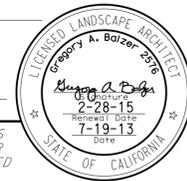
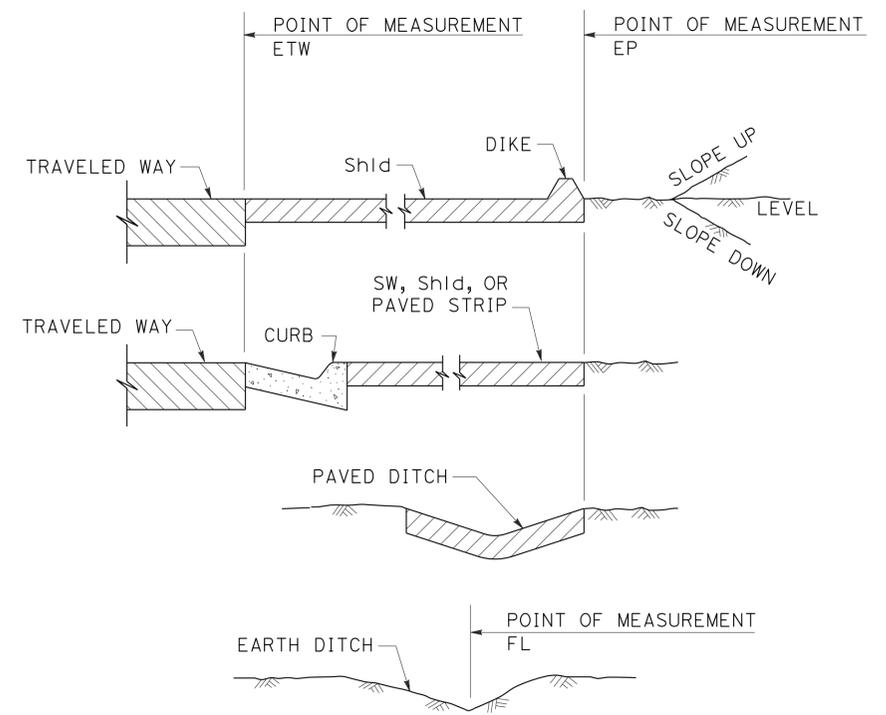


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	601	824

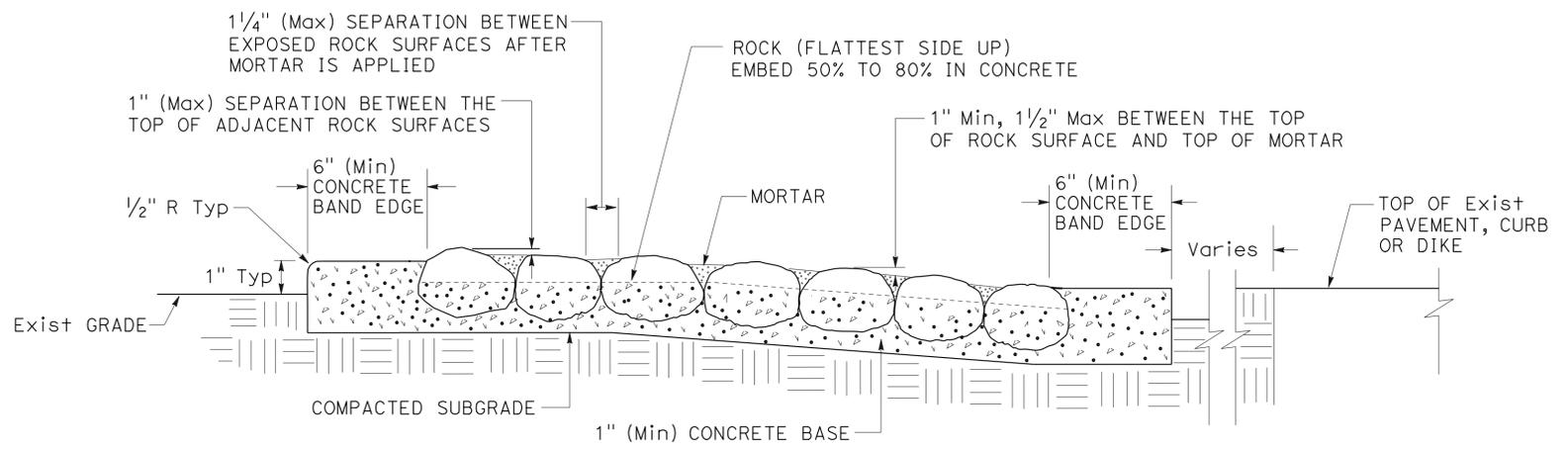
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



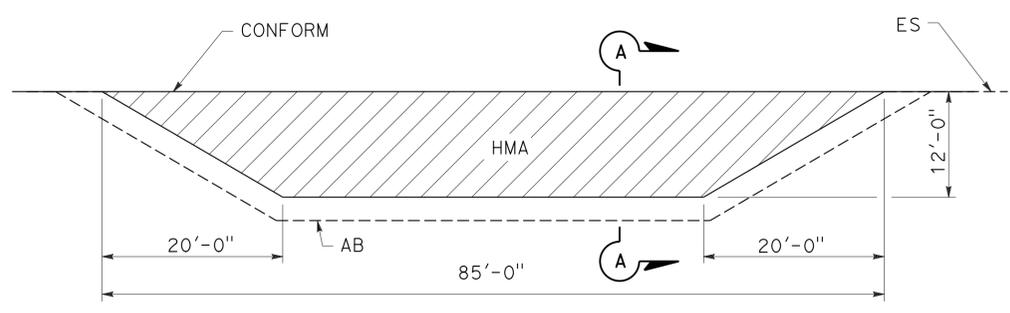
TO ACCOMPANY PLANS DATED 6-23-14



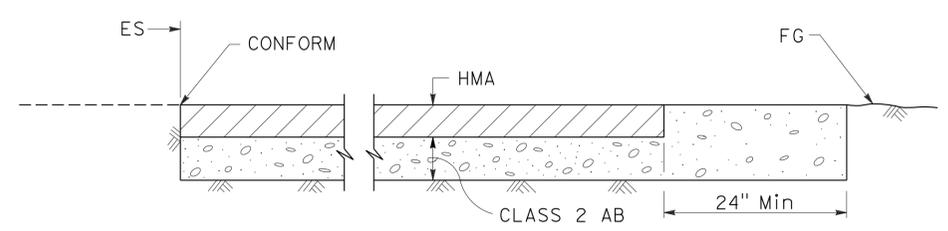
**SECTION
POINTS OF MEASUREMENT**



**SECTION
ROCK BLANKET**



PLAN



**SECTION A-A
MAINTENANCE VEHICLE PULLOUT**

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
 NO SCALE

RSP H9A DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H9A

2010 REVISED STANDARD PLAN RSP H9A

TO ACCOMPANY PLANS DATED 6-23-14

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING							
SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	X	Y	Z **
					TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

* - For other offsets, use the following merging taper length formula for L:
 For speed of 40 mph or less, $L = WS^2/60$
 For speed of 45 mph or more, $L = WS$

Where: L = Taper length in feet
 W = Width of offset in feet
 S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING				
SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
		ft	ft	ft
20	115	116	120	126
25	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Longitudinal buffer space or flagger station spacing

*** - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING			
ROAD TYPE	DISTANCE BETWEEN SIGNS *		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommended distances.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM TABLES
 FOR LANE AND RAMP CLOSURES**

NO SCALE

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013
 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	603	824

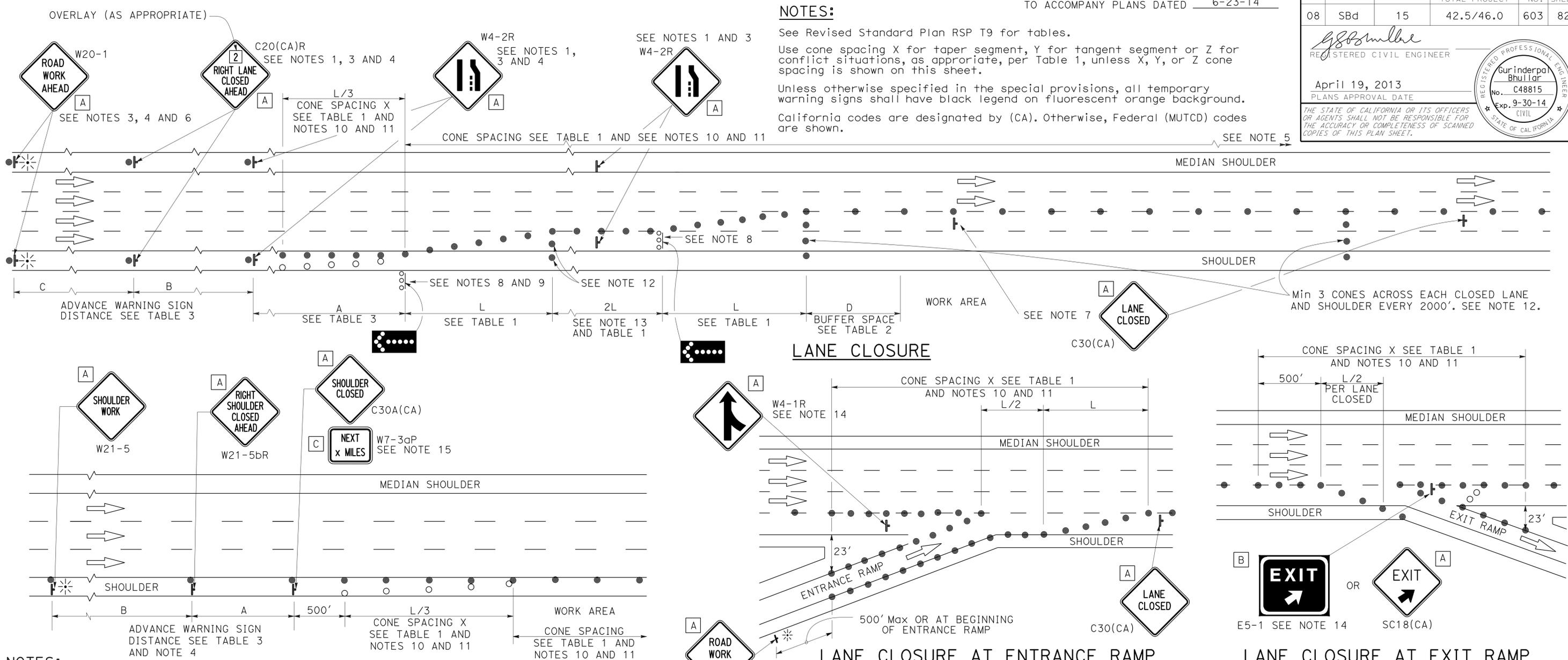
REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Gurinderpal Bhullar
 No. C48815
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-23-14

NOTES:

See Revised Standard Plan RSP T9 for tables.
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
 Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
 California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



NOTES:

1. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
3. Duplicate sign installations are not required:
 - a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
 - b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
4. Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
5. A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.

SHOULDER CLOSURE

6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA)L and W4-2L signs shall be used.
7. Place a C30(CA) sign every 2000' throughout length of lane closure.
8. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
9. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

W20-1 SEE NOTE 4

12. Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
13. Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
14. Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
15. A W7-3aP "NEXT _____ MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ☼ PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 72" x 60"
- C 36" x 30"

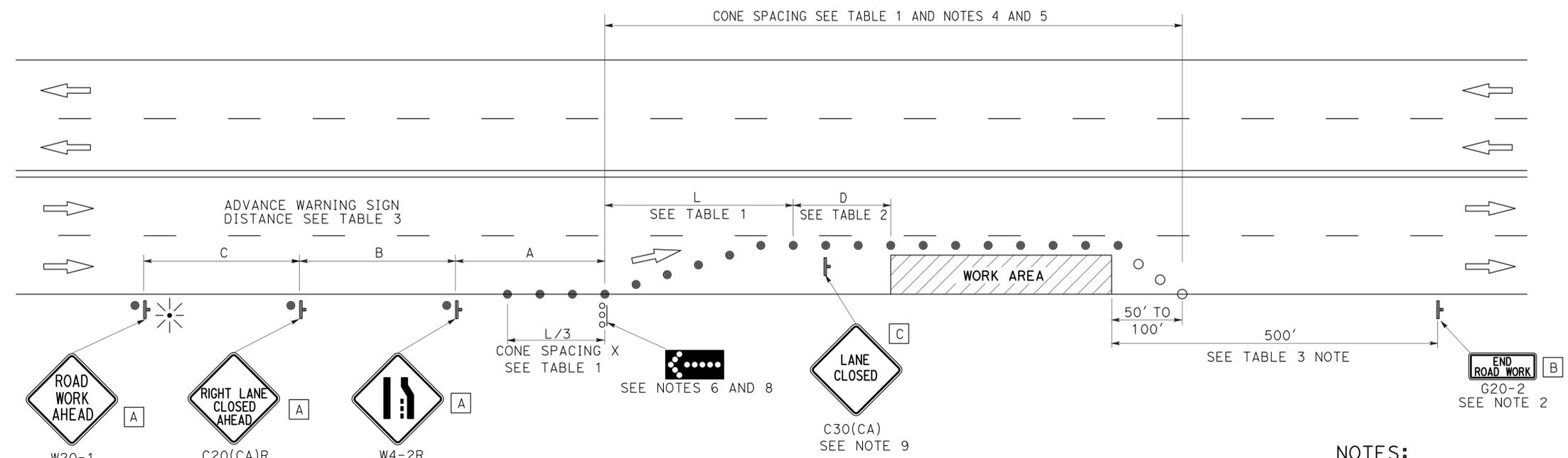
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURE ON
 FREEWAYS AND EXPRESSWAYS**
 NO SCALE

RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10

TO ACCOMPANY PLANS DATED 6-23-14



TYPICAL LANE CLOSURE

NOTES:

See Revised Standard Plan RSP T9 for tables.
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
 Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
 California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

NOTES:

- Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA) sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Flashing arrow sign shall be either Type I or Type II.
- For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.

LEGEND

-  TRAFFIC CONE
-  TRAFFIC CONE (OPTIONAL TAPER)
-  TEMPORARY TRAFFIC CONTROL SIGN
-  FLASHING ARROW SIGN (FAS)
-  FAS SUPPORT OR TRAILER
-  PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

- A** 48" x 48"
- B** 36" x 18"
- C** 30" x 30"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURE ON
 MULTILANE CONVENTIONAL
 HIGHWAYS**

NO SCALE

RSP T11 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T11
 DATED MAY 20, 2011 - PAGE 239 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T11

2010 REVISED STANDARD PLAN RSP T11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	605	824

April 19, 2013
 PLANS APPROVAL DATE
 Gurinderpal Bhullar
 REGISTERED CIVIL ENGINEER
 No. C48815
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

LEGEND

- TRAFFIC CONE
- ⊥ TEMPORARY TRAFFIC CONTROL SIGN
- ⋯ FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ⊛ PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

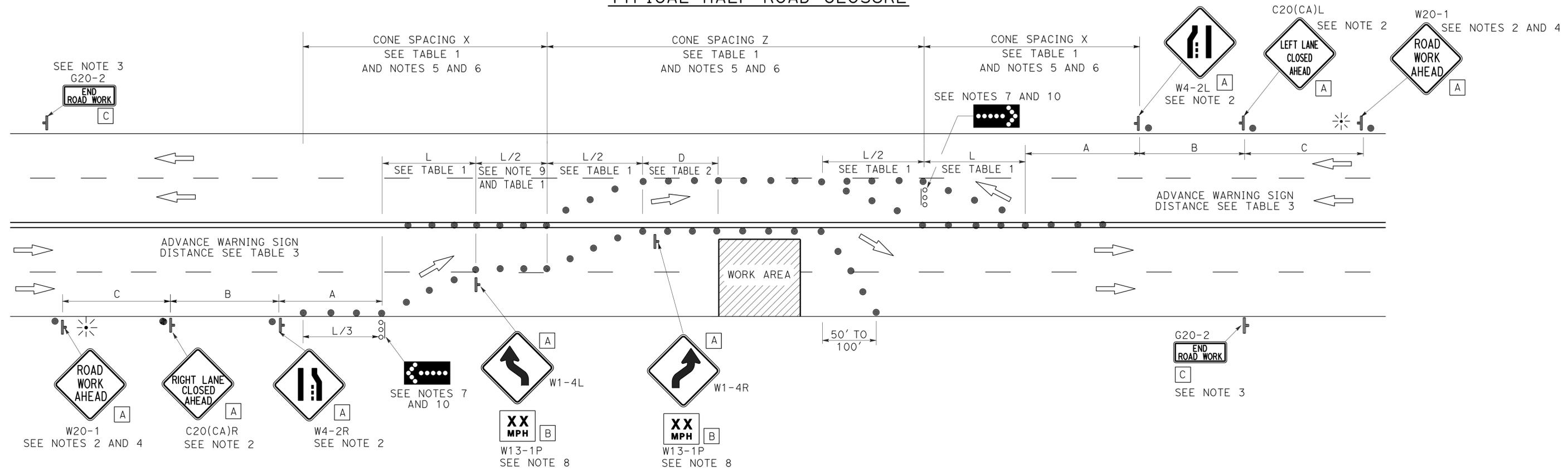
- A 48" x 48"
- B 24" x 24"
- C 36" x 18"

NOTES:

See Revised Standard Plan RSP T9 for tables.
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
 Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
 California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

TO ACCOMPANY PLANS DATED 6-23-14

TYPICAL HALF ROAD CLOSURE



NOTES:

1. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.
2. Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
4. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA) sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Flashing arrow signs shall be either Type I or Type II.
8. Advisory speed will be determined by the Engineer. The W13-1P Plaque will not be required when advisory speed is more than the posted or maximum speed limit.
9. Unless otherwise specified in the special provisions, the tangent (L/2) shall be used.
10. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR HALF ROAD CLOSURE ON
 MULTILANE CONVENTIONAL
 HIGHWAYS AND EXPRESSWAYS**

NO SCALE

RSP T12 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T12
 DATED MAY 20, 2011 - PAGE 240 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T12

2010 REVISED STANDARD PLAN RSP T12

NOTES:

See Revised Standard Plan RSP T9 for tables.

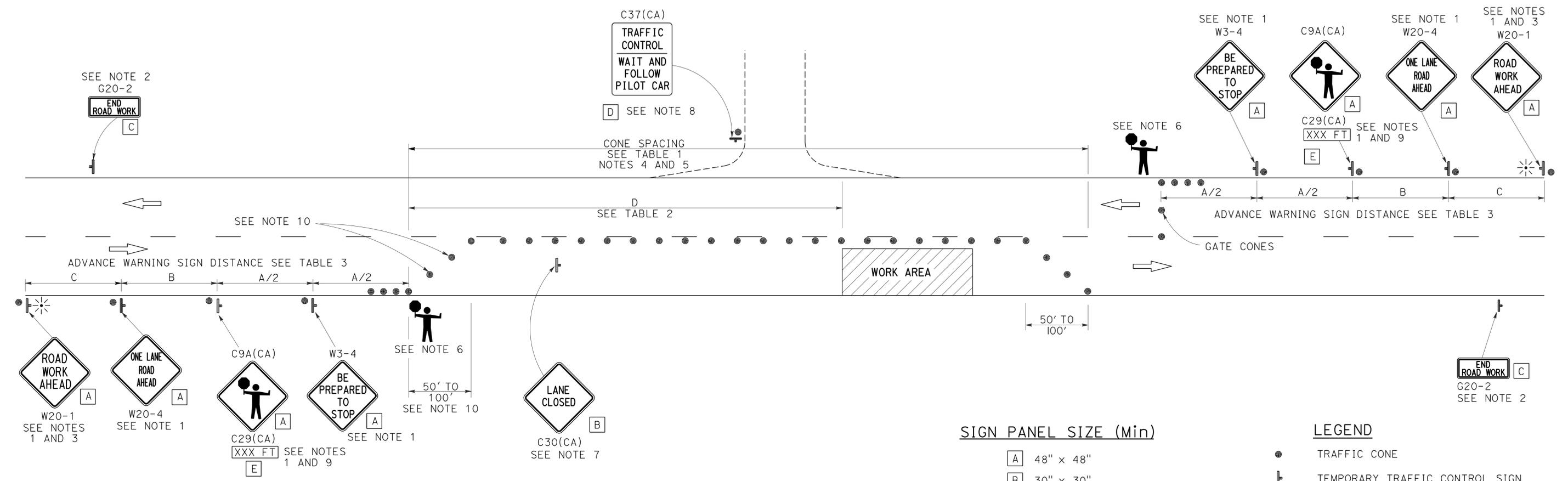
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.

California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL

TO ACCOMPANY PLANS DATED 6-23-14



NOTES:

- Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a W20-4 sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
- Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
- When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
- An optional C29(CA) sign may be placed below the C9A(CA) sign.
- Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 30" x 30"
- C 36" x 18"
- D 36" x 42"
- E 20" x 7"

LEGEND

- TRAFFIC CONE
- ⊥ TEMPORARY TRAFFIC CONTROL SIGN
- ⚡ PORTABLE FLASHING BEACON
- 👤 FLAGGER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM
FOR LANE CLOSURE ON
TWO LANE CONVENTIONAL
HIGHWAYS**

NO SCALE

RSP T13 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T13 DATED MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T13

2010 REVISED STANDARD PLAN RSP T13

TYPICAL RAMP CLOSURES

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 48" x 30"
- C 36" x 36"
- D 48" x 36"

LEGEND

- TRAFFIC CONE
- † TEMPORARY TRAFFIC CONTROL SIGN
- ‡ BARRICADES
- ⚡ PORTABLE FLASHING BEACON

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	607	824

Gurinderpal Bhullar
 REGISTERED CIVIL ENGINEER
 No. C48815
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

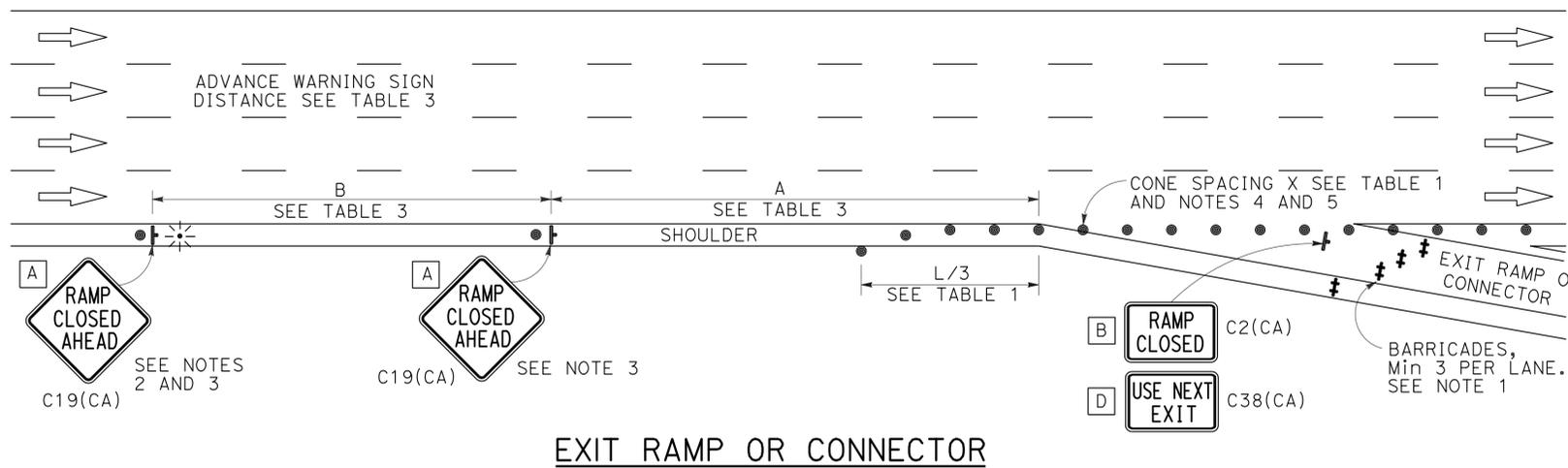
April 19, 2013
 PLANS APPROVAL DATE

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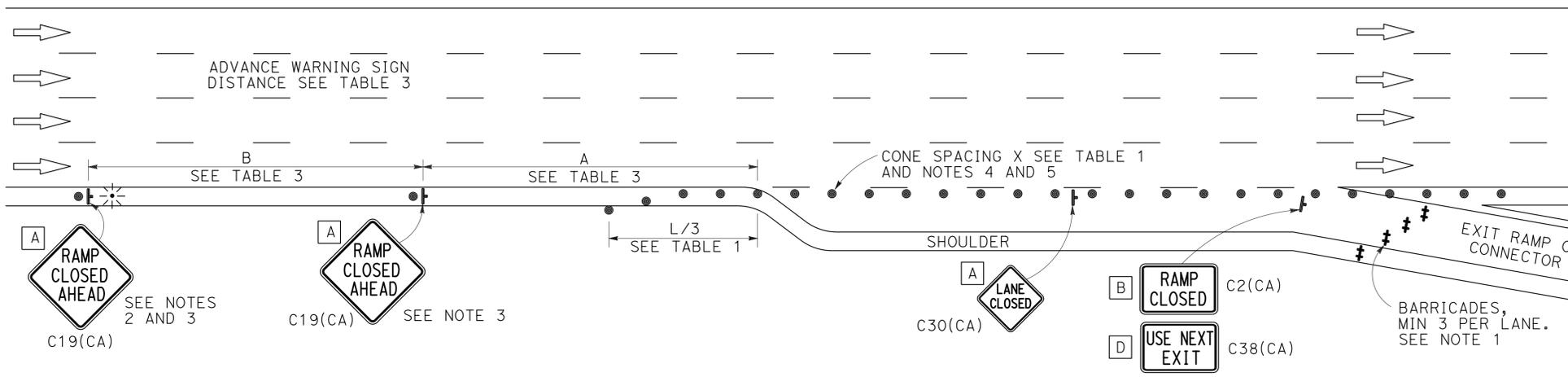
TO ACCOMPANY PLANS DATED 6-23-14

NOTES:

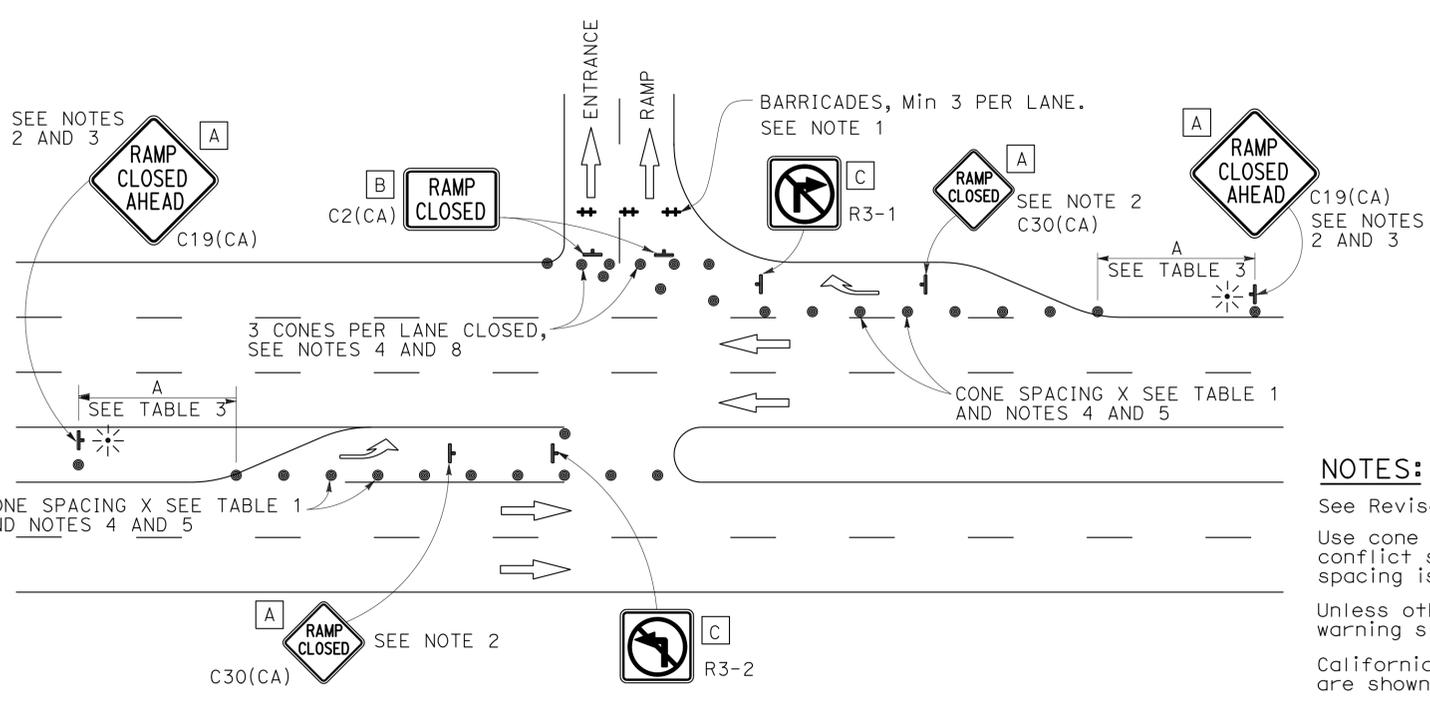
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed by the Engineer, on all guide signs that refer to the closed ramp. The letter size on the overlay shall be the same as the guide sign.
- Each advance C19(CA) "RAMP CLOSED AHEAD" sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. A flashing beacon shall be placed on top of the first C19(CA) sign during hours of darkness.
- All cones used for ramp closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime ramp closures only.
- At least one person shall be assigned to provide full time maintenance of traffic control devices, unless otherwise directed by the Engineer.
- The existing "EXIT" signs shall be covered during ramp closures.
- A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.



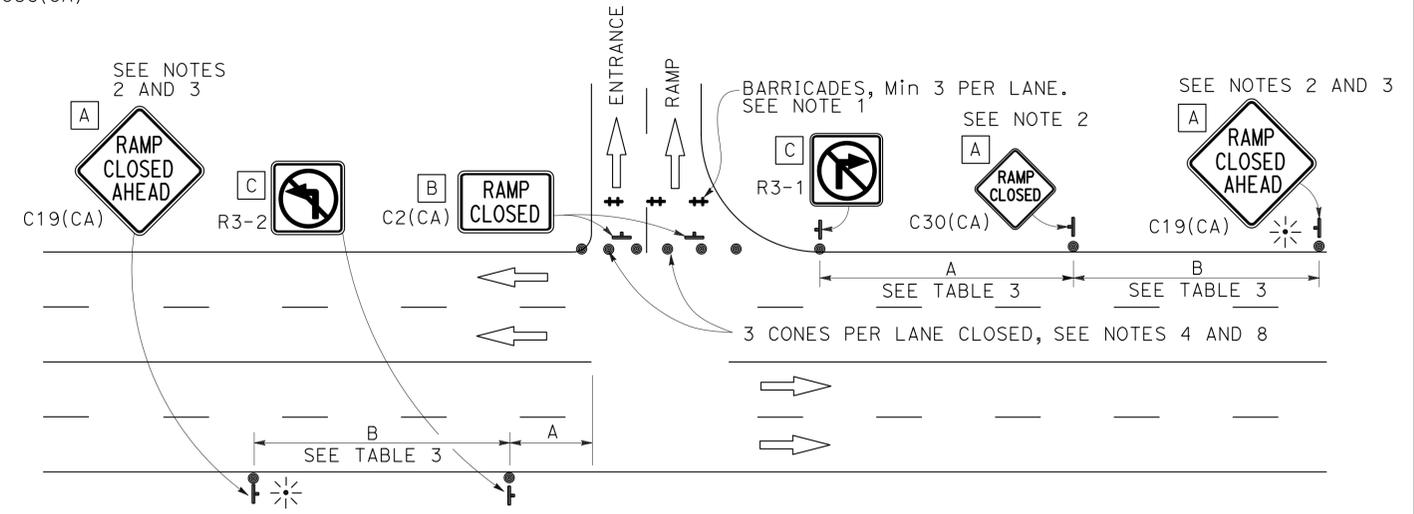
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

NOTES:

- See Revised Standard Plan RSP T9 for tables.
- Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
- Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
- California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

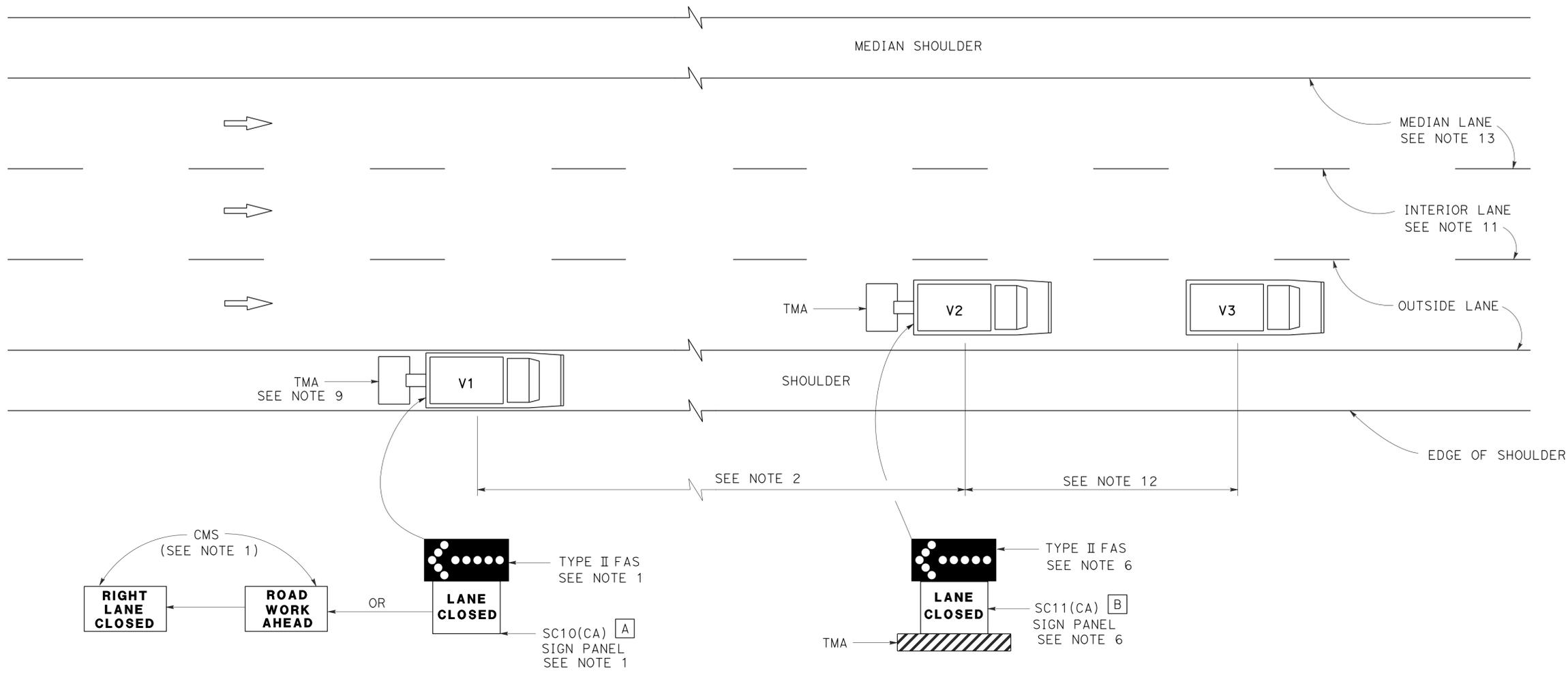
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR RAMP CLOSURE**
 NO SCALE

RSP T14 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T14
 DATED MAY 20, 2011 - PAGE 242 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T14

2010 REVISED STANDARD PLAN RSP T14

TO ACCOMPANY PLANS DATED 6-23-14



SIGN PANEL SIZE (Min)

- A 66" x 36"
- B 54" x 42"

LEGEND

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- FLASHING ARROW SIGN (FAS)
- CMS CHANGEABLE MESSAGE SIGN
- TMA TRUCK-MOUNTED ATTENUATOR

MOVING LANE CLOSURE ON MEDIAN LANE OR OUTSIDE LANE OF MULTILANE HIGHWAYS

NOTES:

1. Either a changeable message sign or a SC10(CA) sign panel and a Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "RIGHT LANE CLOSED" message. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right and the changeable message sign shall show "LEFT LANE CLOSED".
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500'.
5. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2. For median lane closure the flashing arrow sign symbol shall be displayed with the arrowhead on the right.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.
10. Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11, etc., as applicable) shall be used instead of this plan.
11. For moving lane closure on interior lane of multilane highways, use Revised Standard Plan T16.
12. The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.
13. When the work/application vehicle V3 occupies the median lane, sign vehicle V1 should drive in the median shoulder and indicate left lane closed ahead.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS
NO SCALE

RSP T15 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T15 DATED MAY 20, 2011 - PAGE 243 OF THE STANDARD PLANS BOOK DATED 2010.

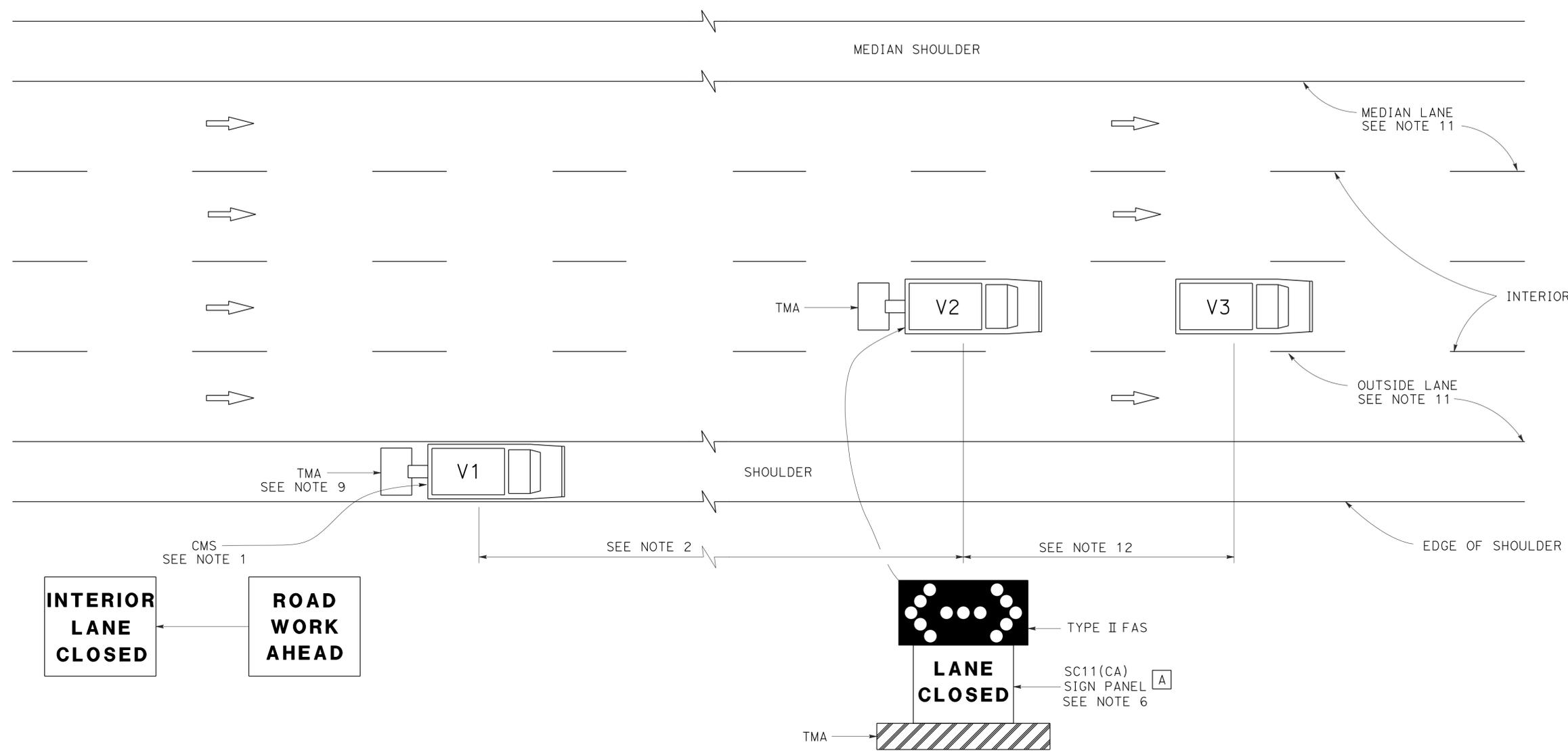
REVISED STANDARD PLAN RSP T15

2010 REVISED STANDARD PLAN RSP T15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	609	824

Gurinderpal Bhullar
 REGISTERED CIVIL ENGINEER
 April 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 6-23-14



SIGN PANEL SIZE (Min)

A 54" x 42"

LEGEND

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- FLASHING ARROW SIGN (FAS) IN FLASHING DOUBLE ARROW MODE
- CMS CHANGEABLE MESSAGE SIGN
- TMA TRUCK-MOUNTED ATTENUATOR

MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS

NOTES:

1. A changeable message sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "INTERIOR LANE CLOSED" message. The message "CENTER LANE CLOSED" may be used in place of the "INTERIOR LANE CLOSED" message.
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500'.
5. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.
10. Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11 etc., as applicable) shall be used instead of this plan.
11. For moving lane closure on median lane or outside lane of multilane highways, use Revised Standard Plan T15.
12. The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.

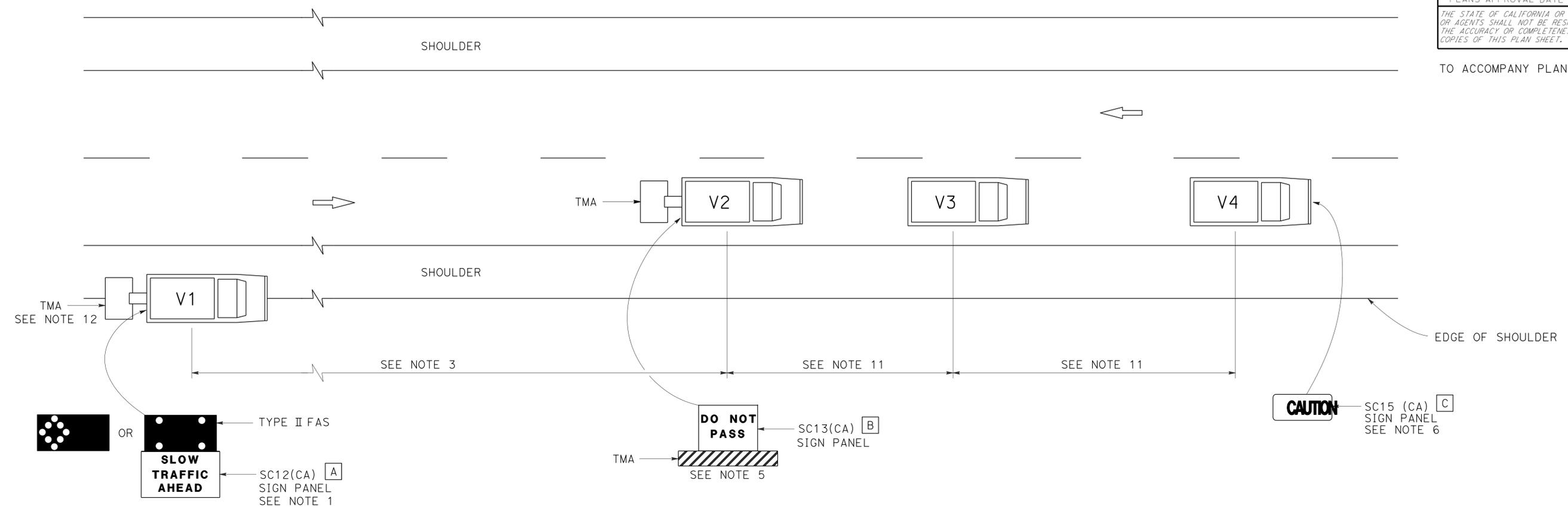
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR MOVING LANE CLOSURE
 ON MULTILANE HIGHWAYS**
 NO SCALE

RSP T16 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T16 DATED MAY 20, 2011 - PAGE 244 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T16

2010 REVISED STANDARD PLAN RSP T16

TO ACCOMPANY PLANS DATED 6-23-14



NOTES:

1. Either a changeable message sign or a SC12(CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "CAUTION" message first, follow by the "SLOW TRAFFIC AHEAD" message. A Type II flashing arrow sign may be used with the SC12(CA) sign panel.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Shadow vehicle shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.

7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2' or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. This plan shall not be used where workers would be on foot in the work area. Use a stationary type lane closure (Revised Standard Plan T13) for this condition.
11. Minimize spacing between vehicles V2 and V3 and vehicles V3 and V4 to deter road users from driving in between them.
12. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.

LEGEND

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- V4 SIGN VEHICLE
- TMA TRUCK-MOUNTED ATTENUATOR
-  FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE
-  FLASHING ARROW SIGN (FAS) IN ALTERNATING DIAMOND CAUTION

SIGN PANEL SIZE (Min)

- A** 72" x 42"
- B** 54" x 42"
- C** 54" x 24"

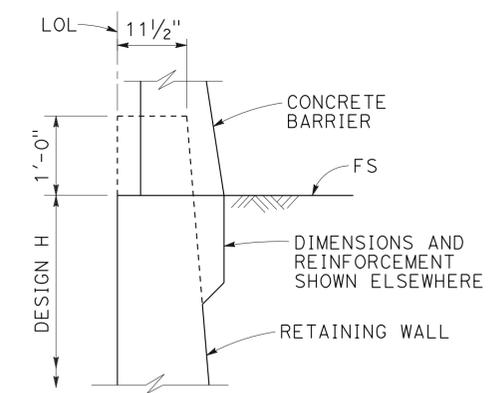
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR MOVING LANE CLOSURE
 ON TWO LANE HIGHWAYS**
 NO SCALE

RSP T17 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T17
 DATED MAY 20, 2011 - PAGE 245 OF THE STANDARD PLANS BOOK DATED 2010.

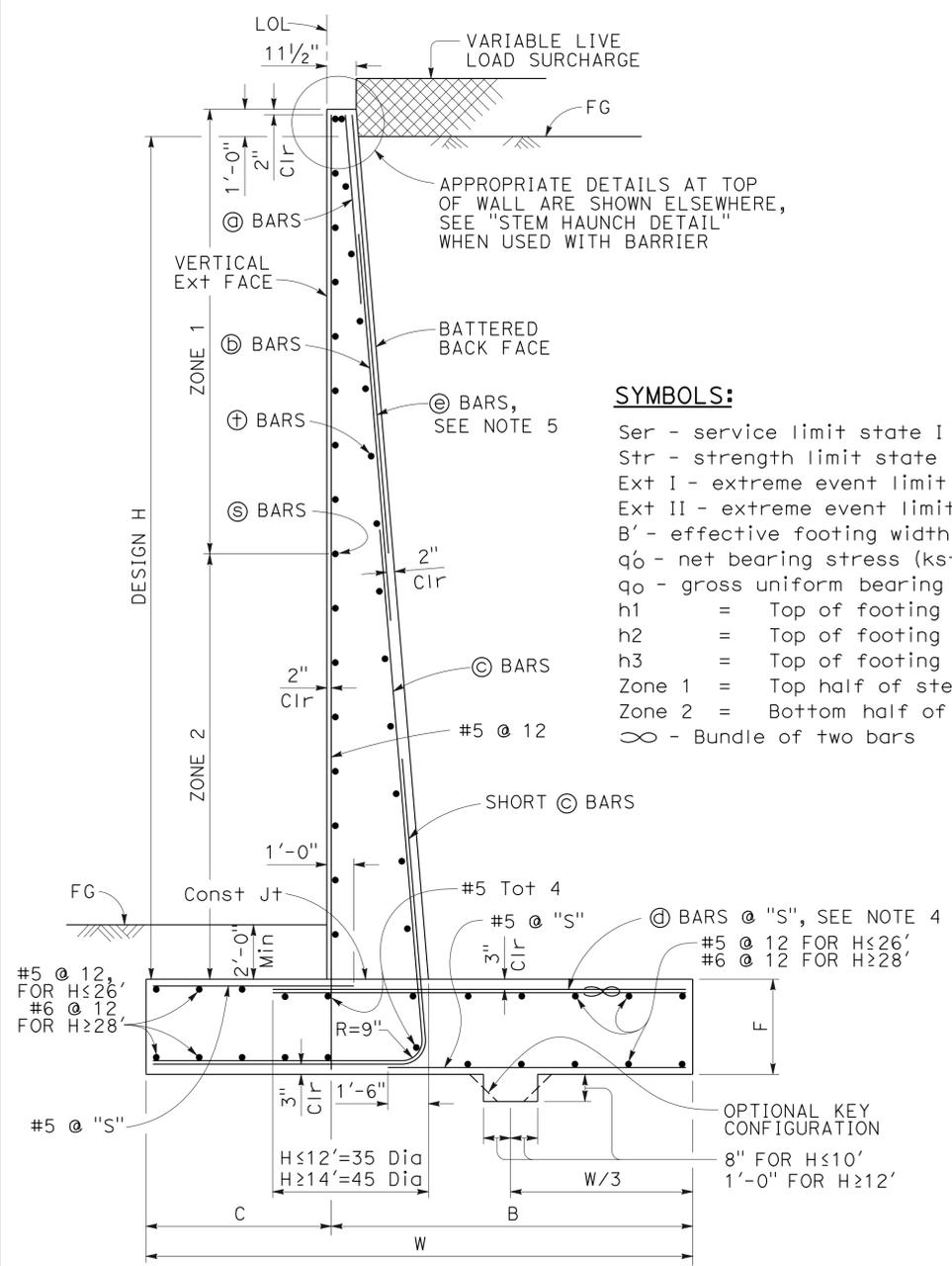
2010 REVISED STANDARD PLAN RSP T17

DESIGN CONDITIONS:

Design H may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in the table.



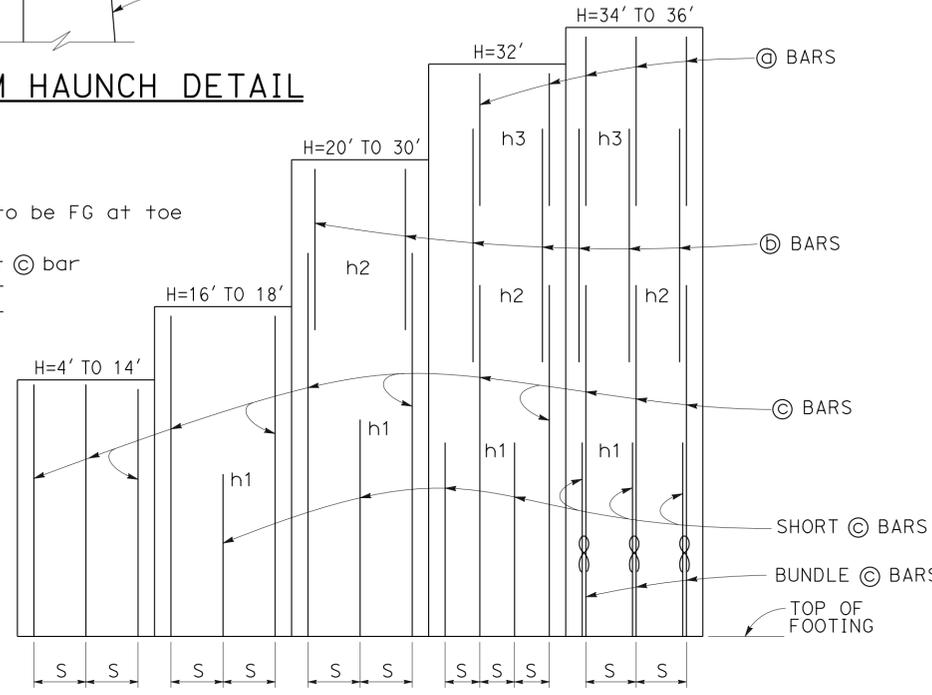
STEM HAUNCH DETAIL



TYPICAL SECTION

SYMBOLS:

- Ser - service limit state I
- Str - strength limit state I
- Ext I - extreme event limit state I
- Ext II - extreme event limit state II
- B' - effective footing width (ft)
- q₀ - net bearing stress (ksf), OG assumed to be FG at toe
- q_o - gross uniform bearing stress (ksf)
- h₁ = Top of footing to top of short © bar
- h₂ = Top of footing to top of © bar
- h₃ = Top of footing to top of © bar
- Zone 1 = Top half of stem height
- Zone 2 = Bottom half of stem height
- ∞ - Bundle of two bars



ELEVATION

DESIGN NOTES:

- TO ACCOMPANY PLANS DATED 6-23-14
- DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments
 - LS: Varied surcharge on level ground surface
 - DC: Stem Architectural Treatment of thickness up to 6" of concrete (75 psf) considered
 - CT: 54 kip transverse force applied at H_e = 32", distributed over 10 feet at the top of wall and 1:1 distribution down and outward. Distribution below footing taken no less than 40'.
 - SEISMIC: k_H = 0.2, k_V = 0.0
 - SOIL: φ = 34°, γ = 120 pcF
 - REINFORCED CONCRETE: f'_c = 3,600 psi, f_y = 60,000 psi
 - LOAD COMBINATIONS AND LIMIT STATES:
 - Service I Q = 1.00DC+1.00EV+1.00EH+1.00LS
 - Strength I Q = αDC+βEV+ηEH+1.75LS
 - Extreme I Q = 1.00DC+1.00EV+1.00EH+1.00EQD+1.00EQE
 - Extreme II Q = 1.00DC+1.00EV+1.00EH+1.00CT
 - Where:
 - Q: Force Effects
 - α: 1.25 or 0.90, Whichever Controls Design
 - β: 1.35 or 1.00, Whichever Controls Design
 - η: 1.50 or 0.90, Whichever Controls Design
 - DC: Dead Load of Structure Components
 - EH: Horizontal Earth Fill Pressure
 - EV: Vertical Earth Pressure from Earth Fill Weight
 - LS: Live Load Surcharge
 - EQE: Seismic Earth Pressure
 - EQD: Soil and Structural and Nonstructural Components Inertia
 - CT: Vehicular Collision Force

NOTES:

1. For details not shown and drainage notes see RSP B3-5
2. For wall stem joint details see B0-3 3-3 and B0-3 3-4
3. At © bars:
 - H ≤ 6', no splices are allowed within 1'-8" above the top of footing.
 - H > 6', no splices are allowed within H/4 above the top of footing.
4. Bundle © bars for H = 34' & 36'.
5. Provide #6 @ 10" x 15'-0" © bars over a distance of 8'-0" measured from all expansion joints, begin wall and end wall locations. For H ≤ 14', hook © bar into footing and reduce bar length as needed to maintain Min CLR cover.

TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA																	
DESIGN H	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	28'	30'	32'	34'	36'
W	6'-10"	7'-0"	7'-3"	7'-7"	8'-4"	9'-7"	10'-9"	12'-0"	13'-3"	14'-6"	15'-9"	17'-1"	18'-5"	19'-10"	21'-2"	22'-7"	24'-0"
C	2'-2"	2'-3"	2'-3"	2'-4"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-5"	6'-0"	6'-6"	7'-2"	7'-8"	8'-2"	9'-0"
B	4'-8"	4'-9"	5'-0"	5'-3"	5'-10"	6'-7"	7'-3"	8'-0"	8'-9"	9'-6"	10'-4"	11'-1"	11'-11"	12'-8"	13'-6"	14'-5"	15'-0"
F	1'-4"	1'-4"	1'-4"	1'-4"	1'-6"	1'-8"	1'-8"	1'-9"	1'-9"	1'-11"	2'-2"	2'-5"	2'-10"	3'-3"	3'-6"	4'-0"	4'-3"
BATTER	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	5/8: 12	5/8: 12	3/4: 12	7/8: 12	1: 12	1: 12	1: 12
SPACING "S"	9"	9"	9"	9"	9"	7"	6"	5"	6"	6"	6"	6"	6"	6"	6"	10"	8"
© BARS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#7	#7	#6
© BARS	-	-	-	-	-	-	-	-	#7	#7	#7	#7	#7	#7	#9	#9	#8
© BARS	#6	#6	#6	#6	#6	#6	#7	#7	#8	#9	#9	#10	#10	#10	#11	#11	#11
© BARS	#5	#5	#6	#6	#6	#6	#9	#8	#8	#9	#9	#10	#10	#10	#11	#11	#11
h ₁	-	-	-	-	-	-	5'-9"	5'-10"	8'-0"	9'-0"	10'-1"	11'-0"	12'-1"	13'-0"	13'-0"	12'-7"	11'-6"
h ₂	-	-	-	-	-	-	-	-	10'-5"	13'-0"	14'-7"	17'-6"	19'-0"	20'-5"	19'-0"	18'-0"	20'-2"
h ₃	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21'-2"	21'-10"	24'-0"
ZONE 1 © BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
ZONE 2 © BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 12	#6 @ 12	#7 @ 12	#7 @ 12
ZONE 1 © BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12
ZONE 2 © BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
Ser: B', q ₀	6.8, 0.7	6.5, 1.0	6.2, 1.3	6.0, 1.6	6.3, 2.0	7.5, 2.1	8.6, 2.2	9.8, 2.3	11.0, 2.4	12.1, 2.5	13.2, 2.8	14.4, 2.9	15.5, 3.1	16.8, 3.3	18.0, 3.5	19.2, 3.7	20.6, 3.7
Str: B', q ₀	6.6, 1.6	5.0, 1.8	3.6, 2.3	3.0, 3.3	3.2, 4.0	4.3, 3.8	5.3, 3.7	6.4, 3.7	7.4, 3.8	8.2, 4.1	9.0, 4.4	9.9, 4.6	10.7, 4.9	11.7, 5.2	12.6, 5.4	13.6, 5.8	14.6, 5.9
Ext I: B', q ₀	5.2, 1.1	4.7, 1.5	3.9, 2.2	3.1, 3.4	2.8, 4.8	3.2, 5.3	3.6, 5.7	4.1, 6.1	4.6, 6.4	5.0, 6.9	5.3, 7.6	5.8, 8.1	6.1, 8.9	6.7, 9.4	7.1, 10.0	7.5, 10.7	8.2, 10.9
Ext II: B', q ₀	2.6, 2.2	2.7, 2.6	2.8, 3.1	2.9, 3.6	3.7, 3.6	5.2, 3.3	6.7, 3.1	8.3, 3.0	9.8, 3.0	11.2, 3.1	12.5, 3.2	13.9, 3.4	15.2, 3.6	16.7, 3.8	18.0, 4.0	19.3, 4.2	20.8, 4.3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
RETAINING WALL TYPE 1 (CASE 1)
NO SCALE

RSP B3-1A DATED APRIL 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP B3-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	613	824

Gary Wang
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 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.

DESIGN CONDITIONS:

Design H may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in the table.

DESIGN NOTES:

- DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments
- LS: Varied surcharge on level ground surface
- DC: Stem Architectural Treatment of thickness up to 6" of concrete (75 psf) considered
- SEISMIC: $k_h = 0.2$
 $k_v = 0.0$
- SOIL: $\phi = 34^\circ$
 $\gamma = 120$ pcf
- REINFORCED CONCRETE: $f'_c = 3,600$ psi
 $f_y = 60,000$ psi
- LOAD COMBINATIONS AND LIMIT STATES:
 Service I $Q = 1.00DC + 1.00EV + 1.00EH + 1.00LS$
 Strength I $Q = \alpha DC + \beta EV + \eta EH + 1.75LS$
 Extreme I $Q = 1.00DC + 1.00EV + 1.00EH + 1.00EQD + 1.00EQE$

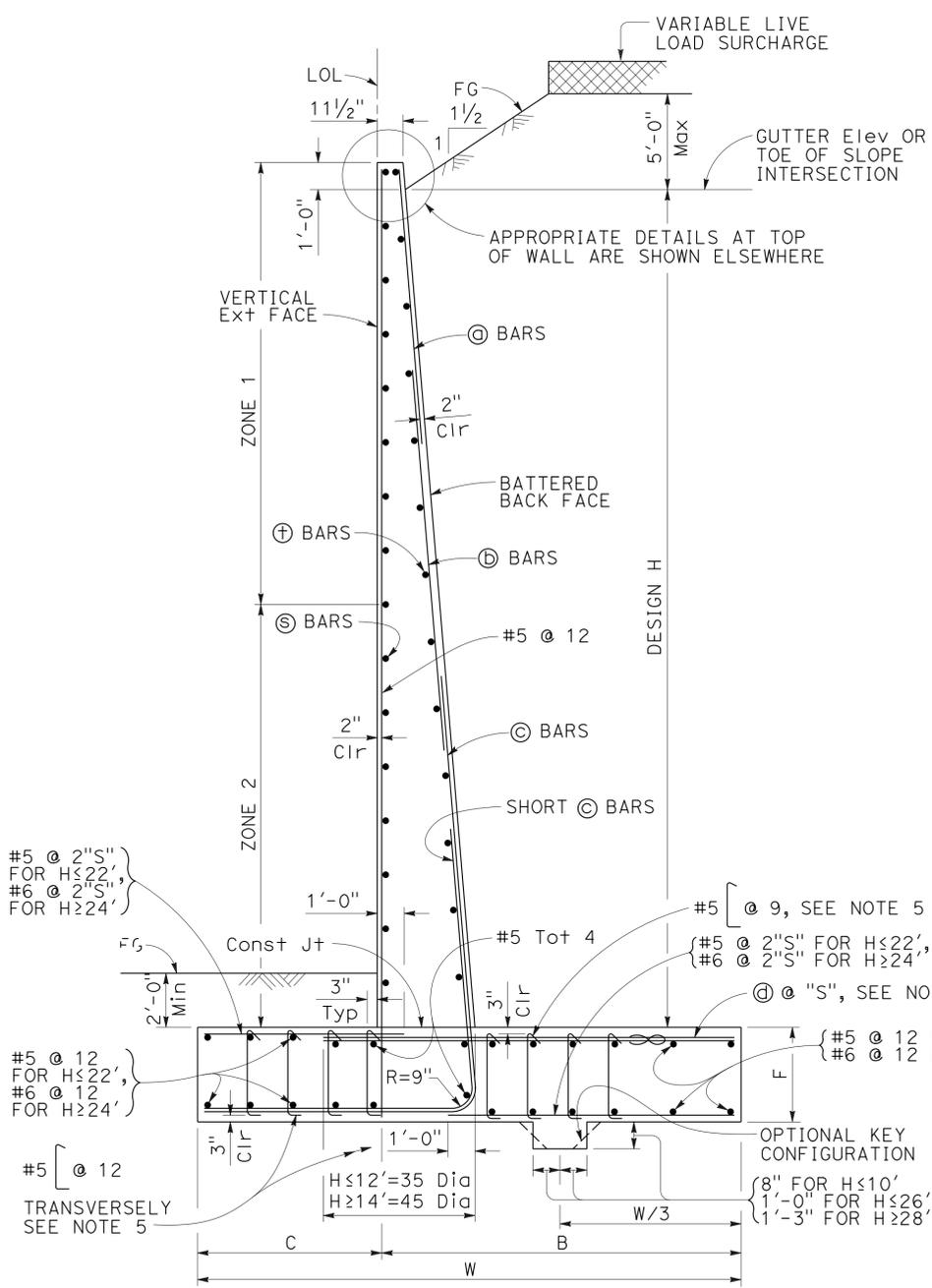
Where:

Q: Force Effects
 α : 1.25 or 0.90, Whichever Controls Design
 β : 1.35 or 1.00, Whichever Controls Design
 η : 1.50 or 0.90, Whichever Controls Design
 DC: Dead Load of Structure Components
 EH: Horizontal Earth Fill Pressure
 EV: Vertical Earth Pressure from Earth Fill Weight
 LS: Live Load Surcharge
 EQE: Seismic Earth Pressure
 EQD: Soil and Structural and Nonstructural Components Inertia

TO ACCOMPANY PLANS DATED 6-23-14

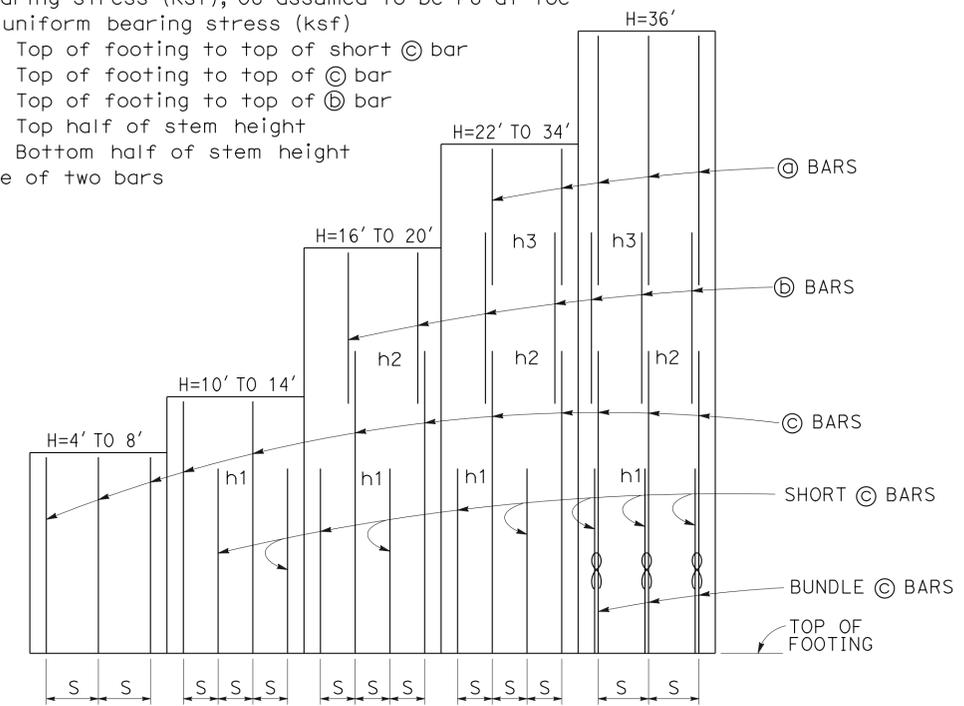
SYMBOLS:

- Ser - service limit state I
 Str - strength limit state I
 Ext - extreme event limit state I
 B' - effective footing width (ft)
 q_0 - net bearing stress (ksf), OG assumed to be FG at toe
 q_0 - gross uniform bearing stress (ksf)
 h1 = Top of footing to top of short \odot bar
 h2 = Top of footing to top of \oplus bar
 h3 = Top of footing to top of \ominus bar
 Zone 1 = Top half of stem height
 Zone 2 = Bottom half of stem height
 ∞ - Bundle of two bars



TYPICAL SECTION

- NOTES:**
- For details not shown and drainage notes see RSP B3-5
 - For wall stem joint details see B0-3/3-3 and B0-3/3-4
 - At \odot bars:
 $H \leq 6'$, no splices are allowed within 1'-8" above the top of footing.
 $H > 6'$, no splices are allowed within H/4 above the top of footing.
 - Bundle \odot bars for $H = 36'$.
 - Hook stirrups around & space with alternating transverse reinforcement at $2 \times "S"$.



ELEVATION

TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA																	
DESIGN H	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	28'	30'	32'	34'	36'
W	6'-5"	7'-3"	8'-3"	9'-3"	10'-8"	12'-6"	13'-9"	15'-1"	16'-6"	17'-10"	19'-3"	20'-4"	21'-5"	22'-8"	23'-11"	25'-1"	26'-4"
C	2'-2"	2'-6"	3'-0"	3'-6"	3'-8"	3'-11"	4'-0"	4'-7"	5'-3"	6'-0"	7'-0"	7'-9"	8'-3"	8'-8"	9'-0"	9'-6"	9'-10"
B	4'-3"	4'-9"	5'-3"	5'-9"	7'-0"	8'-7"	9'-9"	10'-6"	11'-3"	11'-10"	12'-3"	12'-7"	13'-2"	14'-0"	14'-11"	15'-7"	16'-6"
F	1'-4"	1'-4"	1'-4"	1'-6"	1'-6"	1'-6"	1'-8"	2'-0"	2'-4"	2'-9"	3'-2"	3'-0"	3'-0"	3'-3"	3'-3"	3'-3"	3'-3"
BATTER	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	5/8: 12	3/4: 12	1: 12	1: 12	1 1/8: 12	1 1/8: 12	1 1/8: 12
SPACING "S"	16"	16"	16"	8"	8"	7"	7"	7"	6"	6"	7"	7"	7"	6"	6"	6"	8"
\oplus BARS	-	-	-	-	-	-	-	-	-	#5	#5	#5	#5	#5	#5	#6	#6
\ominus BARS	-	-	-	-	-	-	#5	#5	#5	#7	#7	#7	#8	#8	#8	#9	#9
\odot BARS	#5	#5	#6	#5	#6	#6	#7	#8	#8	#9	#10	#10	#10	#10	#10	#11	#11
\oplus BARS	#5	#5	#6	#5	#6	#8	#9	#9	#9	#10	#11	#9	#9	#10	#10	#10	#9
h1	-	-	-	4'-2"	4'-7"	6'-2"	7'-3"	8'-6"	8'-8"	9'-8"	11'-0"	12'-2"	14'-0"	13'-0"	15'-10"	14'-6"	12'-0"
h2	-	-	-	-	-	-	10'-6"	12'-9"	14'-2"	13'-8"	17'-0"	18'-6"	17'-10"	18'-9"	20'-3"	21'-0"	17'-0"
h3	-	-	-	-	-	-	-	-	-	15'-6"	17'-9"	19'-6"	21'-8"	23'-0"	24'-8"	25'-6"	24'-8"
No. of Toe Stirrups	0	0	0	0	0	0	0	0	0	0	0	6	6	7	7	7	8
No. of Heel Stirrups	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6
ZONE 1 \oplus BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
ZONE 2 \oplus BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 12	#6 @ 12	#7 @ 12	#7 @ 12	#7 @ 12
ZONE 1 \oplus BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12
ZONE 2 \oplus BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
Ser: B', q_0	4.3, 0.8	4.9, 1.1	5.6, 1.3	7.1, 1.5	8.0, 1.8	9.3, 2.1	10.6, 2.3	11.9, 2.5	13.3, 2.6	14.6, 2.8	15.9, 2.9	17.0, 3.0	18.0, 3.1	19.3, 3.3	20.4, 3.5	21.5, 3.7	22.7, 3.9
Str: B', q_0	2.4, 2.2	2.4, 2.7	2.7, 3.2	3.0, 3.7	4.3, 3.8	5.9, 3.8	7.0, 4.1	7.9, 4.3	9.0, 4.5	9.9, 4.7	10.8, 4.9	11.6, 5.0	12.3, 5.2	13.3, 5.4	14.2, 5.7	15.0, 5.9	16.0, 6.1
Ext: B', q_0	4.1, 1.5	3.9, 2.1	3.8, 2.8	3.5, 3.9	3.6, 4.9	4.2, 5.5	4.6, 6.3	5.0, 7.0	5.6, 7.4	6.0, 8.0	6.5, 8.4	6.9, 8.6	7.2, 9.2	7.7, 9.6	8.1, 10.4	8.4, 10.9	8.9, 11.3

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
RETAINING WALL TYPE 1 (CASE 3)
 NO SCALE

RSP B3-1C DATED APRIL 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B3-1C

2010 REVISED STANDARD PLAN RSP B3-1C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	614	824

Gary Wang
REGISTERED CIVIL ENGINEER

April 20, 2012
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 6-23-14

2010 REVISED STANDARD PLAN RSP B3-5

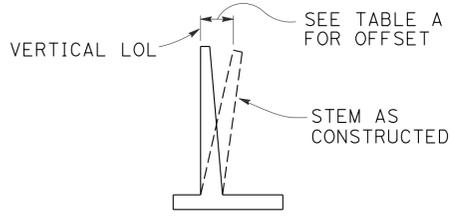
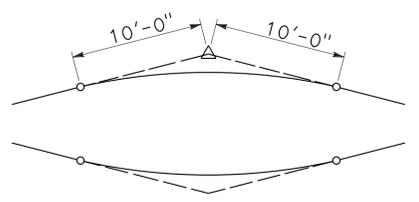


TABLE A

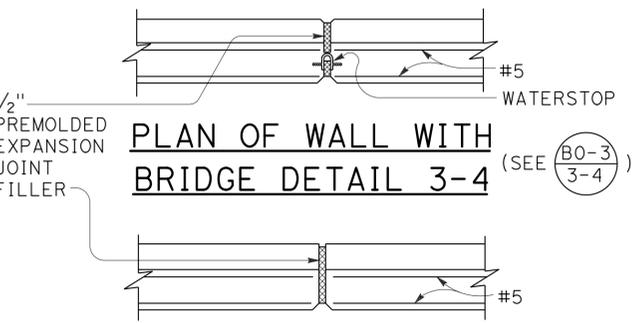
H	OFFSET
4'-12'	H/200
14'-16'	H/160
18'-20'	H/140
22'-24'	H/130
26'-36'	2 1/2"

APPROXIMATE WALL OFFSET VALUES

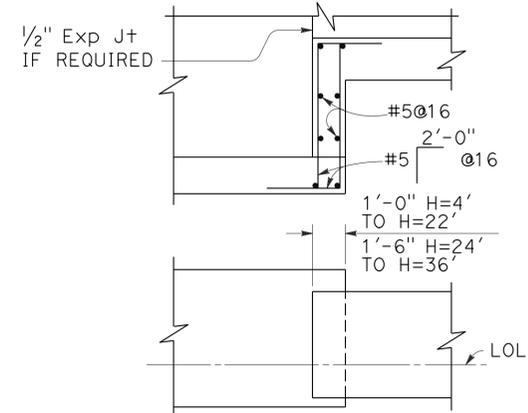
Values for offsetting forms to be determined by the Engineer.



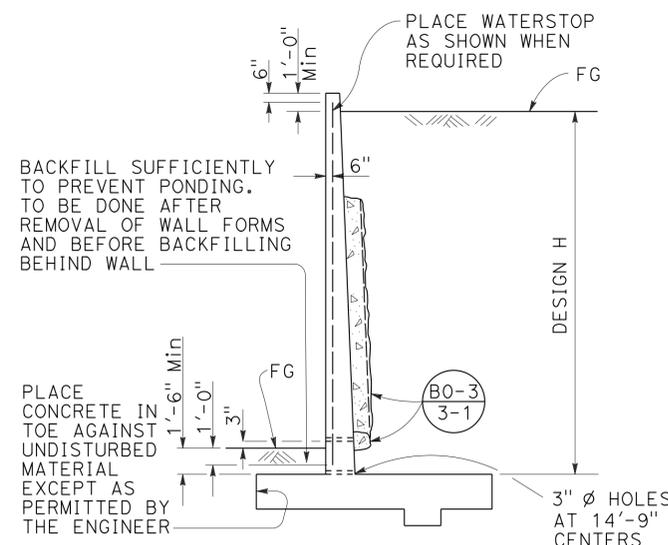
Where shown on the plans



PLAN OF WALL WITH EXPANSION JOINT ONLY



FOOTING STEP



DESIGN AND DRAINAGE

DESIGN CONDITIONS:

Design "H" may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in table

Return wall not required unless shown elsewhere

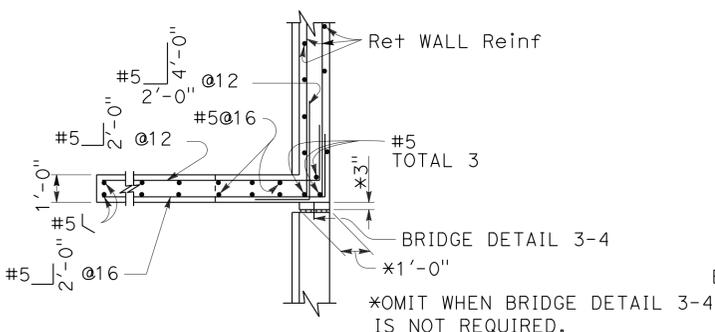
DESIGN NOTES:

DESIGN: AASHTO LRFD Bridge Design Specifications, 4th edition with California Amendments

LIVE LOAD: Surcharge on level ground surface

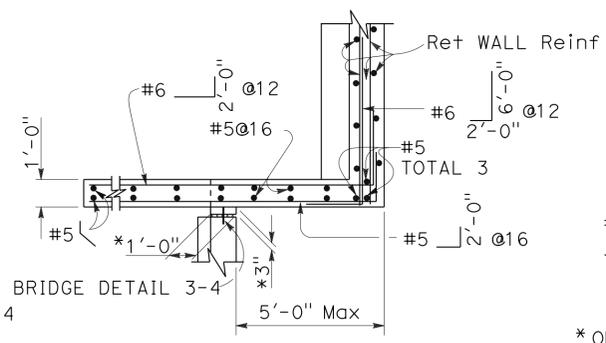
SOIL: $\phi = 34^\circ$
 $\gamma = 120$ pcf

REINFORCED CONCRETE: $f_y = 60,000$ psi
 $f_c' = 3,600$ psi



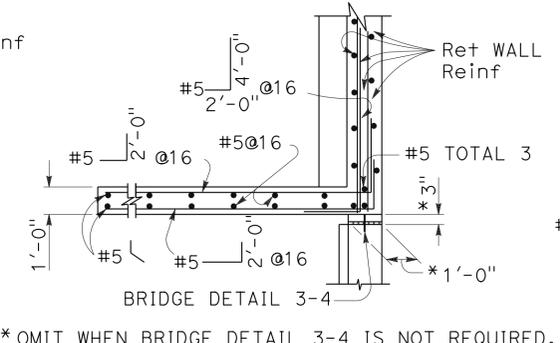
PLAN

(For return wall Type "A")



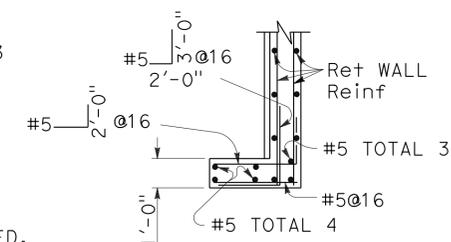
PLAN

(For return wall Type "B")



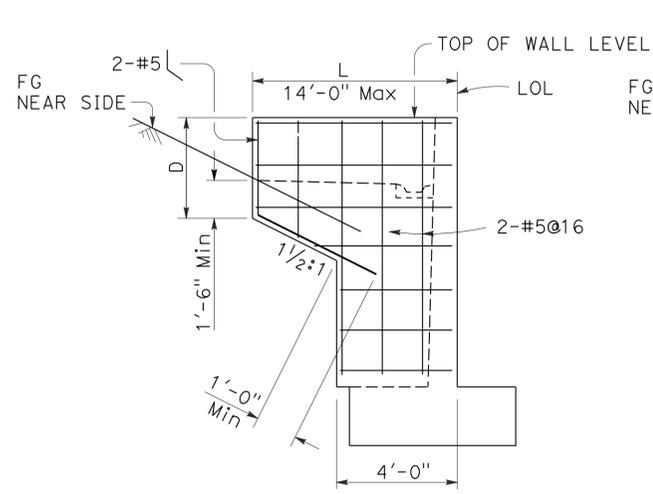
PLAN

(For return wall Type "C")



PLAN

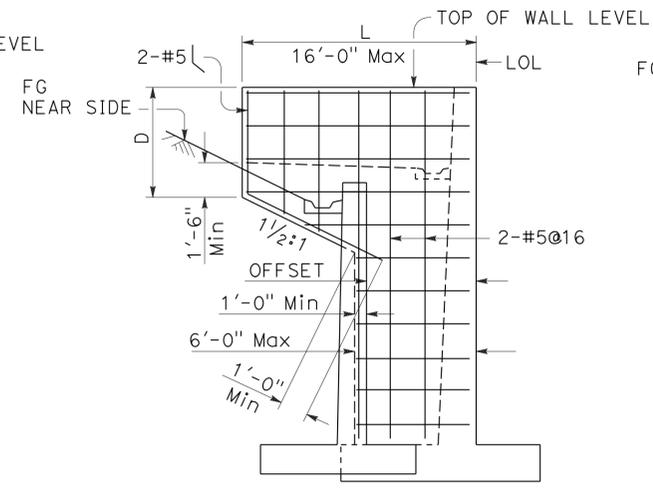
(For return wall Type "D")



ELEVATION

RETURN WALL TYPE "A"

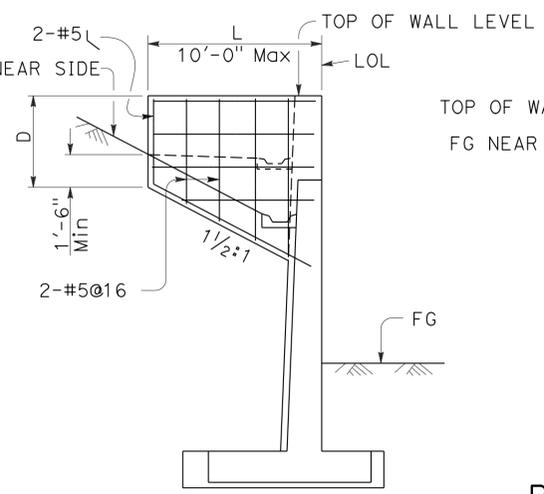
Use where H=8' or less



ELEVATION

RETURN WALL TYPE "B"

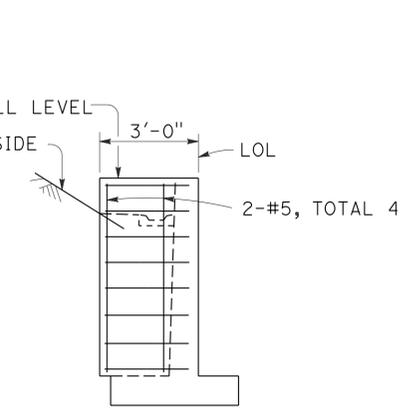
Use where H=10' or more on offset walls



ELEVATION

RETURN WALL TYPE "C"

Use where H=10' or more on straight walls



ELEVATION

RETURN WALL TYPE "D"

Use where H=6' or less

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

RETAINING WALL DETAILS No. 1

NO SCALE

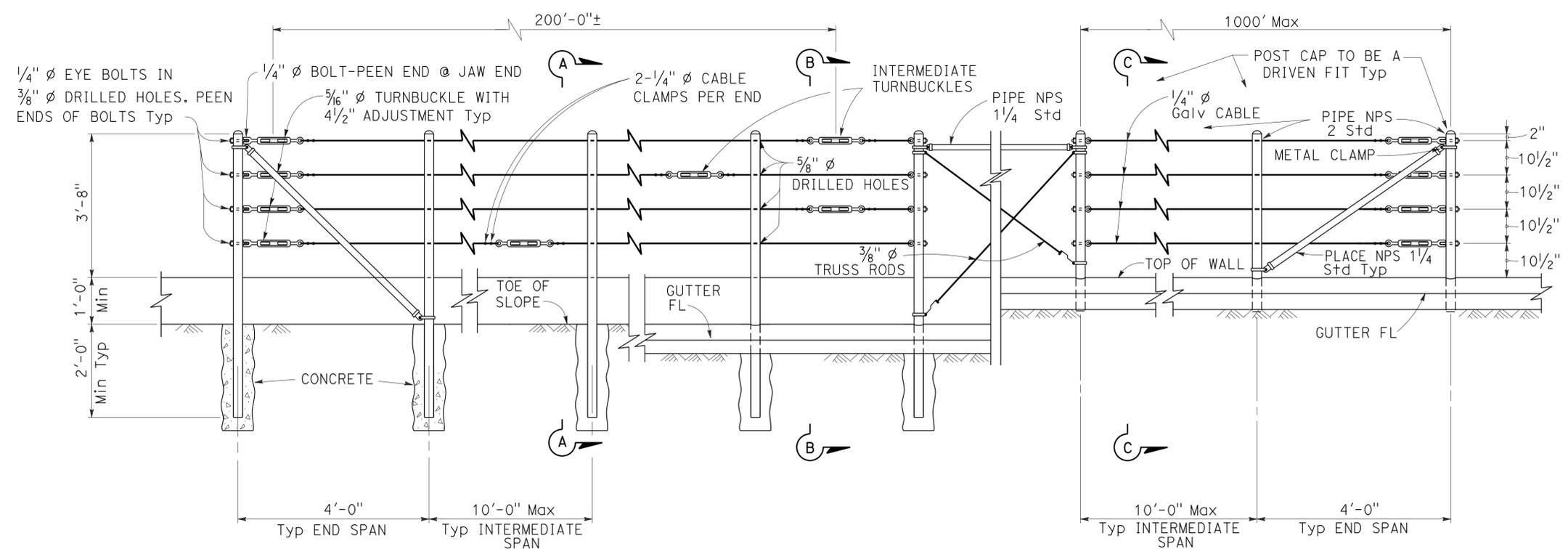
RSP B3-5 DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN B3-5 DATED MAY 20, 2011 - PAGE 277 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B3-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	615	824

REGISTERED CIVIL ENGINEER
 October 21, 2011
 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.

