



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	502	757

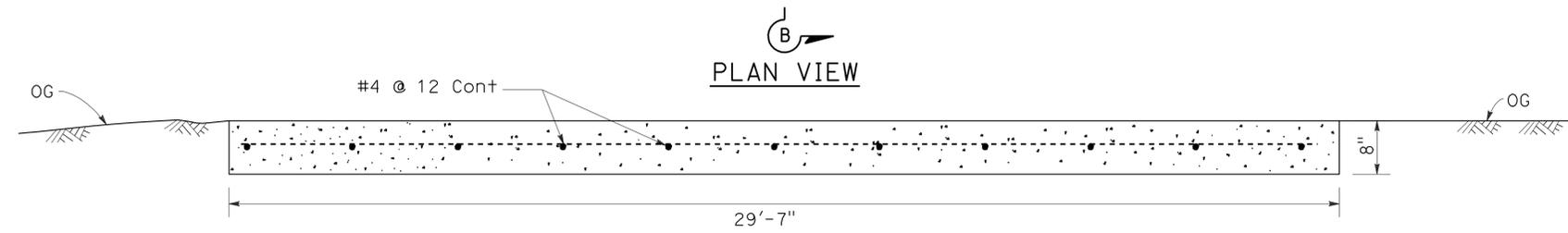
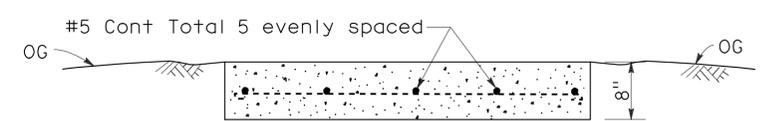
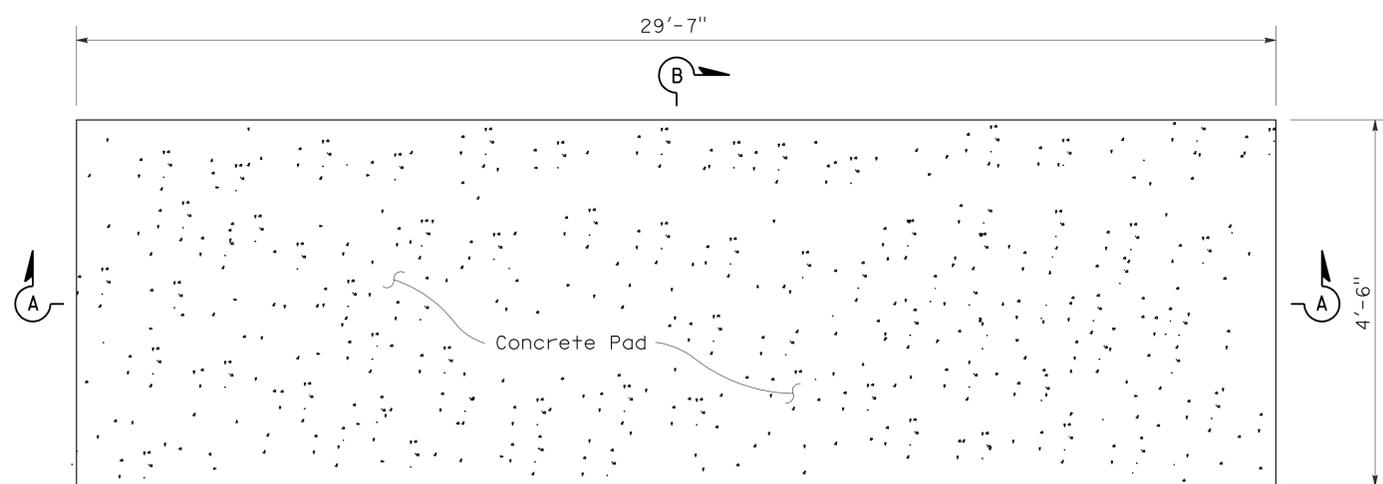
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

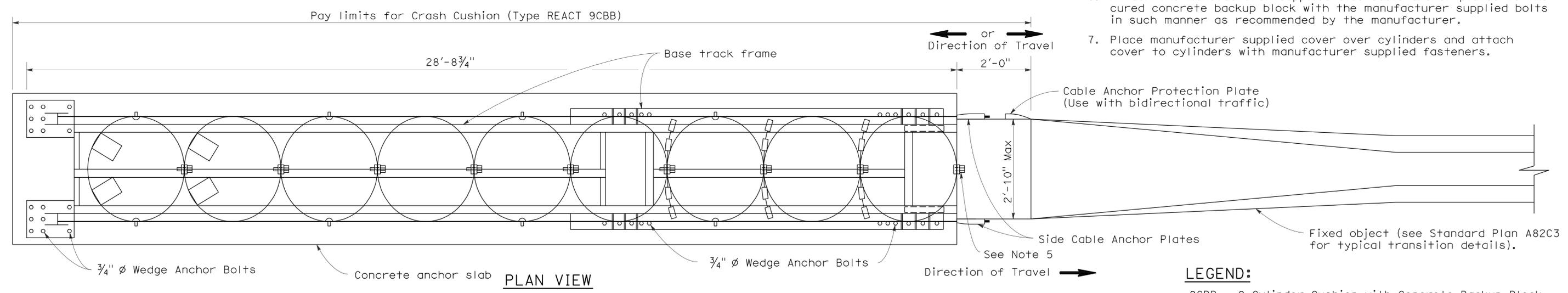
To accompany plans dated 6-20-11



**CONCRETE ANCHOR SLAB**

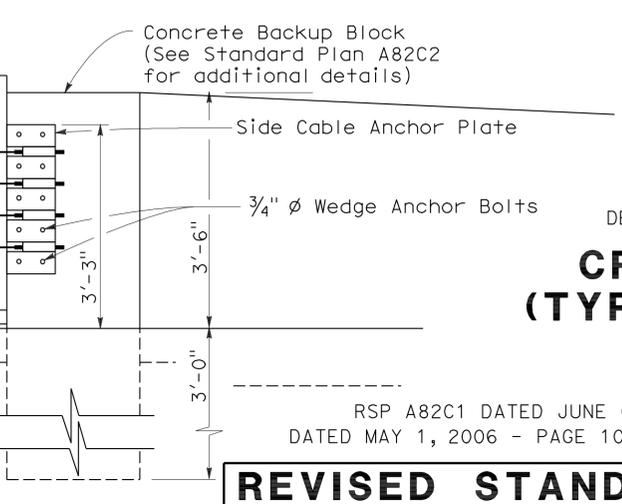
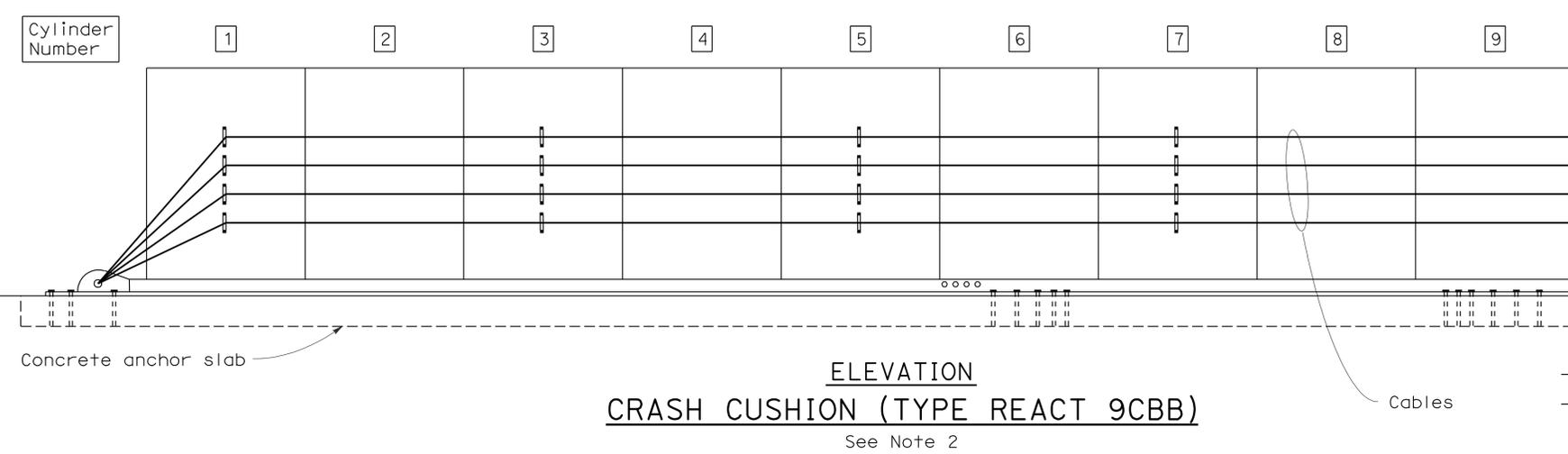
**NOTES:**

1. For additional details of this crash cushion, refer to manufacturer's installation instructions.
2. For details of the REACT Crash Cushion with self contained backup support (no concrete backup block), see Standard Plan A82D1.
3. The base track frame with cylinders attached comes from the manufacturer as a completely pre-assembled unit.
4. Place the crash cushion unit on the cured concrete anchor slab and use the base track frame of the crash cushion as a template for drilling anchor bolt holes. Drill holes in slab and attach crash cushion with wedge anchor bolts supplied by the manufacturer.
5. Attach last cylinder to concrete backup block with manufacturer supplied fastener in such manner as recommended by the manufacturer.
6. Attach the manufacturer supplied side cable anchor plates to the cured concrete backup block with the manufacturer supplied bolts in such manner as recommended by the manufacturer.
7. Place manufacturer supplied cover over cylinders and attach cover to cylinders with manufacturer supplied fasteners.



**LEGEND:**

9CBB = 9 Cylinder Cushion with Concrete Backup Block



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CRASH CUSHION  
(TYPE REACT 9CBB)**

NO SCALE

RSP A82C1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A82C1 DATED MAY 1, 2006 - PAGE 104 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A82C1**

2006 REVISED STANDARD PLAN RSP A82C1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	503	757

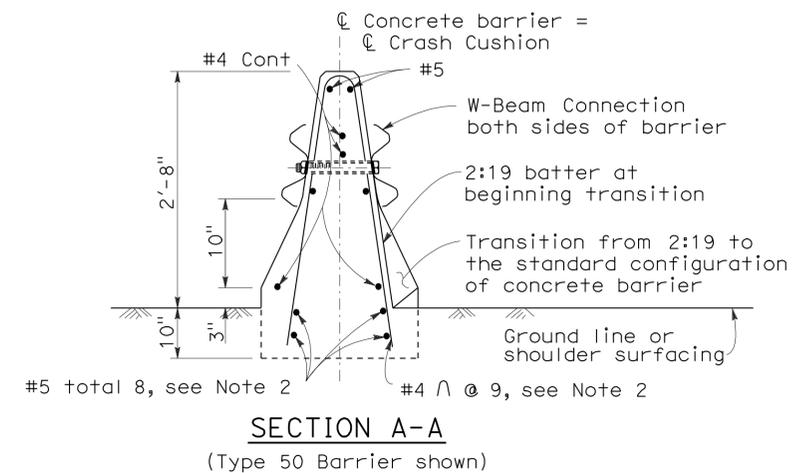
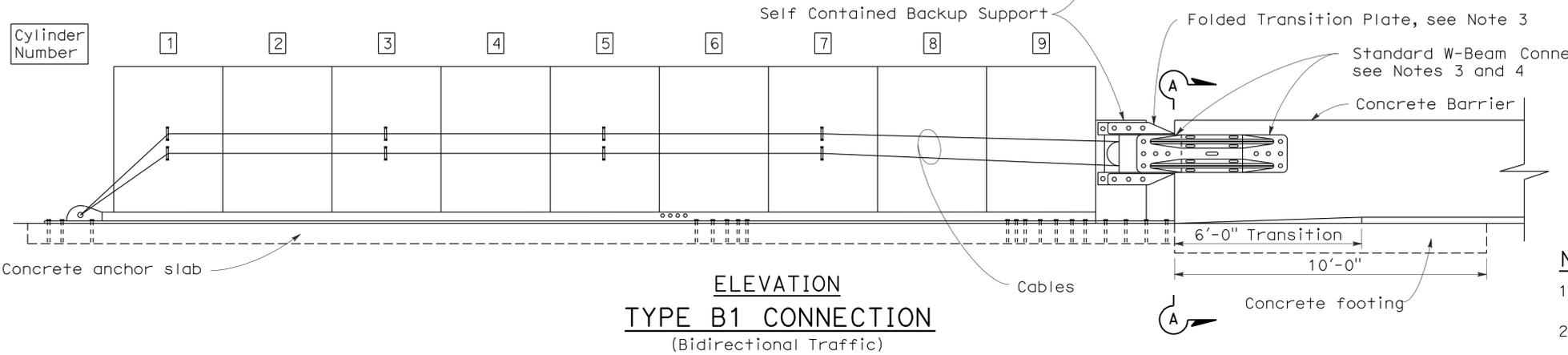
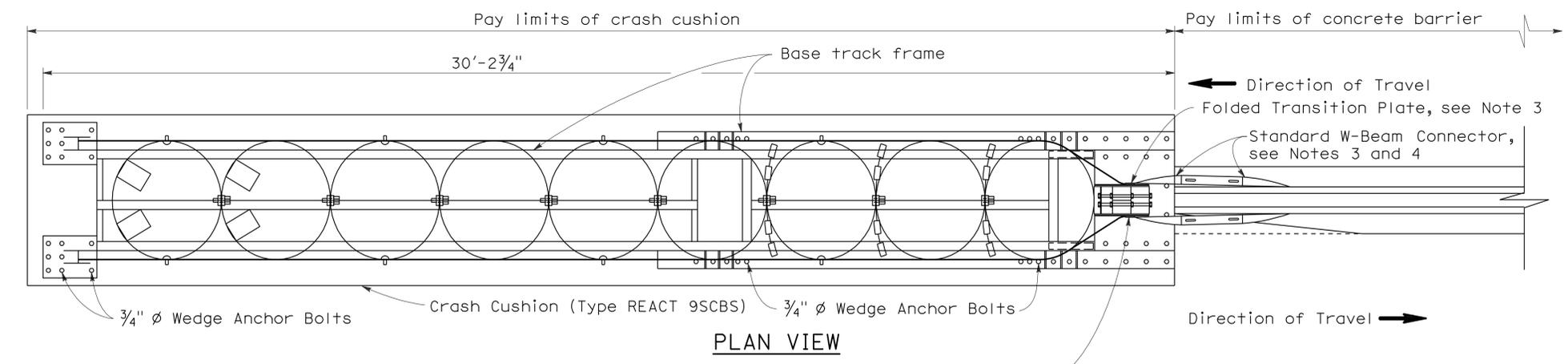
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

October 20, 2006  
PLANS APPROVAL DATE

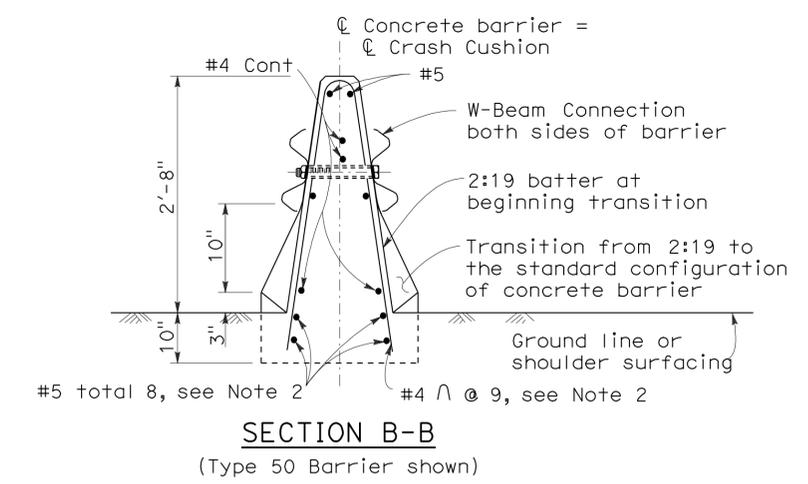
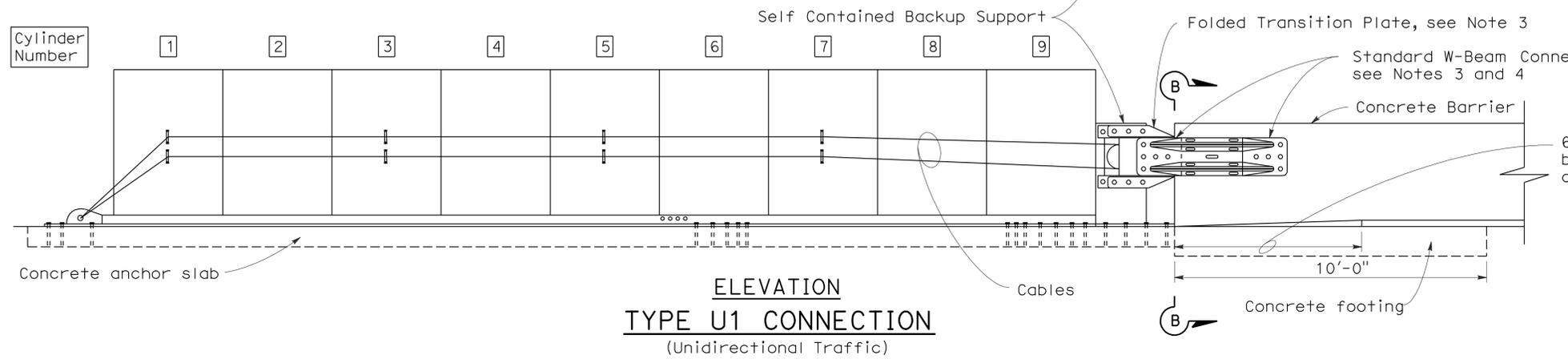
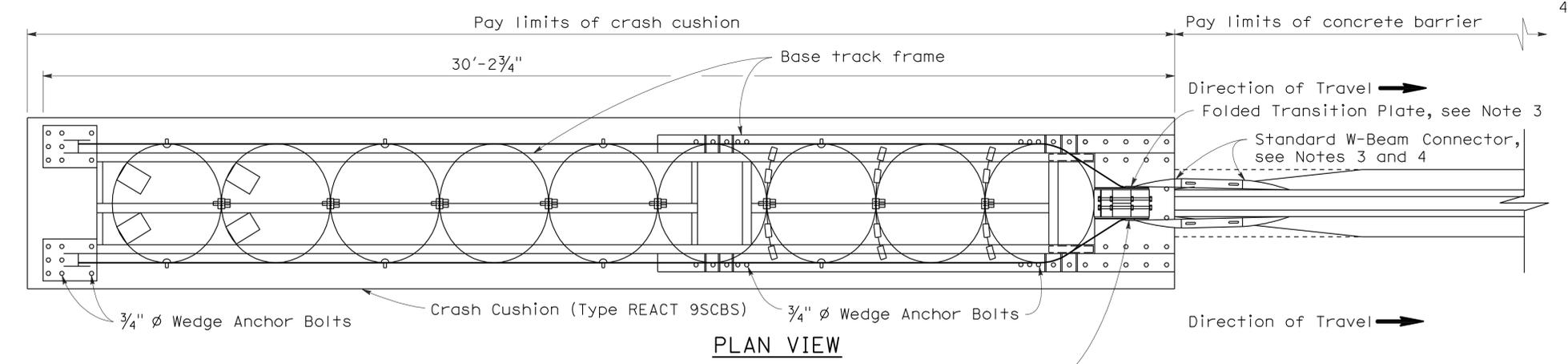
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REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-07  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 6-20-11



- NOTES:**
1. For additional details of Crash Cushion (Type REACT 9SCBS), see Standard Plan A82D1.
  2. Place this reinforcement for the full 10'-0" length of the terminus of the concrete barrier.
  3. Attach manufacturer supplied folded transition plates and W-Beam connectors to backup support with manufacturer supplied bolts.
  4. Attach W-Beam Connectors to barrier with manufacturer supplied anchor bolts in the manner recommended by the manufacturer.



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

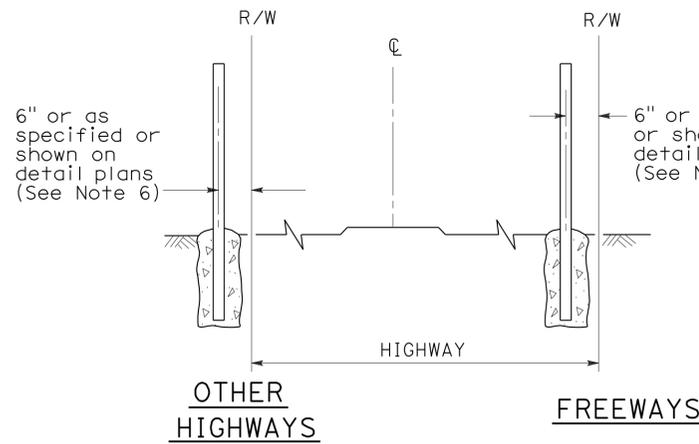
**CRASH CUSHION  
(TYPE REACT 9SCBS)  
CONNECTION TO  
CONCRETE BARRIER**

NO SCALE

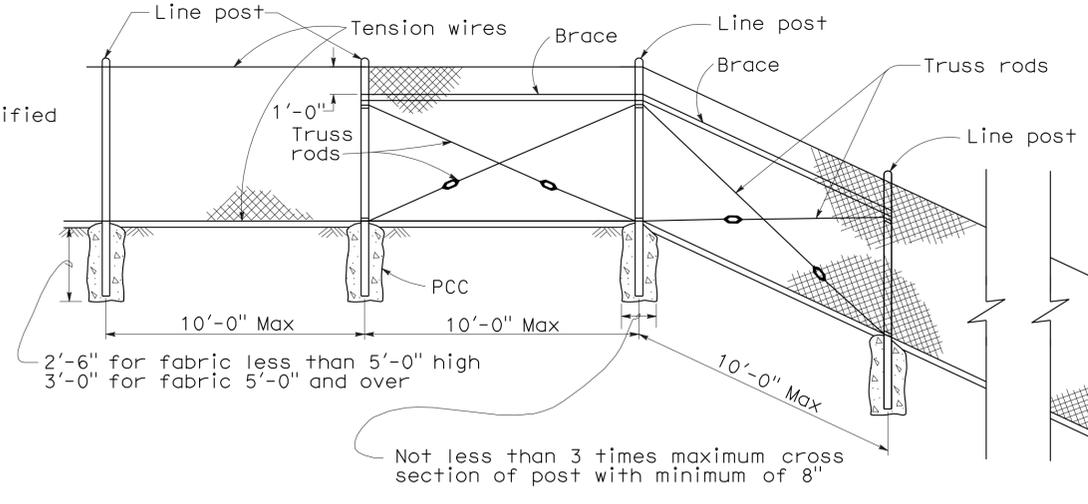
RSP A82D2 DATED OCTOBER 20, 2006 SUPERSEDES STANDARD PLAN A82D2 DATED MAY 1, 2006 - PAGE 108 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A82D2**

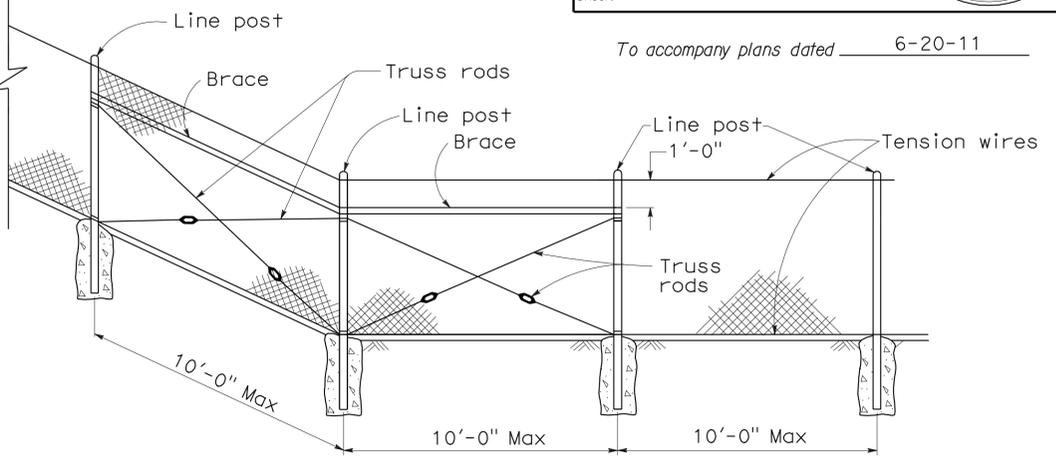
2006 REVISED STANDARD PLAN RSP A82D2



**FENCE LOCATION**

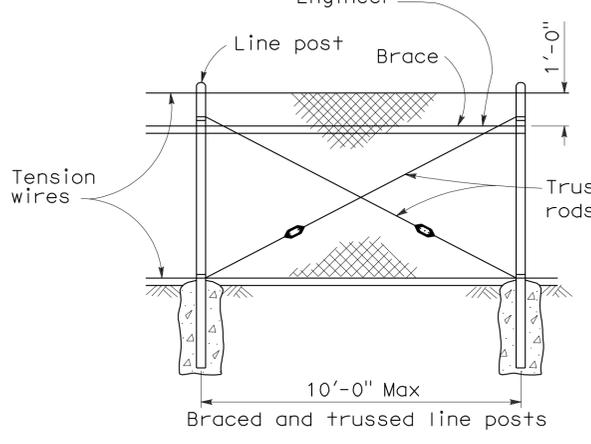


**CHAIN LINK FENCE ON SHARP BREAK IN GRADE**

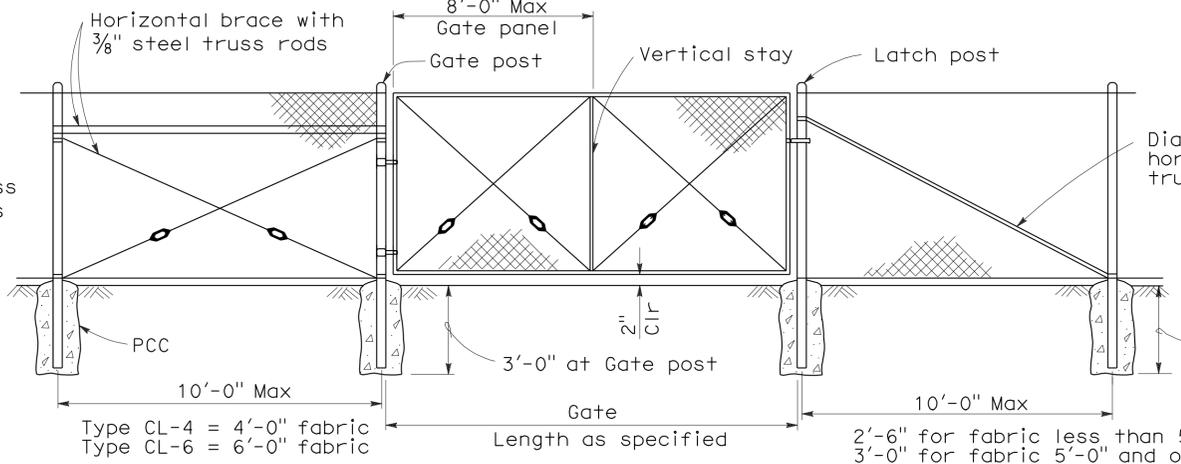


To accompany plans dated 6-20-11

Brace to be removed after all other fence construction is completed unless otherwise directed by the Engineer



Braced and trussed line posts



**CHAIN LINK GATE INSTALLATION**

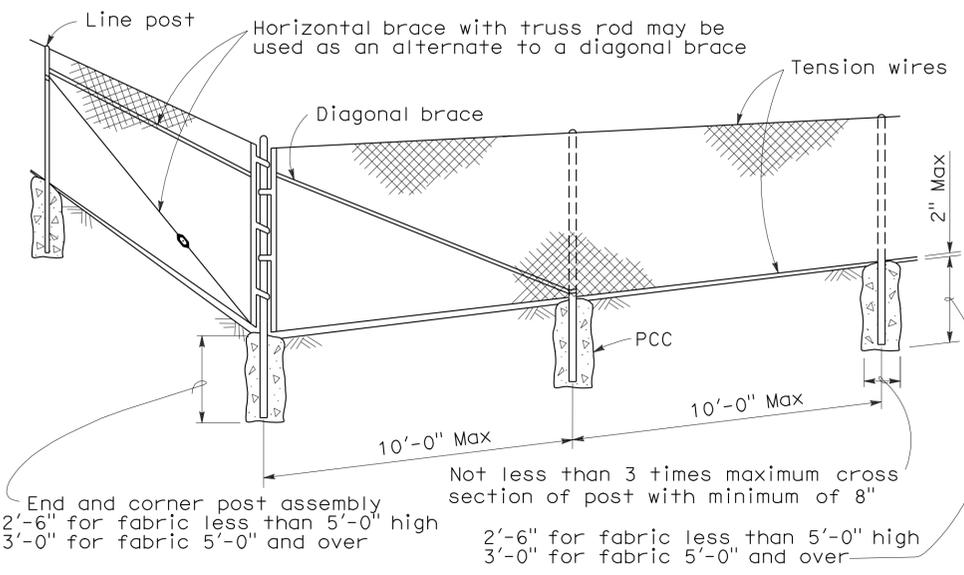
GATE POST			
FENCE HEIGHT	GATE WIDTHS	NOMINAL ID	WEIGHT PER FOOT
6'-0" and Less	Up thru 6'-0"	2 1/2"	4.95 LB
	Over 6'-0" thru 12'-0"	4"	10.79 LB
	Over 12'-0" thru 18'-0"	5"	14.62 LB
Over 6'-0"	Over 18'-0" to 24'-0" Max	6"	18.97 LB
	Up thru 6'-0"	3"	7.58 LB
	Over 6'-0" thru 12'-0"	5"	14.62 LB
Over 6'-0"	Over 12'-0" thru 18'-0"	6"	18.97 LB
	Over 18'-0" to 24'-0" Max	8"	28.55 LB

Above post dimensions and weights are minimums. Larger sizes may be used on approval of the Engineer.

**NOTES:**

- The below table shows examples of post and brace sections which may comply with the Specifications.
- Sections shown in the tables must also comply with the strength requirements and other provisions of the Specifications.
- Other sections which comply with the strength requirements and other provisions of the Specifications may be used on approval of the Engineer.
- Options exercised shall be uniform on any one project.
- Dimensions shown are nominal.
- Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.

FENCE HEIGHT	TYPICAL MEMBER DIMENSIONS (See Notes)									
	LINE POSTS			END, LATCH & CORNER POSTS			BRACES			
	ROUND ID	H	ROLL FORMED	ROUND ID	ROLL FORMED		ROUND ID	H	ROLL FORMED	
6' & less	1 1/2"	1 7/8" x 1 5/8"	1 7/8" x 1 5/8"	2"	3 1/2" x 3 1/2"	2" x 1 3/4"	1 1/4"	1 1/2" x 1 5/16"	1 5/8" x 1 1/4"	1 3/4" x 1 1/4"
Over 6'	2"	2 1/4" x 2"	2" x 1 3/4"	2 1/2"	3 1/2" x 3 1/2"	2 1/2" x 2 1/2"	1 1/4"	1 1/2" x 1 5/16"	1 5/8" x 1 1/4"	1 3/4" x 1 1/4"



**CORNER POST**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CHAIN LINK FENCE**  
 NO SCALE

RSP A85 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN A85  
 DATED MAY 1, 2006 - PAGE 111 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A85**

2006 REVISED STANDARD PLAN RSP A85

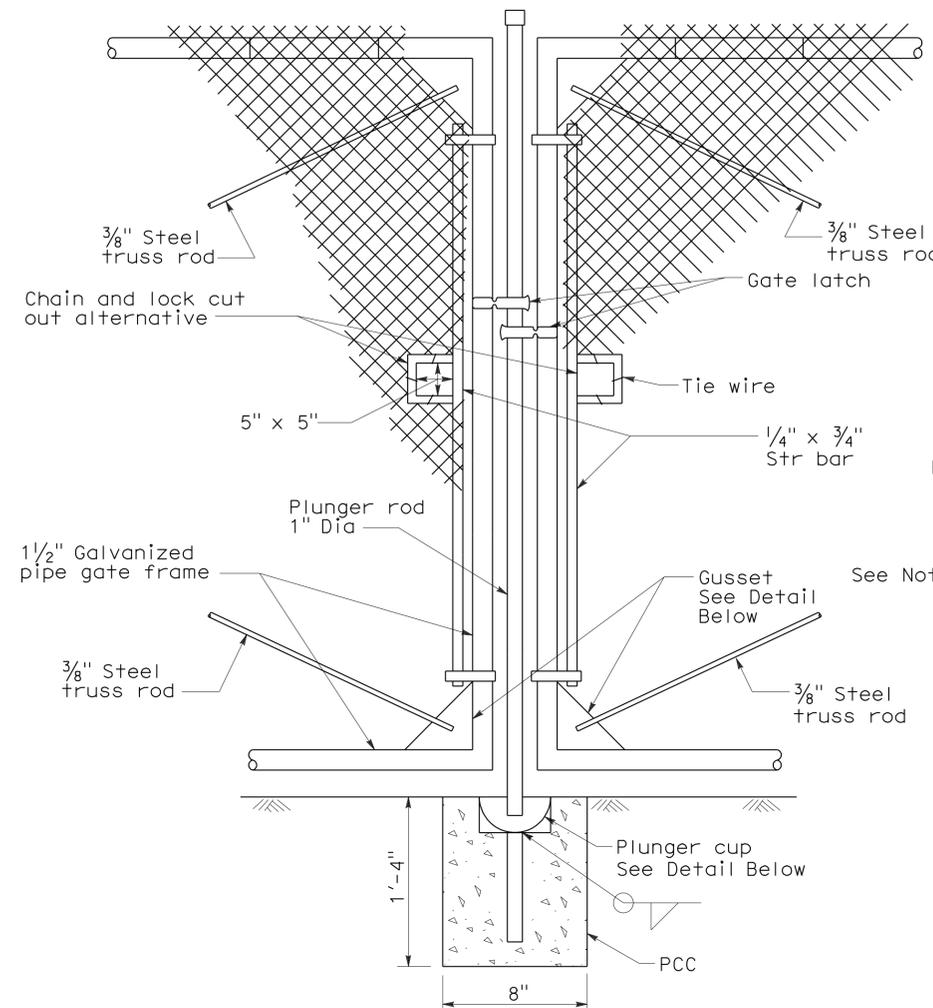
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	505	757

Glenn DeCou  
 REGISTERED CIVIL ENGINEER  
 June 5, 2009  
 PLANS APPROVAL DATE  
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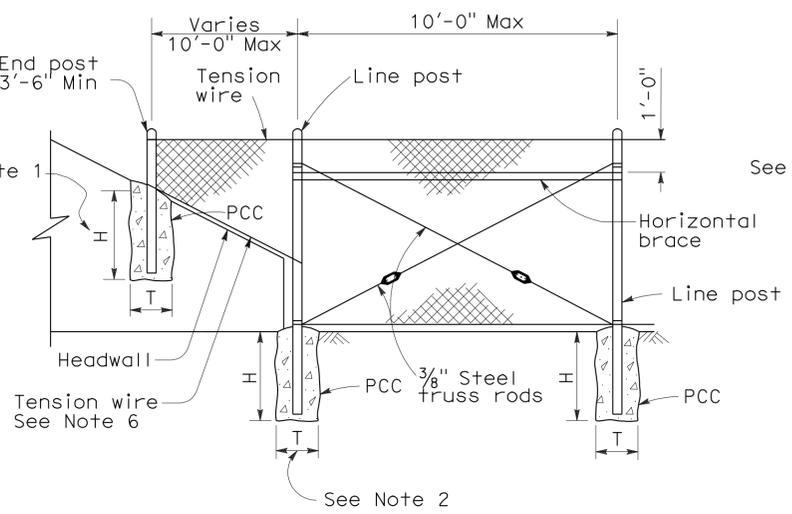
REGISTERED PROFESSIONAL ENGINEER  
 Glenn DeCou  
 No. C34547  
 Exp. 9-30-09  
 CIVIL  
 STATE OF CALIFORNIA

To accompany plans dated 6-20-11

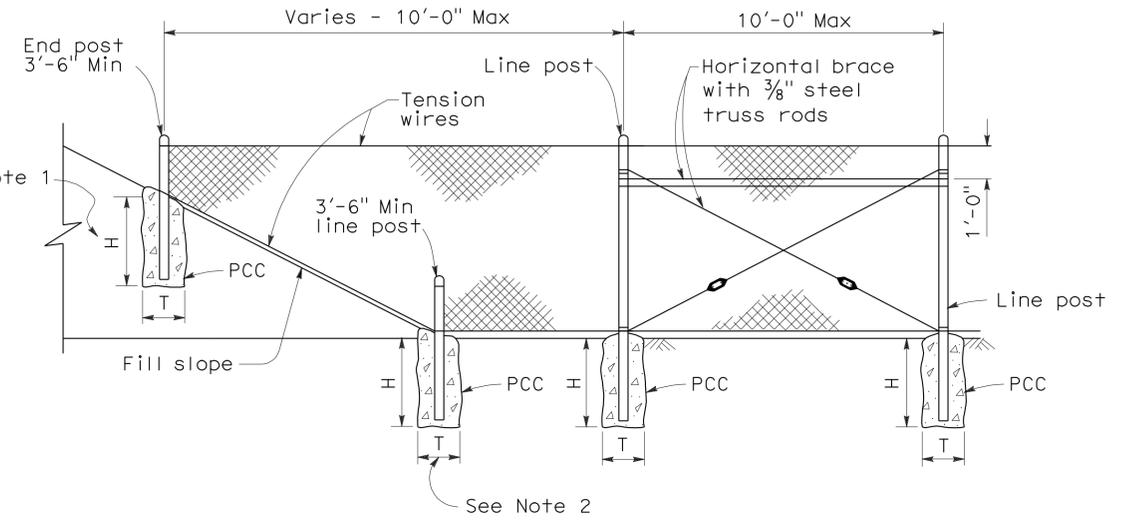
- NOTES:**
- H is 2'-6" for fabric less than 5'-0" high.  
H is 3'-0" for fabric 5'-0" and over.
  - T is not less than 3 times maximum cross section of post with minimum of 8".
  - Arms with barbed wire to be used where shown on plans.
  - See Revised Standard Plan RSP A85 for Chain Link Fencing dimensions.
  - Reinforcing must comply with ASTM A 706.
  - See Detail A on New Standard Plan NSP A86B for connection at headwall.



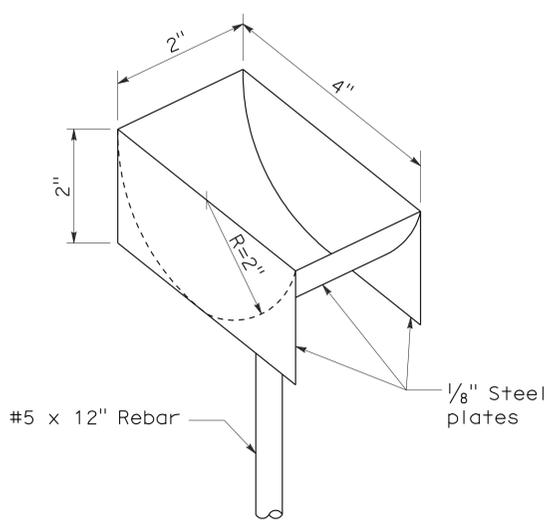
**TYPICAL DOUBLE GATE  
REMOVABLE CENTER POST**



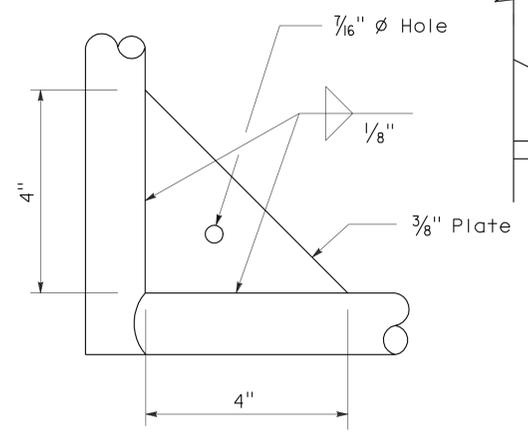
**METHOD OF TYING FENCE TO HEADWALL**



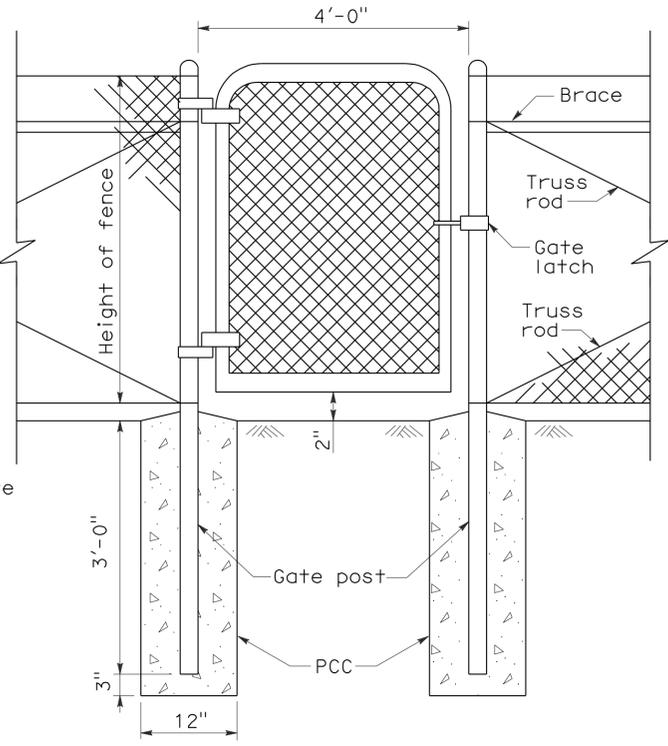
**METHOD OF ERECTING FENCE FOR FILL SLOPE**



**PLUNGER CUP DETAIL**



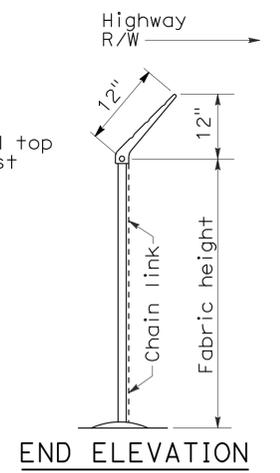
**GUSSET DETAIL**



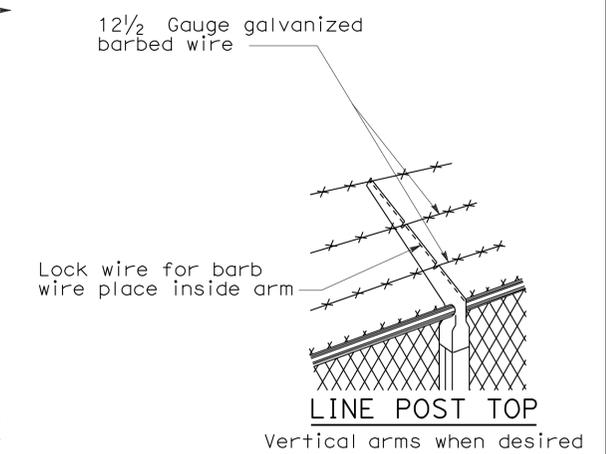
**WALK GATE**



**POST TOP END**



**BARBED WIRE POST TOP**  
See Note 3



**LINE POST TOP**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CHAIN LINK FENCE DETAILS**  
NO SCALE

NSP A85A DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP A85A**

2006 NEW STANDARD PLAN NSP A85A

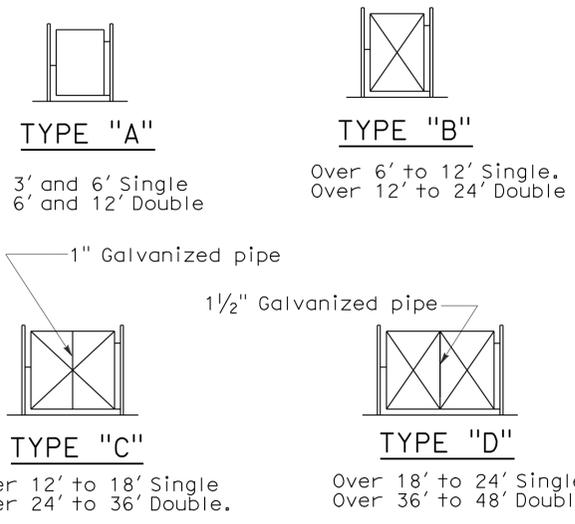
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	506	757

Glenn DeCou  
 REGISTERED CIVIL ENGINEER  
 No. C34547  
 Exp. 9-30-09  
 STATE OF CALIFORNIA

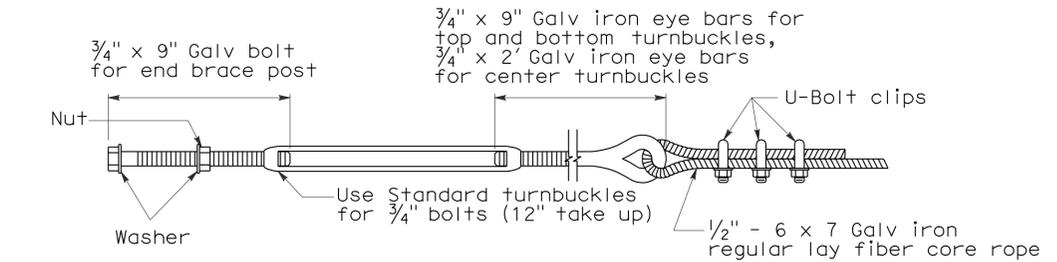
June 5, 2009  
 PLANS APPROVAL DATE

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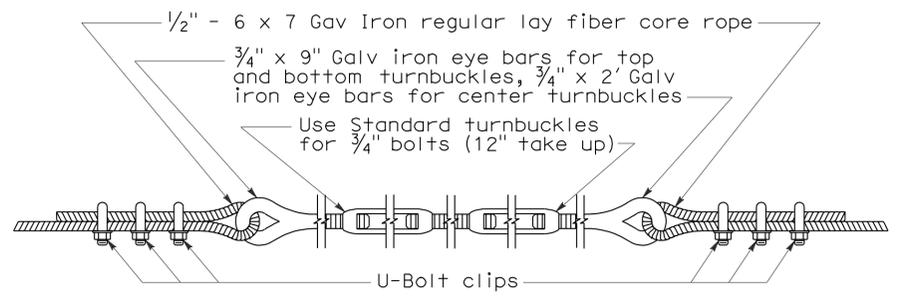
To accompany plans dated 6-20-11



**TYPICAL FRAMEWORK SHOWING NUMBER OF BAYS IN GATE**



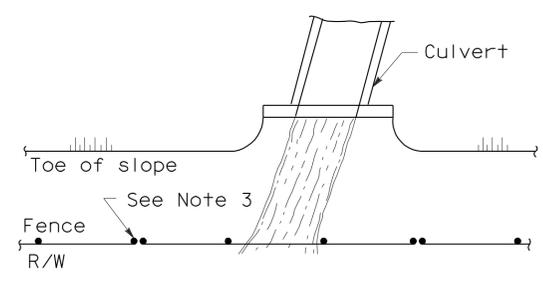
**TURNBUCKLE A**



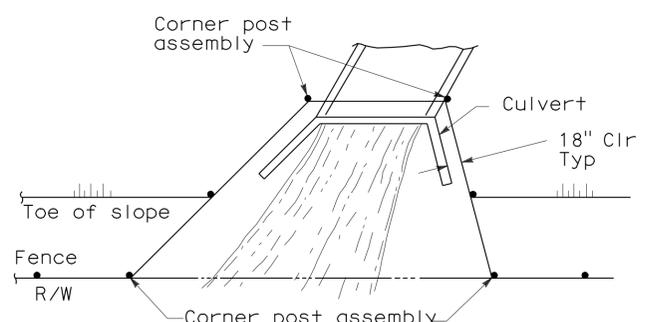
**TURNBUCKLE B**

**NOTES:**

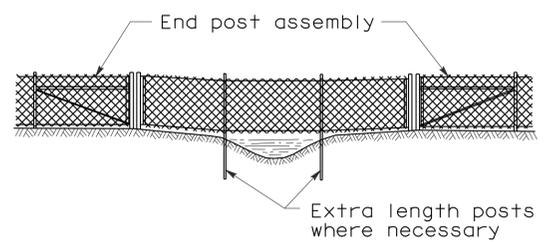
1. All material for abutment connection to be galvanized.
2. The chain link fabric shall be replaced by barbed wire strands at 12" maximum centers between the double posts.
3. When the width of the culvert makes it necessary to anchor a post to the top of the culvert, a cast iron shoe or other device approved by the Engineer shall be used.
4. Fencing over stream and around headwall may also use Barbed Wire or Wire Mesh fencing with either wood post or steel post installation.
5. See Revised Standard Plan RSP A85 for Chain Link fence dimensions. See Standard Plan A86 for Barbed Wire and Wire Mesh fence dimensions and for wood post and steel post installation.



**PLAN**

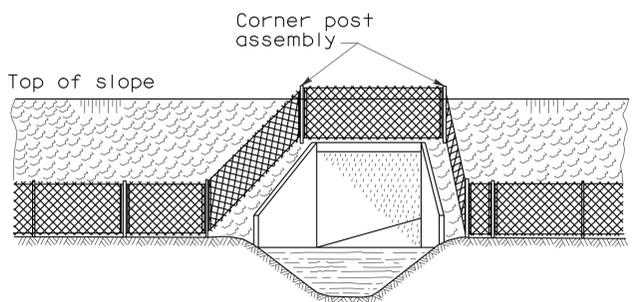


**PLAN**



**ELEVATION**

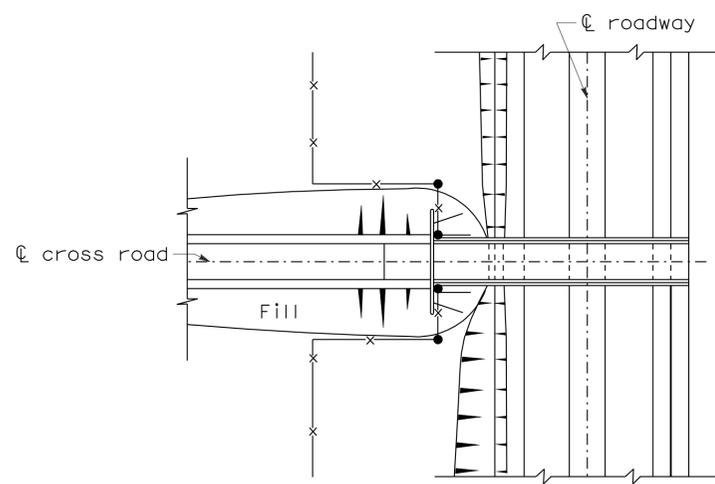
**INSTALLATION OVER STREAM**



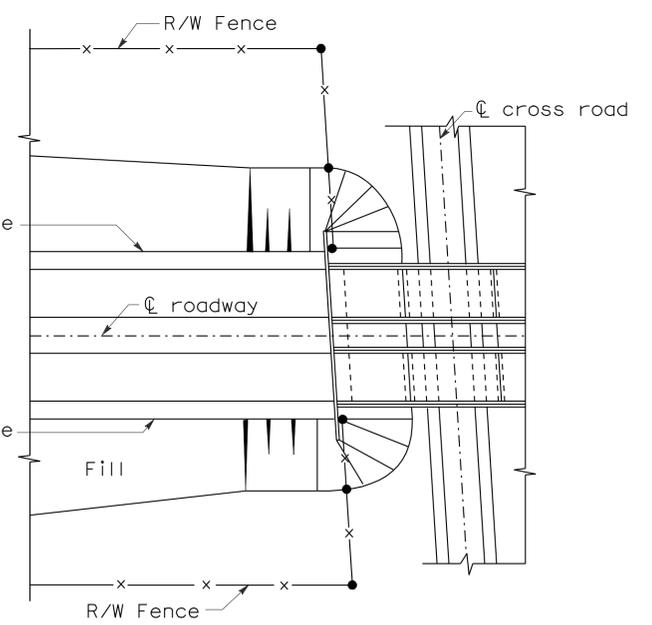
**ELEVATION**

**INSTALLATION AROUND HEADWALL**

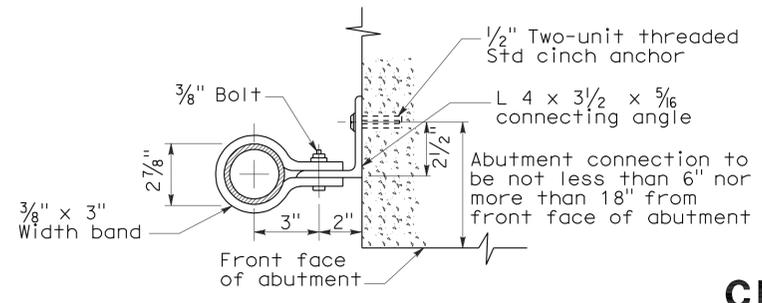
See Note 4



**PLAN OF ROADWAY - UNDERPASS**



**PLAN OF ROADWAY - OVERPASS**



**ABUTMENT CONNECTION**

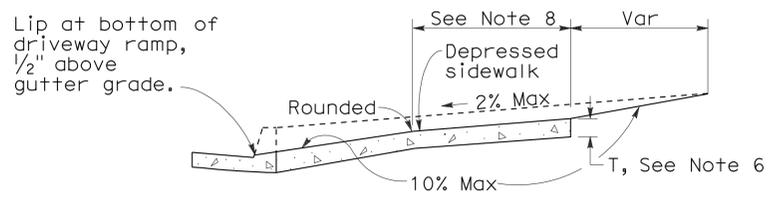
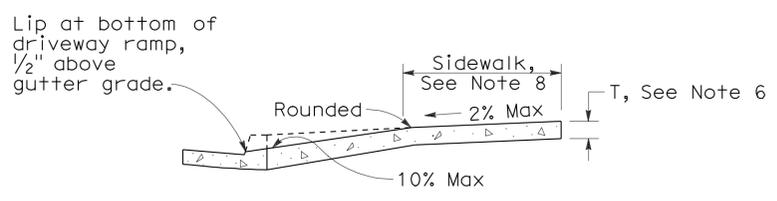
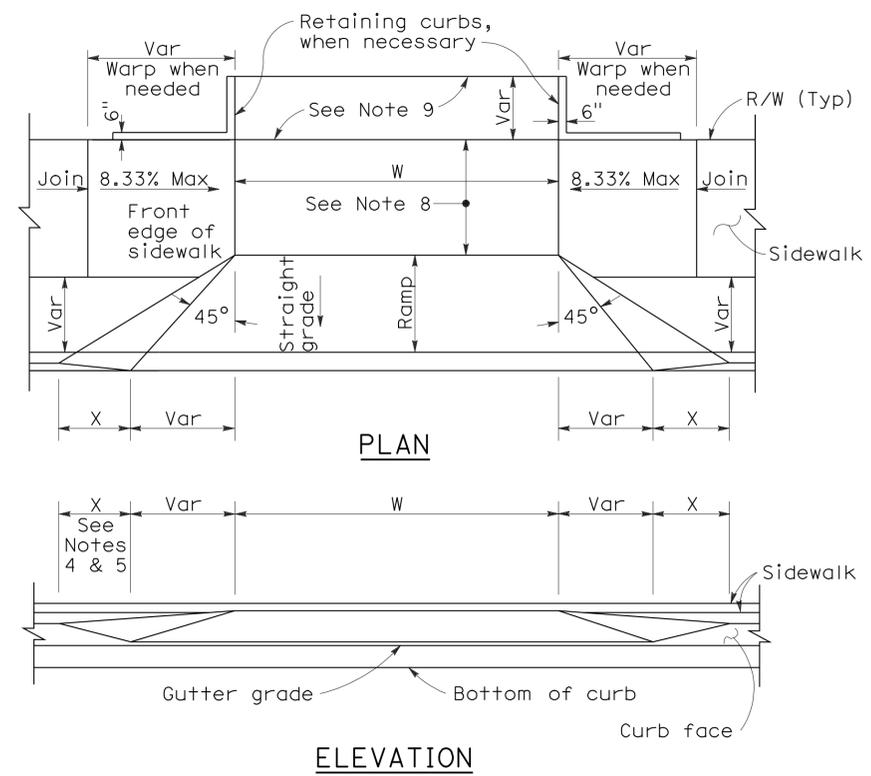
**TYPICAL INSTALLATION AT BRIDGES**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CHAIN LINK FENCE DETAILS**  
 NO SCALE

NSP A85B DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP A85B**

2006 NEW STANDARD PLAN NSP A85B



**CASE A**

Typical driveway, sidewalk not depressed

**CASE B**

Driveway with depressed sidewalk

**SECTIONS**

**CURB QUANTITIES**

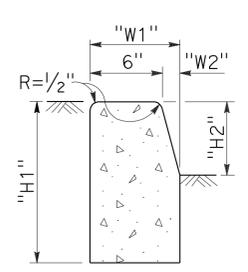
TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

**TABLE A**

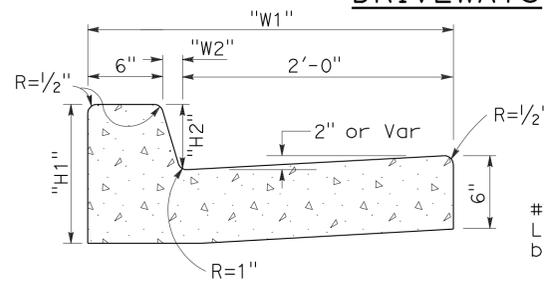
CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7 1/2"	1 1/2"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7 1/2"	1 1/2"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7 1/4"	1 1/4"
A3-8	8"	7"	7 3/4"	1 3/4"
B1-4	1'-0"	4"	7 1/2"	2 1/2"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7 1/2"	2 1/2"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	4"	3"	7"	2"
B3-6	6"	5"	8 1/2"	3 1/2"
D-4	10"	4"	1'-6"	1'-1"
D-6	1'-0"	6"	2'-2"	1'-8"

To accompany plans dated 6-20-11

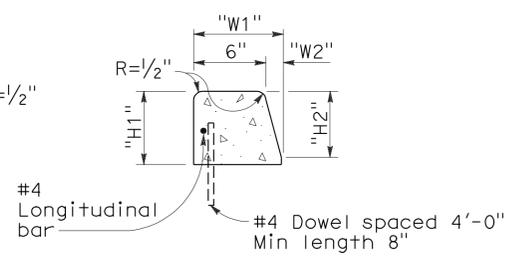
**DRIVEWAYS**



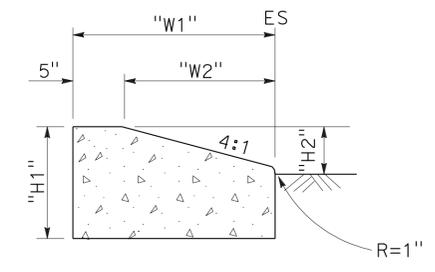
**TYPE A1 CURBS**  
See Table A



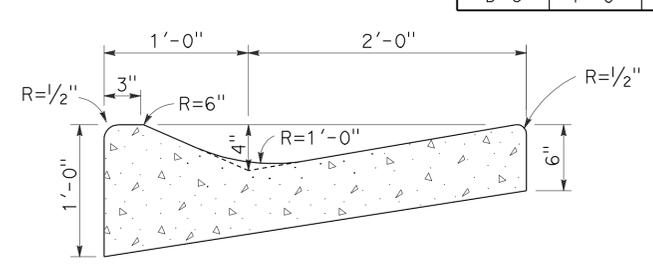
**TYPE A2 CURBS**  
See Table A



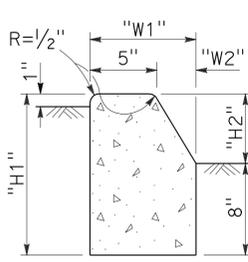
**TYPE A3 CURBS**  
Superimposed on existing pavement  
See Table A



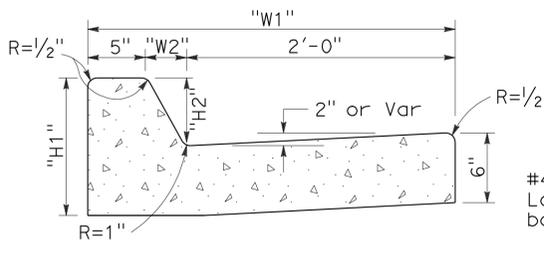
**TYPE D CURBS**  
See Table A



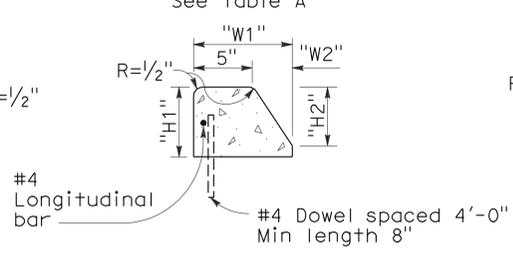
**TYPE E CURB**



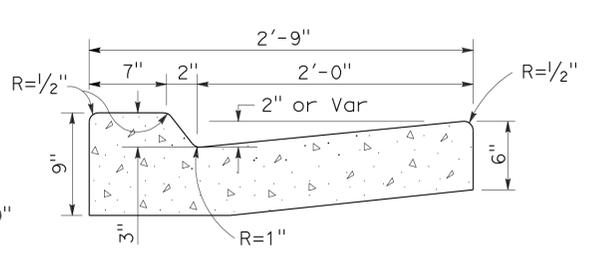
**TYPE B1 CURBS**  
See Table A



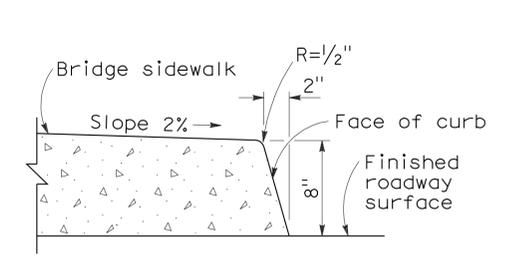
**TYPE B2 CURBS**  
See Table A



**TYPE B3 CURBS**  
Superimposed on existing pavement  
See Table A



**TYPE B4 CURBS**



**TYPE H CURB**  
On Bridges

**NOTES:**

- Case A driveway section typically applies.
- Use Case B driveway section when ramp slopes would exceed 10% in Case A.
- Use Case B driveway section when sidewalk cross slope would exceed 2% in Case A.
- X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
- X is a variable when sidewalk is located where wheelchairs may traverse the surface. Slopes shall not exceed 8.33%.
- Sidewalk and ramp thickness "T" at driveway shall be 4" for residential and 6" for commercial.
- Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
- Minimum width of clear passageway for sidewalk shall be 4'-0".
- Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
- Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

**CURBS**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CURBS AND DRIVEWAYS**

NO SCALE

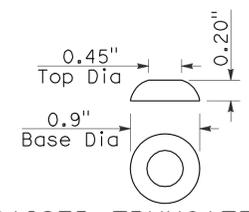
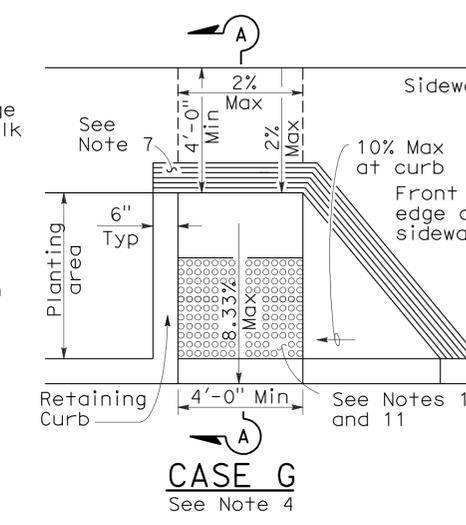
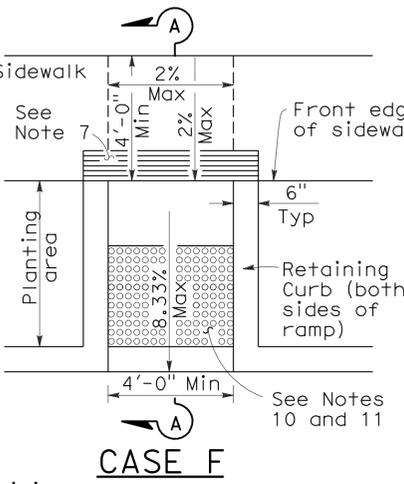
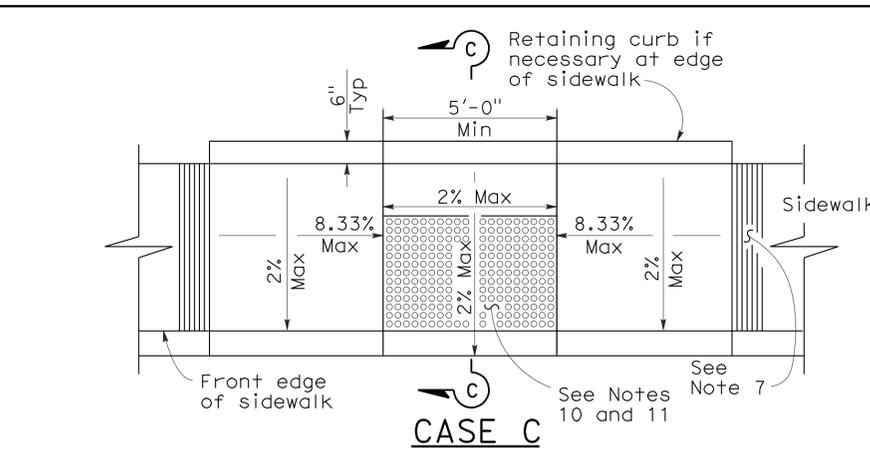
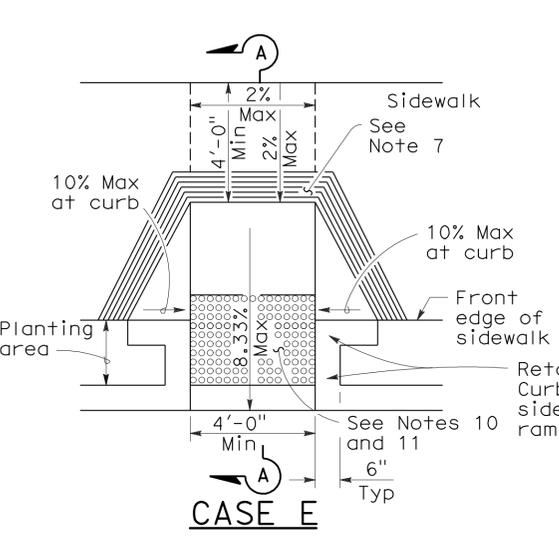
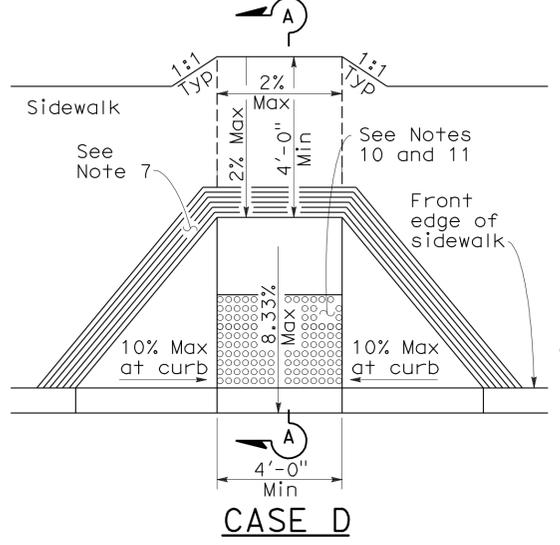
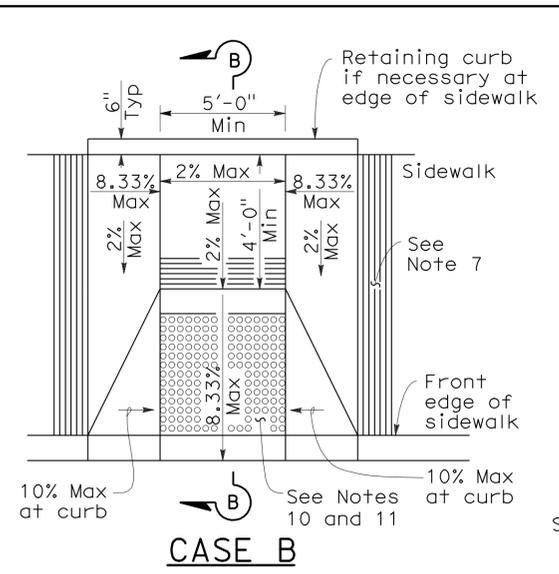
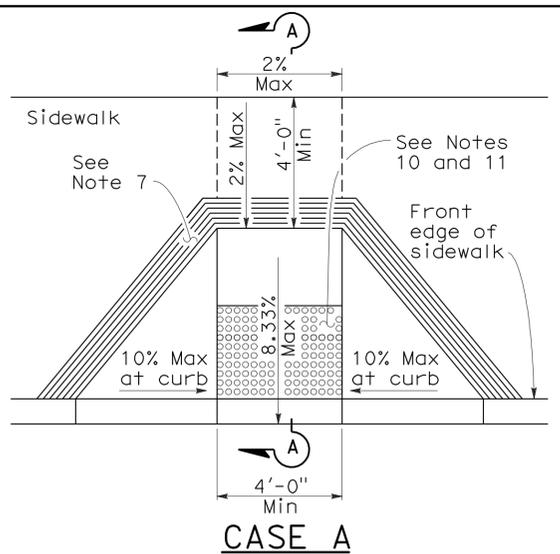
RSP A87A DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN A87A  
DATED MAY 1, 2006 - PAGE 113 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A87A**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	508	757

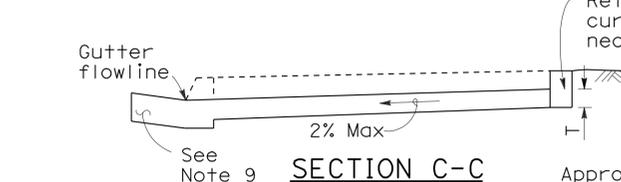
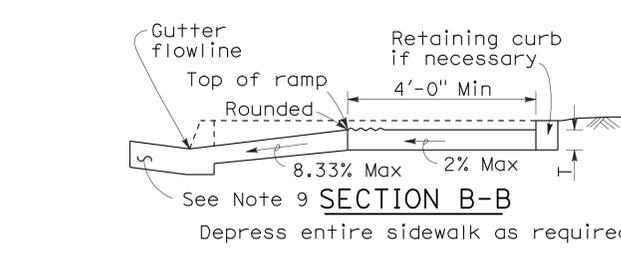
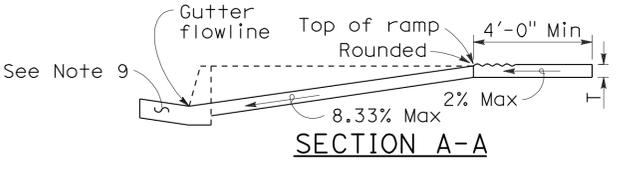
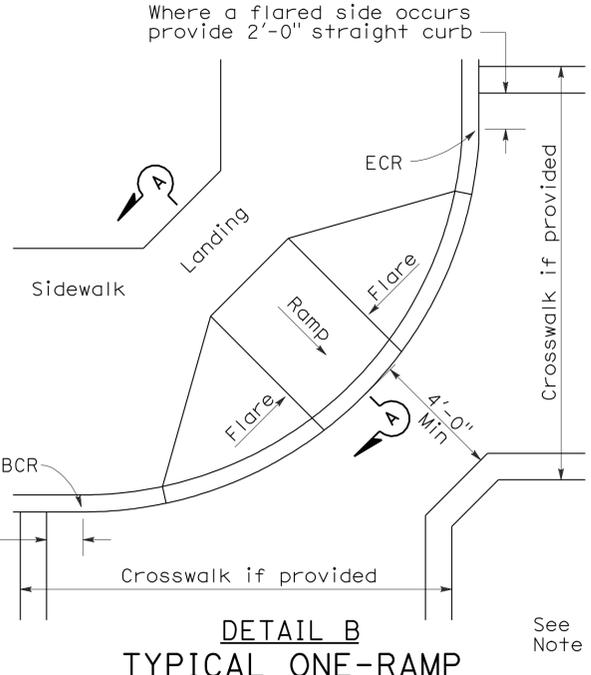
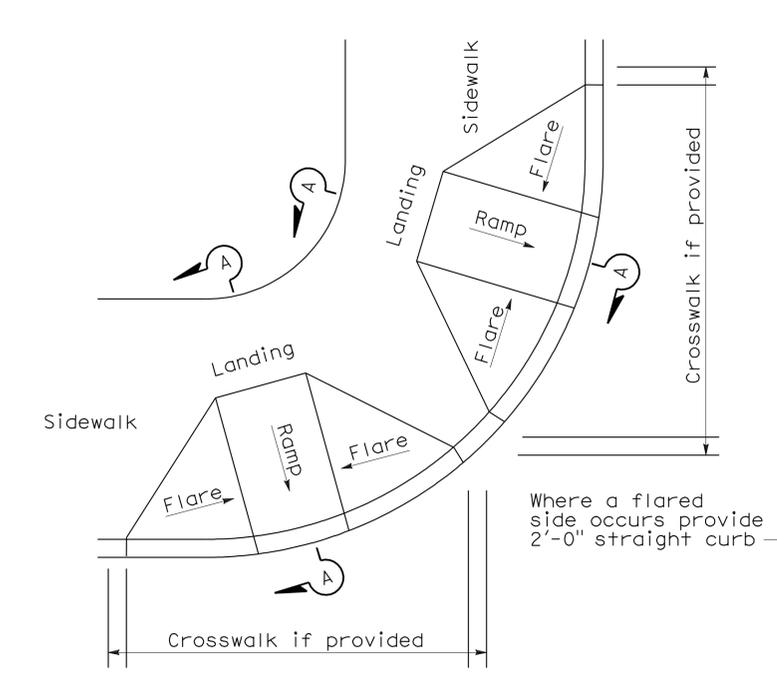
H. David Cordova  
 REGISTERED CIVIL ENGINEER  
 September 1, 2006  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER  
 Hector David Cordova  
 No. C41957  
 Exp. 3-31-08  
 CIVIL  
 STATE OF CALIFORNIA



**NOTES:**

- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
- If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-0" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
- When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
- As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
- If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-0".
- Side slope of ramp flares vary uniformly from a maximum of 10% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
- The curb ramp shall be outlined, as shown, with a 1'-0" wide border with 1/4" grooves approximately 3/4" on center. See grooving detail.
- Transitions from ramps and landing to walks, gutters or streets shall be flush and free of abrupt changes.
- Maximum slopes of adjoining gutters, the road surface immediately adjacent to the curb ramp or accessible route shall not exceed 5 percent within 4'-0" of the top and bottom of the curb ramp.
- Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. Detectable Warning Surfaces shall conform to the details on this plan and the requirements in the Special Provisions.
- The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
- Sidewalk and ramp thickness, "T", shall be 3/2" minimum.
- Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
- For retrofit conditions, removal and replacement of curb apron will be at the Contractor's option, unless otherwise shown on project plans.



1.67" to 2.35"  
Center to  
center spacing

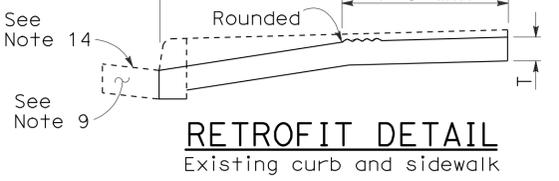
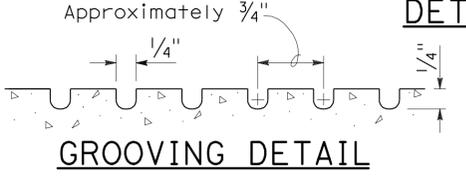
**RAISED TRUNCATED DOME PATTERN (IN-LINE)  
DETECTABLE WARNING SURFACE**

See Note 10

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CURB RAMP DETAILS**

NO SCALE



**TYPICAL TWO-RAMP CORNER INSTALLATION**

See Note 1

**TYPICAL ONE-RAMP CORNER INSTALLATION**

See Notes 1 and 3

**RETROFIT DETAIL**

Existing curb and sidewalk

**REVISED STANDARD PLAN RSP A88A**

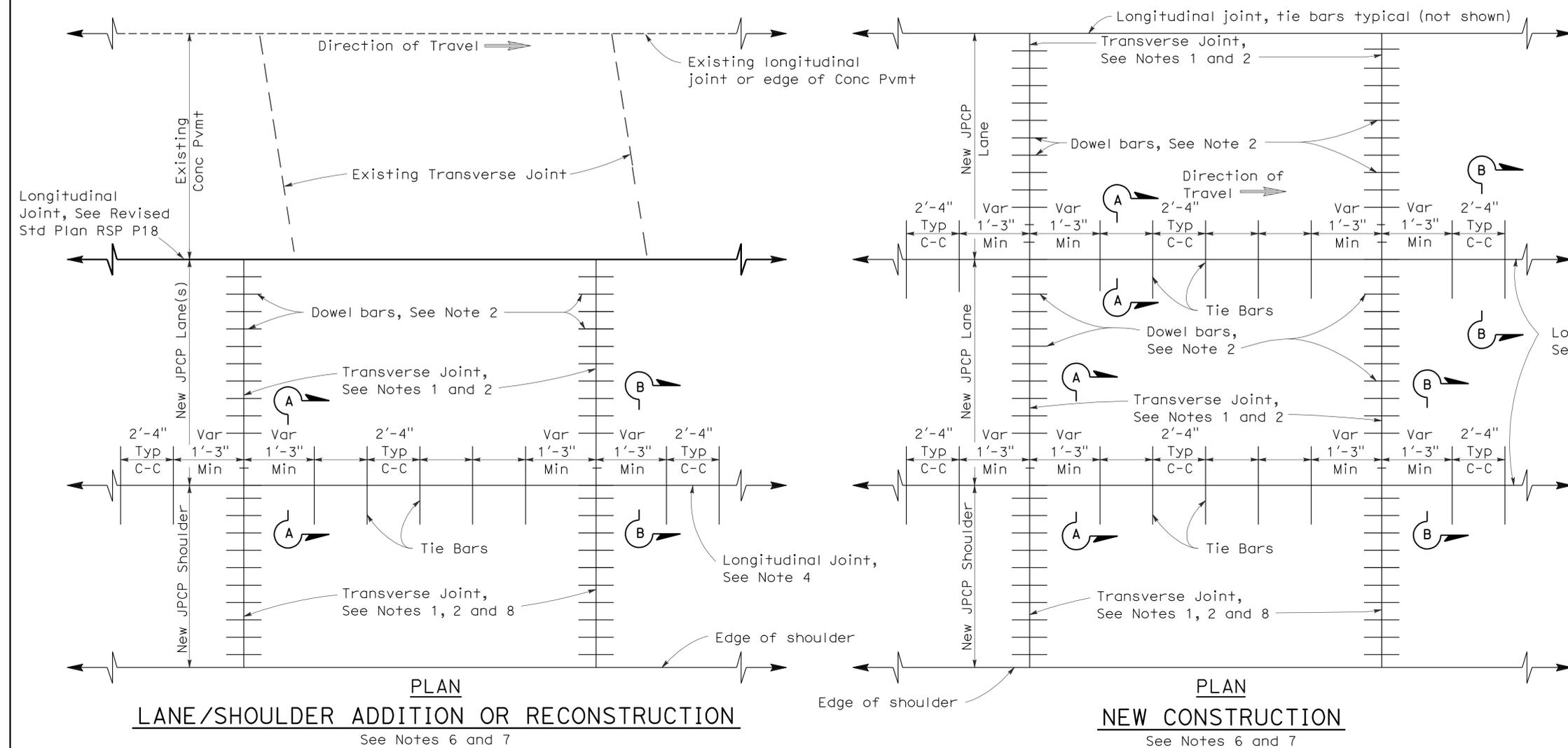
RSP A88A DATED SEPTEMBER 1, 2006 SUPERSEDES STANDARD PLAN A88A DATED MAY 1, 2006 - PAGE 115 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A88A

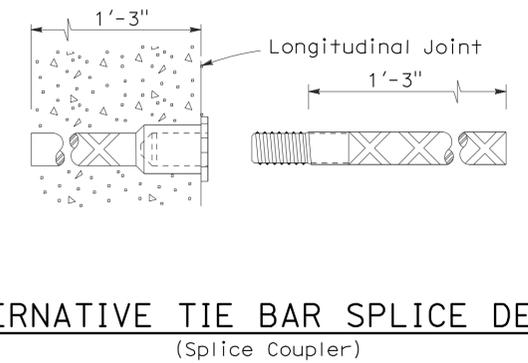
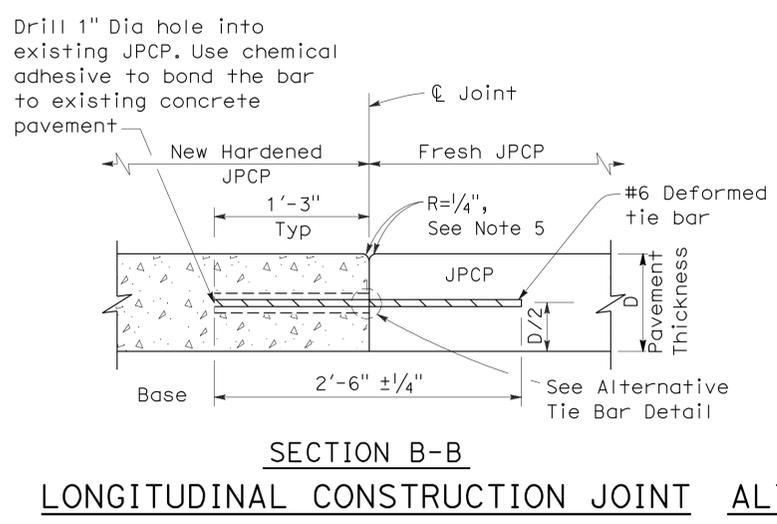
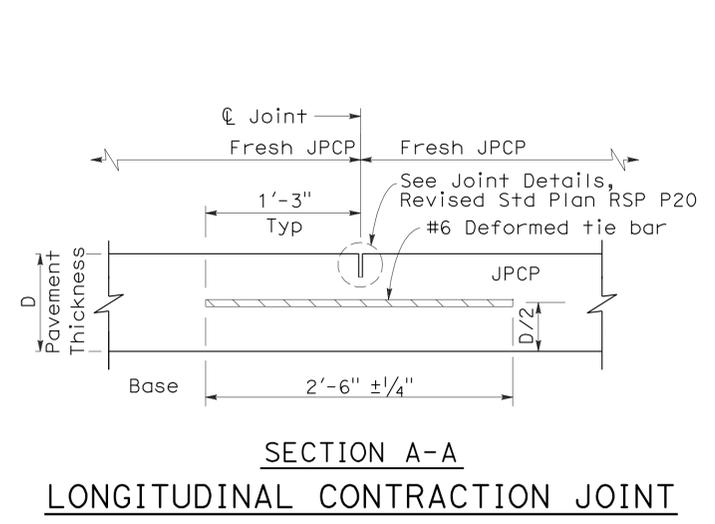
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	509	757

William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 May 15, 2009  
 PLANS APPROVAL DATE  
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 REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. C49042  
 Exp. 9-30-10  
 CIVIL  
 STATE OF CALIFORNIA

To accompany plans dated 6-20-11



- NOTES:**
1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new jointed plain concrete pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
  2. For transverse joint and dowel bar details not shown, See Revised Standard Plan RSP P10.
  3. Construct longitudinal contraction joints as shown in Section A-A when more than one lane or shoulder widths are placed at one time. If constructing one lane at a time, use longitudinal construction joint, as shown in Section B-B.
  4. For additional longitudinal joint details, see Revised Standard Plan RSP P18.
  5. If fresh concrete is placed adjacent to existing concrete, the top corner of the new hardened concrete does not need to be rounded to the 1/4" radius as shown.
  6. Joint spacing patterns do not apply to intersections.
  7. Details can also apply to inside widening.
  8. Dowel bars may be omitted from shoulders when the shoulder cross slope is not the same as the adjacent traffic lane.



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**JOINTED PLAIN  
 CONCRETE PAVEMENT**  
 NO SCALE

RSP P1 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P1  
 DATED MAY 1, 2006 - PAGE 119 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P1**

2006 REVISED STANDARD PLAN RSP P1

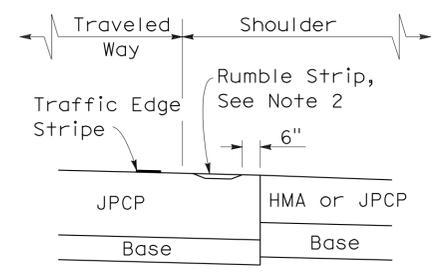
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	510	757

William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 June 5, 2009  
 PLANS APPROVAL DATE  
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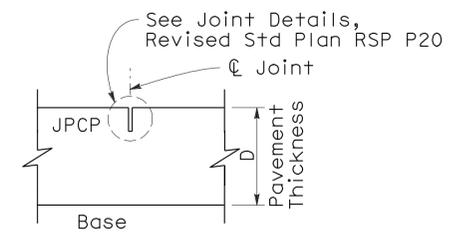
REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. C49042  
 Exp. 9-30-10  
 CIVIL  
 STATE OF CALIFORNIA

To accompany plans dated 6-20-11

- NOTES:**
1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new Jointed Plain Concrete Pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
  2. For locations of rumble strips, see project plans. For rumble strip details not shown, see Standard Plans A40A and A40B.
  3. Joint spacing patterns do not apply to intersections.



**DETAIL "A"**



**SECTION C-C  
TRANSVERSE/LONGITUDINAL JOINT**  
(no dowel bars/tie bars)

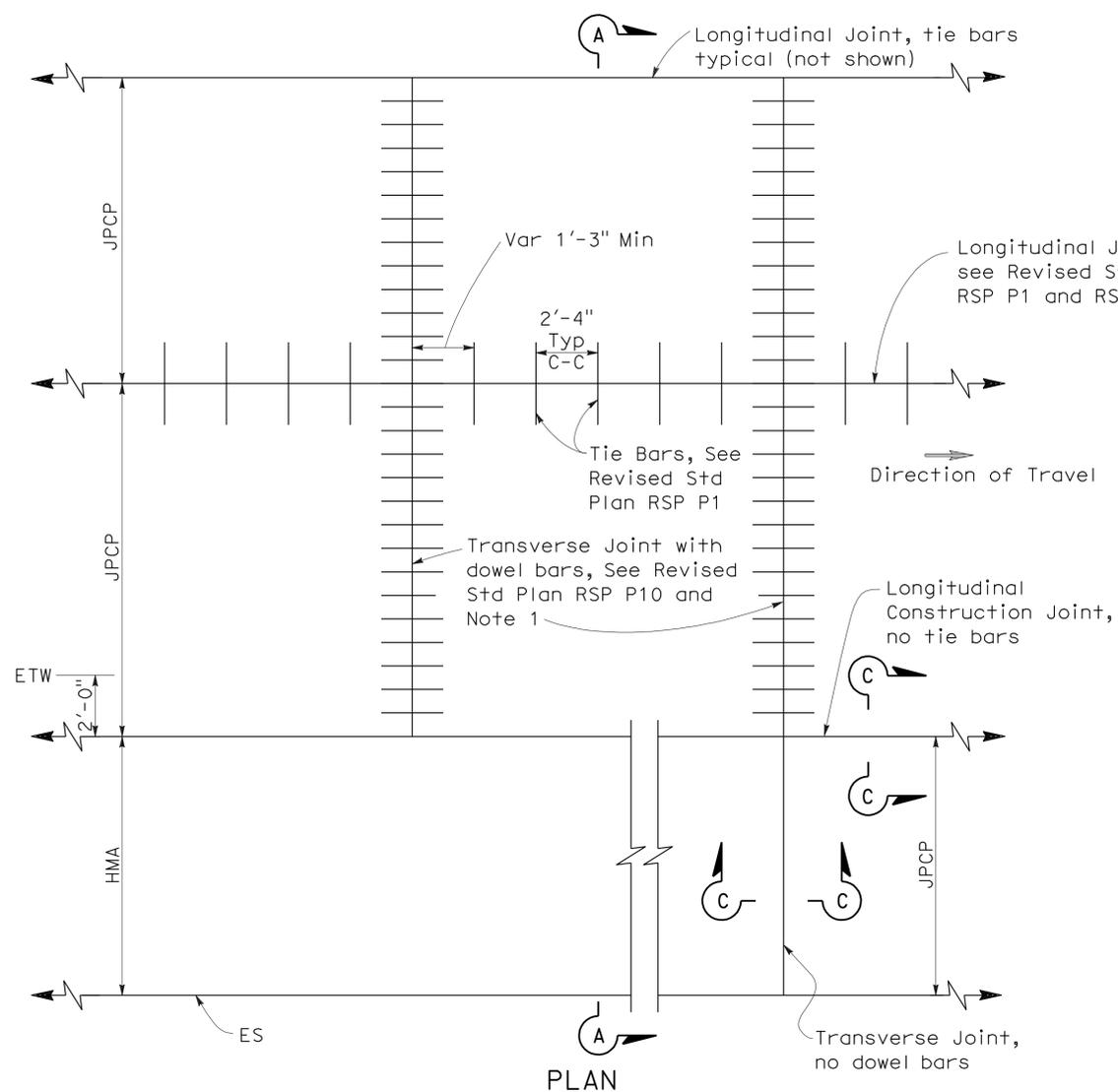
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**JOINTED PLAIN CONCRETE  
PAVEMENT-WIDENED SLAB DETAILS**

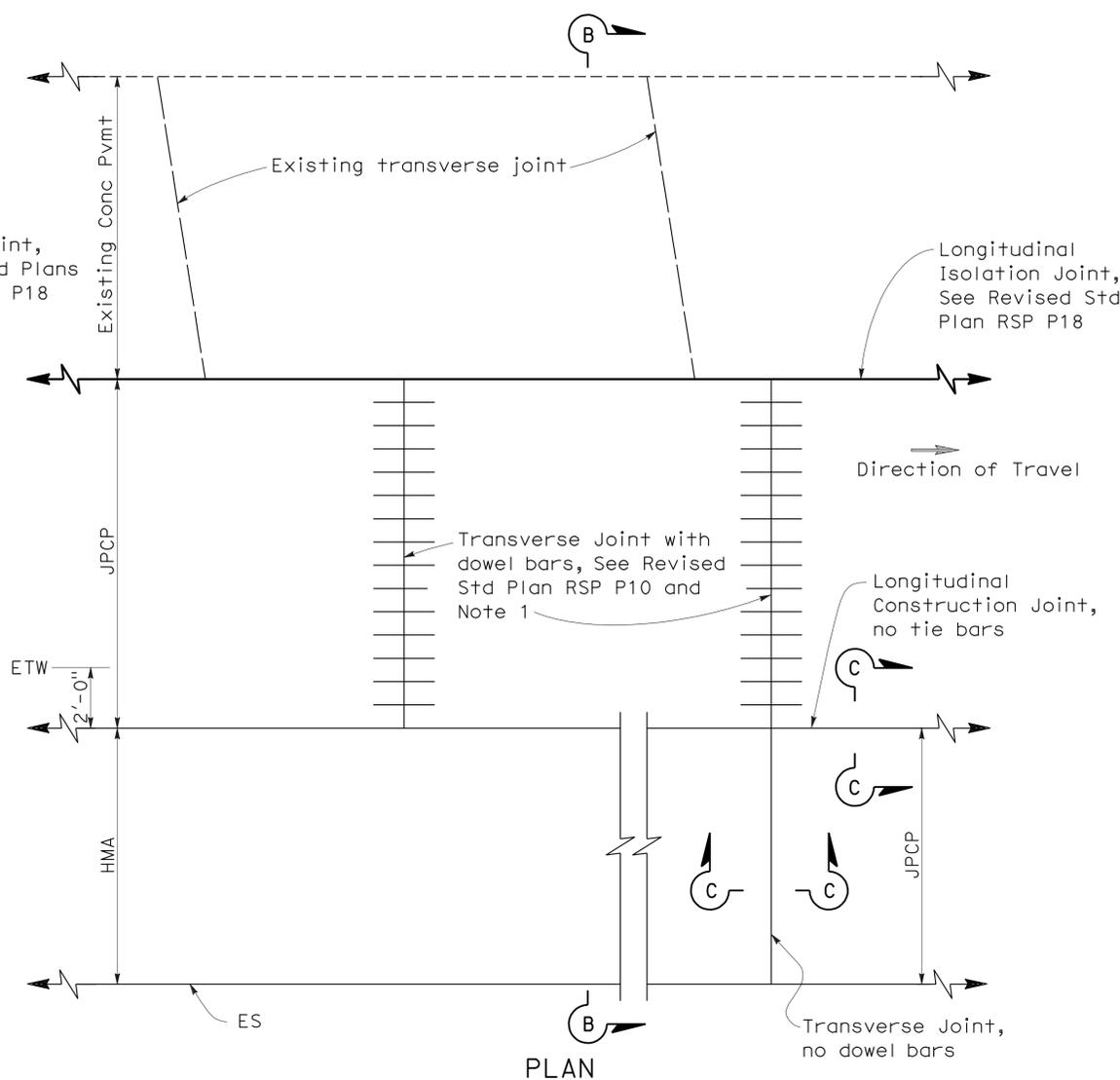
NO SCALE

RSP P2 DATED JUNE 5, 2009 SUPERCEDES STANDARD PLAN P2  
DATED MAY 1, 2006 - PAGE 120 OF THE STANDARD PLANS BOOK DATED MAY 2006.

