

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-3	TYPICAL CROSS SECTIONS
4-6	LAYOUTS
7	PROFILE
8-10	CONSTRUCTION DETAILS
11-14	CONSTRUCTION AREA SIGNS
15-16	STAGE CONSTRUCTION PLANS
17-18	TRAFFIC HANDLING PLANS
19-20	SUMMARY OF QUANTITIES
21	TEMPORARY SIGNAL SYSTEM
22-39	REVISED AND NEW STANDARD PLANS

STRUCTURE PLANS

40-47	SUNSET CANAL BRIDGE Br No. 08-0010
48-67	CRAIG CREEK BRIDGE (REPLACE) Br No. 08-0168

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

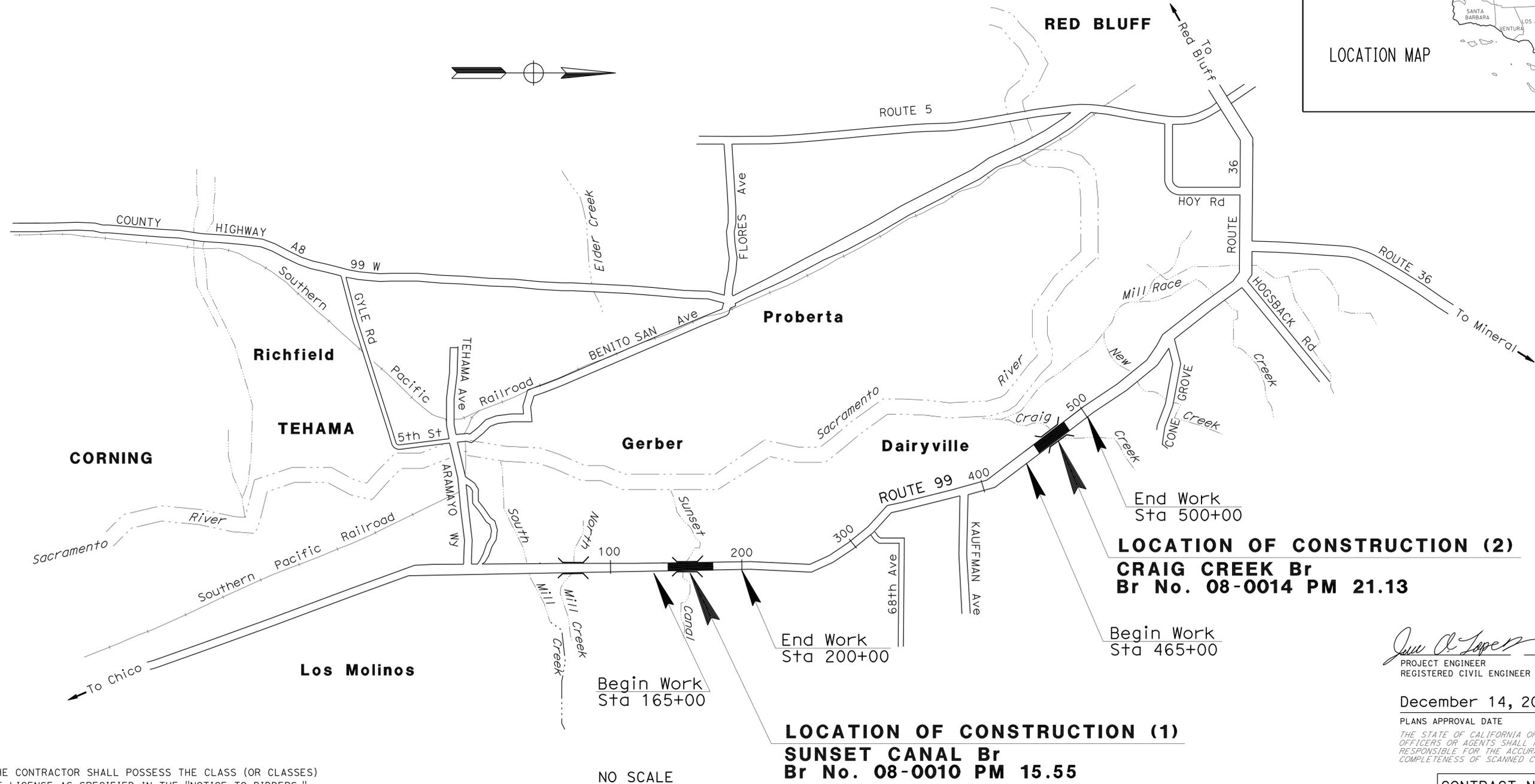
ACNH-P099(528)E

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN TEHAMA COUNTY NEAR DAIRYVILLE
AT SUNSET CANAL BRIDGE AND CRAIG CREEK BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

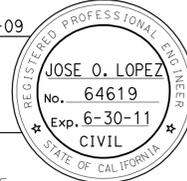
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	1	67



LOCATION OF CONSTRUCTION (2)
CRAIG CREEK Br
Br No. 08-0014 PM 21.13

LOCATION OF CONSTRUCTION (1)
SUNSET CANAL Br
Br No. 08-0010 PM 15.55

Jose O. Lopez 9-25-09
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER
December 14, 2009
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. **02-2C1104**

PROJECT MANAGER
ERIC AKANA
DESIGN ENGINEER
NESAR FORMOLI

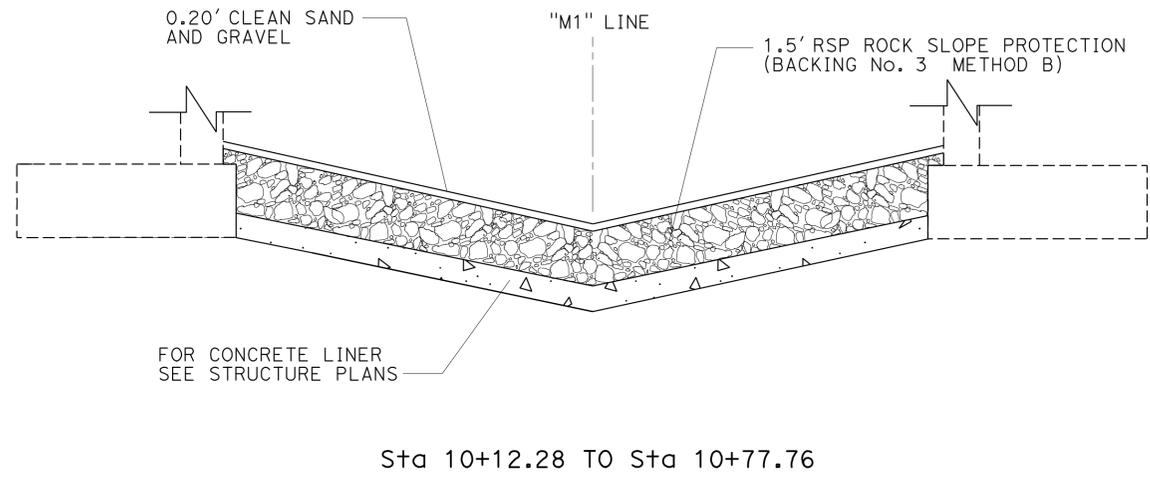
THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

07:55 21-DEC-2009 frmikesl R:\NPSE\02-2c1101\22c110ca002.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH
 DESIGN BRANCH S14
 Caltrans®
 FUNCTIONAL SUPERVISOR
 NESAR FORMOLI
 CALCULATED-DESIGNED BY
 CHECKED BY
 J. LOPEZ
 J. TAN
 REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	3	67

Jose O. Lopez
 REGISTERED CIVIL ENGINEER DATE 9-25-09
 12-14-09
 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.



