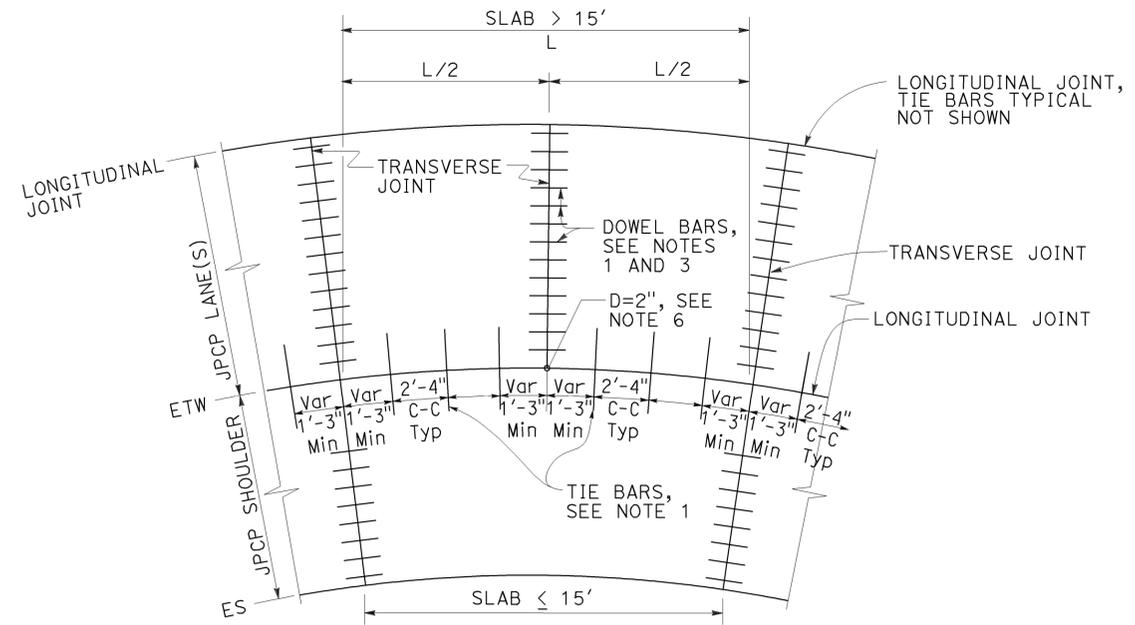


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1501	2313

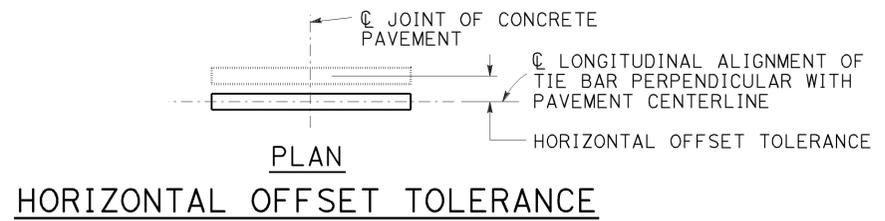
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

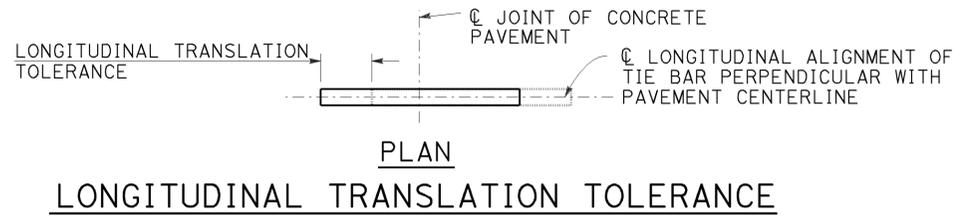
TO ACCOMPANY PLANS DATED 6-1-15



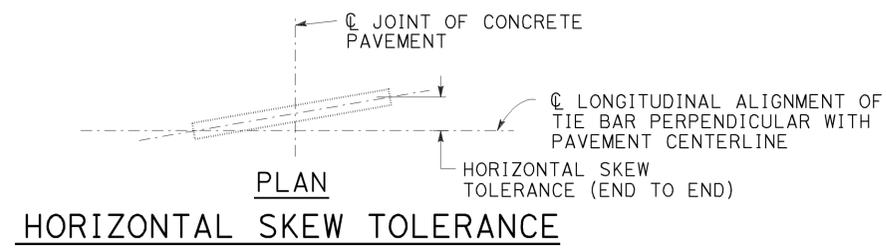
TIE BAR LAYOUT IN CURVED LANES



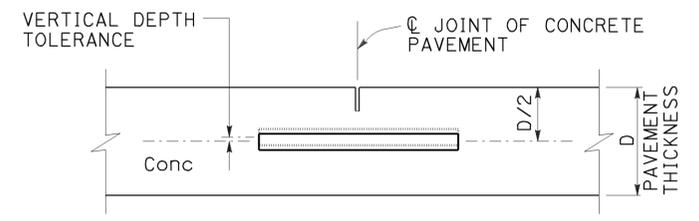
HORIZONTAL OFFSET TOLERANCE



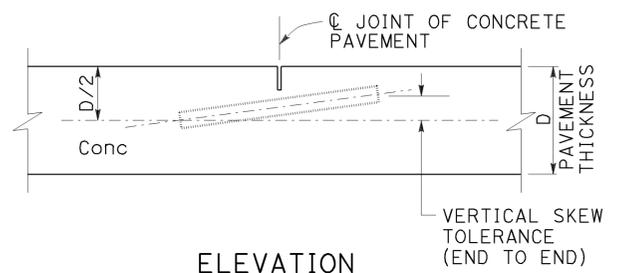
LONGITUDINAL TRANSLATION TOLERANCE



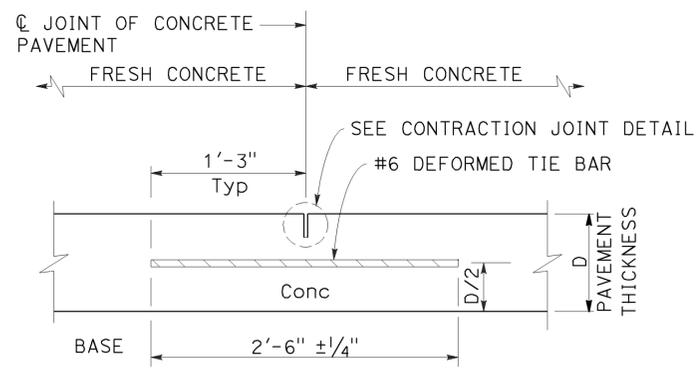
HORIZONTAL SKEW TOLERANCE



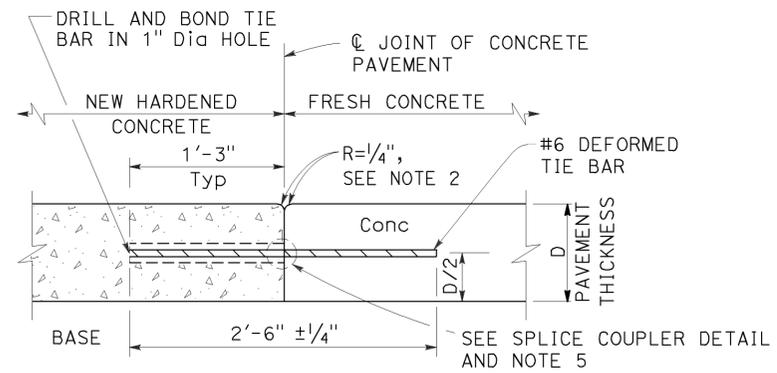
VERTICAL DEPTH TOLERANCE



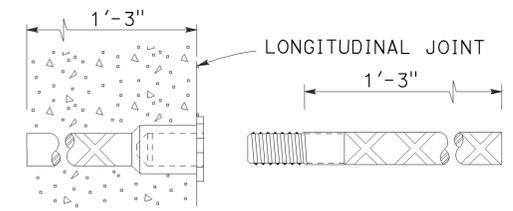
VERTICAL SKEW TOLERANCE



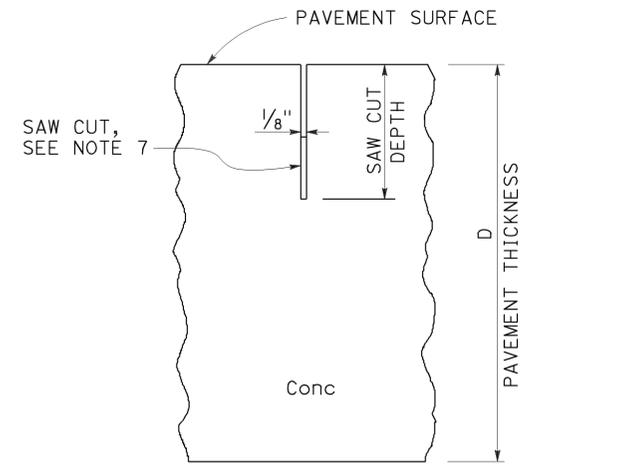
LONGITUDINAL CONTRACTION JOINT



LONGITUDINAL CONSTRUCTION JOINT



ALTERNATIVE SPLICE COUPLER



CONTRACTION JOINT DETAIL

- NOTES:**
1. See Revised Standard Plan RSP P1 for typical dowel bar and tie bar placement and locations.
 2. Where new pavement is placed against existing concrete pavement, rounding the corner is not required.
 3. For dowel bar sizes, See Revised Standard Plan RSP P10.
 4. Tie bar details apply to inside widenings.
 5. Use either drill and bond or splice couplers.
 6. Full depth drilled hole. Fill hole with filler material.
 7. The bottom of the saw cut must be at least 0.5" clear of any dowel bar, tie bar and bar reinforcement.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT-TIE BAR DETAILS
 NO SCALE

RSP P15 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP P15

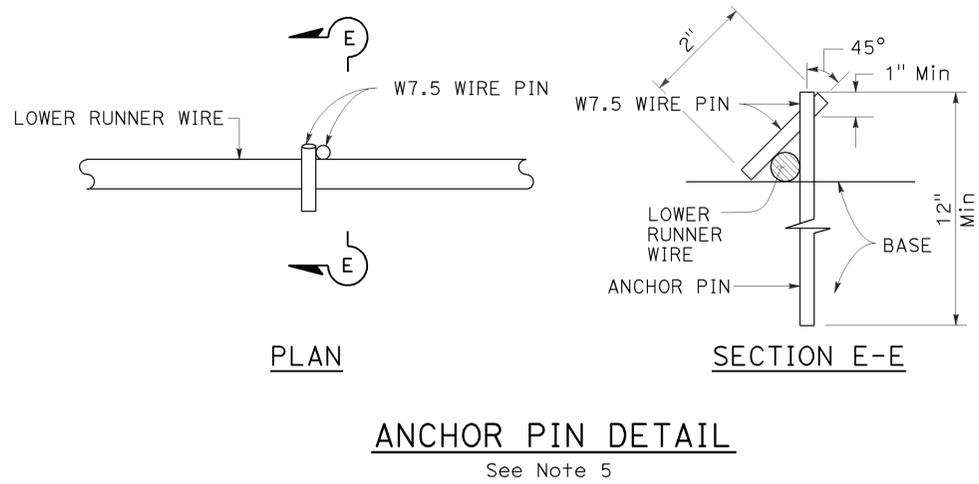
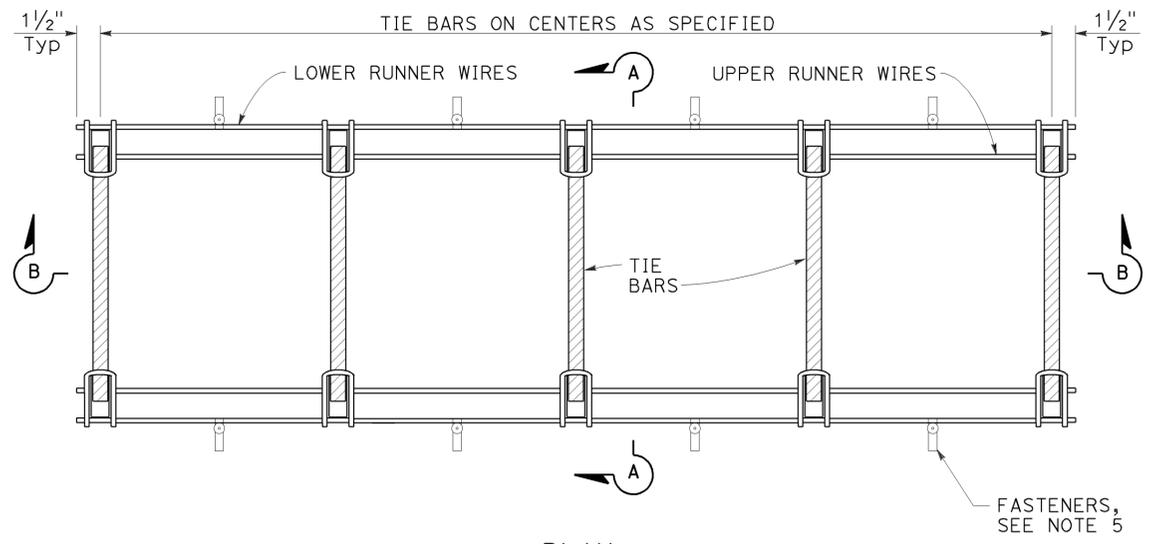
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1502	2313

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

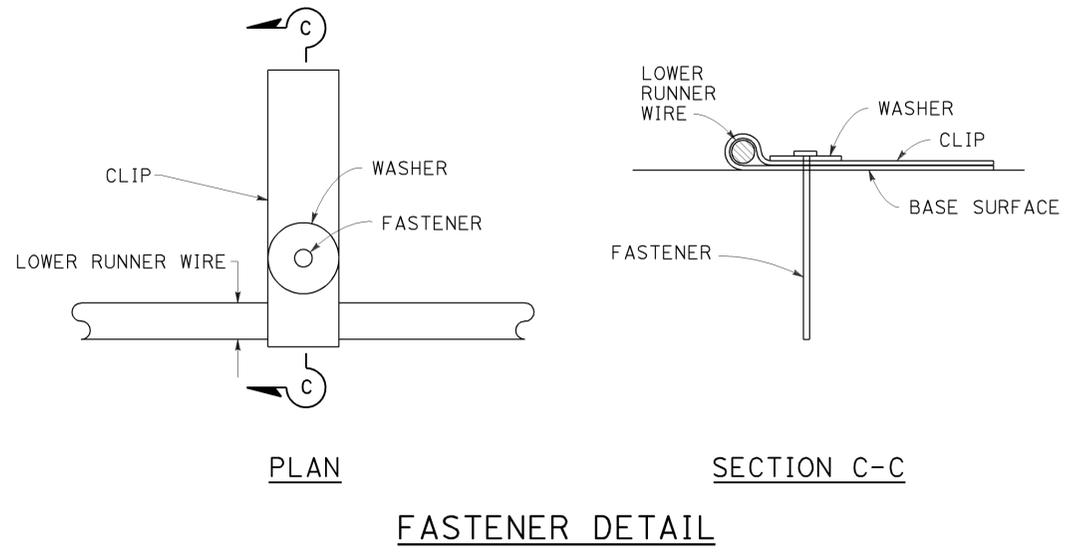
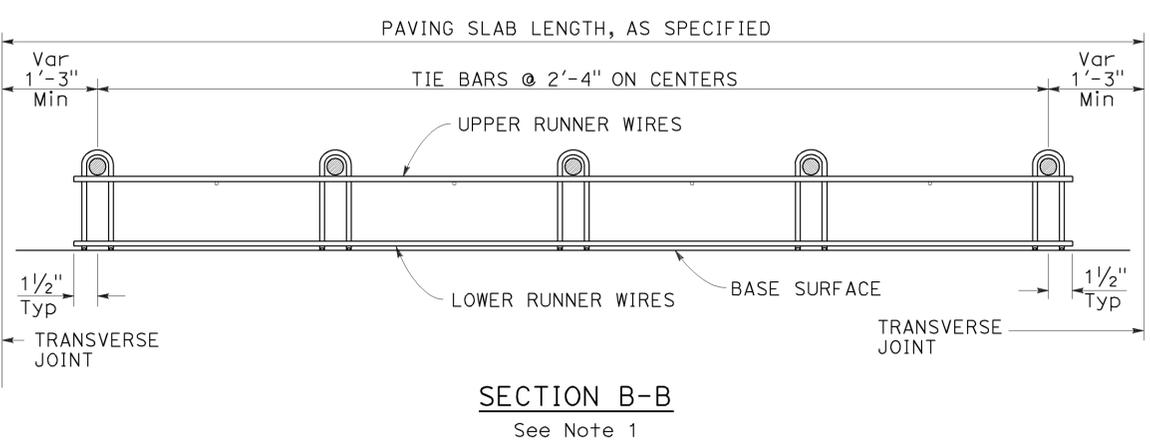
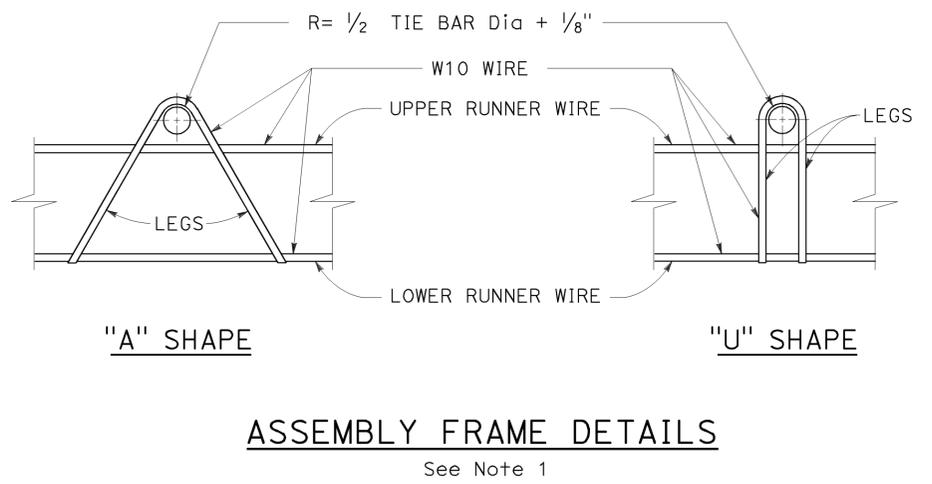
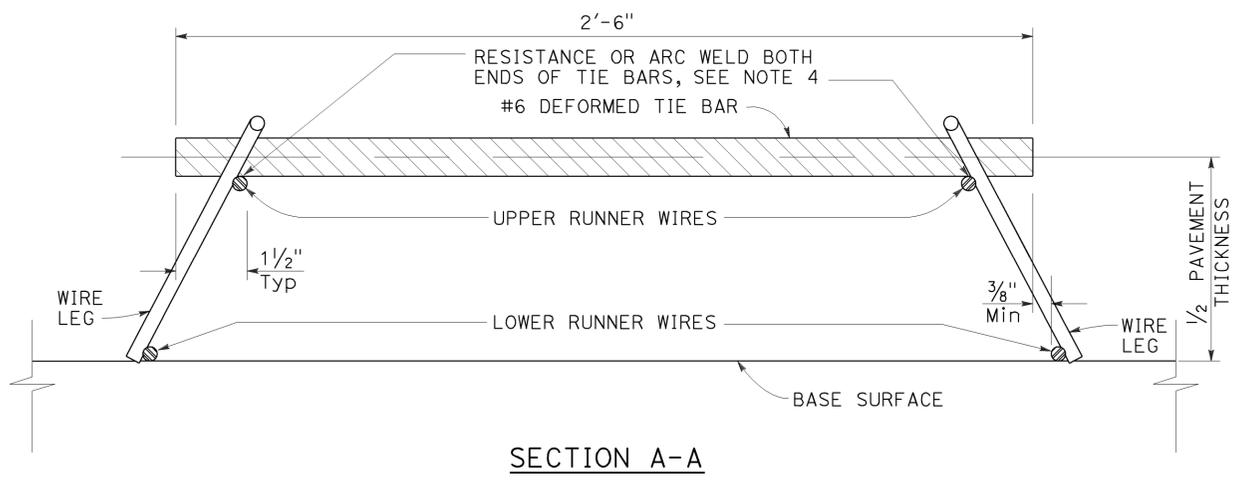
July 19, 2013
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 6-1-15



- NOTES:**
- "U" frame shape assembly shown. Use either "U" frame shape or "A" frame shape.
 - Wire sizes shown are the minimum required.
 - All wire intersections must be resistance welded.
 - Weld may be at top or bottom of tie bars.
 - Use anchor pins where soil or granular base is used.

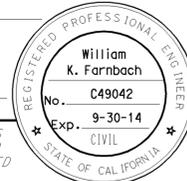


STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT
 TIE BAR BASKET
 DETAILS**
 NO SCALE

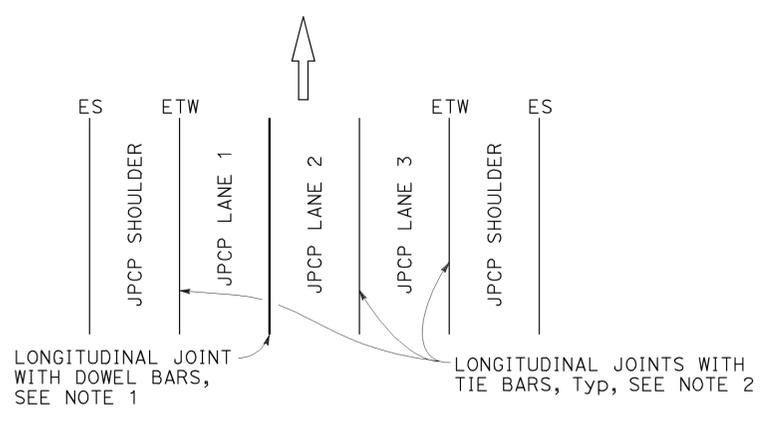
2010 REVISED STANDARD PLAN RSP P17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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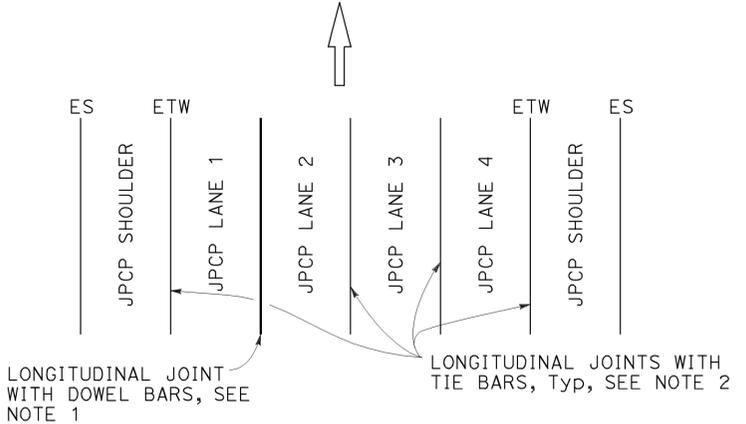
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
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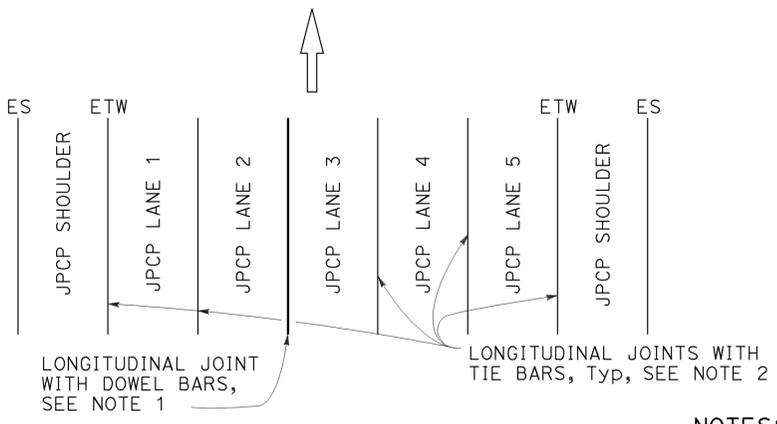
TO ACCOMPANY PLANS DATED 6-1-15



3 LANES WITH CONCRETE SHOULDERS
PLAN



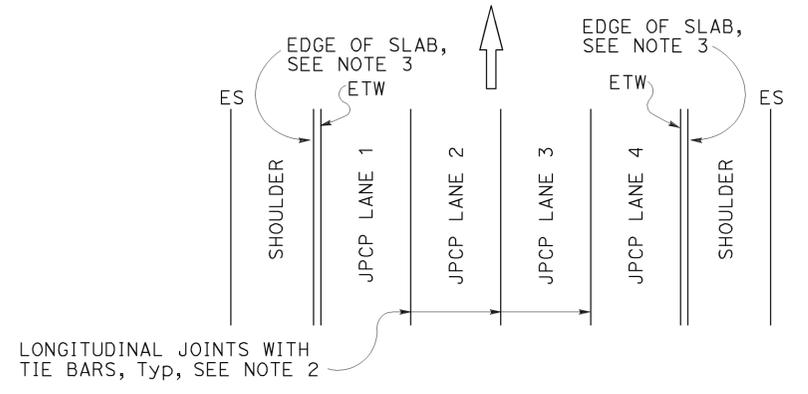
4 LANES WITH CONCRETE SHOULDERS
PLAN



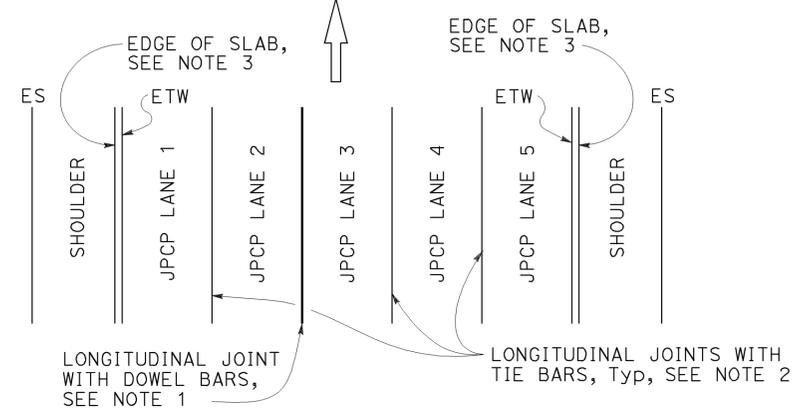
5 LANES WITH CONCRETE SHOULDERS
PLAN

NOTES:

- See Revised Standard Plan RSP P10 for longitudinal joint with dowel bars.
- See Revised Standard Plan RSP P15 for longitudinal joint with tie bars.
- S = Reservoir depth.
 $S = \frac{7}{8}'' \pm \frac{1}{16}''$ for asphalt rubber seals
 $S = \frac{9}{16}'' \pm \frac{1}{16}''$ for silicone seals
 Preformed compression seals must be $\frac{13}{16}''$ wide and $S = 1\frac{1}{16}'' \pm \frac{1}{16}''$

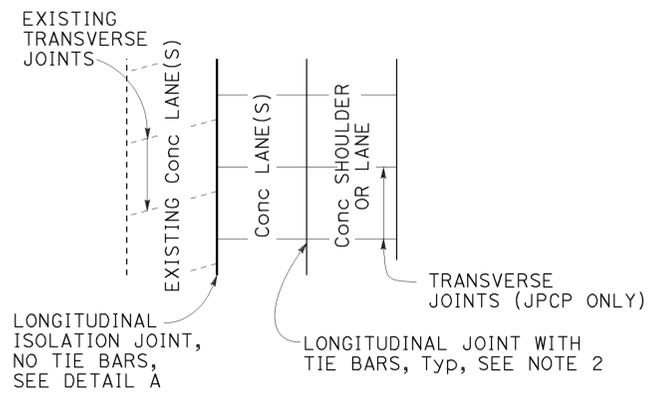


4 LANES OR LESS WITH AC SHOULDERS
PLAN

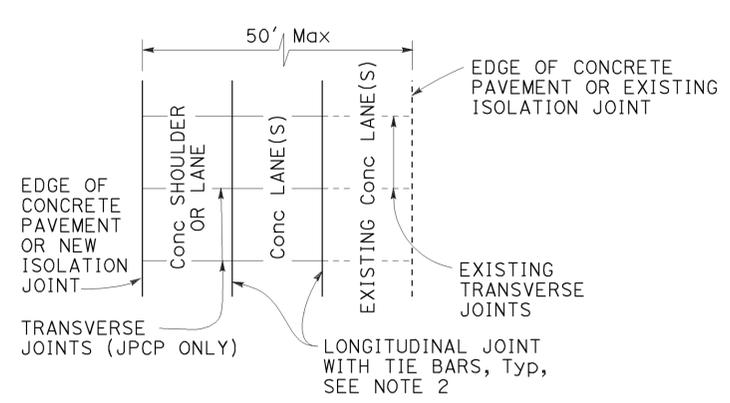


5 LANES WITH AC SHOULDERS
PLAN

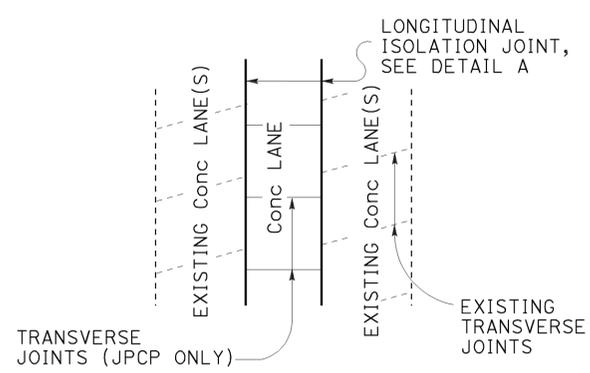
NEW CONSTRUCTION
Location of Longitudinal Joints For JPCP



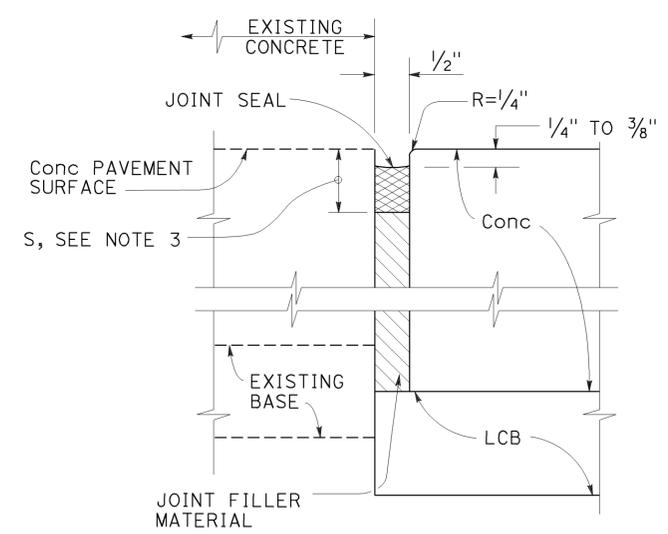
CASE 1
PLAN
Transverse joints do not align between new and existing.



CASE 2
PLAN
Transverse joints align between new and existing. (For JPCP only)



CASE 3 (INTERIOR LANE REPLACEMENT)
PLAN
Transverse joints do not align between new and existing.



DETAIL "A"
ISOLATION JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT
LANE SCHEMATICS
AND ISOLATION JOINT DETAIL**
NO SCALE

LANE/SHOULDER ADDITION OR RECONSTRUCTION
For JPCP and CRCP

RSP P18 DATED JULY 19, 2013 SUPERSEDES RSP P18 DATED APRIL 20, 2012 AND STANDARD PLAN P18 DATED MAY 20, 2011 - PAGE 135 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P18

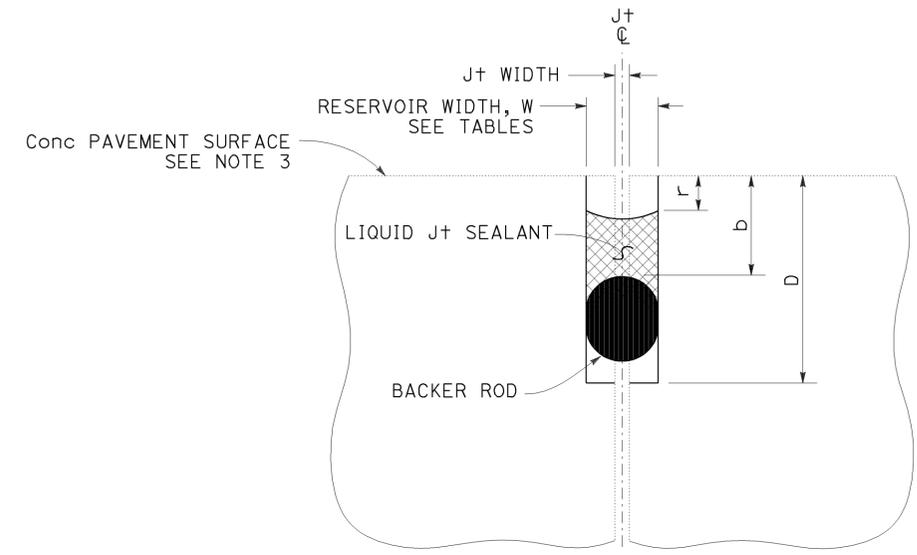
2010 REVISED STANDARD PLAN RSP P18



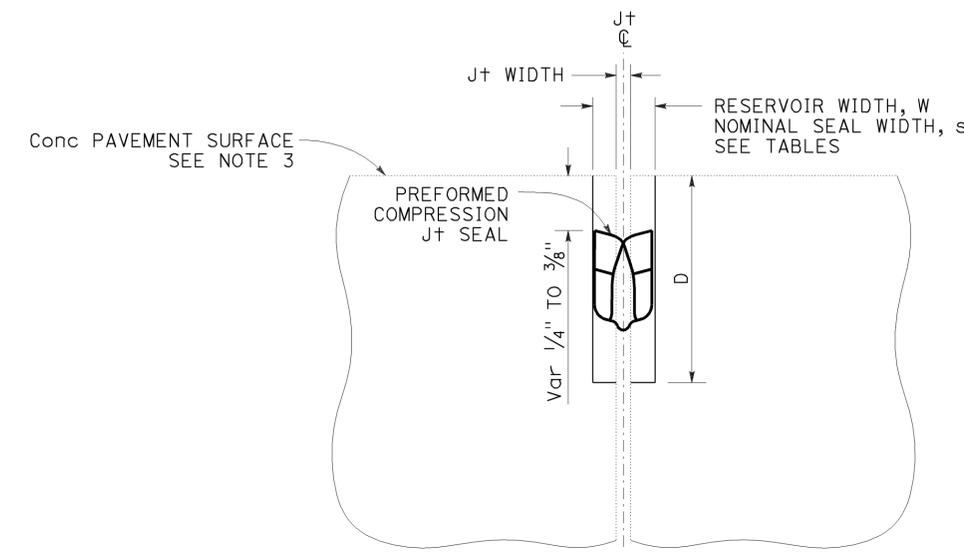
TO ACCOMPANY PLANS DATED 6-1-15

NOTES:

1. Details do not apply to isolation joints and longitudinal construction joints.
2. Tie bars, dowel bars, and bar reinforcement are not shown.
3. Depths are measured from the final concrete pavement surface elevation after any grinding.



LIQUID JOINT SEALANT



PREFORMED COMPRESSION JOINT SEAL

Const SEASON	Min RESERVOIR WIDTH * W ± 1/16"
WINTER	1/4"
SPRING	3/8"
SUMMER	
FALL	

* Minimum reservoir width for replace joint seal = existing joint width + 1/8"

RESERVOIR WIDTH W ± 1/16"	LIQUID JOINT SEALANT DIMENSIONS					
	BACKER ROD NOMINAL Dia *	DEPTHS (ASPHALT RUBBER) **		DEPTHS (SILICONE)		
		RESERVOIR D ± 1/4"	BACKER ROD b ± 1/16"	RESERVOIR D ± 1/4"	BACKER ROD b ± 1/16"	RECESS r ± 1/16"
1/4"	3/8"	1 3/4"	7/8"	1 3/8"	1/2"	1/4"
3/8"	1/2"	1 7/8"	7/8"	1 1/2"	1/2"	1/4"
1/2"	3/4"	2"	7/8"	1 3/4"	9/16"	5/16"
5/8"	7/8"	2 1/4"	1"	2"	5/8"	5/16"
3/4"	1"	2 3/4"	1 1/8"	2 1/4"	3/4"	3/8"
7/8"	1 1/4"	3"	1 1/4"	2 1/2"	13/16"	3/8"
1"	1 1/2"	3 1/4"	1 3/8"	2 5/8"	7/8"	3/8"
1 1/8"	1 1/2"	3 1/2"	1 1/2"	2 13/16"	1"	1/2"

* Larger diameter backer rods may be substituted according to manufacturer recommendations if reservoir depth is increased equivalently.

** Asphalt rubber sealant recess depth "r" varies from 1/4" to 3/8"

RESERVOIR WIDTH W ± 1/16"	PREFORMED COMPRESSION JOINT SEAL DIMENSIONS	
	NOMINAL SEAL WIDTH s	RESERVOIR DEPTH D ± 1/4"
1/4"	7/16"	1 1/4"
3/8"	11/16"	1 1/16"
1/2"	13/16"	1 1/8"
5/8"	1"	1 7/8"
3/4"	1 1/4"	2 1/8"
7/8"	1 5/8"	2 5/8"
1"	1 7/8"	2 3/8"
1 1/8"	2"	2 7/8"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

JOINT SEALS

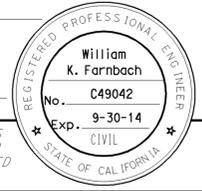
NO SCALE

RSP P20 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN P20
DATED MAY 20, 2011 - PAGE 136 OF THE STANDARD PLANS BOOK DATED 2010.

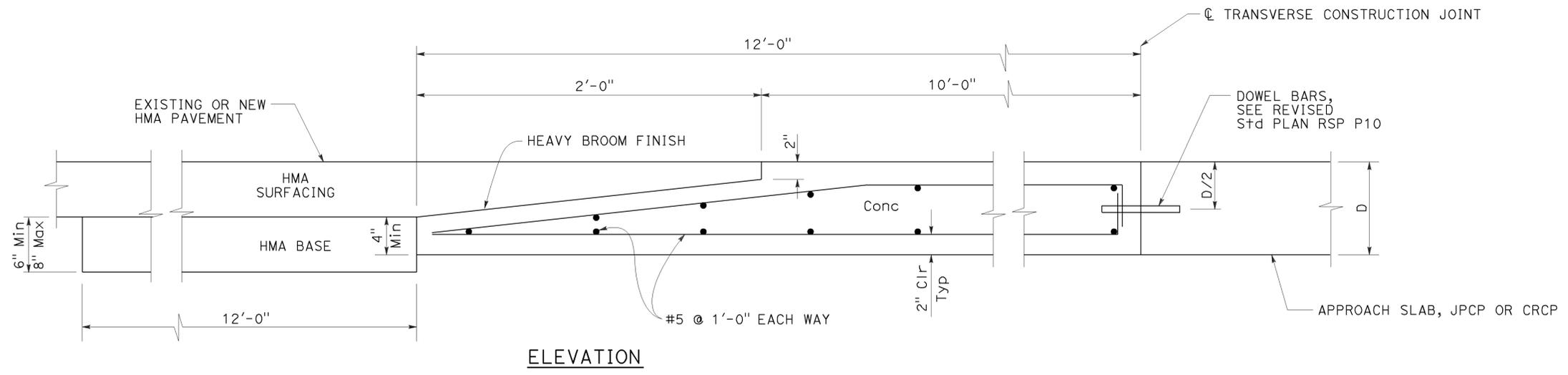
2010 REVISED STANDARD PLAN RSP P20

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1505	2313

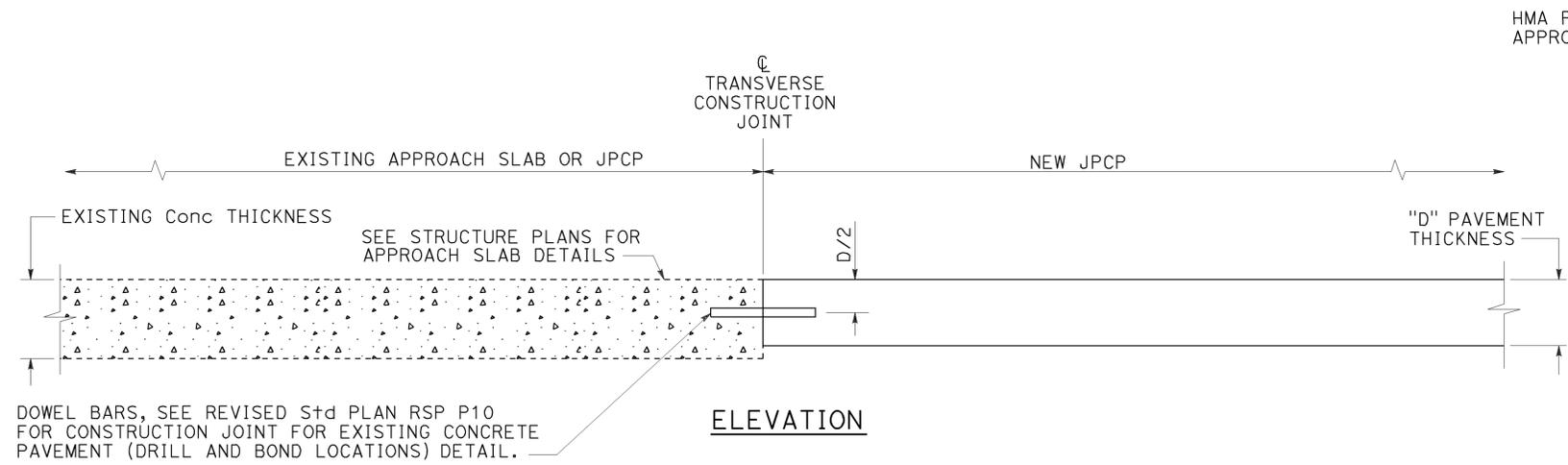
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
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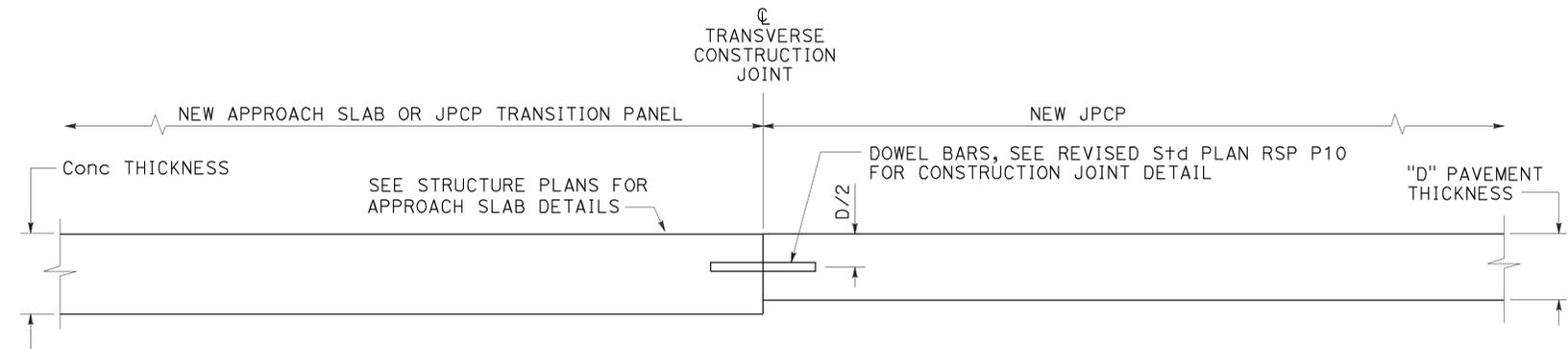
TO ACCOMPANY PLANS DATED 6-1-15



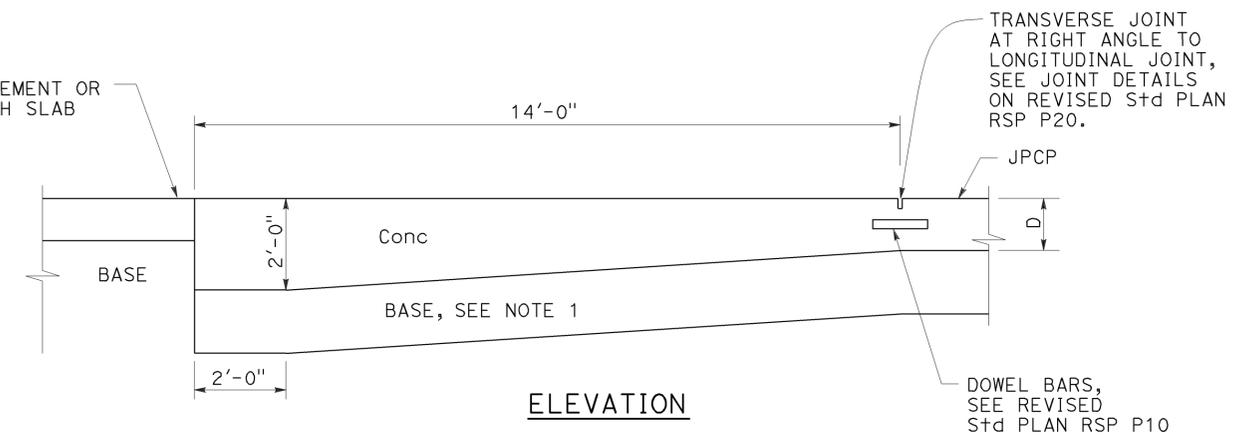
ELEVATION
CONCRETE PAVEMENT
TRANSITION PANEL



ELEVATION
TERMINAL JOINT TYPE 1
For Exist JPCP or Approach Slab



ELEVATION
TERMINAL JOINT TYPE 2
For JPCP Transition Panel or Approach Slab



ELEVATION
PAVEMENT END ANCHOR
For HMA Pvmt or Approach Slab

NOTE:
1. Maintain same base thickness as JPCP.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
END PANEL
PAVEMENT TRANSITIONS**

NO SCALE

RSP P30 DATED JULY 19, 2013 SUPERSEDES RSP P30 DATED APRIL 20, 2012 AND STANDARD PLAN P30 DATED MAY 20, 2011 - PAGE 137 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P30

2010 REVISED STANDARD PLAN RSP P30

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	37.2/42.4	1506	2313

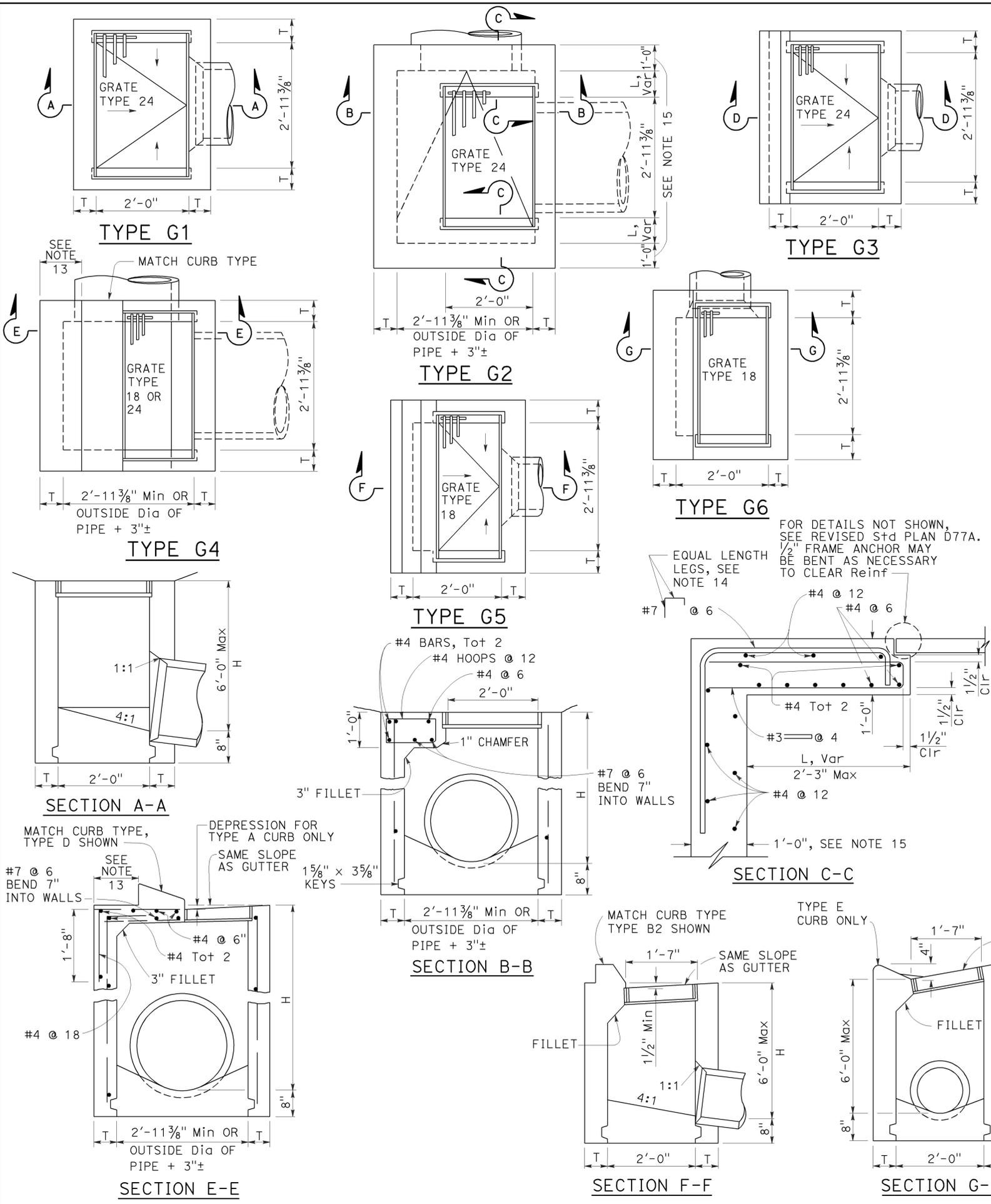
Glenn DeCou
REGISTERED CIVIL ENGINEER

October 19, 2012
PLANS APPROVAL DATE

Glenn DeCou
No. C34547
Exp. 9-30-13
CIVIL
STATE OF CALIFORNIA

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2010 REVISED STANDARD PLAN RSP D73



NOTES:

- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed.
- For "T" wall thickness, see Table A below.
- Wall reinforcing not required when "H" is 8'-0" or less and the unsupported width or length is 7'-0" or less. Walls exceeding these limits shall be reinforced with #4 bars @ 1'-6" ± centers placed 1 1/2" clear to inside of box unless otherwise shown.
- Inlet bottom reinforcing not required. See Standard Plan D74C for alternative reinforced bottom and alternative half round bottom.
- Steps-None required where "H" is less than 2'-6". Where "H" is 2'-6" or more, install steps with lowest rung 1'-0" above the floor and highest rung not more than 6" below top of inlet. The distance between steps shall not exceed 1'-0" and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step inserts shall comply with State Industrial Safety requirements. See Standard Plan D74C for step details.
- Details shown apply to both metal and concrete pipe.
- Pipe(s) can be placed in any wall.
- Curb section shall match adjacent curb.
- Basin floors shall have wood trowel finish and a minimum slope of 12:3 from all directions toward outlet pipe.
- Set inlet so that grate bars are parallel to direction of principal surface flow.
- See Revised Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plan D78A for gutter depression details.
- This dimension will vary with different grates, curbs types, box width and wall thickness.
- Bar may be rotated as necessary to clear opening. Where "L" is 6" or less, bar may be omitted.
- Where "L" is 6" or less, wall thickness shall be as shown in Table A.
- Cast-in-place inlets to be formed around all pipes/stubs intersecting the inlet, and concrete poured in one continuous operation. Precast inlets shall have mortared connections conforming to details for Type GCP Inlet shown on Standard Plan D75B. See Standard Specifications for mortar composition.

TABLE A

TYPE	CONCRETE QUANTITIES					
	H=3'-0" TO 8'-0" (T=6")	H=8'-1" TO 20'-0" (T=8")	H=3'-0" (CY)	ADDITIONAL PCC PER FOOT (CY)	H=8'-1" (CY)	ADDITIONAL PCC PER FOOT (CY)
G-1	0.95	0.220	See Note A	SEE NOTE A		
G-2*	1.31	0.255	3.50	0.357		
G-3	1.03	0.220	See Note A	SEE NOTE A		
G-4* (TYPE 24)	1.27	0.255	3.48	0.357		
G-4* (TYPE 18)	1.30	0.255	3.50	0.357		
G-5	1.02	0.220	SEE NOTE A	SEE NOTE A		
G-6	1.04	0.220	SEE NOTE A	SEE NOTE A		

TABLE BASED ON 8" FLOOR SLAB. NO DEDUCTIONS ARE TO BE MADE TO THESE QUANTITIES BECAUSE OF PIPE OPENINGS, DIFFERENT FLOOR ALTERNATIVES OR DIFFERENT CURB TYPES. * QUANTITIES FOR TYPE G-2 AND G-4 INLETS BASED ON THE MINIMUM INTERIOR DIMENSIONS.

NOTE A:

Maximum allowable height 6'-0".

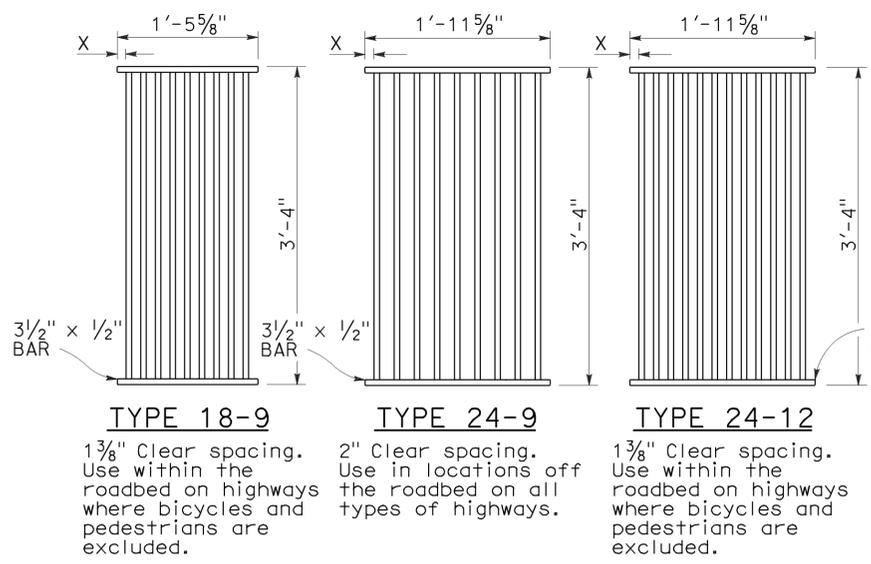
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DRAINAGE INLETS

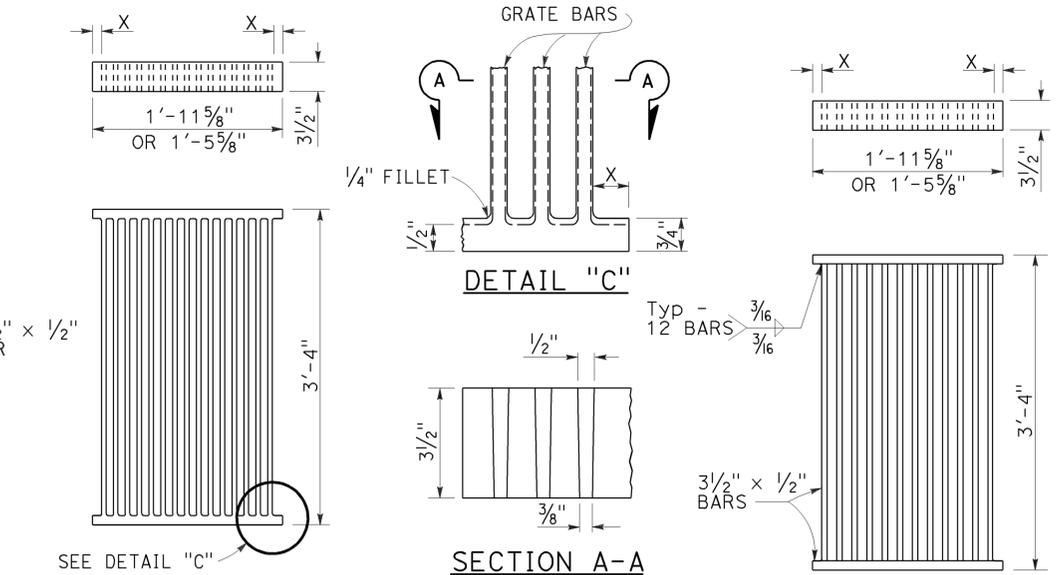
NO SCALE

RSP D73 DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN D73 DATED MAY 20, 2011 - PAGE 156 OF THE STANDARD PLANS BOOK DATED 2010.

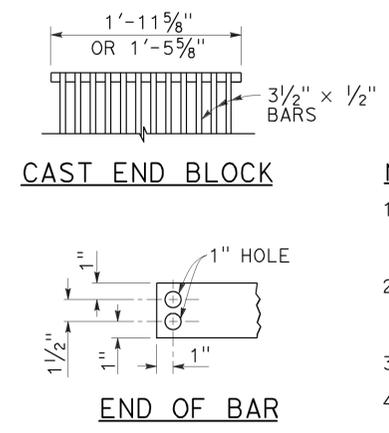
REVISED STANDARD PLAN RSP D73



RECTANGULAR GRATE DETAILS
(See table below)

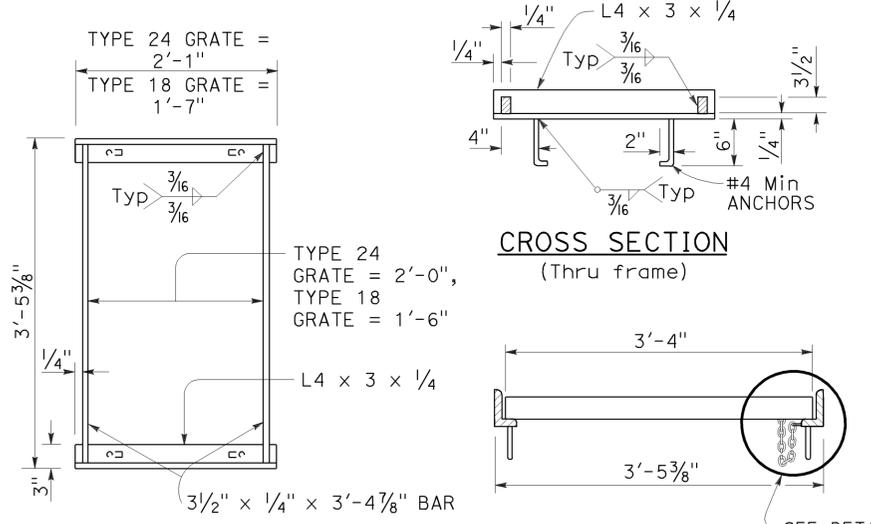


ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE
ALTERNATIVE WELDED GRATE

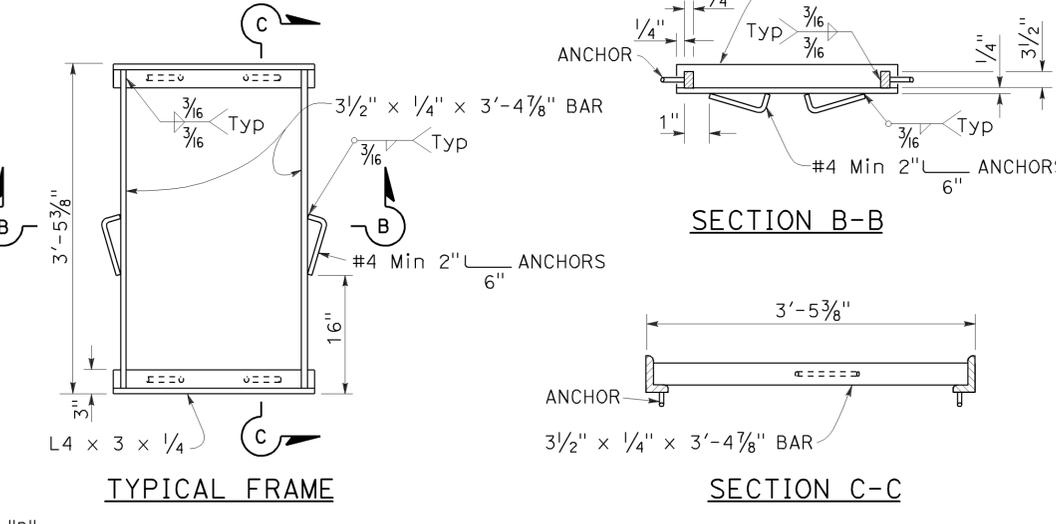


CAST END BLOCK
END OF BAR

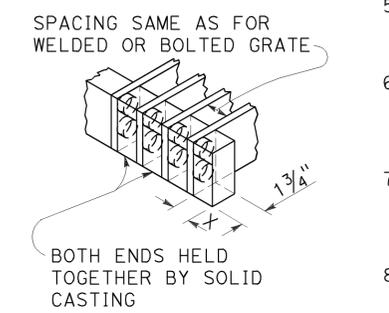
- NOTES:**
- Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
 - Contractor has the option of using cast ductile iron, cast carbon steel, welded, bolted, or cast end block grate.
 - Rounded top of bars optional on all grates.
 - Pipe inlets with a grate shall be placed so that bars parallel direction of principle surface flow.
 - Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
 - Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
 - Grate and frame weights are based on welded grates (weights of face angles, steps, protection bars, etc. are not included).
 - Connect chain to grate and frame only at locations shown on the plans. When chain is required, do not use cast ductile iron grates.



TYPICAL FRAME
LONGITUDINAL SECTION
(Thru frame and grate)



TYPICAL FRAME
ALTERNATIVE ANCHOR FOR RECTANGULAR FRAME
(For details not shown, See Rectangular Frame Details)



ALTERNATIVE CAST DUCTILE IRON OR CAST CARBON STEEL END BLOCK GRATE

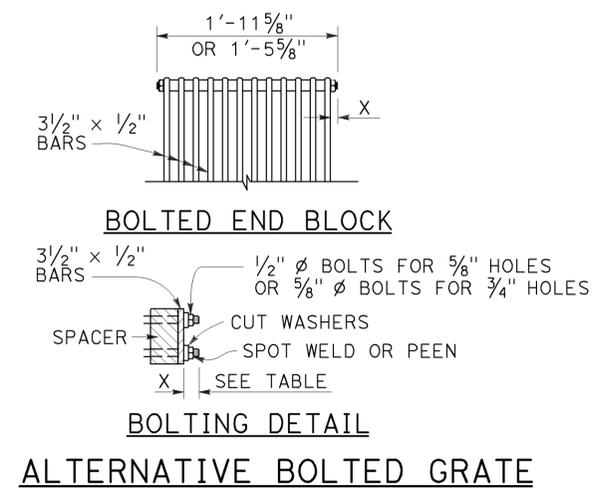
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

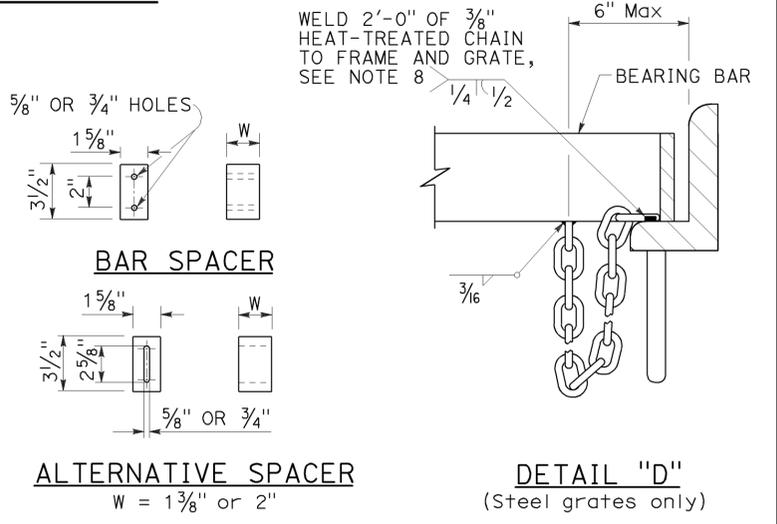
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

INLET TYPE	COVER TYPE	WEIGHT LB
OS	PLATE	174
OL-7	PLATE	170
OL-10	PLATE	170
OL-14	PLATE	170
OL-21	PLATE	170
OCPI	PLATE	112
OCPI	PLATE	112
OCPI	REDWOOD	42
OMP	PLATE	177
OMPI	PLATE	177

INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
GT1	18-9	2	498
GT2	18-9	2	498
GT3	24-12	2	652
GT4	24-12	2	652
TRASH RACK			22
GRATE CHAIN			3



BOLTED END BLOCK
BOLTING DETAIL
ALTERNATIVE BOLTED GRATE



BAR SPACER
ALTERNATIVE SPACER
DETAIL "D"
(Steel grates only)

BASIS FOR MISC IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS
(See Note 7)

RSP D77A DATED APRIL 19, 2013 SUPERSEDES RSP D77A DATED JULY 20, 2012 AND STANDARD PLAN D77A DATED MAY 20, 2011 - PAGE 164 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D77A

2010 REVISED STANDARD PLAN RSP D77A

DESIGN NOTES:

Design Specifications:
AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments.

Loading:
Live load: (AASHTO LRFD 3.6.1.2)
HL-93 consists of design truck or design tandem and design lane load.

Impact Factor: (Apply to roof slab only)
 $IM = 33(1.0 - 0.125D_e) \geq 0\%$ (AASHTO LRFD 3.6.2.2)
 D_e = minimum depth of earth cover

Earth load:
Earth pressure for two conditions:
140 pcf vertical, 42 pcf horizontal
140 pcf vertical, 140 pcf horizontal

Load Factors:
AASHTO LRFD Table 3.4.1.1 & Table 3.4.1.2

Unit stresses:
 $f'_c = 3600$ psi
 $f_y = 60,000$ psi

Distribution "d" bars:
Up to and including 10'-0" cover
Express as a percentage of main positive reinforcement required: $\frac{100}{\sqrt{s}}$, Max 50%,
Over 10'-0" cover,
4 @ 12 maximum

Shear:
 $V_c = \{2.14\sqrt{f'_c} + 4600 \frac{A_s V_{ud_e}}{b d_e M_u}\} b \cdot d_e \leq 4.0 \sqrt{f'_c} b \cdot d_e$ (Pounds)
 V_c shall not be less than $3.00 \sqrt{f'_c} b \cdot d_e$ for frame members and $2.5 \sqrt{f'_c} b \cdot d_e$ for simply supported members.

Exclusion:
Compressive reinforcement and negative moment reduction (for continuity) do not apply.
Axial loading on members has not been considered.

CONSTRUCTION NOTES:

Construction loads:
Strutting required as shown on Standard Plan D88.
Strutting may be required on culvert extensions when existing parapet is removed.

Expansion joints:
Invert:
No expansion joints shall be permitted.

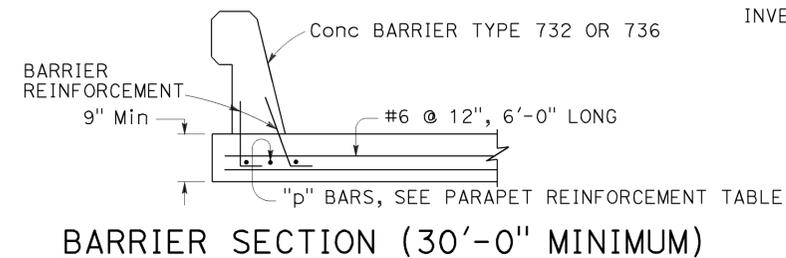
Roof and Walls:
When cover is less than span length-
Place 1/2" premolded expansion joint filler at 30'-0" ± centers outside the paved roadway lanes and place Bridge Detail 3-2, Standard Plan B0-3, at 30'-0" centers under paved roadway lanes.
When cover is more than span length-
Place 1/2" premolded expansion joint filler at 30'-0" ± centers and additional 1/2" premolded expansion joints at locations of change in foundation character, as directed by the Engineer.

Construction joints:
Temporary joints may be permitted if normal (or radial) to ϕ of RCB. Otherwise, the contractor is to submit a proposal for consideration.

Cutoff walls:
4'-0" cutoff walls are to be provided at inlet and/or outlet unless adjacent channel is lined and unless otherwise shown. These walls are to be extended if scour conditions warrant.

Earthwork:
See Standard Plan A62E.

Backfill:
See Standard Specifications, except that the difference in level of backfill (against outside walls) shall not exceed 2'-0".



GENERAL NOTES:

Designation:
Standard single or multiple box culverts are shown on plans as span times height with maximum cover over roof thus: 8' x 5' RCB with 10' or double 10' x 5' RCB with 20', followed by alternatives.

Alternatives:
Single cell: Invert will be sloped unless "trapezoidal invert", "flat invert" or "V invert" is included in designation.
Multiple cell: Invert will be vee unless "flat invert" is specified. Ends of culvert will be rounded unless "square ends" are designated. Parapets will be as shown unless designated in plans. Such designations may be different for inlet and outlet ends.

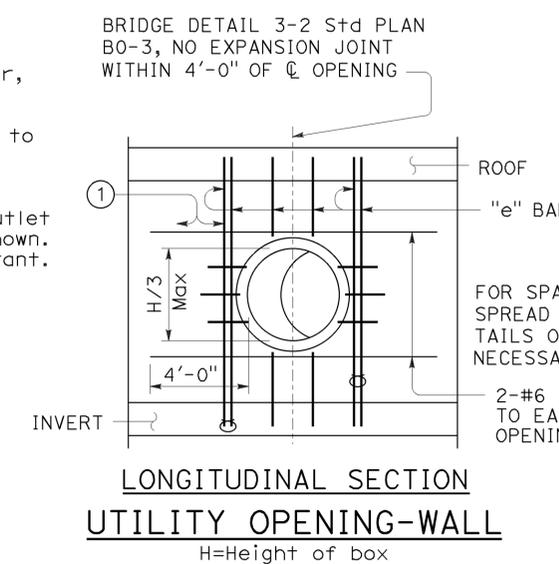
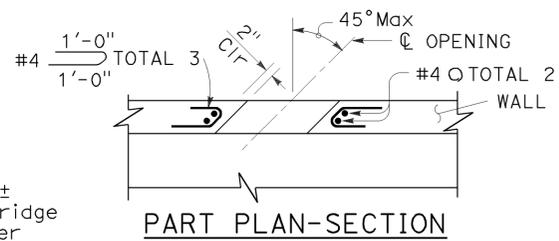
Quantities:
Quantities do not include the following:
• Concrete for parapet, paving notches and cut-off wall.
• Reinforcement for 2% splices, parapets, paving notches, cut-off wall and additional required bars for exposed top slab (D-80, Note 9).

Reinforcement placement:
Main reinforcement is to be placed transversely or, for curved culverts, radially. When radial, reinforcing spacing of the "a", "f" and "g" bars is measured along the centerline. Stagger splices not shown. Hooks may be rotated or tilted, as necessary, for clearance.

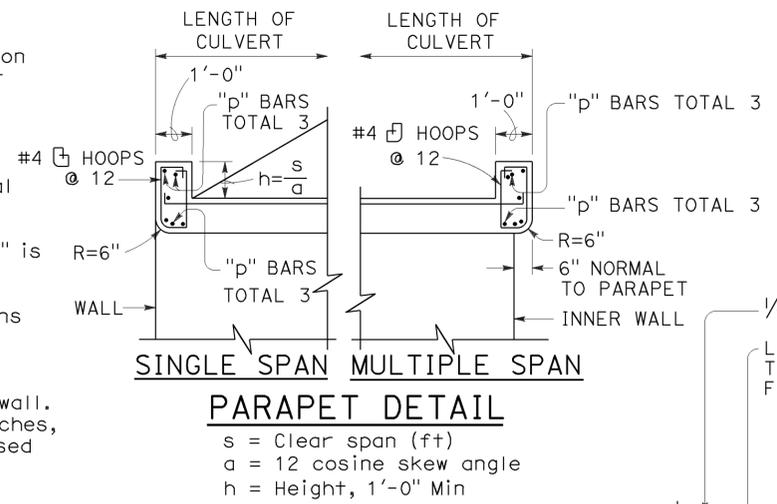
Special reinforcement coverage:
Box standard plans are not to be used for culverts in a corrosive environment or where there is a severe abrasive flow condition or in freeze-thaw locations.

Special design:
Required for culverts with conditions, loads, design bearing pressures or sizes greater than those given on this plan or Standard Plans D80 & D81. Also required for multiple cell culverts with unequal spans. For culverts with railroad loading, see the current AREMA design specification.

3 or more cells:
For culverts with more than two cells, use dimensions and reinforcement for the standard "double box culvert" and adjust quantities accordingly.

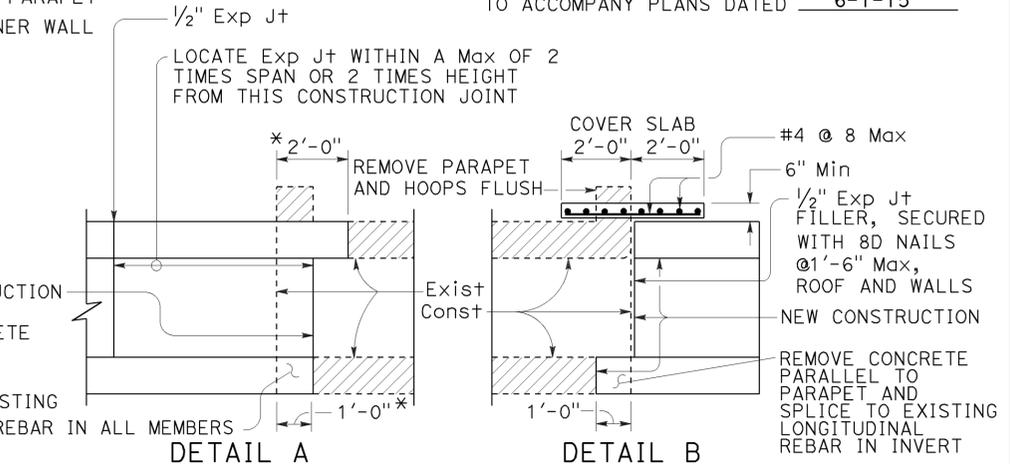
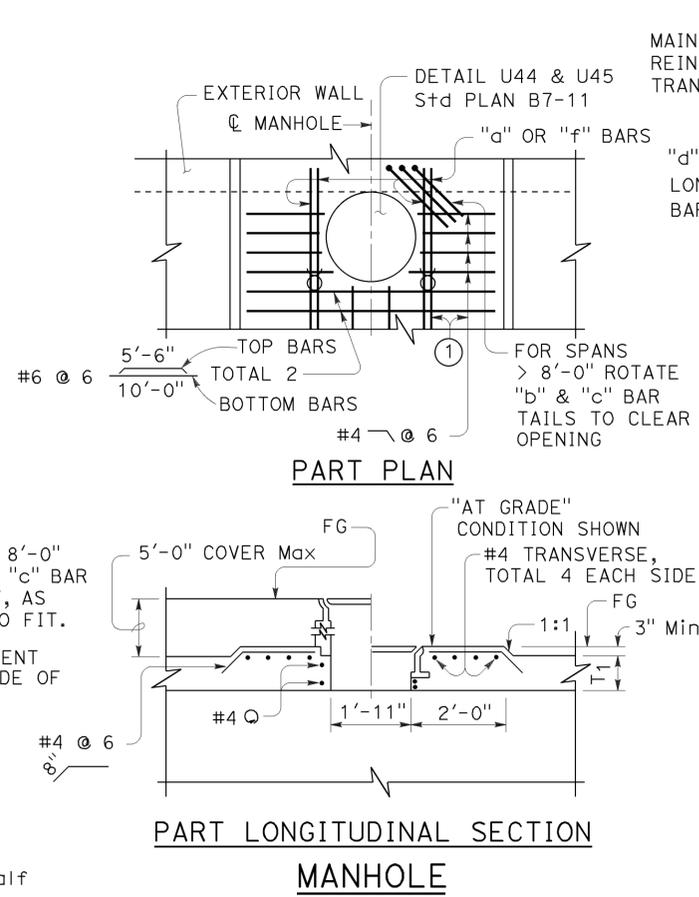


① Adjacent to each side of the opening, place additional bars equivalent to half the interrupted main reinforcement.



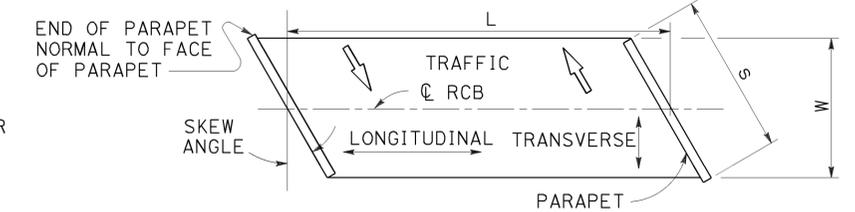
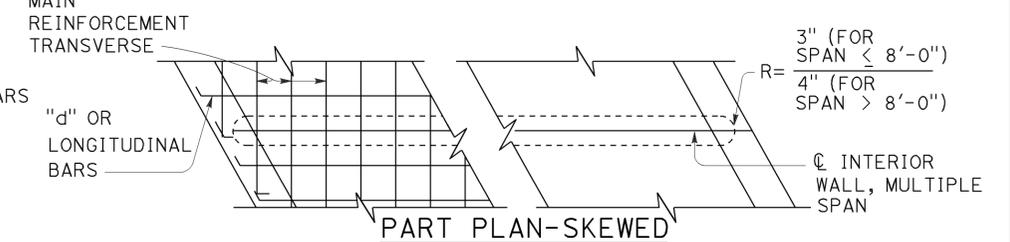
PARAPET "p" BARS				
SPAN	SKEW ANGLE TO	TO		
		0° TO 15°	16° TO 30°	31° TO 45°
4'		#4	#4	#4
6'		#4	#4	#5
8'		#4	#5	#6
10'		#5	#6	#7
12'		#6	#7	#8
14'		#7	#8	#9

PARAPET REINFORCEMENT



20° maximum skew as shown. If existing longitudinal and transverse reinforcing bars in top slab are lap spliced with new longitudinal and transverse reinforcing bars, the 20° skew may be exceeded. Lap splicing may require removal of top slab in excess of 2'-0" shown.

CULVERT EXTENSION



RCB TERMINOLOGY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CAST-IN-PLACE REINFORCED CONCRETE BOX CULVERT MISCELLANEOUS DETAILS

NO SCALE

RSP D82 DATED JULY 18, 2014 SUPERSEDES STANDARD PLAN D82 DATED MAY 20, 2011 - PAGE 174 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D82

2010 REVISED STANDARD PLAN RSP D82

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1509	2313

REGISTERED CIVIL ENGINEER
July 18, 2014
PLANS APPROVAL DATE

Carl M. Duan
No. C59976
Exp. 6-30-16
CIVIL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 6-1-15

DESIGN NOTES:

Specifications:
AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments.

Earth load:
Earth pressures for two conditions:
140 pcf Vert, 42 pcf Horiz
140 pcf Vert, 140 pcf Horiz

Unit stresses:
 $f'_c = 5.0$ ksi
 $f_y = 65.0$ ksi for weld wire fabric
 $n = 7$

Shear:
Based on
 $V_c = \{2.14\sqrt{f'_c} + 4600 \frac{A_s V_u d_e}{b d_e M_u}\} b d_e \leq 4.0\sqrt{f'_c} b d_e$ (Pounds)
 V_c shall not be less than $3.00\sqrt{f'_c} b d_e$ for frame members and $2.5\sqrt{f'_c} b d_e$ for simply supported members.

Exclusion:
Axial loading on the members has not been considered.

GENERAL NOTES:

Designation:
Standard single or multiple precast box culverts are shown on the plans as span times height with maximum cover over roof thus: 8' x 5' RCB with 10'-0" or double 10' x 5' RCB with 20'-0", followed by alternatives.

Alternatives:
Single cell:
Standard dimensions of AASHTO Material Specification 'M259' or 'M273'.
Multiple cell:
Constructed by placing single cells adjacent to each other. Inlet and outlet ends of culvert will be rounded unless square ends are designated. Parapet will be shown unless designated in plans. Such designation may be different for inlet and outlet ends.

Limitations:
Where the overfill is less than 12", Precast RCB culverts are not to be used. Precast RCB culverts are not to be used in siphon or pressurized installations unless appropriate "watertight" jointing is provided.

Special reinforcement coverage:
Precast RCB culvert standard plans are not to be used in a corrosive environment or where there is a severe abrasive flow condition or freeze-thaw locations.

Special design:
Required for culvert with different conditions, loads or design bearing pressures greater than those given on these plans. Required for culverts where end details need higher skew angles, higher parapets or barrier sections.

CONSTRUCTION NOTES:

Cutoff walls:
4'-0" Cutoff walls are to be provided at inlet and/or outlet unless channel is lined and unless otherwise shown. These walls are to be extended if scour conditions warrant. See Standard Plans D84, D85 and D86A.

Wingwalls:
Wingwalls shall be cast-in-place and shall conform to standard plan details for box culvert wingwalls. See Standard Plans D84, D85 and D86A.

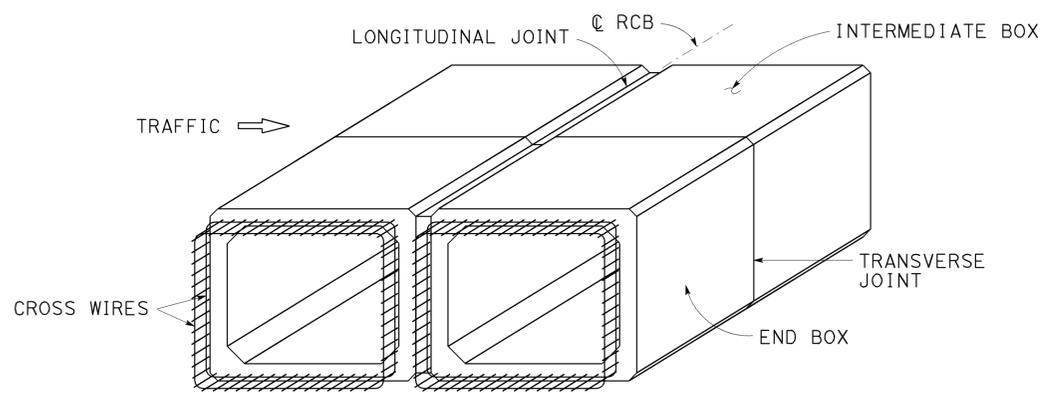
Earthwork:
See Standard Plan A62G.

Construction loads:
Strutting may be required near temporary ends. For construction loads on culverts, See Standard Plan D88.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1511	2313

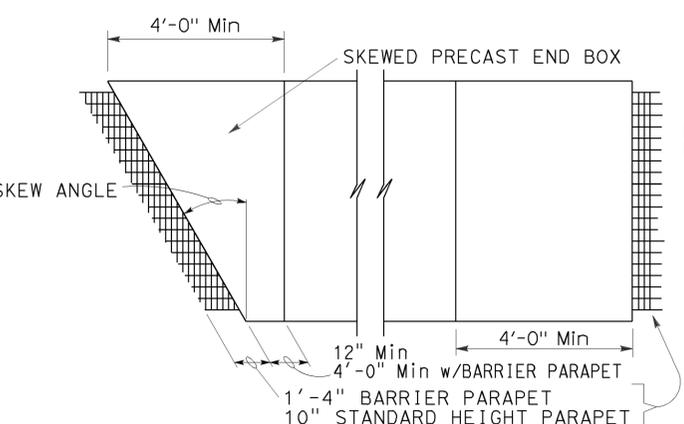
REGISTERED CIVIL ENGINEER
 July 18, 2014
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 6-1-15



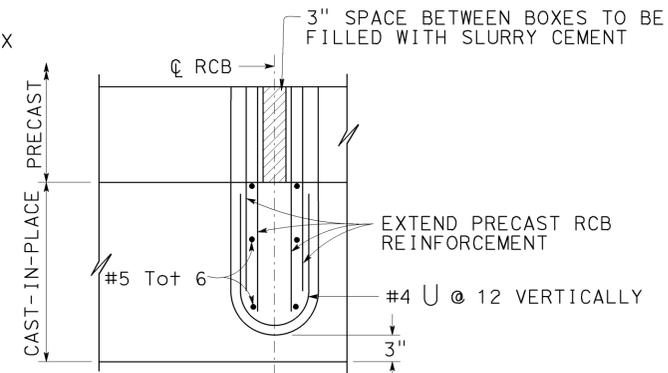
PRECAST RCB TERMINOLOGY

NOTE: Inner and outer reinforcement to be exposed as required to tie to cast-in-place construction. A minimum of two cross wires shall be exposed on all sides.

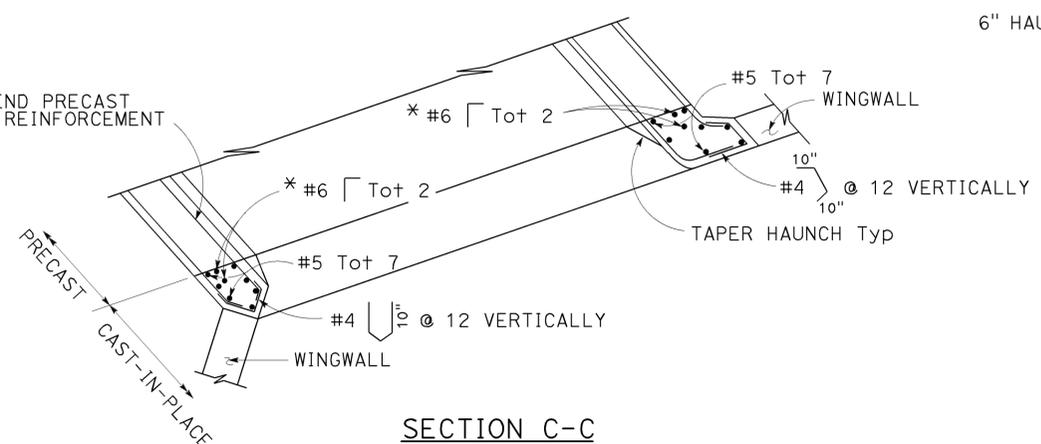


PARTIAL PLAN VIEW

For illustrative purposes only. For correct skew direction see plans.



PARTIAL PLAN INTERIOR WALL MULTICELL CULVERT

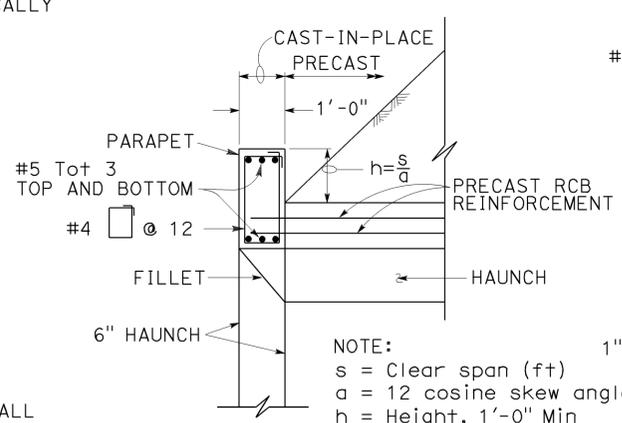


SECTION C-C

* Reinforcing required for barrier parapet application only.

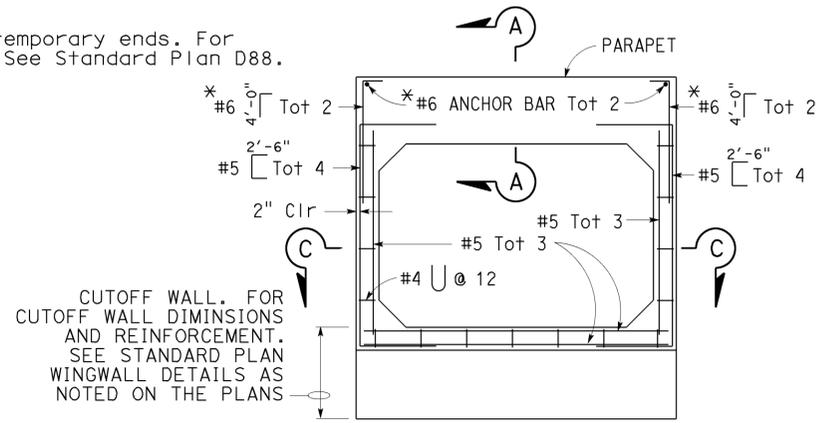
PARAPET "P" BARS			
SKEW ANGLE	0° TO 15°	16° TO 30°	31° TO 45°
SPAN			
4'-0"	#5	#5	#5
5'-0"	#5	#5	#6
6'-0"	#6	#6	#6
7'-0"	#7	#7	#7
8'-0"	#7	#7	#8
10'-0"	#8	#8	#9
12'-0"	#9	#9	#10

BARRIER PARAPET REINFORCEMENT



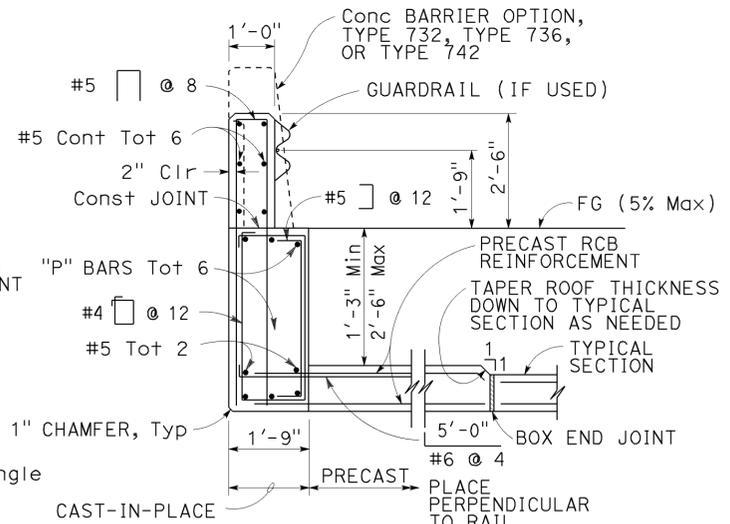
SECTION A-A (Standard Height Parapet)

NOTE: s = Clear span (ft), a = 12 cosine skew angle, h = Height, 1'-0" Min



CAST-IN-PLACE END ELEVATION

* Reinforcing required for barrier parapet application only.



