

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1201	1273

REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Tillat Satter
No. C42892
Exp. 3-31-14
CIVIL
STATE OF CALIFORNIA

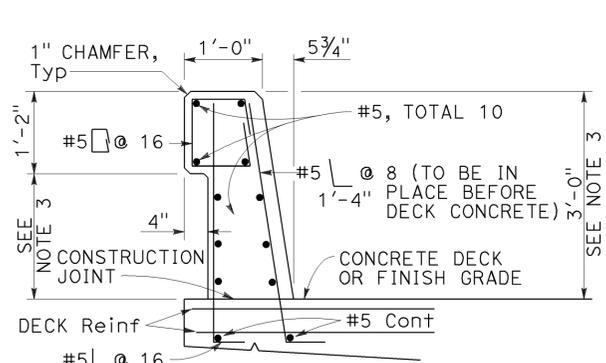
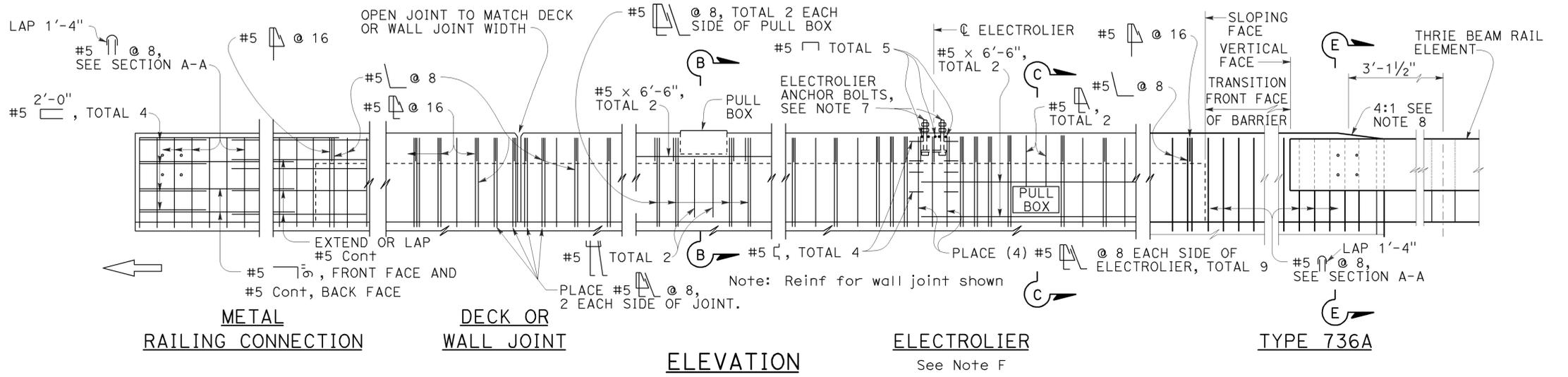
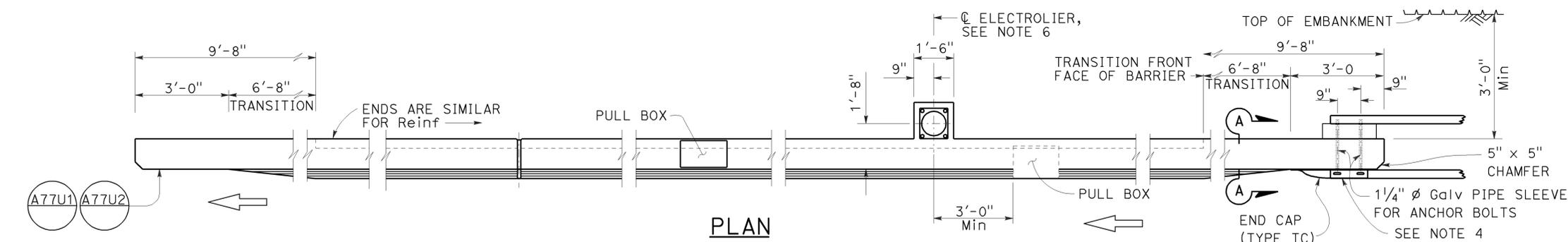
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TO ACCOMPANY PLANS DATED 03-24-14

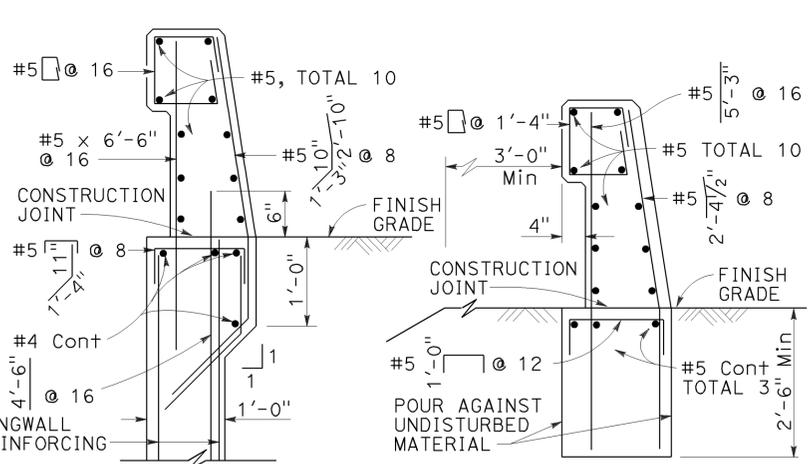
NOTES:

1. Walls are to be backfilled before barrier is placed.
2. Clearance to reinforcing steel in barrier to be 1", except as noted. Longitudinal reinforcement to stop at all expansion joints.
3. Dimensions may vary with roadway cross slope and with certain thickness of surfacing. See Project Plans.
4. For typical metal railing connection details not shown, see Revised Standard Plans RSP A77U1 and RSP A77U2.
5. See Standard Plans ES-9A, ES-9B, ES-9C, ES-9D and ES-9E for electrical details. The maximum number of conduits in the barrier is limited to two 2" conduits along with one 3" conduit. When a 3" conduit is used, it is restricted to the base of the barrier.
6. For electrolier mounting details, See Standard Plans ES-6A and ES-6B.
7. Minimum concrete edge distance, to the reinforcing shown, shall be maintained. Edge distance may be adjusted to accommodate increase in concrete cover for architectural treatment.
8. Taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail element.

2010 REVISED STANDARD PLAN RSP B11-56



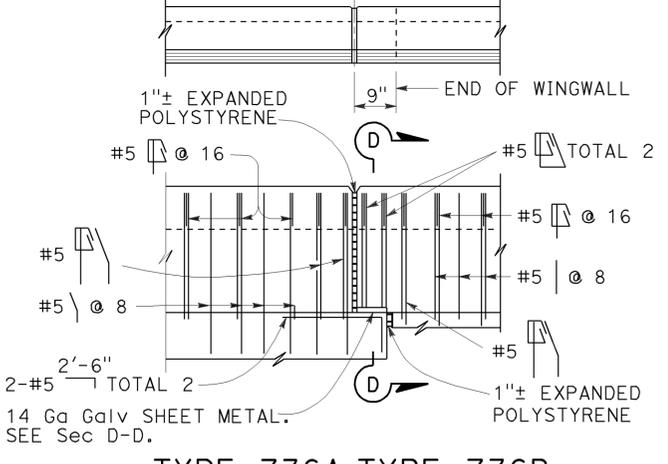
TYPE 736



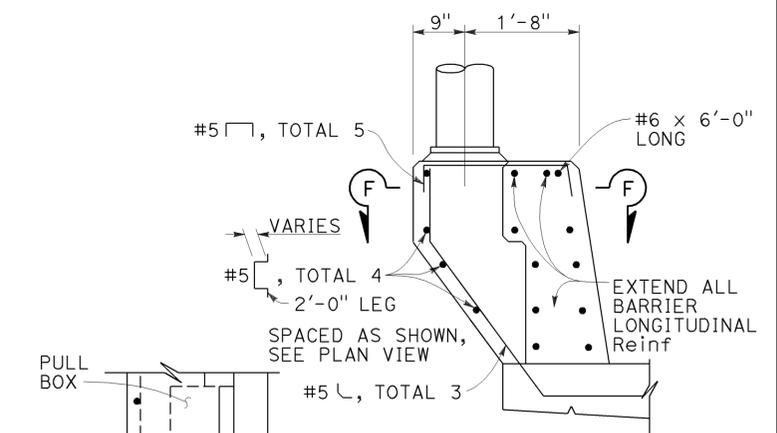
TYPE 736A

TYPE 736B

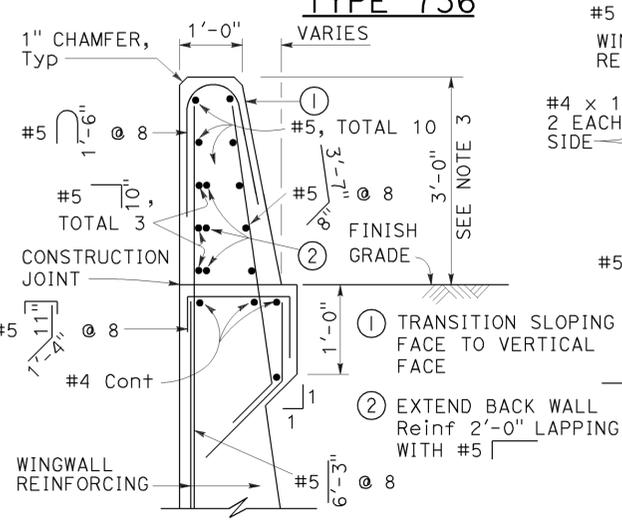
Note: Types 736A & 736B are similar to Type 736 except as noted



TYPE 736A TYPE 736B

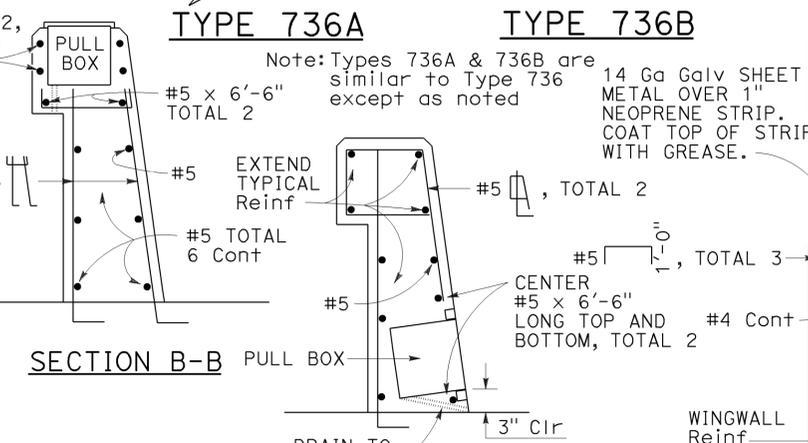


PEDESTAL ELEVATION



SECTION A-A

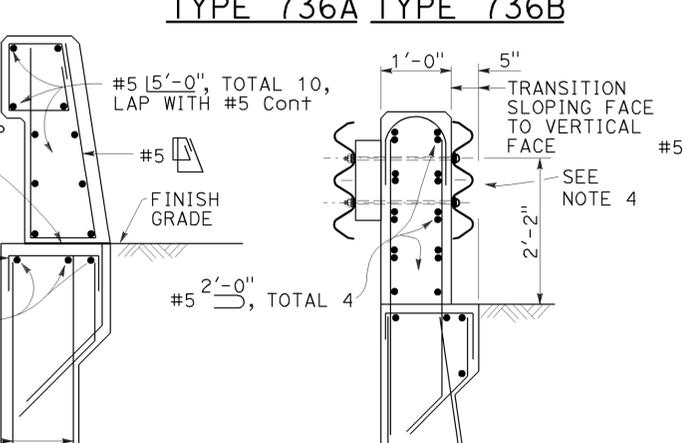
Details shown for barrier anchorage to Type 736A. Anchorage for barrier Types 736 and 736B are similar to their respective details.



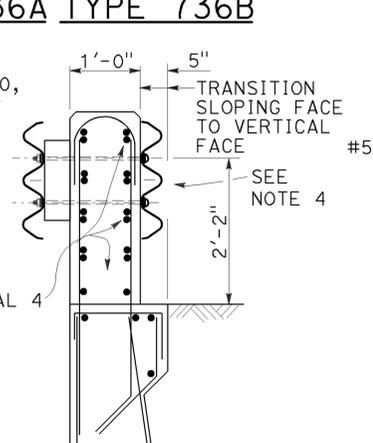
SECTION B-B

SECTION C-C

See Notes

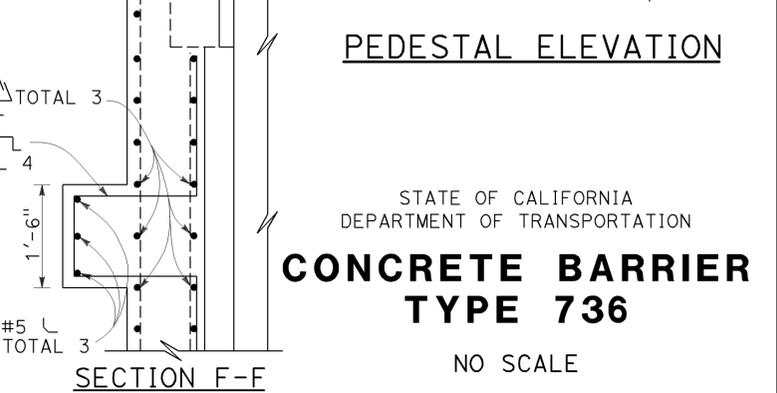


SECTION D-D



SECTION E-E

See Notes



SECTION F-F

NO SCALE

REVISED STANDARD PLAN RSP B11-56

RSP B11-56 DATED NOVEMBER 15, 2013 SUPERSEDES RSP B11-56 DATED JULY 19, 2013 AND STANDARD PLAN B11-56 DATED MAY 20, 2011 - PAGE 298 OF THE STANDARD PLANS BOOK DATED 2010.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE BARRIER
TYPE 736**

LEGEND:

AB	ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
BC	INSTALL PULL BOX IN EXISTING CONDUIT RUN
BP	PEDESTRIAN BARRICADE, TYPE AS INDICATED ON PLAN
CB	INSTALL CONDUIT INTO EXISTING PULL BOX
CC	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
CF	CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS. INSTALL PULL TAPE
DH	DETECTOR HANDHOLE
FA	FOUNDATION TO BE ABANDONED
IS	INSTALL SIGN ON SIGNAL MAST ARM
NS	NO SLIP BASE ON STANDARD
PEC	PHOTOELECTRIC CONTROL
PEU	PHOTOELECTRIC UNIT
RC	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR
RE	REMOVE ELECTROLIER, FUSES AND BALLAST. TAPE ENDS OF CONDUCTORS
RL	RELOCATE EQUIPMENT
RR	REMOVE AND REUSE EQUIPMENT
RS	REMOVE AND SALVAGE EQUIPMENT
SC	SPLICE NEW TO EXISTING CONDUCTORS
SD	SERVICE DISCONNECT
TSP	TELEPHONE SERVICE POINT

ABBREVIATIONS

APS	ACCESSIBLE PEDESTRIAN SIGNAL	M/M	MULTIPLE TO MULTIPLE TRANSFORMER
BBS	BATTERY BACKUP SYSTEM	Mtg	MOUNTING
BC	BOLT CIRCLE	MV	MERCURY VAPOR LIGHTING FIXTURE
BPB	BICYCLE PUSH BUTTON	MVDS	MICROWAVE VEHICLE DETECTION SYSTEM
C	CONDUIT	N	NEUTRAL (GROUNDED CONDUCTOR)
CB	CIRCUIT BREAKER	NB	NEUTRAL BUS
CCTV	CLOSED CIRCUIT TELEVISION	NC	NORMALLY CLOSE
Ck+	CIRCUIT	NO	NORMALLY OPEN
CMS	CHANGEABLE MESSAGE SIGN	P	CIRCUIT BREAKER'S POLE
Ctid	CALTRANS IDENTIFICATION	PB	PULL BOX
Comm	COMMUNICATION	PBA	PUSH BUTTON ASSEMBLY
DLC	LOOP DETECTOR LEAD-IN CABLE	PEC	PHOTOELECTRIC CONTROL
EMS	EXTINGUISHABLE MESSAGE SIGN	Ped	PEDESTRIAN
EVUC	EMERGENCY VEHICLE UNIT CABLE	PEU	PHOTOELECTRIC UNIT
EVUD	EMERGENCY VEHICLE UNIT DETECTOR	PT	CONDUIT WITH PULL TAPE
FB	FLASHING BEACON	RE	RELOCATED EQUIPMENT
FBCA	FLASHING BEACON CONTROL ASSEMBLY	RM	RAMP METERING
FBS	FLASHING BEACON WITH SLIP BASE	RWIS	ROADSIDE WEATHER INFORMATION SYSTEM
FO	FIBER OPTIC	SB	SLIP BASE
G	EQUIPMENT GROUNDING CONDUCTOR	SIC	SIGNAL INTERCONNECT CABLE
GB	GROUND BUS	Sig	SIGNAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SMA	SIGNAL MAST ARM
HAR	HIGHWAY ADVISORY RADIO	SNS	STREET NAME SIGN
Hex	HEXAGONAL	SP	SERVICE POINT
HPS	HIGH PRESSURE SODIUM	TDC	TELEPHONE DEMARCATION CABINET
IISNS	INTERNALLY ILLUMINATED STREET NAME SIGN	TMS	TRAFFIC MONITORING STATION
ISL	INDUCTION SIGN LIGHTING	TOS	TRAFFIC OPERATIONS SYSTEM
LED	LIGHT EMITTING DIODE	Veh	VEHICLE
LMA	LUMINAIRE MAST ARM	VIVDS	VIDEO IMAGE VEHICLE DETECTION SYSTEM
LPS	LOW PRESSURE SODIUM	WIM	WEIGH-IN-MOTION
Ltg	LIGHTING	Xfmr	TRANSFORMER
Lum	LUMINAIRE		
M	METERED		
MAT	MAST ARM MOUNTING TOP ATTACHMENT		
MAS	MAST ARM MOUNTING SIDE ATTACHMENT		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1202	1273

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

Theresa
Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 03-24-14

SOFFIT AND WALL MOUNTED LUMINAIRES

- PENDANT, 70 W HPS UNLESS OTHERWISE SPECIFIED
- FLUSH, 70 W HPS UNLESS OTHERWISE SPECIFIED
- WALL SURFACE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- EXISTING SOFFIT OR WALL LUMINAIRE TO REMAIN UNMODIFIED
- EXISTING SOFFIT OR WALL LUMINAIRE TO BE MODIFIED AS SPECIFIED

NOTE:
Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL USED	DEFINITIONS
Ω	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V(dc)	VOLT (DIRECT CURRENT)
V(ac)	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
μ	MICRO
P	PICO
HZ	HERTZ

MISCELLANEOUS ELECTROLIERS

NEW	EXISTING	
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT NOTES OR PROJECT PLANS)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

- NOTES:**
- HPS luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. HPS luminaires shall be 200 W when installed on other type standards or poles, unless otherwise specified.
 - LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W when installed on other type standards or poles, unless otherwise specified.
 - Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.

STANDARD ELECTROLIER

NEW	EXISTING	STANDARD TYPE
		15
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**

NO SCALE

RSP ES-1A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1A

2010 REVISED STANDARD PLAN RSP ES-1A

TO ACCOMPANY PLANS DATED 03-24-14

CONDUIT

SIGNAL EQUIPMENT

NEW	EXISTING	
---	---	LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
---	---	TRAFFIC SIGNAL CONDUIT
---C---	---c---	COMMUNICATION CONDUIT
---T---	---t---	TELEPHONE CONDUIT
---F---	---f---	FIRE ALARM CONDUIT
---FO---	---fo---	FIBER OPTIC CONDUIT
---	---	CONDUIT TERMINATION
		CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD "C" INDICATES COUNTDOWN PEDESTRIAN HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)

SIGNAL EQUIPMENT Cont

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION SYSTEM

SERVICE EQUIPMENT

NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

NOTES:

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.

POLE-MOUNTED SERVICE DESIGNATION

	TYPE H SERVICE, 28'-10"	TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE
--	-------------------------	--

FLASHING BEACON

NEW	EXISTING	
		FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
		FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

ILLUMINATED OVERHEAD SIGN

NEW	EXISTING	
		SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE ILLUMINATED SIGN
		SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
		DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLIER

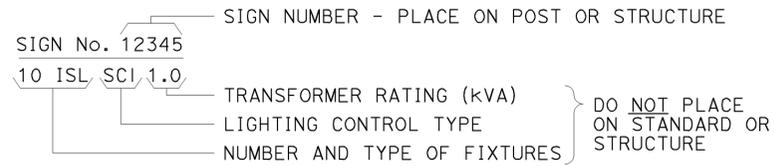
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**
NO SCALE

RSP ES-1B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

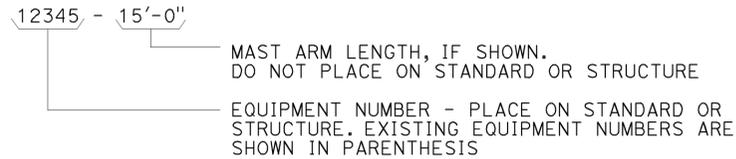
2010 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

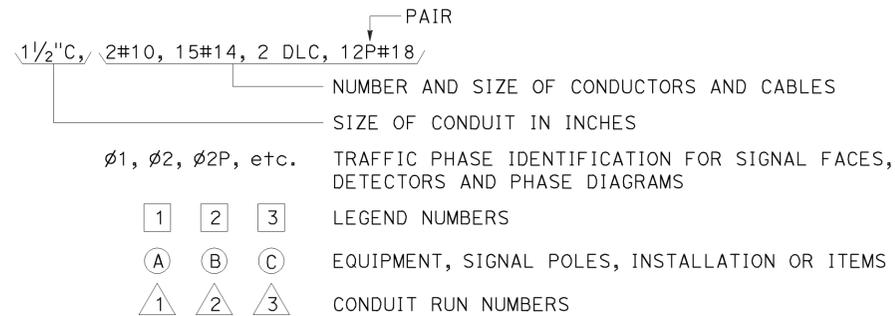
ILLUMINATED SIGN IDENTIFICATION NUMBER:



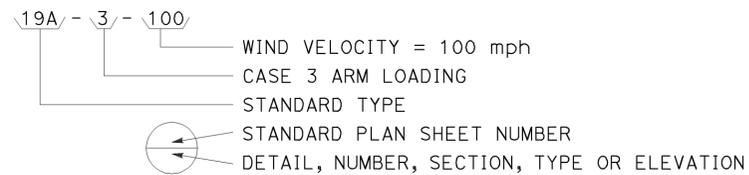
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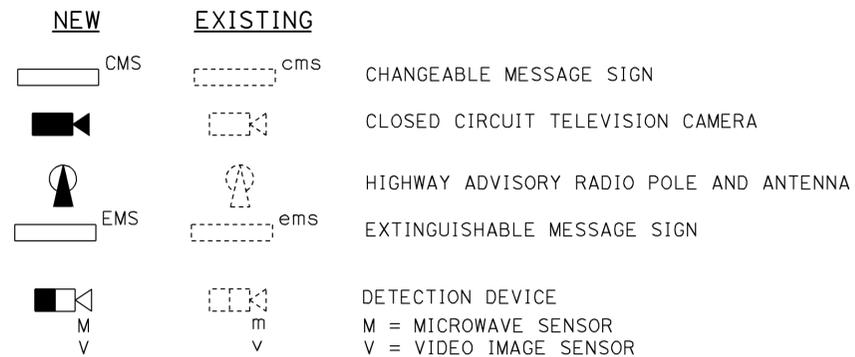
CONDUIT AND CONDUCTOR IDENTIFICATION:



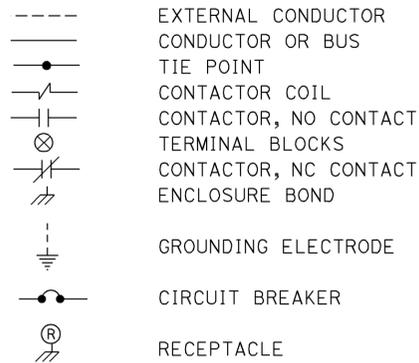
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



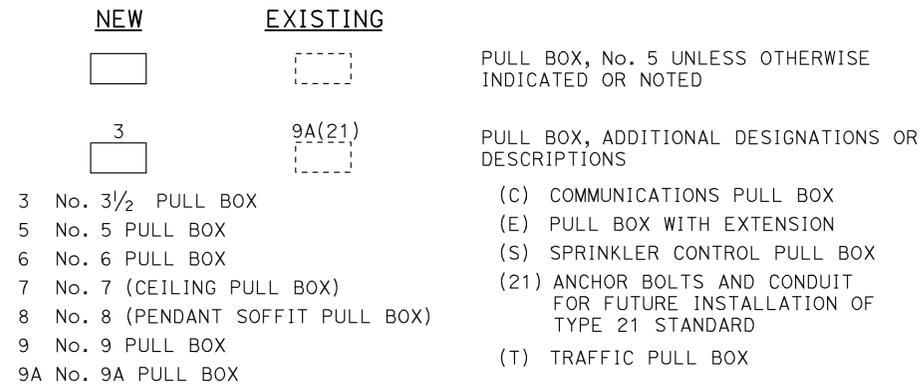
MISCELLANEOUS EQUIPMENT



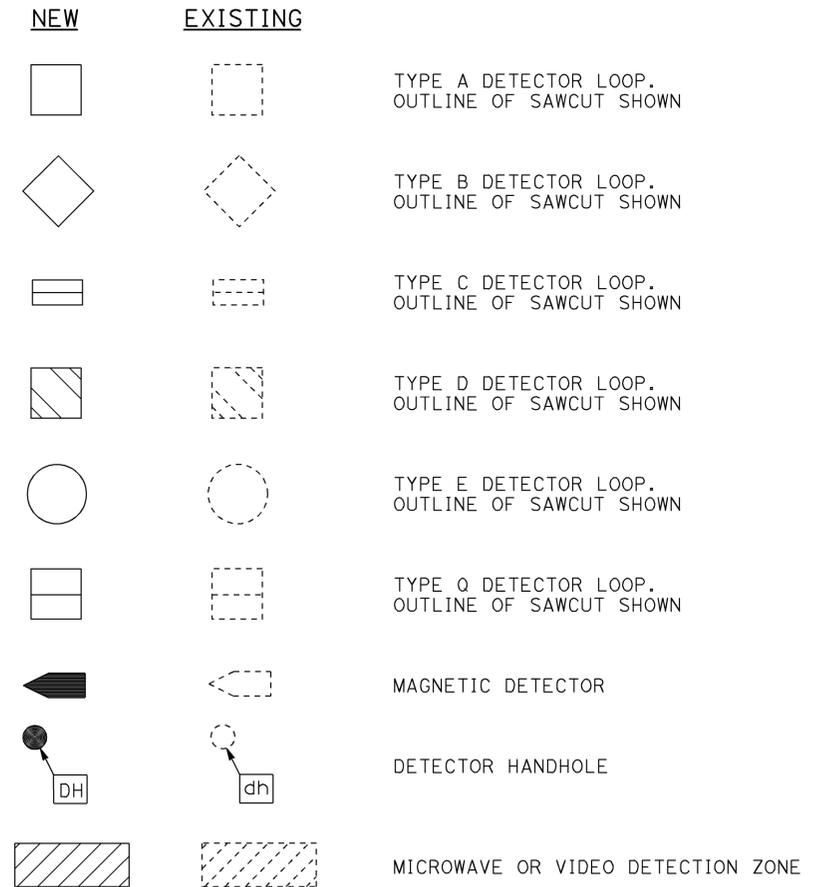
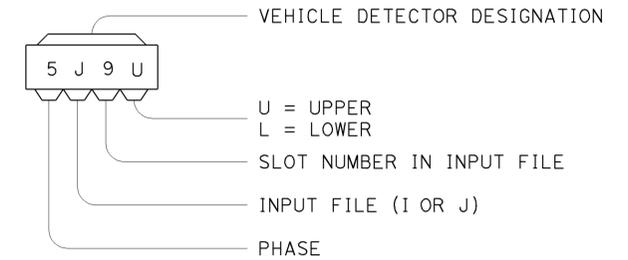
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1C
DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1C

2010 REVISED STANDARD PLAN RSP ES-1C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1205	1273
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER					
July 19, 2013 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>					



TO ACCOMPANY PLANS DATED 03-24-14

PLAN VIEW OF OTHER SIDE MOUNTINGS

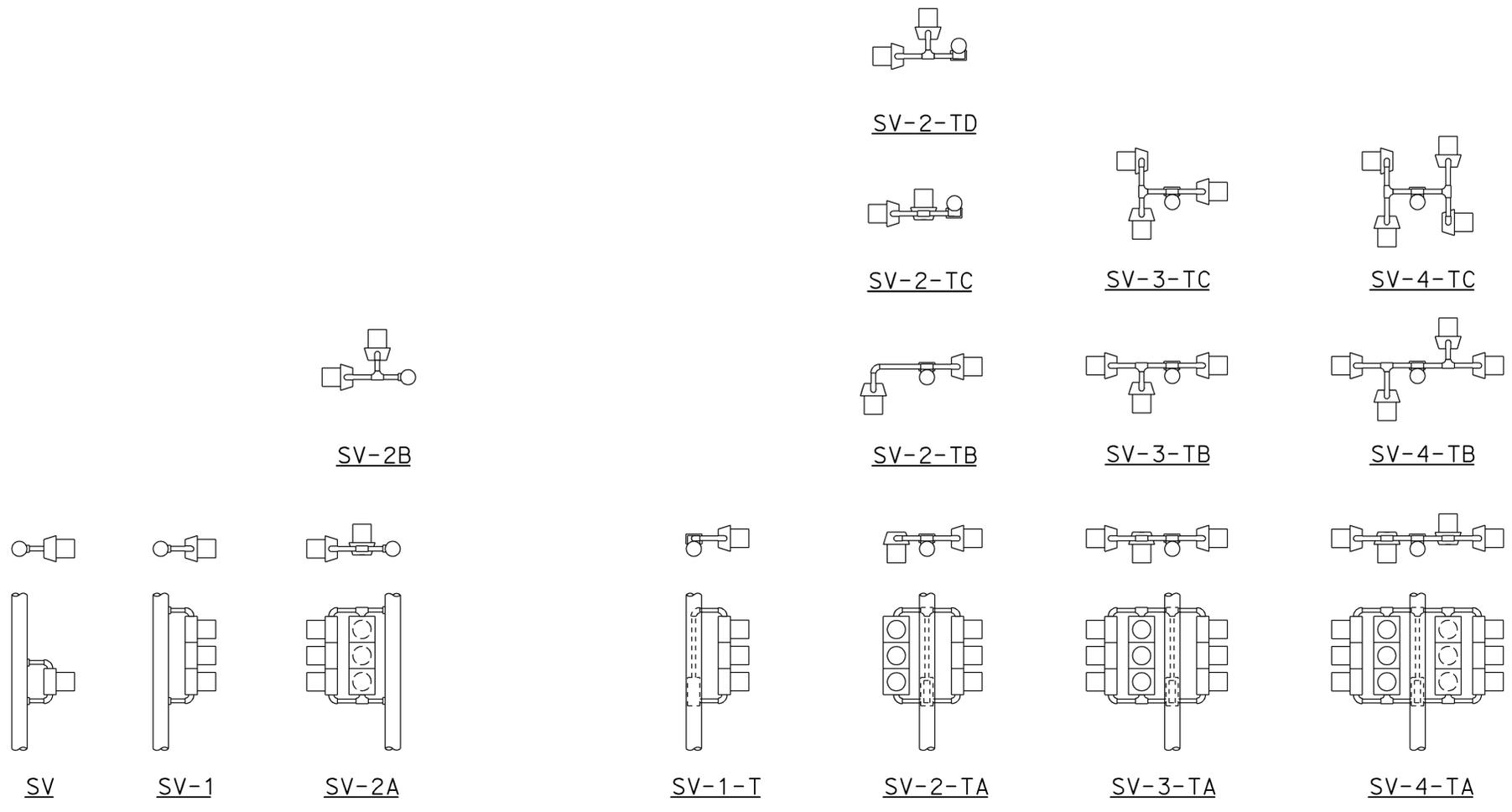
ABBREVIATIONS:

- SV SIDE MOUNTED VEHICLE SIGNALS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED VEHICLE SIGNALS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES
(3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

NOTES:

1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals and backplate installation.
3. See Standard Plans ES-4D and ES-4E for attachment fitting details.

PLAN VIEW OF TOP MOUNTINGS



SIDE MOUNTINGS

TOP MOUNTINGS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (VEHICULAR SIGNAL HEADS
 AND MOUNTINGS)**

NO SCALE

RSP ES-4A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4A DATED MAY 20, 2011 - PAGE 443 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4A

2010 REVISED STANDARD PLAN RSP ES-4A

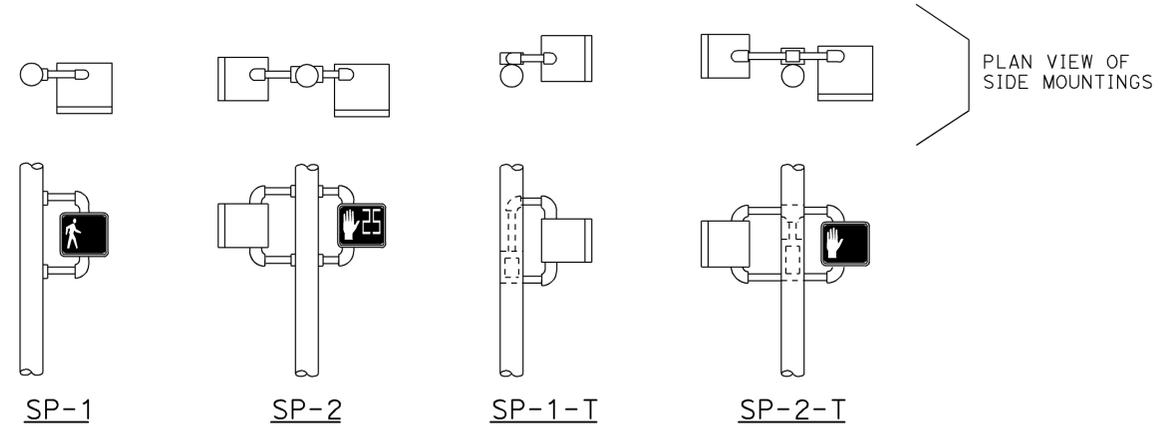
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1206	1273

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE

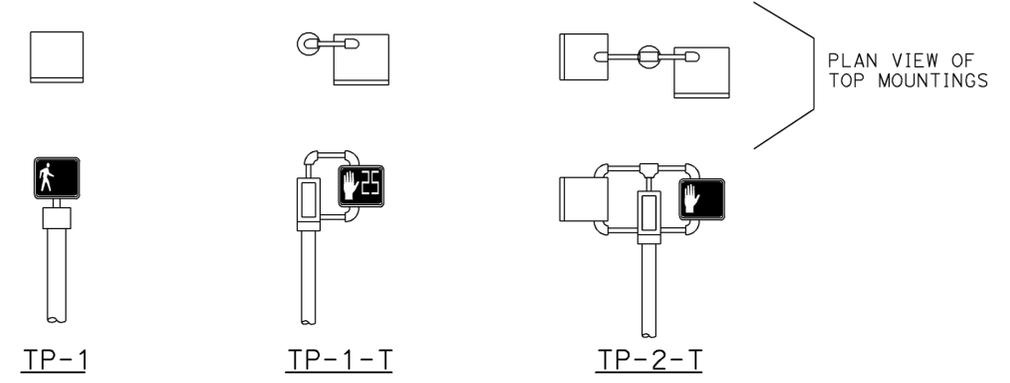
REGISTERED PROFESSIONAL ENGINEER
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 03-24-14



SIDE MOUNTINGS



TOP MOUNTINGS

PEDESTRIAN SIGNALS AND MOUNTINGS

DETAIL A

NOTES:

1. Mounting shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals.
3. See Standard Plan ES-4D for attachment fittings details.

ABBREVIATIONS:

- 1, 2 NUMBER OF SIGNAL FACES
- SP SIDE MOUNTED PEDESTRIAN SIGNAL
- T TERMINAL COMPARTMENT
- TP TOP MOUNTED PEDESTRIAN SIGNAL



PERSON WALKING INTERVAL FLASHING UPRaised HAND INTERVAL STEADY UPRaised HAND INTERVAL

PEDESTRIAN SIGNAL MODULE WITH COUNTDOWN

DETAIL B



RAMP METERING SIGN

DETAIL D



PERSON WALKING INTERVAL

STEADY UPRaised HAND INTERVAL

PEDESTRIAN SIGNAL MODULE WITHOUT COUNTDOWN

DETAIL C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(PEDESTRIAN SIGNAL AND
RAMP METERING SIGN)**

NO SCALE

RSP ES-4B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4B
DATED MAY 20, 2011 - PAGE 444 OF THE STANDARD PLANS BOOK DATED 2010.

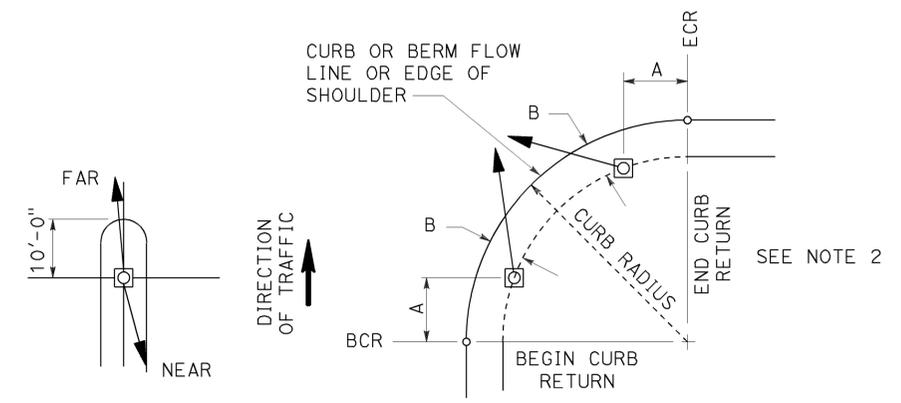
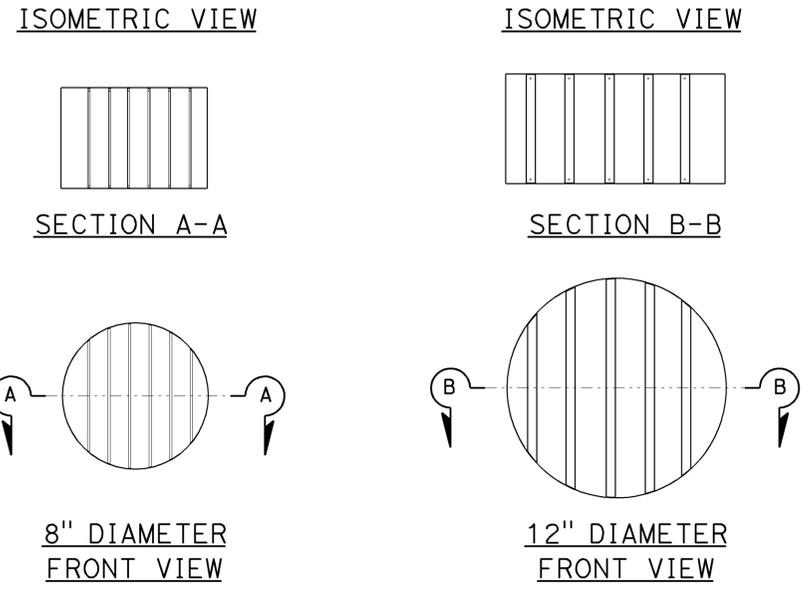
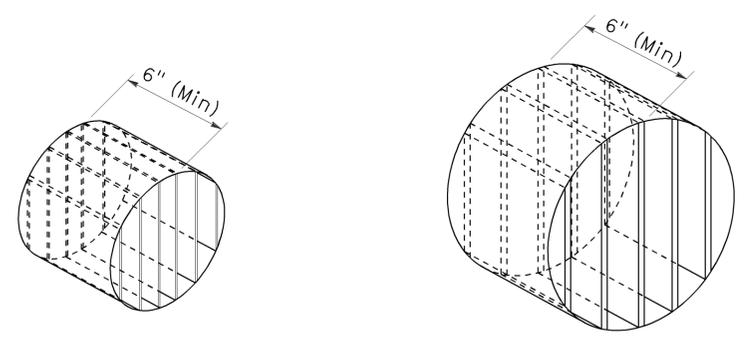
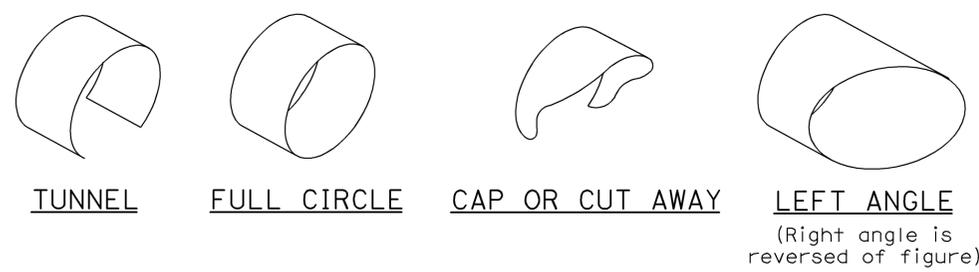
REVISED STANDARD PLAN RSP ES-4B

2010 REVISED STANDARD PLAN RSP ES-4B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1207	1273

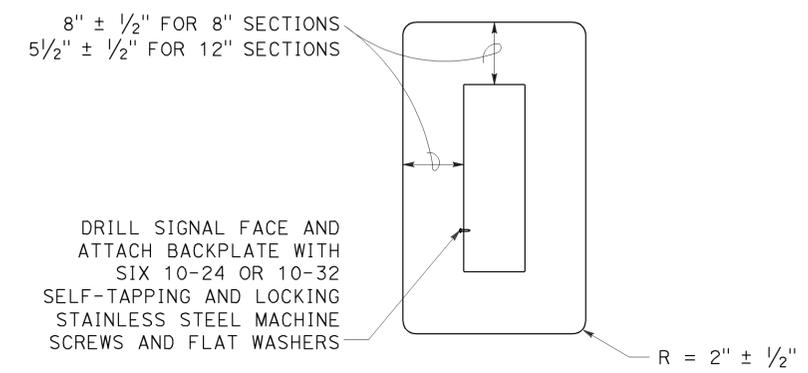
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 03-24-14



- NOTES:**
1. Typical signal pole placement unless dimensioned on plans.
 2. For A and B dimensions, see Pole Schedule, or as directed by the Engineer.

VISORS



8" AND 12" SECTIONS

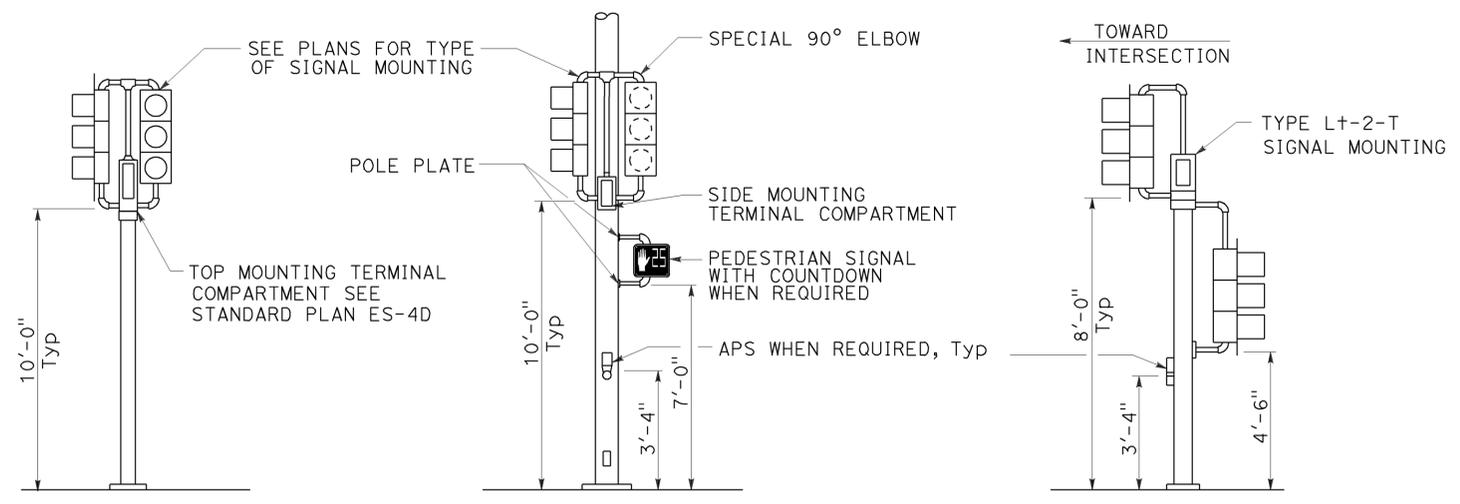
BACKPLATE

1/16" minimum thickness
3001-14 aluminum or plastic when specified

DIRECTIONAL LOUVER

Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



TOP MOUNTED SIGNALS (TV)

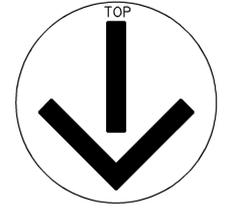
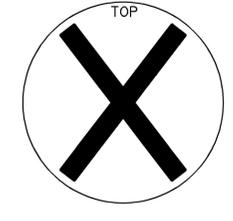
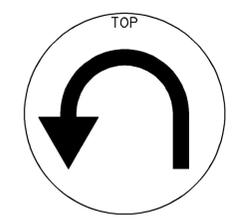
Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans

SIDE MOUNTED SIGNALS (SV AND SP)

Normally used on standards with luminaire or signal mast arm

LEFT TURN LANE SIGNAL

Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans



SIGNAL FACES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (VEHICULAR SIGNAL HEADS AND MOUNTINGS)

NO SCALE

RSP ES-4C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-04C DATED MAY 20, 2011 - PAGE 445 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4C

2010 REVISED STANDARD PLAN RSP ES-4C

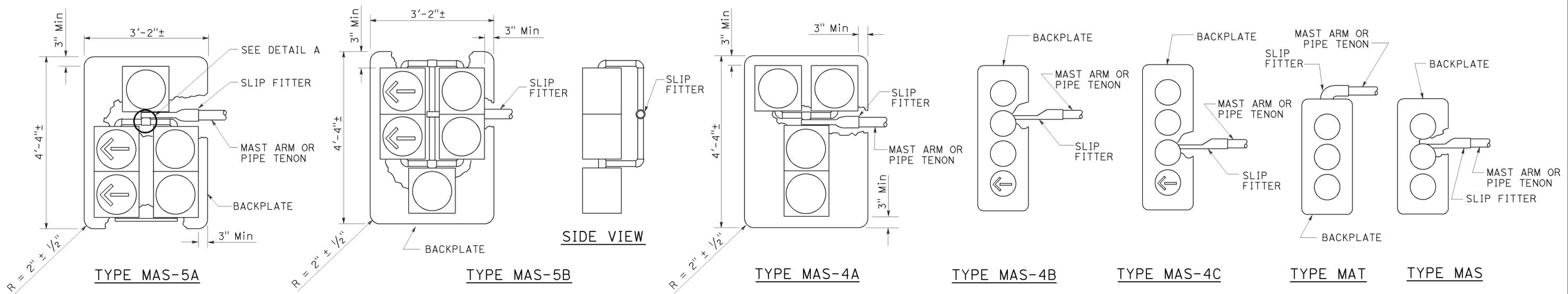
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1208	1273

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE

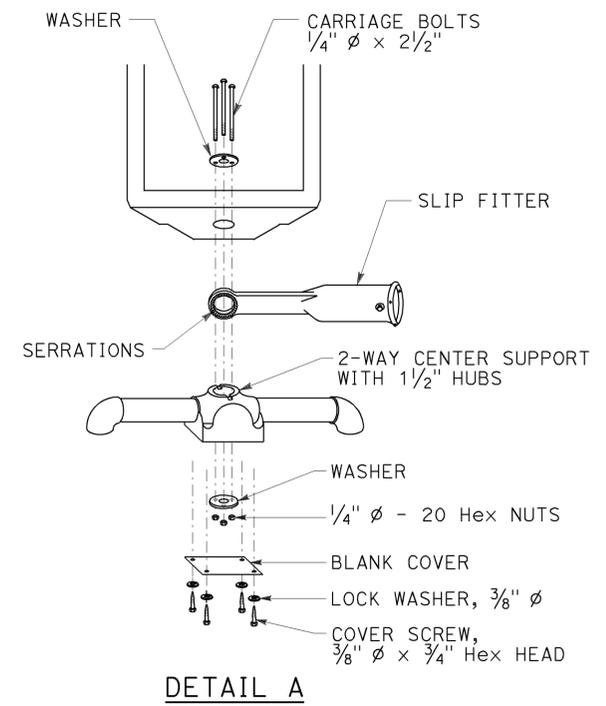
REGISTERED PROFESSIONAL ENGINEER
 Theresa
 Aziz Gabriel
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

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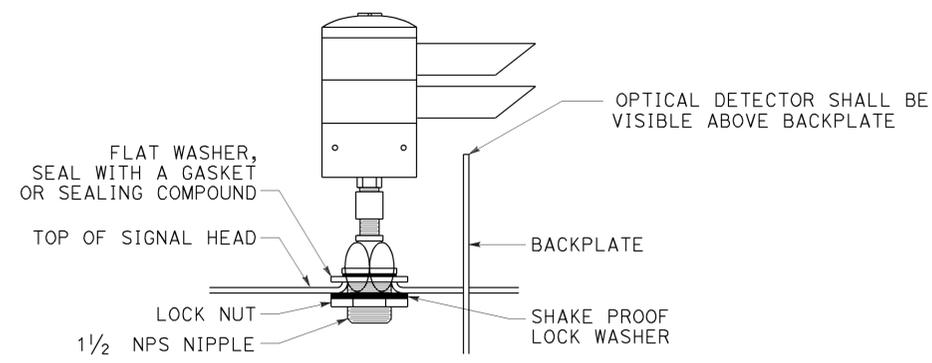
TO ACCOMPANY PLANS DATED 03-24-14



MAST ARM MOUNTINGS



DETAIL A



DETAIL B

OPTICAL DETECTOR MOUNTING FOR EMERGENCY VEHICLE DETECTION SYSTEM

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (VEHICULAR SIGNAL HEADS AND
 OPTICAL DETECTOR MOUNTING)**

NO SCALE

RSP ES-4E DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4E DATED MAY 20, 2011 - 447 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4E

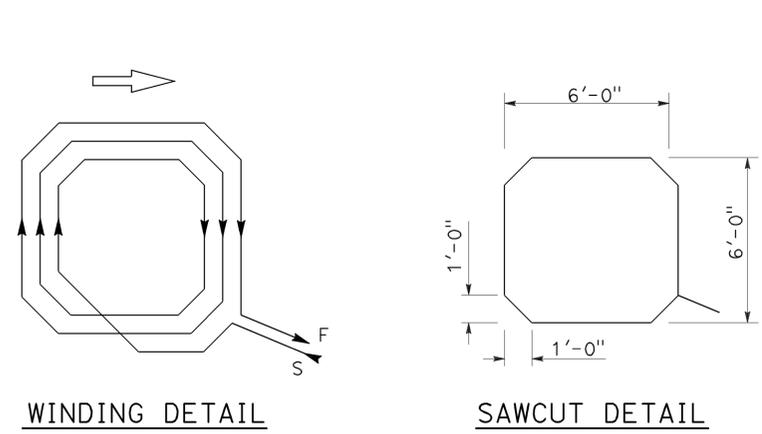
2010 REVISED STANDARD PLAN RSP ES-4E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1209	1273

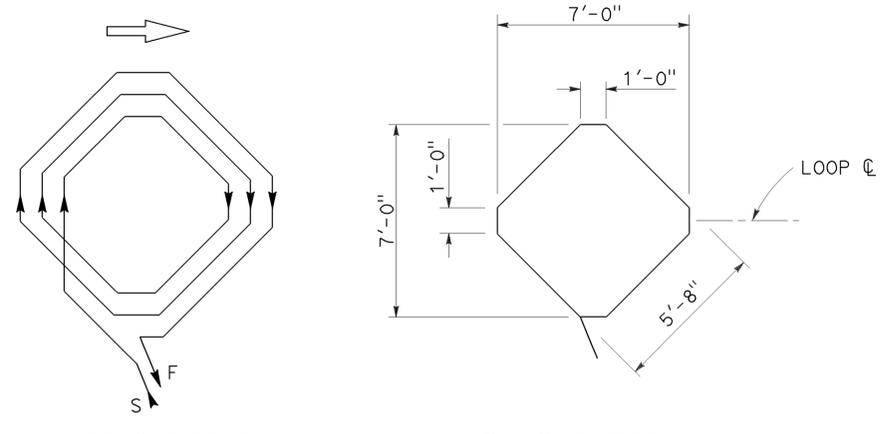
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED 03-24-14

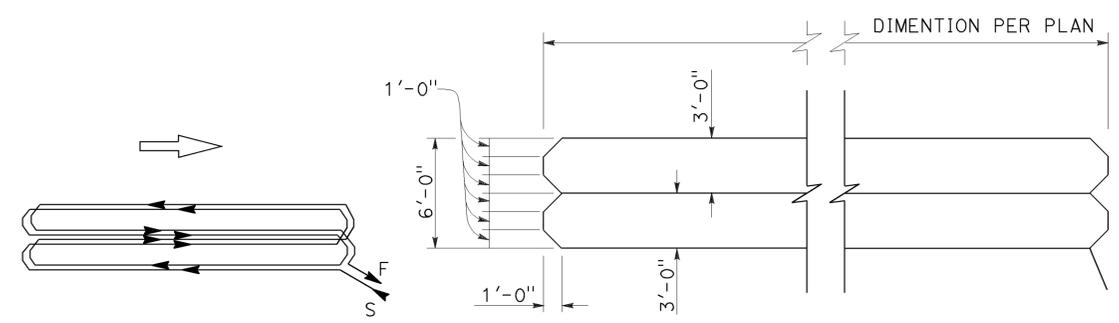
2010 REVISED STANDARD PLAN RSP ES-5B



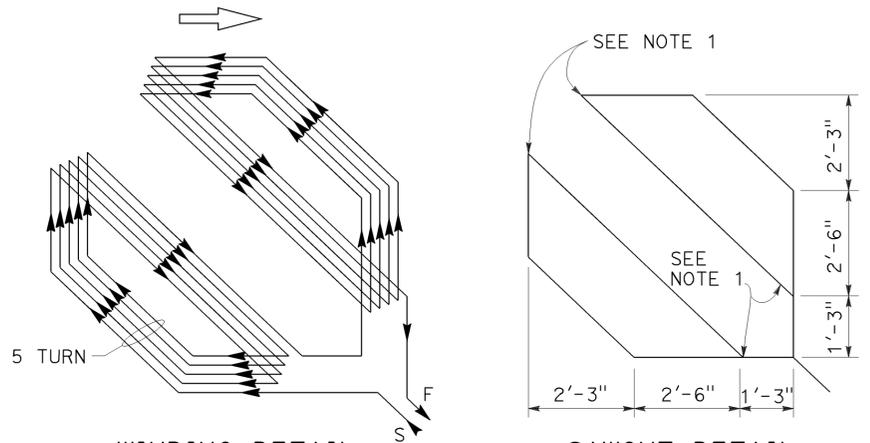
WINDING DETAIL
SAWCUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



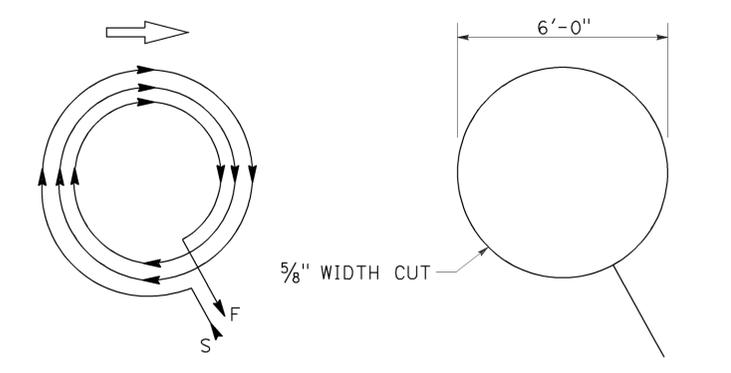
WINDING DETAIL
SAWCUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



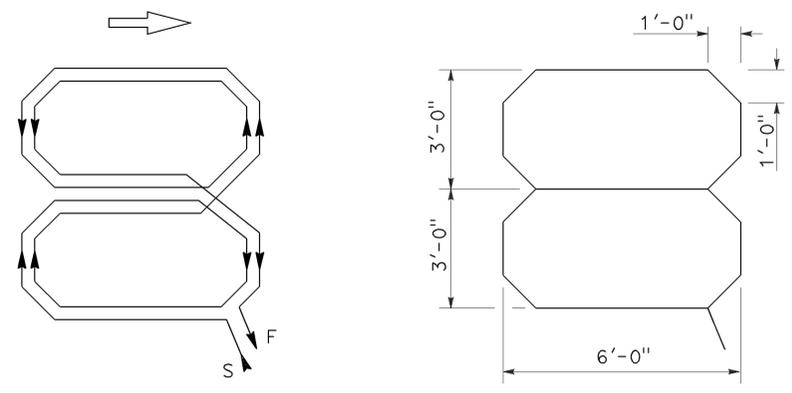
WINDING DETAIL
SAWCUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



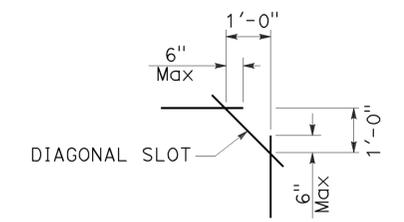
WINDING DETAIL
SAWCUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



**PLAN VIEW OF
DIAGONAL SLOT
AT CORNERS**

- NOTES:**
1. Round corners of acute angle sawcuts to prevent damage to conductors.
 2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(DETECTORS)**

NO SCALE

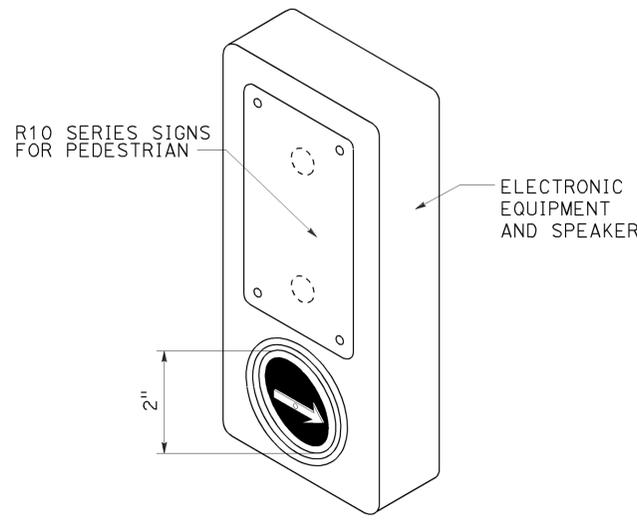
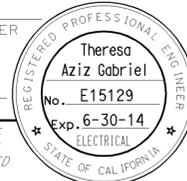
RSP ES-5B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5B
DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1210	1273

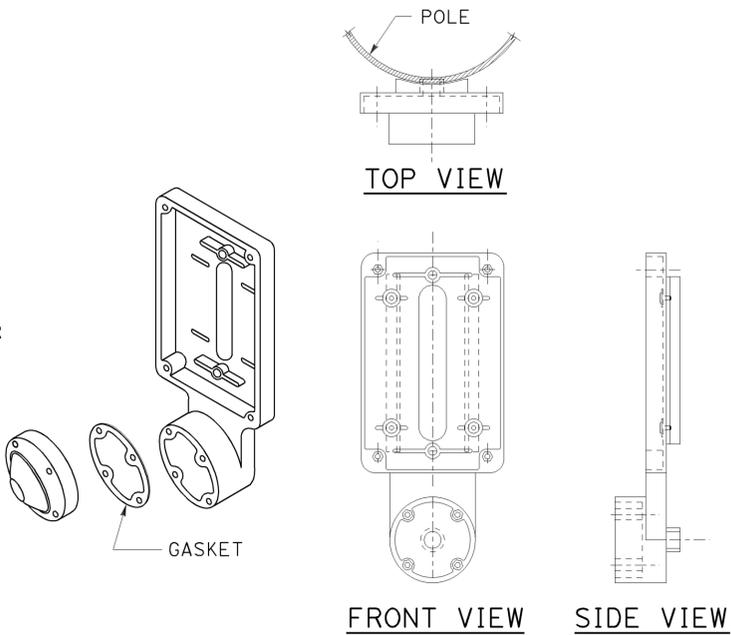
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE

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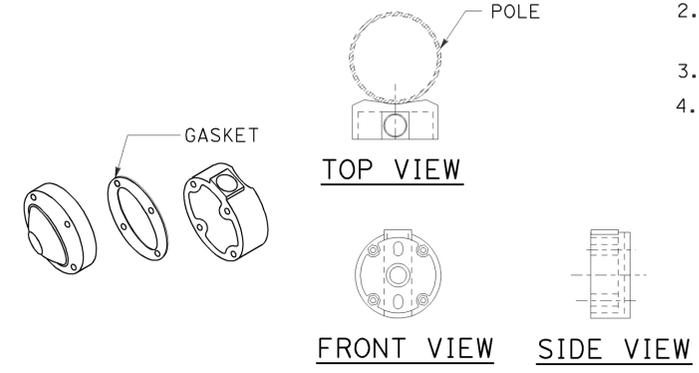
TO ACCOMPANY PLANS DATED 03-24-14



ACCESSIBLE PEDESTRIAN SIGNAL
DETAIL A
 (See note 1 to 4)

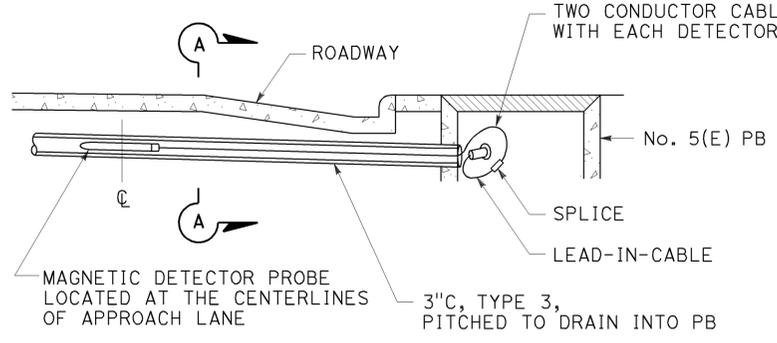
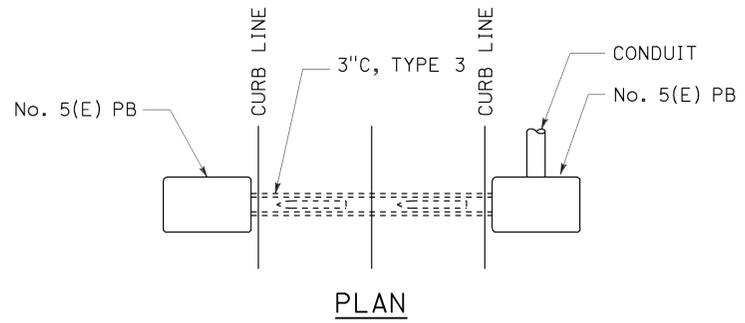


TYPE B PUSH BUTTON ASSEMBLY
DETAIL B
 (See note 1 to 4)

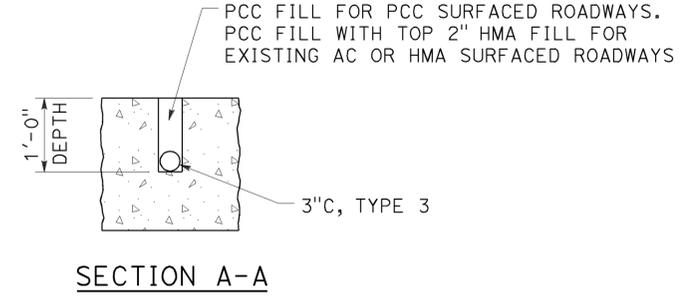


TYPE C PUSH BUTTON ASSEMBLY
DETAIL C
 (See note 1 to 4)

- NOTES:**
1. Back casting shape to fit curvature of pole.
 2. Provide cover fitting for top of post, when PBA is mounted on push button assembly post.
 3. Install push button on crosswalk side of standard.
 4. Use R10 series regulatory signs and plaques for pedestrian and bicycle facilities.