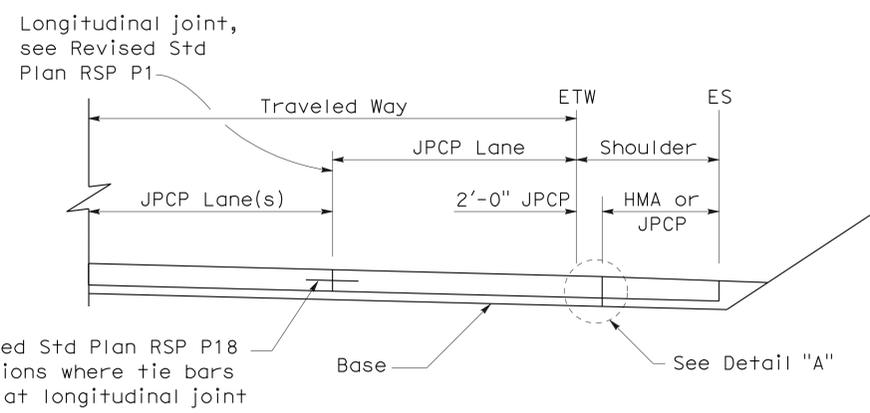
**REVISED STANDARD PLAN RSP P2**



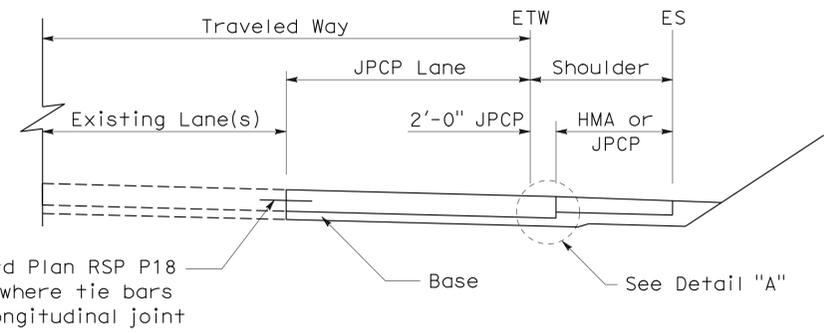
**PLAN  
NEW CONSTRUCTION**



**PLAN  
LANE/SHOULDER ADDITION OR RECONSTRUCTION**



**SECTION A-A**



**SECTION B-B**

2006 REVISED STANDARD PLAN RSP P2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	511	757

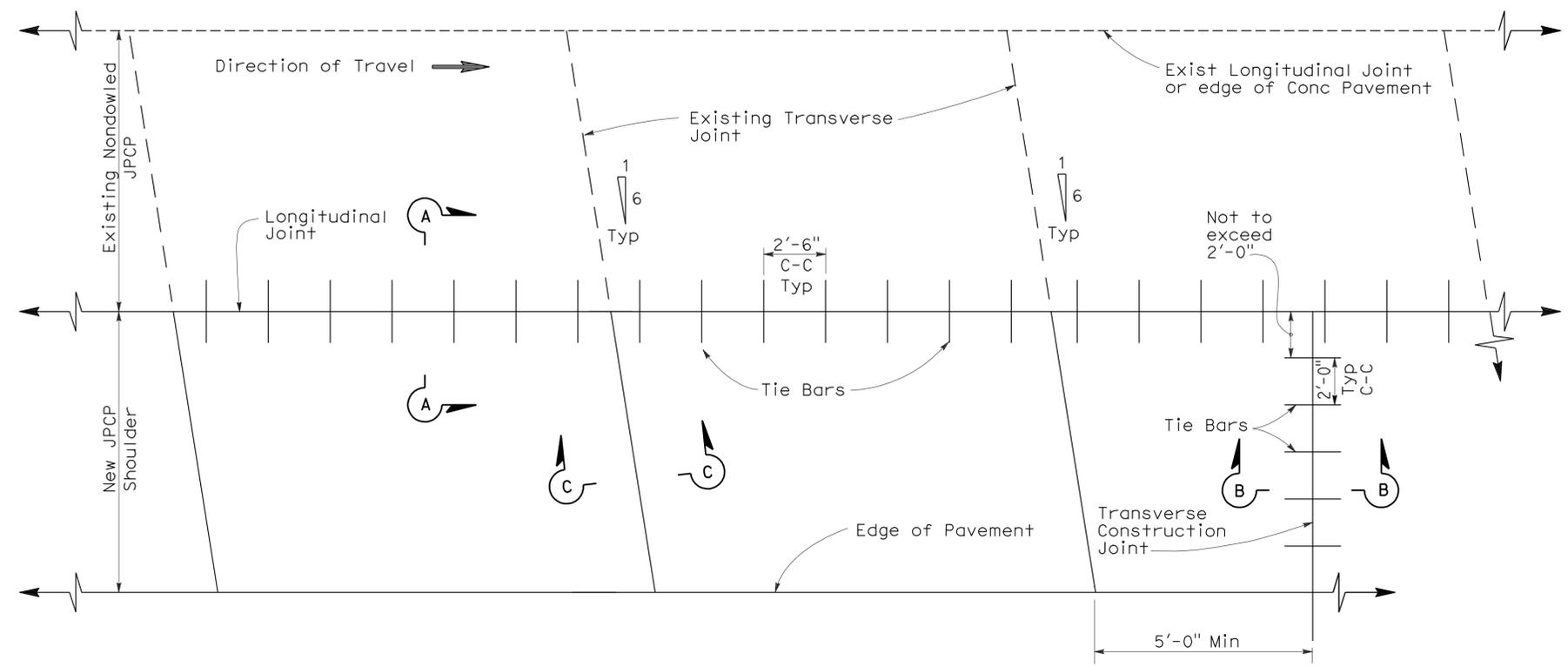
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 No. C49042  
 Exp. 9-30-10  
 STATE OF CALIFORNIA

May 15, 2009  
 PLANS APPROVAL DATE

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To accompany plans dated 6-20-11

2006 REVISED STANDARD PLAN RSP P3



PLAN

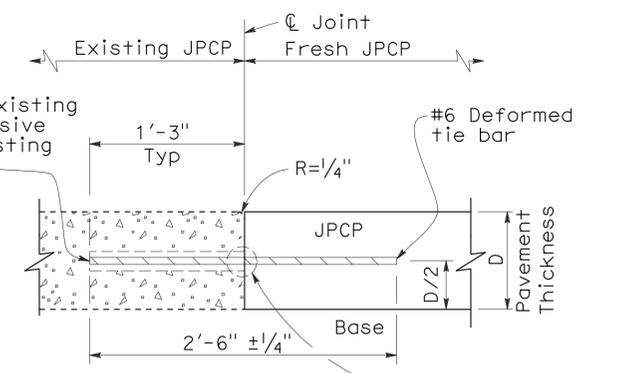
NOTES:

1. New transverse contraction joints shall match the skewed offset and spacing of the adjacent existing contraction joints, as shown.
2. Transverse construction joints, with tie bars spaced as shown, shall be installed at the end of paving operations. Transverse construction joints shall be placed at least 5'-0" from any contraction joint.
3. This Standard Plan only applicable for constructing a nondoweled Jointed Plain Concrete Pavement shoulder next to existing nondoweled Jointed Plain Concrete Pavement lane.
4. If fresh concrete is placed adjacent to existing concrete, the top corner of the new hardened concrete does not need to be rounded to the 1/4" radius as shown.

TABLE A

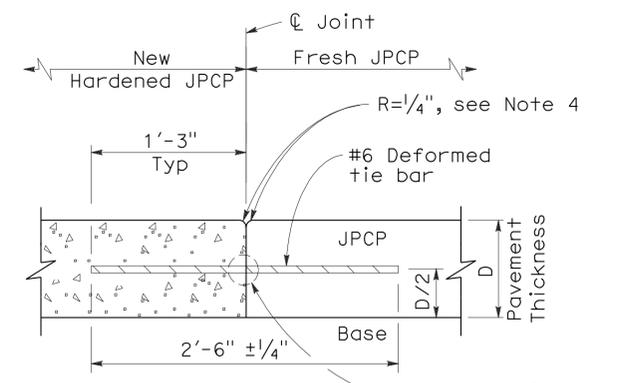
Tie Bar Spacing		
Slab Length	Total Tie Bars per Slab	Clearance Tie Bar to Transverse Joint
9'-0"	3	1'-3"
9'-6"	3	1'-4 1/2"
12'-0"	5	1'-4"
13'-0"	5	1'-10"
14'-0"	5	2'-3 3/4"
15'-0"	6	1'-8"

Drill 1" Dia hole into existing JPCP. Use chemical adhesive to bond tie bar to existing concrete pavement.



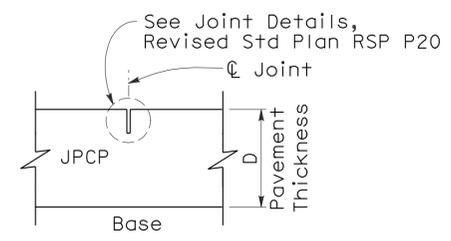
SECTION A-A

LONGITUDINAL JOINT  
(Between fresh and hardened concrete)



SECTION B-B

TRANSVERSE CONSTRUCTION JOINT



SECTION C-C

TRANSVERSE CONTRACTION JOINT

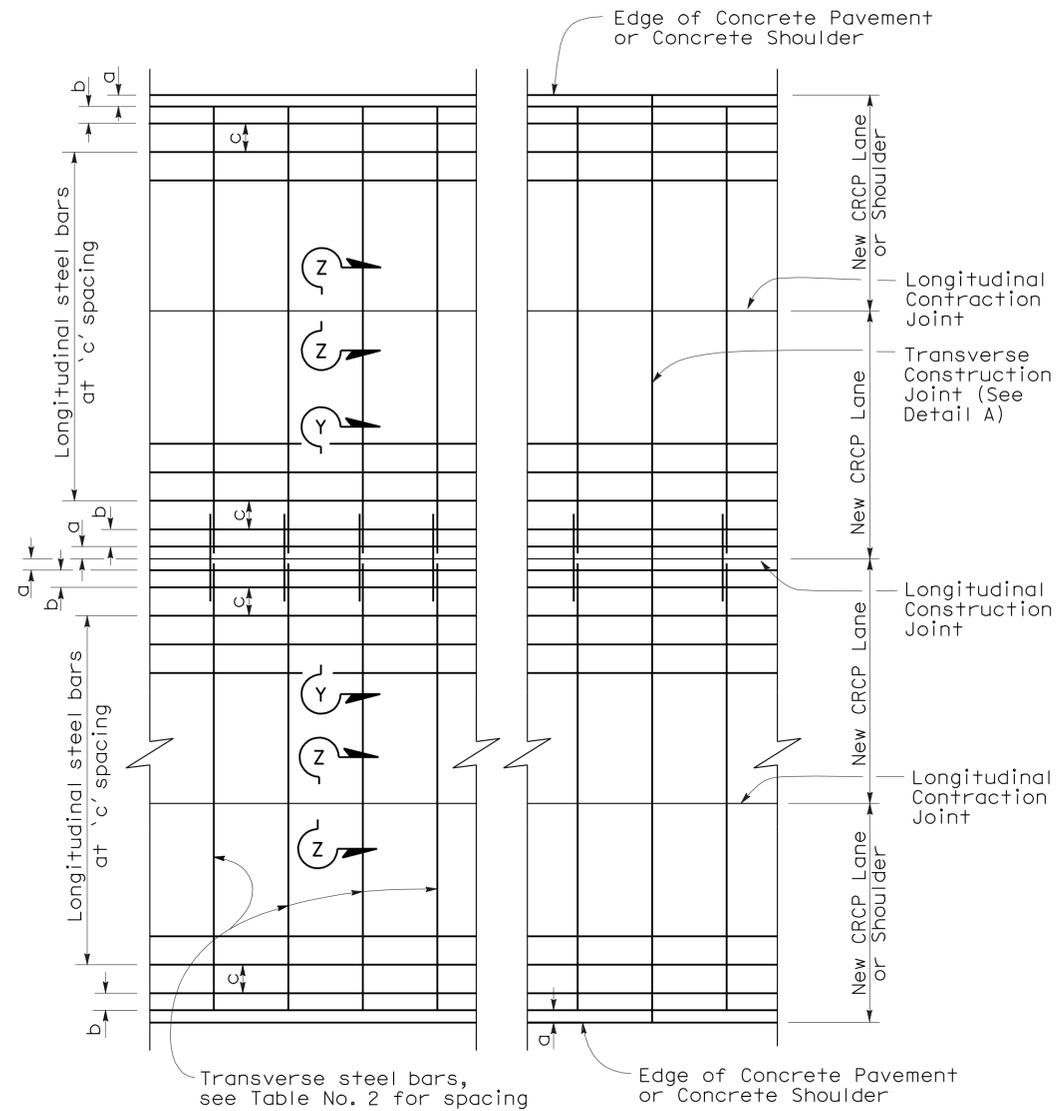
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**JOINTED PLAIN CONCRETE PAVEMENT-NONDOWELED SHOULDER ADDITION/RECONSTRUCTION**

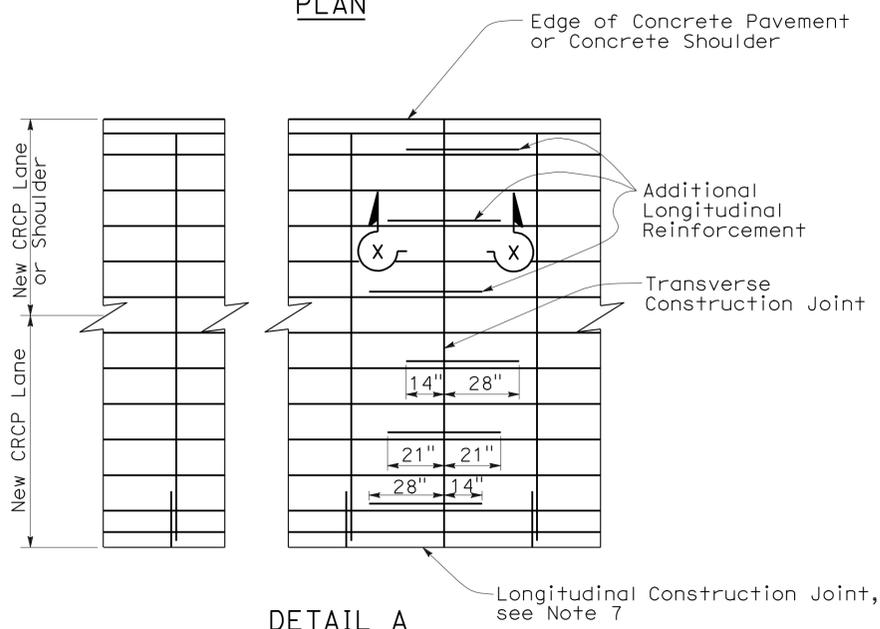
NO SCALE

RSP P3 DATED MAY 15, 2009 SUPERSEDES RSP P3 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P3 DATED MAY 1, 2006 - PAGE 121 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P3**



PLAN



DETAIL A

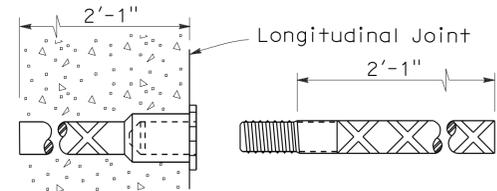
ADDITIONAL LONGITUDINAL REINFORCEMENT AT TRANSVERSE CONSTRUCTION JOINT

**TABLE No. 1 LONGITUDINAL STEEL**

Slab Thickness and Bar Size	First Spacing at Edge or Joint	Second Spacing from Edge or Joint	Regular Steel Bars	Additional Reinforcement at Transverse Construction Joint	Clr		
D	Bar Size	Spacing a	Spacing b	Spacing c	Spacing $2 \times c$	Length L	X
.80'	#6	3" TO 4"	3" TO 8"	8"	16"	42"	4"
.85'	#6	3" TO 4"	3" TO 7"	7"	14"	42"	4"
.90'	#6	3" TO 4"	3" TO 6.5"	6.5"	13"	42"	4"
.95'	#6	3" TO 4"	3" TO 6"	6.5"	13"	42"	4"
1.00'	#6	3" TO 4"	3" TO 6"	6"	12"	42"	4.25"
1.05'	#6	3" TO 4"	3" TO 5.5"	6"	12"	42"	4.5"
1.10'	#6	3" TO 4"	3" TO 5.5"	5.5"	11"	42"	4.75"

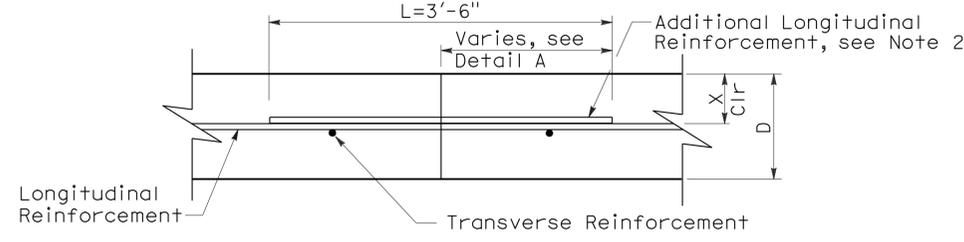
**TABLE No. 2 TRANSVERSE STEEL**

Slab Thickness and Bar Size	Pvmt Width (From Edge of Conc Pvmt or Conc Shld to Nearest Edge of Conc Pvmt or Conc Shld)							
	$\leq 48'$	$\leq 60'$	$\leq 72'$	$\leq 84'$	$\leq 96'$	$\leq 108'$	$\leq 120'$	
D	Bar Size	Spacing	Spacing	Spacing	Spacing	Spacing	Spacing	Spacing
.80'	#6	3'	3'	3'	2.5'	2'	2'	1.5'
.85'	#6	3'	3'	2.5'	2.5'	2'	1.5'	1.5'
.90'	#6	3'	2.5'	2.5'	2'	2'	1.5'	1.5'
.95'	#6	3'	2.5'	2'	2'	1.5'	1.5'	1'
1.00'	#6	3'	2.5'	2'	2'	1.5'	1.5'	1'
1.05'	#6	2.5'	2.5'	2'	1.5'	1.5'	1.5'	1'
1.10'	#6	2.5'	2.5'	2'	1.5'	1.5'	1.5'	1'



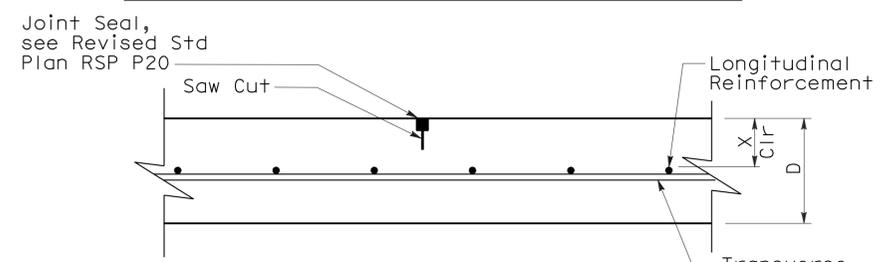
TIE BAR SPLICE DETAIL

(Splice Coupler)



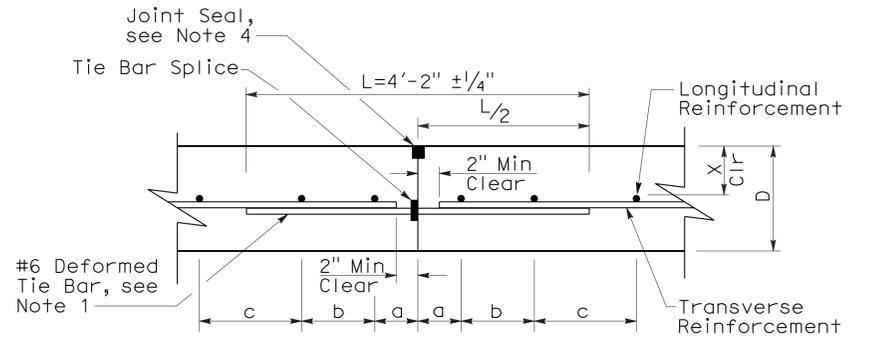
SECTION X-X

TRANSVERSE CONSTRUCTION JOINT

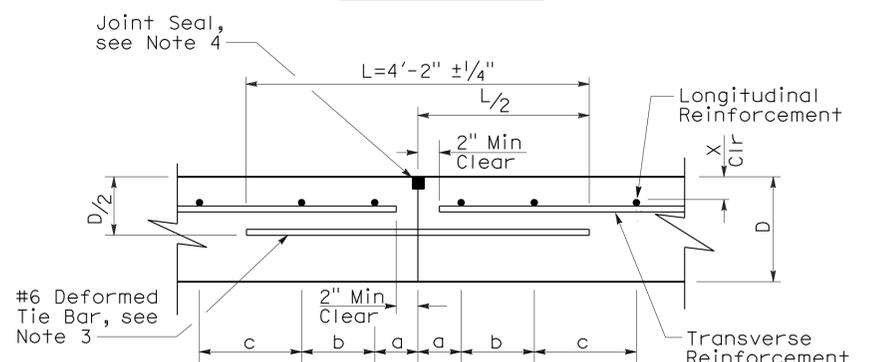


SECTION Z-Z

LONGITUDINAL CONTRACTION JOINT



SECTION Y-Y



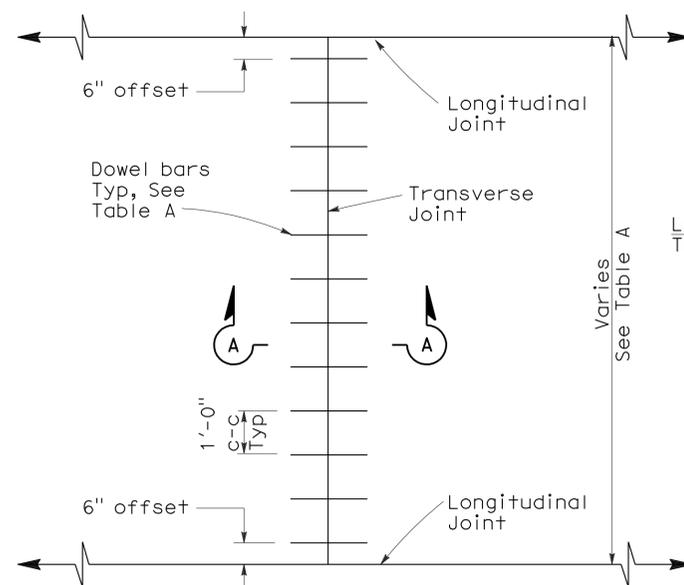
ALTERNATE

LONGITUDINAL CONSTRUCTION JOINT

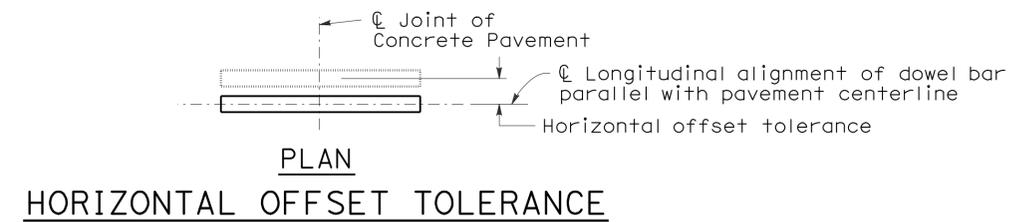
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CONTINUOUSLY REINFORCED  
 CONCRETE PAVEMENT**  
 NO SCALE

RNSP P4 DATED JUNE 5, 2009 SUPERSEDES NSP P4 DATED MAY 15, 2009 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

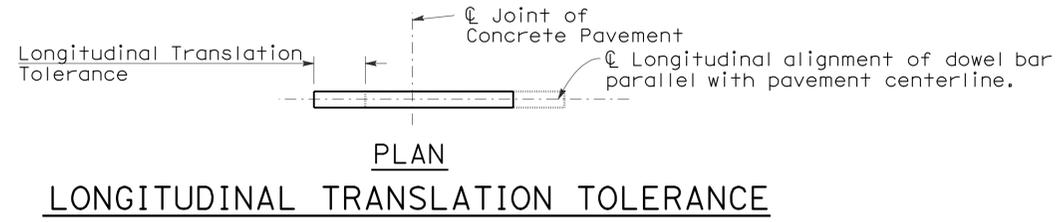
2006 REVISED NEW STANDARD PLAN RNSP P4



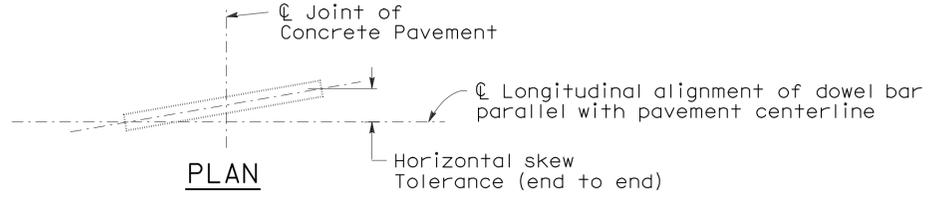
**TRANSVERSE JOINT DOWEL BAR LAYOUT**



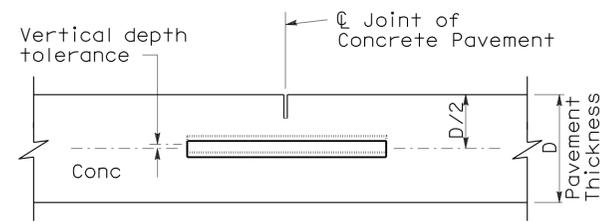
**HORIZONTAL OFFSET TOLERANCE**



**LONGITUDINAL TRANSLATION TOLERANCE**

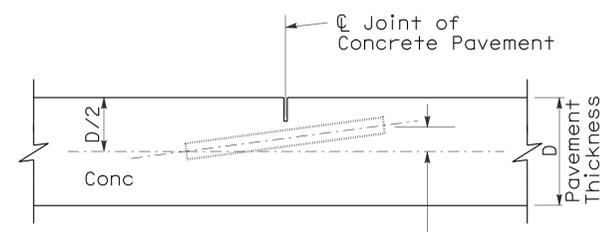


**HORIZONTAL SKEW TOLERANCE**



**ELEVATION**

**VERTICAL DEPTH TOLERANCE**



**ELEVATION**

**VERTICAL SKEW TOLERANCE**

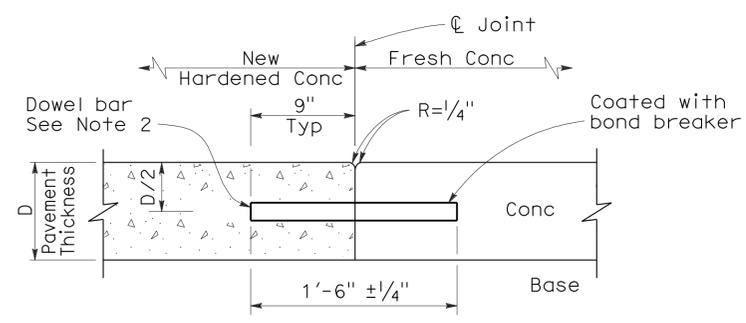
To accompany plans dated 6-20-11

**NOTES:**

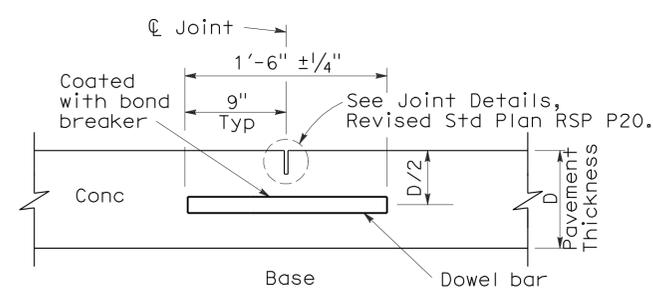
- See Revised Standard Plan RSP P1 for typical dowel bar placement and locations.
- 1 1/2" Dia smooth dowel bars are to be used with a pavement thickness, D, equal to or greater than 0.70 feet. For pavement thickness, D, less than 0.70 feet, use 1 1/4" Dia smooth dowel bars.
- For widths not shown, see Project Plans.
- If fresh concrete pavement is placed adjacent to existing concrete pavement, the top corner of the existing concrete pavement does not need to be rounded to the 1/4" radius, as shown.

**TABLE A (See Note 3)**

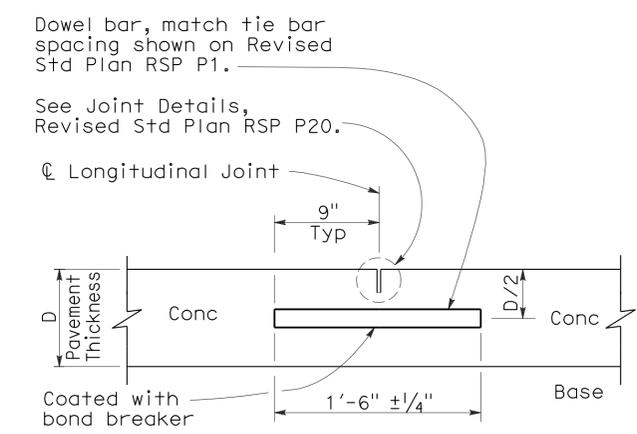
Dowel Bar Transverse Spacing Table	
Width between Longitudinal Joints	Number of Dowels between Longitudinal Joints
14'-0"	14
13'-0"	13
12'-0"	12
11'-0"	11
10'-0"	10
8'-0"	8
5'-0"	5
4'-0"	4



**SECTION A-A TRANSVERSE CONSTRUCTION JOINT DETAIL**

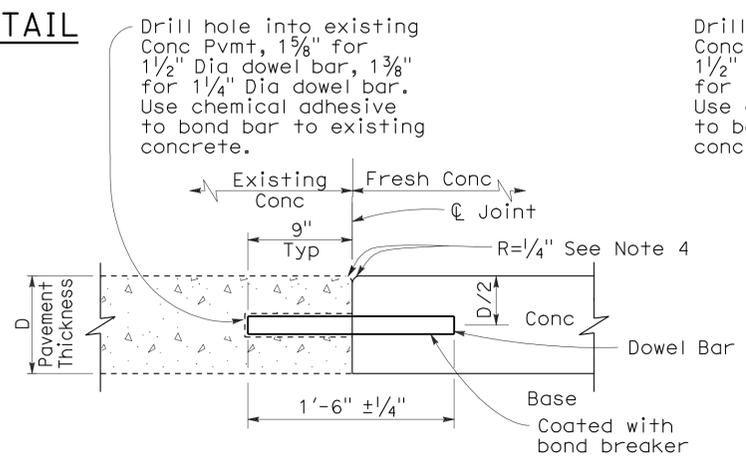


**TRANSVERSE CONTRACTION JOINT**



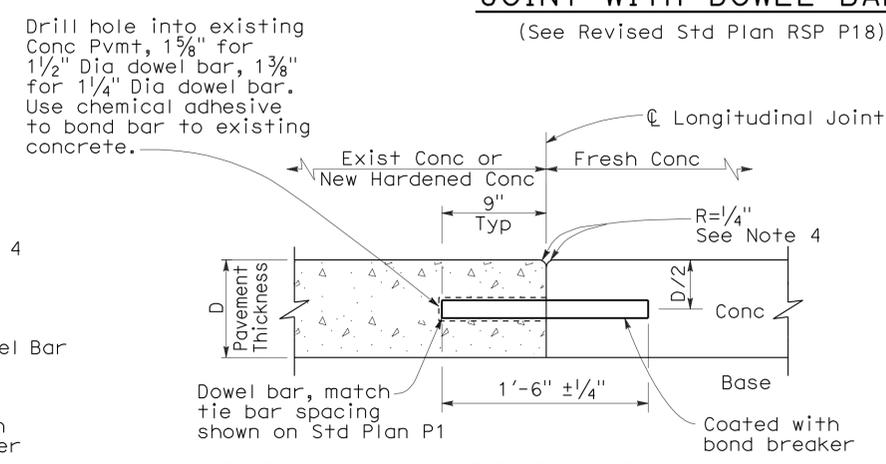
**LONGITUDINAL CONTRACTION JOINT WITH DOWEL BARS**

(See Revised Std Plan RSP P18)



**TRANSVERSE CONSTRUCTION JOINT FOR EXISTING CONCRETE PAVEMENT**

(Drill and bond locations)



**LONGITUDINAL CONSTRUCTION JOINT WITH DOWEL BARS**

(See Revised Std Plan RSP P18)

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

RSP P10 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P10 DATED MAY 1, 2006 - PAGE 124 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P10**

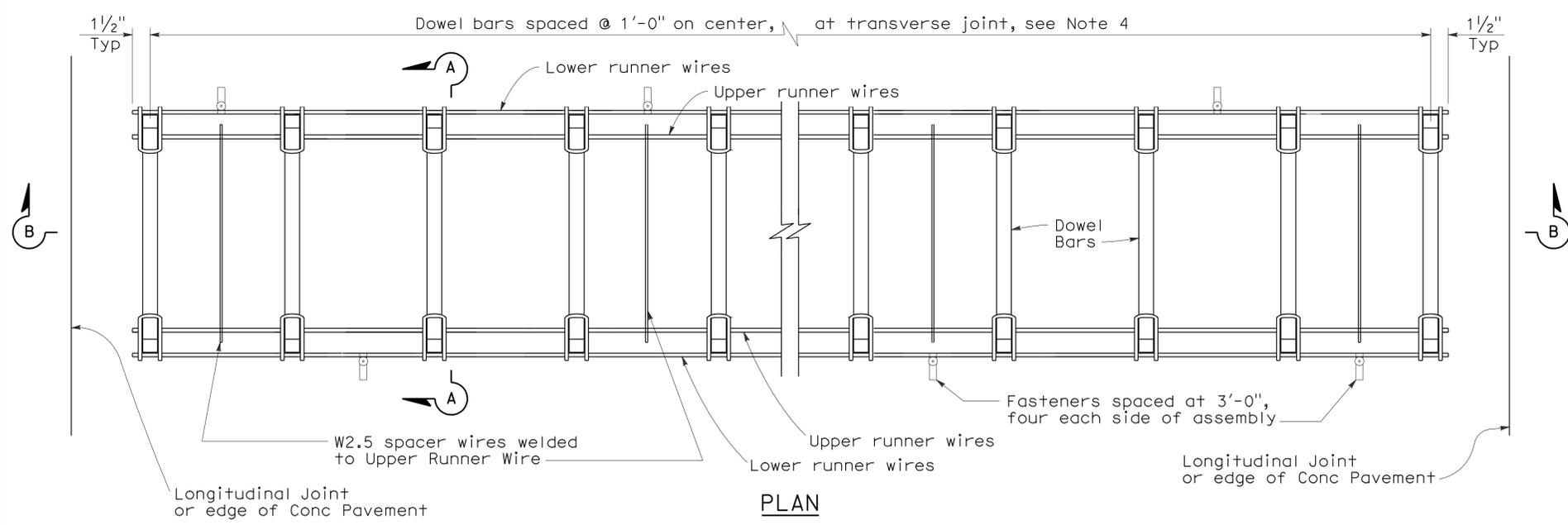
2006 REVISED STANDARD PLAN RSP P10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	514	757

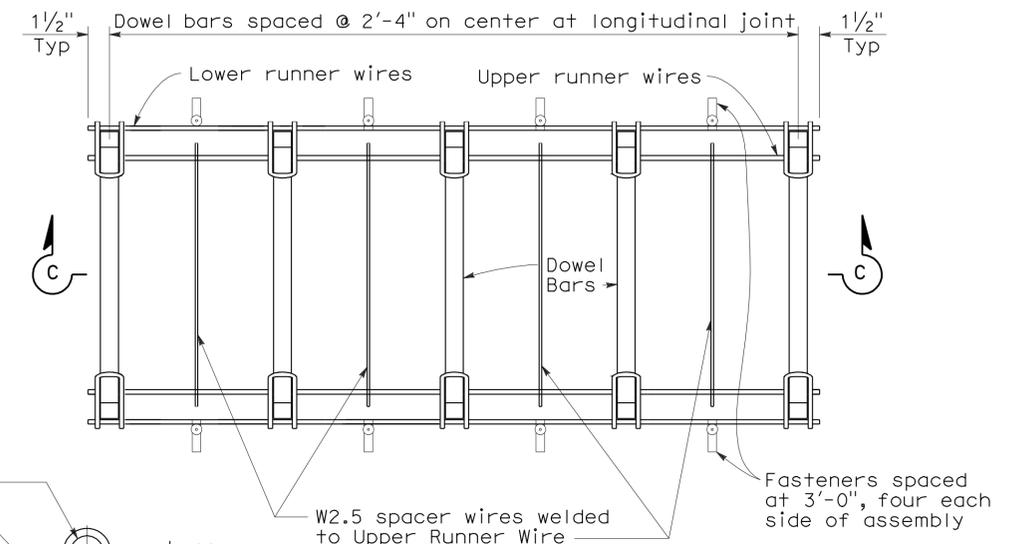
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 May 15, 2009  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. C49042  
 Exp. 9-30-10  
 CIVIL  
 STATE OF CALIFORNIA

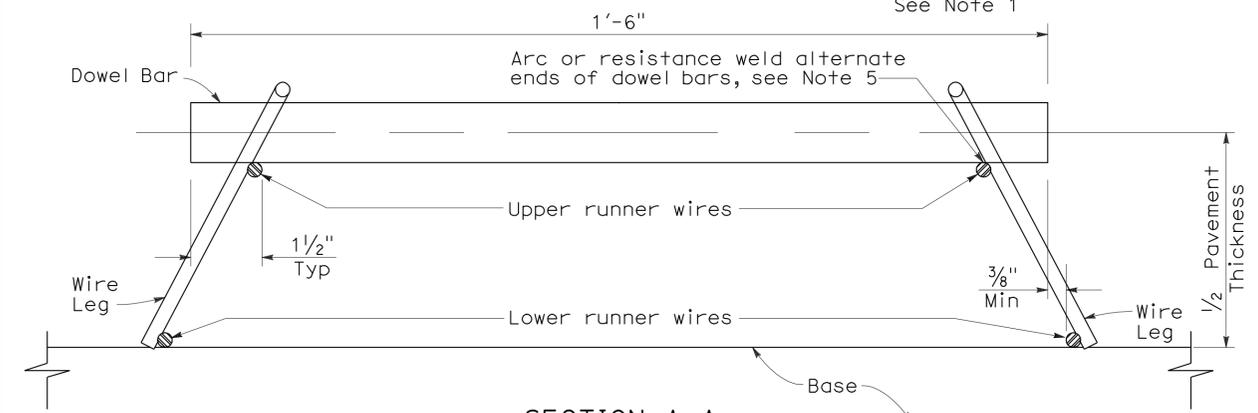
To accompany plans dated 6-20-11



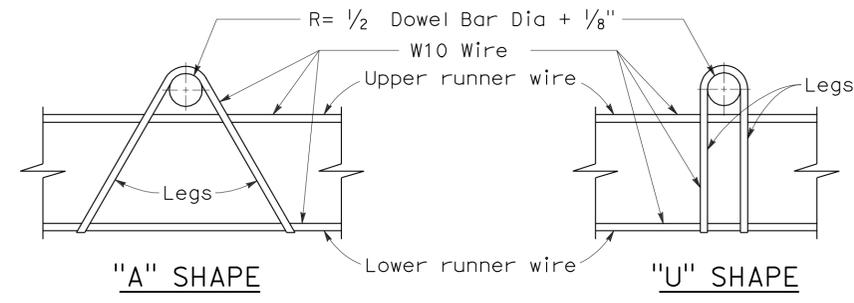
**PLAN  
DOWEL BAR BASKET  
(TRANSVERSE JOINT)**



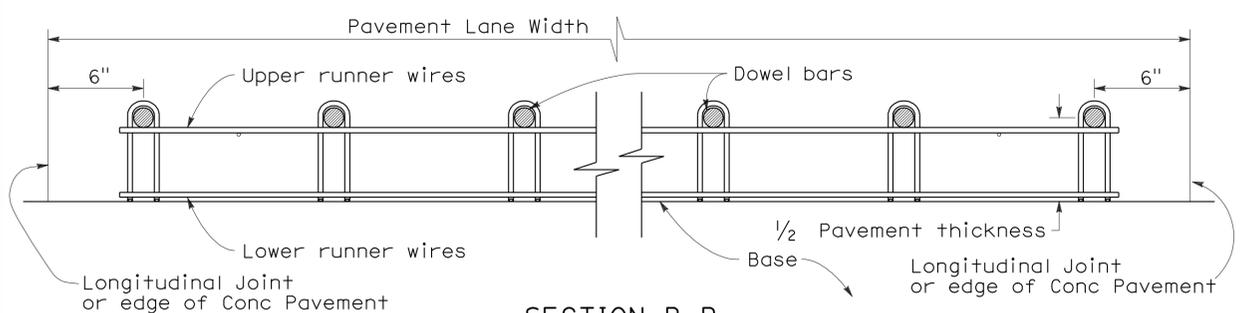
**PLAN  
DOWEL BAR BASKET  
(LONGITUDINAL JOINT)**



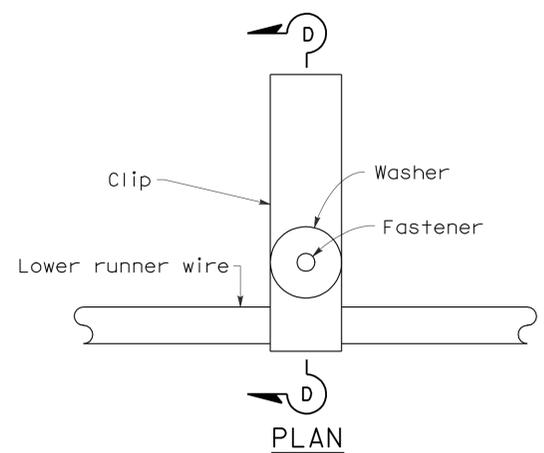
**SECTION A-A**



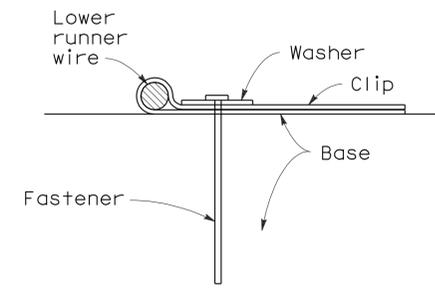
**ASSEMBLY FRAME DETAILS**



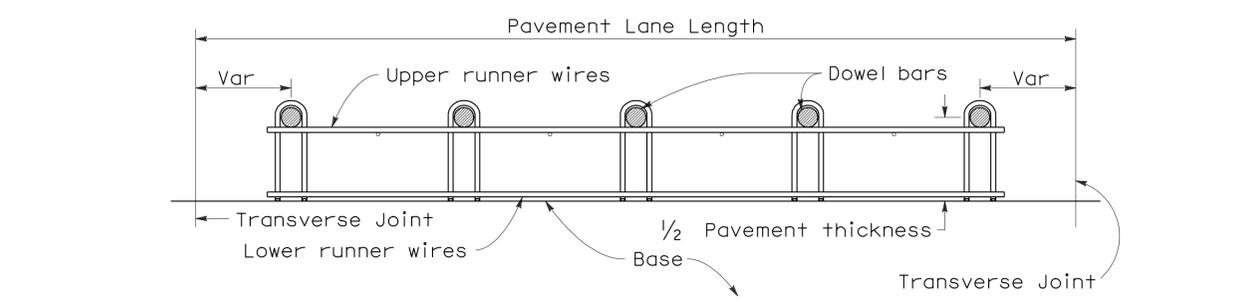
**SECTION B-B**



**FASTENER DETAIL**



**SECTION D-D**



**SECTION C-C**

**NOTES:**

- "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
- Wire sizes shown are minimum required.
- All wire intersections are to be resistance welded.
- Use tie bar spacing for longitudinal dowel bar locations. See Revised Std Plans RSPs P1, P2, and P3 for tie bar requirements.
- Weld may be at top or bottom of dowel bar.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CONCRETE PAVEMENT-  
DOWEL BAR BASKET  
DETAILS**

NO SCALE

RSP P12 DATED MAY 15, 2009 SUPERSEDES RSP P12 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P12 DATED MAY 1, 2006 - PAGE 125 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P12**

2006 REVISED STANDARD PLAN RSP P12

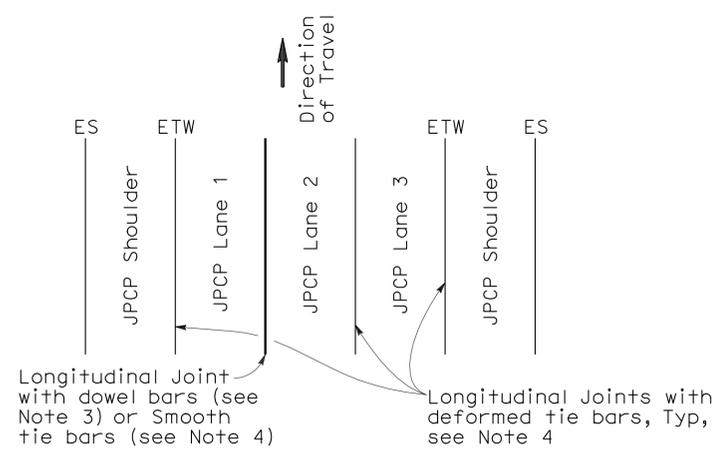
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	515	757

William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 June 5, 2009  
 PLANS APPROVAL DATE

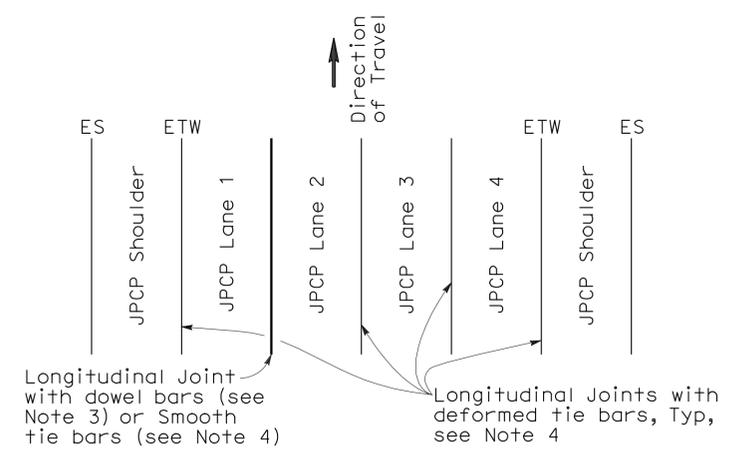
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REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. C49042  
 Exp. 9-30-10  
 CIVIL  
 STATE OF CALIFORNIA

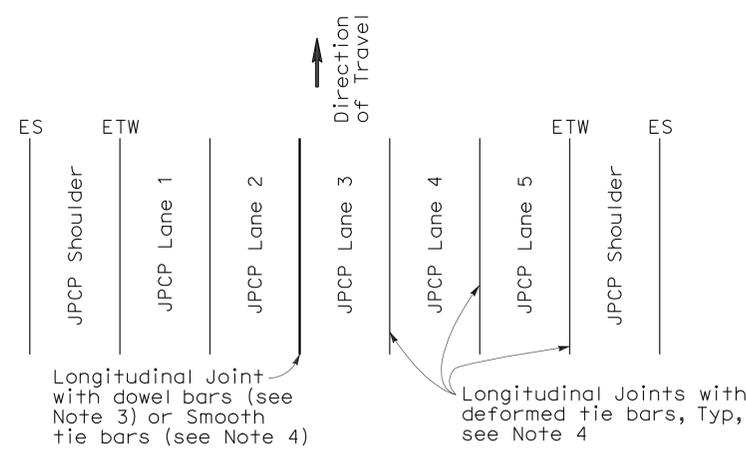
To accompany plans dated 6-20-11



**3 LANES WITH TIED CONCRETE SHOULDERS**  
**PLAN**



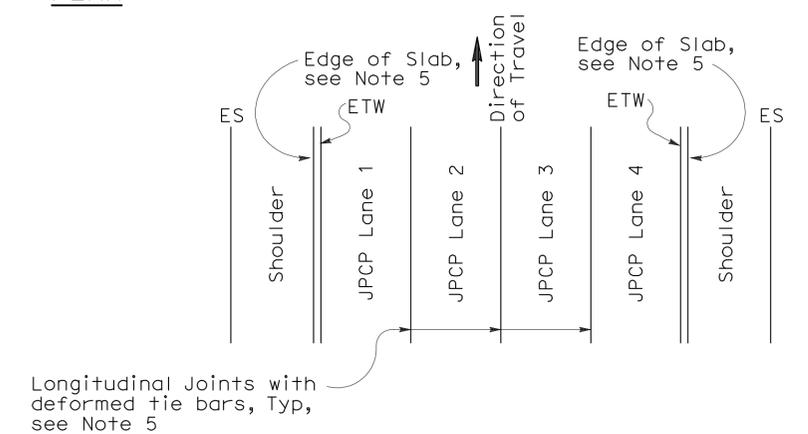
**4 LANES WITH TIED CONCRETE SHOULDERS**  
**PLAN**



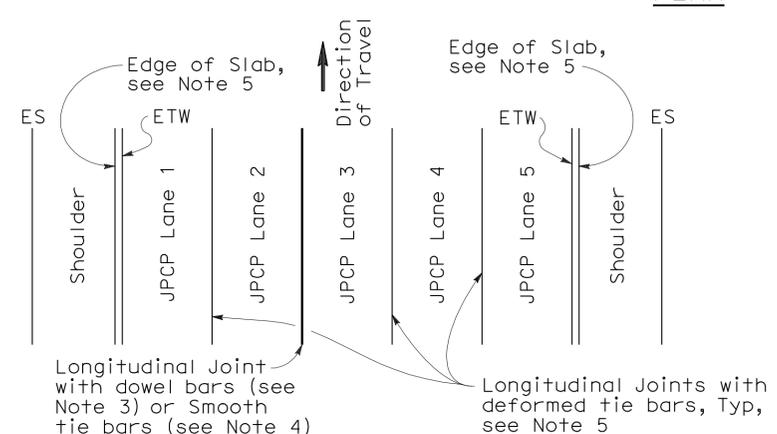
**5 LANES WITH TIED CONCRETE SHOULDERS**  
**PLAN**

**NOTES:**

- Where Lean Concrete Base is not used as base material, the joint filler material used for the longitudinal isolation joint shall only extend to the bottom of the new concrete slab. See Detail A.
- Use 5/8" ± 1/16" dimension for silicone sealant.
- See Revised Standard Plan RSP P10 for longitudinal joint with dowel bars.
- See Revised Standard Plan RSP P1.
- See Revised Standard Plan RSP P2.



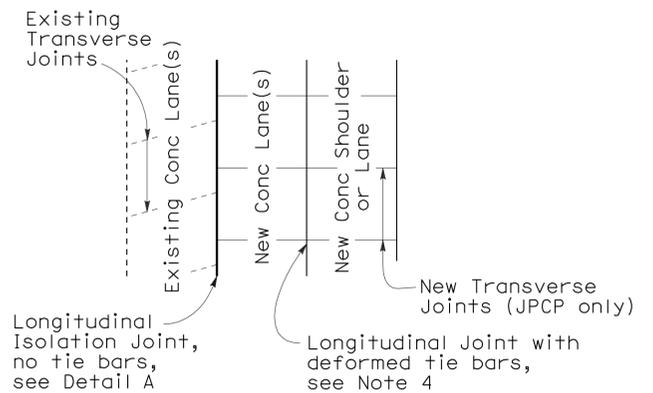
**4 LANES OR LESS WITH WIDENED SLAB**  
**PLAN**



**5 LANES WITH WIDENED SLAB**  
**PLAN**

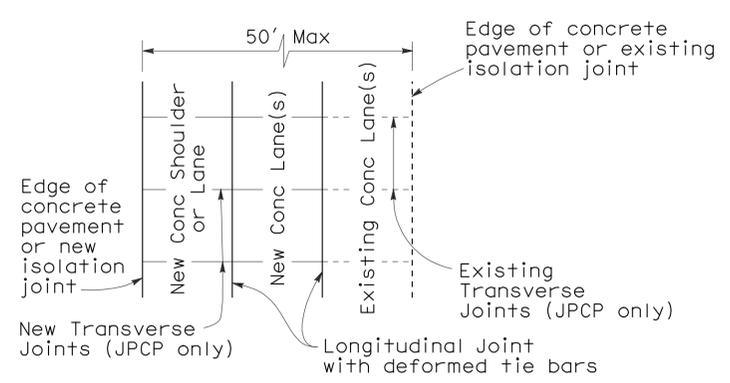
**NEW CONSTRUCTION**

Location of Longitudinal Joints (For JPCP)



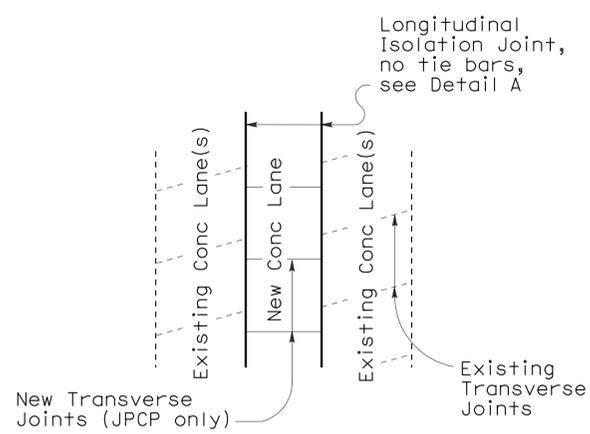
**CASE 1**  
**PLAN**

Transverse Joints do not align between new and existing



**CASE 2**  
**PLAN**

Transverse Joints align between new and existing

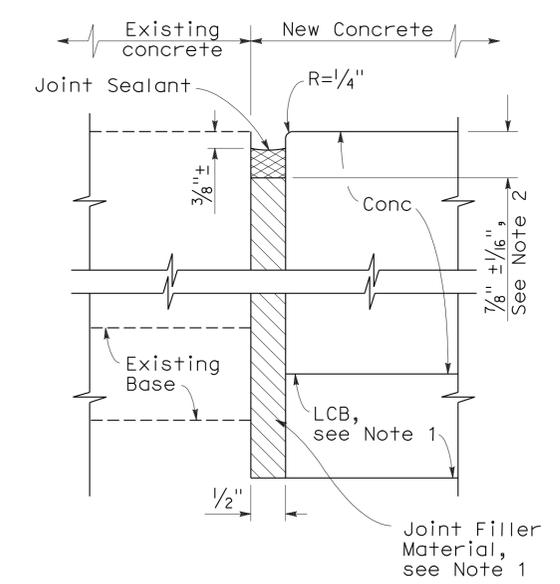


**CASE 3 (INTERIOR LANE REPLACEMENT)**  
**PLAN**

Transverse Joints do not align between new and existing

**LANE/SHOULDER ADDITION OR RECONSTRUCTION**

(For JPCP and CRCP)



**DETAIL A**  
**ISOLATION JOINT**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT-  
LANE SCHEMATICS  
AND ISOLATION JOINT DETAIL**

NO SCALE

RSP P18 DATED JUNE 5, 2009 SUPERSEDES RSP P18 DATED MAY 15, 2009, RSP P18 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P18 DATED MAY 1, 2006 - PAGE 127 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P18**

**2006 REVISED STANDARD PLAN RSP P18**

**NOTE:**

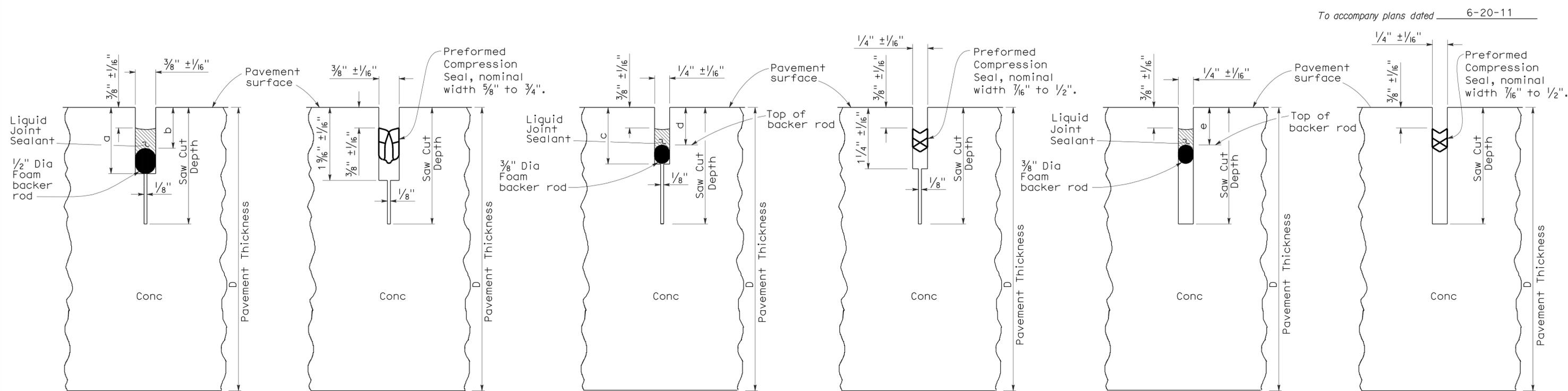
1. Tie bars, dowel bars, and reinforcement are not shown in joint seal details, see Revised Standard Plans RSP P1, RSP P3, RSP P10, RSP P35, RSP P45, or RSP P46 as applicable.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	516	757

William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 No. C49042  
 Exp. 9-30-10  
 STATE OF CALIFORNIA

May 15, 2009  
 PLANS APPROVAL DATE

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LIQUID SEALANT      COMPRESSION SEAL      LIQUID SEALANT      COMPRESSION SEAL      LIQUID SEALANT      COMPRESSION SEAL

**TYPE A1**      **TYPE A2**      **TYPE B**

Transverse Contraction Joints      Longitudinal Contraction Joints      Longitudinal or Transverse Contraction Joint

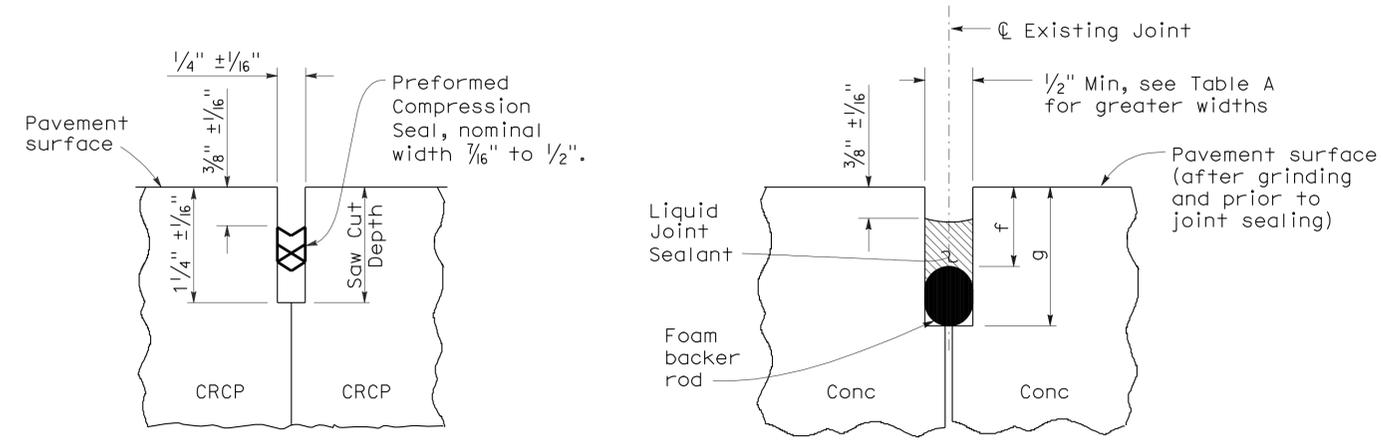
To accompany plans dated 6-20-11

**LIQUID SEALANT RESERVOIR DEPTH**

LIQUID SEALANT MATERIAL	3/8" Joint Width Type A1		1/4" Joint Width Type A2		1/4" Joint Width Type B
	DIMENSION		DIMENSION		DIMENSION
	a	b	c	d	e
SILICONE	1" ± 1/16"	5/8" ± 1/16"	15/16" ± 1/16"	9/16" ± 1/16"	9/16" ± 1/16"
ASPHALT RUBBER	1 3/16" ± 1/16"	3/4" ± 1/16"	1 1/16" ± 1/16"	11/16" ± 1/16"	11/16" ± 1/16"

**TABLE A (TYPE R JOINT)**

Sawn Joint Width	Backer Rod Diameter ± 1/16"	DIMENSION "f"	DIMENSION "g"
1"	1 5/16"	7/8"	2 1/4"
7/8"	1 3/16"	13/16"	2"
3/4"	1"	3/4"	1 3/4"
5/8"	7/8"	11/16"	1 1/2"
1/2"	11/16"	5/8"	1 1/4"



COMPRESSION SEAL      LIQUID SEALANT

**TYPE C**      **TYPE R**

Transverse and Longitudinal Construction Joints (For CRCP)      Retrofit Transverse and Longitudinal Joints

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT-JOINT DETAILS**  
 NO SCALE

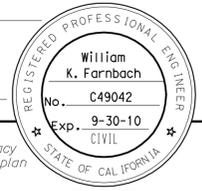
RSP P20 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P20 DATED MAY 1, 2006 - PAGE 128 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P20**

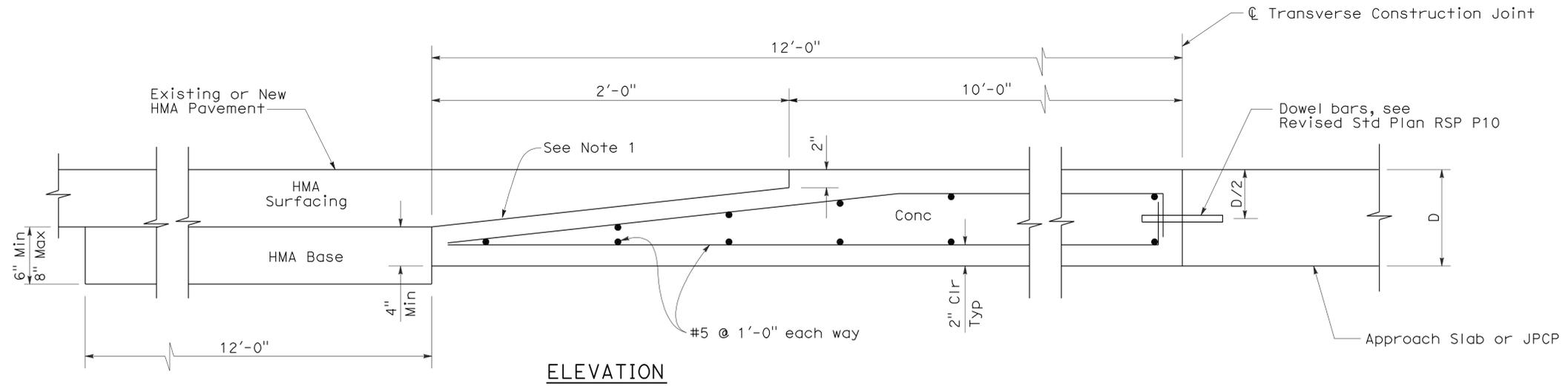
2006 REVISED STANDARD PLAN RSP P20

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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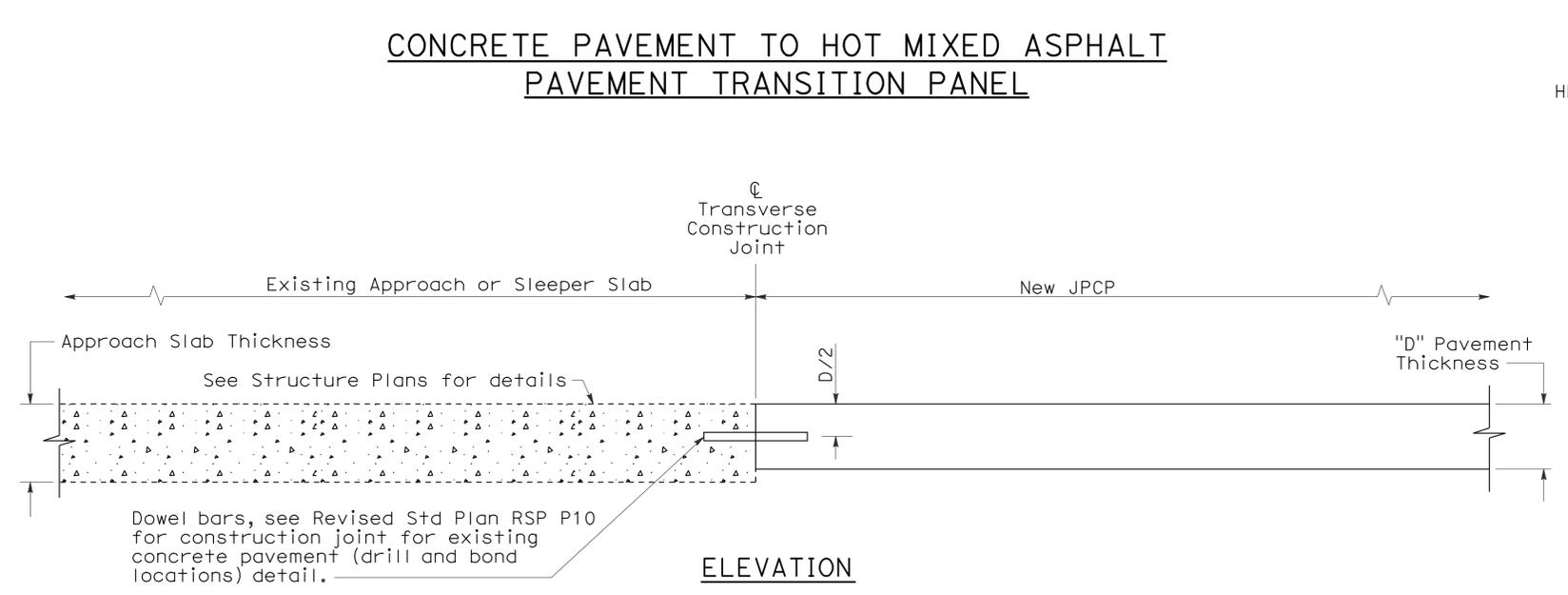
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 May 15, 2009  
 PLANS APPROVAL DATE  
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To accompany plans dated 6-20-11

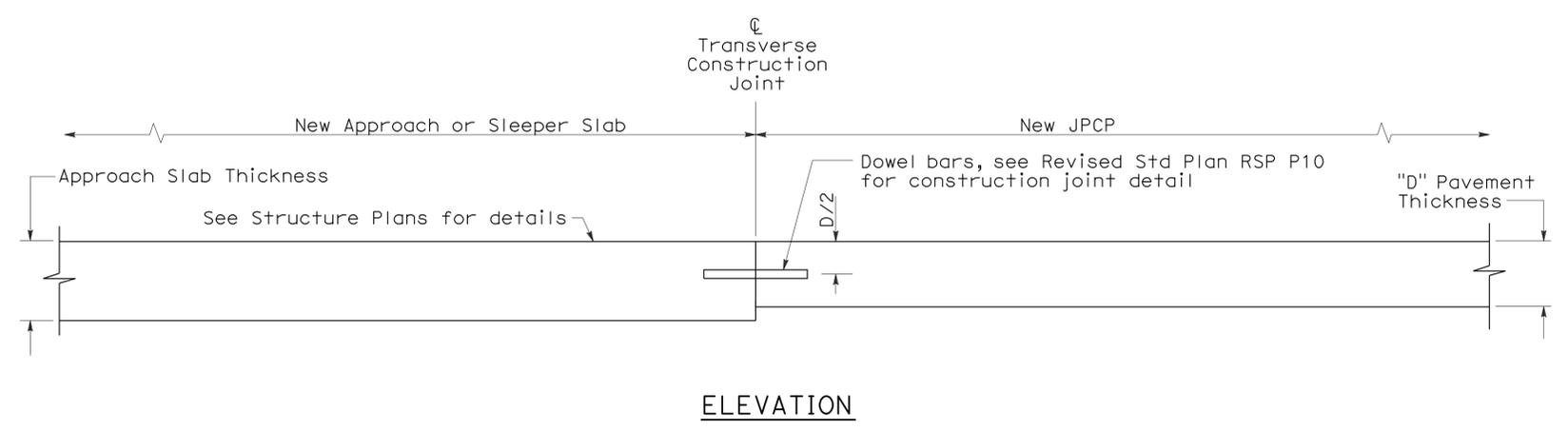


**CONCRETE PAVEMENT TO HOT MIXED ASPHALT PAVEMENT TRANSITION PANEL**



**ELEVATION PAVEMENT END ANCHOR**

**NOTE:**  
1. Heavy broom finish.



**CONCRETE PAVEMENT TRANSITION TO APPROACH OR SLEEPER SLAB**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**JOINTED PLAIN CONCRETE PAVEMENT-  
END PANEL  
PAVEMENT TRANSITIONS**  
NO SCALE

RSP P30 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P30  
DATED MAY 1, 2006 - PAGE 129 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P30**

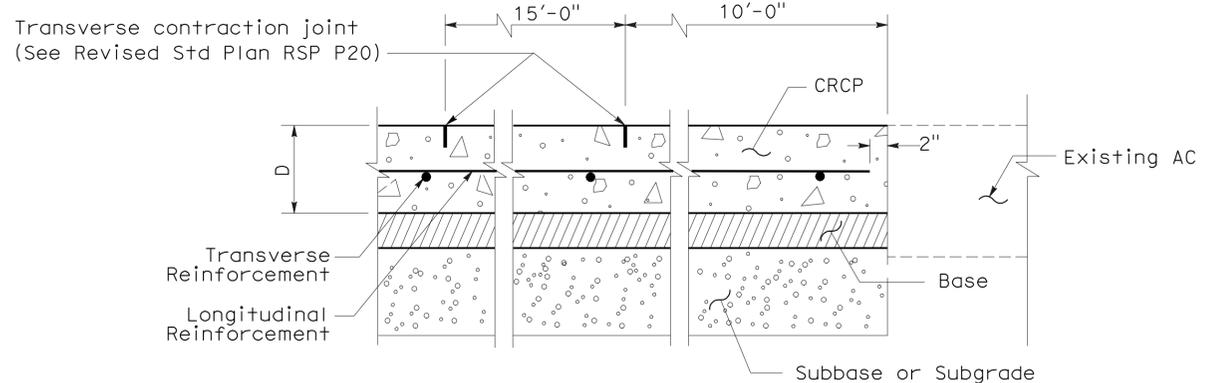
2006 REVISED STANDARD PLAN RSP P30

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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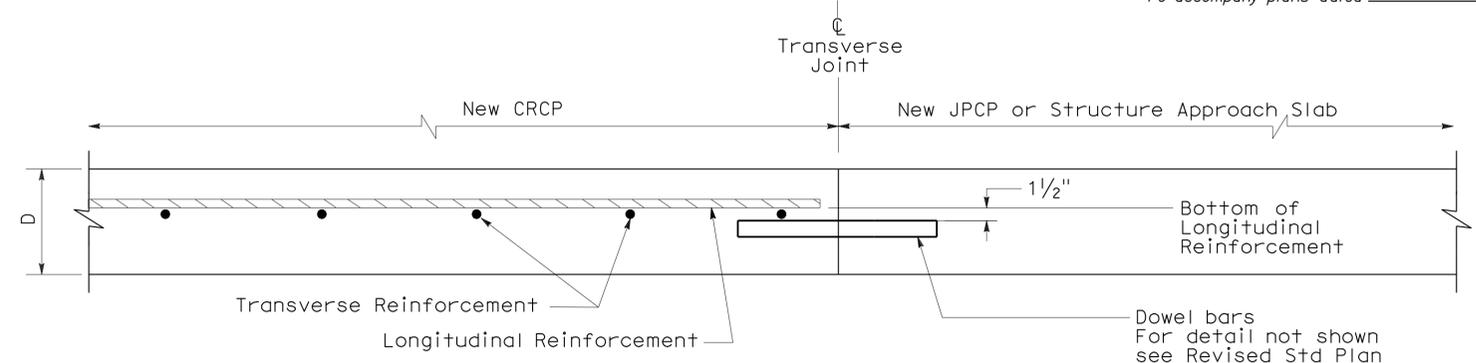
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 June 5, 2009  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. 49042  
 Exp. 09-30-10  
 STATE OF CALIFORNIA

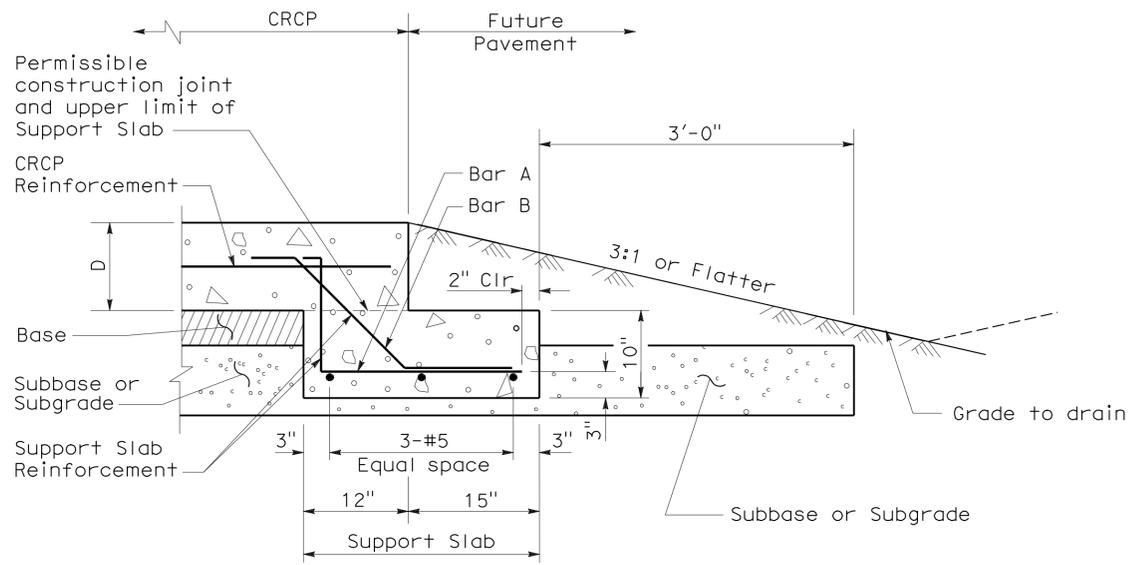
To accompany plans dated 6-20-11



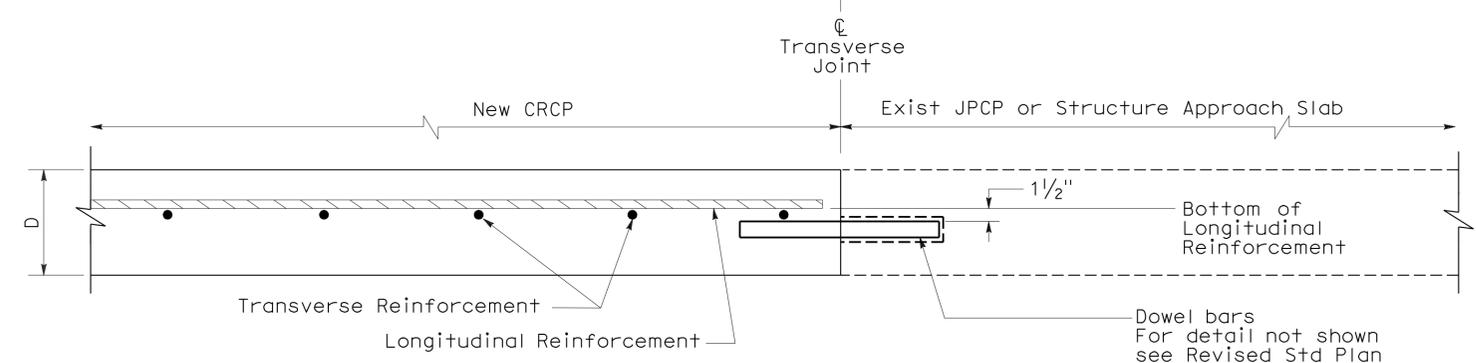
**TERMINAL JOINT TYPE A**  
(For Existing AC)



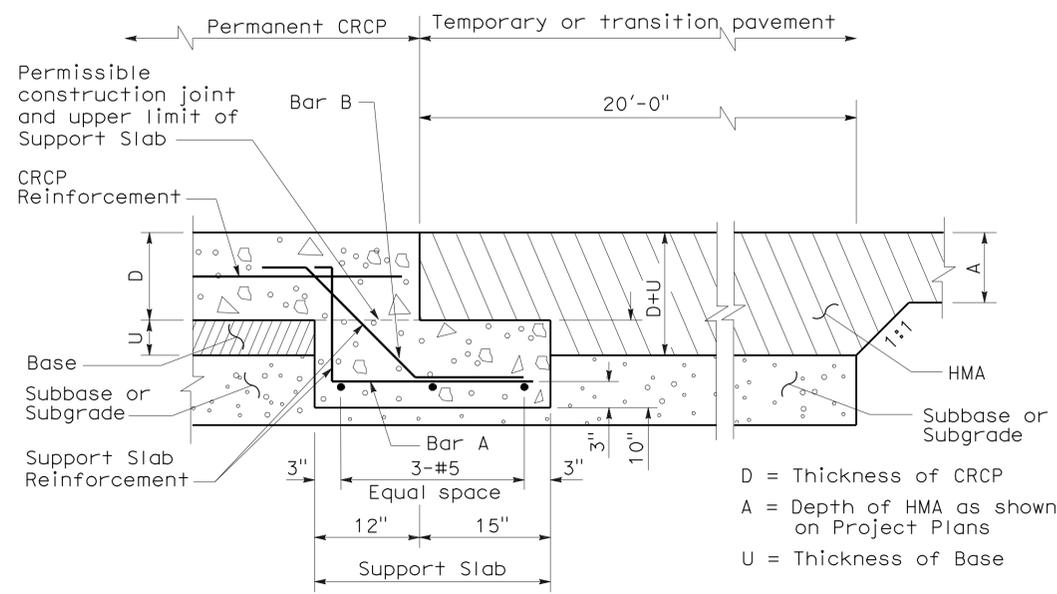
**TERMINAL JOINT TYPE E**  
(For New JPCP or Structure Approach Slabs)



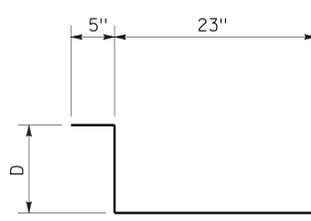
**TERMINAL JOINT TYPE B**  
(For Future Pavement)



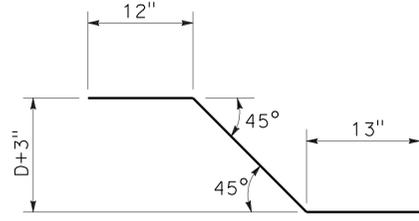
**TERMINAL JOINT TYPE D**  
(For Existing JPCP or Structure Approach Slabs)



**TERMINAL JOINT TYPE C**  
(For Temporary HMA Pavement)



**BAR "A" (#5)**  
AT 12" C-C



**BAR "B" (#5)**  
AT 12" C-C

D = Thickness of CRCP  
 A = Depth of HMA as shown on Project Plans  
 U = Thickness of Base

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CONTINUOUSLY REINFORCED CONCRETE PAVEMENT - TERMINAL JOINT DETAILS**  
 NO SCALE

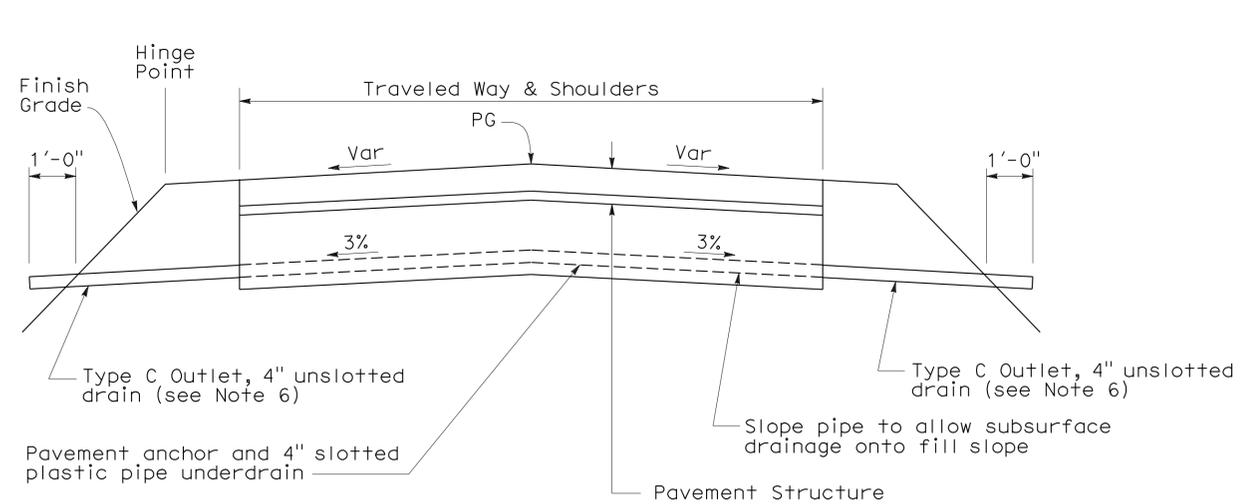
NSP P31A DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP P31A**

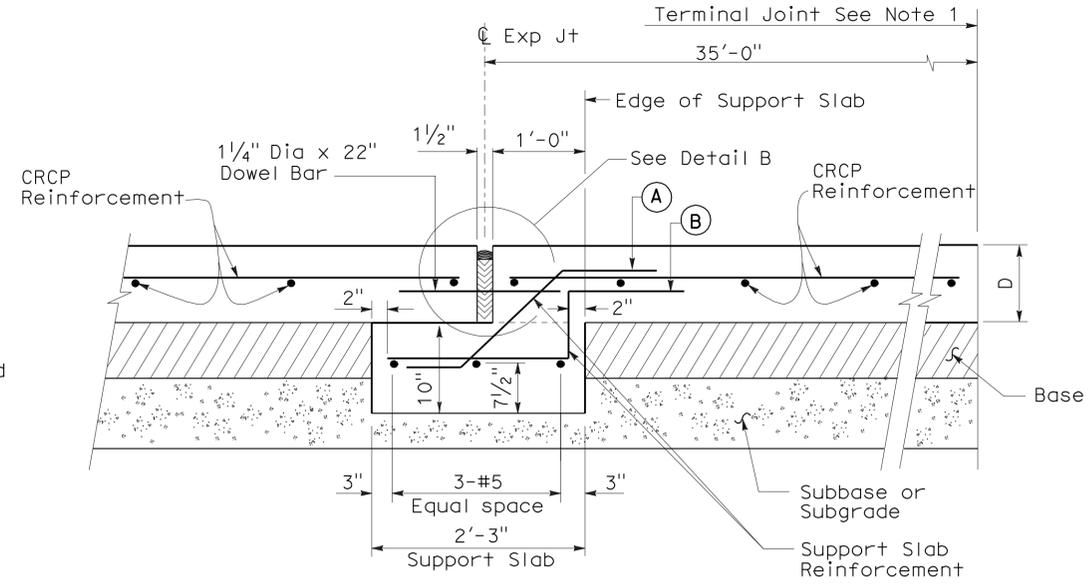
2006 NEW STANDARD PLAN NSP P31A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	519	757

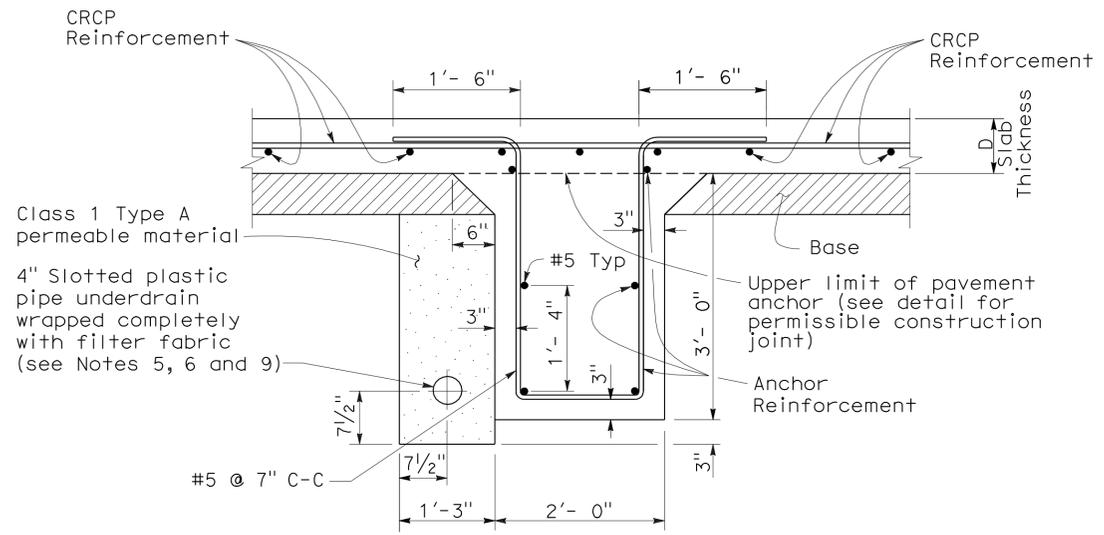
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 June 5, 2009  
 PLANS APPROVAL DATE  
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 REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. 49042  
 Exp. 09-30-10  
 STATE OF CALIFORNIA



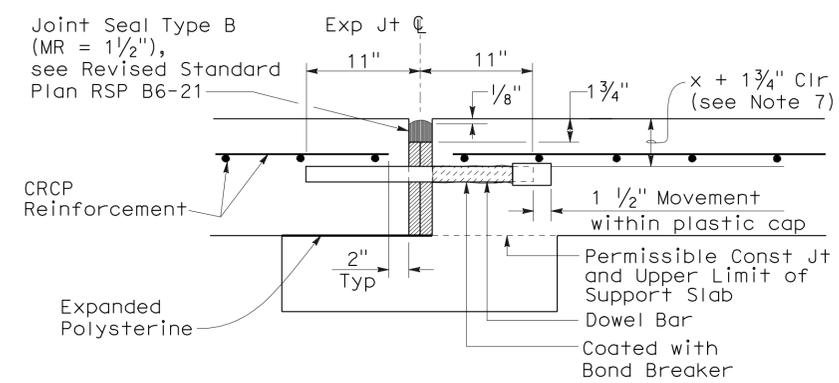
**PAVEMENT ANCHOR PROFILE**



**EXPANSION JOINT TYPE AN**

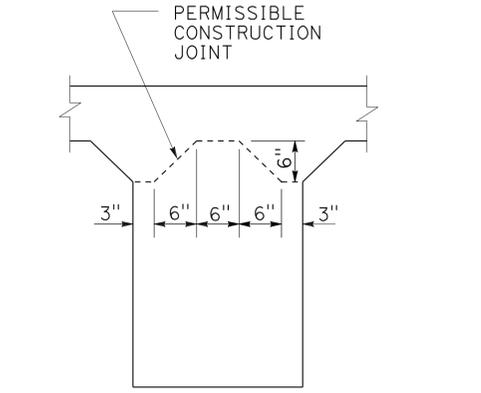


**PAVEMENT ANCHOR**

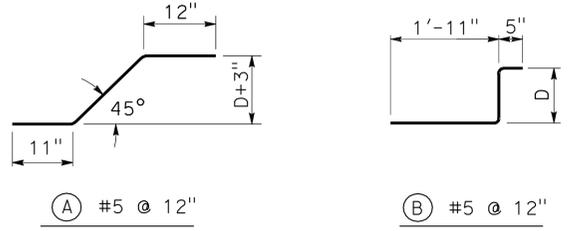


**DETAIL B**

(For layout, tolerances, and other details not shown, see Revised Standard Plan RSP P10.)



**PAVEMENT ANCHOR DETAIL SHOWING PERMISSIBLE CONSTRUCTION JOINT**



**REINFORCEMENT DETAIL**

**NOTES:**

- For the locations of the terminal joints, expansion joints and pavement anchors, see project plans.
- The CRCP shall continue across the pavement anchor and expansion joints as shown.
- Details of reinforcement, tie bars, and longitudinal joints (and if necessary, transverse construction joints) are shown on New Standard Plan NSP P4.
- Transverse construction joints are not allowed within 20'-0" of the pavement anchor.
- When placing pipe through concrete barrier, use 4" unslotted plastic pipe wrapped completely with 3/8" polystyrene.
- See Standard Plan D99B for details not shown.
- See New Standard Plan NSP P4 for "x".
- D = thickness of CRCP
- Place the 4" Slotted Plastic Pipe on the high side of the longitudinal grade.

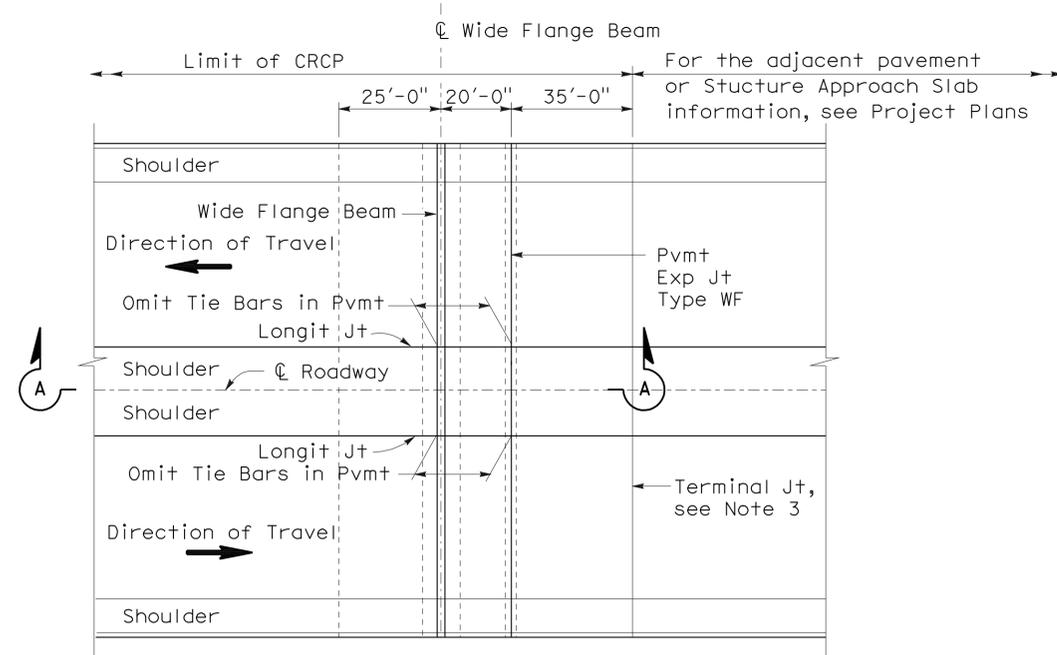
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CONTINUOUSLY REINFORCED CONCRETE PAVEMENT - EXPANSION JOINT AND ANCHOR DETAILS**

NO SCALE  
 NSP P31B DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP P31B**

2006 NEW STANDARD PLAN NSP P31B

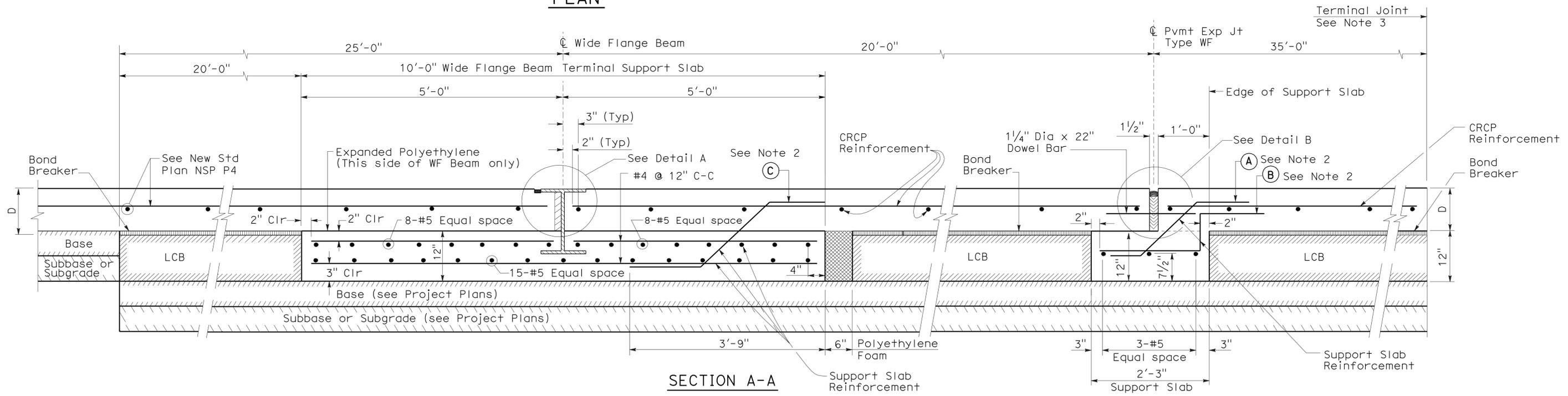
To accompany plans dated 6-20-11



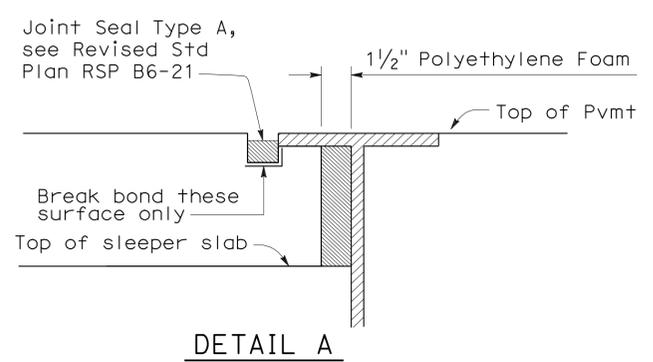
PLAN

NOTES:

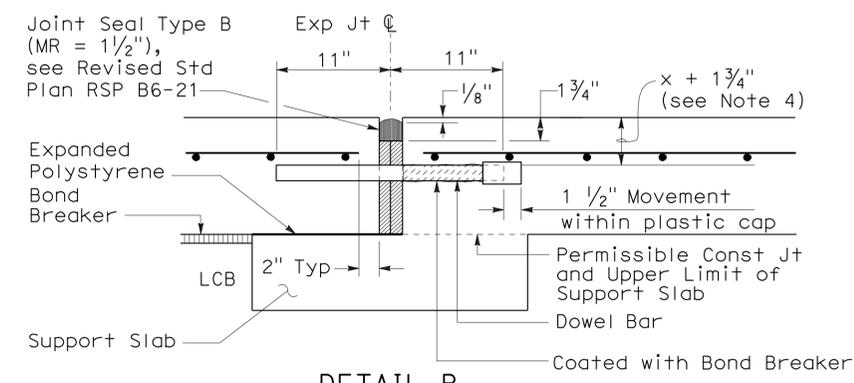
- For additional details on reinforcement member quantities of the wide flange beam terminal and Pavement Expansion Joint Type WF, see New Standard Plan NSP P32B.
  - For reinforcement (A), (B), and (C) Details, see New Standard Plan NSP P32B.
  - For the Pavement Terminal Joint Details, see New Standard Plan NSP P31A. For Pavement Terminal Joint Type, see Project Plans.
  - See New Standard Plan NSP P4 for "x".
- D = Thickness of CRCP



SECTION A-A



DETAIL A

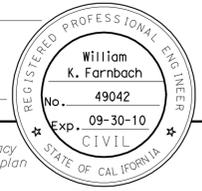


DETAIL B

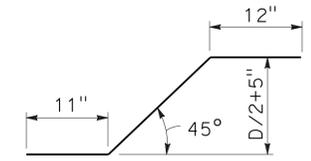
(For layout, tolerances, and other details not shown see Revised Std Plan RSP P10.)

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CONTINUOUSLY REINFORCED  
 CONCRETE PAVEMENT -  
 WIDE FLANGE BEAM TERMINALS**  
 NO SCALE  
 NSP P32A DATED JUNE 5, 2009 SUPPLEMENTS  
 THE STANDARD PLANS BOOK DATED MAY 2006  
**NEW STANDARD PLAN NSP P32A**

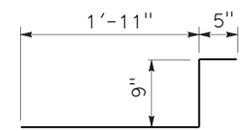
2006 NEW STANDARD PLAN NSP P32A



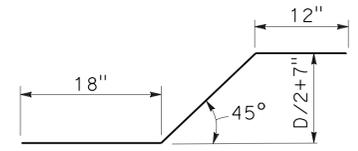
To accompany plans dated 6-20-11



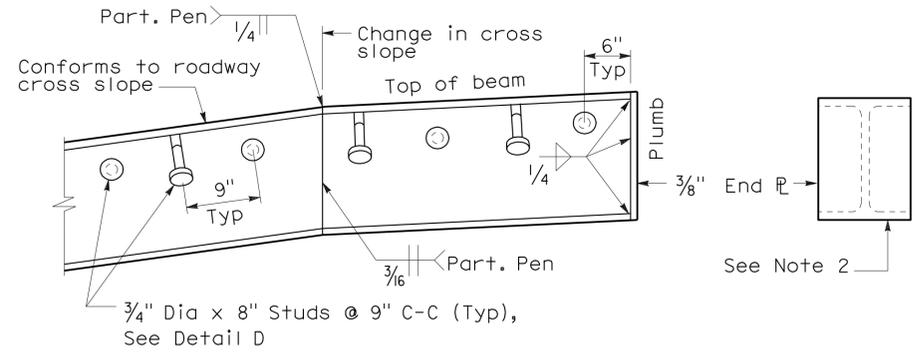
(A) #5 @ 12"



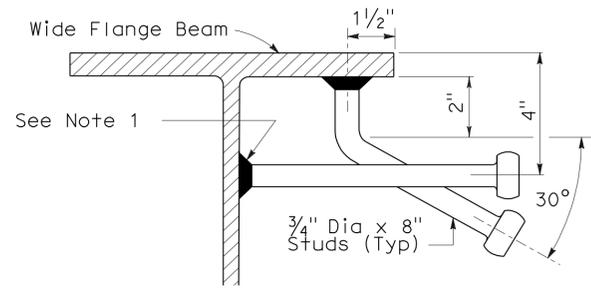
(B) #5 @ 12"



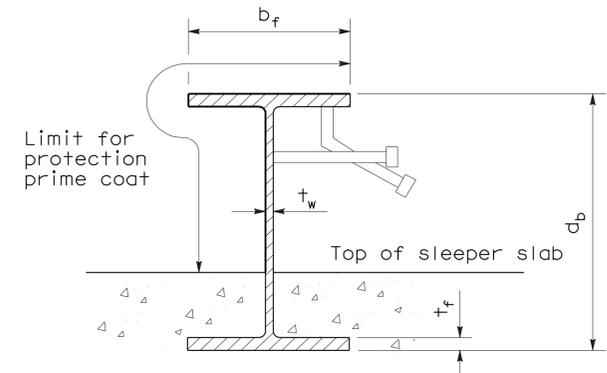
(C) #4 @ 12"



WIDE FLANGE DETAIL



DETAIL D



WIDE FLANGE PAINTING DETAIL

SEE "TABLE OF BEAM SIZES"

LEGEND:

- b<sub>f</sub> - flange width
- t<sub>f</sub> - flange thickness
- t<sub>w</sub> - web thickness
- d<sub>b</sub> - beam depth

NOTES:

- Studs shall be electric arc end welded with complete fusion. Any stud which is dislodged in shipping or can be dislodged by hammer shall be replaced.
- Weld 3/8" Plate to each end of wide flange beam at pavement edges only. End plate covers entire wide flange beam.