**TYPICAL CROSS SECTIONS
 (LOCATION 1)**
 NO SCALE

X-2

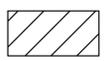
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	4	67

REGISTERED CIVIL ENGINEER
 JOSE O. LOPEZ
 No. 64619
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

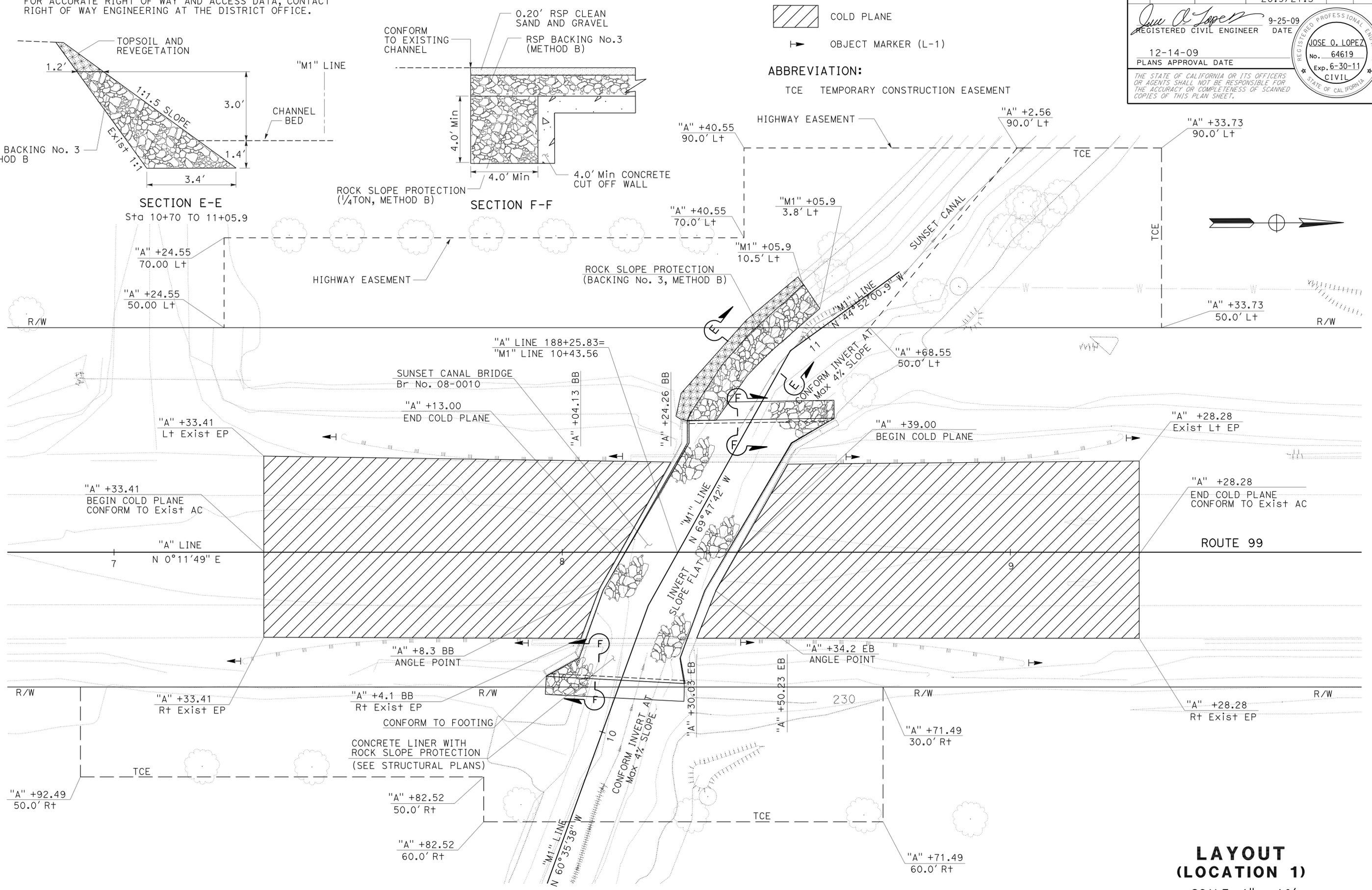
9-25-09 DATE
 12-14-09 PLANS APPROVAL DATE

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.

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

LEGEND:
 COLD PLANE
 OBJECT MARKER (L-1)

ABBREVIATION:
 TCE TEMPORARY CONSTRUCTION EASEMENT



LAYOUT (LOCATION 1)
 SCALE: 1" = 10'

L-1

07:55 21-DEC-2009 11:11:55 R:\NPS\02-201101\22C110ea001.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH
 DESIGN BRANCH S14
 Nesar Formoli
 Functional Supervisor
 J. Lopez
 J. Tan
 Revised By
 Date Revised
 Calculated/Designed By
 Checked By

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	5	67

Jose O. Lopez
 REGISTERED CIVIL ENGINEER DATE 9-25-09
 12-14-09
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
JOSE O. LOPEZ
 No. 64619
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

NOTE:

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

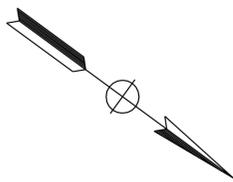
LEGEND:

- CONSTRUCT DRIVEWAY
0.25' HMA (TYPE A)
- 0.2' COLD PLANE AC Pvm+
0.2' PLACE HMA (TYPE A)
- 1.2' FULL DEPTH HMA (TYPE A)