MAGNETIC VEHICLE DETECTOR
INSTALLATION DETAILS
DETAIL D



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(ACCESSIBLE PEDESTRIAN SIGNAL,
PUSH BUTTON ASSEMBLIES AND
MAGNETIC VEHICLE DETECTOR)
 NO SCALE

RSP ES-5C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5C DATED MAY 20, 2011 - PAGE 450 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5C

2010 REVISED STANDARD PLAN RSP ES-5C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1211	1273

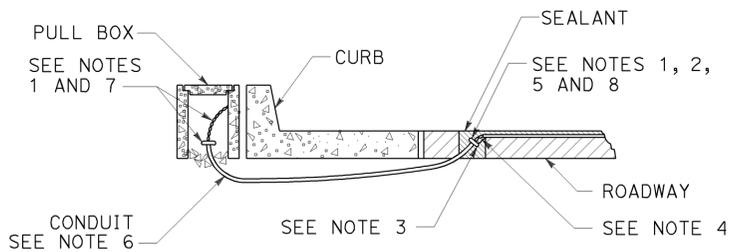
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

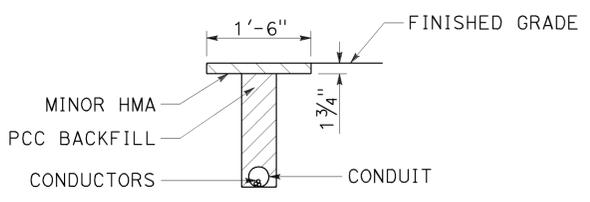
Theresa Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 03-24-14

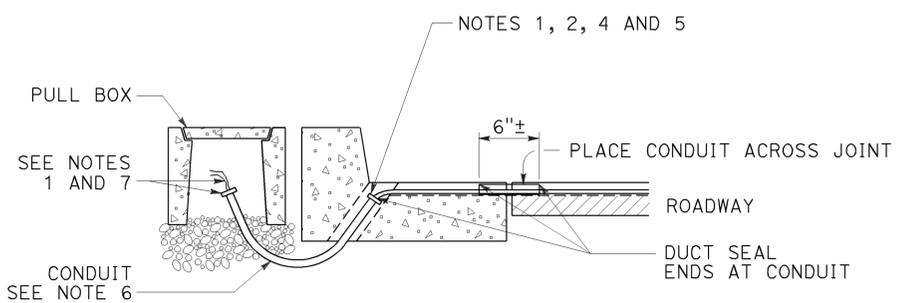


**TYPE A
CURB TERMINATION DETAIL**

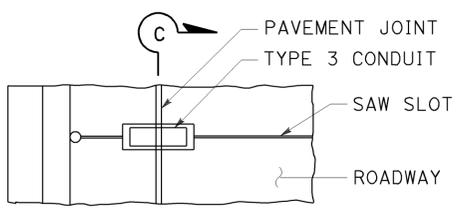


**"T" TRENCH
DETAIL T**

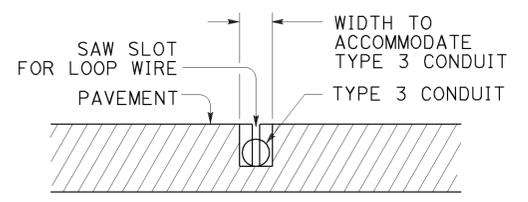
5/16" x 1 1/2" SCREW (BRASS, STAINLESS STEEL OR OTHER NON-CORRODING MATERIAL)



CROSS SECTION

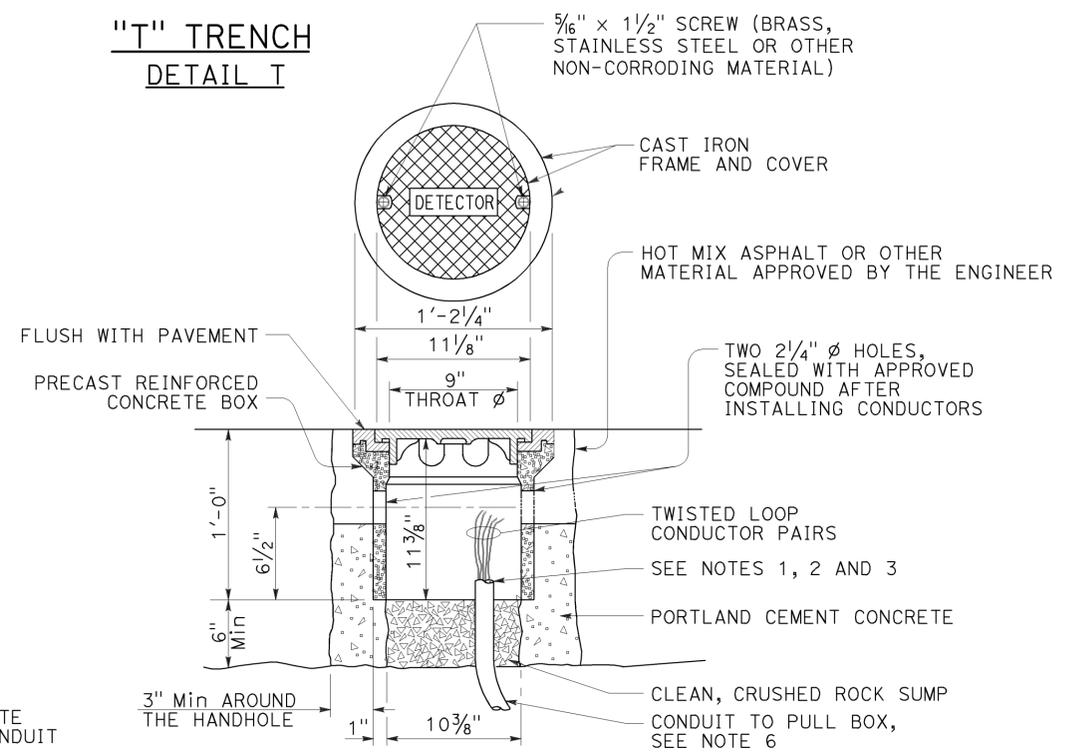


PLAN VIEW

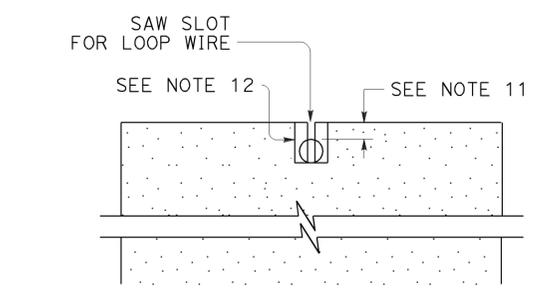


SECTION C-C

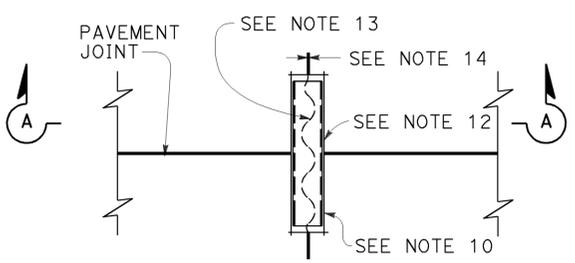
**TYPE B
CURB TERMINATION DETAIL**



DETECTOR HANDHOLE DETAIL

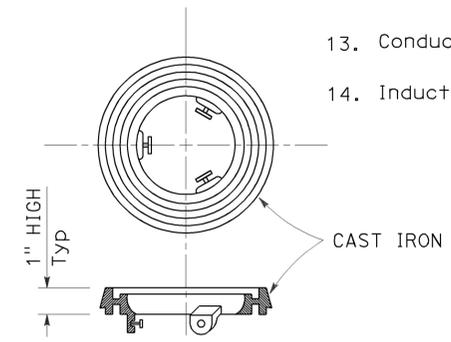


SECTION A-A



PLAN VIEW

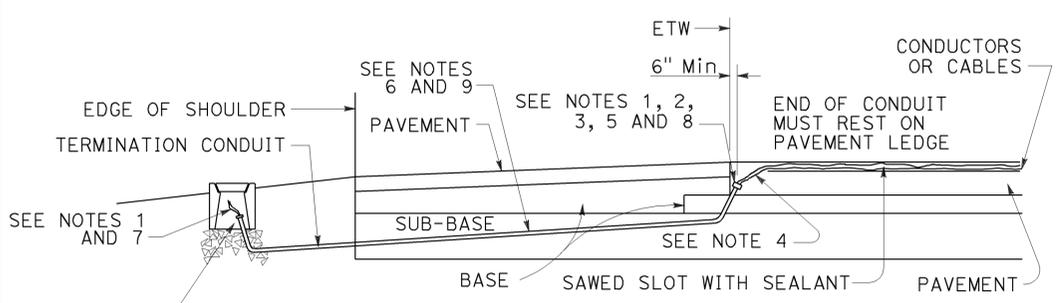
**TYPICAL LOOP LEAD-IN DETAIL
AT PAVEMENT JOINT**



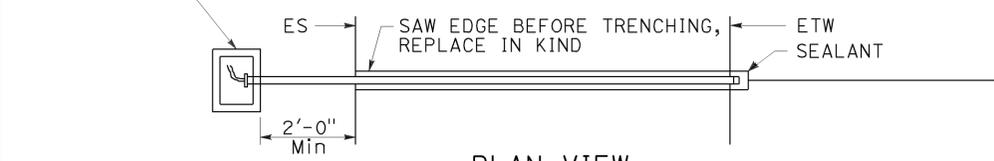
LOCKING GRADE RING

NOTES:

- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 3" each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 3/8" below roadway surface.
- Conduit size Loop conductors
1"C minimum 1 to 2 pairs
1 1/2"C minimum 3 to 4 pairs
2"C minimum 5 or more pairs
- Splice detector conductors or cables to detector lead-in-cable.
- Location of detector handhole when shown on plans.
- When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 2'-0" into the shoulder pavement.
- 3/4"C, Type 3 conduit 6" long minimum, plug both ends with duct compound to keep out sealant.
- 1/2" Minimum between top of conduit and pavement surface.
- Sawcut shall not exceed 1" in width and 1/8" longer than conduit to be installed.
- Conductors with 1/2" minimum slack inside conduit.
- Inductive loop detector saw slot.



CROSS SECTION



PLAN VIEW

SHOULDER TERMINATION DETAILS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(CURB TERMINATION
AND HANDHOLE)**

NO SCALE

RSP ES-5D DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5D DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.

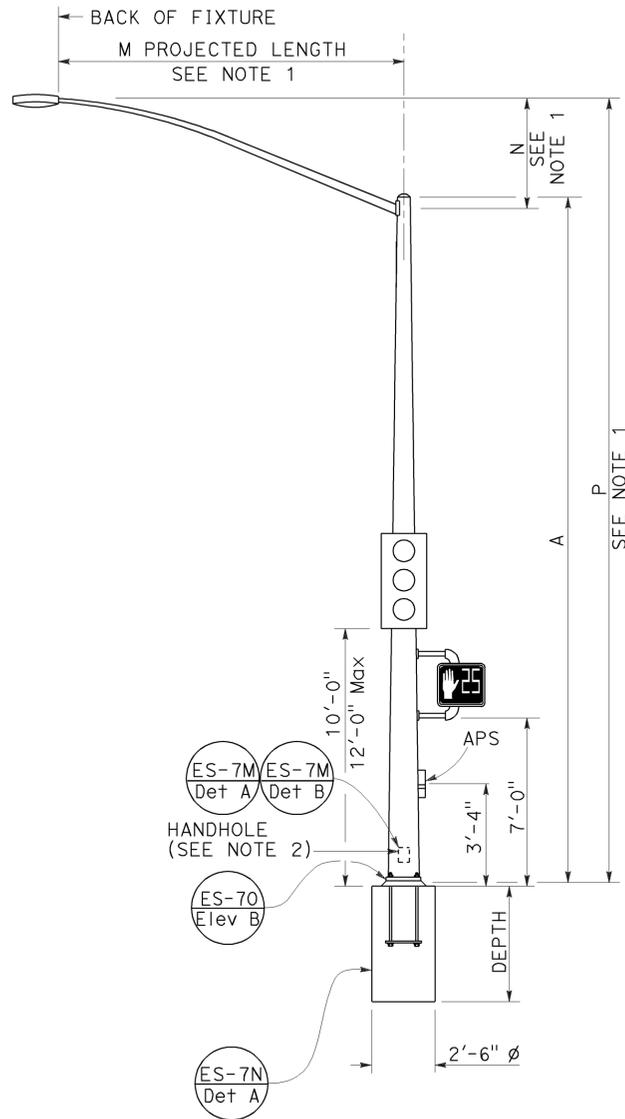
REVISED STANDARD PLAN RSP ES-5D

2010 REVISED STANDARD PLAN RSP ES-5D

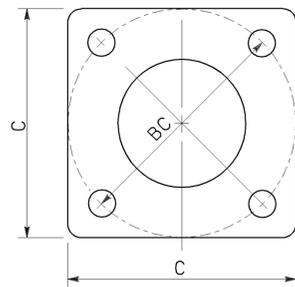
NOTES:

- For additional notes, details and data for Type 15TS and Type 21TS Standards, see Standard Plan ES-6A.
- Handhole shall be located on the downstream side of traffic.

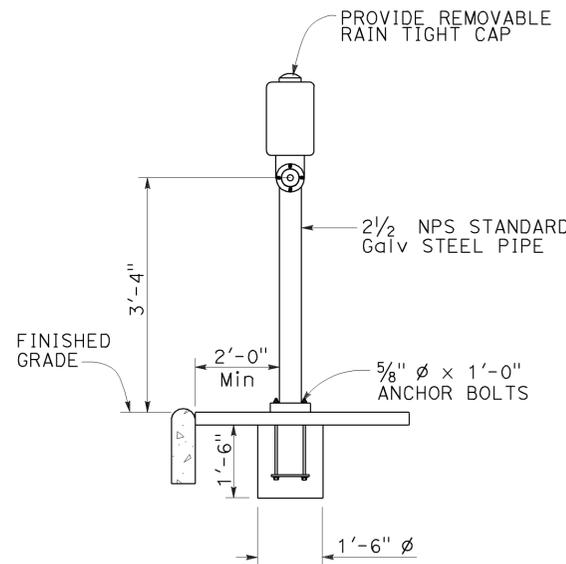
TO ACCOMPANY PLANS DATED 03-24-14



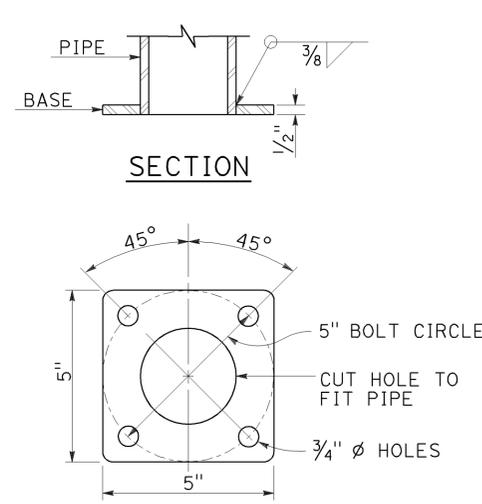
TYPE 15TS AND 21TS STANDARD
ELEVATION A
 (See Note 1)



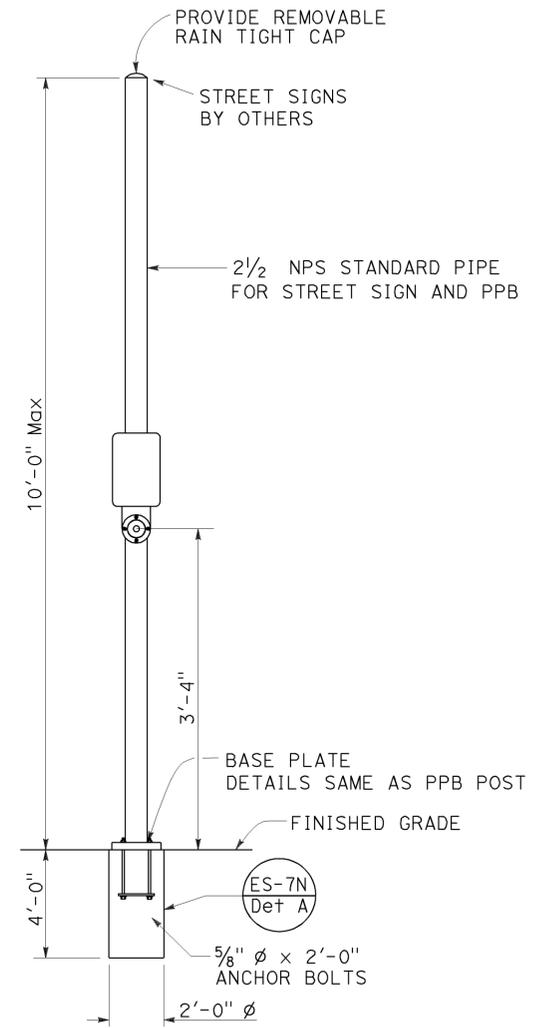
BASE PLATE
TYPE 15TS AND 21TS
DETAIL A



PUSH BUTTON ASSEMBLY POST
DETAIL B



BASE PLATE
PBA POST



COMBINED STREET SIGN
PUSH BUTTON ASSEMBLY POST
DETAIL C

POLE TYPE	POLE DATA			WALL THICKNESS	BASE PLATE DATA			CIDH DEPTH
	A HEIGHT	Min OD			C	BC = BOLT CIRCLE	ANCHOR BOLT SIZE	
		BASE	TOP					
15TS	30'-0"	8"	3 1/16"	0.1793"	1'-1 1/2"	1'-0"	1 1/2" ø x 42"	7'-6"
21TS	35'-0"	9 3/8"	3 3/16"		1'-3"	1'-2"		8'-6"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

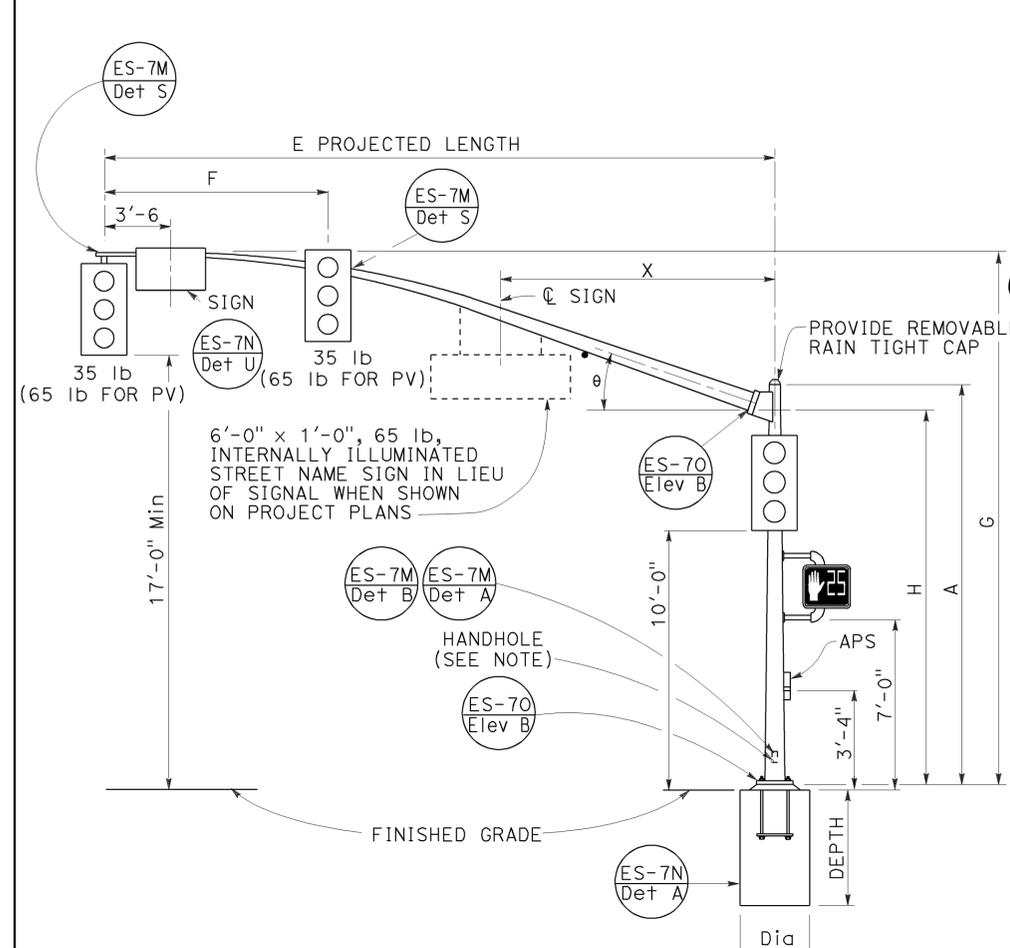
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, TYPE TS,
AND PUSH BUTTON ASSEMBLY POST)

NO SCALE

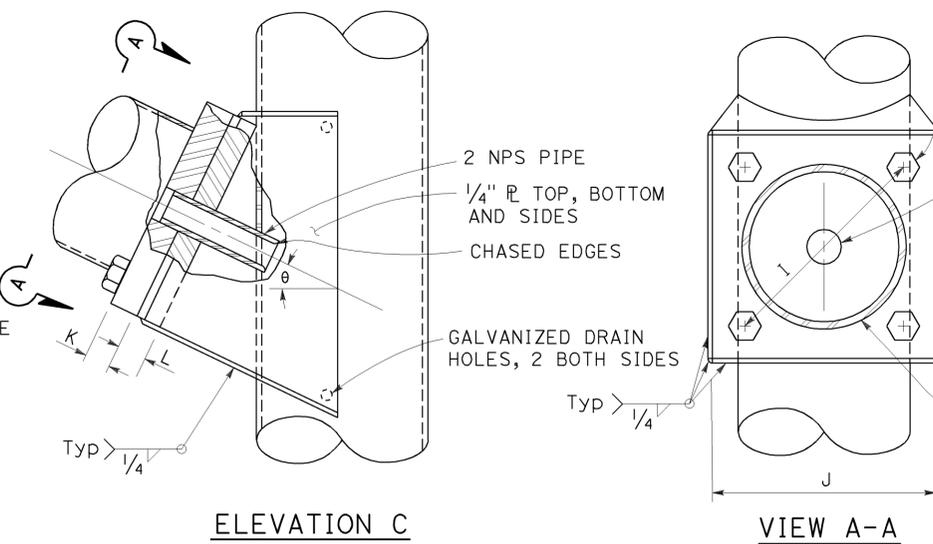
RSP ES-7A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7A
 DATED MAY 20, 2011 - PAGE 462 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7A

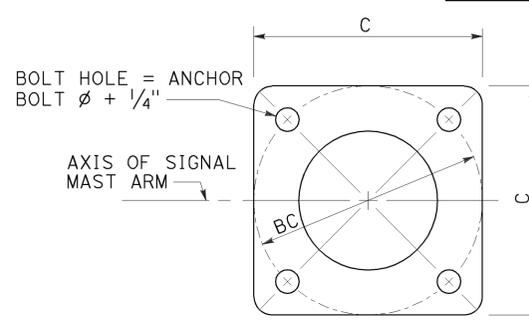
2010 REVISED STANDARD PLAN RSP ES-7A



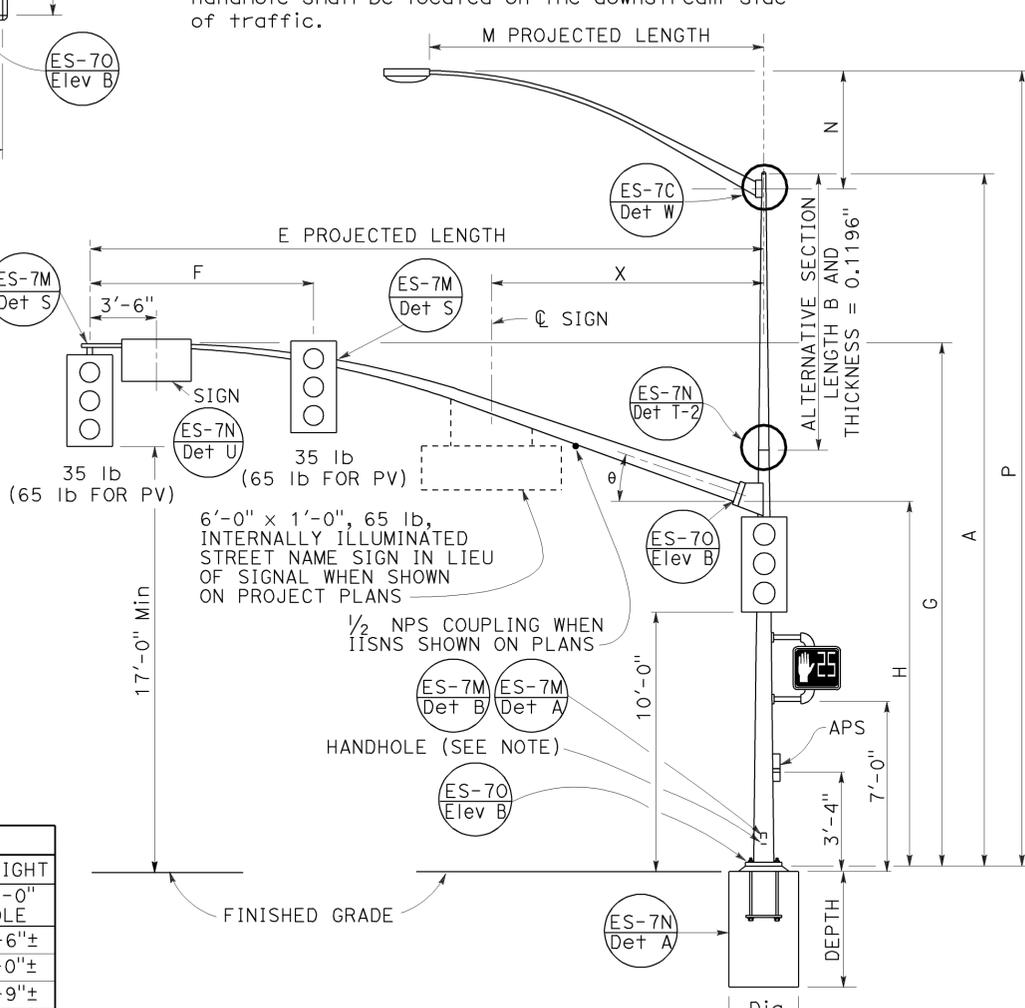
**TYPE 16-3-100, 18-3-100,
 23-3-100, 27-3-100**
ELEVATION A



SIGNAL MAST ARM CONNECTION
DETAIL A



BASE PLATE
DETAIL B



**TYPE 17-3-100, 24A-3-100,
 19-3-100, 26-3-100,
 19A-3-100, 26A-3-100, 24-3-100**
ELEVATION B

E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM THICKNESS	L POLE THICKNESS	theta	X Max
15'-0"	8'-0"	21'-8"±	17'-6"	7 3/8"	0.1793"							
20'-0"		21'-8"±		7 3/8"		12"		1'-0"	1 1/4"	1 1/2"	23°	
25'-0"		22'-8"±		7 3/8"								
30'-0"	12'-0"	22'-8"±		8"			1 1/4"-7NC-3"					10'-6"
35'-0"	14'-0"	23'-0"±	16'-0"	8 3/4"	0.2391"						21°	
40'-0"				9 3/8"		13"		1'-1"	1 1/2"	1 3/4"	15°	13'-0"
45'-0"	15'-0"	23'-8"±		10 1/16"								

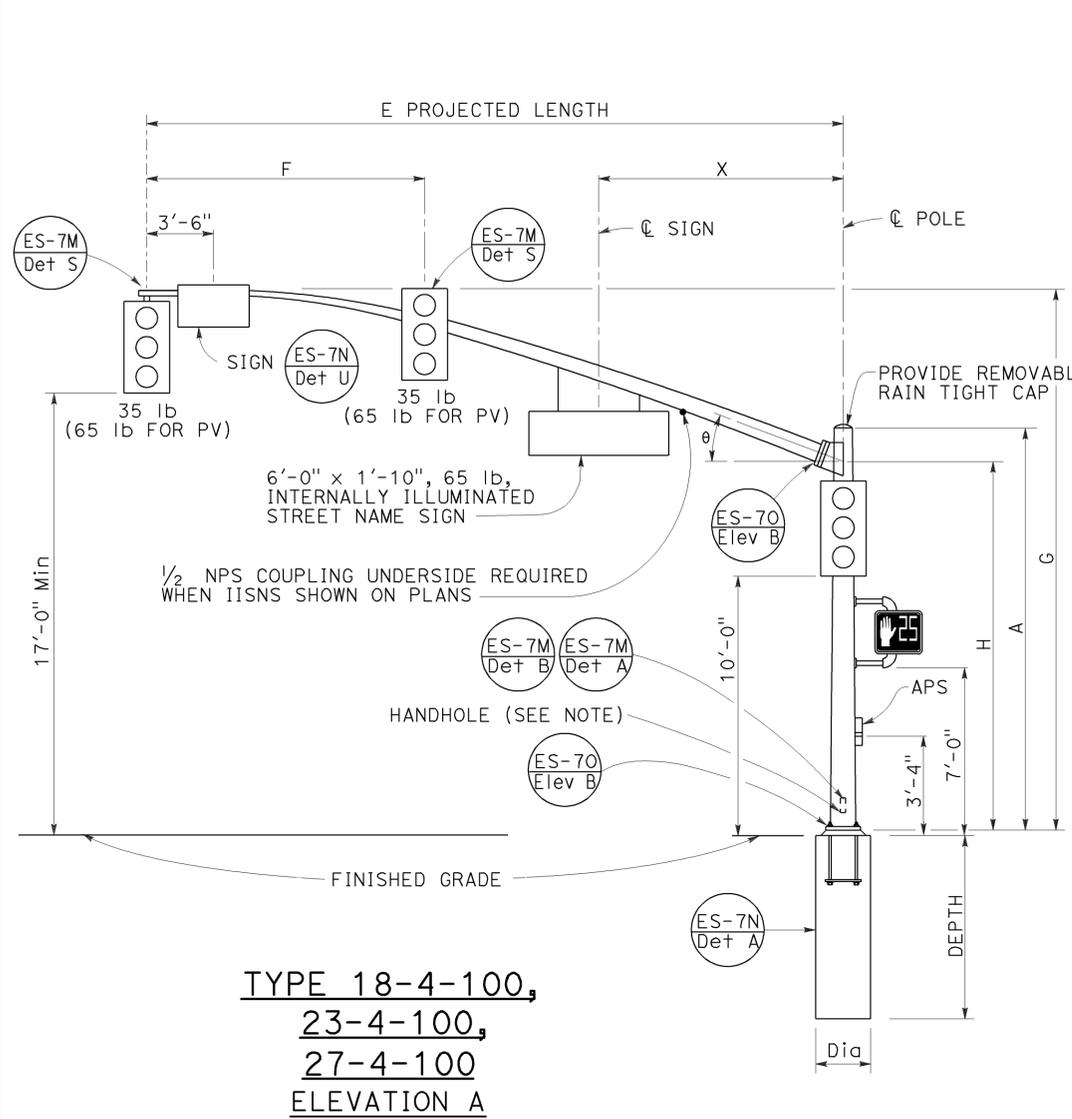
M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT
6'-0"	2'-0"±	3 1/4"		30'-0" POLE
8'-0"	2'-6"±	3 1/2"		35'-0" POLE
10'-0"	3'-3"±	3 7/8"	0.1196"	31'-6"±
12'-0"	4'-3"±	4 1/4"		32'-0"±
15'-0"	4'-9"±			36'-6"±
				37'-0"±
				32'-9"±
				37'-9"±
				33'-9"±
				38'-9"±
				34'-3"±
				39'-3"±

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA				BASE PLATE DATA				CIDH PILE FOUNDATION								
			A HEIGHT	Min OD		THICKNESS	ALTERNATIVE SECTION		C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	LUMINAIRE MAST ARM	SIGNAL MAST ARM	DIAMETER	DEPTH	REINFORCED		
				BASE	TOP		B LENGTH	BOTTOM										TOP	
16-3-100			18'-6"		8 1/16"	0.1793"	NONE												
17-3-100			30'-0"	10 3/4"	6 7/16"		10'-0"	7 7/8"	6 7/16"	1'-5 1/2"			1 1/2" phi x 42"	NONE	15'-0", 20'-0"		8'-6"		
18-3-100			17'-0"		8 9/16"		NONE							NONE	25'-0", 30'-0"		9'-6"		
19-3-100			30'-0"		7 1/16"		10'-0"	9 1/8"	7 1/16"					6'-15' 12'-0"					
19A-3-100			35'-0"		6 15/16"		15'-0"		6 15/16"					6'-15' 15'-0"					
23-3-100	3	100	17'-0"	1'-0"	9 9/16"	0.2391"	NONE			1'-7"	1'-5 1/2"	3"	2" phi x 42"	NONE	35'-0"		3'-0"	11'-0"	YES
24-3-100			30'-0"		7 1/16"		10'-0"	9 1/8"	7 1/16"					6'-15' 12'-0"					
24A-3-100			35'-0"		6 15/16"		15'-0"	9 1/8"	6 15/16"					6'-15' 15'-0"					
26-3-100			30'-0"		7 13/16"		10'-0"	9 1/4"	7 13/16"					6'-15' 12'-0"					
26A-3-100			35'-0"	1'-2"	7 1/16"	0.3125"	15'-0"		7 1/16"	1'-11"	1'-9"		2 1/2" phi x 42"	6'-15' 12'-0"	40'-0", 45'-0"		3'-6"	12'-0"	
27-3-100			17'-0"		9 1/16"		NONE							NONE					

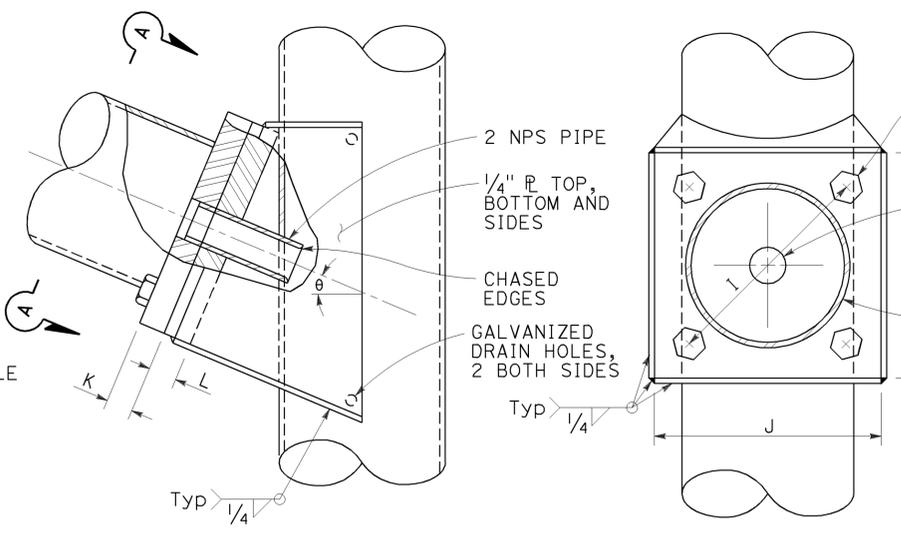
[] INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

2010 REVISED STANDARD PLAN RSP ES-7E

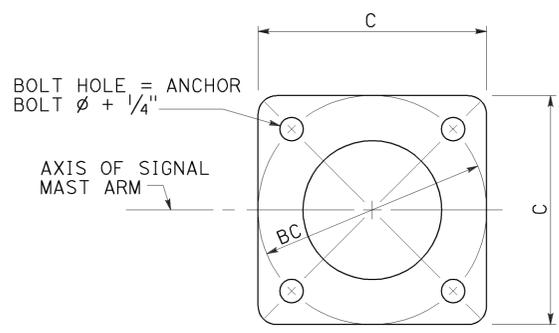
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 3 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 15' TO 45')
 NO SCALE
 RSP 7E DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN 7E
 DATED MAY 20, 2011 - PAGE 466 OF THE STANDARD PLANS BOOK DATED 2010.



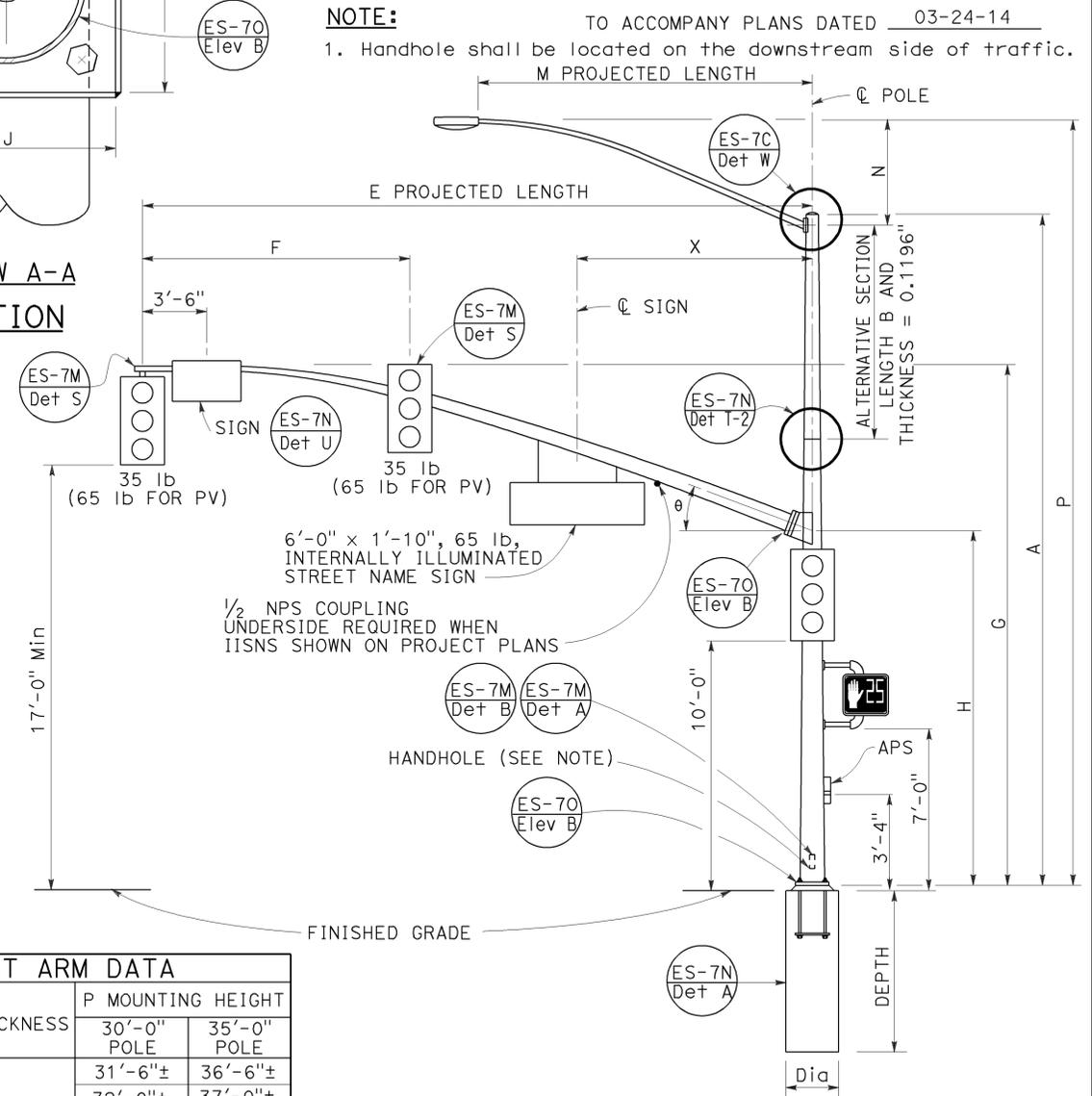
**TYPE 18-4-100,
23-4-100,
27-4-100
ELEVATION A**



**ELEVATION C
VIEW A-A
SIGNAL MAST ARM CONNECTION**



**BASE PLATE
DETAIL B**



**TYPE 19-4-100, 19A-4-100,
24-4-100, 24A-4-100,
26-4-100, 26A-4-100
ELEVATION B**

E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM THICKNESS	L POLE R THICKNESS	θ	X Max
25'-0"	10'-0"	22'-8"±	16'-0"	7 3/8"	0.2391"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°	10'-6"
30'-0"	12'-0"	8"										
35'-0"	14'-0"	8 1/8"										
40'-0"	15'-0"	9 3/8"										
45'-0"	17'-0"	10 1/4"										

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT	
				30'-0" POLE	35'-0" POLE
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±			33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA			BASE PLATE DATA			CIDH PILE FOUNDATION									
			A HEIGHT	Min OD BASE	Min OD TOP	THICKNESS	ALTERNATIVE SECTION B LENGTH	ALTERNATIVE SECTION BOTTOM	ALTERNATIVE SECTION TOP	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	LUMINAIRE MAST ARM	SIGNAL MAST ARM	Dia	DEPTH	REINFORCED
18-4-100	4	100	17'-0"	12 1/8"	9 1/16"	0.3125"	NONE	9 1/8"	7 1/16"	1'-7"	1'-5 1/2"	3"	2" ø x 42"	NONE	35'-0"	3'-0"	11'-0"	YES
19-4-100			30'-0"		7 1/16"		10'-0"		7 1/16"									
19A-4-100			35'-0"		6 15/16"		15'-0"		6 5/16"									
23-4-100			17'-0"		9 1/16"		NONE		NONE									
24-4-100			30'-0"	7 1/16"	10'-0"		7 1/16"											
24A-4-100			35'-0"	6 15/16"	15'-0"		6 5/16"											
26-4-100			30'-0"	8 3/16"	10'-0"		8 3/16"											
26A-4-100			35'-0"	7 7/16"	15'-0"		7 7/16"											
27-4-100	17'-0"	10 1/16"	NONE	NONE	23"	21"	2 1/2" ø x 42"	NONE	40'-0", 45'-0"	3'-6"	12'-0"							

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 4 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 25' TO 45')**

NO SCALE

RSP ES-7F DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7F
DATED MAY 20, 2011 - PAGE 467 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7F

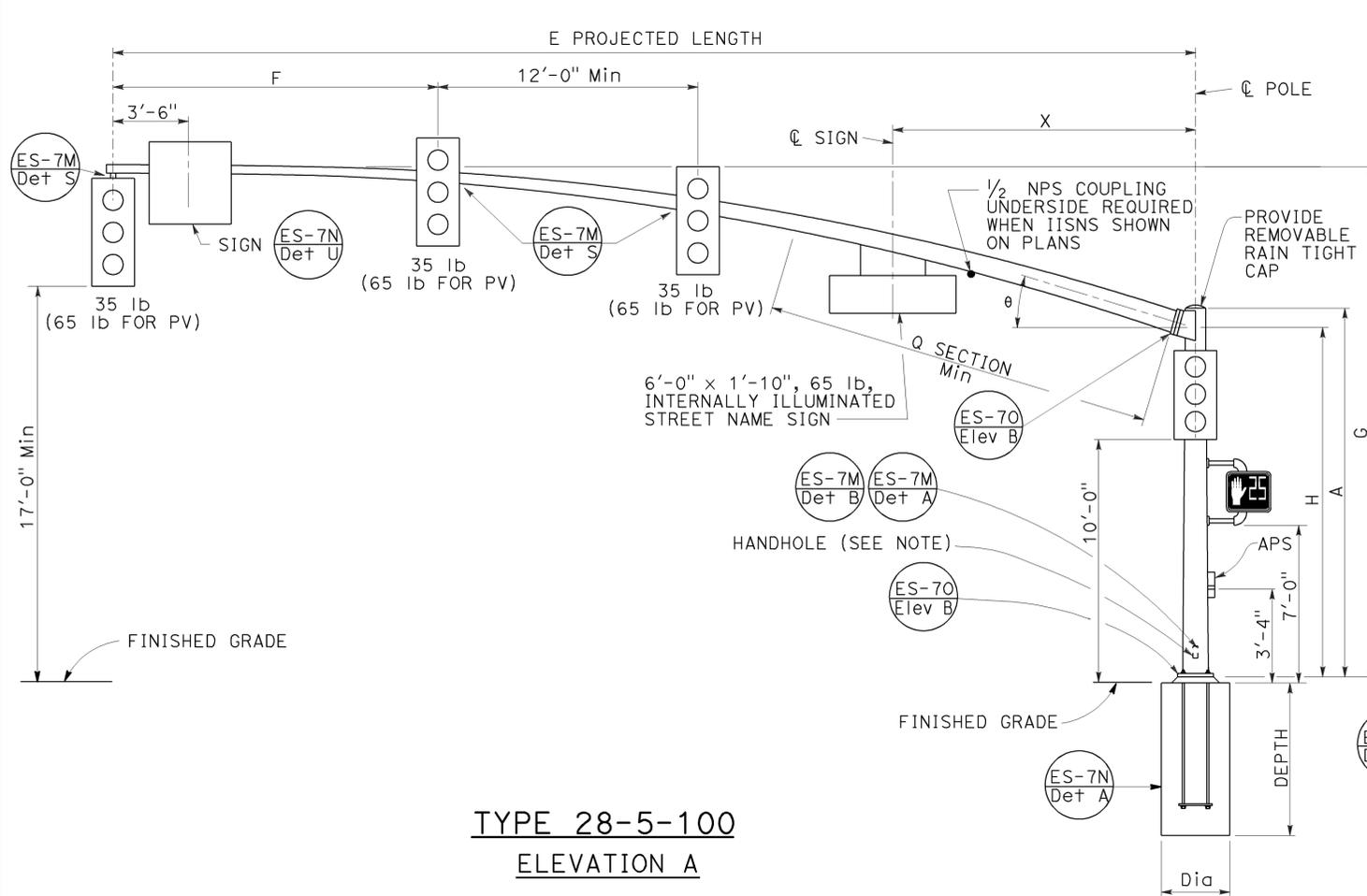
2010 REVISED STANDARD PLAN RSP ES-7F

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8 R12.1/R17.7	1215	1273

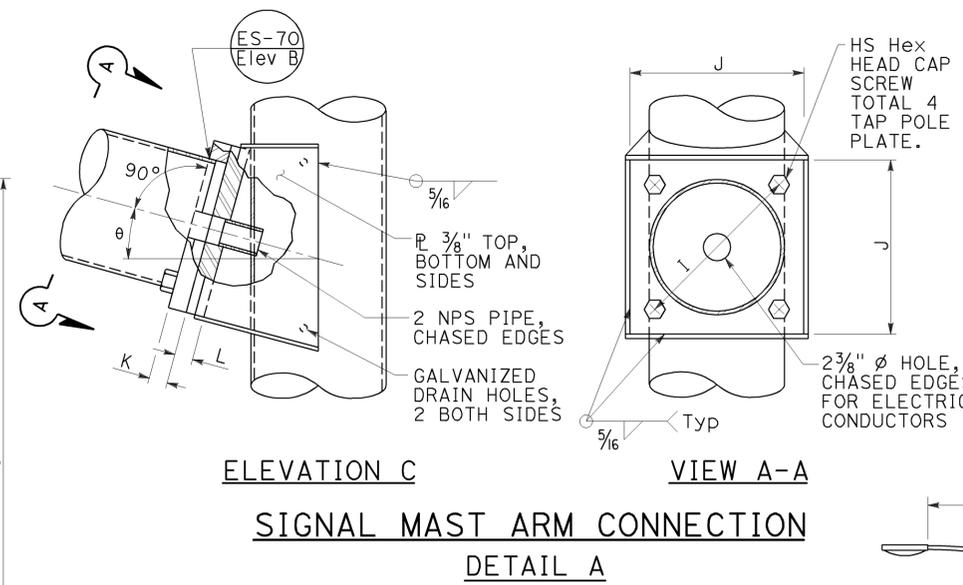
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 3-31-14
 STATE OF CALIFORNIA

July 19, 2013
 PLANS APPROVAL DATE

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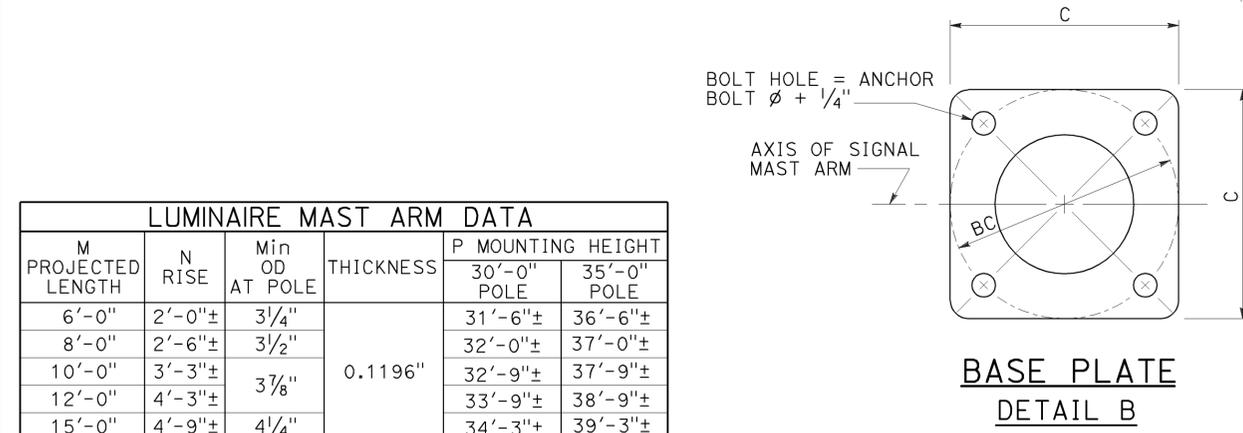


TYPE 28-5-100
ELEVATION A



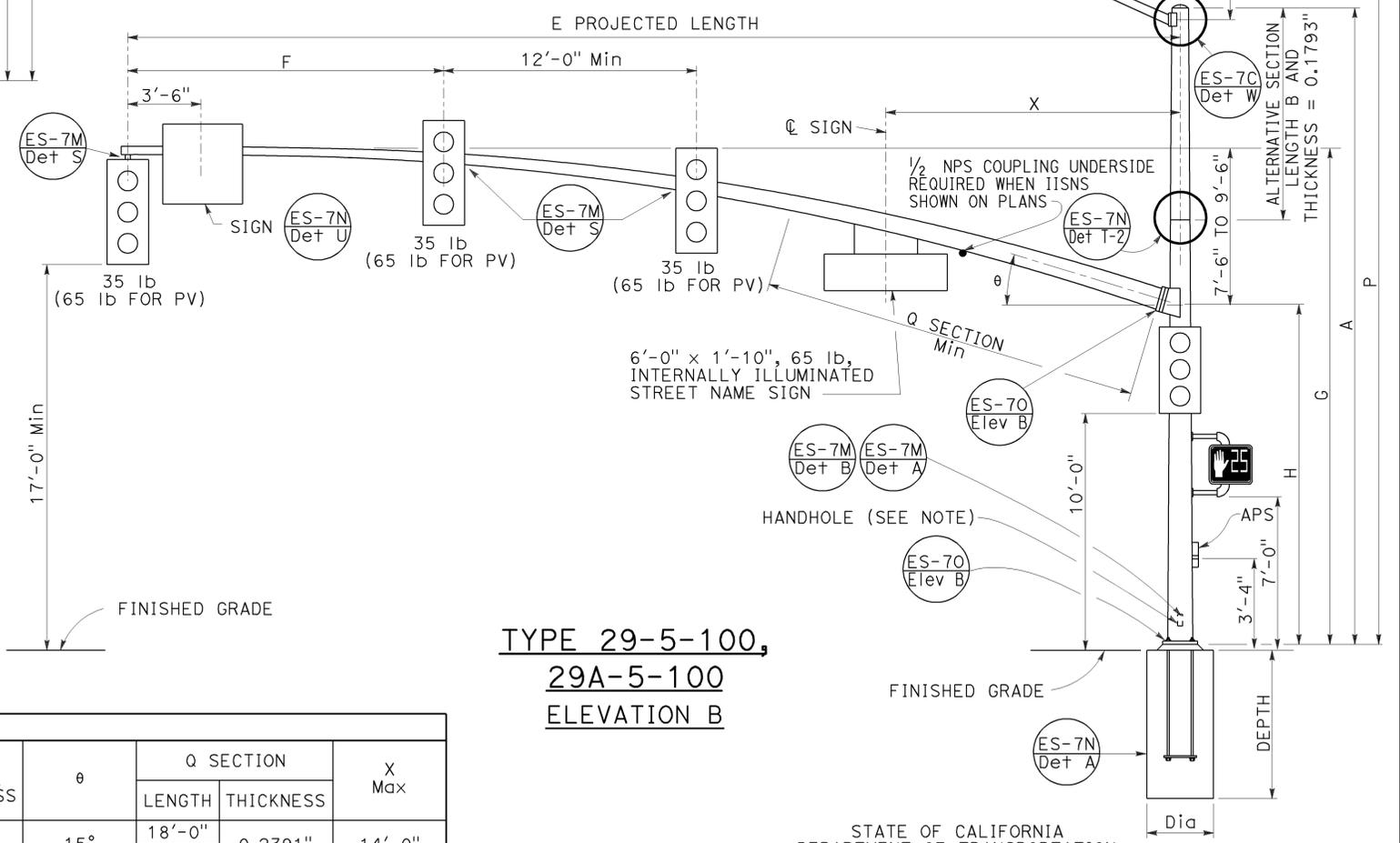
ELEVATION C
VIEW A-A
SIGNAL MAST ARM CONNECTION
DETAIL A

TO ACCOMPANY PLANS DATED 03-24-14
NOTE:
 Handhole shall be located on the downstream side of traffic.



BASE PLATE
DETAIL B

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT	
				30'-0" POLE	35'-0" POLE
6'-0"	2'-0"±	3 3/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±	3 7/8"		33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±



TYPE 29-5-100,
29A-5-100
ELEVATION B

E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM P THICKNESS	L POLE P THICKNESS	θ	Q SECTION		X Max
												LENGTH	THICKNESS	
50'-0" 55'-0"	15'-0"	23'-7"± TO 25'-7"±	16'-0"	1 11/16" 1'-1/4"	0.1793"	16"	1 1/2"-6NC-3 1/4"	1'-4"	1 3/4"	1 3/4"	15°	18'-0" 23'-0"	0.2391"	14'-0"

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA				BASE PLATE DATA				LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH PILE FOUNDATION		
			A HEIGHT	Min OD BASE	Min OD TOP	THICKNESS	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE			Di	DEPTH	REINFORCED
28-5-100	5	100	17'-0"	11 1/16"	NONE	23"	21"	3"	2 1/2" Ø x 42"	NONE	50'-0"	3'-6"	12'-0"	YES	
29-5-100			30'-0"	14"	9 1/16"	0.3125"	10'-0"	11 1/8"	9 1/16"	6'-15" [15'-0"]	55'-0"				
29A-5-100			35'-0"	14"	8 5/16"	0.3125"	15'-0"	11 1/8"	8 5/16"						

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 5 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 50' TO 55')
 NO SCALE

RSP ES-7G DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7G
 DATED MAY 20, 2011 - PAGE 468 OF THE STANDARD PLANS BOOK DATED 2010.

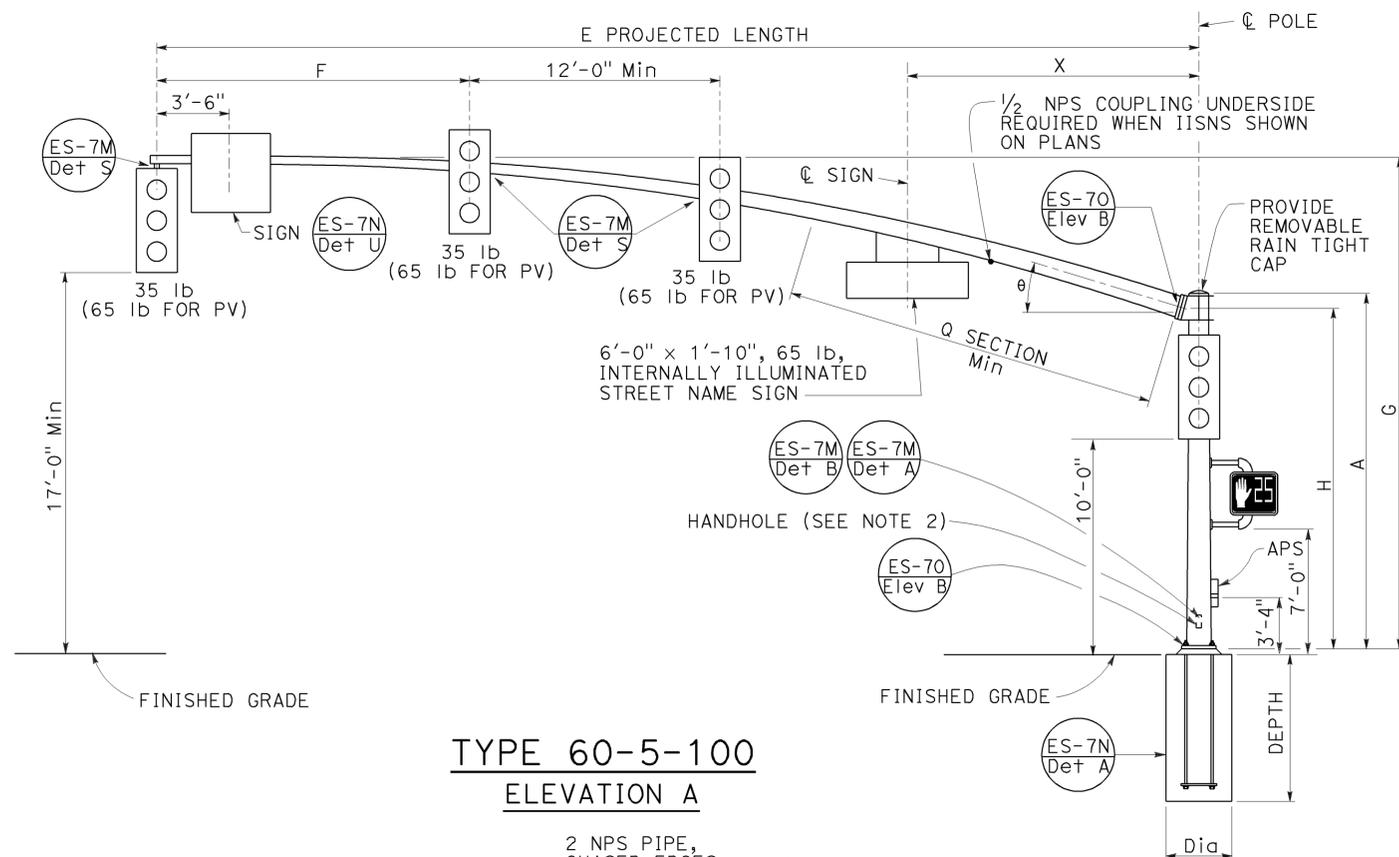
REVISED STANDARD PLAN RSP ES-7G

2010 REVISED STANDARD PLAN RSP ES-7G

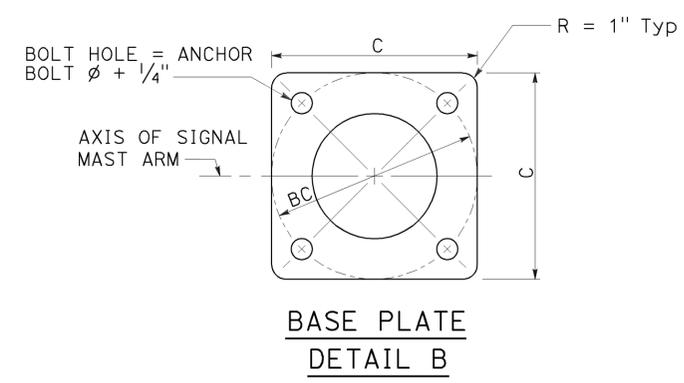
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1216	1273

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 July 19, 2013
 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.

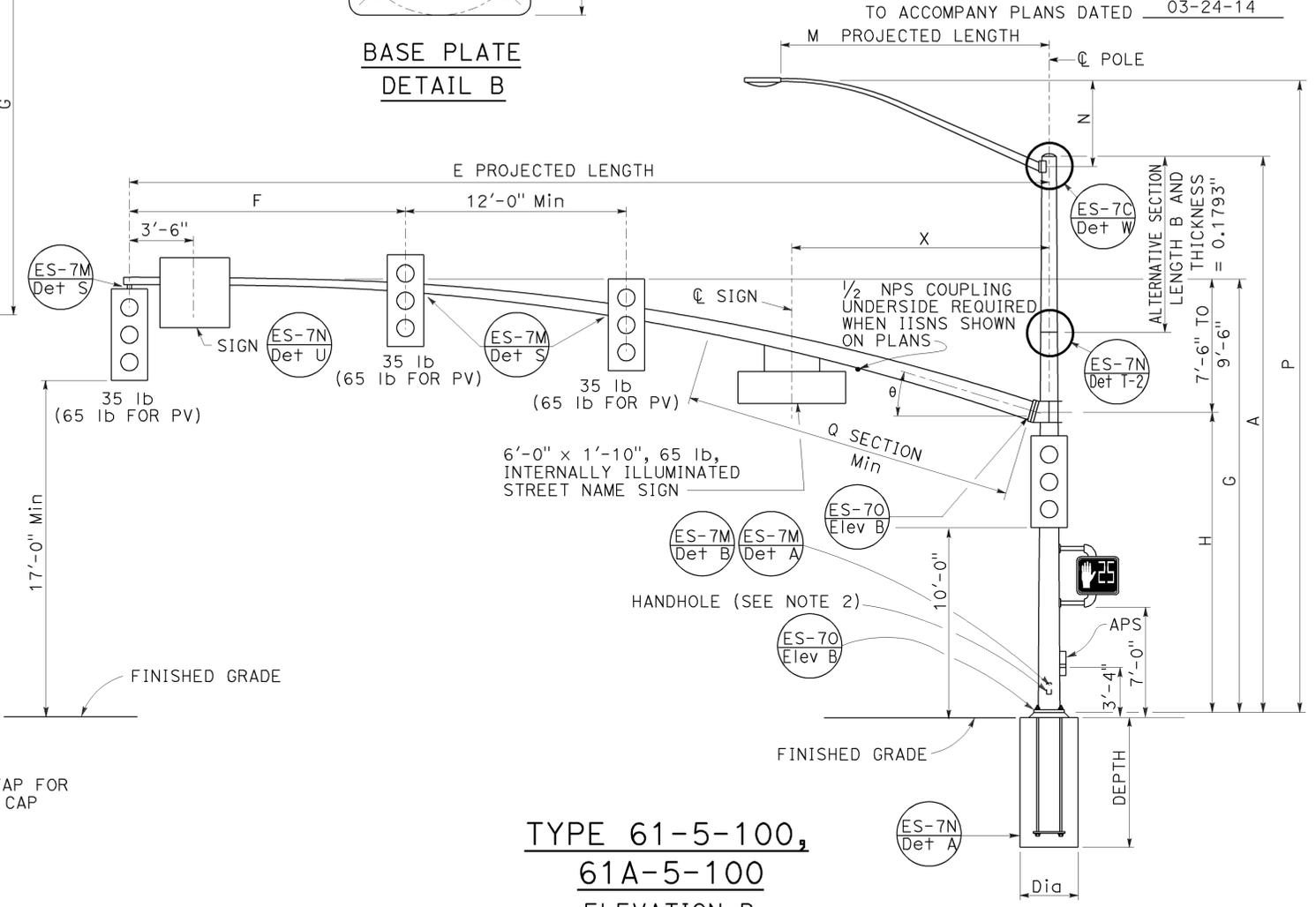
2010 REVISED STANDARD PLAN RSP ES-7H



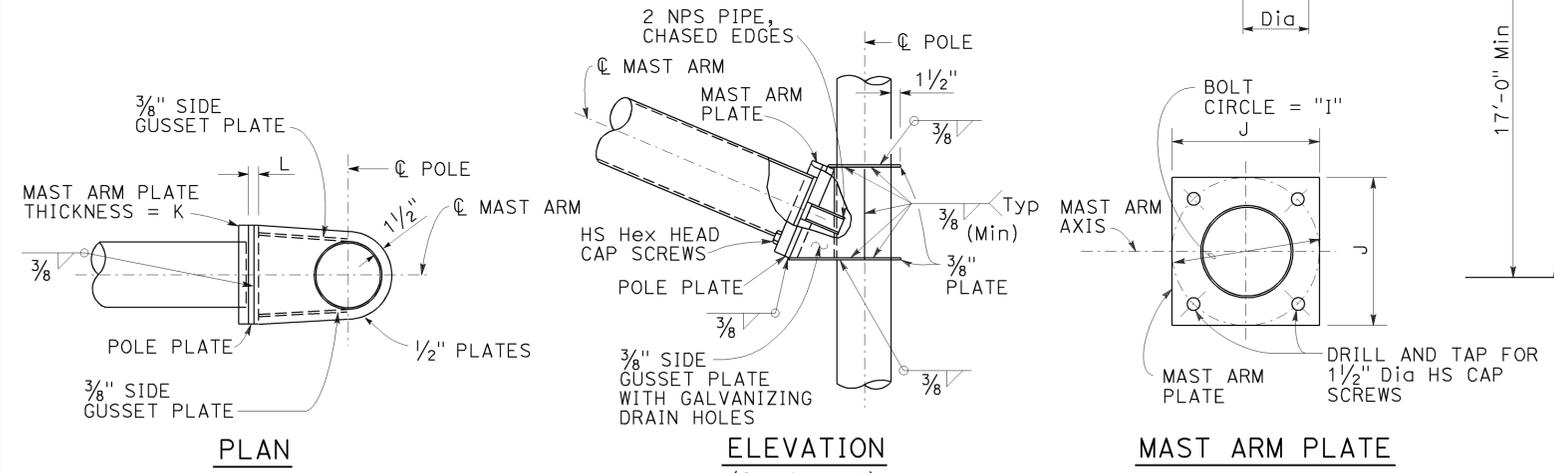
TYPE 60-5-100
ELEVATION A



BASE PLATE
DETAIL B



TYPE 61-5-100,
61A-5-100
ELEVATION B



SIGNAL MAST ARM CONNECTION
DETAIL A

E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM PLATE THICKNESS	L POLE PLATE THICKNESS	theta	Q SECTION		X Max
												LENGTH	THICKNESS	
60'-0"	15'-0"	23'-7" TO 25'-7"	16'-0"	1'-1 1/2"	0.1793"	20"	1 1/2"-6NC-4"	1'-8"	2"	2"	15°	24'-0"	0.2391"	14'-0"
65'-0"					0.2391"							29'-0"	0.3125"	

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT POLE	Q MOUNTING HEIGHT POLE
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 3/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±	3 7/8"		33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

- NOTES:**
- The radial separation between the face of the pole and the adjacent insides of the top and bottom gusset plates shall not exceed 3/16". Fillet weld size to be increased by amount of gap.
 - Handhole shall be located on the downstream side of traffic.

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA			BASE PLATE DATA				LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH PILE FOUNDATION			
			A HEIGHT	Min OD		THICKNESS	C	BC = BOLT CIRCLE	THICKNESS			ANCHOR BOLT SIZE	DIAMETER	DEPTH	REINFORCED
				BASE	TOP										
60-5-100	5	100	17'-0"	16"	1'-1 9/16"	0.3125"	2'-0"	1'-11"	3"	2 1/2" phi x 60"	NONE	60'-0", 65'-0"	3'-6"	13'-0"	YES
61-5-100			30'-0"	16"	11 1/16"										
61A-5-100			35'-0"	16"	10 5/16"										

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

REVISED STANDARD PLAN RSP ES-7H

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 5 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 60' TO 65')
 NO SCALE
 RSP ES-7H DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7H
 DATED MAY 20, 2011 - PAGE 469 OF THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8 R12.1/R17.7	1217	1273

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

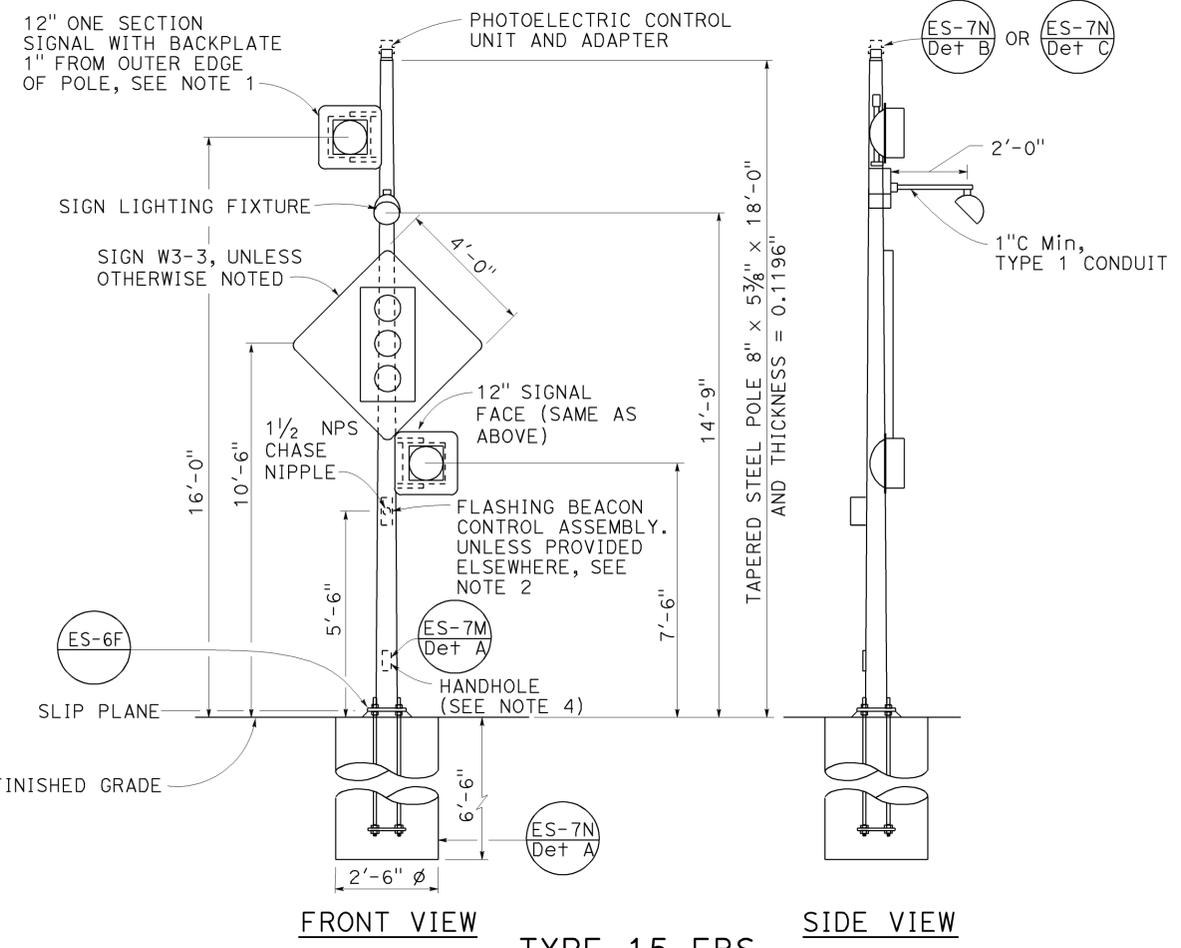
July 19, 2013
 PLANS APPROVAL DATE

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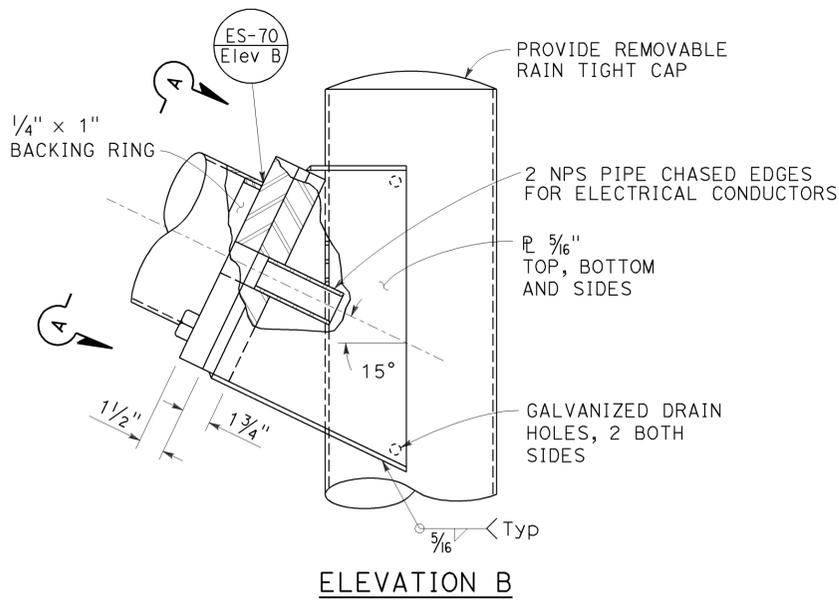
TO ACCOMPANY PLANS DATED 03-24-14

NOTES:

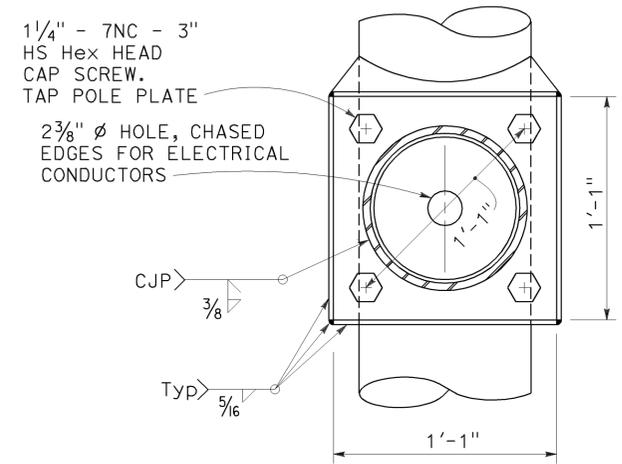
1. See Revised Standard Plan RSP ES-4A and Standard Plan ES-4D for attachment fitting details.
2. For wiring diagram, see Standard Plan ES-14B.
3. For additional notes and details, see Standard Plans ES-7M and ES-7N.
4. Handhole shall be located on the downstream side of traffic.
5. See project plans for type of standard to be installed.