CONCRETE AND STEEL QUANTITIES

ITEM	PAVEMENT THICKNESS						
	.80'	.85'	.90'	.95'	1.00'	1.05'	1.10'
Wide Flange Beam	Concrete	4.81CY	4.81CY	4.81CY	4.81CY	4.81CY	4.81CY
Terminal Slab	Reinforcing Steel	552.2 LBS	552.4 LBS	552.6 LBS	552.8 LBS	553.0 LBS	553.3 LBS
Exp Joint Type	Concrete	1.1 CY					
WF Support Slab	Reinforcing Steel	99.9 LBS	100.2 LBS	100.5 LBS	100.8 LBS	101.1 LBS	101.6 LBS
Steel Beam (Weight of Wide Flange Beam and Studs)		69.51 LBS/LF +2 PLATES @ 14.87 LBS EA	90.51 LBS/LF +2 PLATES @ 18.46 LBS EA	90.51 LBS/LF +2 PLATES @ 18.46 LBS EA	98.51 LBS/LF +2 PLATES @ 22.01 LBS EA	98.51 LBS/LF +2 PLATES @ 22.01 LBS EA	98.51 LBS/LF +2 PLATES @ 22.01 LBS EA

TABLE OF BEAM SIZES

PAVEMENT THICKNESS	WIDE FLANGE BEAM DESIGNATION	d <sub>b</sub>	b <sub>f</sub>	t <sub>f</sub>	t <sub>w</sub>
.80'	W14 X 68	14.04"	10.04"	0.72"	0.42"
.85'	W16 X 89	16.75"	10.37"	0.88"	0.53"
.90'	W16 X 89	16.75"	10.37"	0.88"	0.53"
.95'	W18 X 97	18.59"	11.15"	0.87"	0.54"
1.00'	W18 X 97	18.59"	11.15"	0.87"	0.54"
1.05'	W18 X 97	18.59"	11.15"	0.87"	0.54"
1.10'	W18 X 97	18.59"	11.15"	0.87"	0.54"

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

CONTINUOUSLY REINFORCED  
CONCRETE PAVEMENT -  
WIDE FLANGE BEAM TERMINALS

NO SCALE

NSP P32B DATED JUNE 5, 2009 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006

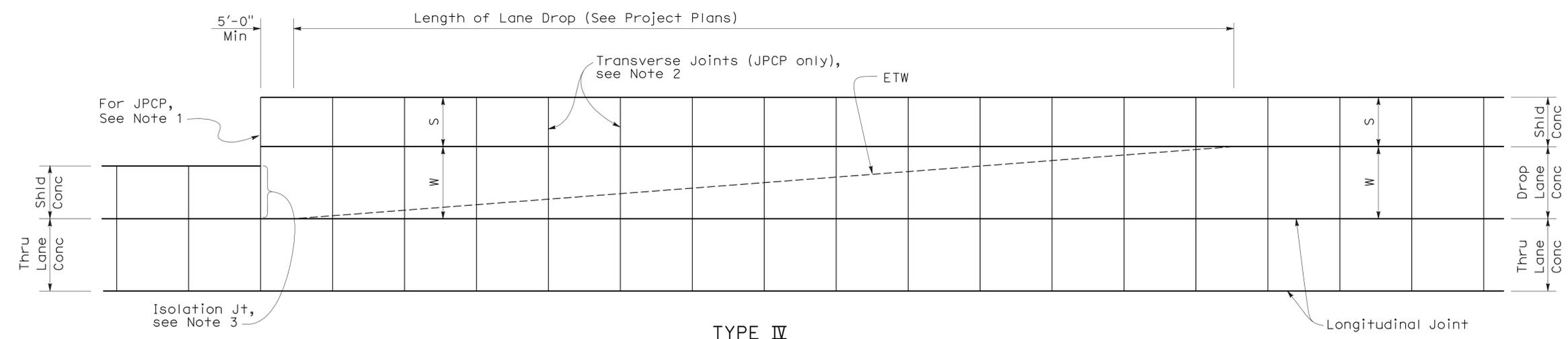
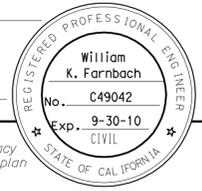
2006 NEW STANDARD PLAN NSP P32B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	522	757

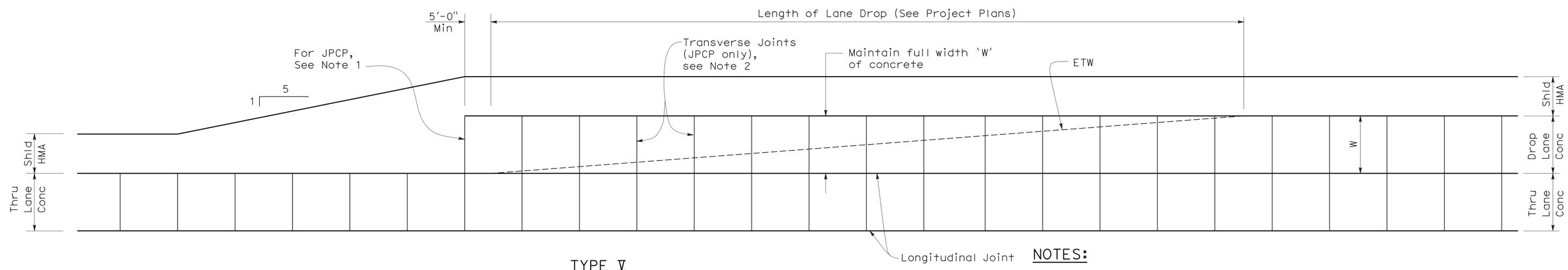
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 May 15, 2009  
 PLANS APPROVAL DATE

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To accompany plans dated 6-20-11

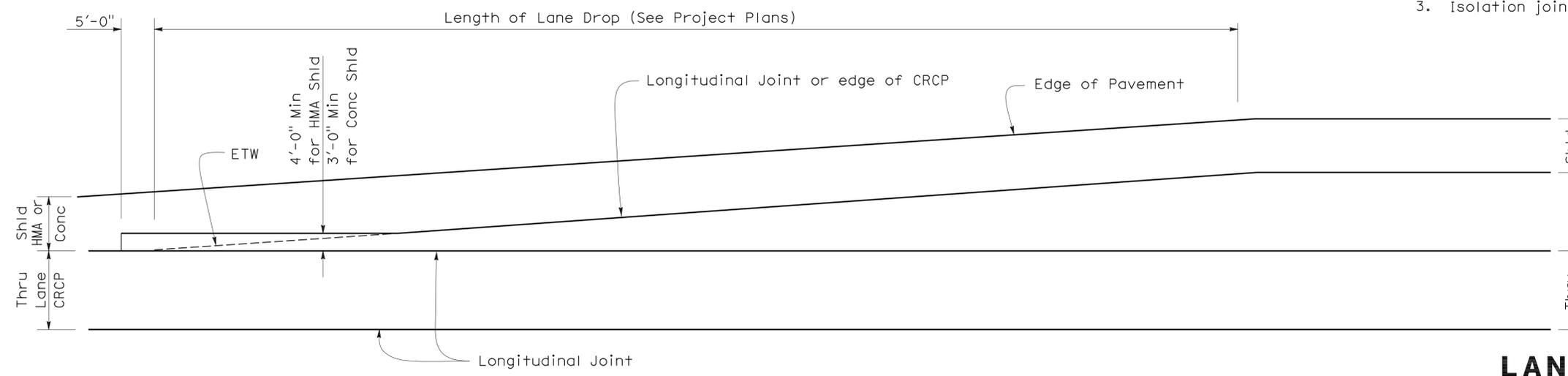


**TYPE IV**  
**JOINED PLAIN AND CONTINUOUSLY REINFORCED CONCRETE PAVEMENT**  
 (See Revised Std Plans RSP P1, RSP P2, or New Std Plan NSP P4 for details not shown)



**TYPE V**  
**JOINED PLAIN AND CONTINUOUSLY REINFORCED CONCRETE PAVEMENT**  
 (See Revised Std Plans RSP P1, RSP P2, or New Std Plan NSP P4 for details not shown)

- NOTES:**
1. Location of transverse joint to match transverse joint of adjacent lane.
  2. Place transverse joint of lane and shoulder perpendicular to longitudinal joint of through lane.
  3. Isolation joint detail shown on Revised Standard Plan RSP P18.



**TYPE VI**  
**CONTINUOUSLY REINFORCED CONCRETE PAVEMENT**  
 (See New Std Plan NSP P4 for details not shown)

**LEGEND**  
 S - Shoulder width  
 W - Lane width

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT -  
 LANE DROP PAVING DETAILS No. 2**  
 NO SCALE  
 NSP P34 DATED MAY 15, 2009 SUPPLEMENTS THE  
 STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP P34**

**2006 NEW STANDARD PLAN NSP P34**

**NOTES:**

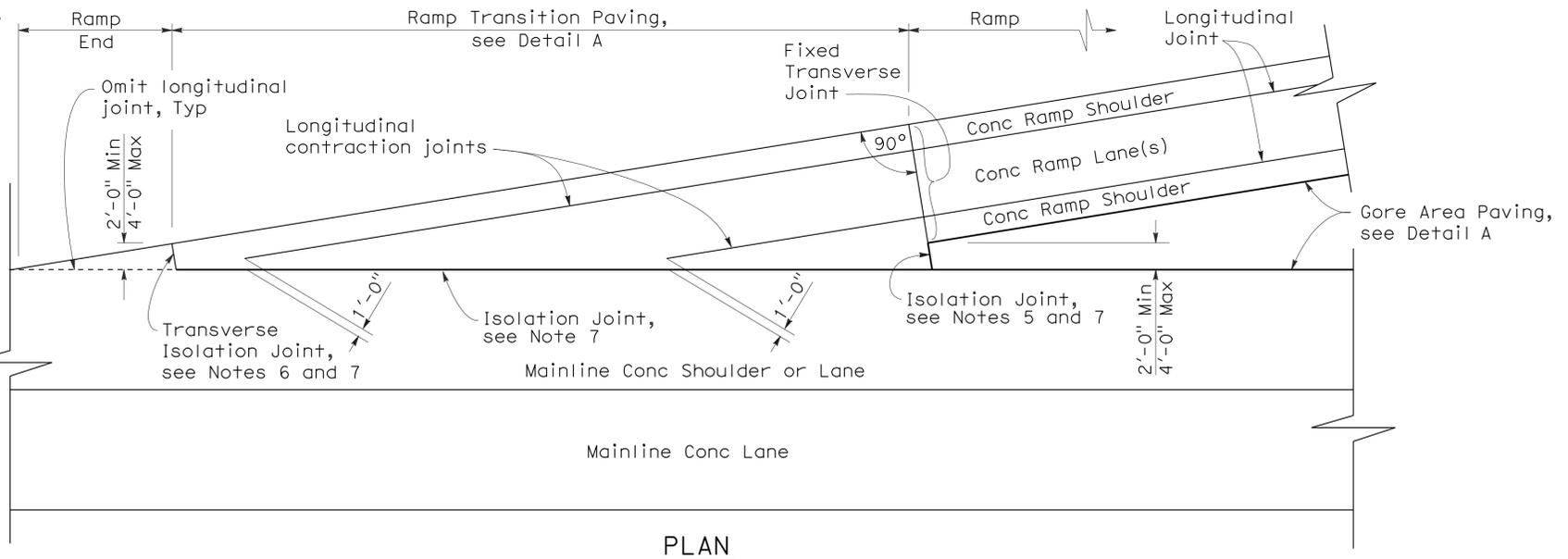
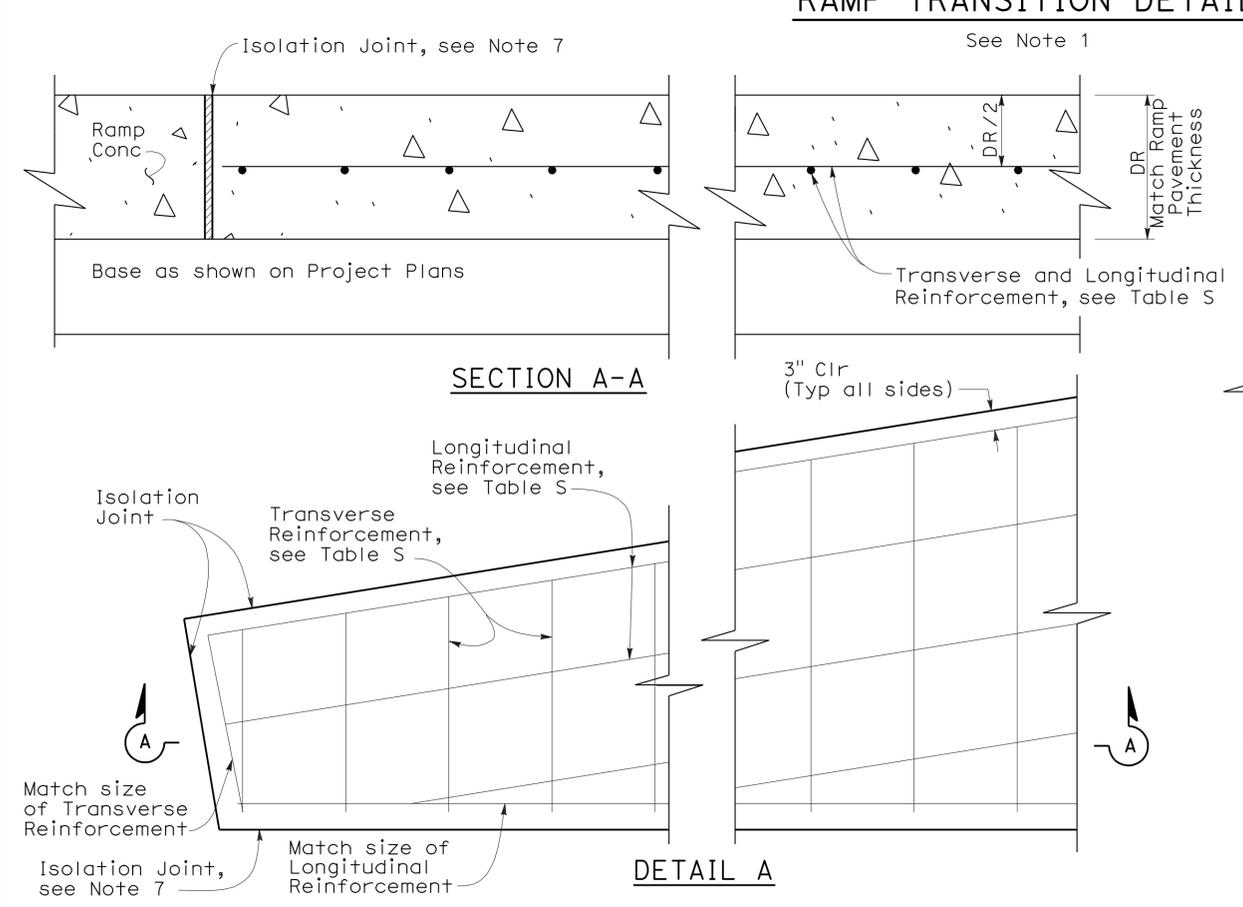
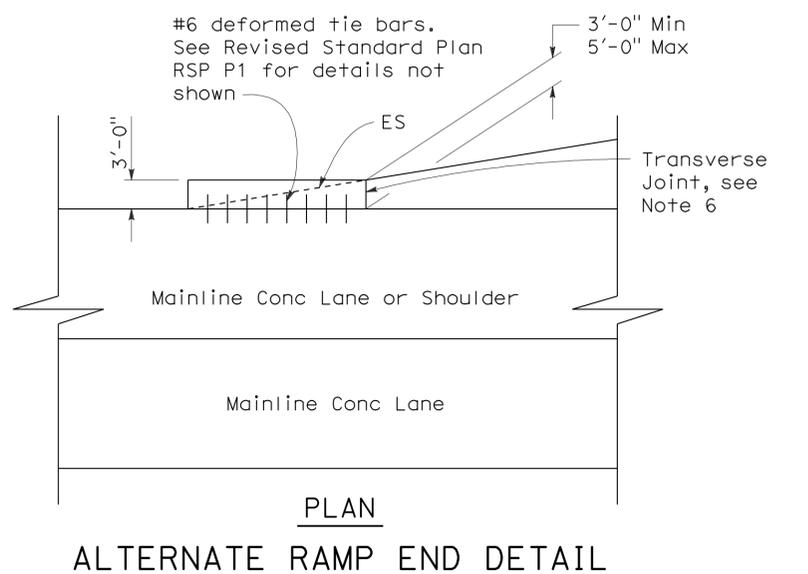
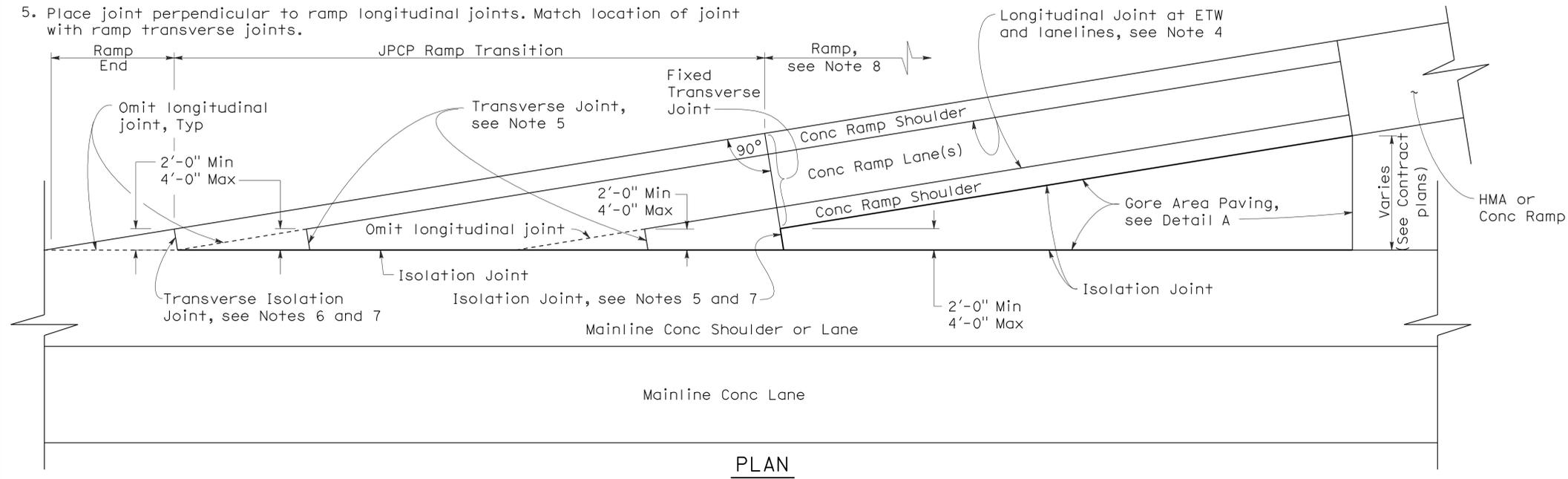
1. Details for gore area paving are applicable to both exit and entrance ramps.
2. Transverse Joint Layouts are not shown. Refer to Revised Standard Plan RSP P1 or Project Plans for details regarding joint layouts, tie bars, and dowel bars not shown.
3. WWF 4 x 4 - W4.0 x W4.0 can be used in place of steel reinforcement for gore area paving only.
4. Omit longitudinal joint when concrete on ramp shoulder is less than 3'-0".
5. Place joint perpendicular to ramp longitudinal joints. Match location of joint with ramp transverse joints.
6. Place joint perpendicular to ramp longitudinal joints. Match location of joint with mainline transverse joints.
7. Isolation joint detail shown on Revised Standard Plan RSP P18.
8. For jointed plain concrete pavement, transverse joints to be spaced from fixed transverse joint and shall follow spacing pattern on Revised Standard Plan RSP P1. Minimum spacing shall be 6 feet.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	523	757

*William K. Farnbach*  
 REGISTERED CIVIL ENGINEER  
 No. C49042  
 Exp. 9-30-10  
 CIVIL  
 STATE OF CALIFORNIA

May 15, 2009  
 PLANS APPROVAL DATE

To accompany plans dated 6-20-11



**TABLE S**  
(For JPCP and CRCP)

Location	Transverse Reinf	Longitudinal Reinf
Gore Area Paving	#4 @ 1'-0" *	#4 @ 1'-0" *
Ramp Transition (JPCP)	#6 @ 1'-6"	#6 @ 9"
Ramp Transition (CRCP)	See NSP P4, Table No. 2	See NSP P4, Table No. 1

\* See Note 3

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CONCRETE PAVEMENT-  
RAMP TRANSITION  
PAVING DETAILS**

NO SCALE

RSP P35 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P35  
DATED MAY 1, 2006 - PAGE 131 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P35**

2006 REVISED STANDARD PLAN RSP P35

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	524	757

William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 No. C49042  
 Exp. 9-30-10  
 STATE OF CALIFORNIA

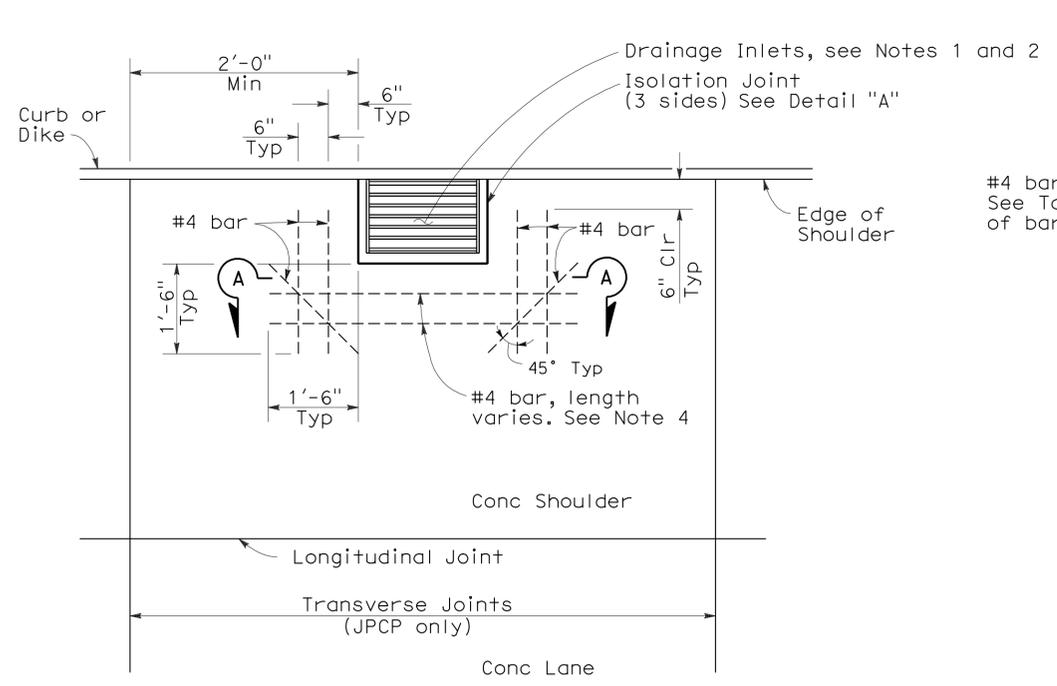
May 15, 2009  
 PLANS APPROVAL DATE

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To accompany plans dated 6-20-11

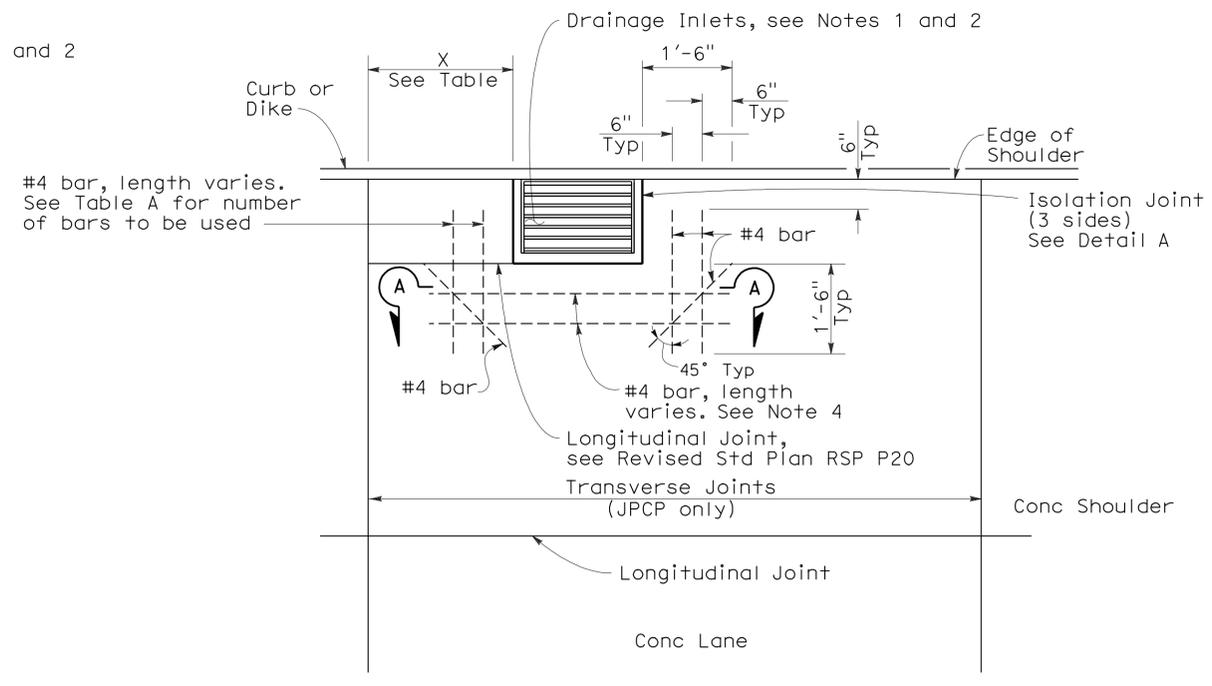
**NOTES:**

- Refer to Project Plans for location and Type of drainage inlets.
- Top of inlet shall be flush with shoulder surface.
- Extend joint filler material to bottom of Lean Concrete Base. Where Lean Concrete Base is not used as base material, the joint filler material shall only extend to the bottom of the new concrete pavement.
- For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, terminate pavement steel reinforcement 2" clear from all outside edges of isolation joint.
- For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, see New Standard Plan NSP P4.
- Dowel and tie bars not shown, see Revised Standard Plan RSP P1.



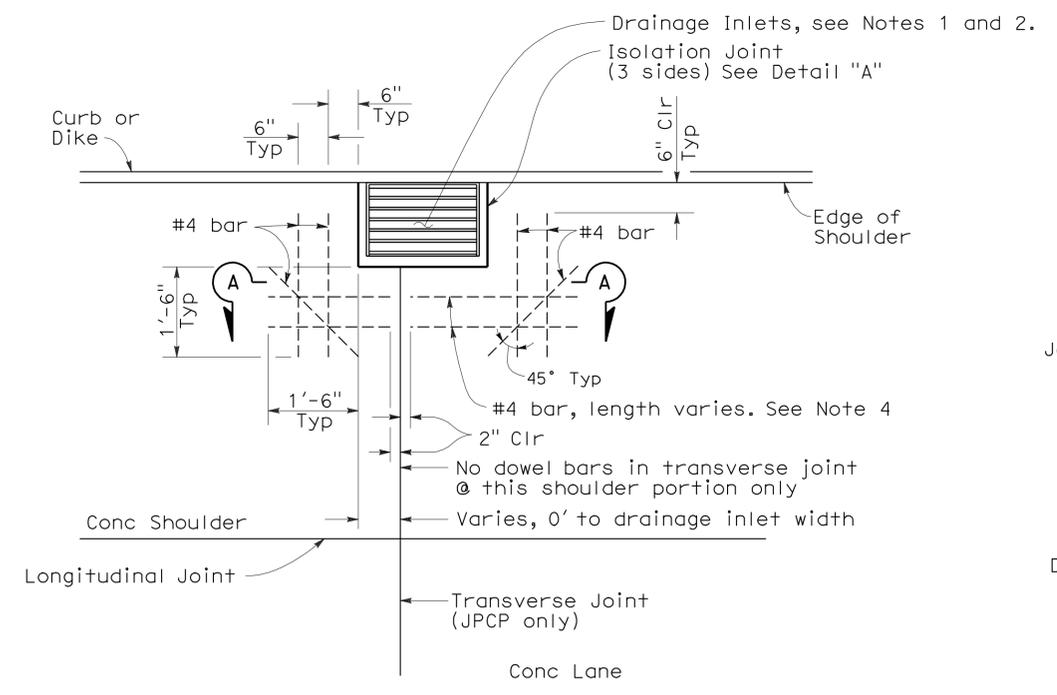
**CASE 1**

Transverse joint more than 2'-0" clear of drainage inlet wall or no transverse joint



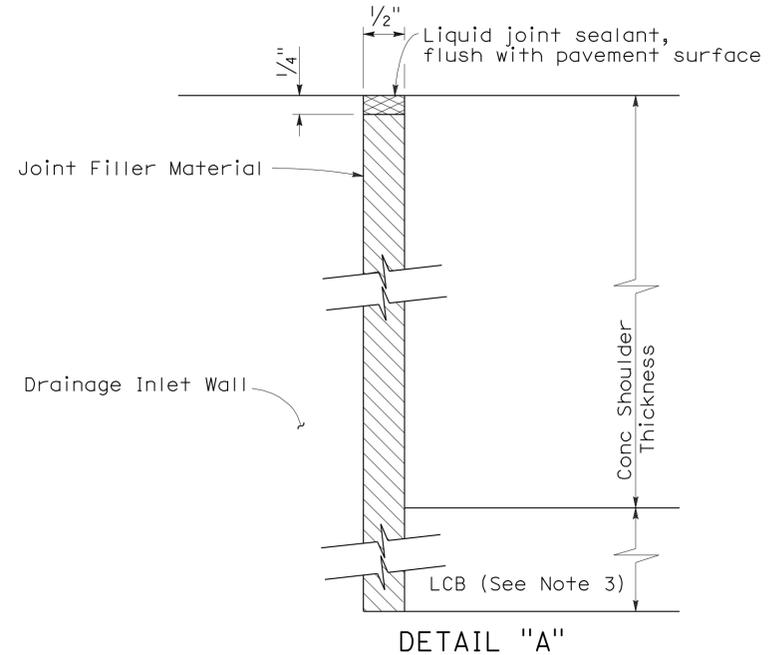
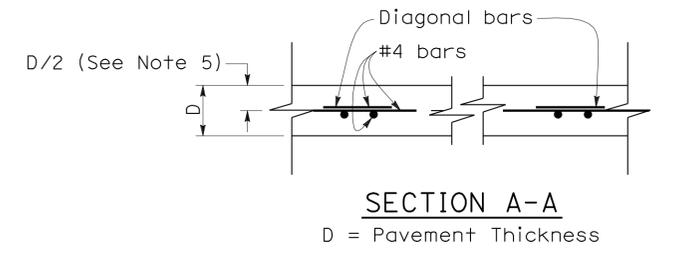
**CASE 3**

Transverse joint within 2'-0" of drainage inlet wall, or matches drainage inlet wall.



**CASE 2**

Transverse joint intersects drainage inlet, or matches drainage inlet wall.



**TABLE A**

DISTANCE X	BARS REQUIRED
2'-0" to 1'-6"	2
1'-6" to 9"	1 @ X/2
9" or less	None

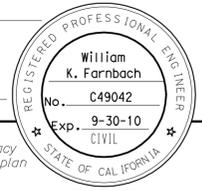
**ISOLATION JOINT AROUND DRAINAGE INLET**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT-  
 DRAINAGE INLET  
 DETAILS No. 1**  
 NO SCALE

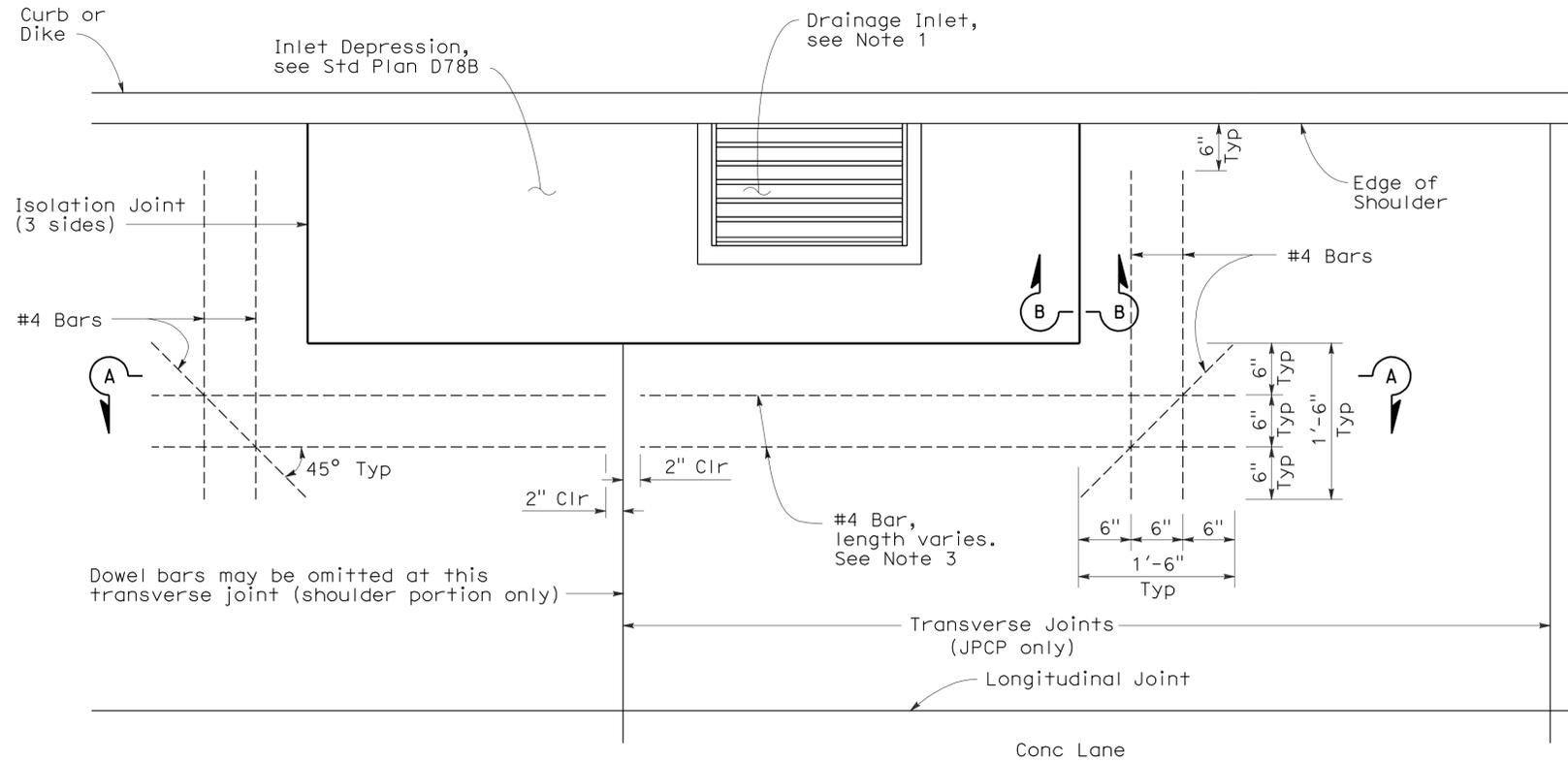
RSP P45 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P45  
 DATED MAY 1, 2006 - PAGE 132 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P45**

2006 REVISED STANDARD PLAN RSP P45

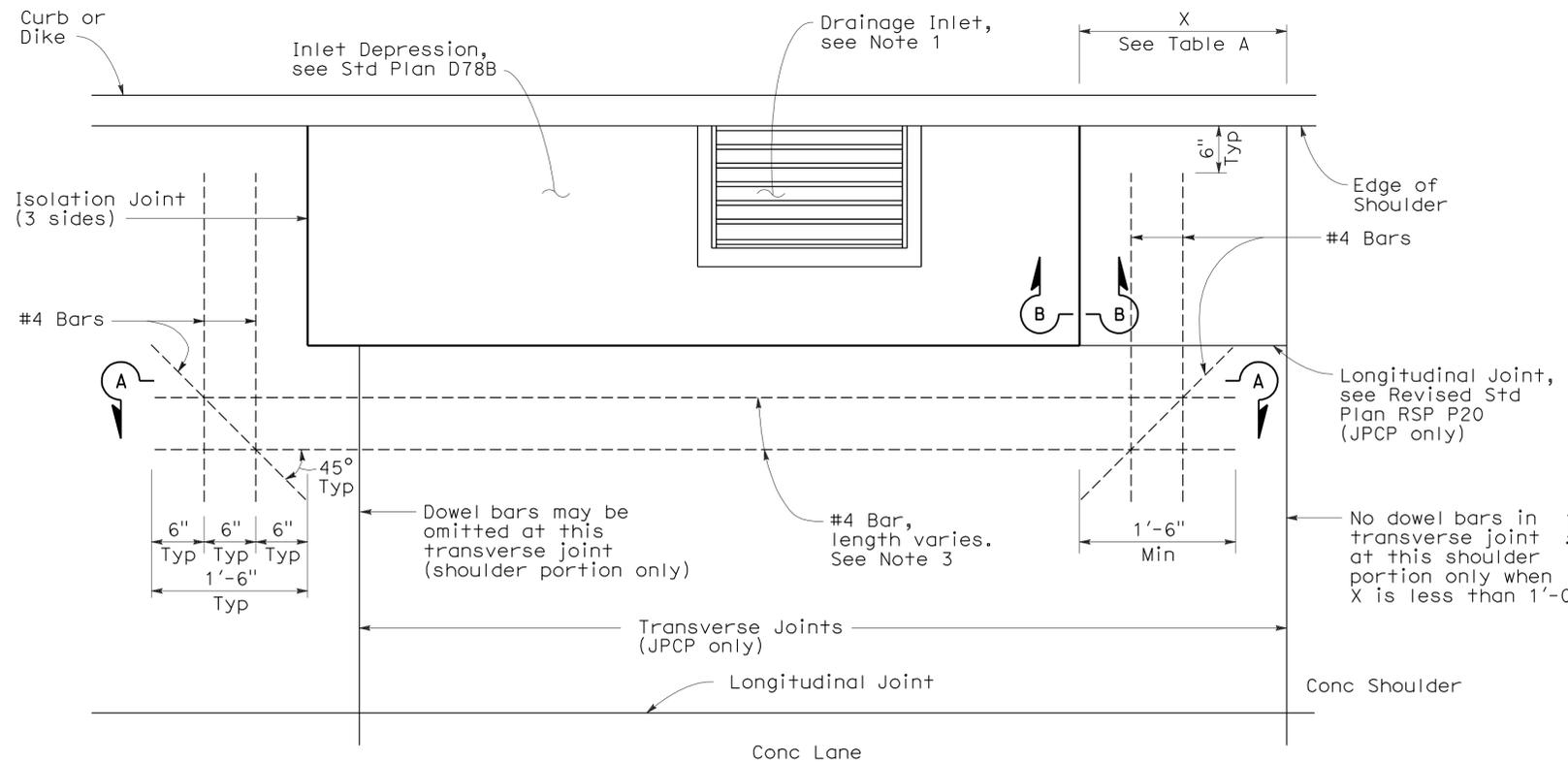


To accompany plans dated 6-20-11



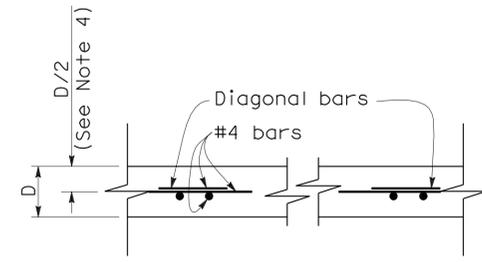
**CASE A**

Transverse Joint intersects inlet depression or no transverse joints.



**CASE B**

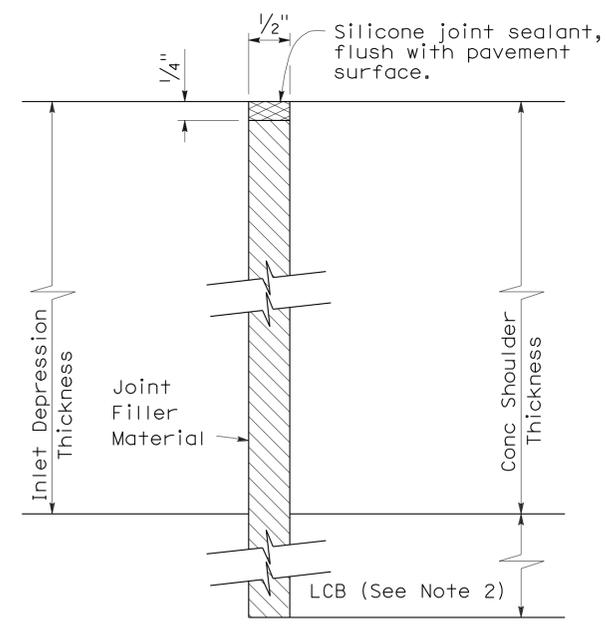
Transverse Joint within 2'-0" of edge of inlet depression.



**SECTION A-A**  
D = Pavement Thickness

**TABLE A**

DISTANCE X	BARS REQUIRED
2'-0" to 1'-6"	2
1'-6" to 1'-0"	1
1'-0" or less	None



**SECTION B-B**

**NOTES:**

1. Refer to Project Plans for location and type of drainage inlets.
2. Extend joint filler material to bottom of Lean Concrete Base. Where Lean Concrete Base is not used as base material, the joint filler material shall only extend to the bottom of the new concrete pavement.
3. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, terminate pavement steel reinforcement 2" clear from all outside edges of isolation joint.
4. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, see New Standard Plan NSP P4.

**ISOLATION JOINT AROUND INLET DEPRESSION**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT-  
DRAINAGE INLET  
DETAILS No. 2**  
NO SCALE

RSP P46 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P46  
DATED MAY 1, 2006 - PAGE 133 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP P46**

2006 REVISED STANDARD PLAN RSP P46

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	526	757

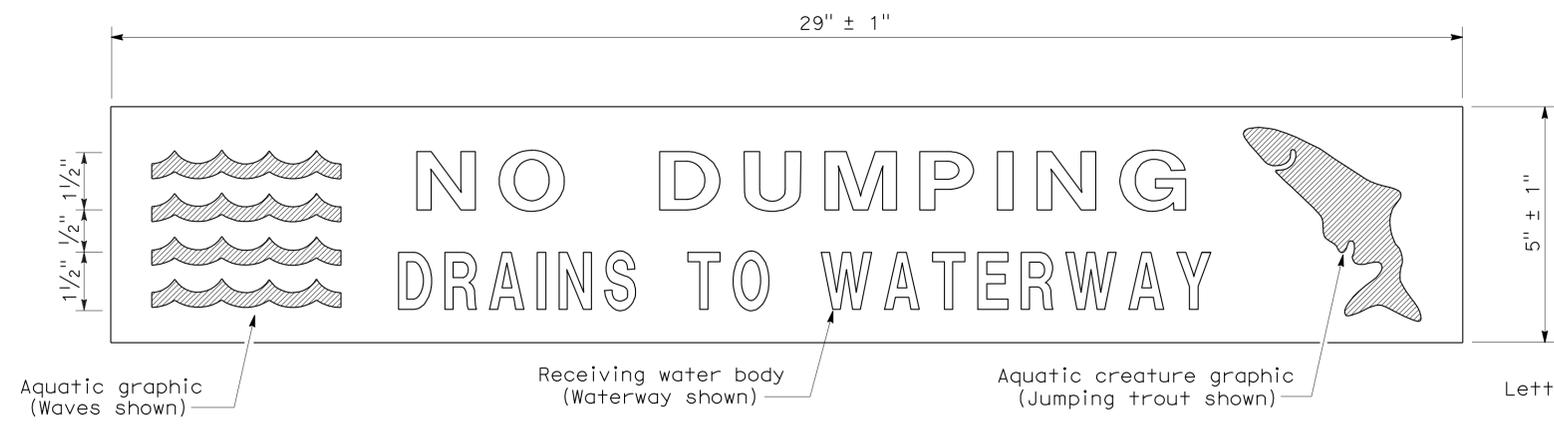
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT

April 3, 2009  
 PLANS APPROVAL DATE

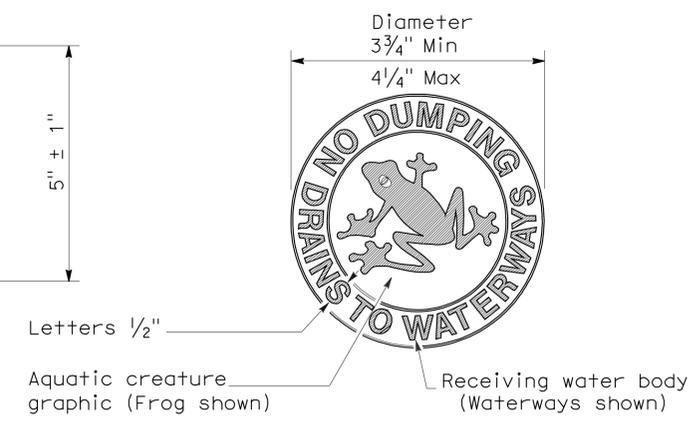
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 Signature  
 11-30-10  
 Renewal Date  
 2-25-09  
 Date

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To accompany plans dated 6-20-11



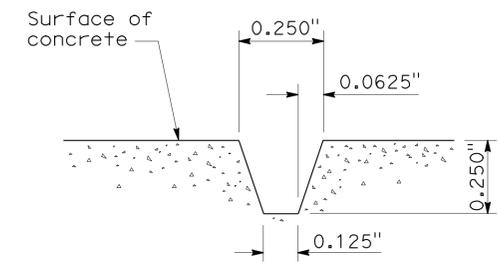
PLAN  
 DRAINAGE INLET MARKER  
 (PREFABRICATED THERMOPLASTIC)



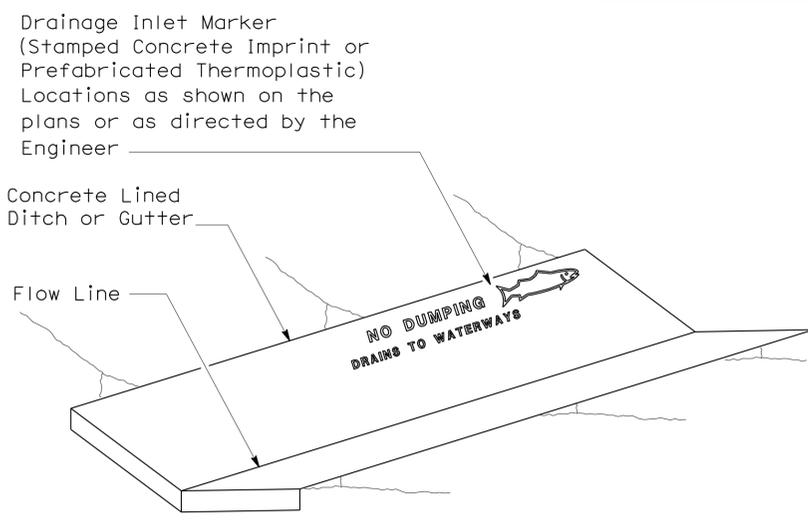
PLAN  
 DRAINAGE INLET MARKER  
 (MEDALLION)



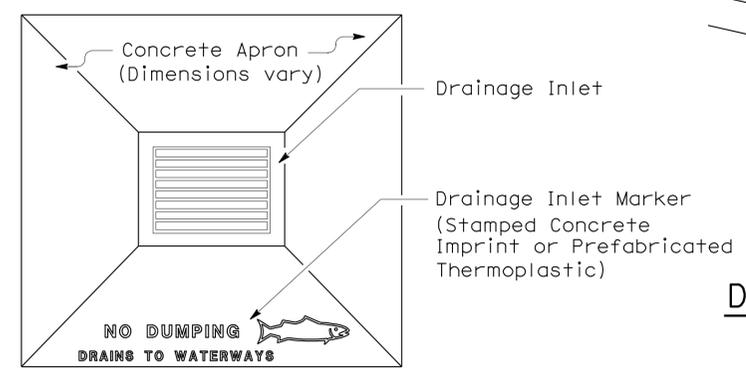
PLAN  
 DRAINAGE INLET MARKER  
 (STAMPED CONCRETE IMPRINT)



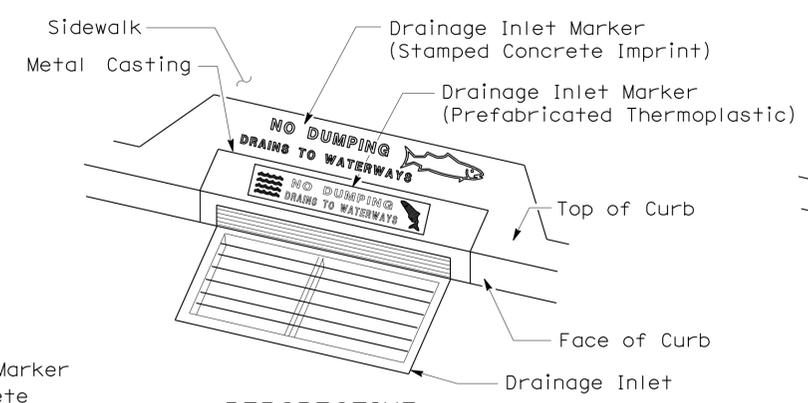
SECTION A-A  
 STAMPED CONCRETE  
 IMPRINT DETAIL



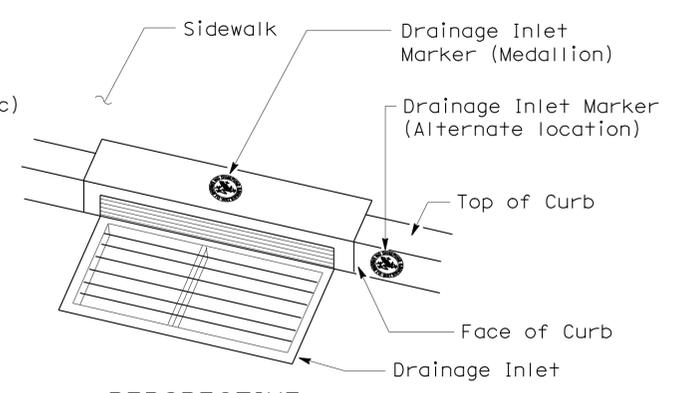
PERSPECTIVE  
 DRAINAGE INLET MARKER ON  
 CONCRETE LINED DITCH



PLAN  
 DRAINAGE INLET MARKER ON  
 DRAINAGE INLET APRON



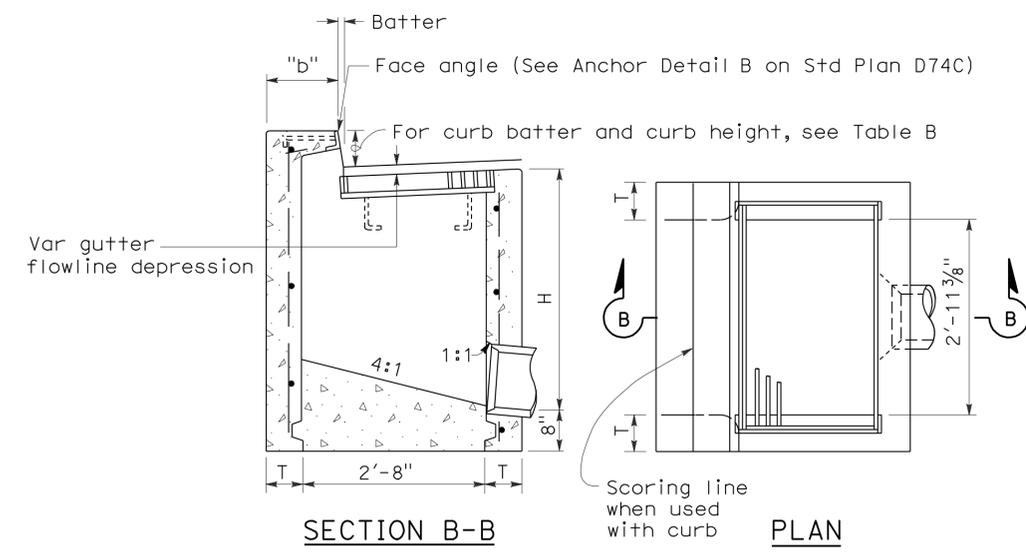
PERSPECTIVE  
 DRAINAGE INLET MARKER ON  
 DRAINAGE INLET



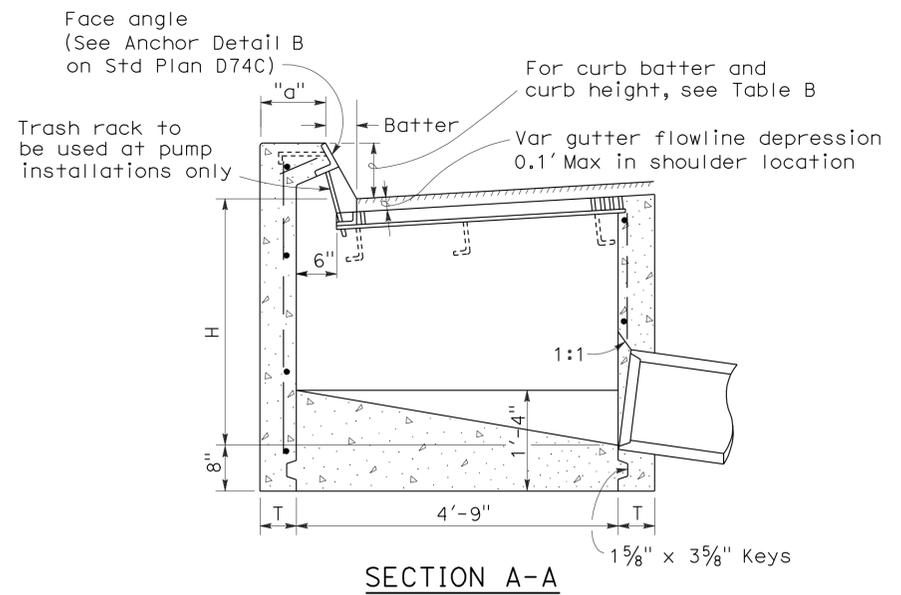
PERSPECTIVE  
 DRAINAGE INLET MARKER (MEDALLION)  
 ON DRAINAGE INLET

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**DRAINAGE INLET MARKERS**  
 NO SCALE  
 NSP D71 DATED APRIL 3, 2009 SUPPLEMENTS  
 THE STANDARD PLANS BOOK DATED MAY 2006.

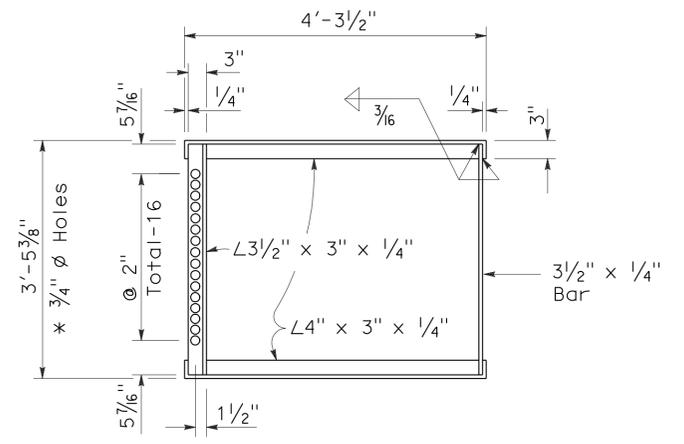
To accompany plans dated 6-20-11



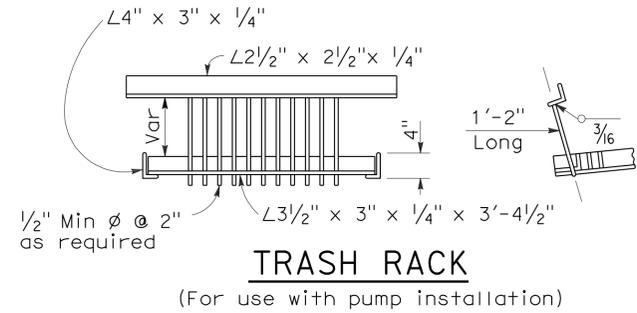
TYPE GO



SECTION A-A



GRATE FRAME FOR TYPE GDO INLET

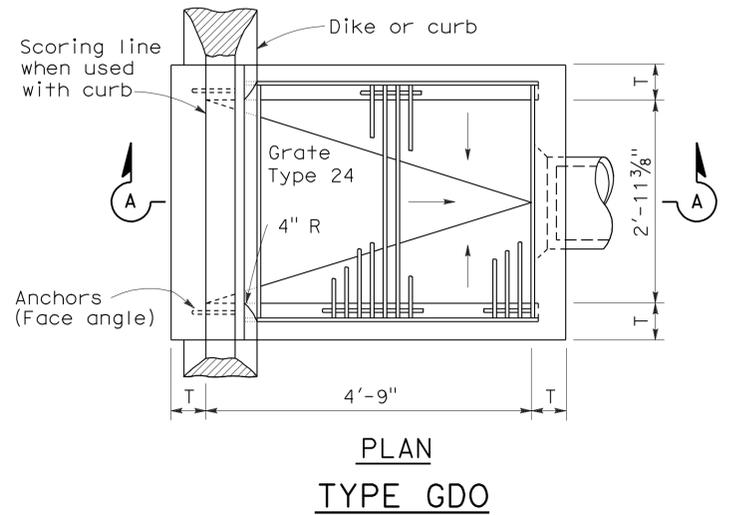


TRASH RACK  
(For use with pump installation)

TABLE A  
CONCRETE QUANTITIES

TYPE	H=3'-0" TO 8'-0" (T=6")	H=8'-1" TO 20'-0" (T=8")	
	ADDITIONAL PCC PER FOOT (CY)	H=8'-1" (CY)	ADDITIONAL PCC PER FOOT (CY)
GO	1.24	3.39	0.346
GDO	1.62	4.36	0.446

Table based on 8" floor slab, no deduction for pipe openings, and curb type giving highest quantity of concrete. No deductions or adjustments are to be made to these quantities because of pipe openings, different floor alternatives or different curb type.



PLAN  
TYPE GDO

TABLE B

CURB TYPE	NORMAL CURB HEIGHT	CURB BATTER	"a" DIMENSION	"b" DIMENSION
A1-6	6"	1 1/2"	T+7 1/2"	T+6 1/2"
A1-8	8"	2"	T+7"	T+6"
B1-6	6"	4"	T+5"	T+4"
Type A Dike	6"	3"	T+6"	T+5"

NOTES:

- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undeepressed.
- 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 @ 18"± centers placed 1/2" clear to inside of box unless otherwise shown.
- Inlet bottom reinforcing not required. See Standard Plan D74C for alternative reinforced 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. Step inserts may be substituted for the bar steps. Step Inserts shall comply with State Industrial Safety requirements. See Standard Plan D74C for step details.
- When shown on the project plans, place a 3/4" plain round protection bar horizontally across the length of the opening and bend back 4" into the inlet wall on each side.
- Pipe(s) can be placed in any wall.
- Curb section shall match adjacent curb.
- Basin floors shall have wood trowel finish and shall slope toward the outlet pipe as shown.
- Galvanizing - See Standard Specifications or Special Provisions.
- See Standard Plan D77A and D77B for grate and frame details and weights of miscellaneous iron and Steel.
- See Standard Plan D78A for gutter depression details.
- Full 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.
- Cast-in-place or precast alternative is optional with contractor. See Standard Specifications.
- 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 pipe connections conforming to details for Type GCP inlets on Standard Plan D75B. See Standard Specifications for mortar composition.

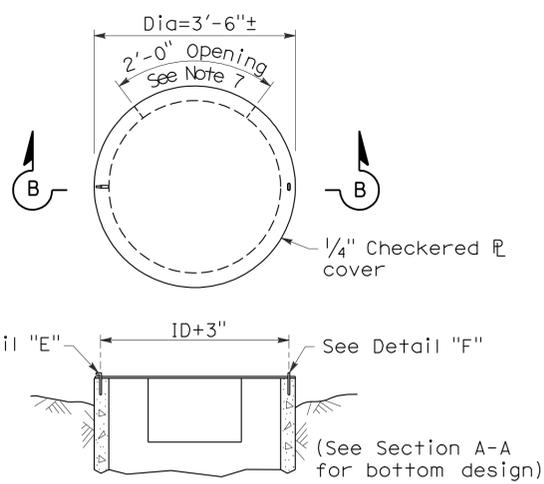
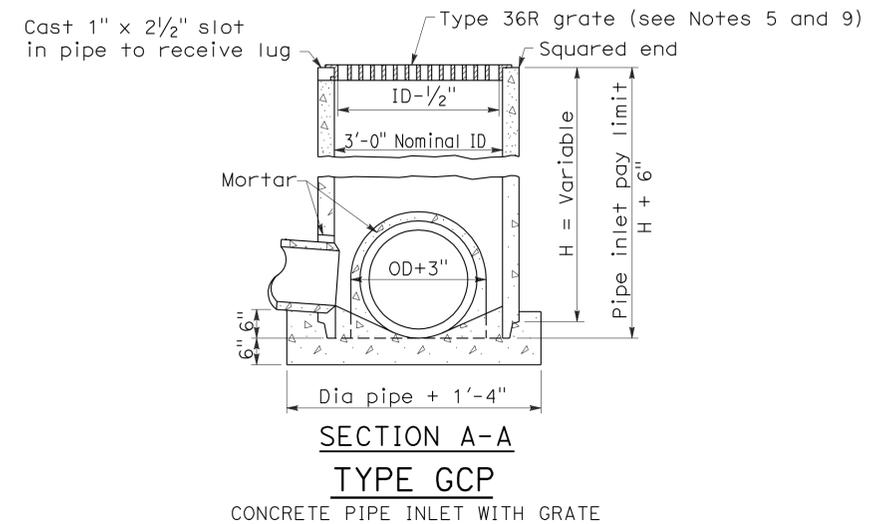
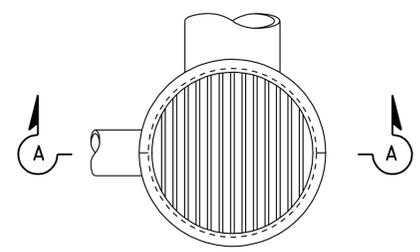
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**DRAINAGE INLETS**  
NO SCALE

2006 REVISED STANDARD PLAN RSP D74B

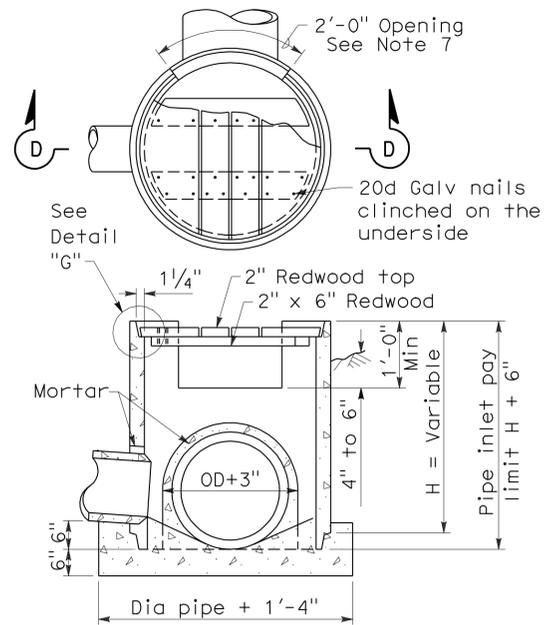
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	528	757

Raymond Don Tsztsoo  
 REGISTERED CIVIL ENGINEER  
 June 6, 2008  
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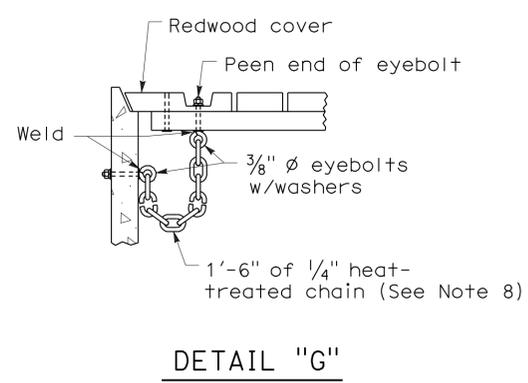
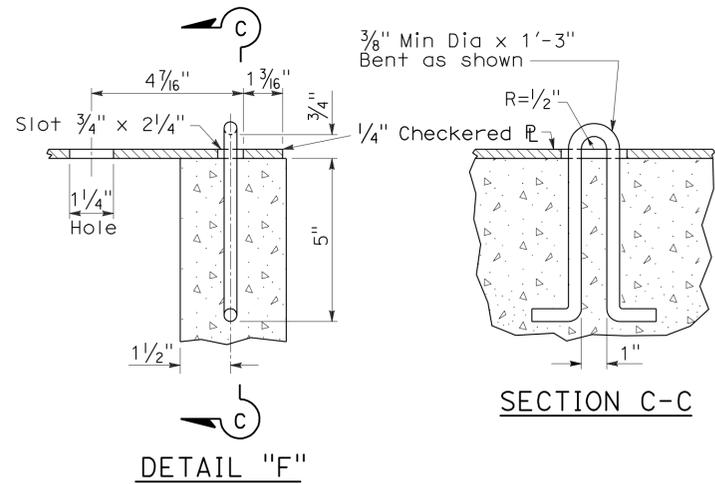
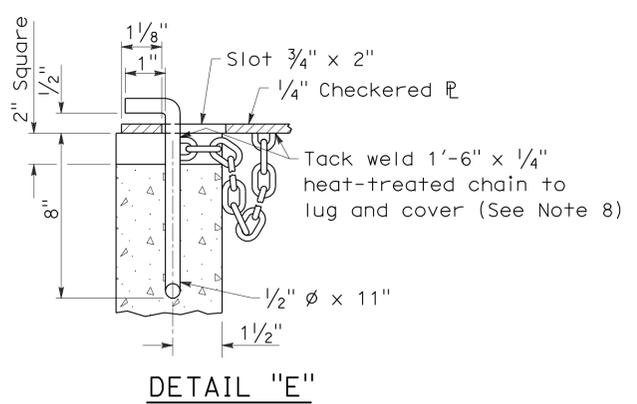
2006 REVISED STANDARD PLAN RSP D75B



**SECTION B-B**  
**TYPE OCP or OCPI**  
CONCRETE PIPE INLET WITH STEEL COVER  
(See Note 6)



**SECTION D-D**  
**TYPE OCP or OCPI**  
CONCRETE PIPE INLET WITH REDWOOD COVER  
(See Notes 6 and 10)



**NOTES:**

- For details of steel pipe inlets, see Standard Plan D75A.
- For details of ladder and steps and when ladder or steps are required, see Standard Plan D75C.
- Inlet pipes shall not protrude into basin.
- Except for inlets used for junction boxes, basin floors shall have minimum slope of 4:1 from all directions toward outlet pipe, and a wood trowel finish.
- See Revised Standard Plan RSP D77A and Standard Plan D77B for Grate and Frame Details and Weights of Miscellaneous Iron and Steel.
- Designation of Type OCPI pipe inlets on plans indicates trash racks are to be furnished and installed on all side openings. See Standard Plan D75C for Trash Rack details.
- More than one side opening may be required. Location and number as ordered by the Engineer. Opening may be cast in pipe.
- Chain to be provided when specified.
- Place pipe so bars of grate will be parallel with main surface flow.
- Redwood covers shall only be placed at locations designated on the plans.

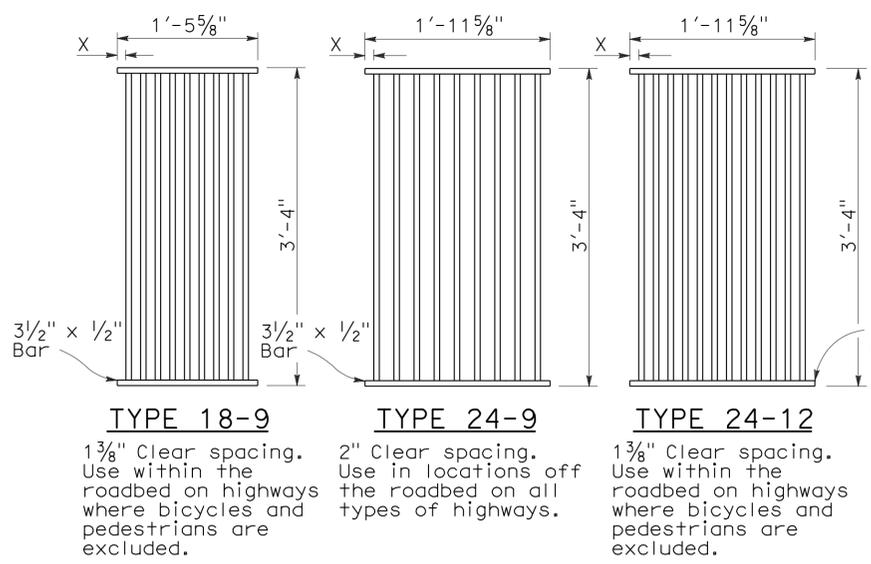
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CONCRETE PIPE INLETS**

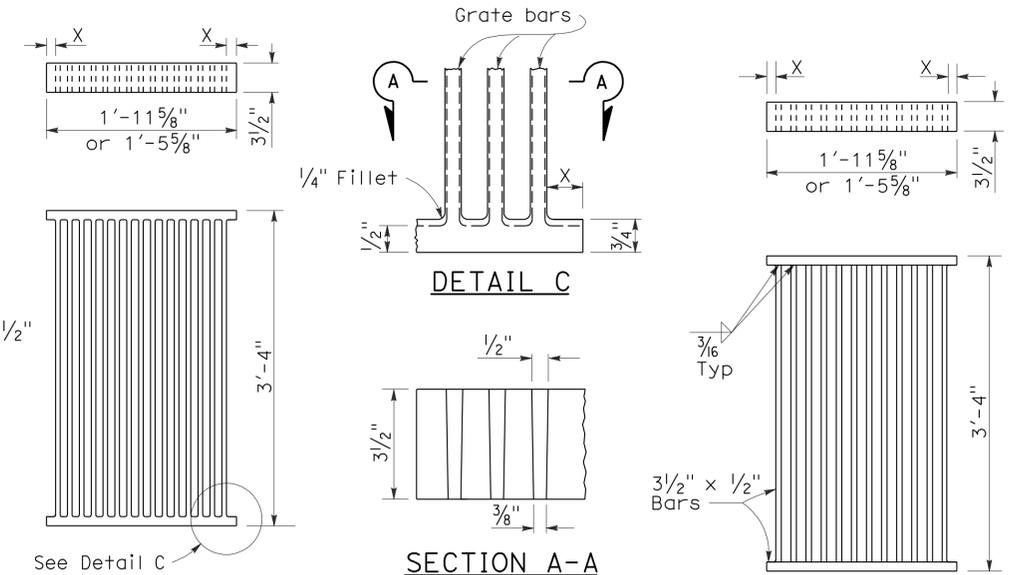
NO SCALE

RSP D75B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D75B  
DATED MAY 1, 2006 - PAGE 153 OF THE STANDARD PLANS BOOK DATED MAY 2006.

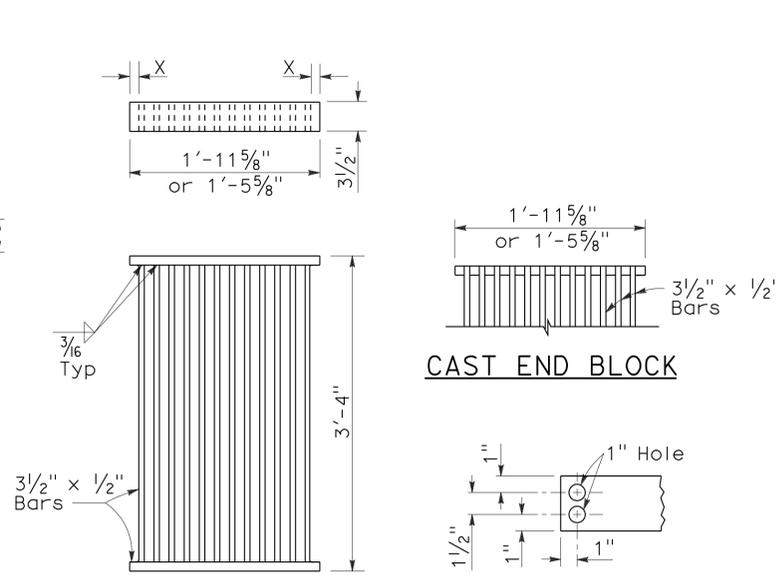
**REVISED STANDARD PLAN RSP D75B**



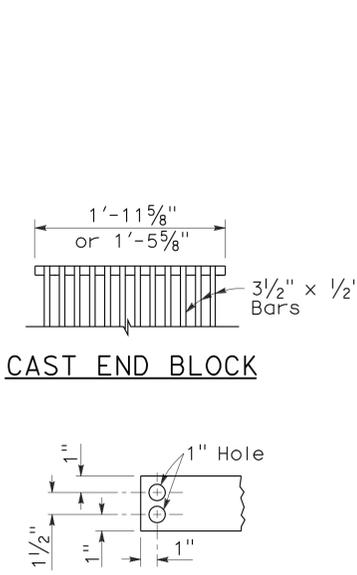
**RECTANGULAR GRATE DETAILS**  
(See table below)



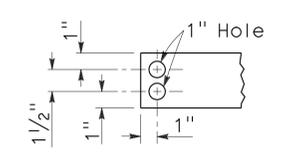
**ALTERNATIVE CAST NODULAR IRON GRATE OR CAST STEEL GRATE**



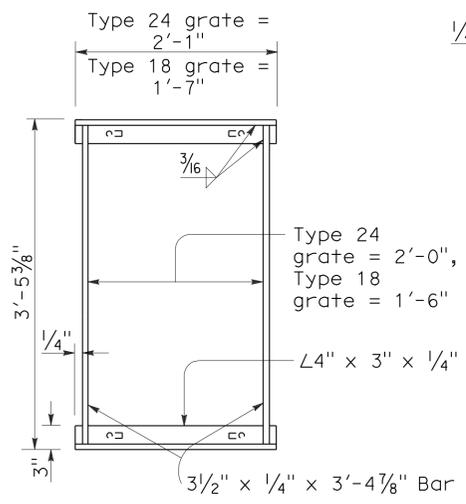
**ALTERNATIVE WELDED GRATE**



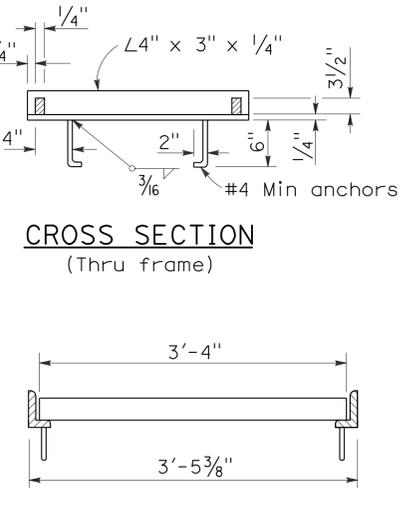
**CAST END BLOCK**



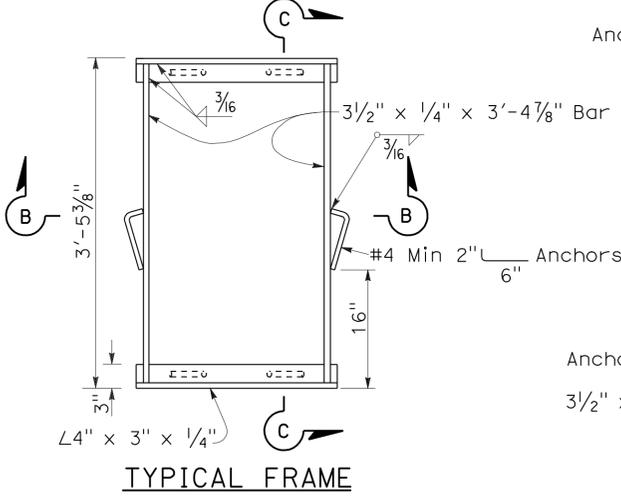
**END OF BAR**



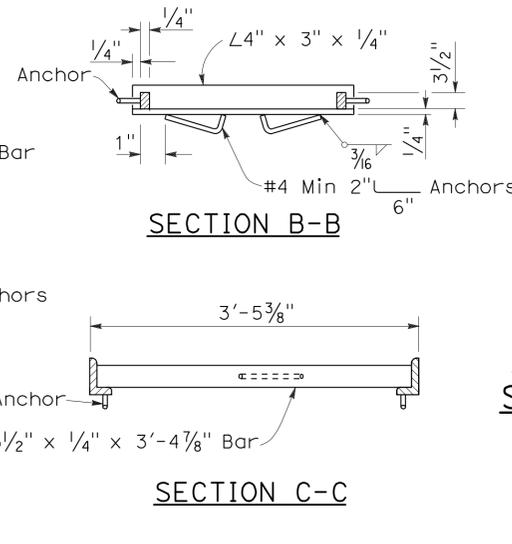
**TYPICAL FRAME**



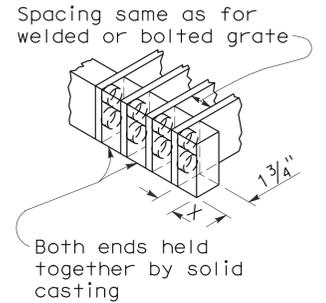
**LONGITUDINAL SECTION**  
(Thru frame and grate)



**TYPICAL FRAME**



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



**ALTERNATIVE CAST NODULAR IRON OR CAST STEEL END BLOCK GRATE**

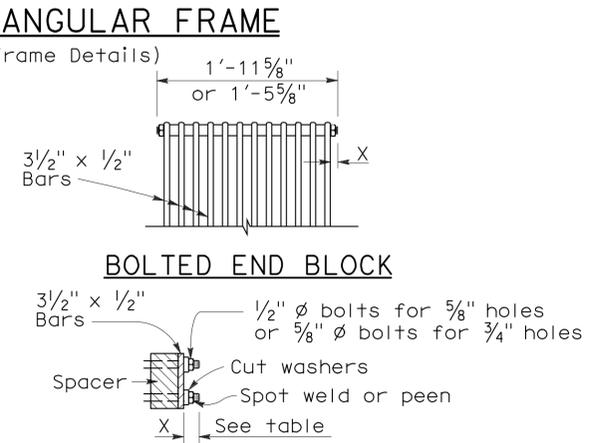
**RECTANGULAR FRAME DETAILS**  
(For all rectangular grates)

**GRATE BAR SPACING TABLE**

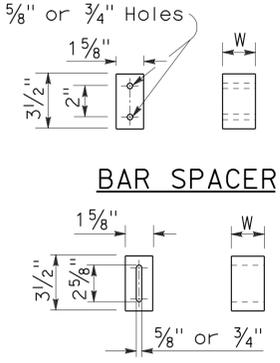
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

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	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



**BOLTING DETAIL**  
**ALTERNATIVE BOLTED GRATE**



**ALTERNATIVE SPACER**  
W = 1 3/8" or 2"

**BASIS FOR MISC IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS**

(See General Notes, No 8)

RSP D77A DATED JANUARY 18, 2008 SUPERSEDES STANDARD PLAN D77A DATED MAY 1, 2006 - PAGE 155 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP D77A**

2006 REVISED STANDARD PLAN RSP D77A

**NOTES:**

1. Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
2. Contractor has the option of using cast nodular iron, cast steel, welded, bolted, or cast end block grate.
3. See Special Provisions for requirements pertaining to galvanizing or asphalt dipping of grates and frames.
4. Rounded top of bars optional on all grates.
5. Pipe inlets with a grate shall be placed so that bars parallel direction of principle surface flow.
6. Full penetration butt welds may be substituted for the fillet welds on all anchors.
7. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
8. Grate and frame weights are based on welded grates (weights of face angles, steps, protection bars, etc. are not included).

To accompany plans dated 6-20-11

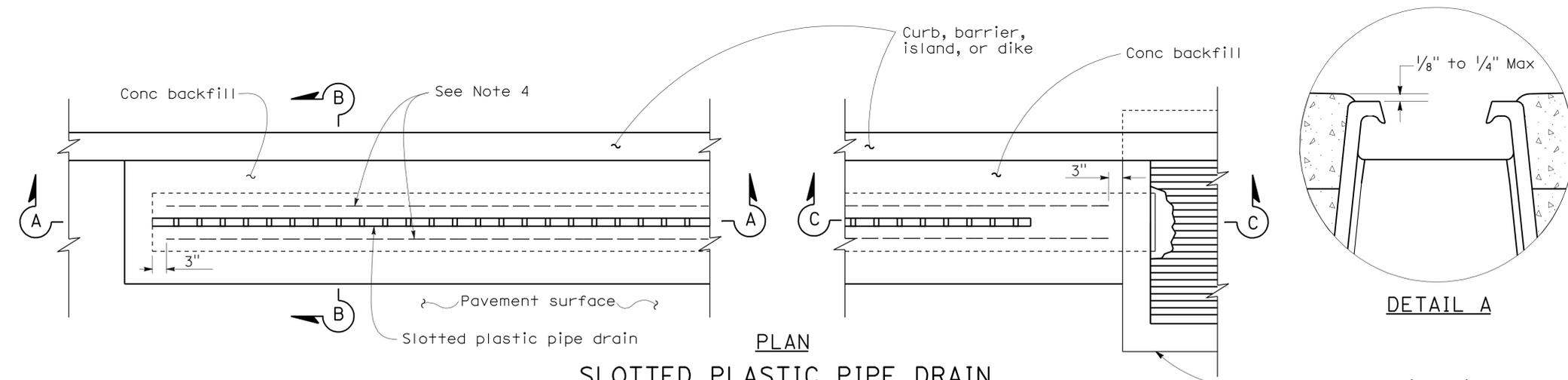
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**GRATE DETAILS**  
NO SCALE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	530	757

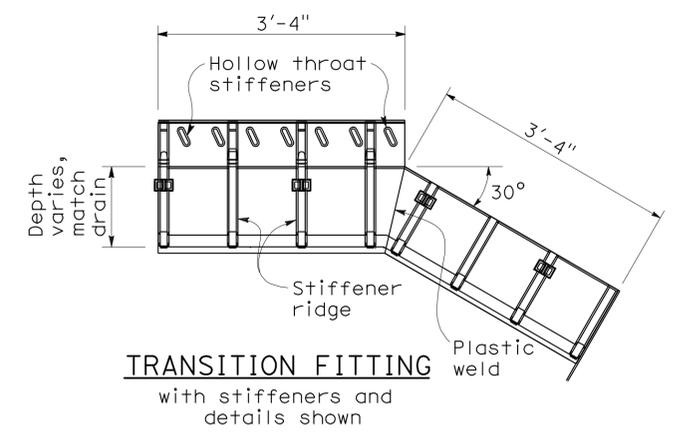
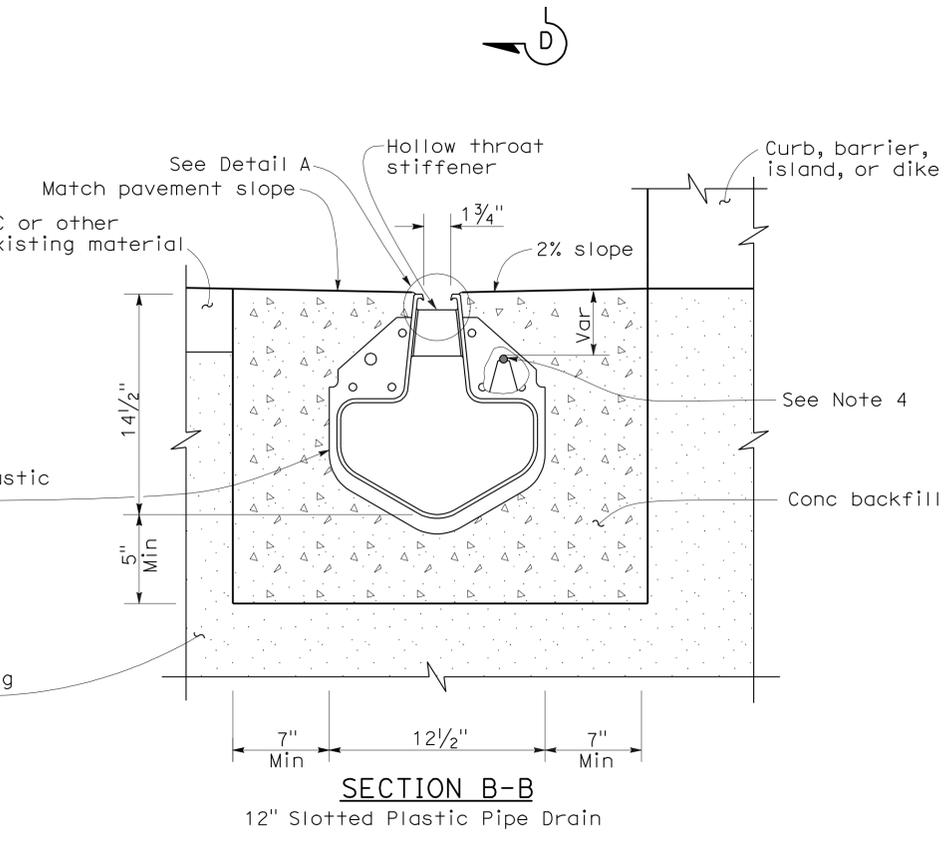
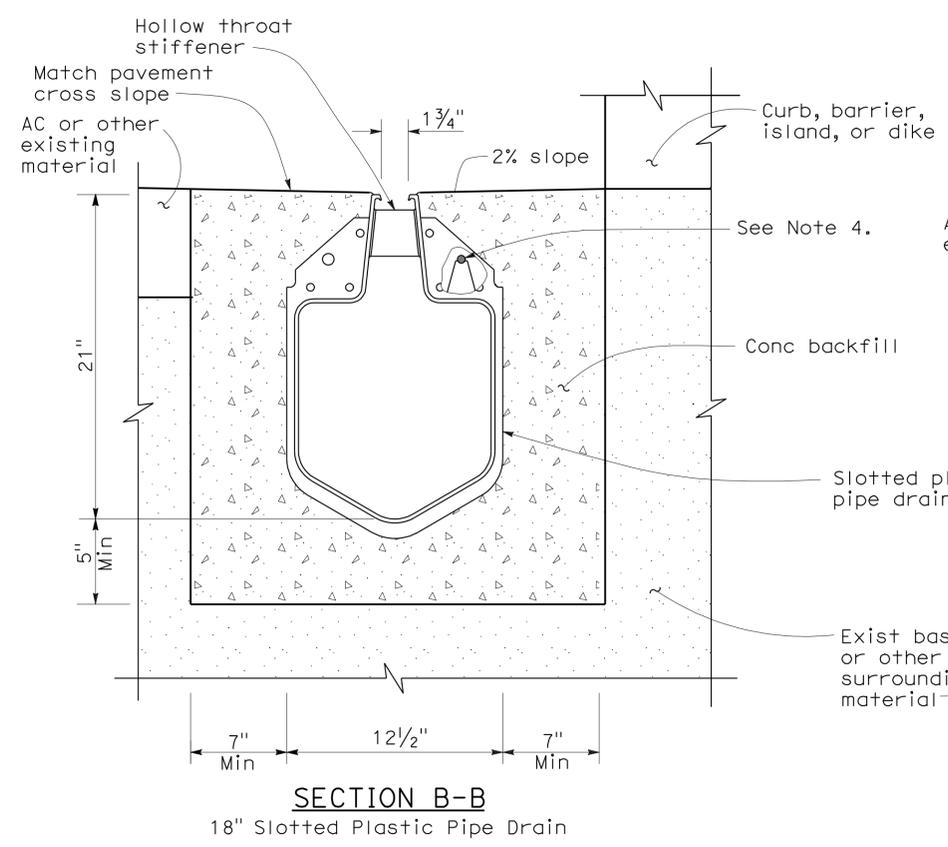
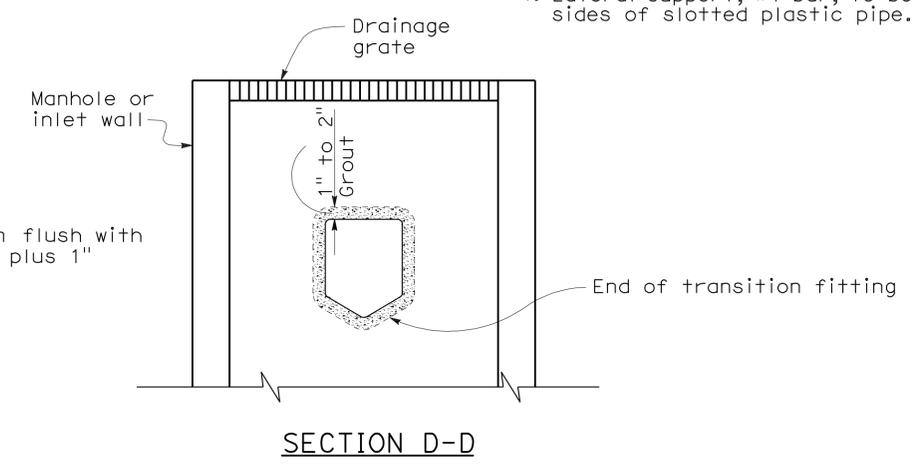
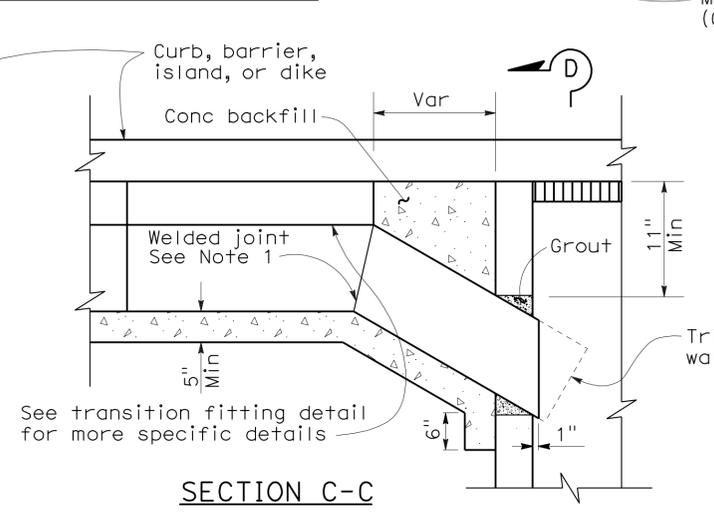
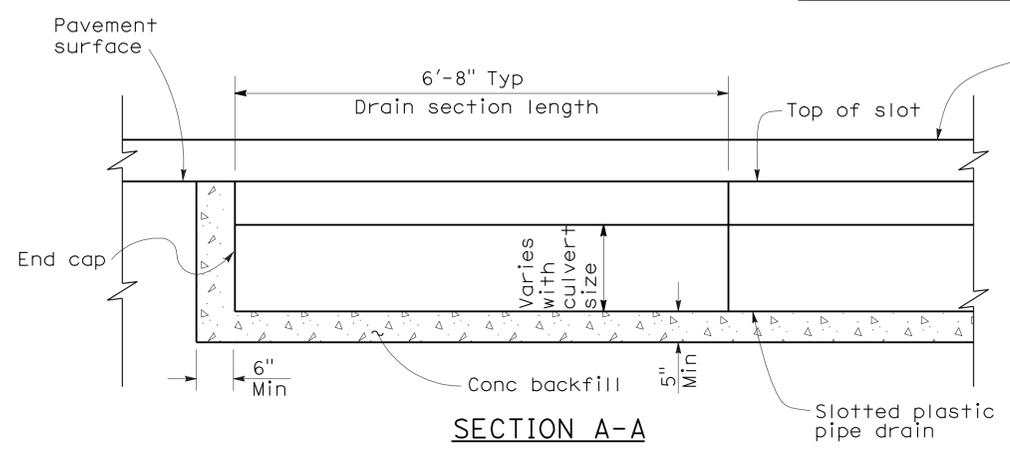
Raymond Don Tsztoo  
 REGISTERED CIVIL ENGINEER  
 January 18, 2008  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER  
 Raymond Don Tsztoo  
 No. C37332  
 Exp. 6-30-08  
 CIVIL  
 STATE OF CALIFORNIA

To accompany plans dated 6-20-11



- NOTES:**
1. Plastic weld shall be factory fabricated.
  2. When Heel Resistant Grate is to be used, see New Standard Plan NSP D98E for details.
  3. Exterior wall stiffener ridges and details not shown on section views. See transition fitting detail for typical exterior ridges and throat stiffeners.
  4. Lateral support, #4 bar, to be placed on both sides of slotted plastic pipe.