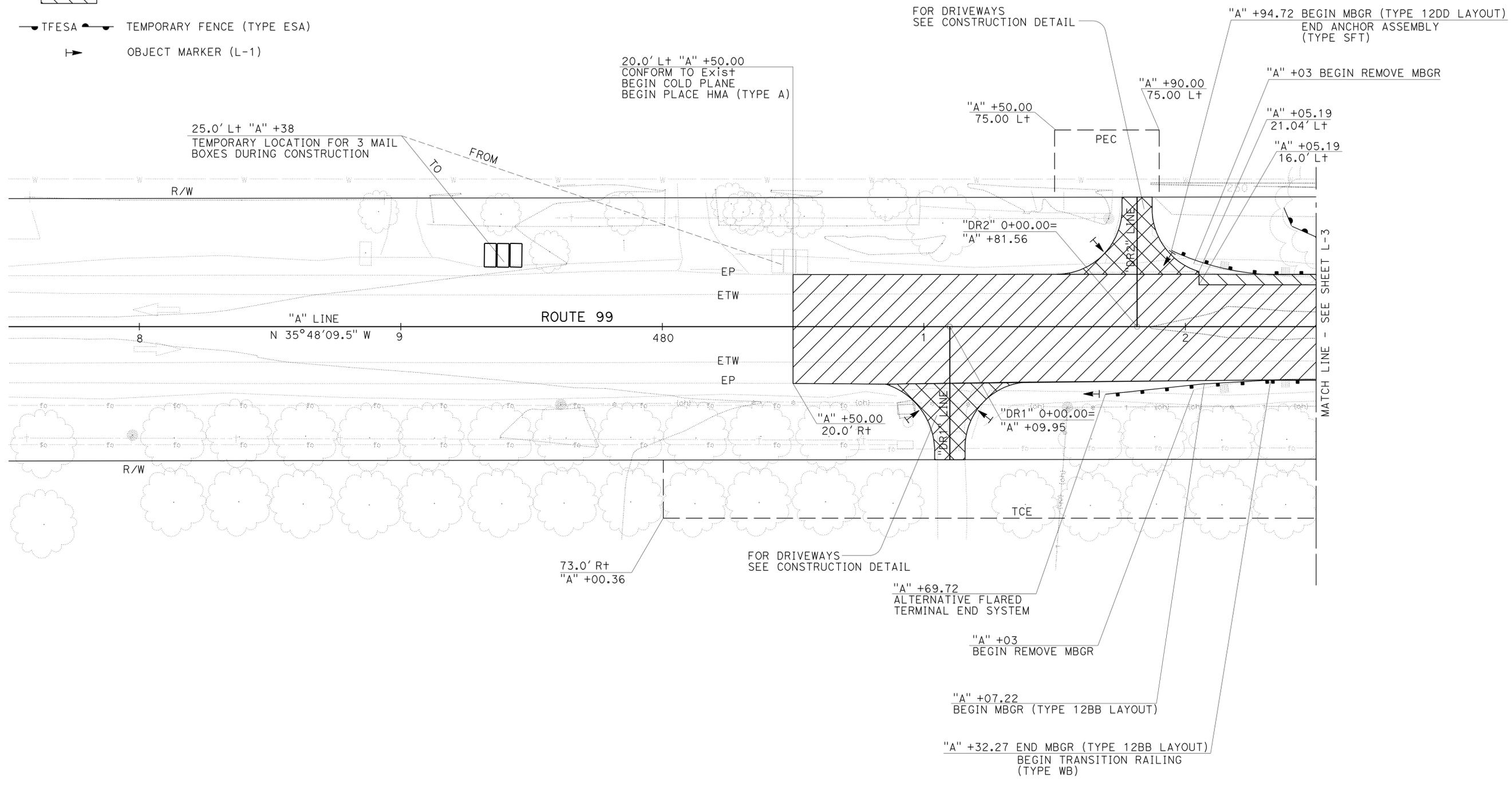
ABBREVIATIONS:

- PEC PERMIT TO ENTER AND CONSTRUCT
- TCE TEMPORARY CONSTRUCTION EASEMENT
- ESA ENVIRONMENTALLY SENSITIVE AREA

- TFESA TEMPORARY FENCE (TYPE ESA)
- OBJECT MARKER (L-1)



07:56 21-DEC-2009 11:56 AM R:\NPSE\02-2c1101\22c110ea002.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH
 DESIGN BRANCH S14
 Nesar Formoli
 J. Lopez
 J. Tan
 12-14-09



**LAYOUT
(LOCATION 2)**

SCALE: 1" = 20'