Tilgat Satter
 No. C42892
 Exp. 3-31-12
 CIVIL
 STATE OF CALIFORNIA

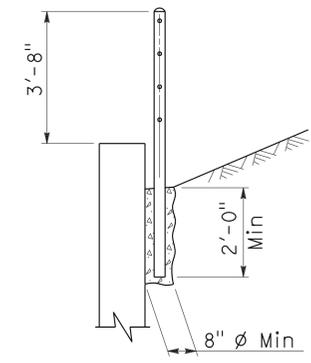


EXISTING WALL (WITHOUT GUTTER) Existing
RETAINING WALL (WITH GUTTER) Existing
RETAINING WALL (WITH GUTTER) New construction

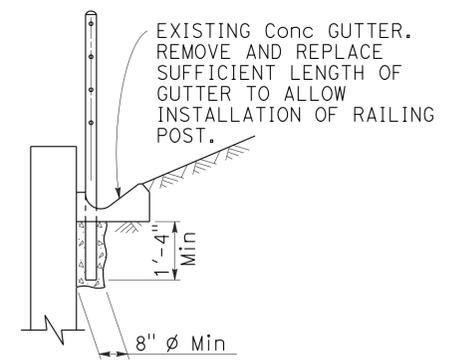
ELEVATION

NOTES:

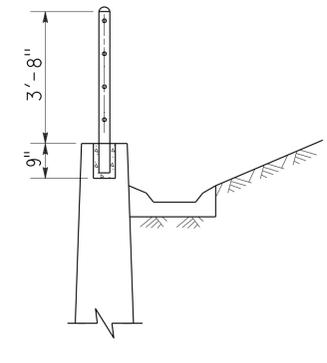
1. Maximum distance between turnbuckles shall be 200'-0"±.
2. Intermediate turnbuckles to be placed in adjacent spans.
3. Cable shall not be spliced between intermediate turnbuckles and end posts.
4. Posts to be vertical.
5. Alignment of holes in posts may vary to conform to slope of top of retaining wall.
6. The Contractor shall verify all dependent dimensions in the field before ordering or fabricating any material.
7. Line posts shall be braced horizontally and trussed diagonally in both directions at intervals not to exceed 1000'.
8. Post pockets to be centered in top of wall.
9. Typical end spans, braced in both directions, shall be constructed at changes in line where the angle of deflection is 15° or more.
10. Provide thimbles at all cable loops.



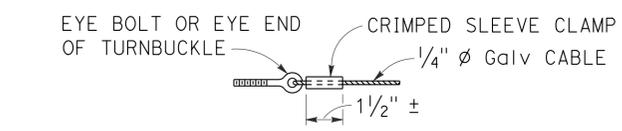
SECTION A-A
Existing



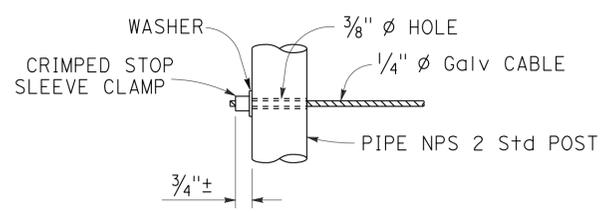
SECTION B-B
Existing



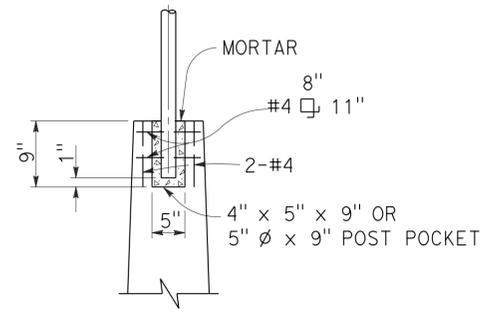
SECTION C-C
New construction



ALTERNATIVE CABLE CONNECTION



ALTERNATIVE DEAD END ANCHORAGE



POST POCKET

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CABLE RAILING

NO SCALE

RSP B11-47 DATED OCTOBER 21, 2011 SUPERSEDES STANDARD PLAN B11-47 DATED MAY 20, 2011 - PAGE 293 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-47

2010 REVISED STANDARD PLAN RSP B11-47

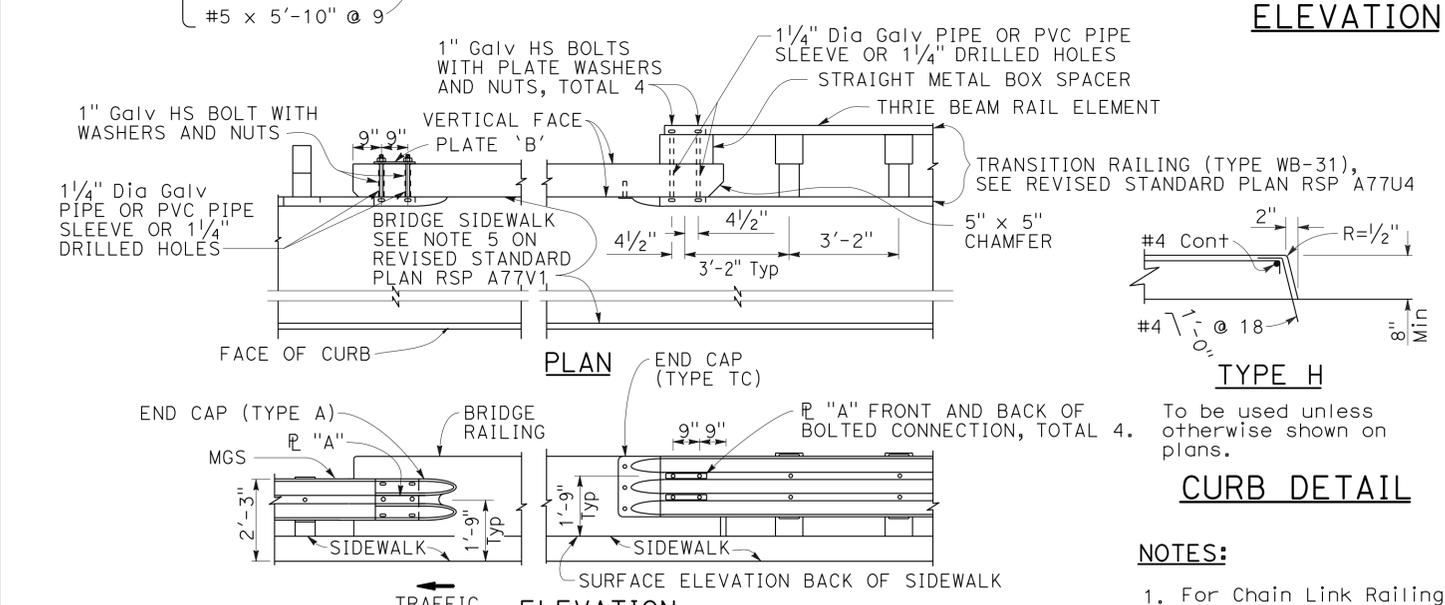
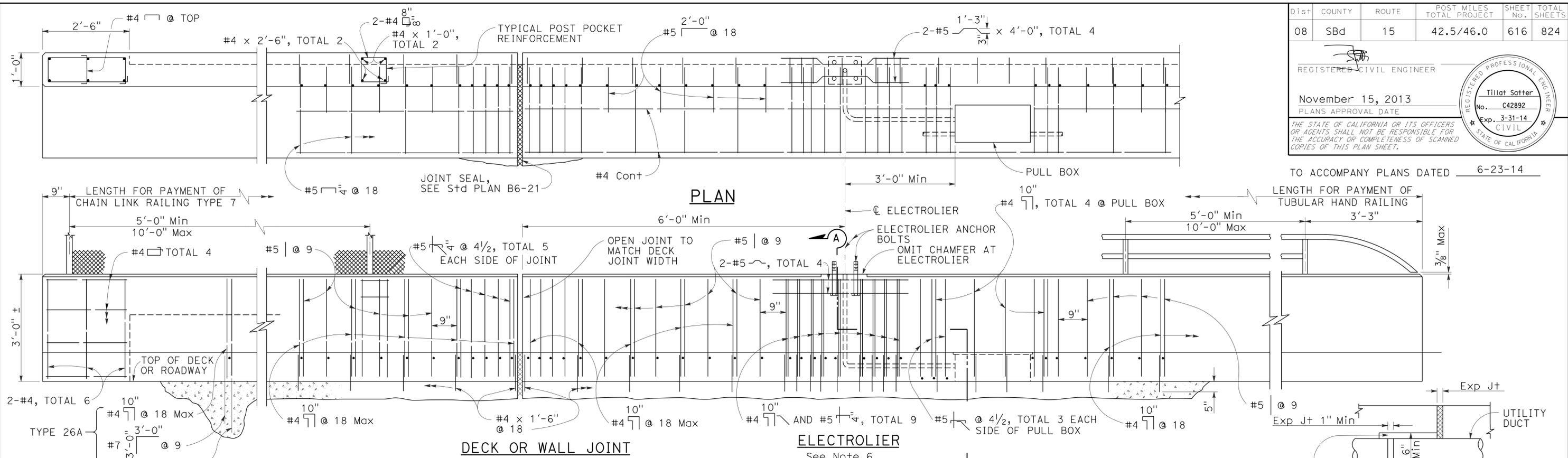
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	616	824

REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

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



NOTES:

1. For Chain Link Railing notes and details not shown, see Standard Plan B11-52.
2. For Hand Railing notes and details not shown, see Standard Plan B11-51.
3. Dimensions will vary with cross slope and with certain thicknesses of surfacing. See Project Plans.
4. Walls are to be backfilled before railing is placed.
5. Clearance to reinforcing steel in curb and railing to be 1" except as noted. Longitudinal reinforcement to stop at all expansion joints.
6. See Project Plans for electrolier locations and pull box type.
7. For electrical details, see Standard Plans ES-9A, ES-9B, ES-9C, ES-9D, and ES-9E.
8. A maximum of five - 4" and a minimum of two - 4" round openings for future utilities. Openings are to be sealed at ends and extended 8" minimum past end of sidewalk if not used. Duct forms are to be tied down. Minimum of 6" from face of rail to utility opening.
9. For typical metal railing connection details not shown, see Revised Standard Plans RSP A77V1 and RSP A77V2.
10. This barrier is to be used only for speeds of 45 MPH or less. For speeds greater than 45 MPH, pedestrians should be protected by a separation traffic barrier.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE BARRIER TYPE 26
NO SCALE

RSP B11-54 DATED NOVEMBER 15, 2013 SUPERSEDES RSP B11-54 DATED JULY 19, 2013 AND STANDARD PLAN B11-54 DATED MAY 20, 2011 - PAGE 296 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-54

2010 REVISED STANDARD PLAN RSP B11-54

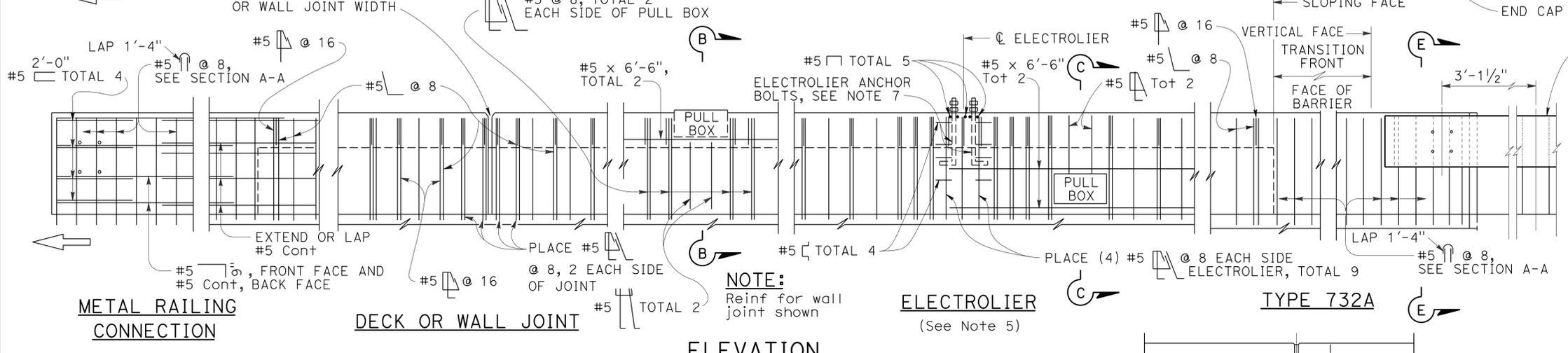
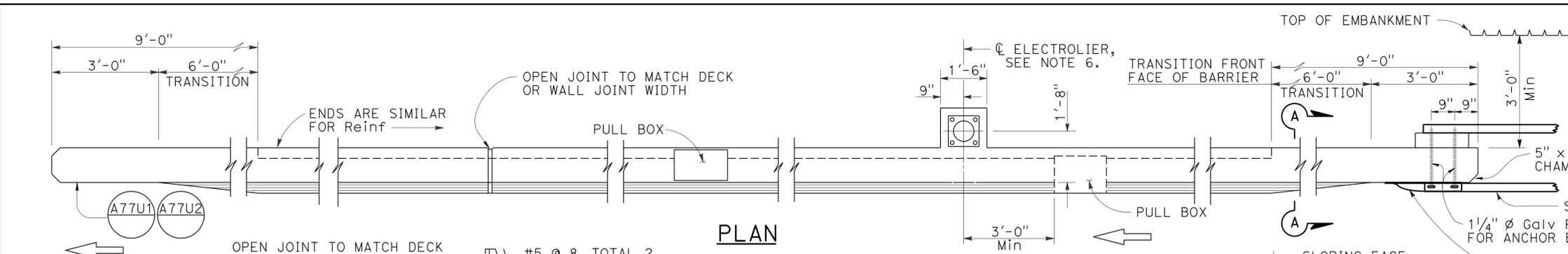
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	617	824

REGISTERED CIVIL ENGINEER

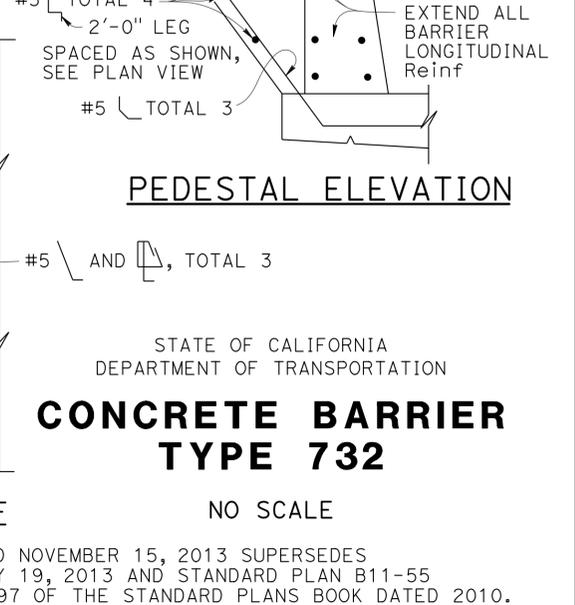
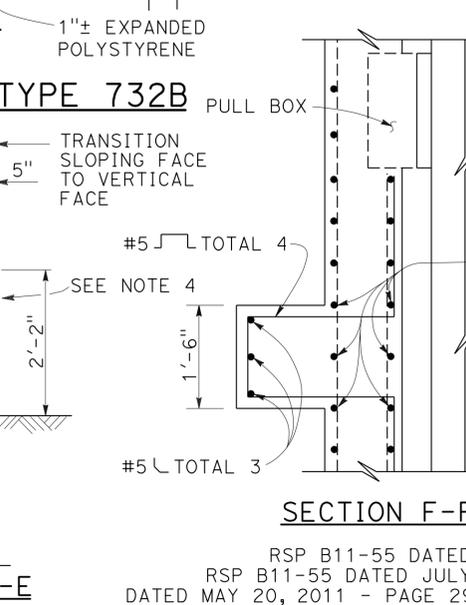
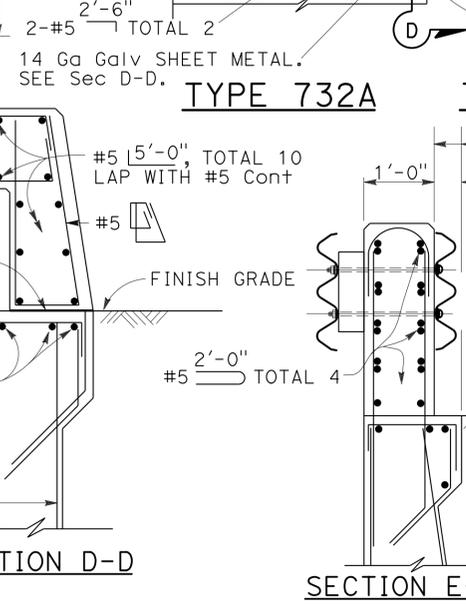
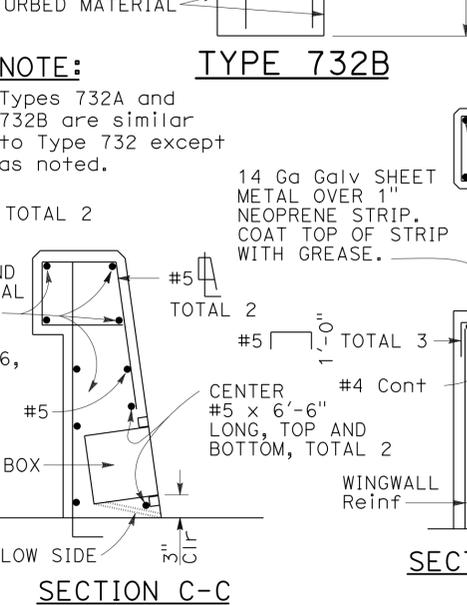
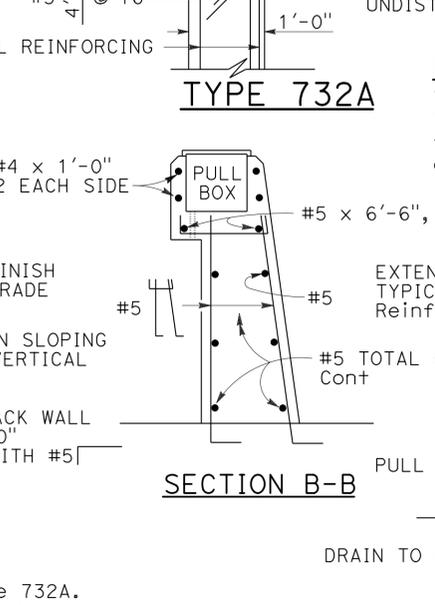
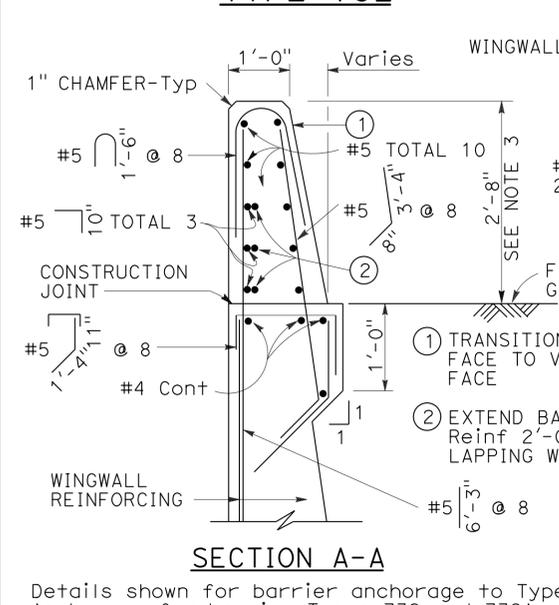
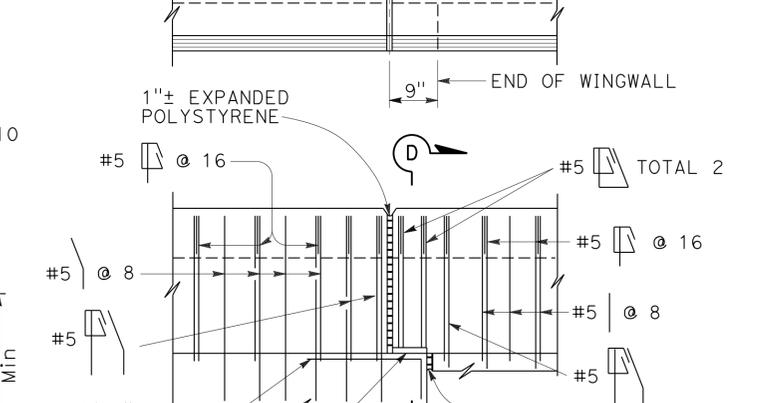
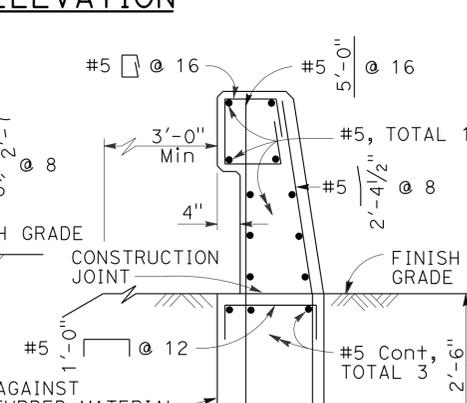
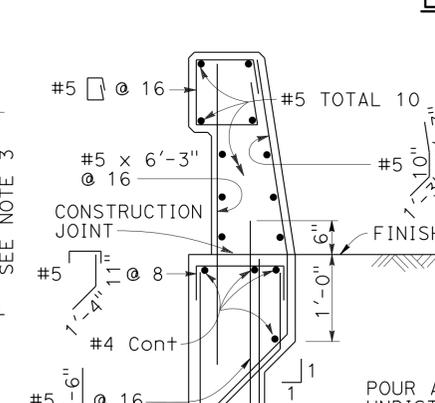
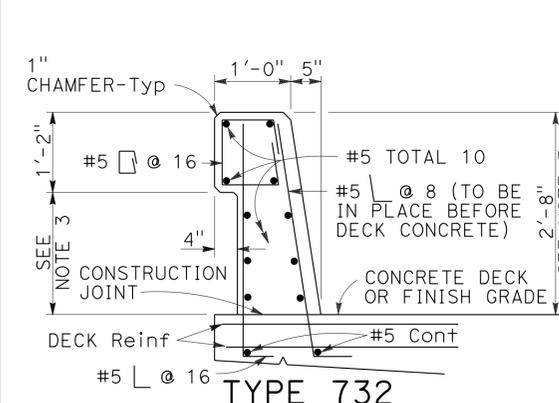
November 15, 2013
PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 6-23-14



- NOTES:**
- Walls are to be backfilled before barrier is placed.
 - Clearance to reinforcing steel in barrier to be 1", except as noted. Longitudinal reinforcement to stop at all expansion joints.
 - Dimensions may vary with roadway cross slope and with certain thickness of surfacing. See Project Plans.
 - For typical metal railing connection details not shown, see Revised Standard Plans RSP A77U1 and RSP A77U2.
 - 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.
 - For electrolier mounting details, See Standard Plans ES-6A and ES-6B.
 - 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.

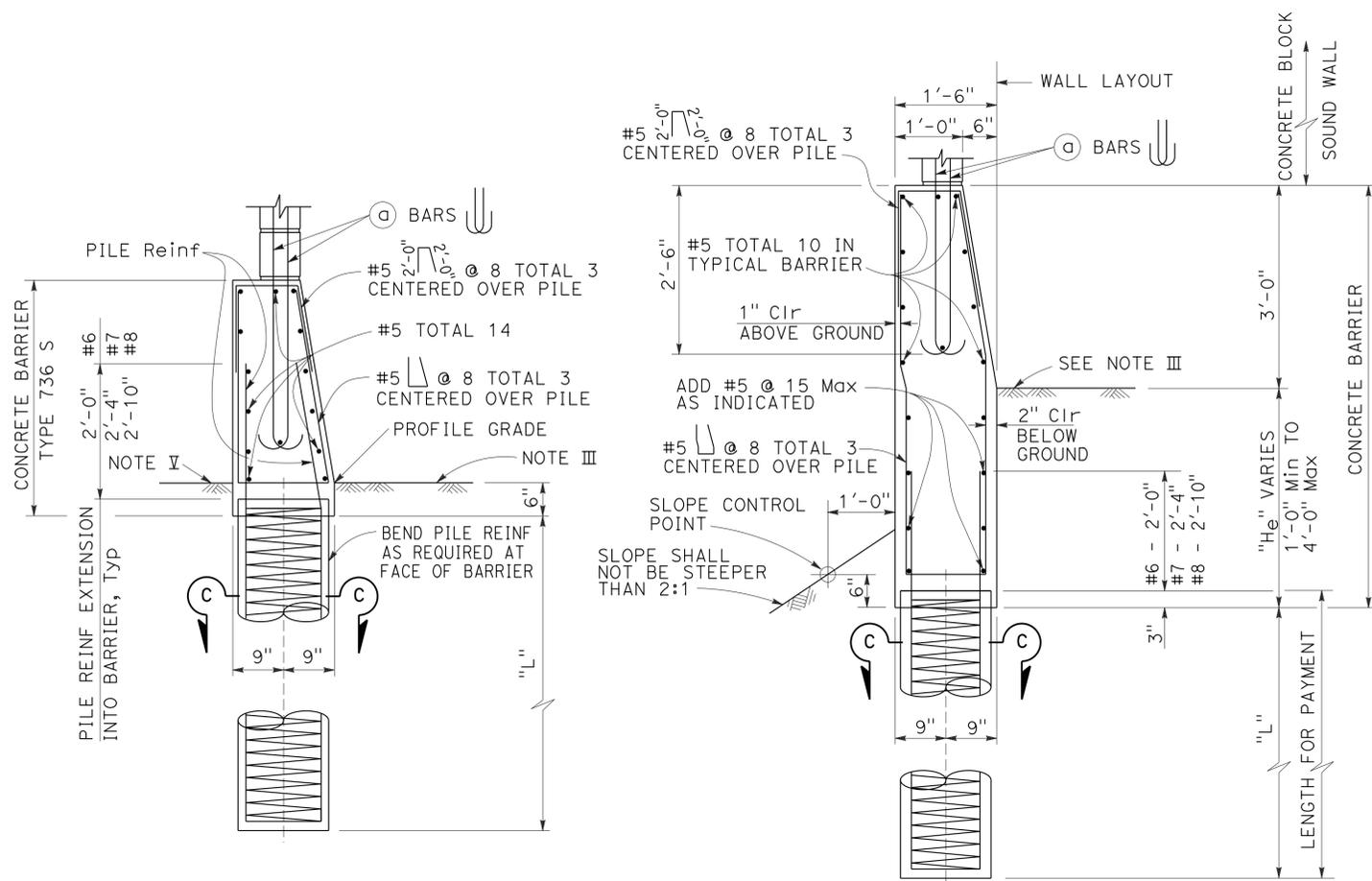


Details shown for barrier anchorage to Type 732A. Anchorage for barrier Types 732 and 732A are similar to their respective details.

RSP B11-55 DATED NOVEMBER 15, 2013 SUPERSEDES RSP B11-55 DATED JULY 19, 2013 AND STANDARD PLAN B11-55 DATED MAY 20, 2011 - PAGE 297 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-55

2010 REVISED STANDARD PLAN RSP B11-55



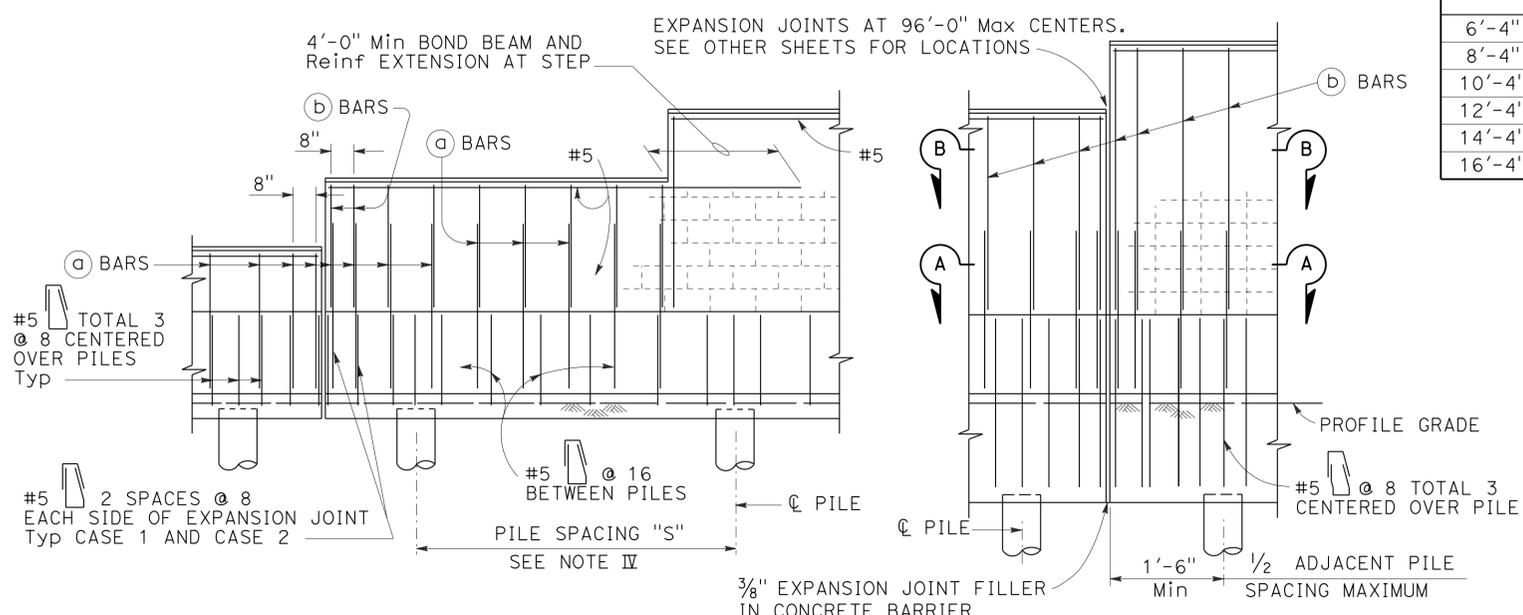
CASE 1

For details not shown, See Case 2.
 Level ground ±10% on both sides of barrier.

CASE 2

For details not shown, See Case 1.
 Level ground ±10% at the traffic side of barrier and sloping ground on the opposite side.

BARRIER SECTIONS



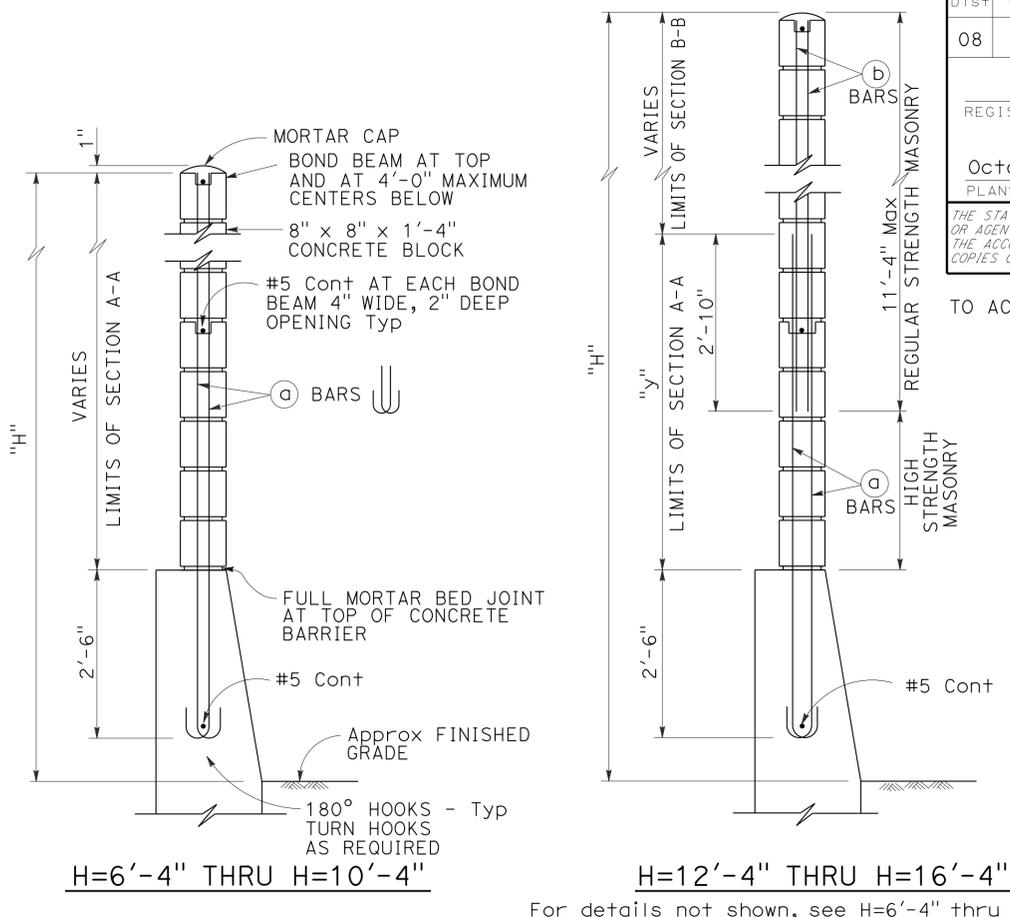
CASE 1

For details not shown, See Case 2.

CASE 2

For details not shown, See Case 1.

PARTIAL ELEVATIONS



TYPICAL SECTIONS

See Standard Plan B15-8 for pile details.

SOUND WALL REINFORCEMENT TABLE

MAXIMUM H	(a) BARS @ 1'-4" Max	(b) BARS @ 1'-4" Max	"y"	f'm (psi)	COMPRESSIVE STRENGTH OF CMU (psi)	H
6'-4"	#4	---	---	1500	1900	6'-4"
8'-4"	#4	---	---	1500	1900	8'-4"
10'-4"	#4	---	---	1500	1900	10'-4"
12'-4"	#5	#4	5'-0"	1500	1900	12'-4"
14'-4"	#6	#4	7'-0"	1500	1900	14'-4"
16'-4"	#6	#4	9'-0"	2500	3750	16'-4"

NOTES I THROUGH VI:

- I. Details shown are primarily to conform design of sound walls to Type 736S and Type 736 SV Concrete Barriers. For sound wall details conforming with barriers see Standard Plans B15-7 and B15-8.
- II. For details and sections not shown, see Standard Plans B15-7 and B15-8.
- III. Slope ground at traffic side of barrier to drain. Maximum slope ±10%. See Std Plan B11-56, Note 3.
- IV. Pile spacing may be varied, but shall not exceed the tabular values. See Standard Plan B15-8.
- V. For Case 1 - ground line to be at the same elevation on both sides of the barrier. Barrier shall not be used to retain earth.
- VI. See Standard Plan B15-9 for other details.

NOTES A THROUGH F:

- A. For type of block, type of block bond, and joint finish, see other sheets.
- B. When blocks are laid in stacked bond, ladder type, galvanized joint reinforcement shall be provided. A minimum of 2-9 gauge wires continuous at 4'-0" maximum to be used. Locate reinforcement in joints that are at the approximate midpoint between bond beams.
- C. Horizontal joints shall be tooled concave or may be weathered. Vertical joints shall be tooled concave or may be raked.
- D. For intermediate wall heights (H), or barrier depths (H_e), that are between the values given, use the tabular information for the next higher (H) or (H_e).
- E. Concrete to be used for the barrier shall contain not less than 590 pounds of cementitious material per cubic yard.
- F. Masonry strengths are listed in the "SOUND WALL REINFORCEMENT TABLE".

SOUND WALL MASONRY BLOCK ON TYPE 736S/SV BARRIER DETAILS (1)

NO SCALE

RSP B15-6 DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN B15-6 DATED MAY 20, 2011 - PAGE 320 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B15-6

2010 REVISED STANDARD PLAN RSP B15-6

INSTRUCTIONS TO FABRICATOR

PROJECT PLANS SHOW:

1. Sign structure location.
2. Length of structure frame.
3. Panel size and locations on structure.
4. Walkway length for two post signs.
5. Post type and height to bottom of frame.
6. Base plate elevation.
7. Footing elevation or location of pile foundation.
8. Photoelectric unit location if required.

REFER TO THE FOLLOWING STANDARD PLANS FOR DETAILS NOT SHOWN ON PROJECT PLANS:

Sheet No. SHEET NAME

- S1 Overhead Signs-Truss, Instructions and Examples
- S2 Overhead Signs-Truss, Single Post Type, Post Types II to IX
- S3 Overhead Signs-Truss, Single Post Type, Base Plate and Anchorage Details
- S4 Overhead Signs-Truss, Single Post Type, Structural Frame Members Details No. 1
- S5 Overhead Signs-Truss, Single Post Type, Structural Frame Members Details No. 2
- S6 Overhead Signs-Truss, Gusset Plate Details
- S8 Overhead Signs-Truss, Single Post Type, Round Pedestal Pile Foundation
- S9 Overhead Signs-Truss, Two Post Type, Post Types I-S through VII-S
- S10 Overhead Signs-Truss, Two Post Type, Base Plate and Anchorage Details
- S11 Overhead Signs-Truss, Two Post Type, Structural Frame Members
- S12 Overhead Signs-Truss, Structural Frame Details
- S13 Overhead Signs-Truss, Frame Juncture Details
- S15 Overhead Signs-Truss, Two Post Type, Round Pedestal Pile Foundation
- S16 Overhead Signs, Walkway Details No. 1
- S17 Overhead Signs, Walkway Details No. 2
- S17A Overhead Signs, Walkway Details No. 3
- S18 Overhead Signs, Walkway Safety Railing Details
- S19 Overhead Signs-Truss, Sign Mounting Details, Laminated Panel-Type A
- S20 Overhead Signs, Steel Frames, Removable Sign Panel Frames
- S21 Overhead Signs, Removable Sign Panel Frames, Mounting Details
- S22 Overhead Signs-Truss, Removable Sign Panel Frames, 9'-2" and 10'-0" Sign Panels

WALKWAY BRACKETS:

Space all walkway brackets maintaining uniform spacing where possible. Maximum spacing shall not exceed 5'-6".

LIGHTING FIXTURE SUPPORTS:

Where distance from walkway bracket to end of sign panel exceeds 1'-4", extend lighting fixture supports to next walkway bracket. See Example No. 2.

WALKWAY AND SAFETY RAILING:

Walkway to be continuous for entire length of frame for single post signs. For two post signs, see Project Plans. Safety railing to protect entire walkway, but continuous for no more than 11'-0" in one unit.



NOTES:

1. Signs are shown and dimensioned looking in the direction of traffic. Double faced signs are shown and dimensioned looking ahead along stationing.
2. Mandatory dimension limit.

GENERAL NOTES:

LOADING:

WIND LOADING:

Normal to face of sign: 40.3 psf on 100% Truss surface area (i.e. 100% panel coverage).
 Transverse to face of sign: 20% of normal force.

WALKWAY LOADING:

Dead load +500 LB concentrated live load.

UNIT STRESSES:

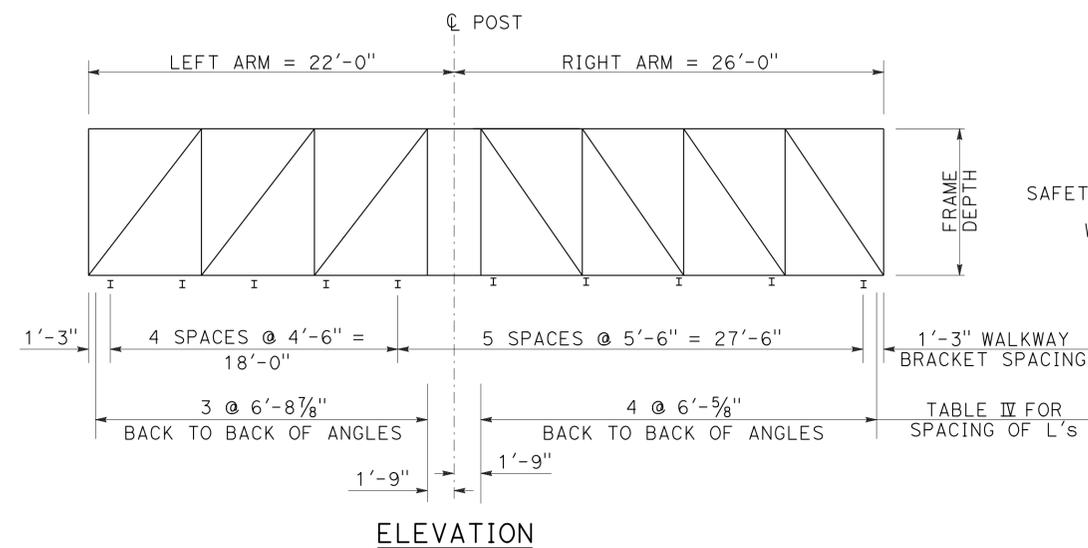
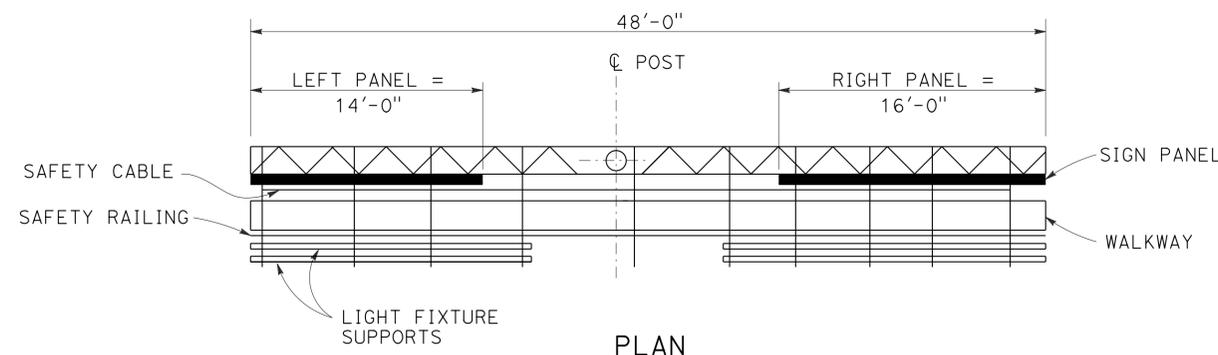
STRUCTURAL STEEL: $f_y = 36,000$ psi
 REINFORCED CONCRETE: $f_y = 60,000$ psi
 $f'_c = 3600$ psi
 FOOTING SOIL PRESSURE: 2.5 ksf (spread footing)

MINIMUM CLEARANCE

Vertical roadway clearance 18'-0" (bottom of walkway system)

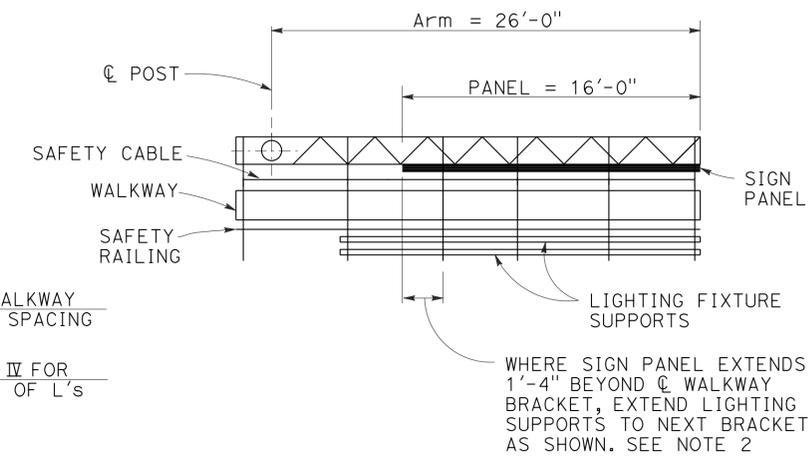
WELDING:

All welding continuous unless otherwise noted on the plans.



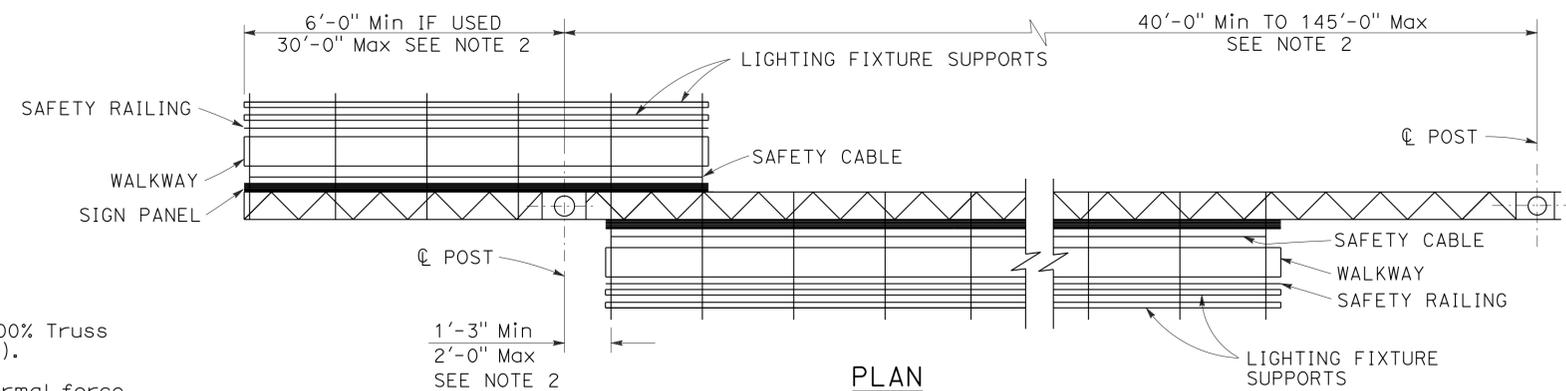
UNBALANCED SINGLE POST TYPE

Example No. 1



CANTILEVER SINGLE POST TYPE

Example No. 2



TWO POST TYPE WITH CANTILEVER (PART DOUBLE-FACED)

Example No. 3

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGNS-TRUSS INSTRUCTIONS AND EXAMPLES

NO SCALE

RSP S1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN S1 DATED MAY 20, 2011 - PAGE 334 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	621	824

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER

July 19, 2013
 PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 6-23-14

2010 REVISED STANDARD PLAN RSP S1

TABLE XV

POST TYPE	PIPE		CAP PLATE SIZE FOR CHORD L's 5 x 5	CAP PLATE SIZE FOR CHORD L's 6 x 6	ROUND PEDESTAL					SQUARE PEDESTAL					SPREAD FOOTING						
	NPS	THICKNESS			PEDESTAL SIZE Dia	VERTICAL EQUALLY SPACED TOTAL	J-BARS BAR SIZE	SPIRAL BAR SIZE	PITCH	PEDESTAL SIZE SQUARE	VERTICAL EQUALLY SPACED TOTAL	J-BARS BAR SIZE	# OF BARS EA FACE	HOOP BAR SIZE	SPACING	(SEE NOTE 2)					
	REINFORCEMENT		WIDTH													LONGITUDINAL		FOOTING STIRRUPS			
II	14	1/2"	2'-0" x 2'-0" x 1"	2'-2" x 2'-2" x 1"	5'-3"	16	#10	#5	3 1/2"	5'-3"	16	#10	5	#5	3 1/2"	12'-0" x 14'-0" x 2'-6"	14-#6		14-#7	13-#9	13-#9
III	16		2'-2" x 2'-2" x 1"	2'-4" x 2'-4" x 1"												12'-0" x 14'-0" x 2'-6"	15-#6	15-#7			
IV	18		2'-4" x 2'-4" x 1"	2'-6" x 2'-6" x 1"												12'-0" x 14'-0" x 2'-6"	15-#6	15-#7			
V	20		2'-6" x 2'-6" x 1"	2'-8" x 2'-8" x 1"												13'-0" x 14'-0" x 2'-6"	15-#6	15-#7	14-#9	14-#9	
VI	24		2'-10" x 2'-10" x 1"	3'-0" x 3'-0" x 1"	5'-9"		#11			5'-9"		#11				13'-0" x 16'-0" x 2'-6"	17-#7	17-#7		14-#11	
VII	24	3/4"														13'-0" x 17'-0" x 2'-6"	18-#7	18-#7			
VIII	24	3 1/32"														13'-0" x 18'-0" x 2'-6"	19-#7	19-#7			
IX	24	3 1/32"														13'-0" x 18'-0" x 2'-6"	19-#7	19-#7			

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	622	824

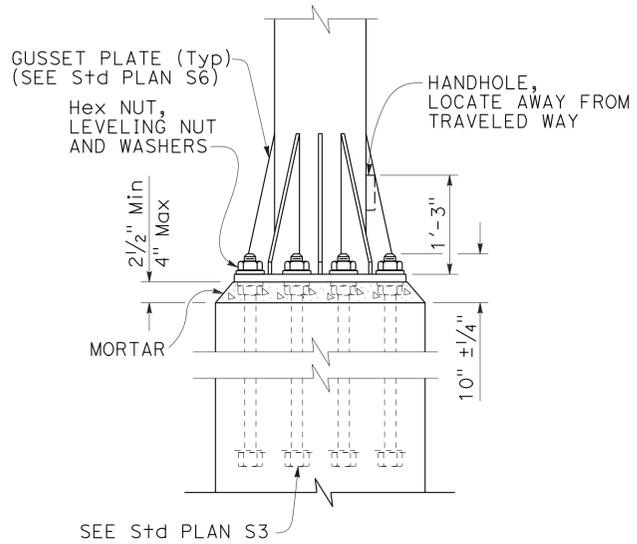
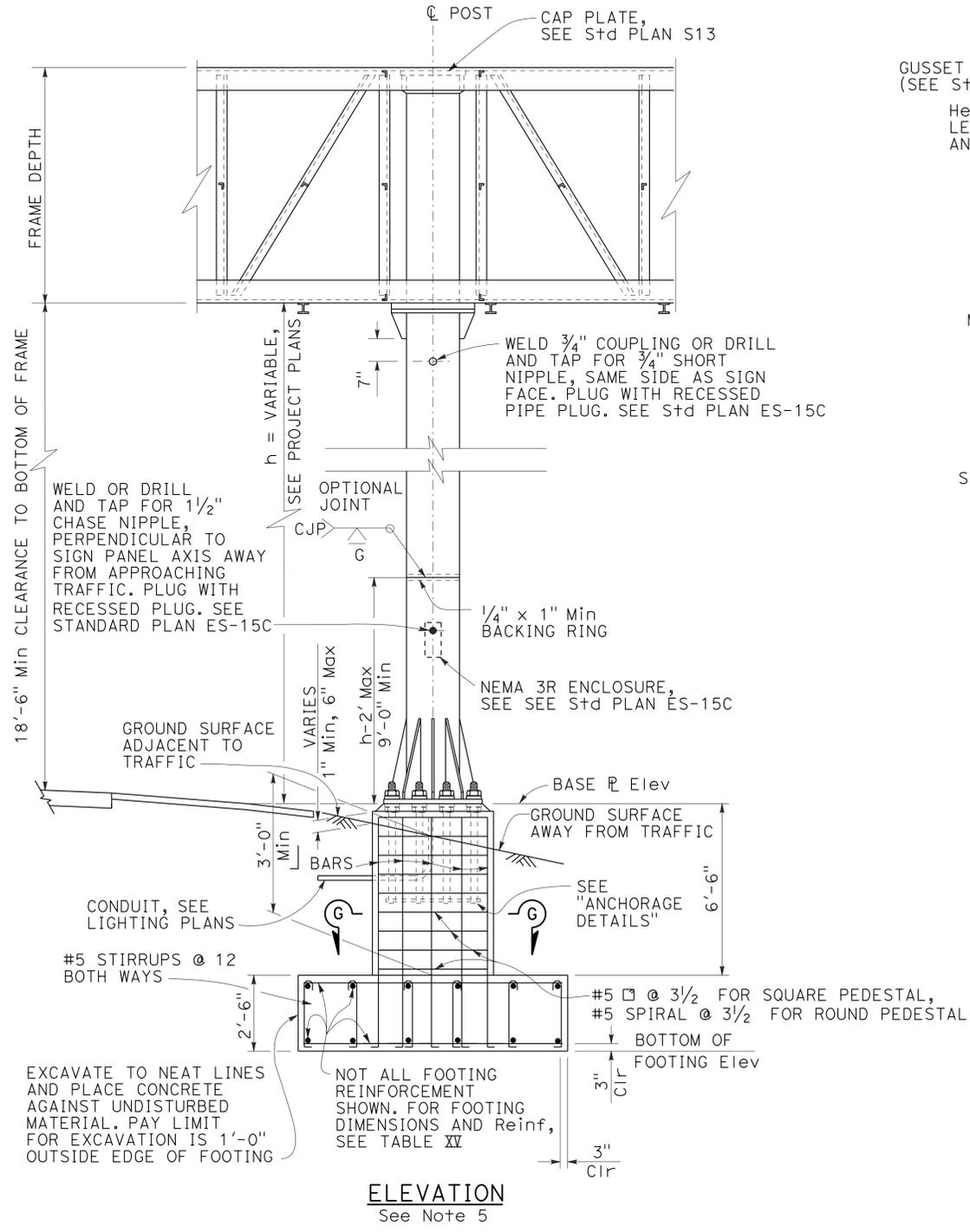
Stanley P. Johnson
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

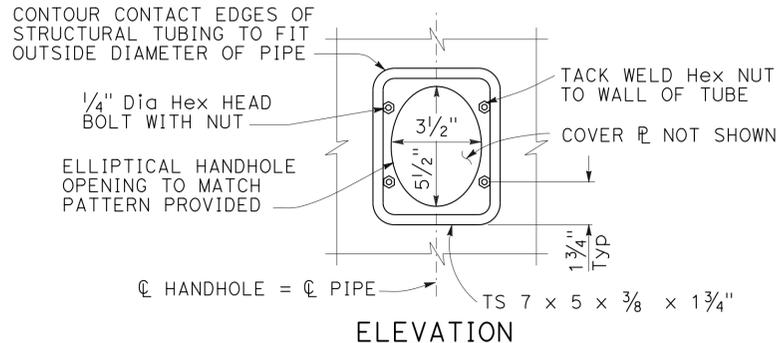
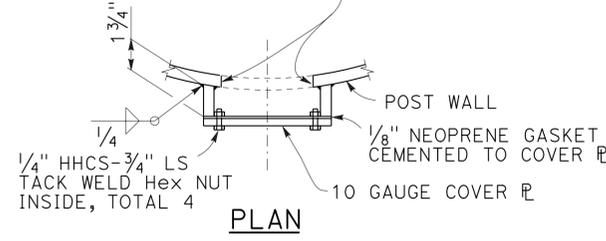
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TO ACCOMPANY PLANS DATED 6-23-14



ELEVATION ANCHORAGE DETAILS

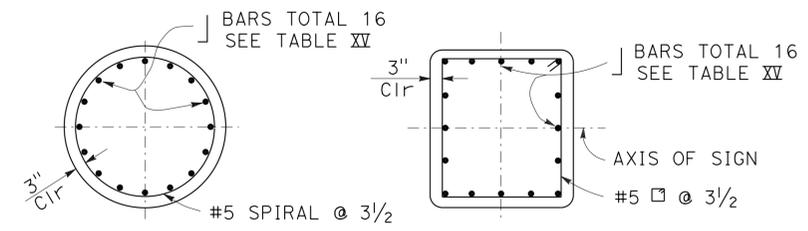
GRIND EDGES SMOOTH, ROUGHNESS OF EDGES NO GREATER THAN 1000 MICROINCHES



TYPICAL DETAILS OF HANDHOLE AND COVER

NOTES:

1. For "General Notes", see Revised Standard Plan RSP S1.
2. Longer side of footing (longitudinal) shall be normal to axis of sign.
3. Backfill shall be in place prior to erection of post.
4. Thread upper 10" of anchor bolts and galvanize upper 1'-0".
5. Spread footing with square pedestal foundation shown, use Pile Foundation when shown on the Project Plans. For pile foundation details, see Standard Plan S8.
6. Anchor plates may be retained with hexagon nut or formed head as alternatives to details shown.
7. On single post sign structures, the post shall be raked out of plumb, with the use of the leveling nuts to make the bottom of the sign frame level.
8. At final position of post all top and bottom nuts shall be tightened against base plate.
9. When foundation is located on a steep slope with exposed face of concrete adjacent to traffic, see "Detail C" on Standard Plan S8, as applicable.
10. Slope protection required when indicated on the Project Plans.



SECTION G-G ROUND PEDESTAL SQUARE PEDESTAL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**OVERHEAD SIGNS-TRUSS
SINGLE POST TYPE
POST TYPES II THROUGH IX**
NO SCALE

RSP S2 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN S2 DATED MAY 20, 2011 - PAGE 335 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S2

2010 REVISED STANDARD PLAN RSP S2

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
Ckt	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
08	SBd	15	42.5/46.0	623	824

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 6-23-14

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	624	824

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 6-23-14

CONDUIT

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

SIGNAL EQUIPMENT

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)
		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

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

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

SIGNAL EQUIPMENT Cont

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

NOTES:

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

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.

REVISED STANDARD PLAN RSP ES-1B

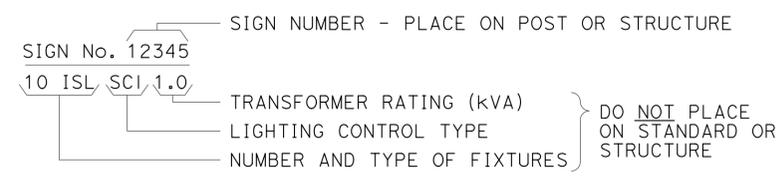
2010 REVISED STANDARD PLAN RSP ES-1B



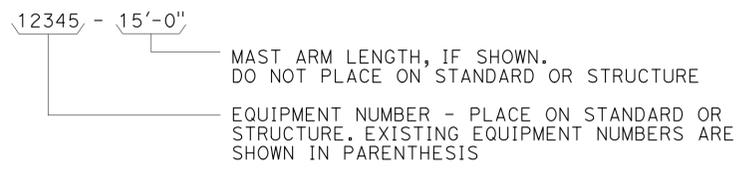
TO ACCOMPANY PLANS DATED 6-23-14

EQUIPMENT IDENTIFICATION

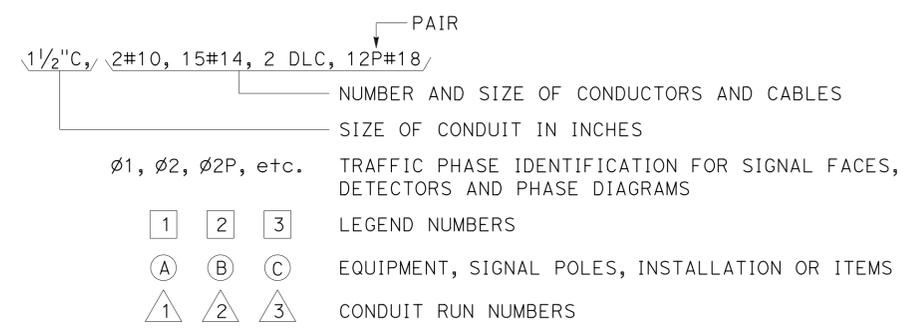
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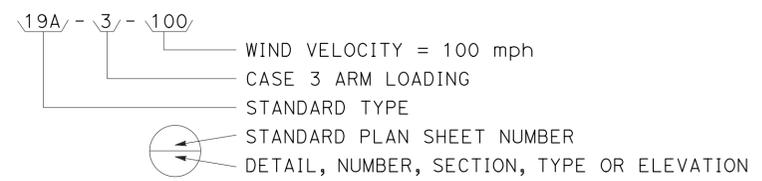
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



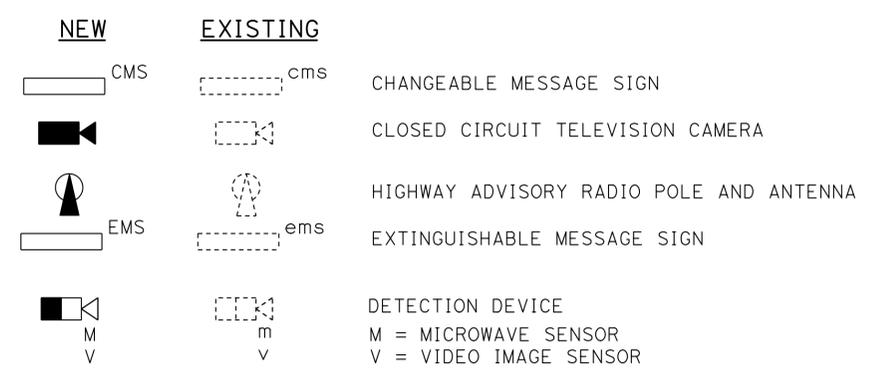
CONDUIT AND CONDUCTOR IDENTIFICATION:



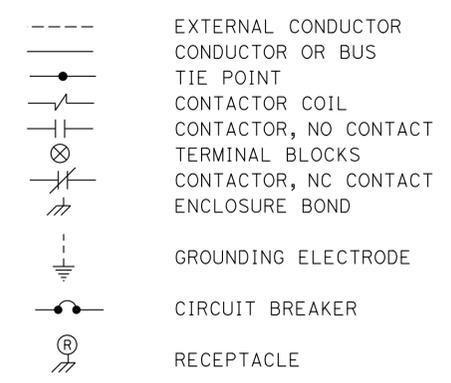
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



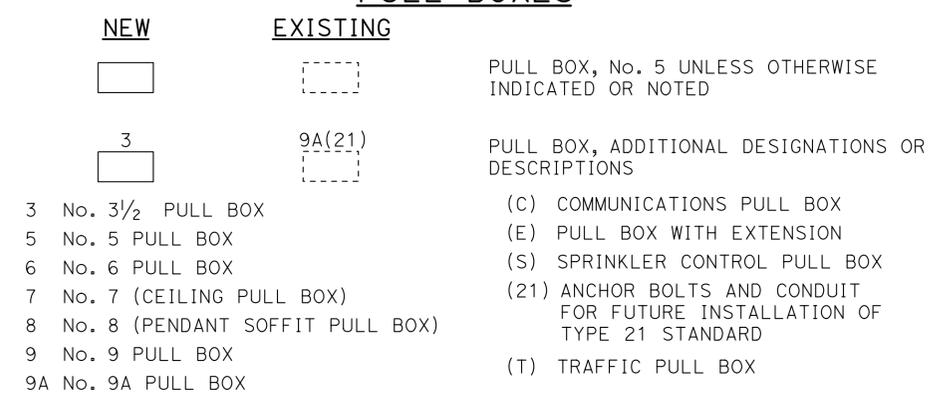
MISCELLANEOUS EQUIPMENT



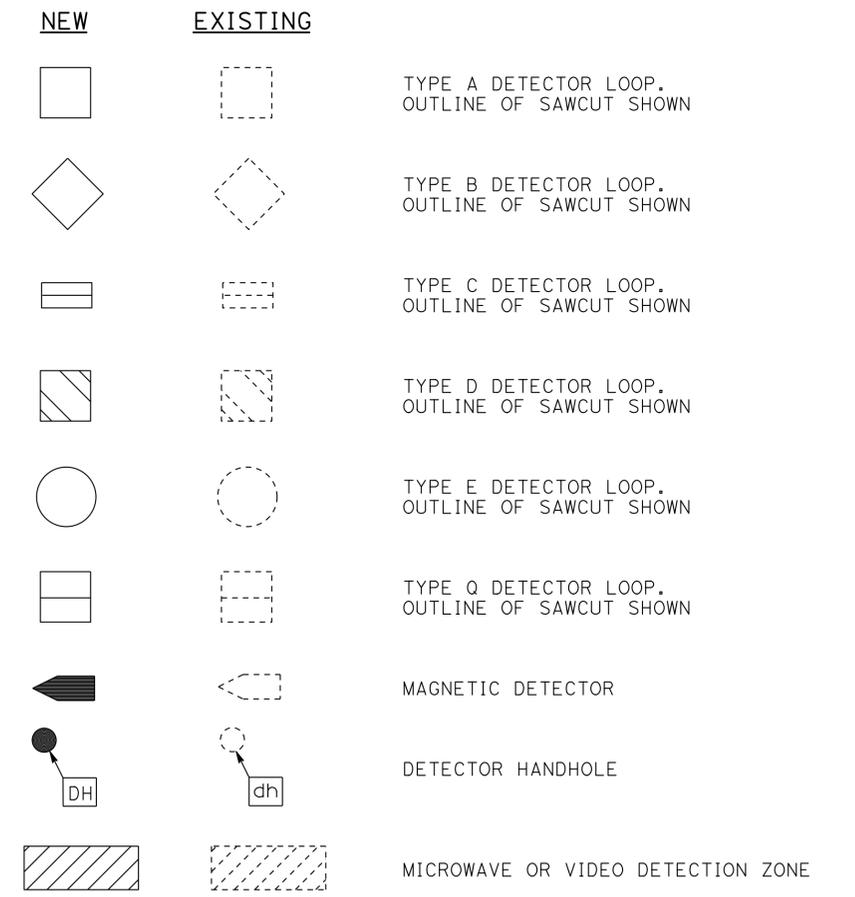
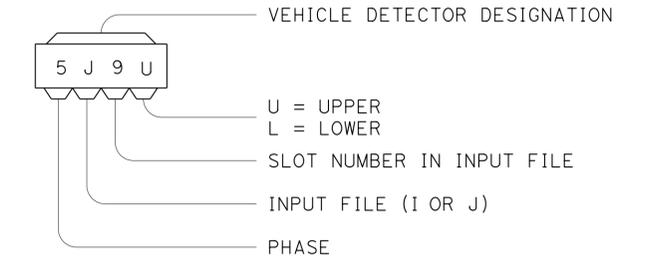
WIRING DIAGRAM LEGEND



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.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	626	824

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

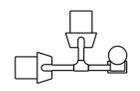
July 19, 2013
PLANS APPROVAL DATE

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

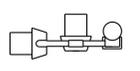
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TO ACCOMPANY PLANS DATED 6-23-14

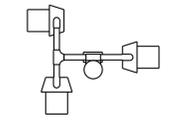
2010 REVISED STANDARD PLAN RSP ES-4A



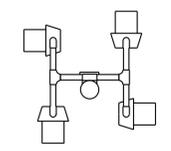
SV-2-TD



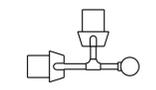
SV-2-TC



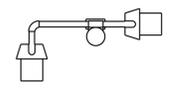
SV-3-TC



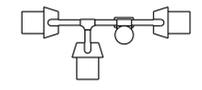
SV-4-TC



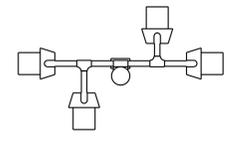
SV-2B



SV-2-TB

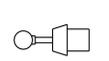


SV-3-TB

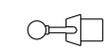


SV-4-TB

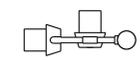
PLAN VIEW OF OTHER
SIDE MOUNTINGS



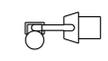
SV



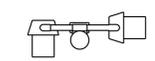
SV-1



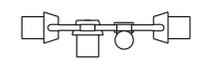
SV-2A



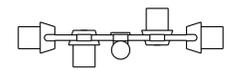
SV-1-T



SV-2-TA



SV-3-TA



SV-4-TA

SIDE MOUNTINGS

ABBREVIATIONS:

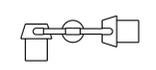
- SV SIDE MOUNTED VEHICLE SIGNALS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED VEHICLE SIGNALS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES
(3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

NOTES:

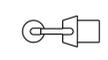
1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals and backplate installation.
3. See Standard Plans ES-4D and ES-4E for attachment fitting details.



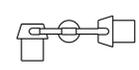
TV-1



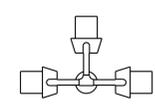
TV-2



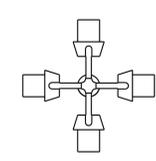
TV-1-T



TV-2-T



TV-3-T



TV-4-T

PLAN VIEW OF
TOP 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.

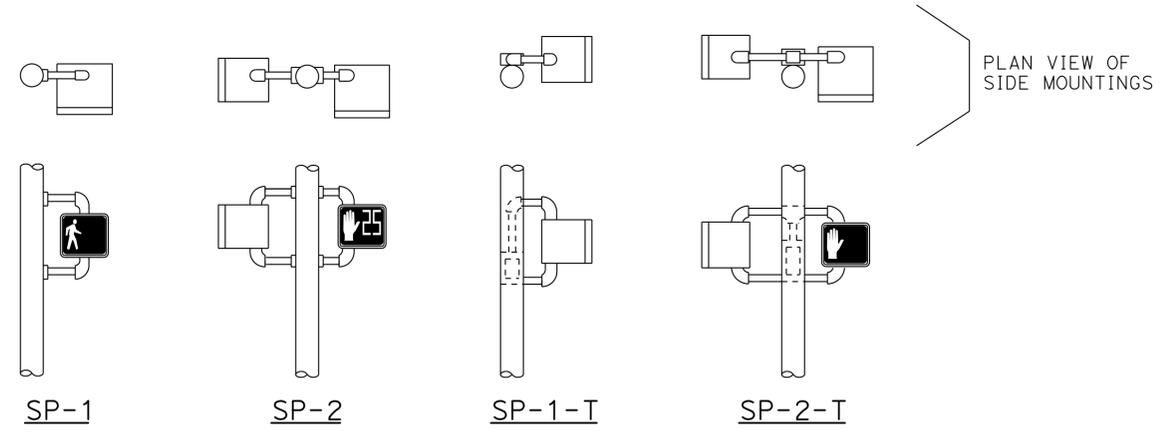
REVISED STANDARD PLAN RSP ES-4A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15	42.5/46.0	627	824

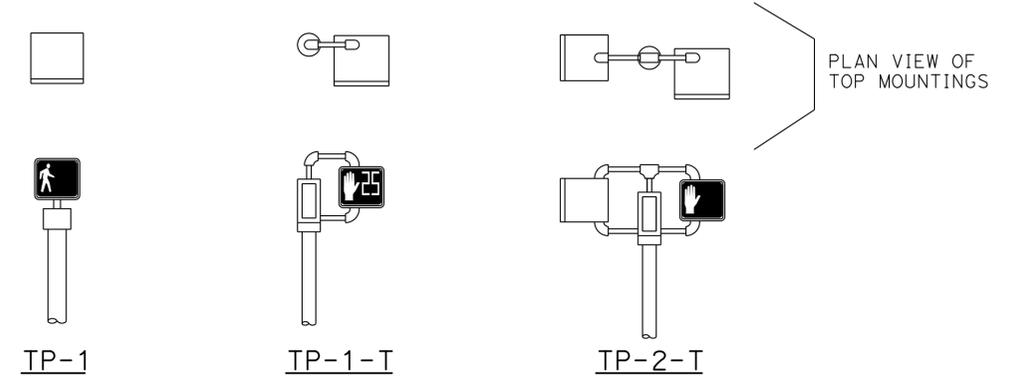
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 6-23-14



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

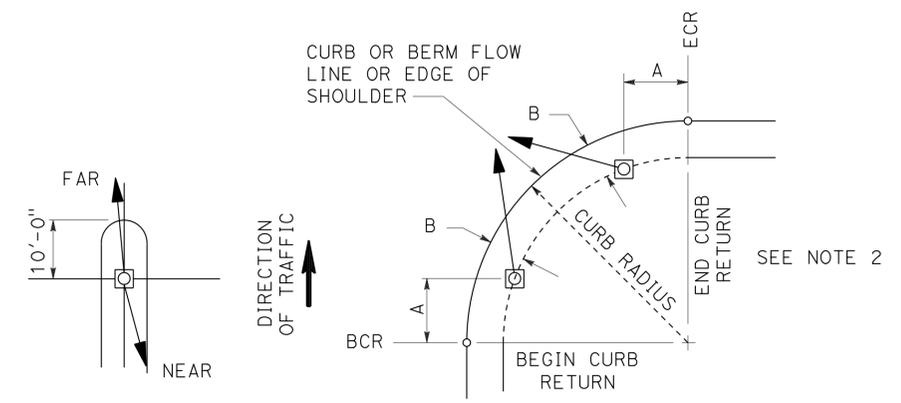
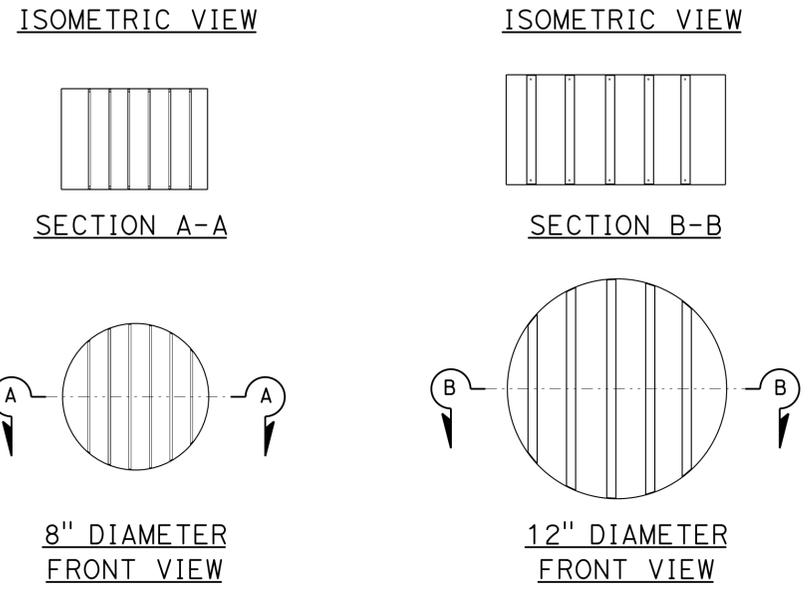
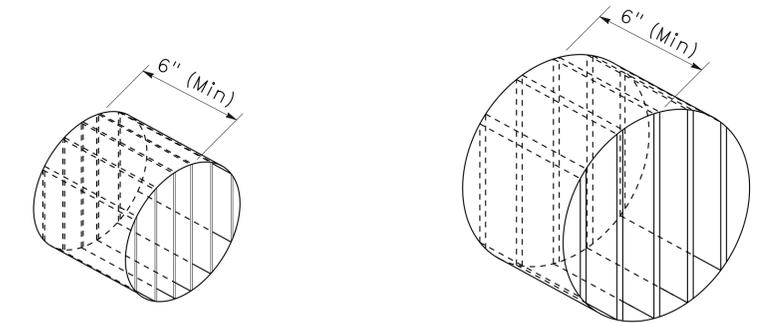
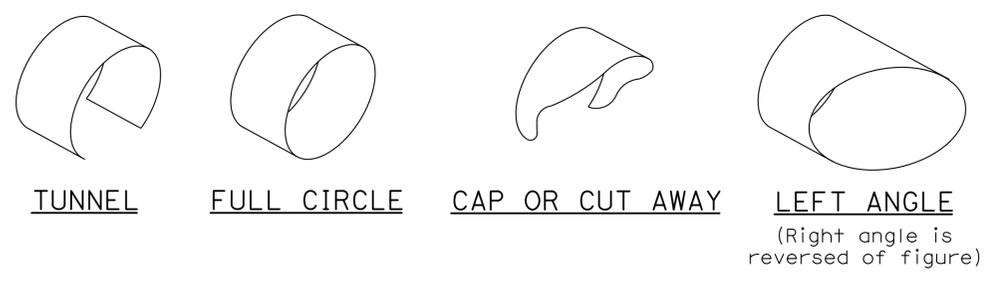
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	628	824

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

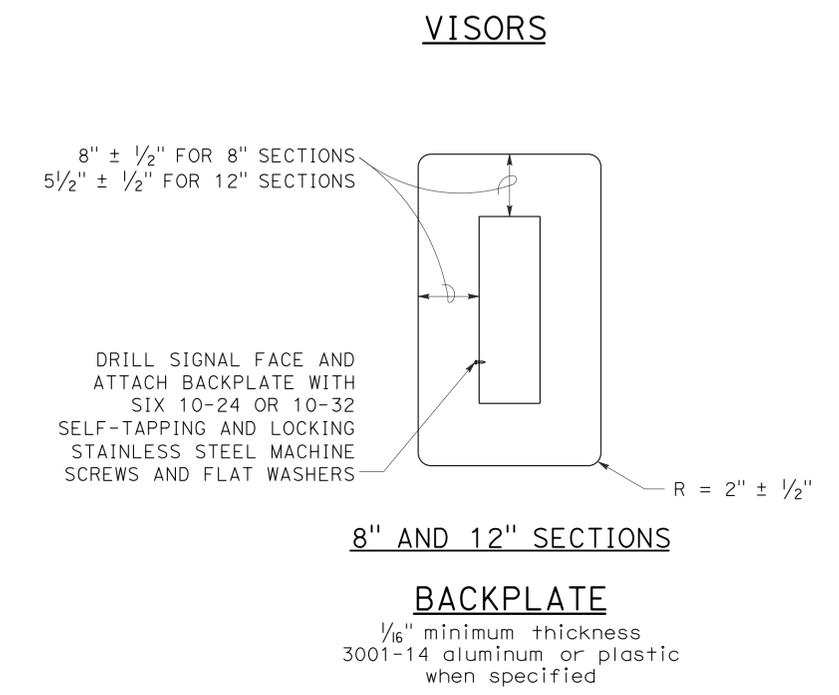
July 19, 2013
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 6-23-14

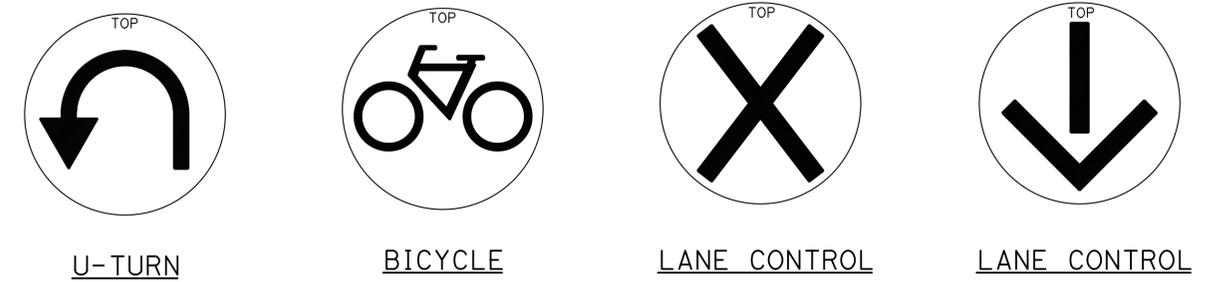
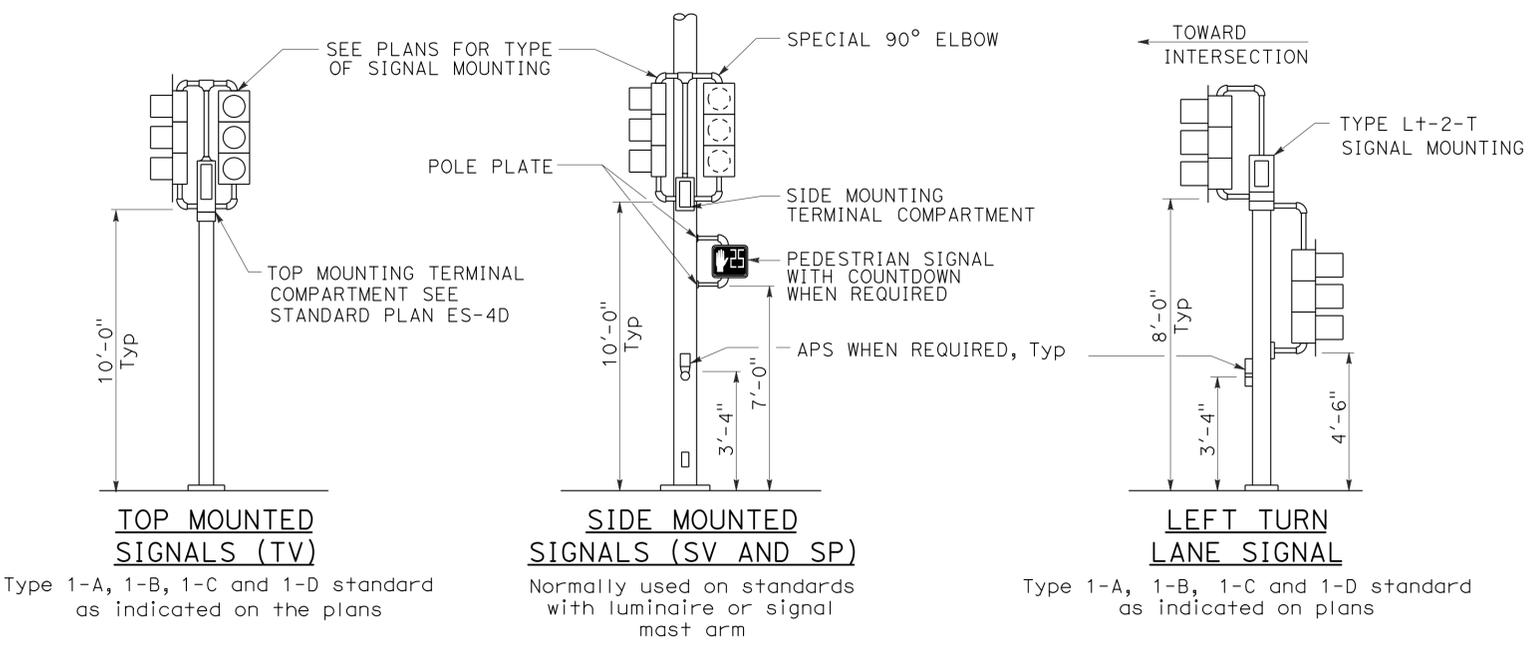


- NOTES:**
1. Typical signal pole placement unless dimensioned on plans.
 2. For A and B dimensions, see Pole Schedule, or as directed by the Engineer.