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**SLOTTED PLASTIC PIPE DRAIN DETAILS**  
 NO SCALE  
 NSP D98D DATED JANUARY 18, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP D98D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	531	757

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
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To accompany plans dated 6-20-11

2006 REVISED STANDARD PLAN RSP H1

**A**

AB aggregate base  
 ABS acrylonitrile-butadiene-styrene  
 AC asphalt concrete  
 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  
 BPAE backflow preventer assembly in enclosure  
 BPE backflow preventer enclosure  
 BV ball valve

**C**

CAP corrugated aluminum pipe  
 CARV combination air release valve  
 CCA cam coupler assembly  
 CEC controller enclosure cabinet  
 CHDPE corrugated high density polyethylene  
 CL chain link  
 CNC control and neutral conductors  
 Conc concrete  
 Cond conduit  
 CSP corrugated steel pipe  
 CST center strip  
 CV check valve

**D**

Dia diameter  
 DIP ductile iron pipe  
 DN diameter nominal

**E**

EA each  
 Elect electric/electrical  
 Elev elevation  
 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  
 FAU filter assembly unit  
 FCV flow control valve  
 FERT fertilizer  
 FG finished grade  
 FIPT female iron pipe thread  
 FIS fertilizer injector system  
 FL flow line  
 FM flow monitor  
 FS flow sensor  
 Ft foot/feet  
 FV flush valve

**G**

GAL Gallon(s)  
 Galv galvanized  
 GARV garden valve  
 GPH gallons per hour  
 GPM gallons per minute  
 GSP galvanized steel pipe  
 GV gate valve

**H**

H half circle  
 HB hose bib  
 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  
 In inches  
 IFS irrigation filtration system  
 IPS iron pipe size  
 IPT iron pipe thread  
 Irr irrigation

**L**

L length  
 LF linear foot

**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  
 Mtl 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  
 Oz ounce

**P**

P part circle  
 PB pull box  
 PCC portland cement concrete  
 PE polyethylene  
 Pkt packet  
 PL plastic  
 PLT plant/planting  
 PLT ESTB plant establishment  
 PM post mile  
 PR pressure rated  
 PRLV pressure relief valve  
 PSFM polymer stabilized fiber matrix  
 PSI pounds per square inch  
 PRV pressure reducing valve  
 PVC polyvinyl chloride  
 Pvmnt 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 meter  
 RCW recycled/reclaimed water  
 RECP rolled erosion control product  
 REQ required  
 R/W right of way

**S**

S slip  
 SCC sprinkler control conduit  
 SCH schedule  
 SF state-furnished  
 Shld shoulder  
 SQFT square foot/feet  
 SQYD square yard(s)  
 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  
 TRVD traveled  
 TT two third circle  
 Typ typical

**U**

UG underground

**V**

VAU valve assembly unit

**W**

W width  
 W/ with  
 WM water meter  
 WS wye strainer  
 WSP welded steel pipe  
 WWM welded wire mesh

**NOTE:**  
 FOR ADDITIONAL ABBREVIATIONS,  
 SEE STANDARD PLANS A10A AND A10B.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**PLANTING AND IRRIGATION  
 ABBREVIATIONS**

NO SCALE  
 RSP H1 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H1  
 DATED MAY 1, 2006 - PAGE 201 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP H1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	532	757

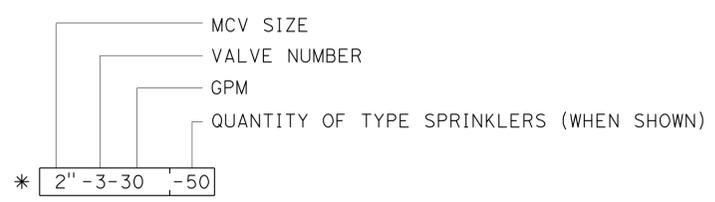
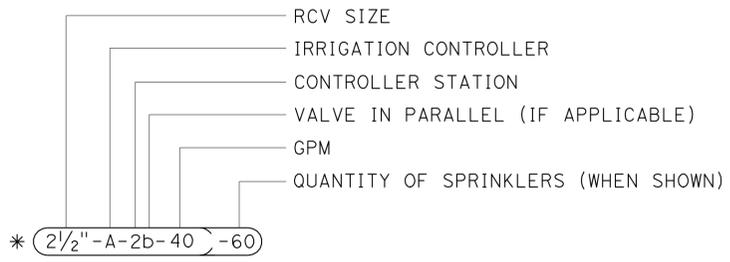
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
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To accompany plans dated 6-20-11

EXISTING	PROPOSED	ITEM DESCRIPTION
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ASSEMBLY IN ENCLOSURE (BPAE)
		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(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)
		SPRINKLER CONTROL CONDUIT (SCC)
		IRRIGATION CROSSOVER
		EXTEND IRRIGATION CROSSOVER
		IRRIGATION SLEEVE
		DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)
		PLASTIC PIPE (PR 200) (SUPPLY LINE) (MAIN)
		PLASTIC PIPE (PR 200) (SUPPLY LINE) (LATERAL)
		PLASTIC PIPE (IRRIGATION LINE)
		REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)
		MANUAL CONTROL VALVE (MCV)
		VALVE ASSEMBLY UNIT (VAU)
		WYE STRAINER (WS)
		FILTER ASSEMBLY UNIT (FAU)
		GATE VALVE (GV)
		BALL VALVE (BV)

EXISTING	PROPOSED	ITEM DESCRIPTION
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		PRESSURE REDUCING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		NOZZLE LINE W/TURNING UNION
		IRRIGATION SYSTEM
		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

**VALVE CODE**



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

**PLANTING AND IRRIGATION SYMBOLS**

NO SCALE

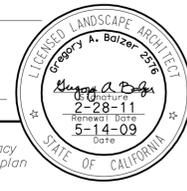
RSP H2 DATED JUNE 5, 2009 SUPERSEDES RSP H2 DATED MARCH 7, 2008 AND STANDARD PLAN H2 DATED MAY 1, 2006 - PAGE 202 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP H2**

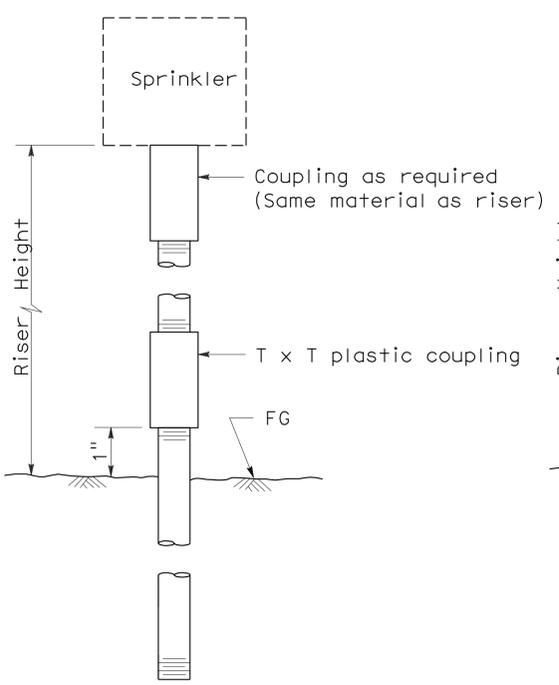
2006 REVISED STANDARD PLAN RSP H2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	533	757

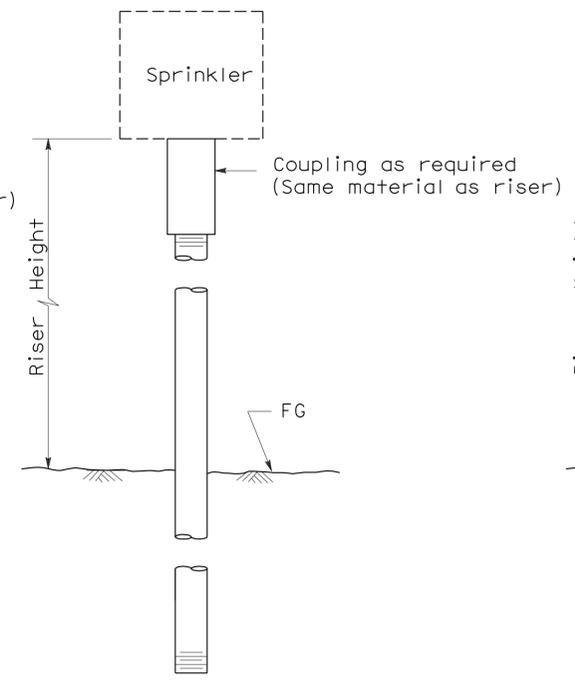
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
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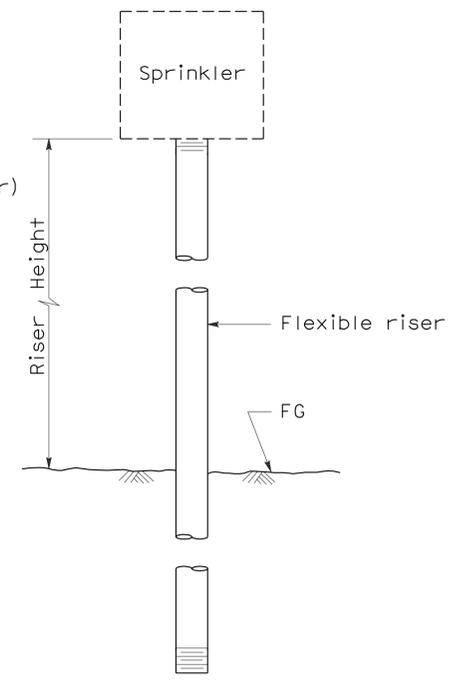
To accompany plans dated 6-20-11



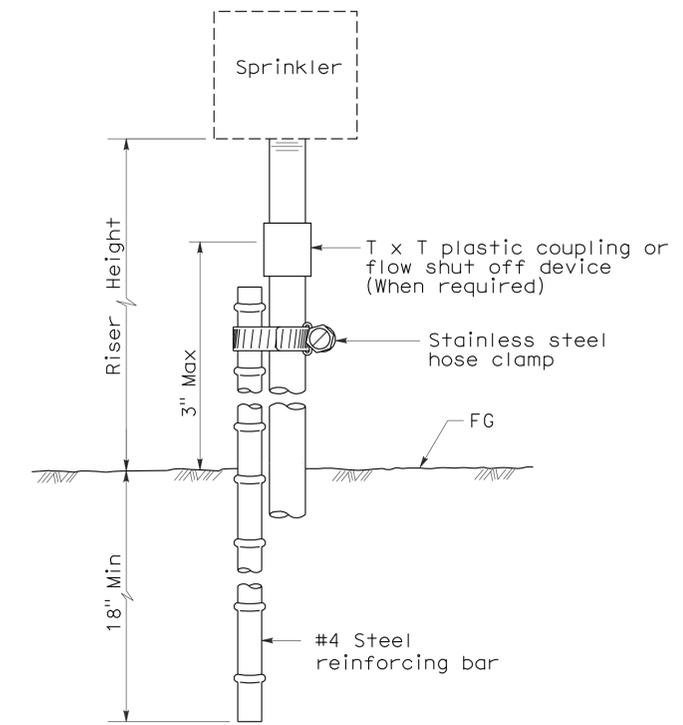
ELEVATION  
RISER TYPE I



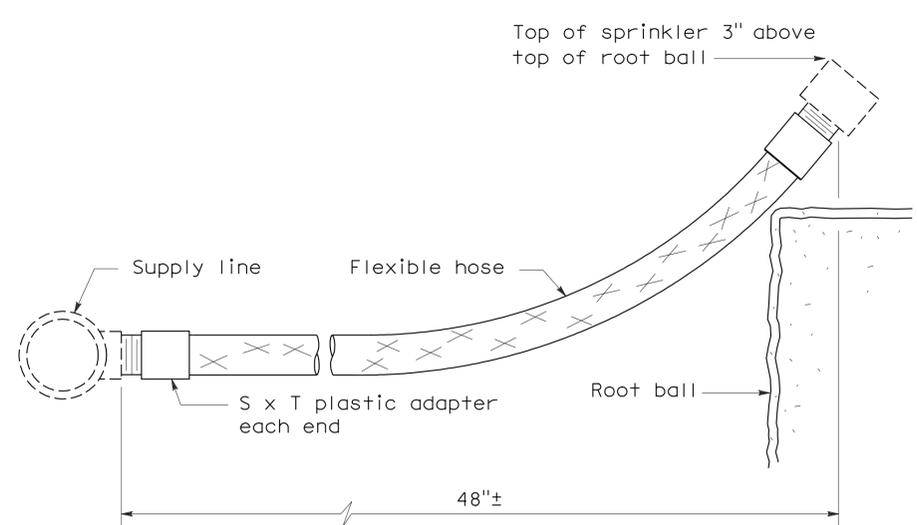
ELEVATION  
RISER TYPE II



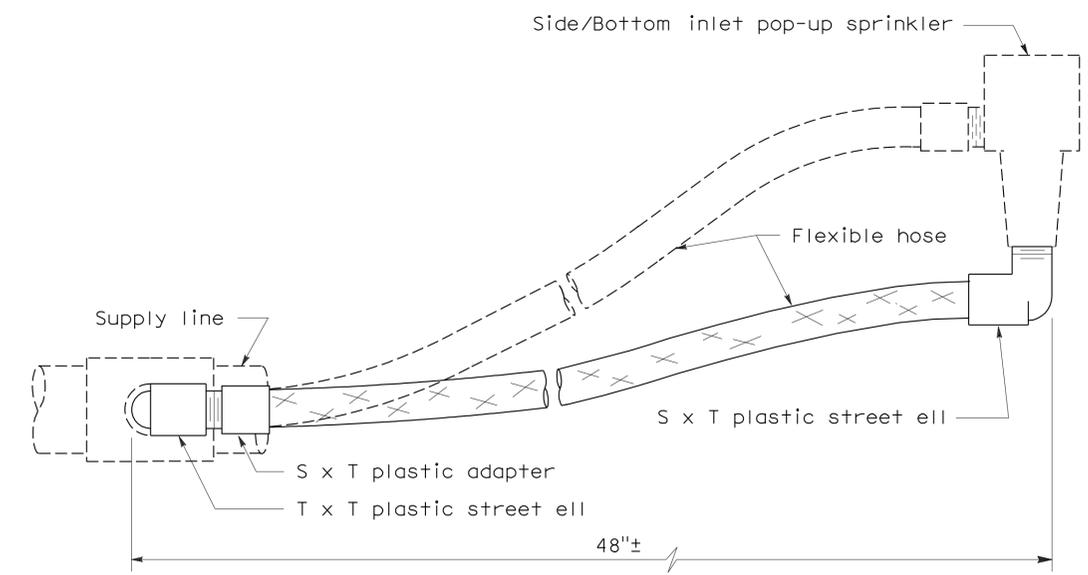
ELEVATION  
RISER TYPE III



ELEVATION  
RISER TYPE IV



ELEVATION  
RISER TYPE V



ELEVATION  
RISER TYPE VI

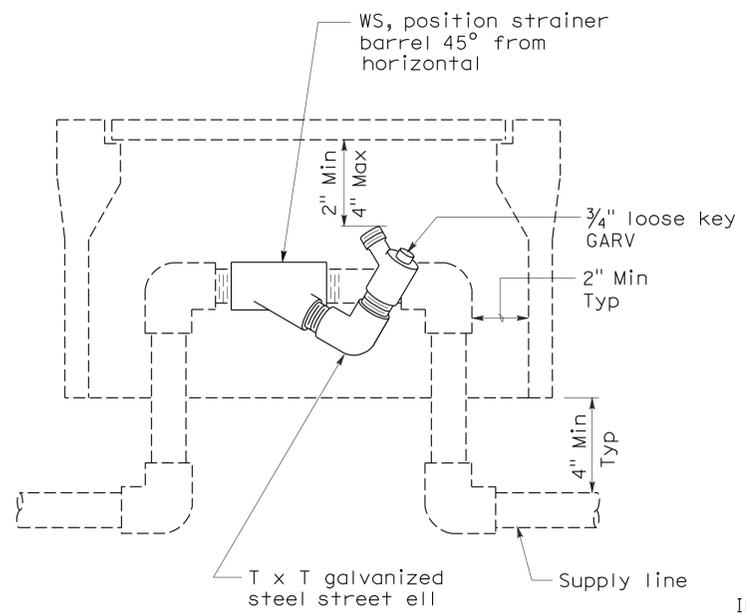
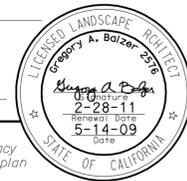
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**PLANTING AND IRRIGATION  
DETAILS**  
NO SCALE

RSP H5 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H5  
DATED MAY 1, 2006 - PAGE 205 OF THE STANDARD PLANS BOOK DATED MAY 2006.

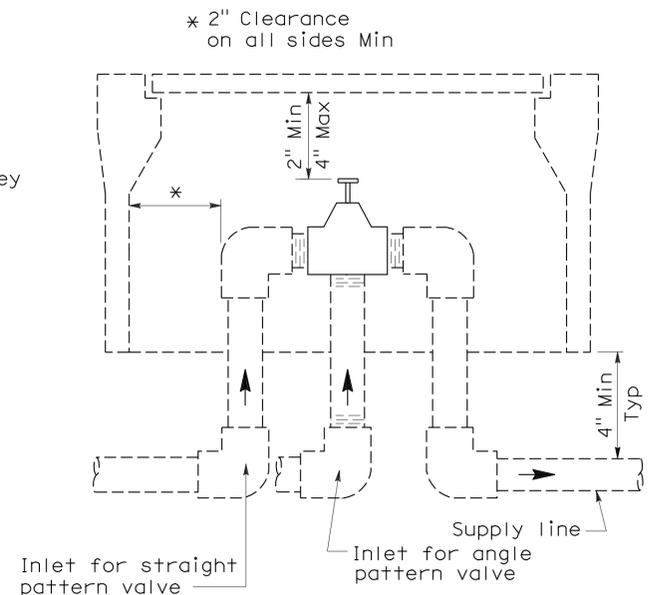
2006 REVISED STANDARD PLAN RSP H5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	534	757

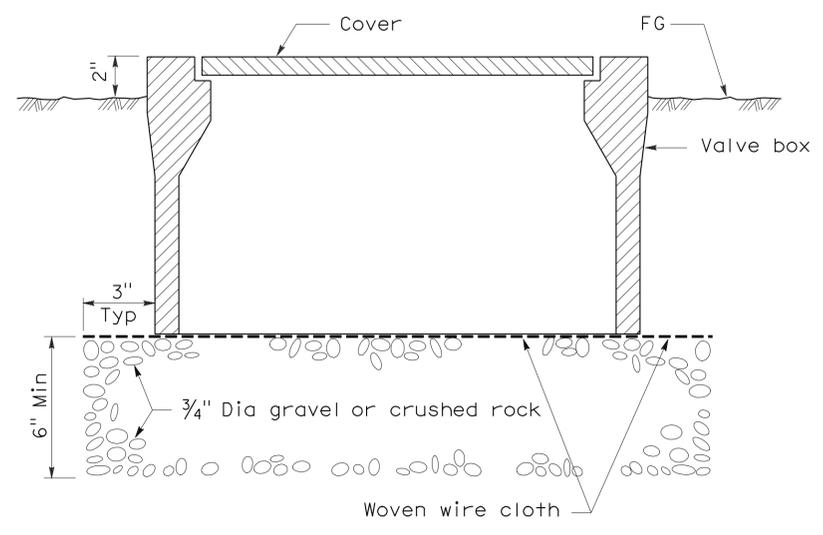
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
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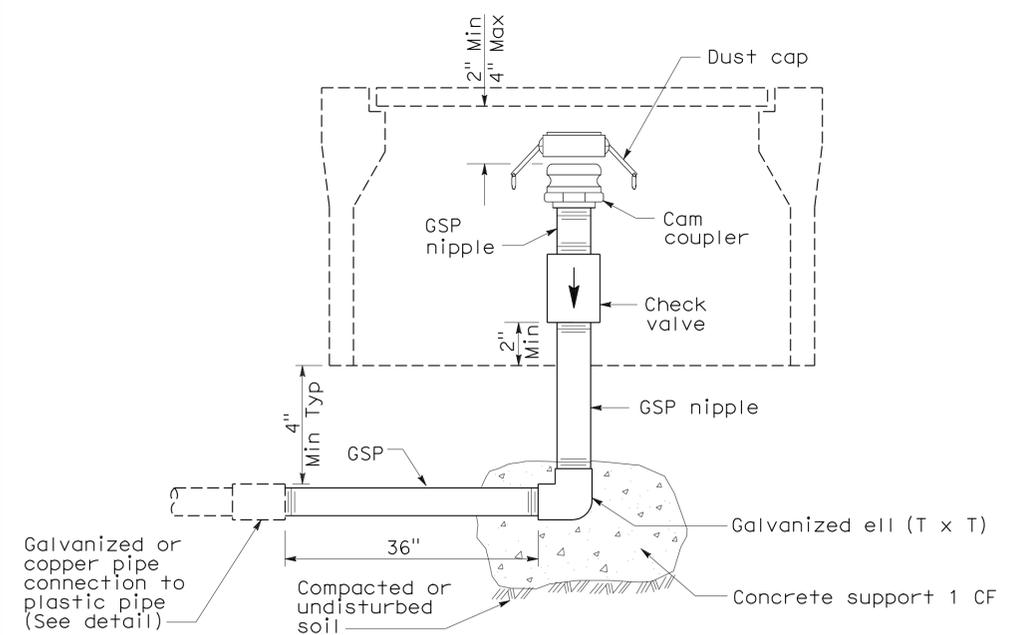
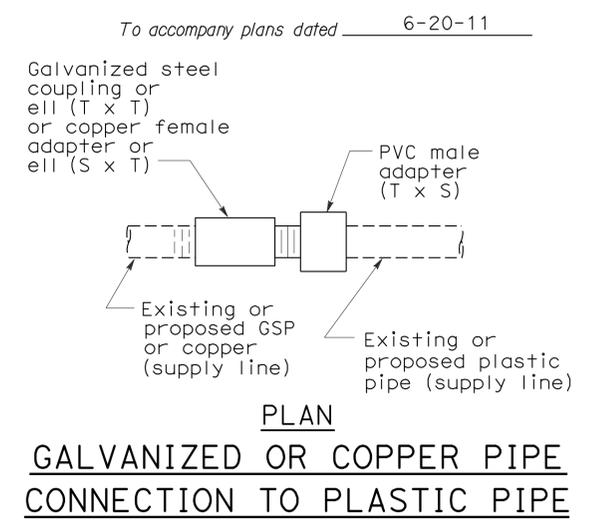
**ELEVATION  
WYE STRAINER**



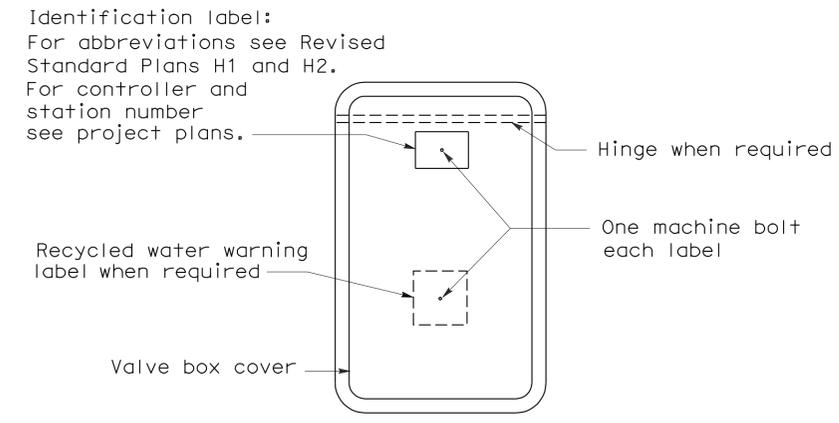
**ELEVATION  
VALVE**



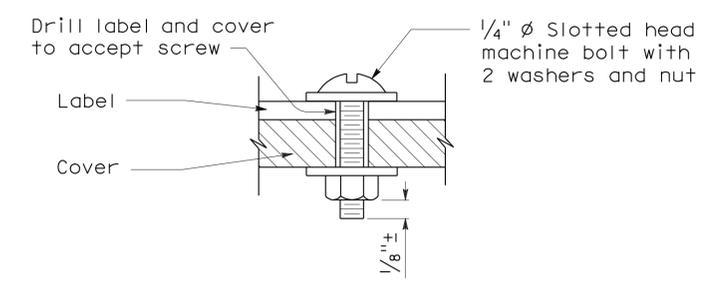
**SECTION  
VALVE BOX**



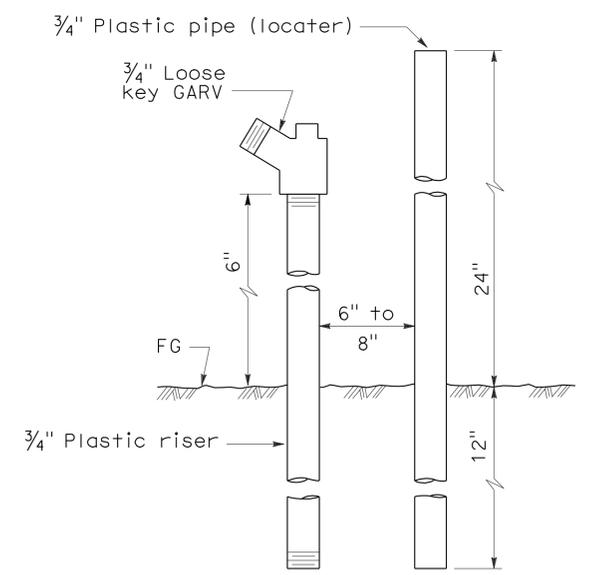
**ELEVATION  
CAM COUPLER ASSEMBLY**



**PLAN**



**SECTION  
VALVE BOX IDENTIFICATION**



**ELEVATION  
FLUSH VALVE**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**PLANTING AND IRRIGATION  
DETAILS**

NO SCALE

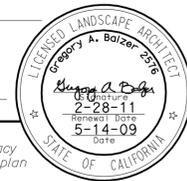
RSP H7 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H7  
DATED MAY 1, 2006 - PAGE 207 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP H7**

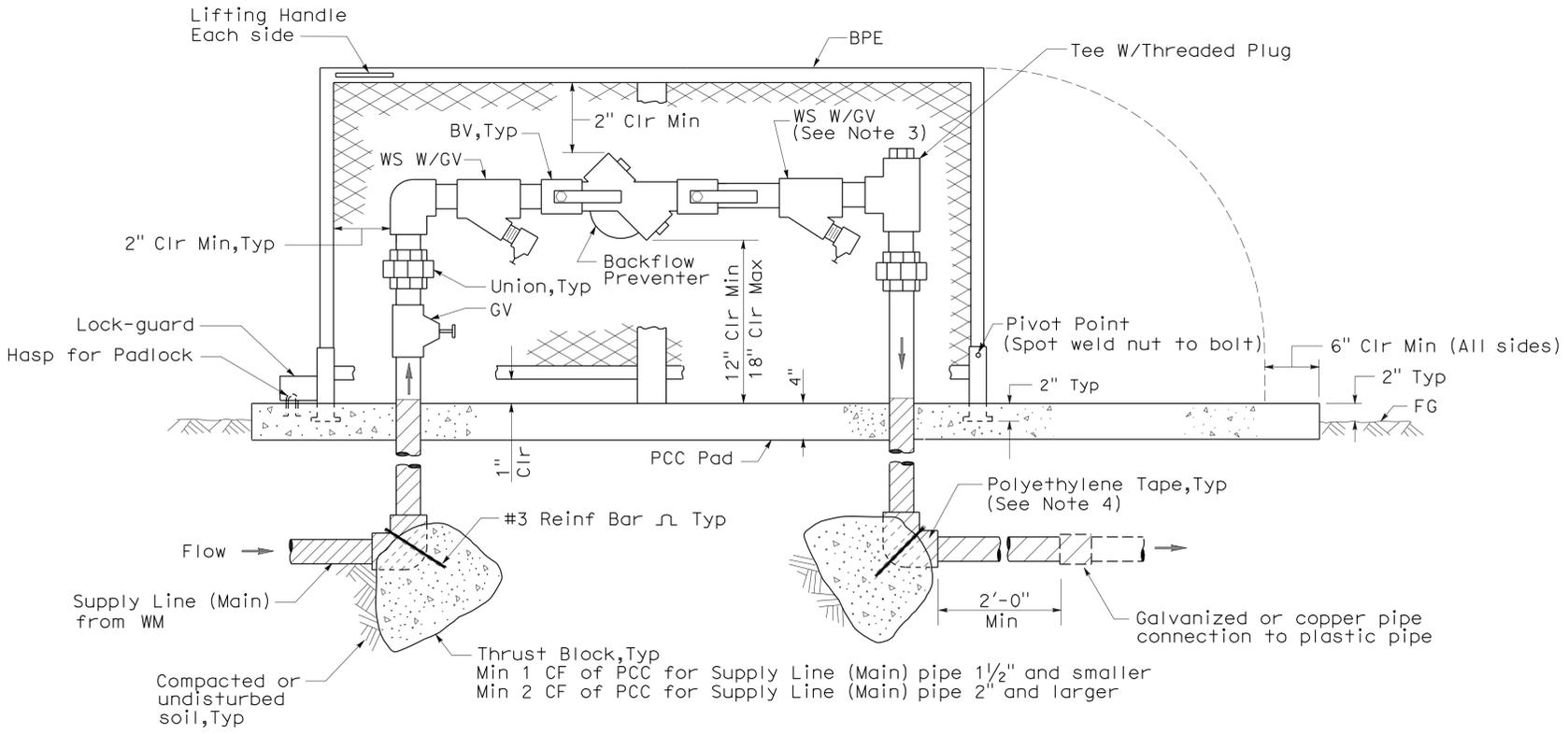
2006 REVISED STANDARD PLAN RSP H7

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	535	757

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
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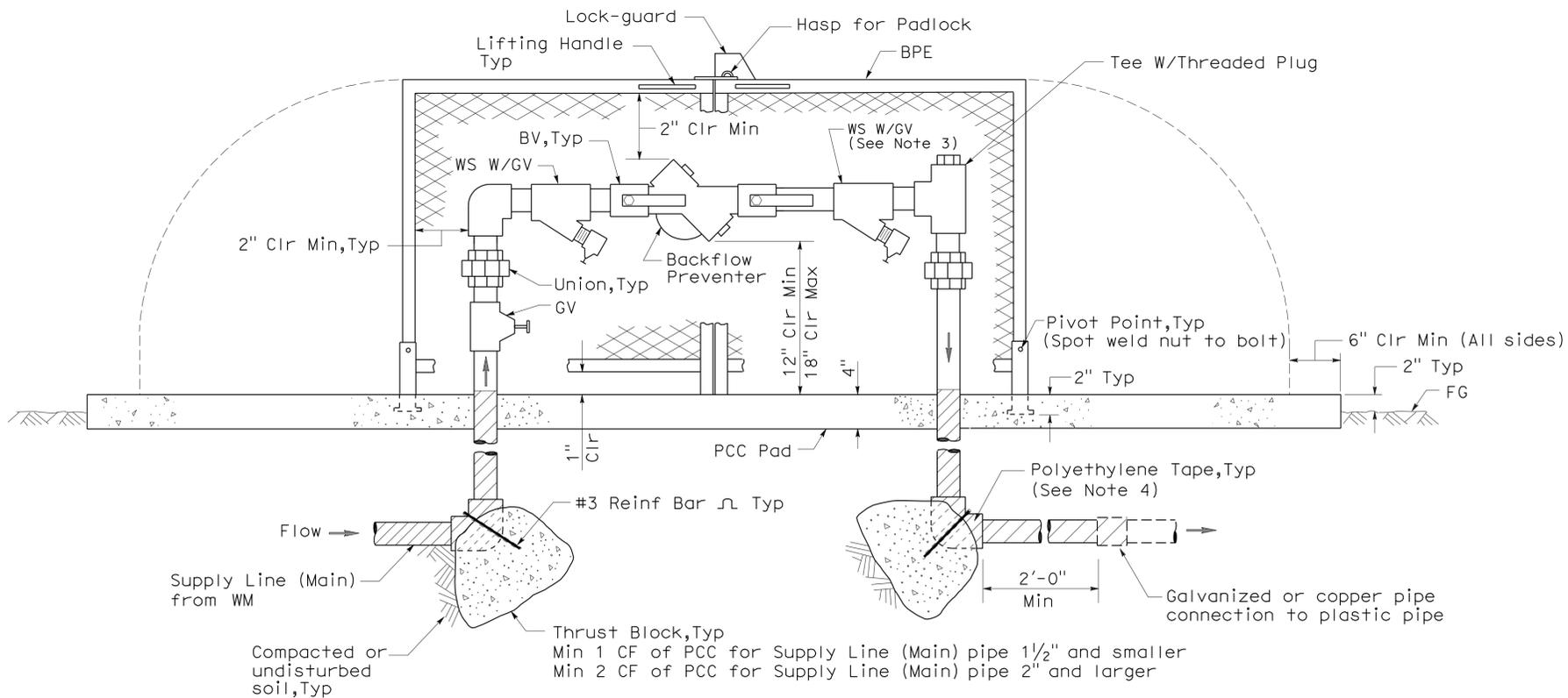
To accompany plans dated 6-20-11



**ELEVATION**  
**BACKFLOW PREVENTER ASSEMBLY IN ENCLOSURE (ONE PIECE)**

**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. Wye strainer location shown downstream of the backflow preventer is for District 11 projects only.
4. All metal in contact with soil and Portland Cement Concrete must be polyethylene wrapped using 2" wide plastic backed adhesive tape 20 mil thick with 1/2" overlap.



**ELEVATION**  
**BACKFLOW PREVENTER ASSEMBLY IN ENCLOSURE (TWO PIECE)**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**PLANTING AND IRRIGATION  
 DETAILS**  
 NO SCALE

RSP H8 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H8  
 DATED MAY 1, 2006 - PAGE 208 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP H8**

2006 REVISED STANDARD PLAN RSP H8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	536	757

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

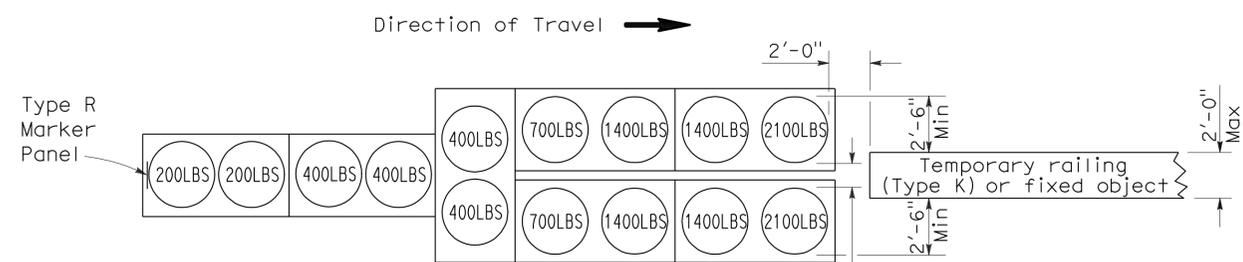
June 6, 2008  
PLANS APPROVAL DATE

*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

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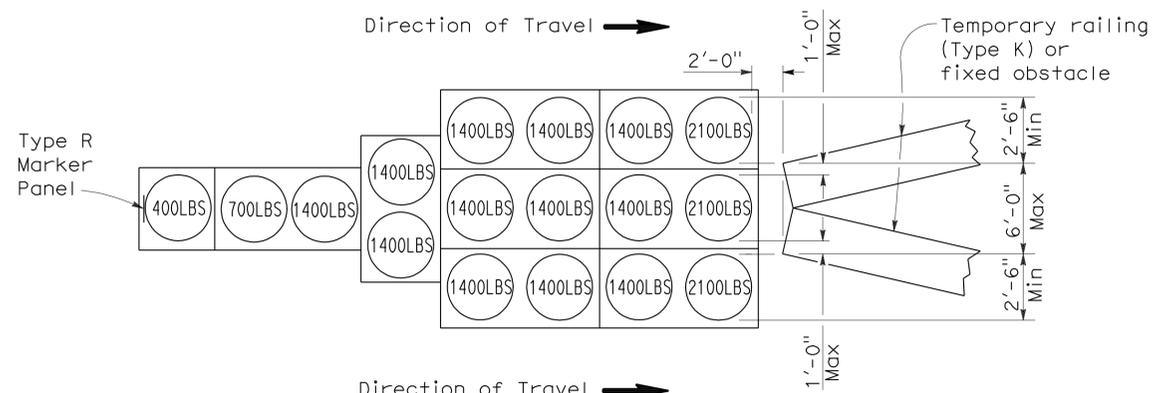
To accompany plans dated 6-20-11

2006 REVISED STANDARD PLAN RSP T1A



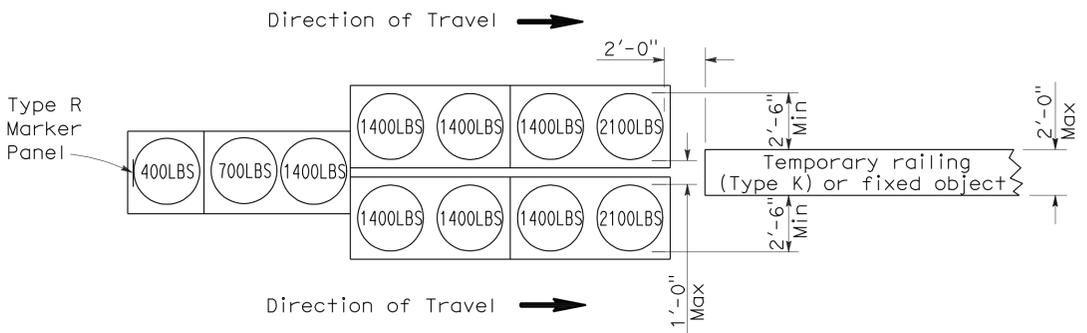
**ARRAY 'TU14'**

Approach speed 45 mph or more



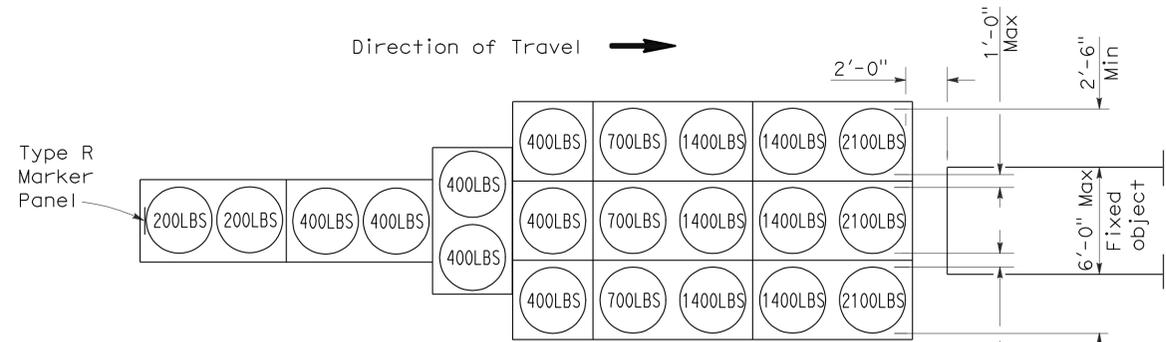
**ARRAY 'TU17'**

Approach speed less than 45 mph



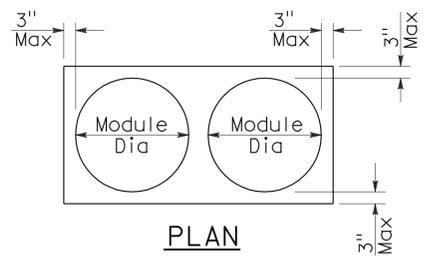
**ARRAY 'TU11'**

Approach speed less than 45 mph

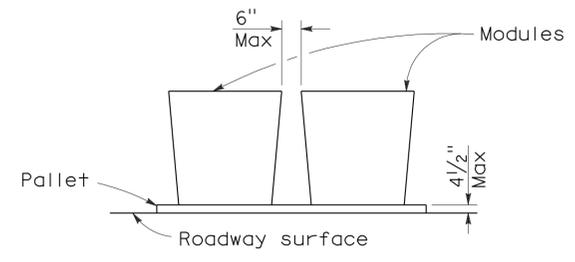


**ARRAY 'TU21'**

Approach speed 45 mph or more



**PLAN**



**ELEVATION**

**CRASH CUSHION PALLET DETAIL**

See Note 7

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(UNIDIRECTIONAL)**

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A  
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T1A**

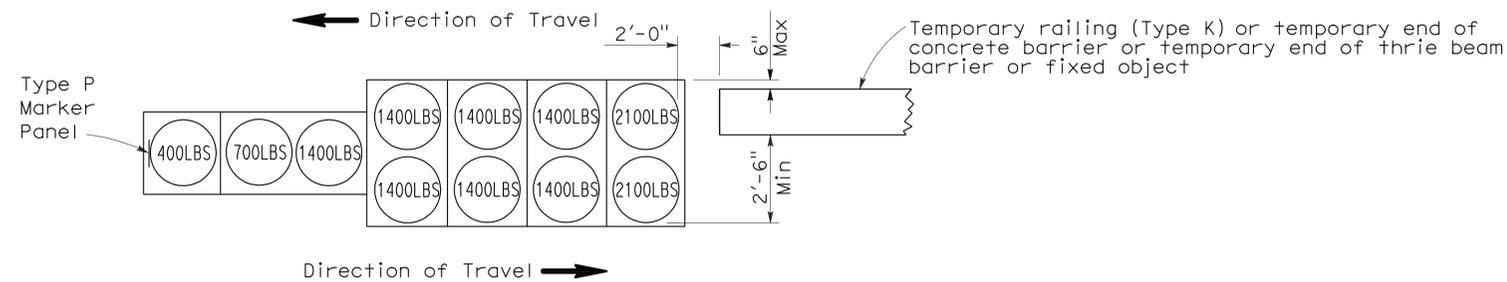
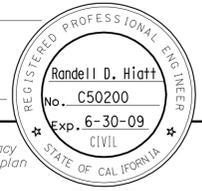
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	537	757

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

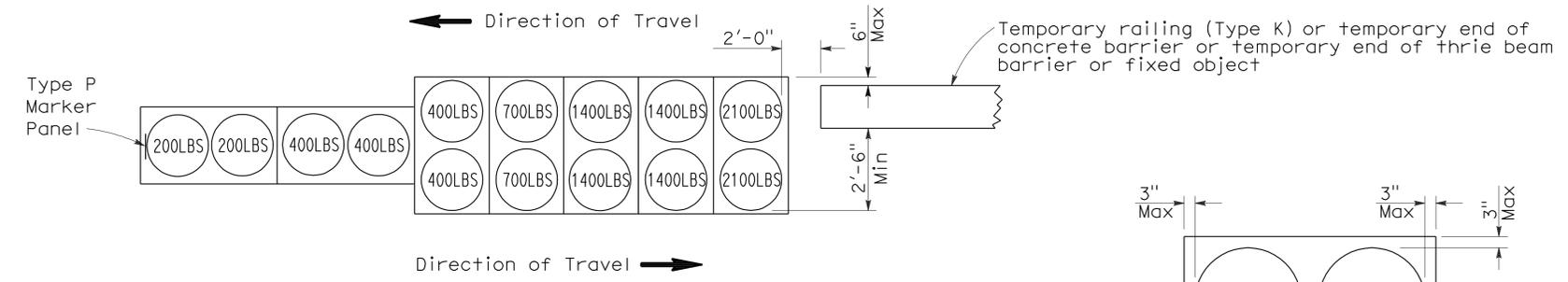
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

To accompany plans dated 6-20-11



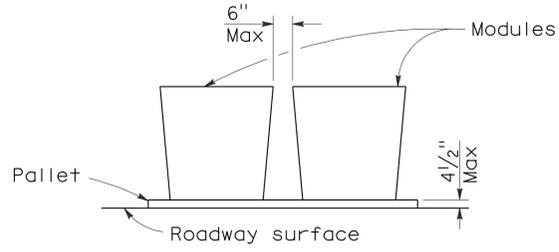
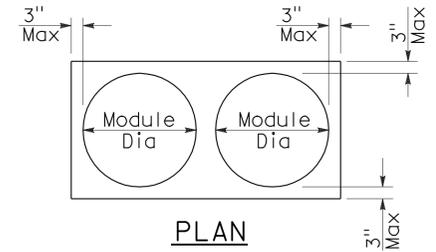
**ARRAY 'TB11'**

Approach speed less than 45 mph



**ARRAY 'TB14'**

Approach speed 45 mph or more



**CRASH CUSHION PALLET DETAIL**  
See Note 7

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(BIDIRECTIONAL)**  
NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B  
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T1B**

2006 REVISED STANDARD PLAN RSP T1B

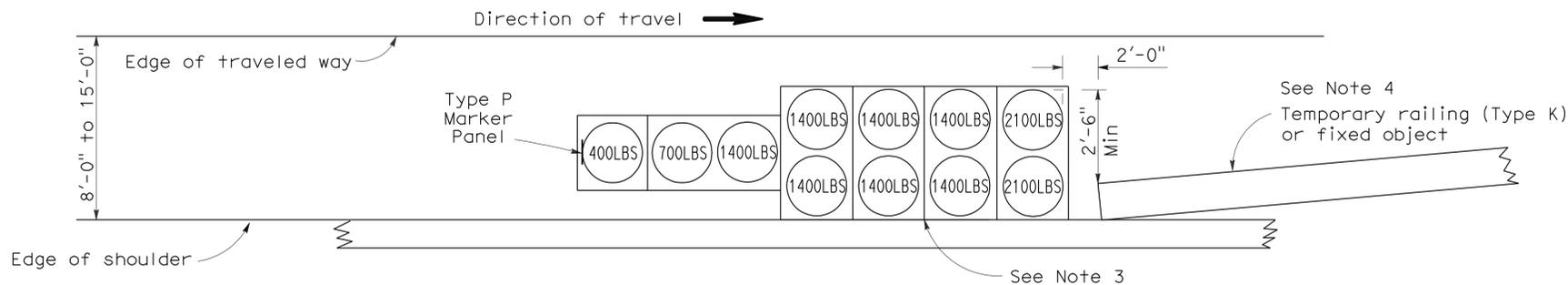
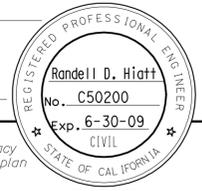
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	538	757

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

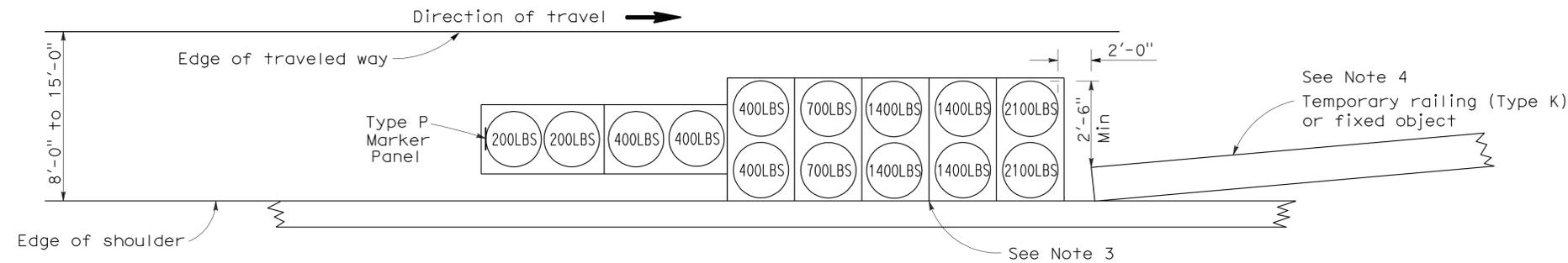
June 6, 2008  
PLANS APPROVAL DATE

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To accompany plans dated 6-20-11



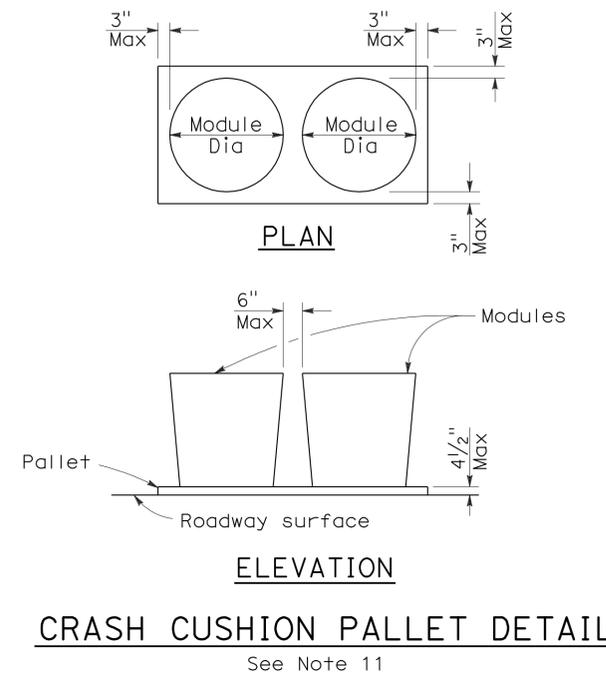
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



**ARRAY 'TS14'**  
Approach speed 45 mph or more  
See Note 9

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(SHOULDER INSTALLATIONS)**  
NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2  
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T2**

2006 REVISED STANDARD PLAN RSP T2

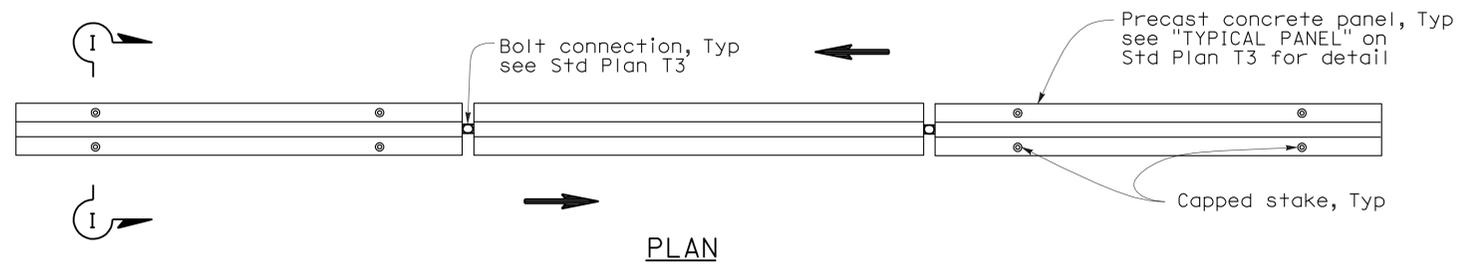
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	539	757

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

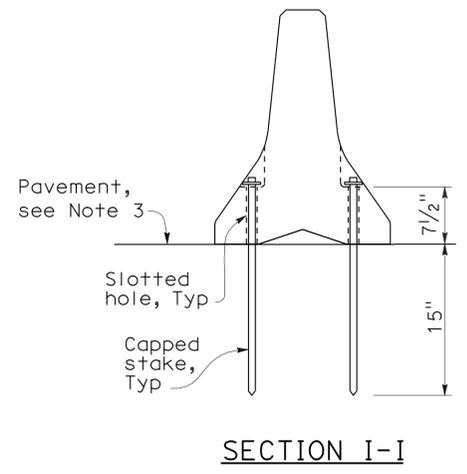
May 20, 2011  
PLANS APPROVAL DATE

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To accompany plans dated 6-20-11

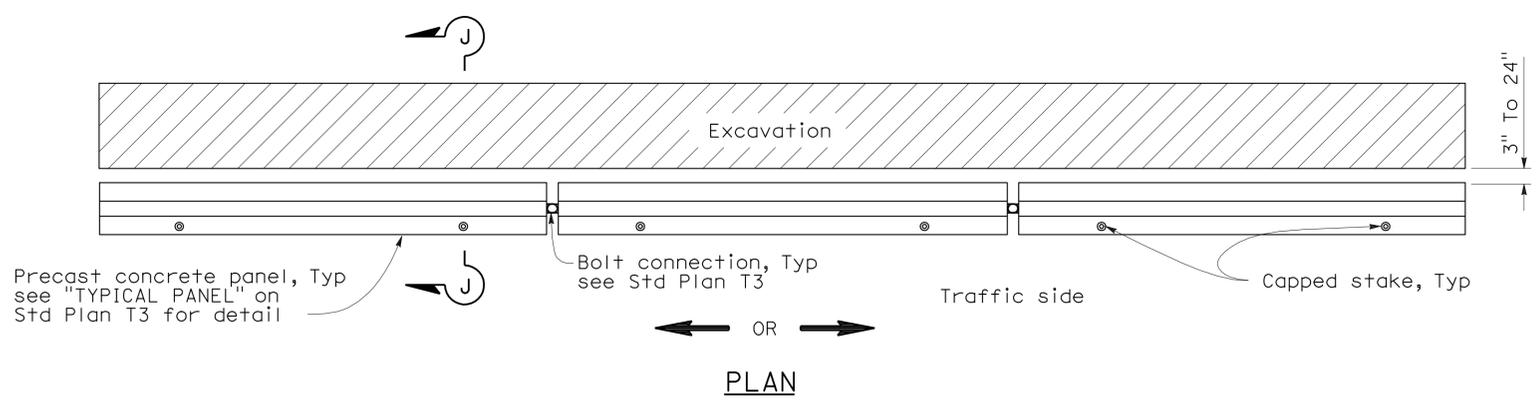


**RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC**  
See Note 1

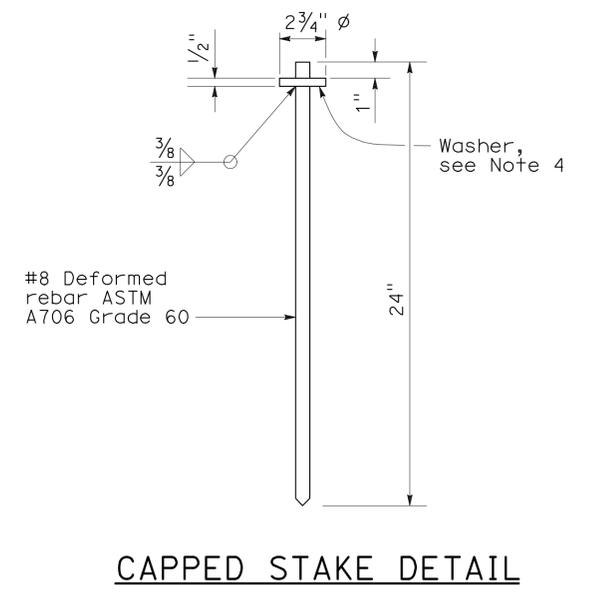
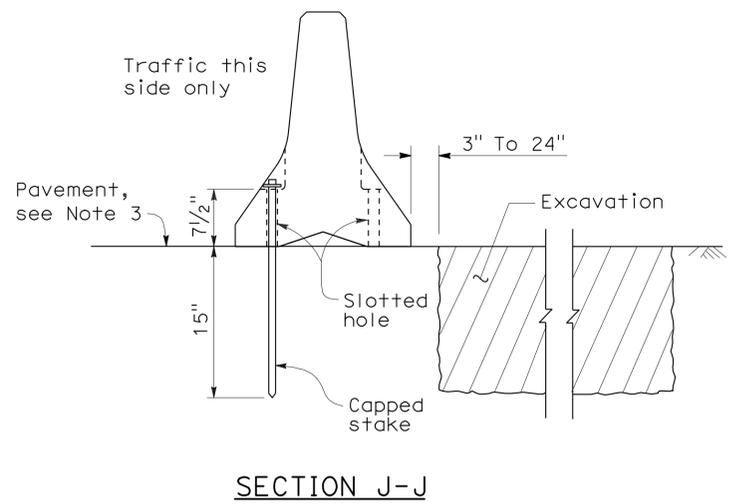


**NOTES:**

1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes per panel along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by  $\Rightarrow$ .



**RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION**  
See Note 2



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY RAILING  
(TYPE K)**

NO SCALE

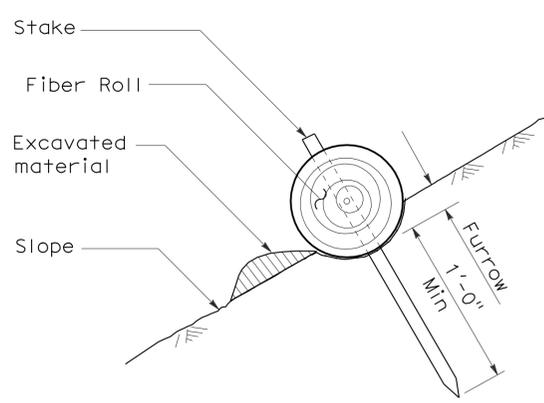
NSP T3A DATED MAY 20, 2011 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T3A

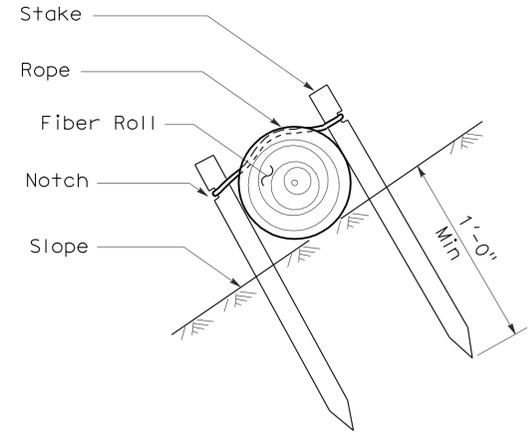
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	540	757

*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 April 3, 2009  
 PLANS APPROVAL DATE  
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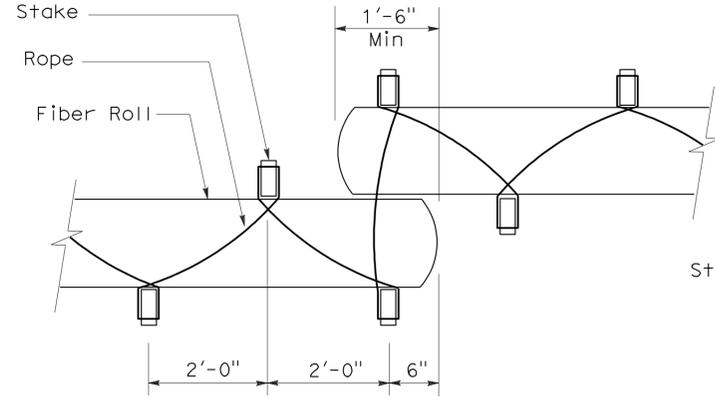
To accompany plans dated 6-20-11



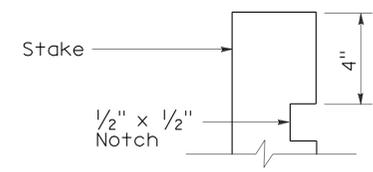
**SECTION**  
**TEMPORARY FIBER ROLL (TYPE 1)**



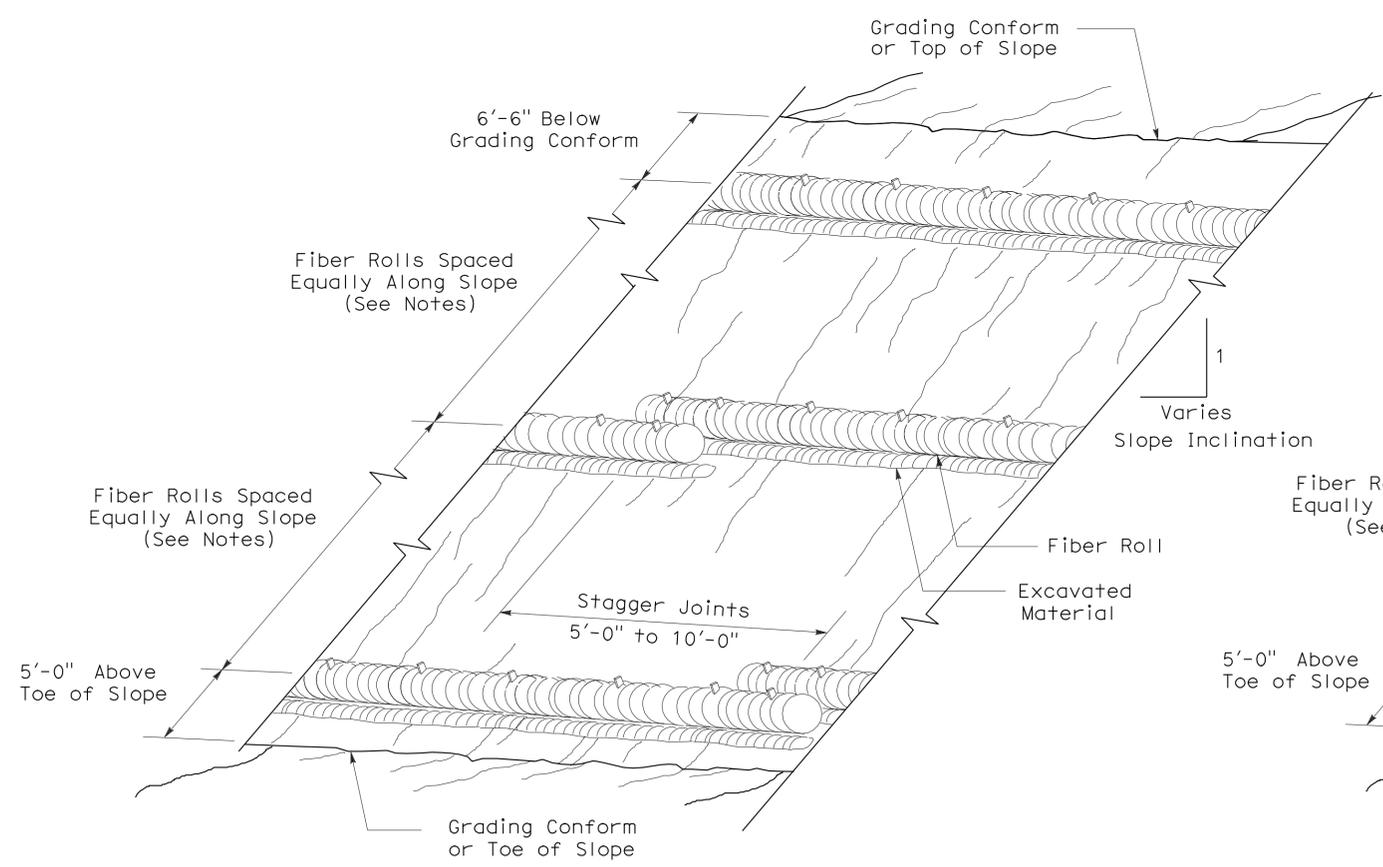
**SECTION**  
**TEMPORARY FIBER ROLL (TYPE 2)**



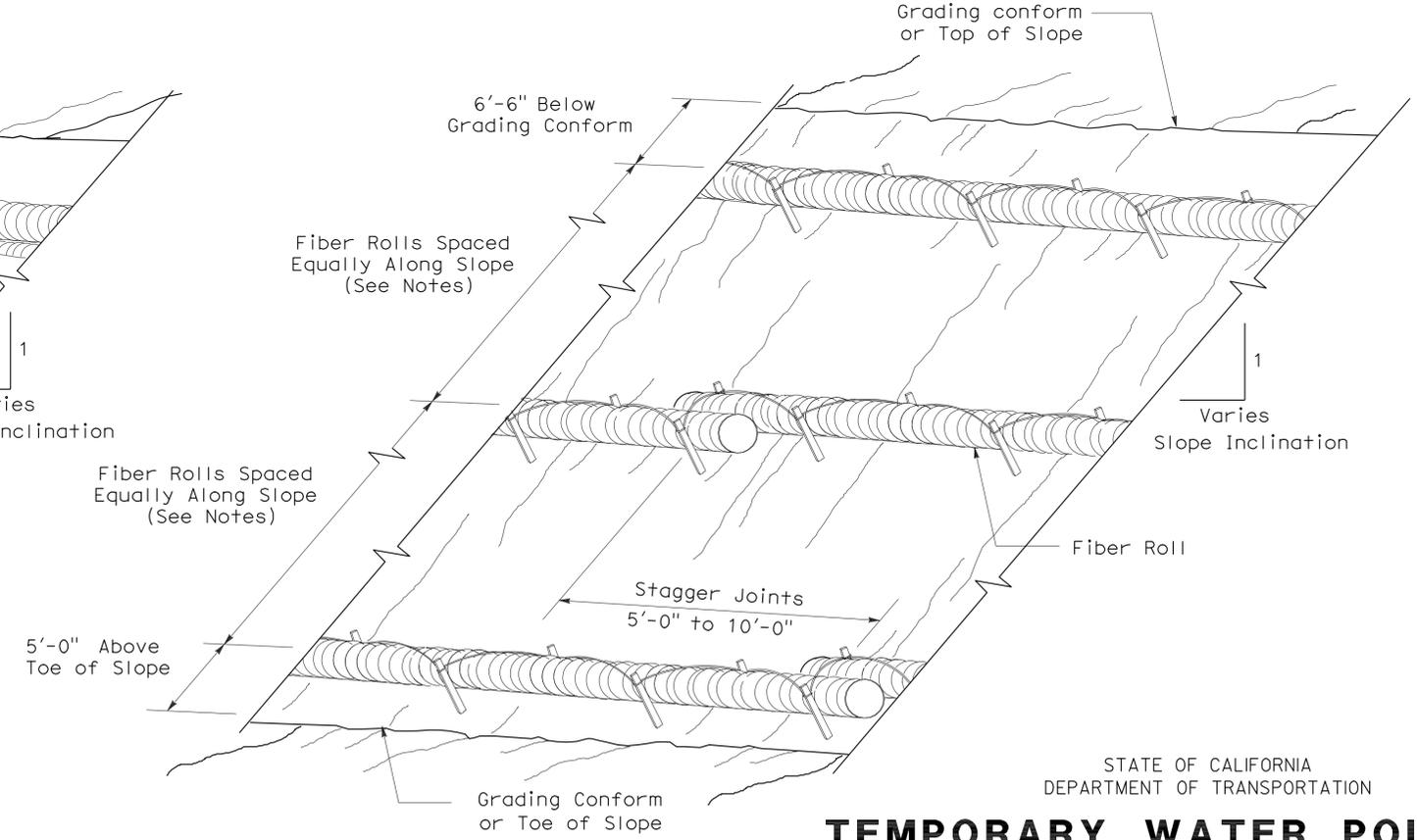
**PLAN**  
**ELEVATION**  
**STAKE NOTCH DETAIL**



- NOTES:**
1. Temporary fiber roll spacing varies depending upon slope inclination.
  2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



**PERSPECTIVE**  
**TEMPORARY FIBER ROLL (TYPE 1)**



**PERSPECTIVE**  
**TEMPORARY FIBER ROLL (TYPE 2)**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)**  
 NO SCALE

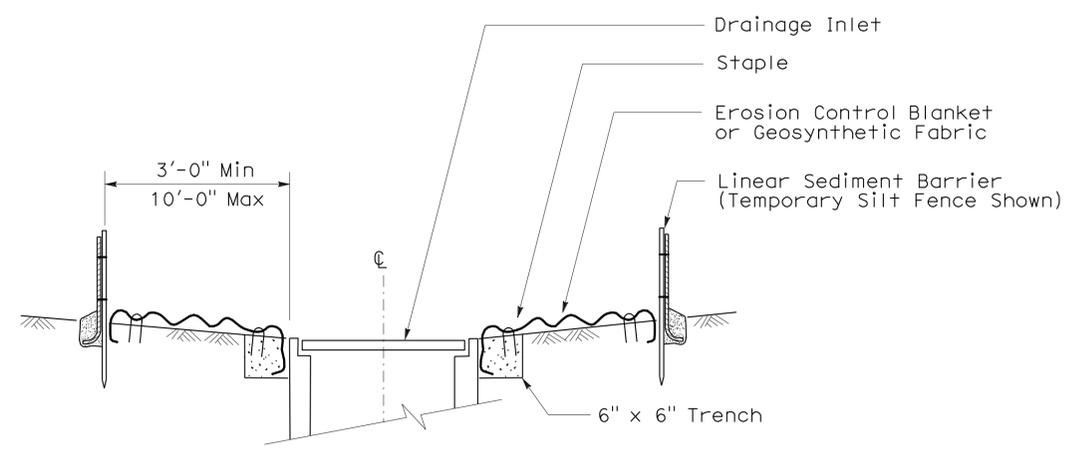
2006 REVISED STANDARD PLAN RSP T56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	541	757

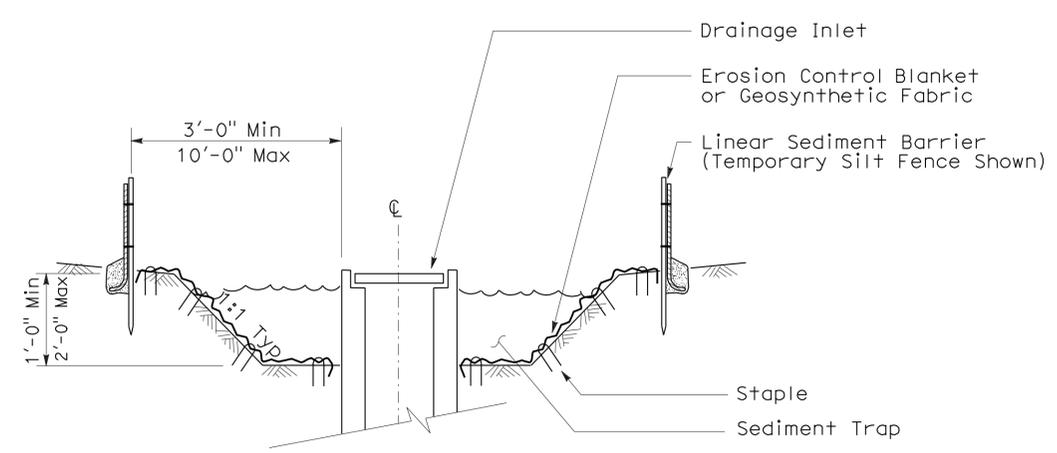
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 August 15, 2008  
 PLANS Approval DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 6-20-11

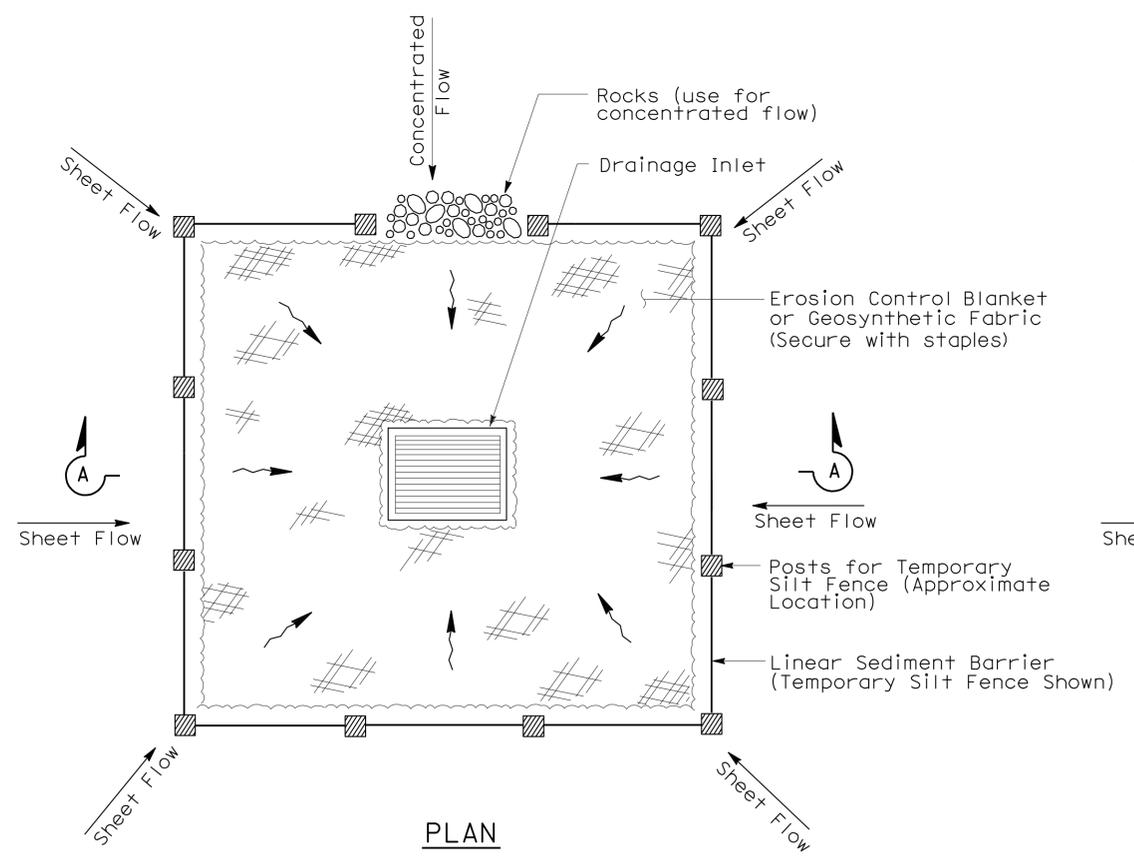
- NOTES:**
- See Standard Plan T51 for Temporary Silt Fence.
  - Dimensions may vary to fit field conditions.



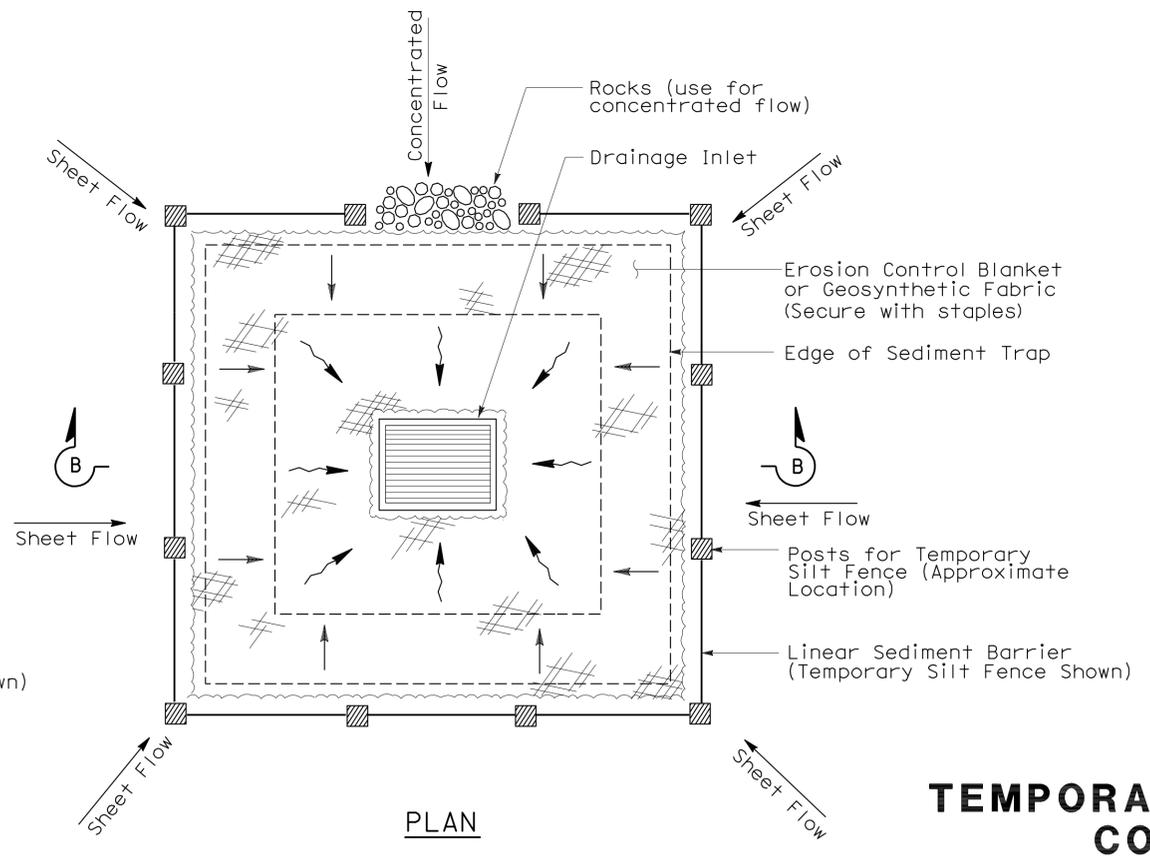
SECTION A-A



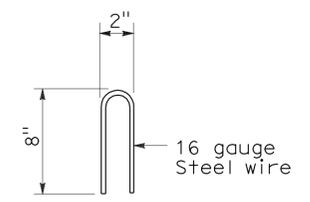
SECTION B-B



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

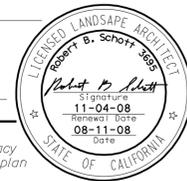
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS**  
**(TEMPORARY DRAINAGE INLET PROTECTION)**  
 NO SCALE

NSP T61 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T61

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	542	757

Robert B. Schott  
 LICENSED LANDSCAPE ARCHITECT  
 August 15, 2008  
 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.

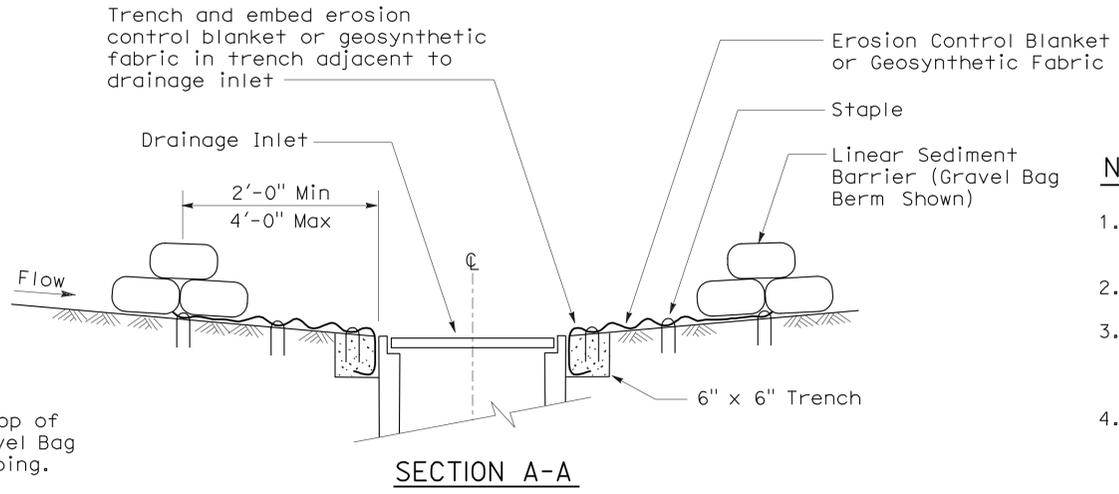
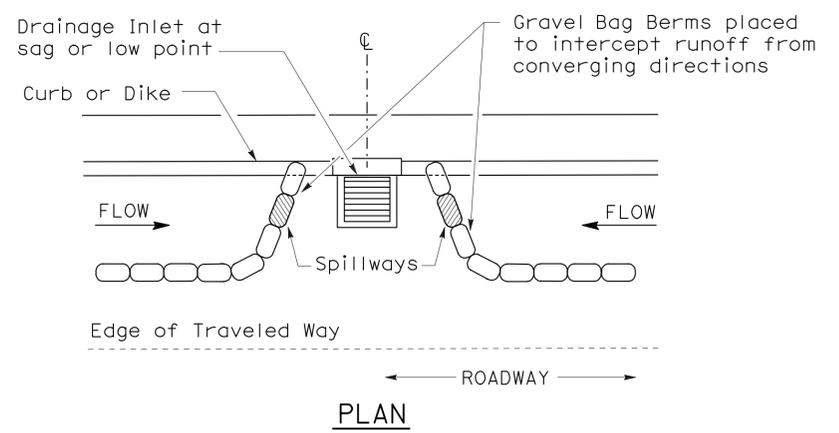


To accompany plans dated 6-20-11

### GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

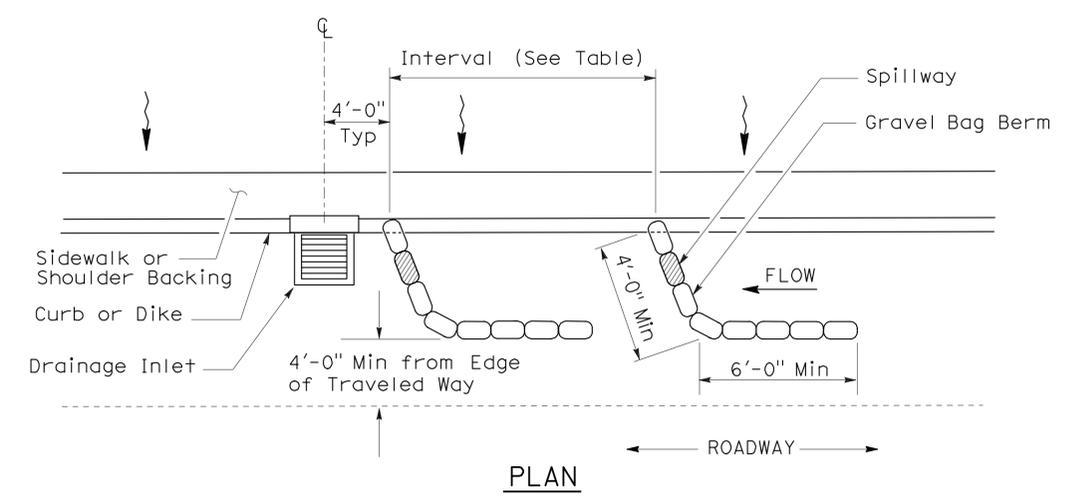
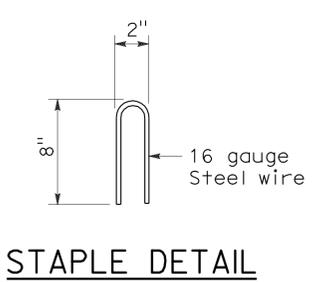
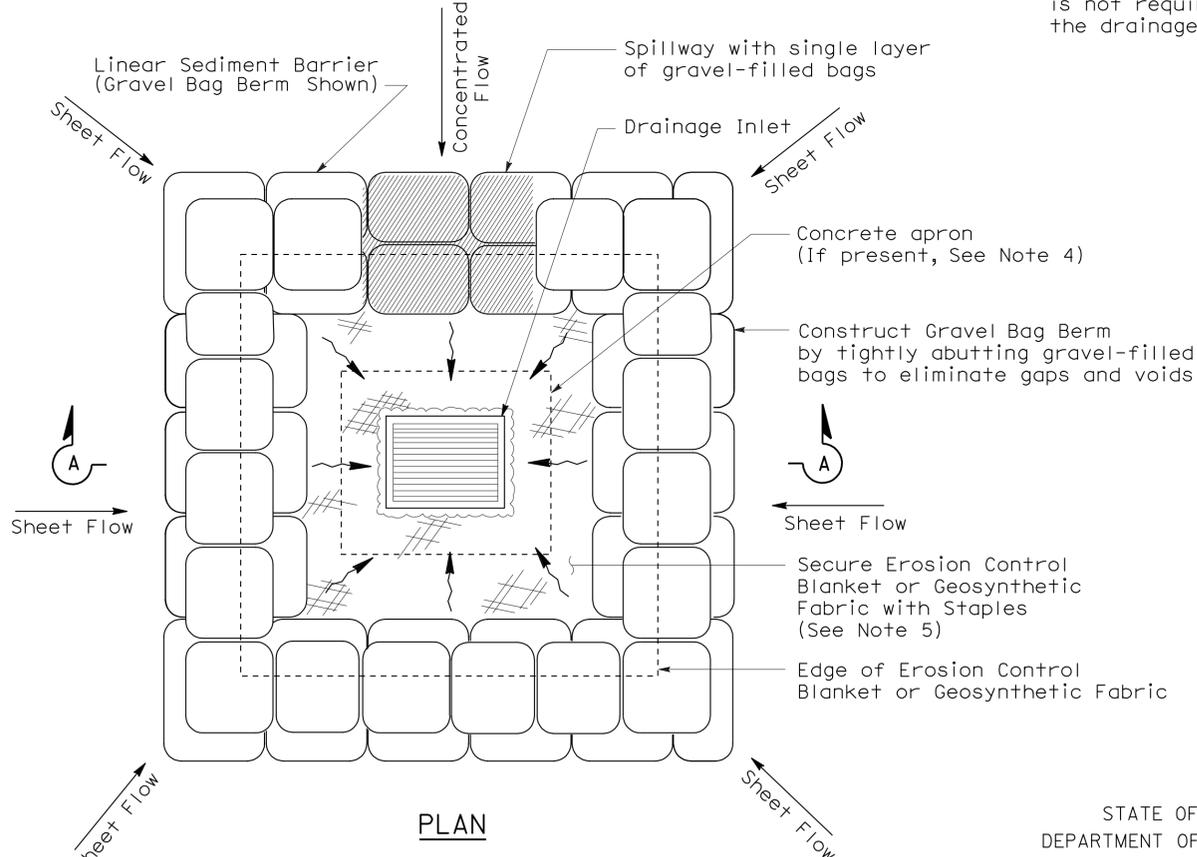
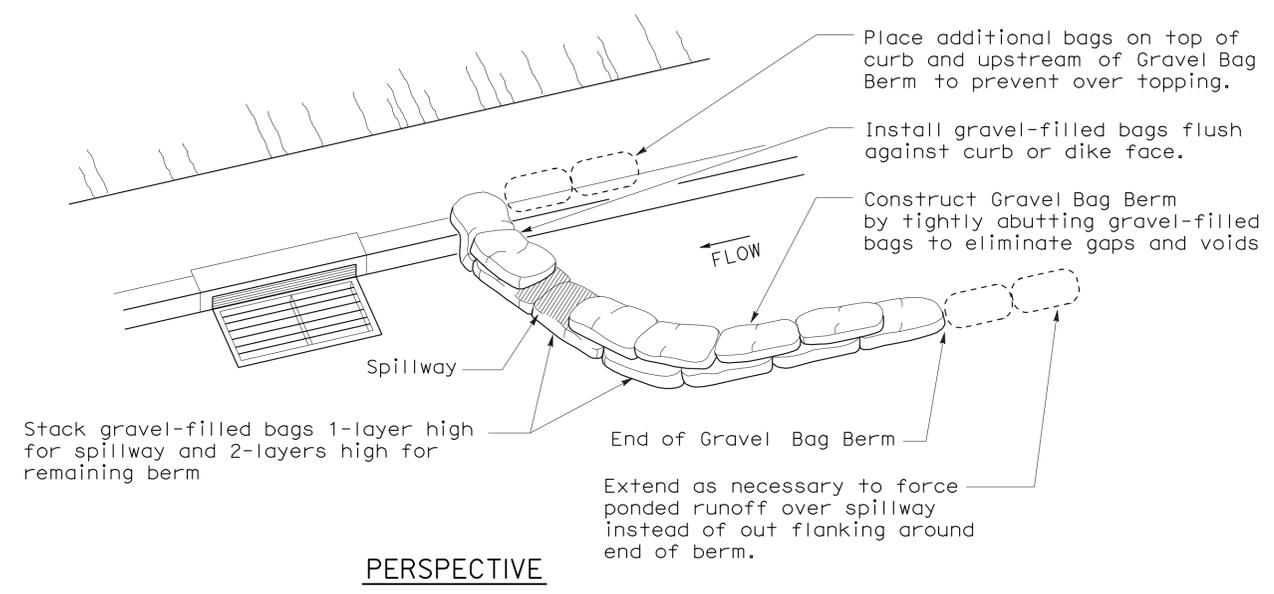
SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100'	75'	50'	25'	12'

For slope of less than 1%, install barriers only if erosion/sediment is prevalent



#### NOTES:

1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3A) (GRAVEL BAG BERM)

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)

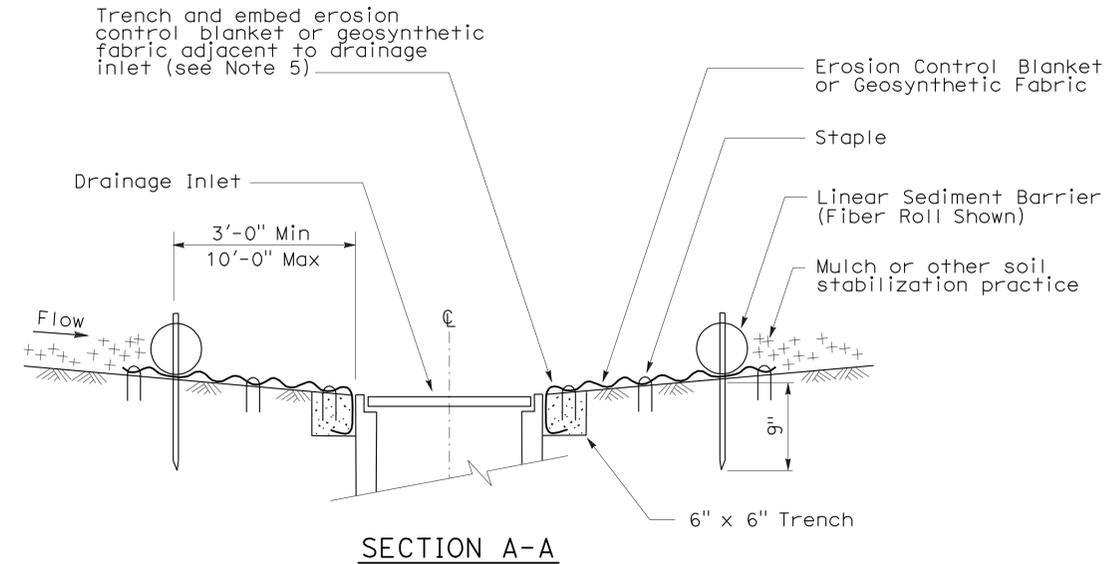
## TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE  
 NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS  
 THE STANDARD PLANS BOOK DATED MAY 2006.

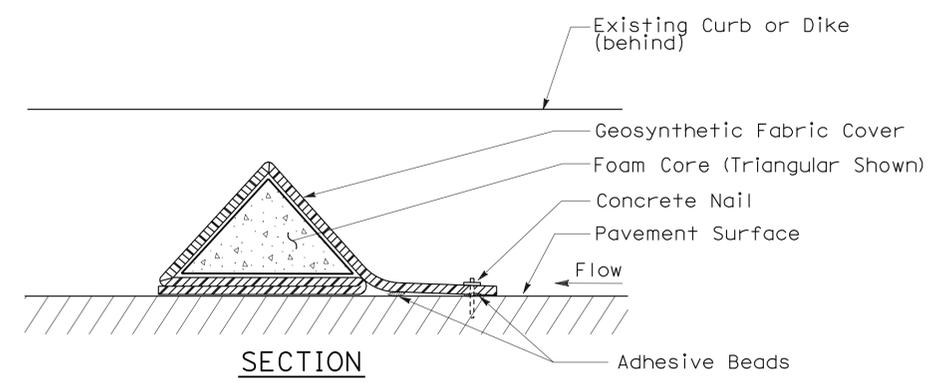
2006 NEW STANDARD PLAN NSP T62

**FLEXIBLE SEDIMENT BARRIER SPACING TABLE**

SLOPE OF ROADWAY (PERCENT)	0 to 0.9	1 to 1.9	2 to 2.9	3 to 4	5+
INTERVAL BETWEEN BARRIERS	50'	35'	30'	25'	20'
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6'	6'	6'	6'	6'



**SECTION A-A**

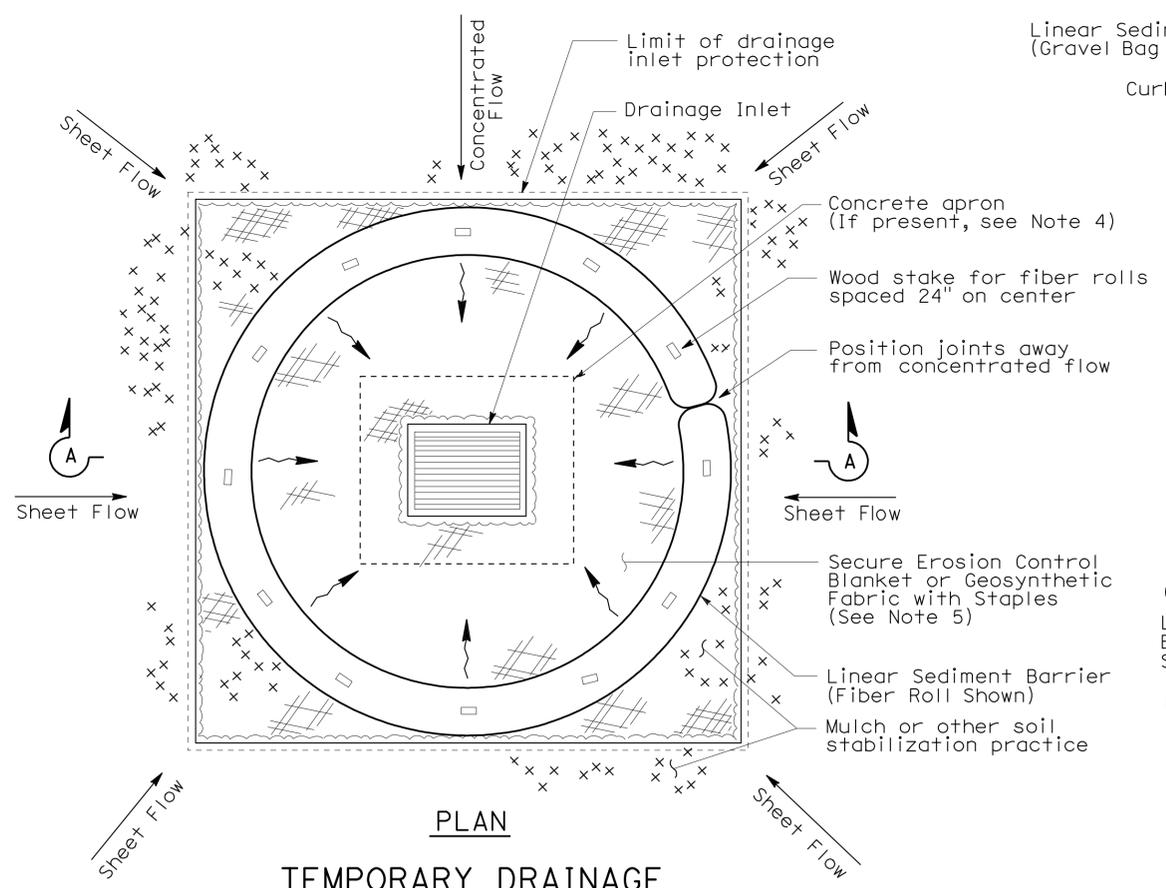


**SECTION FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)**

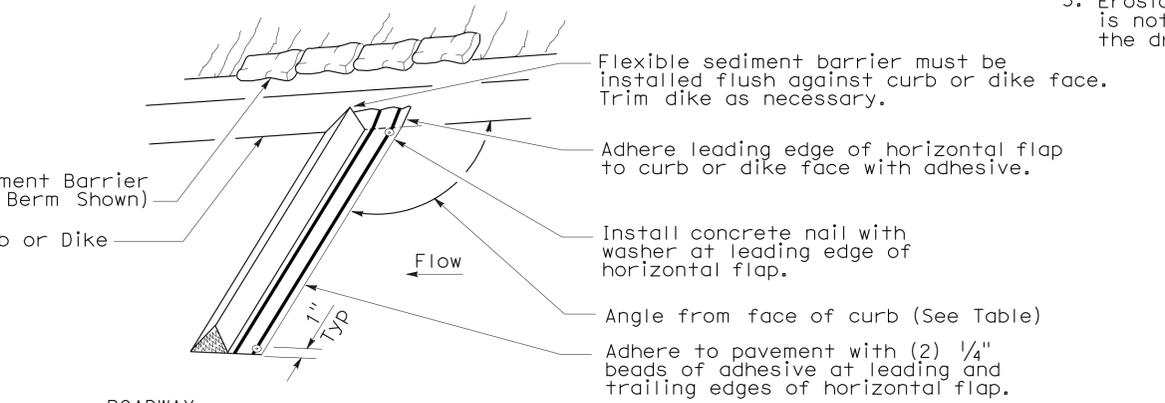
**NOTES:**

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated.