SECTION A-A (Barrier Parapet)

TYPICAL CULVERT END DETAILS
For wall and invert reinforcement not shown, See "End Elevation" detail.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PRECAST REINFORCED CONCRETE BOX CULVERT MISCELLANEOUS DETAILS
NO SCALE

RSP D83B DATED JULY 18, 2014 SUPERSEDES STANDARD PLAN D83B DATED MAY 20, 2011 - PAGE 176 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D83B

2010 REVISED STANDARD PLAN RSP D83B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1512	2313

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 6-1-15

A

AB AGGREGATE BASE
 ABS ACRYLONITRILE-BUTADIENE-STYRENE
 AC ASPHALT CONCRETE
 ACC ARMOR-CLAD CONDUCTORS
 Adj ADJACENT/ADJUSTABLE
 AIC AUXILIARY IRRIGATION CONTROLLER
 Alt ALTERNATIVE
 AMEND AMENDMENT
 ARV AIR RELEASE VALVE
 AUTO AUTOMATIC
 AUX AUXILIARY
 AVB ATMOSPHERIC VACUUM BREAKER

B

B&B BALLED AND BURLAPPED
 B/B BRASS/BRONZE
 B/B/PL BRASS/BRONZE/PLASTIC
 B/PL BRASS/PLASTIC
 BFM BONDED FIBER MATRIX
 Bit Ctd BITUMINOUS COATED
 BP BOOSTER PUMP
 BPA BACKFLOW PREVENTER ASSEMBLY
 BPE BACKFLOW PREVENTER ENCLOSURE
 BV BALL VALVE

C

C CONDUIT
 CAP CORRUGATED ALUMINUM PIPE
 CARV COMBINATION AIR RELEASE VALVE
 CB COUPLING BAND
 CCA CAM COUPLER ASSEMBLY
 CEC CONTROLLER ENCLOSURE CABINET
 CHDPE CORRUGATED HIGH DENSITY POLYETHYLENE
 CL CHAIN LINK
 CNC CONTROL AND NEUTRAL CONDUCTORS
 Conc CONCRETE
 CP COPPER PIPE
 CS COMPOST SOCK
 CSP CORRUGATED STEEL PIPE
 CST CENTER STRIP
 CV CHECK VALVE

D

Dia DIAMETER
 DIP DUCTILE IRON PIPE
 DIT DRIP IRRIGATION TUBING
 DG DECOMPOSED GRANITE
 DN DIAMETER NOMINAL
 DVA DRIP VALVE ASSEMBLY

E

EC EROSION CONTROL
 ECTC EROSION CONTROL TECHNOLOGY COUNCIL
 ElecT ELECTRIC/ELECTRICAL
 Elev ELEVATION
 ELL ELBOW
 ENCL ENCLOSURE
 EP EDGE OF PAVEMENT
 ES EDGE OF SHOULDER
 EST END STRIP
 ESTB ESTABLISHMENT
 ETW EDGE OF TRAVELED WAY

F

F FULL CIRCLE
 F/P FULL/PART CIRCLE
 FCV FLOW CONTROL VALVE
 FERT FERTILIZER
 FG FINISHED GRADE
 FH FLEXIBLE HOSE
 FIPT FEMALE IRON PIPE THREAD
 FIS FERTILIZER INJECTOR SYSTEM
 FL FLOW LINE
 FR FIBER ROLL
 FS FLOW SENSOR
 FSC FLOW SENSOR CABLE
 FV FLUSH VALVE

G

Galv GALVANIZED
 GARV GARDEN VALVE
 GARVA GARDEN VALVE ASSEMBLY
 GM GRAVEL MULCH
 GPH GALLONS PER HOUR
 GPM GALLONS PER MINUTE
 GSP GALVANIZED STEEL PIPE
 GV GATE VALVE

H

H HALF CIRCLE
 HDPE HIGH DENSITY POLYETHYLENE
 HP HORSEPOWER/HINGE POINT
 HPL HIGH PRESSURE LINE
 Hwy HIGHWAY

I

IC IRRIGATION CONTROLLER
 ICC IRRIGATION CONTROLLER(S)
 IN CONTROLLER ENCLOSURE CABINET
 ID INSIDE DIAMETER
 IFS IRRIGATION FILTRATION SYSTEM
 IPS IRON PIPE SIZE
 IPT IRON PIPE THREAD
 Irr IRRIGATION

L

L LENGTH

M

Max MAXIMUM
 MBGR METAL BEAM GUARD RAILING
 MCV MANUAL CONTROL VALVE
 MIC MASTER IRRIGATION CONTROLLER
 Min MINIMUM
 MIPT MALE IRON PIPE THREAD
 Misc MISCELLANEOUS
 MtI MATERIAL
 MVP MAINTENANCE VEHICLE PULLOUT

N

NCN NO COMMON NAME
 NL NOZZLE LINE
 No. NUMBER
 NPT NATIONAL PIPE THREAD

O

O/C ON CENTER
 OD OUTSIDE DIAMETER
 OL OVERLAP

P

P PART CIRCLE
 PB PULL BOX
 PCC PORTLAND CEMENT CONCRETE
 PE POLYETHYLENE
 Pkt+ PACKET
 PL PLASTIC
 PLS PURE LIVE SEED
 PLT PLANT/PLANTING
 PLT ESTB PLANT ESTABLISHMENT
 PM POST MILE
 PR PRESSURE RATED
 PRLV PRESSURE RELIEF VALVE
 PRV PRESSURE REGULATING VALVE
 PVC POLYVINYL CHLORIDE
 Pvm+ PAVEMENT

Q

Q QUARTER CIRCLE
 QCV QUICK COUPLING VALVE

R

R RADIUS
 RCP REINFORCED CONCRETE PIPE
 RCV REMOTE CONTROL VALVE
 RCVM REMOTE CONTROL VALVE (MASTER)
 RCVMF REMOTE CONTROL VALVE (MASTER) W/FLOW SENSOR
 RCVP REMOTE CONTROL VALVE W/PRESSURE REGULATOR
 RCW RECYCLED WATER
 RECP ROLLED EROSION CONTROL PRODUCT
 REQ REQUIRED
 RICS REMOTE IRRIGATION CONTROL SYSTEM
 R/W RIGHT OF WAY

S

S SLIP
 SCH SCHEDULE
 SF STATE-FURNISHED
 Shld SHOULDER
 Sq SQUARE
 SST SIDE STRIP
 Sta STATION
 Std STANDARD
 SW SIDEWALK/SOUND WALL

T

T THIRD CIRCLE/THREAD
 TLS TRUCK LOADING STANDPIPE
 TQ THREE QUARTER CIRCLE
 TRM TURF REINFORCEMENT MAT
 TT TWO-THIRDS CIRCLE
 TWSA TREE WELL SPRINKLER ASSEMBLY
 Typ TYPICAL

U

UG UNDERGROUND

W

W WIDTH
 W/ WITH
 WM WATER METER
 WS WYE STRAINER
 WSA WYE STRAINER ASSEMBLY
 WSP WELDED STEEL PIPE
 WWM WELDED WIRE MESH

NOTE:
 For additional abbreviations,
 see Standard Plans A10A and A10B.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**LANDSCAPE AND
 EROSION CONTROL ABBREVIATIONS**
 NO SCALE

RSP H1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H1
 DATED MAY 20, 2011 - PAGE 218 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H1

2010 REVISED STANDARD PLAN RSP H1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1513	2313

Gregory A. Balzer
LICENSED LANDSCAPE ARCHITECT

November 15, 2013
PLANS APPROVAL DATE

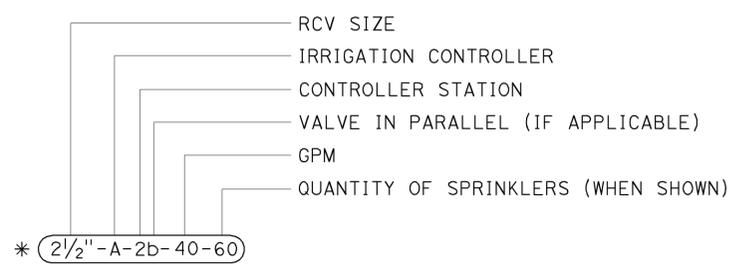
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LICENSED LANDSCAPE ARCHITECT
Gregory A. Balzer
2-28-15
11-15-13
DATE

TO ACCOMPANY PLANS DATED 6-1-15

EXISTING	NEW	ITEM DESCRIPTION
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ENCLOSURE (BPE)
		BOOSTER PUMP (BP)
		TRUCK LOADING STANDPIPE (TLS)
		FLOW SENSOR (FS)
		MASTER IRRIGATION CONTROLLER (MIC)
		AUXILIARY IRRIGATION CONTROLLER (AIC)
		IRRIGATION CONTROLLER (IC)
		IRRIGATION CONTROLLER (IC) (BATTERY)
		IRRIGATION CONTROLLER (IC) (SOLAR)
		IRRIGATION CONTROLLER (IC) (TWO WIRE)
		IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
		ARMOR-CLAD CONDUCTORS (ACC)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)
		IRRIGATION CONDUIT
		EXTEND IRRIGATION CONDUIT
		DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)
		PLASTIC PIPE (SUPPLY LINE) (MAIN)
		PLASTIC PIPE (SUPPLY LINE) (LATERAL)
		COPPER PIPE (SUPPLY LINE)
		DRIP IRRIGATION TUBING
		REMOTE CONTROL VALVE (RCV)
		REMOTE CONTROL VALVE (MASTER) (RCVM)
		REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)
		REMOTE CONTROL VALVE W/PRESSURE REGULATOR (RCVP)
		EXISTING MANUAL CONTROL VALVE (MCV)
		DRIP VALVE ASSEMBLY (DVA)
		WYE STRAINER ASSEMBLY (WSA)

EXISTING	NEW	ITEM DESCRIPTION
		GATE VALVE (GV)
		BALL VALVE (BV)
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		GARDEN VALVE ASSEMBLY (GARVA)
		PRESSURE REGULATING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		EXISTING NOZZLE LINE W/TURNING UNION
		EXISTING IRRIGATION SYSTEM
		EXISTING IRRIGATION SYSTEM TO BE REMOVED
		CHAIN LINK GATE
		QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		SPRINKLER W/SPRINKLER PROTECTOR
		CONNECT TO EXISTING SYSTEM
		CAP
		CAP EXISTING
		FIBER ROLL
		COMPOST SOCK



* 2 1/2" - A - 2b - 40 - 60

VALVE CODE

* VALVE CODES FOR EXISTING VALVES ARE SHOWN IN A DASHED ENCLOSURE.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**LANDSCAPE AND EROSION
CONTROL SYMBOLS**
NO SCALE

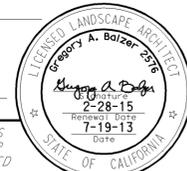
RSP H2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP H2 DATED JULY 19, 2013 AND STANDARD PLAN H2 DATED MAY 20, 2011 - PAGE 219 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H2

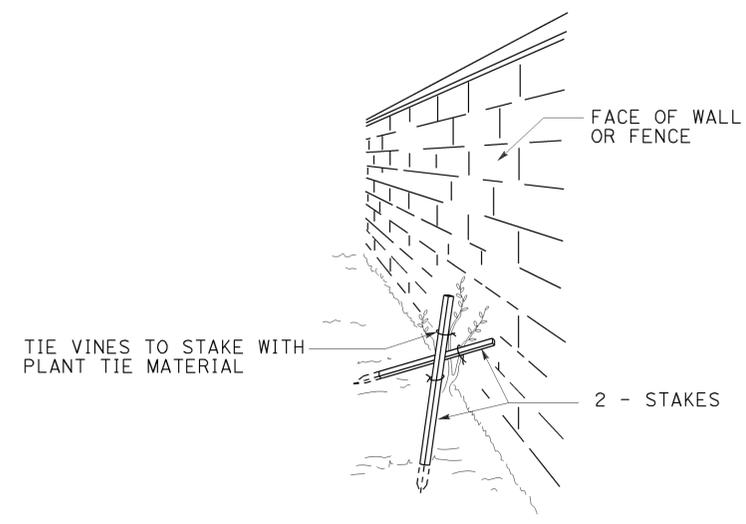
2010 REVISED STANDARD PLAN RSP H2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1514	2313

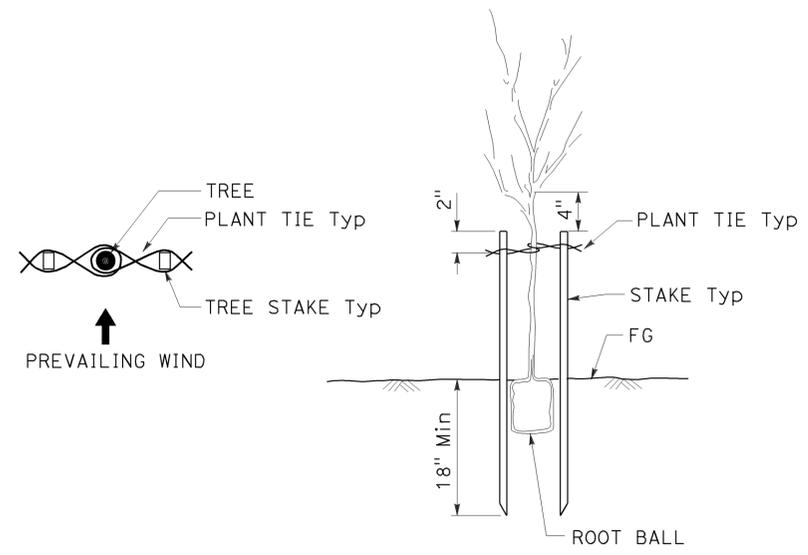
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



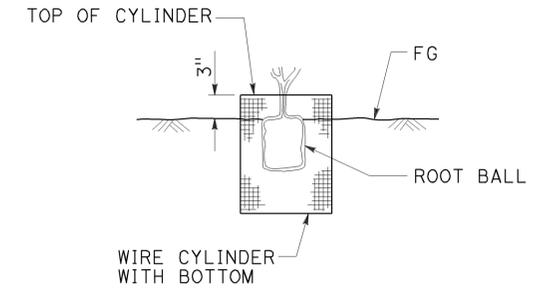
TO ACCOMPANY PLANS DATED 6-1-15



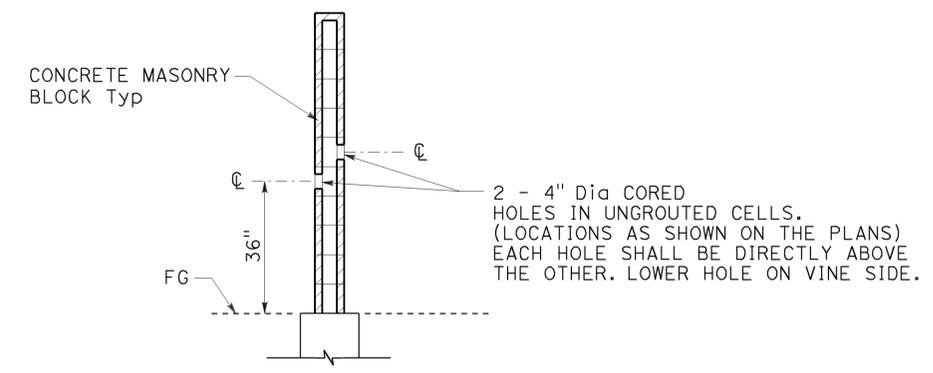
PERSPECTIVE VINE STAKING



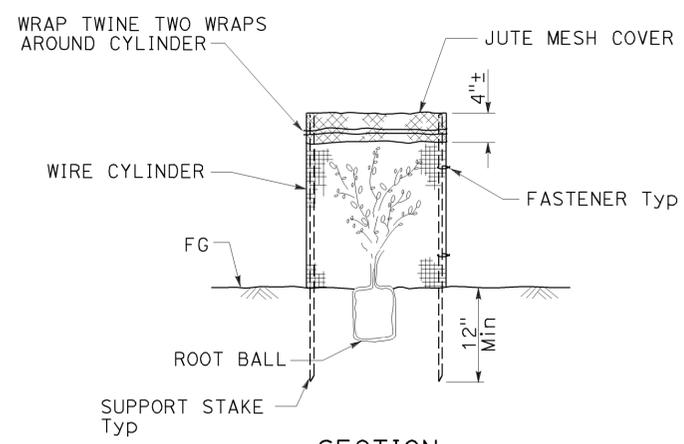
TREE STAKING



SECTION ROOT PROTECTOR



SECTION CORE HOLE (VINE)



SECTION FOLIAGE PROTECTOR

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
 NO SCALE

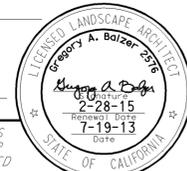
RSP H4 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H4 DATED MAY 20, 2011 - PAGE 221 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H4

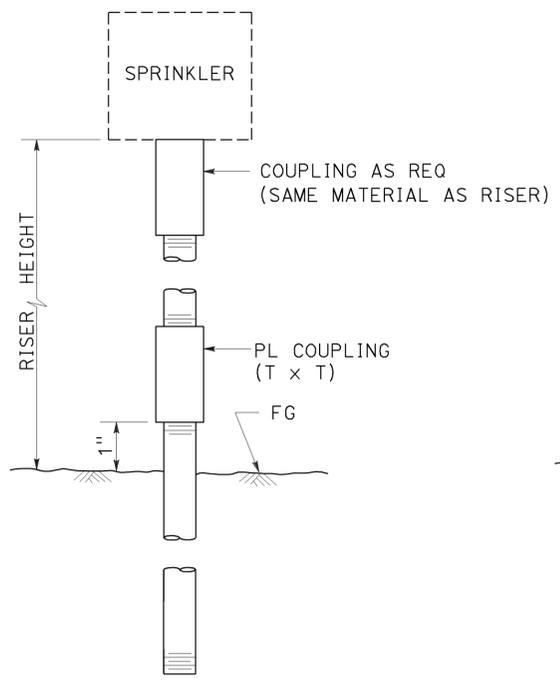
2010 REVISED STANDARD PLAN RSP H4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1515	2313

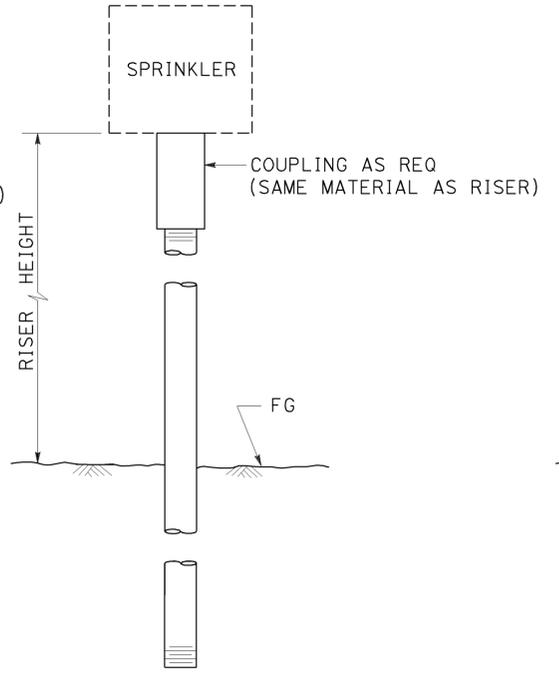
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
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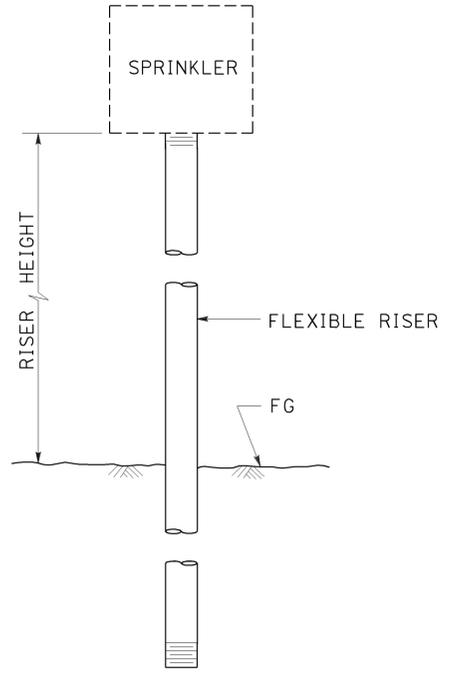
TO ACCOMPANY PLANS DATED 6-1-15



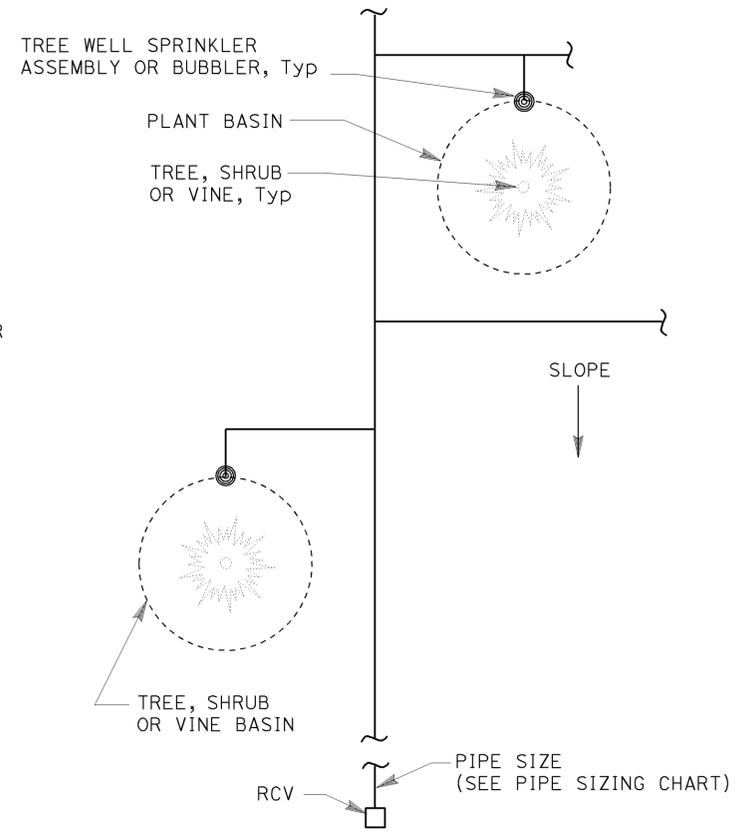
ELEVATION
RISER SPRINKLER ASSEMBLY TYPE I



ELEVATION
RISER SPRINKLER ASSEMBLY TYPE II



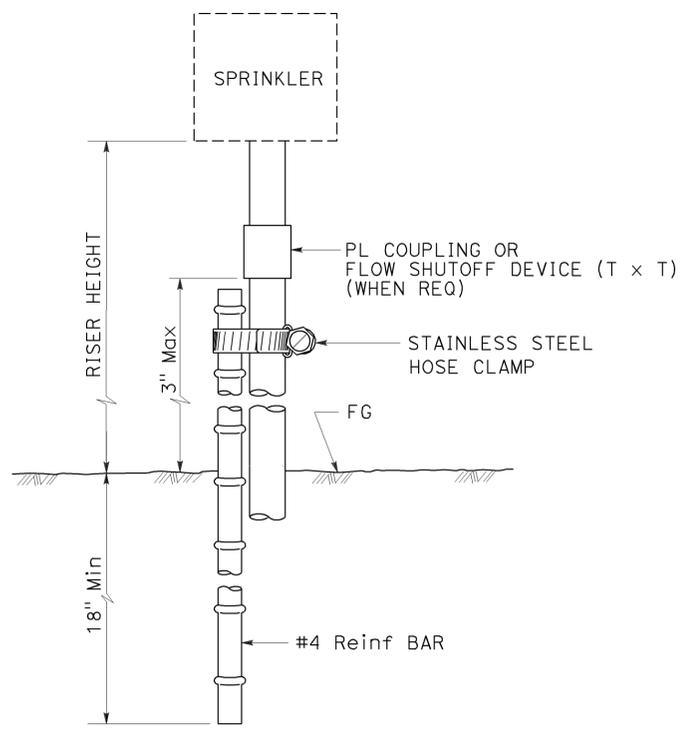
ELEVATION
RISER SPRINKLER ASSEMBLY TYPE III



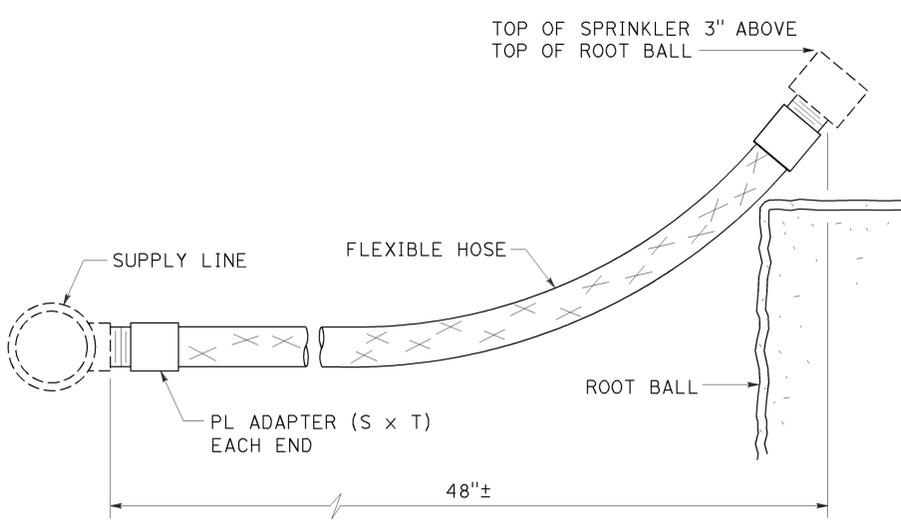
PLAN

NOTES:

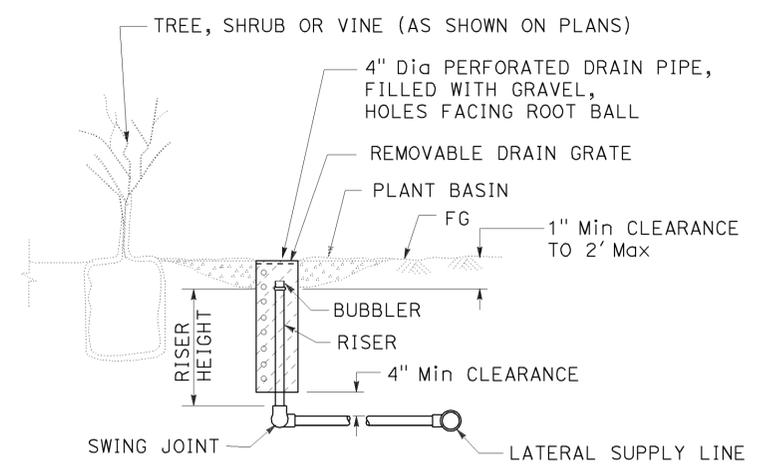
1. Install tree well sprinkler assembly on up-hill side of plant when on slope.
2. Install bubbler within basin.



ELEVATION
RISER SPRINKLER ASSEMBLY TYPE IV



ELEVATION
RISER SPRINKLER ASSEMBLY TYPE V



SECTION
TREE WELL SPRINKLER ASSEMBLY

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
 NO SCALE

RSP H5 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H5 DATED MAY 20, 2011 - PAGE 222 OF THE STANDARD PLANS BOOK DATED 2010.

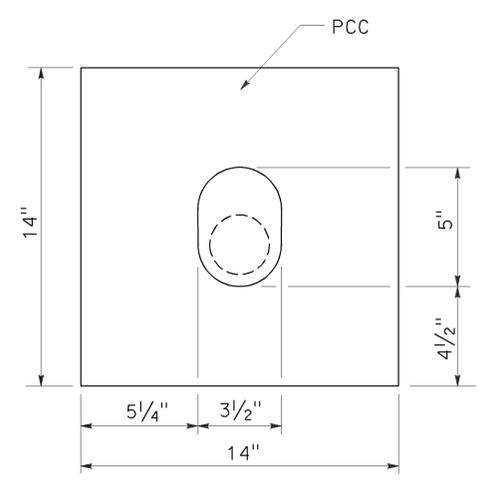
REVISED STANDARD PLAN RSP H5

2010 REVISED STANDARD PLAN RSP H5

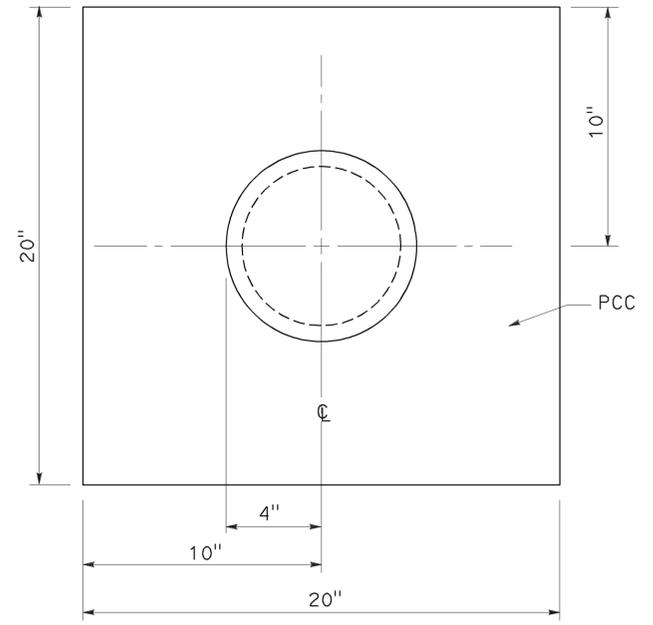
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1516	2313

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.

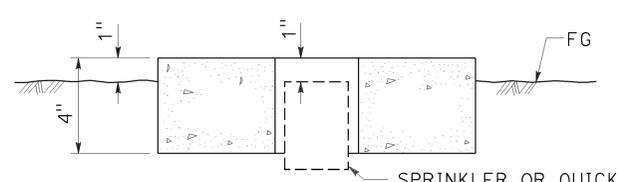
TO ACCOMPANY PLANS DATED 6-1-15



PLAN

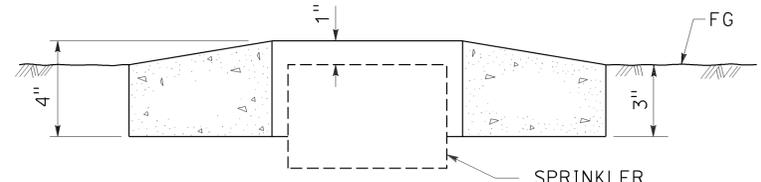


PLAN



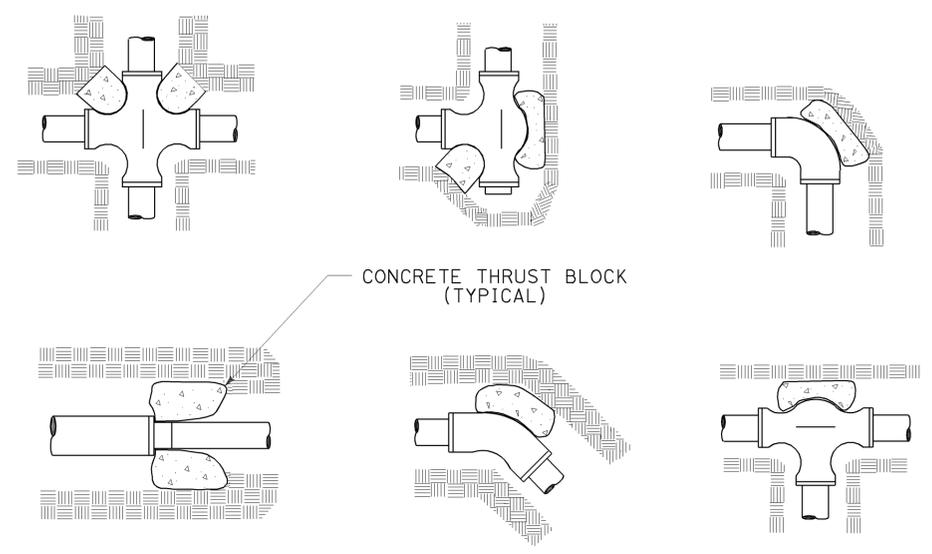
SECTION SPRINKLER OR QUICK COUPLING VALVE

SPRINKLER PROTECTOR TYPE I

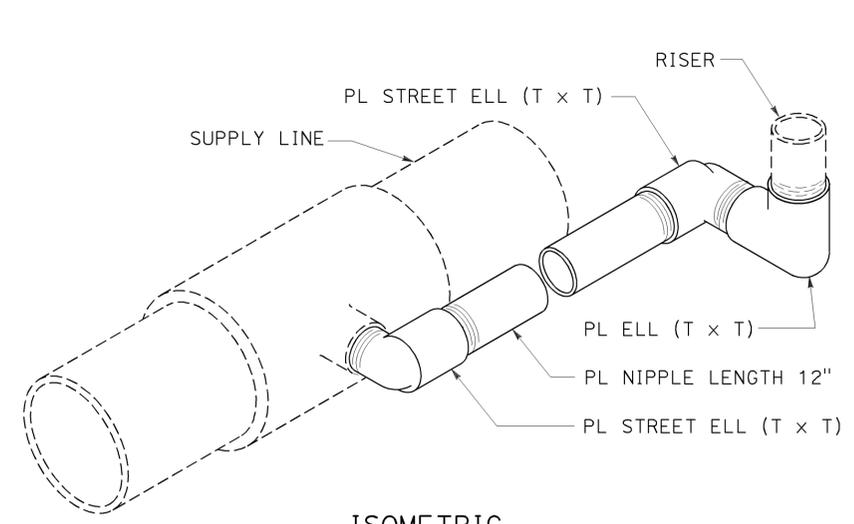


SECTION SPRINKLER

SPRINKLER PROTECTOR TYPE II

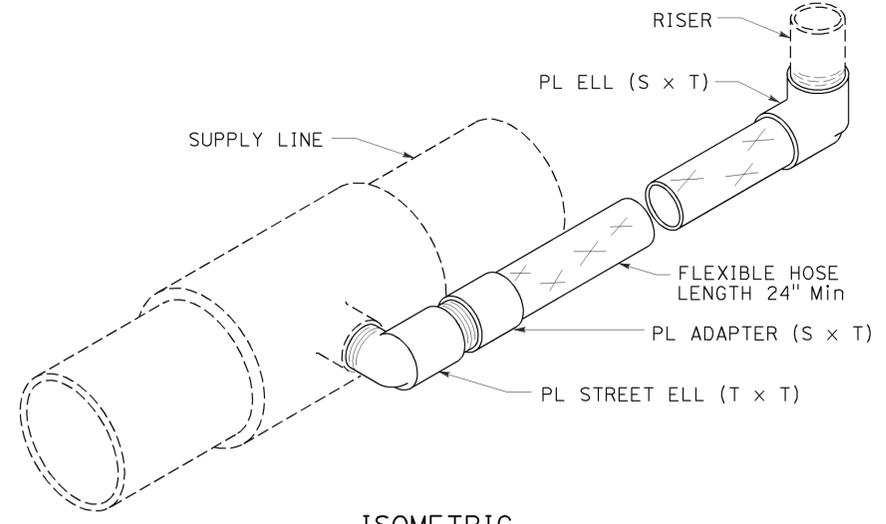


TYPICAL THRUST BLOCKS



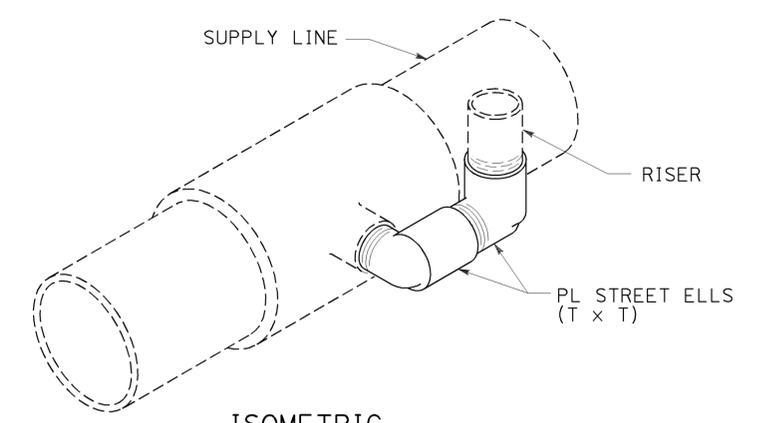
ISOMETRIC

POP-UP SPRINKLER ASSEMBLY TYPE I



ISOMETRIC

POP-UP SPRINKLER ASSEMBLY TYPE II



ISOMETRIC

POP-UP SPRINKLER ASSEMBLY TYPE III

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS

NO SCALE

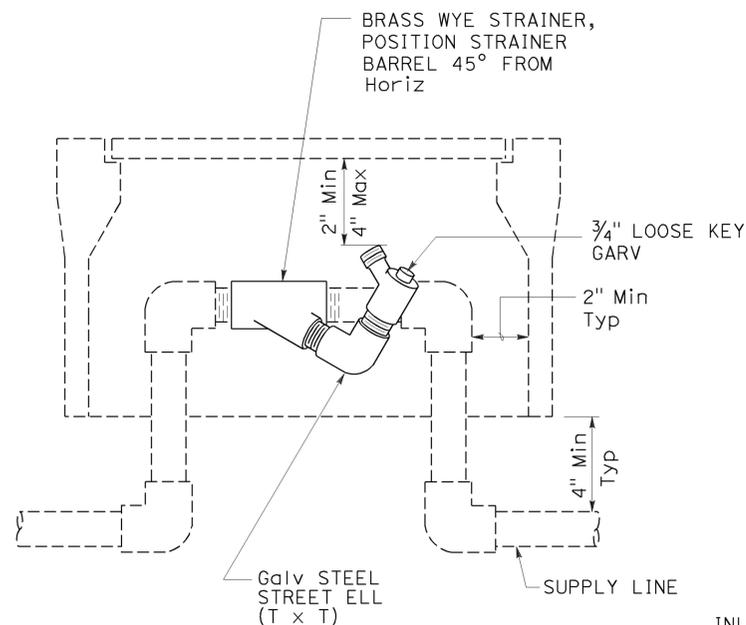
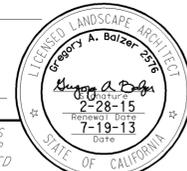
RSP H6 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H6 DATED MAY 20, 2011 - PAGE 223 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H6

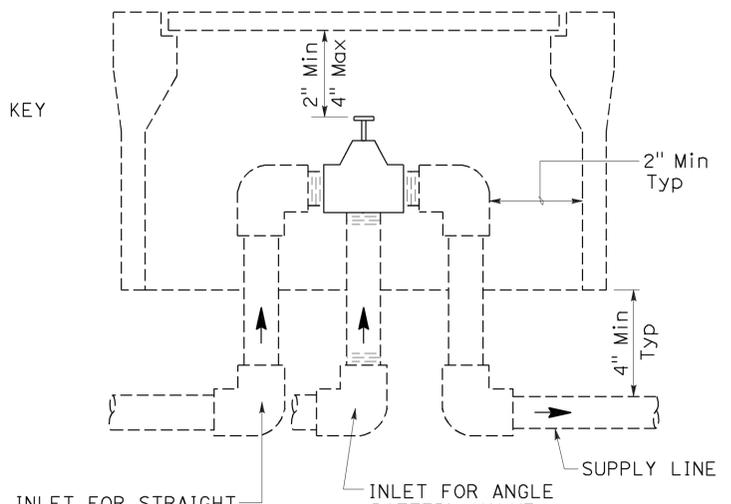
2010 REVISED STANDARD PLAN RSP H6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1517	2313

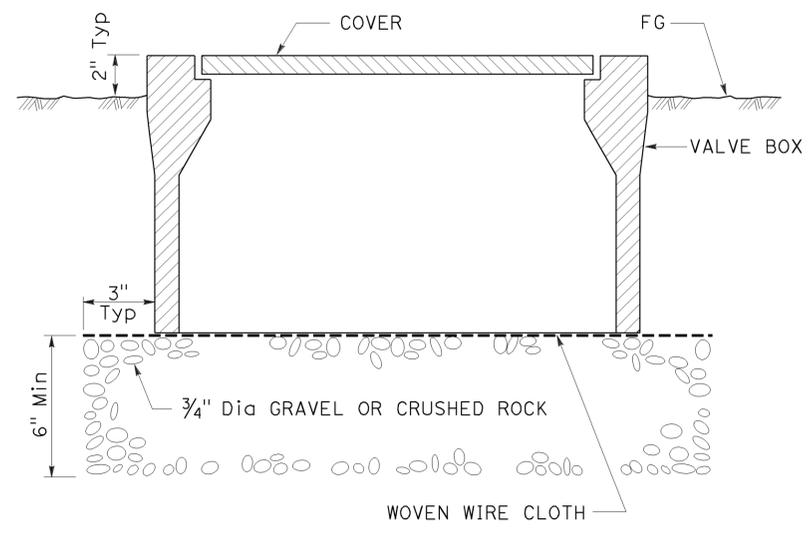
July 19, 2013
 PLANS APPROVAL DATE
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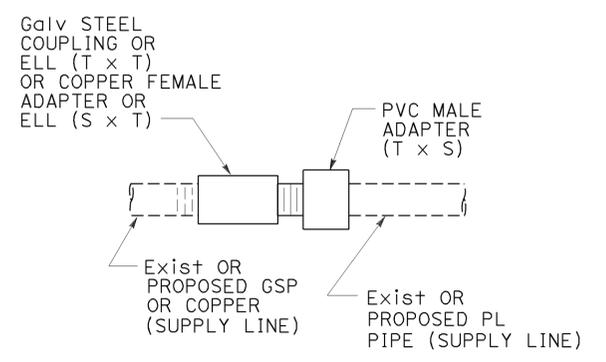
ELEVATION
WYE STRAINER ASSEMBLY



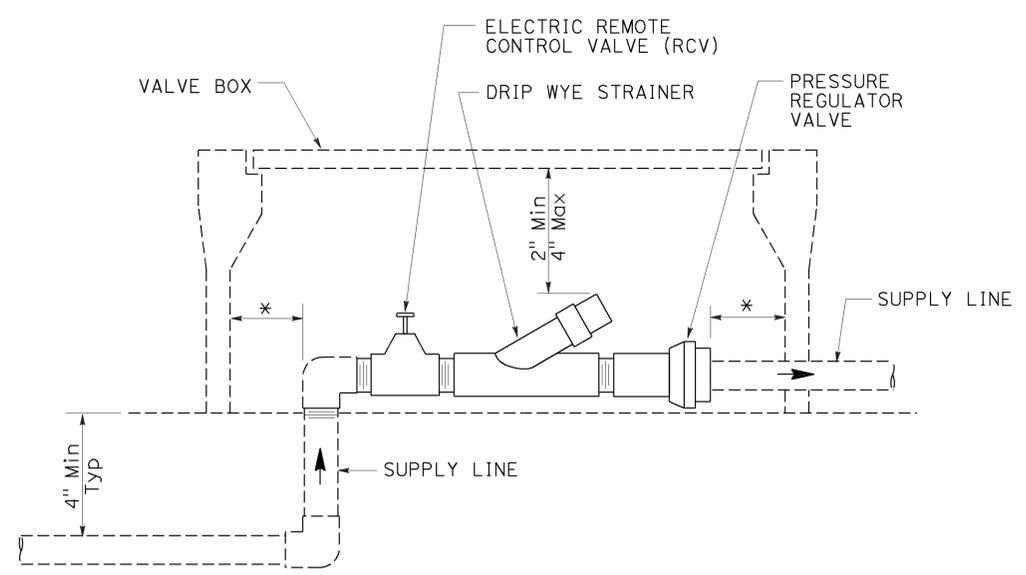
ELEVATION
VALVE



SECTION
VALVE BOX



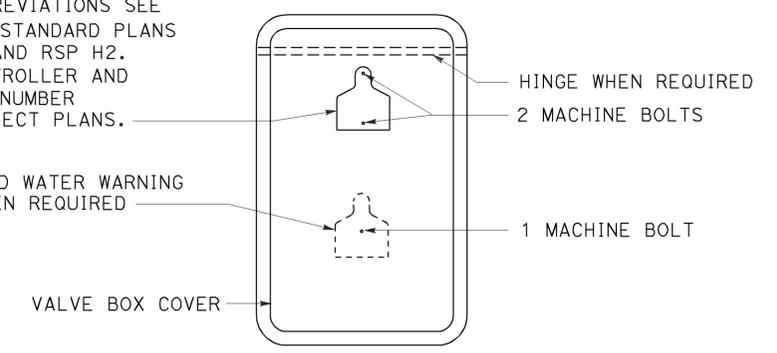
GALVANIZED OR COPPER PIPE CONNECTION TO PLASTIC PIPE



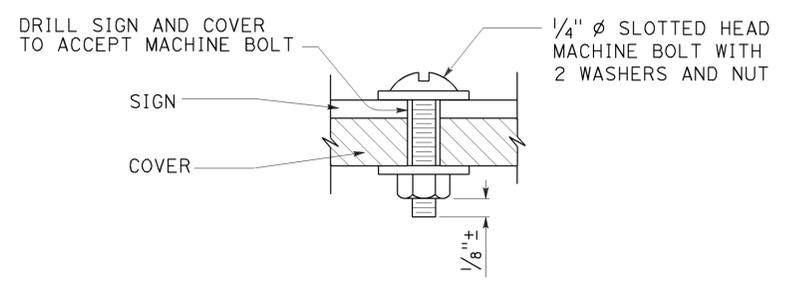
ELEVATION
DRIP VALVE ASSEMBLY

IDENTIFICATION LABEL:
FOR ABBREVIATIONS SEE
REVISED STANDARD PLANS
RSP H1 AND RSP H2.
FOR CONTROLLER AND
STATION NUMBER
SEE PROJECT PLANS.

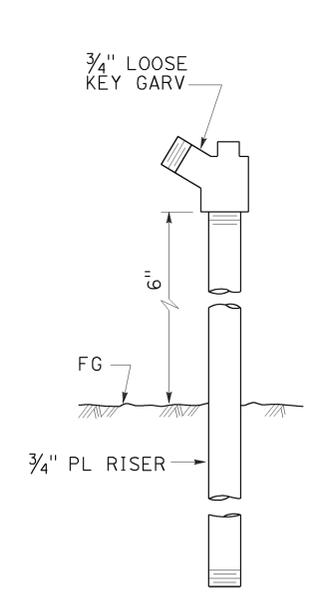
RECYCLED WATER WARNING
SIGN WHEN REQUIRED



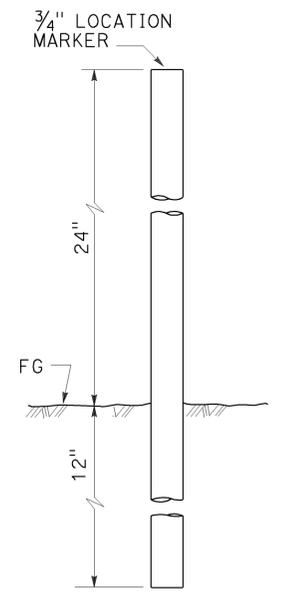
PLAN



SECTION
VALVE BOX IDENTIFICATION



ELEVATION
GARDEN VALVE ASSEMBLY



ELEVATION
LOCATION MARKER

GARDEN VALVE ASSEMBLY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

LANDSCAPE DETAILS

NO SCALE

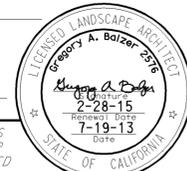
RSP H7 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H7
DATED MAY 20, 2011 - PAGE 224 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H7

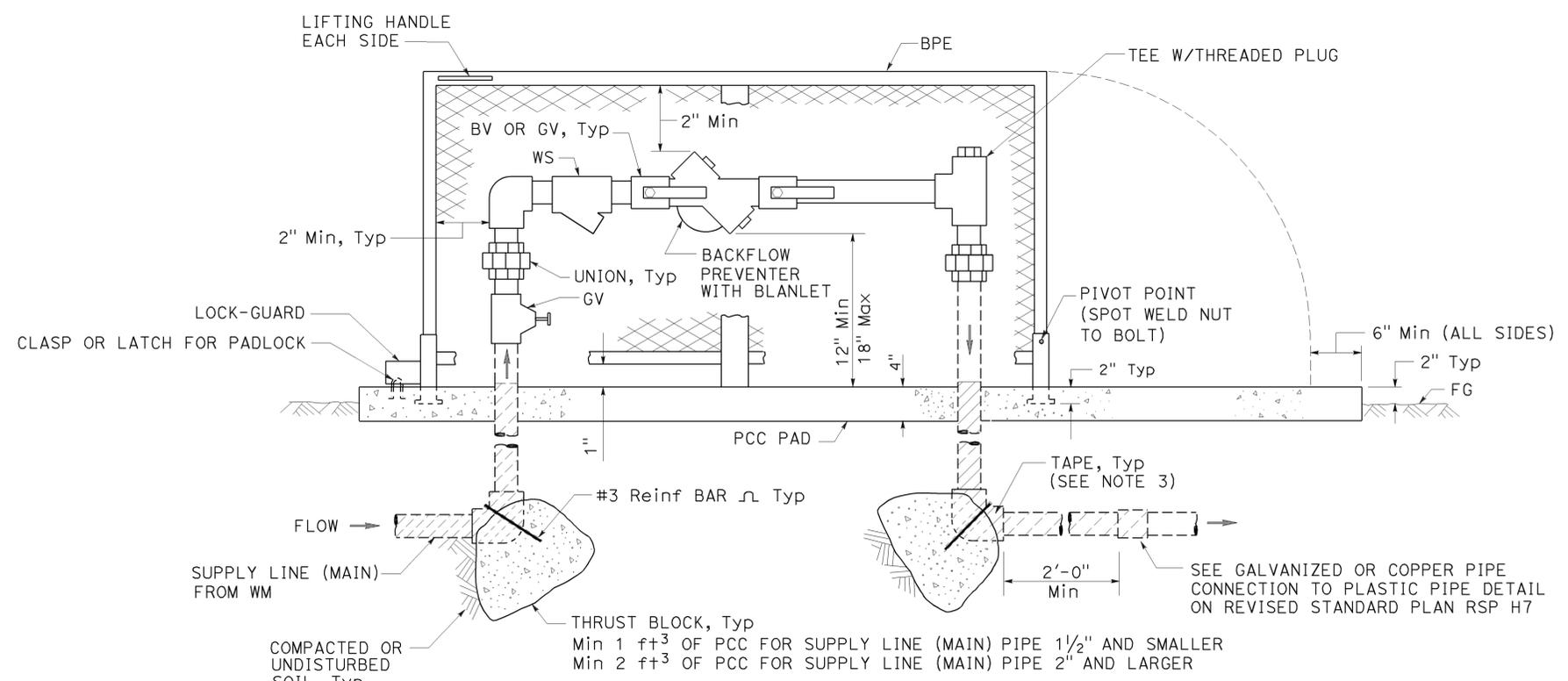
2010 REVISED STANDARD PLAN RSP H7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1518	2313

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.



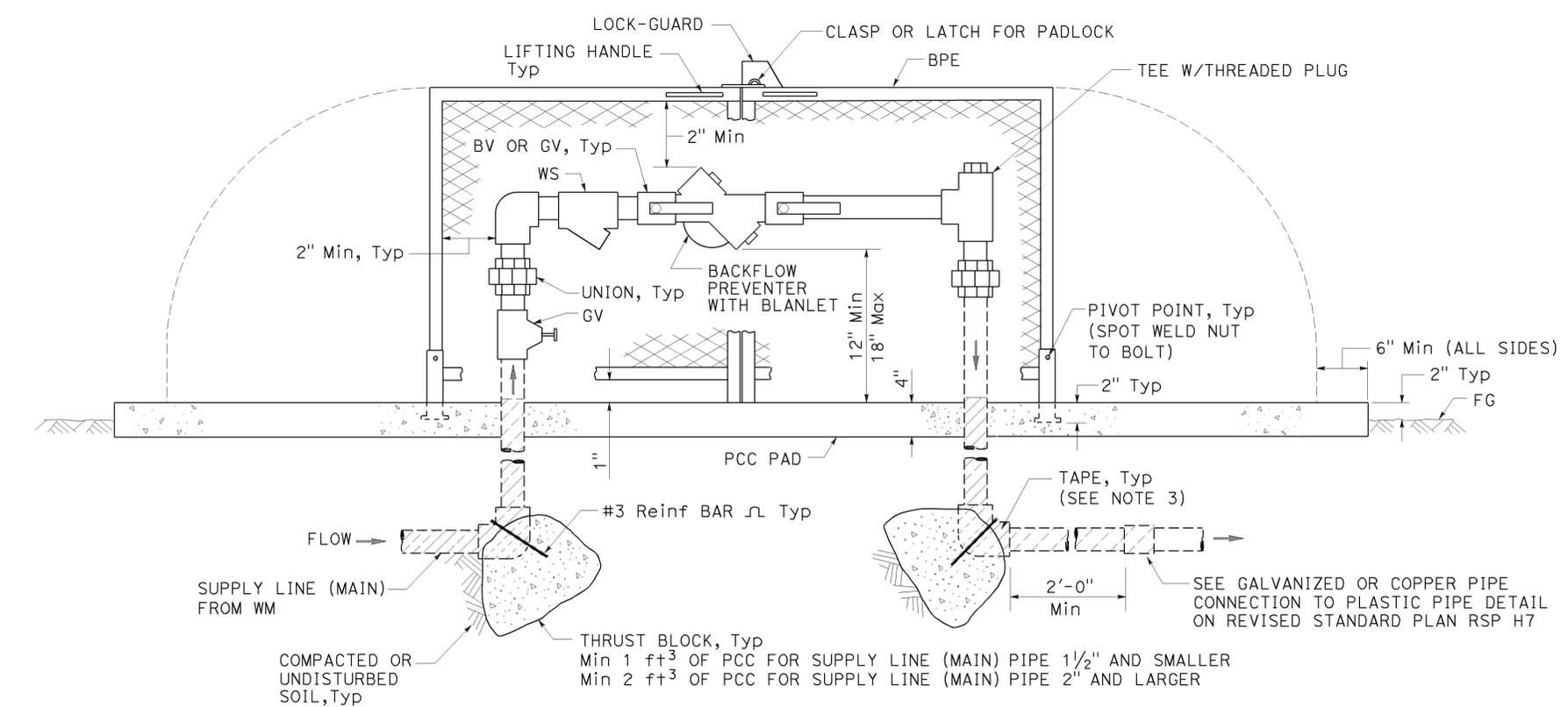
TO ACCOMPANY PLANS DATED 6-1-15



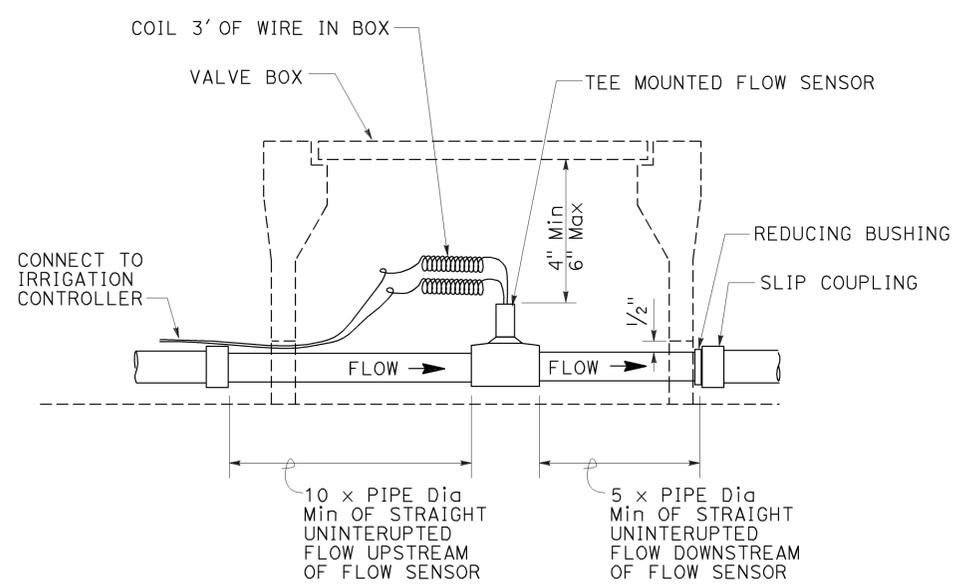
ELEVATION
BACKFLOW PREVENTER ASSEMBLY
 IN ONE PIECE ENCLOSURE

NOTES:

1. Wye strainer and fittings must be the same size as the backflow preventer shown on the plans.
2. Backflow preventer assembly manifold pipe must be the same pipe as the supply line (main) pipe to be installed from the water meter to the backflow preventer assembly.
3. All metal in contact with soil and Portland Cement Concrete must be wrapped with 2" wide plastic backed adhesive polyethylene tape 20 mil thick with 1/2" overlap.



ELEVATION
BACKFLOW PREVENTER ASSEMBLY
 IN TWO PIECE ENCLOSURE



SECTION
FLOW SENSOR

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
 NO SCALE

RSP H8 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H8 DATED MAY 20, 2011 - PAGE 225 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H8

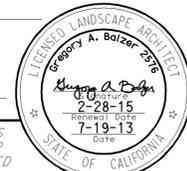
2010 REVISED STANDARD PLAN RSP H8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1519	2313

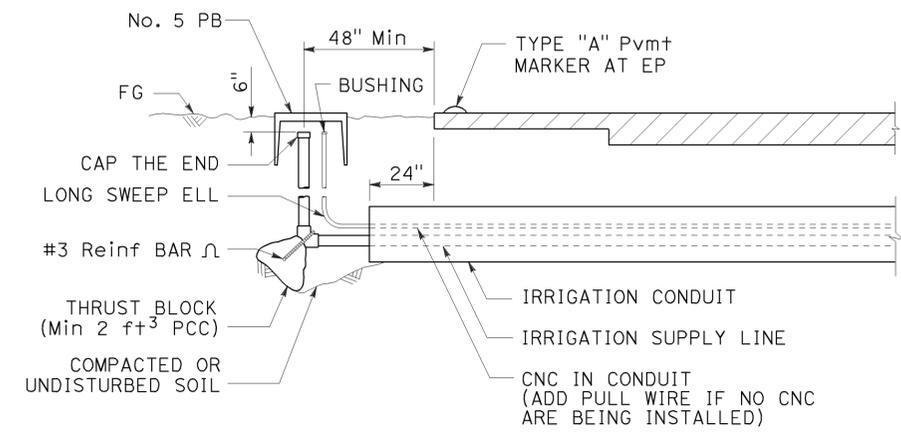
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT

July 19, 2013
 PLANS APPROVAL DATE

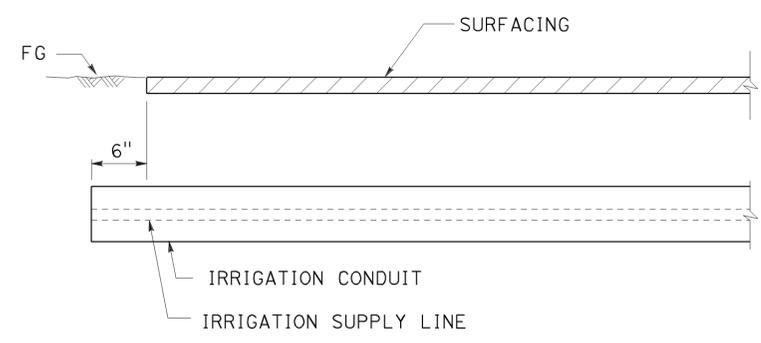
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



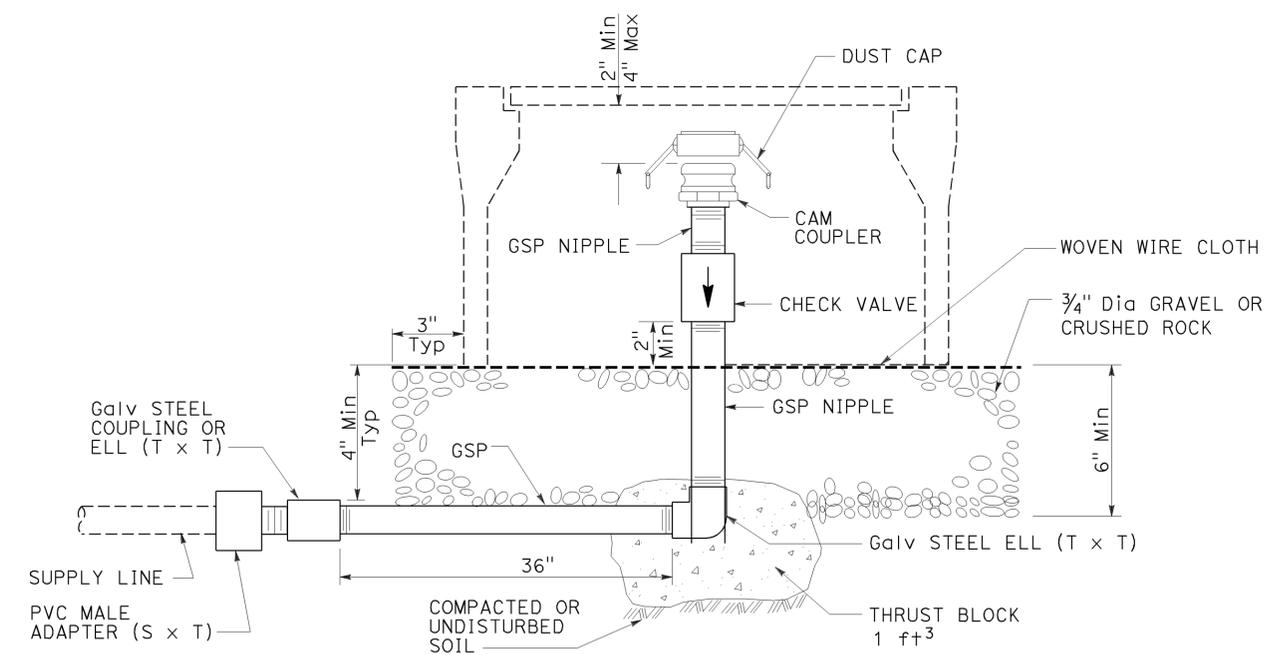
TO ACCOMPANY PLANS DATED 6-1-15



SECTION
IRRIGATION CONDUIT
UNDER TRAVELED WAY



SECTION
IRRIGATION CONDUIT
UNDER SIDEWALKS, DRIVEWAYS AND PATHS



ELEVATION
CAM COUPLER ASSEMBLY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
NO SCALE

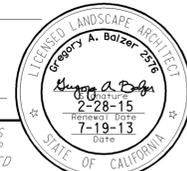
RSP H9 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H9 DATED MAY 20, 2011 - PAGE 226 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H9

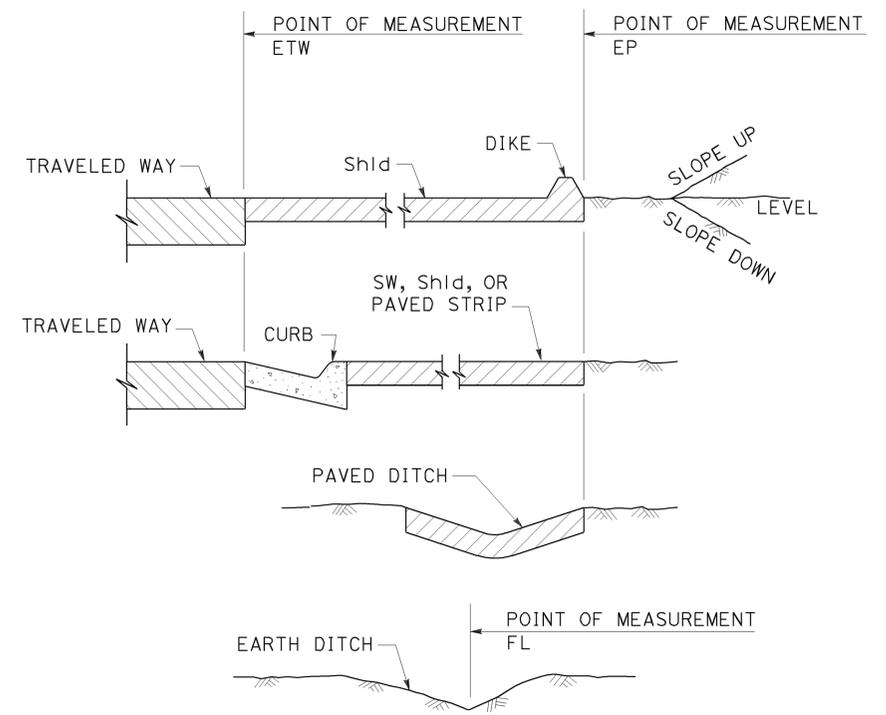
2010 REVISED STANDARD PLAN RSP H9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1520	2313

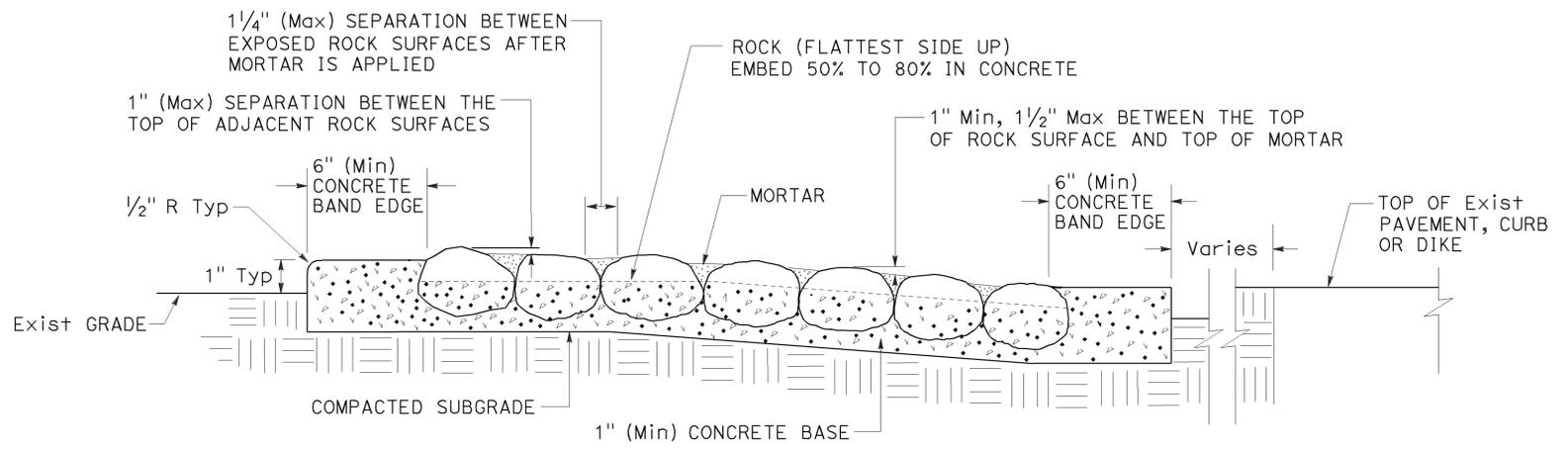
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



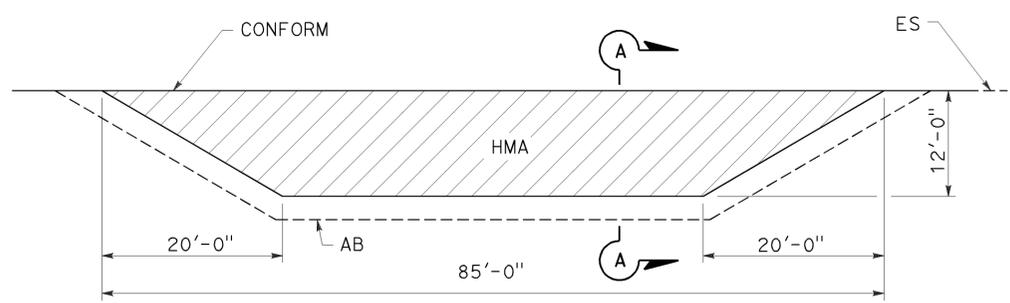
TO ACCOMPANY PLANS DATED 6-1-15



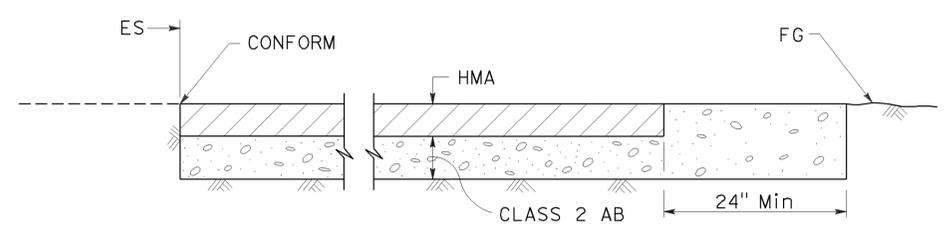
**SECTION
POINTS OF MEASUREMENT**



**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 6-1-15

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.

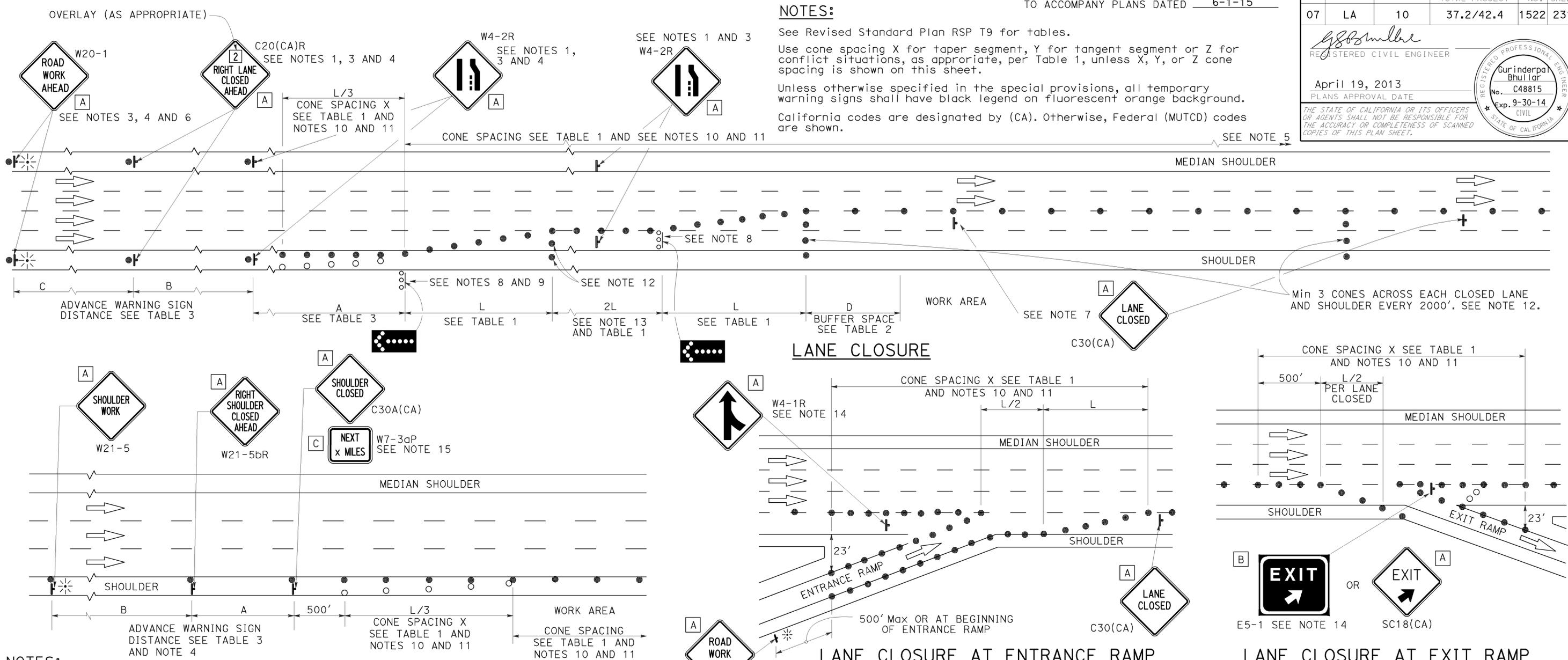
2010 REVISED STANDARD PLAN RSP T9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1522	2313

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



- 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.

- LANE CLOSURE AT ENTRANCE RAMP**
- LANE CLOSURE AT EXIT RAMP**
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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1523	2313

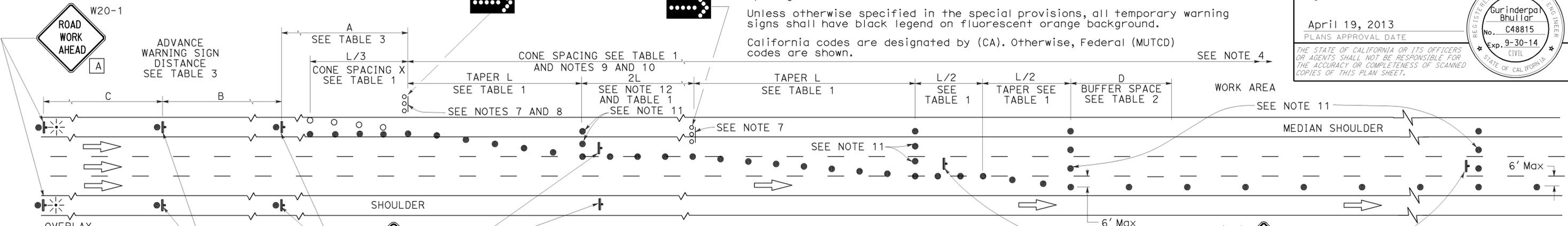
REGISTERED CIVIL ENGINEER
 Gurinderpal Bhullar
 No. C48815
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

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.

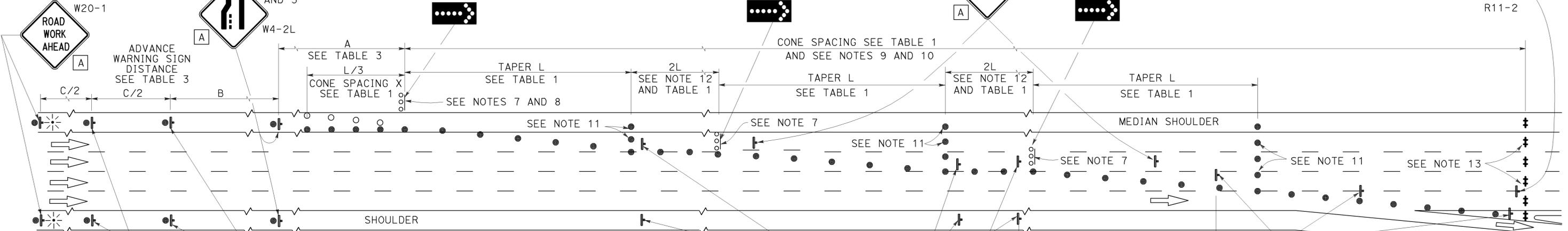
NOTES: See Revised Standard Plan RSP T9 for tables.
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
 Unless otherwise specified in the special provisions, all temporary warning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

SEE NOTES 3 AND 5



LANE CLOSURE WITH PARTIAL SHOULDER USE

SEE NOTES 3 AND 5



COMPLETE CLOSURE

NOTES:

- Lane closures on the right side using partial median shoulder as a traffic lane shall conform to the details as shown except that C20(CA)R and W4-2R signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
- 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.
- 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.
- 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.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
- 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.
- 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.
- 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 With Partial Shoulder Use" 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.
- 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.
- A minimum of Two Type II or III barricades shall be placed across each closed lane and shoulder at the location shown and every 2000' within the complete closure area. Within the complete closure area, the transverse alignment of the barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- When specified in the special provisions, a W20-2 "DETOUR AHEAD" sign is to be used in place of the W20-3 "FREEWAY CLOSED AHEAD" sign.

SIGN PANEL SIZE (Min)

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

LEGEND

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

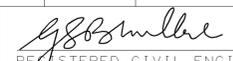
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURES ON
 FREEWAYS AND EXPRESSWAYS**
 NO SCALE

RSP T10A DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10A DATED MAY 20, 2011 - PAGE 238 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10A

2010 REVISED STANDARD PLAN RSP T10A

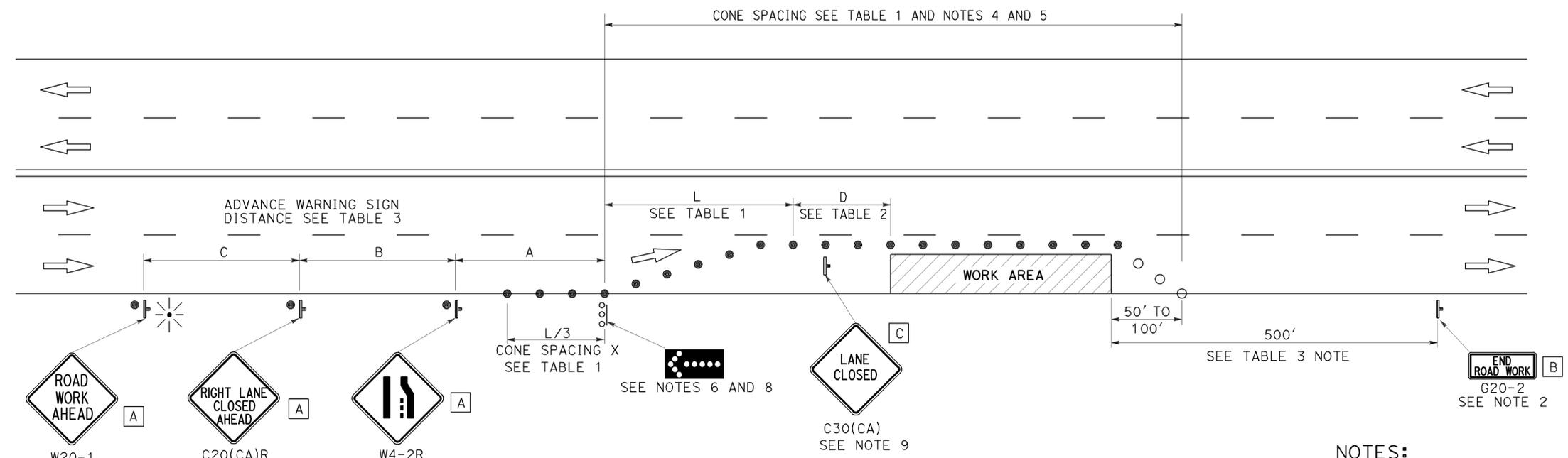
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1524	2313


 REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 6-1-15



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
07	LA	10	37.2/42.4	1525	2313

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

April 19, 2013
 PLANS APPROVAL DATE

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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.

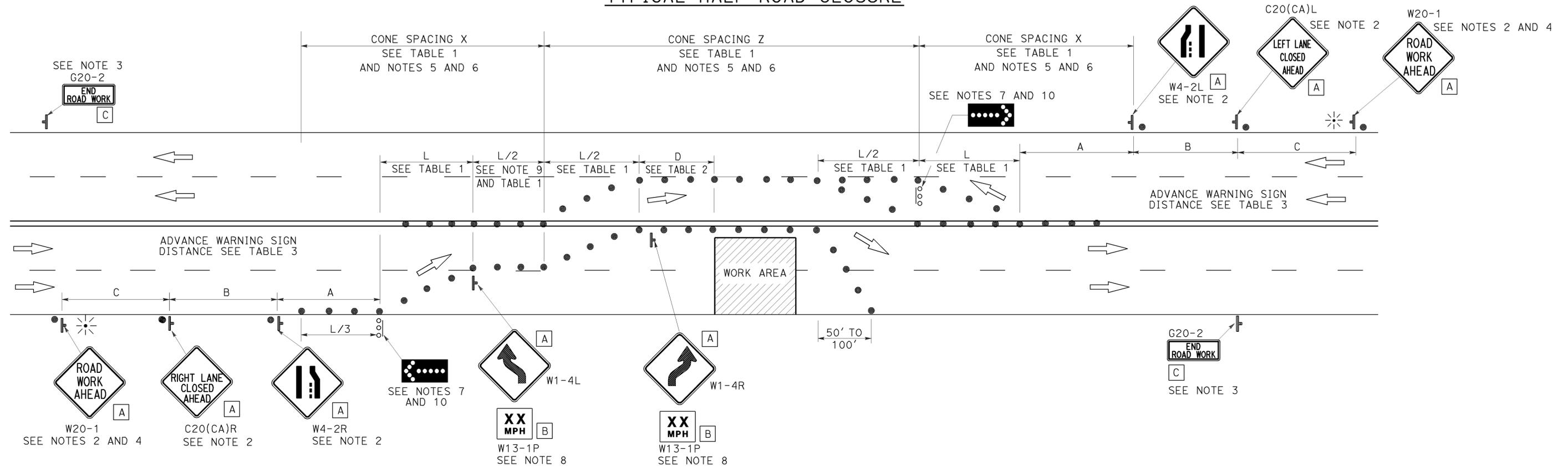
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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 6-1-15

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.

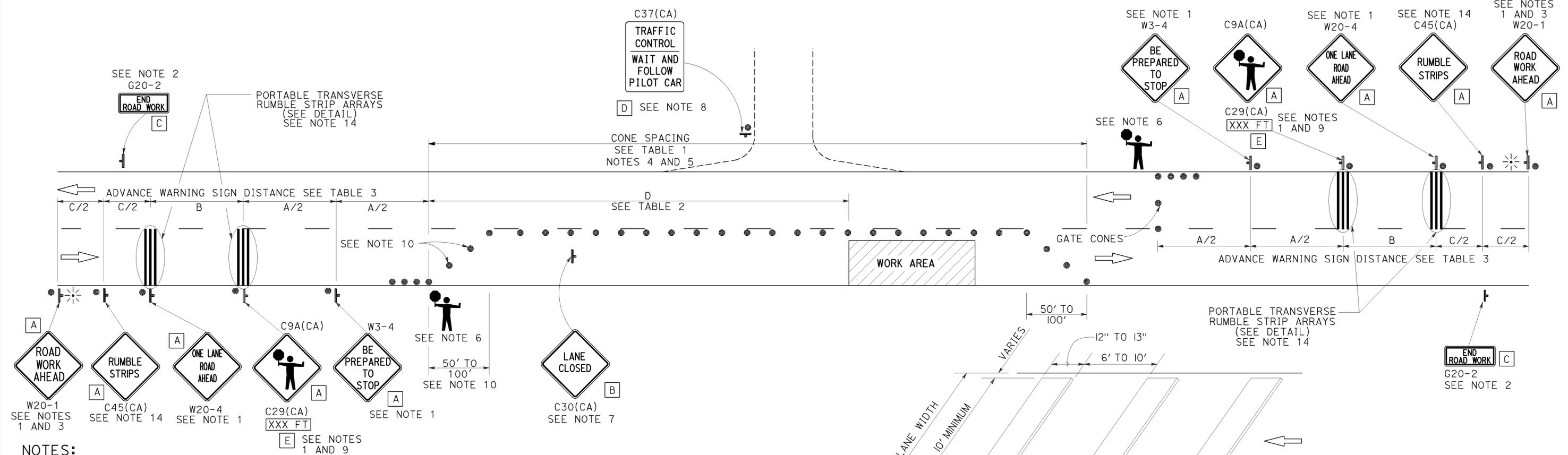
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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.

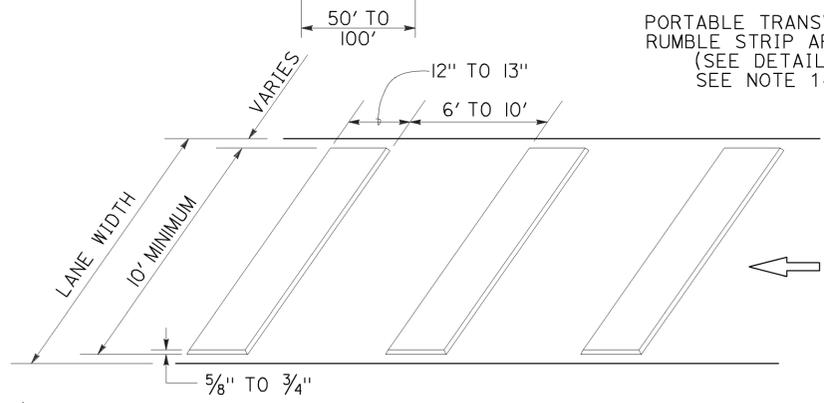
TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL

TO ACCOMPANY PLANS DATED 6-1-15



- 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.
- The color of the portable transverse rumble strips shall be black or orange. Use 2 arrays, each array shall consist of 3 rumble strips.
- Portable transverse rumble strips shall not be placed on sharp horizontal or vertical curves nor shall they be placed through pedestrian crossings.
- If the portable transverse rumble strips become out of alignment (skewed) by more than 6 inches, measured from one end to the other, they shall be readjusted to bring the placement back to the original location.
- Portable transverse rumble strips are not required if any one of the following conditions is satisfied:
 - Work duration occupies a location for four hours or less
 - Posted speed limit is below 45 MPH
 - Work is of emergency nature
 - Work zone is in snow or icy weather conditions



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 OCTOBER 17, 2014 SUPERSEDES RSP T13 DATED JULY 18, 2014
AND RSP T13 DATED APRIL 19, 2013 AND STANDARD PLAN T13 DATED
MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

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
07	LA	10	37.2/42.4	1527	2313

Gurinderpal Bhullar
 REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE

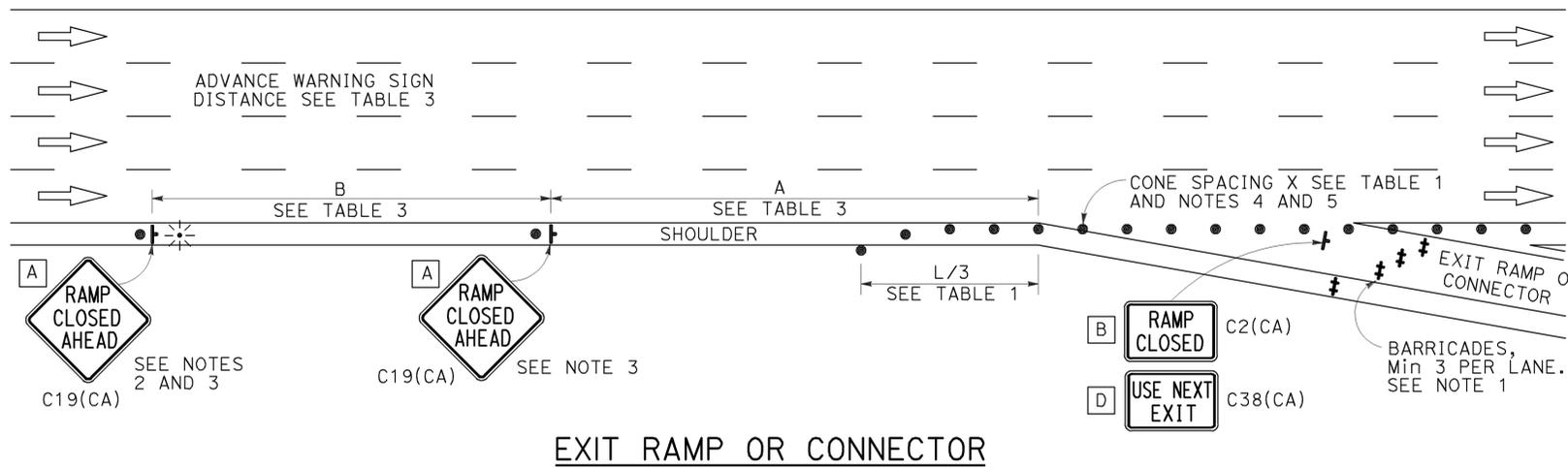
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

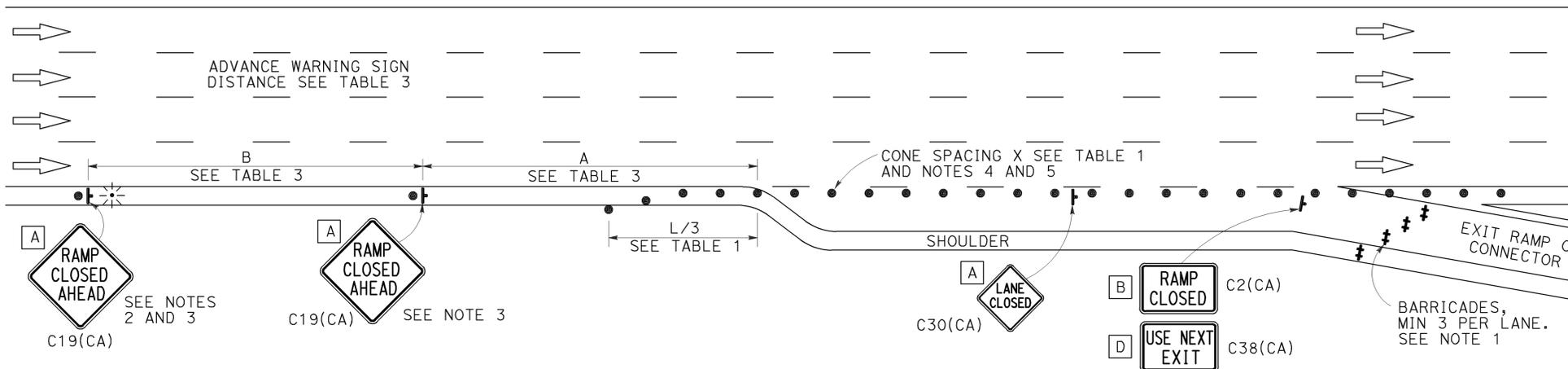
TO ACCOMPANY PLANS DATED 6-1-15

NOTES:

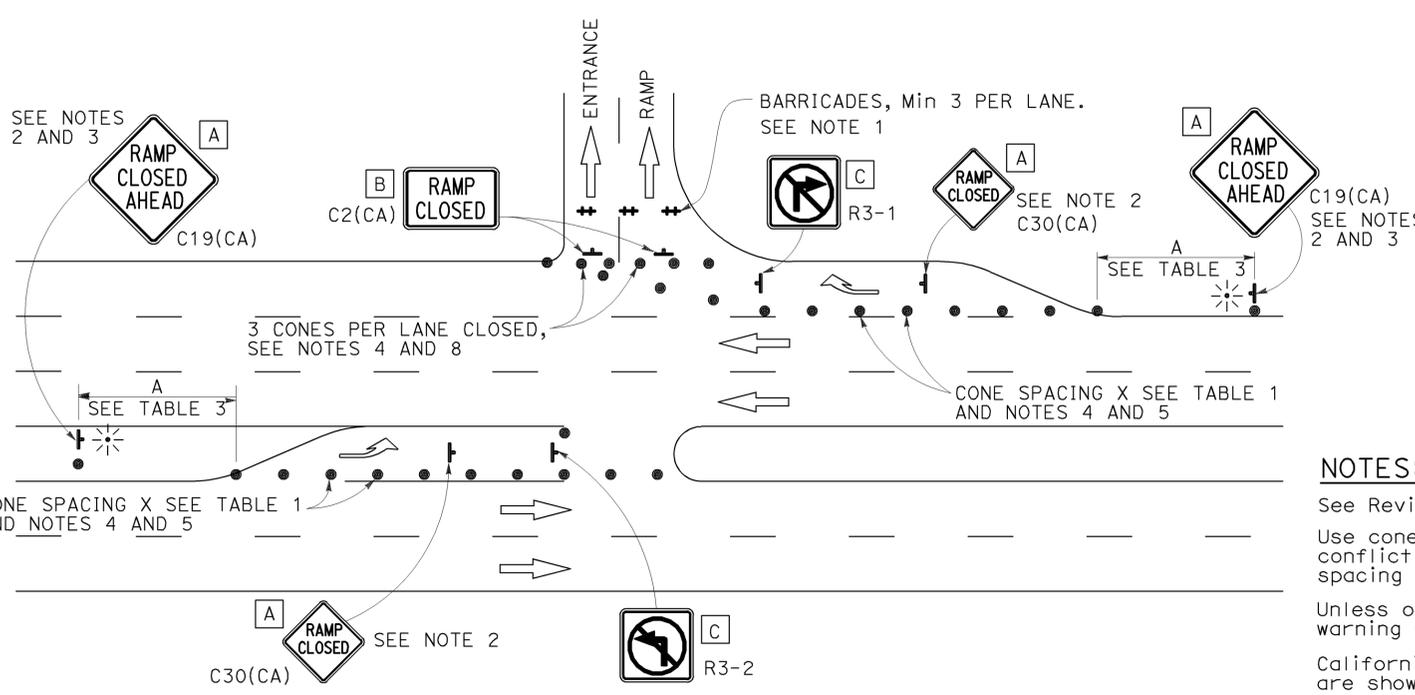
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed 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.



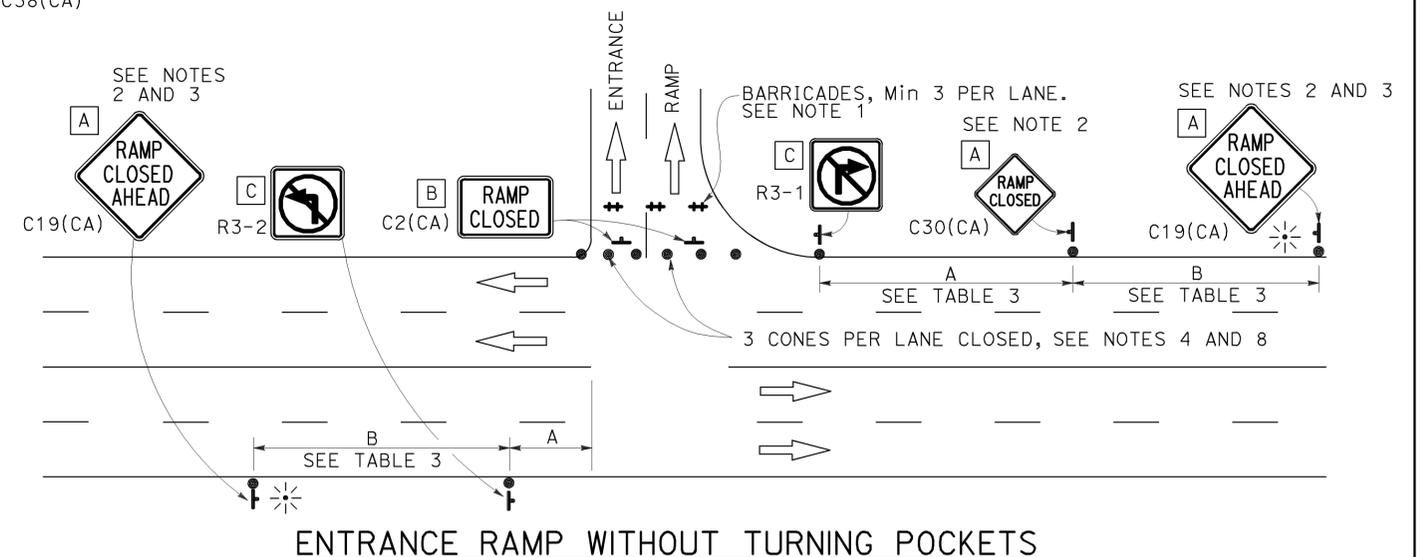
EXIT RAMP OR CONNECTOR



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.

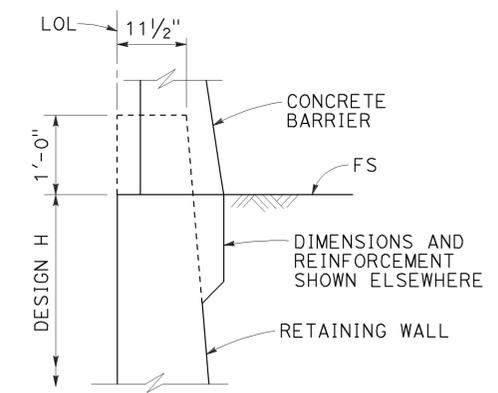
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR RAMP CLOSURE**
 NO SCALE

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

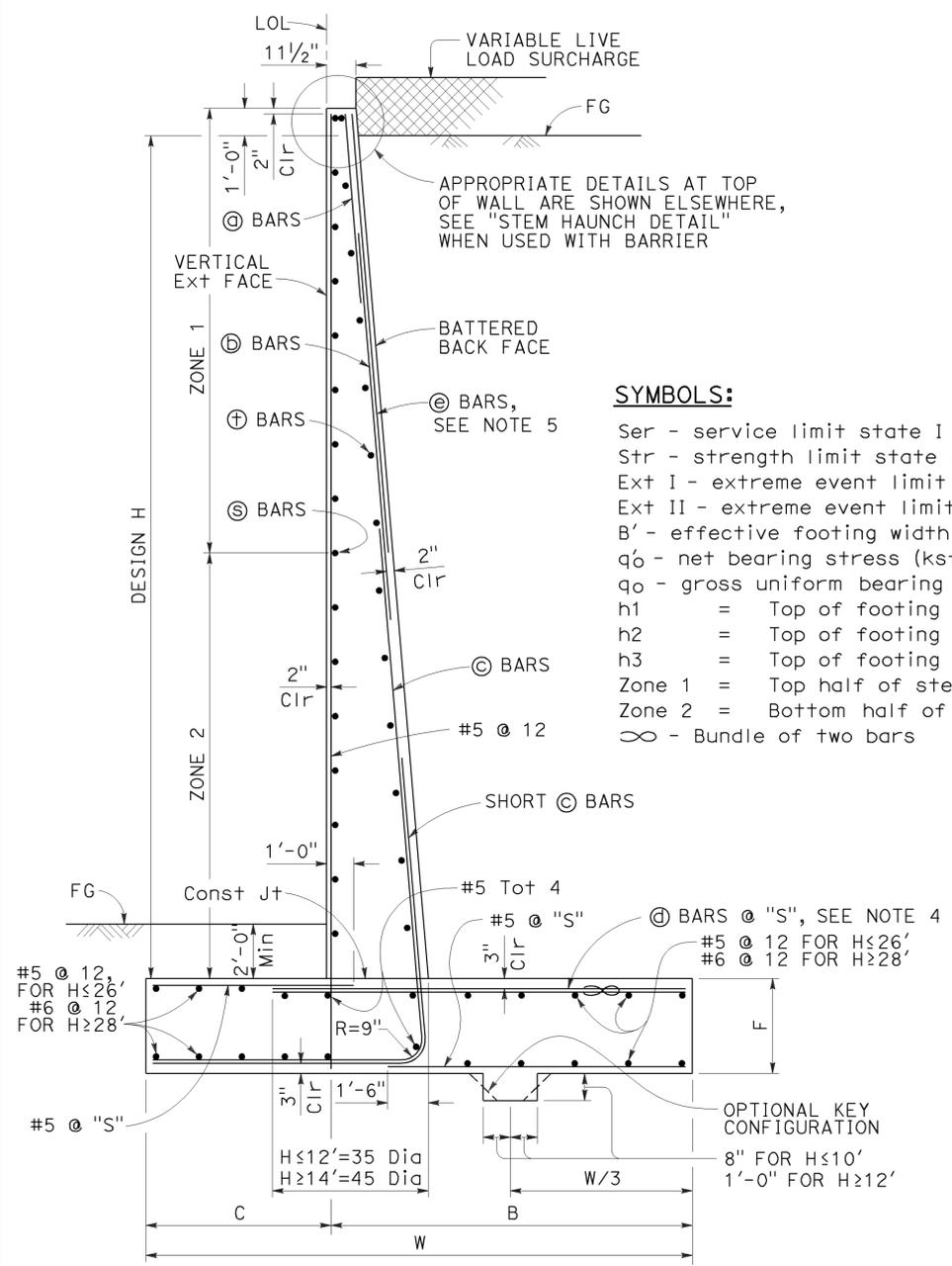
2010 REVISED STANDARD PLAN RSP T14

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.



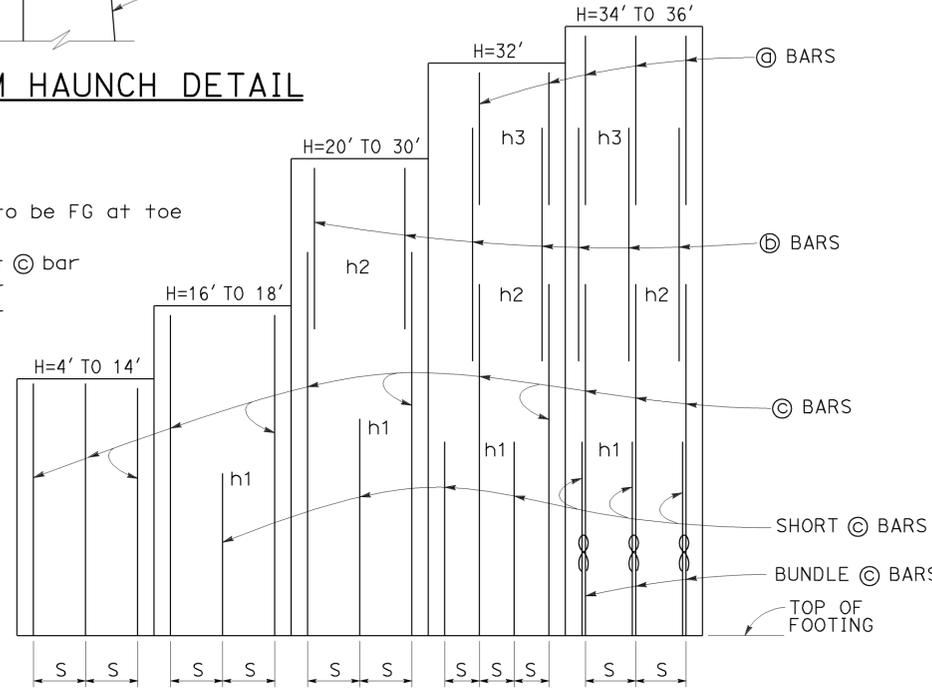
STEM HAUNCH DETAIL



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 6-1-15
- 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, fy = 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.

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ⓞ BARS	-	-	-	-	-	-	-	-	#7	#7	#7	#7	#7	#7	#7	#7	#7
© BARS	#6	#6	#6	#6	#6	#6	#7	#7	#8	#9	#9	#10	#10	#10	#10	#11	#11
Ⓞ BARS	#5	#5	#6	#6	#6	#6	#9	#8	#8	#9	#9	#10	#10	#10	#11	#11	#11
h1	-	-	-	-	-	-	5'-9"	5'-10"	8'-0"	9'-0"	10'-4"	11'-1"	11'-11"	12'-8"	13'-6"	14'-5"	15'-0"
h2	-	-	-	-	-	-	-	-	10'-5"	13'-0"	14'-7"	17'-6"	19'-0"	20'-5"	19'-0"	18'-0"	20'-2"
h3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21'-0"	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

2010 REVISED STANDARD PLAN RSP B3-1B

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

SYMBOLS:

- TO ACCOMPANY PLANS DATED 6-1-15
- 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 @ bar
 h2 = Top of footing to top of @ bar
 h3 = Top of footing to top of @ bar
 h4 = 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

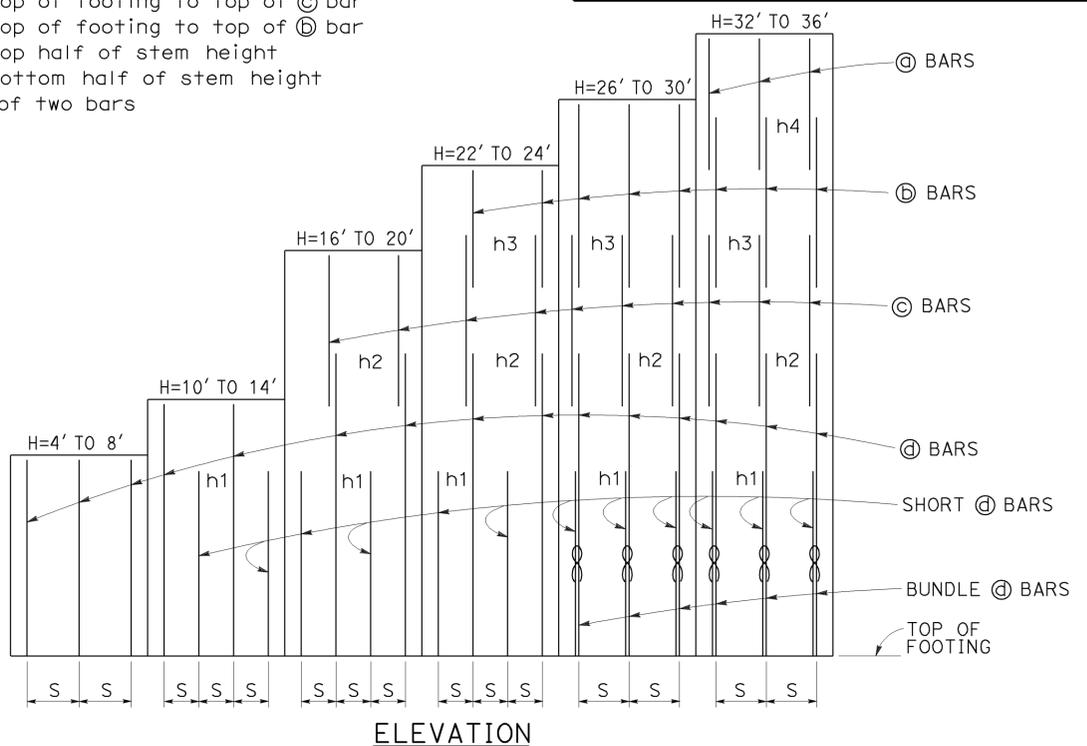
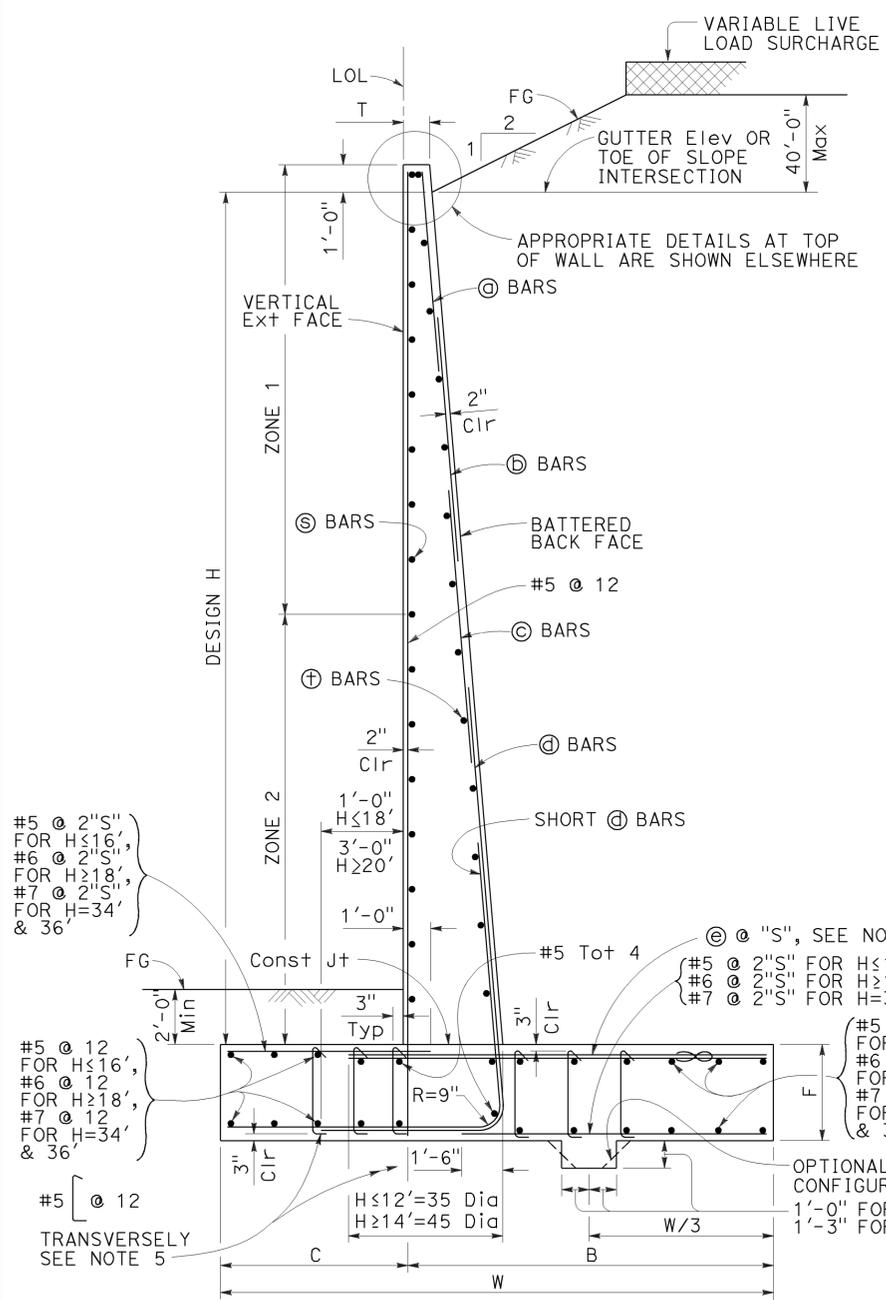


TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA																	
DESIGN H	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	28'	30'	32'	34'	36'
W	6'-0"	7'-6"	9'-6"	11'-0"	12'-6"	15'-6"	17'-3"	19'-6"	21'-9"	23'-6"	26'-0"	28'-1"	30'-3"	31'-6"	33'-0"	34'-8"	35'-11"
C	2'-0"	2'-6"	3'-3"	3'-6"	4'-3"	5'-0"	5'-3"	5'-9"	6'-9"	7'-3"	8'-3"	8'-9"	9'-0"	9'-6"	10'-0"	10'-10"	11'-3"
B	4'-0"	5'-0"	6'-3"	7'-6"	8'-3"	10'-6"	12'-0"	13'-9"	15'-0"	16'-3"	17'-9"	19'-4"	21'-3"	22'-0"	23'-0"	23'-10"	24'-8"
F	1'-6"	1'-6"	2'-0"	2'-3"	2'-6"	2'-8"	2'-10"	3'-0"	3'-4"	3'-6"	3'-6"	3'-7"	3'-7"	3'-9"	3'-9"	4'-0"	4'-4"
T	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1'-2"	1'-5"	1'-10"	2'-3"	2'-9"
BATTER	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 1/8: 12	1 1/8: 12	1 1/8: 12	1 1/8: 12	1 1/8: 12	1 1/8: 12	1 1/8: 12
SPACING "S"	16"	12"	10"	7"	7"	7"	7"	7"	7"	6"	6"	10"	8"	7"	7"	7"	7"
@ BARS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#5	#5	#5
@ BARS	-	-	-	-	-	-	-	-	-	#5	#5	#5	#5	#5	#7	#7	#7
@ BARS	-	-	-	-	-	-	#6	#6	#6	#7	#8	#8	#8	#8	#9	#9	#9
@ BARS	#5	#5	#6	#6	#7	#8	#9	#10	#10	#10	#11	#11	#11	#11	#11	#11	#11
@ BARS	#5	#5	#6	#6	#7	#8	#9	#10	#10	#10	#11	#11	#11	#11	#11	#11	#11
h1	-	-	-	5'-3"	6'-4"	7'-6"	8'-9"	9'-9"	11'-0"	11'-3"	11'-6"	10'-3"	11'-9"	12'-3"	12'-6"	13'-3"	13'-8"
h2	-	-	-	-	-	-	12'-8"	15'-6"	17'-0"	16'-6"	17'-3"	18'-0"	17'-6"	17'-4"	14'-10"	15'-9"	16'-4"
h3	-	-	-	-	-	-	-	-	-	18'-9"	21'-3"	21'-3"	22'-4"	22'-8"	18'-0"	18'-6"	19'-6"
h4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26'-3"	27'-4"	28'-6"
No. of Toe Stirrups	0	0	0	0	0	0	0	0	0	0	0	5	5	6	7	8	9
No. of Heel Stirrups	0	0	0	0	0	0	0	0	4	6	7	8	10	10	11	11	11
ZONE 1 @ BARS	#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	#6 @ 12	#6 @ 12	#6 @ 10	#6 @ 10
ZONE 2 @ BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 12	#7 @ 12	#7 @ 12	#7 @ 12	#7 @ 12	#7 @ 10	#7 @ 10
ZONE 1 @ BARS	#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	#5 @ 12	#5 @ 12	#5 @ 12
ZONE 2 @ BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 12	#6 @ 12
Ser: B', q ₀	4.0, 0.9	5.5, 1.0	9.3, 1.0	10.9, 1.3	12.3, 1.5	14.8, 1.9	16.6, 2.1	18.7, 2.4	20.6, 2.7	22.3, 3.0	24.2, 3.3	26.1, 3.5	28.2, 3.9	29.6, 4.0	31.1, 4.2	32.7, 4.4	34.1, 4.6
Str: B', q ₀	2.2, 2.2	3.5, 2.2	5.1, 2.3	6.3, 2.6	7.6, 2.7	12.9, 3.1	14.3, 3.6	16.5, 3.9	19.4, 4.5	20.7, 4.8	22.5, 5.2	24.3, 5.6	26.2, 6.0	27.5, 6.3	28.8, 6.6	30.3, 6.9	31.8, 7.2
Ext: B', q ₀	2.3, 3.4	2.7, 4.4	3.6, 5.0	3.8, 6.5	4.5, 7.0	7.0, 6.1	7.6, 6.9	9.3, 7.0	11.0, 7.1	11.8, 7.6	14.1, 7.4	15.6, 7.7	17.1, 8.0	17.2, 8.7	18.1, 9.0	19.0, 9.4	19.4, 10.0

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 @ and short @ 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.
- Bundle @ bars for $H \geq 26'$.
- Hook stirrups around & space with alternating transverse reinforcement at $2 \times "S"$.

