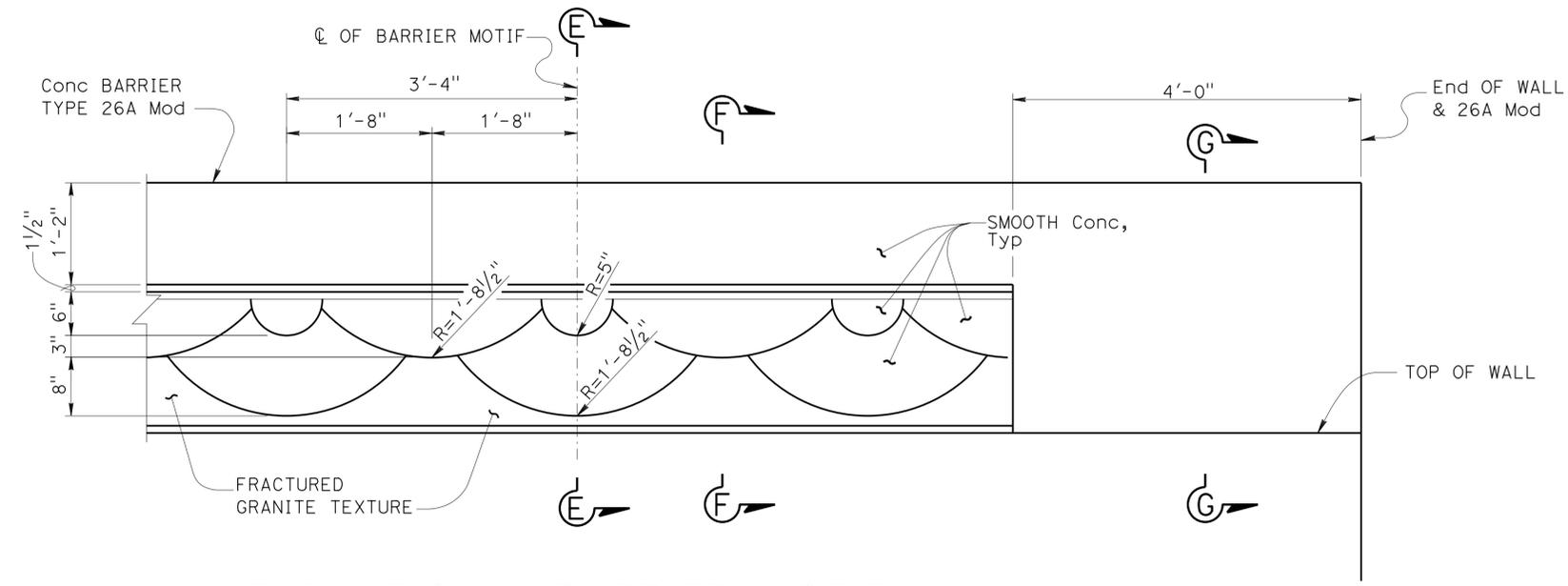
**SECTION H-H**  
NO SCALE

DESIGN BY: H. Javier Chavez CHECKED: Issac Tasabia DETAILS BY: Anthony Valdez CHECKED: Issac Tasabia QUANTITIES BY: Daryoush Tavatli CHECKED: Christine Chan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	<b>RETAINING WALL TR3</b> <b>ARCHITECTURAL TREATMENT DETAILS</b>
			53E0250	
			POST MILE	
0.35	UNIT: 3587	PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 09-18-12, 1-08-13, 3-28-13, 7-28-13 SHEET 4 OF 6

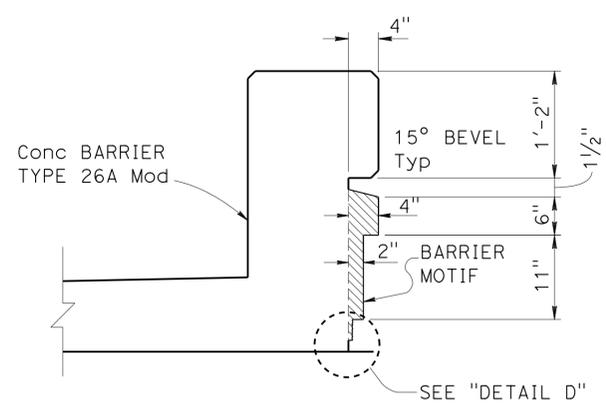
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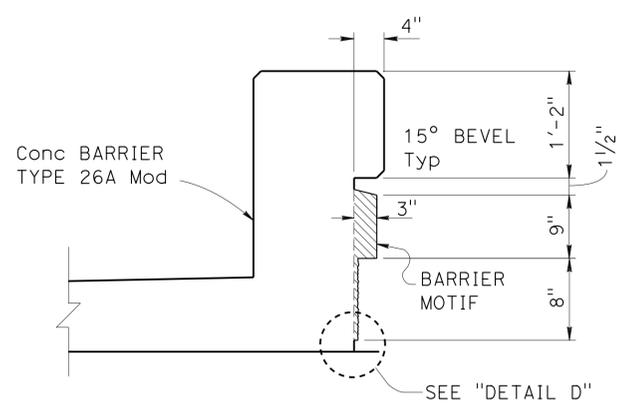
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1574	1622
REGISTERED CIVIL ENGINEER			DATE	3-18-15	
PLANS APPROVAL DATE			1-25-16		
					
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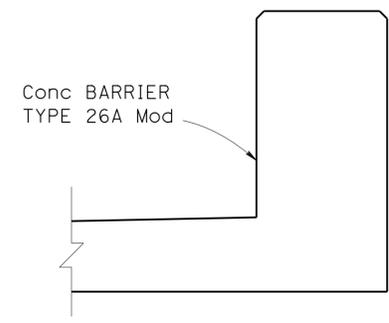
**ELEVATION - BARRIER MOTIF**  
NO SCALE



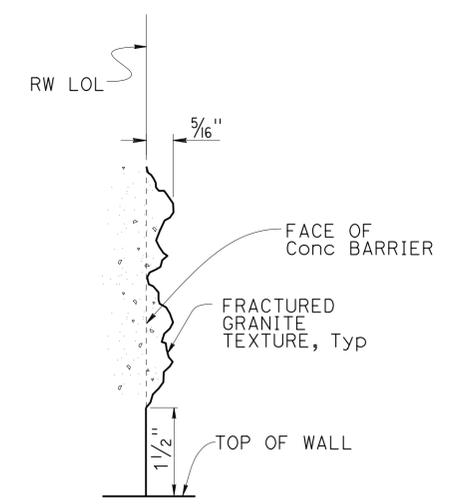
**SECTION E-E**  
NO SCALE



**SECTION F-F**  
NO SCALE



**SECTION G-G**  
NO SCALE



**DETAIL D**  
NO SCALE

DESIGN	BY	H. Javier Chavez	CHECKED	Issac Tasabia	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL TR3				
	DETAILS	BY	Anthony Valdez	CHECKED			Issac Tasabia	53E0250	BARRIER MOTIF DETAILS			
QUANTITIES	BY	Daryoush Tavatli	CHECKED	Daryoush Tavatli	PROJECT NUMBER & PHASE: 0715000160-1	POST MILE	0.35	CONTRACT NO.: 07-2159u4				
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3587	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET	OF	
					0 1 2 3	PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	09-18-12	1-10-13	3-28-13	7-29-13	5 6

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:36

**BENCH MARK**  
 GPS 0887  
 ELEVATION 65.915 FT  
 FD 2-1/2 CADT DISK IN CONC. CURB  
 FLUSH, STAMPED "LA-5-1.0, 1995"  
 LOCATED 90' N OF THE SOUTH SIDE  
 FIRESTONE BLVD 0.2 MI SE OF VALLEY VIEW  
 NORTHING 542395.636  
 EASTING 1997613.893  
 DATUM NAVD88

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1575	1622

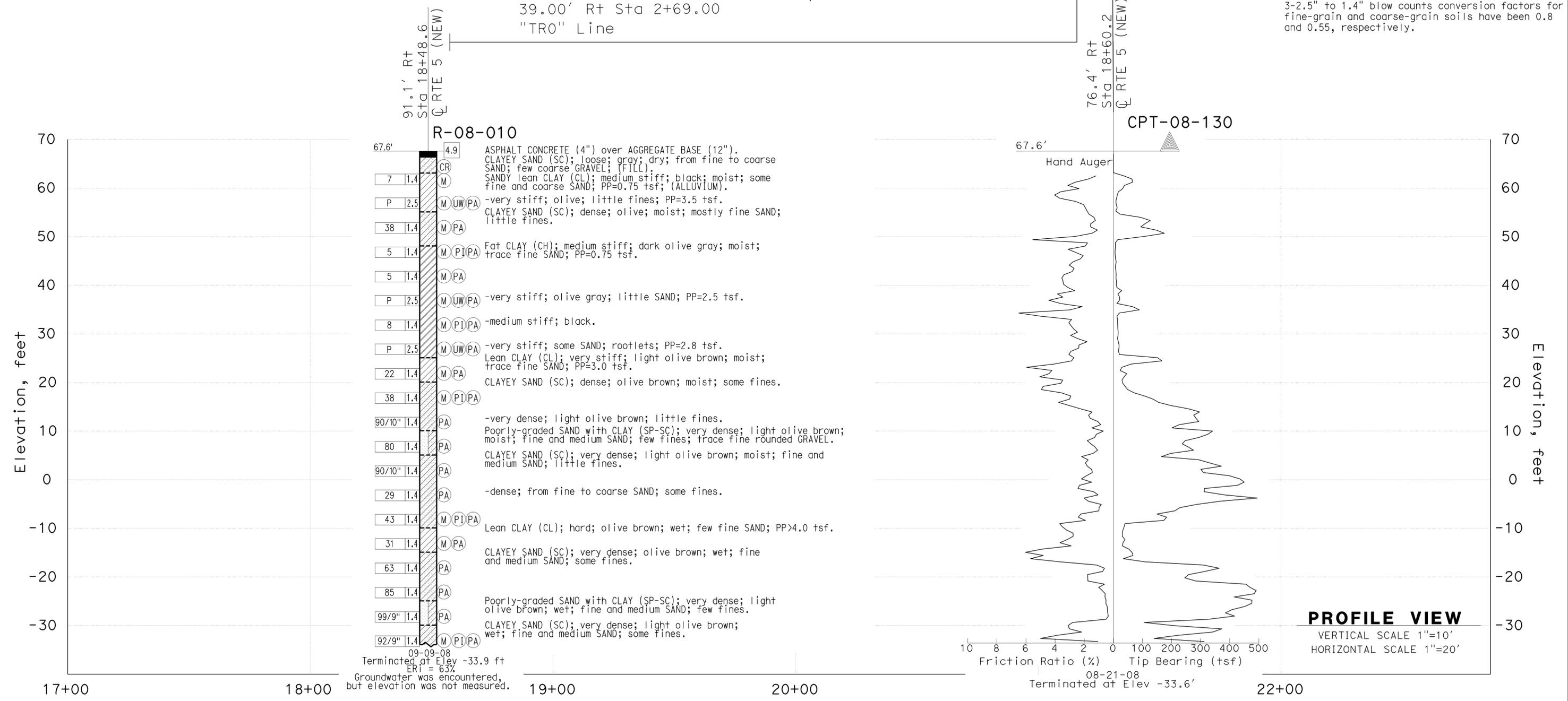
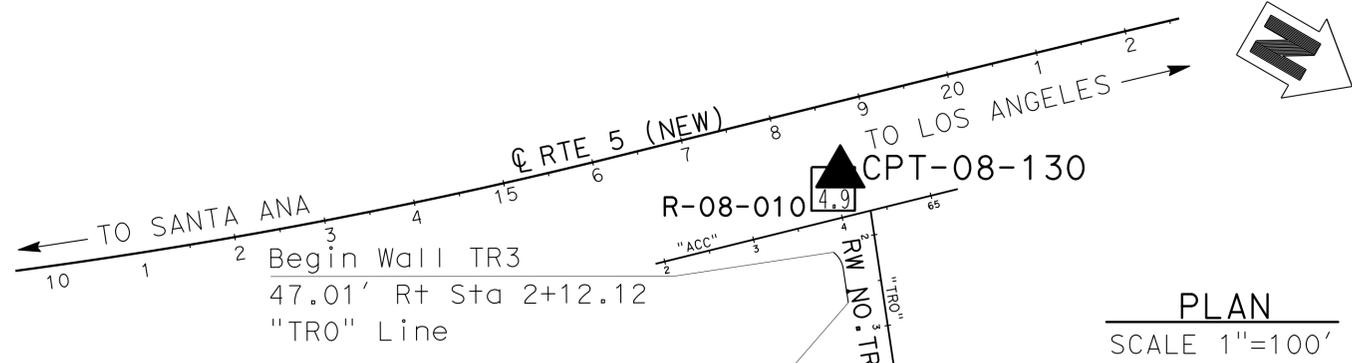
05/20/15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

MICHAEL G. SMITH  
 No. 2229  
 Exp. 03/31/16  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 GEOTECHNICAL

URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705

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F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH	P.MCDONALD/P.CHAU FIELD INVESTIGATION BY: DATE: 08/21/08 - 09/09/08	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. 53E0250 POST MILES 0.35	RETAINING WALL NO. TR3 LOG OF TEST BORINGS SHEET 1 OF 1
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	CONTRACT NO.: 07-2159U4	REVISION DATES 5/12/15

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USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:36

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Orca	5	0.0/1.5, 44.3/44.4	1576	1622

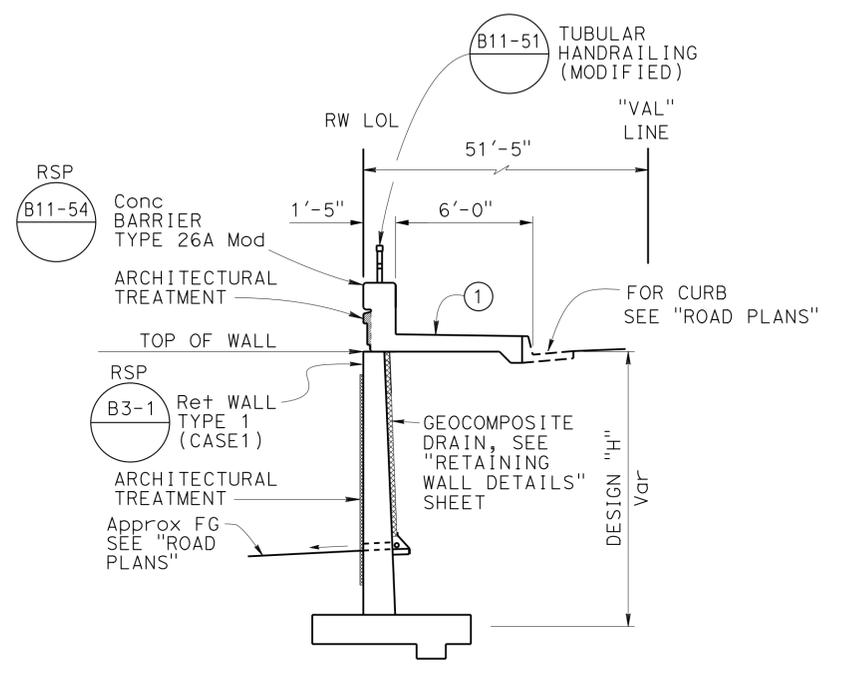
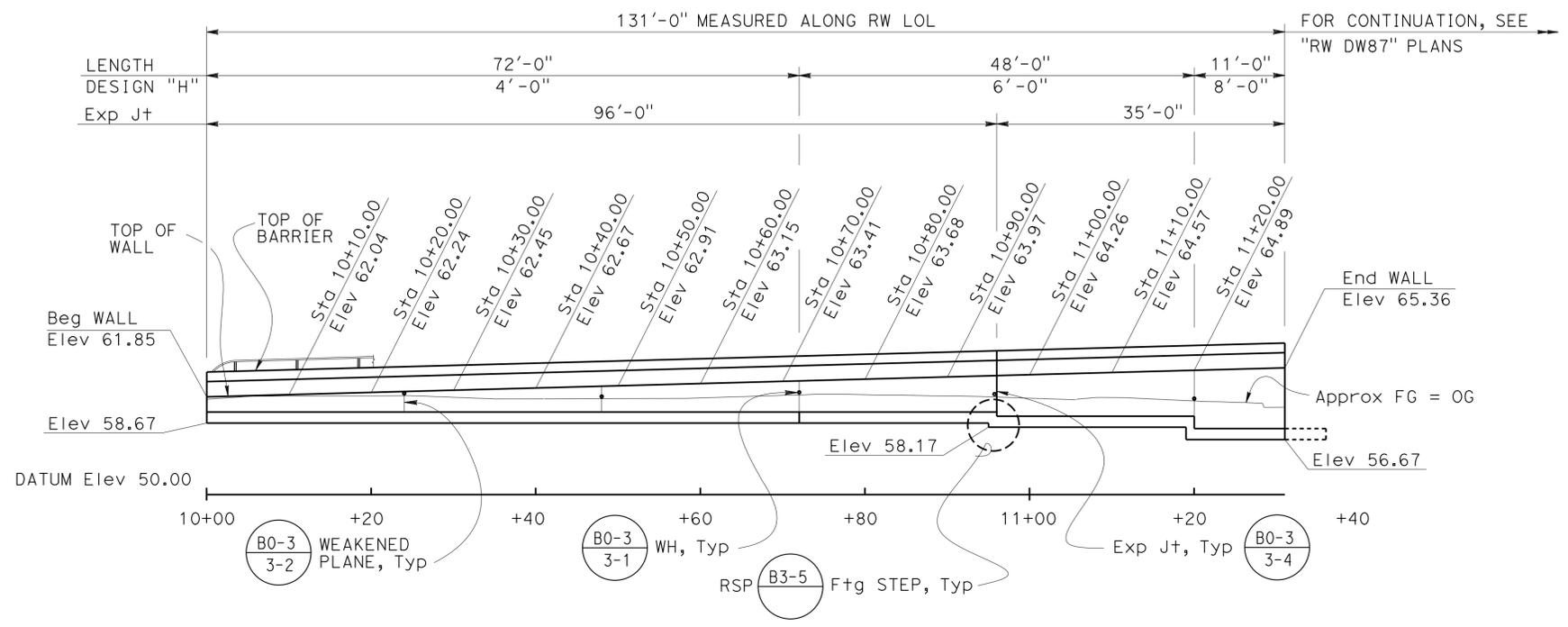
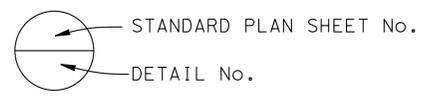
William Kemp  
 REGISTERED CIVIL ENGINEER DATE 3-18-15  
 1-25-16  
 PLANS APPROVAL DATE  
 William D. Kemp  
 No. 55730  
 Exp. 12-31-16  
 CIVIL  
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### INDEX TO PLANS

SHEET No.	TITLE
1	GENERAL PLAN
2	RETAINING WALL DETAILS
3	ARCHITECTURAL TREATMENT DETAILS
4	LIMITS OF EXCAVATION AND BACKFILL
5	LOG OF TEST BORINGS SHEET 1 OF 1

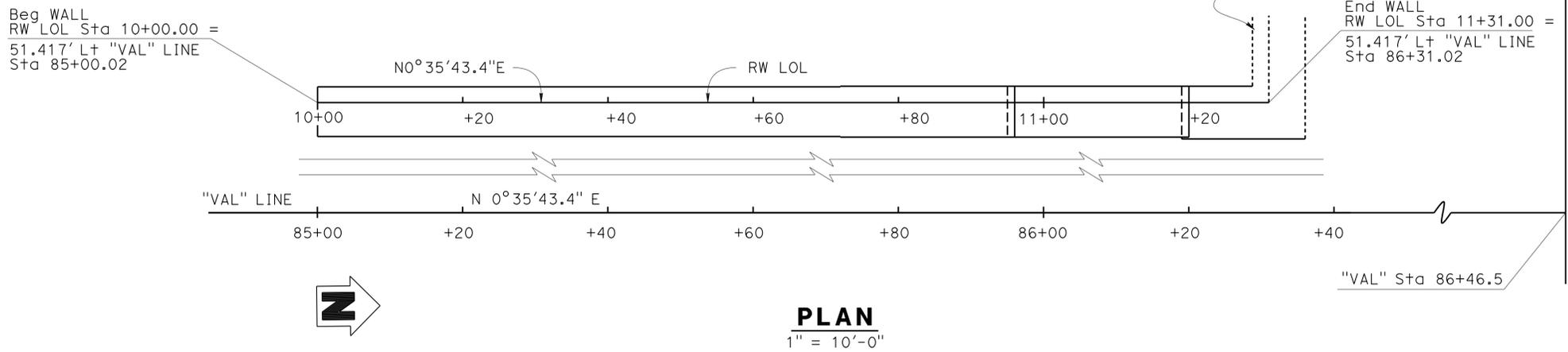
### STANDARD PLANS 2010

RSP A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
RSP A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
RSP A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
RSP A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
RSP A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP A10G	LEGEND - SOIL (SHEET 2 OF 2)
RSP A10H	LEGEND - ROCK
RSP A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL- BRIDGE SURCHARGE AND WALL
BO-3	BRIDGE DETAILS
RSP B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP B3-5	RETAINING WALL DETAILS NO. 1
B11-51	TUBULAR HAND RAILING
RSP B11-54	CONCRETE BARRIER TYPE 26



**TYPICAL SECTION**  
1/4" = 1'-0"

**NOTE**  
 (1) Transition to Depressed Sidewalk between Sta 11+24.48 and Sta 11+31.00, see "ROAD PLANS"



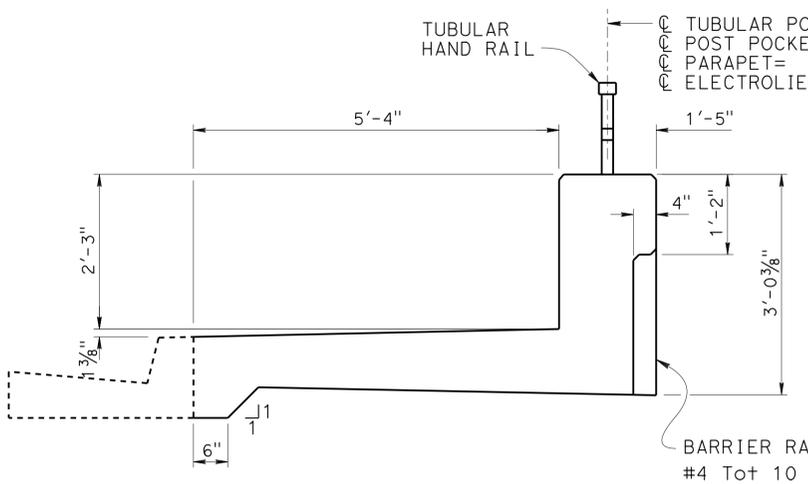
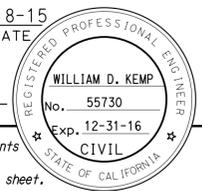
**QUANTITIES**

STRUCTURE EXCAVATION (RETAINING WALL)	470	CY
STRUCTURE BACKFILL (RETAINING WALL)	390	CY
STRUCTURAL CONCRETE, RETAINING WALL	68	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	147	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	9,655	LB
TUBULAR HANDRAILING (MODIFIED)	131	LF
CONCRETE BARRIER (TYPE 26 MODIFIED)	131	LF

DESIGN ENGINEER Ramin Rashedi 3-18-15	DESIGN BY Yeo Yoon	CHECKED Cipriano Manansala	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 11</b>	BRIDGE NO. RW VA85	<b>RETAINING WALL VA85</b> <b>GENERAL PLAN</b>
	DETAILS BY Anthony Valdez	CHECKED Cipriano Manansala	LAYOUT BY Yeo Yoon	CHECKED Cipriano Manansala			POST MILE 1.04	
QUANTITIES BY G. Reyes-Gutierrez	CHECKED Tuong Ha	SPECIFICATIONS BY Xiahong Li	CHECKED Xiahong Li	PLANS AND SPECS COMPARED	UNIT: 3587	PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 3-27-13, 1-08-13, 1-16-13, 9-28-11 SHEET 1 OF 5

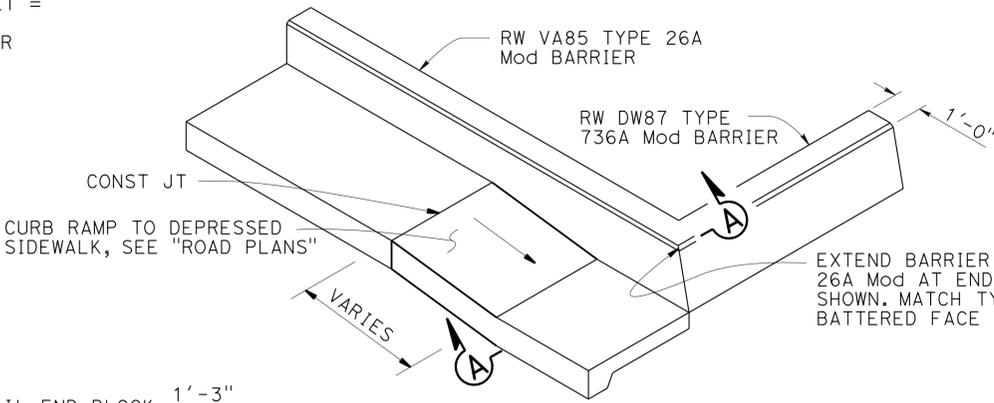
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3  
 FILE => rwa85-a-gp.dgn  
 STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1577	1622
			3-18-15		
			REGISTERED CIVIL ENGINEER		
			DATE		
			1-25-16		
			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

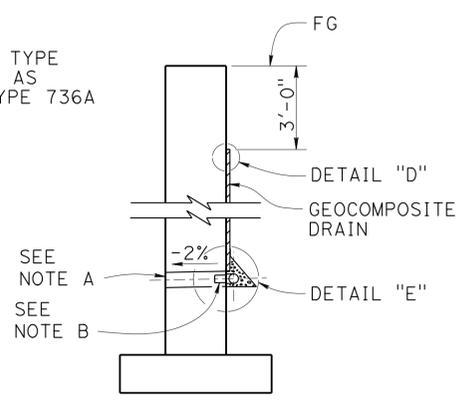


**CONCRETE BARRIER TYPE 26A MOD**  
3/4" = 1'-0"

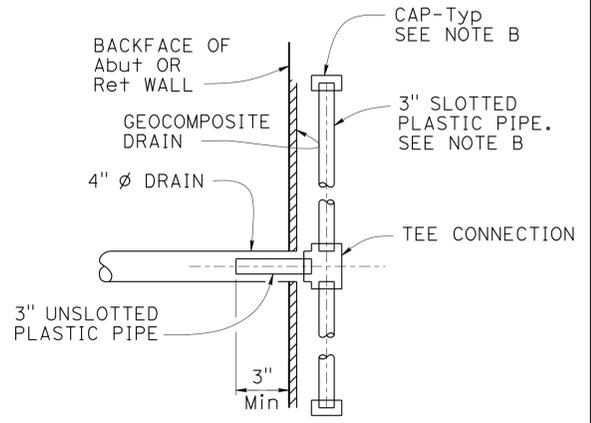
Note: For details not shown see **B11-54**