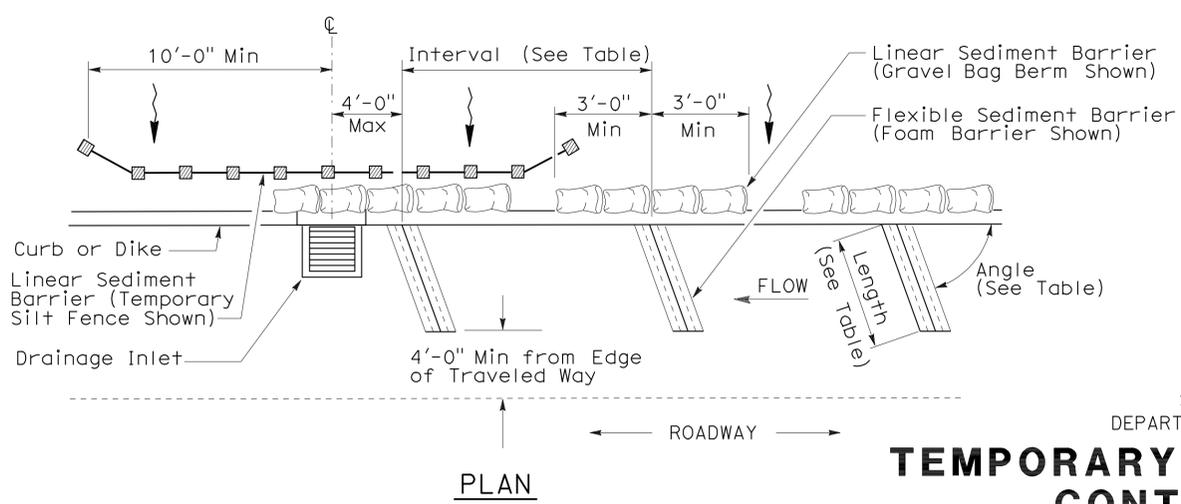
To accompany plans dated 6-20-11



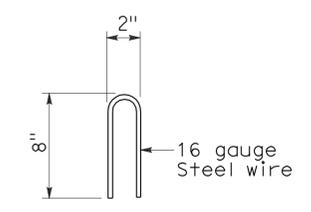
**PLAN TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)**



**PERSPECTIVE**



**PLAN TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4B) FLEXIBLE SEDIMENT BARRIER**



**STAPLE DETAIL**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)**  
 NO SCALE  
 NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

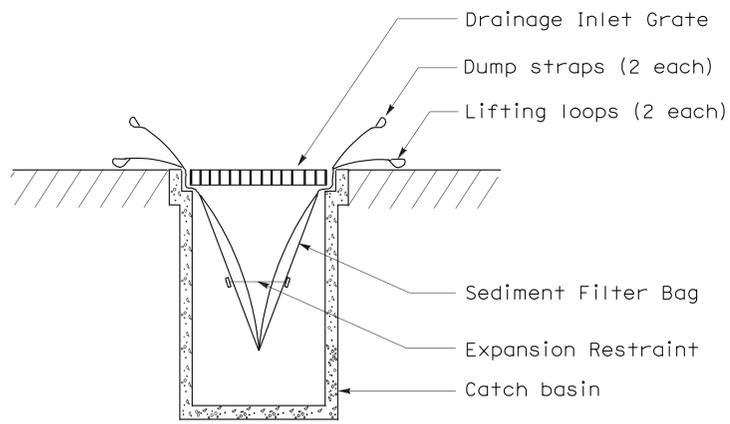
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	544	757

*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT

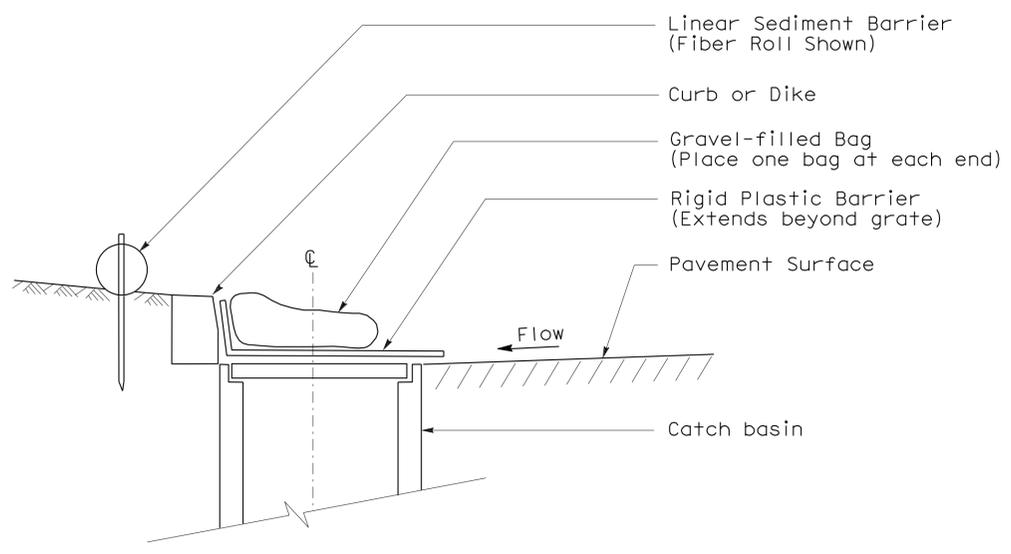
August 15, 2008  
 PLANS APPROVAL DATE

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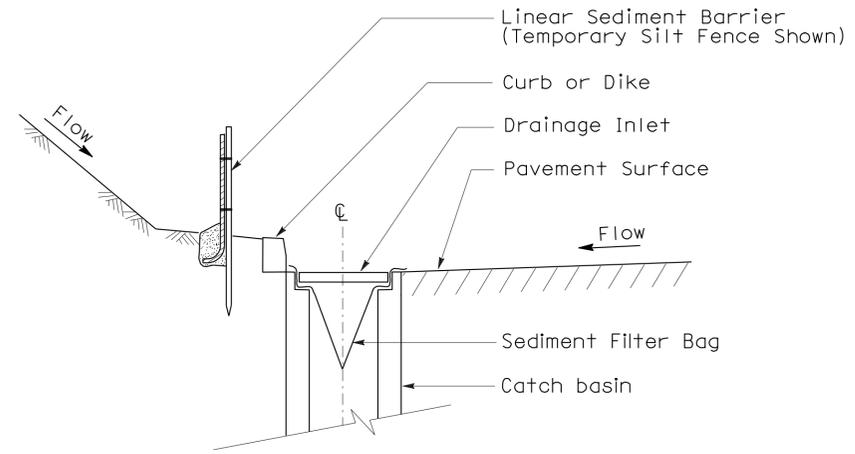
To accompany plans dated 6-20-11



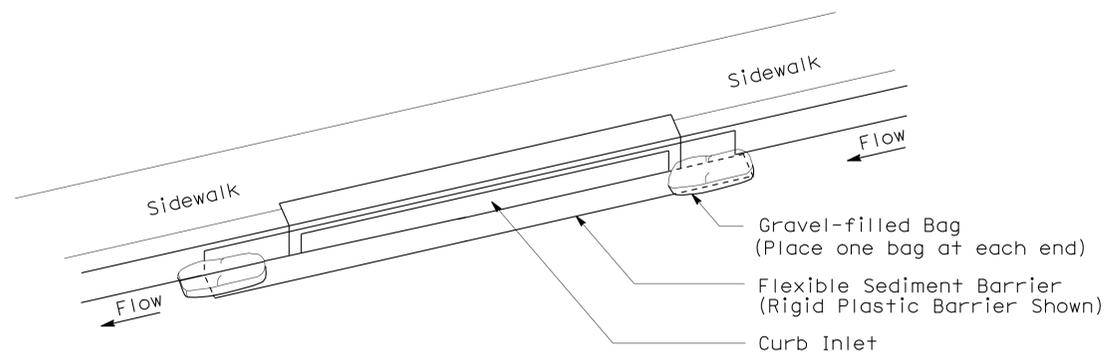
SECTION B-B  
SEDIMENT FILTER BAG DETAIL



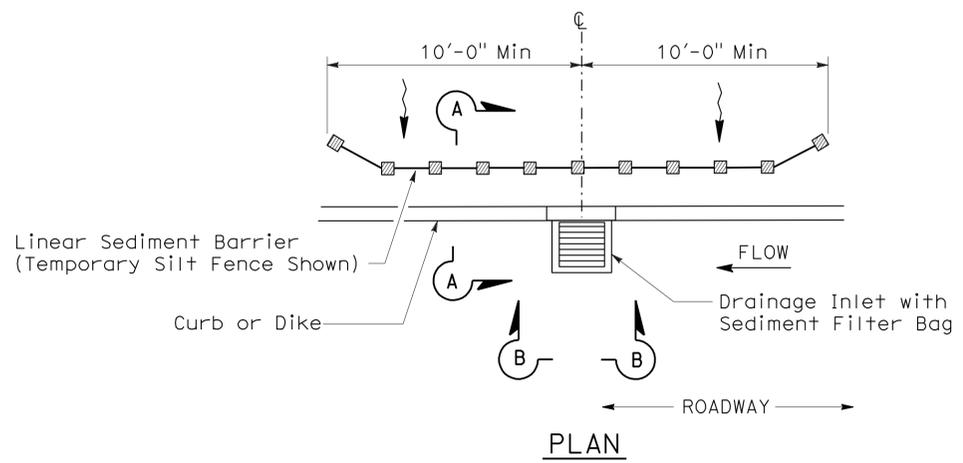
SECTION  
TEMPORARY DRAINAGE  
INLET PROTECTION (TYPE 6A)  
(CATCH BASIN WITH GRATE)



SECTION A-A



PERSPECTIVE  
TEMPORARY DRAINAGE  
INLET PROTECTION (TYPE 6B)  
(CURB INLET WITHOUT GRATE)



PLAN  
TEMPORARY DRAINAGE  
INLET PROTECTION (TYPE 5)  
(SEDIMENT FILTER BAG)

**NOTES:**

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)**

NO SCALE

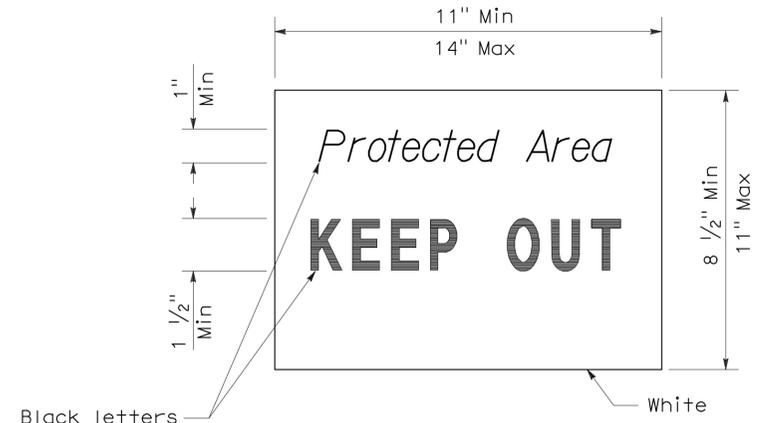
NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP T64**

2006 NEW STANDARD PLAN NSP T64

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	545	757

*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 April 3, 2009  
 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.

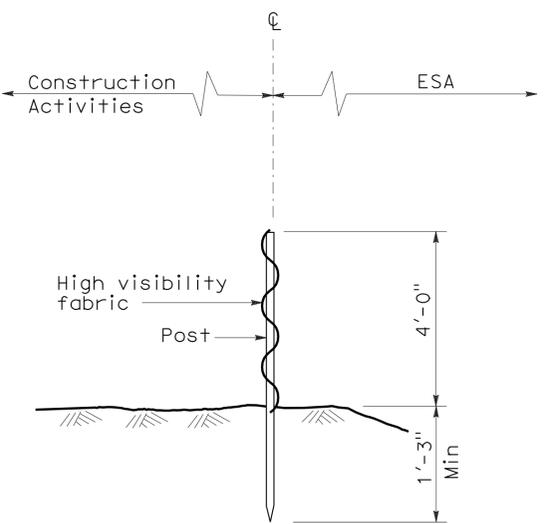


**SIGN DETAIL**

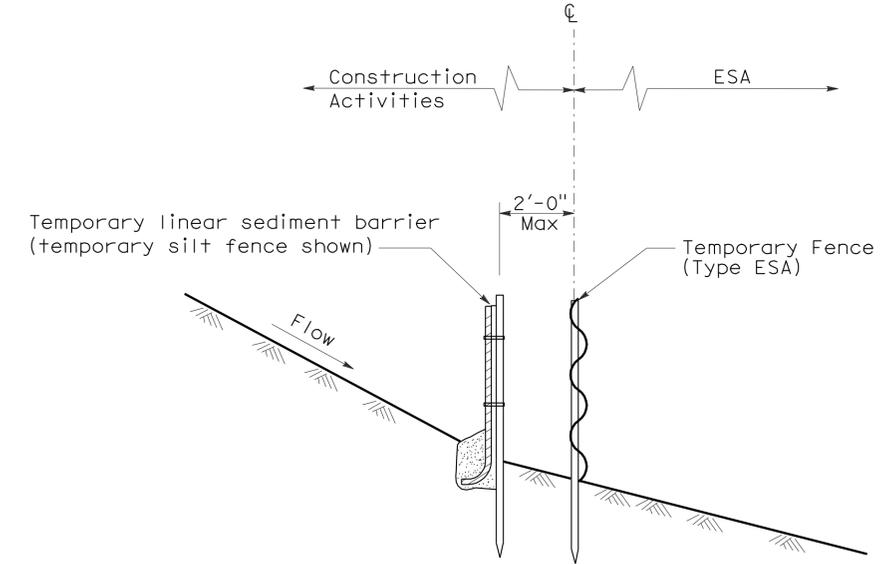
To accompany plans dated 6-20-11

**NOTE:**

1. Temporary silt fence and temporary straw bale barrier shown for reference purposes only.

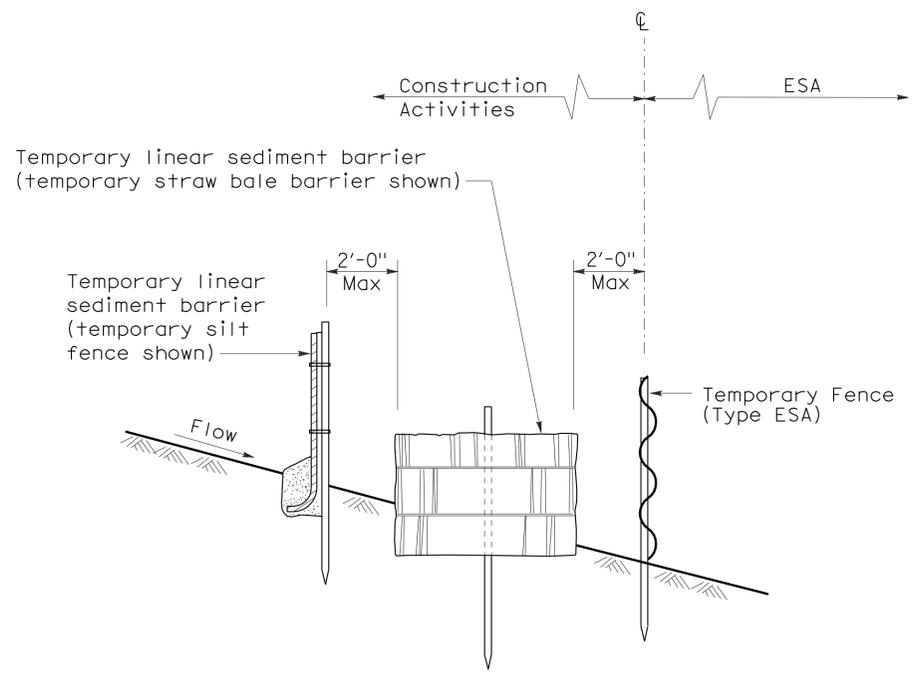


**SECTION TEMPORARY FENCE (TYPE ESA)**



**SECTION PLACEMENT DETAIL FOR TEMPORARY LINEAR SEDIMENT BARRIER USED WITH TEMPORARY FENCE (TYPE ESA)**

(See Note 1)



**SECTION PLACEMENT DETAIL FOR TEMPORARY SILT FENCE AND TEMPORARY STRAW BALE BARRIER USED WITH TEMPORARY FENCE (TYPE ESA)**

(See Note 1)

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS [TEMPORARY FENCE (TYPE ESA)]**

NO SCALE

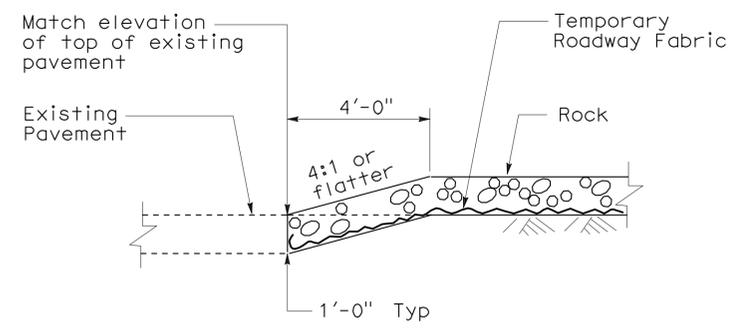
NSP T65 DATED APRIL 3, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T65

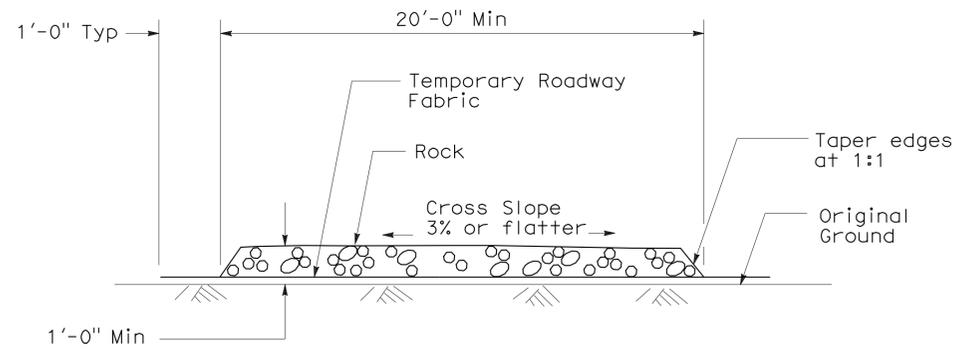
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	546	757

*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 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.

To accompany plans dated 6-20-11



SECTION  
CONFORM DETAIL



SECTION  
TEMPORARY CONSTRUCTION ROADWAY

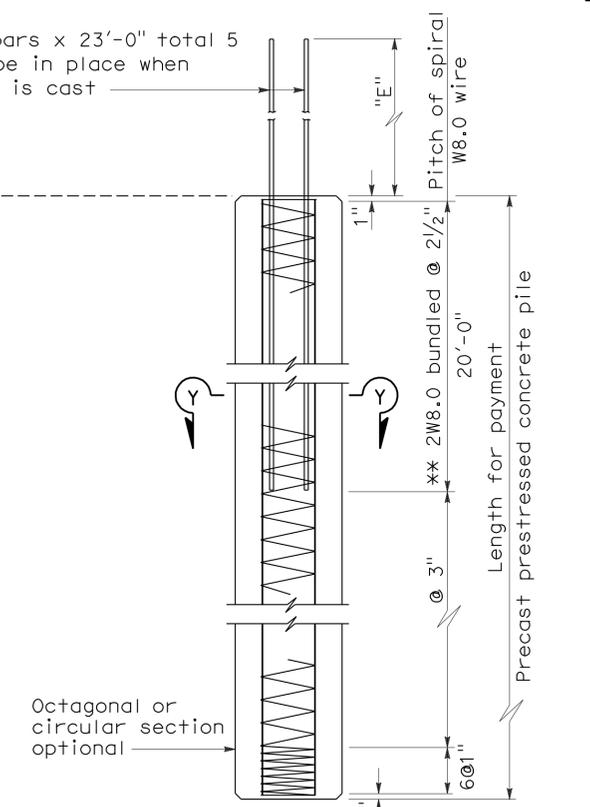
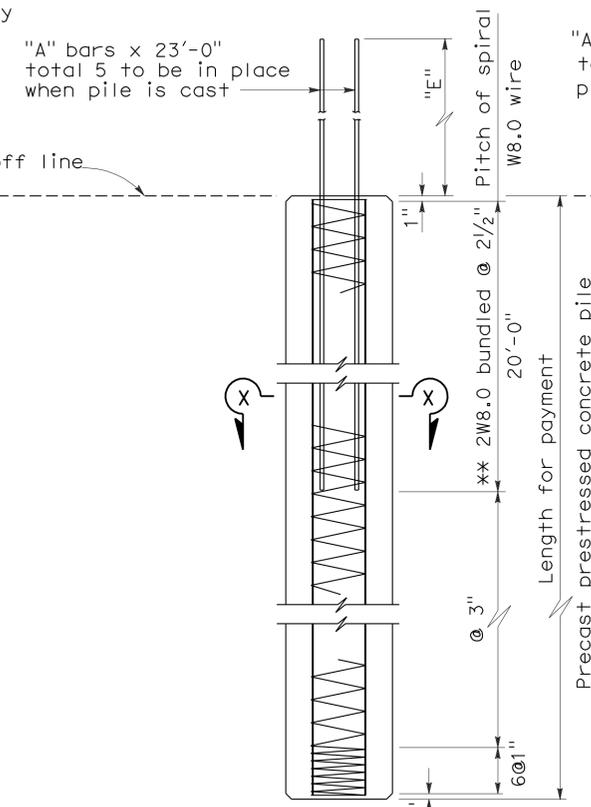
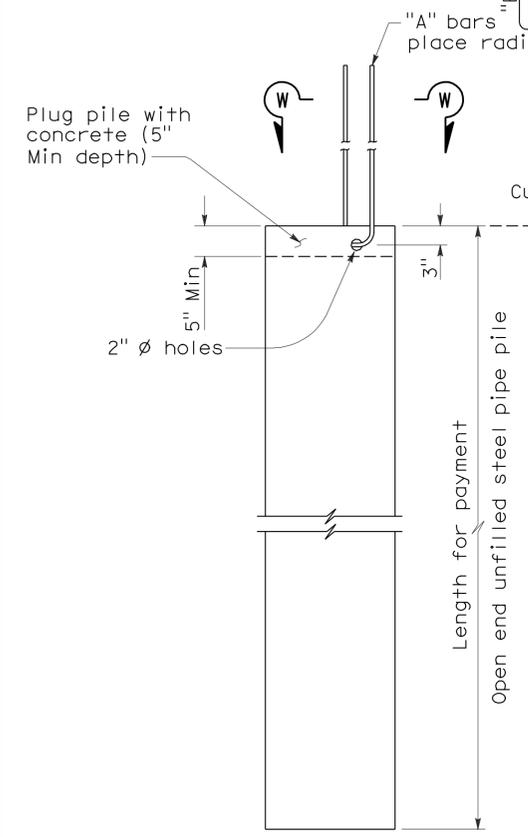
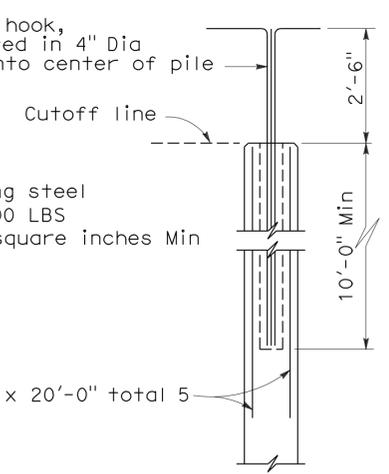
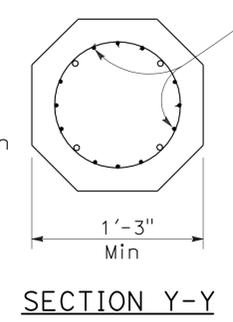
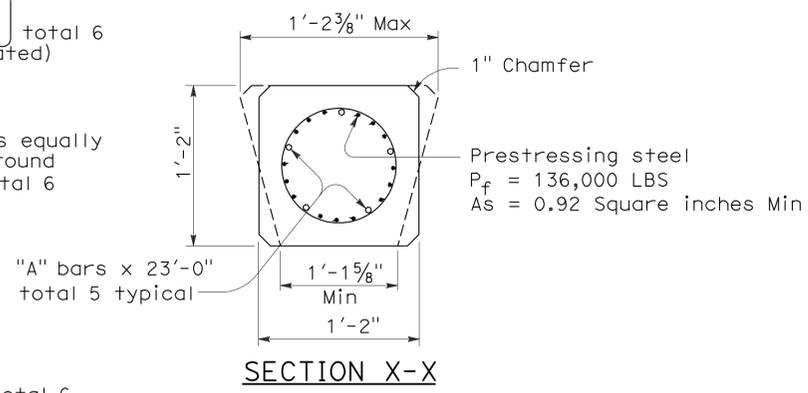
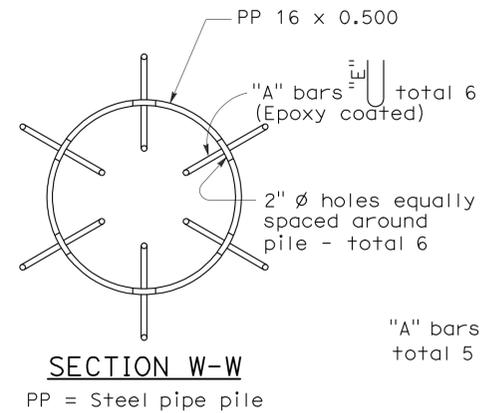
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION  
CONTROL DETAILS  
(TEMPORARY CONSTRUCTION  
ROADWAY)**

NO SCALE  
NSP T67 DATED JUNE 5, 2009 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T67

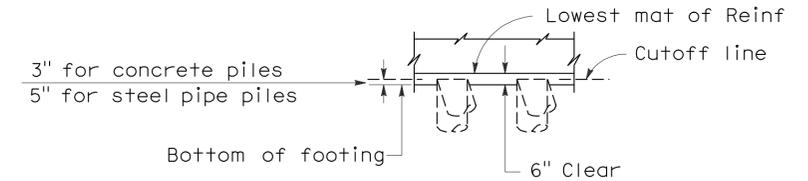
To accompany plans dated 6-20-11

2006 REVISED STANDARD PLAN RSP B2-8



	Nominal Resistance (Tension) *	
	Not Required	Required
"A" bars	#6	#8
"E" Dimension	2'-0"	2'-10"

\* See Pile Data Table in the Project Plans for Nominal Resistance (Tension) Requirements



**DESIGN NOTES:**

**DESIGN CAPACITY :**

- Compression = 200 kip (Service state)
- = 400 kip (Nominal axial strength)
- Tension = 80 kip (Service state)
- = 200 kip (Nominal axial strength)

**REINFORCED CONCRETE**

f'c = 4,000 psi  
fy = 60,000 psi

**PRECAST PRESTRESSED PILES**

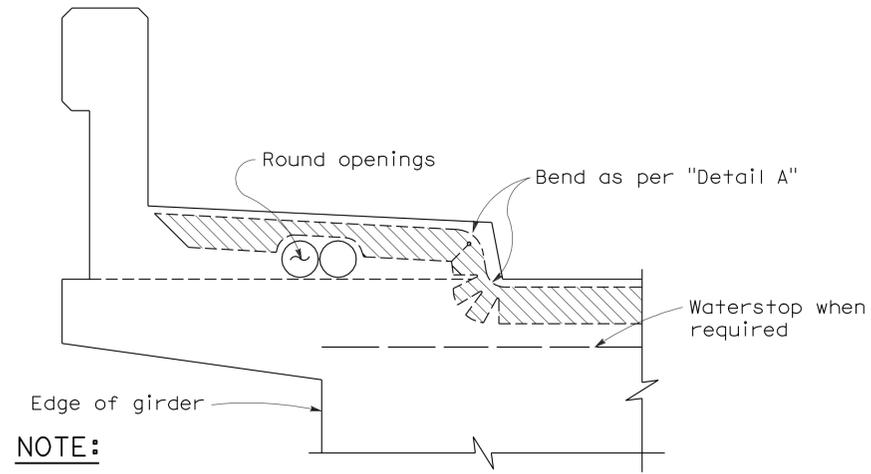
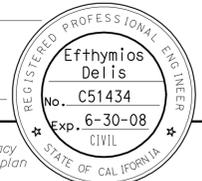
Pf = Prestress Force (After losses)  
Concrete Strength f'c @ 28 days = 7,000 psi  
f'ci @ transfer = 4,000 psi

**STEEL PIPE PILE**

Fy (minimum yield strength) = 45,000 psi  
Fu (minimum tensile strength) = 66,000 psi

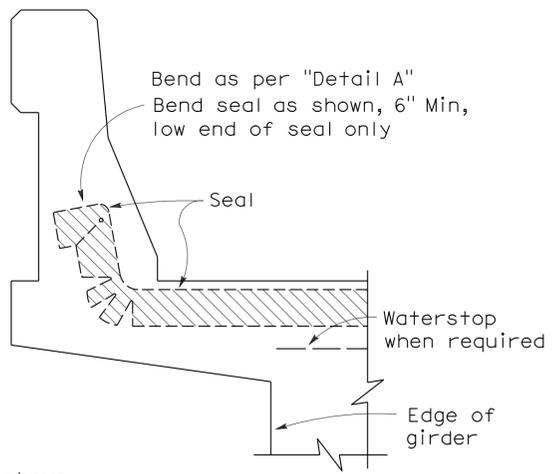
**NOTES:**

- Pile reinforcement extending into footing shall be hooked as required to provide clearance to top of footing.
- Lapped splices in spiral pile reinforcement shall be lapped 80 wire diameters minimum. Spiral pile reinforcement at splices and at ends shall be terminated by a 135 degree hook with 6 inch tail hooked around a longitudinal bar or strand.
- At the Contractor's option, alternative steel pipe with at least the diameter and wall thickness shown on these plans may be used. The diameter shall not exceed 1'-6 inches.
- Alternative "W" piles shall not be used for corrosive environments.
- Maximum cut-off length at the top of the Alternative "X" and Alternative "Y" piles is 10'-0 inches.

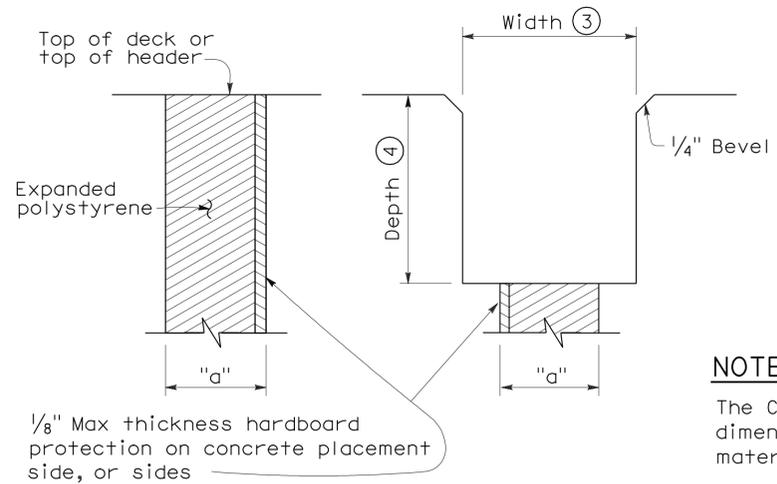


**NOTE:**  
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend Type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

**CONCRETE BARRIER AND SIDEWALK**



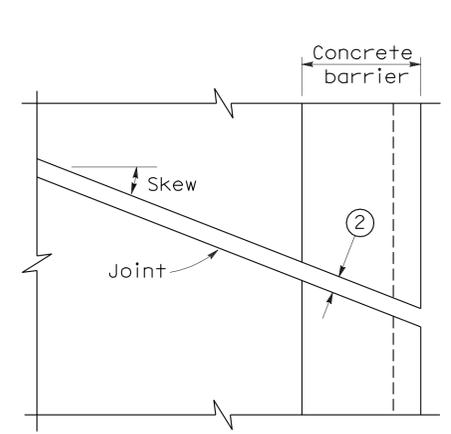
**CONCRETE BARRIER**



**FORMING DETAIL SAWCUT DETAIL**

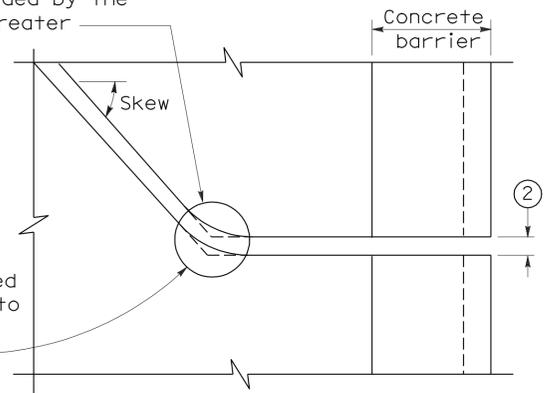
**NOTE:**  
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

**JOINT SEALS DETAILS**



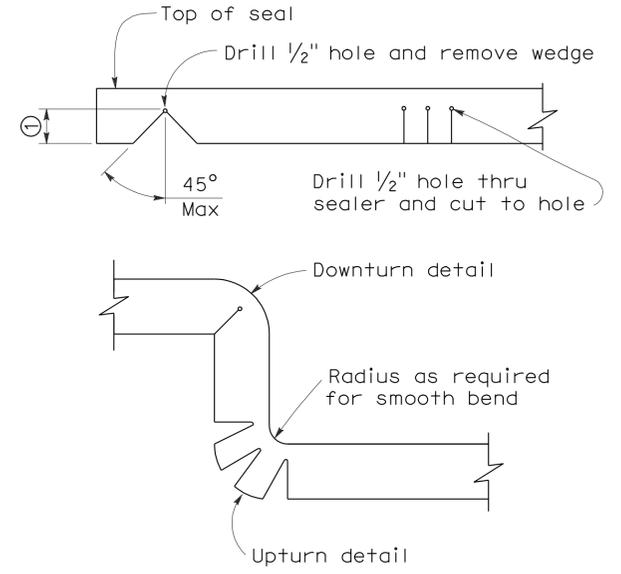
**PLAN OF JOINT (SKEW ≤ 20°)**

Min  $\phi$  radius to be 4 times uncompressed width of seal or as recommended by the manufacturer, whichever is greater



**PLAN OF JOINT (SKEW > 20°)**

In lieu of saw cutting, this area may be blocked out and reconstructed to match saw cutting on both sides.



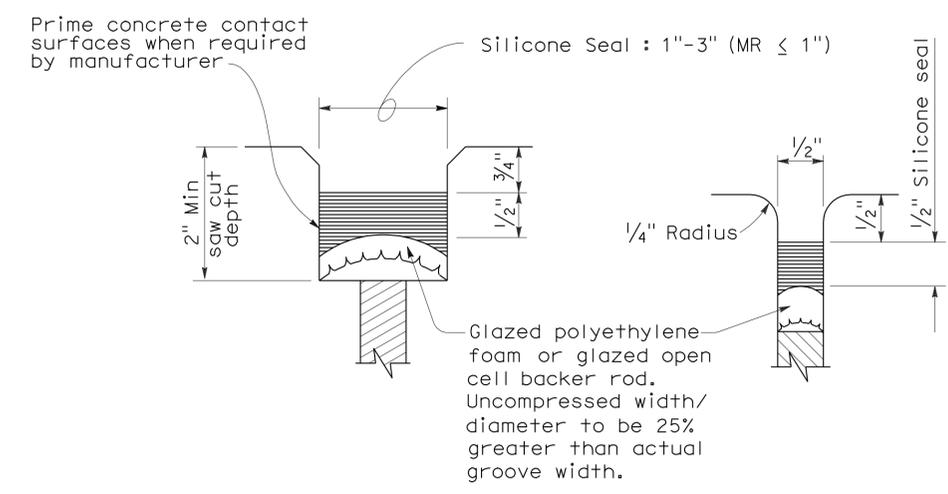
**DETAIL A**

- NOTES:**
- Make smooth cuts from the bottom of seal to 1 1/2" clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
  - Opening in barrier to match width of sawn deck joint.
  - Sawcut groove widths shall be as ordered by the Engineer.
  - Depth of sawcut: Type A - Depth to be 2" minimum.  
 Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W<sub>2</sub>) plus dimensions shown.
  - MR (movement rating) as shown on other plan sheets.
  - Other depths must be approved by the Engineer.

**DIMENSIONS "a" OF JOINT REQUIRED**

Movement Rating (MR) ⑤	Bridge Type	"a" Dimension		
		Deck Concrete Placed		
		Winter	Fall-Spring	Summer
2"	All except CIP/PS	1 1/2"	1 1/4"	3/4"
	CIP/PS	1 1/4"	1"	1/2"
1 1/2"	All except CIP/PS	1 1/4"	1"	1/2"
	CIP/PS	1"	3/4"	1/2"
1"	All except CIP/PS	1"	3/4"	1/2"
	CIP/PS	3/4"	1/2"	1/2"
1/2"	All except CIP/PS	3/4"	3/4"	1/2"
	CIP/PS	1/2"	1/2"	1/2"

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**JOINT SEALS**  
**(MAXIMUM MOVEMENT RATING = 2")**  
 NO SCALE

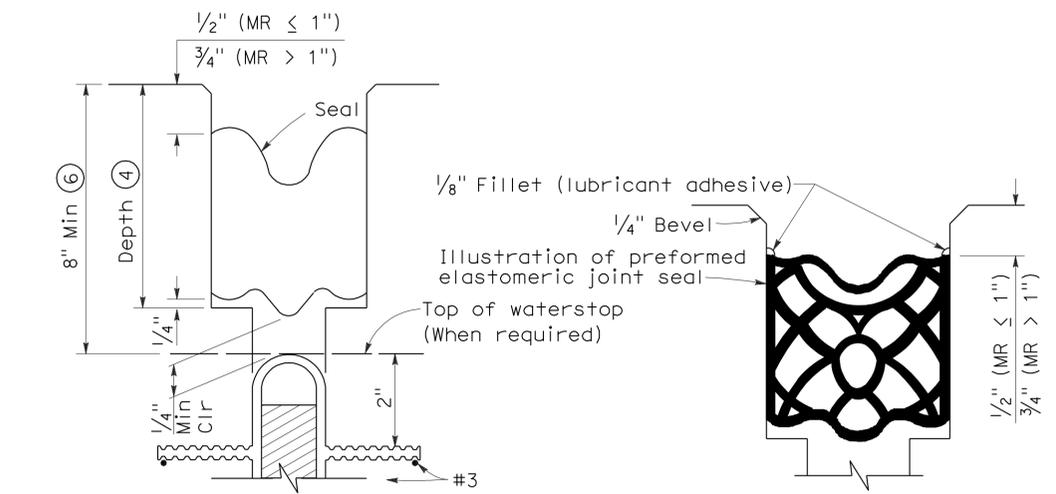


**TYPE A SEAL**

Movement rating : Silicone = 1" Max

**TYPE AL SEAL**

Longitudinal joints only



**TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W<sub>2</sub>)**

**TYPE B SEAL**

Movement Rating ≤ 2"

RSP B6-21 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B6-21 DATED MAY 1, 2006 - PAGE 258 OF THE STANDARD PLANS BOOK DATED MAY 2006.

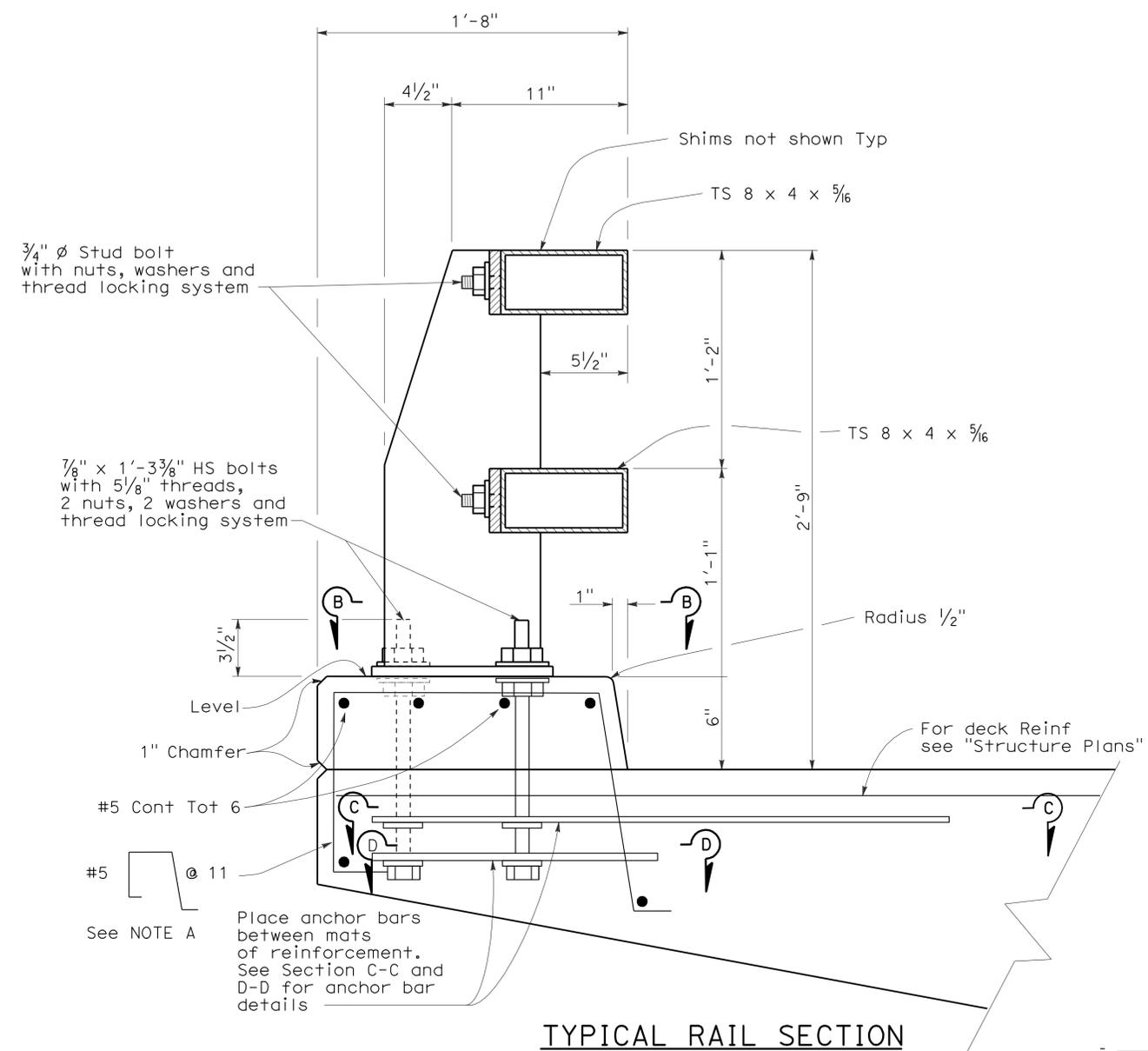
**REVISED STANDARD PLAN RSP B6-21**

2006 REVISED STANDARD PLAN RSP B6-21

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	549	757

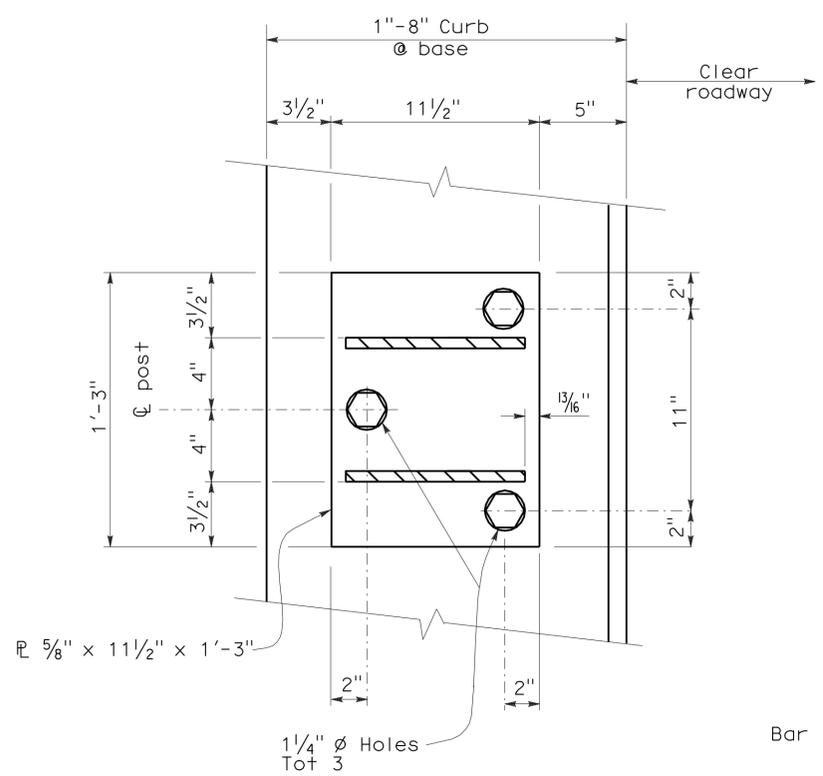
REGISTERED CIVIL ENGINEER  
 June 30, 2006  
 PLANS APPROVAL DATE  
 Tillet Satter  
 No. C42892  
 Exp. 03-31-08  
 CIVIL  
 STATE OF CALIFORNIA

To accompany plans dated 6-20-11

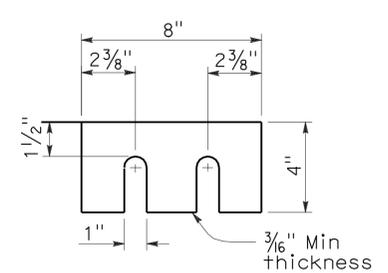


TYPICAL RAIL SECTION

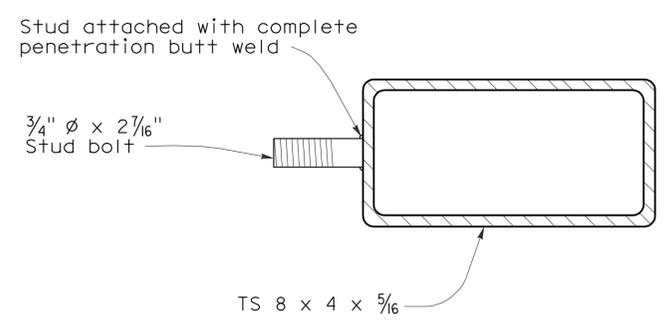
**NOTE A**  
 Adjust spacing to clear scupper opening by 2" if applicable.



SECTION B-B

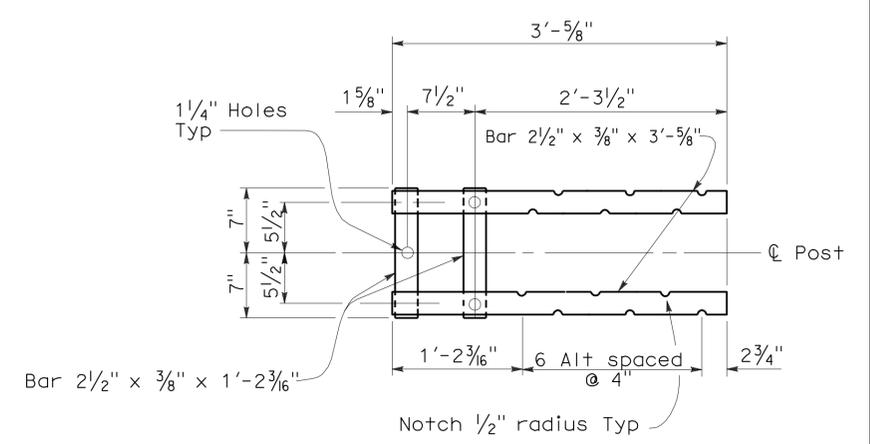


SHIMS REQUIRED FOR TOP AND BOTTOM RAIL

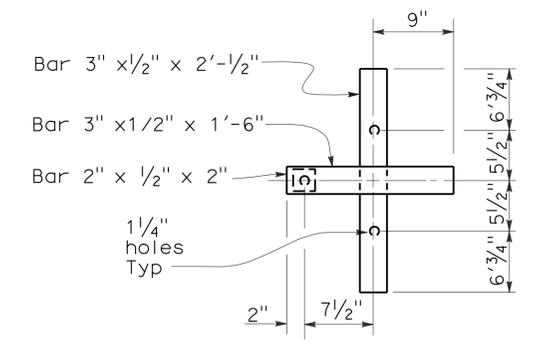


SECTION AT POST

STUD BOLT DETAIL



SECTION C-C  
 Top Anchorage



SECTION D-D  
 Lower Anchorage

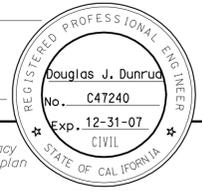
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CALIFORNIA ST-10  
 BRIDGE RAIL  
 (SHEET 1 OF 3)**

NO SCALE

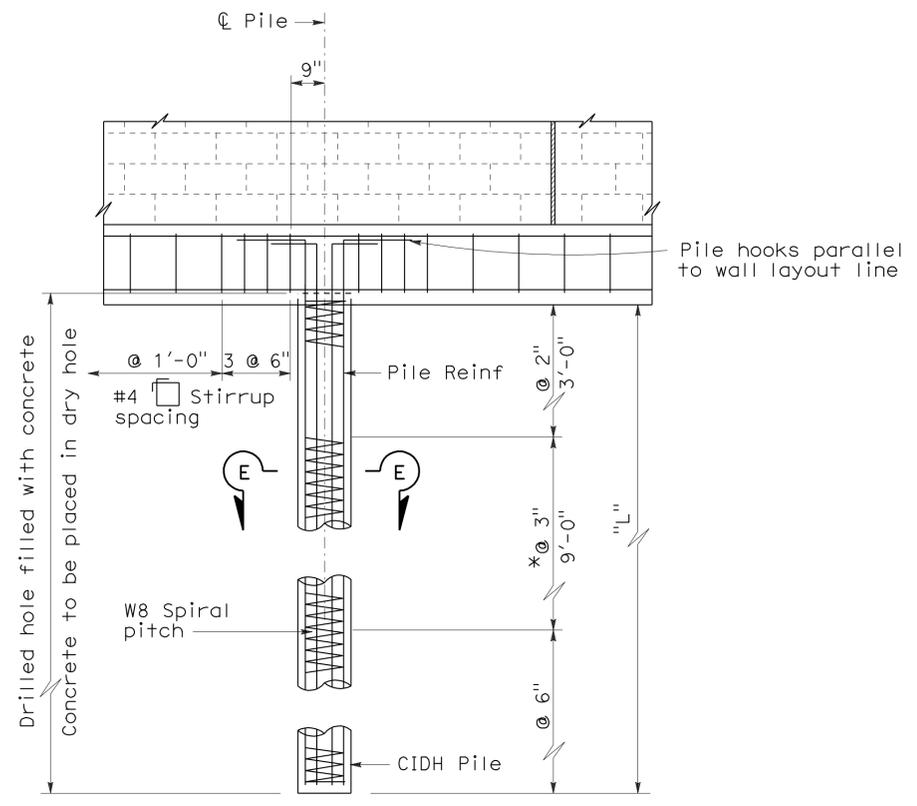
RSP B11-68 DATED JUNE 30, 2006 SUPERSEDES STANDARD PLAN DATED MAY 1, 2006 - PAGE 284 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP B11-68**

2006 REVISED STANDARD PLAN RSP B11-68

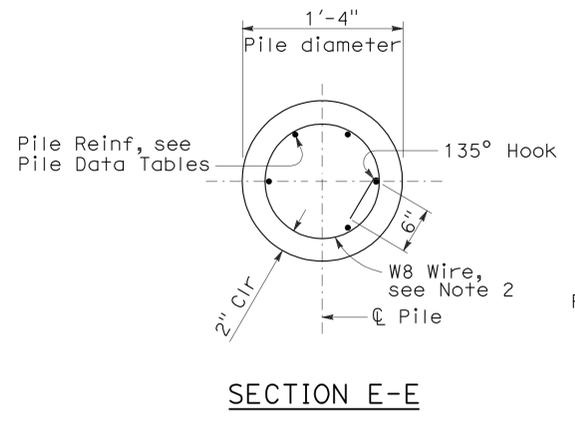


To accompany plans dated 6-20-11

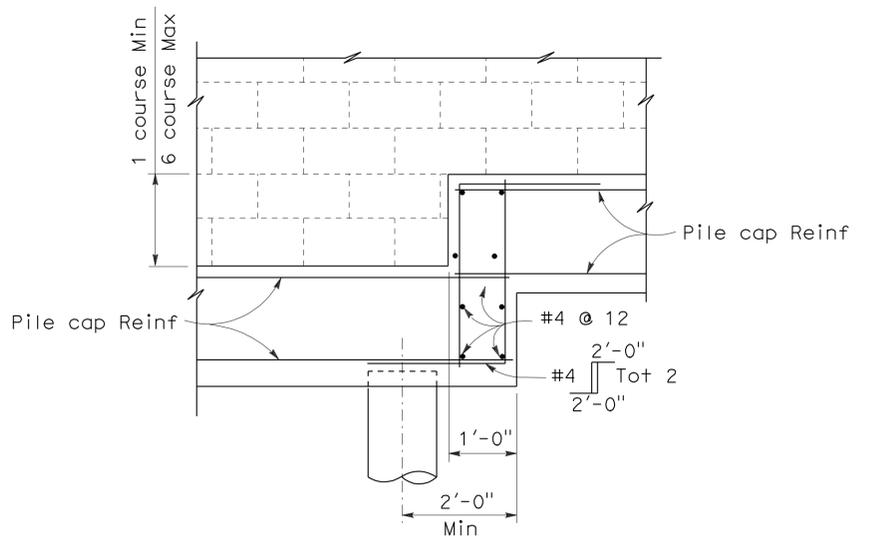


**DETAIL D**

\* @ 2" at option of Contractor



**SECTION E-E**



**PILE CAP STEP DETAIL**

**NOTES:**

1. For details not shown, see Standard Plan B15-3 and Revised Standard Plan RSP B15-4.
2. Lapped splices in spiral reinforcement shall be lapped at least 80 wire diameters. Spiral reinforcement at splices and at ends shall be terminated with a 135° hook with a 6" tail hooked around a longitudinal bar.

Maximum H	∅ = 25 Min			∅ = 30 Min			∅ = 35 Min			Maximum H
	S	L	Pile Reinf	S	L	Pile Reinf	S	L	Pile Reinf	
6'-0"	16'-0"	7'-0"	#6 Tot 6	16'-0"	5'-6"	#6 Tot 6	16'-0"	4'-6"	#6 Tot 6	6'-0"
8'-0"	16'-0"	8'-6"	#6 Tot 7	16'-0"	7'-0"	#6 Tot 7	16'-0"	5'-6"	#6 Tot 7	8'-0"
10'-0"	16'-0"	10'-0"	#7 Tot 6	16'-0"	8'-0"	#7 Tot 6	16'-0"	6'-6"	#7 Tot 6	10'-0"
12'-0"	15'-0"	11'-6"	#8 Tot 7	16'-0"	9'-6"	#8 Tot 7	16'-0"	7'-6"	#8 Tot 7	12'-0"
14'-0"	13'-0"	11'-6"	#8 Tot 7	14'-0"	10'-0"	#8 Tot 7	14'-0"	8'-0"	#8 Tot 7	14'-0"
16'-0"	12'-0"	12'-0"	#8 Tot 7	13'-0"	10'-6"	#8 Tot 7	13'-0"	8'-6"	#8 Tot 7	16'-0"

Case 1 - Level ground (±10%) on both sides of the sound wall.

Maximum H	∅ = 30 Min			∅ = 35 Min			Maximum H
	S	L	Pile Reinf	S	L	Pile Reinf	
6'-0"	16'-0"	11'-6"	#8 Tot 7	16'-0"	8'-6"	#6 Tot 7	6'-0"
8'-0"	16'-0"	14'-0"	#8 Tot 7	16'-0"	10'-6"	#7 Tot 6	8'-0"
10'-0"	15'-0"	16'-0"	#8 Tot 7	16'-0"	12'-0"	#7 Tot 7	10'-0"
12'-0"	12'-0"	16'-0"	#8 Tot 7	15'-0"	13'-6"	#8 Tot 7	12'-0"
14'-0"	10'-0"	16'-0"	#8 Tot 7	12'-0"	13'-6"	#8 Tot 7	14'-0"
16'-0"	8'-0"	16'-0"	#8 Tot 7	11'-0"	14'-0"	#8 Tot 7	16'-0"

Case 2 - Level ground (±10%) on traffic side of the sound wall and sloping ground on opposite side.

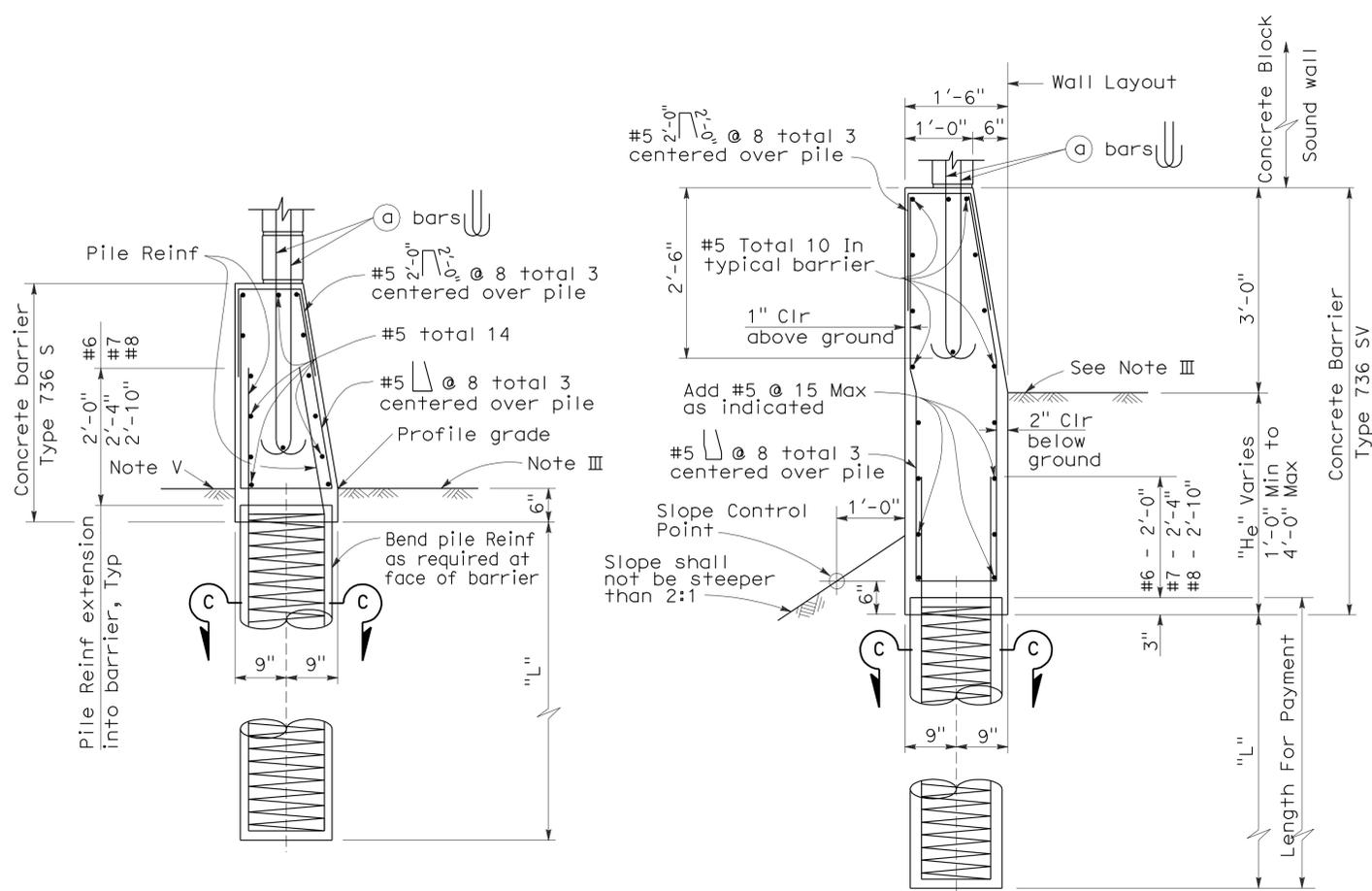
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**SOUND WALL  
MASONRY BLOCK ON PILE CAP  
DETAILS (3)**

NO SCALE

RSP B15-5 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B15-5  
DATED MAY 1, 2006 - PAGE 295 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP B15-5



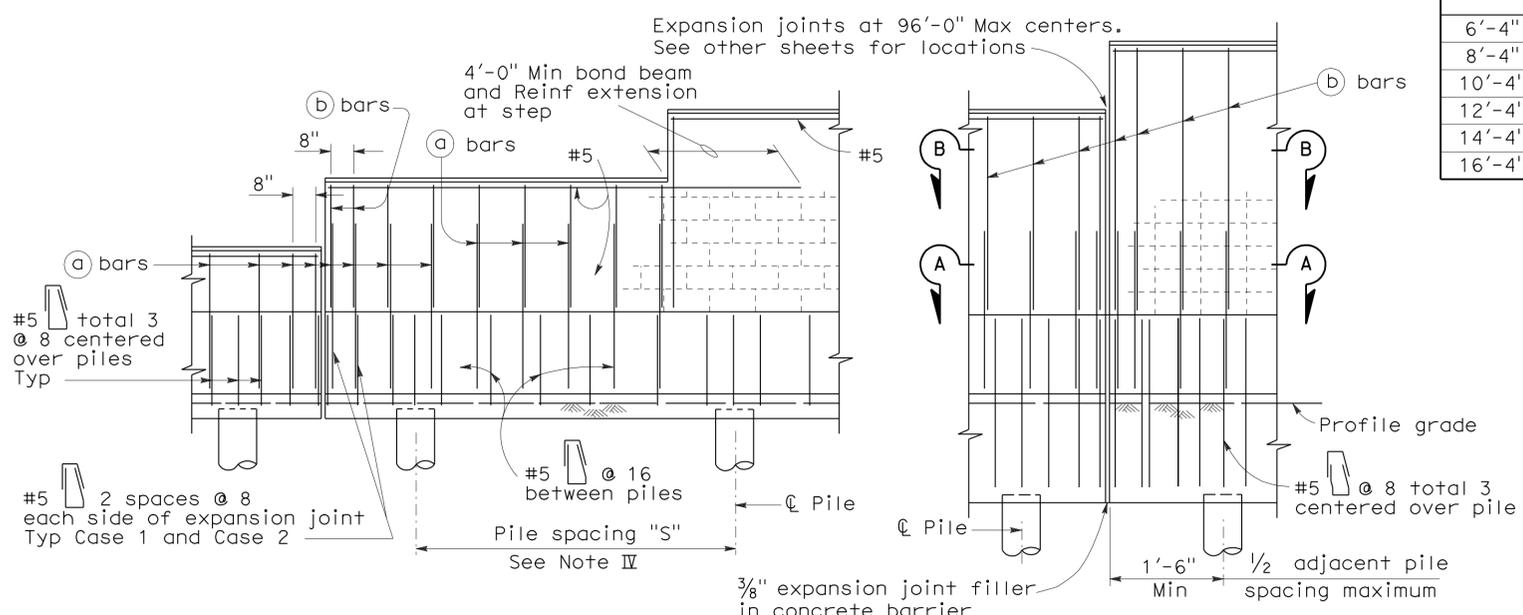
**CASE 1**

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**



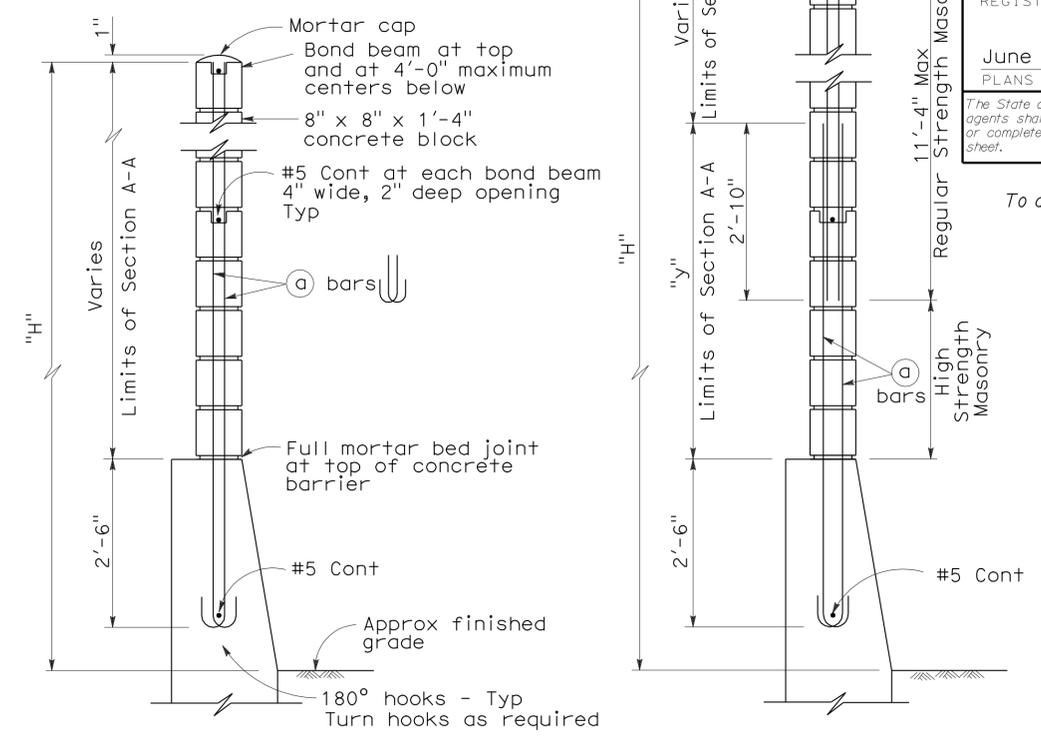
**CASE 1**

For details not shown, See Case 2.

**CASE 2**

For details not shown, See Case 1.

**PARTIAL ELEVATIONS**



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

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

For details not shown, see H=6'-4" thru H=10'-4".

**TYPICAL SECTIONS**

See Revised Standard Plan RSP 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 Plan B15-7 and Revised Standard Plan RSP B15-8.
- II. For details and sections not shown, see Standard Plan B15-7 and Revised Standard Plan RSP B15-8.
- III. Slope ground at traffic side of barrier to drain. Maximum slope ±10%. See Std Plan B11-56, Note D.
- IV. Pile spacing may be varied, but shall not exceed the tabular values. See Revised Standard Plan RSP 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 G:**

- 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<sub>e</sub>), that are between the values given, use the tabular information for the next higher (H) or (H<sub>e</sub>).
- 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

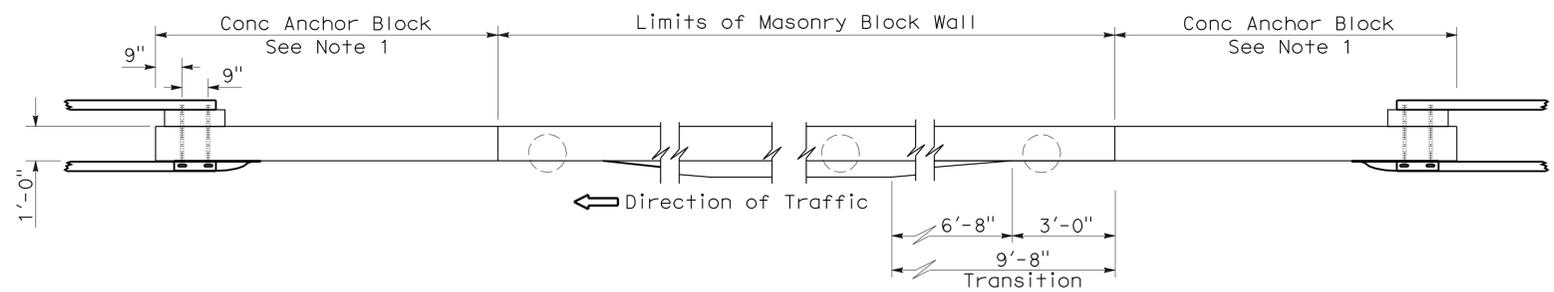
RSP B15-6 DATED JUNE 5, 2009 SUPERSEDES  
 RSP B15-6 DATED OCTOBER 5, 2007 AND STANDARD PLAN B15-6  
 DATED MAY 1, 2006 - PAGE 296 OF THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	552	757

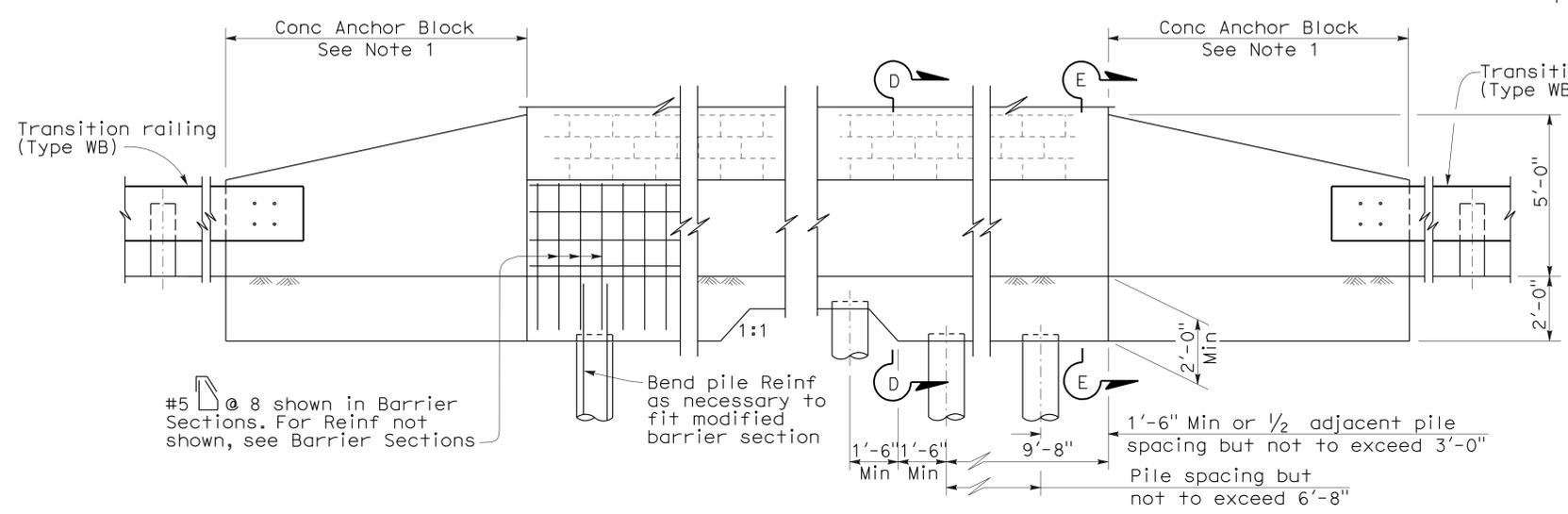
REGISTERED CIVIL ENGINEER  
 June 6, 2008  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Tiliat Satter  
 No. C42892  
 Exp. 03-31-10  
 CIVIL  
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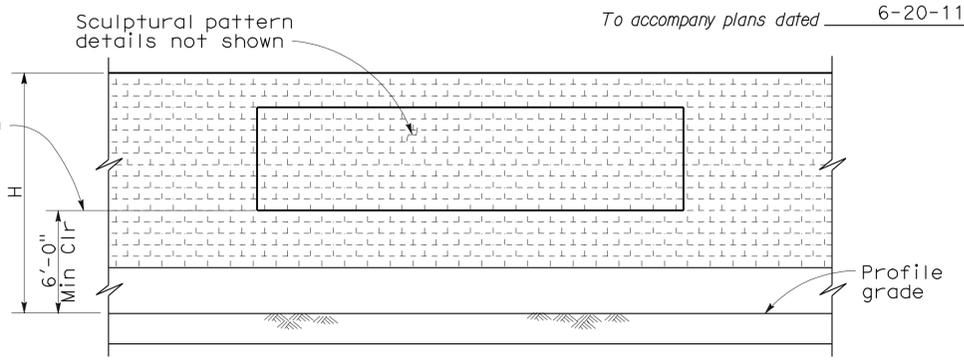
PLAN



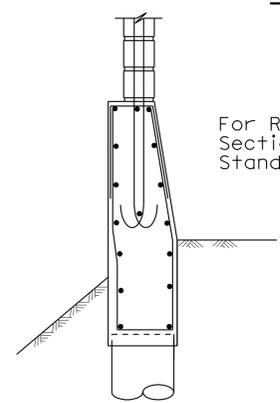
ELEVATION

**METAL BEAM GUARDRAIL ANCHORAGE**

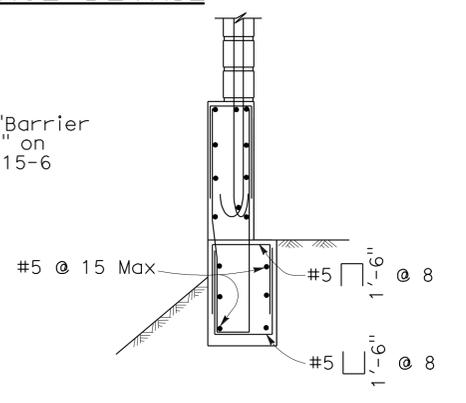
For details not shown, see Standard Plan B11-56.



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

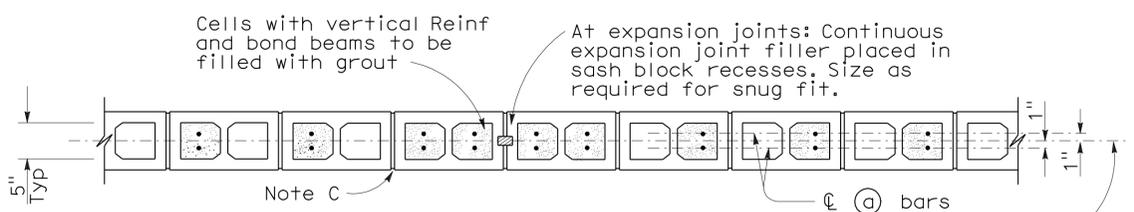
**HIGH STRENGTH**

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

f'm = 2500 psi  
 fb = 830 psi  
 fs = 24,000 psi  
 n = 15.5

**NOTE:**

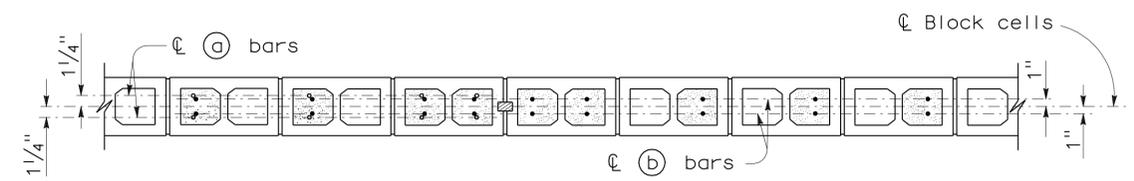
1. For Concrete Anchor Block and connection details, see "Connection Detail DD" on Standard Plan A77J3.



SECTION A-A

For details not shown, see other details.

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



SECTION A-A

For details not shown, see other details.

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

SECTION B-B

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 DEPARTMENT OF TRANSPORTATION

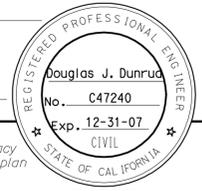
**SOUND WALL MASONRY BLOCK ON TYPE 736S/SV BARRIER DETAILS (2)**

NO SCALE

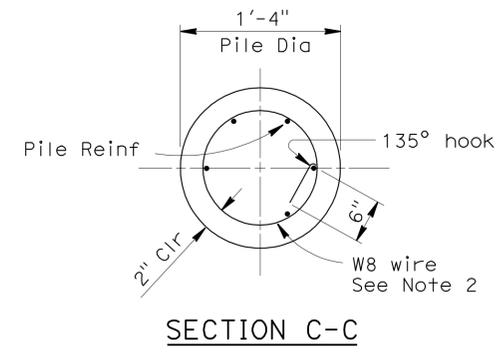
RSP B15-7 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN B15-7 DATED MAY 1, 2006 - PAGE 297 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP B15-7**

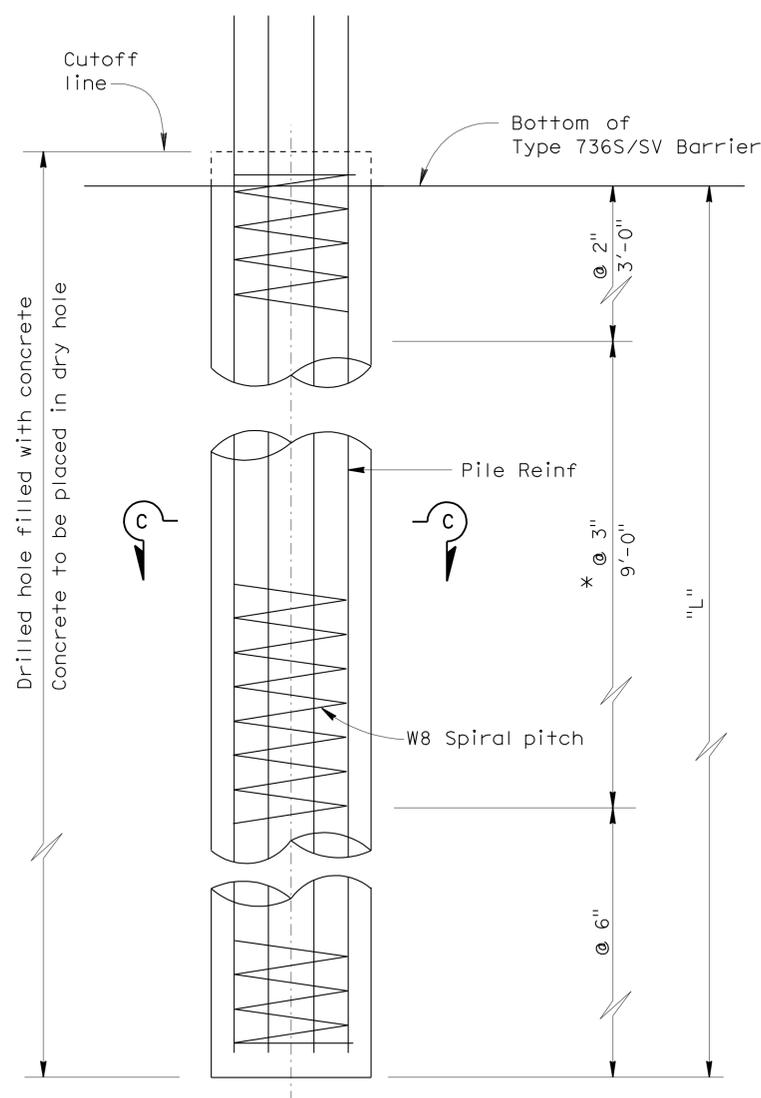
2006 REVISED STANDARD PLAN RSP B15-7



To accompany plans dated 6-20-11



Maximum H	ø = 25 Min			ø = 30 Min			ø = 35 Min			Maximum H
	S	L	Pile Reinf	S	L	Pile Reinf	S	L	Pile Reinf	
6'-4"	10'-0"	8'-6"	#6 Tol 6	10'-0"	7'-0"	#6 Tol 6	10'-0"	6'-0"	#6 Tol 6	6'-4"
8'-4"	10'-0"	9'-6"	#6 Tol 6	10'-0"	8'-0"	#6 Tol 6	10'-0"	7'-0"	#6 Tol 6	8'-4"
10'-4"	10'-0"	10'-6"	#6 Tol 6	10'-0"	9'-0"	#6 Tol 6	10'-0"	7'-6"	#6 Tol 6	10'-4"
12'-4"	10'-0"	11'-6"	#7 Tol 6	10'-0"	9'-6"	#7 Tol 6	10'-0"	8'-6"	#6 Tol 6	12'-4"
14'-4"	10'-0"	12'-6"	#7 Tol 7	10'-0"	10'-6"	#7 Tol 7	10'-0"	9'-0"	#7 Tol 7	14'-4"
16'-4"	10'-0"	13'-0"	#8 Tol 7	10'-0"	11'-6"	#8 Tol 7	10'-0"	9'-6"	#7 Tol 7	16'-4"



He	Maximum H	ø = 30 Min			ø = 35 Min			Maximum H
		S	L	Pile Reinf	S	L	Pile Reinf	
1'-0"	6'-4"	10'-0"	15'-0"	#7 Tol 6	10'-0"	12'-0"	#6 Tol 6	6'-4"
	8'-4"	9'-9"	16'-0"	#7 Tol 6	10'-0"	13'-0"	#7 Tol 6	8'-4"
	10'-4"	8'-0"	16'-0"	#7 Tol 6	10'-0"	14'-0"	#7 Tol 6	10'-4"
	12'-4"	6'-9"	16'-0"	#7 Tol 6	10'-0"	15'-0"	#8 Tol 7	12'-4"
	14'-4"	5'-9"	16'-0"	#7 Tol 6	9'-6"	15'-6"	#8 Tol 7	14'-4"
2'-0"	6'-4"	8'-3"	16'-0"	#7 Tol 6	10'-0"	13'-6"	#7 Tol 6	6'-4"
	8'-4"	7'-0"	16'-0"	#7 Tol 6	10'-0"	14'-6"	#7 Tol 7	8'-4"
	10'-4"	6'-0"	16'-0"	#7 Tol 6	10'-0"	15'-3'	#8 Tol 7	10'-4"
	12'-4"	5'-3"	16'-0"	#7 Tol 6	9'-9"	16'-0"	#8 Tol 7	12'-4"
	14'-4"	4'-6"	16'-0"	#7 Tol 6	8'-4"	16'-0"	#8 Tol 7	14'-4"
3'-0"	6'-4"	6'-0"	16'-0"	#7 Tol 6	10'-0"	15'-3"	#8 Tol 7	6'-4"
	8'-4"	5'-3"	16'-0"	#7 Tol 6	10'-0"	16'-0"	#8 Tol 7	8'-4"
	10'-4"	4'-6"	16'-0"	#7 Tol 6	8'-10"	16'-0"	#8 Tol 7	10'-4"
	12'-4"	4'-0"	16'-0"	#7 Tol 6	7'-10"	16'-0"	#8 Tol 7	12'-4"
	14'-4"	3'-6'	16'-0"	#7 Tol 6	6'-10"	16'-0"	#8 Tol 7	14'-4"
4'-0"	6'-4"	4'-3"	16'-0"	#7 Tol 6	8'-0"	15'-6"	#8 Tol 7	6'-4"
	8'-4"	3'-10"	16'-0"	#7 Tol 6	7'-4"	15'-9"	#8 Tol 7	8'-4"
	10'-4"	3'-6"	16'-0"	#7 Tol 6	6'-10"	16'-0"	#8 Tol 7	10'-4"
	12'-4"	3'-2"	16'-0"	#7 Tol 6	6'-3"	16'-0"	#8 Tol 7	12'-4"
	14'-4"	3'-0"	16'-3"	#7 Tol 6	5'-8"	16'-0"	#8 Tol 7	14'-4"
16'-4"	2'-10"	16'-6"	#7 Tol 6	5'-0"	16'-0"	#8 Tol 7	16'-4"	

**NOTES:**

- For details not shown, see Revised Standard Plan RSP B15-6 and Standard Plan B15-7.
- Lapped splices in spiral reinforcement shall be lapped at least 80 wire diameters. Spiral reinforcement at splices and at ends shall be terminated with a 135° hook with a 6" tail hooked around a longitudinal bar.

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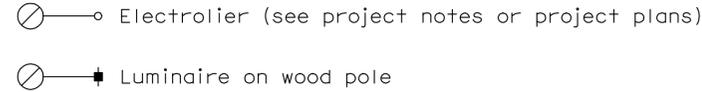
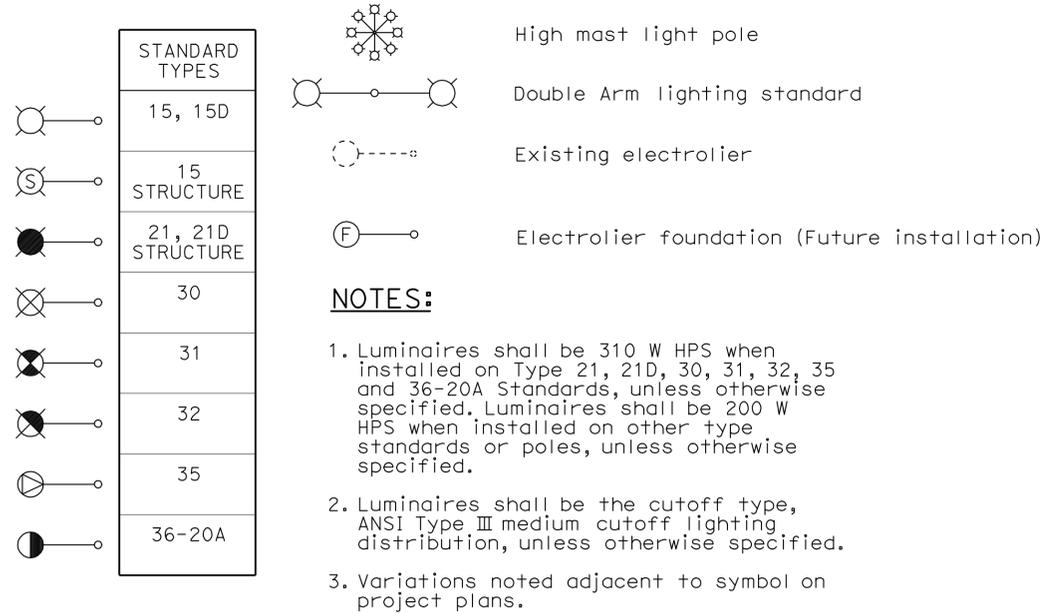
**SOUND WALL MASONRY BLOCK  
ON TYPE 736S/SV BARRIER  
DETAILS (3)**

NO SCALE

RSP B15-8 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B15-8  
DATED MAY 1, 2006 - PAGE 298 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP B15-8

# ELECTROLIERS



## STANDARD NOTES:

- 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 wire or rope.
- 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.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

# ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

## PROPOSED EXISTING

BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	554	757

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

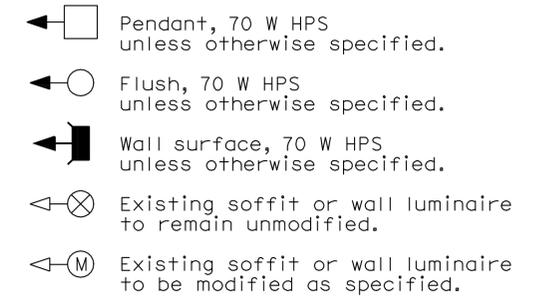
October 5, 2007  
PLANS APPROVAL DATE

Jeffery G. McRae  
No. E14512  
Exp. 6-30-08  
ELECTRICAL  
STATE OF CALIFORNIA

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To accompany plans dated 6-20-11

## SOFFIT AND WALL MOUNTED LUMINAIRES



### NOTE:

Arrow indicates "street side" of luminaire.

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DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1A**

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	555	757

Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
 Jeffrey G. McRae  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA  
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### CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
		Communication conduit
		Telephone conduit
		Fire alarm conduit
		Fiber optic conduit
		Conduit termination
		Conduit riser in/on structure or service pole

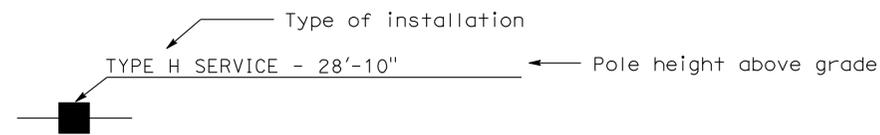
### SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" indicates all non-arrow sections louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
		Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

### SERVICE EQUIPMENT

PROPOSED	EXISTING	
		Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		Telephone demarcation cabinet

### POLE-MOUNTED SERVICE DESIGNATION



### ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

### SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

### NOTES:

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

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

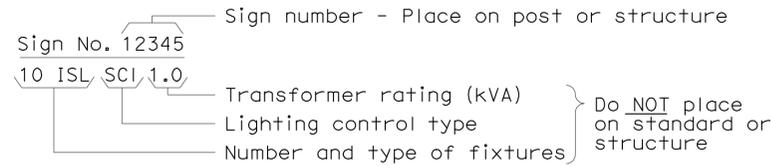
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B  
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1B**

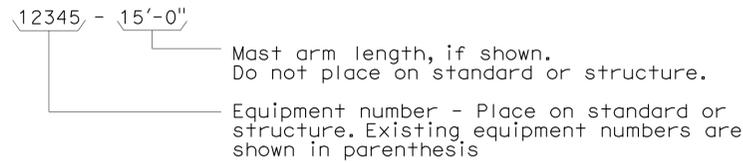
2006 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

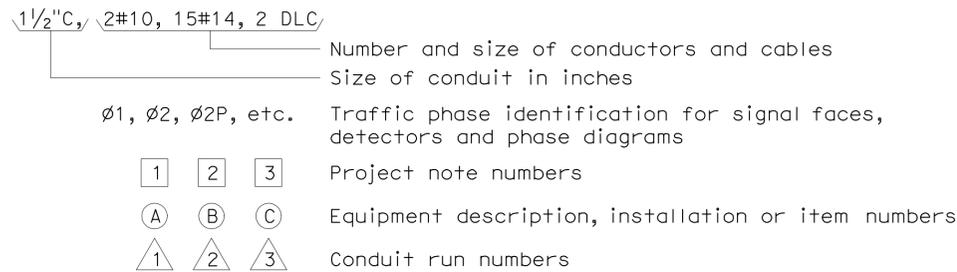
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



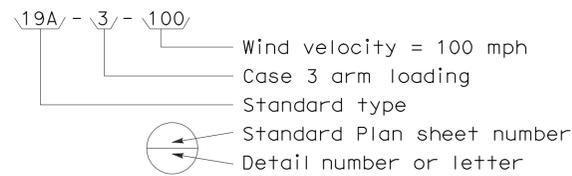
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



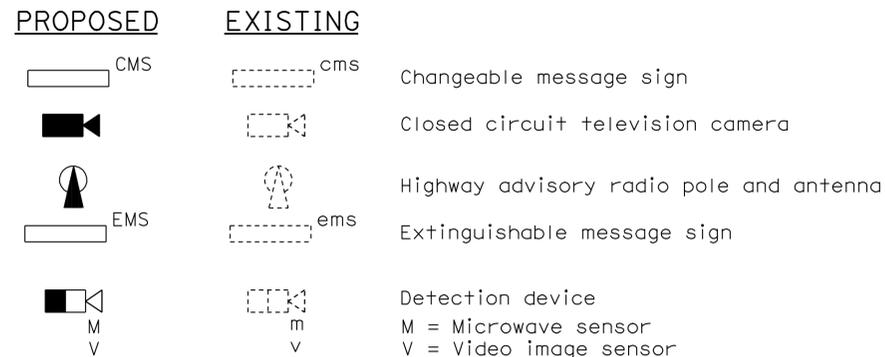
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



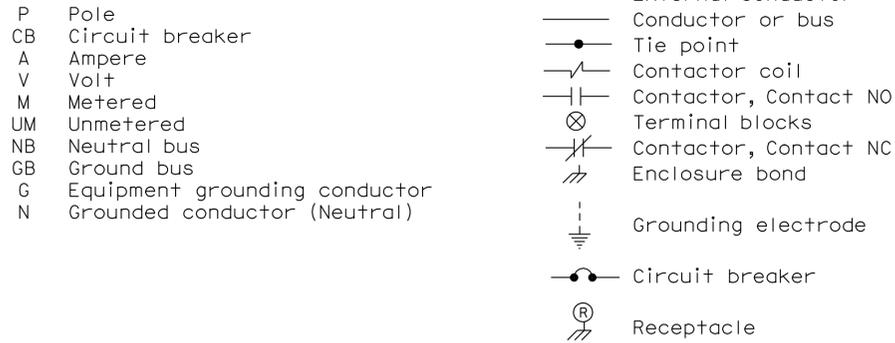
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



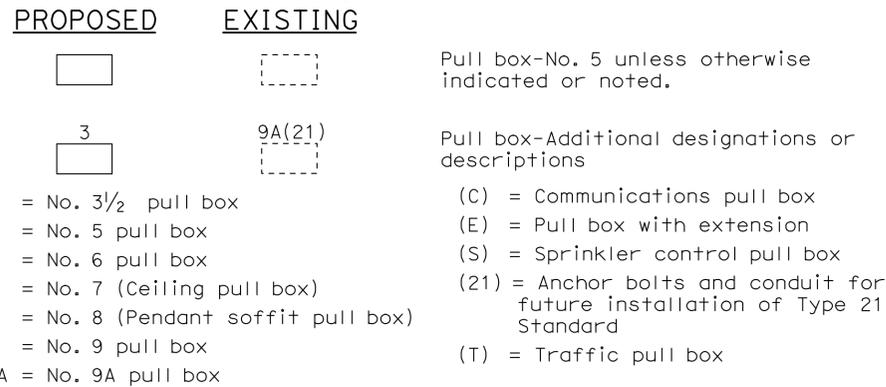
### MISCELLANEOUS EQUIPMENT



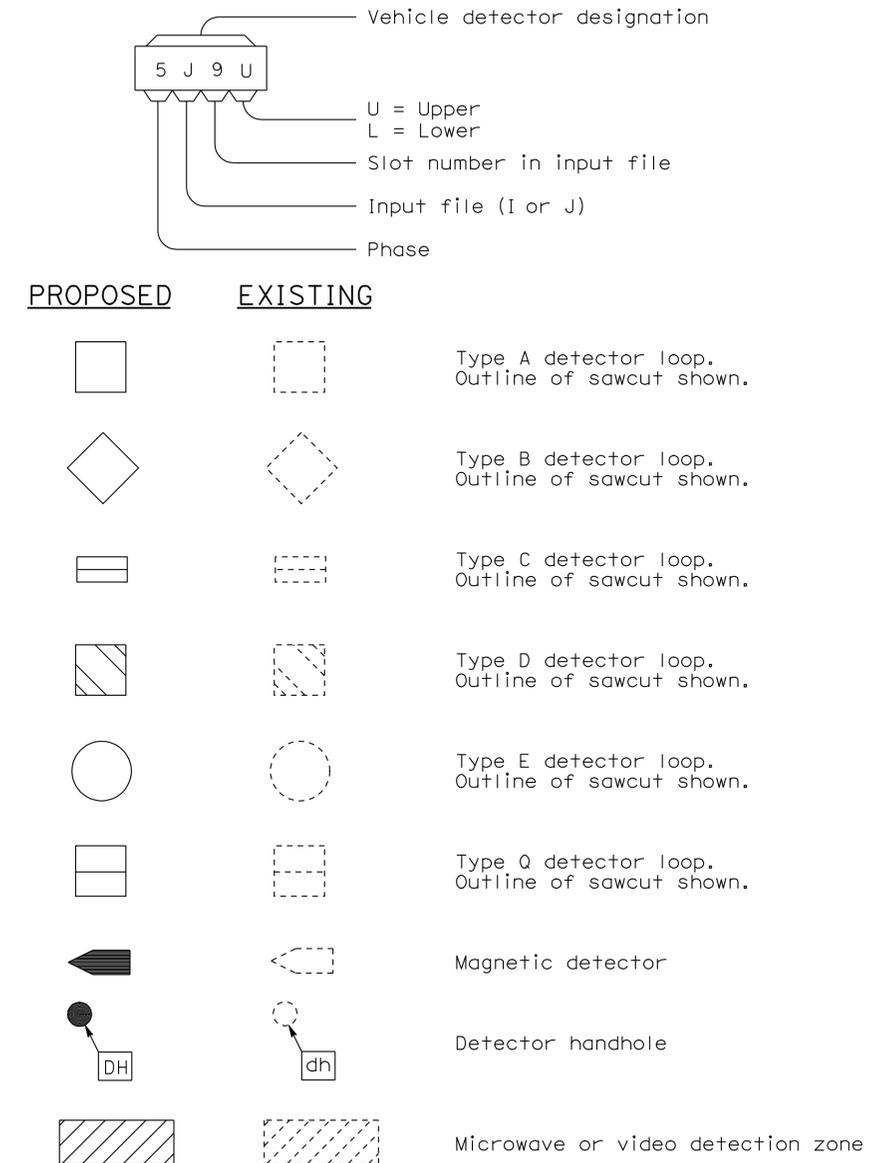
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C  
 DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1C**

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	557	757

*Jeffery G. McRae*  
 REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
 PLANS APPROVAL DATE

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**NOTES-TYPE III SERVICE EQUIPMENT ENCLOSURES:**

1. Service equipment enclosure and metering equipment shall meet the requirements of the service utility. The meter area shall have a sealable, lockable, weathertight cover that can be removed without the use of tools.
2. Service equipment enclosures shall be factory wired and conform to NEMA standards.
3. Dimensions of service equipment enclosures shall meet the requirements of the service utility.
4. The dead front panels on Type III service equipment enclosures shall have a continuous stainless steel or aluminum piano hinge. The panel in front of the breakers shall be secured with a latch or captive screws. No live parts shall be mounted on the dead front panel.
5. The exterior door shall have provisions for padlocking. The padlock hole shall be a minimum diameter of  $\frac{7}{16}$ ".
6. Enclosures housing transformers of more than one kVA shall have effective screened ventilation louver of not less than 50 square inches. Screen shall be stainless steel No. 304, with a No. 10 size mesh. Framed screen shall be secured with at least four bolts.
7. Fasteners on the exterior of the enclosure shall be vandal-resistant and shall not be removable from the exterior. Exterior screws, nuts, bolts and washers shall be stainless steel.
8. Landing lugs for incoming service conductors shall be compatible with either copper or aluminum conductors sized to suit the conductors shown on the plan. Landing lugs shall be copper or tin-plated aluminum. Neutral bus shall be rated for 125 A and be suitable for copper or aluminum conductors unless otherwise specified. The terminal shall include but not be limited to:
  - a) Incoming terminals (landing lugs)
  - b) Neutral lugs
  - c) Solid neutral terminal strip
9. At least 6 standard single pole circuit breaker spaces,  $\frac{3}{4}$ " nominal, shall be provided for branch circuits. Circuit breaker interiors shall be copper. Interiors of enclosure shall accept plug-in or cable-in/cable-out circuit breakers.
10. Control wiring shall be 600 V, 14 stranded machine tool wire. Where subject to flexing, 19 strand wire shall be used.
11. Main bus shall be rated for 125 A and shall be tin-plated copper.
12. A plastic laminated wiring diagram shall be provided with brass mounting eyelets and attached to the inside of the enclosure and the wiring diagram shall be affixed to the interior with a UL or ETL approved method.

13. An engraved phenolic nameplate on the dead front panel indicating the function of each circuit or device shall be installed with stainless steel rivets or stainless steel screws:
  - a) Adjacent to the breaker or device with character size a minimum of  $\frac{1}{8}$ ".
  - b) At the top of the exterior door panel indicating State system number, voltage level and number of phases with character size a minimum of  $\frac{3}{16}$ ".
14. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.
15. In unpaved areas a raised portland cement concrete pad 2'-0" x 4" x width of foundation shall be constructed in front of new service equipment enclosure installation. Pad shall be set to elevation of foundation.
16. Foundation shall extend 2" minimum beyond edge of service equipment enclosure.
17. Internal bus, where shown, is typical only. Alternative design of proposed service equipment enclosure shall be submitted to the Engineer for approval.
18. Plug-in circuit breakers may be mounted in the vertical or horizontal position. Cable-in/cable-out circuit breakers shall be mounted in the vertical position.
19. Type III-AF and Type III-BF service equipment enclosures shall have the meter viewing windows located on the front side of the service equipment enclosures.
20. Type III-AR and Type III-BR service equipment enclosures shall be similarly constructed as Type III-AF and Type III-BF respectively, except the meter viewing windows shall be located on the back side of the service equipment enclosures.
21. Minimum clearance shall be required for front and back of service equipment enclosure per National Electrical Code, Article 110.26, "Spaces About Electric Equipment (600 Volts, Nominal, or Less)."