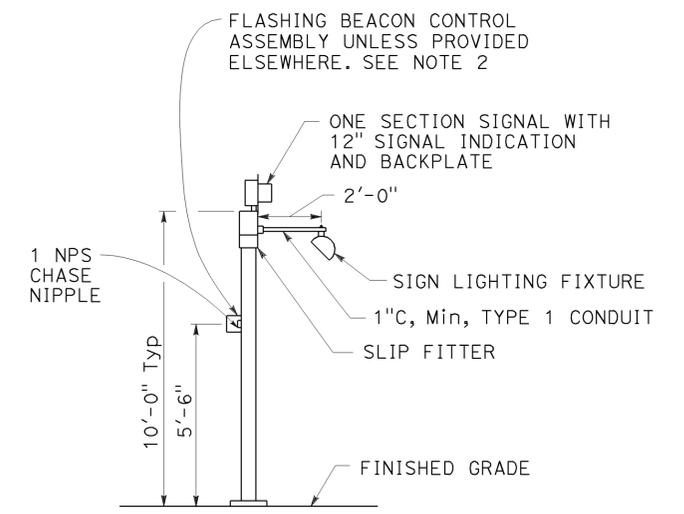
FRONT VIEW
 SIDE VIEW
TYPE 15-FBS
ADVANCE FLASHING BEACON WITH SLIP BASE INSTALLATION
DETAIL A



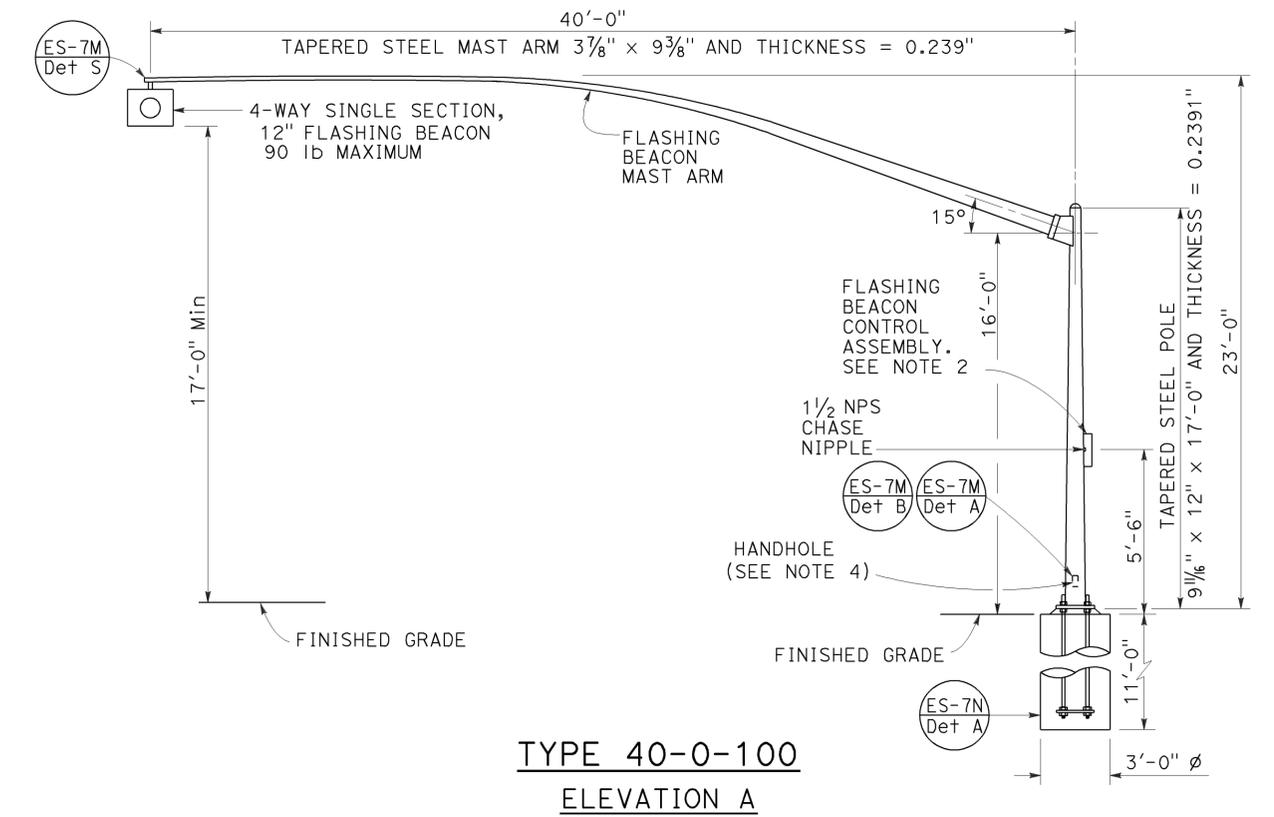
ELEVATION B



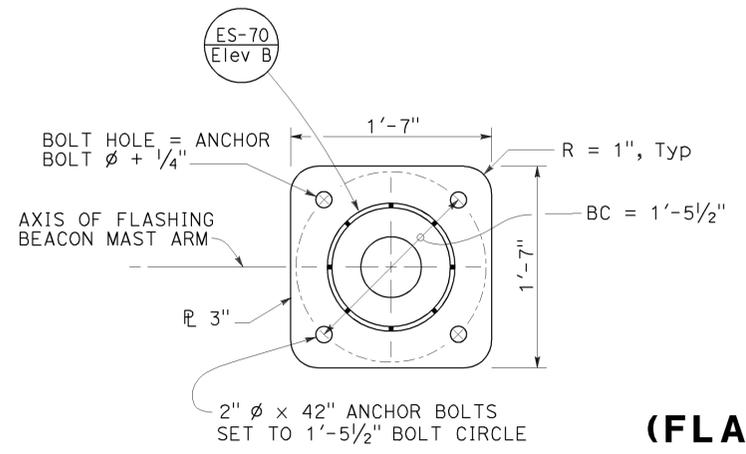
VIEW A-A
FLASHING BEACON MAST ARM CONNECTION DETAIL
DETAIL B



TYPE 1-A, 1-B, 1-C AND 1-D
ADVANCE FLASHING BEACON INSTALLATION
DETAIL D
 See Note 5



TYPE 40-0-100
ELEVATION A



BASE PLATE
DETAIL C

ELECTRICAL SYSTEMS
(FLASHING BEACON ON A TYPE 1, TYPE 15-FBS AND TYPE 40 STANDARD)
 NO SCALE

RSP ES-7J DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7J DATED MAY 20, 2011 - PAGE 471 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7J

2010 REVISED STANDARD PLAN RSP ES-7J

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8 R12.1/R17.7	1218	1273

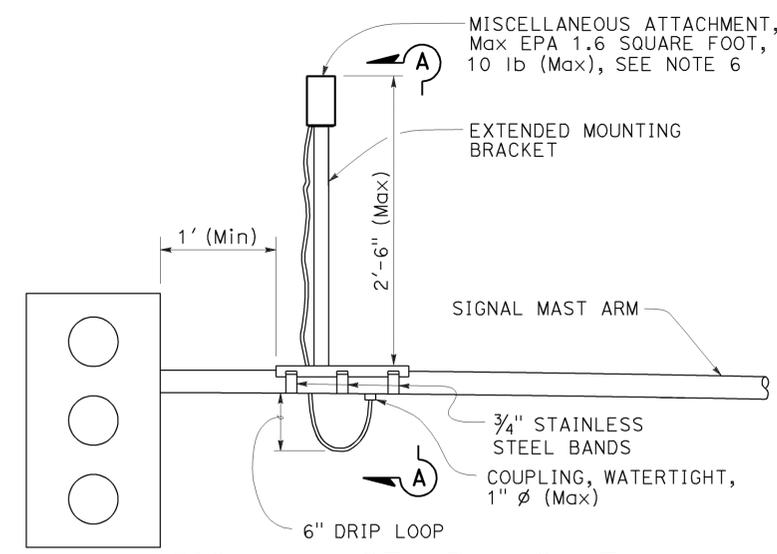
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

July 19, 2013
 PLANS APPROVAL DATE

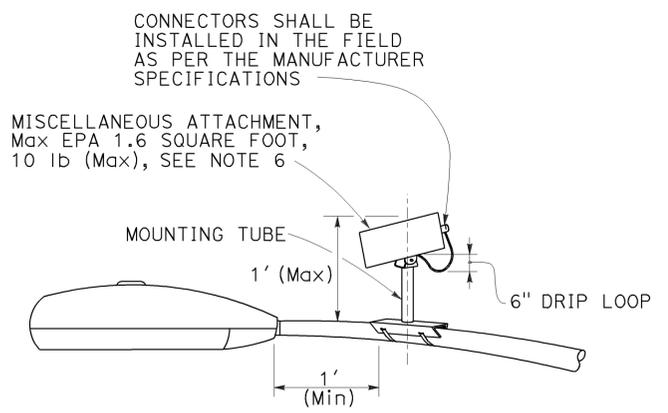
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TO ACCOMPANY PLANS DATED 03-24-14

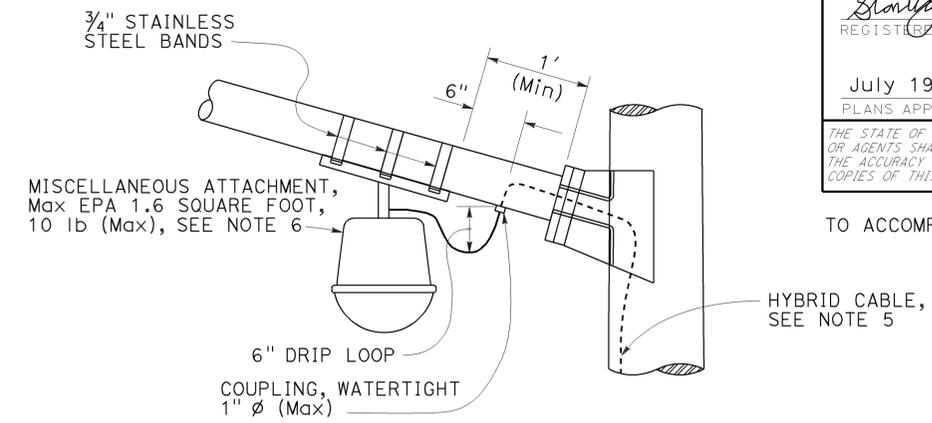
2010 REVISED STANDARD PLAN RSP ES-7R



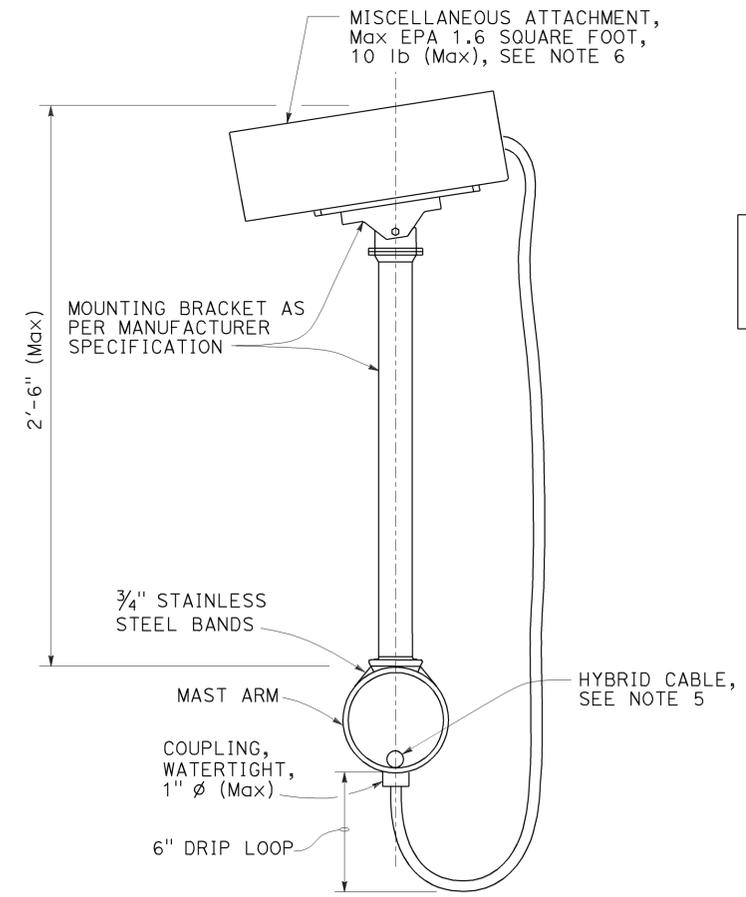
**SIGNAL MAST ARM MOUNT
DETAIL A**



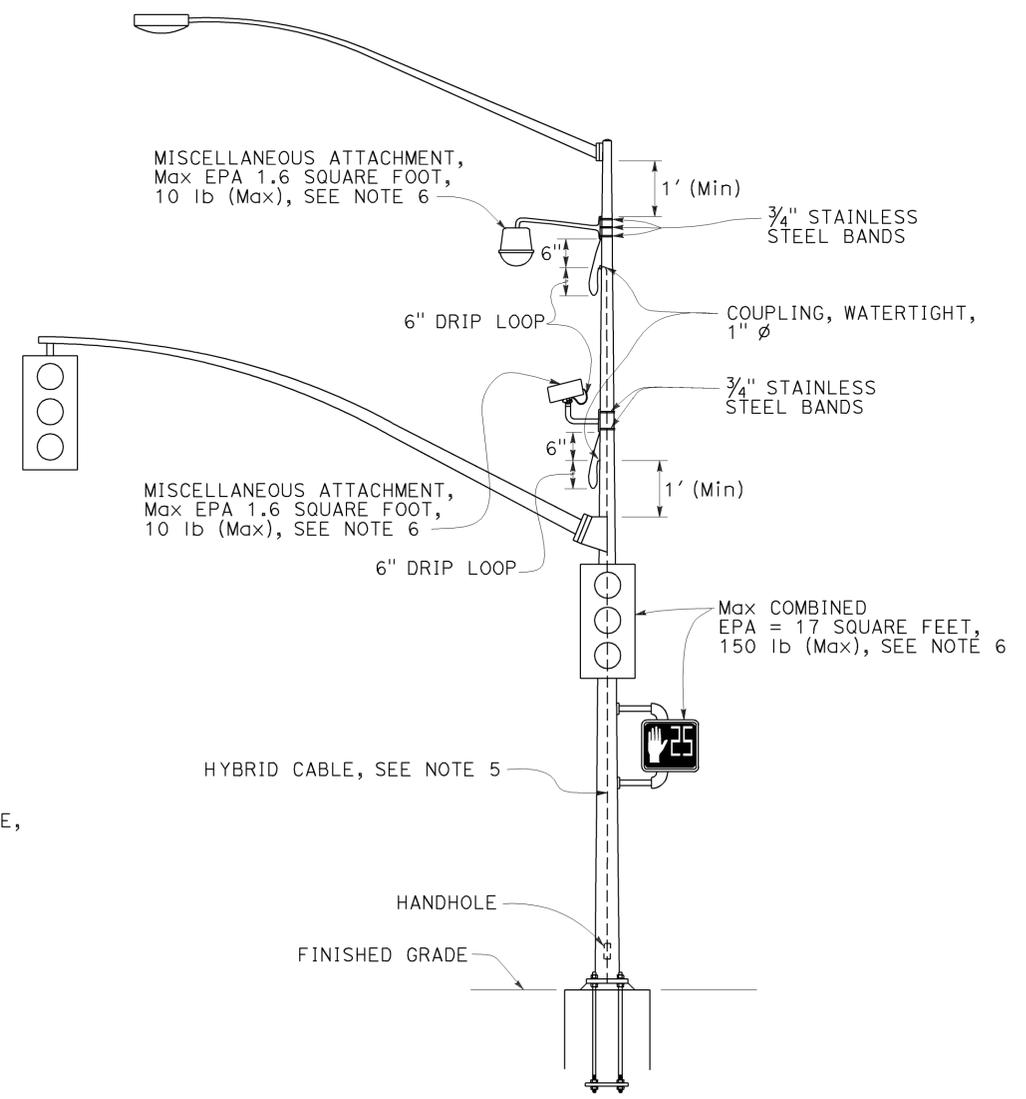
**LUMINAIRE MAST ARM MOUNT
DETAIL B**



**LUMINAIRE MAST ARM MOUNT
DETAIL C**



SECTION A-A



**SIGNAL POLE MOUNT
DETAIL D**

NOTES:

1. Exact mounting location of miscellaneous attachment and bracket shall be approved by the Engineer per manufacturer's recommendation.
2. Location of cable entrances on signal pole shall be a minimum of 1' from any flange or base plate.
3. Hybrid cable entrances on signal pole shall be drilled for weathertight coupling as required.
4. Hybrid cable shall have a drip loop at the entrance into signal pole, luminaire mast arm and signal mast arm.
5. A single hybrid cable shall run continuous and shall not be twisted from the miscellaneous attachment to the controller cabinet. No splices shall be allowed.
6. Use the manufacturer's Effective Projected Area (EPA) for miscellaneous attachment. The maximum EPA for each miscellaneous attachment shall be 1.6 square feet.
7. Maximum of two miscellaneous attachments per traffic signal structure.
8. Maximum of one miscellaneous attachment per mast arm.
9. Miscellaneous attachment shall be mounted using clamping devices.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING,
MISCELLANEOUS ATTACHMENT)**

NO SCALE

RSP ES-7R DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7R DATED MAY 20, 2011 - PAGE 479 OF THE STANDARD PLANS BOOK DATED 2010.

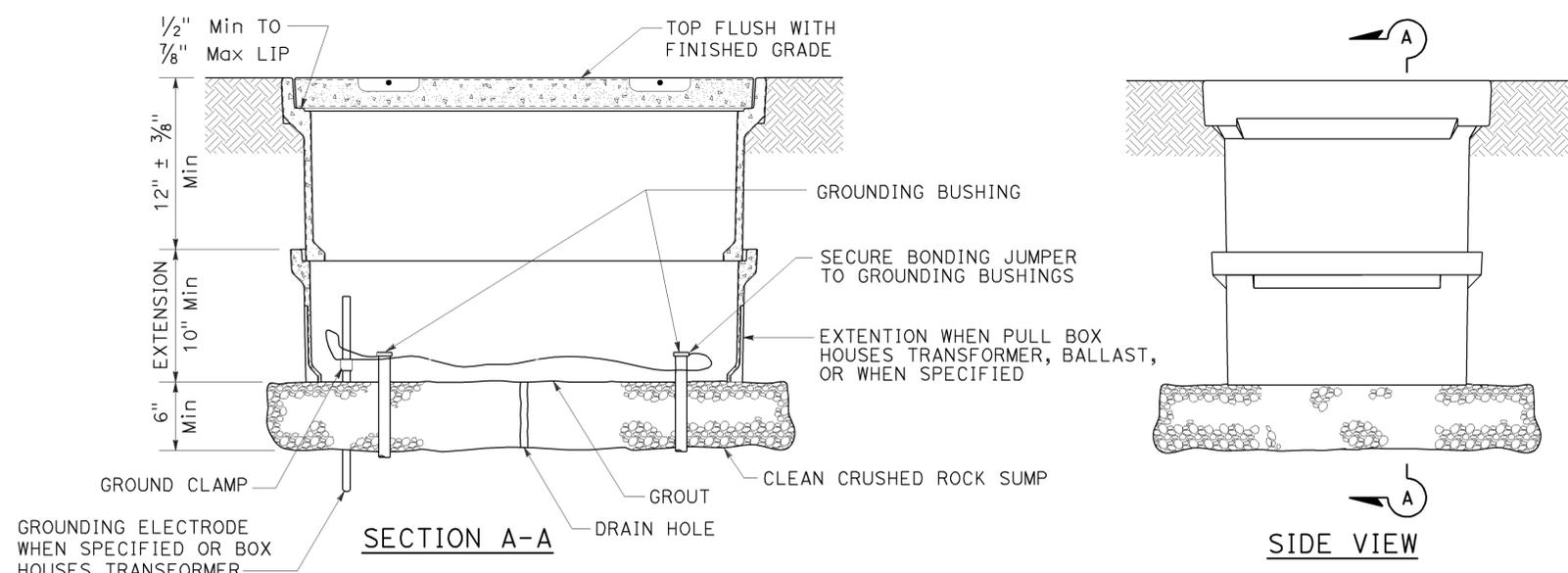
REVISED STANDARD PLAN RSP ES-7R

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1219	1273

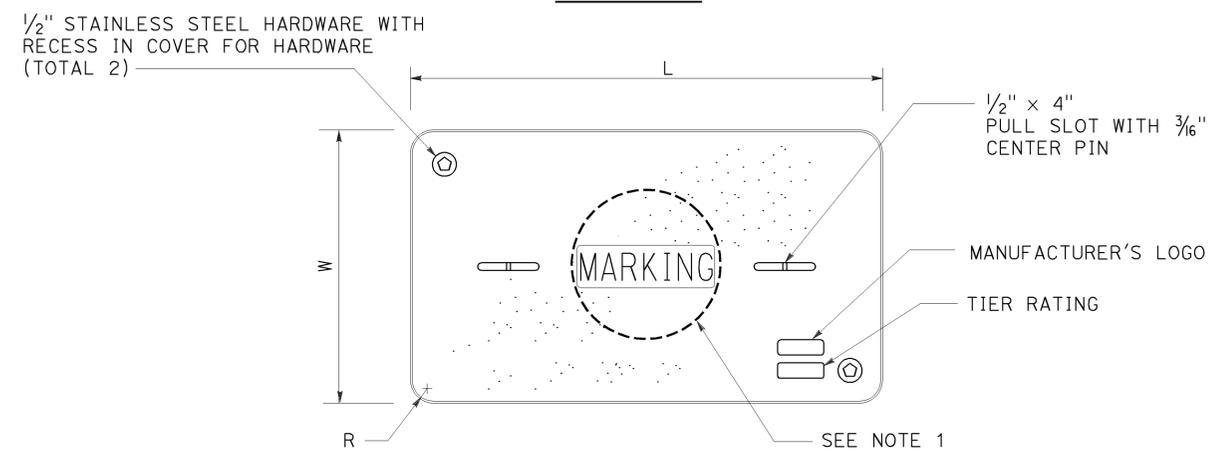
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



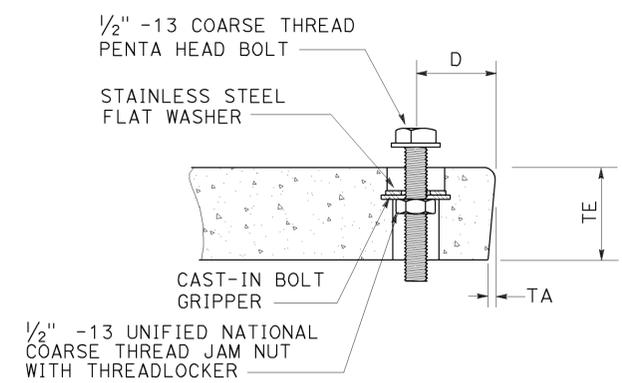
TO ACCOMPANY PLANS DATED 03-24-14



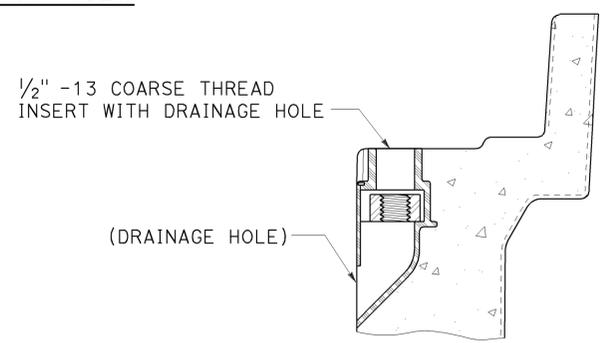
INSTALLATION DETAILS
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

NOTES:

- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;
 - No. 3 1/2 pull box.
 - "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - No. 5, 6, 9 or 9A pull box.
 - "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
 - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - "RAMP METER" - Ramp meter circuits.
 - "COUNT STATION" - Count or speed monitor circuits.
 - "COMMUNICATIONS" - Communication circuits.
 - "TOS COMMUNICATIONS" - TOS communication line.
 - "TOS POWER" - TOS power.
 - "TDC POWER" - Telephone demarcation cabinet power.
 - "CCTV" - Closed circuit television circuits.
 - "TMS" - Traffic monitoring station circuits.
 - "CMS" - Changeable message sign circuits.
 - "HAR" - Highway advisory radio circuits.
 - "BOOSTER PUMP" - Booster pump circuit.
- The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8". Top outside radius of covers and pull boxes shall have a 1/8" radius.
- Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.
- All dimensions for the cover for non-traffic pull box are nominal values.

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MAXIMUM WEIGHT	L	W	R	TE	TA	D	MAXIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3 3/8"	10 1/8"	1 3/8"	2"	1/8"	1 3/4"	30 lb
No. 5	12"	10"	55 lb	1' - 11 1/4"	1' - 1 3/4"	1 3/8"	2"	1/8"	1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 6 1/2"	1' - 5 1/2"	1 3/8"	2"	1/8"	2"	85 lb

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(NON-TRAFFIC PULL BOX)
NO SCALE

RSP ES-8A DATED JULY 19, 2013 SUPERSEDES RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

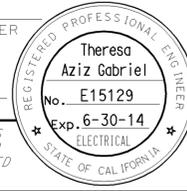
REVISED STANDARD PLAN RSP ES-8A

2010 REVISED STANDARD PLAN RSP ES-8A

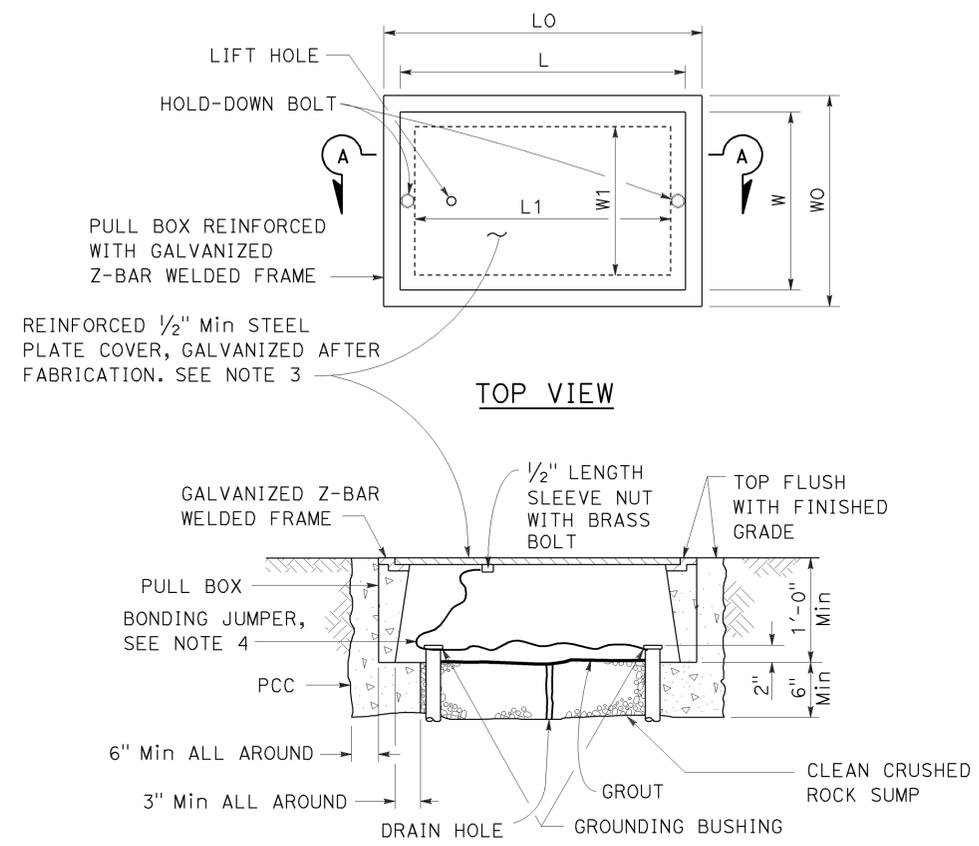
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1220	1273

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 03-24-14



No. 3 1/2(T), No. 5(T) AND No. 6(T) TRAFFIC PULL BOX

NOTES:

- Traffic pull box shall be provided with steel cover and special concrete footing. Steel cover shall have embossed non-skid pattern.
- Steel reinforcing shall be as regularly used in the standard products of the respective manufacturer.
- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" Sprinkler control circuits, 50 V or less; "CALTRANS" On all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service.
 - No. 3 1/2(T) pull box.
 - "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - No. 5(T) or 6(T) pull box.
 - "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
 - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - "RAMP METER" - Ramp meter circuits.
 - "COUNT STATION" - Count or speed monitor circuits.
 - "COMMUNICATION" - Communication circuits.
 - "TOS COMMUNICATIONS" - TOS communications line.
 - "TOS POWER" - TOS power.
 - "TDC POWER" - Telephone demarcation cabinet power.
 - "CCTV" - Closed circuit television circuits.
 - "TMS" - Traffic monitoring station circuits.
 - "CMS" - Changeable message sign circuits.
 - "HAR" - Highway advisory radio circuits.
 - "BOOSTER PUMP" - Booster pump circuit.
- Bonding jumper for metal covers shall be 3' long, minimum.
- The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8".

PULL BOX	PULL BOX						COVER				
	MINIMUM * THICKNESS	MINIMUM DEPTH BOX AND EXTENSION	W0	L0	L1	W1	L **	W **	R	EDGE THICKNESS	EDGE TAPER
No. 3 1/2(T)	1 1/2"	1'-0"	1'-5"± 1"	1'-8 3/8"±	1'-2 1/2"±	10 5/8"± 1"	1'-8"±	1'-1 3/4"±	0"	1/2"	NONE
No. 5(T)	1 3/4"	1'-0"	1'-11 1/2"± 1"	2'-5 1/2"±	1'-7"±	1'-1"± 1"	2'-3"±	1'-4"±	0"	1/2"	NONE
No. 6(T)	2"	1'-0"	2'-6"± 1"	2'-11 1/2"±	1'-11 1/2"±	1'-5"± 1"	2'-9"±	1'-8"±	0"	1/2"	NONE

* EXCLUDING CONDUIT WEB ** TOP DIMENSION

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (TRAFFIC PULL BOX)**
 NO SCALE

RSP ES-8B DATED JULY 19, 2013 SUPERSEDES RSP ES-8B DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8B

2010 REVISED STANDARD PLAN RSP ES-8B

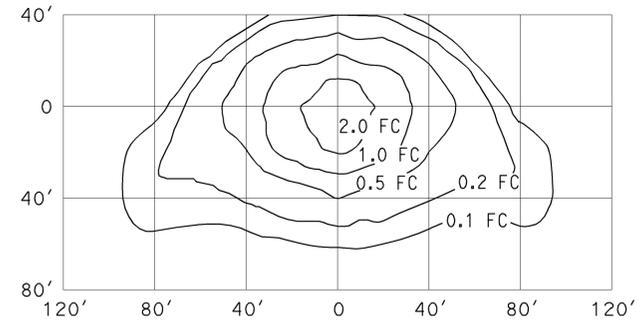
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1221	1273

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 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.

REGISTERED PROFESSIONAL ENGINEER
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

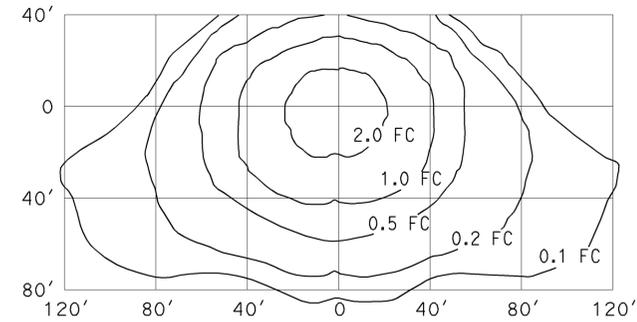
TO ACCOMPANY PLANS DATED 03-24-14

ISOFOOTCANDLE CURVE - MINIMUM



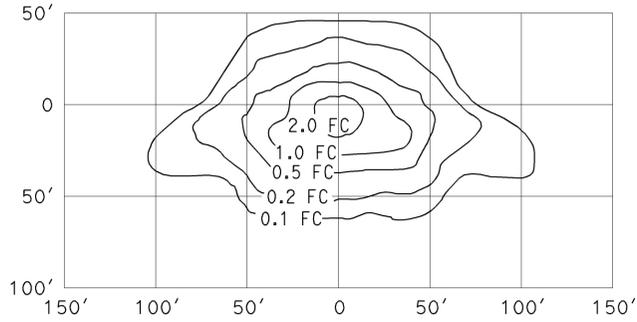
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 34' Mounting Height
 Lamp operated at 22,000 lm
 200-W high pressure sodium lamp
 ANSI Designation S66

ISOFOOTCANDLE CURVE - MINIMUM



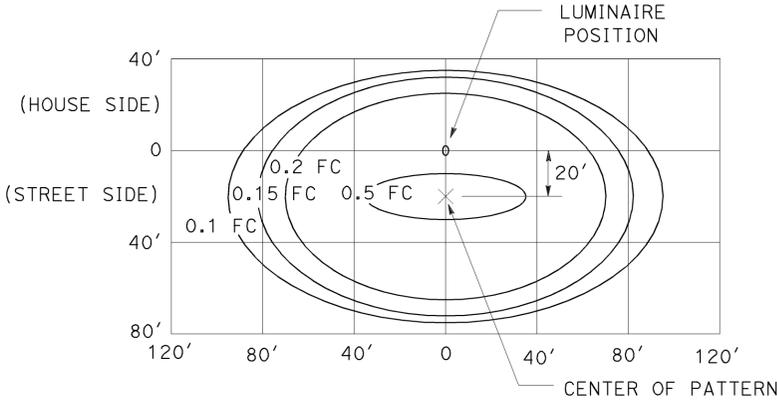
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 40' Mounting Height
 Lamp operated at 37,000 lm
 310-W high pressure sodium lamp
 ANSI Designation S67

ISOFOOTCANDLE CURVE - MINIMUM



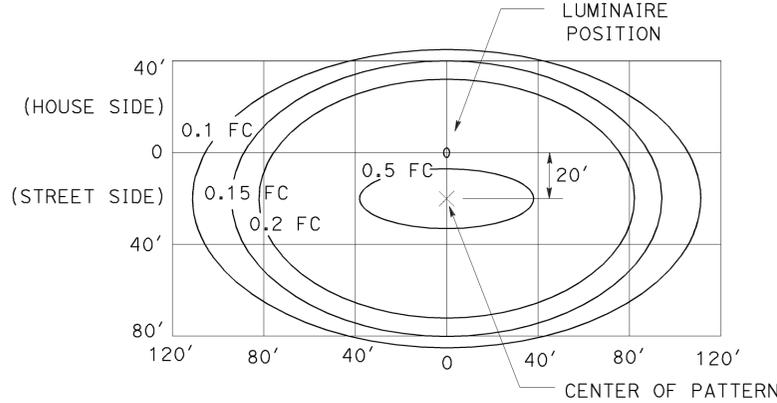
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 30' Mounting Height
 Lamp operated at 16,000 lm
 150-W high pressure sodium lamp
 ANSI Designation S55

ISOFOOTCANDLE CURVE - MINIMUM



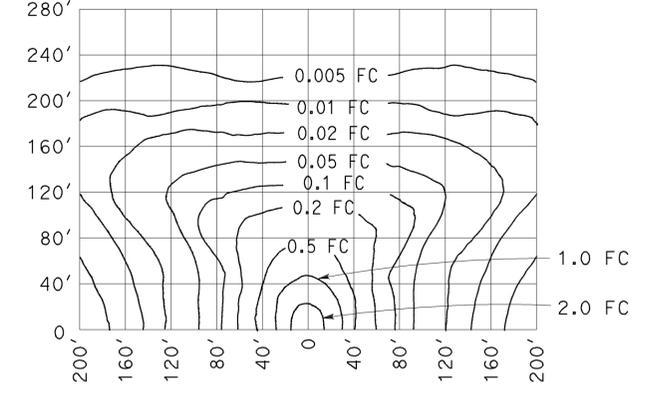
LED LUMINAIRE ROADWAY 1
 165-W at 34' Mounting Height

ISOFOOTCANDLE CURVE - MINIMUM



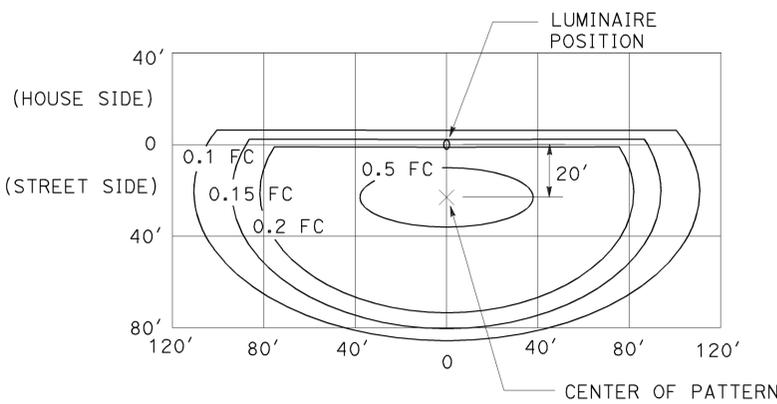
LED LUMINAIRE ROADWAY 2
 235-W at 40' Mounting Height

ISOFOOTCANDLE CURVE - MINIMUM



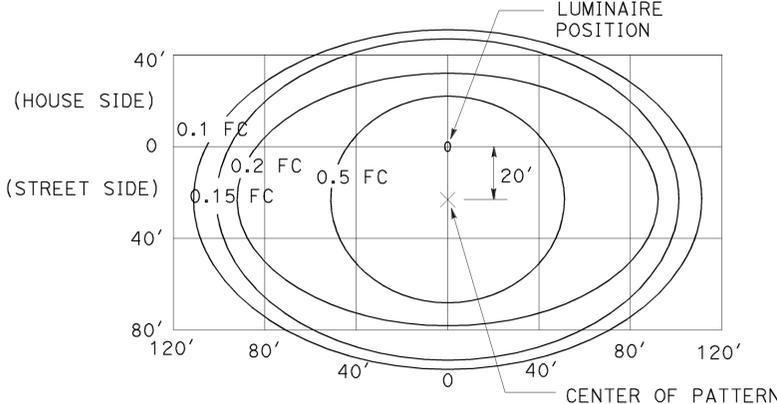
LOW PRESSURE SODIUM LUMINAIRE
 40' Mounting Height
 Lamp operated at 33,000 lm
 180-W low pressure sodium lamp

ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 3
 235-W at 40' Mounting Height
 with back side control

ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 4
 300-W at 40' Mounting Height

**ELECTRICAL SYSTEMS
 (ISOFOOTCANDLE DIAGRAMS)**

NO SCALE

RSP ES-10A DATED JULY 19, 2013 SUPERSEDES RSP ES-10A DATED JULY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-10A

2010 REVISED STANDARD PLAN RSP ES-10A

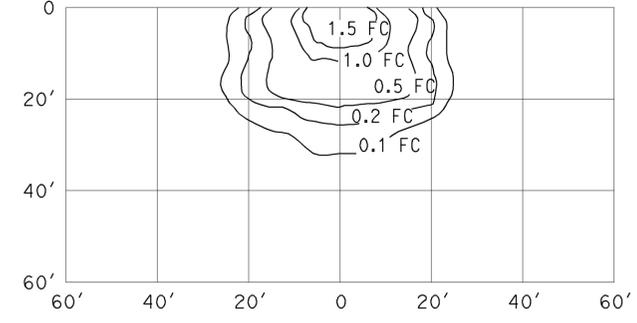
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8 R12.1/R17.7	1222	1273

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 July 20, 2012
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 03-24-14

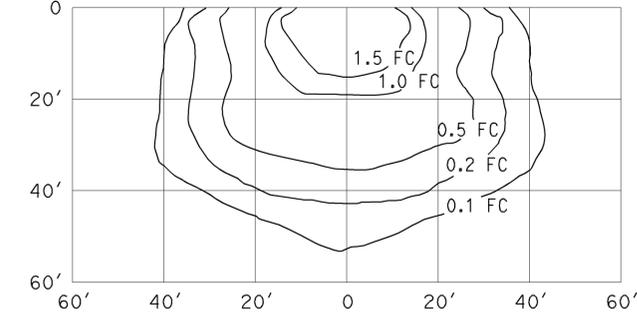
ISOFOOTCANDLE CURVE - MINIMUM



WALL LUMINAIRE

15' Mounting Height
 Lamp operated at 5,800 lm
 70-W high pressure sodium lamp
 ANSI Designation S62

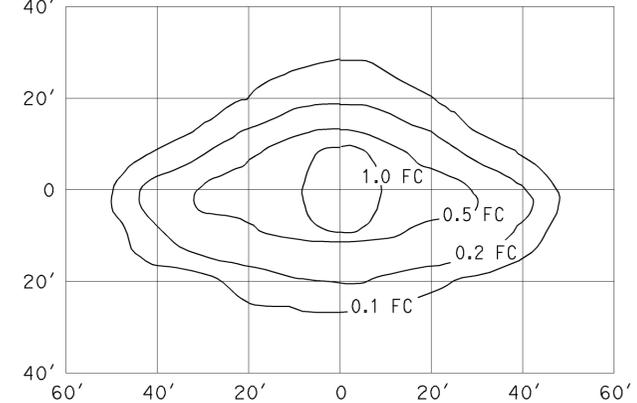
ISOFOOTCANDLE CURVE - MINIMUM



WALL LUMINAIRE

15' Mounting Height
 Lamp operated at 9,500 lm
 100-W high pressure sodium lamp
 ANSI Designation S54

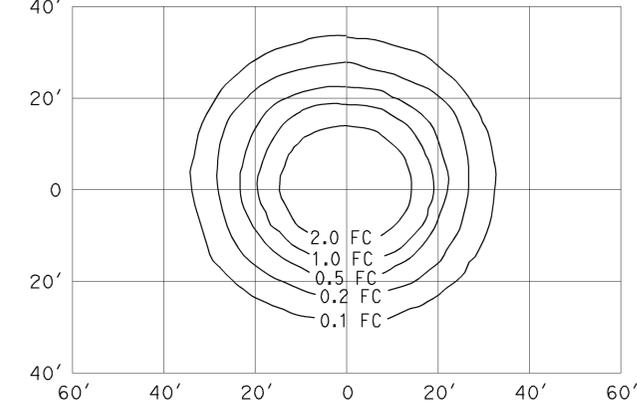
ISOFOOTCANDLE CURVE - MINIMUM



PENDANT SOFFIT LUMINAIRE
TYPE III SHORT

17' Mounting Height
 Lamp operated at 5,800 lm
 70-W high pressure sodium lamp
 ANSI Designation S62

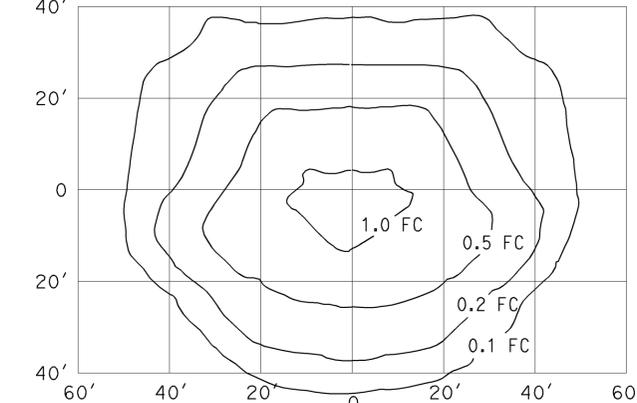
ISOFOOTCANDLE CURVE - MINIMUM



PENDANT SOFFIT LUMINAIRE

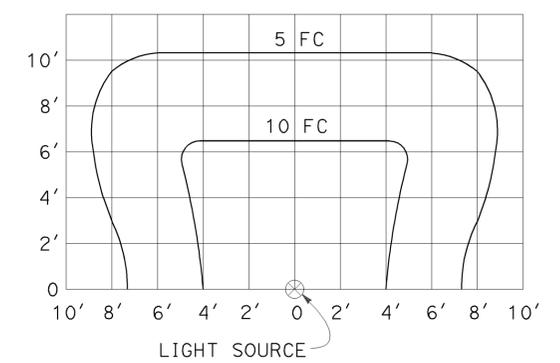
17' Mounting Height
 Lamp operated at 5,800 lm
 70-W high pressure sodium lamp
 ANSI Designation S62

ISOFOOTCANDLE CURVE - MINIMUM



FLUSH SOFFIT LUMINAIRE

17' Mounting Height
 Lamp operated at 5,800 lm
 70-W high pressure sodium lamp
 ANSI Designation S62



SIGN LIGHTING FIXTURE
ISOFOOTCANDLE DIAGRAM

NOTES:

- Curves represent the minimum footcandle (FC) of initial illumination on a 10'-0" x 20'-0" panel.
- The FC shown are with the fixture attached to the light fixture mounting channel which places the center of the source 4'-8" in front of panel and 1'-0" below the bottom edge.
- Applicable lamp: 85-W fluorescent phosphor coated induction lamp.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(ISOFOOTCANDLE DIAGRAMS)

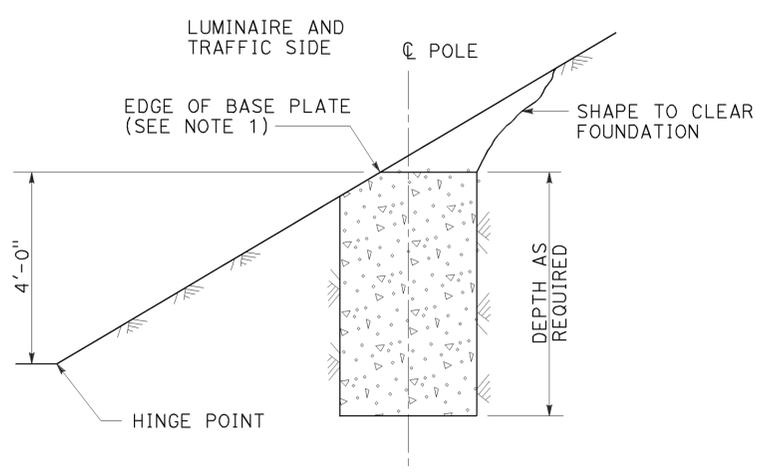
NO SCALE

RSP ES-10B DATED JULY 20, 2012 SUPPLEMENTS THE
 STANDARD PLANS BOOK DATED 2010.

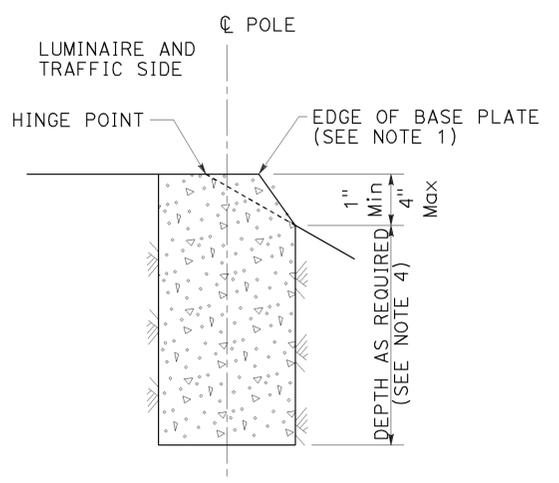
2010 REVISED STANDARD PLAN RSP ES-10B

TO ACCOMPANY PLANS DATED 03-24-14

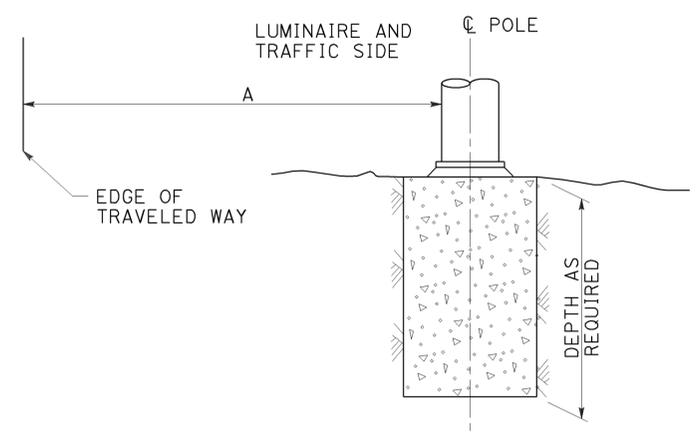
STANDARD TYPE	SETBACK (DIMENSION A)
32	30'-0" (Min)
31	20'-0" (Min)
15, 15D, 15-SB, 21, 21D, 30	ARM LENGTH (Min)



CUT SLOPES
STEEPER THAN 4:1,
LESS THAN 2:1
DETAIL A-1
 See Note 2 and 3



FILL SLOPES
STEEPER THAN 4:1,
LESS THAN 2:1
DETAIL A-2
 See Note 2 and 3

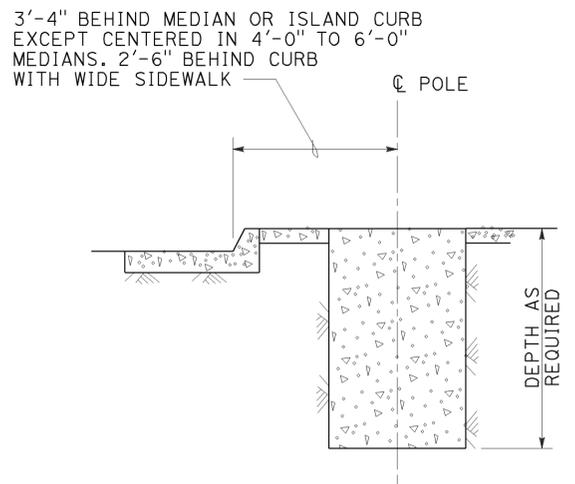


FLAT SECTIONS, CUT OR FILL SLOPES
4:1 OR FLATTER
DETAIL A-3
 See Note 2

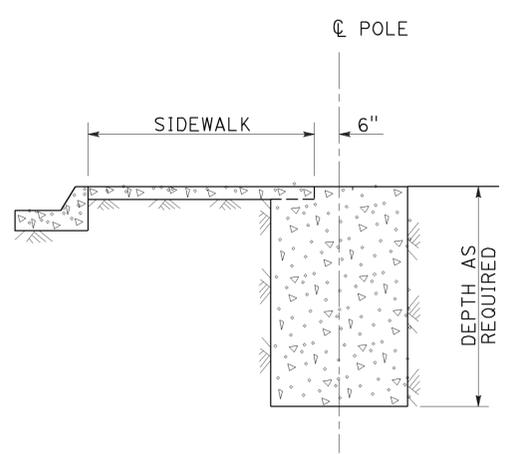
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL A

NOTES:

1. Where a portion of the foundation is above grade, the top edges shall have a 1" chamfer.
2. Slopes shall be horizontal to vertical ratio (Horizontal : Vertical).
3. Horizontal setbacks on cut and fill slopes steeper than 4:1 shall not exceed the distance shown for flat sections.
4. CIDH embedment depth shall be increased beyond standard depths by the diameter of the CIDH.



MEDIAN, ISLAND
OR WIDE SIDEWALK
DETAIL B-1
 7' Wide and wider



NARROW SIDEWALK
DETAIL B-2
 Less than 7' wide

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL B

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(FOUNDATION INSTALLATIONS)
 NO SCALE

RSP ES-11 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-11
 DATED MAY 20, 2011 - PAGE 488 OF THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1224	1273

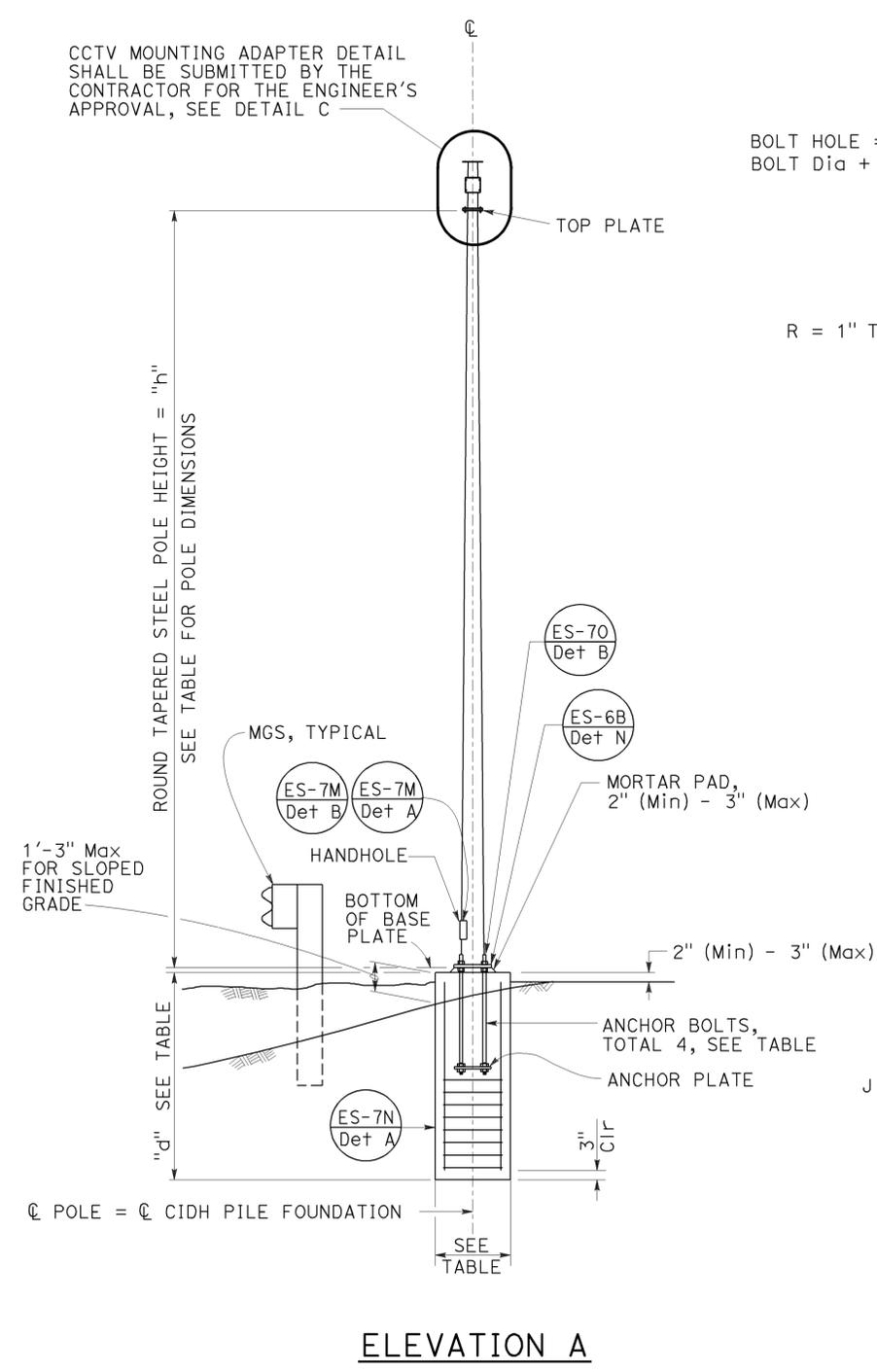
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 November 15, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

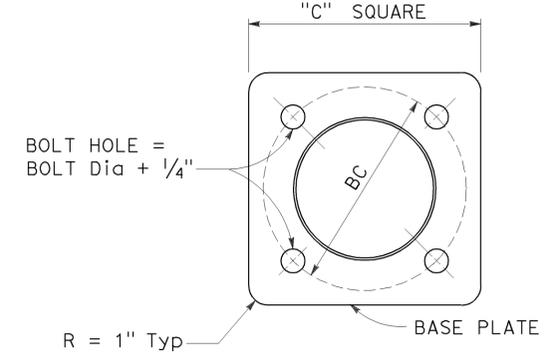
POLE TYPE	POLE DATA			BASE PLATE DATA				CIDH		
	HEIGHT "h"	Min OD		THICKNESS	"c"	THICKNESS	ANCHOR BOLT SIZE	BC = BOLT CIRCLE	Dia	"d"
		BASE	TOP							
CCTV 25	25'	7 ³ / ₈ "	3 ³ / ₄ "	0.1793"	1'-1"	1"	1/2" ϕ x 36"	11 ¹ / ₂ "	2'-6"	7'-0"
CCTV 30	30'	8"			1'-1 ¹ / ₂ "			1'-0"		7'-6"
CCTV 35	35'	8 ⁵ / ₈ "			1'-2"			1'-1"		8'-0"
CCTV 40	40'	9 ³ / ₈ "			1'-1 ¹ / ₂ "			1'-1 ¹ / ₂ "		8'-0"
CCTV 45	45'	10"			1'-3"			1'-2"		8'-6"

TO ACCOMPANY PLANS DATED 03-24-14

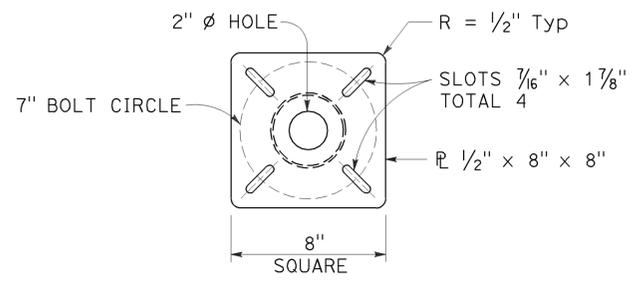
CCTV MOUNTING ADAPTER DETAIL SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE ENGINEER'S APPROVAL, SEE DETAIL C



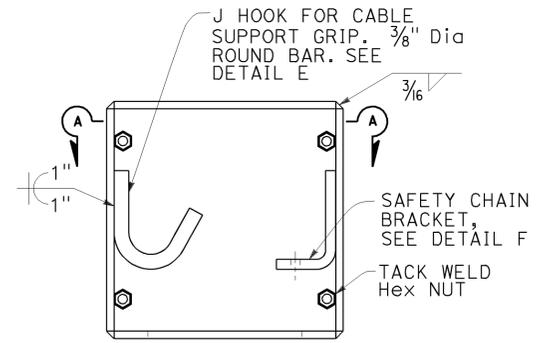
ELEVATION A



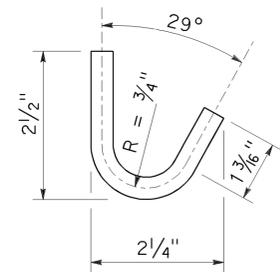
BASE PLATE
DETAIL A



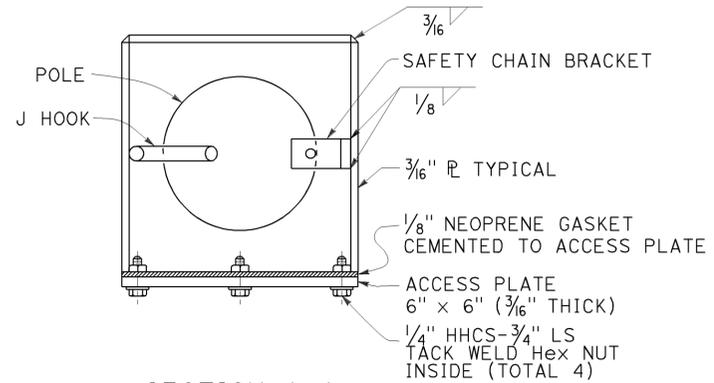
TOP PLATE
DETAIL B



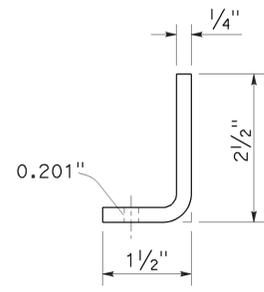
BOX ENCLOSURE
DETAIL D



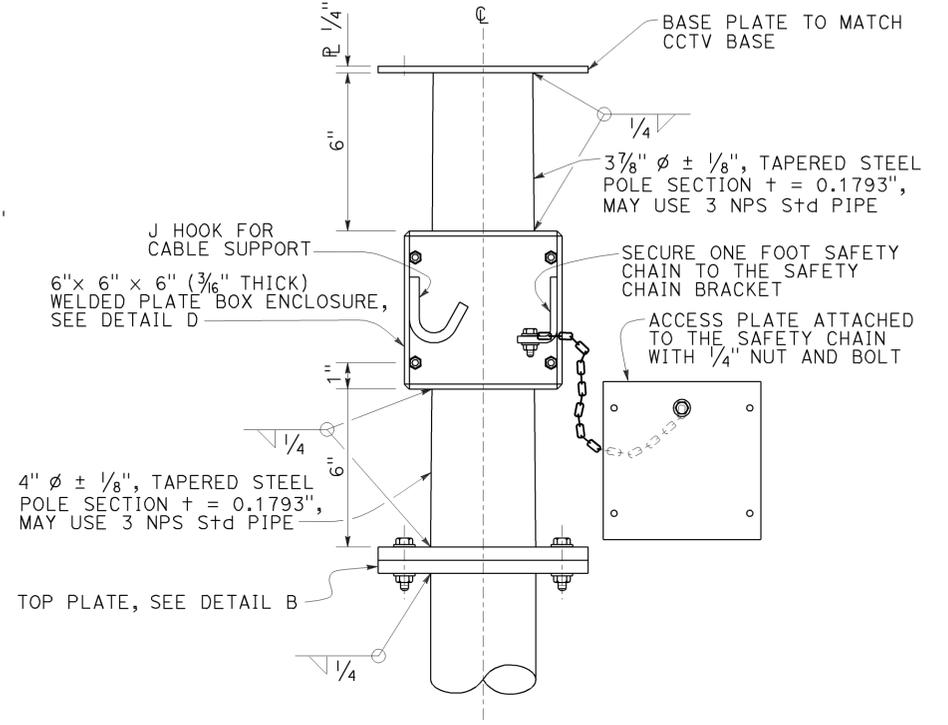
J HOOK
DETAIL E



SECTION A-A



SAFETY CHAIN BRACKET
DETAIL F



CLOSED CIRCUIT TELEVISION MOUNTING ADAPTER
DETAIL C

NOTES:

- The Contractor shall verify controlling field dimensions before ordering or fabricating any material.
- During pole installation, the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
- Wind Loadings (3-second gust): 100 mph
- Unit Stresses (Structural Steel):
 - fy = 55,000 psi (tapered steel tube and anchor bolts)
 - fy = 50,000 psi (unless otherwise noted)
- Unit Stresses (Reinforced Concrete):
 - f'c = 3,625 psi
 - fy = 60,000 psi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(CLOSED CIRCUIT TELEVISION,
25' TO 45' POLE)**

NO SCALE

RSP ES-16B DATED NOVEMBER 15, 2013 SUPERSEDES STANDARD PLAN ES-16B DATED MAY 20, 2011 - PAGE 501 OF THE STANDARD PLANS BOOK DATED 2010.