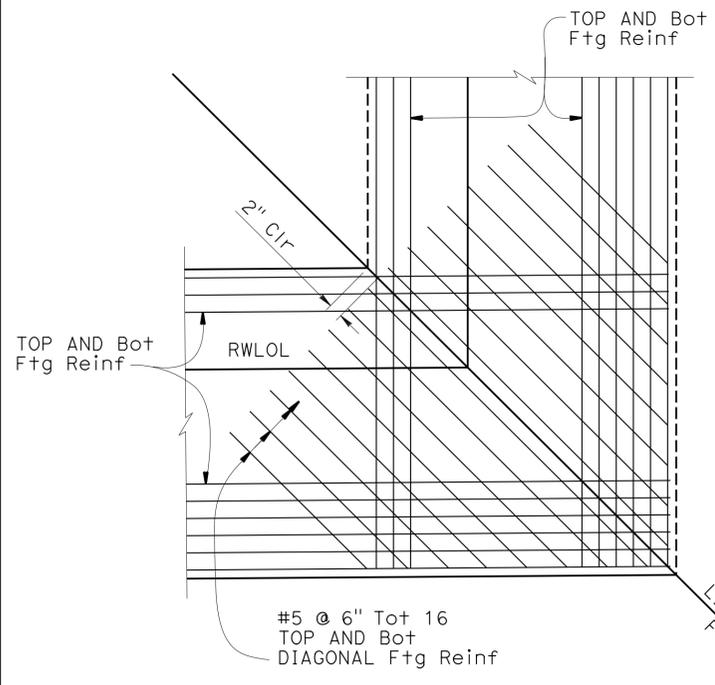
**BARRIER TRANSITION DETAIL**  
NO SCALE



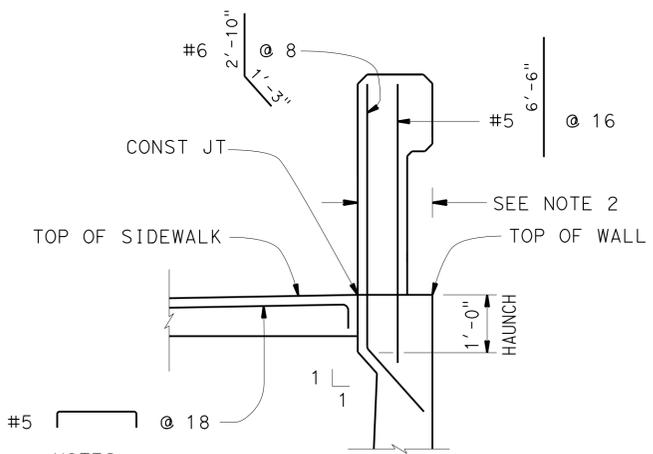
**WALL SECTION**



**SECTION K-K**

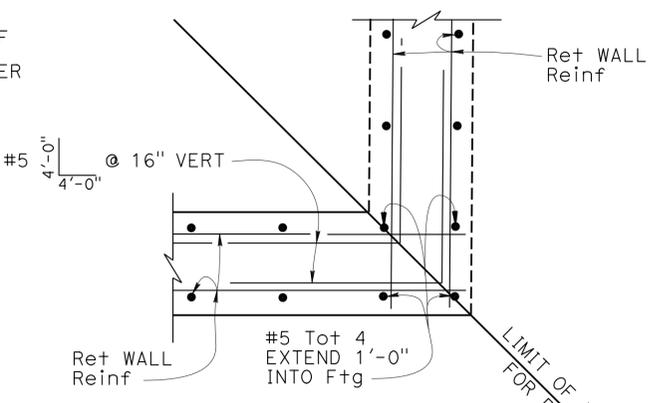


**FTG CORNER DETAIL**  
NO SCALE

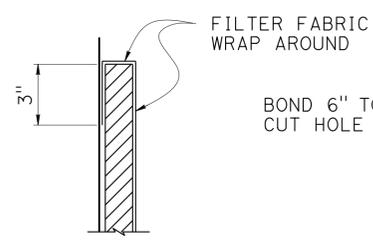


**SECTION A-A**  
NO SCALE

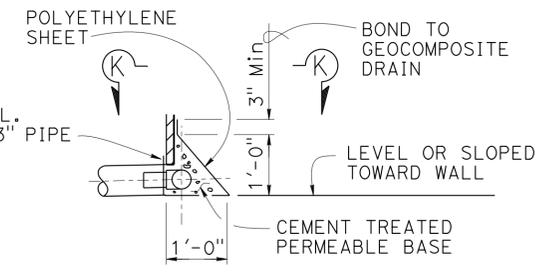
- NOTES:
1. APPLY DETAIL FROM THE BEGINNING OF CURB RAMP CONSTRUCTION JOINT TO THE END OF RETAINING WALL CORNER
  2. HAUNCH WIDTH MUST MATCH BARRIER RAIL WIDTH



**STEM CORNER DETAIL**  
NO SCALE



**DETAIL "D"**



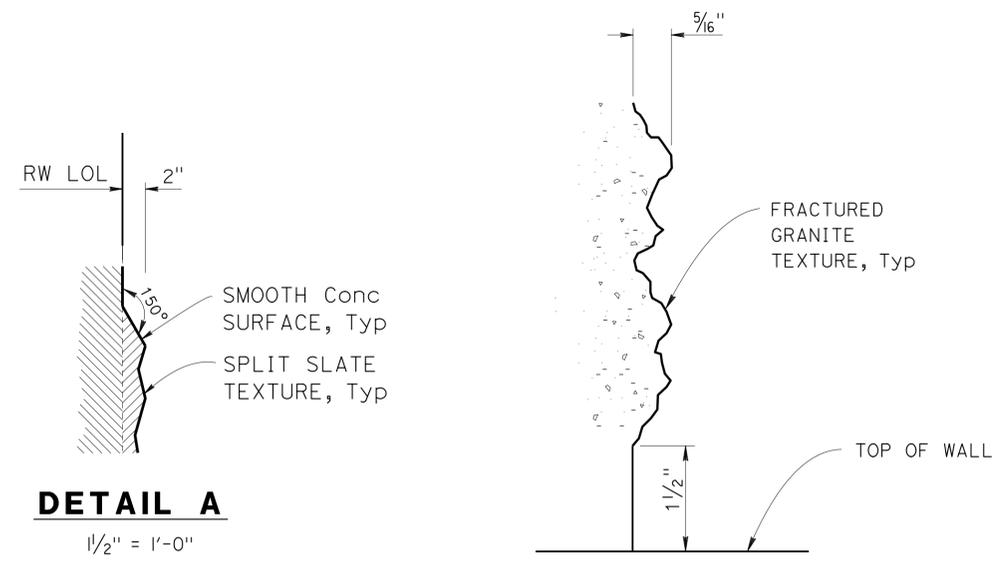
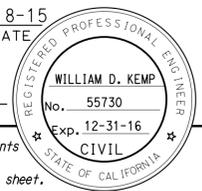
**DETAIL "E"**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**  
NO SCALE

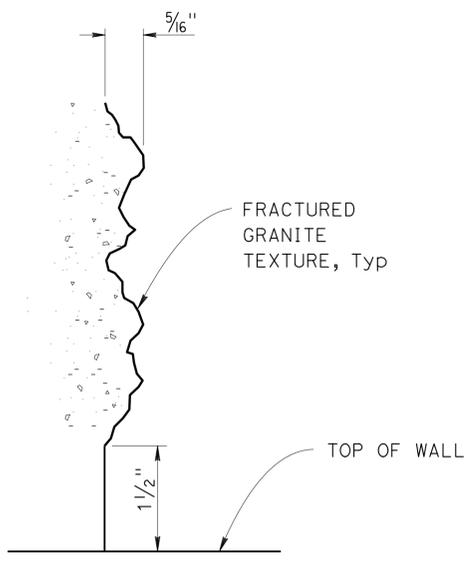
- NOTES: (GEOCOMPOSITE DRAIN)
- A. 4"  $\phi$  drains at intermediate sag points and at 25'-0" center to center (9'-0" c-c for Type 3 and 9'-2" c-c for Type 4 retaining walls). For walls adjacent to sidewalks or curbs, provide 4"  $\phi$  cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3"  $\pm$  above finished grade.
  - B. Geocomposite drain, cement treated permeable base, and 3"  $\phi$  slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4"  $\phi$  drain.
  - C. Connect the low end of plastic pipe to the main outlet pipe as applicable.

DESIGN	BY Yeo Yoon	CHECKED Cipriano Mananasala	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL VA85	RETAINING WALL DETAILS	
DETAILS	BY Anthony Valdez	CHECKED Cipriano Mananasala			POST MILE			1.04
QUANTITIES	BY G. Reyes-Gutierrez	CHECKED Tuong Ha			POST MILE			1.04

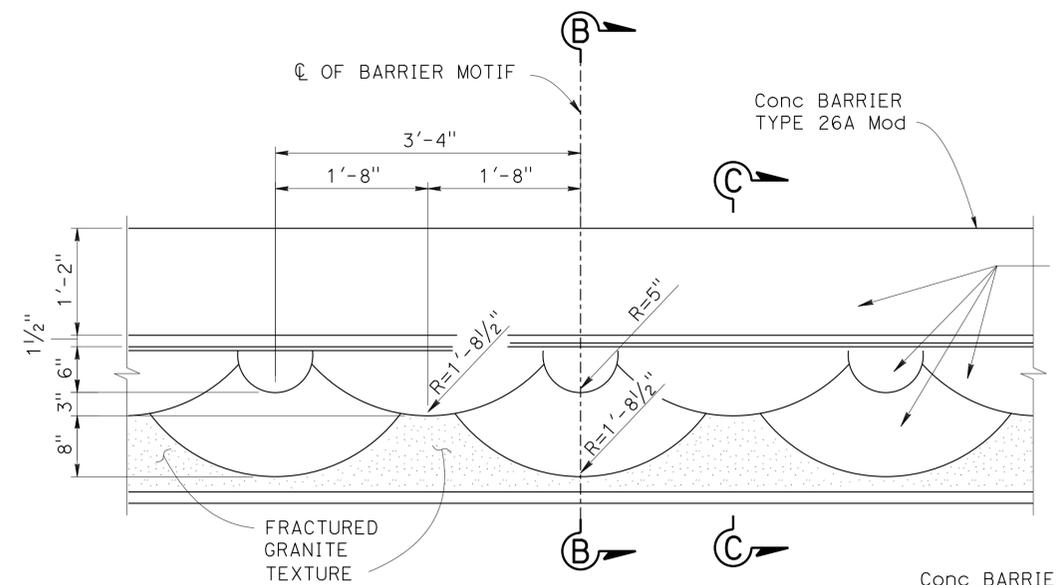
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1578	1622
			DATE		
			3-18-15		
			REGISTERED CIVIL ENGINEER		
			PLANS APPROVAL DATE		
			1-25-16		
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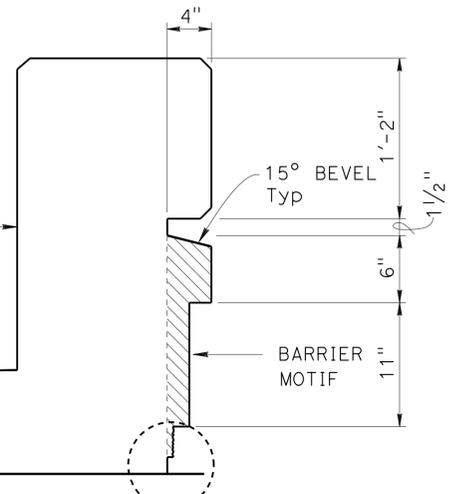
**DETAIL A**  
1/2" = 1'-0"



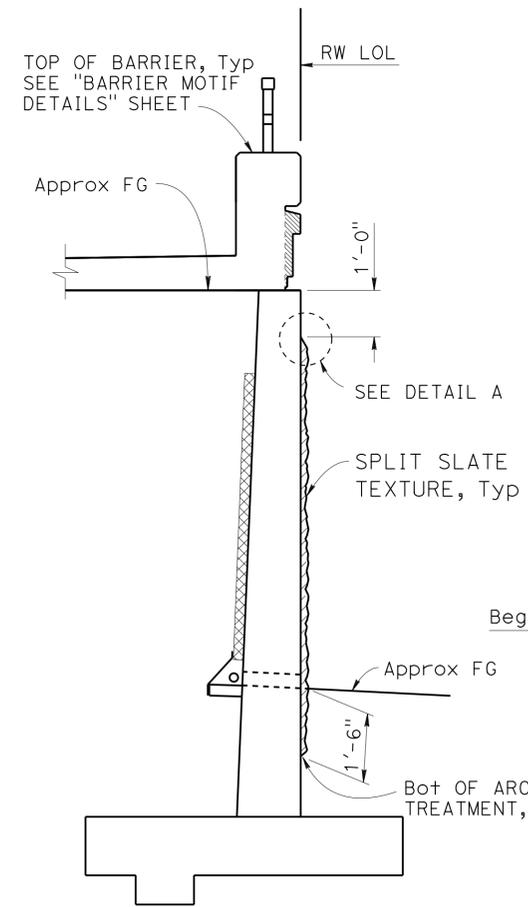
**DETAIL B**  
NO SCALE



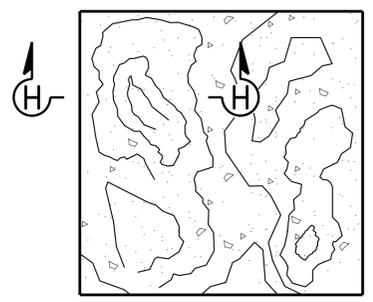
**ELEVATION - BARRIER MOTIF**  
1" = 1'-0"



**SECTION B-B**  
1/2" = 1'-0"

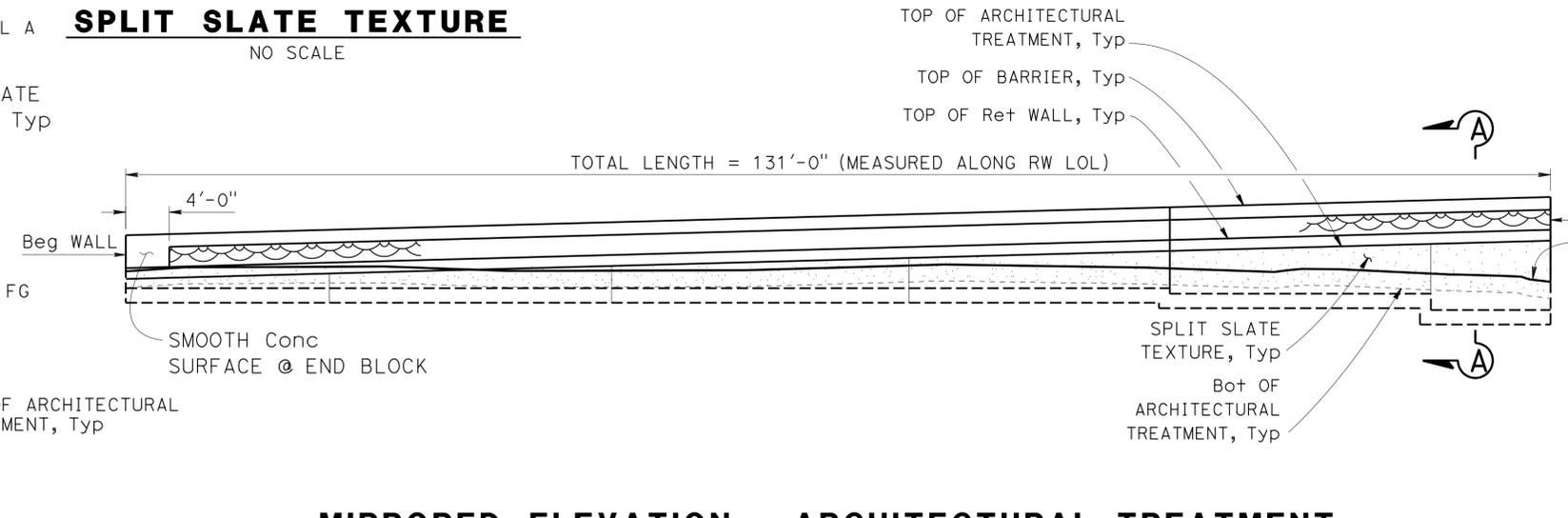


**SECTION A-A**  
NO SCALE

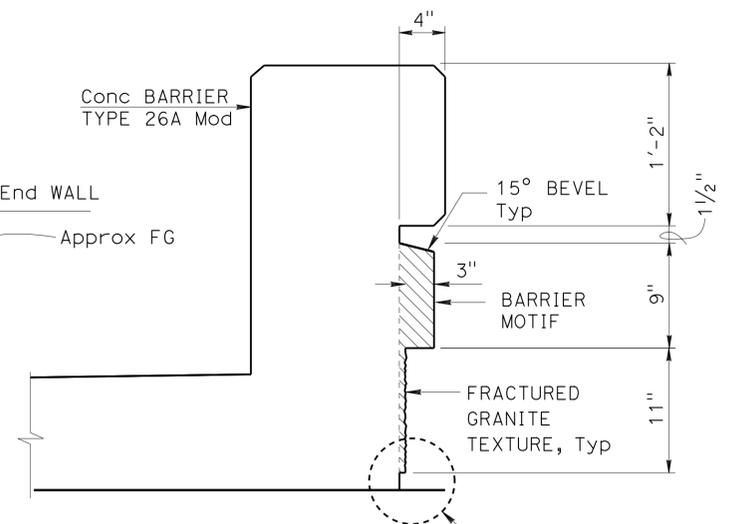


**SECTION H-H**  
NO SCALE

**SPLIT SLATE TEXTURE**  
NO SCALE



**MIRRORED ELEVATION - ARCHITECTURAL TREATMENT**  
1/8" = 1'-0"



**SECTION C-C**  
1/2" = 1'-0"

NOTE:  
All surface relief and texture shall be measured from RW LOL, Typ

DESIGN	BY H. Javier Chavez	CHECKED Issac Tasabia
DETAILS	BY Anthony Valdez	CHECKED Issac Tasabia
QUANTITIES	BY G. Reyes-Gutierrez	CHECKED Tuong Ha

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	RW VA85
POST MILE	1.04

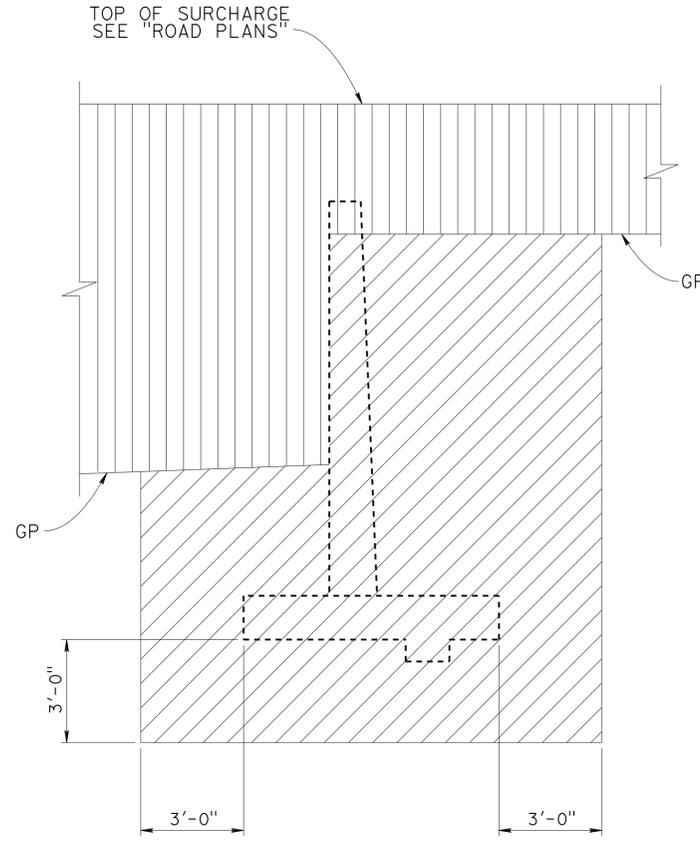
**RETAINING WALL VA85**  
**ARCHITECTURAL TREATMENT DETAILS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1579	1622
			3-18-15	DATE	
			1-25-16	PLANS APPROVAL DATE	

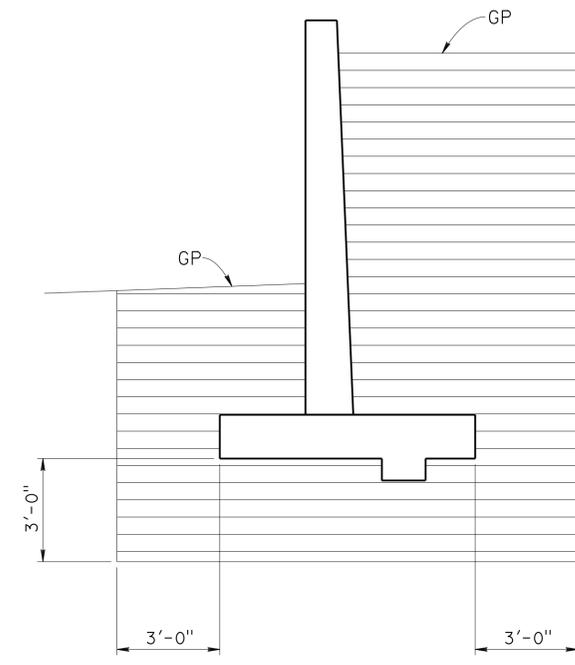
*William Kemp*  
 REGISTERED CIVIL ENGINEER

William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 CIVIL

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**EXCAVATION**



**BACKFILL**

- LEGEND:
- STRUCTURE EXCAVATION
  - ROADWAY EXCAVATION
  - STRUCTURE BACKFILL
- GP - PLANNED GRADING PLANE

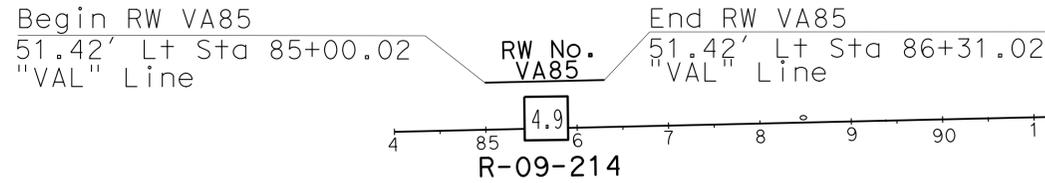
**LIMITS OF EXCAVATION AND BACKFILL**  
NO SCALE

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Yeo Yoon	CHECKED Cipriano Manansala	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 11</b>	BRIDGE NO.	<b>RETAINING WALL VA85</b> <b>LIMITS OF EXCAVATION AND BACKFILL</b>		
	DETAILS	BY Jaime Ramirez	CHECKED Cipriano Manansala			RW VA85			
	QUANTITIES	BY G. Reyes-Gutierrez	CHECKED Tuong Ha			POST MILE 1.04			
				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 4 OF 5

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:36

**BENCH MARK**

GPS 0887  
 ELEVATION 65.915 FT  
 FD 2-1/2 CADT DISK IN CONC. CURB  
 FLUSH, STAMPED "LA-5-1.0, 1995"  
 LOCATED 90' N OF THE SOUTH SIDE  
 FIRESTONE BLVD 0.2 MI SE OF  
 VALLEY VIEW  
 NORTHING 542395.636  
 EASTING 1997613.893  
 DATUM NAVD88



**PLAN**  
 SCALE 1"=100'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1580	1622

05/20/15  
 REGISTERED CIVIL ENGINEER DATE

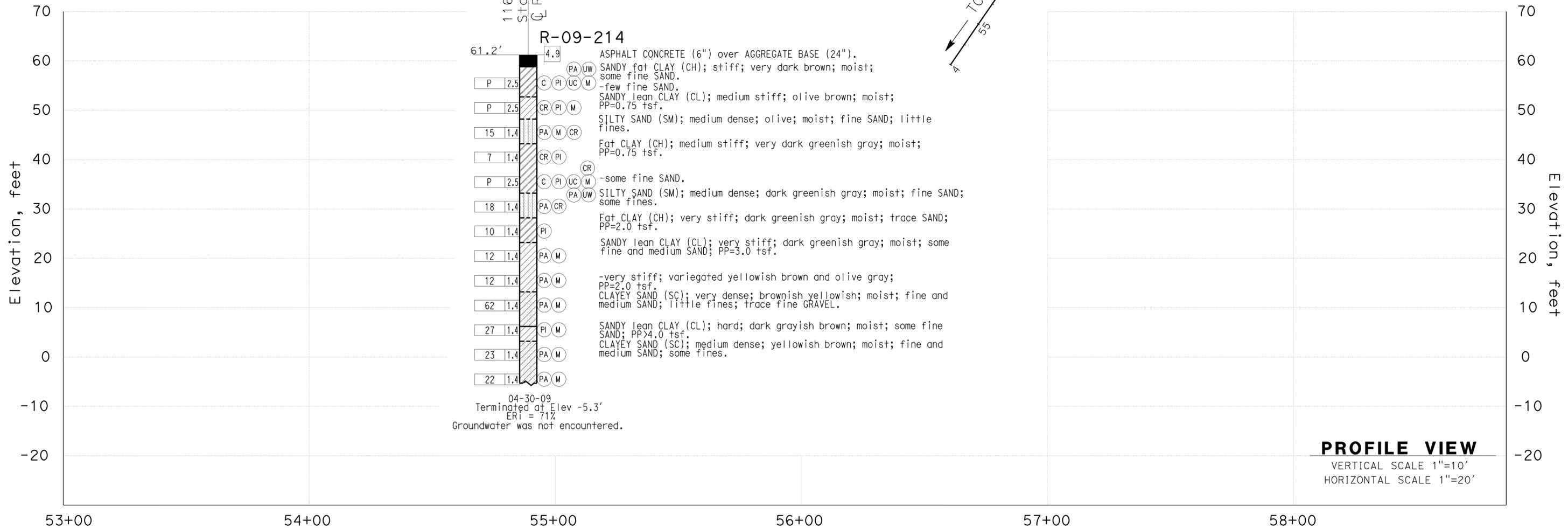
1-25-16  
 PLANS APPROVAL DATE

URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705

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MICHAEL G. SMITH  
 No. 2229  
 Exp. 03/31/16  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA  
 GEOTECHNICAL

1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.5" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.