To accompany plans dated 6-20-11

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

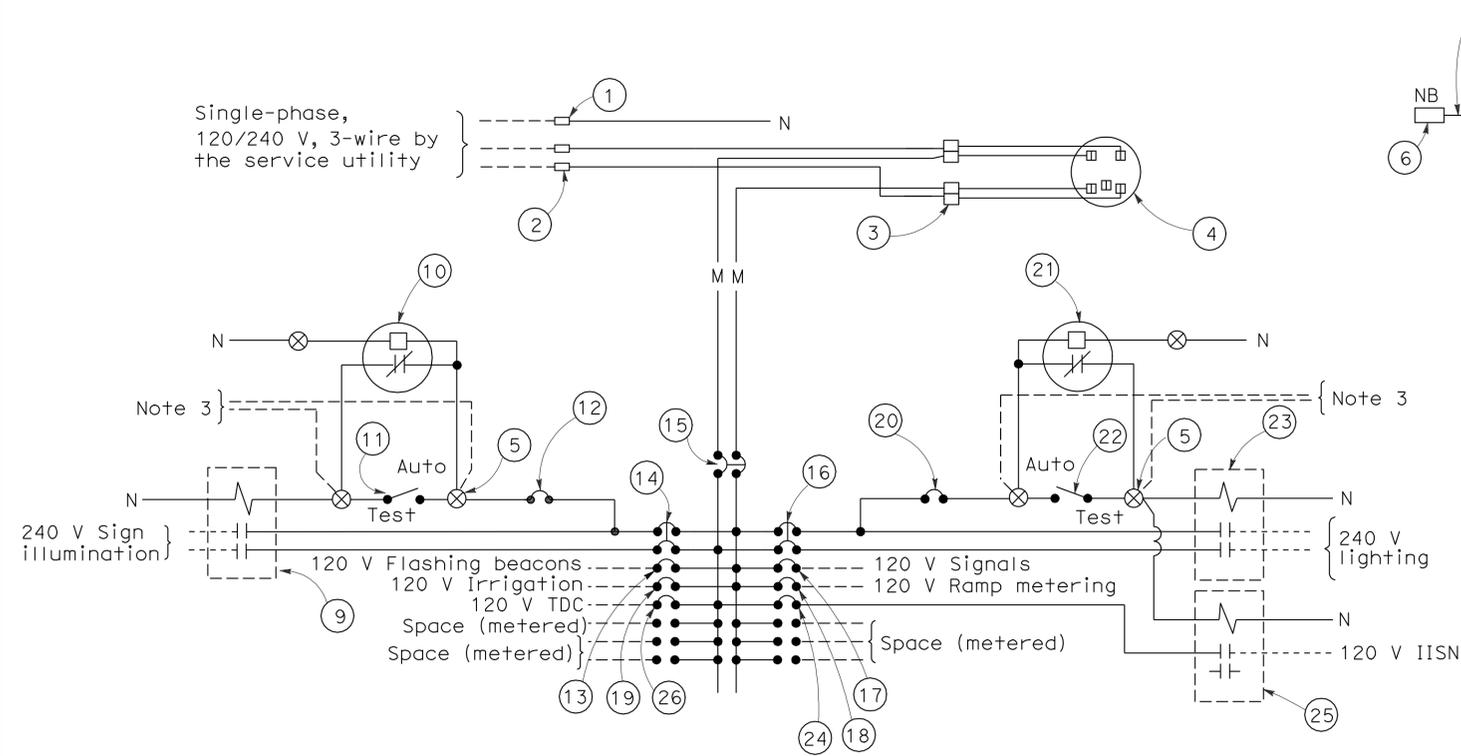
**ELECTRICAL SYSTEMS  
 (SERVICE EQUIPMENT NOTES  
 TYPE III SERIES)**

NO SCALE

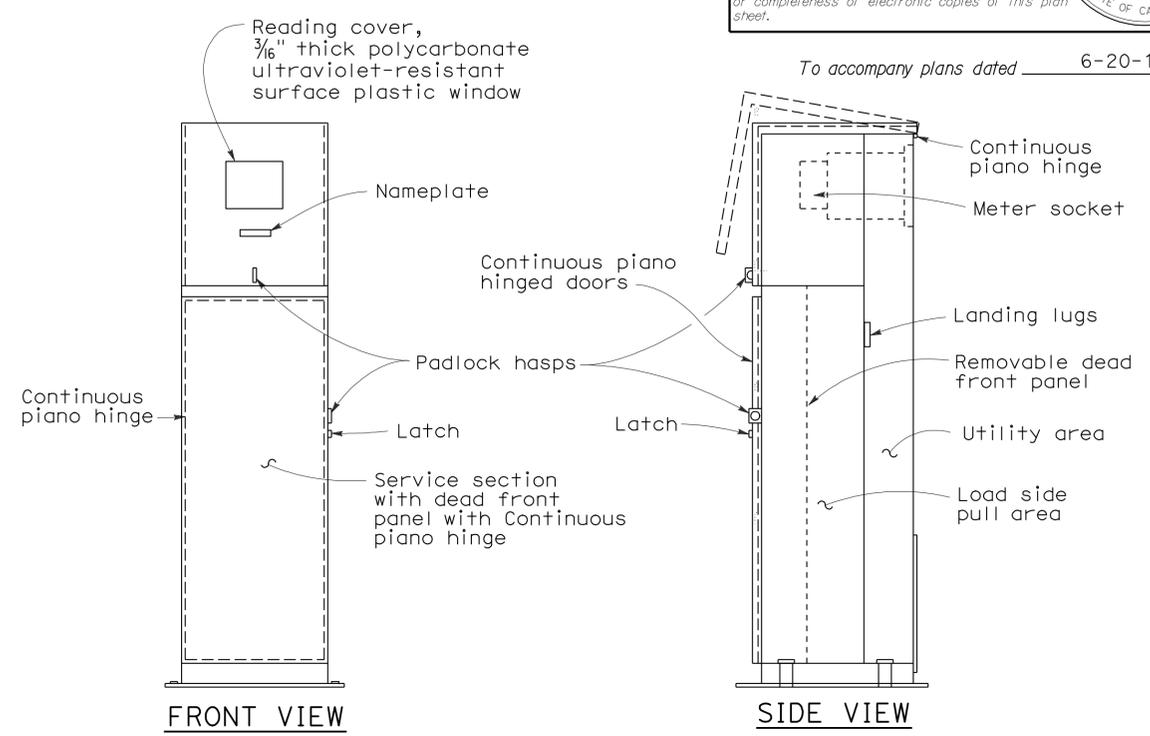
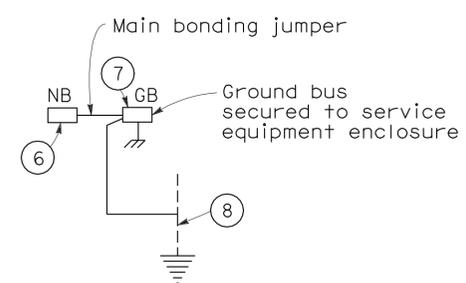
RSP ES-2C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2C  
 DATED MAY 1, 2006 - PAGE 405 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-2C**

2006 REVISED STANDARD PLAN RSP ES-2C



**120/240 V SERVICE WIRING DIAGRAM (TYPICAL)**

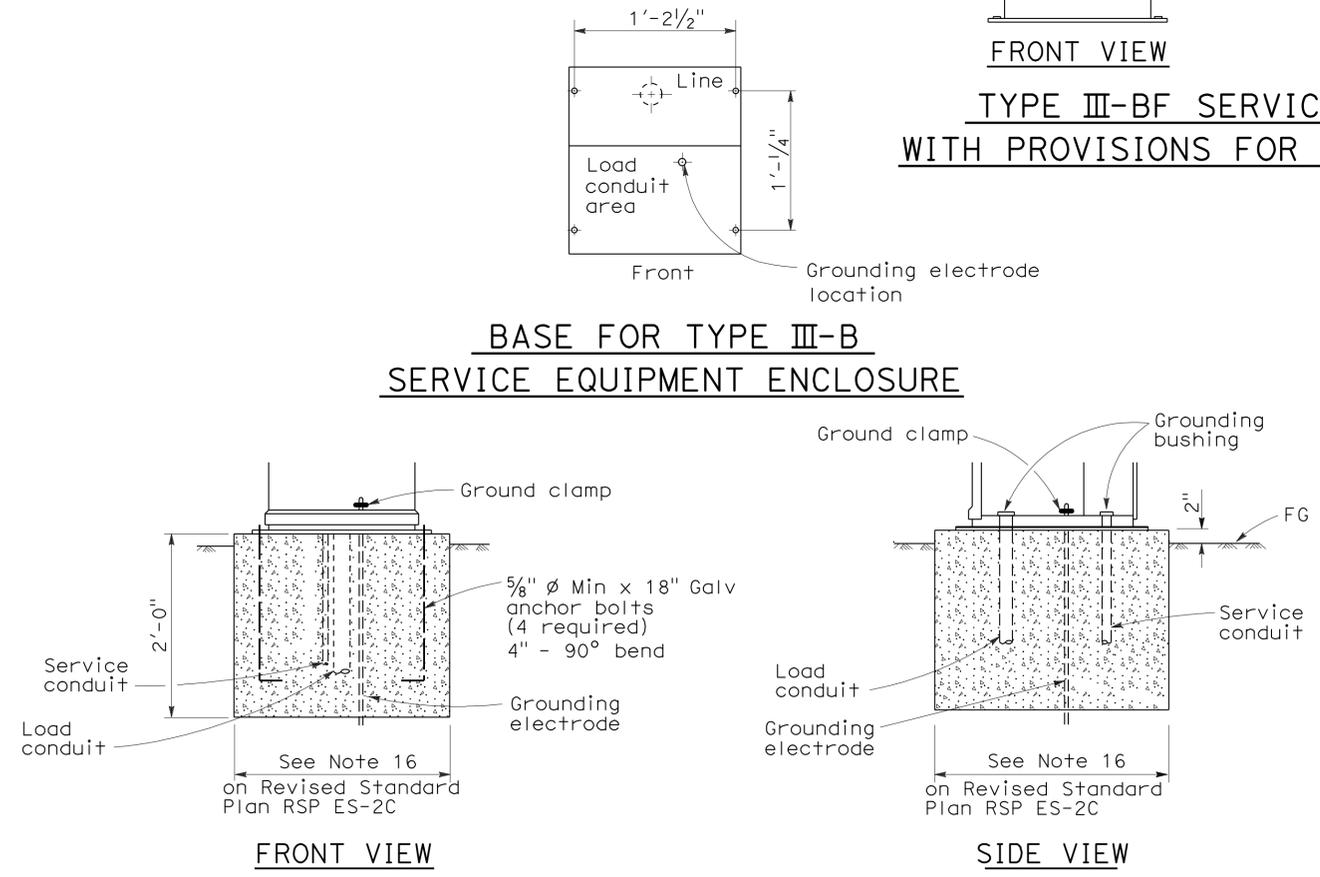


**TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR ONE 100 A METER (TYPICAL)**

- NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)**
1. Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
  2. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
  3. Connect to remote test switch mounted on lighting standards, sign post or structure when required.
  4. Items No. ① and ⑥ shall be isolated from the service equipment enclosure.
  5. Meter sockets shall be 5 clip type.
  6. The landing lug shall be suitable for multiple conductors.
  7. Type I photoelectric control shall be used unless otherwise indicated on the plans.

TYPE III-B SERVICE (120/240 V) EQUIPMENT LEGEND		
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
①	Neutral lug	
②	Landing lug (Note 6)	
③	Test bypass facility	
④	Meter socket and support	
⑤	Terminal blocks	
⑥	Neutral bus	
⑦	Ground bus	
⑧	Grounding electrode	
⑨	30 A, 2PNO Contactor	Sign Illumination
⑩	Photoelectric unit (Note 7)	
⑪	15 A, 1P, Test switch	Sign Illumination Test Switch
⑫	15 A, 120 V, 1P, CB	Sign Illumination Control
⑬	15 A, 120 V, 1P, CB	Flashing Beacon
⑭	30 A, 240 V, 2P, CB	Sign Illumination
⑮	100 A, 240 V, 2P, CB	Main Breaker
⑯	30 A, 240 V, 2P, CB	Lighting
⑰	50 A, 120 V, 1P, CB	Signals
⑱	30 A, 120 V, 1P, CB	Ramp Metering
⑲	20 A, 120 V, 1P, CB	Irrigation
⑳	15 A, 120 V, 1P, CB	Lighting Control
㉑	Photoelectric unit (Note 7)	
㉒	15 A, 1P, Test switch	Lighting Test Switch
㉓	60 A, 2PNO Contactor	Lighting
㉔	15 A, 120 V, 1P, CB	IISNS
㉕	30 A, 2PNO Contactor	IISNS
㉖	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet

**BASE FOR TYPE III-B SERVICE EQUIPMENT ENCLOSURE**



**TYPE III-B SERVICE EQUIPMENT ENCLOSURE FOUNDATION DETAILS**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS (SERVICE EQUIPMENT AND TYPICAL WIRING DIAGRAM, TYPE III-B SERIES)**  
 NO SCALE

RSP ES-2E DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2E DATED MAY 1, 2006 - PAGE 407 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-2E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	559	757

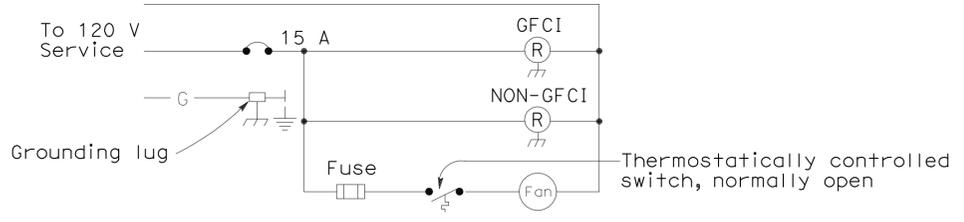
REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER  
 Jeffrey G. McRae  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA

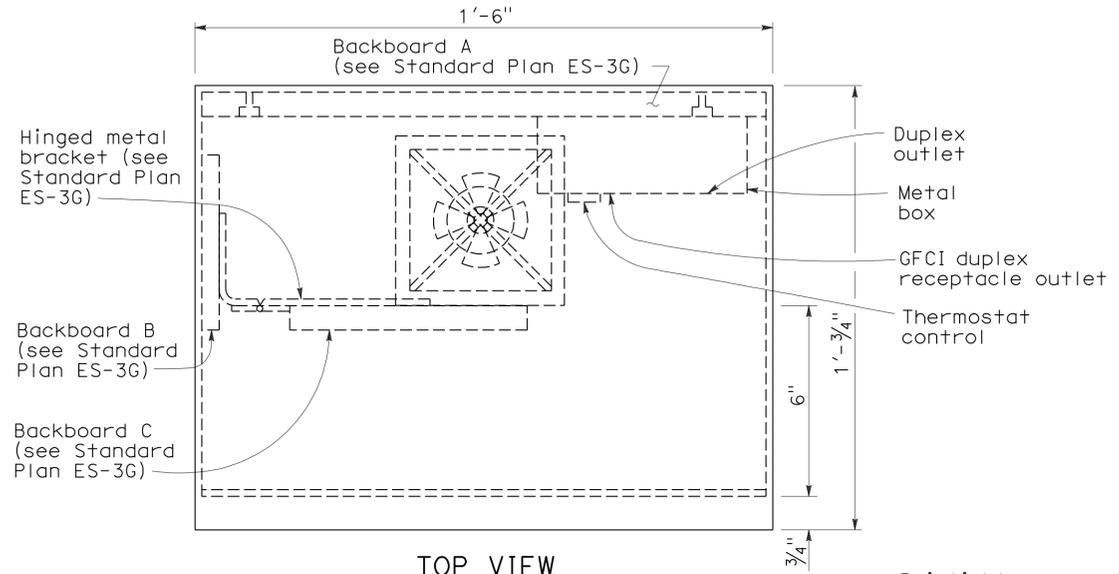
To accompany plans dated 6-20-11

**NOTES:**

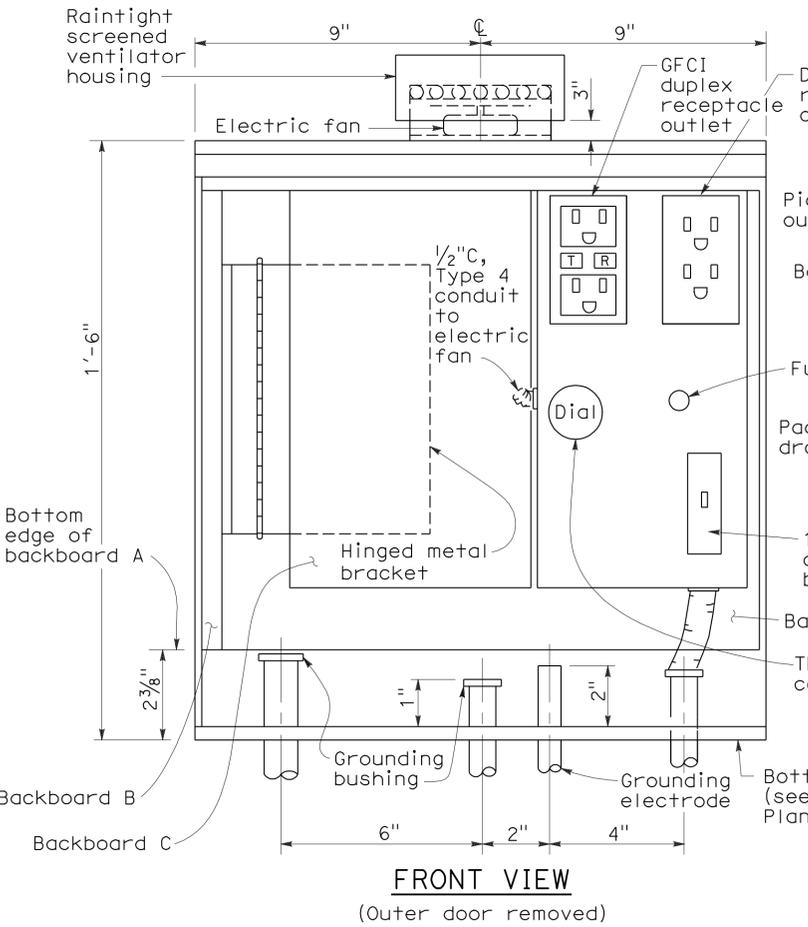
- Telephone demarcation cabinet shall be furnished with mounting boards, thermostat, fan, outlet box, circuit breaker and outlet plate. Dimensions are nominal.
- An approved mastic or caulking compound shall be placed on the foundation prior to placing the cabinet to seal openings between bottom of cabinet and foundation.
- In unpaved areas, a raised PCC pad shall be placed in front of the telephone demarcation cabinet. Pad shall be 1'-10" x 3'-0" x 4" thick, with 2" above the finished grade.
- All conduits shall be bonded to the enclosure.
- Telephone demarcation cabinet:
  - Material shall be anodized aluminum (1/8" thick).
  - Fabrication shall conform to the requirements of the Standard Specifications.
  - Ventilation louvers shall be located in door.
  - Door shall be lockable with padlock.
  - Fan shall be mounted in a ventilator housing.
  - Fan capacity shall be at least 25 cubic feet per minute.
  - Fan shall be thermostatically controlled and adjustable to turn on between 80°F and 130°F.
  - Fan circuit shall be fused at 175 percent of the fan motor capacity.
- Hardware for fastening of mounting boards:
  - Fasten backboard A and backboard B to telephone demarcation cabinet with 3/16"  $\phi$  x 3/4" stainless steel carriage bolts (8 required).
  - Fasten hinged metal bracket to backboard B and backboard C to hinged metal bracket with number No. 10 x 3/4" wood screws (9 required).



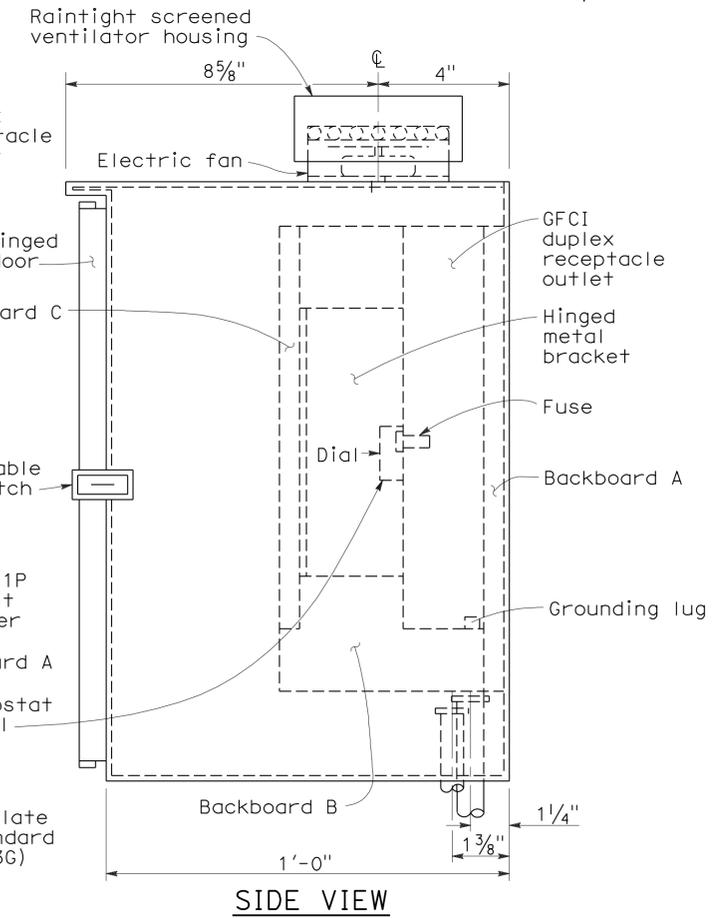
**WIRING DIAGRAM**



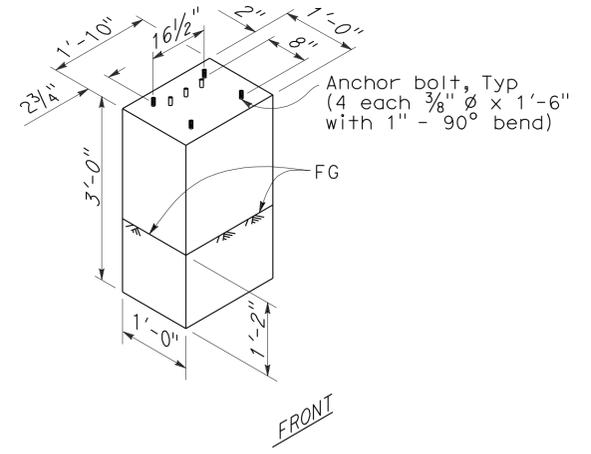
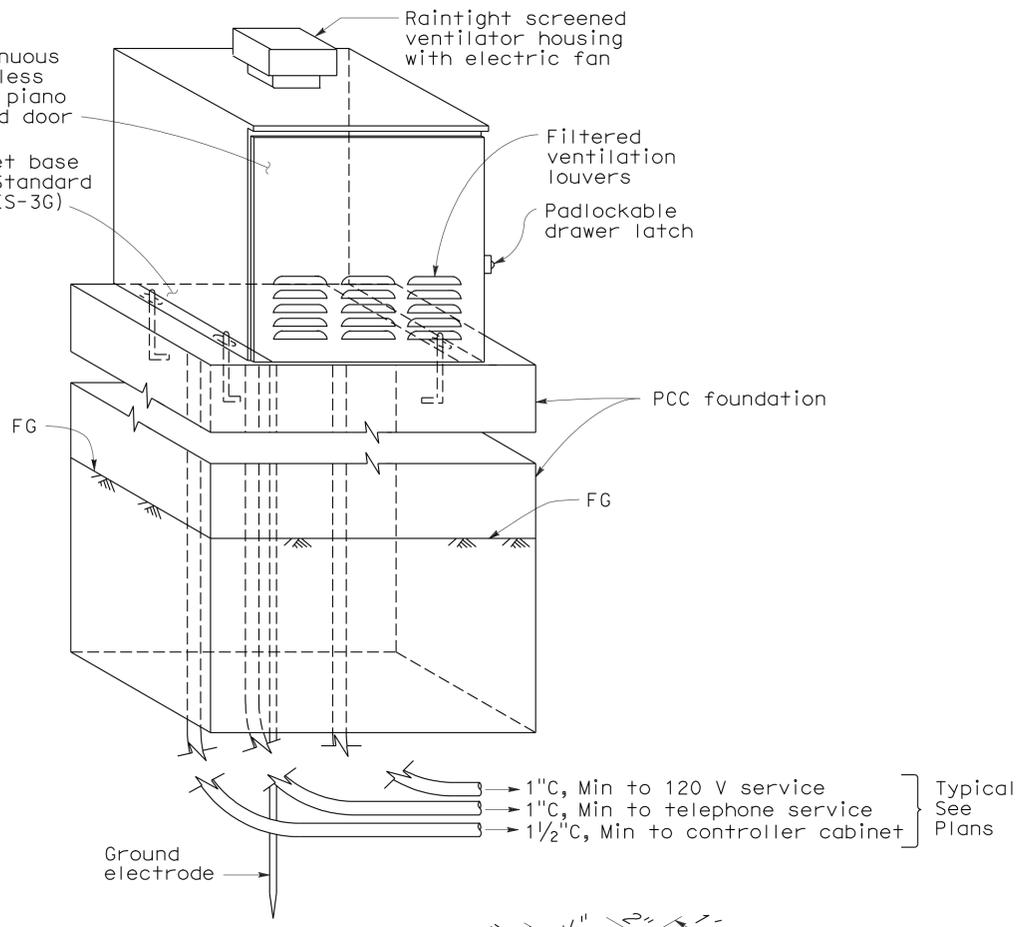
**TOP VIEW**



**FRONT VIEW**  
(Outer door removed)



**SIDE VIEW**



**FOUNDATION DETAILS**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (TELEPHONE DEMARICATION  
 CABINET, TYPE C)**

NO SCALE

RSP ES-3F DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-3F  
 DATED MAY 1, 2006 - PAGE 415 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-3F**

2006 REVISED STANDARD PLAN RSP ES-3F

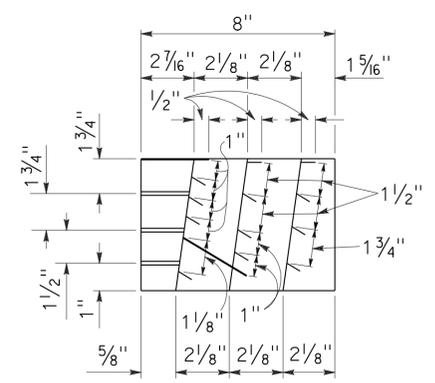
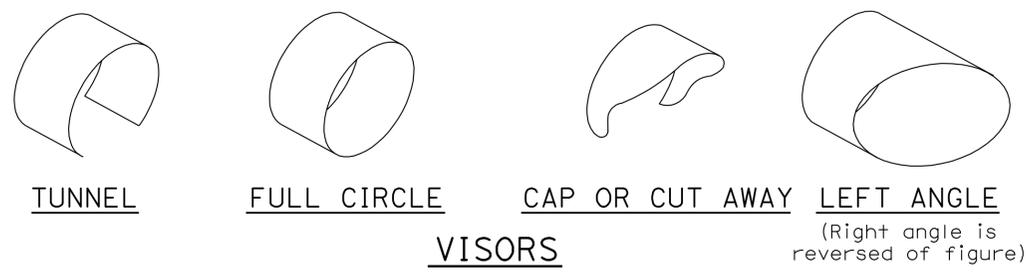
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	560	757

Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 No. E14512  
 Exp. 6-30-10  
 ELECTRICAL  
 STATE OF CALIFORNIA

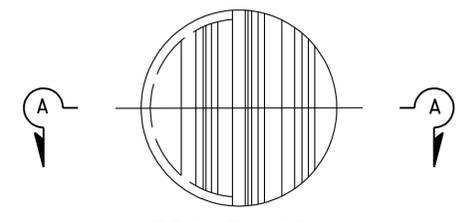
June 6, 2008  
 PLANS APPROVAL DATE

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.

To accompany plans dated 6-20-11



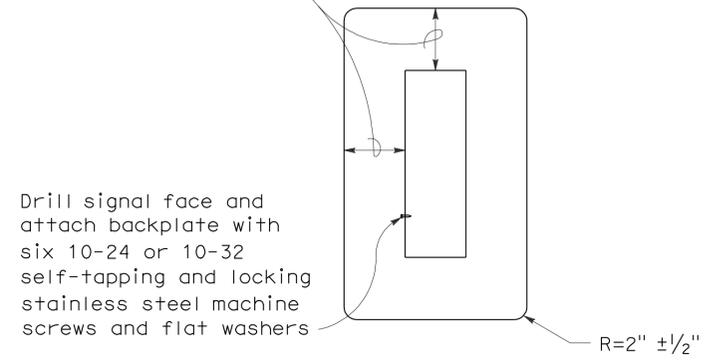
**SECTION A-A**



**FRONT VIEW**  
**DIRECTIONAL LOUVER**

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

8" ± 1/2" for 8" sections  
 5 1/2" ± 1/2" for 12" sections

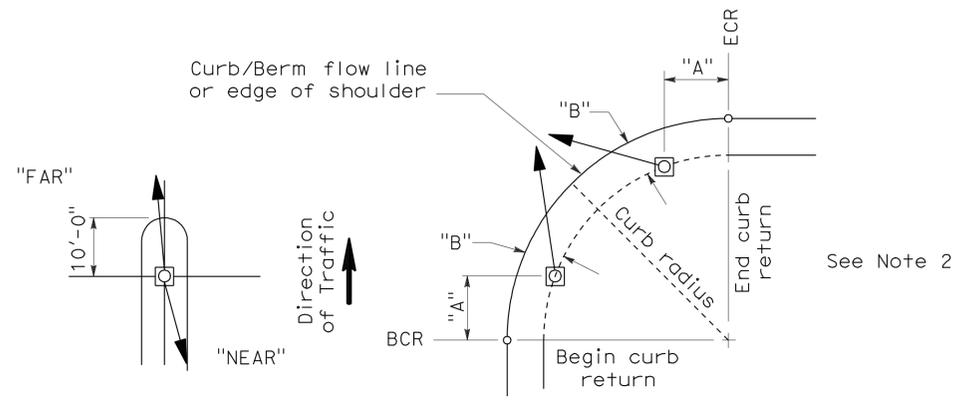


Drill signal face and attach backplate with six 10-24 or 10-32 self-tapping and locking stainless steel machine screws and flat washers

**8" AND 12" SECTIONS**

**BACKPLATE**

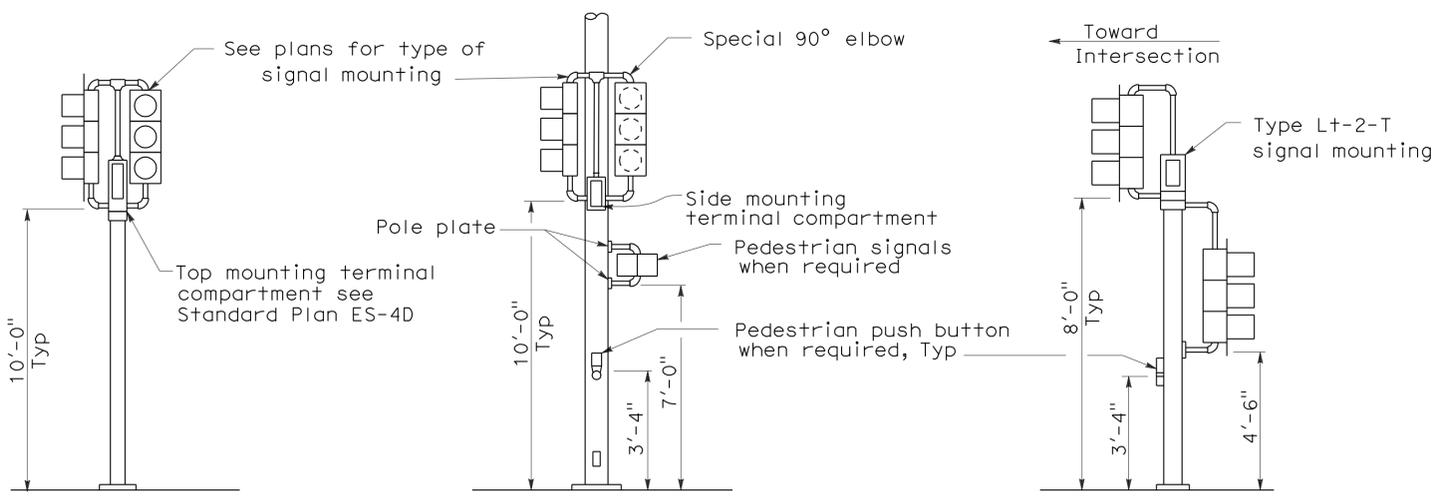
1/16" minimum thickness  
 3001-14 aluminum, or plastic when specified



**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.

**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

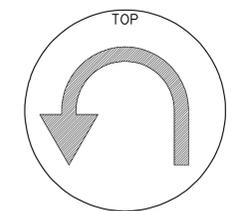
**SIDE MOUNTED SIGNALS (SV AND SP)**

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

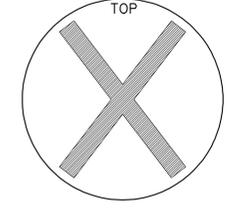
**TYPICAL SIGNAL INSTALLATIONS**



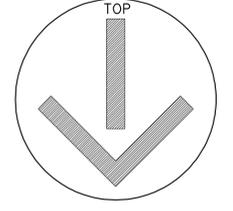
**U-TURN SIGNAL FACE**



**BICYCLE SIGNAL FACE**



**LANE CONTROL SIGNAL FACE**



**LANE CONTROL SIGNAL FACE**

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

NO SCALE

RSP ES-4C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN ES-4C DATED MAY 1, 2006 - PAGE 420 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-4C**

2006 REVISED STANDARD PLAN RSP ES-4C

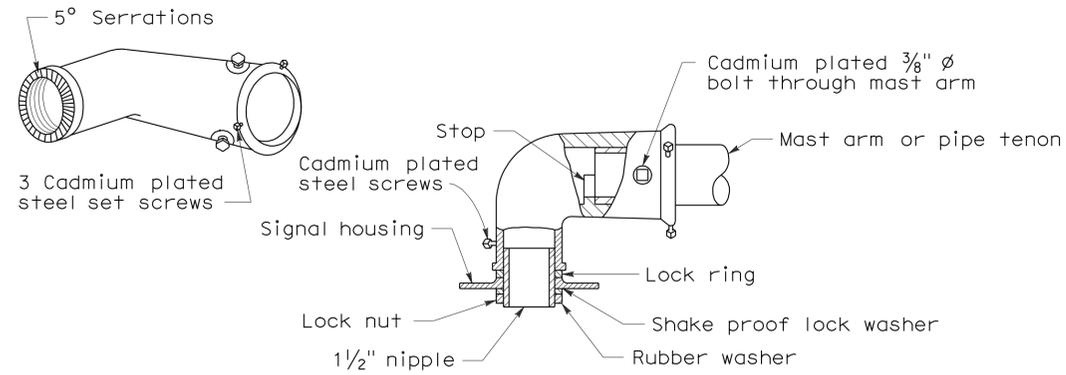
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	561	757

Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 No. E14512  
 Exp. 6-30-10  
 STATE OF CALIFORNIA

June 6, 2008  
 PLANS APPROVAL DATE

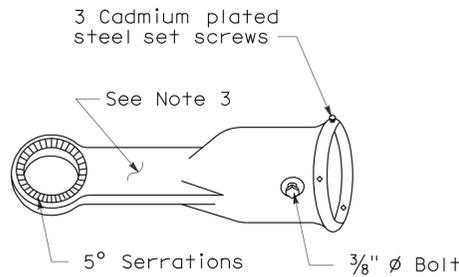
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 6-20-11



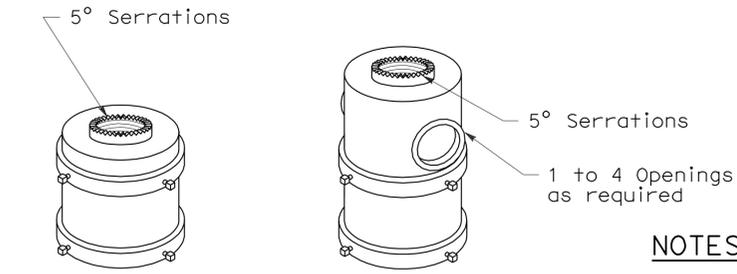
**MAST ARM MOUNTING - TYPE "MAT"**

For 2 NPS pipe, see Note 1.



**MAST ARM MOUNTING - TYPE "MAS"**

For 2 NPS pipe. See Note 1.

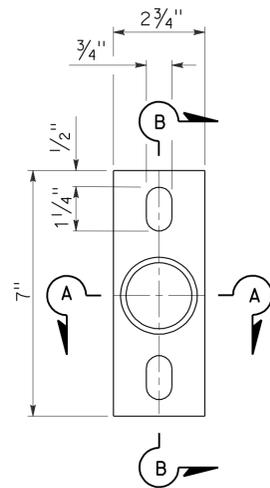


For one mounting For multiple mountings

**TOP MOUNTINGS**

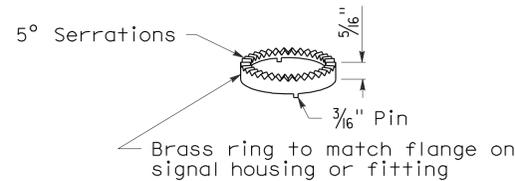
For 4 NPS pipe, see Note 2.

**SIGNAL SLIP FITTERS**



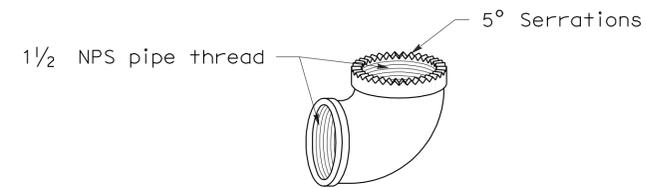
**POLE PLATE**

For side mountings



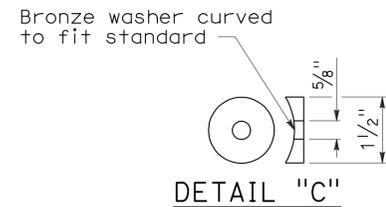
**LOCK RING**

Use where locking ring is not integral with signal housing or fitting.



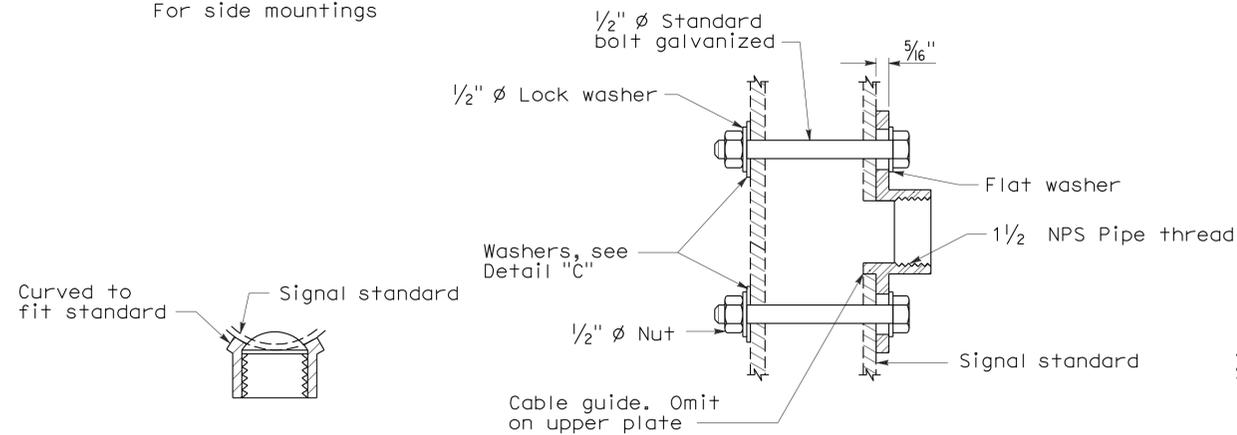
**SPECIAL 90° ELBOW**

One for each signal head, except those with special slip fitter mounting

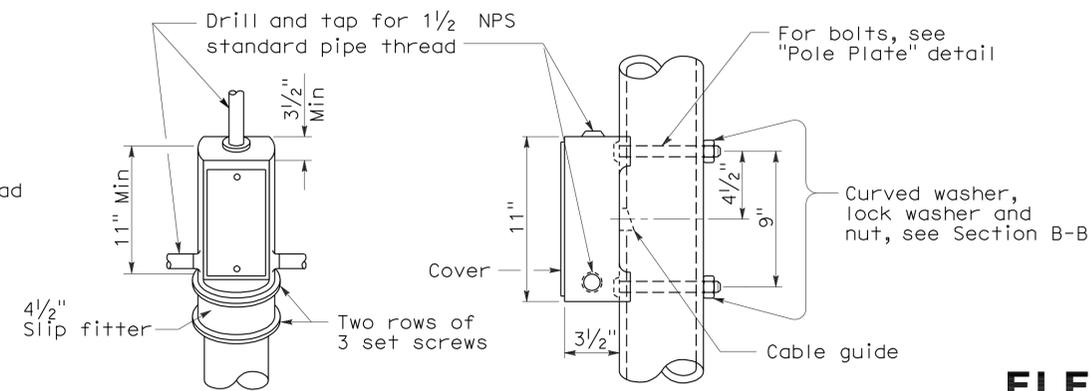


**DETAIL "C"**

**MISCELLANEOUS MOUNTING HARDWARE**



**SECTION B-B**



**TOP MOUNTING**

**SIDE MOUNTING**

**TERMINAL COMPARTMENTS**

**ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)**

NO SCALE

RSP ES-4D DATED June 6, 2008 SUPERSEDES STANDARD PLAN ES-4D DATED MAY 1, 2006 - PAGE 421 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-4D**

2006 REVISED STANDARD PLAN RSP ES-4D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	562	757

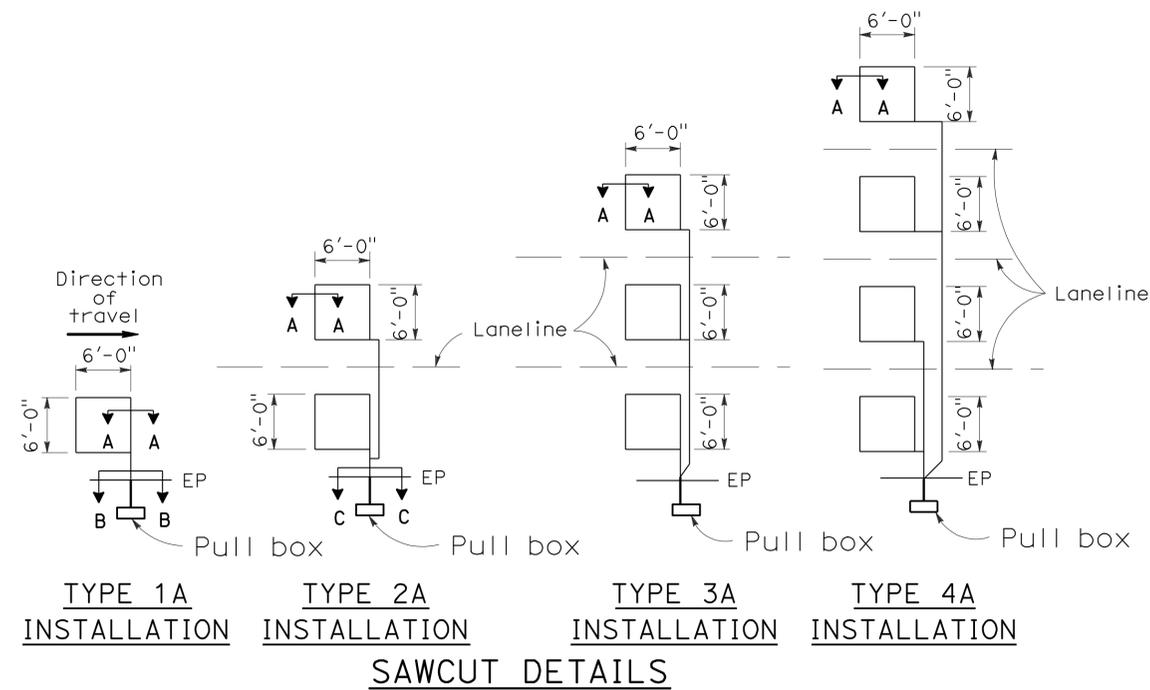
REGISTERED ELECTRICAL ENGINEER  
 REGISTERED PROFESSIONAL ENGINEER  
 Jeffery G. McRae  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA

October 5, 2007  
 PLANS APPROVAL DATE

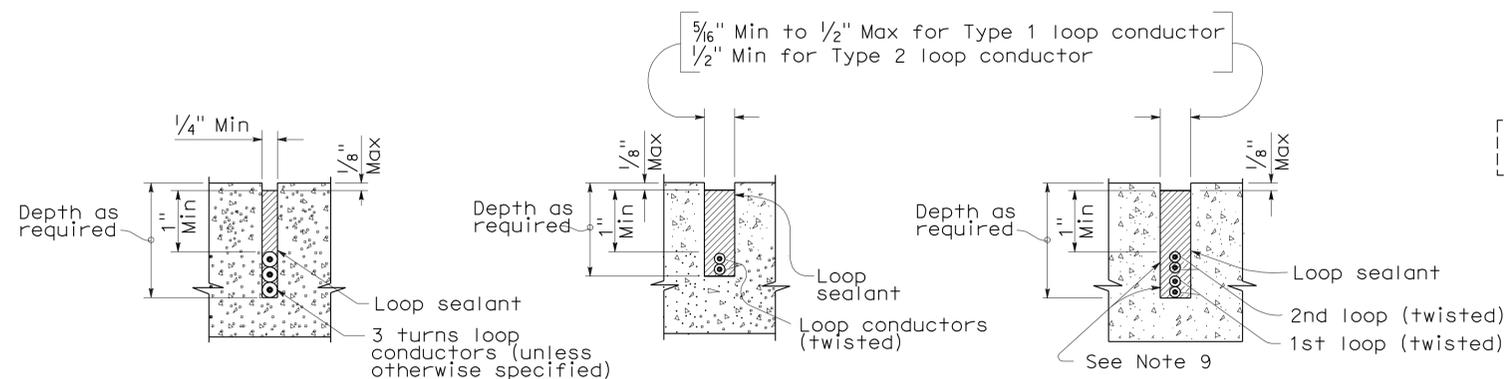
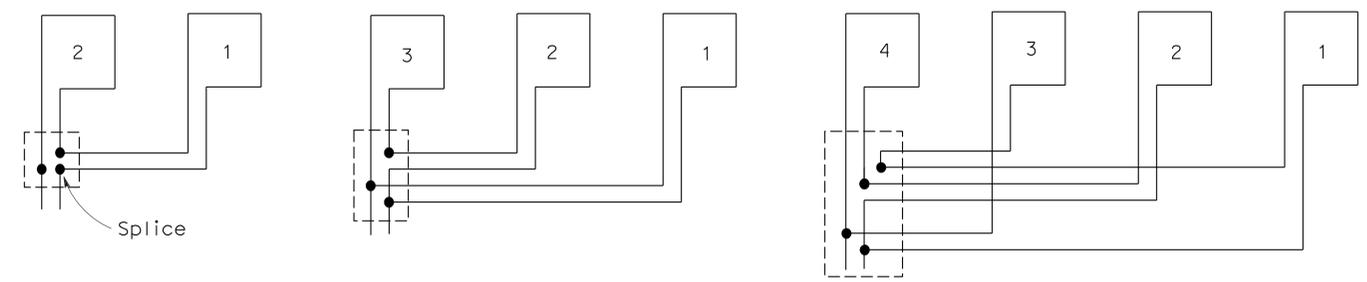
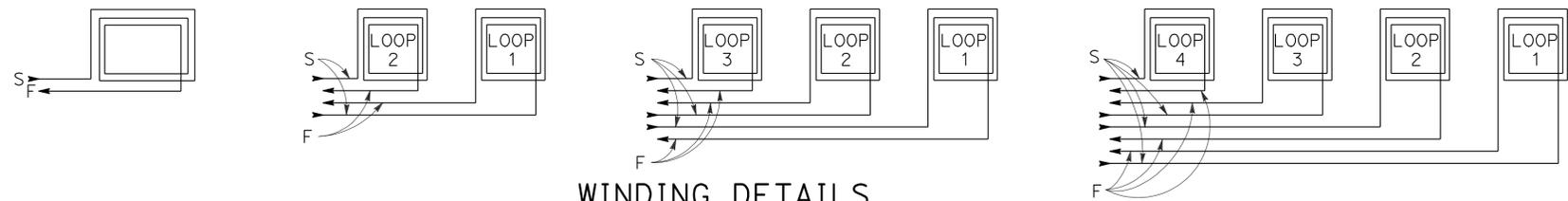
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

## LOOP INSTALLATION PROCEDURE

- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no sharp edges.
- Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
- Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
- Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
- Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
- No more than 2 twisted pairs shall be installed in one sawed slot.
- Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
- The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
- Fill slots as shown in details.
- Splice loop conductors to lead-in-cable. Splices shall be soldered.
- End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
- Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
- Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.



- 1A thru 4A = 1 Type A loop configuration in each lane.
  - 1B thru 4B = 1 Type B loop configuration in each lane.
  - 1C = 1 Type C loop configuration entering lanes as required.
  - 1D thru 4D = 1 Type D loop configuration in each lane.
  - 1E thru 4E = 1 Type E loop configuration in each lane.
  - 1Q thru 4Q = 1 Type Q loop configuration in each lane.
- (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)



## ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

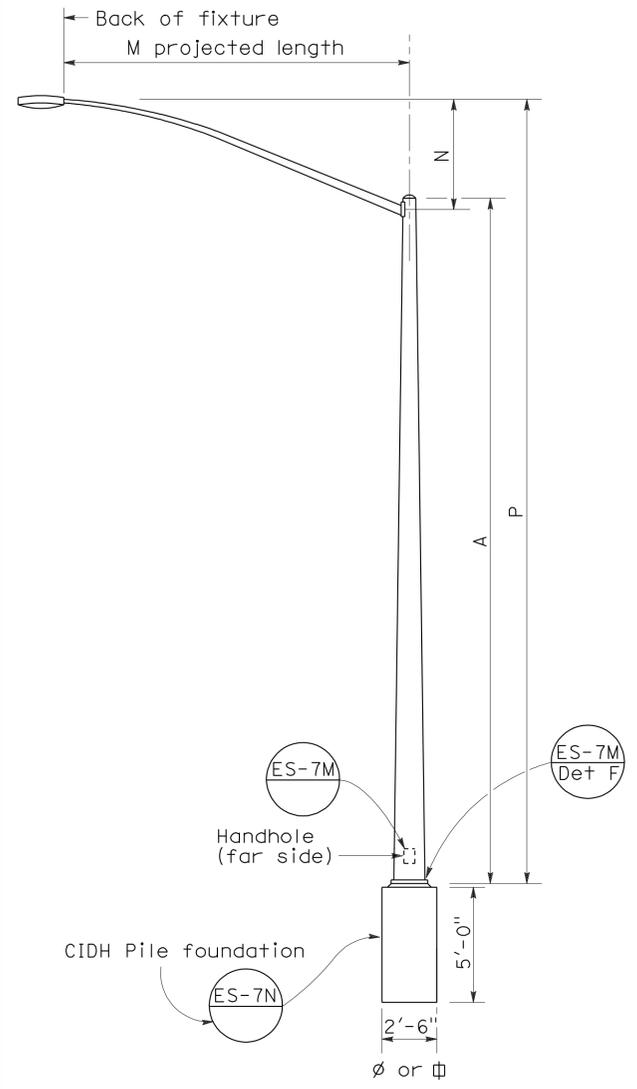
NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

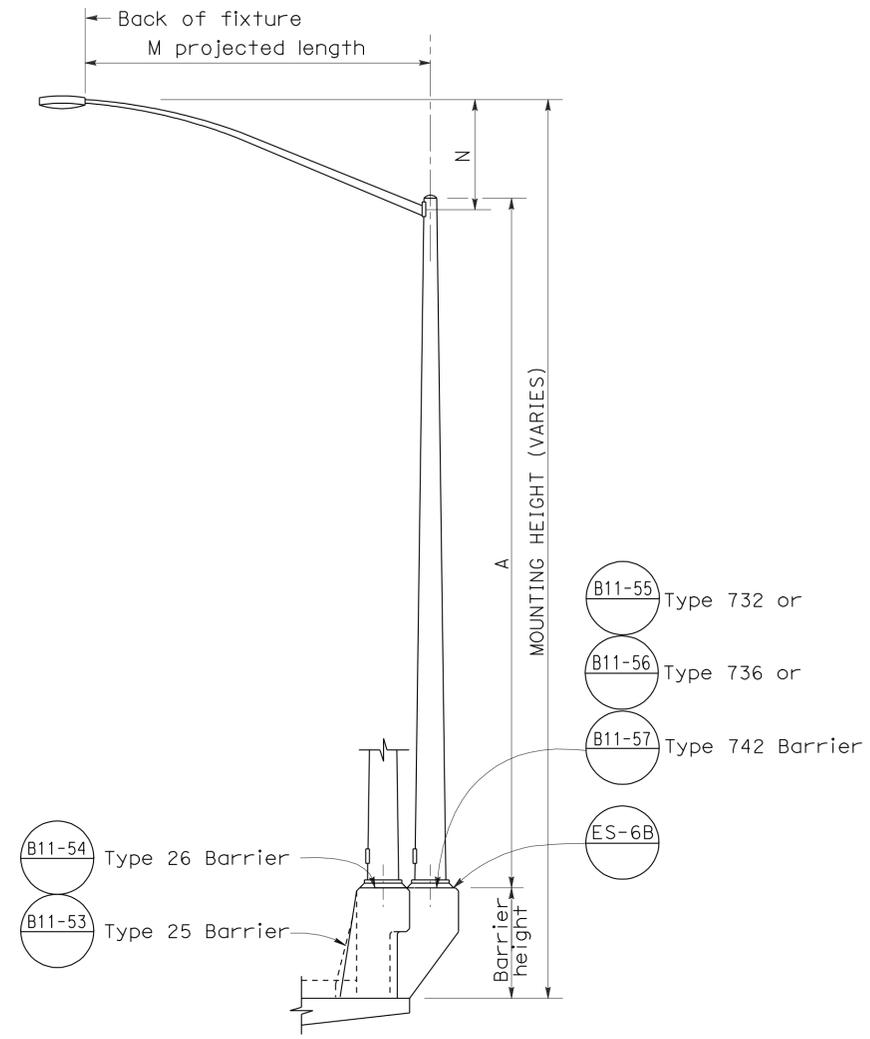
REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A

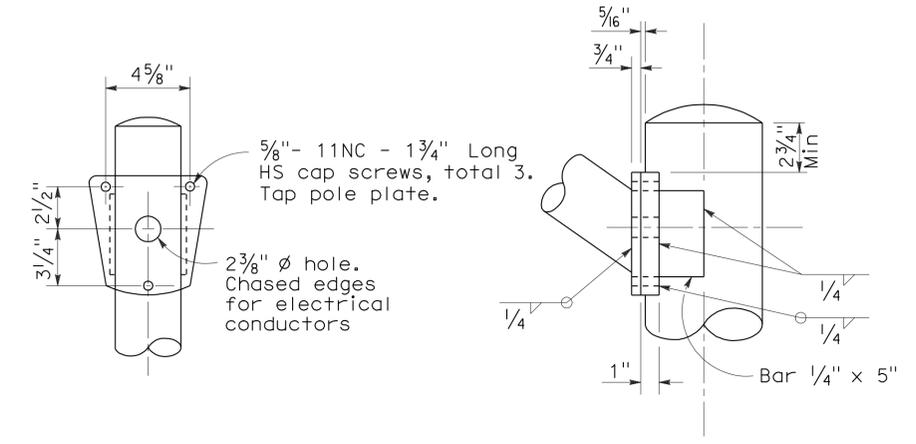
To accompany plans dated 6-20-11



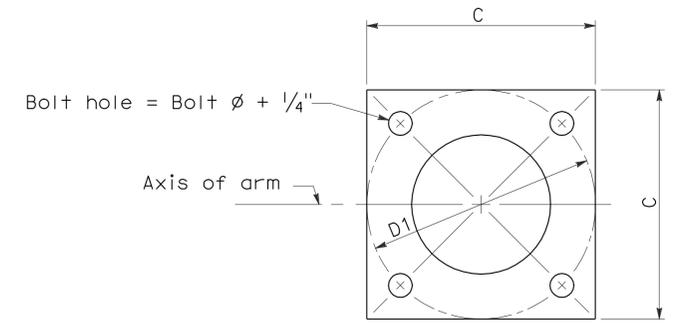
**ELEVATION**  
**TYPE 15 AND TYPE 21**



**ELEVATION**  
**TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED**



**DETAIL R**  
**LUMINAIRE ARM CONNECTION**



**BASE PLATE**

POLE TYPE	POLE DATA				BASE PLATE DATA				LUMINAIRE ARM
	A Height	Min OD Base	Min OD Top	Wall Thickness	C	D1 Bolt Circle	Thickness	Anchor Bolts Size	
15	30'	8"	3 7/8"	0.1196"	1'-0"	1'-0"	1"	1" $\phi$ x 3'-0" x 4"*	6' - 15' 12'
21	35'	8 5/8"	3 7/8"	0.1196"	1'-0"	1'-0"	1"	1 1/4" $\phi$ x 3'-0" x 4"*	6' - 15' 12'

\* For barrier rail bolts, see Standard Plan ES-6B.

M Projected Length	N Rise	Min OD At Pole	Nominal Thickness	LUMINAIRE ARM DATA	
				Type 15	Type 21
6'-0"	2'-0"±	3/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3/2"	0.1196"	32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"	0.1196"	32'-9"±	37'-9"±
12'-0"	4'-3"±	3 7/8"	0.1196"	33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"	0.1196"	34'-3"±	39'-3"±

**NOTES:**

- Indicates arm length to be used unless otherwise noted on the plans.
- For Type 15-SB, use Type 15 standard with Type 30 slip base plate details, see Standard Plan ES-6F.
- For additional notes, see Standard Plan ES-7M and ES-7N.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(LIGHTING STANDARD**  
**TYPES 15 AND 21)**

NO SCALE

RSP ES-6A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-6A DATED MAY 1, 2006 - PAGE 427 OF THE STANDARD PLANS BOOK DATED MAY 2006.

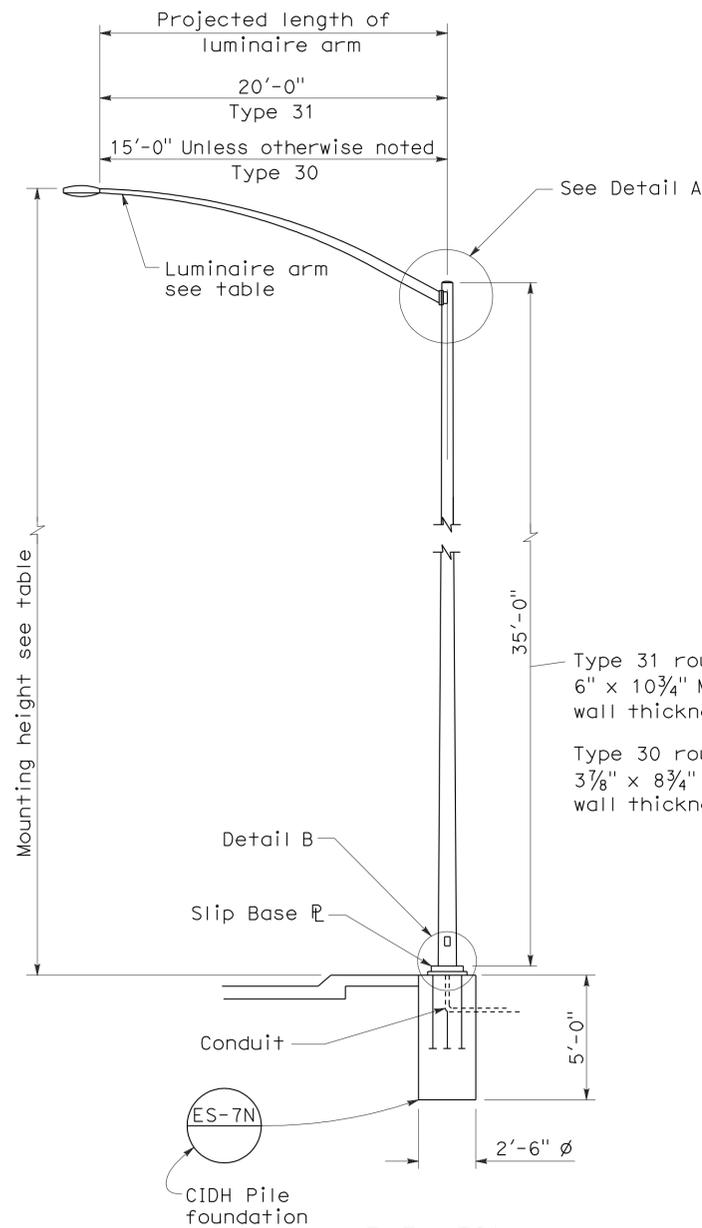
**REVISED STANDARD PLAN RSP ES-6A**

2006 REVISED STANDARD PLAN RSP ES-6A

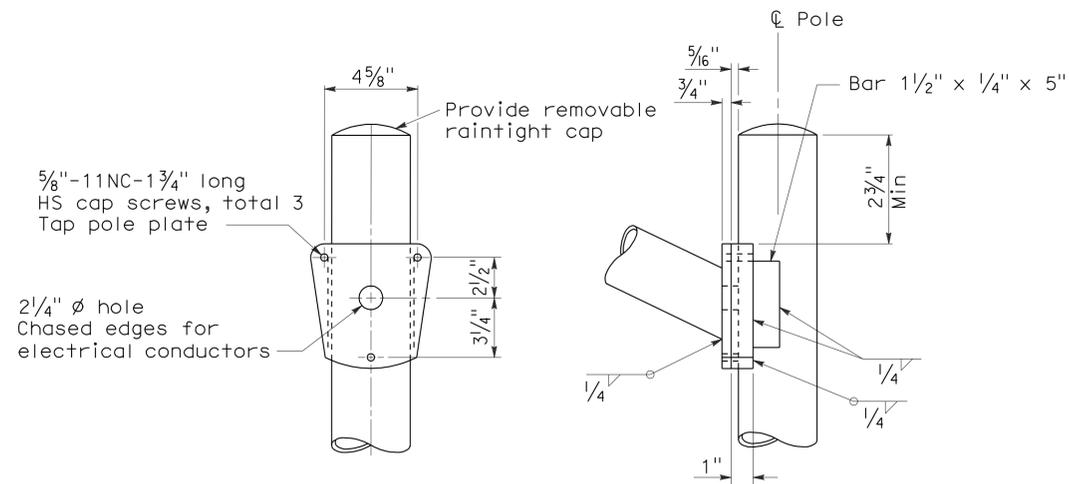
**LUMINAIRE ARM DATA**

PROJECTED LENGTH	THICKNESS	MINIMUM OD @ POLE	MOUNTING HEIGHT
* 6'-0"	0.1196"	3 1/4"	36'-9"±
8'-0"		3 1/2"	37'-3"±
10'-0"		3 3/4"	38'-0"±
12'-0"		3 3/4"	39'-0"±
15'-0"		4 1/4"	39'-6"±
** 20'-0"	0.1793"	5"	37'-0"±

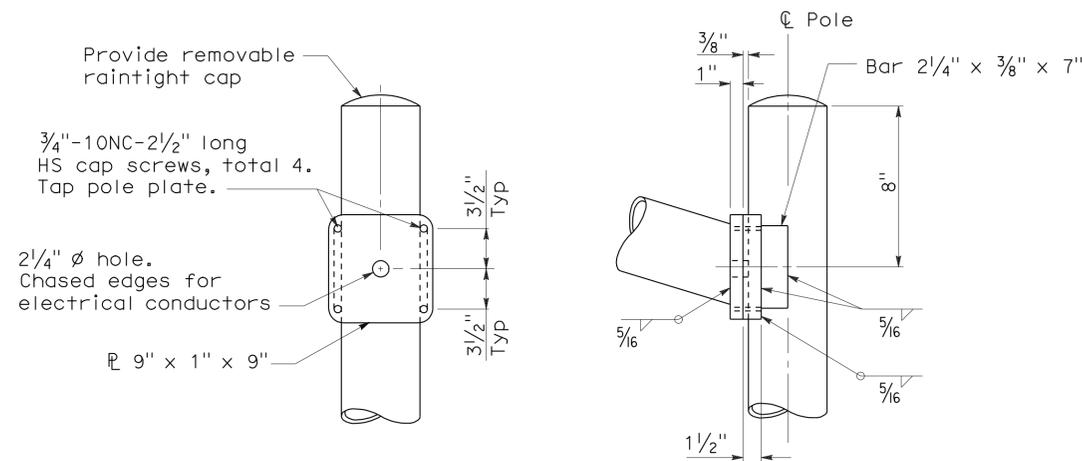
\* Type 30 - arm length 6'-0" - 15'-0" maximum  
 \*\* Type 31 - arm lengths 20'-0"



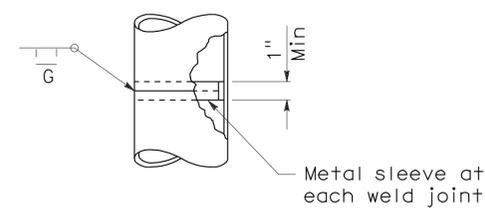
**ELEVATION**



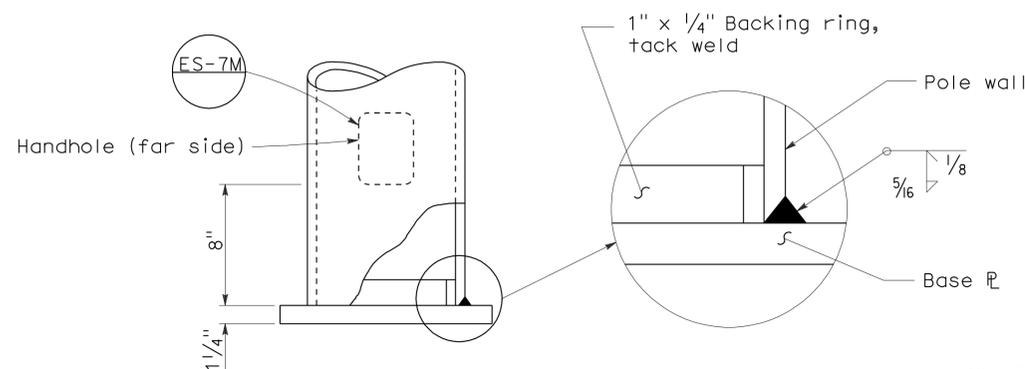
**DETAIL A - TYPE 30**



**DETAIL A - TYPE 31**



**POLE SPLICE**



**DETAIL B**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	564	757

Stanley P. Johnson  
 REGISTERED CIVIL ENGINEER  
 No. C57793  
 Exp. 03-31-08  
 CIVIL  
 STATE OF CALIFORNIA

January 18, 2008  
 PLANS APPROVAL DATE

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To accompany plans dated 6-20-11

**NOTES:**

- Sheet steel shall have a minimum yield of 48,000 psi.
- For slip base details see Standard Plan ES-6F.
- For Type 30 fixed base use Type 15 base plate, and foundation shown on Revised Standard Plan RSP ES-6A. Use 1 1/4" Dia x 3'-6" x 4" anchor bolts.
- For Type 31 fixed base use Type 32 base plate, anchor bolts and foundation on Standard Plan ES-6G.
- Handhole shall be located on downstream side of traffic unless noted otherwise on plans.
- For additional general notes refer to Standard Plan ES-7M.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (LIGHTING STANDARD  
 TYPES 30 AND 31)**

NO SCALE

RSP ES-6E DATED JANUARY 18, 2008 SUPERCEDES STANDARD PLAN ES-6E DATED MAY 1, 2006 - PAGE 430 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-6E**

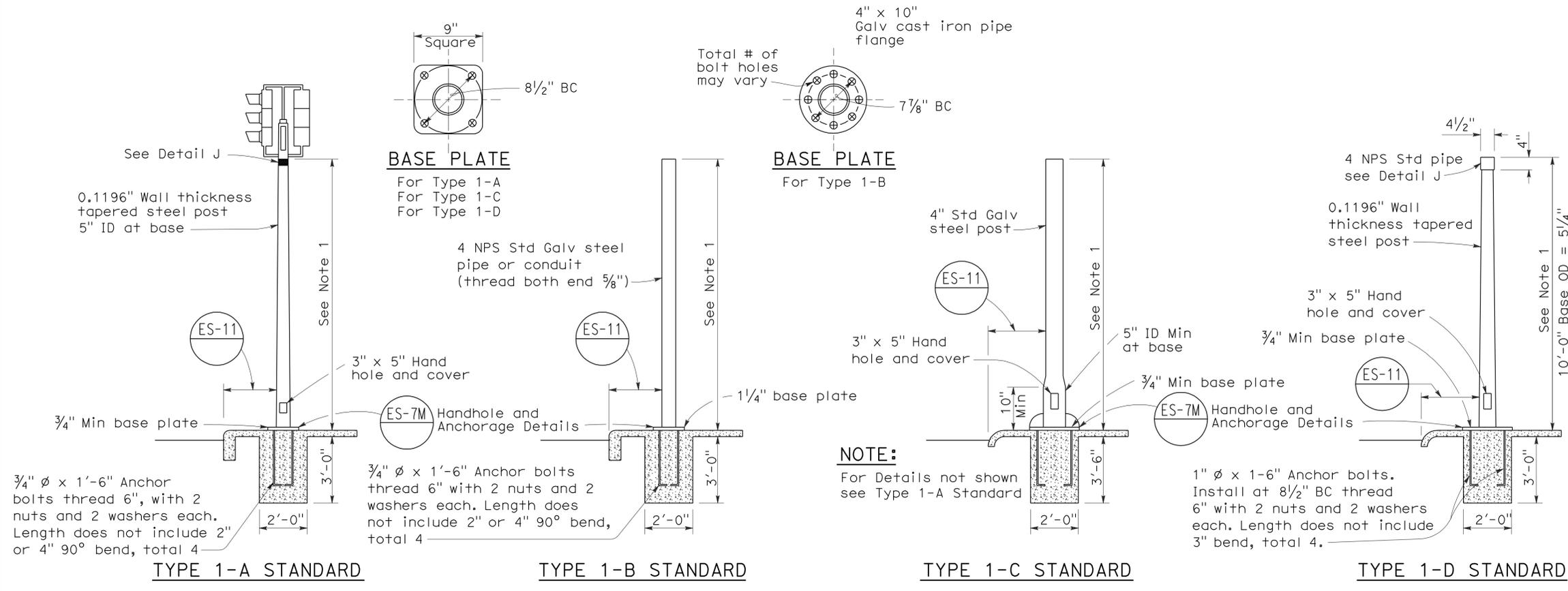
2006 REVISED STANDARD PLAN RSP ES-6E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	565	757

Stanley P. Johnson  
 REGISTERED CIVIL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

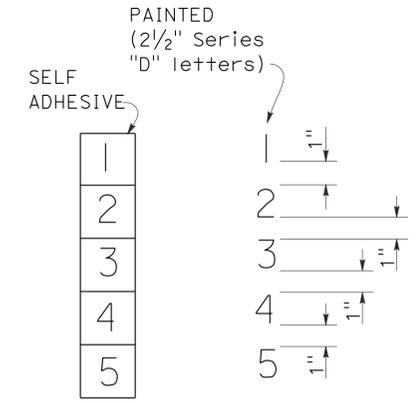
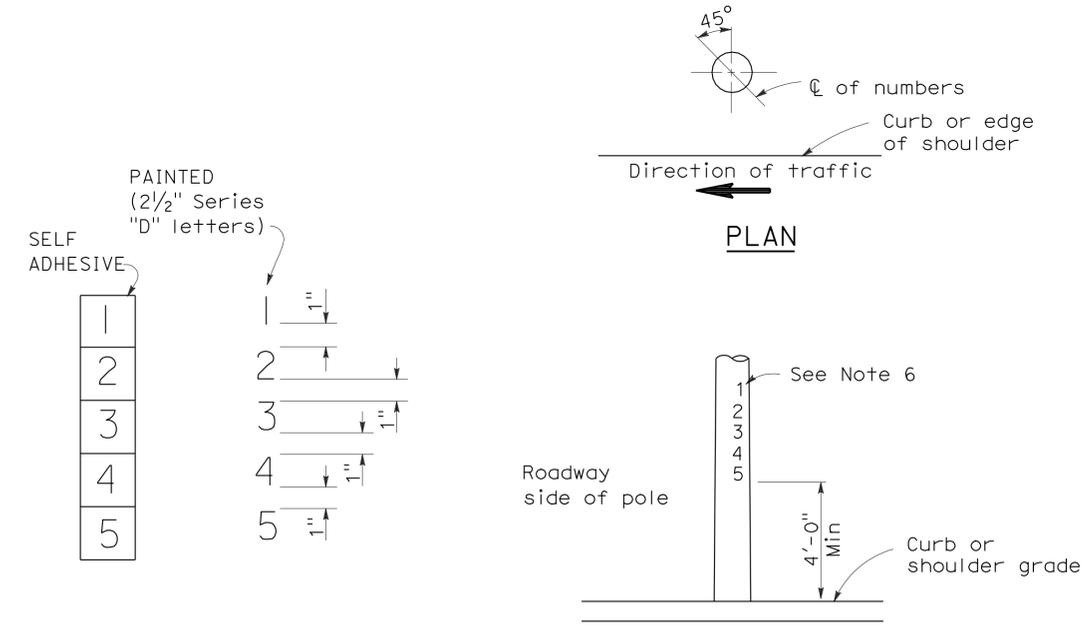
REGISTERED PROFESSIONAL ENGINEER  
 Stanley P. Johnson  
 No. C57793  
 Exp. 3-31-08  
 CIVIL  
 STATE OF CALIFORNIA

To accompany plans dated 6-20-11

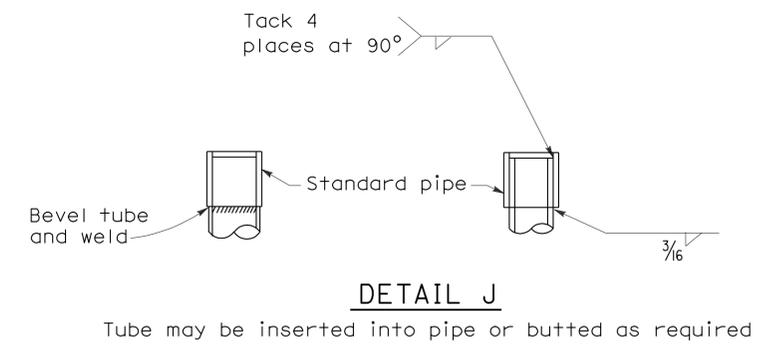
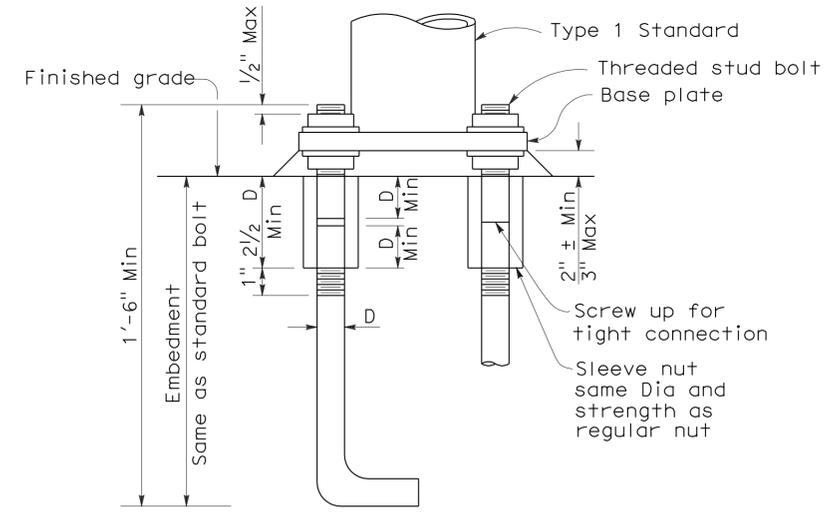


- NOTES:**
- Standards shall be 10'-0"  $\pm$  2" for vehicle signals and 7'-0"  $\pm$  2" for pedestrian signals unless otherwise noted on plans.
  - Top of standards shall be 4 1/2" OD.
  - Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward handhole.
  - Anchor bolts shall be bonded to conduit or grounding conductor.
  - Conduit between standard and adjacent pull box shall be 2" minimum.
  - Paint numbers on roadway side facing traffic when electrolier or post is left of direction of traffic.

**TYPE 1 SIGNAL STANDARDS**



**LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS**



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD TYPE 1 STANDARD AND EQUIPMENT NUMBERING)**  
 NO SCALE

RSP ES-7B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-7B DATED MAY 1, 2006 - PAGE 438 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-7B

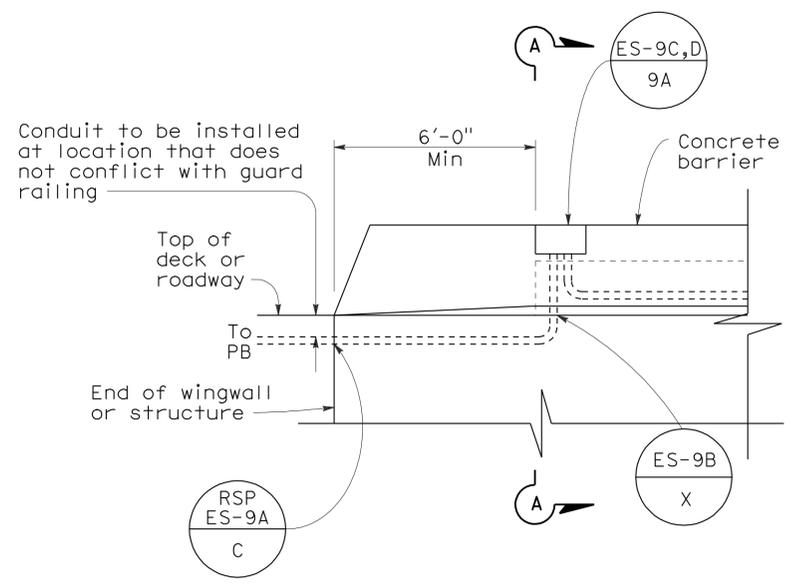
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	566	757

REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

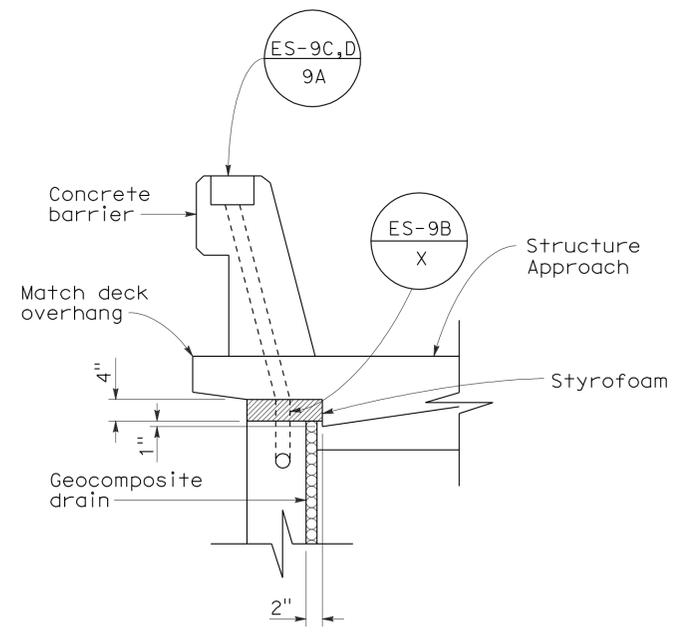
REGISTERED PROFESSIONAL ENGINEER  
 Jeffrey G. McRae  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA

To accompany plans dated 6-20-11

2006 REVISED STANDARD PLAN RSP ES-9A

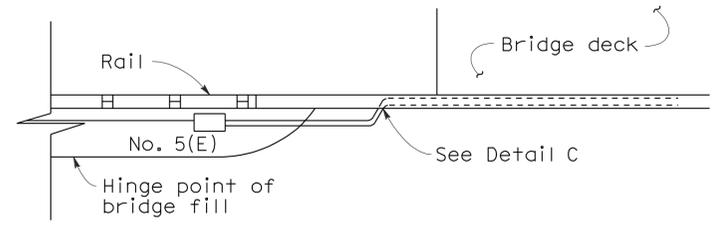


**SIDEVIEW**

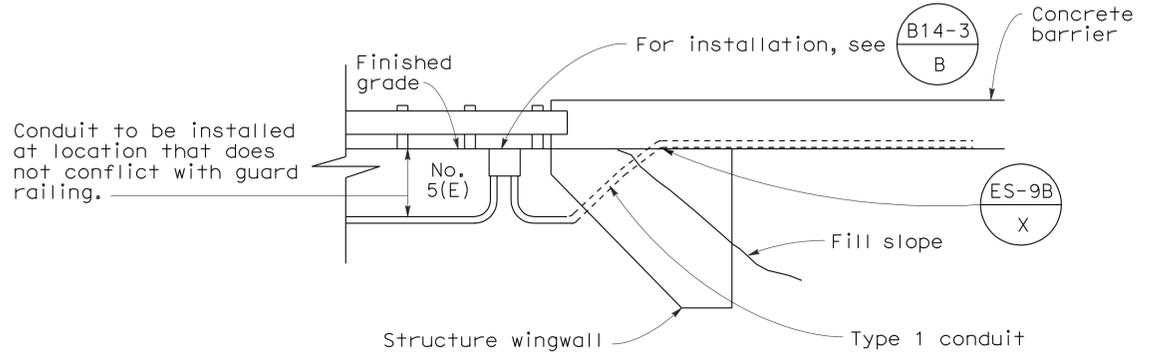


**SECTION A-A**

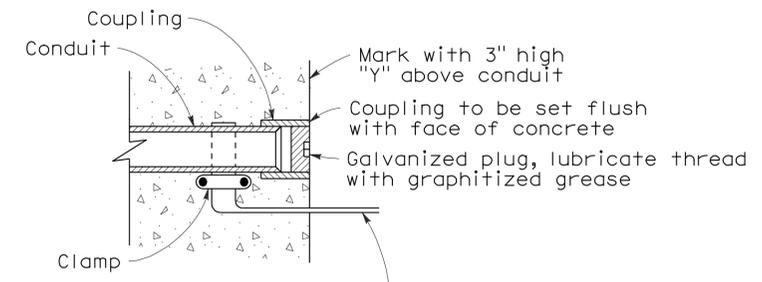
**DETAIL A  
CONDUIT TERMINATION**



**TOP VIEW**



**SIDE VIEW  
DETAIL I  
CONDUIT TERMINATION**



**DETAIL C  
CONDUIT TERMINATION**

Copper bonding strap install only at structure construction joint, extend at least 6" from face of concrete

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
(ELECTRICAL DETAILS  
STRUCTURE INSTALLATIONS)**

NO SCALE

RSP ES-9A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-9A DATED MAY 1, 2006 - PAGE 454 OF THE STANDARD PLANS BOOK DATED MAY 2006.

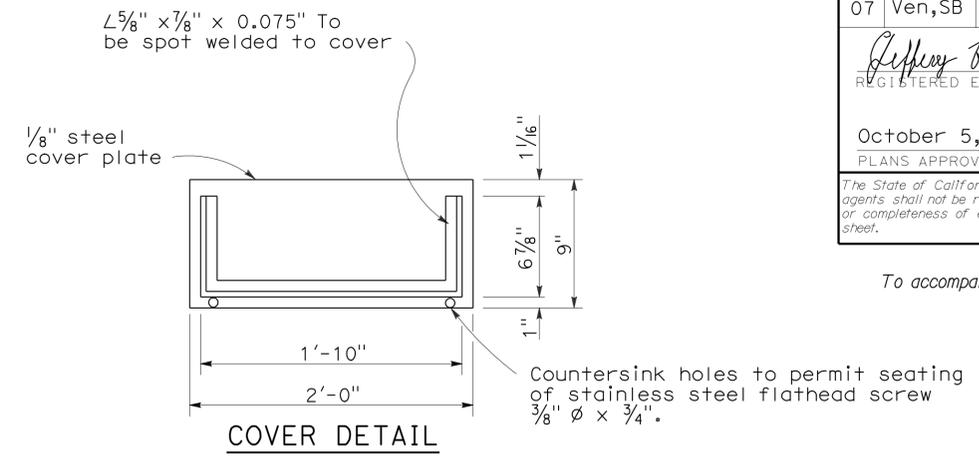
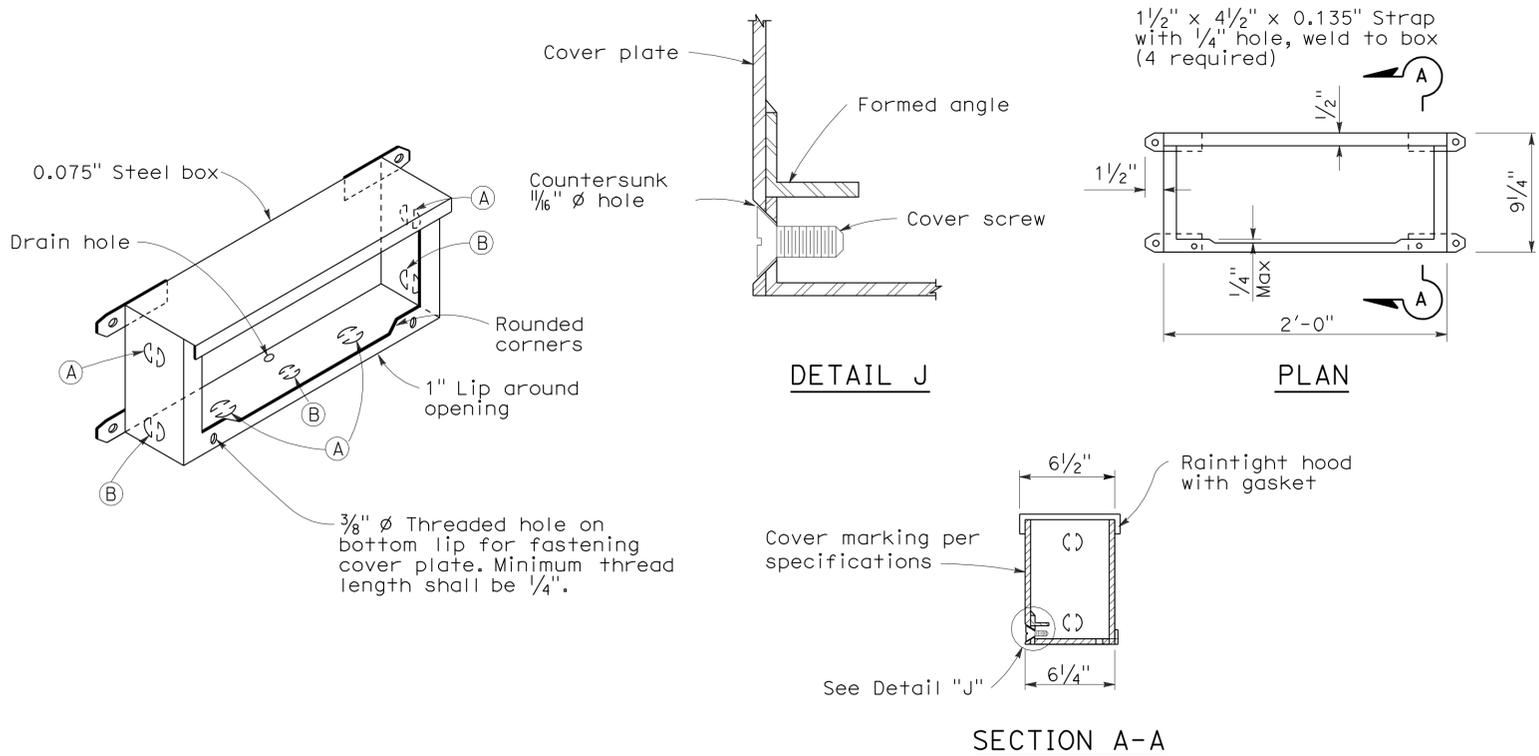
**REVISED STANDARD PLAN RSP ES-9A**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	567	757

Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
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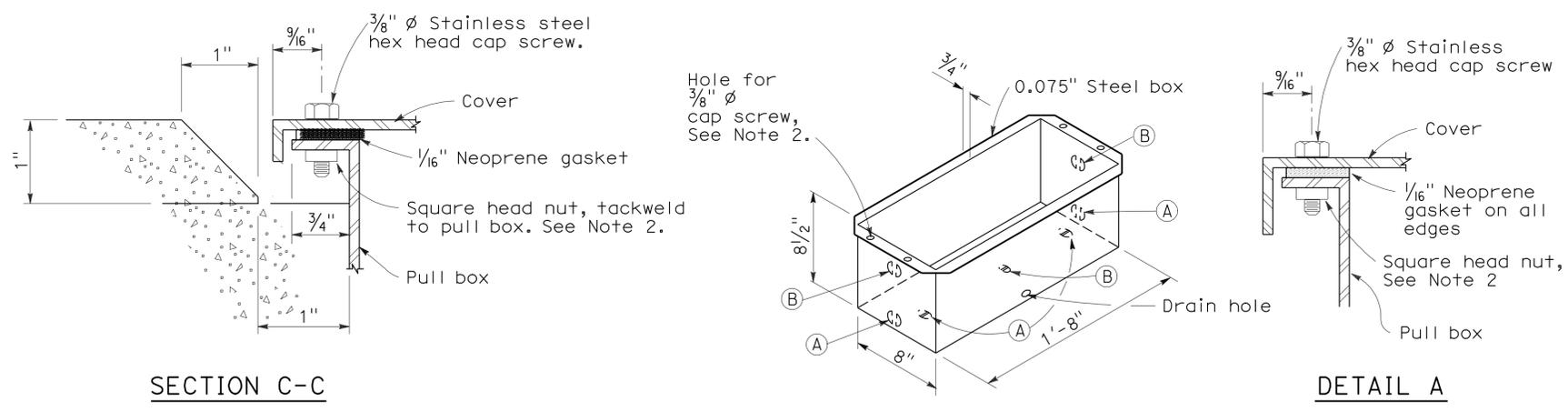
REGISTERED PROFESSIONAL ENGINEER  
 Jeffrey G. McRae  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA

To accompany plans dated 6-20-11



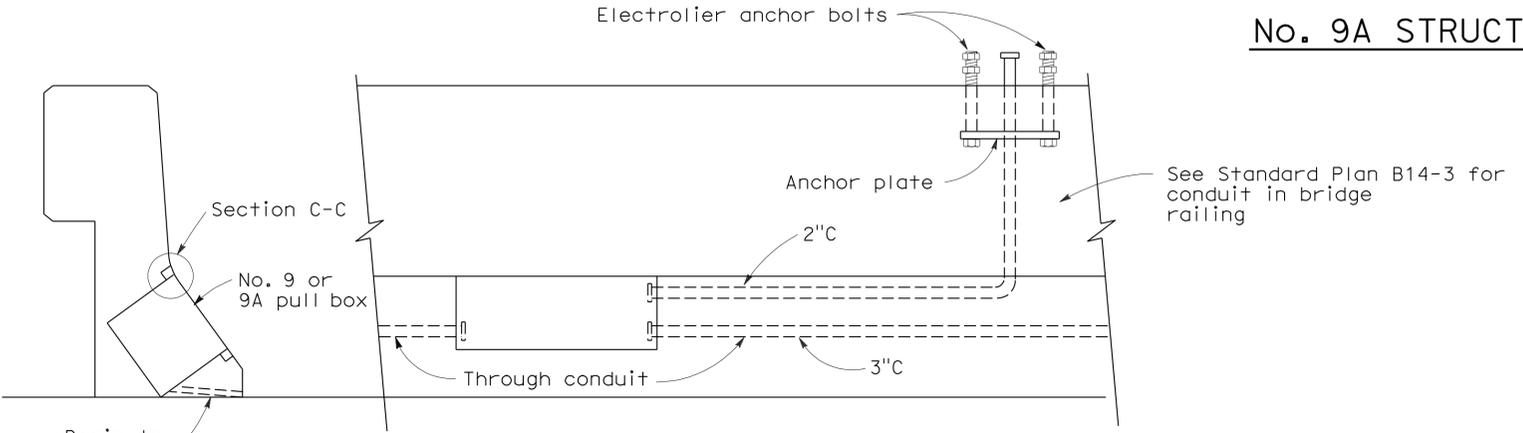
**INSTALLATION NOTE:**  
 Box shall be parallel to top of railing. Close cover box during pouring with 1/4" plywood of sufficient size to provide 1:1 chamfer on 3 sides of cover. Upper edge of plywood shall fit against lower edge of raintight hood.

**No. 9 STRUCTURE PULL BOX**



- NOTES:** No. 9 and 9A Pull Box
- Corner joints shall be lapped and secured by spot welding or riveting.
  - Where cap screws are used to attach cover to box, either of the following methods of providing adequate threading may be used:
    - Tack weld square nut to bottom of flange (Total 4), or
    - Tack weld a 1/4" x 5/8" x 8" bar beneath flange (Total 2).
  - Pound knockouts flat after punching.
  - Multiple size knockouts shall not be permitted.
  - Pull box covers shall be marked as shown on Standard Plan ES-8.

**No. 9A STRUCTURE PULL BOX**



**INSTALLATION IN SLOPING PARAPETS**

For reinforcement in area of electrolier, see railing sheets. For electrolier anchor bolts, see Standard Plan ES-6B.

- KNOCKOUT SCHEDULE**  
**No. 9 AND 9A PULL BOX**
- (A) 2"C, 1 each end, 2 on bottom.
  - (B) 3"C, 1 each end, 1 on bottom.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(ELECTRICAL DETAILS**  
**STRUCTURE INSTALLATIONS)**

NO SCALE  
 RSP ES-9C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-9C DATED MAY 1, 2006 - PAGE 456 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-9C

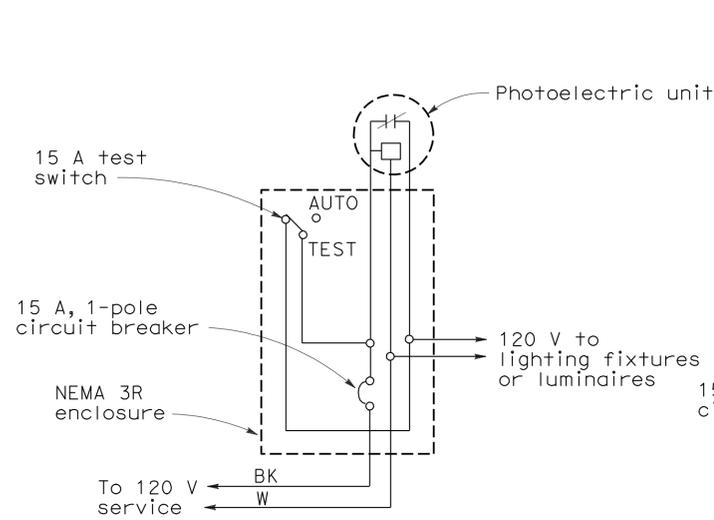
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	568	757

*Jeffery G. McRae*  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

**NOTES:** (FOR LIGHTING AND SIGN ILLUMINATION CONTROL)

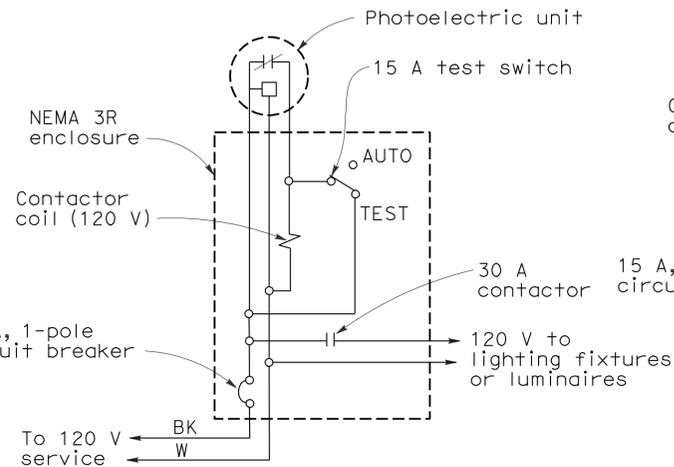
1. The ballast voltages of lighting fixtures and luminaires shall match line service voltages.
2. Voltage rating of photoelectric controls shall conform to the service voltage indicated on the plans.
3. Terminal strip shall be provided for wiring to fixtures.
4. Type SC1A, SC2A, SC3A controls are similar to Types SC1, SC2 and SC3 controls respectively except test switch and wiring are not required.

