

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3-4	LAYOUTS
5	PROFILES AND SUPERELEVATION DIAGRAMS
6-9	CONSTRUCTION DETAILS
10	EROSION CONTROL PLAN
11	DRAINAGE PLANS AND PROFILES
12	UTILITY PLANS
13	CONSTRUCTION AREA SIGNS
14-15	STAGE CONSTRUCTION PLANS AND TRAFFIC HANDLING PLANS
16	STAGE CONSTRUCTION QUANTITIES
17	DETOUR PLAN
18	PAVEMENT DELINEATION AND SIGN PLAN
19	SUMMARY OF QUANTITIES
20-24	ELECTRICAL PLANS
25-29	SPECIAL ELECTRICAL STRUCTURES
30-49	REVISED AND NEW STANDARD PLANS

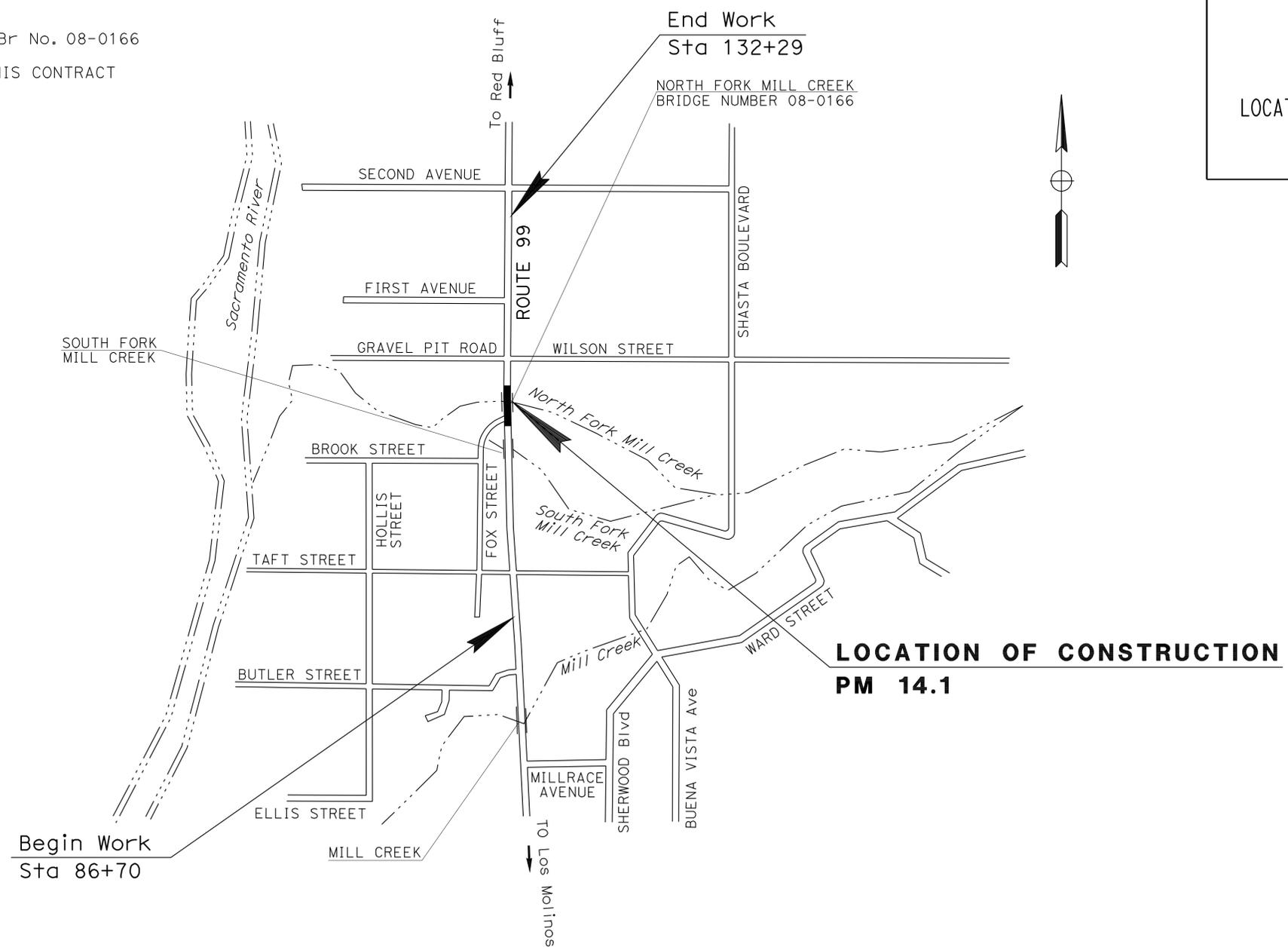
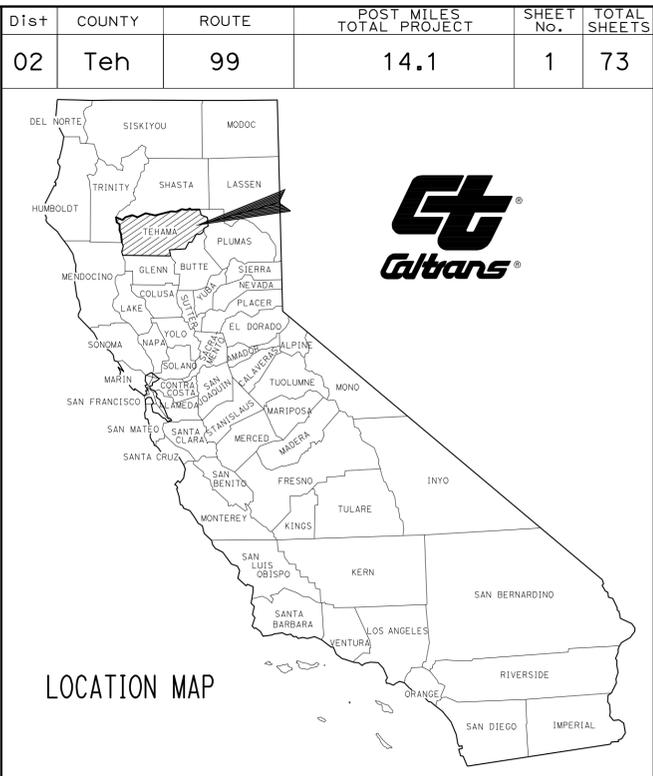
STRUCTURE PLANS

50-73 NORTH FORK MILL CREEK BRIDGE, Br No. 08-0166

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA ACBRNH-P099(562)E  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN TEHAMA COUNTY**  
**NEAR LOS MOLINOS**  
**AT NORTH FORK MILL CREEK BRIDGE**

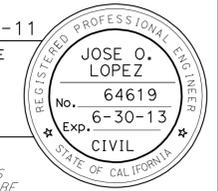
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



NO SCALE

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

*Jose O. Lopez* 12-14-11  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
**March 26, 2012**  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



CONTRACT No.	<b>02-2C1124</b>
PROJECT ID	<b>0200000163</b>

PROJECT MANAGER  
**STEVE ROGERS**  
 DESIGN ENGINEER  
**NESAR FORMOLI**

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	2	73

		12-14-11
REGISTERED CIVIL ENGINEER		DATE
3-26-12		PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSE O. LOPEZ No. C64619 Exp. 6-30-13 CIVIL
--

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

**NOTES:**

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAM.

**ABBREVIATIONS:**

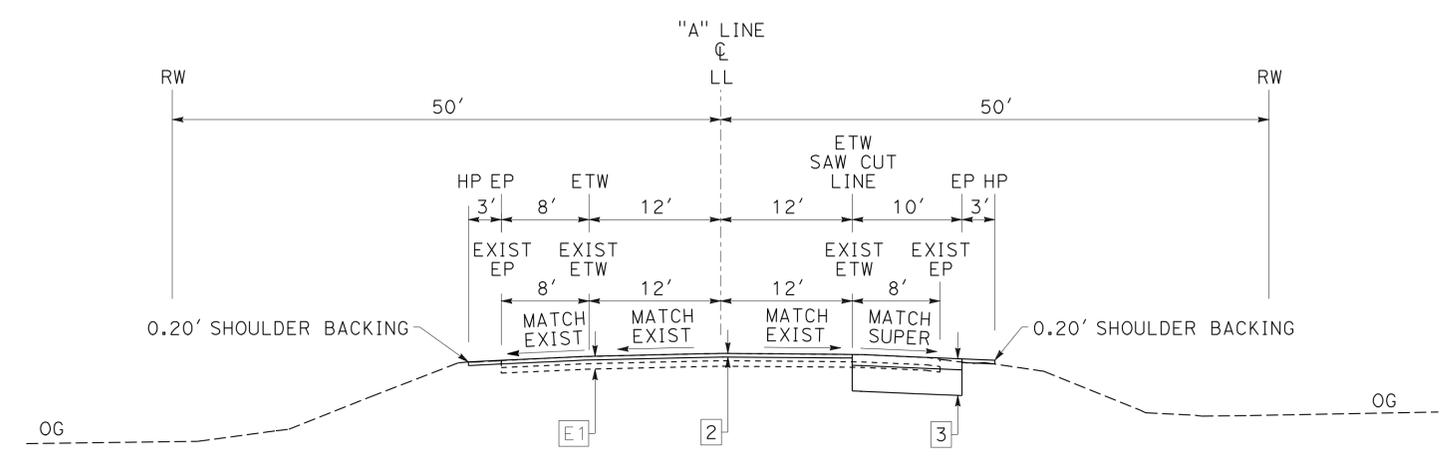
LL LANE LINE

**LEGEND:**

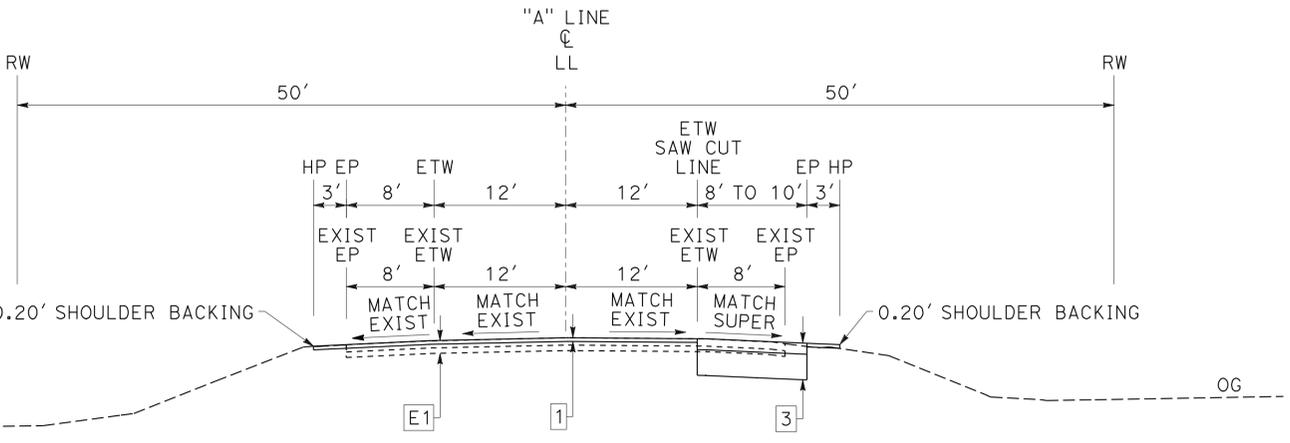
- # STRUCTURAL SECTION
- E# EXISTING STRUCTURAL SECTION

- 1 0.20' COLD PLANE AC PAVEMENT  
0.20' HOT MIX ASPHALT (TYPE A)
- 2 0.20' COLD PLANE AC PAVEMENT  
VARIES 0.20 TO 0.60 HOT MIX ASPHALT (TYPE A)
- 3 0.60' HOT MIX ASPHALT (TYPE A)  
1.40' CLASS 2 AGGREGATE BASE  
SUBGRADE ENHANCEMENT GEOTEXTILE CLASS B2
- 4 1.35' HOT MIX ASPHALT (TYPE A)  
0.35' CLASS 2 AGGREGATE BASE  
SUBGRADE ENHANCEMENT GEOTEXTILE CLASS B2

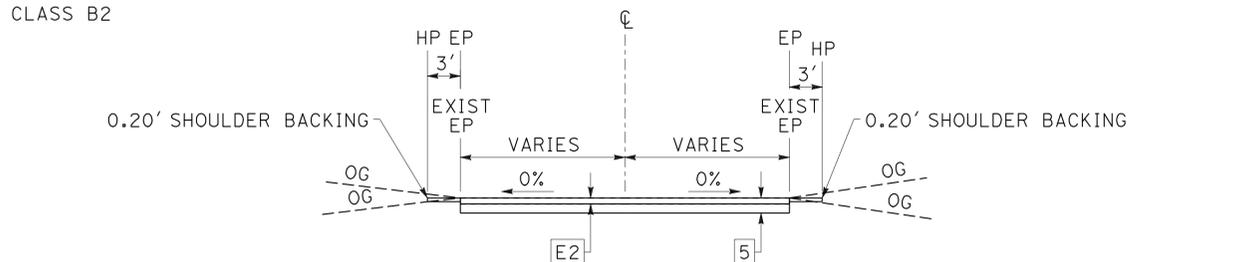
- 5 0.33' HOT MIX ASPHALT (TYPE A)  
0.5' CLASS 2 AGGREGATE BASE  
SUBGRADE ENHANCEMENT GEOTEXTILE CLASS B2
- E1 0.86' ASPHALT CONCRETE  
0.5' CONCRETE TREATED BASE
- E2 0.33' ASPHALT CONCRETE



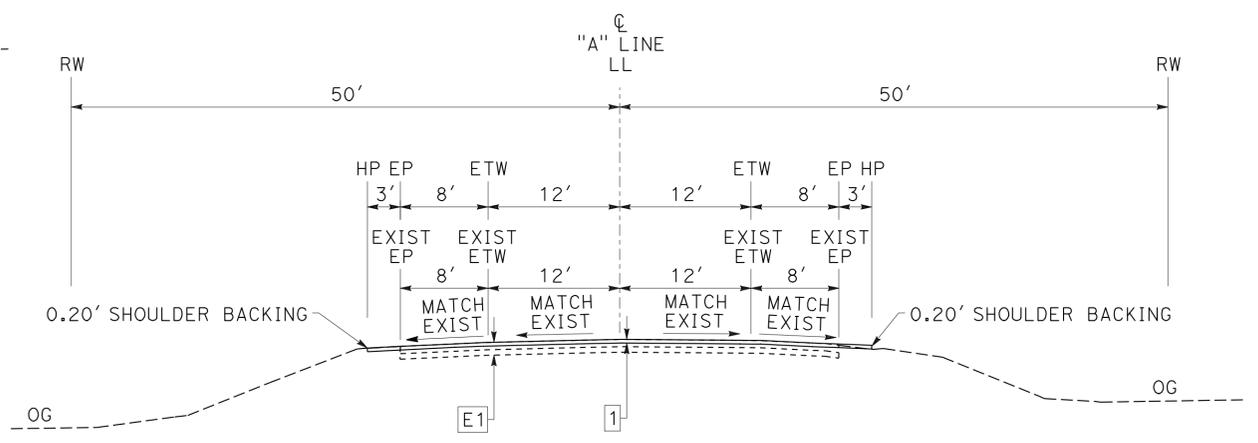
Sta 108+50.00 TO 108+90.00  
Sta 109+75.00 TO 110+15.00



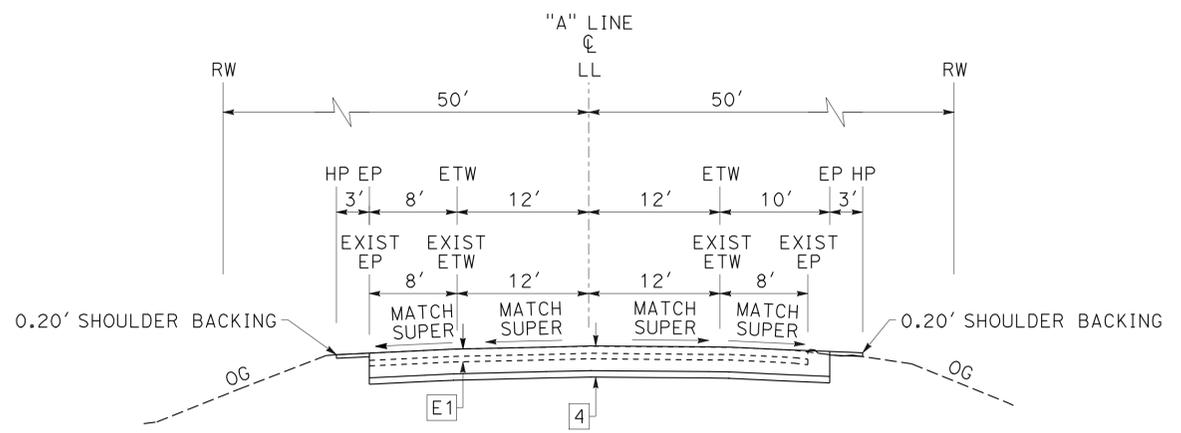
Sta 106+40.00 TO 108+50.00  
Sta 110+15.00 TO 111+10.00



**DRIVEWAY TYPICAL**  
 DRIVEWAY 1 AT "A" LINE Sta 106+68.11 TO 107+22.11  
 DRIVEWAY 2 AT "A" LINE Sta 109+66.12 TO 110+01.80  
 DRIVEWAY 3 AT "A" LINE Sta 110+24.59 TO 110+64.59



Sta 111+10.00 TO 112+24.67



Sta 108+90.00 TO 109+00.00 BB  
Sta 109+65.00 EB TO 109+75.00

**ROUTE 99**

**TYPICAL CROSS SECTIONS**

NO SCALE

**X-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN SOUTH  
 DESIGN BRANCH 14  
 Jose Lopez  
 NESAR FORMOLI  
 NESAR FORMOLI  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN SOUTH  
 DESIGN BRANCH 14



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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN SOUTH  
 DESIGN BRANCH 14  
 Caltrans

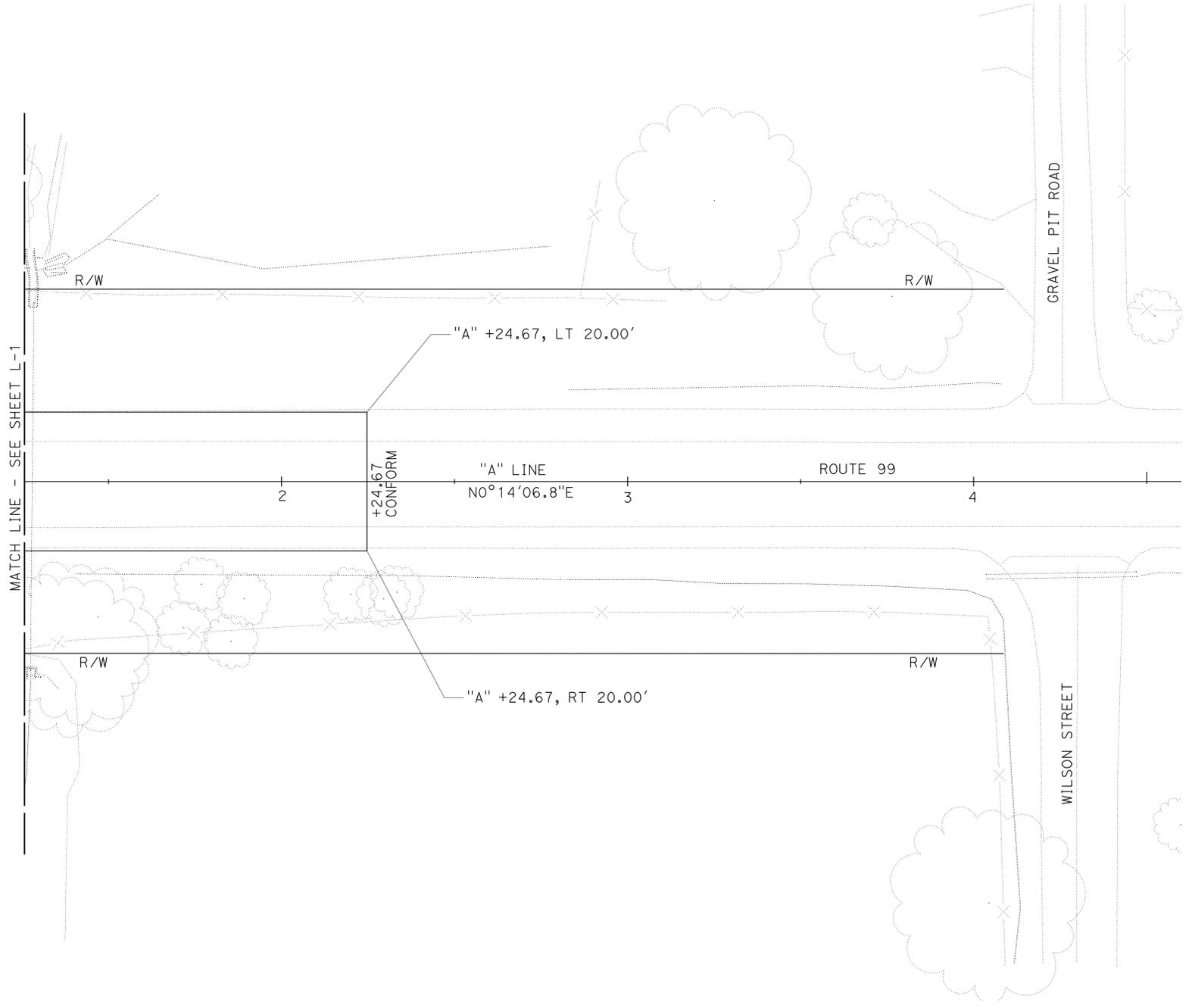
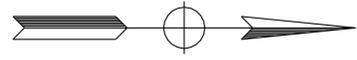
**NOTE:**  
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	4	73

12-14-11  
 REGISTERED CIVIL ENGINEER DATE  
 3-26-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 JOSE O. LOPEZ  
 No. C64619  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA

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



**LAYOUT**  
 SCALE: 1" = 20'

**L-2**



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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN SOUTH  
 DESIGN BRANCH 14  
 Caltrans

POINT #	STATION	OFFSET (FT)	NOTE
1	51+78.06	0.00	"A" LINE 109+32.50
2	52+25.00	7.56 RT	RSP
3	52+17.77	11.44 LT	RSP
4	51+39.01	10.54 LT	RSP
5	51+43.26	7.75 RT	RSP
6	51+43.14	26.00 RT	RSP
7	51+43.16	30.52 RT	RSP
8	51+49.29	29.00 LT	RSP
9	51+49.14	32.50 LT	RSP
10	51+45.54	43.32 LT	RSP
11	52+07.30	29.00 LT	RSP
12	52+00.16	35.00 LT	RSP
13	52+12.42	43.27 LT	RSP
14	52+11.64	57.50 LT	CONFORM, RSP
15	51+43.50	57.50 LT	CONFORM, RSP
16	51+32.54	57.50 LT	CONFORM, RSP
17	52+19.20	57.50 LT	CONFORM, RSP
18	52+33.00	5.00 RT	CONFORM, RSP
19	52+33.00	26.00 RT	CONFORM, RSP
20	51+29.00	27.28 RT	CONFORM, RSP
21	51+29.00	30.11 RT	CONFORM, RSP

**NOTE:**

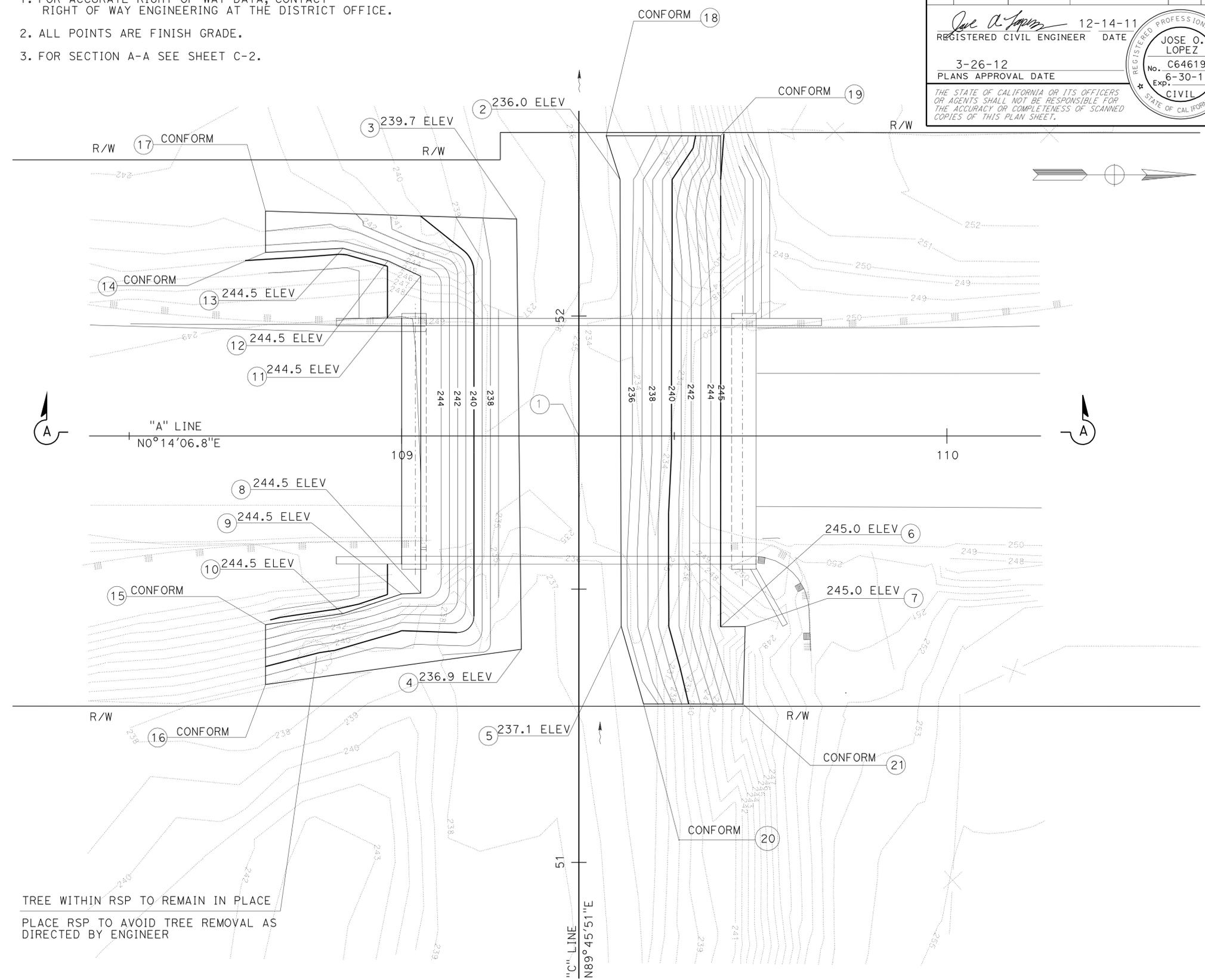
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- ALL POINTS ARE FINISH GRADE.
- FOR SECTION A-A SEE SHEET C-2.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	6	73

REGISTERED CIVIL ENGINEER  
 DATE 12-14-11  
 JOSE O. LOPEZ  
 No. C64619  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA

3-26-12  
 PLANS APPROVAL DATE

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TREE WITHIN RSP TO REMAIN IN PLACE  
 PLACE RSP TO AVOID TREE REMOVAL AS DIRECTED BY ENGINEER

**CONSTRUCTION DETAILS**  
 SCALE: 1" = 10'  
**C-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	7	73

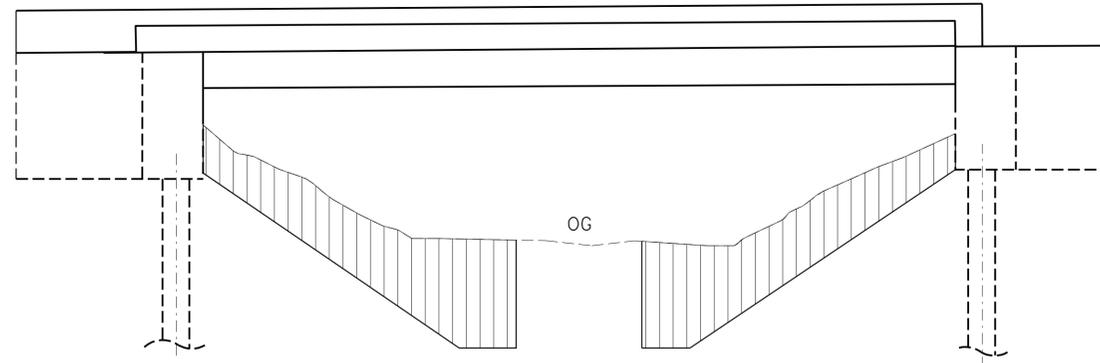
*Jose O. Lopez* 12-14-11  
 REGISTERED CIVIL ENGINEER DATE  
 3-26-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 JOSE O. LOPEZ  
 No. C64619  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA

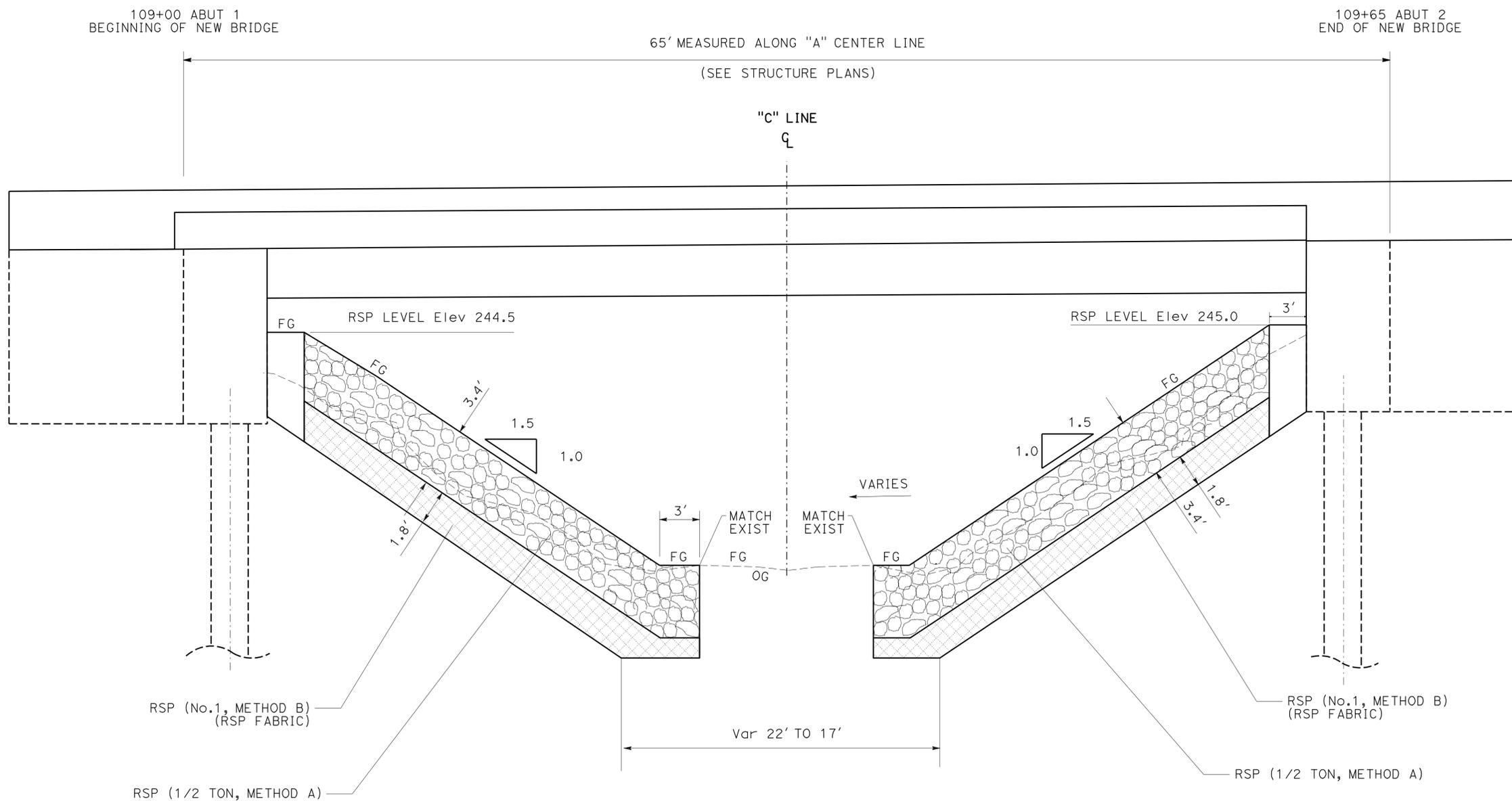
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**LEGEND:**

-  RSP (No.1, METHOD B) (RSP FABRIC)
-  RSP (1/2 TON, METHOD A)
-  CHANNEL EXCAVATION



LIMITS OF CHANNEL EXCAVATION



SECTION A-A  
(SEE SHEET C-1)

**CONSTRUCTION DETAILS**  
NO SCALE  
**C-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN SOUTH  
 DESIGN BRANCH 14  
 FUNCTIONAL SUPERVISOR  
 NESAR FORMOLI  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 JOSE LOPEZ  
 NESAR FORMOLI  
 REVISED BY  
 DATE REVISED  
 USERNAME => s114640  
 DGN FILE => 22c112ga002.dgn



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	9	73

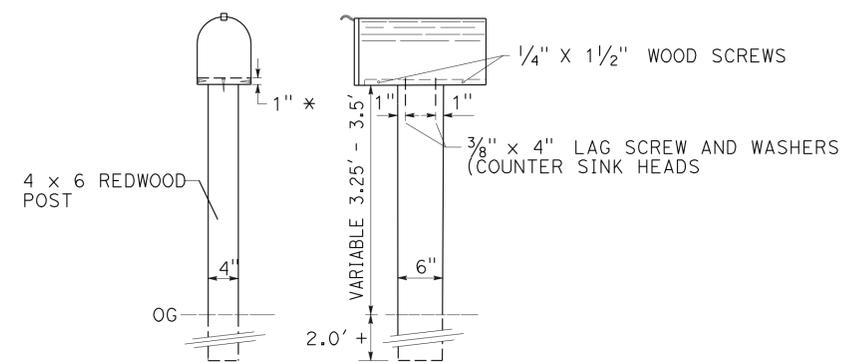
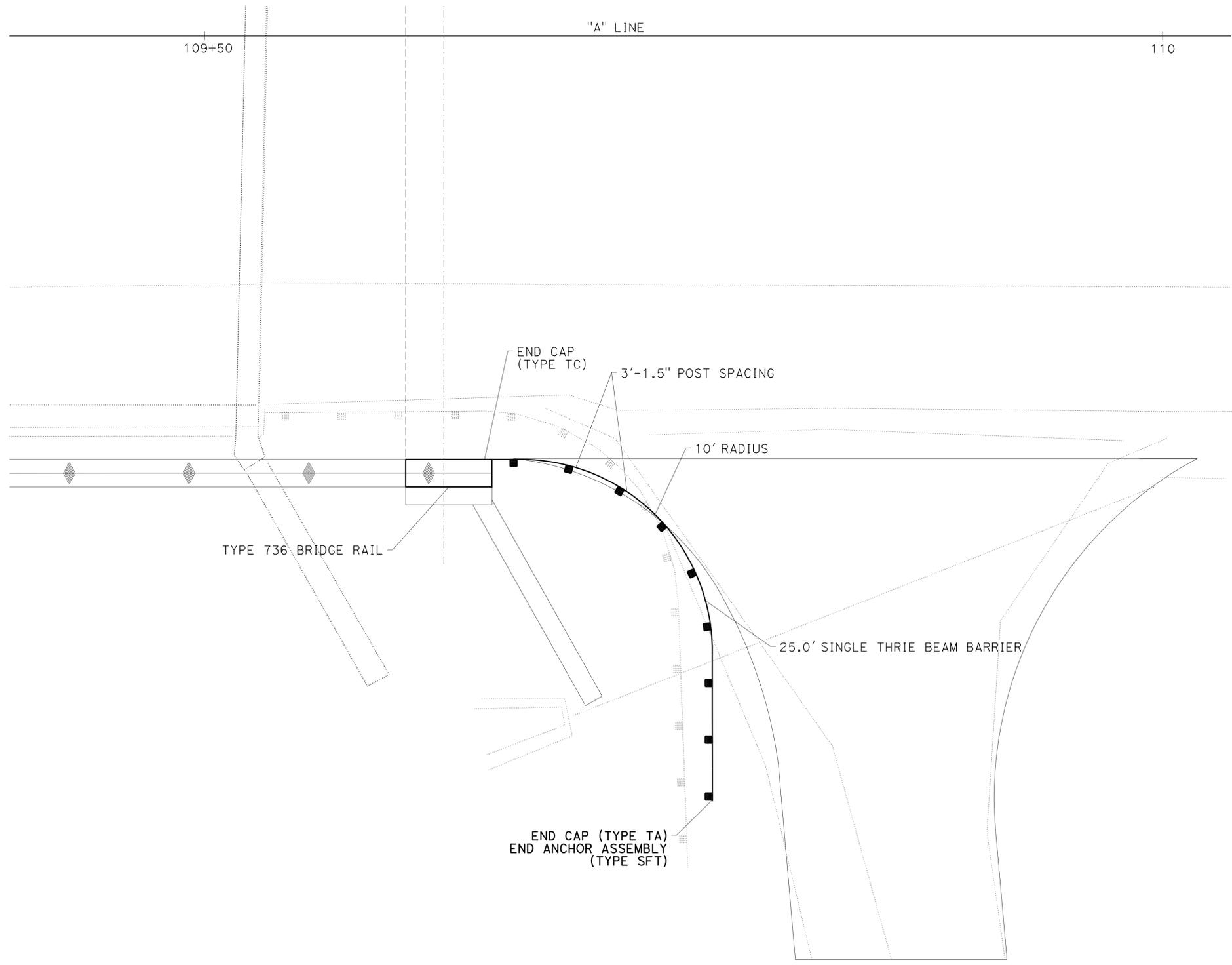
<i>Jose O. Lopez</i>	12-14-11
REGISTERED CIVIL ENGINEER	DATE
3-26-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER <b>JOSE O. LOPEZ</b> No. C64619 Exp. 6-30-13 CIVIL STATE OF CALIFORNIA
--

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**NOTE:**  
 1. SEE STANDARD PLANS A77J4 FOR ATTACHMENT TO CONCRETE RAILING  
 2. SEE STANDARD PLAN A78E1 FOR END ANCHOR ASSEMBLY (TYPE SFT)



\*BLOCK TO BE REDWOOD 1" THICK  
 LENGTH AND WIDTH TO VARY W/SIZE  
 OF MAILBOX

SINGLE  
 FRONT VIEW SIDE VIEW  
**MAILBOX INSTALLATION DETAILS**

**CONSTRUCTION DETAILS**  
 NO SCALE  
**C-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN SOUTH  
 DESIGN BRANCH 14  
 Caltrans

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	10	73

J. Patrick Sullivan, AIA  
 LICENSED LANDSCAPE ARCHITECT  
 3-26-12  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

### EROSION CONTROL QUANTITIES

STATION	(N)	(N)	(N)	(N)	(N)	(N)	
	STRAW TON	COMPOST CY	HYDROSEED ACRE	SEED LB	FIBER (N) LB	COMMERCIAL FERTILIZER LB	STABILIZING EMULSION LB
106+95 TO 110+46	2.18	1.92	0.872	113.36	3025	87.2	262
TOTAL	2.18	1.92	0.872	113.36	3025	87.2	262

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

**NOTE:**

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**LEGEND:**



EROSION CONTROL (HYDROSEED)



TFESA

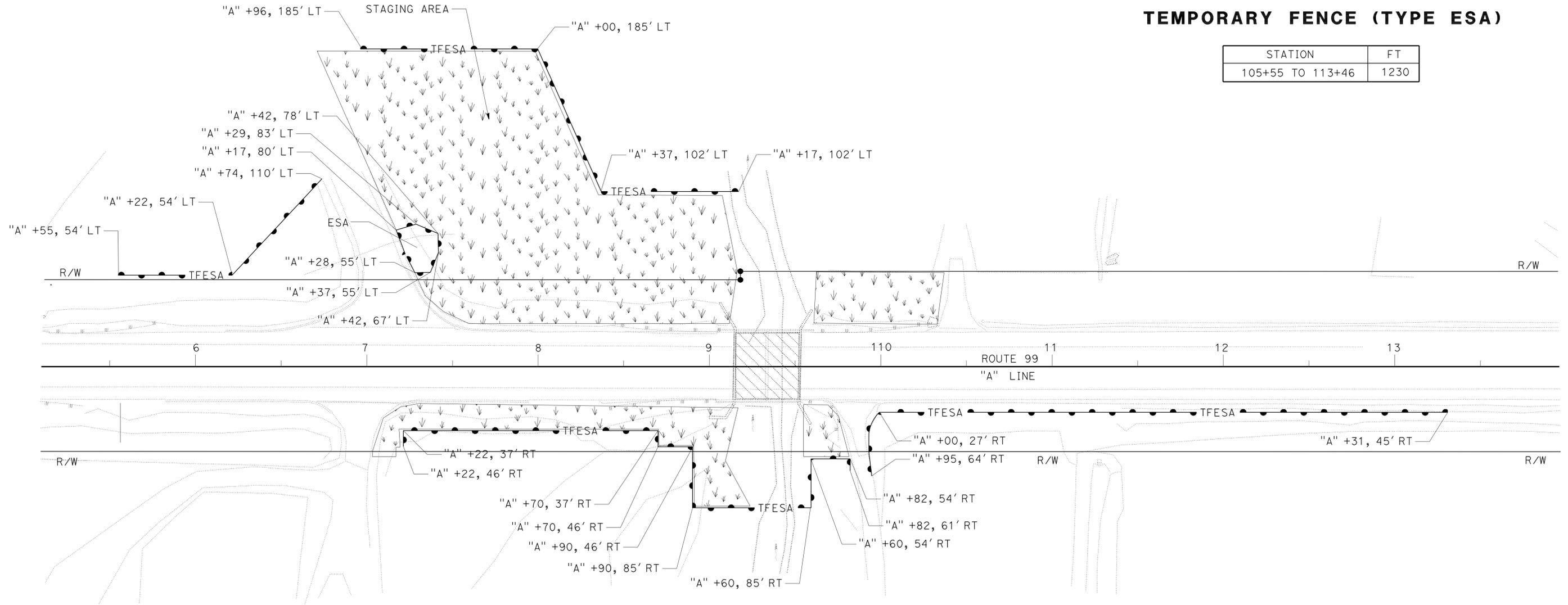
**ABBREVIATIONS:**

TFESA TEMPORARY FENCE ENVIRONMENTALLY SENSITIVE AREA

ESA ENVIRONMENTALLY SENSITIVE AREA

**TEMPORARY FENCE (TYPE ESA)**

STATION	FT
105+55 TO 113+46	1230



**EROSION CONTROL PLAN**

SCALE: 1" = 30'

**EC-1**

APPROVED FOR LANDSCAPE WORK ONLY

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT  
RON FLORY

CALCULATED-DESIGNED BY  
CHECKED BY

J. PATRICK SULLIVAN  
RON FLORY

REVISED BY  
DATE REVISED

x  
x  
x  
x  
x  
x

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	11	73

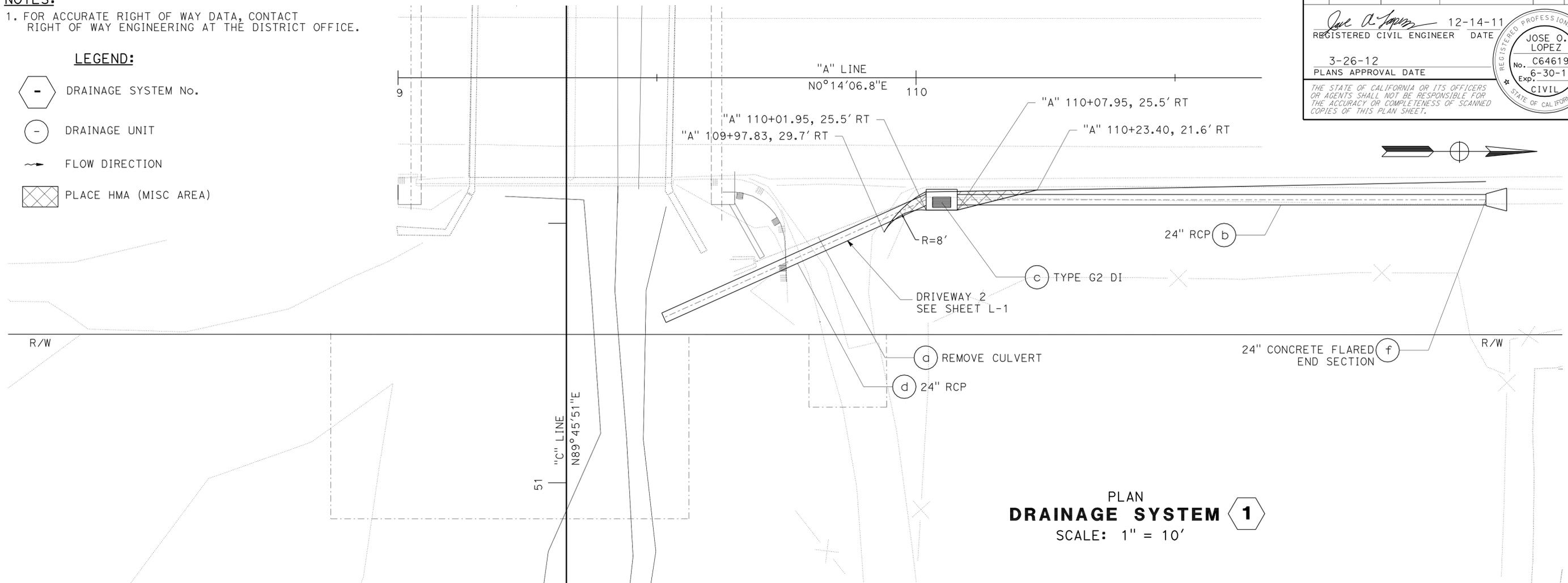
12-14-11  
 REGISTERED CIVIL ENGINEER DATE  
 3-26-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 JOSE O. LOPEZ  
 No. C64619  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA

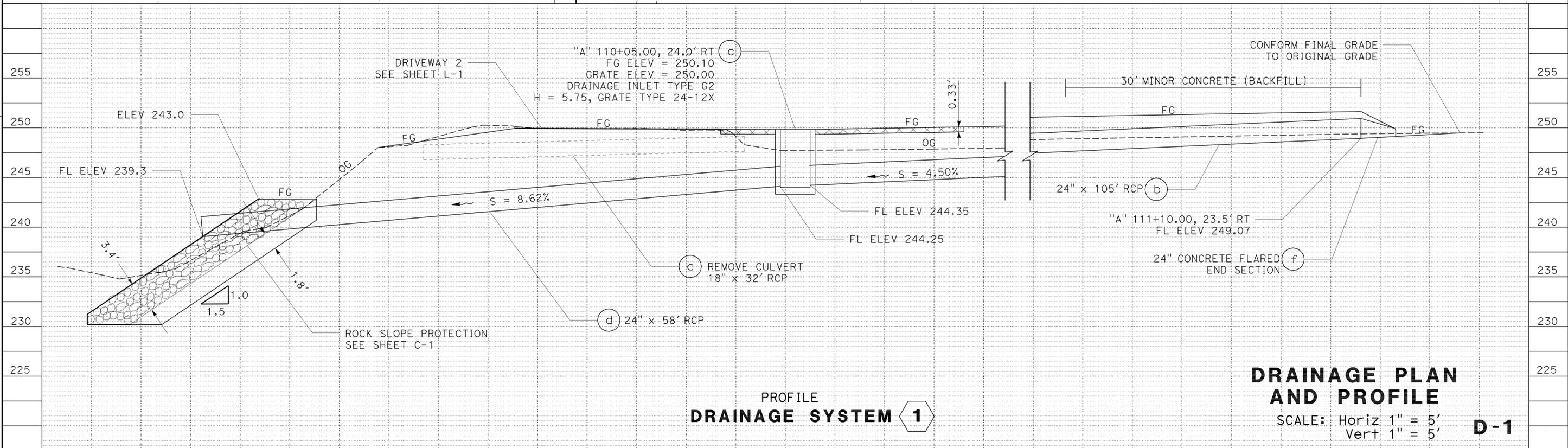
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**  
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

- LEGEND:**
- DRAINAGE SYSTEM No.
  - DRAINAGE UNIT
  - FLOW DIRECTION
  - PLACE HMA (MISC AREA)



PLAN  
**DRAINAGE SYSTEM 1**  
 SCALE: 1" = 10'



PROFILE  
**DRAINAGE SYSTEM 1**

**DRAINAGE PLAN AND PROFILE**  
 SCALE: Horiz 1" = 5'  
 Vert 1" = 5' **D-1**

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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN SOUTH  
 DESIGN BRANCH 14  
 Caltrans

LAST REVISION DATE PLOTTED => 29-MAR-2012  
 11-14-11 TIME PLOTTED => 17:58

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	12	73

<i>Jose O. Lopez</i>	12-14-11
REGISTERED CIVIL ENGINEER	DATE
3-26-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER <b>JOSE O. LOPEZ</b> No. C64619 Exp. 6-30-13 CIVIL STATE OF CALIFORNIA
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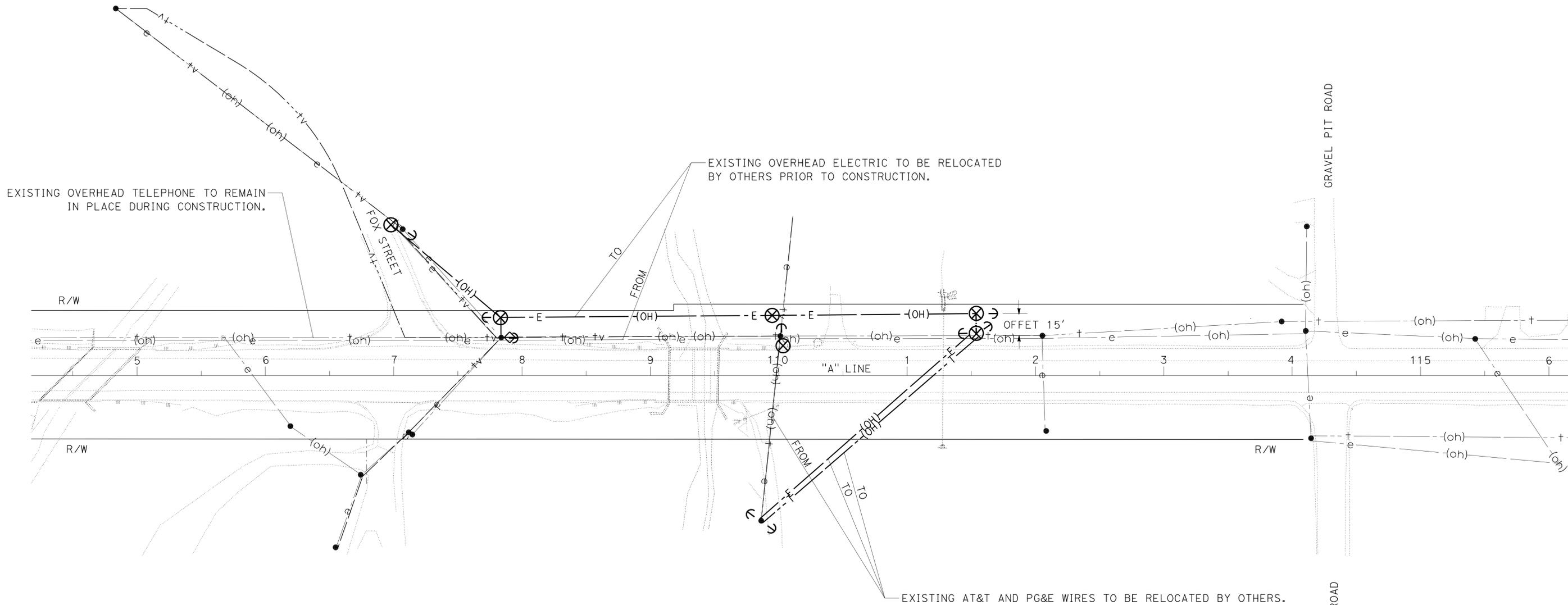
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**NOTE:**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- UTILITY WORK BY OTHERS TO BE DONE PRIOR TO CONSTRUCTION

**LEGEND:**

- EXISTING UTILITY Pole
- ⊗ NEW UTILITY POLE
- E---(OH) NEW OVERHEAD UTILITY - PG&E
- T---(OH) NEW OVERHEAD UTILITY - AT&T
- ➔ NEW GUY ANCHOR

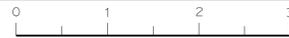


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN SOUTH  
 DESIGN BRANCH 14  
 Caltrans

APPROVED FOR UTILITY WORK ONLY

**UTILITY PLAN**  
SCALE: 1" = 40'

**U-1**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	13	73

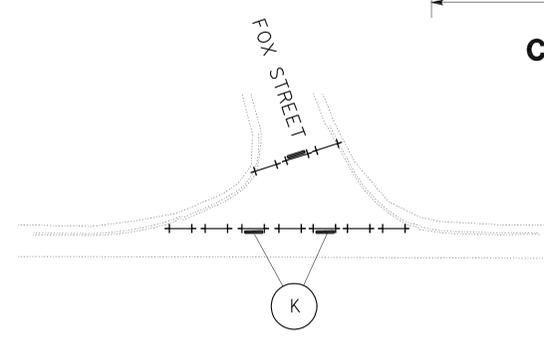
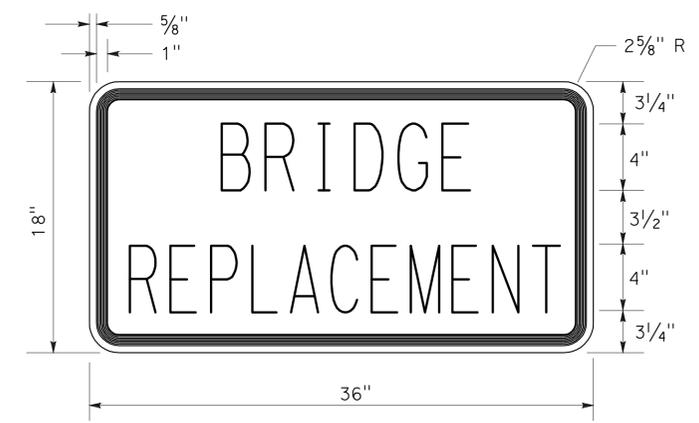
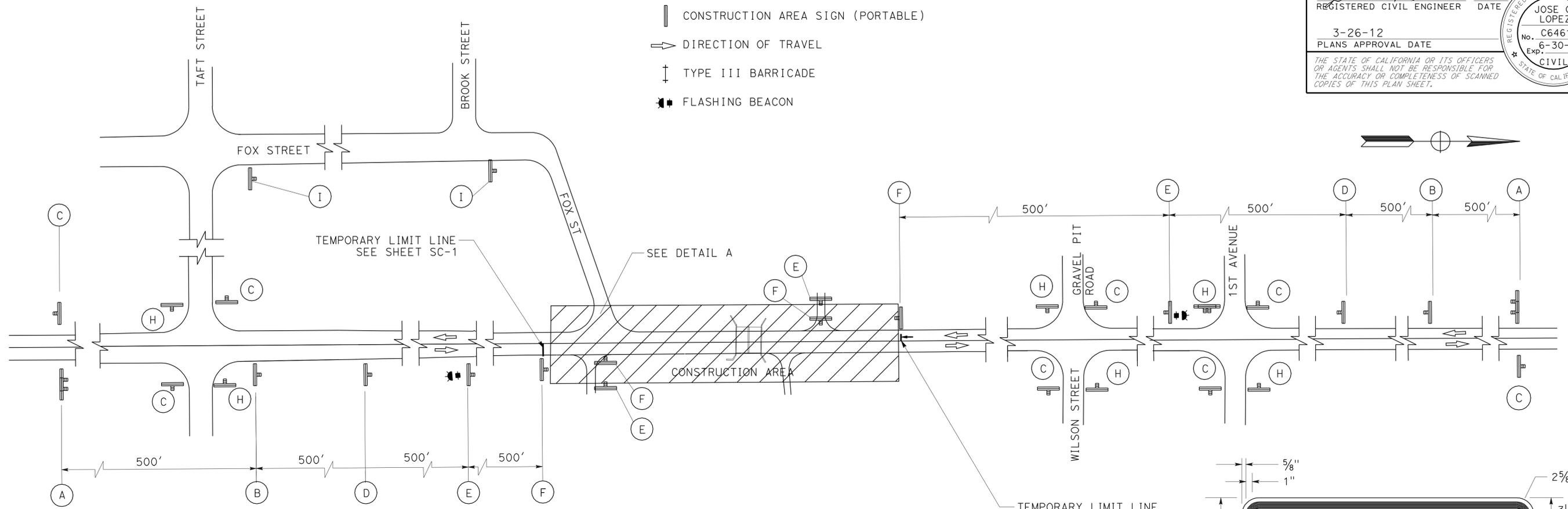
*Jose O. Lopez* 12-14-11  
 REGISTERED CIVIL ENGINEER DATE  
 3-26-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**JOSE O. LOPEZ**  
 No. C64619  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA

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**LEGEND:**

-  CONSTRUCTION AREA SIGN (STATIONARY MOUNTED)
-  CONSTRUCTION AREA SIGN (PORTABLE)
-  DIRECTION OF TRAVEL
-  TYPE III BARRICADE
-  FLASHING BEACON



**CONSTRUCTION AREA SIGNS**

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A		C40	108" x 42"	TRAFFIC FINES DOUBLED IN WORK ZONES	2 - 6" x 6"	2
B	W20-1		48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	2
		C23B	48" x 24"	BRIDGE REPLACEMENT		
C	G20-2		48" x 24"	END ROAD WORK	1 - 4" x 6"	8
D	W20-4		48" x 48"	ONE LANE ROAD AHEAD	1 - 4" x 6"	2
E	W3-3		48" x 48"	TEMPORARY TRAFFIC SIGNAL (SYMBOL)	1 - 4" x 6"	4
F	R10-6		36" x 24"	STOP HERE ON RED	1 - 4" x 6"	4
H	W20-1		48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	6
K	R11-2		36" x 24"	ROAD CLOSED		3
I	W20-3		48" x 48"	ROAD CLOSED AHEAD	1 - 4" x 6"	2

ADDITIONAL QUANTITIES SHOWN ELSEWHERE

**CONSTRUCTION AREA SIGNS**  
NO SCALE  
**CS-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN SOUTH  
 DESIGN BRANCH 14

FUNCTIONAL SUPERVISOR  
 NESAR FORMOLI

CALCULATED/DESIGNED BY  
 JOSE LOPEZ

CHECKED BY  
 NESAR FORMOLI

REVISED BY  
 DATE

**NOTES:**

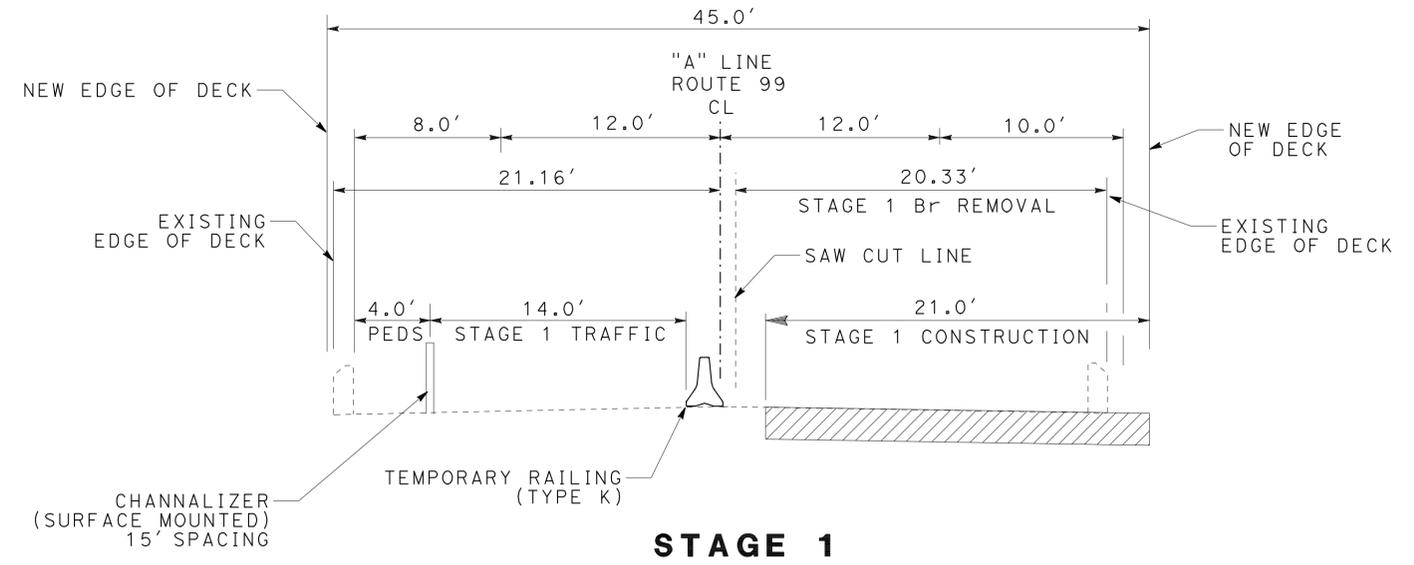
1. NUMBER OF SIGN AND PANELS REQUIRED PER STAGE CONSTRUCTION DOES NOT INCLUDE SIGNS SHOWN ON THE STANDARD PLANS.
2. EXACT SIGNS LOCATION, INCLUDING PCMS, TO BE DETERMINED BY THE ENGINEER.
3. SEE ELECTRICAL PLANS FOR TEMPORARY TRAFFIC SIGNAL LOCATIONS.