RETAINING WALL TYPE 1 (CASE 2)

NO SCALE

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

REVISED STANDARD PLAN RSP B3-1B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TO ACCOMPANY PLANS DATED 6-1-15

2010 REVISED STANDARD PLAN RSP B3-5

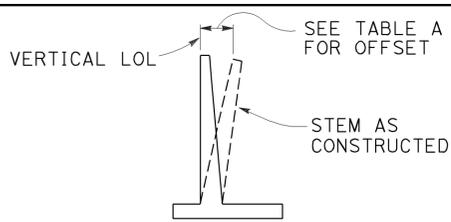
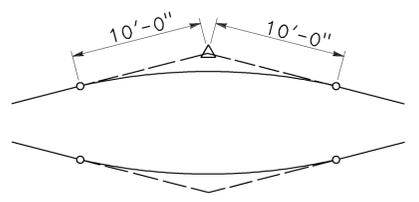


TABLE A

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

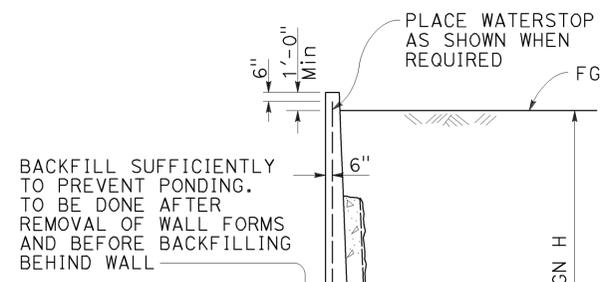
APPROXIMATE WALL OFFSET VALUES

Values for offsetting forms to be determined by the Engineer.



20'-0" VC AT TOP OF WALL SLOPE CHANGE

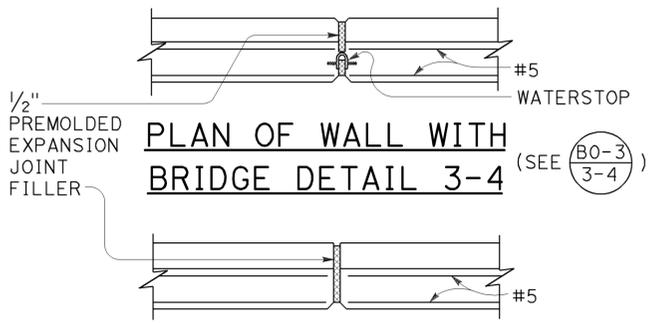
Where shown on the plans



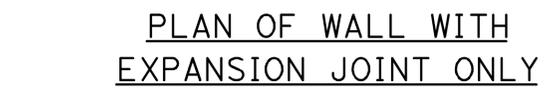
BACKFILL SUFFICIENTLY TO PREVENT PONDING. TO BE DONE AFTER REMOVAL OF WALL FORMS AND BEFORE BACKFILLING BEHIND WALL.

PLACE CONCRETE IN TOE AGAINST UNDISTURBED MATERIAL EXCEPT AS PERMITTED BY THE ENGINEER.

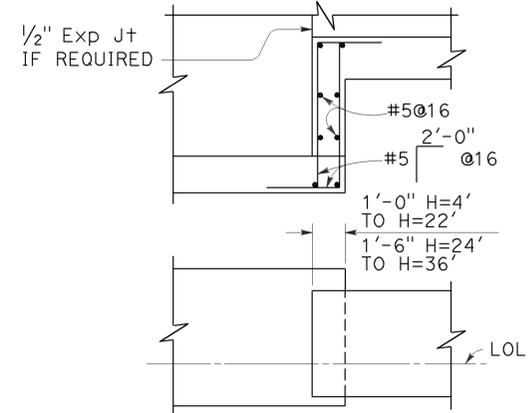
DESIGN AND DRAINAGE



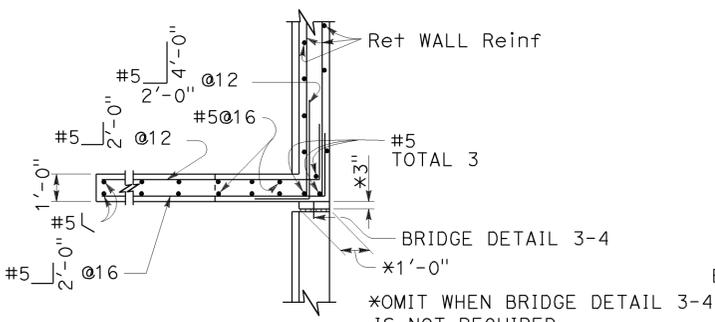
PLAN OF WALL WITH BRIDGE DETAIL 3-4



PLAN OF WALL WITH EXPANSION JOINT ONLY

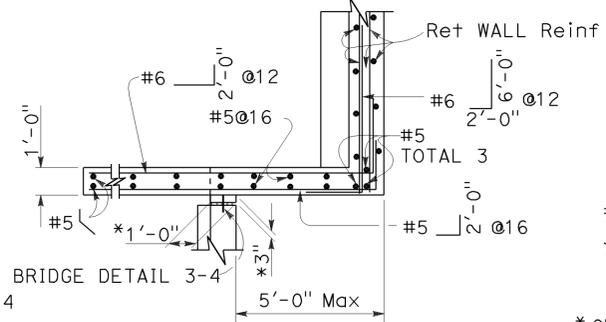


FOOTING STEP



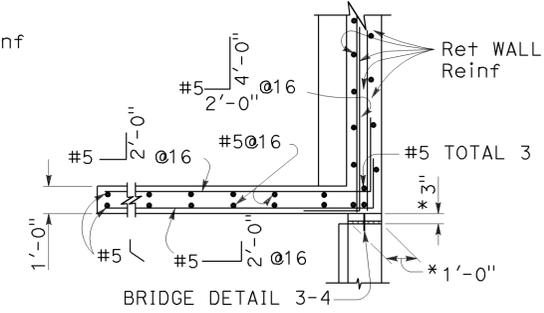
PLAN

(For return wall Type "A")



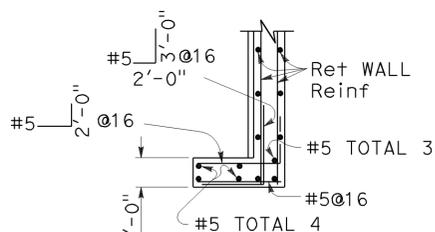
PLAN

(For return wall Type "B")



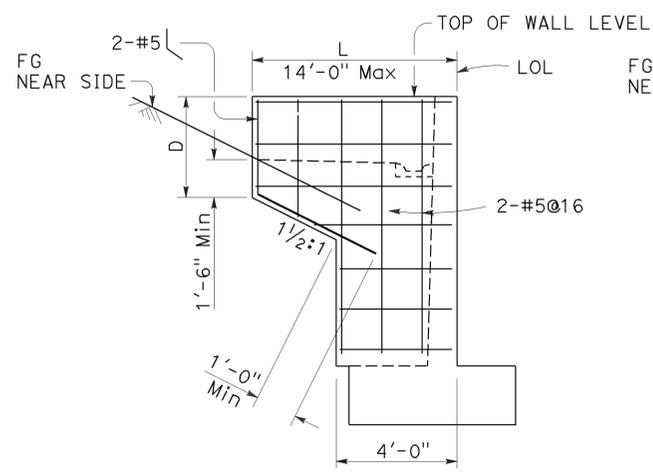
PLAN

(For return wall Type "C")



PLAN

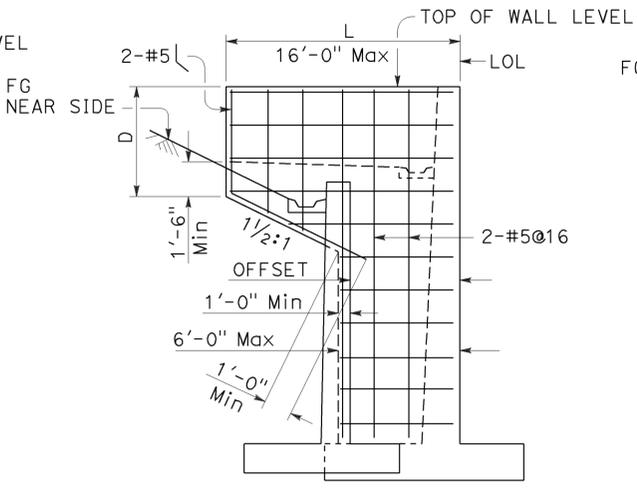
(For return wall Type "D")



ELEVATION

RETURN WALL TYPE "A"

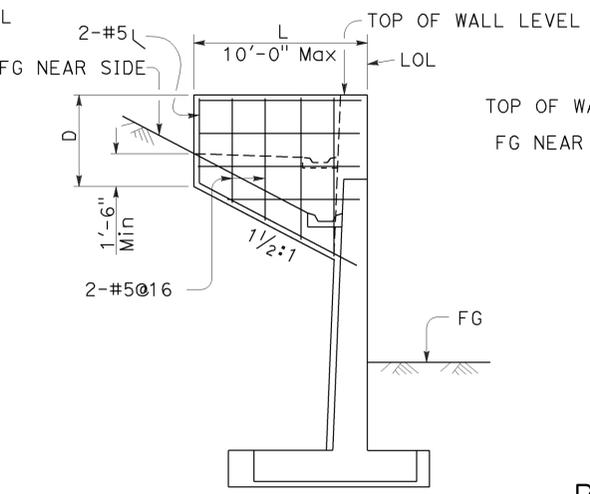
Use where H=8' or less



ELEVATION

RETURN WALL TYPE "B"

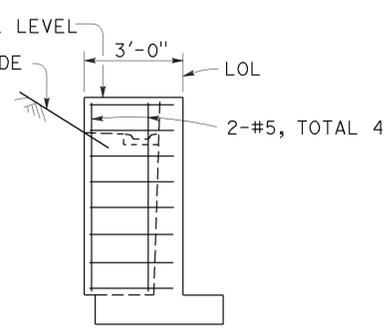
Use where H=10' or more on offset walls



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

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

RETAINING WALL DETAILS No. 1

NO SCALE

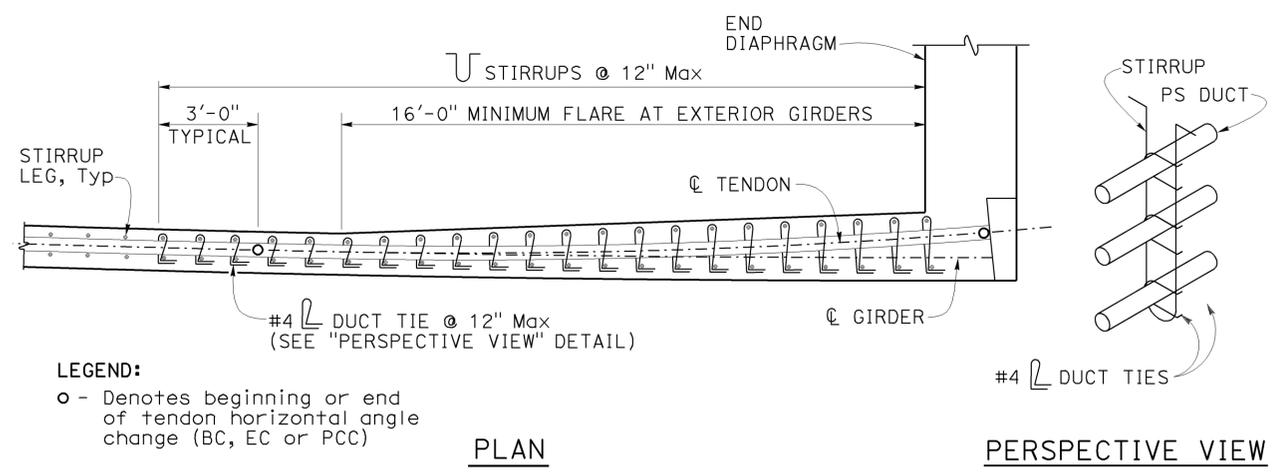
RSP B3-5 DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN B3-5 DATED MAY 20, 2011 - PAGE 277 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B3-5

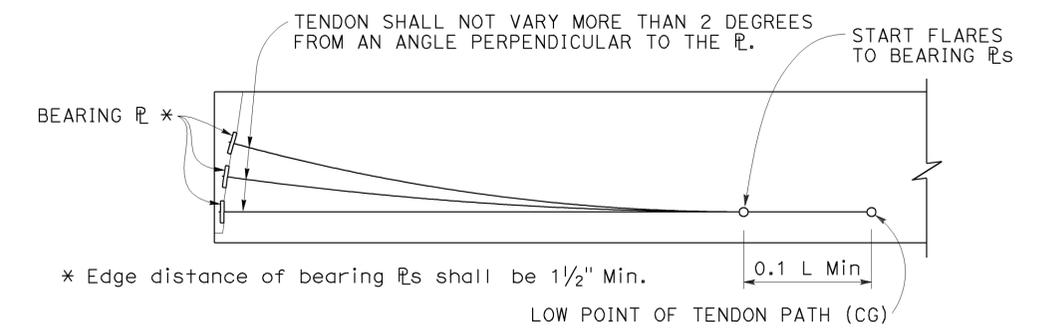
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1531	2313

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

REGISTERED PROFESSIONAL ENGINEER
 Marc Friedheim
 No. C57968
 Exp. 6-30-14
 CIVIL
 STATE OF CALIFORNIA

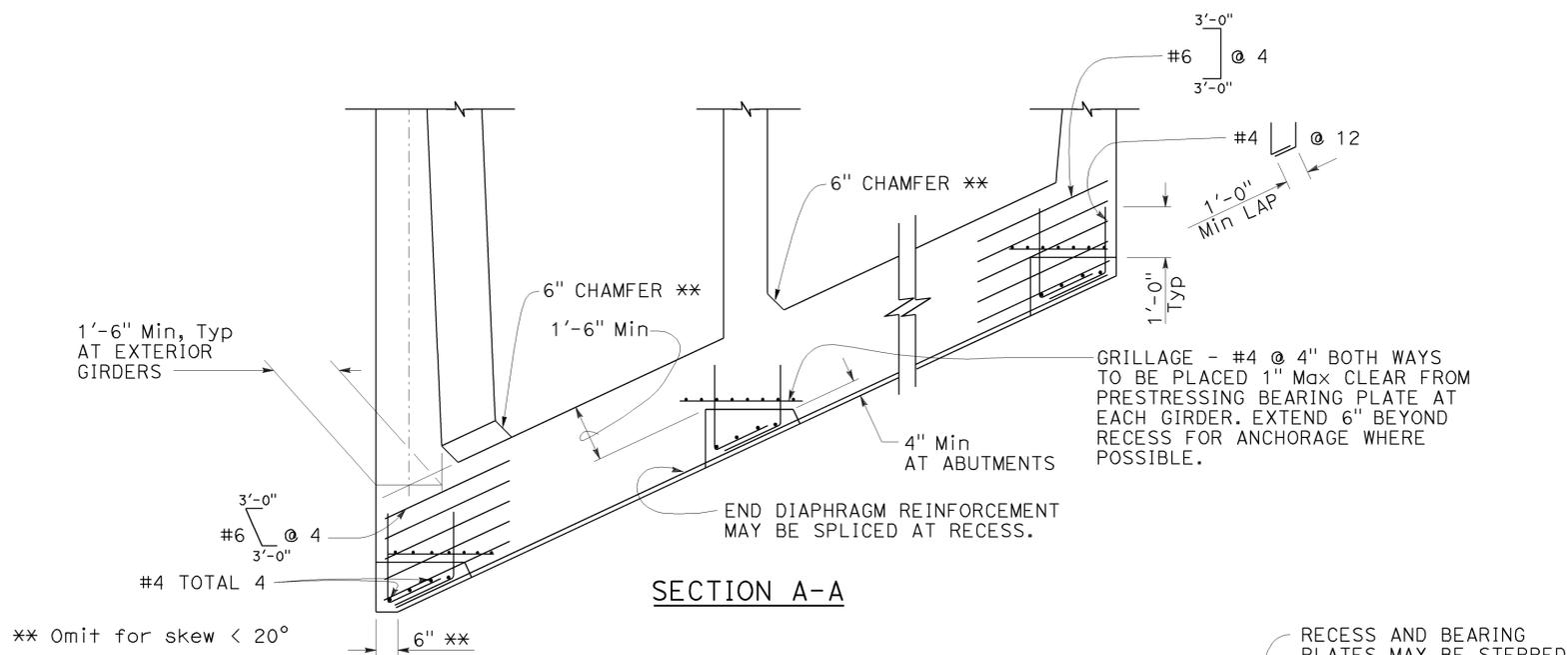


DUCT TIES AT TENDON HORIZONTAL ANGLE CHANGES
DETAIL 5-1

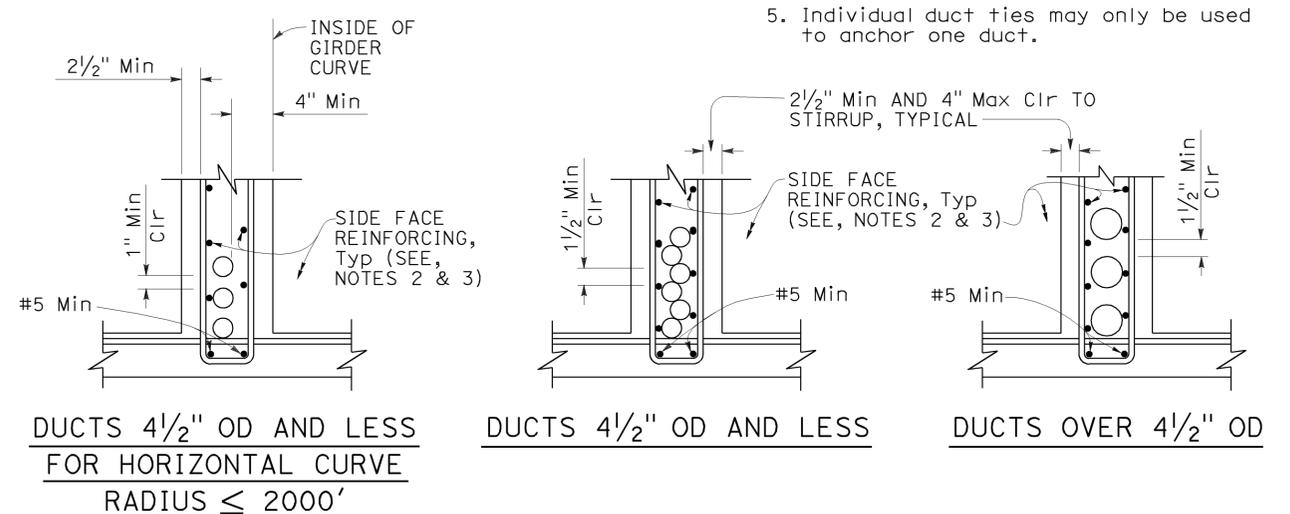


ELEVATION - BEARING PLATE AND PRESTRESSING PATH
DETAIL 5-2

- TO ACCOMPANY PLANS DATED 6-1-15
- NOTES FOR DETAIL 5-1**
1. Tendon horizontal angle change at end diaphragm shown. Duct tie placement similar for other locations where tendon horizontal angle changes occur. For curved girders place duct ties at tendon angle changes where tendon radius is smaller than girder radius.
 2. Adjacent duct ties may be staggered to facilitate placement if stirrup spacing is less than 12 inches.
 3. Place closed end of duct ties toward inside of tendon curve.
 4. Wrap duct ties around both stirrup legs.
 5. Individual duct ties may only be used to anchor one duct.



PRESTRESS ANCHORAGE DETAILS AT END DIAPHRAGMS
DETAIL 5-3



CLEARANCE REQUIREMENTS FOR DUCTS
DETAIL 5-4

- NOTES FOR DETAIL 5-4:**
1. Stirrups may also be used.
 2. For additional details, see Standard Plan B7-1, and Project Plans.
 3. Bar reinforcing which interferes with prestressing ducts may be adjusted as approved by the Engineer.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

CAST-IN-PLACE POST-TENSIONED GIRDER DETAILS
 NO SCALE

RSP B8-5 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN B8-5 DATED MAY 20, 2011 - PAGE 291 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B8-5

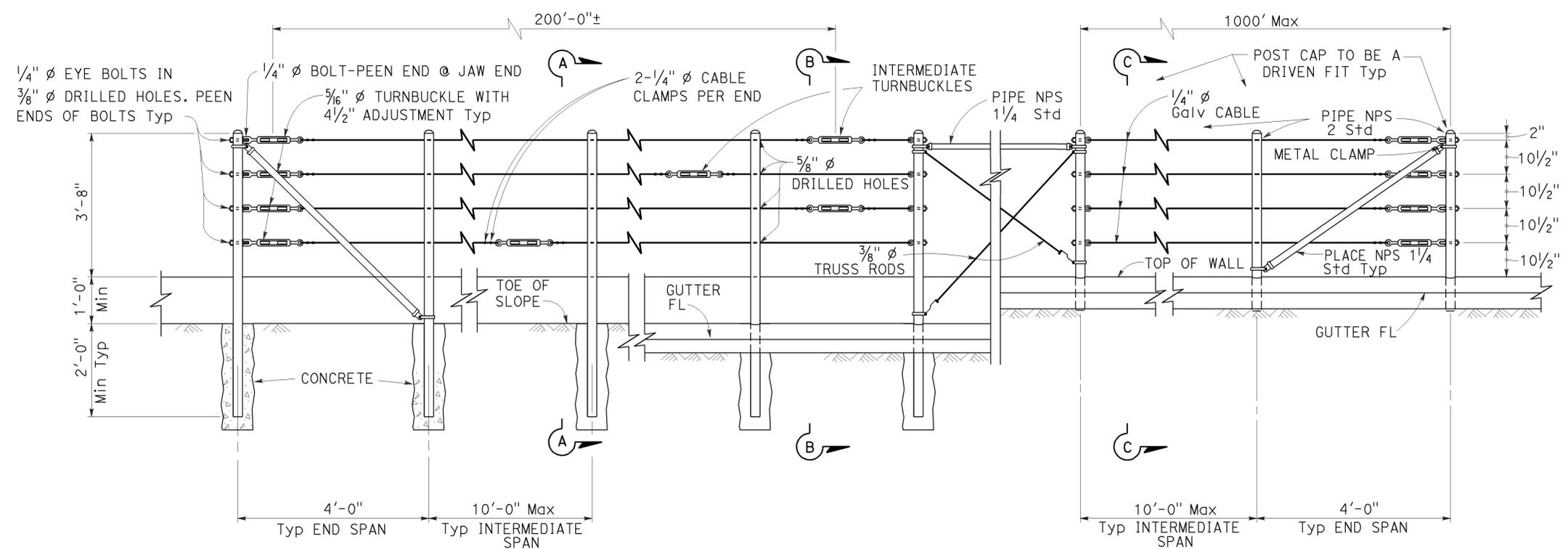
2010 REVISED STANDARD PLAN RSP B8-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1532	2313

REGISTERED CIVIL ENGINEER
 Tillet Satter
 No. C42892
 Exp. 3-31-12
 CIVIL
 STATE OF CALIFORNIA

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.

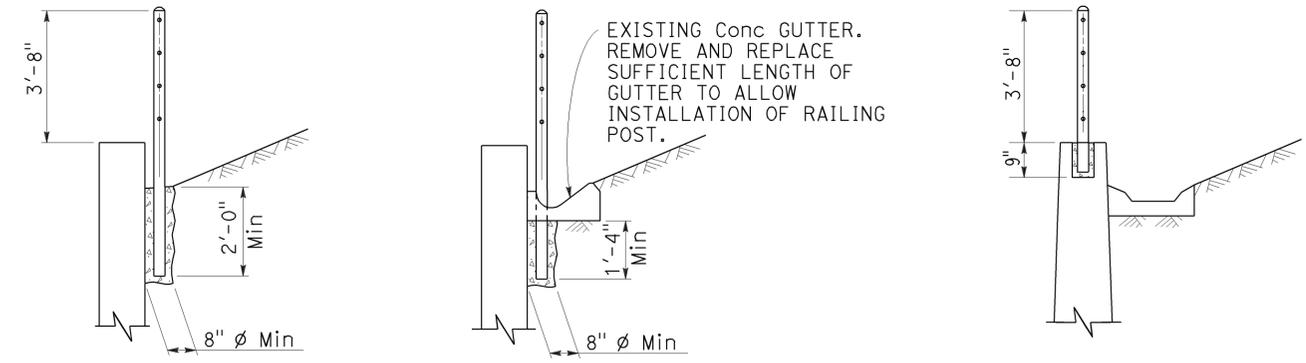


EXISTING WALL (WITHOUT GUTTER) Existing
RETAINING WALL (WITH GUTTER) Existing
RETAINING WALL (WITH GUTTER) New construction

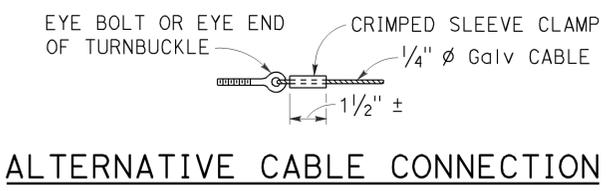
ELEVATION

NOTES:

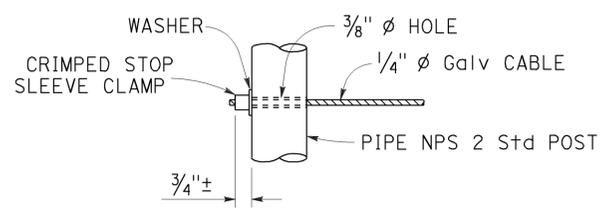
1. Maximum distance between turnbuckles shall be 200'-0"±.
2. Intermediate turnbuckles to be placed in adjacent spans.
3. Cable shall not be spliced between intermediate turnbuckles and end posts.
4. Posts to be vertical.
5. Alignment of holes in posts may vary to conform to slope of top of retaining 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.



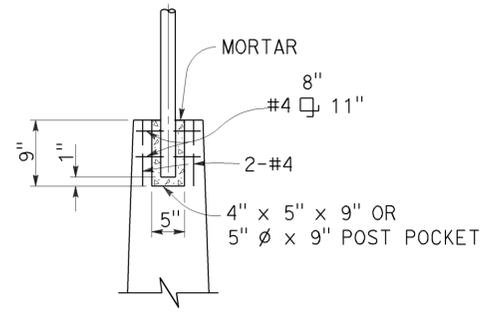
SECTION A-A Existing
SECTION B-B Existing
SECTION C-C New construction



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
07	LA	10	37.2/42.4	1533	2313

REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

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

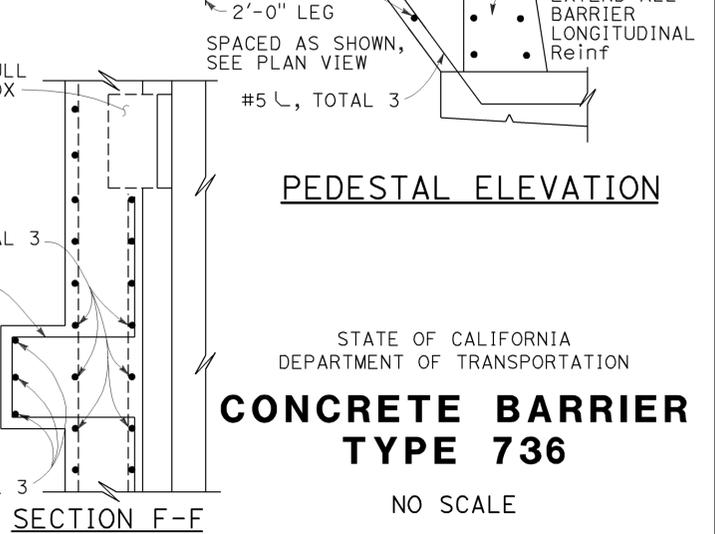
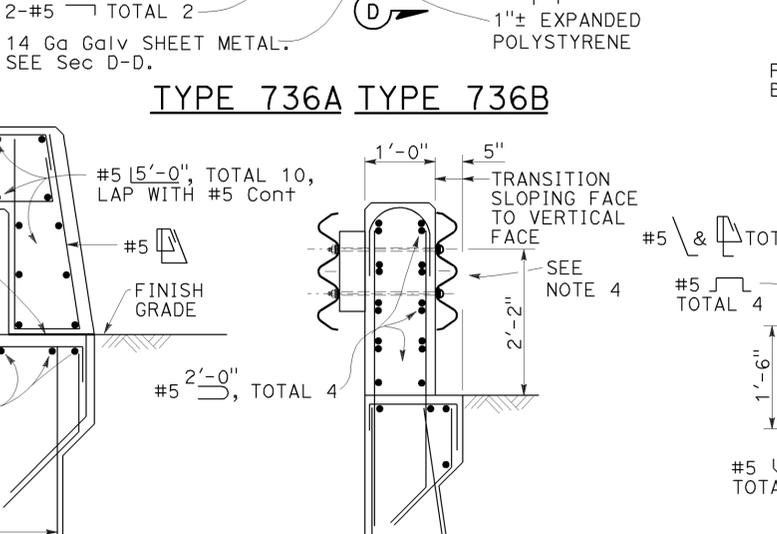
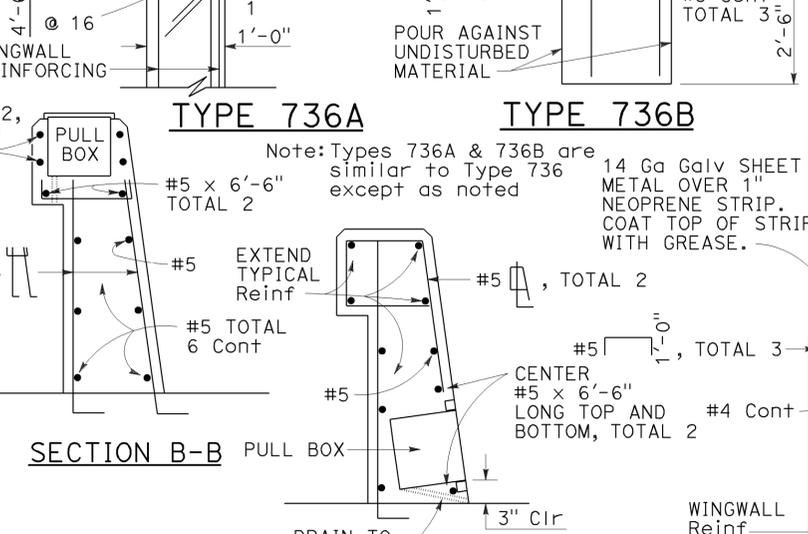
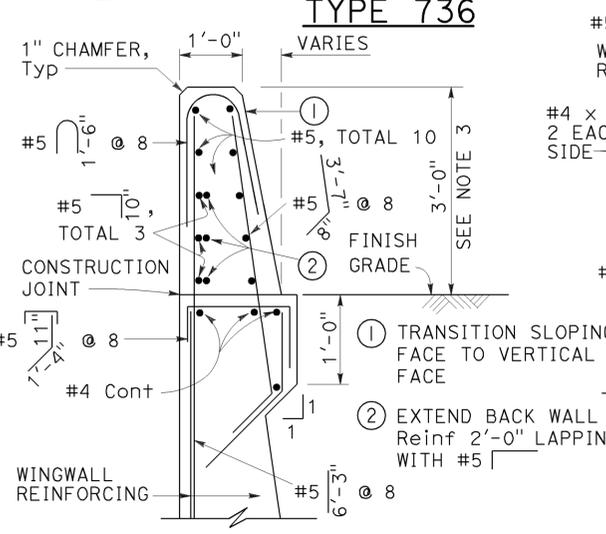
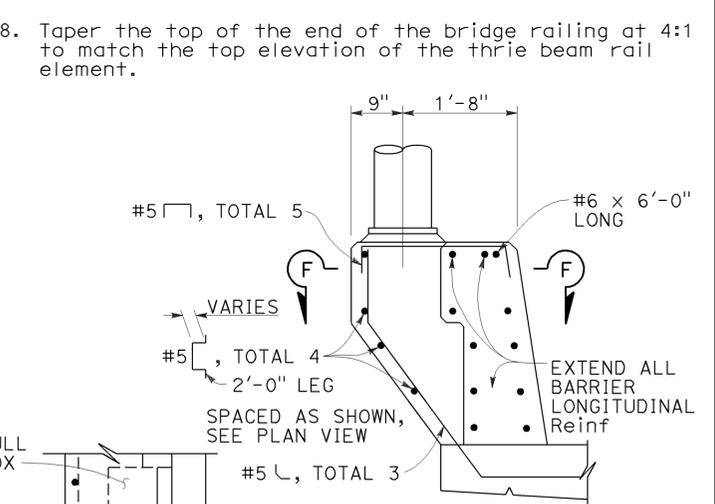
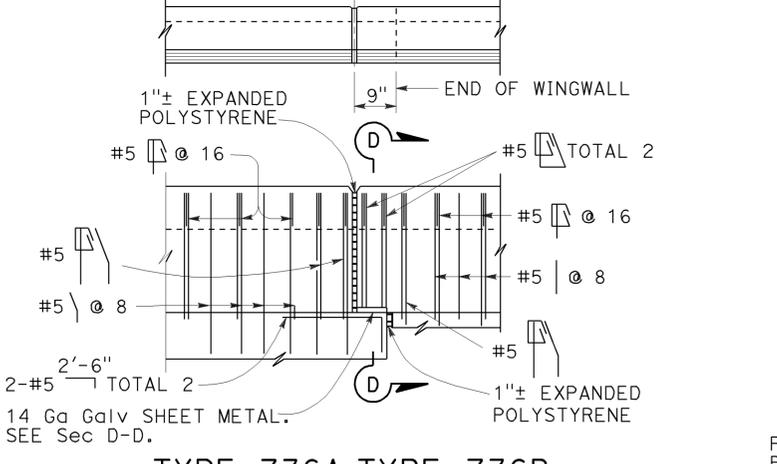
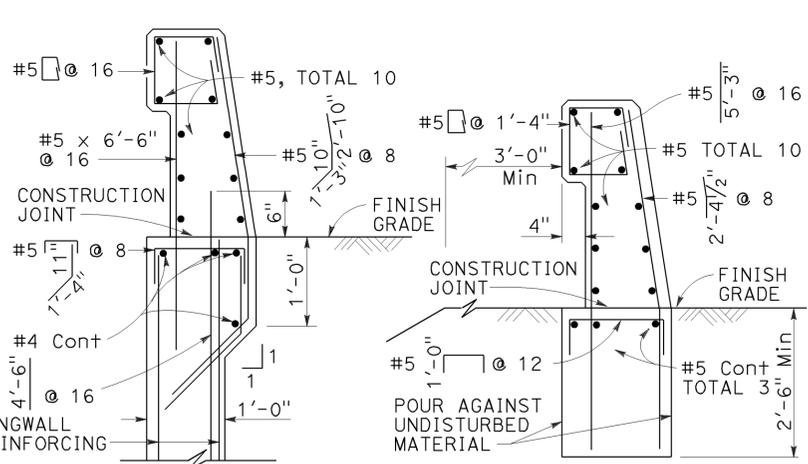
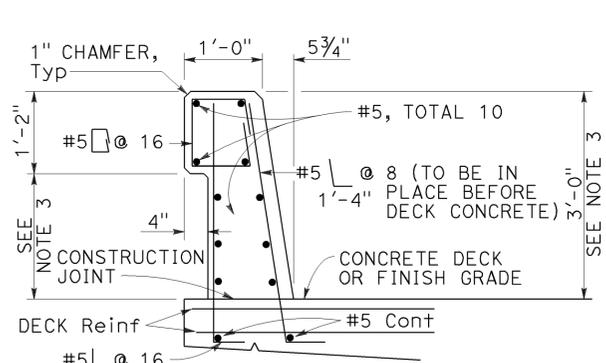
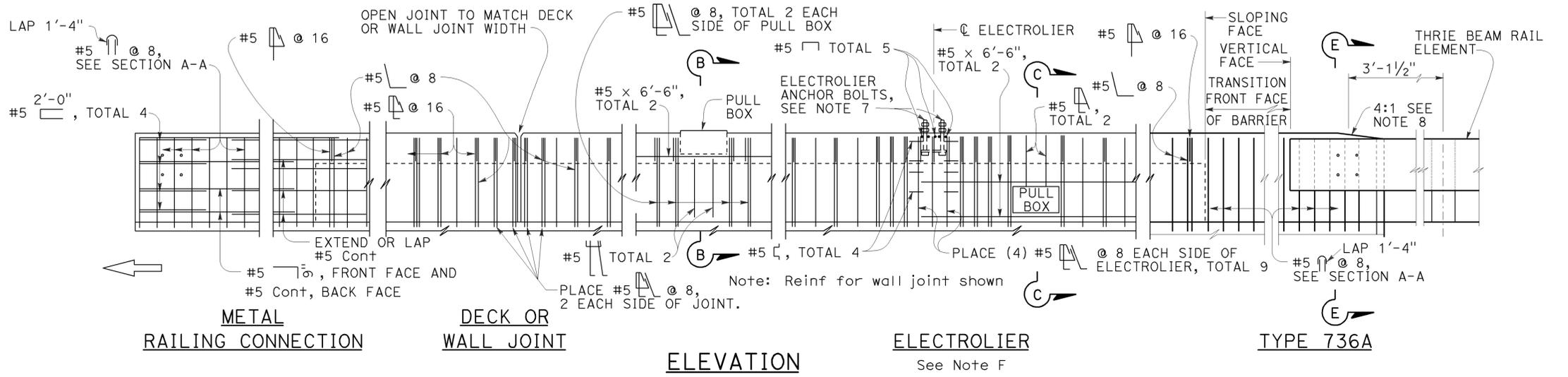
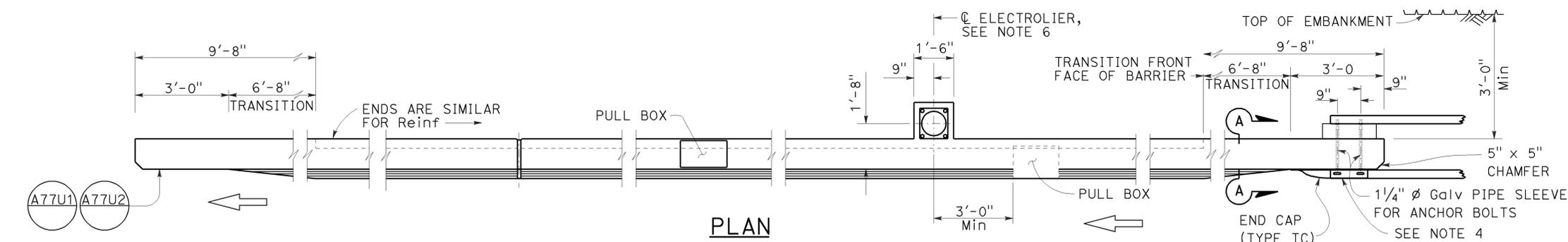
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TO ACCOMPANY PLANS DATED 6-1-15

NOTES:

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

2010 REVISED STANDARD PLAN RSP B11-56

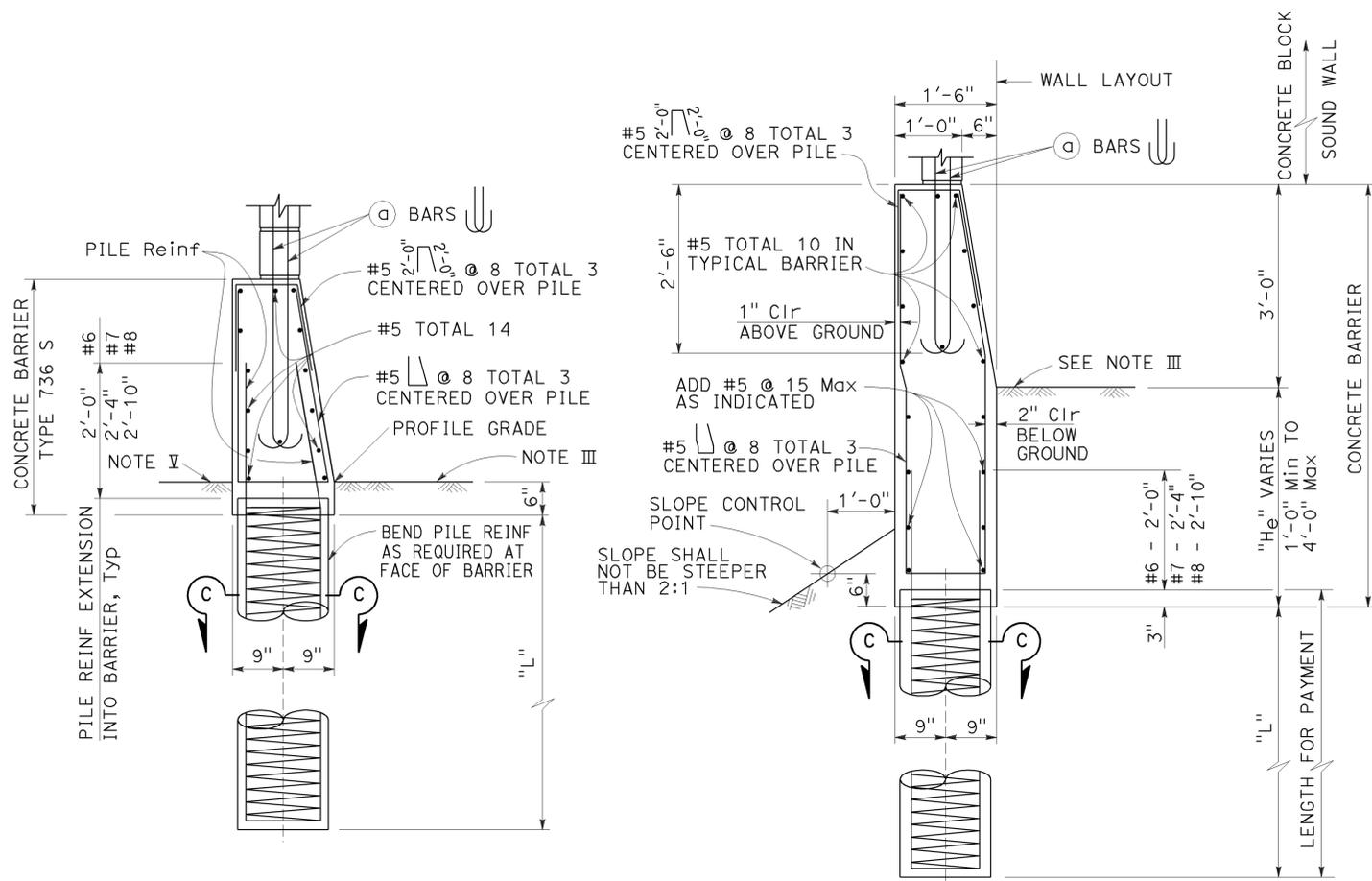


Details shown for barrier anchorage to Type 736A. Anchorage for barrier Types 736 and 736B are similar to their respective details.

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

REVISED STANDARD PLAN RSP B11-56

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE BARRIER
TYPE 736**
NO SCALE



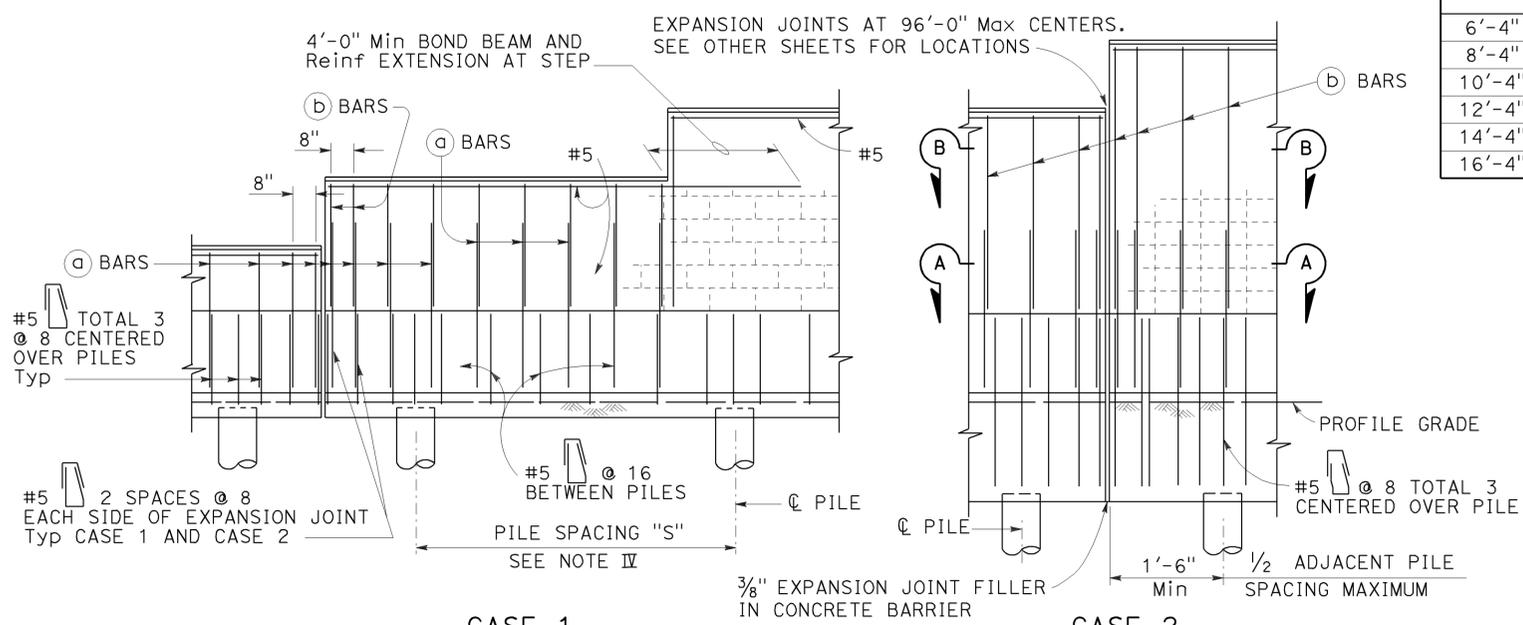
CASE 1

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



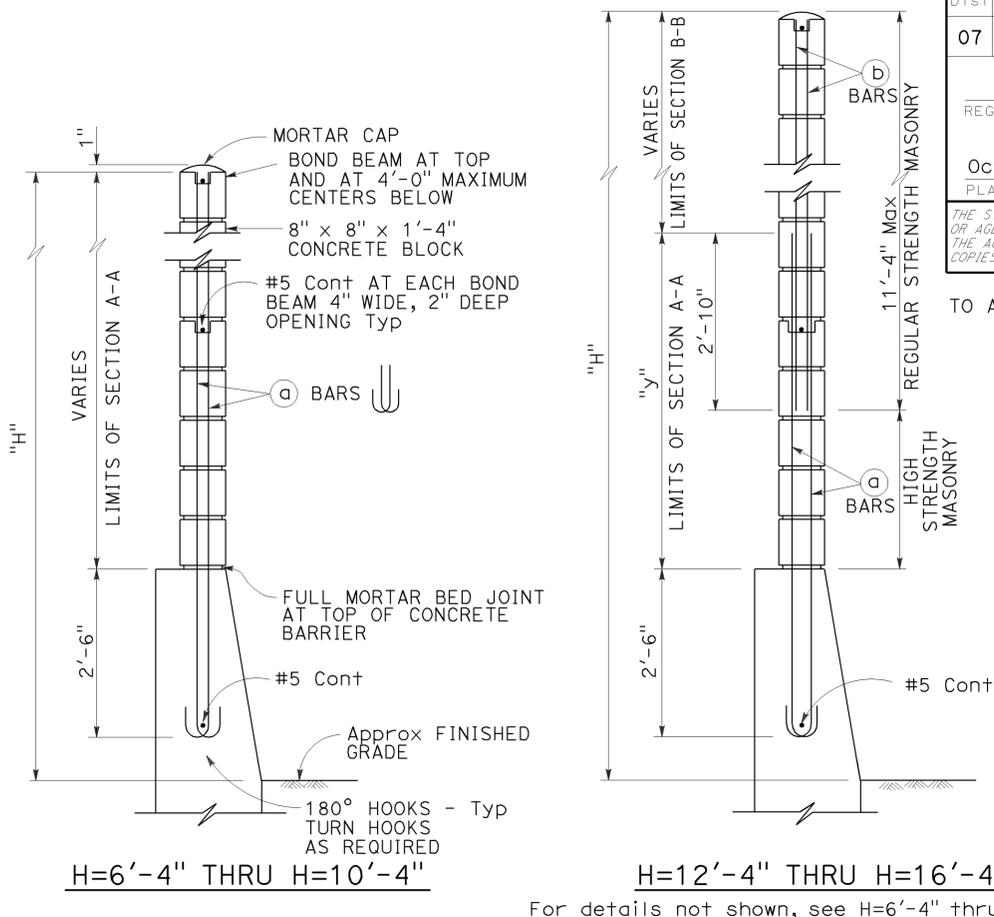
CASE 1

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".

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
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

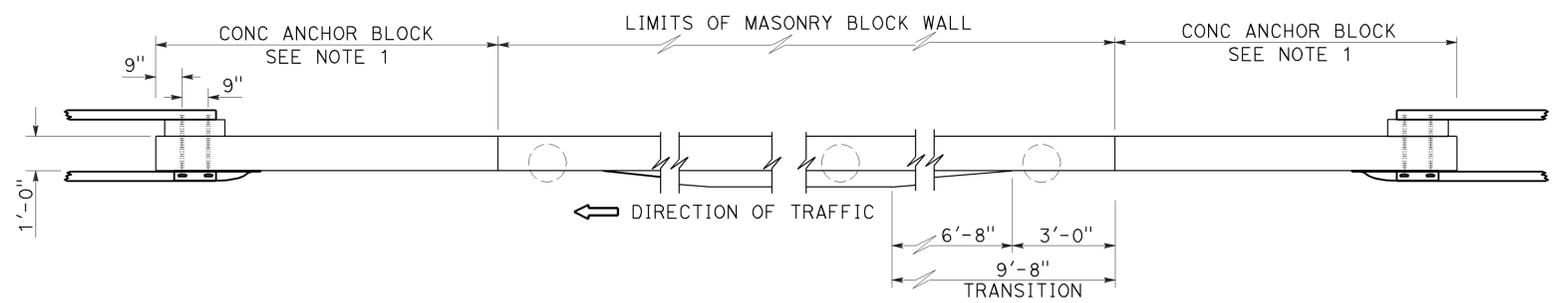
2010 REVISED STANDARD PLAN RSP B15-6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1535	2313

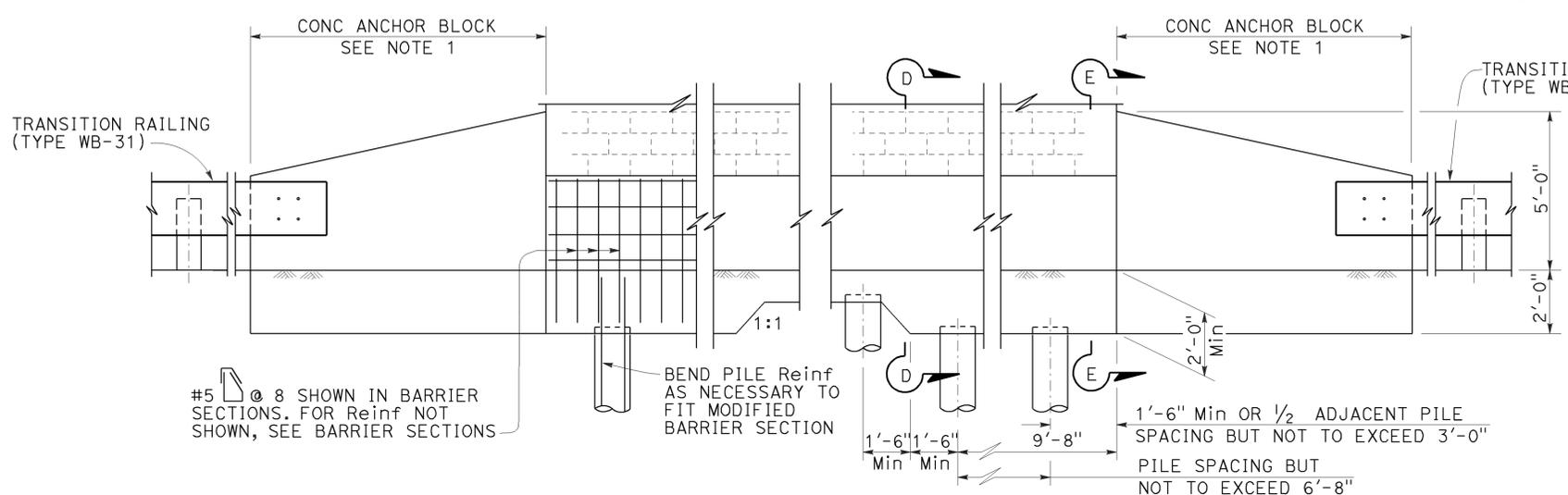
REGISTERED CIVIL ENGINEER
November 15, 2013
 PLANS APPROVAL DATE

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



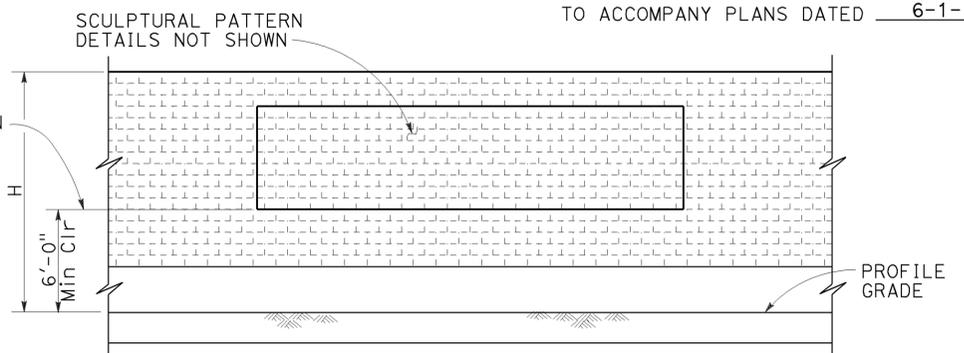
PLAN



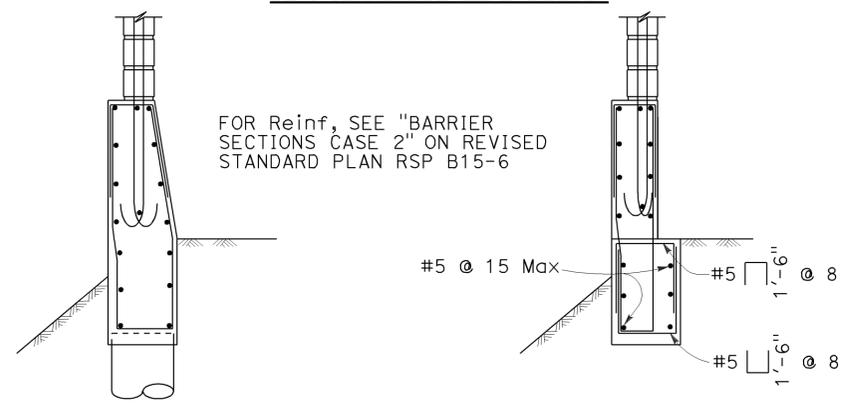
ELEVATION

MIDWEST GUARDRAIL SYSTEM ANCHORAGE

For details not shown, see Revised Standard Plan RSP B11-56.



CLEARANCE DETAIL



SECTION D-D

SECTION E-E

DESIGN NOTES:

DESIGN

Uniform Building Code, 1997 Edition and the Bridge Design Specifications.

DESIGN WIND LOAD

27 psf

DESIGN SEISMIC LOAD

0.57 Dead load

REINFORCED CONCRETE

f'c = 3.6 ksi
fy = 60 ksi

CONCRETE MASONRY

REGULAR STRENGTH

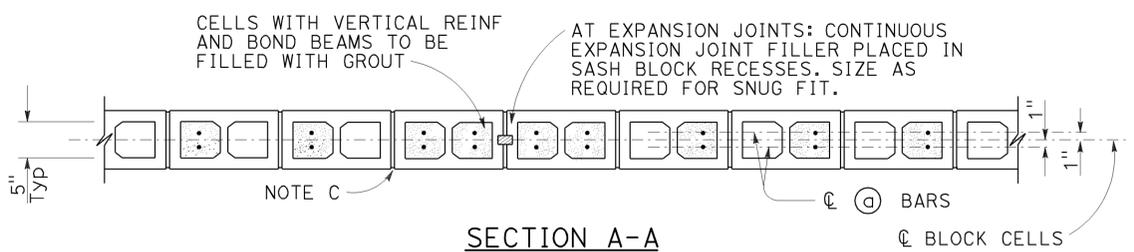
f'm = 1500 psi
fb = 495 psi
fs = 24,000 psi
n = 25.8

HIGH STRENGTH

f'm = 2000 psi
fb = 660 psi
fs = 24,000 psi
n = 19.3

NOTE:

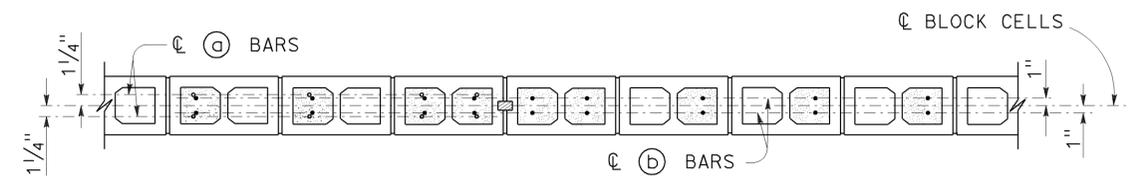
1. For Concrete Anchor Block and connection details, see "Connection Detail DD" on Revised Standard Plan RSP A77U3.



SECTION A-A

For details not shown, see other details.

H=6'-4" THRU H=10'-4"



SECTION A-A

SECTION B-B

For details not shown, see other details.

H=12'-4" THRU H=16'-4"

SOUND WALL MASONRY BLOCK ON TYPE 736S/SV BARRIER DETAILS (2)

NO SCALE

RSP B15-7 DATED NOVEMBER 15, 2013 SUPERSEDES RSP B15-7 DATED JULY 19, 2013 AND STANDARD PLAN B15-7 DATED MAY 20, 2011 - PAGE 321 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B15-7

2010 REVISED STANDARD PLAN RSP B15-7

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:

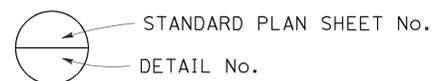
Space all walkway brackets maintaining uniform spacing where possible. Maximum spacing shall not exceed 5'-6".

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:

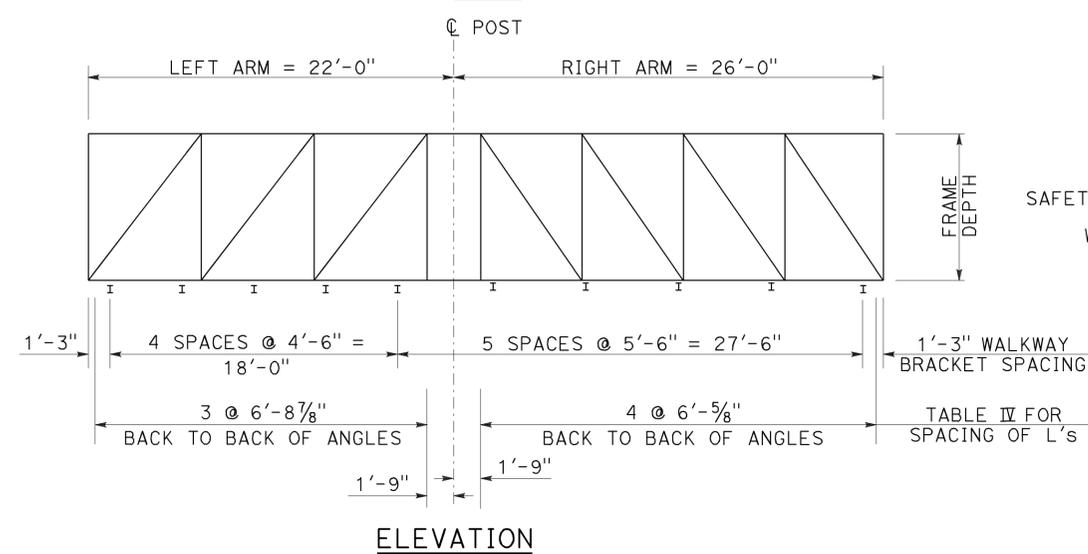
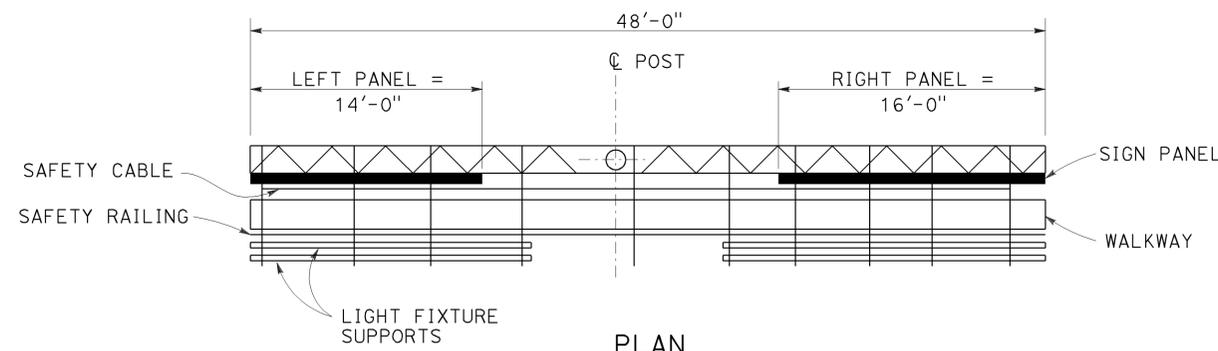
STRUCTURAL STEEL: $f_y = 36,000$ psi
 REINFORCED CONCRETE: $f_y = 60,000$ psi
 $f'_c = 3600$ psi
 FOOTING SOIL PRESSURE: 2.5 ksf (spread footing)

MINIMUM CLEARANCE

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

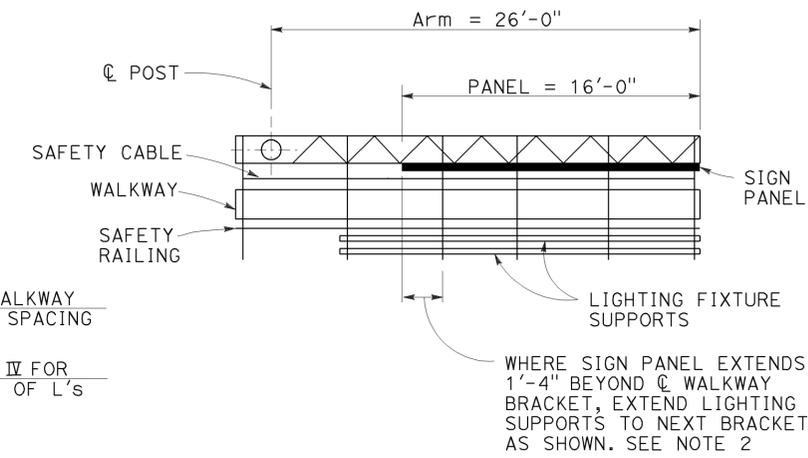
WELDING:

All welding continuous unless otherwise noted on the plans.



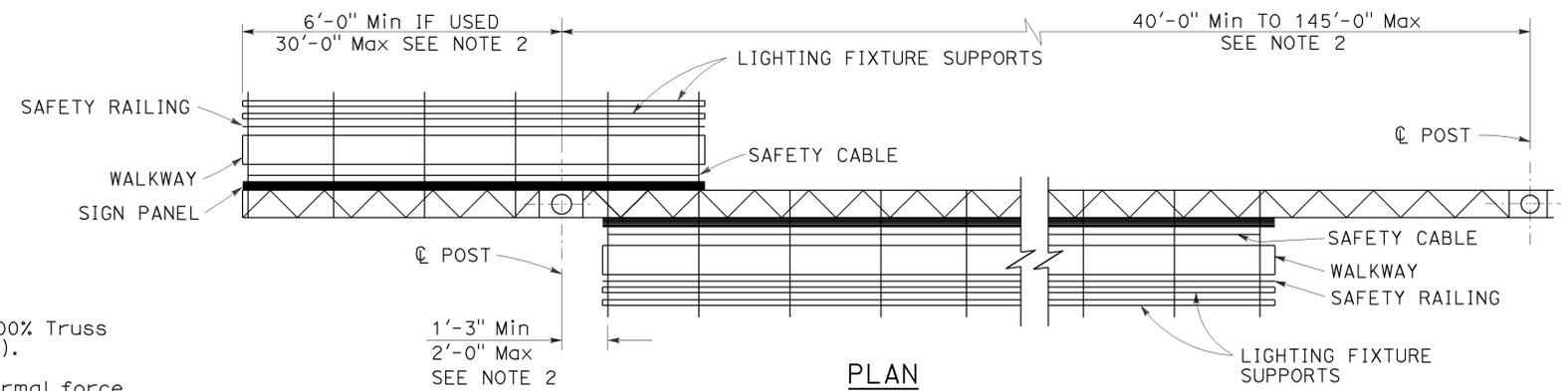
UNBALANCED SINGLE POST TYPE

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
07	LA	10	37.2/42.4	1536	2313

REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED 6-1-15

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			
														TOP	BOTTOM	TOP	BOTTOM				
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	#5 @ 12
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	3/32"														13'-0" x 18'-0" x 2'-6"	19-#7	19-#7			
IX	24	3/32"														13'-0" x 18'-0" x 2'-6"	19-#7	19-#7			

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1537	2313

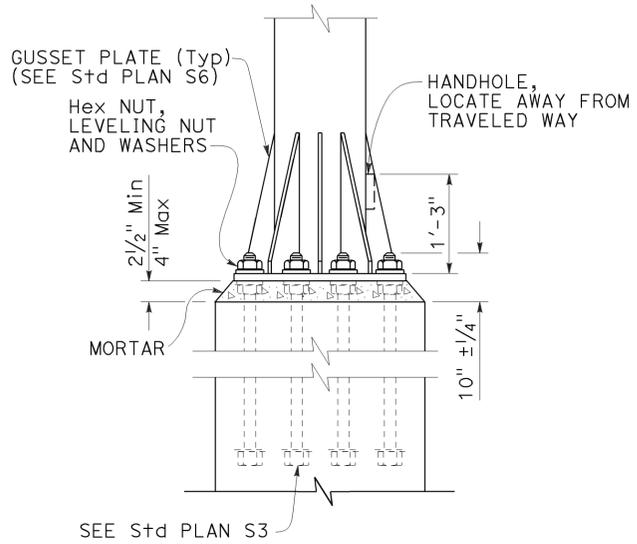
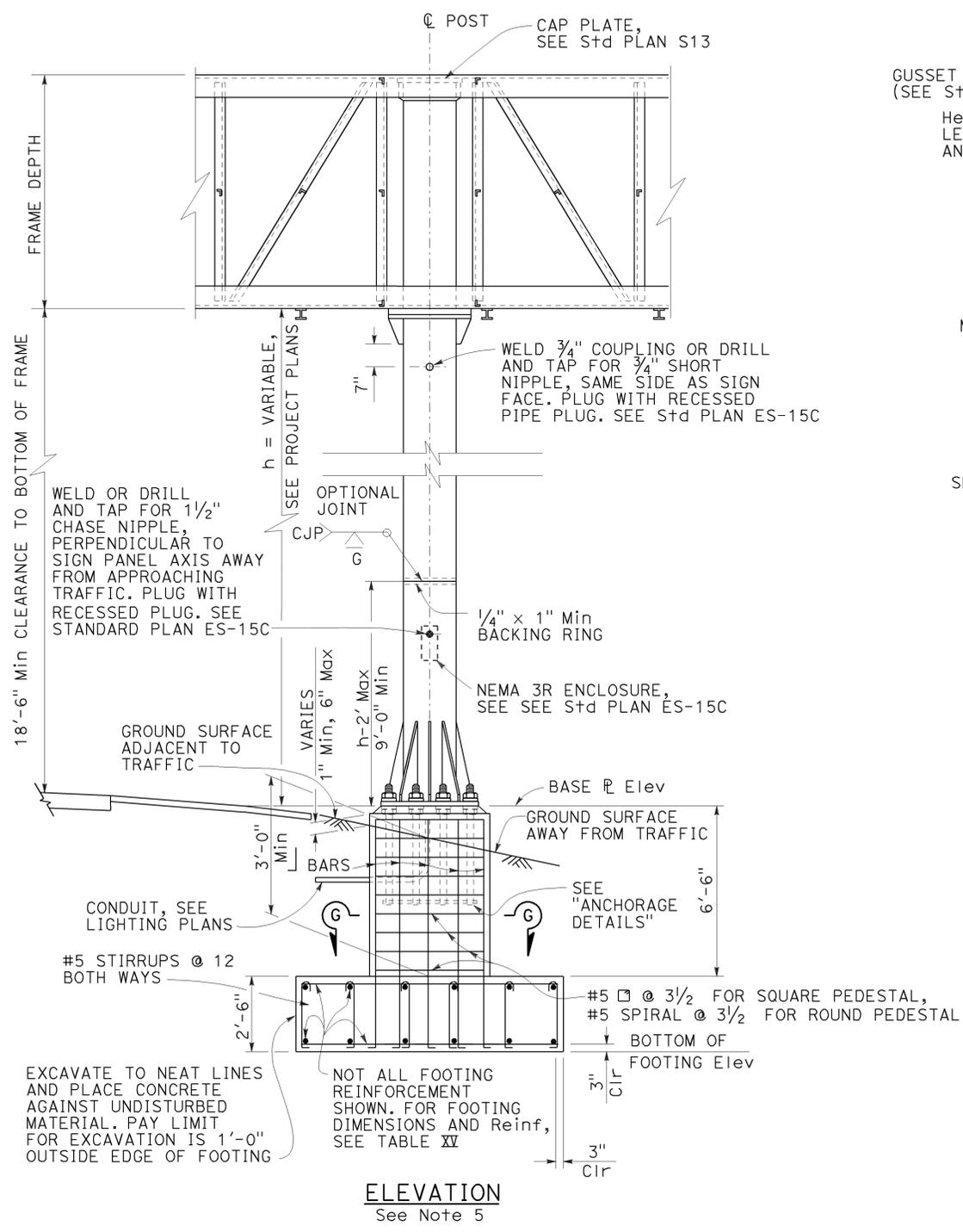
Stanley P. Johnson
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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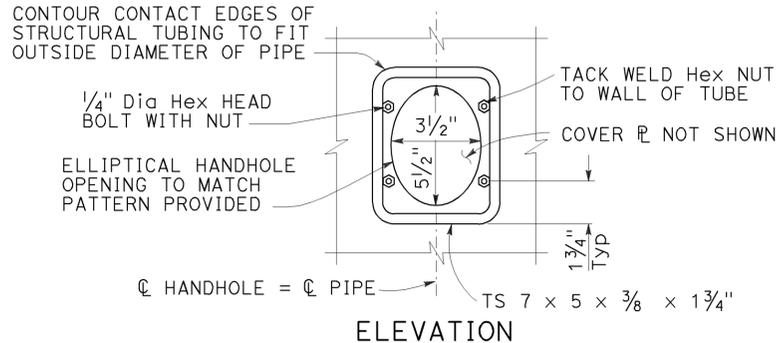
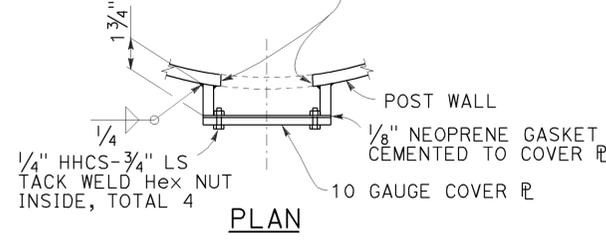
Stanley P. Johnson
REGISTERED PROFESSIONAL ENGINEER
No. C57793
Exp. 3-31-14
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-1-15



ELEVATION ANCHORAGE DETAILS

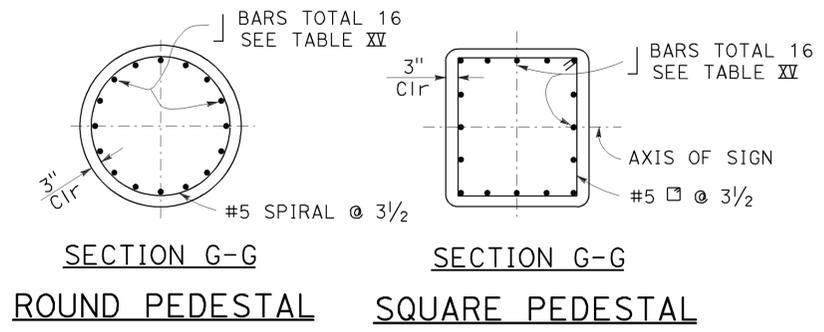
GRIND EDGES SMOOTH, ROUGHNESS OF EDGES NO GREATER THAN 1000 MICROINCHES



TYPICAL DETAILS OF HANDHOLE AND COVER

NOTES:

- For "General Notes", see Revised Standard Plan RSP S1.
- Longer side of footing (longitudinal) shall be normal to axis of sign.
- Backfill shall be in place prior to erection of post.
- Thread upper 10" of anchor bolts and galvanize upper 1'-0".
- Spread footing with square pedestal foundation shown, use Pile Foundation when shown on the Project Plans. For pile foundation details, see Standard Plan S8.
- Anchor plates may be retained with hexagon nut or formed head as alternatives to details shown.
- 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.
- At final position of post all top and bottom nuts shall be tightened against base plate.
- 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.
- Slope protection required when indicated on the Project Plans.



SECTION G-G ROUND PEDESTAL SECTION G-G 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

NOTES:

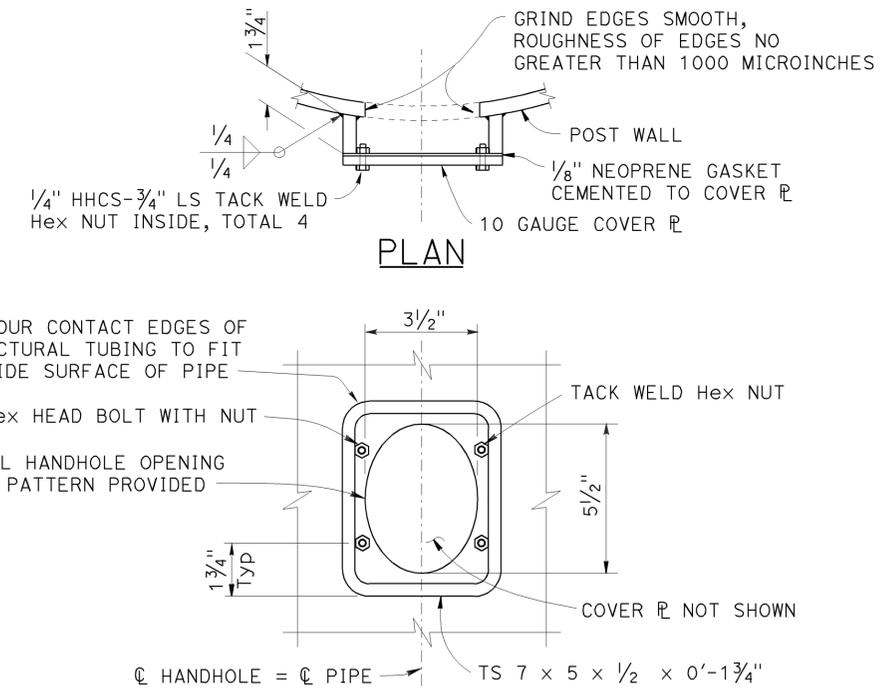
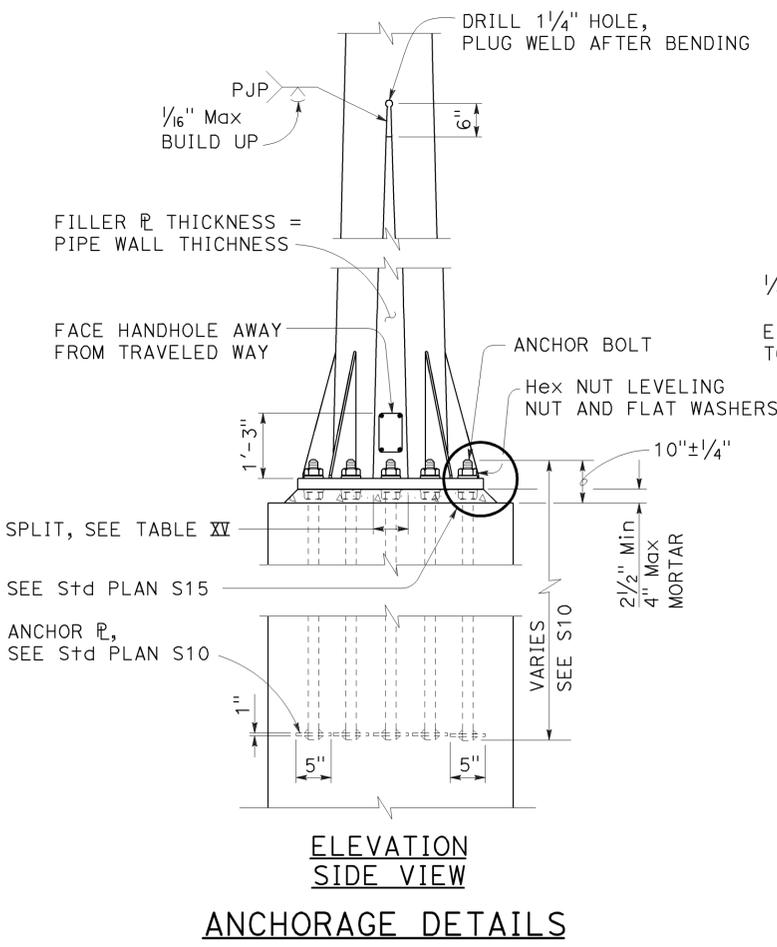
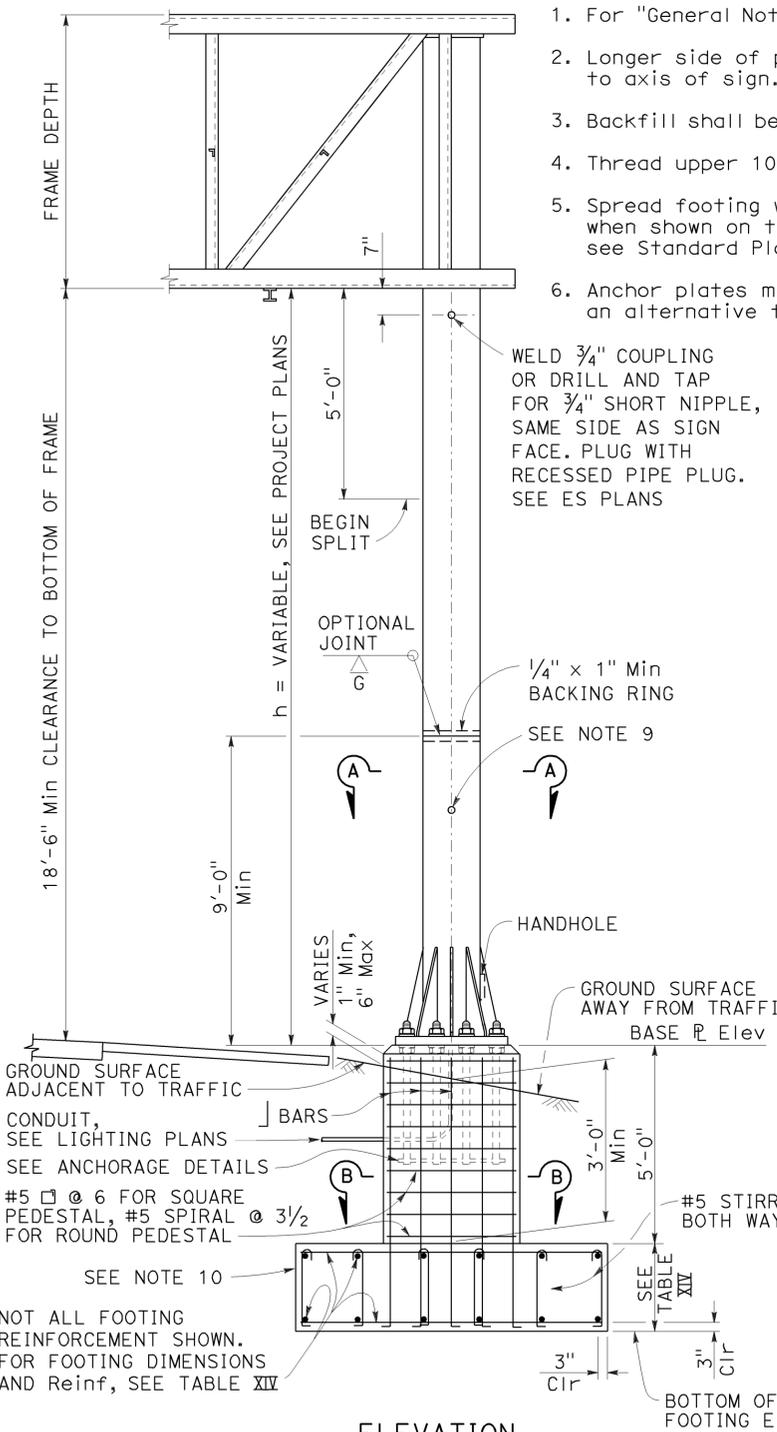
- For "General Notes", see Revised Standard Plan RSP S1.
- Longer side of post and footing (longitudinal) shall be normal to axis of sign.
- Backfill shall be in place prior to erection of post.
- Thread upper 10" of anchor bolts and galvanize upper 1'-0".
- Spread footing with square pedestal shown, use pile foundation when shown on the Project Plans. For pile foundation details, see Standard Plan S15.
- Anchor plates may be retained with Hex nut or formed head as an alternative to details shown.

- When foundation is located on a steep slope with exposed face of concrete adjacent to traffic, see "Detail C" on Standard Plan S15.
- Slope protection required when indicated on Project Plans.
- Weld coupling or drill and tap for 1/2" C chase nipple, perpendicular to sign panel axis away from approaching traffic. Plug with recessed pipe plug. See Standard Plan ES-15C.
- Excavate to neat lines and place concrete against undisturbed material.

TO ACCOMPANY PLANS DATED 6-1-15

TABLE XIV

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



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
TWO POST TYPE
POST TYPES I-S THROUGH VII-S**

NO SCALE

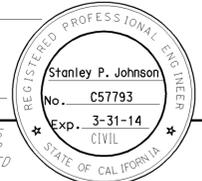
RSP S9 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN S9 DATED MAY 20, 2011 - PAGE 342 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S9

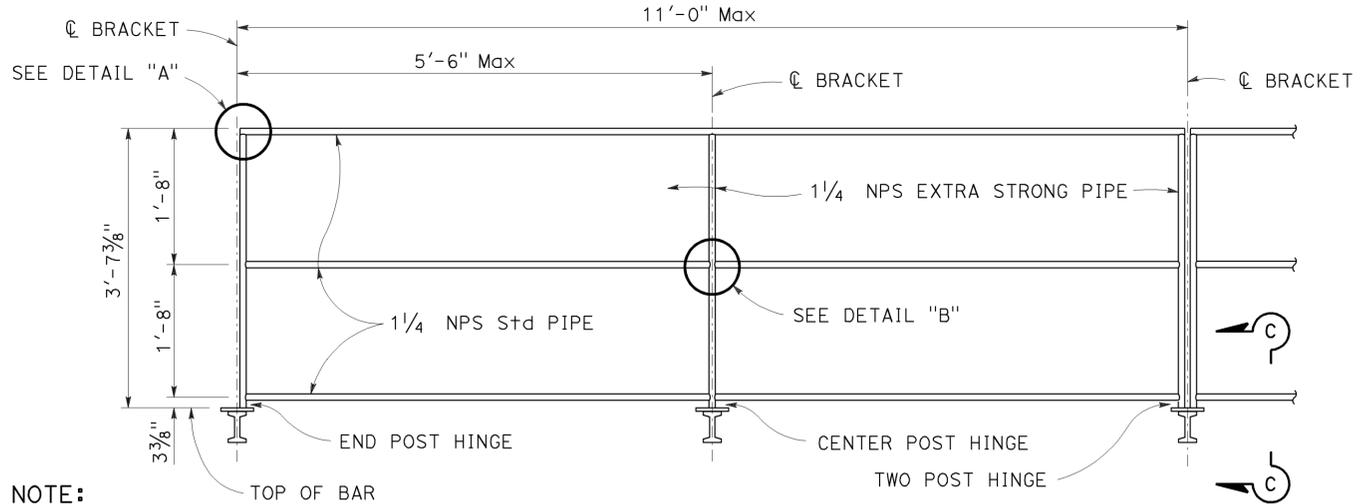
2010 REVISED STANDARD PLAN RSP S9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1539	2313

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



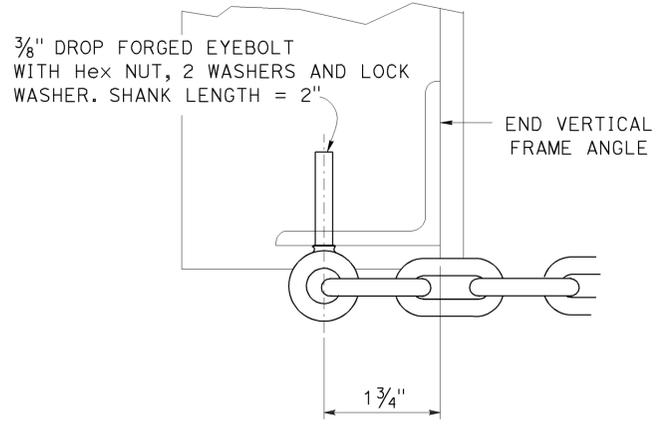
TO ACCOMPANY PLANS DATED 6-1-15



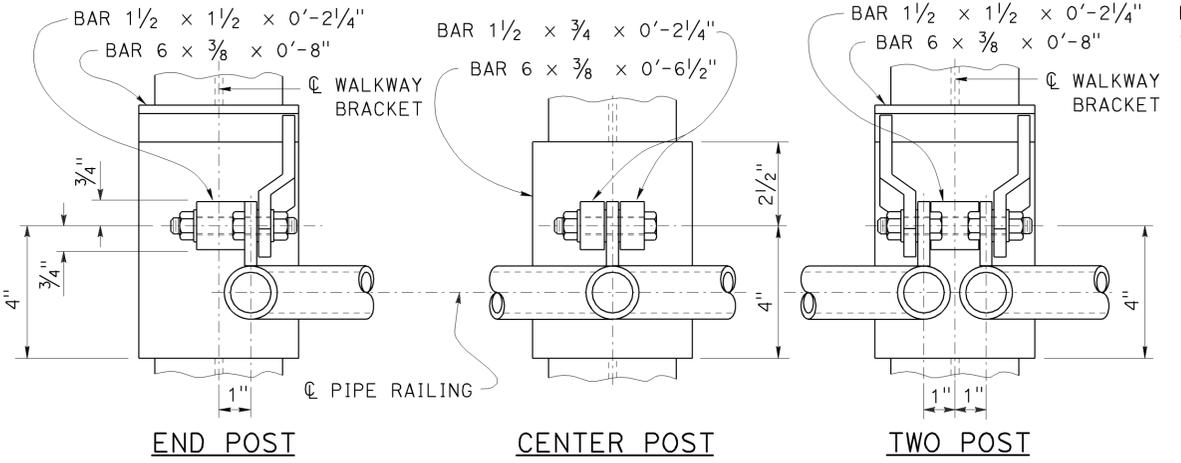
SAFETY RAILING ELEVATION

NOTE:
Chain assembly behind (see detail this page)

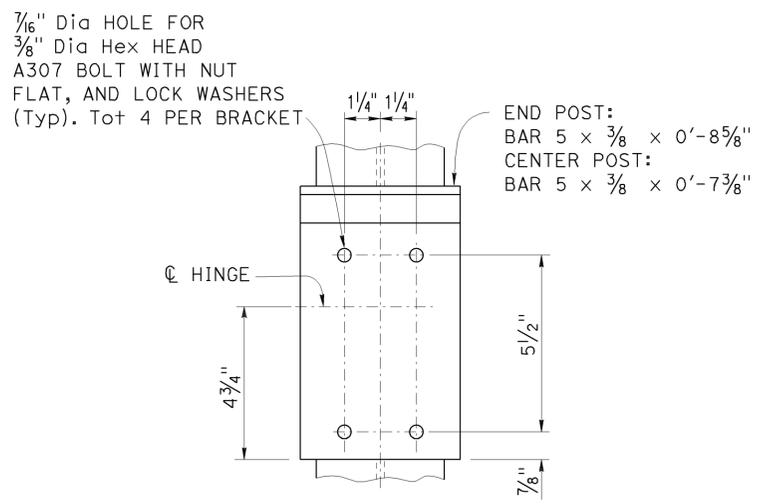
NOTE:
See Standard Plans S101 and S105 and S109 for walkway bracket spacing.



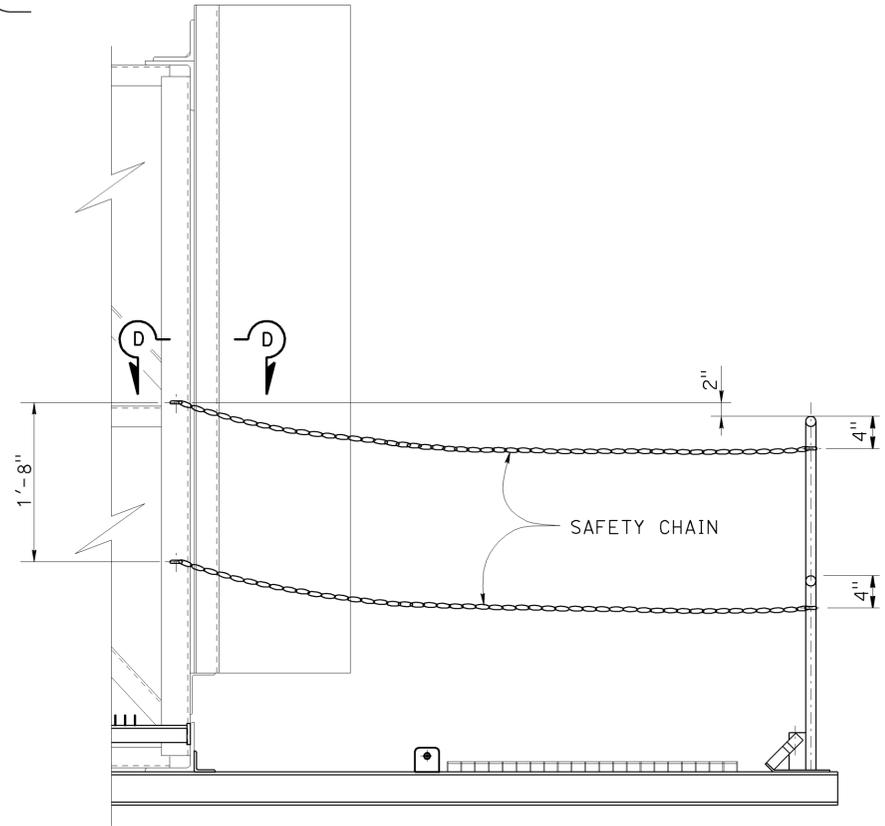
SECTION D-D



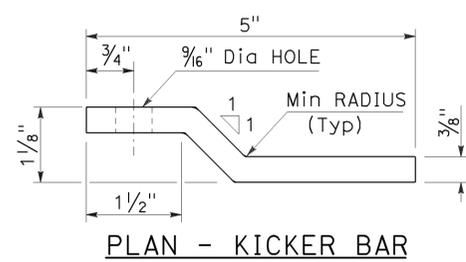
WELDED HINGE - PLAN



TYPICAL BOLTED (ALTERNATIVE) HINGED CONNECTION

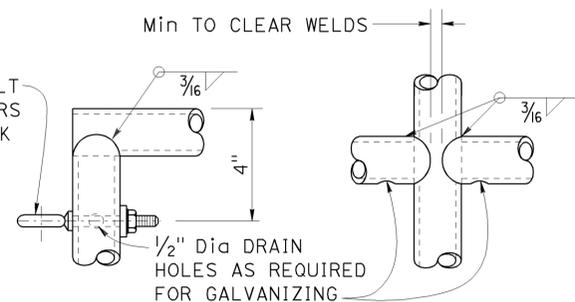


CHAIN ASSEMBLY

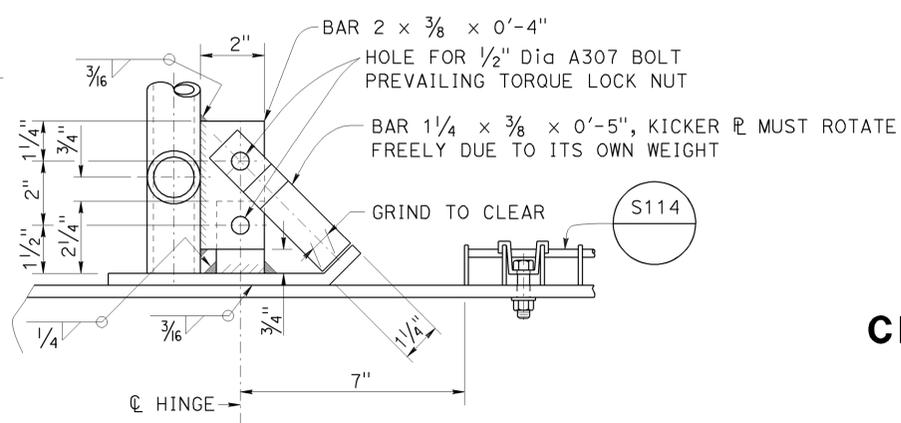


PLAN - KICKER BAR

3/8" DROP FORGED EYEBOLT WITH Hex NUT, 2 WASHERS AND LOCK WASHER. SHANK LENGTH = 3"



NOTE:
Alternative venting methods may be used if approved by the Engineer.