**PROFILE VIEW**  
 VERTICAL SCALE 1"=10'  
 HORIZONTAL SCALE 1"=20'

F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH CHECKED BY A.GHAZINOOR/L.KHALKHALI	E.J.JEON/P.MCDONALD FIELD INVESTIGATION BY: DATE: 04/30/09	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. RW VA85 POST MILES 1.04	RETAINING WALL NO. VA85 LOG OF TEST BORINGS SHEET 1 OF 1
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3658 PROJECT NUMBER & PHASE: 07150001601	CONTRACT NO.: 07-2159U4	REVISION DATES 5/12/15

DISREGARD PRINTS BEARING EARLIER REVISION DATES

FILE => rwwa85-v-1otb.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1581	1622

William Kemp 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 CIVIL  
 STATE OF CALIFORNIA

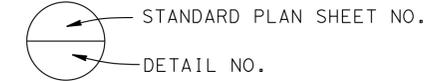
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### INDEX TO PLANS

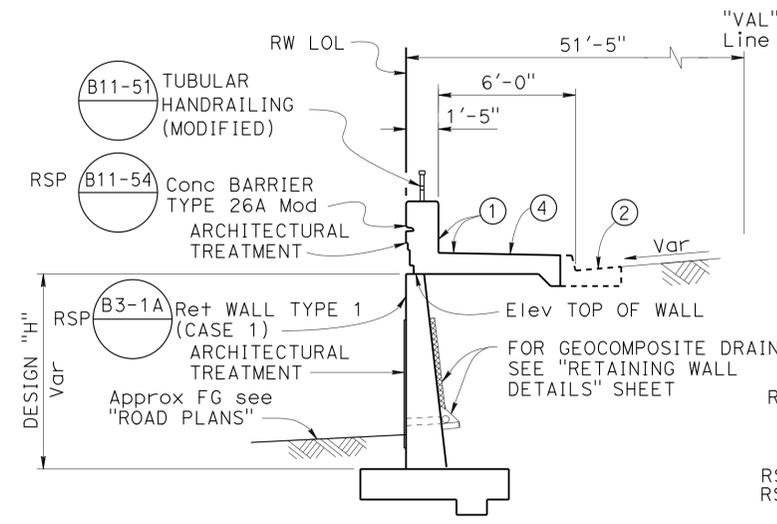
Sheet No.	Title
1	GENERAL PLAN
2	RETAINING WALL DETAILS
3	ARCHITECTURAL TREATMENT DETAILS
4	LIMITS OF EXCAVATION AND BACKFILL
5	LOG OF TEST BORING SHEET 1 OF 1

### STANDARD PLANS DATED MAY 2010

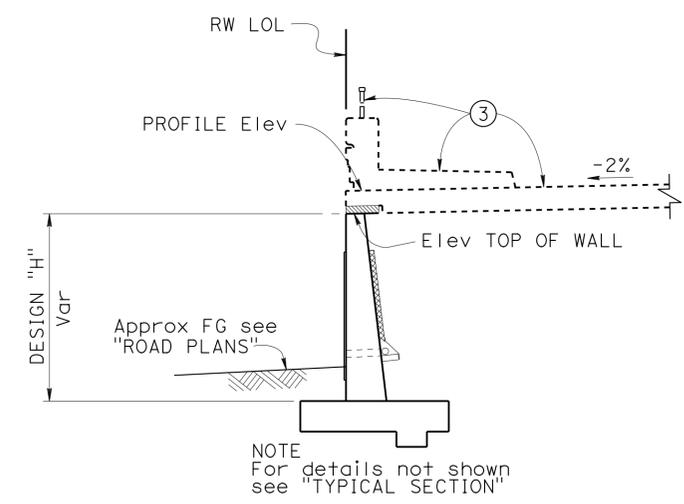
A10A	ABBREVIATIONS (SHEET 1 OF 2)
A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
A10F	LEGEND - SOIL - (SHEET 1 OF 2)
A10G	LEGEND - SOIL - (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL- BRIDGE SURCHARGE AND WALL BRIDGE DETAILS
B0-3	BRIDGE DETAILS
RSP B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP B3-5	RETAINING WALL DETAILS NO. 1
B11-51	TUBULAR HAND RAILING
RSP B11-54	CONCRETE BARRIER TYPE 26



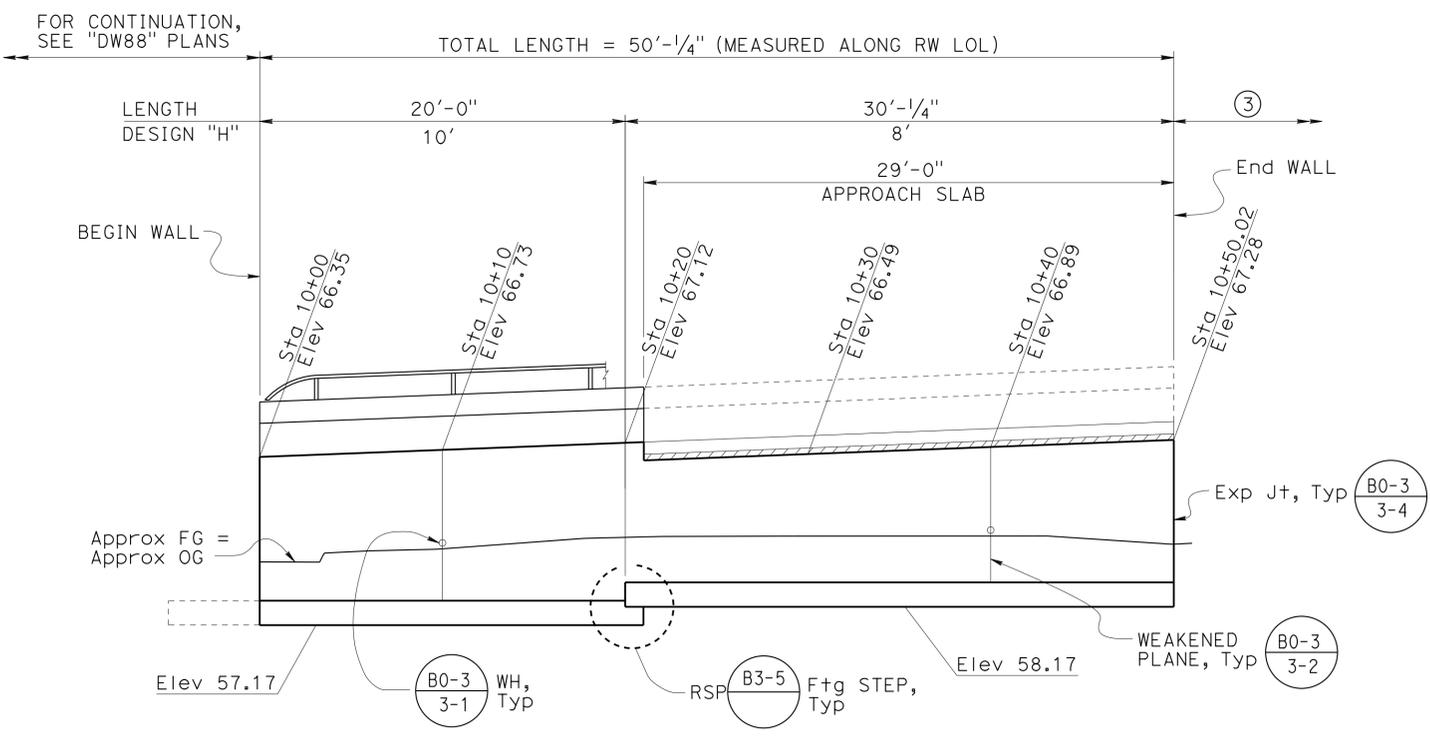
- Notes:
- Match face to Concrete Barrier Type 26 Mod at Bridge No. 53-3045
  - Curb, see "ROAD PLANS"
  - See Bridge No. 53-3045
  - Transition to Depressed Sidewalk between Sta 86+61.98 and Sta 86+68.50, see "ROAD PLANS"



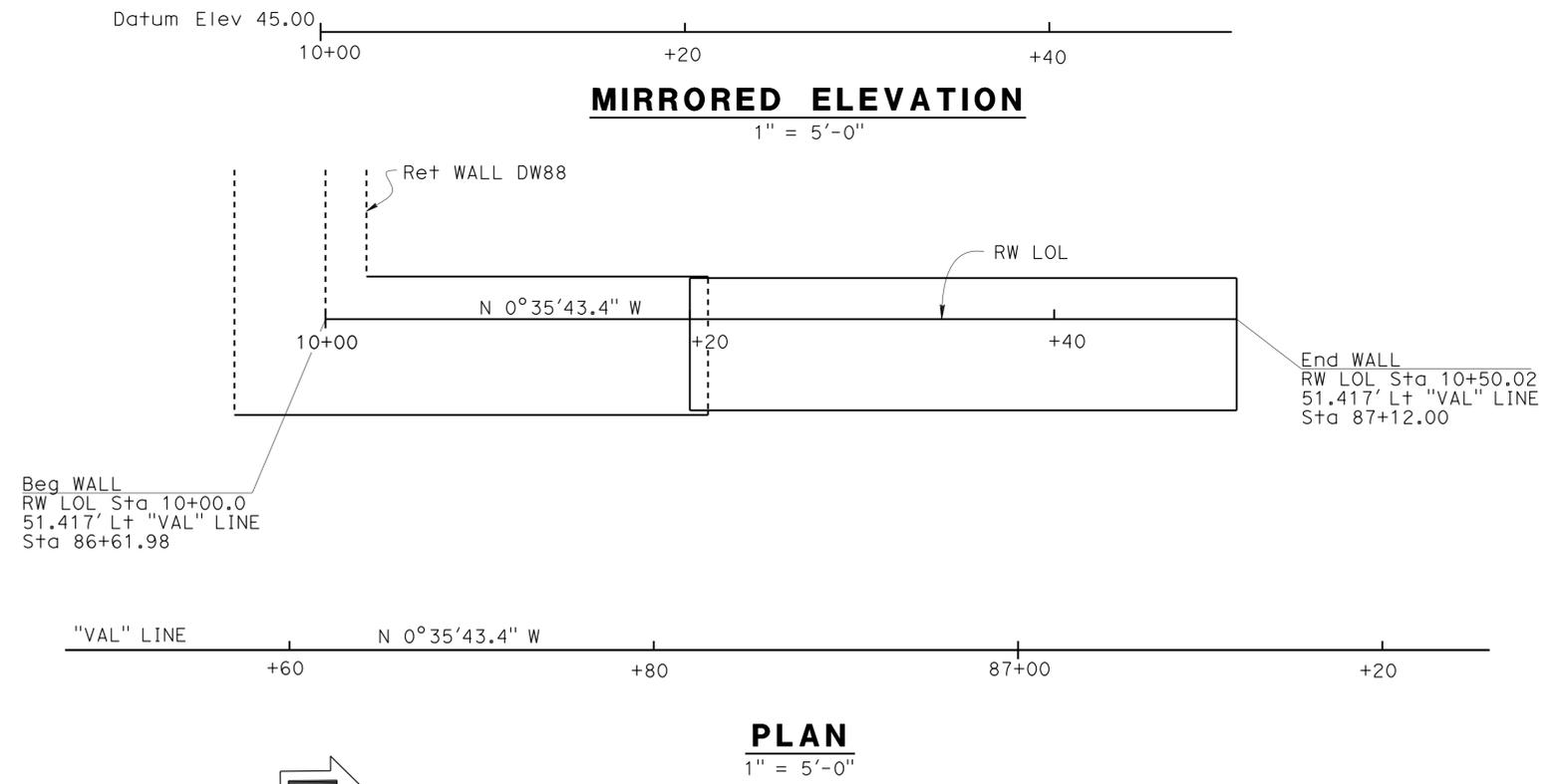
**TYPICAL SECTION**  
NO SCALE



**TYPICAL SECTION AT STRUCTURAL APPROACH**  
NO SCALE



**MIRRORED ELEVATION**  
1" = 5'-0"



QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	255	CY
STRUCTURE BACKFILL (RETAINING WALL)	213	CY
STRUCTURAL CONCRETE, RETAINING WALL	37	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	288	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	4,835	LB
TUBULAR HANDRAILING (MODIFIED)	21	LF
CONCRETE BARRIER (TYPE 26 MODIFIED)	21	LF

DESIGN	BY	CHECKED	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
DESIGN ENGINEER	Daryoush Tavatli	Cipriano Manansala	LAYOUT	Daryoush Tavatli
	Anthony Valdez	Cipriano Manansala	SPECIFICATIONS	Xiahong Li
	G. Reyes-Gutierrez	Tuong Ha		

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
 DESIGN BRANCH 11

BRIDGE NO. RW VA87  
 POST MILE 1.06  
**RETAINING WALL VA87**  
**GENERAL PLAN**

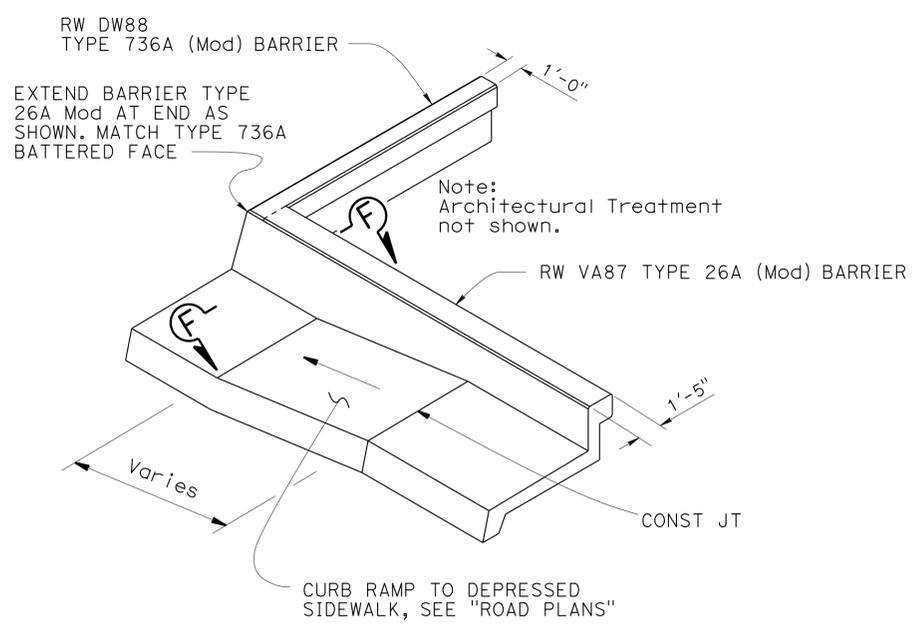
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Orca	5	0.0/1.5, 44.3/44.4	1582	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

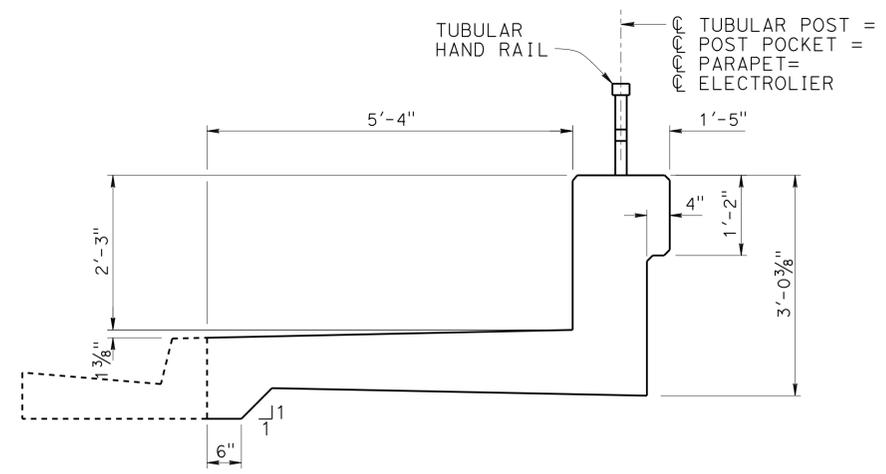
1-25-16  
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
 William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 CIVIL  
 STATE OF CALIFORNIA

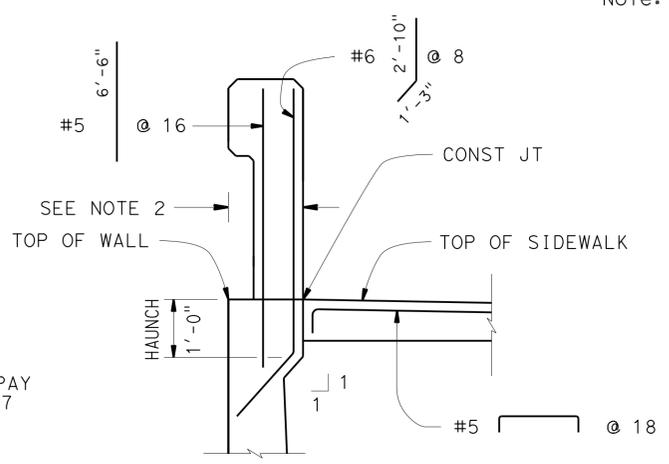


**BARRIER TRANSITION DETAIL**  
NO SCALE



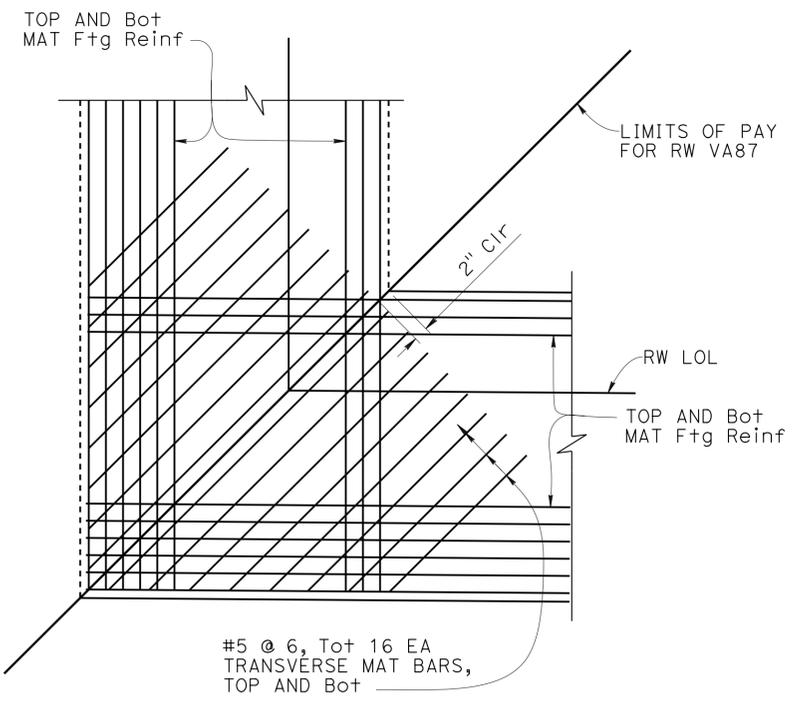
**CONCRETE BARRIER TYPE 26A MOD**

3/4" = 1'-0" RSP  
 Note: For details not shown see B11-54

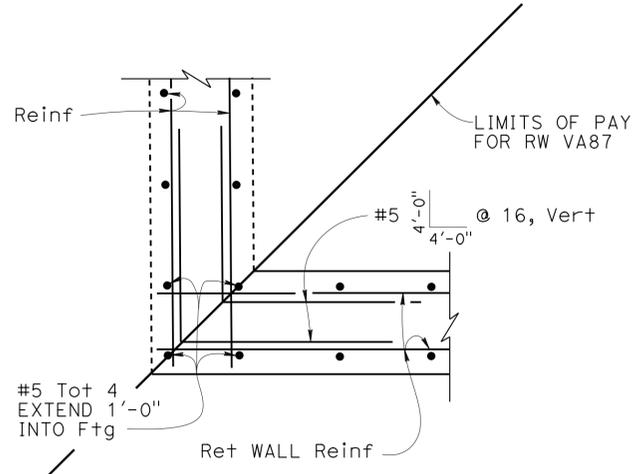


NOTES:  
 1. APPLY DETAIL FROM THE BEGINNING OF CURB RAMP CONSTRUCTION JOINT TO THE END OF RETAINING WALL CORNER  
 2. HAUNCH WIDTH MUST MATCH BARRIER RAIL WIDTH

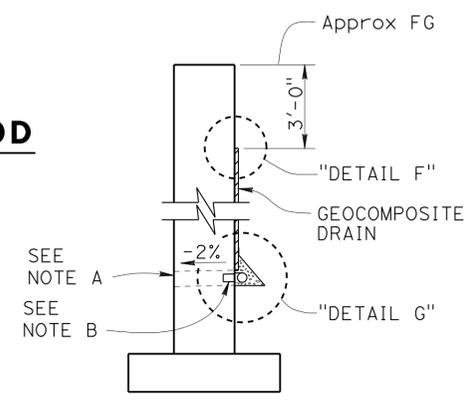
**SECTION F-F**  
NO SCALE



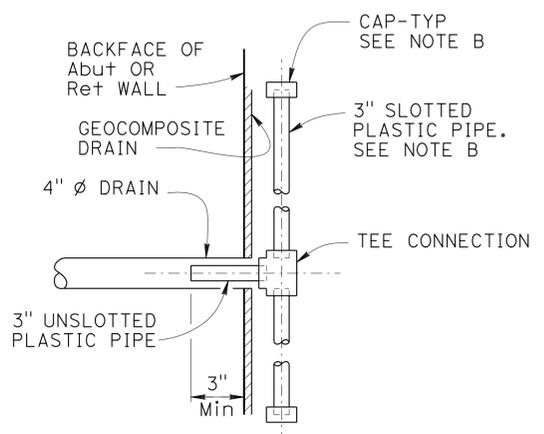
**FOOTING CORNER DETAIL**  
No Scale



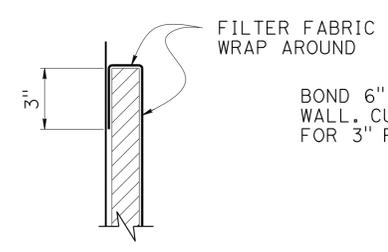
**STEM CORNER DETAIL**  
No Scale



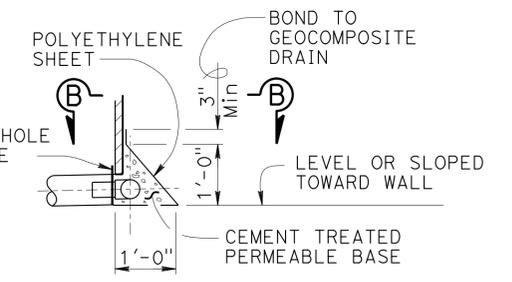
**WALL SECTION**



**SECTION B-B**



**DETAIL F**



**DETAIL G**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**  
NO SCALE

Notes: (GEOCOMPOSITE DRAIN)

A. 4" Ø drains at intermediate sag points and at 25'-0" center to center (9'-0" c-c for Type 3 and 9'-2" c-c for Type 4 retaining walls). For walls adjacent to sidewalks or curbs, provide 4" Ø cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3" ± above finished grade.

B. Geocomposite drain, cement treated permeable base, and 3" Ø slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Ø drain.

C. Connect the low end of plastic pipe to the main outlet pipe as applicable.

DESIGN	BY Daryoush Tavlati	CHECKED Cipriano Manansala
DETAILS	BY Anthony Valdez	CHECKED Cipriano Manansala
QUANTITIES	BY G. Reyes-Gutierrez	CHECKED Tuong Ha

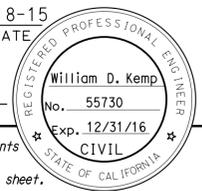
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
 DESIGN BRANCH 11

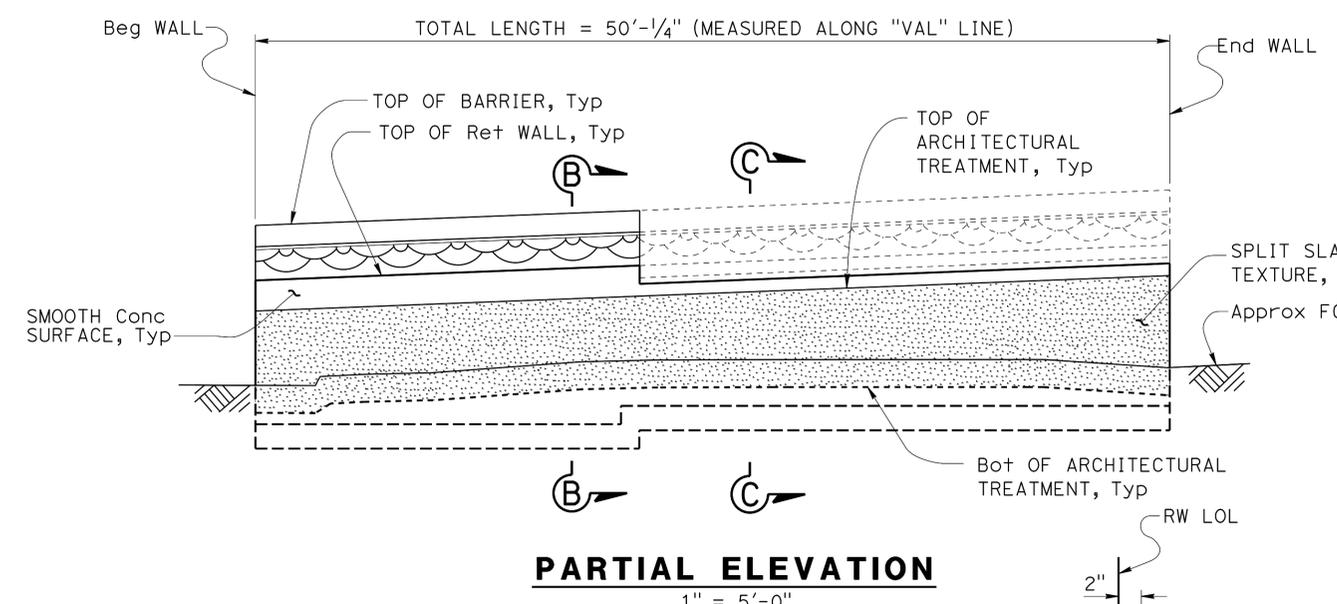
BRIDGE NO.	RW VA87
POST MILE	1.06

**RETAINING WALL VA87**  
**RETAINING WALL DETAILS**

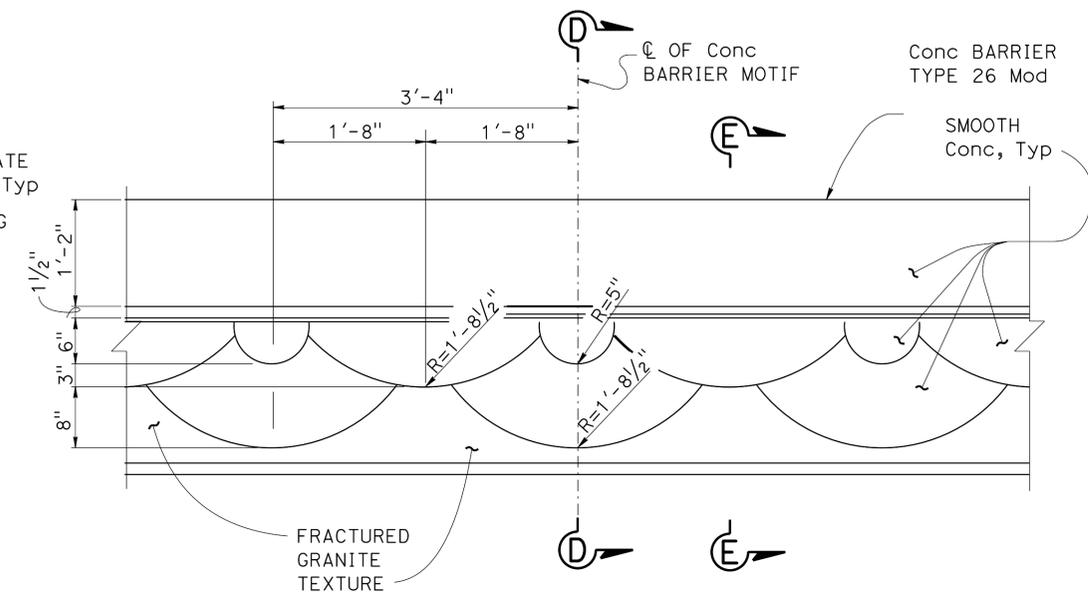
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1583	1622
			DATE		
			3-18-15		
			REGISTERED CIVIL ENGINEER		
			DATE		
			1-25-16		
			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



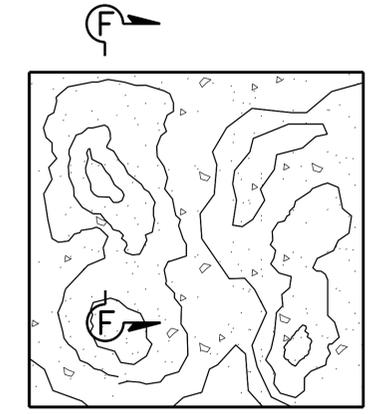
NOTE:  
All surface relief and texture shall be measured from RW LOL, Typ



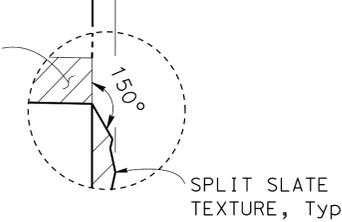
**PARTIAL ELEVATION**  
1" = 5'-0"