**LEGEND:**

- TRAFFIC PLASTIC DRUM
- ▩ TEMPORARY CRASH CUSHION MODULE
- ▨ TEMPORARY ALTERNATE CRASH CUSHION
- ⊕ CHANNELIZER (SURFACE MOUNTED)
- ▨ WORK AREA
- 27B TEMPORARY TRAFFIC STRIPE (PAINT) DETAIL NUMBER

**ABBREVIATIONS:**

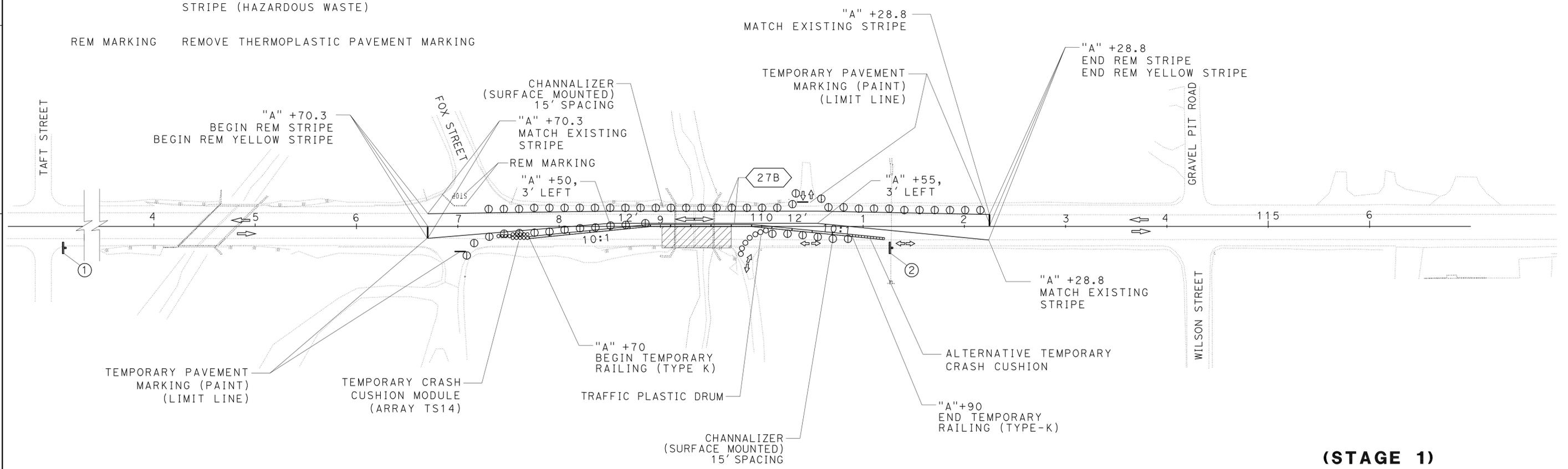
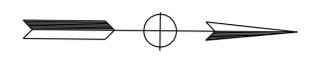
- REM STRIPE REMOVE THERMOPLASTIC TRAFFIC STRIPE
- REM YELLOW STRIPE REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)
- REM MARKING REMOVE THERMOPLASTIC PAVEMENT MARKING



**CONSTRUCTION AREA SIGNS (STATIONARY MOUNTED)**

SIGN LETTER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS
	FEDERAL				
1	R9-11A	48" x 24"	SIDEWALK CLOSED CROSS HERE	1 - 4" x 6"	1
2	R3-4	24" x 24"	NO U TURN	1 - 4" x 6"	1

ADDITIONAL QUANTITY SHOWN ELSEWHERE



**(STAGE 1)  
STAGE CONSTRUCTION AND  
TRAFFIC HANDLING PLAN  
SCALE: 1" = 50'  
SC-1**

APPROVED FOR STAGE CONSTRUCTION WORK ONLY

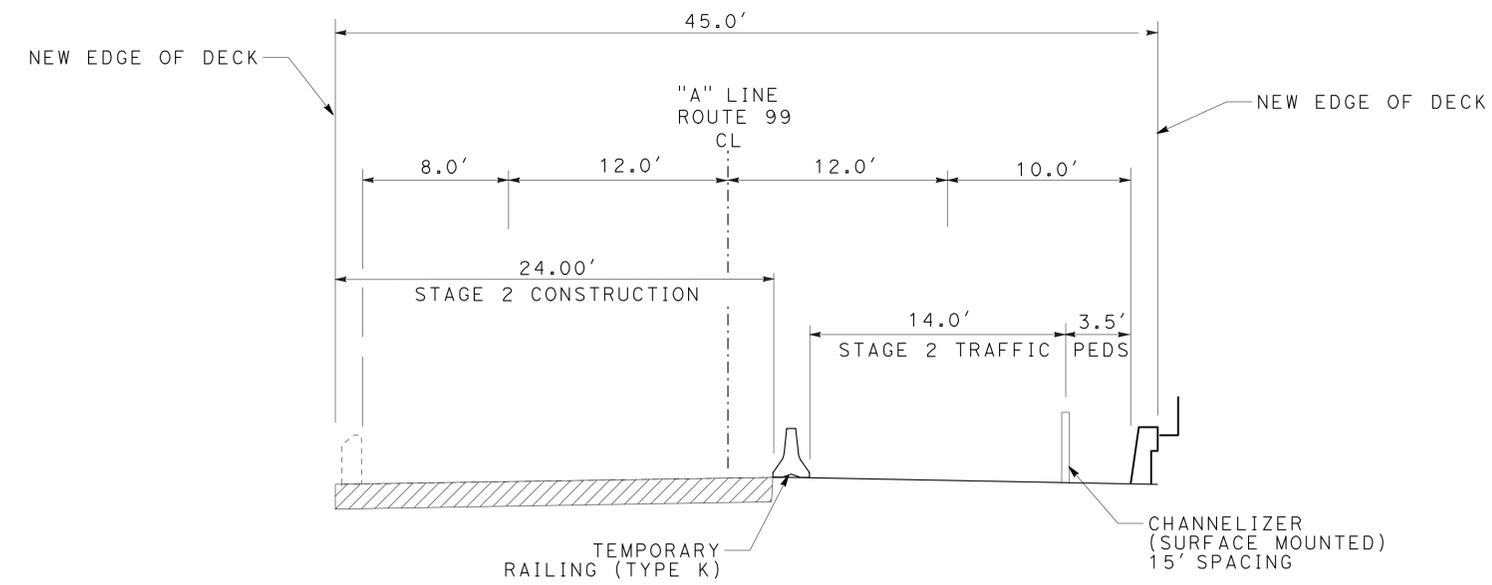
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN SOUTH  
 DESIGN BRANCH 14  
 JOSE LOPEZ  
 NESAR FORMOLI  
 REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	15	73

REGISTERED CIVIL ENGINEER DATE 12-14-11  
 JOSE O. LOPEZ  
 No. C64619  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA

3-26-12  
 PLANS APPROVAL DATE

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



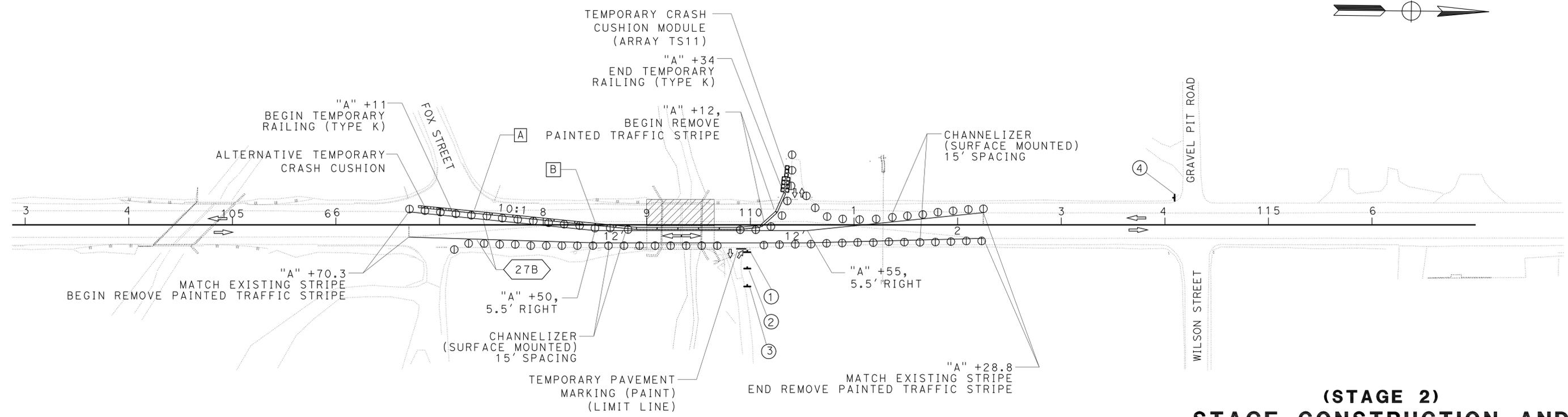
**STAGE 2**

**CONSTRUCTION AREA SIGNS (STATIONARY MOUNTED)**

SIGN LETTER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS
	FEDERAL				
1	R10-6	36" x 24"	STOP HERE ON RED	1 - 4" x 6"	1
2	W3-5	36" x 24"	RIGHT TURN ONLY	1 - 4" x 6"	1
3	W3-3	48" x 48"	TEMPORARY TRAFFIC SIGNAL (SYMBOL)	1 - 4" x 6"	1
4	R9-11A	48" x 24"	SIDEWALK CLOSED CROSS HERE	1 - 4" x 6"	1

- A "A" +30, END REM PAINTED TRAFFIC STRIPE
- B "A" +50, END REM PAINTED TRAFFIC STRIPE

ADDITIONAL QUANTITY SHOWN ELSEWHERE



**(STAGE 2)  
STAGE CONSTRUCTION AND  
TRAFFIC HANDLING PLAN  
SC-2**

SCALE: 1" = 50'

APPROVED FOR STAGE CONSTRUCTION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION OFFICE OF DESIGN SOUTH DESIGN BRANCH 14  
 Jose Lopez  
 Nesar Formoli  
 Functional Supervisor  
 Calculated/Designed By  
 Checked By  
 Revised By  
 Date Revised  
 USERNAME => s123631  
 DGN FILE => 22c112ma002.dgn  
 BORDER LAST REVISED 7/2/2010  
 UNIT 0334  
 PROJECT NUMBER & PHASE 02000001631  
 EA: 02-2C1121

DATE PLOTTED => 29-MAR-2012  
 TIME PLOTTED => 17:58

P:\proj\102\2c112\plans\pse\22c112mc001.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** NORTH REGION  
 OFFICE OF DESIGN SOUTH  
 DESIGN BRANCH 14  
 FUNCTIONAL SUPERVISOR  
 NESAR FORMOLI  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 JOSE LOPEZ  
 NESAR FORMOLI  
 REVISED BY  
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	16	73

*Jose O. Lopez* 12-14-11  
 REGISTERED CIVIL ENGINEER DATE  
 3-26-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 JOSE O. LOPEZ  
 No. C64619  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA

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

### STAGE CONSTRUCTION AND TRAFFIC HANDLING

SHEET	STATION "A" LINE		EA	SQFT	LF	EA	EA	LF	EA	EA	LF	LF	LF	SQFT
	FROM	TO												
CS-1	106+70.3	107+50	10											
SC-1	106+70.3	112+28.8		48	1117	53	10	320	14	1	559	1117		28
SC-2	106+70.3	112+28.8		12	1117	69		340	11	1		1117	657	
	TOTAL		10	60	2234	122	10	660	25	2	559	2234	657	28

## STAGE CONSTRUCTION QUANTITIES

### SCQ-1

LAST REVISION DATE PLOTTED => 29-MAR-2012  
 11-14-11 TIME PLOTTED => 17:58

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	17	73

*Jose O. Lopez* 12-14-11  
 REGISTERED CIVIL ENGINEER DATE  
 3-26-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**JOSE O. LOPEZ**  
 No. C64619  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA

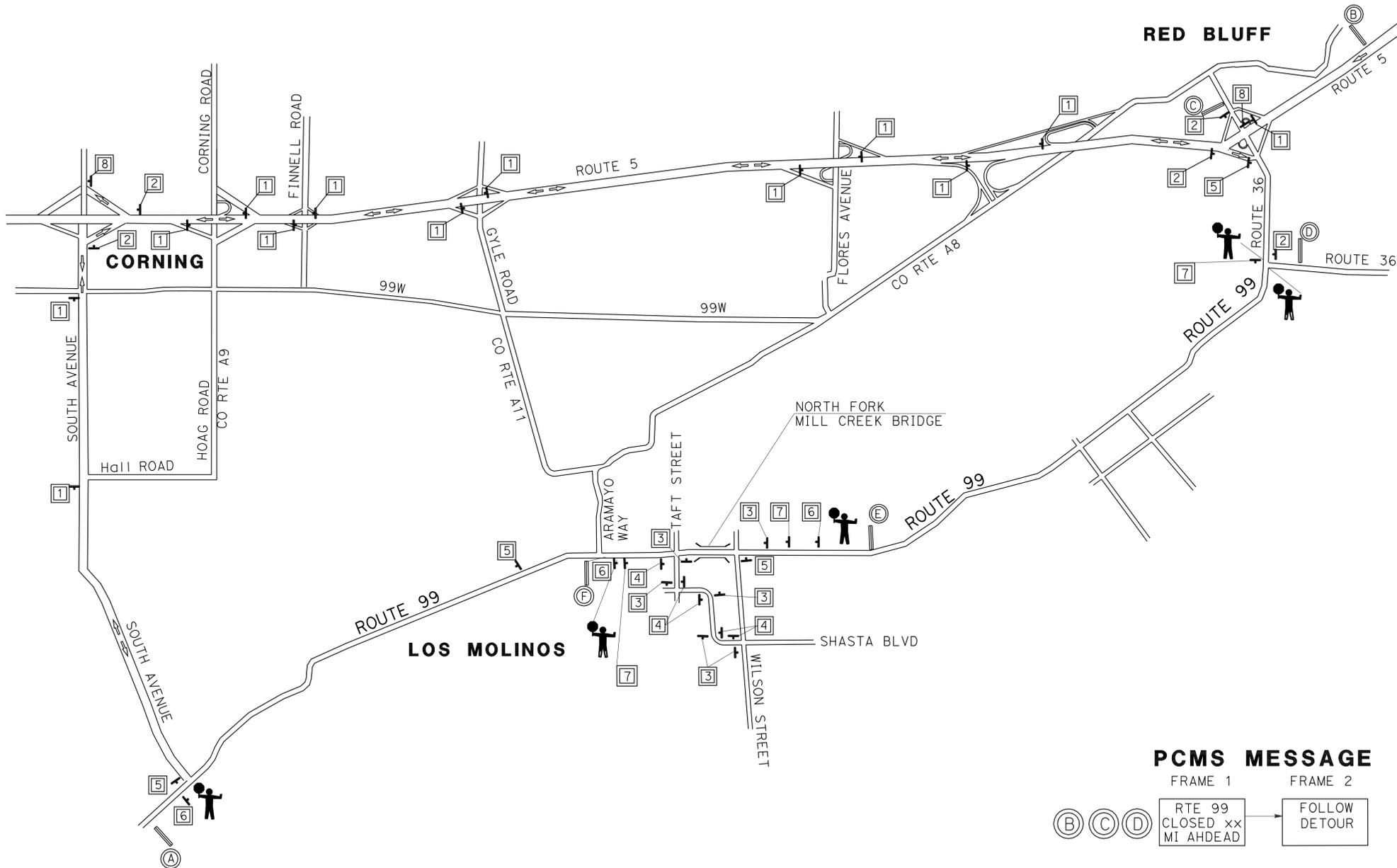
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

1. EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.
2. BLACK LETTERING ON ORANGE BACKGROUND.
3. CALIFORNIA CODES ARE DESIGNATED BY (CA). OTHERWISE FEDERAL CODES ARE SHOWN.

**LEGEND**

- PORTABLE SIGN
- DIRECTION OF TRAVEL
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- FLAGGER

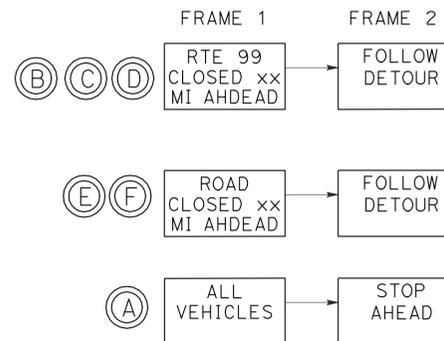


**CONSTRUCTION AREA SIGNS (PORTABLE)**

SIGN LETTER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF SIGNS
1	SC3 (CA)	48" x 18"	DETOUR (ARROW) ↑	13
	G28-2 (CA)	24" x 25"	99	13
2	M4-10 R	48" x 18"	DETOUR (RIGHT ARROW)	5
	G28-2 (CA)	24" x 25"	99	5
3	M4-10 L	48" x 18"	DETOUR (LEFT ARROW)	6
4	M4-10 R	48" x 18"	DETOUR (RIGHT ARROW)	5
5	M4-8a	24" x 18"	END DETOUR	4
6	W20-3	48" x 48"	ROAD CLOSED AHEAD	3
	W20-2	48" x 48"	DETOUR AHEAD	3
	C9A (CA)	48" x 48"	(FLAGGER SYMBOL)	3
	W3-4	48" x 48"	BE PREPARED TO STOP	3
7	R11-3B	60" x 30"	BRIDGE CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	3
8	M4-10 L	48" x 18"	DETOUR (LEFT ARROW)	2
	G28-2 (CA)	24" x 25"	99	2

ADDITIONAL QUANTITIES SHOWN ELSEWHERE

**PCMS MESSAGE**



**DETOUR FOR COMPLETE HIGHWAY CLOSURE**

**DETOUR PLAN**

NO SCALE

**DE-1**

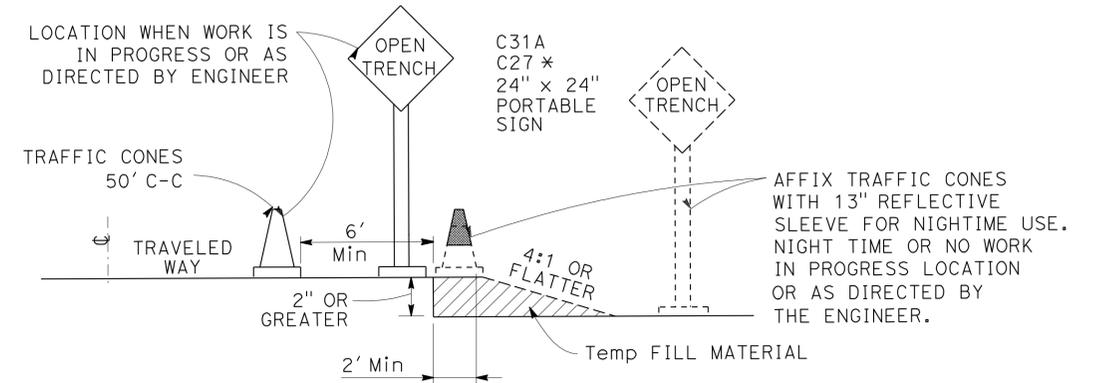
APPROVED FOR DETOUR CONSTRUCTION WORK ONLY

NOTES:  
 1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.  
 2. SEE DETAIL SHEET C-4 FOR RESET MAILBOX DETAILS

- LEGEND**
- ┃ SINGLE STRIPE MARKER
  - ┃┃ STRIPE CHANGE
  - ⬡ TRAFFIC STRIPE DETAIL No.
  - \* RESET ROADSIDE SIGN
  - # RESET MAILBOX
  - EXISTING MAILBOX
  - ┃ EXISTING ROADSIDE SIGN 1-POST
  - ┃ EXISTING ROADSIDE SIGN 2-POST
  - LL LIMIT LINE
  - P → OBJECT MARKER (TYPE P)

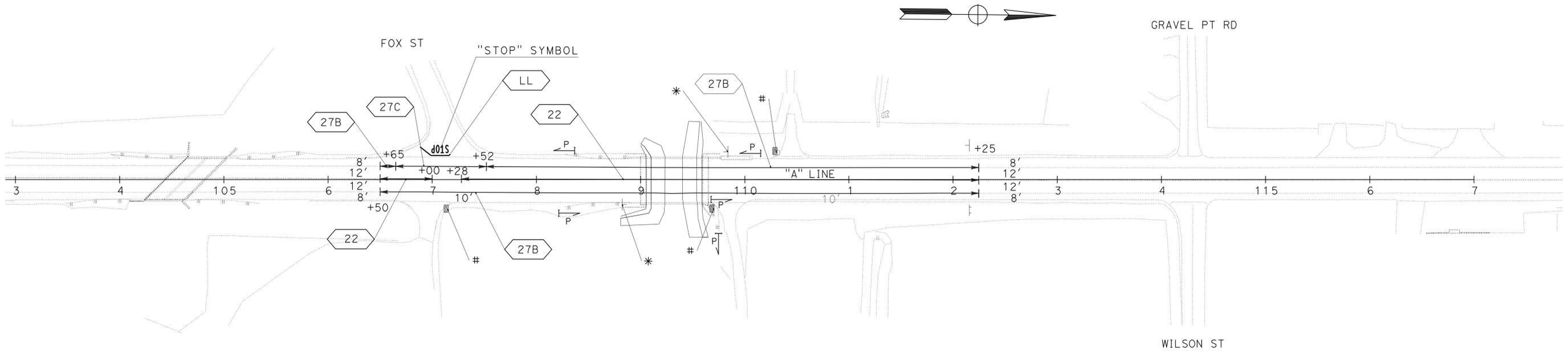
**TRAFFIC STRIPE PAVEMENT MARKINGS AND MARKERS**

LOCATION	THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)			PAVEMENT MARKER (RETROREFLECTIVE)	THERMOPLASTIC PAVEMENT MARKING	OBJECT MARKER (TYPE P)	RESET MAILBOX	RESET ROADSIDE SIGN
	YELLOW	WHITE						
	2-4"	4"	4"					
	DETAIL	DETAIL	DETAIL					
	22	27B	27C	TYPE D				
	LF	LF	LF	EA	SQFT	EA	EA	EA
"A" 106+50 TO "A" 112+25	1094	1063	17	48	43	5	3	2
TOTAL	2174			48	43	5	3	2



**OPEN TRENCH SIGNING AND MARKING**  
NO SCALE

\* PLACE AT 250' INTERVALS THROUGH THE OPEN TRENCH AREA, ALTERNATE C27 (OPEN TRENCH) AND C31A (NO SHOULDER) SIGNS



**PAVEMENT DELINEATION AND SIGN PLAN**

SCALE: 1" = 50'

PD-1

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	19	73

<i>Jose O. Lopez</i>	12-14-11
REGISTERED CIVIL ENGINEER	DATE
3-26-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER <b>JOSE O. LOPEZ</b> No. C64619 Exp. 6-30-13 CIVIL STATE OF CALIFORNIA	
--	--

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

**NOTE:**

1. (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

**ROCK SLOPE PROTECTION**

STATION LOCATION	FROM		TO		ROCK SLOPE PROTECTION (1/2 TON, METHOD A)	ROCK SLOPE PROTECTION (No. 1, METHOD B)	ROCK SLOPE PROTECTION FABRIC (CLASS 8)
	CY	CY	SQYD				
"C" LINE	51+22.43	52+42.79	527	279	662		
TOTAL			527	279	662		

**HOT MIX ASPHALT DIKE**

STATION "A" LINE	REMOVE ASPHALT CONCRETE DIKE	HOT MIX ASPHALT (TYPE A)	PLACE HOT MIX ASPHALT DIKE (TYPE A)	PLACE HOT MIX ASPHALT DIKE (TYPE D)
	LF	TON	LF	LF
106+40.00 TO 107+97.00 LT	155	4.6	155	
109+92.00 TO 110+10.00 RT	120	3.5		120
TOTAL	275	8.1	155	120

\* ADDITIONAL QUANTITIES SHOWN ELSEWHERE, SEE THIS SHEET FOR TOTAL QUANTITIES

**METAL BEAM GUARD RAILING**

STATION "A" LINE	REMOVE MBGR	SINGLE THRIE BEAM BARRIER (WOOD POST)	END ANCHOR ASSEMBLY (TYPE SFT)	TRANSITION RAILING (TYPE WB)	ALTERNATIVE FLARED TERMINAL SYSTEM	ALTERNATIVE CRASH CUSHION	END CAP (TYPE TA)	END CAP (TYPE TC)
	LF	LF	EA	EA	EA	EA	EA	EA
108+42.42 TO 110+22.92 LT	130		1	1	1			
108+42.42 TO 110+22.92 RT	106	25	1	1	1		1	1
TOTAL	236	25	1	2	2	1	1	1

**ROADWAY QUANTITY SUMMARY**

STATION LOCATION	HOT MIX ASPHALT (TYPE A)		COLD PLANE ASPHALT CONCRETE PAVEMENT		ROADWAY EXCAVATION	SHOULDER BACKING	TACK COAT	CHANNEL EXCAVATION	SUBGRADE ENHANCEMENT GEOTEXTILE CLASS B2	CLASS 2 AGGREGATE BASE (CY)	PLACE HMA (Misc AREA)
	FROM	TO	TON	SQYD	CY	TON	TON	CY	SQYD	CY	SQYD
"A" LINE	106+50.00	109+00.00	220	1031		12	0.50				
	109+65.00	112+24.67	208	1031		40	0.47				
	107+16.29	109+00.00	119		135				325	135	
	109+65.00	112+24.67	61.6		27				185	69	4.4
	DRIVEWAY 1		29		8	3	0.1		123	58	
DRIVEWAY 2		15		4	2	0.1		63	30		
DRIVEWAY 3		15		5	2	0.1		61	29		
"C" LINE	51+45	52+10						945			
FROM DIKE QUANTITES			8.1								
TOTAL			676	2062	179	59	1	945	757	321	4.4

**TEMPORARY EROSION CONTROL**

TEMPORARY FIBER ROLL	TEMPORARY COVER	TEMPORARY CONSTRUCTION ENTRANCE	TEMPORARY SOIL BINDER
LF	SQYD	EA	SQYD
1000	780	4	14,600

**DRAINAGE QUANTITIES**

DRAINAGE SYSTEM No.	UNIT DESCRIPTION	REMOVE CULVERT (LF)	MINOR CONCRETE (MINOR STRUCTURE)	MINOR CONCRETE (BACKFILL)	24" RCP (CLASS II, RUBBER GASKET JOINT)	24" CONCRETE FLARED END SECTION	MISCELLANEOUS IRON AND STEEL
		LF	CY	CY	LF	EA	LB
1	ⓐ REMOVE 18" RCP	32					
	ⓑ 24" RCP, MINOR CONCRETE (BACKFILL)			4.8	105		
	ⓒ TYPE G2 DI, GRATE TYPE 24-12X		2.0				239
	ⓓ 24" RCP				58		
	ⓔ 24" CONCRETE FLARED END SECTION					1	
TOTAL		32	2.0	4.8	163	1	239

**SUMMARY OF QUANTITIES**

Q-1

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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION OFFICE OF DESIGN SOUTH DESIGN BRANCH 14  
 Jose Lopez  
 NEAR FORMOLI  
 FUNCTIONAL SUPERVISOR  
 NEAR FORMOLI  
 CALCULATED BY  
 CHECKED BY  
 JOSE LOPEZ  
 NEAR FORMOLI  
 REVISED BY  
 DATE REVISED  
 x x x



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	21	73

ART	12-14-11
REGISTERED ELECTRICAL ENGINEER	DATE
3-26-12	
PLANS APPROVAL DATE	

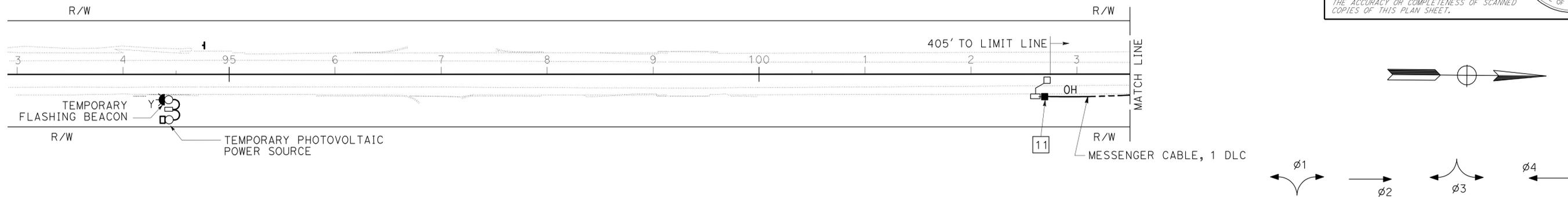
  

REGISTERED PROFESSIONAL ENGINEER	A.P. ROBLES
No.	E15293
Exp.	3-31-13
ELECTRICAL	

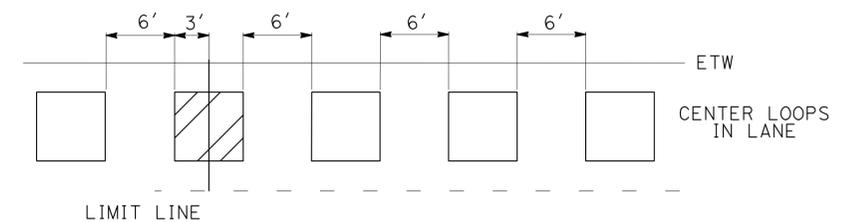
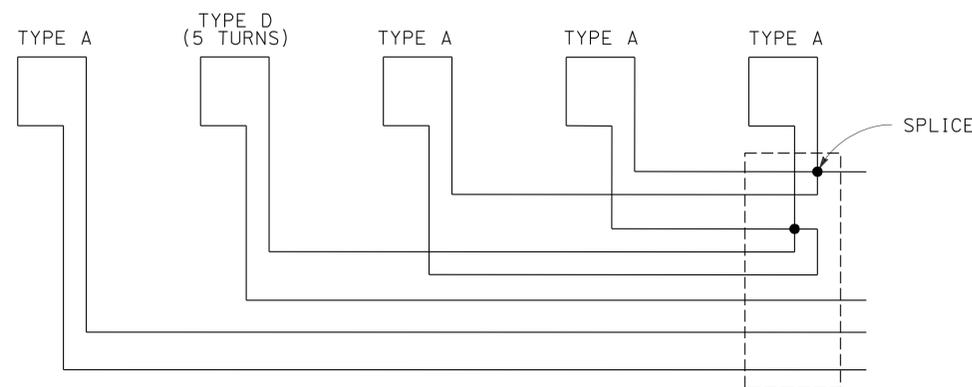
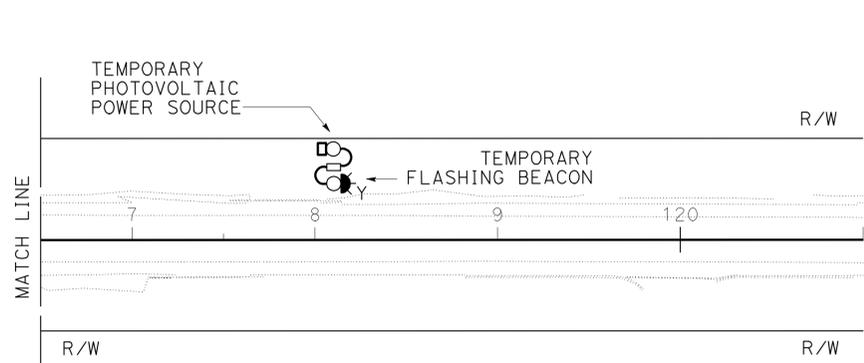
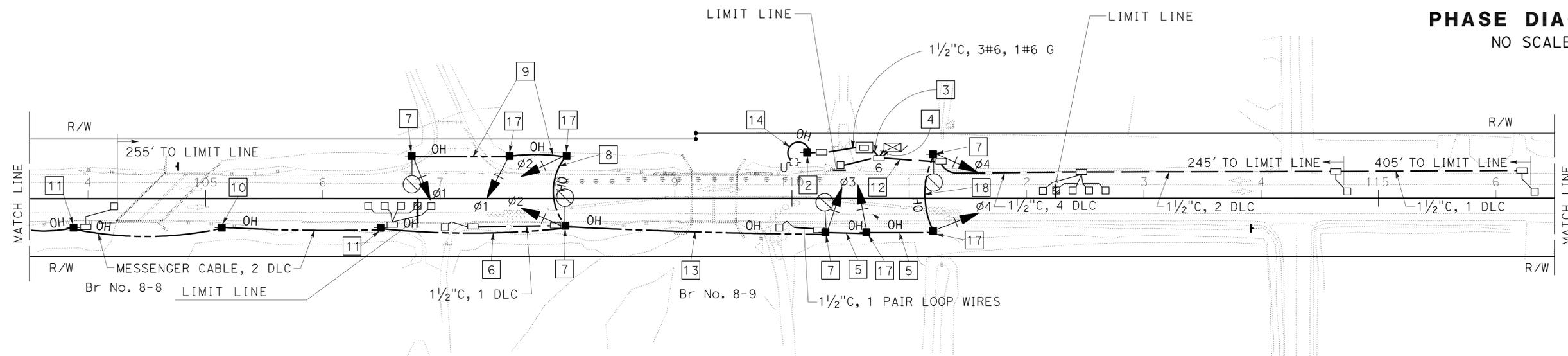
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**NOTES:**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS, SEE SHEET E-1.



**PHASE DIAGRAM**  
NO SCALE



**TYPE D/TYPE A LOOP ARRAY**  
NO SCALE

**TEMPORARY SIGNAL SYSTEM**  
(STAGE 1)

SCALE: 1" = 50'

**E-2**

APPROVED FOR ELECTRICAL WORK ONLY

P:\proj\1102\2c112\plans\pse\22c112\ud002.dgn

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	22	73

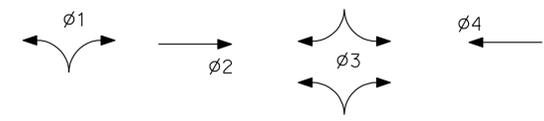
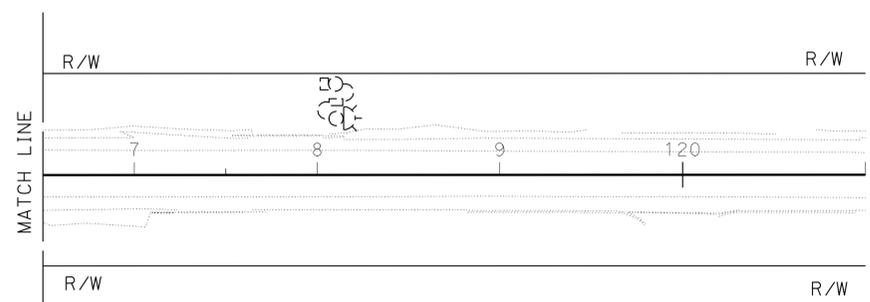
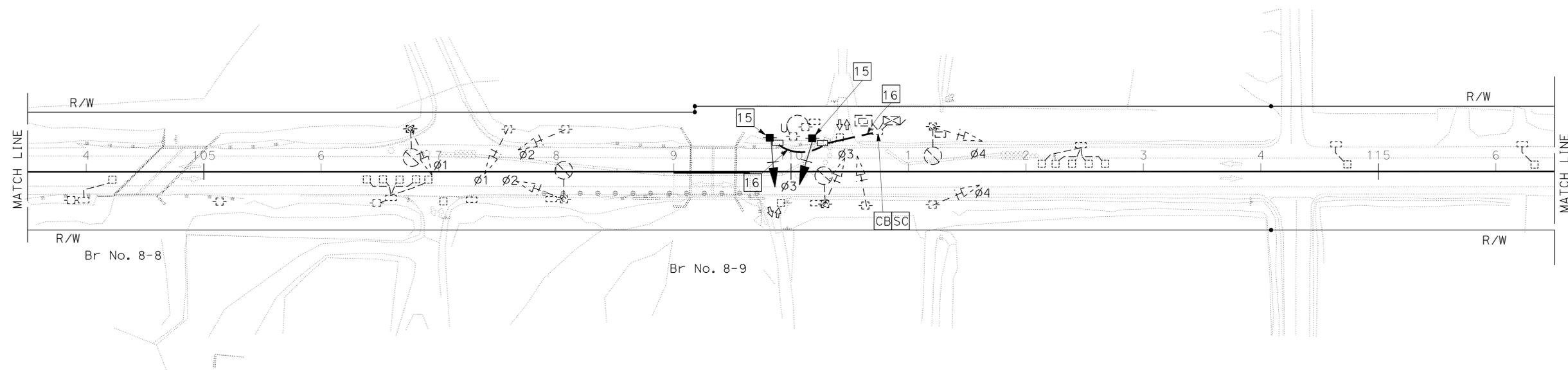
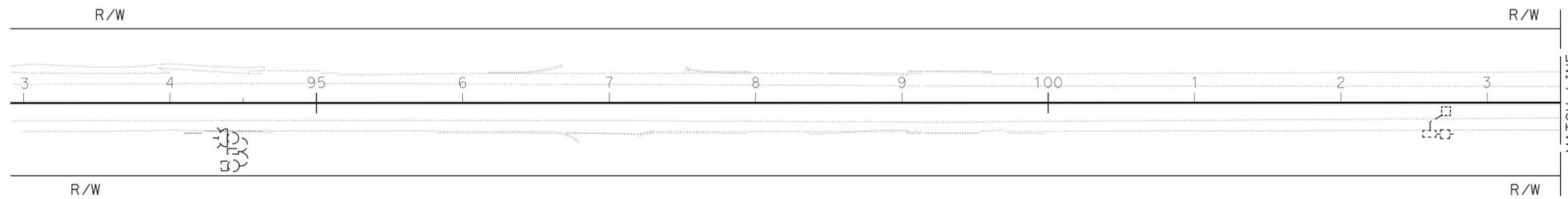
**ART** 12-14-11  
 REGISTERED ELECTRICAL ENGINEER DATE  
 3-26-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**A.P. ROBLES**  
 No. E15293  
 Exp. 3-31-13  
 ELECTRICAL  
 STATE OF CALIFORNIA

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

**NOTES:**

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR PROJECT NOTES, LEGEND, AND ABBREVIATIONS, SEE SHEET E-1.



**PHASE DIAGRAM**  
NO SCALE

**TEMPORARY SIGNAL SYSTEM**  
**(STAGE 2)**  
SCALE: 1" = 20'

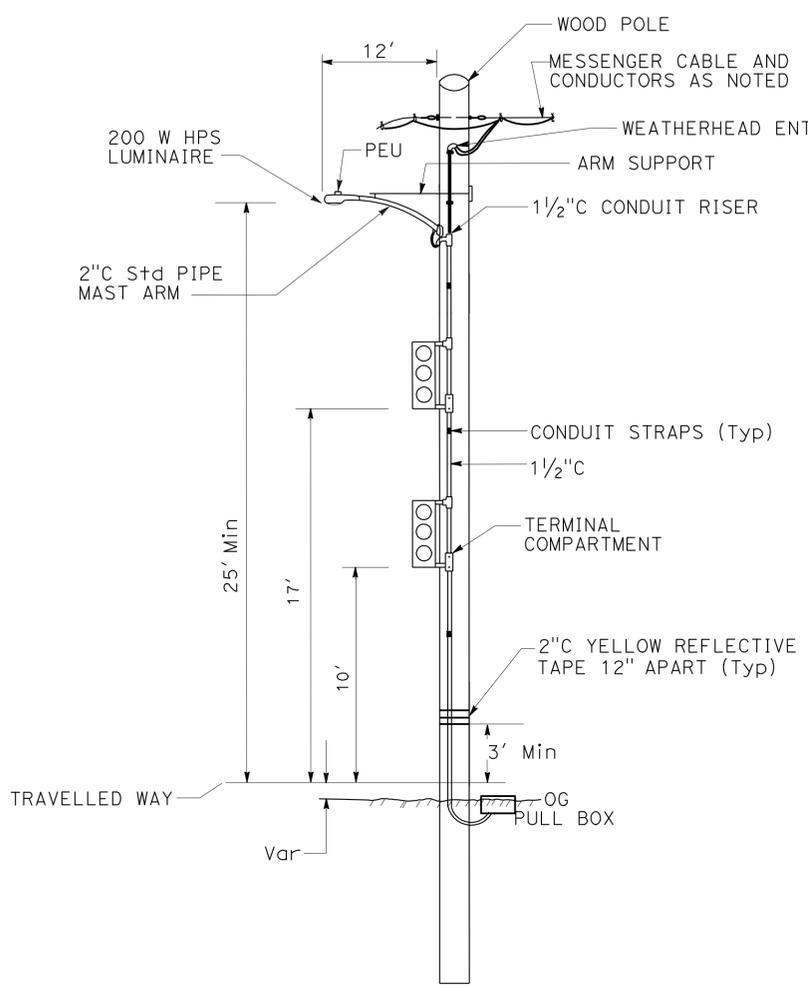
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APPROVED FOR ELECTRICAL WORK ONLY

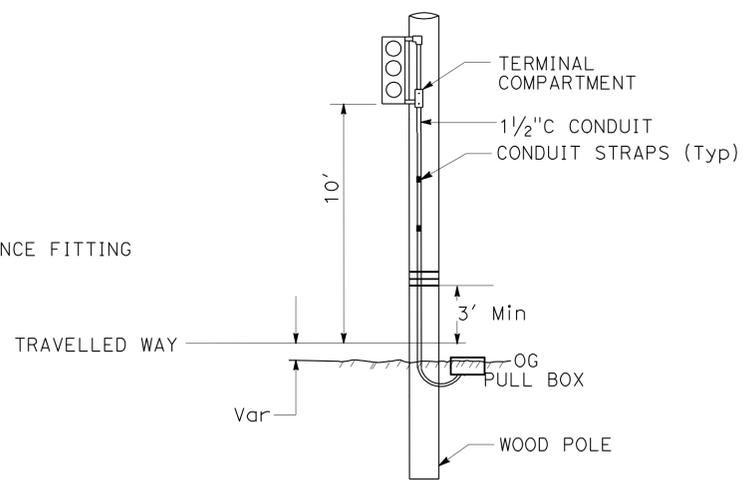
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**Caltrans** ELECTRICAL DESIGN  
 FUNCTIONAL SUPERVISOR: ROB STINGER  
 CALCULATED/DESIGNED BY: [blank]  
 CHECKED BY: [blank]  
 ARTURO ROBLES  
 ROB STINGER  
 REVISED BY: [blank]  
 DATE REVISED: [blank]

LAST REVISION    DATE PLOTTED => 29-MAR-2012    TIME PLOTTED => 17:59

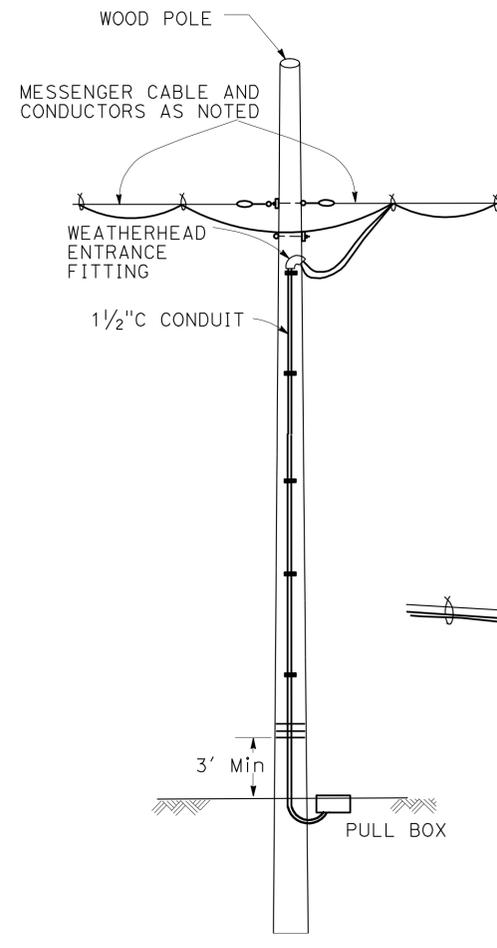
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	23	73
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THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
REGISTERED PROFESSIONAL ENGINEER A.P. ROBLES No. E15293 Exp. 3-31-13 ELECTRICAL STATE OF CALIFORNIA					



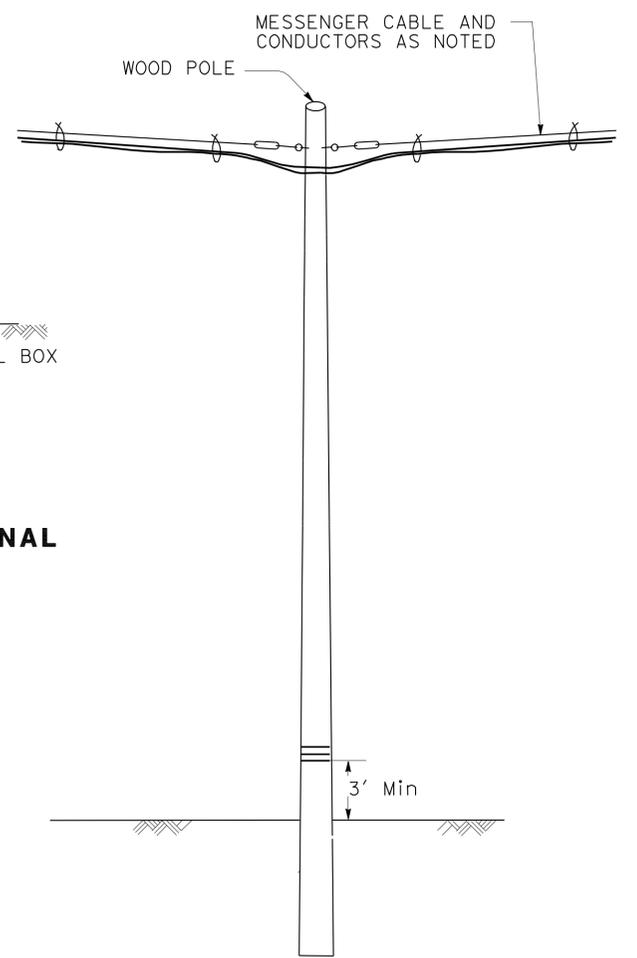
**TEMPORARY SIGNAL AND LIGHTING INSTALLATION**  
DETAIL A



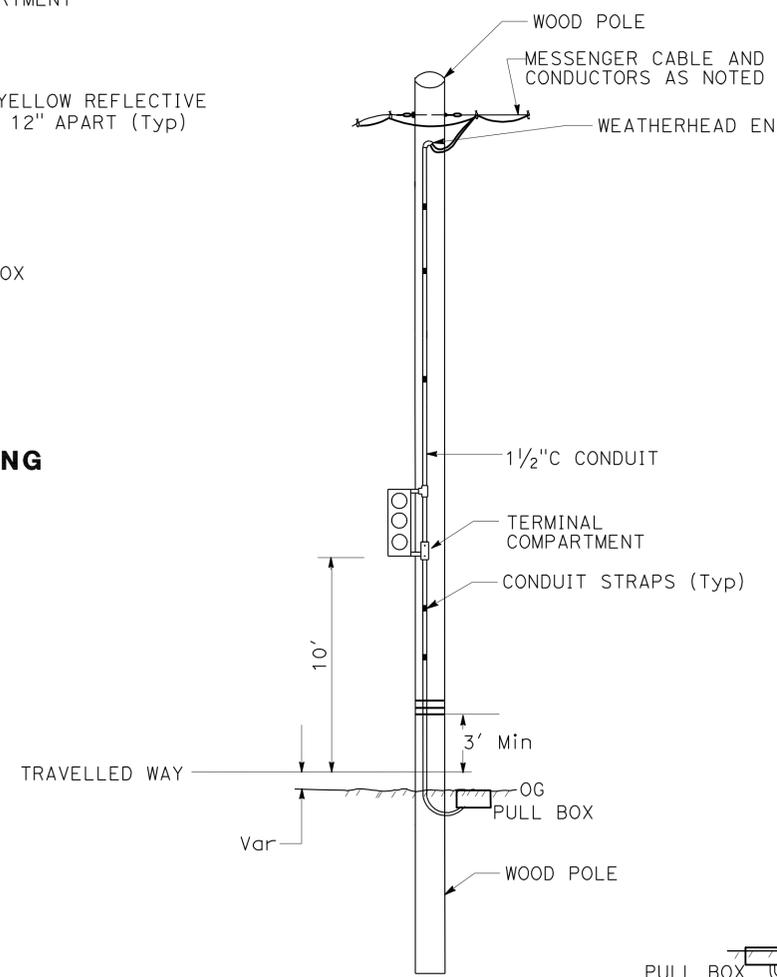
**TEMPORARY SIGNAL INSTALLATION**  
DETAIL E



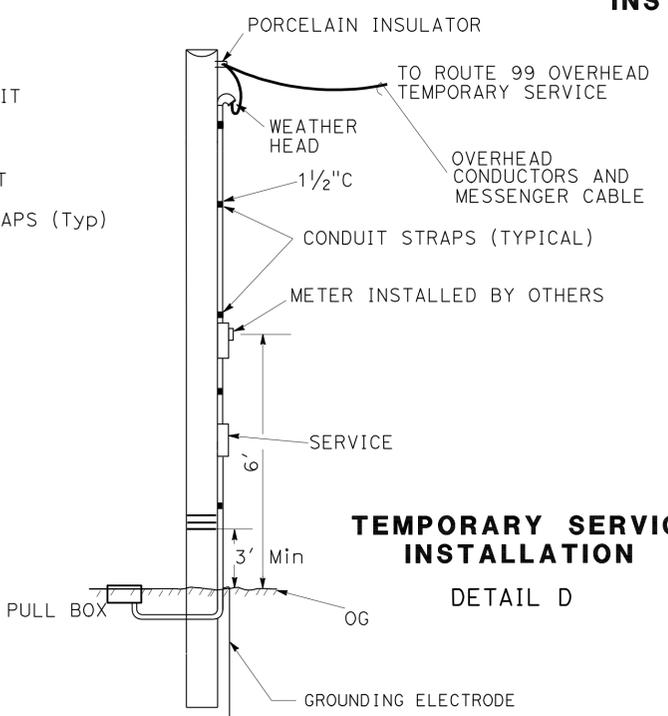
**TEMPORARY SIGNAL INSTALLATION**  
DETAIL B



**TEMPORARY WOOD POLE INSTALLATION**  
DETAIL C



**TEMPORARY SIGNAL INSTALLATION**  
DETAIL F



**TEMPORARY SERVICE INSTALLATION**  
DETAIL D

**TEMPORARY SIGNAL SYSTEM (DETAILS)**

NO SCALE

**E-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 ELECTRICAL DESIGN  
 ARTURO ROBLES  
 ROB STINGER  
 ROB STINGER  
 REVISIONS: (None listed)  
 REVISIONS: (None listed)  
 REVISIONS: (None listed)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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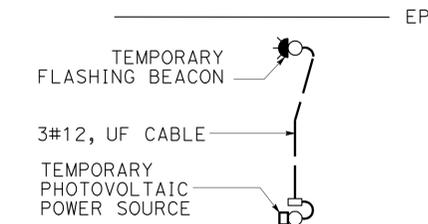
  

ART		12-14-11
REGISTERED ELECTRICAL ENGINEER	DATE	
3-26-12		
PLANS APPROVAL DATE		

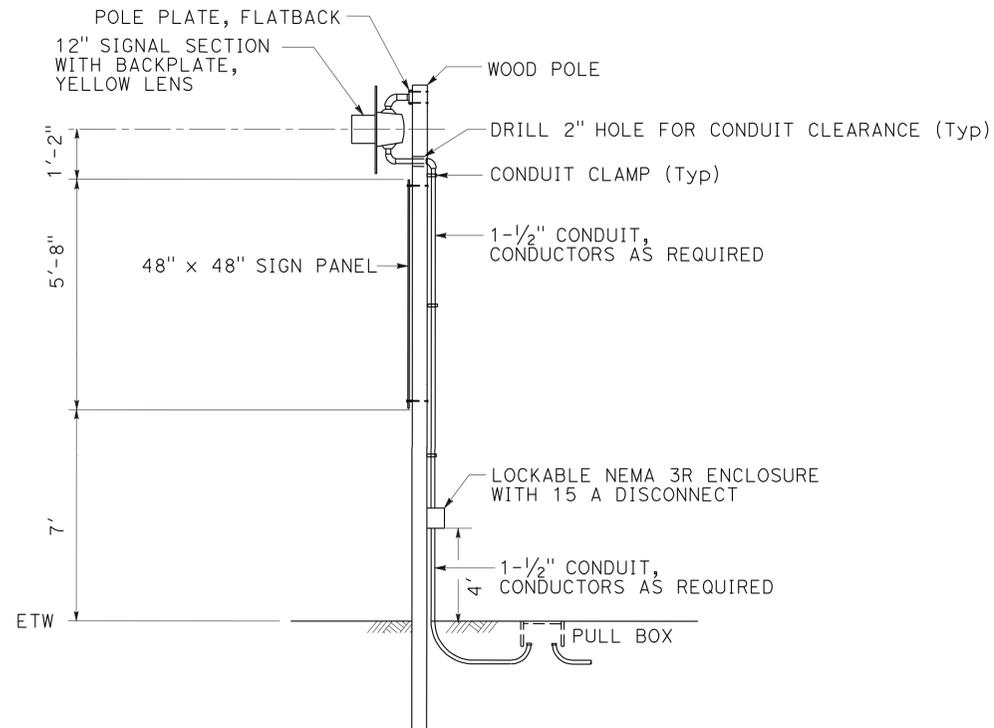
  

REGISTERED PROFESSIONAL ENGINEER	
A.P. ROBLES	
No. E15293	
Exp. 3-31-13	
ELECTRICAL	
STATE OF CALIFORNIA	

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

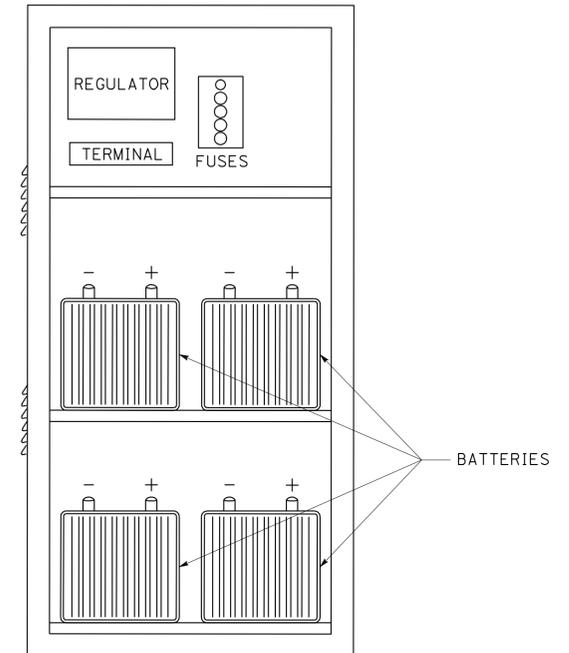


**TYPICAL SOLAR INSTALLATION**

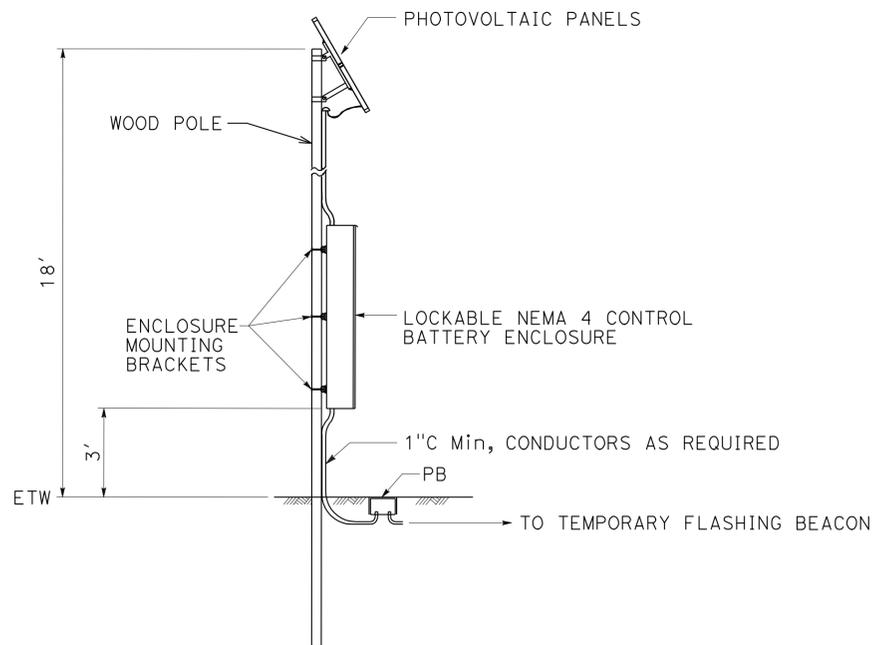


**TEMPORARY FLASHING BEACON**

NOTE: PROVIDE ATTENUATION.