L-2

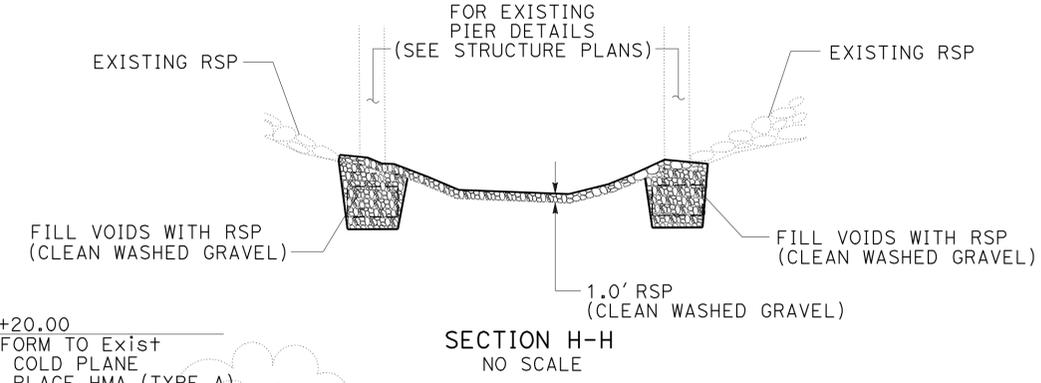
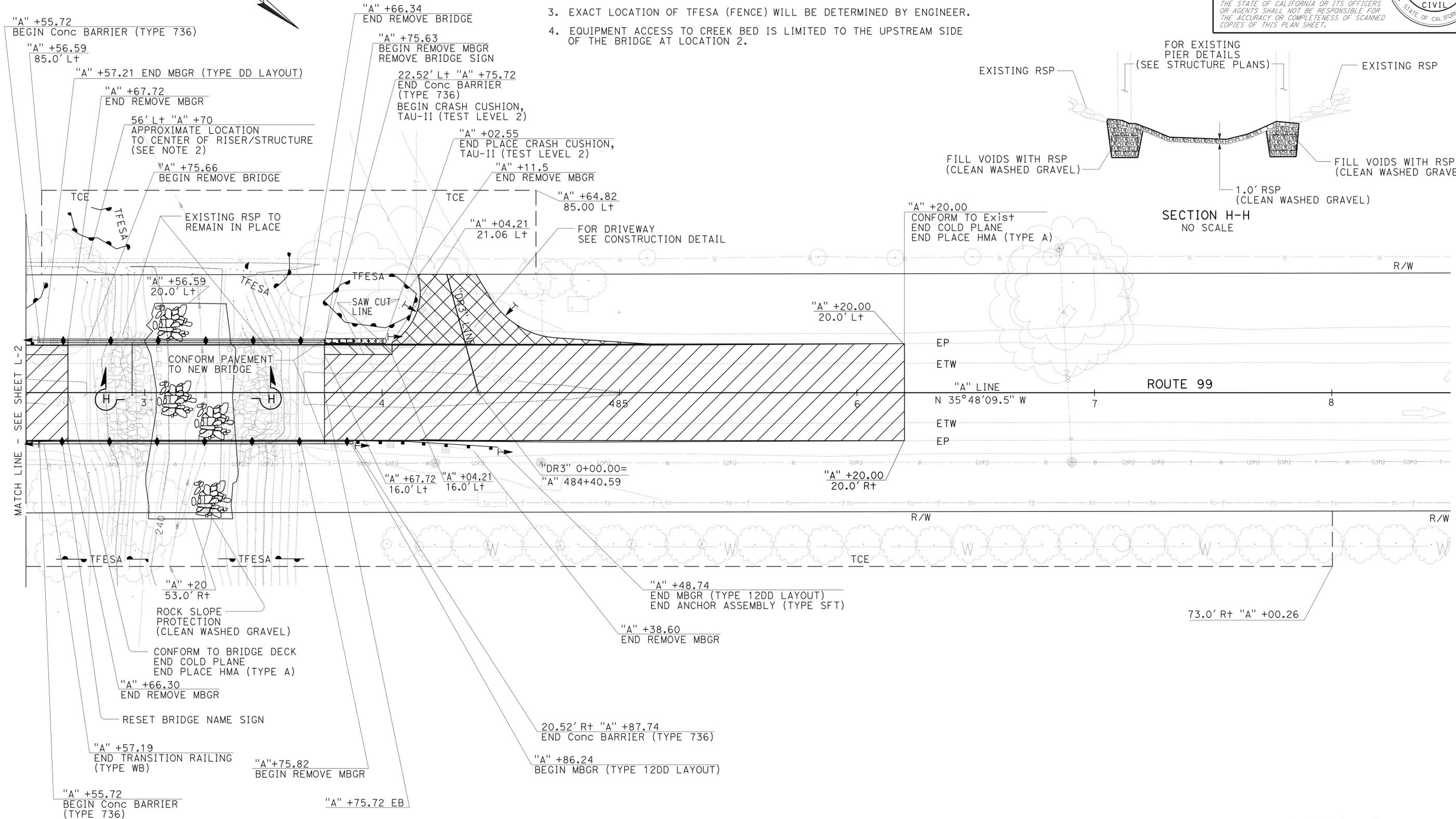
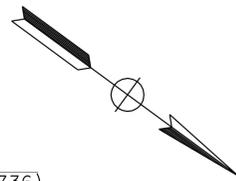
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	6	67

<i>Jose O. Lopez</i>		9-25-09
REGISTERED CIVIL ENGINEER	DATE	
12-14-09		
PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>		

REGISTERED PROFESSIONAL ENGINEER	JOSE O. LOPEZ
No.	64619
Exp.	6-30-11
CIVIL	

NOTES:

- FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- CONCRETE APRON WITH UNDERMINED SUPPORT. COORDINATION WITH UTILITY OWNER IS REQUIRED PRIOR TO CONDUCTING CONSTRUCTION ACTIVITIES (SEE CONSTRUCTION DETAILS).
- EXACT LOCATION OF TFESA (FENCE) WILL BE DETERMINED BY ENGINEER.
- EQUIPMENT ACCESS TO CREEK BED IS LIMITED TO THE UPSTREAM SIDE OF THE BRIDGE AT LOCATION 2.



LAYOUT (LOCATION 2)

SCALE: 1" = 20'

L-3

07:56 21-DEC-2009 11:11 AM I:\Projects\2009\22C1101\22C1101.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH DESIGN BRANCH S14
 Nesar Formoli
 J. Lopez
 J. Tan
 9-25-09
 12-14-09