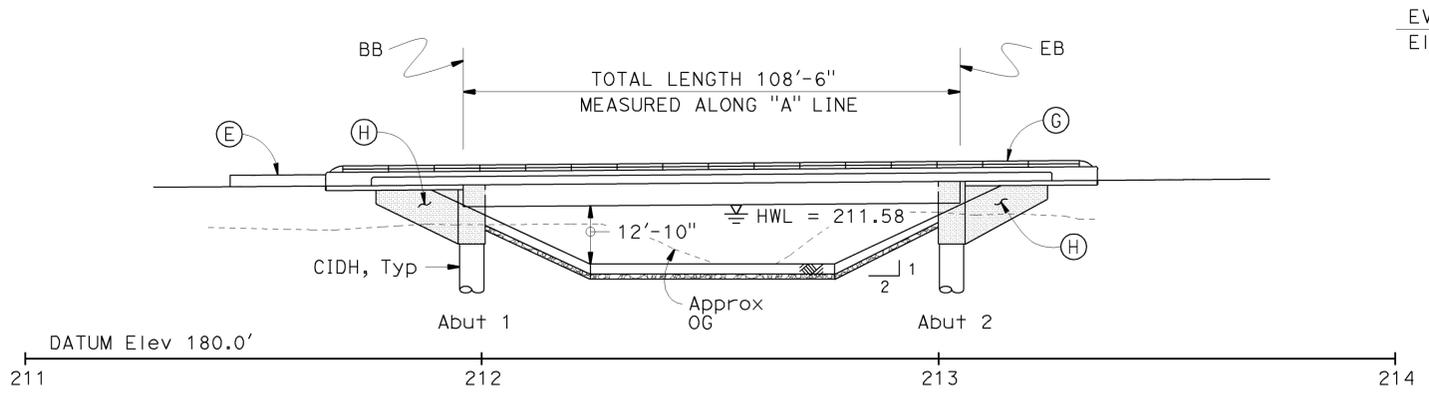
REVISED STANDARD PLAN RSP ES-16B

2010 REVISED STANDARD PLAN RSP ES-16B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1225	1273

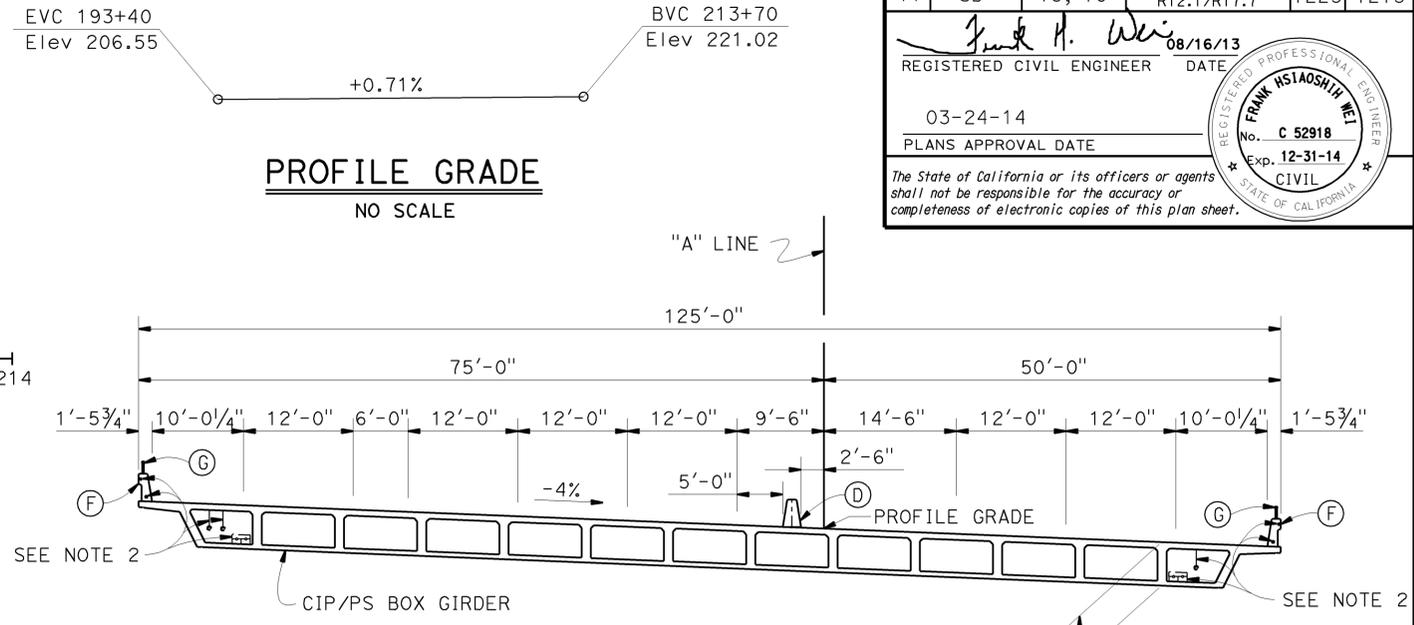
REGISTERED CIVIL ENGINEER **Frank H. Wei** DATE **08/16/13**
 PLANS APPROVAL DATE **03-24-14**
 No. **C 52918** Exp. **12-31-14**
 CIVIL
 STATE OF CALIFORNIA

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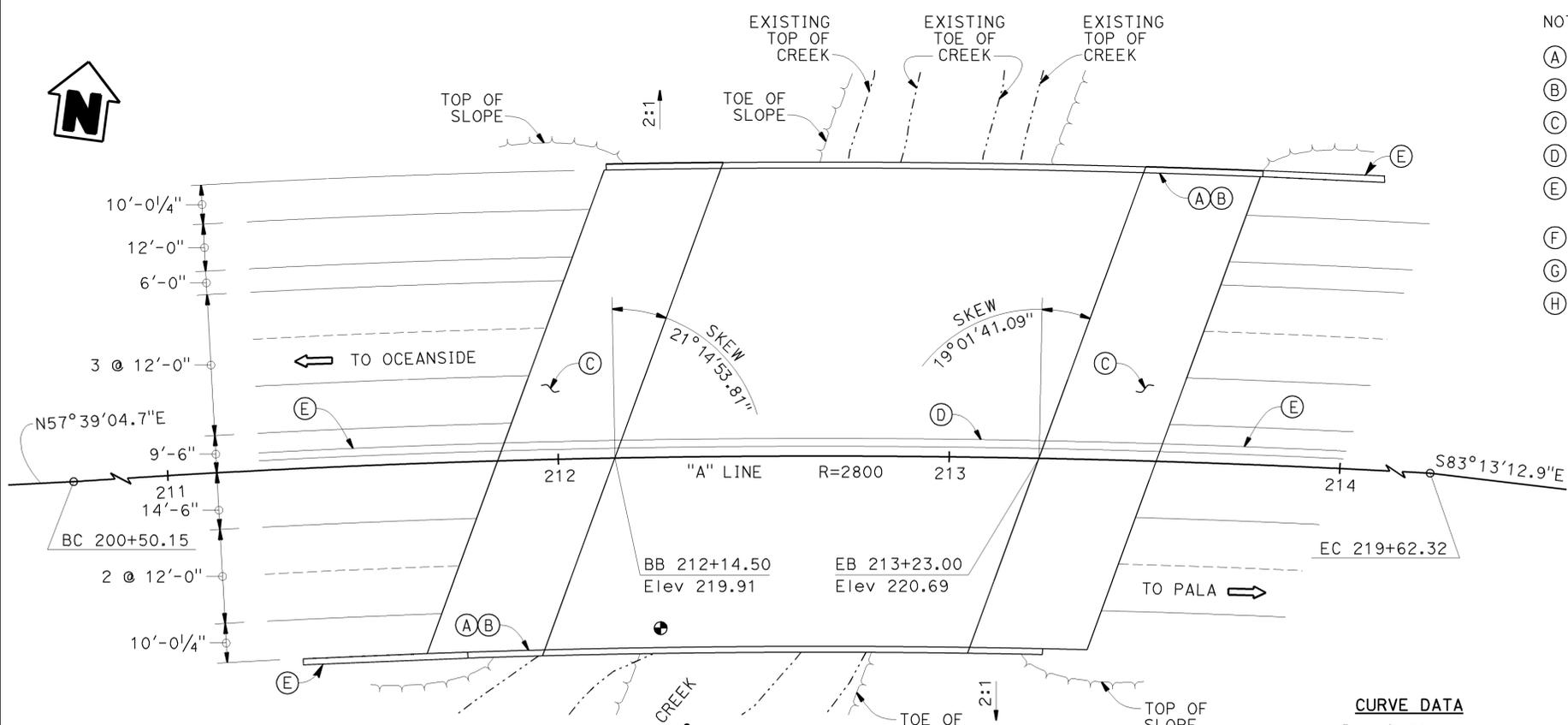
ELEVATION
1" = 20'

* HWL = 100-Year Water Surface Elevation



PROFILE GRADE
NO SCALE

TYPICAL SECTION
1" = 10'



PLAN
1" = 20'

NOTES:

- (A) Paint "LIVE OAK CREEK BRIDGE"
 - (B) Paint "Br No. 57-1234" and year completed
 - (C) Structure Approach, Type N(30S)
 - (D) Concrete Barrier, Type 60A
 - (E) Concrete Barrier, Type 60, see "ROAD PLANS"
 - (F) Concrete Barrier, Type 736
 - (G) Tubular Hand Railing
 - (H) Color Concrete
1. For existing bridge removal, see "FOUNDATION PLAN" sheet
 2. For utility conduits information, see "TYPICAL SECTION" sheet
 3. For "General Notes", "Index to Plans", "Standard Plans" and "Pile Data Table", see "INDEX TO PLANS" sheet

LEGEND:

- Denotes New Structure
- █ Rock Slope Protection, see "ROAD PLANS"
- Point of Minimum Vertical Clearance
- ⇨ Indicates Direction of Traffic

QUANTITIES

DESCRIPTION	QUANTITY	UNIT	LUMP SUM
BRIDGE REMOVAL			
STRUCTURE EXCAVATION (BRIDGE)	875	CY	
STRUCTURE BACKFILL (BRIDGE)	530	CY	
3" SUPPLY LINE (BRIDGE)	674	LF	
60" PERMANENT STEEL CASING	875	LF	
48" CAST-IN-DRILLED-HOLE CONCRETE PILING	341	LF	
60" CAST-IN-DRILLED-HOLE CONCRETE PILING	875	LF	
48" CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	16	LF	
PRESTRESSING CAST-IN-PLACE CONCRETE			LUMP SUM
STRUCTURAL CONCRETE, BRIDGE FOOTING	33	CY	
STRUCTURAL CONCRETE, BRIDGE	1,496	CY	
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	278	CY	
JOINT SEAL (MR 1")	267	LF	
BAR REINFORCING STEEL (BRIDGE)	578,810	LB	
TUBULAR HANDRAILING	337	LF	
CONCRETE BARRIER (TYPE 60A)	169	LF	
CONCRETE BARRIER (TYPE 736)	337	LF	

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

FRANK H. WEI DESIGN ENGINEER	DESIGN BY H. Win	CHECKED H. Akbarzadegan	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 21	BRIDGE NO. 57-1234	LIVE OAK CREEK BRIDGE (REPLACE) GENERAL PLAN
	DETAILS BY P. Perez	CHECKED F. Wei	LAYOUT BY P. Perez	CHECKED H. Win			POST MILE R14.68	
QUANTITIES BY H. Win	CHECKED H. Akbarzadegan	SPECIFICATIONS BY J. Choi	CHECKED J. Choi	PLANS AND SPECS COMPARED	UNIT: 3623	PROJECT NUMBER & PHASE: 1100020489 & 1	CONTRACT NO.: 257151	DISREGARD PRINTS BEARING EARLIER REVISION DATES

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

REVISION DATES: 05/07/12, 08/09/13, 09/14/12, 01/28/13

SHEET 1 OF 18

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1226	1273

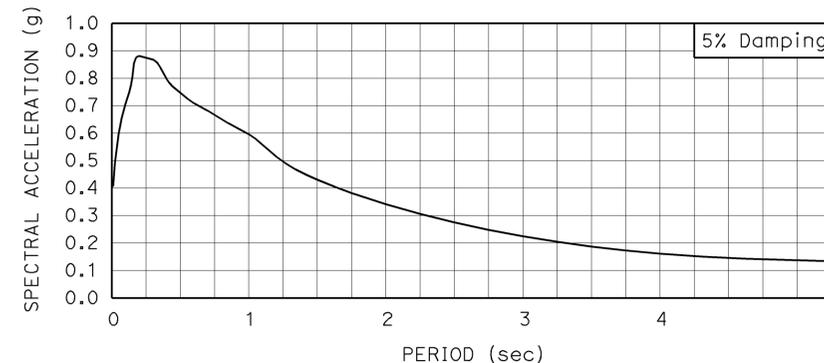
Frank H. Wei
 REGISTERED CIVIL ENGINEER DATE 08/16/13
 03-24-14
 PLANS APPROVAL DATE
 No. C 52918
 Exp. 12-31-14
 CIVIL
 STATE OF CALIFORNIA
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

INDEX TO PLANS

Sheet No.	Title
1.	GENERAL PLAN
2.	INDEX TO PLANS
3.	DECK CONTOURS
4.	FOUNDATION PLAN
5.	ABUTMENT 1 LAYOUT
6.	ABUTMENT 2 LAYOUT
7.	ABUTMENT DETAILS NO. 1
8.	ABUTMENT DETAILS NO. 2
9.	ABUTMENT DETAILS NO. 3
10.	ABUTMENT DETAILS NO. 4
11.	TYPICAL SECTION
12.	GIRDER LAYOUT
13.	GIRDER REINFORCEMENT
14.	GIRDER DETAILS
15.	STRUCTURE APPROACH TYPE N(30S)
16.	STRUCTURE APPROACH DRAINAGE DETAILS
17.	LOG OF TEST BORINGS 1 OF 2
18.	LOG OF TEST BORINGS 2 OF 2

GENERAL NOTES LOAD AND RESISTANCE FACTOR DESIGN

- DESIGN:**
AASHTO LRFD Bridge Design Specifications, 4th edition with the California Amendments, preface dated Nov 2011.
- SEISMIC DESIGN:**
Caltrans Seismic Design Criteria (SDC), Version 1.6, November 2010.
- DEAD LOAD:**
Includes 35 psf for future wearing surface.
- LIVE LOADING:**
HL93 and permit design load.
- SEISMIC LOADING:**
Soil Profile: Vs30 = 853 ft/s
Moment Magnitude: Mw = 7.6
Peak Bedrock Acceleration: 0.4 g
- REINFORCED CONCRETE:**
fy = 60 ksi
f'c = 4000 psi, unless otherwise noted
n = 9
- PRESTRESSED CONCRETE:**
See "PRESTRESSING NOTES" on "GIRDER REINFORCEMENT NO. 1" sheet
See "PRESTRESSING NOTES" on "GIRDER REINFORCEMENT NO. 1" sheet
- STRUCTURAL STEEL:**
ASTM A709, Grade 50 (for Permanent Steel Casing)

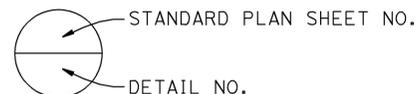


Modified CALTRANS SDC ARS CURVE:
Type D Soil Profile, Magnitude Mw=7.6, 5% Damping

ARS CURVE
No Scale

STANDARD PLANS DATED 2010

A10A	ACRONYMS AND ABBREVIATIONS (A-L)
RSP A10B	ACRONYMS AND ABBREVIATIONS (M-Z)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE
A76A	CONCRETE BARRIER TYPE 60
BO-1	BRIDGE DETAILS
BO-3	BRIDGE DETAILS
BO-5	BRIDGE DETAILS
BO-13	BRIDGE DETAILS
RSP B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP B3-5	RETAINING WALL DETAILS NO. 1
B7-1	BRIDGE GIRDER DETAILS
B7-10	UTILITY OPENING BOX GIRDER
RSP B8-5	CAST-IN-PLACE PRESTRESSED GIRDER DETAILS
B11-51	TUBULAR HAND RAILING
RSP B11-56	CONCRETE BARRIER TYPE 736
B14-3	COMMUNICATION AND SPRINKLER CONTROL CONDUITS (CONDUIT LESS THAN 4")
B14-4	WATER SUPPLY LINE (BRIDGE) (PIPE SIZE LESS THAN 4")
B14-5	WATER SUPPLY LINE (DETAILS) (PIPE SIZE LESS THAN 4")



- Structural Concrete, Bridge (f'c = 4000 psi @ 28 days)
- Structural Concrete, Approach Slab (f'c = 3600 psi @ 28 days)
- Structural Concrete, Bridge Footing (f'c = 3600 psi @ 28 days)
- CIDH Piles (f'c = 4000 psi @ 28 days)

CONCRETE STRENGTH AND TYPE LIMITS

No Scale

PILE DATA TABLE

Location	Pile Type	Cut-Off Elev (ft)	Nominal Resistance (kips/pile)		Estimated Top of Rock Socket Elev (ft)	Design Tip Elev (ft)	48" Specified Tip Elev (ft)	60" Steel Casing Specified Tip Elev (ft)
			Compression	Tension				
Abut 1	60" CIDH w/ Permanent Casing/ 48" CIDH*	205.25	1420	0	118.3	116.0	116.0 (a)	141.5
Abut 2	60" CIDH w/ Permanent Casing/ 48" CIDH*	205.25	1420	0	N/A	118.5	118.5 (a)	144.0

Note: Design tip elevations are controlled by: (a) Compression.
* See "ABUTMENT DETAILS NO. 4" sheet

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

DESIGN BY H. Win	CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 57-1234	LIVE OAK CREEK BRIDGE (REPLACE) INDEX TO PLANS
DETAILS BY H. Win / P. Perez	CHECKED F. Wei		POST MILE R14.68	
QUANTITIES BY H. Win	CHECKED H. Akbarzadegan		DESIGN BRANCH 21	

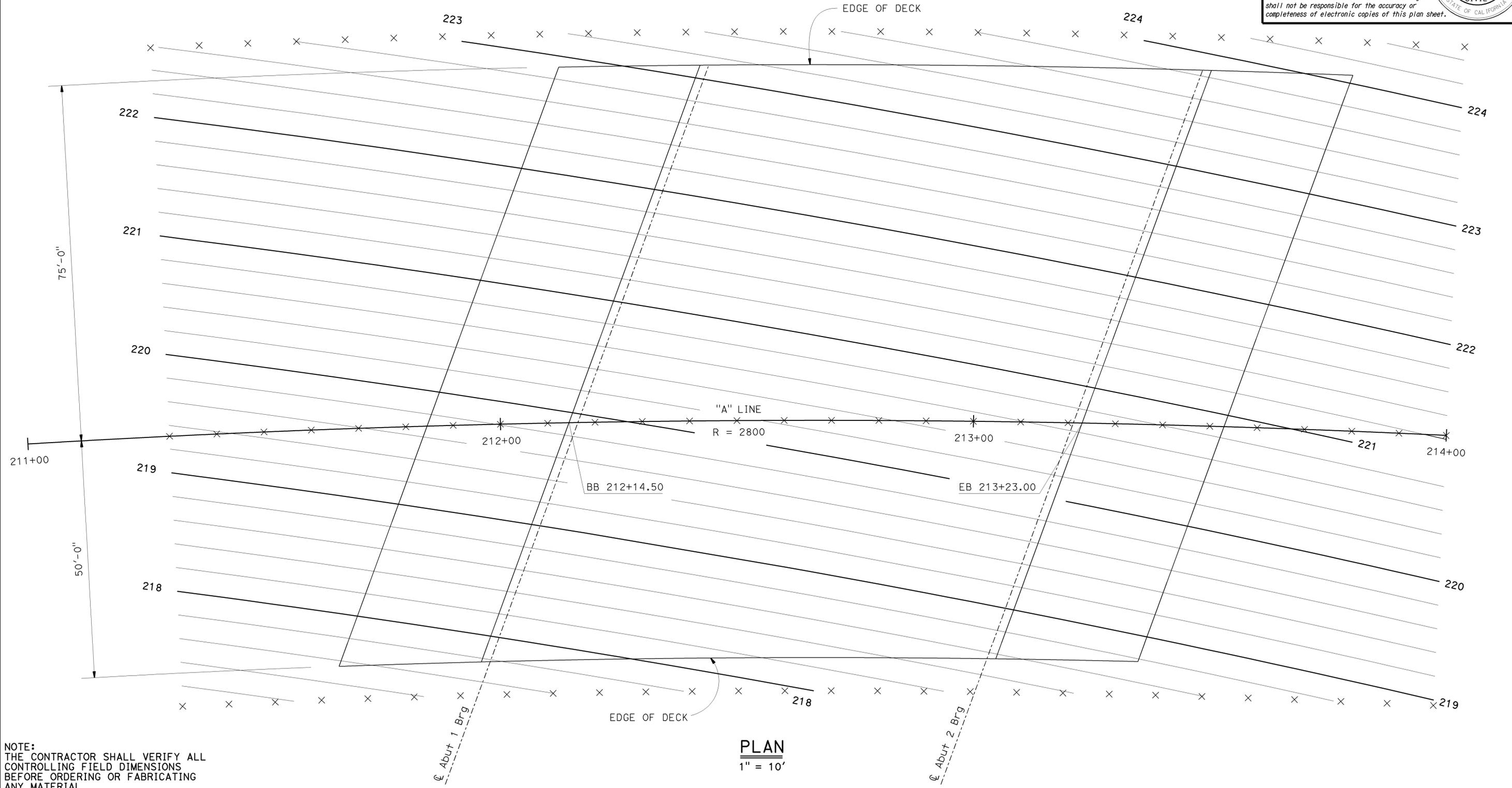
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
 UNIT: 3623 PROJECT NUMBER & PHASE: 1100020489 & 1 CONTRACT NO.: 257151
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 08/28/12, 08/09/13, 09/06/12, 01/28/13
 SHEET 2 OF 18

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1227	1273

REGISTERED CIVIL ENGINEER *Frank H. Wei* DATE 08/16/13
 PLANS APPROVAL DATE 03-24-14
 No. C 52918
 Exp. 12-31-14
 CIVIL
 STATE OF CALIFORNIA

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- NOTES:
1. X = 10' intervals along Station Line.
 2. Contour intervals = 0.20'
 3. Contours do not include camber.



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

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY H. Win	CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 21	BRIDGE No.	57-1234	LIVE OAK CREEK BRIDGE (REPLACE) DECK CONTOURS
	DETAILS	BY M. Kingra / P. Perez	CHECKED F. Wei			POST MILE	R14.68	
	QUANTITIES	BY H. Win	CHECKED H. Akbarzadegan					

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3
 UNIT: 3623
 PROJECT NUMBER & PHASE: 1100020489 & 1 CONTRACT No.: 257151
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 01/11/12, 08/09/13, 01/11/12, 01/28/13
 SHEET 3 OF 18

USERNAME => s135307 DATE PLOTTED => 12-AUG-2013 TIME PLOTTED => 08:48

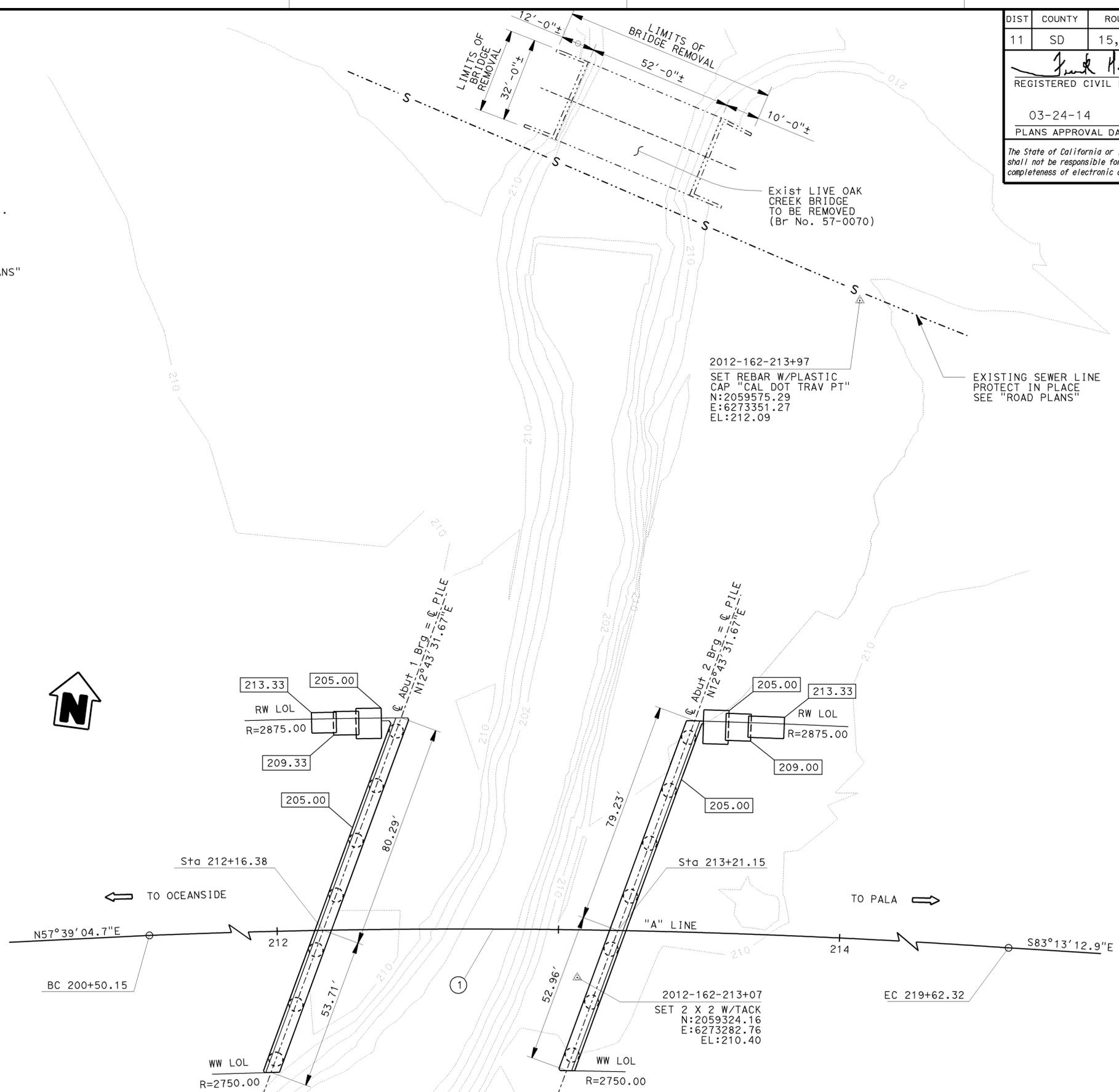
No.	R	Δ	T	L
①	2800.00'	39°07'42.4"	995.07'	1912.18'

NOTES:

- indicates bottom of abutment elevation.
- Existing contours shown; for final contours, see "ROAD PLANS".
- For pile layout, see "ABUTMENT 1 LAYOUT" and "ABUTMENT 2 LAYOUT" sheets.
- Underground utilities as shown are approximate. See "ROAD PLANS" for details.

LEGEND:

- Denotes New Structure
- - - Denotes Existing Structure



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1228	1273

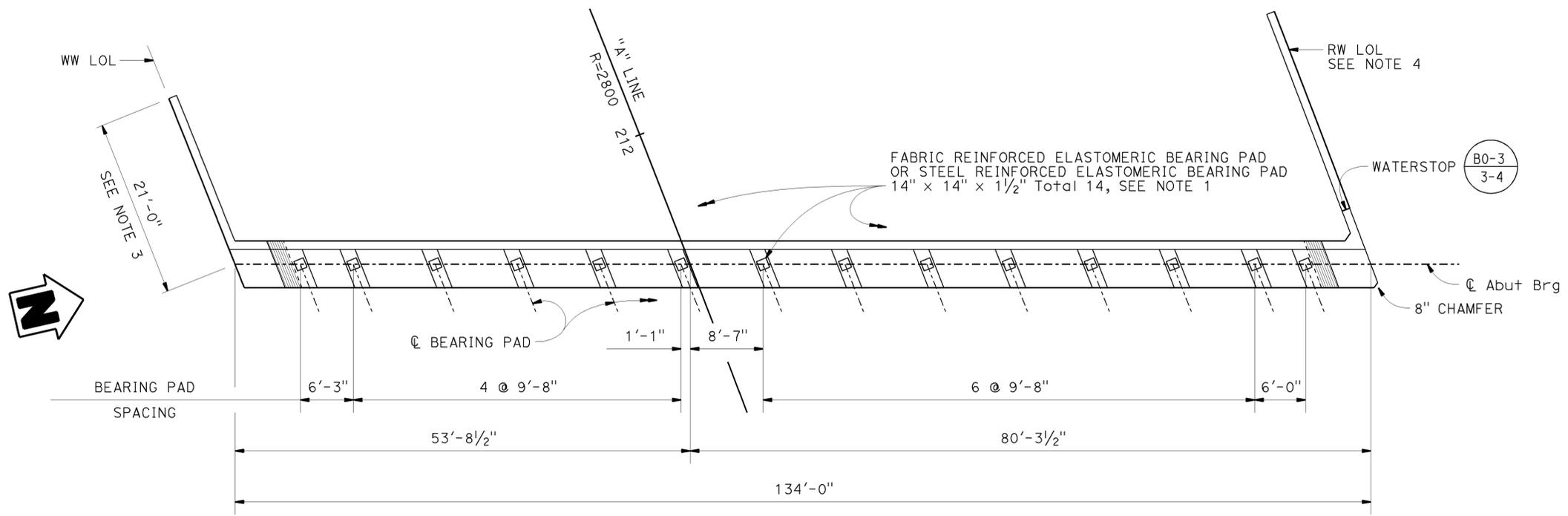
Frank H. Wei
 REGISTERED CIVIL ENGINEER DATE 08/16/13
 03-24-14
 PLANS APPROVAL DATE
 No. C 52918
 Exp. 12-31-14
 CIVIL
 STATE OF CALIFORNIA
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DISTRICT SURVEY SECTION				DESIGN BY H. Win	CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 21	BRIDGE NO. 57-1234	LIVE OAK CREEK BRIDGE (REPLACE) FOUNDATION PLAN							
SCALE 1"=20'	VERT.DATUM NAVD1988	PHOTOGRAMMETRY AS OF: X	DETAILS BY P. Perez / H. Win	CHECKED F. Wei	POST MILE R14.68											
ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED BY P. Perez	CHECKED BY M. Wartenberg	QUANTITIES BY H. Win	CHECKED H. Akbarzadegan												
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3623	PROJECT NUMBER & PHASE: 11100020489 & 1 CONTRACT NO.: 257151	DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1"> <tr> <th>REVISION DATES</th> <th>SHEET</th> <th>OF</th> </tr> <tr> <td>07/09/12 08/09/13 09/14/12 01/28/13</td> <td>4</td> <td>18</td> </tr> </table>	REVISION DATES	SHEET	OF	07/09/12 08/09/13 09/14/12 01/28/13	4	18
REVISION DATES	SHEET	OF														
07/09/12 08/09/13 09/14/12 01/28/13	4	18														

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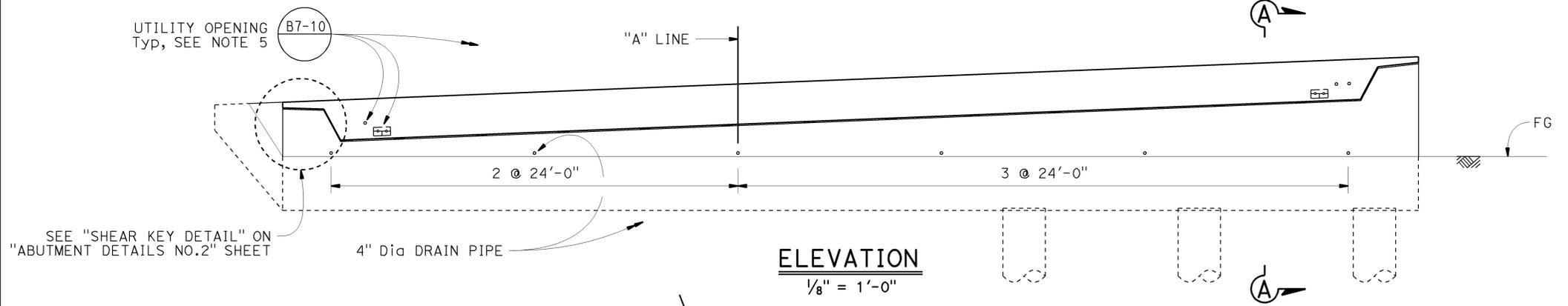
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1229	1273

Frank H. Wei
 REGISTERED CIVIL ENGINEER DATE 08/16/13
 03-24-14
 PLANS APPROVAL DATE
 No. C 52918
 Exp. 12-31-14
 CIVIL
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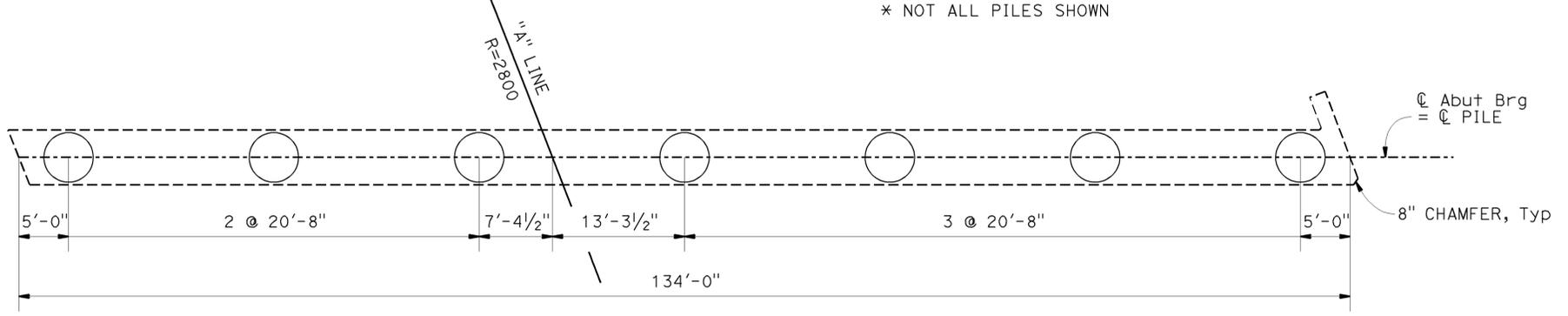


PLAN
1/8" = 1'-0"

- NOTES:
1. For Bearing Pad Detail, see "ABUTMENT DETAILS NO. 2" sheet.
 2. For Section A-A, see "ABUTMENT DETAILS NO. 1" sheet.
 3. For Wingwall Details, see "ABUTMENT DETAILS NO. 1" sheet.
 4. For Retaining Wall Details, see "ABUTMENT DETAILS NO. 3" sheet.
 5. For utility opening size, see "TYPICAL SECTION" sheet.



ELEVATION
1/8" = 1'-0"



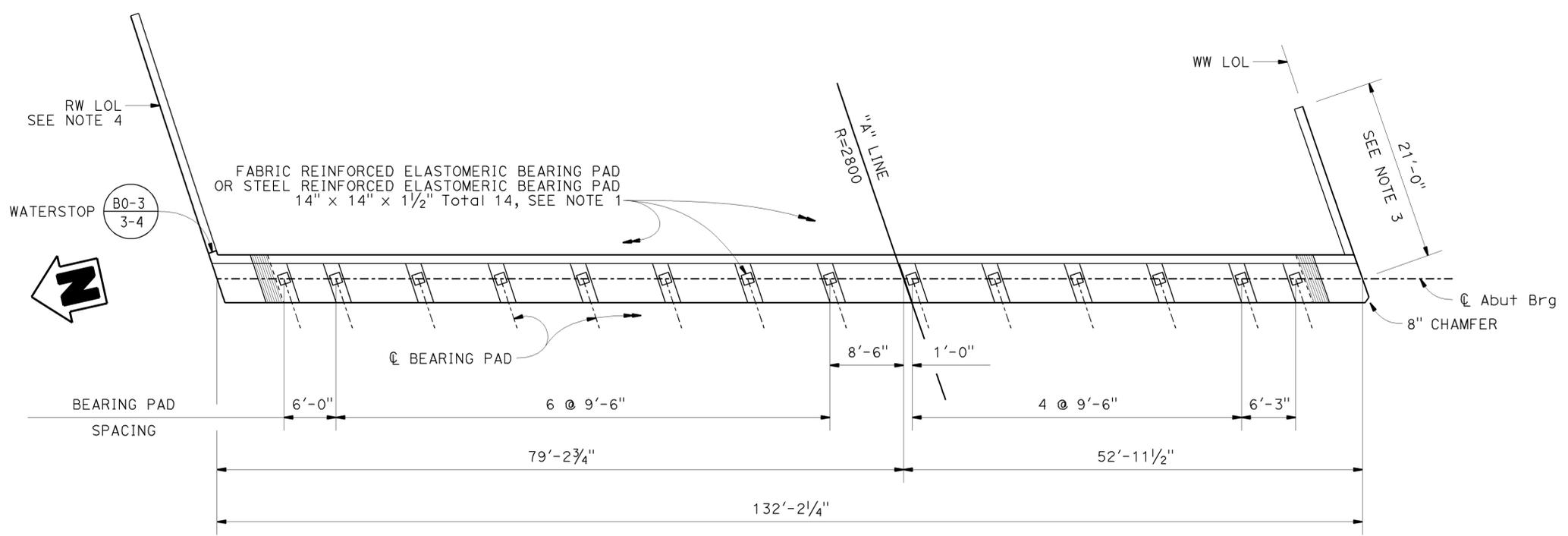
PILE LAYOUT
1/8" = 1'-0"

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

DESIGN	BY H. Win	CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 21	BRIDGE No.	57-1234	LIVE OAK CREEK BRIDGE (REPLACE) ABUTMENT 1 LAYOUT
DETAILS	BY P. Perez	CHECKED F. Wei		POST MILE	R14.68	
QUANTITIES	BY H. Win	CHECKED H. Akbarzadegan		UNIT: 3623	PROJECT NUMBER & PHASE: 1100020489 & 1	

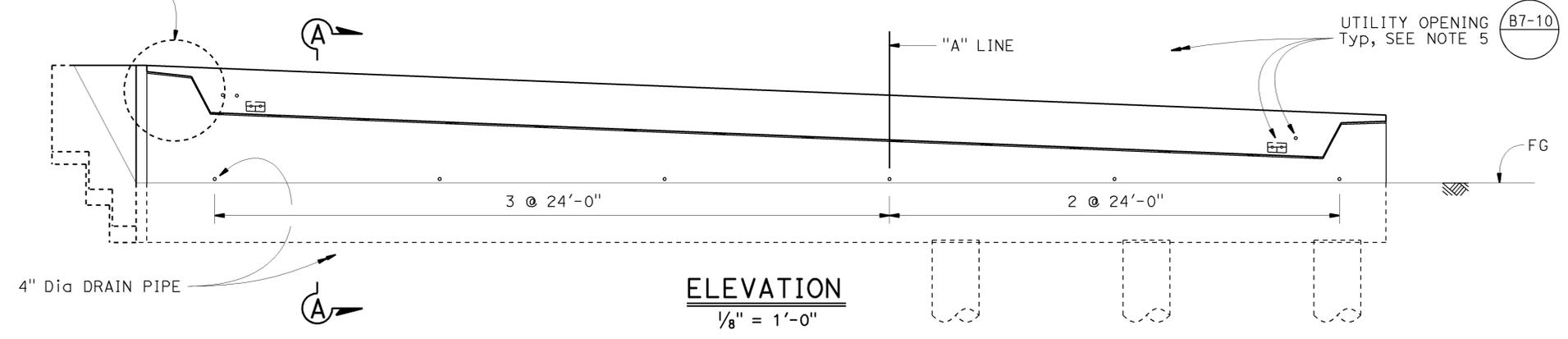
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)
 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
 0 1 2 3
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 01/10/12, 08/09/13, 03/14/12, 01/28/13
 SHEET 5 OF 18
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1230	1273
 REGISTERED CIVIL ENGINEER DATE 08/16/13					
PLANS APPROVAL DATE 03-24-14					
<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>					

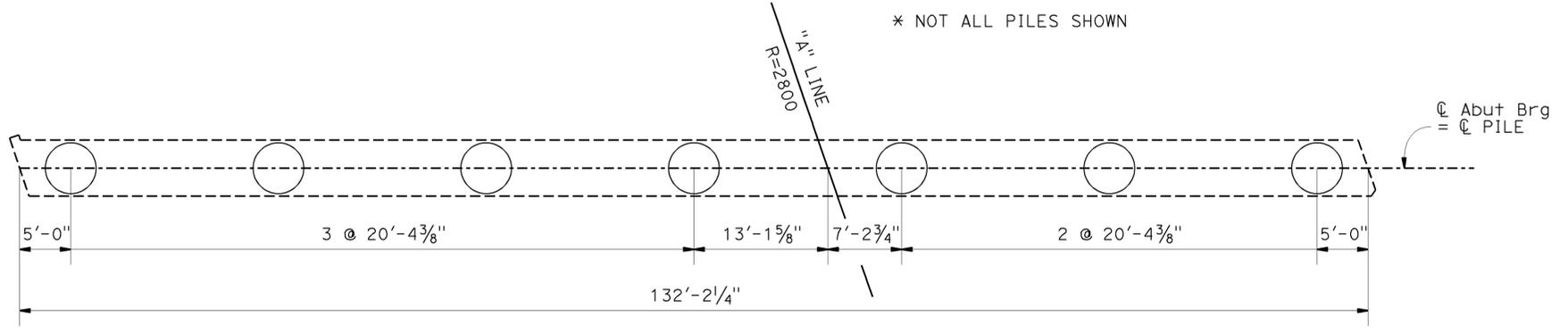


PLAN
1/8" = 1'-0"

SEE "SHEAR KEY DETAIL" ON "ABUTMENT DETAILS NO.2" SHEET



ELEVATION
1/8" = 1'-0"



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

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

DESIGN	BY H. Win	CHECKED H. Akbarzadegan
DETAILS	BY P. Perez	CHECKED F. Wei
QUANTITIES	BY H. Win	CHECKED H. Akbarzadegan

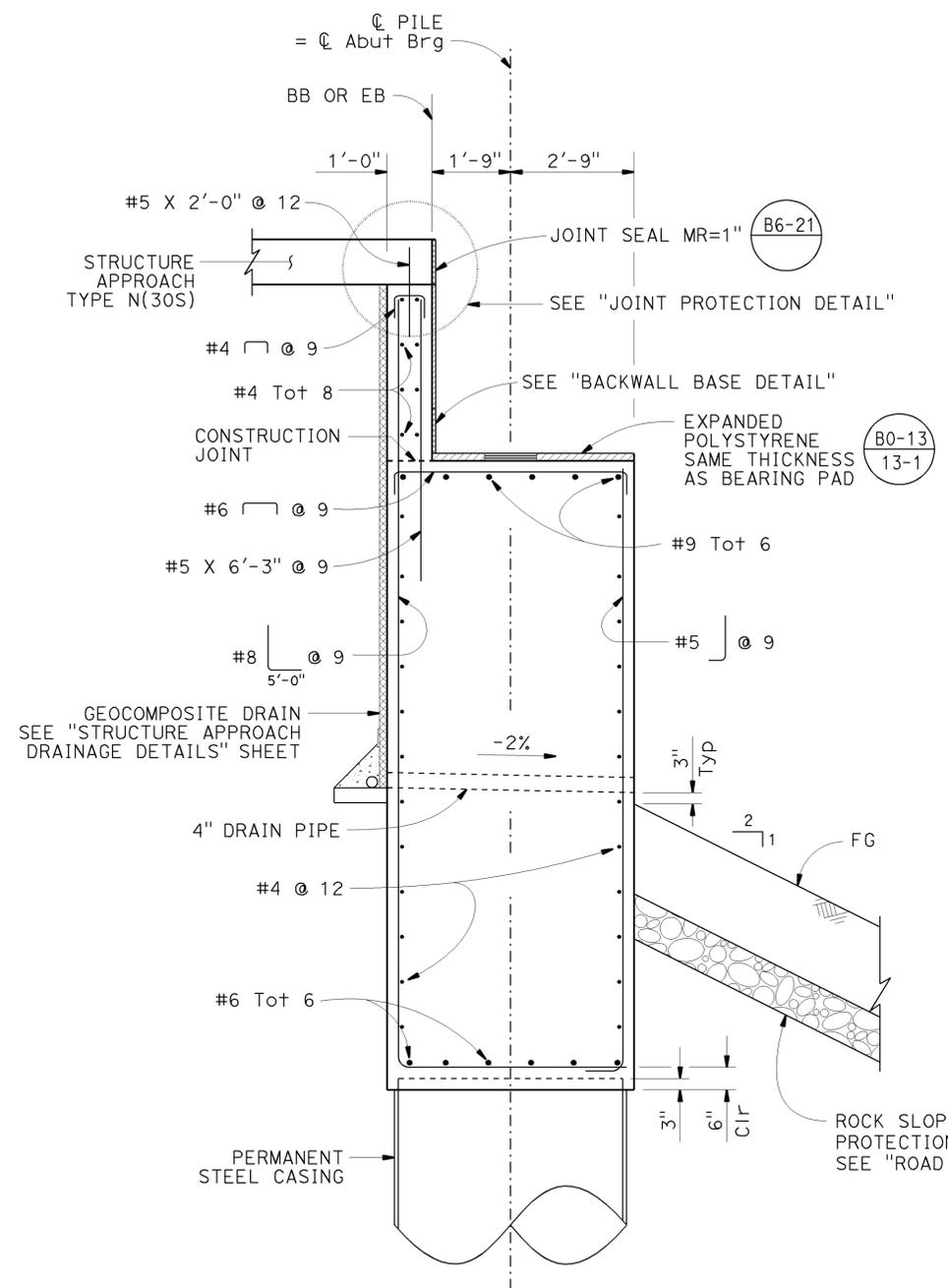
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 21

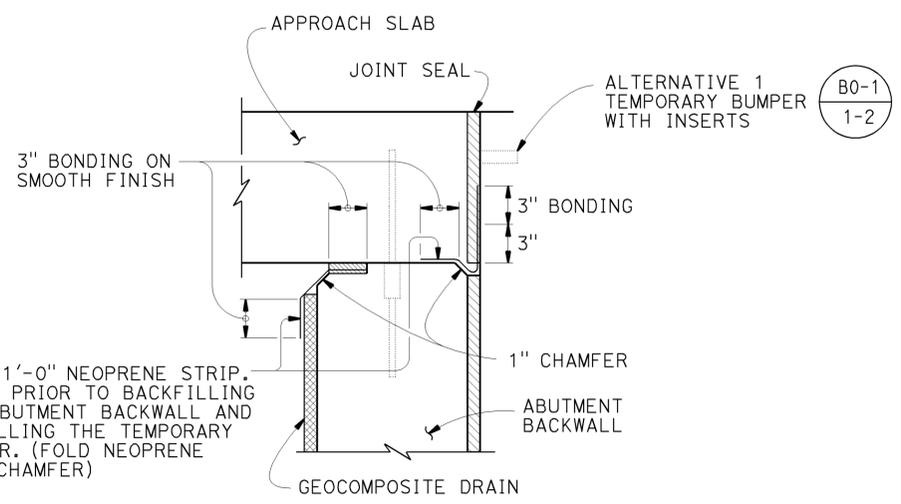
BRIDGE No.	57-1234
POST MILE	R14.68

LIVE OAK CREEK BRIDGE (REPLACE)
ABUTMENT 2 LAYOUT

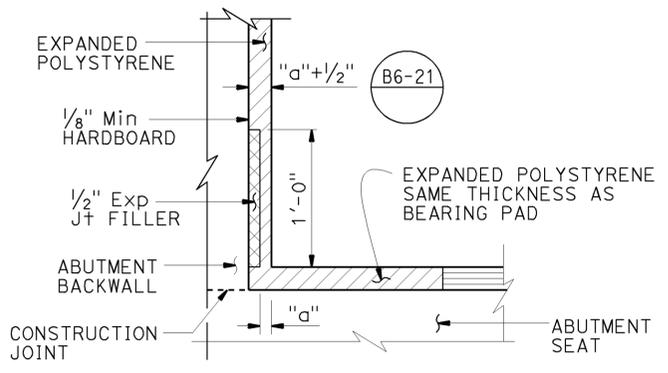
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1231	1273
Frank H. Wei REGISTERED CIVIL ENGINEER DATE 08/16/13				03-24-14 PLANS APPROVAL DATE	
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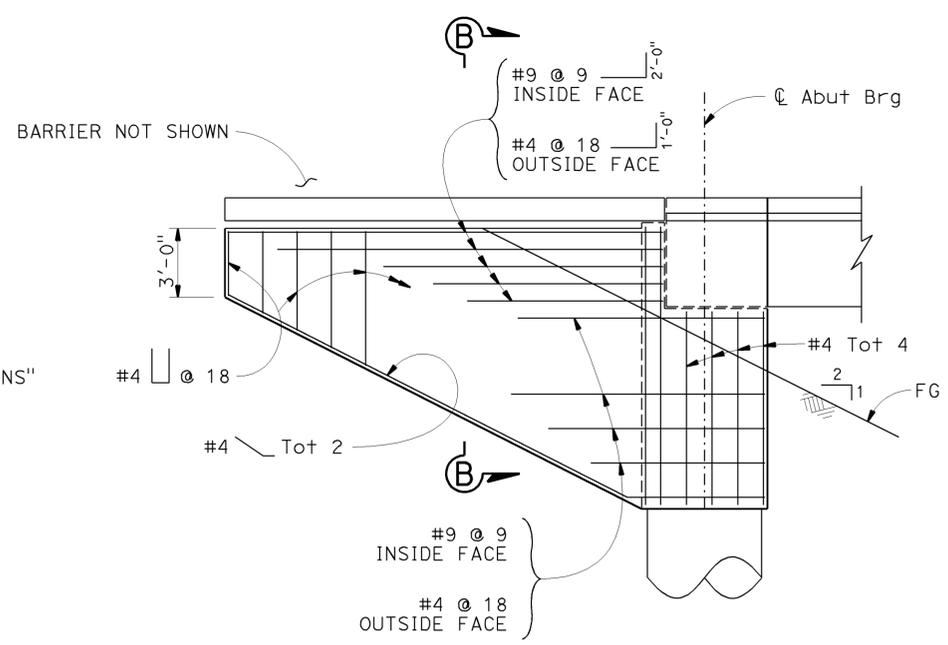
SECTION A-A
1/2" = 1'-0"



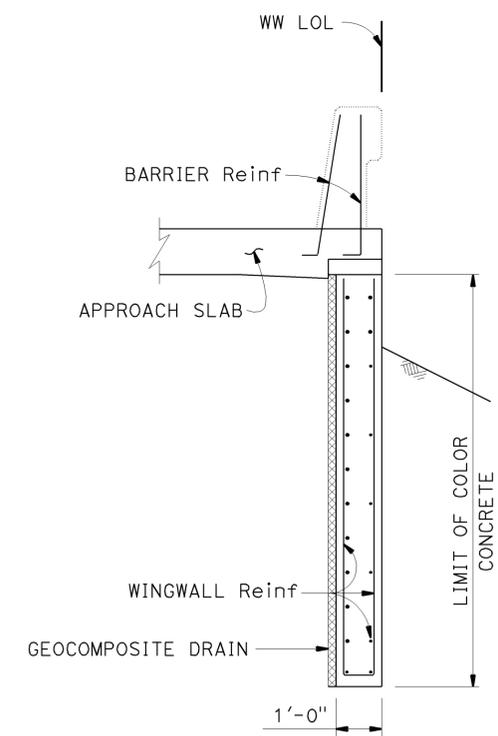
JOINT PROTECTION DETAIL
No Scale



BACKWALL BASE DETAIL
No Scale



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



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

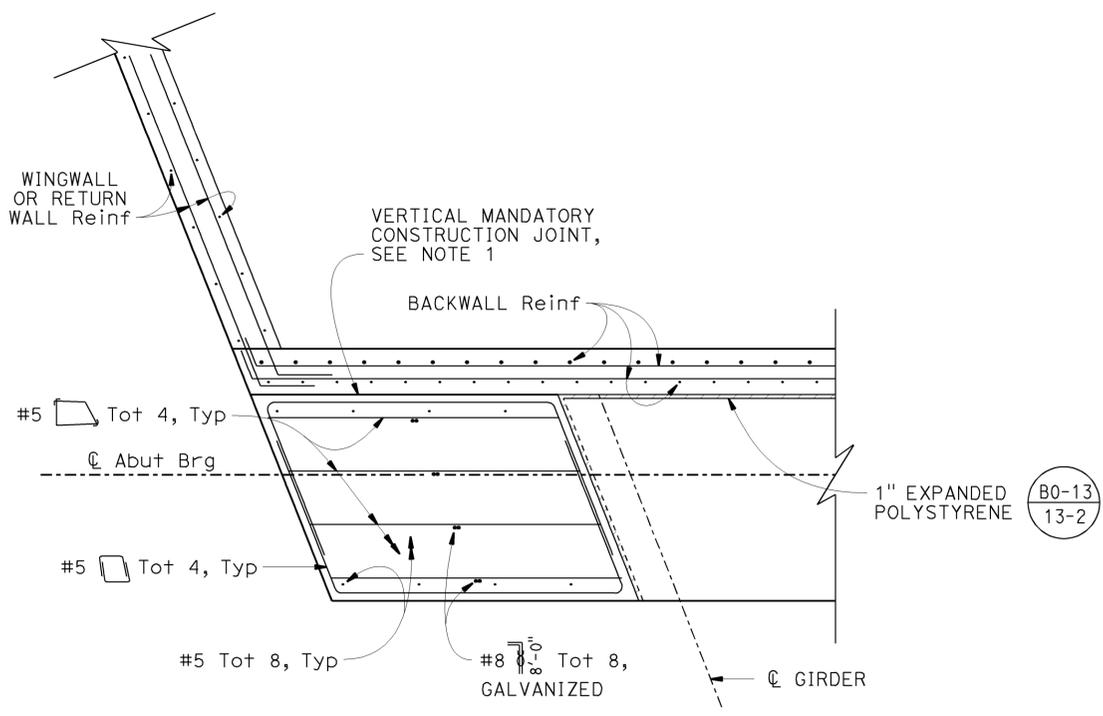
NOTE:
1. For location of Section A-A, see "ABUTMENT LAYOUT" sheets.

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

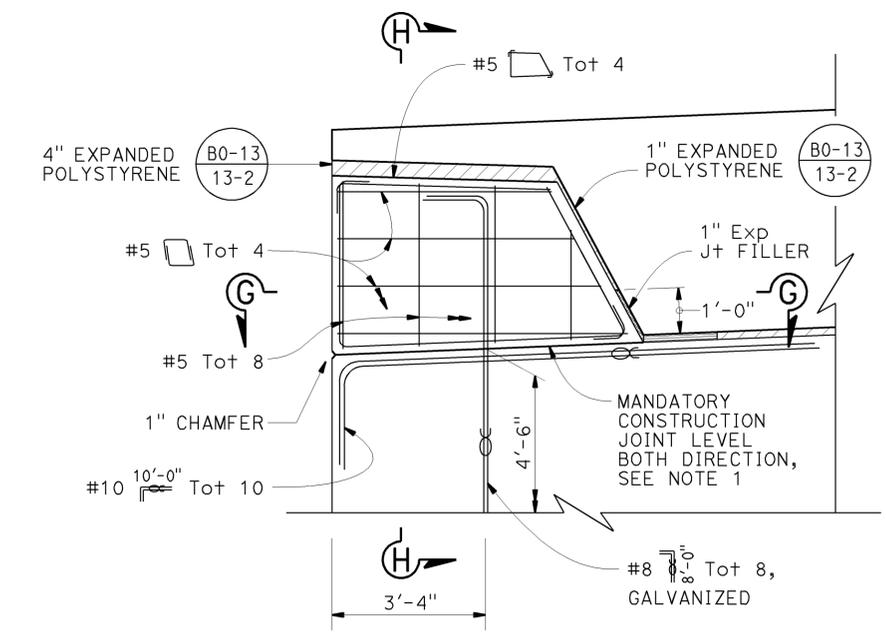
DESIGN	BY H. Win	CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 21	BRIDGE No.	LIVE OAK CREEK BRIDGE (REPLACE) ABUTMENT DETAILS NO. 1
DETAILS	BY H. Win	CHECKED F. Wei			57-1234	
QUANTITIES	BY H. Win	CHECKED H. Akbarzadegan			POST MILE R14.68	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3623	PROJECT NUMBER & PHASE: 1100020489 & 1	CONTRACT No.: 257151
DISREGARD PRINTS BEARING EARLIER REVISION DATES					REVISION DATES	SHEET 7 OF 18

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1232	1273

Frank H. Wei
 REGISTERED CIVIL ENGINEER DATE 08/16/13
 PLANS APPROVAL DATE 03-24-14
 No. C 52918
 Exp. 12-31-14
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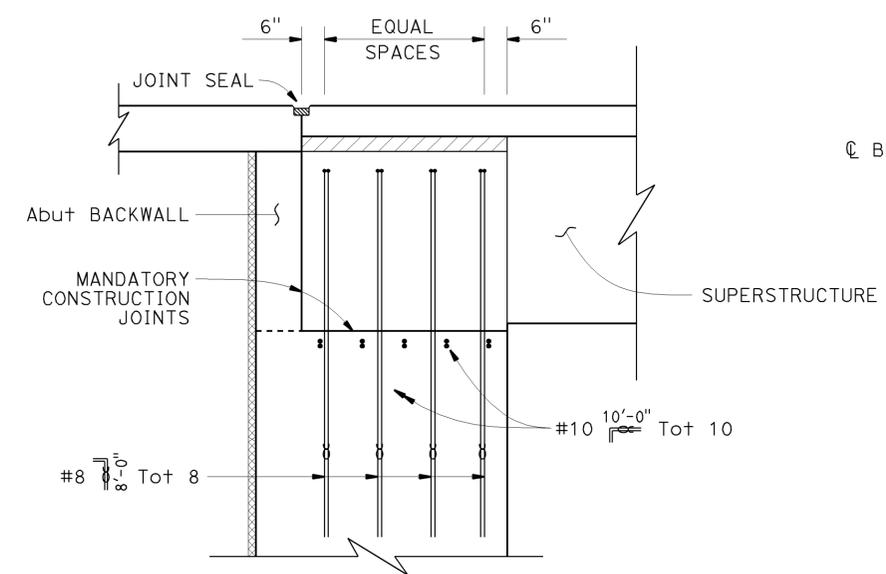


SECTION G-G
1/2" = 1'-0"

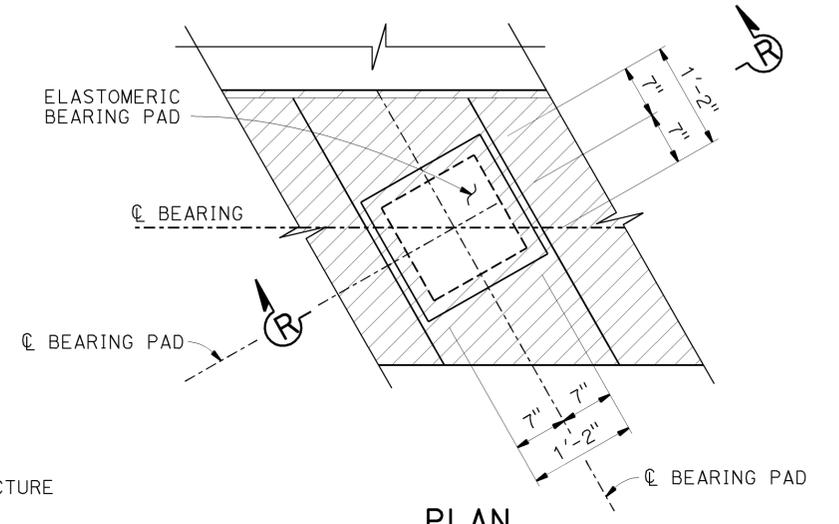


SHEAR KEY DETAIL
1/2" = 1'-0"

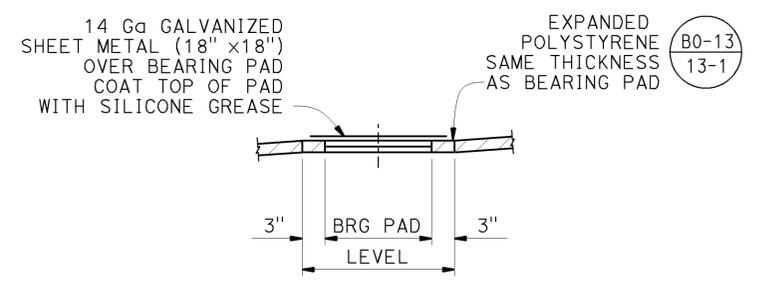
NOTE:
1. Mandatory construction joint surface to be smooth finished and lined with 15 lbs construction paper.



SECTION H-H
1/2" = 1'-0"



PLAN

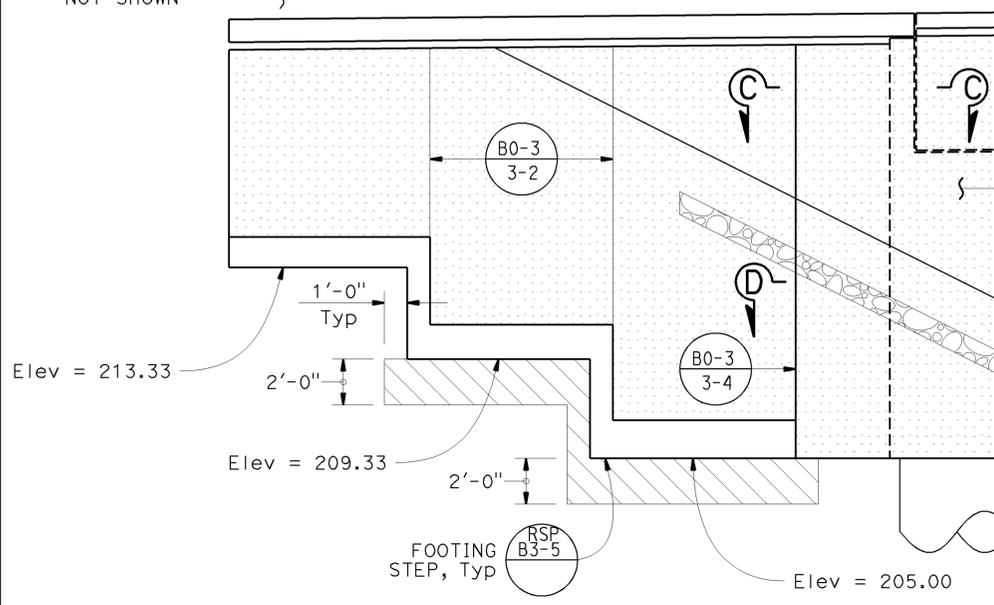
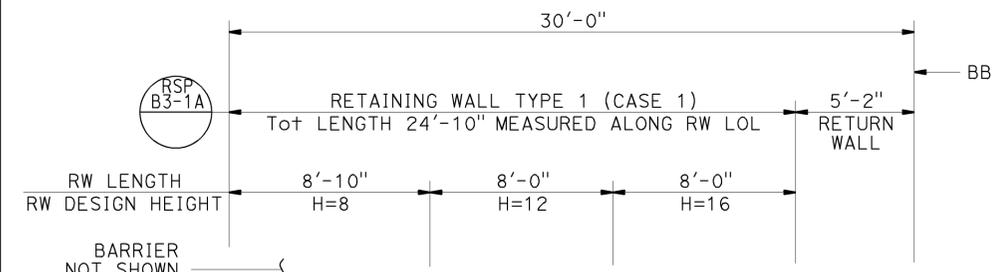


SECTION R-R BEARING PAD DETAIL
No Scale

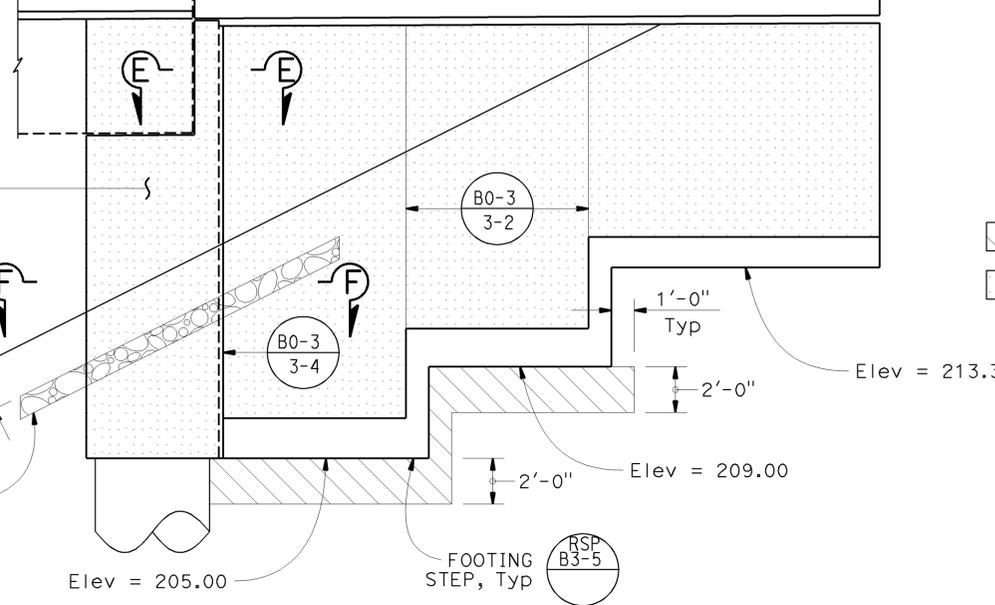
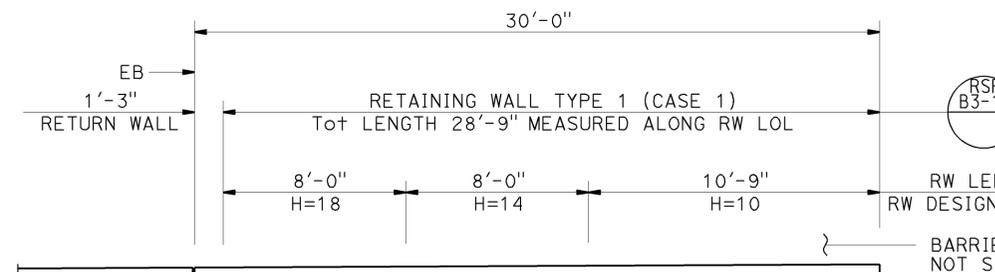
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	DESIGN	BY H. Win	CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 21	BRIDGE No.	57-1234	LIVE OAK CREEK BRIDGE (REPLACE) ABUTMENT DETAILS NO. 2
	DETAILS	BY P. Perez	CHECKED F. Wei		POST MILE	R14.68	
	QUANTITIES	BY H. Win	CHECKED H. Akbarzadegan		UNIT: 3623 PROJECT NUMBER & PHASE: 1100020489 & 1 CONTRACT No.: 257151	REVISION DATES	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1233	1273
 REGISTERED CIVIL ENGINEER DATE 08/16/13					
03-24-14 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>					



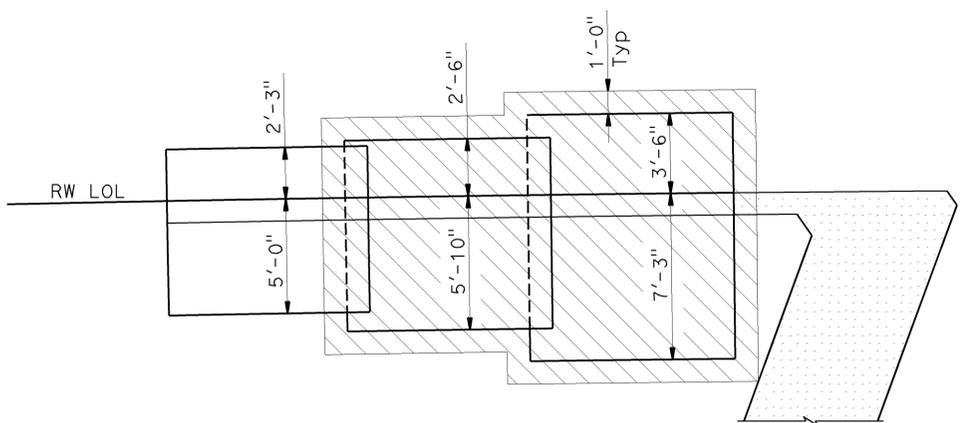
**MIRRORED ELEVATION
RETAINING WALL AT ABUTMENT 1**
1/4" = 1'-0"



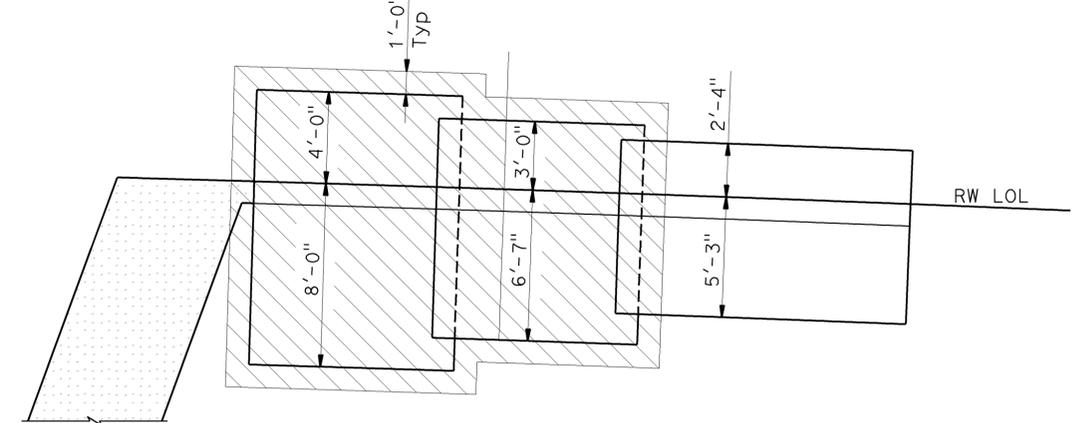
**MIRRORED ELEVATION
RETAINING WALL AT ABUTMENT 2**
1/4" = 1'-0"

NOTE:
1. For Section C-C, Section D-D, Section E-E, and Section F-F, see "ABUTMENT DETAILS No. 4" sheet.