SECTION C-C ELEVATION VIEW

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**OVERHEAD SIGN-TRUSS
SINGLE POST TYPE
WALKWAY SAFETY
RAILING DETAILS
CHANGEABLE MESSAGE SIGNS
MODEL 500 AND 510**
NO SCALE

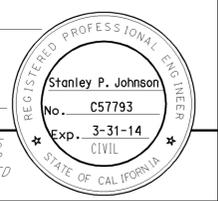
RSP S140 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN S140 DATED MAY 20, 2011 - PAGE 422 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S140

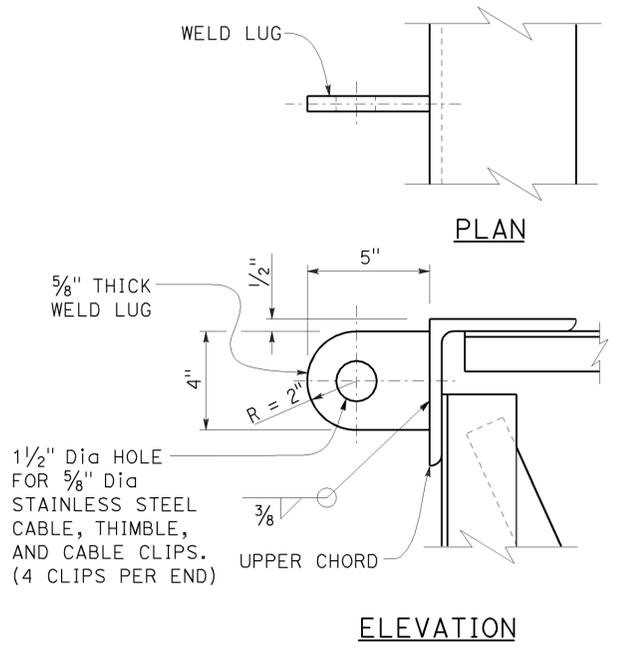
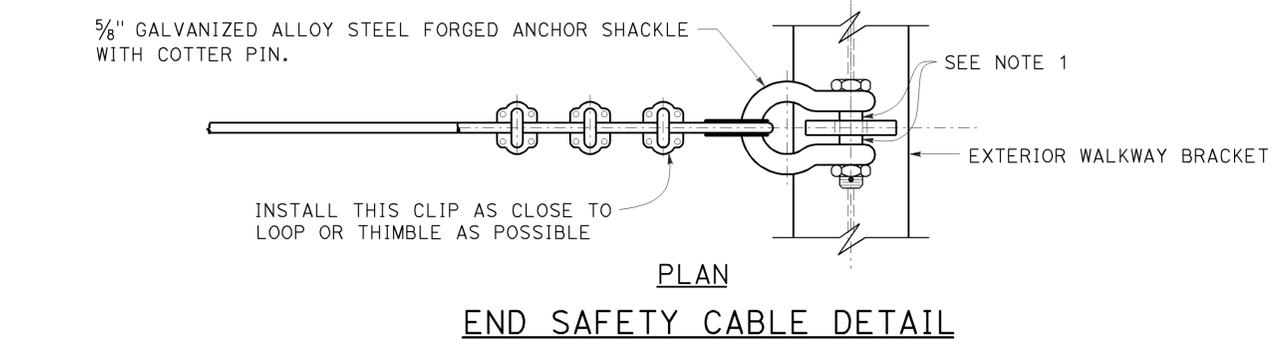
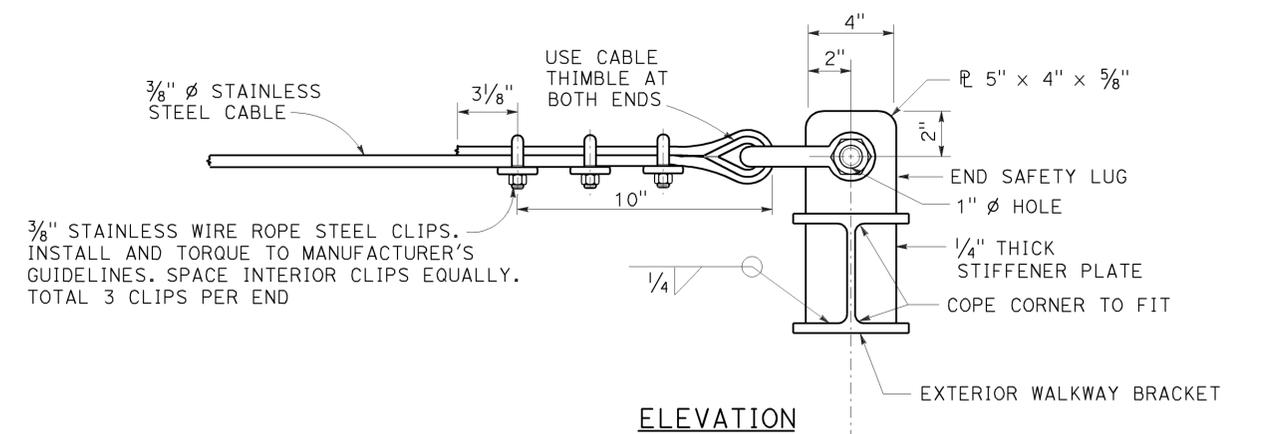
2010 REVISED STANDARD PLAN RSP S140

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1540	2313

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
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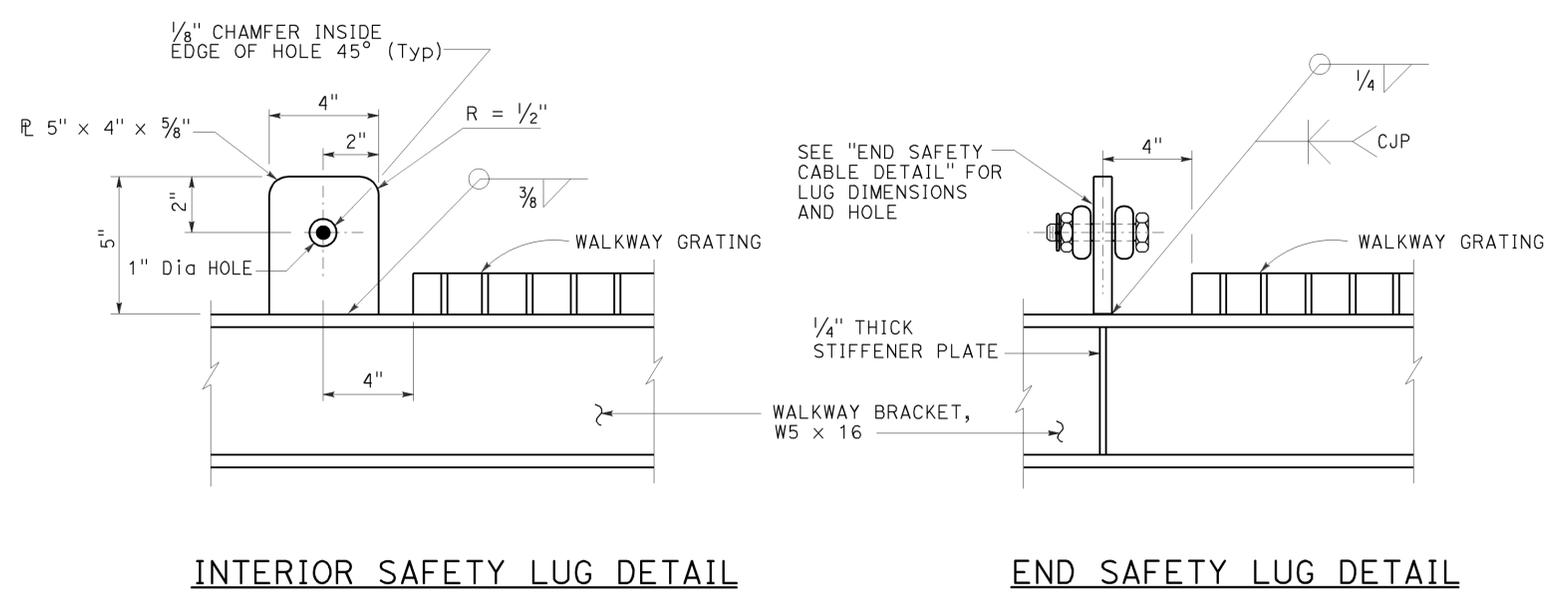
TO ACCOMPANY PLANS DATED 6-1-15



NOTE: Backside weld lug shall be installed only for projects requiring backside walkways.

NOTES:

1. Place an equal amount of washers on each side to align cable with end lug without restricting shackle bolt rotation or contacting cable.
2. For walkway grating details, see Standard Plan S114.



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**OVERHEAD SIGN-TRUSS
 SINGLE POST TYPE
 SAFETY CABLE
 ANCHORAGE DETAILS
 CHANGEABLE MESSAGE SIGNS
 MODEL 500 AND 510**

NO SCALE

RSP S141 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN S141 DATED MAY 20, 2011 - PAGE 423 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S141

2010 REVISED STANDARD PLAN RSP S141

LEGEND:

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

ABBREVIATIONS

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1541	2313

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 6-1-15

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
07	LA	10	37.2/42.4	1542	2313

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 6-1-15

CONDUIT

SIGNAL EQUIPMENT

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

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

SIGNAL EQUIPMENT Cont

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

SERVICE EQUIPMENT

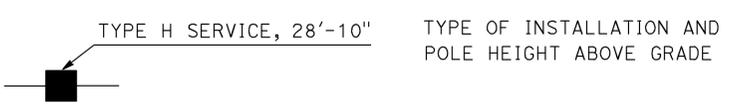
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

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

NOTES:

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

POLE-MOUNTED SERVICE DESIGNATION



FLASHING BEACON

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

ILLUMINATED OVERHEAD SIGN

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**

NO SCALE

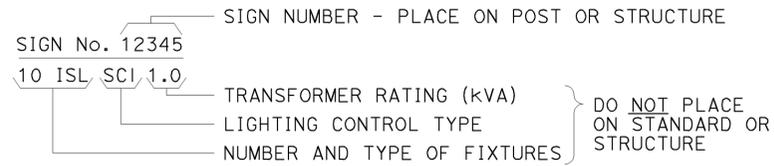
RSP ES-1B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1B

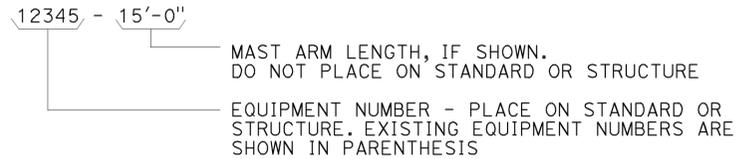
2010 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

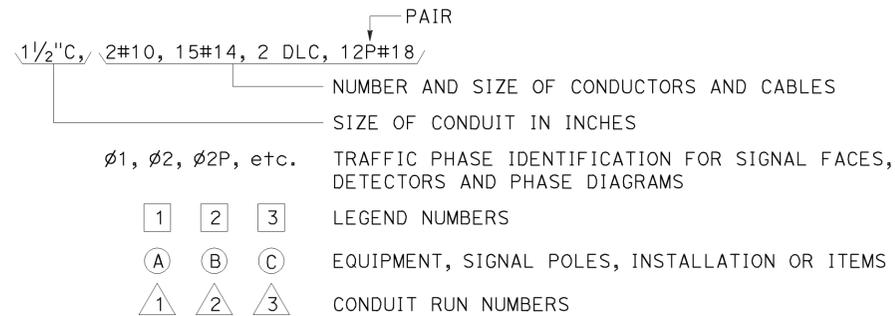
ILLUMINATED SIGN IDENTIFICATION NUMBER:



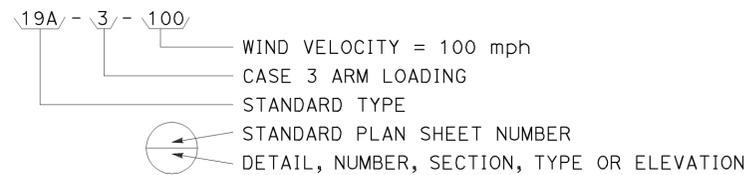
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



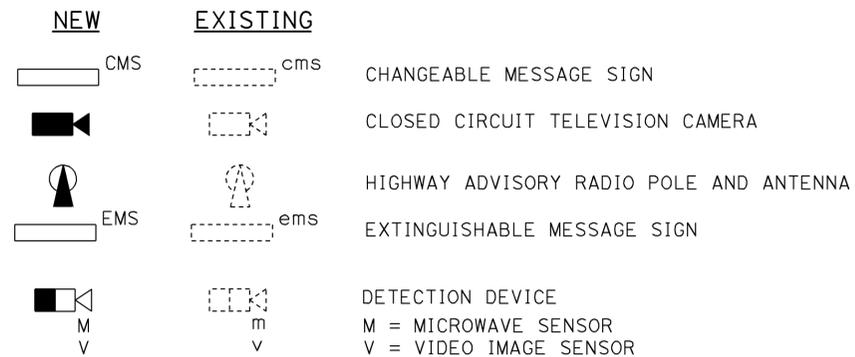
CONDUIT AND CONDUCTOR IDENTIFICATION:



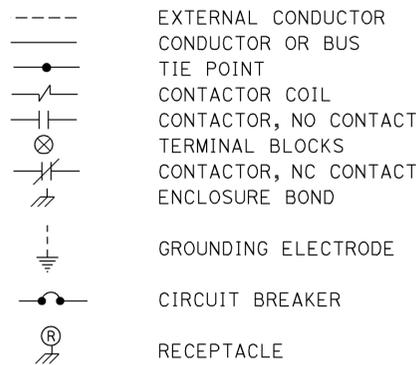
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



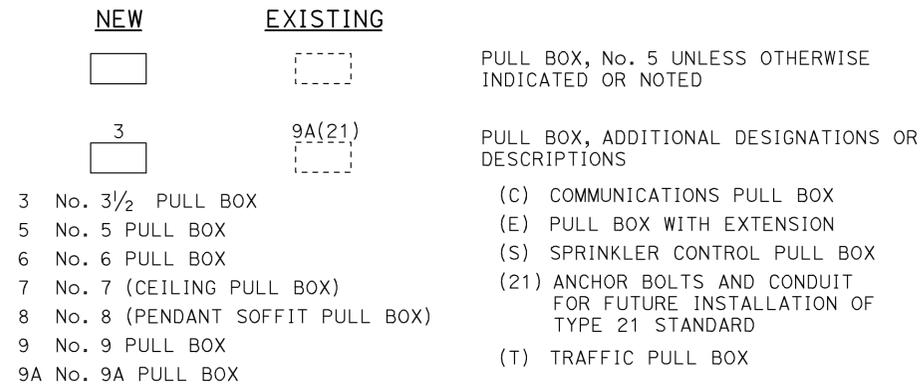
MISCELLANEOUS EQUIPMENT



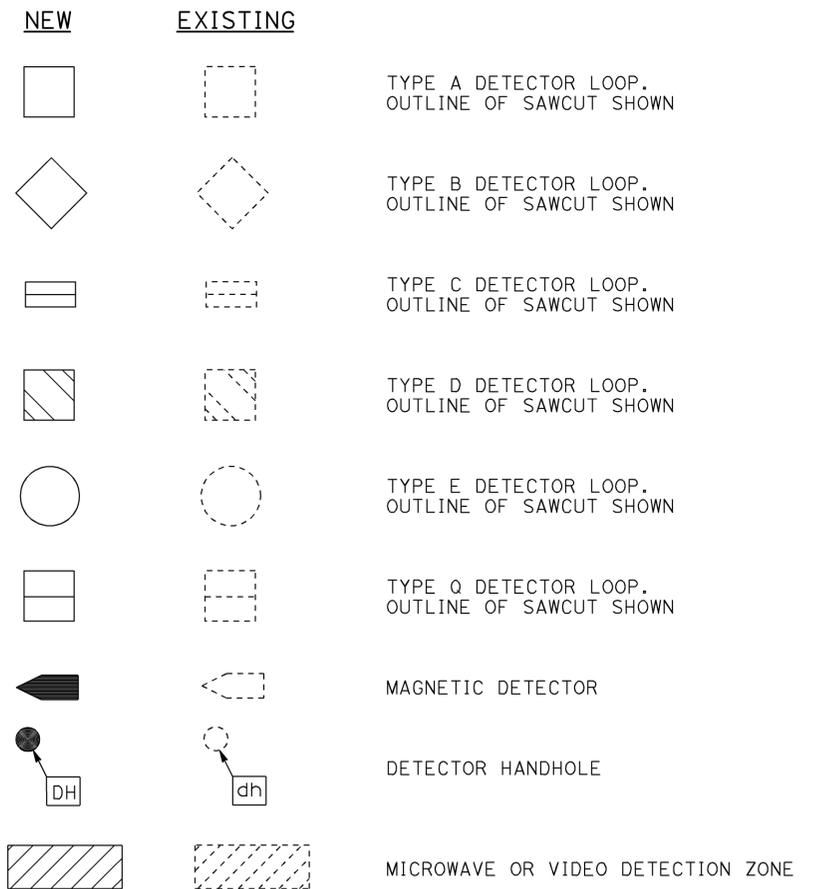
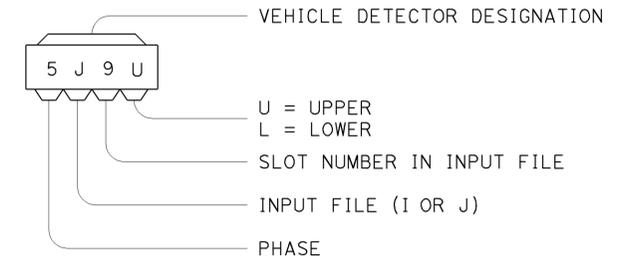
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

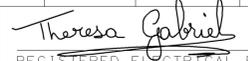
ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

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.

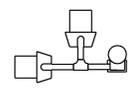
REVISED STANDARD PLAN RSP ES-1C

2010 REVISED STANDARD PLAN RSP ES-1C

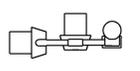
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1544	2313
 REGISTERED ELECTRICAL ENGINEER					
July 19, 2013 PLANS APPROVAL DATE					
					
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TO ACCOMPANY PLANS DATED 6-1-15

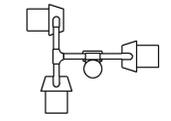
2010 REVISED STANDARD PLAN RSP ES-4A



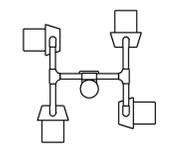
SV-2-TD



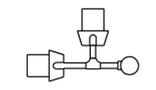
SV-2-TC



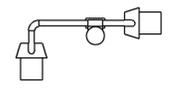
SV-3-TC



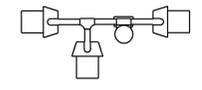
SV-4-TC



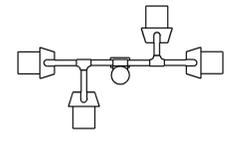
SV-2B



SV-2-TB

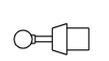


SV-3-TB

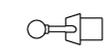


SV-4-TB

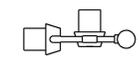
PLAN VIEW OF OTHER
SIDE MOUNTINGS



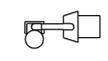
SV



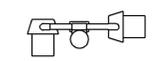
SV-1



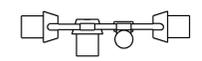
SV-2A



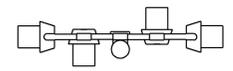
SV-1-T



SV-2-TA



SV-3-TA



SV-4-TA

SIDE MOUNTINGS

ABBREVIATIONS:

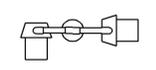
- SV SIDE MOUNTED VEHICLE SIGNALS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED VEHICLE SIGNALS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES
(3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

NOTES:

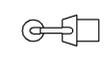
1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals and backplate installation.
3. See Standard Plans ES-4D and ES-4E for attachment fitting details.



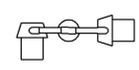
TV-1



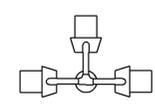
TV-2



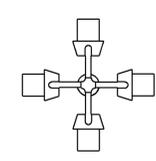
TV-1-T



TV-2-T



TV-3-T



TV-4-T

PLAN VIEW OF
TOP MOUNTINGS

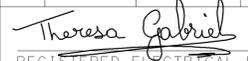
TOP MOUNTINGS

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

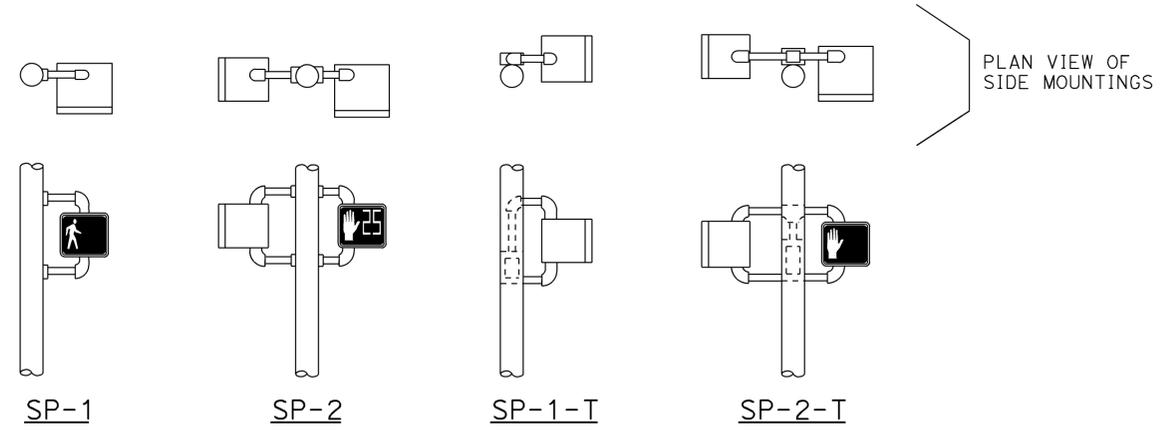
NO SCALE

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.

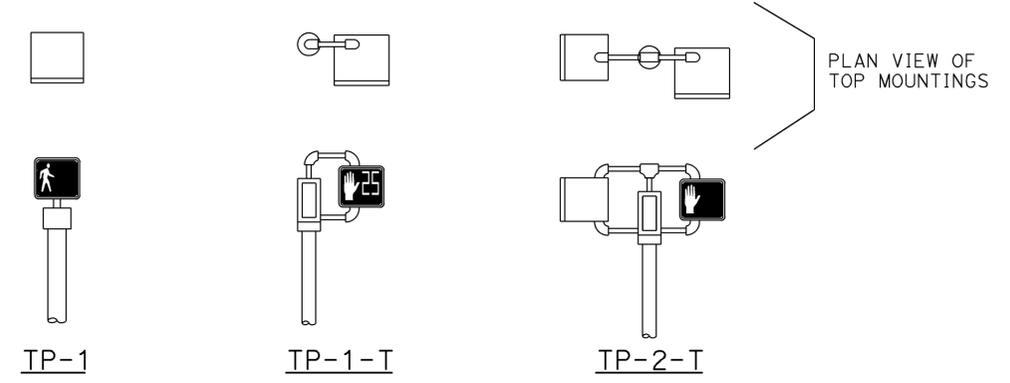
REVISED STANDARD PLAN RSP ES-4A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1545	2313
 REGISTERED ELECTRICAL ENGINEER					
October 17, 2014 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 6-1-15



SIDE MOUNTINGS



TOP MOUNTINGS

PEDESTRIAN SIGNALS AND MOUNTINGS

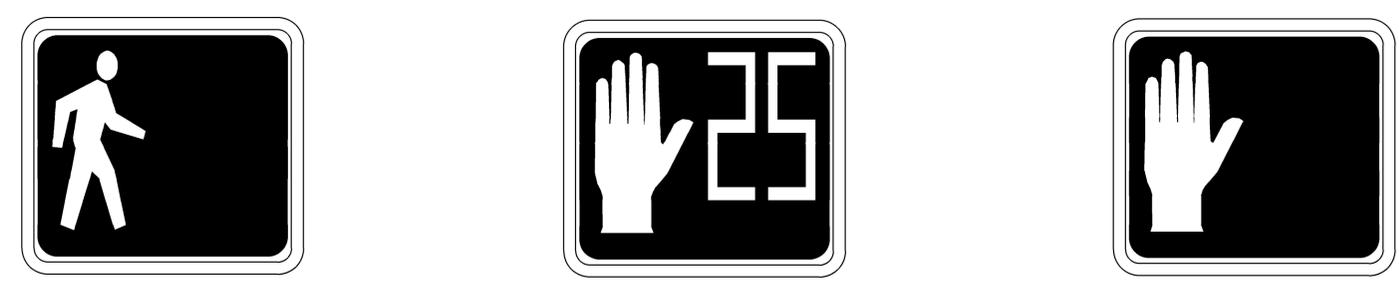
DETAIL A

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:

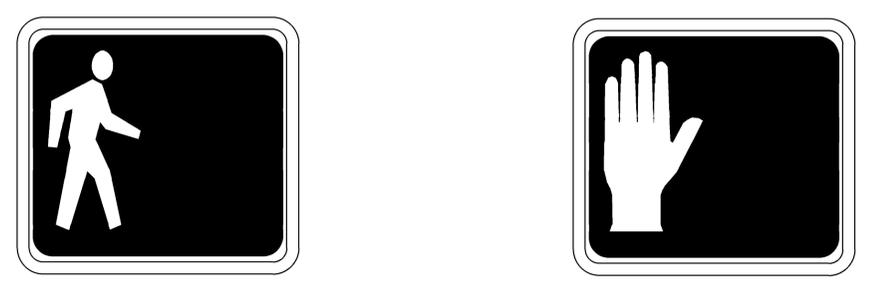
- 1, 2 NUMBER OF SIGNAL FACES
- SP SIDE MOUNTED PEDESTRIAN SIGNAL
- T TERMINAL COMPARTMENT
- TP TOP MOUNTED PEDESTRIAN SIGNAL



PERSON WALKING INTERVAL FLASHING UPRaised HAND INTERVAL STEADY UPRaised HAND INTERVAL

PEDESTRIAN SIGNAL MODULE WITH COUNTDOWN

DETAIL B



PERSON WALKING INTERVAL STEADY UPRaised HAND INTERVAL

PEDESTRIAN SIGNAL MODULE WITHOUT COUNTDOWN

DETAIL C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(PEDESTRIAN SIGNAL)**

NO SCALE

RSP ES-4B DATED OCTOBER 17, 2014 SUPERSEDES RSP ES-4B DATED JULY 19, 2013 AND
STANDARD PLAN ES-4B DATED MAY 20, 2011 - PAGE 444 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4B

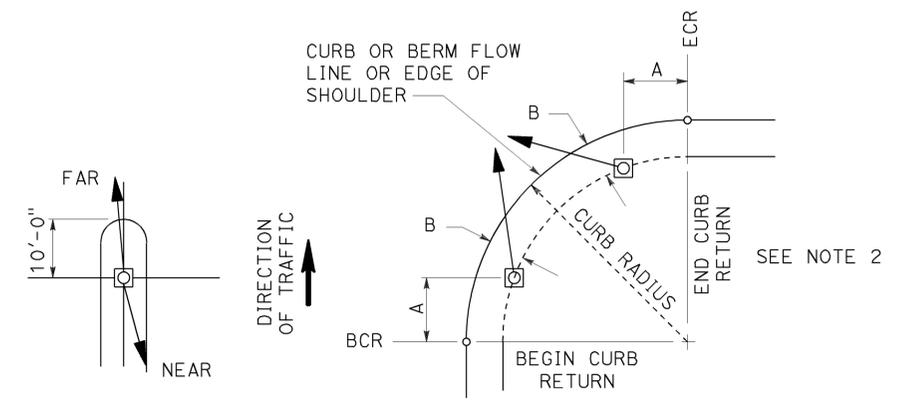
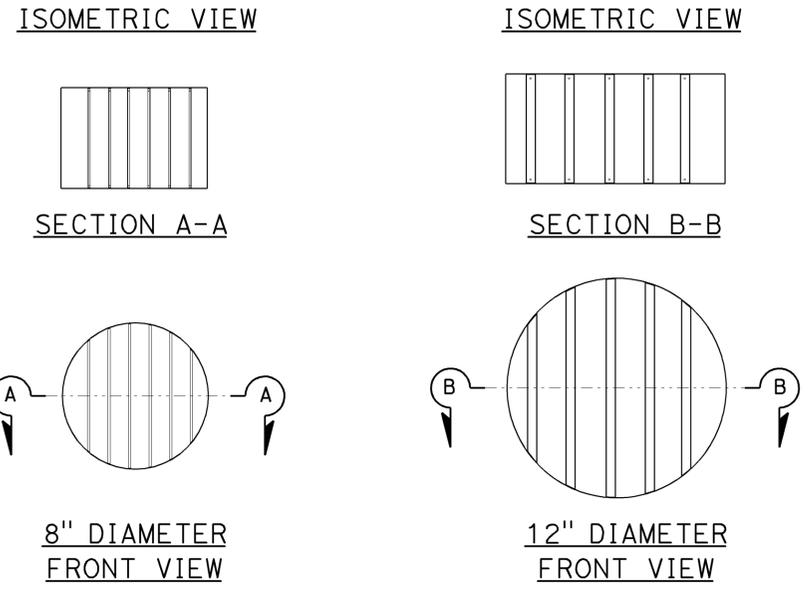
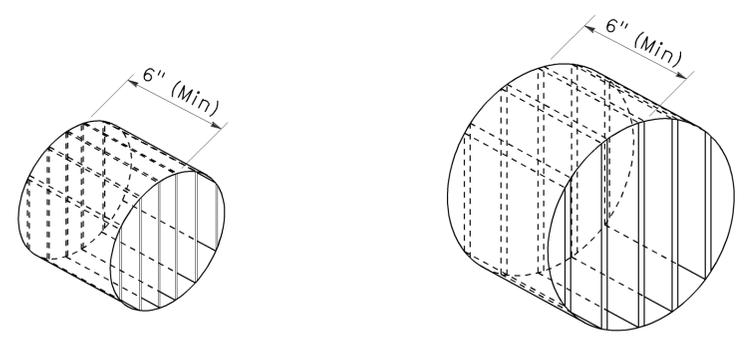
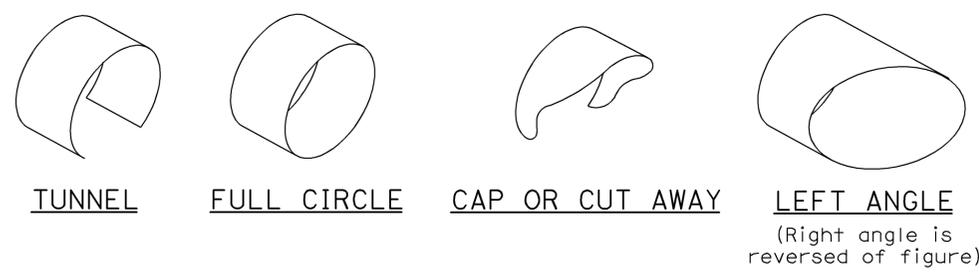
2010 REVISED STANDARD PLAN RSP ES-4B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1546	2313

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

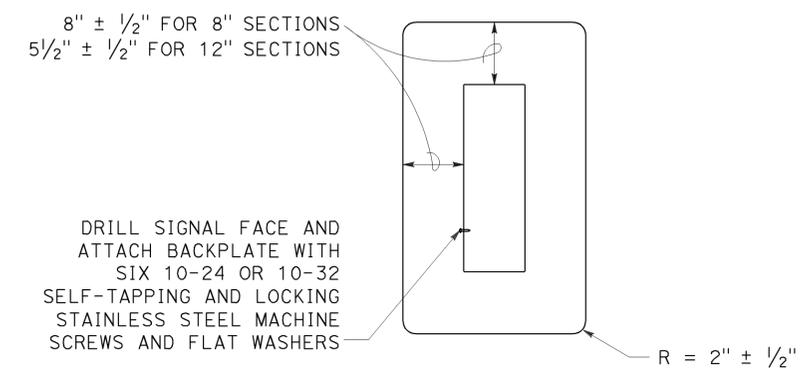
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 6-1-15



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

VISORS



8" AND 12" SECTIONS

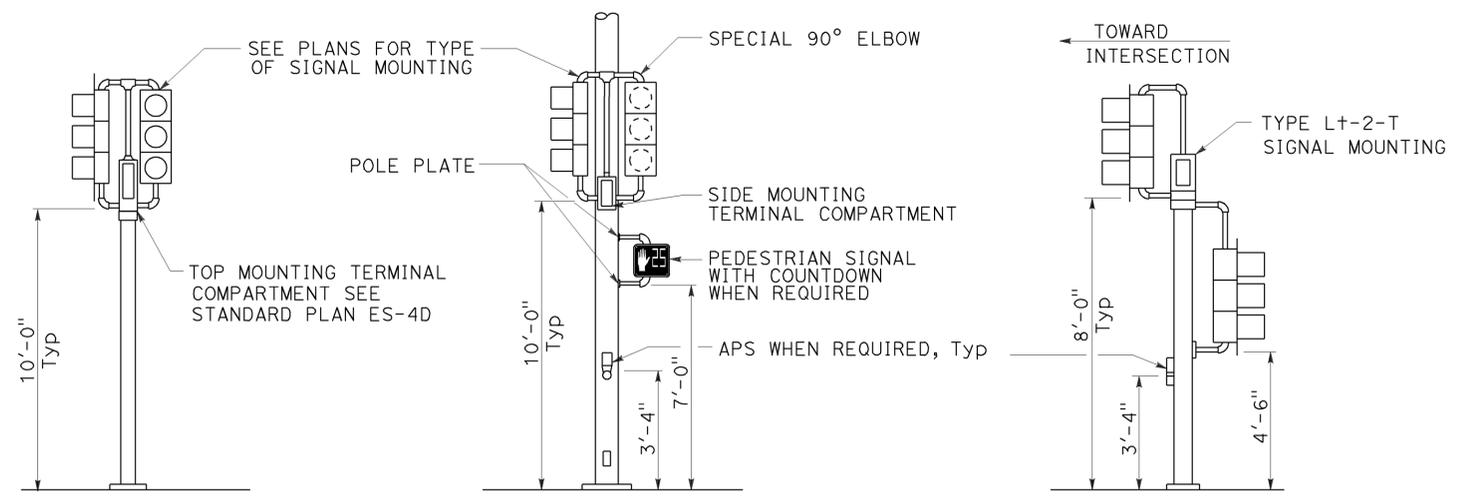
BACKPLATE

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

DIRECTIONAL LOUVER

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

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



TOP MOUNTED SIGNALS (TV)

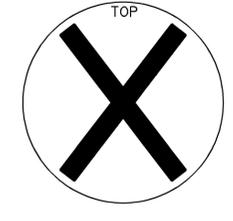
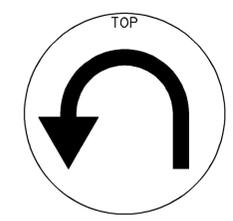
Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans

SIDE MOUNTED SIGNALS (SV AND SP)

Normally used on standards with luminaire or signal mast arm

LEFT TURN LANE SIGNAL

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



SIGNAL FACES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (VEHICULAR SIGNAL HEADS AND MOUNTINGS)

NO SCALE

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

2010 REVISED STANDARD PLAN RSP ES-4C

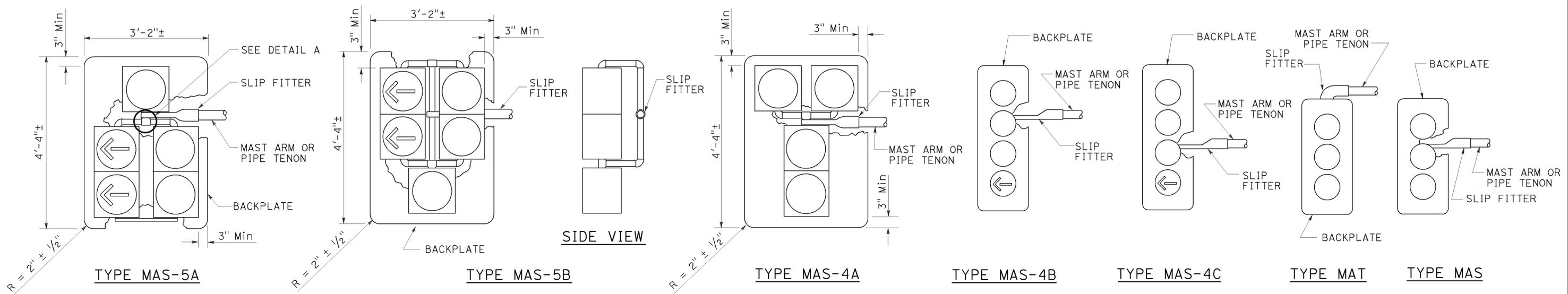
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1547	2313

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

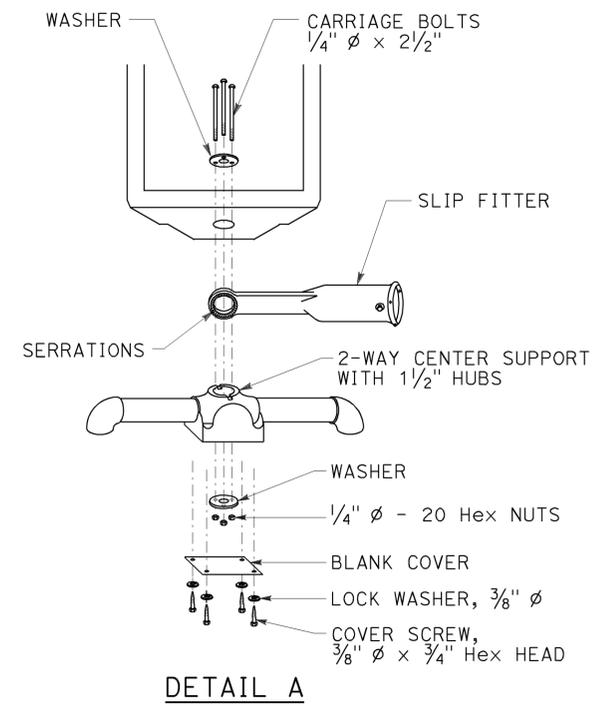
REGISTERED PROFESSIONAL ENGINEER
 Theresa
 Aziz Gabriel
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS
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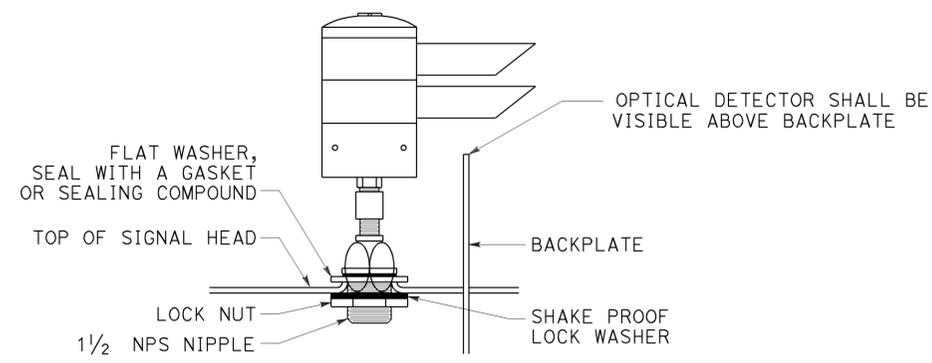
TO ACCOMPANY PLANS DATED 6-1-15



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

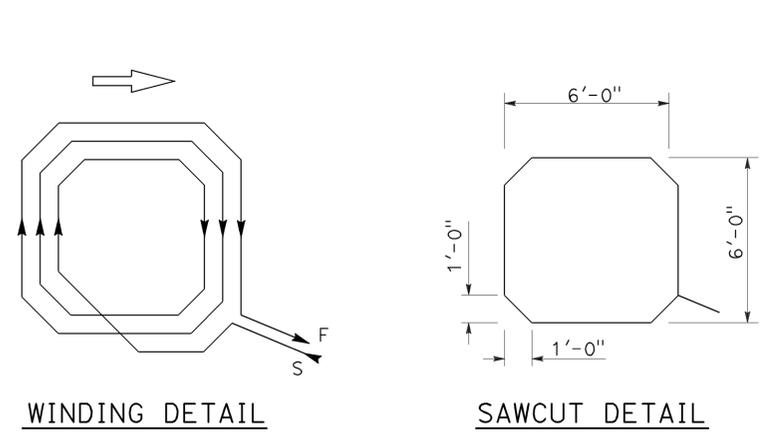
2010 REVISED STANDARD PLAN RSP ES-4E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1548	2313

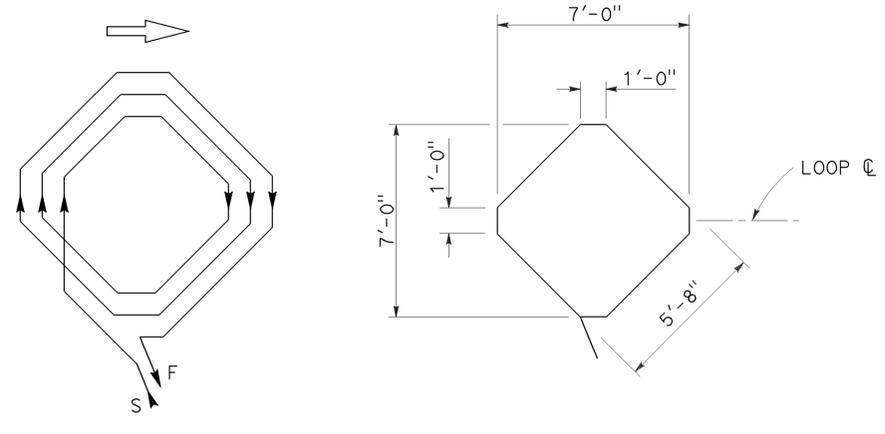
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 6-1-15

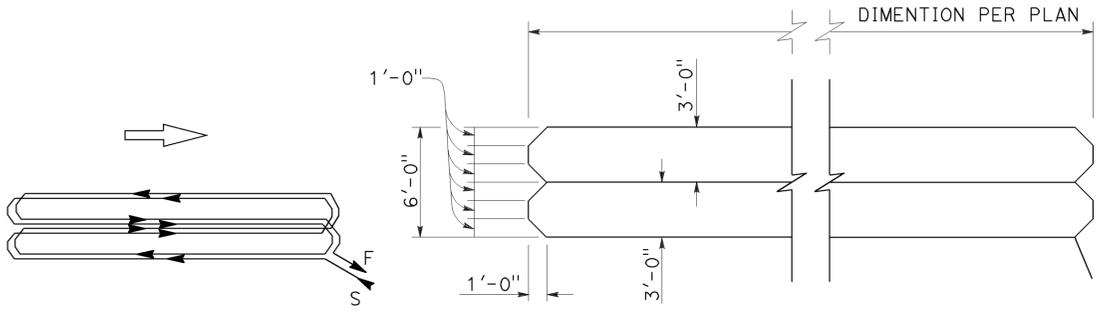
2010 REVISED STANDARD PLAN RSP ES-5B



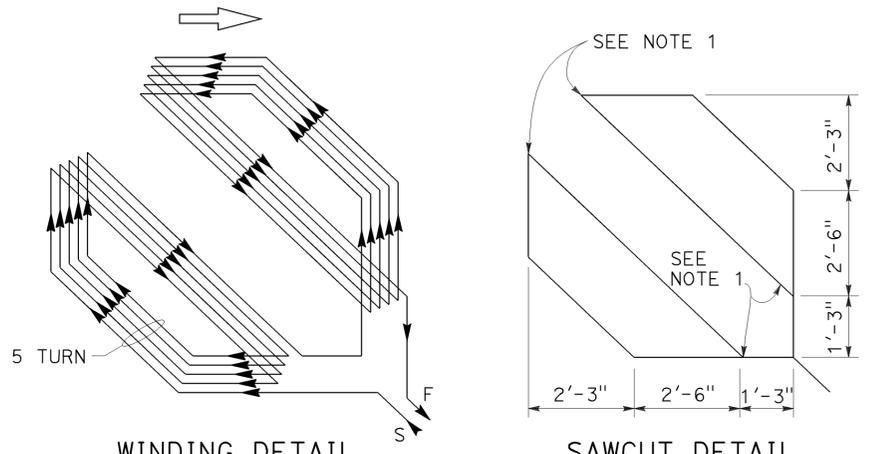
WINDING DETAIL
SAWCUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



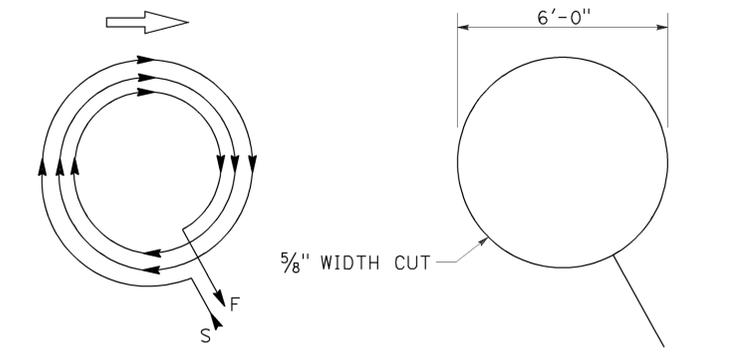
WINDING DETAIL
SAWCUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



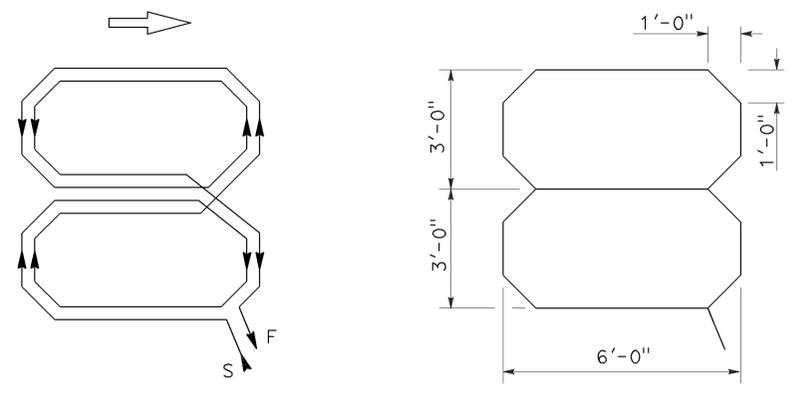
WINDING DETAIL
SAWCUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



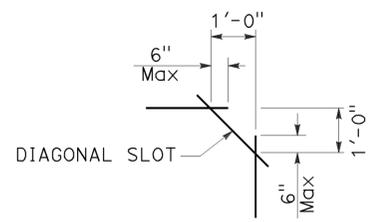
WINDING DETAIL
SAWCUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



PLAN VIEW OF DIAGONAL SLOT AT CORNERS

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1549	2313

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

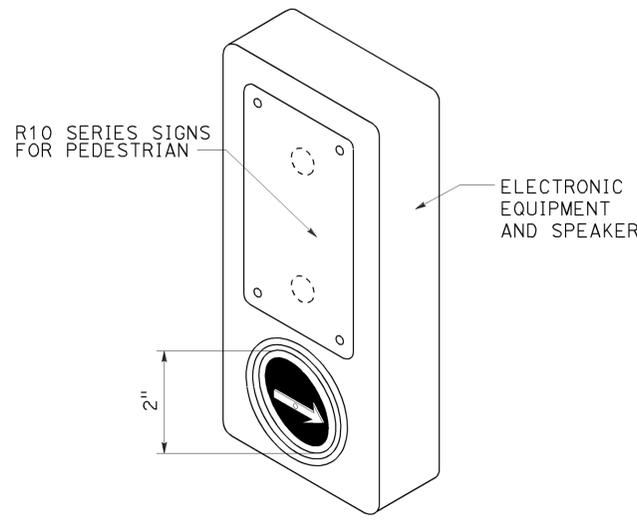
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

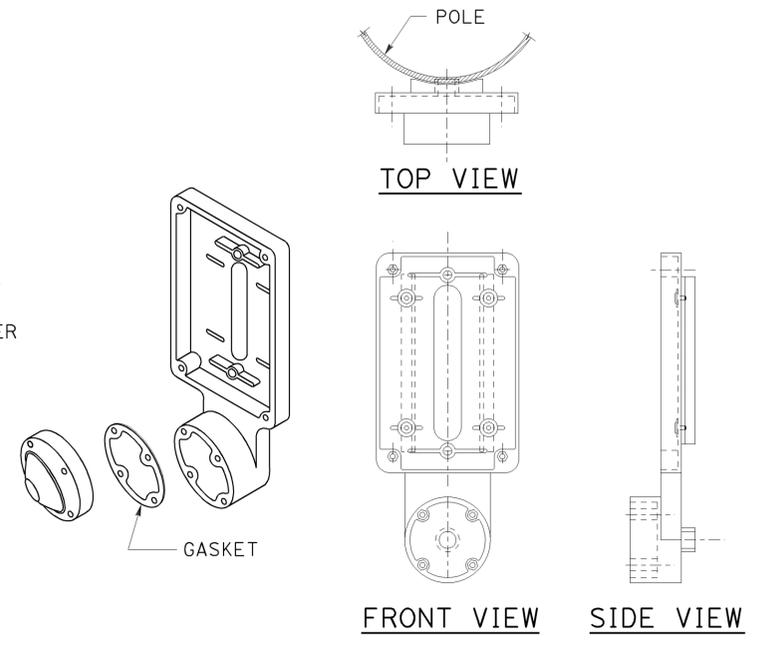
TO ACCOMPANY PLANS DATED 6-1-15

NOTES:

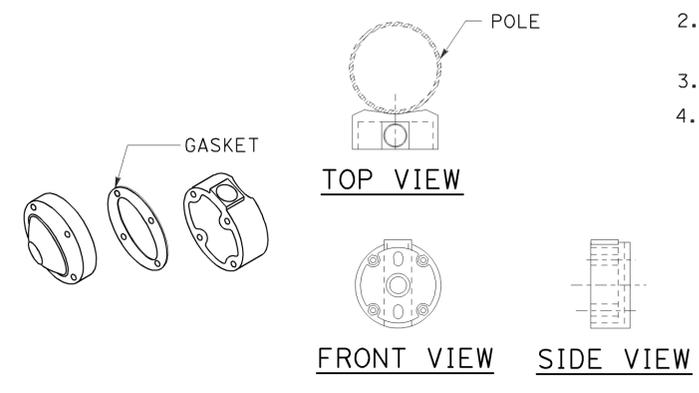
1. Back casting shape to fit curvature of pole.
2. Provide cover fitting for top of post, when PBA is mounted on push button assembly post.
3. Install push button on crosswalk side of standard.
4. Use R10 series regulatory signs and plaques for pedestrian and bicycle facilities.



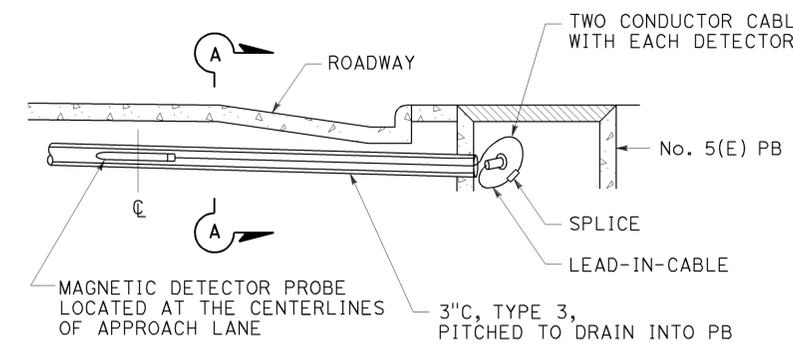
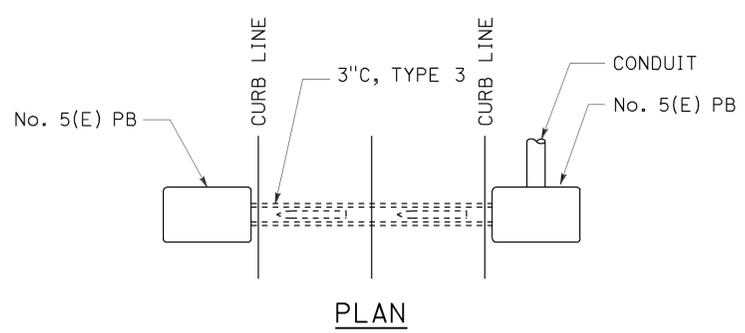
ACCESSIBLE PEDESTRIAN SIGNAL
DETAIL A
 (See note 1 to 4)



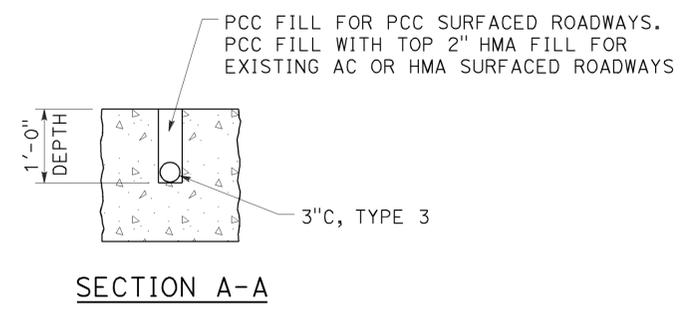
TYPE B PUSH BUTTON ASSEMBLY
DETAIL B
 (See note 1 to 4)



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

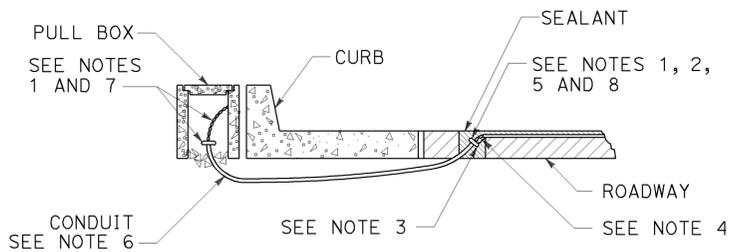
2010 REVISED STANDARD PLAN RSP ES-5C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1550	2313

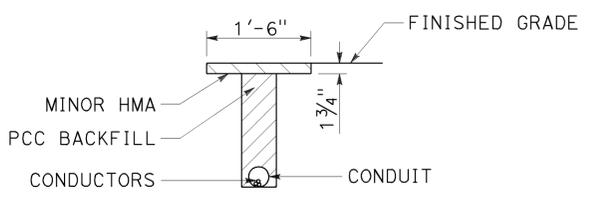
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



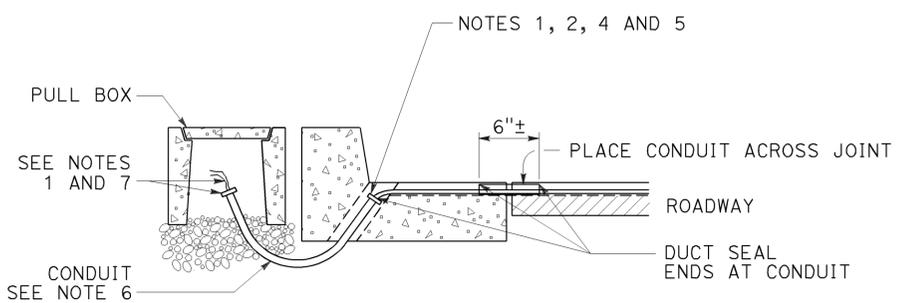
TO ACCOMPANY PLANS DATED 6-1-15



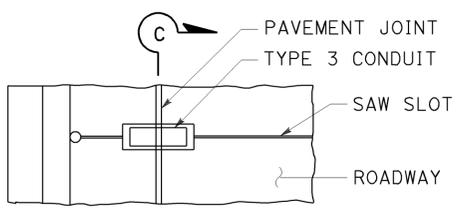
TYPE A
CURB TERMINATION DETAIL



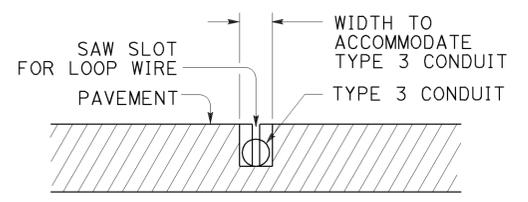
"T" TRENCH
DETAIL T



CROSS SECTION

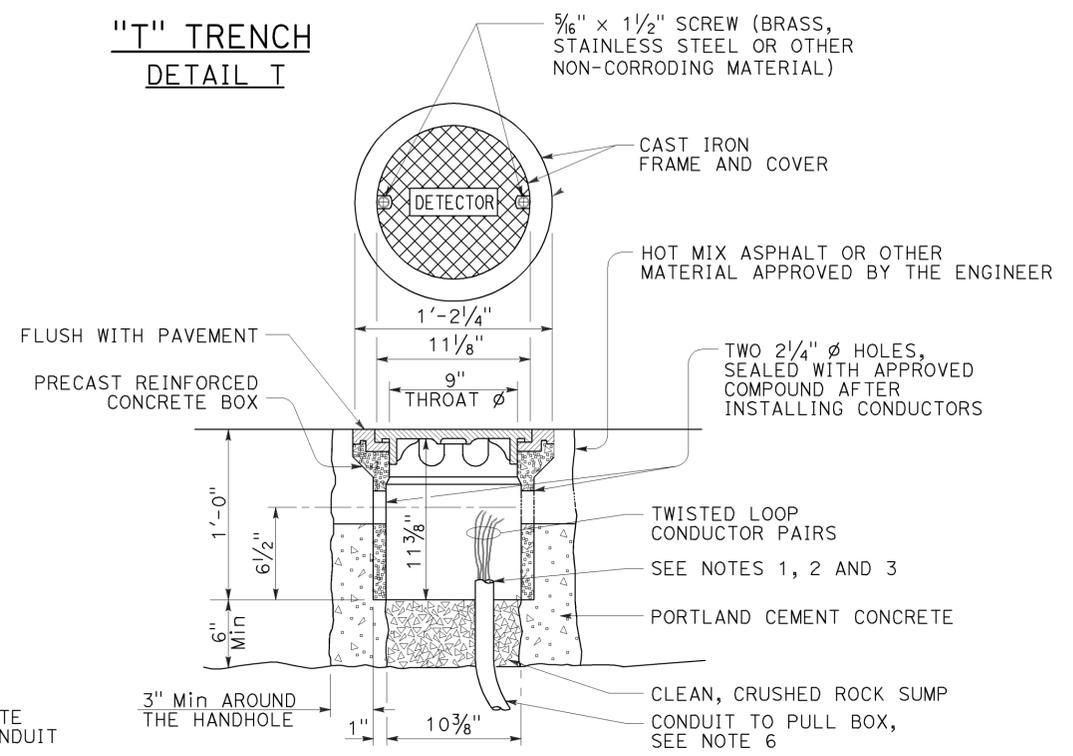


PLAN VIEW

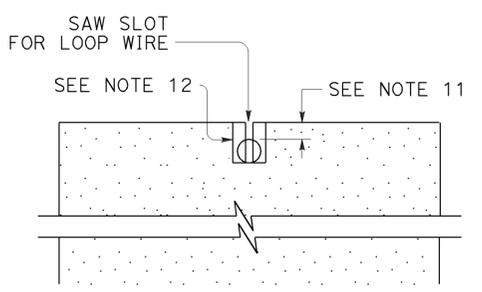


SECTION C-C

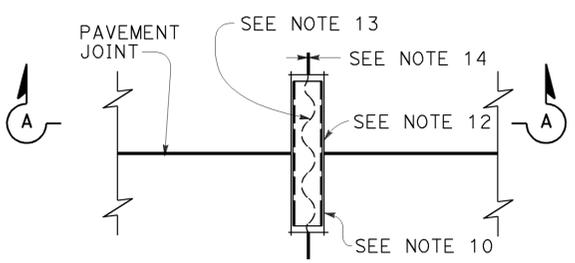
TYPE B
CURB TERMINATION DETAIL



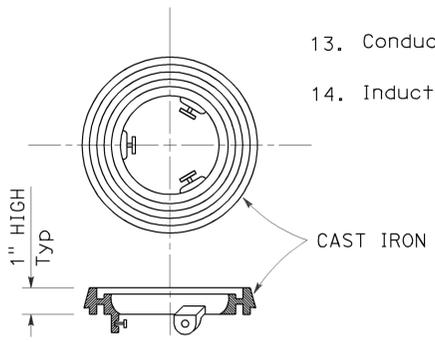
DETECTOR HANDHOLE DETAIL



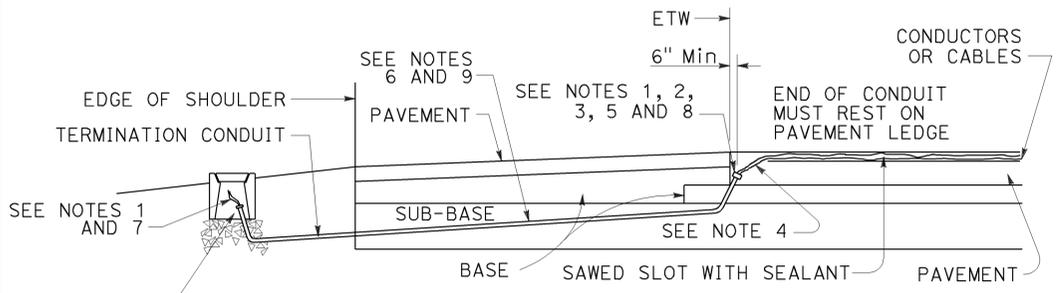
SECTION A-A



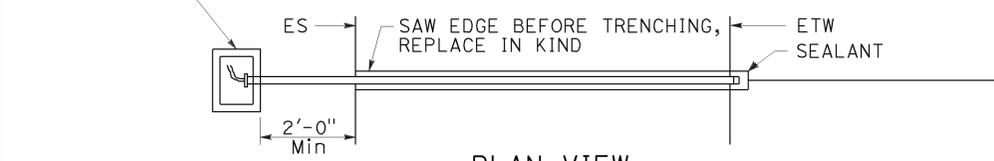
PLAN VIEW
TYPICAL LOOP LEAD-IN DETAIL
AT PAVEMENT JOINT



LOCKING GRADE RING



CROSS SECTION



PLAN VIEW
SHOULDER TERMINATION DETAILS

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(CURB TERMINATION
AND HANDHOLE)
NO SCALE

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

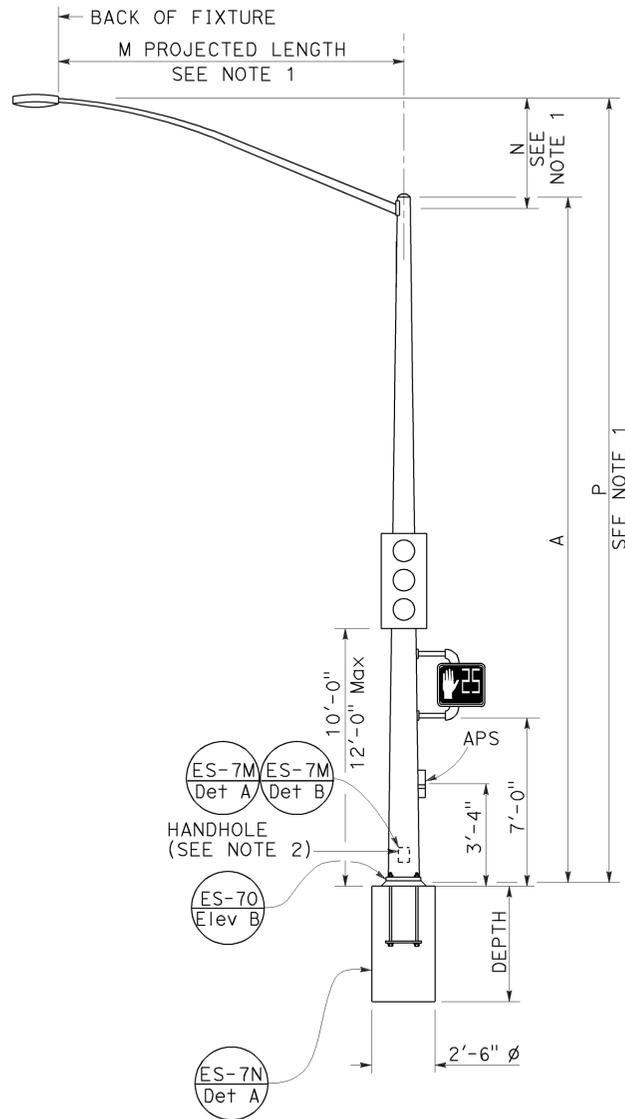
REVISED STANDARD PLAN RSP ES-5D

2010 REVISED STANDARD PLAN RSP ES-5D

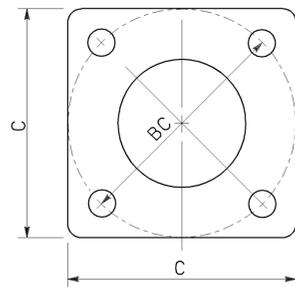
NOTES:

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

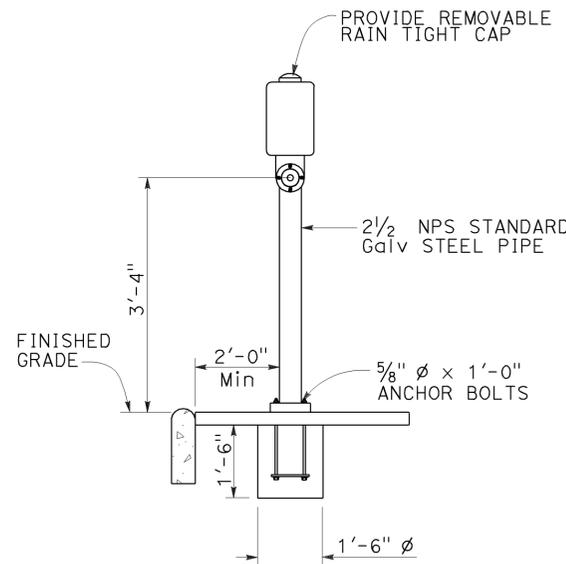
TO ACCOMPANY PLANS DATED 6-1-15



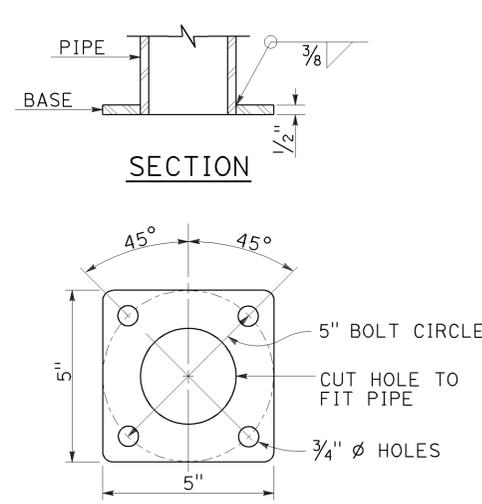
TYPE 15TS AND 21TS STANDARD
ELEVATION A
 (See Note 1)



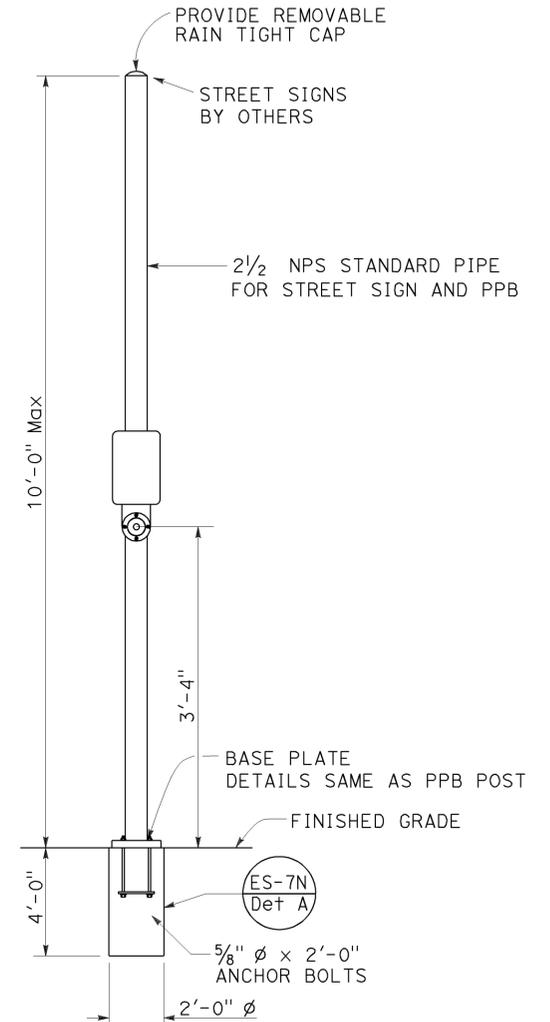
BASE PLATE
TYPE 15TS AND 21TS
DETAIL A



PUSH BUTTON ASSEMBLY POST
DETAIL B



BASE PLATE
PBA POST



COMBINED STREET SIGN
PUSH BUTTON ASSEMBLY POST
DETAIL C

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP ES-7A

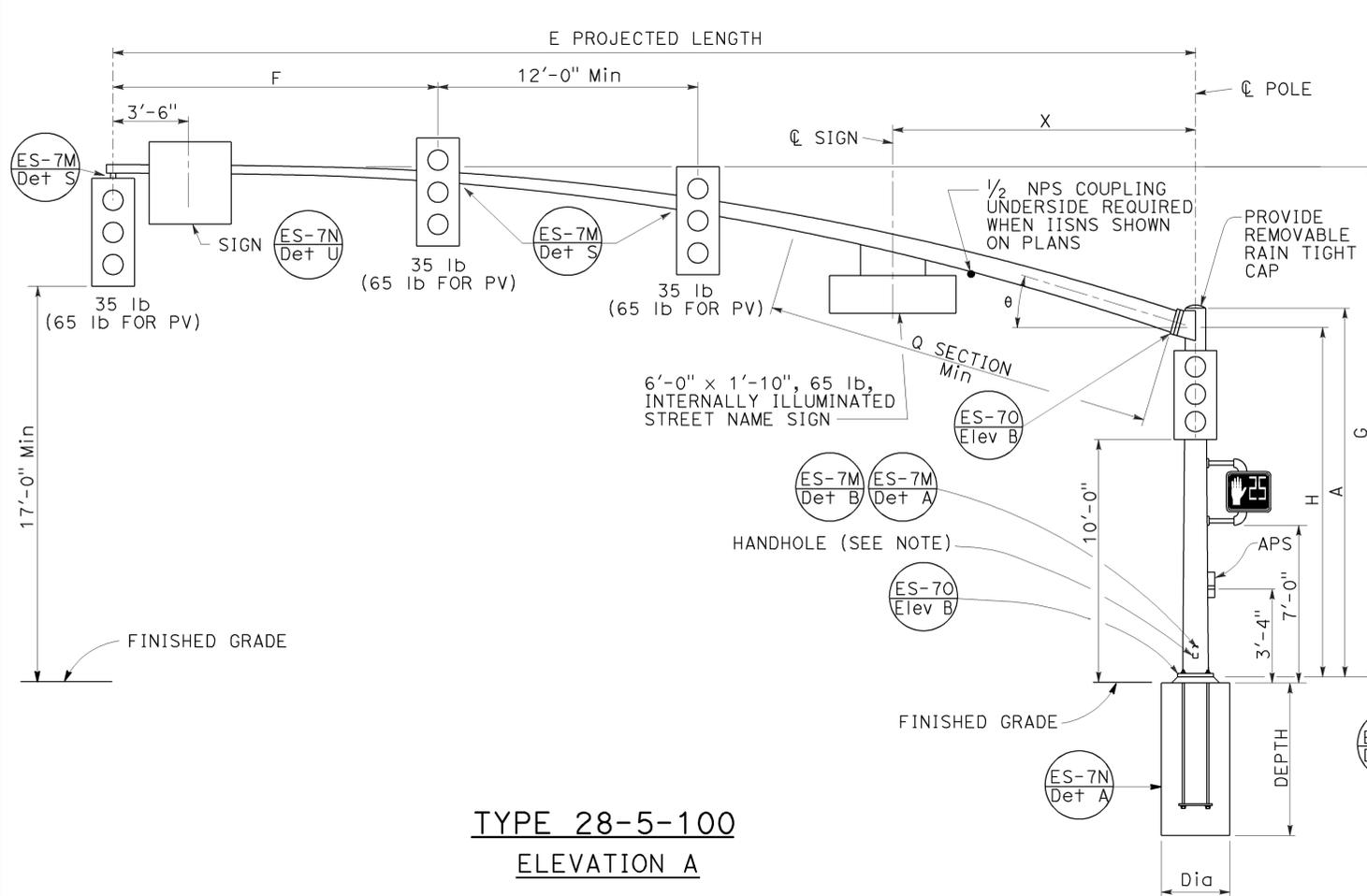
2010 REVISED STANDARD PLAN RSP ES-7A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1552	2313

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

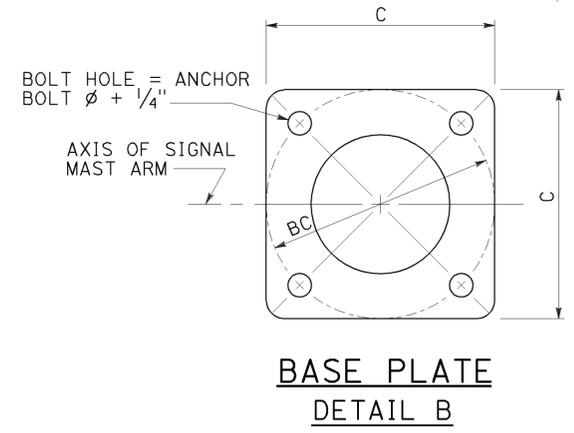
July 19, 2013
 PLANS APPROVAL DATE

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.



TYPE 28-5-100
ELEVATION A

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

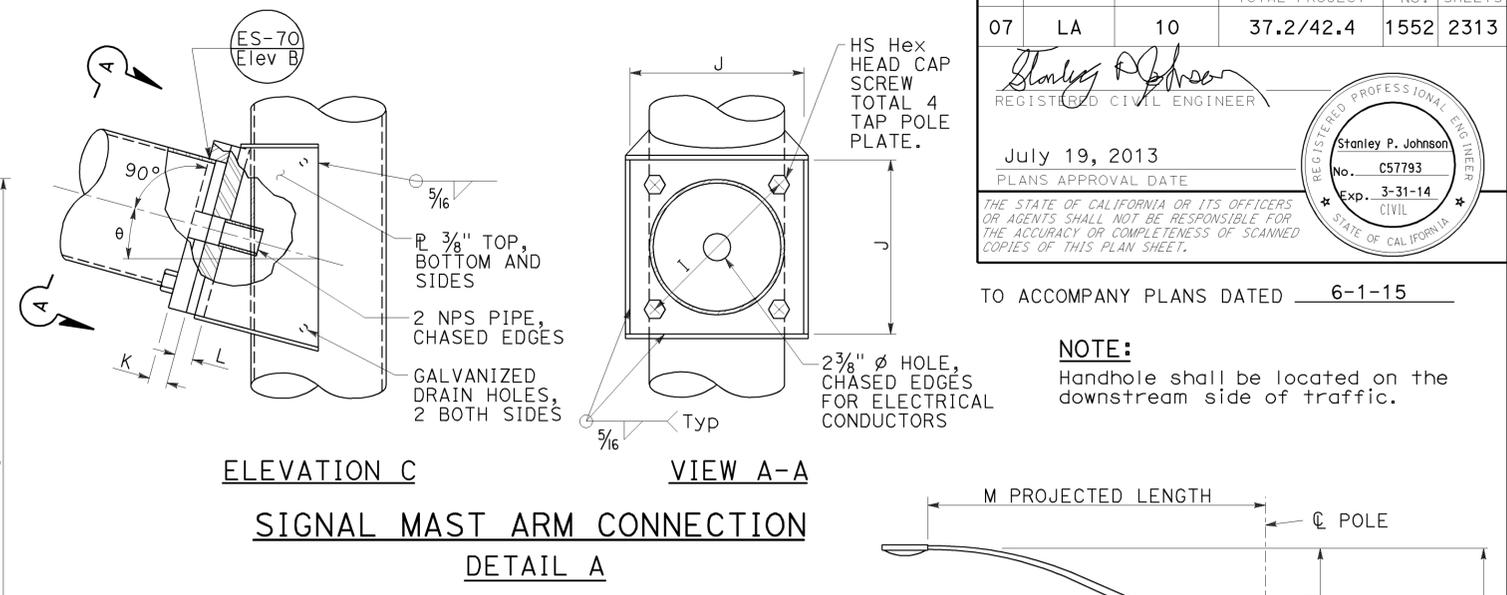


BASE PLATE
DETAIL B

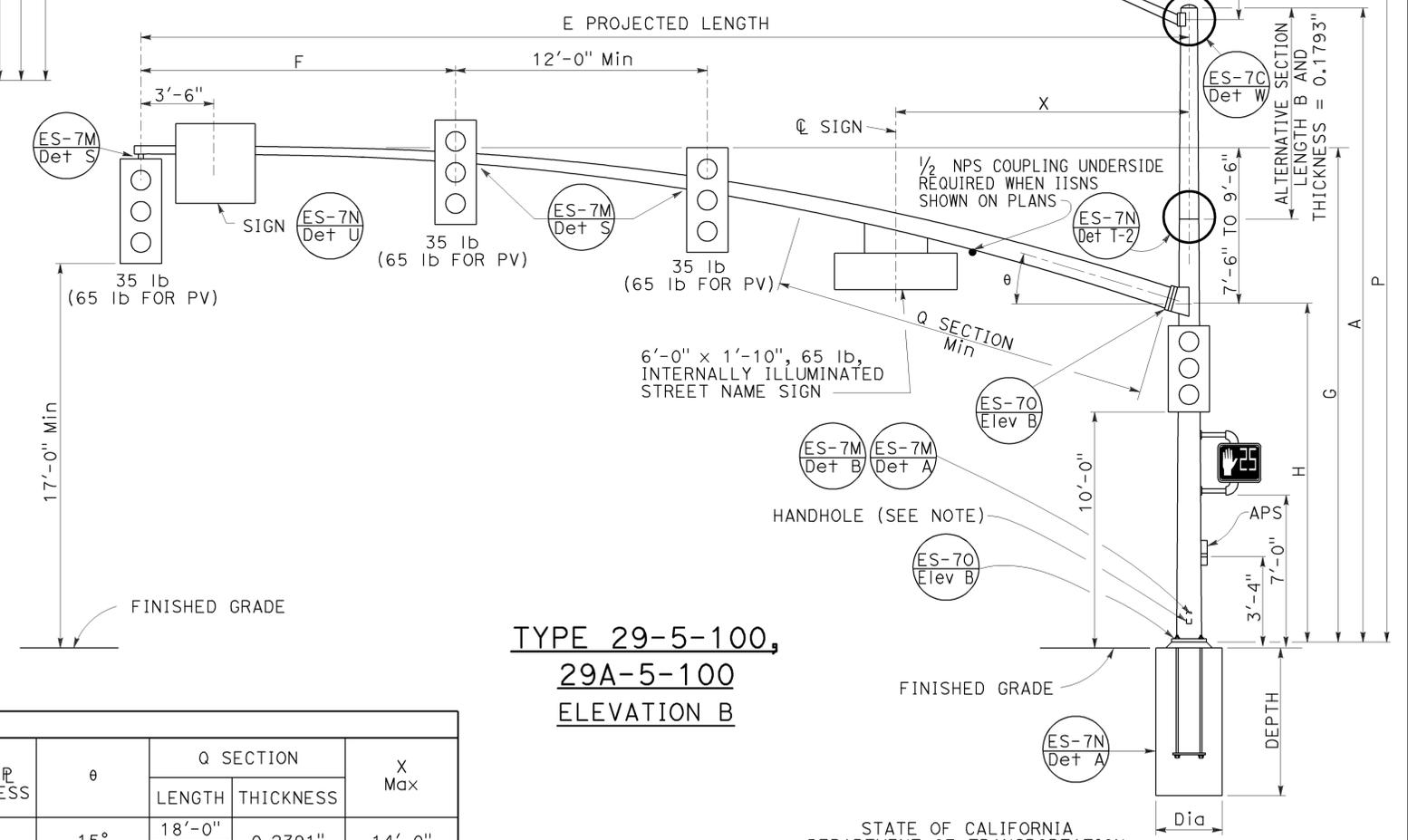
E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM P THICKNESS	L POLE P THICKNESS	θ	Q SECTION		X Max
												LENGTH	THICKNESS	
50'-0" 55'-0"	15'-0"	23'-7"± TO 25'-7"±	16'-0"	11 1/16" 1'-1/4"	0.1793"	16"	1 1/2"-6NC-3 1/4"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

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

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



ELEVATION C
SIGNAL MAST ARM CONNECTION
DETAIL A



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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 5 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 50' TO 55')

NO SCALE

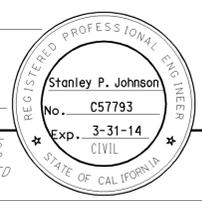
RSP ES-7G DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7G DATED MAY 20, 2011 - PAGE 468 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7G

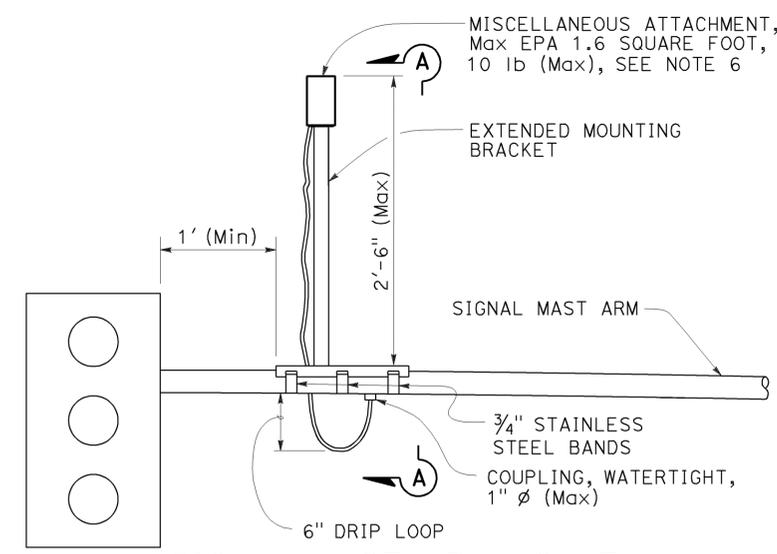
2010 REVISED STANDARD PLAN RSP ES-7G

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1553	2313

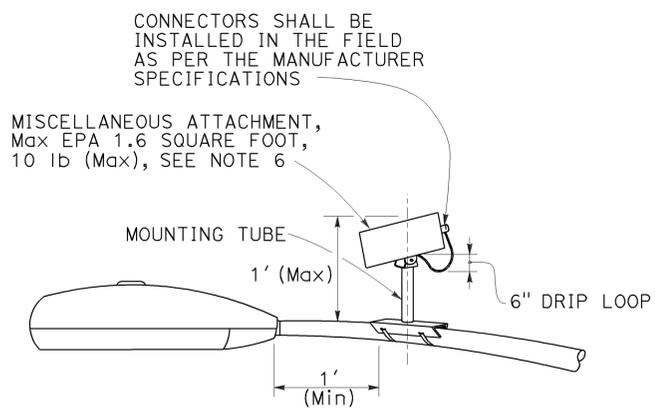
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



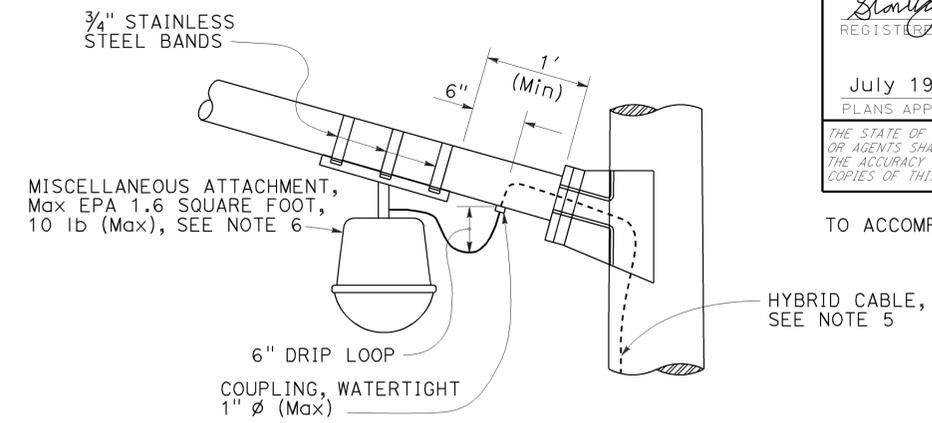
TO ACCOMPANY PLANS DATED 6-1-15



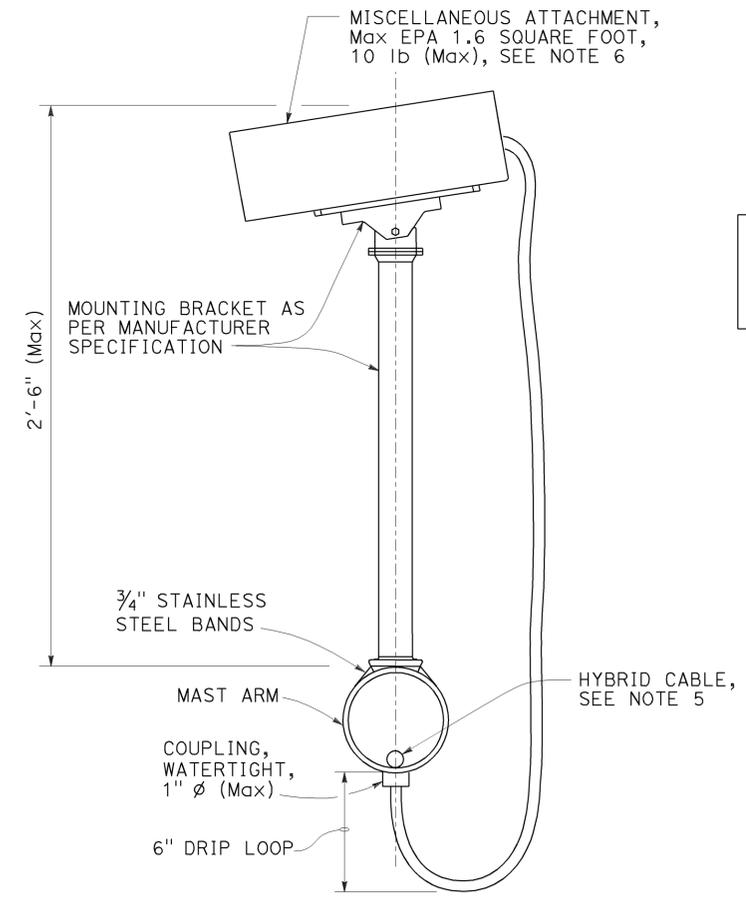
**SIGNAL MAST ARM MOUNT
DETAIL A**



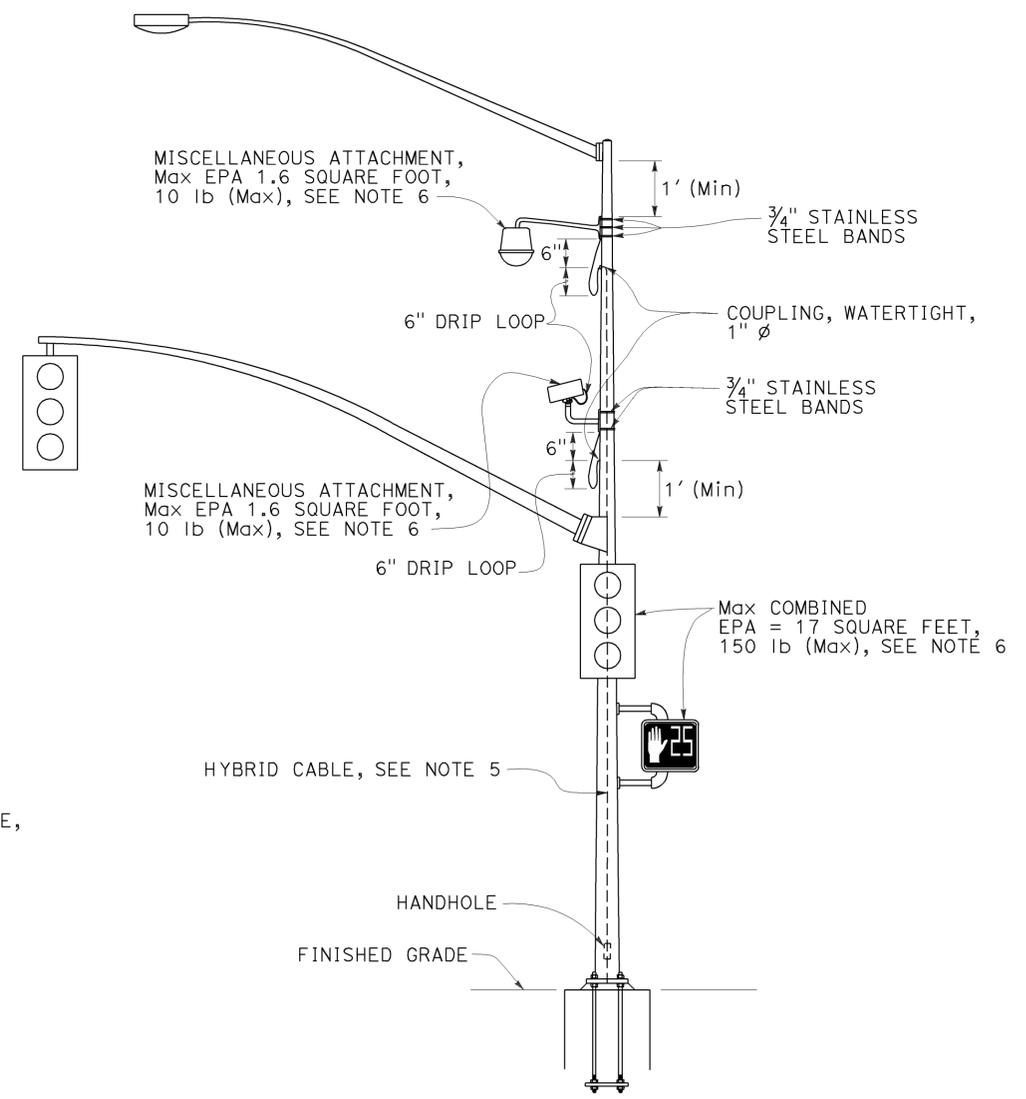
**LUMINAIRE MAST ARM MOUNT
DETAIL B**



**LUMINAIRE MAST ARM MOUNT
DETAIL C**



SECTION A-A



**SIGNAL POLE MOUNT
DETAIL D**

NOTES:

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SIGNAL AND LIGHTING,
 MISCELLANEOUS ATTACHMENT)**
 NO SCALE

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

REVISED STANDARD PLAN RSP ES-7R

2010 REVISED STANDARD PLAN RSP ES-7R

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	37.2/42.4	1554	2313

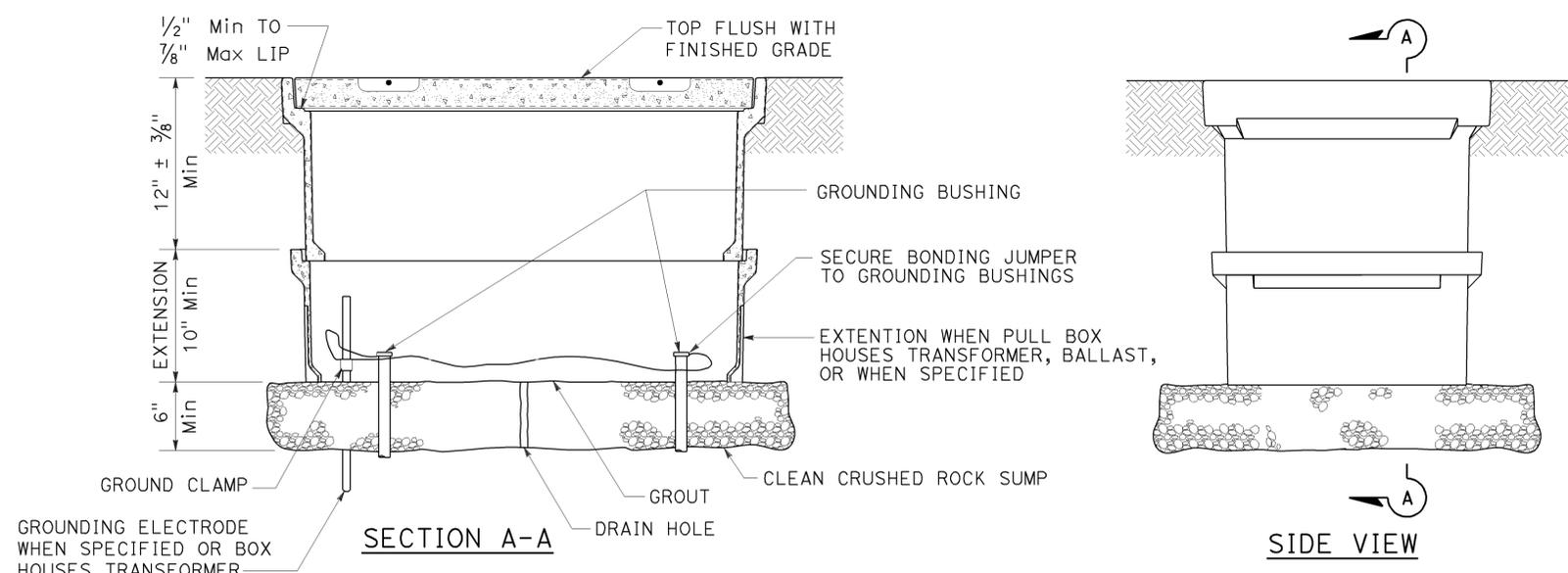
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

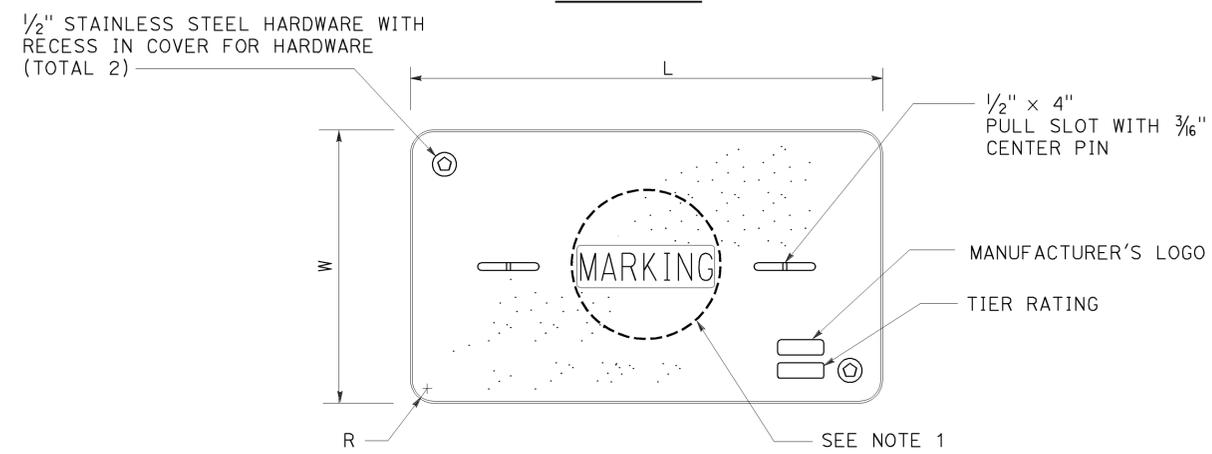
Theresa Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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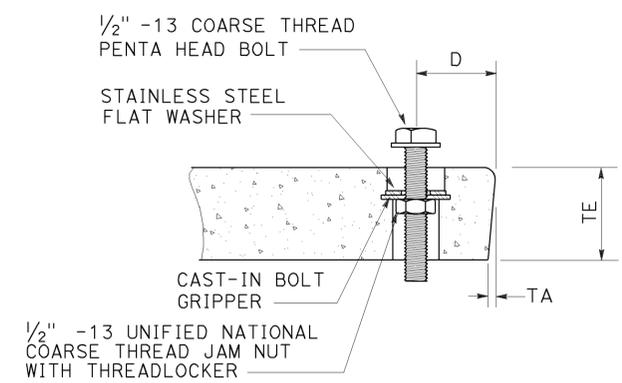
TO ACCOMPANY PLANS DATED 6-1-15



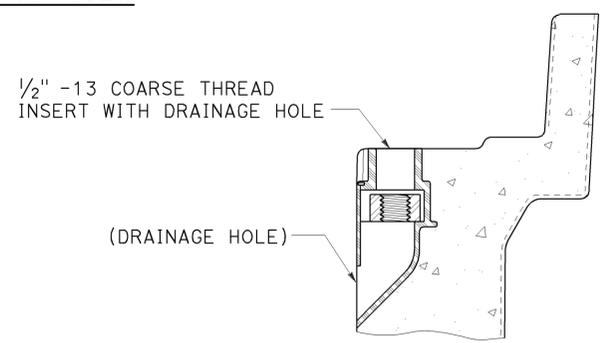
INSTALLATION DETAILS
DETAIL A



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

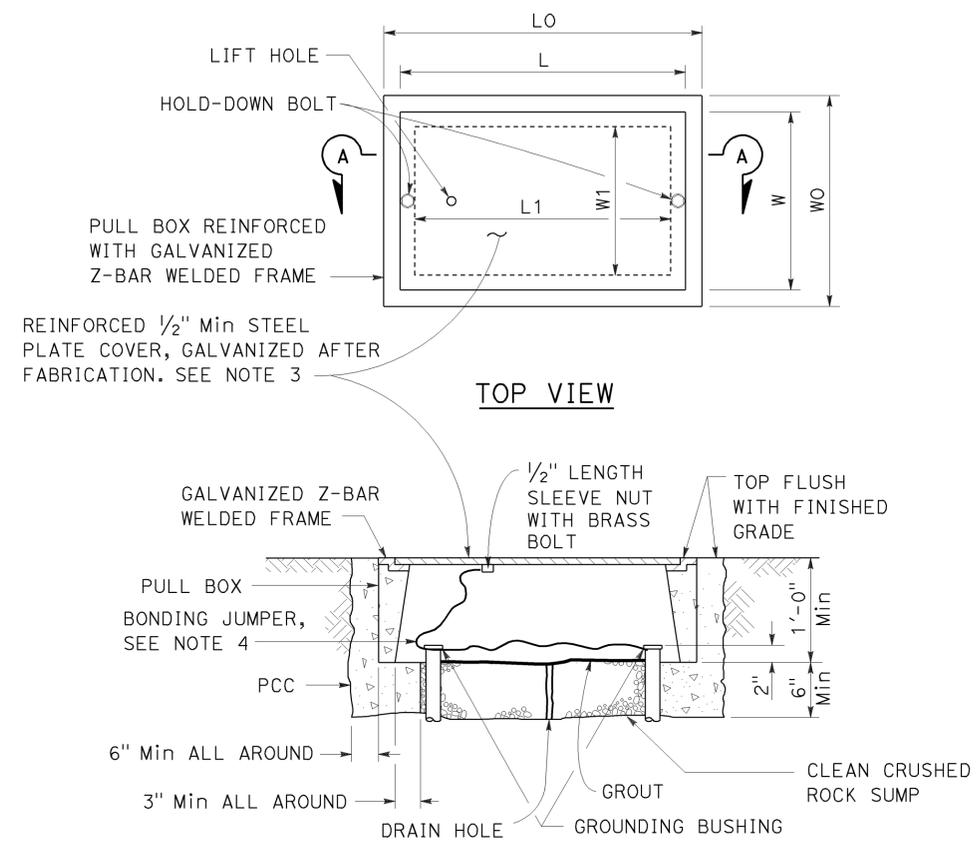
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	37.2/42.4	1555	2313

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

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TO ACCOMPANY PLANS DATED 6-1-15



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 3/8"±	1'-2 1/2"±	10 5/8"± 1"	1'-8"±	1'-1 3/4"±	0"	1/2"	NONE
No. 5(T)	1 3/4"	1'-0"	1'-11 1/2"± 1"	2'-5 1/2"±	1'-7"±	1'-1"± 1"	2'-3"±	1'-4"±	0"	1/2"	NONE
No. 6(T)	2"	1'-0"	2'-6"± 1"	2'-11 1/2"±	1'-11 1/2"±	1'-5"± 1"	2'-9"±	1'-8"±	0"	1/2"	NONE

* EXCLUDING CONDUIT WEB ** TOP DIMENSION

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

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

REVISED STANDARD PLAN RSP ES-8B

2010 REVISED STANDARD PLAN RSP ES-8B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1556	2313

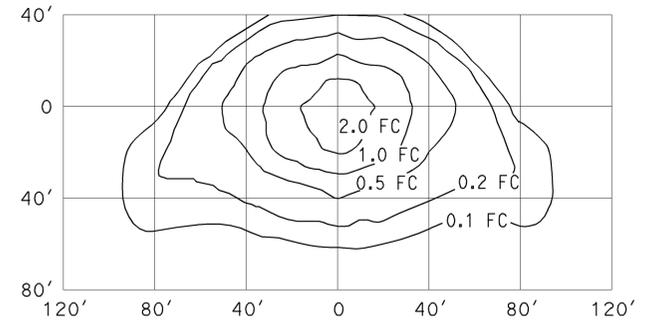
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

July 19, 2013
 PLANS APPROVAL DATE

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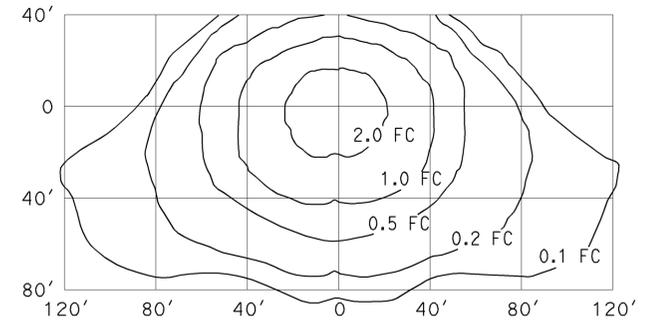
TO ACCOMPANY PLANS DATED 6-1-15

ISOFOOTCANDLE CURVE - MINIMUM



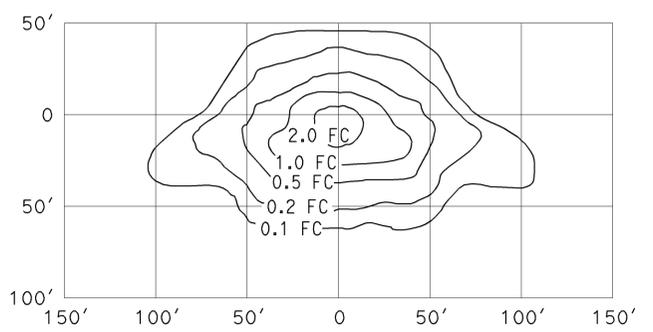
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 34' Mounting Height
 Lamp operated at 22,000 lm
 200-W high pressure sodium lamp
 ANSI Designation S66

ISOFOOTCANDLE CURVE - MINIMUM



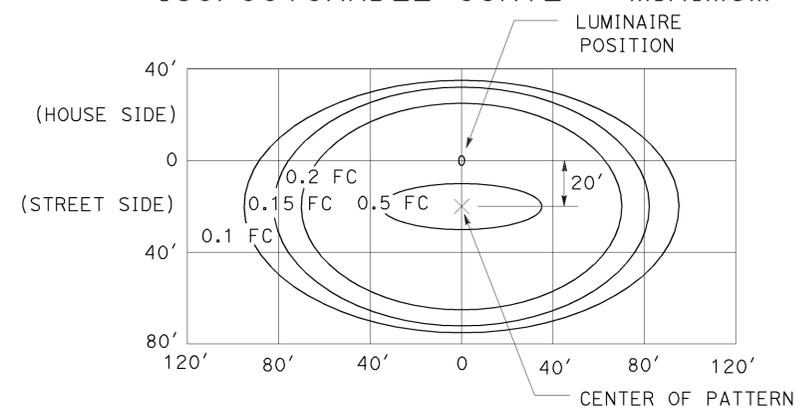
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 40' Mounting Height
 Lamp operated at 37,000 lm
 310-W high pressure sodium lamp
 ANSI Designation S67

ISOFOOTCANDLE CURVE - MINIMUM



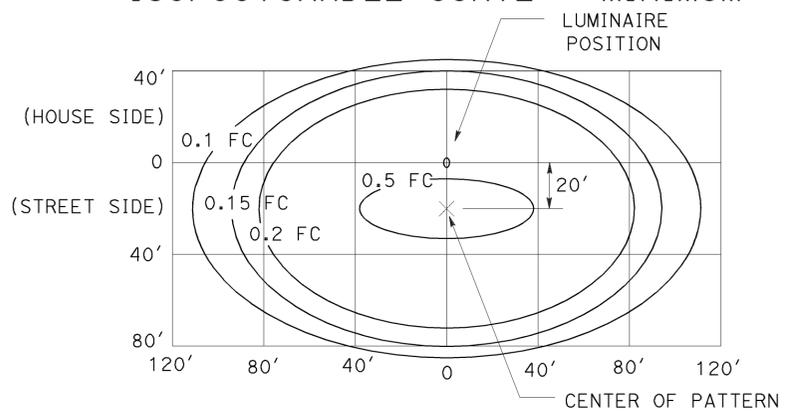
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 30' Mounting Height
 Lamp operated at 16,000 lm
 150-W high pressure sodium lamp
 ANSI Designation S55

ISOFOOTCANDLE CURVE - MINIMUM



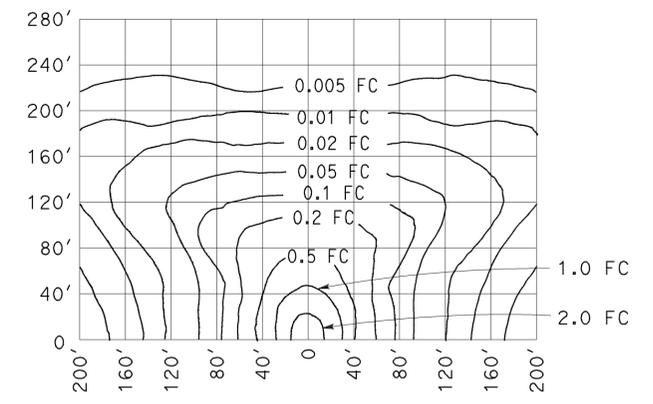
LED LUMINAIRE ROADWAY 1
 165-W at 34' Mounting Height

ISOFOOTCANDLE CURVE - MINIMUM



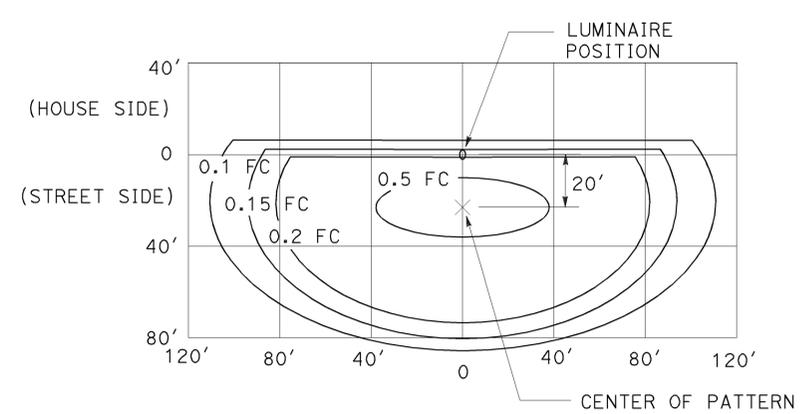
LED LUMINAIRE ROADWAY 2
 235-W at 40' Mounting Height

ISOFOOTCANDLE CURVE - MINIMUM



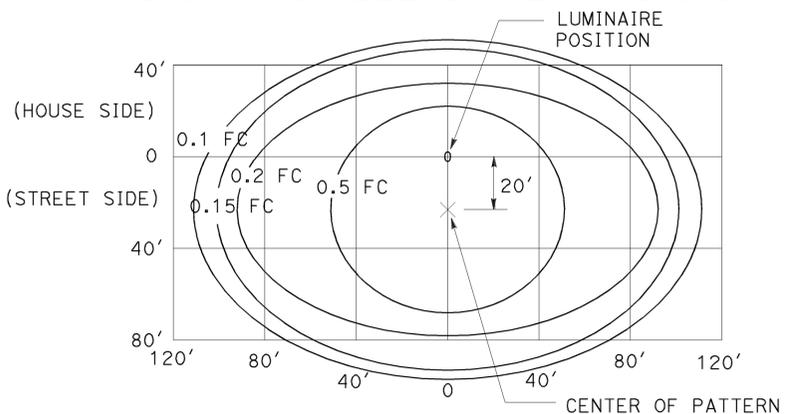
LOW PRESSURE SODIUM LUMINAIRE
 40' Mounting Height
 Lamp operated at 33,000 lm
 180-W low pressure sodium lamp

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.