07:56 21-DEC-2003 frmikes1 R:\NPSE\02-2c1101\22c110fa001.dgn

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH
 DESIGN BRANCH S14

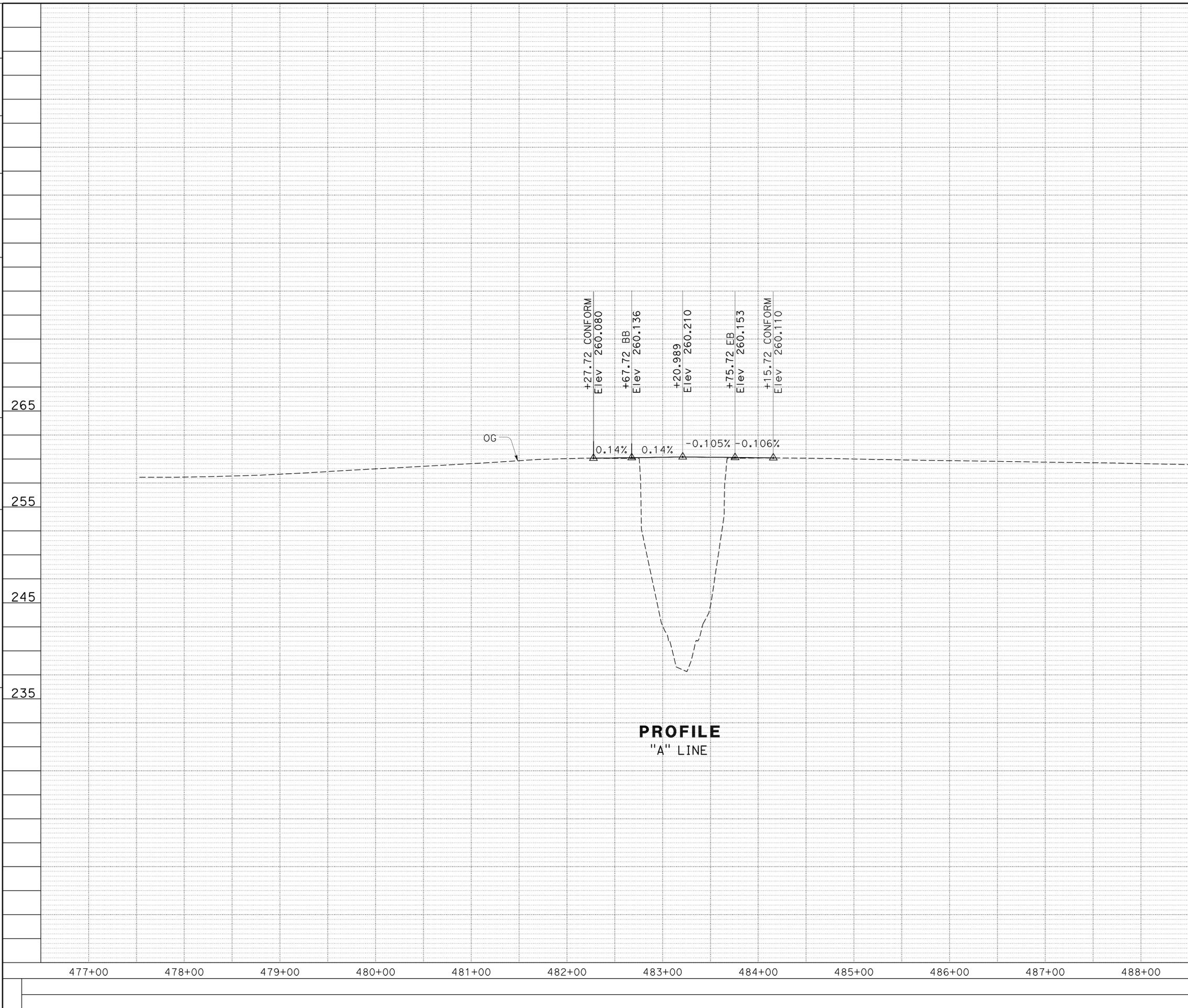


FUNCTIONAL SUPERVISOR
 NESAR FORMOLI

CALCULATED-
 DESIGNED BY
 CHECKED BY

J. LOPEZ
 J. TAN

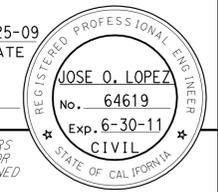
REVISED BY
 DATE REVISED



PROFILE
 "A" LINE

PROFILE
(LOCATION 2)
 SCALE: Horiz 1" = 50'
 Vert 1" = 5'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	7	67
			REGISTERED CIVIL ENGINEER DATE 9-25-09 12-14-09 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.		

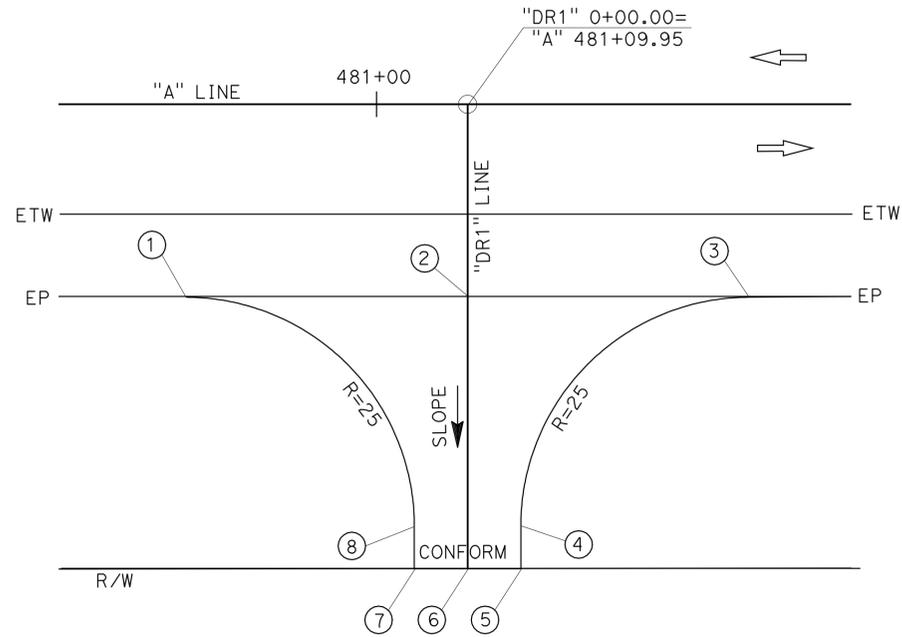


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	8	67

Jose O. Lopez
 REGISTERED CIVIL ENGINEER DATE 9-25-09
 12-14-09
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JOSE O. LOPEZ
 No. 64619
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

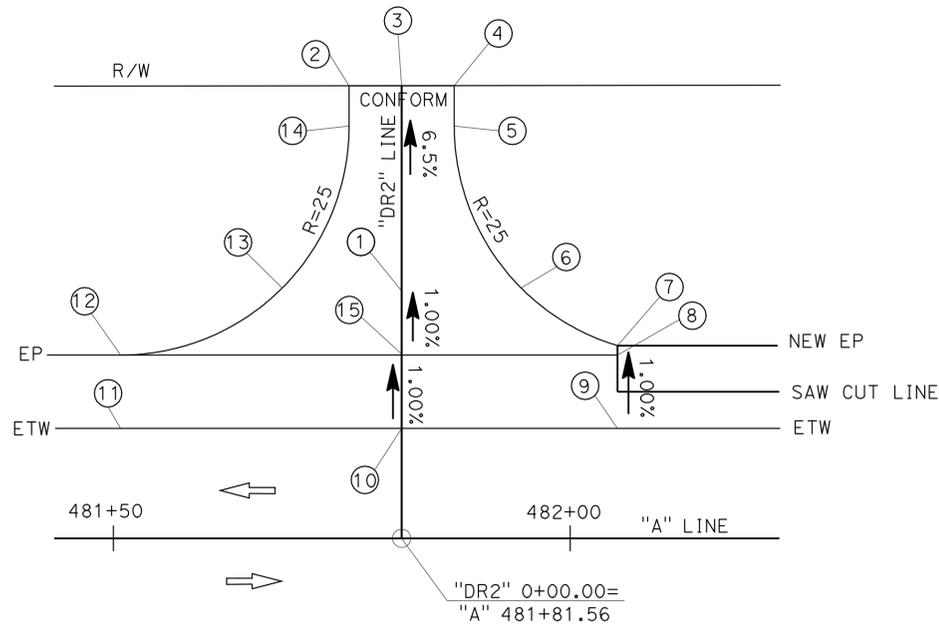
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



DRIVEWAY "DR1" LINE

DRIVEWAY "DR1" LINE

No. ○	LOCATION	ELEVATION
1	20.00' R+ "A" 480+79.13	CONFORM
2	20.00' R+ "A" 481+09.95	CONFORM
3	20.00' R+ "A" 481+40.78	CONFORM
4	46.07' R+ "A" 481+15.78	CONFORM
5	50.00' R+ "A" 481+15.78	CONFORM
6	50.00' R+ "A" 481+09.95	CONFORM
7	50.00' R+ "A" 481+04.13	CONFORM
8	46.07' R+ "A" 480+04.13	CONFORM