**NEMA 4 BATTERY AND CONTROL ENCLOSURE**



**TEMPORARY PHOTOVOLTAIC POWER SOURCE**

NOTE: POLE SHALL BE LOCATED 15' FROM ETW OR PROVIDE ATTENUATION.

**TEMPORARY SIGNAL SYSTEM (DETAILS)**

NO SCALE

E-5

APPROVED FOR ELECTRICAL WORK ONLY

P:\proj\1\02\2c112\plans\pse\22c112\005.dgn

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Electrical DESIGN**

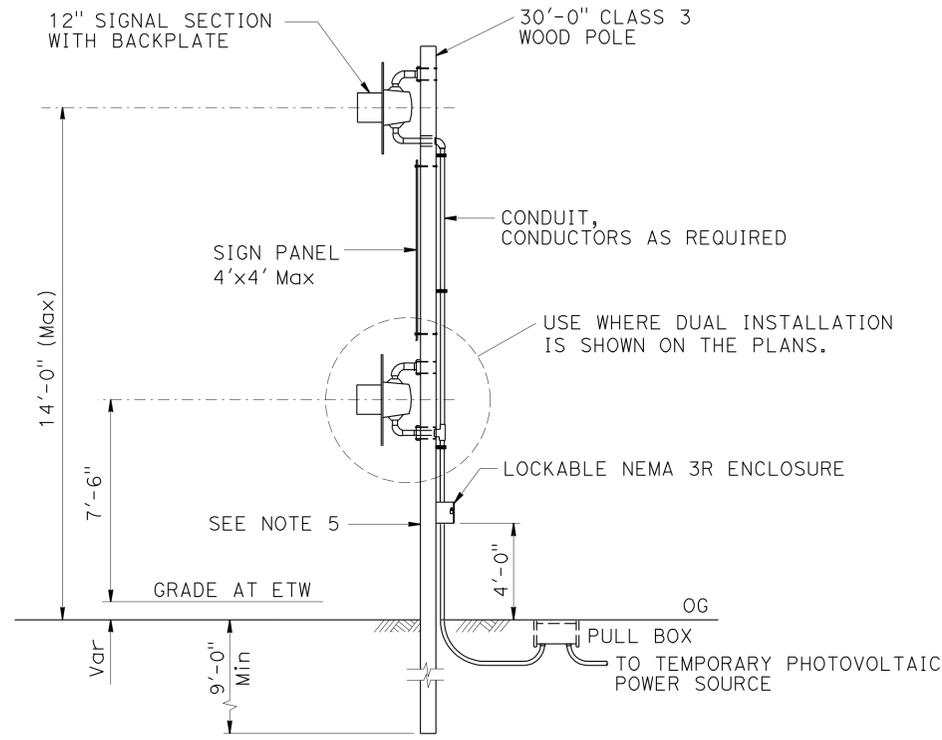
FUNCTIONAL SUPERVISOR  
 ROB STINGER

CALCULATED, DESIGNED BY  
 CHECKED BY

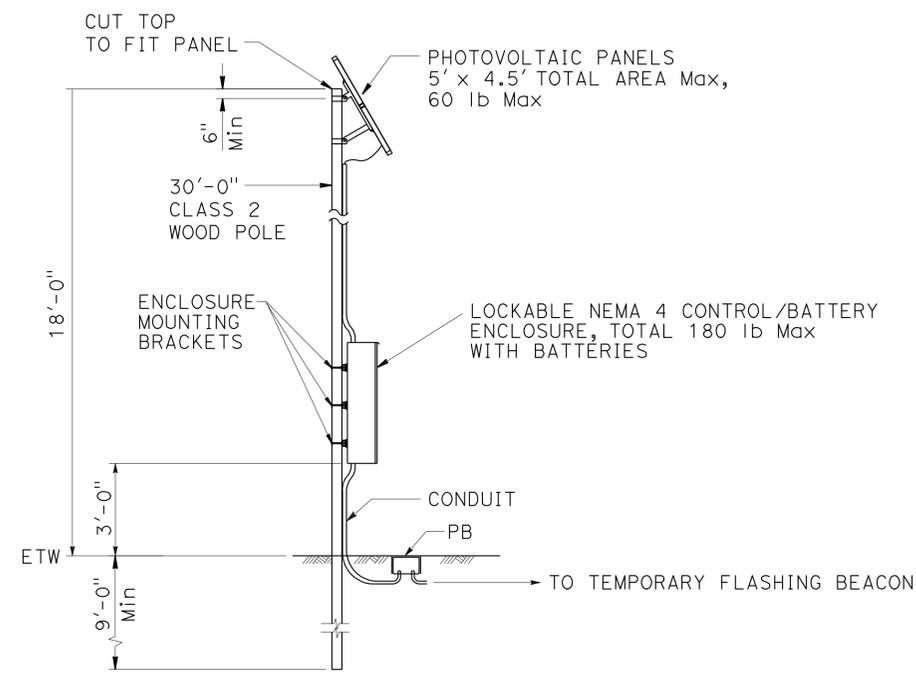
ARTURO ROBLES  
 ROB STINGER

REVISED BY  
 DATE REVISED

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	14.1	25	73
			12/13/11	REGISTERED CIVIL ENGINEER DATE	
			3-26-12	PLANS APPROVAL DATE	
					
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**TEMPORARY FLASHING BEACON INSTALLATION**



**TEMPORARY PHOTOVOLTAIC POWER SOURCE**  
POLE SHALL BE LOCATED 20' FROM ETW OR SEE NOTE 5

**GENERAL NOTES:**

**SPECIFICATIONS**

Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2001.

**LOADING**

Wind Loadings: 85 MPH

**UNIT STRESSES**

Timber Poles: Tapered treated round pole ASTM D2899 Standard  
 F<sub>b</sub> = 1850  
 F<sub>v</sub> = 110 psi  
 E = 1500 x 10<sup>3</sup> psi

**TREATMENT**

To conform with Section 86 Standard Specifications

**SPECIFICATIONS**

Caltrans Standard Specifications May 2006  
 ANSI 0.5 Wood Poles

**NOTES:**

- All attachments shall be mounted with stainless steel straps or other manufacturers methods without drilling holes in pole, except as shown. Drilling through pole will require the Engineer's approval.
- Foundation design is based on AASHTO 2001 article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30° and unit weight of soil used is 120 lb/ft<sup>3</sup>. The Contractor to verify actual soil condition.
- If pole is located on a steep slope add 2 feet extra for embedment. The steep slope limits are: from 1V:4H to 1H:2V.
- For details not shown, see "2006 STANDARD PLANS" and "2006 REVISED STANDARD PLANS".
- Wood poles shall be shielded from traffic by means according to California Department of Transportation Highway Design Manual Requirements. See Roadway Plans.

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

BRANCH CHIEF **JAMES SAGAR**

DESIGN	BY T MARCHENKO	CHECKED J MAGANA
DETAILS	BY H NGUYEN	CHECKED B NAGID
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 DESIGN AND TECHNICAL SERVICES  
 SPECIAL DESIGNS BRANCH

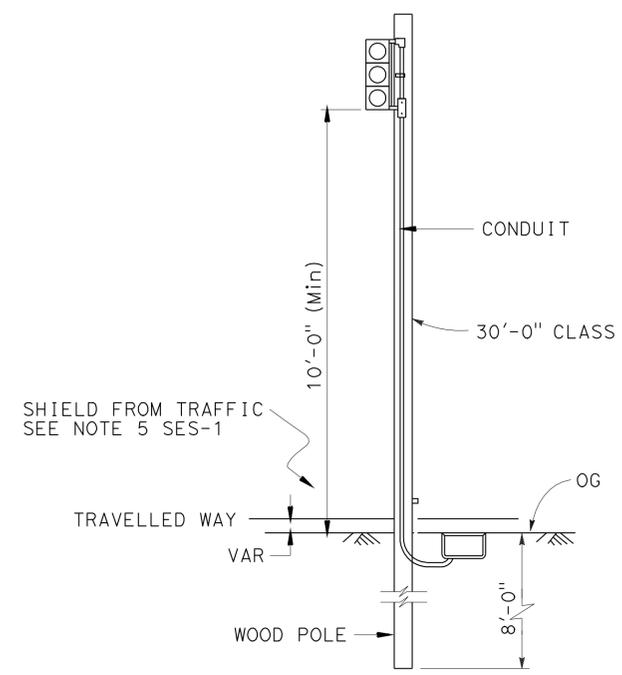
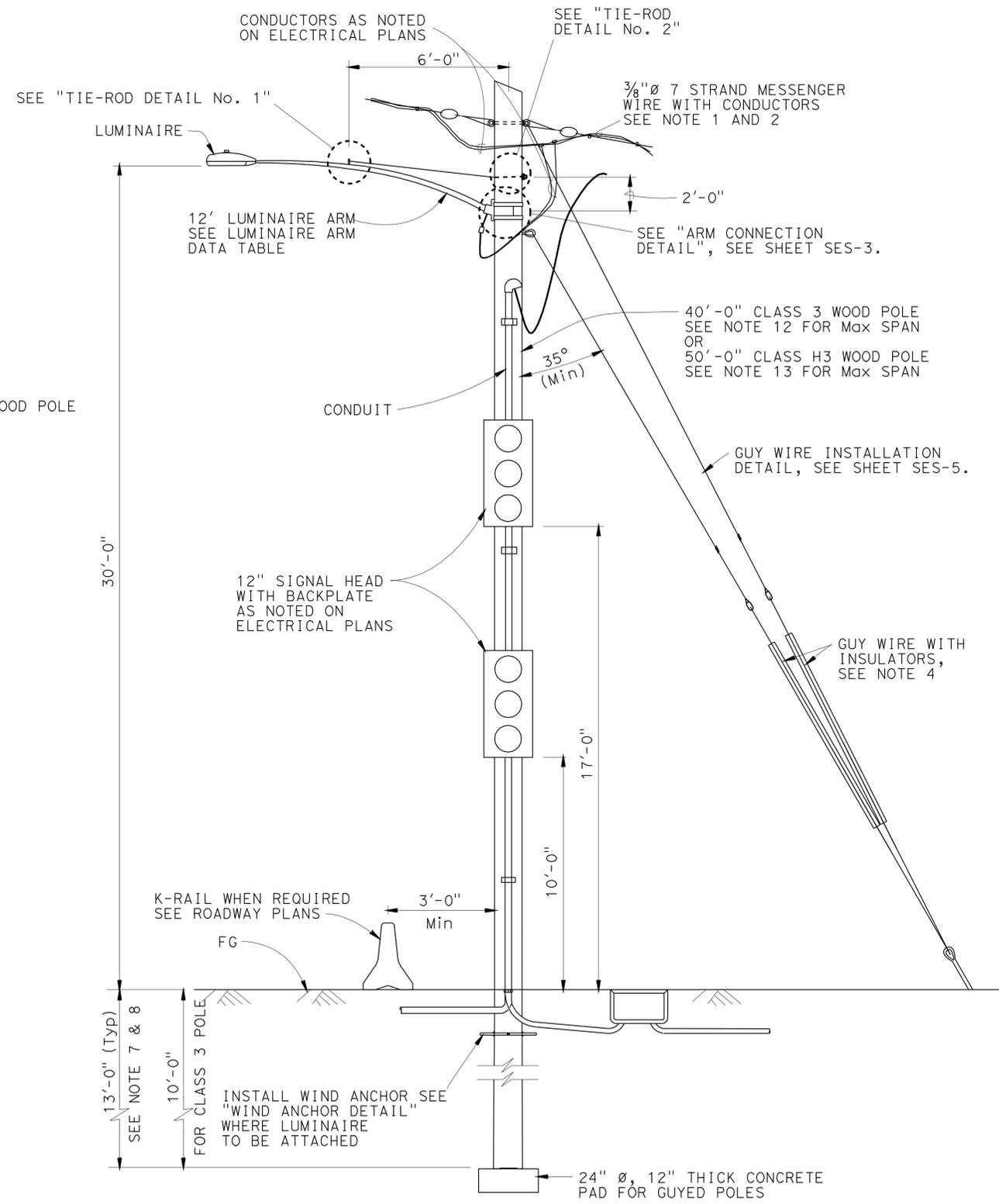
BRIDGE NO.	N/A
POST MILE	13.9/14.3

**TEMPORARY FLASHING BEACON**  
**TEMPORARY WOOD POLE**

**SES-1**

USERNAME => s123631 DATE PLOTTED => 29-MAR-2012 TIME PLOTTED => 18:01

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	14.1	26	73
			12/13/11	REGISTERED CIVIL ENGINEER DATE	
			3-26-12	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER TAMARA S. MARCHENKO No. C76837 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA		
<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>					



**WOOD POLE SUPPORT FOR SIGNAL ONLY**

LUMINAIRE ARM DATA			
Projected Length	N Rise	Min OD At Pole	Thickness
12'-0"	4'-3"	3 7/8"	0.1196"

Refer to ES-6D for Luminaire arm details

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

NO SCALE

**TYPICAL WOOD POLE SUPPORT**

**GENERAL NOTES:**

- Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2001.
- LOADING**  
Wind Loadings: 85 MPH
- UNIT STRESSES**  
Timber Poles: Tapered treated round pole ASTM D2899 Standard  
Fb = 1850 psi  
Fv = 110 psi  
E = 1500 x 10<sup>3</sup> psi
- TREATMENT**  
To conform with Section 86 Standard Specifications
- SPECIFICATIONS**  
Caltrans Standard Specifications May 2006  
ANSI 05 Wood Poles  
ASTM A475 Utility Grade Wires

**NOTES:**

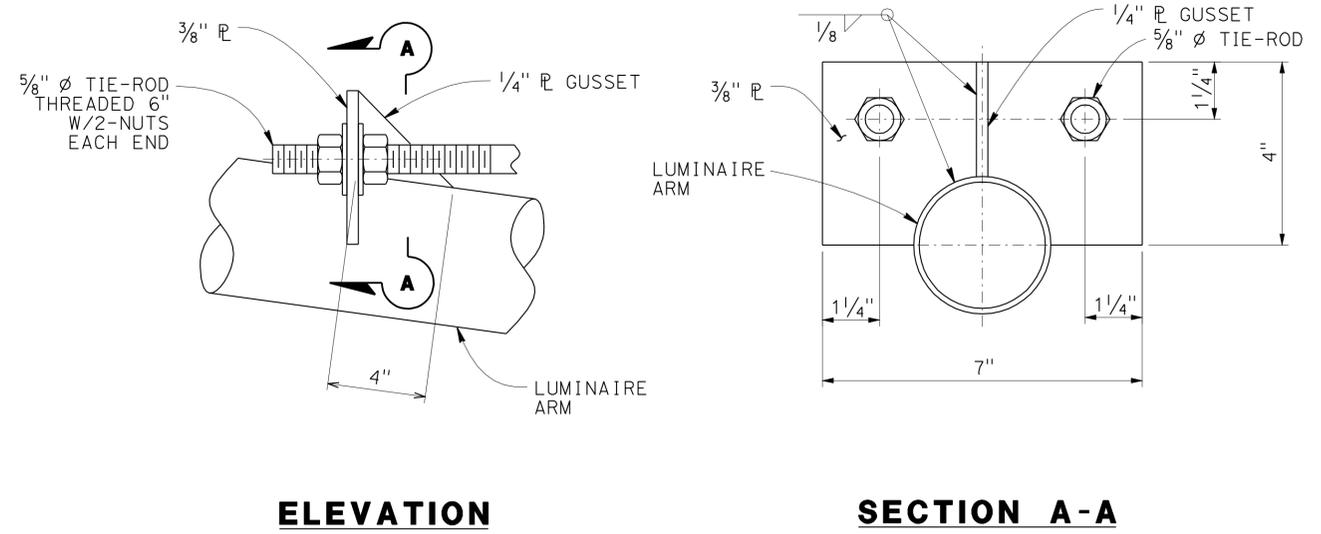
- All overhead cables shall be slack spanned with 25'-0" minimum overhead vertical clearance, where it crosses highway and 15'-0" parallel to the highway.
- Conductors shall be suspended from span-wire as follows:  
A) Main run 3/8" span-wire with 5% + 0.5% sag.  
No spare conductors allowed except as noted.
- Overhead line construction not specifically covered here shall conform with the provisions of General Order No. 95 of Public Utilities Commission.
- Wood poles shall be stabilized using guy wires, breast blocks or rakes at each dead end, corner, drop or line deviation more than 15° from straight line. The direction of the guy shall counteract the resultant of unbalanced force applied to pole. Where space or conflict prevent guy installation, a diagonal brace shall be used. The brace shall be wood and shall be connected to the pole by means to satisfy structural and electrical requirements. The direction of the brace shall counteract the resultant of unbalanced horizontal force of 3500 pounds (Min) applied to the pole.
- Guy wire shall be attached to pole as nearly as practical to the center of conductors load, or 3'-0" Max otherwise, See Note 4.
- All attachments shall be mounted with stainless steel straps or other manufacturers methods without drilling holes in pole, except as shown. Drilling through pole will require the Engineer's approval.
- Foundation design is based on AASHTO 2001 article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30° and unit weight of soil used is 120 lb/ft<sup>3</sup>. The Contractor to verify actual soil condition.
- If pole is located on or near a steep slope add 2 feet extra for embedment.
- See Sheets SES-2, SES-3, SES-4 and SES-5 for details.
- For details not shown, see "2006 STANDARD PLANS".
- All temporary poles support OH Conductors. Attach luminaire arm and combination of attachments as specified at locations where indicated on Electrical Sheets.
- Max span of 150' for messenger carrying DLC (Max 3 conductors only), without other attachments to the pole, see Electrical Sheets for locations.
- Max spans for messenger, carrying more than 3 conductors are:  
230' (Max) span for up to 15 total conductors and 70' (Max) span for up to 22 total conductors as noted on Plans.

BRANCH CHIEF JAMES SAGAR	DESIGN	BY T MARCHENKO	CHECKED J MAGANA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	N/A	TEMPORARY SIGNAL SYSTEM TEMPORARY WOOD POLE	SES-2		
	DETAILS	BY H NGUYEN	CHECKED B NAGID			POST MILE	13.9/14.3				
(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			UNIT: 3619	PROJECT NUMBER & PHASE: 0200000163		CONTRACT NO.: 02-2C1121	REVISION DATES	SHEET	OF
								11-22-11	2	5	

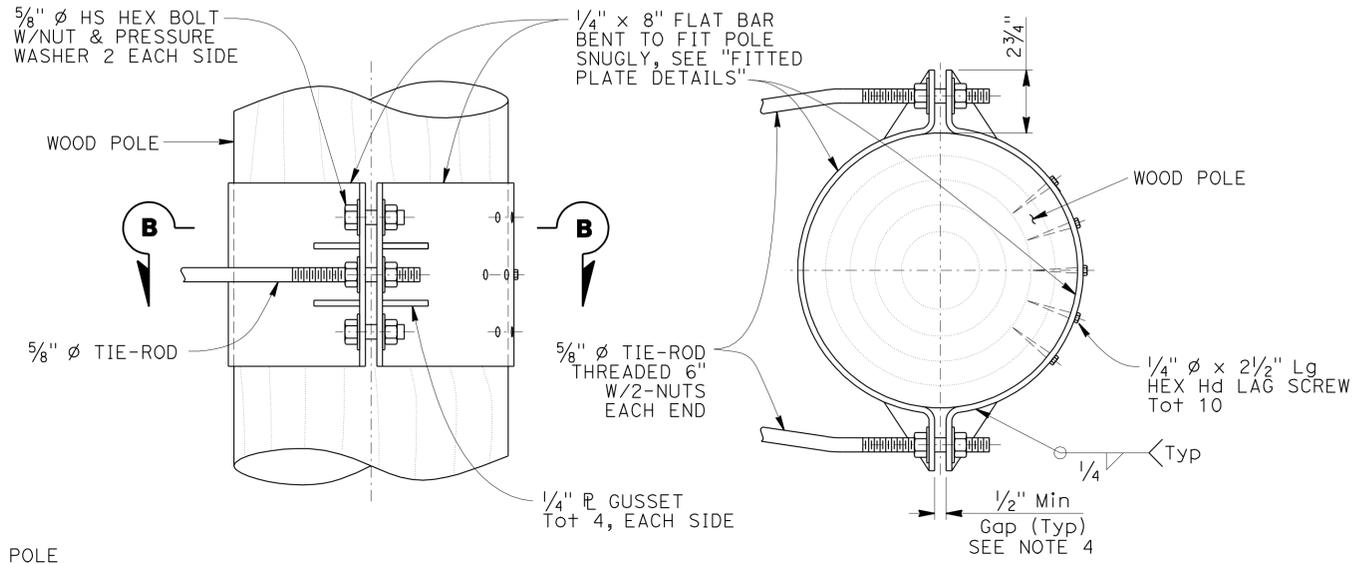
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			3-26-12	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER TAMARA S. MARCHENKO No. C76837 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

**NOTES:**

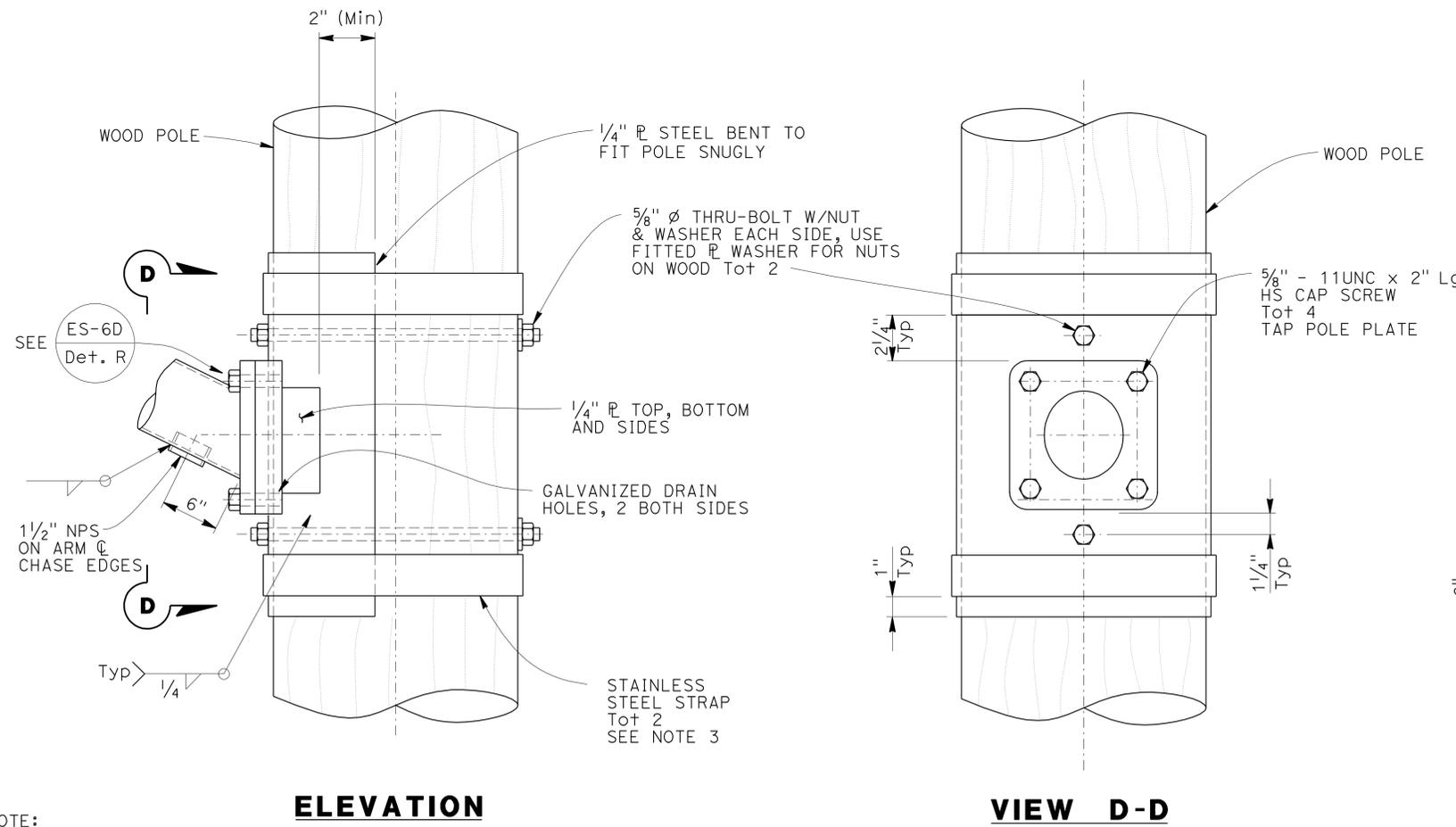
- All hardware and steel shall be galvanized after fabrication.
- Arm Base connection details shall be in compliance with Standard Plans Detail Sheet ES-6D with noted modifications.
- 2000 lb Min capacity strap system shall be used for top and bottom of plate.
- The Contractor to verify pole dimensions at Tie-Rod attachment height. Fabricate 8" flat bar with "L" dimension to maintain an open gap between encasement in finished installation.



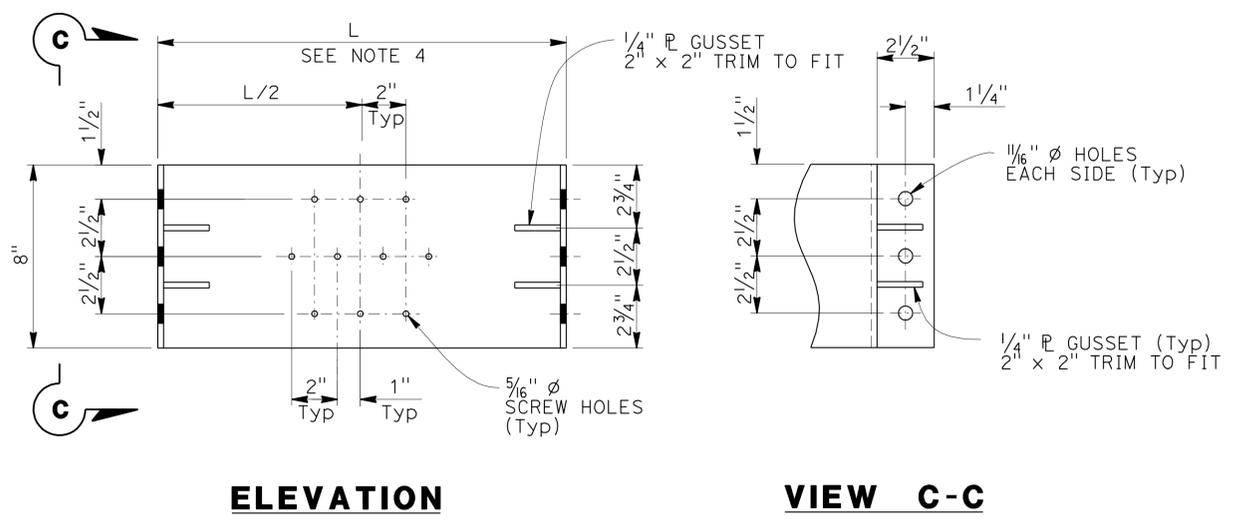
**TIE-ROD DETAIL No. 1**



**TIE-ROD DETAIL No. 2**



**ARM CONNECTION DETAILS**



**FITTED PLATE DETAILS**

Note: 2 Required (1 w/screw holes, 1 without)

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

BRANCH CHIEF	JAMES SAGAR
--------------	-------------

DESIGN	BY T MARCHENKO	CHECKED J MAGANA
DETAILS	BY H NGUYEN	CHECKED B NAGID
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
DESIGN AND TECHNICAL SERVICES  
SPECIAL DESIGNS BRANCH

BRIDGE NO.	N/A
POST MILE	13.9/14.3

TEMPORARY SIGNAL SYSTEM  
WOOD POLE MOUNTING DETAILS

SES-3

(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

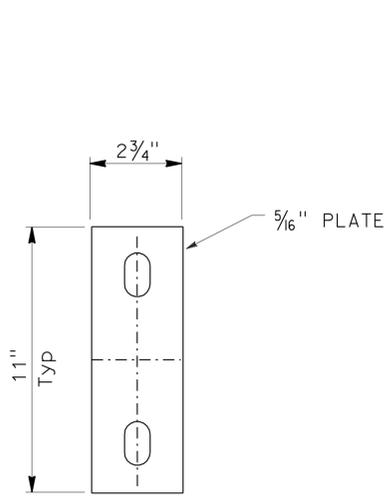
UNIT: 3619  
PROJECT NUMBER & PHASE: 0200000163  
CONTRACT NO.: 02-2C1121

DISREGARD PRINTS BEARING EARLIER REVISION DATES

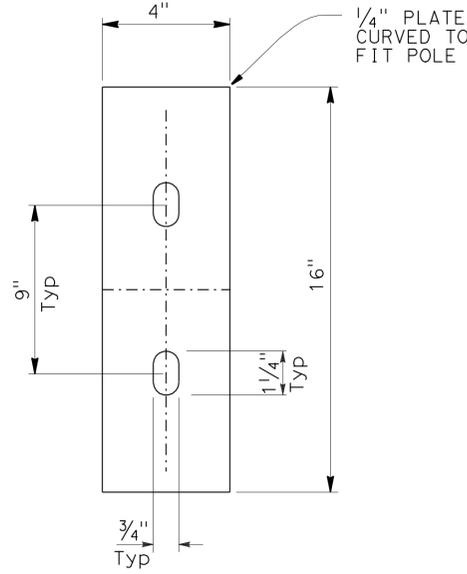
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11-21-11

DATE PLOTTED => 29-MAR-2012  
USERNAME => s123631

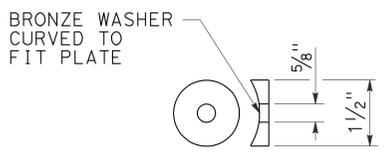
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			3-26-12	PLANS APPROVAL DATE	
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



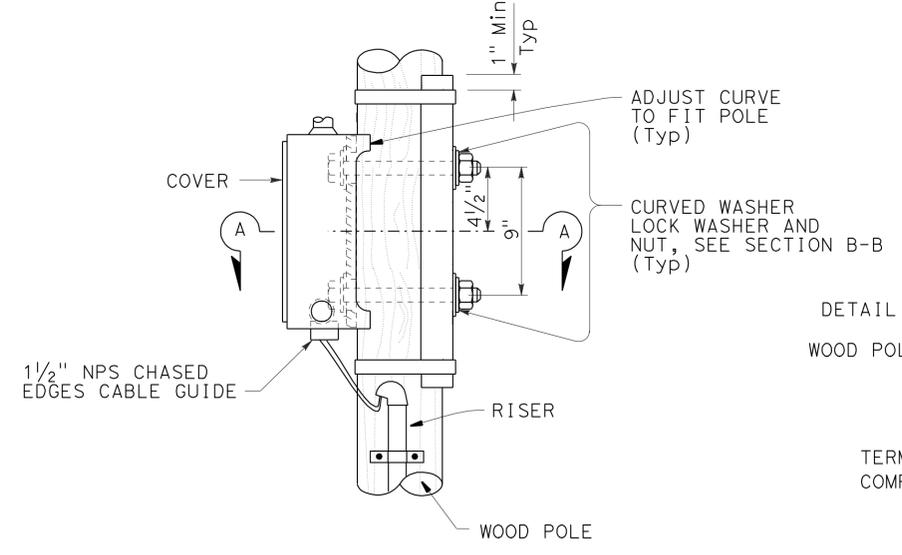
**COMPARTMENT PLATE (MOD)**



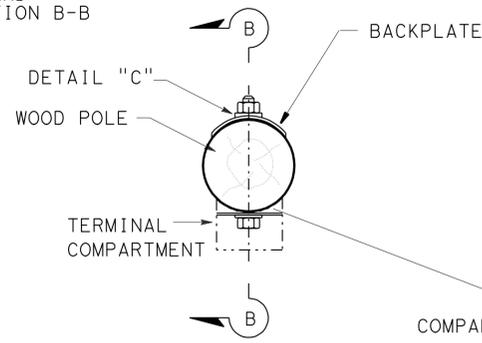
**BACKPLATE**



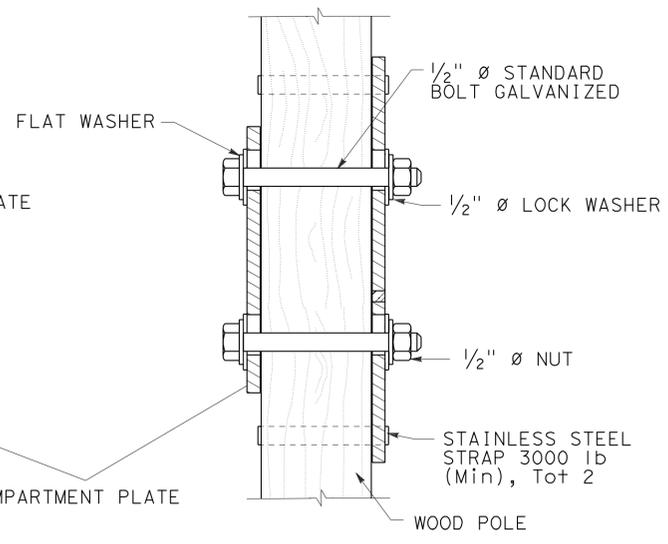
**DETAIL "C"**



**SIDE MOUNTING  
TERMINAL COMPARTMENT**



**SECTION A-A**



**SECTION B-B**

**SIGNAL HEAD MOUNTING**

For Details Not Shown, See RSP-ES-4D

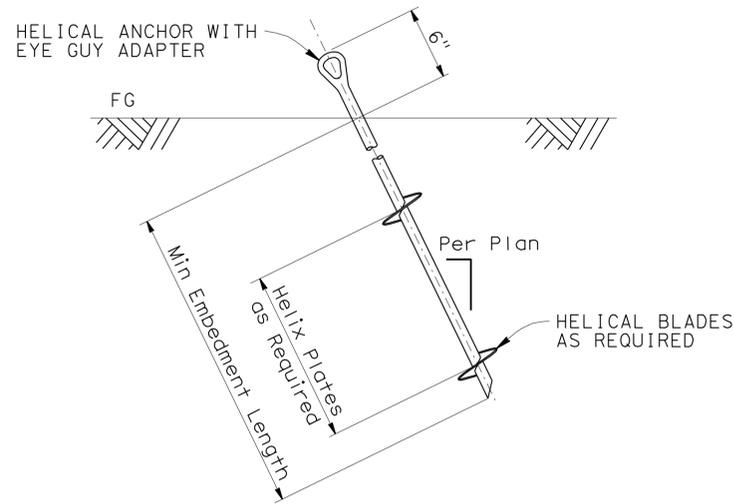
NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NO SCALE

BRANCH CHIEF JAMES SAGAR	DESIGN	BY T MARCHENKO	CHECKED J MAGANA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	TEMPORARY SIGNAL SYSTEM WOOD POLE DETAILS	SES-4
	DETAILS	BY HUNG NGUYEN	CHECKED B NAGID			N/A		
	QUANTITIES	BY	CHECKED			POST MILE 13.9/14.3		

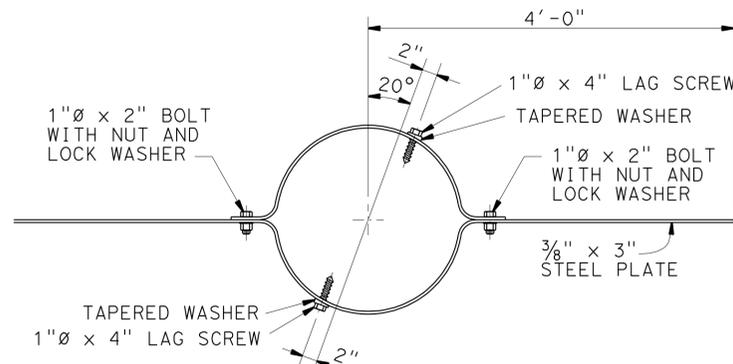
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USERNAME => s123631 DATE PLOTTED => 29-MAR-2012 TIME PLOTTED => 18:02



### ALTERNATIVE GUY WIRE INSTALLATION DETAIL

(See Helical Anchor Specifications Table)



### WIND ANCHOR

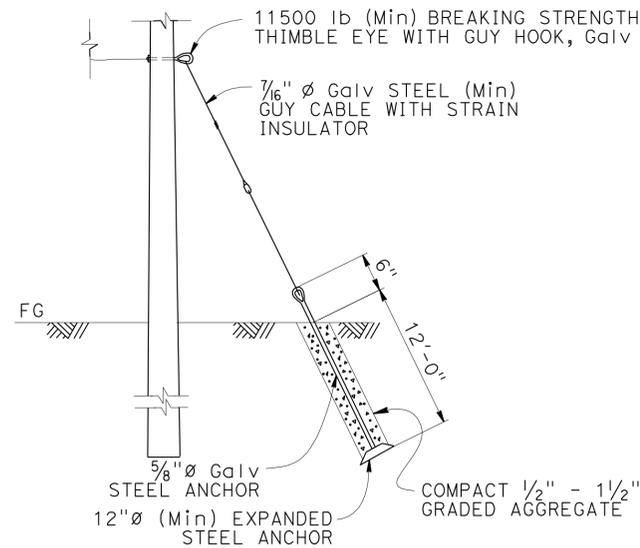
To be installed perpendicular to luminaire arms and 2'-0" Min below grade

HELICAL ANCHOR SPECIFICATIONS					
Anchor Location	Type	Helix Plate Diameter*	Allowable Min Tension Cap., "Q <sub>a</sub> "	Embedment Length (Min)	Installation Torque (Min)**, "T"
Detail	Tension	12"	5500 lb	12'-0"	1650 Ft-lb

**SPECIFICATION NOTES:**

- During installation the torque will be continuously monitored and recorded. If a drop in torque is recorded, the anchor must then continue to be inserted past the soft soil layer until Minimum Installation Torque is achieved.
- Anchors and Hardware to be installed per the manufacturers specifications.

\* Number of helical plates is not specified; Contractors choice.  
 \*\* Adjust accordingly if required, See Note 3.



### GUY WIRE INSTALLATION DETAIL

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

NO SCALE

### NOTES:

- The Contractor to verify soil condition, slope, and adjust anchoring to satisfy basic design requirements per Note 7 on SES-2 sheet.
- Use of alternative Guy Wire Installation Detail requires that the soil bearing capacity be verified by the Contractor.
- The Contractor shall determine the most appropriate value for k<sub>t</sub> based on soil conditions and shall adjust the Min Installation Torque based on the revised k<sub>t</sub>. A k<sub>t</sub> value of 10 was assumed for the Min Installation Torque shown in the table.

The Helical Installation torque Formula is Q<sub>u</sub> = k<sub>t</sub>\*T where,

$$Q_u = Q_a * FS = \text{Ultimate Helical Anchor Capacity (lb)}$$

$$FS = \text{Factor of Safety} = 3.0$$

$$Q_a = \text{Allowable Helical Anchor Capacity (lb)}$$

$$k_t = \text{Empirical Torque Factor (ft}^{-1}\text{)}$$

$$T = \text{Min Installation Torque (ft-lb)}$$

- Requests made by Helical Anchor Installation Contractor to reduce the minimum embedment length and/or Helix Ø diameter require the Engineer's approval.
- The Contractor shall locate and mark all of the substructures and utilities. Installation of anchors underneath utilities or subsurface structures is prohibited. Horizontal clearances of anchors shall be determined by the Inspector during construction.

BRANCH CHIEF JAMES SAGAR	DESIGN	BY T MARCHENKO	CHECKED J MAGANA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	N/A	TEMPORARY SIGNAL SYSTEM WOOD POLE DETAILS	SES-5
	DETAILS	BY H NGUYEN	CHECKED B NAGID			POST MILE	13.9/14.3		
	QUANTITIES	BY	CHECKED			UNIT: 3619	PROJECT NUMBER & PHASE: 0200000163		

(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)

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

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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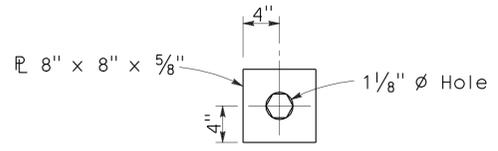
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

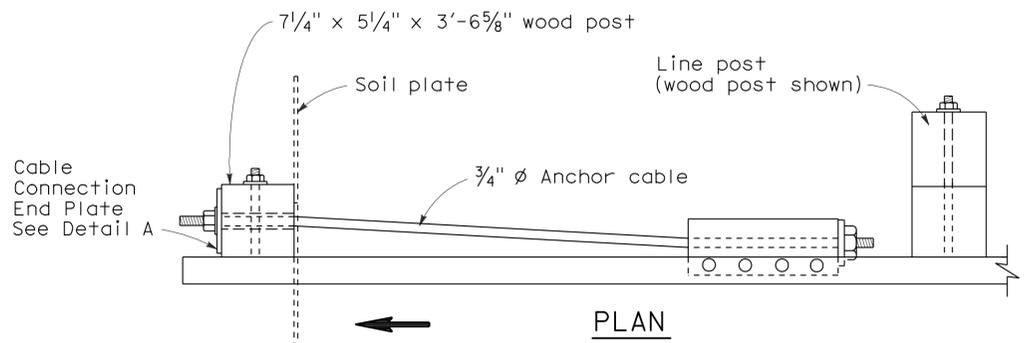
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REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-11  
CIVIL  
STATE OF CALIFORNIA

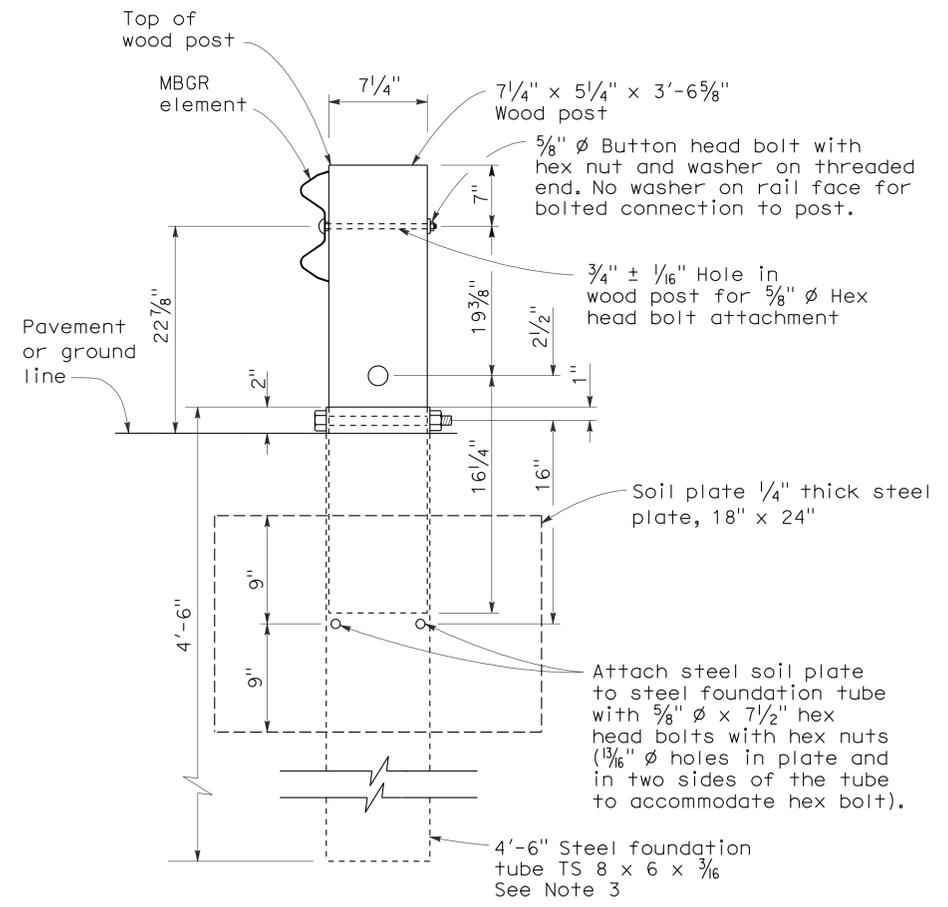
To accompany plans dated 3-26-12



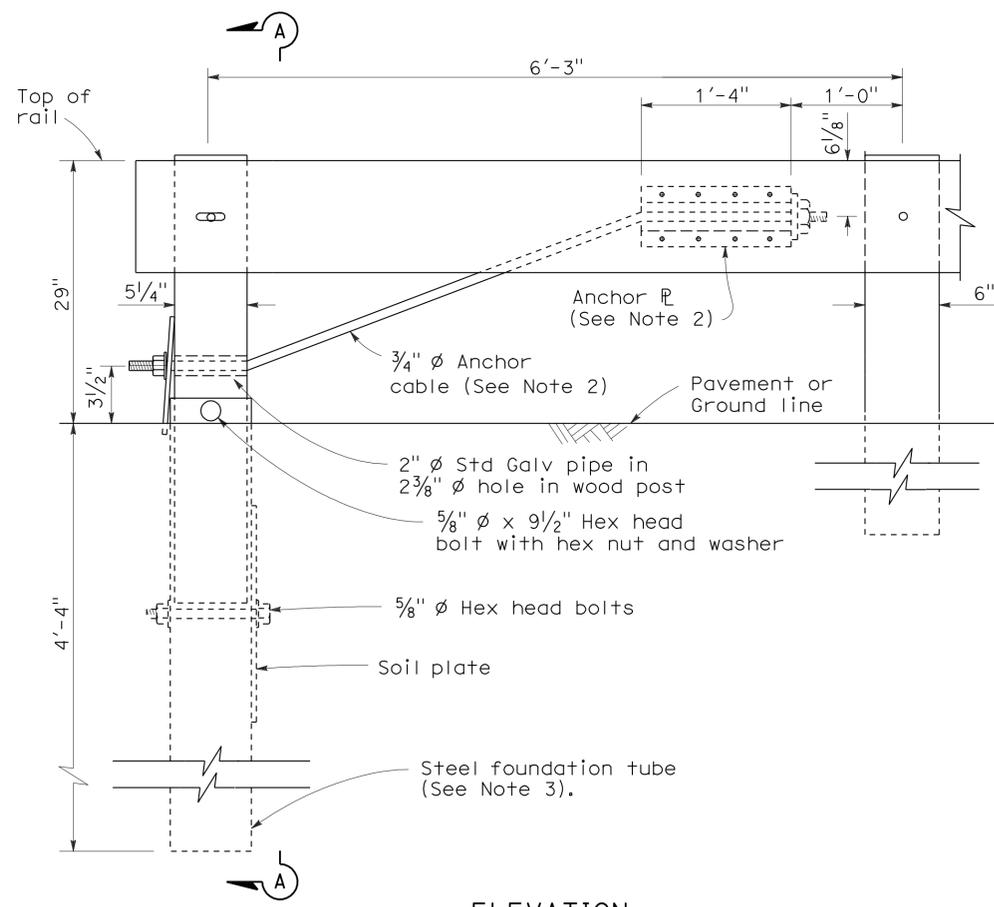
**DETAIL A**  
**CABLE CONNECTION**  
**END PLATE**



**PLAN**



**SECTION A-A**



**ELEVATION**  
**END ANCHOR**  
**ASSEMBLY (TYPE SFT)**  
See Note 1

**NOTES:**

1. See the A77E, A77F and A77G series of Standard Plans for typical use of End Anchor Assembly (Type SFT).
2. For details of the anchor plate and 3/4" cable, see Standard Plan A77H3.
3. A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8" diameter hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
4. Direction of traffic indicated by →.
5. Install line post, steel foundation tube and soil plate in soil.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**METAL RAILING**  
**END ANCHOR ASSEMBLY**  
**(TYPE SFT)**

NO SCALE

RSP A77H1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77H1  
DATED MAY 1, 2006 - PAGE 67 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77H1**

2006 REVISED STANDARD PLAN RSP A77H1

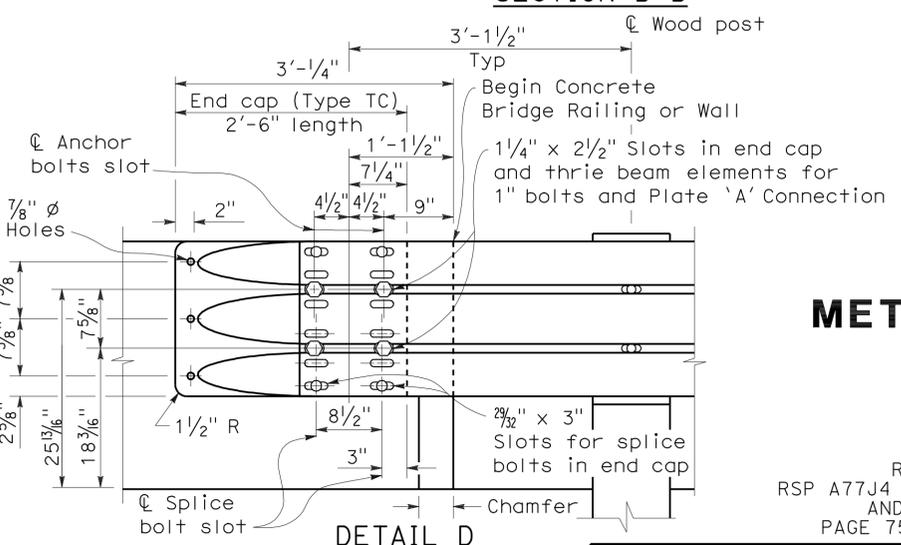
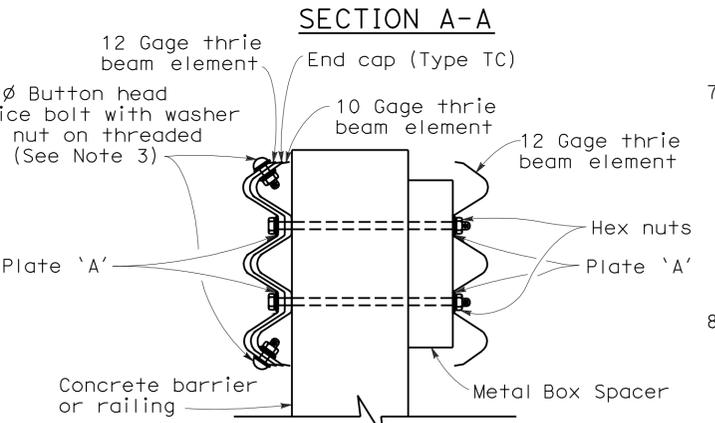
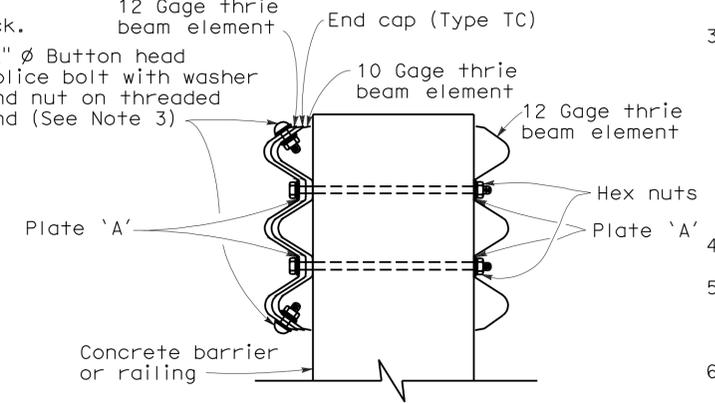
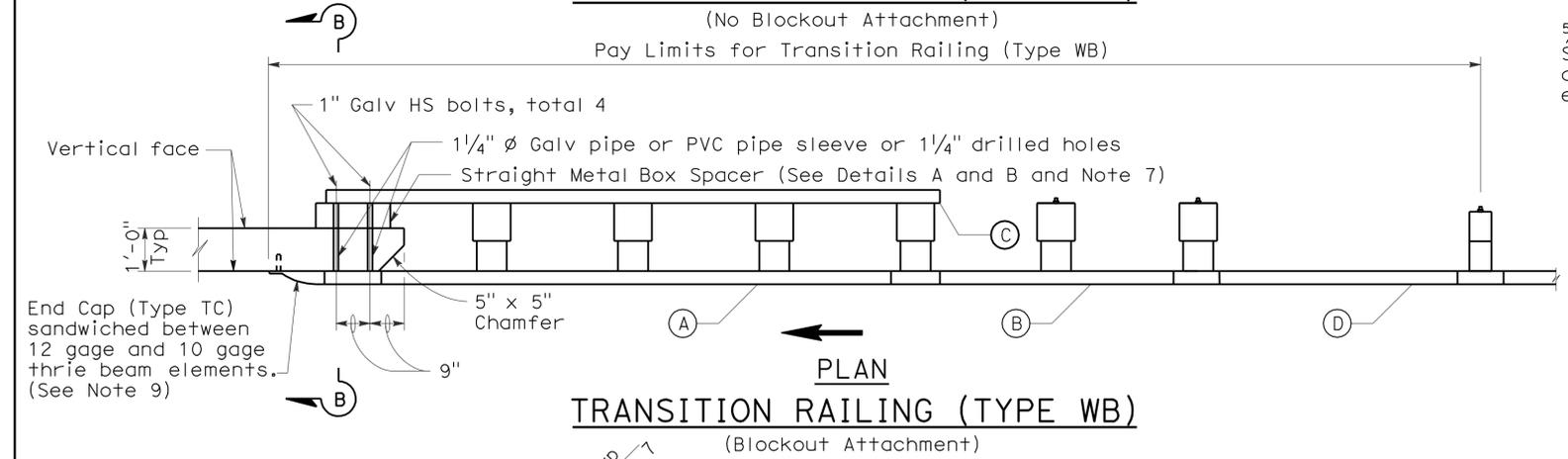
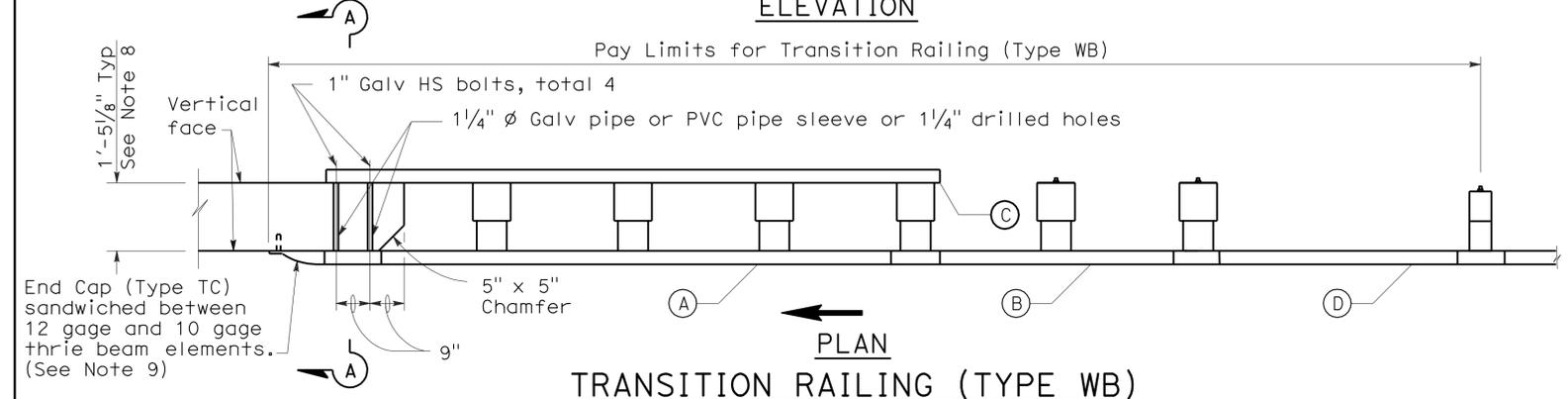
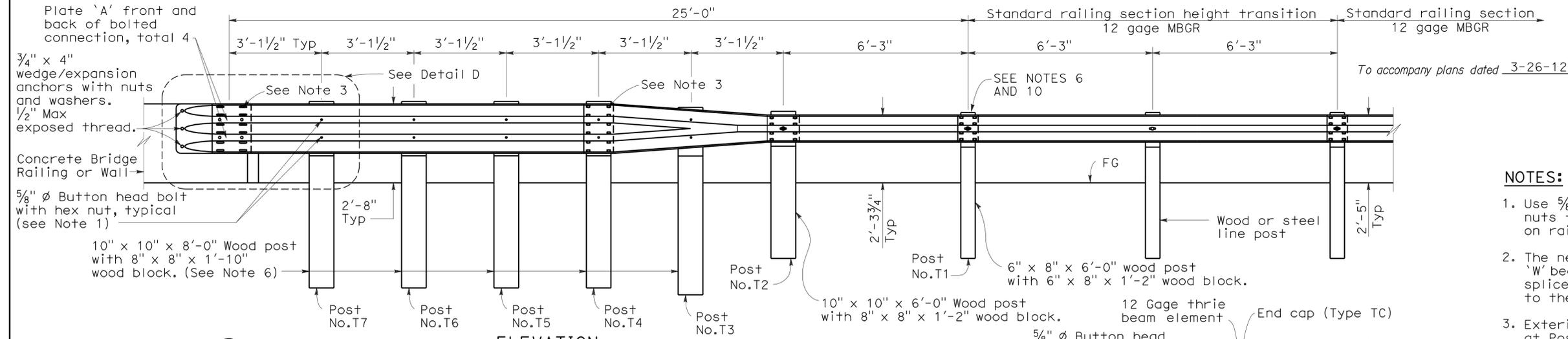
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	31	73

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

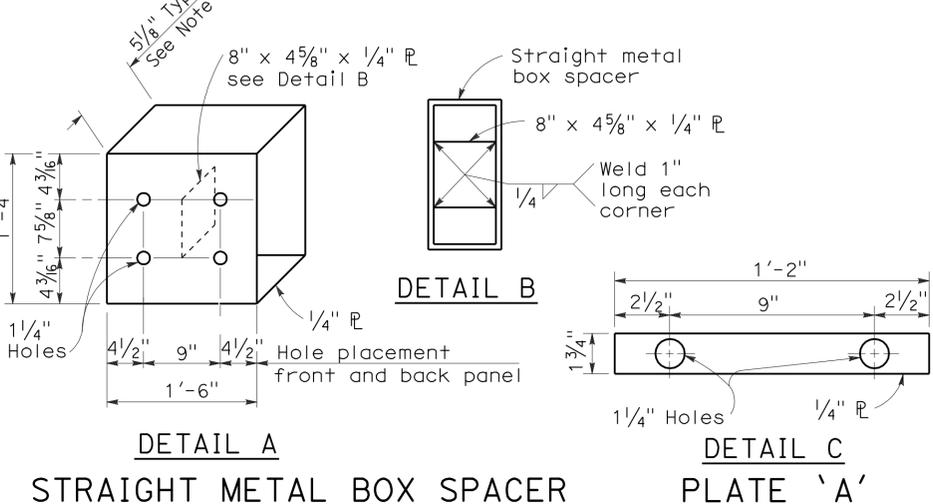
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Exp. 6-30-11  
STATE OF CALIFORNIA



- NOTES:**
- Use 5/8"  $\phi$  Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
  - The nested rail elements, end cap, and "W" beam to thrie beam element may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
  - Exterior splice bolt holes for rail element splices at Post No. T4 and the connection to the concrete barrier or railing shall be the standard 7/32" x 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1/4"  $\phi$ . Only the top 2 and the bottom 2 splice bolts with washers and nuts are required for rail splices at Post No. T4 and the connection to the concrete barrier or railing.
  - Direction of adjacent traffic indicated by  $\rightarrow$ .
  - The top elevation of Posts No. T2 through No. T7 shall not project more than 1" above the top elevation of the rail element.
  - Typically, the railing connected to Transition Railing (Type WB) will be either standard railing section of metal beam guard railing with height transition ratio of 120:1 or an approved Caltrans end treatment attached to Post No. T1.
  - The depth of the metal box spacer varies from the 5/8" to 1 1/2" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 17 1/8". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1 1/2", metal plates similar to Plate 'A' are to be used as spacers.
  - Where the width of the concrete railing or wall is greater than 17 1/8", wood blocks are to be used to fill the space created between the backside of Posts No. T4 through No. T7 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
  - End cap may be installed over 12 gage and 10 gage thrie beam elements where transition railing is installed on the departure end of bridge railing.
  - Conform standard railing section height to 2'-3 3/4" at Post No. T1 using height transition ratio of 120:1.