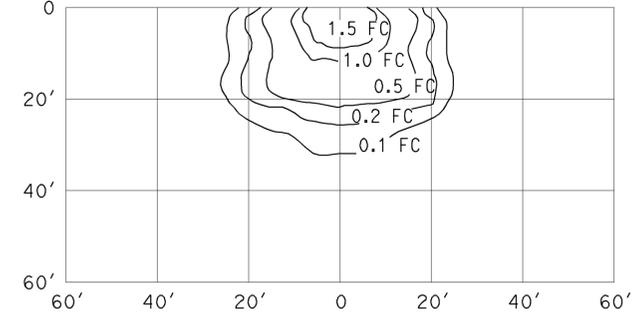
2010 REVISED STANDARD PLAN RSP ES-10A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1557	2313

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 6-1-15

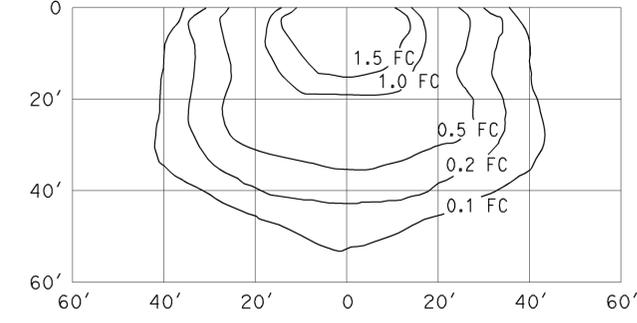
ISOFOOTCANDLE CURVE - MINIMUM



WALL LUMINAIRE

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

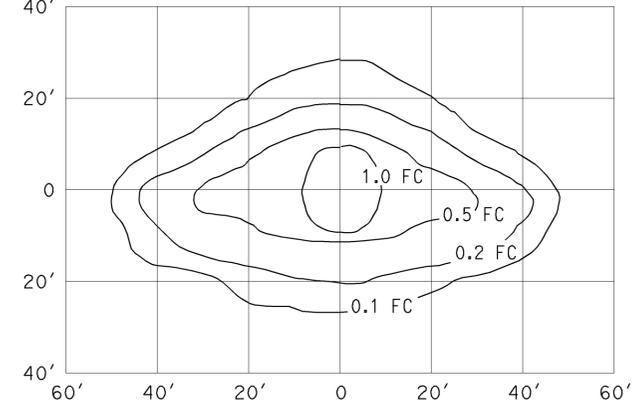
ISOFOOTCANDLE CURVE - MINIMUM



WALL LUMINAIRE

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

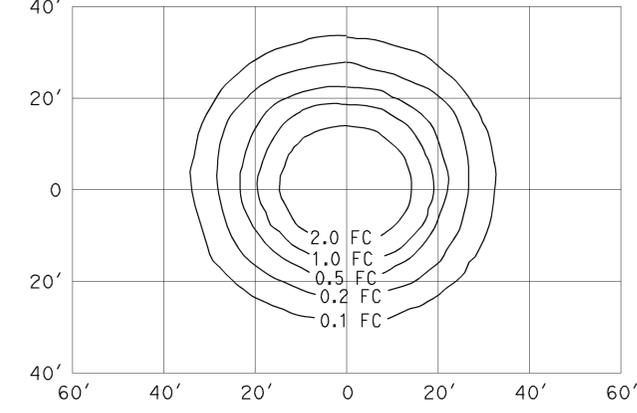
ISOFOOTCANDLE CURVE - MINIMUM



**PENDANT SOFFIT LUMINAIRE
 TYPE III SHORT**

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

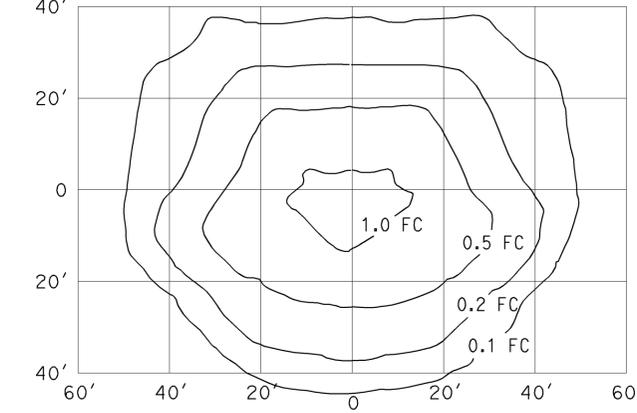
ISOFOOTCANDLE CURVE - MINIMUM



PENDANT SOFFIT LUMINAIRE

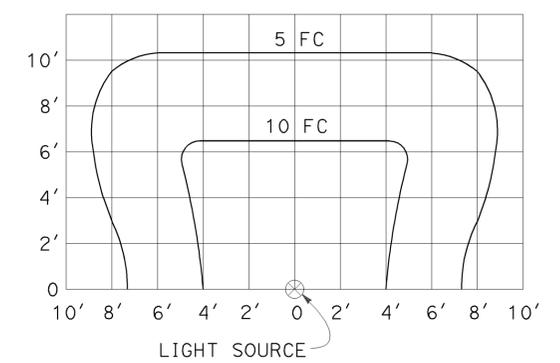
17' Mounting Height
 Lamp operated at 5,800 lm
 70-W high pressure sodium lamp
 ANSI Designation S62

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)**

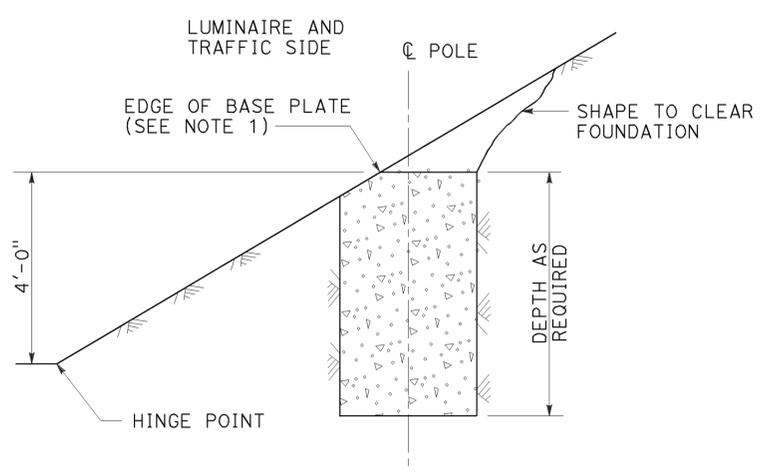
NO SCALE

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

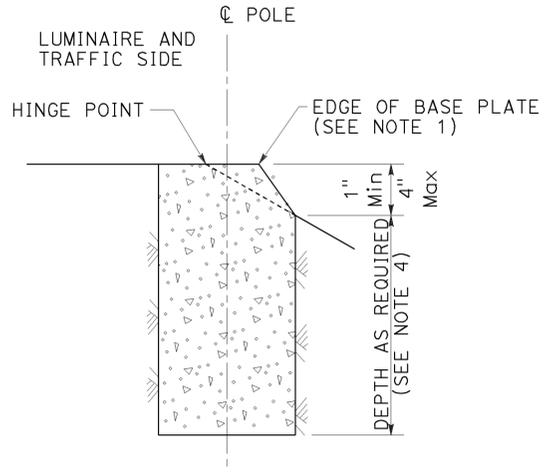
2010 REVISED STANDARD PLAN RSP ES-10B

TO ACCOMPANY PLANS DATED 6-1-15

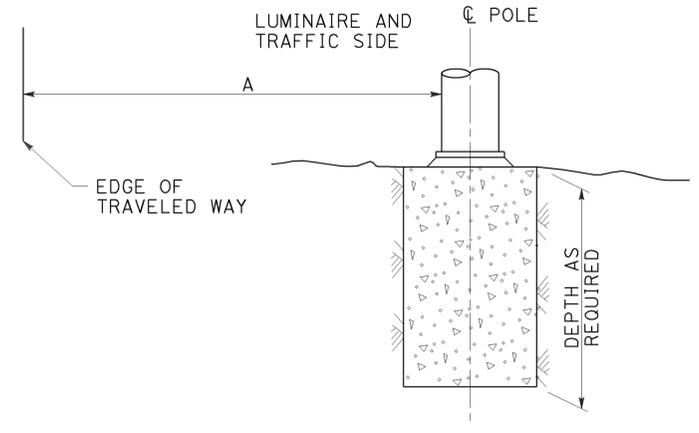
STANDARD TYPE	SETBACK (DIMENSION A)
32	30'-0" (Min)
31	20'-0" (Min)
15, 15D, 15-SB, 21, 21D, 30	ARM LENGTH (Min)



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



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

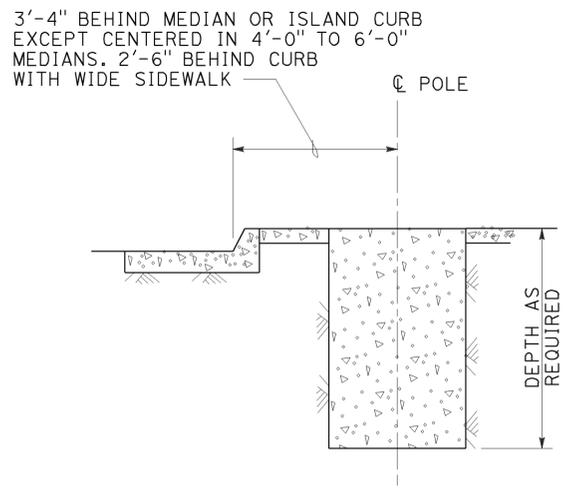


FLAT SECTIONS, CUT OR FILL SLOPES
4:1 OR FLATTER
DETAIL A-3
 See Note 2

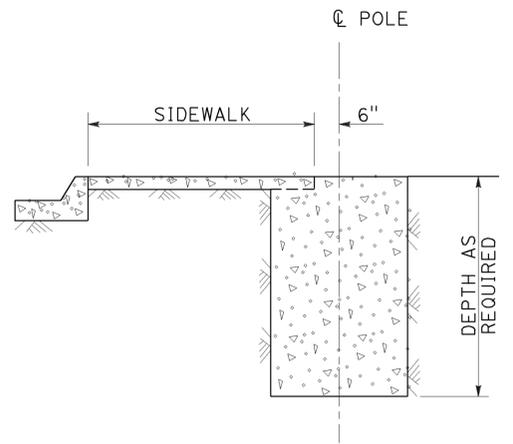
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL A

NOTES:

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



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



NARROW SIDEWALK
DETAIL B-2
 Less than 7' wide

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL B

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

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

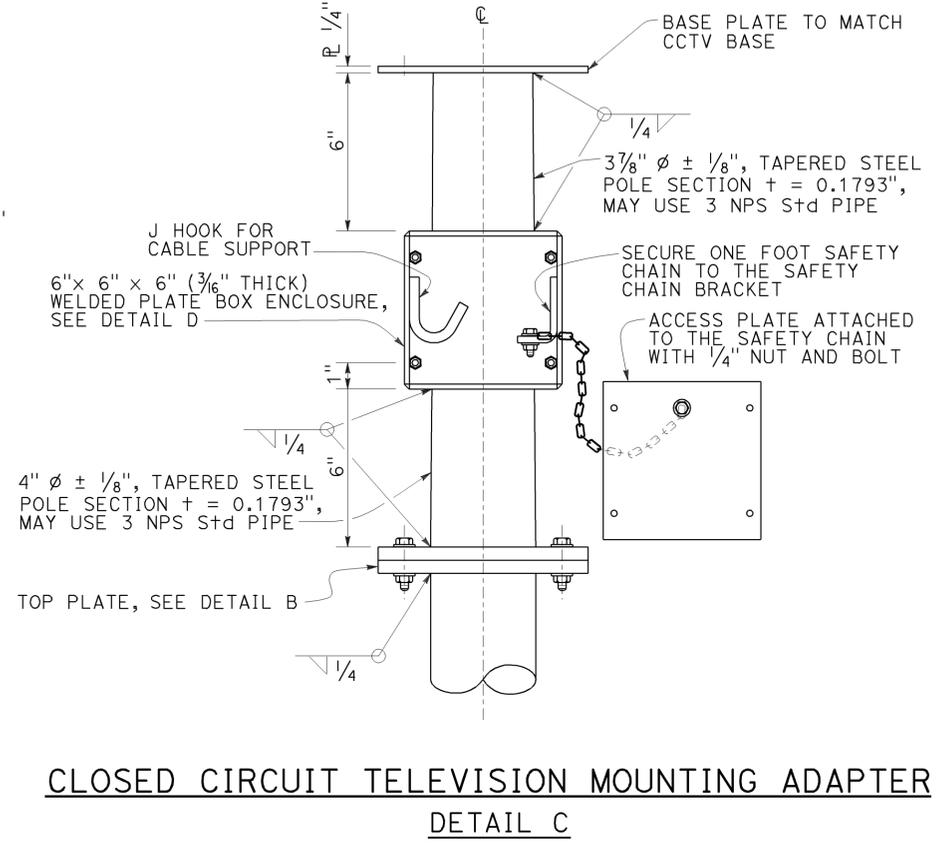
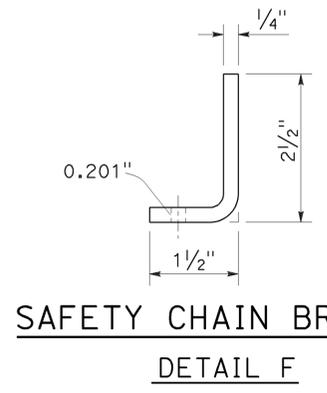
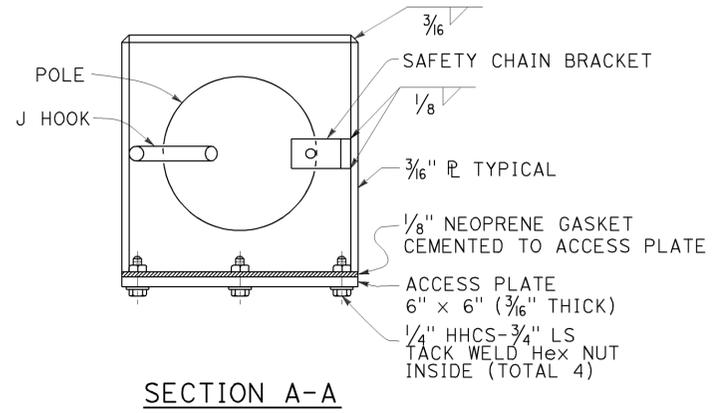
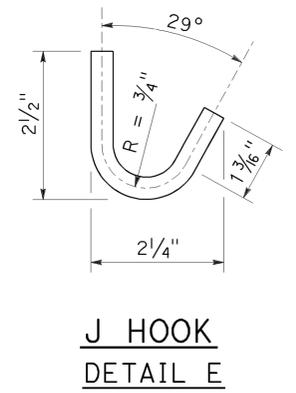
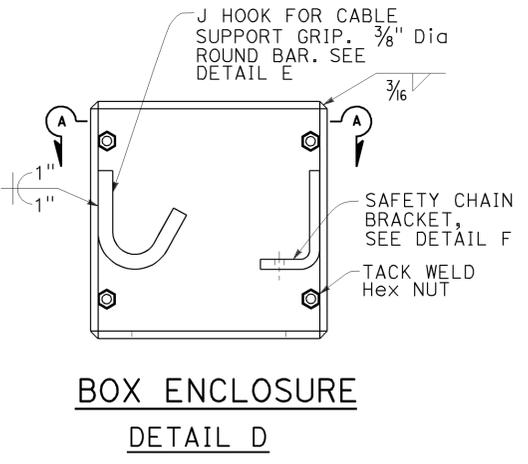
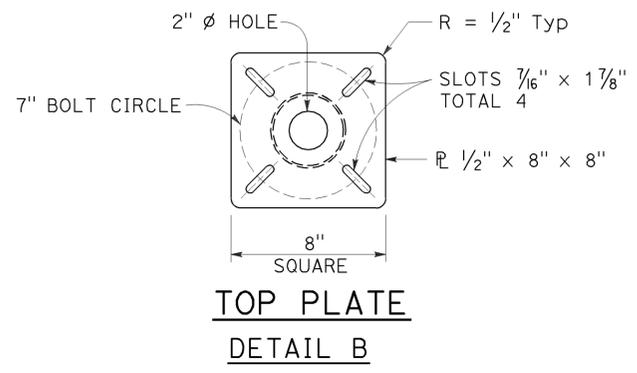
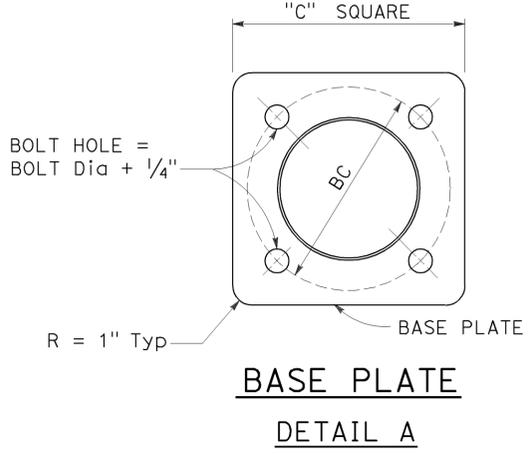
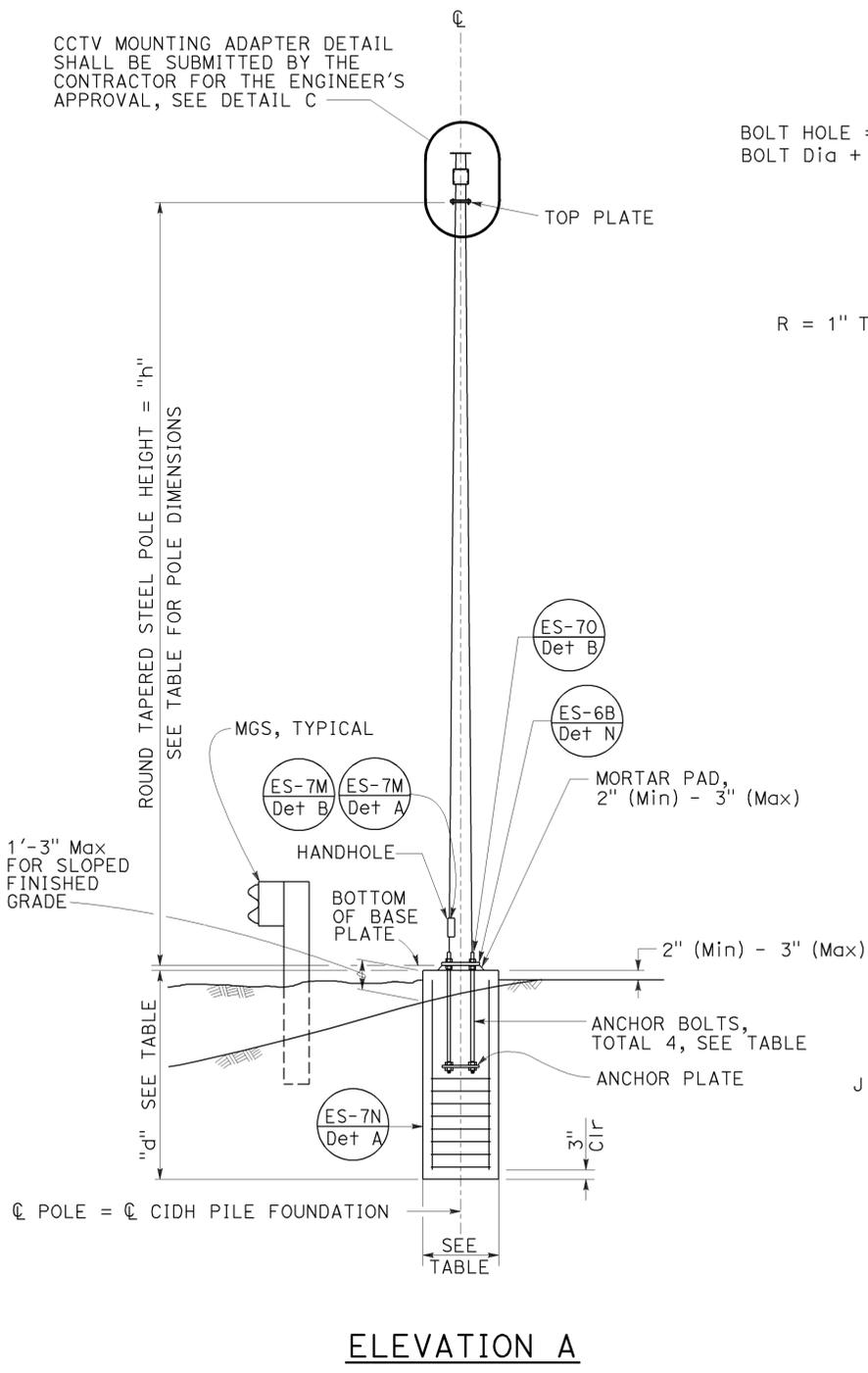
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1559	2313

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.

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

TO ACCOMPANY PLANS DATED 6-1-15

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



CLOSED CIRCUIT TELEVISION MOUNTING ADAPTER
DETAIL C

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(CLOSED CIRCUIT TELEVISION,
25' TO 45' POLE)**
NO SCALE

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

REVISED STANDARD PLAN RSP ES-16B

2010 REVISED STANDARD PLAN RSP ES-16B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1560	2313

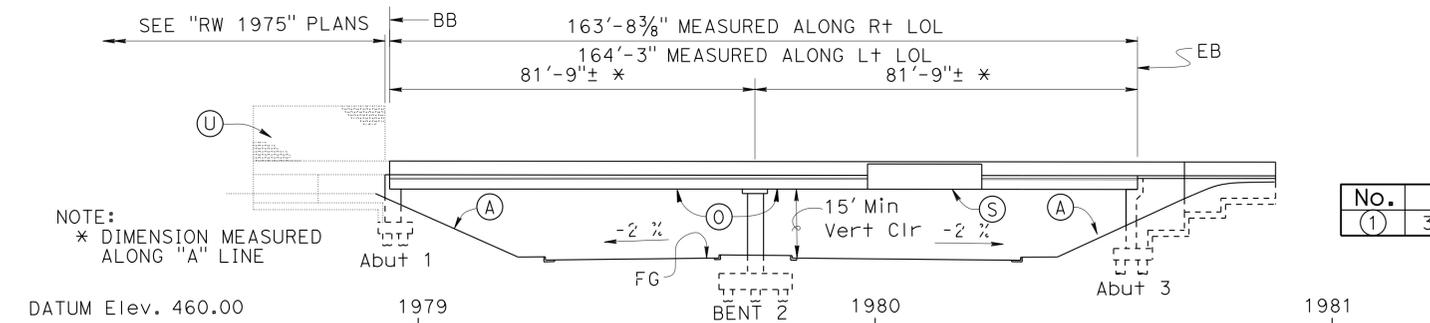
Dawit Tadelle Ezer 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LEGEND:

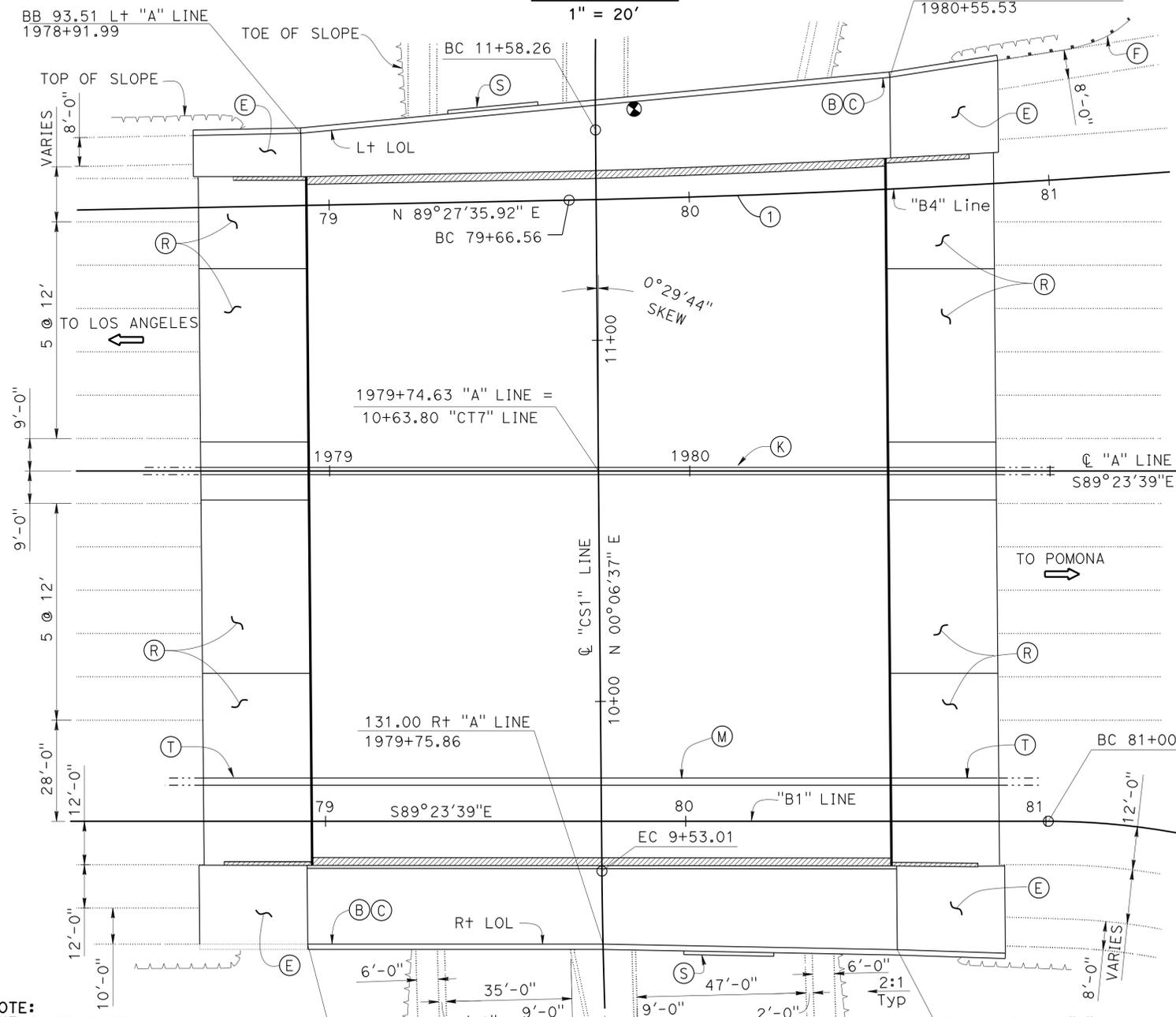
- Point of Min Vertical Clearance
- Joint Seal and paving notch extension
- New Structure
- Existing Structure

CURVE DATA

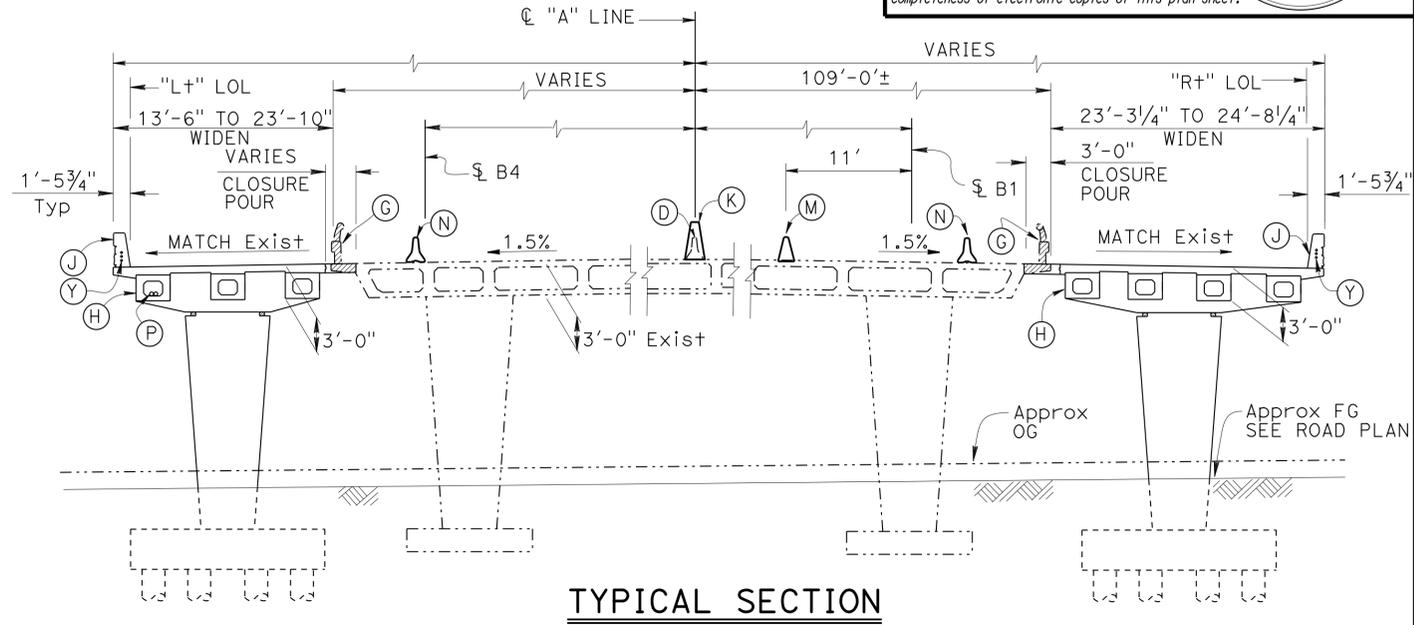
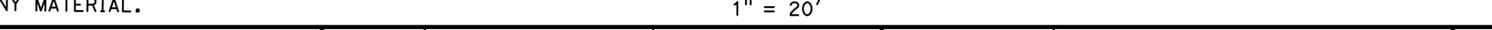
No.	R	Δ	T	L
(1)	3106'	3° 4' 50"	83.51	166.99



ELEVATION



PLAN



TYPICAL SECTION

NOTES:

- (A) Slope paving
- (B) Paint "Bridge No. 53-0670"
- (C) Paint "CITRUS STREET UNDERCROSSING"
- (D) Remove Concrete Barrier Type 50A
- (E) Structure Approach Type N (30S)
- (F) Midwest Guardrail System, see "Road Plans"
- (G) Remove Overhang, Barrier and salvage Metal Bridge Railing
- (H) Precast prestressed Concrete Box Girder with longitudinal post tension.
- (J) Concrete Barrier Type 736 (Mod 4)
- (K) Concrete Barrier Type 60GA (Mod)
- (M) Concrete Barrier Type 60A (Mod 1)
- (N) Temporary Railing Type K, see "Road Plans"
- (O) Soffit lighting, see "Road Plans"
- (P) 2-3/2" ∅ communication conduits, see "Road Plans"
- (R) Structure Approach Type R(30D)
- (S) Bridge Mounted Sign. See "ROAD PLANS"
- (T) Concrete Barrier Type 60A
- (U) Masonry Block Sound Wall, see "RW 1975" Plan
- (Y) 3-2" ∅ conduits, see "ROAD PLANS"

QUANTITIES

RAPID SETTING CONCRETE (PATCH)	2	CF
SALVAGE METAL BRIDGE RAILING	420	LF
REMOVE UNSOUND CONCRETE	2	CF
BRIDGE REMOVAL (PORTION), LOCATION A	LUMP	SUM
STRUCTURE EXCAVATION (BRIDGE)	655	CY
STRUCTURE BACKFILL (BRIDGE)	440	CY
24" CAST-IN-DRILLED-HOLE CONCRETE PILING	1,991	LF
PRESTRESSING PRECAST GIRDER	LUMP	SUM
STRUCTURAL CONCRETE, BRIDGE FOOTING	176	CY
STRUCTURAL CONCRETE, BRIDGE	376	CY
AGGREGATE BASE (APPROACH SLAB)	43	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	93	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	428	CY
PAVING NOTCH EXTENSION	208	CF
CONCRETE SURFACE TEXTURE	341	SQFT
DRILL AND BOND DOWEL	238	LF
FURNISH PRECAST PRESTRESSED CONCRETE BOX GIRDER (70'-80')	14	EA
ERECT PRECAST PRESTRESSED CONCRETE BOX GIRDER	14	EA
JOINT SEAL (MR 1 1/2")	471	LF
BAR REINFORCING STEEL (BRIDGE)	219,080	LB
HEADED BAR REINFORCEMENT	340	EA
SLOPE PAVING (CONCRETE) (MODIFIED)	60	CY
CONCRETE BARRIER (TYPE 60GA MODIFIED)	221	LF
CONCRETE BARRIER (TYPE 60A MODIFIED 1)	221	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	418	LF

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

HOWARD NG DESIGN ENGINEER	DESIGN	BY Dawit Worku	CHECKED Edward B Mu	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 20	BRIDGE NO.	53-0670	CITRUS STREET UNDERCROSSING (WIDEN) GENERAL PLAN
	DETAILS	BY K Farahzadi/ L Tran	CHECKED Edward B Mu	LAYOUT	BY Dawit Worku			POST MILE	37.5	
	QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian	SPECIFICATIONS	BY Xiaodong Chen			PLANS AND SPECS COMPARED	XIAODONG CHEN	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
 UNIT: 3622
 PROJECT NUMBER & PHASE: 0713000007-4
 CONTRACT NO.: 1193U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 7-18-14, 7-24-14, 09/09/14, 9-15-14
 SHEET 1 OF 30

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	INDEX TO PLANS
3	CONSTRUCTION SEQUENCE
4	FOUNDATION PLAN
5	ABUTMENT 1 LAYOUT
6	ABUTMENT 3 LAYOUT
7	ABUTMENT DETAIL NO.1
8	ABUTMENT DETAIL NO.2
9	ABUTMENT DETAIL NO.3
10	ABUTMENT DETAIL NO.4
11	BENT LAYOUT (LEFT WIDEN)
12	BENT LAYOUT (RIGHT WIDEN)
13	BENT 2 DETAILS
14	TYPICAL SECTION
15	GIRDER LAYOUT
16	PRESTRESSED GIRDER DETAILS NO.1
17	PRESTRESSED GIRDER DETAILS NO.2
18	GIRDER REINFORCEMENT (LEFT WIDEN)
19	GIRDER REINFORCEMENT (RIGHT WIDEN)
20	BARRIER-CONCRETE TYPE 60A & 60SA MODIFIED
21	STRUCTURE APPROACH AND SLOPE PAVING LIMIT
22	SLOPE PAVING-FULL SLOPE
23	STRUCTURE APPROACH DRAINAGE DETAILS
24	STRUCTURE APPROACH TYPE N(30S)
25	STRUCTURE APPROACH TYPE R(30D)
26	ARCHITECTURAL TREATMENT DETAILS NO. 1
27	ARCHITECTURAL TREATMENT DETAILS NO. 2
28	LOG OF TEST BORINGS 1 OF 3
29	LOG OF TEST BORINGS 2 OF 3
30	LOG OF TEST BORINGS 3 OF 3

GENERAL NOTES LOAD AND RESISTANCE FACTOR DESIGN

DESIGN: AASHTO LRFD BRIDGE SPECIFICATIONS, 4th Edition with Caltrans Amendments preface dated Nov 2011

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC), Version 1.6 November 2010

DEAD LOADING: Include 35 psf for future wearing surface
The deck load between the girders has been increased by factor of 10% to allow for the use of steel deck forms.

LIVE LOADING: HL-93 and Permit Design Load

SEISMIC LOADING: Soil Profile: Shear wave Velocity of top 100 ft of soil $V_s = 240$ m/s
Moment magnitude $M_{max} = 7.7$
Peak Ground Acceleration = 0.6g

REINFORCED CONCRETE: $f_y = 60$ ksi
 $f'_c = 3.6$ ksi (Except as shown on "CONCRETE STRENGTH AND TYPE LIMITS" diagram)
 $n = 8$

PRESTRESSED CONCRETE: See PRESTRESSING NOTES on "PRESTRESSED GIRDER DETAILS NO. 2" sheet

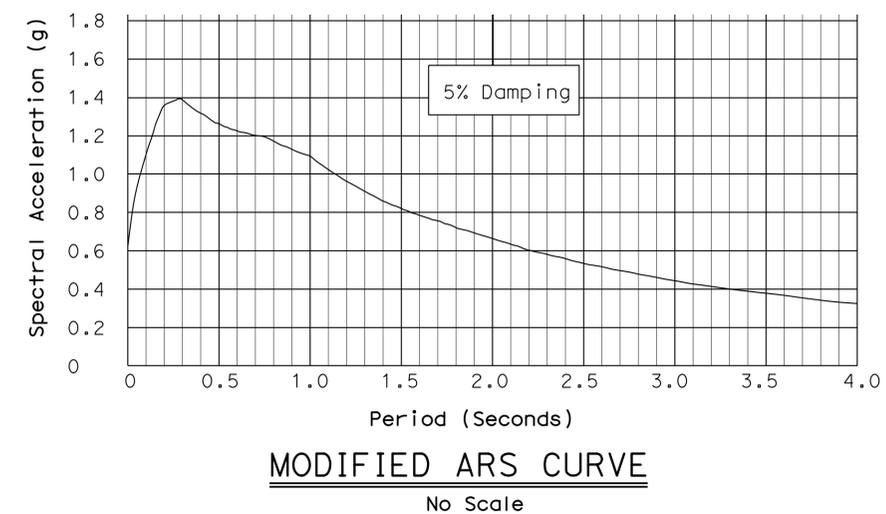
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1561	2313

Dawit Tadelle Tessema 10/01/14
REGISTERED CIVIL ENGINEER DATE

6-1-15
PLANS APPROVAL DATE

Dawit T Worku
No. C60711
Exp 12-31-16
CIVIL
STATE OF CALIFORNIA

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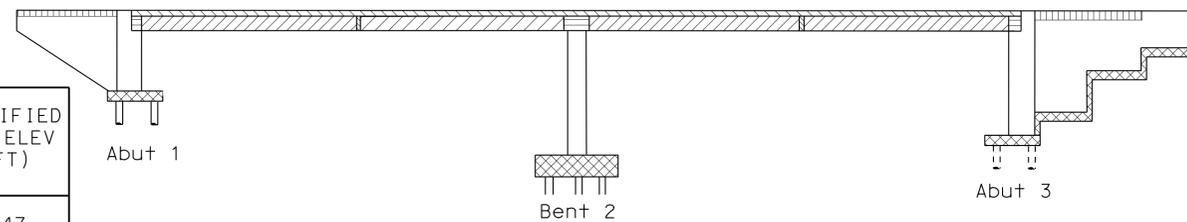


STANDARD PLANS Dated 2010

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
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
A76A	CONCRETE BARRIER TYPE 60
A76D	CONCRETE BARRIER TYPE 60G
B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B0-5	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
B2-3	16" AND 24" CAST-IN-DRILLED-HOLE CONCRETE PILE
(RSP) B3-1A	RETAINING WALL TYPE 1
B3-5	RETAINING WALL DETAILS NO.1 (CASE 1)
(RSP) B6-10	UTILITY OPENINGS T-BEAM
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
(RSP) B8-5	CAST-IN-PLACE PRESTRESSED GIRDER DETAILS
(RSP) B11-56	CONCRETE BARRIER TYPE 736
B14-3	COMMUNICATION AND SPRINKLER CONDUITS (CONDUIT LESS THAN 4")

PILE DATA TABLE

SUPPORT LOCATION	PILE TYPE	NOMINAL RESISTANCE (KIPS)		DESIGN TIP ELEV (FT)	SPECIFIED TIP ELEV (FT)
		COMPRESSION	TENSION		
Abut 1 LEFT WIDEN	24 IN CIDH	220	0	447(a) 463(c) 454(d)	447
Abut 1 RIGHT WIDEN	24 IN CIDH	300	0	441(a) 457(c) 454(d)	441
Bent 2 LEFT WIDEN	24 IN CIDH	340	200	418(a) 423(b) 449(c) 439(d)	418
Bent 2 RIGHT WIDEN	24 IN CIDH	410	180	413(a) 425(b) 439(c) 438(d)	413
Abut 3 LEFT WIDEN	24 IN CIDH	300	0	430(a) 455(c) 446(d)	430
Abut 3 RIGHT WIDEN	24 IN CIDH	310	0	429(a) 454(c) 446(d)	429



LEGEND:

- Structural Concrete, Bridge ($f'_c = 4$ ksi @ 28 days)
- Precast Prestressed Concrete Box Girder (see "PRESTRESSED GIRDER DETAILS NO. 2" sheet)
- Structural Concrete, Bridge ($f'_c = 5$ ksi @ 28 days)
- Structural Concrete, Bridge ($f'_c = 6$ ksi @ 28 days)
- Structural Concrete, Bridge Footing
- Structural Concrete, Approach Slab

CONCRETE STRENGTH AND TYPE LIMITS

No Scale

NOTES:

- Design Tip Elevation are controlled by:
(a) Compression, (b) Tension, (c) Settlement, (d) Lateral load.
- The specified tip elevation for CIDH piles shall not be raised.



DESIGN	BY Dawit Worku	CHECKED Edward B Mu
DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu
QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

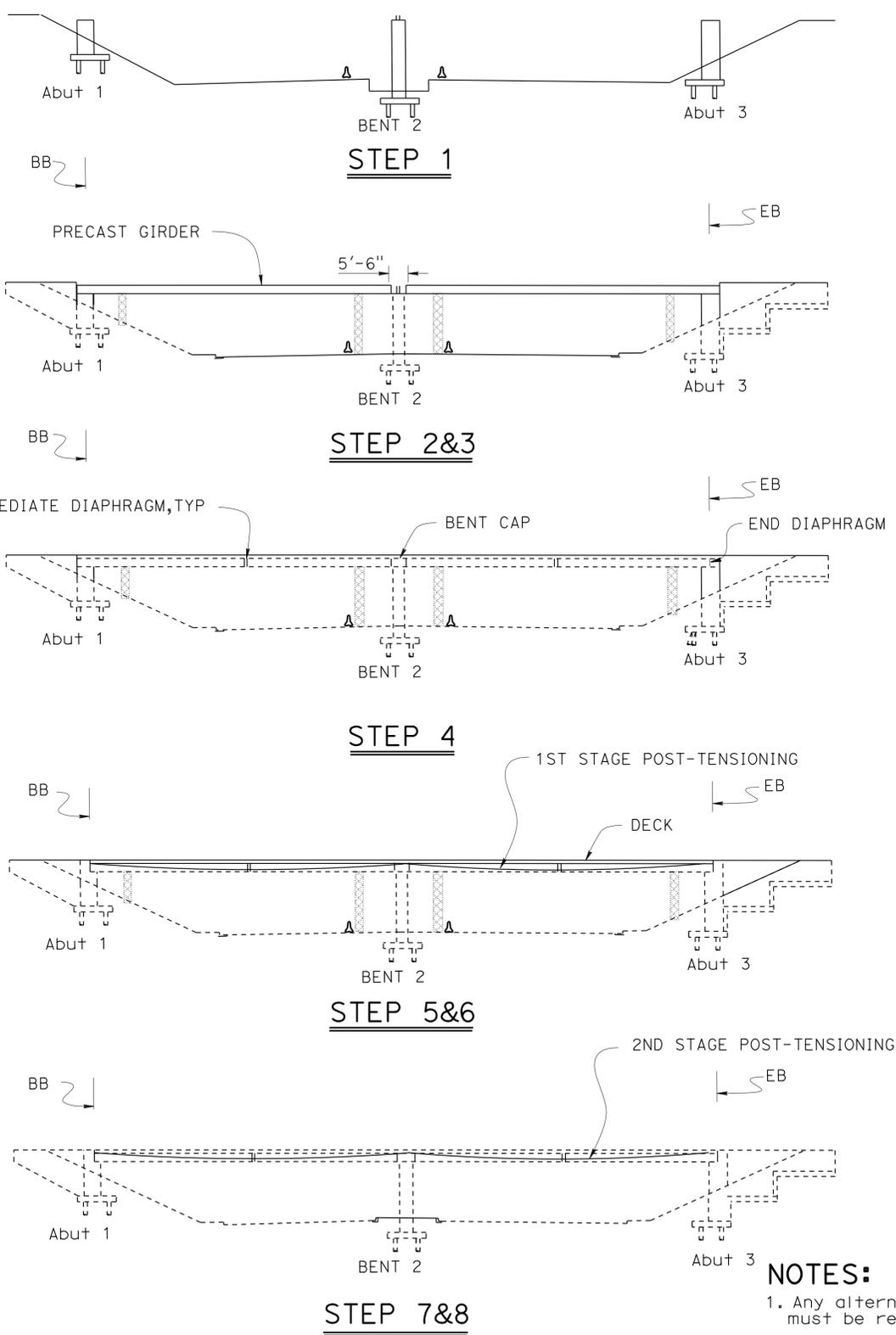
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 20

BRIDGE NO.	53-0670
POST MILE	37.5

CITRUS STREET UNDERCROSSING (WIDEN)

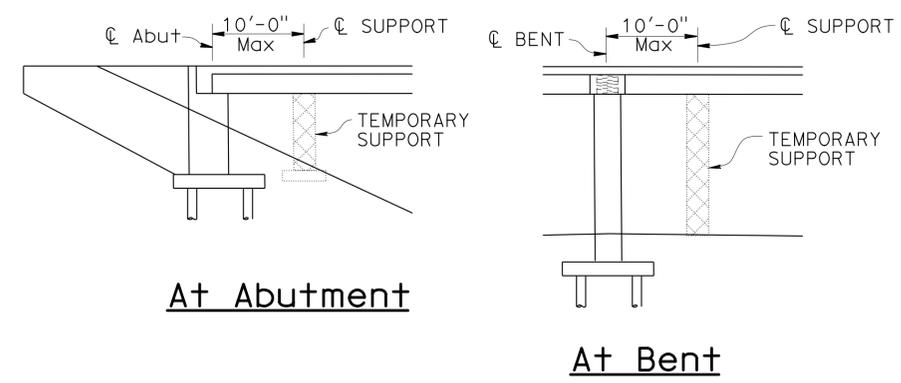
INDEX TO PLANS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1562	2313
Dawit Tadelle Esq REGISTERED CIVIL ENGINEER			0307/14 DATE	REGISTERED PROFESSIONAL ENGINEER Dawit T Worku No. C60711 Exp 12-31-16 CIVIL STATE OF CALIFORNIA	
PLANS APPROVAL DATE 6-1-15					
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BRIDGE CONSTRUCTION SEQUENCE

- Step 1. Construct abutments, bent footings, and columns.
- Step 2. Erect temporary supports at abutments and bent. Temporary supports must be capable of supporting a minimum girder and deck dead load reaction of 110kip per box girder end. This reaction does not include forces due to wind, impact, or construction loads. The supports must bear on a minimum of 2'-0" of structural fill, and not bear directly on footing. Temporary support must be located no more than 10'-0" from centerline of abutment and centerline of bent.
- Step 3. Erect precast / prestressed girders on temporary supports.
- Step 4. Construct Bent cap, intermediate diaphragm and end diaphragm. Allow cast-in-place bent cap, end diaphragm and intermediate diaphragm concrete to reach a minimum strength of 6 ksi.
- Step 5. First stage longitudinal post-tensioning:- Prestress girders to maximum of 50% of total longitudinal post-tensioning (500 kip per girder).
- Step 6. Place deck concrete, allow deck concrete to reach minimum compressive strength of 4.5 ksi.
- Step 7. Second stage longitudinal post-tensioning:- Complete longitudinal post-tensioning (500 kip per girder). Second stage post-tensioning must not be permitted less than 10 days after deck concrete has been placed and before the concrete compressive strength reach a minimum of 4.5 ksi at time of stressing.
- Step 8. Remove temporary supports, complete abutments, construct approach slabs and install railing and construct deck closure pour. Closure pour shall not be placed sooner than 14 days after temporary supports have been removed.



LOCATION OF TEMPORARY SUPPORT
No Scale

NOTES:
1. Any alternatives to this construction sequence must be reviewed and approved by the engineer.

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

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-0670	CITRUS STREET UNDERCROSSING (WIDEN) CONSTRUCTION SEQUENCE	
	DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			POST MILE	37.5		
	QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian						
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3622	PROJECT NUMBER & PHASE: 0713000007-4		CONTRACT NO.: 1193U1	
DISREGARD PRINTS BEARING EARLIER REVISION DATES								REVISION DATES	SHEET 3 OF 30

USERNAME => s125624 DATE PLOTTED => 18-MAY-2015 TIME PLOTTED => 13:53

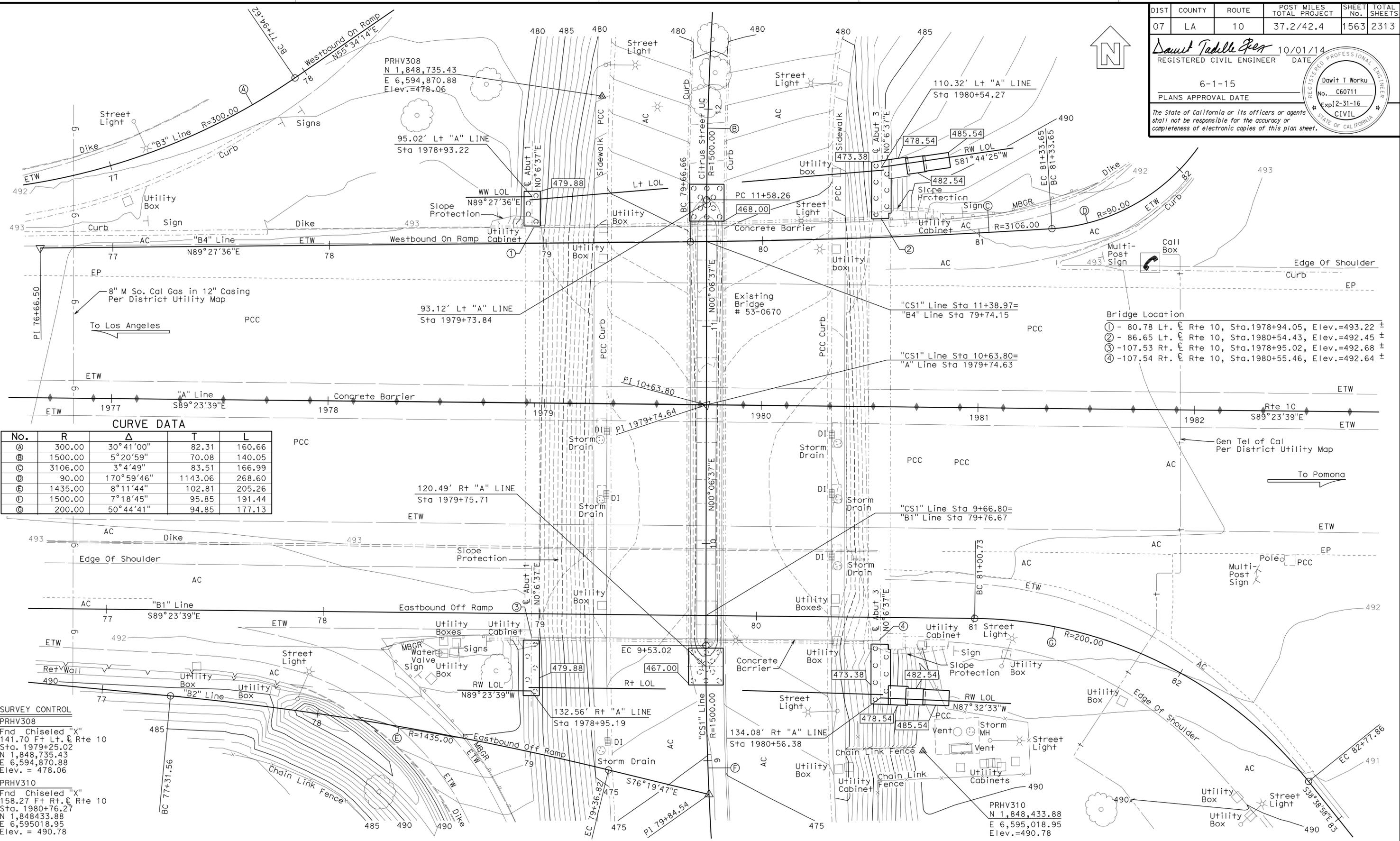
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1563	2313

Dawit Tadelle Tesse 10/01/14
REGISTERED CIVIL ENGINEER DATE

6-1-15
PLANS APPROVAL DATE

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Dawit T. Worku
No. C60711
Exp. 12-31-16
CIVIL



Bridge Location

①	- 80.78 Lt.	℄ Rte 10, Sta. 1978+94.05, Elev.=493.22 ±
②	- 86.65 Lt.	℄ Rte 10, Sta. 1980+54.43, Elev.=492.45 ±
③	- 107.53 Rt.	℄ Rte 10, Sta. 1978+95.02, Elev.=492.68 ±
④	- 107.54 Rt.	℄ Rte 10, Sta. 1980+55.46, Elev.=492.64 ±

CURVE DATA

No.	R	Δ	T	L
Ⓐ	300.00	30°41'00"	82.31	160.66
Ⓑ	1500.00	5°20'59"	70.08	140.05
Ⓒ	3106.00	3°4'49"	83.51	166.99
Ⓓ	90.00	170°59'46"	1143.06	268.60
Ⓔ	1435.00	8°11'44"	102.81	205.26
Ⓕ	1500.00	7°18'45"	95.85	191.44
Ⓖ	200.00	50°44'41"	94.85	177.13

SURVEY CONTROL

PRHV308
Fnd Chiseled "x"
141.70 Ft Lt. ℄ Rte 10
Sta. 1979+25.02
N 1,848,735.43
E 6,594,870.88
Elev. = 478.06

PRHV310
Fnd Chiseled "x"
158.27 Ft Rt. ℄ Rte 10
Sta. 1980+76.27
N 1,848,433.88
E 6,595,018.95
Elev. = 490.78

PRELIMINARY INVESTIGATION SECTION			DESIGN BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO. 53-0670	CITRUS STREET UC FOUNDATION PLAN
SCALE 1"=20'	VERT. DATUM NAVD88	PHOTOGAMMETRY AS OF: X	DETAILS BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			POST MILE 37.48	
HORIZ. DATUM NAD83 (1991.35)	SURVEYED BY District/T. Mason	CHECKED BY C. Fasset 10/2009	QUANTITIES BY Dawit Worku	CHECKED Homa Irannejadian			CONTRACT NO.: 1193U	

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3646 PROJECT NUMBER & PHASE: 071300007-4 CONTRACT NO.: 1193U

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
11/18/13 05/28/15 07/24/15	4	30

FILE => 53-0670-e-fp101.dgn

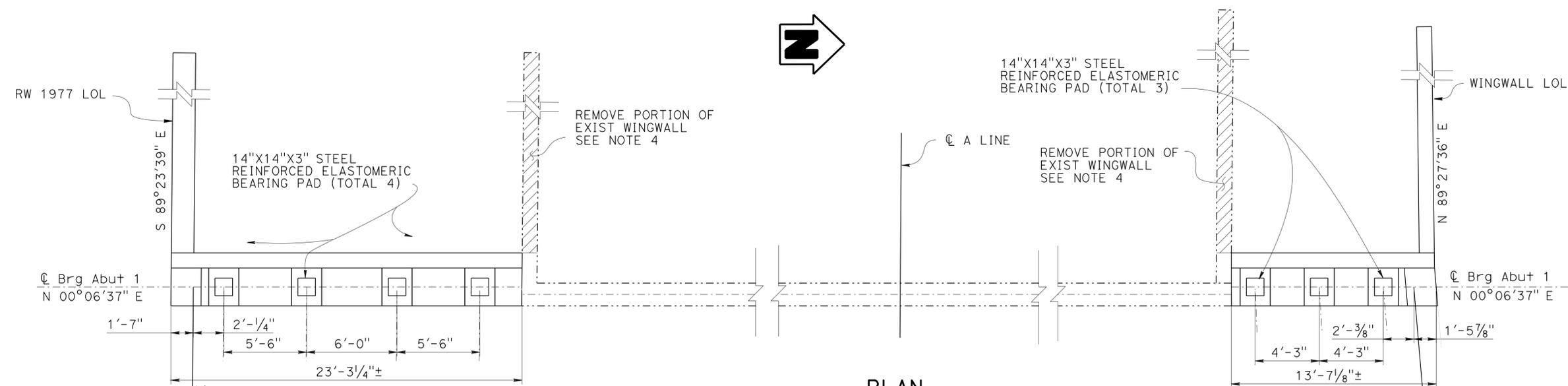
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1564	2313

Dawit Tadelle Tessema 10/01/14
 REGISTERED CIVIL ENGINEER DATE

6-1-15
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Dawit T Worku
 No. C60711
 Exp 12-31-16
 CIVIL
 STATE OF CALIFORNIA

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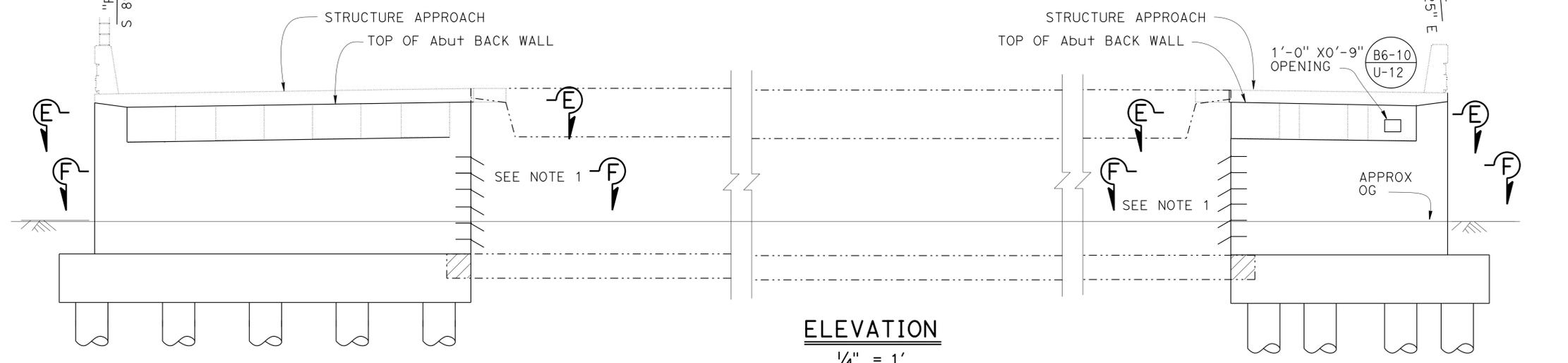
PLAN
 1/4" = 1'

NOTES:

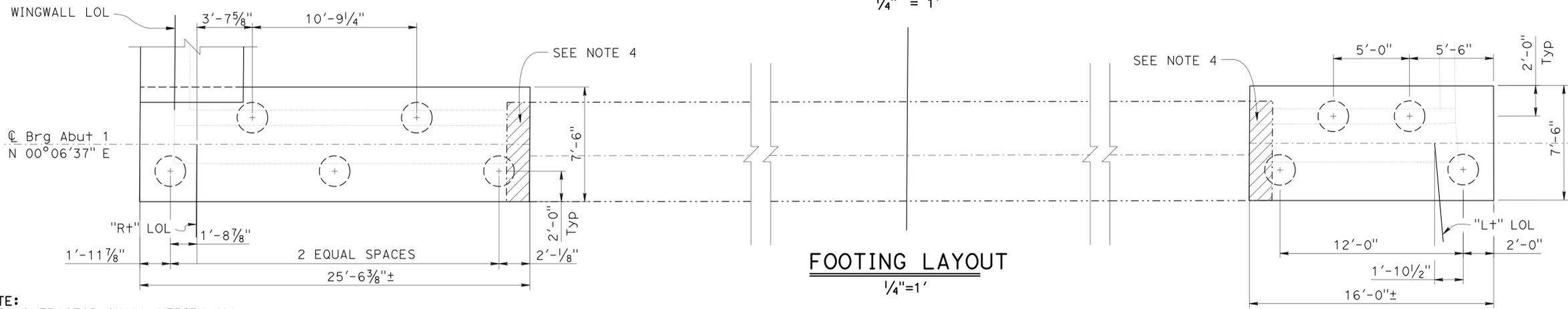
1. For drill and bond details, see "ABUTMENT DETAILS NO. 1" sheet
2. For Wingwall plan and elevation, see "ABUTMENT DETAILS NO. 2" sheet
3. For Section E-E and F-F, see "ABUTMENT DETAILS NO. 3" sheet
4. For concrete removal details, see "ABUTMENT DETAILS NO. 4" sheet

LEGEND:

- Bridge Removal (portion), see "ABUTMENT DETAIL NO. 4" sheet
- New Structure
- Existing Structure



ELEVATION
 1/4" = 1'



FOOTING LAYOUT
 1/4" = 1'

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

RIGHT WIDEN

LEFT WIDEN

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-0670	CITRUS STREET UNDERCROSSING (WIDEN) ABUTMENT 1 LAYOUT
	DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			POST MILE	37.5	
	QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian			CONTRACT NO.:	1193U1	
UNIT: 3622 PROJECT NUMBER & PHASE: 0713000007-4					CONTRACT NO.:		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
							REVISION DATES	SHEET 5 OF 30

USERNAME => s125624 DATE PLOTTED => 18-MAY-2015 TIME PLOTTED => 1:35:53

NOTE:
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CONTROLLING FIELD DIMENSIONS
BEFORE ORDERING OR FABRICATING
ANY MATERIAL.

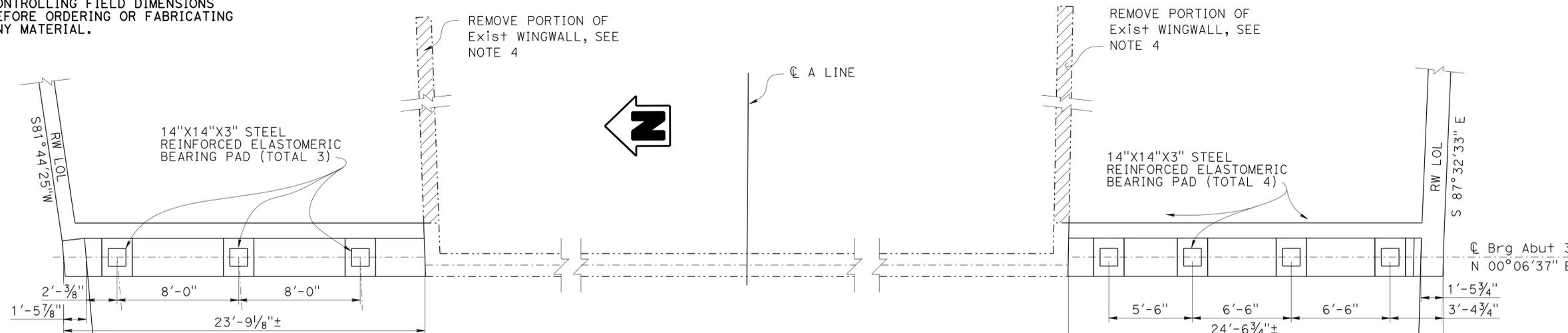
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1565	2313

Davit Tadelle Esq 10/01/14
REGISTERED CIVIL ENGINEER DATE

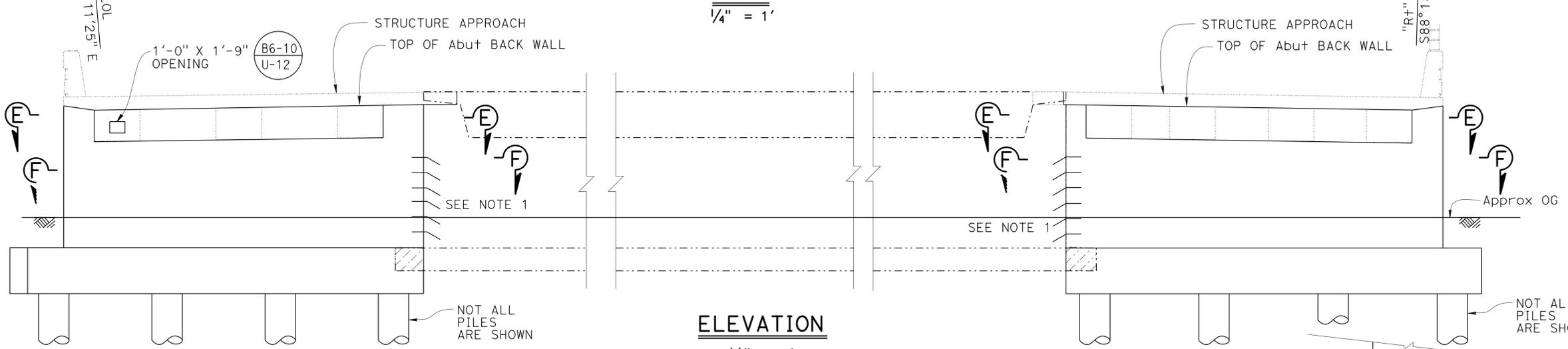
6-1-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Davit T Worku
No. C60711
Exp 12-31-16
CIVIL
STATE OF CALIFORNIA

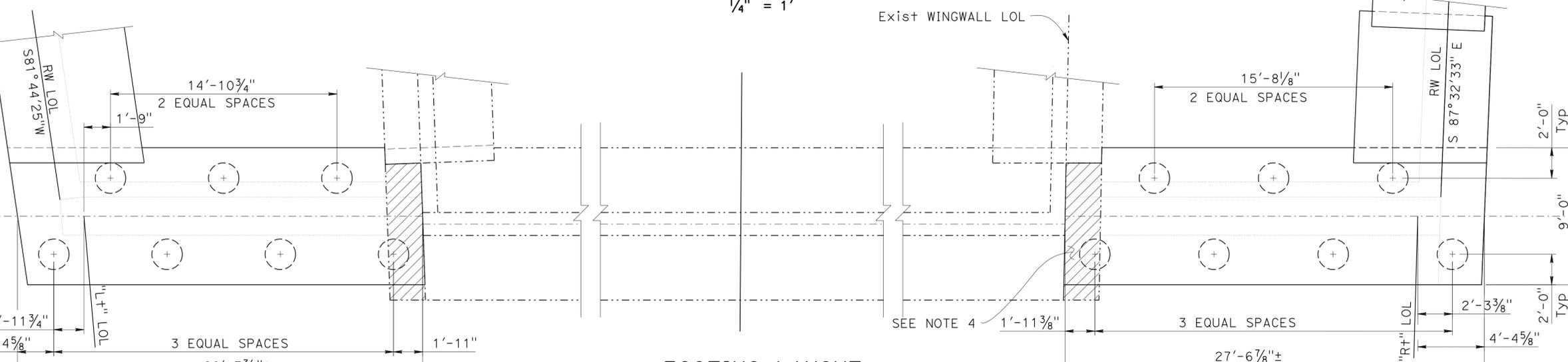
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PLAN
1/4" = 1'



ELEVATION
1/4" = 1'



FOOTING LAYOUT
1/4" = 1'

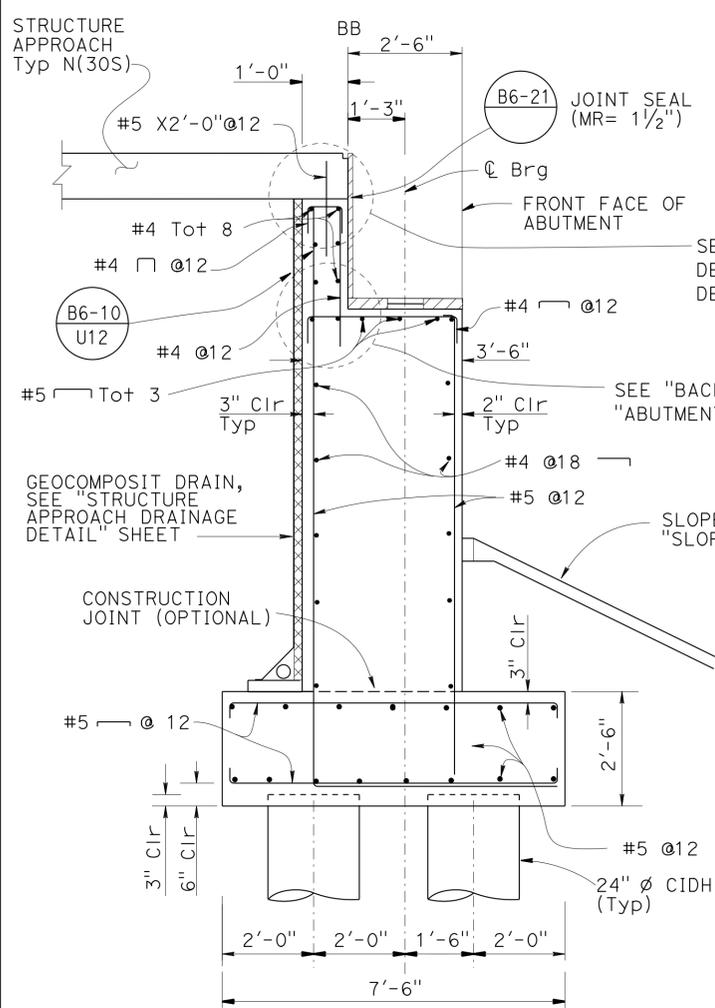
- NOTES:**
1. For drill and bond details, see "ABUTMENT DETAILS NO. 1" sheet
 2. For Wingwall plan and elevation, see "ABUTMENT DETAILS NO. 2" sheet
 3. For Section E-E and F-F, see "ABUTMENT DETAILS NO. 3" sheet
 4. For concrete removal details, see "ABUTMENT DETAILS NO. 4" sheet

- LEGEND:**
- Bridge Removal (portion), see "ABUTMENT DETAIL NO. 4" sheet
 - New Structure
 - Existing Structure

DESIGN	BY	Davit Worku	CHECKED	Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-0670	CITRUS STREET UNDERCROSSING (WIDEN) ABUTMENT 3 LAYOUT	
	DETAILS	BY	K Farahzadi\ Lan Tran	CHECKED			Edward B Mu	POST MILE		37.5
	QUANTITIES	BY	Davit Worku	CHECKED			Homa Iraninejadian			

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1566	2313

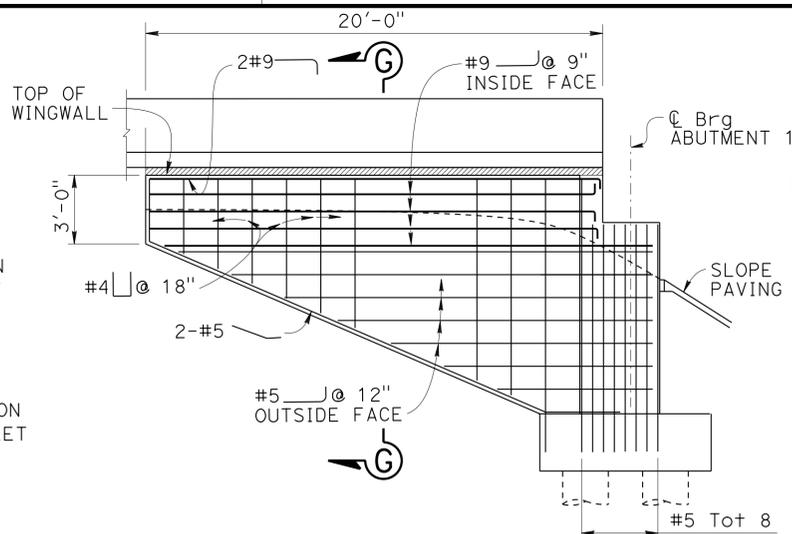
Dawit Tadelle Tessema 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
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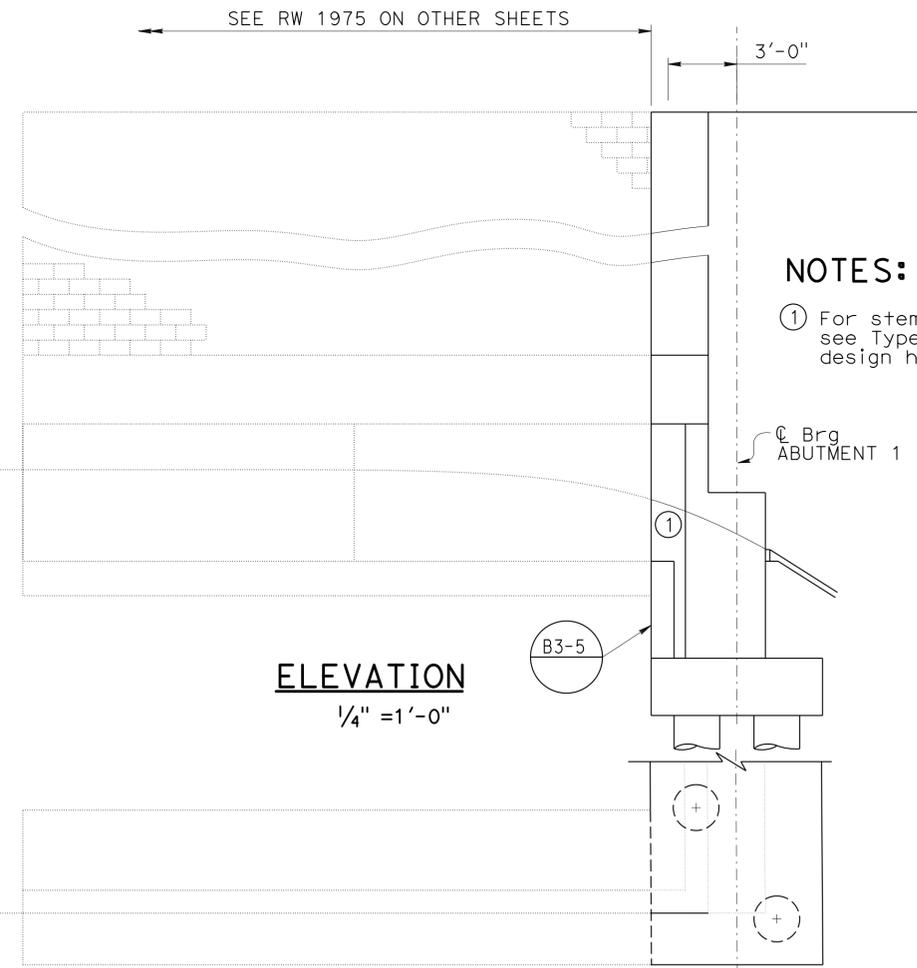
ABUTMENT 1 SECTION
1/2" = 1'-0"

LEGEND:
 — New Structure
 - - - Existing Structure

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

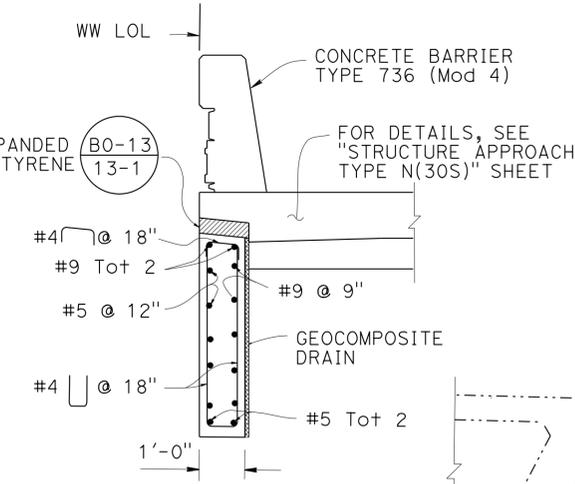


**ABUTMENT 1 LEFT WINGWALL
MIRRORED ELEVATION**
1/4" = 1'-0"

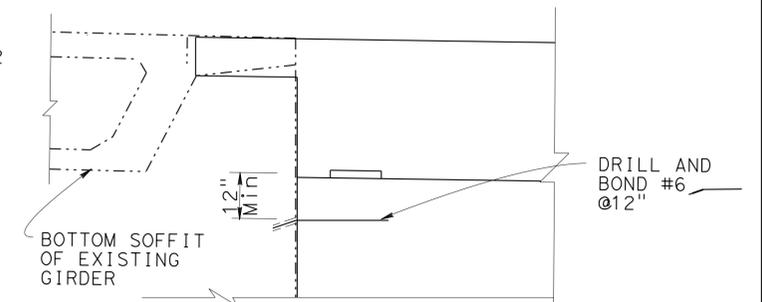


**ABUTMENT 1 RIGHT WIDENING
RETAINING WALL**
1/4" = 1'-0"

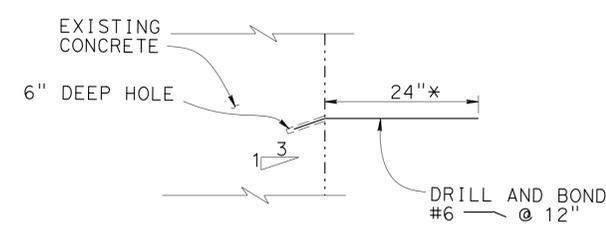
NOTES:
 ① For stem reinforcement detail see Type 1 Retaining Wall design height H = 10'-0"



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

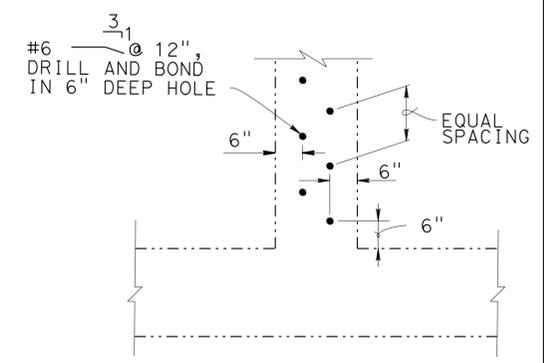


ABUTMENT JOINT DETAIL
No Scale



DOWEL DETAIL
NO SCALE

NOTE:
 1. For Bearing pad details, Joint protection details and Shear key details, see "ABUTMENT DETAILS NO.3" sheet

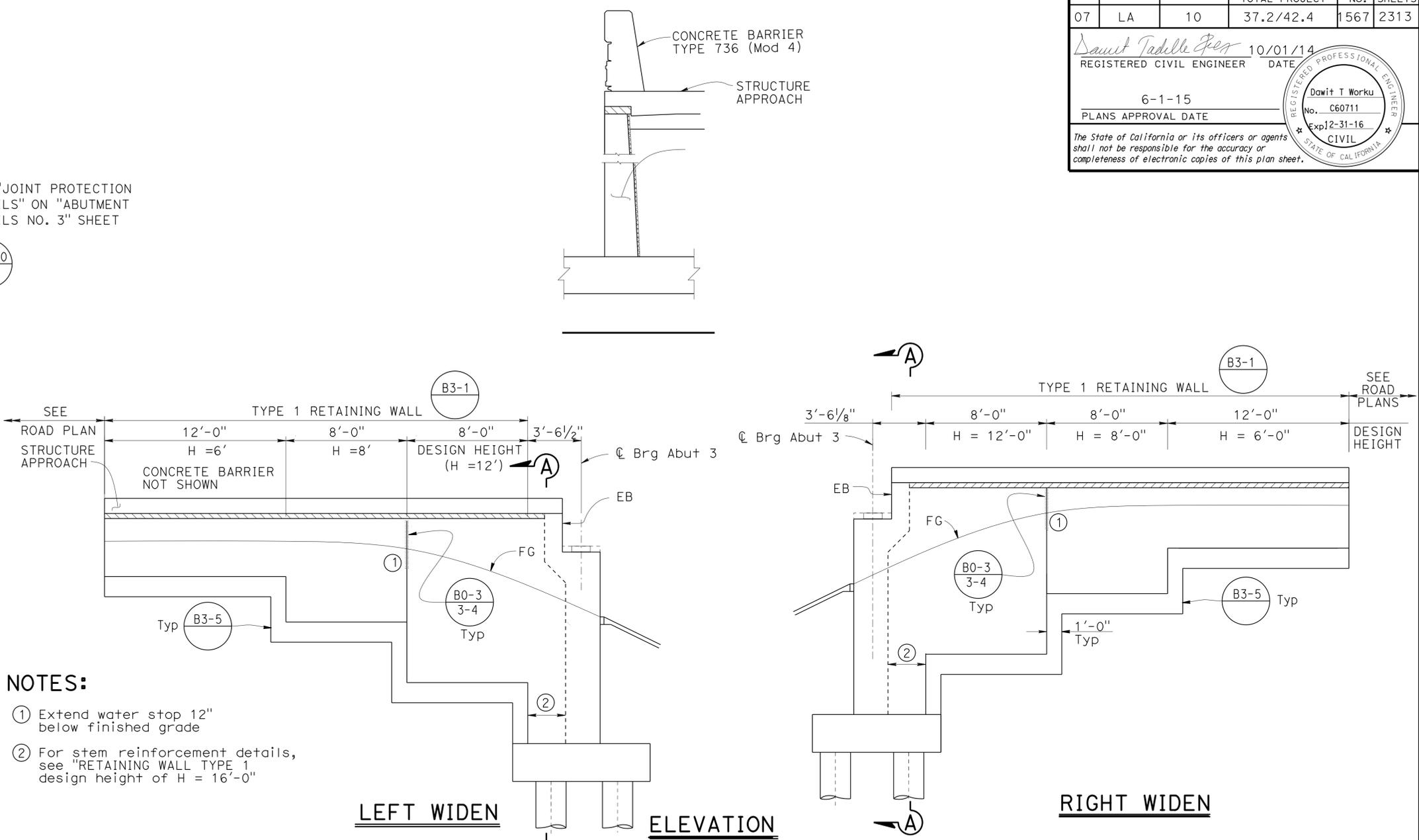
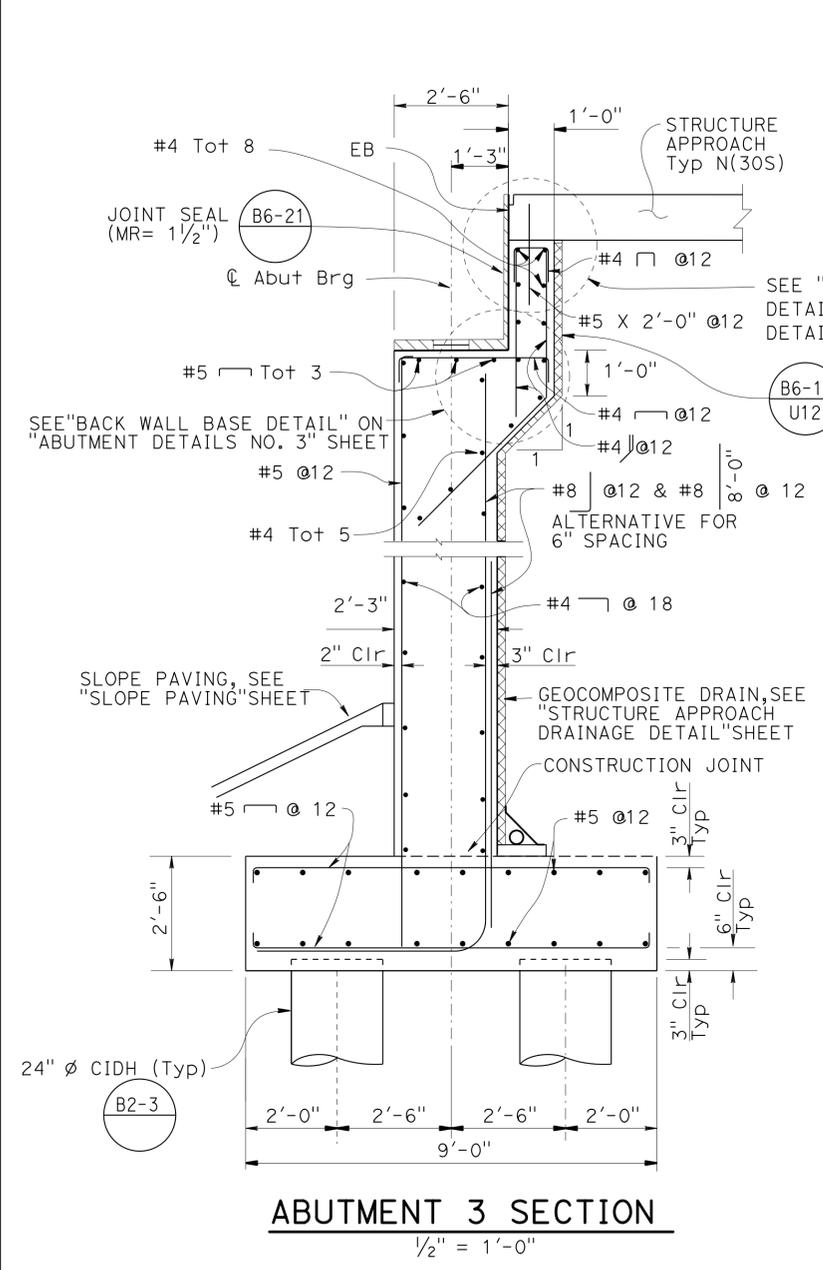


SECTION D-D
No Scale

DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	53-0670	CITRUS STREET UNDERCROSSING (WIDEN) ABUTMENT DETAILS NO. 1
DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu		POST MILE	37.5	
QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian				

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1567	2313

Dawit Tadelle Esq. 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
 Dawit T Worku
 No. C60711
 Exp 12-31-16
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- NOTES:**
- Extend water stop 12" below finished grade
 - For stem reinforcement details, see "RETAINING WALL TYPE 1 design height of H = 16'-0"

NOTE:
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DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	CITRUS STREET UNDERCROSSING (WIDEN) ABUTMENT DETAILS NO. 2
DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			53-0670	
QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian			POST MILE 37.5	

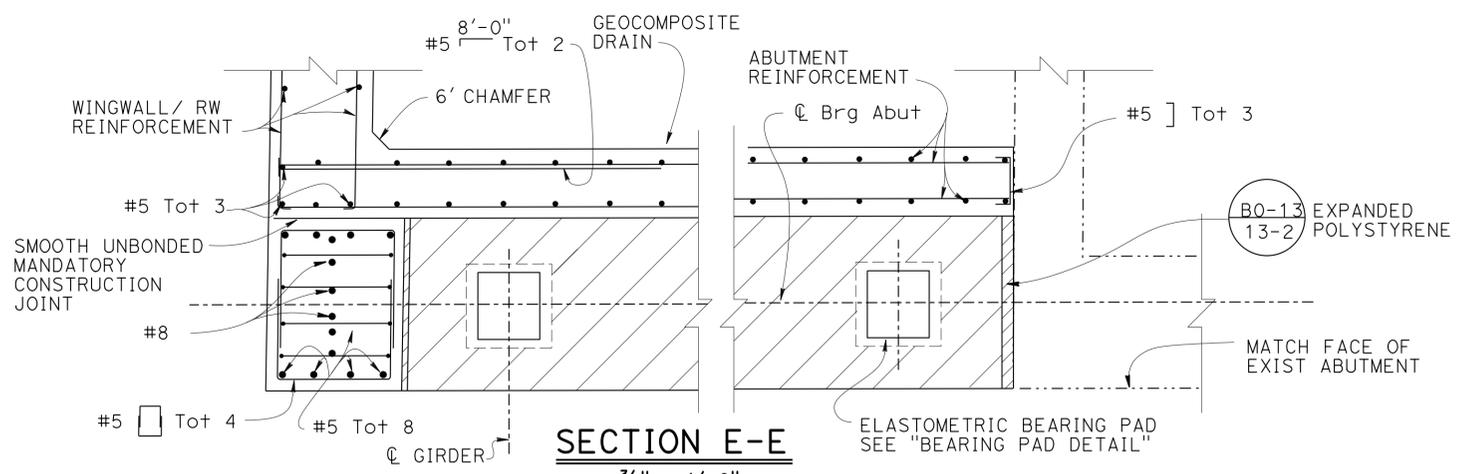
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT: 3622 PROJECT NUMBER & PHASE: 0713000007-4 CONTRACT NO.: 1193U1 DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
5-28-14 7-23-14 7-24-14	8	30

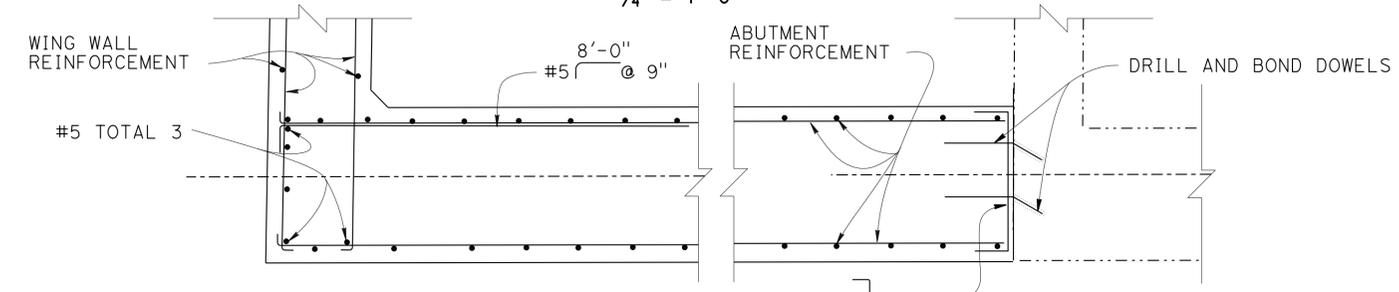
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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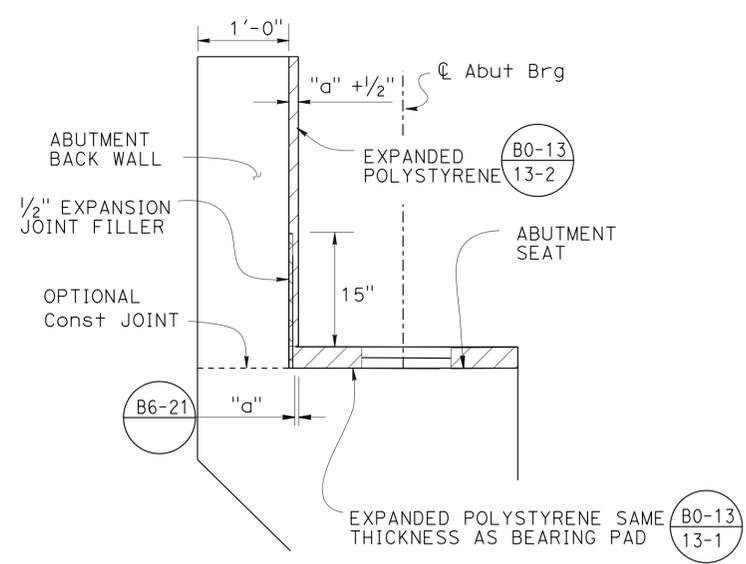
Dawit T Worku 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
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SECTION E-E
3/4" = 1'-0"



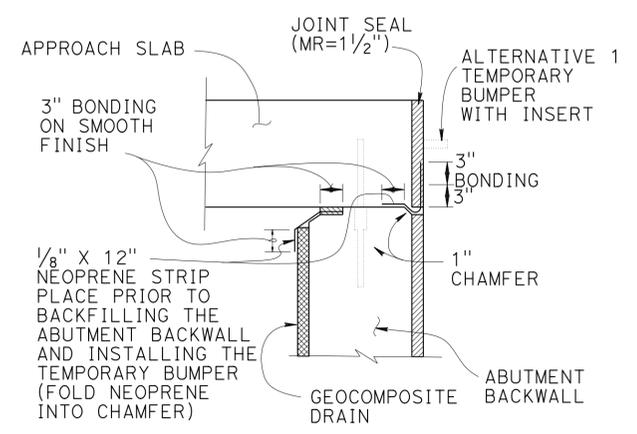
SECTION F-F
3/4" = 1'-0"



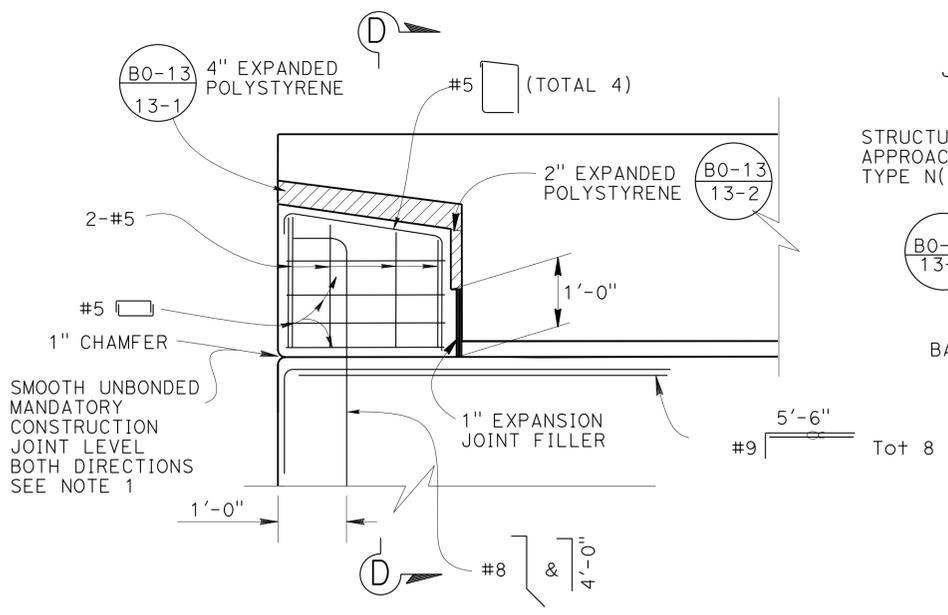
BACKWALL BASE DETAIL
1" = 1'

LEGEND:

- Indicates Expanded Polystyrene
- New Structure
- Existing Structure

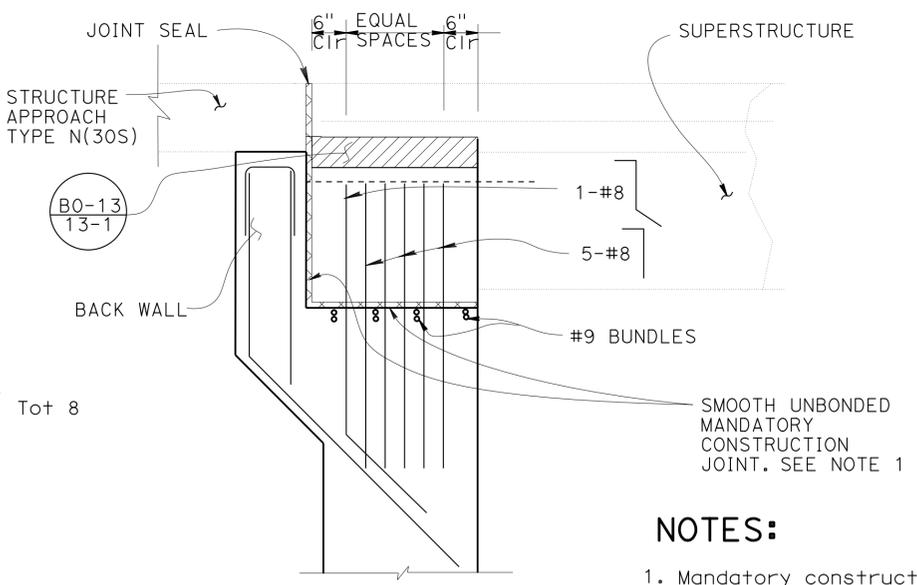


JOINT PROTECTION DETAILS
NO SCALE



SHEAR KEY DETAIL
3/4" = 1'-0"

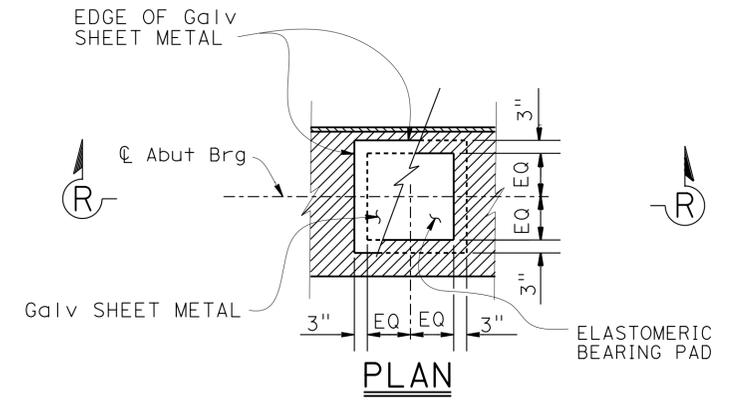
NOTE:
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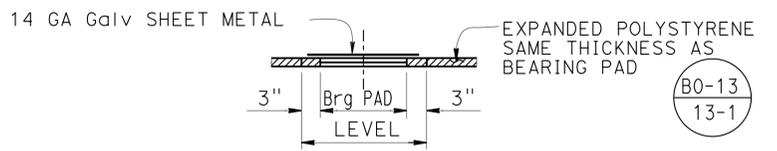
SECTION D-D
3/4" = 1'-0"

NOTES:

1. Mandatory construction joint surface to be smooth finished and lined with 15 lbs construction paper
2. Shear key and wingwall reinforcement to be discontinuous as shown
3. Vertical shear key reinforcement (#8 Bar) to be galvanized.
4. Abument 3 Left widen shown, the rest are similar



PLAN



SECTION R-R
BEARING PAD DETAIL
No Scale

DETAILS TYPICAL AT ALL BEARING PADS

NOTE:

Coat top of Bearing pad with silicone grease prior to placing sheet metal.

DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	CITRUS STREET UNDERCROSSING (WIDEN) ABUTMENT DETAILS NO. 3
DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			53-0670	
QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian			POST MILE 37.5	

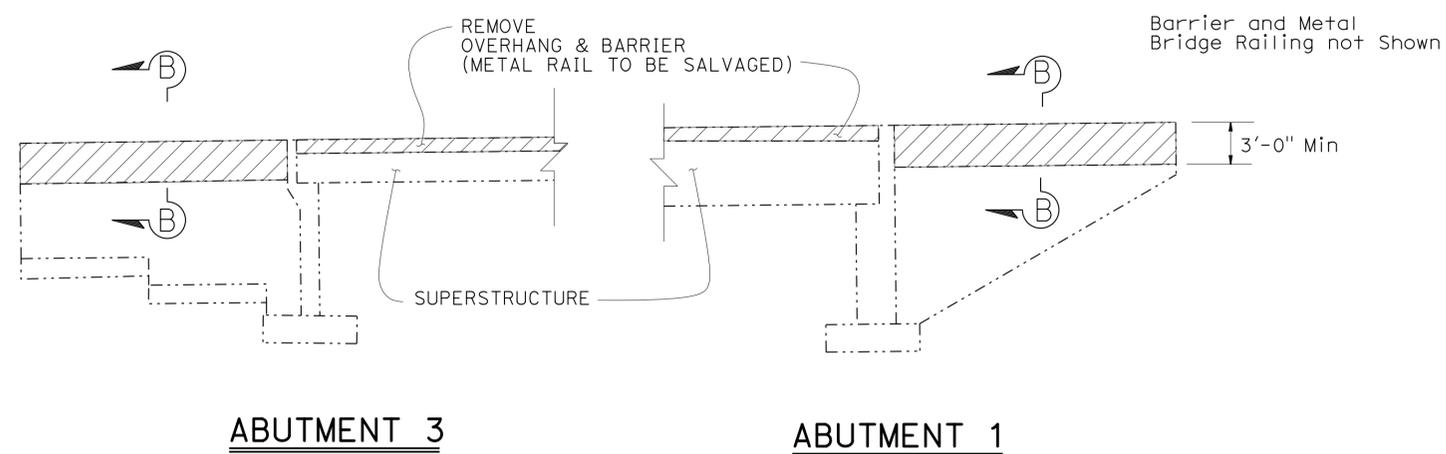
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1569	2313

Dawit Tadelle Esq 10/01/14
 REGISTERED CIVIL ENGINEER DATE

6-1-15
 PLANS APPROVAL DATE

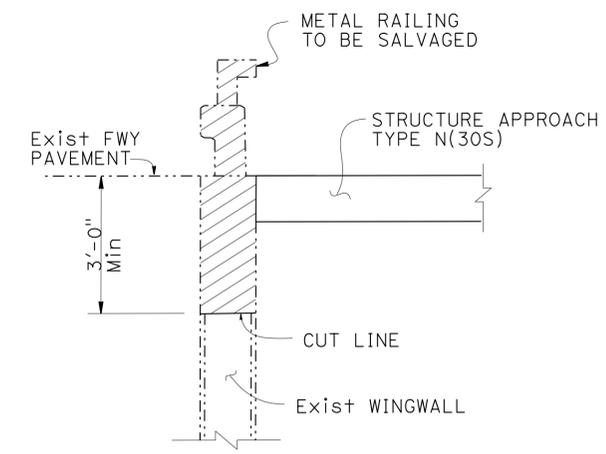
REGISTERED PROFESSIONAL ENGINEER
 Dawit T Worku
 No. C60711
 Exp 12-31-16
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 STATE OF CALIFORNIA

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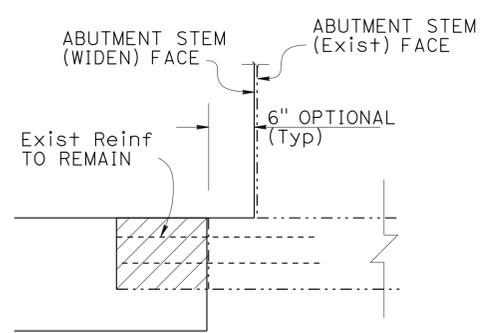
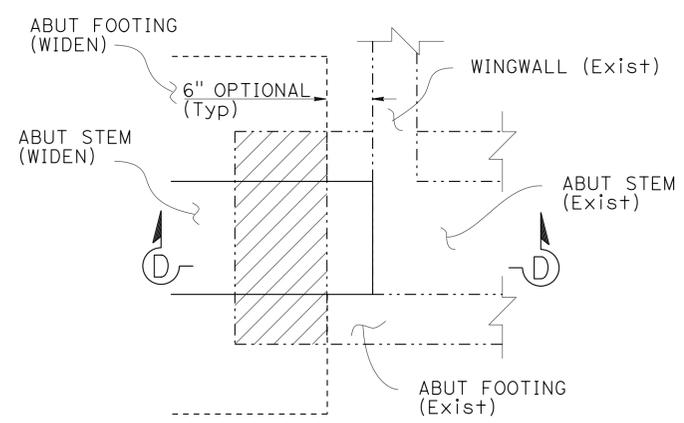


ABUTMENT 3 **ABUTMENT 1**

WING WALL REMOVAL DETAILS
 NO SCALE



SECTION B-B
 NO SCALE



PLAN **SECTION D-D**

ABUTMENT FOOTING REMOVAL DETAIL
 No Scale

LEGEND:

- Bridge removal (portion)
- New Structure
- Existing Structure

NOTE:
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DESIGN	BY Dawit Worku	CHECKED Edward B Mu
DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu
QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 20

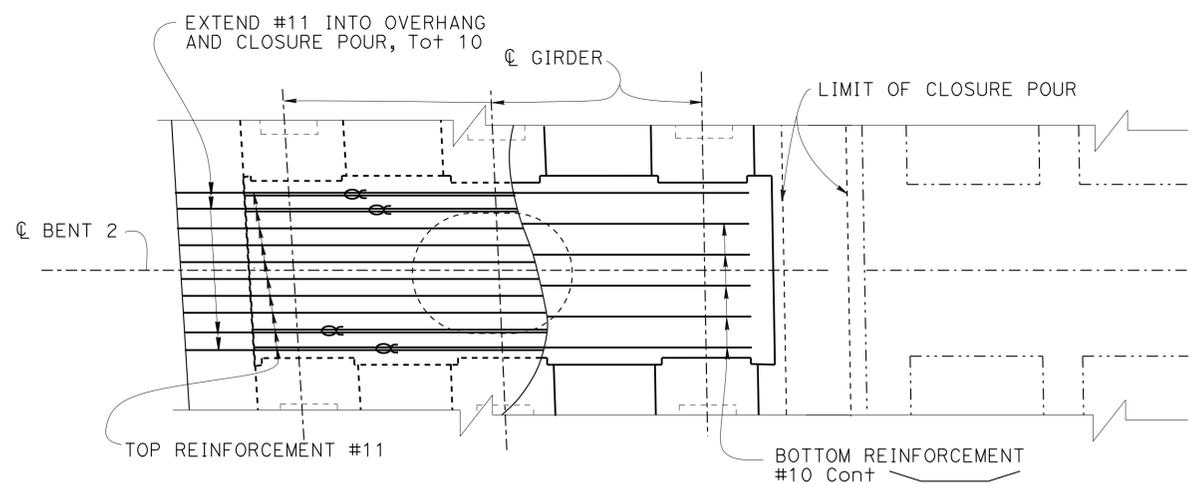
BRIDGE NO.	53-0670
POST MILE	37.5

CITRUS STREET UNDERCROSSING (WIDEN)
ABUTMENT DETAILS NO. 4

USERNAME => s125624 DATE PLOTTED => 18-MAY-2015 TIME PLOTTED => 13:53

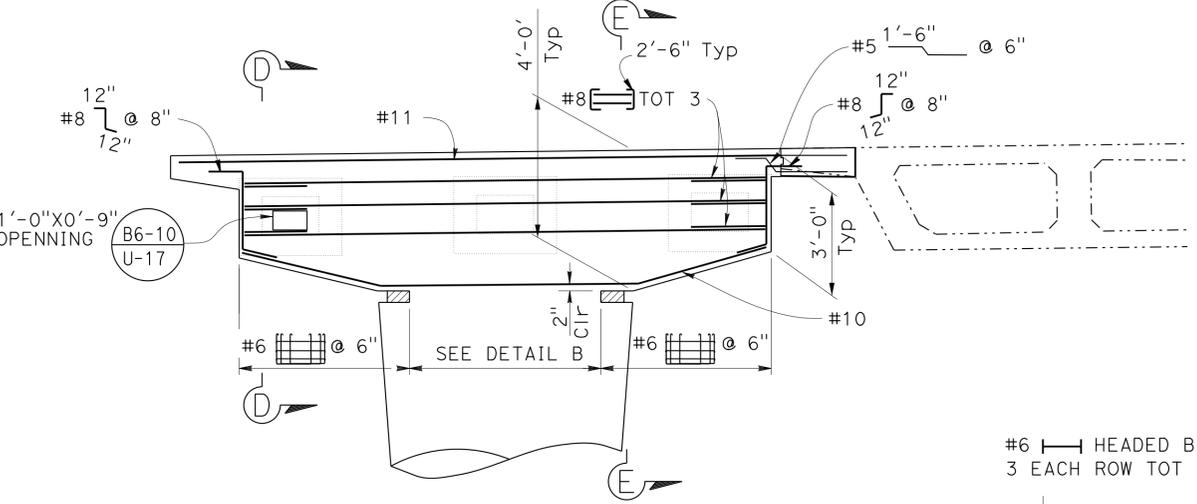
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1570	2313

Dawit Tadelle Esq. 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
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PLAN (LEFT WIDEN)

3/8" = 1'



ELEVATION BENT 2 (LEFT WIDEN)

3/8" = 1'

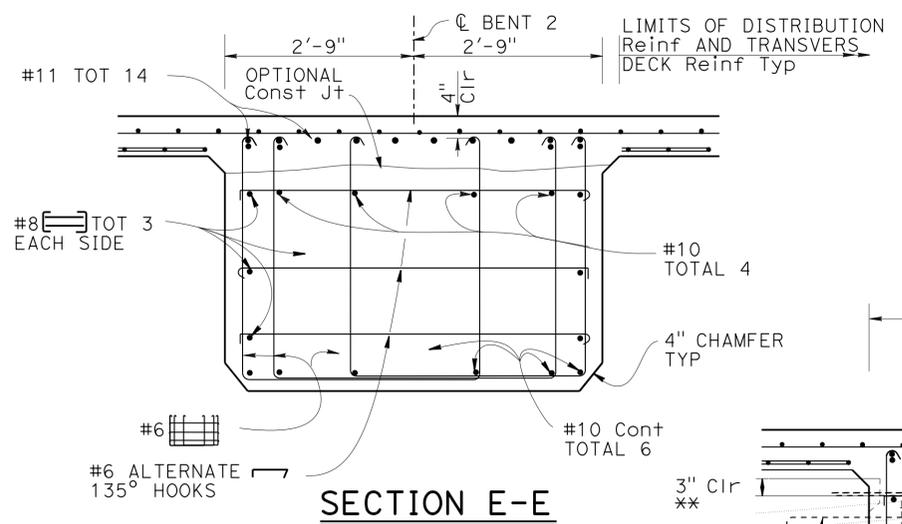
NOTES:

1. For column flare REINFORCEMENT and Column Geometry see "BENT 2 DETAILS" sheet.
 2. Prior to placing the column concrete, Contractor to align column main reinforcement bar to accommodate the projecting reinforcement from PC/PS girder, joint shear and bentcap reinforcement.
 3. For reinforcement not shown see "PRESTRESSED GIRDER DETAILS NO. 1" sheet
 4. No splices allowed in main cap top & bottom reinforcement
- ** Reinforcement may be adjusted to clear prestressing duct

LEGEND:

- Expanded Polystyrene
- New Structure
- Existing Structure

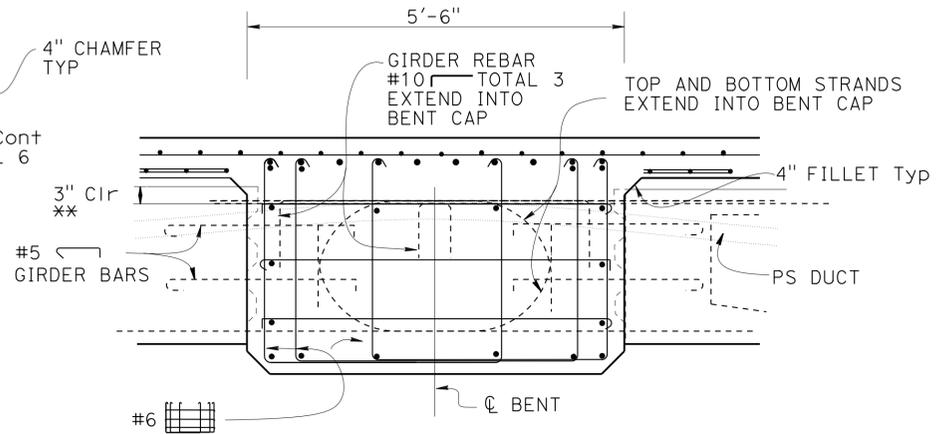
NOTE:
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SECTION E-E

3/4" = 1'

For reinforcement bars not shown, see "SECTION F-F" and "SECTION D-D"

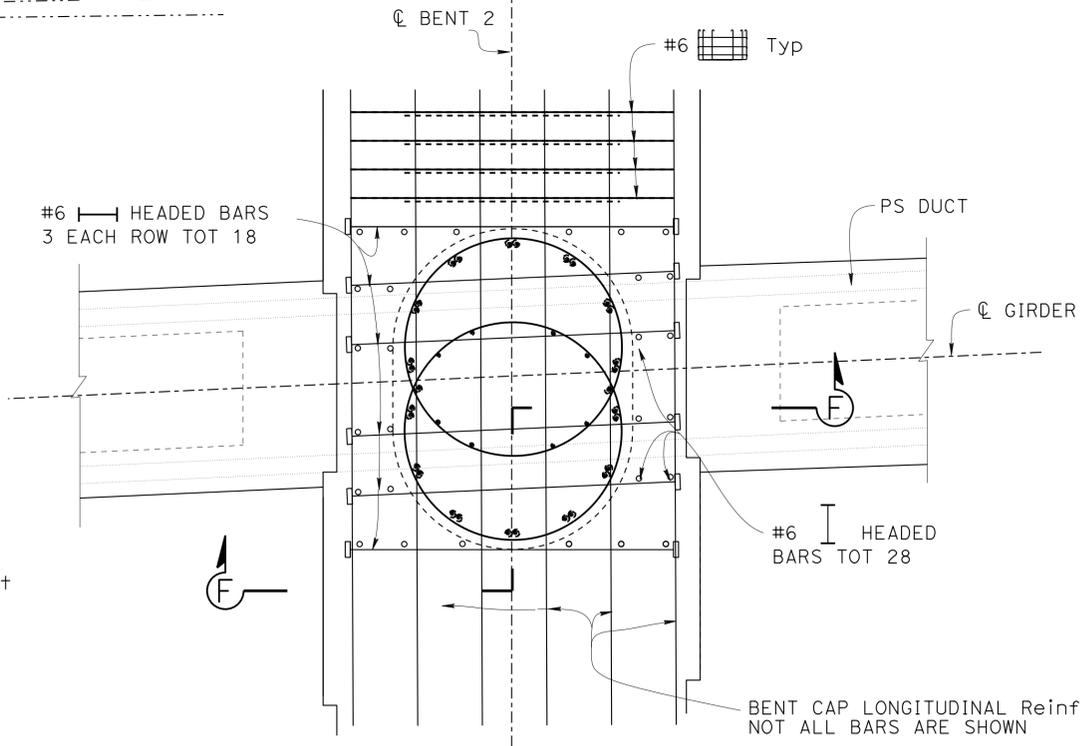


SECTION D-D

3/4" = 1'

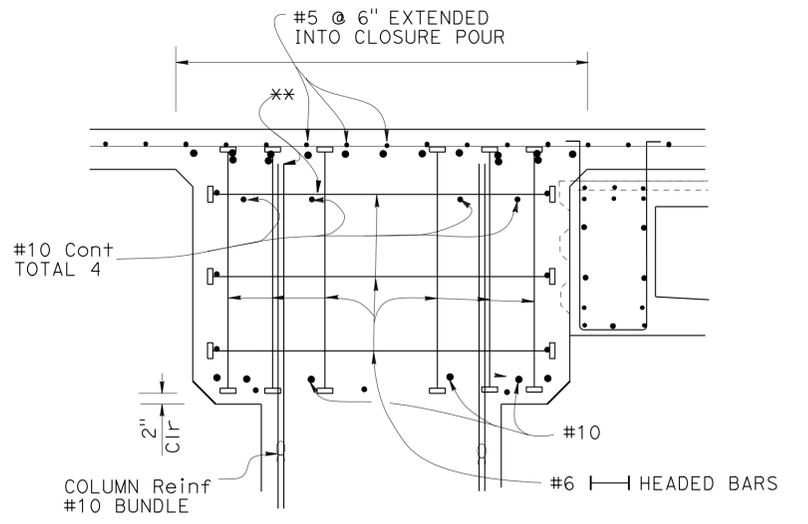
NOTE:

For reinforcement bars not shown, see "SECTION E-E" and "SECTION F-F"



JOINT REINFORCEMENT DETAIL B

3/4" = 1'



SECTION F-F

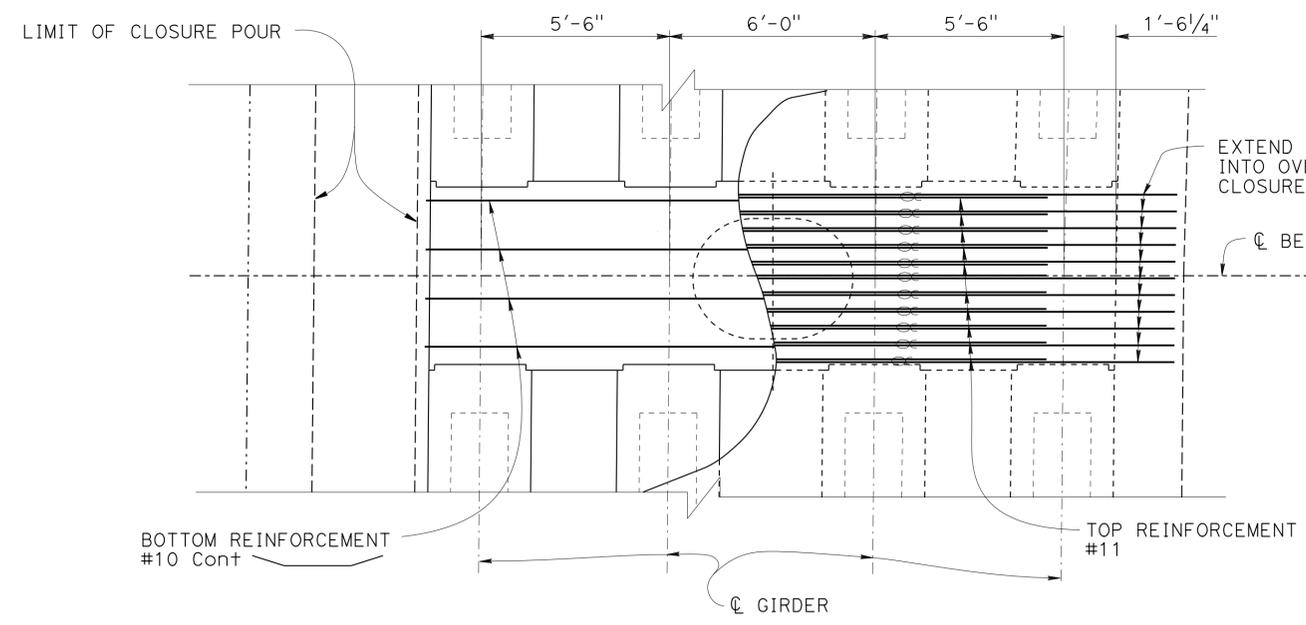
3/4" = 1'

NOTES:

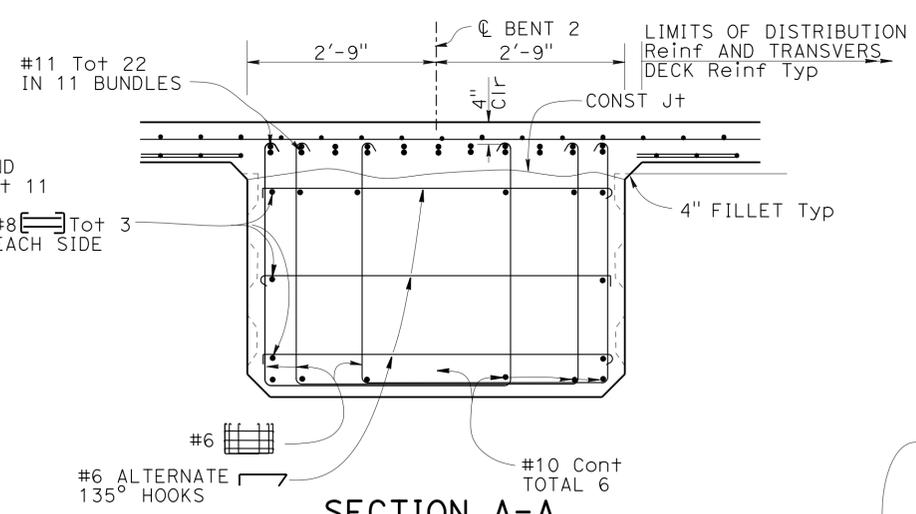
For reinforcement bars not shown, see "SECTION E-E" and "SECTION D-D"

DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-0670	CITRUS STREET UNDERCROSSING (WIDEN) BENT LAYOUT (LEFT WIDEN)
DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu		POST MILE	37.5	
QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian				

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1571	2313
Dawit Tadelle Geza REGISTERED CIVIL ENGINEER			10/01/14 DATE	Dawit T Worku No. C60711 Exp 12-31-16 CIVIL STATE OF CALIFORNIA	
6-1-15 PLANS APPROVAL DATE					
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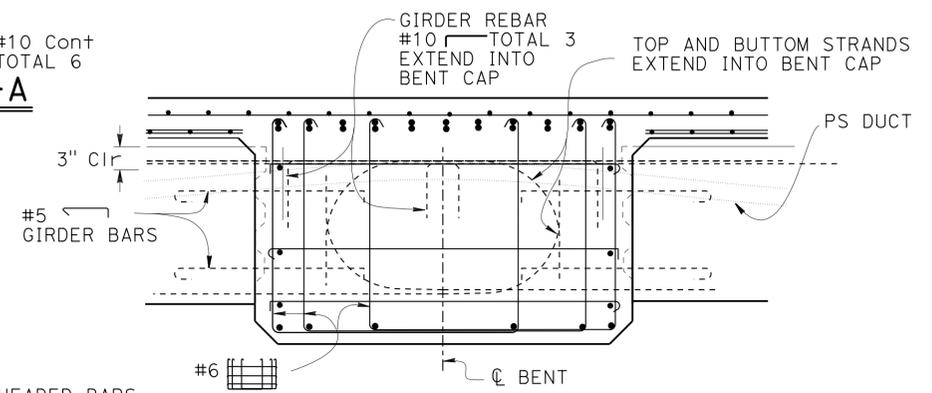


PLAN (RIGHT WIDEN)
3/8" = 1'



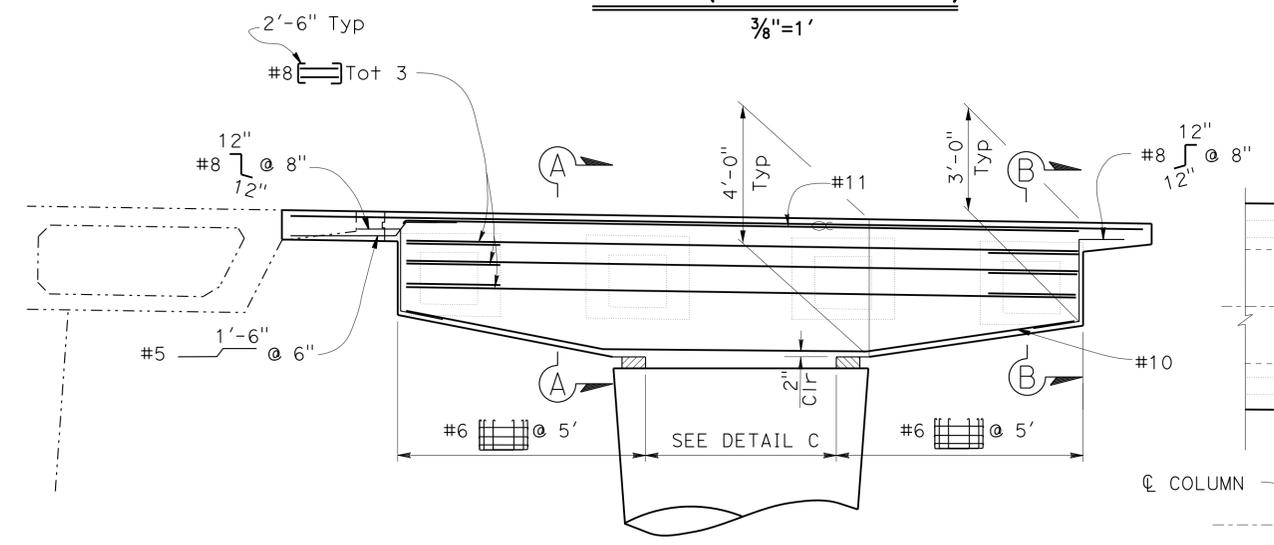
SECTION A-A
3/4" = 1'

NOTE:
For reinforcement bars not shown, see "SECTION B-B" and "SECTION C-C"



SECTION B-B
3/4" = 1'

NOTE:
For reinforcement bars not shown, see "SECTION B-B" and "SECTION C-C"



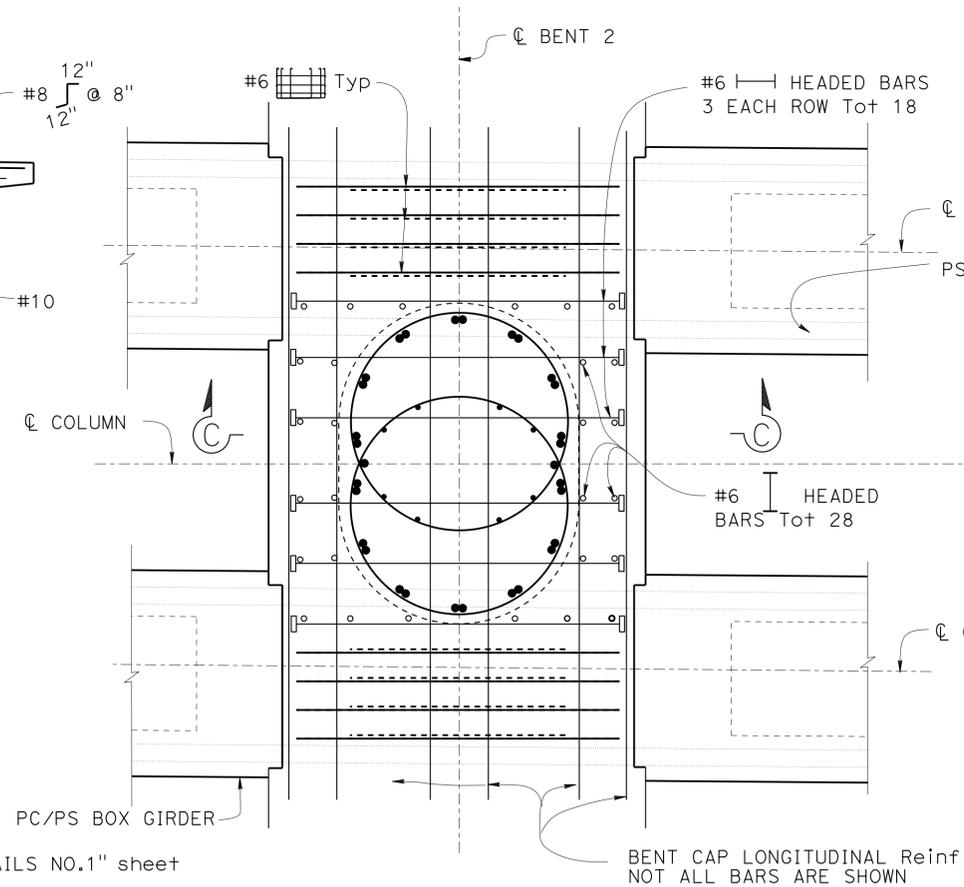
ELEVATION BENT 2 (RIGHT WIDEN)
3/8" = 1'

LEGEND:
 Expanded Polystyrene
 New Structure
 Existing Structure

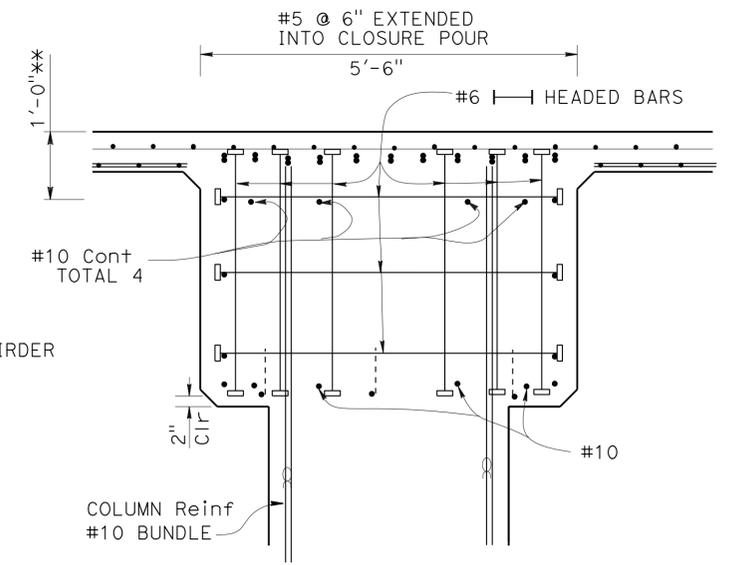
- NOTES:**
1. For column flare reinforcement and column Geometry see "BENT 2 DETAILS" sheet.
 2. Prior to placing the column concrete, contractor to align column main reinforcement bar to accommodate the projecting reinforcement from PC/PS girder, joint shear and bentcap reinforcement.
 3. For reinforcement not shown see "PRESTRESSED GIRDER DETAILS NO.1" sheet
 4. No splices allowed in main cap top & bottom reinforcement

** Reinforcement may be adjusted to clear prestressing duct

NOTE:
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JOINT REINFORCEMENT DETAIL C
3/4" = 1'



SECTION C-C
3/4" = 1'

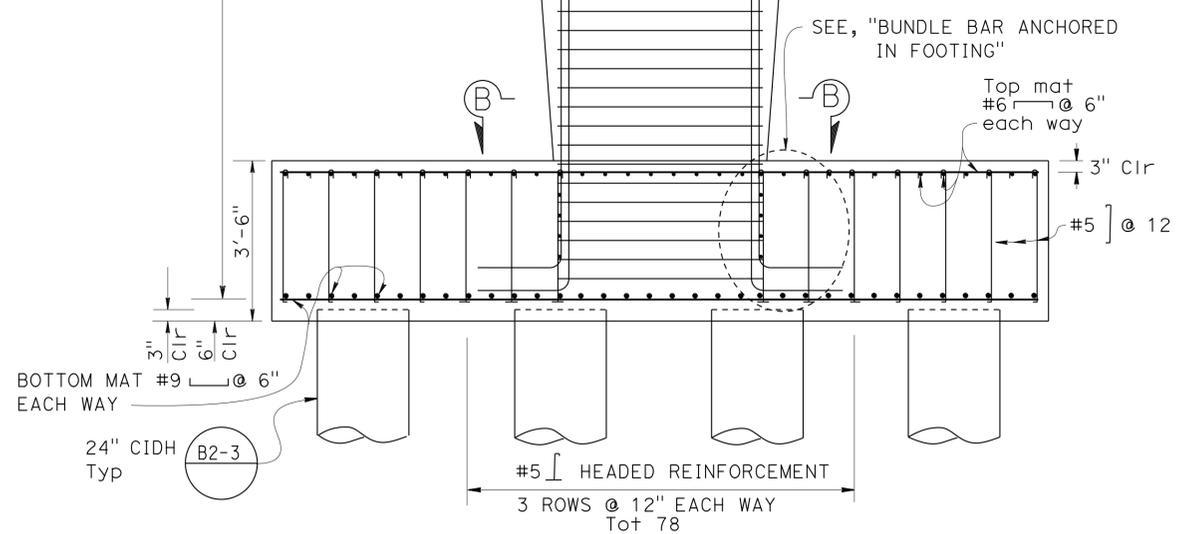
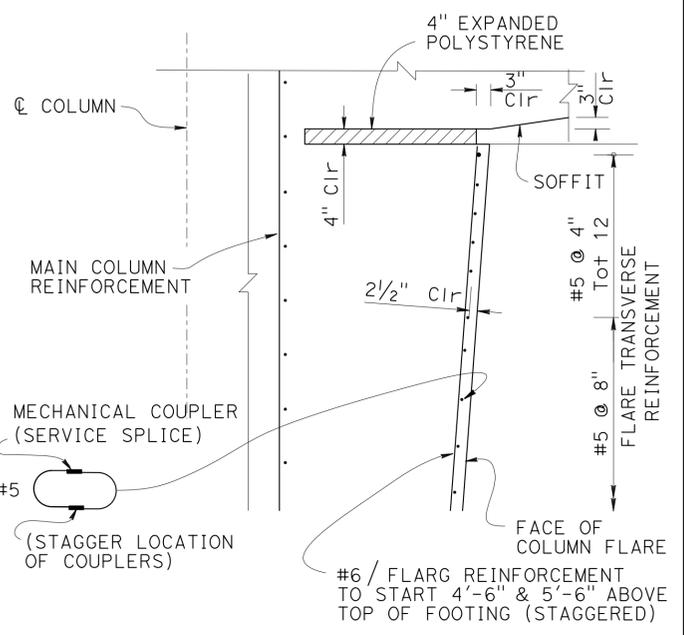
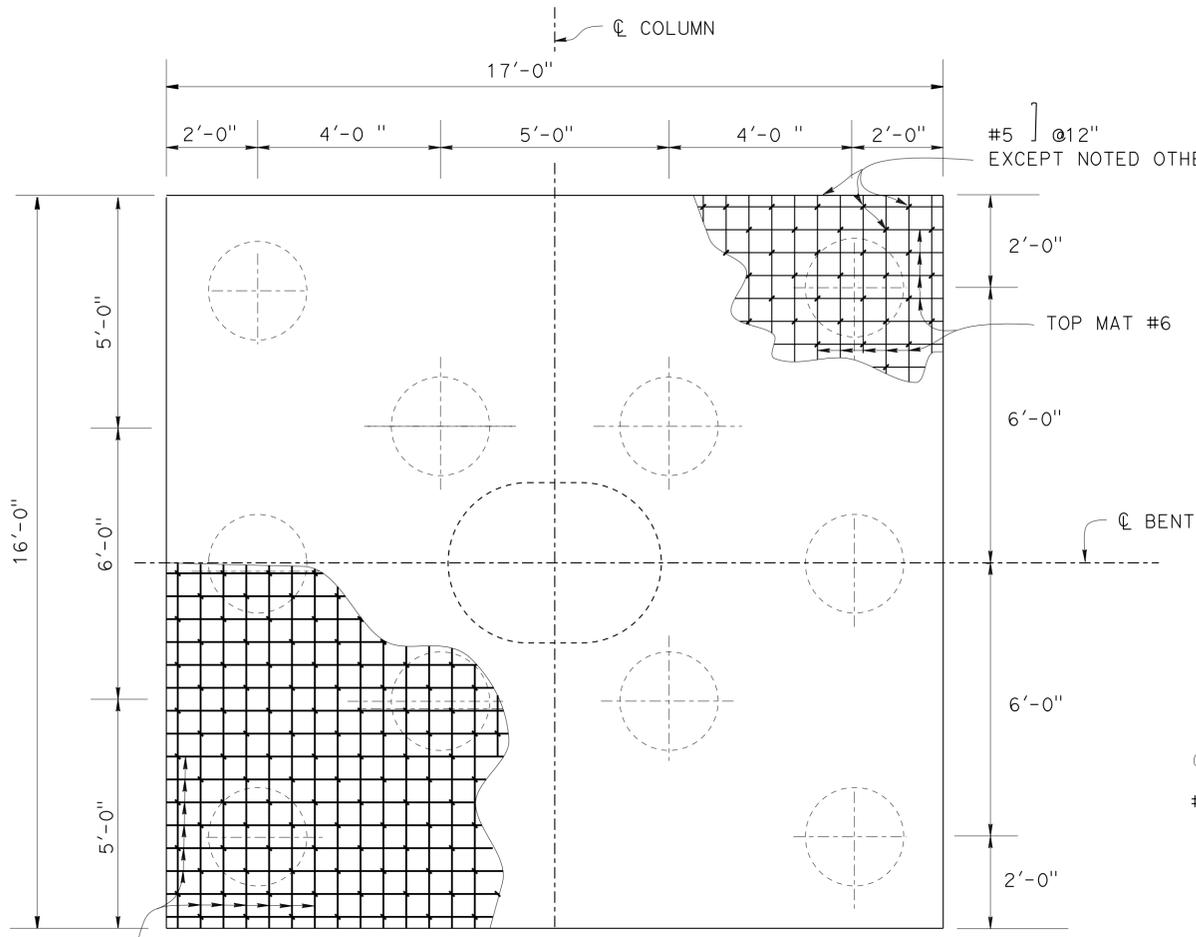
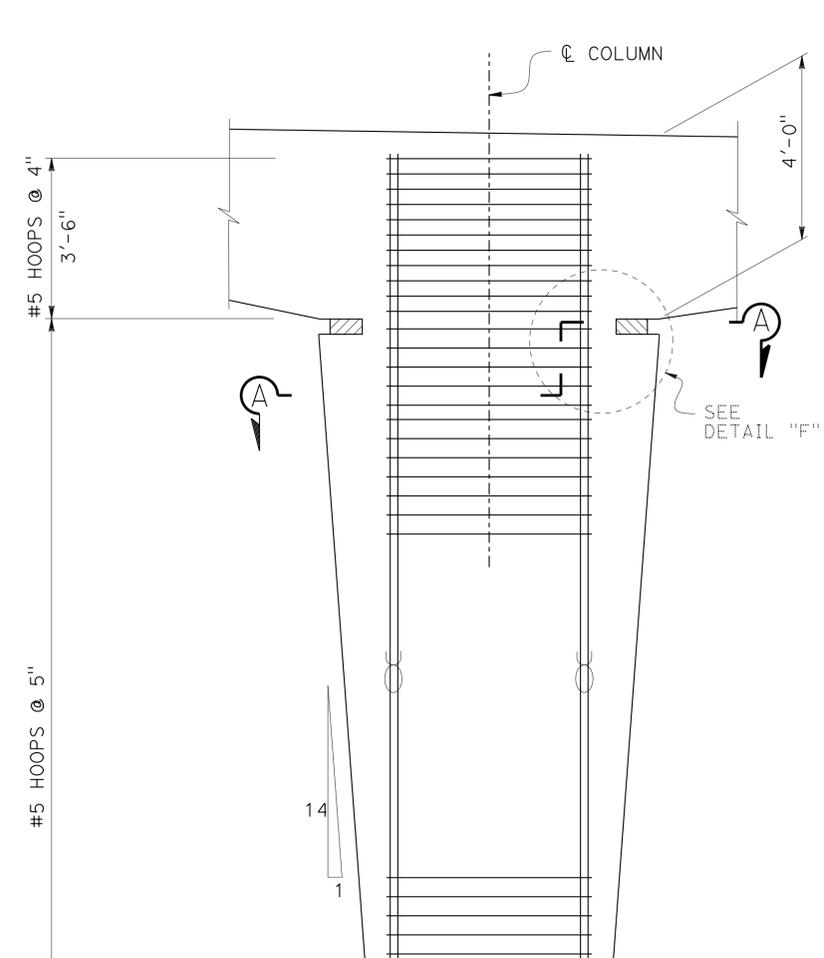
NOTE:
For reinforcement bars not shown, see "SECTION A-A" and "SECTION B-B"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-0670	CITRUS STREET UNDERCROSSING (WIDEN) BENT LAYOUT (RIGHT WIDEN)	
	DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			POST MILE	37.5		
	QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian	UNIT: 3622	PROJECT NUMBER & PHASE: 071300007-4	CONTRACT NO.: 1193U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 12 OF 30

USERNAME => s125624 DATE PLOTTED => 18-MAY-2015 TIME PLOTTED => 13:53

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1572	2313

Dawit Tadelle Esq. 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
 Dawit T Worku
 No. C60711
 Exp 12-31-16
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 STATE OF CALIFORNIA
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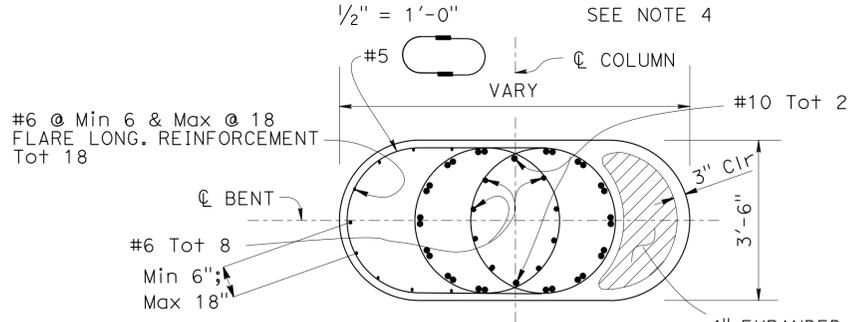


FOOTING PLAN - LEFT AND RIGHT WIDEN

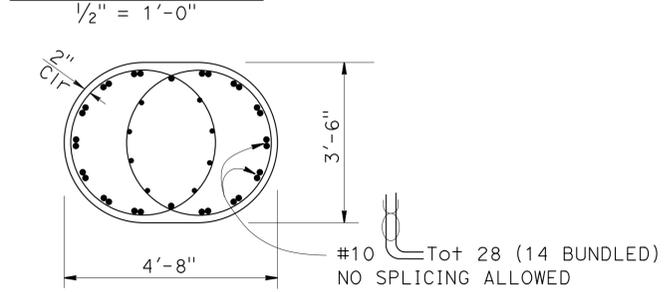
DETAIL "F"

NOTES:

1. No Splices allowed in main column reinforcement
2. All Hoops shall be ultimate butt splice
3. Hoops may be adjusted for installation of prestress duct as approved by the engineer
4. No two adjacent piles shall be installed at the same time



SECTION A-A



SECTION B-B

LEGEND

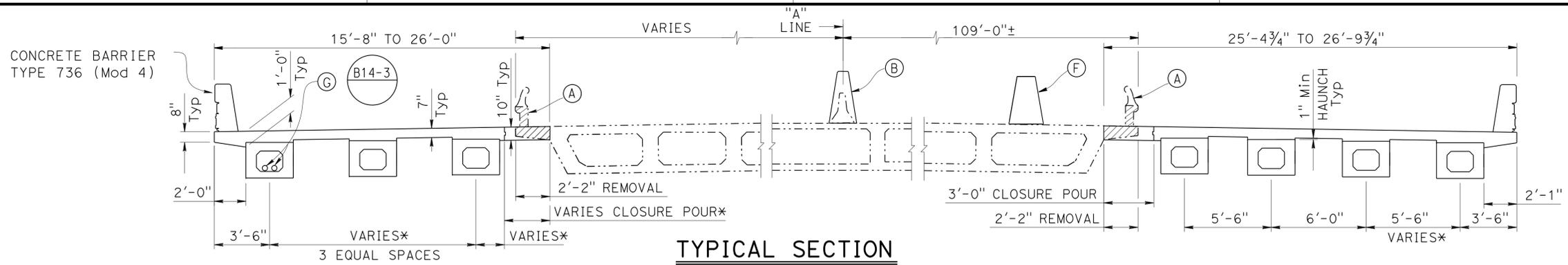
- Expanded Polystyrene
- New Structure

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

DESIGN BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO. 53-0670	CITRUS STREET UNDERCROSSING (WIDEN) BENT 2 DETAIL
DETAILS BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			POST MILE 37.5	
QUANTITIES BY Dawit Worku	CHECKED Homa Iraninejadian				

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1573	2313

Dawit Tadelle Ezer 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



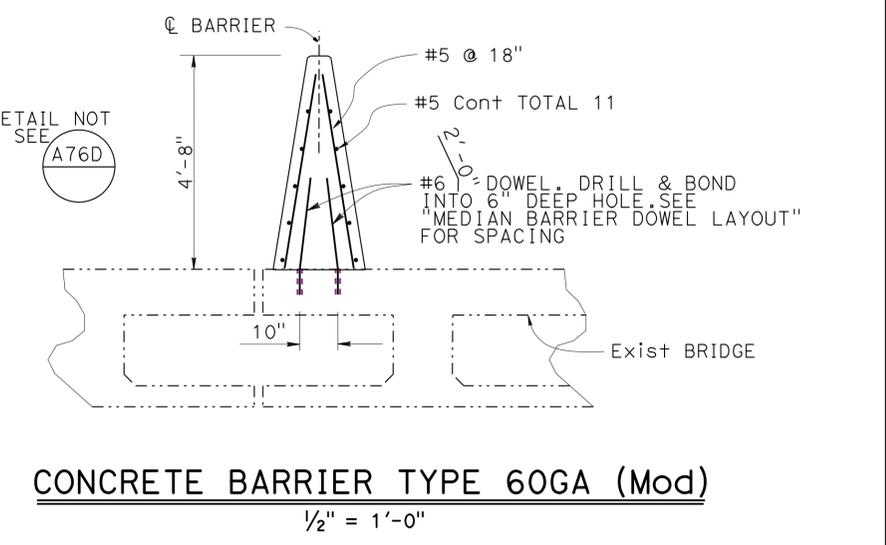
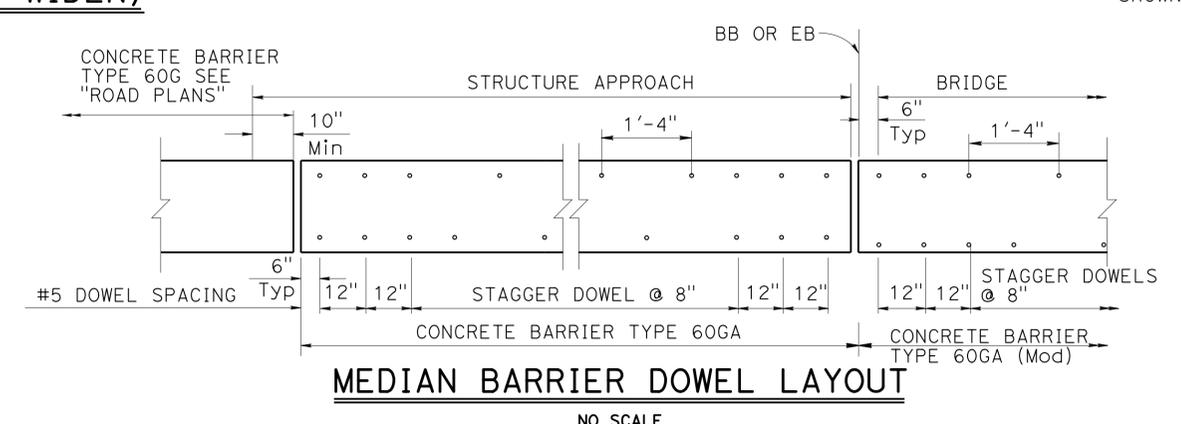
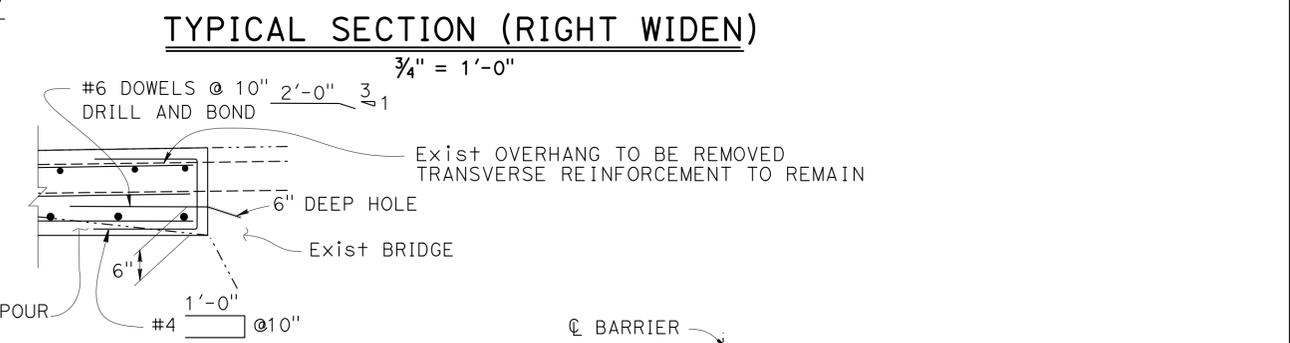
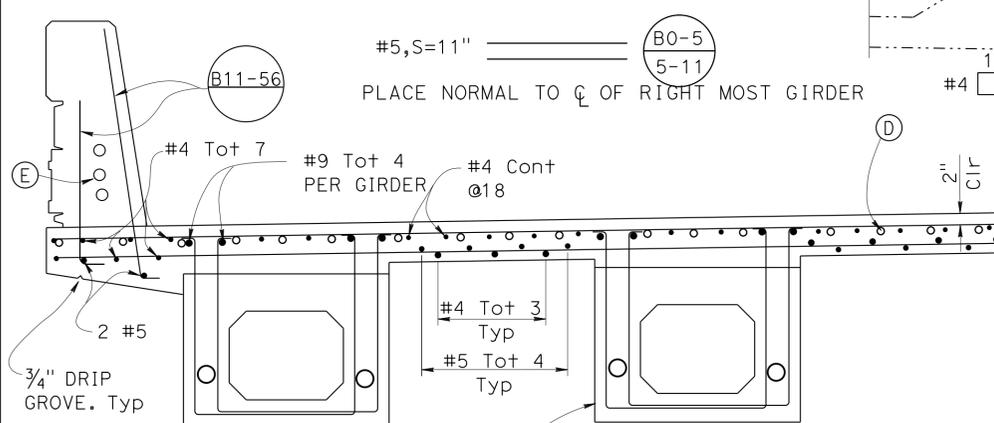
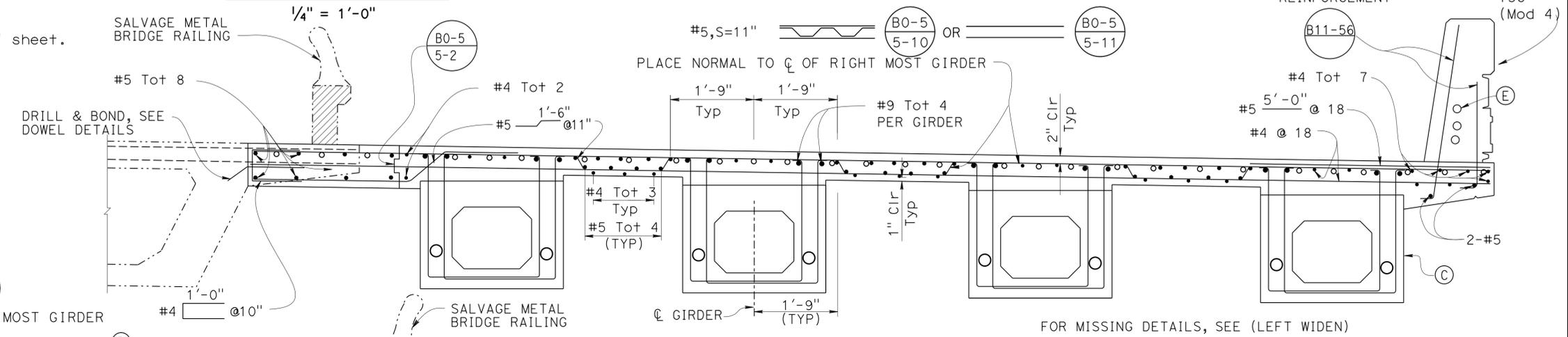
NOTE:
* See "GIRDER LAYOUT" sheet.

LEGEND:

Bridge Removal (portion)

New Structure

Existing Structure



- NOTES:**
- (A) - Exist concrete Barrier and overhang to be removed. Transverse deck reinforcement to remain in place
 - (B) - Concrete Barrier Type 60GA (Mod)
 - (C) - Prestressed Concrete Box Girder (Typ). See "ROAD PLAN" For details, see "PRESTRESSED GIRDER DETAILS NO. 1" sheet
 - (D) - For additional Top Longitudinal Reinforcement, see "GIRDER REINFORCEMENT (RIGHT WIDEN)" AND "GIRDER REINFORCEMENT (LEFT WIDEN)" sheets
 - (E) - 3 - 2" Ø Conduits, see "Road Plans"
 - (F) - Concrete Barrier Type 60A.2 (Mod), see "CONCRETE BARRIER TYPE 60A & 60SA MODIFIED" sheet
 - (G) - 2-3/2" Ø communication conduit (Type 1). See "ROAD PLANS"

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

DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	CITRUS STREET UNDERCROSSING (WIDEN)
DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			53-0670	
QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian			POST MILE 37.5	

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3622 PROJECT NUMBER & PHASE: 071300007-4 CONTRACT NO.: 1193U1

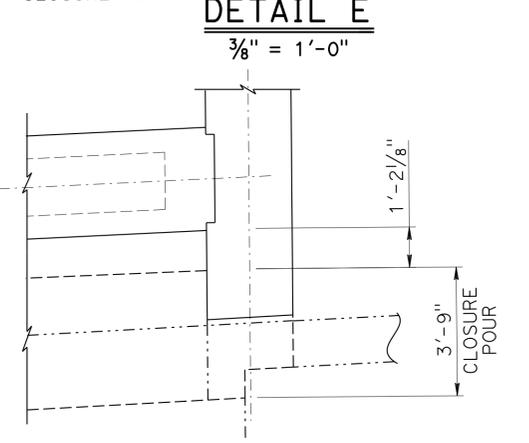
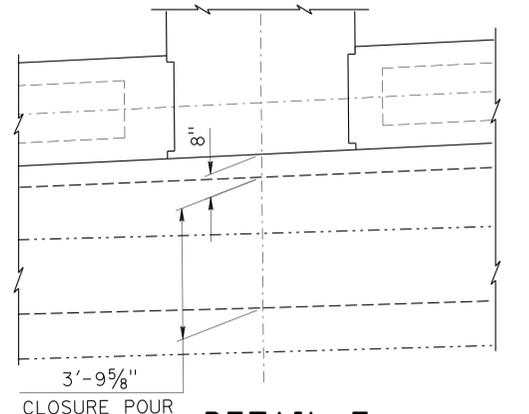
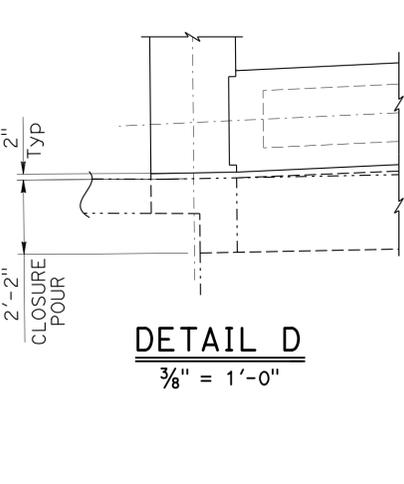
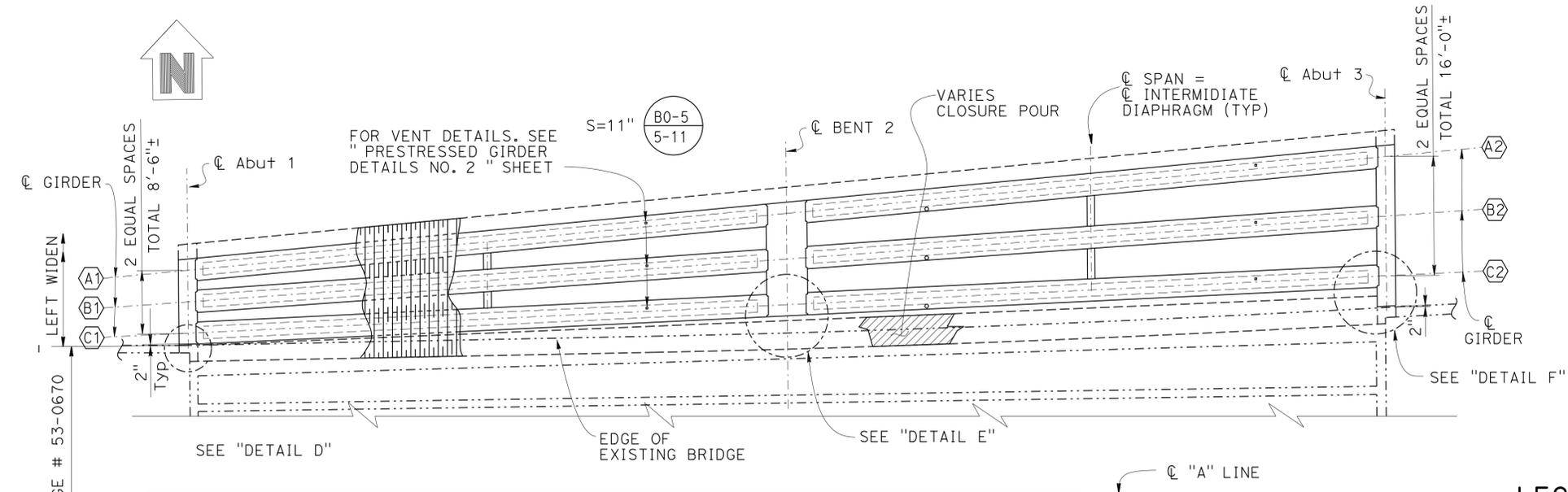
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
5-28-14 5-28-14 5-29-14	14	30

FILE => 53-0670-k-ts.dgn

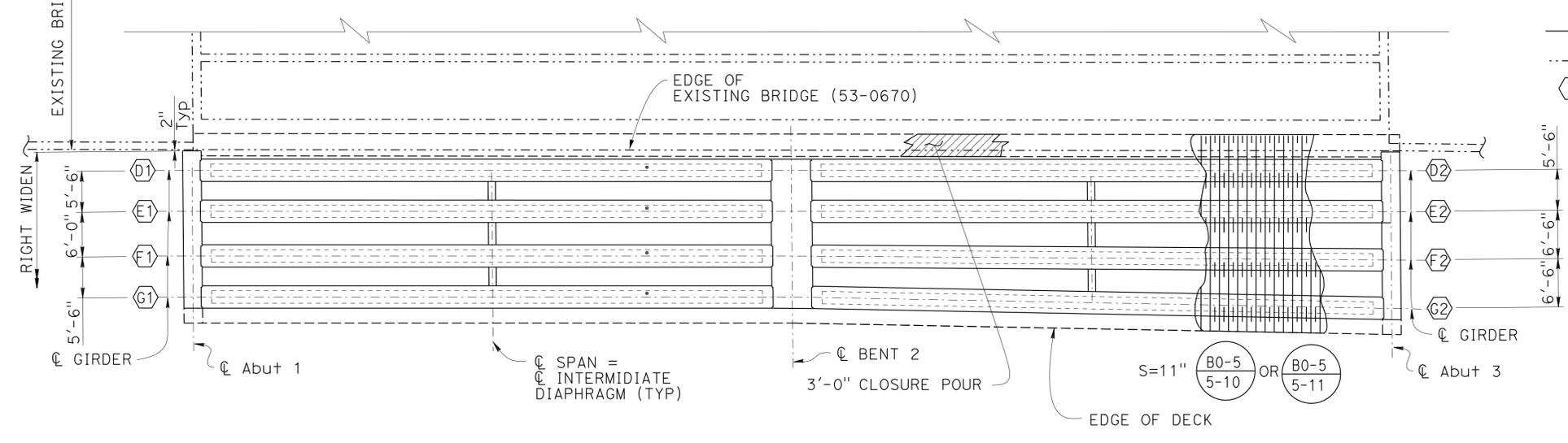
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1574	2313

Dawit Tadelle Geza 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
 Dawit T Worku
 No. C60711
 Exp 12-31-16
 CIVIL
 STATE OF CALIFORNIA
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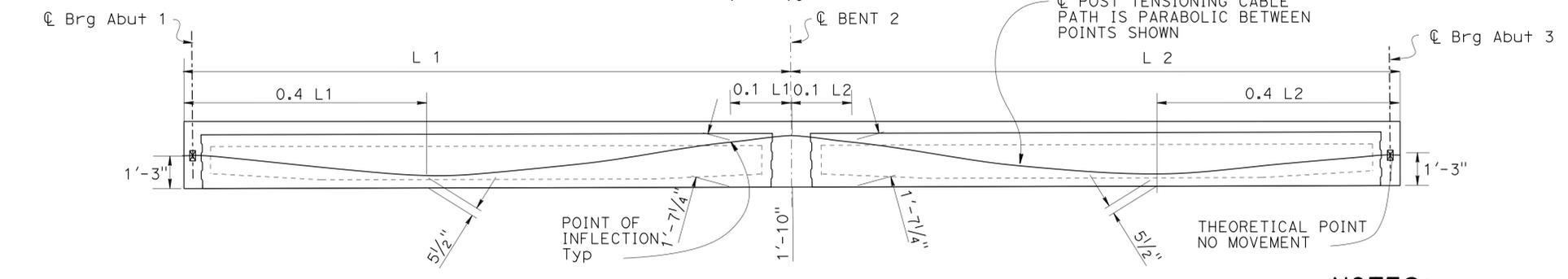
LEGEND:

- New Structure
- - - Existing Structure
- (X) Girder Label



GIRDER LAYOUT

1" = 10'



LONGITUDINAL SECTION

No Scale

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

NOTES:

* See "CONSTRUCTION SEQUENCE" sheet for P_{jack} sequence

PRESTRESSING NOTES (POST TENSIONING)

270 ksi Low Relaxation Strand:
 * P_{jack} = 1000 kips per Box girder (Total)
 Anchor Set = 3/8 in
 Total Number of box Girders = 14
 Design is based on μ=0.15, k=0.0002/ft
 Concrete: f'_c = 6 ksi @ 28 days
 f'_{ci} = 5 ksi @ time of stressing
 Deck slab: f'_c = 5 ksi @ 28 days
 f'_{ci} = 4.5 ksi @ time of stressing
 Contractor shall submit elongation calculations based on initial stress at
 ⦿ = 0.930 times jacking stress.
 One end stressing shall be from either end

DESIGN	BY Dawit Worku	CHECKED Edward B Mu
DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu
QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadjan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

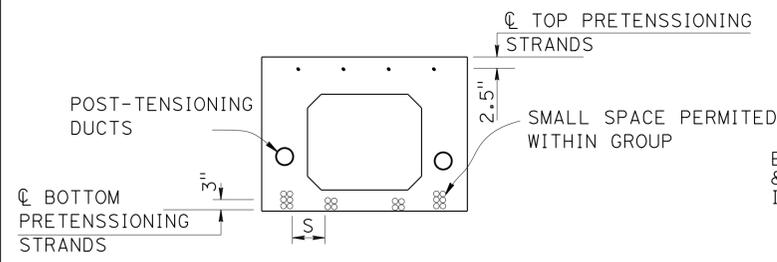
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 20

BRIDGE NO.	53-0670
POST MILE	37.5

CITRUS STREET UNDERCROSSING (WIDEN)
GIRDER LAYOUT

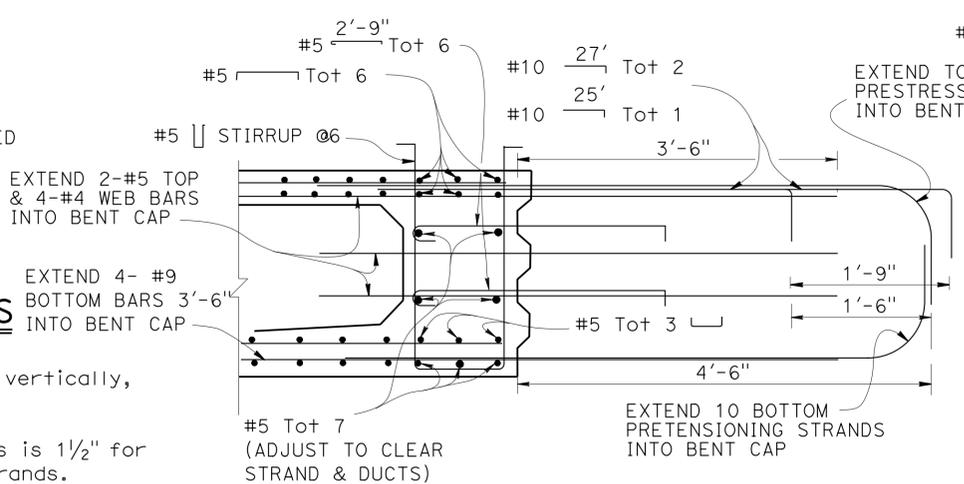
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1575	2313

Dawit Tadelle Eger 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
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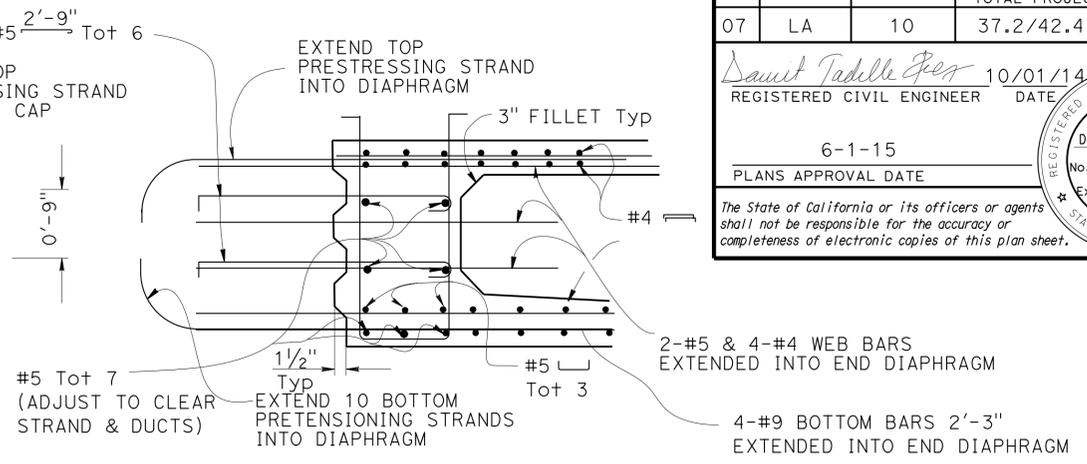


CLEARANCES FOR PRETENSIONED STRANDS
NO SCALE

1. Strands may be bundled in groups consisting of up to 3 vertically, 2 horizontally, and separated at ends
2. The Min distance "S" between groups or individual strands is 1/2" for 3/8" strands, 1 3/4" for 7/16" strands, and 2" for 1/2" and 9/16" strands.
3. "S" is measured between centers of adjacent strands.
4. Approval of engineer is required for deviation.



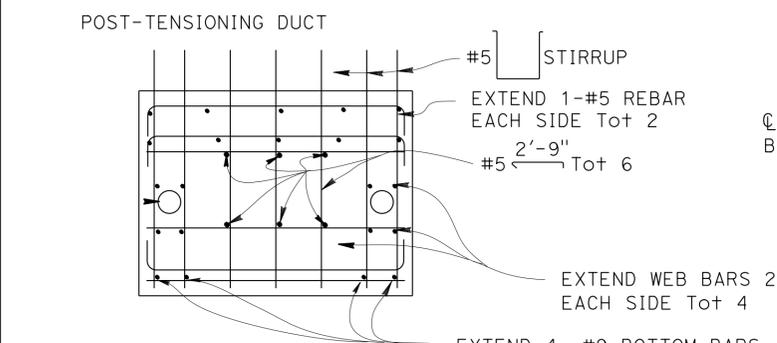
GIRDER END DIAPHRAGM (AT BENT CAP)
1" = 1'



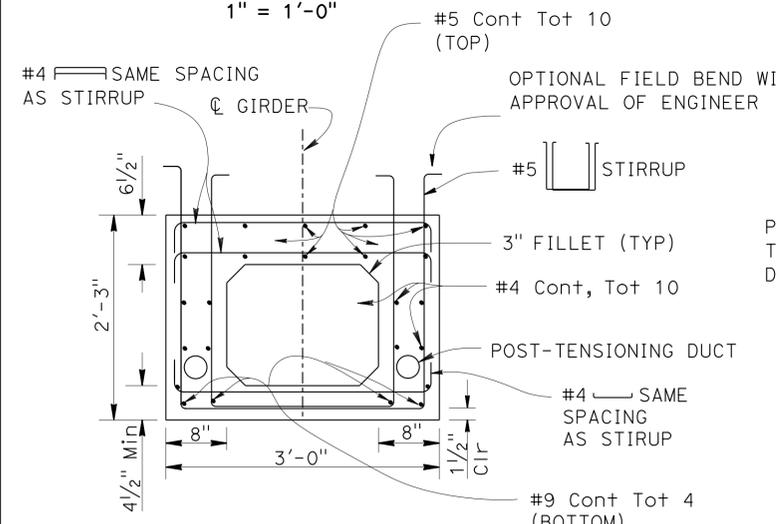
GIRDER END DIAPHRAGM (AT ABUTMENT)
1" = 1'

NOTES:

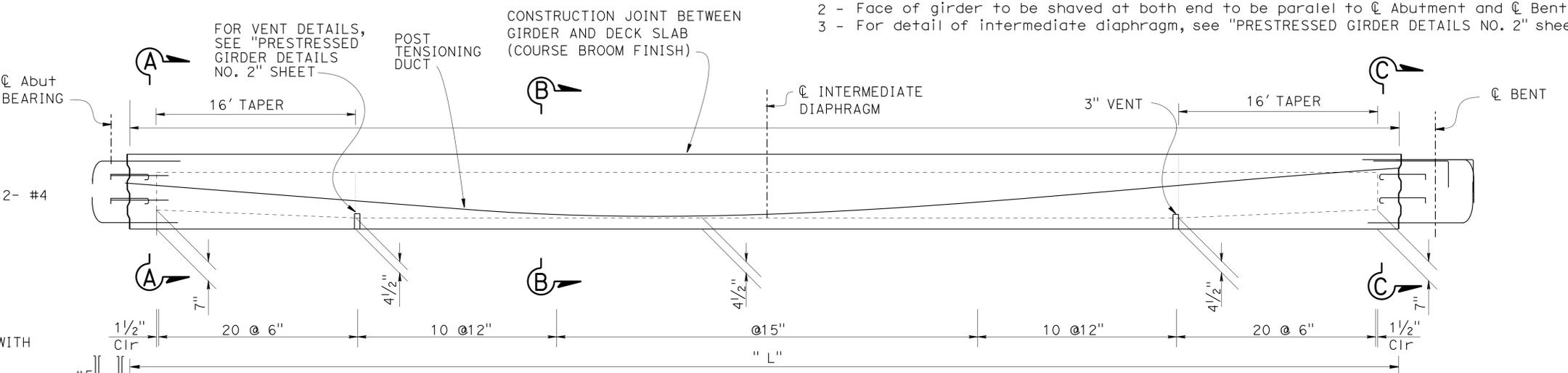
- 1 - For prestressing Notes, see "PRESTRESSED GIRDER DETAILS NO. 2" sheet
- 2 - Face of girder to be shaved at both end to be paralel to C Abutment and C Bent
- 3 - For detail of intermediate diaphragm, see "PRESTRESSED GIRDER DETAILS NO. 2" sheet



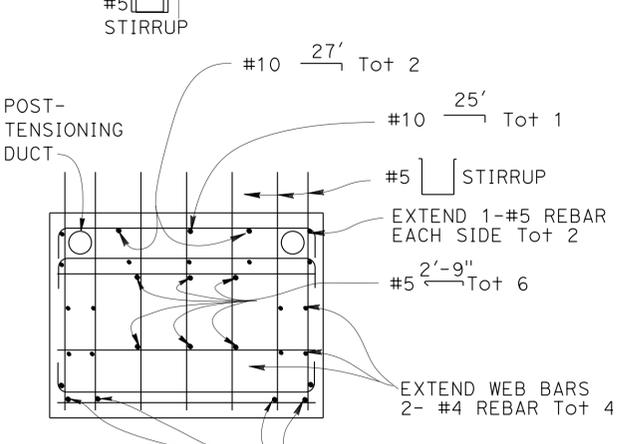
SECTION A-A
1" = 1'-0"



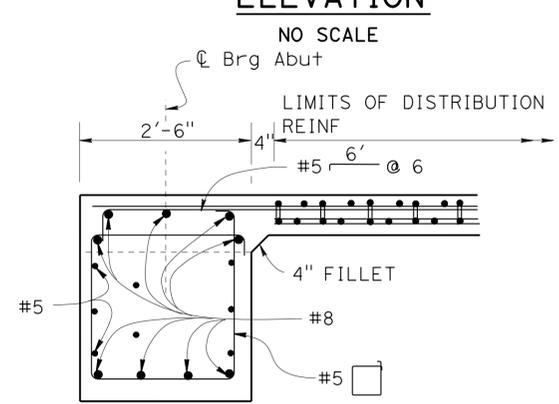
SECTION B-B
1" = 1'-0"



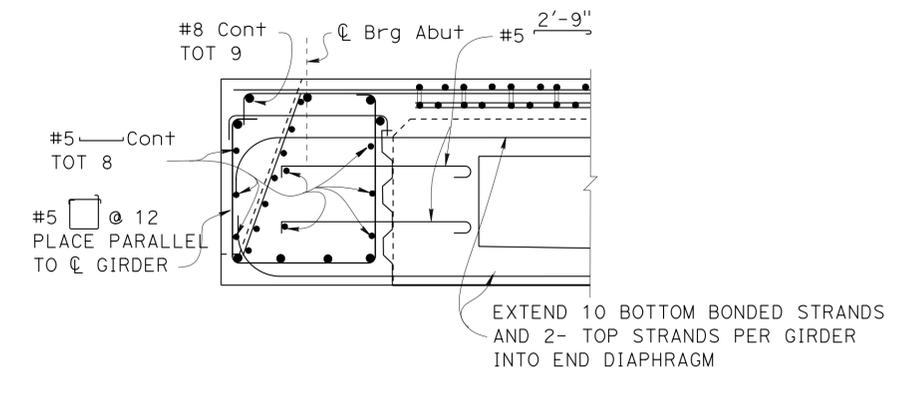
ELEVATION
NO SCALE



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



ABUTMENT END DIAPHRAGM (BETWEEN GIRDERS)
3/4" = 1'



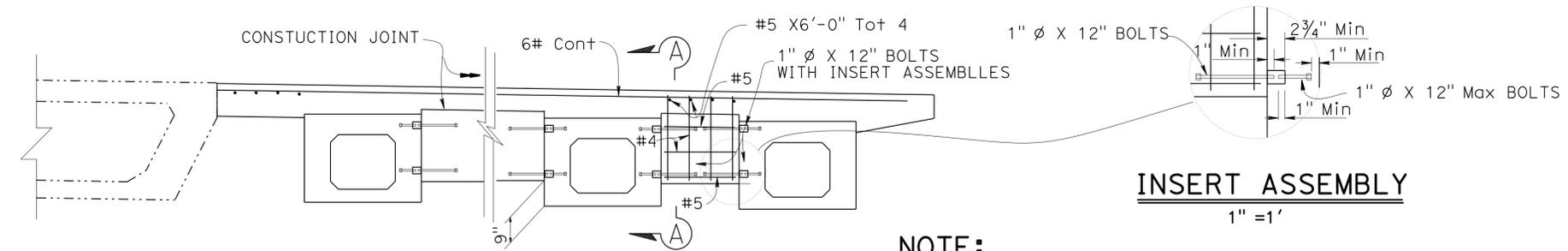
ABUTMENT END DIAPHRAGM (AT GIRDER)
3/4" = 1'

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

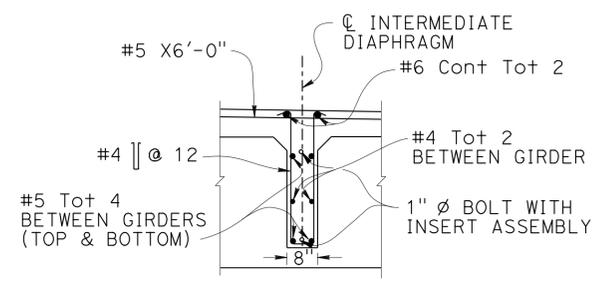
DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-0670	CITRUS STREET UNDERCROSSING (WIDEN) PRESTRESSED GIRDER DETAILS NO.1
DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			POST MILE	37.5	
QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian			CONTRACT NO.:	1193U1	

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS UNIT: 3622 PROJECT NUMBER & PHASE: 0713000007-4 CONTRACT NO.: 1193U1 DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
12/28/12 03/02/13 7-24-14	16	30



INTERMEDIATE DIAPHRAGM (LEFT WIDEN)
 1/2" = 1'-0" (B6-10 U-15)



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

PRESTRESSING NOTES (PRETENSIONING)

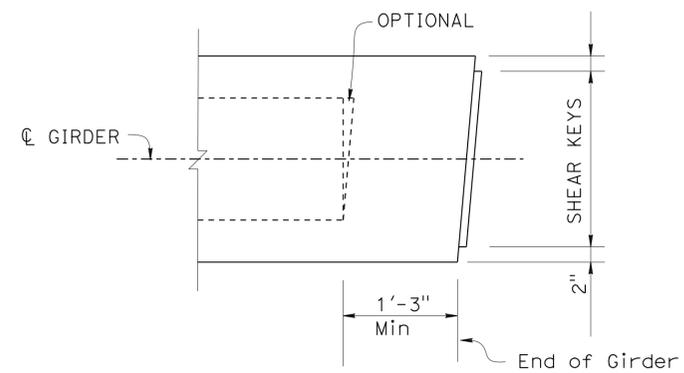
Number of prestressing strands is based on:
 Strand Size = $\phi 0.6$ "
 $F_{pu} = 270$ ksi low laxation strands
 Strand prestressing tensile stress = 202.5 ksi

Concrete strength; $f'_{ci} = 5.0$ ksi at time of stressing,
 $f'_{c} = 6.0$ ksi @ 28 days.

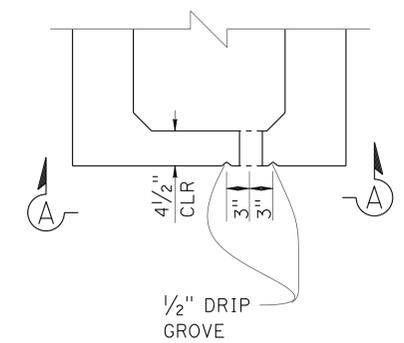
Deflection components: informational - to be used in setting screed line elevations.

Screed line elevation for deck concrete will be determined by the engineer.

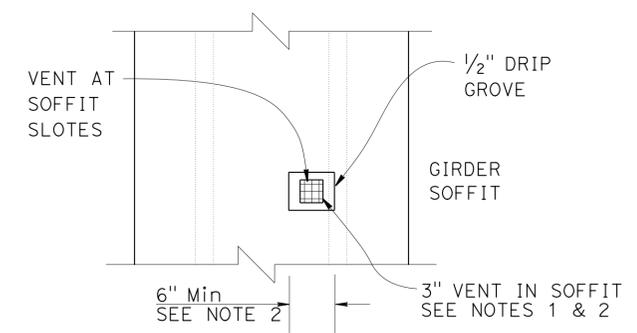
Debonded stands shall be placed symetrically along ϕ of girder. Debonded length shall be 14'-0" from end of the girders.



PLAN- END DIAPHRAGM
 1" = 1'



VENT DETAIL
 1" = 1'-0"



VIEW A-A (GIRDER SOFFIT)
 1" = 1'-0"

LEGEND OF LOAD TYPE FOR DEFLECTION

- PRE-TENSIONING:**
estimated prestressing deflection at release due to prestressing only.
- GIRDER:**
precast girder deflection at release due to self weight.
- CIP DECK:**
deflection of composite girder due to weight of cast in place deck, overhang and intermediate diaphragm after removal of temporary support.
- POST-TENSINING:**
estimated post tensioning deflection of composite girder due to the effect of post tensioning after removal of temporary support.
- RAIL:**
deflection of composite girder due to weight of bridge railing

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

LOCATION (SPAN)	LABEL	LENGTH "L"	NO. OF STRANDS			MAX DEFLECTION @ MID SPAN (IN)				
			TOP BONDED	BOTTOM		LOAD				
				BONDED	DEBONDED	PRE TENSIONING	GIRDER	CIP DECK	POST TENSIONING	RAIL
SPAN 1	* (A)	76'-10 3/8"	4	10	4	+2.5	-2.5	-0.5	+1.8	-0.30
SPAN 1	(B)	76'-8 7/8"	4	10	4	+2.5	-2.5	-0.5	+1.8	-0.20
SPAN 1	(C)	76'-7 3/4"	4	10	4	+2.5	-2.5	-0.5	+1.8	-0.12
SPAN 1	(D)	76'-7"	4	10	4	+2.5	-2.5	-0.6	+1.7	-0.16
SPAN 1	(E)	76'-7"	4	10	4	+2.5	-2.5	-0.6	+1.7	-0.16
SPAN 1	(F)	76'-7"	4	10	4	+2.5	-2.5	-0.6	+1.7	-0.25
SPAN 1	(G)	76'-7"	4	10	4	+2.5	-2.5	-0.6	+1.7	-0.32
SPAN 2	* (A2)	76'-10 3/8"	4	10	4	+2.5	-2.5	-0.7	+1.7	-0.32
SPAN 2	(B2)	76'-8 7/8"	4	10	4	+2.5	-2.5	-0.7	+1.7	-0.20
SPAN 2	(C2)	76'-7 3/4"	4	10	4	+2.5	-2.5	-0.6	+1.7	-0.12
SPAN 2	(D2)	76'-7"	4	10	4	+2.5	-2.5	-0.6	+1.7	-0.16
SPAN 2	(E2)	76'-7"	4	10	4	+2.5	-2.5	-0.6	+1.7	-0.16
SPAN 2	(F2)	76'-11 1/8"	4	10	4	+2.5	-2.5	-0.6	+1.7	-0.25
SPAN 2	(G2)	76'-11 3/8"	4	10	4	+2.5	-2.5	-0.6	+1.7	-0.32

* 2-3 1/2" ϕ (TYPE 1) COMMUNICATION CONDUITS INSIDE BOX GIRDER (B14-3)

NEGATIVE DEFLECTION: DOWN
 POSITIVE DEFLECTION: UP

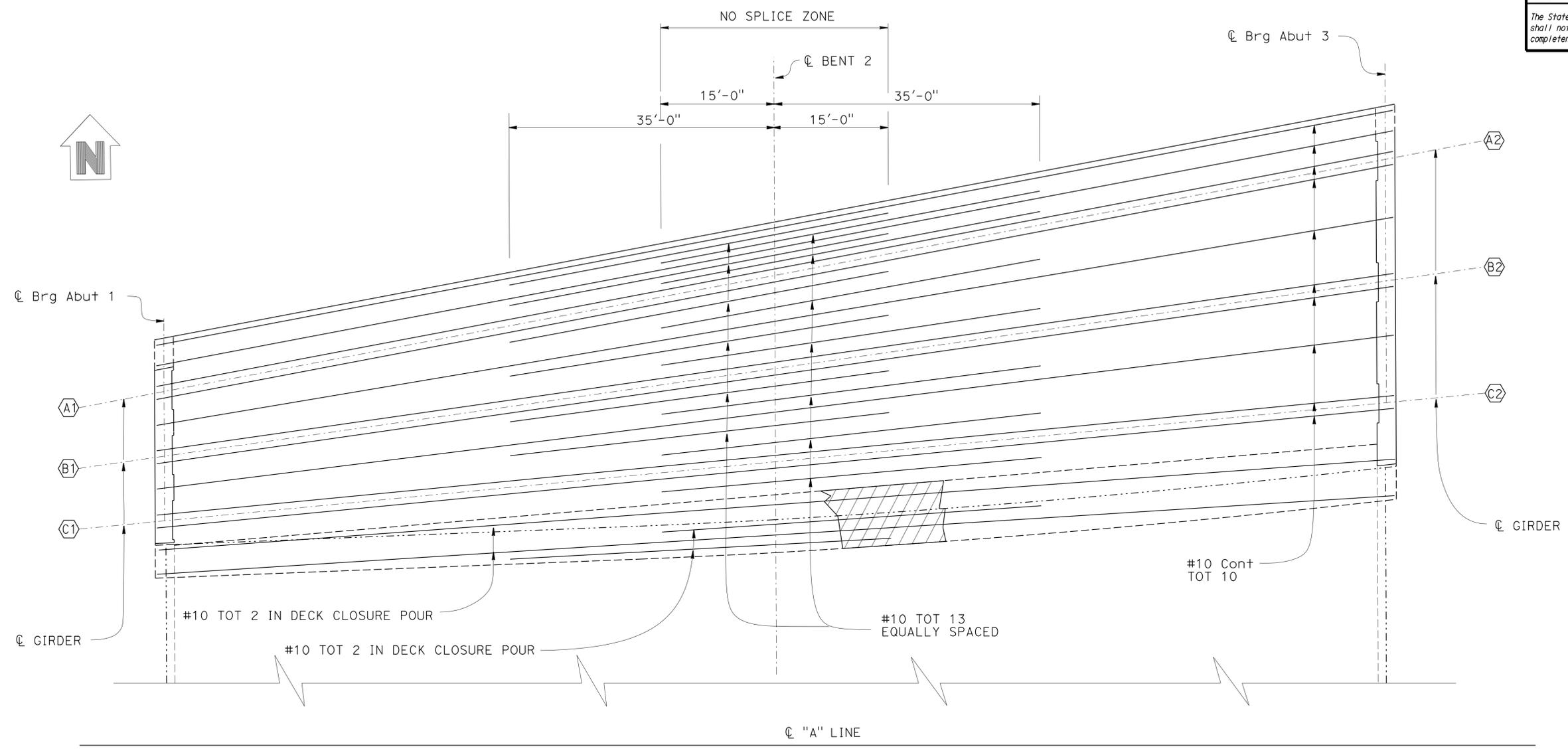
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1577	2313

Dawit Tadelle Esq 10/01/14
REGISTERED CIVIL ENGINEER DATE

6-1-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Dawit T Worku
No. C60711
Exp 12-31-16
CIVIL
STATE OF CALIFORNIA

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TOP LONGITUDINAL REINFORCEMENT (LEFT WIDEN)

1/8" = 1' HORIZONTAL
1/4" = 1' VERTICAL

LEGEND:

- New Structure
- - - Existing Structure
- ▨ Closure pour
- ⊙ Girder Label

NOTES:

- Reinforcement spaced evenly between girder ⊙

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

DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO. 53-0670	CITRUS STREET UNDERCROSSING (WIDEN) GIRDER REINFORCEMENT (LEFT WIDEN)
	DETAILS	BY K Farahzadi\ Lan Tran			CHECKED Edward B Mu	
QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian				

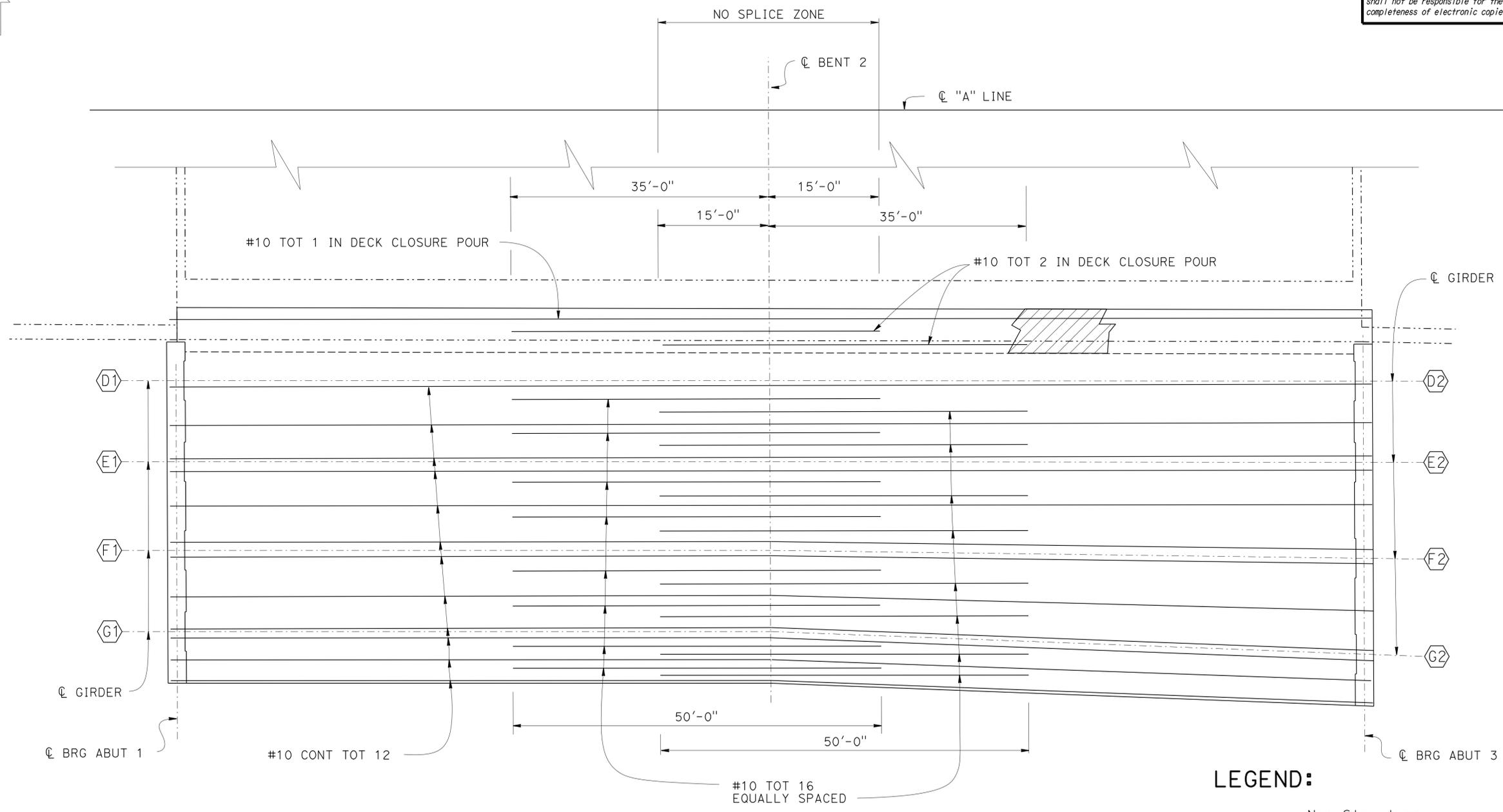
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1578	2313

Dawit Tadelle Esq 10/01/14
 REGISTERED CIVIL ENGINEER DATE

6-1-15
 PLANS APPROVAL DATE

Dawit T Worku
 No. C60711
 Exp 12-31-16
 CIVIL
 STATE OF CALIFORNIA

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TOP LONGITUDINAL REINFORCEMENT (RIGHT WIDEN)

$\frac{1}{8}$ "=1'-0" horizontal
 $\frac{1}{4}$ "=1'-0" Vertical

LEGEND:

- New Structure
- Existing Structure
- ▨ Closure pour
- ⊕ Girder Label

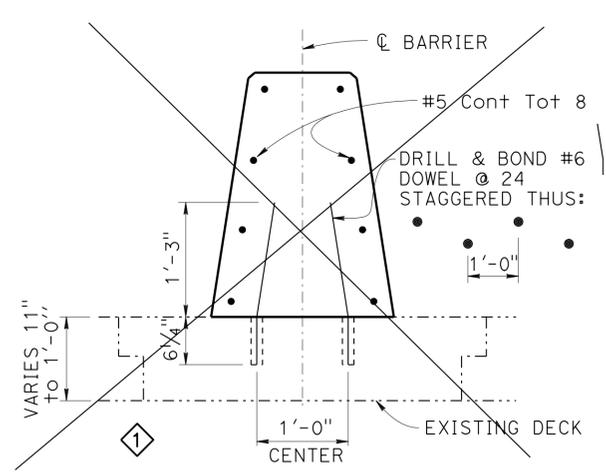
NOTES:

- Reinforcement spaced evenly between girder CL

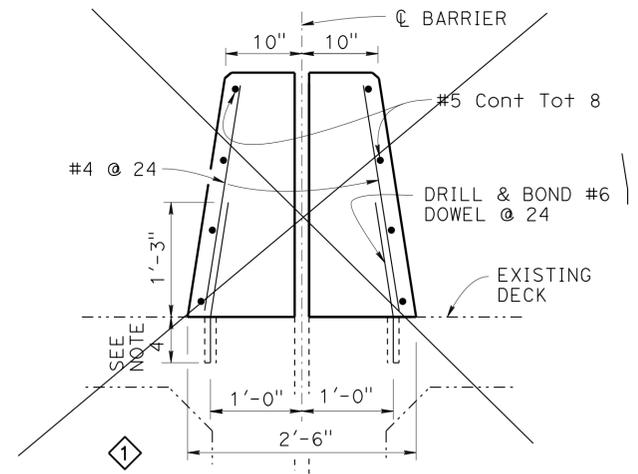
NOTE:
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STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-0670	CITRUS STREET UNDERCROSSING (WIDEN) GIRDER REINFORCEMENT (RIGHT WIDEN)	
	DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			POST MILE	37.5		
	QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian			UNIT: 3622	PROJECT NUMBER & PHASE: 0713000007-4		CONTRACT NO.: 1193U1
				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 03/02/13 02/25/14 05/20/14 07/24/14	SHEET 19 OF 30

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1579	2313
<i>Davit Tadelle Esq</i> REGISTERED CIVIL ENGINEER			10/01/14	DATE	
6-1-15			PLANS APPROVAL DATE		
Dawit T Worku No. C60711 Exp 12-31-16 CIVIL STATE OF CALIFORNIA			REGISTERED PROFESSIONAL ENGINEER		
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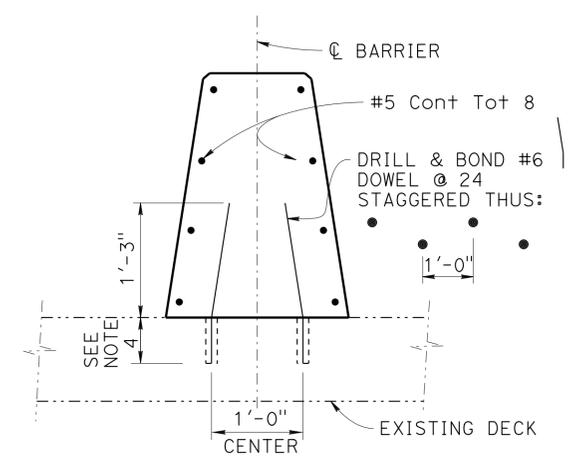


MODIFIED TYPE 60A.1 OR 60SA.1

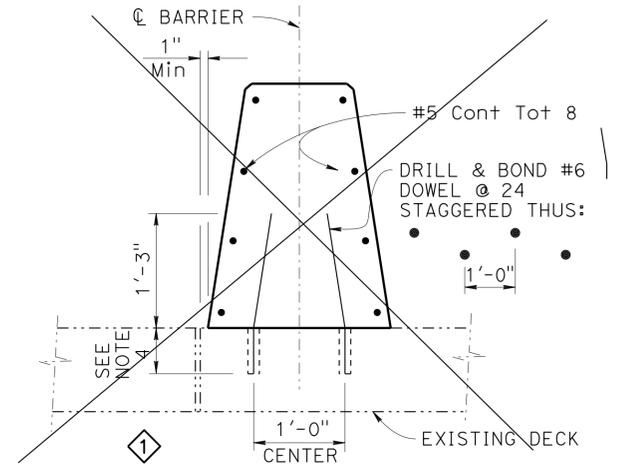


MODIFIED TYPE 60A.4 OR 60SA.4

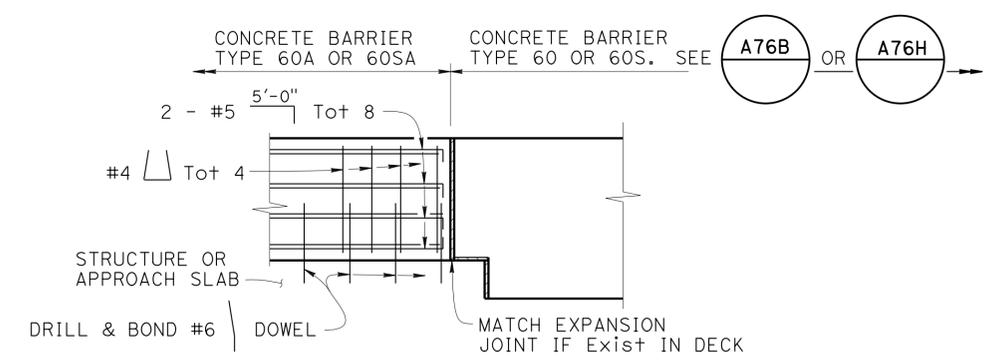
ONLY VERTICAL DIMENSION VARIES ACCORDING TO RESPECTIVE BARRIER HEIGHT. SEE NOTE 9.