DRIVEWAY "DR2" LINE

DRIVEWAY "DR2" LINE

No. ○	LOCATION	ELEVATION
1	27.00' L+ "A" 481+81.56	259.62'
2	50.00' L+ "A" 481+75.80	CONFORM
3	50.00' L+ "A" 481+81.56	CONFORM
4	50.00' L+ "A" 481+87.31	CONFORM
5	45.00' L+ "A" 481+87.31	258.45'
6	27.32' L+ "A" 481+94.64	259.62'
7	21.04' L+ "A" 482+05.19	259.80'
8	20.00' L+ "A" 482+05.19	259.81'
9	12.00' L+ "A" 482+05.19	CONFORM
10	12.00' L+ "A" 481+81.56	CONFORM
11	12.00' L+ "A" 481+50.80	CONFORM
12	20.00' L+ "A" 481+50.80	259.48'
13	27.32' L+ "A" 481+68.48	259.45'
14	45.00' L+ "A" 481+75.80	258.45'
15	20.00' L+ "A" 481+81.56	259.69'

CONSTRUCTION DETAILS

NO SCALE

C-1

07:56 21-DEC-2009 11:11:56 I:\Projects\2009\21-DEC-2009\22C110ga001.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH
 DESIGN BRANCH S14
 J. LOPEZ
 J. TAN
 Nesar Formoli
 REVISIONS: 01, 02, 03, 04, 05, 06, 07, 08, 09, 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.

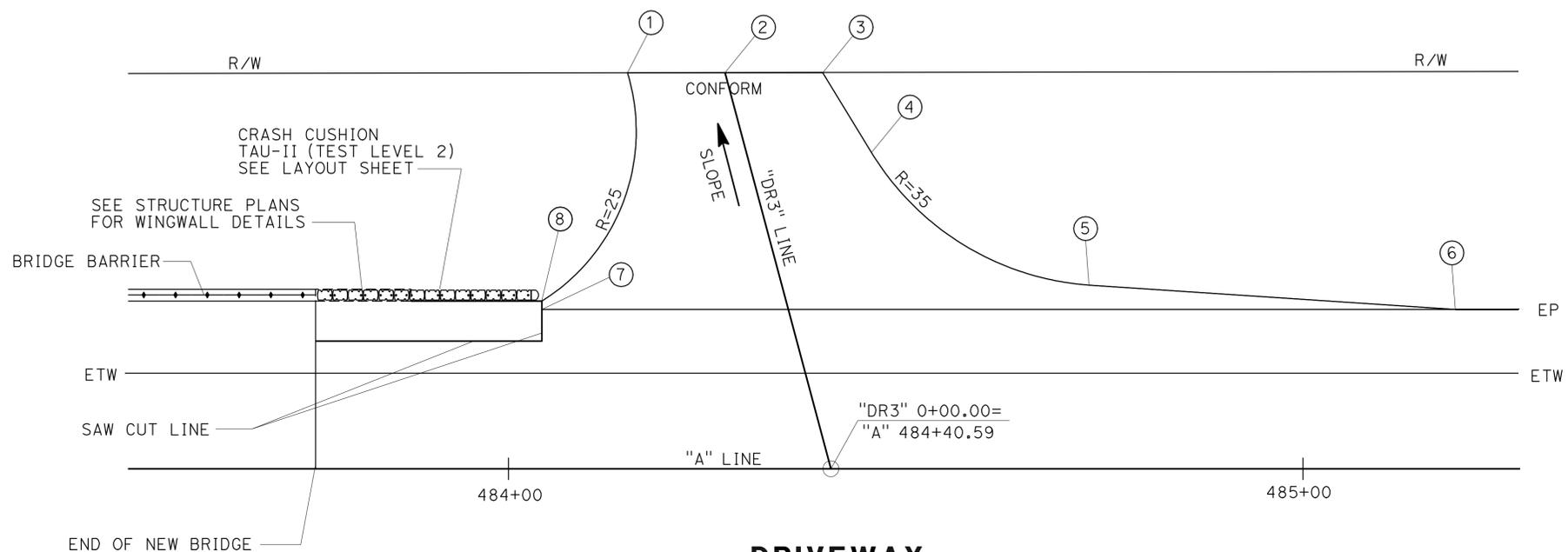
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	9	67

Jose O. Lopez
 REGISTERED CIVIL ENGINEER DATE 9-25-09
 12-14-09
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JOSE O. LOPEZ
 No. 64619
 Exp. 6-30-11
 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.

07:57 21-DEC-2009 11:11 AM I:\Projects\02-2c1101\22c110ga002.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH
 DESIGN BRANCH S14
 Caltrans®
 FUNCTIONAL SUPERVISOR
 NESAR FORMOLI
 CALCULATED-DESIGNED BY
 CHECKED BY
 J. LOPEZ
 J. TAN
 REVISED BY
 DATE REVISED



DRIVEWAY "DR3" LINE

No.	○	LOCATION	ELEVATION
1		50.00' Lt "A" 484+14.98	CONFORM
2		50.00' Lt "A" 484+27.26	CONFORM
3		50.00' Lt "A" 484+39.56	CONFORM
4		39.70' Lt "A" 484+45.71	CONFORM
5		23.05' Lt "A" 484+73.07	CONFORM
6		20.00' Lt "A" 485+19.18	CONFORM
7		20.00' Lt "A" 484+04.21	CONFORM
8		21.06' Lt "A" 484+04.21	CONFORM

DRIVEWAY "DR3" LINE

DRIVEWAY	EXCAVATION	EMBANKMENT (N)	HMA (TYPE A) STRUCTURAL SECTION
	CY	CY	LF
"DR1"	6.0		0.25
"DR2"	3.0	20.0	0.25
"DR3"	12.0		0.25
TOTAL	21.0	20.0	