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



SIGNAL FACES

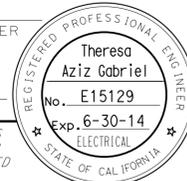
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (VEHICULAR SIGNAL HEADS AND MOUNTINGS)
 NO SCALE

TYPICAL SIGNAL INSTALLATIONS

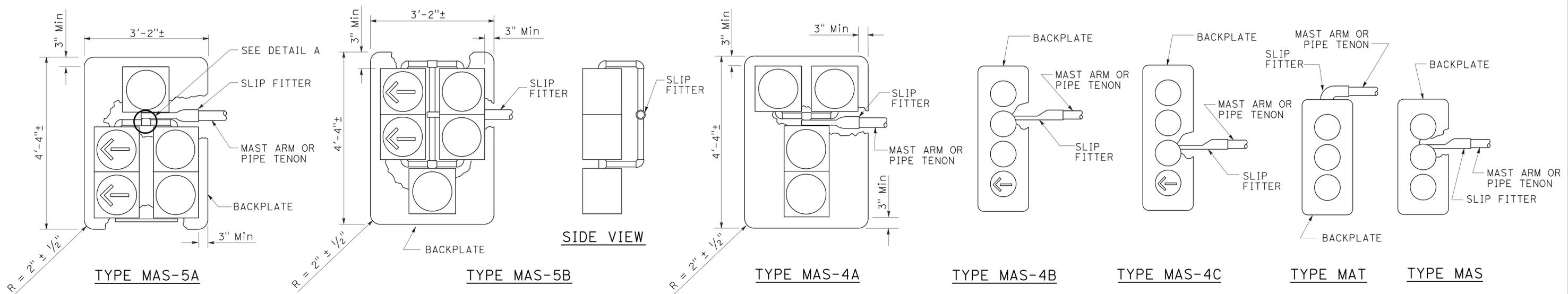
RSP ES-4C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-04C DATED MAY 20, 2011 - PAGE 445 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-4C

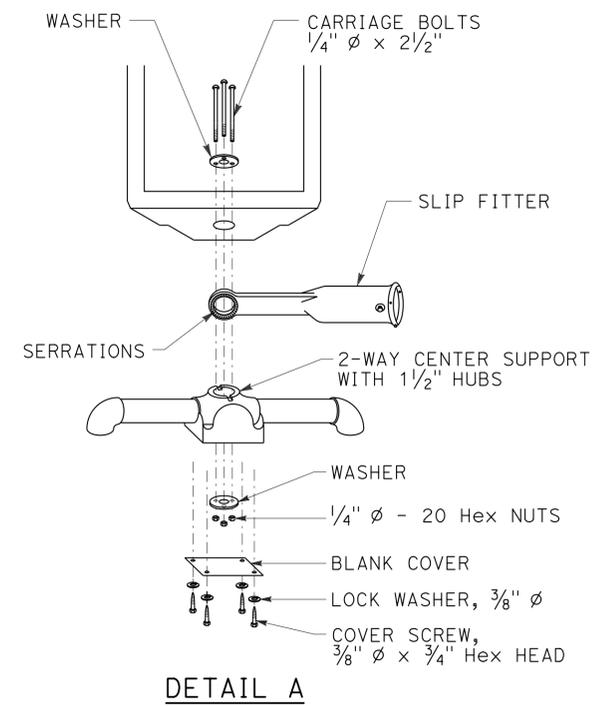
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	629	824
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER					
July 19, 2013 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



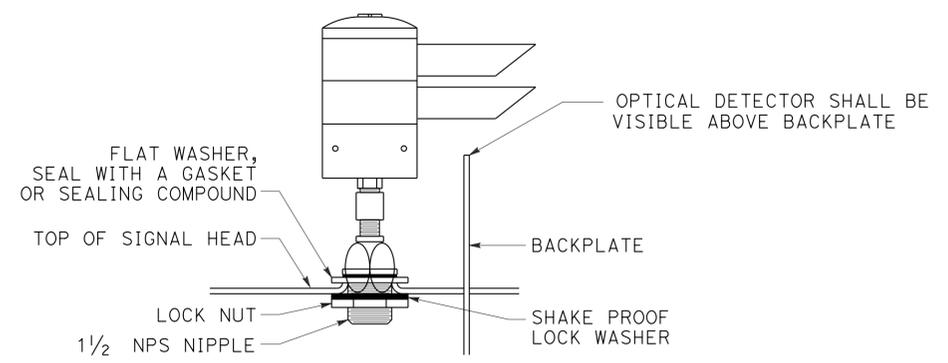
TO ACCOMPANY PLANS DATED 6-23-14



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

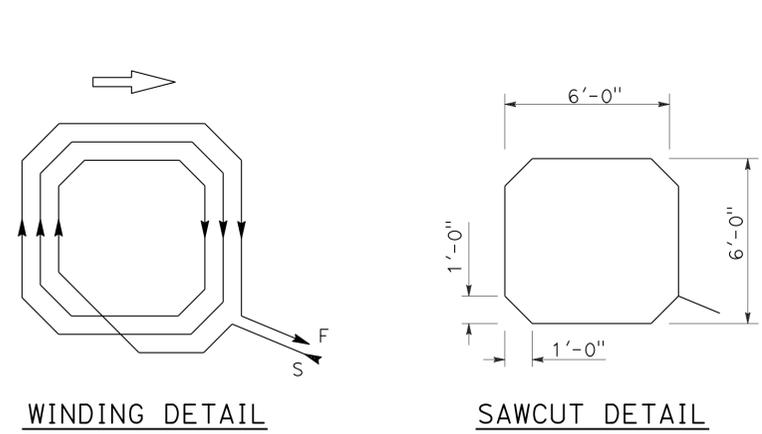
RSP ES-4E DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4E DATED MAY 20, 2011 - 447 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4E

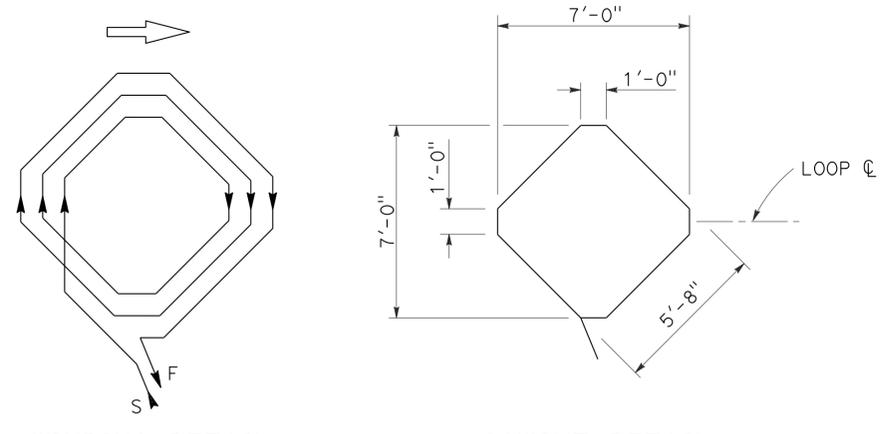
2010 REVISED STANDARD PLAN RSP ES-4E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	630	824
<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>					

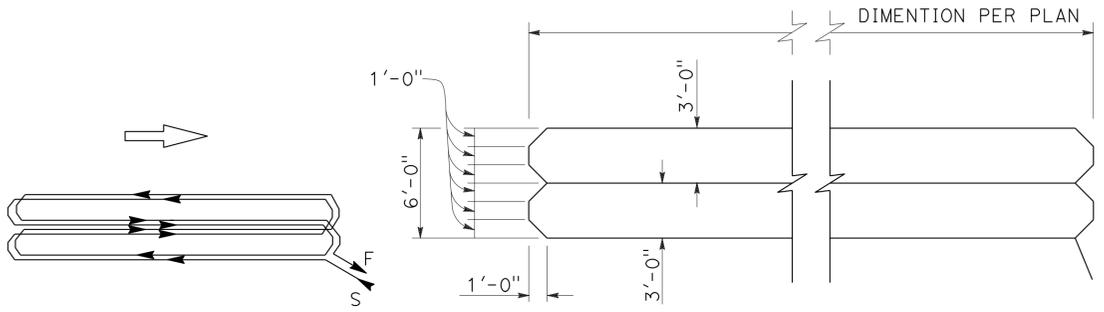
TO ACCOMPANY PLANS DATED 6-23-14



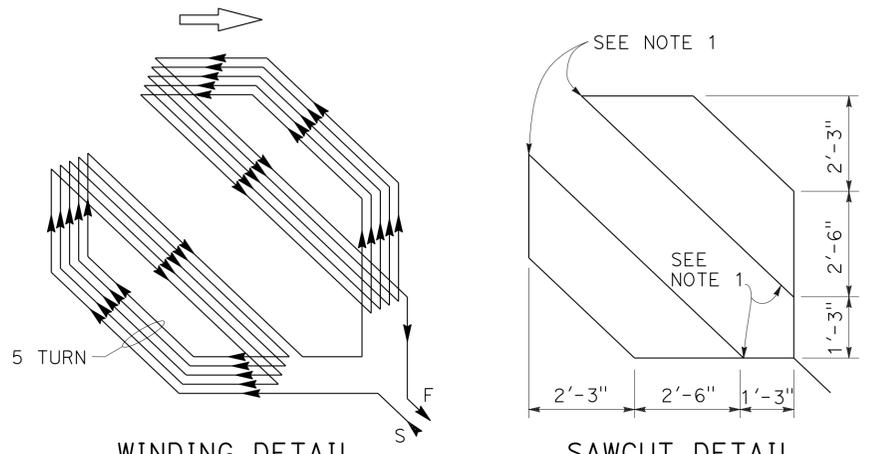
WINDING DETAIL
SAWCUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



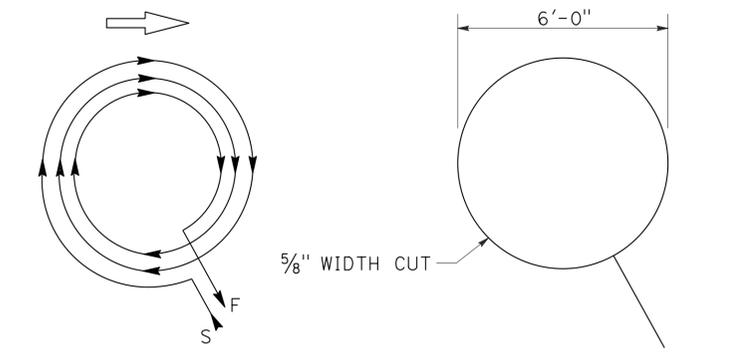
WINDING DETAIL
SAWCUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



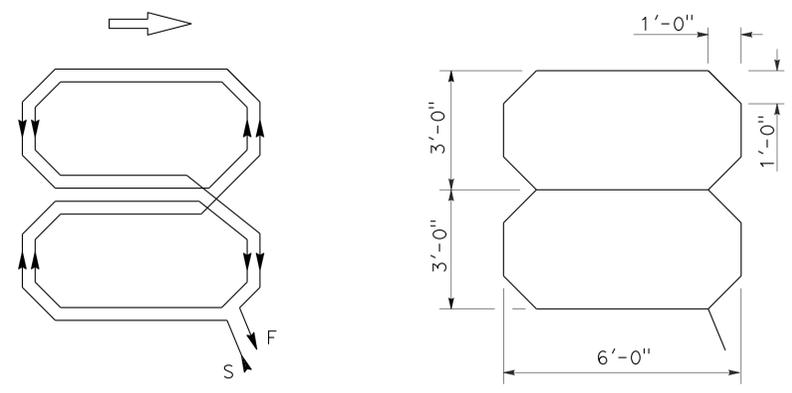
WINDING DETAIL
SAWCUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



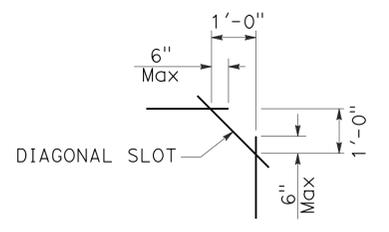
WINDING DETAIL
SAWCUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



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.

2010 REVISED STANDARD PLAN RSP ES-5B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	631	824

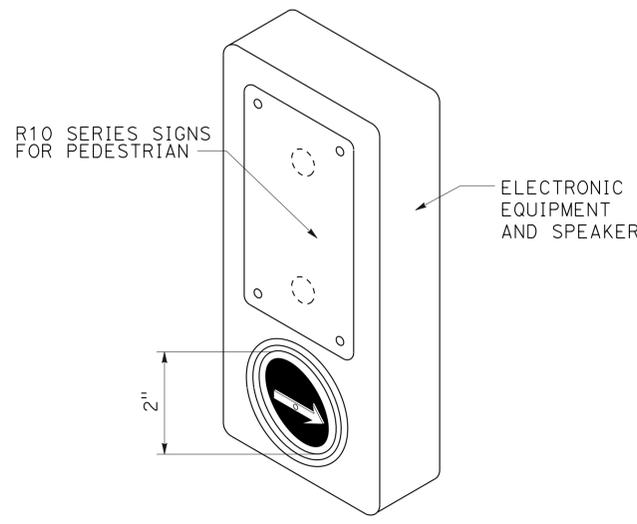
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE

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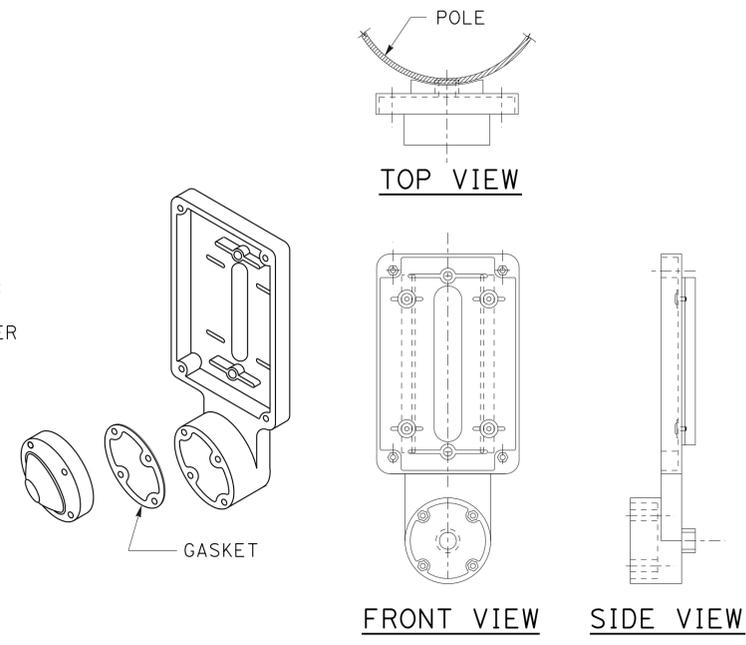
TO ACCOMPANY PLANS DATED 6-23-14

NOTES:

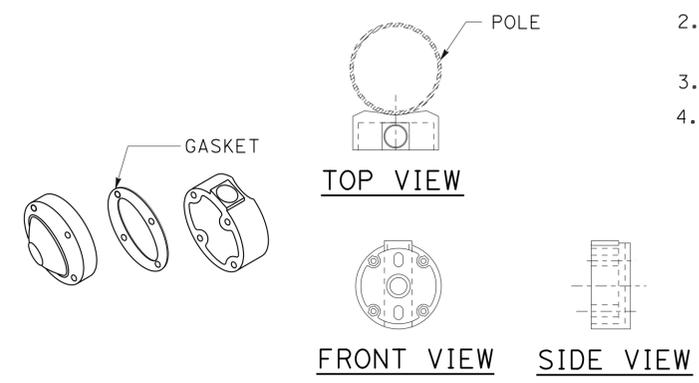
1. Back casting shape to fit curvature of pole.
2. Provide cover fitting for top of post, when PBA is mounted on push button assembly post.
3. Install push button on crosswalk side of standard.
4. Use R10 series regulatory signs and plaques for pedestrian and bicycle facilities.



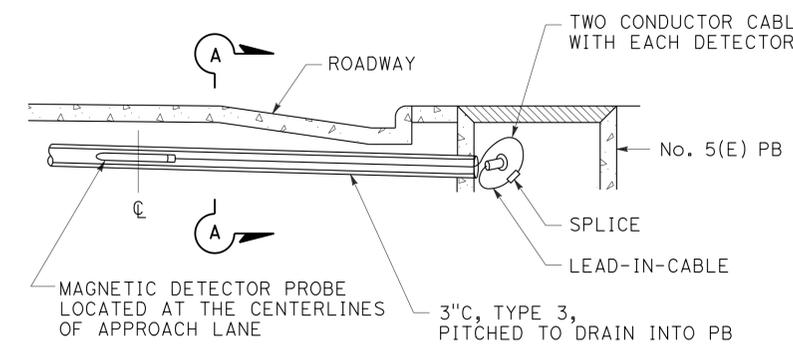
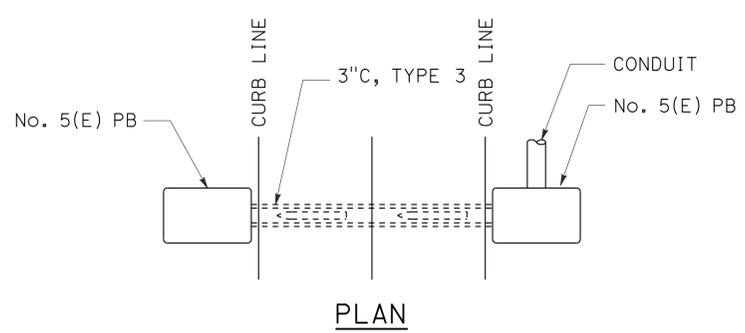
ACCESSIBLE PEDESTRIAN SIGNAL
DETAIL A
 (See note 1 to 4)



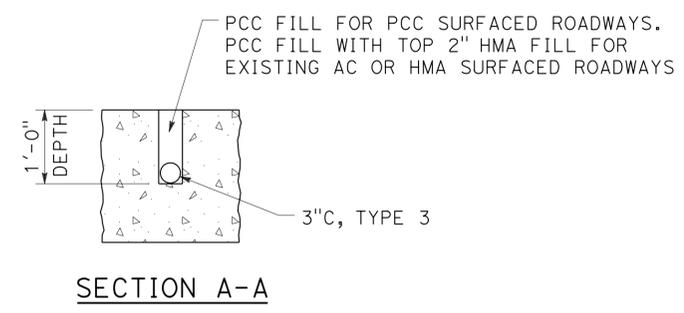
TYPE B PUSH BUTTON ASSEMBLY
DETAIL B
 (See note 1 to 4)



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



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

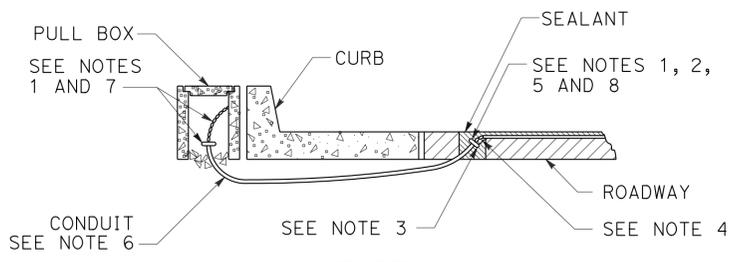
2010 REVISED STANDARD PLAN RSP ES-5C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	632	824

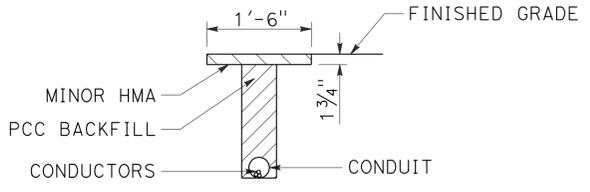
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
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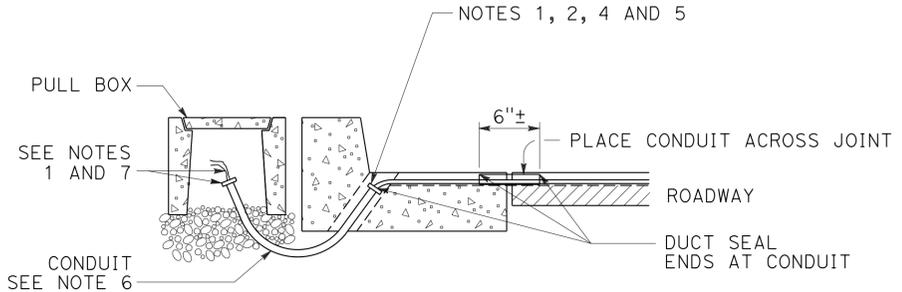
TO ACCOMPANY PLANS DATED 6-23-14



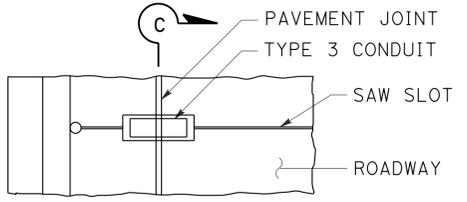
**TYPE A
CURB TERMINATION DETAIL**



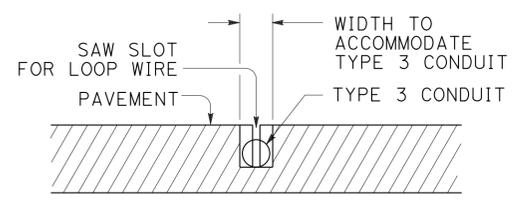
**"T" TRENCH
DETAIL 1**



CROSS SECTION

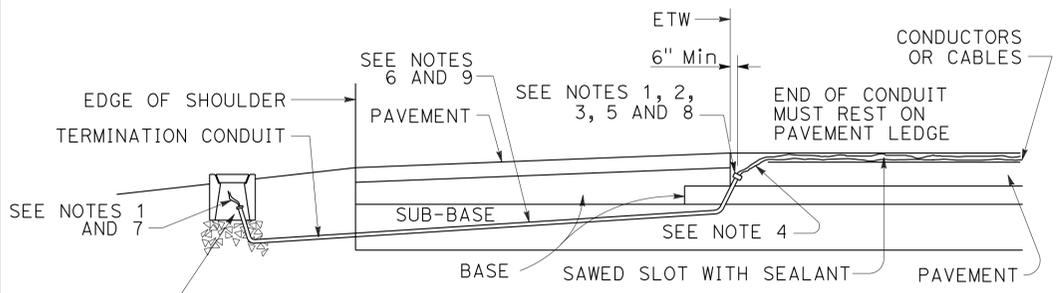


PLAN VIEW

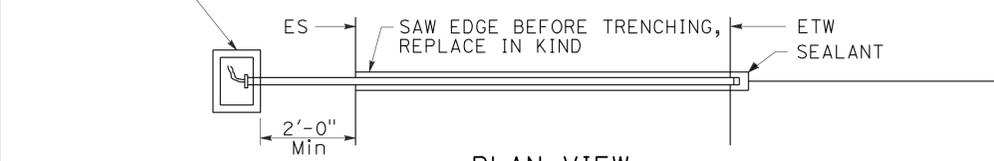


SECTION C-C

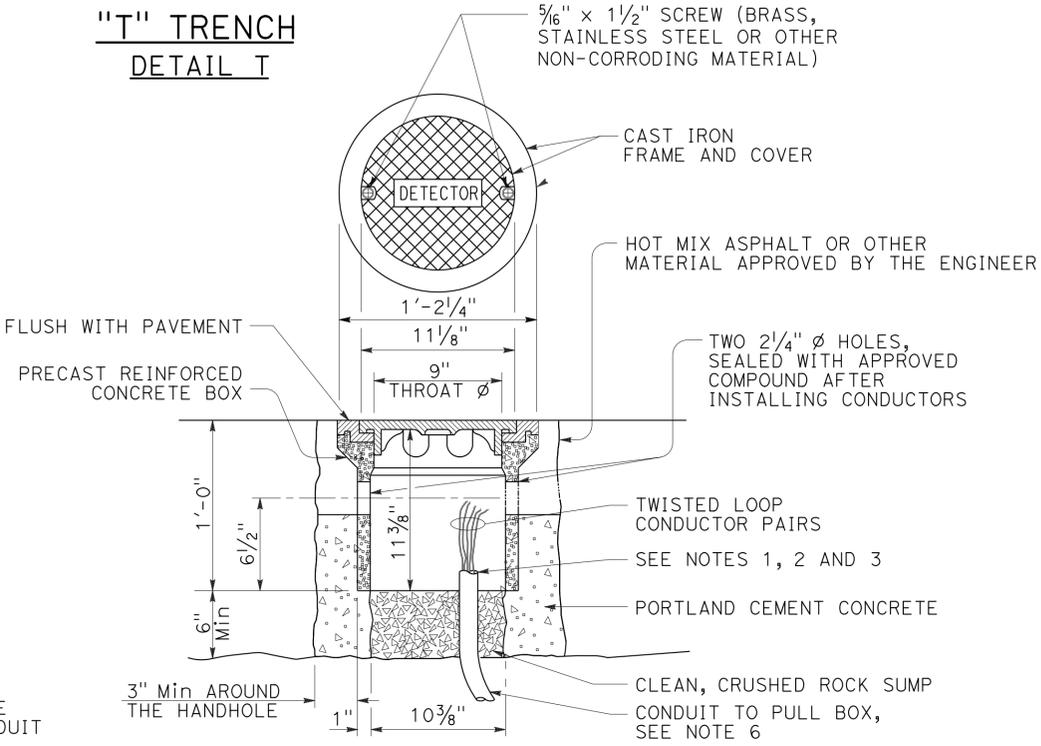
**TYPE B
CURB TERMINATION DETAIL**



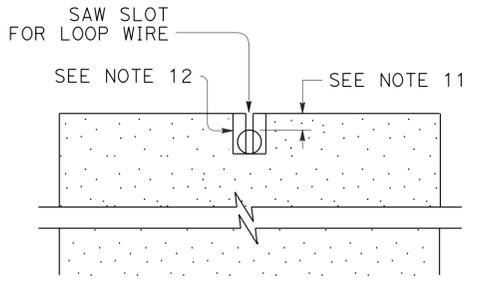
CROSS SECTION



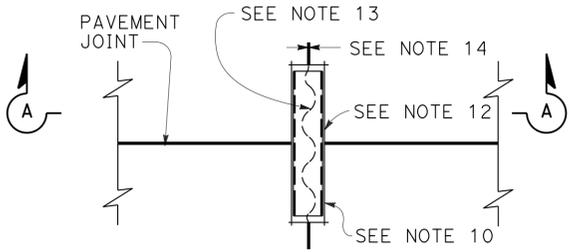
**PLAN VIEW
SHOULDER TERMINATION DETAILS**



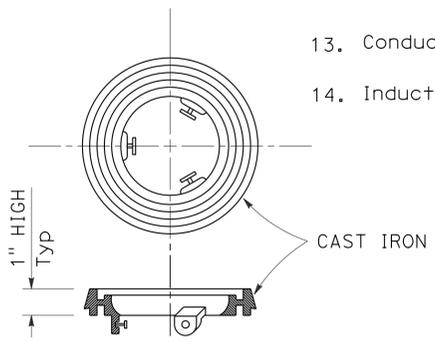
DETECTOR HANDHOLE DETAIL



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.
- | | |
|---------------------|------------------------|
| <u>Conduit size</u> | <u>Loop conductors</u> |
| 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.

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.

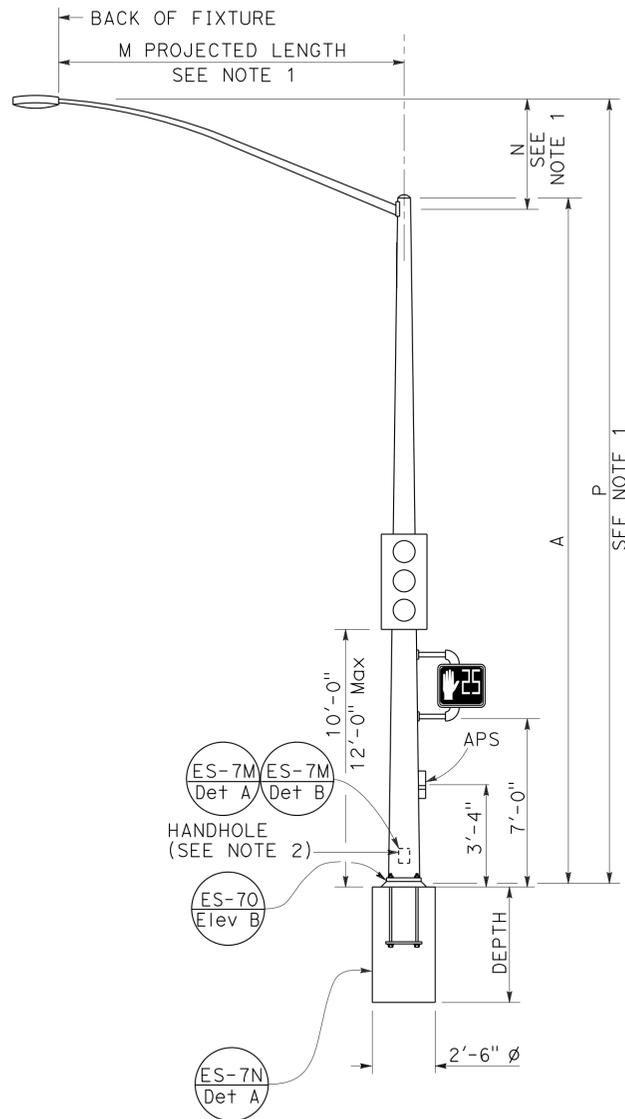
REVISED STANDARD PLAN RSP ES-5D

2010 REVISED STANDARD PLAN RSP ES-5D

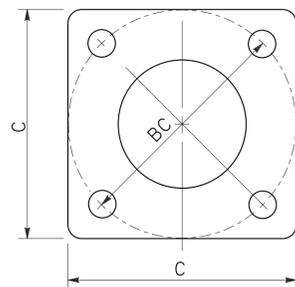
TO ACCOMPANY PLANS DATED 6-23-14

NOTES:

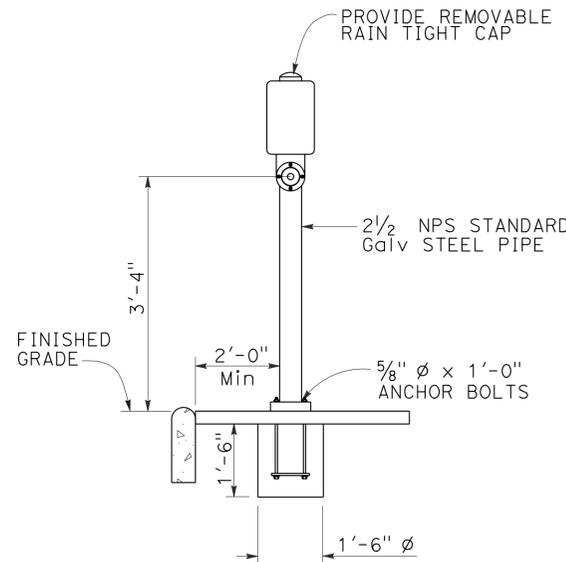
- For additional notes, details and data for Type 15TS and Type 21TS Standards, see Standard Plan ES-6A.
- Handhole shall be located on the downstream side of traffic.



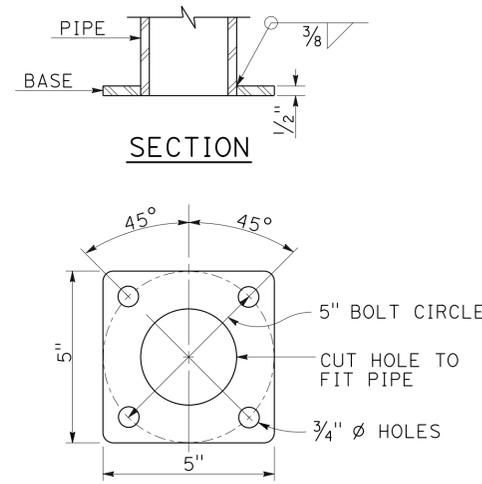
TYPE 15TS AND 21TS STANDARD
ELEVATION A
 (See Note 1)



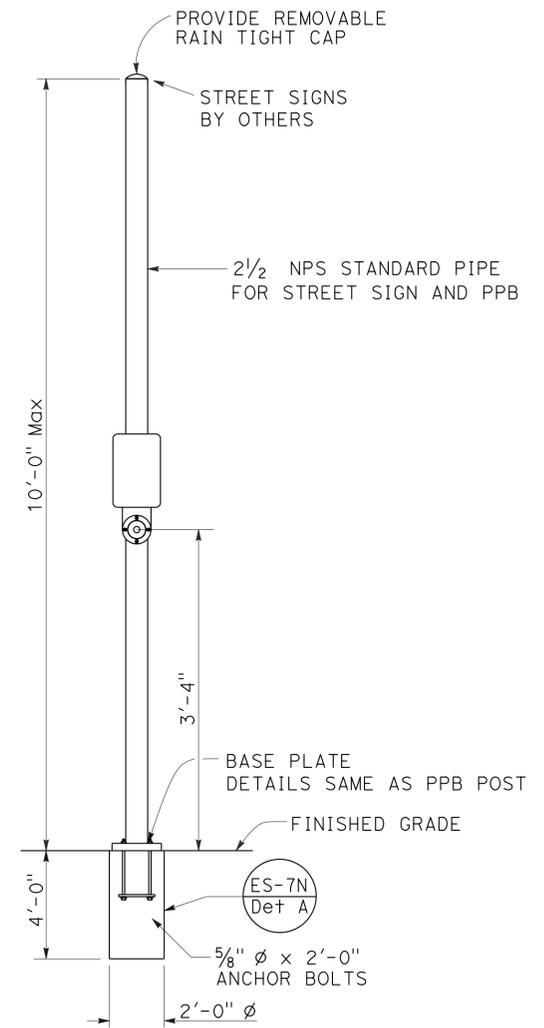
BASE PLATE
TYPE 15TS AND 21TS
DETAIL A



PUSH BUTTON ASSEMBLY POST
DETAIL B



BASE PLATE
PBA POST



COMBINED STREET SIGN
PUSH BUTTON ASSEMBLY POST
DETAIL C

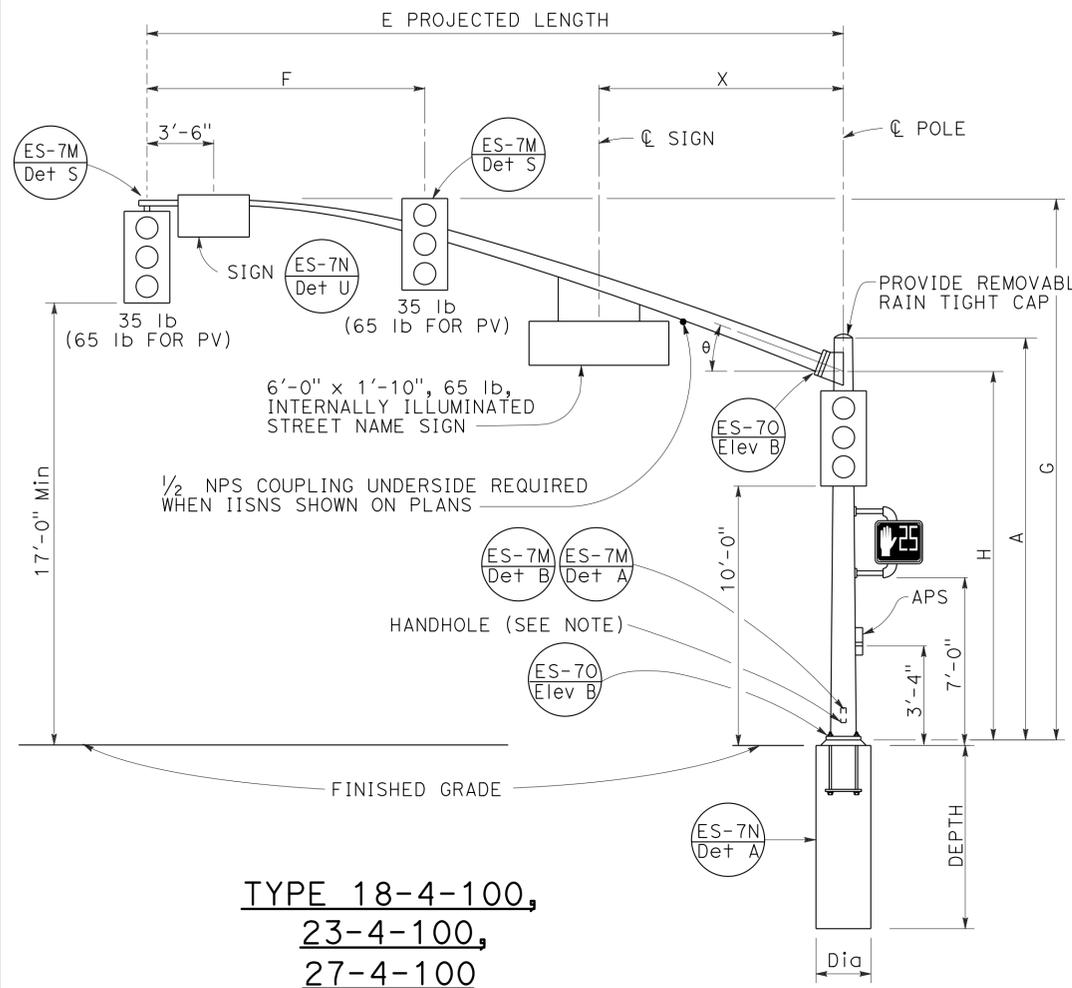
POLE TYPE	POLE DATA			WALL THICKNESS	BASE PLATE DATA			CIDH DEPTH
	A HEIGHT	Min OD			C	BC = BOLT CIRCLE	THICKNESS	
15TS	30'-0"	8"	3 1/16"	0.1793"	1'-1 1/2"	1'-0"	1 1/2" ø x 42"	7'-6"
21TS	35'-0"	9 3/8"	3 3/16"		1'-3"	1'-2"		8'-6"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, TYPE TS,
AND PUSH BUTTON ASSEMBLY POST)
 NO SCALE

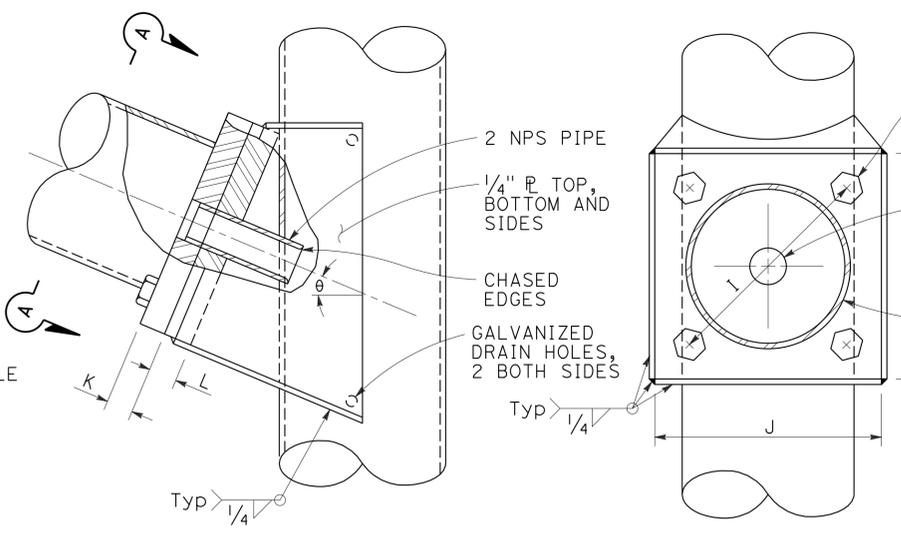
RSP ES-7A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7A
 DATED MAY 20, 2011 - PAGE 462 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7A

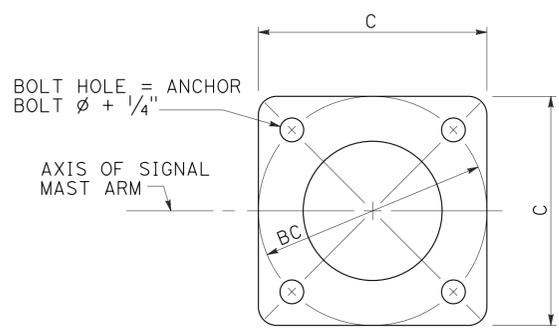
2010 REVISED STANDARD PLAN RSP ES-7A



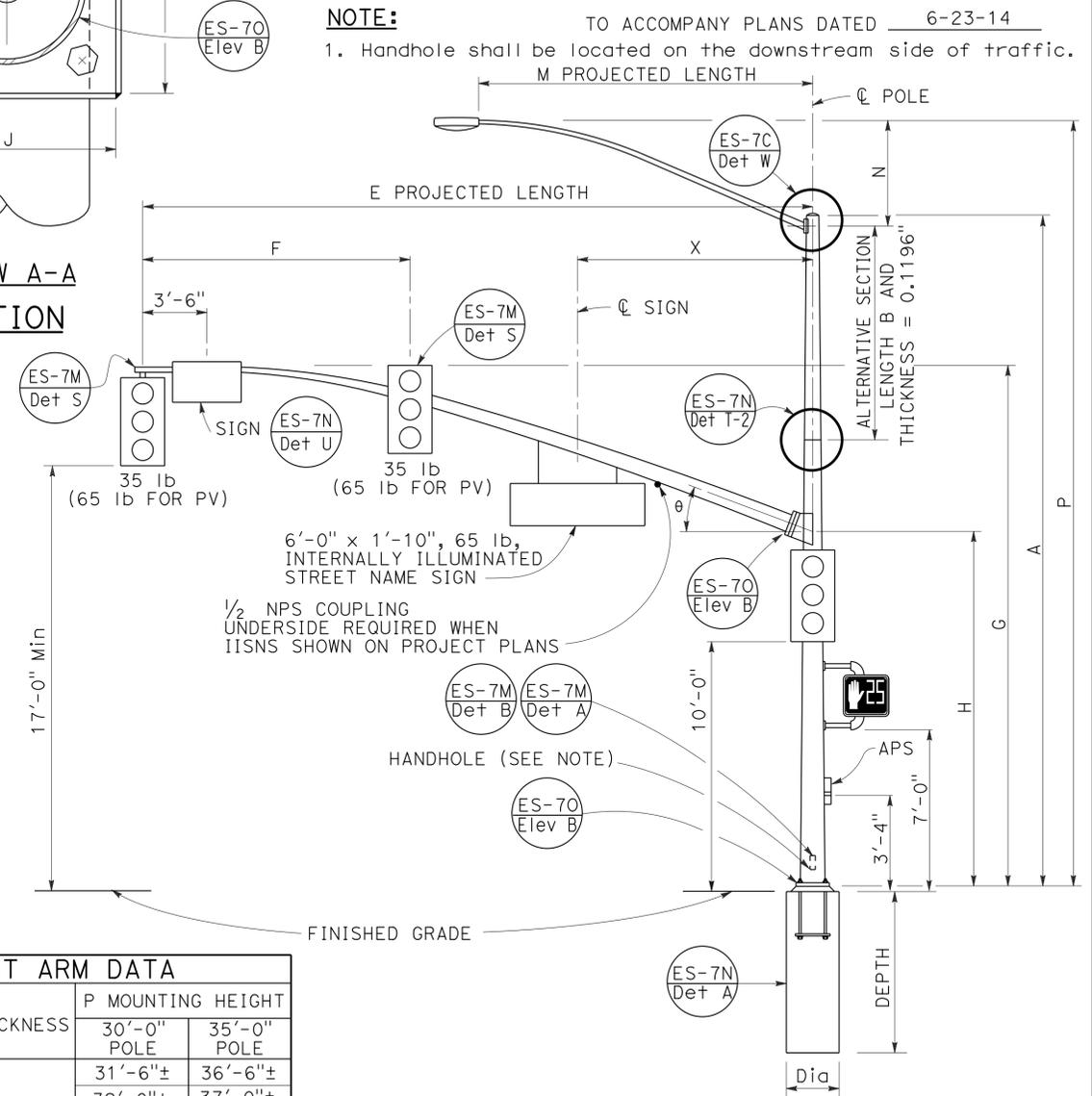
**TYPE 18-4-100,
 23-4-100,
 27-4-100
 ELEVATION A**



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



**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 THICKNESS	theta	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 1/16"										
40'-0"	15'-0"	9 3/8"										
45'-0"	15'-0"	23'-8"±		10 1/4"		13 1/2"	1'-1 1/2"	1 1/2"	1 3/4"	15°	13'-0"	

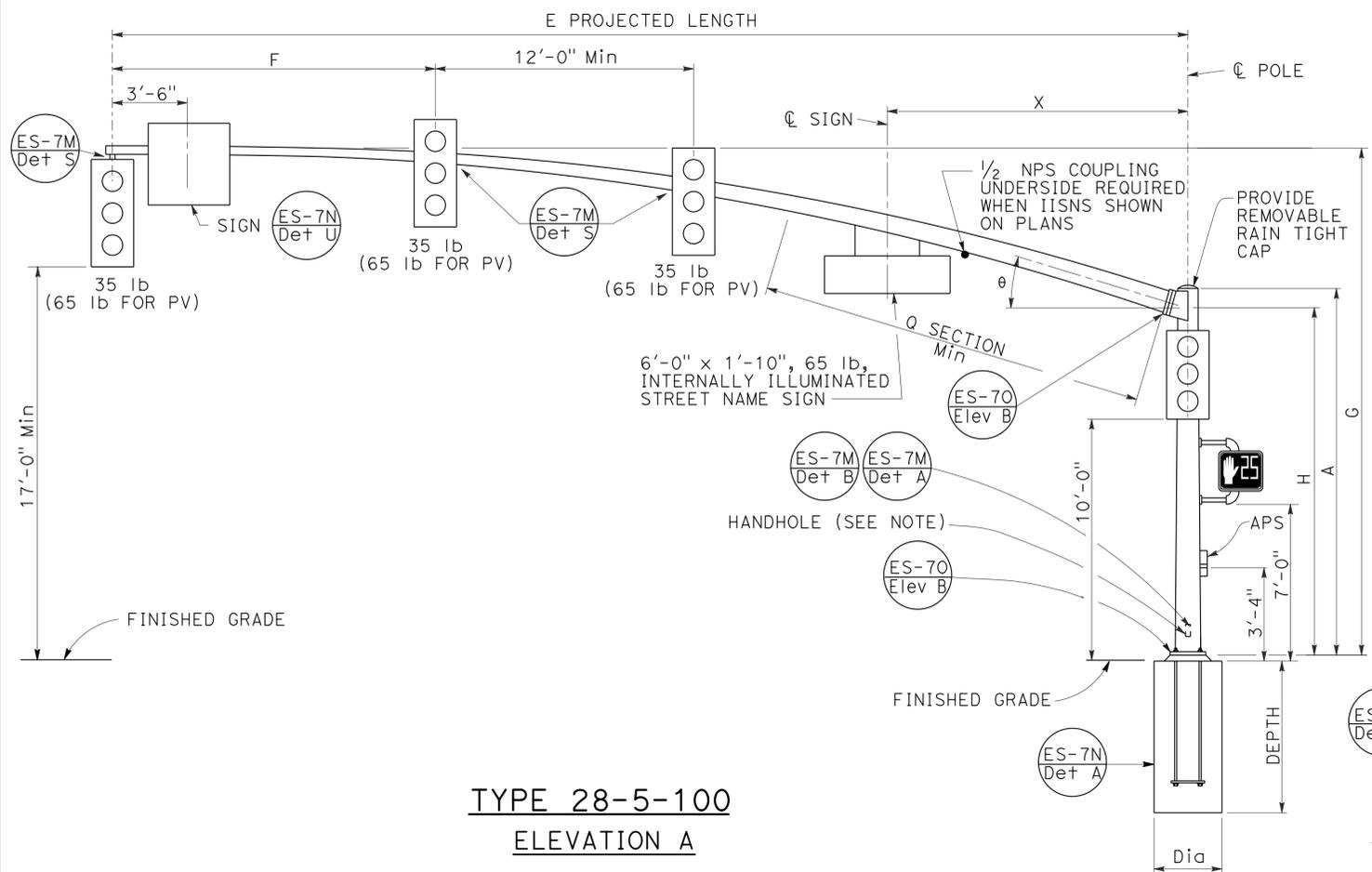
M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT	
				30'-0" POLE	35'-0" POLE
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±			33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

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

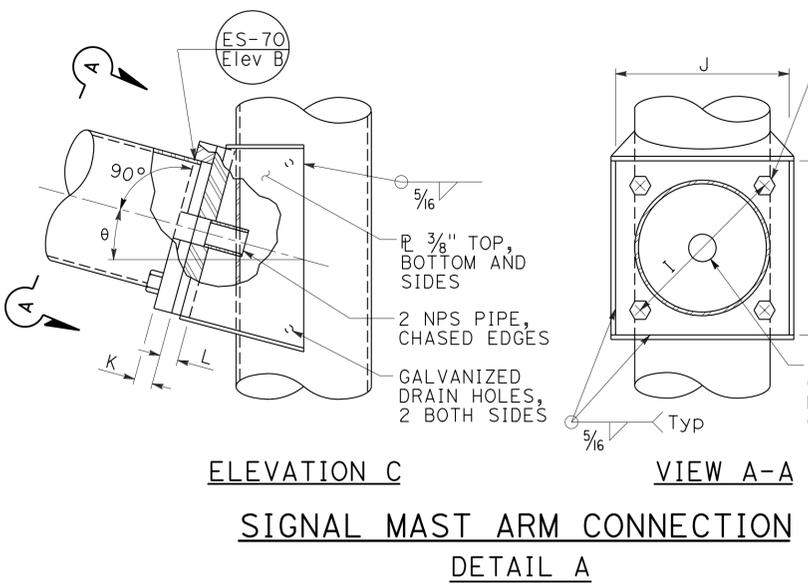
[] INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

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

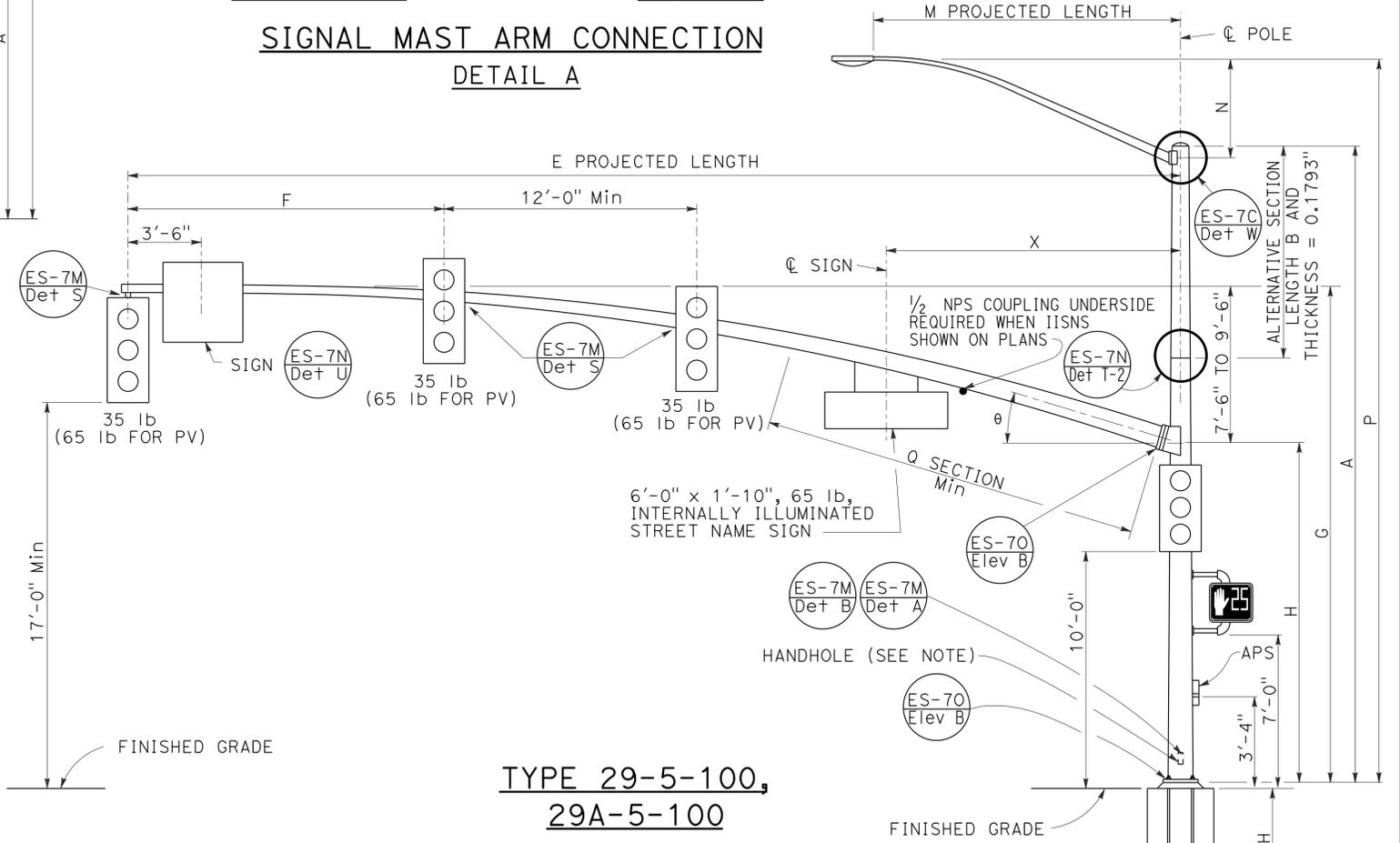
2010 REVISED STANDARD PLAN RSP ES-7F



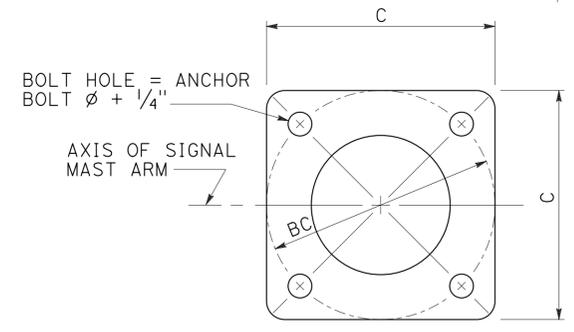
TYPE 28-5-100
ELEVATION A



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



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



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 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"±	3 7/8"		33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

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	θ	Q SECTION		X Max
												LENGTH	THICKNESS	
50'-0" 55'-0"	15'-0"	23'-7"± TO 25'-7"±	16'-0"	11 7/16" 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	B LENGTH	ALTERNATIVE SECTION BOTTOM	ALTERNATIVE SECTION TOP	C			BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	Dia	DEPTH	REINFORCED
28-5-100			17'-0"	11 3/16"		NONE							NONE					
29-5-100	5	100	30'-0"	14"	9 1/16"	0.3125"	10'-0"	11 1/8"	9 1/16"	23"	21"	3"	2 1/2" φ × 42"	6'-15" [15'-0"]	50'-0", 55'-0"	3'-6"	12'-0"	YES
29A-5-100			35'-0"		8 5/16"		15'-0"		8 5/16"									

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

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

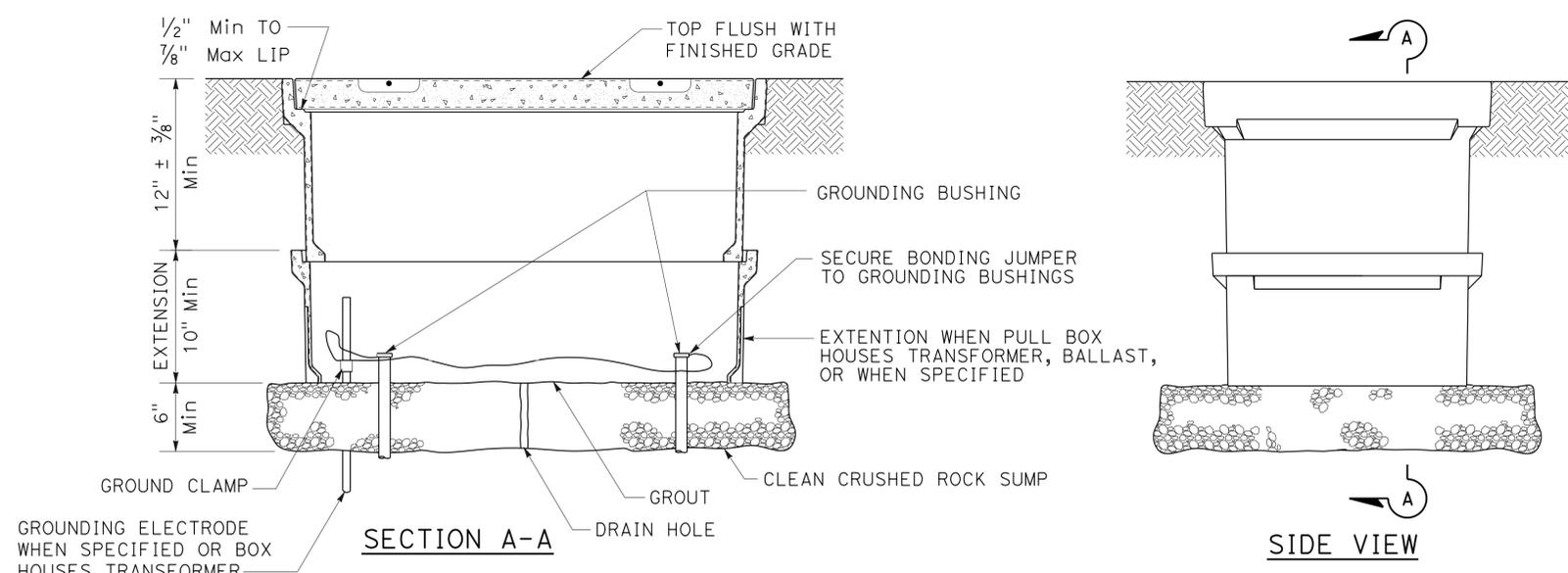
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15	42.5/46.0	636	824

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

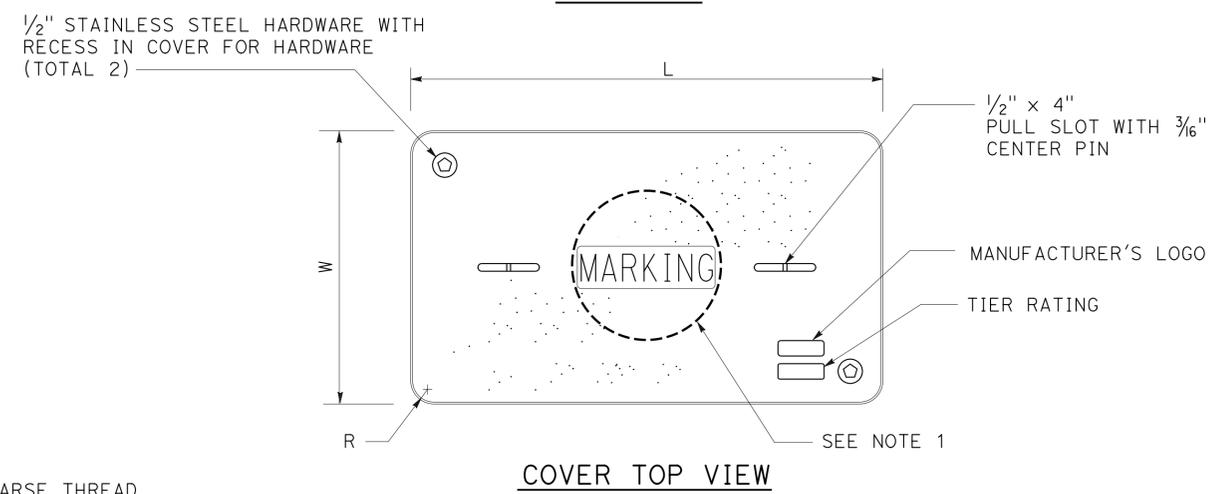
July 19, 2013
 PLANS APPROVAL DATE

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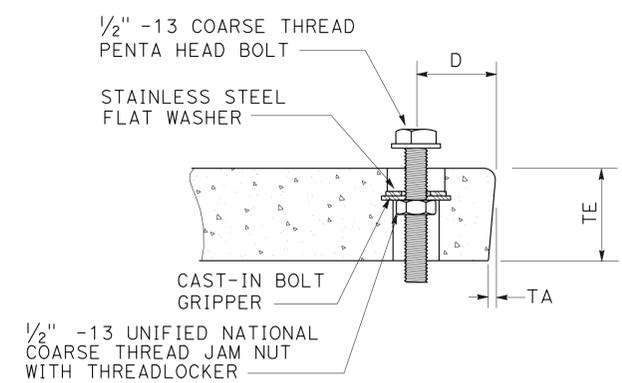
TO ACCOMPANY PLANS DATED 6-23-14



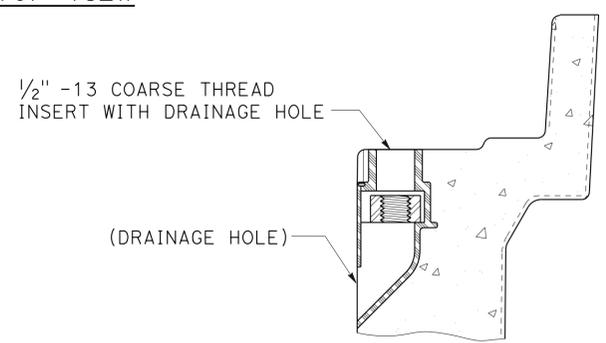
INSTALLATION DETAILS
DETAIL A



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

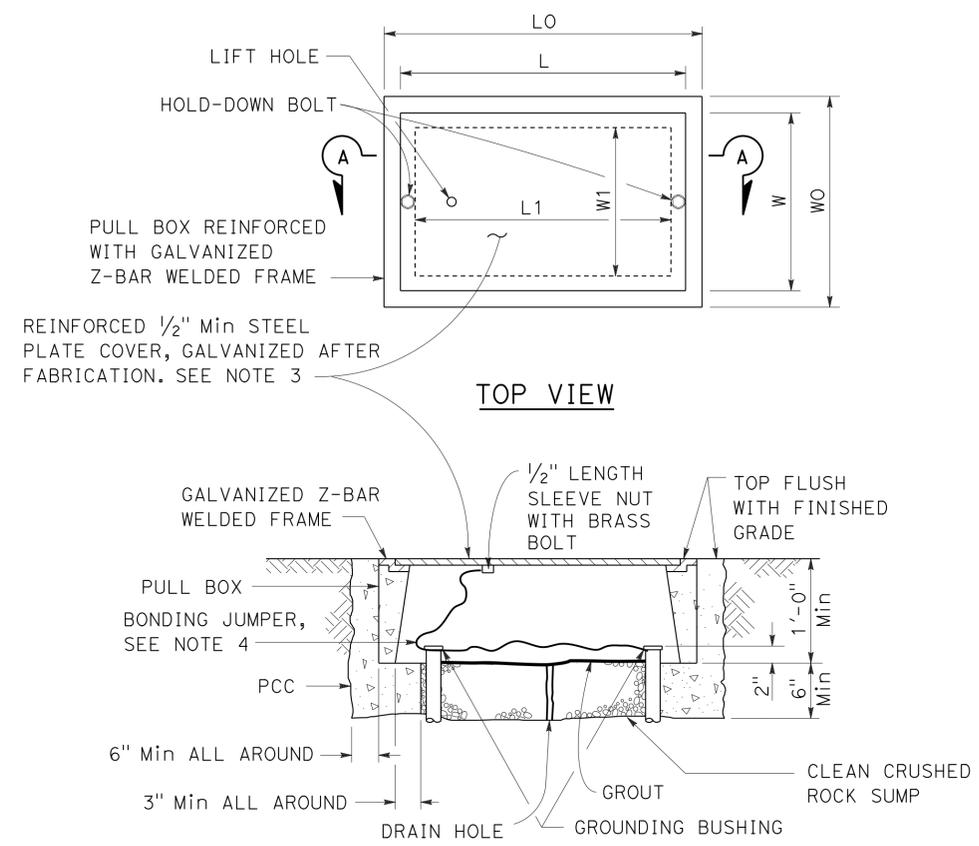
2010 REVISED STANDARD PLAN RSP ES-8A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15	42.5/46.0	637	824

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 6-23-14



SECTION A-A
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 7/8"±	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.

2010 REVISED STANDARD PLAN RSP ES-8B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15	42.5/46.0	638	824

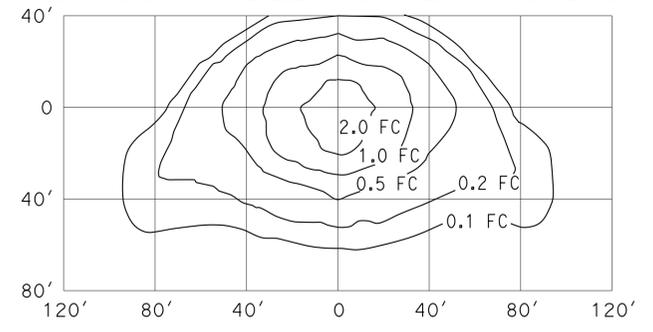
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

July 19, 2013
 PLANS APPROVAL DATE

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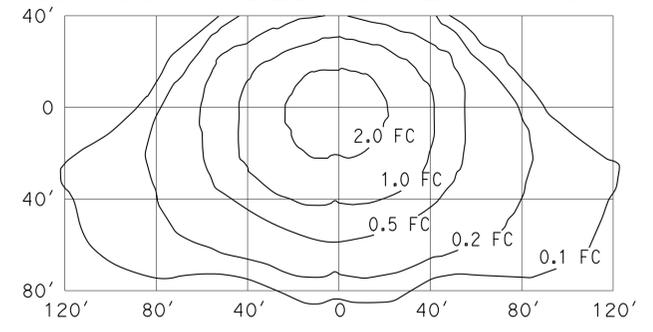
TO ACCOMPANY PLANS DATED 6-23-14

ISOFOOTCANDLE CURVE - MINIMUM



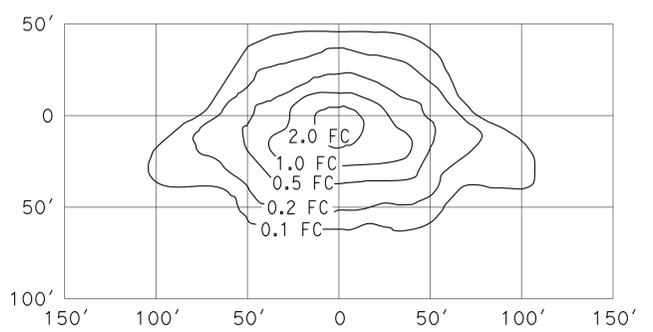
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 34' Mounting Height
 Lamp operated at 22,000 lm
 200-W high pressure sodium lamp
 ANSI Designation S66

ISOFOOTCANDLE CURVE - MINIMUM



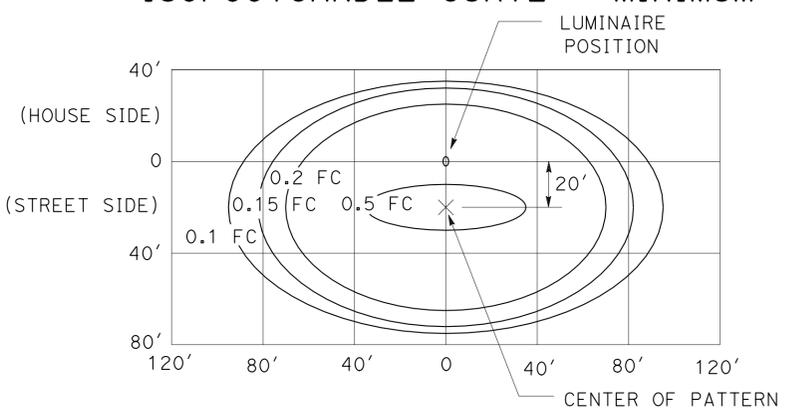
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 40' Mounting Height
 Lamp operated at 37,000 lm
 310-W high pressure sodium lamp
 ANSI Designation S67

ISOFOOTCANDLE CURVE - MINIMUM



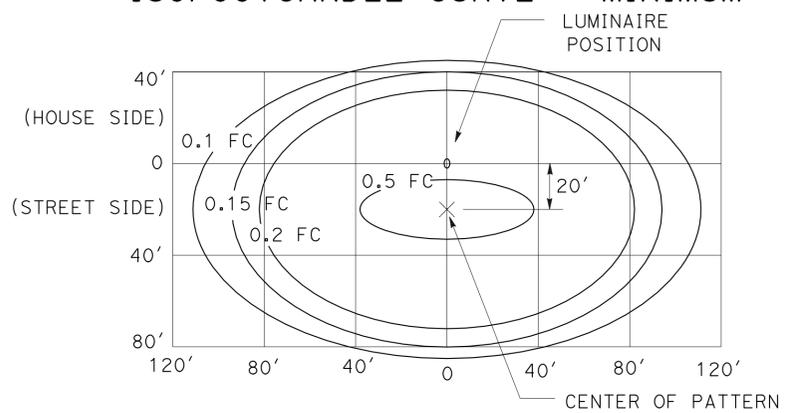
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 30' Mounting Height
 Lamp operated at 16,000 lm
 150-W high pressure sodium lamp
 ANSI Designation S55

ISOFOOTCANDLE CURVE - MINIMUM



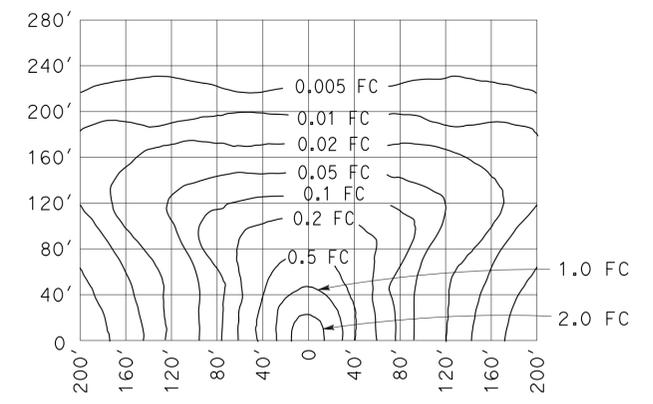
LED LUMINAIRE ROADWAY 1
 165-W at 34' Mounting Height

ISOFOOTCANDLE CURVE - MINIMUM



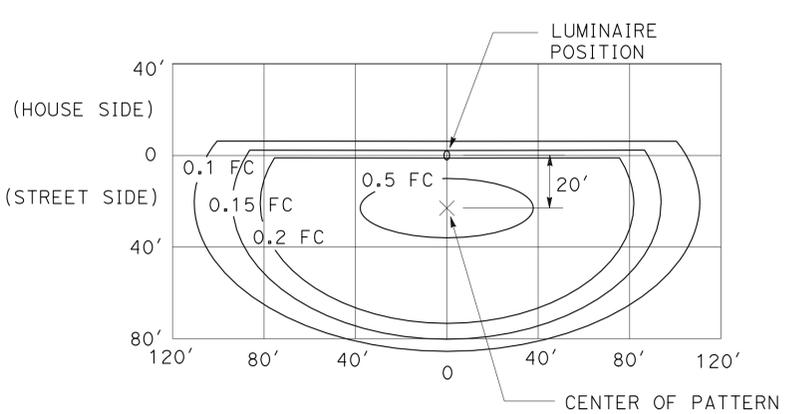
LED LUMINAIRE ROADWAY 2
 235-W at 40' Mounting Height

ISOFOOTCANDLE CURVE - MINIMUM



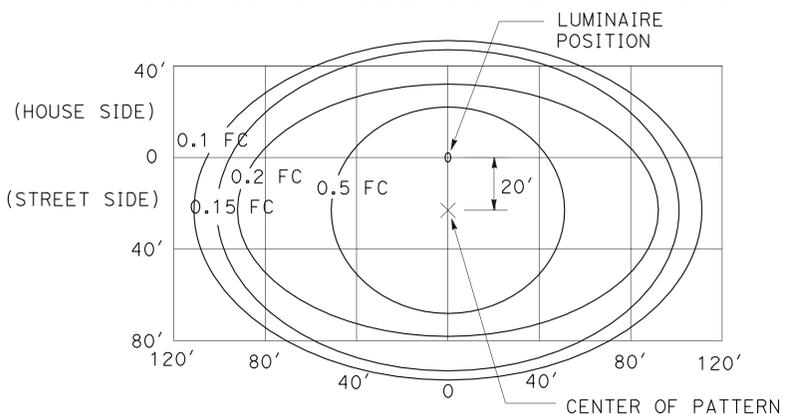
LOW PRESSURE SODIUM LUMINAIRE
 40' Mounting Height
 Lamp operated at 33,000 lm
 180-W low pressure sodium lamp

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
 (ISOFOOTCANDLE DIAGRAMS)**

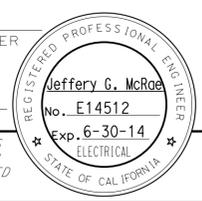
NO SCALE

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

2010 REVISED STANDARD PLAN RSP ES-10A

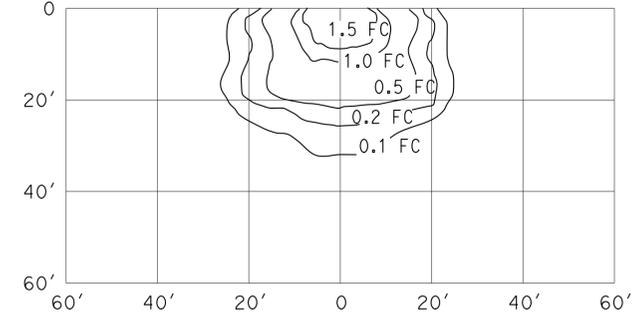
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	639	824

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 July 20, 2012
 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 6-23-14

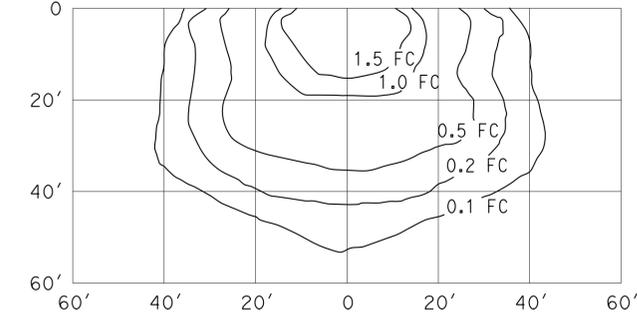
ISOFOOTCANDLE CURVE - MINIMUM



WALL LUMINAIRE

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

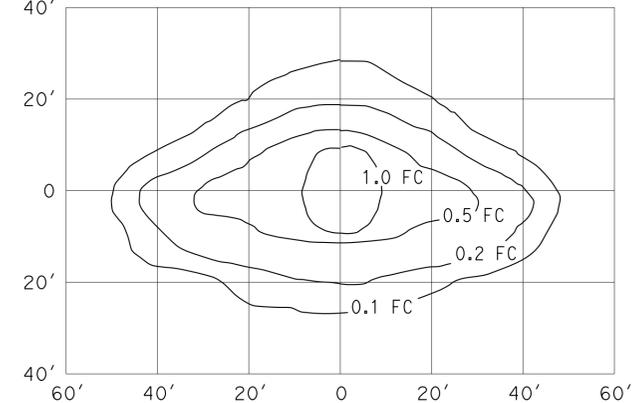
ISOFOOTCANDLE CURVE - MINIMUM



WALL LUMINAIRE

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

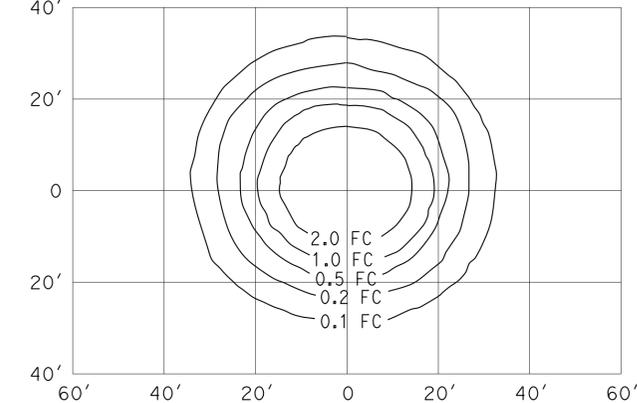
ISOFOOTCANDLE CURVE - MINIMUM



**PENDANT SOFFIT LUMINAIRE
 TYPE III SHORT**

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

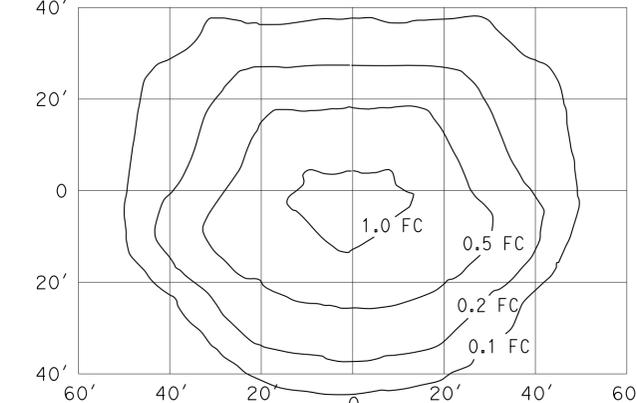
ISOFOOTCANDLE CURVE - MINIMUM



PENDANT SOFFIT LUMINAIRE

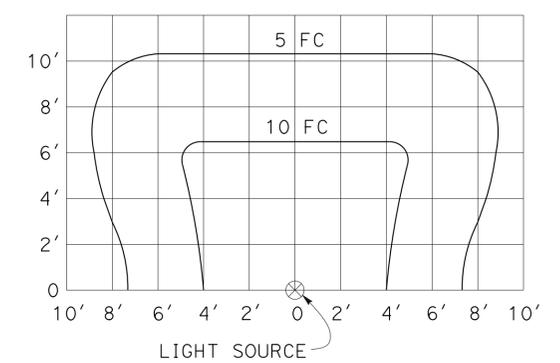
17' Mounting Height
 Lamp operated at 5,800 lm
 70-W high pressure sodium lamp
 ANSI Designation S62

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.

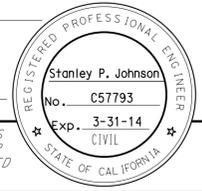
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
 (ISOFOOTCANDLE DIAGRAMS)**

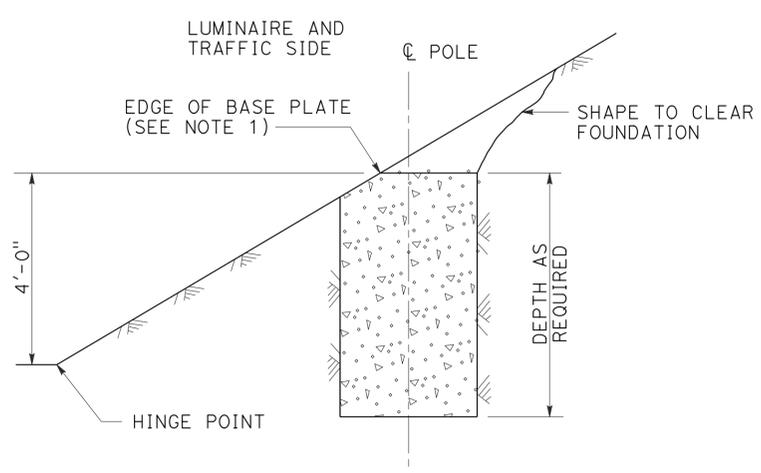
NO SCALE

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

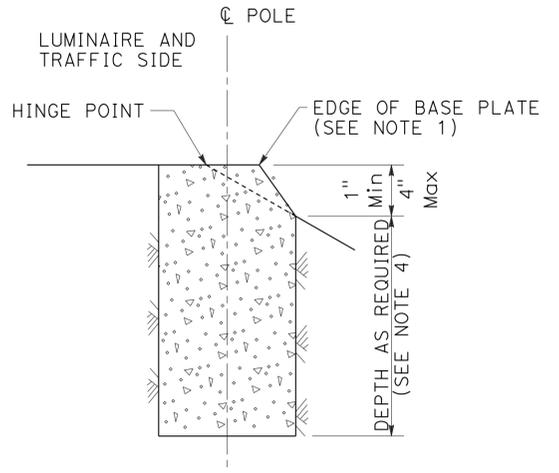
2010 REVISED STANDARD PLAN RSP ES-10B



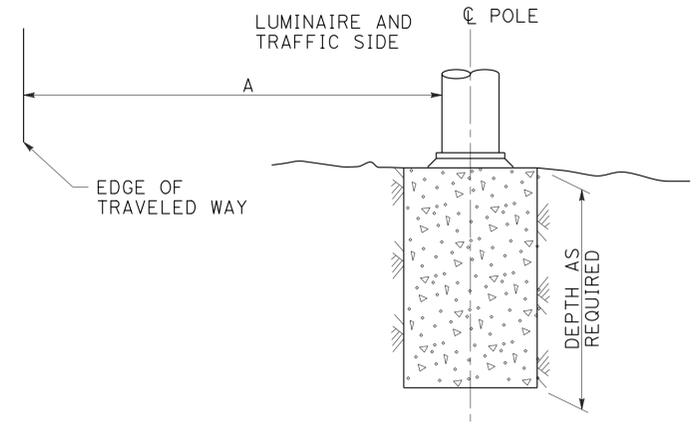
TO ACCOMPANY PLANS DATED 6-23-14



**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



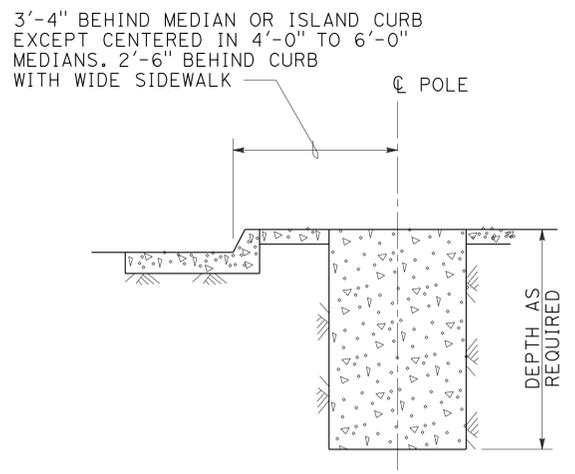
**FLAT SECTIONS, CUT OR FILL SLOPES
4:1 OR FLATTER
DETAIL A-3**
See Note 2

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

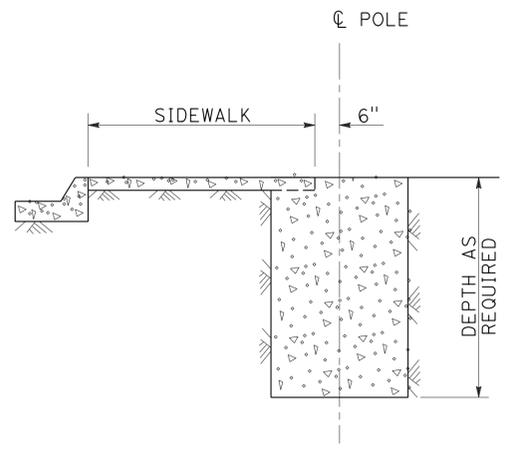
**FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL A**

NOTES:

- Where a portion of the foundation is above grade, the top edges shall have a 1" chamfer.
- Slopes shall be horizontal to vertical ratio (Horizontal : Vertical).
- Horizontal setbacks on cut and fill slopes steeper than 4:1 shall not exceed the distance shown for flat sections.
- 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.

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 "			1'-1"			11 ¹ / ₂ "		7'-0"
CCTV 30	30'	8"			1'-1 ¹ / ₂ "			1'-0"		7'-6"
CCTV 35	35'	8 ⁵ / ₈ "	3 ³ / ₄ "	0.1793"	1'-2"	1"	1 ¹ / ₂ " ϕ x 36"	1'-1"	2'-6"	8'-0"
CCTV 40	40'	9 ³ / ₈ "			1'-3"			1'-1 ¹ / ₂ "		8'-0"
CCTV 45	45'	10"						1'-2"		8'-6"

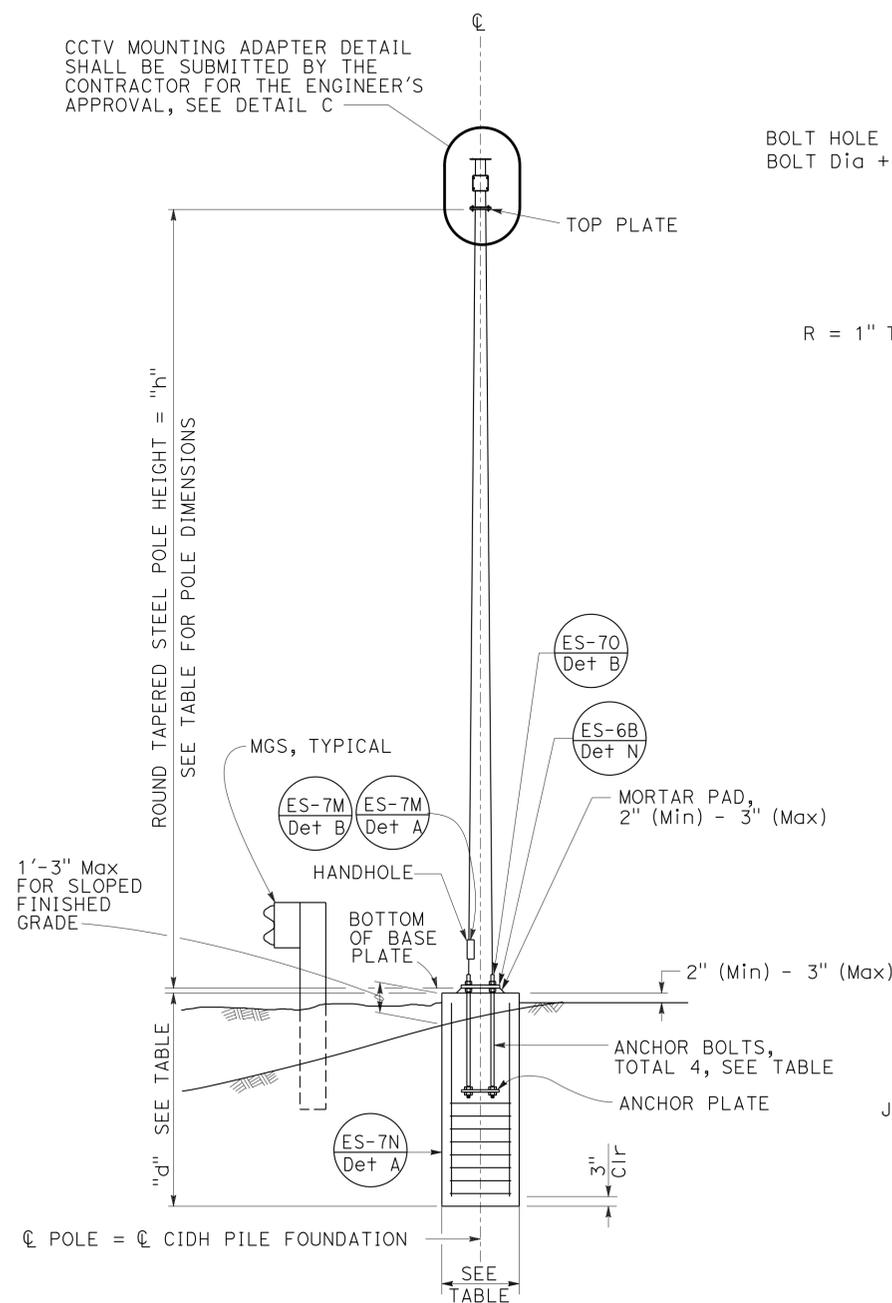
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	641	824

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.