To accompany plans dated 6-20-11



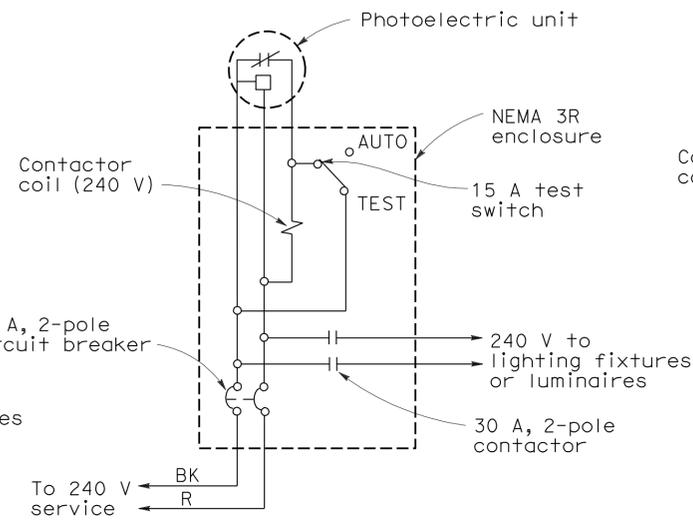
**TYPE LC1 CONTROL**

For 120 V unswitched circuit with no more than 800 W load.



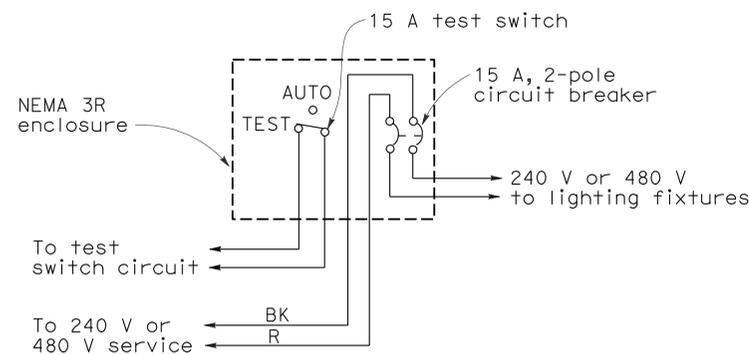
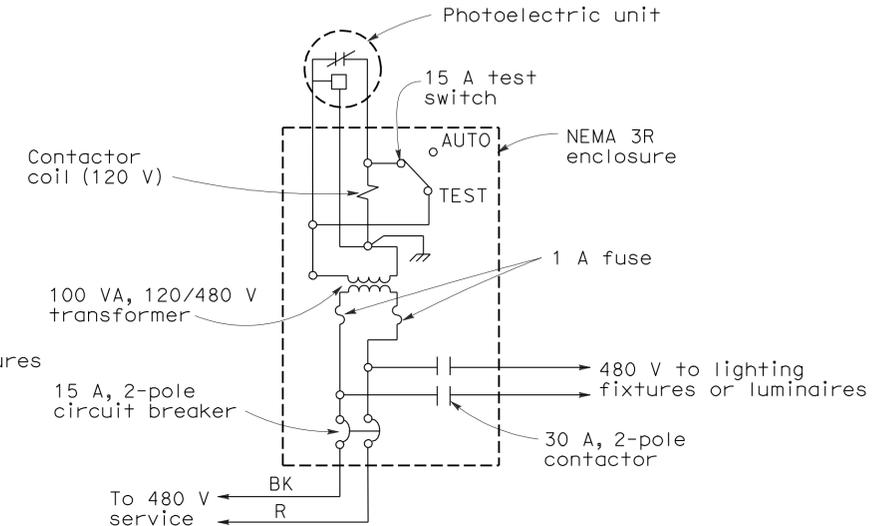
**TYPE LC2 CONTROL**

For 120 V unswitched circuit



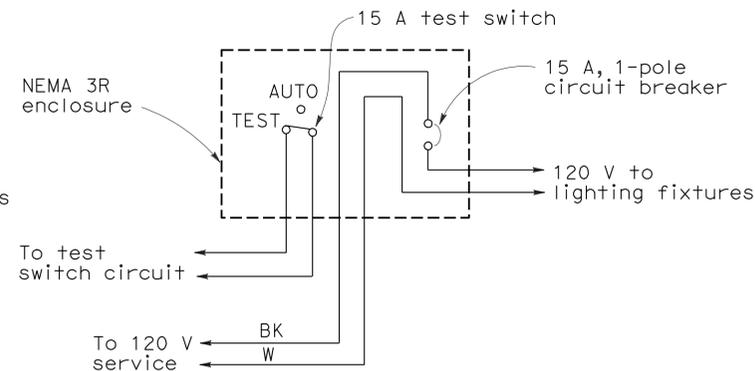
**TYPE LC3 CONTROL**

For 240 V and 480 V unswitched circuits



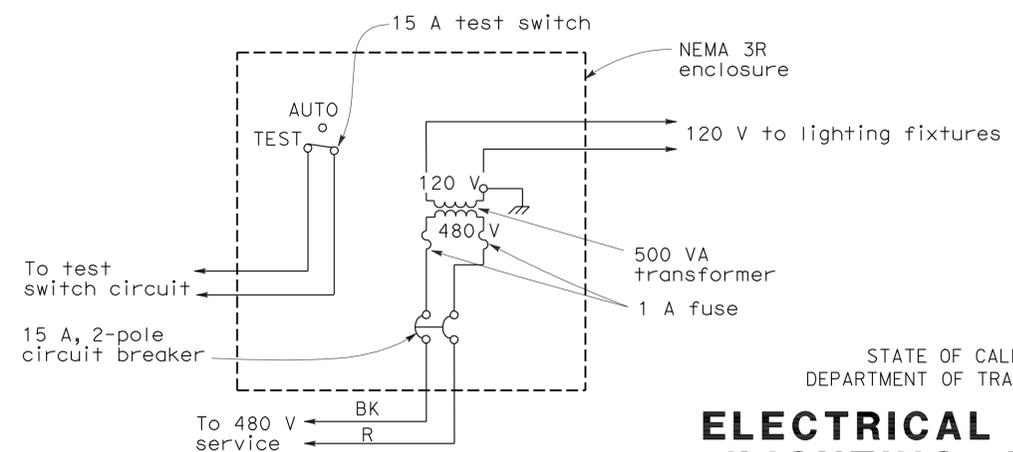
**TYPE SC1 CONTROL**

For 240 V or 480 V switched circuit, see Note 4 for Type SC1A



**TYPE SC2 CONTROL**

For 120 V switched circuit, see Note 4 for Type SC2A



**TYPE SC3 CONTROL**

For 480 V switched sign circuit, see Note 4 for Type SC3A

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (LIGHTING AND SIGN  
 ILLUMINATION CONTROL)**

NO SCALE

RSP ES-15D DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-15D DATED MAY 1, 2006 - PAGE 472 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-15D**

2006 REVISED STANDARD PLAN RSP ES-15D

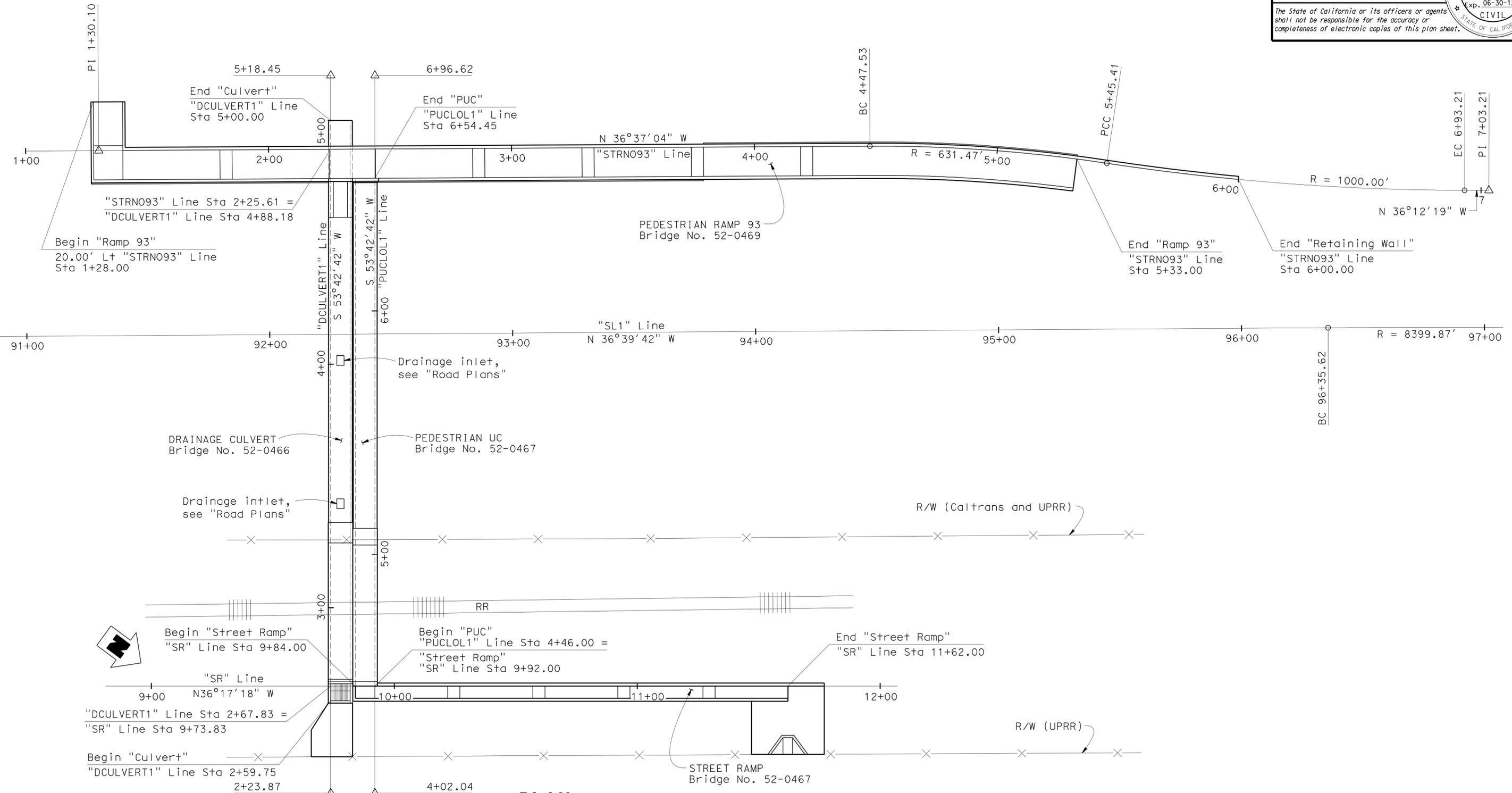
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	569	757

Mahmoud Fustok 10-18-10  
 REGISTERED CIVIL ENGINEER DATE

6-20-11  
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER  
 MAHMOUD FUSTOK  
 No. C51502  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



**PLAN**  
1:20

Matt Holm DESIGN ENGINEER	DESIGN	BY M. Fustok	CHECKED W. Addlespurger	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	Varies
	DETAILS	BY Various	CHECKED M. Fustok	LAYOUT	BY F. Fustok			POST MILE	41.58
	QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger	SPECIFICATIONS	BY Erwin Rufino			PLANS AND SPECS COMPARED	Erwin Rufino

**PEDESTRIAN RAMP 93,  
PEDESTRIAN UC AND  
DRAINAGE CULVERT  
PROJECT PLAN**

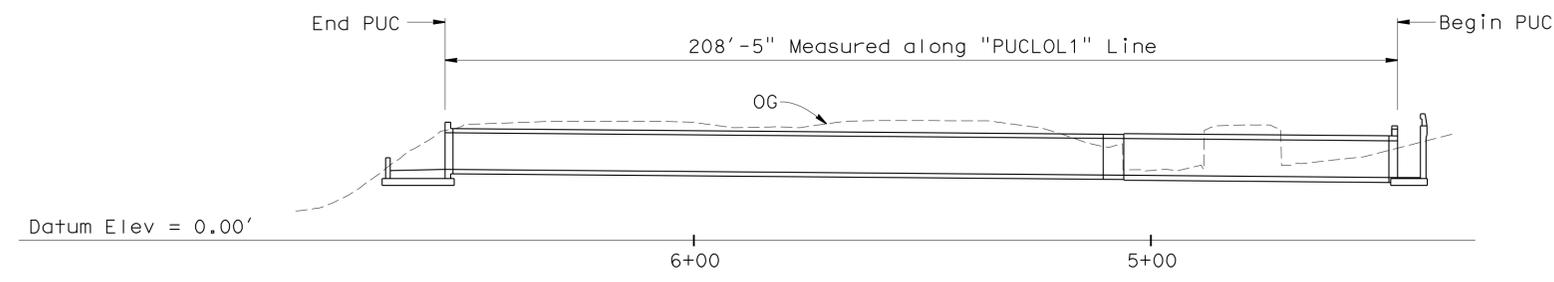
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	570	757

**Mahmoud Fustok** 10-18-10  
REGISTERED CIVIL ENGINEER DATE

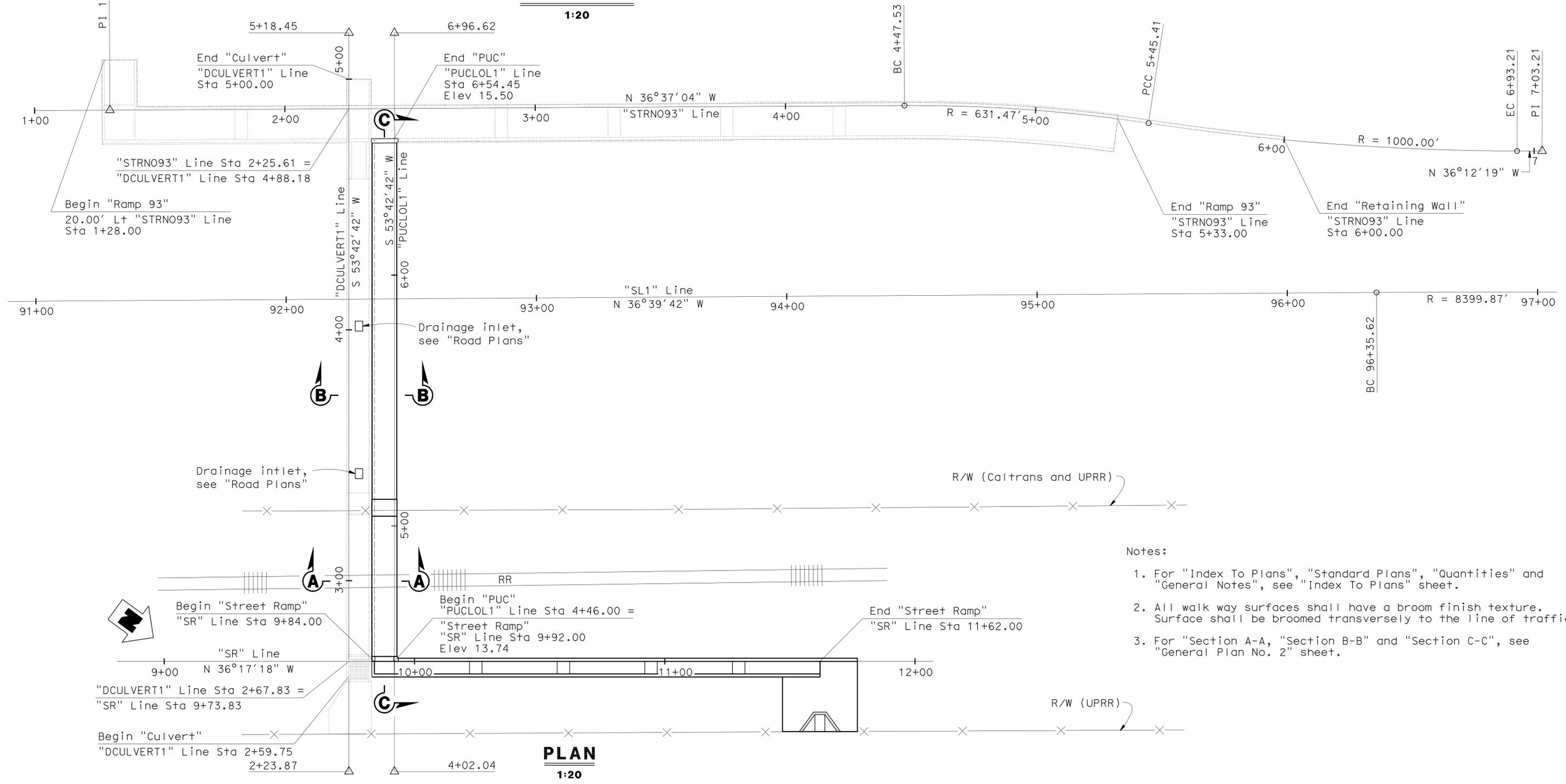
6-20-11  
PLANS APPROVAL DATE

**MAHMOUD FUSTOK**  
No. C51502  
Exp. 06-30-12  
CIVIL  
STATE OF CALIFORNIA

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



**ELEVATION**  
1:20



**PLAN**  
1:20

Notes:

1. For "Index To Plans", "Standard Plans", "Quantities" and "General Notes", see "Index To Plans" sheet.
2. All walk way surfaces shall have a broom finish texture. Surface shall be broomed transversely to the line of traffic.
3. For "Section A-A", "Section B-B" and "Section C-C", see "General Plan No. 2" sheet.

Matt Holm  
DESIGN ENGINEER

DESIGN	BY M. Fustok	CHECKED W. Addlespurger
DETAILS	BY Various	CHECKED M. Fustok
QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger

LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
LAYOUT	BY F. Fustok
SPECIFICATIONS	BY Erwin Rufino

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH **12**

BRIDGE NO.	52-0467
POST MILE	41.58

**PEDESTRIAN UC**  
**GENERAL PLAN NO. 1**

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



CU 07  
EA 260701

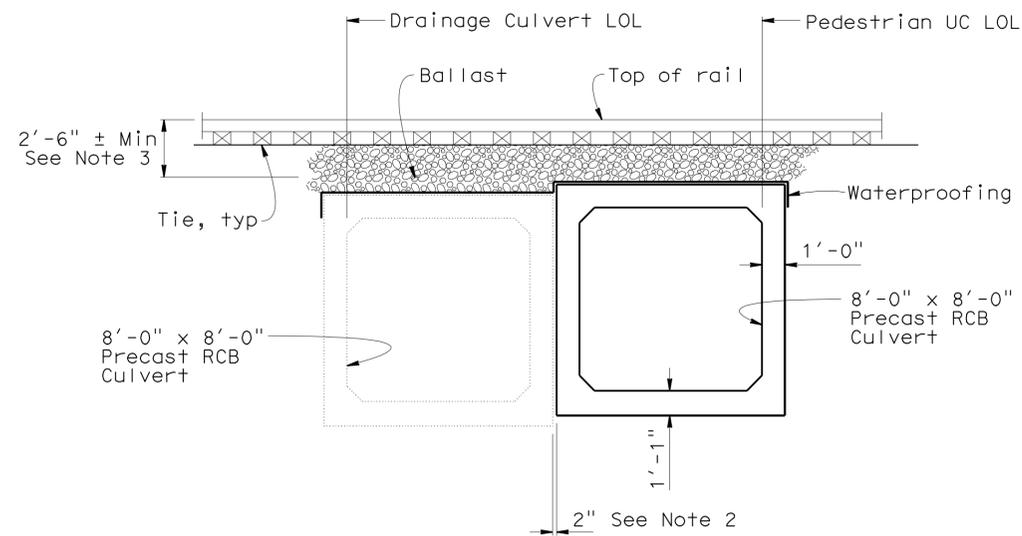
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES								SHEET	OF
2-3-10	3-8-11	6-3-10	7-22-10	8-24-10	9-3-10	1-4-10	2-14-11	1	29

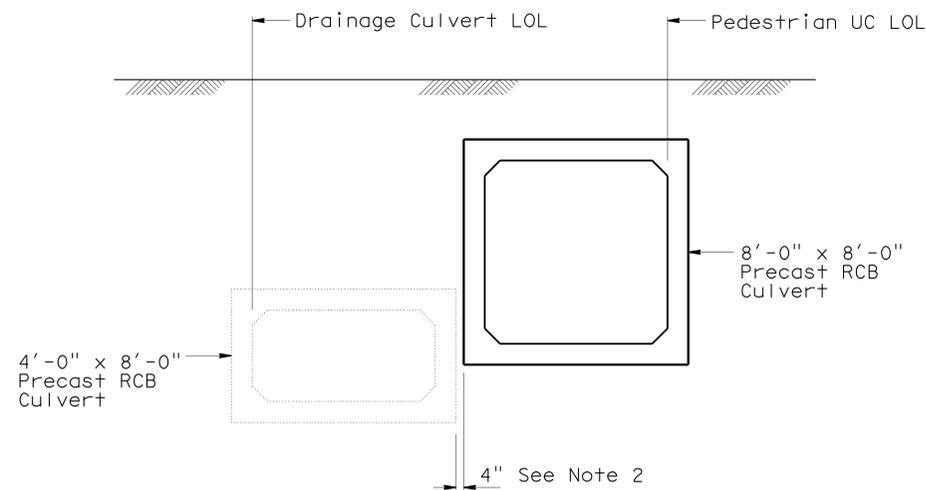
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	571	757

Mahmoud Fustok 10-18-10  
 REGISTERED CIVIL ENGINEER DATE  
 6-20-11  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 MAHMOUD FUSTOK  
 No. C51502  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



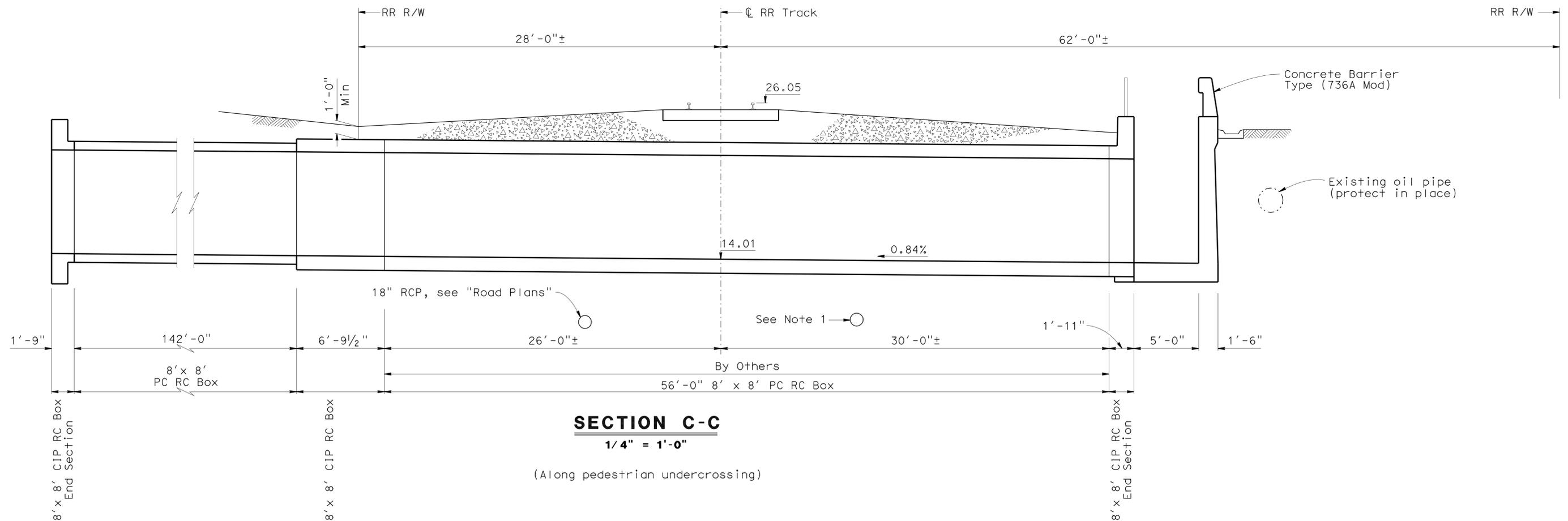
**SECTION A-A**  
1/4" = 1'-0"



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

Notes:

1. Fiber optic conduits to be relocated below ground.
2. Gaps between culverts to be filled with slurry cement backfill.
3. Match existing top of rail grades.



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

(Along pedestrian undercrossing)

Matt Holm  
DESIGN ENGINEER

DESIGN	BY M. Fustok	CHECKED W. Addlespurger
DETAILS	BY Various	CHECKED M. Fustok
QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger

LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE DESIGN LOAD
LAYOUT	BY F. Fustok
SPECIFICATIONS	BY Erwin Rufino

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 12

BRIDGE NO.	52-0467
POST MILE	41.58

PEDESTRIAN UC  
GENERAL PLAN NO. 2

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



CU 07  
EA 260701

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 7-21-10 1-6-10 2-14-11 2-18-11 3-7-11 4-18-11
---	---

SHEET	OF
2	29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	572	757

*Mahmoud Fustok* 10-18-10  
REGISTERED CIVIL ENGINEER DATE

6-20-11  
PLANS APPROVAL DATE

MAHMOUD FUSTOK  
No. C51502  
Exp. 06-30-12  
CIVIL  
STATE OF CALIFORNIA

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

**GENERAL NOTES  
LOAD FACTOR DESIGN**

DESIGN: CALTRANS BRIDGE DESIGN SPECIFICATIONS - April 2000 (LFD)  
(1996 AASHTO with Interims and Revisions by CALTRANS)

RETAINING WALL (SERVICE LOAD DESIGN):  
 $f_s = 24,000$  psi  
 $f'_c = 1,400$  psi  
 $n = 9$

LIVE LOADING SURCHARGE: 240 lbs / Sq Ft

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

FOR CAST-IN-PLACE RCB CULVERT

DESIGN: BRIDGE DESIGN SPECIFICATIONS  
(1983 AASHTO specifications with Revisions by CALTRANS)

FOR LOADS AND LOAD FACTORS SEE: 

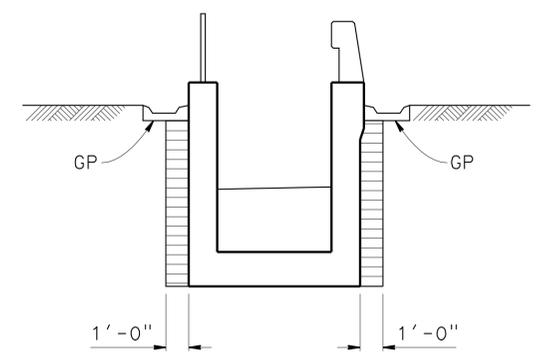
ALLOWABLE FOOTING PRESSURE: 9.2 kips per Sq Ft

**QUANTITIES**

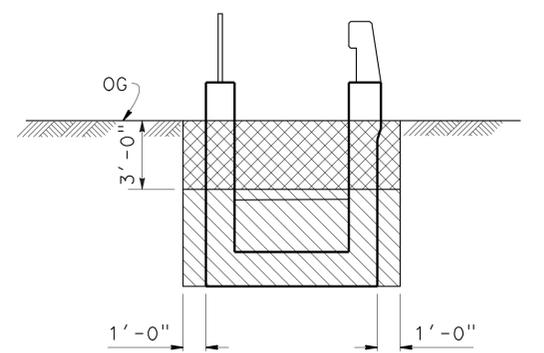
STRUCTURE EXCAVATION (PETROLEUM HYDROCARBON)	223	CY
STRUCTURE EXCAVATION (RETAINING WALL)	322	CY
SLURRY FILL	89	CY
STRUCTURE BACKFILL (RETAINING WALL)	200	CY
STRUCTURAL CONCRETE, RETAINING WALL	221	CY
STRUCTURAL CONCRETE, BOX CULVERT	18	CY
8' X 8' PRECAST REINFORCED CONCRETE BOX CULVERT	142	LF
ARCHITECTURAL TEXTURE (SEASIDE MOTIF)	3,304	SQFT
BAR REINFORCING STEEL (EPOXY COATED) (RETAINING WALL)	19,800	LB
BAR REINFORCING STEEL (EPOXY COATED) (BOX CULVERT)	3,018	LB
MINOR CONCRETE (SIDEWALK)	30	CY
MINOR CONCRETE (GUTTER)	343	LF
WATERPROOFING	616	SQFT
PIPE HANDRAILING (MODIFIED)	768	LF
CABLE RAILING	200	LF
CONCRETE BARRIER (TYPE 736A MODIFIED)	179	LF

**INDEX TO PLANS**

SHEET NO.	TITLE
1.	GENERAL PLAN NO. 1
2.	GENERAL PLAN NO. 2
3.	INDEX TO PLANS
4.	FOUNDATION PLAN
5.	UNDERCROSSING CROSS SECTION NO.1
6.	UNDERCROSSING CROSS SECTION NO.2
7.	STREET RAMP LAYOUT
8.	STREET RAMP DETAILS NO. 1
9.	STREET RAMP DETAILS NO. 2
10.	PRECAST RCB MISCELLANEOUS DETAILS NO. 1
11.	PRECAST RCB MISCELLANEOUS DETAILS NO. 2
12.	PRECAST RCB MISCELLANEOUS DETAILS NO. 3
13.	HANDRAIL DETAILS NO. 1
14.	HANDRAIL DETAILS NO. 2
15.	HANDRAIL DETAILS NO. 3
16.	STREET RAMP DRAINAGE DETAILS
17.	ARCHITECTURAL TREATMENT DETAILS NO. 1
18.	ARCHITECTURAL TREATMENT DETAILS NO. 2
19.	ARCHITECTURAL TREATMENT DETAILS NO. 3
20.	ARCHITECTURAL TREATMENT DETAILS NO. 4
21.	ARCHITECTURAL TREATMENT DETAILS NO. 5
22.	ARCHITECTURAL TREATMENT DETAILS NO. 6
23.	ARCHITECTURAL TREATMENT DETAILS NO. 7
24.	ARCHITECTURAL TREATMENT DETAILS NO. 8
25.	ARCHITECTURAL TREATMENT DETAILS NO. 9
26.	PRECAST RCB EXCAVATION AND BACKFILL DETAILS
27.	LOG OF TEST BORINGS 1 OF 3
28.	LOG OF TEST BORINGS 2 OF 3
29.	LOG OF TEST BORINGS 3 OF 3



**PAY LIMITS BACKFILL**  
1/4" = 1'-0"



**PAY LIMITS EXCAVATION**  
1/4" = 1'-0"

 Structure backfill (Retaining wall)	 Structure excavation (Retaining wall)
	 Structure excavation (Petroleum Hydrocarbon)

**STANDARD PLANS DATED MAY 2006**

A10A	ACRONYMS AND ABBREVIATIONS (A-L)
A10B	ACRONYMS AND ABBREVIATIONS (M-Z)
A87-A	CURBS AND DRIVEWAYS
A88-A	CURB RAMP DETAILS
B0-3	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
B3-8	RETAINING WALL DETAILS NO. 1
B3-9	RETAINING WALL DETAILS NO. 2
B11-47	CABLE RAILING
B11-55	CONCRETE BARRIER TYPE 732
D75-A	STEEL PIPE INLETS
D82	CAST-IN-PLACE REINFORCED CONCRETE BOX CULVERT MISCELLANEOUS DETAILS

DESIGN BY M. Fustok CHECKED W. Addlespurger	BY Various CHECKED M. Fustok	BY M. Fustok CHECKED W. Addlespurger	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO. 52-0467	PEDESTRIAN UC INDEX TO PLANS
					POST MILE 41.58	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 07 EA 260701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 3 OF 29

REVISION DATES: 8-24-10, 9-1-10, 10-14-10, 2-28-11, 2-28-11, 4-18-11

FILE => b-52-0467-b-1tp.dgn

USERNAME => s124496 DATE PLOTTED => 24-JUN-2011 TIME PLOTTED => 17:12

**CURVE DATA**

No.	R	Δ	T	L
(A)	8399.87	4°20'15"	318.10	635.89
(B)	631.47	8°52'51"	49.04	97.88
(C)	1000.00	8°28'7"	74.04	147.80

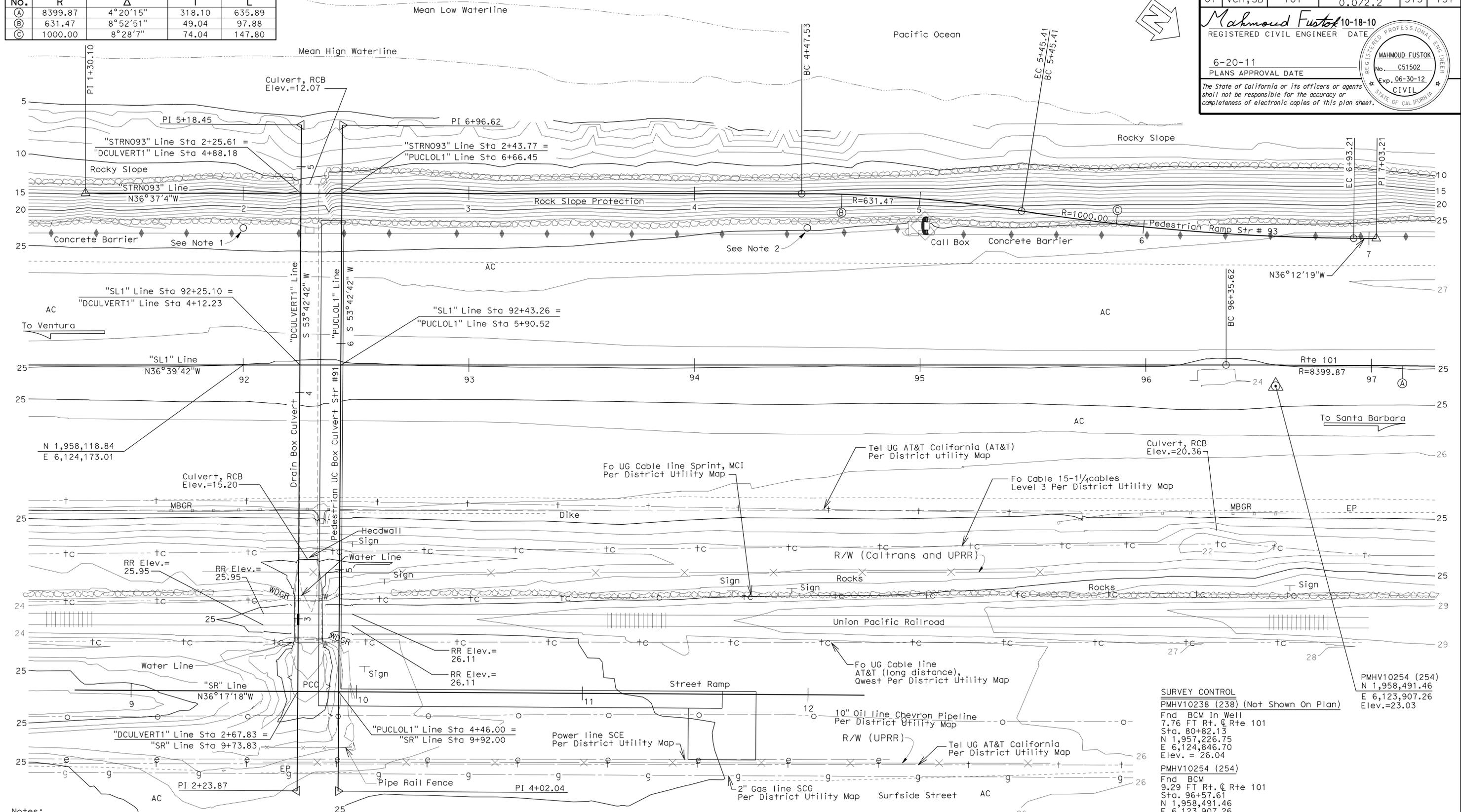
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	573	757

**Mahmoud Fustok** 10-18-10  
REGISTERED CIVIL ENGINEER DATE

6-20-11  
PLANS APPROVAL DATE

MAHMOUD FUSTOK  
No. C51502  
Exp. 06-30-12  
CIVIL  
STATE OF CALIFORNIA

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- Notes:
1. Location of bore hole, 50 to 70 feet left of SL1 Line Sta 92+00.00.
  2. Location of bore hole, 50 to 70 feet left of SL1 Line Sta 94+50.00.

**SURVEY CONTROL**

PMHV10238 (238) (Not Shown On Plan)  
 Fnd BCM In Well  
 7.76 FT Rt. C Rte 101  
 Sta. 80+82.13  
 N 1,957,226.75  
 E 6,124,846.70  
 Elev. = 26.04

PMHV10254 (254)  
 Fnd BCM  
 9.29 FT Rt. C Rte 101  
 Sta. 96+57.61  
 N 1,958,491.46  
 E 6,123,907.26  
 Elev. = 23.03

<b>PRELIMINARY INVESTIGATION SECTION</b>				DESIGN BY M. Fustok	CHECKED W. Adlespurger	<b>STATE OF CALIFORNIA</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>DIVISION OF ENGINEERING SERVICES</b> <b>STRUCTURE DESIGN</b> <b>DESIGN BRANCH 12</b>	BRIDGE NO. 52-0467	<b>PEDESTRIAN UC</b> <b>FOUNDATION PLAN</b>
SCALE VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY KC	CHECKED M. Fustok	POST MILE 41.58					
1"=20' HORZ. DATUM NAD83 (1991.35)	SURVEYED BY District	CHECKED BY T. Mason	CHECKED BY S. Sou	DATE 06/20/09					
ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED BY T. Zolnikova	CHECKED BY T. Zolnikova	CHECKED BY S. Sou	DATE 06/20/09	QUANTITIES BY M. Fustok	CHECKED W. Adlespurger	CU 07	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 4 OF 29

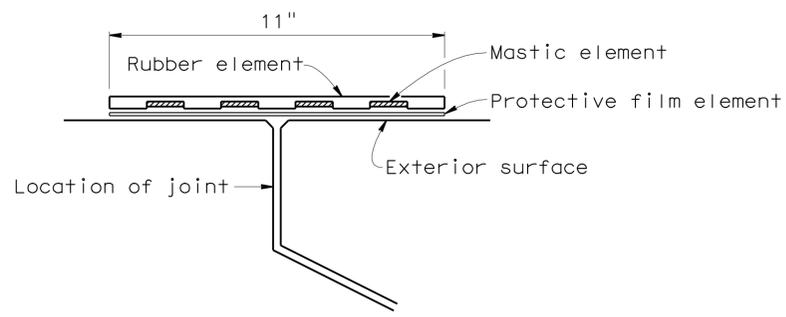
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 10/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

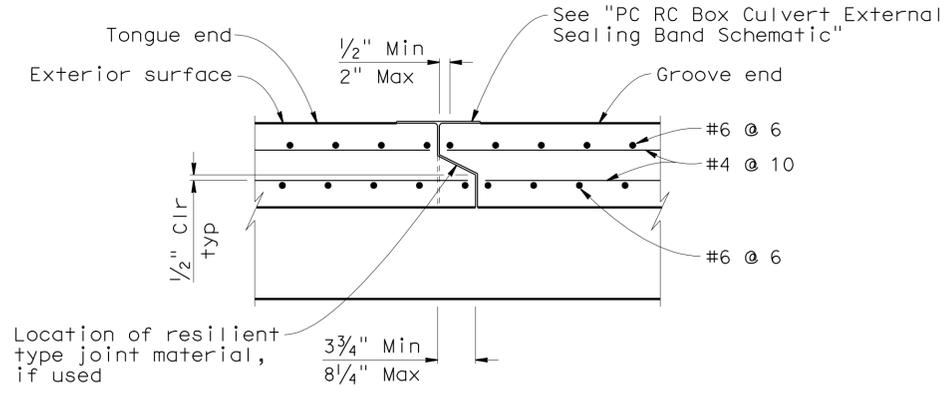
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	574	757

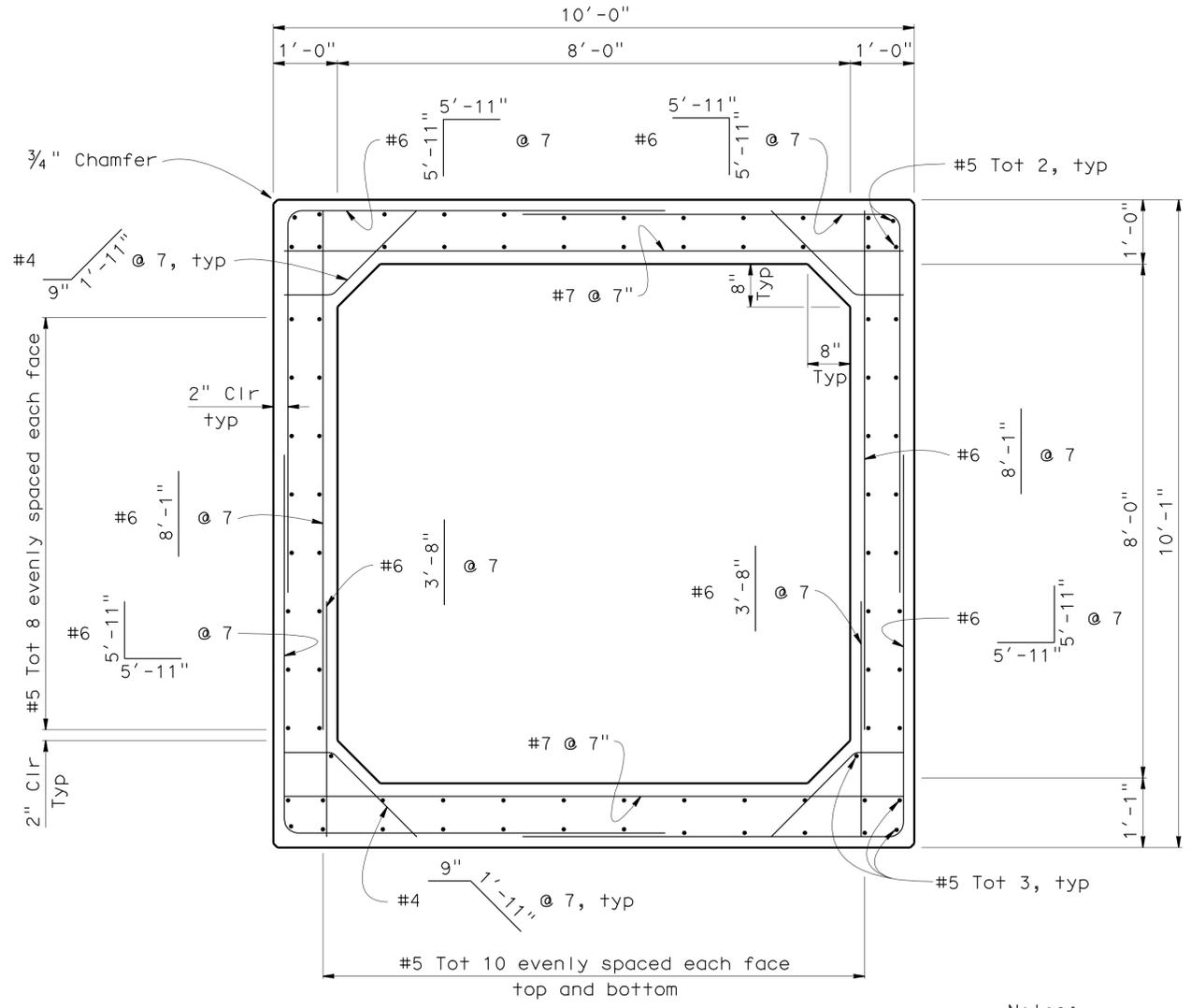
Mahmoud Fustok 10-18-10  
 REGISTERED CIVIL ENGINEER DATE  
 6-20-11  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



**PC RC BOX CULVERT EXTERNAL SEALING BAND SCHEMATIC**  
No scale

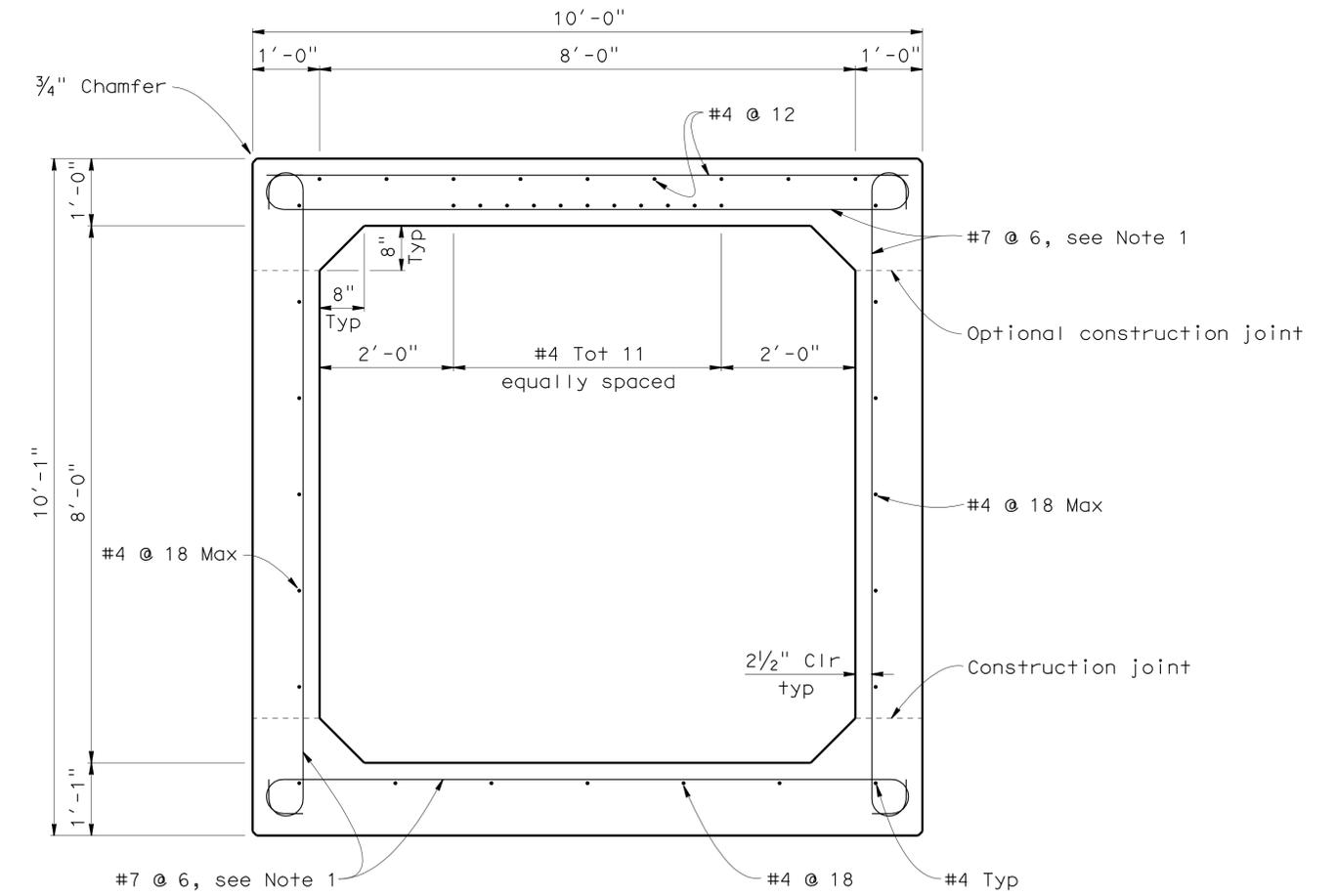


**PC RC BOX CULVERT END JOINT DETAIL**  
1" = 1'-0"



**8' x 8' PC RC BOX**  
3/4" = 1'-0"  
Sta 4+47.92 to Sta 5+03.92  
(By others)

- Notes:
- It is permissible to eliminate the 180° hooks on every other bar.
  - All reinforcement shall be prefabricated epoxy coated reinforcement.



**8' x 8' CIP RC BOX**  
3/4" = 1'-0"  
Sta 5+03.92 to Sta 5+10.71

DESIGN	BY	M. Fustok	CHECKED	W. Addlespurger	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	52-0467	PEDESTRIAN UC UNDERCROSSING CROSS SECTION NO. 1	
	DETAILS	BY	Various	CHECKED			M. Fustok	POST MILE		41.58
	QUANTITIES	BY	M. Fustok	CHECKED			W. Addlespurger	REVISION DATES		

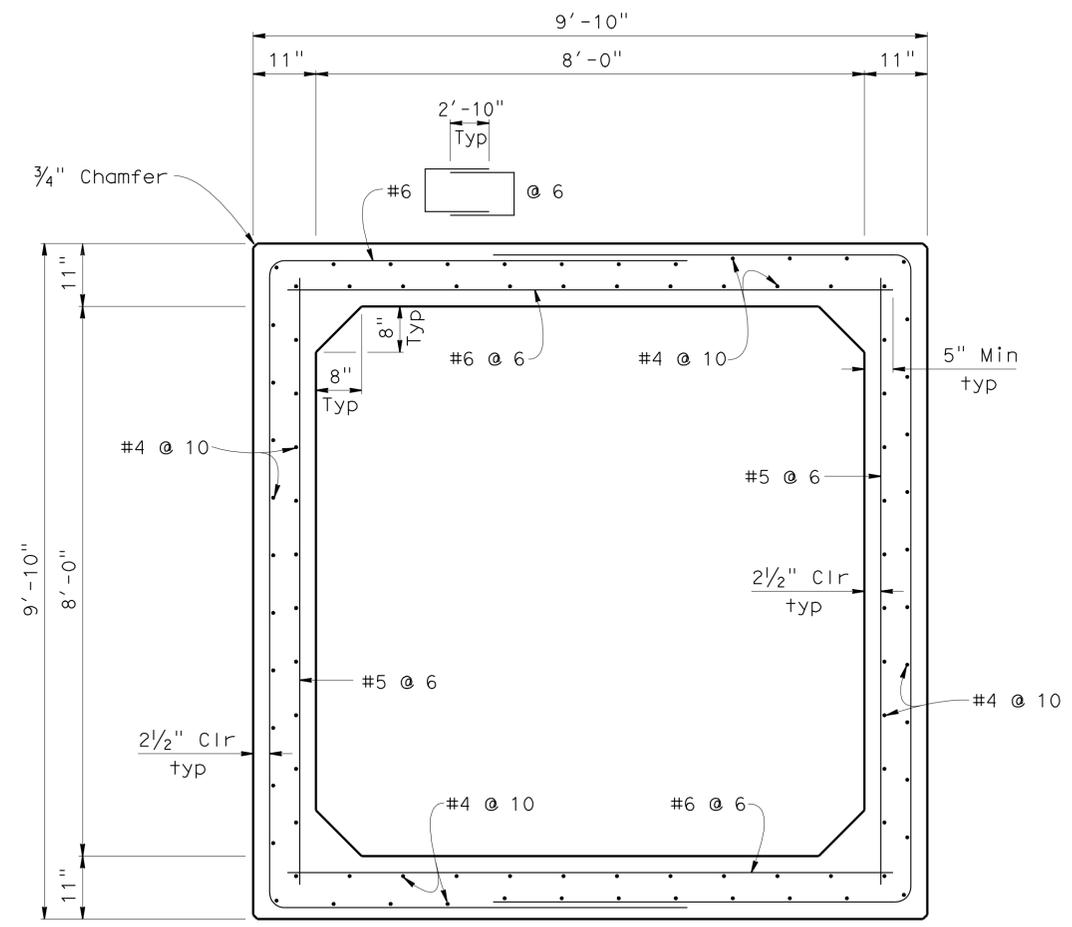
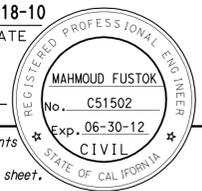
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 CU 07 EA 260701 DISREGARD PRINTS BEARING EARLIER REVISION DATES 7-12-10 8-24-10 9-1-10 1-4-11 3-7-11 3-28-11 SHEET 5 OF 29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	575	757

*Mahmoud Fustok* 10-18-10  
REGISTERED CIVIL ENGINEER DATE

6-20-11  
PLANS APPROVAL DATE

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**8' x 8' PC RC BOX**  
3/4" = 1'-0"  
Sta 5+10.71 to Sta 6+52.71

Note:  
All reinforcement shall be prefabricated epoxy coated reinforcement.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY M. Fustok	CHECKED W. Addlespurger	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>12</b>	BRIDGE NO.	PEDESTRIAN UC				
	DETAILS	BY Various	CHECKED M. Fustok			52-0467	UNDERCROSSING CROSS SECTION NO. 2				
	QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger			POST MILE 41.58					
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				CU 07 EA 260701		DISREGARD PRINTS BEARING EARLIER REVISION DATES					SHEET 6 OF 29

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USERNAME => s124496

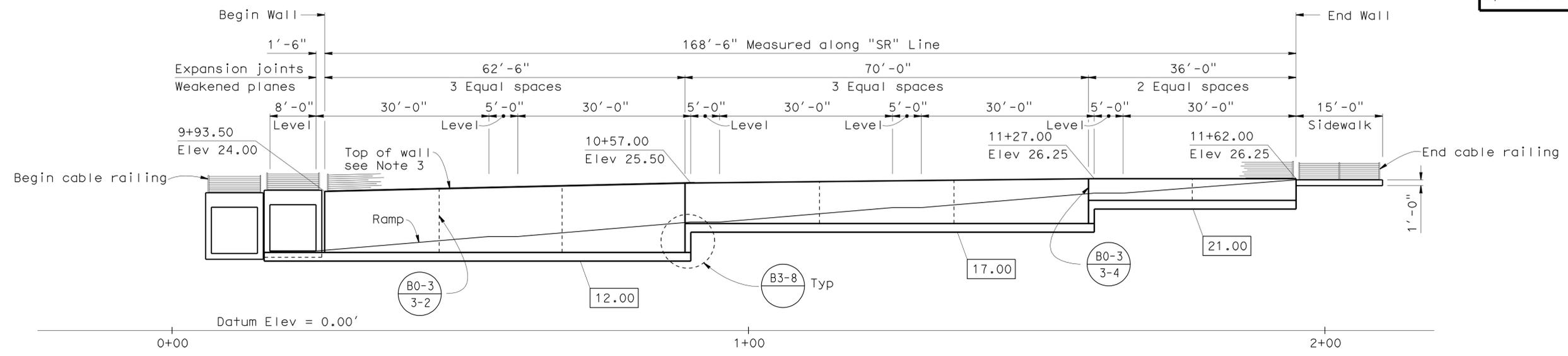
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	576	757

Mahmoud Fustok 10-18-10  
 REGISTERED CIVIL ENGINEER DATE

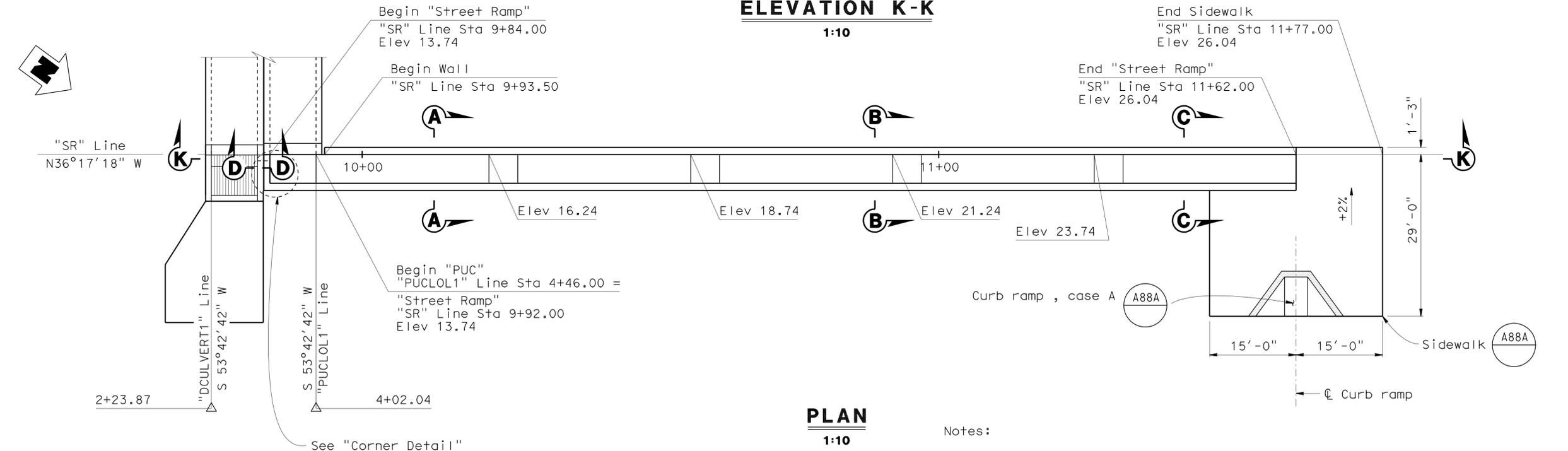
6-20-11  
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
 MAHMOUD FUSTOK  
 No. C51502  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



**ELEVATION K-K**  
1:10



**PLAN**  
1:10

- Notes:
1. For "Section A-A", "Section B-B", and "Section C-C" see "Street Ramp Details No. 1" sheet.
  2. For "Section D-D" and "Corner Detail" see "Street Ramp Details No. 2" sheet.
  3. Cable railing not shown for clarity.
  4. All walkway surface shall have a broom finish texture. Surfaces shall be broomed transversely to the line of traffic.

DESIGN	BY	M. Fustok	CHECKED	W. Addlespurger	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>12</b>	BRIDGE NO.	52-0467	PEDESTRIAN UC STREET RAMP LAYOUT	
	DETAILS	BY	Various	CHECKED			M. Fustok	POST MILE		41.58
	QUANTITIES	BY	M. Fustok	CHECKED			W. Addlespurger			

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 CU 07 EA 260701 DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
5-28-10	7-21-10	8-24-10	2-14-11	7	29

FILE => b-52-0467-f-sr01.dgn

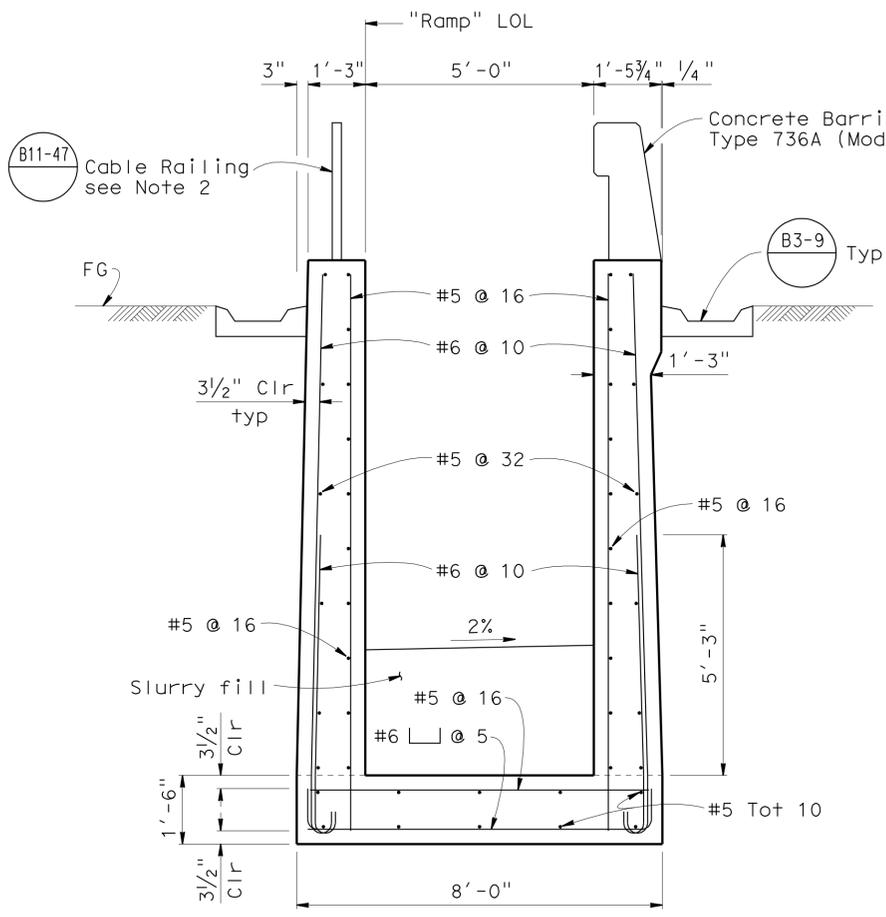
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	577	757

Mahmoud Fustok 10-18-10  
 REGISTERED CIVIL ENGINEER DATE

6-20-11  
 PLANS APPROVAL DATE

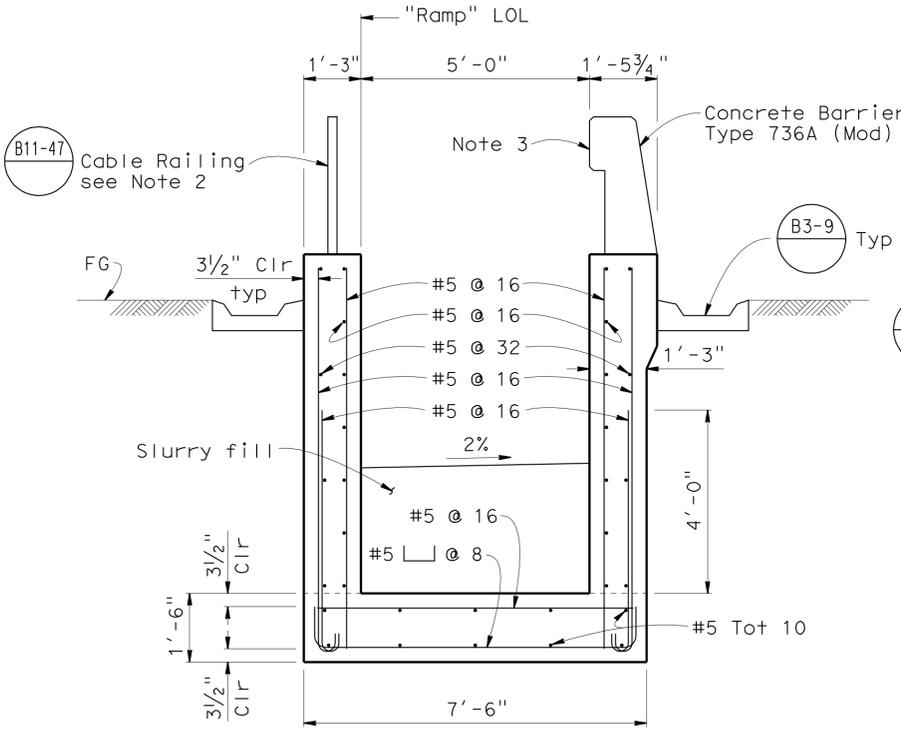
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REGISTERED PROFESSIONAL ENGINEER  
 MAHMOUD FUSTOK  
 No. C51502  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



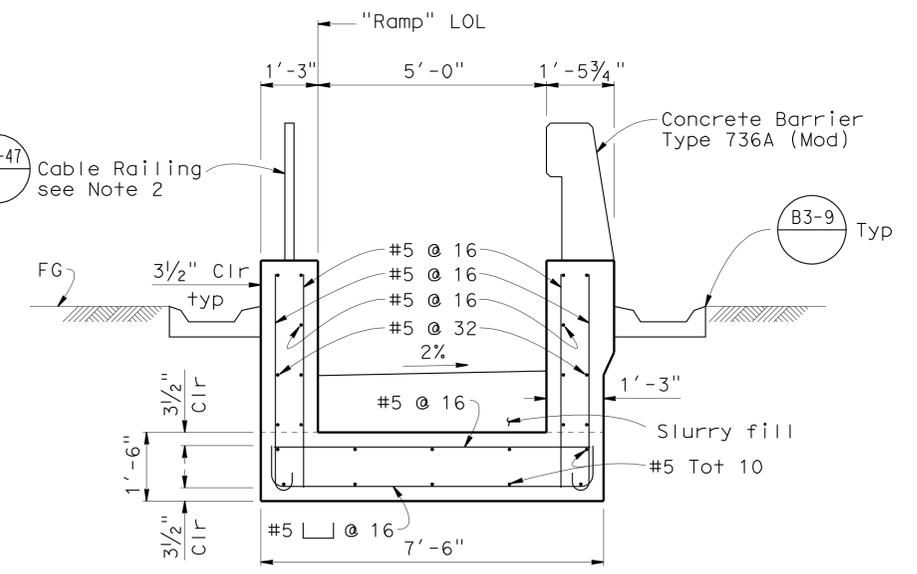
**SECTION A-A**  
1/2" = 1'-0"

"SR" Ramp  
Sta 9+93.5 to Sta 10+57



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

"SR" Ramp  
Sta 10+57 to Sta 11+27



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

"SR" Ramp  
Sta 11+27 to Sta 11+62

- Notes:
1. Section between Sta 9+83.00 to Sta 9+93.50 is similar to Section A-A but without the left wall.
  2. Spacing between cables is 4".
  3. Architectural treatment not shown for clarity.
  4. All reinforcement shall be prefabricated epoxy coated reinforcement.

DESIGN	BY M. Fustok	CHECKED W. Addlespurger
DETAILS	BY Various	CHECKED M. Fustok
QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 12

BRIDGE NO.	52-0467
POST MILE	41.58

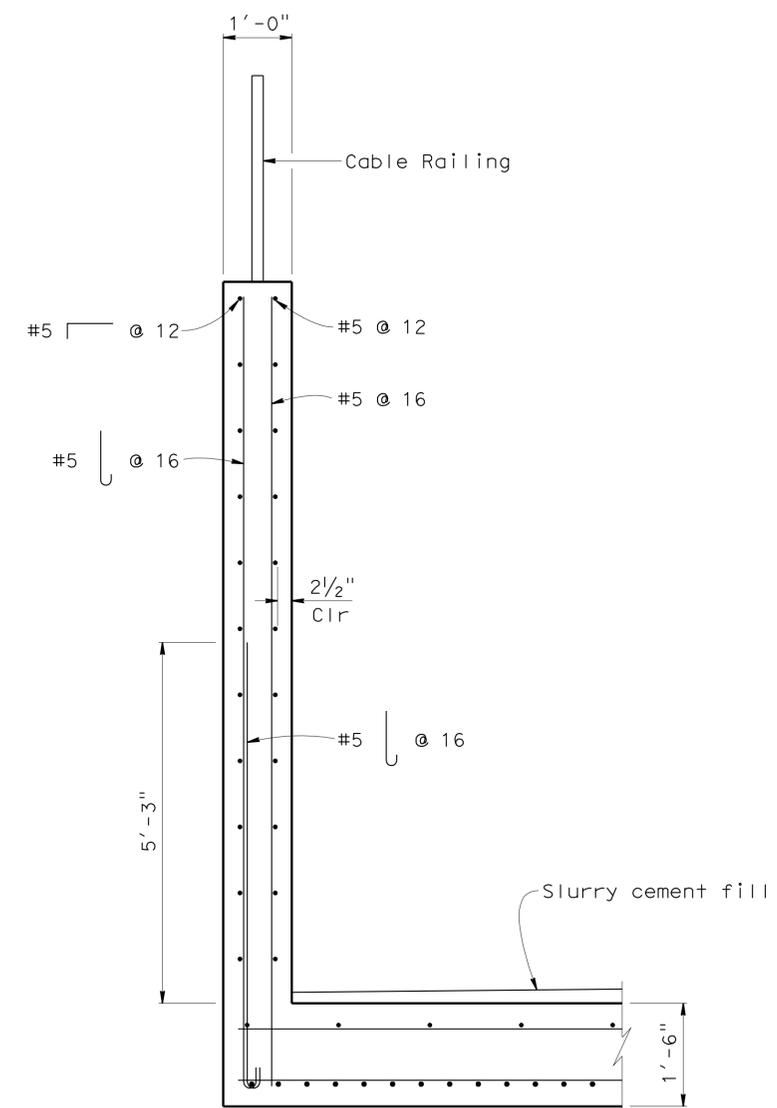
PEDESTRIAN UC  
STREET RAMP DETAILS NO. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	578	757

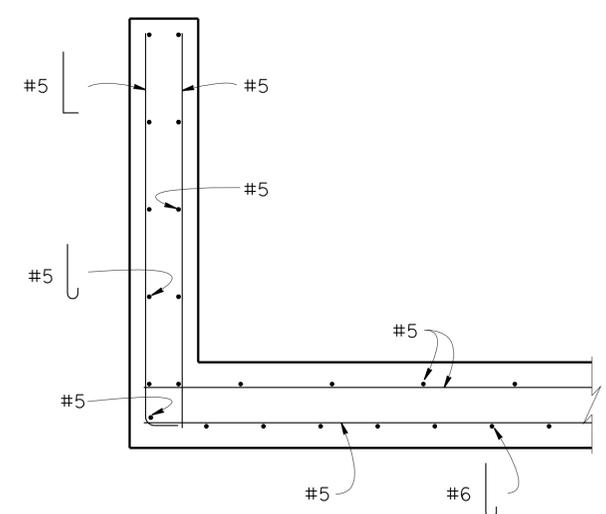
*Mahmoud Fustok* 10-18-10  
REGISTERED CIVIL ENGINEER DATE

6-20-11  
PLANS APPROVAL DATE

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



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

Note:  
All reinforcement shall be prefabricated epoxy coated reinforcement.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY M. Fustok	CHECKED W. Addlespurger	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>12</b>	BRIDGE NO.	PEDESTRIAN UC			
	DETAILS	BY Various	CHECKED M. Fustok			52-0467	STREET RAMP DETAILS NO. 2			
	QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger			POST MILE 41.58				
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					CU 07 EA 260701	DISREGARD PRINTS BEARING EARLIER REVISION DATES				SHEET 9 OF 29

USERNAME => s124496 DATE PLOTTED => 24-JUN-2011 TIME PLOTTED => 17:12

**DESIGN NOTES**

**Specifications:**

Design: Bridge Design Specifications (1983 AASHTO Specifications with revisions by Caltrans). Depth of cover is assumed to be uniform.

**Earth Load:**

Earth pressures for two conditions:  
 -140 lb/cf vert, 42 lb/cf horiz  
 -140 lb/cf vert, 140 lb/cf horiz

**Unit Stresses:**

f'c = 5.0 KSI  
 fy = 65.0 KSI for weld wire fabric  
 n = 7

**Shear:**

Maximum allowable shear,  $v = 3.5\sqrt{f'c}$ , PSI

**Exclusion:**

Axial loading on the members has not been considered.

**Earthwork:**

See "Precast RCB Excavation and Backfill Details" sheet.

**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'.

**Earthwork:**

See "Precast RCB Excavation and Backfill Details" sheet.

**Construction Loads:**

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

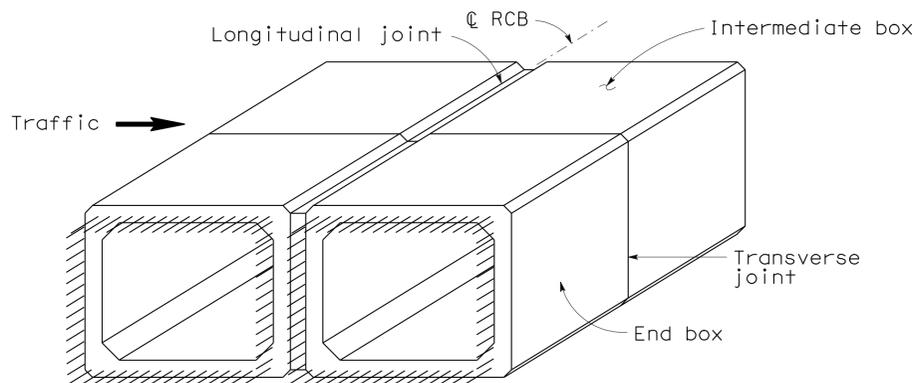
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07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	579	757

*Mahmoud Fustok* 10-18-10  
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6-20-11  
 PLANS APPROVAL DATE

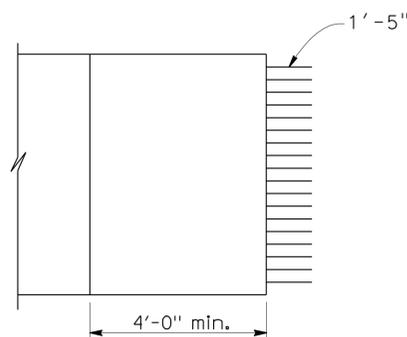
MAHMOUD FUSTOK  
 No. C51502  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA

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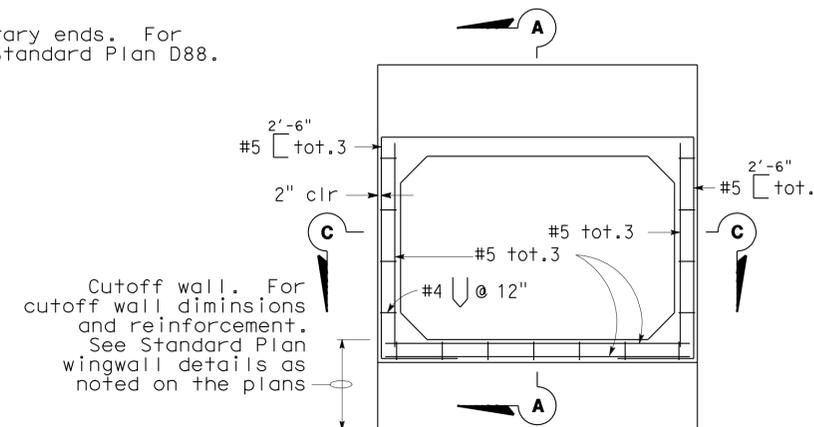
**PRECAST RCB TERMINOLOGY**

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.



**8' X 8' CIP RC BOX END SECTION**

No scale

Cutoff wall. For cutoff wall dimensions and reinforcement. See Standard Plan wingwall details as noted on the plans

**Notes:**

1. For Sections "A-A" and "C-C" at Street Ramp, see "Precast RCB Miscellaneous Details No. 2" sheet.
2. For Sections "A-A" and "C-C" at Pedestrian Ramp 93, see "Precast RCB Miscellaneous Details No. 3" sheet.

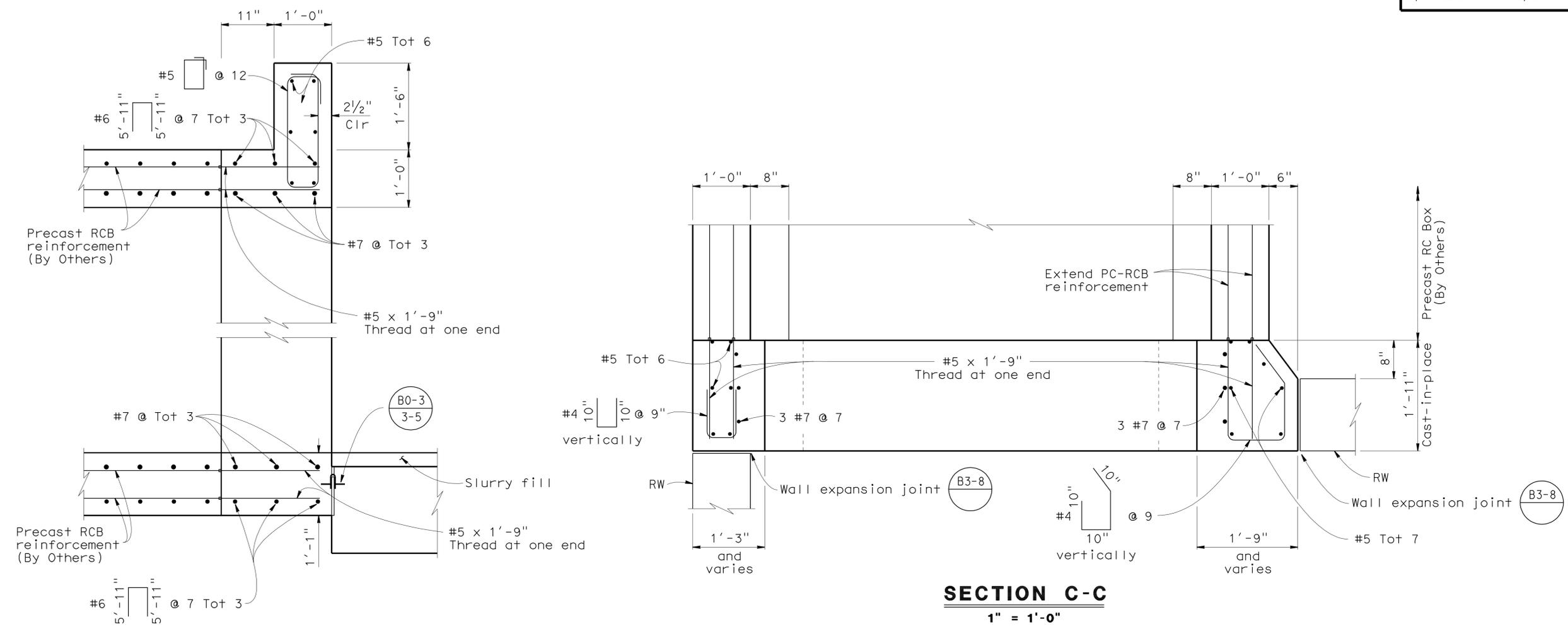
**Note:**

All reinforcement shall be prefabricated epoxy coated reinforcement.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY M. Fustok	CHECKED W. Addlespurger	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>12</b>	BRIDGE NO.	PEDESTRIAN UC			
	DETAILS	BY Various	CHECKED M. Fustok			52-0467	PRECAST RCB MISCELLANEOUS DETAILS NO. 1			
	QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger			POST MILE 41.58				
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					CU 07 EA 260701	REVISION DATES				SHEET 10 OF 29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	580	757

Mahmoud Fustok 10-18-10  
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 6-20-11  
 PLANS APPROVAL DATE  
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**AT PEDESTRIAN UC AND STREET RAMP INTERSECTION**

- Notes:
- All reinforcement shall be prefabricated epoxy coated reinforcement.
  - For location of "Section A-A" and "Section C-C" see "Precast RCB Miscellaneous Details No. 1" sheet.

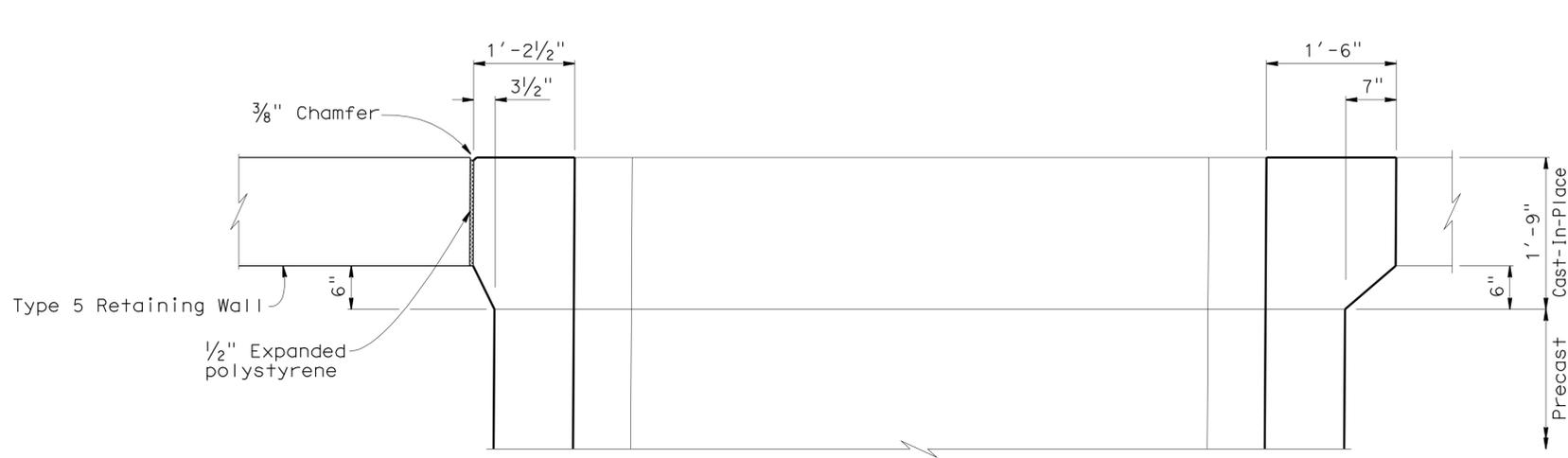
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY M. Fustok	CHECKED W. Addlespurger	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 12</b>	BRIDGE NO.	<b>PEDESTRIAN UC</b>					
	DETAILS	BY Various	CHECKED M. Fustok			52-0467	<b>PRECAST RCB MISCELLANEOUS DETAILS NO. 2</b>					
	QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger			41.58						
				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	CU 07 EA 260701	DISREGARD PRINTS BEARING EARLIER REVISION DATES					
						REVISION DATES: 8-26-10, 9-3-10, 2-16-11, 3-7-11, 4-11-11					SHEET 11	OF 29

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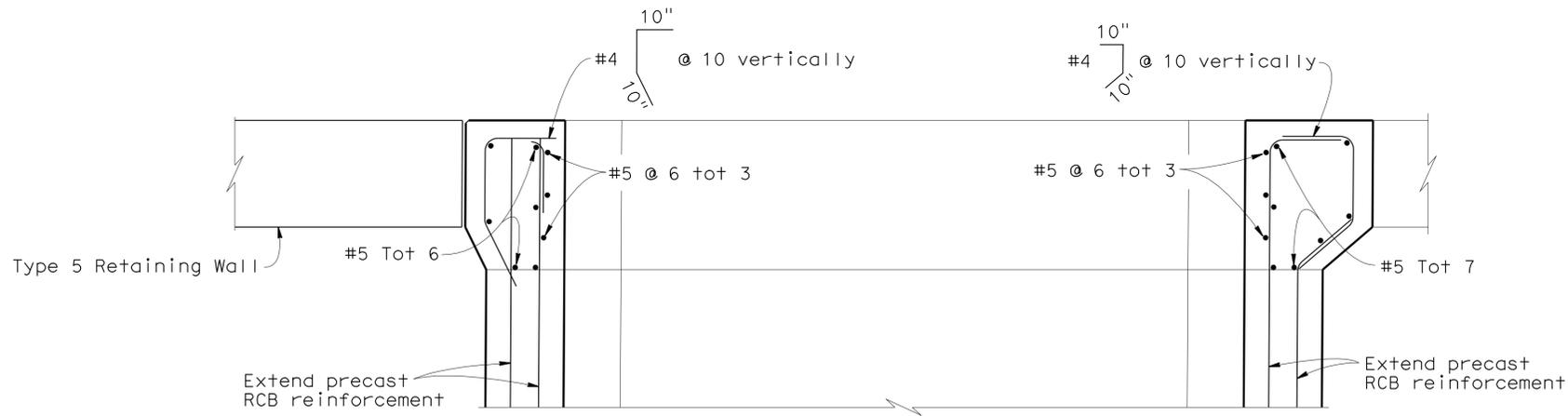
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	581	757
<i>Mahmoud Fustok</i> 10-18-10 REGISTERED CIVIL ENGINEER DATE				REGISTERED PROFESSIONAL ENGINEER MAHMOUD FUSTOK No. C51502 Exp. 06-30-12 CIVIL STATE OF CALIFORNIA	
6-20-11 PLANS APPROVAL DATE					
<i>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.</i>					

Notes:

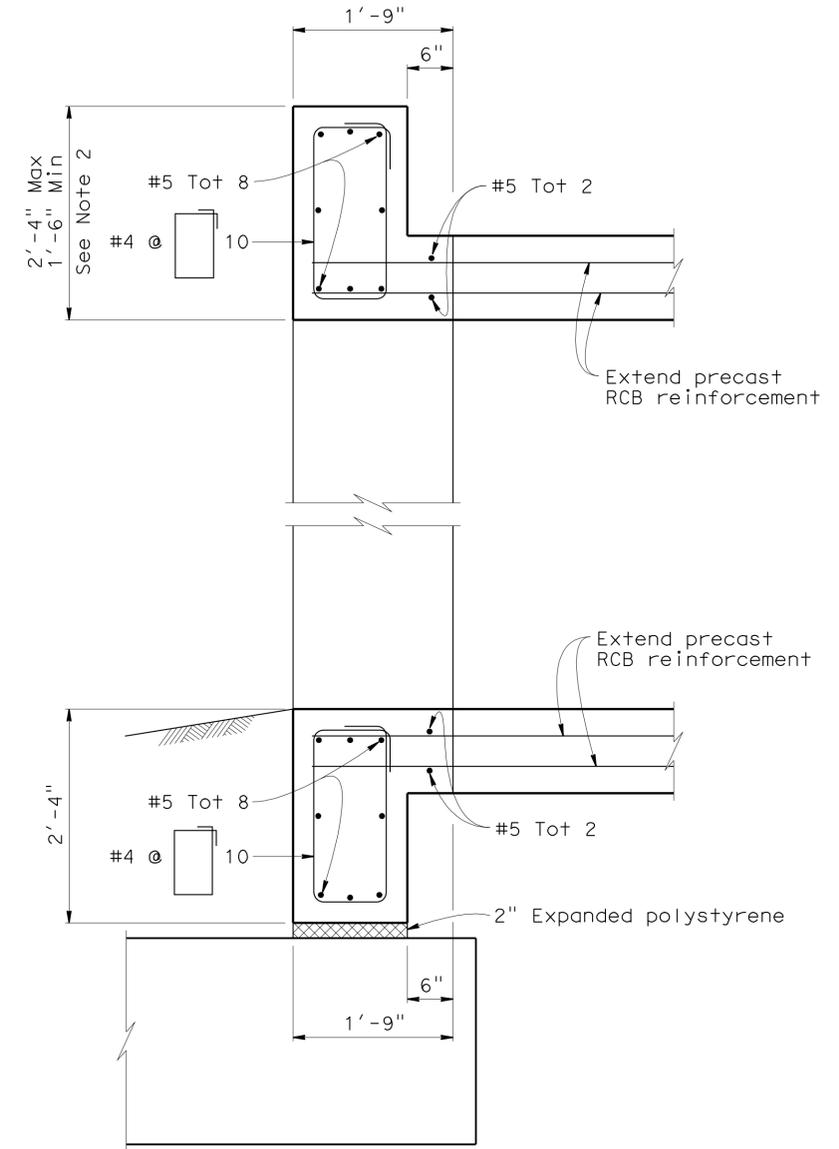
1. All reinforcement shall be prefabricated epoxy coated reinforcement.
2. For height see "Architectural Treatment Detail No. 7" sheet.
3. For location of "Section A-A" and "Section C-C" see "Precast RCB Miscellaneous Details No. 1" sheet.



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



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



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

**AT PEDESTRIAN UC AND PEDESTRIAN RAMP 93 INTERSECTION**

DESIGN	BY M. Fustok	CHECKED W. Addlespurger
DETAILS	BY Various	CHECKED M. Fustok
QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH **12**

BRIDGE NO.  
52-0467  
POST MILE  
41.58

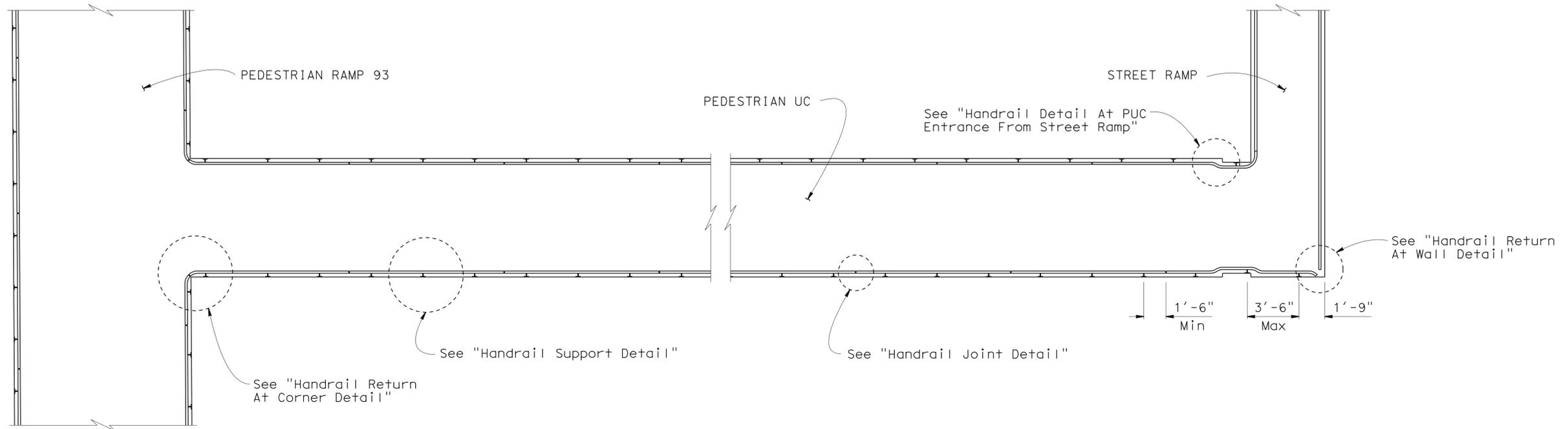
**PEDESTRIAN UC**  
**PRECAST RCB MISCELLANEOUS DETAILS NO. 3**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	582	757

*Mahmoud Fustok* 10-18-10  
REGISTERED CIVIL ENGINEER DATE

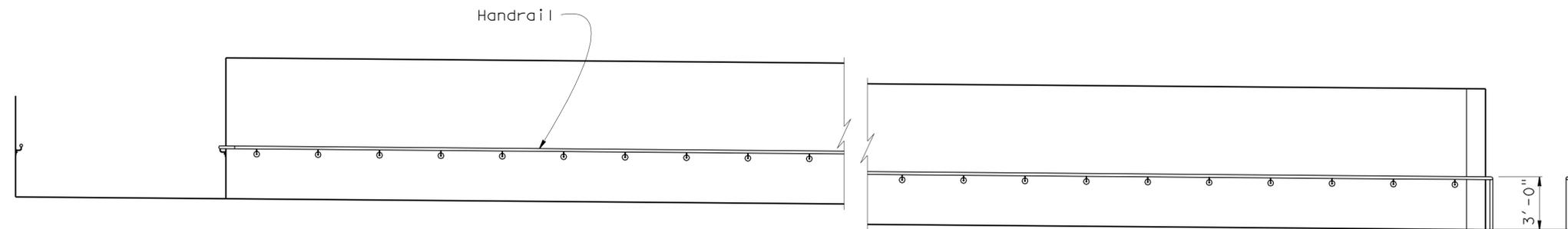
6-20-11  
PLANS APPROVAL DATE

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**HANDRAIL PLAN**  
1/4" = 1'-0"

Note:  
For "Handrail Return At Wall Detail", "Handrail Support Detail", "Handrail Return At Corner Detail", "Handrail Detail At PUC Entrance From Street Ramp" and "Handrail Joint Detail", see "Handrail Details No. 3" sheet.



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

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY M. Fustok	CHECKED W. Addlespurger	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>12</b>	BRIDGE NO.	PEDESTRIAN UC				
	DETAILS	BY Various	CHECKED M. Fustok			52-0467	HANDRAIL DETAILS NO. 1				
	QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger			POST MILE 41.58					
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					0 1 2 3	CU 07 EA 260701	DISREGARD PRINTS BEARING EARLIER REVISION DATES				SHEET 13 OF 29

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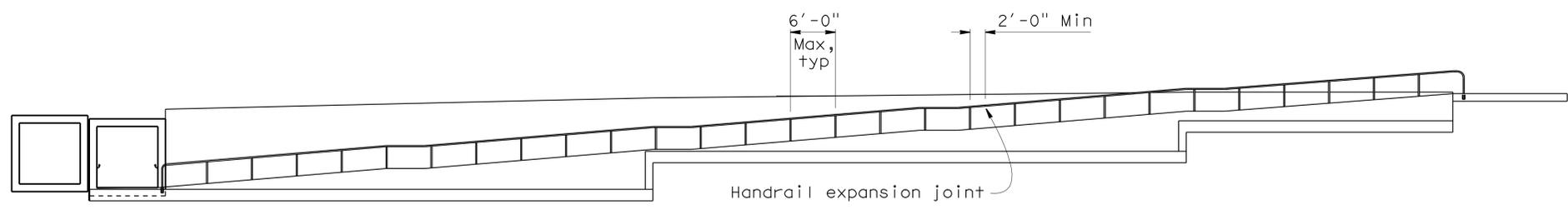
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	583	757

*Mahmoud Fustok* 10-18-10  
REGISTERED CIVIL ENGINEER DATE

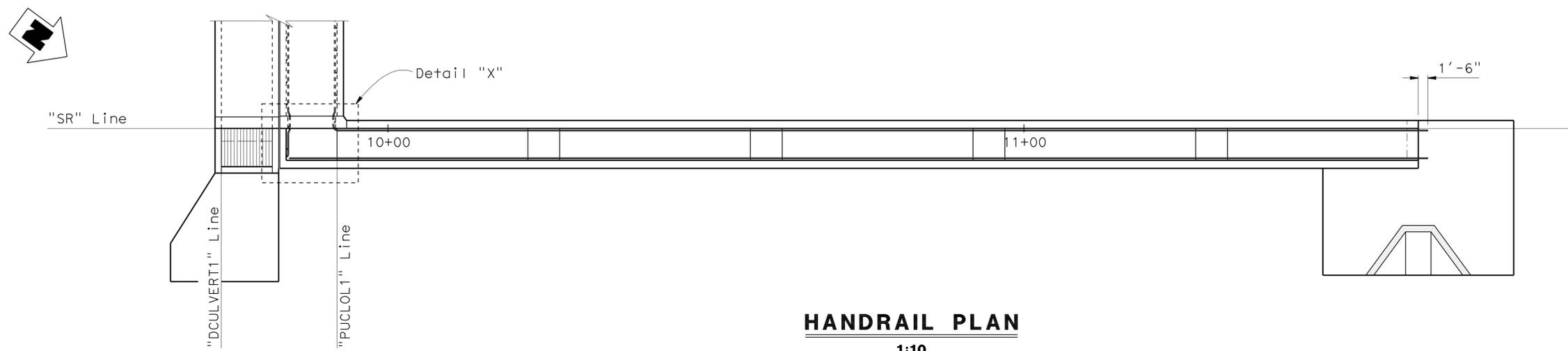
6-20-11  
PLANS APPROVAL DATE

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

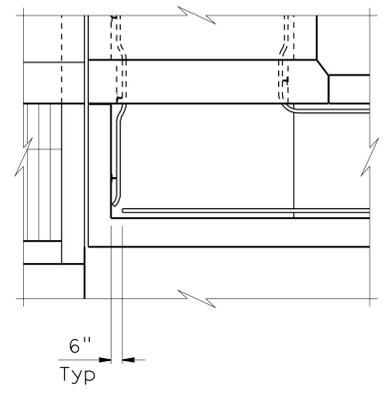
REGISTERED PROFESSIONAL ENGINEER  
MAHMOUD FUSTOK  
No. C51502  
Exp. 06-30-12  
CIVIL  
STATE OF CALIFORNIA



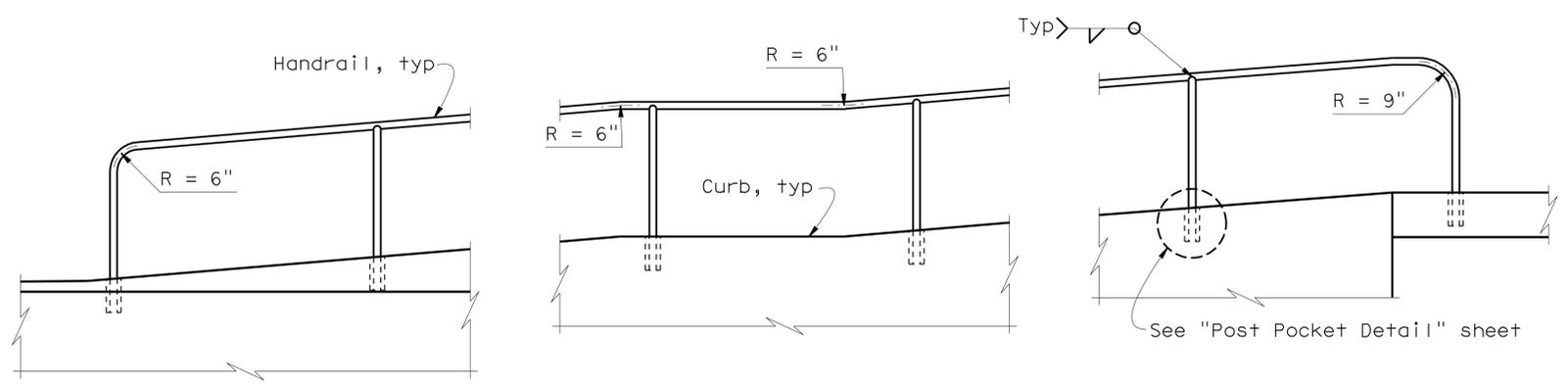
**HANDRAIL ELEVATION**  
1:10



**HANDRAIL PLAN**  
1:10



**DETAIL X**  
1/4" = 1'-0"



**STREET RAMP HANDRAIL DETAILS**  
1/2" = 1'-0"

Note:  
Handrail and post shall be 1 1/2" Ø STD pipe.