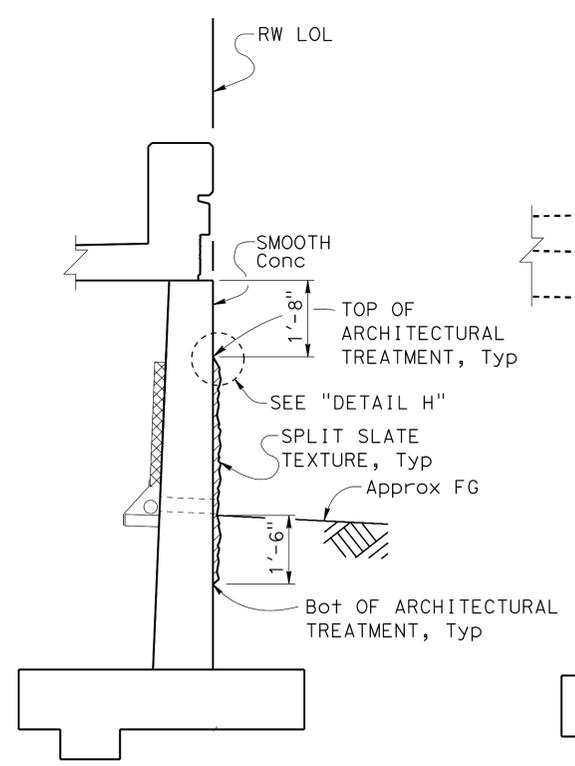
**PARTIAL ELEVATION - BARRIER MOTIF**  
1" = 1'-0"



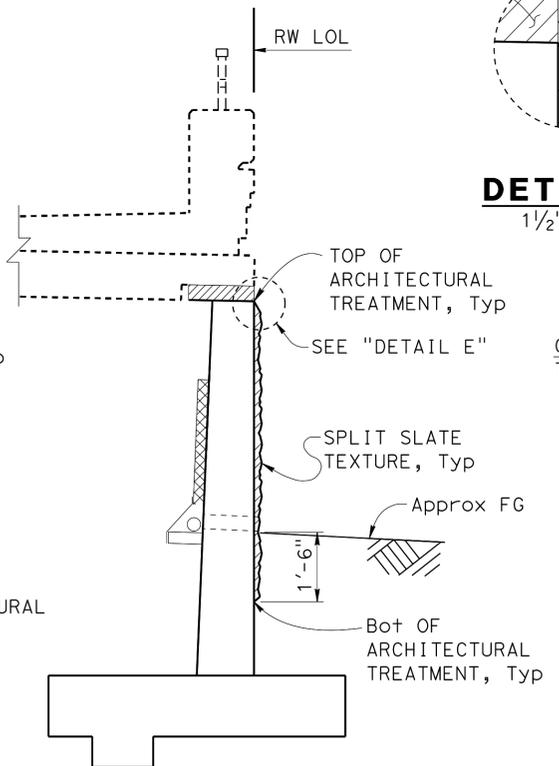
**SPLIT SLATE TEXTURE**  
NO SCALE



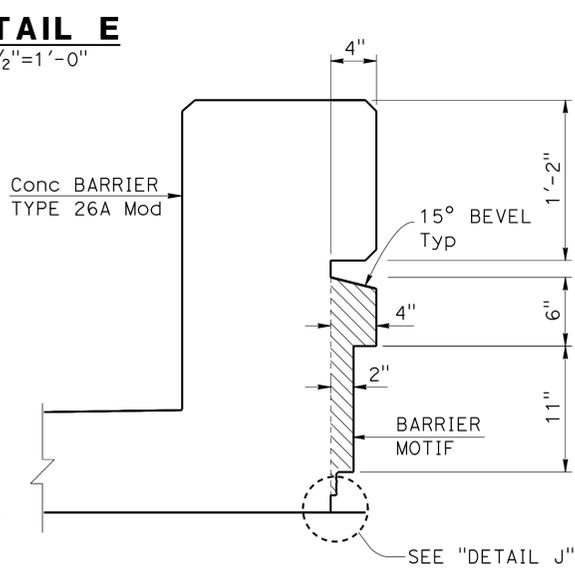
**DETAIL E**  
1/2" = 1'-0"



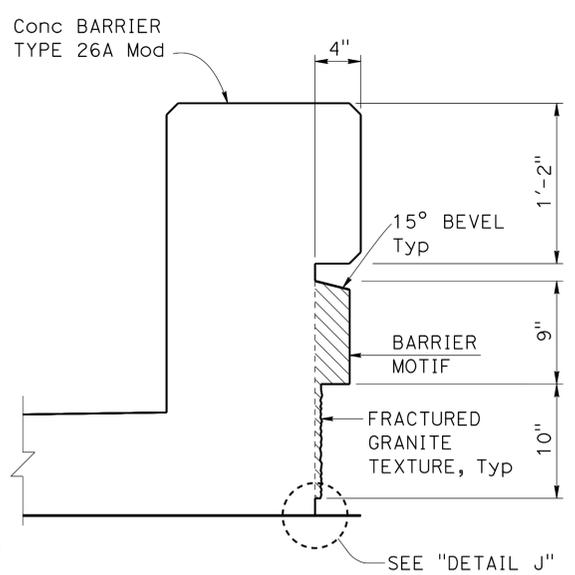
**SECTION B-B**  
1/2" = 1'-0"



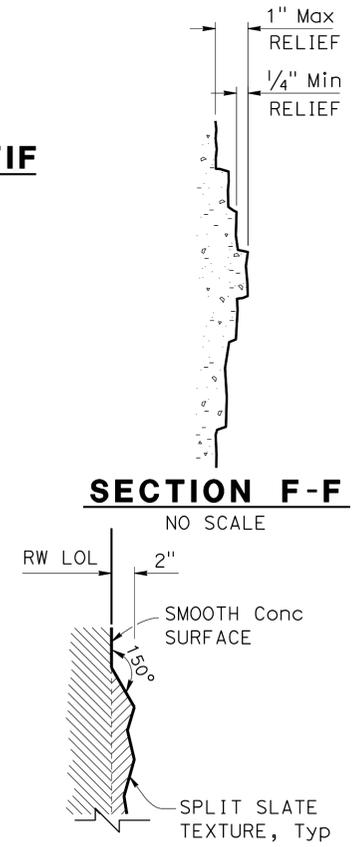
**SECTION C-C**  
1/2" = 1'-0"



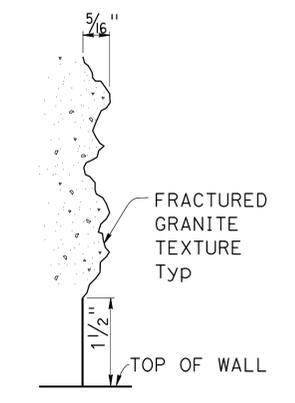
**SECTION D-D**  
1/2" = 1'-0"



**SECTION E-E**  
1/2" = 1'-0"



**DETAIL H**  
1/2" = 1'-0"



**DETAIL J**  
NO SCALE

DESIGN	BY H. Javier Chavez	CHECKED Isaac Tasabia
DETAILS	BY Jaime Ramirez	CHECKED Cipriano Manansala
QUANTITIES	BY G. Reyes-Gutierrez	CHECKED Tuong Ha

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	RW VA87
POST MILE	1.06

RETAINING WALL VA87  
ARCHITECTURAL TREATMENT DETAILS

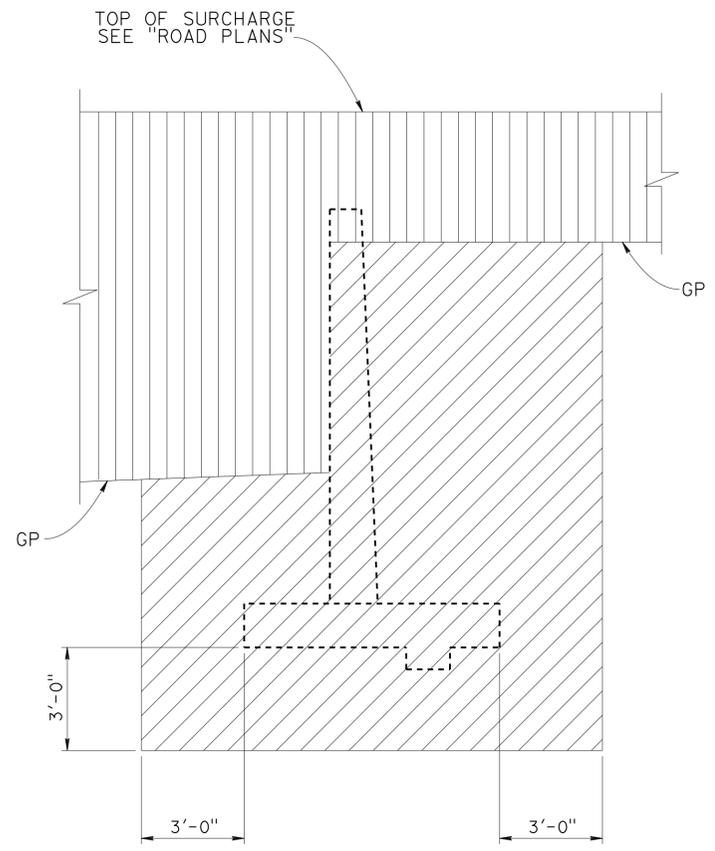
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1584	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

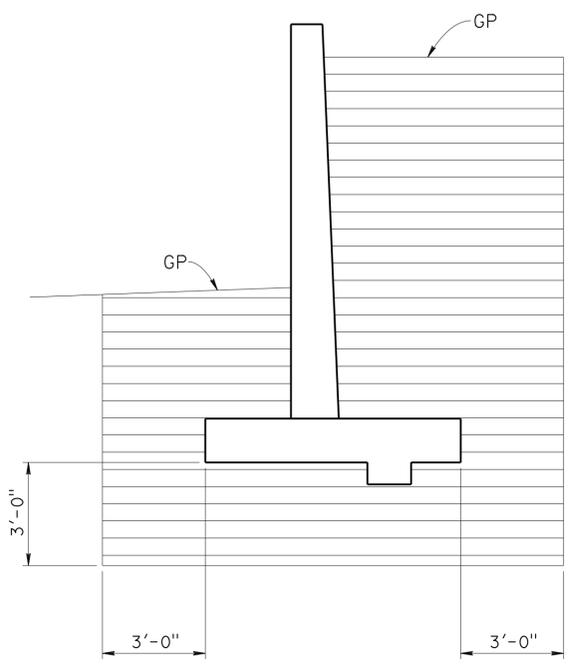
1-25-16  
 PLANS APPROVAL DATE

William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL  
 STATE OF CALIFORNIA

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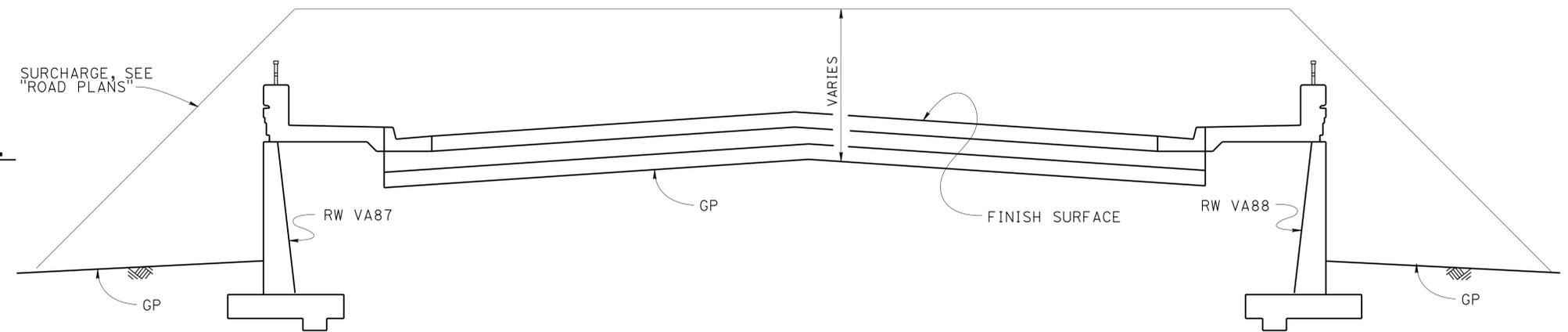
**EXCAVATION**



**BACKFILL**

- LEGEND:
- STRUCTURE EXCAVATION
  - ROADWAY EXCAVATION
  - STRUCTURE BACKFILL
- GP - PLANNED GRADING PLANE

**LIMITS OF EXCAVATION AND BACKFILL**  
NO SCALE



**EMBANKMENT SURCHARGE**  
NO SCALE

DESIGN	BY Daryoush Tavatli	CHECKED B. Kemp
DETAILS	BY Jaime Ramirez	CHECKED B. Kemp
QUANTITIES	BY G. Reyes-Gutierrez	CHECKED Tuong Ha

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	RW VA87
POST MILE	1.06

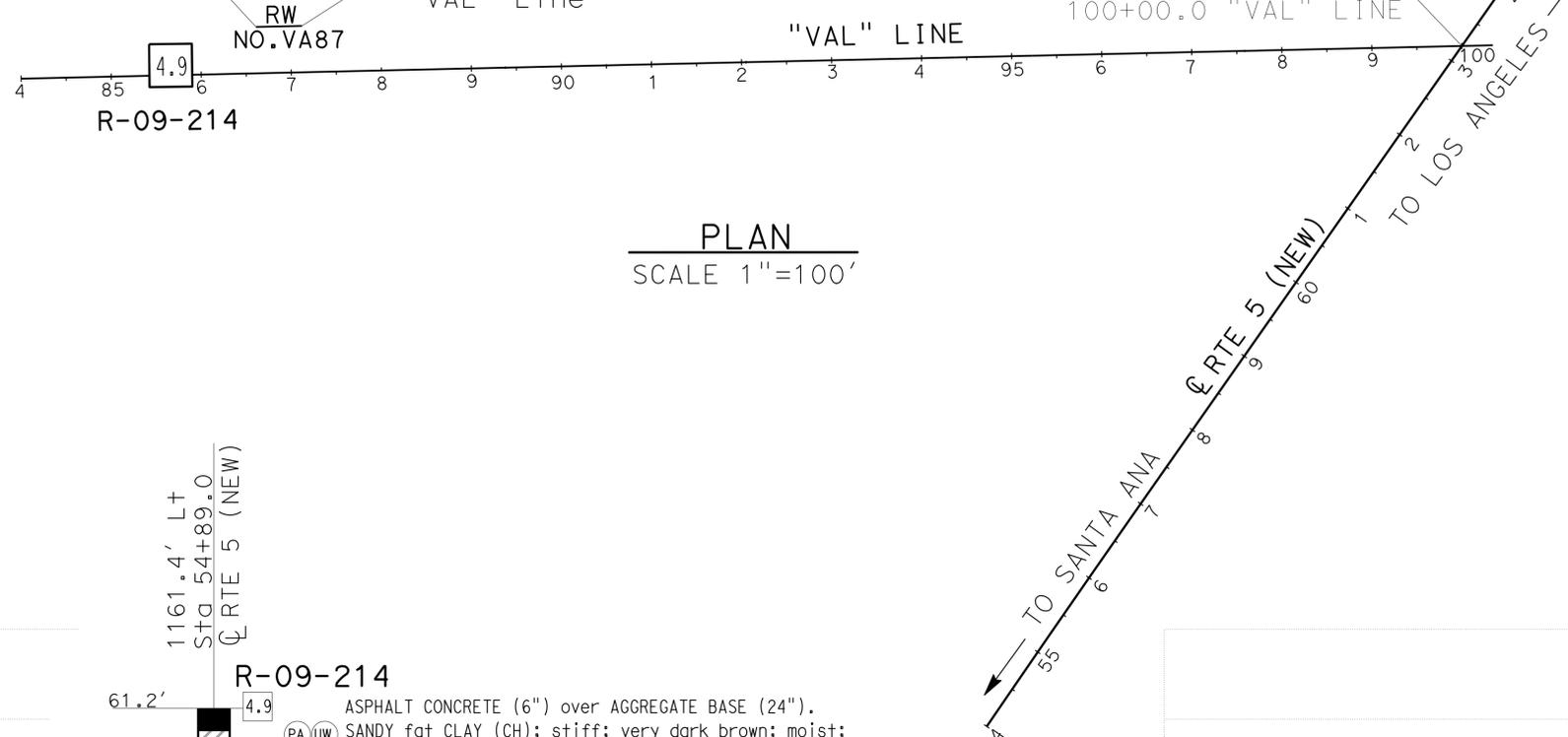
**RETAINING WALL VA87**  
**LIMITS OF EXCAVATION AND BACKFILL**

**BENCH MARK**

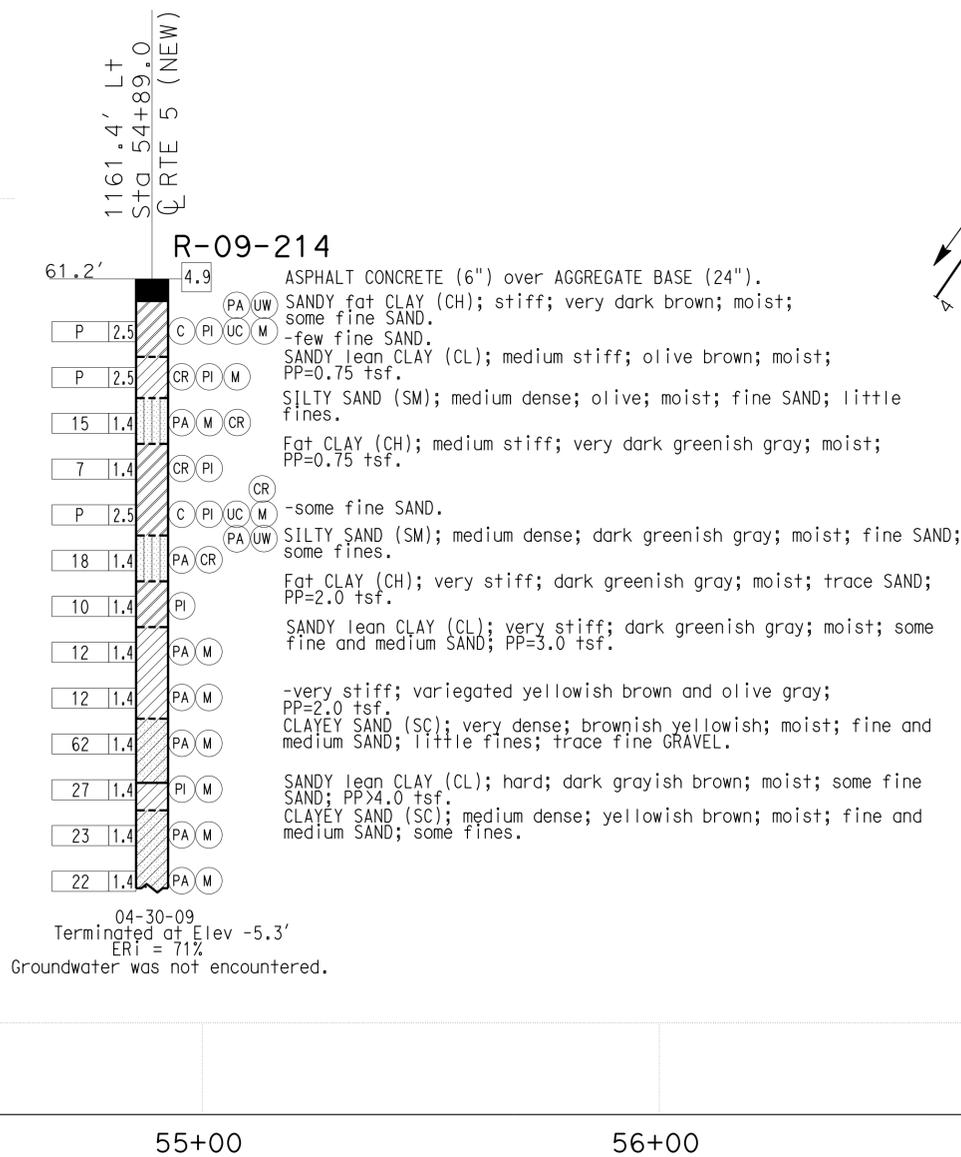
GPS 0887  
 ELEVATION 65.915 FT  
 FD 2-1/2 CADT DISK IN CONC. CURB  
 FLUSH, STAMPED "LA-5-1.0, 1995"  
 LOCATED 90' N OF THE SOUTH SIDE  
 FIRESTONE BLVD 0.2 MI SE OF VALLEY VIEW  
 NORTHING 542395.636  
 EASTING 1997613.893  
 DATUM NAVD88

Begin RW VA87  
 51.42' Lt Sta 86+61.98  
 "VAL" Line

End RW VA87  
 51.42' Lt Sta 87+13.00  
 "VAL" Line



**PLAN**  
 SCALE 1"=100'



**PROFILE VIEW**  
 VERTICAL SCALE 1"=10'  
 HORIZONTAL SCALE 1"=20'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1585	1622

05/20/15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705

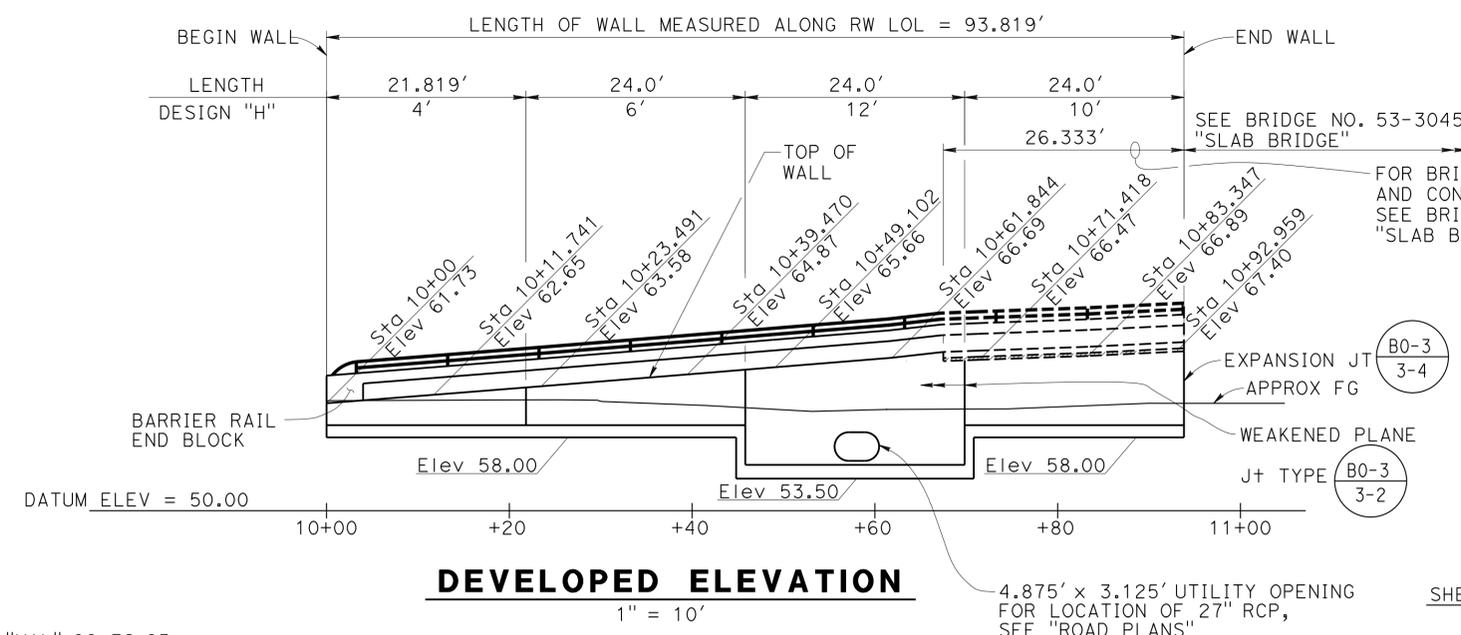
Michael G. Smith  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 2229  
 Exp. 03/31/16  
 STATE OF CALIFORNIA

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1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.5" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.

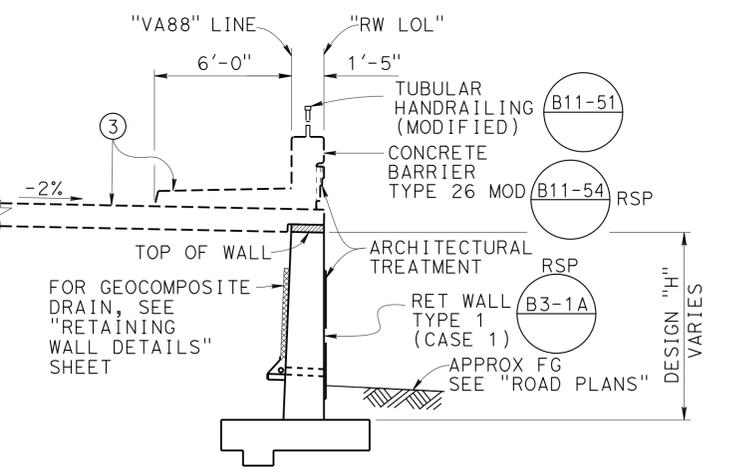
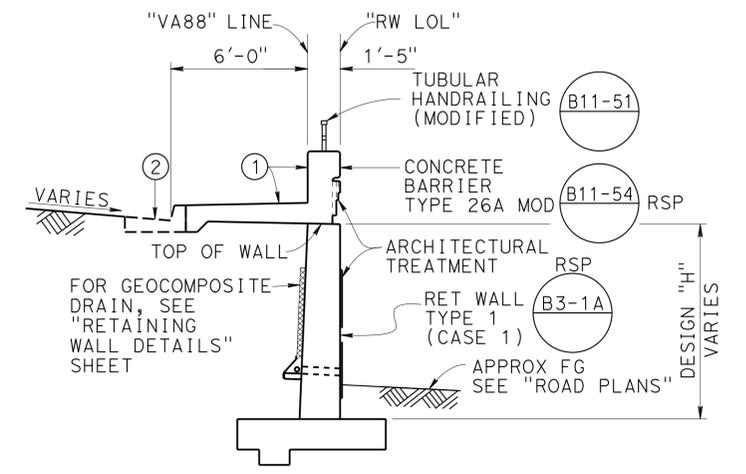
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Orca	5	0.0/1.5, 44.3/44.4	1586	1622

*William Kemp*  
 REGISTERED CIVIL ENGINEER DATE 3-18-15  
 1-25-16  
 PLANS APPROVAL DATE  
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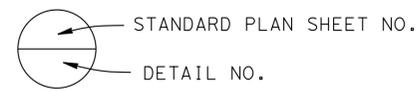
**INDEX TO PLANS**

SHEET NO.	TITLE
1	GENERAL PLAN
2	RETAINING WALL DETAILS
3	ARCHITECTURAL TREATMENT
4	LIMITS OF EXCAVATION AND BACKFILL
5	LOG OF TEST BORINGS SHEET 1 OF 1



**STANDARD PLANS DATED MAY 2010**

A10A	ABBREVIATIONS (SHEET 1 OF 2)
A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
RSP A10F	LEGEND - SOIL - (SHEET 1 OF 2)
RSP A10G	LEGEND - SOIL - (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL- BRIDGE SURCHARGE AND WALL
B0-3	BRIDGE DETAILS
RSP B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP B3-5	RETAINING WALL DETAILS NO. 1
B11-51	TUBULAR HAND RAILING
RSP B11-54	CONCRETE BARRIER TYPE 26