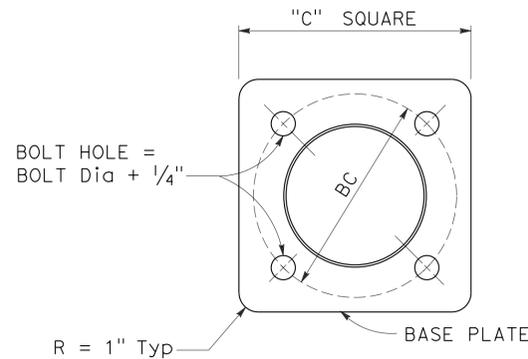
REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-23-14

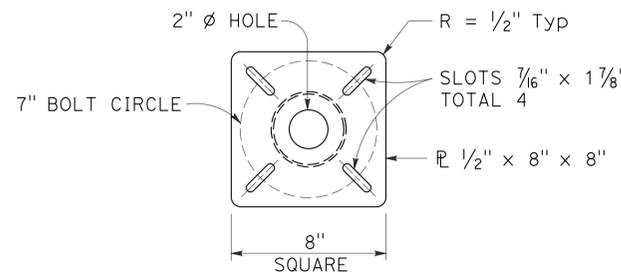
CCTV MOUNTING ADAPTER DETAIL SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE ENGINEER'S APPROVAL, SEE DETAIL C



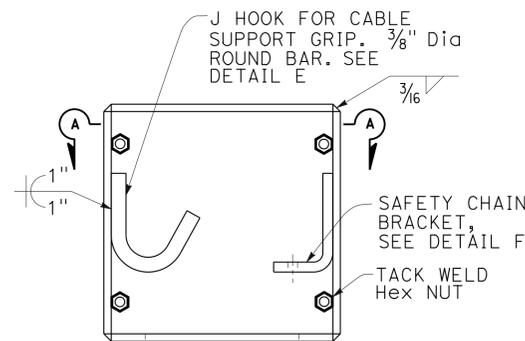
ELEVATION A



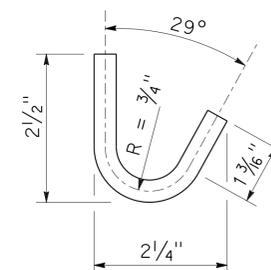
BASE PLATE
DETAIL A



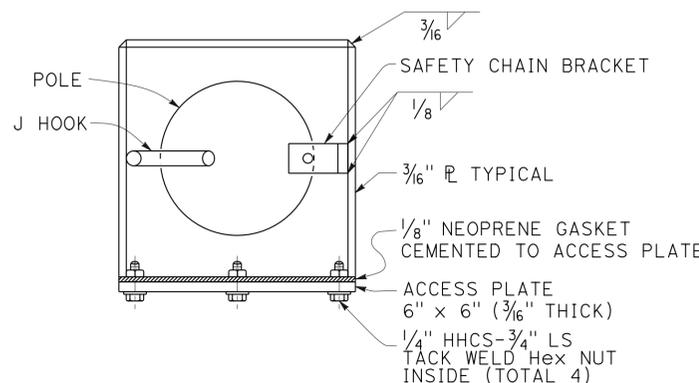
TOP PLATE
DETAIL B



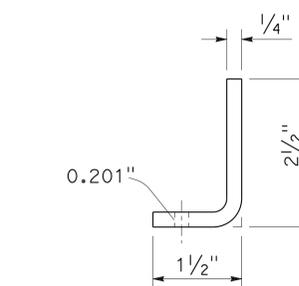
BOX ENCLOSURE
DETAIL D



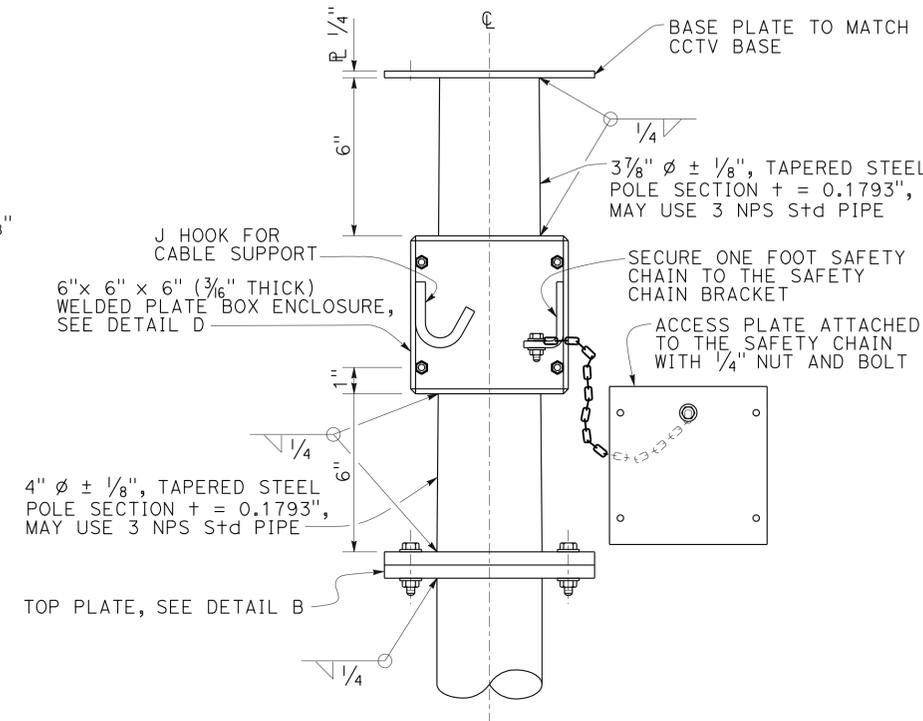
J HOOK
DETAIL E



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):
 - f_y = 55,000 psi (tapered steel tube and anchor bolts)
 - f_y = 50,000 psi (unless otherwise noted)
- Unit Stresses (Reinforced Concrete):
 - f'_c = 3,625 psi
 - f_y = 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.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	642	824


 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.

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

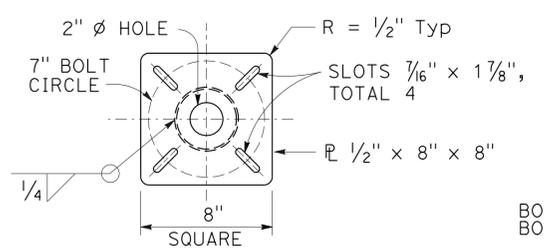
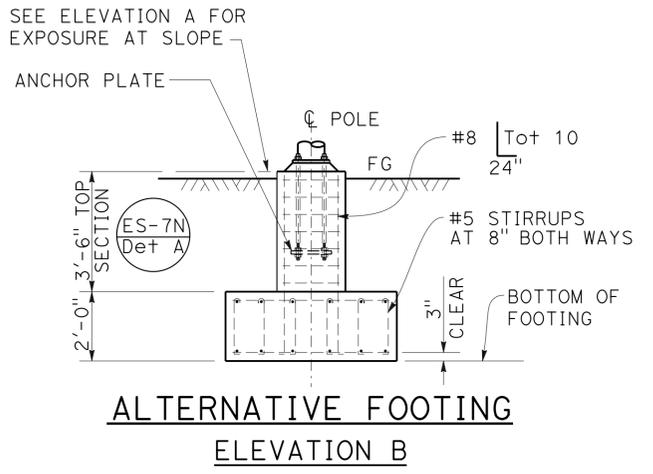
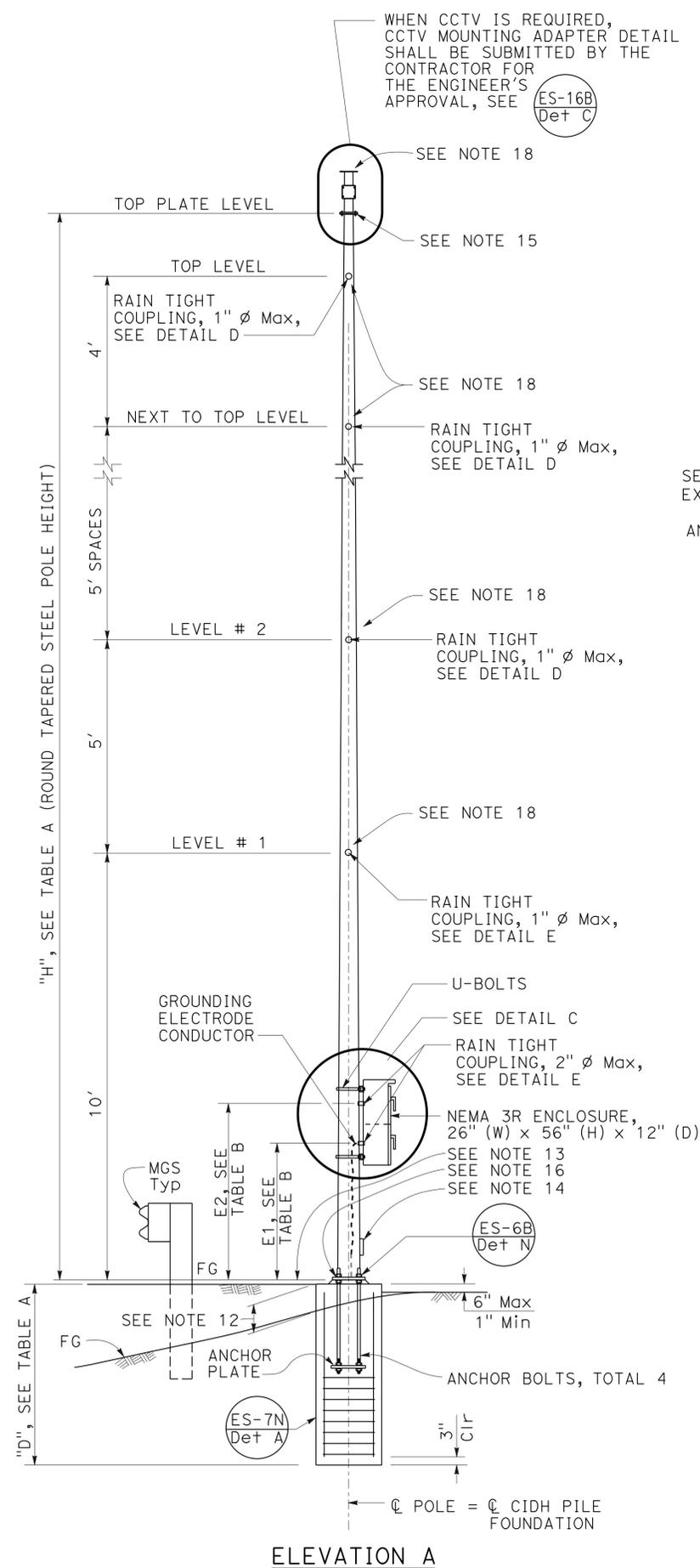
POLE TYPE	POLE DATA			BASE PLATE DATA			"D" 2'-6" ϕ CIDH Pile		
	HEIGHT "H"	Min OD		THICKNESS	"C" THICKNESS	ANCHOR BOLTS SIZE	BC = BOLT CIRCLE	LEVEL GROUND	UP TO 2:1
		BASE	TOP						
VDS 30	30'	8"		0.1793"	1'-1 1/2"		1'-1 1/2"	11'-0"	13'-0"
VDS 35	35'	8 5/8"	3 7/8"	0.1793"	1'-2"	1 1/2" ϕ x 3'-0"	1'-2"	11'-0"	
VDS 40	40'	9 3/8"			1'-3"		1'-3"	12'-0"	14'-0"

POLE TYPE	COUPLING	
	E1(Max)	E2(Max)
VDS 30		
VDS 35	3'-6"	4'-9"
VDS 40		

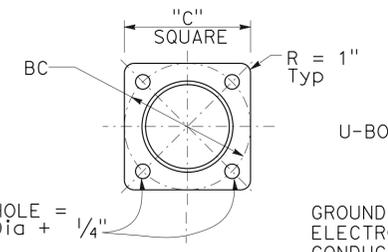
SPREAD FOOTING		
GROUND	FOOTING SIZE (LENGTH x WIDTH x DEPTH)	REINFORCEMENT TOP & BOTTOM
LEVEL	8'-6" x 8'-6" x 2'-0"	12 - #5 EW
UP TO 2:1	10'-0" x 10'-0" x 2'-0"	15 - #5 EW

LOCATION	MAXIMUM TOTAL EPA PER LEVEL (SQUARE FEET)	MAXIMUM TOTAL WEIGHT (lb)
LEVEL #1	14	200
LEVEL #2		
LEVEL #3		
LEVEL #4 (VDS 35 AND VDS 40 ONLY)	2.5	50
LEVEL #5 (VDS 40 ONLY)		
NEXT TO TOP LEVEL		
TOP LEVEL		
ON TOP PLATE LEVEL **		

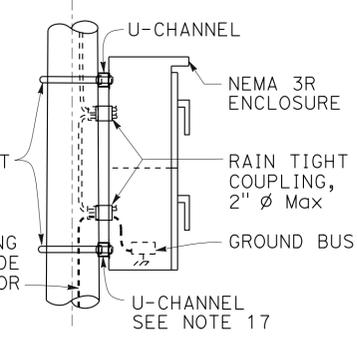
* MAXIMUM HORIZONTAL EXTENT BEYOND POLE FACE IS 4 FEET.
 ** MAXIMUM EXTENT ABOVE TOP PLATE IS 3 FEET.
 *** 14 IF LEVEL #1 IS ZERO.



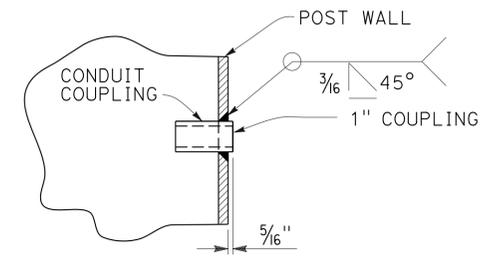
TOP PLATE DETAIL A



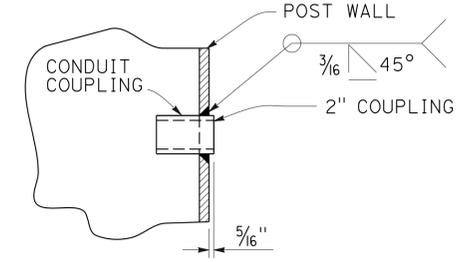
BASE PLATE DETAIL B



DETAIL C



1" COUPLING DETAIL D



2" COUPLING DETAIL E

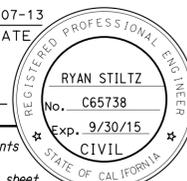
- NOTES:**
- All steel shall be galvanized after fabrication.
 - During pole installation the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
 - The foundation shall be treated as level ground condition if the slope inclination is flatter than 4 : 1 (Horizontal : Vertical)
 - For devices mounted and mounting heights, see TABLE B.
 - Design Specification: AASHTO Standard Specification for structural support for highway signs, luminaires and traffic signal dated 2001.
 - Wind Loadings: 100 mph (3-second gust)
 - Unit Stresses (Structural Steel):
 - fy = 55,000 psi (tapered steel tube)
 - fy = 50,000 psi (unless otherwise noted)
 - Anchor bolts: fy = 55,000 psi
 - Unit Stresses (Reinforced Concrete):
 - f'c = 3,600 psi
 - fy = 60,000 psi
 - The Contractor shall verify all controlling field dimensions before ordering of fabricating any material.
 - When no barriers are used, the NEMA 3R enclosure shall be located on the downstream side and perpendicular to the roadway.
 - 1'-3" (Max) for sloped finished grade.
 - Bottom of base plate.
 - Handhole.  
 - Top plate. Install a blank flange on the top plate when closed circuit television is not used.
 - 
 - U-channel with bracket.
 - Use the manufacturer's Effective Projected Area (EPA) for attachments. Assign attachments to nearest level and sum each level, see Table D for limitations.
- STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

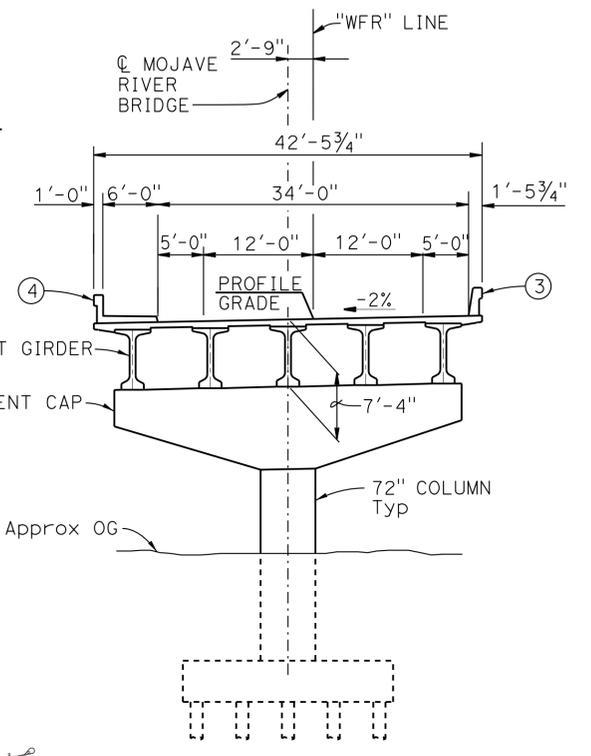
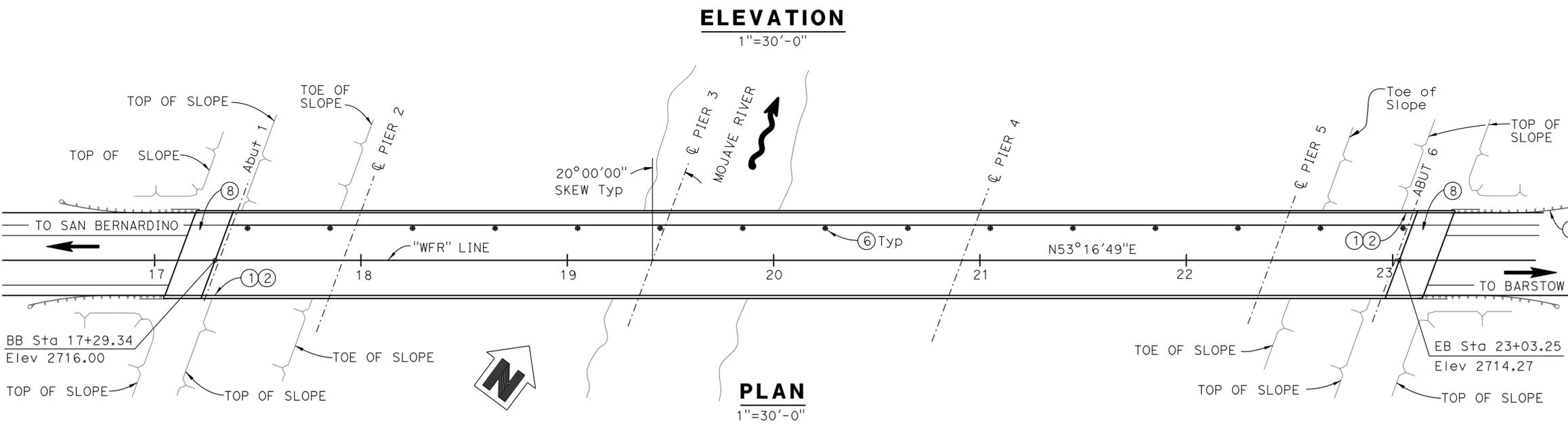
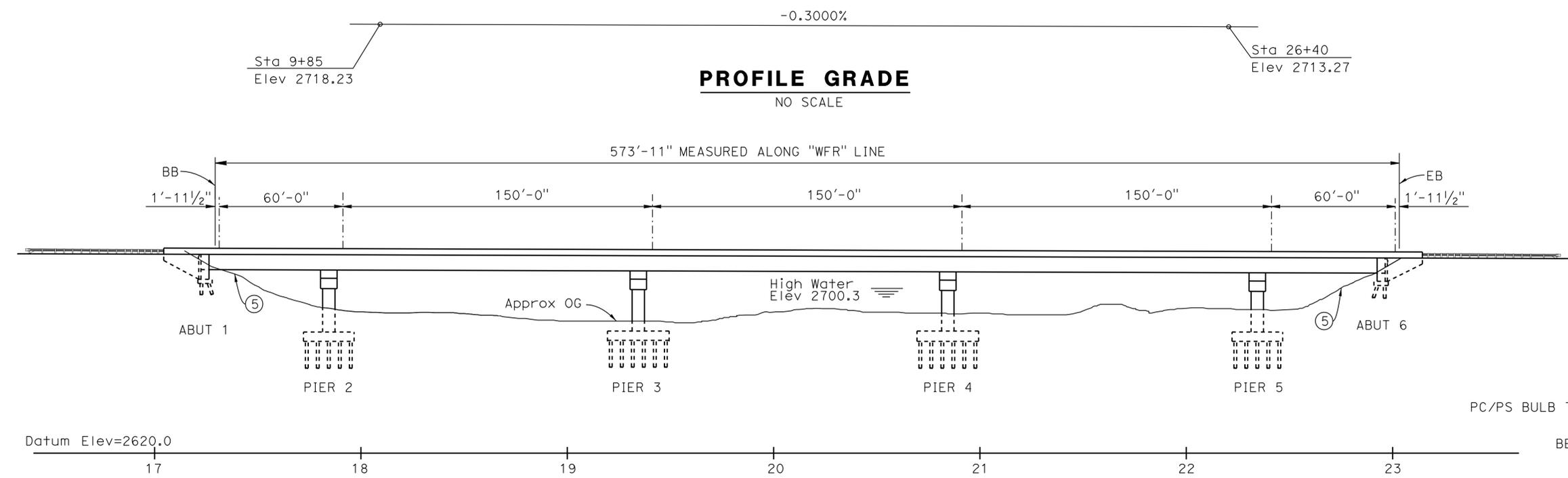
**ELECTRICAL SYSTEMS
 (CLOSED CIRCUIT TELEVISION WITH
 VEHICLE DETECTION SYSTEM,
 30' TO 40' POLE)**

NO SCALE

RSP ES-16D DATED NOVEMBER 15, 2013 SUPERSEDES RSP ES-16D DATED JULY 19, 2013 AND
 STANDARD PLAN ES-16D DATED MAY 20, 2011 - PAGE 503 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-16D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	643	824
 REGISTERED CIVIL ENGINEER			11-07-13	DATE	
6-23-14			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.					



- TYPICAL SECTION**
1"=10'-0"
- ① Paint "BR. NO. 54C0661".
 - ② Paint "MOJAVE RIVER BRIDGE".
 - ③ Conc Barrier, Type 736.
 - ④ Conc Barrier (Type 26 MOD)
 - ⑤ Existing RSP
 - ⑥ Drainage Inlet
 - ⑦ MGS, See "Roadway Plans"
 - ⑧ Structure Approach Type N(30S) MOD

NOTE: Mojave River Bridge (Widen) not shown, see Structures Plans for Bridge No. 54-0483.

DANIEL T. ADAMS
DESIGN ENGINEER

DESIGN	BY R. Stiltz	CHECKED F. Chen
DETAILS	BY Y. Tang	CHECKED F. Chen
QUANTITIES	BY Y. Tang	CHECKED F. Chen

LOAD & RESISTANCE FACTOR DESIGN	BY R. Stiltz	CHECKED F. Chen
LAYOUT	BY R. Stiltz	CHECKED F. Chen
SPECIFICATIONS	BY K. Doll	PLANS AND SPECS COMPARED K. Doll

LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

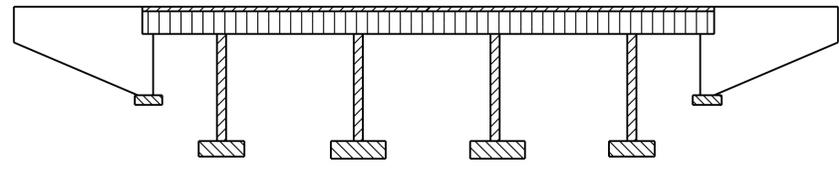
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54C0661
POST MILE	43.93

MOJAVE RIVER BRIDGE
GENERAL PLAN

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	644	824

REGISTERED CIVIL ENGINEER DATE 11-07-13
 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 these drawings unless they are specifically noted on these drawings.



- Structural Concrete, Bridge
- PC/PS Bulb Tee Girder
- Structural Concrete, Bridge Footing
- Structural Concrete, Bridge (4,000 psi at 28 days)

QUANTITIES

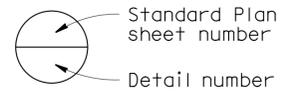
STRUCTURE EXCAVATION (BRIDGE)	145	CY
STRUCTURE EXCAVATION (TYPE D)	2,260	CY
STRUCTURE BACKFILL (BRIDGE)	93	CY
FURNISH PILING (CLASS 200) (ALTERNATIVE W)	5,806	LF
DRIVE PILE (CLASS 200) (ALTERNATIVE W)	138	EA
STRUCTURAL CONCRETE, BRIDGE FOOTING	512	CY
STRUCTURAL CONCRETE, BRIDGE	1,450	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	57	CY
FURNISH PRECAST PRESTRESSED CONCRETE BULB-TEE GIRDER (140'-150')	15	EA
FURNISH PRECAST PRESTRESSED CONCRETE BULB-TEE GIRDER (50'-60')	10	EA
ERECT PRECAST PRESTRESSED CONCRETE GIRDER	25	EA
JOINT SEAL ASSEMBLY (MR 2 1/2")	87	LF
BAR REINFORCING STEEL (BRIDGE)	644,125	LB
BRIDGE DECK DRAINAGE SYSTEM	12,036	LB
CONCRETE BARRIER (TYPE 26 MODIFIED)	610	LF
CONCRETE BARRIER (TYPE 736)	610	LF

CONCRETE STRENGTH AND TYPE LIMITS

No Scale

STANDARD PLANS DATED 2010

RSP	A10A	ABBREVIATIONS (SHEET 1 OF 2)
	A10B	ABBREVIATIONS (SHEET 2 OF 2)
	A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
	A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
	A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
	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
	B2-8	PILE DETAILS CLASS 200
	B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
	B7-8	DECK DRAINAGE DETAILS
	B7-10	UTILITY OPENING BOX GIRDER
RSP	B11-54	CONCRETE BARRIER TYPE 26
RSP	B11-56	CONCRETE BARRIER TYPE 736



PILE DATA TABLE

Location	Pile Type	Nominal Resistance (kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance (kips)
		Compression	Tension			
Abut 1	Class 200 Alt "W"	300 kips	0	2663 (a) 2660 (d)	2660	500
Pier 2	Class 200 Alt "W"	430 kips	190	2631 (a) 2628 (b) 2639 (d)	2628	460
Pier 3	Class 200 Alt "W"	370 kips	190	2631 (a) 2625 (b) 2634 (d)	2625	400
Pier 4	Class 200 Alt "W"	370 kips	190	2621 (a) 2633 (b) 2636 (d)	2621	400
Pier 5	Class 200 Alt "W"	430 kips	190	2633 (a) 2624 (b) 2635 (d)	2624	480
Abut 6	Class 200 Alt "W"	300 kips	0	2666 (a) 2660 (d)	2660	500

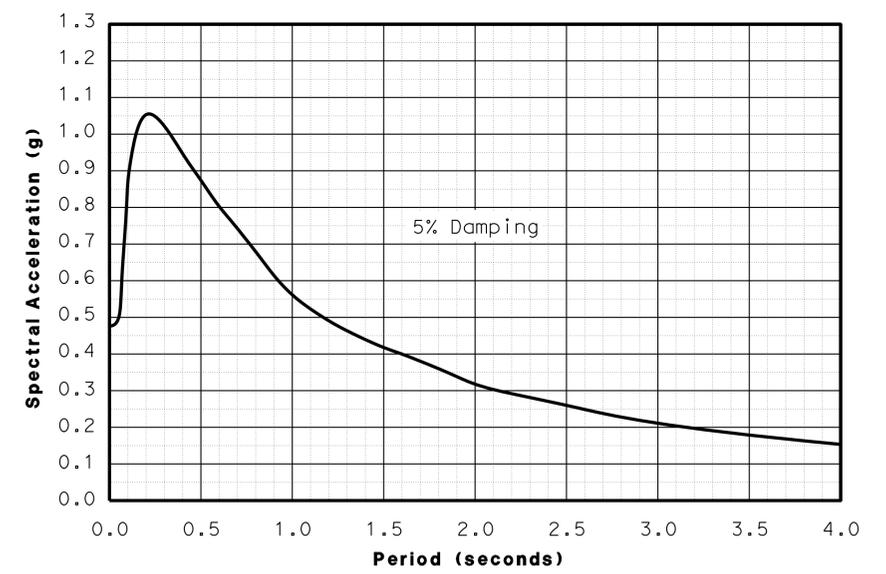
NOTE: All design tip elevations are controlled by the following demands:
 (a) Compression (b) tension (c) settlement (d) lateral

INDEX TO PLANS

Sheet No.	Title
1.	GENERAL PLAN
2.	INDEX TO PLANS
3.	DECK CONTOURS
4.	FOUNDATION PLAN NO. 1
5.	FOUNDATION PLAN NO. 2
6.	ABUTMENT LAYOUT
7.	ABUTMENT DETAILS NO. 1
8.	ABUTMENT DETAILS NO. 2
9.	PIER LAYOUT
10.	PIER DETAILS NO. 1
11.	PIER DETAILS NO. 2
12.	PIER DETAILS NO. 3
13.	TYPICAL SECTION
14.	GIRDER LAYOUT
15.	PC/PS BULB-TEE GIRDER (HARPED STRANDS)
16.	GIRDER DETAILS
17.	GIRDER REINFORCEMENT
18.	STRUCTURE APPROACH TYPE N(30S) MOD
19.	APPROACH DRAINAGE DETAILS
20.	STRUCTURE DRAINAGE LAYOUT
21.	STRUCTURE DRAINAGE DETAILS
22.	JOINT SEAL ASSEMBLY MAXIMUM MOVEMENT RATING = 4"
23.	SIDEWALK COVER PLATE
24.	LOG OF TEST BORINGS 1 OF 11
25.	LOG OF TEST BORINGS 2 OF 11
26.	LOG OF TEST BORINGS 3 OF 11
27.	LOG OF TEST BORINGS 4 OF 11
28.	LOG OF TEST BORINGS 5 OF 11
29.	LOG OF TEST BORINGS 6 OF 11
30.	LOG OF TEST BORINGS 7 OF 11
31.	LOG OF TEST BORINGS 8 OF 11
32.	LOG OF TEST BORINGS 9 OF 11
33.	LOG OF TEST BORINGS 10 OF 11
34.	LOG OF TEST BORINGS 11 OF 11

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 the 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: $V_{S30} = 1030$ ft/s
 Moment Magnitude: $M_{max} = 6.5$
 Peak Ground Acceleration = 0.49g

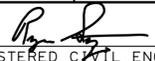


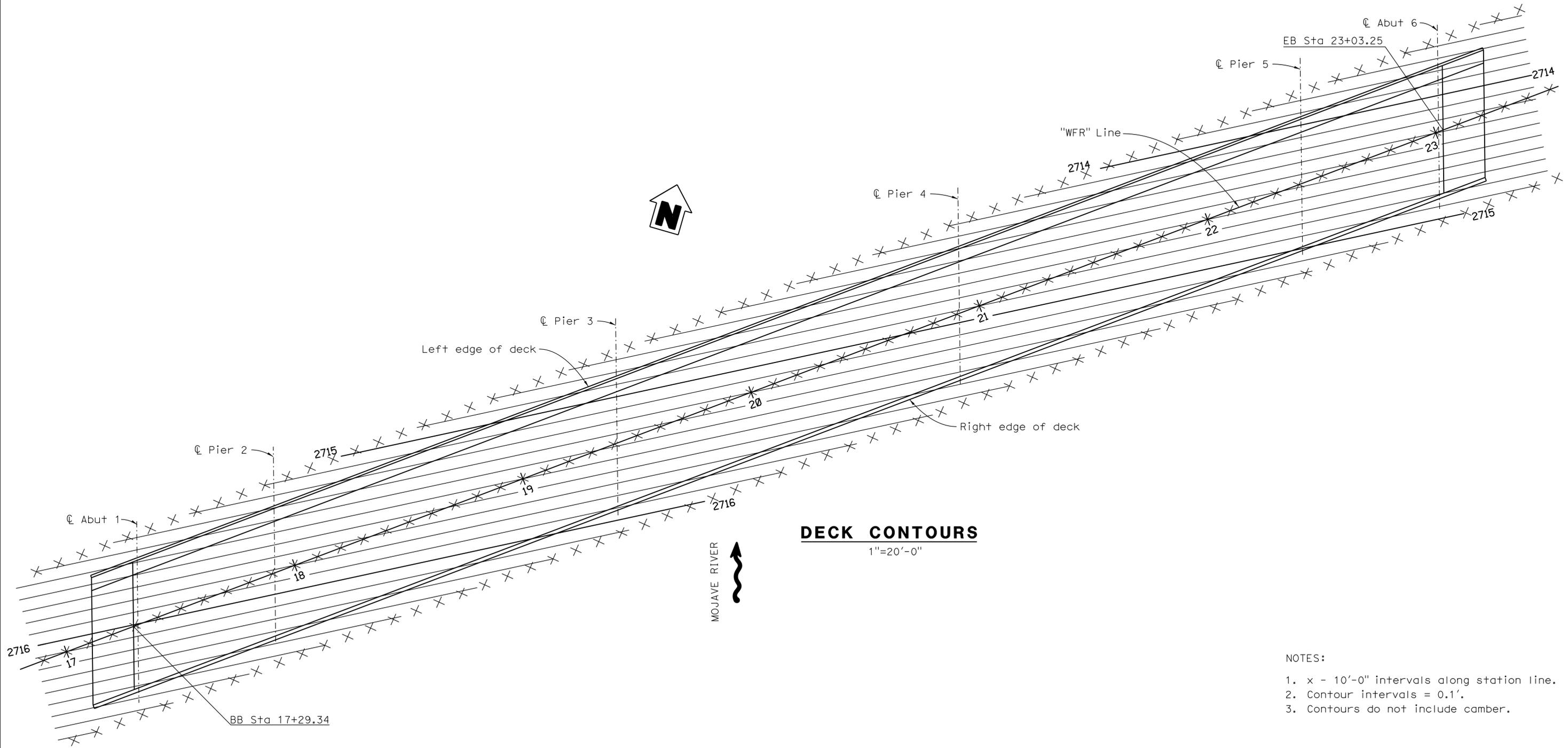
- REINFORCED CONCRETE: $f_y = 60$ ksi
 $f'_c = 3600$ psi, unless otherwise noted
 $n = 8$
- STRUCTURAL STEEL::
 Steel Pipe Piles: Astm A252 Grade 3
- PRESTRESSED CONCRETE: See "Prestressing Notes" on "PC/PS BULB-TEE GIRDER (HARPED STRANDS)" sheet.

DESIGN BY R. Stiltz CHECKED F. Chen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 54C0661	MOJAVE RIVER BRIDGE	
			POST MILE 43.93		
			STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	UNIT: 3589 PROJECT NUMBER & PHASE: 08140000861	CONTRACT NO.: 08-3555V1

USERNAME => s124486 DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 11:42

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15	42.5/46.0	645	824


 REGISTERED CIVIL ENGINEER DATE 11-07-13
 PLANS APPROVAL DATE 6-23-14
 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"=20'-0"

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

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY J. Szabo	CHECKED F. Chen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	54C-0661	MOJAVE RIVER BRIDGE DECK CONTOURS	
	DETAILS	BY G. Hallstrom	CHECKED F. Chen			POST MILE	43.93		
	QUANTITIES	BY Y. Tang	CHECKED F. Chen						
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3	CU 08 EA 3555V1	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 03-18-08 4-11-08 2-08-10 12-14-12 10-01-13	SHEET 3 OF 34

USERNAME => s124496 DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 11:42

SURVEY CONTROL
 PRHV438
 Fnd 1" IP w/ CDOT Plastic Plug
 53.69 FT Rt. @ R+e 15
 Sta. 185+41.29
 N 2,022,651.85
 E 6,773,779.43
 Elev. = 2717.56
 PRHV440 (Shown on Plan No.2)
 Fnd CDOT Brass Disc in Conc.
 51.12 FT Lt. @ R+e 15
 Sta. 193+10.56
 N 2,023,195.81
 E 6,774,333.39
 Elev. = 2713.18

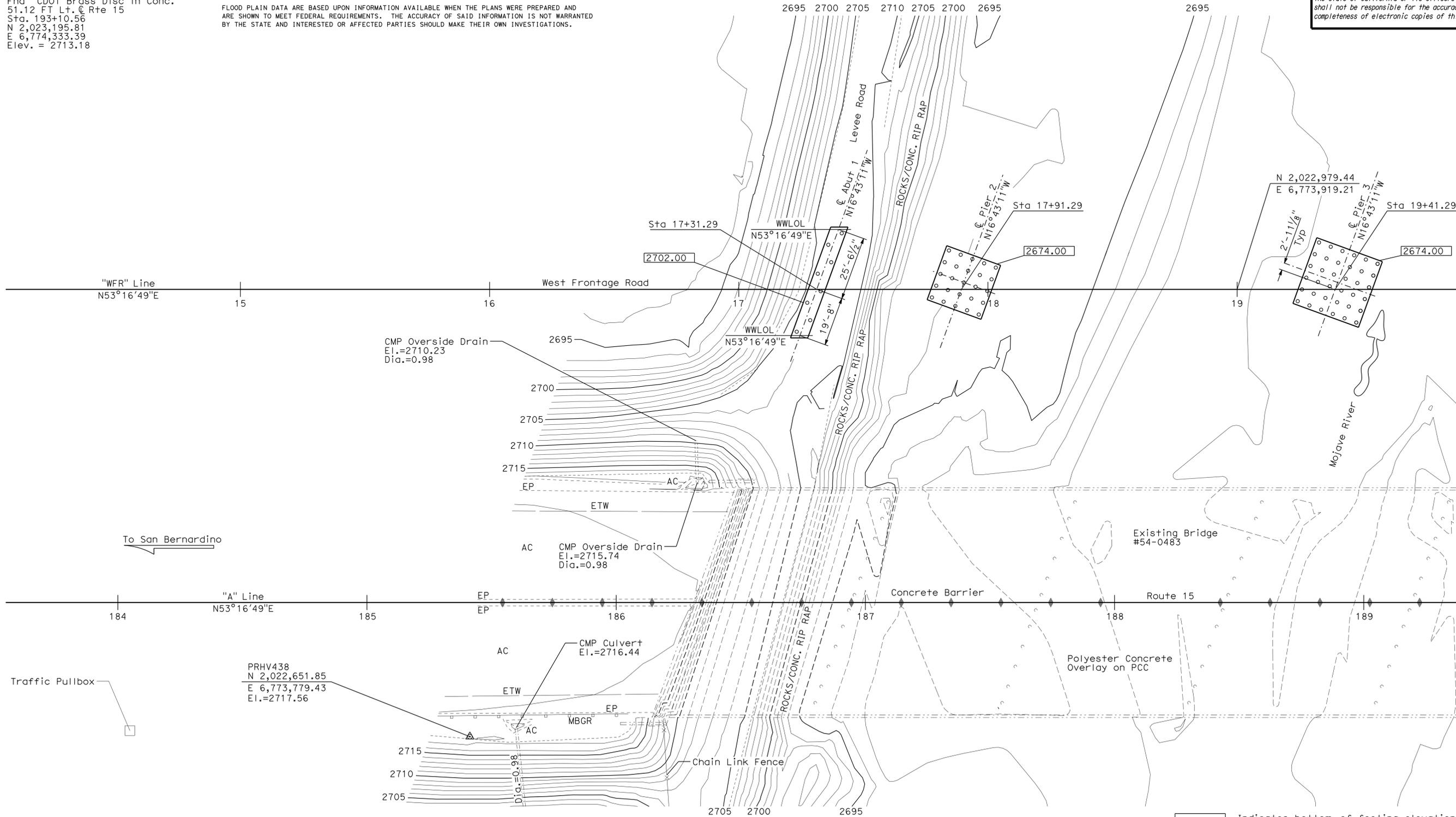
HYDROLOGIC / HYDRAULIC DATA SUMMARY
 DRAINAGE AREA: 513.00 SQUARE MILES

	DESIGN FLOOD	BASE FLOOD
FREQUENCY (YEARS)	50	100
DISCHARGE (CUBIC FEET PER SECOND)	25500.00	30900.00
WATER SURFACE ELEV. (FEET)	2699.50	2700.30

FLOOD PLAIN DATA ARE BASED UPON INFORMATION AVAILABLE WHEN THE PLANS WERE PREPARED AND ARE SHOWN TO MEET FEDERAL REQUIREMENTS. THE ACCURACY OF SAID INFORMATION IS NOT WARRANTED BY THE STATE AND INTERESTED OR AFFECTED PARTIES SHOULD MAKE THEIR OWN INVESTIGATIONS.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15	42.5/46.0	646	824

11-07-13
 REGISTERED CIVIL ENGINEER DATE
 6-23-14
 PLANS APPROVAL DATE
 RYAN STILTZ
 No. C65738
 Exp. 9/30/15
 CIVIL
 STATE OF CALIFORNIA
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PRELIMINARY INVESTIGATION SECTION

SCALE	VERT. DATUM	NGVD29	PHOTOGRAMMETRY AS OF:	DESIGN	BY	R. Stiltz	CHECKED	F. Chen		
1"=20'	HORZ. DATUM	NAD83	SURVEYED	BY	Dist. T. Gillett	2008	CHECKED	BY	T. Gillett	10/2008
ALIGNMENT TIES	Dist. Traverse Sheet	DRAFTED	BY	J. Martinez	10/2008	CHECKED	BY	T. Zolnikova	10/2008	

DETAILS	BY	G. Hallstrom	CHECKED	F. Chen
QUANTITIES	BY	Y. Tang	CHECKED	F. Chen

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54C-0661
POST MILE	43.93

MOJAVE RIVER BRIDGE
FOUNDATION PLAN NO. 1

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 10/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

CU 08
 EA 3555V1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES
11/24/08 06/14/09 08/24/09 10/29/09 5-25-12 12-11-12 04-24-13 10-29-13

SHEET 4 OF 34

USERNAME => s124496 DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 11:42

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15	42.5/46.0	647	824

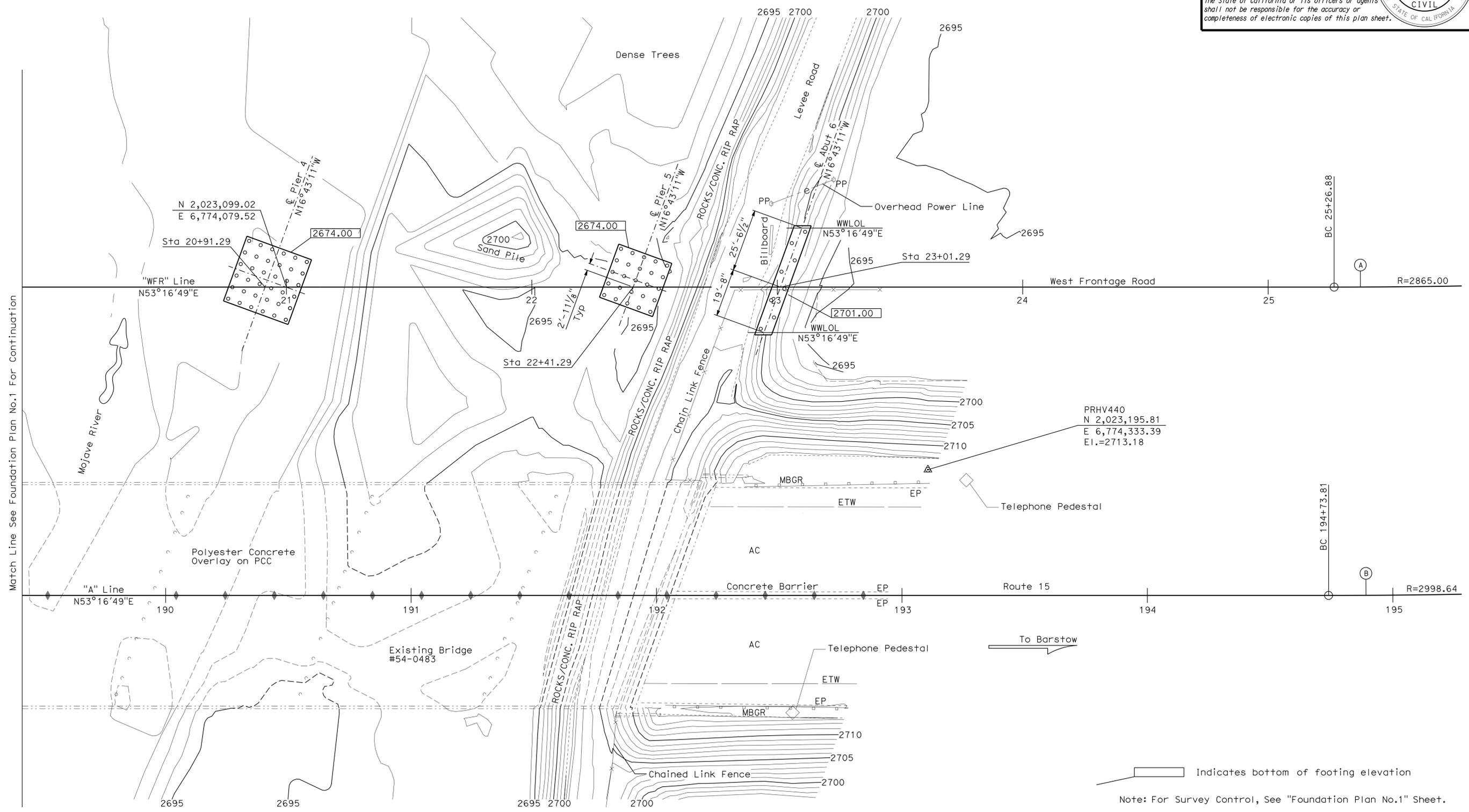
REGISTERED CIVIL ENGINEER	DATE
<i>R. Stiltz</i>	11-07-13
PLANS APPROVAL DATE	
6-23-14	

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

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CURVE DATA

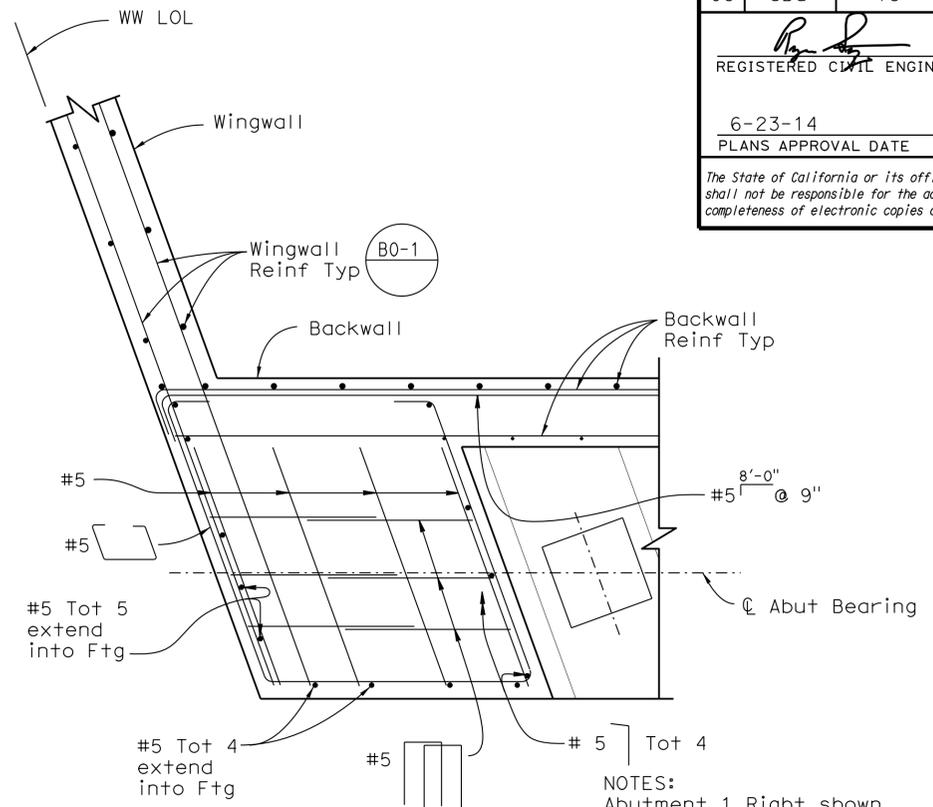
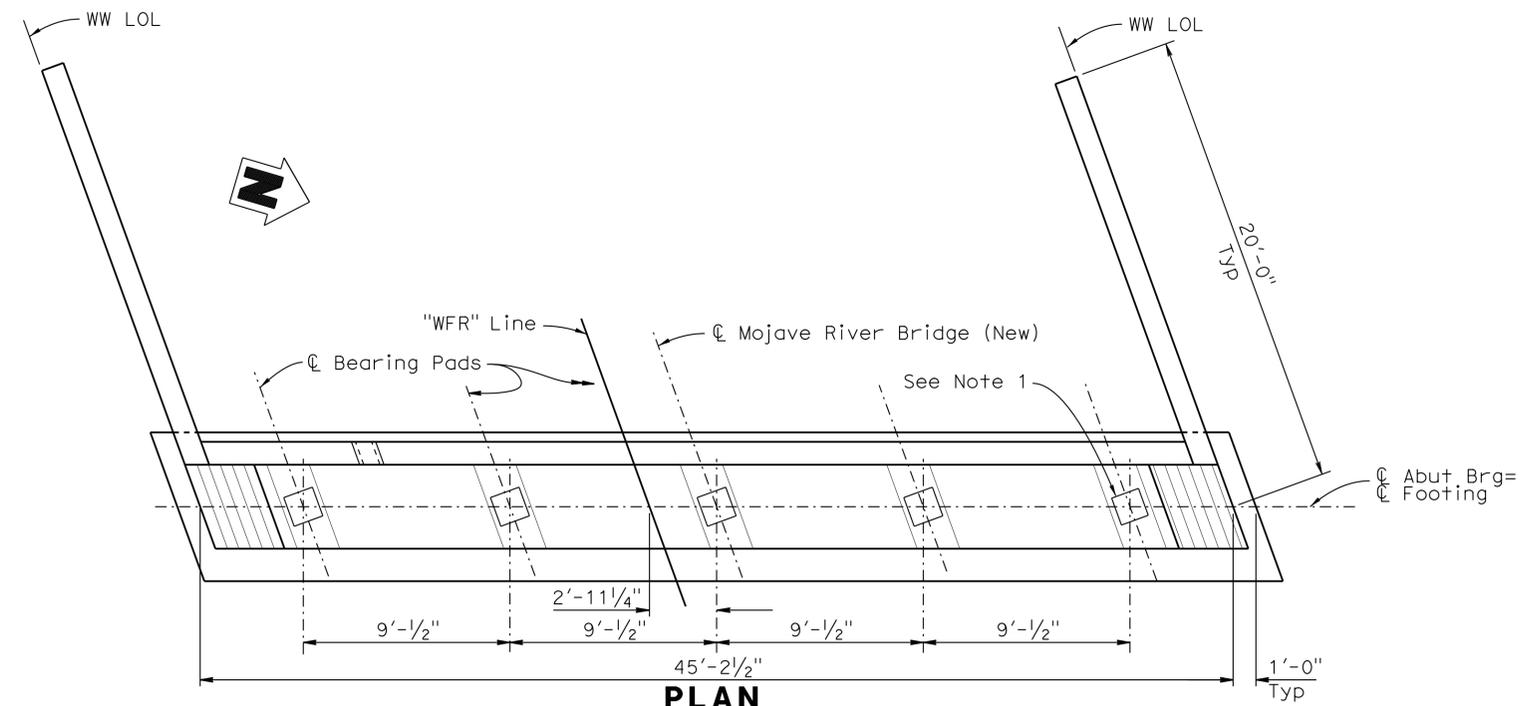
No.	R	Δ	T	L
(A)	2865.00	30°26'44"	779.63	1522.39
(B)	2998.64	30°26'44"	815.99	1593.41



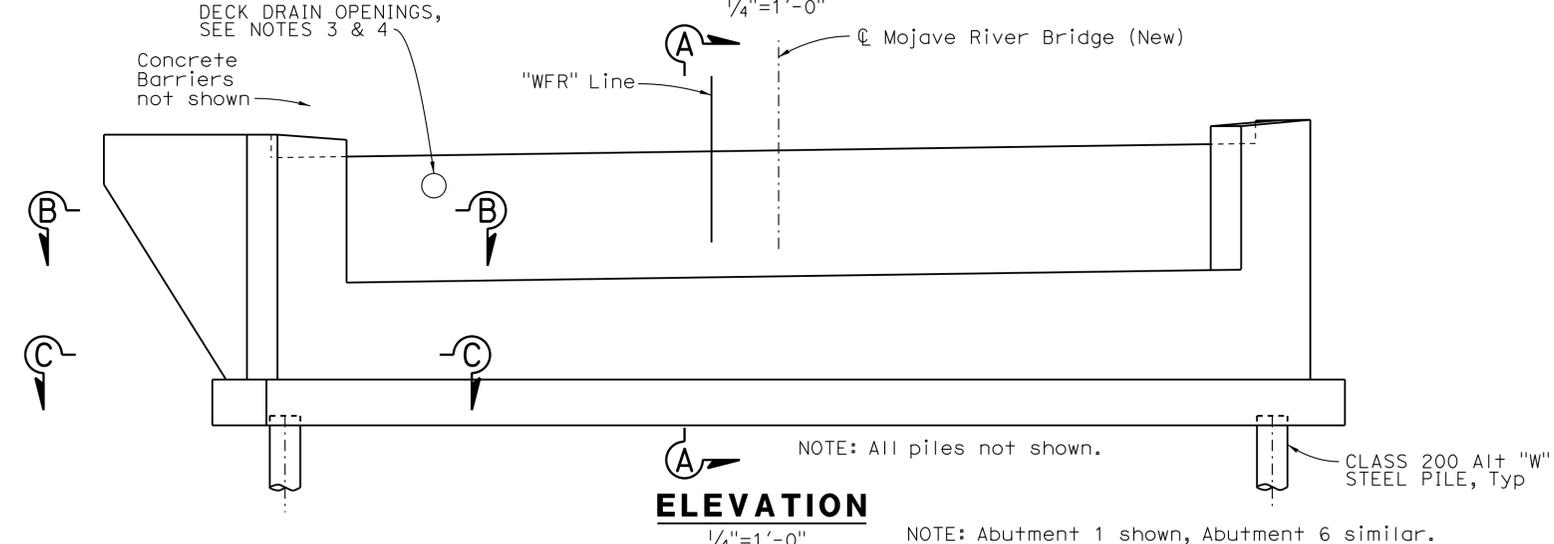
Indicates bottom of footing elevation
Note: For Survey Control, See "Foundation Plan No.1" Sheet.

PRELIMINARY INVESTIGATION SECTION				DESIGN	BY R. Stiltz	CHECKED F. Chen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	54C-0661	MOJAVE RIVER BRIDGE FOUNDATION PLAN NO. 2	
SCALE	VERT. DATUM	NGVD29	PHOTOGRAMMETRY	AS OF: X	DETAILS	BY G. Hallstrom			CHECKED F. Chen	POST MILE		43.93
1"=20'	HORZ. DATUM	NAD83	SURVEYED	BY Dist. T. Gillett 2008	CHECKED	BY T. Gillett 10/2008			CHECKED F. Chen			
ALIGNMENT TIES	Dist. Traverse Sheet		DRAFTED	BY J. Martinez 10/2008	CHECKED	BY T. Zolnikova 10/2008			CHECKED F. Chen			
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 10/25/05)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				CU 08	EA 3555V1	DISREGARD PRINTS BEARING EARLIER REVISION DATES		
								0 1 2 3		REVISION DATES		
								FILE => 54c0661efdp105.dgn		SHEET 5 OF 34		

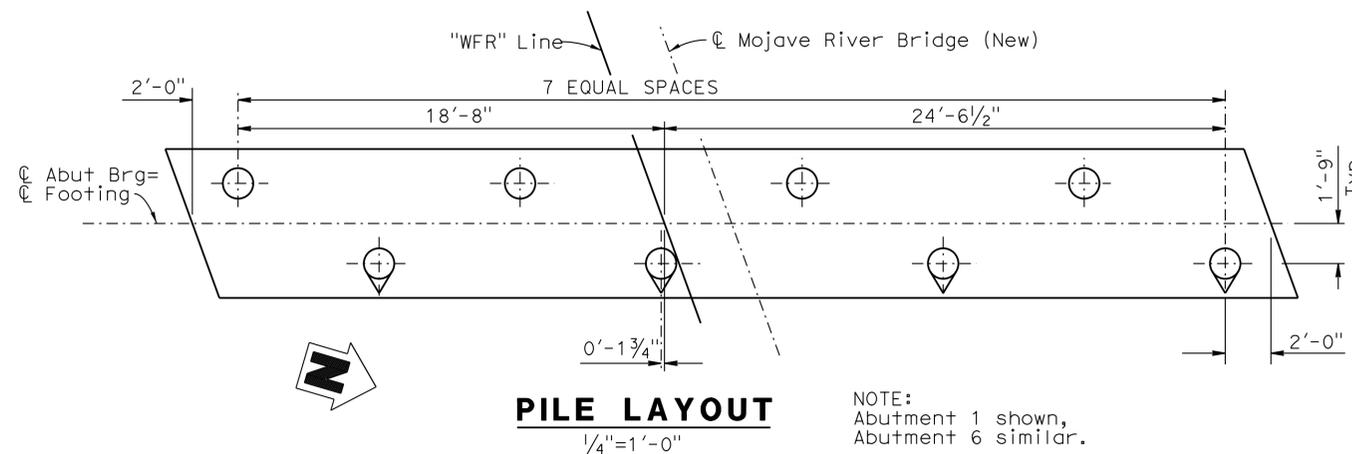
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	648	824
			11-07-13	DATE	
			6-23-14	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER RYAN STILTZ No. C65738 Exp. 9/30/15 CIVIL STATE OF CALIFORNIA		



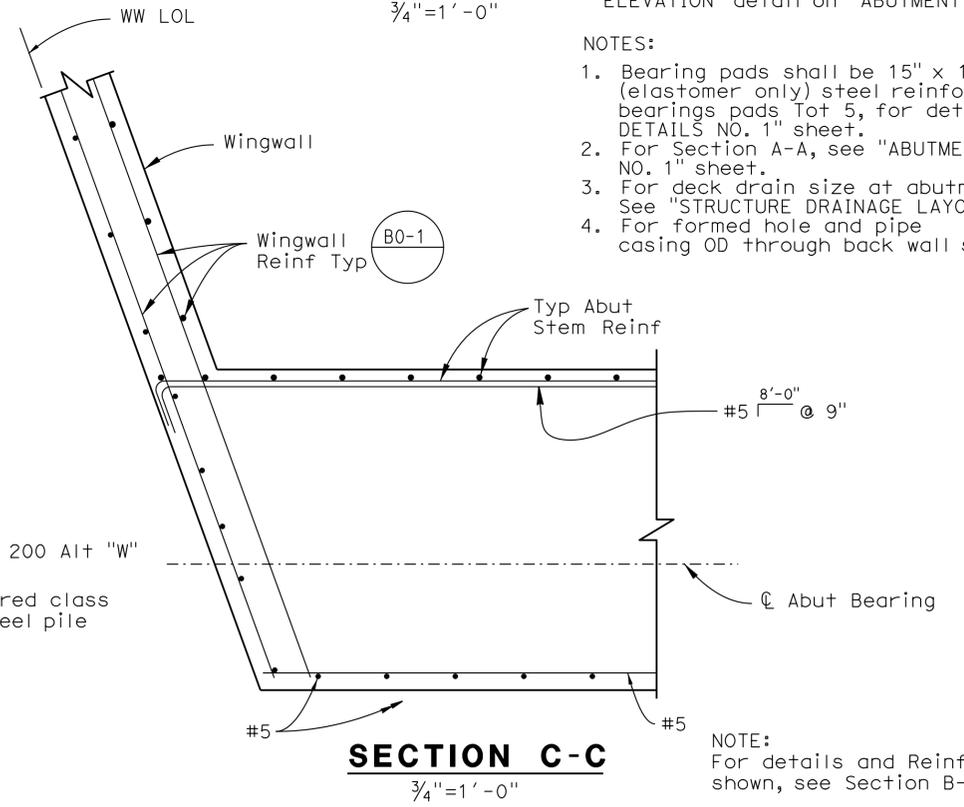
NOTES:
 Abutment 1 Right shown, Abutment 1 Left similar.
 For Shear Key details not shown, see "PART ELEVATION" detail on "ABUTMENT DETAILS NO. 1" sheet.



NOTES:
 1. Bearing pads shall be 15" x 15" x 2" (elastomer only) steel reinforced elastomeric bearings pads Tot 5, for details see "ABUTMENT DETAILS NO. 1" sheet.
 2. For Section A-A, see "ABUTMENT DETAILS NO. 1" sheet.
 3. For deck drain size at abutment and elsewhere, see "STRUCTURE DRAINAGE LAYOUT" sheet.
 4. For formed hole and pipe casing OD through back wall see B7-8

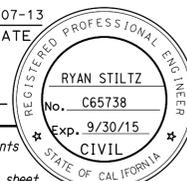


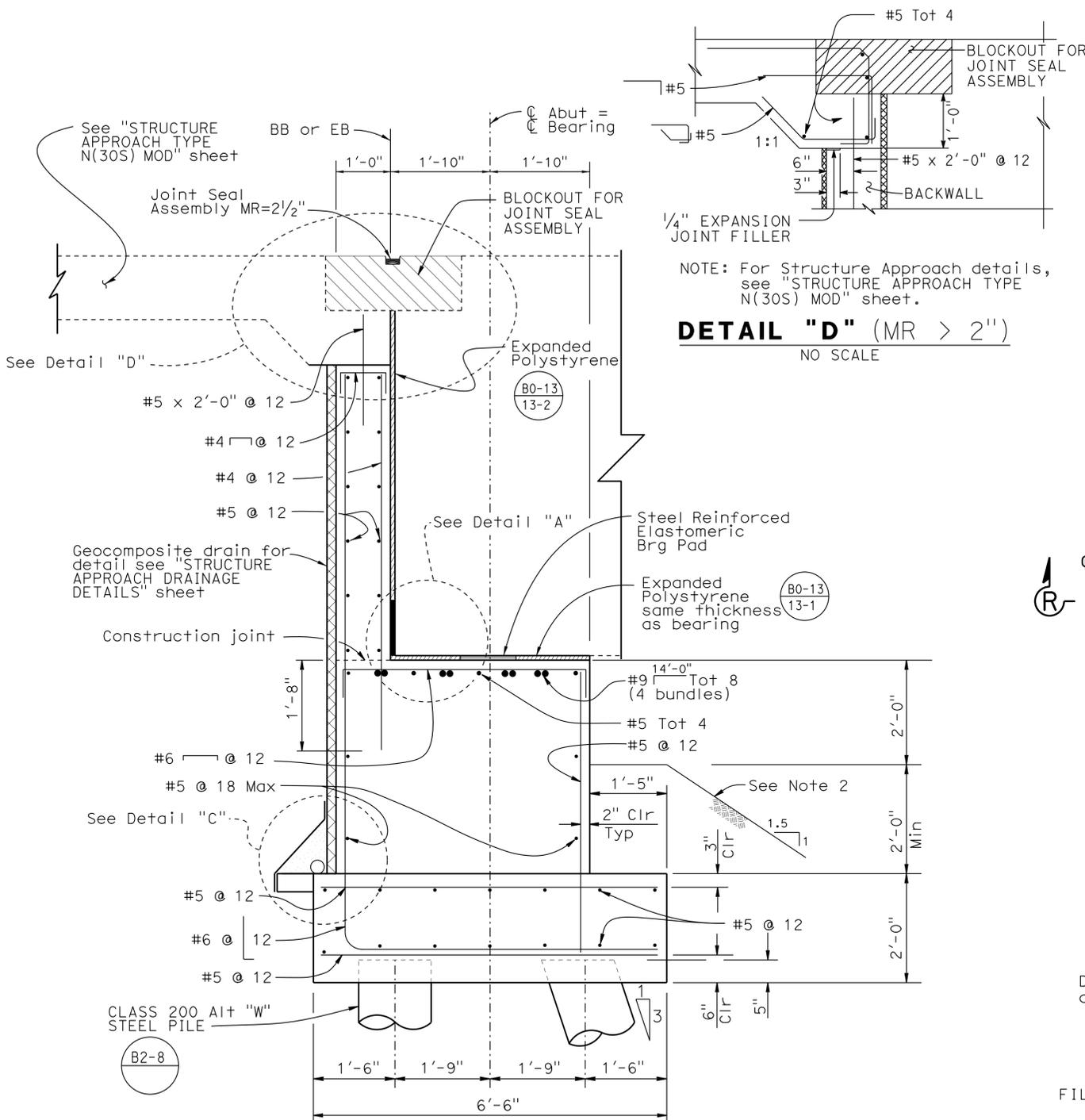
LEGEND:
 ⊕ Denotes class 200 Alt "W" steel pile
 ⊕ Denotes battered class 200 Alt "W" steel pile



NOTE:
 For details and Reinf not shown, see Section B-B

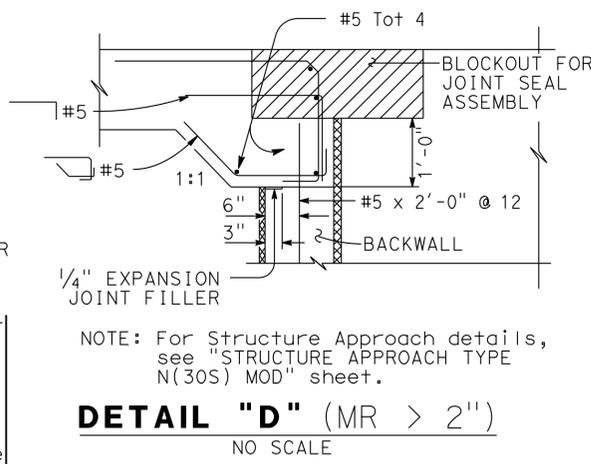
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY R. Stiltz	CHECKED F. Chen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	54C0661	MOJAVE RIVER BRIDGE ABUTMENT LAYOUT
	DETAILS	BY Y. Tang	CHECKED F. Chen			POST MILE	43.93	
	QUANTITIES	BY Y. Tang	CHECKED F. Chen			UNIT: 3589	PROJECT NUMBER & PHASE: 08140000861	
REVISION DATES: 8-18-12, 6-05-13, 10-29-13, 4-25-14								SHEET 6 OF 34

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	649	824
			11-07-13	DATE	
6-23-14			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>					

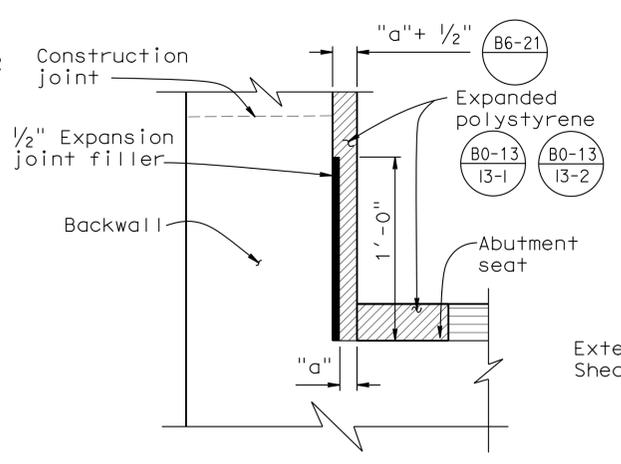


SECTION A-A
3/4"=1'-0"

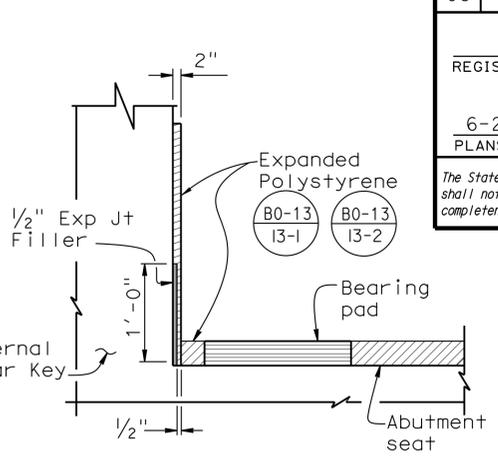
- NOTES:**
- For location of "SECTION A-A", see "ABUTMENT LAYOUT" sheet.
 - For details on Rock Slope Protection, see "Roadway Plans".



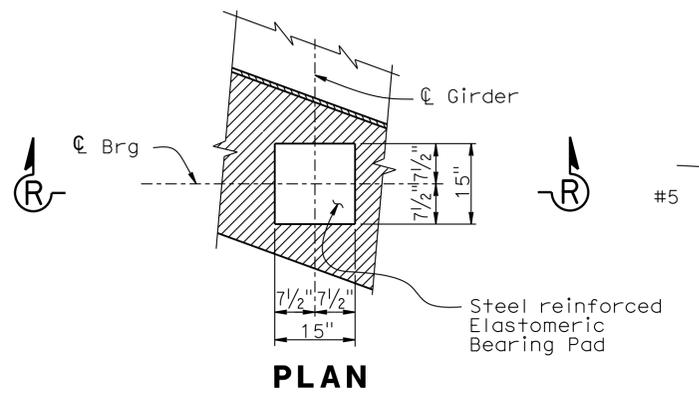
DETAIL "D" (MR > 2')
NO SCALE



DETAIL "A"
No Scale

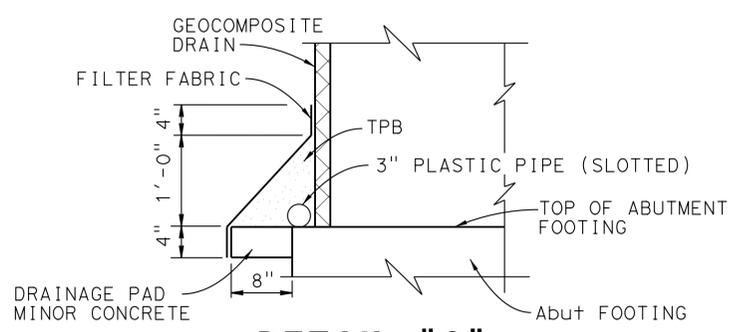


DETAIL "B"
No Scale

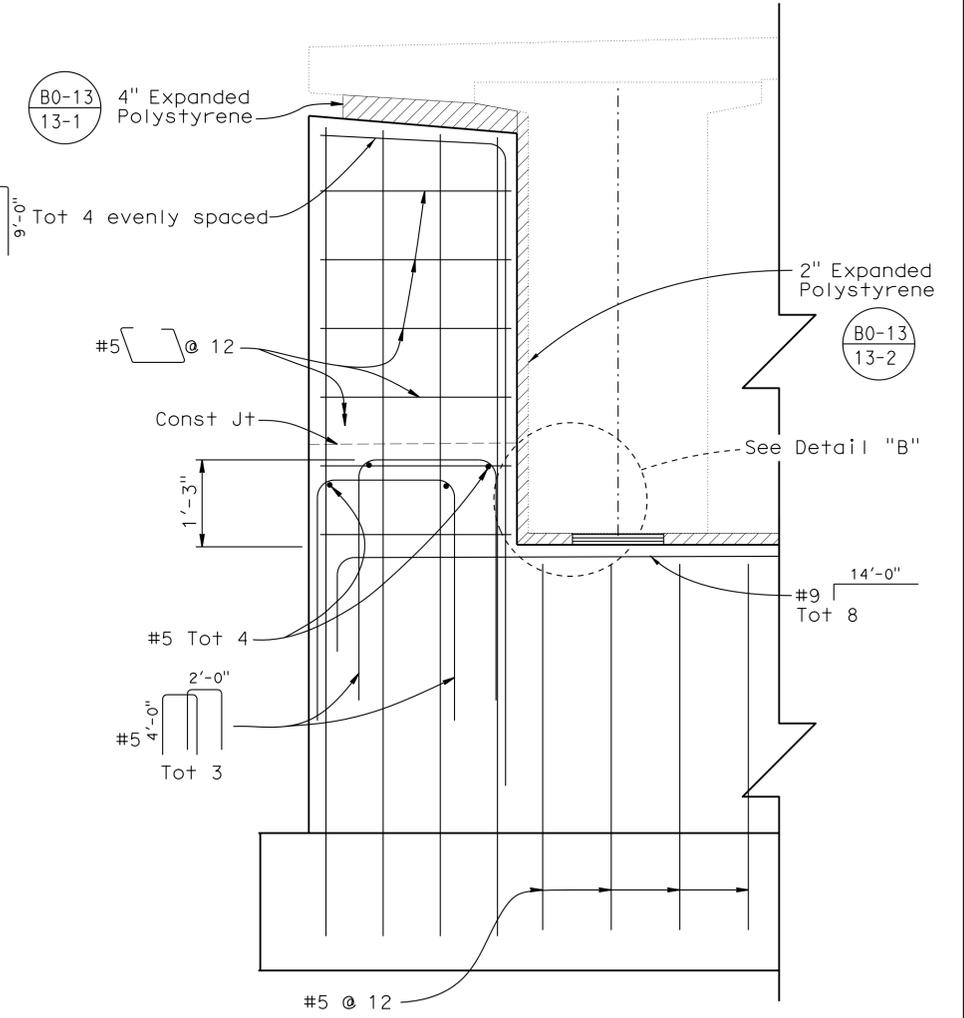


SECTION R-R
BEARING PAD DETAIL
No Scale

Details typical at all abutment bearing pads and at Bent 2 span 1 side and at bent 5 span 5 side.