- LEGEND**
- (A) Nested thrie beam elements (one 12 gage element nested over one 10 gage element).
  - (B) One 10 gage "W" beam to thrie beam element.
  - (C) One 12 gage thrie beam element.
  - (D) One 10 gage "W" beam rail element (7'-3 1/2" length)
- 10 gage = 0.135" thick  
12 gage = 0.108" thick



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

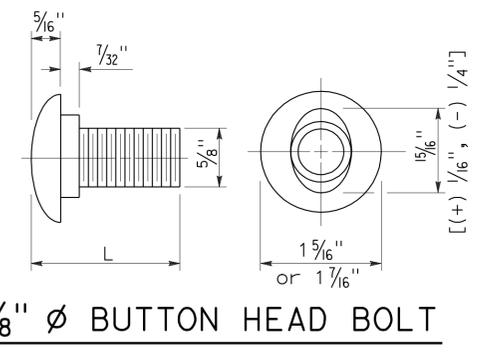
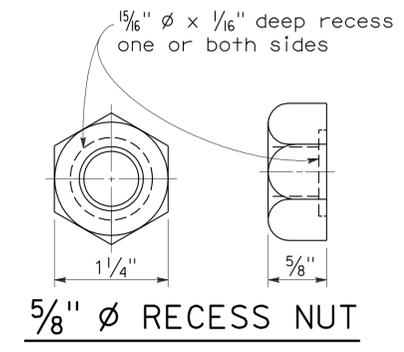
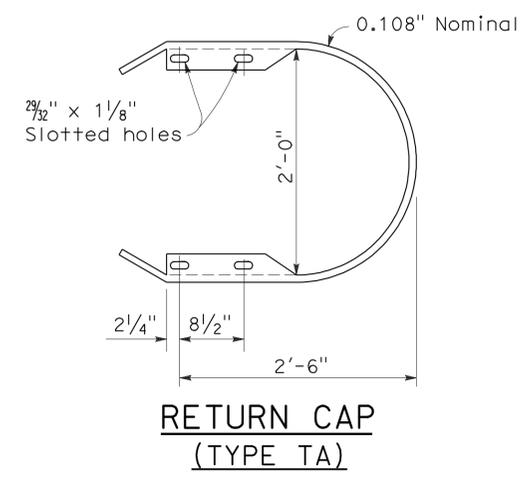
**METAL BEAM GUARD RAILING  
TRANSITION RAILING  
(TYPE WB)**

NO SCALE

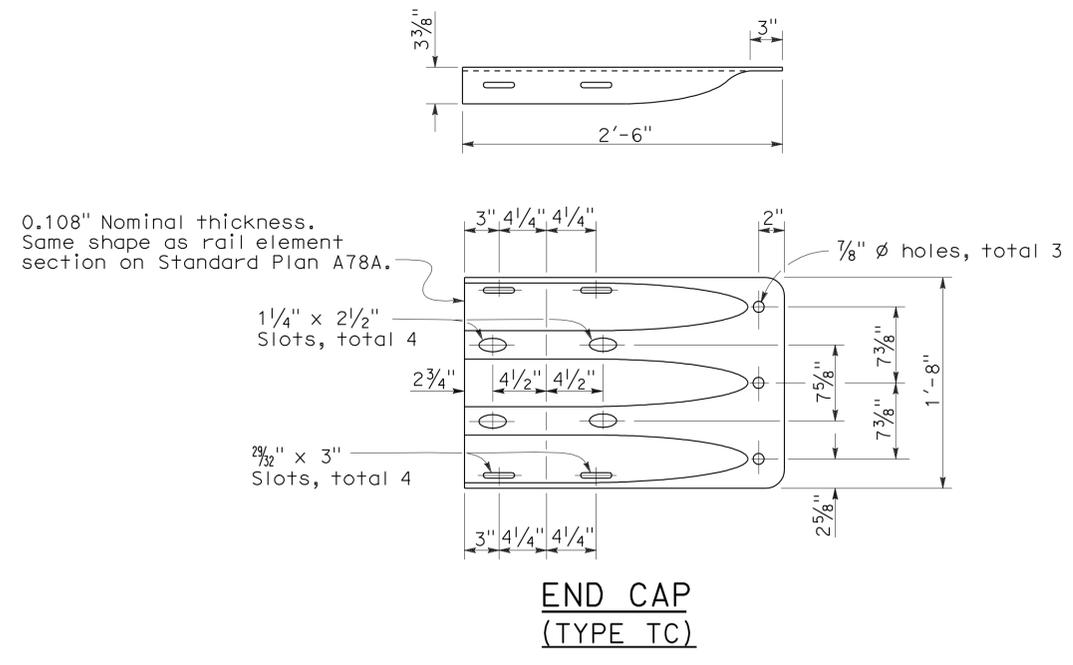
RSP A77J4 DATED MAY 20, 2011 SUPERSEDES  
RSP A77J4 DATED JUNE 5, 2009, RSP A77J4 DATED JUNE 6, 2008  
AND STANDARD PLAN A77J4 DATED MAY 1, 2006 -  
PAGE 75 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77J4

To accompany plans dated 3-26-12



L	THREAD LENGTH
1 1/4"	full thread length
2"	full thread length
9/2"	4" Min thread length
18"	4" Min thread length



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**THRIE BEAM BARRIER  
STANDARD HARDWARE DETAILS**

NO SCALE

RSP A78C1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A78C1  
DATED MAY 1, 2006 - PAGE 85 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A78C1**

2006 REVISED STANDARD PLAN RSP A78C1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	14.1	33	73

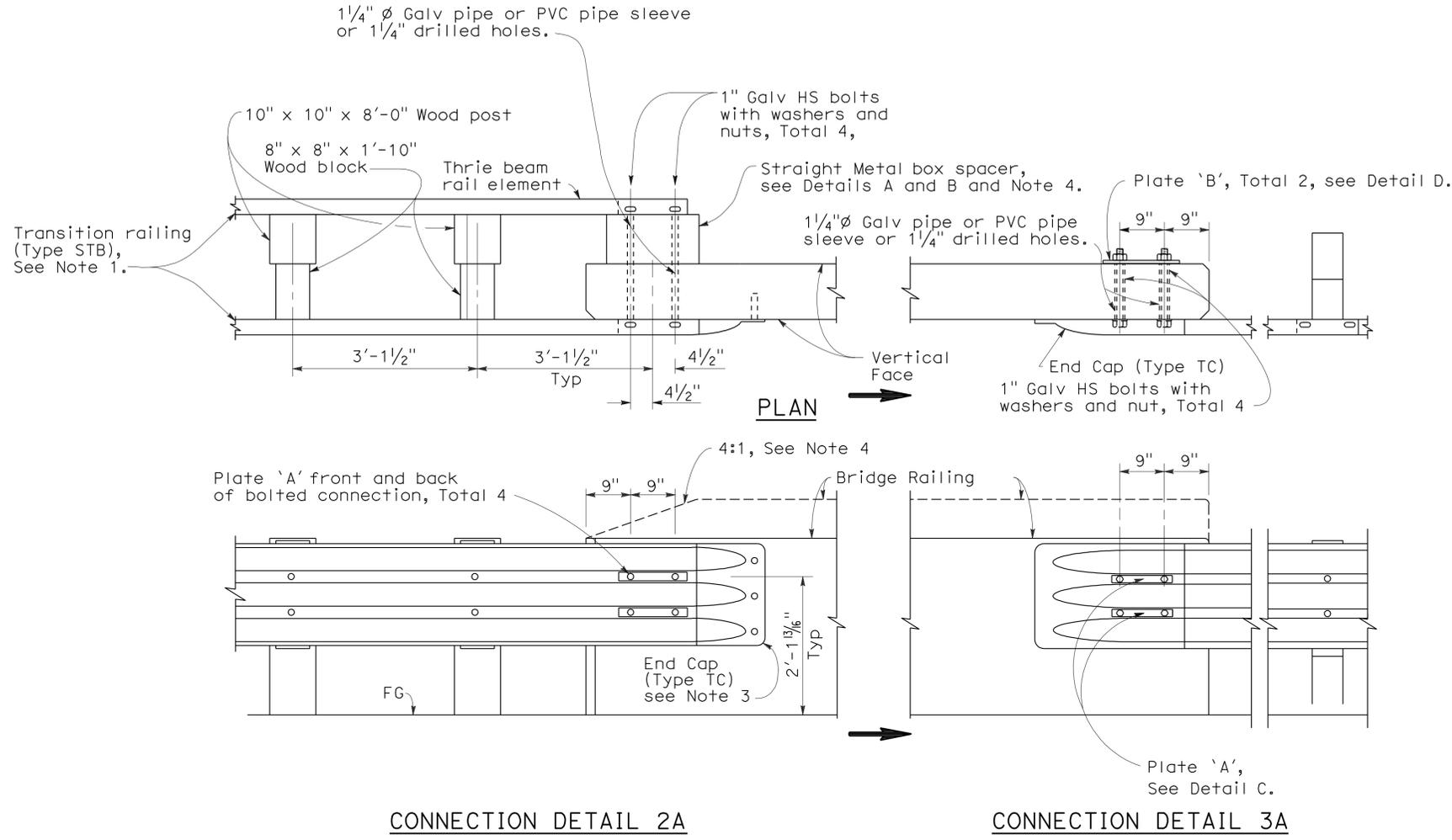
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

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

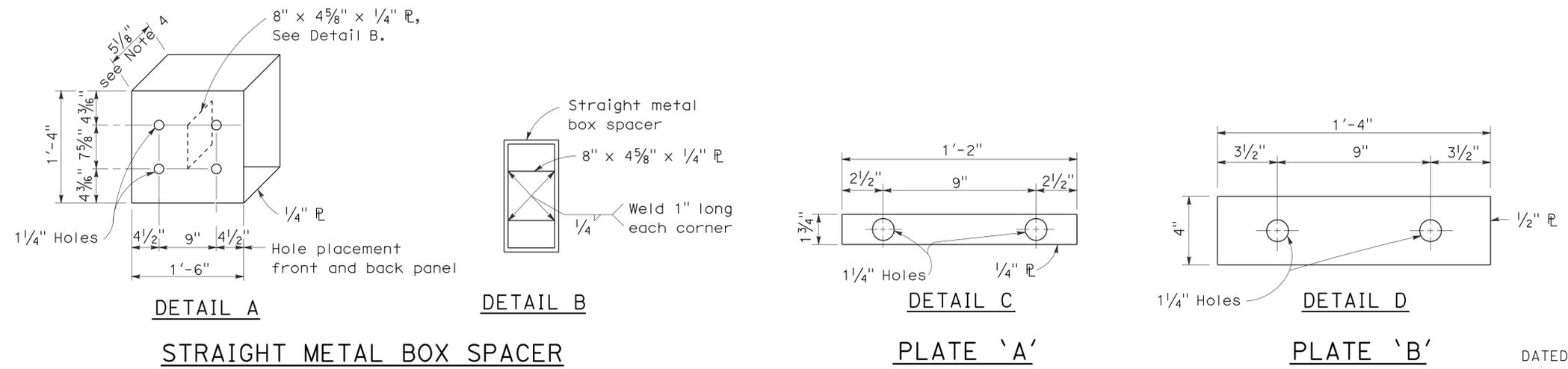
To accompany plans dated 3-26-12



**NOTES:**

1. For additional details of Transition Railing (Type STB), see Standard Plans A78J. Transition Railing (Type STB) transitions the standard 12 gage single thrie beam barrier to a heavier gage single thrie beam railing section then to a heavier gage nested double thrie beam barrier section which then is connected to the concrete bridge railing.
2. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail 2A, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
3. For details of End Cap (Type TC), see Standard Plan A78C1.
4. See Standard Plan A78J for additional details regarding depth dimension for straight metal box spacer.
5. Direction of adjacent traffic indicated by ➡.

**SINGLE THRIE BEAM BARRIER CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK**



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**SINGLE THRIE BEAM BARRIER CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS**

NO SCALE

RSP A78F2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A78F2 DATED MAY 1, 2006 - PAGE 93 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A78F2**

2006 REVISED STANDARD PLAN RSP A78F2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	14.1	34	73

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

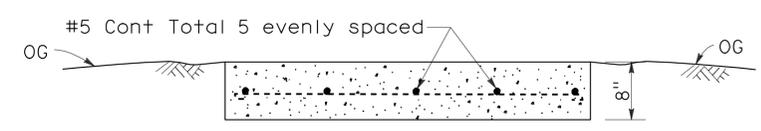
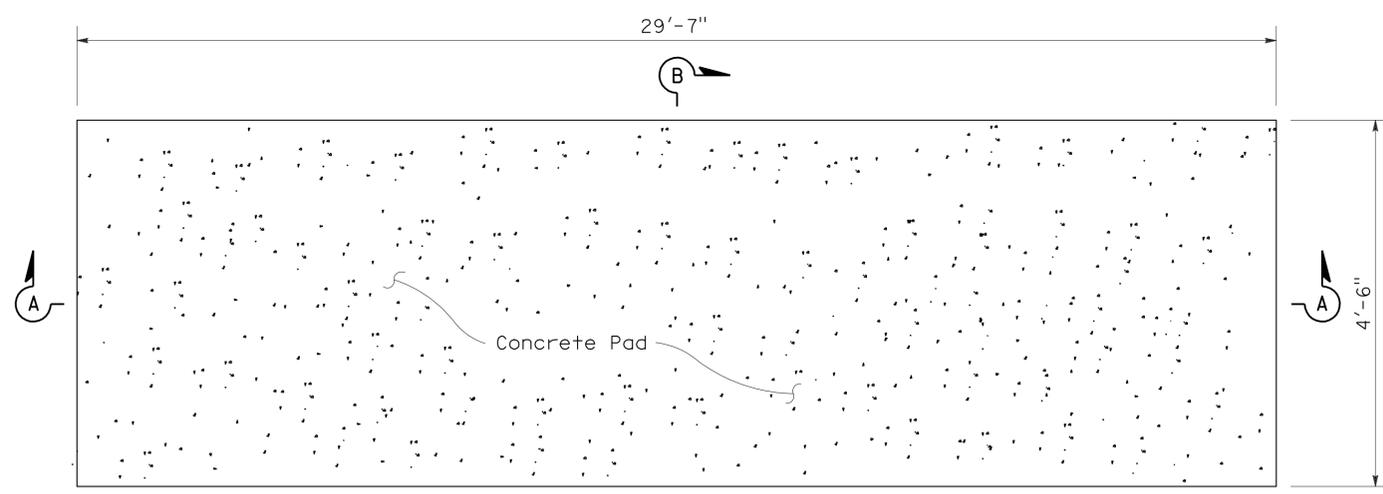
June 6, 2008  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
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Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 3-26-12

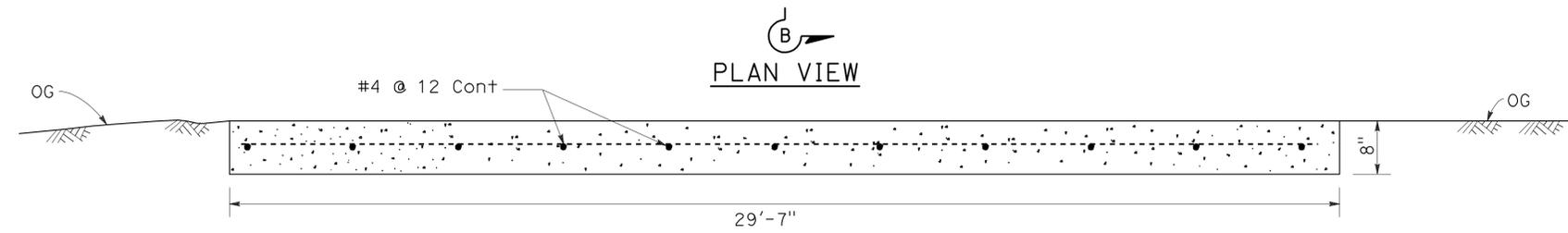
2006 REVISED STANDARD PLAN RSP A82C1



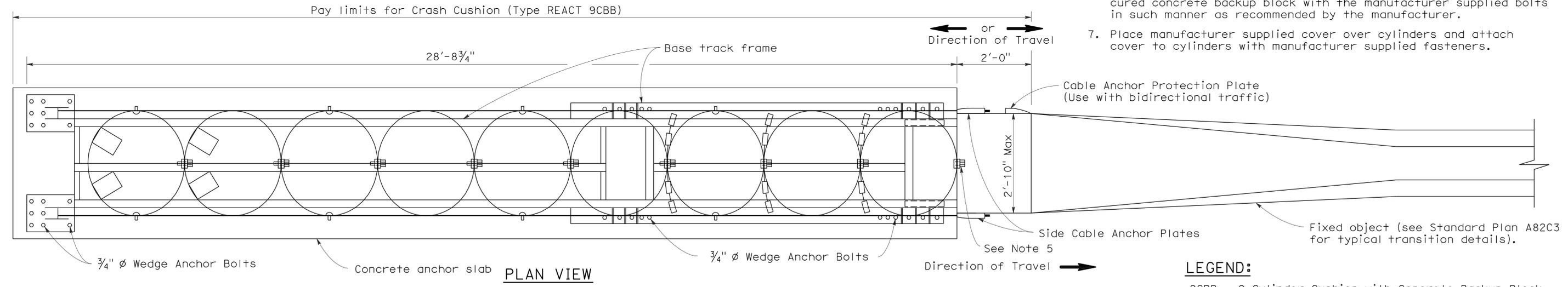
SECTION B-B

**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.

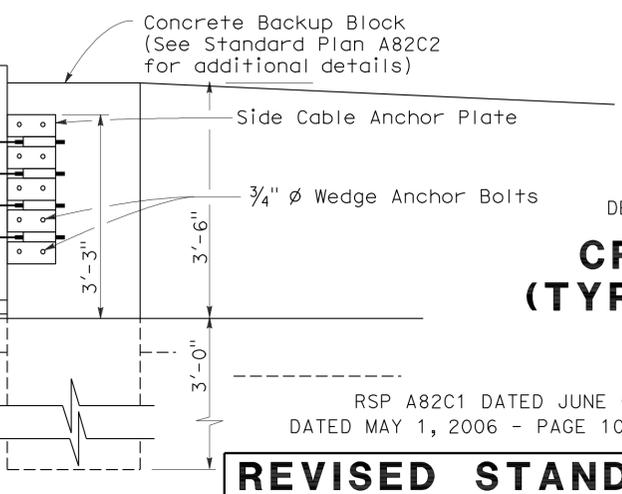
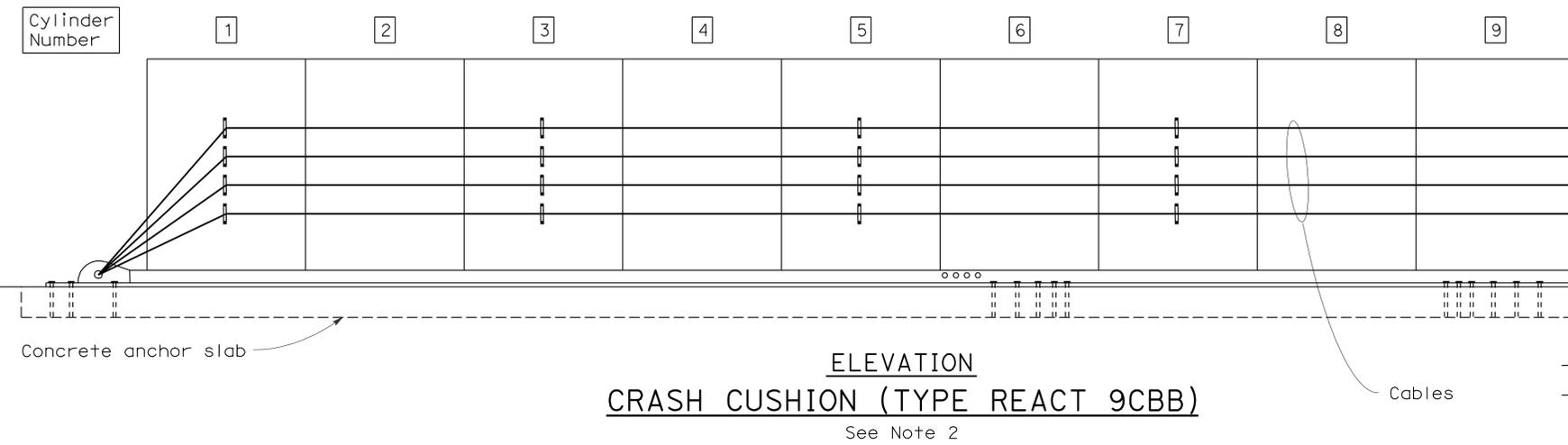


SECTION A-A  
CONCRETE ANCHOR SLAB



**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**

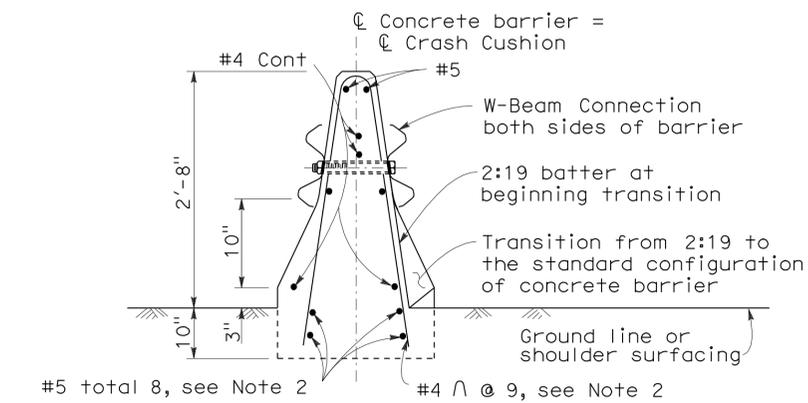
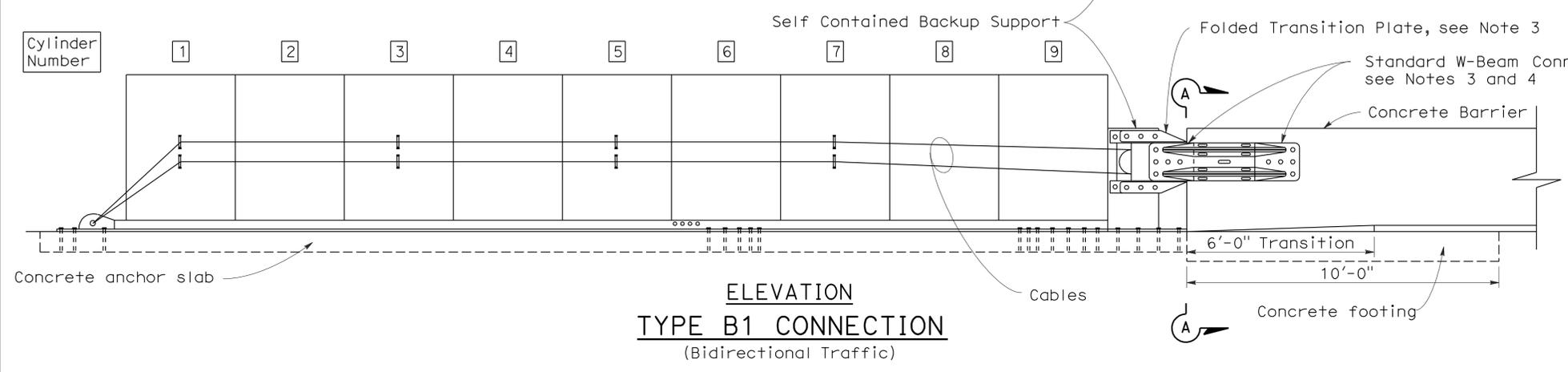
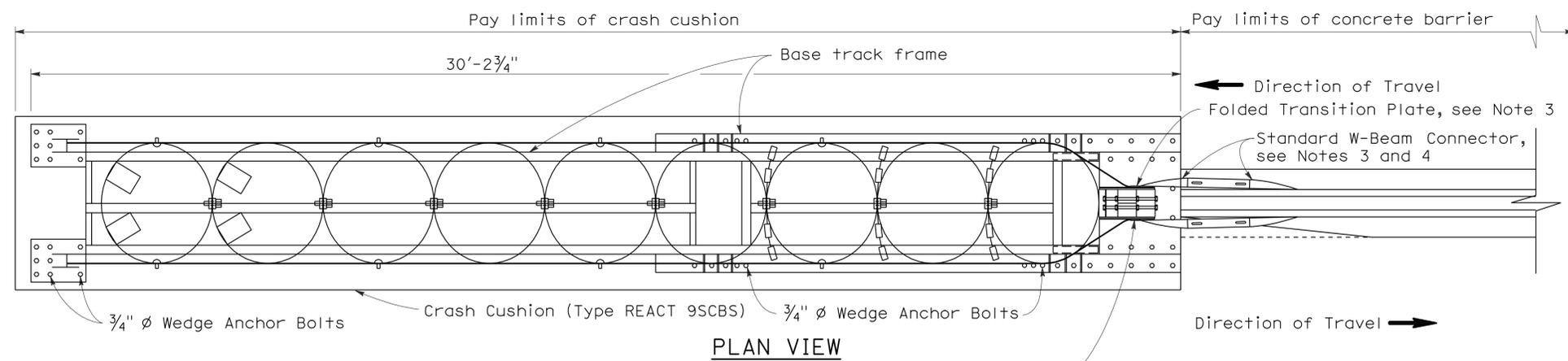
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	14.1	35	73

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

October 20, 2006  
PLANS APPROVAL DATE

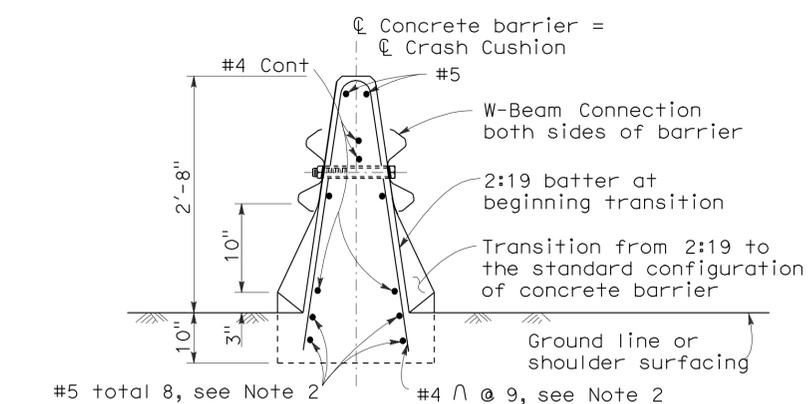
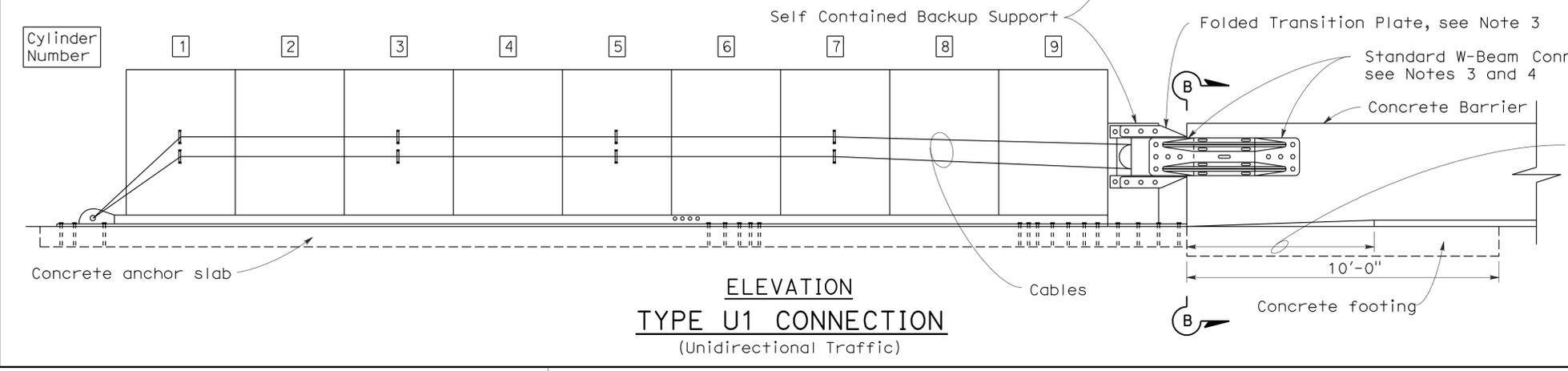
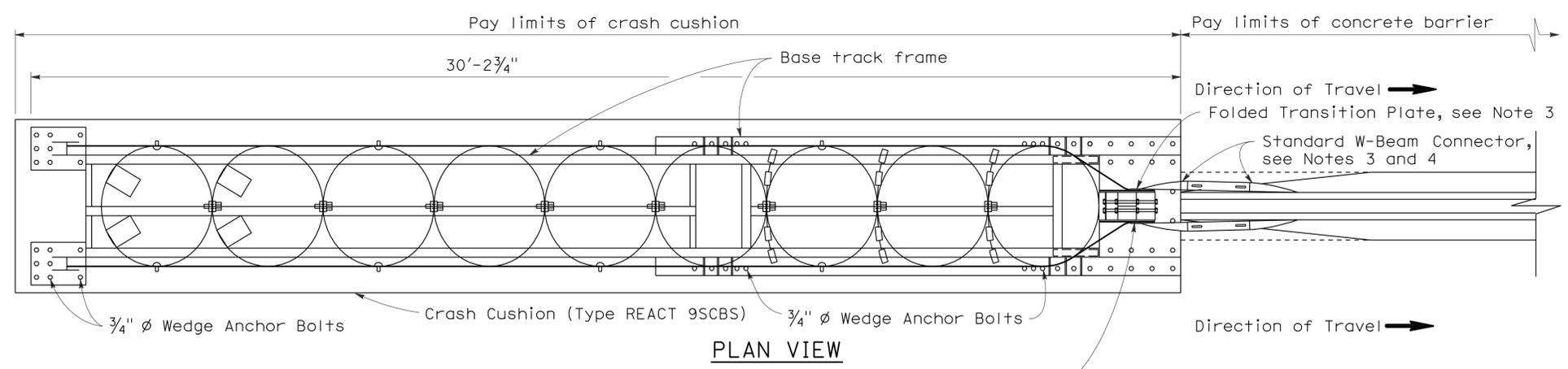
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To accompany plans dated 3-26-12



**SECTION A-A**  
(Type 50 Barrier shown)

- 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.



**SECTION B-B**  
(Type 50 Barrier shown)

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

2006 REVISED STANDARD PLAN RSP A82D2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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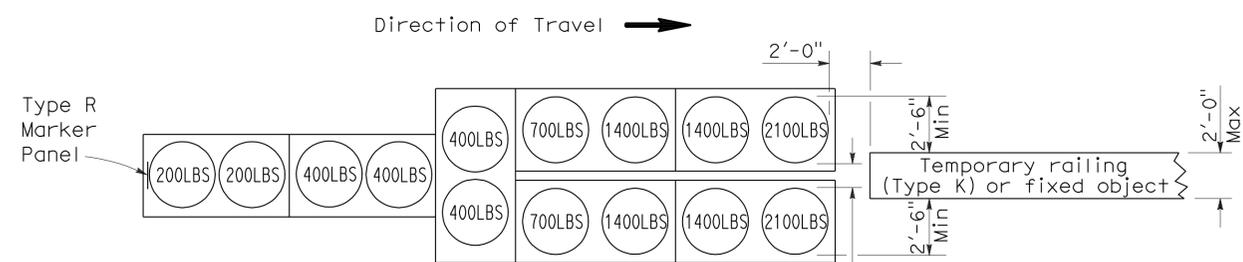
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June 6, 2008  
PLANS APPROVAL DATE

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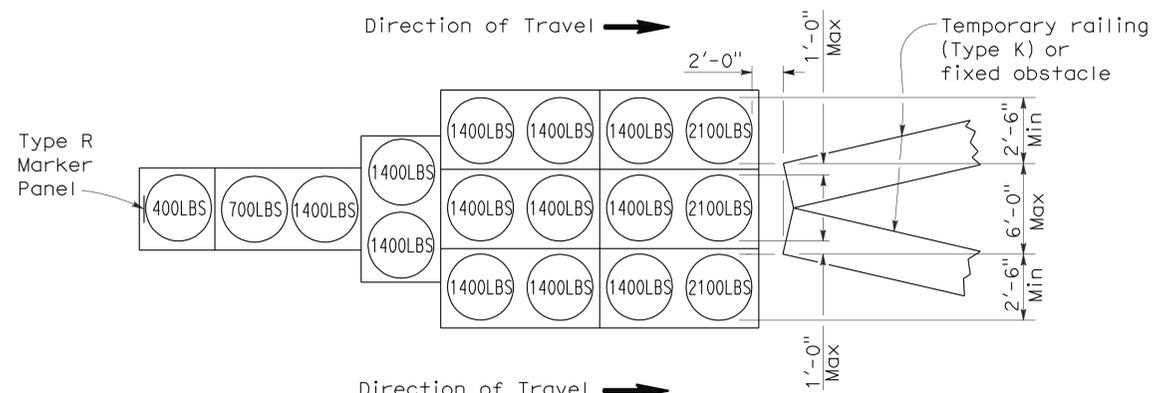
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Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 3-26-12



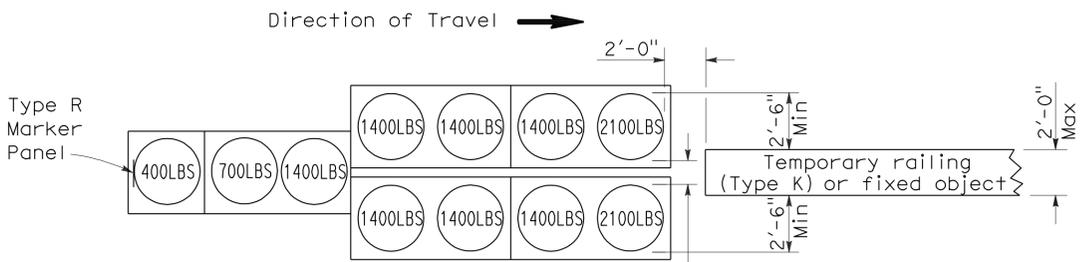
**ARRAY 'TU14'**

Approach speed 45 mph or more



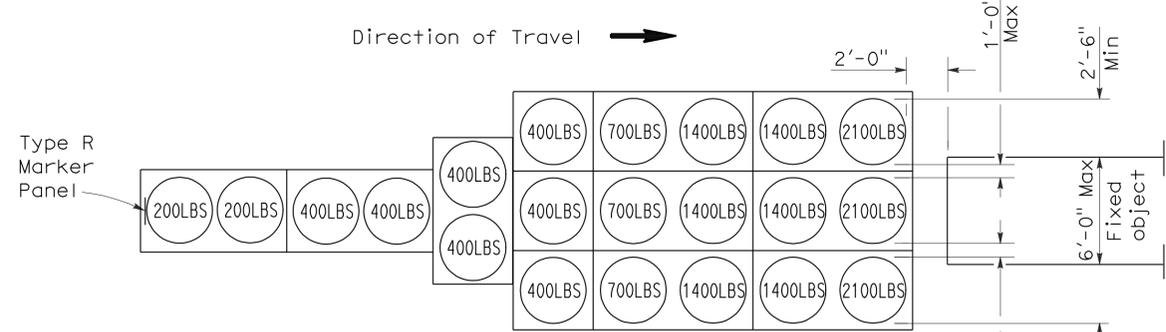
**ARRAY 'TU17'**

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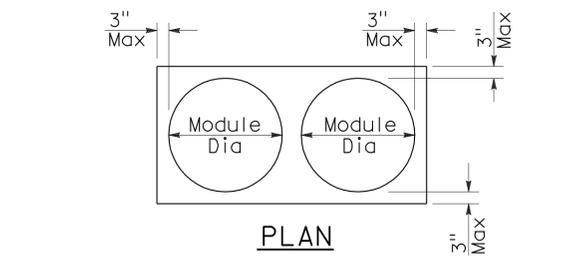
**ARRAY 'TU11'**

Approach speed less than 45 mph

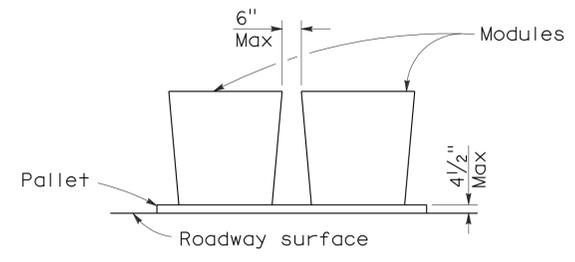


**ARRAY 'TU21'**

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**

2006 REVISED STANDARD PLAN RSP T1A

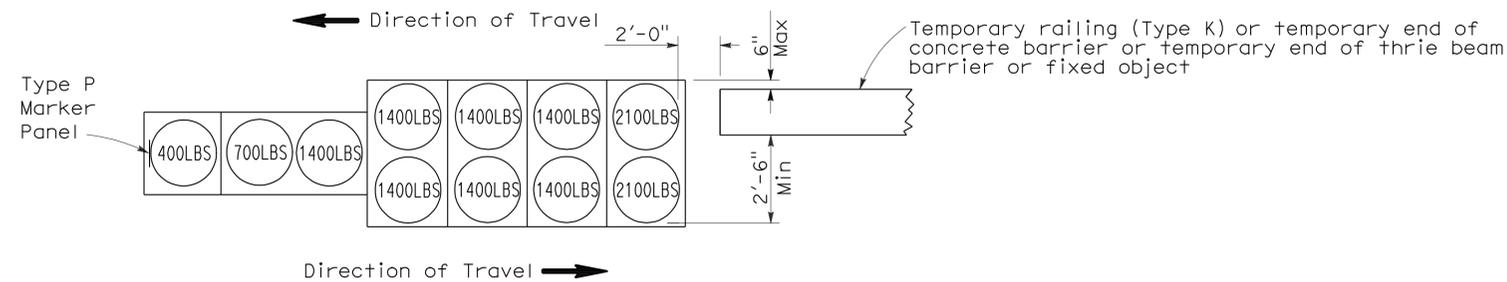
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02	Teh	99	14.1	37	73

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

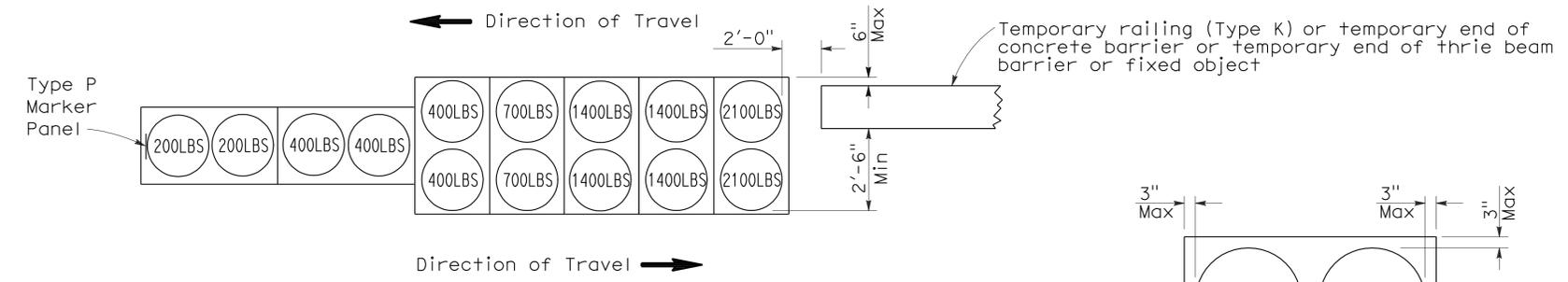
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To accompany plans dated 3-26-12



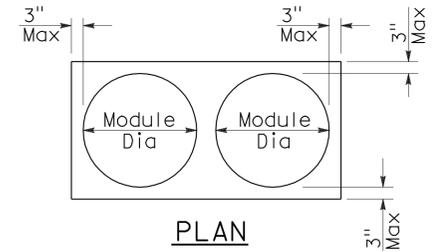
**ARRAY 'TB11'**

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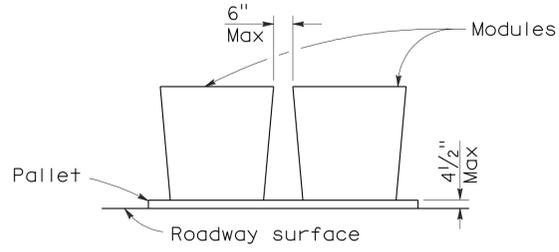


**ARRAY 'TB14'**

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 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

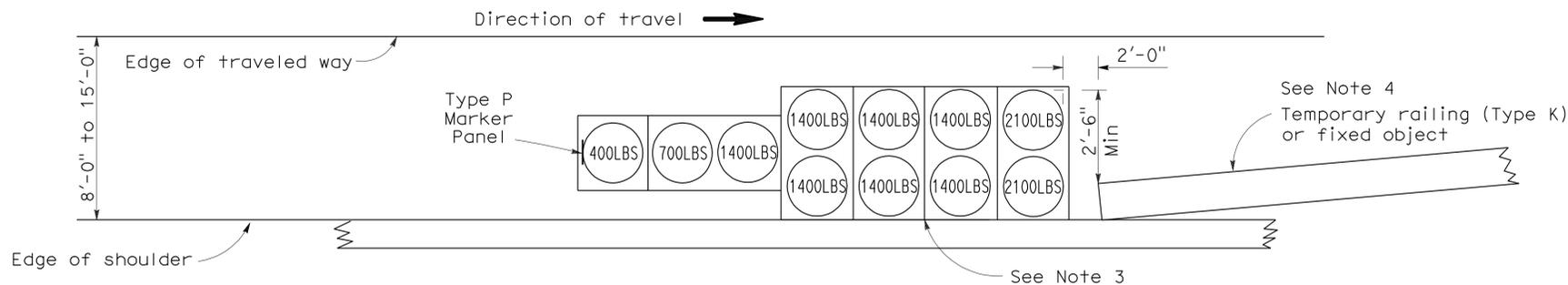
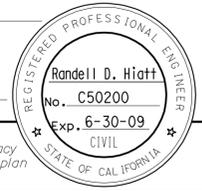
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	14.1	38	73

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

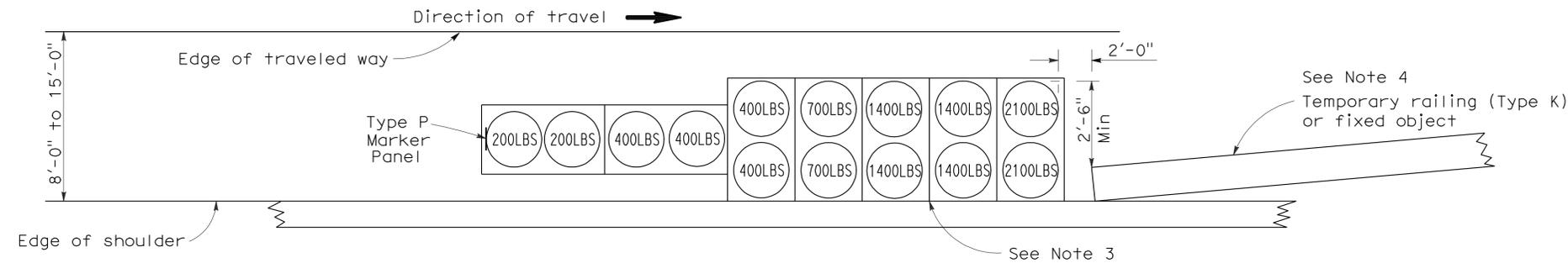
June 6, 2008  
PLANS APPROVAL DATE

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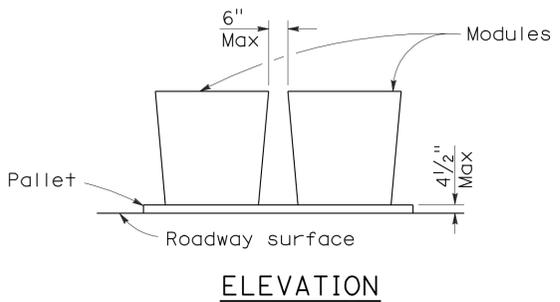
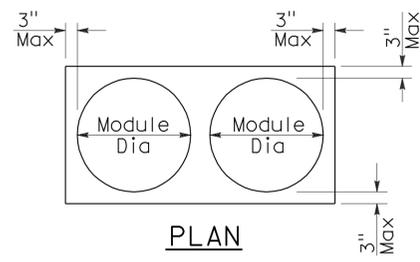
To accompany plans dated 3-26-12



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



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



**CRASH CUSHION PALLET DETAIL**  
See Note 11

**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

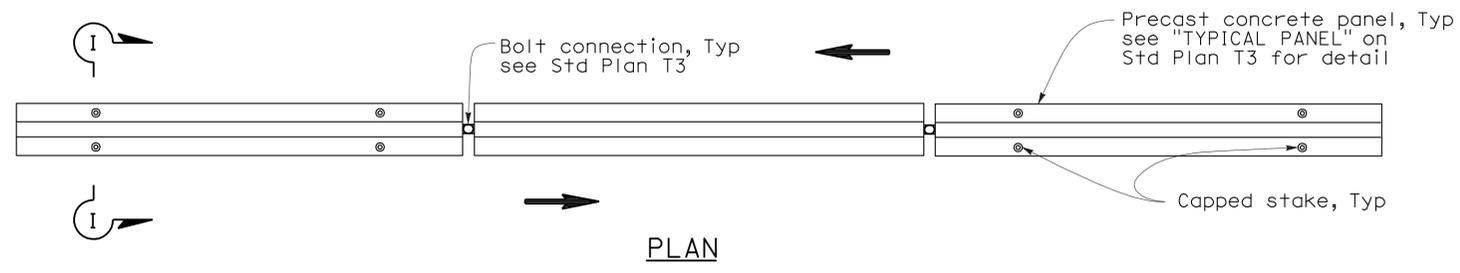
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	39	73

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

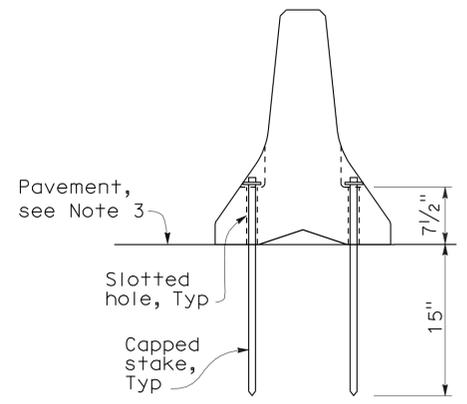
May 20, 2011  
PLANS APPROVAL DATE

*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 3-26-12



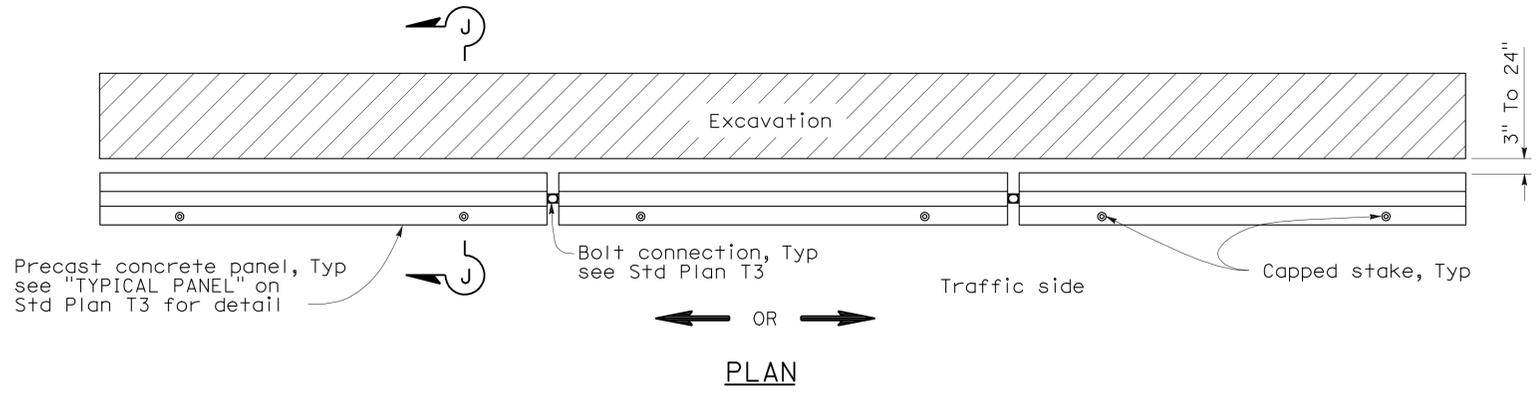
**RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC**  
See Note 1



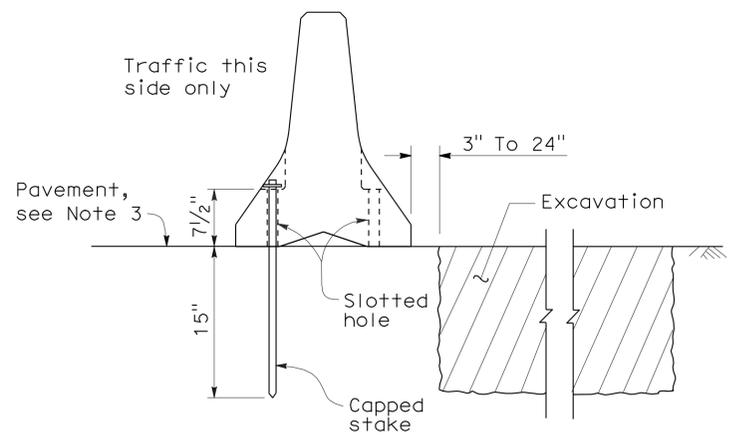
SECTION I-I

**NOTES:**

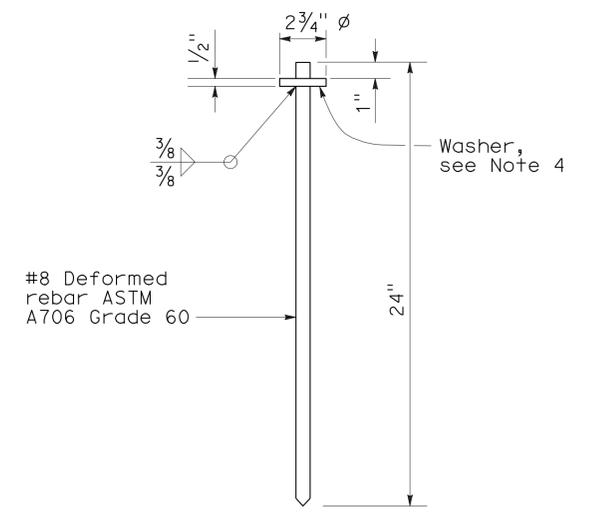
1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of 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



SECTION J-J



CAPPED STAKE DETAIL

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY RAILING  
(TYPE K)**

NO SCALE

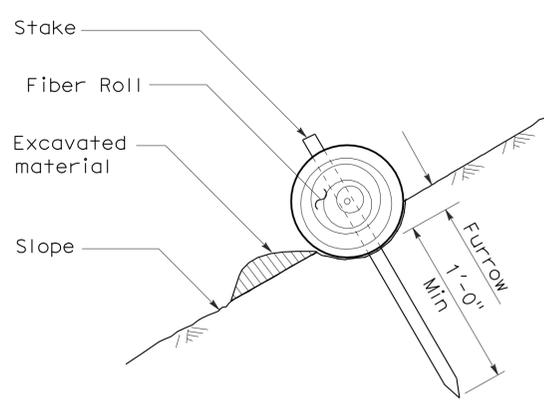
NSP T3A DATED MAY 20, 2011 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T3A

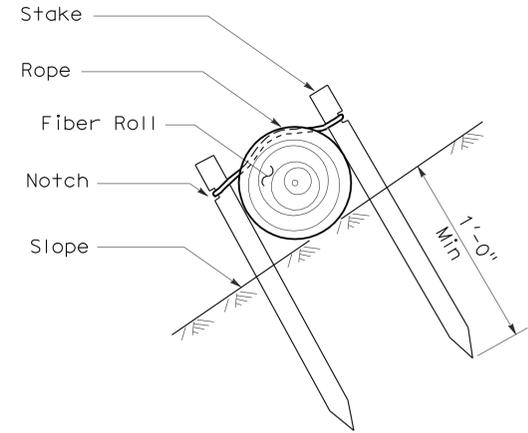
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	14.1	40	73

*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.