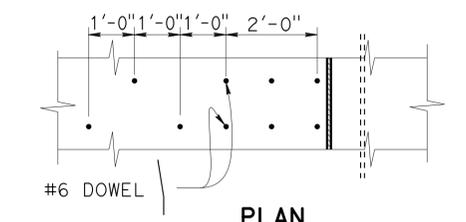
MODIFIED TYPE 60A.2 OR 60SA.2



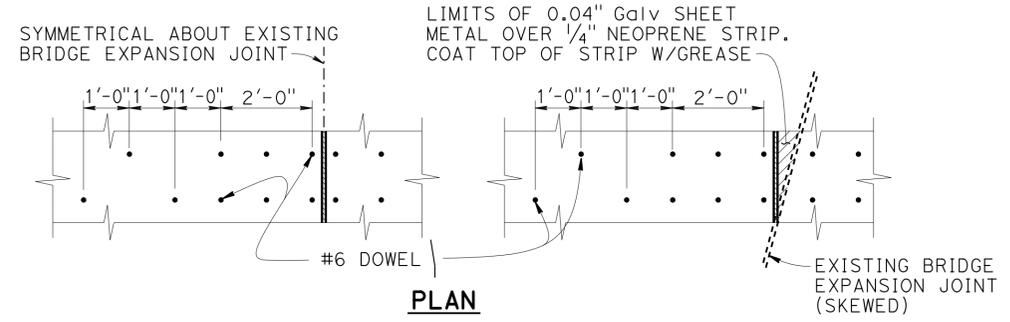
MODIFIED TYPE 60A.5 OR 60SA.5



ELEVATION

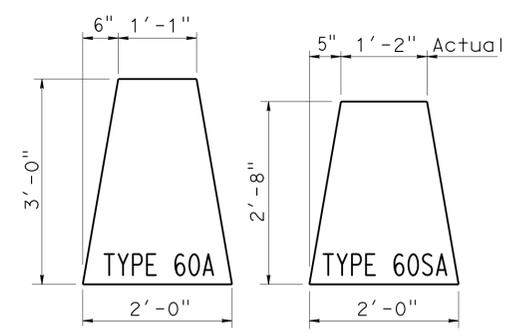


PLAN CONNECTION TO STRUCTURE



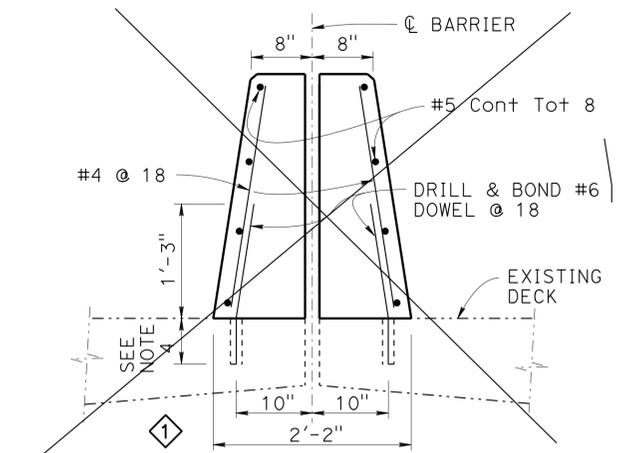
DOWEL SPACING AT EXPANSION JOINT

- NOTES:
1. Transverse expansion joints in concrete barrier shall match all deck joints
 2. Remove all existing curbs and dikes
 3. Existing components of Cable Barrier may be altered and incorporated in Concrete Barriers as indicated. The existing Cable Barrier shall be removed when it is not on the centerline of the new Concrete Barrier
 4. Depth of drilled hole equals depth of slab minus 1/2", up to 6" maximum
 5. Minor adjustments may be made in dowel spacing to clear main reinforcement
 6. Transitions to match adjacent "Type 60A" Barrier shall have minimum flare of 20:1 off the structure
 7. Barrier to be doweled on either side of deck joints.
 8. For Concrete Barrier Type 60A details not shown, see STANDARD PLAN A76A. For Concrete Barrier Type 60SA details not shown, see STANDARD PLANS A76G.
 9. Barrier Dimensions-Type 60A & 60SA, see sketch below:



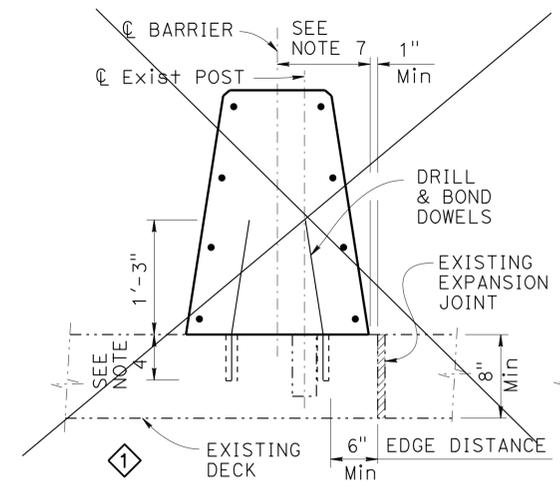
LEGEND:
 - - - - - Indicates existing structure
 ———— Indicates new structure

SCALE: 1" = 1'-0" except as noted

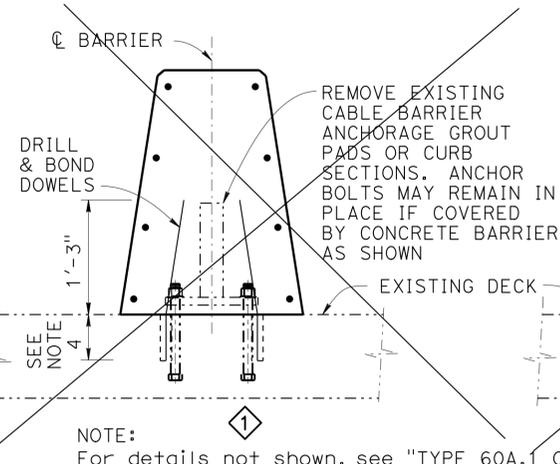


MODIFIED TYPE 60A.3 OR 60SA.3

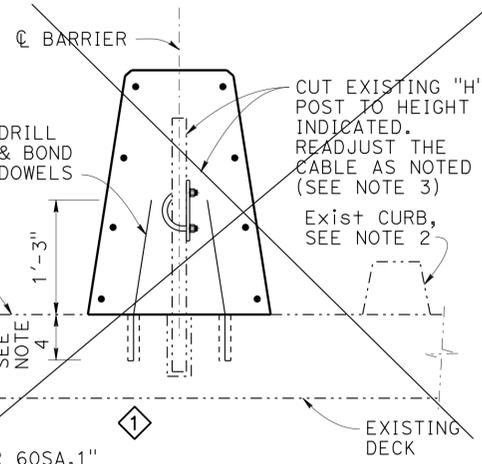
ONLY VERTICAL DIMENSION VARIES ACCORDING TO RESPECTIVE BARRIER HEIGHT. SEE NOTE 9.



EXISTING POST HOLE AT BOLTED ANCHORAGE PLATE



EXISTING POST HOLE AT POST HOLES



EXISTING POST HOLE AT POST HOLES

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

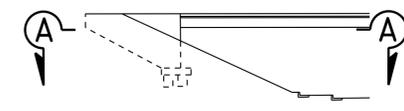
NOTE:
 For details not shown, see "TYPE 60A.1 OR 60SA.1"

EXISTING POST HOLE AT BOLTED ANCHORAGE PLATE AT POST HOLES

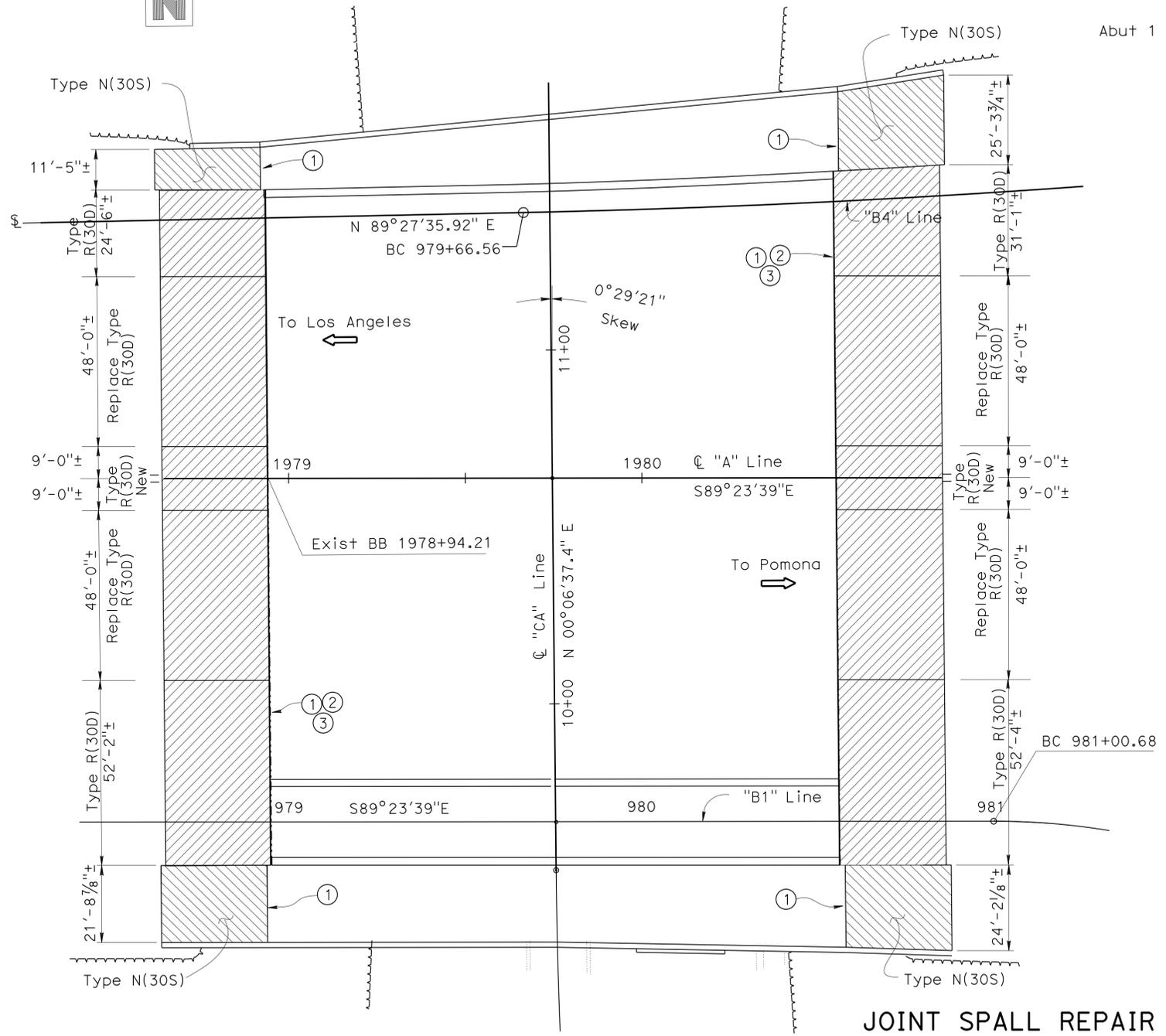
STANDARD DRAWING	Deleted Detail
FILE NO. xs16-100	APPROVAL DATE July 2014

STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES
DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 53-0670
	POST MILE 37.5

CITRUS STREET UNDERCROSSING (WIDEN)	
CONCRETE BARRIER TYPE 60A & TYPE 60SA MOD	

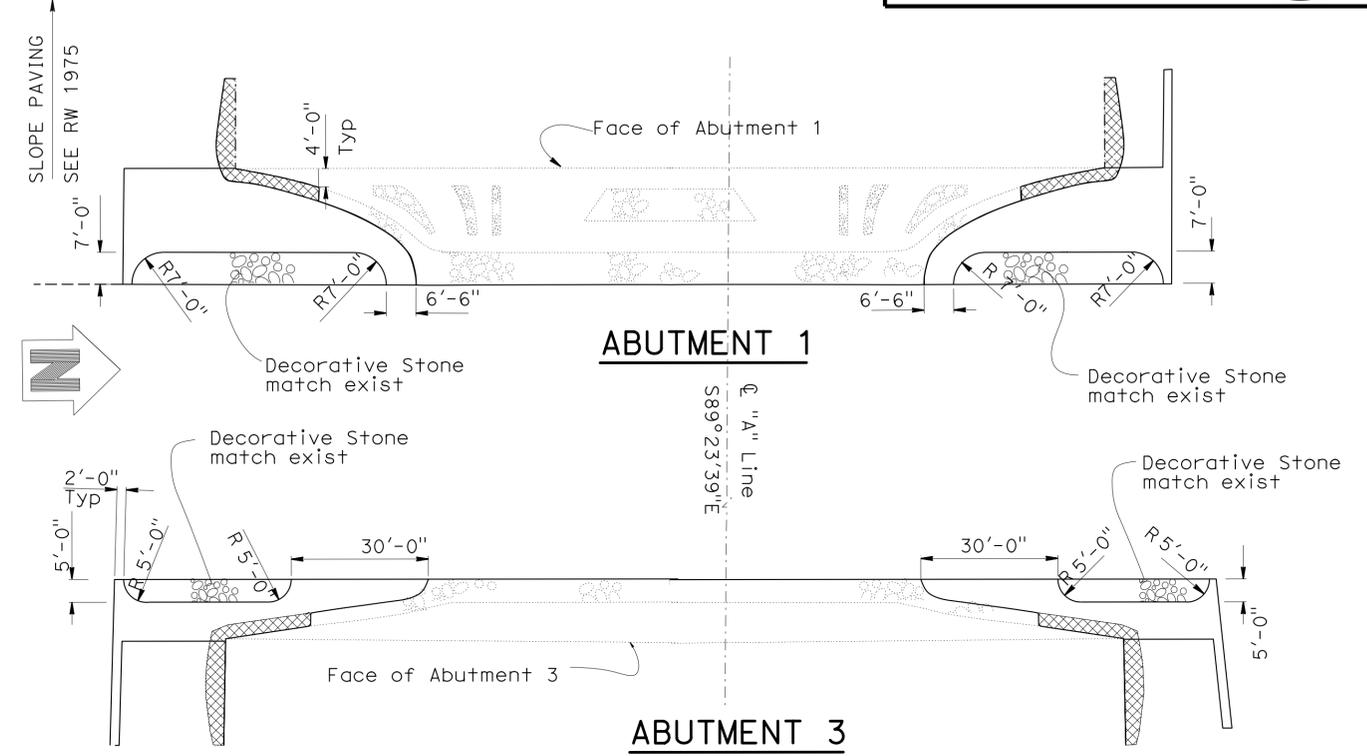


TYPICAL SECTION
No Scale
Abut 1 shown Abut 3 similar



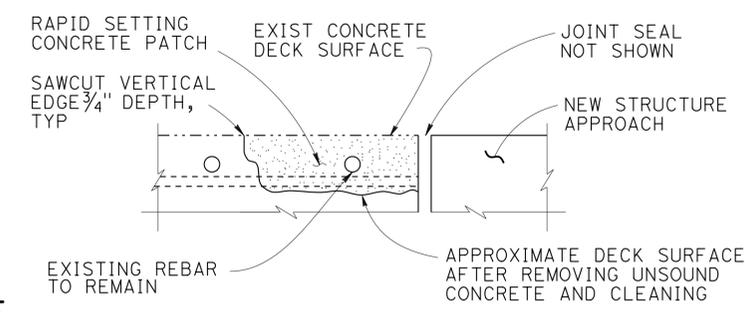
LIMIT OF STRUCTURE APPROACH
1" = 20'

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



ABUTMENT 1
ABUTMENT 3
VIEW A - A
SLOPE PAVING LIMIT
1" = 20'

- NOTES:**
- Joint seal (MR = 1 1/2)
 - Paving notch extension
 - Prior to placement of new joint seal, remove unsound concrete and patch with rapid setting concrete



JOINT SPALL REPAIR DETAIL

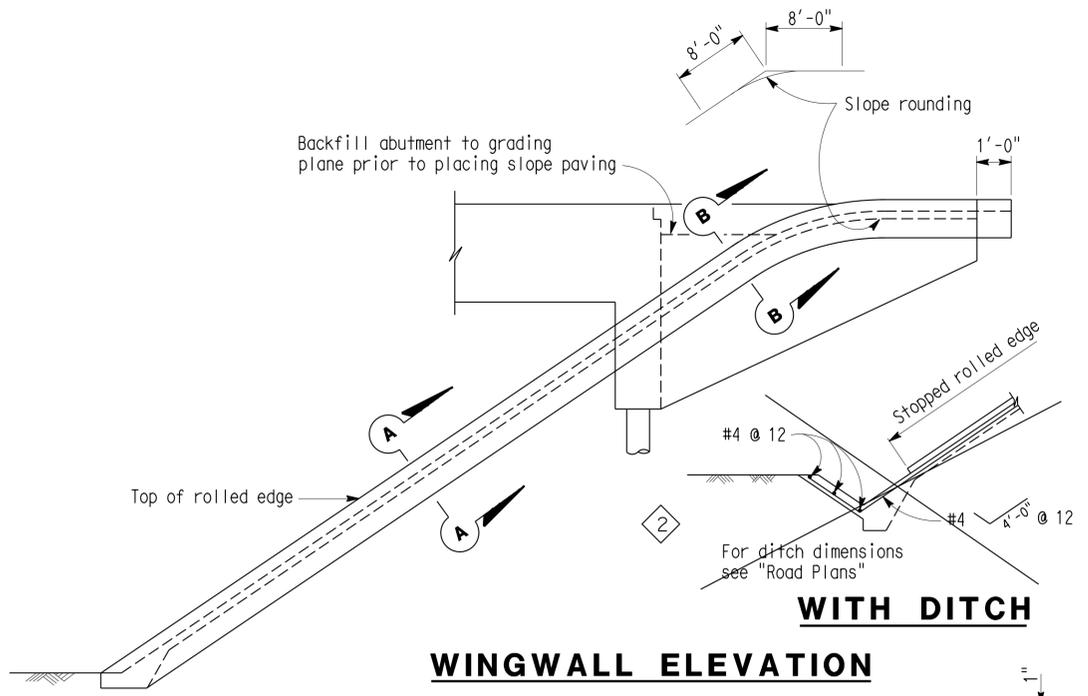
REINFORCEMENT MAY BE ENCOUNTERED DURING DECK CONCRETE REMOVAL AND IS TO REMAIN UNDAMAGED. LOCATIONS TO BE DETERMINED BY THE ENGINEER.
NO SCALE

JOINT SPALL REPAIR TABLE

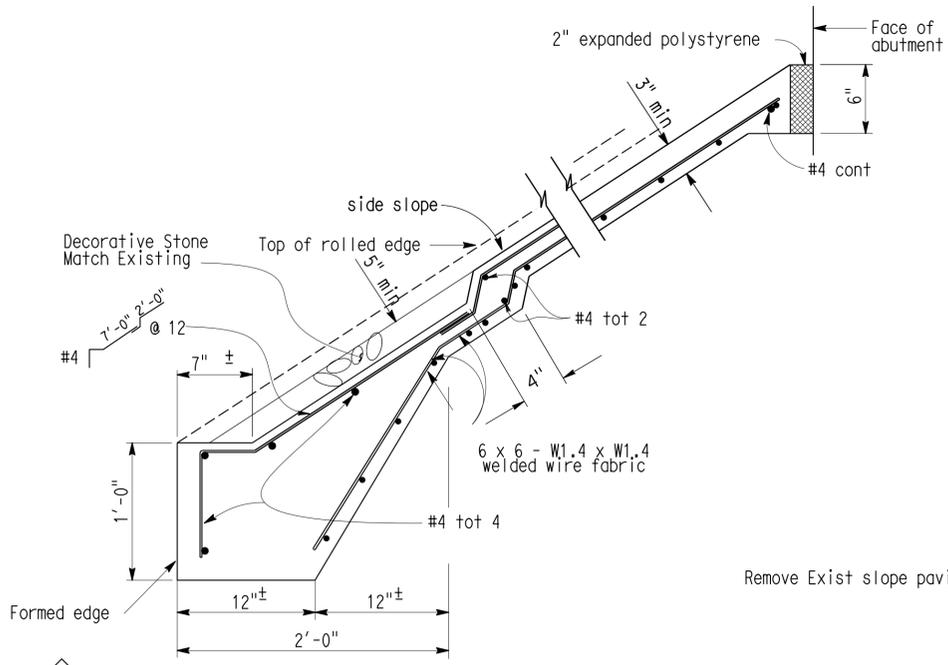
LOCATION	APPROX DEPTH OF JOINT SPALLS (Inch)	APPROX WIDTH OF JOINT SPALLS (Inch)	APPROX LENGTH OF JOINT SPALLS (FEET)
ABUT 1	3	6	8
ABUT 2	3	6	8

- LEGEND:**
- Bridge removal (portion)
 - Existing Decorative Stone
 - New Decorative Stone
 - Structure Approach Type N(30S)
 - Structure Approach Type R(30D)
 - New Structure
 - Existing Structure

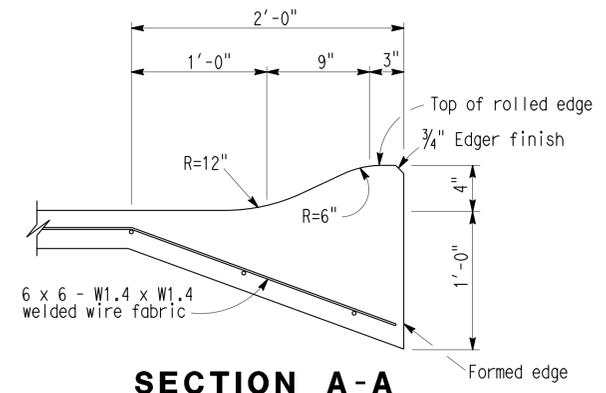
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1581	2313
Davit Tadelle Esq.			10/01/14	REGISTERED CIVIL ENGINEER DATE	
6-1-15			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



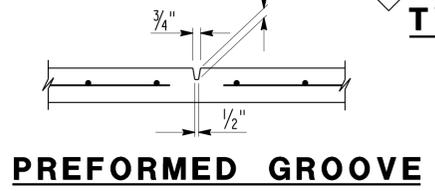
WINGWALL ELEVATION



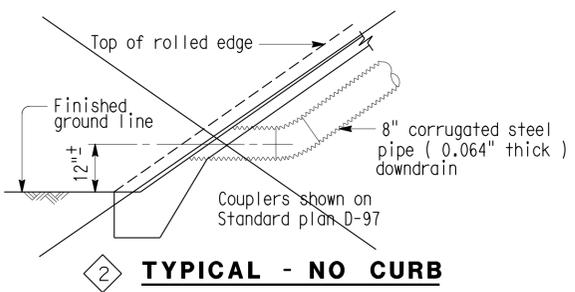
TYPICAL SECTION - CONCRETE PAVING



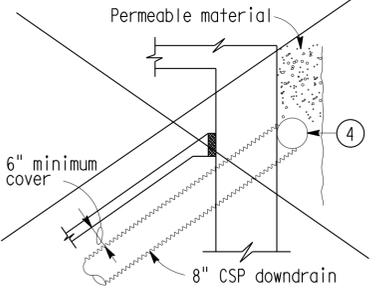
SECTION A-A



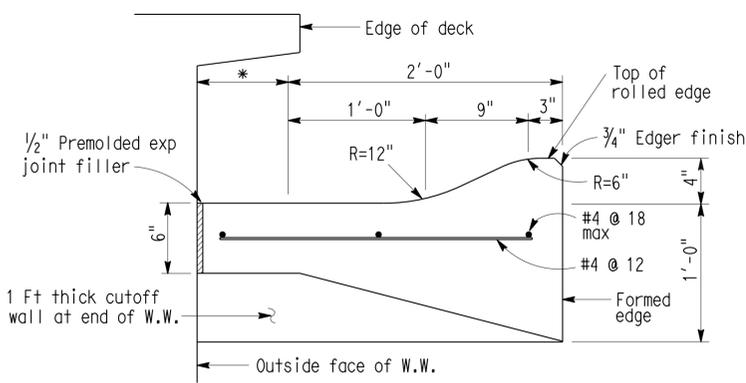
PREFORMED GROOVE



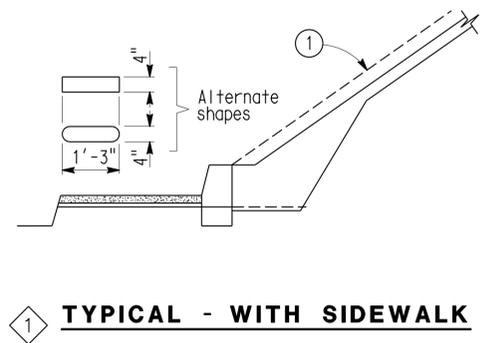
TYPICAL - NO CURB



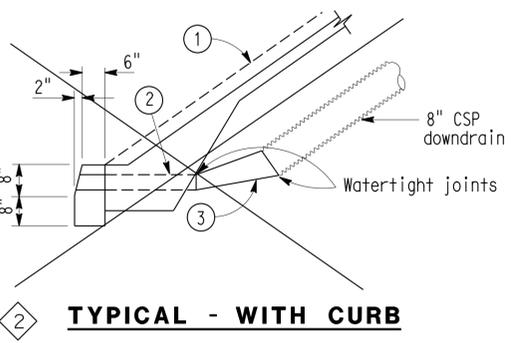
TYPICAL - DRAIN CONNECTION



SECTION B-B



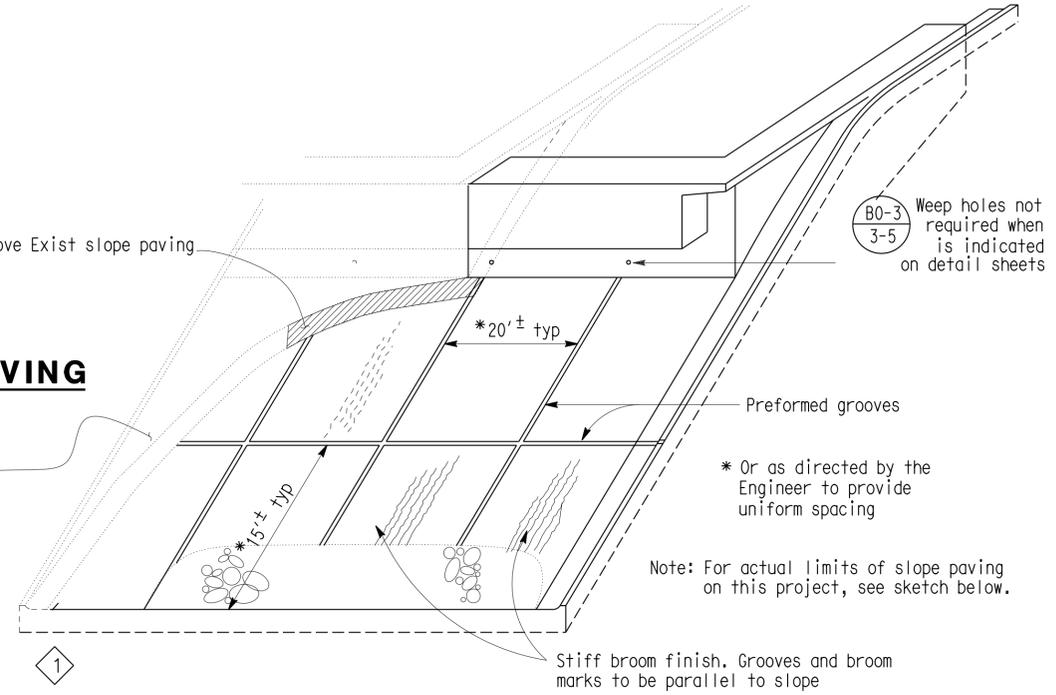
TYPICAL - WITH SIDEWALK



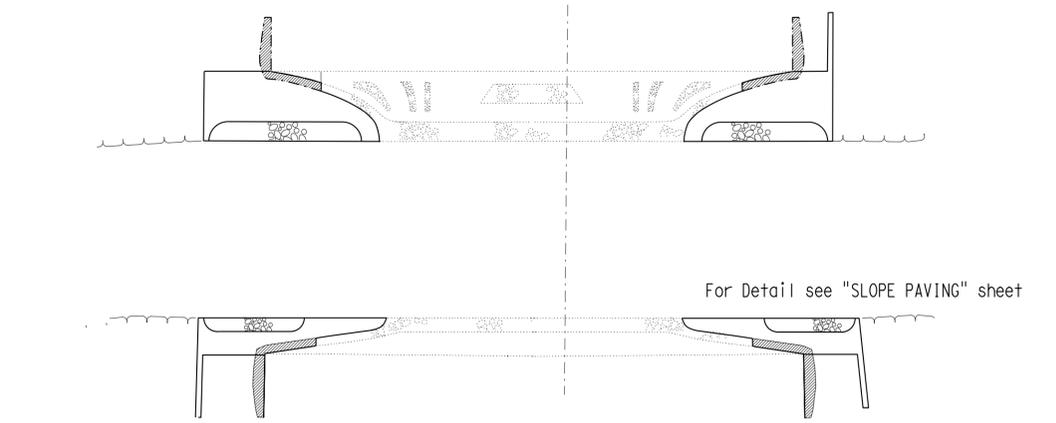
TYPICAL - WITH CURB

DRAINAGE DETAILS

Note: Drainage details are only applicable when is indicated on detail sheets.



PICTORIAL VIEW OF TYPICAL INSTALLATION



LIMITS OF SLOPE PAVING & DRAINAGE LAYOUT

* This dimension becomes zero when edge of deck is at outside face of W.W.

- ① Top of rolled edge
- ② Conduit: 0.064" galv corrugated steel or 0.109" smooth galv steel
- ③ Taper: 0.064" galv corrugated steel or 0.109" smooth galv steel
- ④ 8" perforated steel pipe (0.064" thick) underdrain behind abutment. Connect to down drain as shown on Limits of Slope Paving & Drainage layout.

STANDARD DRAWING	
FILE NO. xs4-210	APPROVAL DATE <u>July 2011</u>

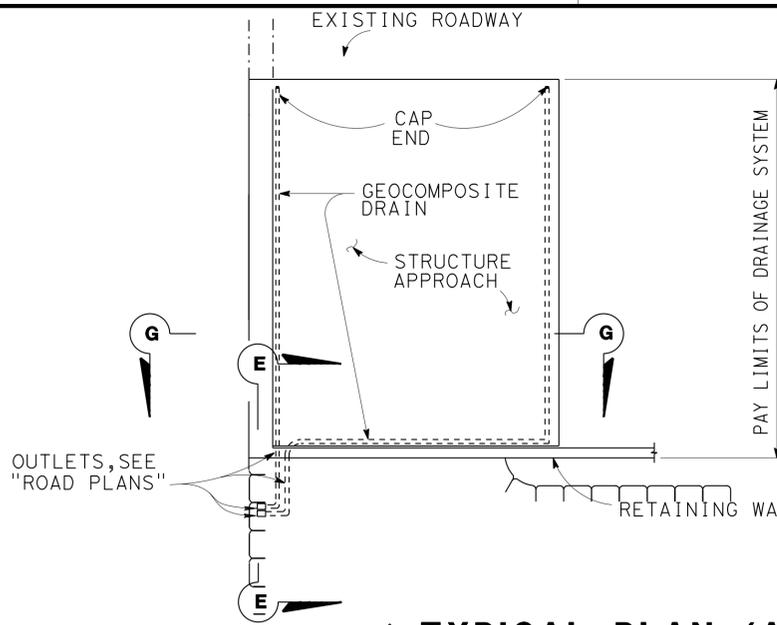
② Deleted Details	③ Deleted Legend
① Modified Detail	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

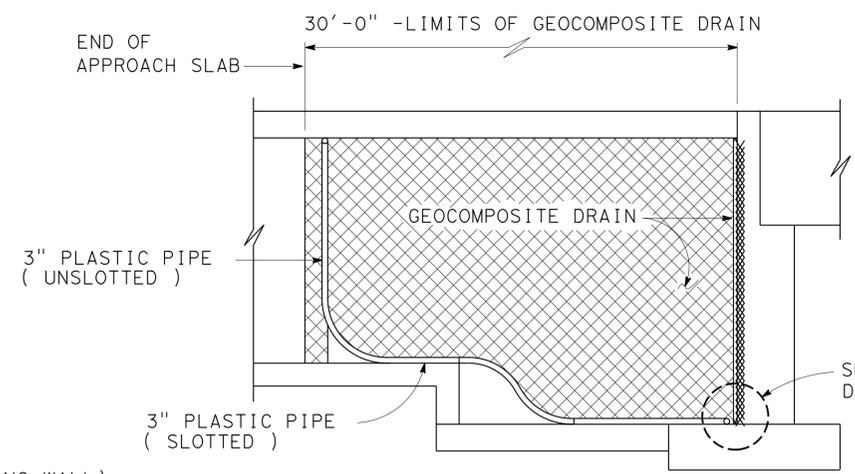
DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 53-0670	CITRUS STREET UNDERCROSSING (WIDEN)
POST MILE 37.5	
SLOPE PAVING-FULL SLOPE	

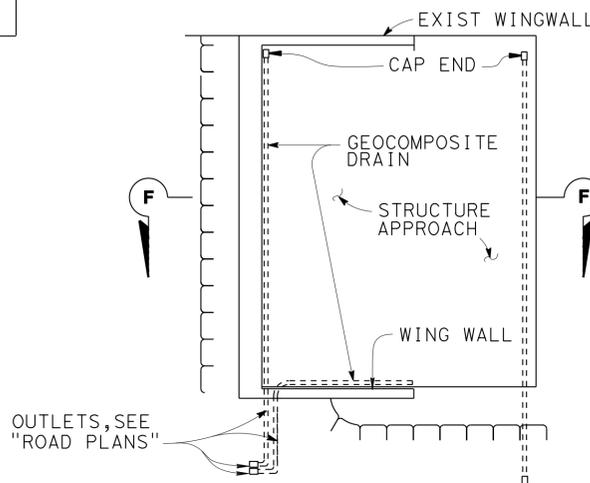
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1582	2313
<i>Davit Tadelle Esq.</i> REGISTERED CIVIL ENGINEER			10/01/14 DATE		
6-1-15 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



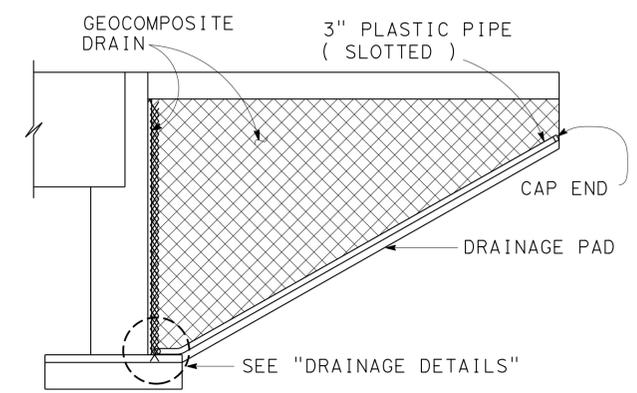
1 TYPICAL PLAN (ABUTMENT 3)
 1"=10'
 * FOR PIPE LAYOUT AT STAGGERED END, SEE "DETAIL B".



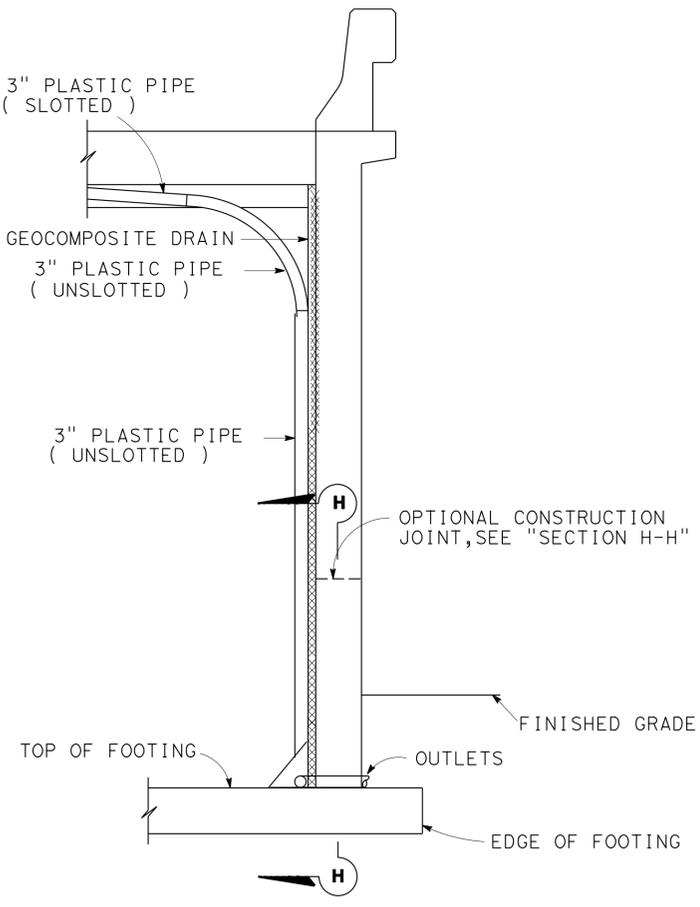
RETAINING WALL WINGWALL SECTION G-G
 1/4"=1'-0"



2 TYPICAL PLAN (ABUTMENT 1)
 1"=10'

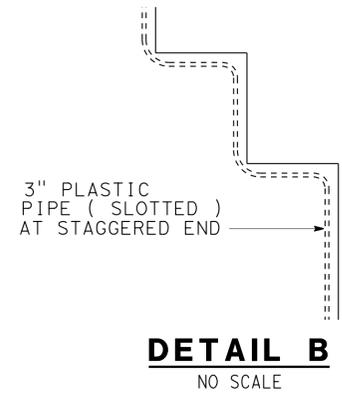


CANTILEVER WINGWALL SECTION F-F
 1/4"=1'-0"

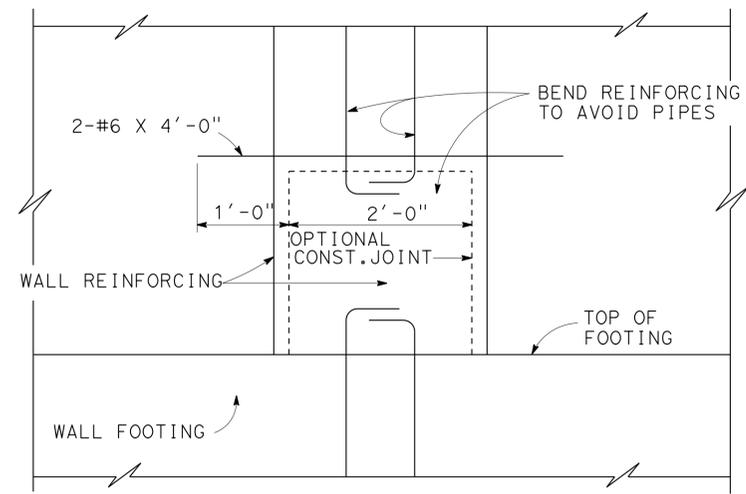


SECTION E-E
 1/2"=1'-0"

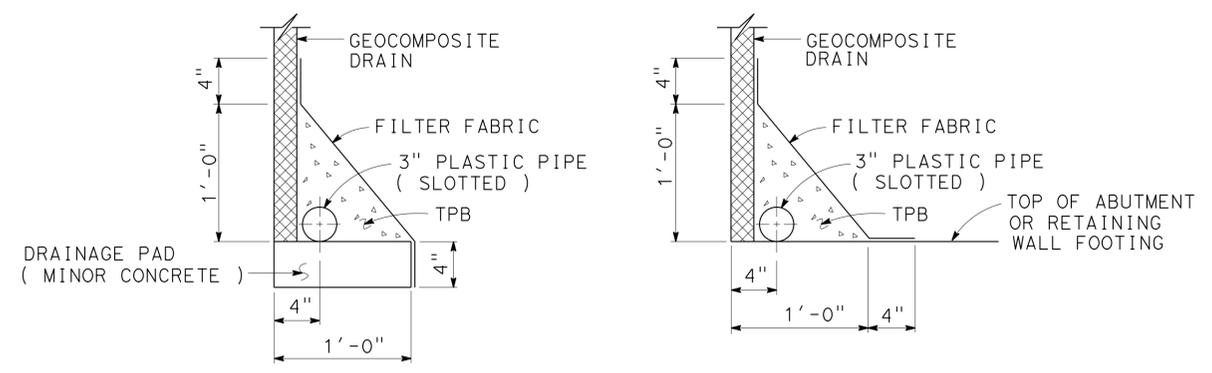
NOTE: Bends and junctions in 3" plastic pipe are 30" radius min.



DETAIL B
 NO SCALE



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



WITHOUT FOOTING WITH FOOTING DRAINAGE DETAILS
 1/2"=1'-0"

STANDARD DRAWING		1 Modified Detail
FILE NO. xs3-110	APPROVAL DATE <u>July 2011</u>	2 Added details

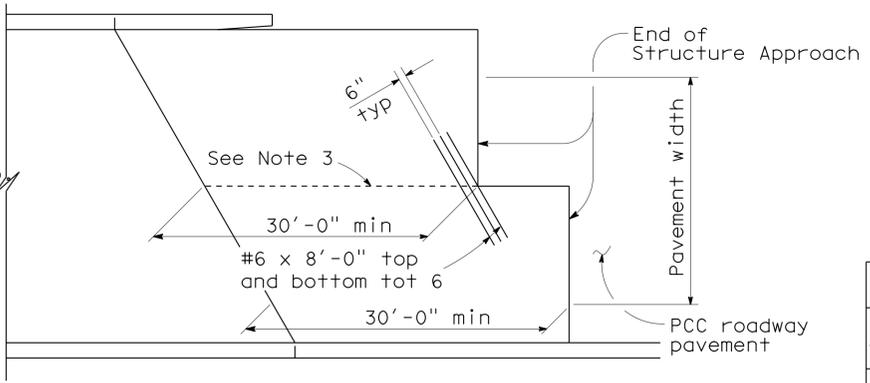
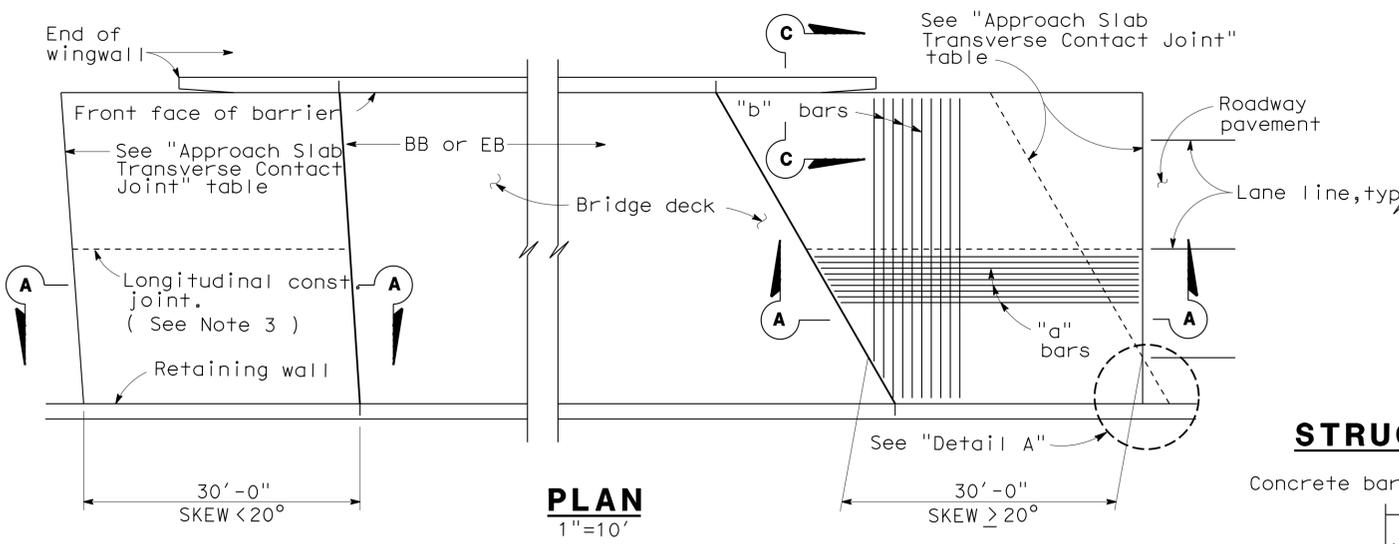
STATE OF CALIFORNIA		BRIDGE NO. 53-0670	CITRUS STREET UNDERCROSSING (WIDEN)	
DEPARTMENT OF TRANSPORTATION		POST MILE 37.5	STRUCTURE APPROACH DRAINAGE DETAILS	

UNIT: 3622	PROJECT NUMBER & PHASE: 071300007-4	CONTRACT NO.: 1193U1
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DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 23 OF 30
	10/05/10 07/19/11	

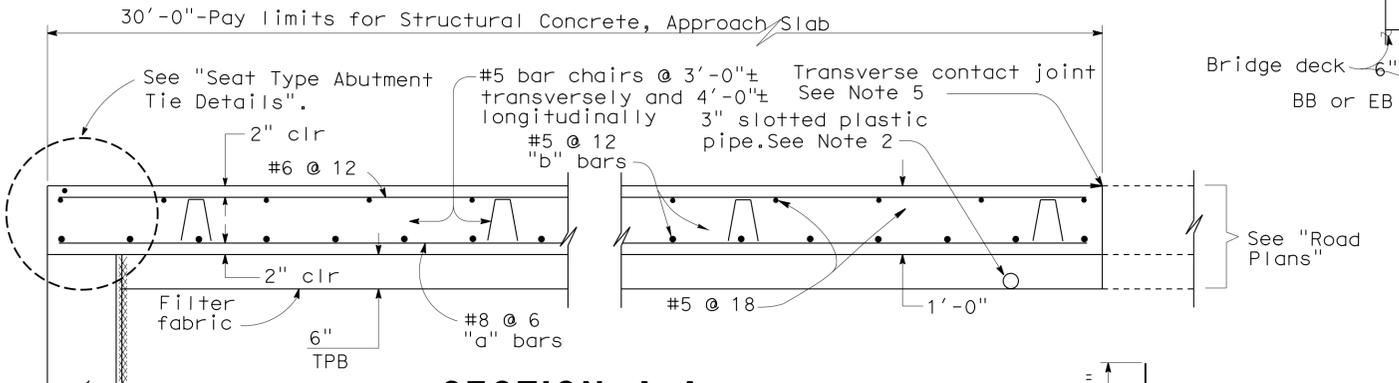
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1583	2313

Dawit Tadelle Ezer 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
 Dawit T Worku
 No. C60711
 Exp 12-31-16
 CIVIL
 STATE OF CALIFORNIA
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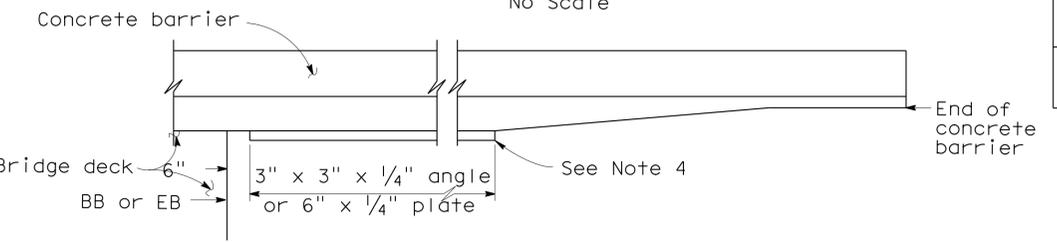


STRUCTURE APPROACH - END STAGGER DETAIL
No Scale

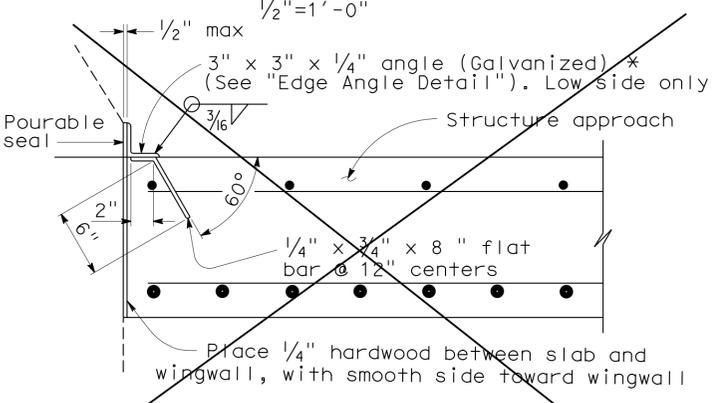
APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 20°	Parallel to face of paving notch	Parallel to face of paving notch
20° - 45°	Parallel to face of P N use (Detail A)	Stagger lines 24' to 36' apart.
> 45°	Parallel to face of P N use (Detail A)	Stagger at each lane line.



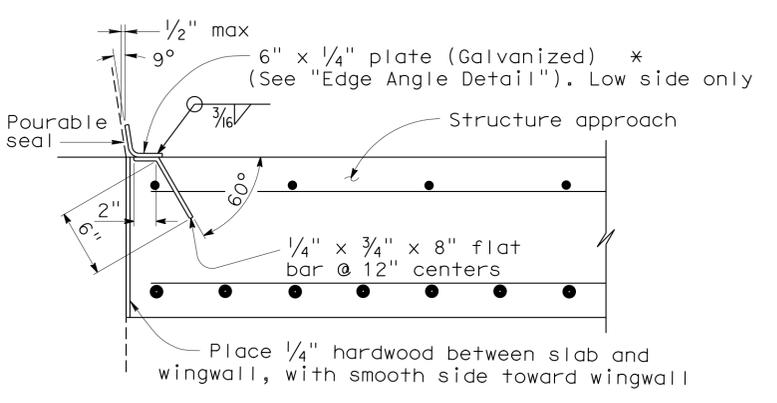
SECTION A-A
3/4"=1'-0"



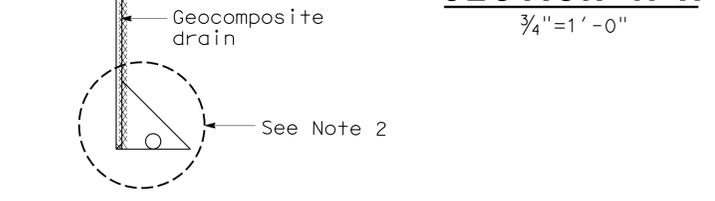
EDGE ANGLE DETAIL



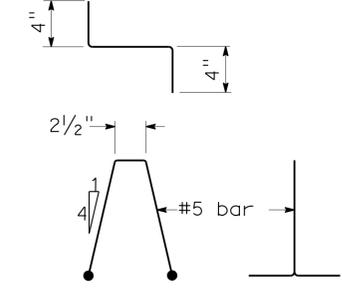
(TO BE USED WITH TYPE 25 OR TYPE 27 CONCRETE BARRIER)



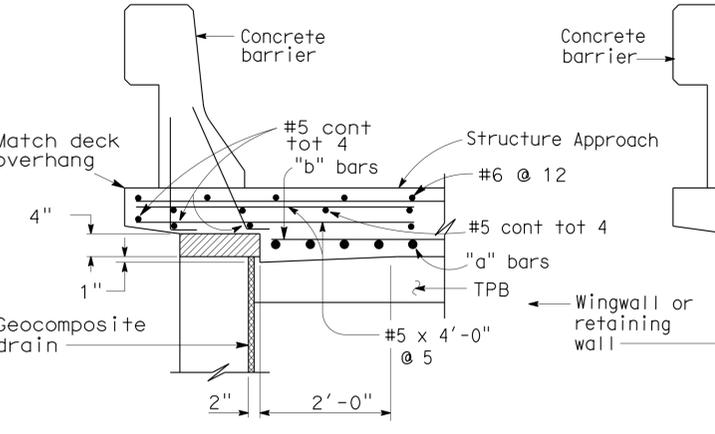
(TO BE USED WITH TYPE 732 OR TYPE 736 CONCRETE BARRIER)



DETAIL A
No Scale

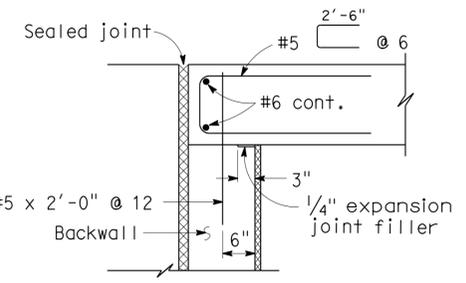


BAR CHAIR DETAIL
1 1/2"=1'-0"

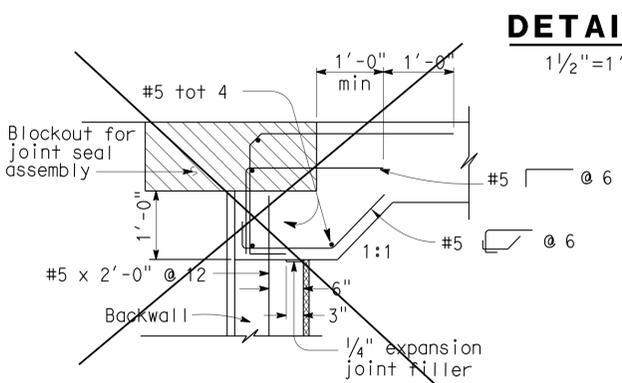


SECTION C-C
3/4"=1'-0"

(Type E-1 to be used, unless otherwise shown on plans)



MR ≤ 2"



MR > 2"

SEAT TYPE ABUTMENT TIE DETAILS (SEE NOTE 1)
3/4"=1'-0"

NOTES:

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

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

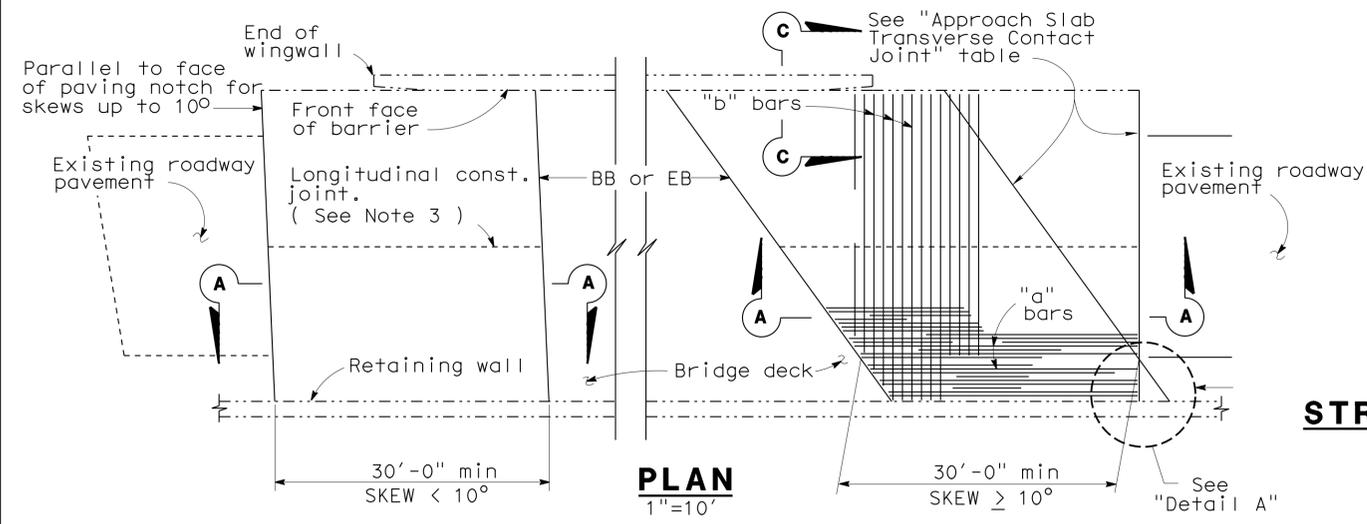
Deleted Details

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 BRIDGE NO. 53-0670
 POST MILE 37.5

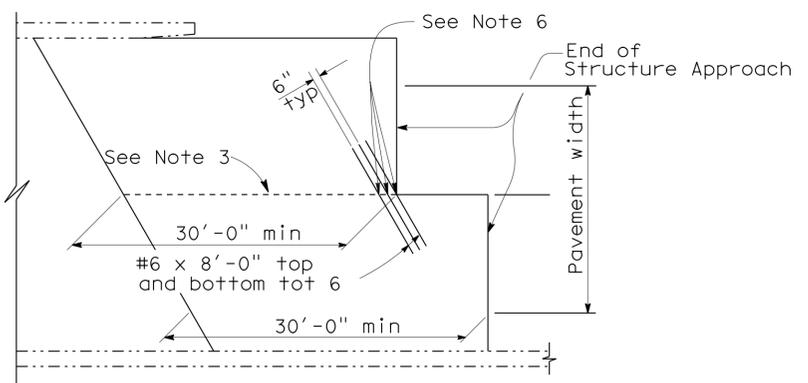
CITRUS STREET UNDERCROSSING (WIDEN)
STRUCTURE APPROACH TYPE N(30S)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1584	2313

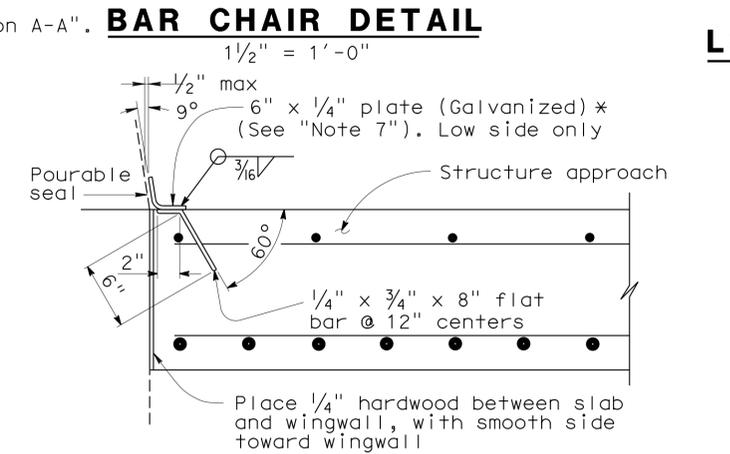
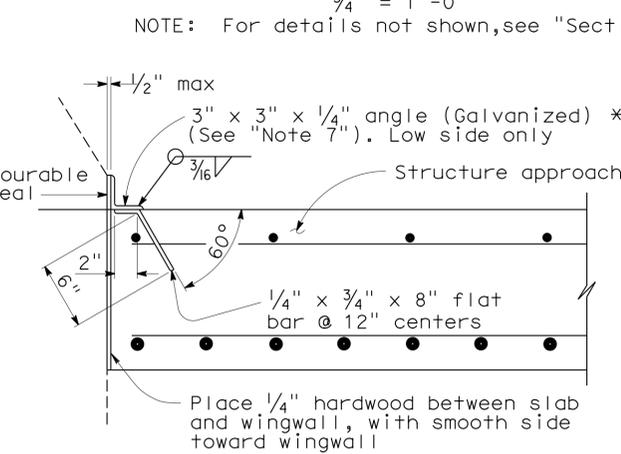
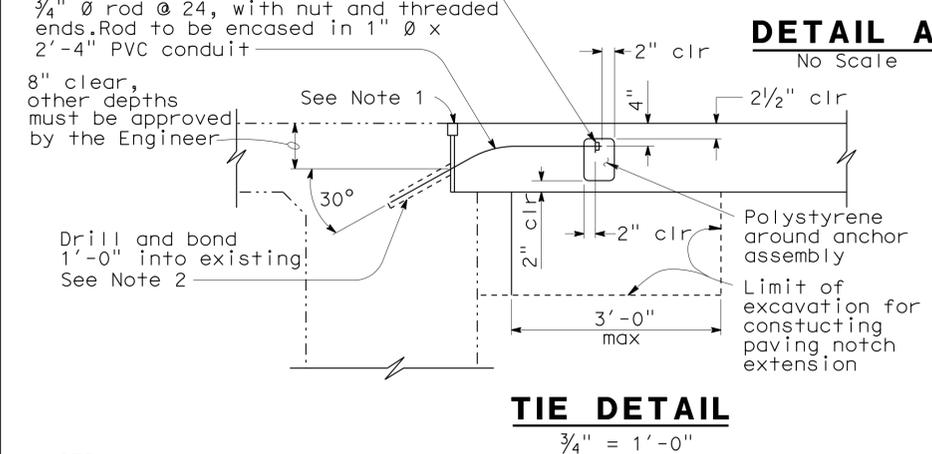
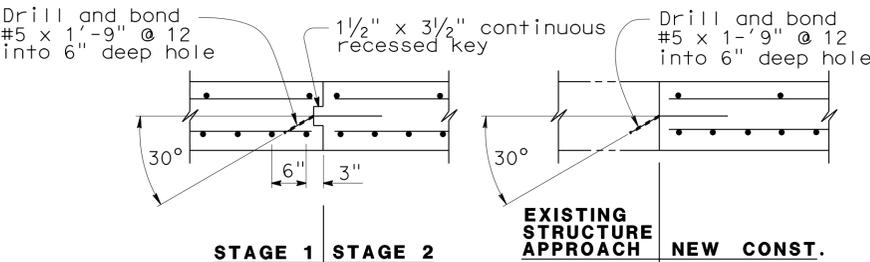
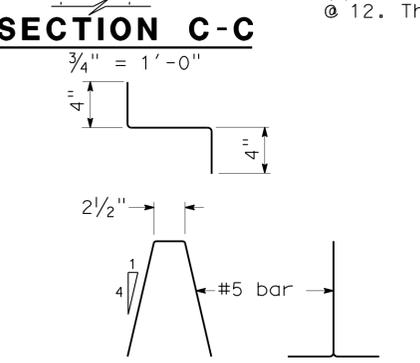
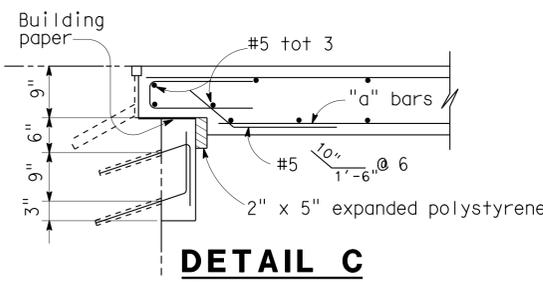
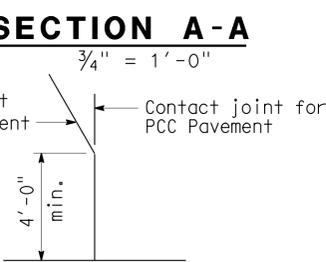
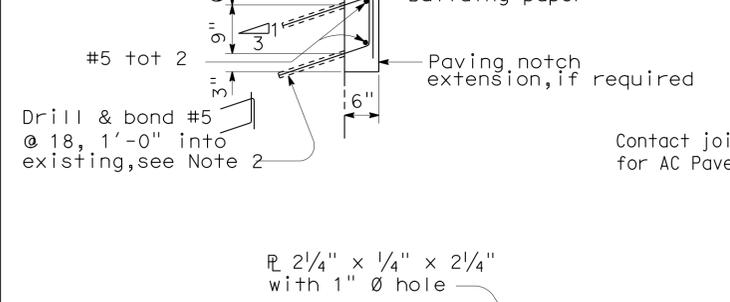
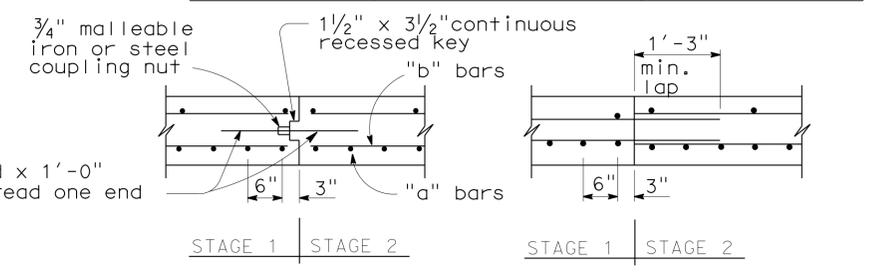
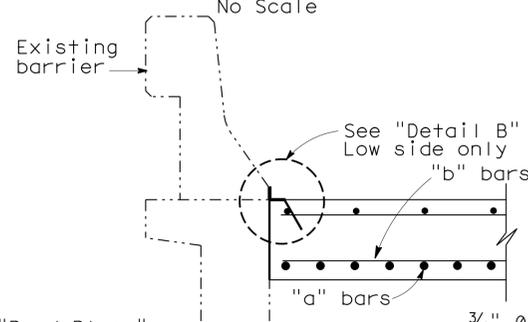
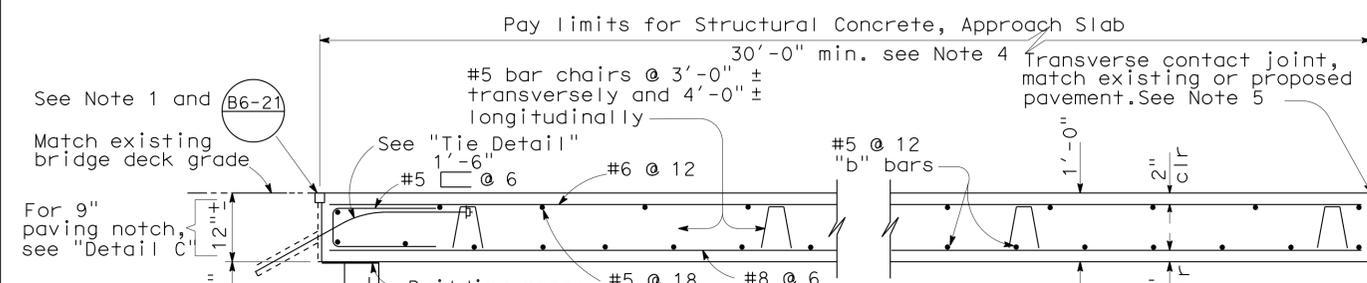
Dawit Tadelle Eger 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
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STRUCTURE APPROACH - END STAGGER DETAIL



APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	Parallel to face of paving notch	Parallel to face of paving notch
10° - 45°	Parallel to face of P N use (Detail A)	Stagger lines 24' to 36' apart
> 45°	Parallel to face of P N use (Detail A)	Stagger at each lane line



LONGITUDINAL CONSTRUCTION JOINT ALTERNATIVES

- NOTES:**
- For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required.
 - Space to avoid existing prestress anchorages and main reinforcement.
 - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
 - Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint.
 - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
 - Couplers are required for stage construction.
 - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.

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

*(TO BE USED WITH TYPE 25 OR TYPE 27 CONCRETE BARRIER)

*(TO BE USED WITH TYPE 732 OR TYPE 736 CONCRETE BARRIER)

STANDARD DRAWING
FILE NO. **xs3-150e**
APPROVAL DATE July 2011

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE NO. 53-0670
POST MILE 37.5

CITRUS STREET UNDERCROSSING (WIDEN)
STRUCTURE APPROACH TYPE R(30D)

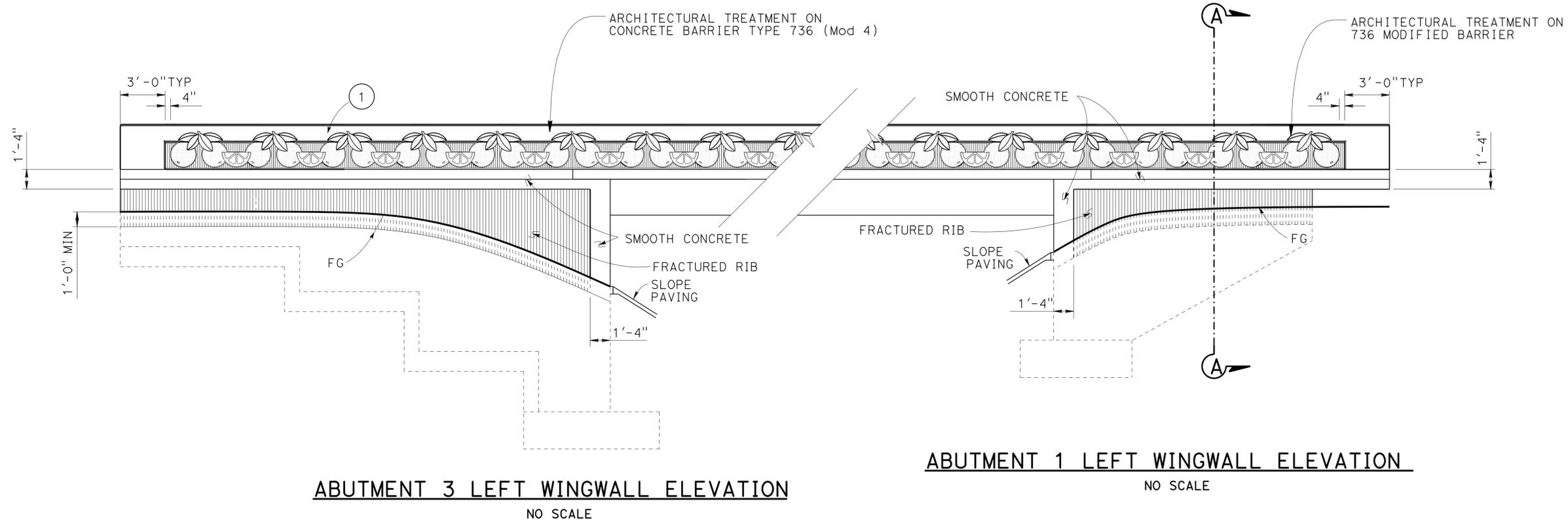
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1585	2313

Dawit Tadelle Esq 10/01/14
REGISTERED CIVIL ENGINEER DATE

6-1-15
PLANS APPROVAL DATE

Dawit T Worku
No. C60711
Exp 12-31-16
CIVIL
STATE OF CALIFORNIA

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ABUTMENT 3 LEFT WINGWALL ELEVATION
NO SCALE

ABUTMENT 1 LEFT WINGWALL ELEVATION
NO SCALE

- NOTES:**
1. For Barrier Architectural Detail see "ARCHITECTURAL TREATMENT DETAIL NO. 2" and
 2. For Fractured Rib and Sandblast Detail see "ARCHITECTURAL TREATMENT DETAIL NO. 2" and Sheet.
 3. For "SECTION A-A" see "ARCHITECTURAL TREATMENT DETAIL NO. 2" sheet.
 4. LEFT BRIDGE WIDEN SHOWN RIGHT BRIDGE WIDEN SIMILAR

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

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-0670	CITRUS STREET UNDERCROSSING (WIDEN)	
	DETAILS	BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			POST MILE	37.5		ARCHITECTURAL TREATMENT DETAILS NO.1
	QUANTITIES	BY Dawit Worku	CHECKED Homa Iraninejadian			UNIT: 3622 PROJECT NUMBER & PHASE: 0713000007-4			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 26 OF 30		

TIME PLOTTED => 1:35:53
18-MAY-2015
DATE PLOTTED => 8:12:56Z
USER NAME =>

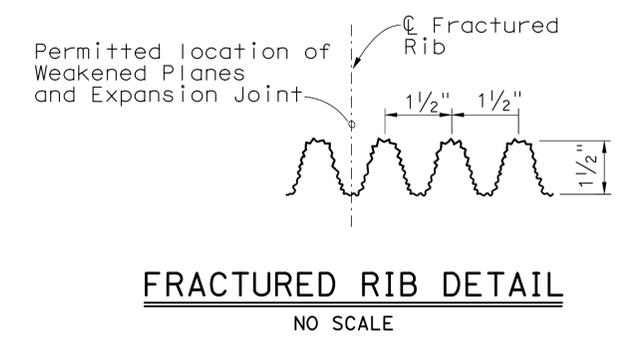
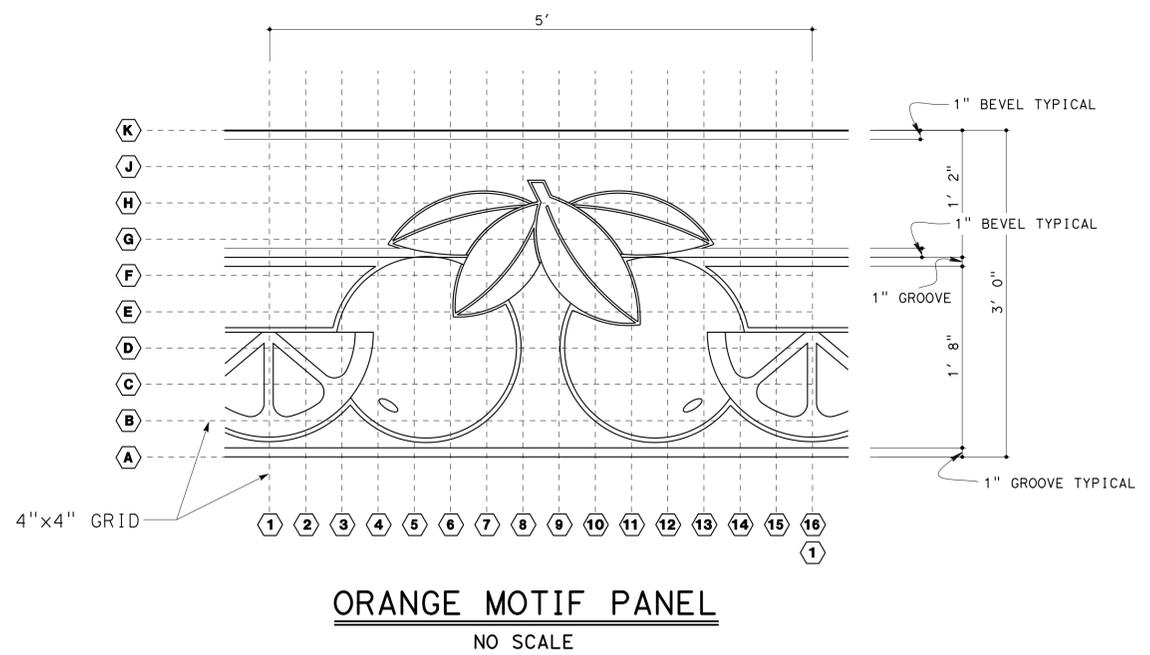
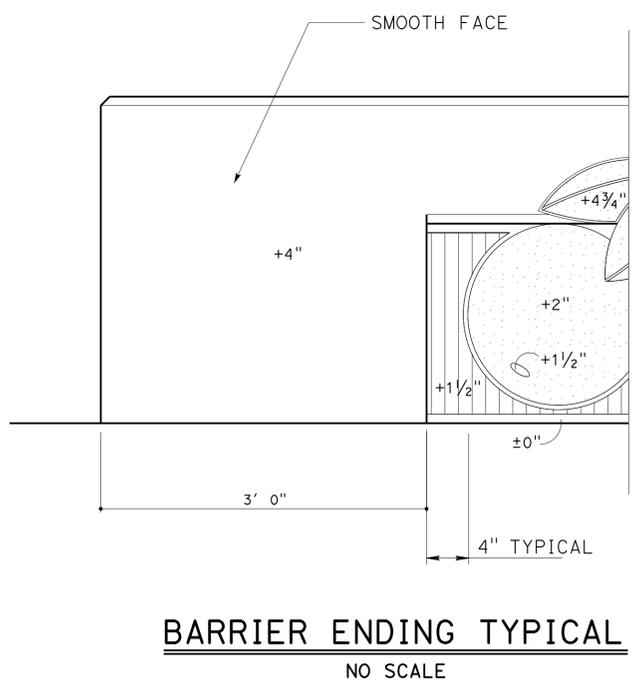
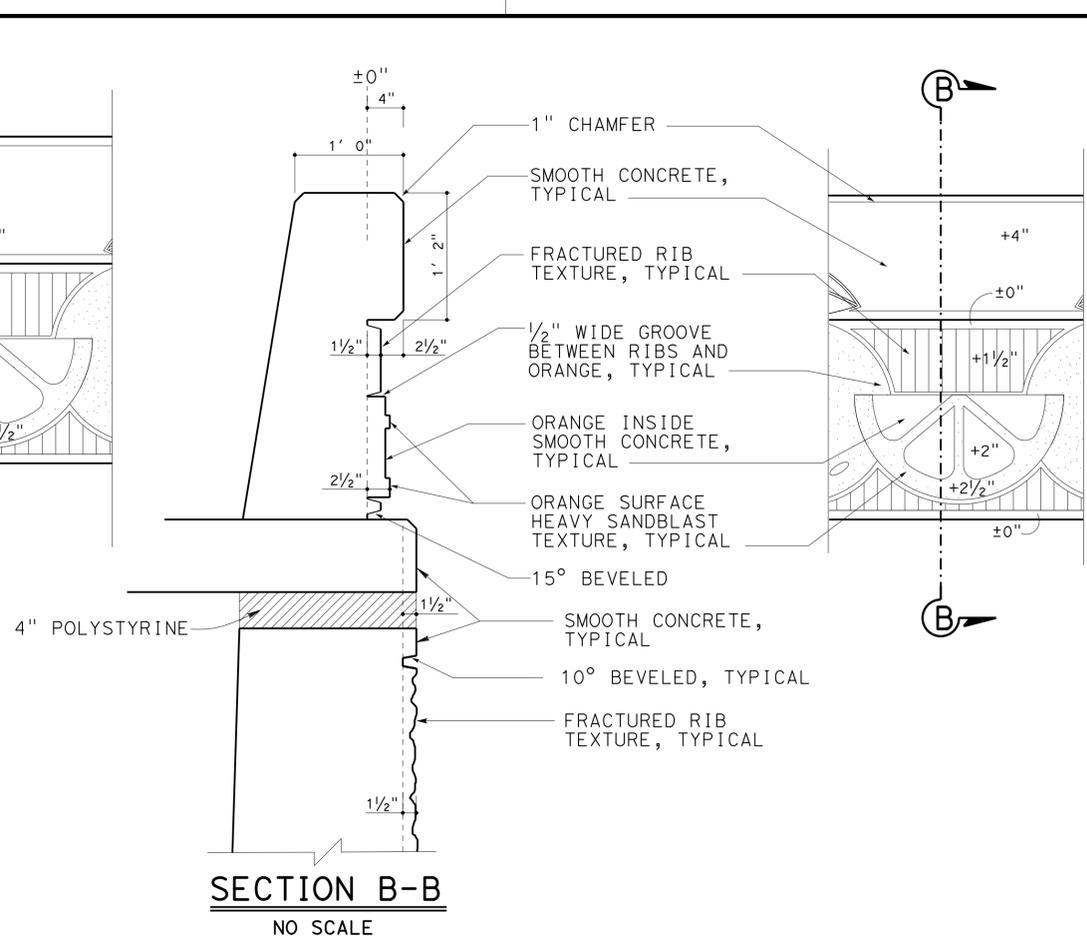
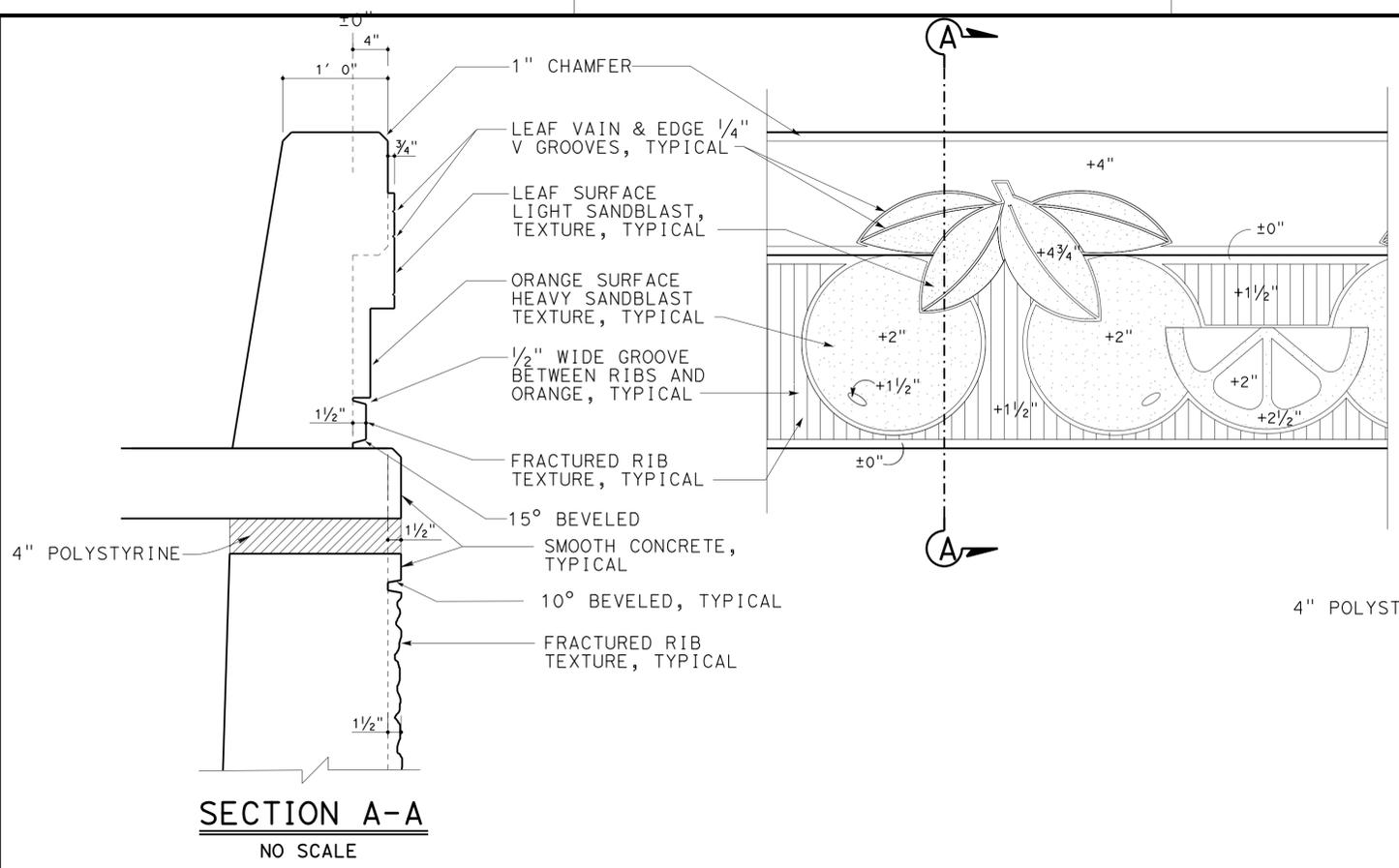
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1586	2313

Dawit Tadelle Eger 10/01/14
 REGISTERED CIVIL ENGINEER DATE

6-1-15
 PLANS APPROVAL DATE

Dawit T Worku
 No. C60711
 Exp 12-31-16
 CIVIL
 STATE OF CALIFORNIA

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BARRIER TYPE 736 (MOD) MODIFICATION DETAILS

DESIGN	BY Dawit Worku	CHECKED Edward B Mu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO. 53-0670	CITRUS STREET UNDERCROSSING (WIDEN) ARCHITECTURAL TREATMENT DETAILS NO.2				
	DETAILS BY K Farahzadi\ Lan Tran	CHECKED Edward B Mu			POST MILE 37.5					
	QUANTITIES BY Dawit Worku	CHECKED Homa Iraninejadian								
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3622 PROJECT NUMBER & PHASE: 0713000007-4	CONTRACT NO.: 1193U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES				
				0	1	2	3	REVISION DATES	SHEET 27	OF 30

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
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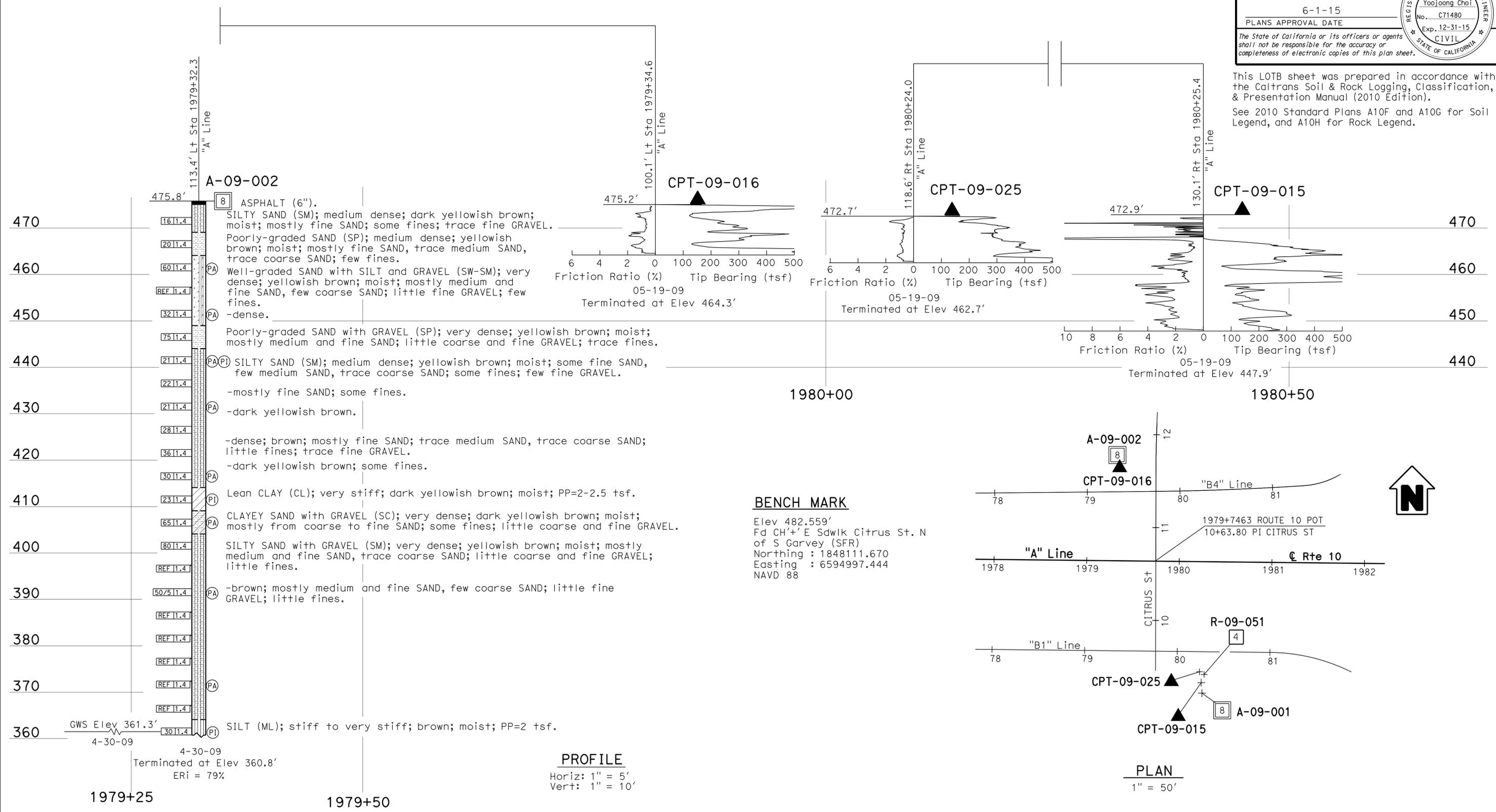
1-13-14
REGISTERED CIVIL ENGINEER

6-1-15
PLANS APPROVAL DATE

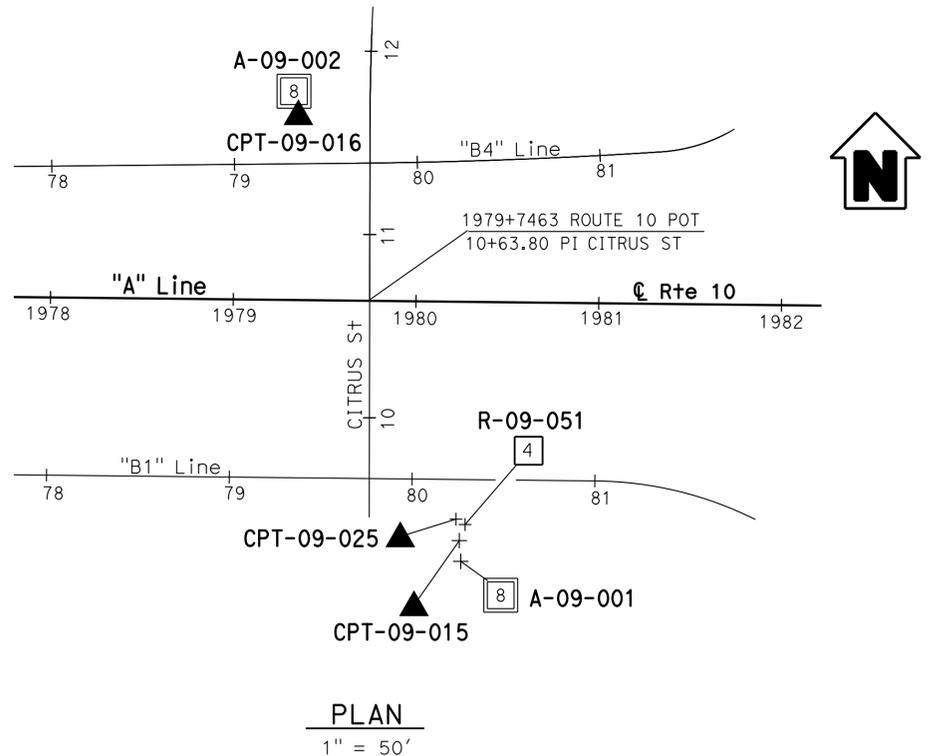
Yoojoong Choi
No. C71480
Exp. 12-31-15
CIVIL
STATE OF CALIFORNIA

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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.



BENCH MARK
Elev 482.559'
Fd CH'+E Sdwk Citrus St. N
of S Garvey (SFR)
Northing : 1848111.670
Easting : 6594997.444
NAVD 88



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

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		CITRUS STREET UNDERCROSSING (WIDEN)	
FUNCTIONAL SUPERVISOR		DRAWN BY: W. Tang 08/10, I.G-Remmen		DEPARTMENT OF TRANSPORTATION		BRIDGE NO. 53-0670		LOG OF TEST BORINGS 1 OF 3	
NAME: D. Jang		CHECKED BY: M. Salisbury		DESIGN BRANCH 20		POST MILE 37.48			
065 CIVIL LOG OF TEST BORINGS SHEET		FIELD INVESTIGATION BY: Y. Choi, S. Cho		UNIT: 3643		PROJECT NUMBER & PHASE: 0713000007-4		CONTRACT NO.: 1193U1	
		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET 28 OF 30	

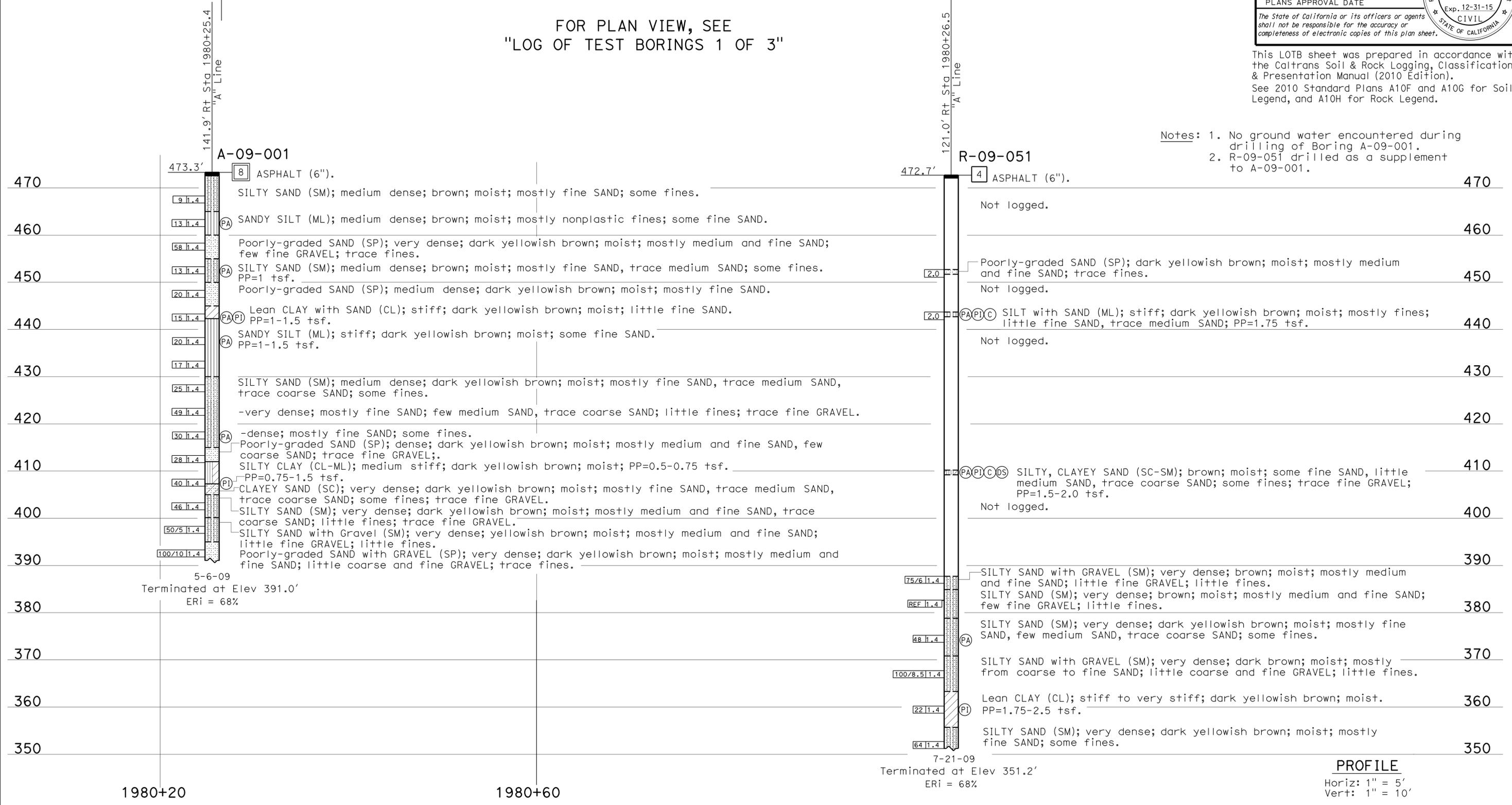
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10	37.2/42.4	1588	2313
			1-13-14		
			REGISTERED CIVIL ENGINEER		
			6-1-15		
			PLANS APPROVAL DATE		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



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.

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

Notes: 1. No ground water encountered during drilling of Boring A-09-001.
2. R-09-051 drilled as a supplement to A-09-001.



ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		CITRUS STREET UNDERCROSSING (WIDEN)	
FUNCTIONAL SUPERVISOR		DRAWN BY: W. Tang 08/10, I.G-Remmen		FIELD INVESTIGATION BY:		STRUCTURE DESIGN		53-0670		LOG OF TEST BORINGS 2 OF 3	
NAME: D. Jang		CHECKED BY: M. Salisbury		Y. Choi		DESIGN BRANCH 20		POST MILE			
								37.48			
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 071300007-4		CONTRACT NO.: 07-1193U1		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3						REVISION DATES	
										08-31-10 10-11-10 11-15-10 01-10-14	
										SHEET 29 OF 30	

USERNAME => s125624 DATE PLOTTED => 16-MAY-2015 TIME PLOTTED => 13:53

FILE => 53-0670-Z-1+D02.dgn

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	37.2/42.4	538	741

REGISTERED PROFESSIONAL ENGINEER
 No. C71480
 Exp. 12-31-15
 CIVIL
 STATE OF CALIFORNIA
 November 29, 1911

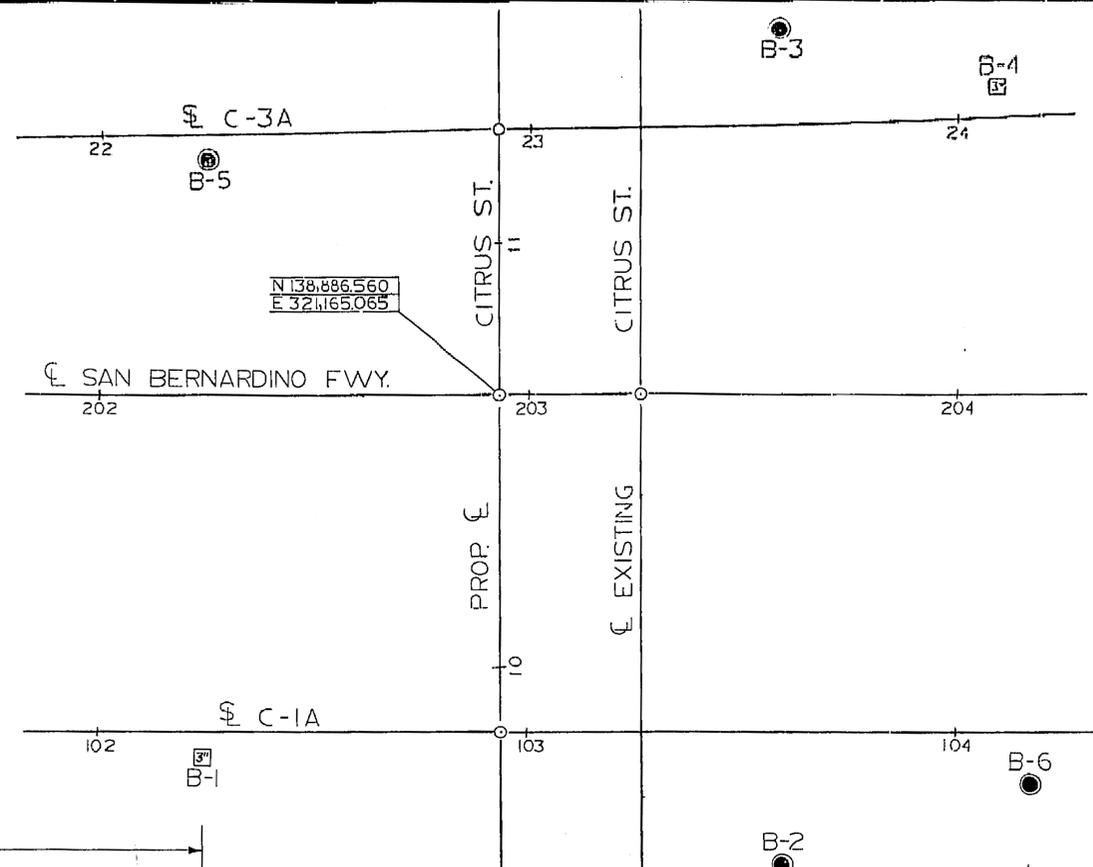
DIVISION OF ENGINEERING SERVICES - MATERIALS AND GEOTECHNICAL SERVICES					
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this 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
07	LA	10	37.2/42.4	1589	2313
REGISTERED CIVIL ENGINEER			DATE 1/13/2014		
CITRUS STREET UNDERCROSSING (WIDEN)					
LOG OF TEST BORINGS 3 OF 3					
UNIT: 3643		CONTRACT No. 07-1193U1		BRIDGE No. 53-0670	
PROJ. No. & PHASE: 0713000071					
AS-BUILT VERT DATUM: N/A		CONVERSION: N/A		Sheet of	
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA					



TO ACCOMPANY PLANS DATED 6-1-15
PLAN
 Scale: 1"=20'

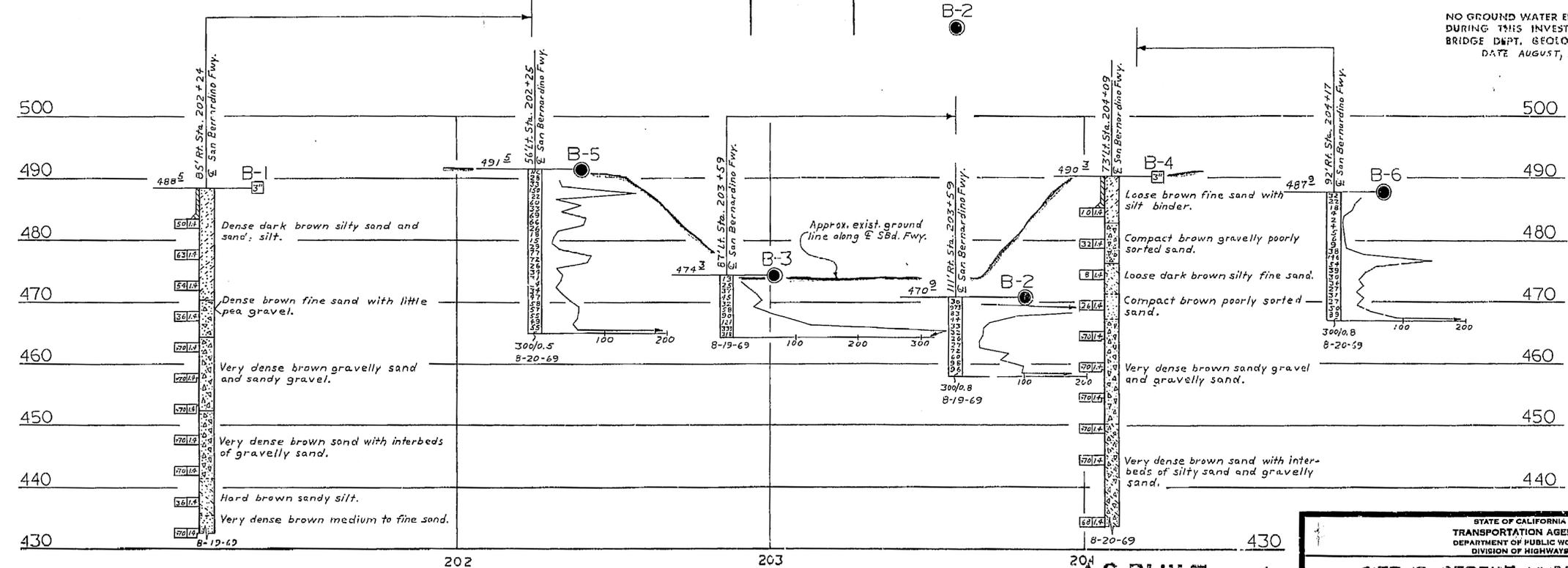
PROFILE
 Scale: Vert. 1"=10'
 Horiz. 1"=20'

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION DATE AUGUST, 69



BENCH MARKS
 BM# 22R-54 Elev. 499.96'
 Found lead and nail on the east curb of Citrus St. 143 feet North of E of the North Frontage Road (Garvey Ave) and 30 feet east of E of Citrus St. (LA-010 9-I, J).