DETAIL "C"
No Scale



PART ELEVATION
3/4"=1'-0"

DESIGN	BY R. Stiltz	CHECKED F. Chen
DETAILS	BY Y. Tang	CHECKED F. Chen
QUANTITIES	BY Y. Tang	CHECKED F. Chen

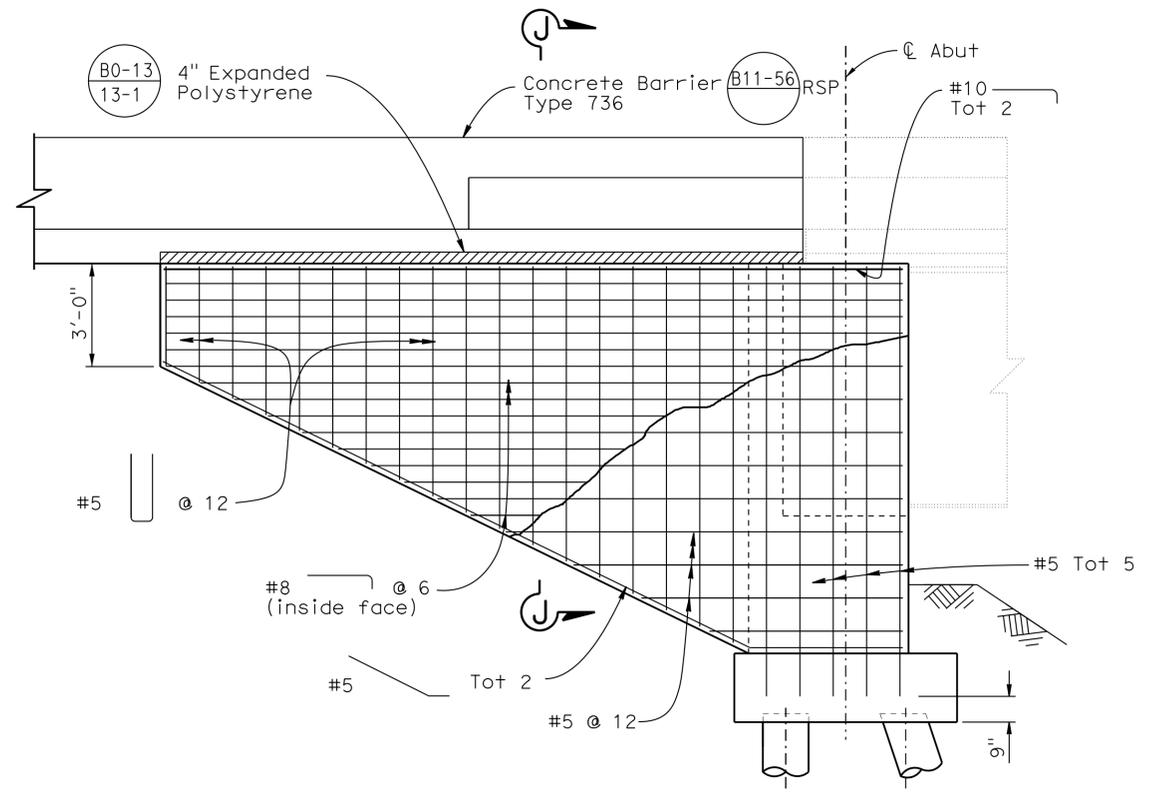
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54C0661
POST MILE	43.93

MOJAVE RIVER BRIDGE
ABUTMENT DETAILS NO. 1

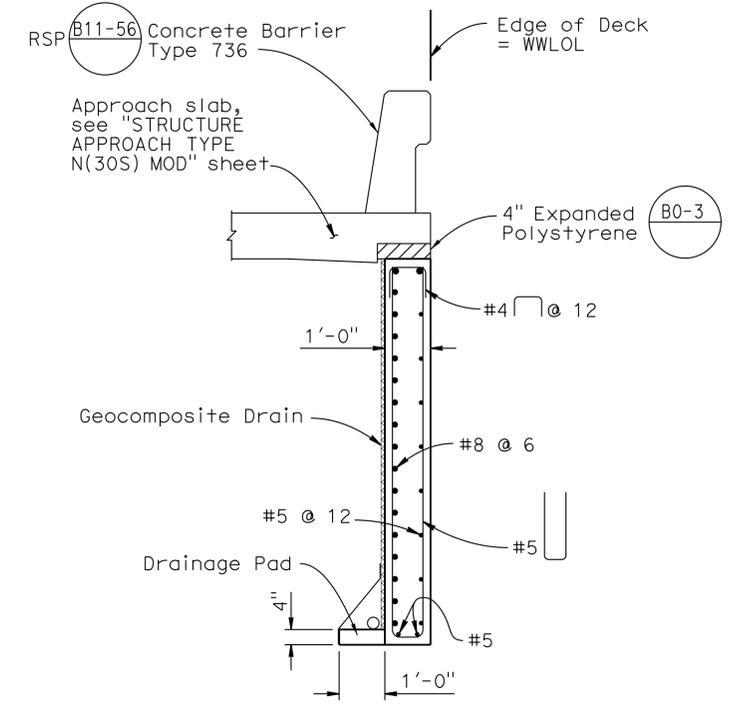
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	650	824
 REGISTERED CIVIL ENGINEER			11-07-13	DATE	
6-23-14			PLANS APPROVAL DATE		
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Abutment 1 shown, Abutment 6 similar

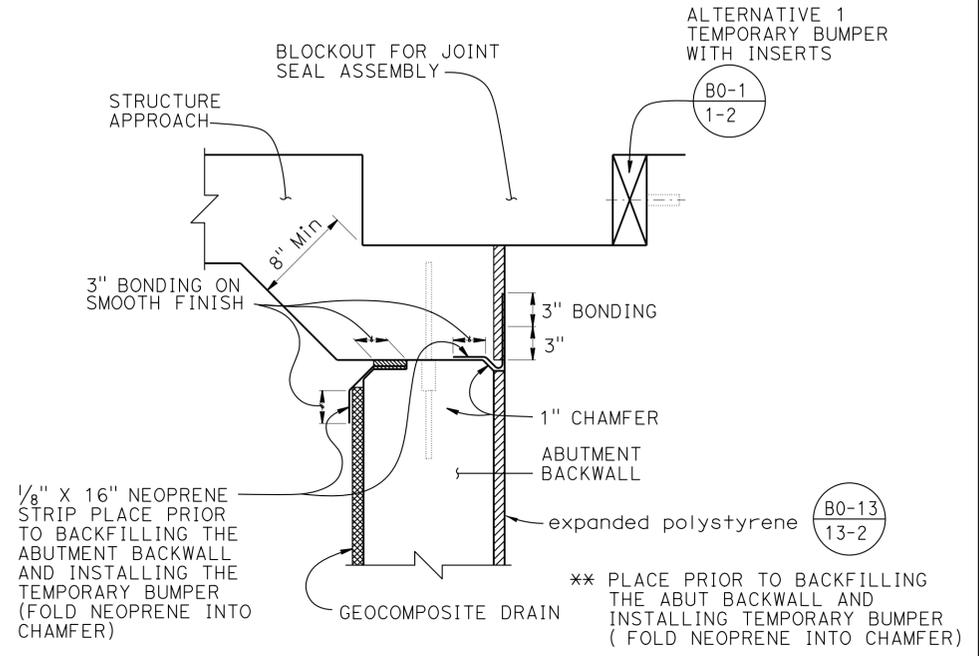
WINGWALL ELEVATION

3/8" = 1'-0"



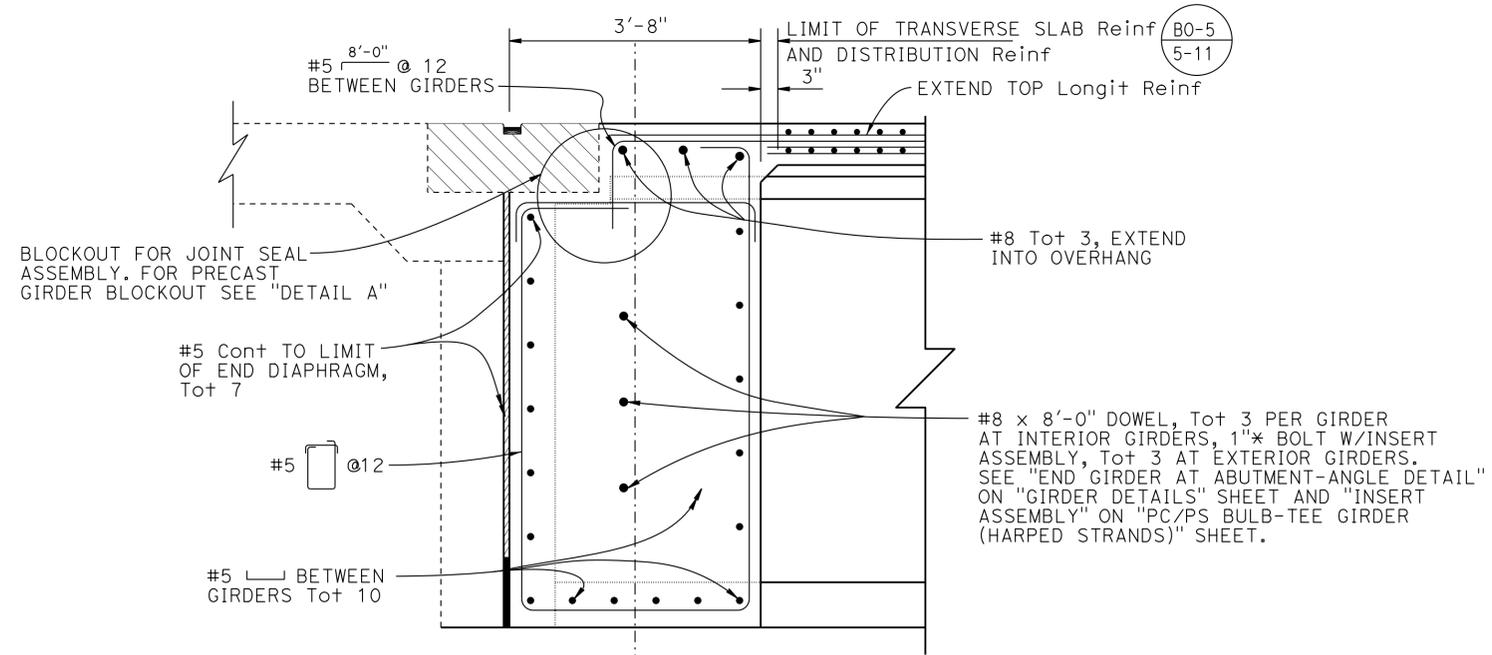
SECTION J-J

1/2" = 1'-0"



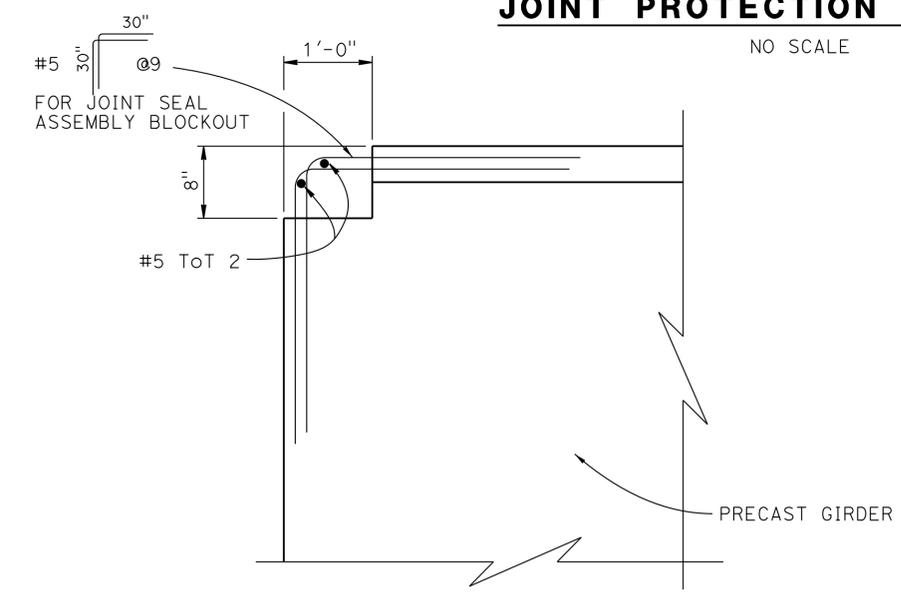
JOINT PROTECTION DETAIL

NO SCALE



END DIAPHRAGM

3/4" = 1'-0"

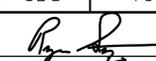
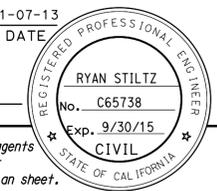


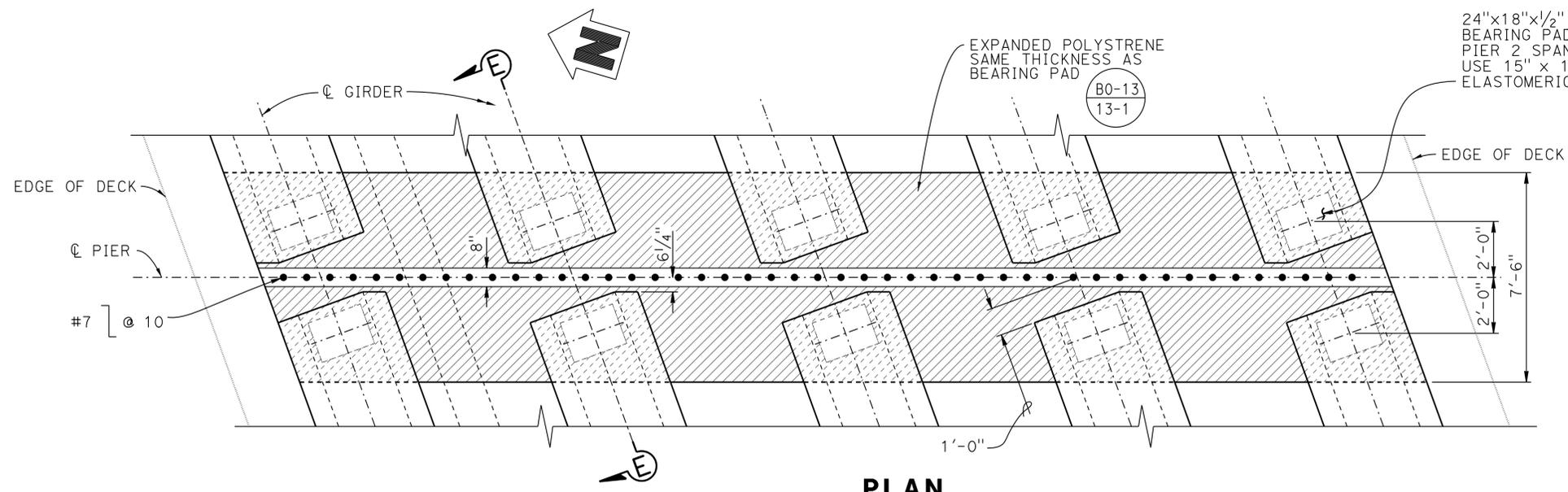
DETAIL 'A'

NO SCALE

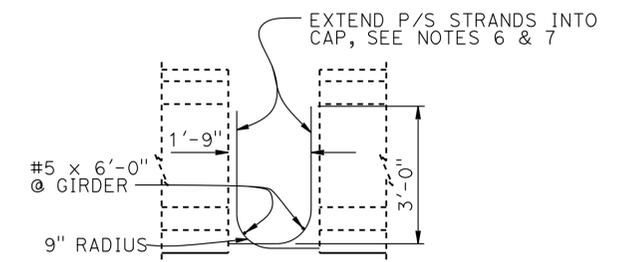
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY R. Stiltz	CHECKED F. Chen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	54C0661	MOJAVE RIVER BRIDGE ABUTMENT DETAILS NO. 2
	DETAILS	BY Y. Tang	CHECKED F. Chen			POST MILE	43.93	
	QUANTITIES	BY Y. Tang	CHECKED F. Chen			UNIT: 3589	PROJECT NUMBER & PHASE: 08140000861	

DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 11:43 USERNAME => s124496

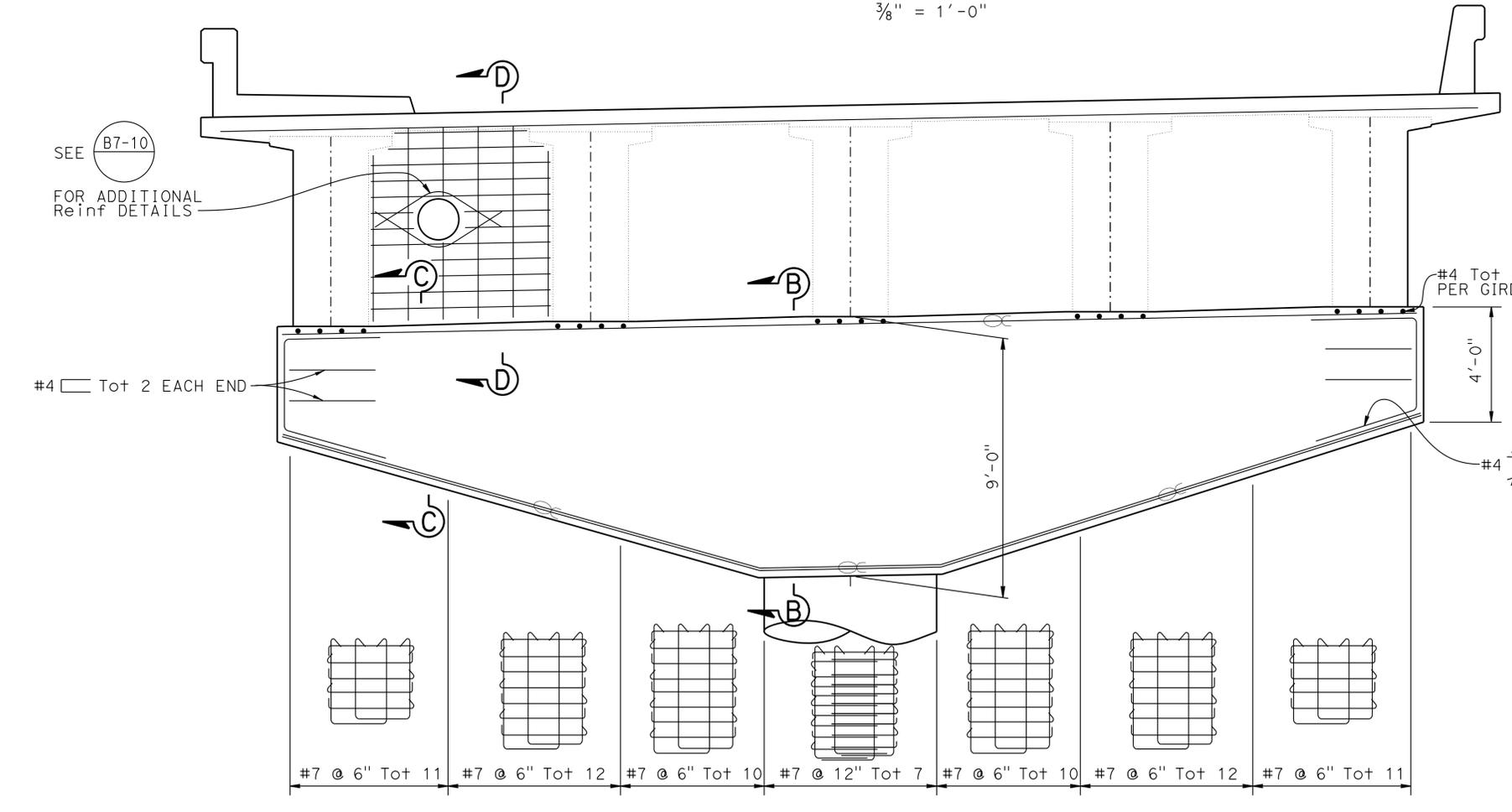
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	651	824
 REGISTERED CIVIL ENGINEER			11-07-13	DATE	
6-23-14			PLANS APPROVAL DATE		
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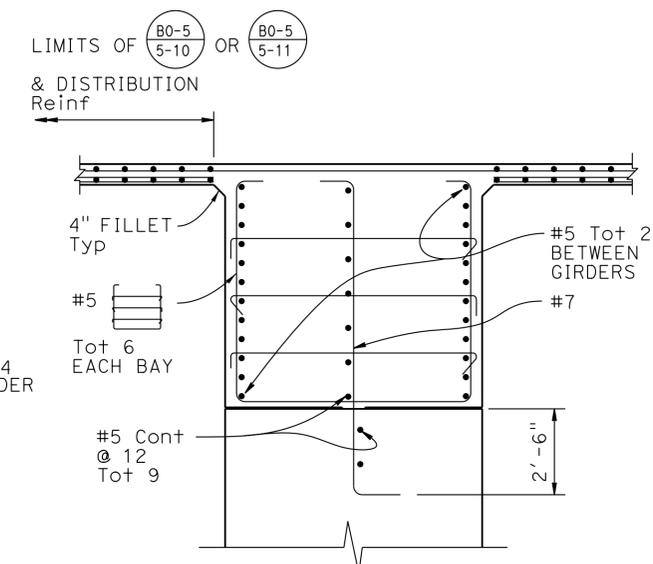
PLAN
3/8" = 1'-0"



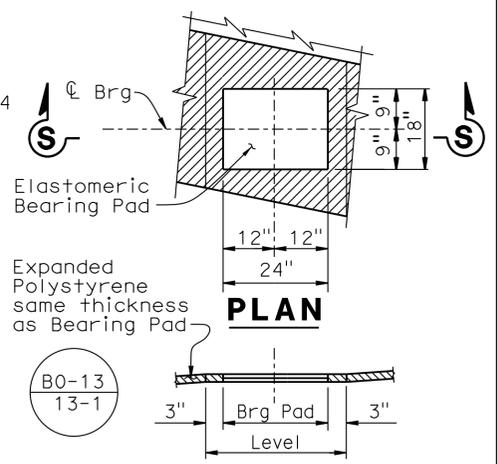
SECTION E-E
1/2" = 1'-0"



PIER ELEVATION
3/8" = 1'-0"



SECTION D-D
3/8" = 1'-0"



SECTION S-S BEARING PAD DETAIL
No Scale

- NOTES:
- For Section B-B and Section C-C, see "PIER DETAILS NO. 1" sheet.
 - Place stirrups parallel to \O girder and space along \O of Pier.
 - Place 3'-0" Hook on each end of top bars of each bundle as shown in Elevation.
 - For Column details, see "PIER DETAILS NO. 2, and NO. 3" sheets.
 - Diaphragms shall be poured no earlier than 90 days after precast girders have been cast.
 - Total of 8 bottom P/S Strands shall be extended into Pier Cap. (\O of Strands shall be within the bottom 8" of PC Girder). Strand spacing shall be a minimum of 4" both horizontally and vertically.
 - Strands extending into Cap may be either a portion of the girder pretensioned Strands or additional P/S Strands. Strands shall extend a Min of 8'-0" into P/C Girder.

DESIGN	BY R. Stiltz	CHECKED F. Chen
DETAILS	BY Y. Tang	CHECKED F. Chen
QUANTITIES	BY Y. Tang	CHECKED F. Chen

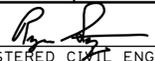
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

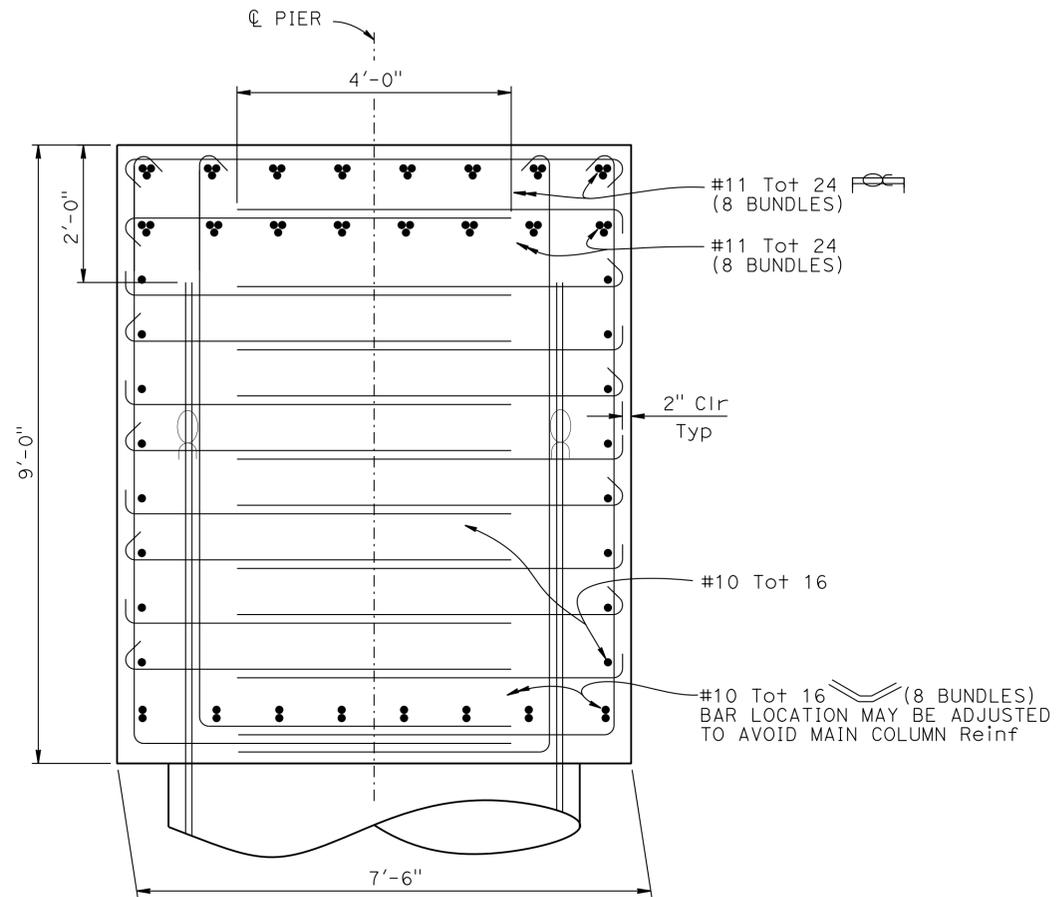
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54C0661
POST MILE	43.93

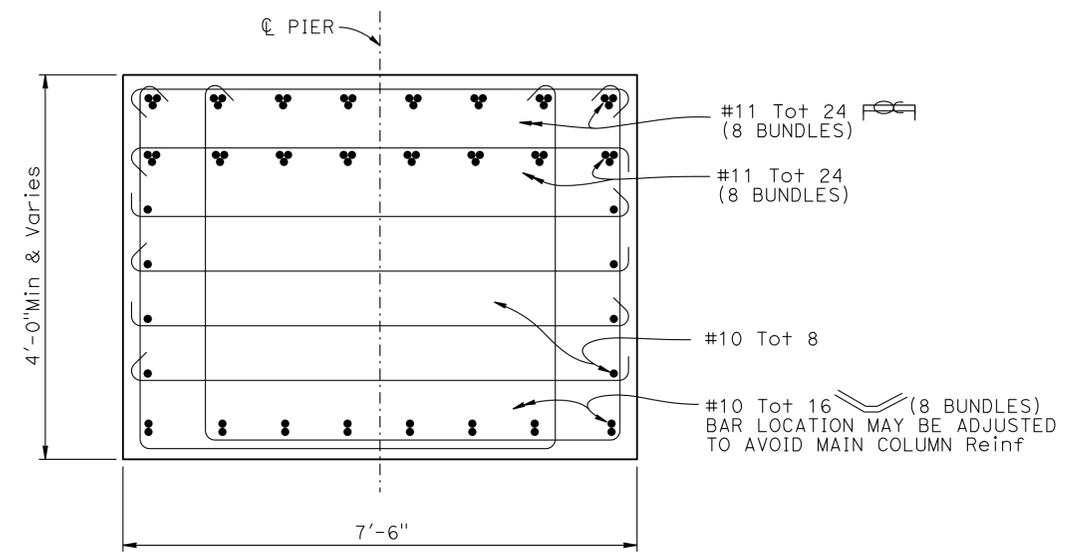
MOJAVE RIVER BRIDGE
PIER LAYOUT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	652	824


 REGISTERED CIVIL ENGINEER DATE 11-07-13
 PLANS APPROVAL DATE 6-23-14
 RYAN STILTZ
 No. C65738
 Exp. 9/30/15
 CIVIL
 STATE OF CALIFORNIA
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SECTION B-B
3/4" = 1'-0"



SECTION C-C
3/4" = 1'-0"

NOTES:

- For location of "SECTION B-B" and "SECTION C-C" see "PIER LAYOUT" sheets.
- No splices allowed in Cap Main Bars.

DESIGN	BY R. Stiltz	CHECKED F. Chen
DETAILS	BY Y. Tang	CHECKED F. Chen
QUANTITIES	BY Y. Tang	CHECKED F. Chen

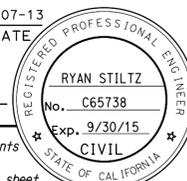
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

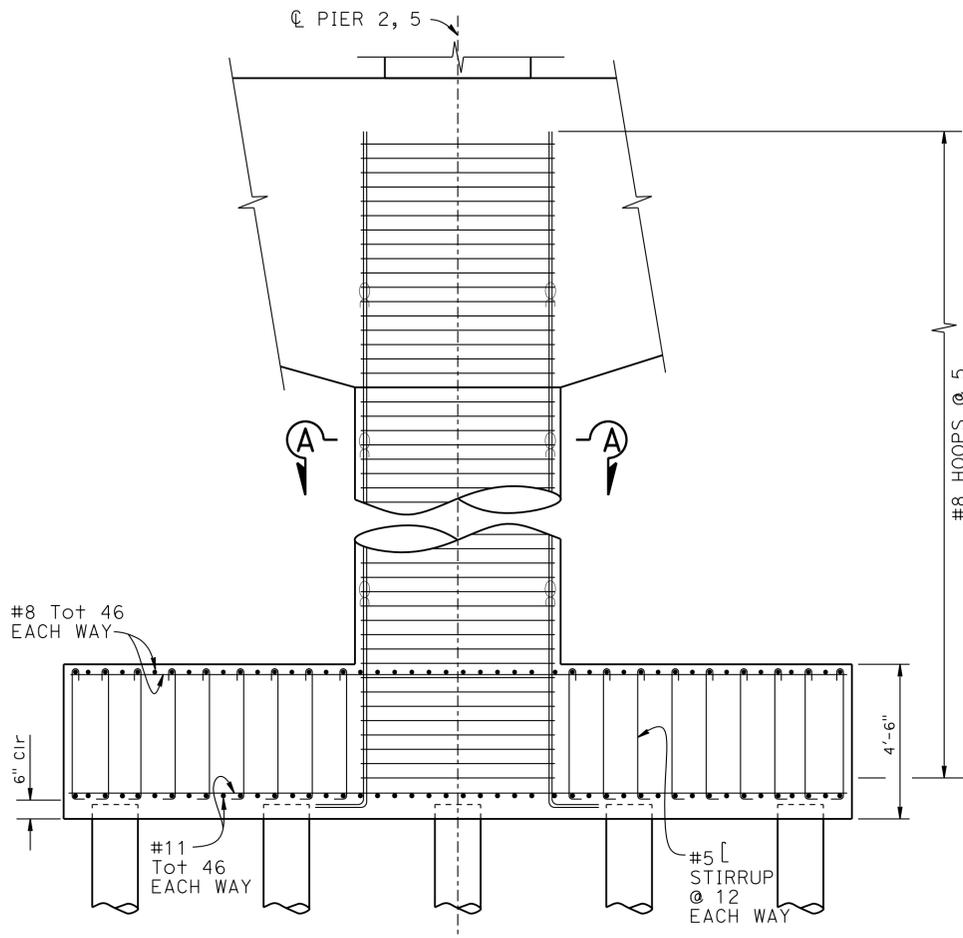
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54C0661
POST MILE	43.93

MOJAVE RIVER BRIDGE
PIER DETAILS NO. 1

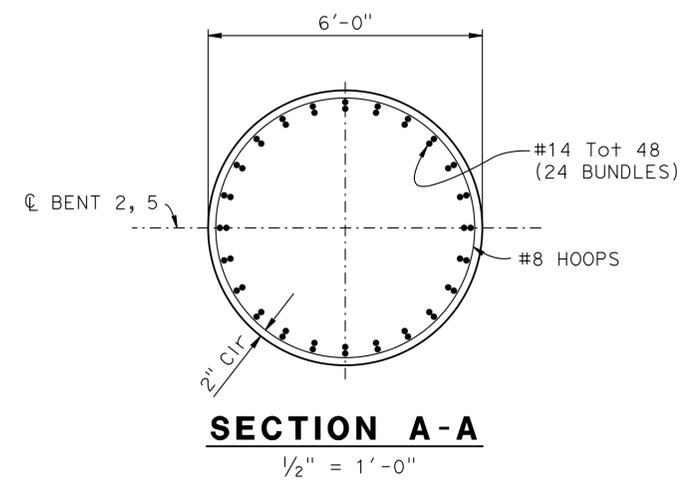
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	653	824


 REGISTERED CIVIL ENGINEER DATE 11-07-13
 6-23-14 PLANS APPROVAL DATE
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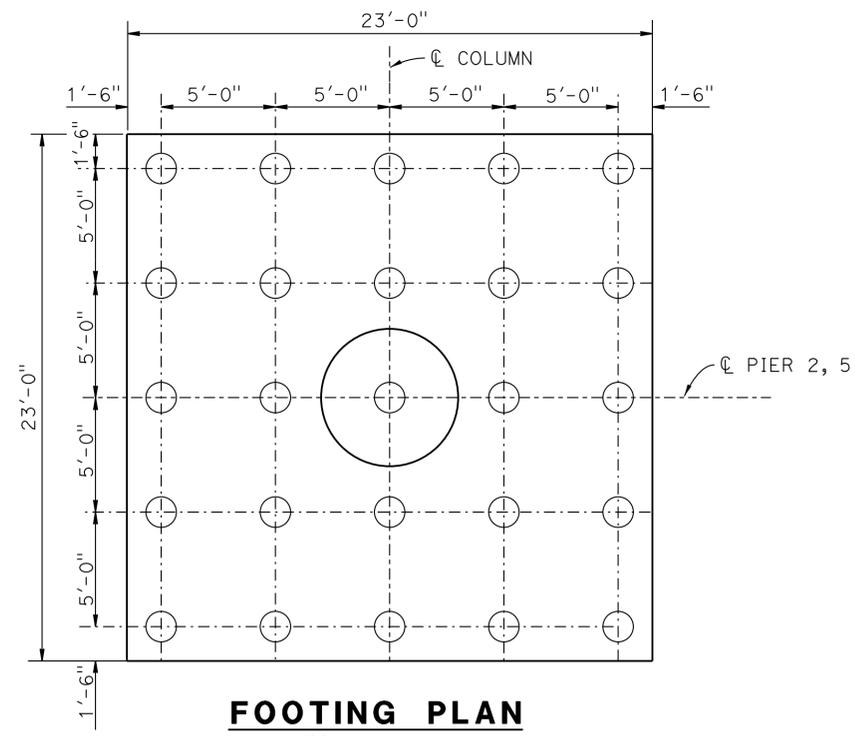


ELEVATION
3/8" = 1'-0"

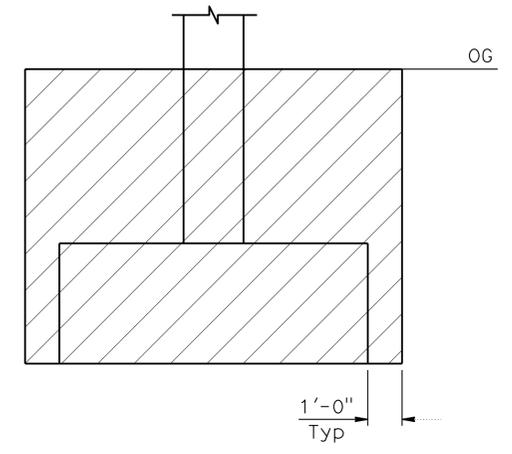
LEGEND:
∞ Indicates bundled bars



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



FOOTING PLAN
1/4" = 1'-0"



LIMITS AND PAYMENT FOR TYPE D EXCAVATION

NO SCALE
(Typical Piers 2, 3, 4 & 5)

NOTE: Piles not shown

 Structure Excavation, Type D

NOTES:

1. All hoops are "Ultimate" butt splices continuous.
2. Only staggered "Ultimate" butt splices are allowed in main column reinforcing.
3. Alternate cut-off lengths of main column reinforcement.
4. No splices allowed in main column reinforcing.

DESIGN	BY R. Stiltz	CHECKED F. Chen
DETAILS	BY Y. Tang	CHECKED F. Chen
QUANTITIES	BY Y. Tang	CHECKED F. Chen

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

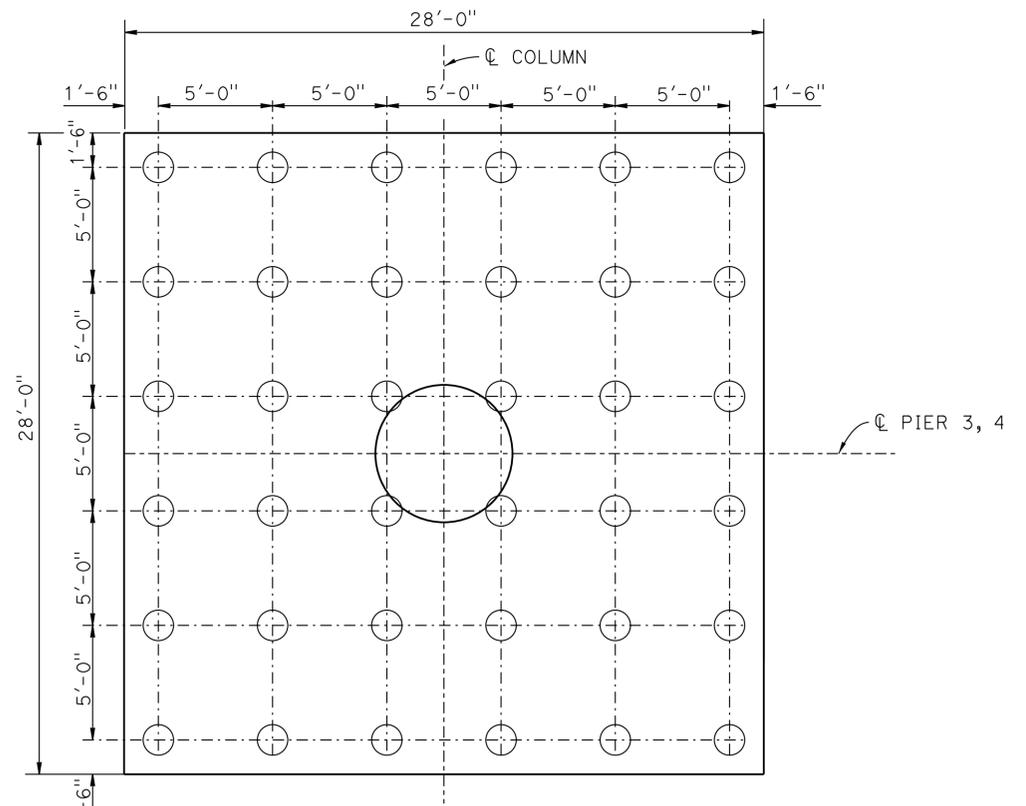
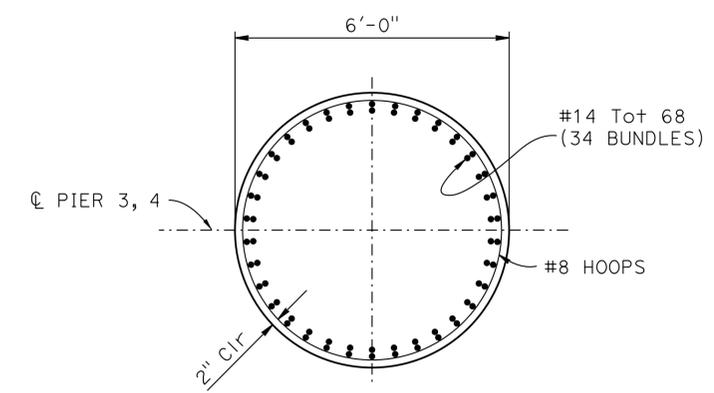
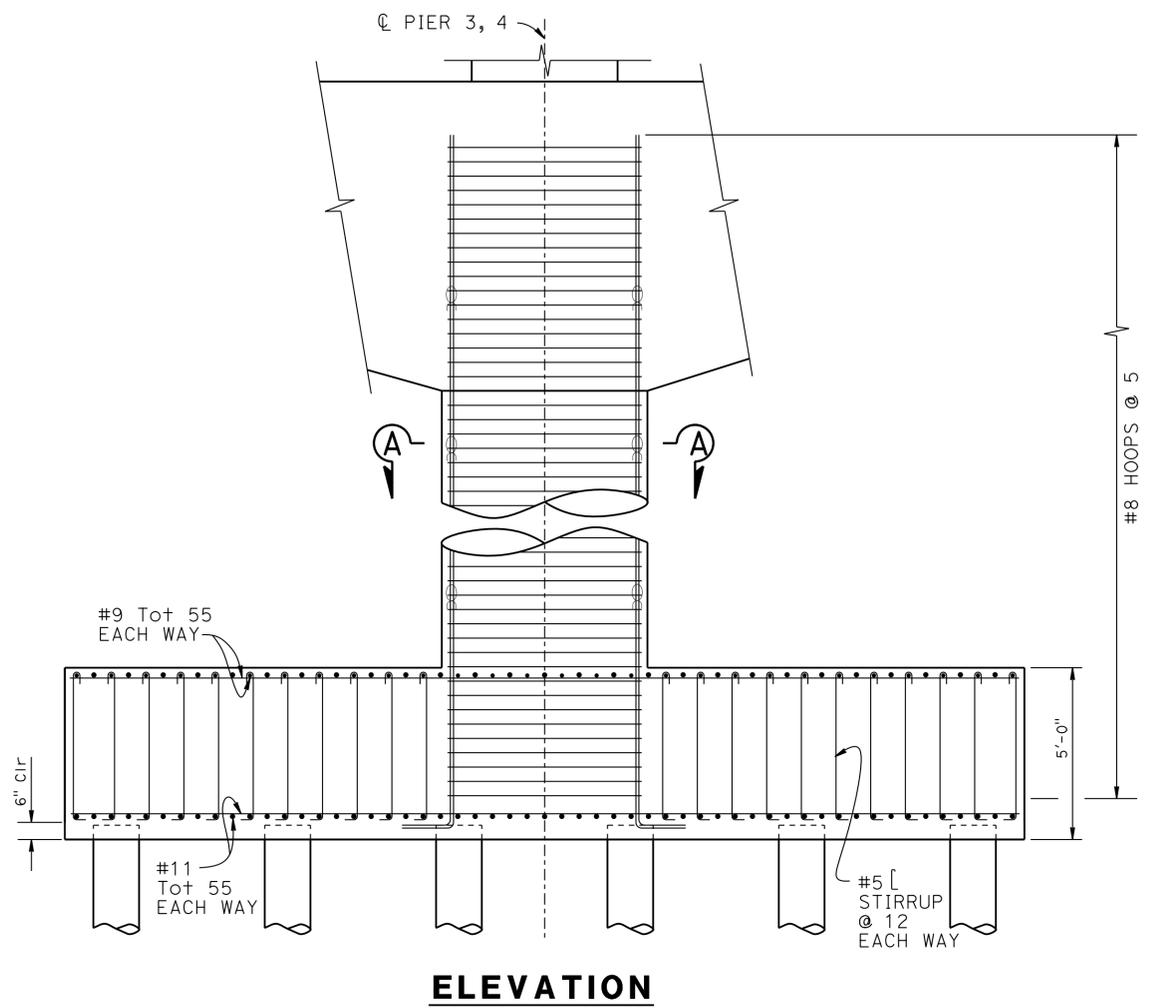
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54C0661
POST MILE	43.93

MOJAVE RIVER BRIDGE
PIER DETAILS NO. 2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	654	824


 REGISTERED CIVIL ENGINEER DATE 11-07-13
 6-23-14
 PLANS APPROVAL DATE
 RYAN STILTZ
 No. C65738
 Exp. 9/30/15
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 STATE OF CALIFORNIA
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LEGEND:
 Indicates bundled bars

- NOTES:**
1. All hoops are "Ultimate" butt splices continuous.
 2. Only staggered "Ultimate" butt splices are allowed in main column reinforcing.
 3. Alternate cut-off lengths of main column reinforcement.
 4. For limits of Type "D" excavation, see "PIER DETAILS NO. 2" sheet.

DESIGN	BY R. Stiltz	CHECKED F. Chen
DETAILS	BY Y. Tang	CHECKED F. Chen
QUANTITIES	BY Y. Tang	CHECKED F. Chen

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

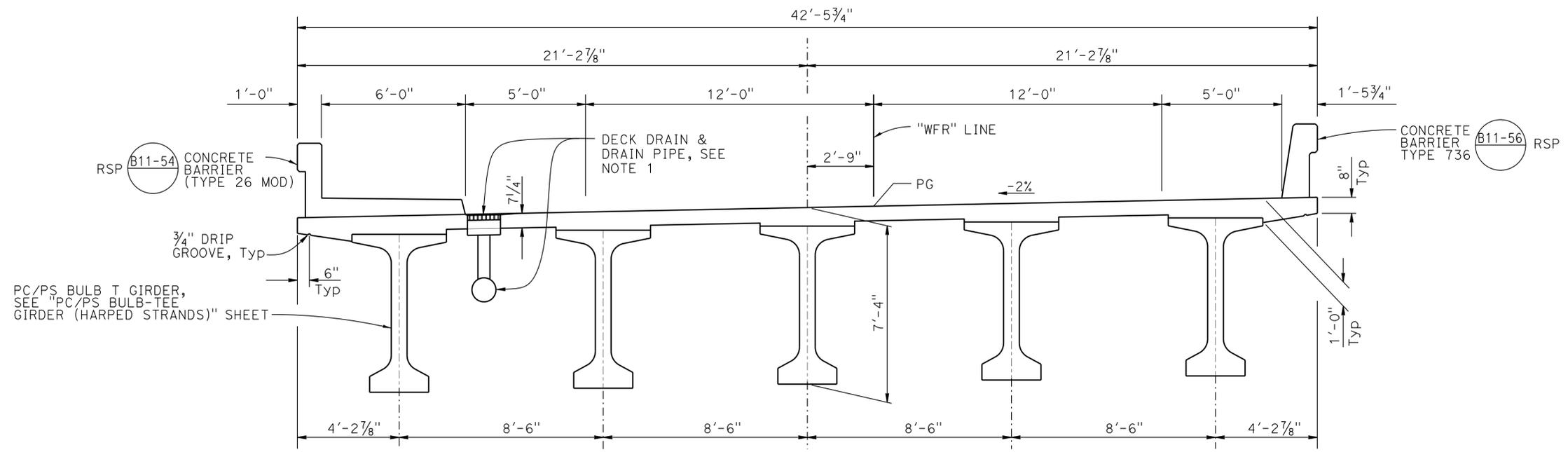
DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54C0661
POST MILE	43.93

MOJAVE RIVER BRIDGE
PIER DETAILS NO. 3

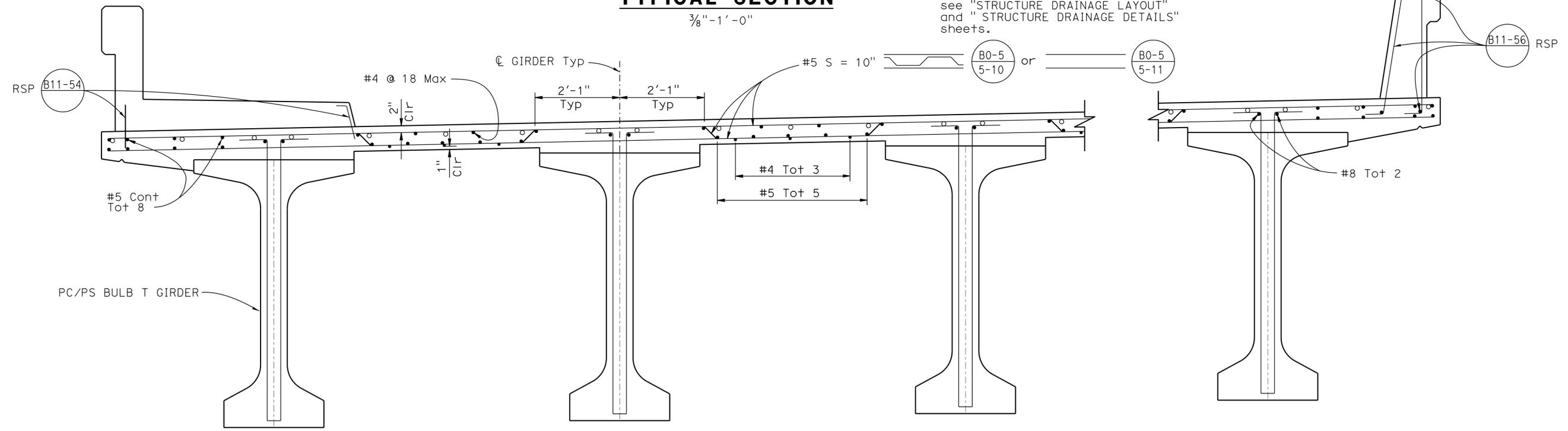
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	655	824


 REGISTERED CIVIL ENGINEER DATE 11-07-13
 6-23-14
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TYPICAL SECTION

NOTE:
For drainage layout and details, see "STRUCTURE DRAINAGE LAYOUT" and "STRUCTURE DRAINAGE DETAILS" sheets.



PART TYPICAL SECTION

For top slab additional Reinf, see "GIRDER REINFORCEMENT" sheet.

DESIGN	BY R. Stiltz	CHECKED F. Chen
DETAILS	BY Y. Tang	CHECKED F. Chen
QUANTITIES	BY Y. Tang	CHECKED F. Chen

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 10

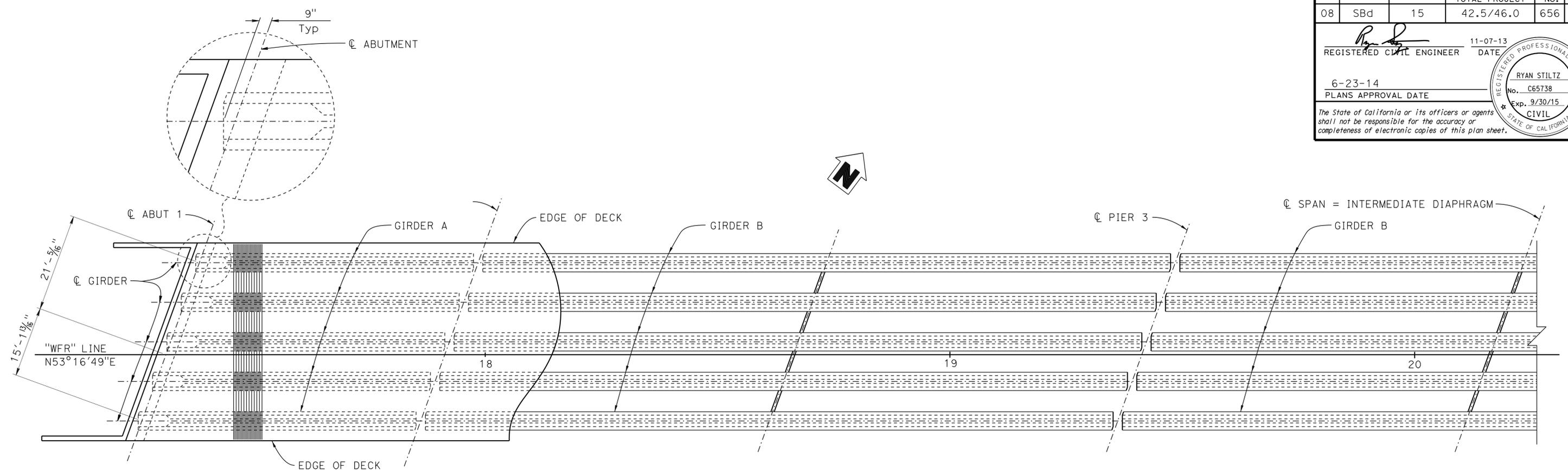
BRIDGE NO.	54C0661
POST MILE	43.93

MOJAVE RIVER BRIDGE
TYPICAL SECTION

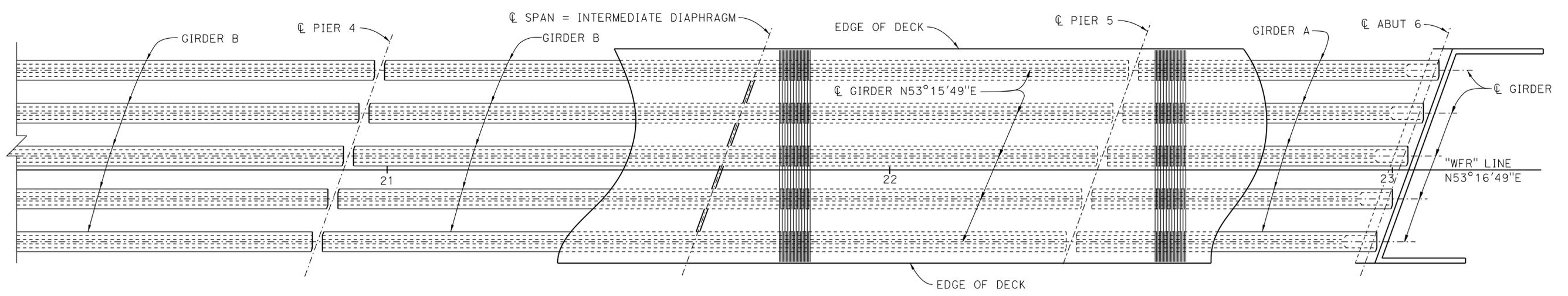
REVISION DATES	SHEET	OF
8-12-12 3-12-13 6-06-13 10-29-13	13	34

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	656	824


 REGISTERED CIVIL ENGINEER DATE 11-07-13
 6-23-14
 PLANS APPROVAL DATE
 RYAN STILTZ
 No. C65738
 Exp. 9/30/15
 CIVIL
 STATE OF CALIFORNIA
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GIRDER LAYOUT
 $\frac{3}{32}'' = 1'-0''$



GIRDER LAYOUT
 $\frac{3}{32}'' = 1'-0''$

DESIGN	BY R. Stiltz	CHECKED F. Chen
DETAILS	BY Y. Tang	CHECKED F. Chen
QUANTITIES	BY Y. Tang	CHECKED F. Chen

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54C0661
POST MILE	43.93

MOJAVE RIVER BRIDGE
GIRDER LAYOUT

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



UNIT: 3589
 PROJECT NUMBER & PHASE: 08140000861

CONTRACT NO.: 08-3555V1

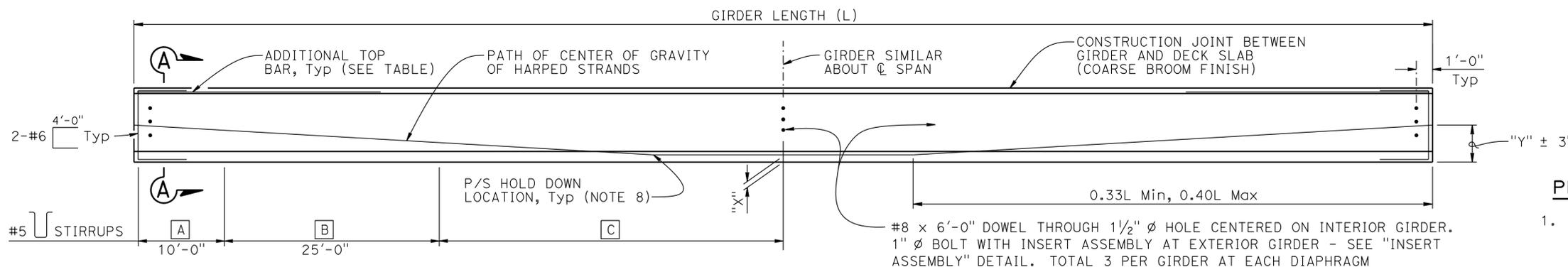
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
6-28-12 8-14-12 10-29-13	14	34

USERNAME => s124486 DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 11:43

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	657	824

REGISTERED CIVIL ENGINEER
 DATE 11-07-13
 RYAN STILTZ
 No. C65738
 Exp. 9/30/15
 CIVIL
 STATE OF CALIFORNIA
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LOCATION	A	B	C
SPAN 1,5	#5 @ 6"	#5 @ 12"	#5 @ 12"
SPAN 2,3,4	#5 @ 4"	#5 @ 6"	#5 @ 12"

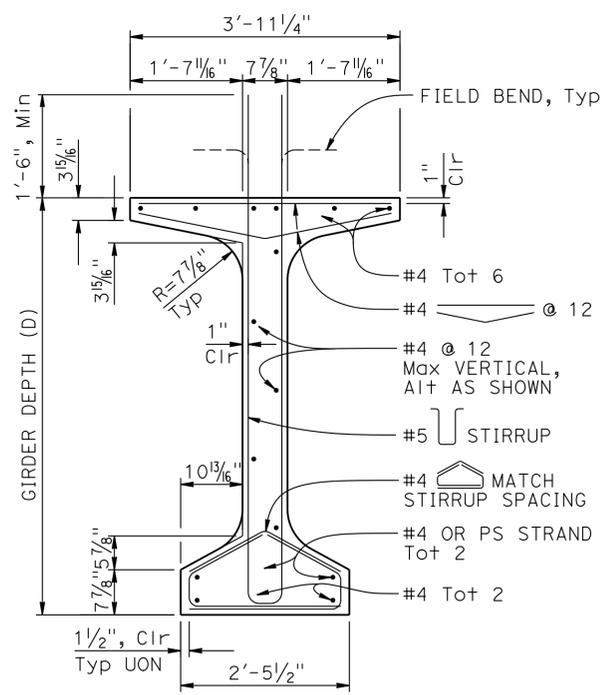
GIRDER ELEVATION

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

LOCATION	GIRDER LENGTH (L)	GIRDER DEPTH (D)	"x" (in)	JACKING FORCE (P) (kips)	As, Min (in ²)	"y" (in)	CONCRETE STRENGTH (ksi)		MIDSPAN DEAD LOAD DEFLECTION (in)		ADDITIONAL TOP BAR (EACH END)
							f'ci	f'c	DECK	RAIL	
GIRDER A	59'-9"	78 3/4"	4	600	2.96	36	5.0	6.0	0.01	0	#6 x 20' Tot 4
			6	600	2.96						
GIRDER B	148'-0"	78 3/4"	6	1950	9.63	36	6.0	7.0	2.0	0	#6 x 20' Tot 4
			12	2050	10.12						

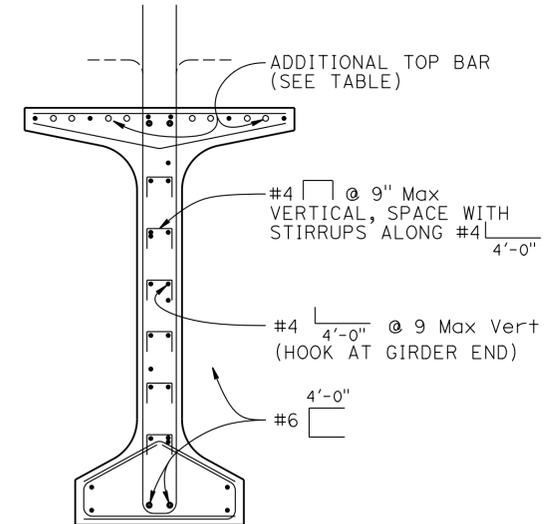
PRESTRESSING NOTES

- 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 tensile stress in the prestressing steel upon release shall not exceed 75% of the specified minimum ultimate tensile strength of the prestressing steel
- 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
- Contractor may interpolate "P" and "X" values between the limits shown, as approved by the Engineer
- There shall be a minimum of two hold downs per girder for the prestressing
- Prestressing strand shall be 270 ksi low relaxation
- As, Min is the minimum area required of prestressing steel



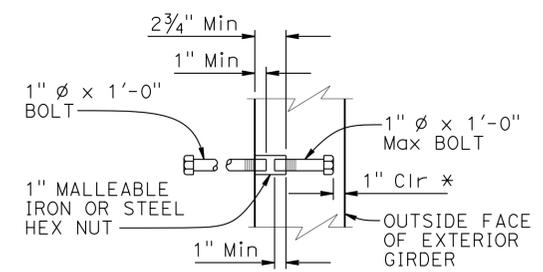
TYPICAL GIRDER SECTION

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



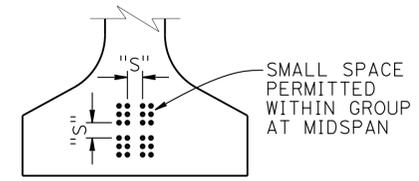
SECTION A-A

NOTE:
For details not shown, see "TYPICAL GIRDER SECTION"
For end block details, see "GIRDER DETAILS No. 1" sheet



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

INSERT ASSEMBLY



CLEARANCES FOR PRETENSIONED STRANDS

NOTES:

- Strands may be bundled in groups consisting of 3 vertically, 2 horizontally, and separated at the ends
- The minimum distance "S" between groups or individual strands is 1 3/4" for 0.5" Ø strand and 2" for 0.6" Ø strand
- "S" is measured between centers of adjacent strands
- Approval by Engineer is required for deviation

NO SCALE

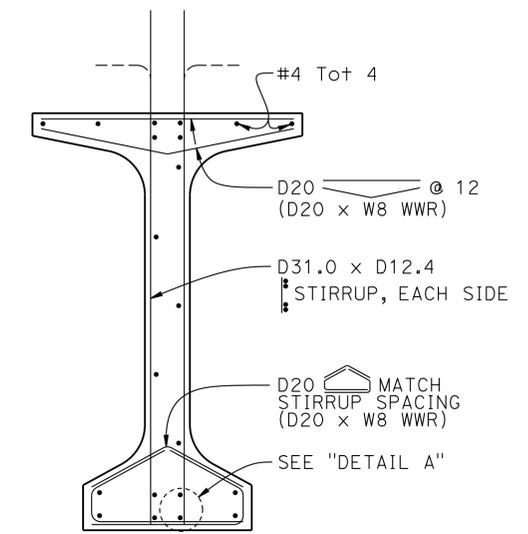
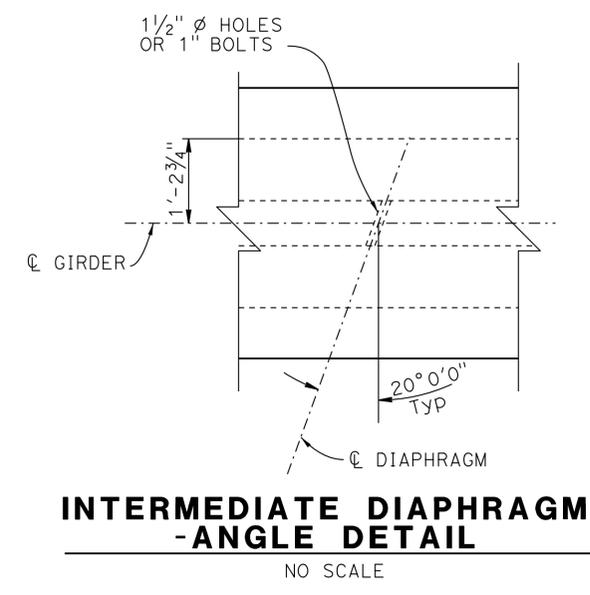
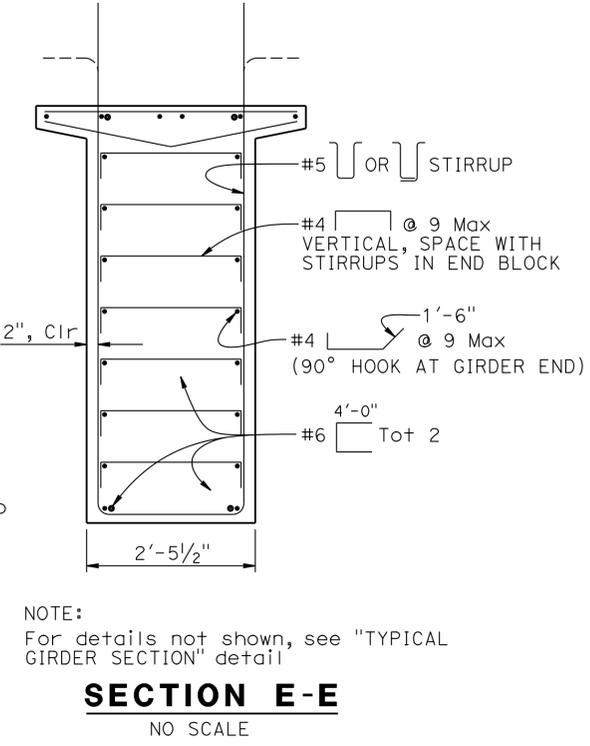
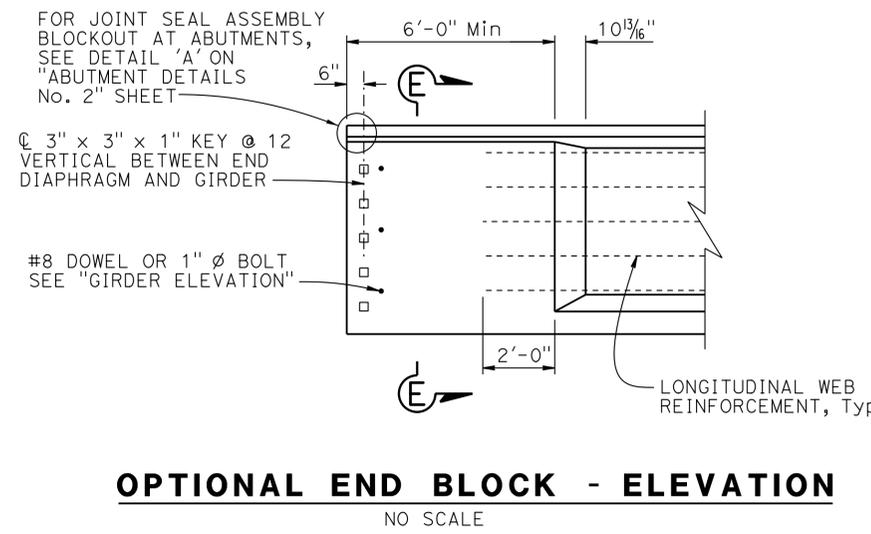
DESIGN BY R. Stiltz CHECKED F. Chen DETAILS BY Y. Tang CHECKED F. Chen QUANTITIES BY Y. Tang CHECKED F. Chen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 54C0661	MOJAVE RIVER BRIDGE PC/PS BULB-TEE GIRDER (HARPED STRANDS)				
			POST MILE 43.93					
			PROJECT NUMBER & PHASE: 08140000861 CONTRACT NO.: 08-3555V1					
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: 3589 PROJECT NUMBER & PHASE: 08140000861 CONTRACT NO.: 08-3555V1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 8-14-12 1-23-13 10-29-13	SHEET OF 15 34

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	658	824

REGISTERED CIVIL ENGINEER	DATE
11-07-13	
PLANS APPROVAL DATE	
6-23-14	

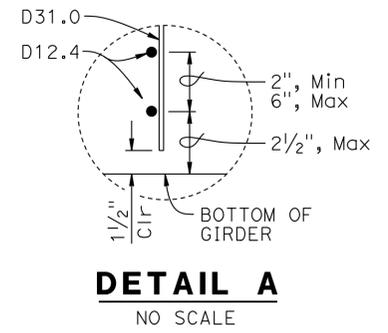
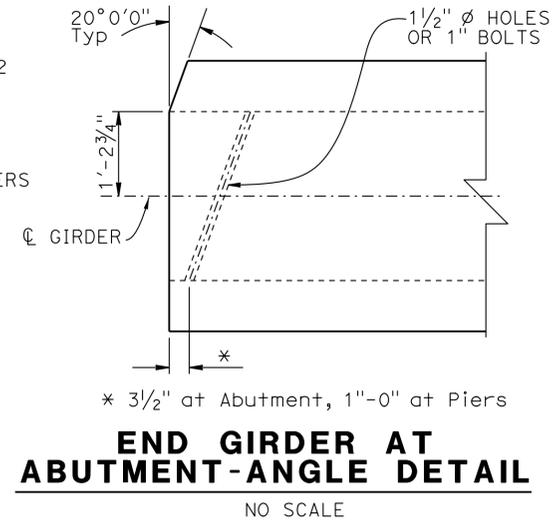
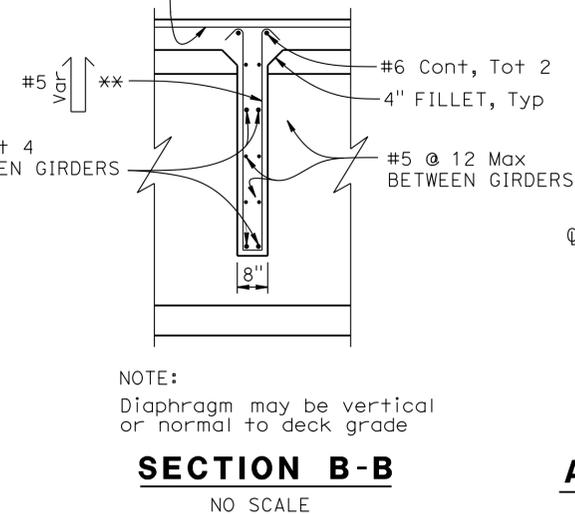
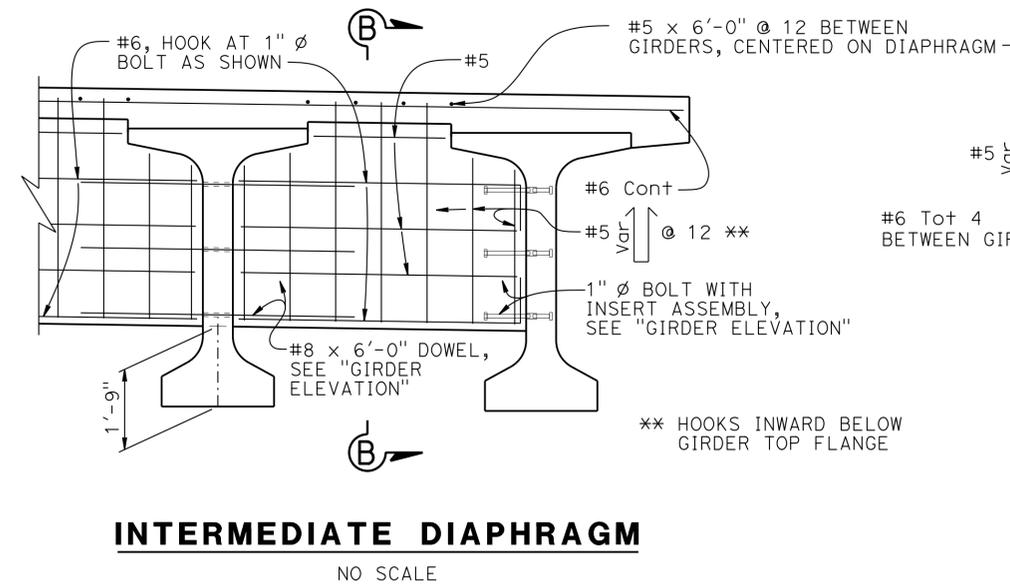
REGISTERED PROFESSIONAL ENGINEER
RYAN STILTZ
No. C65738
Exp. 9/30/15
CIVIL
STATE OF CALIFORNIA

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

NOTES:
1. For details shown but not noted, see "TYPICAL GIRDER SECTION" detail
2. W8 WWR not shown



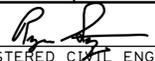
NOTES:
1. Bottom of stirrup WWR detail shown, top similar
2. Longitudinal wire area shall be 40% or greater of vertical deformed wire's area

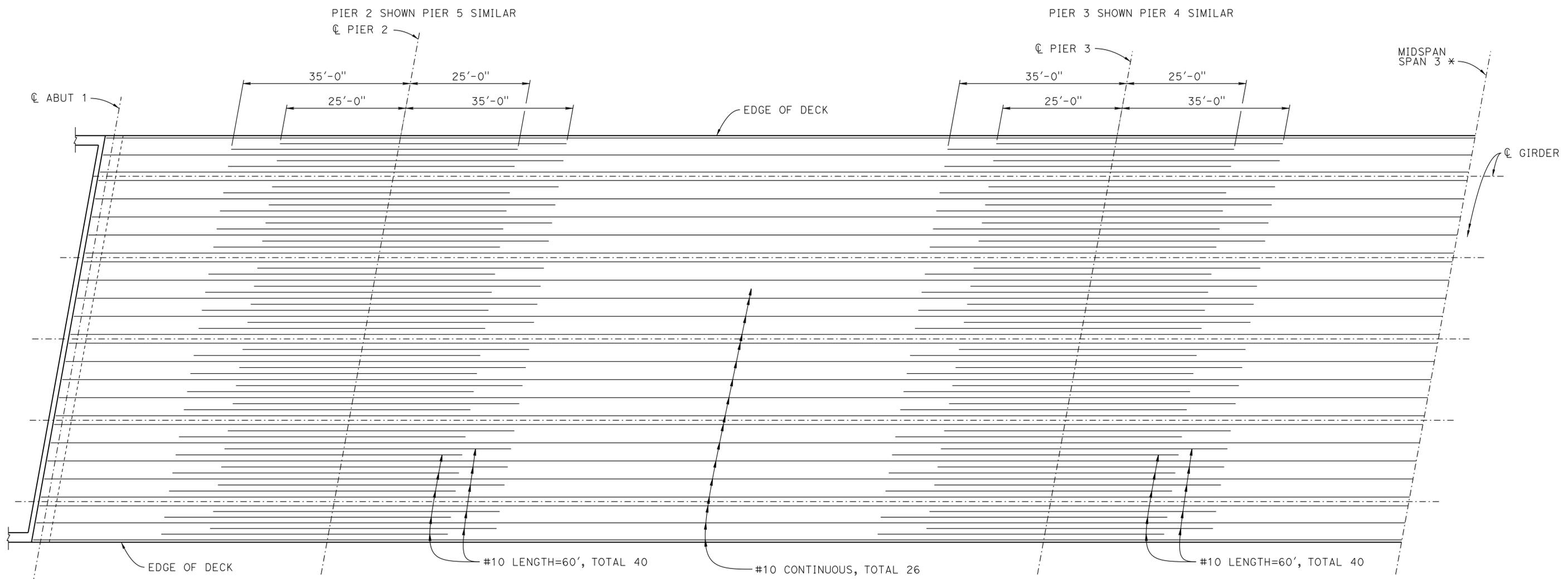
DESIGN	BY	R. Stiltz	CHECKED	F. Chen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	54C0661	MOJAVE RIVER BRIDGE GIRDER DETAILS	
	DETAILS	BY	Y. Tang	CHECKED			F. Chen	POST MILE		43.93
	QUANTITIES	BY	Y. Tang	CHECKED			F. Chen			

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0	1	2	3	UNIT: 3589 PROJECT NUMBER & PHASE: 08140000861	CONTRACT NO.: 08-3555V1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
									08-12-12	17-28-13	10-29-13
										16	34

FILE => 54c06611gd116.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	659	824


 REGISTERED CIVIL ENGINEER DATE 11-07-13
 PLANS APPROVAL DATE 6-23-14
 RYAN STILTZ
 No. C65738
 Exp. 9/30/15
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 STATE OF CALIFORNIA
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ADDITIONAL TOP REINFORCEMENT

$\frac{3}{32}'' = 1'-0''$

* Bridge symmetrical about span 3 C

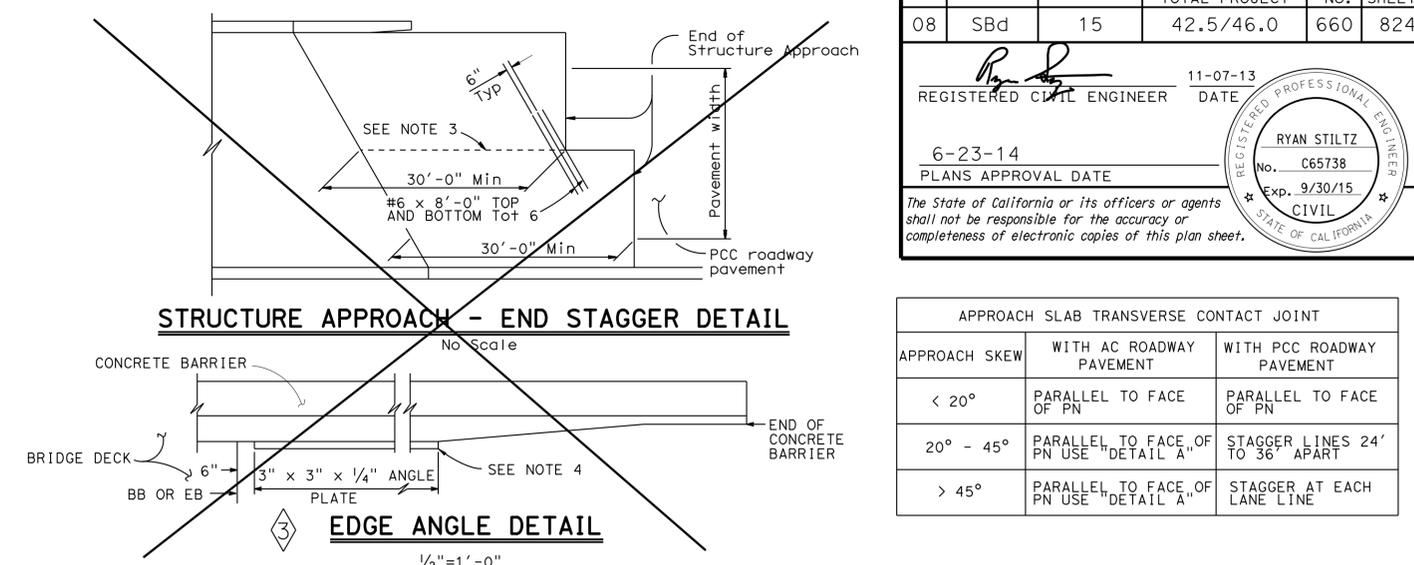
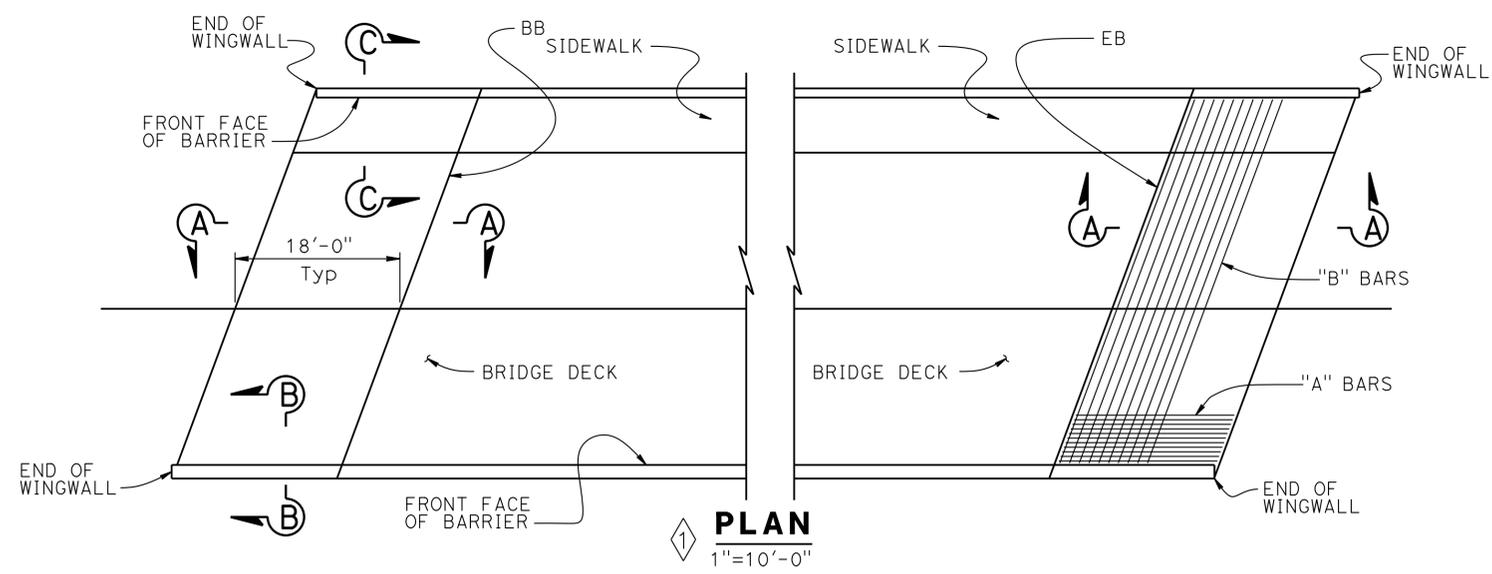
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY R. Stiltz	CHECKED F. Chen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	54C0661	MOJAVE RIVER BRIDGE GIRDER REINFORCEMENT	
	DETAILS	BY Y. Tang	CHECKED F. Chen			POST MILE	43.93		
	QUANTITIES	BY Y. Tang	CHECKED F. Chen			CONTRACT NO.:	08-3555V1		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3589 PROJECT NUMBER & PHASE: 08140000861	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 17 OF 34

USERNAME => s124496 DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 11:43

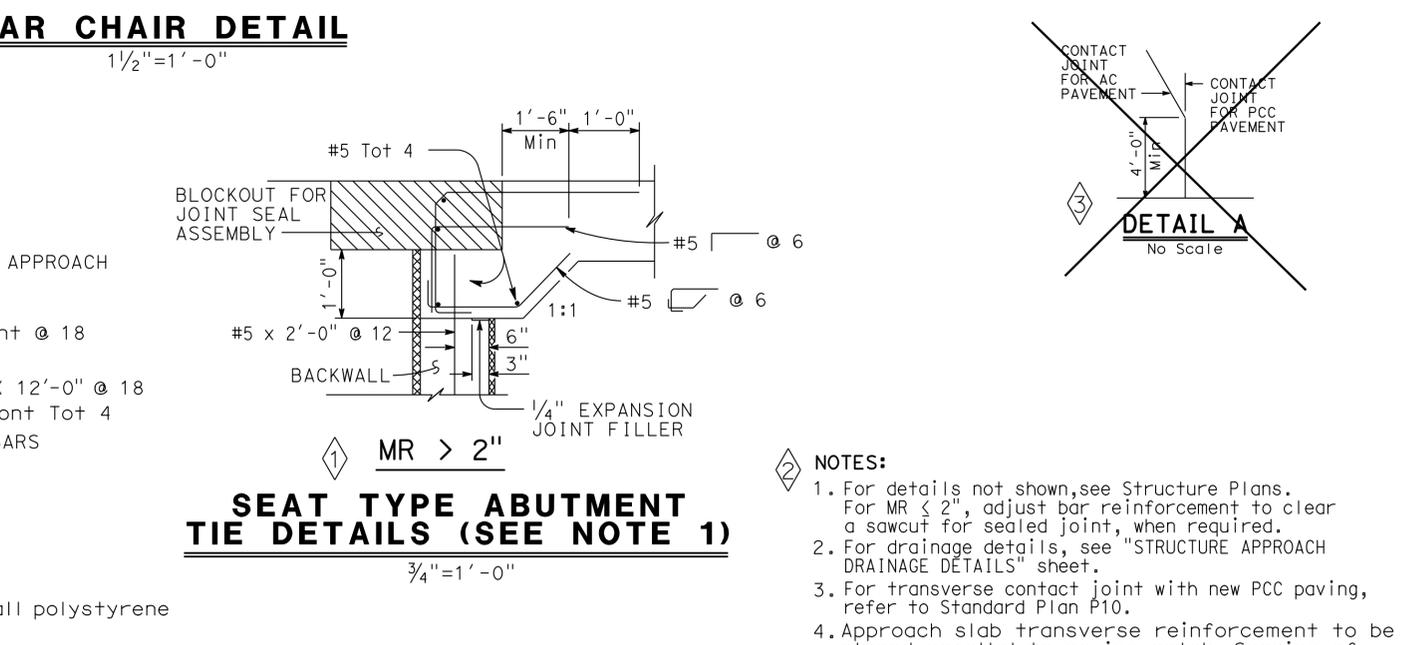
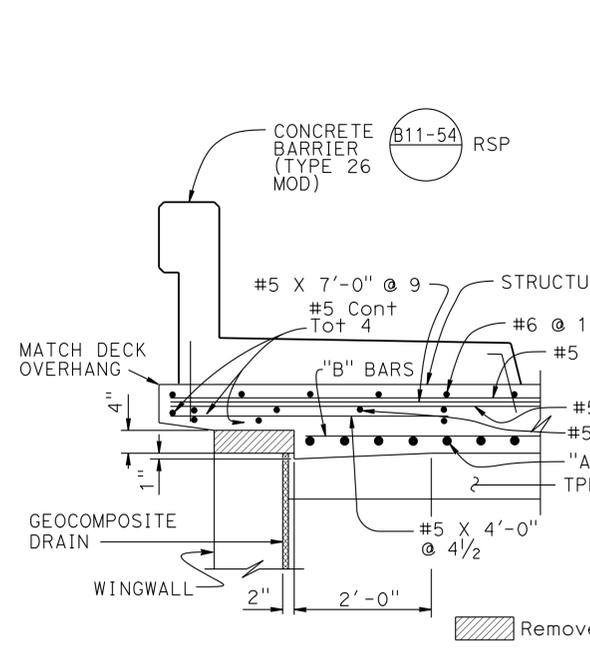
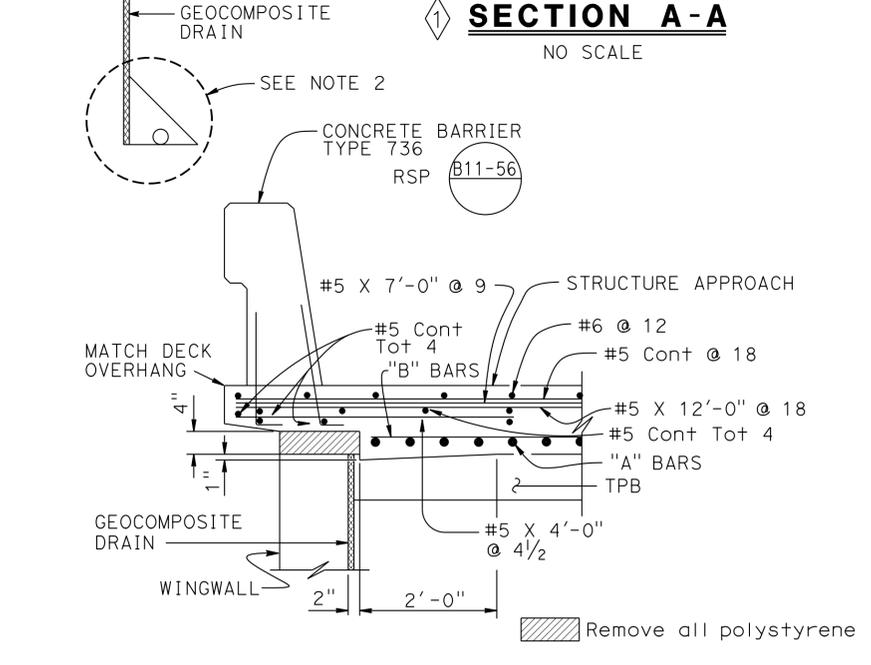
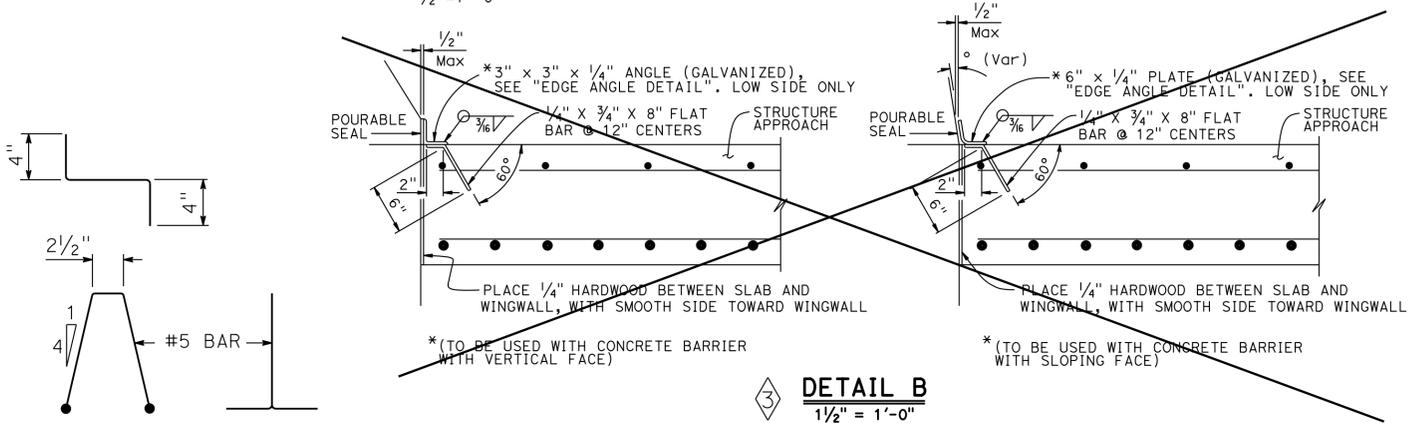
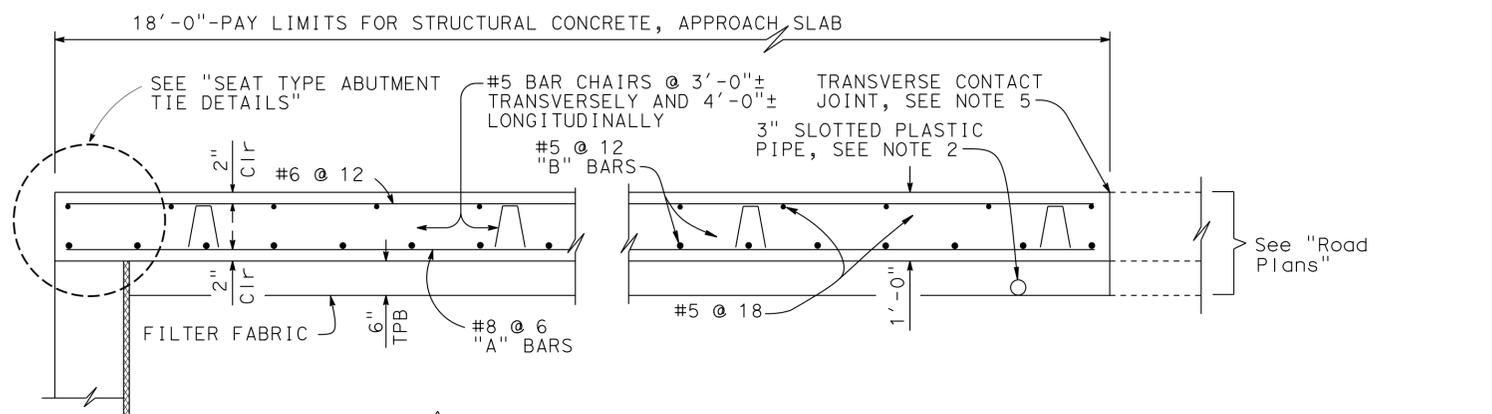
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	660	824

11-07-13
 REGISTERED CIVIL ENGINEER DATE
 6-23-14
 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.
 - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
 - Approach slab transverse reinforcement to be placed parallel to paving notch. Spacing of transverse reinforcement is measured along ϕ roadway.