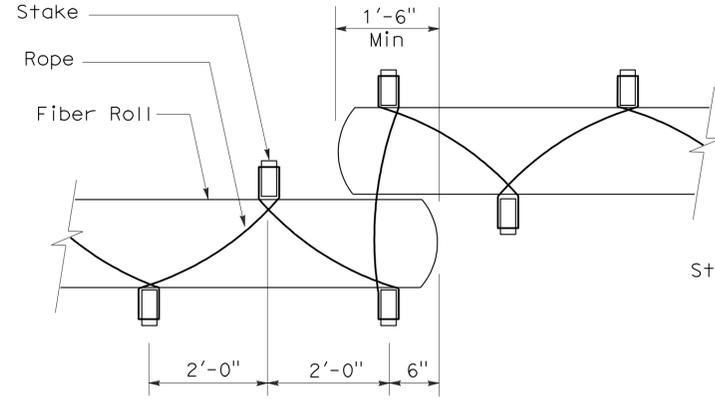
To accompany plans dated 3-26-12



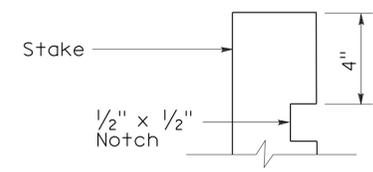
**SECTION**  
**TEMPORARY FIBER ROLL**  
**(TYPE 1)**



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

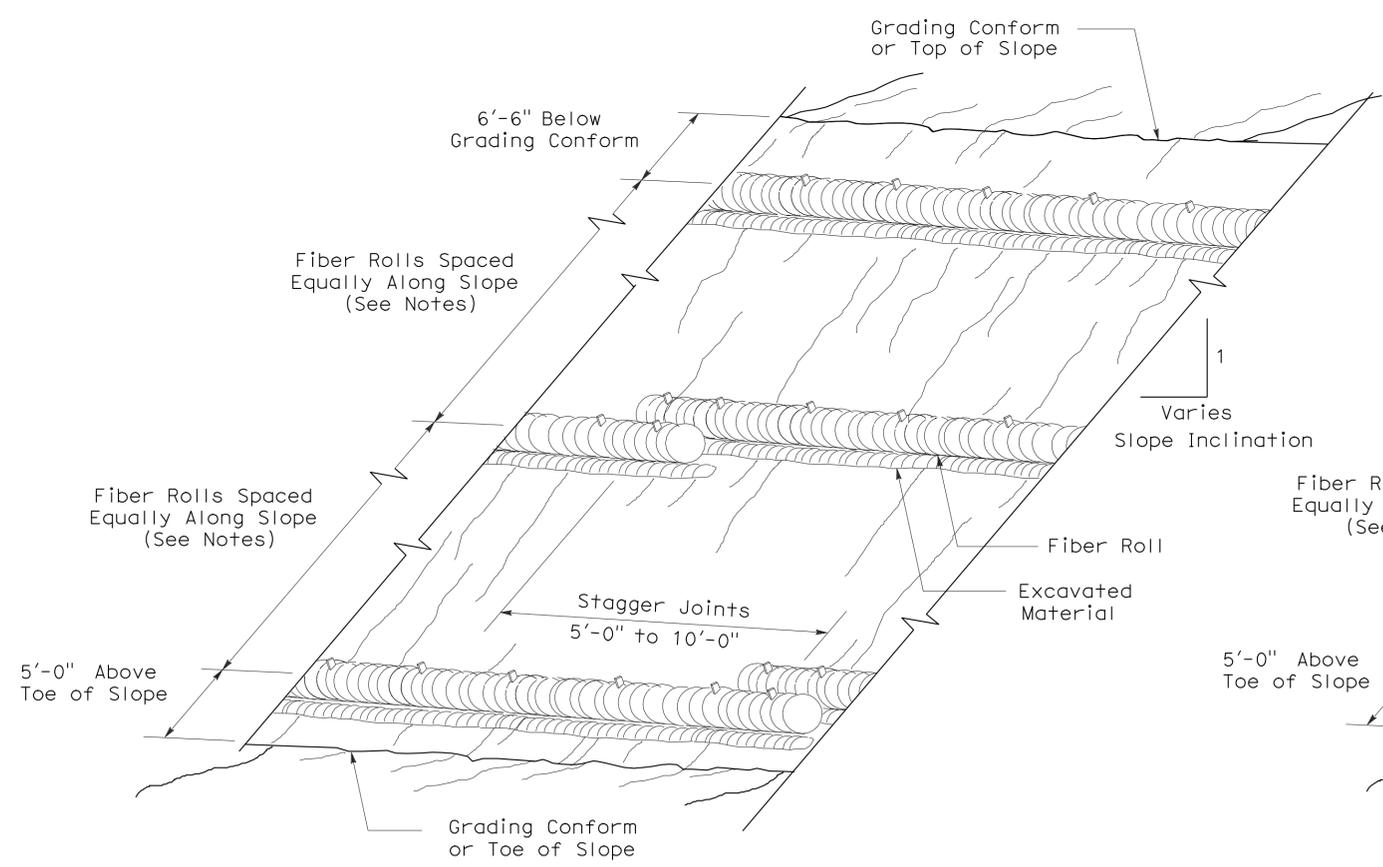


**PLAN**  
**TEMPORARY FIBER ROLL**  
**(TYPE 2)**

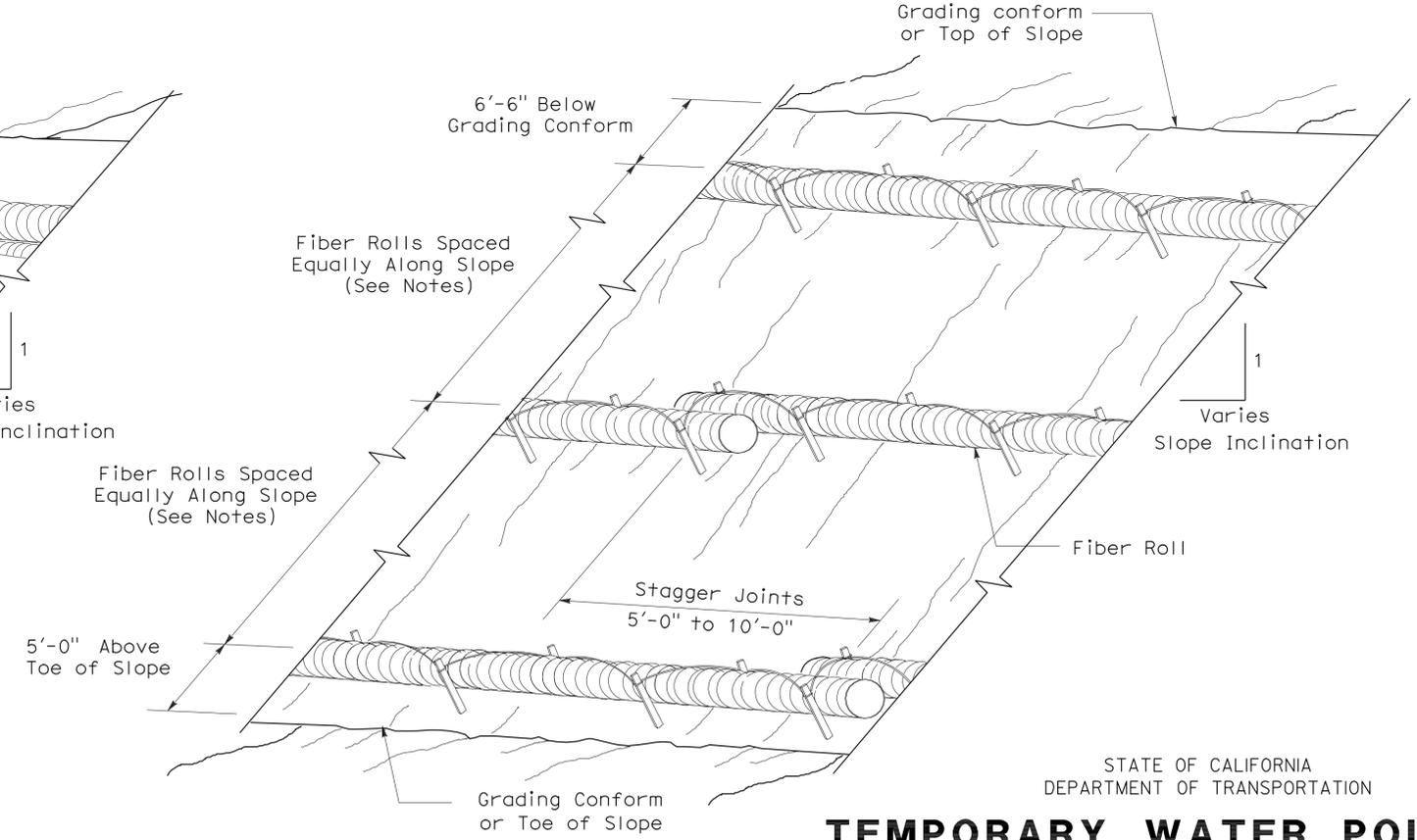


**ELEVATION**  
**STAKE NOTCH DETAIL**

- 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

RSP T56 DATED APRIL 3, 2009 SUPERSEDES STANDARD PLAN T56  
 DATED MAY 1, 2006 - PAGE 232 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T56**

2006 REVISED STANDARD PLAN RSP T56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	14.1	41	73

*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT

April 3, 2009  
 PLANS APPROVAL DATE

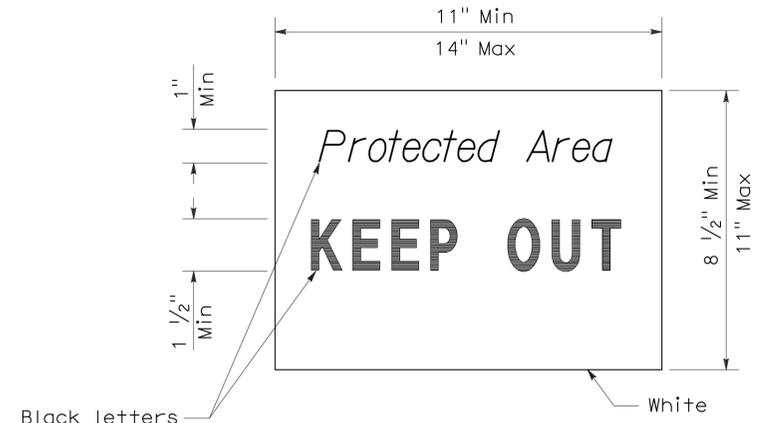
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 Signature  
 11-30-10  
 Renewal Date  
 2-25-09  
 Date

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.

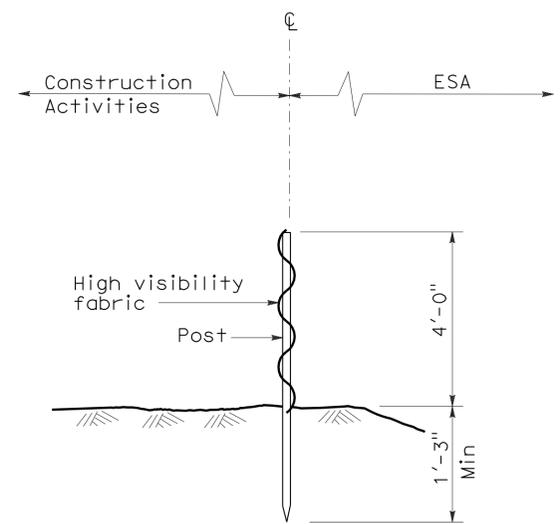
To accompany plans dated 3-26-12

**NOTE:**

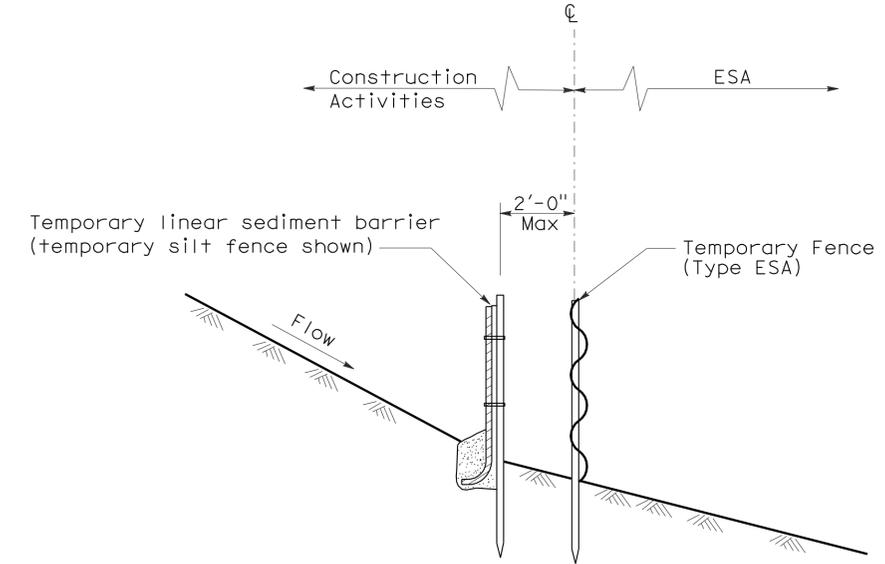
1. Temporary silt fence and temporary straw bale barrier shown for reference purposes only.



**SIGN DETAIL**

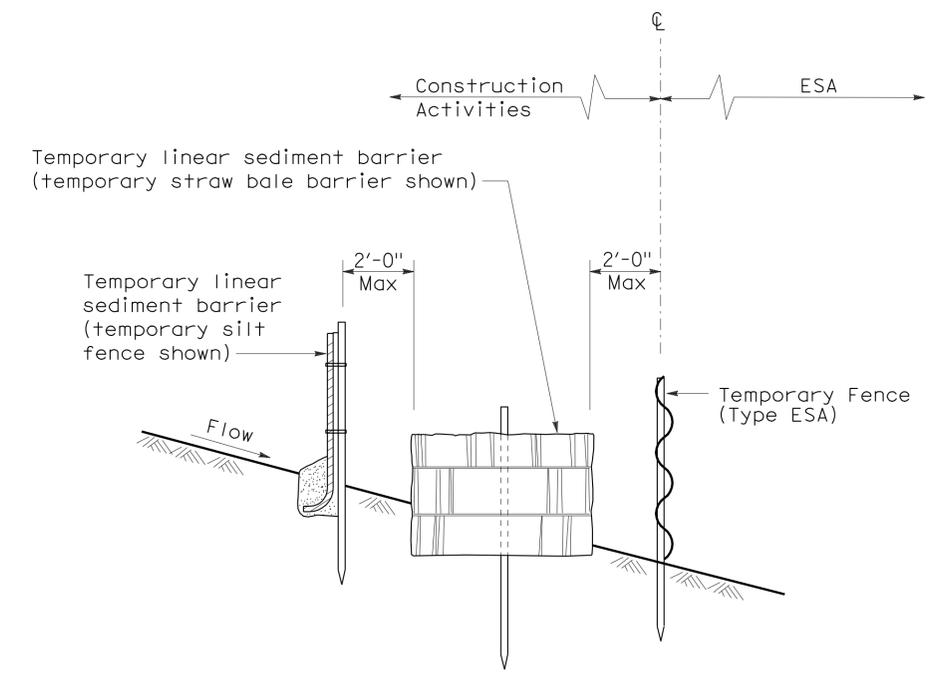


**SECTION TEMPORARY FENCE (TYPE ESA)**



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

(See Note 1 )



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

(See Note 1 )

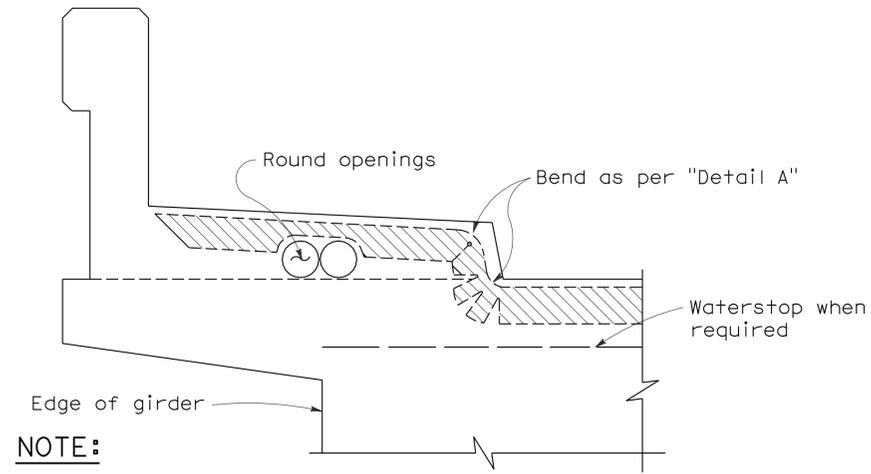
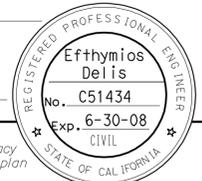
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

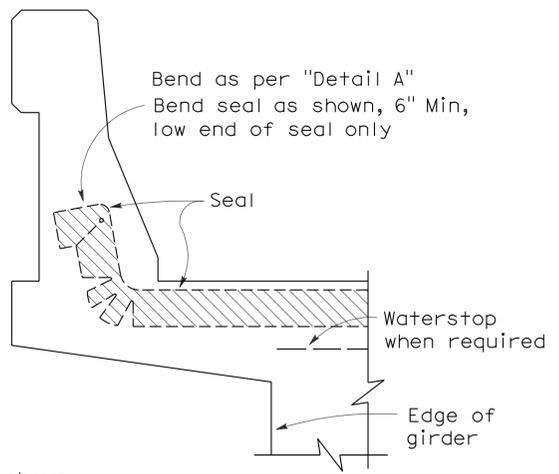
NSP T65 DATED APRIL 3, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T65

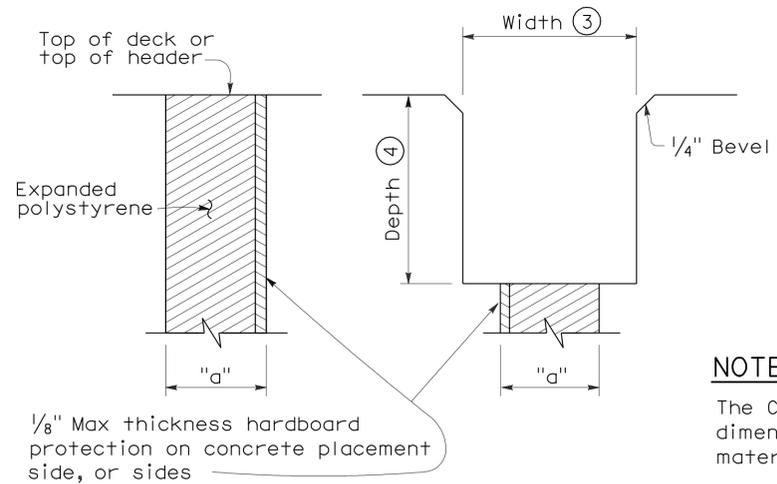


**NOTE:**  
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend Type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

**CONCRETE BARRIER AND SIDEWALK**



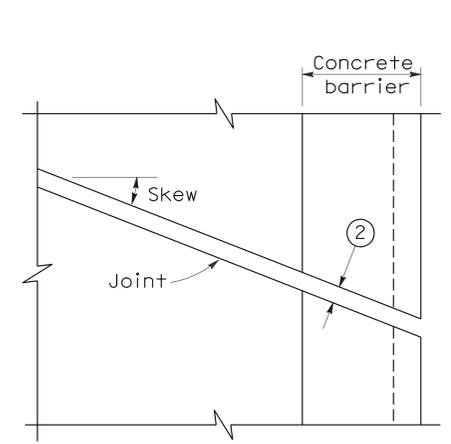
**CONCRETE BARRIER**



**FORMING DETAIL SAWCUT DETAIL**

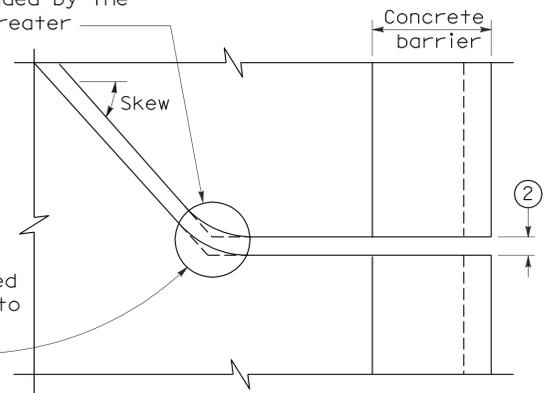
**NOTE:**  
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

**JOINT SEALS DETAILS**



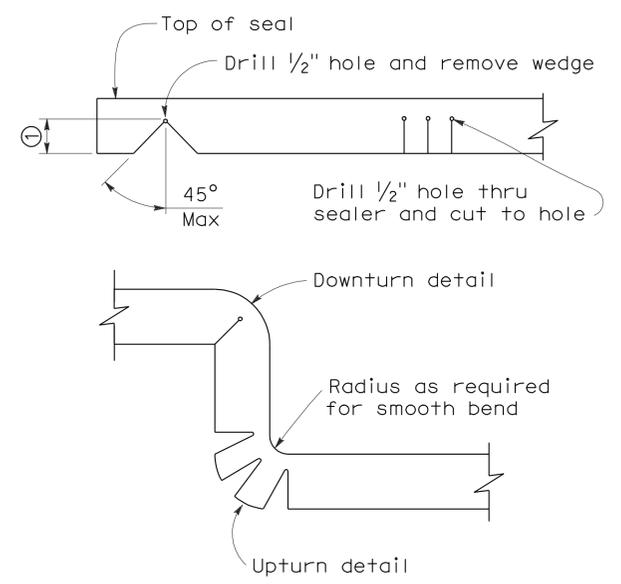
**PLAN OF JOINT (SKEW ≤ 20°)**

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.



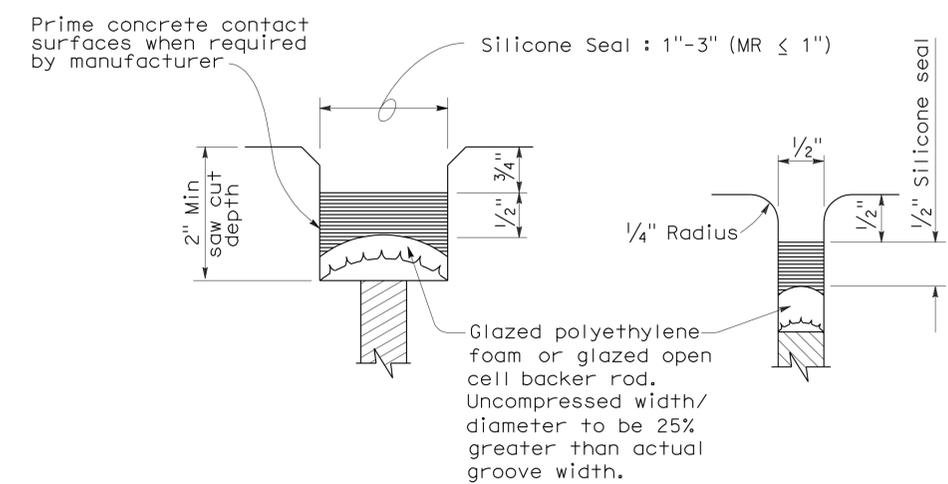
**DETAIL A**

**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"

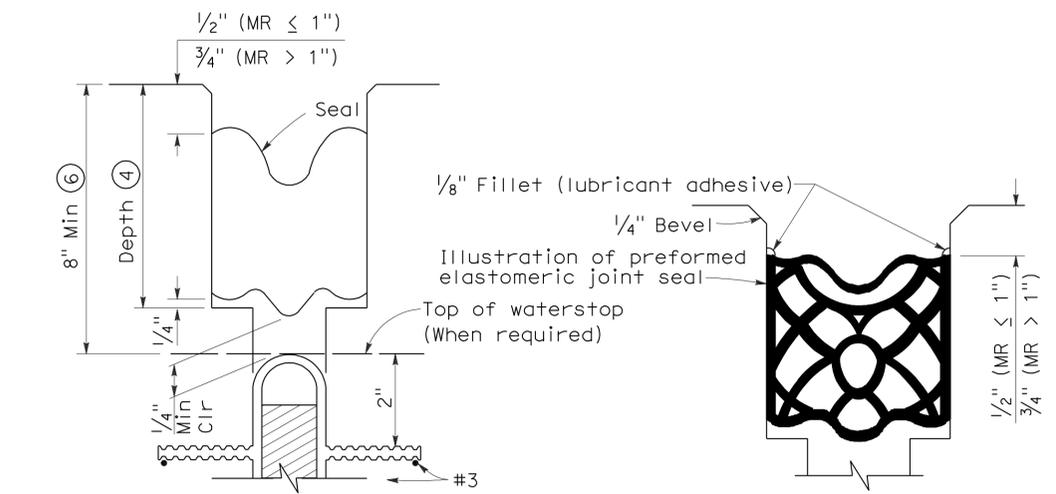


**TYPE A SEAL**

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"

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

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.

# ELECTROLIERS

STANDARD TYPES		
15, 15D		High mast light pole
15 STRUCTURE		Double Arm lighting standard
21, 21D STRUCTURE		Existing electrolier
30		Electrolier foundation (Future installation)
31		
32		
35		
36-20A		

**NOTES:**

- Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- Variations noted adjacent to symbol on project plans.

- Electrolier (see project notes or project plans)
- Luminaire on wood pole

## 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
02	Teh	99	14.1	43	73

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
Jeffery G. McRae  
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.

To accompany plans dated 3-26-12

## SOFFIT AND WALL MOUNTED LUMINAIRES

- Pendant, 70 W HPS unless otherwise specified.
- Flush, 70 W HPS unless otherwise specified.
- Wall surface, 70 W HPS unless otherwise specified.
- Existing soffit or wall luminaire to remain unmodified.
- Existing soffit or wall luminaire to be modified as specified.

### NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA  
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
02	Teh	99	14.1	44	73

*Jeffery G. McRae*  
 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

### 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

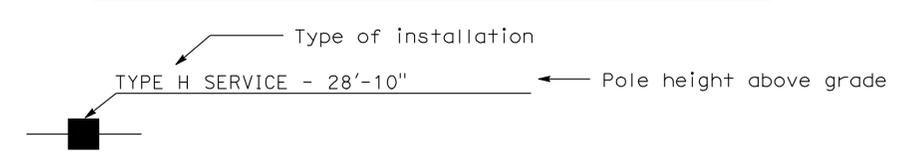
### SIGNAL EQUIPMENT

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

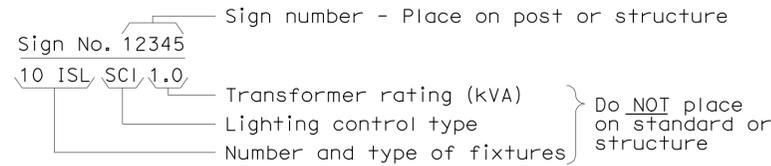
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B  
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

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

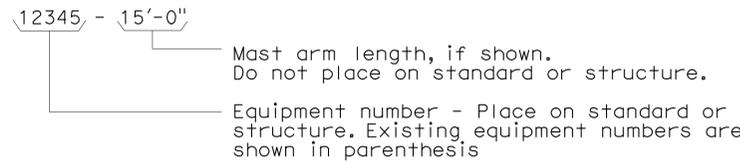
2006 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

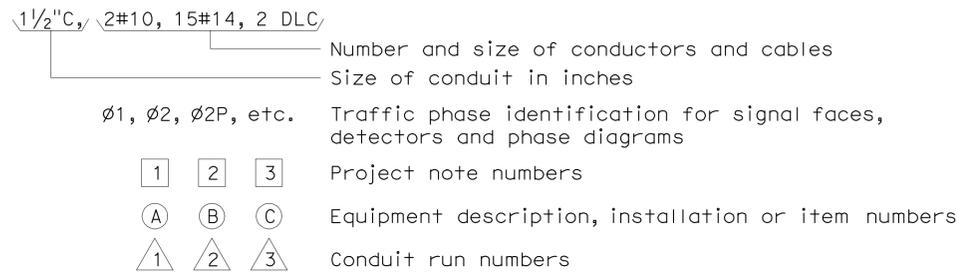
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



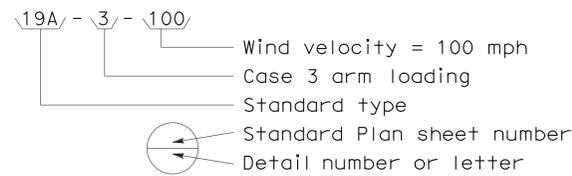
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



#### CONDUIT AND CONDUCTOR IDENTIFICATION:



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



### MISCELLANEOUS EQUIPMENT

PROPOSED	EXISTING	
CMS	cms	Changeable message sign
		Closed circuit television camera
EMS	ems	Highway advisory radio pole and antenna
		Extinguishable message sign
M V	m v	Detection device M = Microwave sensor V = Video image sensor

### WIRING DIAGRAM LEGEND

P	Pole	----	External conductor
CB	Circuit breaker	—	Conductor or bus
A	Ampere	—●—	Tie point
V	Volt	—/—	Contactor coil
M	Metered	— —	Contactor, Contact NO
UM	Unmetered	—X—	Terminal blocks
NB	Neutral bus	— /—	Contactor, Contact NC
GB	Ground bus	—/—	Enclosure bond
G	Equipment grounding conductor	— —	Grounding electrode
N	Grounded conductor (Neutral)	— —	Circuit breaker
		—(R)—	Receptacle

### PULL BOXES

PROPOSED	EXISTING	
		Pull box-No. 5 unless otherwise indicated or noted.
		Pull box-Additional designations or descriptions
3		(C) = Communications pull box
5		(E) = Pull box with extension
6		(S) = Sprinkler control pull box
7		(21) = Anchor bolts and conduit for future installation of Type 21 Standard
8		(T) = Traffic pull box
9		
9A		

### VEHICLE DETECTORS

PROPOSED	EXISTING	
		Type A detector loop. Outline of sawcut shown.
		Type B detector loop. Outline of sawcut shown.
		Type C detector loop. Outline of sawcut shown.
		Type D detector loop. Outline of sawcut shown.
		Type E detector loop. Outline of sawcut shown.
		Type Q detector loop. Outline of sawcut shown.
		Magnetic detector
		Detector handhole
		Microwave or video detection zone

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

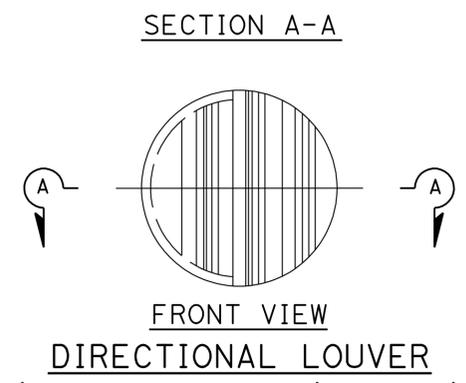
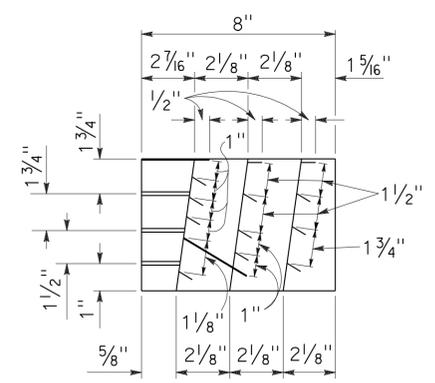
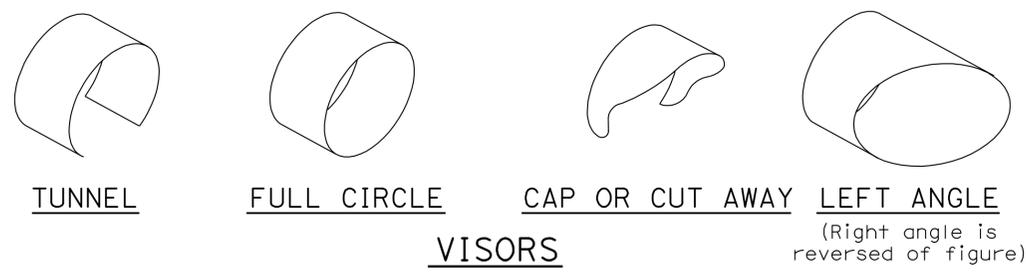
RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C  
DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

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

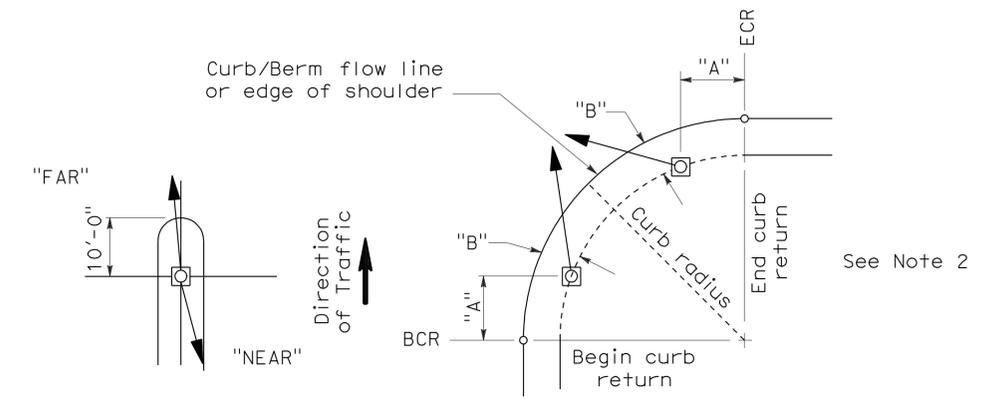
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	14.1	46	73

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

To accompany plans dated 3-26-12



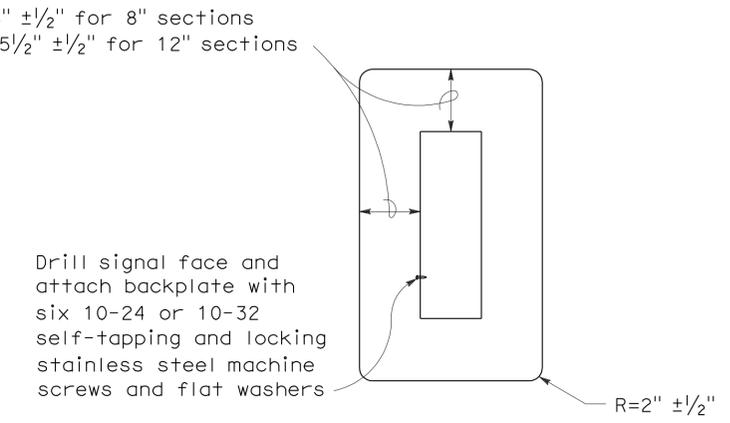
Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.



**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.

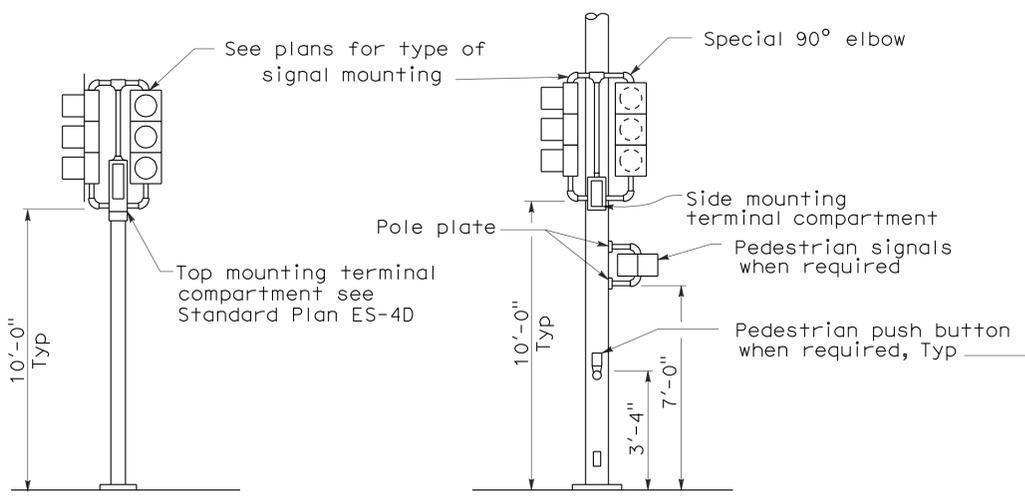
**SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS**



**8" AND 12" SECTIONS**

**BACKPLATE**

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



**TOP MOUNTED SIGNALS (TV)**

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

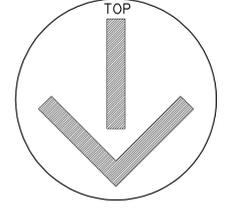
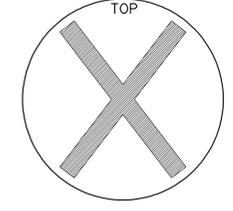
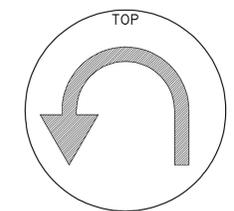
**SIDE MOUNTED SIGNALS (SV AND SP)**

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**



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

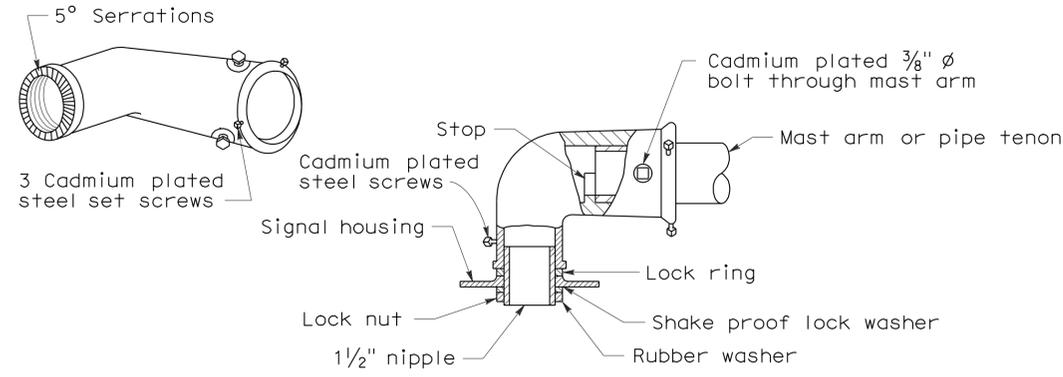
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	14.1	47	73

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

June 6, 2008  
 PLANS APPROVAL DATE

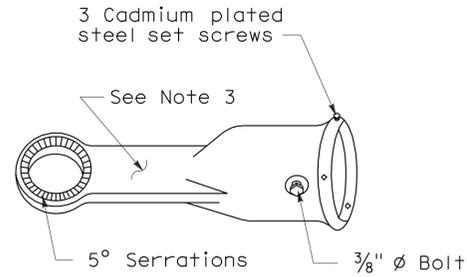
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 3-26-12



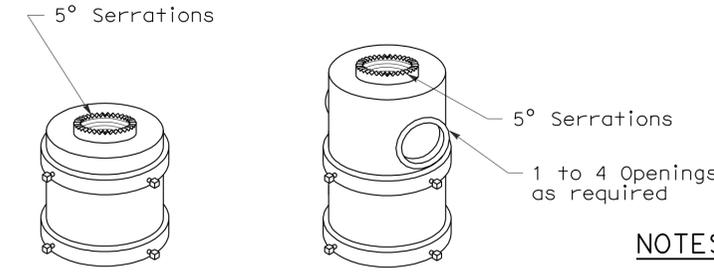
**MAST ARM MOUNTING - TYPE "MAT"**

For 2 NPS pipe, see Note 1.



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

For 2 NPS pipe. See Note 1.

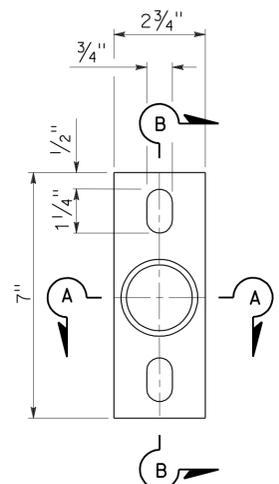


For one mounting For multiple mountings

**TOP MOUNTINGS**

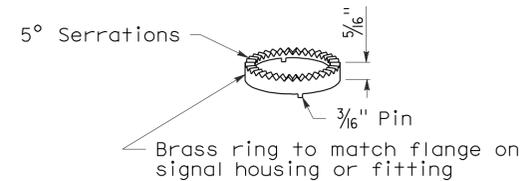
For 4 NPS pipe, see Note 2.

**SIGNAL SLIP FITTERS**



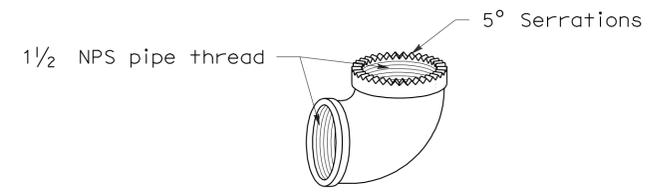
**POLE PLATE**

For side mountings



**LOCK RING**

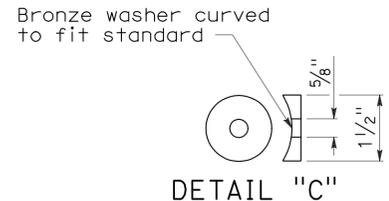
Use where locking ring is not integral with signal housing or fitting.



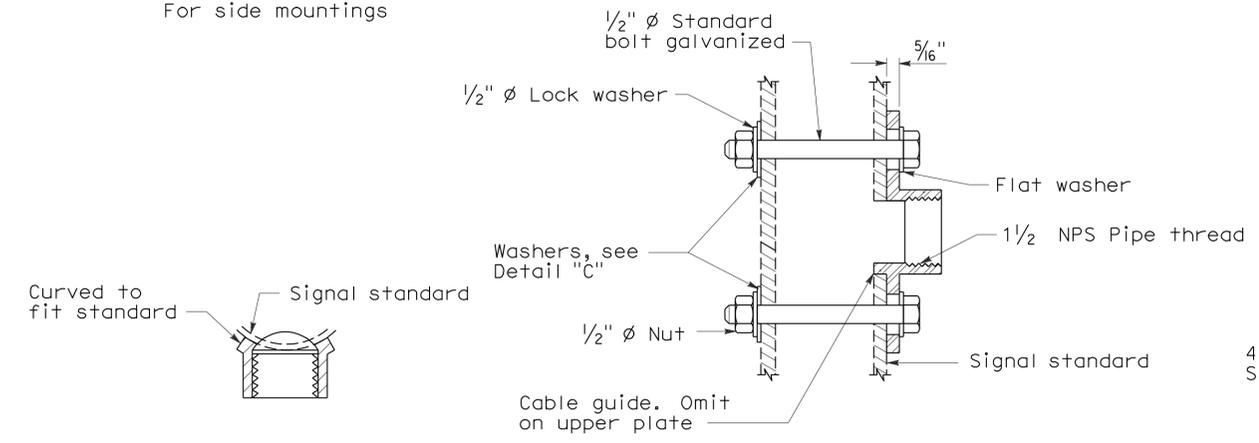
**SPECIAL 90° ELBOW**

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

**MISCELLANEOUS MOUNTING HARDWARE**

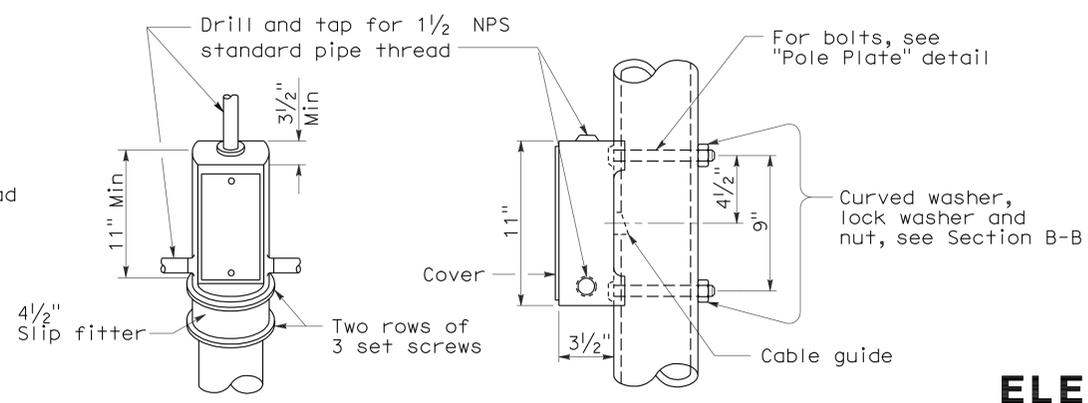


**DETAIL "C"**



**SECTION A-A**

**SECTION B-B**



**TOP MOUNTING**

**SIDE MOUNTING**

**TERMINAL COMPARTMENTS**

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

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

NO SCALE

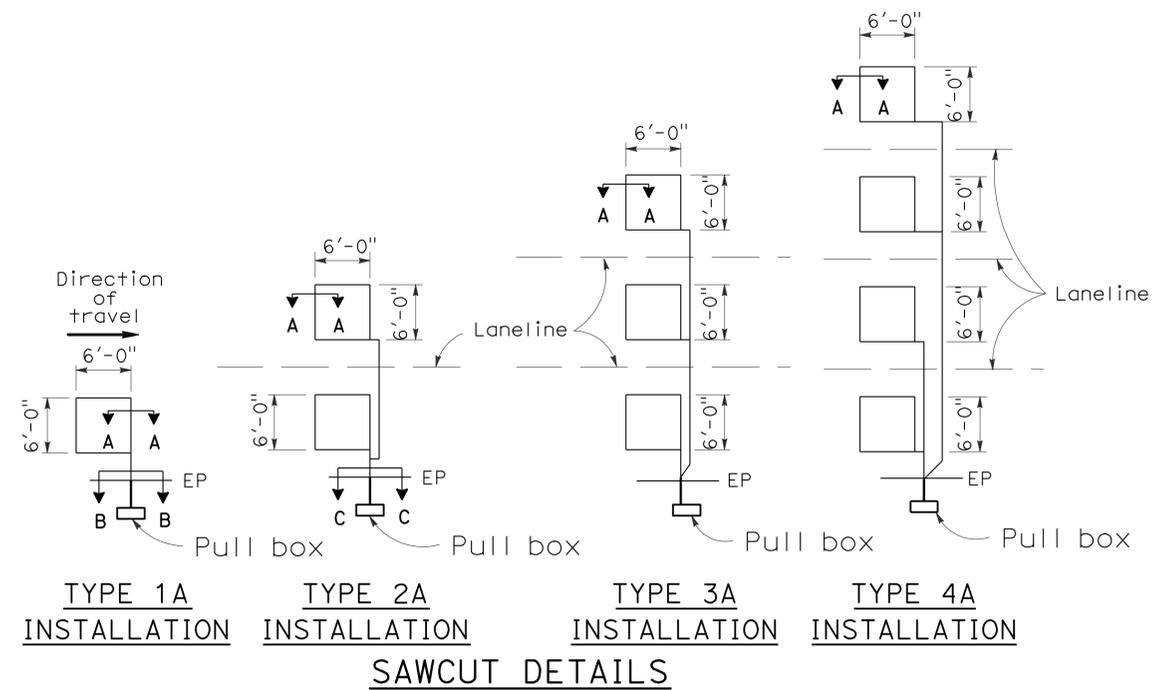
RSP ES-4D DATED June 6, 2008 SUPERSEDES STANDARD PLAN ES-4D DATED MAY 1, 2006 - PAGE 421 OF THE STANDARD PLANS BOOK DATED MAY 2006.

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

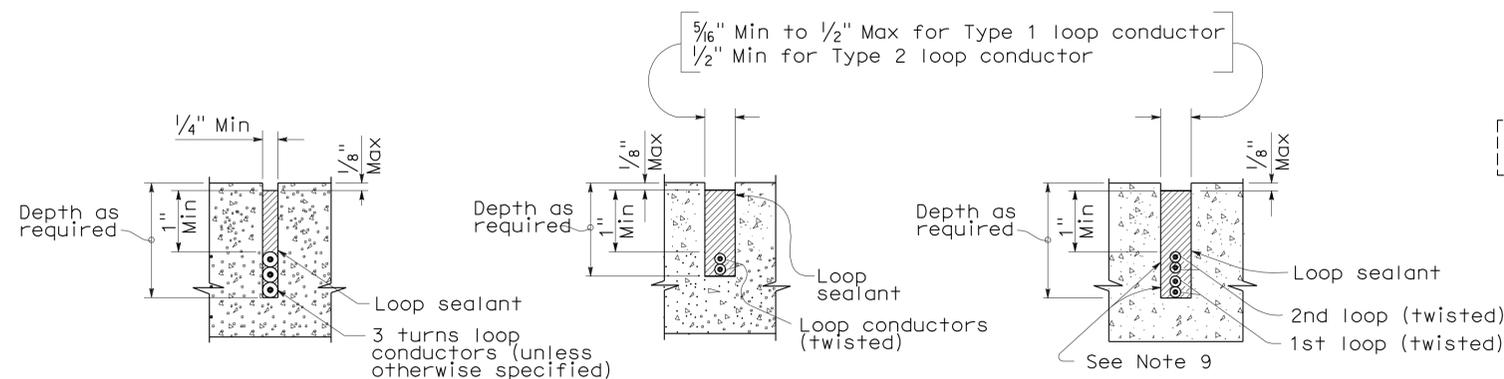
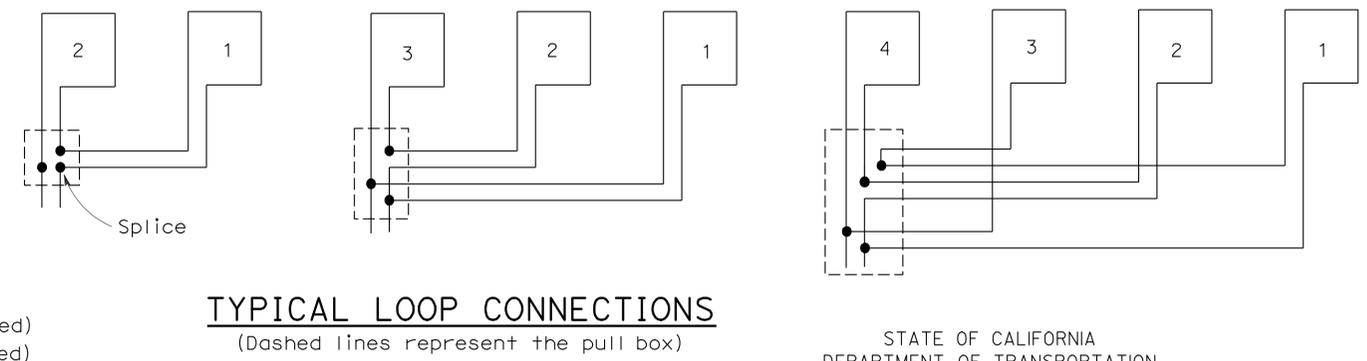
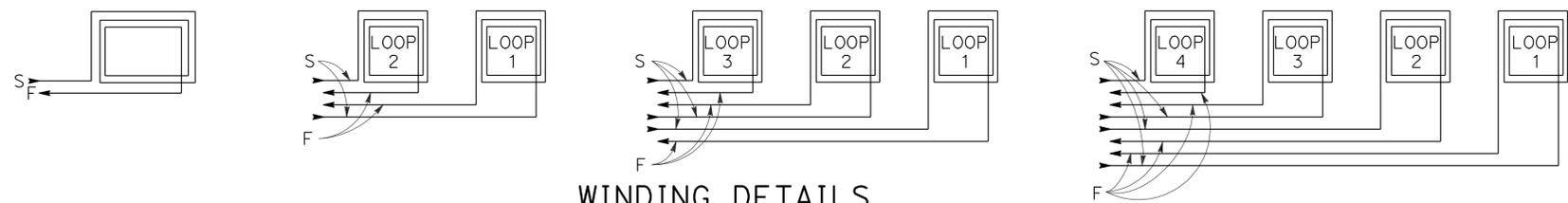
2006 REVISED STANDARD PLAN RSP ES-4D

# 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)



**SECTION A-A SECTION B-B SECTION C-C**  
**SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR**

## ELECTRICAL SYSTEMS (DETECTORS)

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**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	14.1	48	73

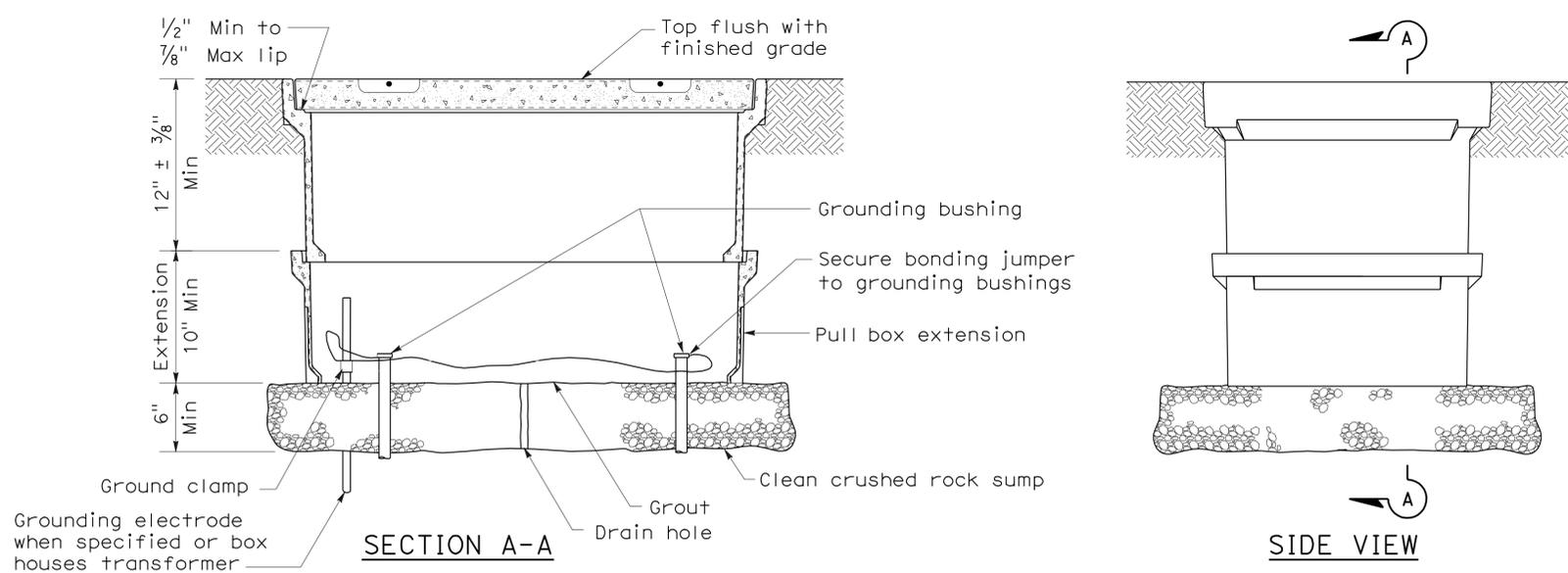
*Jeffery G. McRae*  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 3-26-12

2006 REVISED STANDARD PLAN RSP ES-5A

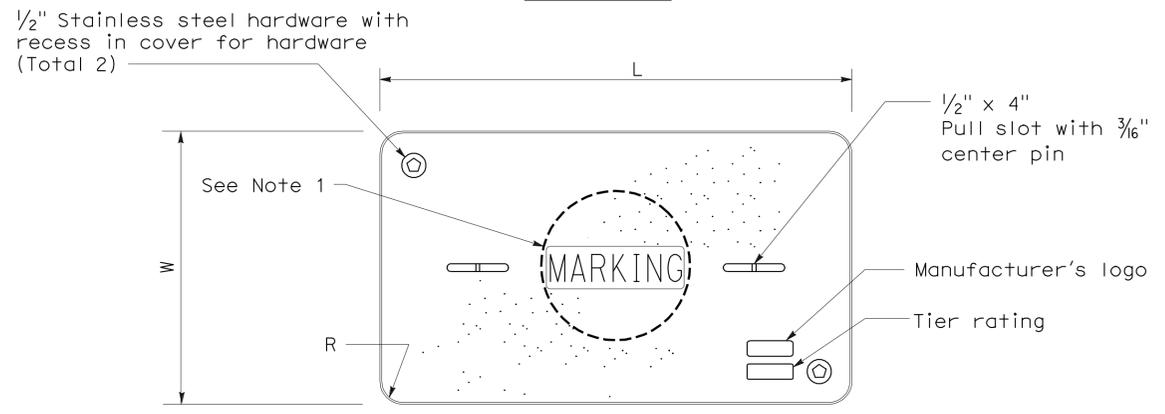
To accompany plans dated 3-26-12

2006 NEW STANDARD PLAN NSP ES-8A

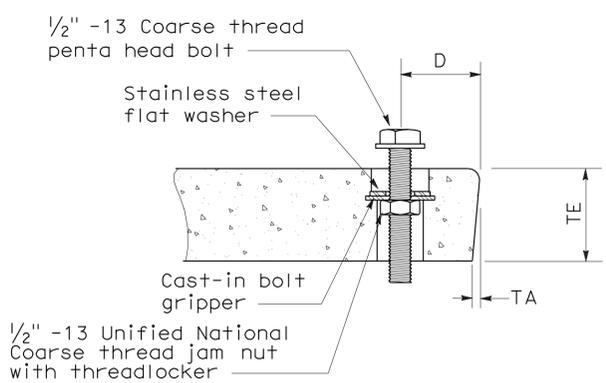


**INSTALLATION DETAILS**

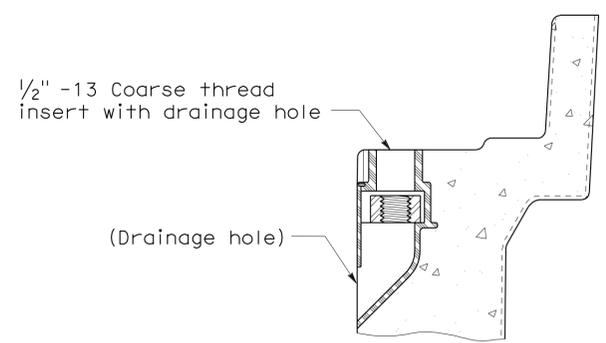
**DETAIL A**



**COVER TOP VIEW**



**TYPICAL COVER CAPTIVE BOLT**  
(Or similar)



**TYPICAL THREADED INSERT**  
(Or similar)

**NOTES ON PULL BOXES:**

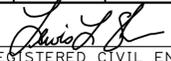
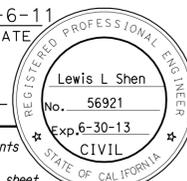
- Pull box covers must be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;
  - No. 3/2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