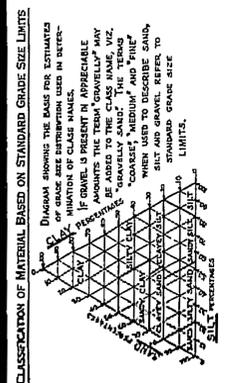
N 138.886.560
 E 32.1165.065



FIELD STUDY	By R.E. CORSALEY B-20-65
DRAWN	By S. JIMENEZ B-27-69
CHECKED	By D.E. CHAMBERLAIN B-69
Approval Recommended	By [Signature]

LEGEND OF EARTH MATERIALS

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



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.

AS BUILT PLANS
 Contract No. 07-038824
 Date Completed: -
 Document No. 70002344

AS BUILT None
 15/10/75
 CORRECTED BY Paul Vuocoli
 CONTRACT NO. 07-038824
 DATE 8-18-75

STATE OF CALIFORNIA TRANSPORTATION AGENCY DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS					
CITRUS STREET UNDERCROSSING					
LOG OF TEST BORINGS					
BRIDGE NO.	53-670	POST MILE	37.5	DRAWING NO.	15/15
REVISION DATES			PRELIMINARY STAKE ONLY		

WO 038821
 CU 07213

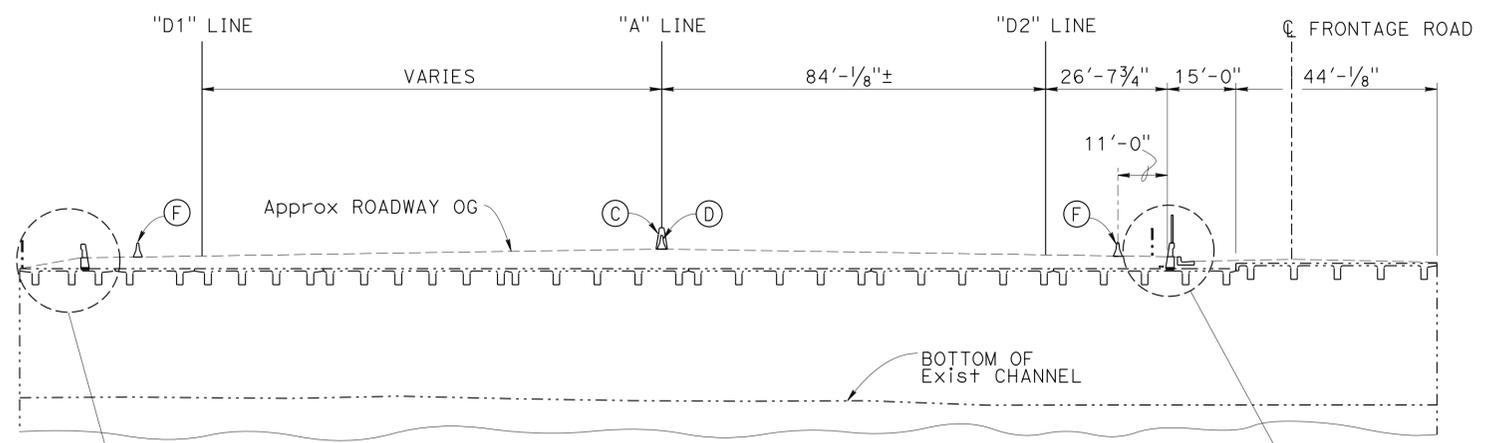
Overland points bearing earlier revision dates

538

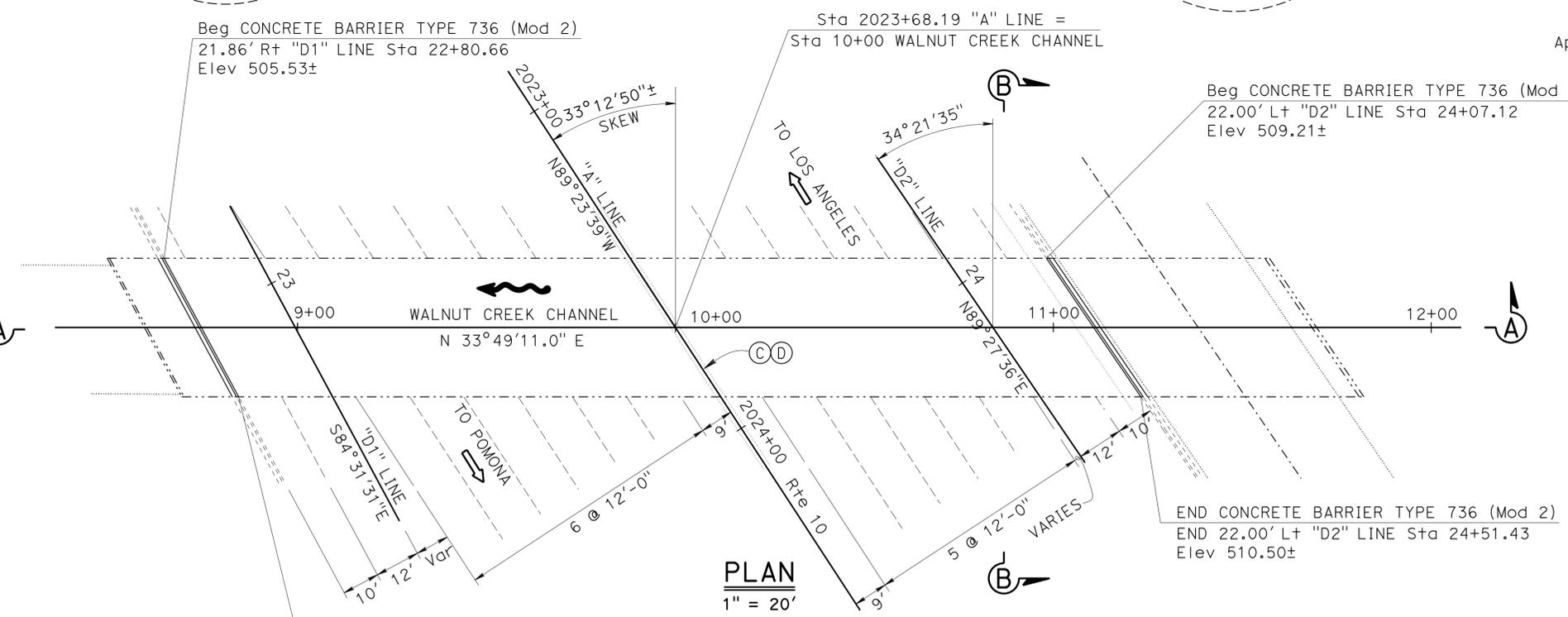
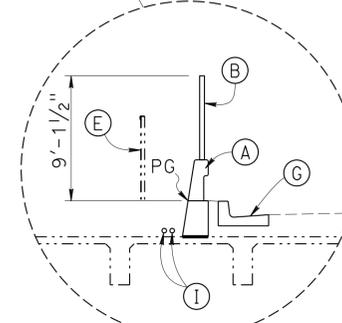
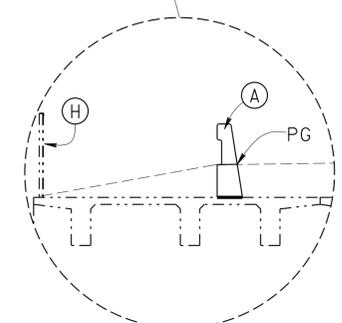
BRIDGE DEPARTMENT
 ENGINEERING GEOLOGY SECTION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1590	2313

Dawit Tadelle Ezer 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
 Dawit T Worku
 No. C60711
 Exp. 12-31-14
 CIVIL
 STATE OF CALIFORNIA
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SECTION A-A
1" = 20'

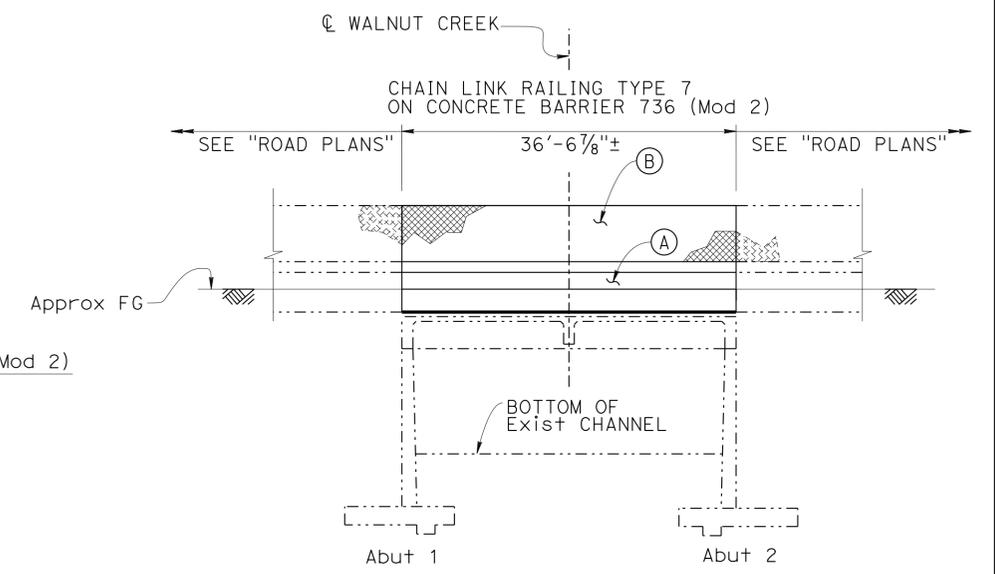


NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

LEGEND:
 ——— Indicates New Construction
 - - - - - Indicates Existing Structure

QUANTITIES

STRUCTURAL CONCRETE, BRIDGE	10	CY
DRILL AND BOND DOWEL	110	LF
BAR REINFORCING STEEL (BRIDGE)	1,832	LB
CHAIN LINK RAILING (TYPE 7 MODIFIED)	44	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	86	LF



SECTION B-B
1" = 10'-0"

NOTES:

- (A) Concrete Barrier Type 736 (Mod 2)
- (B) Chain Link Railing Type 7
- (C) Concrete Barrier Type 60G, see "ROAD PLANS"
- (D) Remove Concrete Barrier Type 50, see "ROAD PLANS"
- (E) Remove Chain Link Fence, see "ROAD PLANS"
- (F) Temporary Railing Type K, see "ROAD PLANS"
- (G) Reconstruct Curb and Gutter, see "ROAD PLANS"
- (H) Chain Link Fence to remain, see "ROAD PLANS"
- (I) 2-3/2"Ø Communication Conduits, see "ROAD PLANS"

HOWARD NG DESIGN ENGINEER	DESIGN	BY DAWIT WORKU	CHECKED EDDY SCOTT	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 20	BRIDGE NO.	53-0105	WALNUT CREEK CHANNEL BRIDGE (BRIDGE RAILING) GENERAL PLAN
	DETAILS	BY LAN T TRAN/A. ONG	CHECKED DAWIT WORKU	LAYOUT	BY DAWIT WORKU			CHECKED EDDY SCOTT	POST MILE	
	QUANTITIES	BY DAWIT WORKU	CHECKED EDDY SCOTT	SPECIFICATIONS	BY XIAODONG CHEN	PLANS AND SPECS COMPARED	XIAODONG CHEN			

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
 UNIT: 3622
 PROJECT NUMBER & PHASE: 0713000007-1
 CONTRACT NO.: 1193U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 05/08/14, 05/08/14, 05/20/14, 9-10-14
 SHEET 1 OF 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1591	2313

Dawit Tadelle Tessema 10/01/14
REGISTERED CIVIL ENGINEER DATE

6-1-15
PLANS APPROVAL DATE

Dawit T Worku
No. C60711
Exp. 12-31-14
CIVIL
STATE OF CALIFORNIA

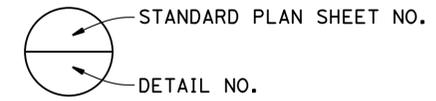
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INDEX TO PLANS

NO.	SHEET NAME
1.	GENERAL PLAN
2.	INDEX TO PLANS
3.	BRIDGE RAILING DETAILS

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
A10H	LEGEND - ROCK
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
B11-52	CHAIN LINK RAILING TYPE 7
RSP B11-56	CONCRETE BARRIER TYPE 736



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

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

Design: AASHTO LRFD Bridge Design Specifications, 4th edition with Caltrans Amendments, preface dated November 2011

LS: Varied surcharge on level ground surface
CT: 54 kip maximum traffic impact loading evenly distributed over 10 feet at top of the barrier and 1:1 distribution down and outward

Reinforced
Concrete: $f'c = 3.6 \text{ ksi}$ $n = 8$
 $f_y = 60 \text{ ksi}$

Load Combinations and Limit States

Service I $Q=1.00DC+1.00EH+1.00LS$

Service II $Q=1.00DC+1.00EH+1.3LS$

Service III $Q=1.00DC+1.00EH+0.8LS$

Strength I $Q=aDC+1.50EH+1.75LS$

Strength III $Q=aDC+1.50EH$

Strength V $Q=aDC+1.50EH+1.35LS$

Extreme I $Q=1.00DC+1.00EH$

Extreme II $Q=1.00DC+1.00EH+1.00CT+0.5LS$

Where: Q: Force Effects
a: 1.25 or 0.90, Which ever Controls Design
B: 1.35 or 1.00, which ever Controls Design
DC: Dead Load of Structure Components
LS: Live Load Surcharge
CT: Vehicular Collision Force

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY DAWIT WORKU	CHECKED EDDY SCOTT	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-0105	WALNUT CREEK CHANNEL BRIDGE (BRIDGE RAILING)	
	DETAILS	BY ANTONETTE L. ONG	CHECKED DAWIT WORKU			POST MILE	38.3		
	QUANTITIES	BY DAWIT WORKU	CHECKED EDDY SCOTT			INDEX TO PLANS			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3	UNIT: 3622 PROJECT NUMBER & PHASE: 0713000007-1	CONTRACT NO.: 1193U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 2 OF 3

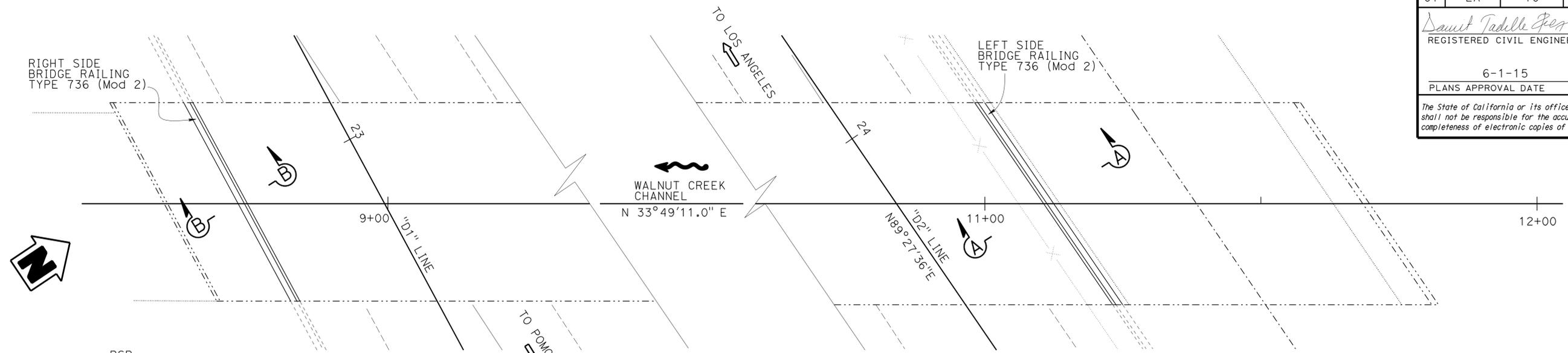
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1592	2313

Dawit Tadelle Esq. 10/01/14
 REGISTERED CIVIL ENGINEER DATE

6-1-15
 PLANS APPROVAL DATE

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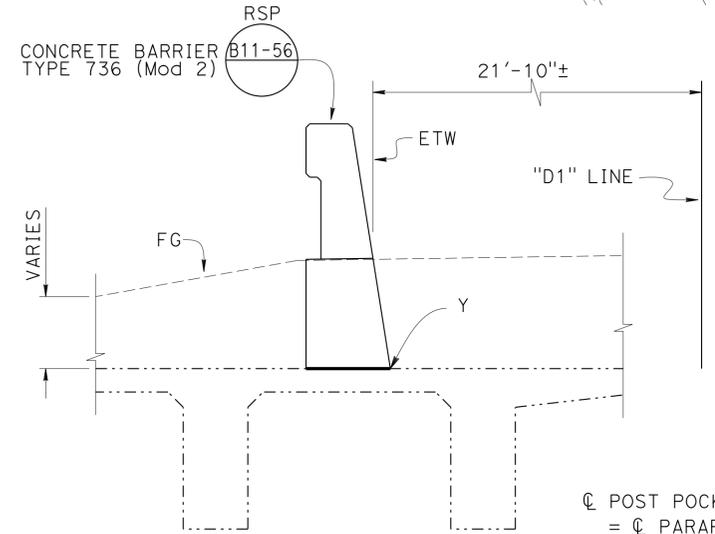
Dawit T Worku
 No. C60711
 Exp. 12-31-14
 REGISTERED PROFESSIONAL ENGINEER CIVIL STATE OF CALIFORNIA



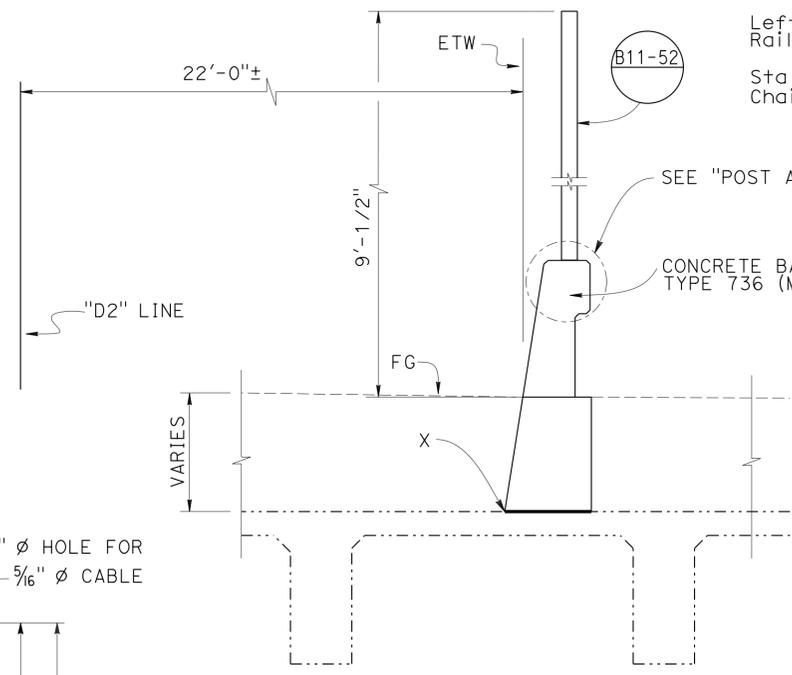
FOOTING PLAN
1" = 10'-0"

NOTES:

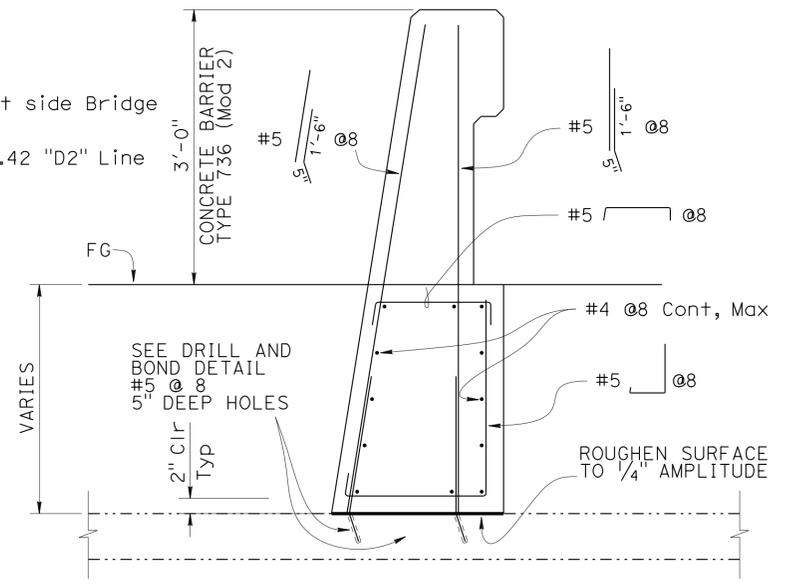
Left side Bridge Railing shown, right side Bridge Railing similar
 Sta 24+07.12 "D2" Line to Sta 24+51.42 "D2" Line Chain Link Railing Type 7



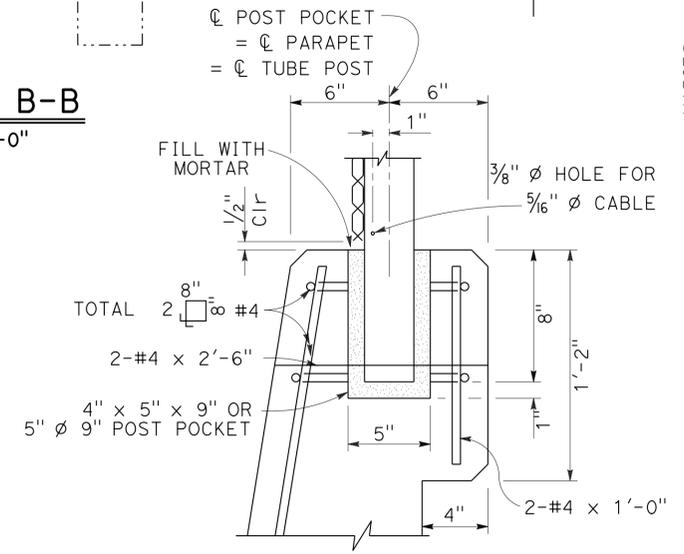
SECTION B-B
1/2" = 1'-0"



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



TYPICAL BARRIER DETAILS
1" = 1'-0"

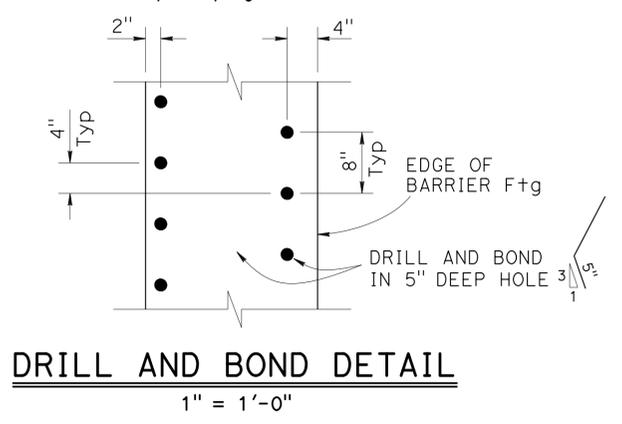


POST ANCHORAGE DETAIL
NO SCALE

LOCATION	APPROXIMATE ELEVATION OF DECK	
	X	Y
Abut 1	507.72±	504.28±
Abut 2	507.60±	505.57±

LEGEND:

- Indicates New Construction
- - - - Indicates Existing Structure



DRILL AND BOND DETAIL
1" = 1'-0"

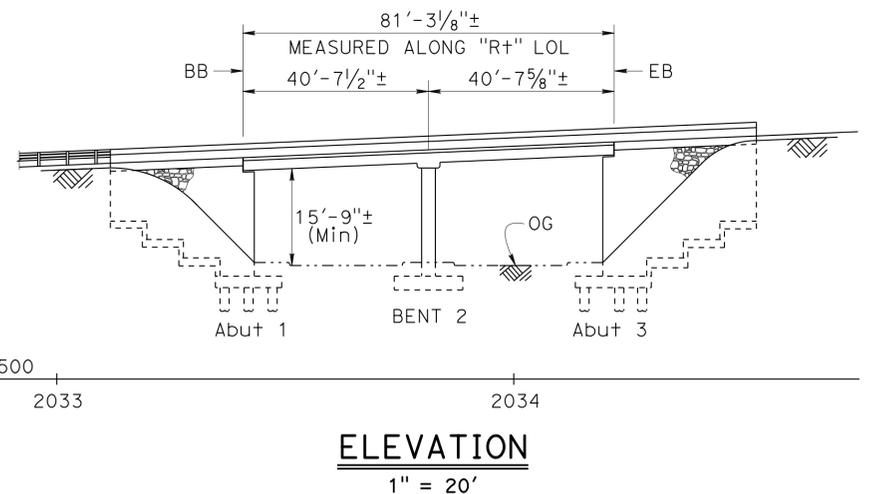
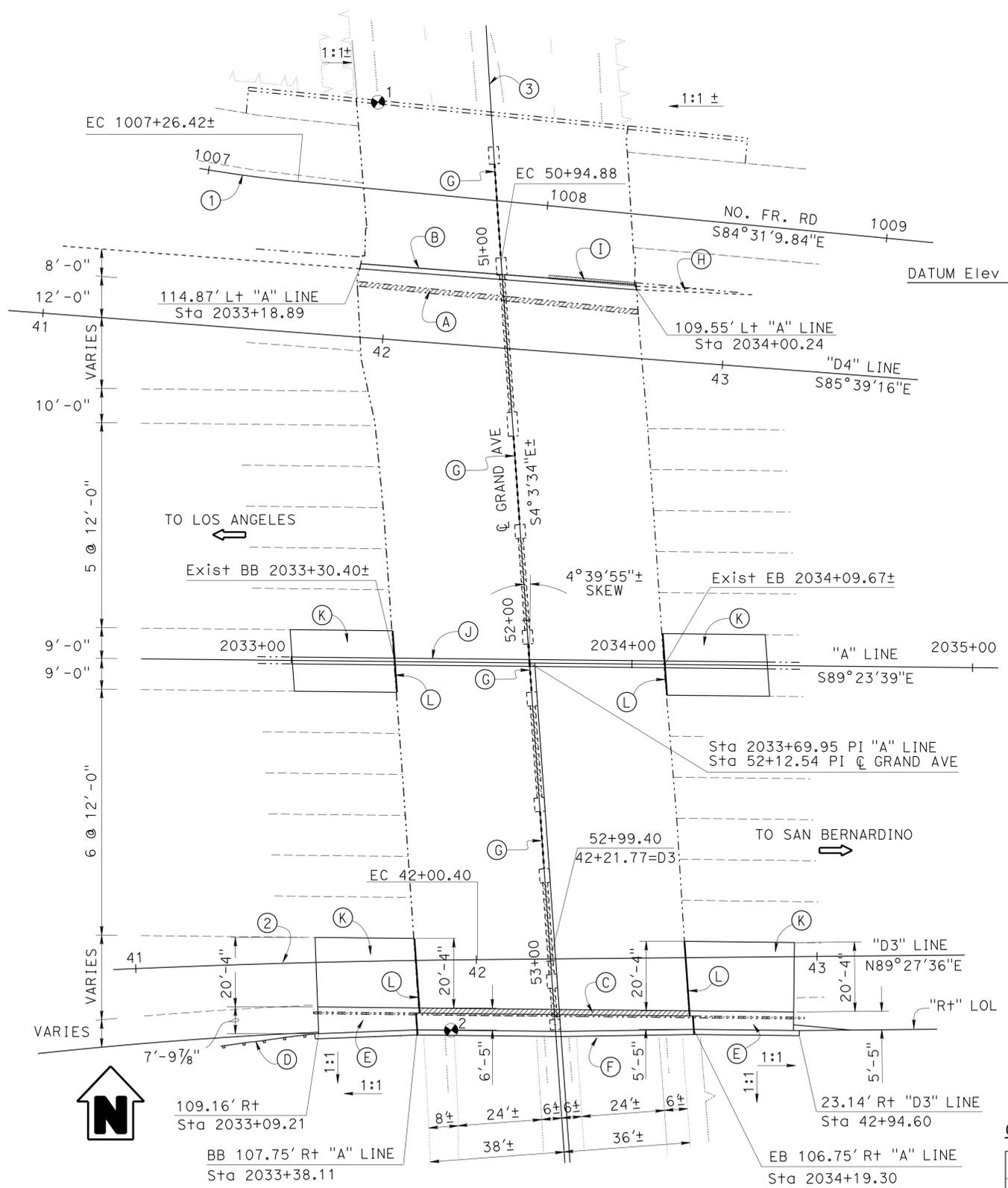
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY DAWIT WORKU	CHECKED EDDY SCOTT
DETAILS	BY ANTONETTE L. ONG	CHECKED DAWIT WORKU
QUANTITIES	BY DAWIT WORKU	CHECKED EDDY SCOTT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 20

BRIDGE NO. 53-0105
POST MILE 38.3
WALNUT CREEK CHANNEL BRIDGE (BRIDGE RAILING)
BRIDGE RAILING DETAILS



QUANTITIES

RAPID SETTING CONCRETE (PATCH)	1	CF
SALVAGE METAL BRIDGE RAILING	232	LF
REMOVE UNSOUND CONCRETE	1	CF
REFINISH BRIDGE DECK	218	SQFT
CORE CONCRETE (5 1/2")	17	LF
BRIDGE REMOVAL (PORTION), LOCATION B	LUMP	SUM
STRUCTURE EXCAVATION (BRIDGE)	593	CY
STRUCTURE BACKFILL (BRIDGE)	428	CY
2" SUPPLY LINE (BRIDGE)	140	LF
24" CAST-IN-DRILLED-HOLE CONCRETE PILING	477	LF
STRUCTURAL CONCRETE, BRIDGE FOOTING	127	CY
STRUCTURAL CONCRETE, BRIDGE	302	CY
AGGREGATE BASE (APPROACH SLAB)	9	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	11	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	89	CY
PAVING NOTCH EXTENSION	60	CF
CONCRETE SURFACE TEXTURE	612	SQFT
DRILL AND BOND DOWEL	478	LF
JOINT SEAL (MR 1/2")	94	LF
BAR REINFORCING STEEL (BRIDGE)	88,470	LB
HEADED BAR REINFORCEMENT	40	EA
PREPARE AND STAIN CONCRETE	696	SQFT
MISCELLANEOUS METAL (BRIDGE)	527	LB
CHAIN LINK RAILING (TYPE 7 MODIFIED)	85	LF
CONCRETE BARRIER (TYPE 60GA MODIFIED)	140	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	224	LF

- ### NOTES:
- (A) Remove Existing Barrier Rail, Type 9 Salvage Metal Bridge Railing
 - (B) Concrete Barrier Type 736 (Mod 3)
 - (C) Remove Bridge Railing and Overhang Salvage Metal Bridge Railing
 - (D) Midwest Guardrail System, see "ROAD PLANS"
 - (E) Structure Approach Slab Type N(30S)
 - (F) Concrete Barrier Type 736 (Mod 4)
 - (G) Chain Link Railing Type 7 (Mod)
 - (H) Barrier Transition, see "ROAD PLANS"
 - (I) Remove Concrete Curb
 - (J) Concrete Barrier Type 60GA (Mod)
 - (K) Structure Approach Slab Type R(30D)
 - (L) Joint Seal

- ### LEGEND:
- Indicates New Construction
 - - - - - Indicates Existing Structure
 - ▨ Indicates Infill Shear Wall
 - ▩ Indicates Bridge Removal (Portion)
 - ➔ Indicates Direction of Traffic
 - ⊙ 1 Indicate Min Vert Clr = 15'-9 1/2" (Exist)
 - ⊙ 2 Indicate Min Vert Clr = 18'-2" (Widen)

CURVE DATA

LINE	R	Δ	T	L
①	400'	24°38'25"	87.36	172.02
②	3000'	3°11'29"	83.57	167.10
③	5000'	3°45'58"	164.69	329.26

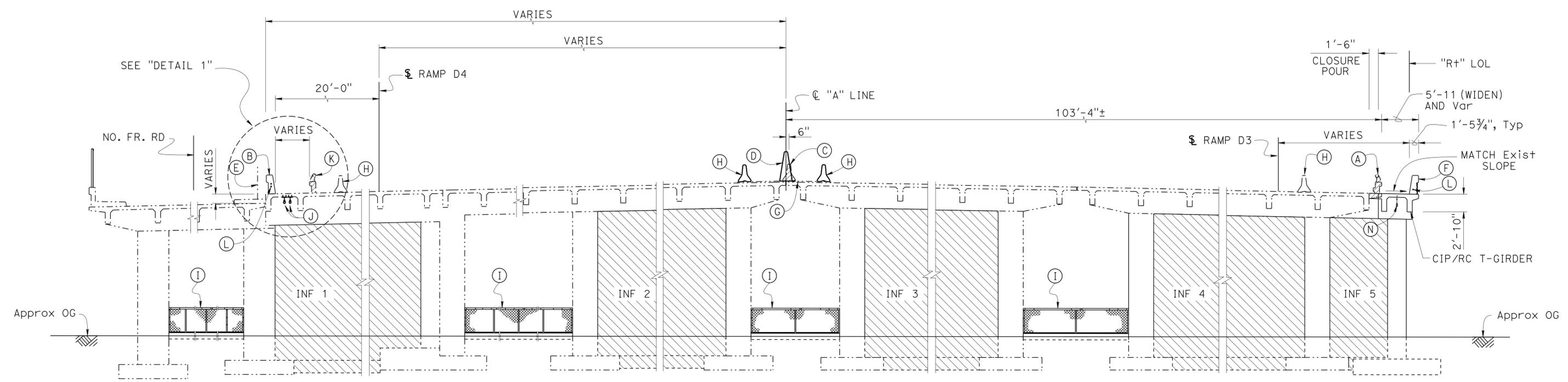
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PLAN
1" = 20'

HOWARD NG DESIGN ENGINEER	DESIGN	BY MOHAMMAD MUQTADIR	CHECKED FEIRUZ ABERRA	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 20	BRIDGE NO.	53-1528	GRAND AVENUE UC (WIDEN) GENERAL PLAN NO. 1	
	DETAILS	BY R. PALO/C. LE/A. ONG	CHECKED FEIRUZ ABERRA	LAYOUT	BY MOHAMMAD MUQTADIR			CHECKED FEIRUZ ABERRA	POST MILE		38.51
	QUANTITIES	BY MOHAMMAD MUQTADIR	CHECKED FEIRUZ ABERRA	SPECIFICATIONS	BY XIAODONG CHEN			CHECKED XIAODONG CHEN	UNIT: 3622		PROJECT NUMBER & PHASE: 0713000007-4

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
 0 1 2 3
 REVISION DATES: 03/17/14, 05/08/14, 06/17/14, 09/09/14
 SHEET 1 OF 28
 FILE => 53-1528-a-gp01.dgn

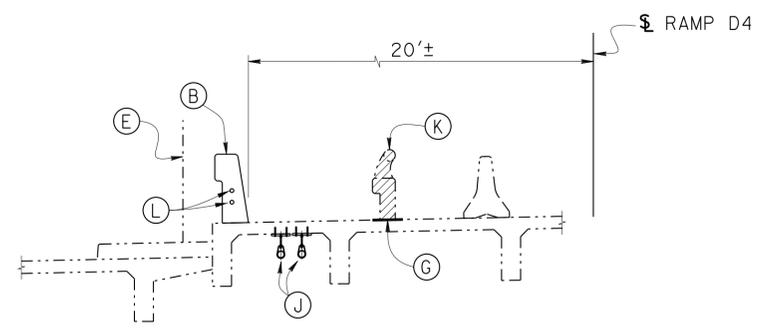
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1594	2313
<i>Davit Tadelle Esq</i> REGISTERED CIVIL ENGINEER			10/01/14 DATE	Dawit T Worku No. C60711 Exp. 12-31-14 CIVIL STATE OF CALIFORNIA	
6-1-15			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



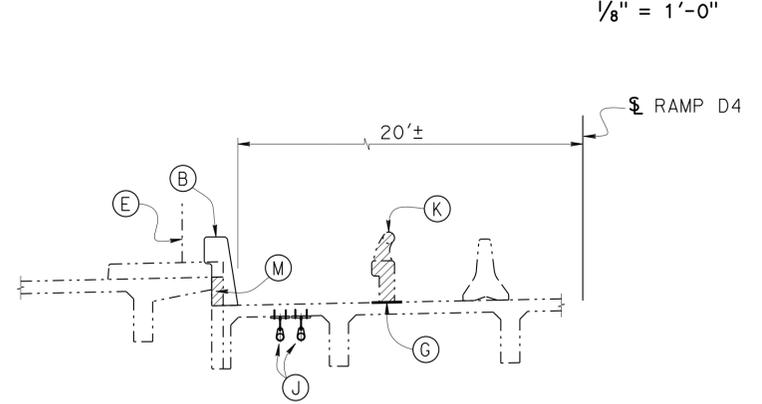
TYPICAL SECTION
 $\frac{1}{8}'' = 1'-0''$

NOTES:

- (A) Remove Existing Bridge Railing and overhang Salvage Metal Bridge Railing
- (B) Concrete Barrier Type 736 (Mod 3), see "MISCELLANEOUS DETAILS" sheet
- (C) Remove Concrete Barrier (Type 50A) Salvage Metal Bridge Railing
- (D) Concrete Barrier Type 60GA (Mod)
- (E) Existing Fence to remain, see "ROAD PLANS"
- (F) Concrete Barrier Type 736 (Mod 4)
- (G) Refinish Bridge Deck
- (H) Temporary Railing Type K, see "ROAD PLANS"
- (I) Chain Link Railing Type 7 (Mod), see "INFILL SHEAR WALL DETAILS" sheet
- (J) 2-3/2"Ø Communication Conduits (B14-3), see "ROAD PLANS"
- (K) Remove Existing Concrete Bridge Rail and Salvage Metal Bridge Railing
- (L) 2-2"Ø conduits, see "ROAD PLANS"
- (M) Remove Concrete Curb, 6" x 15" x 20"*
- (N) 2" Ø Water Supply Line (B14-5)



SECTION AT ABUTMENT 1
 Sta 41+95 - 42+50
 RAMP "D4" LINE



SECTION AT ABUTMENT 3
 Sta 42+50 - 42+80
 RAMP "D4" LINE

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

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

LEGEND:

- Indicates New Construction
- - - - Indicates Existing Structure
- ▨ Indicates Infill Shear Wall
- ▩ Indicates Bridge Removal (Portion)

HOWARD NG DESIGN ENGINEER	DESIGN	BY MOHAMMAD MUQTADIR	CHECKED FEIRUZ ABERRA	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 20	BRIDGE NO.	53-1528	GRAND AVENUE UC (WIDEN) GENERAL PLAN NO. 2
	DETAILS	BY ANTONETTE L. ONG	CHECKED FEIRUZ ABERRA	LAYOUT	BY MOHAMMAD MUQTADIR			CHECKED FEIRUZ ABERRA	POST MILE	
	QUANTITIES	BY MOHAMMAD MUQTADIR	CHECKED FEIRUZ ABERRA	SPECIFICATIONS	BY XIAODONG CHEN	CHECKED XIAODONG CHEN	UNIT: 3622	PROJECT NUMBER & PHASE: 0713000007-4	CONTRACT NO.: 07-1193U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3										
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10) FILE => 53-1528-a-gp02.dgn										

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1595	2313

Dawit Tadelle Esq. 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
 Dawit T Worku
 No. C60711
 Exp. 12-31-14
 CIVIL
 STATE OF CALIFORNIA
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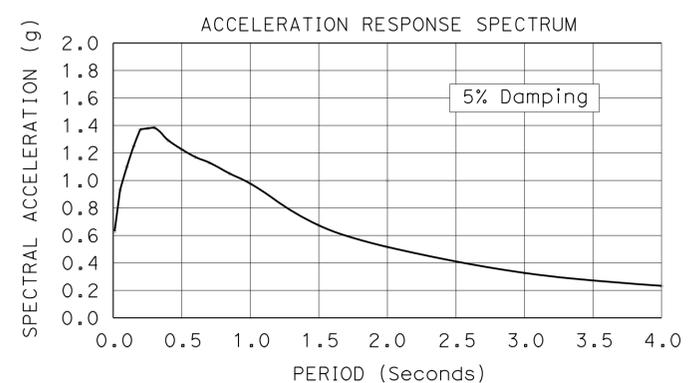
INDEX TO PLANS

NO.	SHEET NAME
1.	GENERAL PLAN NO. 1
2.	GENERAL PLAN NO. 2
3.	INDEX TO PLANS
4.	FOUNDATION PLAN
5.	CONCRETE REMOVAL DETAILS NO. 1
6.	CONCRETE REMOVAL DETAILS NO. 2
7.	ABUTMENT LAYOUT 1
8.	ABUTMENT LAYOUT 2
9.	ABUTMENT DETAILS NO. 1
10.	ABUTMENT DETAILS NO. 2
11.	BENT 2 LAYOUT
12.	BENT DETAILS NO. 1
13.	TYPICAL SECTION
14.	GIRDER LAYOUT
15.	GIRDER REINFORCEMENT
16.	MISCELLANEOUS DETAILS
17.	INFILL SHEAR WALL DETAILS NO. 1
18.	INFILL SHEAR WALL DETAILS NO. 2
19.	APPROACH SLAB LAYOUT
20.	STRUCTURE APPROACH TYPE N(30S)
21.	STRUCTURE APPROACH TYPE R(30D)
22.	STRUCTURE APPROACH DRAINAGE DETAILS
23.	ARCHITECTURAL TREATMENT
24.	ARCHITECTURAL TREATMENT DETAILS
25.	LOG OF TEST BORINGS 1 OF 4
26.	LOG OF TEST BORINGS 2 OF 4
27.	LOG OF TEST BORINGS 3 OF 4
28.	LOG OF TEST BORINGS 4 OF 4

GENERAL NOTES

LOAD AND RESISTANCE FACTOR DESIGN

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th Edition dated with the Caltrans Amendments, preface dated November 2011
SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC) version 1.6 dated November 2010
DEAD LOAD: (INCLUDING 10% METAL DECK FORM) Includes 35 psf future wearing surface
LIVE LOAD: HL-93 and Permit Design Load
SEISMIC LOADING: Soil Profile: $V_{s30} = 270$ m/sec for the top 100' of Soil
 Moment Magnitude: $M_{max} = 6.6$
 Peak Ground Acceleration = 0.60g
REINFORCED CONCRETE: $f_y = 60$ ksi
 $f'_c = 3.6$ ksi (Except as shown on Concrete Strength and Type Limits Diagram)
 $n = 8$



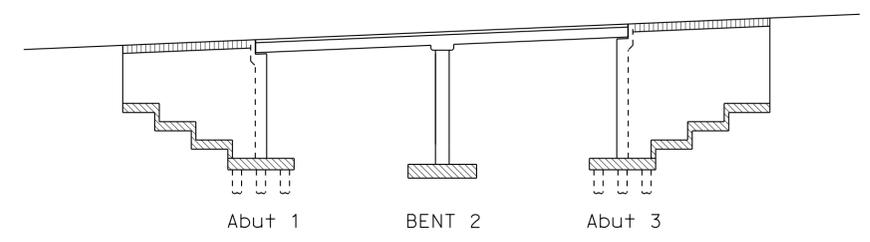
STANDARD PLANS 2010

RSP A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
A10F	LEGEND - SOIL (SHEET 1 OF 2)
A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
A76D	CONCRETE BARRIER TYPE 60G
BO-1	BRIDGE DETAILS
BO-3	BRIDGE DETAILS
BO-5	BRIDGE DETAILS
BO-13	BRIDGE DETAILS
B2-3	16" AND 24" CAST-IN-DRILLED-HOLE CONCRETE PILE
RSP B3-1A	RETAINING WALL TYPE 1 (CASE 1)
RSP B3-5	RETAINING WALL DETAILS NO. 1
B6-10	UTILITY OPENING T-BEAM
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
B11-52	CHAIN LINK RAILING TYPE 7
RSP B11-56	CONCRETE BARRIER TYPE 736
B14-4	WATER SUPPLY LINE (BRIDGE) (PIPE SIZES LESS THAN 4")
B14-5	WATER SUPPLY LINE (DETAILS) (PIPE SIZES LESS THAN 4")
T3A	TEMPORARY RAILING (TYPE K)

PILE DATA TABLE

SUPPORT LOCATION	PILE TYPE	NOMINAL RESISTANCE (Kips)		DESIGN TIP ELEV (Ft)	SPECIFIC TIP ELEV (Ft)
		COMPRESSION	TENSION		
Abut 1	24" CIDH	180	0	494 (a) 506 (c) 494 (d)	494
Abut 3	24" CIDH	320	0	477 (a) 498 (c) 494 (d)	477

NOTE:
 1. DESIGN TIP ELEVATIONS ARE CONTROLLED BY:
 (a) COMPRESSION, (c) SETTLEMENT, (d) LATERAL LOAD



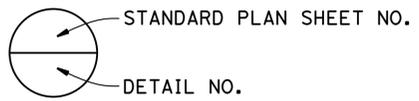
Structural Concrete, Bridge ($f'_c = 4$ ksi @ 28 days)
 Structural Concrete, Bridge Footing
 Structural Concrete, Approach Slab

CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE

SPREAD FOOTING DATA TABLE

SUPPORT LOCATION	LOAD AND RESISTANCE FACTOR DESIGN (LRFD)		
	SERVICE PERMISSIBLE NET CONTACT STRESS (SETTLEMENT) ksf	STRENGTH FACTORED GROSS NOMINAL BEARING RESISTANCE ($\phi b = 0.45$), ksf	EXTERME EVENT FACTORED GROSS NOMINAL BEARING RESISTANCE ($\phi b = 1.0$), ksf
BENT 2	3.1	16	34



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DESIGN BY MOHAMMAD MUQTADIR CHECKED FEIRUZ ABERRA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO. 53-1528	GRAND AVENUE UC (WIDEN) INDEX TO PLANS
DETAILS BY ANTONETTE L. ONG CHECKED M. MUQTADIR/F. ABERRA		DESIGN BRANCH 20	POST MILE 38.51	
QUANTITIES BY MOHAMMAD MUQTADIR CHECKED FEIRUZ ABERRA		UNIT: 3622 PROJECT NUMBER & PHASE: 0713000007-1	CONTRACT NO.: 07-1193U1	

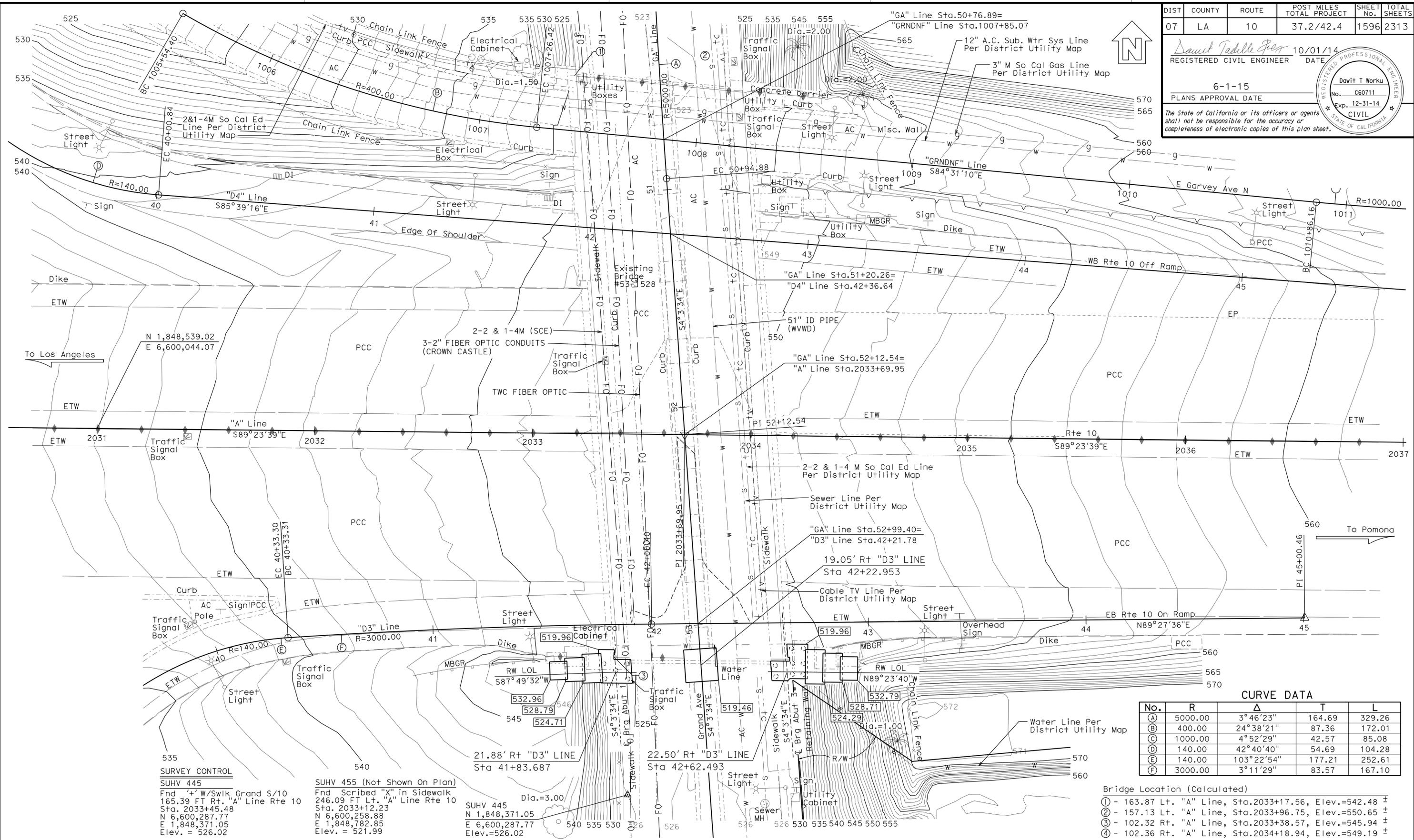
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 05/20/14, 07/24/14, 03/05/15
 SHEET 3 OF 28

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1596	2313

Dawit T. Worlu 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
 PLANS APPROVAL DATE
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Dawit T. Worlu
 No. C60711
 Exp. 12-31-14
 CIVIL
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA



SURVEY CONTROL
 SUHV 445
 Fnd '+ W/SwIk Grand S/10
 165.39 FT Rt. "A" Line Rte 10
 Sta. 2033+45.48
 N 6,600,287.77
 E 1,848,371.05
 Elev. = 526.02

SUHV 455 (Not Shown On Plan)
 Fnd Scribed "X" in Sidewalk
 246.09 FT Lt. "A" Line Rte 10
 Sta. 2033+12.23
 N 6,600,258.88
 E 1,848,782.85
 Elev. = 521.99

SUHV 445
 N 1,848,371.05
 E 6,600,287.77
 Elev. = 526.02

CURVE DATA

No.	R	Δ	T	L
(A)	5000.00	3°46'23"	164.69	329.26
(B)	400.00	24°38'21"	87.36	172.01
(C)	1000.00	4°52'29"	42.57	85.08
(D)	140.00	42°40'40"	54.69	104.28
(E)	140.00	103°22'54"	177.21	252.61
(F)	3000.00	3°11'29"	83.57	167.10

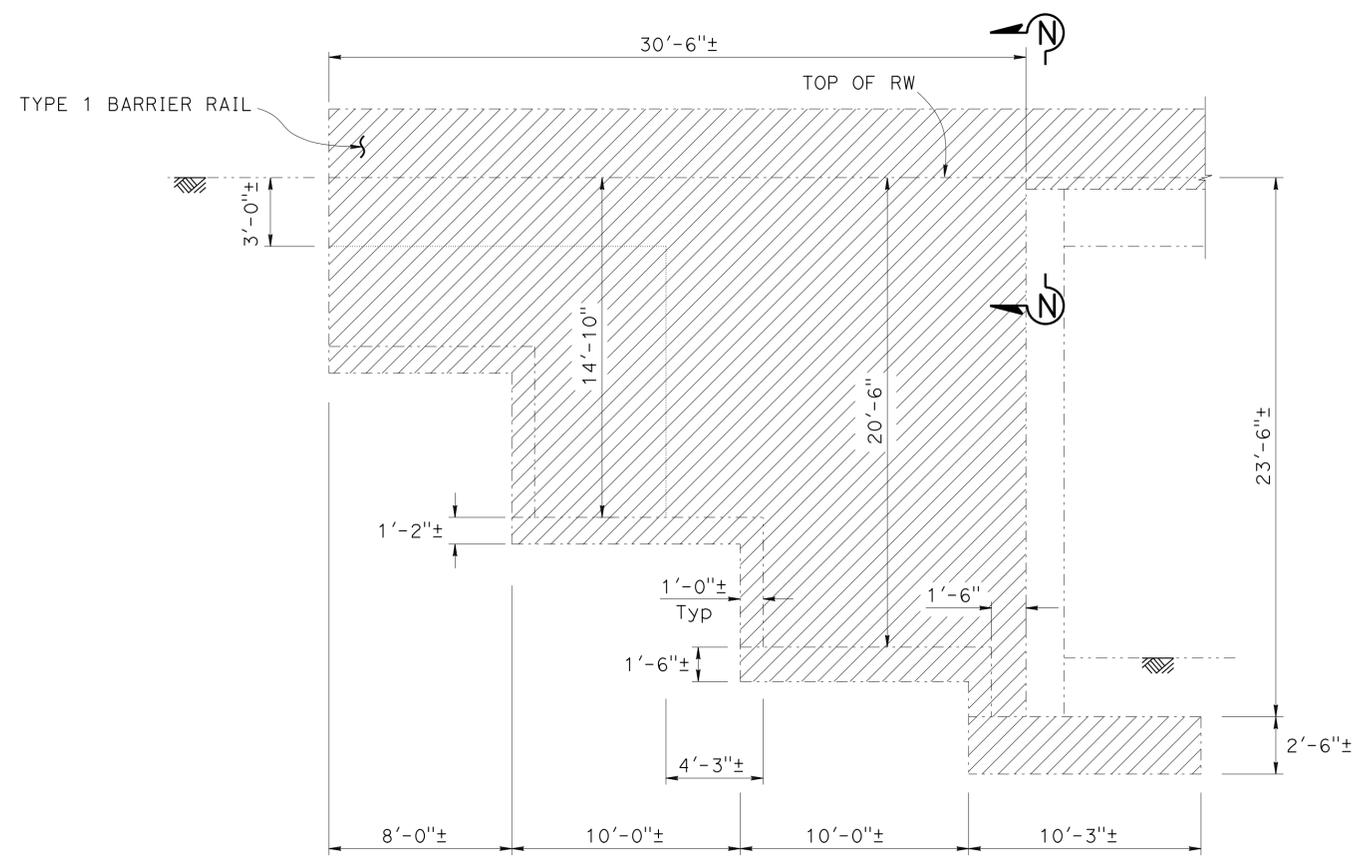
- Bridge Location (Calculated)
- ① - 163.87 Lt. "A" Line, Sta. 2033+17.56, Elev. = 542.48 ±
 - ② - 157.13 Lt. "A" Line, Sta. 2033+96.75, Elev. = 550.65 ±
 - ③ - 102.32 Rt. "A" Line, Sta. 2033+38.57, Elev. = 545.94 ±
 - ④ - 102.36 Rt. "A" Line, Sta. 2034+18.94, Elev. = 549.19 ±

PRELIMINARY INVESTIGATION SECTION			DESIGN BY MOHAMMAD MUQTADIR	CHECKED FEIRUZ ABERRA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO. 53-1528	GRAND AVE UC (WIDENING) FOUNDATION PLAN	
SCALE VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DRAFTED BY T. Zolnikov 06/2010	DETAILS BY ANTONETTE L. ONG	CHECKED FEIRUZ ABERRA			POST MILE 38.51		
1"=20'	HORIZ. DATUM NAD83 (1991.35)	CHECKED BY C. Fasset 06/2010	QUANTITIES BY MOHAMMAD MUQTADIR	CHECKED FEIRUZ ABERRA					
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3622	PROJECT NUMBER & PHASE: 071300007-1	CONTRACT NO.: 07-1193U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	
								REVISION DATES	SHEET 4 OF 28

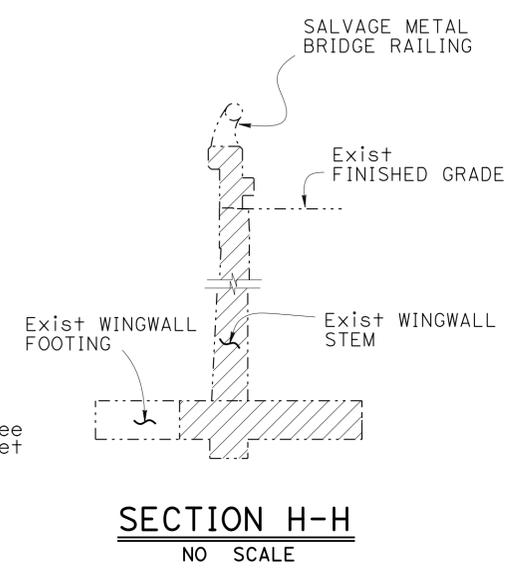
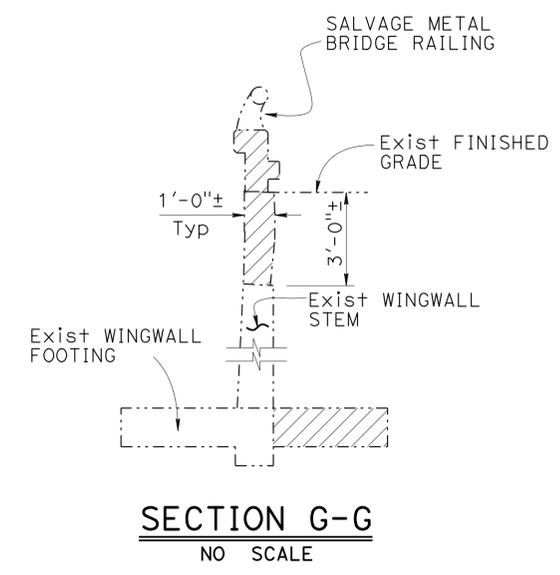
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1597	2313

Dawit Tadelle Esq. 10/01/14
 REGISTERED CIVIL ENGINEER DATE
 6-1-15
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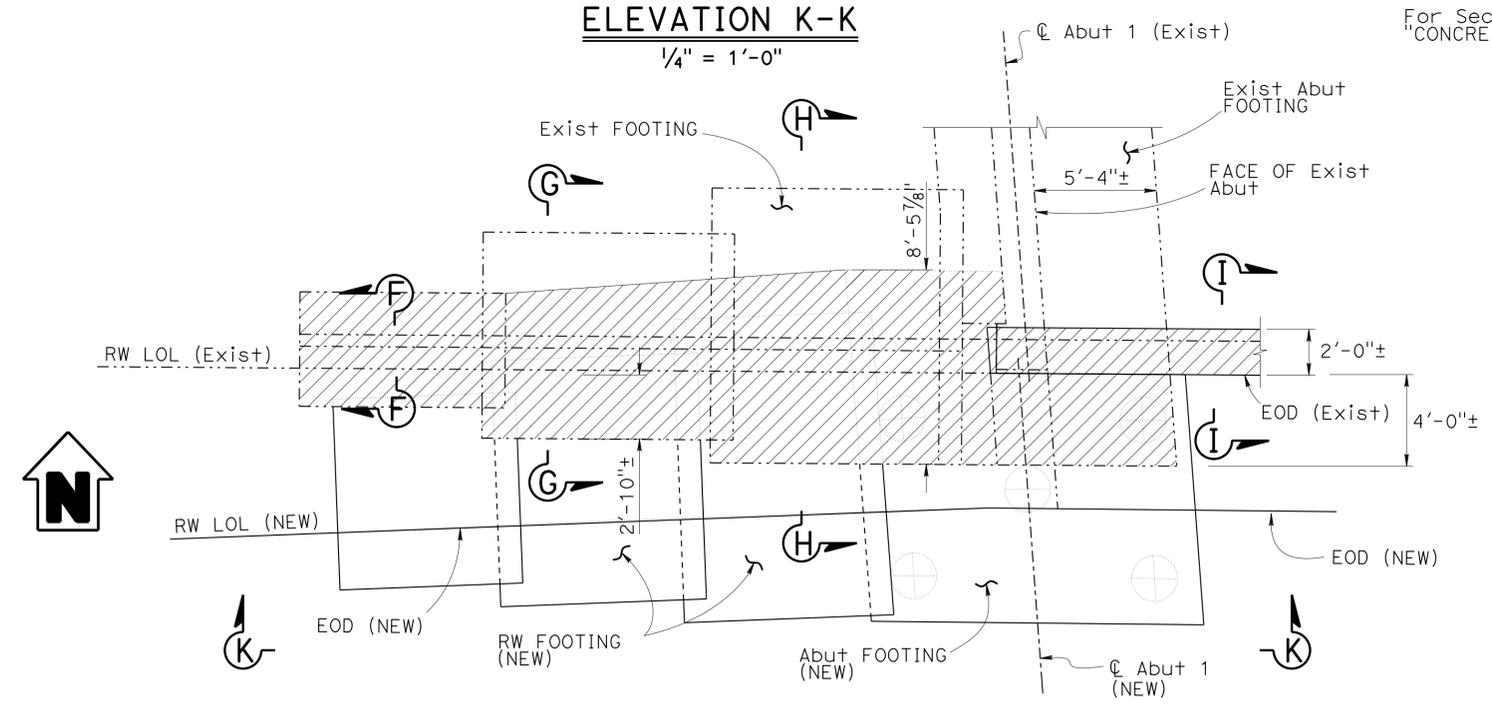
REGISTERED PROFESSIONAL ENGINEER
 Dawit T Worku
 No. C60711
 Exp. 12-31-14
 CIVIL
 STATE OF CALIFORNIA



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



NOTE:
For Sections "F-F", "I-I" and "N-N", see "CONCRETE REMOVAL DETAILS No. 2" sheet



ABUTMENT 1 REMOVAL PLAN
1/4" = 1'-0"

NOTE:
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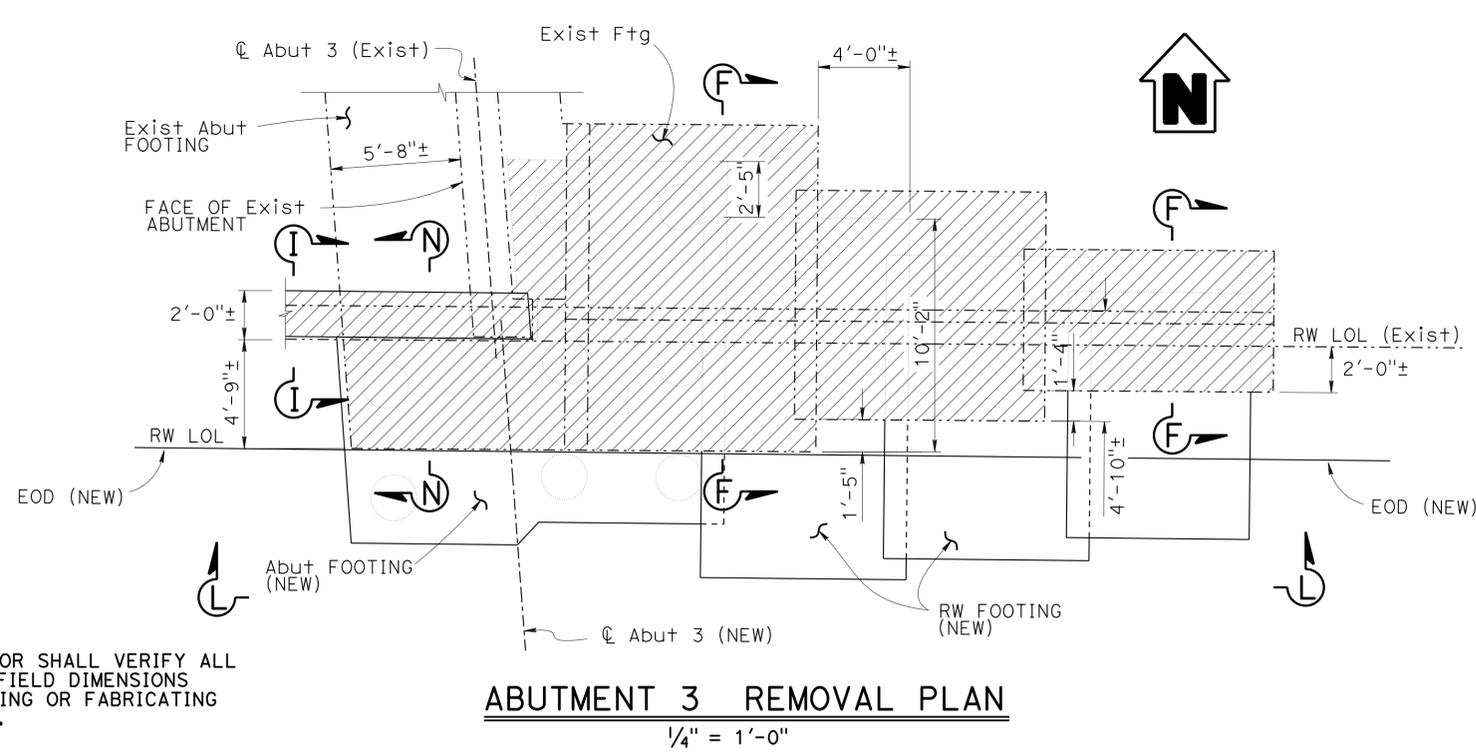
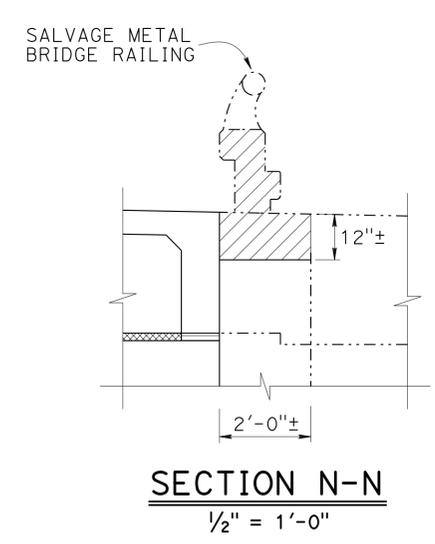
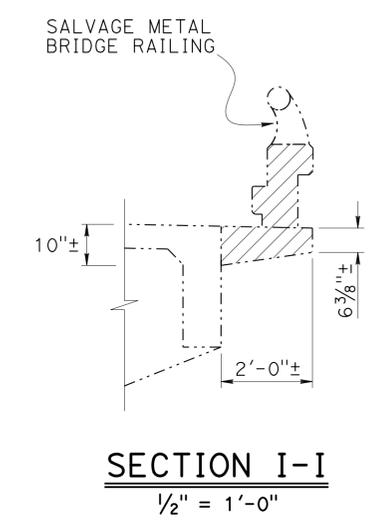
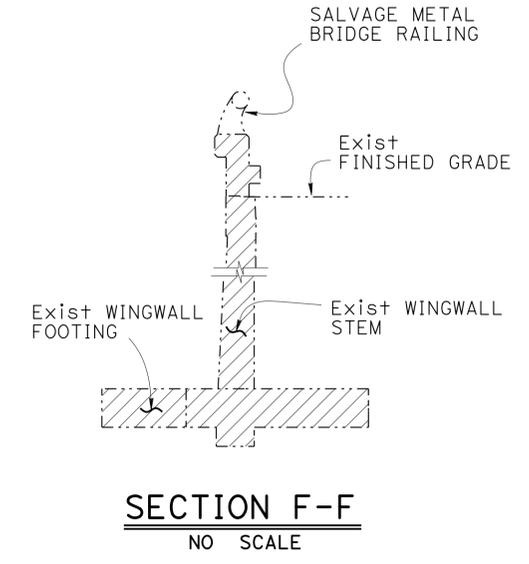
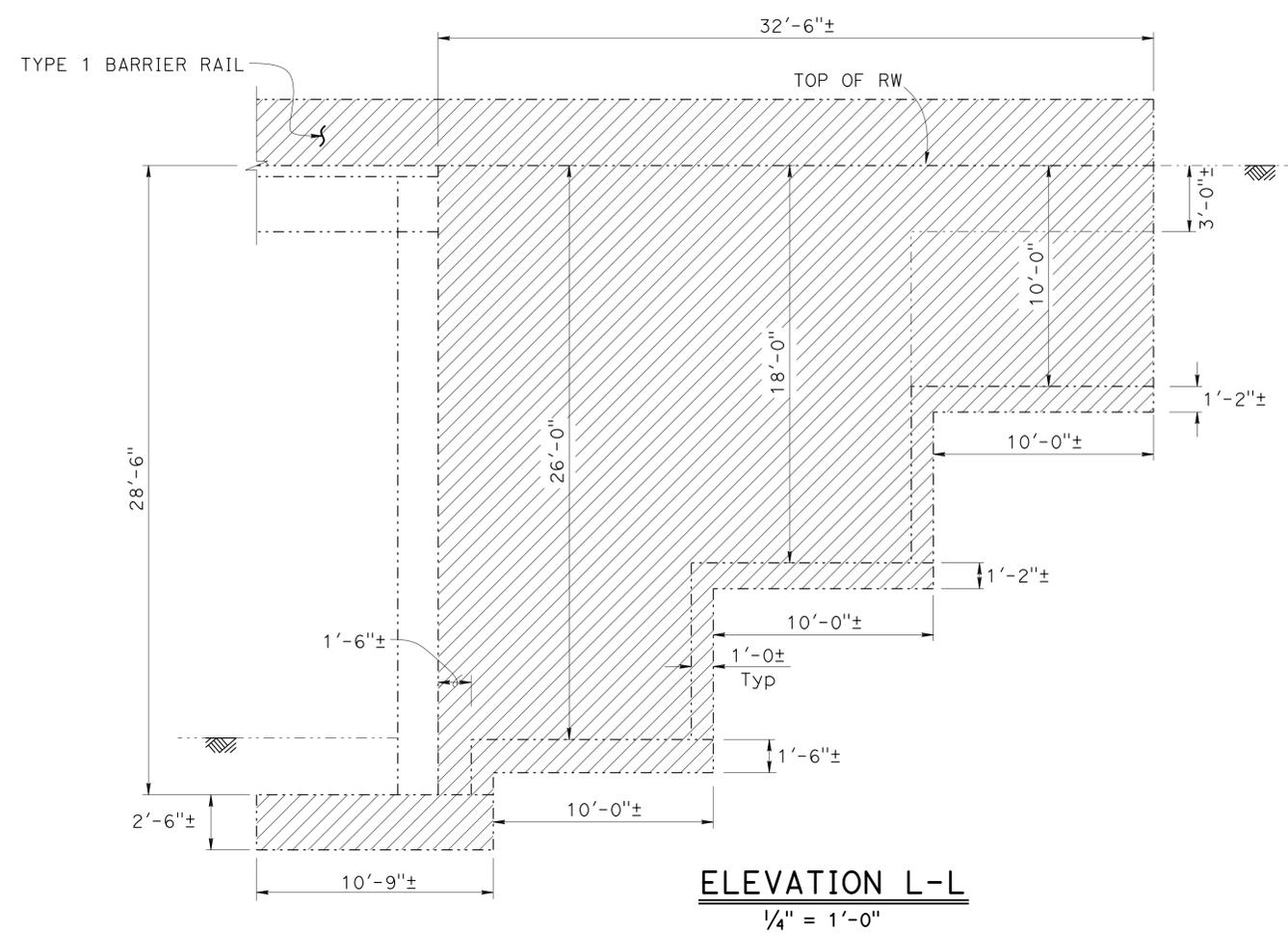
LEGEND:

—	Indicates New Construction
----	Indicates Existing Structure
▨	Bridge Removal (Portion)

DESIGN BY MOHAMMAD MUQTADIR CHECKED FEIRUZ ABERRA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO. 53-1528	GRAND AVENUE UC (WIDEN) CONCRETE REMOVAL DETAILS NO.1
DETAILS BY ANTONETTE L. ONG CHECKED M. MUQTADIR/F. ABERRA		PROJECT NUMBER & PHASE: 0713000007-1	POST MILE 38.51	
QUANTITIES BY MOHAMMAD MUQTADIR CHECKED FEIRUZ ABERRA		CONTRACT NO.: 07-1193U1	REVISION DATES	

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
 UNIT: 3622 PROJECT NUMBER & PHASE: 0713000007-1 CONTRACT NO.: 07-1193U1
 DISREGARD PRINTS BEARING EARLIER REVISION DATES 01/23/14 05/20/14 06/03/14
 FILE => 53-1528-c-crem01d+01.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1598	2313
Davit Tadelle Esq			10/01/14	REGISTERED CIVIL ENGINEER DATE	
6-1-15			PLANS APPROVAL DATE		
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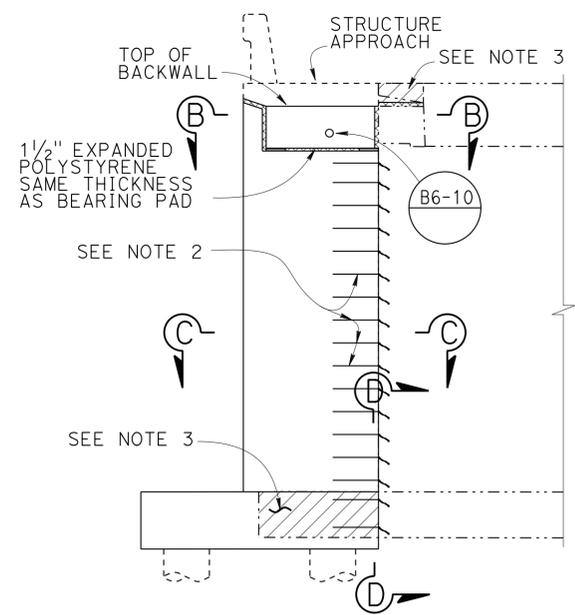
LEGEND:

—	Indicates New Construction
---	Indicates Existing Structure
▨	Indicates Bridge Removal (Portion)

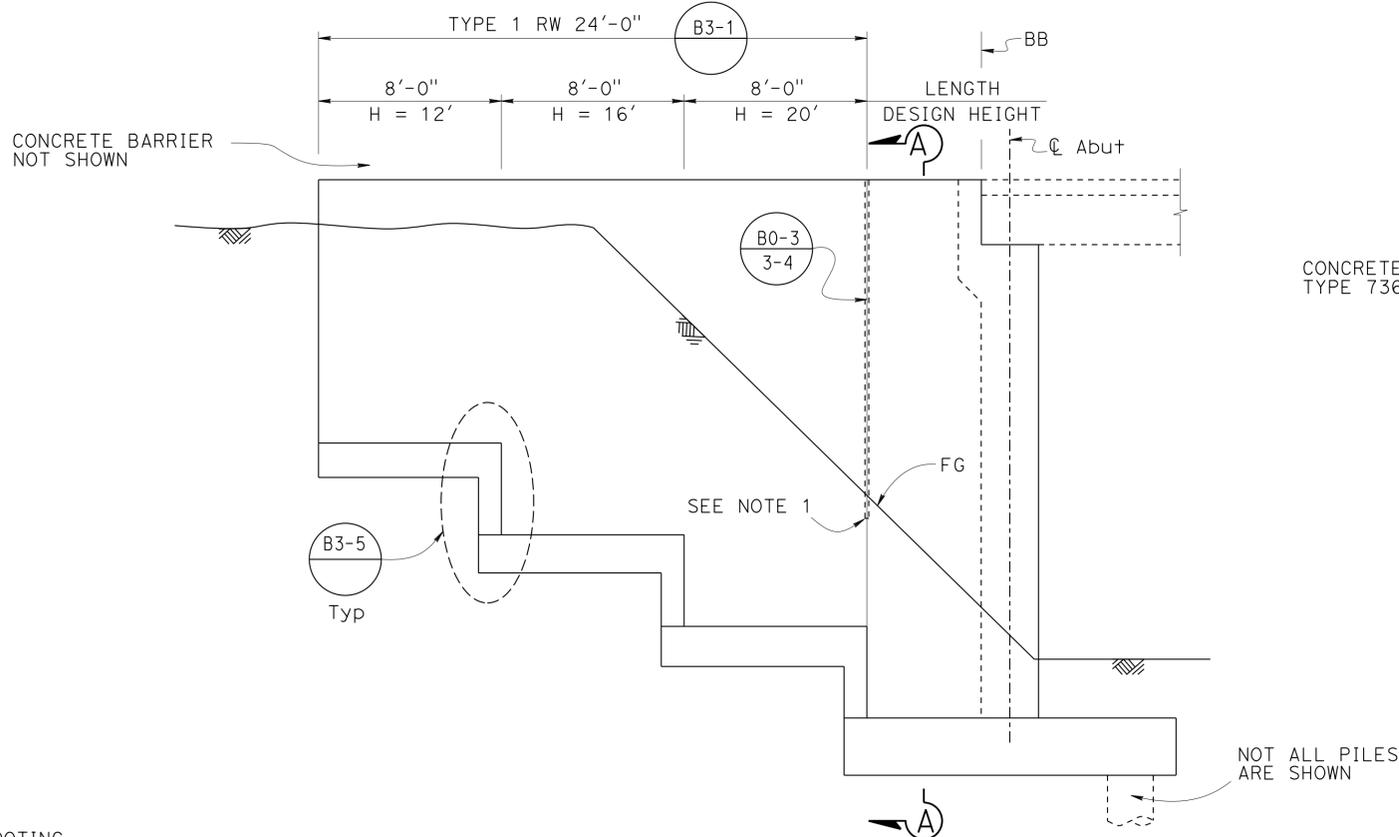
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DETAILS	BY ANTONETTE L. ONG	CHECKED M. MUQTADIR/F. ABERRA			53-1528							
QUANTITIES	BY MOHAMMAD MUQTADIR	CHECKED FEIRUZ ABERRA			POST MILE 38.51							
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)				UNIT: 3622	PROJECT NUMBER & PHASE: 071300007-1	CONTRACT NO.: 07-1193U1						
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0	1	2	3	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF	
								01/28/14	02/24/14	07/23/14	6	28

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1599	2313

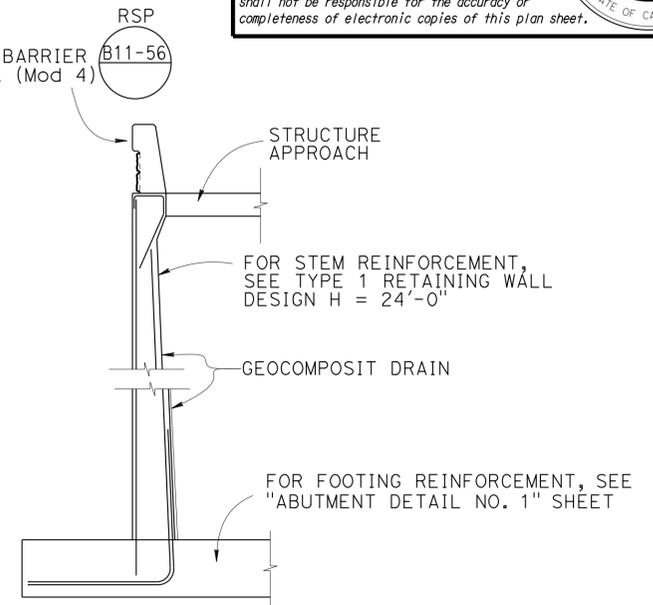
Dawit Tadelle Ezer 10/01/14
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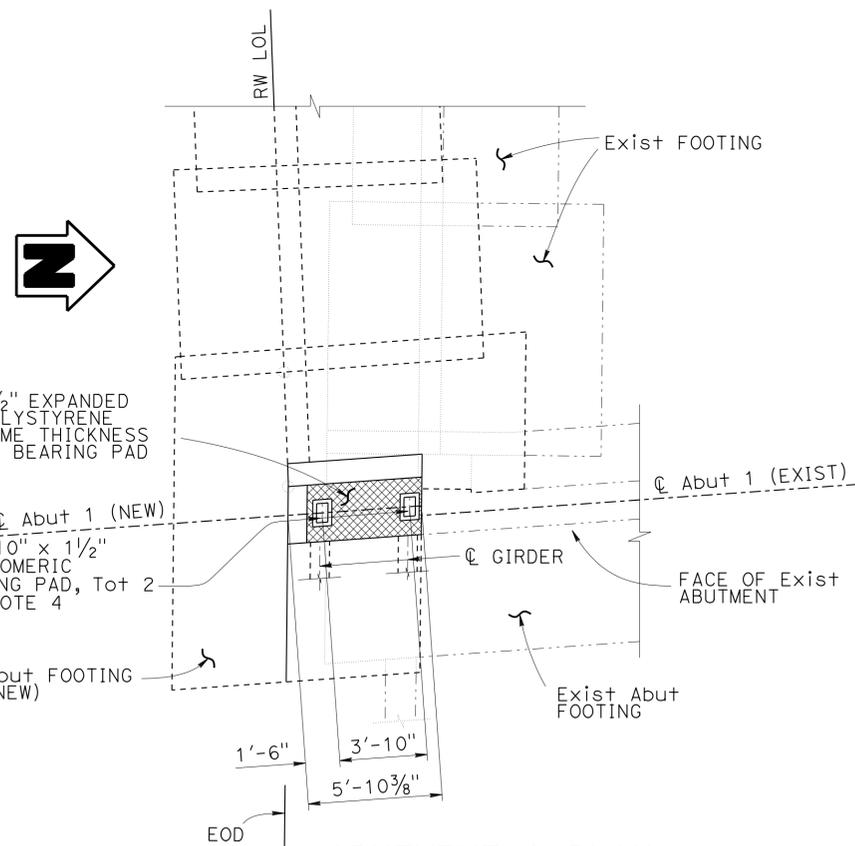
ABUTMENT 1 ELEVATION
1/4" = 1'-0"



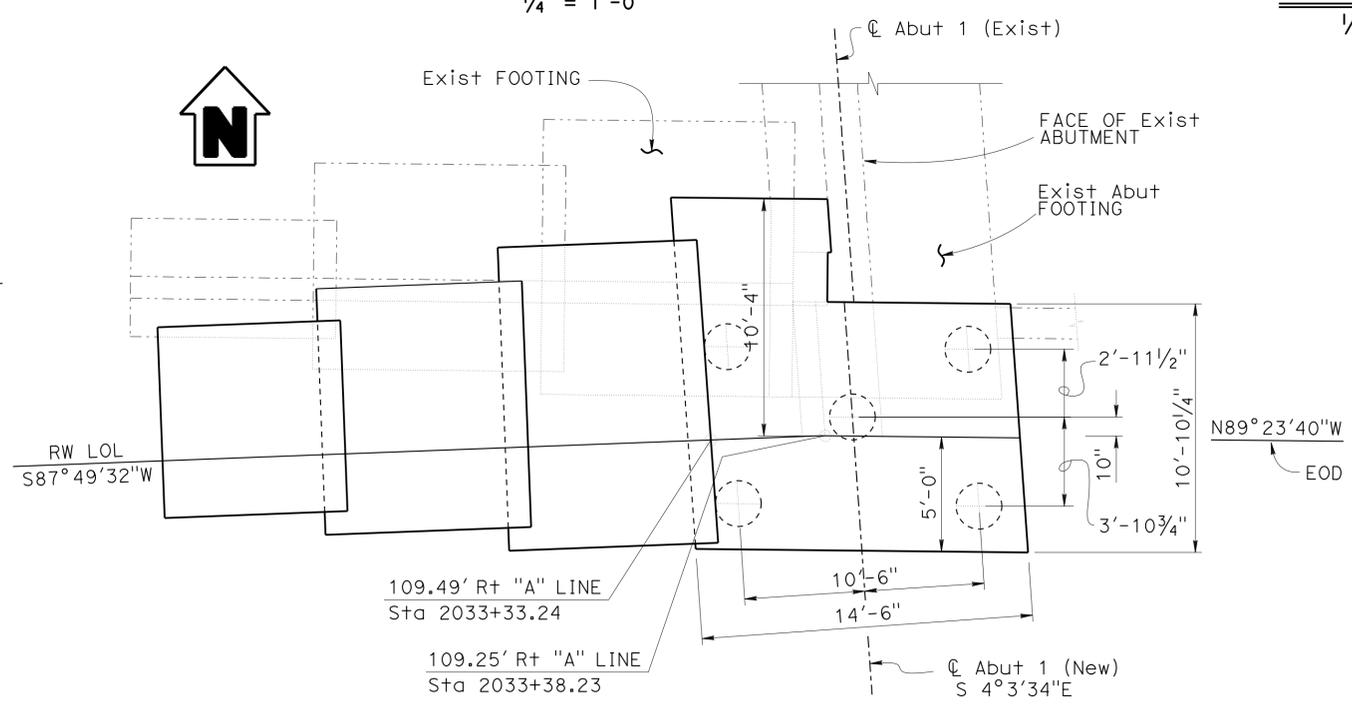
RETAINING WALL ELEVATION
1/4" = 1'-0"



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



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



ABUTMENT 1 AND RETAINING WALL FOOTING LAYOUT
1/4" = 1'-0"

NOTES:

1. Extend Water Stop 1'-0" below Finish Grade
2. For "Section B-B, C-C and D-D", see "ABUTMENT DETAILS NO. 2" sheet
3. For Removal details, see "CONCRETE REMOVAL DETAILS NO. 1" sheet
4. For Bearing Pad details, see "ABUTMENT DETAILS NO. 1" sheet

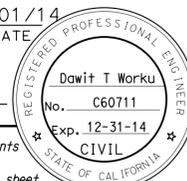
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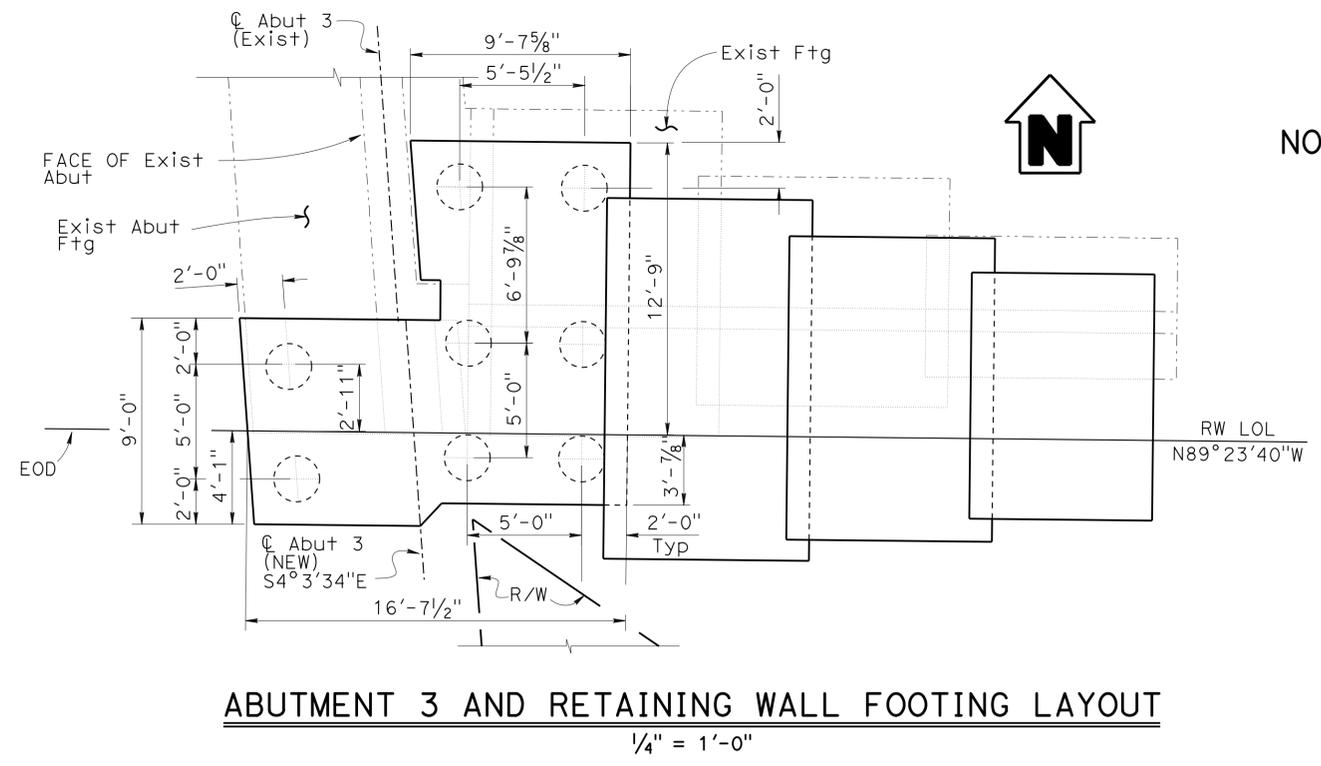
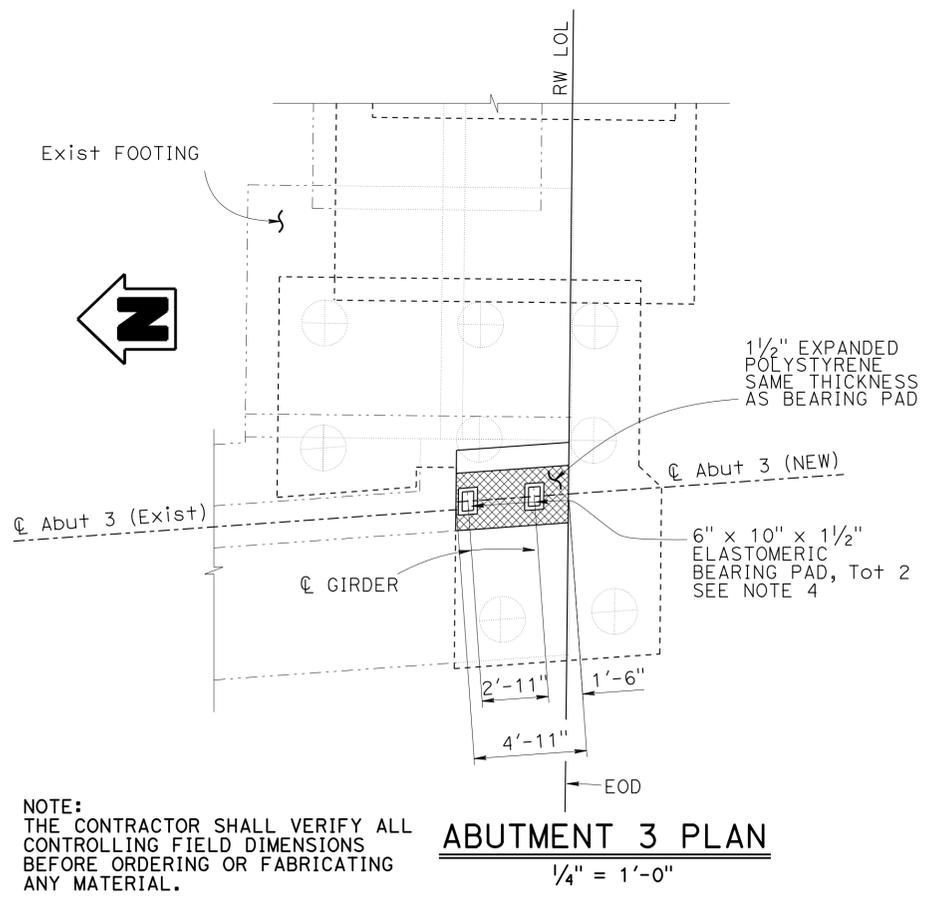
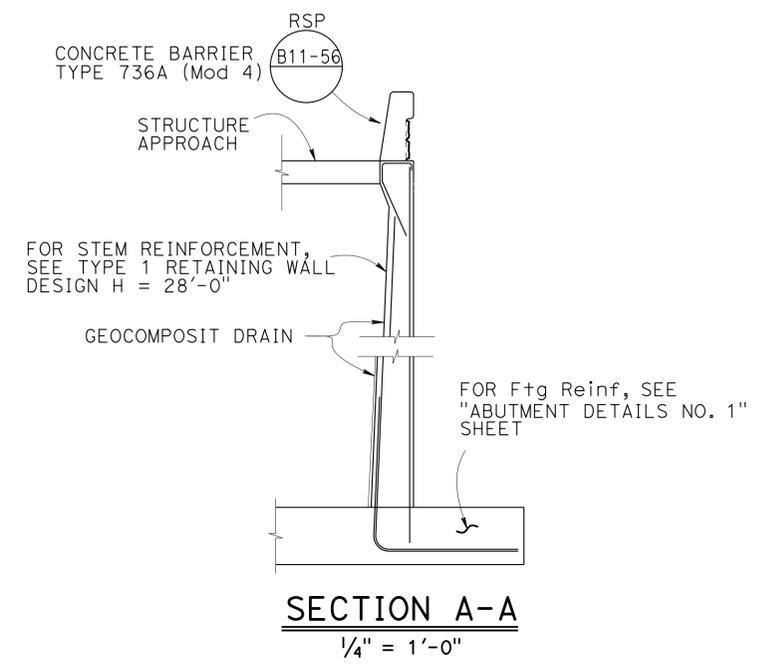
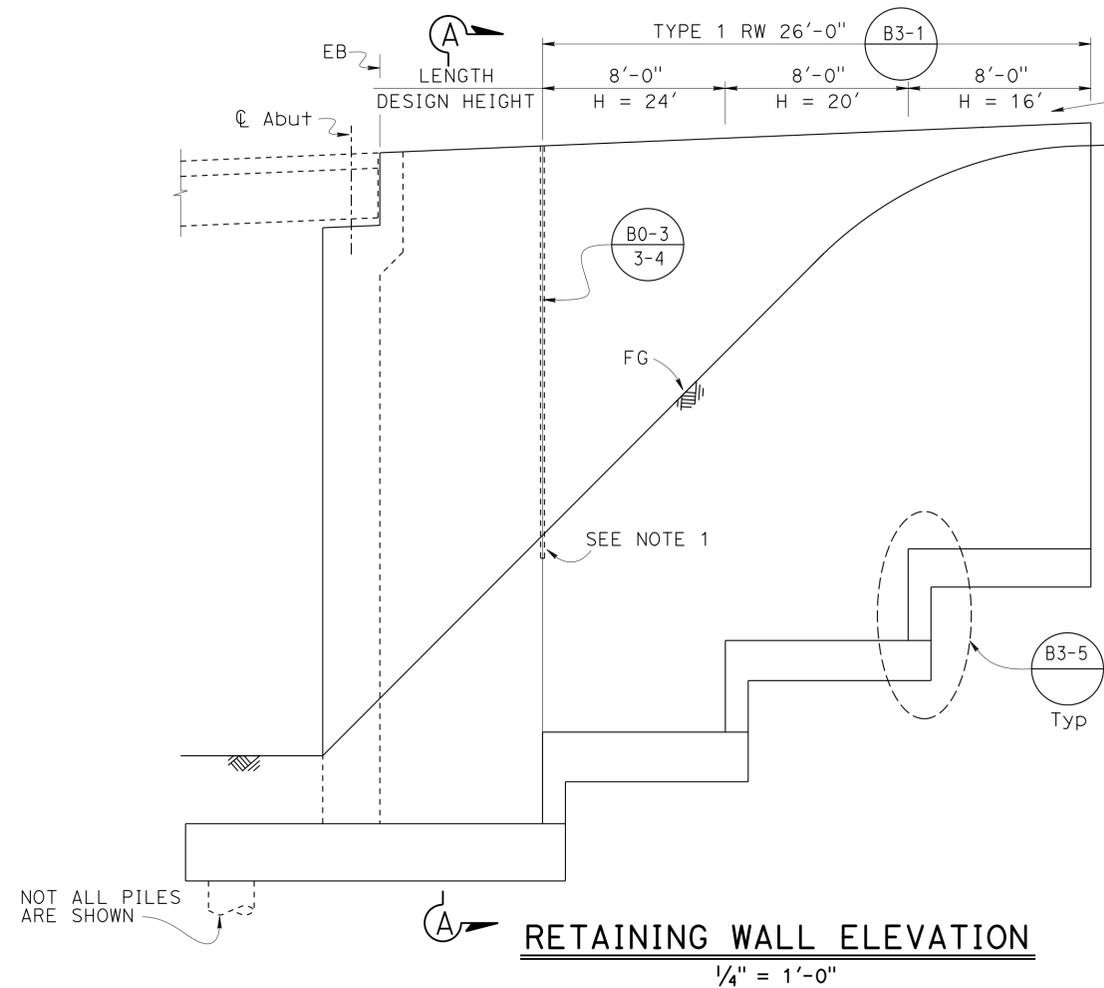
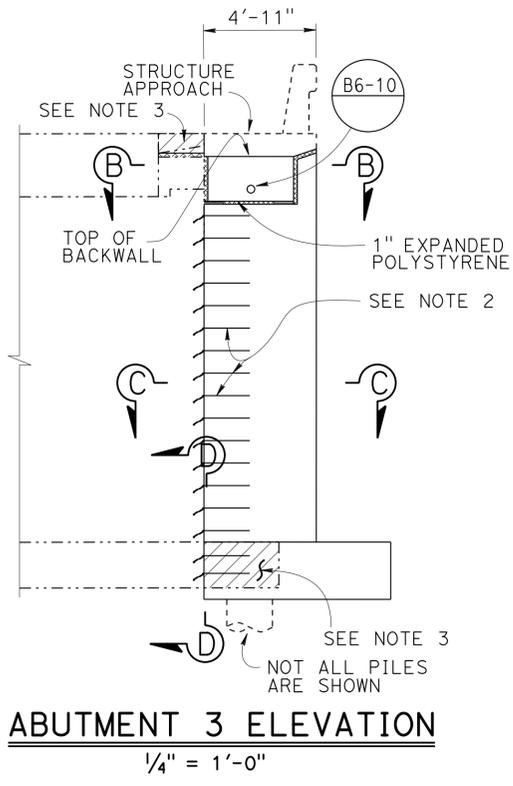
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DESIGN	BY MOHAMMAD MUQTADIR	CHECKED FEIRUZ ABERRA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	53-1528	GRAND AVENUE UC (WIDEN) ABUTMENT 1 LAYOUT		
DETAILS	BY ANTONETTE L. ONG	CHECKED M. MUQTADIR/F. ABERRA		DESIGN BRANCH	20		POST MILE	38.51
QUANTITIES	BY MOHAMMAD MUQTADIR	CHECKED FEIRUZ ABERRA		UNIT: 3622	PROJECT NUMBER & PHASE: 0713000007-1		CONTRACT NO.: 07-1193U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	37.2/42.4	1600	2313
<i>Dawit Tadelle Ezer</i> REGISTERED CIVIL ENGINEER			10/01/14 DATE		
6-1-15 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. Extend Water Stop 1'-0" below finished grade
 2. For "Section B-B, C-C and D-D", see "ABUTMENT DETAILS NO. 2" sheet
 3. For Removal details, see "CONCRETE REMOVAL DETAILS NO. 2" sheet
 4. For Bearing Pad details, see "ABUTMENT DETAILS NO. 1" sheet
 5. No two adjacent Piles to be constructed during the same stage
 6. No Temporary Construction Easement. All work to be performed within the Right of Way

LEGEND:

	Indicates New Construction
	Indicates Existing Structure
	Bridge Removal (Portion)

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

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN BY MOHAMMAD MUQTADIR CHECKED FEIRUZ ABERRA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO. 53-1528	GRAND AVENUE UC (WIDEN) ABUTMENT 3 LAYOUT	
	DETAILS BY ANTONETTE L. ONG CHECKED M. MUQTADIR/F. ABERRA			POST MILE 38.51		
	QUANTITIES BY MOHAMMAD MUQTADIR CHECKED FEIRUZ ABERRA			UNIT: 3622 PROJECT NUMBER & PHASE: 0713000007-1 CONTRACT NO.: 07-1193U1		
DISREGARD PRINTS BEARING EARLIER REVISION DATES					REVISION DATES: 02/24/14, 05/14/14, 05/20/14	SHEET 8 OF 28