CONSTRUCTION DETAILS

NO SCALE

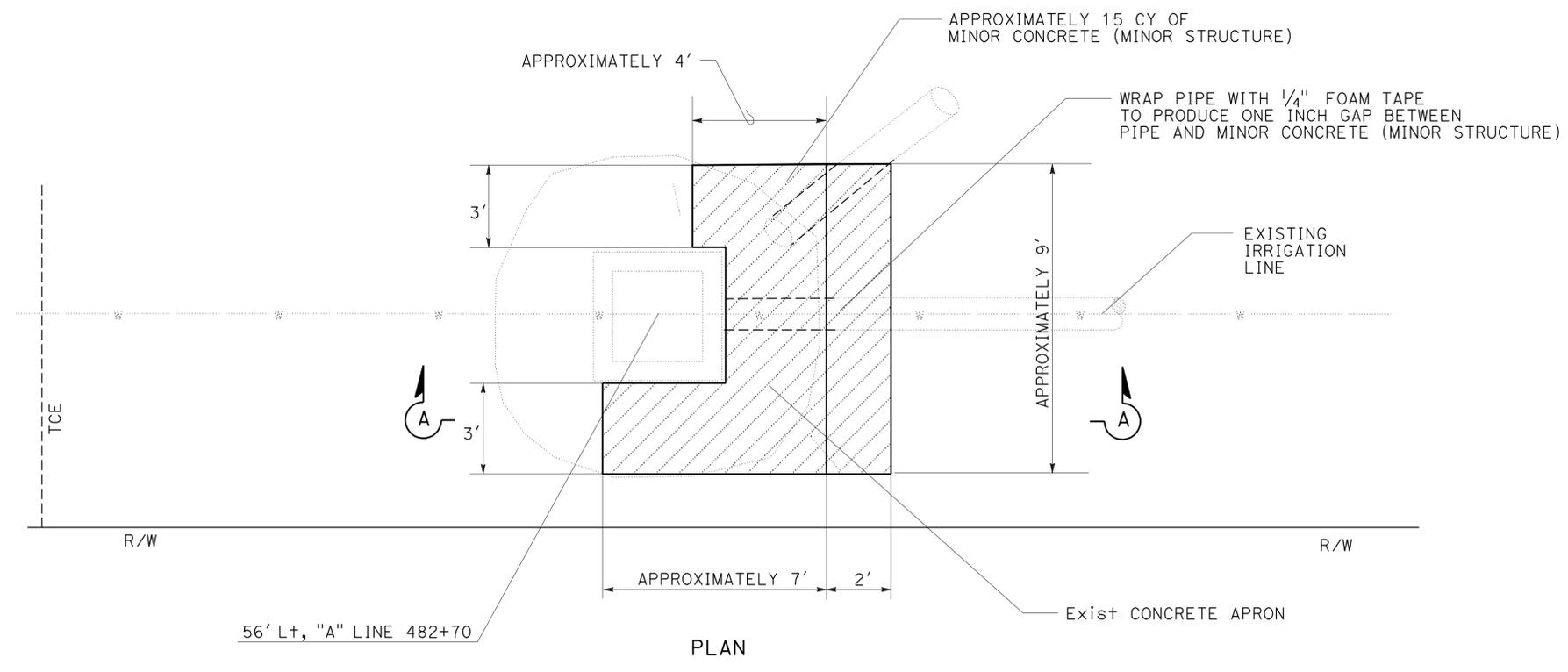
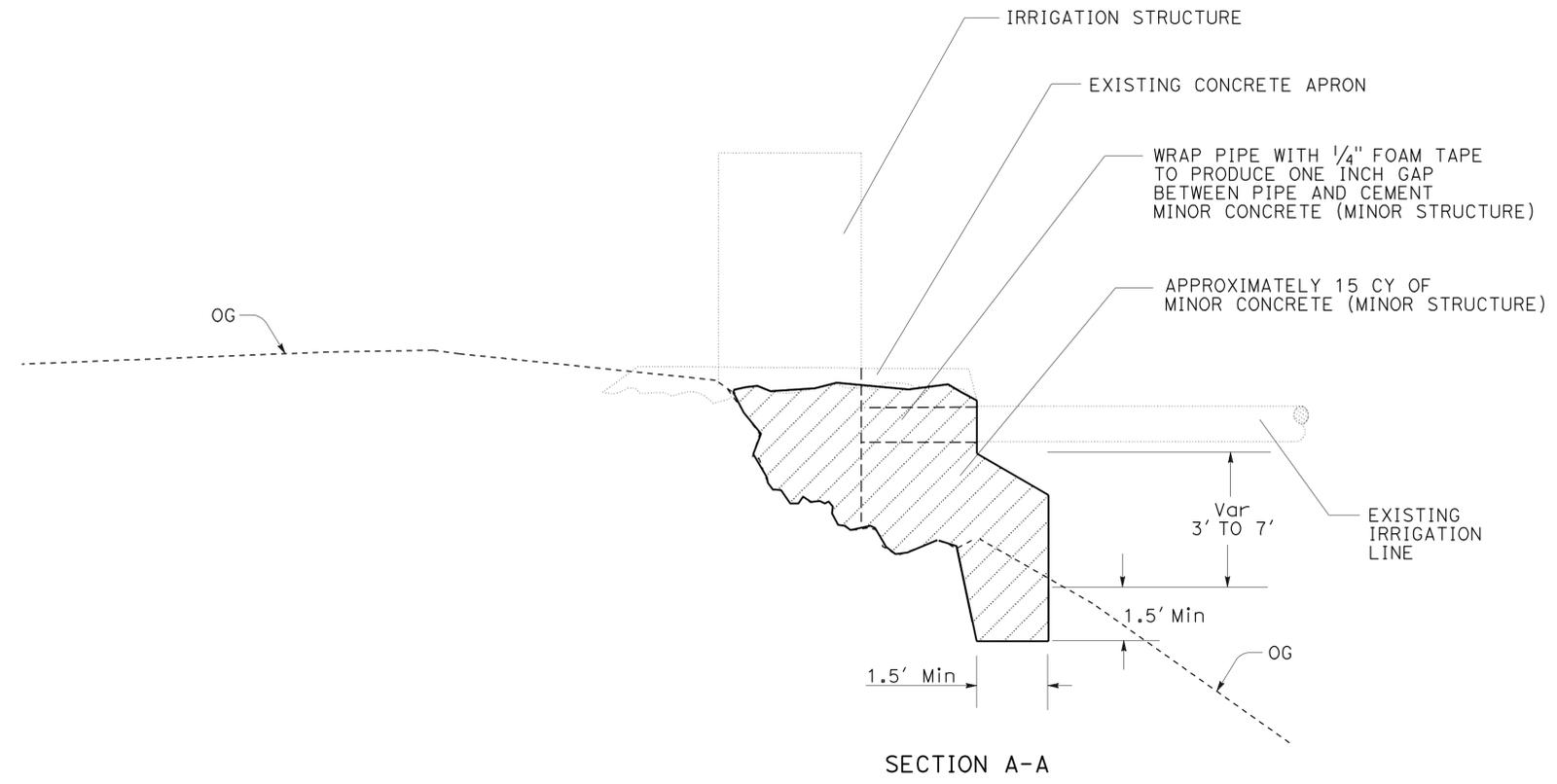
C-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	10	67

Jose O. Lopez
 REGISTERED CIVIL ENGINEER DATE 9-25-09
 12-14-09
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JOSE O. LOPEZ
 No. 64619
 Exp. 6-30-11
 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.