LEGEND:
 Limits of over-excavation and structural backfill
 Limits of color concrete



**FOOTING PLAN
RETAINING WALL AT ABUTMENT 1**
1/4" = 1'-0"



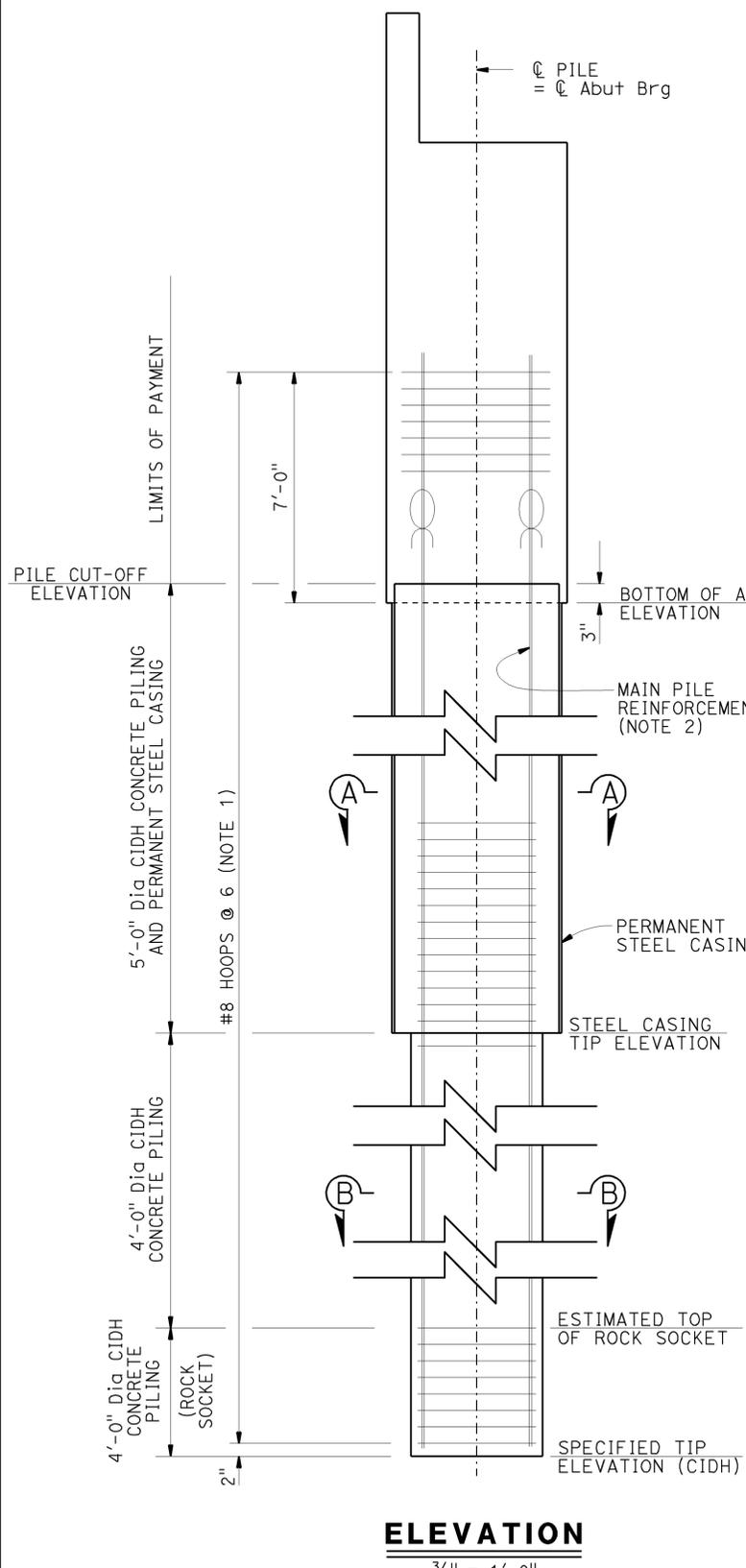
**FOOTING PLAN
RETAINING WALL AT ABUTMENT 2**
1/4" = 1'-0"

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

DESIGN	BY H. Win	CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 21	BRIDGE No.	LIVE OAK CREEK BRIDGE (REPLACE) ABUTMENT DETAILS NO. 3
DETAILS	BY P. Perez	CHECKED F. Wei			57-1234	
QUANTITIES	BY H. Win	CHECKED H. Akbarzadegan			POST MILE R14.68	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3623	PROJECT NUMBER & PHASE: 1100020489 & 1	CONTRACT No.: 257151
					DISREGARD PRINTS BEARING EARLIER REVISION DATES	
					REVISION DATES	SHEET 9 OF 18

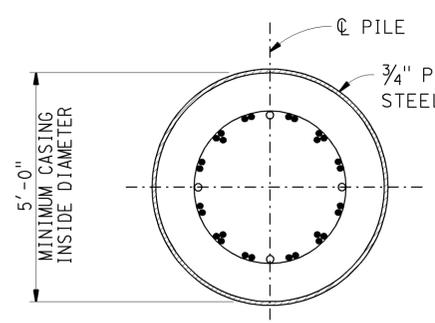
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1234	1273

Frank H. Wei
 REGISTERED CIVIL ENGINEER DATE 08/16/13
 03-24-14
 PLANS APPROVAL DATE
 No. C 52918
 Exp. 12-31-14
 CIVIL
 STATE OF CALIFORNIA
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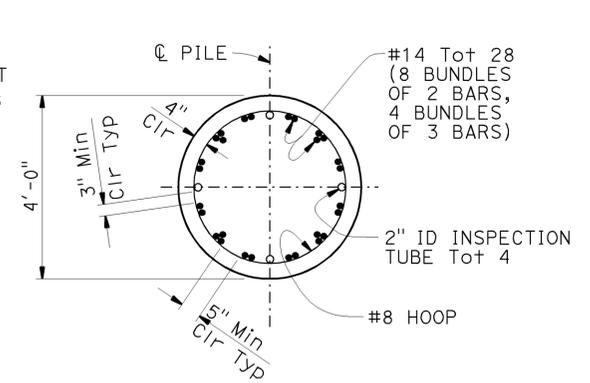


ELEVATION
3/8" = 1'-0"

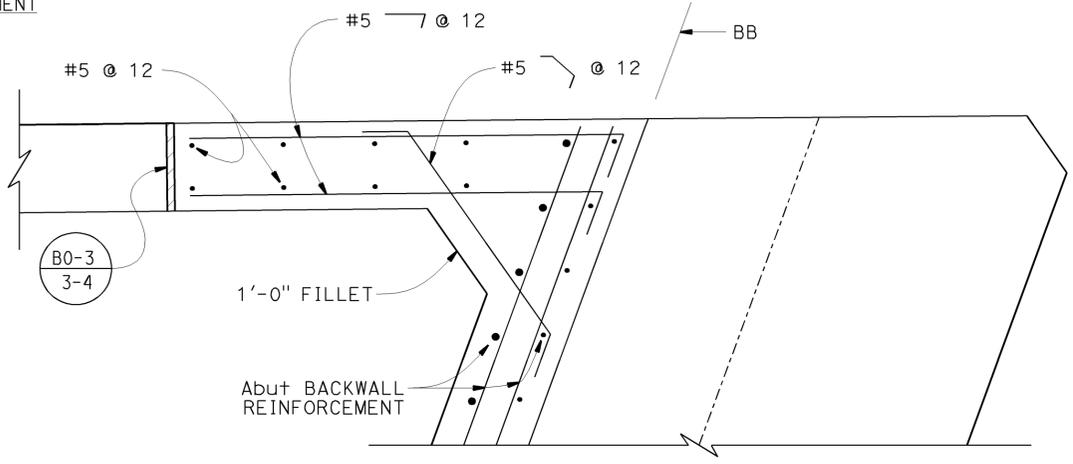
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



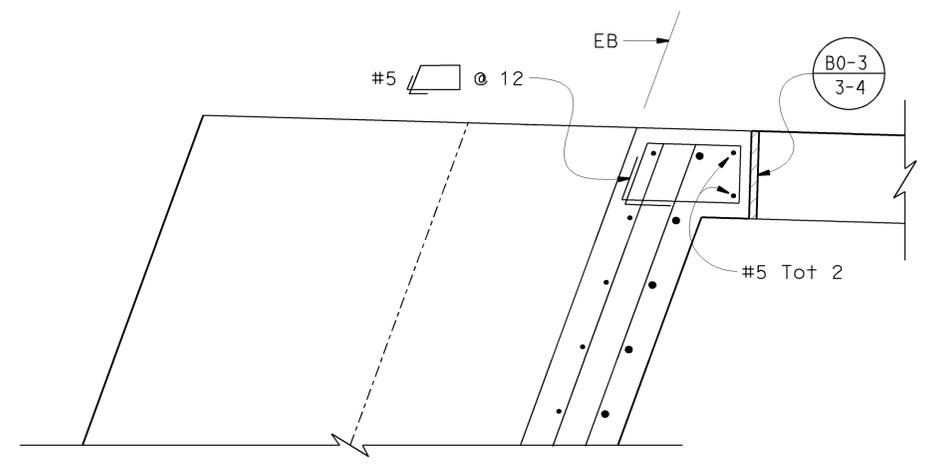
SECTION A-A
1/2" = 1'-0"



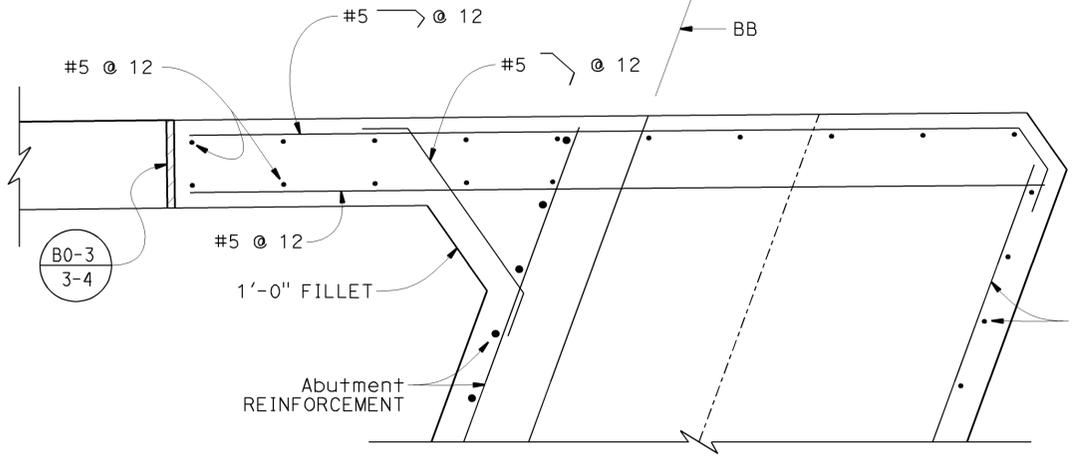
SECTION B-B
1/2" = 1'-0"



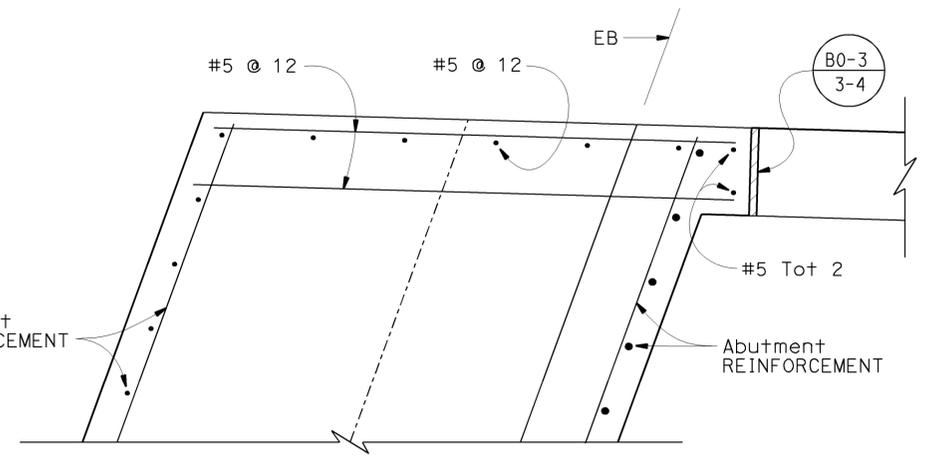
SECTION C-C
1" = 1'-0"



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



SECTION D-D
1" = 1'-0"



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

- NOTES:
- All Hoops are "Ultimate" butt spliced continuous.
 - Only Staggered "Ultimate" butt splices are allowed in main Pile Reinforcement.
 - For Pile Data Table, see "INDEX TO PLANS" sheet.
 - For location of Section C-C, Section D-D, Section E-E, and Section F-F, see "ABUTMENT DETAILS NO. 3" sheet.
- ⊗ Indicates bundled rebar

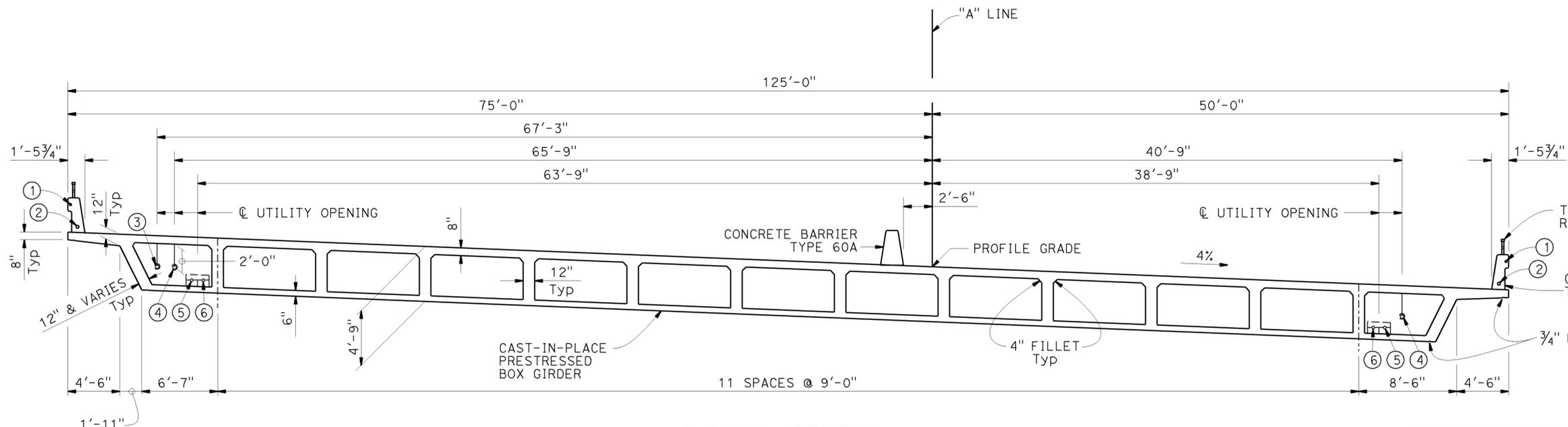
DESIGN	BY H. Win	CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 21	BRIDGE NO.	57-1234	LIVE OAK CREEK BRIDGE (REPLACE) ABUTMENT DETAILS NO. 4
DETAILS	BY P. Perez	CHECKED F. Wei		POST MILE	R14.68	
QUANTITIES	BY H. Win	CHECKED H. Akbarzadegan		UNIT: 3623	PROJECT NUMBER & PHASE: 1100020489 & 1	

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
 USERNAME => s135307 DATE PLOTTED => 12-AUG-2013 TIME PLOTTED => 08:49
 FILE => 57-1234-g-abut_d404.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1235	1273

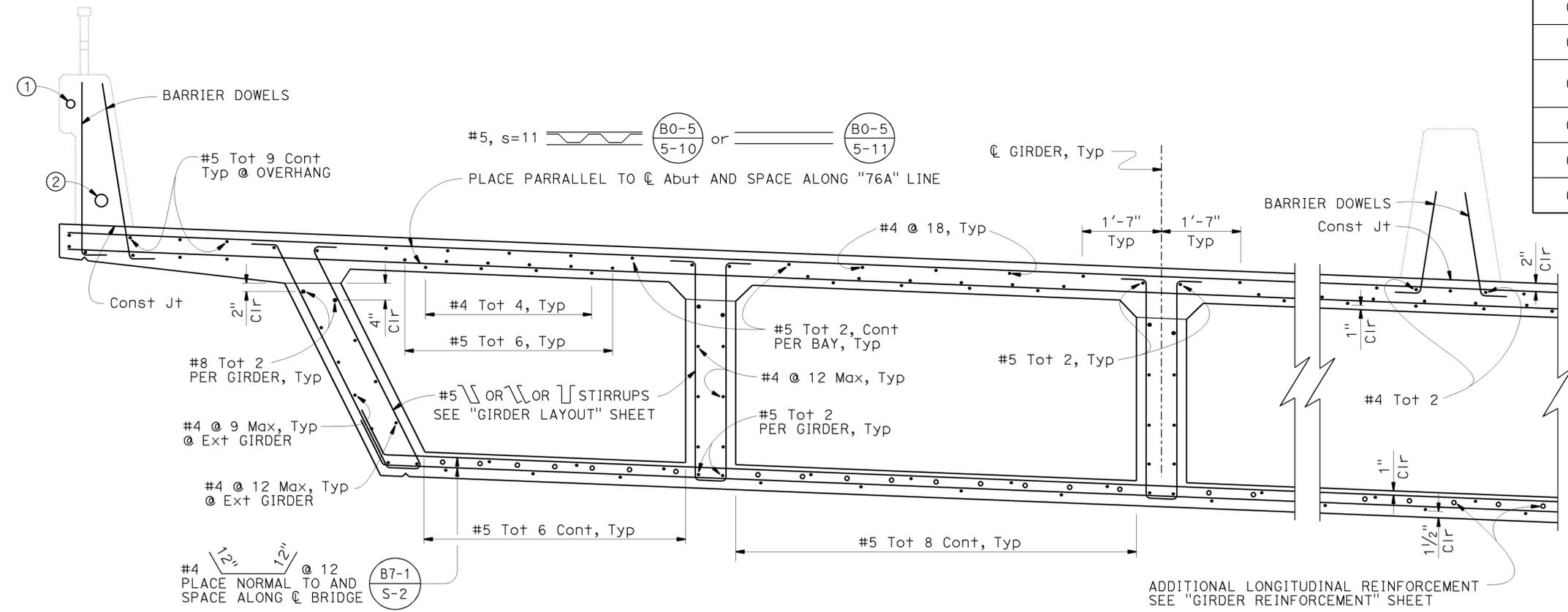
Frank H. Wei
 REGISTERED CIVIL ENGINEER DATE 08/16/13
 03-24-14
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
 FRANK H. WEI
 No. C 52918
 Exp. 12-31-14
 CIVIL
 STATE OF CALIFORNIA



TYPICAL SECTION
 $\frac{3}{16}'' = 1'-0''$

UTILITY & UTILITY OPENING TABLE				
Location	Utility	Owner	Conduit Size	Utility Opening Size HxW
				End Diaphragm
①	Signal and Lighting (see "Road Plans")	Caltrans	2"	N/A
②	Sprinkler Control (see "Road Plans")	Caltrans	3"	N/A
③	Closed Circuit Television System (see "ROAD PLANS")	Caltrans	4"	6" Diameter
④	Irrigation Electrical (see "Road Plans")	Caltrans	4"	6" Diameter
⑤	Water Supply Line	Caltrans	3"	2'-0" x 1'-0"
⑥	Water Supply Line	Caltrans	3"	2'-0" x 1'-0"



PART TYPICAL SECTION
 $\frac{3}{4}'' = 1'-0''$

NOTES:

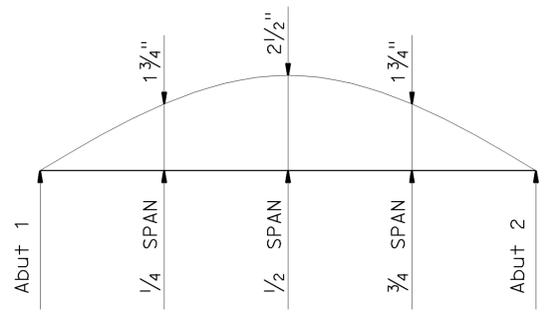
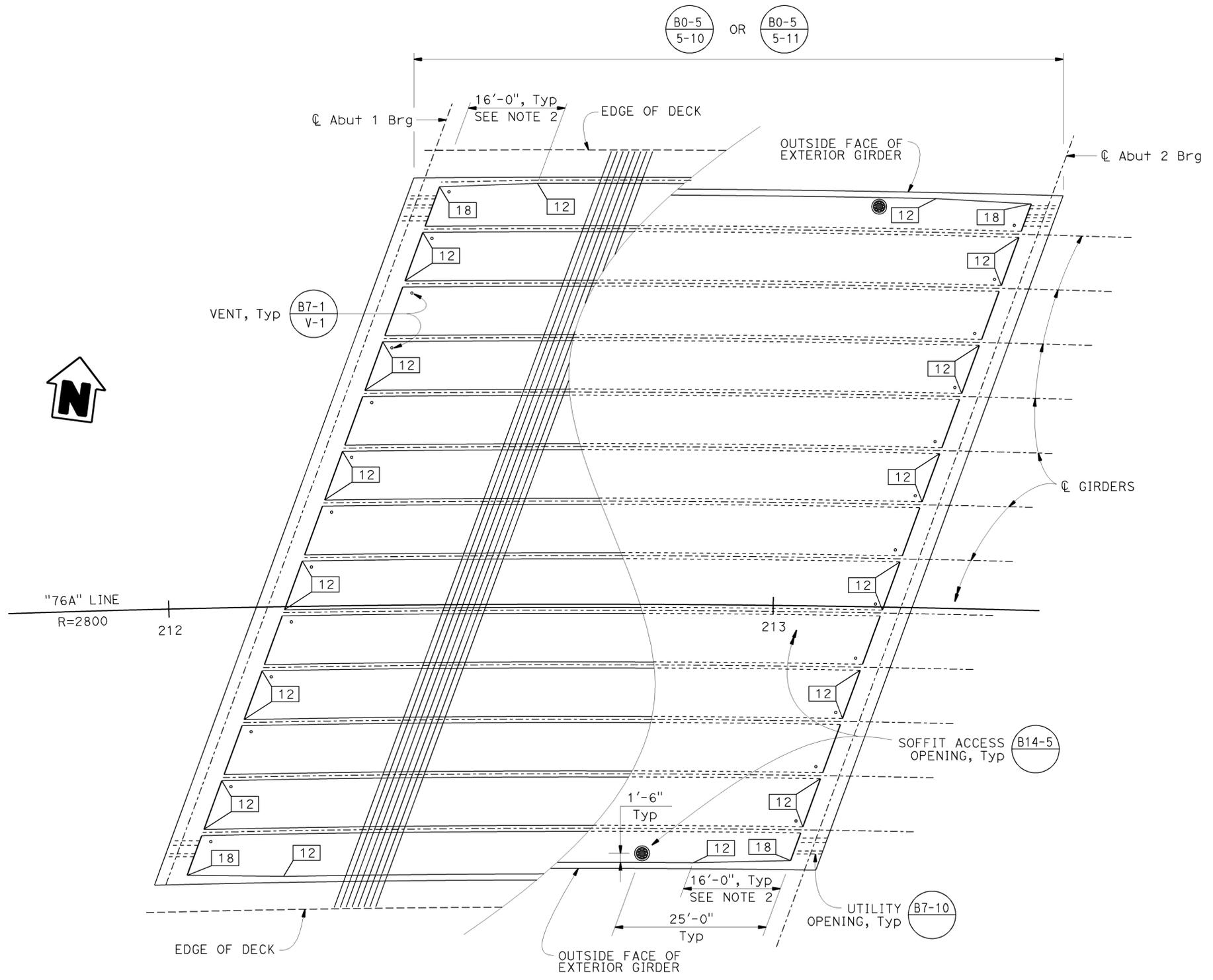
- For 3" Water supply line, see Standard Plans B14-4 and B14-5. Water supply lines are to share 2' wide x 1' high opening at end of diaphragms.
- For 2" signal and lighting, and 3" sprinkler control in barrier rail, see Standard Plans B14-3.
- For 4" closed television system, and 4" irrigation electrical, see Standard Plans B14-3. Use rod, strap, and support spacing for 3/2" conduit.
- For additional reinforcement at abutment backwall and diaphragm, see Standard Plans B7-10.

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

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	DESIGN BY H. Win CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 21	BRIDGE No. 57-1234	LIVE OAK CREEK BRIDGE (REPLACE) TYPICAL SECTION
	DETAILS BY P. Perez / H. Win CHECKED F. Wei		POST MILE R14.68	
	QUANTITIES BY H. Win CHECKED H. Akbarzadegan		UNIT: 3623 PROJECT NUMBER & PHASE: 1100020489 & 1 CONTRACT No.: 257151	

DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 08/16/12, 08/09/13, 09/07/12, 01/28/13
 SHEET 11 OF 18

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1236	1273
			08/16/13 REGISTERED CIVIL ENGINEER DATE		
			03-24-14 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.					



PLAN (B7-1) (B8-5)
1" = 10'

- NOTES:
- Indicates girder width in inches
 - Length of girder flare
 - For Prestressing Notes, see "GIRDER REINFORCEMENT" sheet.

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

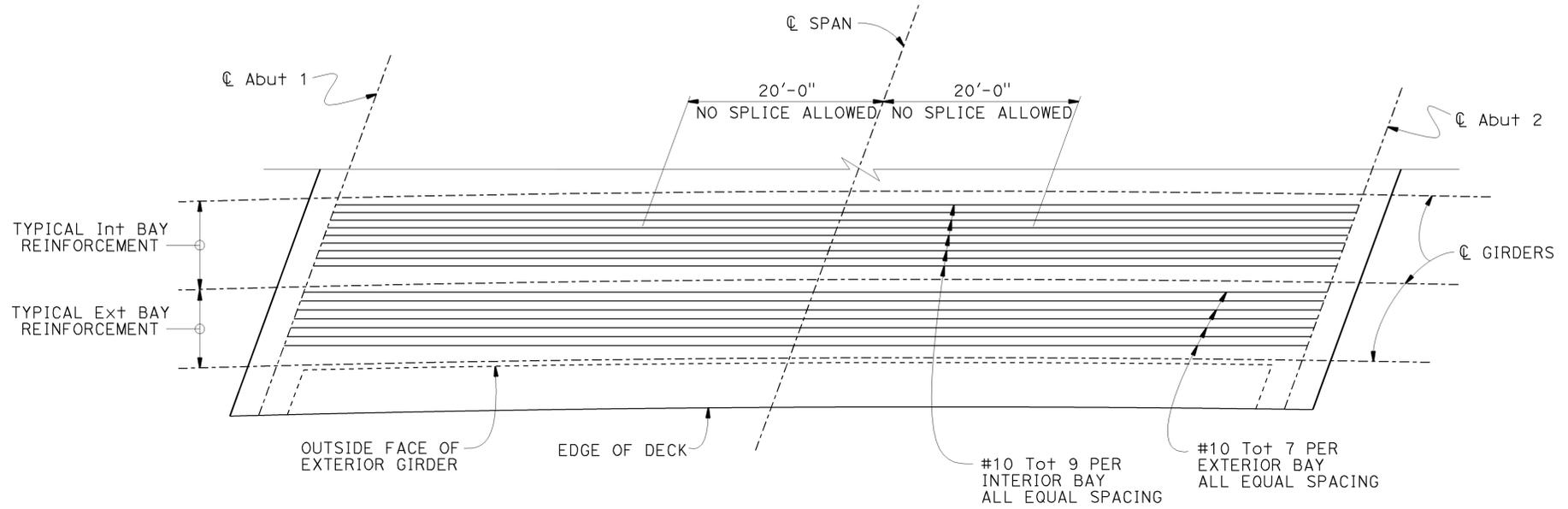
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY H. Win	CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 21	BRIDGE NO.	LIVE OAK CREEK BRIDGE (REPLACE) GIRDER LAYOUT
	DETAILS	BY P. Perez / H. Win	CHECKED F. Wei			57-1234	
	QUANTITIES	BY H. Win	CHECKED H. Akbarzadegan			R14.68	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3623 PROJECT NUMBER & PHASE: 1100020489 & 1 CONTRACT NO.: 257151	DISREGARD PRINTS BEARING EARLIER REVISION DATES	
						REVISION DATES 08/20/12 03/14/12 01/28/13 08/09/13	SHEET 12 OF 18

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1237	1273
			08/16/13		
REGISTERED CIVIL ENGINEER			DATE		
03-24-14			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.					



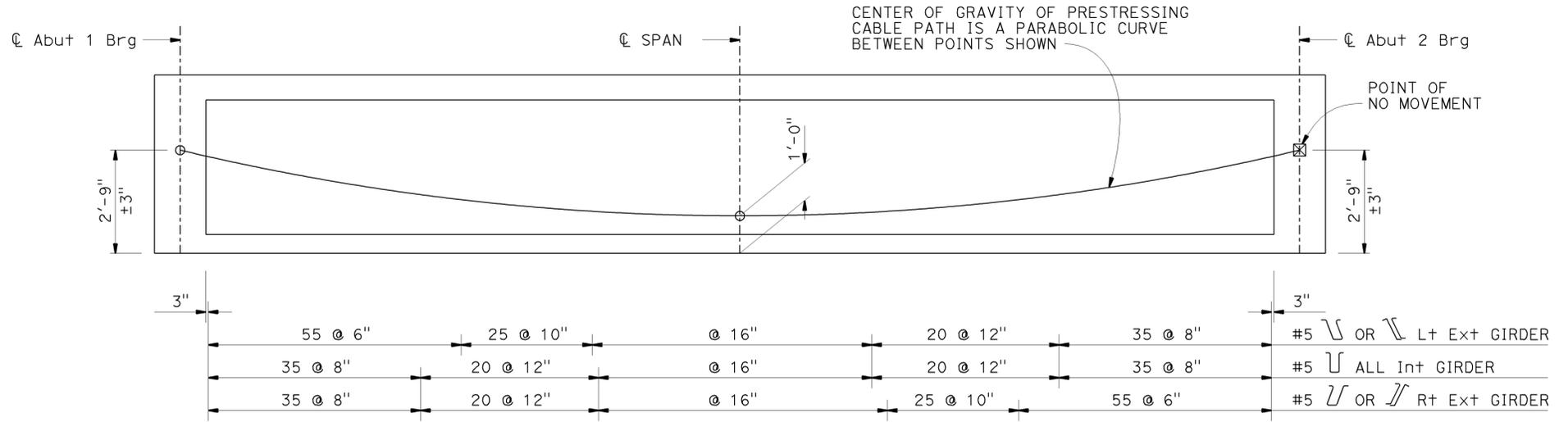
PRESTRESSING NOTES

270 KSI Low Relaxation Strand:
 $P_{jack} = 24,500$ kips
 Anchor Set = $\frac{3}{8}$ in
 Total Number of Girders = 14
 Friction curvature coefficient $\mu = 0.0015$ per rad
 Friction wobble coefficient $K = 0.0002$ per ft
 Distribution of prestress force (P_{jack}) between girders shall not exceed the ratio of 3:2.
 Maximum final force variation between girders shall not exceed 725 kips.
 Concrete: $f'_c = 4000$ psi @ 28 days
 $f'_{ci} = 3500$ psi @ time of stressing
 Contractor shall submit elongation calculations based on initial stress at $\delta = 0.960$ times jacking stress.
 One end stressing shall be performed from either end.



BOTTOM GIRDER REINFORCEMENT

$\frac{1}{8}'' = 1'-0''$



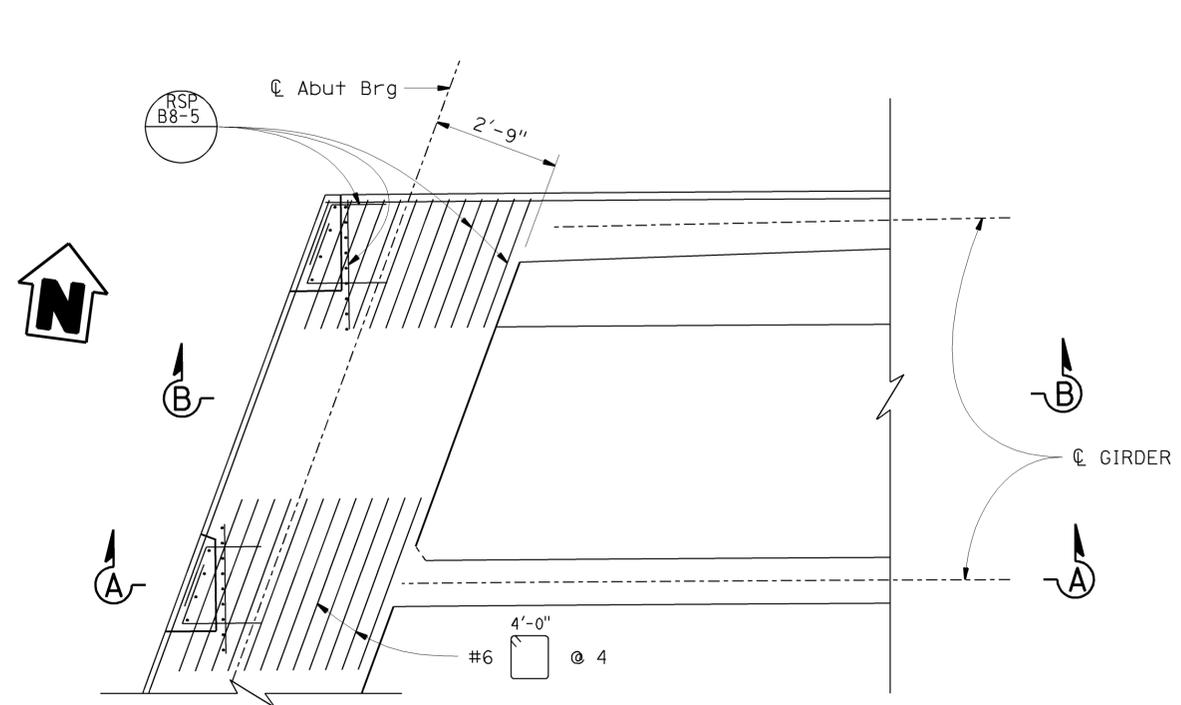
LONGITUDINAL SECTION

NO SCALE

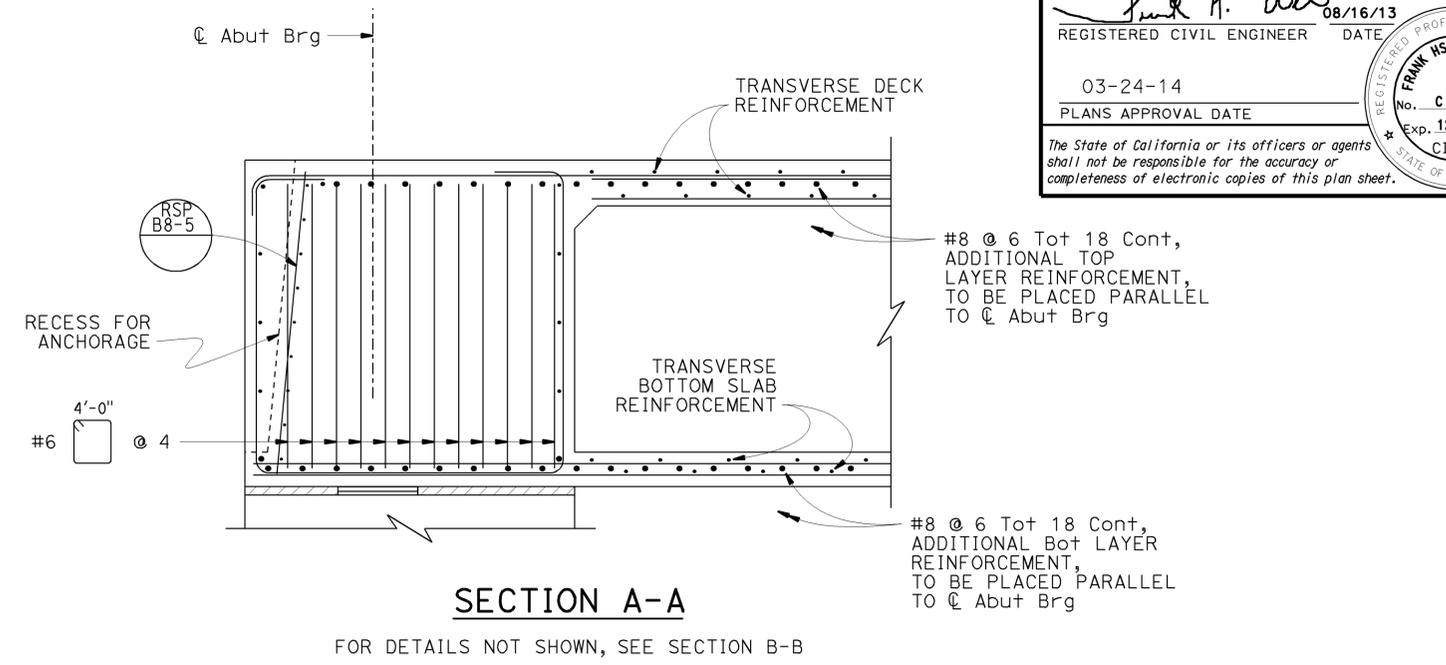
NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY H. Win	CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 21	BRIDGE NO.	LIVE OAK CREEK BRIDGE (REPLACE) GIRDER REINFORCEMENT
	DETAILS	BY P. Perez	CHECKED F. Wei			57-1234	
	QUANTITIES	BY H. Win	CHECKED H. Akbarzadegan			POST MILE R14.68	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3623	PROJECT NUMBER & PHASE: 1100020489 & 1 CONTRACT NO.: 257151	
DISREGARD PRINTS BEARING EARLIER REVISION DATES						REVISION DATES	SHEET 13 OF 18

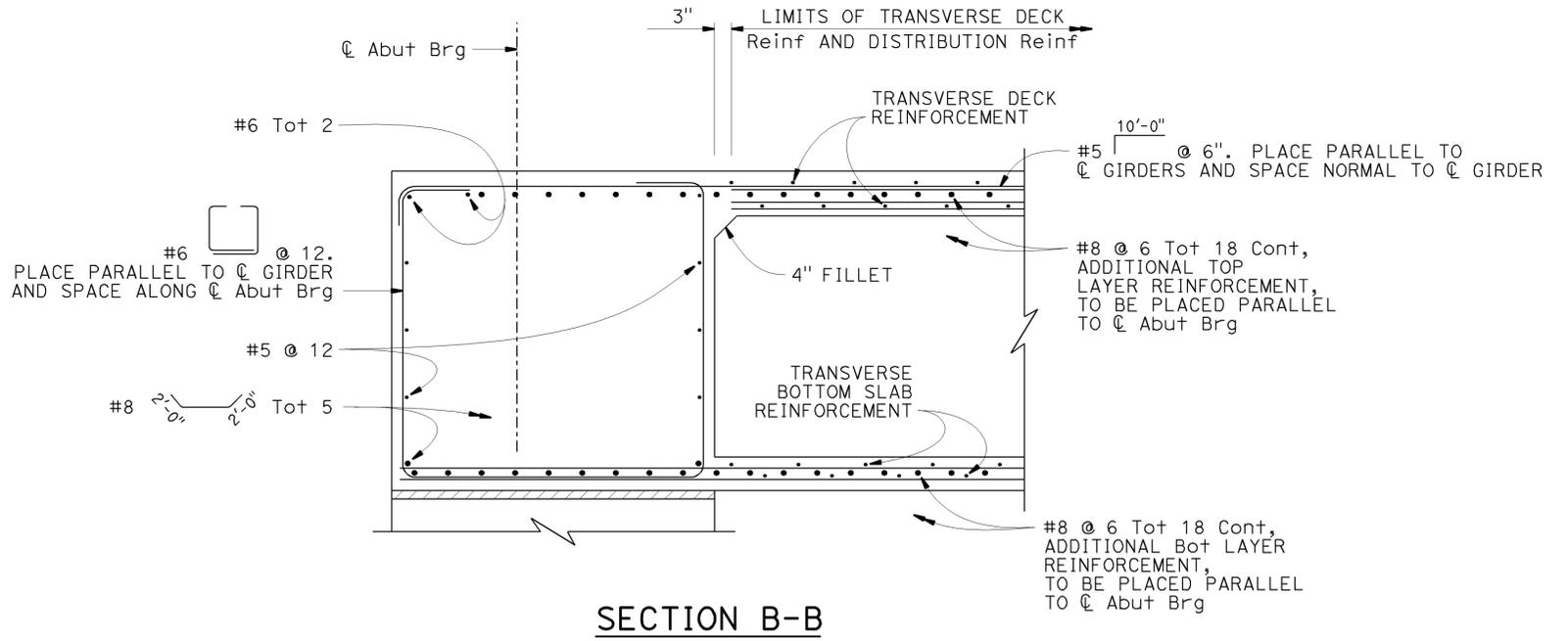
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1238	1273
Frank H. Wei REGISTERED CIVIL ENGINEER DATE 08/16/13					
03-24-14 PLANS APPROVAL DATE					
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ANCHORAGE ZONE PLAN VIEW
1/2" = 1'-0"



SECTION A-A
FOR DETAILS NOT SHOWN, SEE SECTION B-B

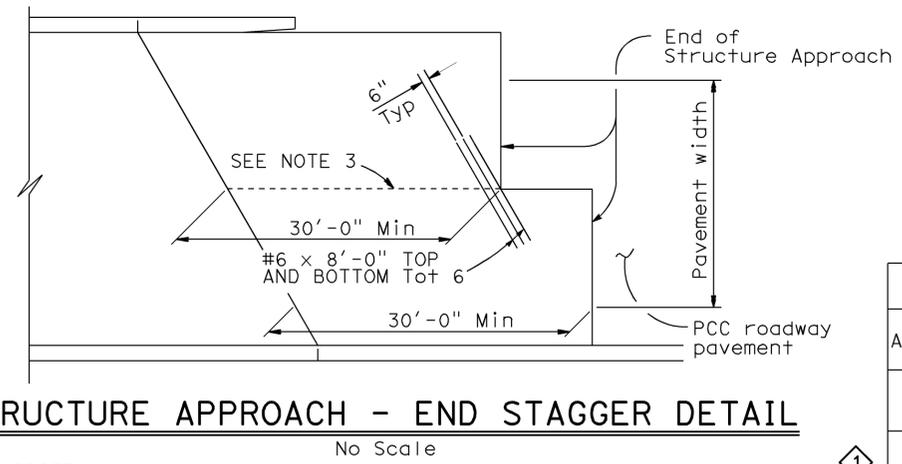
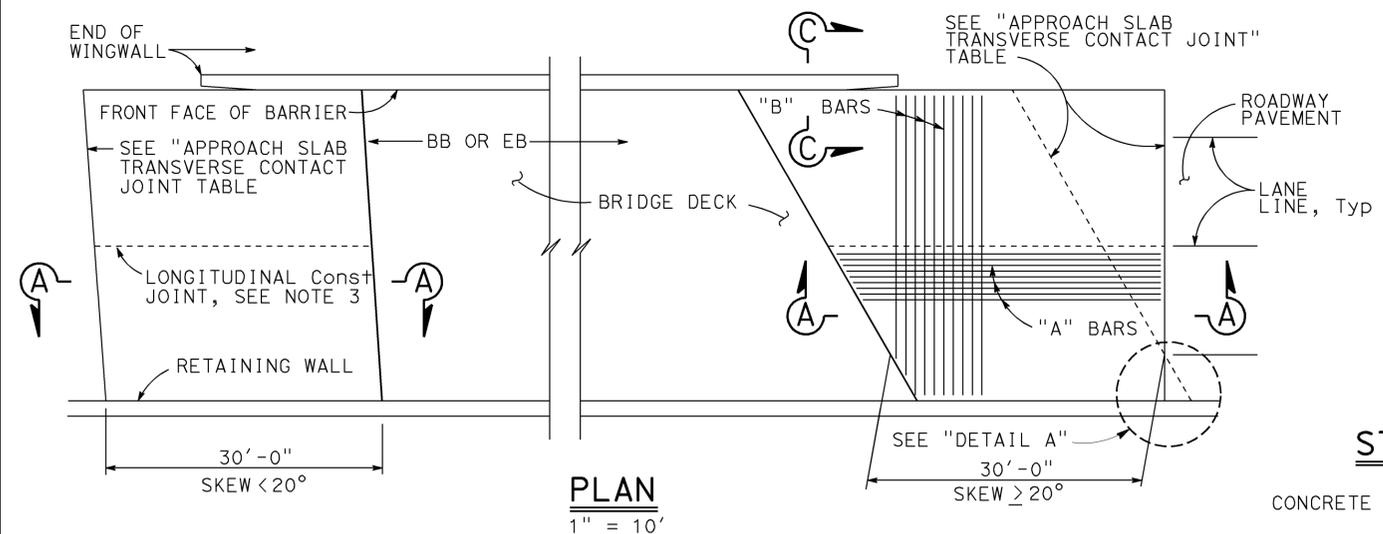


SECTION B-B
END DIAPHRAGM DETAILS
3/4" = 1'-0"

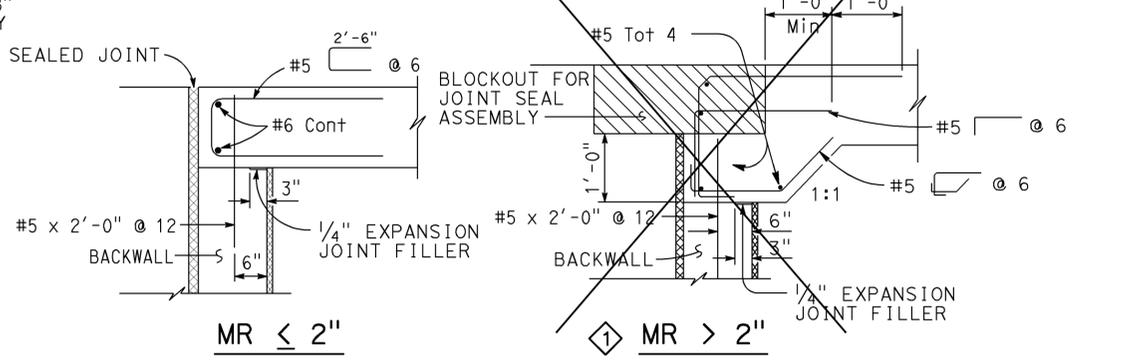
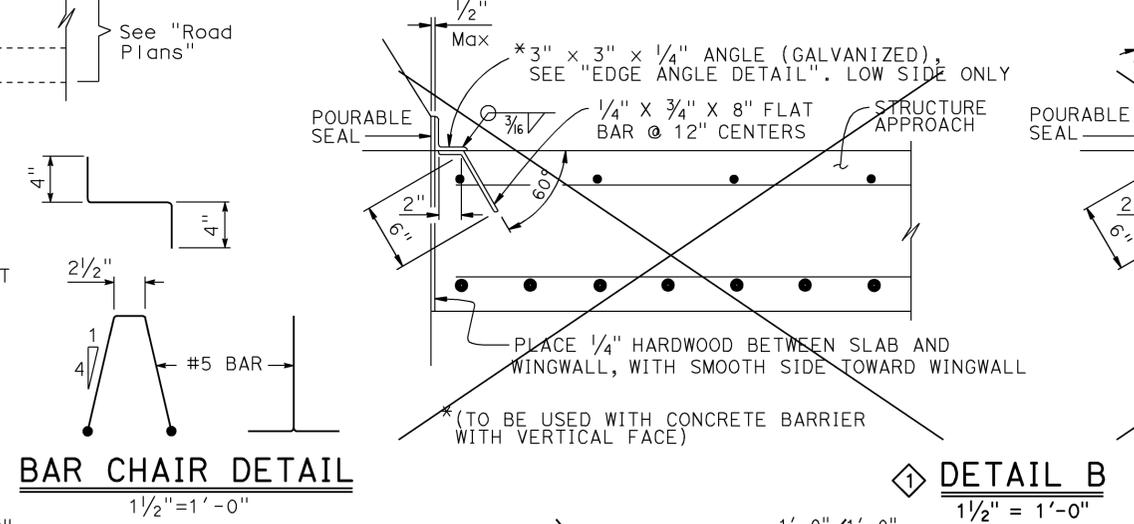
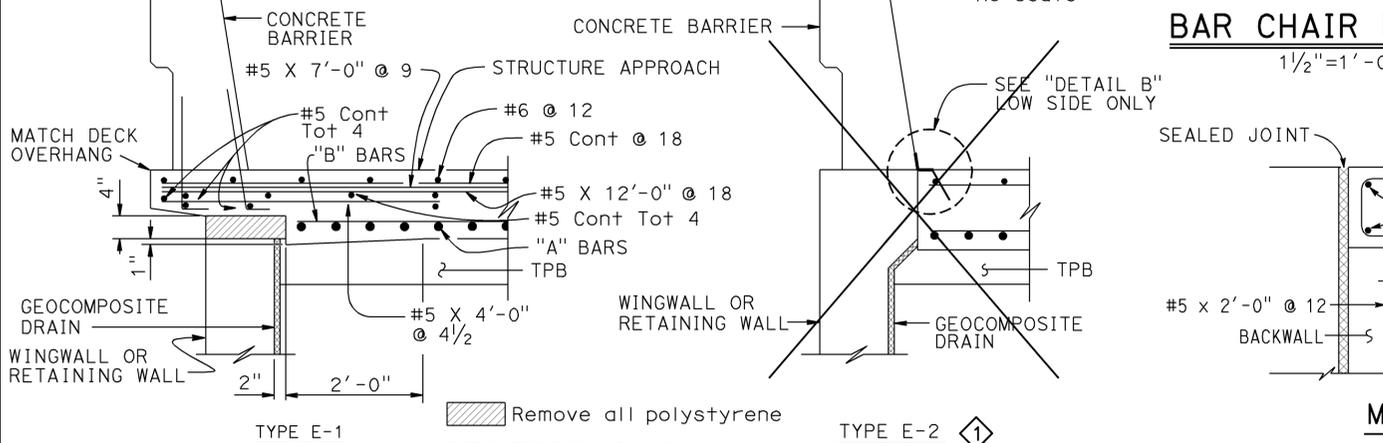
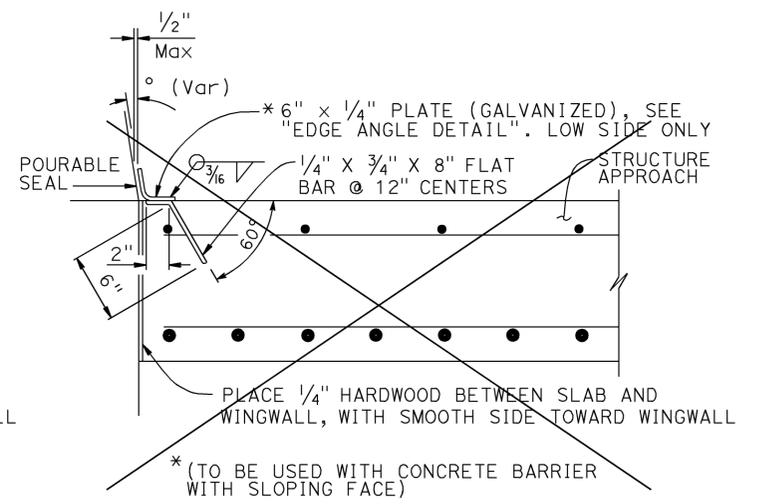
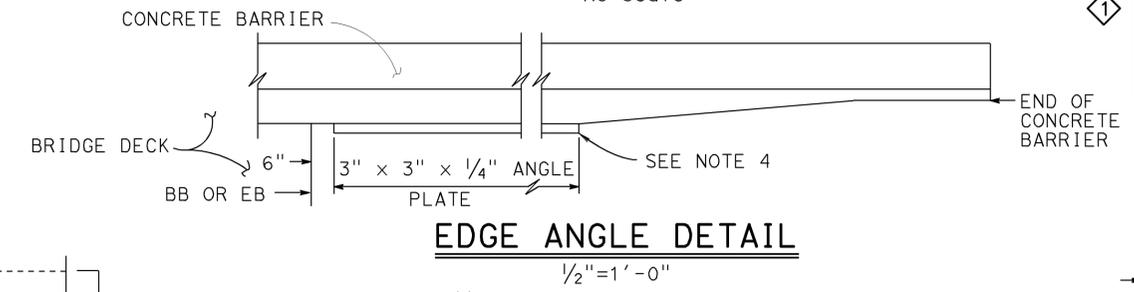
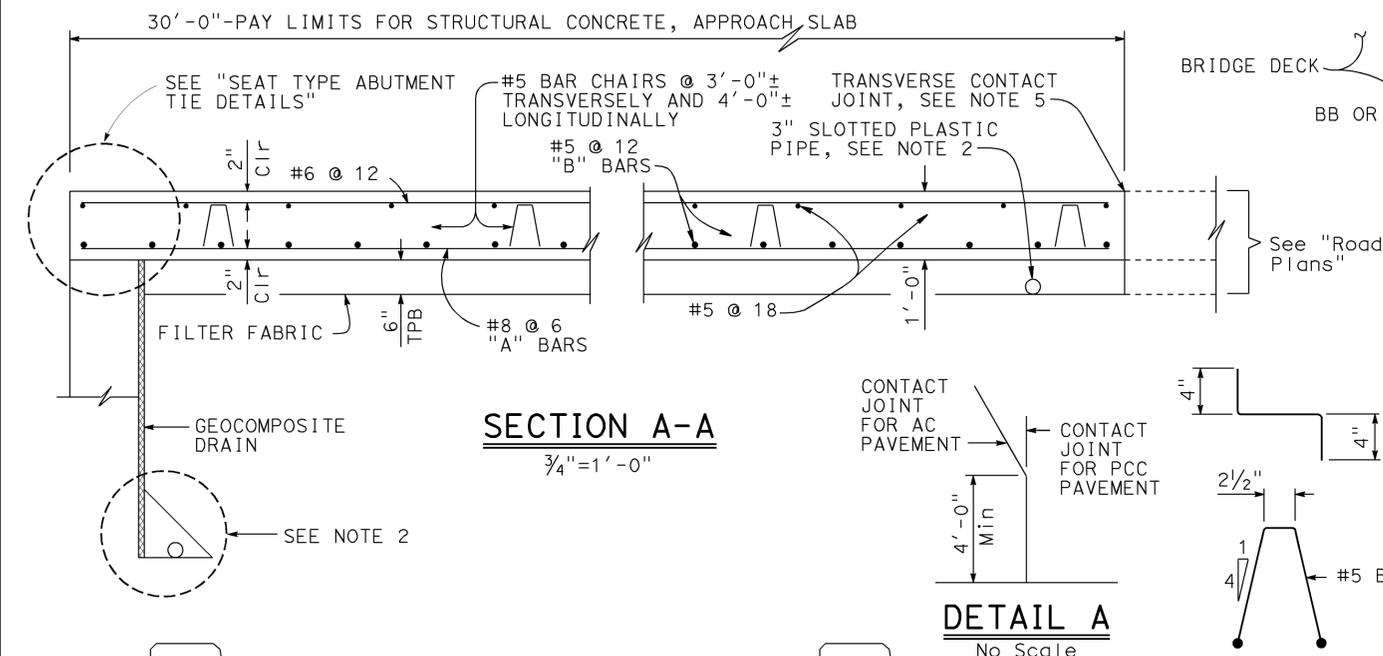
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY H. Win	CHECKED H. Akbarzadegan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 21	BRIDGE No.	LIVE OAK CREEK BRIDGE (REPLACE) GIRDER DETAILS	
	DETAILS	BY P. Perez	CHECKED F. Wei			57-1234		
	QUANTITIES	BY H. Win	CHECKED H. Akbarzadegan			POST MILE R14.68		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3	UNIT: 3623 PROJECT NUMBER & PHASE: 1100020489 & 1 CONTRACT No.: 257151	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 09/10/12 03/14/12 01/28/13 08/09/13	SHEET 14 OF 18

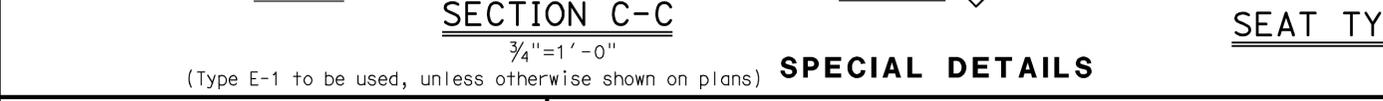
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APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 20°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PN
20° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT EACH LANE LINE



- NOTES:**
- For details not shown, see Structure Plans. For MR < 2', adjust bar reinforcement to clear a sawcut for sealed joint, when required.
 - For drainage details, see "STRUCTURE APPROACH DRAINAGE DETAILS" sheet.
 - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
 - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.
 - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
 - At the Contractor's option, approach slab transverse reinforcement may be placed parallel to paving notch. Spacing of transverse reinforcement is measured along roadway.



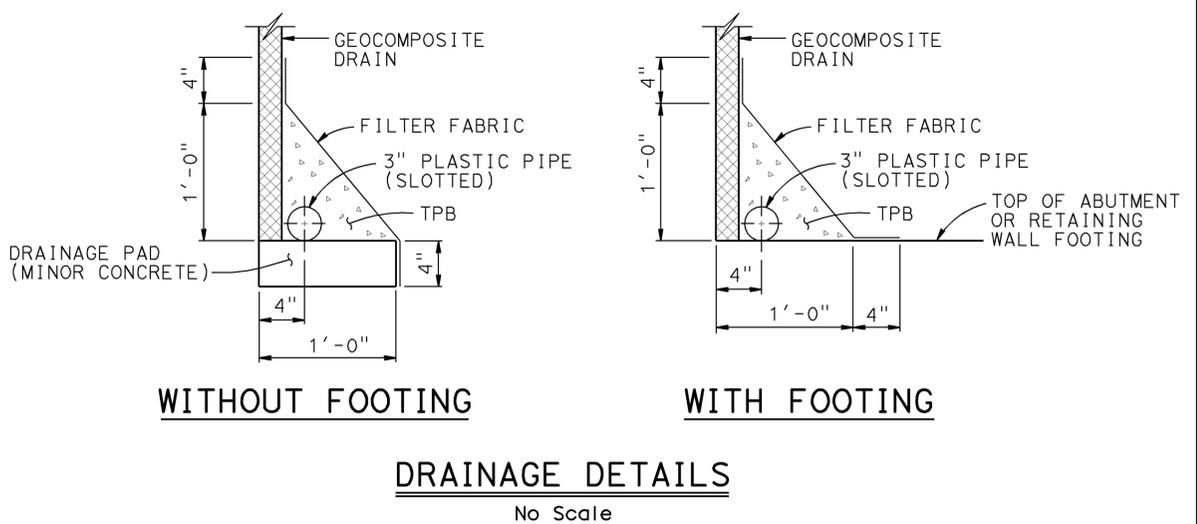
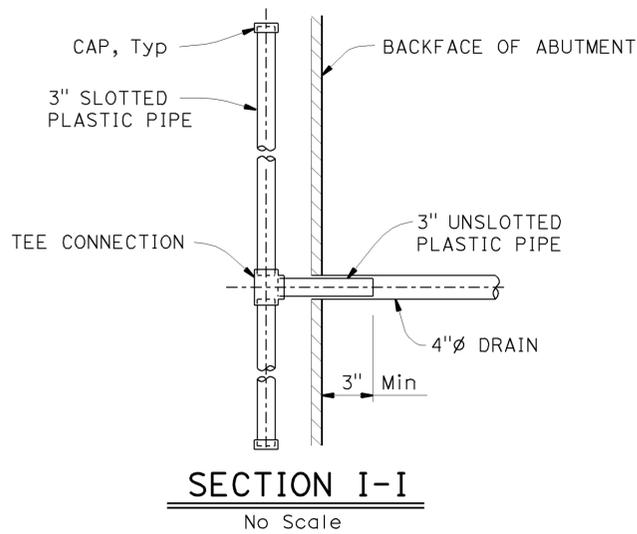
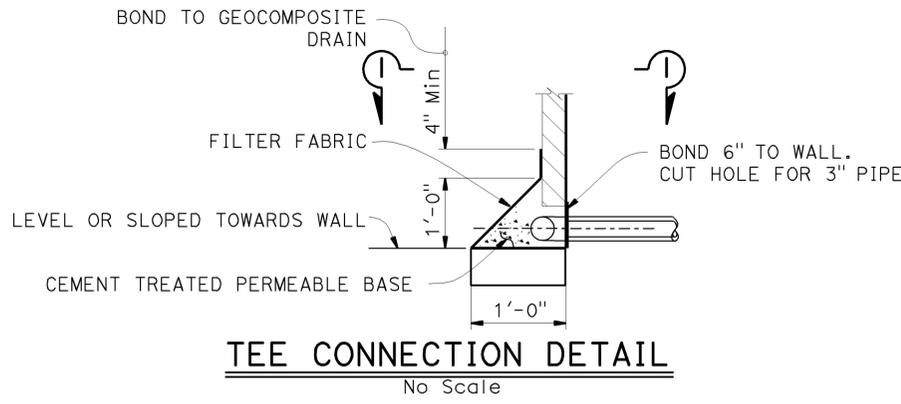
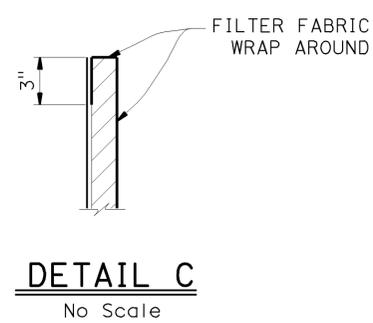
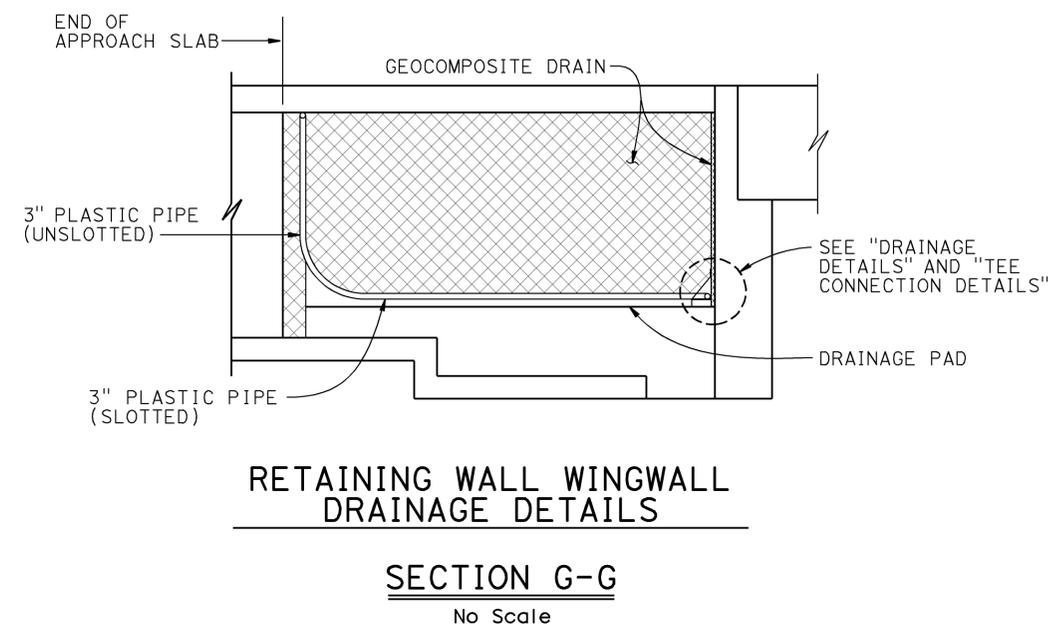
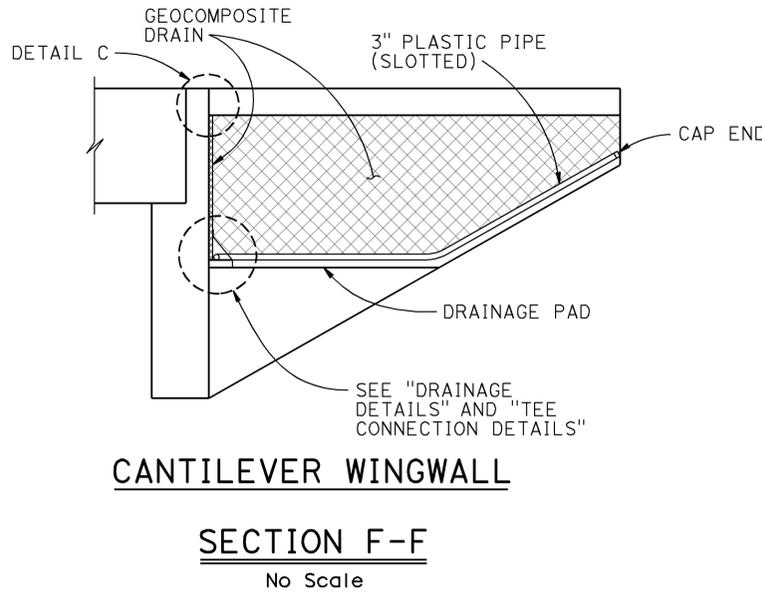
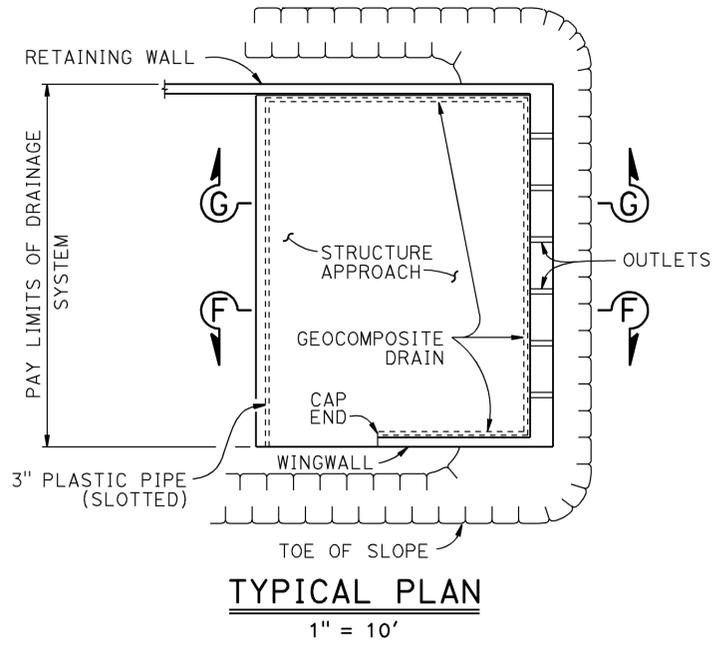
STANDARD DRAWING
 FILE NO. **xs3-120**
 APPROVAL DATE July 2011

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STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 57-1234
 POST MILE R14.68
LIVE OAK CREEK BRIDGE (REPLACE)
STRUCTURE APPROACH TYPE N(30S)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1240	1273
Frank H. Wei REGISTERED CIVIL ENGINEER DATE 08/16/13				FRANK H. SHIAOSH/H. WEI No. C 52918 Exp. 12-31-14 CIVIL STATE OF CALIFORNIA	
03-24-14 PLANS APPROVAL DATE					
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NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY H. Win	CHECKED H. Akbarzadegan
DETAILS	BY P. Perez	CHECKED F. Wei
QUANTITIES	BY H. Win	CHECKED H. Akbarzadegan

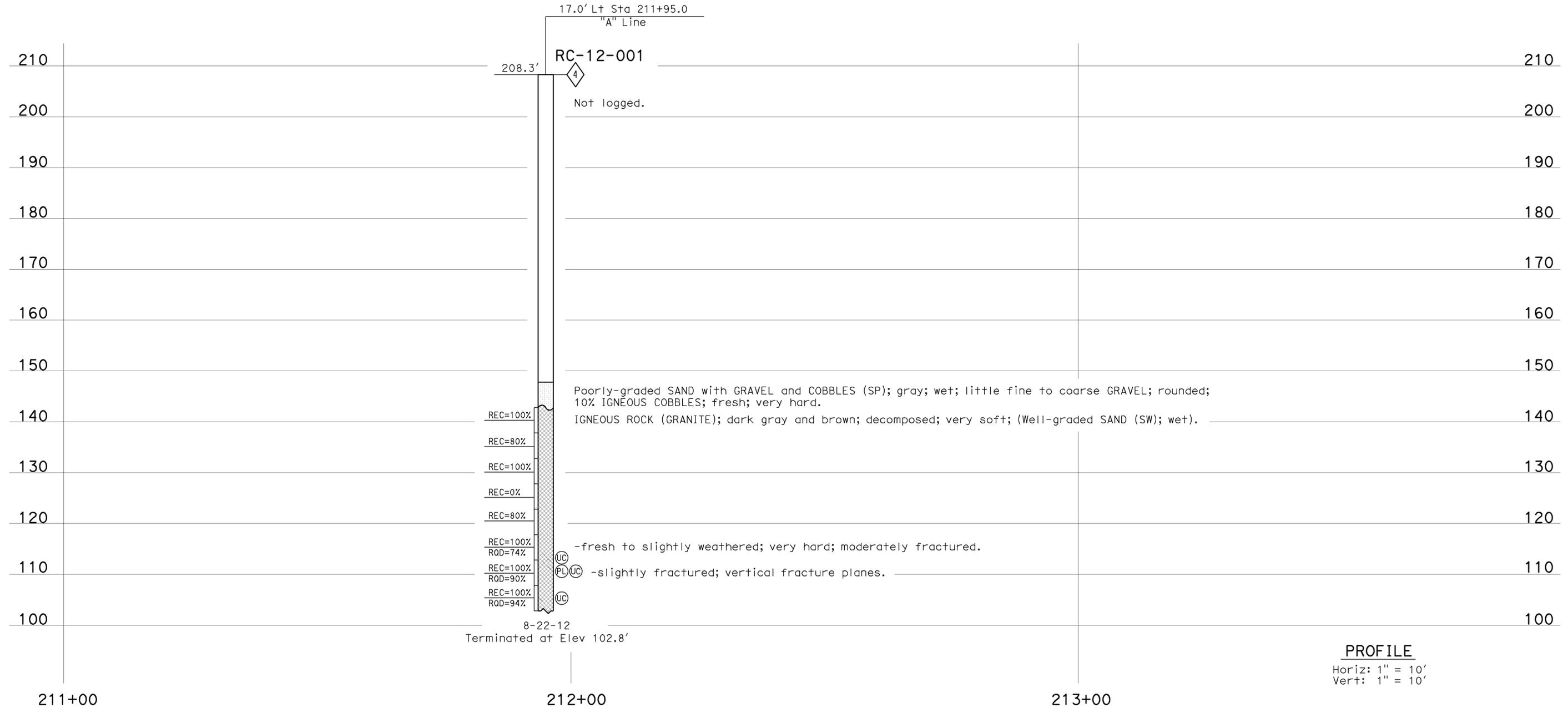
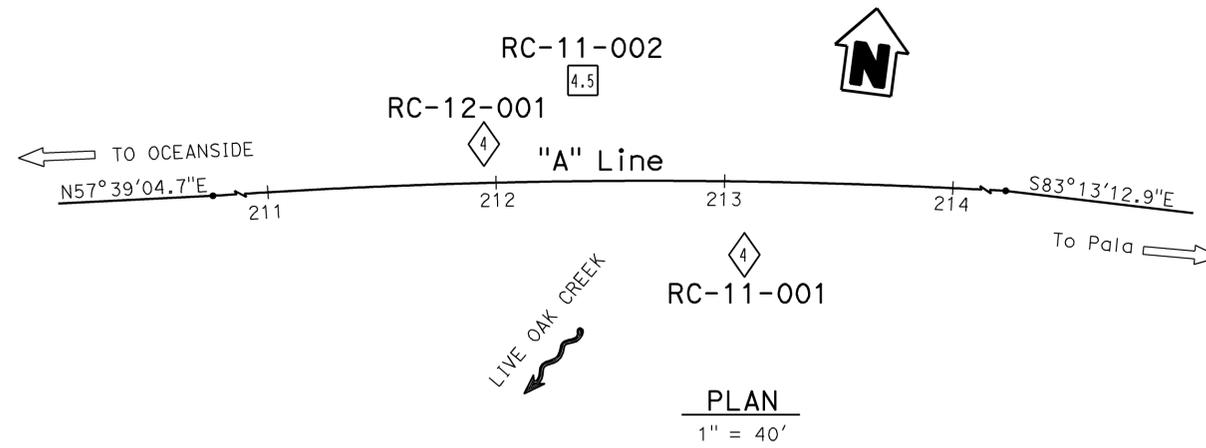
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 21

BRIDGE No. 57-1234
POST MILE R14.68
LIVE OAK CREEK BRIDGE (REPLACE)
STRUCTURE APPROACH DRAINAGE DETAILS

BENCH MARK

BM: G1312 1978 Elev 213.59'
 Brass disk set in concrete of SW
 corner of Live Oak Creek Bridge.
 Vertical Datum: NAVD88



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1241	1273

11-13-12
 REGISTERED CIVIL ENGINEER DATE

03-24-14
 PLANS APPROVAL DATE

David T-M Liao
 No. C59838
 Exp. 12-31-15
 CIVIL ENGINEER

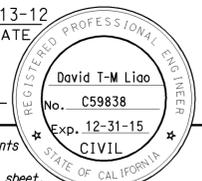
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		LIVE OAK CREEK BRIDGE	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		FIELD INVESTIGATION BY:		DEPARTMENT OF TRANSPORTATION		57-1234		LOG OF TEST BORINGS 1 OF 2	
NAME: M. DeSalvatore		CHECKED BY: E. Neupert		T-M Liao		DESIGN BRANCH 21		POST MILE			
								R14.68			
OGS CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 11000204891		CONTRACT NO.: 11-257151		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3						REVISION DATES	
										SHEET OF	
										17 18	

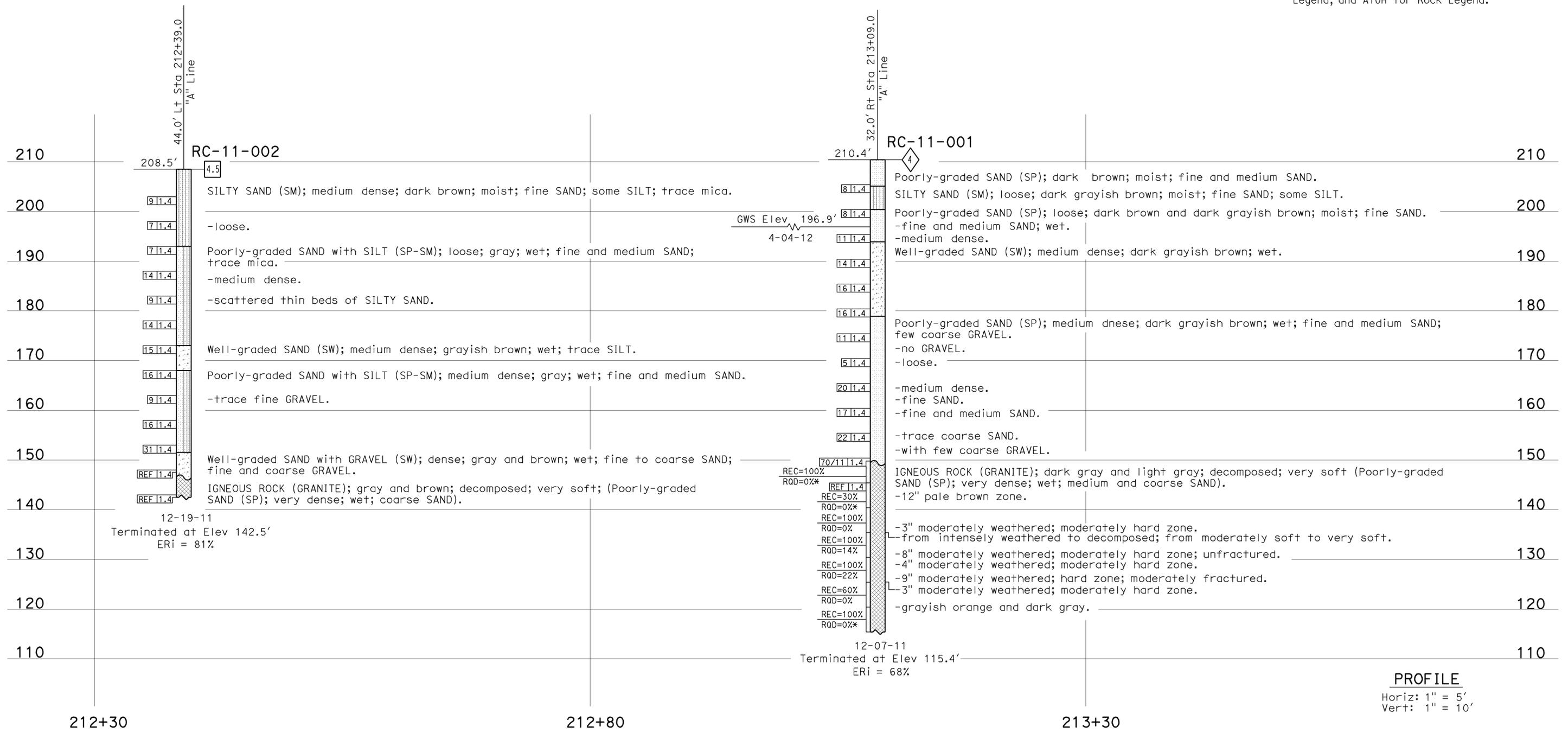
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15, 76	R46.2/R46.8, R12.1/R17.7	1242	1273
			11-13-12	REGISTERED CIVIL ENGINEER DATE	
			03-24-14	PLANS APPROVAL DATE	
					
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FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 2"

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.