**DIMENSION TABLE**

PULL BOX	PULL BOX			COVER						
	Minimum Depth Box	Minimum Depth Extension	Maximum Weight	L	W	R	TE	TA	D	Maximum Weight
No. 3/2	12"	N/A	40 lb	1' - 3 3/8"	10 1/8"	1 3/8"	2"	1/8"	1 3/4"	30 lb
No. 5	12"	10"	55 lb	1' - 11 1/4"	1' - 1 3/4"	1 3/8"	2"	1/8"	1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 6 1/2"	1' - 5 1/2"	1 3/8"	2"	1/8"	2"	85 lb

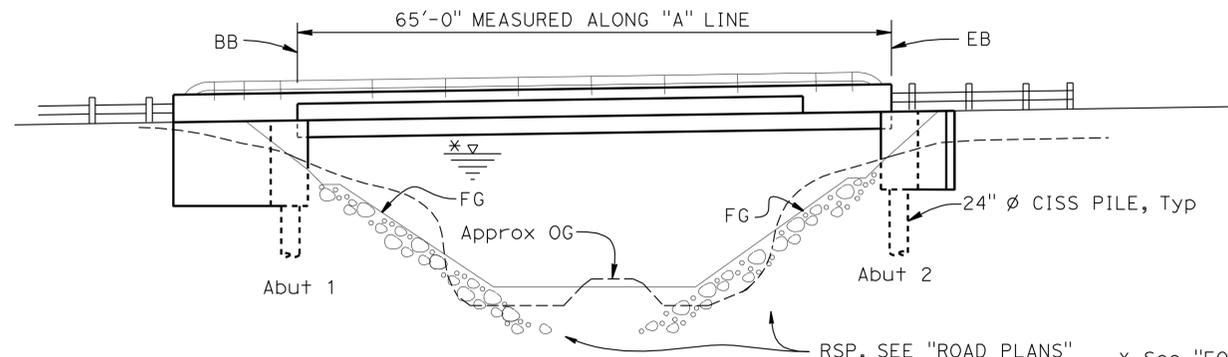
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(PULL BOX)**  
NO SCALE

NSP ES-8A DATED JANUARY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	50	73
 REGISTERED CIVIL ENGINEER			10-6-11	DATE	
3-26-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

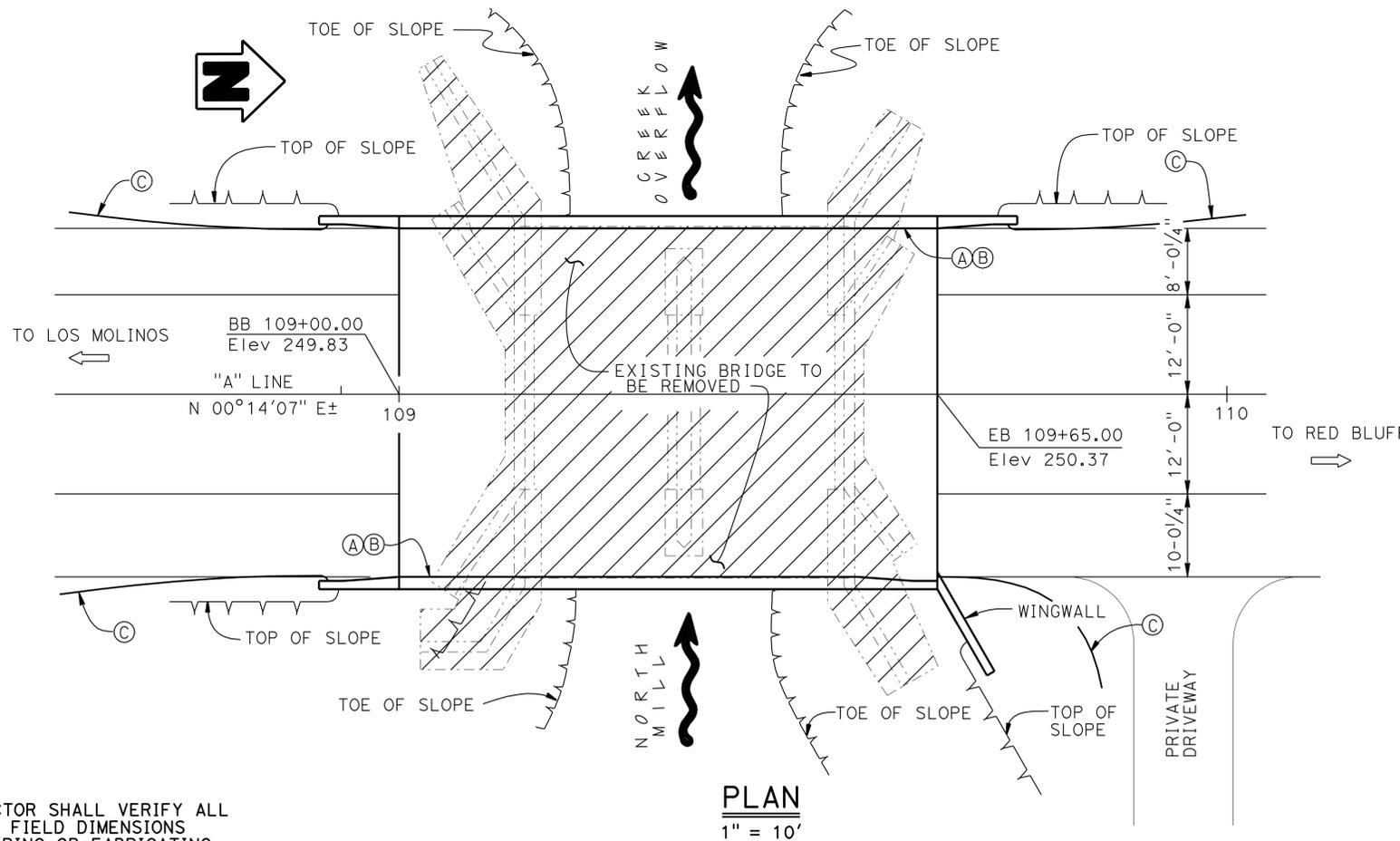
Elev 249.41 Sta 108+50.00 +0.839% Elev 250.67 Sta 110+00.00

**PROFILE GRADE**  
NO SCALE



DATUM Elev = 215.00

**ELEVATION**  
1" = 10'



**PLAN**  
1" = 10'

**NOTES:**

- (A) Paint "NORTH FORK MILL CREEK BRIDGE"
- (B) Paint "BR NO. 08-0166"
- (C) MBGR, see "ROAD PLANS"

For "STAGE 1" and "STAGE 2" "TYPICAL SECTIONS", see "GENERAL PLAN NO. 2" sheet

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

**LEGEND:**

 Indicates Bridge Removal

**QUANTITIES**

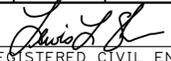
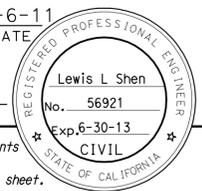
PREPARE CONCRETE BRIDGE DECK SURFACE	2,732	SQFT
BRIDGE REMOVAL	LUMP	SUM
STRUCTURE EXCAVATION (BRIDGE)	271	CY
STRUCTURE BACKFILL (BRIDGE)	86	CY
FURNISH 24" CAST-IN-STEEL SHELL	756	LF
CONCRETE PILING		
DRIVE 24" CAST-IN-STEEL SHELL CONCRETE PILE	12	EA
PRESTRESSING (TRANSVERSE TIE RODS)	LUMP	SUM
STRUCTURAL CONCRETE, BRIDGE	31	CY
FURNISH PRECAST PRESTRESSED CONCRETE VOIDED SLAB	2,824	SQFT
FURNISH PRECAST ABUTMENT	4	EA
FURNISH PRECAST WINGWALL	4	EA
ERECT PRECAST PRESTRESSED CONCRETE VOIDED SLAB	15	EA
ERECT PRECAST ABUTMENT	4	EA
ERECT PRECAST WINGWALL	4	EA
FURNISH POLYESTER CONCRETE OVERLAY	180	CF
PLACE POLYESTER CONCRETE OVERLAY	2,732	SQFT
JOINT SEAL (MR 1")	86	LF
BAR REINFORCING STEEL (BRIDGE)	14,050	LB
TUBULAR BICYCLE RAILING	166	LF
CONCRETE BARRIER (TYPE 736)	166	LF

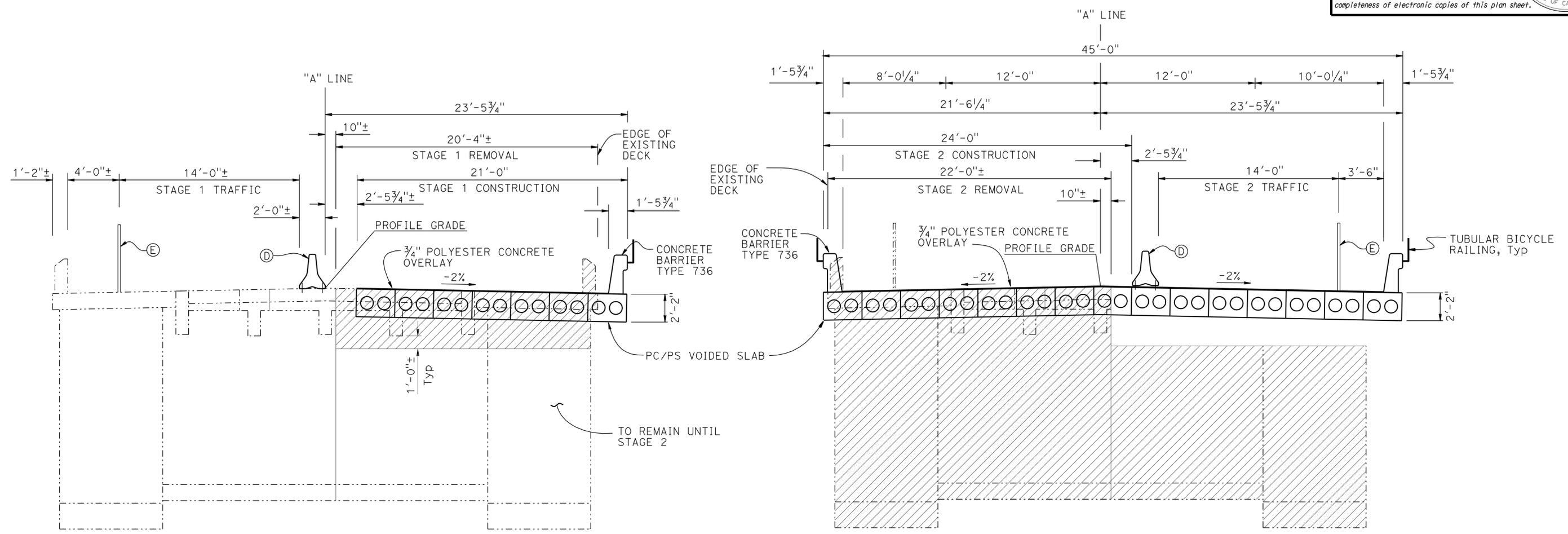
NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN ENGINEER Joseph E. Downing	DESIGN	BY Lewis L. Shen	CHECKED Joey Aquino	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	08-0166	<b>NORTH FORK MILL CREEK BRIDGE (REPLACE)</b> <b>GENERAL PLAN NO. 1</b>
	DETAILS	BY Jay Reid	CHECKED Joey Aquino	LAYOUT	BY Lewis L. Shen		DESIGN BRANCH	3	
	QUANTITIES	BY Art Herrera	CHECKED Ye Yang	SPECIFICATIONS	BY Dave Klein		PLANS AND SPECS COMPARED	Dave Klein	

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3578		PROJECT NUMBER & PHASE: 0200000163-1		CONTRACT NO.: 02-2C1121		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET 1 OF 24	
												1-5-10		10-3-11	

USERNAME => s123631 DATE PLOTTED => 29-MAR-2012 TIME PLOTTED => 18:03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	51	73
 REGISTERED CIVIL ENGINEER			10-6-11	DATE	
3-26-12			PLANS APPROVAL DATE		
					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



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

**STAGE 2**  
1/4" = 1'-0"

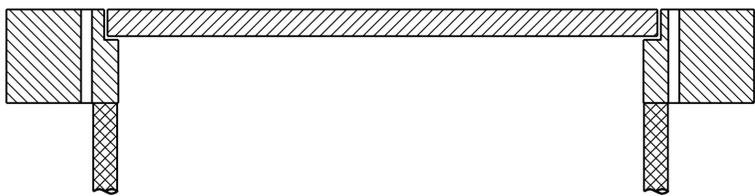
- NOTES:**
- Ⓓ Temporary Railing (Type K), see "ROAD PLANS"
  - Ⓔ Temporary Surface Mounted Channalizer, see "ROAD PLANS"
- See "GENERAL PLAN NO. 1" sheet for "PLAN" and "ELEVATION" views
- LEGEND:**
-  Indicates Bridge Removal

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

DESIGN ENGINEER Joseph E. Downing	DESIGN	BY Lewis L. Shen	CHECKED Joey Aquino	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>3</b>	BRIDGE NO.	NORTH FORK MILL CREEK BRIDGE (REPLACE)		
	DETAILS	BY Jay Reid	CHECKED Joey Aquino	LAYOUT	BY Lewis L. Shen			CHECKED Joey Aquino	POST MILE	GENERAL PLAN NO. 2	
	QUANTITIES	BY Art Herrera	CHECKED Ye Yang	SPECIFICATIONS	BY Dave Klein	CHECKED Dave Klein	14.00				
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS							UNIT: 3578 PROJECT NUMBER & PHASE: 0200000163-1	CONTRACT NO.: 02-2C1121	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 1-5-10 5-24-11 5-31-11	SHEET 2 OF 24

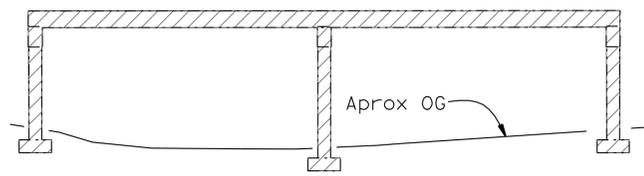
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	52	73

REGISTERED CIVIL ENGINEER *Lewis L Shen* DATE 10-6-11  
 PLANS APPROVAL DATE 3-26-12  
 Lewis L Shen  
 No. 56921  
 Exp. 6-30-13  
 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.

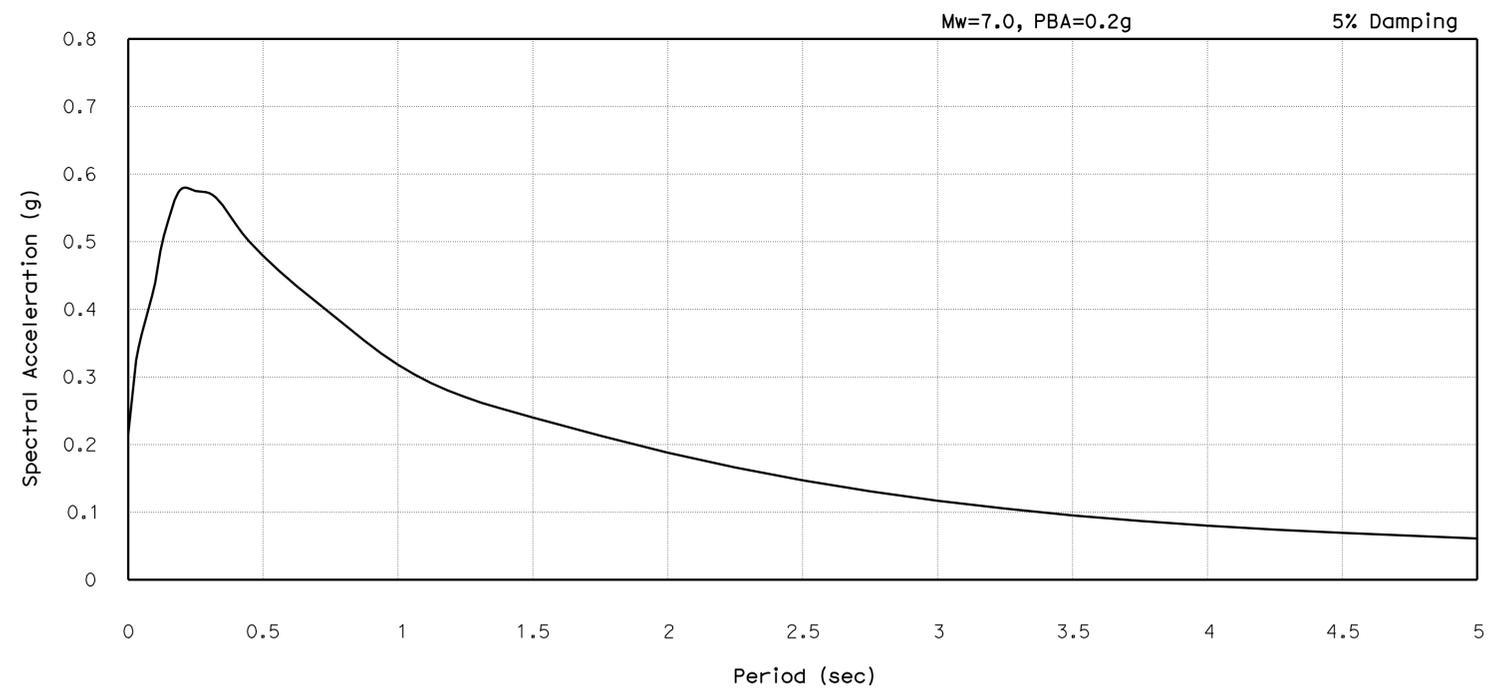


- Structural Concrete, Bridge, 2.5 ksi @ 3 days, 4 ksi @ 28 days
- PC/PS Concrete Slab. See "PRESTRESSED CONCRETE SLAB DETAILS NO. 1"
- PC Abutment / Wingwall 4 ksi @ 28 days
- 2'-0"  $\phi$  CISS Concrete Pile

**CONCRETE STRENGTH AND TYPE LIMITS**  
No Scale



- Existing Bridge Removal Limits
- LIMITS OF BRIDGE REMOVAL**  
No Scale



**SITE SPECIFIC ARS CURVE**

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

**PILE DATA TABLE**

Location	Pile Type	Nominal Resistance		Cut-Off Elevation (ft)	Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance
		Compression	Tension				
Abutment 1	24" x 0.5" CISS	300 kips	0 kips	241.15	172.0 (a) 196.0 (b)	172.0	420 kips
Abutment 2	24" x 0.5" CISS	300 kips	0 kips	241.85	185.0 (a) 196.0 (b)	185.0	490 kips

- NOTES:  
 1) Design Tip Elevations for Abutments are controlled by: (a) Compression, (b) Lateral Load  
 2) The Specified Tip Elevation shall not be raised above the Design Tip Elevation for tension load, and lateral load  
 3) Scour potential exists to Elevation 226.0 ft Abut 1 and 234.0 ft Abut 2

**INDEX TO PLANS**

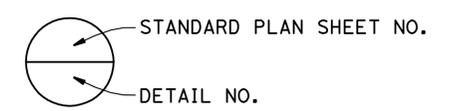
Sheet No.	Title
1	GENERAL PLAN NO. 1
2	GENERAL PLAN NO. 2
3	INDEX TO PLANS
4	DECK CONTOURS
5	FOUNDATION PLAN
6	EXISTING BRIDGE REMOVAL DETAILS
7	PRECAST ABUTMENT 1 LAYOUT
8	PRECAST ABUTMENT 2 LAYOUT
9	PRECAST ABUTMENT DETAILS NO. 1
10	PRECAST ABUTMENT DETAILS NO. 2
11	PRECAST ABUTMENT DETAILS NO. 3
12	PRECAST ABUTMENT DETAILS NO. 4
13	PRECAST ABUTMENT DETAILS NO. 5
14	TYPICAL SECTION
15	GIRDER LAYOUT
16	PRESTRESSED CONCRETE SLAB DETAILS NO. 1
17	PRESTRESSED CONCRETE SLAB DETAILS NO. 2
18	TIE ROD DETAILS
19	TUBULAR BICYCLE RAILING DETAILS
20	LOG OF TEST BORINGS 1 OF 5
21	LOG OF TEST BORINGS 2 OF 5
22	LOG OF TEST BORINGS 3 OF 5
23	LOG OF TEST BORINGS 4 OF 5
24	LOG OF TEST BORINGS 5 OF 5

**GENERAL NOTES**  
**LOAD AND RESISTANCE FACTOR DESIGN**

- DESIGN:**  
AASHTO LRFD Bridge Design Specifications, 4th edition with 2007 and the Caltrans Amendments
- SEISMIC DESIGN:**  
Caltrans Seismic Design Criteria (SDC), Version 1.5, 2009
- DEAD LOAD:**  
Includes 9.4 psf for polyester concrete overlay.
- LIVE LOADING:**  
HL93 and permit design load.
- SEISMIC LOADING:**  
See "SITE SPECIFIC ARS CURVE"
- REINFORCED CONCRETE:**  
 $f_y = 60$  ksi  
 $f'_c = 2.5$  ksi @ 3 days, 4.0 ksi @ 28 days  
 $n = 8$   
 See "PRESTRESSING NOTES" on "PRESTRESSED CONCRETE SLAB DETAILS NO. 1" sheet
- STRUCTURAL STEEL:**  
Steel Pipe Piles: ASTM 252

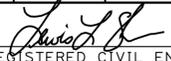
**STANDARD PLANS DATED MAY 2006**

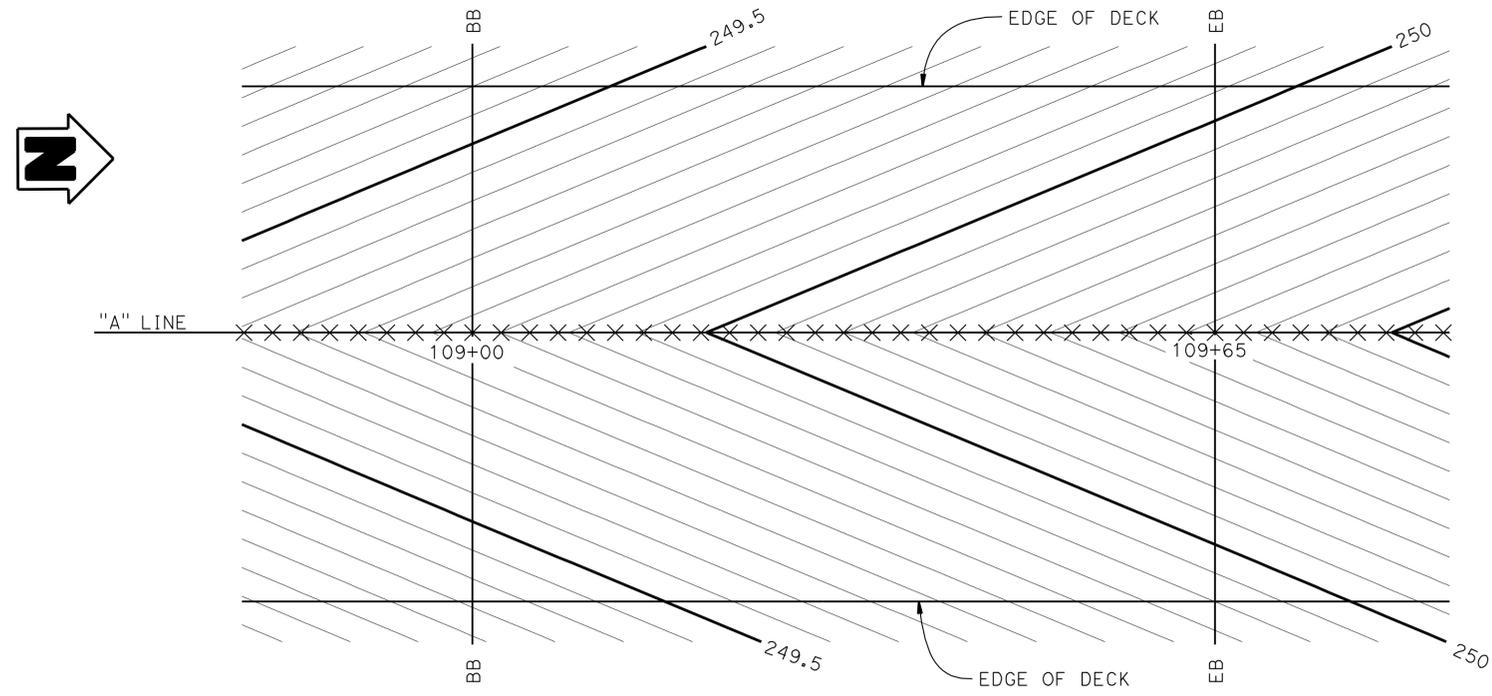
A10A	ACRONYMS AND ABBREVIATIONS (A-L)
A10B	ACRONYMS AND ABBREVIATIONS (M-Z)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE
B0-3	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
B11-56	CONCRETE BARRIER TYPE 736



STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Lewis L Shen	CHECKED Joey Aquino	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	08-0166	NORTH FORK MILL CREEK BRIDGE (REPLACE)
	DETAILS	BY Jay Reid	CHECKED Joey Aquino			POST MILE	14.00	
	QUANTITIES	BY Art Herrera	CHECKED Ye Yang			INDEX TO PLANS		

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3  
 UNIT: 3578  
 PROJECT NUMBER & PHASE: 0200000163-1 CONTRACT NO.: 02-2C1121  
 DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 REVISION DATES: 9-7-10 5-31-11 10-3-11  
 SHEET 3 OF 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	53	73
 REGISTERED CIVIL ENGINEER			10-6-11	DATE	
3-26-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

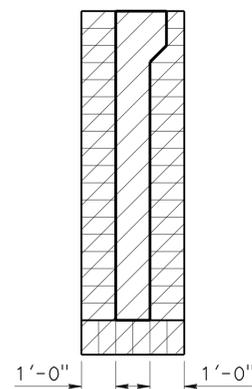


**DECK CONTOURS**

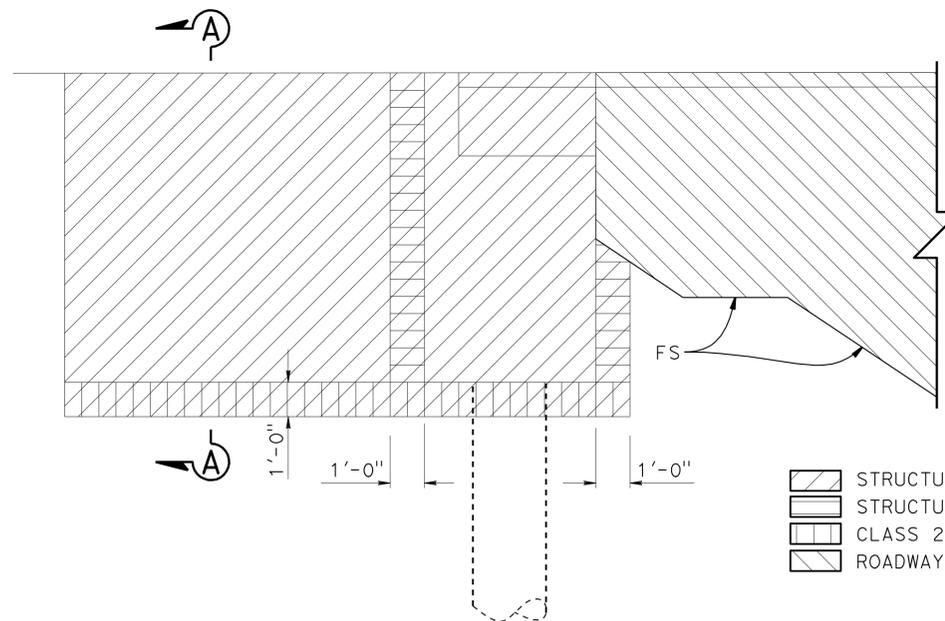
1/8" = 1'-0"

NOTES:

- Contours are at 0.05' intervals
- × Indicates 2.5' intervals along Station Line  
Contours do not include camber
- Contour reflects profile grade at top of of Polyester Concrete overlay



**SECTION A-A**  
No Scale



**LIMITS OF STRUCTURE EXCAVATION & BACKFILL**

No Scale

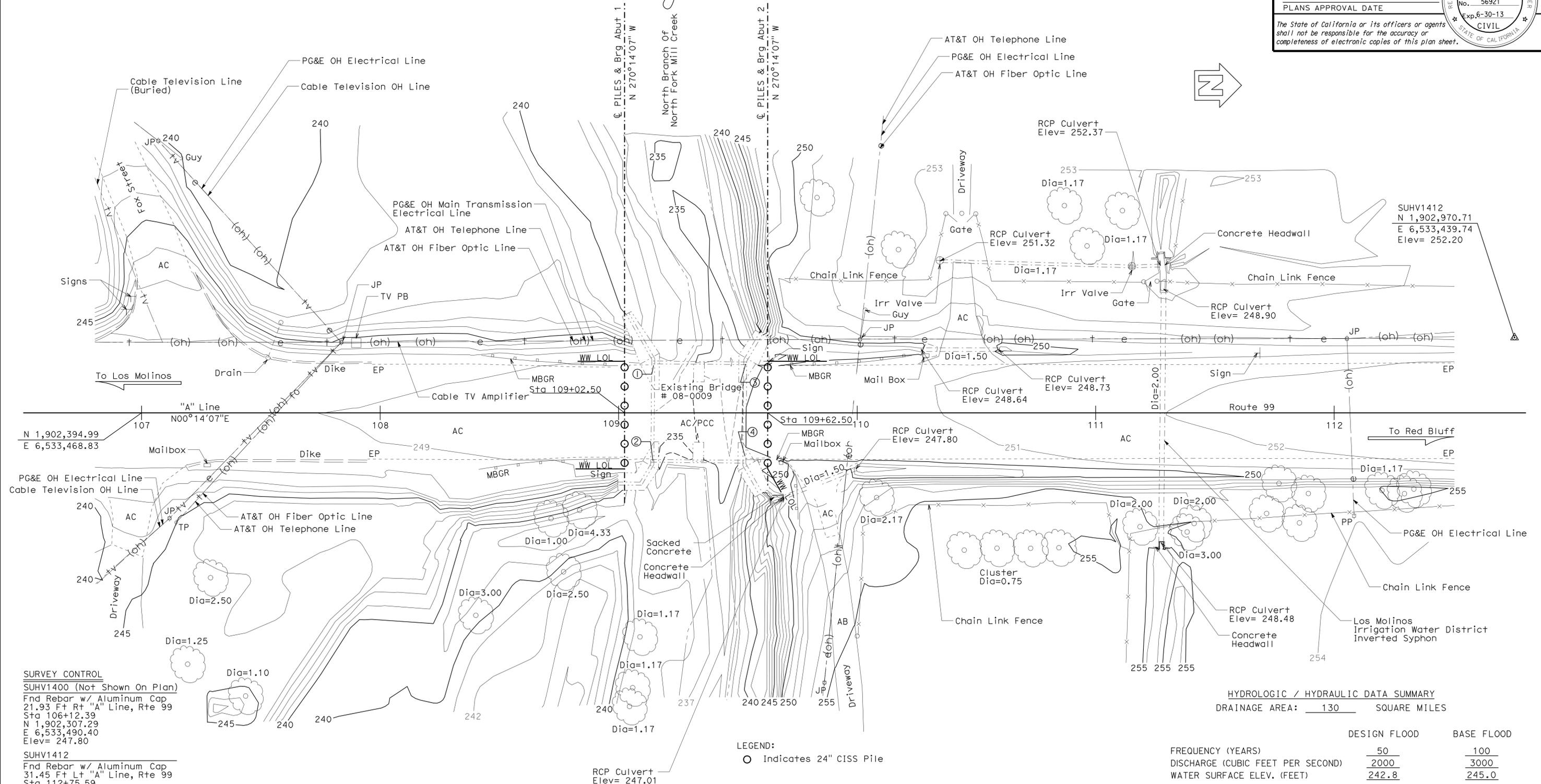
-  STRUCTURE EXCAVATION
-  STRUCTURE BACKFILL
-  CLASS 2 AGGREGATE BASE MATERIAL (LEVELING PAD)
-  ROADWAY EXCAVATION, SEE "ROAD PLANS"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Lewis L. Shen	CHECKED Joey Aquino	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 3</b>	BRIDGE NO.	<b>NORTH FORK MILL CREEK BRIDGE (REPLACE)</b>		
	DETAILS	BY Jay Reid	CHECKED Joey Aquino			08-0166	<b>DECK CONTOURS</b>		
	QUANTITIES	BY Art Herrera	CHECKED Ye Yang			POST MILE	14.00		
				UNIT: 3578	PROJECT NUMBER & PHASE: 0200000163-1	CONTRACT NO.: 02-2C1121	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 9-7-10 5-31-11 10-3-11	SHEET OF 4 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	54	73

REGISTERED CIVIL ENGINEER DATE 10-6-11  
 Lewis L. Shen  
 No. 56921  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA  
 PLANS APPROVAL DATE 3-26-12  
 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.

- Existing Bridge Location #08-0009
- ① - 19.96 Lt "A" Line, Sta 109+14.48, Elev= 249.07 ±
  - ② - 19.12 Rt "A" Line, Sta 109+13.68, Elev= 249.00 ±
  - ③ - 19.90 Lt "A" Line, Sta 109+53.66, Elev= 249.63 ±
  - ④ - 19.10 Rt "A" Line, Sta 109+52.87, Elev= 249.66 ±



**SURVEY CONTROL**

SUHV1400 (Not Shown On Plan)  
 Fnd Rebar w/ Aluminum Cap  
 21.93 Ft Rt "A" Line, Rte 99  
 Sta 106+12.39  
 N 1,902,307.29  
 E 6,533,490.40  
 Elev= 247.80

SUHV1412  
 Fnd Rebar w/ Aluminum Cap  
 31.45 Ft Lt "A" Line, Rte 99  
 Sta 112+75.59  
 N 1,902,970.71  
 E 6,533,439.74  
 Elev= 252.20

Note:  
 Utility Lines Are Per District Utility Plan

LEGEND:  
 ○ Indicates 24" CISS Pile

HYDROLOGIC / HYDRAULIC DATA SUMMARY  
 DRAINAGE AREA: 130 SQUARE MILES

	DESIGN FLOOD	BASE FLOOD
FREQUENCY (YEARS)	50	100
DISCHARGE (CUBIC FEET PER SECOND)	2000	3000
WATER SURFACE ELEV. (FEET)	242.8	245.0

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

PRELIMINARY INVESTIGATION SECTION			
SCALE	VERT. DATUM	NAVD88	PHOTOGRAMMETRY AS OF: X
1"=20'	HORZ. DATUM	NAD83 (2004.69)	SURVEYED BY District 09/2006
ALIGNMENT TIES	Dist. Traverse Sheet	DRAFTED BY J.Martinez 12/2009	CHECKED BY T.Gillett 12/2009
		CHECKED BY L.Lew 12/2009	CHECKED BY L.Lew 12/2009

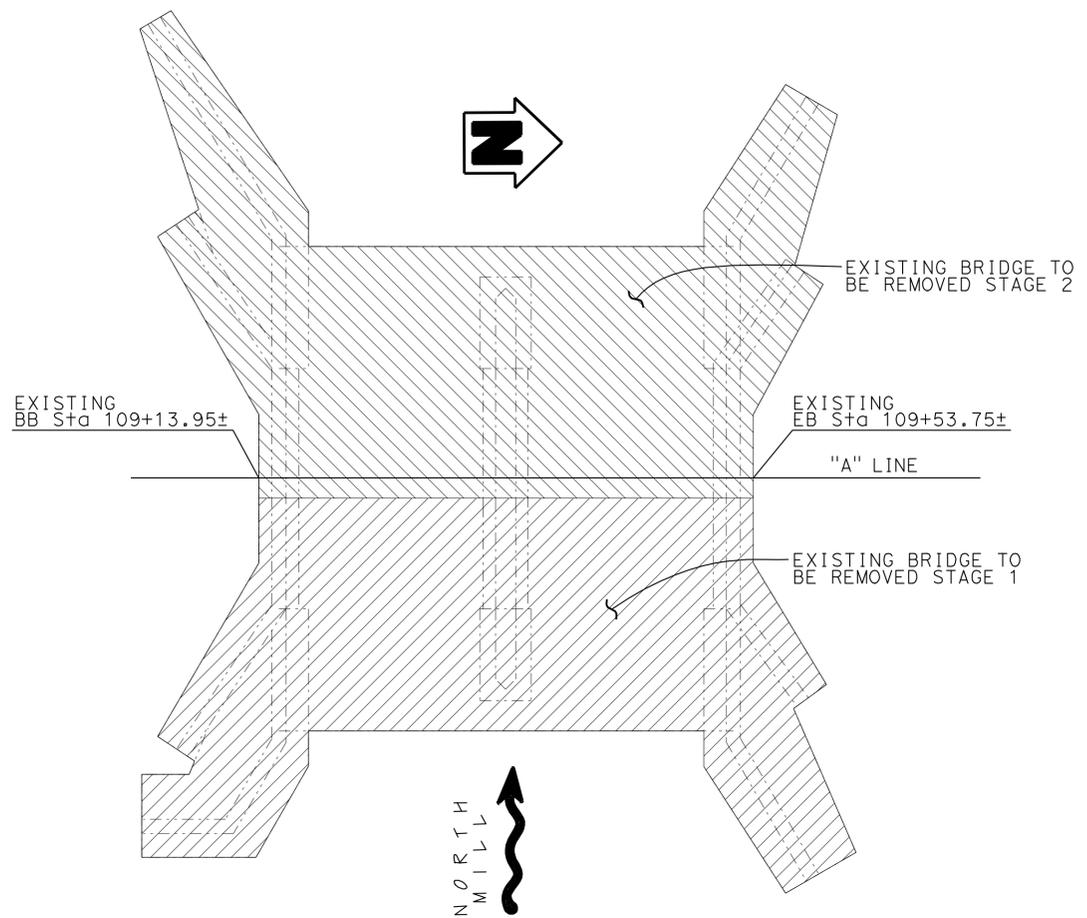
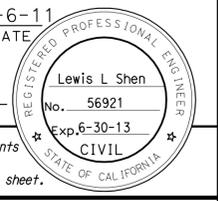
DESIGN	BY Lewis L. Shen	CHECKED Joey Aquino
DETAILS	BY Jay Reid	CHECKED Joey Aquino
QUANTITIES	BY Art Herrera	CHECKED Ye Yang

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

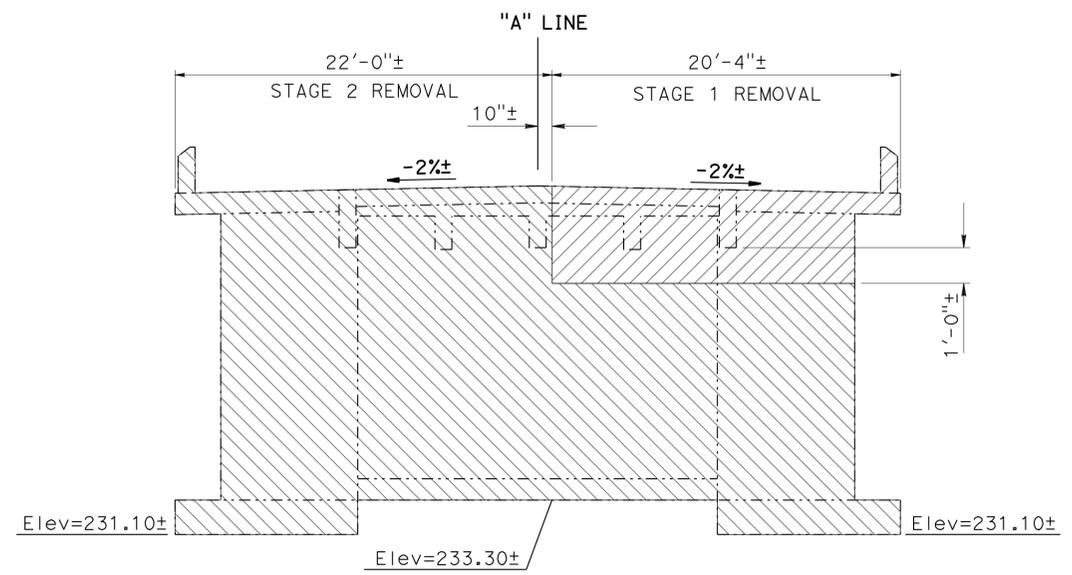
DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
 DESIGN BRANCH 3

BRIDGE NO. 08-0166  
 POST MILE 14.00  
**NORTH FORK MILL CREEK BRIDGE (REPLACE)**  
**FOUNDATION PLAN**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	55	73
			10-6-11	DATE	
REGISTERED CIVIL ENGINEER			DATE		
3-26-12			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



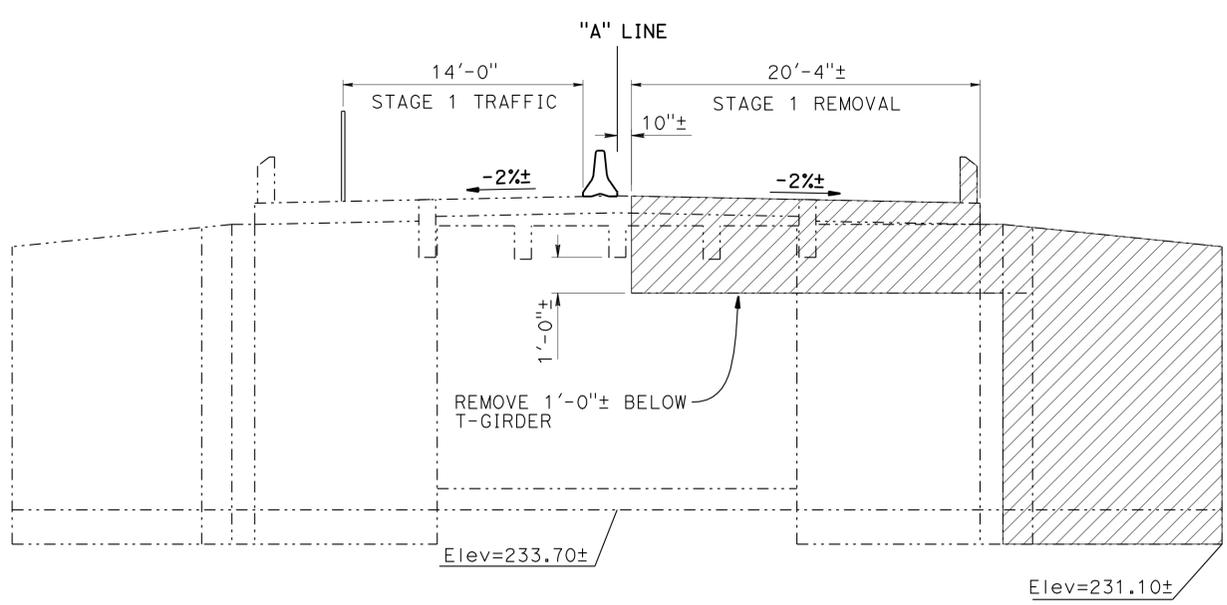
**PLAN**  
1/8" = 1'-0"



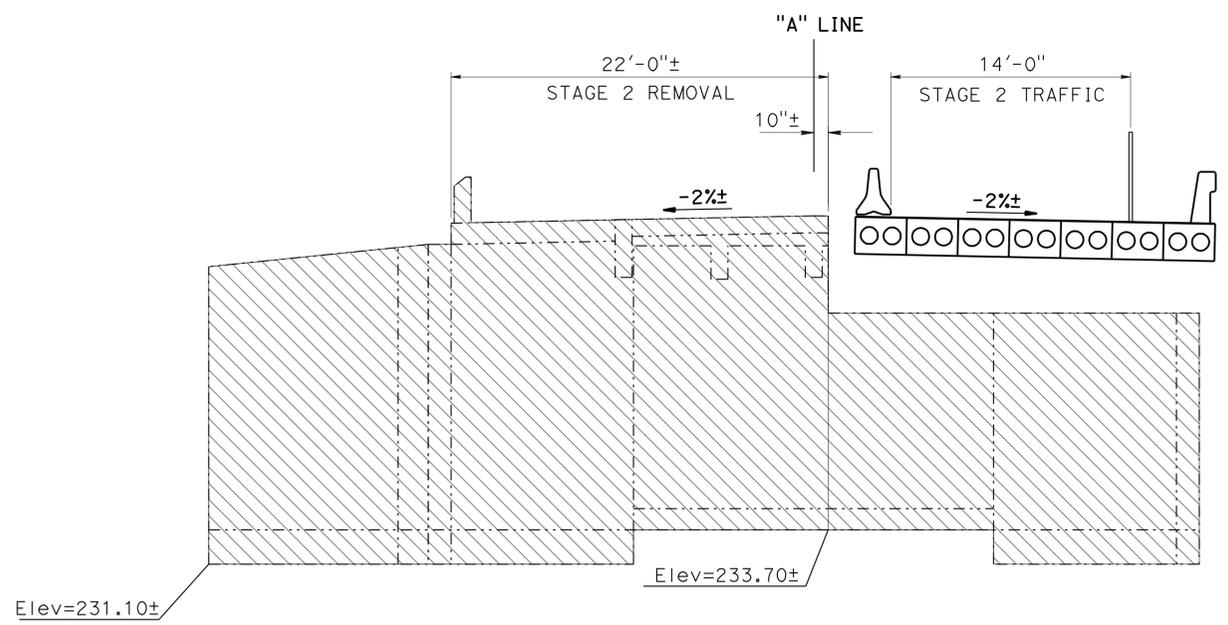
**STAGE REMOVAL-PIER**  
3/16" = 1'-0"

NOTES:  
Abutment 3 shown  
Abutment 1 similar  
For information not shown see "GENERAL PLAN NO. 2" sheet

LEGEND:  
 Indicates limits of Existing Bridge Removal Stage 1  
 Indicates limits of Existing Bridge Removal Stage 2



**STAGE 1 REMOVAL-ABUTMENT**  
3/16" = 1'-0"



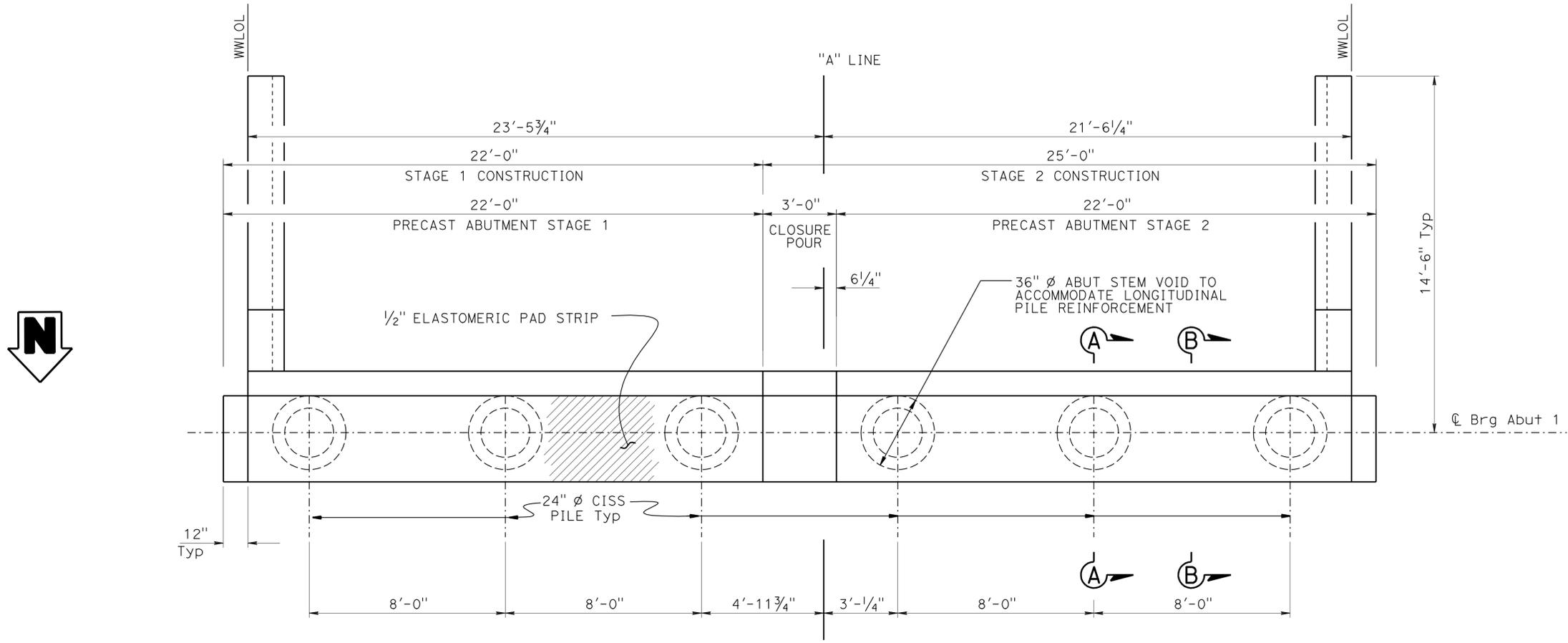
**STAGE 2 REMOVAL-ABUTMENT**  
3/16" = 1'-0"

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

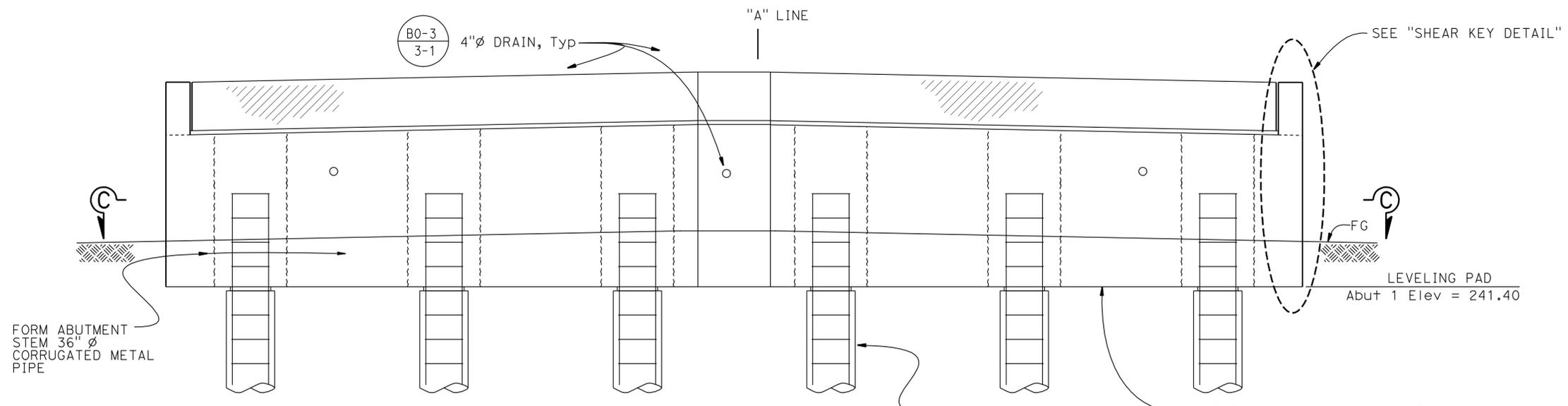
DESIGN	BY	Lewis L. Shen	CHECKED	Joey Aquino	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>3</b>	BRIDGE NO.	08-0166	<b>NORTH FORK MILL CREEK BRIDGE (REPLACE)</b>	
	DETAILS	Jay Reid	CHECKED	Joey Aquino			POST MILE	14.00		<b>EXISTING BRIDGE REMOVAL DETAILS</b>
	QUANTITIES	Art Herrera	CHECKED	Ye Yang						
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3578 PROJECT NUMBER & PHASE: 0200000163-1	CONTRACT NO.: 02-2C1121	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 6 OF 24

FILE => 08-0166-e-xbrm.dgn  
 USERNAME => s123631  
 DATE PLOTTED => 29-MAR-2012  
 TIME PLOTTED => 18:03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	56	73
			10-6-11	DATE	
			3-26-12	PLANS APPROVAL DATE	
REGISTERED CIVIL ENGINEER Lewis L Shen No. 56921 Exp. 6-30-13 CIVIL STATE OF CALIFORNIA					
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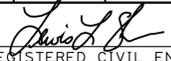
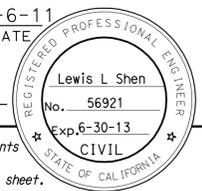
**PLAN**  
3/8" = 1'-0"

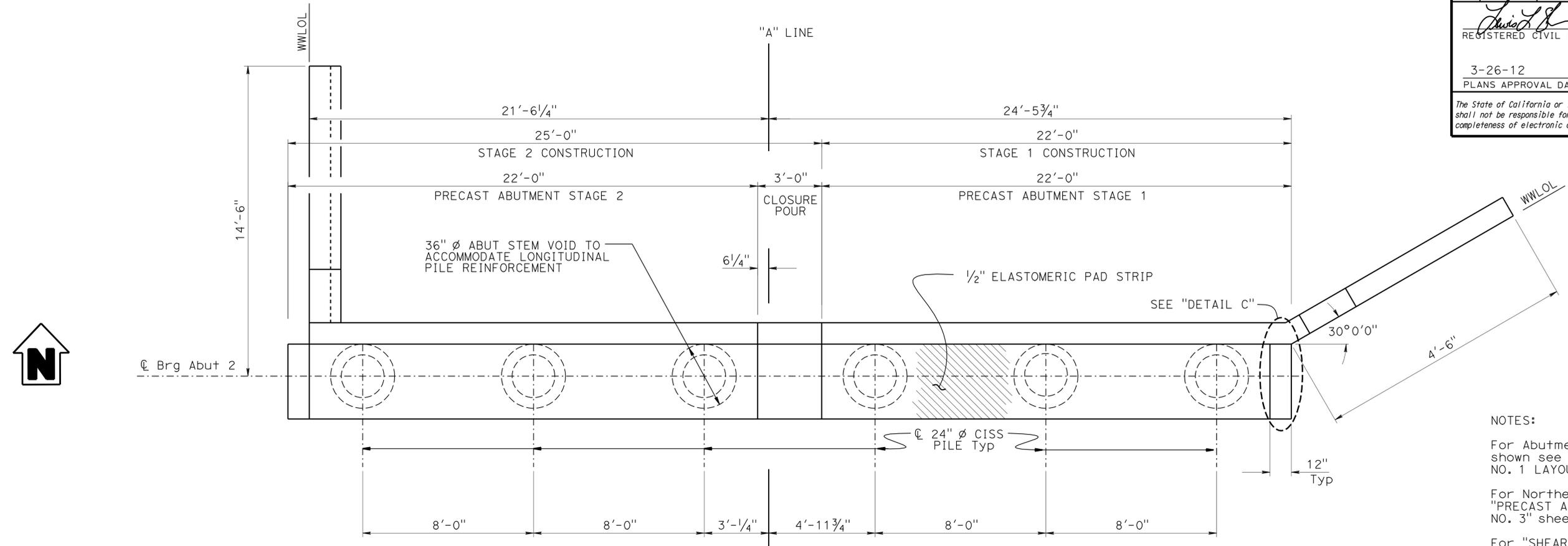


**ELEVATION**  
3/8" = 1'-0"

NOTES:  
 For "SECTION C-C", see "PRECAST ABUTMENT DETAILS NO. 2" sheet  
 For "SECTION A-A" and "SECTION B-B", see "PRECAST ABUTMENT DETAIL NO. 1" sheet  
 For "SHEAR KEY DETAIL", see "PRECAST ABUTMENT DETAIL NO. 4" sheet