SPECIAL DETAILS

REVISED STANDARD DRAWING

FILE NO. **xs3-120**

APPROVAL DATE July 2011

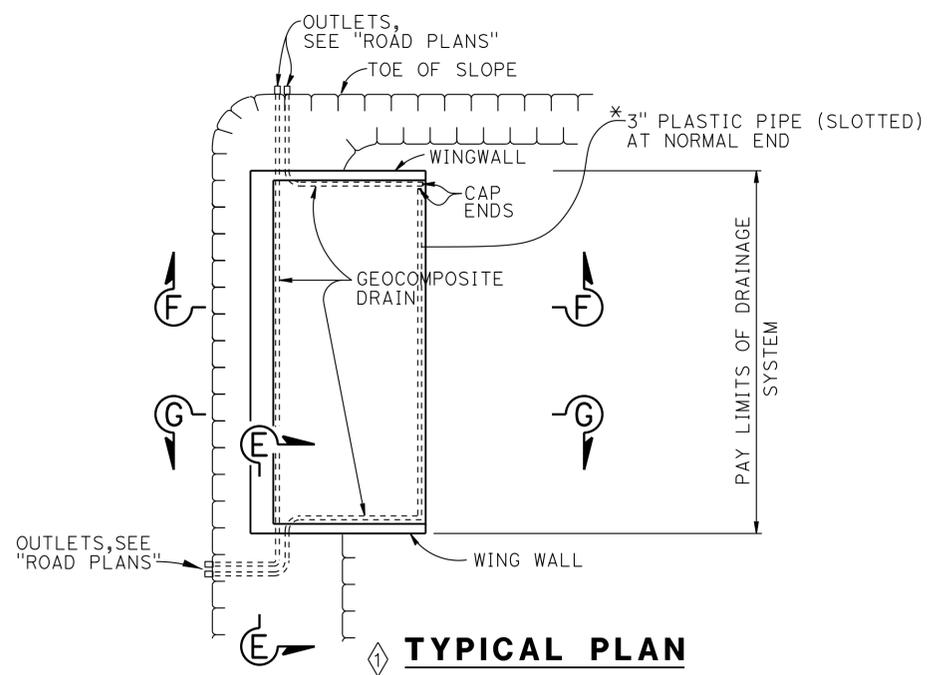
1 Revised Detail 3 Does Not Apply
 2 Revised Note

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 54C0661
 POST MILE 43.93
MOJAVE RIVER BRIDGE
STRUCTURE APPROACH TYPE N(30S) MOD

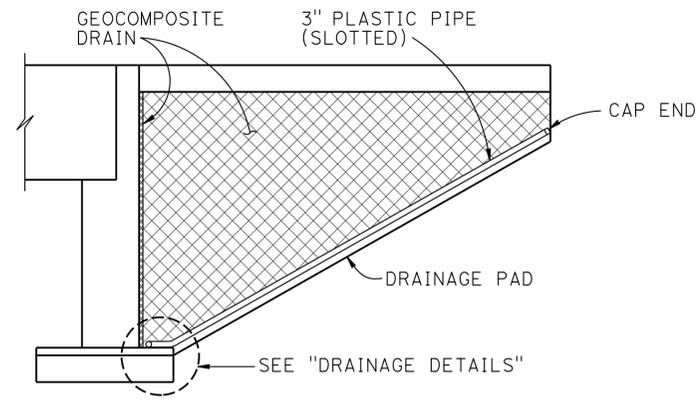
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	661	824
REGISTERED CIVIL ENGINEER			DATE	11-07-13	
6-23-14			PLANS APPROVAL DATE		
No. C65738			Exp. 9/30/15		
CIVIL			STATE OF CALIFORNIA		

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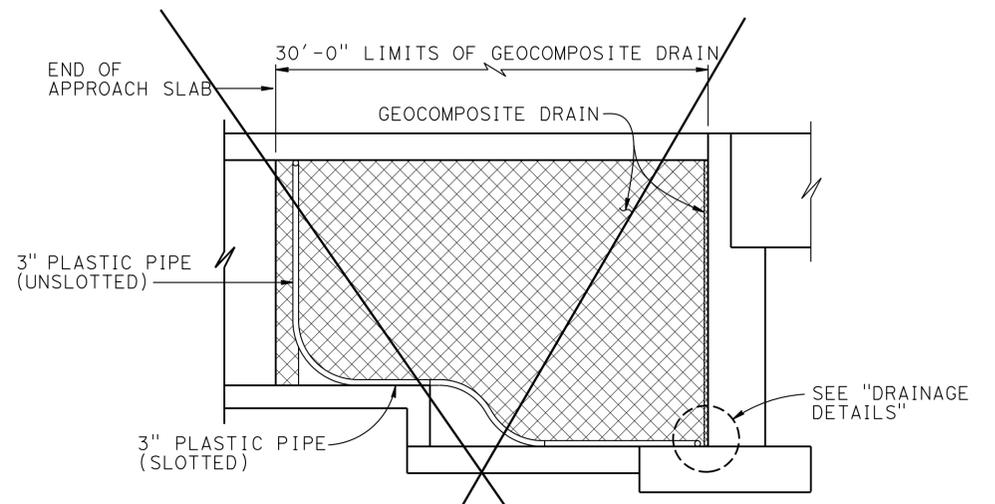
TYPICAL PLAN
1" = 10'

ABUTMENT 1 SHOWN, ABUTMENT 6 SIMILAR.
* FOR PIPE LAYOUT AT STAGGERED END, SEE "DETAIL B"



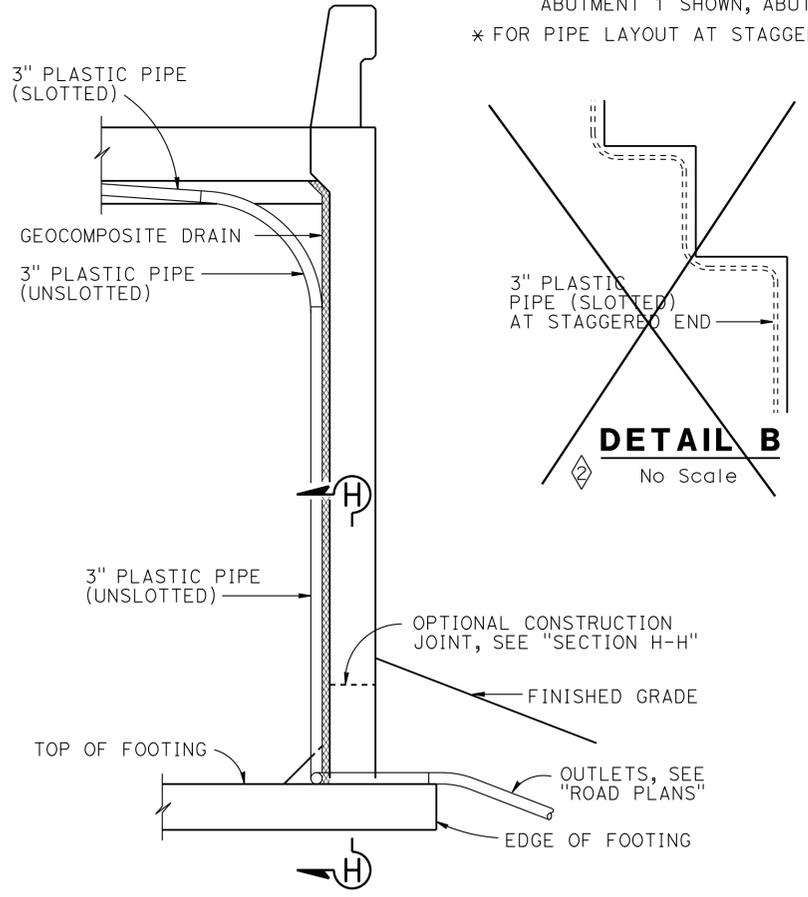
CANTILEVER WINGWALL

SECTION F-F
1/4" = 1'-0"



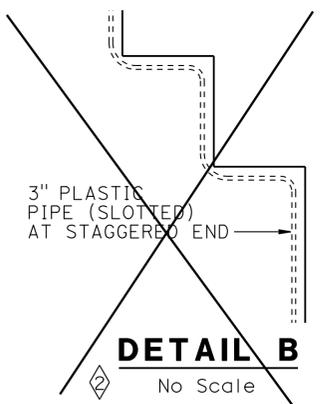
RETAINING WALL WINGWALL DRAINAGE DETAILS

SECTION G-G
1/4" = 1'-0"

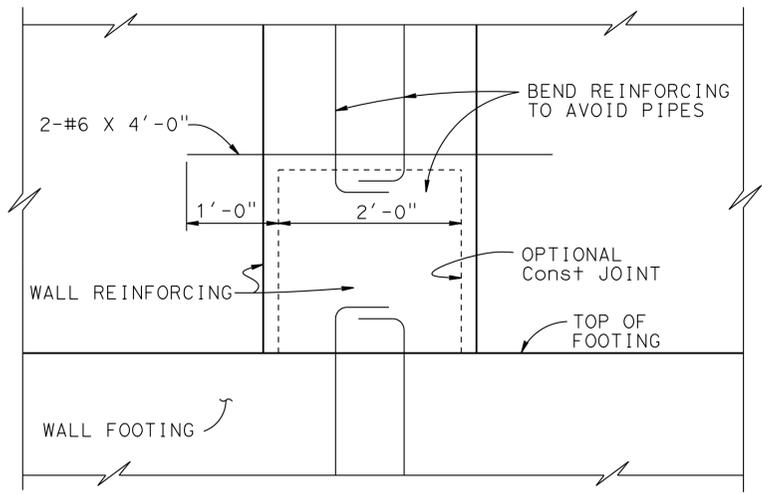


SECTION E-E
1/2" = 1'-0"

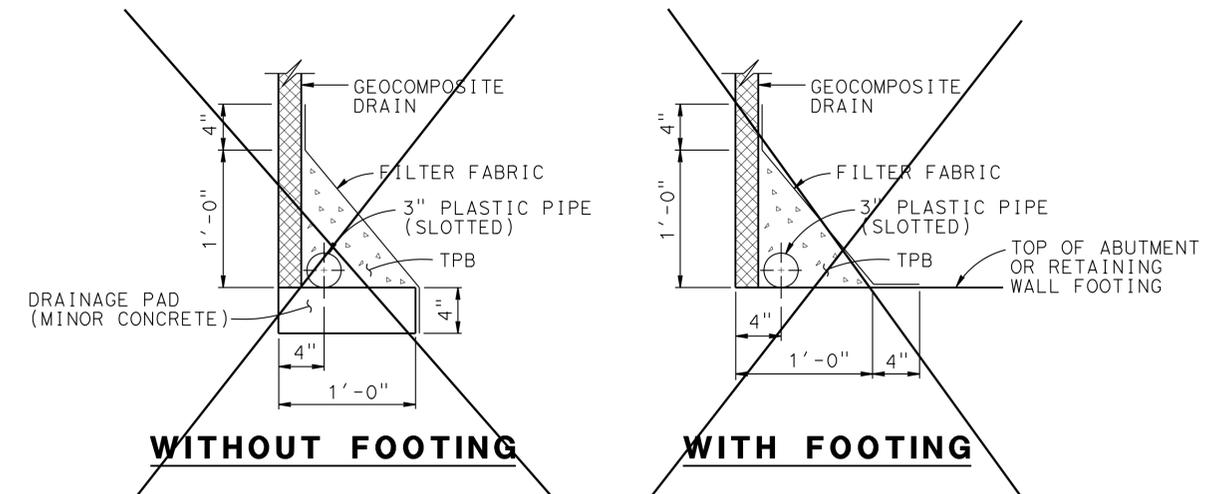
NOTE: Bends and junctions in 3" plastic pipe are 30" radius Min



DETAIL B
No Scale



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



WITHOUT FOOTING

WITH FOOTING

DRAINAGE DETAILS
1 1/2" = 1'-0"

SPECIAL DETAILS

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

- ◇ Revised Detail
- ◇ Does Not Apply

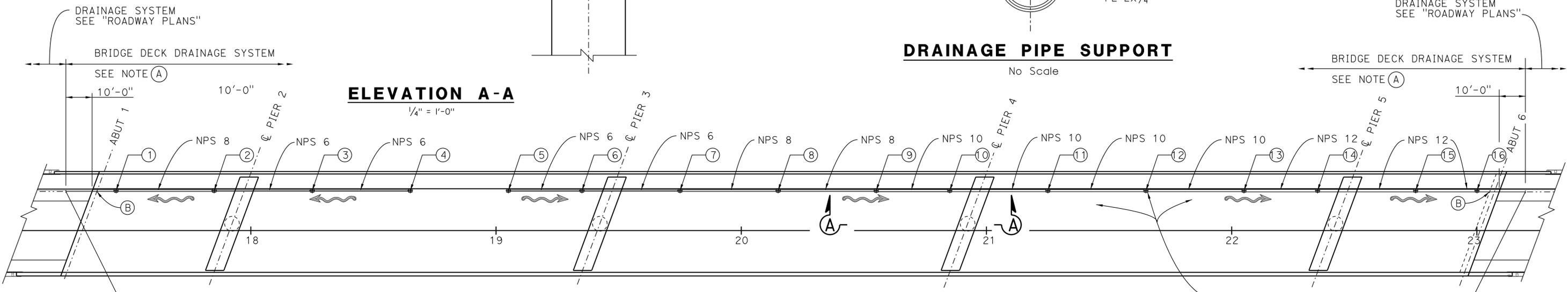
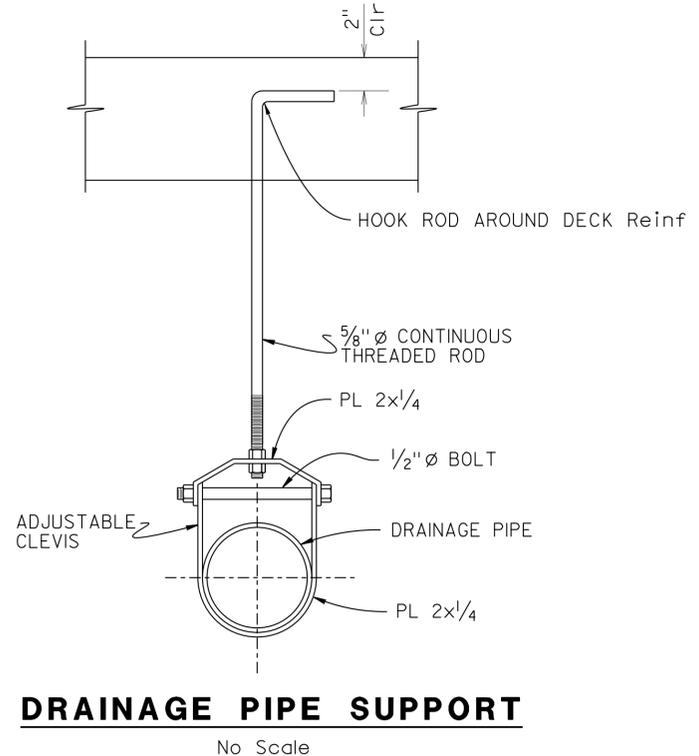
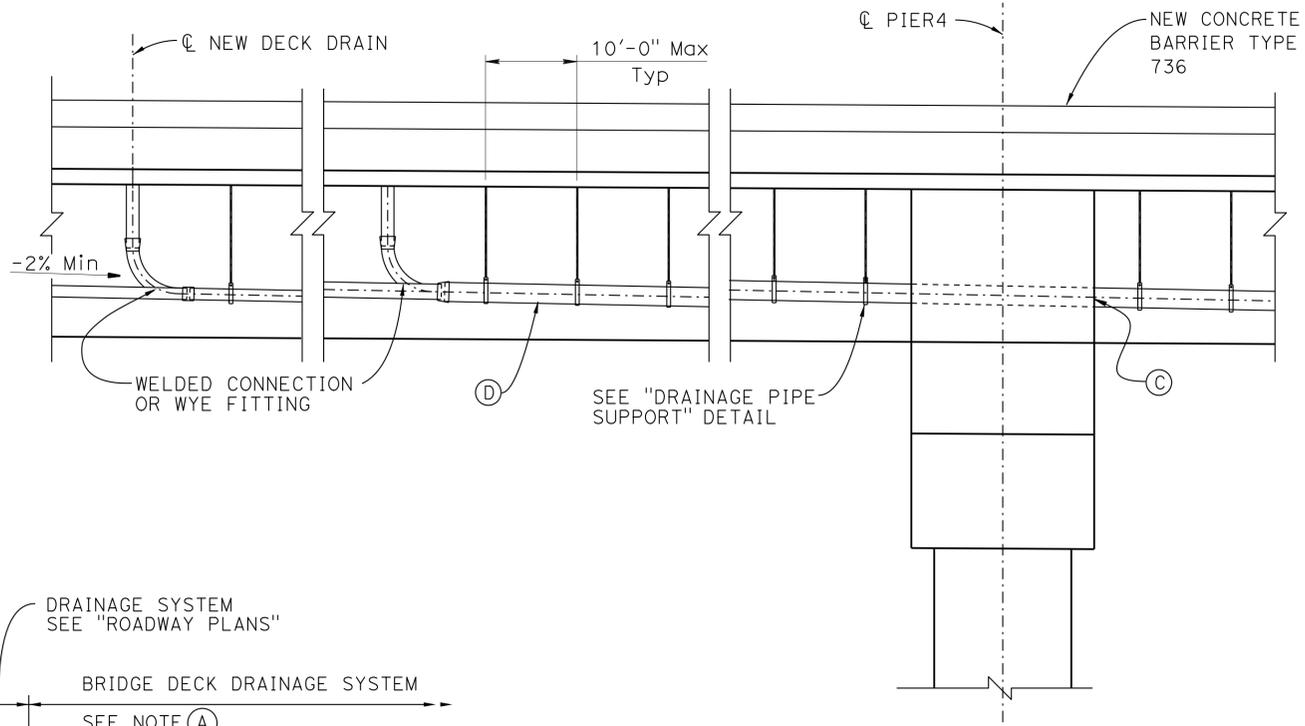
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO.	54C0661
POST MILE	43.93

MOJAVE RIVER BRIDGE
APPROACH DRAINAGE DETAILS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	662	824
			11-07-13	REGISTERED PROFESSIONAL ENGINEER	
			DATE	No. C65738	
			6-23-14	Exp. 9/30/15	
			PLANS APPROVAL DATE	CIVIL	
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ELEVATION A-A
1/4" = 1'-0"

PLAN DECK-DRAIN LAYOUT
1" = 20'-0"

DECK-DRAIN ASSEMBLYS LOCATION

LEGEND:
~ Indicates deck - drain flow direction

	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
"WFR" Line Sta	17+45.0	17+85.0	18+25.0	18+65.0	19+05.0	19+35.0	19+75.0	20+15.0	20+55.0	20+85.0	21+25.0	21+65.0	22+05.0	22+35.0	22+75.0	23+00.0

- NOTES:**
- (A) Limits of payment Bridge Deck drainage system. For Details and payment beyond limits shown, see "ROADWAY PLANS"
 - (B) For drainage details at abutment, including expansion coupling and pipe casing, see B7-8
 - (C) For drainage pipe through intermediate & end diaphragms, Use formed hole 4"Ø larger than pipe OD. See B7-10 for additional reinforcement
 - (D) Drainage Pipe shall be NPS 12x0.180", NPS 10x0.165", NPS 8x0.148", or NPS 6x0.135" as shown. For Drainage Details and notes not shown, see "STRUCTURE DRAINAGE DETAILS" sheet.

DESIGN	BY R. Stiltz	CHECKED F. Chen
DETAILS	BY Y. Tang	CHECKED F. Chen
QUANTITIES	BY Y. Tang	CHECKED F. Chen

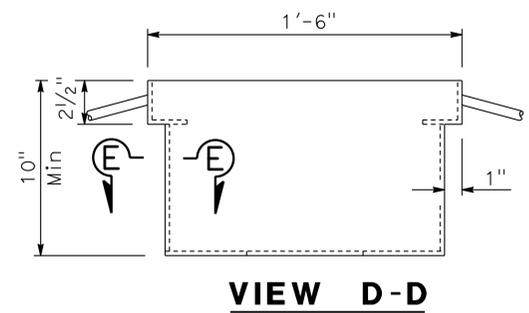
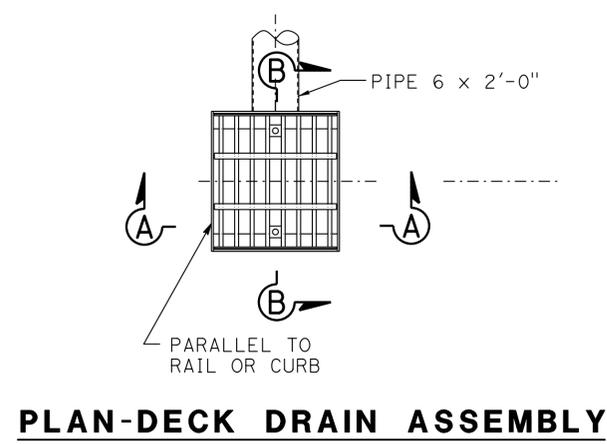
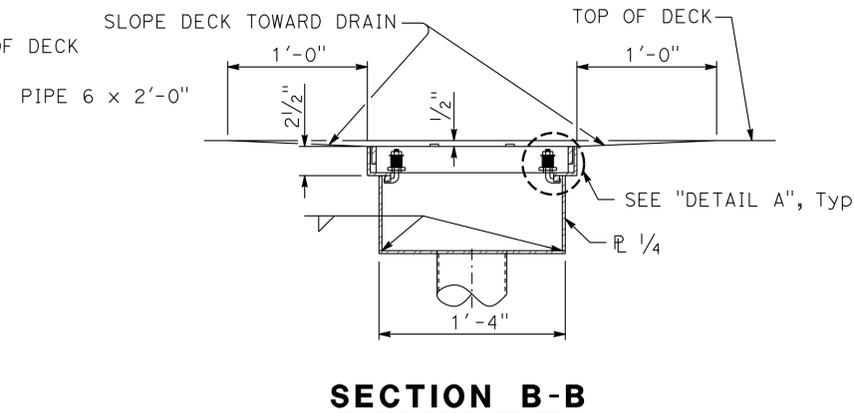
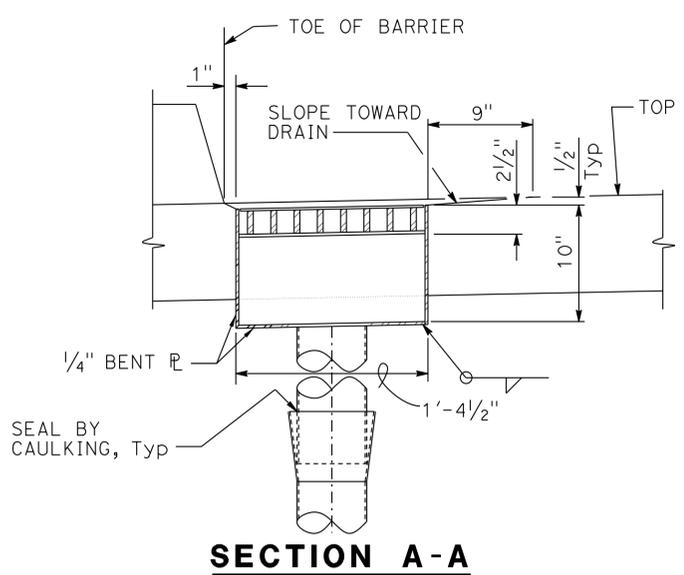
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54C0661
POST MILE	43.93

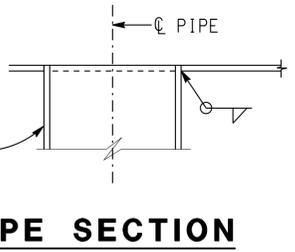
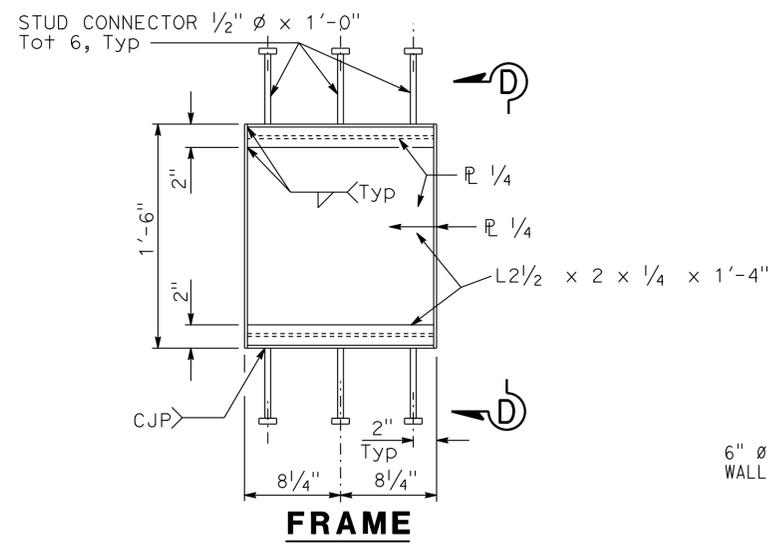
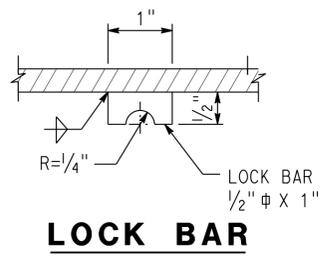
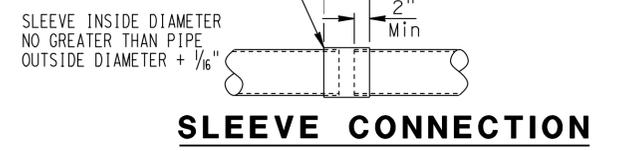
MOJAVE RIVER BRIDGE
STRUCTURE DRAINAGE LAYOUT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	663	824
REGISTERED CIVIL ENGINEER			DATE	11-07-13	
6-23-14			PLANS APPROVAL DATE		
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REGISTERED PROFESSIONAL ENGINEER RYAN STILTZ No. C65738 Exp. 9/30/15 CIVIL STATE OF CALIFORNIA					

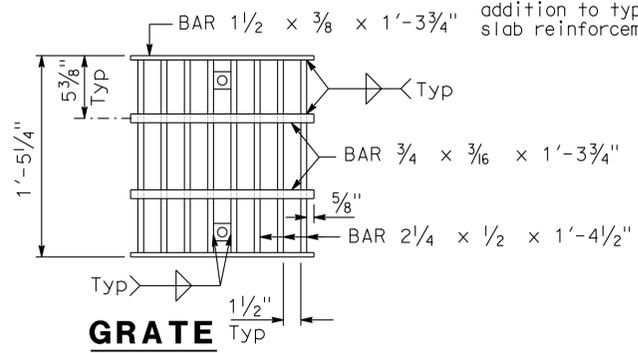
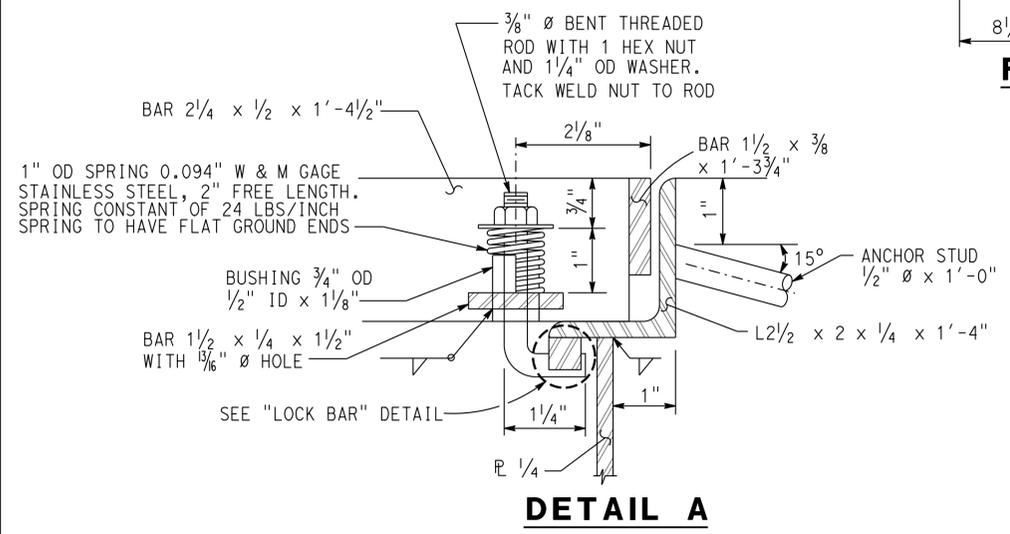


DECK DRAIN ASSEMBLY DETAIL

APPLY ADHESIVE SEALANT ON PIPE PERIPHERY TO SEAL JOINT. SECURE EACH END OF SLEEVE TO PIPE WITH 3-#10-24 X 1/2" SELF TAPPING HEX HEAD SCREWS



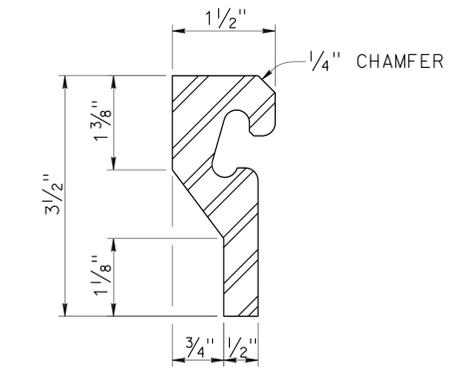
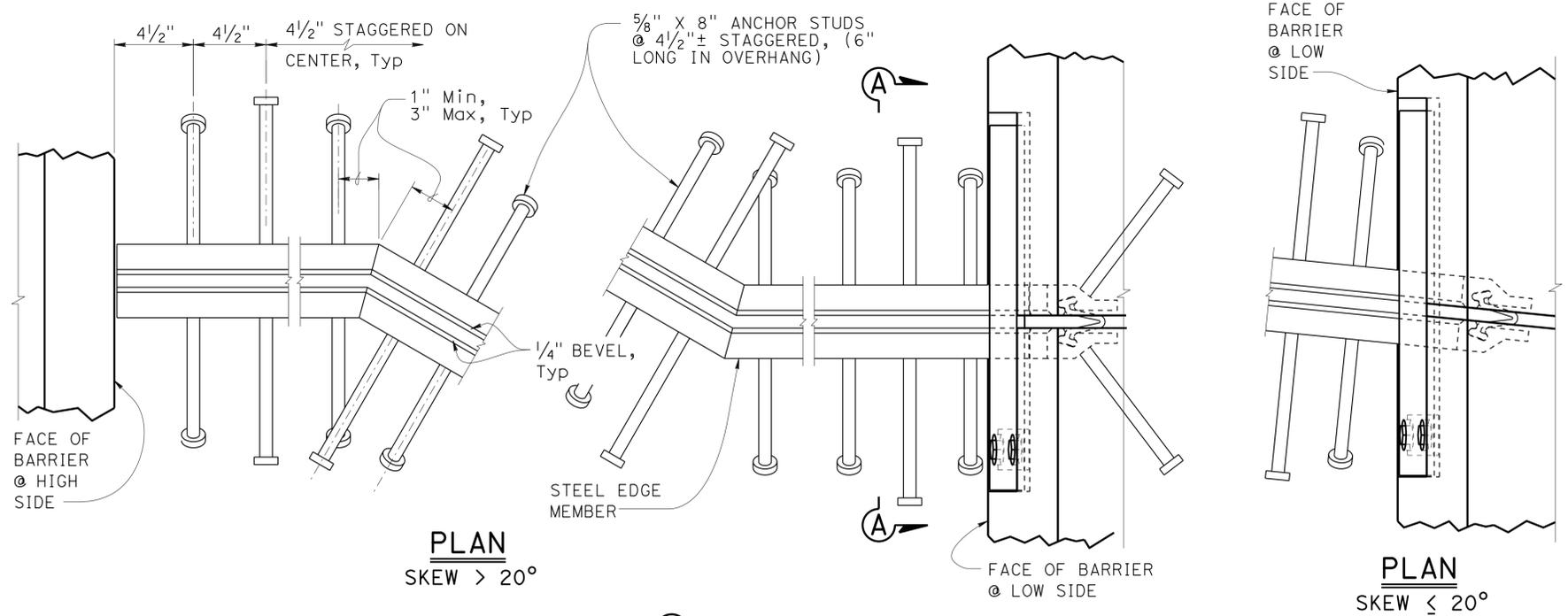
NOTE: Galvanize deck drain assembly after fabrication. Reinforcement shown at drains is to be placed in addition to typical slab reinforcement. Typical slab reinforcement not shown.



NOTE: All pipe to be NPS 6 x 0.135" welded steel pipe except as noted and galvanized if not encased in concrete. Fittings and bends shall have a minimum wall thickness of 1/8". All joints or connections to be butt welded or connected by a steel pipe sleeve and to be smooth throughout inside of pipe except as noted. All bends to be on 1'-6" minimum radius measured along centerline of pipe. All bends to be supported by @ 10'-0" maximum spacing throughout. Galvanize deck drain assembly after fabrication

NO SCALE

DESIGN	BY	R. Stiltz	CHECKED	F. Chen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	54C0661	MOJAVE RIVER BRIDGE STRUCTURE DRAINAGE DETAILS	
	DETAILS	BY	Y. Tang	CHECKED			F. Chen	POST MILE		43.93
	QUANTITIES	BY	Y. Tang	CHECKED			F. Chen	CONTRACT NO.:		08-3555V1
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)						UNIT: 3589 PROJECT NUMBER & PHASE: 08140000861	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 21 OF 34



STEEL EDGE MEMBER

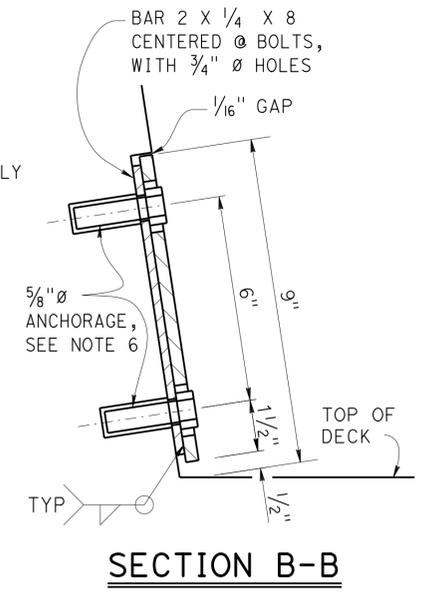
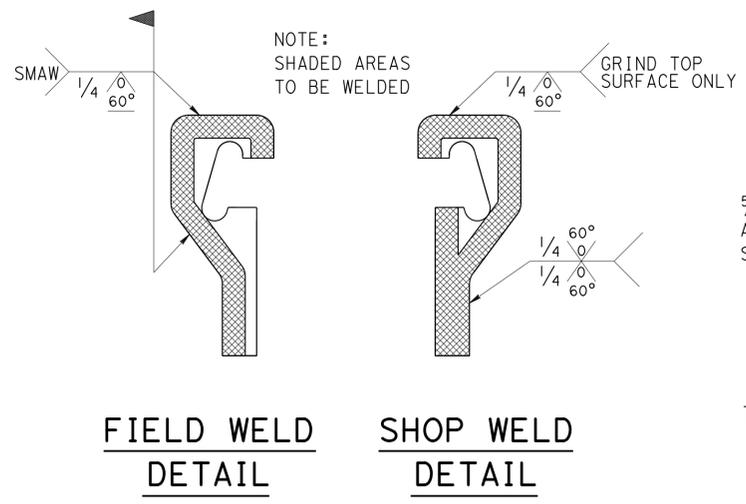
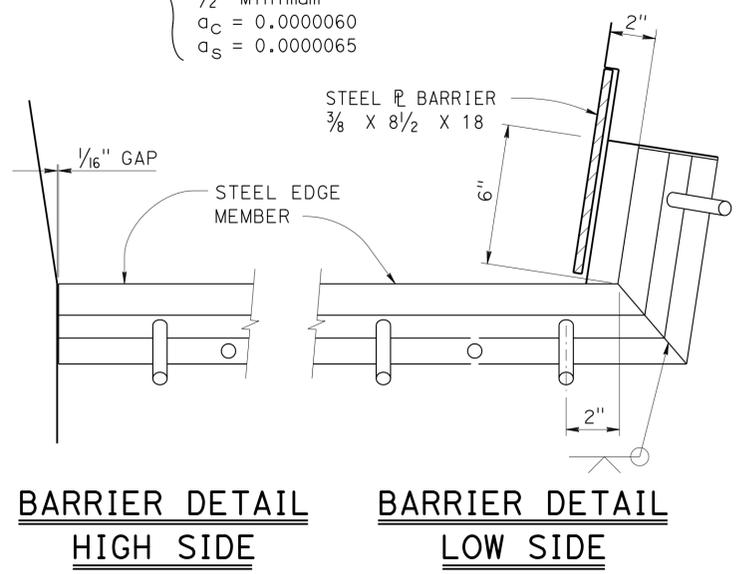
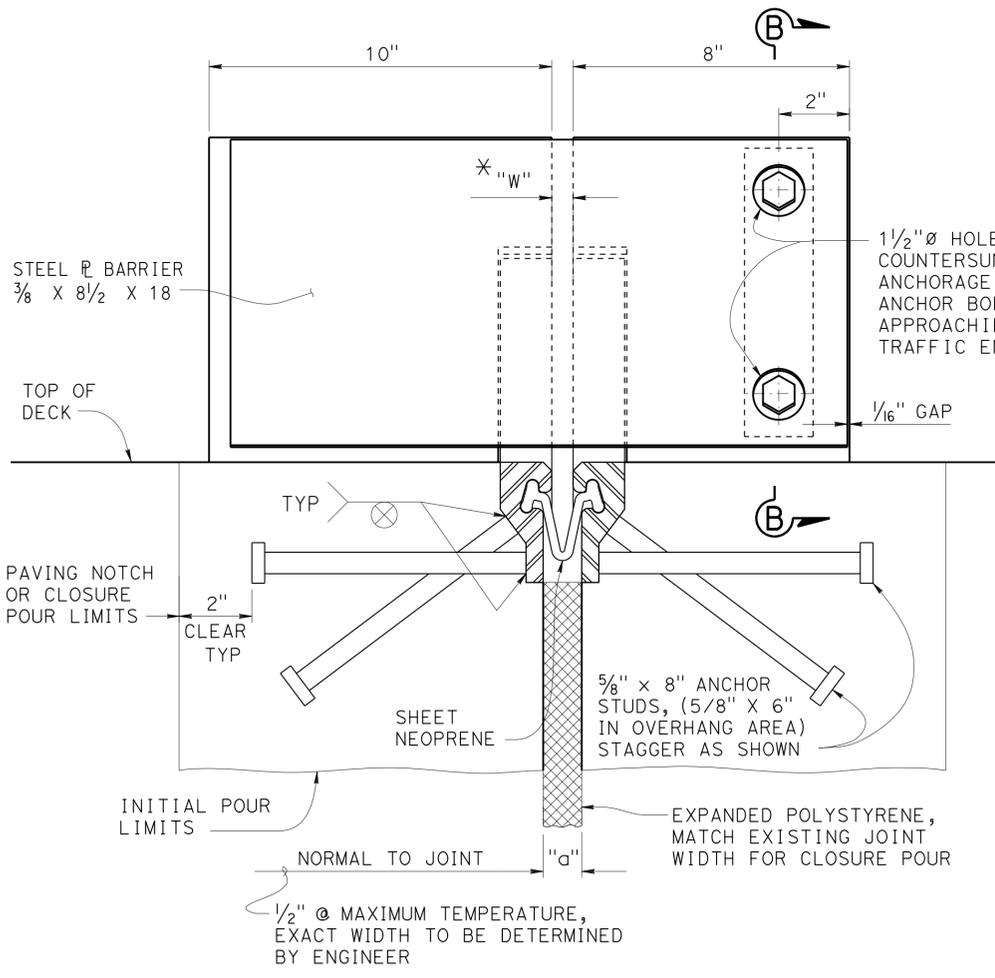
NOTES:

- Alternatively, fillet or full penetration welds may be used at anchor studs.
- Alternate types of anchor studs may be permitted subject to the approval by the Engineer
- Joint seal assembly to be used in conjunction with closure pour. (See other sheets for limits). Closure pour shall not be placed until final deck surface is within the tolerances specified
- Use joint at crown of roadway, at any change in traverse slope in deck and at changes in horizontal direction. Place other joints at or near lanes. All metal parts to be painted or galvanized after fabrication
- Sheet Neoprene shall be fabricated in one continuous piece and shall be fabricated to bend around corners. Field splices of the neoprene are not allowed.
- Insert assembly or expansion anchorage for 5/8" x 1 3/4" bolts. Use installation bolts extended 1/2" minimum past nut and coat with bond breaker, after concrete has cured, remove installation bolts, install A325 bolts and sheet neoprene
- Sidewalk Detail similar to Barrier Detail on low side at both sides if the roadway is crowned or if the difference in elevation between the ends of the seal is 0.5' or less
- a_c, a_s , are the thermal expansion coefficients for concrete and steel respectively.

JOINT INFORMATION			"a" DIMENSIONS		
LOCATION	MOVEMENT RATING (MR)	SKEW	WINTER	SPRING & FALL	SUMMER
Abut 1	2 1/2"	20°	2"	1 1/2"	1"
Abut 6	2 1/2"	20°	2"	1 1/2"	1"

* TO SET MINIMUM JOINT OPENING "W"

$$"W" = \begin{cases} \frac{1}{2} + [(Max\ Str\ temperature\ in\ F^\circ) - (actual\ Str\ temperature\ in\ F^\circ)] * (a_c\ or\ a_s) * (12) * (contributory\ L\ in\ feet) \\ \frac{1}{2} \text{ Minimum} \\ a_c = 0.0000060 \\ a_s = 0.0000065 \end{cases}$$



NO SCALE

MOJAVE RIVER BRIDGE

JOINT SEAL ASSEMBLY

MAXIMUM MOVEMENT RATING = 4"

STANDARD DRAWING

FILE NO. **xs8-010**

APPROVAL DATE June 2012

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 54C0661

POST MILE 43.93

UNIT: 3589

PROJECT NUMBER & PHASE: 08140000861

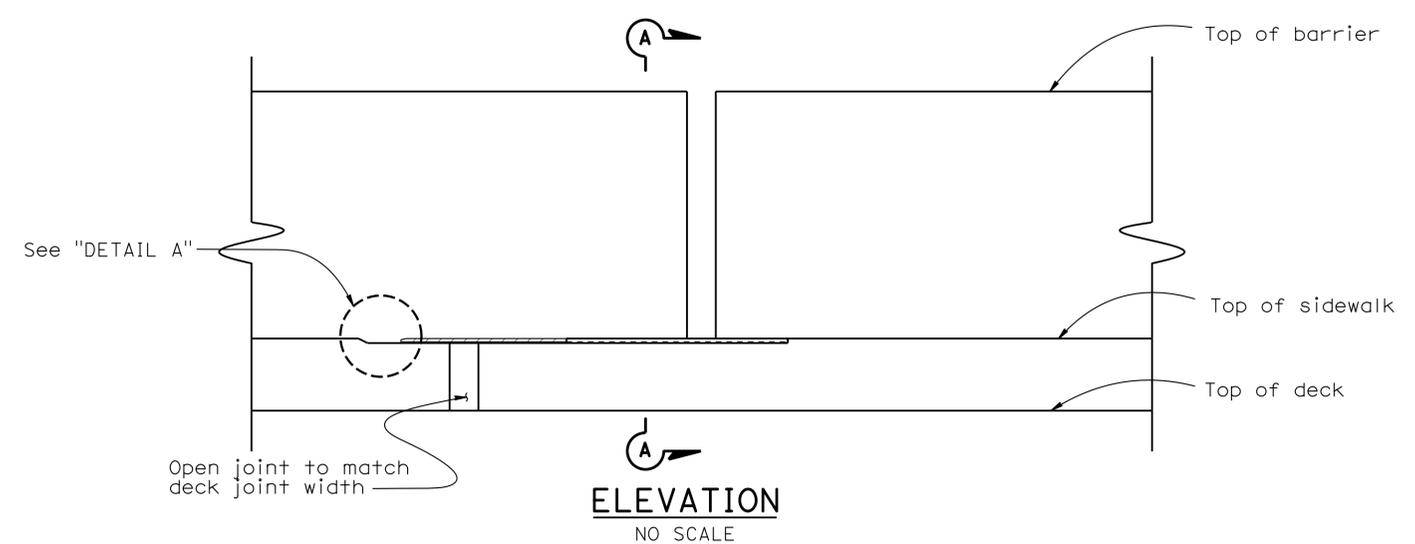
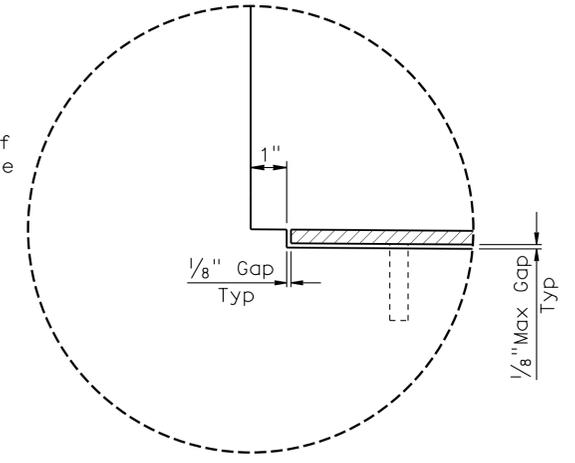
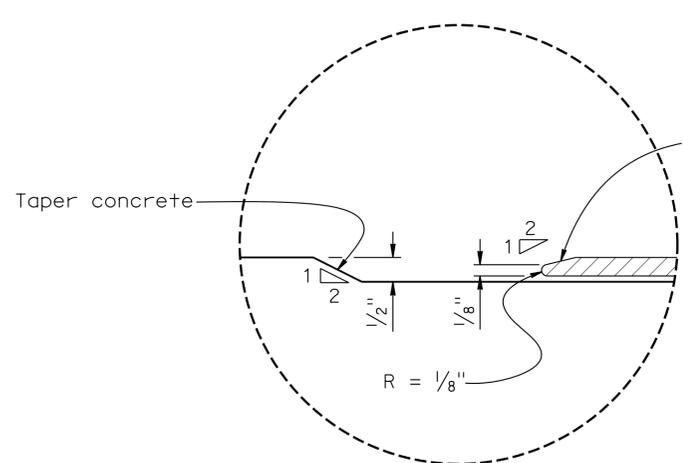
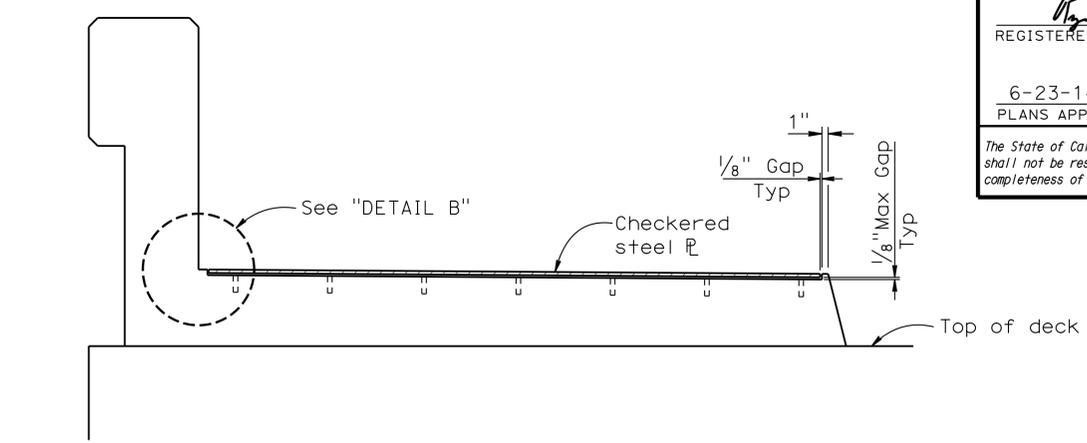
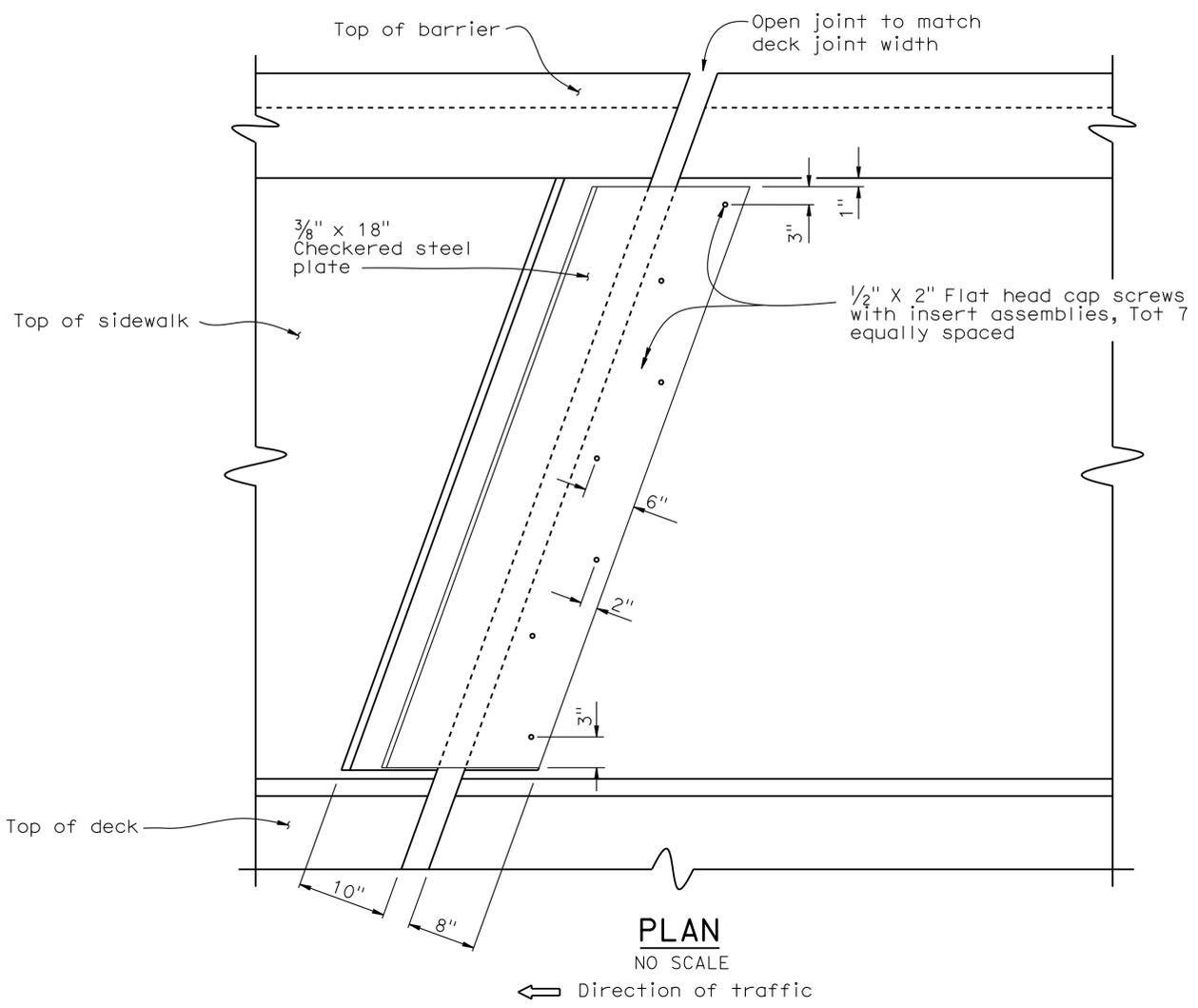
CONTRACT NO.: 08-3555V1

REVISION DATES

2/7/12	6/26/13	10/29/13	6/24/12
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SHEET 22 OF 34

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	665	824
			11-07-13	DATE	
REGISTERED CIVIL ENGINEER			DATE		
6-23-14			PLANS APPROVAL DATE		
			REGISTERED PROFESSIONAL ENGINEER 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.					



- NOTES:
- Utility openings and expansion joints not shown for clarity.
 - Recess concrete 1/2" for plates.
 - Plates to be galvanized.

DESIGN	BY R. Stiltz	CHECKED F. Chen
DETAILS	BY Y. Tang/G. Hallstrom	CHECKED F. Chen
QUANTITIES	BY Y. Tang	CHECKED F. Chen

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54C0661
POST MILE	43.93

MOJAVE RIVER BRIDGE
SIDEWALK COVER PLATE

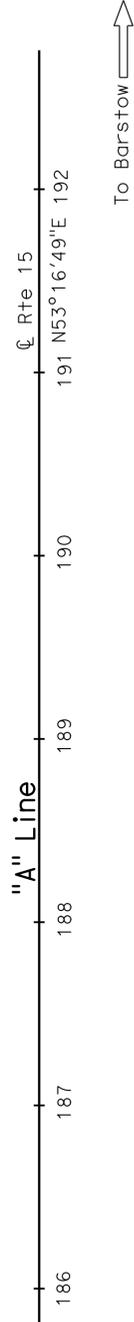
BENCH MARK

These well monument elevations are based off of BM 43.7-92, Elevation= 2697.606 ft. 2 inches brass disk stamped "State of California Division of Highways BM 43.70-92". 45.9 Ft. right of Station 178.5 ± Interstate I-5 NGVD 1929.

To San Bernardino

R-10-001

R-10-002



To Barstow

PLAN
1" = 50'

Station	Soil Description	Elevation
2720	6" Asphalt concrete pavement of road surface over well-graded SAND (SW); brown; dry.	2717.3'
2710	Well-graded SAND with SILT (SW-SM); dense; light brown; moist; few fines; (FILL).	311.4
2700	Well-graded SAND (SW); very dense; brown; moist; few fine GRAVEL.	521.4
2690	Poorly-graded SAND with CLAY (SP-SC); dense; greenish brown; moist; mostly fine and medium; few coarse; trace fine GRAVEL; (NATIVE).	471.4
2680	Well-graded SAND (SW); medium dense; grayish brown; wet; little fines; trace fine GRAVEL.	551.4
2670	Poorly-graded SAND with CLAY (SP-SC); medium dense; grayish brown; wet; mostly fine and medium; few coarse; trace fine GRAVEL.	381.4
2660	Well-graded SAND with CLAY and GRAVEL (SW-SC); dense; grayish brown; wet; little well-graded GRAVEL; few fines.	141.4
2650	SILTY SAND (SM); dense; grayish brown; wet; well-graded SAND; little fines; few fine GRAVEL.	91.4
2640	Well-graded SAND with CLAY and GRAVEL (SW-SC); dense; grayish brown; wet; few fines; trace fine GRAVEL.	241.4
2630	SILTY SAND (SM); dense; grayish brown; wet; medium to fine SAND; little fines; trace GRAVEL.	371.4
2620	SILTY SAND (SM); dense; grayish brown; wet; medium to fine SAND; little fines; trace GRAVEL.	381.4
2610	SILTY SAND (SM); dense; grayish brown; wet; medium to fine SAND; little fines; trace GRAVEL.	341.4
2600	Well-graded SAND with CLAY and GRAVEL (SW-SC); dense; grayish brown; wet; some well-graded SAND; few fines.	361.4
2590	Well-graded SAND with CLAY and GRAVEL (SW-SC); dense; grayish brown; wet; little well-graded GRAVEL; few fines.	521.4
2580	Well-graded SAND with CLAY and GRAVEL (SW-SC); dense; grayish brown; wet; few fines; trace fine GRAVEL.	591.4
2570	Well-graded SAND with CLAY and GRAVEL (SW-SC); dense; grayish brown; wet; few fines; trace fine GRAVEL.	391.4
2560	Well-graded SAND with CLAY and GRAVEL (SW-SC); dense; grayish brown; wet; few fines; trace fine GRAVEL.	461.4
2550	Well-graded SAND with CLAY and GRAVEL (SW-SC); dense; grayish brown; wet; few fines; trace fine GRAVEL.	741.4
2540	Well-graded SAND with CLAY and GRAVEL (SW-SC); dense; grayish brown; wet; few fines; trace fine GRAVEL.	461.4

Terminated at Elev 2545.8'

ERI = 68%

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

186+00

187+00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	666	824

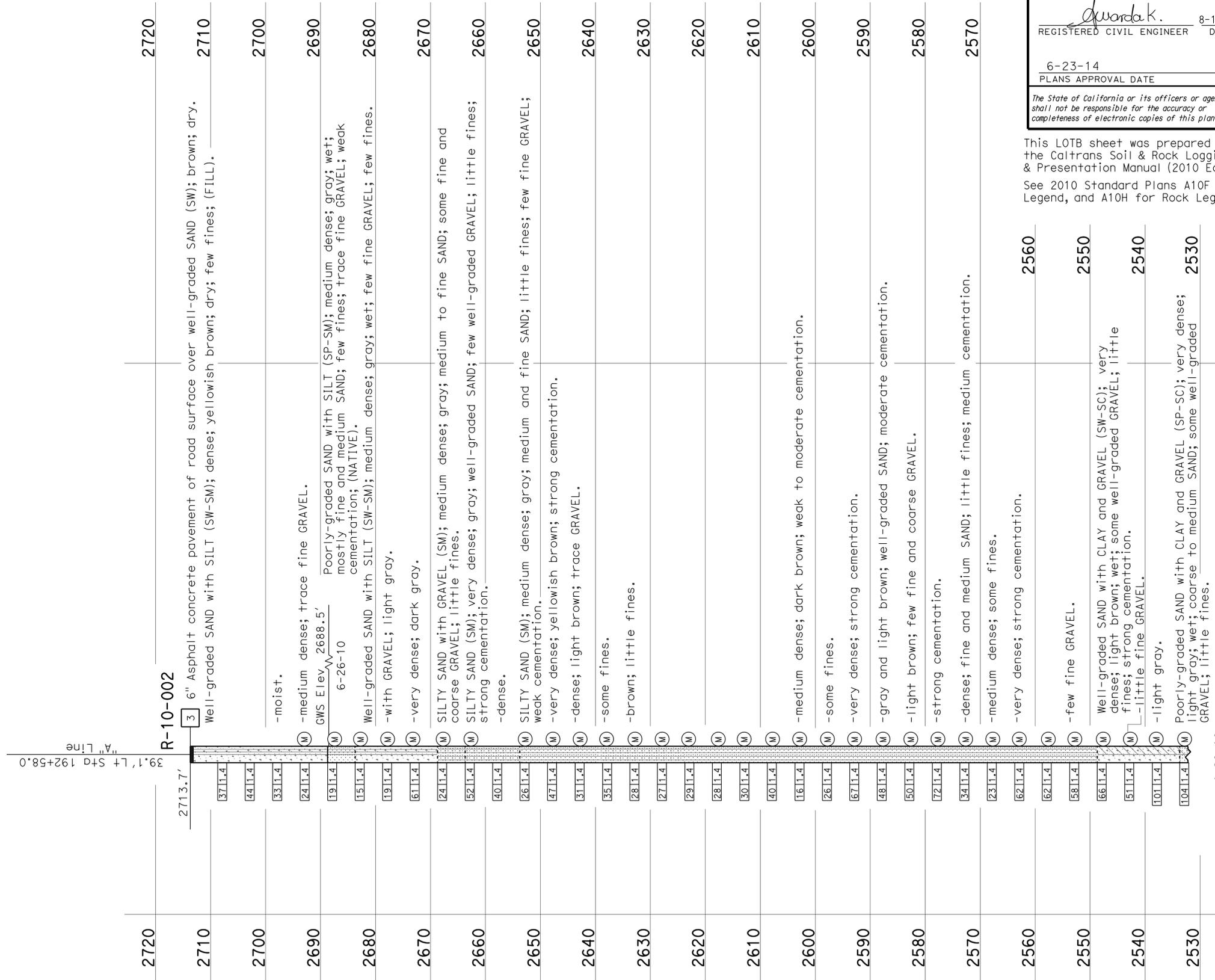
REGISTERED CIVIL ENGINEER
DATE: 8-14-13
PLANS APPROVAL DATE: 6-23-14

Hassan Ibrahim
No. C59016
Exp. 6-30-15
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.

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: LOTB sheets from 3 of 11 to 10 of 11, are based on the Soil & Rock Logging Classification Manual (Field Guide) August 1996.

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 11"



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	667	824

Asef Wardak
 REGISTERED CIVIL ENGINEER
 DATE 8-14-13
 6-23-14
 PLANS APPROVAL DATE

No. C61960
 Exp. 9-30-13
 CIVIL
 STATE OF CALIFORNIA

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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.

PROFILE
Horiz: 1" = 20'
Vert: 1" = 10'

192+00

194+00

ENGINEERING SERVICES

MATERIALS AND GEOTECHNICAL SERVICES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

MOJAVE RIVER BRIDGE
LOG OF TEST BORINGS 2 OF 11

FUNCTIONAL SUPERVISOR
NAME: A. Perez-Cobo

DRAWN BY: F. Nguyen
CHECKED BY: S. Logeswaran

FIELD INVESTIGATION BY:
A. Wardak

BRIDGE NO.
54C0661
POST MILE
43.93

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	669	824

8-14-13
 REGISTERED CIVIL ENGINEER DATE

6-23-14
 PLANS APPROVAL DATE

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FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"

LEGEND OF BORING OPERATIONS

2 1/4" CONE PENETROMETER

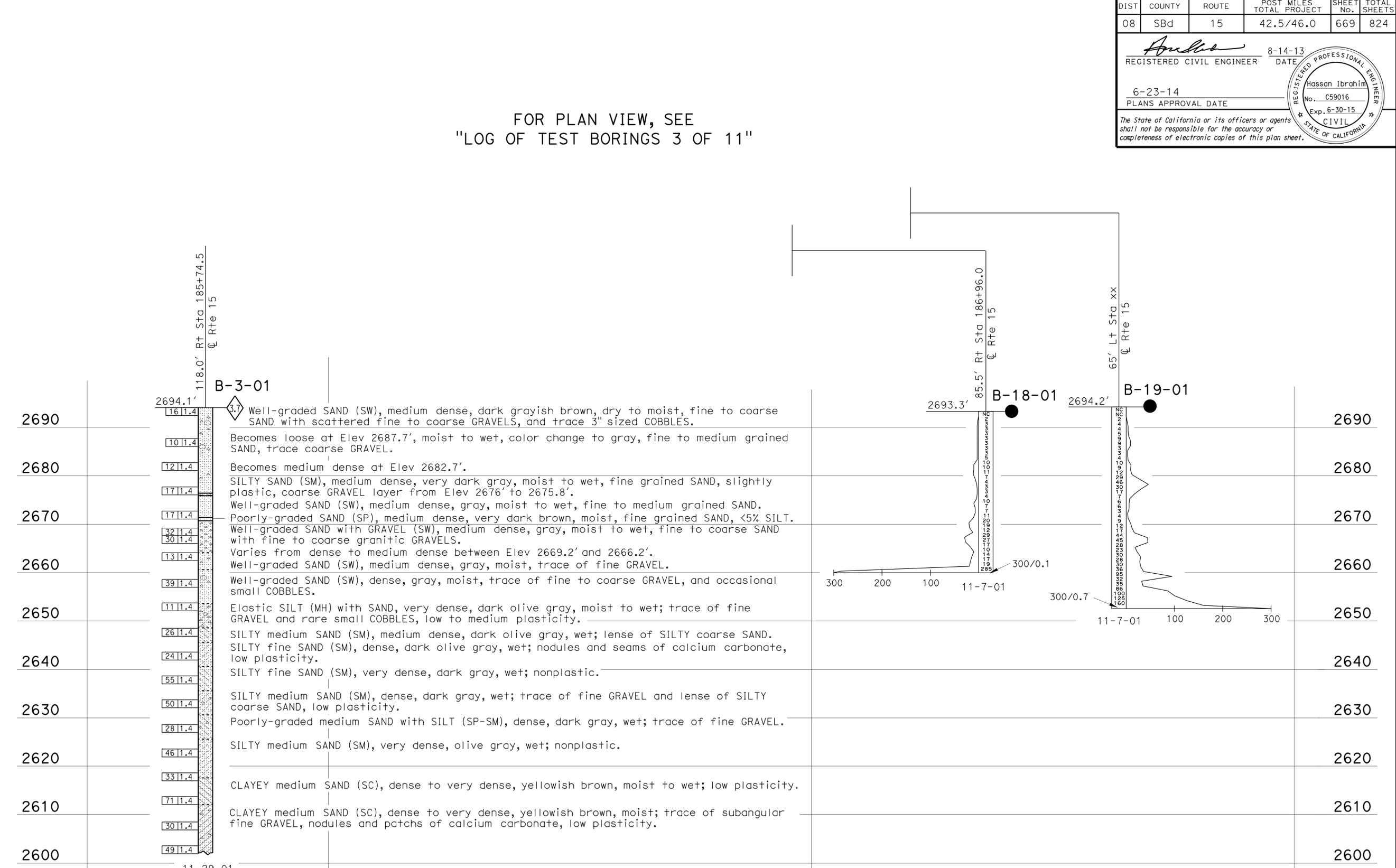
LEGEND OF EARTH MATERIALS

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

SPT No./Blows (ft)	0-4	5-10	11-30	31-50	51-70	71-100	101-150	151-200	201-300	301-400	401-500	501-600	601-700	701-800	801-900	901-1000
Consistency	Very Loose	Loose	Medium Dense	Dense	Very Dense	Very Hard	Hard	Very Stiff	Stiff	Medium Stiff	Soft	Very Soft	Comesive			

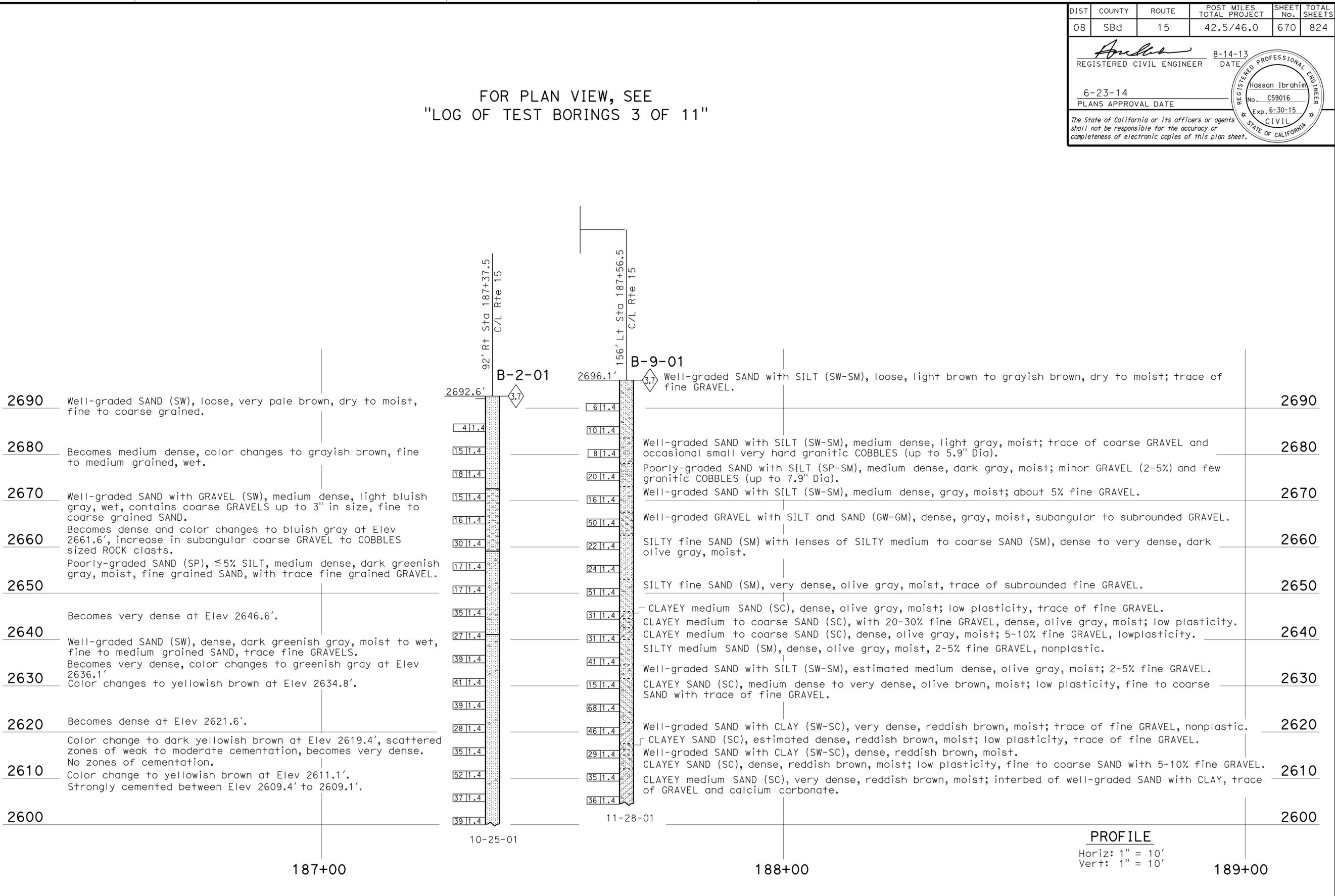
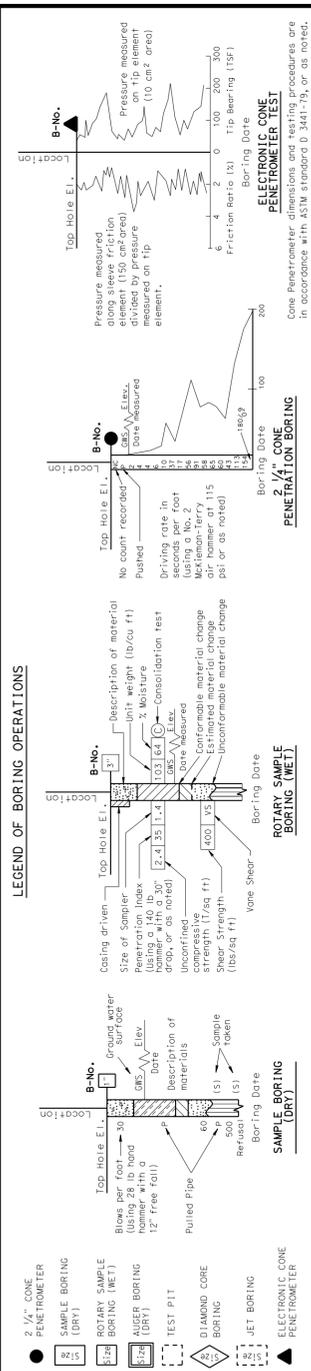
NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



185+50	186+00	187+00	188+00
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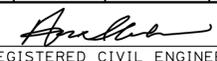
ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS	FIELD INVESTIGATION BY: E. Neupert	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 54C0661 POST MILE 43.93	MOJAVE RIVER BRIDGE LOG OF TEST BORINGS 4 OF 11
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FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"



ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS	FIELD INVESTIGATION BY: E. Neupert, F. Gerami	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 54C0661 POST MILE 43.93	MOJAVE RIVER BRIDGE LOG OF TEST BORINGS 5 OF 11
DRAWN BY I. G. Remmen	CHECKED BY A. Wardak					

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	671	824


 REGISTERED CIVIL ENGINEER 8-14-13
 DATE

6-23-14
 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.

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"

LEGEND OF BORING OPERATIONS

2 1/4" CONE PENETROMETER

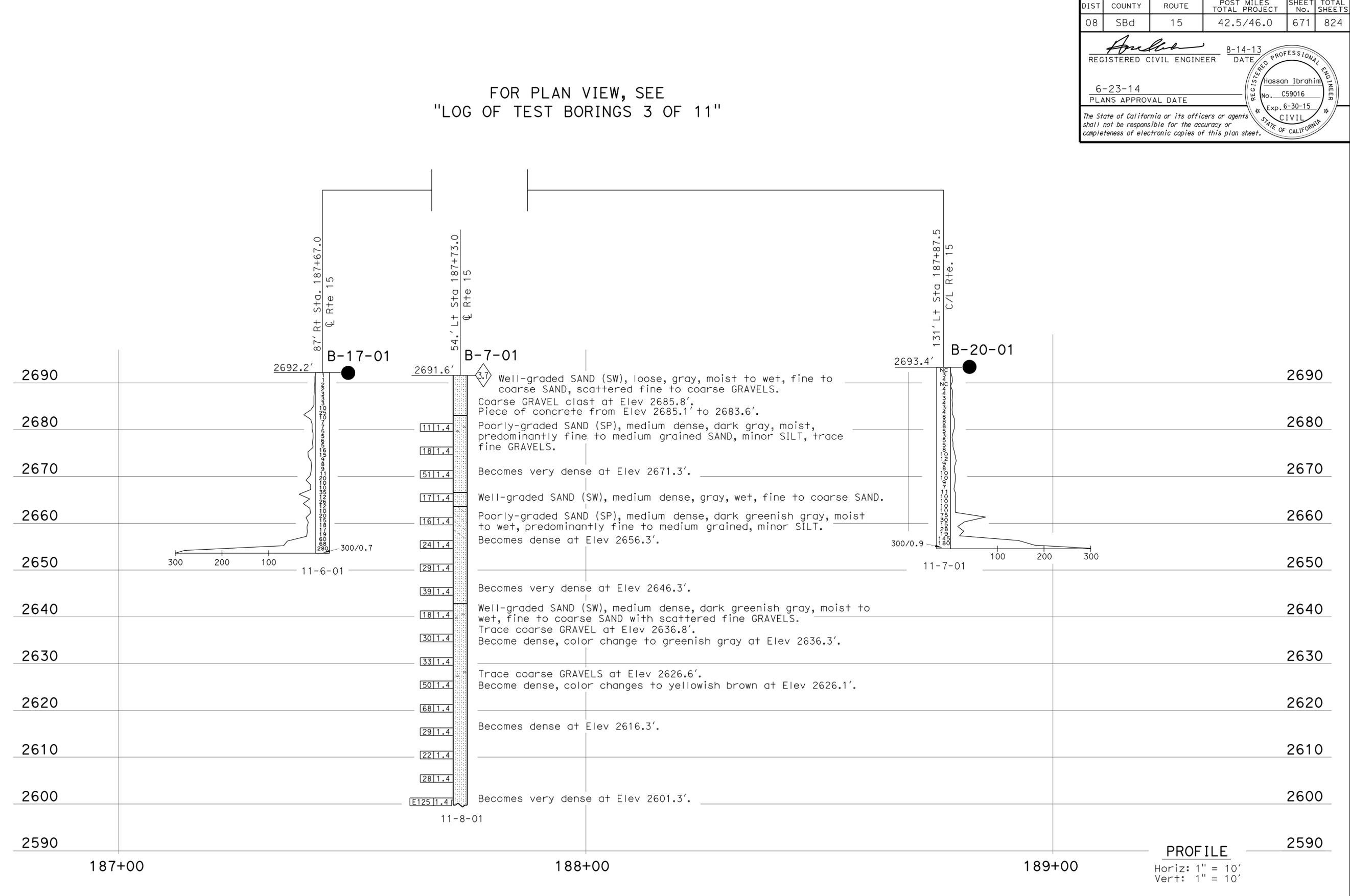
LEGEND OF EARTH MATERIALS

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

SPT No./Blows (ft)	Soil Consistency
0-4	Very Loose
5-10	Loose
11-30	Medium Dense
31-50	Dense
51-60	Very Dense

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS	FIELD INVESTIGATION BY: E. Neupert, F. Gerami	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DRAWN BY: I. G. Remmen	CHECKED BY: A. Wardak	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.: 54C0661 POST MILE: 43.93
MOJAVE RIVER BRIDGE			LOG OF TEST BORINGS 6 OF 11

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"

LEGEND OF BORING OPERATIONS

LEGEND OF EARTH MATERIALS

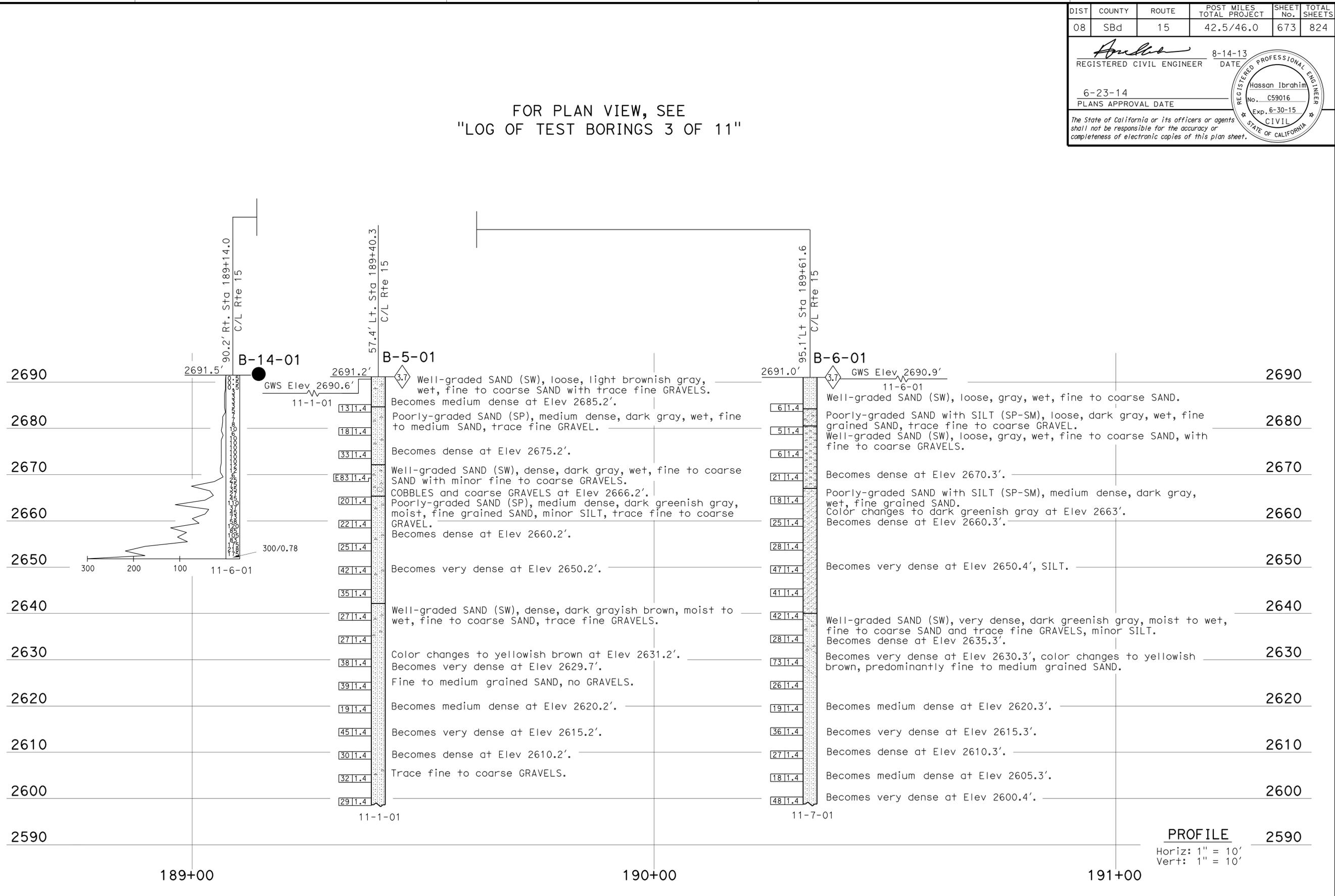
CONSISTENCY CLASSIFICATION FOR SOILS

LEGEND OF BORING OPERATIONS (CONT.)

LEGEND OF EARTH MATERIALS (CONT.)

CONSISTENCY CLASSIFICATION FOR SOILS (CONT.)