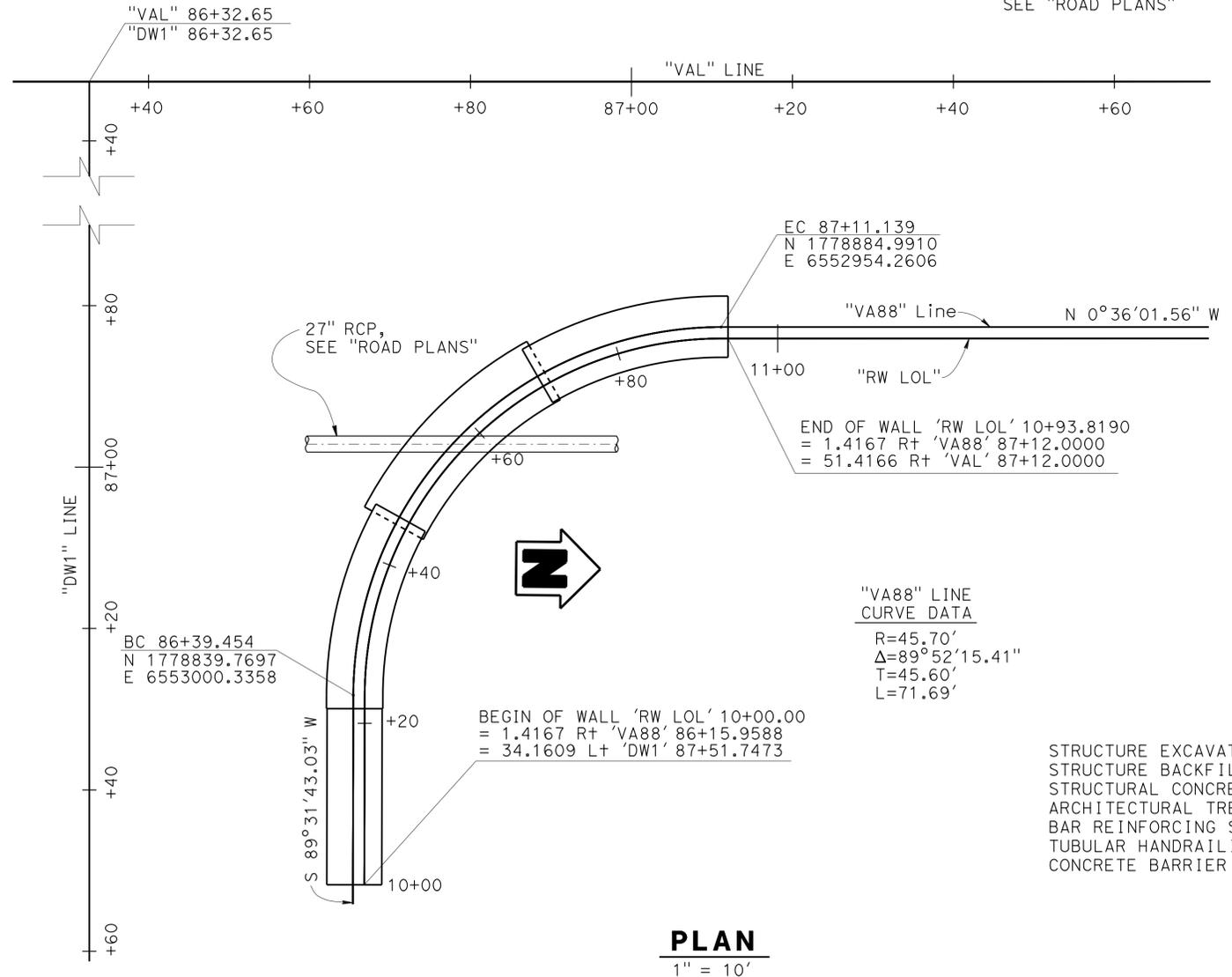


**QUANTITIES**

STRUCTURE EXCAVATION (RETAINING WALL)	480	CY
STRUCTURE BACKFILL (RETAINING WALL)	410	CY
STRUCTURAL CONCRETE, RETAINING WALL	69	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	330	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	8,425	LB
TUBULAR HANDRAILING (MODIFIED)	68	LF
CONCRETE BARRIER (TYPE 26 MODIFIED)	68	LF

**Notes:**

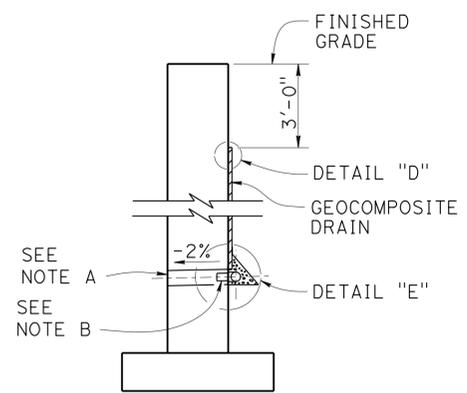
- Match Face to Concrete Barrier Type 26 Mod at Bridge No. 53-3045 "SLAB BRIDGE"
- Curb Type A2-8, see "ROAD PLANS"
- Approach Slab and Concrete Barrier Rail Type 26 Mod, see Bridge No. 53-3045 "SLAB BRIDGE"



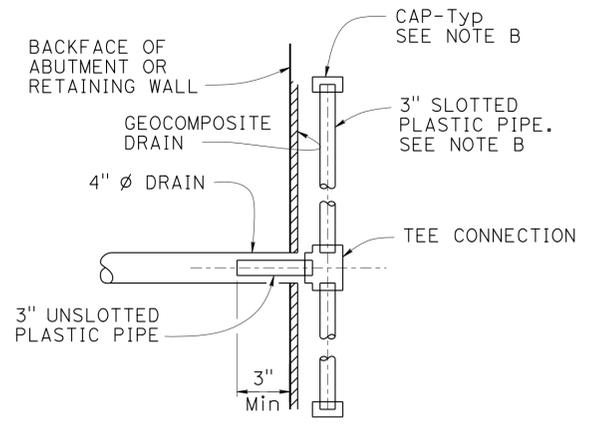
Ramin Rashedi 3-18-15 DESIGN ENGINEER	DESIGN	BY Phu Nguyen	CHECKED Yeo Yoon	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 11</b>	BRIDGE NO.	<b>RETAINING WALL NO. VA88</b>  <b>GENERAL PLAN</b>
	DETAILS	BY Jaime Ramirez	CHECKED Yeo Yoon	LAYOUT	BY Phu Nguyen			POST MILE	
	QUANTITIES	BY Ubong Inyang	CHECKED Phu Nguyen	SPECIFICATIONS	BY Xiahong Li			1.03	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS  
 UNIT: 3587  
 PROJECT NUMBER & PHASE: 0715000160-1  
 CONTRACT NO.: 07-2159u4  
 DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 REVISION DATES: 7-28-11, 9-20-13, 9-11-12, 3-28-15  
 SHEET 1 OF 5

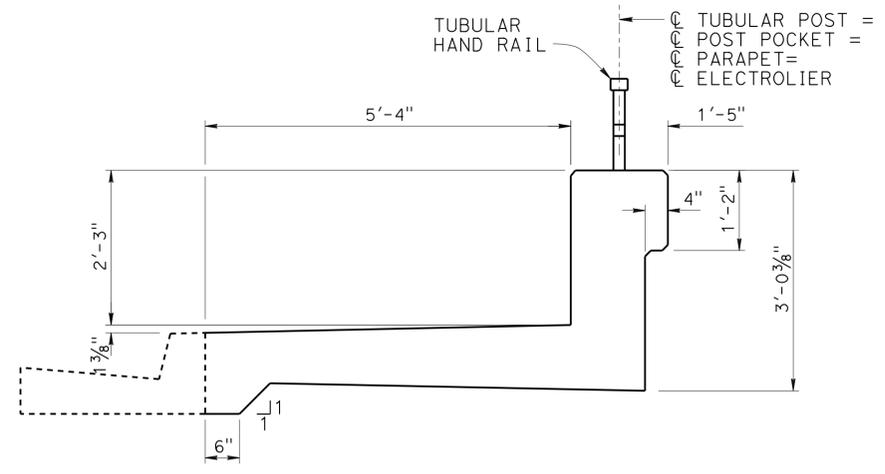
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Orca	5	0.0/1.5, 44.3/44.4	1587	1622
			3-18-15		
			DATE		
			1-25-16		
			PLANS APPROVAL DATE		
<i>William Kemp</i> REGISTERED CIVIL ENGINEER					
William D. Kemp No. 55730 Exp. 12/31/16 CIVIL STATE OF CALIFORNIA					
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**WALL SECTION**

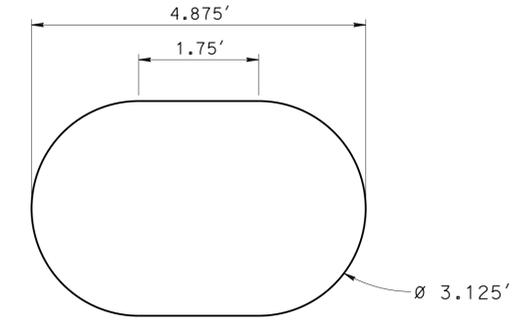


**SECTION K-K**



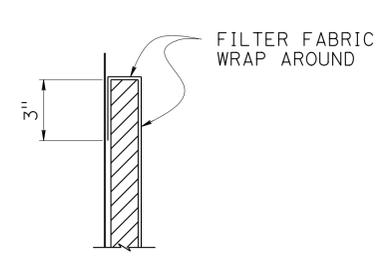
**CONCRETE BARRIER TYPE 26A MOD**

3/4" = 1'-0" RSP  
 Note: For details not shown see B11-54

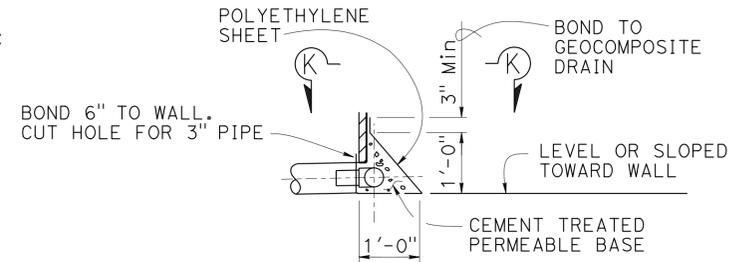


**UTILITY OPENING**

NO SCALE



**DETAIL "D"**



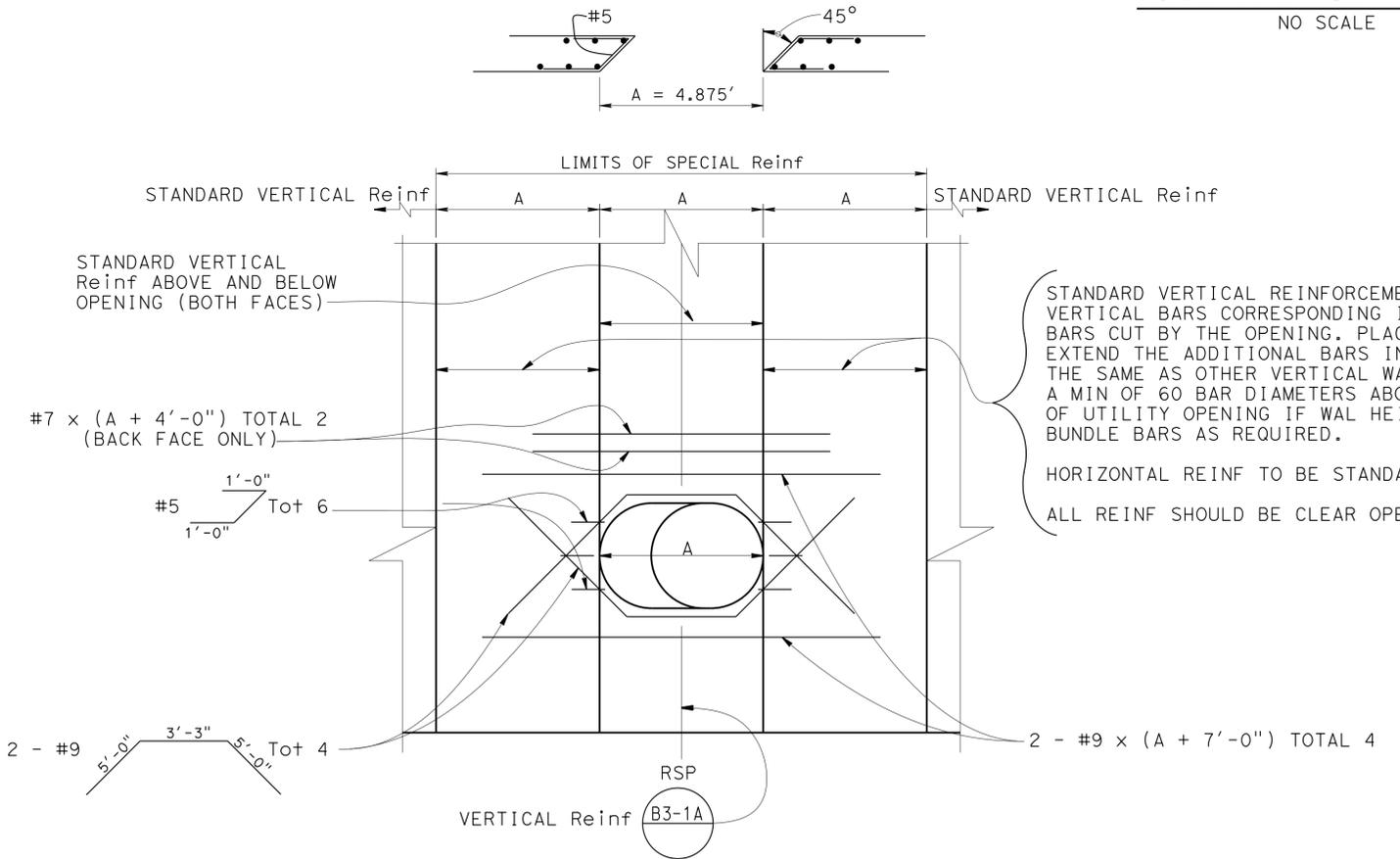
**DETAIL "E"**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**

NO SCALE

**Notes:**

- A. 4" Ø drains at intermediate sag points and at 25'-0" center to center. For walls adjacent to sidewalks or curbs, provide 4" Ø cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3" ± above finished grade.
- B. Geocomposite drain, cement treated permeable base, and 3" Ø slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Ø drain.
- C. Connect the low end of plastic pipe to the main outlet pipe as applicable.



**RETAINING WALL UTILITY OPENING**

NO SCALE

DESIGN	BY	Phu Nguyen	CHECKED	Yeo Yoon
DETAILS	BY	Jaime Ramirez	CHECKED	Yeo Yoon
QUANTITIES	BY	Ubong Inyang	CHECKED	Phu Nguyen

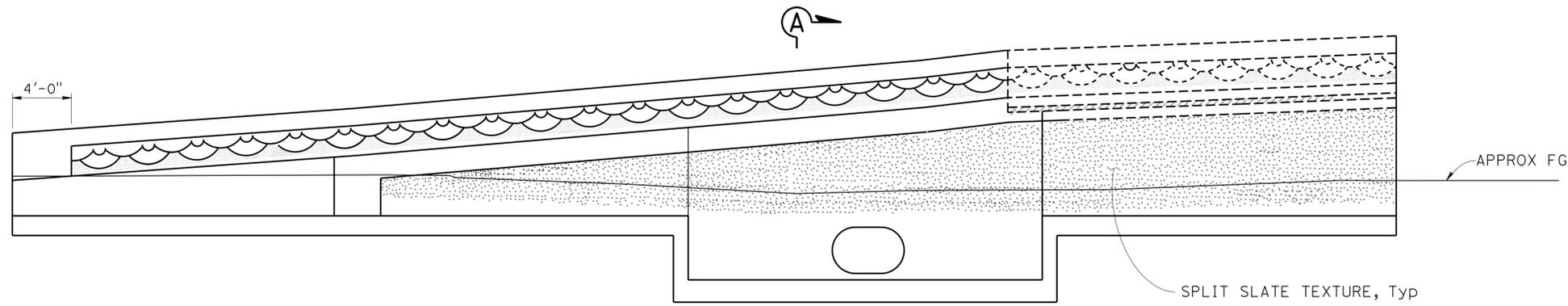
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
 DESIGN BRANCH 11

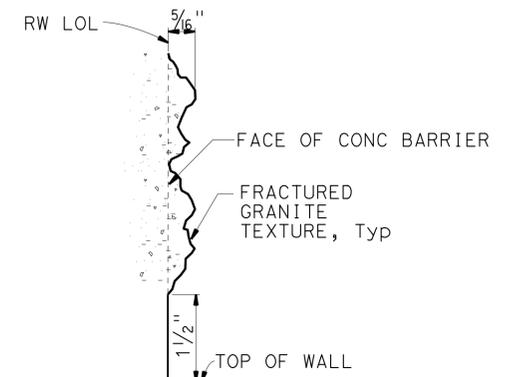
BRIDGE NO.	RW VA88
POST MILE	1.03

**RETAINING WALL NO. VA88**  
**RETAINING WALL DETAILS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Orca	5	0.0/1.5, 44.3/44.4	1588	1622
<i>William Kemp</i> REGISTERED CIVIL ENGINEER			3-18-15 DATE	REGISTERED PROFESSIONAL ENGINEER William D. Kemp No. 55730 Exp. 12/31/16 CIVIL STATE OF CALIFORNIA	
1-25-16 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

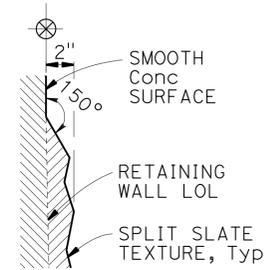


**DEVELOPED ELEVATION**  
1" = 5'-0"

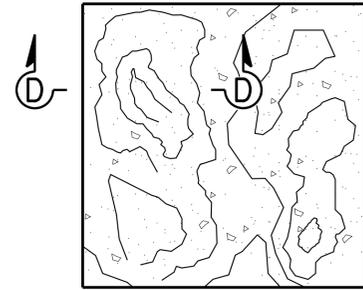


**DETAIL E**  
NO SCALE

Note: All surface relief and texture shall be measured from RW LOL, Typ



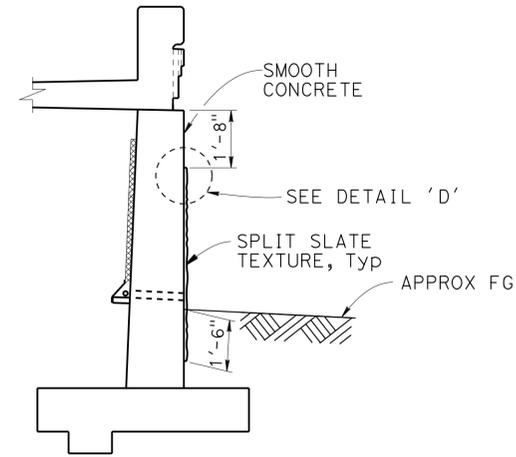
**DETAIL D**  
NO SCALE



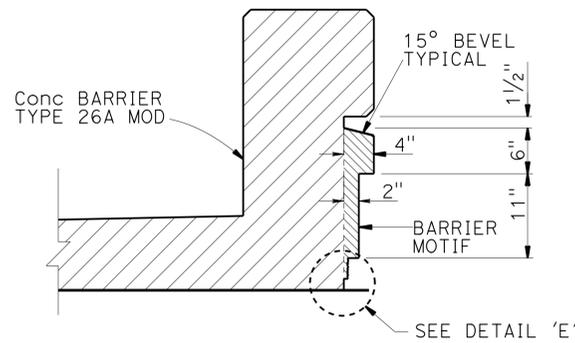
**SPLIT SLATE TEXTURE**  
NO SCALE



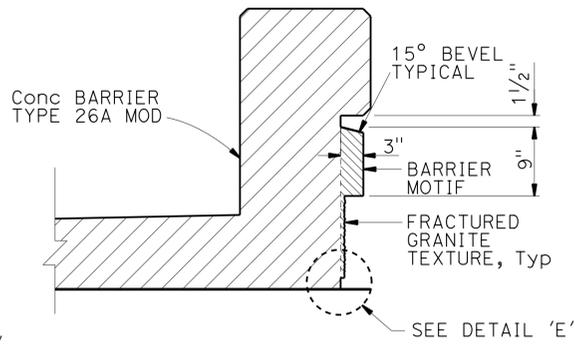
**SECTION D-D**  
NO SCALE



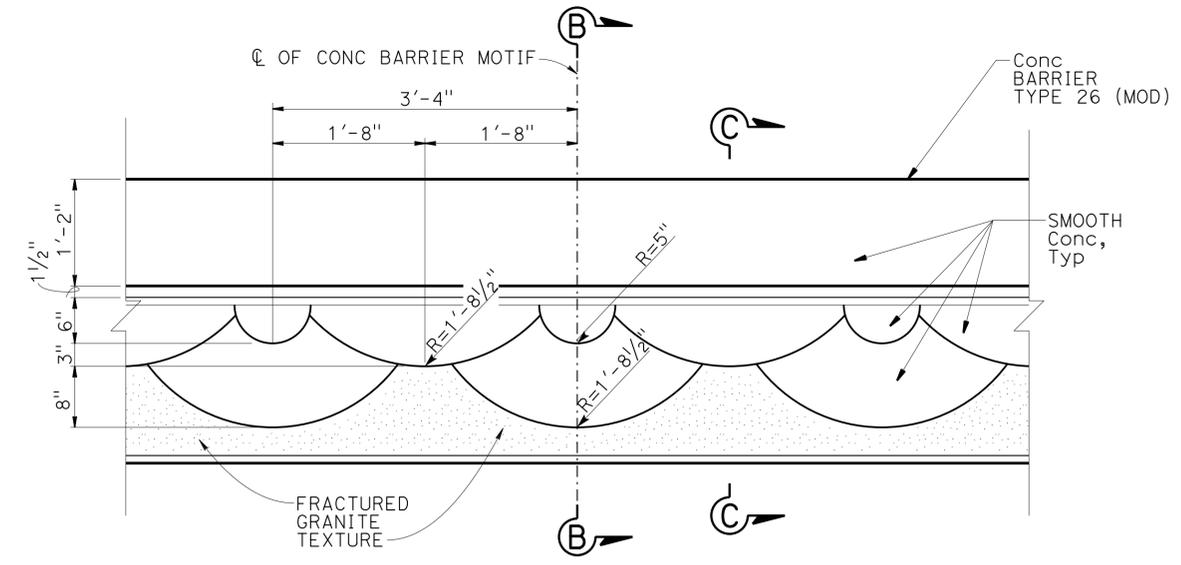
**SECTION A-A**  
3/8" = 1'-0"



**SECTION B-B**  
1" = 1'-0"



**SECTION C-C**  
1" = 1'-0"



**ELEVATION - BARRIER MOTIF**  
1" = 1'-0"

DESIGN	BY H. Javier Chavez	CHECKED Issac Tasabia
DETAILS	BY Jaime Ramirez	CHECKED Issac Tasabia
QUANTITIES	BY Ubong Inyang	CHECKED Phu Nguyen

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	RW VA88
POST MILE	1.03

**RETAINING WALL VA88**  
**ARCHITECTURAL TREATMENT DETAILS**

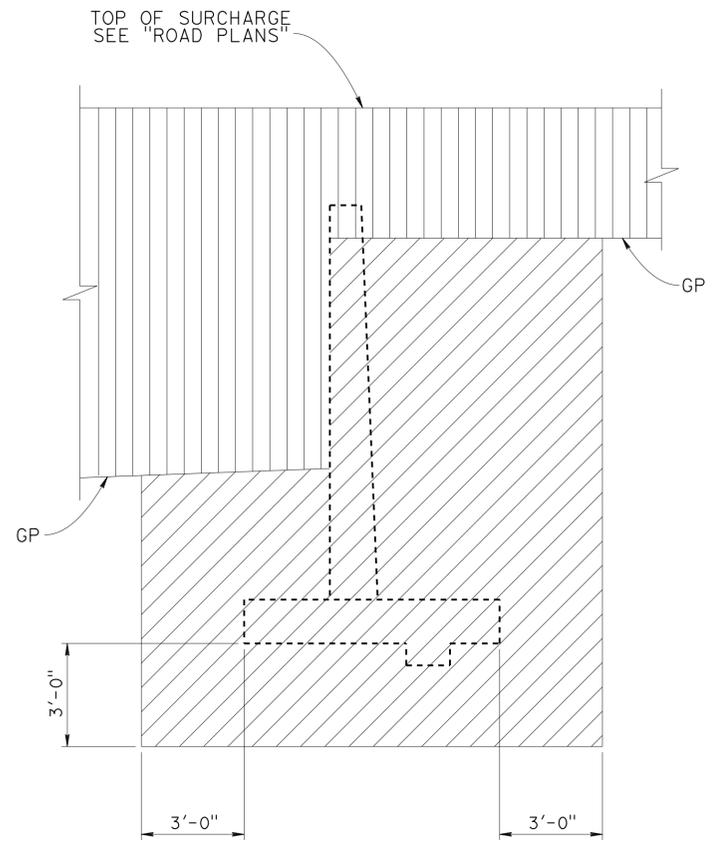
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ora	5	0.0/1.5, 44.3/44.4	1589	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

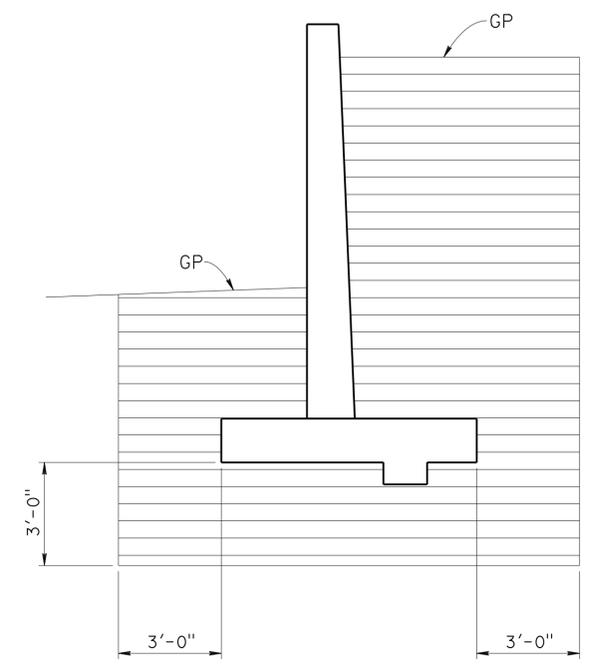
1-25-16  
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
 William D. Kemp  
 No. 55730  
 Exp. 12/31/16  
 CIVIL  
 STATE OF CALIFORNIA



**EXCAVATION**



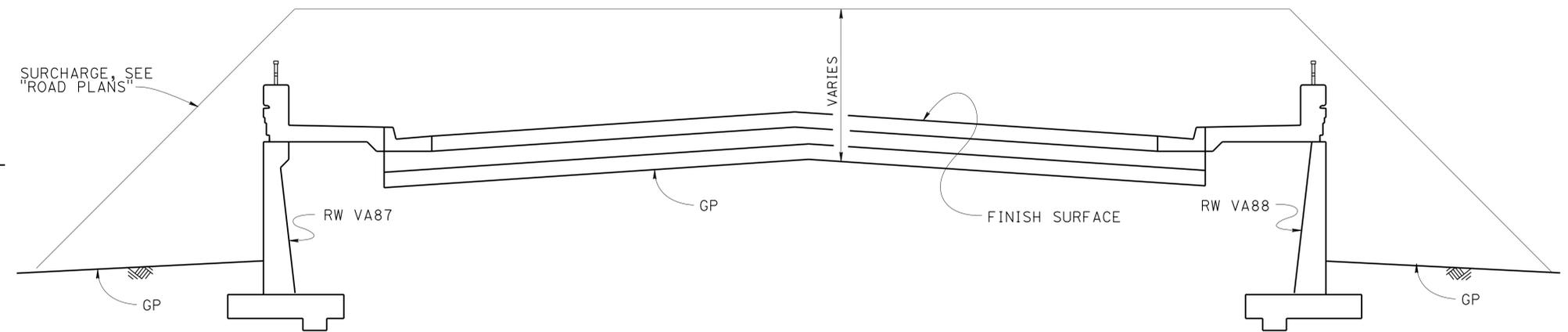
**BACKFILL**

LEGEND:

- STRUCTURE EXCAVATION
- ROADWAY EXCAVATION
- STRUCTURE BACKFILL

GP - PLANNED GRADING PLANE

**LIMITS OF EXCAVATION AND BACKFILL**  
NO SCALE



**EMBANKMENT SURCHARGE**  
NO SCALE

DESIGN	BY B. Kemp	CHECKED I. Tasabia
DETAILS	BY J. Ramirez	CHECKED I. Tasabia
QUANTITIES	BY G. Reyes-Gutierrez	CHECKED P. Nguyen