PROFILE
Horiz: 1" = 5'
Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		LIVE OAK CREEK BRIDGE	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		FIELD INVESTIGATION BY:		STRUCTURE DESIGN		57-1234		LOG OF TEST BORINGS 2 OF 2	
NAME: M. DeSalvatore		CHECKED BY: E. Neupert		F. De Haro, T-M Liao		DESIGN BRANCH 21		POST MILE			
						R14.68					
005 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 11000204891		CONTRACT NO.: 11-257151		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3		REVISION DATES		SHEET OF		18 18	
						09-19-12 10-26-12 11-13-12					

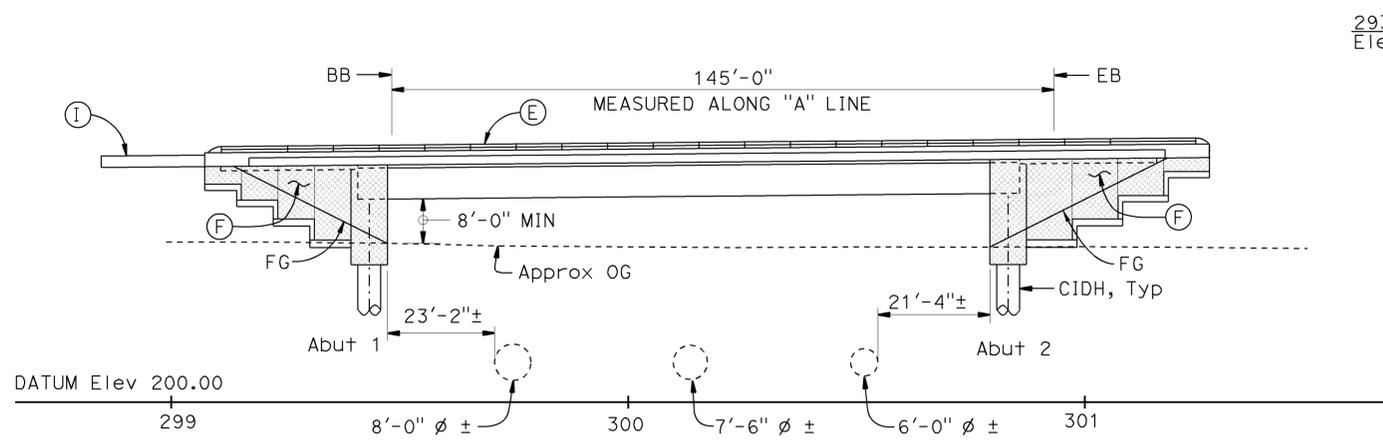
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1243	1273

08-16-13
REGISTERED CIVIL ENGINEER DATE

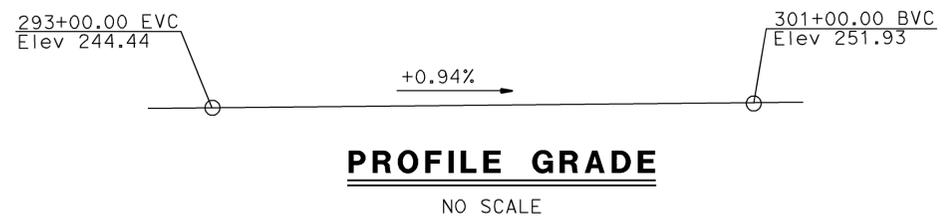
03-24-14
PLANS APPROVAL DATE

RYAN STILTZ
No. C65738
Exp. 9/30/15
CIVIL
STATE OF CALIFORNIA

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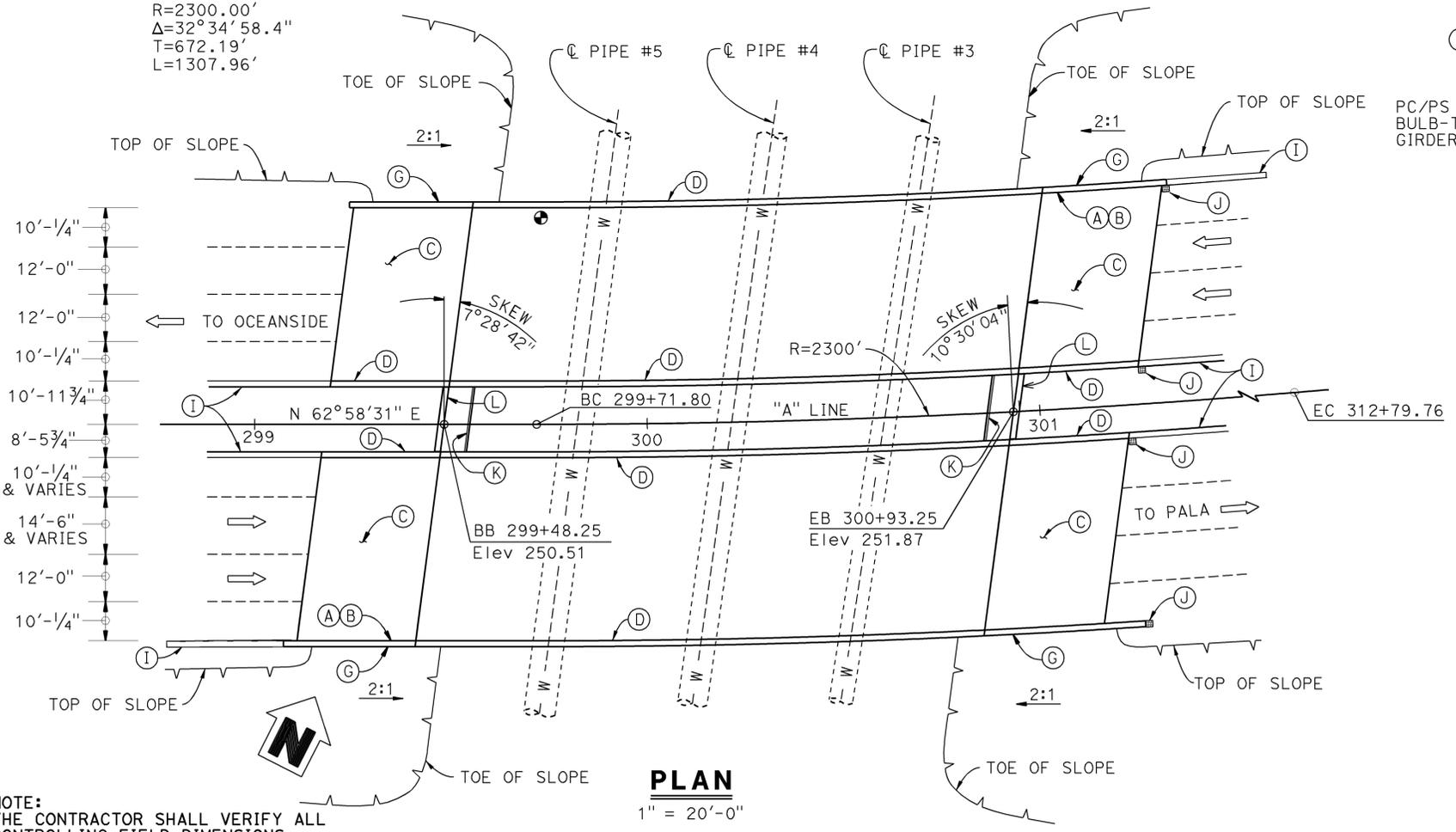


ELEVATION
1" = 20'-0"

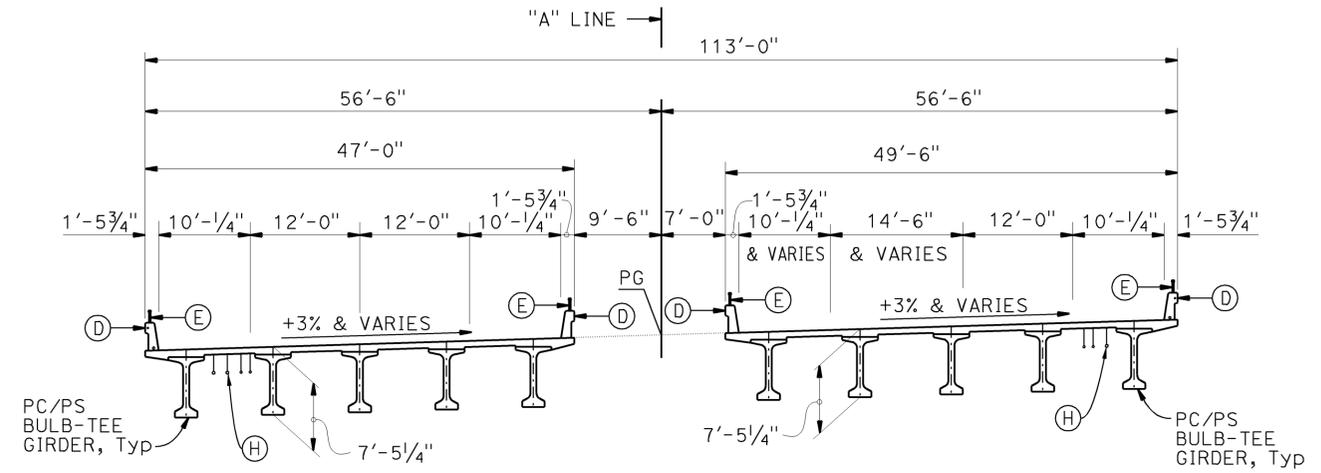


PROFILE GRADE
NO SCALE

CURVE DATA
R=2300.00'
Δ=32° 34' 58.4"
T=672.19'
L=1307.96'



PLAN
1" = 20'-0"



TYPICAL SECTION
1" = 10'-0"

NOTES:

- (A) Paint "SDCWA PIPELINE OVERCROSSING"
- (B) Paint "BR NO. 57-1235L/R" and year completed
- (C) Structure Approach, Type N(30S)
- (D) Concrete Barrier, Type 736
- (E) Tubular Hand Railing
- (F) Color Concrete
- (G) Retaining Wall
- (H) Utilities Lines, see "TYPICAL SECTION" sheet
- (I) Concrete Barrier, Type 60, see "ROADWAY PLANS"
- (J) Drainage inlet, see "DRAINAGE PLANS"
- (K) Cable Railing
- (L) Concrete Barrier, Type 736 (Mod)

LEGEND:

- Point of Minimum Vertical Clearance
- W-- Indicates Underground Water Pipeline
- ⇒ Indicates Direction of Traffic

For "GENERAL NOTES", "INDEX TO PLANS", "STANDARD PLANS", and "PILE DATA TABLE", see "INDEX TO PLANS" sheet.

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

DANIEL T. ADAMS DESIGN ENGINEER	DESIGN	BY T. Tran/ L. Wu	CHECKED R. Stiltz	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 10	BRIDGE NO.	SDCWA PIPELINE OVERCROSSING		
	DETAILS	BY M. Kingra/ G. Hallstrom	CHECKED R. Stiltz	LAYOUT	BY M. Kingra/ L. Wu			CHECKED T. Tran/ R. Stiltz		57-1235L/R	
	QUANTITIES	BY L. Wu	CHECKED D. Azzam/F. Chen	SPECIFICATIONS	BY J. Choi			POST MILE	GENERAL PLAN		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS							UNIT: 3623	PROJECT NUMBER & PHASE: 11000204891	CONTRACT NO.: 11-257151	REVISION DATES	SHEET 1 OF 21

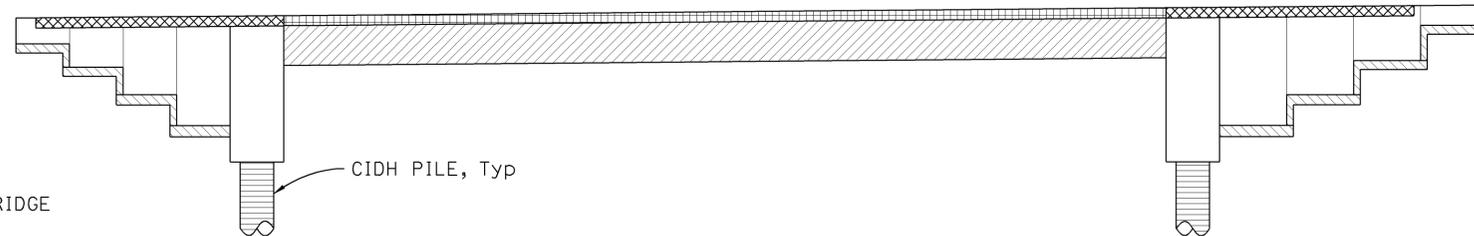
STANDARD PLANS DATED 2010

- 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)
- A10F LEGEND-SOIL (SHEET 1 OF 2)
- A10G LEGEND-SOIL (SHEET 2 OF 2)
- A10H LEGEND-ROCK
- A62C LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
- BO-1 BRIDGE DETAILS
- BO-3 BRIDGE DETAILS
- BO-5 BRIDGE DETAILS
- BO-13 BRIDGE DETAILS
- RSP B3-1A RETAINING WALL TYPE 1 (CASE 1)
- RSP B3-5 RETAINING WALL DETAILS No. 1
- B6-21 JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
- B7-10 UTILITY OPENING BOX GIRDER
- RSP B11-47 CABLE RAILING
- B11-51 TUBULAR HAND RAILING
- RSP B11-56 CONCRETE BARRIER TYPE 736
- B14-3 COMMUNICATION AND SPRINKLER CONTROL CONDUITS (CONDUIT LESS THAN 4")
- B14-4 WATER SUPPLY LINE (BRIDGE) (PIPE SIZES LESS THAN 4")
- B14-5 WATER SUPPLY LINE (DETAILS) (PIPE SIZES LESS THAN 4")



QUANTITIES

STRUCTURE EXCAVATION (BRIDGE)	713	CY
STRUCTURE BACKFILL (BRIDGE)	670	CY
3" SUPPLY LINE (BRIDGE)	820	LF
60" PERMANENT STEEL CASING	1,365	LF
48" CAST-IN-DRILLED-HOLE CONCRETE PILING	417	LF
60" CAST-IN-DRILLED-HOLE CONCRETE PILING	1,365	LF
STRUCTURAL CONCRETE, BRIDGE FOOTING	80	CY
STRUCTURAL CONCRETE, BRIDGE	1,763	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	208	CY
FURNISH PRECAST PRESTRESSED CONCRETE BULB-TEE GIRDER (140'-150')	10	EA
ERECT PRECAST PRESTRESSED CONCRETE GIRDER	10	EA
JOINT SEAL (MR 1")	196	LF
JOINT SEAL (TYPE AL)	26	LF
BAR REINFORCING STEEL (BRIDGE)	706,451	LB
TUBULAR HANDRAILING	838	LF
CABLE RAILING	33	LF
CONCRETE BARRIER (TYPE 736)	871	LF



- Structural Concrete, Bridge (f'c = 4000 psi @ 28 days)
- Structural Concrete, Bridge Footing (f'c = 3600 psi @ 28 days)
- CIDH Piles (f'c = 4000 psi @ 28 days)
- Structural Concrete, Approach Slab (f'c = 3600 psi @ 28 days)
- PC/PS Bulb-Tee Girders
- Structural Concrete, Bridge Deck, and Diaphragms (f'c = 5000 psi @ 28 days)

CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE

INDEX TO PLANS

Sheet No.	Title
1.	GENERAL PLAN
2.	INDEX TO PLANS
3.	DECK CONTOURS
4.	FOUNDATION PLAN
5.	ABUTMENT 1 LAYOUT
6.	ABUTMENT 2 LAYOUT
7.	ABUTMENT DETAILS NO. 1
8.	ABUTMENT DETAILS NO. 2
9.	ABUTMENT DETAILS NO. 3
10.	ABUTMENT DETAILS NO. 4
11.	TYPICAL SECTION
12.	GIRDER LAYOUT
13.	PC/PS BULB-TEE GIRDER (DEBONDED STRANDS)
14.	PC/PS BULB-TEE GIRDER (MISCELLANEOUS DETAILS)
15.	STRUCTURE APPROACH TYPE N(30S)
16.	STRUCTURE APPROACH DRAINAGE DETAILS
17.	LOG OF TEST BORINGS 1 OF 5
18.	LOG OF TEST BORINGS 2 OF 5
19.	LOG OF TEST BORINGS 3 OF 5
20.	LOG OF TEST BORINGS 4 OF 5
21.	LOG OF TEST BORINGS 5 OF 5

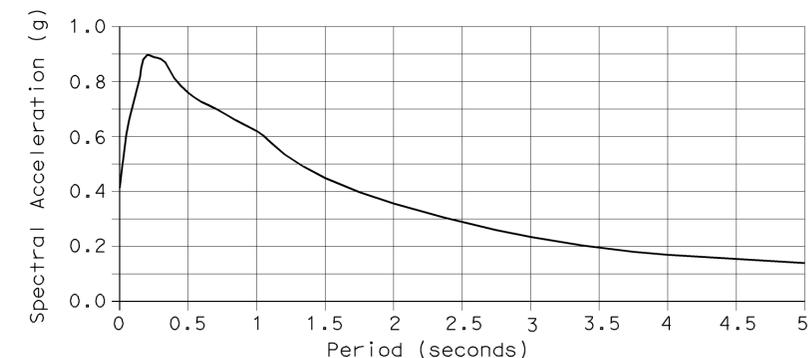
PILE DATA TABLE

Support Location	Pile Type	Cut-off Elev (ft)	Nominal Resistance (kips)		Design Tip Elevation (ft)	48" Specified Tip Elevation (ft)	60" Steel Casing Specified Tip Elevation (ft)
			Compression	Tension			
Abutment 1 Pile No. 1, 2, 3	60" CIDH w/permanent casing/48" CIDH*	230.25	1270	0	134.0(a)	134.0	157.0
Abutment 1 Pile No. 4, 5, 6	60" CIDH w/permanent casing/48" CIDH*	230.25	1270	0	124.0(a)	124.0	147.0
Abutment 1 Pile No. 7, 8, 9	60" CIDH w/permanent casing/48" CIDH*	230.25	1270	0	114.0(a)	114.0	137.0
Abutment 2 Pile No. 1, 2, 3	60" CIDH w/permanent casing/48" CIDH*	230.25	1270	0	144.0(a)	144.0	167.5
Abutment 2 Pile No. 4, 5, 6	60" CIDH w/permanent casing/48" CIDH*	230.25	1270	0	138.0(a)	138.0	161.5
Abutment 2 Pile No. 7, 8, 9	60" CIDH w/permanent casing/48" CIDH*	230.25	1270	0	132.0(a)	132.0	155.0

Notes: 1) Design tip elevations are controlled by: (a) Compression
 2) Piles are numbered, beginning with the number 1 and increasing from left to right, while looking upstation. See "ABUTMENT 1 LAYOUT" and "ABUTMENT 2 LAYOUT" sheets.
 * See "ABUTMENT DETAILS NO. 2" sheet.

**GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN**

- DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th Edition with California Amendments, Preface dated Nov. 2011.
- SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC) Version 1.6, November, 2010.
- DEAD LOAD: Includes 35 Psf for future wearing surface. The deck load between girders has been increased by a factor of 10% to allow for the use of steel deck forms.
- LIVE LOADING: HL93 and permit design load.
- SEISMIC LOADING: Soil Profile: Vs30 = 853 ft/s
Moment Magnitude: Mmax = 7.6
Peak Ground Acceleration: 0.4g



Modified CALTRANS SDC ARS Curve:
Type D Soil Profile, Magnitude Mw=7.6, 5% Damping

- REINFORCED CONCRETE: f_y = 60 ksi
f'c = 4000 psi, unless otherwise noted
n = 9
- PRESTRESSED CONCRETE: See "Prestressing Notes" on "PC/PS BULB-TEE GIRDER (DEBONDED STRANDS)" sheet
- STRUCTURAL STEEL: ASTM-A709, Grade 50 (for Permanent Steel Casing)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1244	1273

08-16-13
REGISTERED CIVIL ENGINEER DATE

03-24-14
PLANS APPROVAL DATE

RYAN STILTZ
No. C65738
Exp. 9/30/15
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.

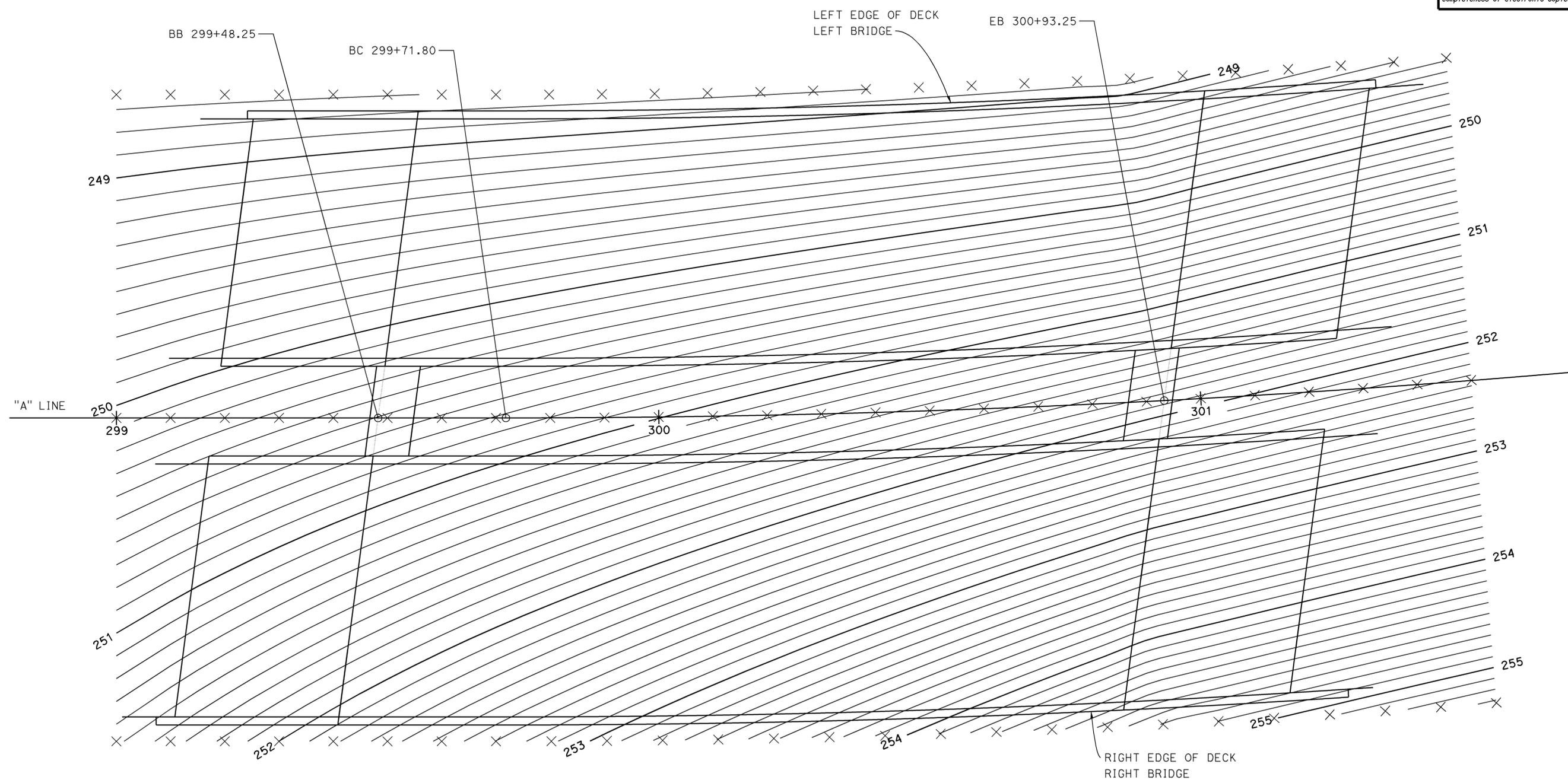
DESIGN	BY L. Wu	CHECKED R. Stiltz
DETAILS	BY G. Hallstrom	CHECKED R. Stiltz
QUANTITIES	BY L. Wu	CHECKED D. Azzam/F. Chen

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
BRIDGE NO. 57-1235L/R
POST MILE R16.33
DESIGN BRANCH 10

SDCWA PIPELINE OVERCROSSING
INDEX TO PLANS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8 R12.1/R17.7	1245	1273
			08-16-13	DATE	
			03-24-14	PLANS APPROVAL DATE	
			REGISTERED CIVIL ENGINEER RYAN STILTZ No. C65738 Exp. 9/30/15 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.					



DECK CONTOURS

1" = 10'-0"

- NOTES:
1. x - 10'-0" intervals along station line.
 2. Contour intervals = 0.1'.
 3. Contours do not include camber.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY L. Wu	CHECKED R. Stiltz	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 57-1235L/R	SDCWA PIPELINE OVERCROSSING DECK CONTOURS
	DETAILS	BY G. Hallstrom	CHECKED R. Stiltz			POST MILE R16.33	
	QUANTITIES	BY L. Wu	CHECKED D. Azzam/F. Chen	UNIT: 3589 PROJECT NUMBER & PHASE: 11000204891	CONTRACT NO.: 11-257151	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES
			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3			7-24-12 11-28-12
							SHEET 3 OF 21

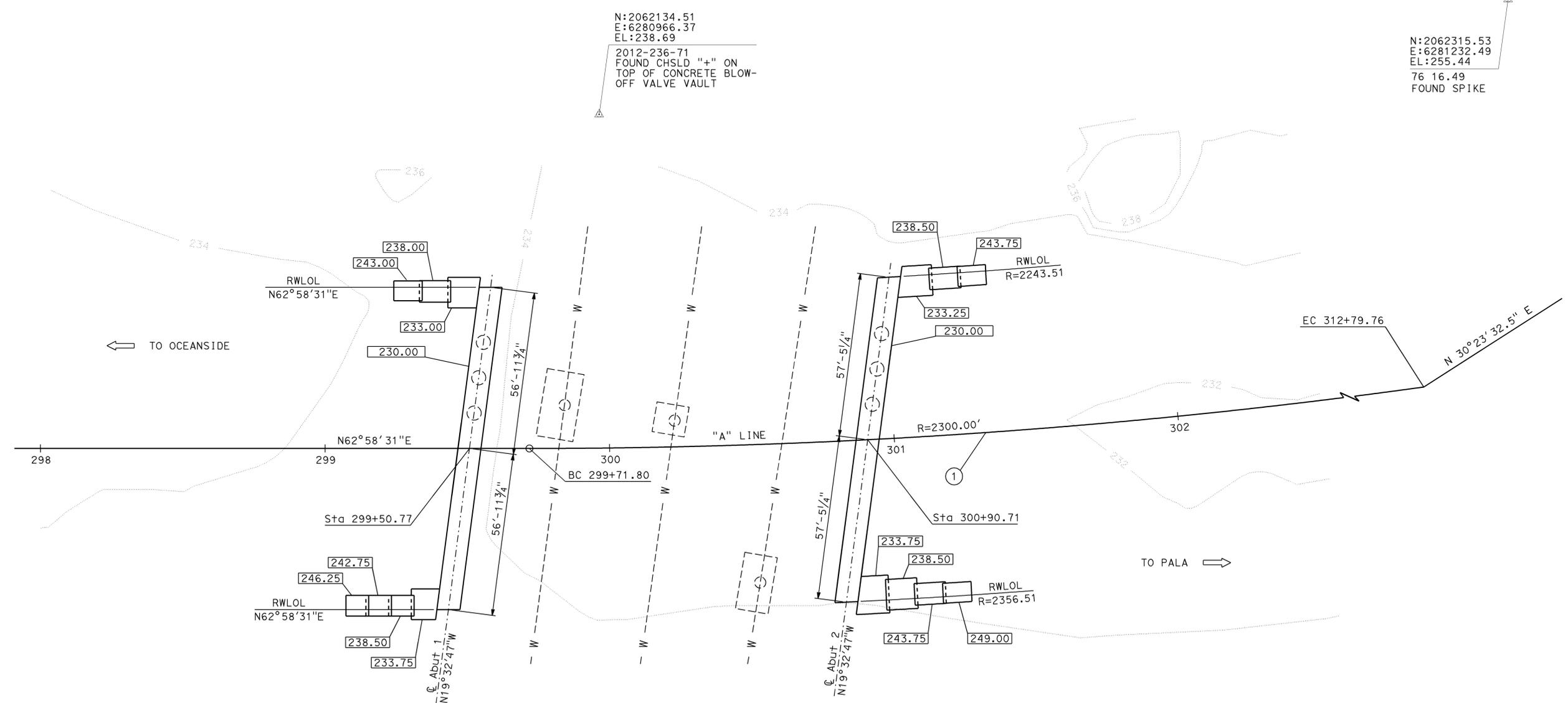
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8 R12.1/R17.7	1246	1273
			08-16-13	DATE	
			03-24-14	PLANS APPROVAL DATE	
REGISTERED CIVIL ENGINEER RYAN STILTZ No. C65738 Exp. 9/30/15 CIVIL STATE OF CALIFORNIA					
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No.	R	Δ	T	L
①	2300.00'	32°34'58.4"	672.19'	1307.96'

NOTES:

- Indicates Bottom of footing elevation.
- Existing contours shown, for final contours, see "ROADWAY PLANS".
- For footing dimensions and pile layout, see "ABUTMENT 1 LAYOUT" and "ABUTMENT 2 LAYOUT" sheets.
- Underground utilities as shown are approximate. See "ROADWAY PLANS" for details.



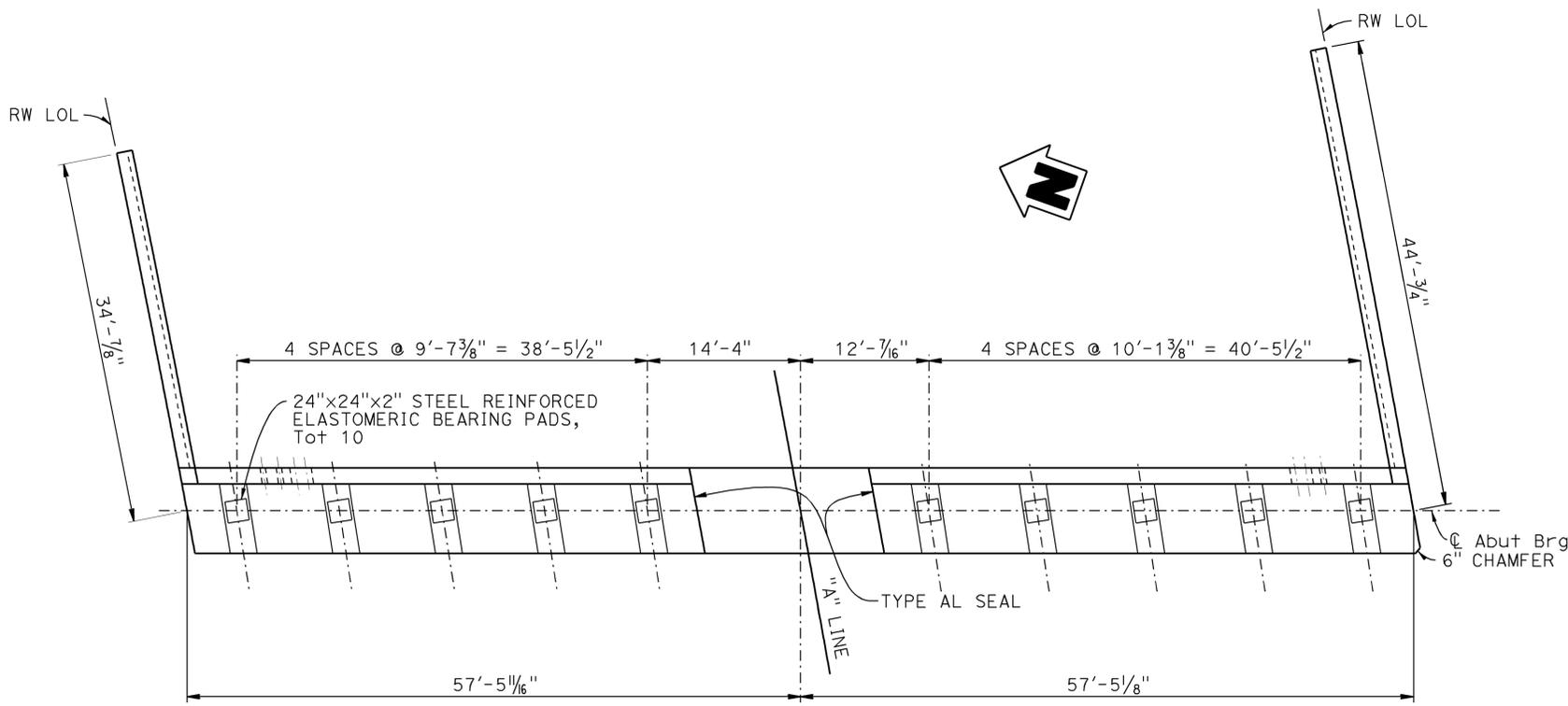
N:2062134.51
E:6280966.37
EL:238.69
2012-236-71
FOUND CHSLD "+" ON
TOP OF CONCRETE BLOW-
OFF VALVE VAULT

N:2062315.53
E:6281232.49
EL:255.44
76 16.49
FOUND SPIKE

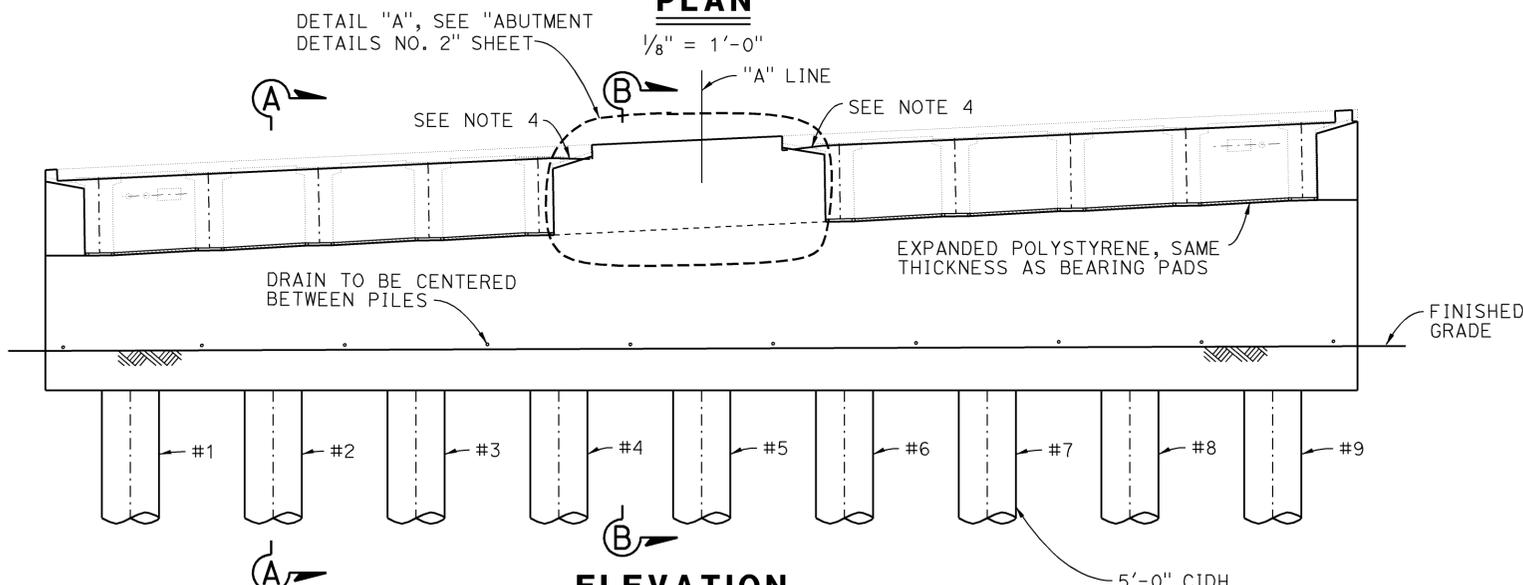
DISTRICT SURVEY SECTION				DESIGN BY L. Wu	CHECKED R. Stiltz	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 57-1235L/R	SDCWA PIPELINE OVERCROSSING FOUNDATION PLAN		
SCALE VERT. DATUM NAVD1988	PHOTOGRAMMETRY AS OF: X	DETAILS BY P. Perez/G. Hallstrom	CHECKED R. Stiltz	POST MILE R16.33							
ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED BY P. Perez	CHECKED BY M. Wartenberg	CHECKED D. Azzam/F. Chen								
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3623	PROJECT NUMBER & PHASE: 11000204891	CONTRACT NO.: 11-257151	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 4 OF 21

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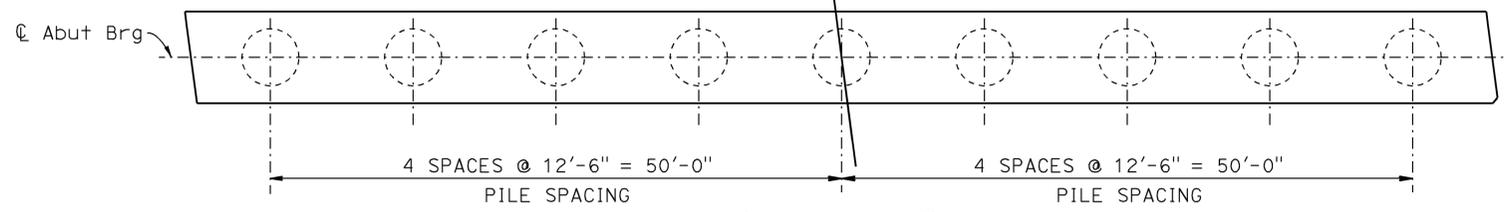
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1248	1273
			08-16-13		
			REGISTERED CIVIL ENGINEER		
			DATE		
			03-24-14		
			PLANS APPROVAL DATE		
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PLAN

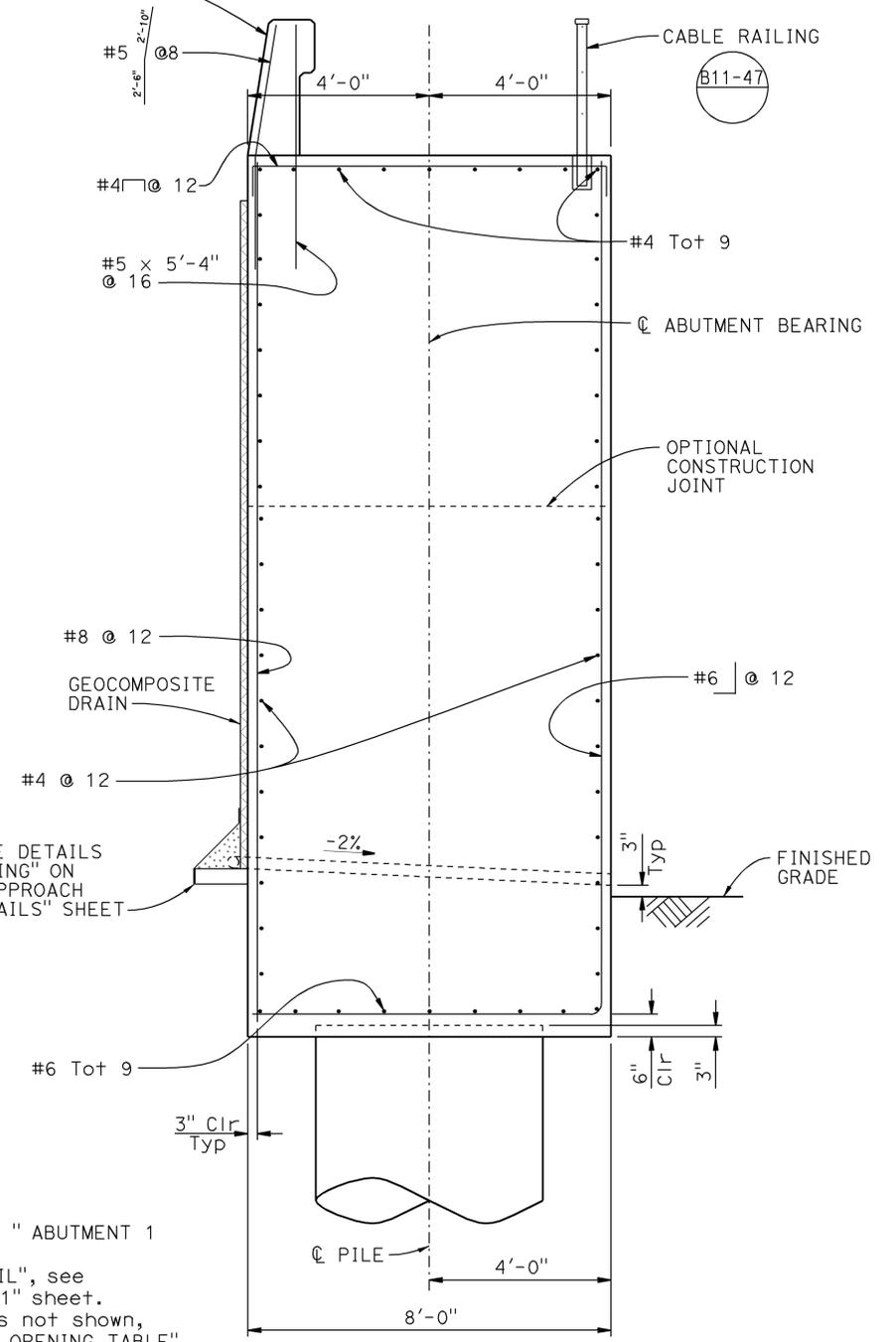


ELEVATION



PILE LAYOUT

Conc BARRIER TYPE 736 (Mod)



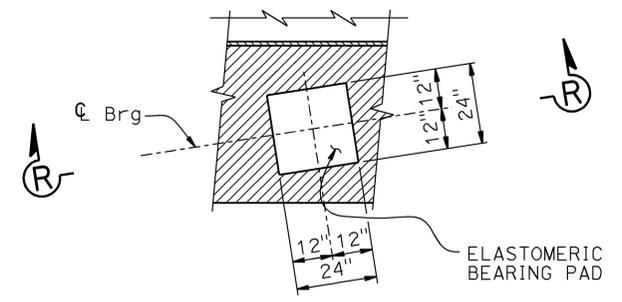
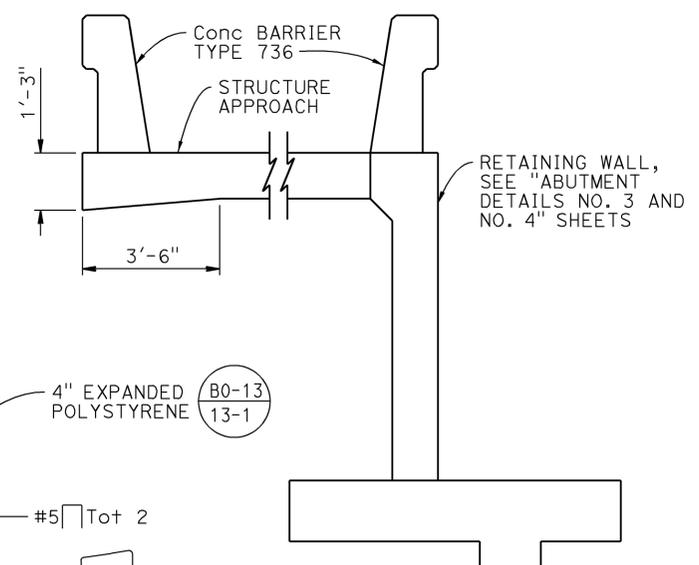
SECTION B-B

NOTES:

1. For "SECTION A-A", see "ABUTMENT 1 LAYOUT" sheet.
2. For "BEARING PAD DETAIL", see "ABUTMENT DETAILS NO. 1" sheet.
3. Utility opening details not shown, see "UTILITY & UTILITY OPENING TABLE" on "TYPICAL SECTION" sheet.
4. Top of backwall taper to match bottom of approach slab, see "SECTION D-D" on "ABUTMENT DETAILS NO. 1" sheet.

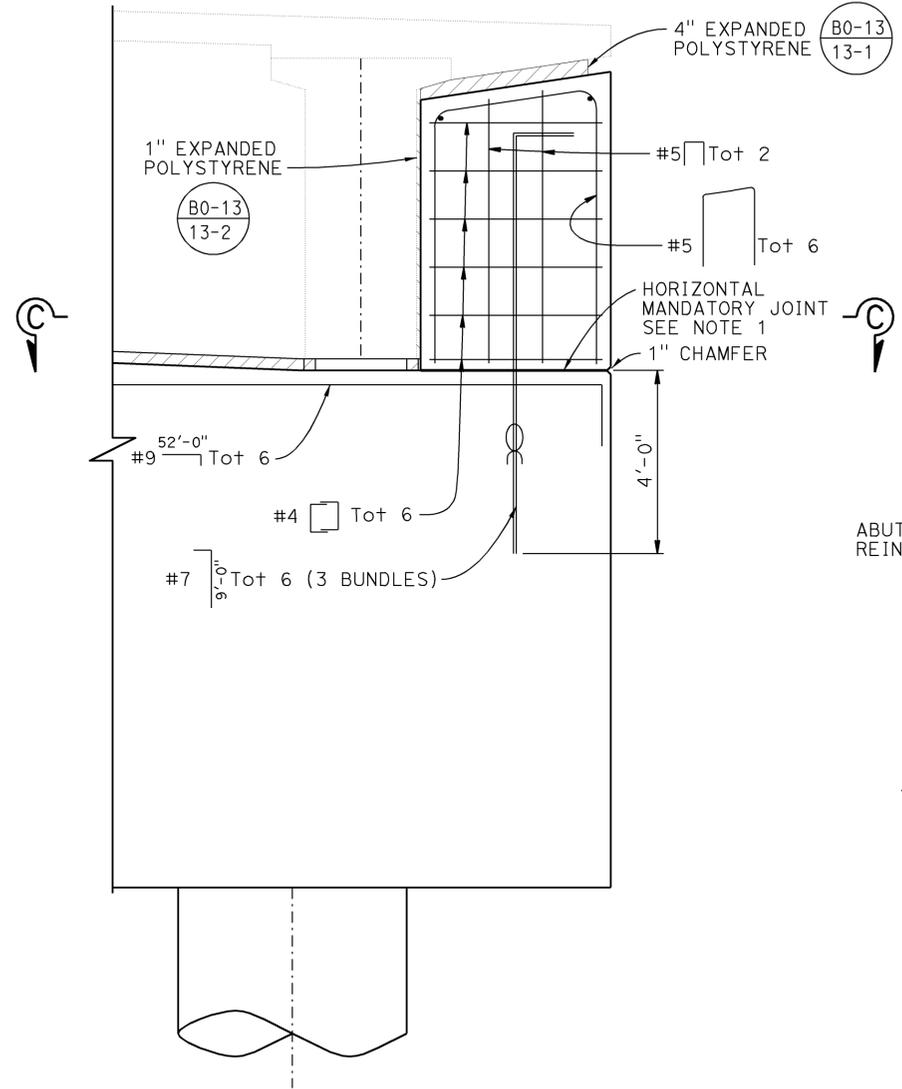
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY L. Wu	CHECKED R. Stiltz	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	57-1235L/R	SDCWA PIPELINE OVERCROSSING ABUTMENT 2 LAYOUT					
	DETAILS	BY G. Hallstrom	CHECKED R. Stiltz			POST MILE	R16.33						
	QUANTITIES	BY L. Wu	CHECKED D. Azzam/F. Chen										
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0	1	2	3	UNIT: 3589 PROJECT NUMBER & PHASE: 11000204891	CONTRACT NO.: 11-257151	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 6	OF 21

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1249	1273
			08-16-13	REGISTERED CIVIL ENGINEER DATE	
			03-24-14	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER RYAN STILTZ No. C65738 Exp. 9/30/15 CIVIL STATE OF CALIFORNIA		
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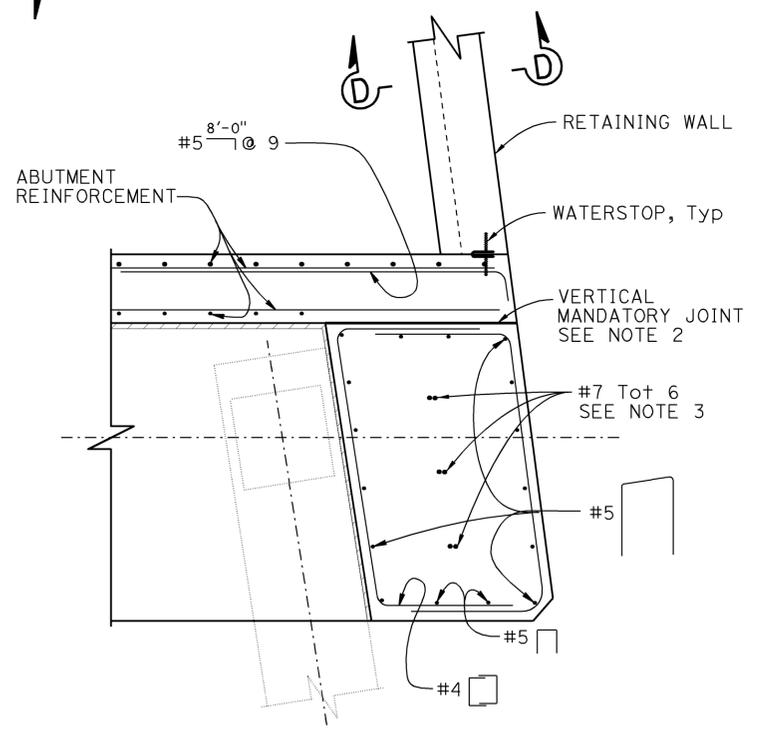


**SECTION R-R
BEARING PAD DETAIL**
No Scale
Details typical at all bearing pads

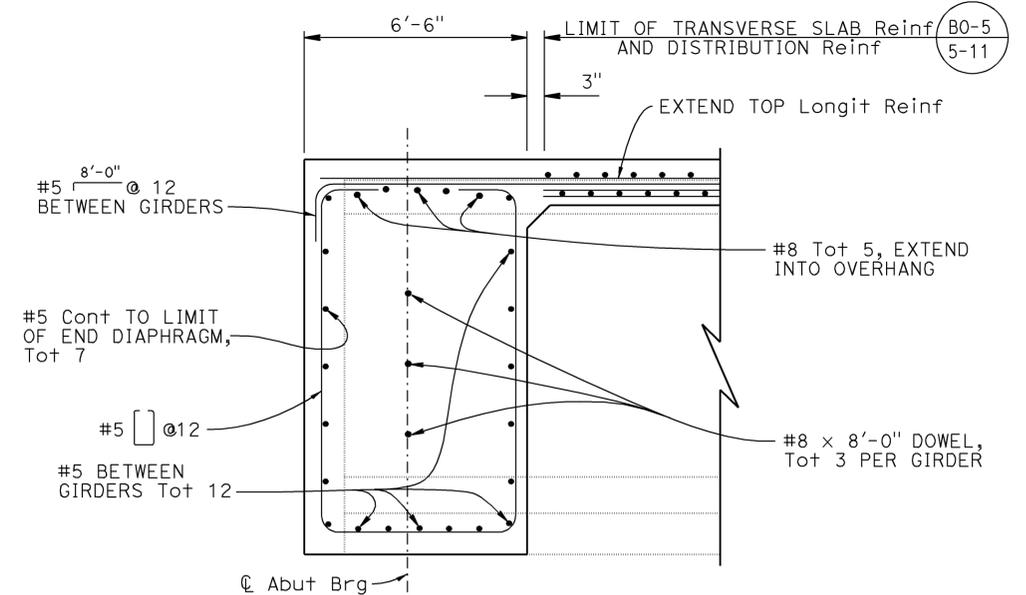
- NOTES:
- Horizontal Mandatory Joint, level both directions, surface to be smooth finished and lined with 15 pound construction paper.
 - Vertical Mandatory Joint surface to be smooth finished and lined with 15 pound construction paper.
 - Vertical Shear Key reinforcing, #7, to be galvanized.
- ⊗ Indicates bundled rebar



SHEAR KEY DETAIL
 $1/2" = 1'-0"$



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



END DIAPHRAGM
No Scale

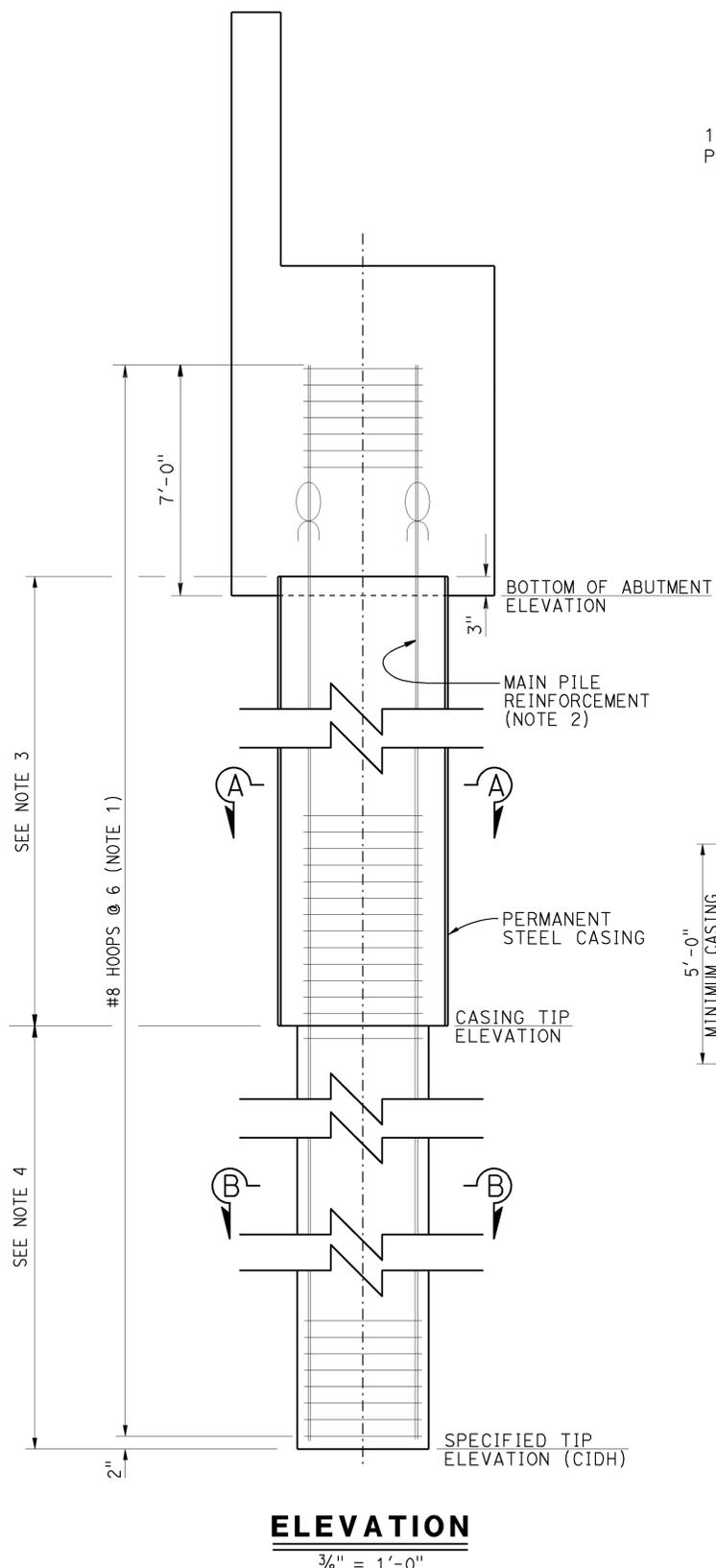
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY L. Wu	CHECKED R. Stiltz	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	SDCWA PIPELINE OVERCROSSING ABUTMENT DETAILS NO. 1
	DETAILS	BY G. Hallstrom	CHECKED R. Stiltz			57-1235L/R	
	QUANTITIES	BY L. Wu	CHECKED D. Azzam/F. Chen			POST MILE R16.33	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3589	PROJECT NUMBER & PHASE: 11000204891	CONTRACT NO.: 11-257151	DISREGARD PRINTS BEARING EARLIER REVISION DATES
				0	1	2	3
				REVISION DATES		SHEET	OF
						7	21

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1250	1273

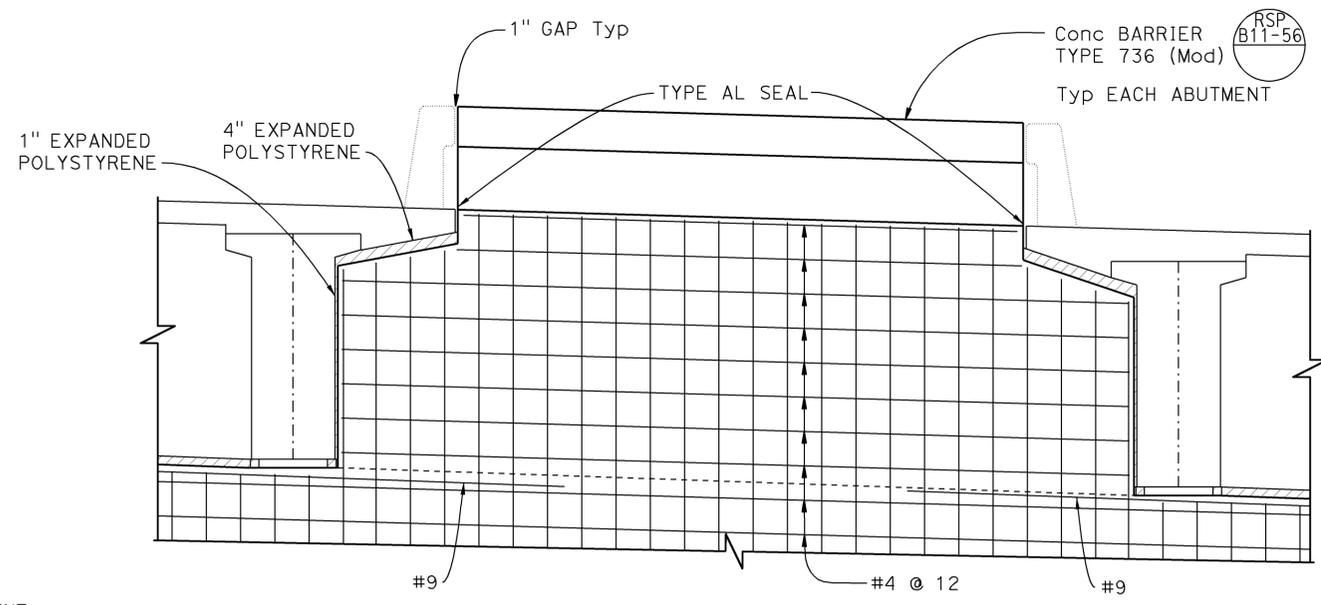
REGISTERED CIVIL ENGINEER	DATE 08-16-13
PLANS APPROVAL DATE 03-24-14	

REGISTERED PROFESSIONAL ENGINEER	RYAN STILTZ
No. C65738	Exp. 9/30/15
CIVIL	

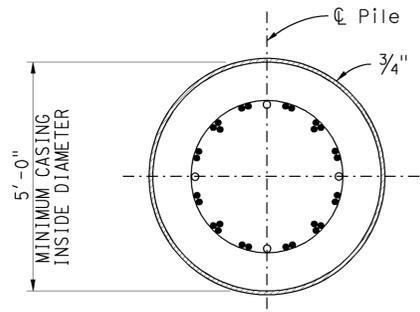
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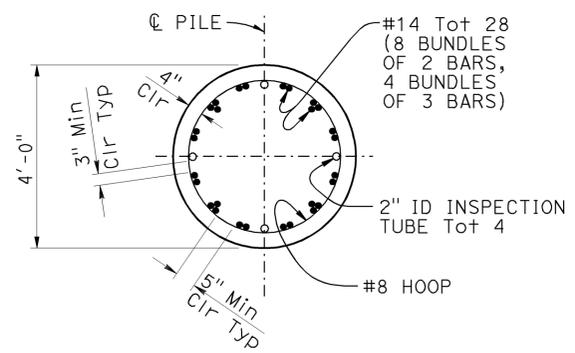
ELEVATION
3/8" = 1'-0"



DETAIL A
3/8" = 1'-0"



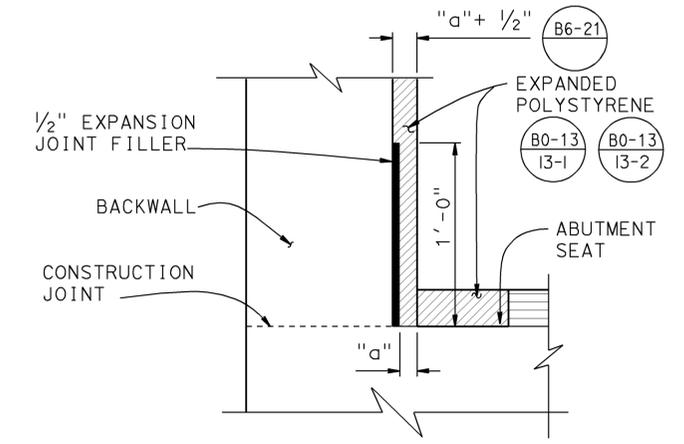
SECTION A-A
1/2" = 1'-0"



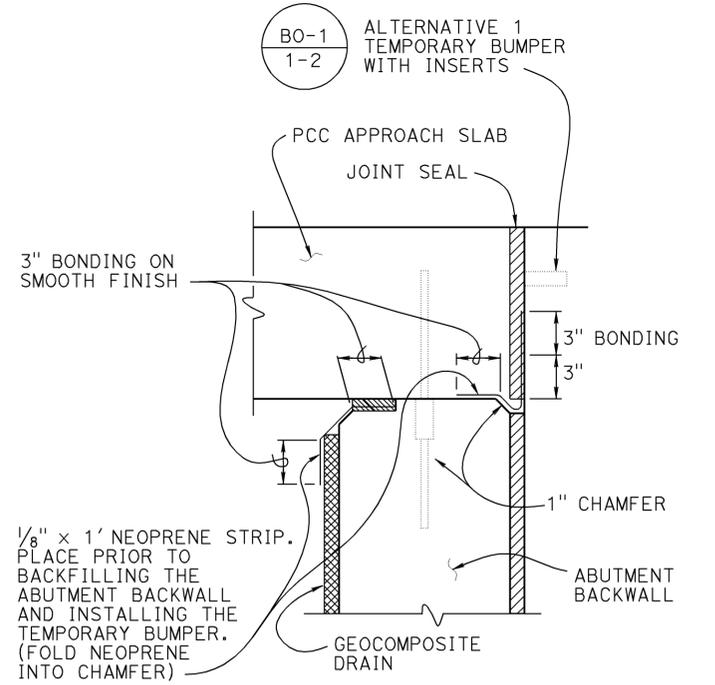
SECTION B-B
1/2" = 1'-0"

- NOTES:
- All Hoops are "Ultimate" butt spliced continuous.
 - Only Staggered "Ultimate" butt splices are allowed in main Pile Reinforcement.
 - Limits of payment for 5'-0" CIDH Concrete Piling, and permanent steel casing.
 - Limits of payment for 4'-0" CIDH Concrete Piling.
 - For "PILE DATA TABLE", see "INDEX TO PLANS" sheet.
 - For location of "DETAIL A", see "ABUTMENT 1 LAYOUT" and "ABUTMENT 2 LAYOUT" sheets.
 - For location of "DETAIL B", see "ABUTMENT 1 LAYOUT" sheet.

⊗ Indicates bundled rebar



DETAIL "B"
No Scale



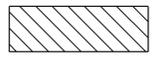
JOINT PROTECTION DETAIL
No Scale

NOTE: For details not shown, see "STRUCTURE APPROACH TYPE N(30S)" sheet.