Note:  
For "Post Pocket Detail" see "Handrail Details No. 3" sheet.

DESIGN	BY M. Fustok	CHECKED W. Addlespurger
DETAILS	BY Various	CHECKED M. Fustok
QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH **12**

BRIDGE NO.	52-0467
POST MILE	41.58

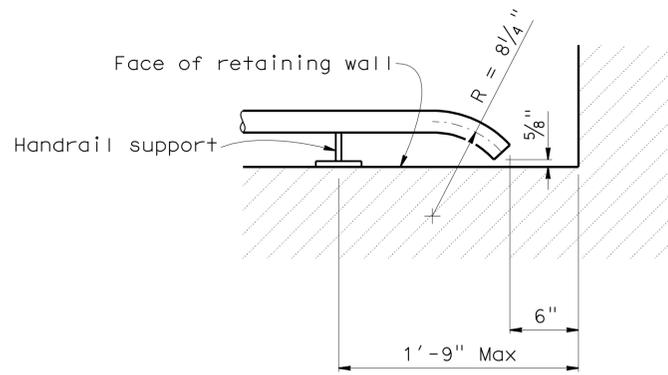
PEDESTRIAN UC  
HANDRAIL DETAILS NO. 2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	584	757

*Mahmoud Fustok* 10-18-10  
REGISTERED CIVIL ENGINEER DATE

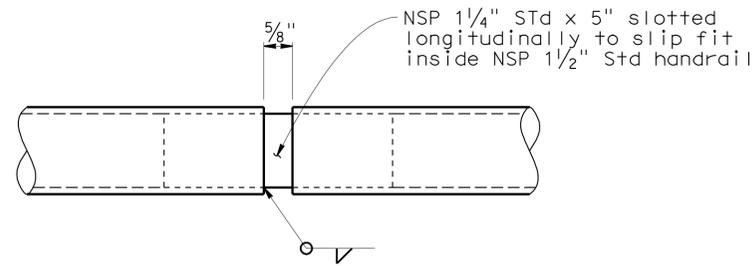
6-20-11  
PLANS APPROVAL DATE

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**HANDRAIL RETURN AT WALL DETAIL**

1 1/2" = 1'-0"

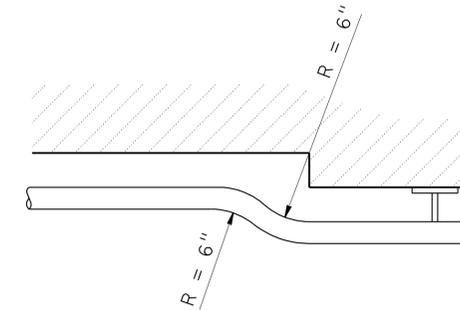


**HANDRAIL JOINT DETAIL**

6" = 1'-0"

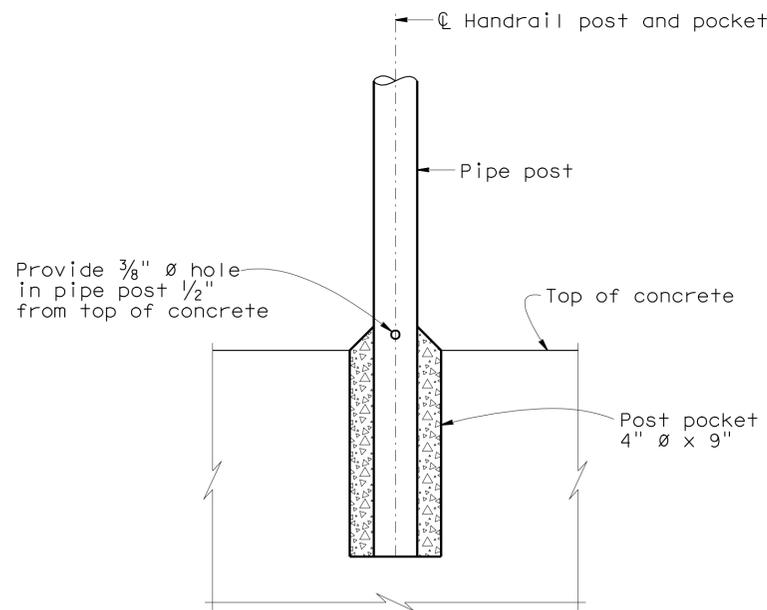
Note:

Handrail expansion joint shall be spaced at 15'-0" maximum when supported on posts and 10'-6" maximum when supported with mechanical expansion anchors.



**HANDRAIL DETAIL AT PUC ENTRANCE FROM STREET RAMP**

1 1/2" = 1'-0"

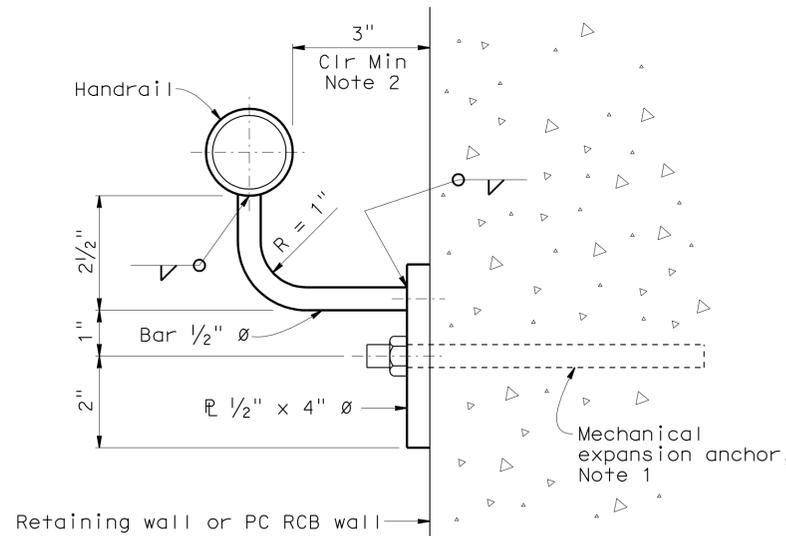


**POST POCKET DETAIL**

3" = 1'-0"

Note:

Pack post pocket with epoxy grout, typical.

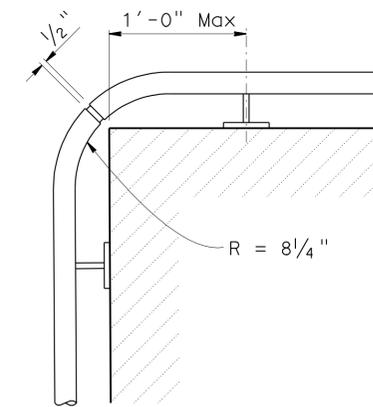


**HANDRAIL SUPPORT DETAIL**

6" = 1'-0"

Notes:

- Mechanical expansion anchors shall be 1/2"  $\phi$  and have 6" minimum embedment and shall be stainless steel.
- Bend handrail R = 6" at Pedestrian UC entrance and exit to maintain 3" clearance.



**HANDRAIL RETURN AT CORNER DETAIL**

1 1/2" = 1'-0"

DESIGN	BY M. Fustok	CHECKED W. Addlespurger
DETAILS	BY Various	CHECKED M. Fustok
QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger

STATE OF CALIFORNIA	
DEPARTMENT OF TRANSPORTATION	

DIVISION OF ENGINEERING SERVICES	BRIDGE NO.
STRUCTURE DESIGN	52-0467
DESIGN BRANCH 12	POST MILE
	41.58

PEDESTRIAN UC	
HANDRAIL DETAILS NO. 3	

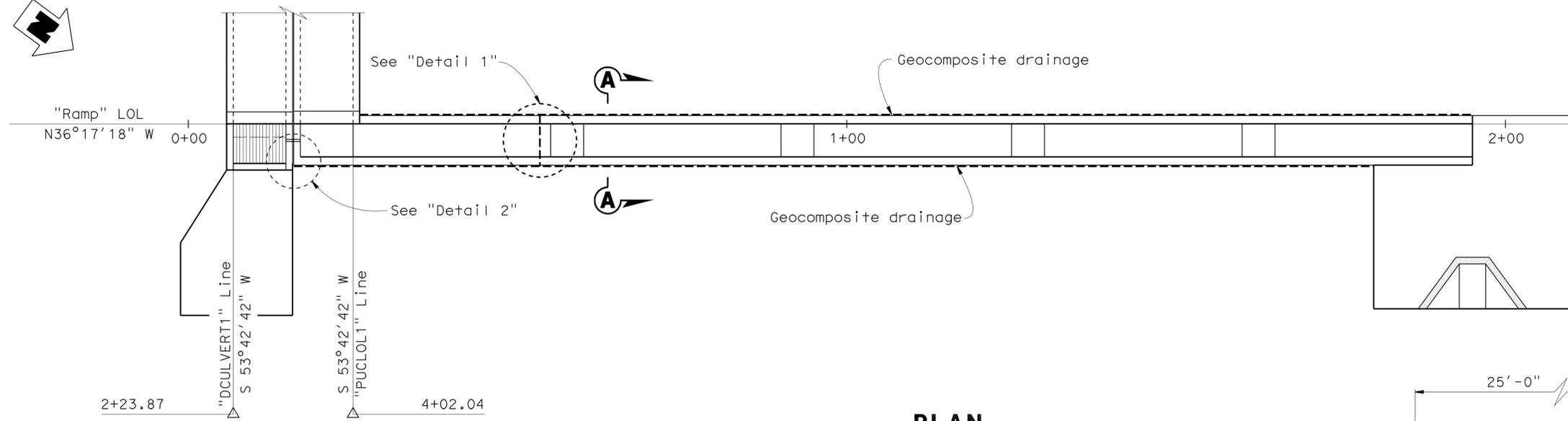
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07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	585	757

**Mahmoud Fustok** 10-18-10  
REGISTERED CIVIL ENGINEER DATE

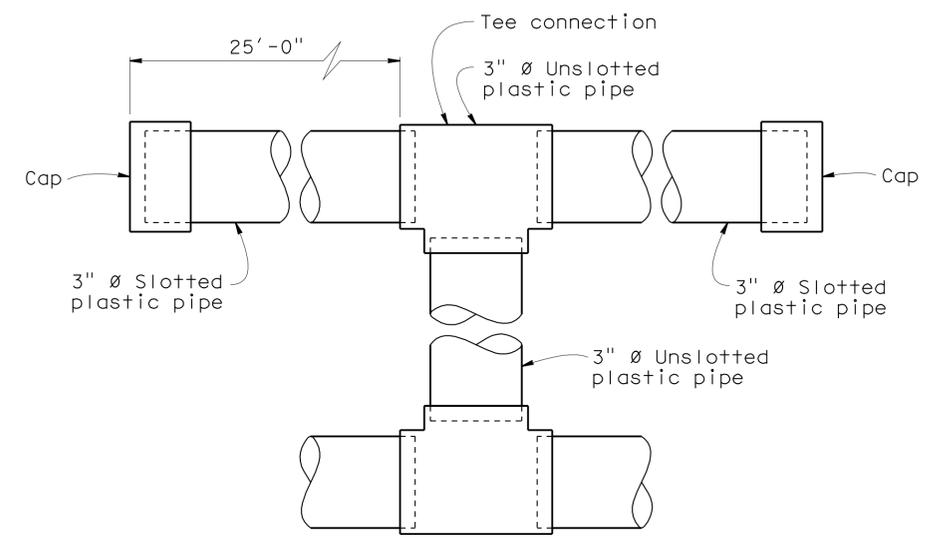
6-20-11  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**MAHMOUD FUSTOK**  
No. C51502  
Exp. 06-30-12  
CIVIL  
STATE OF CALIFORNIA

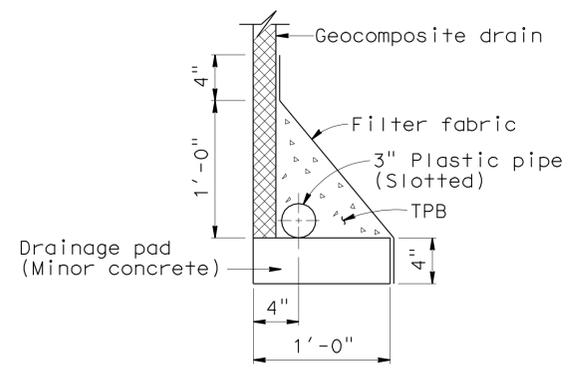
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



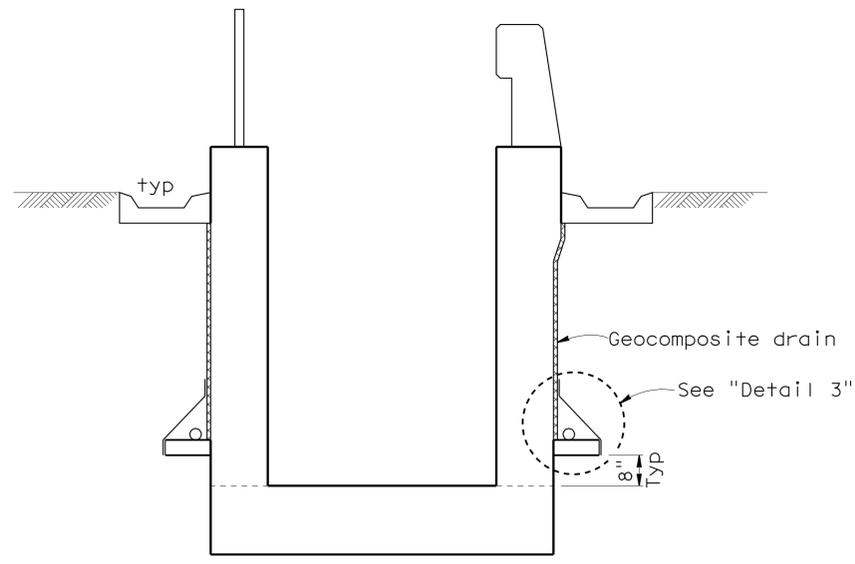
**PLAN**  
1:10



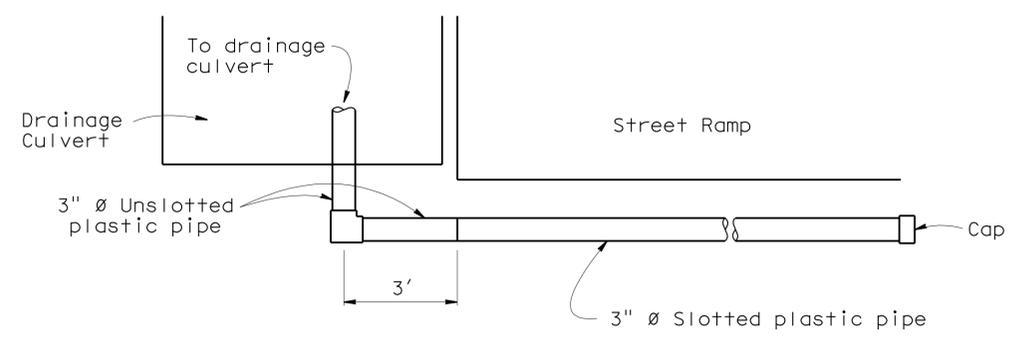
**DETAIL 1**  
No scale



**DETAIL 3**  
No scale



**SECTION A-A**  
No scale



**DETAIL 2**  
No scale

DESIGN	BY M. Fustok	CHECKED W. Addlespurger
DETAILS	BY Various	CHECKED M. Fustok
QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH **12**

BRIDGE NO.	52-0467
POST MILE	41.58

PEDESTRIAN UC  
**STREET RAMP DRAINAGE DETAILS**

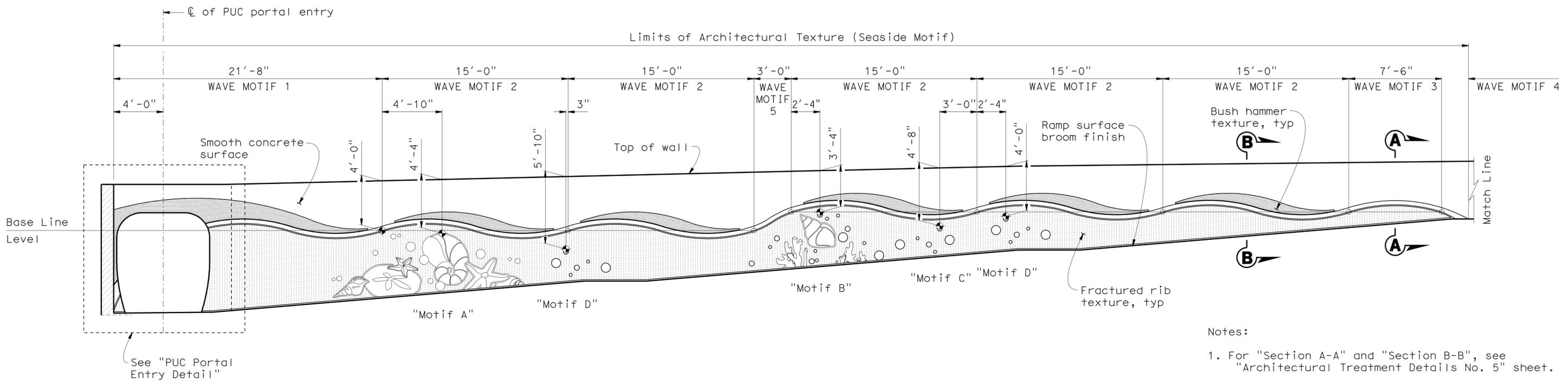
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	586	757

*Mahmoud Fustok* 10-18-10  
REGISTERED CIVIL ENGINEER DATE

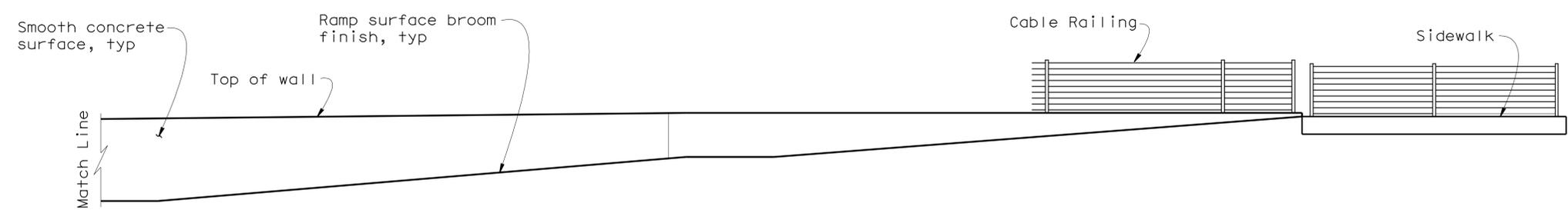
6-20-11  
PLANS APPROVAL DATE

MAHMOUD FUSTOK  
No. C51502  
Exp. 06-30-12  
CIVIL  
STATE OF CALIFORNIA

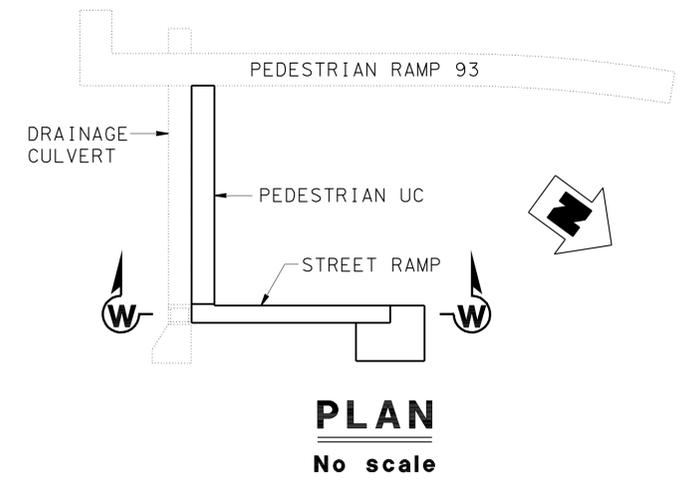
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



- Notes:
1. For "Section A-A" and "Section B-B", see "Architectural Treatment Details No. 5" sheet.
  2. For "Motif A", "Motif B", "Motif C" and "Motif D" details, see "Architectural Treatment Details No. 8" sheet.
  3. For "Wave Motif" details see "Architectural Treatment Details No. 6" and "Architectural Treatment Details No. 7" sheets.
  4. For "Portal Entry Detail" see "Architectural Treatment Details No. 3" sheet.



**VIEW W-W**  
1/4" = 1'-0"



Indicates Working Point

DESIGN	BY M. Fustok	CHECKED W. Addlespurger
DETAILS	BY Various	CHECKED M. Fustok
QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 12

BRIDGE NO.	52-0467
POST MILE	41.58

PEDESTRIAN UC  
ARCHITECTURAL TREATMENT DETAILS NO. 1

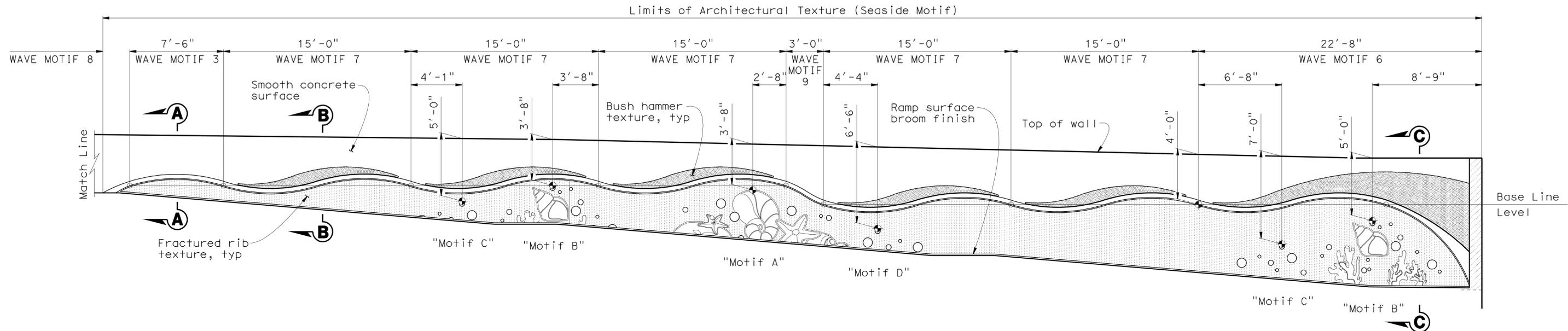
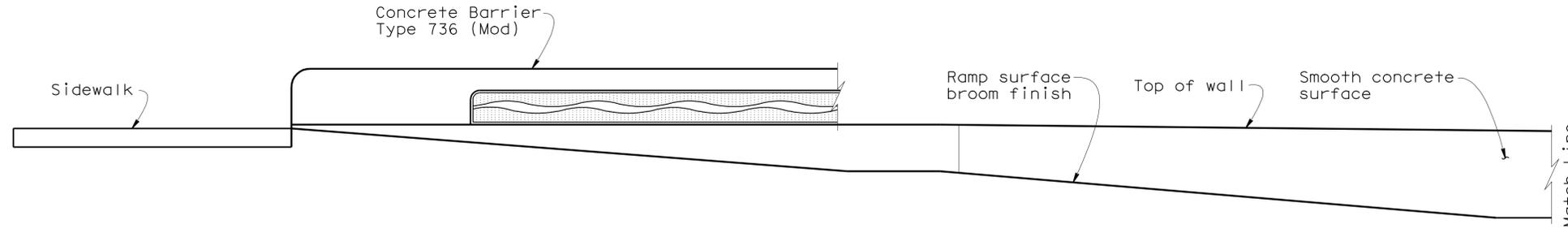
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	587	757

**Mahmoud Fustok** 10-18-10  
 REGISTERED CIVIL ENGINEER DATE

6-20-11  
 PLANS APPROVAL DATE

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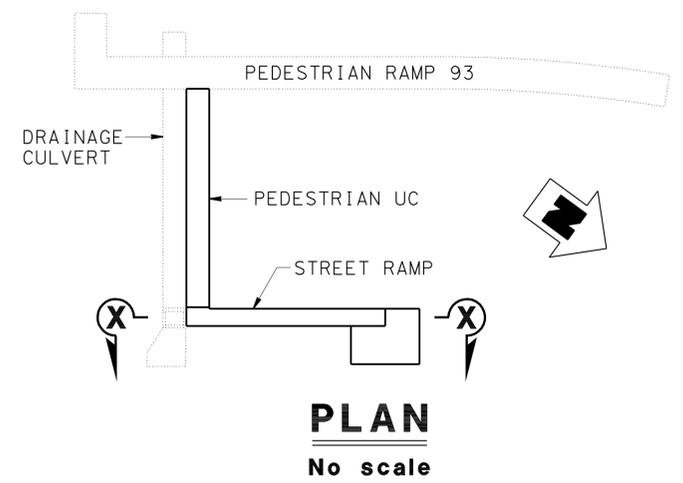
REGISTERED PROFESSIONAL ENGINEER  
**MAHMOUD FUSTOK**  
 No. C51502  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



**VIEW X-X**  
1/4" = 1'-0"

- Notes:
1. For "Section A-A", "Section B-B" and "Section C-C", see "Architectural Treatment Details No. 5" sheet.
  2. For "Motif A", "Motif B", "Motif C" and "Motif D" details, see "Architectural Treatment Details No. 8" sheet.
  3. For "Wave Motif" details see "Architectural Treatment Details No. 6" and "Architectural Treatment Details No. 7" sheets.
  4. For "PUC Portal Entry Detail" see "Architectural Treatment Details No. 3" sheet.

⊙ Indicates Working Point



DESIGN	BY M. Fustok	CHECKED W. Addlespurger
DETAILS	BY Various	CHECKED M. Fustok
QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH **12**

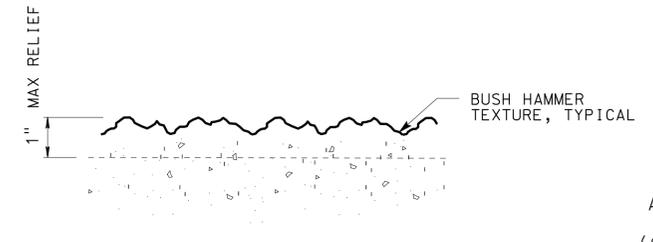
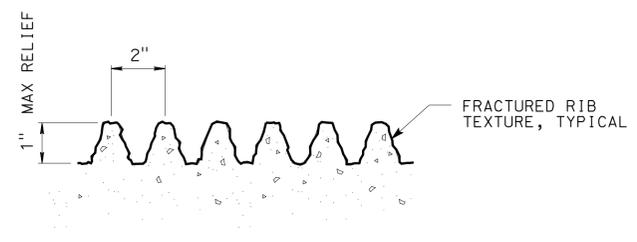
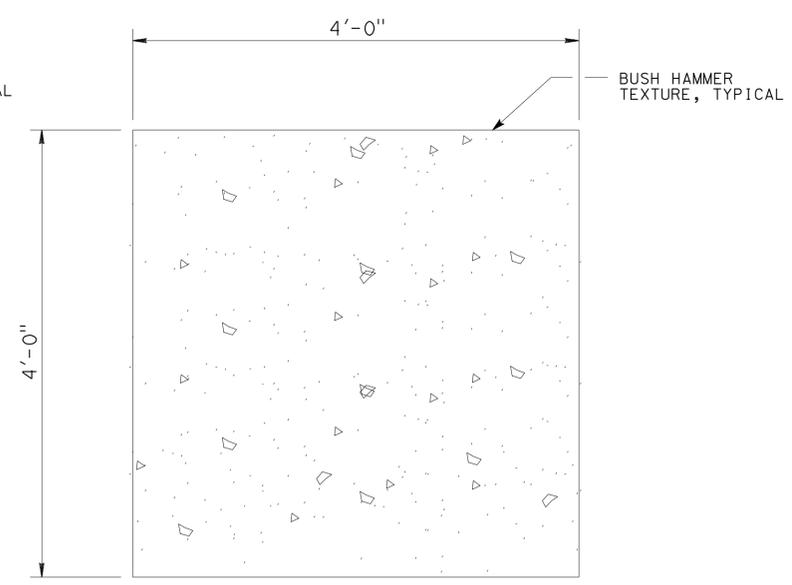
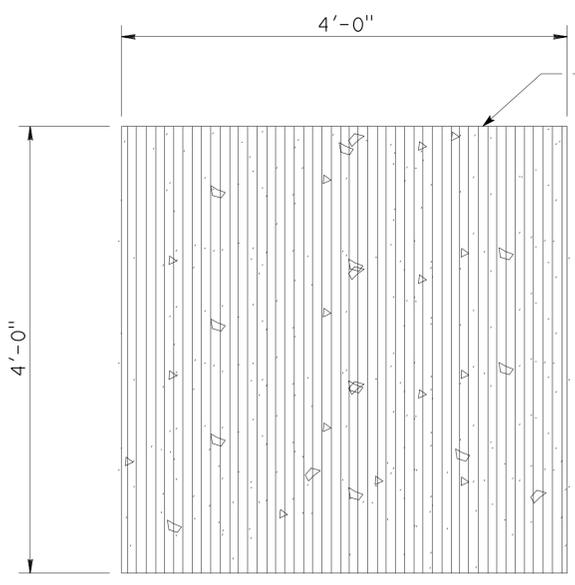
BRIDGE NO.	52-0467
POST MILE	41.58

**PEDESTRIAN UC**  
**ARCHITECTURAL TREATMENT DETAILS NO. 2**

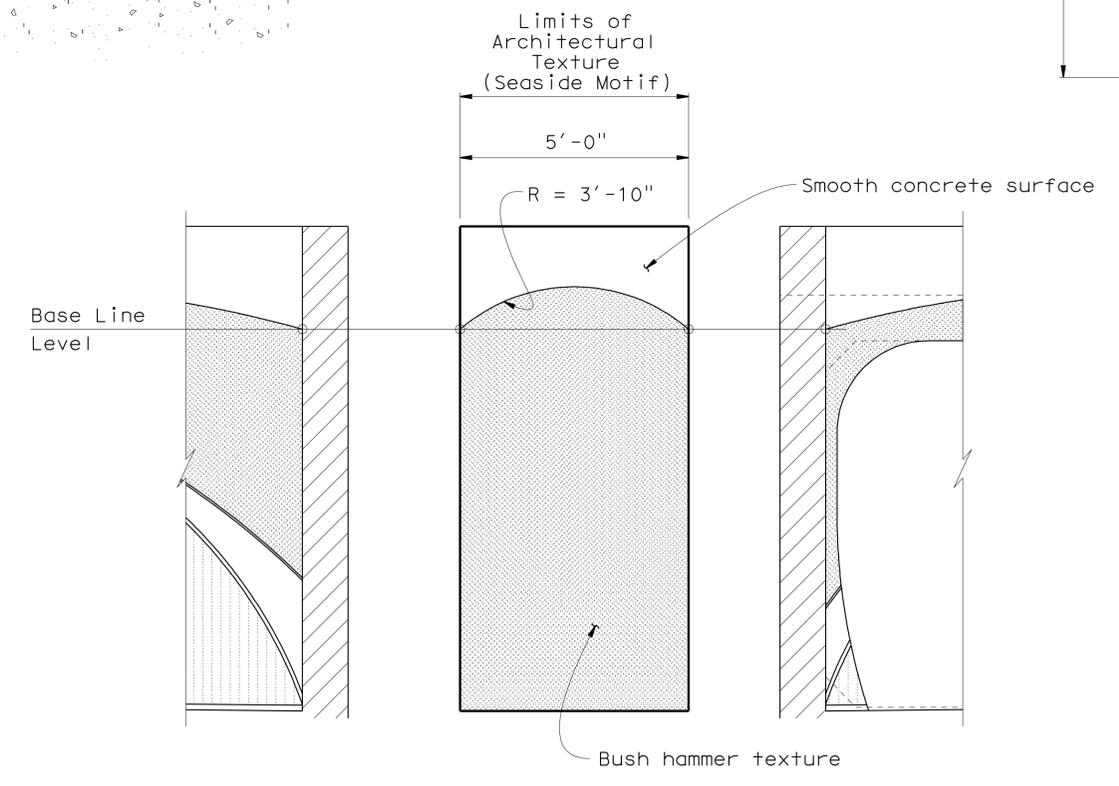


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6, 0.0/2.2	589	757

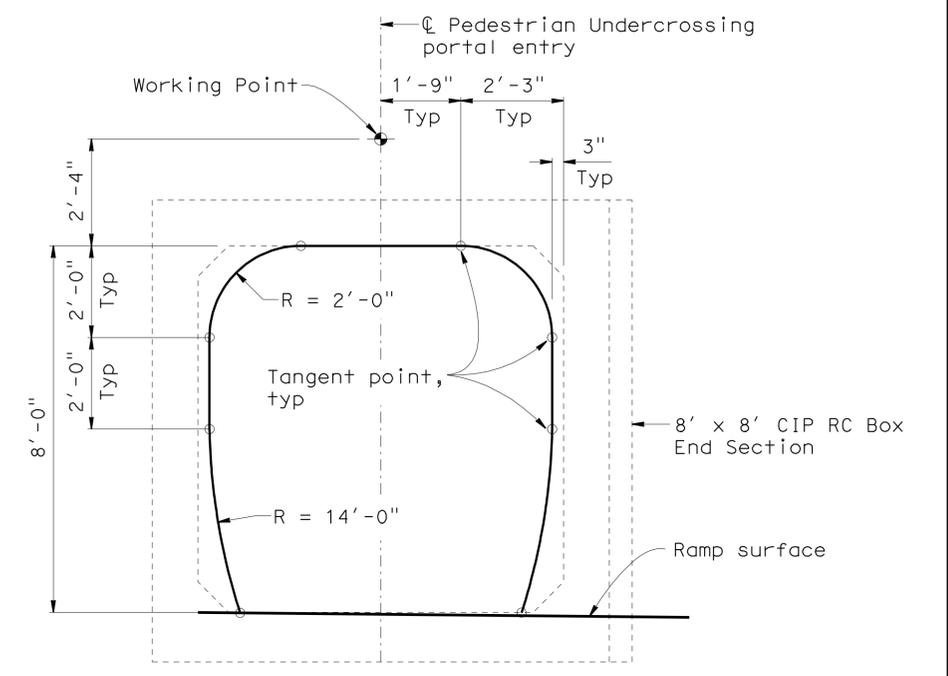
**Mahmoud Fustok** 10-18-10  
 REGISTERED CIVIL ENGINEER DATE  
 6-20-11  
 PLANS APPROVAL DATE  
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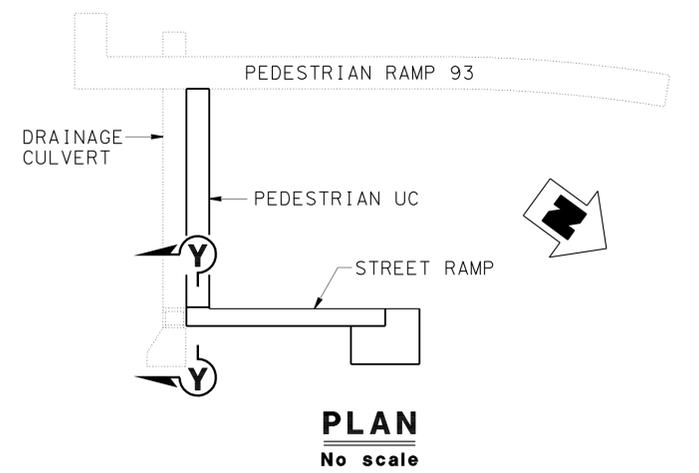
**TEST PANELS**  
No Scale



**VIEW Y-Y**  
1/2" = 1'-0"



**PORTAL ENTRY DETAIL**  
1/2" = 1'-0"



DESIGN	BY M. Fustok	CHECKED W. Addlespurger
DETAILS	BY Various	CHECKED M. Fustok
QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger

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

<b>DIVISION OF ENGINEERING SERVICES</b>	
STRUCTURE DESIGN	
BRIDGE NO.	52-0467
POST MILE	41.58
<b>DESIGN BRANCH 12</b>	

<b>PEDESTRIAN UC</b>	
<b>ARCHITECTURAL TREATMENT DETAILS NO. 4</b>	



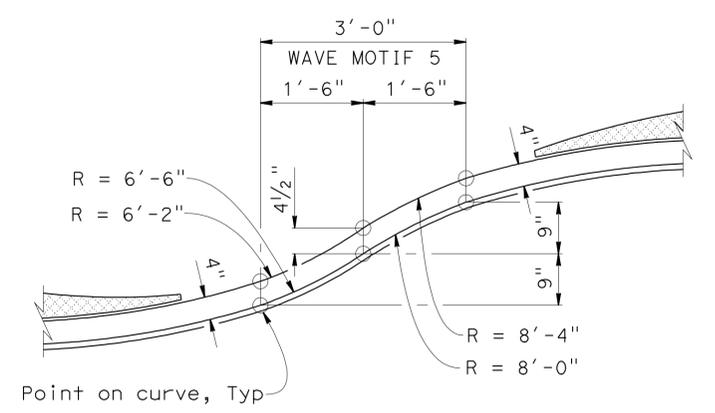
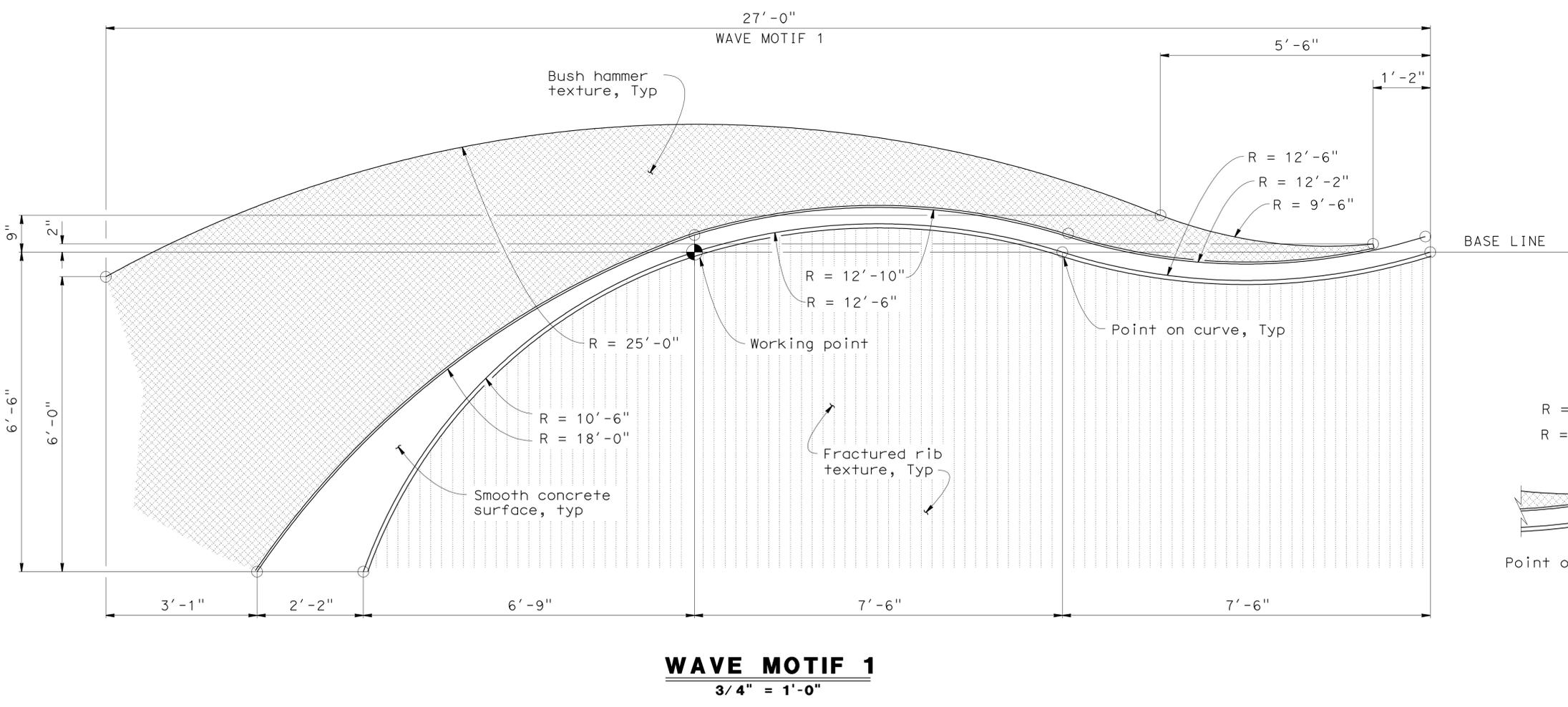
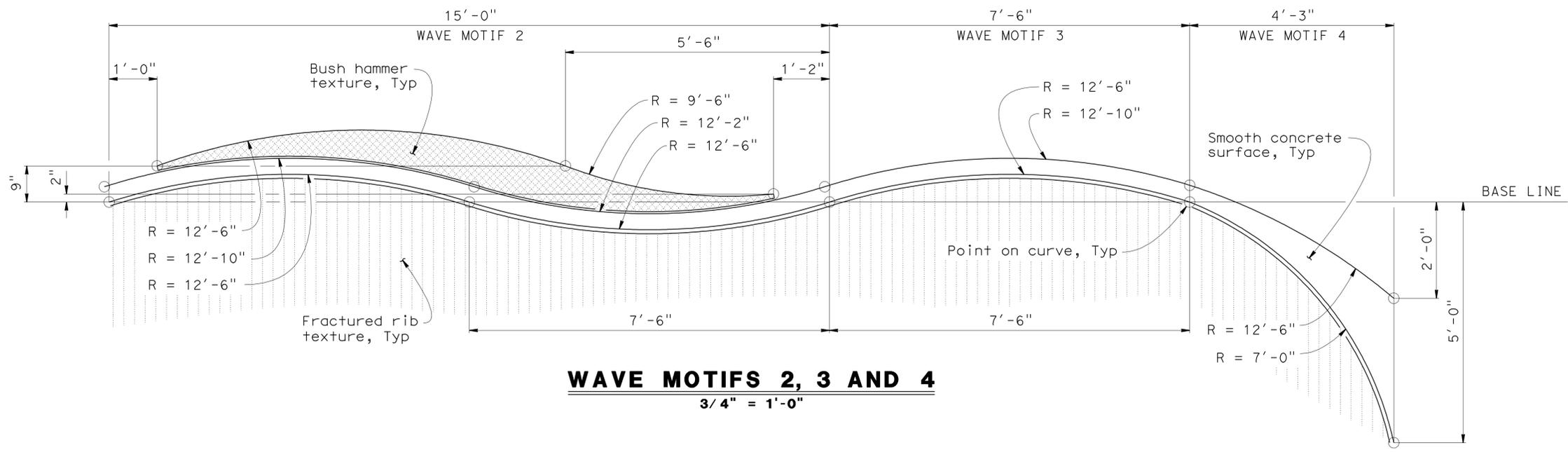
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven,SB	101	R39.8/R43.6 0.0/2.2	591	757

**Mahmoud Fustok** 10-18-10  
REGISTERED CIVIL ENGINEER DATE

6-20-11  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
MAHMOUD FUSTOK  
No. C51502  
Exp. 06-30-12  
CIVIL  
STATE OF CALIFORNIA



STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY M. Fustok	CHECKED W. Addlespurger	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>12</b>	BRIDGE NO.	PEDESTRIAN UC			
	DETAILS	BY Various	CHECKED M. Fustok			52-0467	ARCHITECTURAL TREATMENT DETAILS NO. 6			
	QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger			41.58				
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					CU 07 EA 260701	DISREGARD PRINTS BEARING EARLIER REVISION DATES				SHEET 22 OF 29

USERNAME => s124496 DATE PLOTTED => 24-JUN-2011 TIME PLOTTED => 17:14

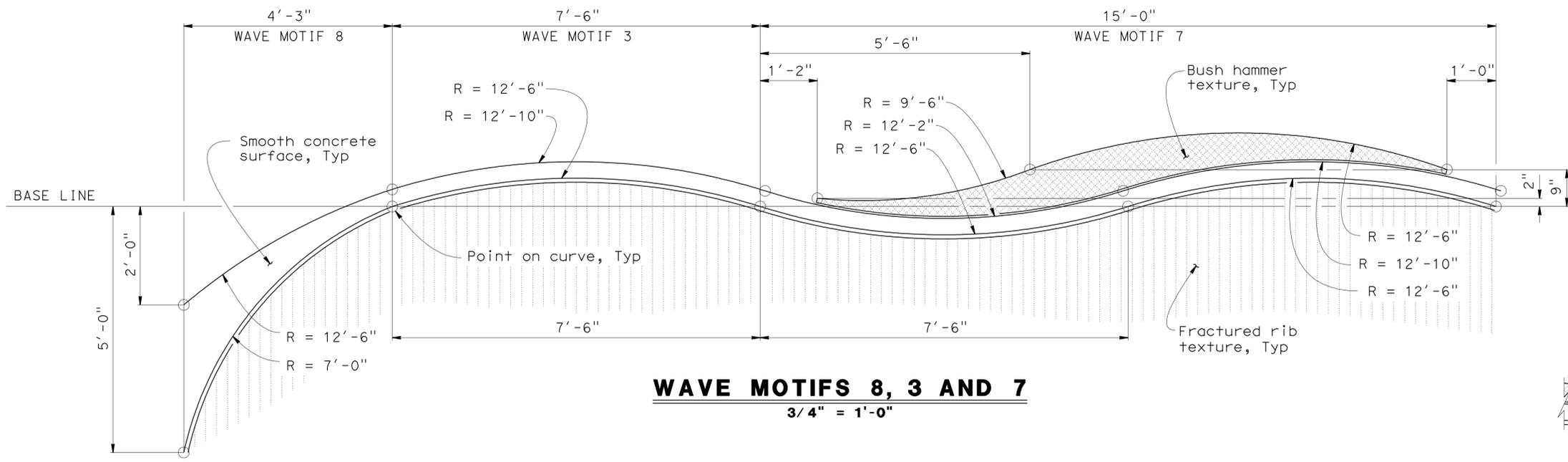
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	592	757

**Mahmoud Fustok** 10-18-10  
 REGISTERED CIVIL ENGINEER DATE

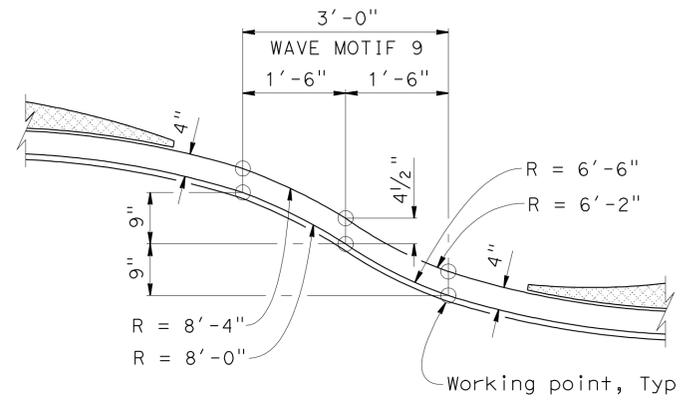
6-20-11  
 PLANS APPROVAL DATE

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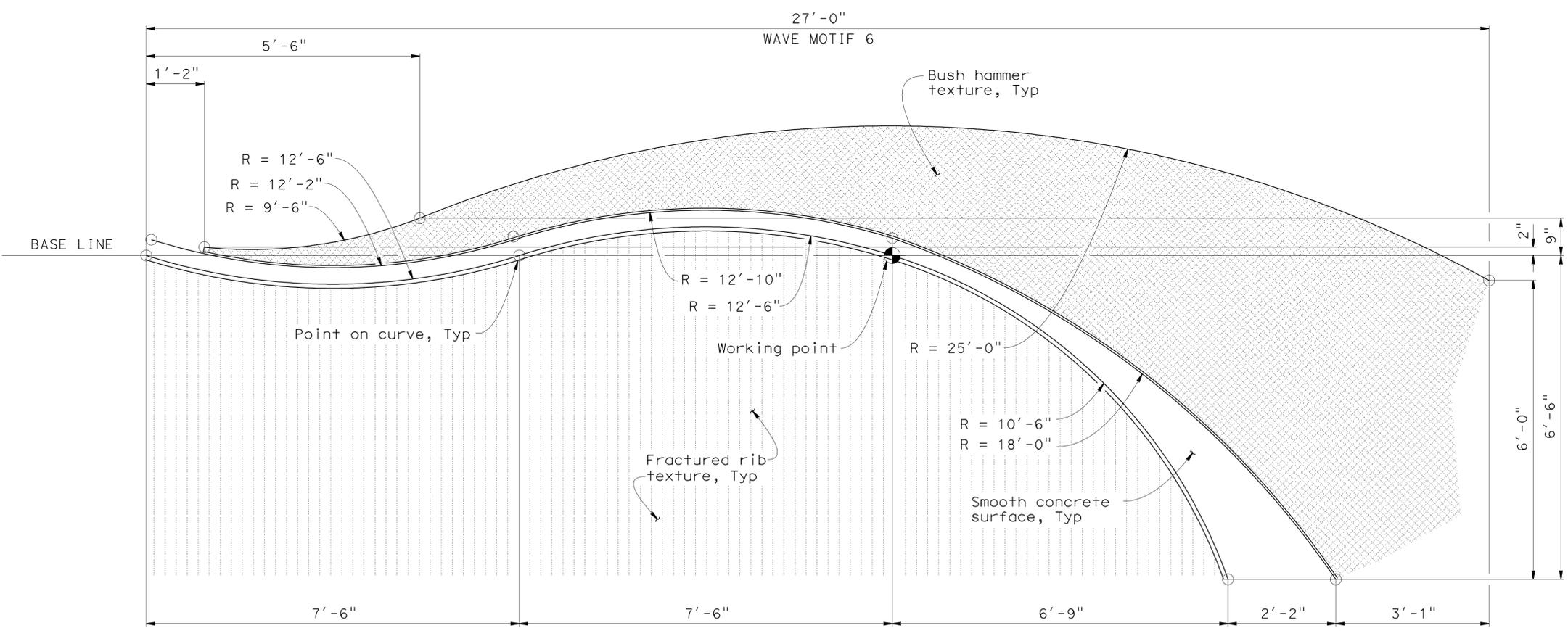
REGISTERED PROFESSIONAL ENGINEER  
**MAHMOUD FUSTOK**  
 No. C51502  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



**WAVE MOTIFS 8, 3 AND 7**  
 3/4" = 1'-0"



**WAVE MOTIF 9**  
 3/4" = 1'-0"



**WAVE MOTIF 6**  
 3/4" = 1'-0"

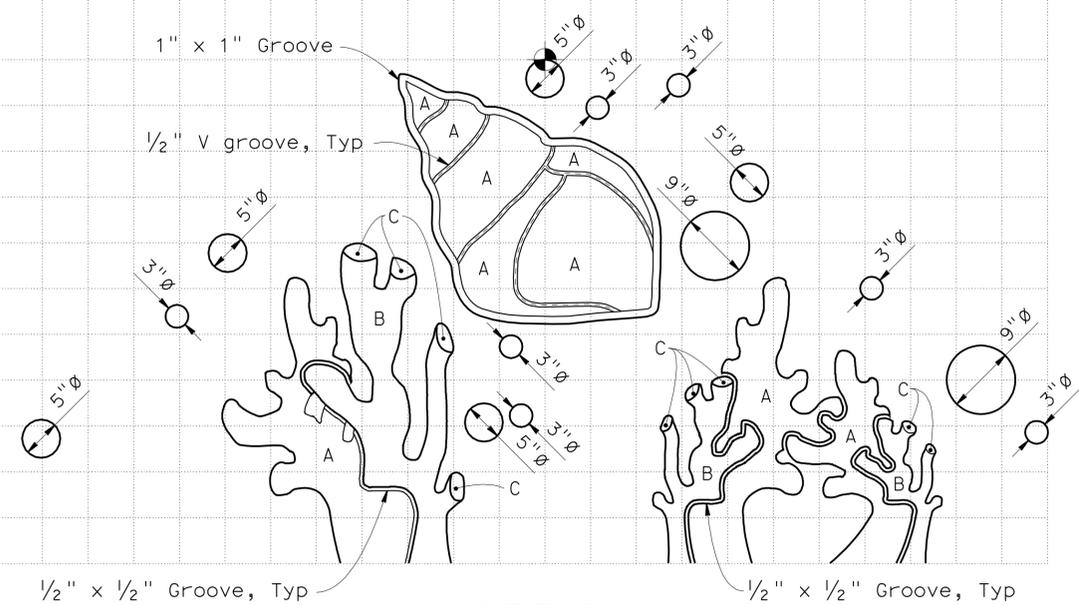
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY M. Fustok	CHECKED W. Addlespurger	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>12</b>	BRIDGE NO.	PEDESTRIAN UC	
	DETAILS	BY Various	CHECKED M. Fustok			52-0467	ARCHITECTURAL TREATMENT DETAILS NO. 7	
	QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger			POST MILE 41.58		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3	CU 07 EA 260701	DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET 23 OF 29

USERNAME => s124496 DATE PLOTTED => 24-JUN-2011 TIME PLOTTED => 17:14

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	593	757
<b>Mahmoud Fustok</b> 10-18-10 REGISTERED CIVIL ENGINEER DATE					
6-20-11 PLANS APPROVAL DATE					
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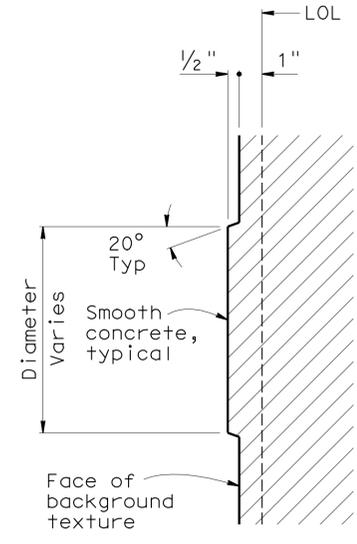
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L



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

GRID = 6" X 6"

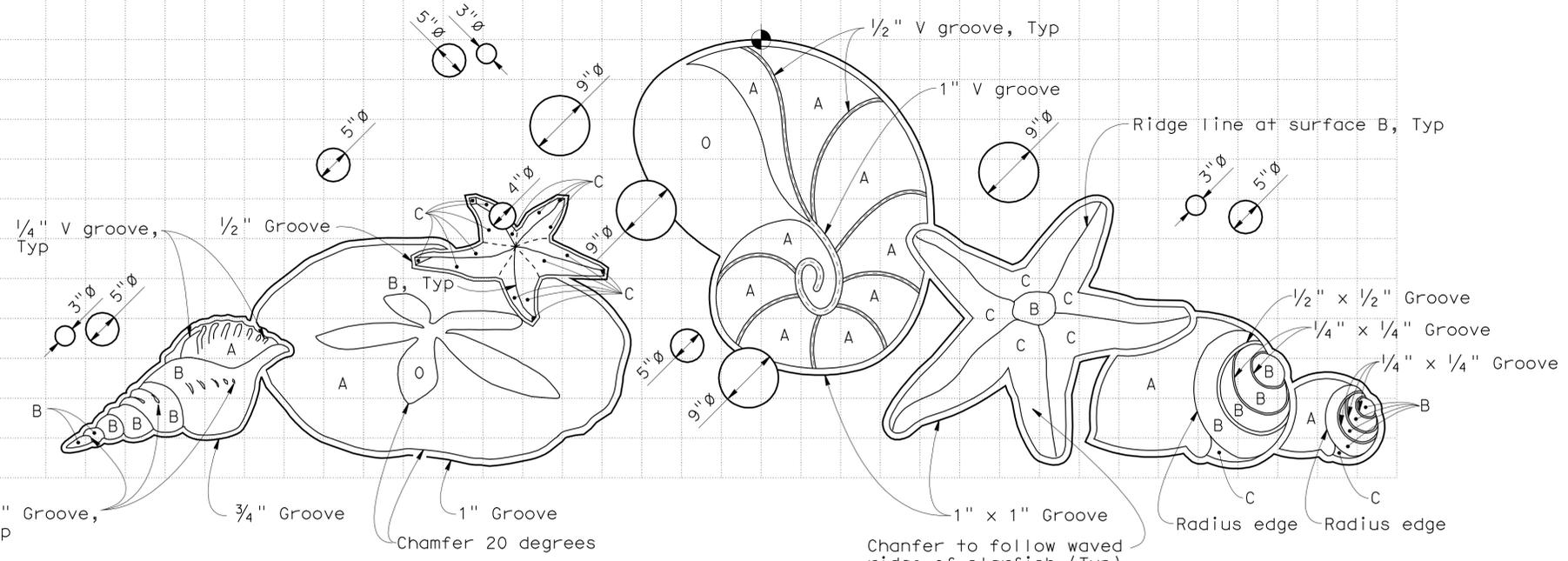


**SECTION A-A**  
3" = 1'-0"  
APPLIES TO ALL BUBBLES

**RELIEF LEGEND:**  
 O = LOL  
 A = 1"  
 B = 2"  
 C = CHAMFER SURFACE FROM RELIEF OUT SURFACE B TO LOL.  
**NOTE:**  
 MOTIF A, B, C, AND D ARE FORMED RELIEF TYEXTURE.

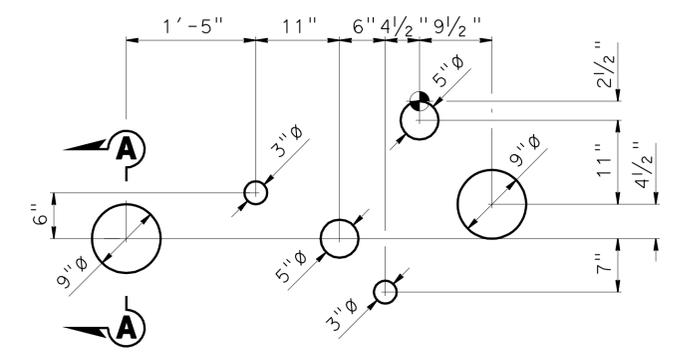
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L

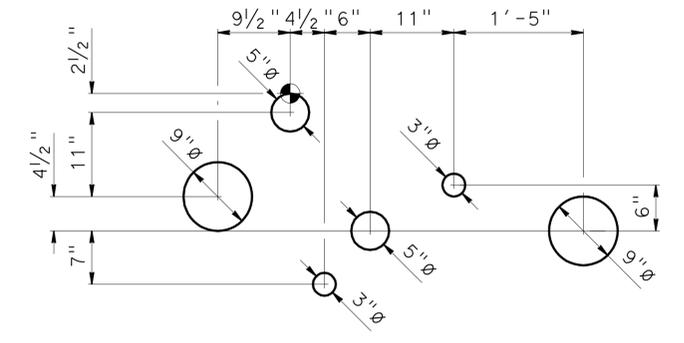


**MOTIF A**  
1" = 1'-0"

GRID = 6" X 6"



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



**MOTIF D**  
1" = 1'-0"

INDICATES WORKING POINT

DESIGN	BY M. Fustok	CHECKED W. Addlespurger
DETAILS	BY Various	CHECKED M. Fustok
QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 12

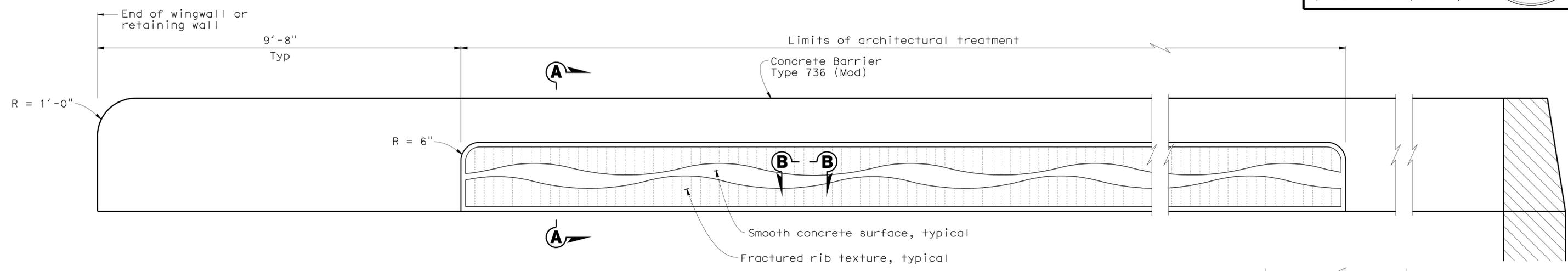
BRIDGE NO.	52-0467
POST MILE	41.58

PEDESTRIAN UC  
ARCHITECTURAL TREATMENT DETAILS NO. 8

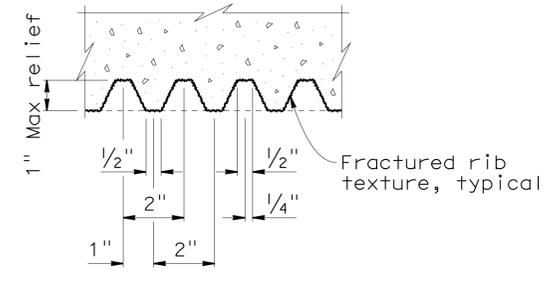
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	594	757

Mahmoud Fustok 10-18-10  
 REGISTERED CIVIL ENGINEER DATE  
 6-20-11  
 PLANS APPROVAL DATE  
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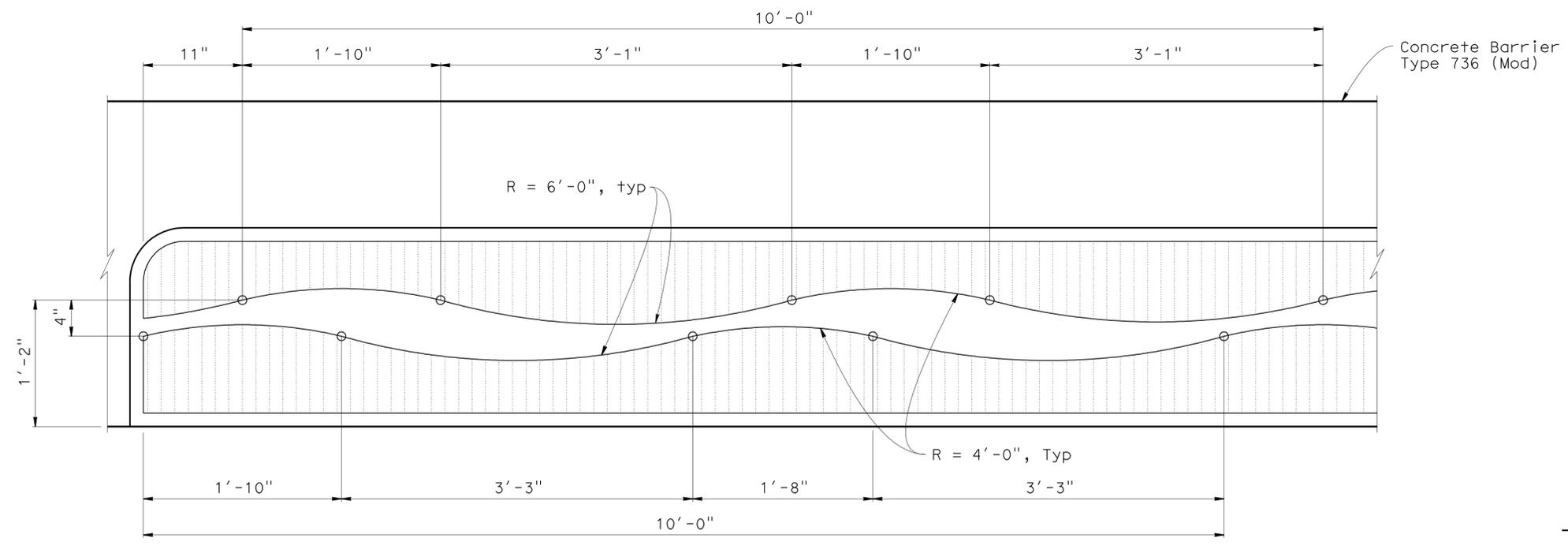
REGISTERED PROFESSIONAL ENGINEER  
 MAHMOUD FUSTOK  
 No. C51502  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



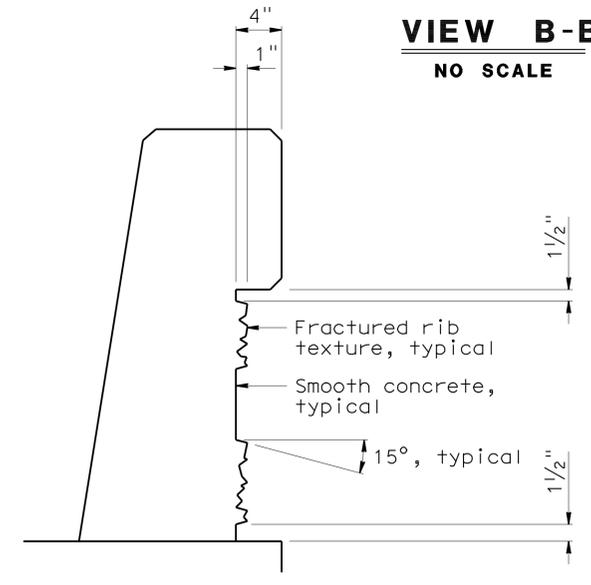
**PART TYPICAL ELEVATION**  
 3/4" = 1'-0"



**VIEW B-B**  
 NO SCALE



**ARCHITECTURAL TREATMENT DETAILS**  
 1 1/2" = 1'-0"



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

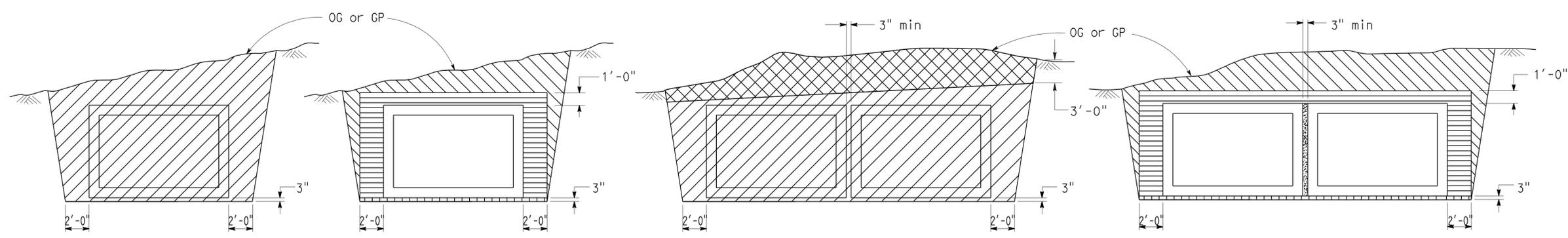
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY M. Fustok	CHECKED W. Addlespurger	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 12</b>	BRIDGE NO.	<b>PEDESTRIAN UC</b> <b>ARCHITECTURAL TREATMENT DETAILS NO. 9</b>							
	DETAILS	BY Various	CHECKED M. Fustok			POST MILE						52-0467		
	QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger			POST MILE						41.58		
				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	CU 07 EA 260701	DISREGARD PRINTS BEARING EARLIER REVISION DATES					3-8-11	SHEET 25	OF 29

USERNAME => s124496 DATE PLOTTED => 24-JUN-2011 TIME PLOTTED => 17:14  
 FILE => b-52-0467-r-arch09.dgn

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	595	757

Mahmoud Fustok 10-18-10  
 REGISTERED ENGINEER - CIVIL  
 No. C51502  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA

PLANS APPROVAL DATE  
 6-20-11  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



**EXCAVATION**

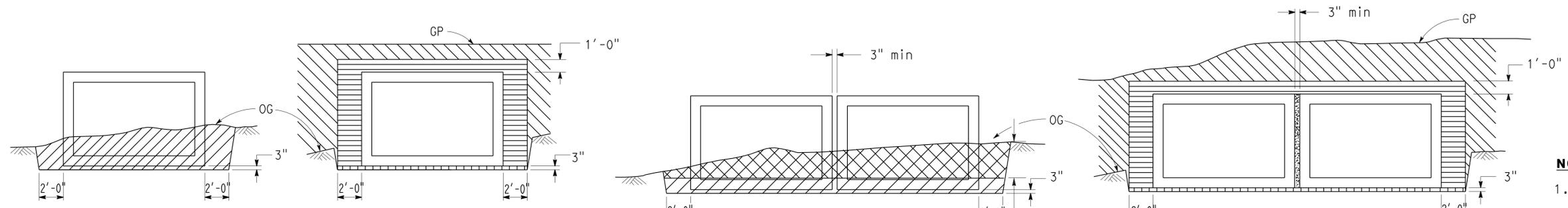
**BACKFILL**

**IN TRENCH**

**EXCAVATION**

**BACKFILL**

**IN TRENCH**



**EXCAVATION**

**BACKFILL**

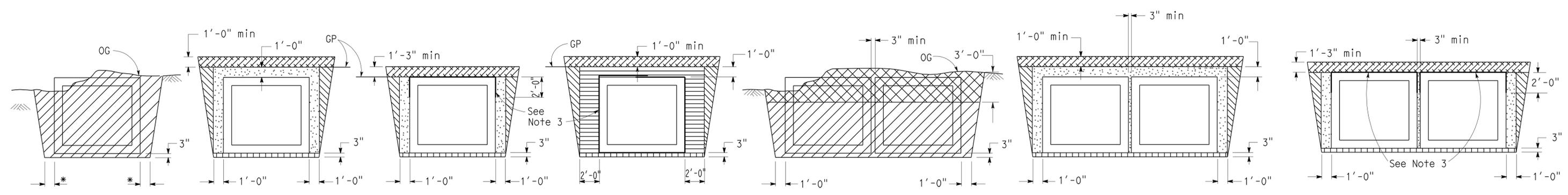
**IN EMBANKMENT**

**EXCAVATION**

**BACKFILL**

**IN EMBANKMENT**

**FILL HEIGHT GREATER THAN 2'-0"**



**EXCAVATION**

**METHOD 1**

**METHOD 2**

**METHOD 3**

**EXCAVATION**

**METHOD 1**

**METHOD 2**

**BACKFILL**

**BACKFILL**

**FILL HEIGHT 2'-0" OR LESS**

- LEGEND:**
- Structure excavation (Culvert)
  - Structure backfill (Culvert) 95% relative compaction
  - Roadway embankment
  - Slurry cement backfill
  - Sand bedding (Culvert)
  - Roadway structural section
  - Original ground
  - Structure Excavation (Petroleum Hydrocarbon) Sta 4+46 to 5+5.92

- NOTES:**
- Slope or shore excavation sides as necessary.
  - Dimensions shown are minimum.
  - Method 2 and 3 for single or multiple boxes requires an approved external sealing band. See "Precast RCB Culvert, Reinforcement and Design Tables" sheet.
  - Construction of Roadway Structural Section in Method 2 or Method 3 shall not disturb the external sealing band installation.

\* 1'-0" Where Method 1 or 2 Backfill is used.  
 2'-0" Where Method 3 Backfill is used.

<b>STANDARD DRAWING</b> FILE NO. <b>xs17-040e</b> APPROVED BY <u>D FORESTER</u> RESPONSIBLE TECHNICAL SPECIALIST APPROVAL DATE <u>5-1-08</u> RELEASED BY <u>ROBERTO LACALLE</u> RESPONSIBLE OFFICE CHIEF RELEASE DATE <u>5-1-08</u>			STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES BRIDGE NO. <u>52-0467</u> POST MILE <u>41.58</u>		<b>PEDESTRIAN UC</b> <b>PRECAST RCB EXCAVATION AND BACKFILL DETAILS</b>		
DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. 01/11/08) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					CU 07 EA 260701		DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES (PRELIMINARY STAGE ONLY) 8-30-10		
					USERNAME => s124496		SHEET 26 OF 29 DATE PLOTTED => 24-JUN-2011 17:14		

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	596	757

4-7-10  
REGISTERED CIVIL ENGINEER  
6-20-11  
PLANS APPROVAL DATE

Harinar Shiwakoti  
No. C76035  
Exp. 6-30-12  
CIVIL  
STATE OF CALIFORNIA

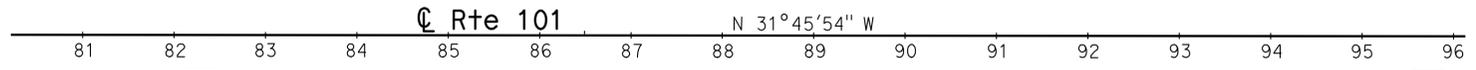
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

**BENCH MARK**

For Boring A-09-109  
Datums: NAD '83 and NAVD '88  
Well cap located at 57.57' Rt  
Sta 95+72.24 Centerline Rte 101.  
N 1958451.806  
E 6123996.939  
Elev 25.801'

For Boring A-09-110  
Datums: NAD '83 and NAVD '88  
Well cap located at 56.15' Rt  
Sta 82+30.53 Centerline Rte 101.  
N 1957374.669  
E 6124796.917  
Elev 27.010'

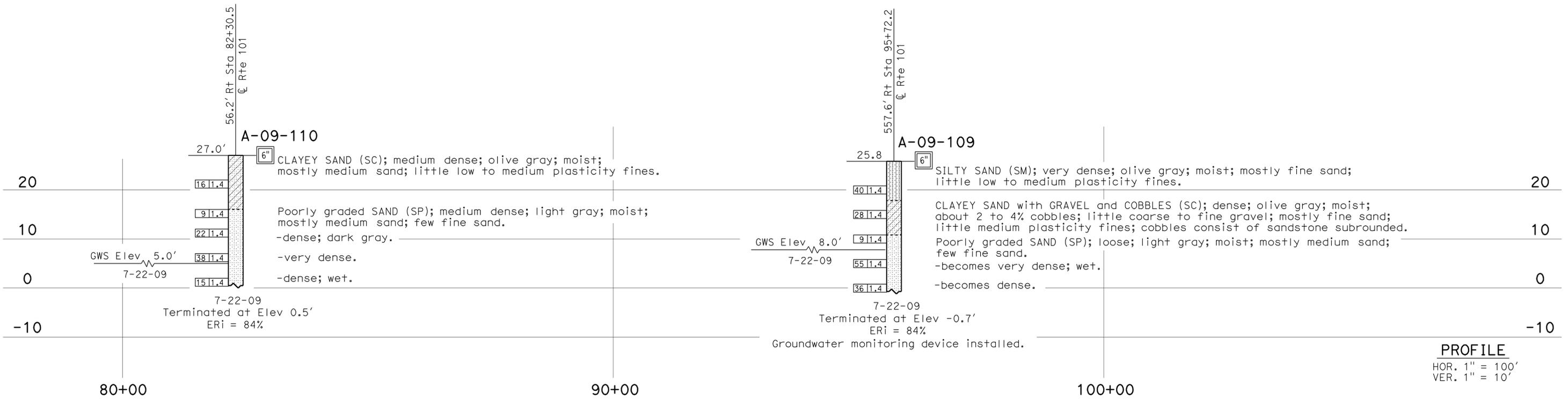
← To Ventura



**PLAN**

1" = 100'

To Santa Barbara →



**PROFILE**

HOR. 1" = 100'  
VER. 1" = 10'

<b>ENGINEERING SERVICES</b>		<b>GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 12</b>	BRIDGE NO. 52-0467	<b>PEDESTRIAN UC</b>
FUNCTIONAL SUPERVISOR NAME: D. Jang	DRAWN BY: C. Christian, I.G-Remmen 11/09	FIELD INVESTIGATION BY: H. Shiwakoti	CHECKED BY: H. Liu			POST MILES 41.58	
O&S CIVIL LOG OF TEST BORINGS SHEET				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 07 EA 260701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES
				0 1 2 3	FILE => b-52-0467-z-lotb01.dgn	12-28-09 03-18-10 04-07-10	SHEET 27 OF 29

USERNAME => s124496 DATE PLOTTED => 24-JUN-2011 TIME PLOTTED => 17:14

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	597	757

4-7-10  
 REGISTERED CIVIL ENGINEER  
 6-20-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Harihar Shiwakoti  
 No. C76035  
 Exp. 6-30-12  
 CIVIL  
 STATE OF CALIFORNIA

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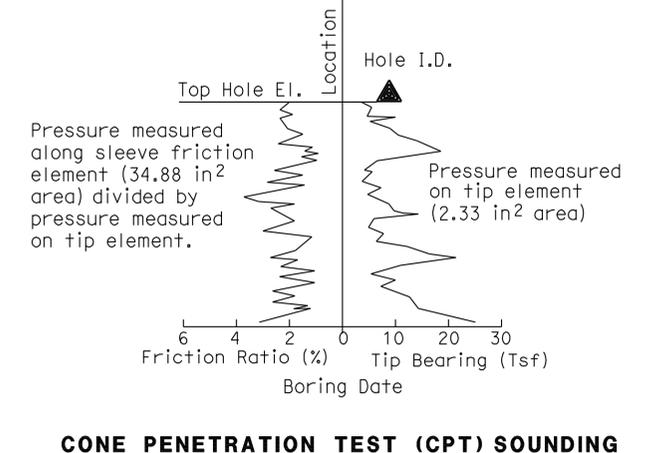
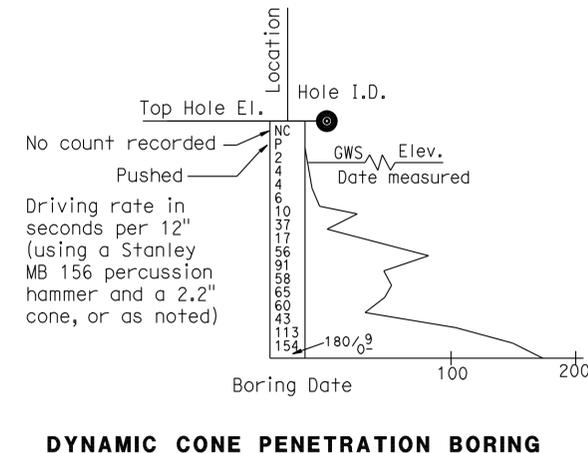
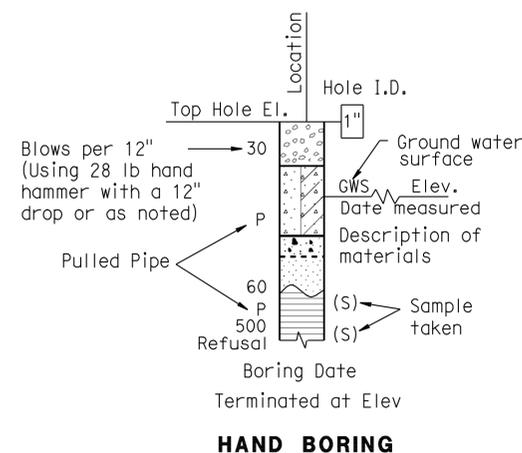
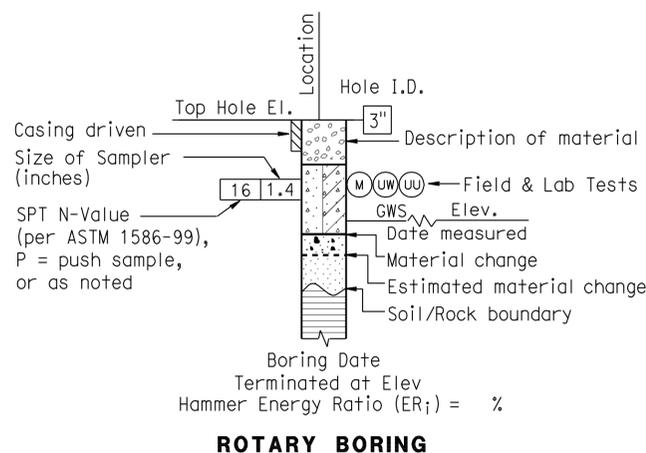
CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS				
Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring
	R	Rotary drilled boring
	P	Rotary percussion boring (air)
	R	Rotary drilled diamond core
	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778-95)
	O	Other

Note: Size in inches.

PLASTICITY OF FINE-GRAINED SOILS	
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO. 52-0467	PEDESTRIAN UC LOG OF TEST BORINGS 2 OF 3
	PREPARED BY: I.G-Remmen 12/09			POST MILE 41.58	
GS LOTB SOIL LEGEND	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 07 EA 260701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 28 OF 29

FILE => b-52-0467-z-lotb02.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	598	757

4-7-10  
 REGISTERED CIVIL ENGINEER  
 6-20-11  
 PLANS APPROVAL DATE  
 Harihar Shiwakoti  
 No. C76035  
 Exp. 6-30-12  
 CIVIL  
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GROUP SYMBOLS AND NAMES					
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	GW		Well-graded GRAVEL with SAND		Lean CLAY
	GP				Poorly graded GRAVEL
	GP		Poorly graded GRAVEL with SAND		Lean CLAY with GRAVEL
	GW-GM				Well-graded GRAVEL with SILT
	GW-GM		Well-graded GRAVEL with SILT and SAND		GRAVELLY lean CLAY
	GW-GC				Well-graded GRAVEL with CLAY (or SILTY CLAY)
	GW-GC		Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		GRAVELLY lean CLAY
	GP-GM				Poorly graded GRAVEL with SILT
	GP-GM		Poorly graded GRAVEL with SILT and SAND		GRAVELLY lean CLAY
	GP-GC				Poorly graded GRAVEL with CLAY (or SILTY CLAY)
	GP-GC		Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		GRAVELLY lean CLAY
	GM				SILTY GRAVEL
	GM		SILTY GRAVEL with SAND		SILT
	GC				CLAYEY GRAVEL
	GC		CLAYEY GRAVEL with SAND		SILT with GRAVEL
	GC-GM				SILTY, CLAYEY GRAVEL
	GC-GM		SILTY, CLAYEY GRAVEL with SAND		GRAVELLY SILT
	SW				Well-graded SAND
	SW		Well-graded SAND with GRAVEL		ORGANIC lean CLAY
	SP				Poorly graded SAND
	SP		Poorly graded SAND with GRAVEL		ORGANIC lean CLAY with GRAVEL
	SW-SM				Well-graded SAND with SILT
	SW-SM		Well-graded SAND with SILT and GRAVEL		GRAVELLY ORGANIC lean CLAY
	SW-SC				Well-graded SAND with CLAY (or SILTY CLAY)
	SW-SC		Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		GRAVELLY ORGANIC lean CLAY
	SP-SM				Poorly graded SAND with SILT
	SP-SM		Poorly graded SAND with SILT and GRAVEL		GRAVELLY ORGANIC lean CLAY
	SP-SC				Poorly graded SAND with CLAY (or SILTY CLAY)
	SP-SC		Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		GRAVELLY ORGANIC lean CLAY
	SM				SILTY SAND
	SM		SILTY SAND with GRAVEL		ORGANIC elastic SILT
	SC				CLAYEY SAND
	SC		CLAYEY SAND with GRAVEL		ORGANIC elastic SILT with GRAVEL
	SC-SM				SILTY, CLAYEY SAND
	SC-SM		SILTY, CLAYEY SAND with GRAVEL		GRAVELLY ORGANIC elastic SILT
	PT				PEAT
	PT		COBBLES COBBLES and BOULDERS BOULDERS		ORGANIC SOIL
					ORGANIC SOIL with GRAVEL
					SANDY ORGANIC SOIL
					SANDY ORGANIC SOIL with GRAVEL
					GRAVELLY ORGANIC SOIL
					GRAVELLY ORGANIC SOIL with SAND

FIELD AND LABORATORY TESTING	
(C)	Consolidation (ASTM D 2435)
(CL)	Collapse Potential (ASTM D 5333)
(CP)	Compaction Curve (CTM 216)
(CR)	Corrosivity Testing (CTM 643, CTM 422, CTM 417)
(CU)	Consolidated Undrained Triaxial (ASTM D 4767)
(DS)	Direct Shear (ASTM D 3080)
(EI)	Expansion Index (ASTM D 4829)
(M)	Moisture Content (ASTM D 2216)
(OC)	Organic Content-% (ASTM D 2974)
(P)	Permeability (CTM 220)
(PA)	Particle Size Analysis (ASTM D 422)
(PI)	Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
(PL)	Point Load Index (ASTM D 5731)
(PM)	Pressure Meter
(PP)	Pocket Penetrometer
(R)	R-Value (CTM 301)
(SE)	Sand Equivalent (CTM 217)
(SG)	Specific Gravity (AASHTO T 100)
(SL)	Shrinkage Limit (ASTM D 427)
(SW)	Swell Potential (ASTM D 4546)
(TV)	Pocket Torvane
(UC)	Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
(UU)	Unconsolidated Undrained Triaxial (ASTM D 2850)
(UW)	Unit Weight (ASTM D 4767)
(VS)	Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N <sub>60</sub> (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE	
Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS	
Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE		
Description	Size	
Boulder	> 12"	
Cobble	3" to 12"	
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

**ENGINEERING SERVICES**

PREPARED BY:  
I.G-Remmen 12/09

**GEOTECHNICAL SERVICES**

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
 DESIGN BRANCH 12

BRIDGE NO. 52-0467  
 POST MILE 41.58

CU 07  
 EA 260701

PEDESTRIAN UC  
 LOG OF TEST BORINGS 3 OF 3

REVISION DATES

SHEET 29 OF 29

DISREGARD PRINTS BEARING EARLIER REVISION DATES

USERNAME => s124496 DATE PLOTTED => 24-JUN-2011 TIME PLOTTED => 17:14

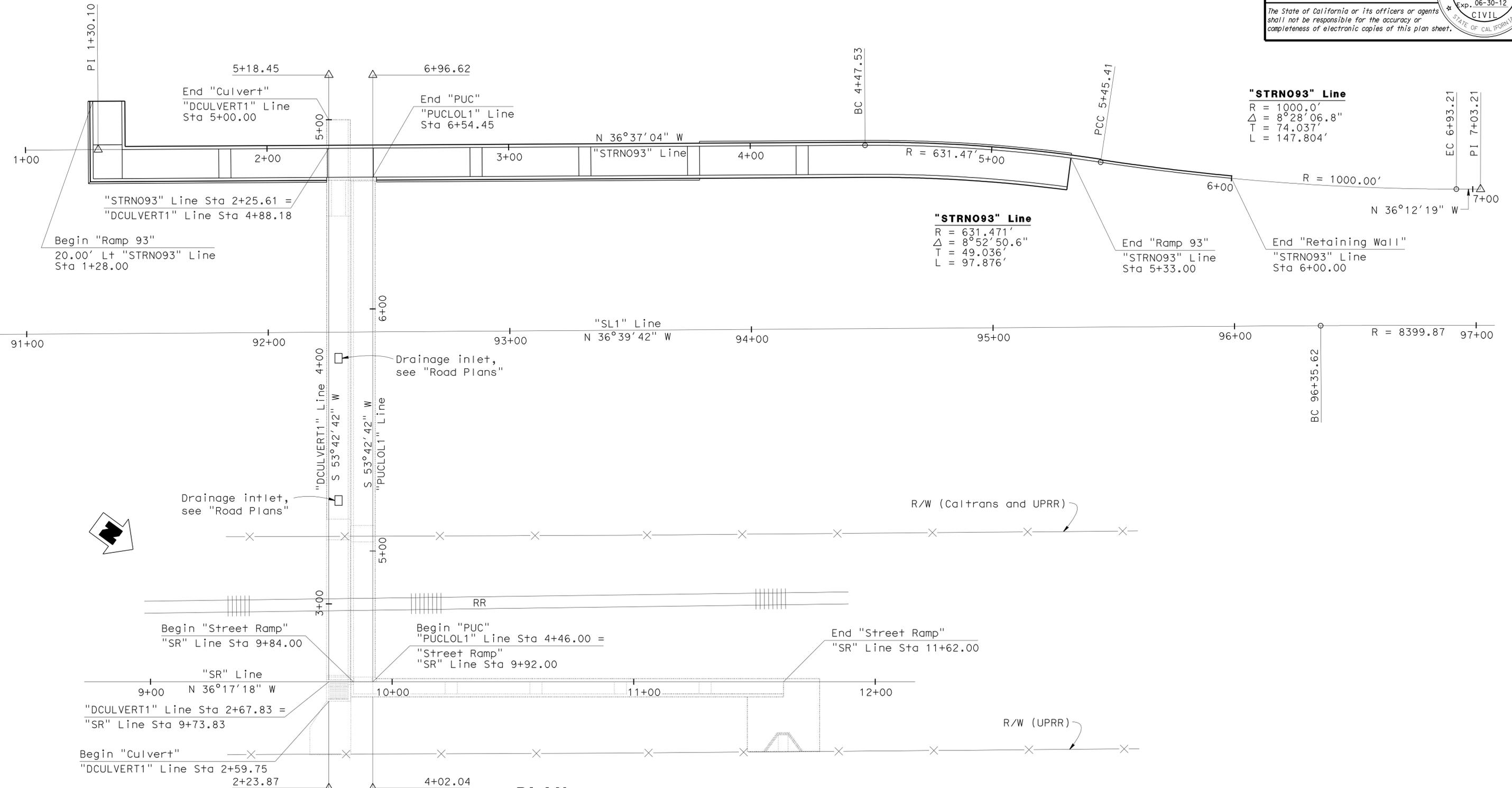
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	599	757

**Mahmoud Fustok** 10-18-10  
 REGISTERED CIVIL ENGINEER DATE

6-20-11  
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
 MAHMOUD FUSTOK  
 No. C51502  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



**PLAN**  
1:20

Matt Holm DESIGN ENGINEER	DESIGN	BY M. Fustok	CHECKED W. Addlespurger	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 12</b>	BRIDGE NO.	<b>PEDESTRIAN RAMP 93</b>  <b>GENERAL PLAN</b>	
	DETAILS	BY Various	CHECKED M. Fustok	LAYOUT	BY F. Fustok			CHECKED W. Addlespurger		52-0469
	QUANTITIES	BY M. Fustok	CHECKED W. Addlespurger	SPECIFICATIONS	BY Erwin Rufino			PLANS AND SPECS COMPARED Erwin Rufino		41.58

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

CU 07  
 EA 260701

DISREGARD PRINTS BEARING EARLIER REVISION DATES

2-3-10	2-17-10	5-18-10	6-3-10	7-22-10	7-28-10	8-18-10	1-9-11	3-8-11
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SHEET 1 OF 50

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.07-24-06)

FILE => c-52-0469-a-gp.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	Ven, SB	101	R39.8/R43.6, 0.0/2.2	600	757

*Mahmoud Fustok* 10-18-10  
REGISTERED CIVIL ENGINEER DATE

6-20-11  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
MAHMOUD FUSTOK  
No. C51502  
Exp. 06-30-12  
CIVIL  
STATE OF CALIFORNIA

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**INDEX TO PLANS**

SHEET No.	TITLE
1.	GENERAL PLAN
2.	INDEX TO PLANS
3.	FOUNDATION PLAN
4.	RETAINING WALL LAYOUT No. 1
5.	RETAINING WALL LAYOUT No. 2
6.	RETAINING WALL LAYOUT No. 3
7.	RETAINING WALL LAYOUT No. 4
8.	RETAINING WALL DETAILS No. 1
9.	RETAINING WALL DETAILS No. 2
10.	RETAINING WALL DETAILS No. 3
11.	RETAINING WALL DETAILS No. 4
12.	RETAINING WALL DETAILS No. 5
13.	RETAINING WALL DETAILS No. 6
14.	RETAINING WALL DETAILS No. 7
15.	PILE LAYOUT
16.	PILE DETAILS
17.	ROCK SLOPE PROTECTION No. 1
18.	ROCK SLOPE PROTECTION No. 2
19.	ROCK SLOPE PROTECTION No. 3
20.	HANDRAIL DETAILS No. 1
21.	HANDRAIL DETAILS No. 2
22.	MISCELLANEOUS DETAILS
23.	RETAINING WALL DRAINAGE DETAILS
24.	ARCHITECTURAL TREATMENT DETAILS No. 1
25.	ARCHITECTURAL TREATMENT DETAILS No. 2
26.	ARCHITECTURAL TREATMENT DETAILS No. 3
27.	ARCHITECTURAL TREATMENT DETAILS No. 4
28.	ARCHITECTURAL TREATMENT DETAILS No. 5
29.	ARCHITECTURAL TREATMENT DETAILS No. 6
30.	ARCHITECTURAL TREATMENT DETAILS No. 7
31.	ARCHITECTURAL TREATMENT DETAILS No. 8
32.	ARCHITECTURAL TREATMENT DETAILS No. 9
33.	ARCHITECTURAL TREATMENT DETAILS No. 10
34.	ARCHITECTURAL TREATMENT DETAILS No. 11
35.	ARCHITECTURAL TREATMENT DETAILS No. 12
36.	ARCHITECTURAL TREATMENT DETAILS No. 13
37.	ARCHITECTURAL TREATMENT DETAILS No. 14
38.	ARCHITECTURAL TREATMENT DETAILS No. 15
39.	ARCHITECTURAL TREATMENT DETAILS No. 16
40.	ARCHITECTURAL TREATMENT DETAILS No. 17
41.	ARCHITECTURAL TREATMENT DETAILS No. 18
42.	ARCHITECTURAL TREATMENT DETAILS No. 19
43.	ARCHITECTURAL TREATMENT DETAILS No. 20
44.	LOG OF TEST BORINGS 1 OF 7
45.	LOG OF TEST BORINGS 2 OF 7
46.	LOG OF TEST BORINGS 3 OF 7
47.	LOG OF TEST BORINGS 4 OF 7
48.	LOG OF TEST BORINGS 5 OF 7
49.	LOG OF TEST BORINGS 6 OF 7
50.	LOG OF TEST BORINGS 7 OF 7

**GENERAL NOTES  
LOAD FACTOR DESIGN**

DESIGN: CALTRANS BRIDGE DESIGN SPECIFICATIONS - April 2000 (LFD)  
(1996 AASHTO with Interims and Revisions by CALTRANS)

RETAINING WALL (SERVICE LOAD DESIGN):  
 $f = 24,000$  psi  
 $f'_c = 1,400$  psi  
 $n_s = 9$

LIVE LOADING SURCHARGE: 240 lbs / Sq Ft

**QUANTITIES**

ROCK SLOPE PROTECTION EXCAVATION	9,380	CY
NATIVE BACKFILL	1,115	CY
SLURRY FILL	414	CY
STRUCTURE BACKFILL (RETAINING WALL)	3.435	CY
HOT MIX ASPHALT (TYPE B)	53	TON
PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)	203	SQYD
FURNISH PILE (CLASS 200)	3,000	LF
DRIVE PILING (CLASS 200)	102	EA
STRUCTURAL CONCRETE, RETAINING WALL	1,045	CY
STRUCTURAL CONCRETE, SLAB	76	CY
ARCHITECTURAL TEXTURE (SEASIDE MOTIF)	7,930	SQFT
JOINT SEAL (TYPE A) (MODIFIED)	100	LF
BAR REINFORCING STEEL (SLAB)	5,630	LB
BAR REINFORCING STEEL (EPOXY COATED) (RETAINING WALL)	80,900	LB
SET ROCK SLOPE PROTECTION	3,401	CY
ROCK SLOPE PROTECTION FABRIC	3,678	SQYD
PIPE HANDRAILING (MODIFIED)	839	LF

**STANDARD PLANS DATED MAY 2006**

A10A	ACRONYMS AND ABBREVIATIONS (A-L)
A10B	ACRONYMS AND ABBREVIATIONS (M-Z)
B0-3	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
B3-8	RETAINING WALL DETAILS No. 1
B3-9	RETAINING WALL DETAILS No. 2

DESIGN BY M. Fustok CHECKED W. Addlespurger	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO. 52-0469	PEDESTRIAN RAMP 93 INDEX TO PLANS
			POST MILE 41.58	
			REVISION DATES	
DETAILS BY Various CHECKED M. Fustok	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 07 EA 260701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 2 OF 50
QUANTITIES BY M. Fustok CHECKED W. Addlespurger	0 1 2 3	FILE => c-52-0469-b-1tp.dgn	8-24-10 9-1-10 10-15-10 11-1-10 1-19-11 2-16-11 2-28-11 4-15-11	

USERNAME => s124496 DATE PLOTTED => 25-JUN-2011 TIME PLOTTED => 05:22