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

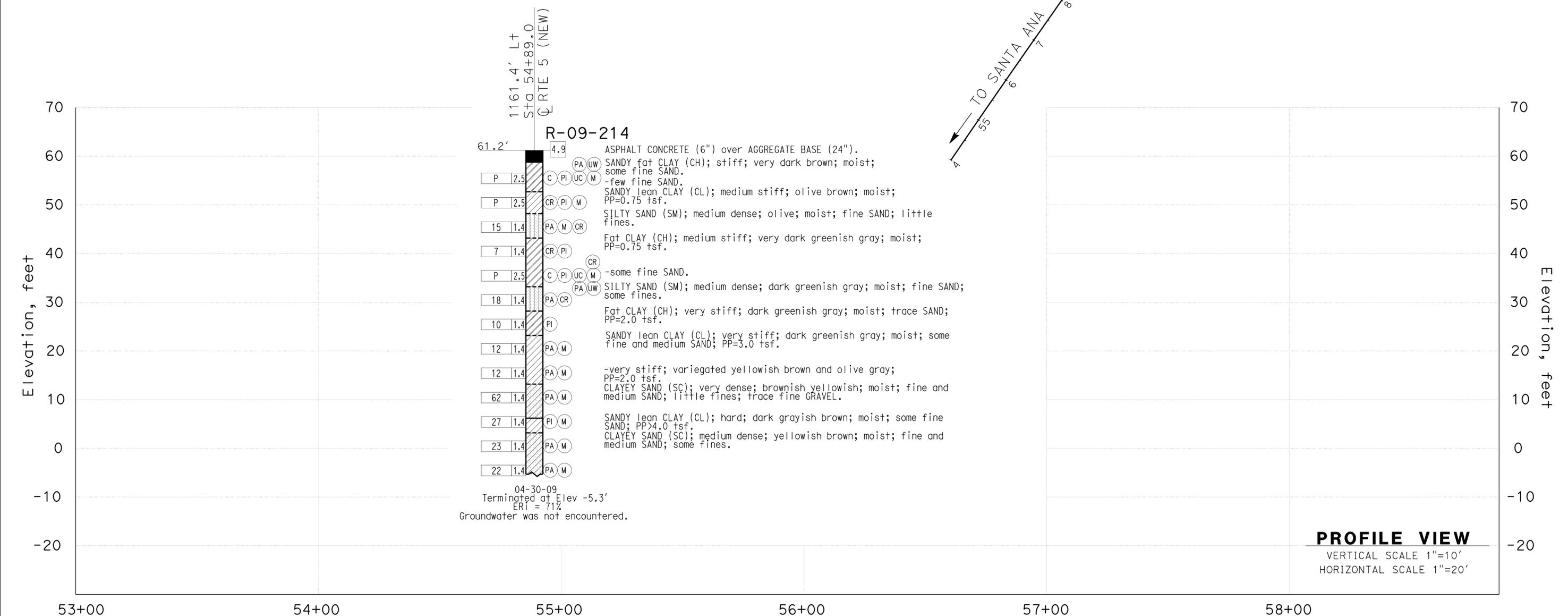
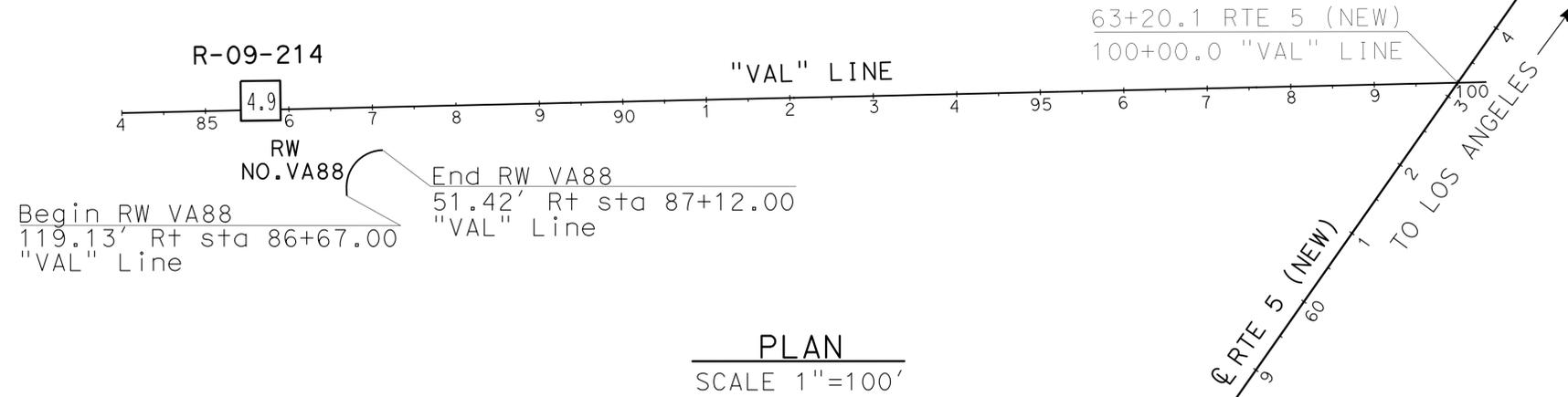
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	RW VA88
POST MILE	1.03

**RETAINING WALL VA88**  
**LIMITS OF EXCAVATION AND BACKFILL**

**BENCH MARK**

GPS 0887  
 ELEVATION 65.915 FT  
 FD 2-1/2 CADT DISK IN CONC. CURB  
 FLUSH, STAMPED "LA-5-1.0, 1995"  
 LOCATED 90' N OF THE SOUTH SIDE  
 FIRESTONE BLVD 0.2 MI SE OF VALLEY VIEW  
 NORTHING 542395.636  
 EASTING 1997613.893  
 DATUM NAVD88



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1590	1622

05/20/15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705

Michael G. Smith  
 No. 2229  
 Exp. 03/31/16  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA  
 GEOTECHNICAL

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1-This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
 2-For protection of underground utility lines, hand-auger was used to remove top 5 to 10 feet of subsurface material for exploratory borings and Cone Penetration Testings.  
 3-2.5" to 1.4" blow counts conversion factors for fine-grain and coarse-grain soils have been 0.8 and 0.55, respectively.

F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH	EJ.JEON/P.MCDONALD FIELD INVESTIGATION BY: DATE: 04/30/09	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. RW VA88 POST MILES 1.03	RETAINING WALL NO. VA88 LOG OF TEST BORINGS SHEET 1 OF 1
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	CONTRACT NO.: 07-2159U4	REVISION DATES 5/12/15

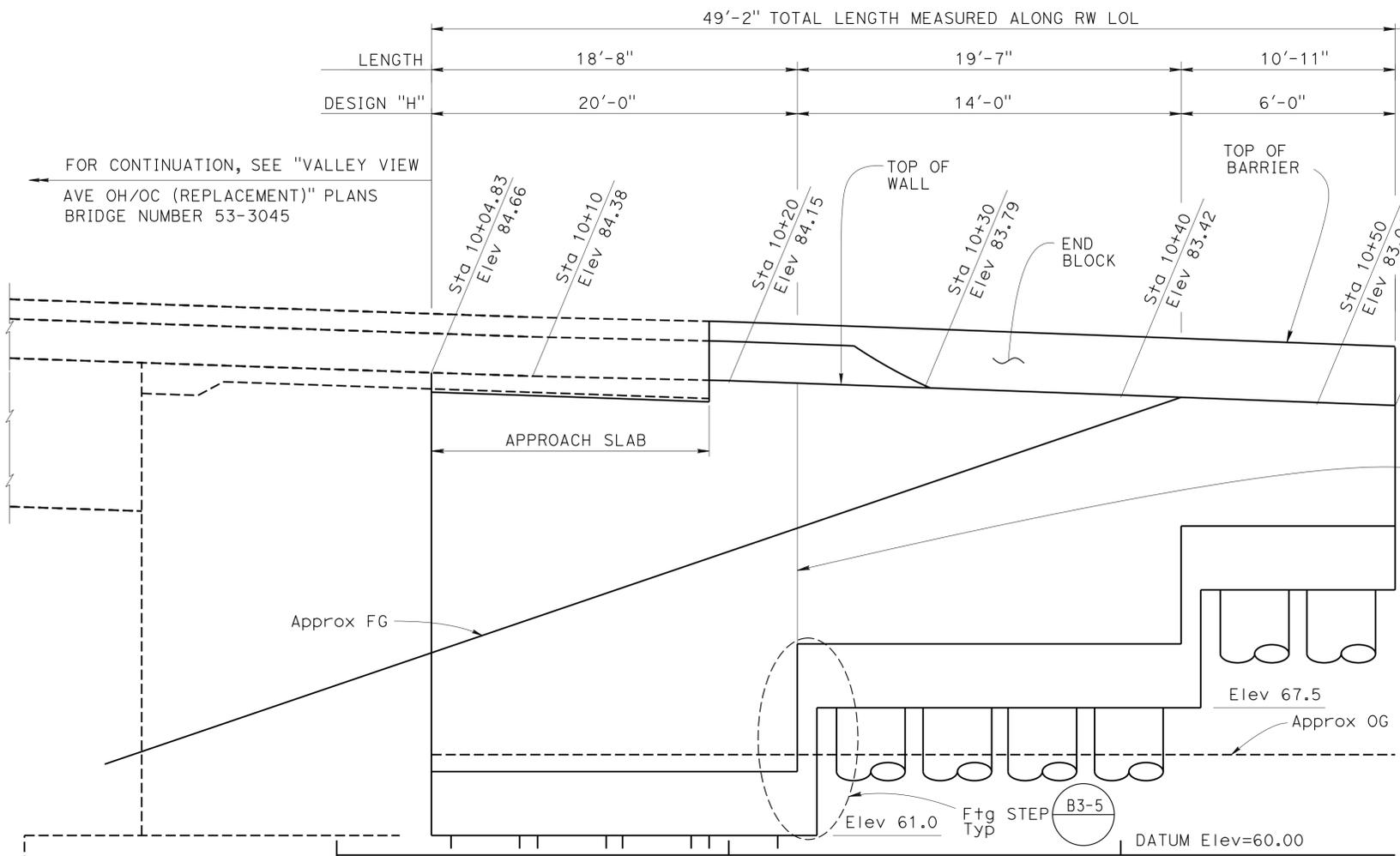
FILE => rfw088-u-totb.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1591	1622

*William Kemp*  
 REGISTERED CIVIL ENGINEER DATE 3-18-15  
 No. 55730  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

1-25-16  
 PLANS APPROVAL DATE

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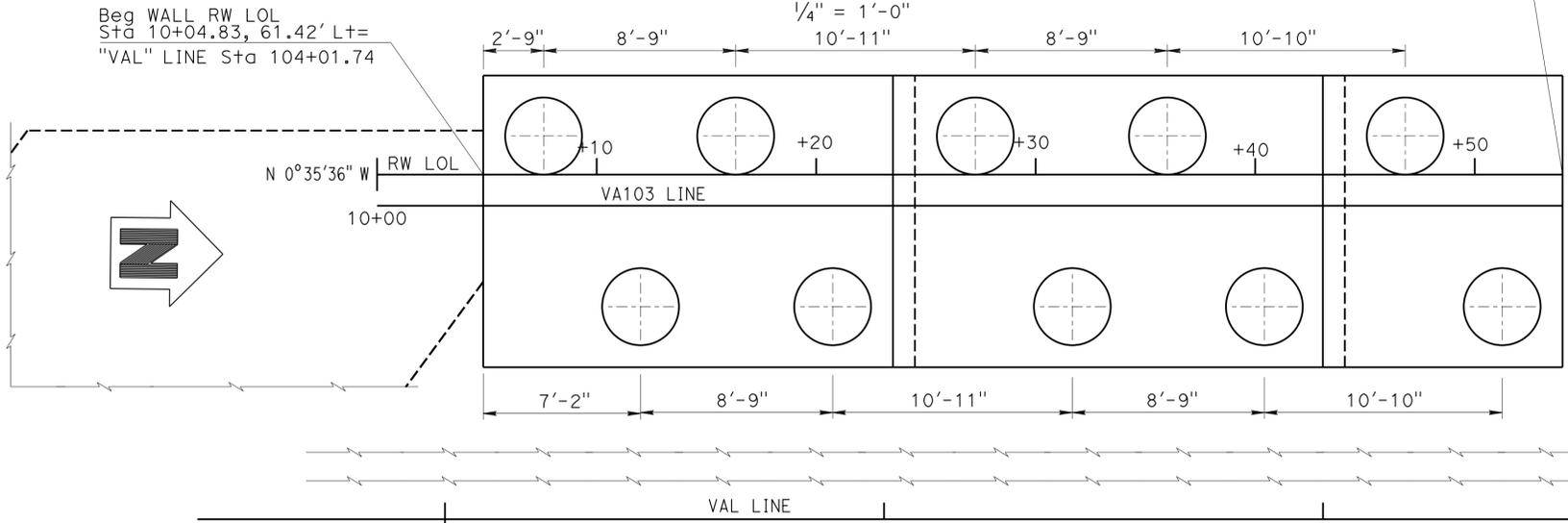
FOR CONTINUATION, SEE "ROAD PLANS"

FOR CONTINUATION, SEE "VALLEY VIEW"  
 AVE OH/OC (REPLACEMENT) PLANS  
 BRIDGE NUMBER 53-3045

QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	435	CY
STRUCTURE BACKFILL (RETAINING WALL)	320	CY
42" CAST-IN-DRILLED-HOLE CONCRETE PILING	436	LF
STRUCTURAL CONCRETE, RETAINING WALL	116	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	335	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	52,100	LB
TUBULAR HANDRAILING (MODIFIED)	35	LF
CONCRETE BARRIER (TYPE 26 MODIFIED)	35	LF

**MIRROR ELEVATION**



**PLAN**

1/4" = 1'-0"

**INDEX TO PLANS**

Sheet No.	Title
1	GENERAL PLAN
2	RETAINING WALL DETAILS
3	ARCHITECTURAL TREATMENT DETAILS
4	BARRIER MOTIF DETAILS
5	LOG OF TEST BORINGS SHEET 1 OF 1

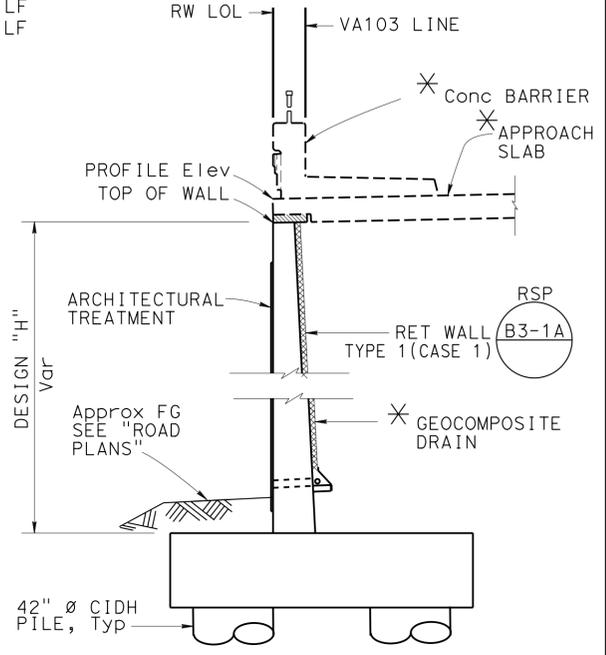
**STANDARD PLANS DATED 2010**

A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
RSP A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL- BRIDGE SURCHARGE AND WALL
BO-3	BRIDGE DETAILS
RSP B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP B3-5	RETAINING WALL DETAILS NO. 1
B3-6	RETAINING WALL DETAILS NO. 2
B11-51	TUBULAR HAND RAILING
RSP B11-54	CONCRETE BARRIER TYPE 26



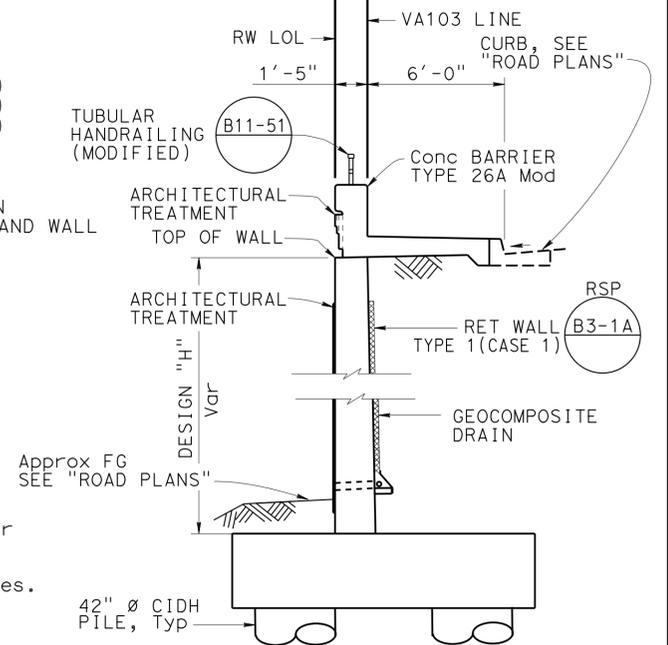
NOTES:

- Drilling for piles spaced closer than 10'-6" OC shall not take place until one day after conc placement for adjacent piles.
  - FOR 'PILE DATA TABLE', SEE "RETAINING WALL DETAILS" SHEET
- ✱ See Bridge No. 53-3045 plans



**TYPICAL SECTION AT APPROACH SLAB**

1/4" = 1'-0"



**TYPICAL SECTION**

1/4" = 1'-0"

Ramin Rashedi 3-18-15  
 DESIGN ENGINEER

DESIGN	BY M. Okimura	CHECKED R. Wilson
DETAILS	BY T. Bittermann	CHECKED R. Wilson
QUANTITIES	BY M. Okimura	CHECKED J. Radu

LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
LAYOUT	BY M. Okimura
SPECIFICATIONS	BY X. Li

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 11**

BRIDGE NO.	53E0266
POST MILE	1.25

**RETAINING WALL VA103 GENERAL PLAN**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1592	1622

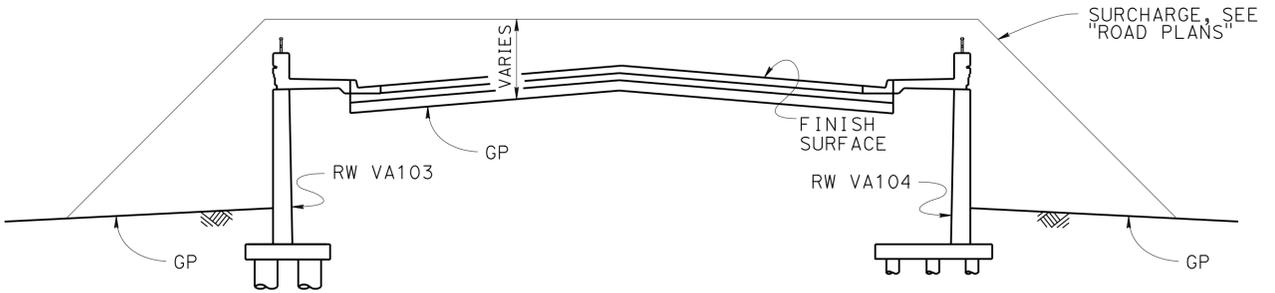
*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

### PILE DATA TABLE

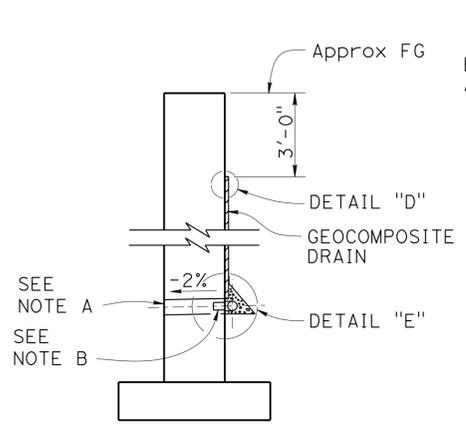
LOCATION	PILE TYPE	NOMINAL RESISTANCE (kips)		DESIGN TIP ELEVATIONS (ft)	SPECIFIED TIP ELEVATION (ft)
		COMPRESSION	TENSION		
VA103/ Sta 10+04.83 to Sta 10+23.5	42-inch CIDH	360	0	+16.0 (a) +31.0 (c) +39.0 (d)	+16
VA103/ Sta 10+23.5 to Sta 10+43.08		360	0	+24.0 (a) +51.0 (c) +39.0 (d)	+24
VA103/ Sta 10+43.08 to Sta 10+54		360	0	+34.0 (a) +60.0 (c) +39.0 (d)	+34

Notes:

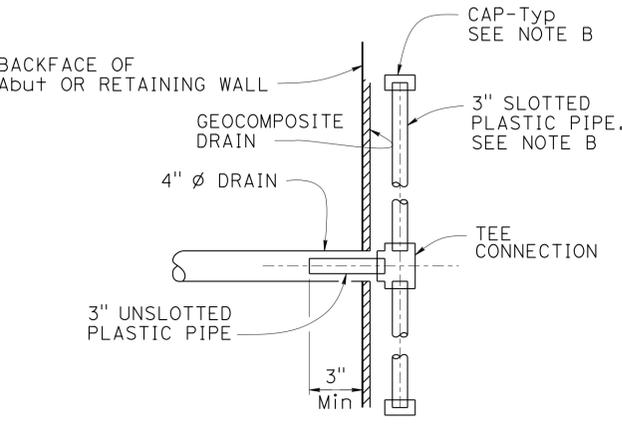
- Design tip elevations are controlled by: (a) Compression, (b) Tension (c) Settlement, (d) Lateral
- The CIDH specified tip elevation shall not be raised



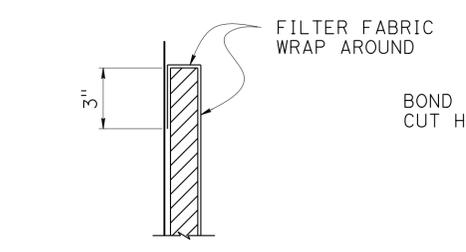
**EMBAKMENT SURCHARGE**  
NO SCALE



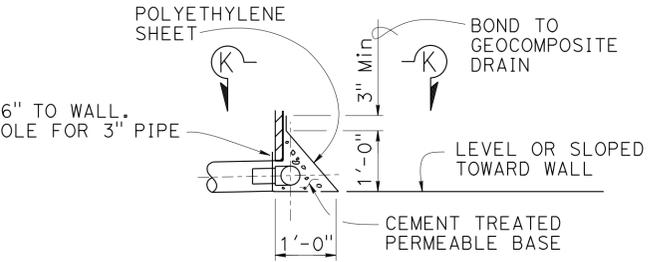
**WALL SECTION**



**SECTION K-K**



**DETAIL "D"**



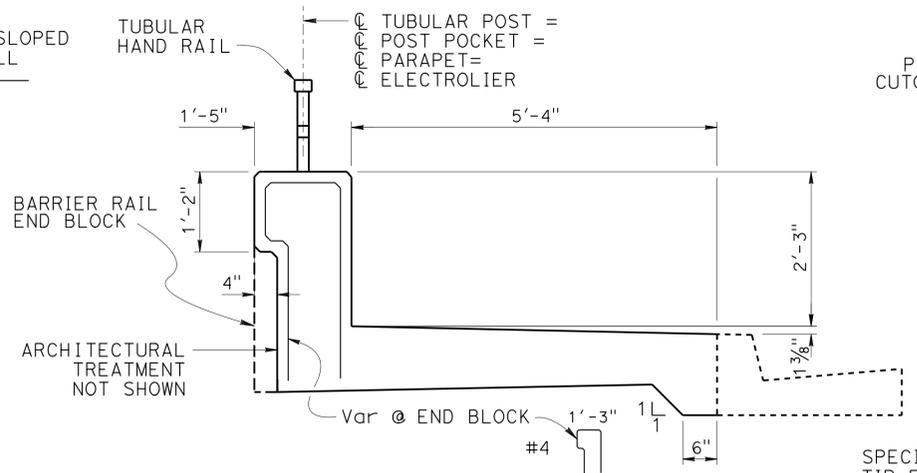
**DETAIL "E"**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**

NO SCALE

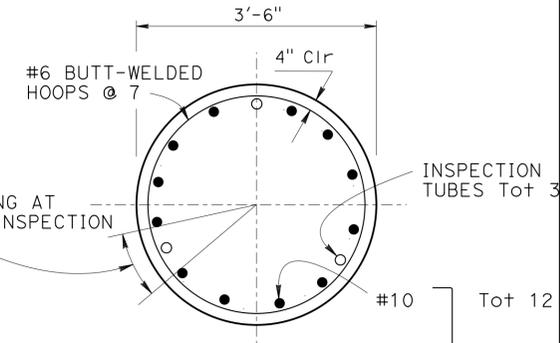
Notes (GEOCOMPOSITE DRAIN):

- 4"  $\phi$  drains at intermediate sag points and at 25'-0" center to center. For walls adjacent to sidewalks or curbs, provide 4"  $\phi$  cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3"  $\pm$  above finished grade.
- Geocomposite drain, cement treated permeable base, and 3"  $\phi$  slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4"  $\phi$  drain.
- Connect the low end of plastic pipe to the main outlet pipe as applicable.



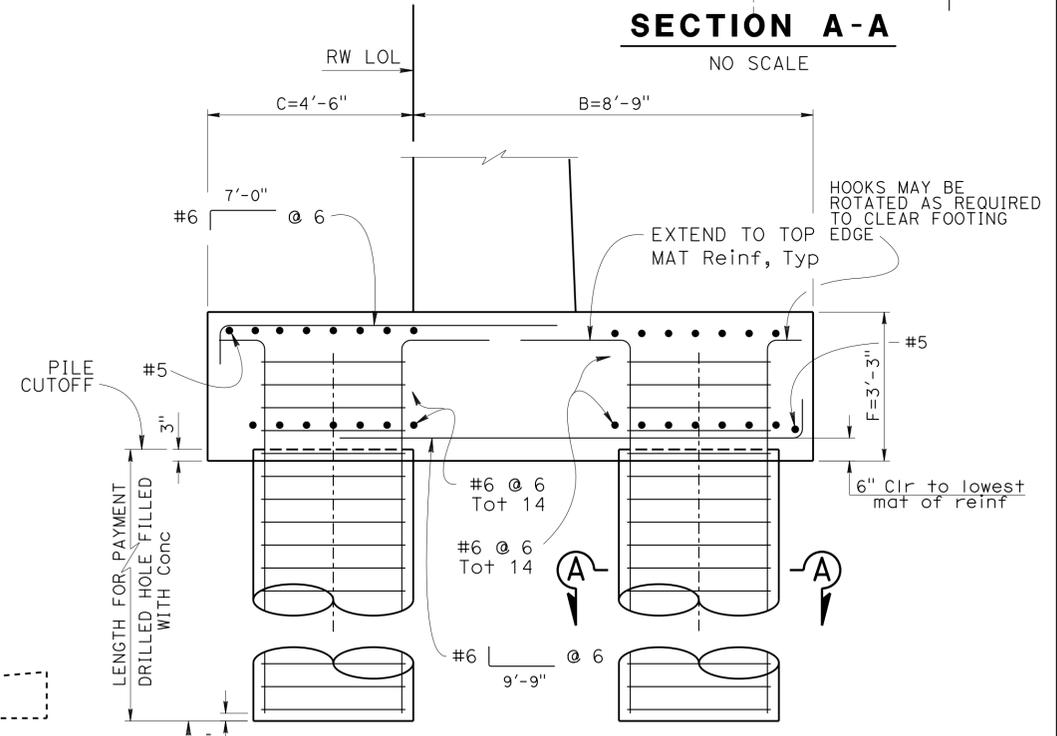
**BARRIER RAIL TYPE 26A Mod**

Note: For details and reinforcement not shown see **B11-54** RSP



**SECTION A-A**

NO SCALE



**PILE FOOTING SECTION**

NO SCALE

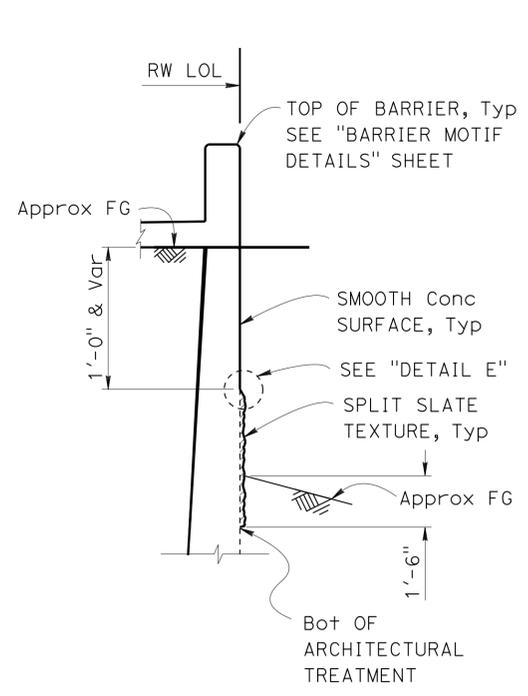
Notes:

- Reinforcement shown is in addition to that shown in **B3-1A**
- Bottom mat reinf may be adjusted to accommodate pile reinf as approved by the engineer.