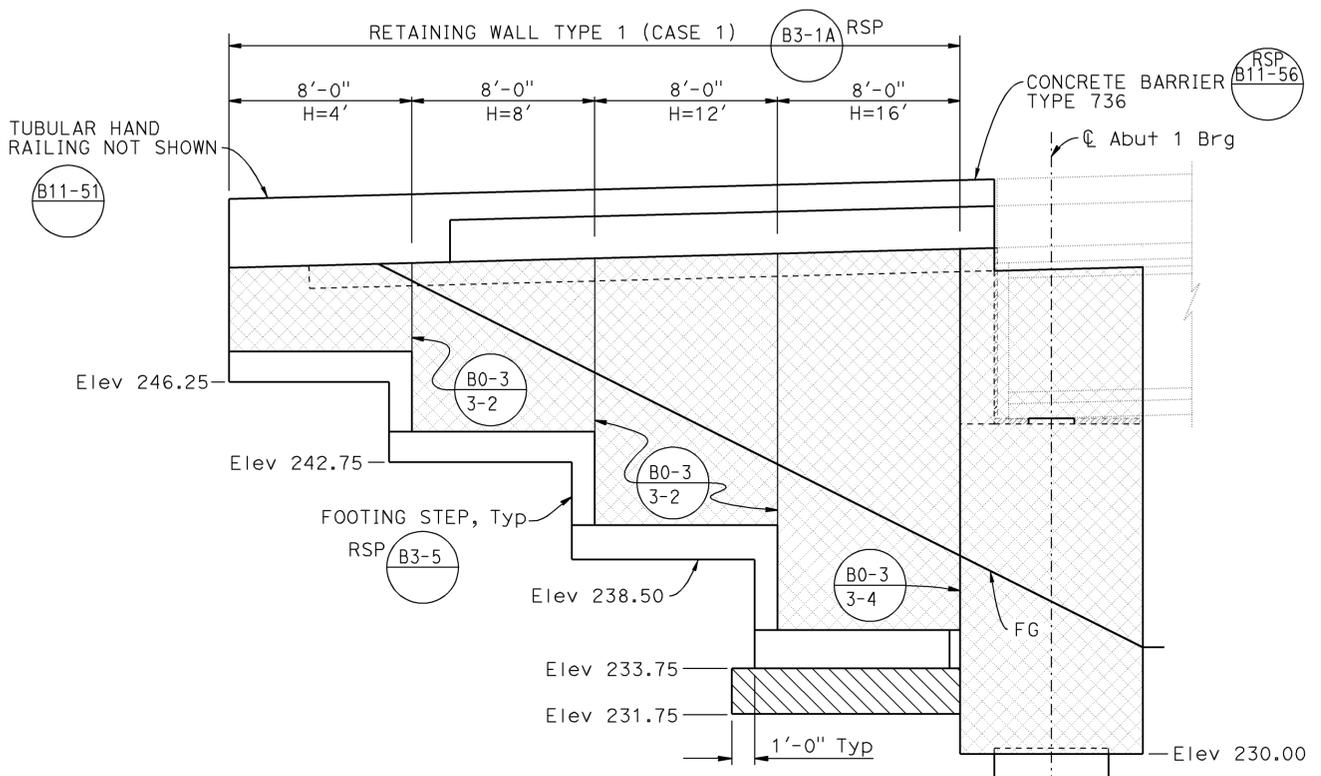
DESIGN	BY	L. Wu	CHECKED	R. Stiltz	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	57-1235L/R	SDCWA PIPELINE OVERCROSSING ABUTMENT DETAILS NO. 2	
	DETAILS	BY	G. Hallstrom	CHECKED			R. Stiltz	POST MILE		R16.33
QUANTITIES	BY	L. Wu	CHECKED	D. Azzam/F. Chen	UNIT: 3589	PROJECT NUMBER & PHASE: 11000204891	CONTRACT NO.: 11-257151	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 8 OF 21

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8 R12.1/R17.7	1251	1273

REGISTERED CIVIL ENGINEER
 DATE 08-16-13
 PLANS APPROVAL DATE 03-24-14
 RYAN STILTZ
 No. C65738
 Exp. 9/30/15
 CIVIL
 STATE OF CALIFORNIA
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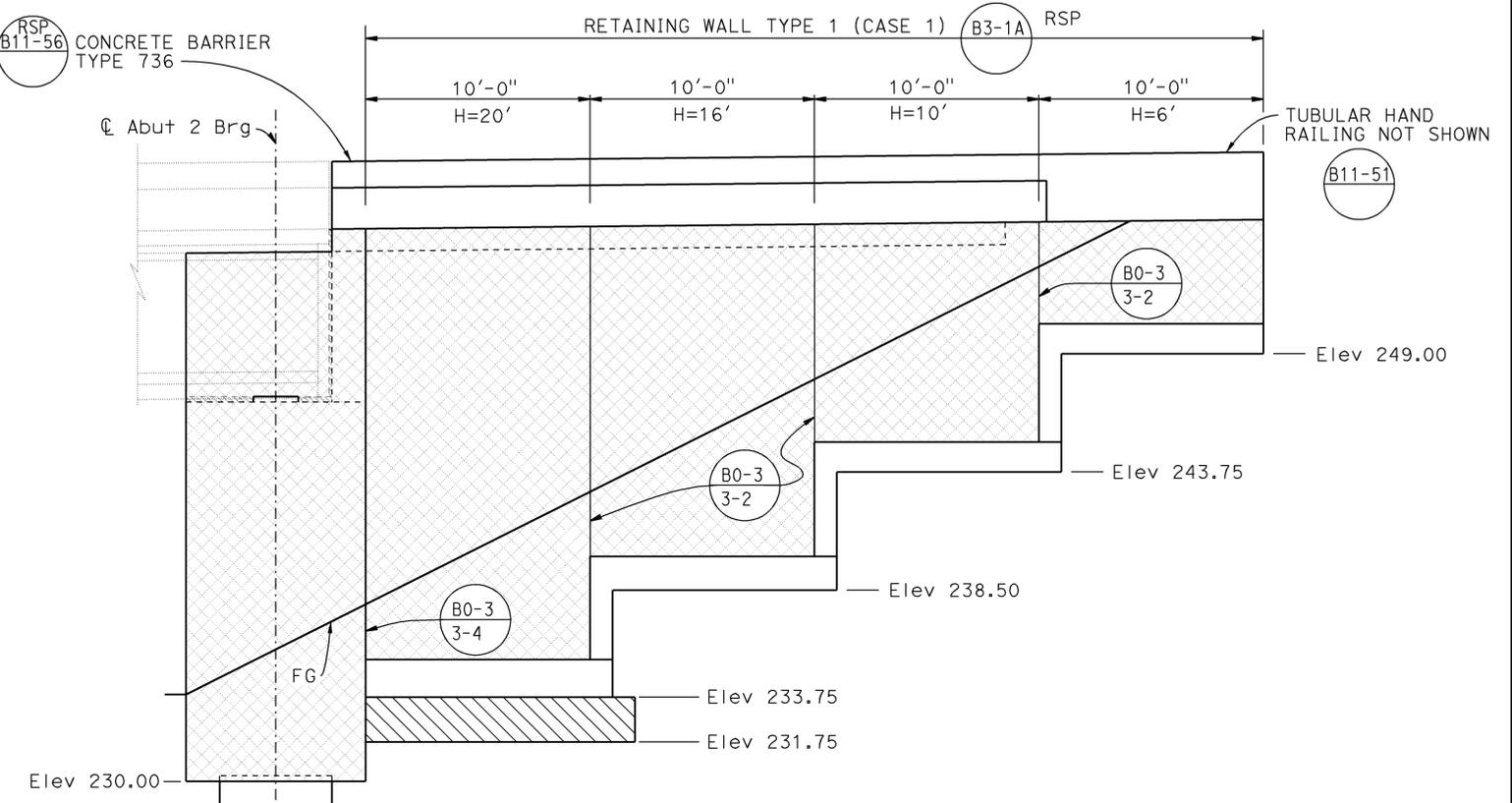
 Limits of Color Concrete
 Limits of over-excavation and structural backfill

NOTE: For wall design height=16', use #7 'd' bars @ S=6".
 For location of 'd' bars, see 



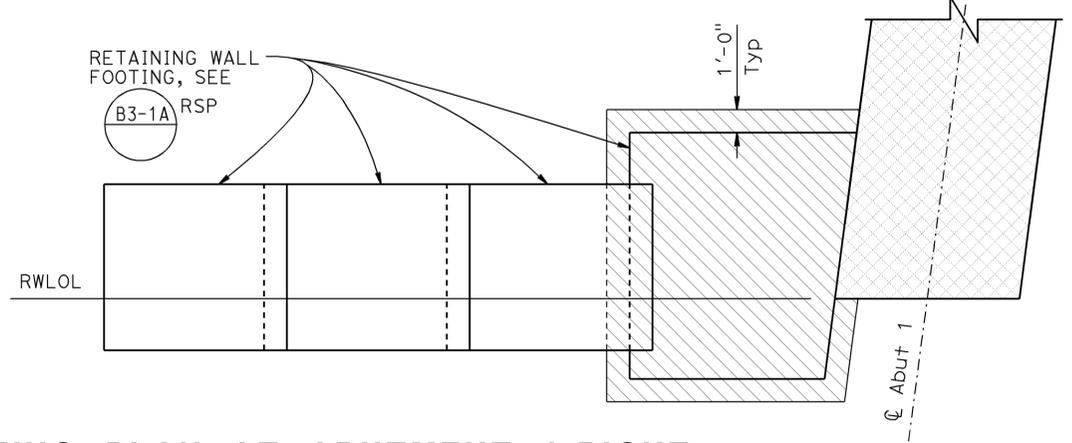
RETAINING WALL AT ABUTMENT 1 RIGHT

1/4" = 1'-0"



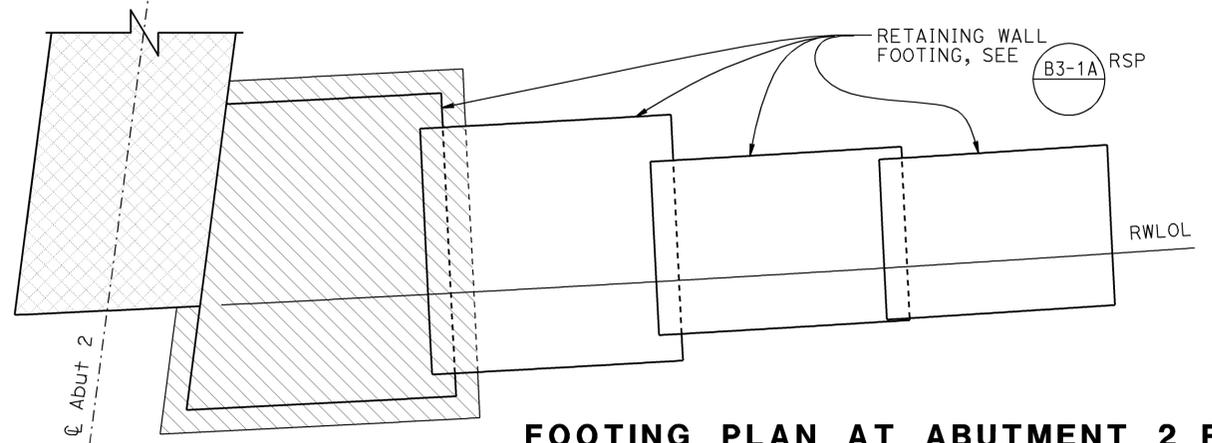
RETAINING WALL AT ABUTMENT 2 RIGHT

1/4" = 1'-0"



FOOTING PLAN AT ABUTMENT 1 RIGHT

1/4" = 1'-0"



FOOTING PLAN AT ABUTMENT 2 RIGHT

1/4" = 1'-0"

DESIGN	BY L. Wu	CHECKED R. Stiltz
DETAILS	BY G. Hallstrom	CHECKED R. Stiltz
QUANTITIES	BY L. Wu	CHECKED D. Azzam/F. Chen

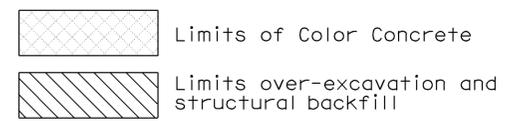
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 10
 BRIDGE NO. 57-1235L/R
 POST MILE R16.33

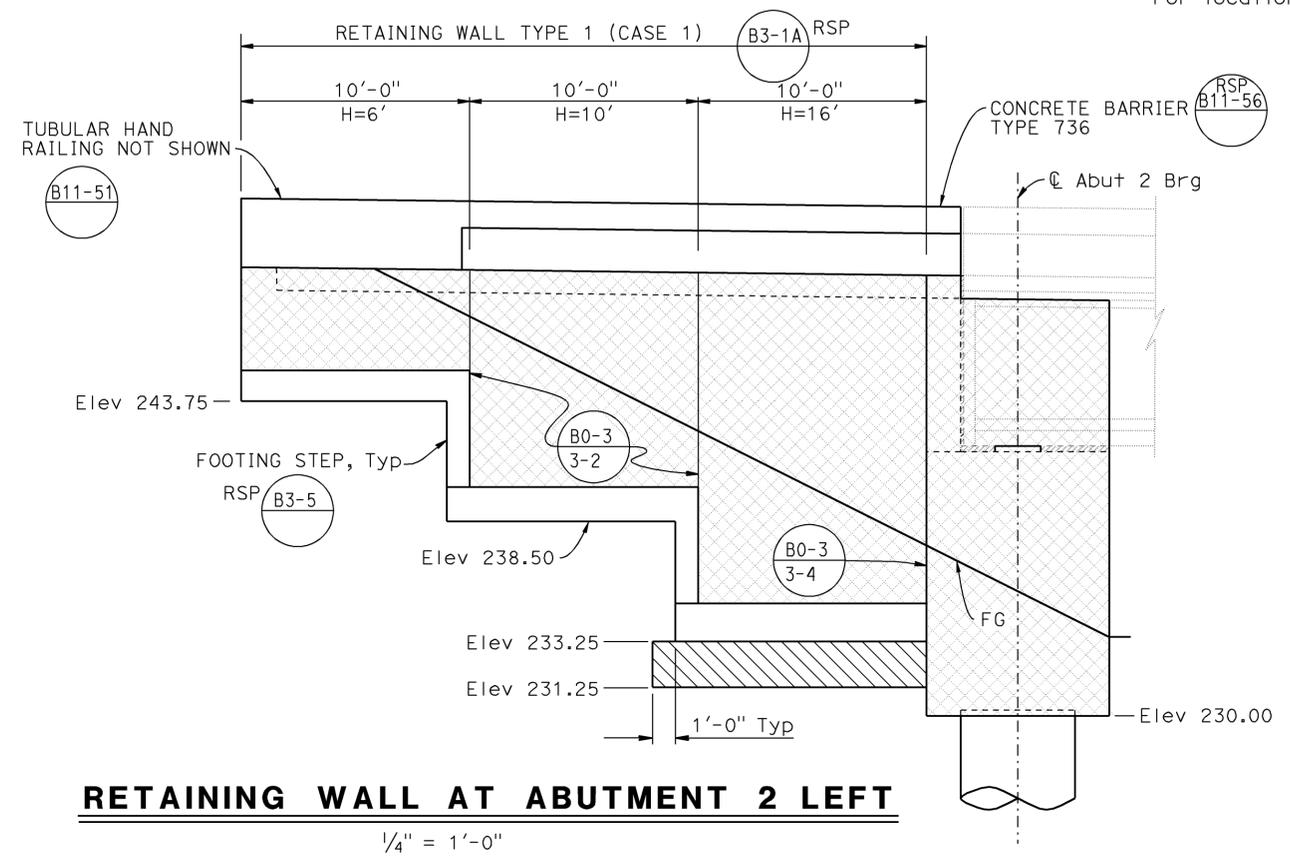
SDCWA PIPELINE OVERCROSSING
ABUTMENT DETAILS NO. 3

USERNAME => s136307 DATE PLOTTED => 12-AUG-2013 TIME PLOTTED =>

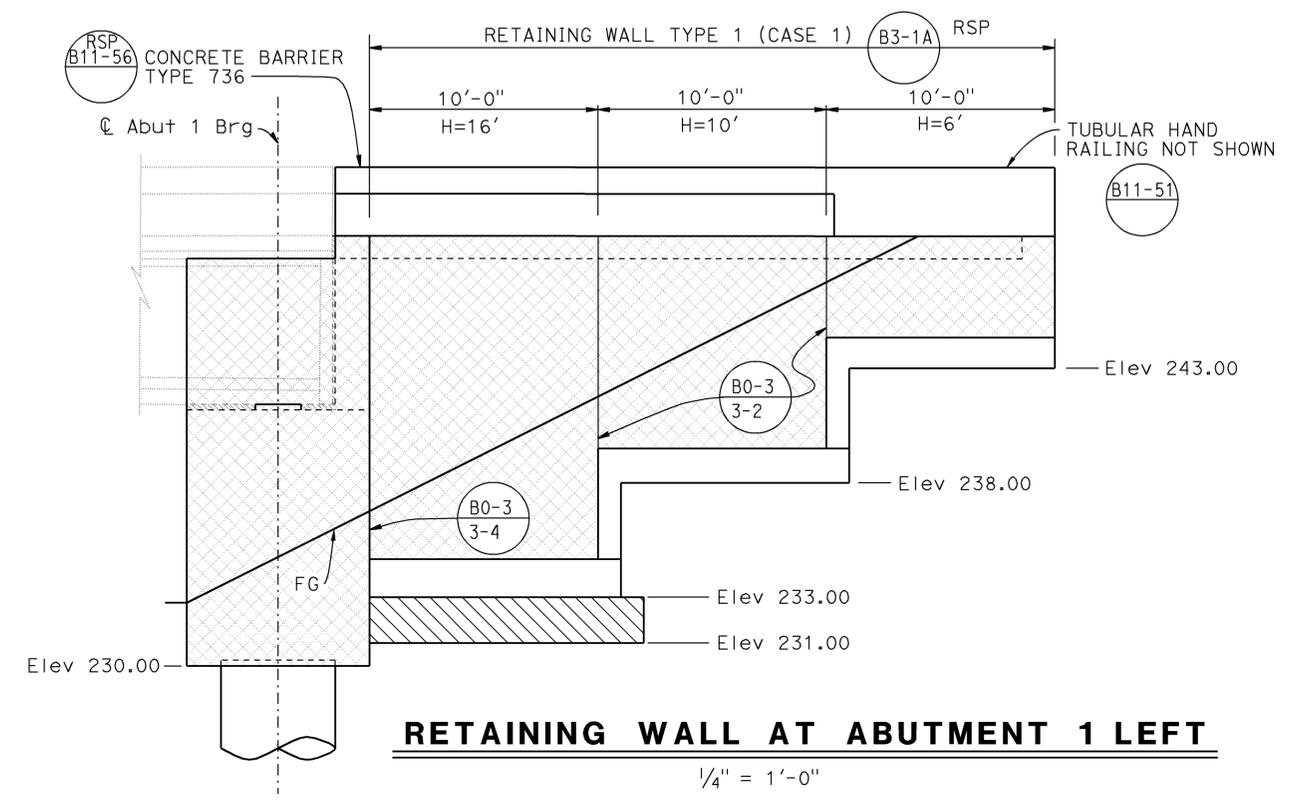
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11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1252	1273
REGISTERED CIVIL ENGINEER			DATE	08-16-13	
PLANS APPROVAL DATE			03-24-14		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.			REGISTERED PROFESSIONAL ENGINEER RYAN STILTZ No. C65738 Exp. 9/30/15 CIVIL STATE OF CALIFORNIA		



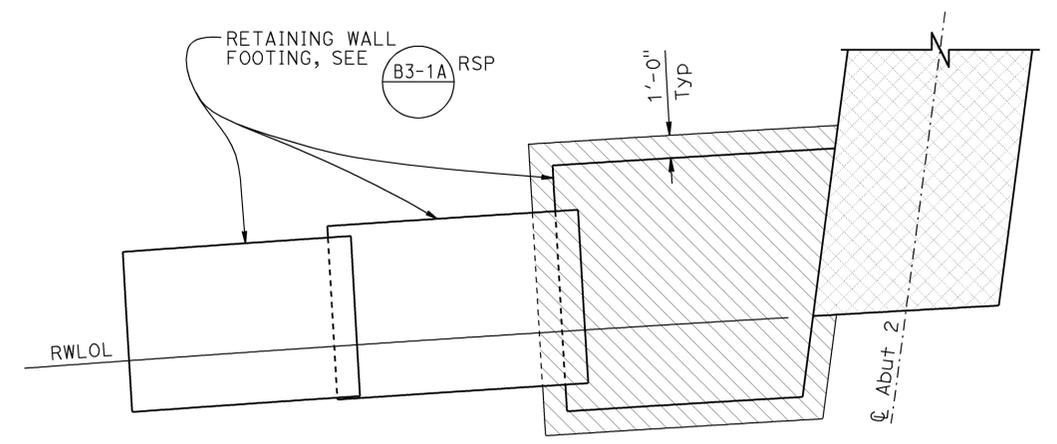
NOTE: For wall design height=16', use #7 'd' bars @ S=6".
 For location of 'd' bars, see RSP B3-1A



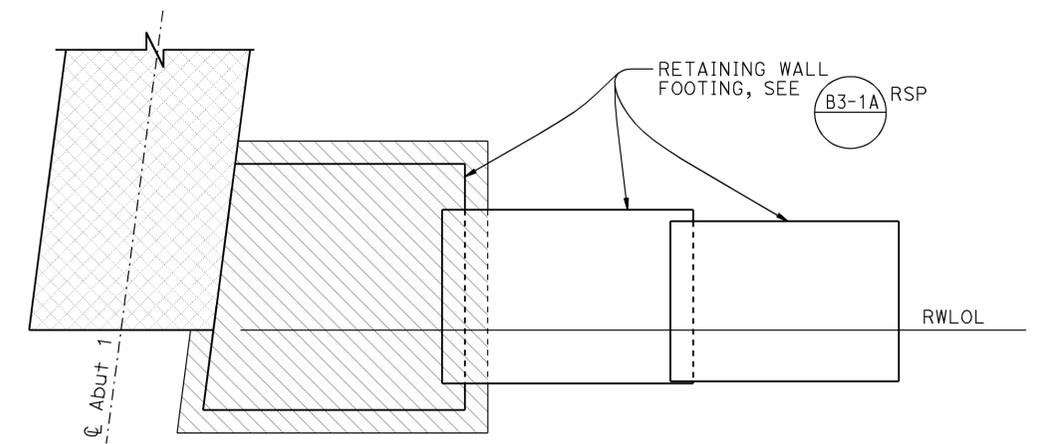
RETAINING WALL AT ABUTMENT 2 LEFT



RETAINING WALL AT ABUTMENT 1 LEFT



FOOTING PLAN AT ABUTMENT 2 LEFT



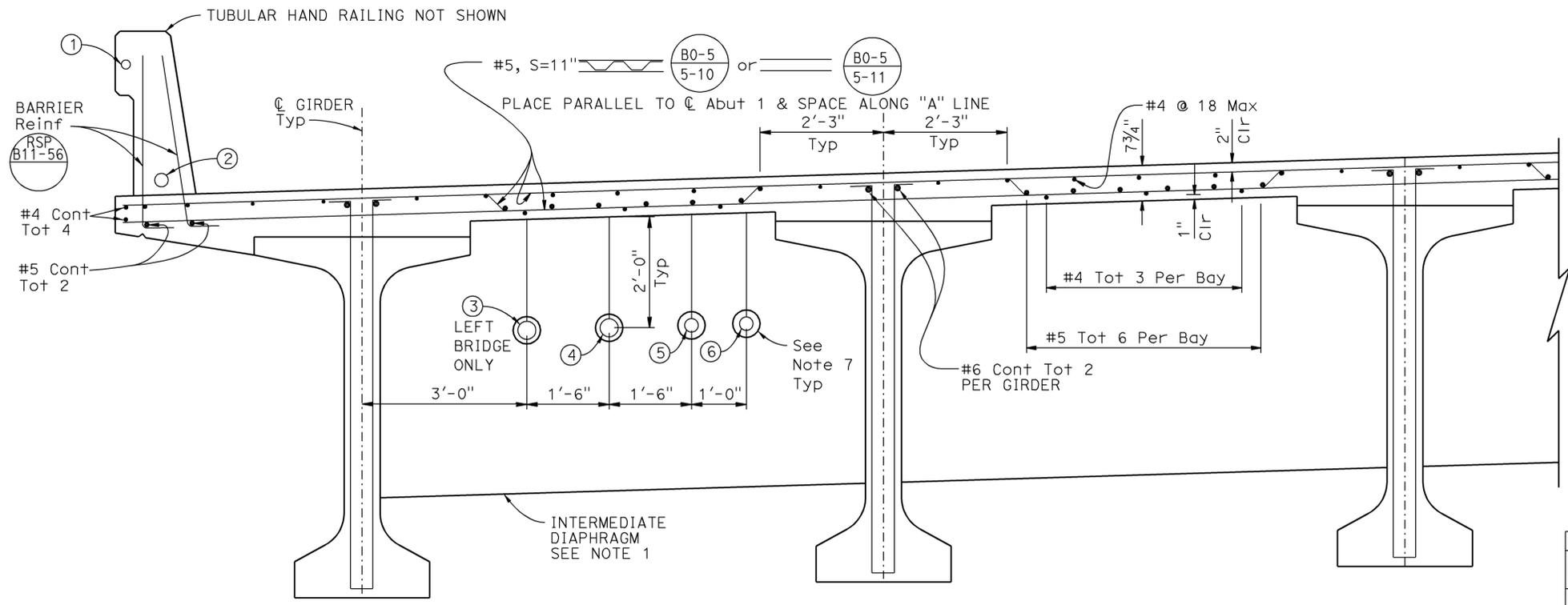
FOOTING PLAN AT ABUTMENT 1 LEFT

DESIGN	BY L. Wu	CHECKED R. Stiltz
DETAILS	BY G. Hallstrom	CHECKED R. Stiltz
QUANTITIES	BY L. Wu	CHECKED D. Azzam/F. Chen

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

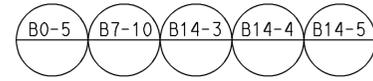
DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO. 57-1235L/R
 POST MILE R16.33
SDCWA PIPELINE OVERCROSSING
ABUTMENT DETAILS NO. 4



PART TYPICAL SECTION

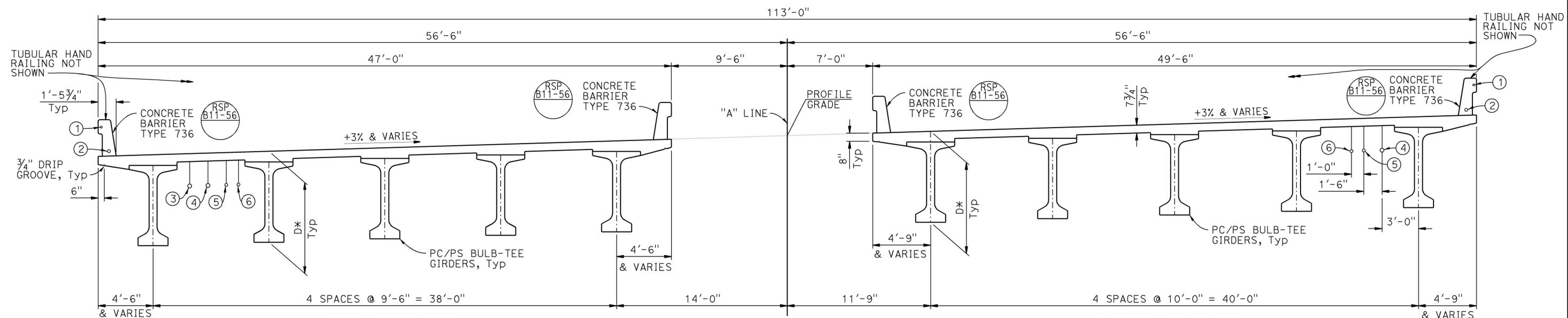
$\frac{3}{4}'' = 1'-0''$



NOTES:

- For Intermediate Diaphragm Details, see "PC/PS BULB-TEE GIRDER (MISCELLANEOUS DETAILS)" sheet.
- For details not shown, see "PC/PS BULB-TEE GIRDER (DEBONDED STRANDS)" sheet.
- For 3" Water Supply Lines, see Standard Plans B14-4 and B14-5. 3" Water Supply Lines are to share 2' wide x 1' high opening at end diaphragms.
- For 2" Signal and Lighting, and 3" Sprinkler Control in Barrier Rail, see Standard Plan B14-3.
- For 4" Closed Circuit TV & 4" Irrigation electrical, see Standard Plan B14-3. Use Rod, Strap, and Support Spacing for 3/2" Conduit.
- For additional reinforcement at abutment back wall, end diaphragm, and intermediate diaphragm, see Standard Plan B7-10.
- For utility opening size at end diaphragms and intermediate diaphragms, see table below.

UTILITY & UTILITY OPENING TABLE					
LOCATION	UTILITY	OWNER	CONDUIT SIZE	OPENING SIZE @ END DIAPH	OPENING SIZE @ INT DIAPH
①	Signal and Lighting (Bridge)(see "Road Plans")	Caltrans	2"	N/A	N/A
②	Sprinkler Control (see "Road Plans")	Caltrans	3"	N/A	N/A
③	Closed Circuit TV (see "Road Plans")	Caltrans	4"	6" Diameter	6" Diameter
④	Irrigation Electrical (see "Road Plans")	Caltrans	4"	6" Diameter	6" Diameter
⑤	Water Supply Line	Caltrans	3"	1'-0"Hx2'-0"W	6" Diameter
⑥	Water Supply Line	Caltrans	3"	1'-0"Hx2'-0"W	6" Diameter



LEFT BRIDGE

TYPICAL SECTION

$\frac{1}{4}'' = 1'-0''$

RIGHT BRIDGE

* D = 7'-5 1/4" Min AT SUPPORT
 D = 7'-3 1/2" Min AT MIDSPAN

DESIGN	BY L. Wu	CHECKED R. Stiltz
DETAILS	BY G. Hallstrom	CHECKED R. Stiltz
QUANTITIES	BY L. Wu	CHECKED D. Azzam/F. Chen

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

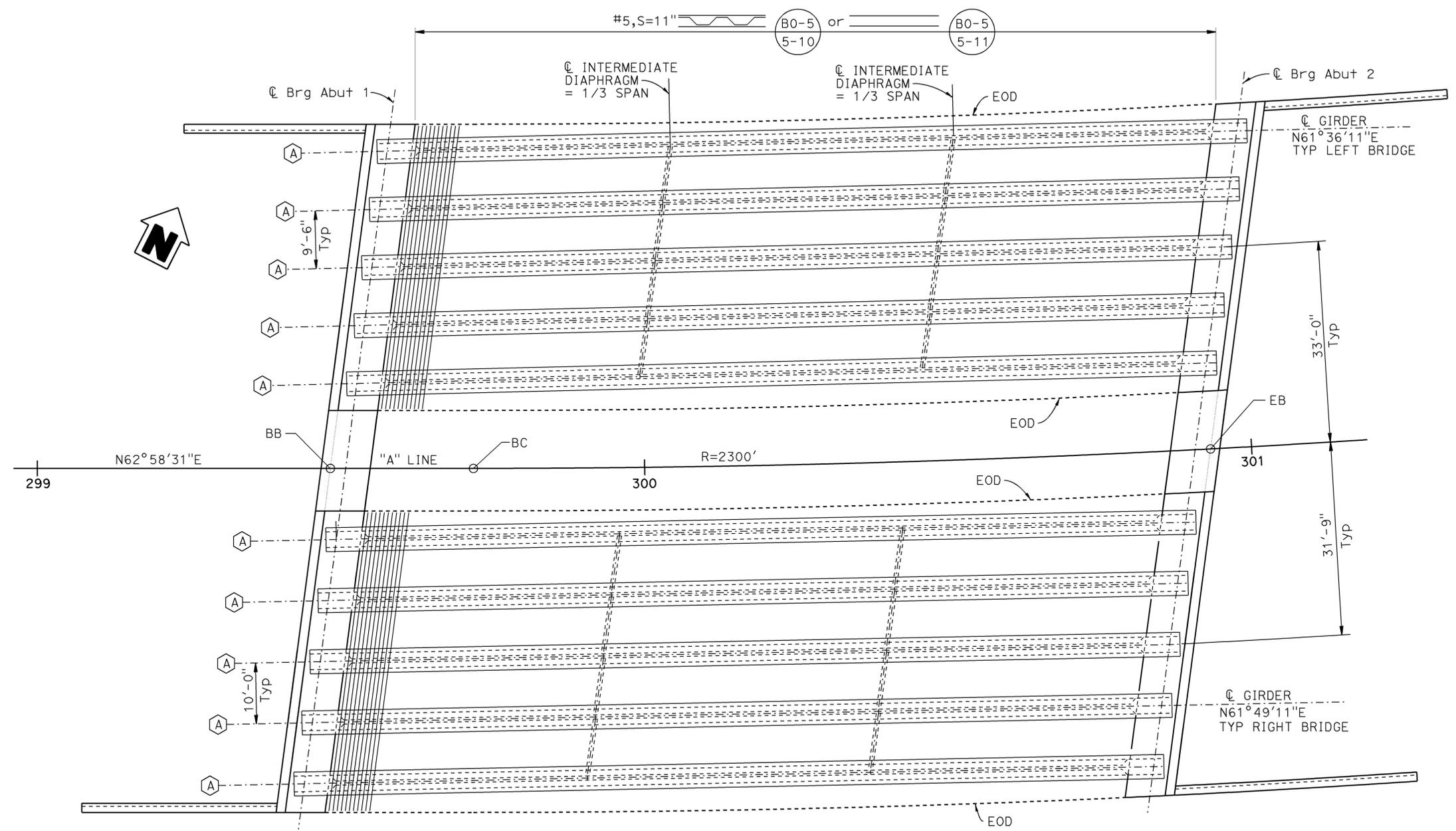
DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	57-1235L/R
POST MILE	R16.33

SDCWA PIPELINE OVERCROSSING
TYPICAL SECTION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8 R12.1/R17.7	1254	1273

REGISTERED CIVIL ENGINEER DATE 08-16-13
 PLANS APPROVAL DATE 03-24-14
 RYAN STILTZ
 No. C65738
 Exp. 9/30/15
 CIVIL
 STATE OF CALIFORNIA
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PLAN
1" = 10'-0"

DESIGN	BY R. Stiltz	CHECKED L. Wu
DETAILS	BY G. Hallstrom	CHECKED L. Wu
QUANTITIES	BY L. Wu	CHECKED D. Azzam/F. Chen

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	57-1235L/R
POST MILE	R16.33

SDCWA PIPELINE OVERCROSSING
GIRDER LAYOUT

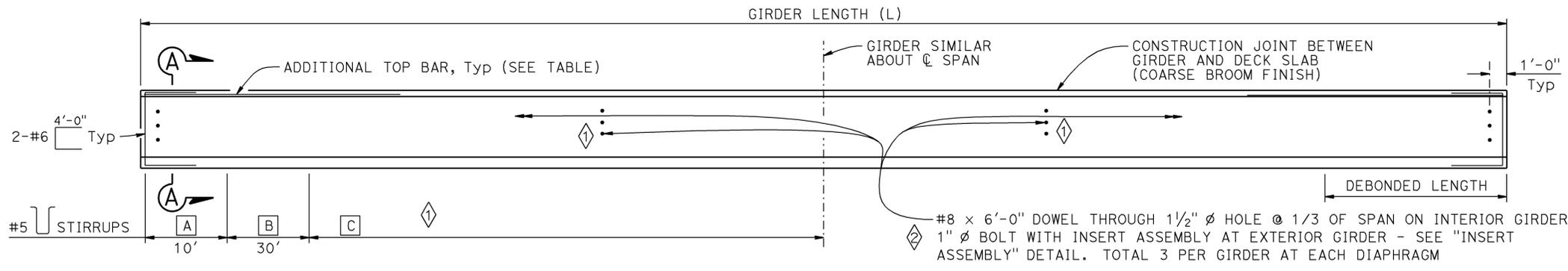
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1255	1273

08-16-13
REGISTERED CIVIL ENGINEER DATE

03-24-14
PLANS APPROVAL DATE

RYAN STILTZ
No. C65738
Exp. 9/30/15
CIVIL
STATE OF CALIFORNIA

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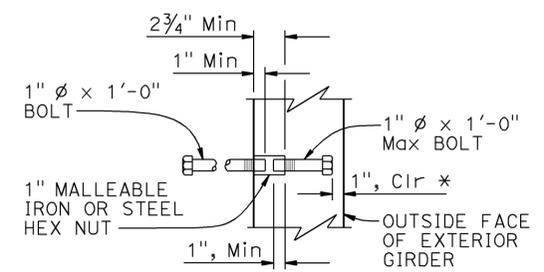


LOCATION	A	B	C
GIRDER A	#5 @ 6"	#5 @ 9"	#5 @ 12"
GIRDER B			
GIRDER C			
GIRDER (Etc)			

GIRDER ELEVATION

NOTE:
Girder ends to be cast such that a level surface is provided at bearing pads

LOCATION	GIRDER LENGTH (L)	GIRDER DEPTH (D)	NUMBER OF 0.6" Ø STRANDS	JACKING FORCE (P)	CONCRETE STRENGTH (ksi)		MIDSPAN DEAD LOAD DEFLECTION (In)		ADDITIONAL TOP BAR (EACH END)
					f'ci	f'c	DECK	RAIL	
GIRDER A	143'-3"	6'-6 3/4"	58	2552 kips (44 kips/STRAND)	7.0	8.0	4.50	0.52	#8 x 30 Tot 8
GIRDER B									
GIRDER C									
GIRDER (Etc)									

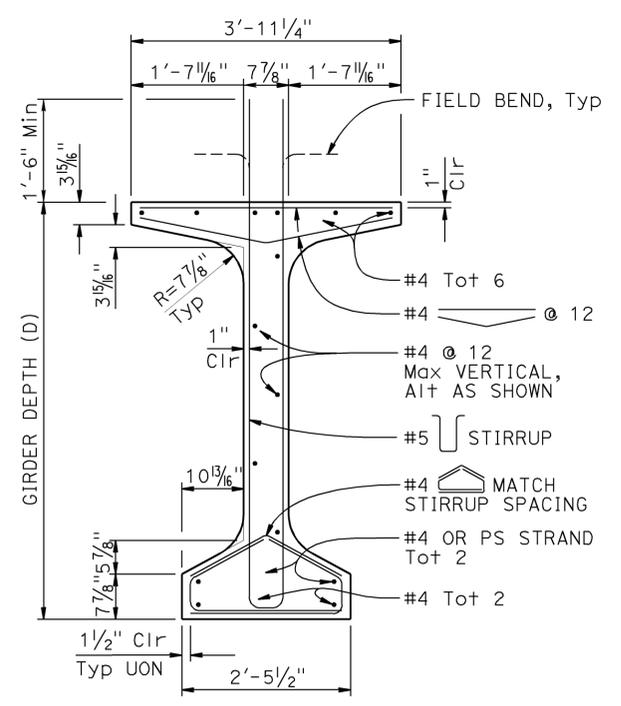


* DIMENSION MAY BE INCREASED WHEN INSERT ASSEMBLY IS USED AT END BLOCK

INSERT ASSEMBLY

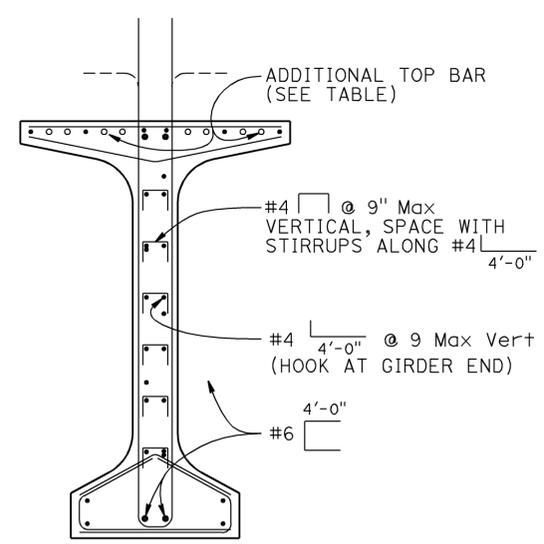
PRESTRESSING NOTES

- The Jacking Force (P) is the jacking force required at the point of control along the span. The jacking force does not include any fabrication specific losses
- The maximum temporary tensile stress (jacking stress) in the prestressing steel shall not exceed 80% of the specified minimum ultimate tensile strength of the prestressing steel
- Concrete strength:
f'ci is at time of initial stressing
f'c is at 28 days
- Deflection components are informational and will be used to set screed line elevations
- Screed line elevations for deck concrete will be determined by the Engineer
- Prestressing strand shall be 270 ksi low relaxation



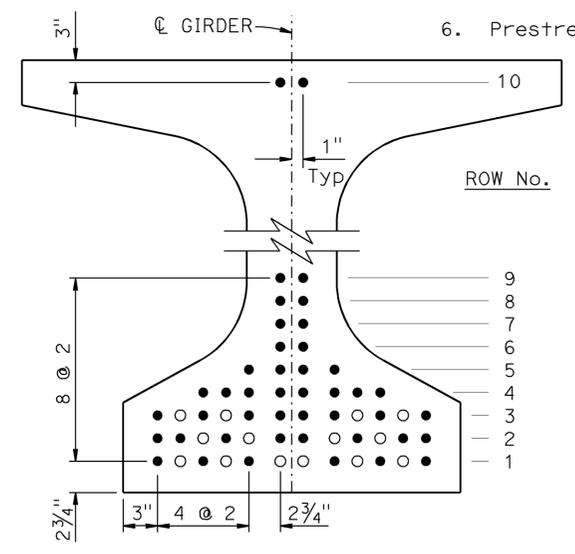
TYPICAL GIRDER SECTION

NOTE: For "WELDED WIRE REINFORCEMENT (WWR) ALTERNATIVE", see "PC/PS BULB-TEE GIRDER (MISCELLANEOUS DETAILS)" sheet



SECTION A-A

NOTE:
For details not shown, see "TYPICAL GIRDER SECTION" detail



LEGEND:
● DENOTES CONTINUOUSLY BONDED STRAND LOCATION
○ DENOTES PERMISSIBLE DEBONDED STRAND LOCATION

STRAND TEMPLATE & DEBONDING PATTERN

- NOTES:
- Strands shall be placed as low as possible in the strand template and symmetrical about CL Girder
 - No more than 33% of the total number of strands and 50% of the strands per horizontal row may be debonded
 - Strand locations may be adjusted as approved by the Engineer

GIRDER A			
ROW No.	TOTAL No. OF STRANDS	No. OF DEBONDED STRANDS	DEBONDED LENGTH
10	2		
9	2		
8	2		
7	2		
6	2		
5	4		
4	8		
3	12	4	2x30', 2x40'
2	12	4	2x20', 2x30'
1	12	6	2x10', 2x20', 2x30'

SPECIAL DETAILS

NO SCALE

REVISED STANDARD DRAWING

FILE NO. **xs1-121-1**

APPROVAL DATE July 2011

- ◊ Revised Detail
- ◊ Revised Note

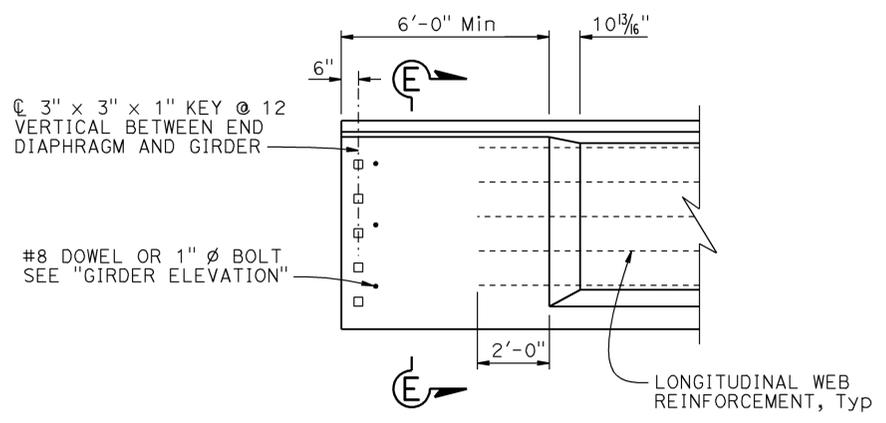
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

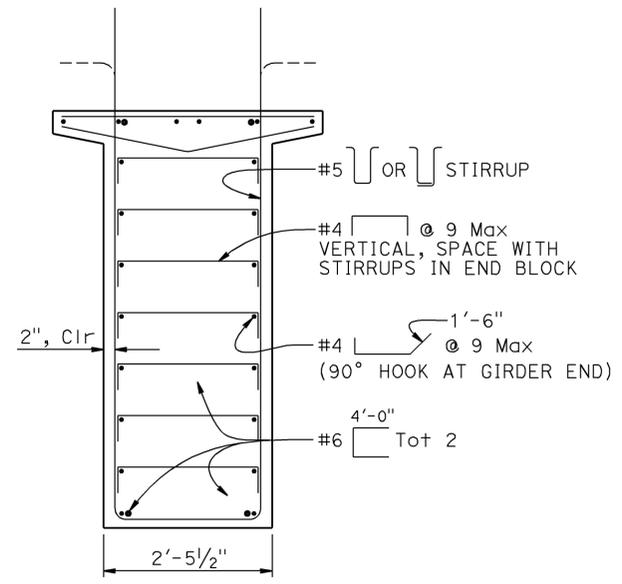
BRIDGE NO. 57-1235L/R
POST MILE R16.33

SDCWA PIPELINE OVERCROSSING
PC/PS BULB-TEE GIRDER (DEBONDED STRANDS)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1256	1273
			08-16-13		
REGISTERED CIVIL ENGINEER			DATE		
			03-24-14		
			PLANS APPROVAL DATE		
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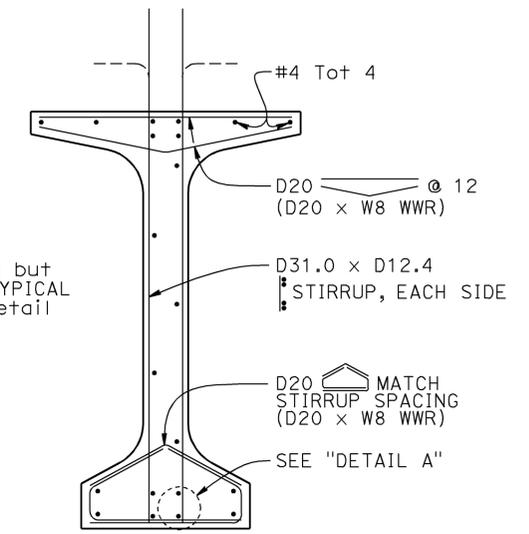
END BLOCK - ELEVATION



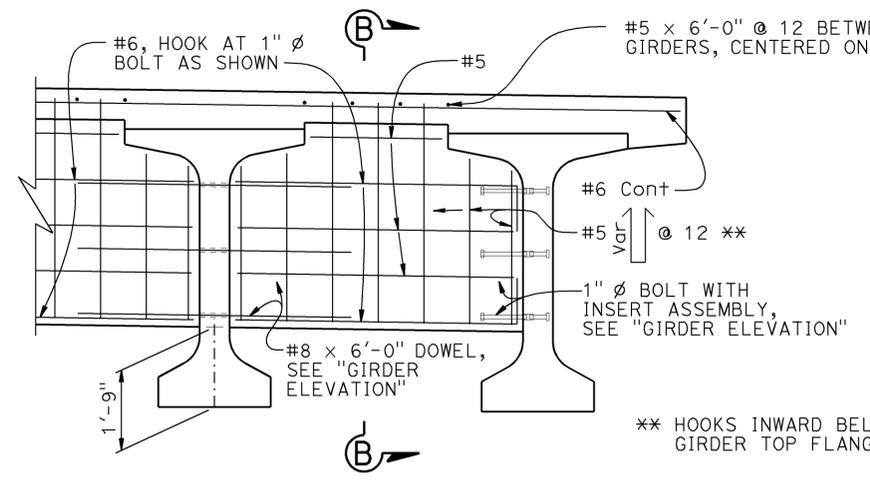
NOTE:
For details not shown, see "TYPICAL GIRDER SECTION" detail

SECTION E-E

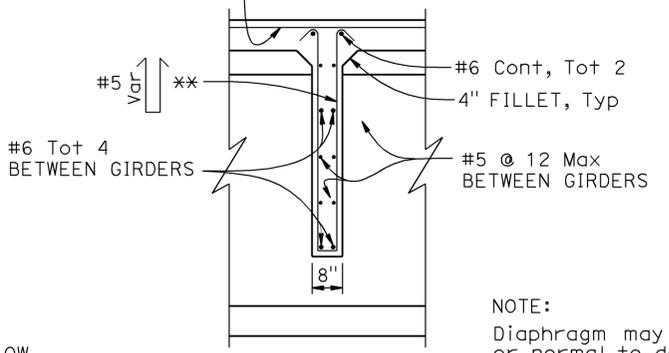
NOTE:
For "GIRDER ELEVATION" and "TYPICAL GIRDER SECTION", see "PC/PS BULB-TEE GIRDER (DEBONDED STRANDS)" sheet



WELDED WIRE REINFORCEMENT (WWR) ALTERNATIVE

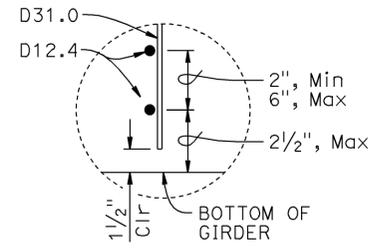


INTERMEDIATE DIAPHRAGM



NOTE:
Diaphragm may be vertical or normal to deck grade

SECTION B-B



DETAIL A

NOTES:
1. Bottom of stirrup WWR detail shown, top similar
2. Longitudinal wire area shall be 40% or greater of vertical deformed wire's area

NO SCALE

STANDARD DRAWING	
FILE NO. xs1-121-2	APPROVAL DATE July 2011

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	
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DIVISION OF ENGINEERING SERVICES	
BRIDGE NO. 57-1235L/R	POST MILE R16.33

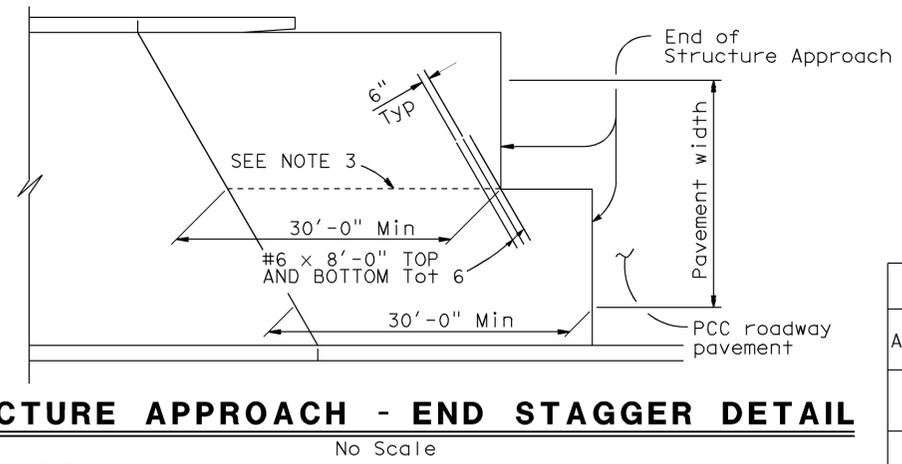
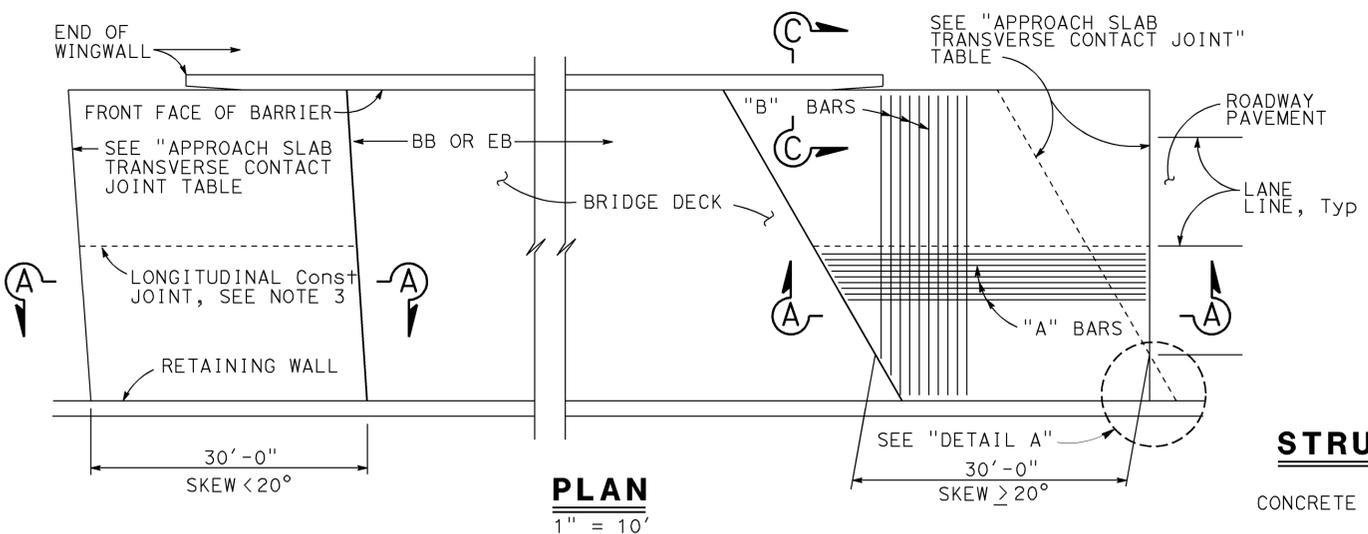
SDCWA PIPELINE OVERCROSSING	
PC/PS BULB-TEE GIRDER (MISCELLANEOUS DETAILS)	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1257	1273

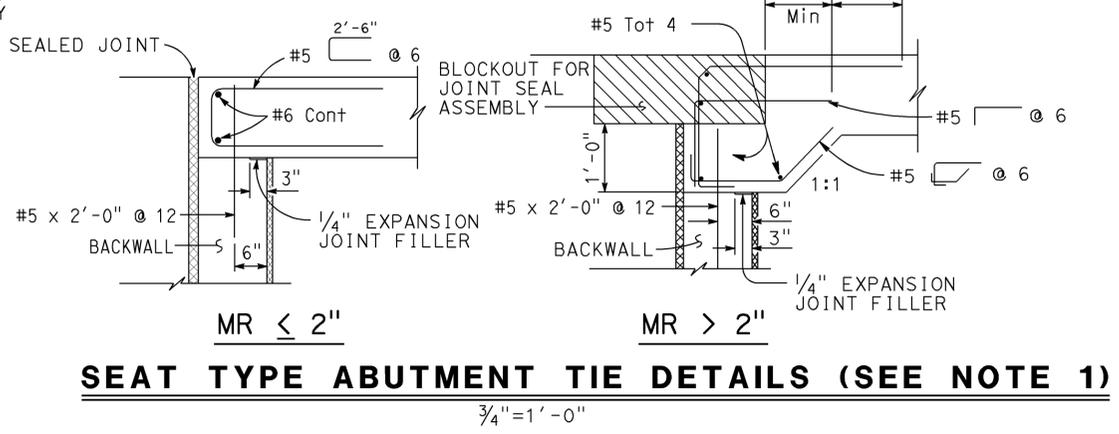
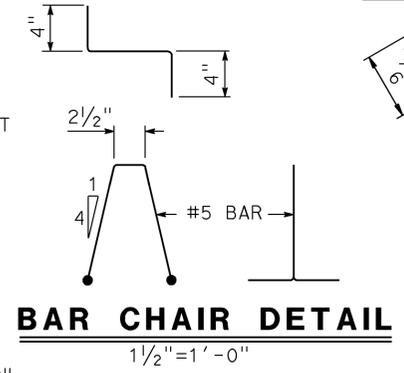
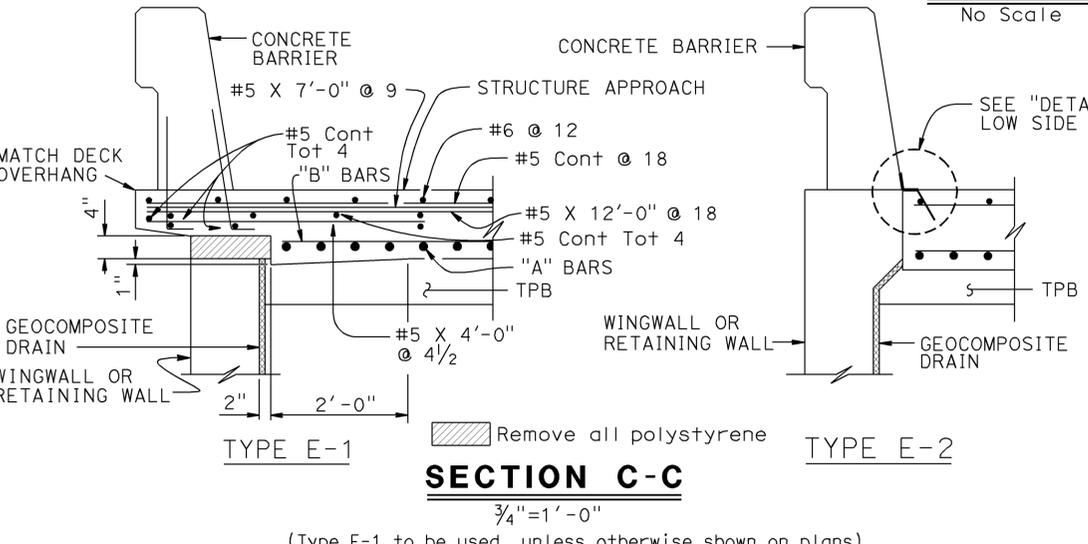
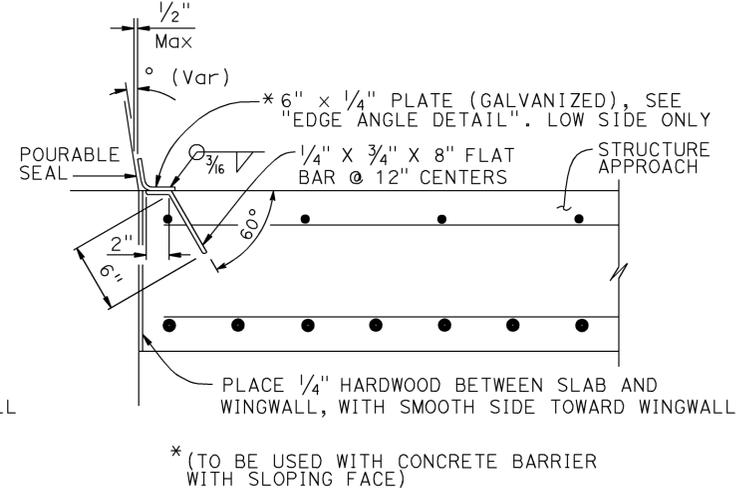
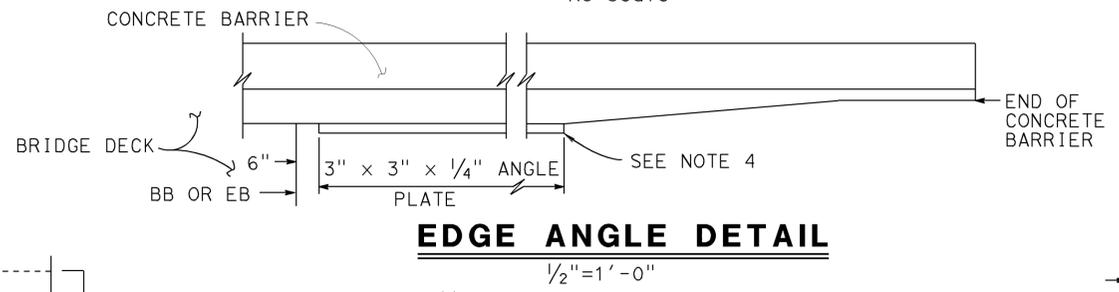
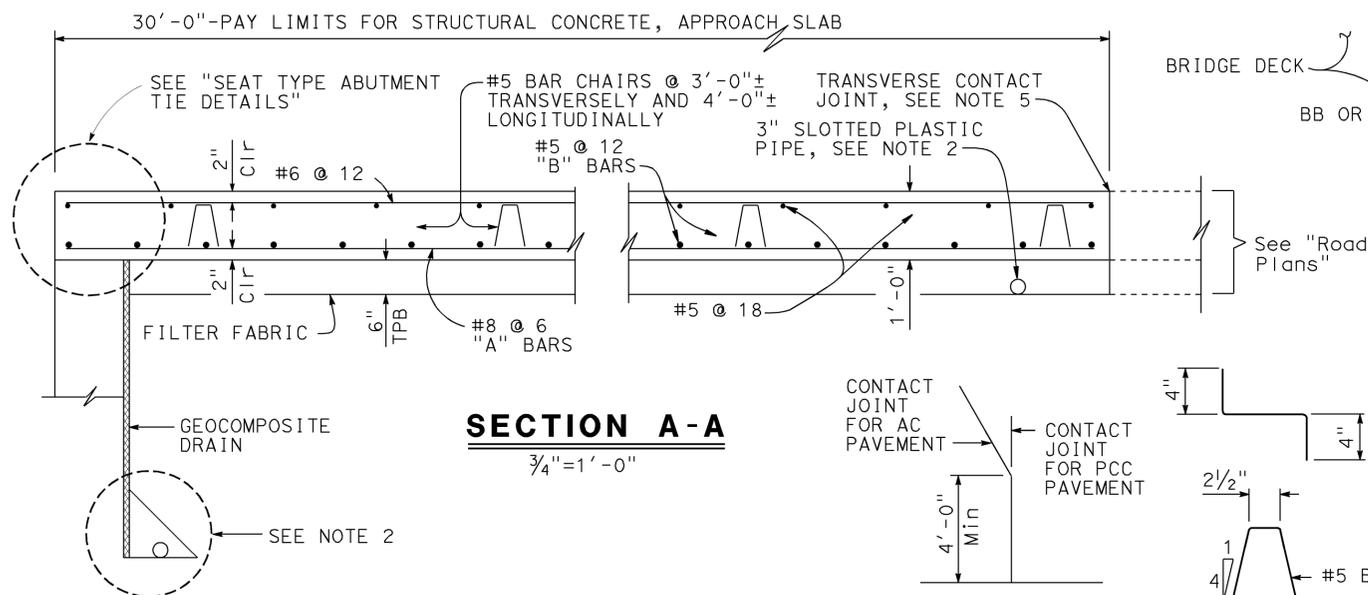
08-16-13
 REGISTERED CIVIL ENGINEER DATE
 03-24-14
 PLANS APPROVAL DATE

RYAN STILTZ
 No. C65738
 Exp. 9/30/15
 CIVIL
 STATE OF CALIFORNIA

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APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 20°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PN
20° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT EACH LANE LINE

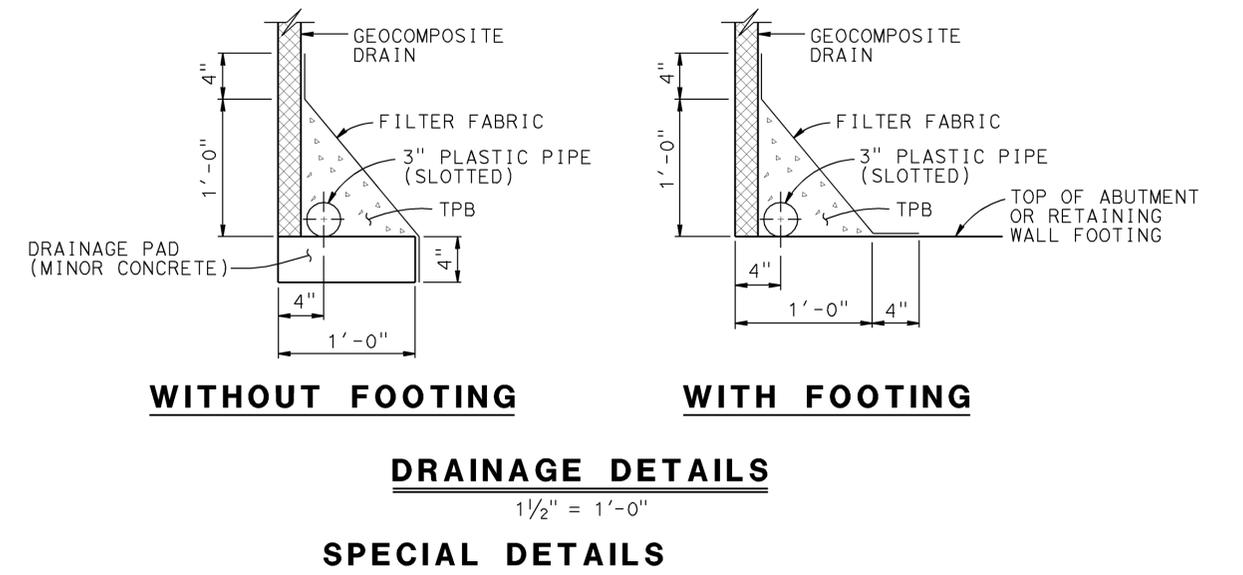
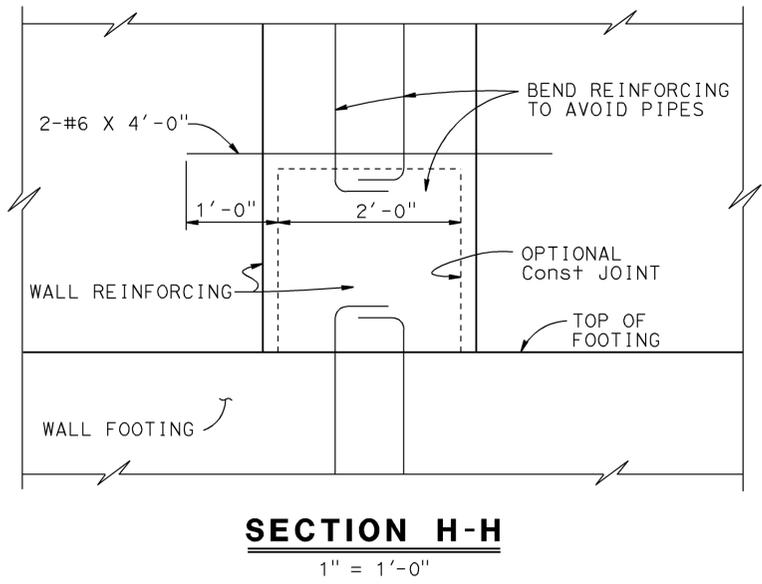
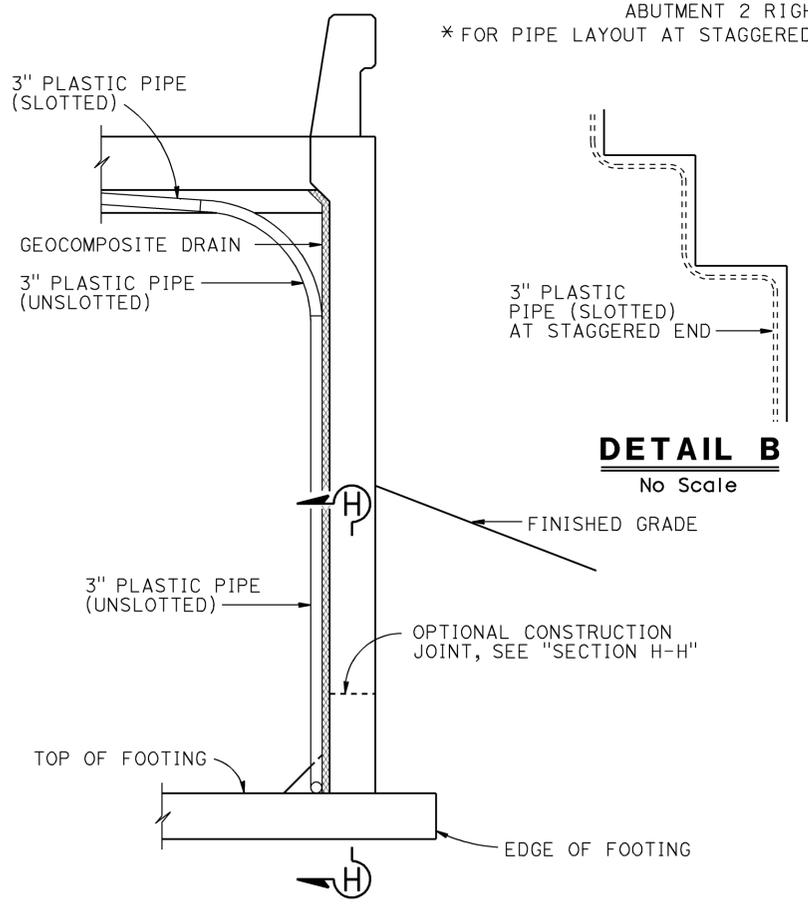
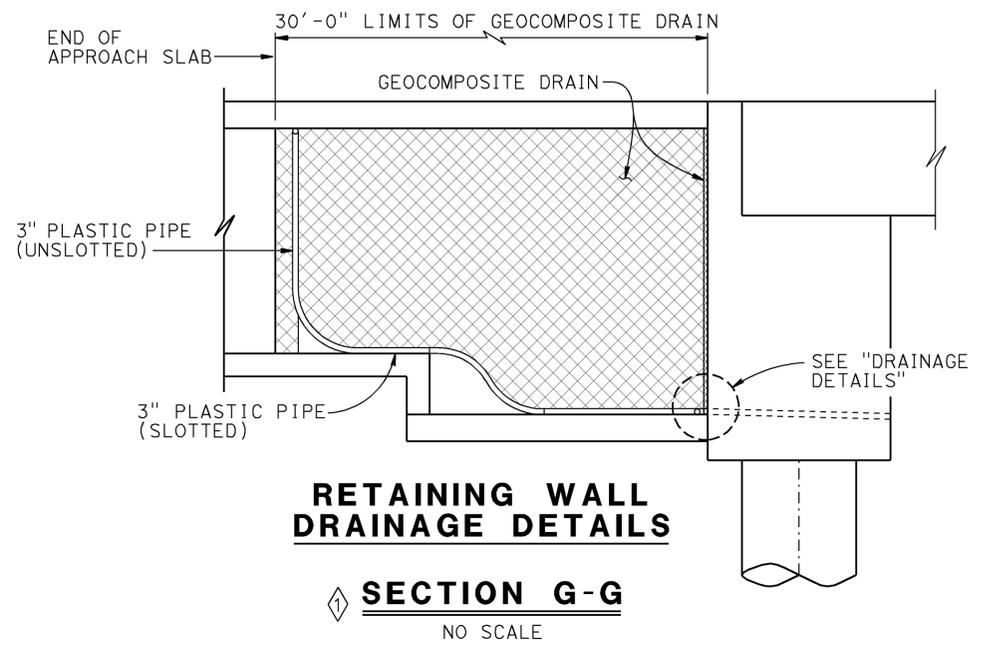
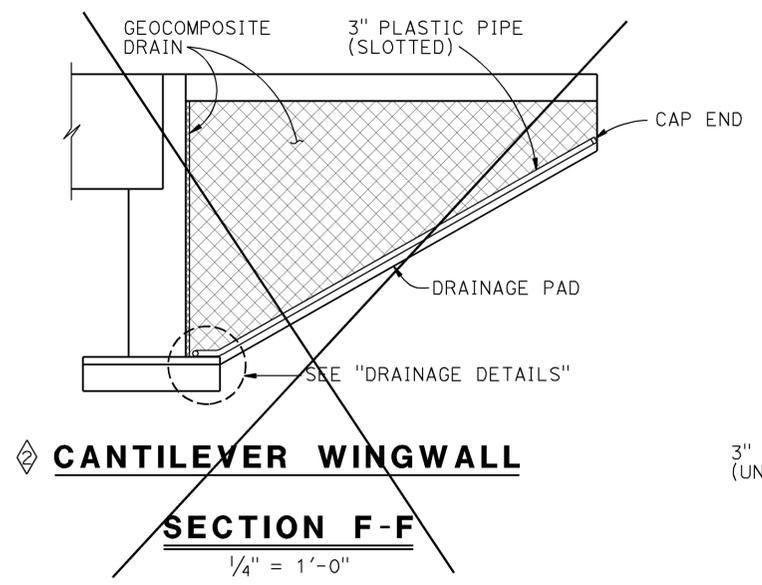
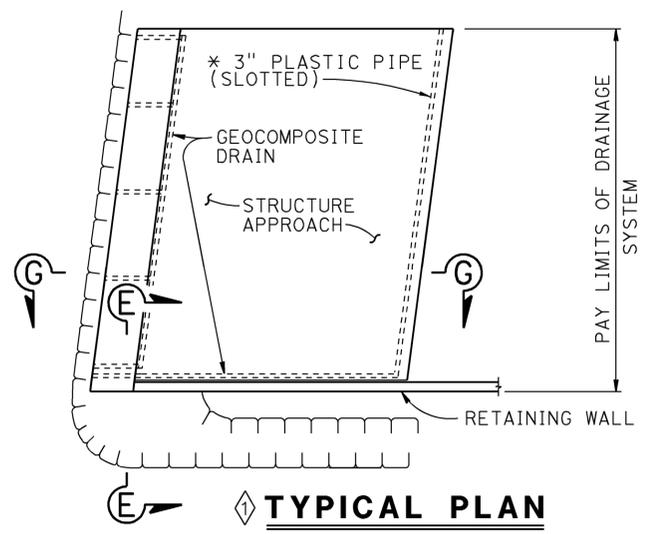


- NOTES:**
- For details not shown, see Structure Plans. For MR ≤ 2', adjust bar reinforcement to clear a sawcut for sealed joint, when required.
 - For drainage details, see "STRUCTURE APPROACH DRAINAGE DETAILS" sheet.
 - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
 - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.
 - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
 - At the Contractor's option, approach slab transverse reinforcement may be placed parallel to paving notch. Spacing of transverse reinforcement is measured along roadway.