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS	FIELD INVESTIGATION BY: E. Neupert, F. Gerami	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 54C0661 POST MILE 43.93	MOJAVE RIVER BRIDGE LOG OF TEST BORINGS 8 OF 11
DRAWN BY I. G. Remmen	CHECKED BY A. Wardak					REVISION DATES 08-07-13

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3
 UNIT: 3643
 PROJECT NUMBER & PHASE: 08140000861
 CONTRACT NO.: 08-3555V1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 SHEET 31 OF 34

USERNAME => s124496 DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 11:48

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"

LEGEND OF BORING OPERATIONS

2 1/4" CONE PENETROMETER

3/8" SAMPLE BORING (DRY)

3/8" POSTHOLE SAMPLE BORING (WET)

AUER BORING (WET)

TEST PIT

DIAMOND CORE BORING

JET BORING

ELECTRONIC CONE PENETROMETER

LEGEND OF EARTH MATERIALS

GRAVEL

SAND

SILT

CLAY

SANDY CLAY or CLAY SAND

SANDY SILT or SILTY SAND

SILTY CLAY

CLAYEY SILT

PEAT and/or ORGANIC MATTER

COBBLES and/or Boulders

IGNEOUS ROCK

SEDIMENTARY ROCK

METAMORPHIC ROCK

LEGEND OF BORING OPERATIONS (continued)

POSTHOLE SAMPLE BORING (WET)

SAMPLE BORING (DRY)

LEGEND OF BORING OPERATIONS (continued)

CONCRETE

REINFORCING BARS

STEEL

WOOD

BRICK

ASPHALT

GRAVEL

SAND

SILT

CLAY

CONCRETE

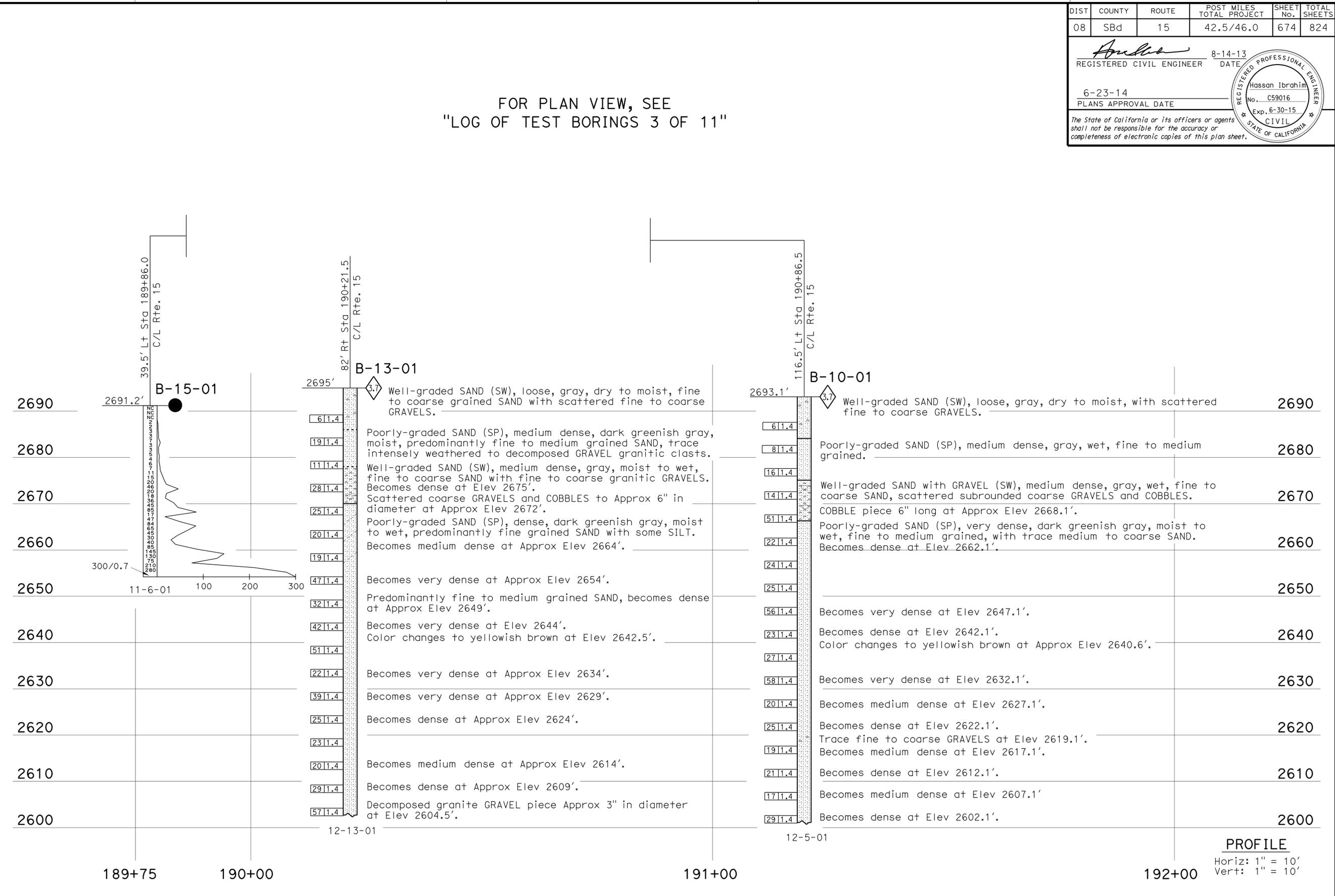
REINFORCING BARS

STEEL

WOOD

BRICK

ASPHALT



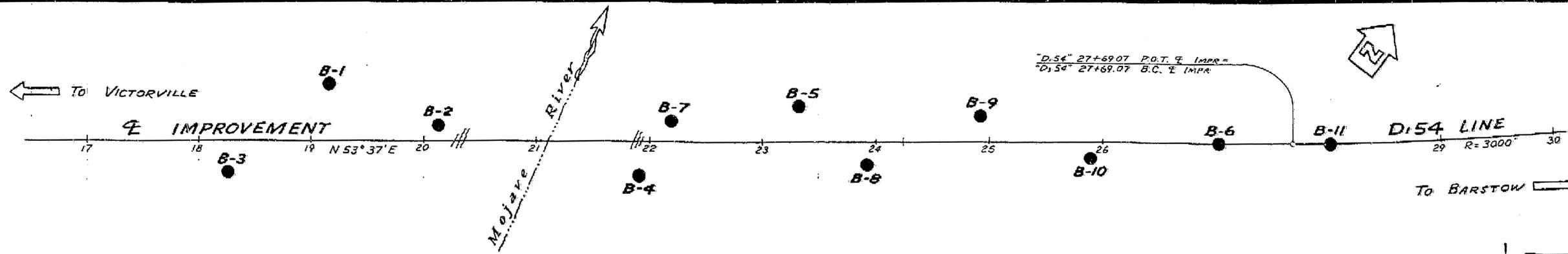
CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

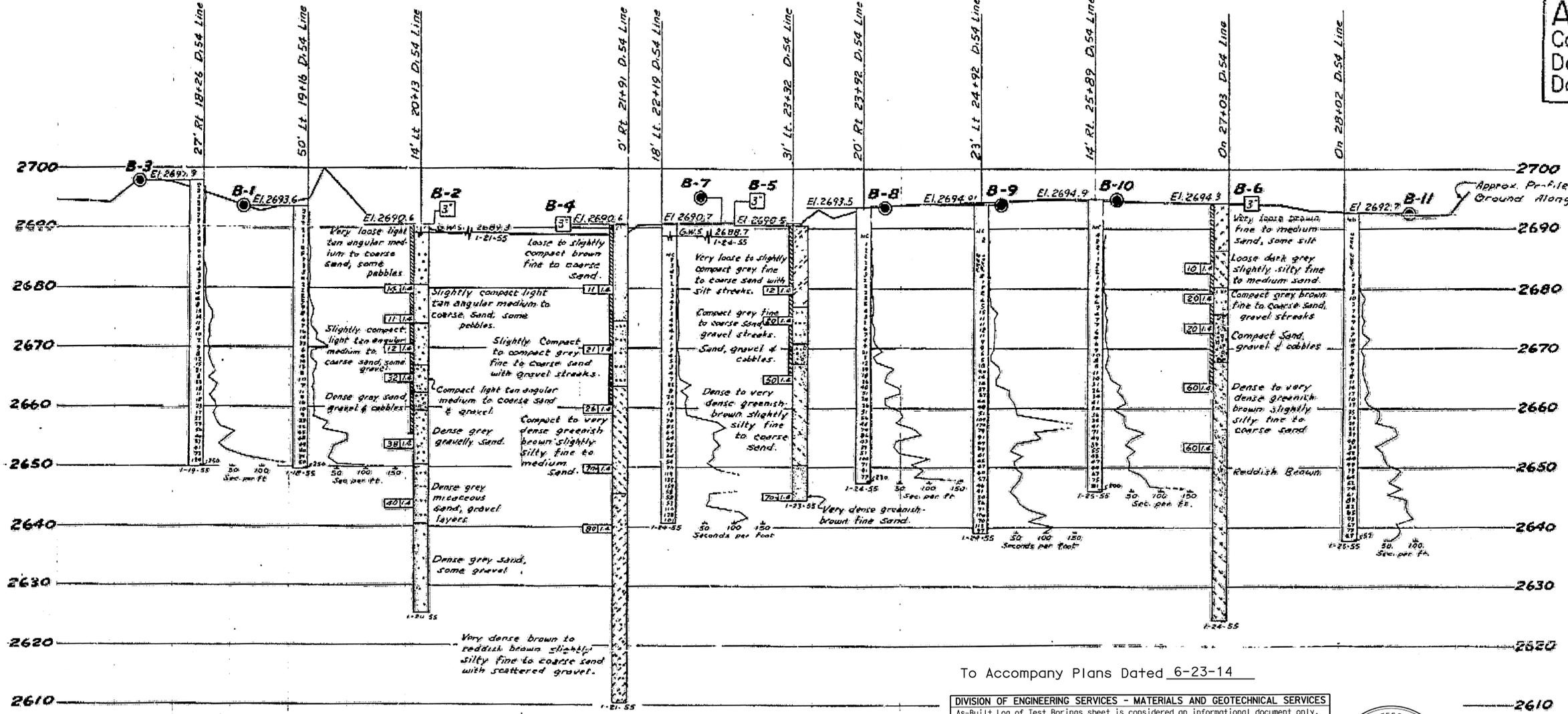
SPT No./Blows (ft)	Consistency
0-4	Very Loose
5-10	Loose
11-30	Medium Dense
31-50	Dense
51-70	Very Dense
71-90	Very Dense
91-110	Very Dense
111-130	Very Dense
131-150	Very Dense
151-170	Very Dense
171-190	Very Dense
191-210	Very Dense
211-230	Very Dense
231-250	Very Dense
251-270	Very Dense
271-290	Very Dense
291-310	Very Dense
311-330	Very Dense
331-350	Very Dense
351-370	Very Dense
371-390	Very Dense
391-410	Very Dense
411-430	Very Dense
431-450	Very Dense
451-470	Very Dense
471-490	Very Dense
491-510	Very Dense
511-530	Very Dense
531-550	Very Dense
551-570	Very Dense
571-590	Very Dense
591-610	Very Dense
611-630	Very Dense
631-650	Very Dense
651-670	Very Dense
671-690	Very Dense
691-710	Very Dense
711-730	Very Dense
731-750	Very Dense
751-770	Very Dense
771-790	Very Dense
791-810	Very Dense
811-830	Very Dense
831-850	Very Dense
851-870	Very Dense
871-890	Very Dense
891-910	Very Dense
911-930	Very Dense
931-950	Very Dense
951-970	Very Dense
971-990	Very Dense
991-1010	Very Dense
1011-1030	Very Dense
1031-1050	Very Dense
1051-1070	Very Dense
1071-1090	Very Dense
1091-1110	Very Dense
1111-1130	Very Dense
1131-1150	Very Dense
1151-1170	Very Dense
1171-1190	Very Dense
1191-1210	Very Dense
1211-1230	Very Dense
1231-1250	Very Dense
1251-1270	Very Dense
1271-1290	Very Dense
1291-1310	Very Dense
1311-1330	Very Dense
1331-1350	Very Dense
1351-1370	Very Dense
1371-1390	Very Dense
1391-1410	Very Dense
1411-1430	Very Dense
1431-1450	Very Dense
1451-1470	Very Dense
1471-1490	Very Dense
1491-1510	Very Dense
1511-1530	Very Dense
1531-1550	Very Dense
1551-1570	Very Dense
1571-1590	Very Dense
1591-1610	Very Dense
1611-1630	Very Dense
1631-1650	Very Dense
1651-1670	Very Dense
1671-1690	Very Dense
1691-1710	Very Dense
1711-1730	Very Dense
1731-1750	Very Dense
1751-1770	Very Dense
1771-1790	Very Dense
1791-1810	Very Dense
1811-1830	Very Dense
1831-1850	Very Dense
1851-1870	Very Dense
1871-1890	Very Dense
1891-1910	Very Dense
1911-1930	Very Dense
1931-1950	Very Dense
1951-1970	Very Dense
1971-1990	Very Dense
1991-2010	Very Dense
2011-2030	Very Dense
2031-2050	Very Dense
2051-2070	Very Dense
2071-2090	Very Dense
2091-2110	Very Dense
2111-2130	Very Dense
2131-2150	Very Dense
2151-2170	Very Dense
2171-2190	Very Dense
2191-2210	Very Dense
2211-2230	Very Dense
2231-2250	Very Dense
2251-2270	Very Dense
2271-2290	Very Dense
2291-2310	Very Dense
2311-2330	Very Dense
2331-2350	Very Dense
2351-2370	Very Dense
2371-2390	Very Dense
2391-2410	Very Dense
2411-2430	Very Dense
2431-2450	Very Dense
2451-2470	Very Dense
2471-2490	Very Dense
2491-2510	Very Dense
2511-2530	Very Dense
2531-2550	Very Dense
2551-2570	Very Dense
2571-2590	Very Dense
2591-2610	Very Dense
2611-2630	Very Dense
2631-2650	Very Dense
2651-2670	Very Dense
2671-2690	Very Dense

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS	FIELD INVESTIGATION BY: E. Neupert, F. Gerami	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DRAWN BY: I. G. Remmen	CHECKED BY: A. Wardak	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.: 54C0661 POST MILE: 43.93
MOJAVE RIVER BRIDGE			LOG OF TEST BORINGS 9 OF 11



AS BUILT PLANS
 Contract No. 57-RVC-12
 Date Completed _____
 Document No. 80000790



Text Boring By Bridge Dept.

B.M. D-54 2054
 Sp. Hd. Nail in 2x2 Wood Hub
 buried 14" 78" D. 18x718
 Elev. 2697.93

B.M. D-54 3A24
 Sp. Hd. Nail in 2x2 Wood Hub
 buried 18" 79" D. 24x54
 Elev. 2677.88

To Accompany Plans Dated 6-23-14

DIVISION OF ENGINEERING SERVICES - MATERIALS AND GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
08	SBd	15	42.5/46.0	676	824

August 14, 2013

MOJAVE RIVER BRIDGE
 LOG OF TEST BORINGS 11 OF 11

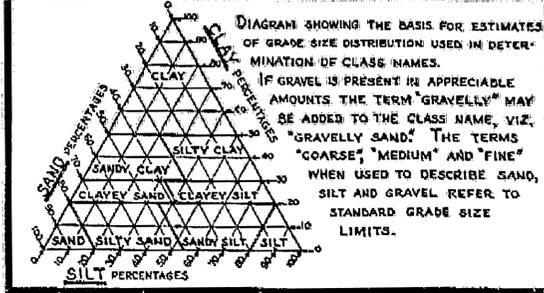
UNIT: 3643 CONTRACT No. BRIDGE No.
 PROJ. No. & PHASE: 08000006211 08-3555V1 54C0661

AS-BUILT VERT DATUM: NGVD29 CONVERSION: NGVD29 + 2.7 Ft Sheet of

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA 34 34



CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS



LEGEND OF EARTH MATERIALS

- GRAVEL
- SAND
- SILT
- CLAY
- SANDY CLAY OR CLAYEY SAND
- SANDY SILT OR SILTY SAND
- SILTY CLAY OR CLAYEY SILT
- PEAT AND/OR ORGANIC MATTER
- FILL MATERIAL
- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

LEGEND OF

- PLAN OF ANY BORING
- PENETROMETER
- 2 1/4" CONE PENETROMETER
- SAMPLER BORING (DRY)
- ROTARY BORING (WET)
- AUGER BORING (DRY)
- JET BORING
- CORE BORING
- TEST PIT

FIELD STUDY
 DRAWN
 CHECKED
 APPROVED

44

2610 AS BUILT *J.R.H.* 1-7-58 BR REP

NOTES

The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

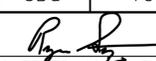
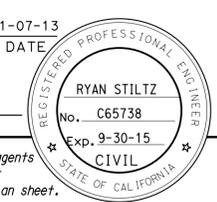
STATE OF CALIFORNIA
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

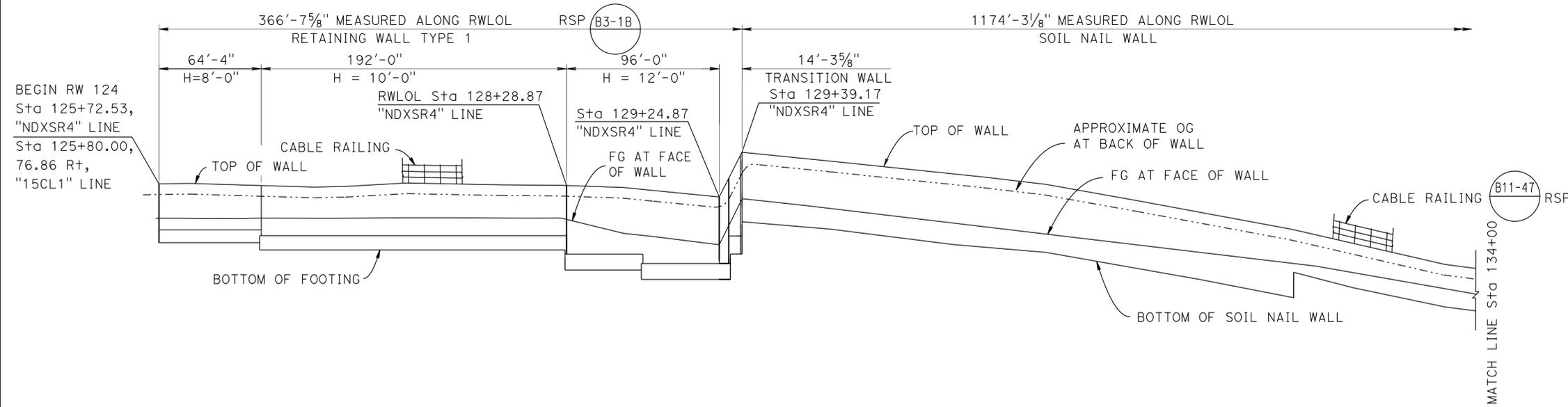
MOJAVE RIVER BRIDGE

LOG OF TEST BORINGS

Horizontal Scale 1" = 50'
 Vertical Scale 1" = 10'

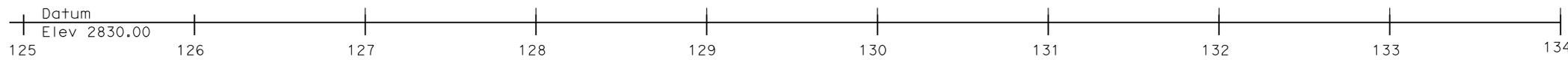
BRIDGE 54-483 FILE DRAWING C-4170-9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	677	824
 REGISTERED CIVIL ENGINEER			11-07-13 DATE		
6-23-14 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>					

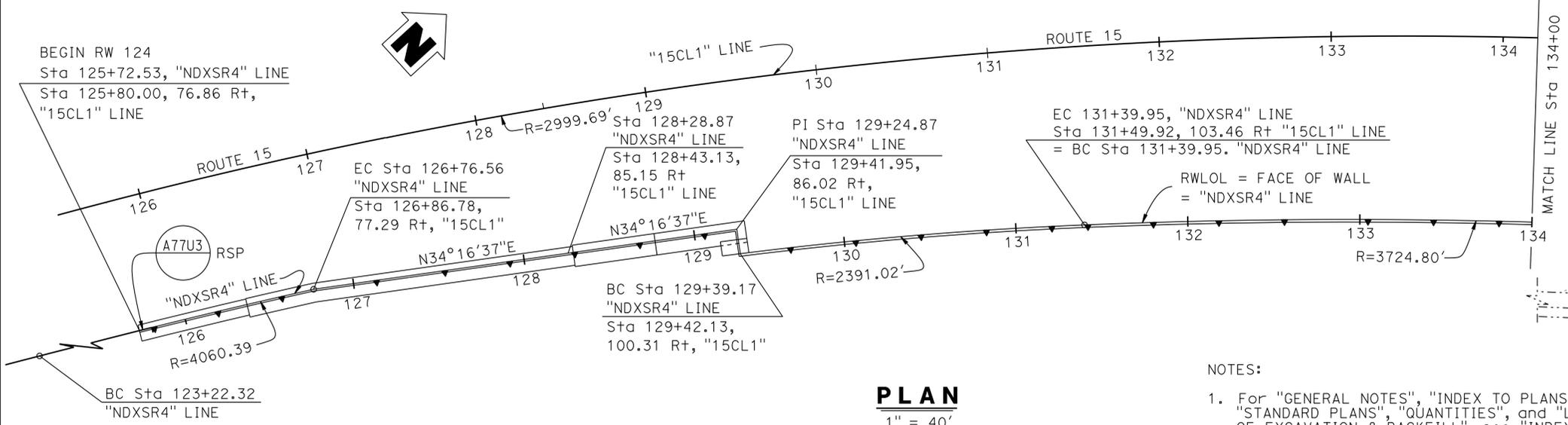


CURVE DATA

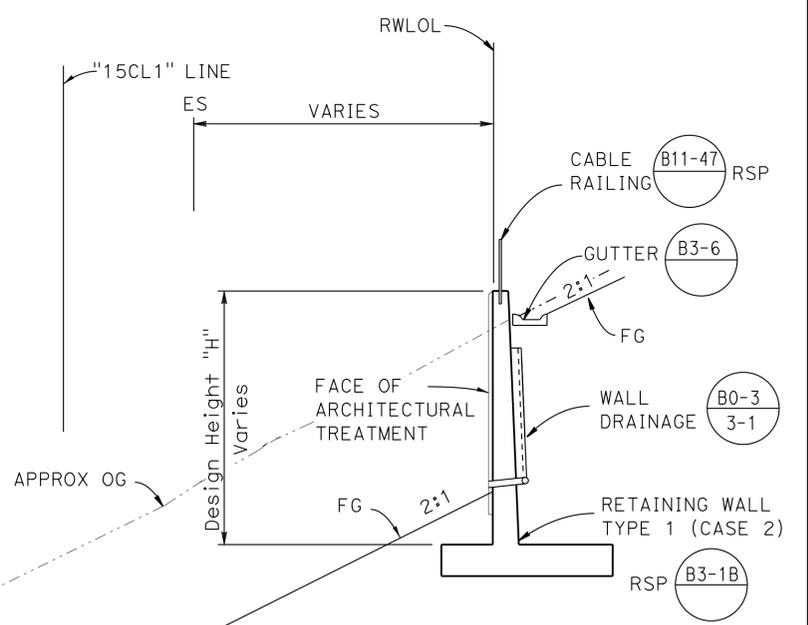
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Δ=30°24'51"	Δ=04°59'55"	Δ=04°48'40"	Δ=13°17'18"
T=815.39'	T=177.23'	T=100.45'	T=433.88'
L=1592.31'	L=354.24'	L=200.78'	L=863.87'



MIRRORED DEVELOPED ELEVATION



PLAN
1" = 40'



TYPE 1 WALL TYPICAL SECTION

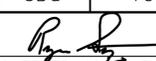
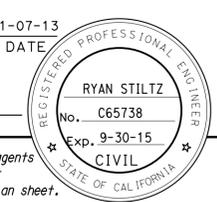
1/4" = 1'-0"
Sta 125+73.53 to Sta 129+39.17

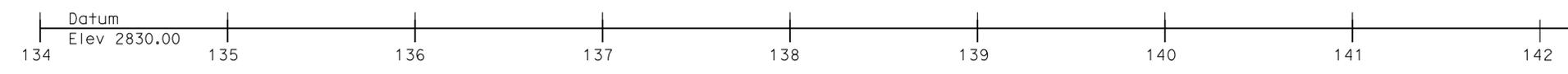
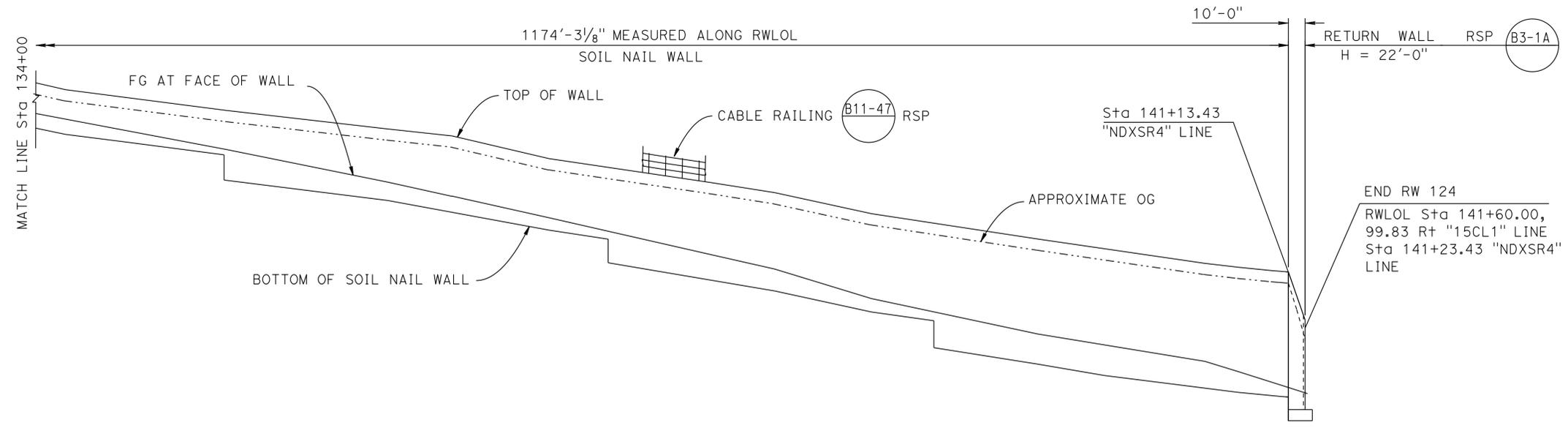
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

- NOTES:
- For "GENERAL NOTES", "INDEX TO PLANS", "STANDARD PLANS", "QUANTITIES", and "LIMITS OF EXCAVATION & BACKFILL", see "INDEX TO PLANS" Sheet.
 - For wall elevations, see "STRUCTURE PLANS".
 - For Soil Nail Wall "TYPICAL SECTION", see "GENERAL PLAN NO. 2" sheet.

DESIGN ENGINEER DANIEL T. ADAMS	DESIGN	BY: F. Chen	CHECKED: A. McPhee	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.	RETAINING WALL NO. 124 GENERAL PLAN NO. 1
	DETAILS	BY: D. Wooten	CHECKED: A. McPhee	LAYOUT	BY: F. Chen			CHECKED: A. McPhee	
	QUANTITIES	BY: F. Chen	CHECKED: A. McPhee	SPECIFICATIONS	BY: K. Doll	CHECKED: K. Doll	42.7		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						UNIT: 3589 PROJECT NUMBER & PHASE: 08140000861		CONTRACT NO.: 08-3555V1	
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)								DISREGARD PRINTS BEARING EARLIER REVISION DATES	
								REVISION DATES 7-18-13 11-04-13 9-23-13 10-15-13	
								SHEET 1 OF 19	

USERNAME => s124496 DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 12:05

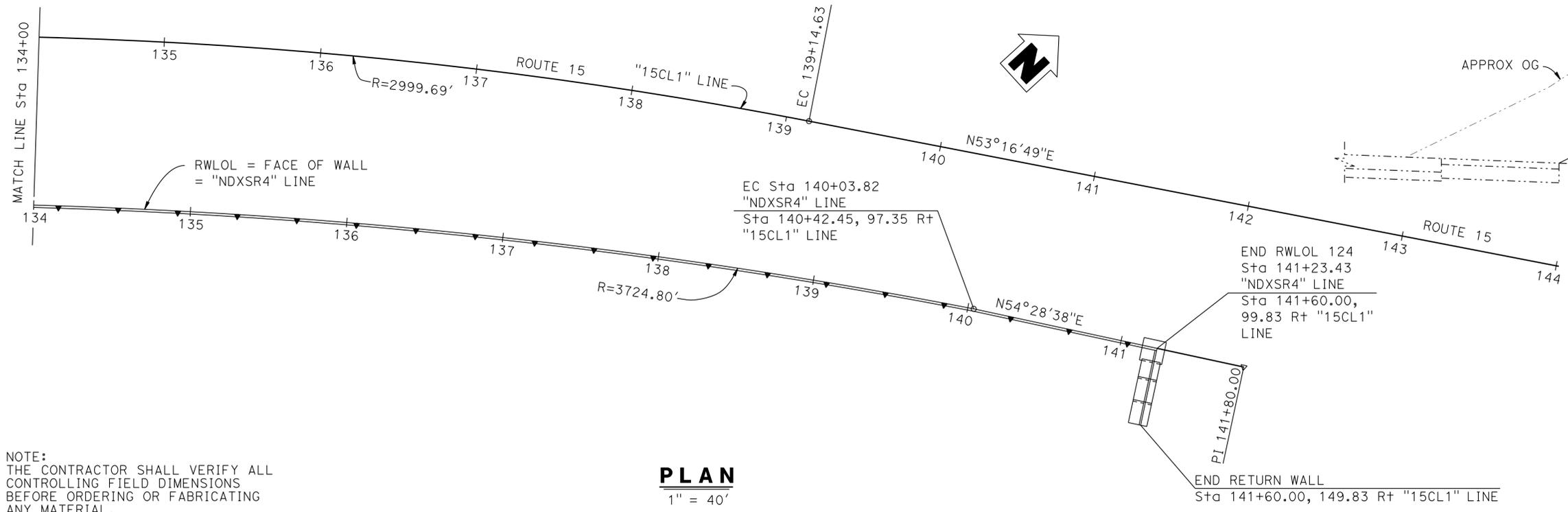
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	678	824
 REGISTERED CIVIL ENGINEER			11-07-13	DATE	
6-23-14 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



CURVE DATA
 R=2999.69' R=3724.80'
 $\Delta=30^{\circ}24'51''$ $\Delta=00^{\circ}00'00''$
 T=xxxx.xx' T=xxx.xx'
 L=1592.31' L=863.87'

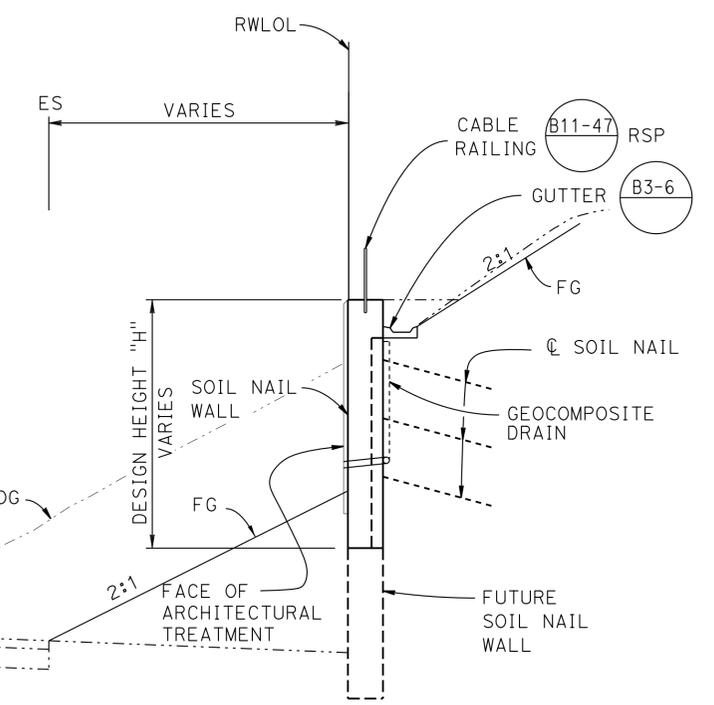
MIRRORED DEVELOPED ELEVATION

Vert. 1" = 10'
 Horiz. 1" = 40'



PLAN
 1" = 40'

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



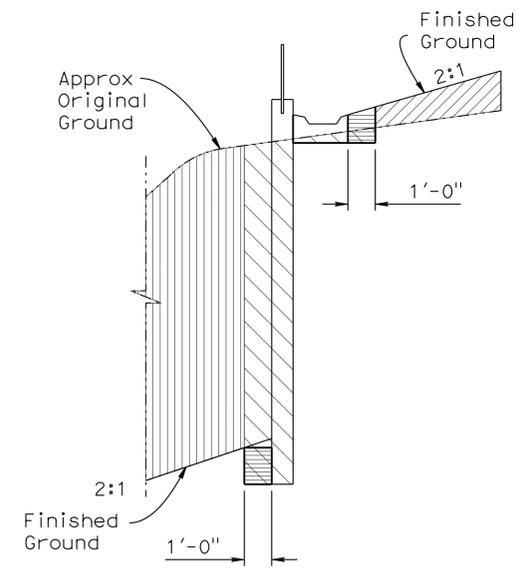
SOIL NAIL WALL TYPICAL SECTION

1/4" = 1'-0"
 STA 129+39.17 TO STA 141+13.43

- NOTES:
- For "GENERAL NOTES", "INDEX TO PLANS", "STANDARD PLANS", "QUANTITIES", and "LIMITS OF EXCAVATION & BACKFILL", see "INDEX TO PLANS" Sheet.
 - For wall elevations, see "STRUCTURE PLANS".

DESIGN BY F. Chen CHECKED A. McPhee		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	RETAINING WALL NO. 124 GENERAL PLAN NO. 2
DETAILS BY D. Wooten CHECKED A. McPhee				54E0131	
QUANTITIES BY F. Chen CHECKED A. McPhee				POST MILE 42.7	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			UNIT: 3589 PROJECT NUMBER & PHASE: 08140000861	CONTRACT NO.: 08-3555V1	DISREGARD PRINTS BEARING EARLIER REVISION DATES
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			0 1 2 3	REVISION DATES: 9-11-13, 9-24-13, 10-15-13, 11-04-13	SHEET 2 OF 19

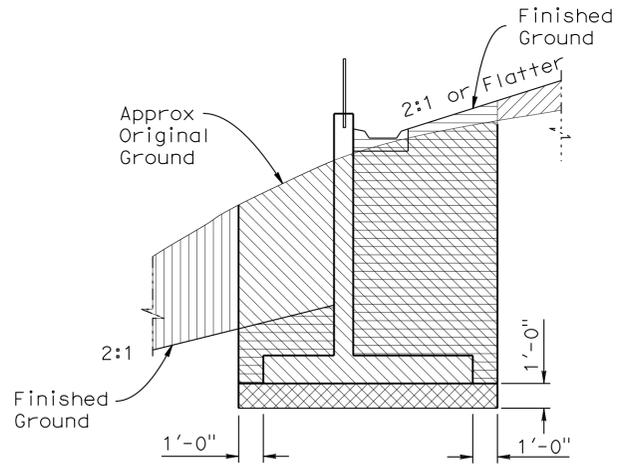
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	679	824
			11-07-13	REGISTERED CIVIL ENGINEER DATE	
			6-23-14	PLANS APPROVAL DATE	
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



SOIL NAIL WALL EXCAVATION & BACKFILL

NO SCALE

Sta 129+39.17, "NDXSR4" LINE
to Sta 141+13.43 "NDXSR4" LINE



RETAINING WALL TYPE 1 EXCAVATION & BACKFILL

NO SCALE

Sta 175+72.53 "NDXSR4" LINE to Sta 129+39.17 "NDXSR4" LINE
Sta 141+13.43 "NDXSR4" LINE to Sta 141+23.43 "NDXSR4" LINE

LEGEND:

	Structure Excavation (Retaining Wall)		Roadway Excavation (see Roadway Plan)
	Structure Excavation (Soil Nail Wall)		Roadway Backfill (see Roadway Plan)
	Structure Backfill (Retaining Wall)		Structure Overexcavation & Backfill to 95% relative compaction
	Structure Backfill (Soil Nail Wall)		

GENERAL NOTES

DESIGN (TYPE 1 RETAINING WALL): AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th Edition and the California Amendments, Preface dated Nov. 2011.

DESIGN (SOIL NAIL WALL): Service Load Design Method per FHWA Geotechnical Engineering Circular No. 7 (FHWA O-IF-03-017) & Manual for Design and Construction Monitoring of Soil Nail Wall (FHWA-SA-96-069R)

SEISMIC LOAD SOIL: $k_n = 0.2g$
 $k_v = 0.0g$
 $k_{ae} = \text{Mononobe-Okabe Method}$

REINFORCED CONCRETE: $f_c = 3.6 \text{ KSI}$
 $f_y = 60 \text{ KSI}$

SHOTCRETE: $f_c = 3.6 \text{ KSI}$
 $f_y = 60 \text{ KSI}$

SOIL NAILS: ASTM Designation: A615, Grade 60
 $f_y = 60 \text{ KSI}$

SOIL PARAMETERS: $\phi = 33^\circ$
 $c = 100 \text{ lb/ft}^3$
 $\gamma = 130 \text{ lb/ft}^3$
 $Q_d = 3.30 \text{ k/ft (Design Pullout Resistance)}$

NOTE: For Design Data of Retaining Wall Type 1, see Standard Plan B3-1B.

QUANTITIES

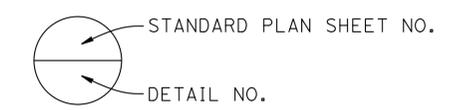
STRUCTURE EXCAVATION (RETAINING WALL)	2,983	CY
STRUCTURE EXCAVATION (SOIL NAIL WALL)	1,101	CY
STRUCTURE BACKFILL (RETAINING WALL)	2,138	CY
STRUCTURE BACKFILL (SOIL NAIL WALL)	160	CY
PERVIOUS BACKFILL MATERIAL	59	CY
SOIL NAIL	16,750	LF
STRUCTURAL CONCRETE, RETAINING WALL	631	CY
CONCRETE SURFACE TEXTURE (FLUTED RIB)	13,306	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	120,939	LB
STRUCTURAL SHOTCRETE	197	CY
MINOR CONCRETE (GUTTER) (LF)	1,550	LF
CABLE RAILING	1,551	LF

INDEX TO PLANS

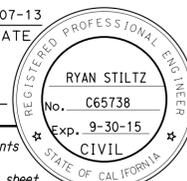
Sheet No.	Title
1	GENERAL PLAN NO.1
2	GENERAL PLAN NO.2
3	INDEX TO PLANS
4	STRUCTURE PLAN NO. 1
5	STRUCTURE PLAN NO. 2
6	STRUCTURE PLAN NO. 3
7	STRUCTURE PLAN NO. 4
8	STRUCTURE PLAN NO. 5
9	STRUCTURE PLAN NO. 6
10	STRUCTURE PLAN NO. 7
11	STRUCTURE PLAN NO. 8
12	SOIL NAIL WALL DETAILS NO. 1
13	SOIL NAIL WALL DETAILS NO. 2
14	SOIL NAIL WALL DETAILS NO. 3
15	ARCHITECTURAL TREATMENT NO. 1
16	ARCHITECTURAL TREATMENT NO. 2
17	LOG OF TEST BORINGS 1 OF 3
18	LOG OF TEST BORINGS 2 OF 3
19	LOG OF TEST BORINGS 3 OF 3

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
A10F	LEGEND-SOIL (SHEET 1 OF 2)
A10G	LEGEND-SOIL (SHEET 2 OF 2)
A10H	LEGEND-ROCK
RSP A77U3	MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO ABUTMENTS AND WALLS
BO-1	BRIDGE DETAILS
BO-3	BRIDGE DETAILS
RSP B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP B3-1B	RETAINING WALL TYPE 1 (CASE 2)
RSP B3-5	RETAINING WALL DETAILS NO. 1
B3-6	RETAINING WALL DETAILS NO. 2
RSP B11-47	CABLE RAILING

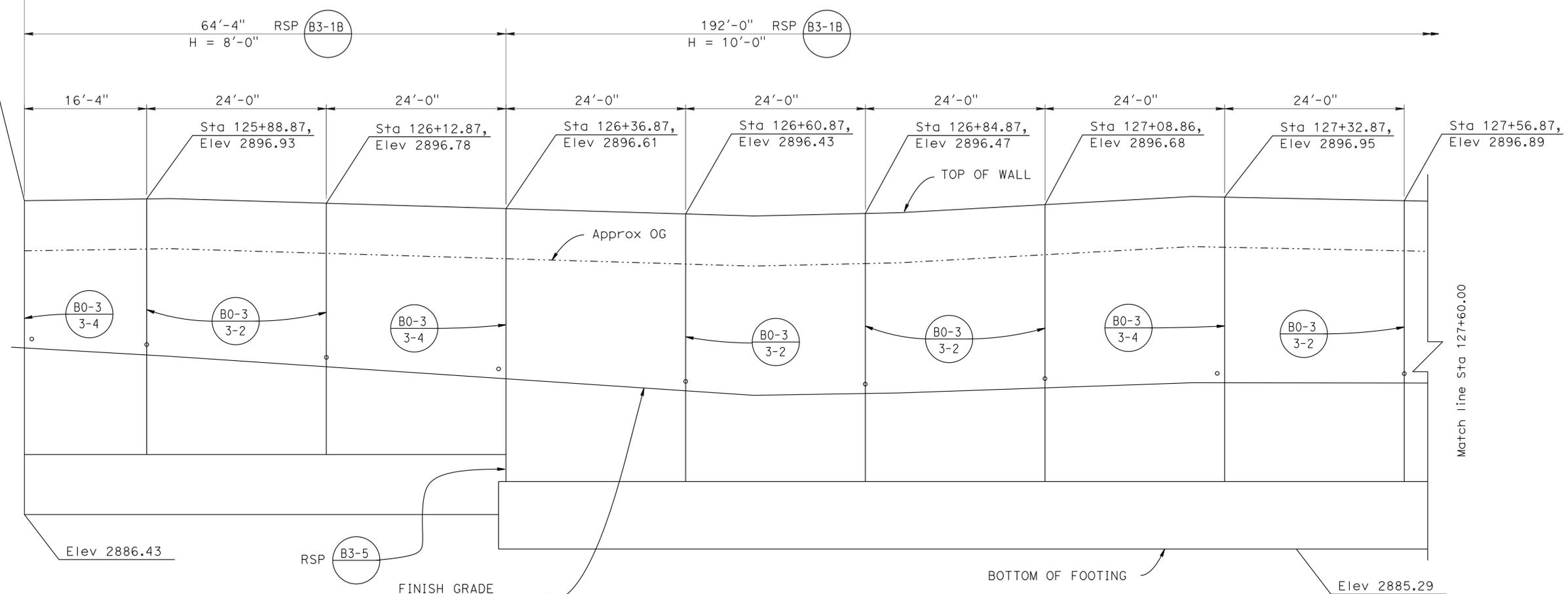


STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN BY F. Chen	CHECKED A. McPhee	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 54E0131	RETAINING WALL NO. 124 INDEX TO PLANS						
	DETAILS BY D. Wooten	CHECKED A. McPhee			POST MILE 42.7							
	QUANTITIES BY F. Chen	CHECKED A. McPhee	UNIT: 3589	PROJECT NUMBER & PHASE: 08140000861	CONTRACT NO.: 08-3555V1	DISREGARD PRINTS BEARING EARLIER REVISION DATES						
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						<table border="1"> <tr> <th>REVISION DATES</th> <th>SHEET</th> <th>OF</th> </tr> <tr> <td>6-14-13</td> <td>3</td> <td>19</td> </tr> </table>	REVISION DATES	SHEET	OF	6-14-13	3	19
REVISION DATES	SHEET	OF										
6-14-13	3	19										

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	680	824
 REGISTERED CIVIL ENGINEER			11-07-13 DATE		
6-23-14 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>					

BEGIN RW 124
Sta 125+72.53, "NDXSR4" LINE
Elev 2896.87

SEE NOTE 1



MIRRORED DEVELOPED ELEVATION

Horiz: 1/8" = 1'-0"
Vert: 1/2" = 1'-0"

Datum
Elev 2830.00

125+80 126+00 +20 +40 +60 +80 127+00 +20 +40 +60

NOTES:

- Place wall drain with grate and wall outlet @ low points and at 20'-0" Max spacing, see standard plan for details. 
- Place wall drain and wall outlet at low points and at 5'-0" Max spacing, see standard plan for details. 

DESIGN	BY F. Chen	CHECKED A. McPhee
DETAILS	BY D. Wooten	CHECKED A. McPhee
QUANTITIES	BY F. Chen	CHECKED A. McPhee

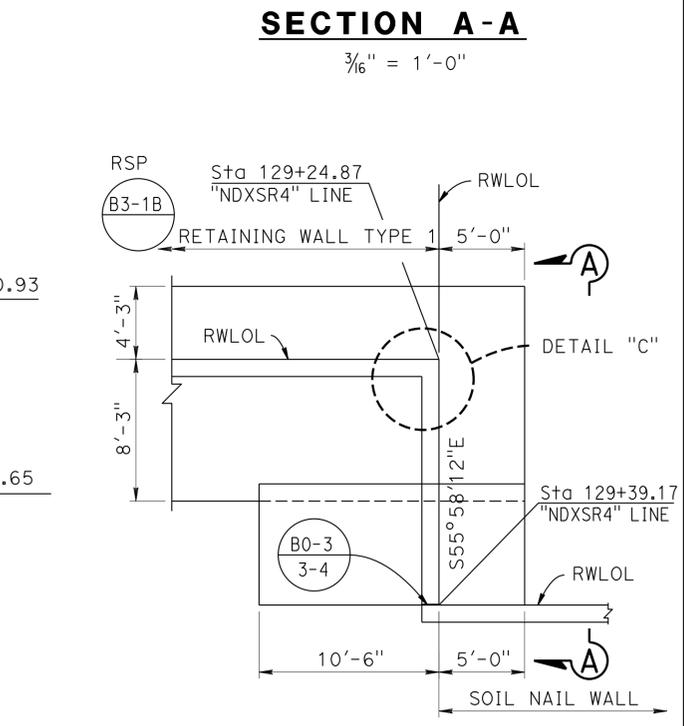
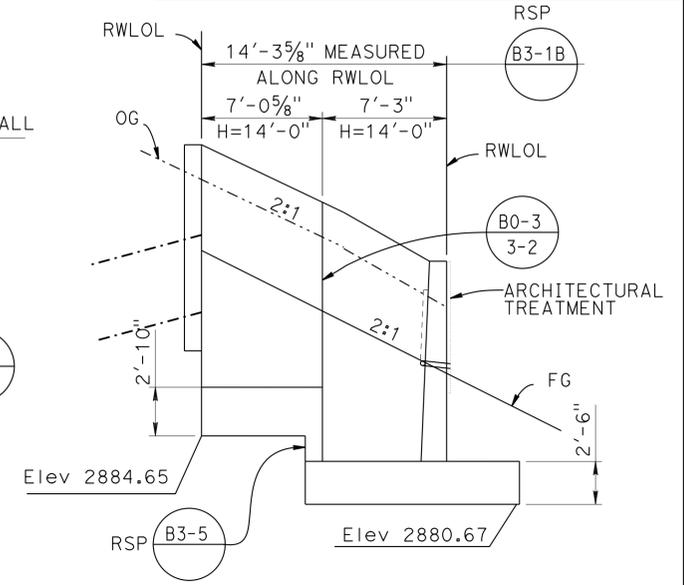
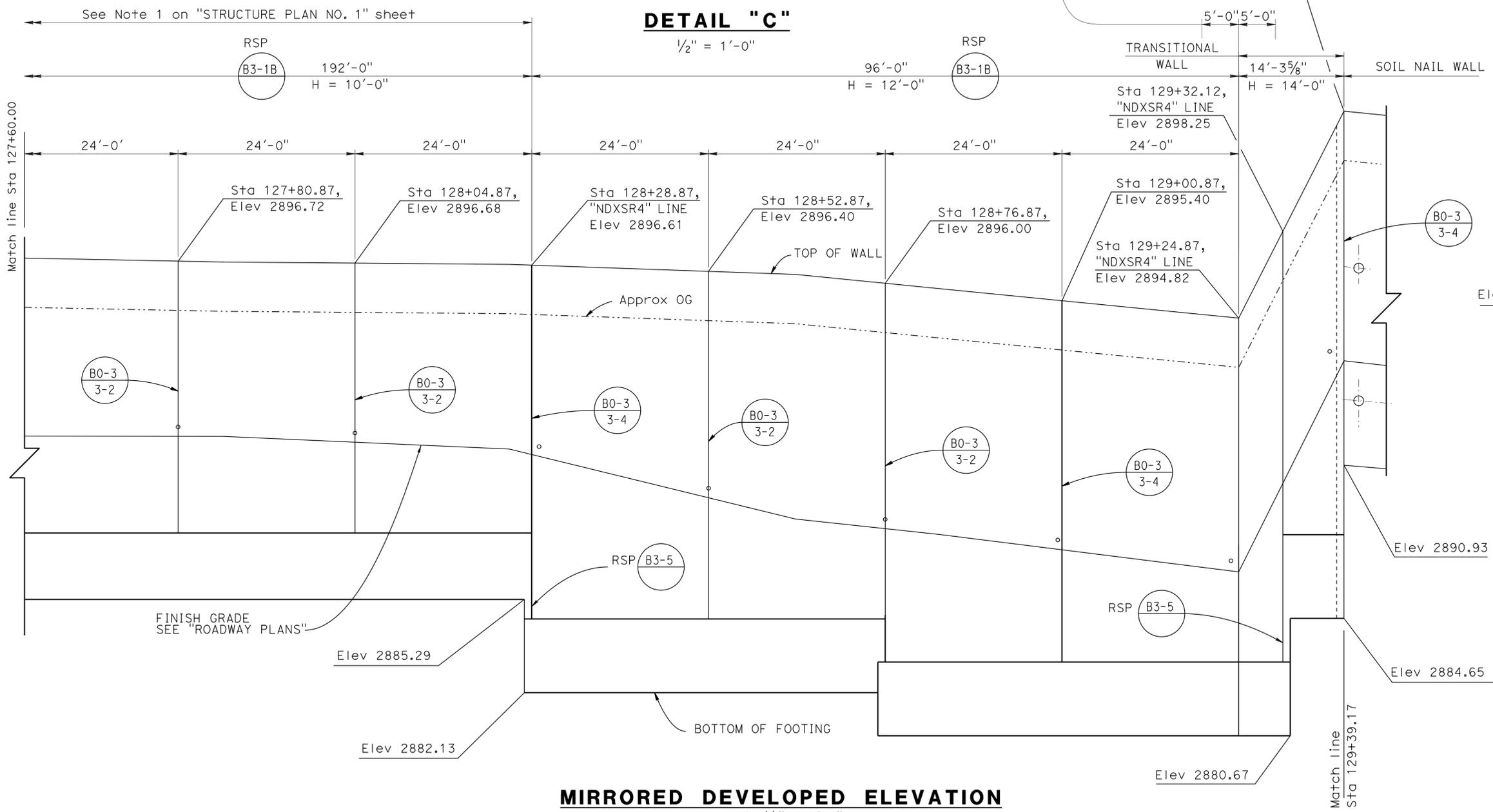
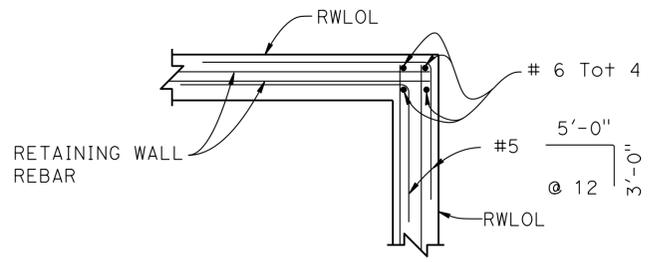
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54E0131
POST MILE	42.7

RETAINING WALL NO. 124
STRUCTURE PLAN NO. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	681	824
			11-07-13	REGISTERED PROFESSIONAL ENGINEER	
			DATE	RYAN STILTZ	
			6-23-14	No. C65738	
			PLANS APPROVAL DATE	Exp. 9-30-15	
			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.					



DESIGN	BY	F. Chen	CHECKED	A. McPhee	BRIDGE NO.	54E0131	RETAINING WALL NO. 124			
	DETAILS	D. Wooten	CHECKED	A. McPhee				POST MILE	42.7	STRUCTURE PLAN NO. 2
	QUANTITIES	F. Chen	CHECKED	A. McPhee						
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION					DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10		CONTRACT NO.: 08-3555V1			
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					UNIT: 3589 PROJECT NUMBER & PHASE: 08140000861		DISREGARD PRINTS BEARING EARLIER REVISION DATES			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					CONTRACT NO.: 08-3555V1		REVISION DATES			
0 1 2 3					FILE => 54e0131csp05.dgn		SHEET 5 OF 19			

RSP TYPE 1 Ret WALL B3-1B SOIL NAIL WALL

Sta 129+39.17, "NDXSR4" LINE Elev 2901.60

MATCH LINE Sta 129+39.17

PRODUCTION NAIL

Sta 129+90.00 Elev 2900.54

4'-0" Typ

Sta 130+40.00 Elev 2899.27

TOP OF WALL

TEST NAIL, SEE NOTE 1

Sta 130+90.00 Elev 2897.98

Approx OG

Sta 131+40.00 Elev 2896.36

LE 1

LE 2

LE 1

LE 2

Sta 129+39.17 Elev 2890.93

Sta 129+90.00 Elev 2889.87

FINISH GRADE

Sta 130+40.00 Elev 2888.60

Sta 130+90.00 Elev 2887.30

BOTTOM OF WALL

BOTTOM OF FOOTING

Elev 2884.65

Sta 131+40.00 Elev 2885.68

MATCH LINE Sta 131+40.00

2'-0"

SOIL NAIL HORIZONTAL SPACING @ 4'-0" x 150 = 600'-0"
LE 1 = 26'-0", LE 2 = 26'-0"

Datum Elev 2830.00

+40 +60 +80 130+00 +20 +40 +60 +80 131+00 +20 +40

NOTES:

1. Test nail locations are at midway between production nails. The exact location of the proof test nails to be determined in the field by the Engineer.
2. Contractor shall adjust the concrete gutter & FG to meet the gutter flow line.
3. Cable Railing is not shown for clarity.
4. Geocomposite Drain & Weep Holes at 5'-0" Max spacing. For drain details, see "SOIL NAIL WALL DETAILS NO. 3" sheet.

LEGEND:

- Indicates location of Production Nail assembly.
- ⊗ Indicates location of Test Nail assembly.
- LE# Indicates Soil Nail Profile Line.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	682	824

REGISTERED CIVIL ENGINEER DATE 11-07-13

6-23-14 PLANS APPROVAL DATE

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

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SOIL NAIL LAYOUT

Horiz: 1/8" = 1'-0"
Ver: 1/2" = 1'-0"

DESIGN	BY F. Chen	CHECKED A. McPhee
DETAILS	BY D. Wooten	CHECKED A. McPhee
QUANTITIES	BY F. Chen	CHECKED A. McPhee

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54E0131
POST MILE	42.7

RETAINING WALL NO. 124
STRUCTURE PLAN NO. 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	683	824

REGISTERED CIVIL ENGINEER	DATE
11-07-13	
PLANS APPROVAL DATE	
6-23-14	

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

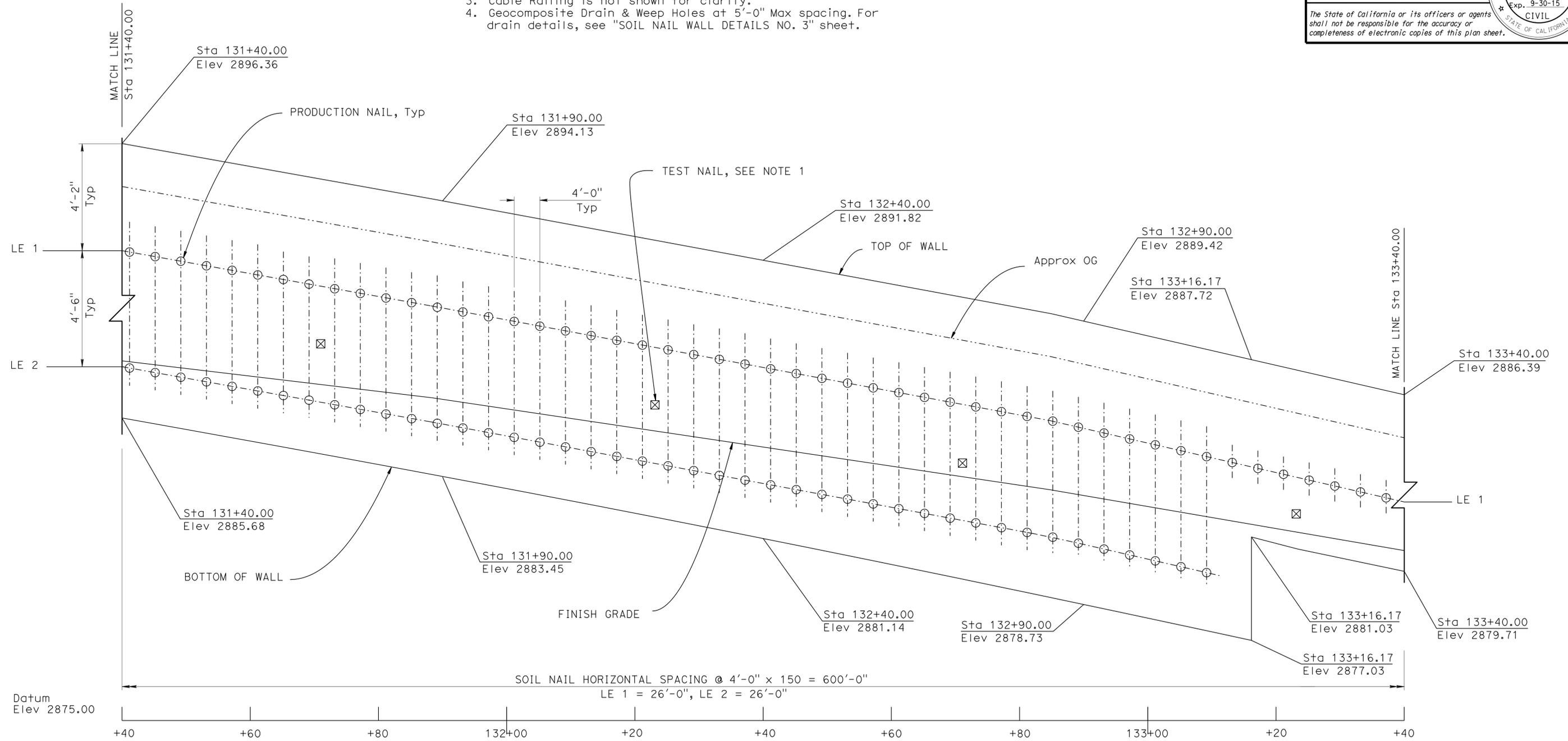
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

NOTES:

1. Test nail locations are at midway between production nails. The exact location of the proof test nails to be determined in the field by the Engineer.
2. Contractor shall adjust the concrete gutter & FG to meet the gutter flow line.
3. Cable Railing is not shown for clarity.
4. Geocomposite Drain & Weep Holes at 5'-0" Max spacing. For drain details, see "SOIL NAIL WALL DETAILS NO. 3" sheet.

LEGEND:

- Indicates location of Production Nail assembly.
- ⊗ Indicates location of Test Nail assembly.
- LE# Indicates Soil Nail Profile Line.



SOIL NAIL LAYOUT

Horiz: 1/8" = 1'-0"
Vert: 1/2" = 1'-0"

DESIGN	BY F. Chen	CHECKED A. McPhee
DETAILS	BY D. Wooten	CHECKED A. McPhee
QUANTITIES	BY F. Chen	CHECKED A. McPhee

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54E0131
POST MILE	42.7

RETAINING WALL NO. 124
STRUCTURE PLAN NO. 4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	684	824

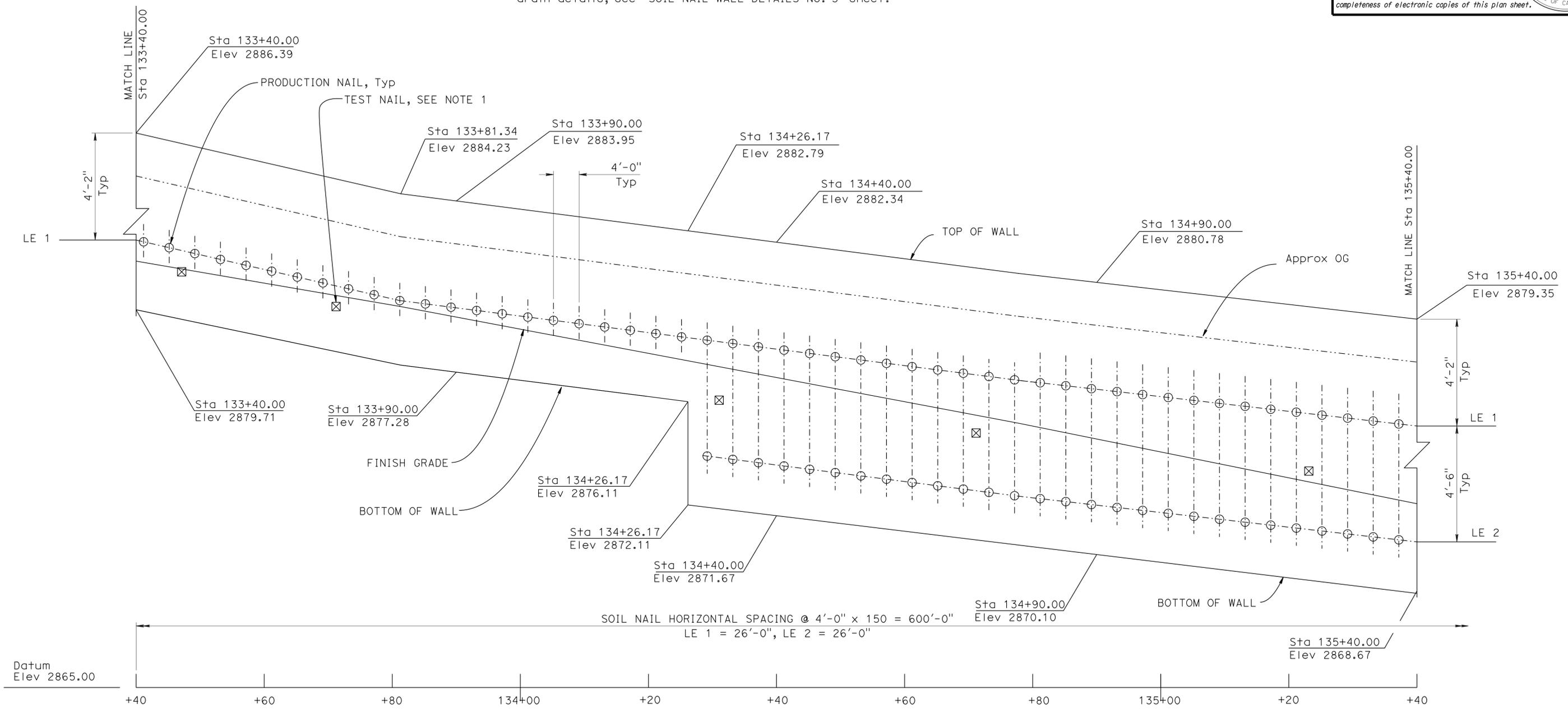
NOTES:

1. Test nail locations are at midway between production nails. The exact location of the proof test nails to be determined in the field by the Engineer.
2. Contractor shall adjust the concrete gutter & FG to meet the gutter flow line.
3. Cable Railing is not shown for clarity.
4. Geocomposite Drain & Weep Holes at 5'-0" Max spacing. For drain details, see "SOIL NAIL WALL DETAILS NO. 3" sheet.

LEGEND:

- Indicates location of Production Nail assembly.
- ⊗ Indicates location of Test Nail assembly.
- LE# Indicates Soil Nail Profile Line.

11-07-13
 REGISTERED CIVIL ENGINEER DATE
 6-23-14
 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.



SOIL NAIL LAYOUT

Horiz: 1/8" = 1'-0"
 Vert: 1/2" = 1'-0"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY F. Chen	CHECKED A. McPhee	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	54E0131	RETAINING WALL NO. 124 STRUCTURE PLAN NO. 5				
	DETAILS	BY D. Wooten	CHECKED A. McPhee			POST MILE	42.7					
	QUANTITIES	BY F. Chen	CHECKED A. McPhee			CONTRACT NO.:	08-3555V1					
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0	1	2	3	UNIT: 3589 PROJECT NUMBER & PHASE: 08140000861	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 8	OF 19

DATE PLOTTED => 27-JUN-2014
 TIME PLOTTED => 12:05
 USERNAME => s124486

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	685	824

NOTES:

1. Test nail locations are at midway between production nails. The exact location of the proof test nails to be determined in the field by the Engineer.
2. Contractor shall adjust the concrete gutter & FG to meet the gutter flow line.
3. Cable Railing is not shown for clarity.
4. Geocomposite Drain & Weep Holes at 5'-0" Max spacing. For drain details, see "SOIL NAIL WALL DETAILS NO. 3" sheet.

LEGEND:

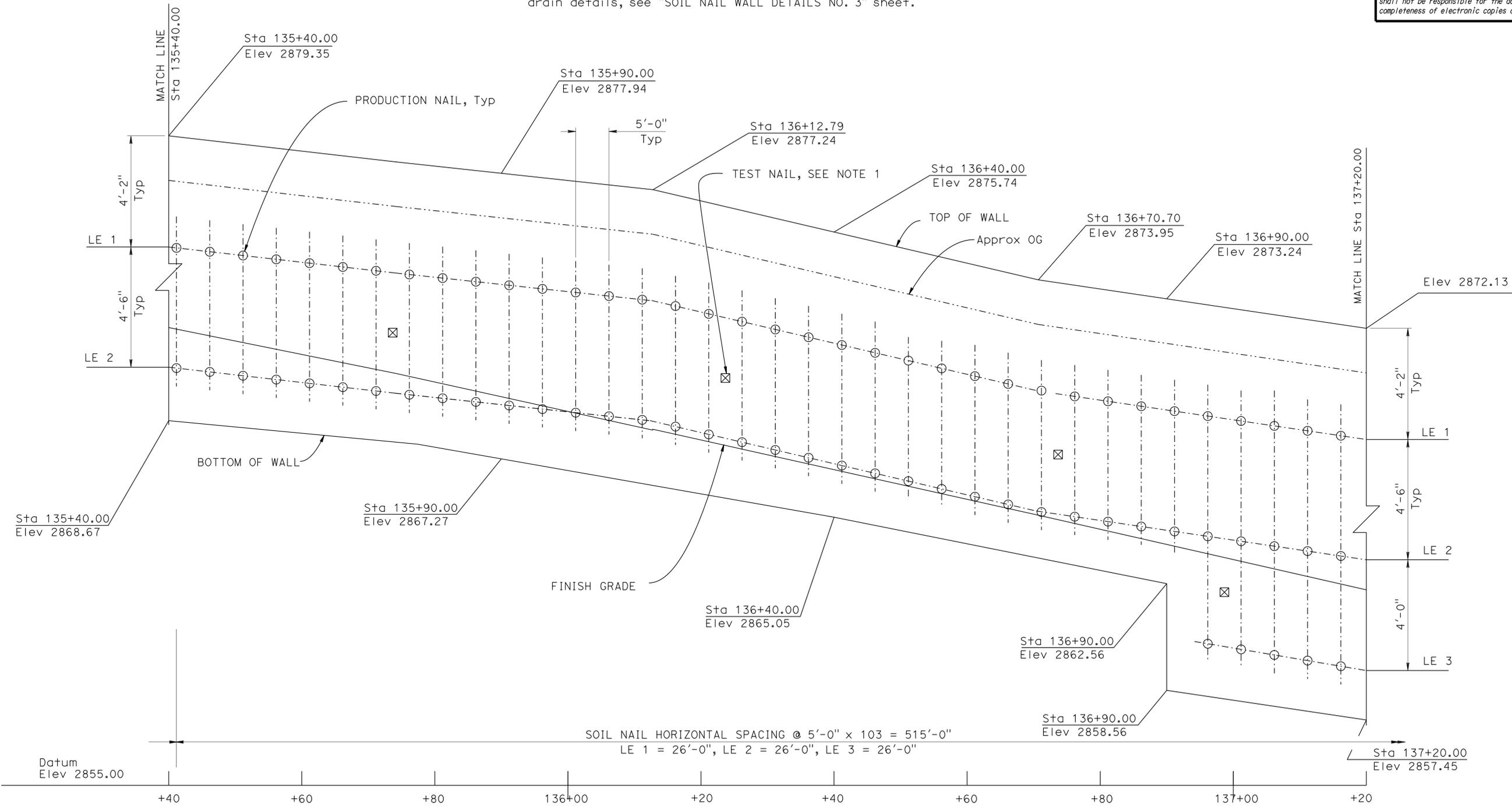
- Indicates location of Production Nail assembly.
- ⊗ Indicates location of Test Nail assembly.
- LE# Indicates Soil Nail Profile Line.

11-07-13
 REGISTERED CIVIL ENGINEER DATE

6-23-14
 PLANS APPROVAL DATE

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

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SOIL NAIL LAYOUT

Horiz: 1/8" = 1'-0"
 Vert: 1/2" = 1'-0"

DESIGN	BY F. Chen	CHECKED A. McPhee
DETAILS	BY D. Wooten	CHECKED A. McPhee
QUANTITIES	BY F. Chen	CHECKED A. McPhee

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 10

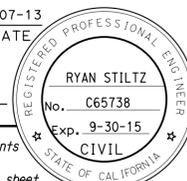
BRIDGE NO.	54E0131
POST MILE	42.7

RETAINING WALL NO. 124
STRUCTURE PLAN NO. 6



REVISION DATES	SHEET	OF
7-18-13 9-11-13 11-04-13	9	19

USERNAME => s124486 DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 12:05

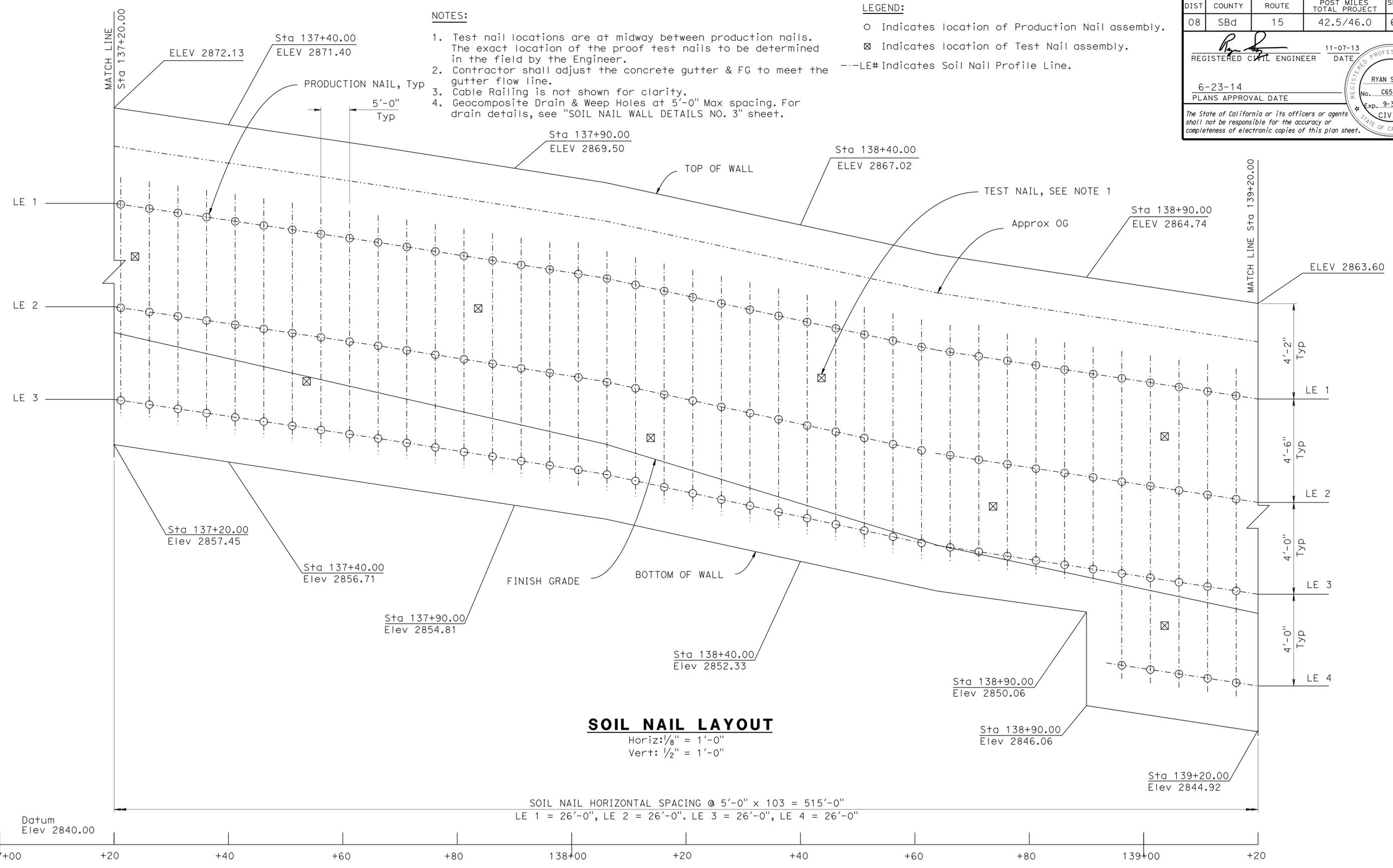
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	686	824
 REGISTERED CIVIL ENGINEER			11-07-13 DATE		
6-23-14 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

NOTES:

1. Test nail locations are at midway between production nails. The exact location of the proof test nails to be determined in the field by the Engineer.
2. Contractor shall adjust the concrete gutter & FG to meet the gutter flow line.
3. Cable Railing is not shown for clarity.
4. Geocomposite Drain & Weep Holes at 5'-0" Max spacing. For drain details, see "SOIL NAIL WALL DETAILS NO. 3" sheet.

LEGEND:

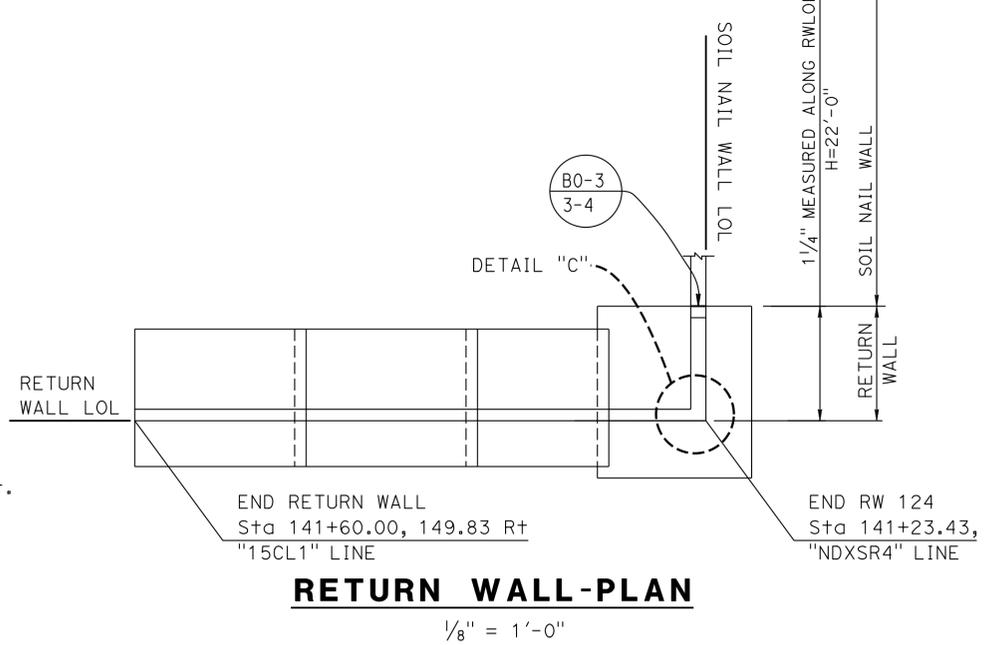
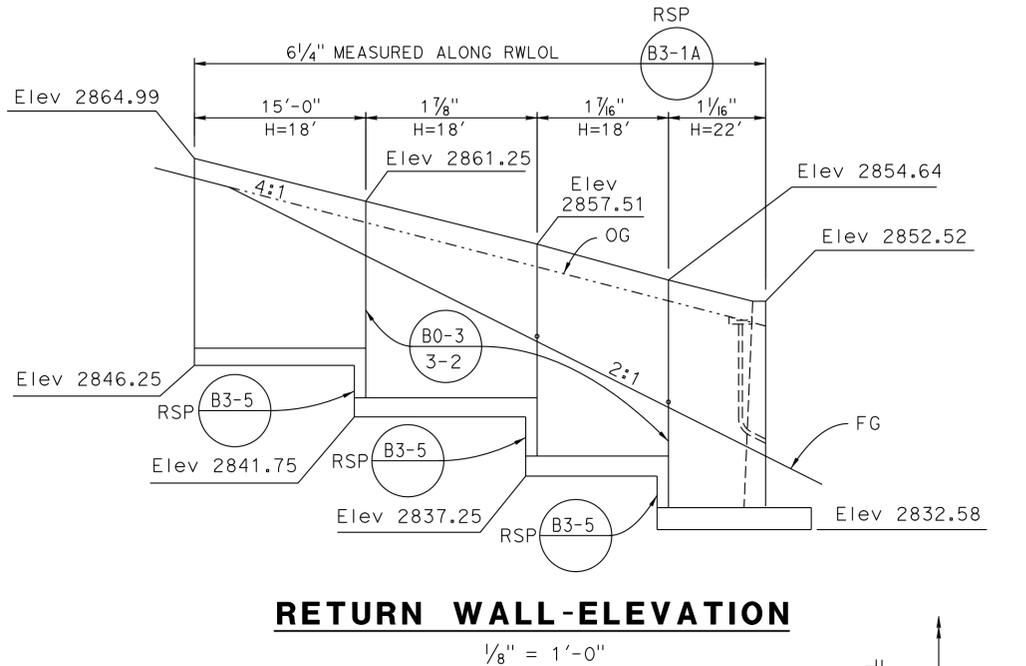
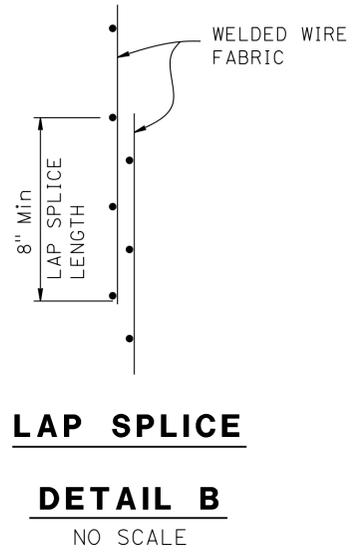
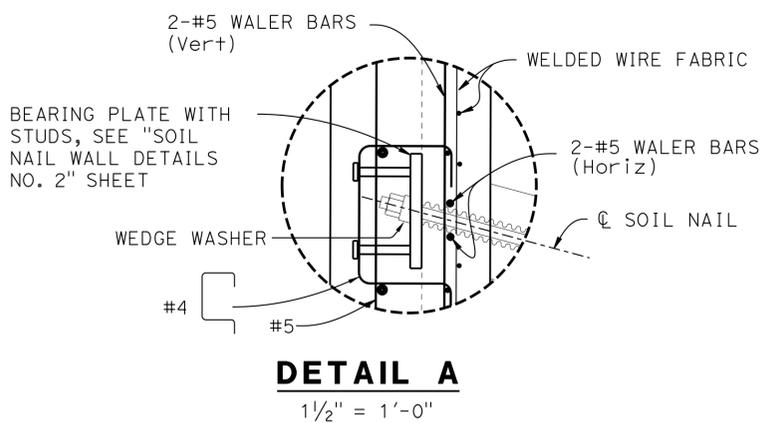
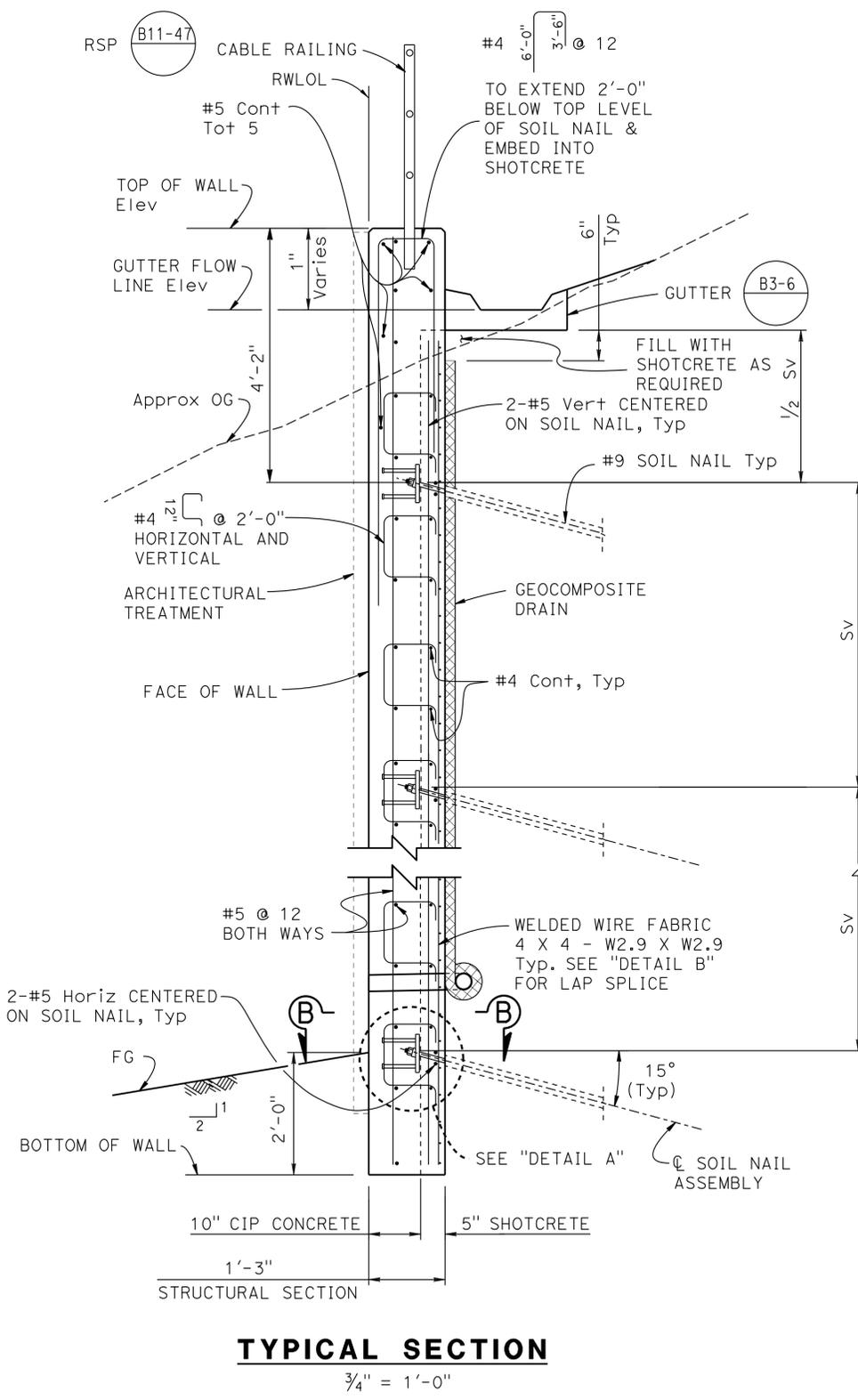
- Indicates location of Production Nail assembly.
- ⊗ Indicates location of Test Nail assembly.
- LE# Indicates Soil Nail Profile Line.



DESIGN BY F. Chen DETAILS BY D. Wooten QUANTITIES BY F. Chen	CHECKED A. McPhee	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 54E0131	RETAINING WALL NO. 124 STRUCTURE PLAN NO. 7	
	CHECKED A. McPhee			POST MILE 42.7		
	CHECKED A. McPhee					
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3		UNIT: 3589 PROJECT NUMBER & PHASE: 08140000861	CONTRACT NO.: 08-3555V1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 7-18-13 9-11-13 11-04-13	SHEET 10 OF 19

USERNAME => s124486 DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 12:05

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	688	824
			11-07-13	REGISTERED PROFESSIONAL ENGINEER	
			DATE	RYAN STILTZ	
			6-23-14	No. C65738	
			PLANS APPROVAL DATE	Exp. 9-30-15	
			CIVIL		
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- NOTES:**
- Bottom of wall to be placed against undisturbed material.
 - For Horizontal and Vertical Soil Nail spacing see "STRUCTURE PLAN NO. 1" through "STRUCTURE PLAN NO. 8" sheets.
 - For additional Soil Nail Details & Assemblies, see "SOIL NAIL WALL DETAILS NO. 2" sheet.
 - For Geocomposite Drain Details see "SOIL NAIL WALL DETAILS NO. 3" sheet.
 - For Architectural Treatment, see "ARCHITECTURAL TREATMENT NO. 1" & "ARCHITECTURAL TREATMENT NO. 2" sheets.
 - For "SECTION B-B", see "SOIL NAIL WALL DETAILS NO. 2" sheet.
 - For "DETAIL C", see "STRUCTURE PLAN NO. 2" sheet.