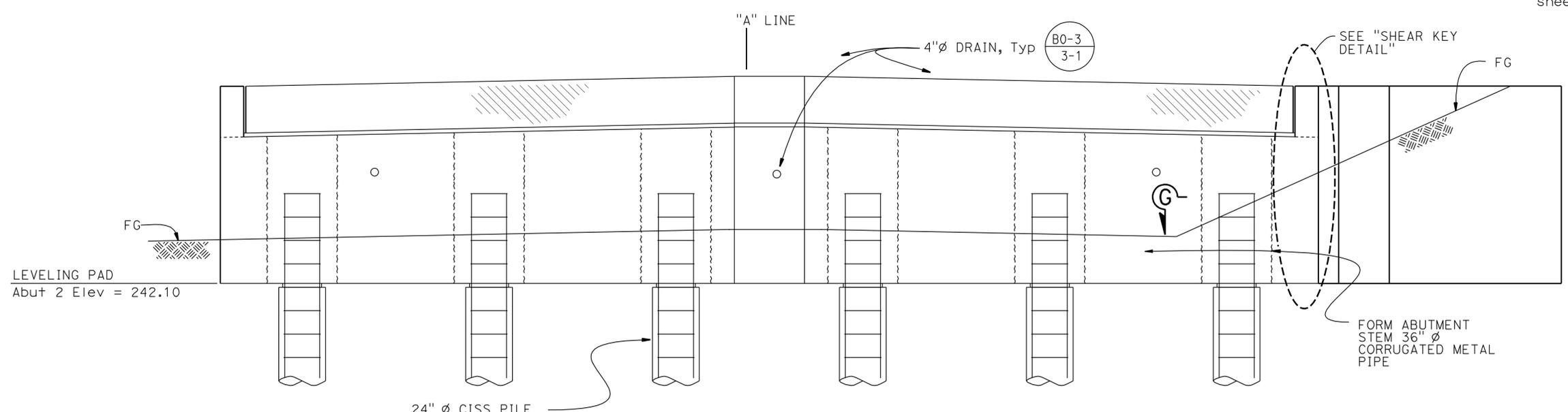
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY Lewis L Shen	CHECKED Joey Aquino	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>3</b>	BRIDGE NO.	08-0166	<b>NORTH FORK MILL CREEK BRIDGE (REPLACE)</b> <b>PRECAST ABUTMENT 1 LAYOUT</b>	
	DETAILS	BY Jay Reid	CHECKED Joey Aquino			POST MILE	14.00		
	QUANTITIES	BY Art Herrera	CHECKED Ye Yang			PROJECT NUMBER & PHASE: 0200000163-1	CONTRACT NO.: 02-2C1121		REVISION DATES
UNIT: 3578 PROJECT NUMBER & PHASE: 0200000163-1 CONTRACT NO.: 02-2C1121 DISREGARD PRINTS BEARING EARLIER REVISION DATES								REVISION DATES 9-7-10 5-31-11 10-3-11	SHEET 7 OF 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	57	73
 REGISTERED CIVIL ENGINEER			10-6-11 DATE		
3-26-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



**PLAN**  
3/8" = 1'-0"

NOTES:  
 For Abutment Details not shown see "PRECAST ABUTMENT NO. 1 LAYOUT" sheet  
 For Northeast Wingwall see "PRECAST ABUTMENT DETAILS NO. 3" sheet  
 For "SHEAR KEY DETAIL" & "DETAIL C" see "PRECAST ABUTMENT DETAILS NO. 4" sheet  
 For "SECTION G-G" see ABUTMENT DETAILS NO. 3" sheet



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

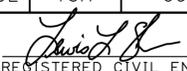
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DETAILS	BY Jay Reid	CHECKED Joey Aquino
QUANTITIES	BY Art Herrera	CHECKED Ye Yang

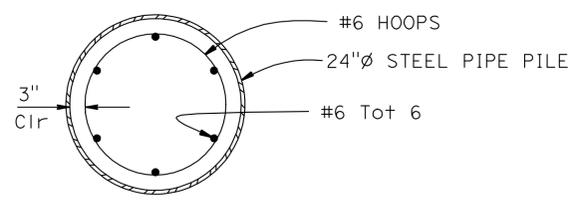
**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES**  
STRUCTURE DESIGN  
**DESIGN BRANCH 3**

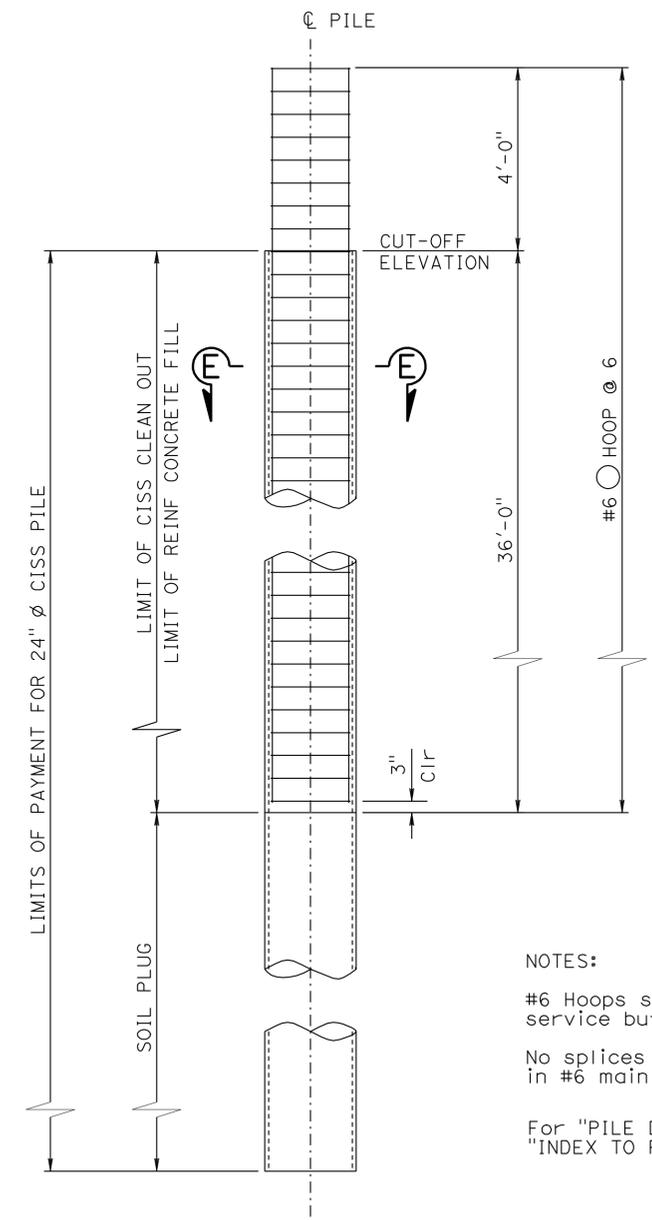
BRIDGE NO. 08-0166  
POST MILE 14.00

**NORTH FORK MILL CREEK BRIDGE (REPLACE)**  
**PRECAST ABUTMENT 2 LAYOUT**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	58	73
 REGISTERED CIVIL ENGINEER			10-6-11	DATE	
3-26-12			PLANS APPROVAL DATE		
Lewis L. Shen No. 56921 Exp. 6-30-13 CIVIL STATE OF CALIFORNIA			REGISTERED PROFESSIONAL ENGINEER		
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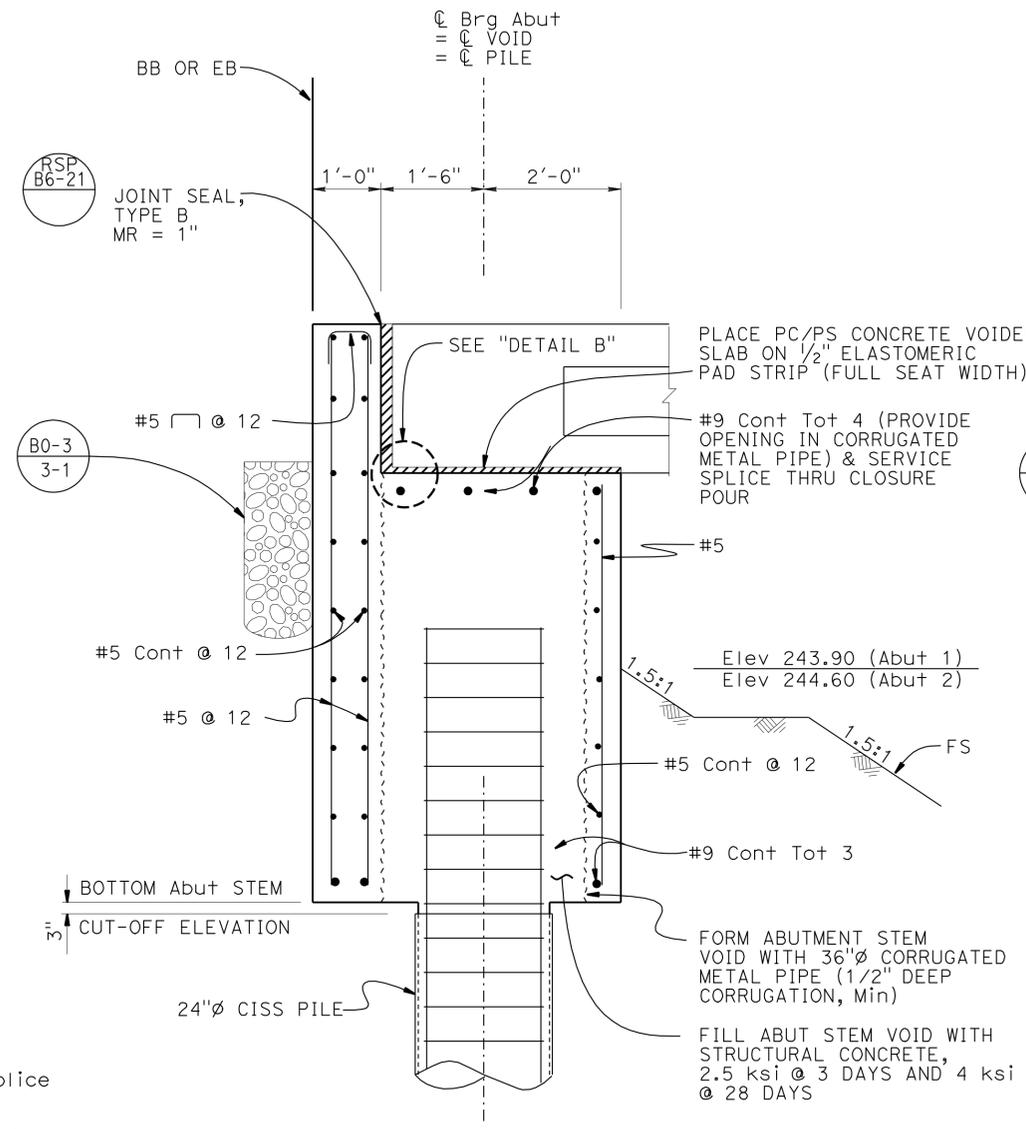


**SECTION E-E**  
1" = 1'-0"

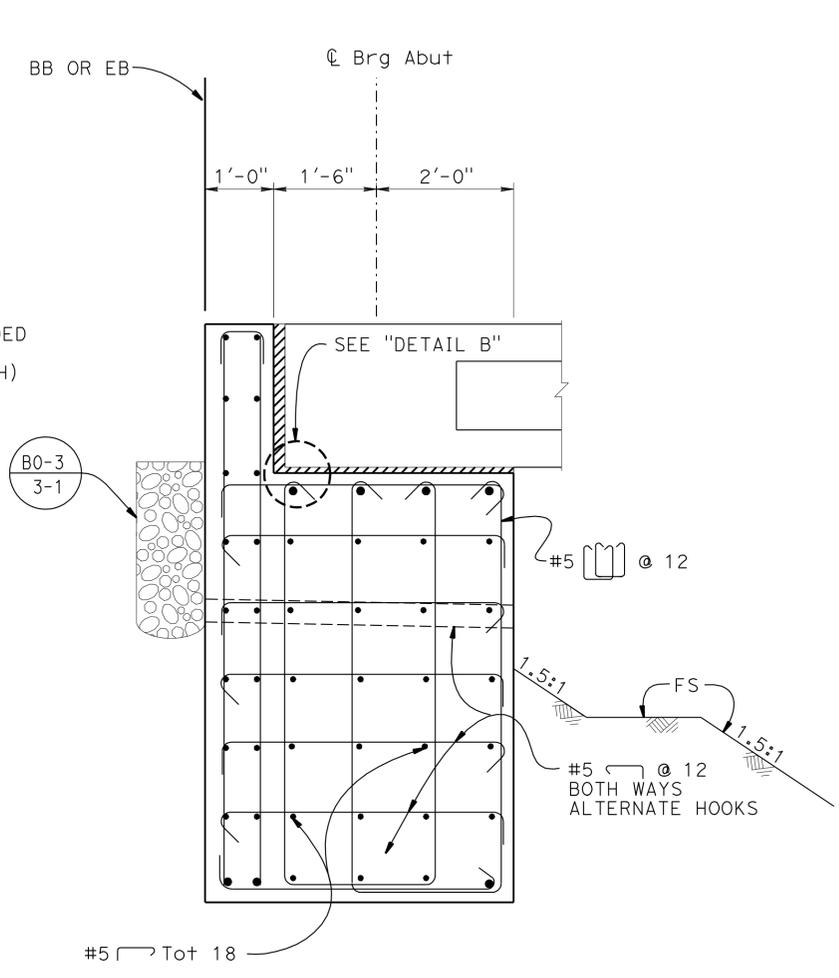


**24" Ø CISS PILE**  
1/2" = 1'-0"

NOTES:  
 #6 Hoops shall be service butt-welded splice  
 No splices allowed in #6 main reinforcement  
 For "PILE DATA TABLE" see "INDEX TO PLANS" sheet



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



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

NOTES:  
 For details not shown, see "SECTION A-A"  
 For location of "SECTION A-A" and "SECTION B-B" see "PRECAST ABUTMENT 1 LAYOUT" sheet  
 For "DETAIL B" see "PRECAST ABUTMENT DETAILS NO. 4" sheet

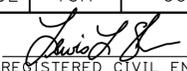
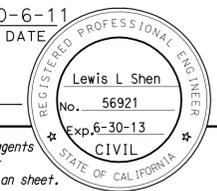
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DETAILS	BY Jay Reid	CHECKED Joey Aquino
QUANTITIES	BY Art Herrera	CHECKED Ye Yang

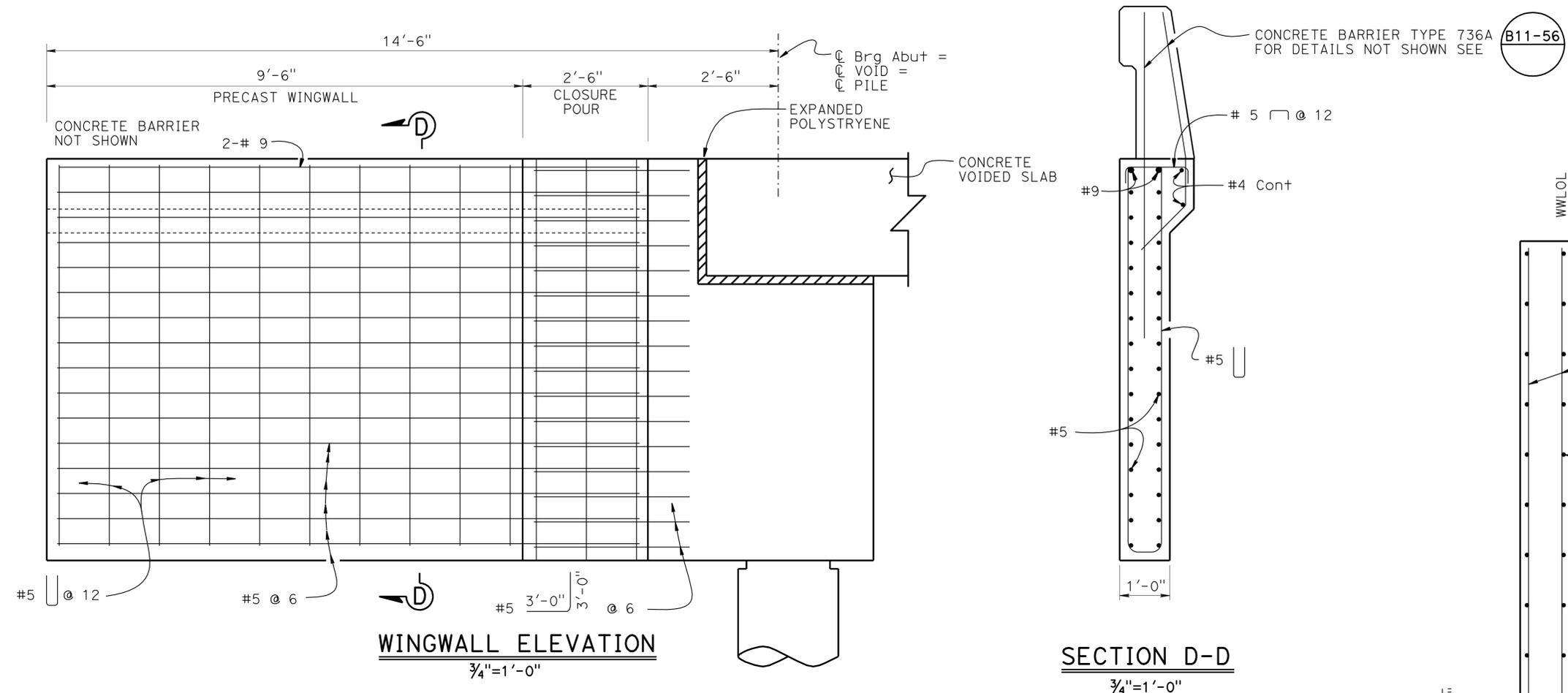
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
 DESIGN BRANCH **3**

BRIDGE NO.	08-0166
POST MILE	14.00

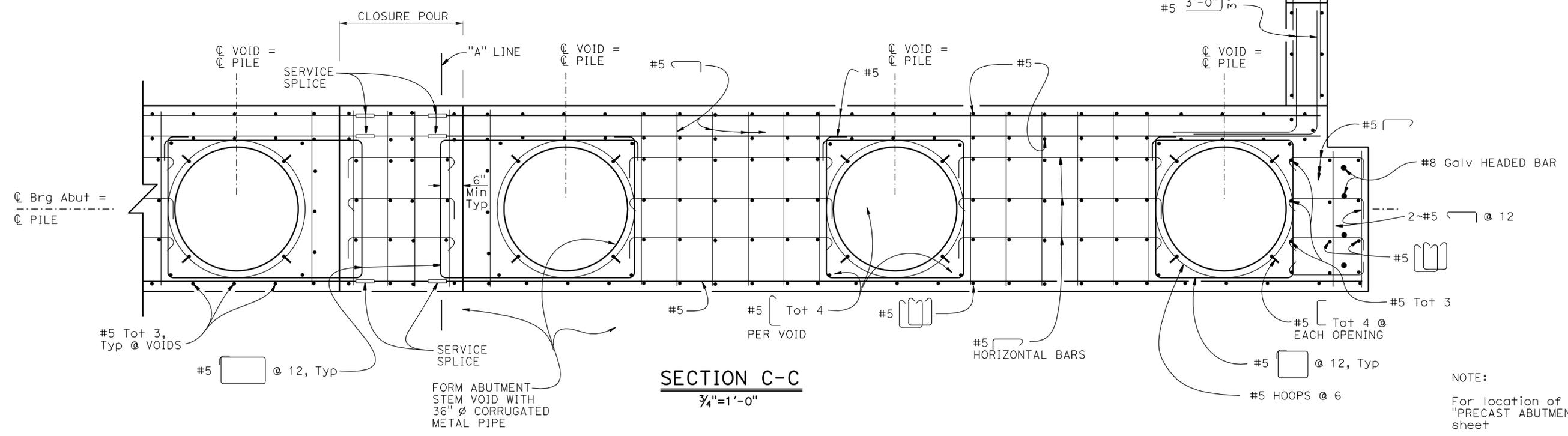
**NORTH FORK MILL CREEK BRIDGE (REPLACE)**  
**PRECAST ABUTMENT DETAILS NO. 1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	59	73
 REGISTERED CIVIL ENGINEER			10-6-11	DATE	
3-26-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



**WINGWALL ELEVATION**  
3/4"=1'-0"

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



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

NOTE:  
For location of "SECTION C-C", see "PRECAST ABUTMENT 1 LAYOUT" sheet

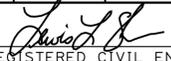
DESIGN	BY Lewis L. Shen	CHECKED Joey Aquino
DETAILS	BY Jay Reid	CHECKED Joey Aquino
QUANTITIES	BY Art Herrera	CHECKED Ye Yang

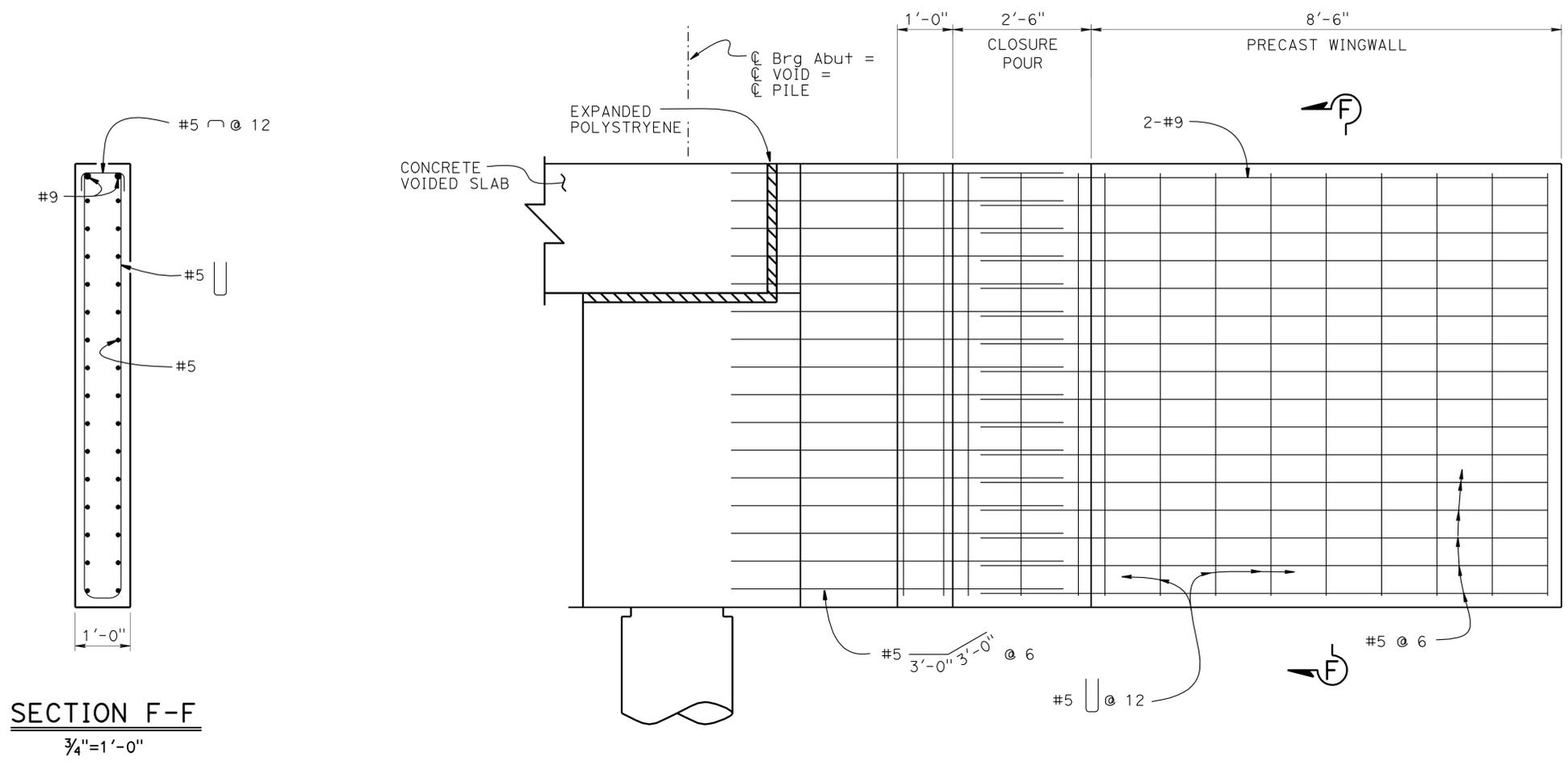
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 3

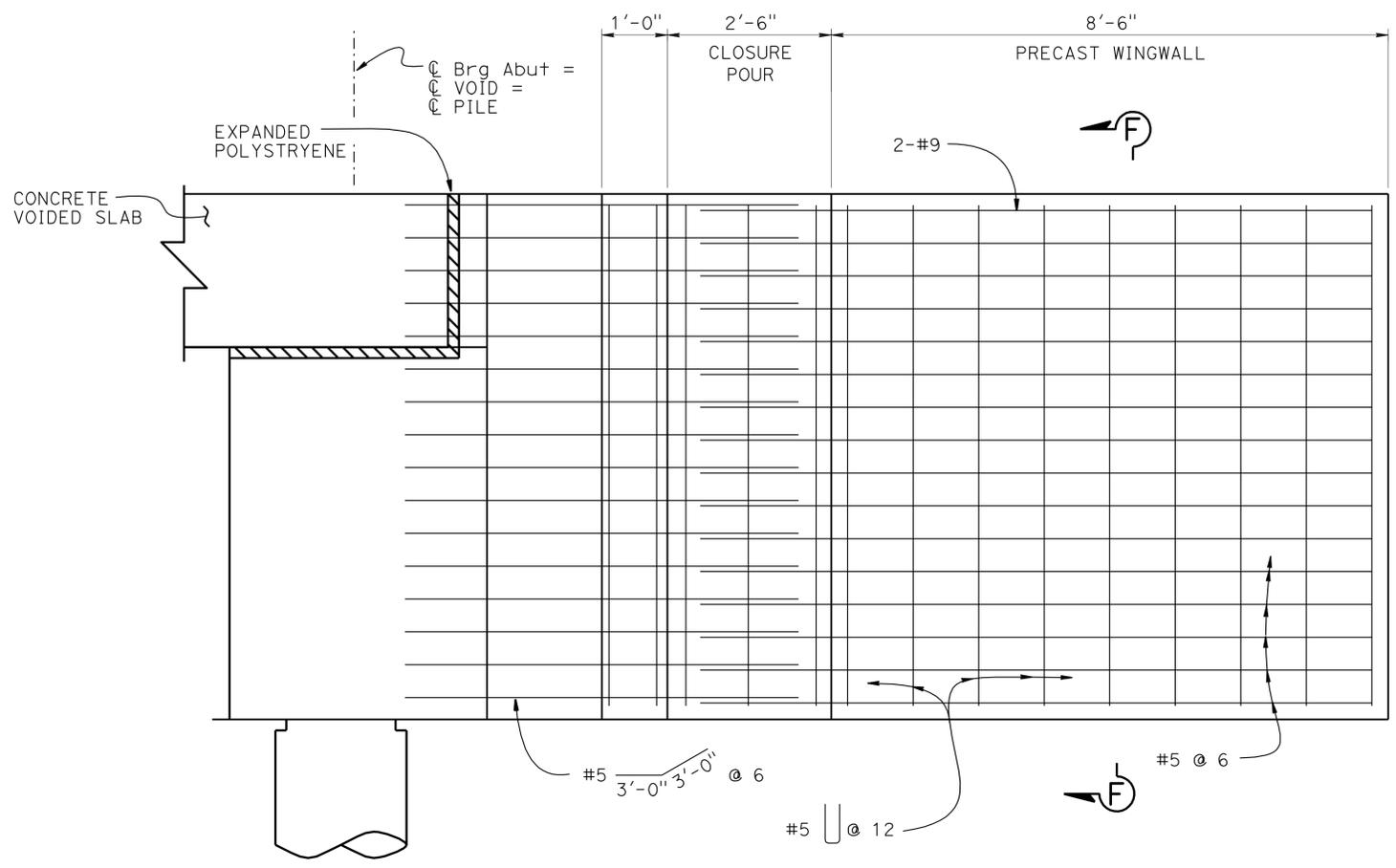
BRIDGE NO.	08-0166
POST MILE	14.00

**NORTH FORK MILL CREEK BRIDGE (REPLACE)**  
**PRECAST ABUTMENT DETAILS NO. 2**

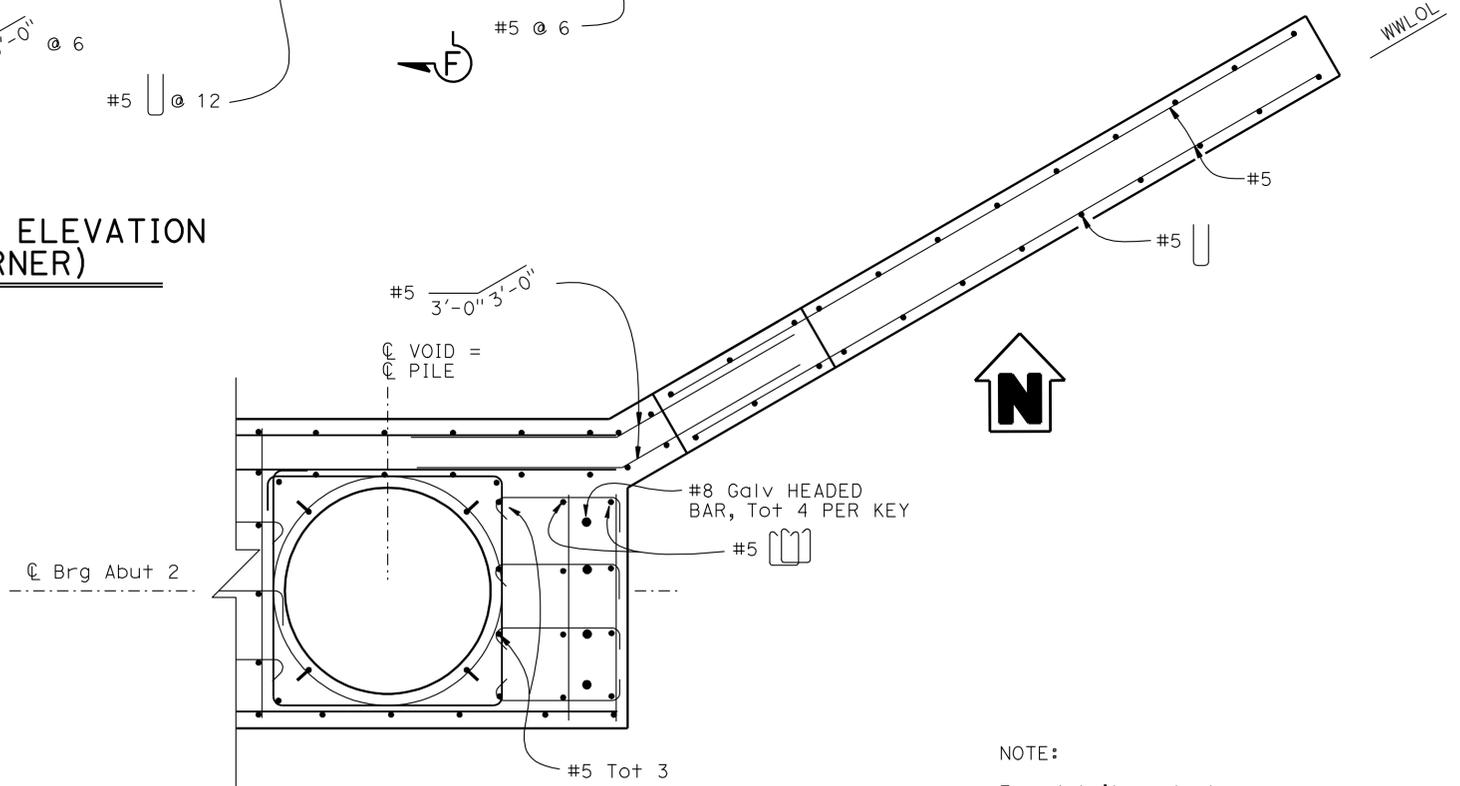
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	60	73
 REGISTERED CIVIL ENGINEER			10-6-11	DATE	
3-26-12			PLANS APPROVAL DATE		
Lewis L. Shen No. 56921 Exp. 6-30-13 CIVIL STATE OF CALIFORNIA					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



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



**ABUTMENT 2 WINGWALL ELEVATION (NORTHEAST CORNER)**  
3/4"=1'-0"



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

NOTE:  
 For details not shown see "PRECAST ABUTMENT DETAILS NO. 1" and "PRECAST ABUTMENT DETAILS NO. 2" sheet  
 For location of "SECTION G-G" see "PRECAST ABUTMENT 2 LAYOUT" sheet

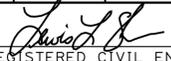
DESIGN	BY Lewis L. Shen	CHECKED Joey Aquino
DETAILS	BY Jay Reid	CHECKED Joey Aquino
QUANTITIES	BY Art Herrera	CHECKED Ye Yang

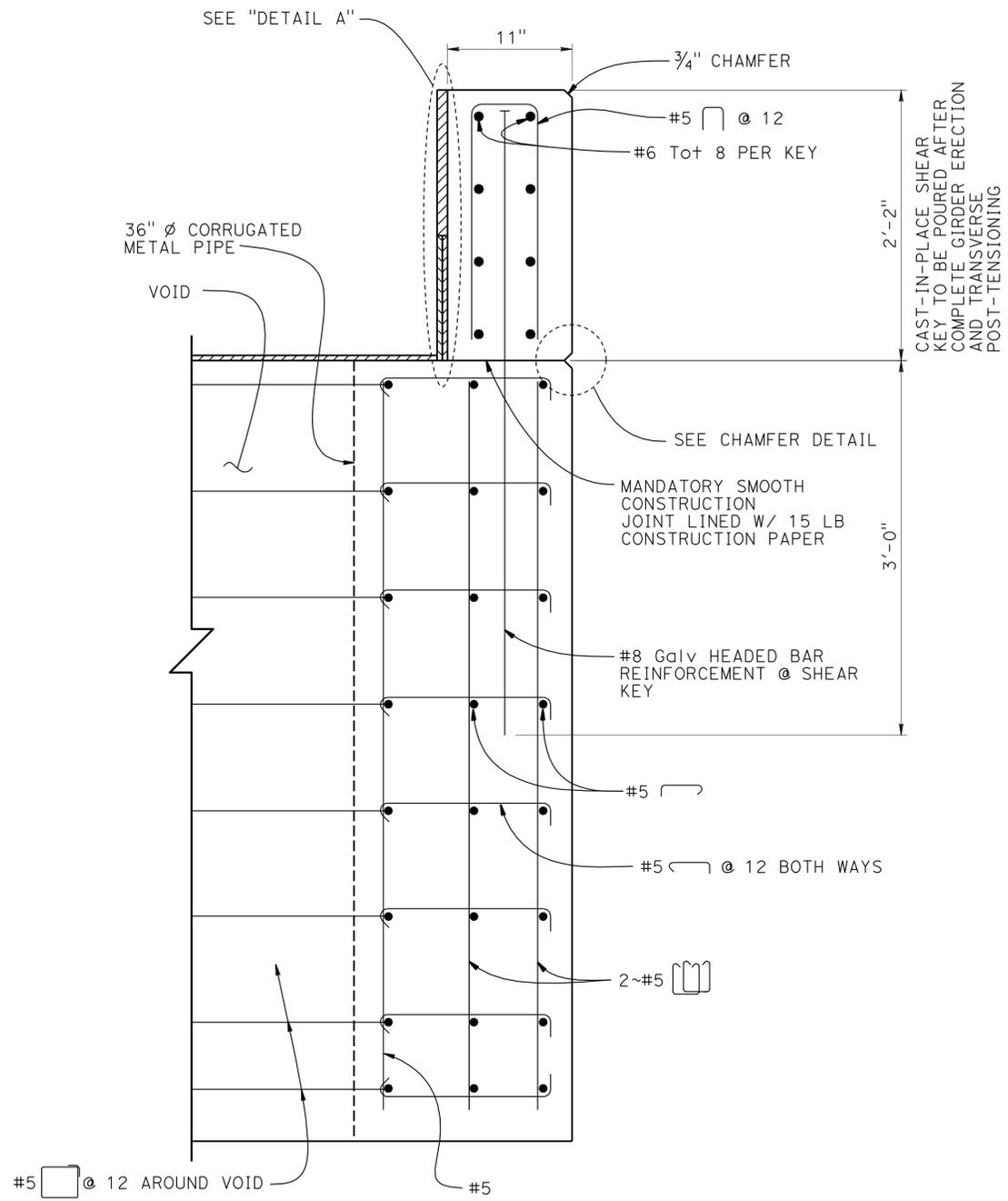
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 3**

BRIDGE NO.	08-0166
POST MILE	14.00

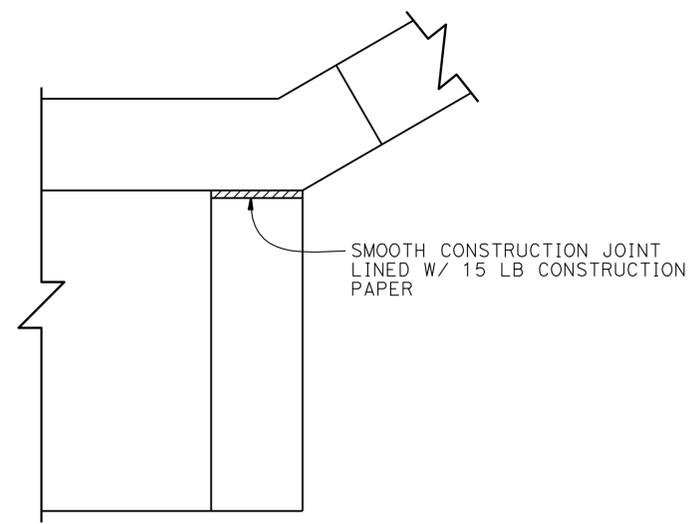
**NORTH FORK MILL CREEK BRIDGE (REPLACE)**  
**PRECAST ABUTMENT DETAILS NO. 3**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	61	73
 REGISTERED CIVIL ENGINEER			10-6-11 DATE		
3-26-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

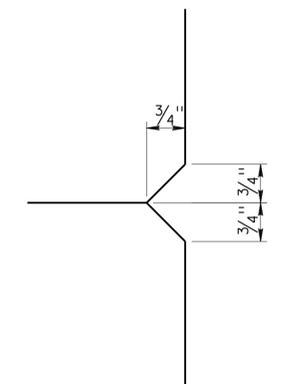


NOTE:  
See "SECTION C-C" and "SECTION G-G" for details

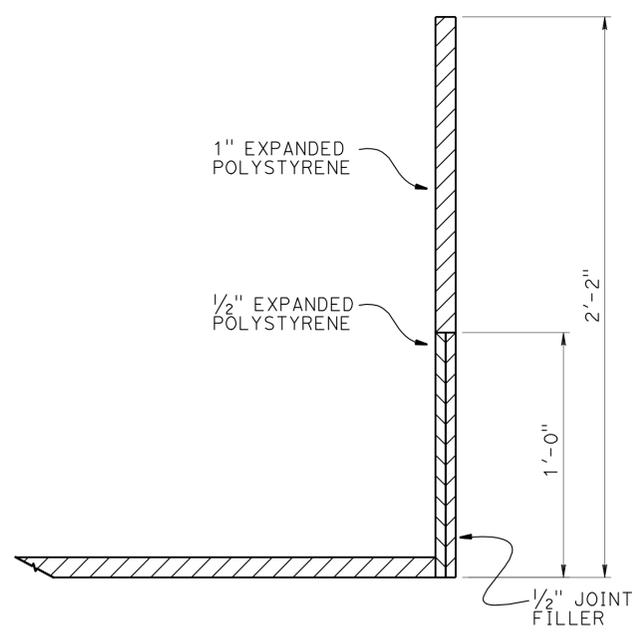
**SHEAR KEY DETAIL**  
1/2"=1'-0"



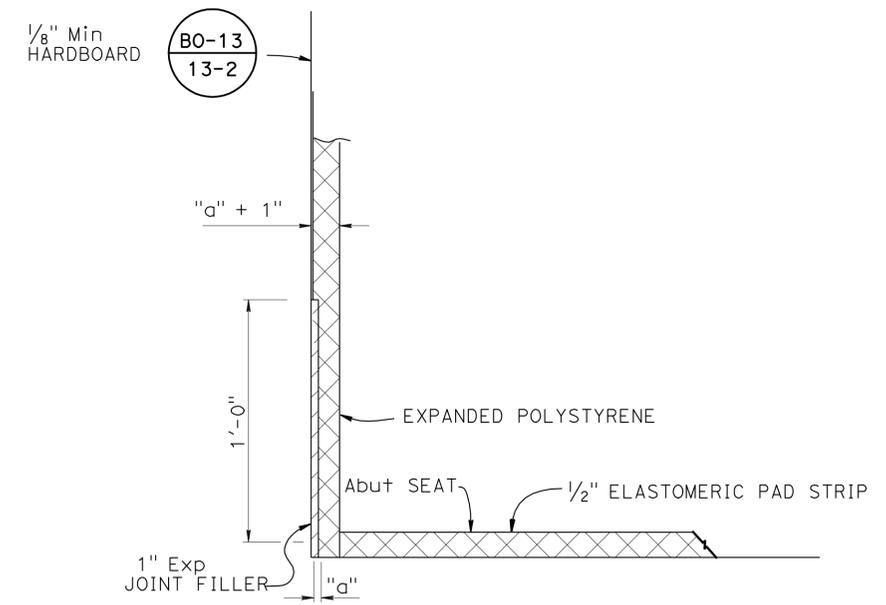
**DETAIL C**  
1"=1'-0"



**CHAMFER DETAIL**  
No Scale



**DETAIL A**  
No Scale



**DETAIL B**  
No Scale

NOTES:  
For location of "SECTION C-C" see "PRECAST ABUTMENT 1 LAYOUT" sheet  
For location of "DETAIL C" see "PRECAST ABUTMENT 2 LAYOUT" sheet  
For location of "DETAIL B" see "PRECAST ABUTMENT DETAILS NO. 1" SHEET

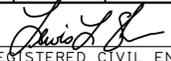
DESIGN	BY Lewis L. Shen	CHECKED Joey Aquino
DETAILS	BY Jay Reid	CHECKED Joey Aquino
QUANTITIES	BY Art Herrera	CHECKED Ye Yang

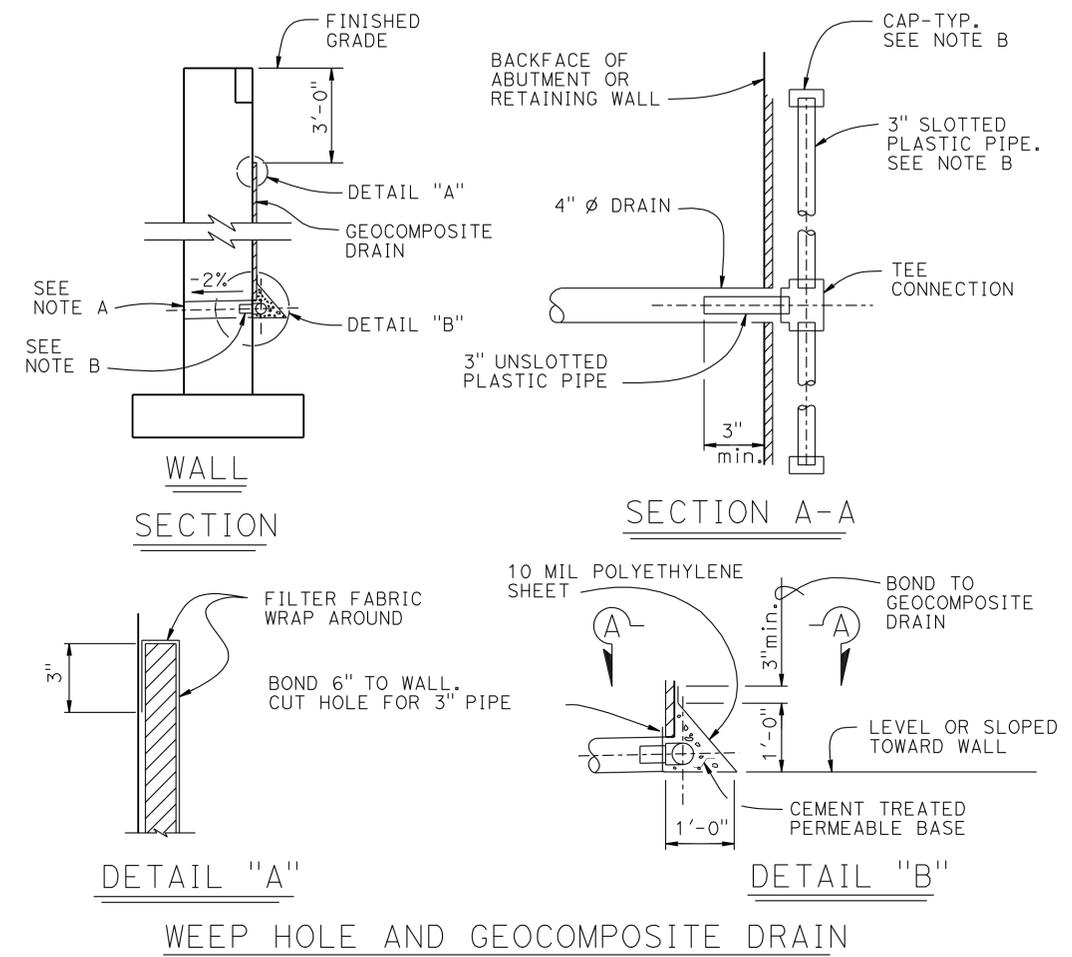
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 3

BRIDGE NO.	08-0166
POST MILE	14.00

**NORTH FORK MILL CREEK BRIDGE (REPLACE)**  
**PRECAST ABUTMENT DETAILS NO. 4**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	62	73
 REGISTERED CIVIL ENGINEER			10-6-11 DATE		
3-26-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



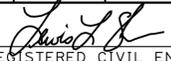
- NOTES:
- A. 4"  $\phi$  drains at intermediate sag points and at 25' max center to center (9' c-c for Type 3 and 9'-3" c-c for Type 4 retaining walls). For walls adjacent to sidewalks or curbs, provide 4" cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall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

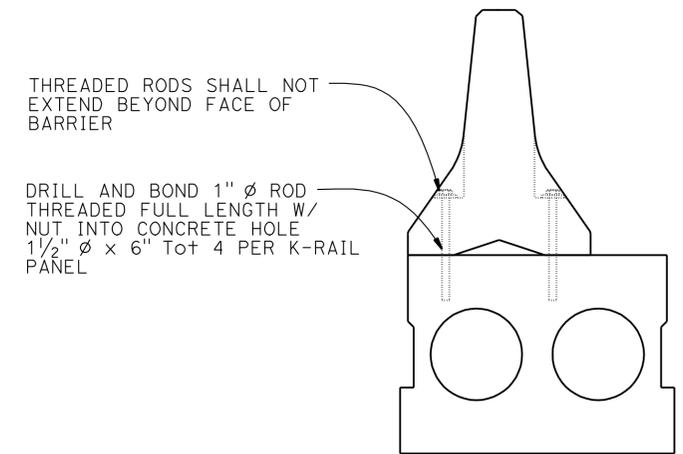
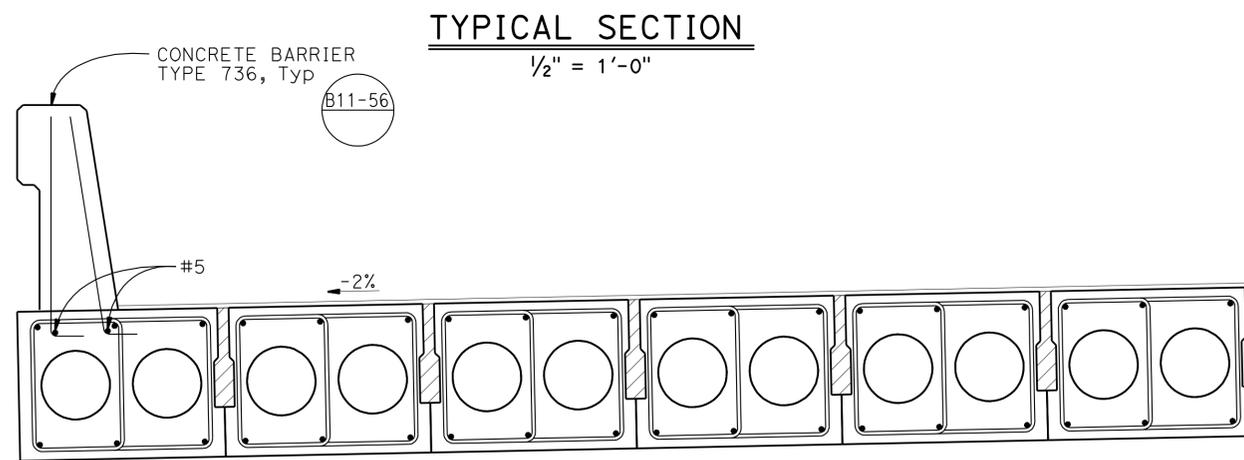
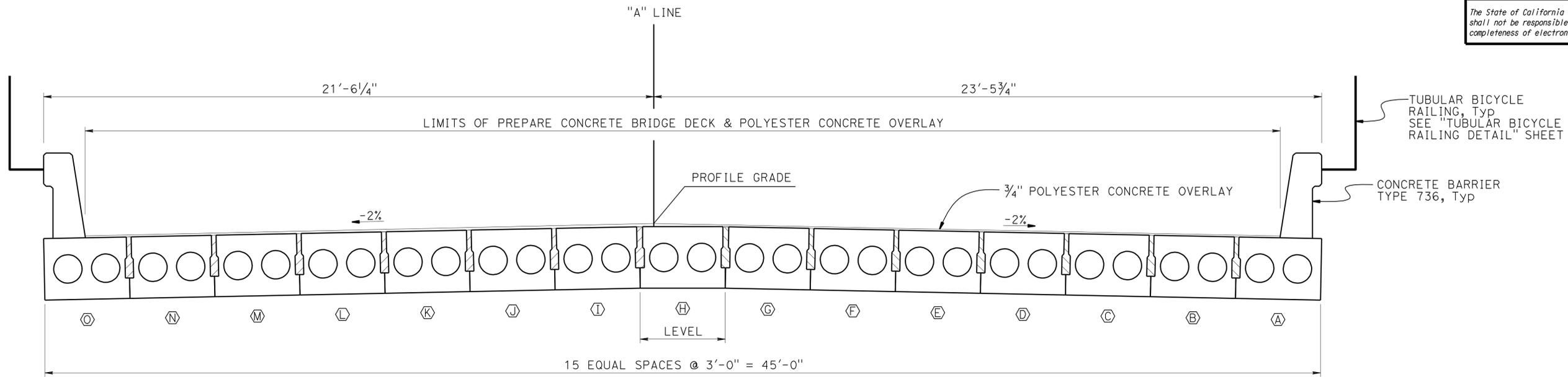
DESIGN	BY Lewis L. Shen	CHECKED Joey Aquino
DETAILS	BY Jay Reid	CHECKED Joey Aquino
QUANTITIES	BY Art Herrera	CHECKED Ye Yang

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 3**

BRIDGE NO. 08-0166	<b>NORTH FORK MILL CREEK BRIDGE (REPLACE)</b>
POST MILE 14.00	
<b>PRECAST ABUTMENT DETAILS NO. 5</b>	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	63	73
 REGISTERED CIVIL ENGINEER			10-6-11 DATE		
3-26-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



NOTES:

Temporary K-Rail Drill & Bond to clear Intermediate & End Diaphragm

for Temporary Railing (TYPE K) location see "ROAD PLANS"

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

**TYPE K RAILING ATTACHMENT**  
NO SCALE

DESIGN	BY Lewis L. Shen	CHECKED Joey Aquino	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO. 08-0166	NORTH FORK MILL CREEK BRIDGE (REPLACE) TYPICAL SECTION
	DETAILS	BY Jay Reid			CHECKED Joey Aquino	
QUANTITIES	BY Art Herrera	CHECKED Ye Yang	UNIT: 3578 PROJECT NUMBER & PHASE: 0200000163-1	CONTRACT NO.: 02-2C1121	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	9-7-10 5-31-11	SHEET 14 OF 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	64	73

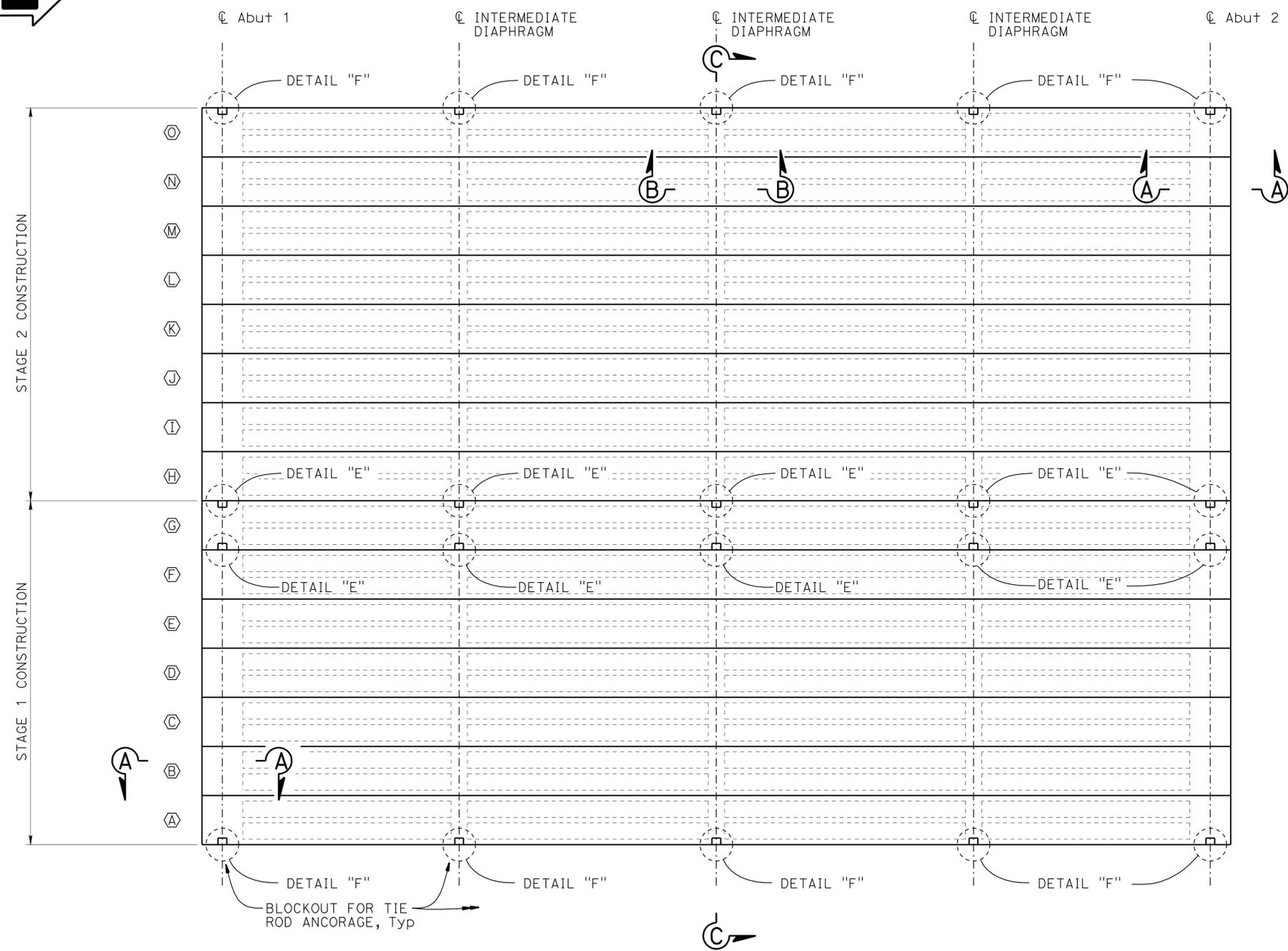
  

REGISTERED CIVIL ENGINEER	DATE
<i>Lewis L Shen</i>	10-6-11
PLANS APPROVAL DATE	
3-26-12	

REGISTERED PROFESSIONAL ENGINEER
Lewis L Shen
No. 56921
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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**GIRDER LAYOUT**  
1/4" = 1'-0"

**TRANSVERSE POST TENSIONING NOTES:**

1 3/8" HIGH STRENGTH TIE RODS, 150 ksi ASTM A722  
Pjack = 150 k

**CONSTRUCTION SEQUENCE:**

- Stage 1
- Erect PC Voided Slab A to G
  - Place transverse tie rods at diaphragms from girder A to G.
  - Stress tie rods for Stage 1 to 20% of Pjack to snug slab sections.
  - Fill in all longitudinal keyways and diaphragm blockouts with non shrink grout.
  - Stress tie rods for Stage 1 to Pjack after grout has cured to a minimum 5 ksi strength.
  - Place concrete barrier and prepare concrete deck surface and place polyester overlay.
  - 2 1/2"  $\emptyset$  duct to be fully grouted.
  - Tie rod anchorage blockouts to be filled with structure concrete after tie rod duct has been grouted.
- Stage 2
- Erect PC Voided Slab H to O
  - Place transverse tie rods at diaphragms from girder H to O.
  - Stress tie rods for Stage 2 to 20% of Pjack to snug slab sections.
  - Fill in all longitudinal keyways and diaphragm blockouts with non shrink grout.
  - Stress tie rods for Stage 2 to Pjack after grout has cured to a minimum 5 ksi strength.
  - Place concrete barrier and prepare concrete deck surface and place polyester concrete
  - 2 1/2"  $\emptyset$  duct to be fully grouted.
  - Tie rod anchorage blockouts to be filled with structure concrete after tie rod duct has been grouted.