STANDARD DRAWING		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES		BRIDGE NO. 57-1235L/R		SDCWA PIPELINE OVERCROSSING	
FILE NO. xs3-120	APPROVAL DATE July 2011					POST MILE R16.33		STRUCTURE APPROACH TYPE N(30S)	
DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. (02-02-11))		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3589 PROJECT NUMBER & PHASE: 11000204891		CONTRACT NO.: 11-257151		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
								REVISION DATES	
								SHEET 15 OF 21	

DATE PLOTTED => 08-14-13
 USERNAME => s135307
 FILE => 571235Lr1ss015.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1258	1273
			08-16-13		
REGISTERED CIVIL ENGINEER			DATE		
			03-24-14		
			PLANS APPROVAL DATE		
			REGISTERED PROFESSIONAL ENGINEER No. C65738 Exp. 9/30/15 CIVIL STATE OF CALIFORNIA		
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SECTION E-E
NO SCALE
NOTE: Bends and junctions in 3" plastic pipe are 30" radius Min

REVISED STANDARD DRAWING	
FILE NO. xs3-110	APPROVAL DATE July 2011

Revised Detail	Does Not Apply
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STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 57-1235L/R POST MILE R16.33
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SDCWA PIPELINE OVERCROSSING	
STRUCTURE APPROACH DRAINAGE DETAILS	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1261	1273

11-27-12
REGISTERED CIVIL ENGINEER DATE

03-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Fernando De Haro
No. C065281
Exp. 9-30-15
CIVIL
STATE OF CALIFORNIA

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FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 5"



This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).
See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		SDCWA PIPELINE OVERCROSSING	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		DEPARTMENT OF TRANSPORTATION		BRIDGE NO. 57-1235L/R		LOG OF TEST BORINGS 3 OF 5	
NAME: M. DeSalvatore		CHECKED BY: E. Neupert		FIELD INVESTIGATION BY: TM. Liao, F. De Haro		DESIGN BRANCH 10			
06S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 11000204891		CONTRACT NO.: 11-257151	
				DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET 19 OF 21	

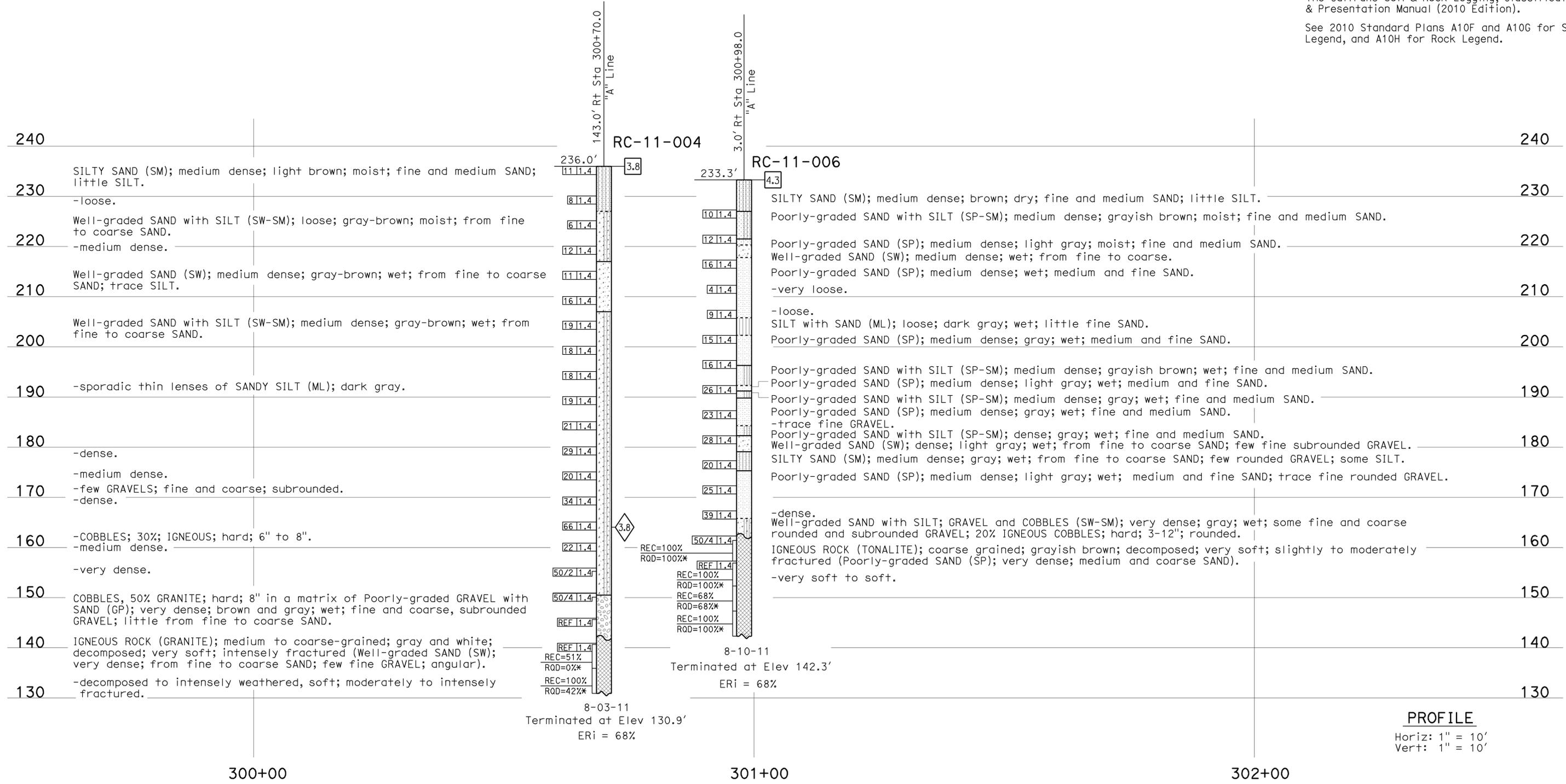
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15.76	R46.2/R46.8, R12.1/R17.7	1262	1273
			11-27-12	REGISTERED CIVIL ENGINEER DATE	
			03-24-14	PLANS APPROVAL DATE	
					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 5"

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.



PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		SDCWA PIPELINE OVERCROSSING	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		FIELD INVESTIGATION BY:		STRUCTURE DESIGN		57-1235L/R		LOG OF TEST BORINGS 4 OF 5	
NAME: M. DeSalvatore		CHECKED BY: E. Neupert		F. De Haro, J. Klamecki		DESIGN BRANCH 10		POST MILE			
								R16.33			
06S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 11000204891		CONTRACT NO.: 11-257151		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3						REVISION DATES	
										09-13-12 11-09-12 11-27-12 05-01-13	
										SHEET 20 OF 21	

USERNAME => s135307 DATE PLOTTED => 12-AUG-2013 TIME PLOTTED => 08:49

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15.76	R46.2/R46.8 R12.1/R17.7	1263	1273

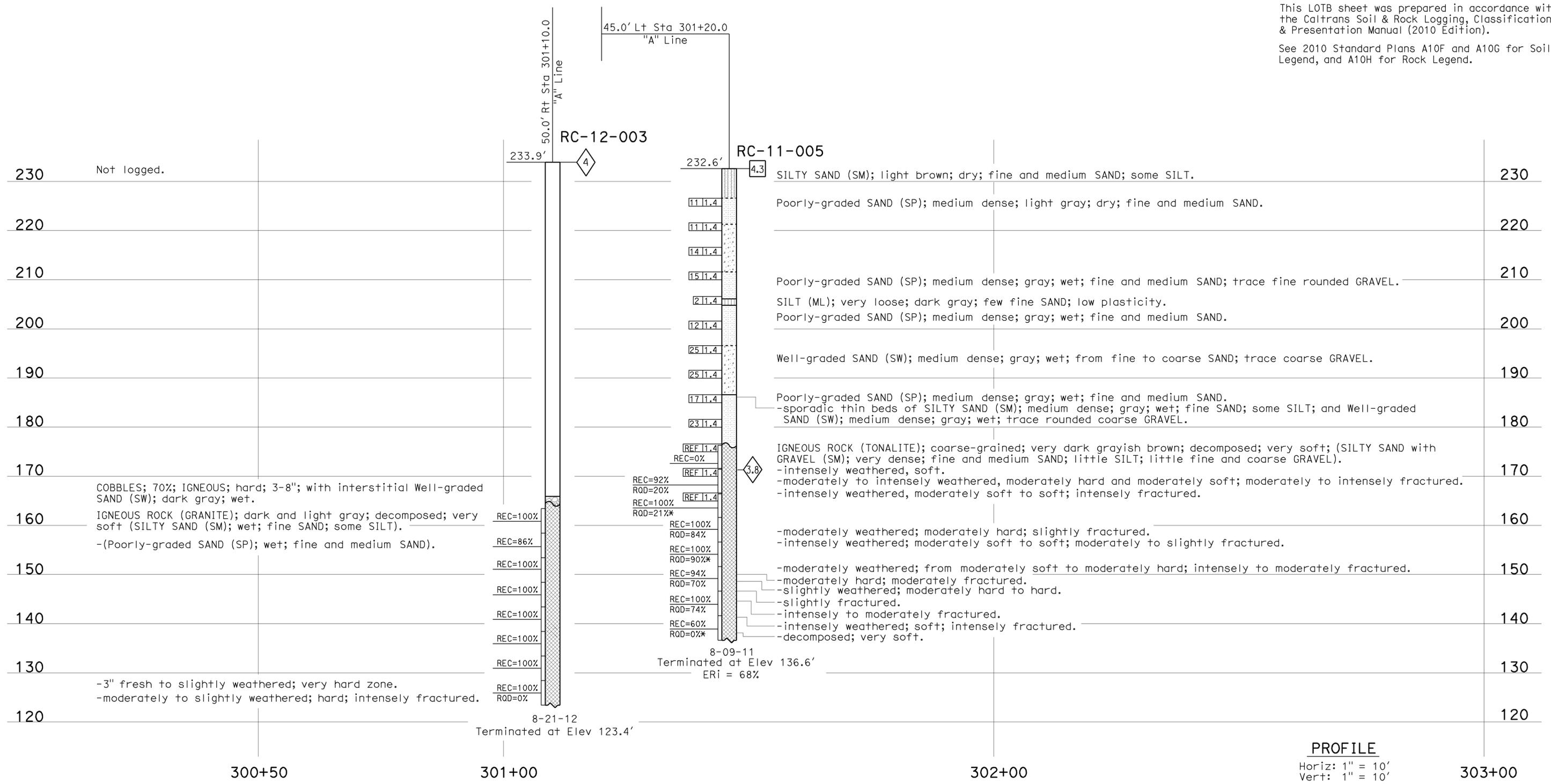
11-27-12
REGISTERED CIVIL ENGINEER DATE

03-24-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Fernando De Haro
No. C065281
Exp. 9-30-15
CIVIL
STATE OF CALIFORNIA

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FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 5"



This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).
See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10		BRIDGE NO. 57-1235L/R POST MILE R16.33		SDCWA PIPELINE OVERCROSSING LOG OF TEST BORINGS 5 OF 5	
FUNCTIONAL SUPERVISOR NAME: M. DeSalvatore	DRAWN BY: F. Nguyen CHECKED BY: E. Neupert	FIELD INVESTIGATION BY: TM Liao, J. Klamecki		UNIT: 3643 PROJECT NUMBER & PHASE: 11000204891		CONTRACT NO.: 11-257151		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 09-18-12 11-08-12 11-27-12 05-01-13 SHEET 21 OF 21	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

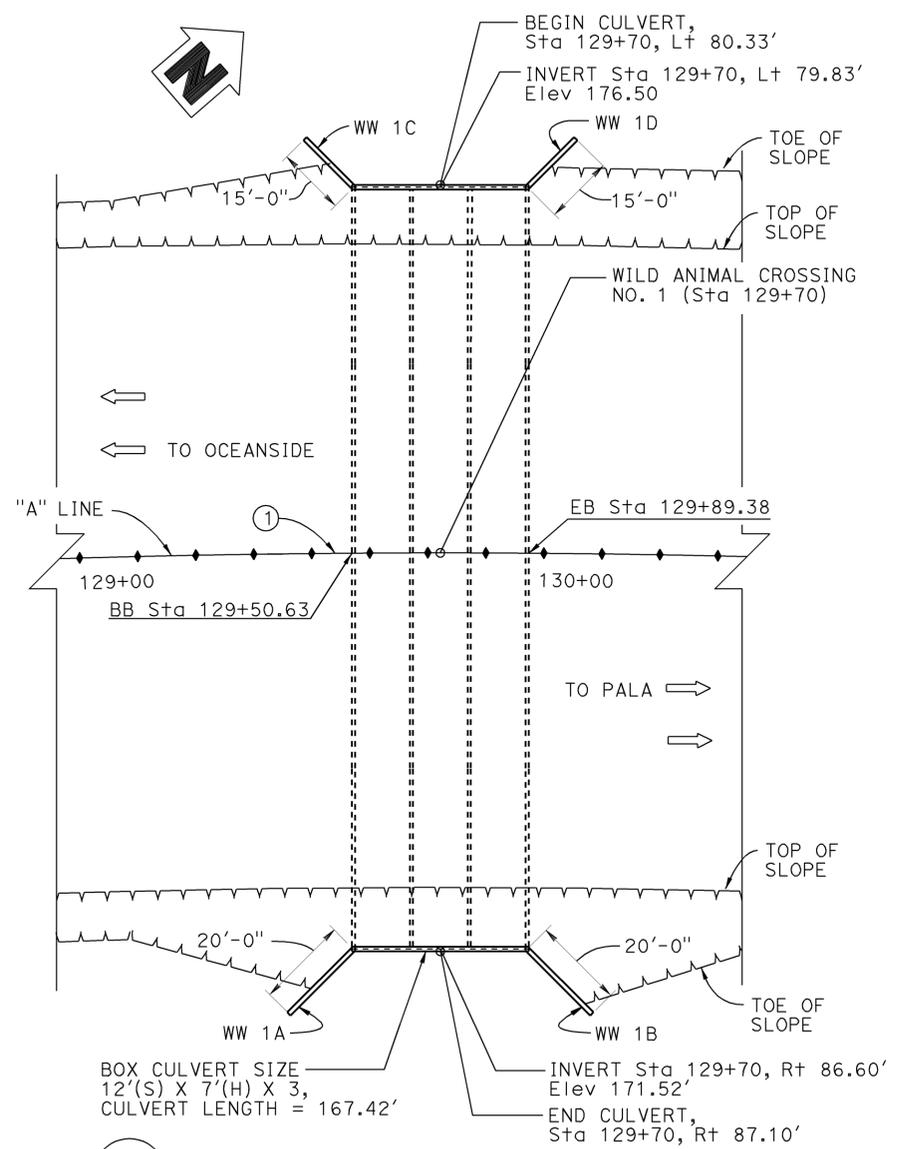
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FILE => 571235R121fb21.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8; R12.1/R17.7	1264	1273
			08-16-13	REGISTERED CIVIL ENGINEER DATE	
			03-24-14	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER RYAN STILTZ No. C65738 Exp. 9-30-15 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.					

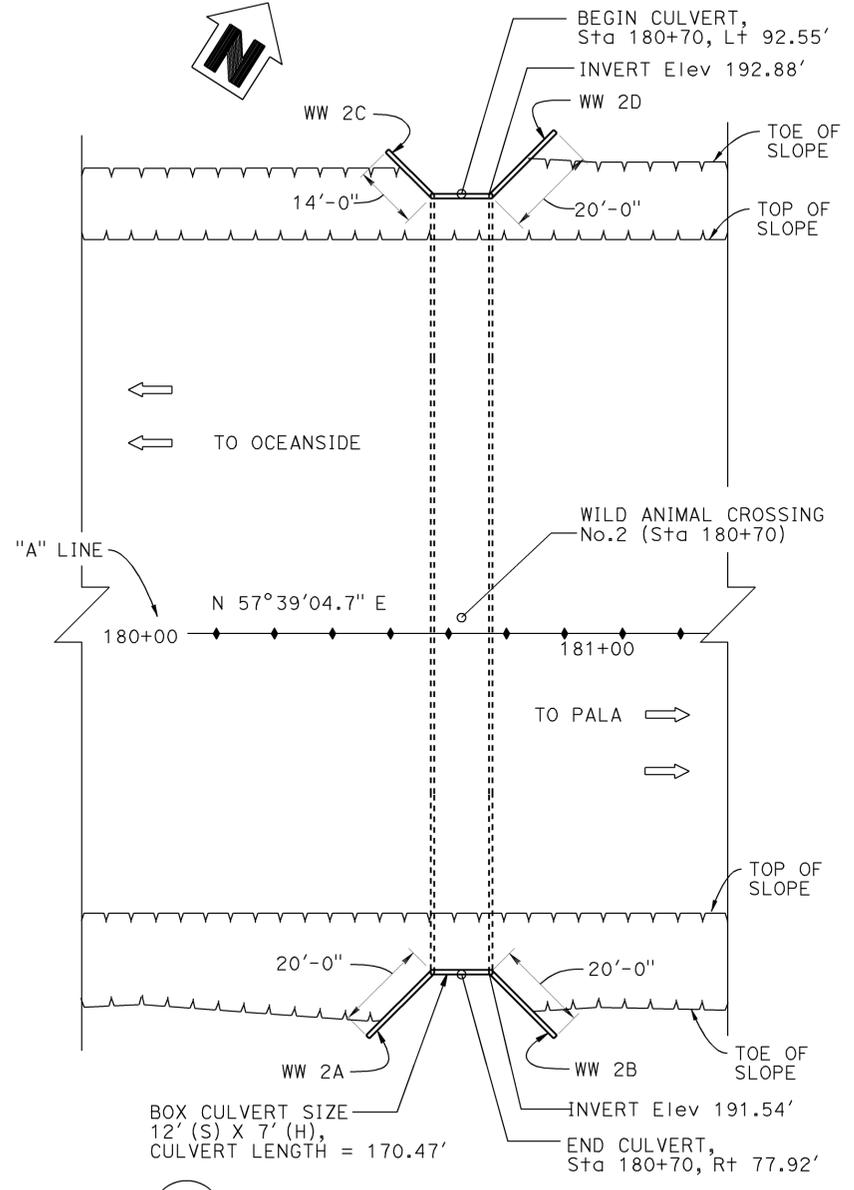
CURVE DATA

No.	R	Δ	T	L
①	2800.00'	20° 54' 32.7"	516.65'	1021.81'



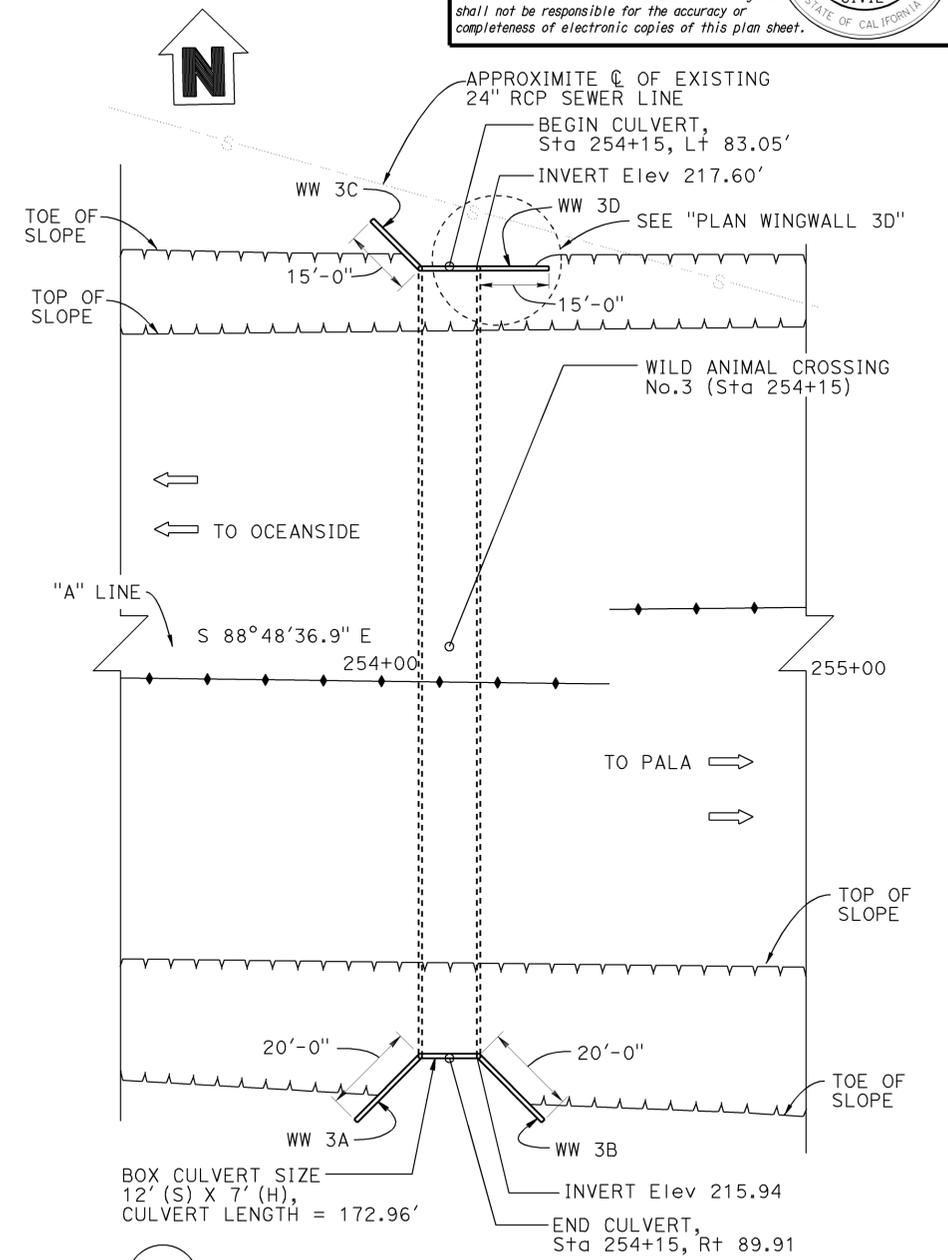
WILD ANIMAL CROSSING No. 1 (WAC#1)
(BRIDGE # 57-1236)

1" = 20'-0"



WILD ANIMAL CROSSING No. 2 (WAC#2)

1" = 20'-0"



WILD ANIMAL CROSSING No. 3 (WAC#3)

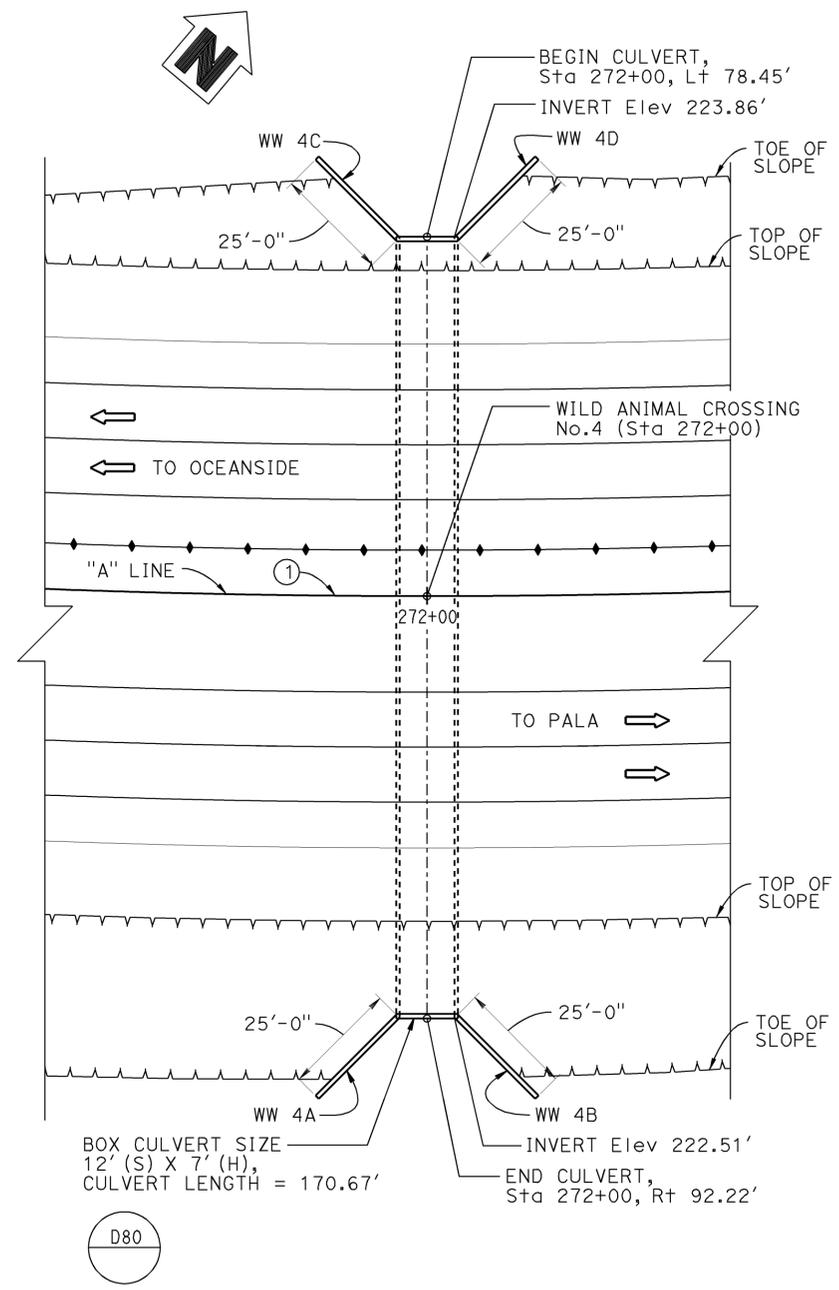
1" = 20'-0"

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

For "GENERAL NOTES", "STANDARD PLANS", "INDEX TO PLANS", see "INDEX TO PLANS" sheet
 For Bridge # 57-1236 (WAC # 1) quantities, see "WINGWALL LAYOUT NO. 1" sheet
 For WAC # 2, WAC # 3, WAC # 4, WAC # 6 quantities, see "WINGWALL LAYOUT NO. 2" sheet
 For "PLAN WINGWALL 3D", see "WINGWALL LAYOUT NO. 2" sheet

DANIEL T. ADAMS DESIGN ENGINEER	DESIGN	BY R. Stiltz	CHECKED D. Azzam	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 10	BRIDGE NO.	WILD ANIMAL CROSSING GENERAL PLAN NO. 1	
	DETAILS	BY Y. Tang	CHECKED D. Azzam	LAYOUT	BY R. Stiltz			CHECKED D. Azzam	57-1236	POST MILE
	QUANTITIES	BY F. Chen	CHECKED A. McPhee	SPECIFICATIONS	BY J. Choi	CHECKED J. Choi				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
PROJECT NUMBER & PHASE: 11000204891							CONTRACT NO.: 11-257151		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)							FILE => 571236agp01.dgn		REVISION DATES 1 10	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1265	1273
			08-16-13	REGISTERED CIVIL ENGINEER DATE	
			03-24-14	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER RYAN STILTZ No. C65738 Exp. 9-30-15 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.					

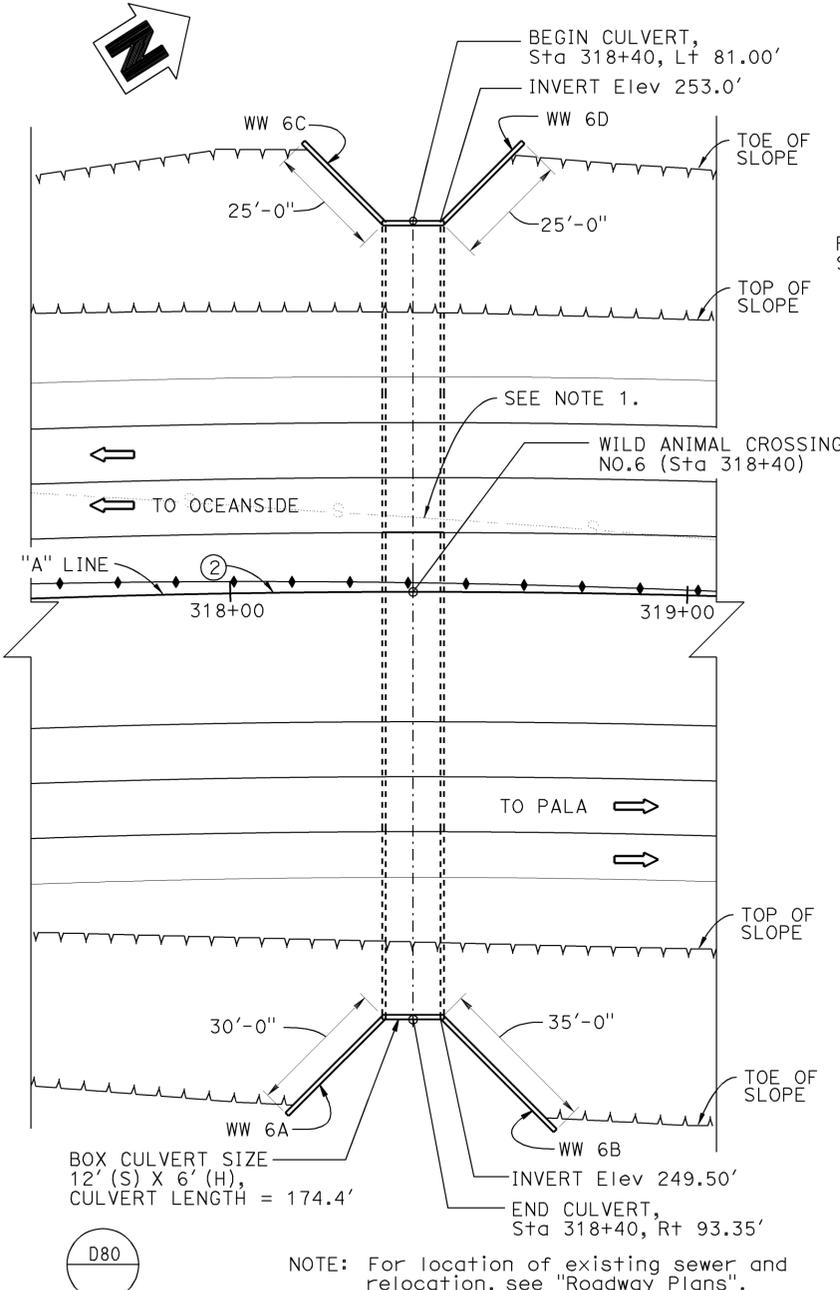


WILD ANIMAL CROSSING No. 4 (WAC#4)

1" = 20'-0"

CURVE DATA

No.	R	Δ	T	L
①	2200.00'	56° 59' 55.8"	1194.47'	2188.60'

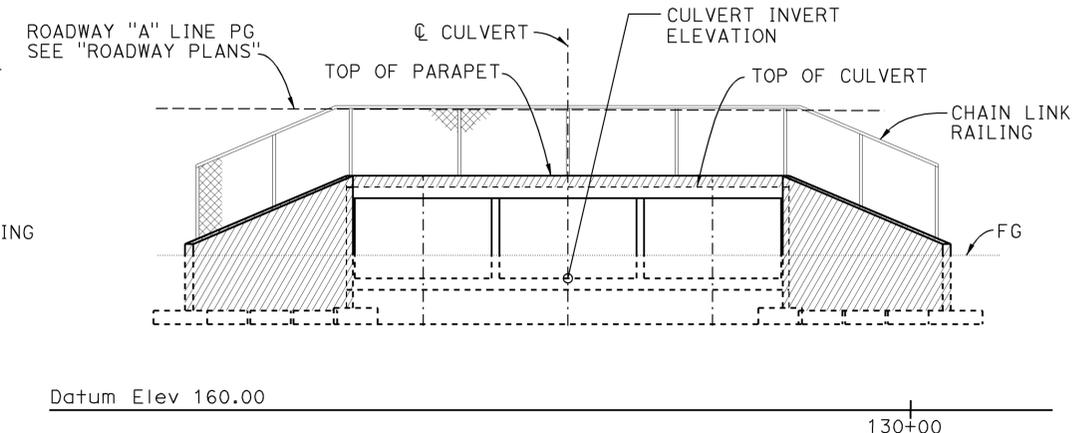


WILD ANIMAL CROSSING No. 6 (WAC#6)

1" = 20'-0"

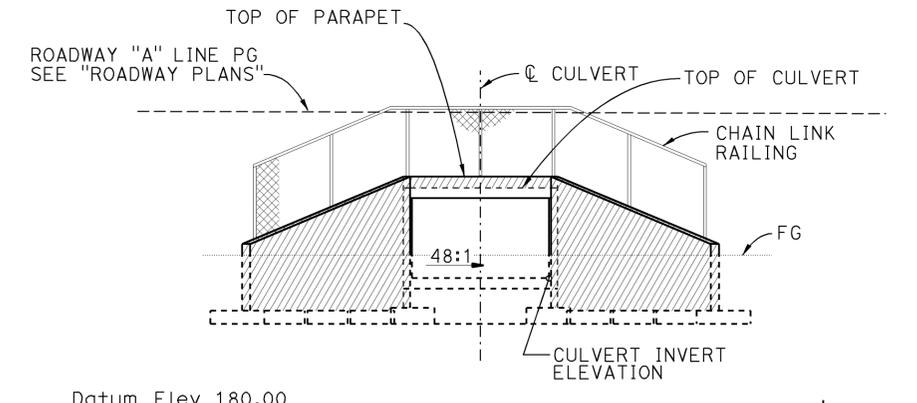
CURVE DATA

No.	R	Δ	T	L
②	2400.00'	12° 20' 30.3"	259.49'	516.97'



ELEVATION WAC No. 1

1/8" = 1'-0"



ELEVATION WAC No. 2

1/8" = 1'-0"

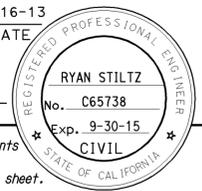
NOTE: WAC #3, #4, #6 SIMILAR

COLOR CONCRETE

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

For "GENERAL NOTES", "STANDARD PLANS", "INDEX TO PLANS", see "INDEX TO PLANS" sheet
For WAC # 2, WAC # 3, WAC # 4, WAC # 6 quantities, see "WINGWALL LAYOUT NO. 2" sheet

DANIEL T. ADAMS DESIGN ENGINEER	DESIGN	BY R. Stiltz	CHECKED D. Azzam	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 10	BRIDGE NO.	WILD ANIMAL CROSSING GENERAL PLAN NO. 2	
	DETAILS	BY Y. Tang	CHECKED D. Azzam	LAYOUT	BY R. Stiltz			CHECKED D. Azzam		POST MILE
	QUANTITIES	BY F. Chen	CHECKED A. McPhee	SPECIFICATIONS	BY J. Choi			R13.11		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						UNIT: 3589	PROJECT NUMBER & PHASE: 11000204891	CONTRACT NO.: 11-257151	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES SHEET 2 OF 10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	76	R46.2/R46.8, R12.1/R17.7	1266	1273
			08-16-13		
REGISTERED CIVIL ENGINEER			DATE		
03-24-14			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>		

INDEX TO PLANS

SHEET NO.	TITLE
1.	GENERAL PLAN NO. 1
2.	GENERAL PLAN NO. 2
3.	INDEX TO PLANS
4.	WINGWALL LAYOUT NO. 1
5.	WINGWALL LAYOUT NO. 2
6.	LOG OF TEST BORINGS 1 OF 5
7.	LOG OF TEST BORINGS 2 OF 5
8.	LOG OF TEST BORINGS 3 OF 5
9.	LOG OF TEST BORINGS 4 OF 5
10.	LOG OF TEST BORINGS 5 OF 5

GENERAL NOTES

For Culvert General Notes, Design Notes, and Construction Notes see 2010 Standard Plan D82 "Cast-in-Place Reinforced Concrete Box Culvert Miscellaneous Details"

For Culvert details not shown see 2010 Standard Plan D81 "Cast-in-Place Reinforced Concrete Double Box Culvert"

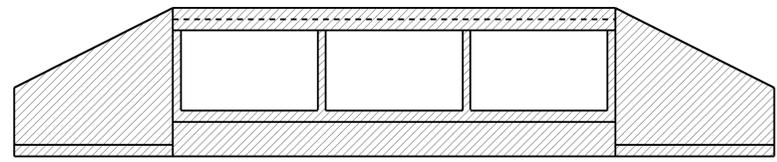
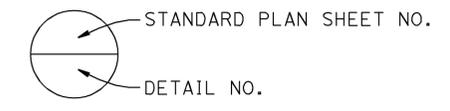
For Wingwall notes and details not shown see 2010 Standard Plan D84 "Box Culvert Wingwalls Types A, B and C"

REINFORCED CONCRETE:

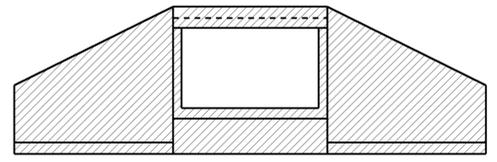
$f_y = 60$ ksi
 $f'_c = 3.6$ ksi
 $n = 8$

STANDARD PLANS DATED 2010

A10A	ACRONYMS AND ABBREVIATIONS (A-L)
RSP A10B	ACRONYMS AND ABBREVIATIONS (M-Z)
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
A62A	EXCAVATION AND BACKFILL MISCELLANEOUS DETAILS
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE SURCHARGE AND WALL
A62E	EXCAVATION AND BACKFILL CAST-IN-PLACE REINFORCED CONCRETE BOX AND ARCH CULVERTS
B0-3	BRIDGE DETAILS
RSP B3-4B	RETAINING WALL TYPE 5 (CASE 2)
RSP B3-5	RETAINING WALL DETAILS No. 1
B3-6	RETAINING WALL DETAILS No. 2
B11-52	CHAIN LINK RAILING
D80	CAST-IN-PLACE REINFORCED CONCRETE SINGLE BOX CULVERT
D81	CAST-IN-PLACE REINFORCED CONCRETE DOUBLE BOX CULVERT
D82	CAST-IN-PLACE REINFORCED CONCRETE BOX CULVERT MISCELLANEOUS DETAILS
D84	BOX CULVERT WINGWALLS TYPES A, B AND C
D88	CONSTRUCTION LOADS ON CULVERTS



WAC NO. 1



WAC NO. 2, 3, 4, 6

 STRUCTURAL CONCRETE, BOX CULVERT

CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE

QUANTITIES

WILD ANIMAL CROSSING NO. 1 - BR NO. 57-1236			
QUANTITIES			
STRUCTURAL CONCRETE, BOX CULVERT	676	CY	
BAR REINFORCING STEEL (BOX CULVERT)	153,600	LB	
MINOR CONCRETE (GUTTER) (LF)	70	LF	
CHAIN LINK RAILING (TYPE 7)	148	LF	
WILD ANIMAL CROSSING NO. 2			
QUANTITIES			
STRUCTURAL CONCRETE, BOX CULVERT	284	CY	
BAR REINFORCING STEEL (BOX CULVERT)	71,000	LB	
MINOR CONCRETE (GUTTER) (LF)	80	LF	
CHAIN LINK RAILING (TYPE 7)	107	LF	
WILD ANIMAL CROSSING NO. 3			
QUANTITIES			
STRUCTURAL CONCRETE, BOX CULVERT	290	CY	
BAR REINFORCING STEEL (BOX CULVERT)	73,250	LB	
MINOR CONCRETE (GUTTER) (LF)	70	LF	
CHAIN LINK RAILING (TYPE 7)	97	LF	
WILD ANIMAL CROSSING NO. 4			
QUANTITIES			
STRUCTURAL CONCRETE, BOX CULVERT	300	CY	
BAR REINFORCING STEEL (BOX CULVERT)	72,400	LB	
MINOR CONCRETE (GUTTER) (LF)	100	LF	
CHAIN LINK RAILING (TYPE 7)	127	LF	
WILD ANIMAL CROSSING NO. 6			
QUANTITIES			
STRUCTURAL CONCRETE, BOX CULVERT	310	CY	
BAR REINFORCING STEEL (BOX CULVERT)	74,100	LB	
MINOR CONCRETE (GUTTER) (LF)	115	LF	
CHAIN LINK RAILING (TYPE 7)	142	LF	

DESIGN	BY R. Stiltz	CHECKED D. Azzam
DETAILS	BY Y. Tang	CHECKED D. Azzam
QUANTITIES	BY F. Chen	CHECKED A. McPhee

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	57-1236
POST MILE	R13.11

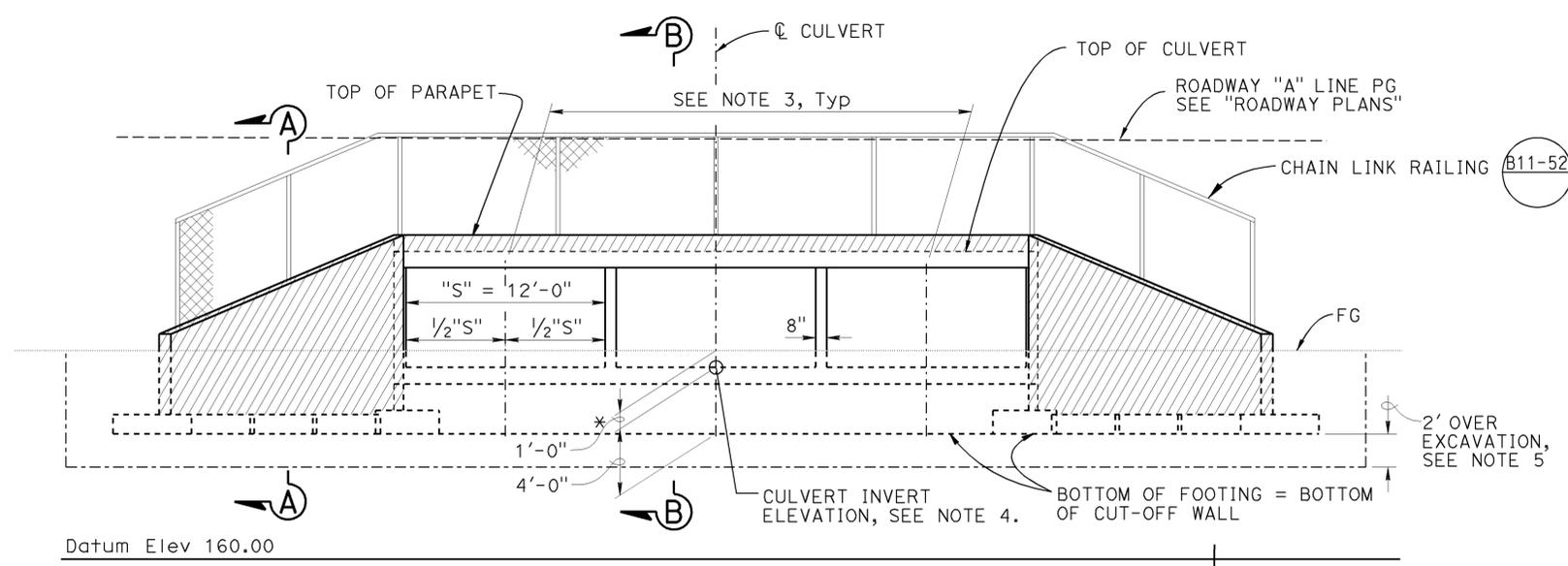
WILD ANIMAL CROSSING INDEX TO PLANS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	76	R46.2/R46.8, R12.1/R17.7	1267	1273

08-16-13
REGISTERED CIVIL ENGINEER DATE
03-24-14
PLANS APPROVAL DATE

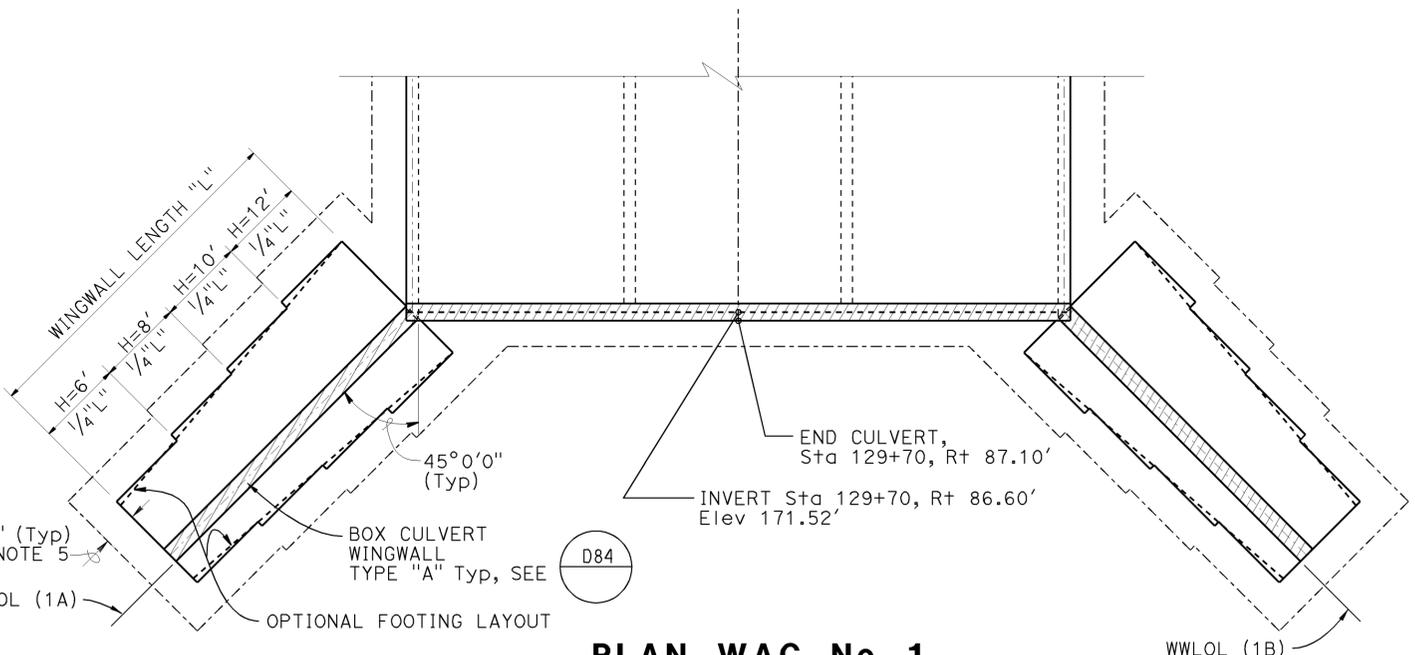
RYAN STILTZ
No. C65738
Exp. 9-30-15
CIVIL
STATE OF CALIFORNIA

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ELEVATION WAC No. 1
3/16" = 1'-0"

* 1'-0" Between FG and culvert invert elevation, See "Road Plans".

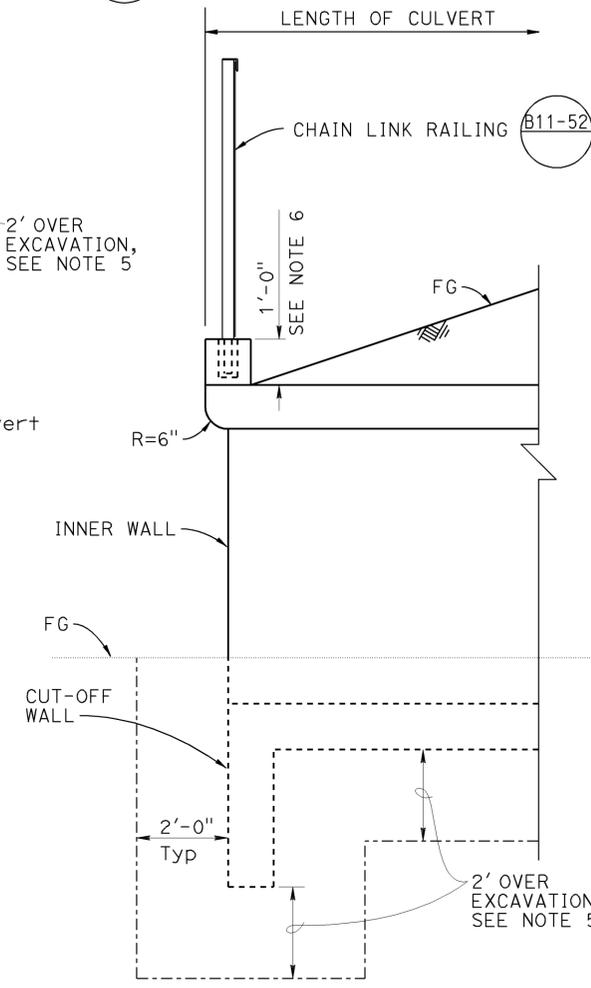


PLAN WAC No. 1
3/16" = 1'-0"

NOTE: WingWall 1A and 1B shown, 1C and 1D similar

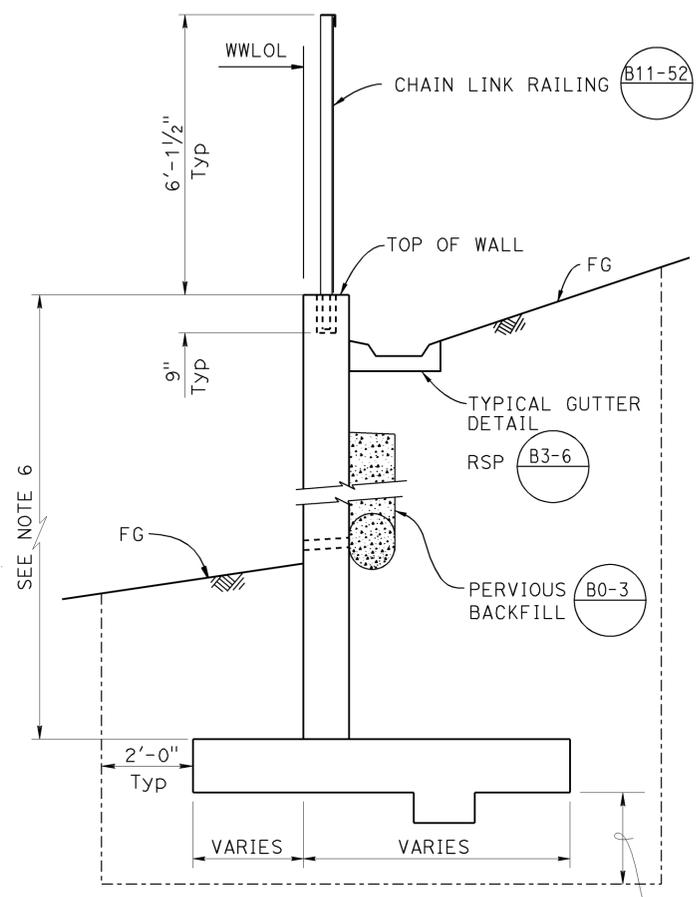
COLOR CONCRETE

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



SECTION B-B
1/2" = 1'-0" D-82

NOTE:
For reinforcement and dimensions not shown, see "STANDARD PLANS 2010".



SECTION A-A
1/2" = 1'-0" D-84

NOTE:
For reinforcement and dimensions not shown, see "STANDARD PLANS 2010".

NOTES:

- 1 Typical wingwall layout & design heights. For wingwall length "L", see "GENERAL PLANS NO. 1" sheet.
- 2 For culvert dimensions and reinf details, see D81.
- 3 Roof and invert reinf symmetrical about C interior walls, see D81 for reinf details.
- 4 For culvert invert elevation, see "GENERAL PLAN NO. 1" sheet. Culvert invert uses "FLAT INVERT ALTERNATIVE", see D81.
5. Limits of Structure Excavation and Backfill. Structure Backfill including over Excavation-Backfill shall be compacted to 95% relative compaction.
6. Limits of color concrete.

DESIGN	BY R. Stiltz	CHECKED D. Azzam
DETAILS	BY Y. Tang	CHECKED D. Azzam
QUANTITIES	BY F. Chen	CHECKED A. McPhee

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

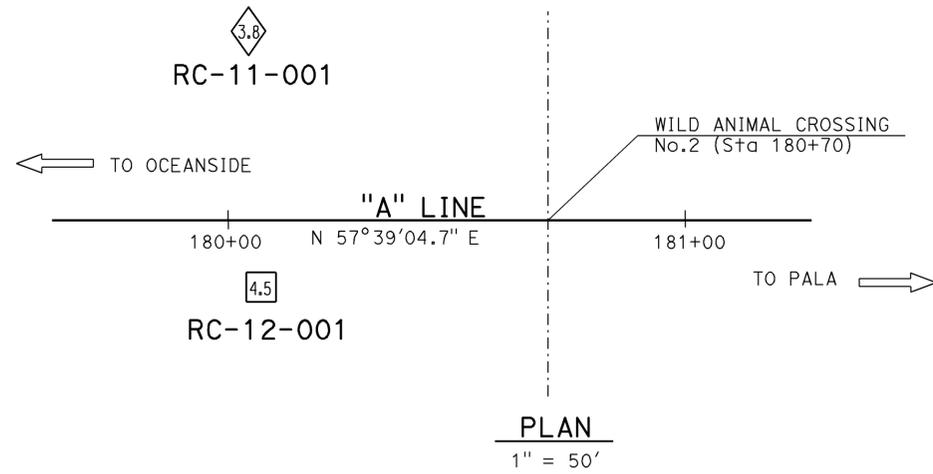
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE No.	57-1236
POST MILE	R13.11

**WILD ANIMAL CROSSING
WINGWALL LAYOUT NO. 1**

BENCH MARK

HV-22 Elev 195.85'
 PK nail on south shoulder of Hwy 76
 N: 6270046.70
 E: 2057710.38
 Vertical Datum: NAVD 88



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8 R12.1/R17.7	1270	1273

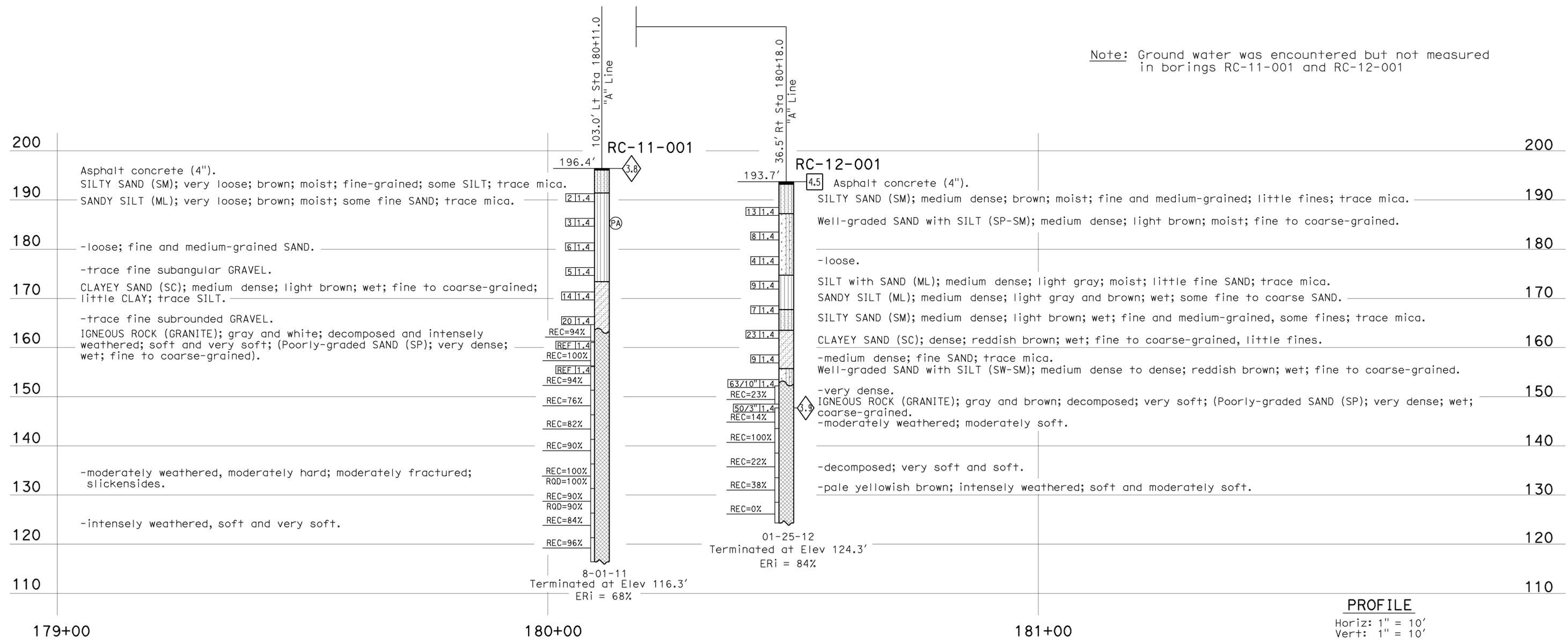
REGISTERED CIVIL ENGINEER DATE 10-24-12

PLANS APPROVAL DATE 03-24-14

REGISTERED PROFESSIONAL ENGINEER
 Fernando De Haro
 No. C065281
 Exp. 9-30-15
 CIVIL

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).
 See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.



Note: Ground water was encountered but not measured in borings RC-11-001 and RC-12-001

PROFILE
 Horiz: 1" = 10'
 Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		WILD ANIMAL CROSSING NO. 2	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		FIELD INVESTIGATION BY:		STRUCTURE DESIGN		57-1236		LOG OF TEST BORINGS	
NAME: M. DeSalvatore		CHECKED BY: E. Neupert		F. De Haro		DESIGN BRANCH 10		POST MILE			
								R13.11			
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT: 3643		PROJECT NUMBER & PHASE: 11000204891		CONTRACT NO.: 11-257151	
						DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET 7 OF 10	

USERNAME => s135307 DATE PLOTTED => 12-AUG-2013 TIME PLOTTED => 08:50

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8 R12.1/R17.7	1271	1273

REGISTERED CIVIL ENGINEER DATE 10-25-12

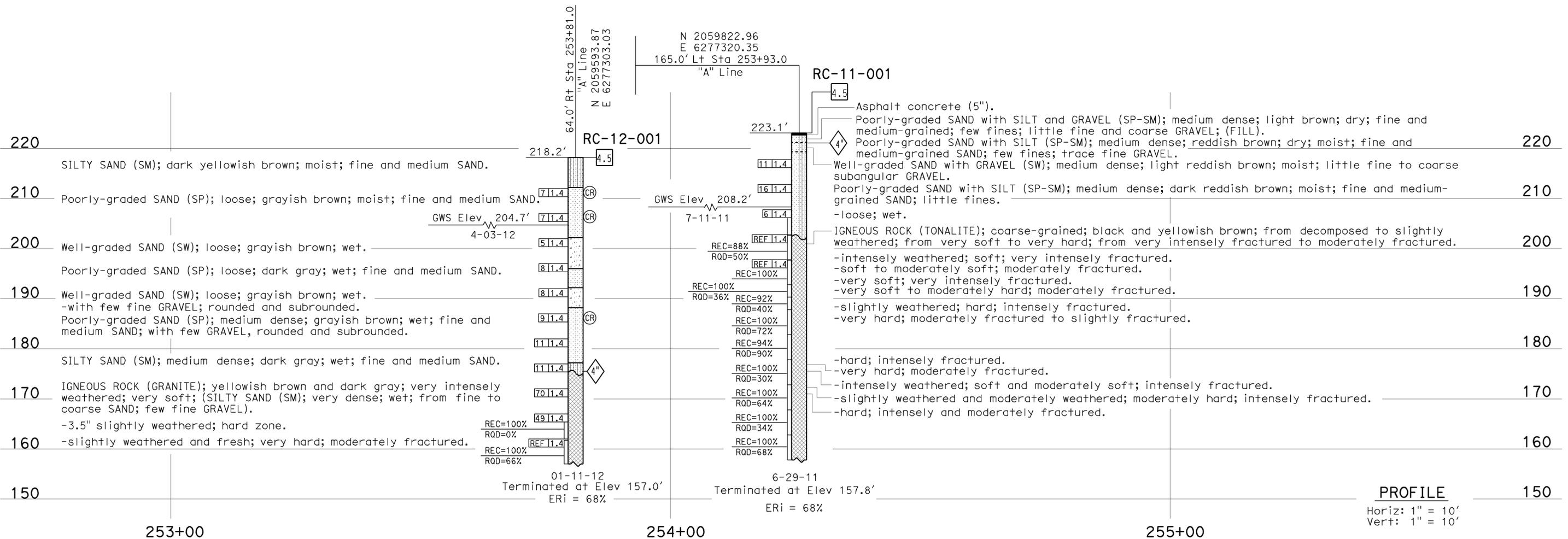
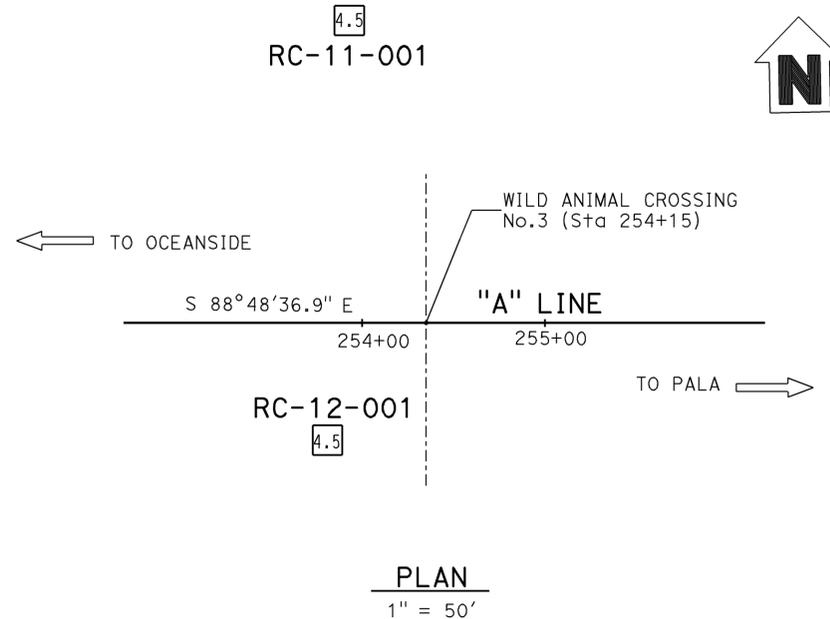
PLANS APPROVAL DATE 03-24-14

David T-M Liao
No. C59838
Exp. 12-31-15
CIVIL

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BENCH MARK

TBM PK Nail on north shoulder of Hwy 76 at Station 253+54.17, 175.21 ft Left "SD76T1" Line
Elevation: 223.55 ft.
Vertical Datum: NAVD 88



ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10		WILD ANIMAL CROSSING NO. 3 LOG OF TEST BORINGS	
FUNCTIONAL SUPERVISOR NAME: M. DeSalvatore	DRAWN BY: F. Nguyen CHECKED BY: E. Neupert	FIELD INVESTIGATION BY: D. Liao/J. Klamecki		BRIDGE NO. 57-1236 POST MILE R13.11		UNIT: 3643 PROJECT NUMBER & PHASE: 11000204891		CONTRACT NO.: 11-257151	
DISREGARD PRINTS BEARING EARLIER REVISION DATES								REVISION DATES	SHEET OF
								08-28-12 09-13-12 10-24-12	8 10

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FILE => 571236z1tb08.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15,76	R46.2/R46.8, R12.1/R17.7	1273	1273

10-25-12
REGISTERED CIVIL ENGINEER DATE

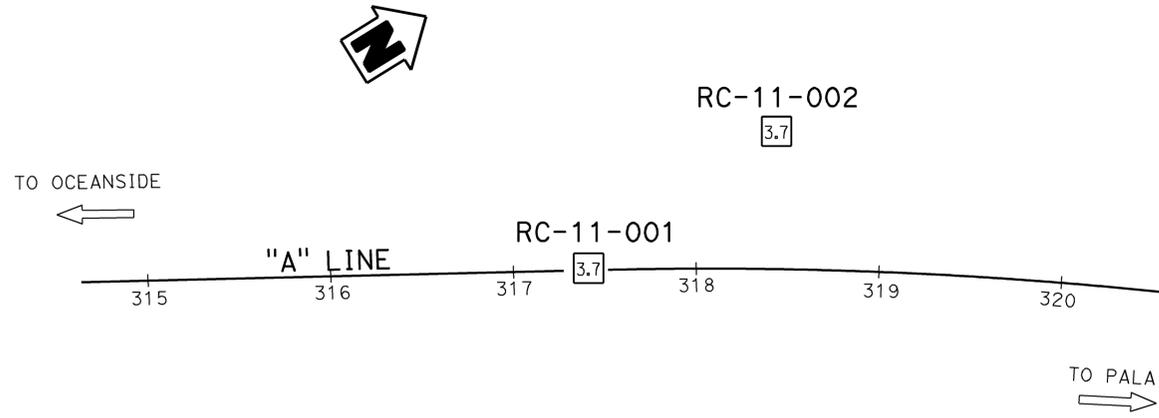
03-24-14
PLANS APPROVAL DATE

David T-M Liao
No. C59838
Exp. 12-31-15
CIVIL

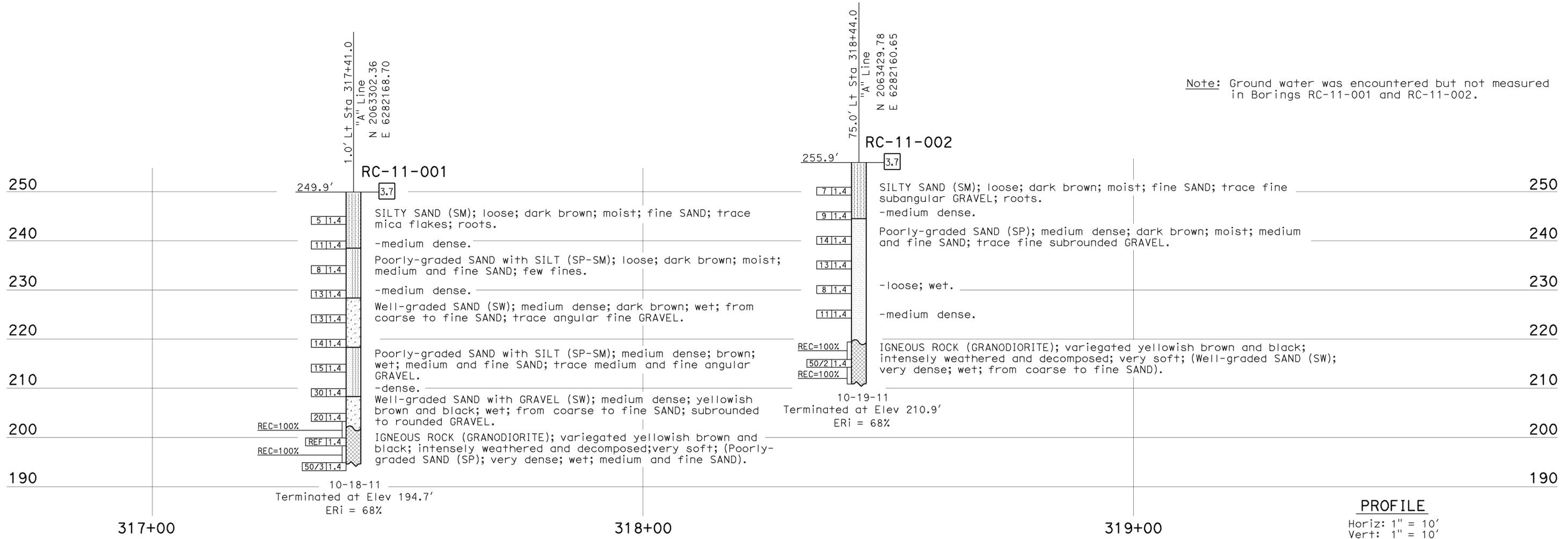
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

BENCH MARK

TBM Elev 255.3'
Stake at station 318+00,
64 ft left of "A" Line.
Located on north shoulder
of Hwy 76.
Vertical Datum: NAVD88



PLAN
1" = 50'



PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		WILD ANIMAL CROSSING NO. 6	
FUNCTIONAL SUPERVISOR		DRAWN BY: I.G-Remmen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		57-1236		LOG OF TEST BORINGS	
NAME: M. DeSalvatore		CHECKED BY: E. Neupert		FIELD INVESTIGATION BY: Z. Yazdani		DESIGN BRANCH 10		POST MILE			
						R13.11					
06S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 11000204891		CONTRACT NO.: 11-257151		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3		REVISION DATES		SHEET		OF	
						08-31-12 09-26-12 10-24-12 05-01-13		10		10	

FILE => 571236z1tb10.dgn