LEGEND:

Sv = Vertical spacing of Soil Nail Assemblies

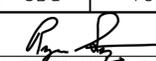
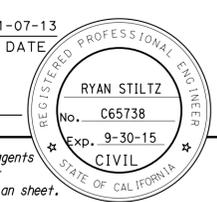
DESIGN	BY F. Chen	CHECKED A. McPhee
DETAILS	BY D. Wooten	CHECKED A. McPhee
QUANTITIES	BY F. Chen	CHECKED A. McPhee

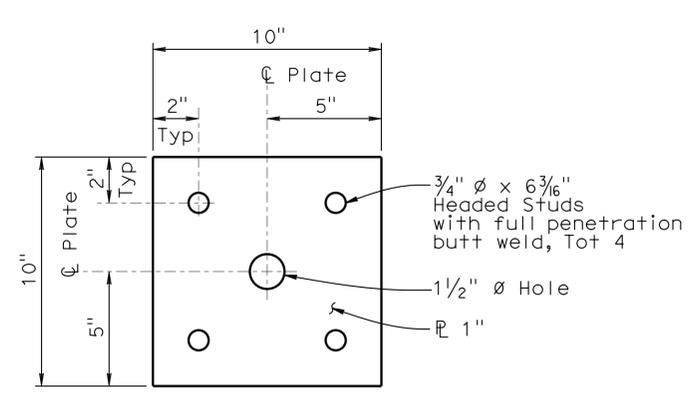
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

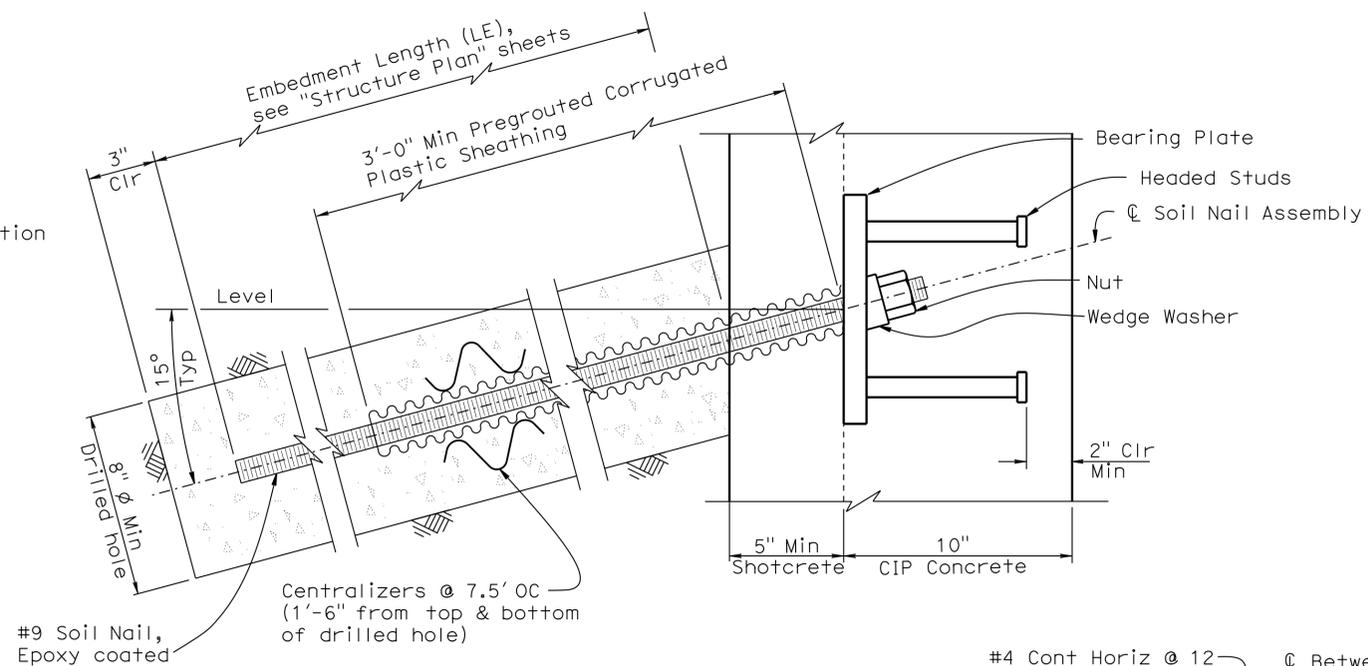
BRIDGE NO.	54E0131
POST MILE	42.7

RETAINING WALL NO. 124
SOIL NAIL WALL DETAILS NO. 1

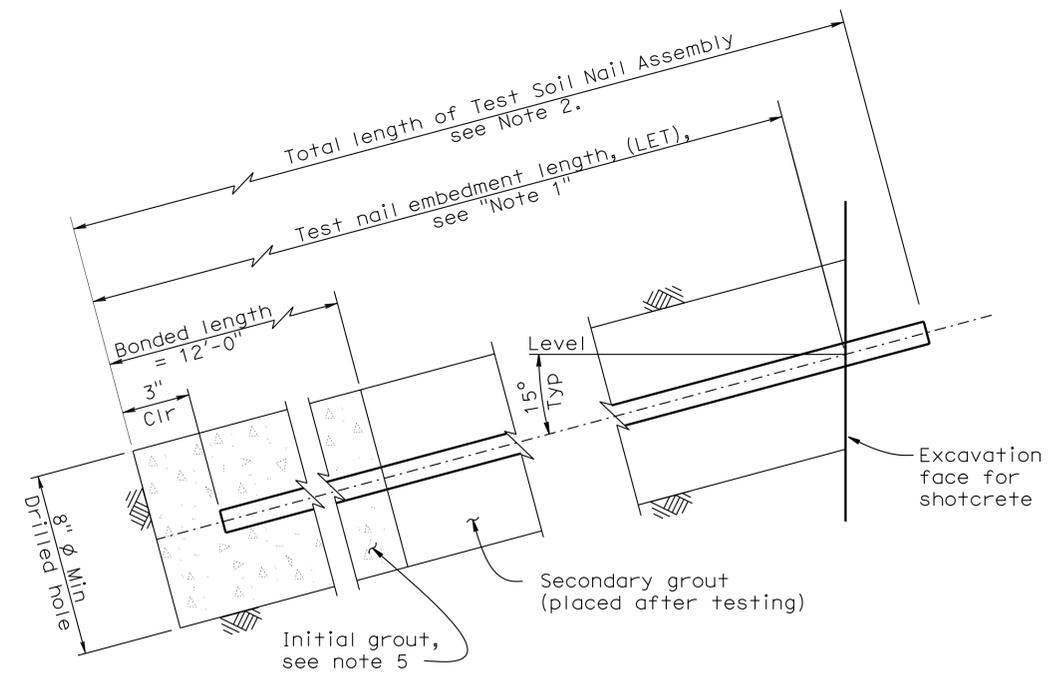
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	689	824
 REGISTERED CIVIL ENGINEER			11-07-13	DATE	
6-23-14			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



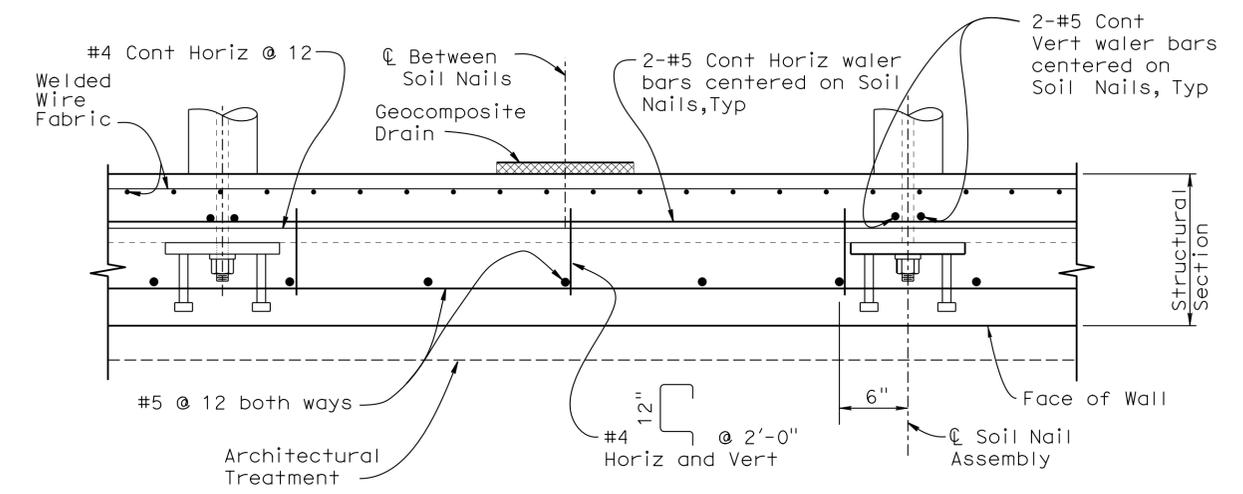
BEARING PLATE
3" = 1'-0"



SOIL NAIL ASSEMBLY
3" = 1'-0"



TEST SOIL NAIL ASSEMBLY
3" = 1'-0"



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

- NOTES:**
1. Embedment length (LET) of Test Nails equals two thirds of the embedment length (LE) of adjacent soil nail assemblies, but not less than 12'-0".
 2. Total length of Test Soil Nail equals embedment length plus the length required for jacking equipment.
 3. For embedment length of Production Nails see "STRUCTURE PLAN NO. 1" through "STRUCTURE PLAN NO. 8" sheets.
 4. Finished grout surface for Test Nail to be perpendicular to Soil Nail bar.
 5. For location of Test Nails, see "STRUCTURE PLAN NO. 1" through "STRUCTURE PLAN NO. 8" sheets. Additional Test Nails will be installed and tested per special provisions.
 6. For location of Section B-B, see "SOIL NAIL WALL DETAILS NO. 1" sheet.
 7. Contractor to determine drilled hole diameter.

DESIGN	BY F. Chen	CHECKED A. McPhee
DETAILS	BY D. Wooten	CHECKED A. McPhee
QUANTITIES	BY F. Chen	CHECKED A. McPhee

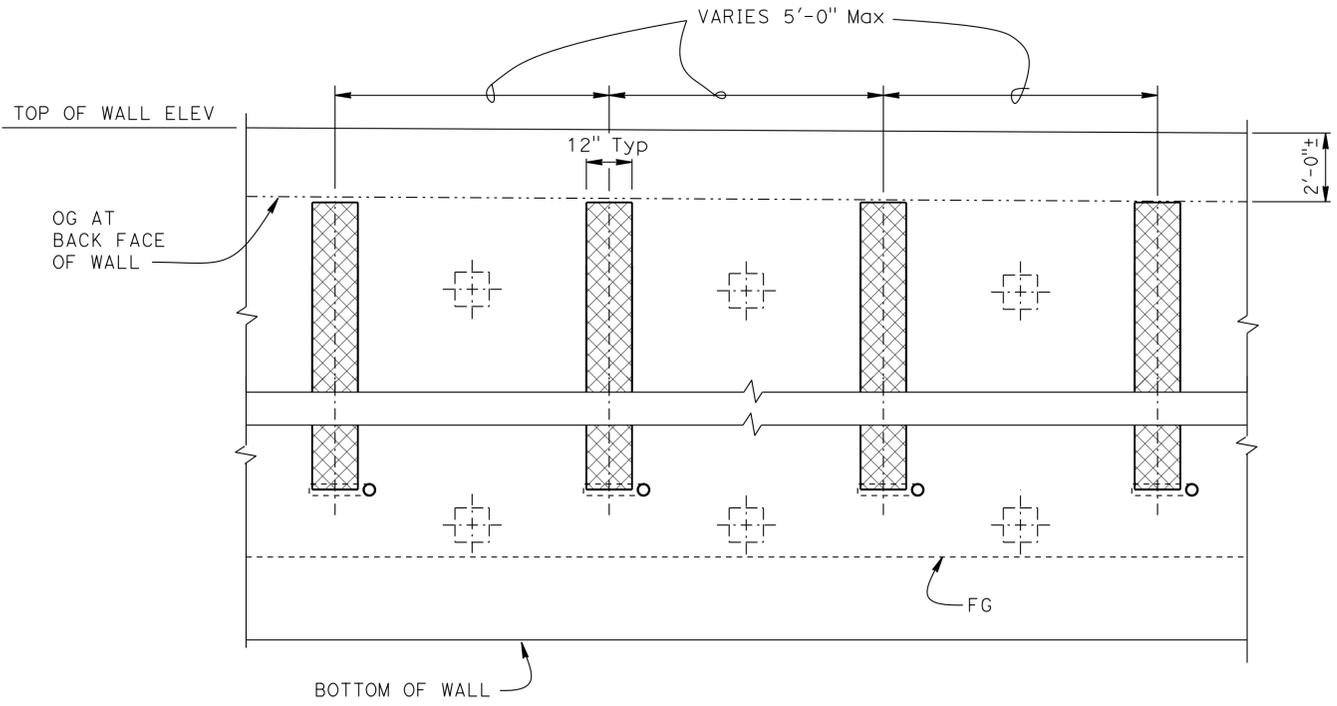
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54E0131
POST MILE	42.7

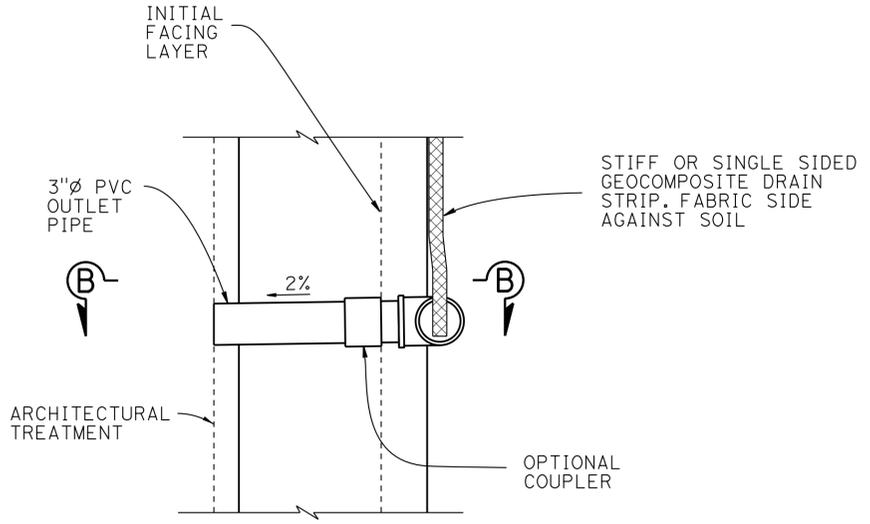
RETAINING WALL NO. 124
SOIL NAIL WALL DETAILS NO. 2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	690	824
 REGISTERED CIVIL ENGINEER			11-07-13	DATE	
6-23-14			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 RYAN STILTZ No. C65738 Exp. 9-30-15 CIVIL STATE OF CALIFORNIA					



PART ELEVATION - GEOCOMPOSITE DRAIN

No scale



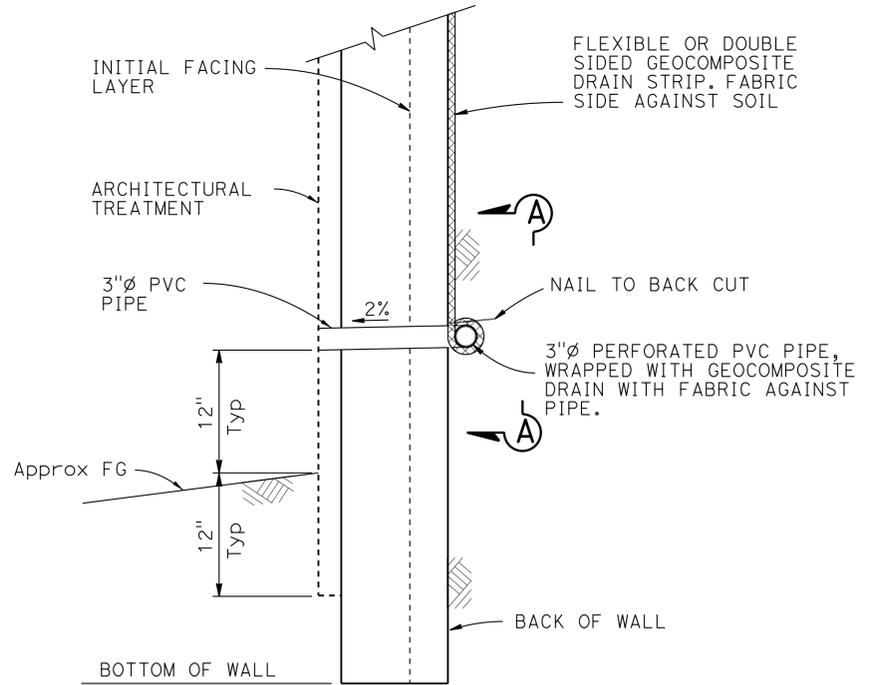
WALL DRAIN DETAIL AT WEEPHOLE OPTION B

OPTION B

No scale

NOTES:

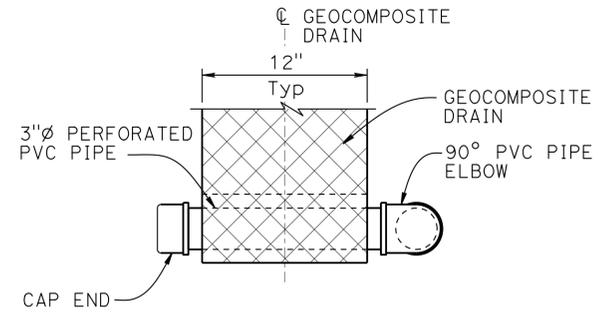
- Center Geocomposite drain between Soil Nail assemblies
-  - Indicates Soil Nail Assembly
- Adjust Geocomposite Drain to clear Test Soil Nails.
- Elevation of drain and weepholes are shown elsewhere on plans
- Geocomposite Drain strip per Section 88 Geosynthetics of the Standard Specifications



WALL DRAIN DETAIL AT WEEPHOLE OPTION A

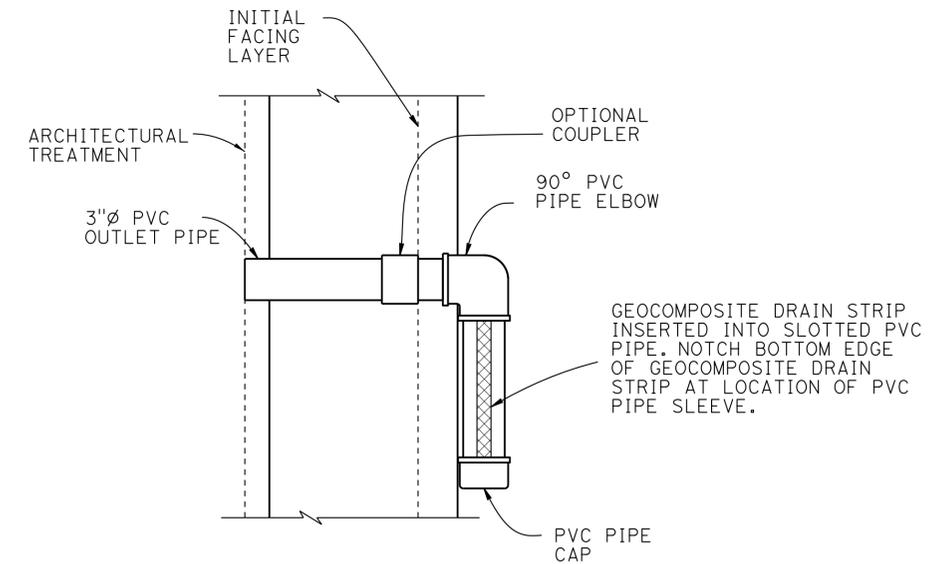
OPTION A

No scale



VIEW A-A

No scale



VIEW B-B

No Scale

DESIGN	BY F. Chen	CHECKED A. McPhee
DETAILS	BY D. Wooten	CHECKED A. McPhee
QUANTITIES	BY F. Chen	CHECKED A. McPhee

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54E0131
POST MILE	42.7

RETAINING WALL NO. 124
SOIL NAIL WALL DETAILS NO. 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	691	824

MATTHEW PERRY HALL
LICENSED LANDSCAPE ARCHITECT

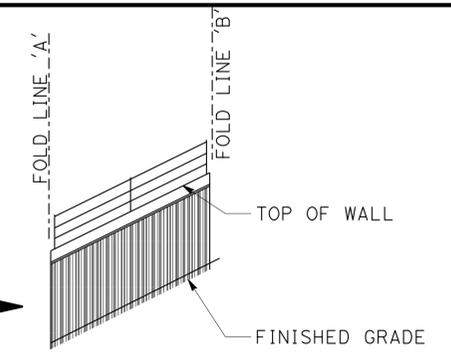
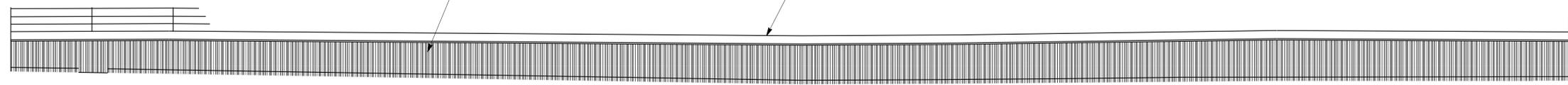
6-23-14
PLANS APPROVAL DATE

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.

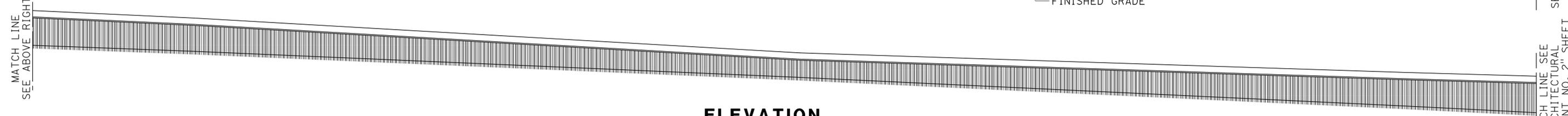
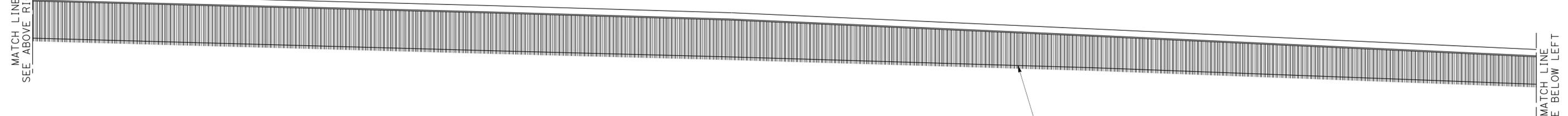
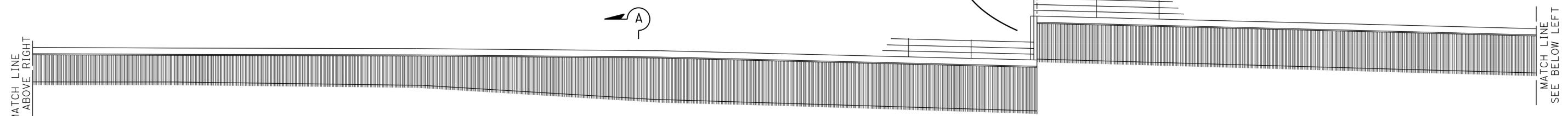
BEGIN WALL 124
BEGIN CONCRETE SURFACE TEXTURES (FLUTED RIB)

CONCRETE SURFACE TEXTURES (FLUTED RIB)
TOP OF WALL

MATCH LINE SEE BELOW LEFT



TRANSITION WALL ELEVATION
SCALE: 1/8"=1'-0"



ELEVATION
SCALE: 1/8"=1'-0"

NOTE: For "SECTION A-A" see "ARCHITECTURAL TREATMENT NO. 2" sheet.

DESIGN	BY MATTHEW HALL	CHECKED RAY DESSELLE
DETAILS	BY MATTHEW HALL	CHECKED RAY DESSELLE
QUANTITIES	BY F. Chen	CHECKED A. McPhee

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54E-0131
POST MILE	42.7

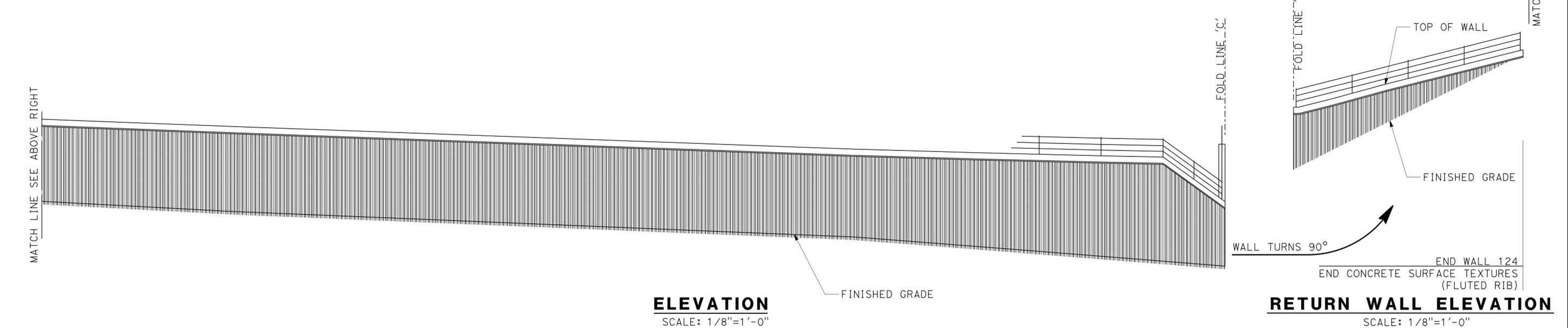
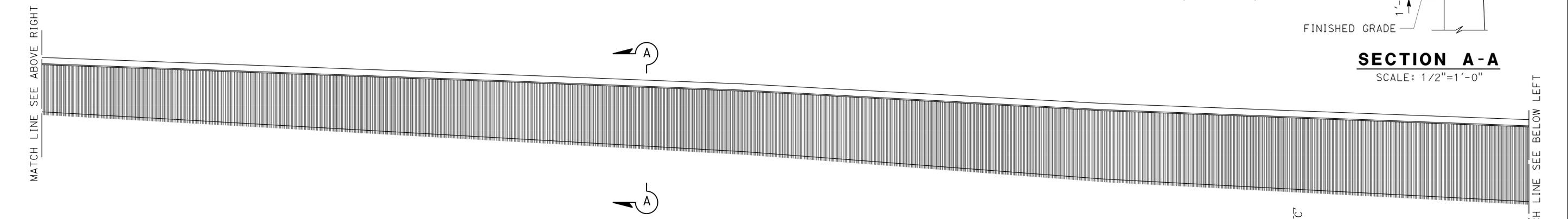
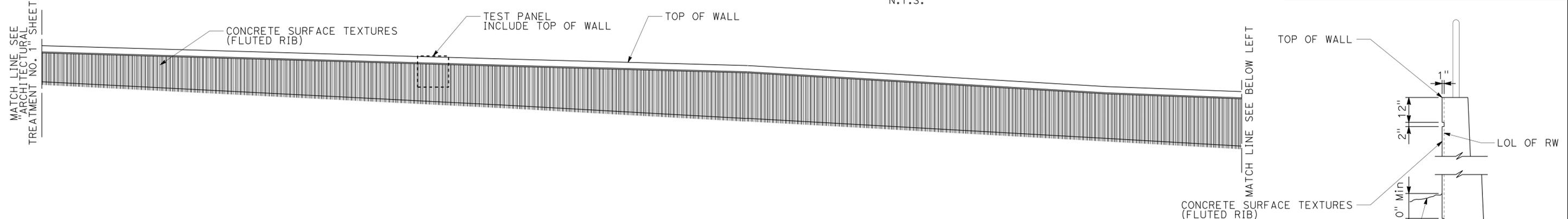
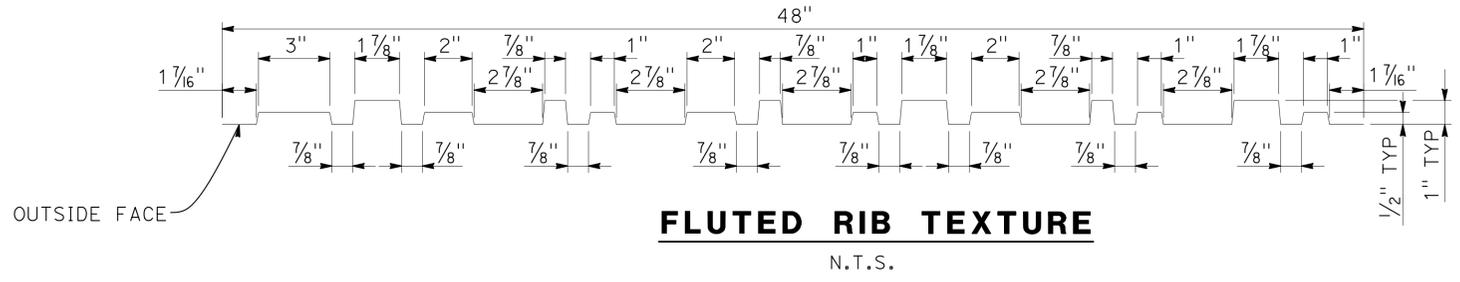
RETAINING WALL NO. 124
ARCHITECTURAL TREATMENT NO. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	692	824

MATTHEW PERRY HALL
LICENSED LANDSCAPE ARCHITECT

6-23-14
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.



DESIGN	BY MATTHEW HALL	CHECKED RAY DESSELLE
DETAILS	BY MATTHEW HALL	CHECKED RAY DESSELLE
QUANTITIES	BY F. Chen	CHECKED A. McPhee

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.	54E-0131
POST MILE	42.7

RETAINING WALL NO. 124
ARCHITECTURAL TREATMENT NO. 2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	693	824

Brian Gutierrez 10-30-13
 REGISTERED CIVIL ENGINEER DATE

6-23-14
 PLANS APPROVAL DATE

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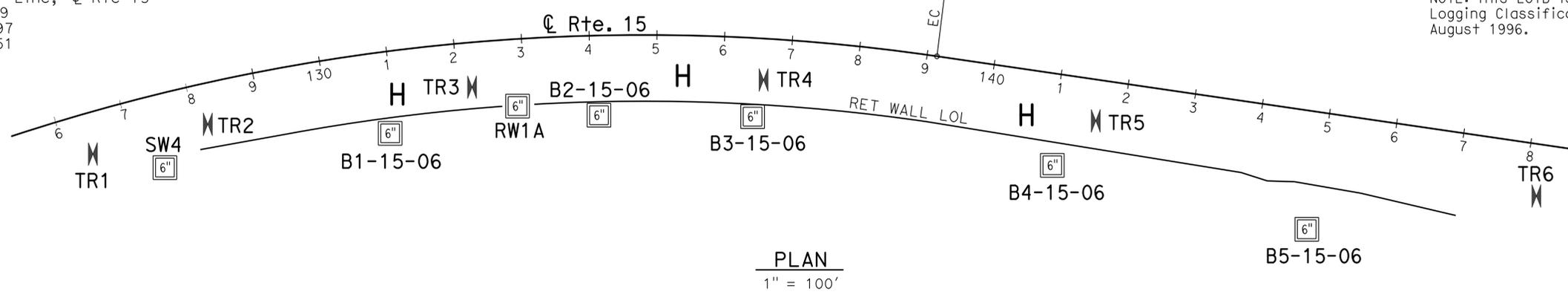
NOTE: This LOTB is based on the Soil & Rock Logging Classification Manual (Field Guide), August 1996.



BENCH MARK

E 103 Elev 2699.26
 Fnd 1" I.P. w/Plastic Plug
 130.03 Rt "A" Line, C Rte 15
 Sta 168+15.36
 N 2,021,558.72
 E 6,772,441.63

SUV 532 Elev 2698.80
 Fnd 1" I.P. w/Plastic Plug
 147.83 Lt "A" Line, C Rte 15
 Sta 168+86.49
 N 2,021,823.97
 E 6,772,332.51



LEGEND

- ⚡ Indicates the approximate location of the back hoe trench investigation of 1999 (Ref #1).
- H Indicates the approximate location of the horizontal boring locations (Ref #1).
- RW1A Is a boring at the location of the proposed Standard Type 1 Retaining Wall. (See sheet 3 of 3 for boring description).
- SW4 Is a boring for Sound Wall #40 near the proposed Type 1 Wall. (See sheet 3 of 3 for boring description).

NOTES: 1. This LOTB for Retaining Wall No. 124 includes data taken from several investigations. Please see Reference #1 for further geologic information.
 2. No ground water encountered during field investigation.

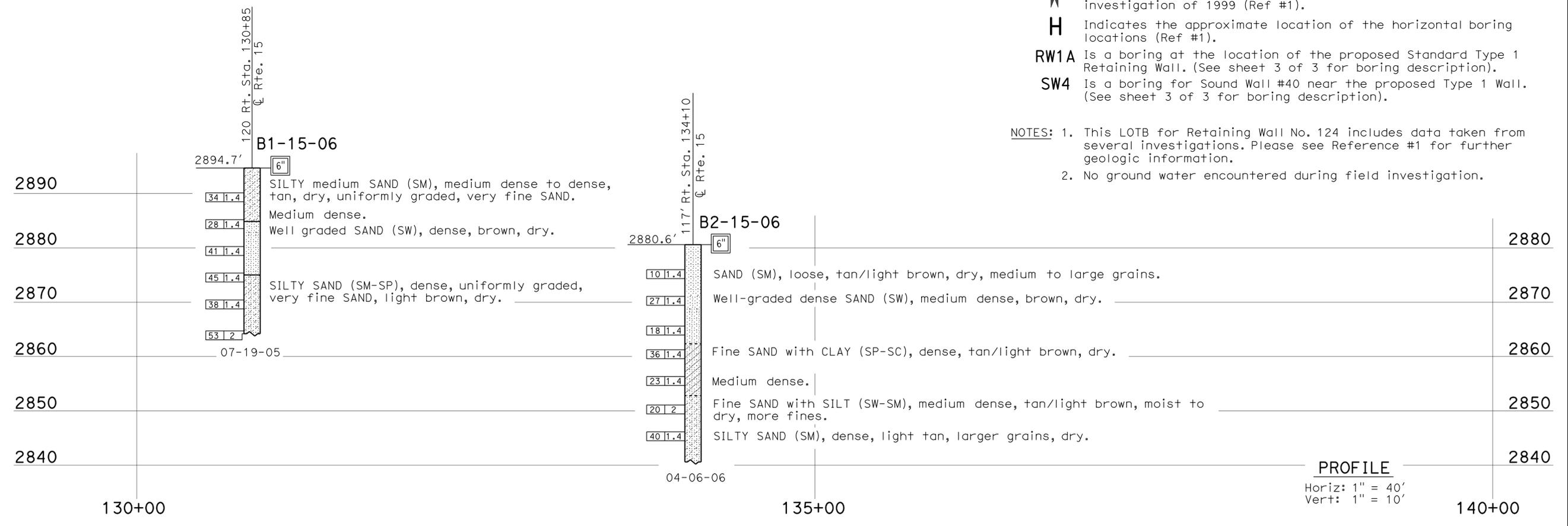
LEGEND OF BORING OPERATIONS

LEGEND OF EARTH MATERIALS

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test	
SPT No./Blows (ft)	Consistency
0-4	Very Loose
5-10	Loose
11-30	Medium Dense
31-50	Dense
51-70	Very Dense
71-100	Very Hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS	FIELD INVESTIGATION BY: B. Gutierrez	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 54E0131 POST MILE 42.7	RETAINING WALL NO. 124 LOG OF TEST BORINGS 1 OF 3
DRAWN BY I. G. Remmen	CHECKED BY B. Gutierrez					

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	42.5/46.0	695	824

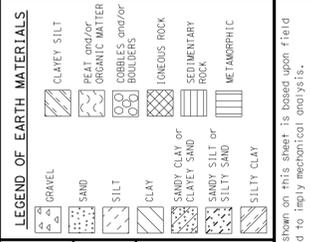
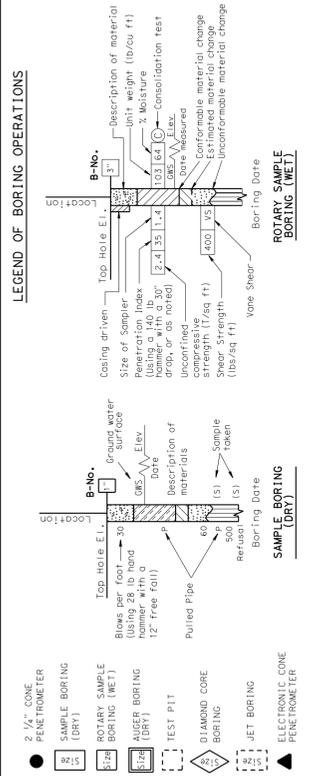
Brian Gutierrez 10-30-13
 REGISTERED CIVIL ENGINEER DATE

6-23-14
 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.

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

LEGEND OF BORING OPERATIONS

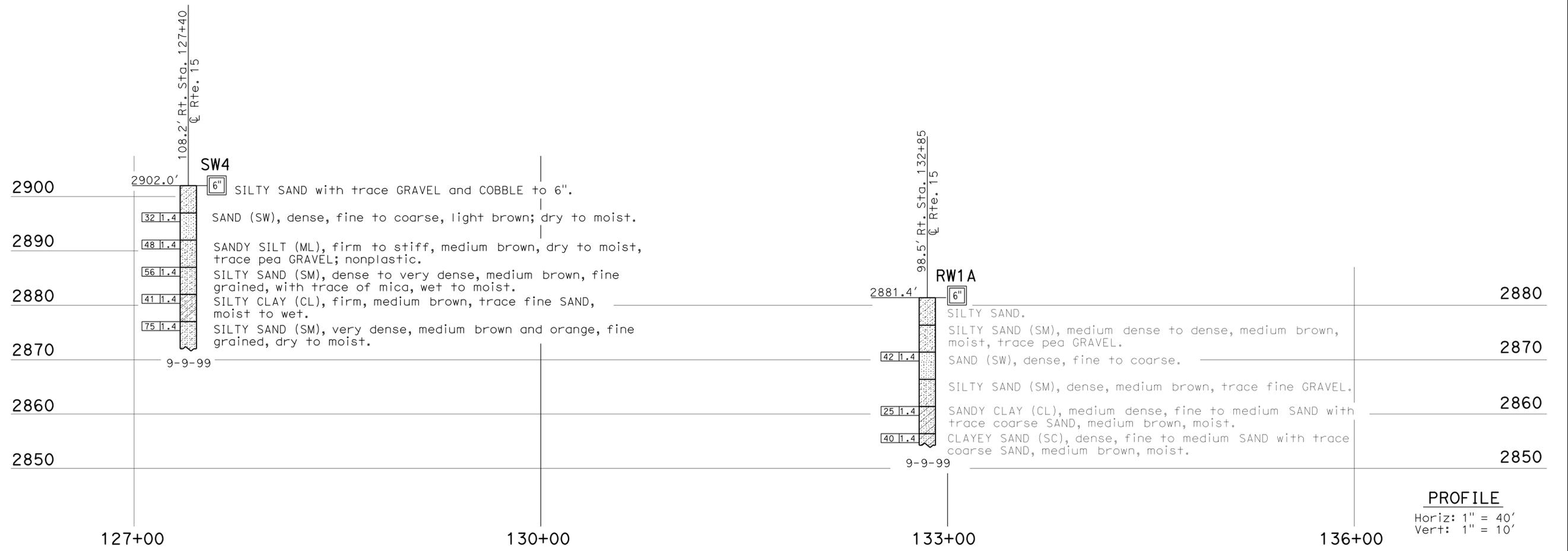


CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

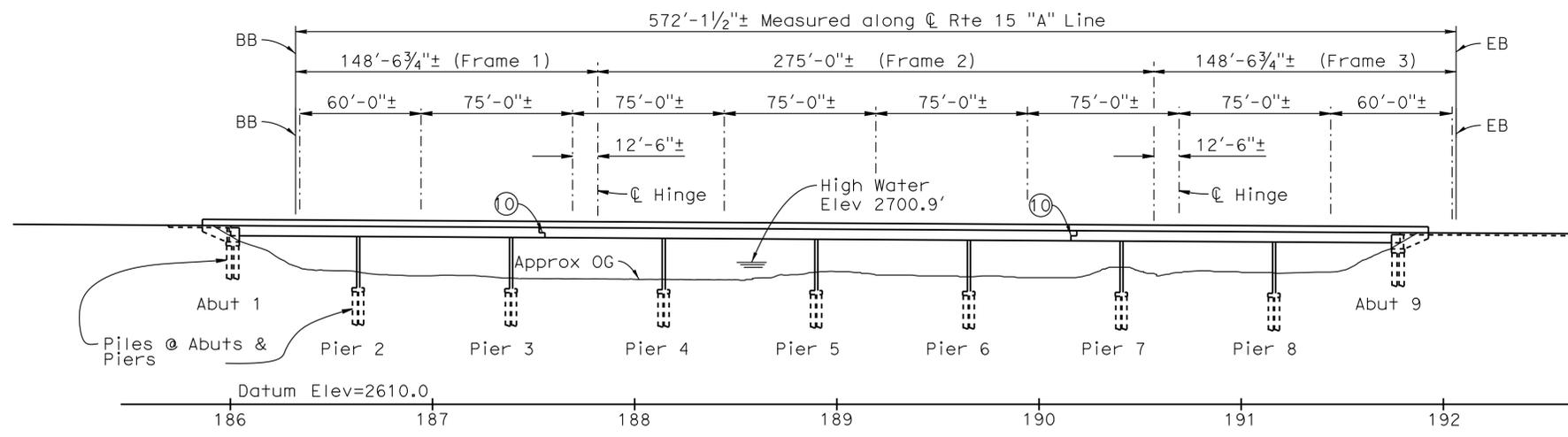
SPT No./Blows (30cm/foot)	Consistency
0-4	Very Loose
5-10	Loose
11-30	Medium Dense
31-50	Dense
51-70	Very Dense
71-100	Very Hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS	FIELD INVESTIGATION BY: B. Gutierrez	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 54E0131 POST MILE 42.7	RETAINING WALL NO. 124 LOG OF TEST BORINGS 3 OF 3
DRAWN BY I.G-Remmen	CHECKED BY B. Gutierrez					REVISION DATES 10-25-13

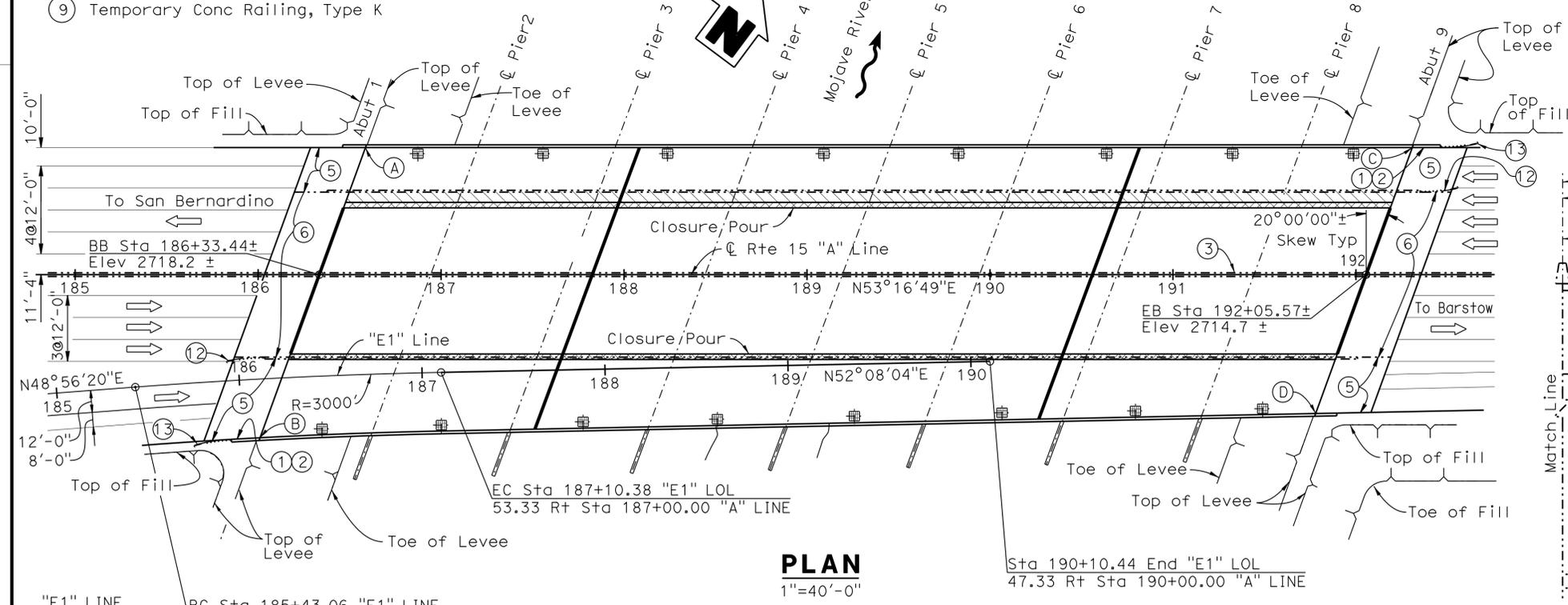
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15	42.5/46.0	696	824
			11-07-13		
			REGISTERED CIVIL ENGINEER		
			DATE		
			6-23-14		
			PLANS APPROVAL DATE		
			RYAN STILTZ		
			No. C65738		
			Exp. 9/30/15		
			CIVIL		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



ELEVATION
1"=40'-0"

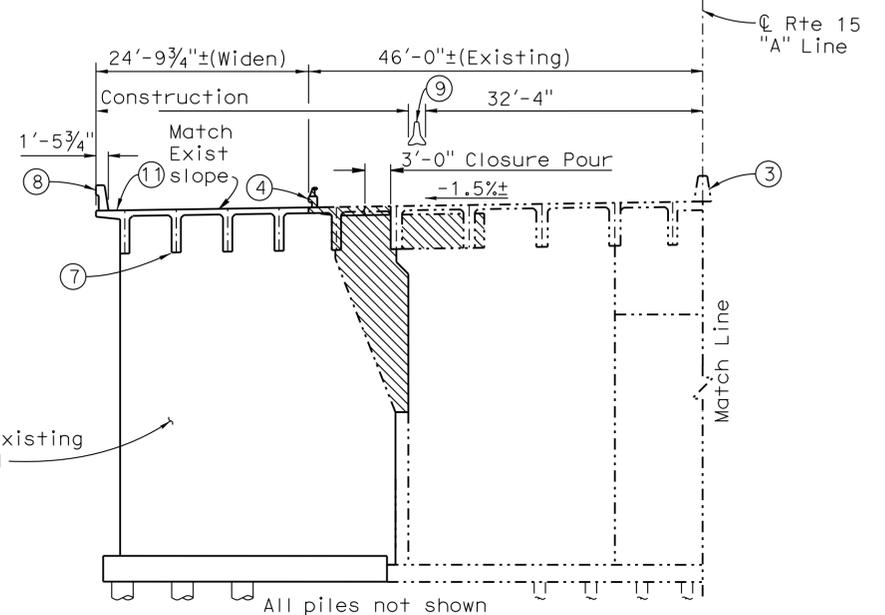
- NOTES:
- ① Paint "BR. NO. 54-0483".
 - ② Paint "MOJAVE RIVER BRIDGE".
 - ③ Remove Exist conc barrier, Type 60A. Refinish bridge deck. Place Type 60A (Mod) Barrier. For construction staging, see "Roadway Plans".
 - ④ Remove Exist Conc Barrier, Type 9, and overhang.
 - ⑤ Limits of Structure Approach Type N(30S).
 - ⑥ Structure Approach Type R(30S).
 - ⑦ CIP/R.C. "T" Girder Bridge.
 - ⑧ Conc Barrier, Type 736.
 - ⑨ Temporary Conc Railing, Type K.
 - ⑩ Pipe Seat Extender earthquake retrofit.
 - ⑪ Place 3/4"± Polyester Concrete overlay on bridge deck.
 - ⑫ Remove existing MGS, see "Roadway Plans".
 - ⑬ MGS, see "Roadway Plans".
 - (A) Sta 186+58.67, 69.33' Lt "A" Line
 - (B) Sta 186+01.05, 88.99' Rt "A" Line
 - (C) Sta 192+30.80, 69.33' Lt "A" Line
 - (D) Sta 191+77.99, 75.77' Rt "A" Line

- LEGEND:
- Indicates new construction
 - - - Indicates existing structure
 - ▨ Indicates bridge removal (portion)
 - ▩ Indicates Closure Pour
 - ⊕ Drainage Inlet Type D3 See "STRUCTURE DRAINAGE LAYOUT" sheet
 - Place new Joint Seal

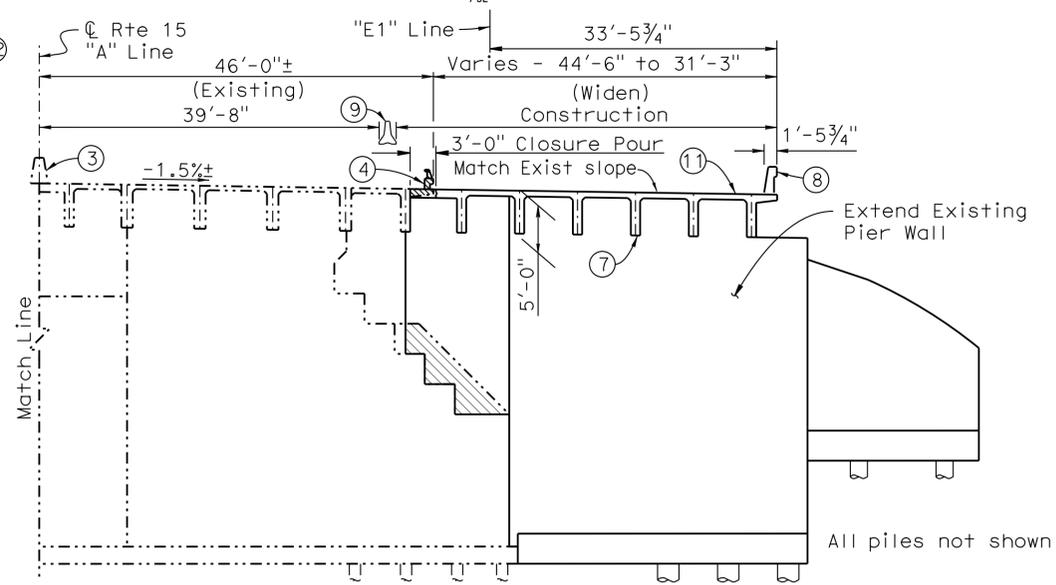


PLAN
1"=40'-0"

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



TYPICAL SECTION (LEFT WIDENING)
South Bound Rte15
3/32"=1'-0"



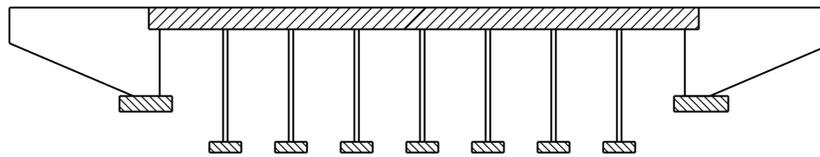
TYPICAL SECTION (RIGHT WIDENING)
North Bound Rte15
3/32"=1'-0"

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

DANIEL T. ADAMS DESIGN ENGINEER	DESIGN	BY R. Stiltz	CHECKED L. Wu	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.	54-0483	MOJAVE RIVER BRIDGE (WIDEN) GENERAL PLAN					
	DETAILS	BY G. Hallstrom	CHECKED L. Wu	LAYOUT	BY R. Stiltz			CHECKED L. Wu	POST MILE		43.93				
	QUANTITIES	BY D. Azzam	CHECKED A. McPhee/F. Chen	SPECIFICATIONS	BY K. Doll			PLANS AND SPECS COMPARED	K. Doll						
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0	1	2	3	UNIT: 3589 PROJECT NUMBER & PHASE: 0814000086	CONTRACT NO.: 08-3555V1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 1	OF 44

INDEX TO PLANS

Sheet No.	Title
1.	GENERAL PLAN
2.	INDEX TO PLANS
3.	FOUNDATION PLAN NO. 1
4.	FOUNDATION PLAN NO. 2
5.	ABUTMENT 1 LEFT LAYOUT
6.	ABUTMENT 1 RIGHT LAYOUT
7.	ABUTMENT 9 RIGHT LAYOUT
8.	ABUTMENT DETAILS NO. 1
9.	ABUTMENT DETAILS NO. 2
10.	ABUTMENT DETAILS NO. 3
11.	PIER LEFT LAYOUT
12.	PIER RIGHT LAYOUT
13.	PIER DETAILS
14.	TYPICAL SECTION
15.	LEFT WIDENING GIRDER LAYOUT
16.	RIGHT WIDENING GIRDER LAYOUT NO. 1
17.	RIGHT WIDENING GIRDER LAYOUT NO. 2
18.	HINGE LAYOUT
19.	HINGE DETAILS
20.	HINGE RETROFIT DETAILS
21.	CABLE RESTRAINER TYPE 2
22.	CABLE RESTRAINER ADJUSTMENT HARDWARE
23.	LEFT WIDENING TOP & BOTTOM GIRDER REINFORCEMENT
24.	RIGHT WIDENING TOP GIRDER REINFORCEMENT
25.	RIGHT WIDENING BOTTOM GIRDER REINFORCEMENT
26.	STRUCTURE APPROACH TYPE N(30S)
27.	STRUCTURE APPROACH TYPE R(30S)
28.	STRUCTURE APPROACH DRAINAGE DETAILS
29.	ABUTMENT RECONSTRUCTION DETAILS NO. 1
30.	ABUTMENT RECONSTRUCTION DETAILS NO. 2
31.	ABUTMENT RECONSTRUCTION DETAILS NO. 3
32.	ABUTMENT RECONSTRUCTION DETAILS NO. 4
33.	STRUCTURE DRAINAGE LAYOUT
34.	LOG OF TEST BORINGS 1 OF 11
35.	LOG OF TEST BORINGS 2 OF 11
36.	LOG OF TEST BORINGS 3 OF 11
37.	LOG OF TEST BORINGS 4 OF 11
38.	LOG OF TEST BORINGS 5 OF 11
39.	LOG OF TEST BORINGS 6 OF 11
40.	LOG OF TEST BORINGS 7 OF 11
41.	LOG OF TEST BORINGS 8 OF 11
42.	LOG OF TEST BORINGS 9 OF 11
43.	LOG OF TEST BORINGS 10 OF 11
44.	LOG OF TEST BORINGS 11 OF 11



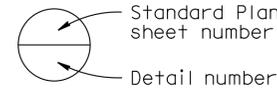
- Structural Concrete, Bridge
- Structural Concrete, Bridge Footing
- Structural Concrete, Bridge (4,000 psi at 28 days)

CONCRETE STRENGTH AND TYPE LIMITS

No Scale

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
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
A76A	CONCRETE BARRIER TYPE 60
BO-1	BRIDGE DETAILS
BO-3	BRIDGE DETAILS
BO-5	BRIDGE DETAILS
BO-13	BRIDGE DETAILS
B2-8	PILE DETAILS CLASS 200
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
B7-6	DECK DRAINS TYPES D-1 AND D-2
B7-7	DECK DRAIN TYPE D-3
B7-8	DECK DRAINAGE DETAILS
B7-10	UTILITY OPENING BOX GIRDER
RSP B11-56	CONCRETE BARRIER TYPE 736



QUANTITIES

PREPARE CONCRETE BRIDGE DECK SURFACE	34,870	SQFT
REFINISH BRIDGE DECK	1,896	SQFT
FURNISH POLYESTER CONCRETE OVERLAY	2,180	CF
PLACE POLYESTER CONCRETE OVERLAY	34,870	SQFT
CORE CONCRETE (6")	120	LF
CORE CONCRETE (10")	110	LF
BRIDGE REMOVAL (PORTION), LOCATION A	LUMP	SUM
STRUCTURE EXCAVATION (BRIDGE)	301	CY
STRUCTURE EXCAVATION (TYPE D)	4,249	CY
STRUCTURE BACKFILL (BRIDGE)	152	CY
TEMPORARY SUPPORT (LOCATION A)	LUMP	SUM
FURNISH PILING (CLASS 200) (ALTERNATIVE W)	10,123	LF
DRIVE PILE (CLASS 200) (ALTERNATIVE W)	226	EA
STRUCTURAL CONCRETE, BRIDGE FOOTING	554	CY
STRUCTURAL CONCRETE, BRIDGE	3,205	CY
AGGREGATE BASE (APPROACH SLAB)	18	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	150	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	185	CY
DIAPHRAGM BOLSTER	18	EA
DRILL AND BOND DOWEL	2,022	LF
JOINT SEAL (MR 1")	336	LF
JOINT SEAL (MR 2")	336	LF
BAR REINFORCING STEEL (BRIDGE)	1,552,381	LB
MISCELLANEOUS METAL (RESTRAINER-CABLE TYPE)	9,649	LB
MISCELLANEOUS METAL (RESTRAINER-PIPE/CABLE TYPE)	7,500	LB
BRIDGE DECK DRAINAGE SYSTEM	4,640	LB
CONCRETE BARRIER (TYPE 60A MODIFIED)	632	LF
CONCRETE BARRIER (TYPE 736)	1,277	LF

**PILE DATA TABLE
MOJAVE RIVER BRIDGE WIDEN**

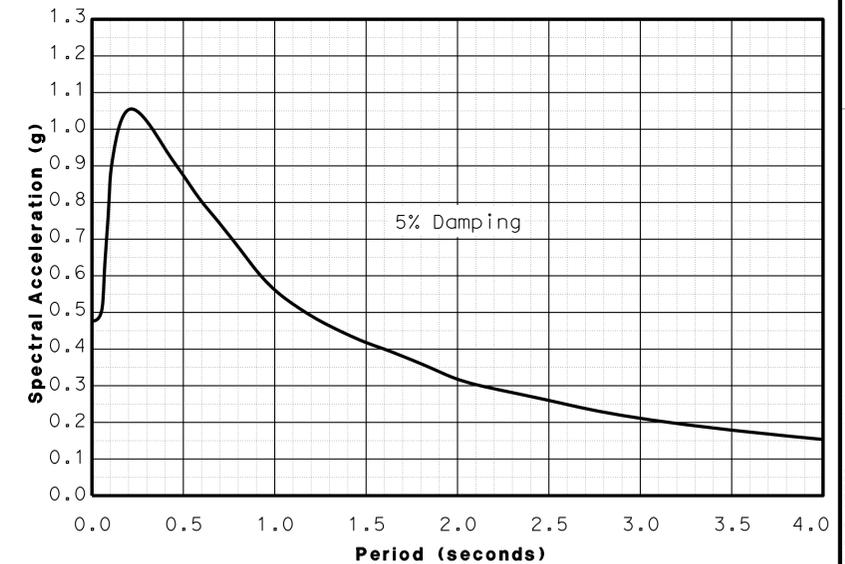
Location	Pile Type	Nominal Resistance (kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance (kips)
		Compression	Tension			
Abut 1 Lt	Class 200	400	0	2665 (a), 2650 (d)	2650	510
Abut 1 Rt	Alt "W"	380	0	2665 (a), 2650 (d)	2650	520
Pier 2 Lt	Class 200	400	130	2627 (a), 2638 (b), 2635 (d)	2627	440
Pier 2 Rt	Alt "W"	400	130	2627 (a), 2634 (b), 2635 (d)	2627	410
Nose Ext.		150	0	2650 (a), 2655 (d)	2650	150
Pier 3 Lt	Class 200	400	130	2627 (a), 2638 (b), 2634 (d)	2627	440
Pier 3 Rt	Alt "W"	400	130	2626 (a), 2633 (b), 2634 (d)	2626	420
Nose Ext.		150	0	2650 (a), 2655 (d)	2650	150
Pier 4 Lt	Class 200	400	130	2627 (a), 2637 (b), 2634 (d)	2627	440
Pier 4 Rt	Alt "W"	400	130	2628 (a), 2635 (b), 2634 (d)	2628	400
Nose Ext.		150	0	2650 (a), 2655 (d)	2650	150
Pier 5 Lt	Class 200	400	130	2626 (a), 2642 (b), 2636 (d)	2626	400
Pier 5 Rt	Alt "W"	390	100	2630 (a), 2637 (b), 2636 (d)	2630	390
Nose Ext.		150	0	2650 (a), 2655 (d)	2650	150
Pier 6 Lt	Class 200	400	130	2627 (a), 2642 (b), 2637 (d)	2627	400
Pier 6 Rt	Alt "W"	390	100	2632 (a), 2646 (b), 2637 (d)	2632	390
Nose Ext.		150	0	2655 (a), 2655 (d)	2655	150
Pier 7 Lt	Class 200	400	130	2622 (a), 2638 (b), 2634 (d)	2622	500
Pier 7 Rt	Alt "W"	390	100	2632 (a), 2644 (b), 2637 (d)	2632	390
Nose Ext.		150	0	2655 (a), 2655 (d)	2655	150
Pier 8 Lt	Class 200	400	130	2622 (a), 2638 (b), 2634 (d)	2622	500
Pier 8 Rt	Alt "W"	390	100	2632 (a), 2644 (b), 2637 (d)	2632	390
Nose Ext.		150	0	2655 (a), 2655 (d)	2655	150
Abut 9 Lt	Class 200	400	0	2665 (a), 2660 (d)	2660	500
Abut 9 Rt	Alt "W"	400	0	2665 (a), 2660 (d)	2660	520

NOTES:

- Design tip elevations are controlled by: (a) compression, (b) Tension, (d) Lateral Load.

**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 the 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: $V_{s30} = 1030$ ft/s
Moment Magnitude: $M_{max} = 6.5$
Peak Ground Acceleration = 0.49g



- REINFORCED CONCRETE: $f_y = 60$ ksi
 $f'_c = 3600$ psi, unless otherwise noted
 $n = 8$
- STRUCTURAL STEEL: NEW CONSTRUCTION: $f_y =$ ASTM A709 Grade 50
- STEEL PIPE PILES: ASTM A252 Grade 3

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY Ryan Stiltz	CHECKED L. Wu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	54-0483	MOJAVE RIVER BRIDGE (WIDEN) INDEX TO PLANS
	DETAILS	BY G. Hallstrom	CHECKED L. Wu			POST MILE	43.93	
	QUANTITIES	BY D. Azzam	CHECKED A. McPhee/F. Chen			REVISION DATES	03-13-08 11-14-13 4-28-14 5-14-14 6-05-13 6-18-13 7-11-13 9-30-13 10-31-13	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					CU 08 EA 3555V1	DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET 2 OF 44

SURVEY CONTROL
 PRHV438
 Fnd 1" IP w/ CDOT Plastic Plug
 53.69 FT Rt. @ Rte 15
 Sta. 185+41.29
 N 2,022,651.85
 E 6,773,779.43
 Elev. = 2717.56
 PRHV440 (Shown on Plan No.2)
 Fnd CDOT Brass Disc in Conc.
 51.12 FT Lt. @ Rte 15
 Sta. 193+10.56
 N 2,023,195.81
 E 6,774,333.39
 Elev. = 2713.18

HYDROLOGIC / HYDRAULIC DATA SUMMARY
 DRAINAGE AREA: 513.00 SQUARE MILES

	DESIGN FLOOD	BASE FLOOD
FREQUENCY (YEARS)	<u>50</u>	<u>100</u>
DISCHARGE (CUBIC FEET PER SECOND)	<u>25500.00</u>	<u>30900.00</u>
WATER SURFACE ELEV. (FEET)	<u>2700.10</u>	<u>2700.90</u>

FLOOD PLAIN DATA ARE BASED UPON INFORMATION AVAILABLE WHEN THE PLANS WERE PREPARED AND ARE SHOWN TO MEET FEDERAL REQUIREMENTS. THE ACCURACY OF SAID INFORMATION IS NOT WARRANTED BY THE STATE AND INTERESTED OR AFFECTED PARTIES SHOULD MAKE THEIR OWN INVESTIGATIONS.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15	42.5/46.0	698	824

REGISTERED CIVIL ENGINEER DATE 11-07-13
 RYAN STILTZ
 No. C65738
 Exp. 9/30/15
 CIVIL
 STATE OF CALIFORNIA

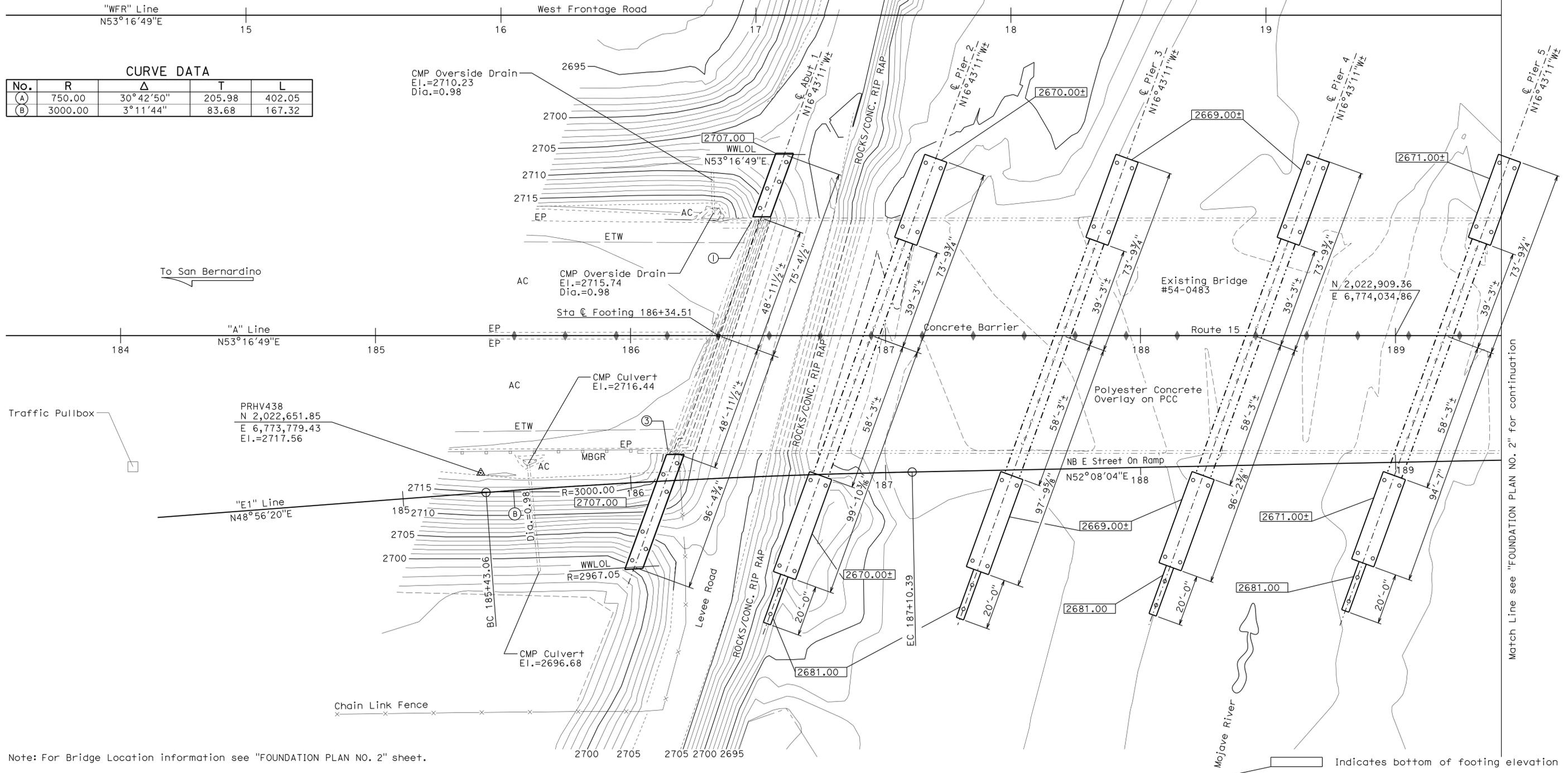
6-23-14
 PLANS APPROVAL DATE

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"WFR" Line
 N53°16'49"E

CURVE DATA

No.	R	Δ	T	L
(A)	750.00	30°42'50"	205.98	402.05
(B)	3000.00	3°11'44"	83.68	167.32



Note: For Bridge Location Information see "FOUNDATION PLAN NO. 2" sheet.

Indicates bottom of footing elevation

PRELIMINARY INVESTIGATION SECTION			
SCALE	VERT. DATUM	PHOTOGRAMMETRY AS OF:	X
1"=20'	HORZ. DATUM	SURVEYED	BY Dist./T.Gillett 2008
ALIGNMENT TIES	Dist. Traverse Sheet	DRAFTED	BY J.Martinez 10/2008
CHECKED	BY T.Gillett 10/2008	CHECKED	BY T.Zolnikova 10/2008

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 10

BRIDGE NO.
 54-0483
 POST MILE
 43.93

MOJAVE RIVER BRIDGE (WIDEN)
FOUNDATION PLAN NO. 1

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 10/25/05)

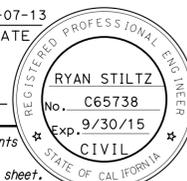
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

CU 08
 EA 3555V1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
11/06/08 03/24/09 06/14/09 09/06/12 05/06/13 07/21/13 10/29/13	3	44

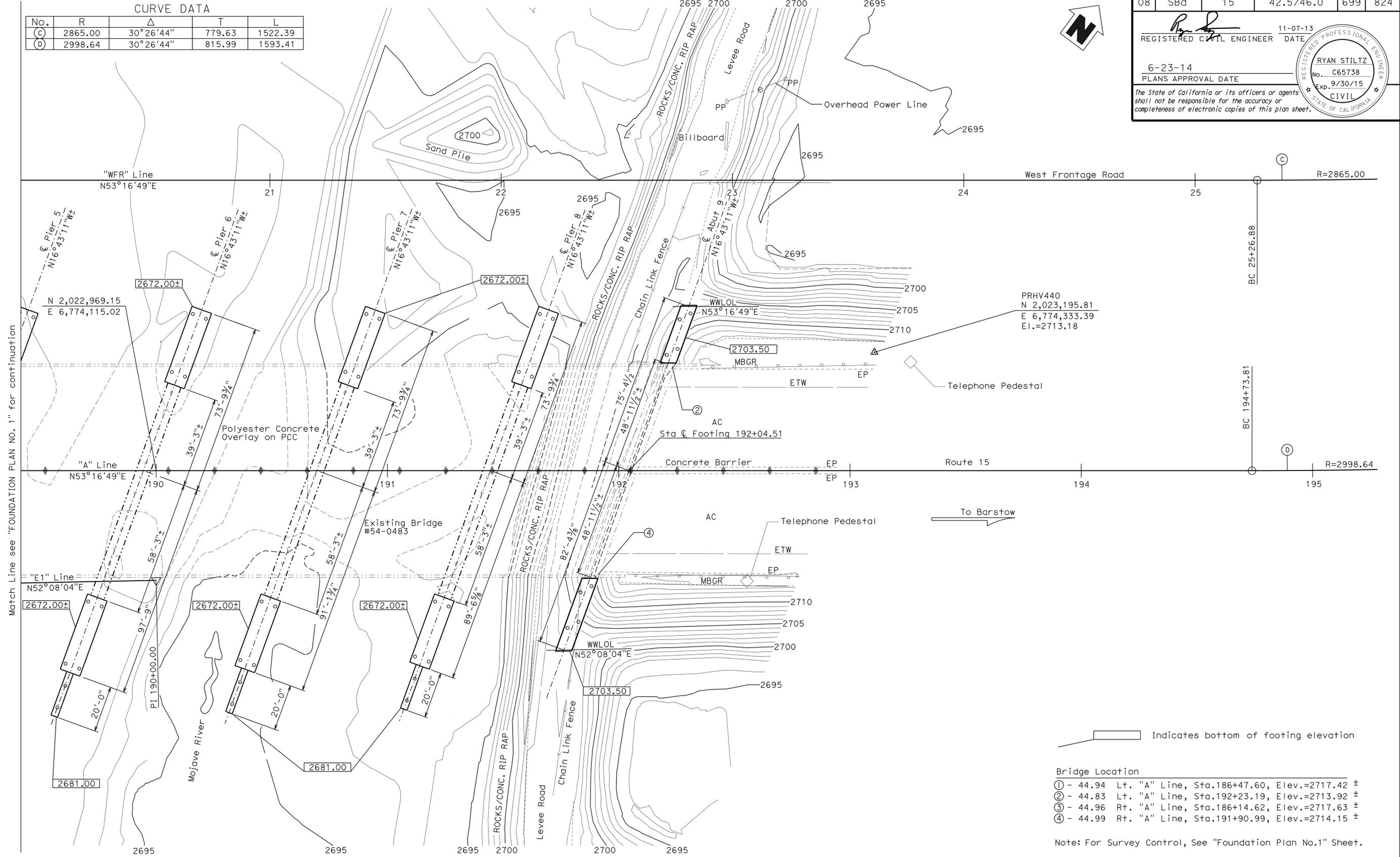
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15	42.5/46.0	699	824



 11-07-13
 REGISTERED CIVIL ENGINEER DATE
 6-23-14
 PLANS APPROVAL DATE
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CURVE DATA

No.	R	Δ	T	L
(C)	2865.00	30°26'44"	779.63	1522.39
(D)	2998.64	30°26'44"	815.99	1593.41

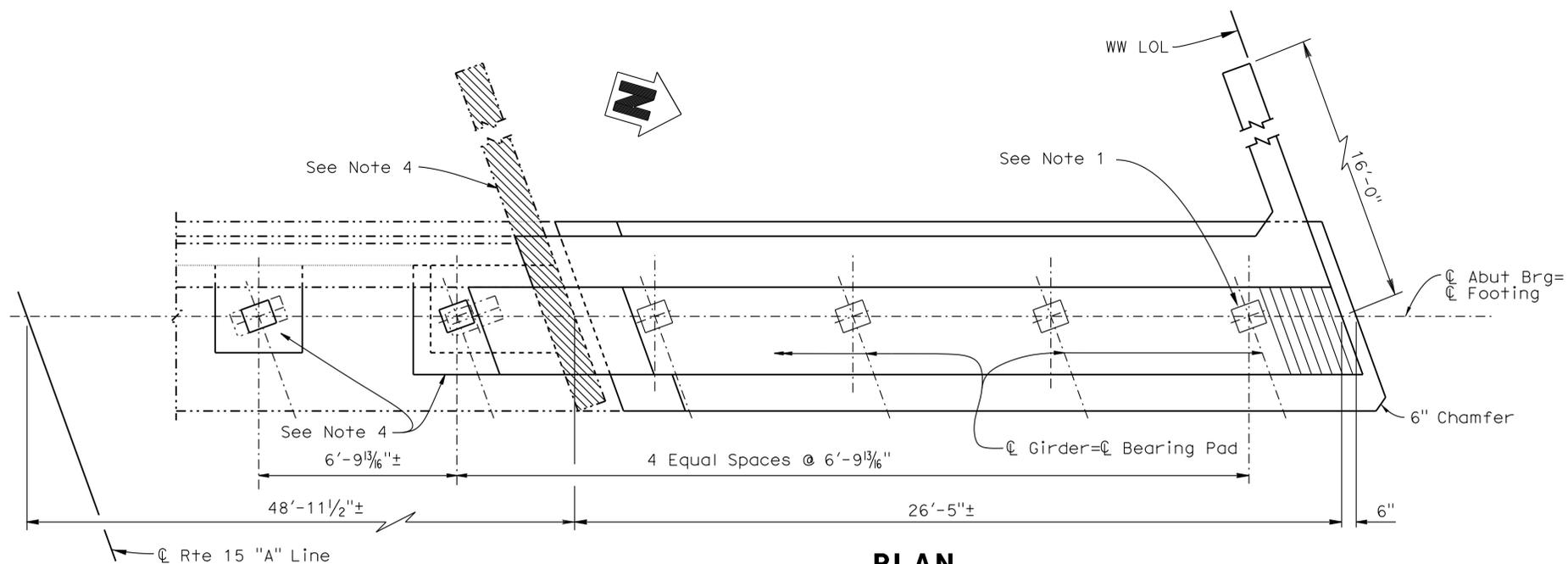


Indicates bottom of footing elevation
 Bridge Location
 ① - 44.94 Lt. "A" Line, Sta.186+47.60, Elev.=2717.42 ±
 ② - 44.83 Lt. "A" Line, Sta.192+23.19, Elev.=2713.92 ±
 ③ - 44.96 Rt. "A" Line, Sta.186+14.62, Elev.=2717.63 ±
 ④ - 44.99 Rt. "A" Line, Sta.191+90.99, Elev.=2714.15 ±
 Note: For Survey Control, See "Foundation Plan No.1" Sheet.

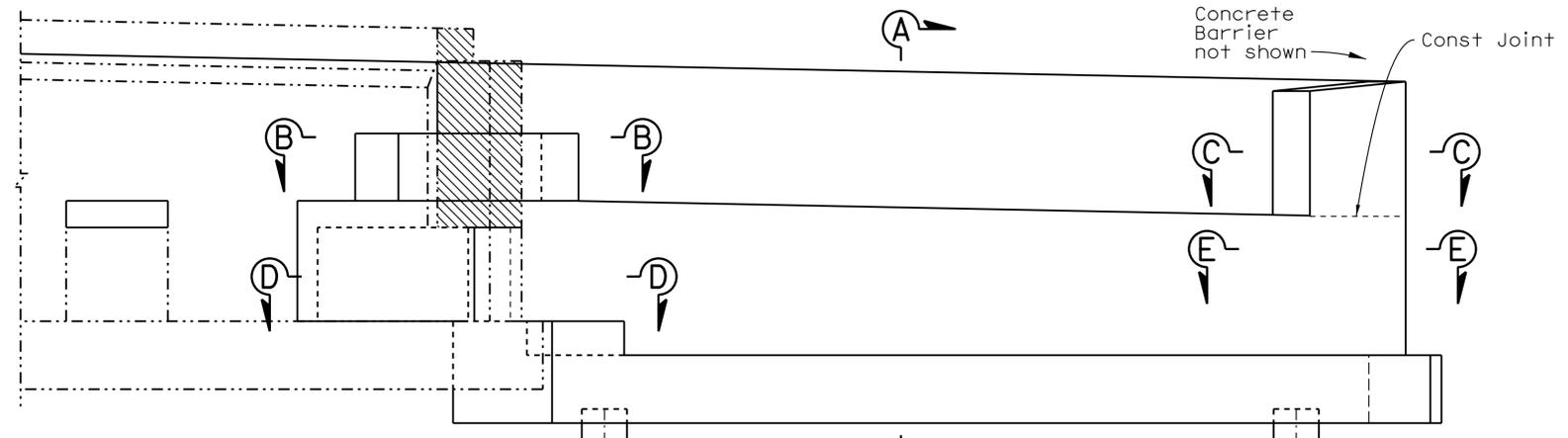
PRELIMINARY INVESTIGATION SECTION				DESIGN BY R. Stiltz	CHECKED L. WU	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 54-0483	MOJAVE RIVER BRIDGE (WIDEN) FOUNDATION PLAN NO. 2	
SCALE 1"=20'	VERT. DATUM NGVD29	PHOTOGRAMMETRY AS OF: X	DETAILS BY G. Hallstrom	CHECKED L. WU	POST MILE 43.93					
ALIGNMENT TIES Dist. Traverse Sheet	SURVEYED BY Dist./T. Gillett 2008	CHECKED BY T. Gillett 10/2008	QUANTITIES BY D. Azzam	CHECKED A. McPhee/F. Chen						
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 10/25/05)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		CU 08 EA 3555V1	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 11/25/08 03/24/09 06/14/09 09/26/12 05/26/13 07/21/13 10/29/13	SHEET 4 OF 44

USERNAME => s124496 DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 12:06

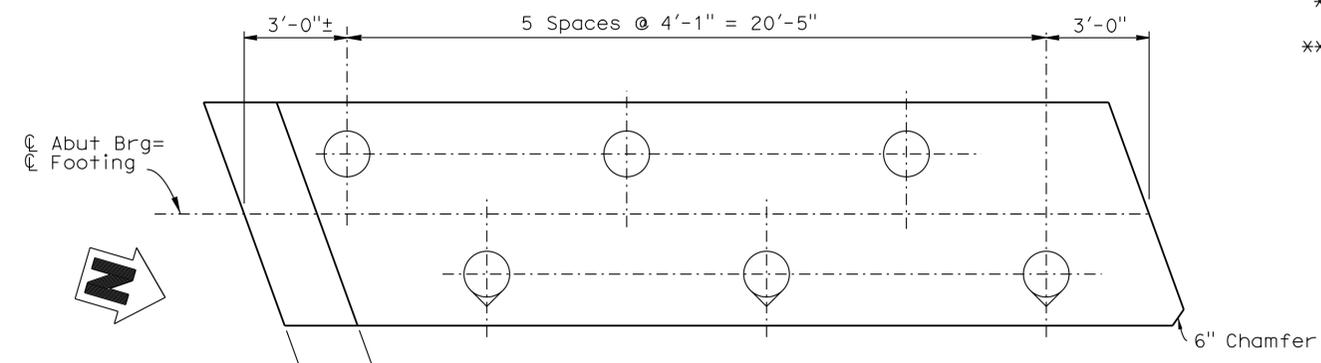
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15	42.5/46.0	700	824
			11-07-13	REGISTERED CIVIL ENGINEER DATE	
			6-23-14	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER RYAN STILTZ No. C65738 Exp. 9/30/15 CIVIL STATE OF CALIFORNIA		
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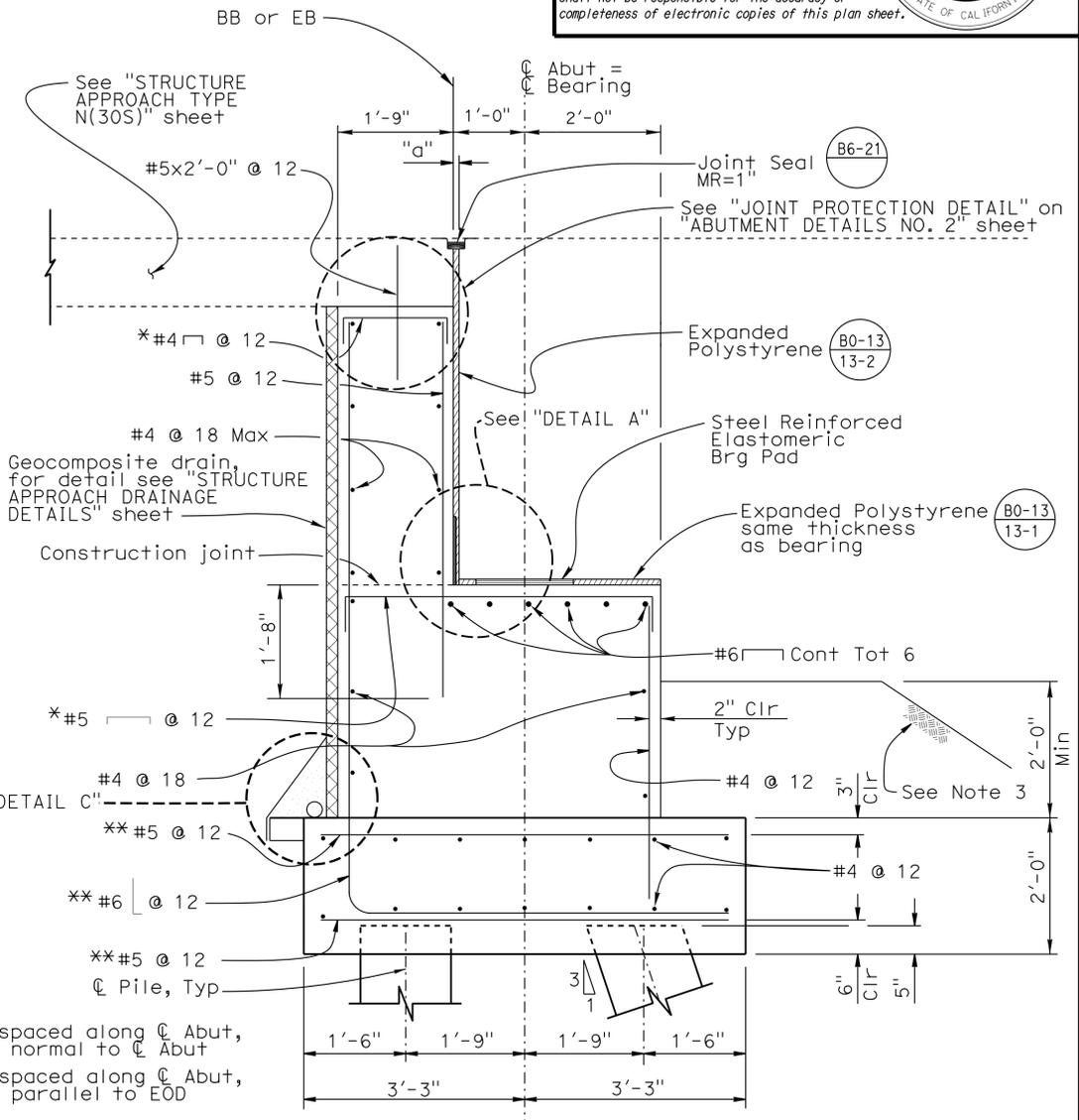
PLAN
3/8" = 1'-0"



ELEVATION
3/8" = 1'-0"



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



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

- NOTES:
- Bearing pads shall be 10" x 12" x 2" (elastomer only) steel reinforced elastomeric bearings pads Tot 5, for details see "ABUTMENT DETAILS NO. 1" sheet.
 - For "SECTION B-B", "SECTION C-C", "SECTION D-D", "SECTION E-E", "DETAIL A", and "DETAIL C", see "ABUTMENT DETAILS NO. 1" sheet.
 - For details on Rock Slope Protection, see "ROADWAY PLANS".
 - For limit of existing wingwall removal, and other abutment reconstruction details, see "ABUTMENT RECONSTRUCTION DETAILS NO. 1, NO. 2, NO. 3, and NO. 4" sheets.

- LEGEND:
- Indicates new construction
 - - - Indicates existing structure
 - ▨ Indicates bridge removal (portion)
 - Indicates Vertical Steel Pile
 - ◊ Indicates Battered Steel Pile

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY R. Stiltz	CHECKED L. Wu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	54-0483	MOJAVE RIVER BRIDGE (WIDEN) ABUTMENT 1 LEFT LAYOUT
	DETAILS	BY G. Hallstrom	CHECKED L. Wu			POST MILE	43.93	
	QUANTITIES	BY D. Azzam	CHECKED A. McPhee/F. Chen			CU 08 EA 3555V1	REVISION DATES	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 5	OF 44	

USERNAME => s124496 DATE PLOTTED => 27-JUN-2014 TIME PLOTTED => 12:06