**NOTES:**

For "SECTION B-B INTERMEDIATE DIAPHRAGM" & "A-A END DIAPHRAGM", see "PRESTRESSED CONCRETE SLAB DETAILS NO. 2" sheet

For "DETAIL E", and "DETAIL F", see "TIE ROD DETAILS" sheet

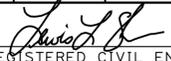
For "SECTION C-C", see "PRESTRESSED CONCRETE SLAB DETAILS NO. 1" sheet

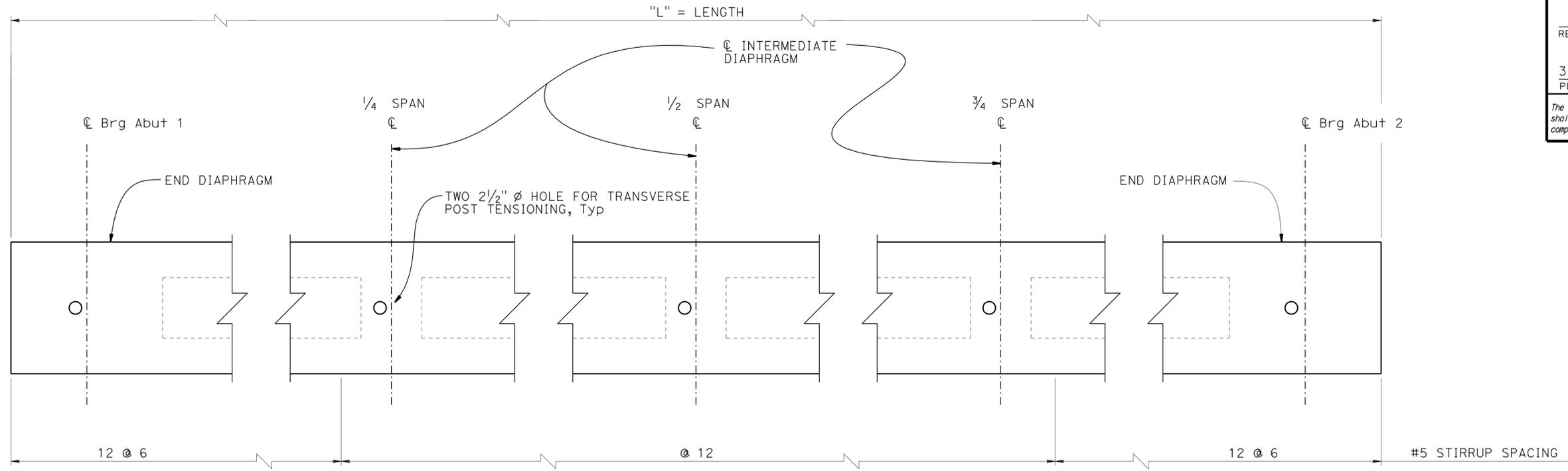
DESIGN	BY	Lewis L Shen	CHECKED	Joey Aquino	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>3</b>	BRIDGE NO.	08-0166	NORTH FORK MILL CREEK BRIDGE (REPLACE) <b>GIRDER LAYOUT</b>
	DETAILS	Jay Reid	CHECKED	Joey Aquino			POST MILE	14.00	
	QUANTITIES	Art Herrera	CHECKED	Ye Yang					

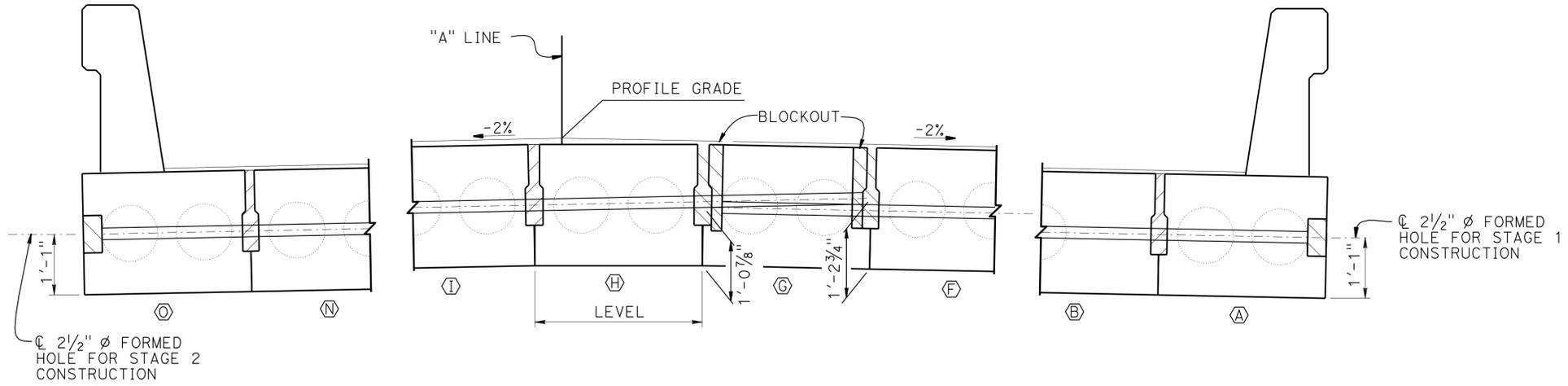
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0	1	2	3	UNIT: 3578 PROJECT NUMBER & PHASE: 0200000163-1	CONTRACT NO.: 02-2C1121	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF	
									9-7-10	5-31-11	15	24

USERNAME => s123631 DATE PLOTTED => 29-MAR-2012 TIME PLOTTED => 18:05

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	65	73
 REGISTERED CIVIL ENGINEER			10-6-11 DATE		
3-26-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



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



NOTE:  
FOR DIAPHRAGM DETAILS, SEE "PRESTRESSED CONCRETE SLAB DETAILS NO. 2" AND "TIE ROD DETAIL" SHEET

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

**PRESTRESSING NOTES**

Jacking Force (P):  
The manufacture jacking force required at point of control along the span. The jacking force does not include any fabrication specific losses

Concrete Strength:  
f'ci (ksi) is at time of initial stressing  
f'c (ksi) is at 28 days

Deflection Components:  
Informational - to be used in setting screed line elevations

Screed line elevations for deck concrete will be determined by the Engineer

Girder location or designation and length	Jacking Force (P) in Kips	Concrete Strength (Ksi)		Deflection Components in Inches		Debond "A"	
		f'ci	f'c	① Overlay DL	② Rail DL	Amount kips	Length
A Thru 0 Length = 62'-9"	3 1/2" 620	4	5	1/8"	1/4"	N/A	N/A

NOTE:  
All prestressing strands to be straight

DESIGN	BY Lewis L. Shen	CHECKED Joey Aquino
DETAILS	BY Jay Reid	CHECKED Joey Aquino
QUANTITIES	BY Art Herrera	CHECKED Ye Yang

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

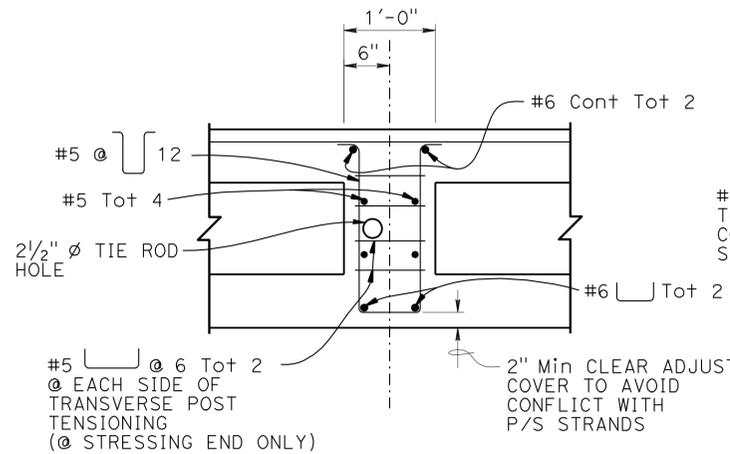
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH **3**

BRIDGE NO. 08-0166  
POST MILE 14.00  
**NORTH FORK MILL CREEK BRIDGE (REPLACE)**  
**PRESTRESSED CONCRETE SLAB DETAILS NO. 1**

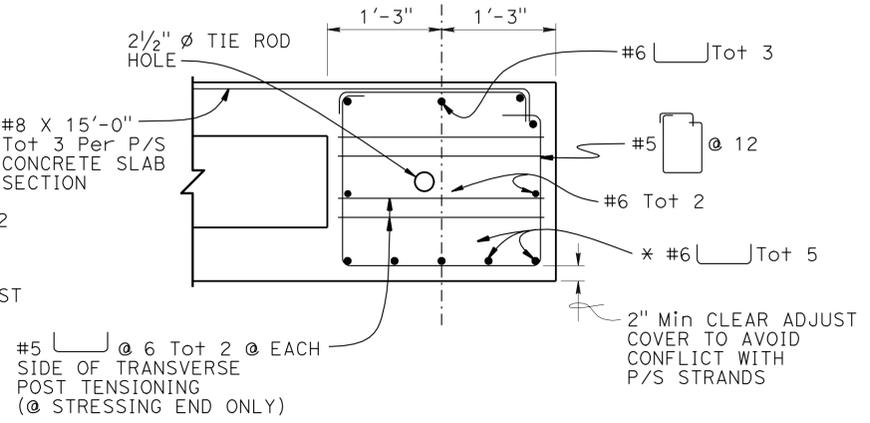
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	66	73

REGISTERED CIVIL ENGINEER DATE 10-6-11  
 PLANS APPROVAL DATE 3-26-12  
 Lewis L Shen  
 No. 56921  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA

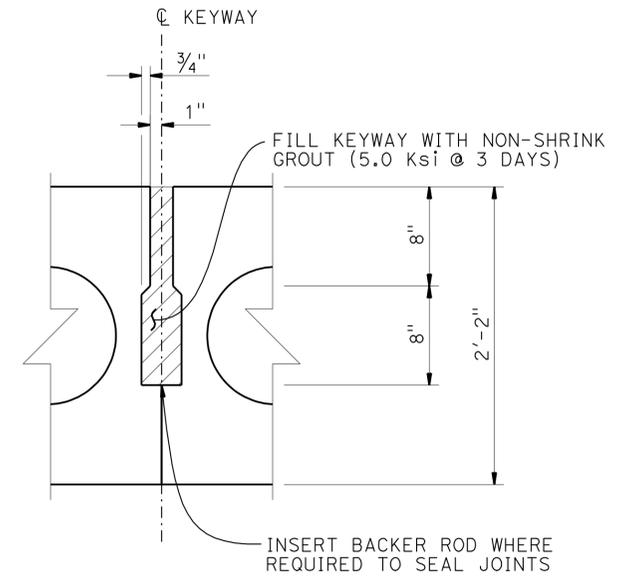
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*



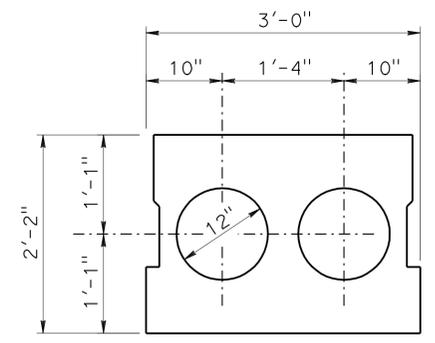
**SECTION B-B  
INTERMEDIATE DIAPHRAGM**  
1" = 1'-0"



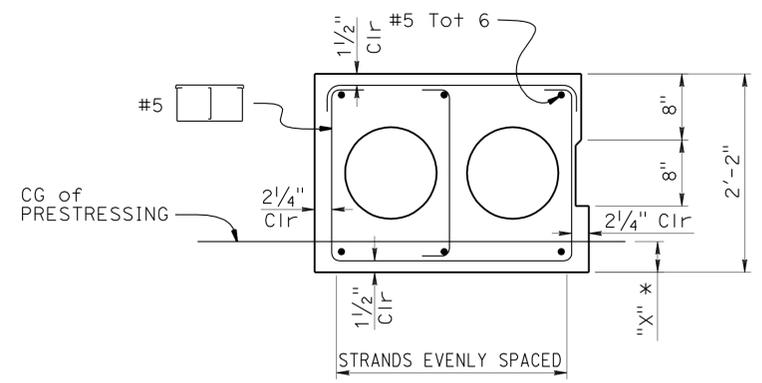
**SECTION A-A  
END DIAPHRAGM**  
1" = 1'-0"



**LONGITUDINAL KEYWAY DETAIL**  
1/2" = 1'-0"



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



**TYPICAL REINFORCEMENT**  
1" = 1'-0"

**NOTES:**

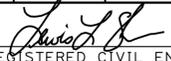
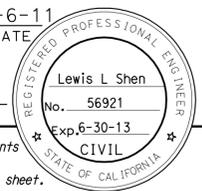
- All longitudinal keyways and diaphragm blockouts shall be cleaned in the precasting plant to remove surface laitance and curing compounds
- Area around keyway and blockouts shall be kept moist for 24 hours prior to grouting between girders
- Adjust mild reinforcement spacing to avoid conflict with P/S strands

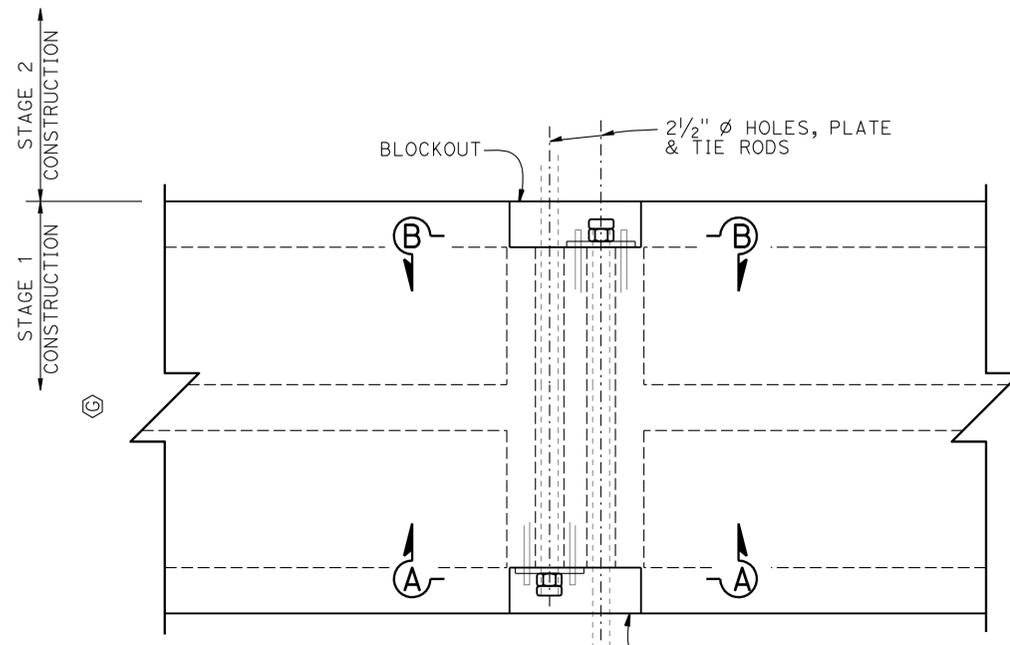
**LEGEND:**

- Indicates Non-Shrink grout
- \* See "PRETENSIONING INFORMATION TABLE" on "PRESTRESSED CONCRETE SLAB DETAILS NO. 1" sheet

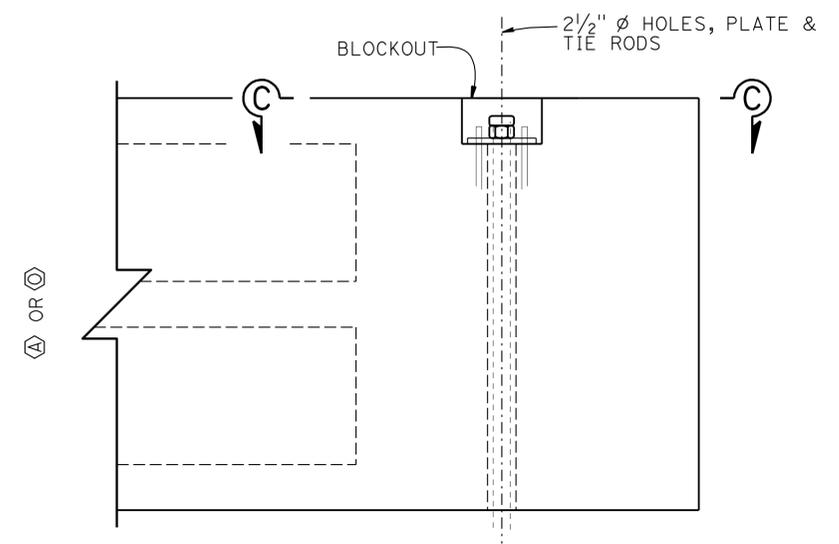
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Lewis L Shen	CHECKED Joey Aquino	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 3</b>	BRIDGE NO.	08-0166	<b>NORTH FORK MILL CREEK BRIDGE (REPLACE)</b> <b>PRESTRESSED CONCRETE SLAB DETAILS NO. 2</b>
	DETAILS	BY Jay Reid	CHECKED Joey Aquino			POST MILE	14.00	
	QUANTITIES	BY Art Herrera	CHECKED Ye Yang			UNIT: 3578	PROJECT NUMBER & PHASE: 0200000163-1	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3  
 FILE => 08-0166-1-gd102.dgn

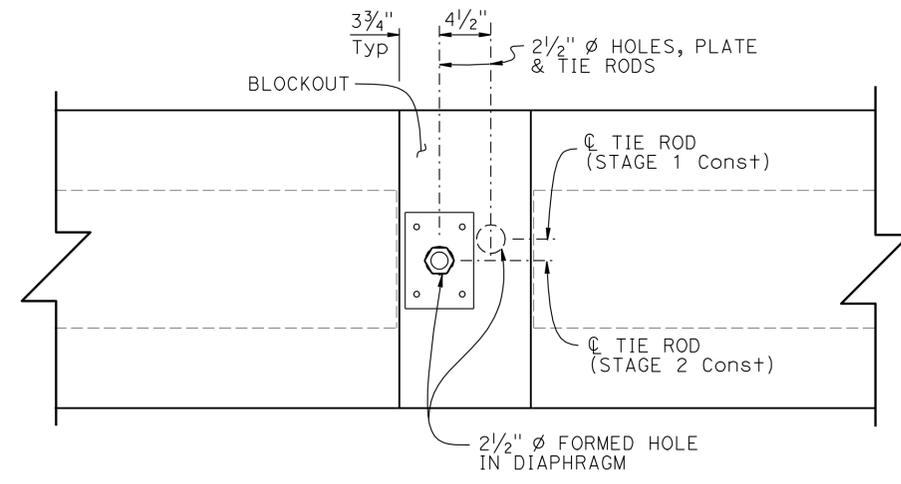
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	67	73
 REGISTERED CIVIL ENGINEER			10-6-11 DATE		
3-26-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



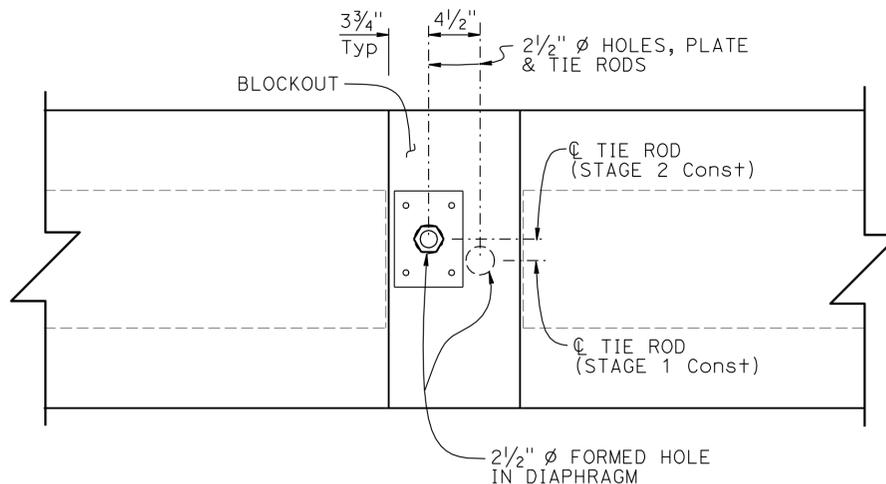
**DETAIL "E"**  
1 1/2"=1'-0"



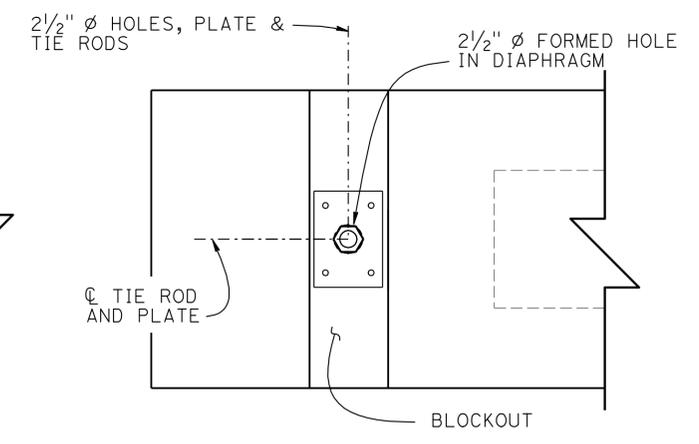
**DETAIL "F"**  
1 1/2"=1'-0"



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



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



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

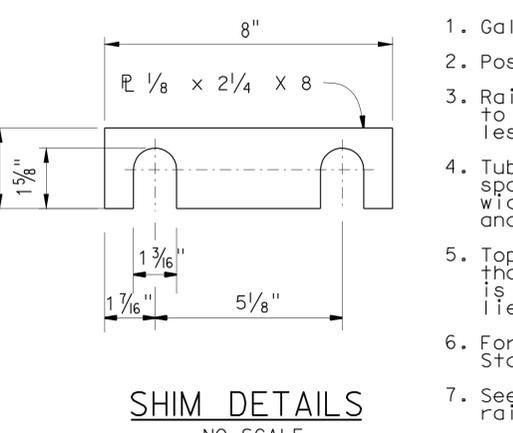
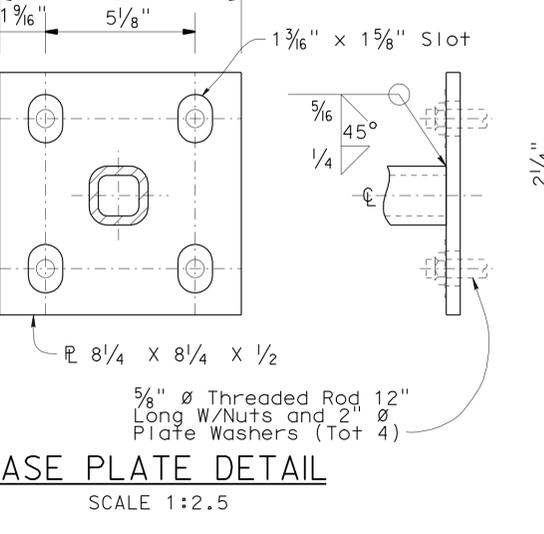
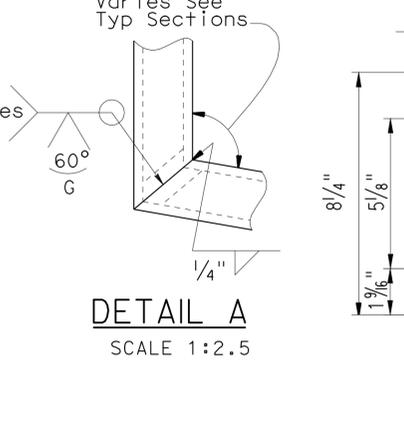
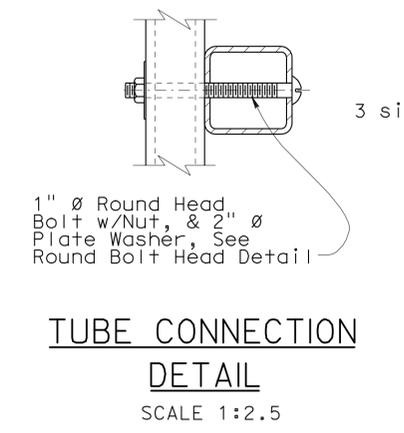
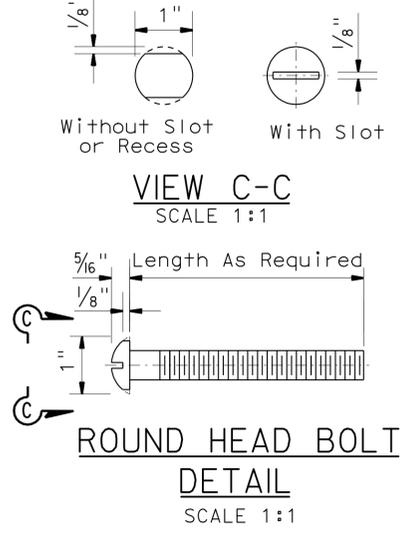
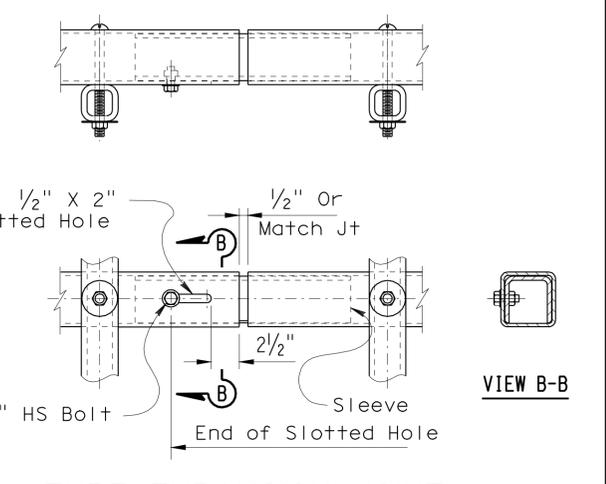
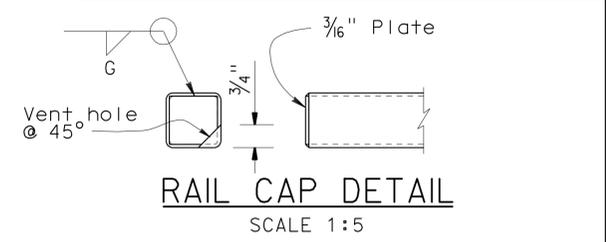
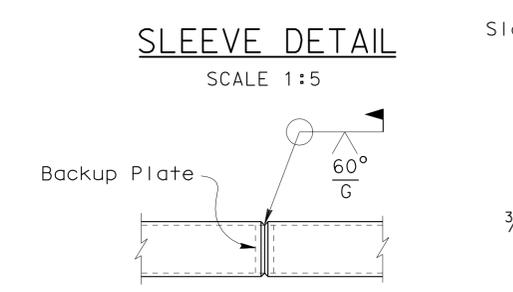
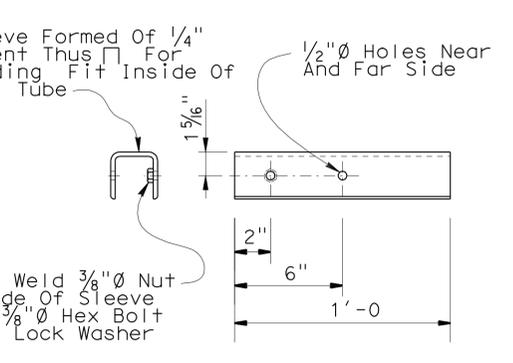
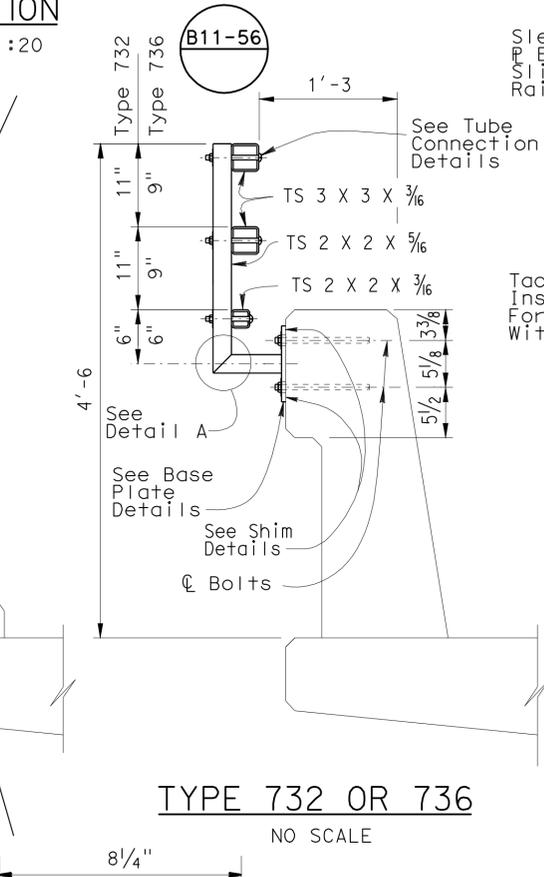
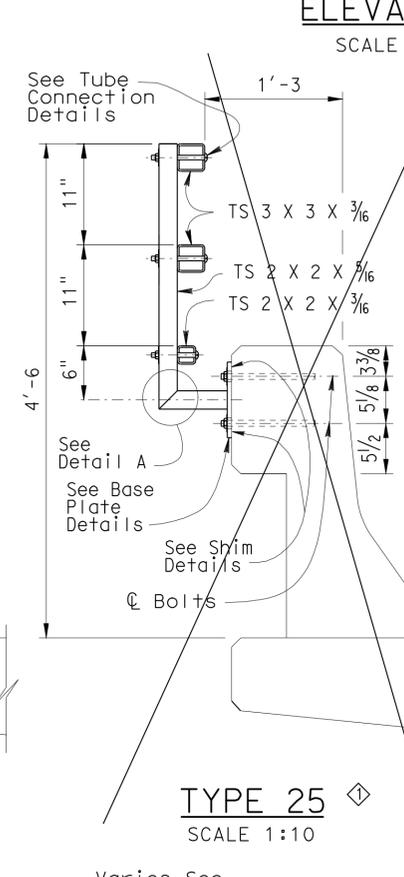
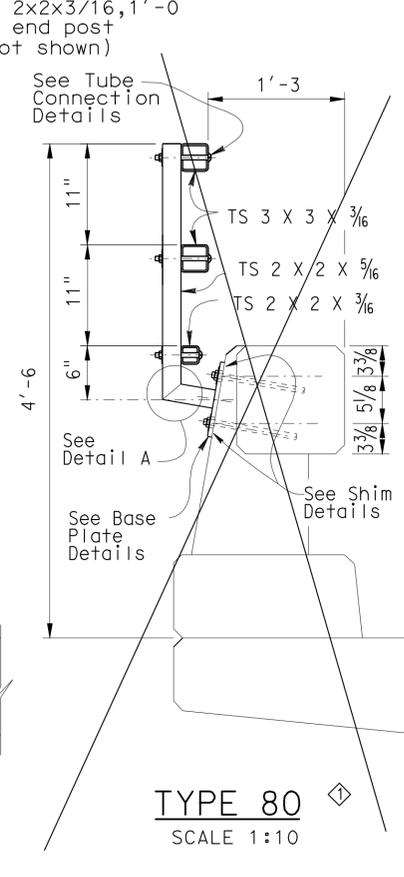
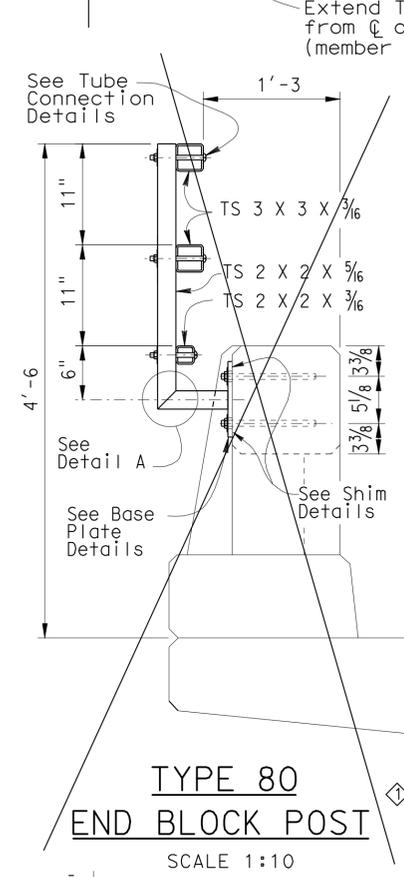
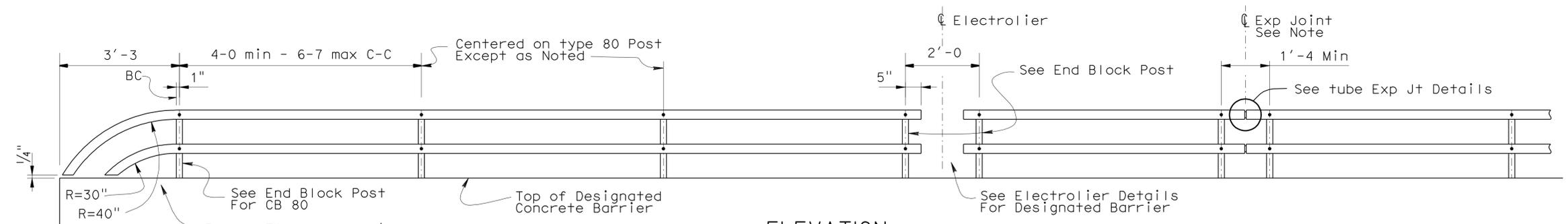
NOTES:  
See Girder Layout Sheet for Tie Rod Locations

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Lewis L. Shen	CHECKED Joey Aquino	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 3</b>	BRIDGE NO.	08-0166	<b>NORTH FORK MILL CREEK BRIDGE (REPLACE)</b> <b>TIE ROD DETAILS</b>					
	DETAILS	BY Jay Reid	CHECKED Joey Aquino			POST MILE	14.00						
	QUANTITIES	BY Art Herrera	CHECKED Ye Yang			CONTRACT NO.:	02-2C1121						
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0	1	2	3	UNIT: 3578 PROJECT NUMBER & PHASE: 0200000163-1	CONTRACT NO.: 02-2C1121	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 18	OF 24

USERNAME => s123631 DATE PLOTTED => 29-MAR-2012 TIME PLOTTED => 18:05

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	14.1	68	73

REGISTERED CIVIL ENGINEER DATE 10-6-11  
 Lewis L Shen  
 No. 56921  
 Exp. 6-30-13  
 CIVIL  
 STATE OF CALIFORNIA



- NOTES:**
- Galvanize rail assembly after fabrication.
  - Post shall be normal to railing.
  - Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 12 inches.
  - Tube splices shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
  - Top rail tube shall be continuous over not less than two posts except a short post spacing is permitted near deck or wall joints, electroliers, or other rail discontinuities as noted.
  - For details and reinforcement not shown see Standard Plan.
  - See project plans for limits of tubular hand railing.

STANDARD DRAWING	
FILE NO. <b>xs16-500e</b>	APPROVED BY <b>T SATTER</b> RESPONSIBLE TECHNICAL SPECIALIST APPROVAL DATE <b>4-15-08</b>
RELEASED BY <b>ROBERTO LACALLE</b> RESPONSIBLE OFFICE CHIEF RELEASE DATE <b>4-15-08</b>	

Deleted Detail	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 08-0166 POST MILE 14.00
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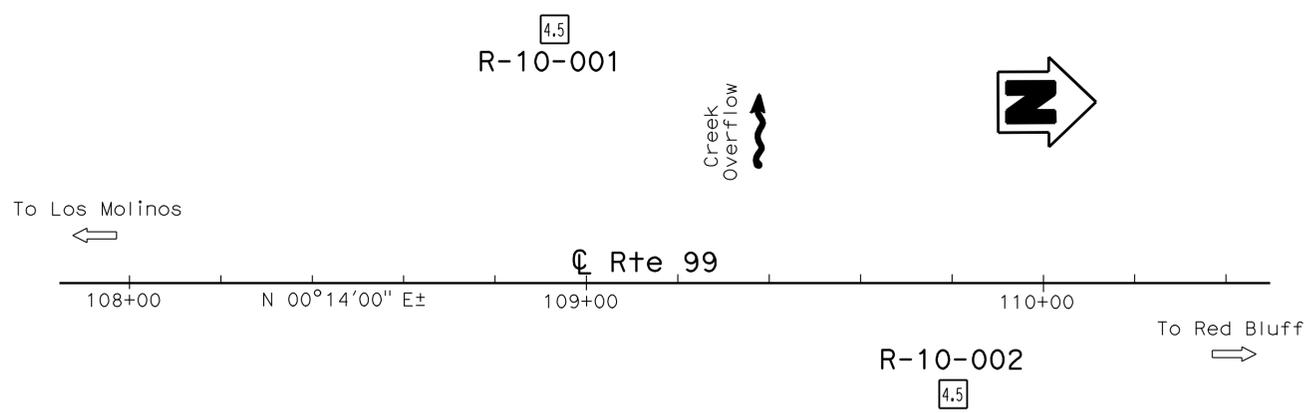
NORTH FORK MILL CREEK BRIDGE (REPLACE)			
CONCRETE BARRIER TYPE 25, 80, 732 & 736			
TUBULAR BICYCLE RAILING DETAILS			
REVISION DATES	SHEET	OF	
5-19-11 5-24-11	19	24	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	14.1	69	73

5-6-11 DATE  
 Xing Zheng  
 CERTIFIED ENGINEERING GEOLOGIST  
 3-26-12 PLANS APPROVAL DATE  
 Xing Zheng  
 No. 2130  
 Exp. 3-31-13  
 REGISTERED PROFESSIONAL GEOLOGIST  
 CERTIFIED ENGINEERING GEOLOGIST  
 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.

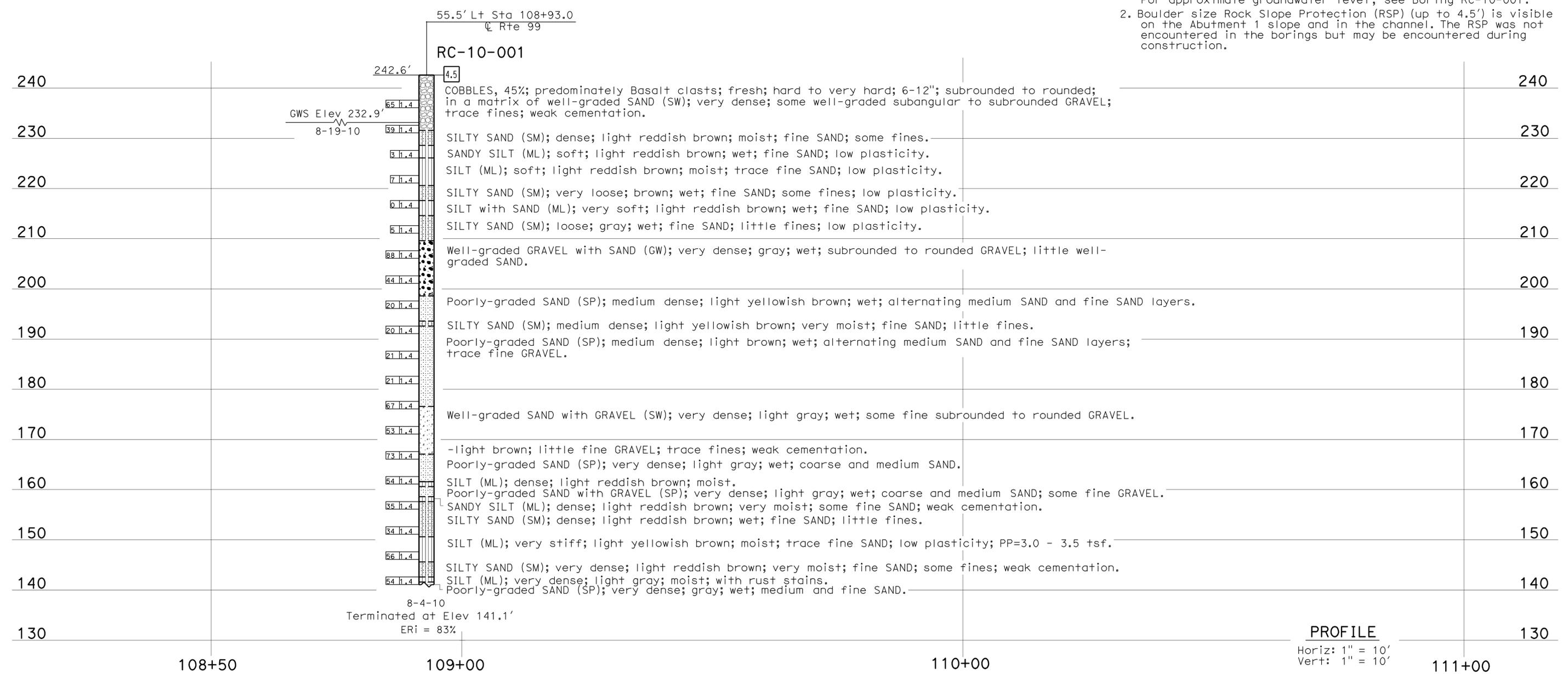
**BENCH MARK**

SUHV1412  
 Fnd Rebar w/ Aluminum Cap  
 31.5' Lt "A" Line, Rte 99  
 Sta 112+75.59  
 N 1,902,970.71  
 E 6,533,439.74  
 Elev 252.2'



**NOTES:**

1. Groundwater was present but not measured in Boring RC-10-002. For approximate groundwater level, see Boring RC-10-001.
2. Boulder size Rock Slope Protection (RSP) (up to 4.5') is visible on the Abutment 1 slope and in the channel. The RSP was not encountered in the borings but may be encountered during construction.



**PROFILE**

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

<b>ENGINEERING SERVICES</b>		<b>GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>NORTH FORK MILL CREEK BRIDGE (REPLACE)</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: W. Tang 11/10		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		08-0166		<b>LOG OF TEST BORINGS 1 OF 5</b>	
NAME: R. Buehl		CHECKED BY: A. Barrie		FIELD INVESTIGATION BY: X. Zheng/J. Thorne		<b>DESIGN BRANCH 3</b>		POST MILES 14.00			
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		CU 02 EA 2C1121		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET 20 OF 24	



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	14.1	71	73

  
 CERTIFIED ENGINEERING GEOLOGIST  
 DATE 5-6-11  
 3-26-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL GEOLOGIST  
 Xing Zheng  
 No. 2130  
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 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA

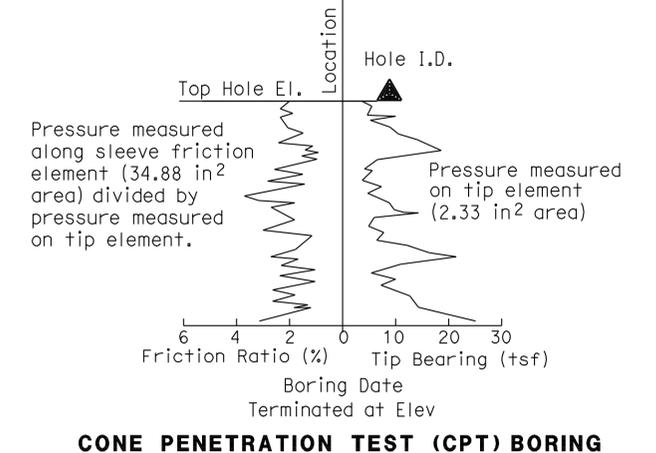
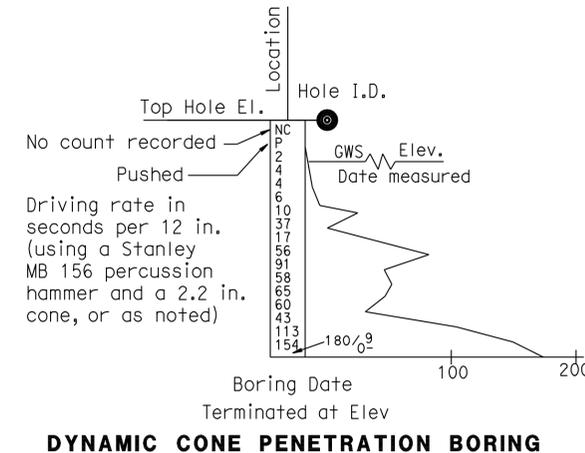
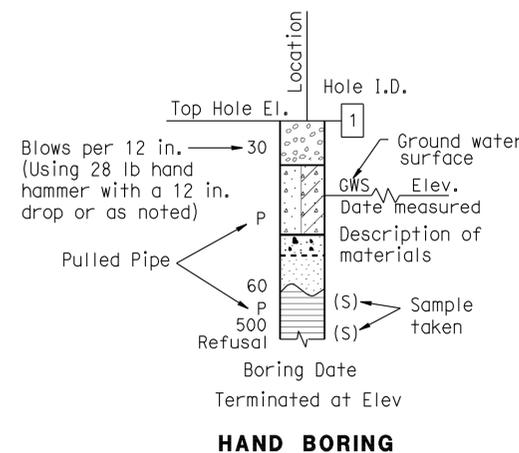
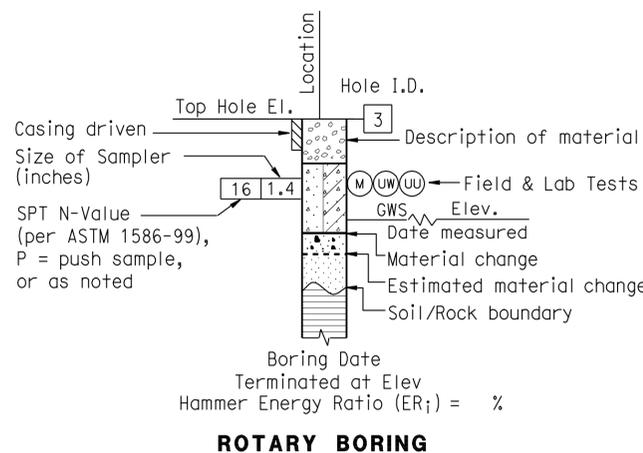
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CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring (hollow or solid stem bucket)
	R	Rotary drilled boring (conventional)
	RW	Rotary drilled with self-casing wire-line
	RC	Rotary core with continuously-sampled, self-casing wire-line
	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)
	O	Other (note on LOTB)

**Note: Size in inches.**

CONSISTENCY OF COHESIVE SOILS				
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	14.1	72	73


  
 5-6-11 DATE  
 3-26-12 PLANS APPROVAL DATE

GROUP SYMBOLS AND NAMES					
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	GW		CL		Lean CLAY
	GW				Well-graded GRAVEL with SAND
	GP		CL-ML		Lean CLAY with GRAVEL
	GP				Poorly-graded GRAVEL with SAND
	GW-GM		ML		GRAVELLY lean CLAY
	GW-GM				Well-graded GRAVEL with SILT
	GW-GM		OL		SILTY CLAY
	GW-GC				Well-graded GRAVEL with SILT and SAND
	GW-GC		OH		SILTY CLAY with GRAVEL
	GW-GC				Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY)
	GW-GC		OH		GRAVELLY SILTY CLAY
	GP-GM				Poorly-graded GRAVEL with SILT
	GP-GM		OH		SILT
	GP-GM				Poorly-graded GRAVEL with SILT and SAND
	GP-GC		OH		SILT with GRAVEL
	GP-GC				Poorly-graded GRAVEL with CLAY (or SILTY CLAY)
	GP-GC		OH		SANDY SILT with GRAVEL
	GP-GC				Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)
	GP-GC		OH		GRAVELLY SILT with SAND
	GM				SILTY GRAVEL
	GM		OH		ORGANIC lean CLAY with SAND
	GC				CLAYEY GRAVEL
	GC		OH		SANDY ORGANIC lean CLAY
	GC-GM				CLAYEY GRAVEL with SAND
	GC-GM		OH		GRAVELLY ORGANIC lean CLAY with SAND
	GC-GM				SILTY, CLAYEY GRAVEL
	GC-GM		OH		ORGANIC SILT with SAND
	SW				Well-graded SAND
	SW		OH		SANDY ORGANIC SILT
	SP				Well-graded SAND with GRAVEL
	SP		OH		GRAVELLY ORGANIC SILT with SAND
	SP				Poorly-graded SAND
	SP		OH		Fat CLAY with SAND
	SP-SM				Poorly-graded SAND with GRAVEL
	SP-SM		OH		SANDY fat CLAY
	SP-SM				Well-graded SAND with SILT
	SP-SM		OH		GRAVELLY fat CLAY
	SW-SC				Well-graded SAND with SILT and GRAVEL
	SW-SC		OH		Elastic SILT
	SW-SC				Well-graded SAND with CLAY (or SILTY CLAY)
	SW-SC		OH		Elastic SILT with GRAVEL
	SP-SM				Poorly-graded SAND with SILT
	SP-SM		OH		SANDY elastic SILT with GRAVEL
	SP-SM				Poorly-graded SAND with SILT and GRAVEL
	SP-SC		OH		GRAVELLY elastic SILT with SAND
	SP-SC				Poorly-graded SAND with CLAY (or SILTY CLAY)
	SP-SC		OH		ORGANIC fat CLAY with SAND
	SM				SILTY SAND
	SM		OH		SANDY ORGANIC fat CLAY
	SC				CLAYEY SAND
	SC		OH		GRAVELLY ORGANIC fat CLAY with SAND
	SC-SM				CLAYEY SAND with GRAVEL
	SC-SM		OH		ORGANIC elastic SILT with SAND
	SC-SM				SILTY, CLAYEY SAND
	SC-SM		OH		SANDY ORGANIC elastic SILT
	PT				PEAT
	PT		OH/OH		GRAVELLY ORGANIC elastic SILT with SAND
					COBBLES
			OH/OH		ORGANIC SOIL with SAND
					COBBLES and BOULDERS
			OH/OH		SANDY ORGANIC SOIL
					BOULDERS
			OH/OH		GRAVELLY ORGANIC SOIL

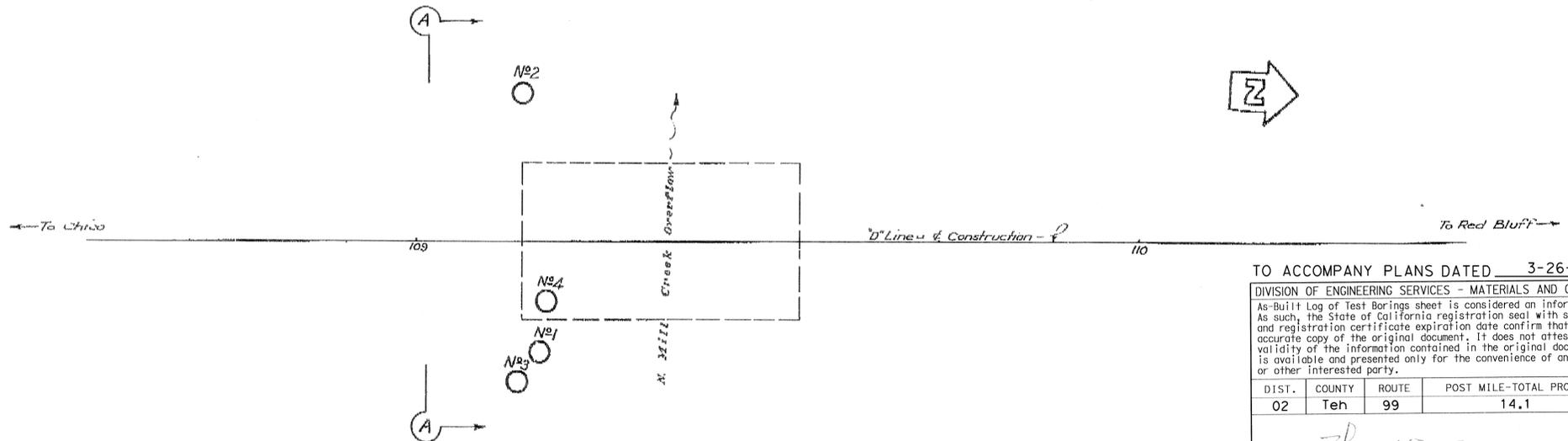
FIELD AND LABORATORY TESTING	
(C)	Consolidation (ASTM D 2435)
(CL)	Collapse Potential (ASTM D 5333)
(CP)	Compaction Curve (CTM 216)
(CR)	Corrosivity Testing (CTM 643, CTM 422, CTM 417)
(CU)	Consolidated Undrained Triaxial (ASTM D 4767)
(DS)	Direct Shear (ASTM D 3080)
(EI)	Expansion Index (ASTM D 4829)
(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
(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)
(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)

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N <sub>60</sub> (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE	
Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

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

PARTICLE SIZE		
Description	Size (in.)	
Boulder	Greater than 12	
Cobble	3 - 12	
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Fine	1/64 - 1/16
Silt and Clay	Less than 1/300	



TO ACCOMPANY PLANS DATED 3-26-12

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

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
02	Teh	99	14.1	73	73

CERTIFIED ENGINEERING GEOLOGIST  
 Xing Zheng  
 No. 2130  
 Exp. 3-31-13  
 STATE OF CALIFORNIA

DATE 4/7/2011

**NORTH FORK MILL CREEK BRIDGE (REPLACE)**  
**LOG OF TEST BORINGS 5 OF 5**

UNIT: 3643	CONTRACT No. 02-2C1121	BRIDGE No. 08-0166
PROJECT NUMBER & PHASE: 02000001631		Sheet of 5

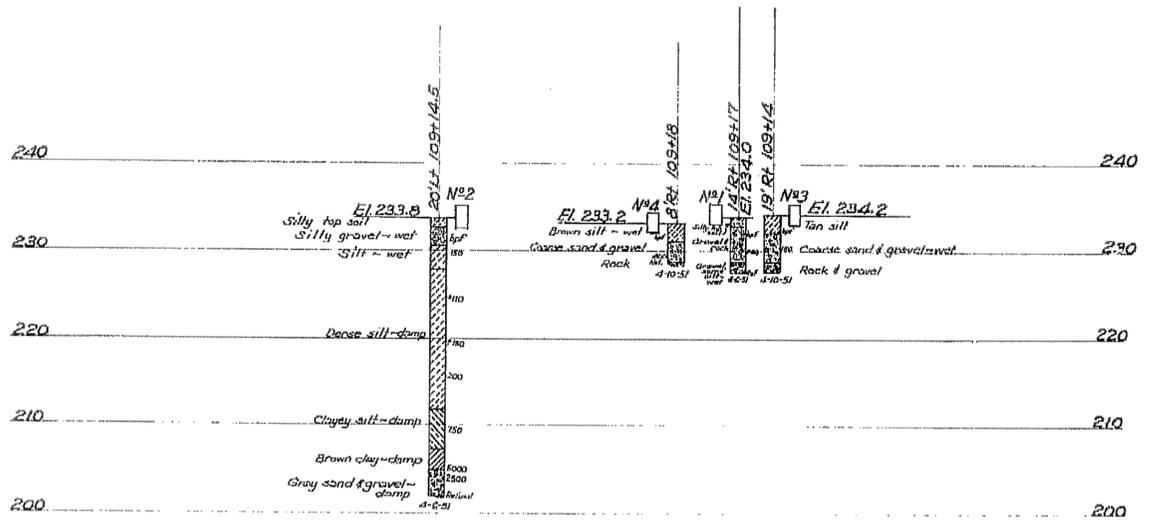
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

As-Built Vertical Datum: NGVD29.  
 Datum Conversion: NAVD88= NGVD29+2.11 ft.

**AS BUILT PLANS**  
 Contract No. 52-147615  
 Date Completed  
 Document No. 20000971

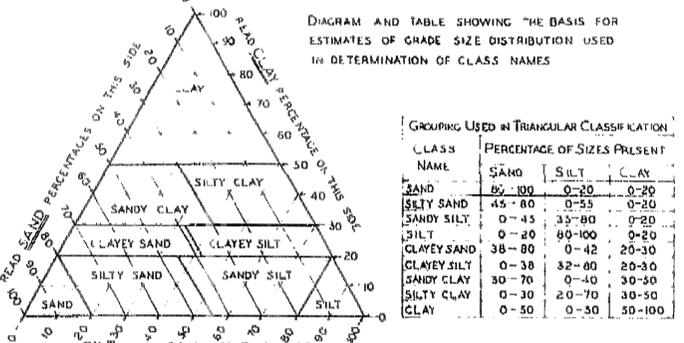
BM  
 Iron pipe-68.01' H Sta 108+25  
 Elev. 233.08

NOTE: Blows per foot were made using a 28 lb. hand hammer with a 12 inch free fall



SECTION A-A

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS



LEGEND OF BORING OPERATIONS

- PLAN OF ANY BORING
  - 1" SAMPLER BORING
  - ⊙ ROTARY WASH BORING
  - ⊙ CORE BORING
  - 2 1/2" PENETROMETER DRIVEN
  - 1 3/8" SAMPLER BORING
  - 2" TO 5" AUGER BORING
  - 6" TO 20" AUGER BORING
  - ▭ CASING DRIVEN
  - JET BORING
  - ⊙ SAMPLE TAKEN
  - ⊙ 1 3/8" A-ROD DRIVEN
- THE APPROPRIATE BORING SYMBOLS DESIGNATING THE METHOD OF OPERATION ARE SHOWN AT THE UPPER RIGHT-HAND CORNER OF THE RESPECTIVE BORING. WHERE TOOL CHANGES WERE MADE DURING THE BORING OPERATION SYMBOLS ARE SHOWN AT THE POINT OF CHANGE.

LEGEND OF EARTH MATERIALS

- ▨ GRAVEL - G
- ▨ SAND - S
- ▨ SILT - SI
- ▨ CLAY - C
- ▨ SILTY SAND - S-S
- ▨ CLAYEY SAND - C-S
- ▨ SANDY SILT - S-SI
- ▨ CLAYEY SILT - C-SI
- ▨ SANDY CLAY - SC
- ▨ SILTY CLAY - SI-C
- ▨ PEAT OR ORGANIC CLAY - O
- ▨ SANDSTONE - SS
- ▨ SHALE - SH
- ▨ BROKEN ROCK (FRAGMENTS) - BR
- ▨ ROCK - R
- ▨ FILL MATERIAL

ABBREVIATIONS

- EL. 69.4 ELEVATION OF GROUND AT TEST HOLE
- bpf BLOWS PER FOOT - (SEE NOTE ABOVE)
- P PULLED PIPE
- M MOISTURE AS % DRY WEIGHT
- EL. 64.3 & 62.42 ELEVATION OF GROUND WATER AND DATE

NOTES

THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 2, ARTICLE (C) OF THE STANDARD SPECIFICATIONS AND TO THE SPECIAL PROVISIONS ACCOMPANYING THIS SET OF PLANS.  
 CLASSIFICATION OF EARTH MATERIAL AS SHOWN ON THIS SHEET IS BASED UPON FIELD INSPECTION AND IS NOT TO BE CONSIDERED TO IMPLY MECHANICAL ANALYSIS.

**WID'G BRIDGE ACROSS N. MILL CK. OVERFLOW**  
**LOG OF TEST BORINGS**  
 SCALE 1" = 10'  
 BRIDGE NO. 8-09  
 DRAWING NO. 0-2613-8