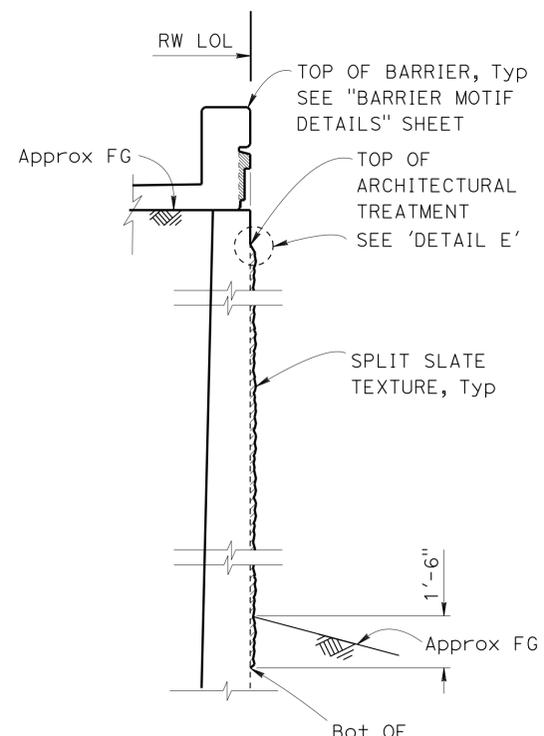
DESIGN BY Mark Okimura	CHECKED Cipriano Manansala	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 53E0266	<b>RETAINING WALL VA103</b> <b>RETAINING WALL DETAILS</b>
DETAILS BY Jaime Ramirez	CHECKED Cipriano Manansala		POST MILE 1.25	
QUANTITIES BY Mark Okimura	CHECKED John Radu		UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1 CONTRACT NO.: 07-2159u4	

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3  
 DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11  
 DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 REVISION DATES: 9-12-12, 7-22-13, 9-3-13, 6-26-15  
 SHEET 2 OF 5

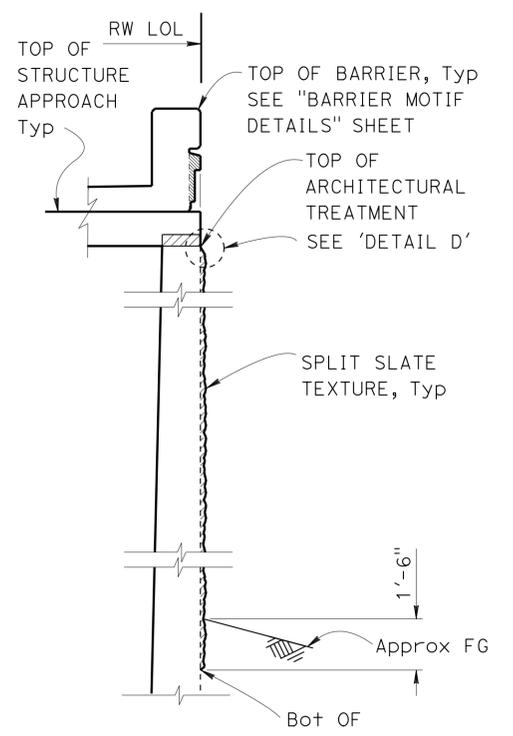
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1593	1622
			DATE		
			3-18-15		
			REGISTERED CIVIL ENGINEER		
			PLANS APPROVAL DATE		
			1-25-16		
			REGISTERED PROFESSIONAL ENGINEER		
			No. 55730		
			Exp. 12/31/16		
			CIVIL		
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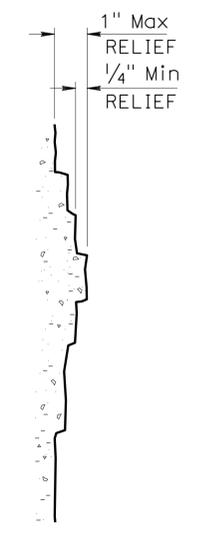
**SECTION A-A**  
3/8" = 1'-0"



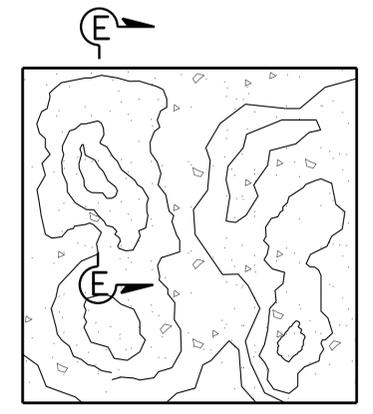
**SECTION B-B**  
3/8" = 1'-0"



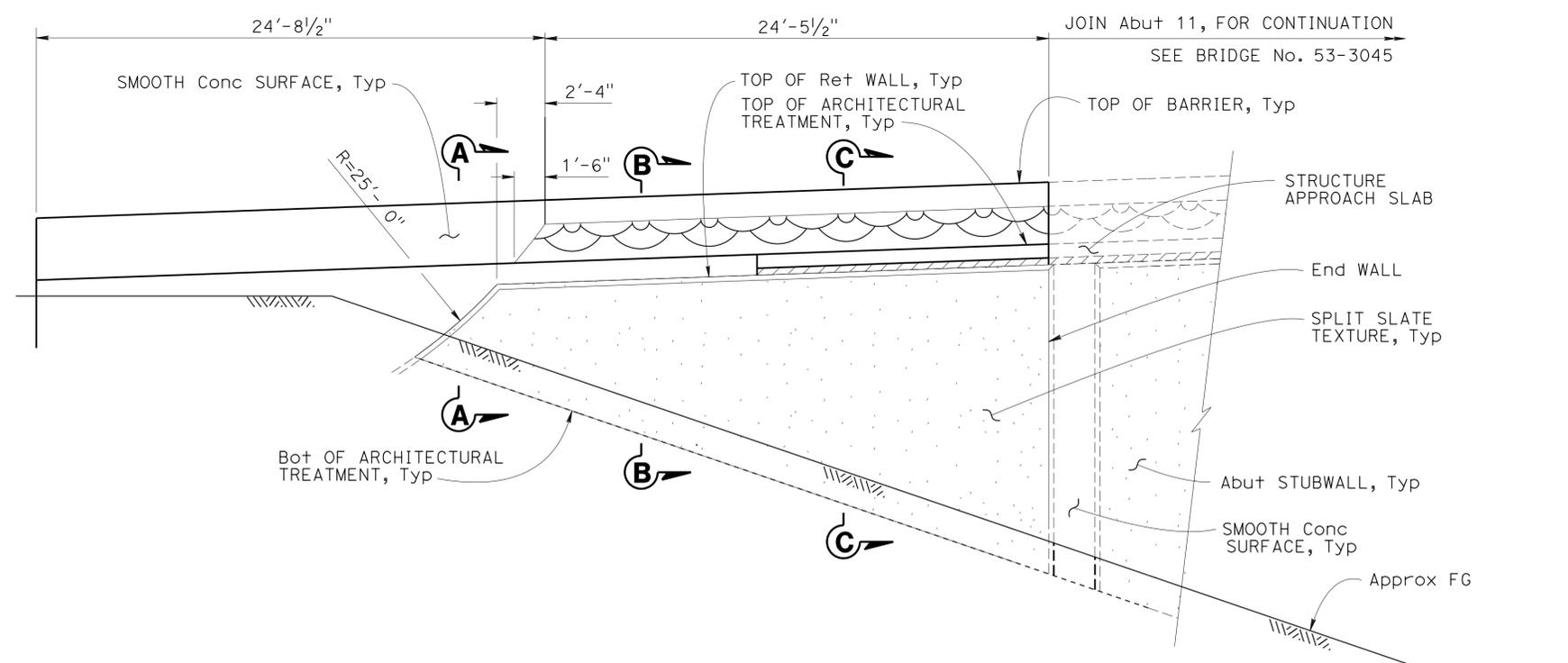
**SECTION C-C**  
3/8" = 1'-0"



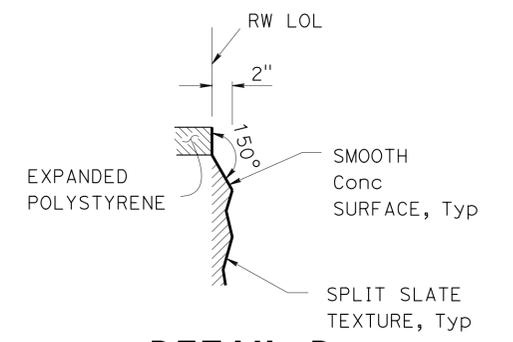
**SECTION E-E**  
NO SCALE



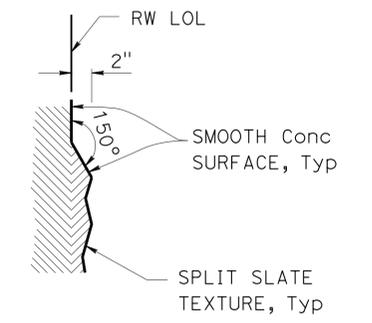
**SPLIT SLATE TEXTURE**  
NO SCALE



**ELEVATION - ARCHITECTURAL TREATMENT**  
1/4" = 1'-0"



**DETAIL D**  
NO SCALE



**DETAIL E**  
NO SCALE

NOTE:  
All surface relief and texture shall be measured from RW LOL, Typ

DESIGN	BY I. Tasabia	CHECKED J. Chavez
DETAILS	BY L. Goldthwait	CHECKED J. Chavez
QUANTITIES	BY M. Okimura	CHECKED J. Radu

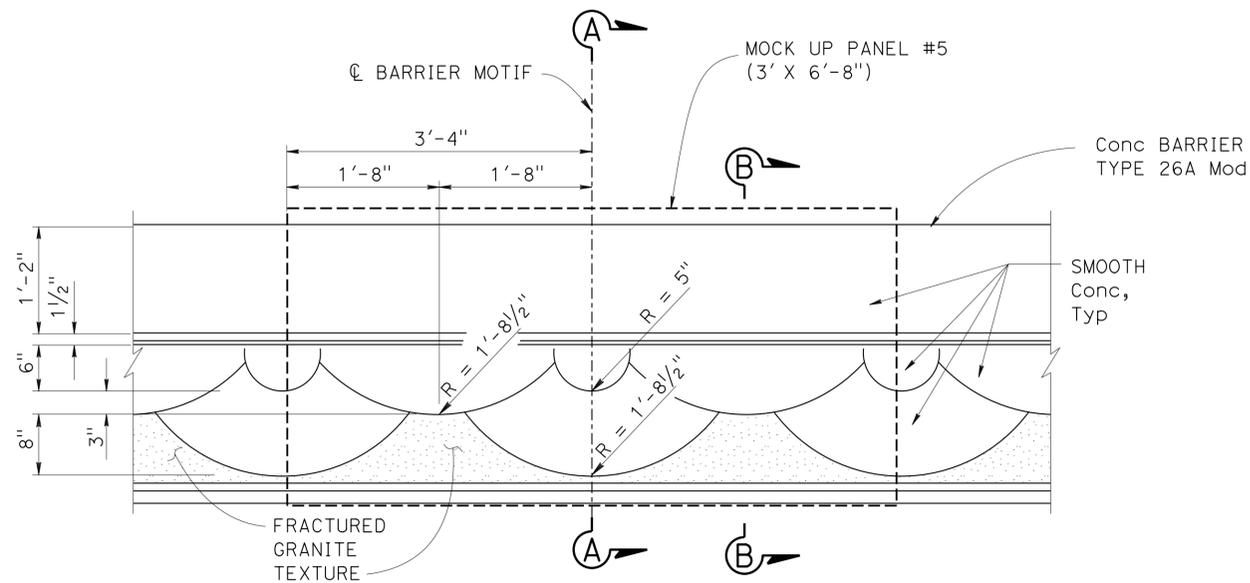
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	53E0266
POST MILE	1.25

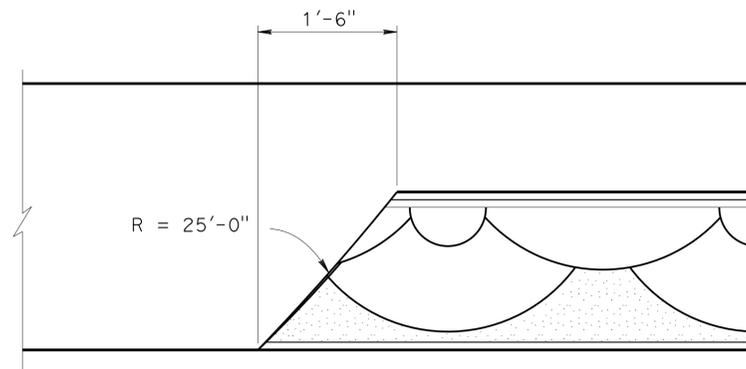
**RETAINING WALL VA103**  
**ARCHITECTURAL TREATMENT DETAILS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Ord	5	0.0/1.5, 44.3/44.4	1594	1622
			3-18-15		
REGISTERED CIVIL ENGINEER			DATE		
1-25-16			PLANS APPROVAL DATE		
			REGISTERED PROFESSIONAL ENGINEER William D. Kemp No. 55730 Exp. 12/31/16 CIVIL STATE OF CALIFORNIA		
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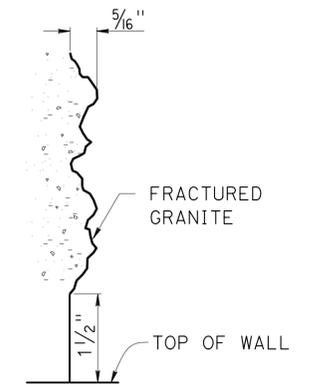
**PARTIAL ELEVATION - BARRIER MOTIF**

1" = 1'-0"



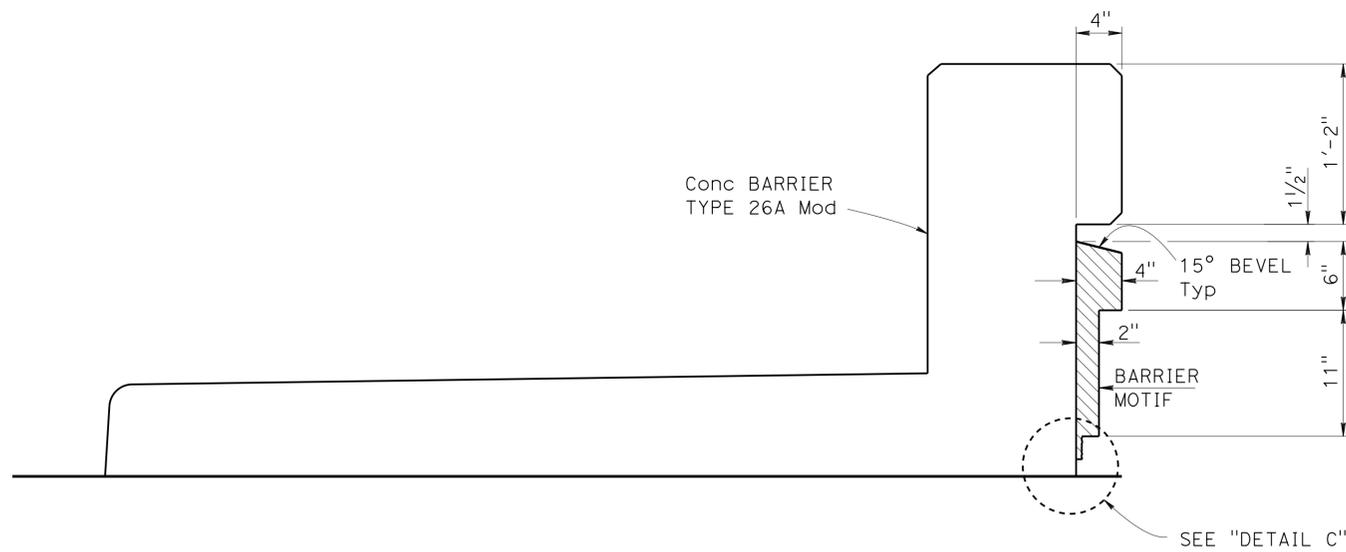
**BARRIER END DETAIL**

1" = 1'-0"



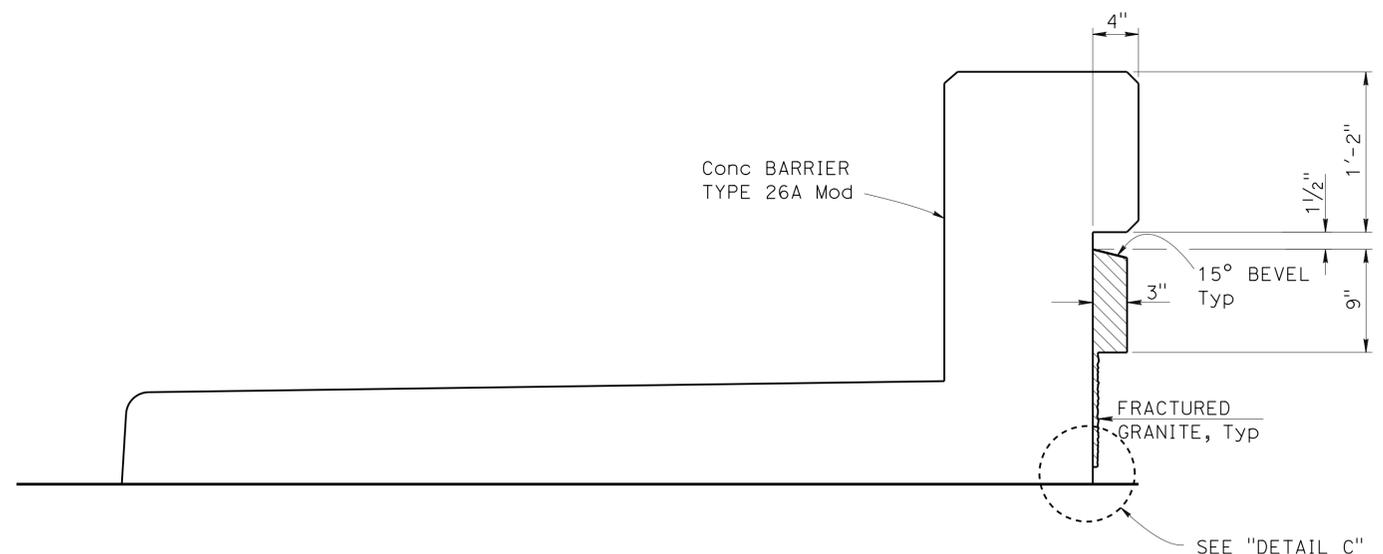
**DETAIL C**

NO SCALE



**SECTION A-A**

1 1/2" = 1'-0"



**SECTION B-B**

1 1/2" = 1'-0"

DESIGN	BY	I. Tasabia	CHECKED	J. Chavez	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	53E0266	RETAINING WALL VA103 BARRIER MOTIF DETAILS	
	DETAILS	BY	A. Valdez	CHECKED			J. Chavez	POST MILE		1.25
	QUANTITIES	BY	M. Okimura	CHECKED			J. Radu			
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 4 OF 5

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:36

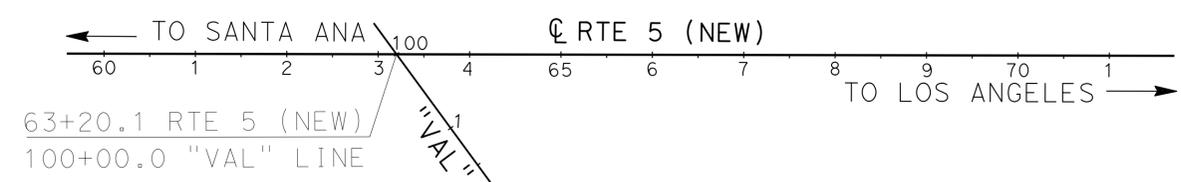
**BENCH MARK**

GPS 0887  
 ELEVATION 65.915 FT  
 FD 2-1/2 CADT DISK IN CONC. CURB  
 FLUSH, STAMPED "LA-5-1.0, 1995"  
 LOCATED 90' N OF THE SOUTH SIDE  
 FIRESTONE BLVD 0.2 MI SE OF VALLEY VIEW  
 NORTHING 542395.636  
 EASTING 1997613.893  
 DATUM NAVD88



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1595	1622

05/20/15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE  
 URS CORPORATION  
 2020 EAST FIRST STREET, SUITE 400  
 SANTA ANA, CA 92705  
 Exp. 03/31/16  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 MICHAEL G. SMITH  
 No. 2229  
 GEOTECHNICAL



**PLAN**  
 SCALE 1"=100'



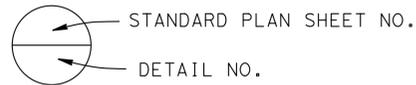
**PROFILE VIEW**  
 VERTICAL SCALE 1"=10'  
 HORIZONTAL SCALE 1"=20'

F.MOTAMED DESIGN OVERSIGHT 05/20/15 SIGN OFF DATE	DRAWN BY T.PANAH	EJ.JEON FIELD INVESTIGATION BY: DATE: 07/01/09	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	M.G. SMITH PROJECT ENGINEER	BRIDGE NO. 53E0266 POST MILES 1.25	<b>RETAINING WALL NO. VA103</b> <b>LOG OF TEST BORINGS SHEET 1 OF 1</b>
GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: 07150001601	3658 CONTRACT NO.: 07-2159U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES

USERNAME => s125624 DATE PLOTTED => 28-JAN-2016 TIME PLOTTED => 12:36

**STANDARD PLANS  
DATED MAY 2010**

RSP	A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP	A10B	ABBREVIATIONS (SHEET 2 OF 2)
RSP	A10C	LINE AND SYMBOLS (SHEET 1 OF 3)
RSP	A10D	LINE AND SYMBOLS (SHEET 2 OF 3)
RSP	A10E	LINE AND SYMBOLS (SHEET 3 OF 3)
RSP	A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP	A10G	LEGEND - SOIL (SHEET 2 OF 2)
RSP	A10H	LEGEND - ROCK
RSP	A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL- BRIDGE SURCHARGE AND WALL BRIDGE DETAILS
RSP	B0-3	BRIDGE DETAILS
RSP	B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP	B3-5	RETAINING WALL DETAILS NO.1
RSP	B11-51	TUBULAR HAND RAILING
RSP	B11-54	CONCRETE BARRIER TYPE 26
RSP	S48	OVERHEAD SIGNS-LIGHTWEIGHT POST DETAILS



**INDEX TO PLANS**

SHEET NO.	TITLE
1	GENERAL PLAN
2	STRUCTURE PLAN
3	PILE LAYOUT
4	RETAINING WALL DETAILS
5	SIGN PEDESTAL AND WALL REMOVAL DETAILS
6	PILE AND FOOTING DETAILS
7	ARCHITECTURAL TREATMENT DETAILS
8	BARRIER MOTIF DETAILS
9	LOG OF TEST BORINGS SHEET 1 OF 1

QUANTITIES

REMOVE RETAINING WALL (CY)	167	CY
STRUCTURE EXCAVATION (RETAINING WALL)	2,225	CY
STRUCTURE BACKFILL (RETAINING WALL)	1,740	CY
42" CAST-IN-DRILLED-HOLE CONCRETE PILING	3,061	LF
STRUCTURAL CONCRETE, RETAINING WALL	721	CY
ARCHITECTURAL TREATMENT (SPLIT SLATE)	3,640	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	327,500	LB
TUBULAR HANDRAILING (MODIFIED)	228	LF
CONCRETE BARRIER (TYPE 26 MODIFIED)	228	LF

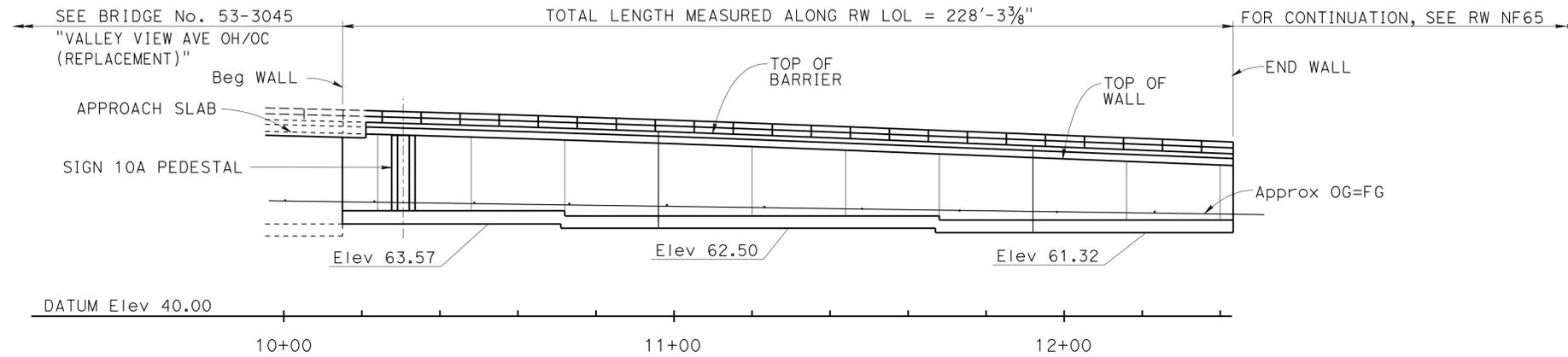
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1596	1622

*William Kemp* 3-18-15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

William D. Kemp  
 No. 55730  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

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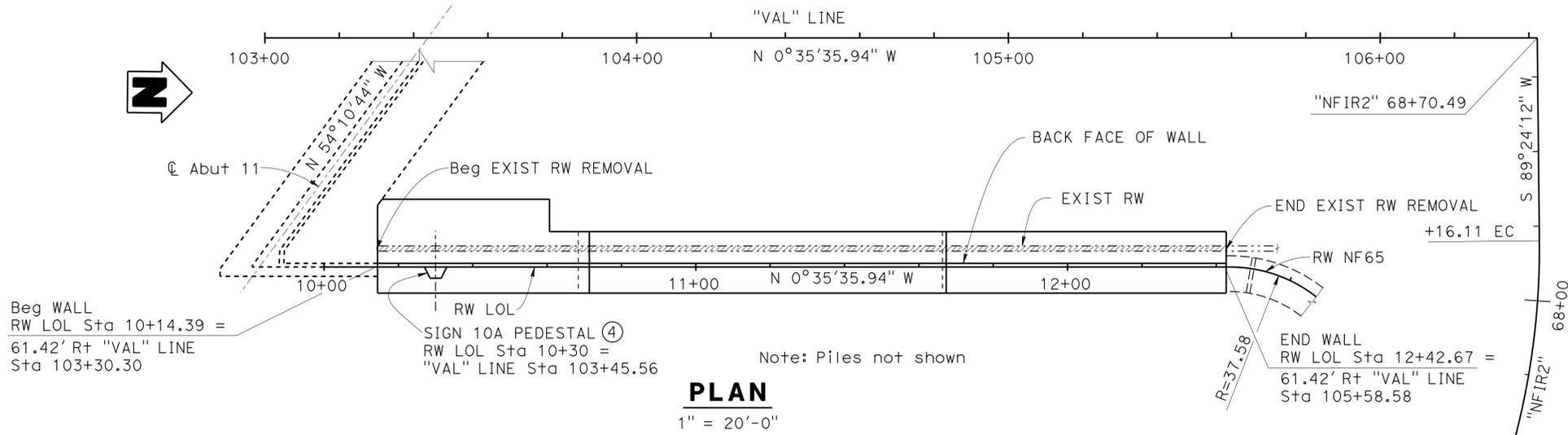
Note: All Piles not shown

**ELEVATION**

1" = 20'-0"

LEGEND:

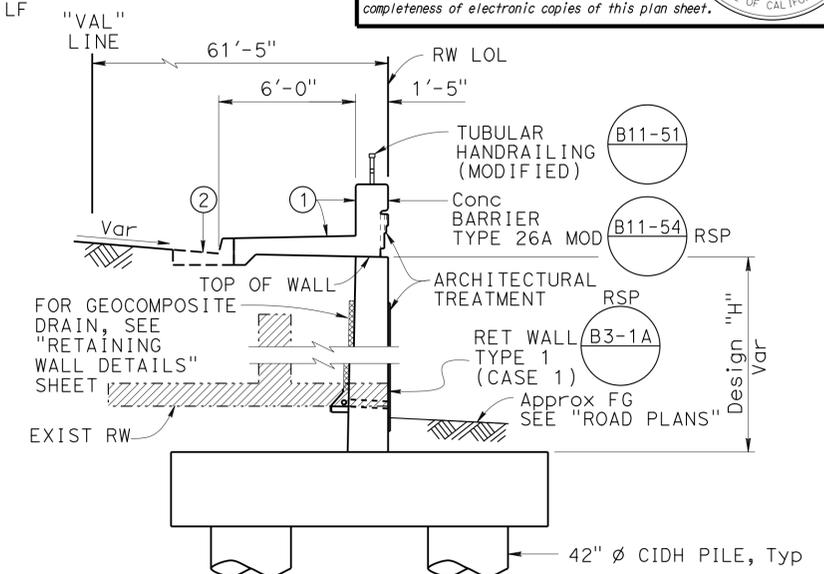
Indicates exist retaining wall removal



**PLAN**

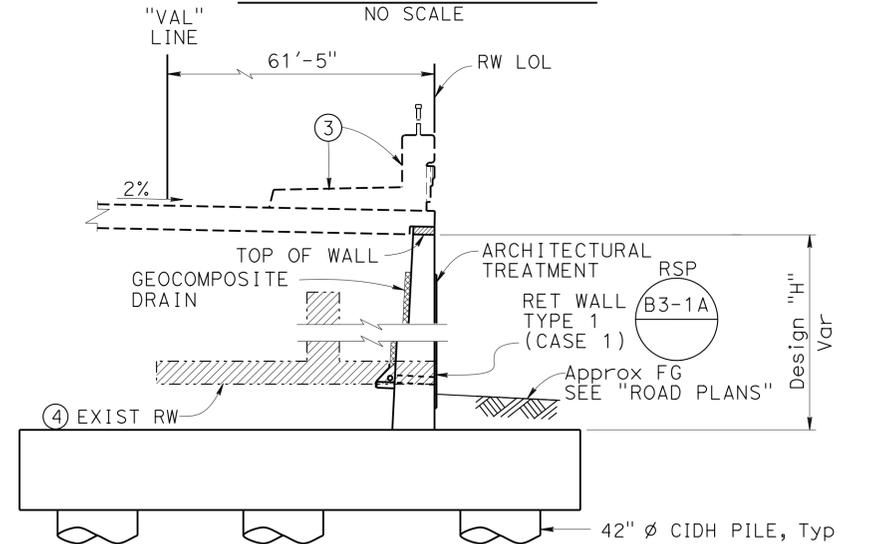
1" = 20'-0"

Note: Piles not shown



**TYPICAL SECTION**

NO SCALE



**TYPICAL SECTION AT APPROACH SLAB**

NO SCALE

Notes:

- Match Face to Concrete Barrier Type 26 Mod at Bridge No. 53-3045 Valley View Ave OH/OC (Replacement) Br.
- Curb Type A2-8, see "ROAD PLANS"
- Approach Slab and Concrete Barrier Rail Type 26 Mod, see Bridge No. 53-3045
- Begin removal of exist Retaining Wall 58.5'± right "VAL" line.

Ramin Rashedi 3-18-15 DESIGN ENGINEER	DESIGN	BY	Ruperd Wilson	CHECKED	Cipriano Manasala	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 11</b>	BRIDGE NO.	53E0267	<b>RETAINING WALL VA104</b> <b>GENERAL PLAN</b>			
	DETAILS	BY	Jaime Ramirez	CHECKED	Ruperd Wilson	LAYOUT	BY			Ruperd Wilson	CHECKED		Cipriano Manasala	POST MILE	1.22
	QUANTITIES	BY	M. Thach	CHECKED	J. Radu	SPECIFICATIONS	BY			Xiahong Li	CHECKED		Xiahong Li	PLANS AND SPECS COMPARED	

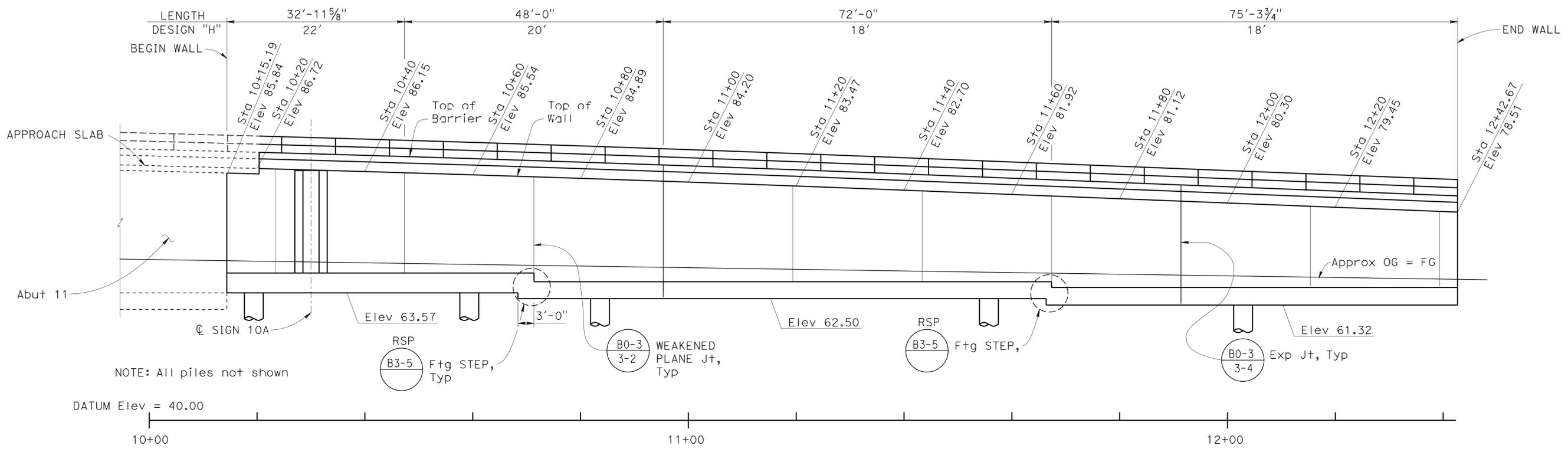
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3587  
PROJECT NUMBER & PHASE: 0715000160-1 CONTRACT NO.: 07-2159u4

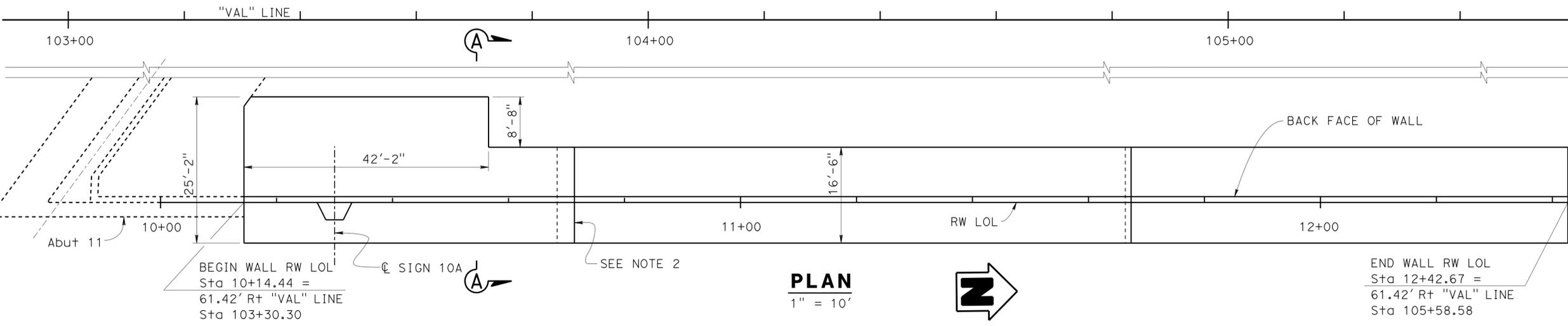
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
4-2-12 8-20-13 1-1-13 7-24-13	1	9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1597	1622
			DATE		
			3-18-15		
			REGISTERED CIVIL ENGINEER		
			1-25-16		
			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.					



**ELEVATION**  
1" = 10'



**PLAN**  
1" = 10'

- NOTES:
- Existing Retaining wall to be removed not shown see "GENERAL PLAN" sheet
  - Limit of 3'-6" Footing
  - For section A-A see "PILE & FOOTING DETAILS" sheet

DESIGN	BY Ruperd Wilson	CHECKED Cipriano Mananasala
DETAILS	BY Jaime Ramirez	CHECKED Ruperd Wilson
QUANTITIES	BY M. Thach	CHECKED J. Radu

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 11**

BRIDGE NO.	53E0267
POST MILE	1.22

**RETAINING WALL VA104  
STRUCTURE PLAN**

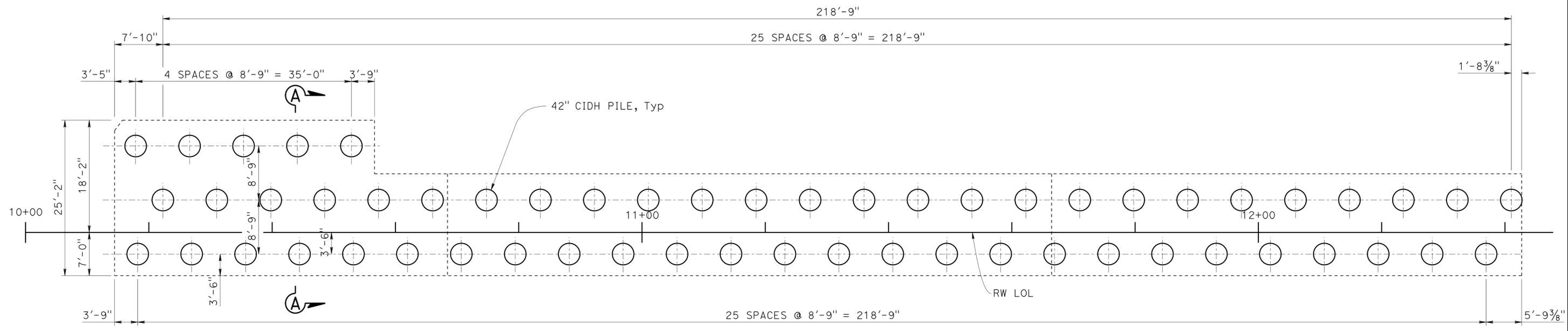
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1598	1622

*William Kemp* 3-18-15  
REGISTERED CIVIL ENGINEER DATE

1-25-16  
PLANS APPROVAL DATE

William D. Kemp  
No. 55730  
Exp. 12/31/16  
CIVIL  
STATE OF CALIFORNIA

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.



**N**

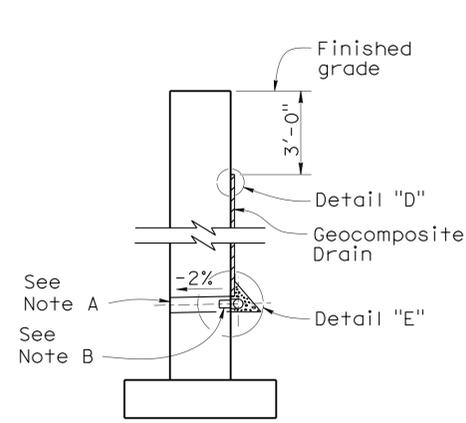
**PLAN**  
1/8" = 1'-0"

NOTE:  
For Section A-A, see "PILE AND FOOTING DETAILS" sheet

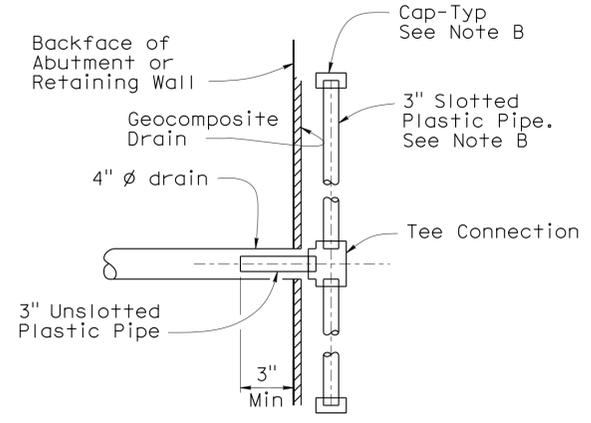
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Ruperd Wilson	CHECKED Cipriano Mananasala	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 11	BRIDGE NO.	RETAINING WALL VA104		
	DETAILS	BY Pauline Tong	CHECKED Ruperd Wilson			53E0267	PILE LAYOUT		
	QUANTITIES	BY M. Thach	CHECKED J. Radu			POST MILE 1.22			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3587 PROJECT NUMBER & PHASE: 0715000160-1	CONTRACT NO.: 07-2159u4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 3 OF 9

TIME PLOTTED => 12:36  
DATE PLOTTED => 28-JAN-2016  
USERNAME => s125624

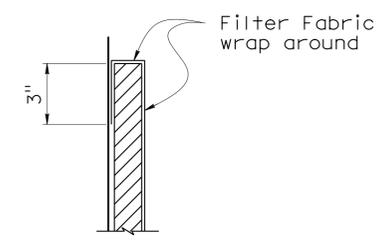
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Orca	5	0.0/1.5, 44.3/44.4	1599	1622
<i>William Kemp</i> REGISTERED CIVIL ENGINEER DATE 3-18-15			William D. Kemp No. 55730 Exp. 12/31/16 CIVIL STATE OF CALIFORNIA		
1-25-16			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



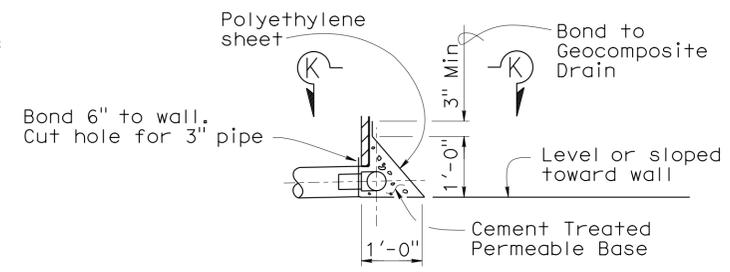
**WALL SECTION**



**SECTION K-K**

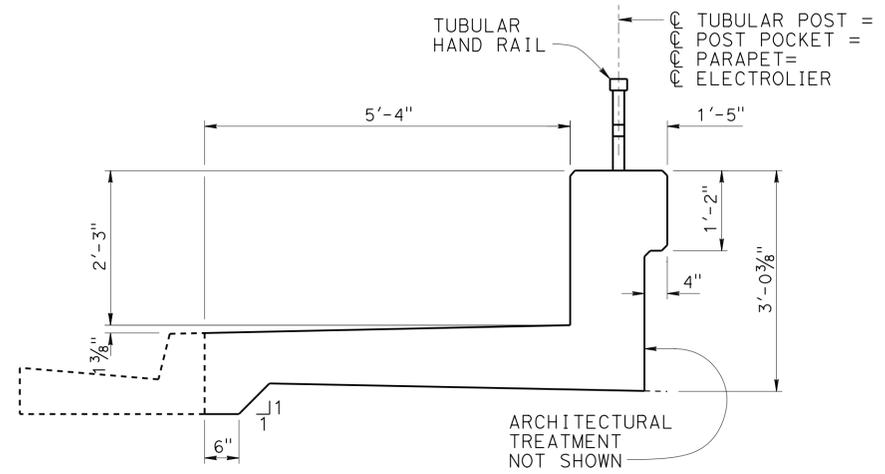


**DETAIL "D"**



**DETAIL "E"**

**WEEP HOLE AND GEOCOMPOSITE DRAIN**  
NO SCALE



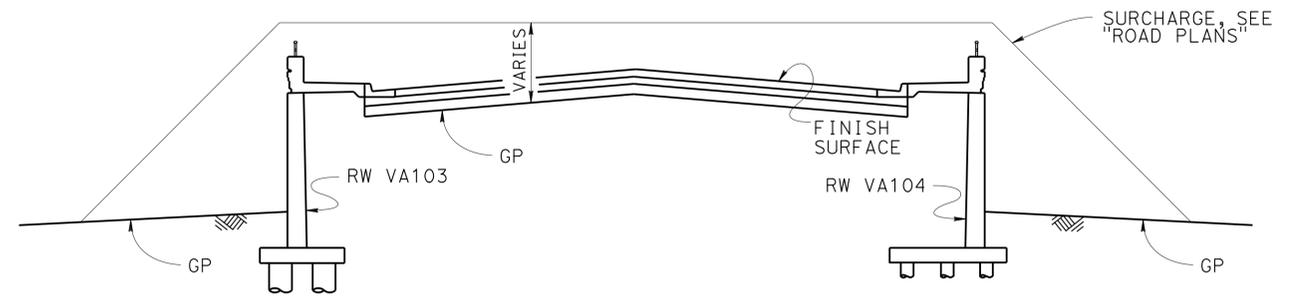
**CONCRETE BARRIER TYPE 26A Mod**

3/4" = 1'-0"

Note: For details not shown see RSP B11-54

**Notes (GEOCOMPOSITE DRAIN):**

- A. 4"  $\phi$  drains at intermediate sag points and at 25'-0" center to center. For walls adjacent to sidewalks or curbs, provide 4"  $\phi$  cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3"  $\pm$  above finished grade.
- B. Geocomposite drain, cement treated permeable base, and 3"  $\phi$  slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4"  $\phi$  drain.
- C. Connect the low end of plastic pipe to the main outlet pipe as applicable.



**EMBANKMENT SURCHARGE**

NO SCALE

DESIGN	BY Ruperd Wilson	CHECKED Cipriano Mananasa
DETAILS	BY Jaime Ramirez	CHECKED Ruperd Wilson
QUANTITIES	BY M. Thach	CHECKED J. Radu

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

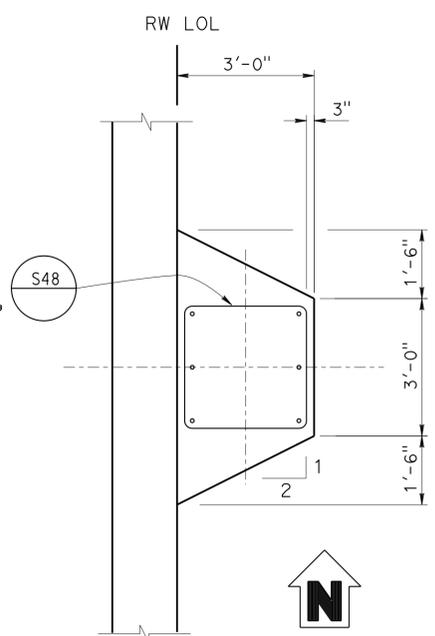
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 11

BRIDGE NO.	53E0267
POST MILE	1.22

**RETAINING WALL VA104**  
**RETAINING WALL DETAILS**

**NOTES:**

- For reinforcing steel not shown, see Standard Plan RSP B3-1A "RETAINING WALL TYPE 1 (CASE 1)". Unless otherwise specified
- For Post Type 10 NPS base plate and anchors, see "ROAD PLANS"
- Vertical reinforcement on pedestal may be adjusted to clear retaining wall reinforcement
- Concrete strength shall be achieved and Backfill prior to installation of Sign
- Vertical pedestal Reinf shall extend and be tied to bottom horizontal Reinf of footing

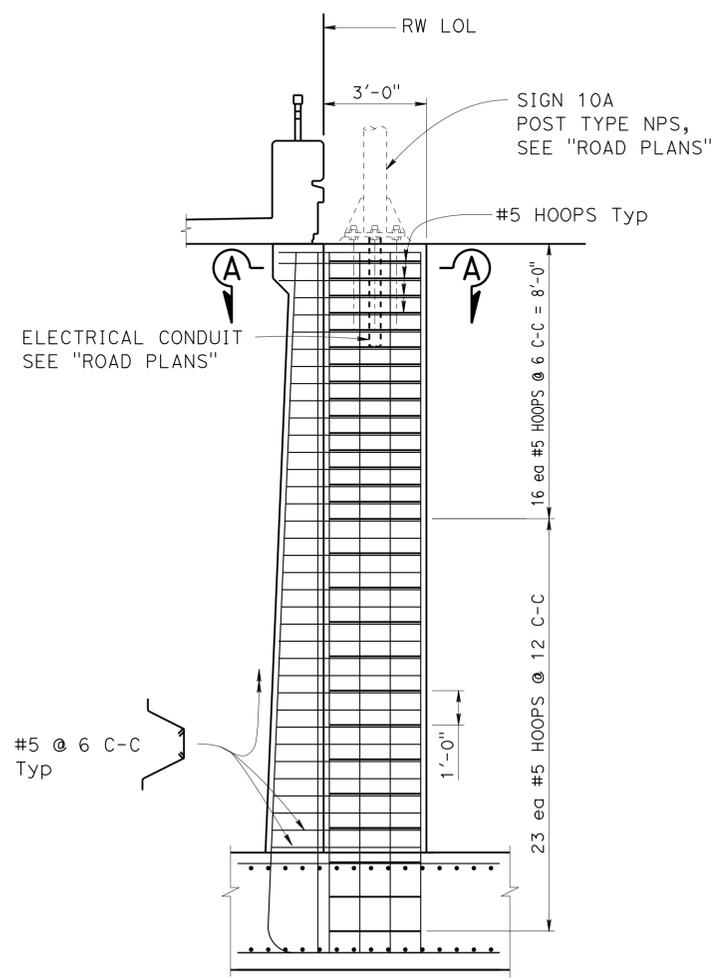


**PEDESTAL PLAN**  
1/2" = 1'-0"

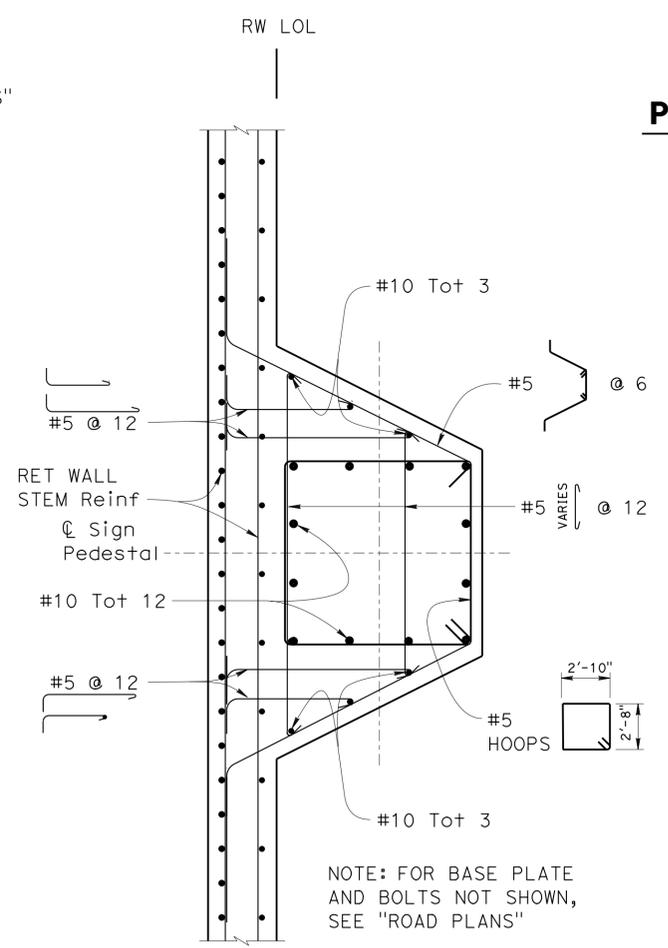
**EXIST RETAINING WALL DATA**

TRENCH NUMBER	TOE WIDTH "C" (ft)	Ftg Thk "T" (ft)	EMBEDMENT "D" (in)	HEIGHT "H" (ft)	Dist FROM EXIST Abut
T-1	4.0±-4.3±	1.5±	12.5±	12.0±	0'± N
T-2	4.3±	1.0±	9.0±	5.0±	100'± N
T-3	1.5±	1.0±	11.0±	2.0±	180'± N

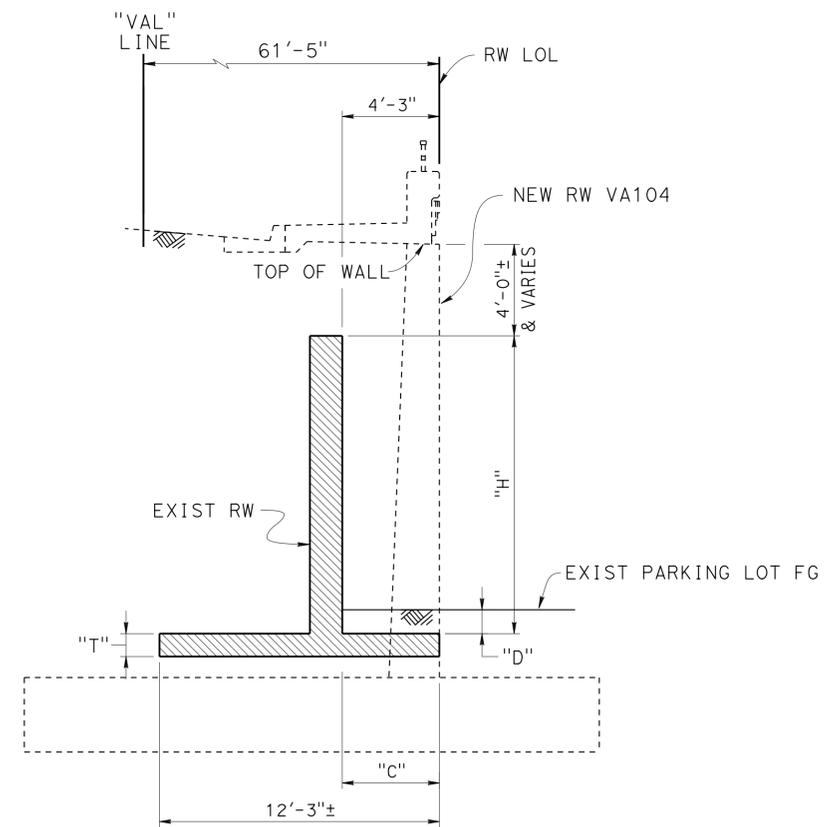
Indicates existing wall removal



**PEDESTAL SECTION**  
RW LOL STA 10+30  
3/8" = 1'-0"



**SECTION A-A**  
3/4" = 1'-0"



**WALL REMOVAL DETAIL**  
NO SCALE