CONSTRUCTION DETAILS

NO SCALE

C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH DESIGN BRANCH S14
 FUNCTIONAL SUPERVISOR
 NESAR FORMOLI
 CALCULATED-DESIGNED BY
 J. LOPEZ
 CHECKED BY
 J. TAN
 REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	11	67

Jose O. Lopez
 REGISTERED CIVIL ENGINEER DATE 9-25-09
 12-14-09
 PLANS APPROVAL DATE

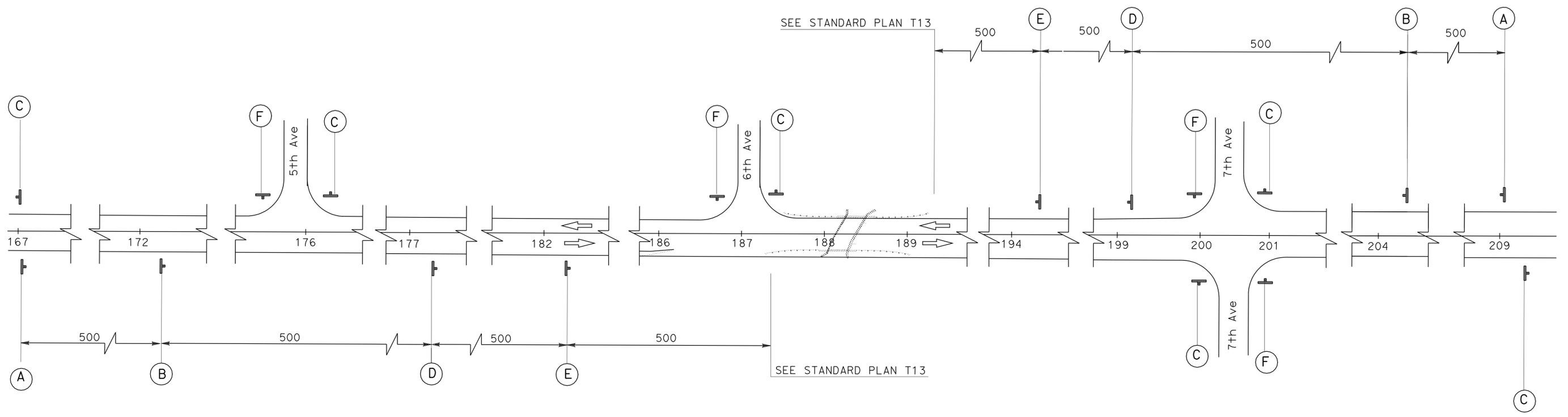
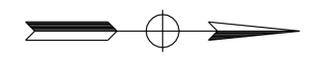
REGISTERED PROFESSIONAL ENGINEER
 JOSE O. LOPEZ
 No. 64619
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

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.

LEGEND

-  PORTABLE SIGN
-  DIRECTION OF TRAVEL
-  FLASHING BEACON

1- EXACT LOCATION TO BE DETERMINED BY THE ENGINEER.
 2- BLACK LETTERING ON ORANGE BACKGROUND



CONSTRUCTION AREA SIGNS (PORTABLE SIGN)

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA			
A	W20-1	C23B	48" x 48"	BRIDGE IMPROVEMENT	2
B	W20-4		48" x 48"	ONE LANE ROAD AHEAD	2
C	G20-2		36" x 18"	END ROAD WORK	6
D		C9A	48" x 48"	(FLAGGER) SYMBOL	2
E	W3-4		48" x 48"	BE PREPARED TO STOP	2
F	W20-1	C23	48" x 48"	BRIDGE IMPROVEMENT	4



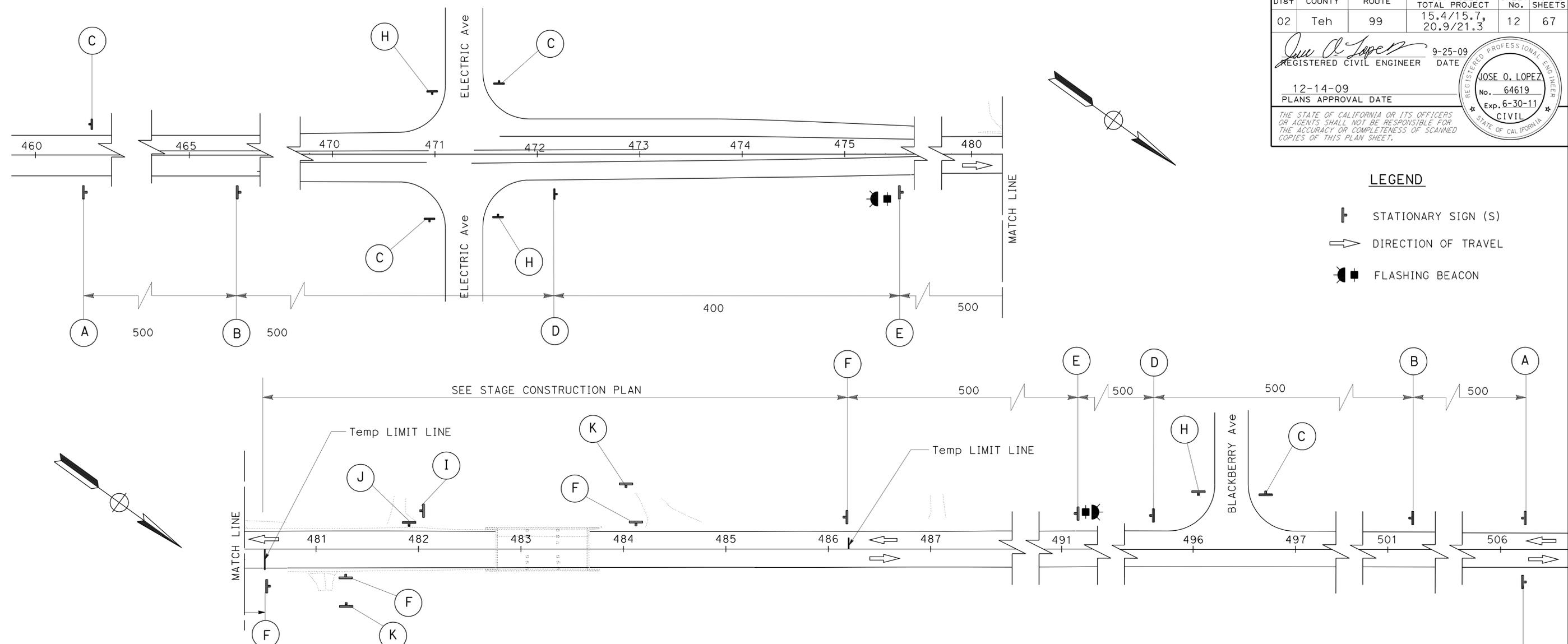
CONSTRUCTION AREA SIGNS (LOCATION 1)

NO SCALE

CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

07:57 21-DEC-2009 11:11:51 R:\NPSE\02-2c1101\22c1101a001.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH DESIGN BRANCH S14
 Caltrans



- LEGEND**
- STATIONARY SIGN (S)
 - DIRECTION OF TRAVEL
 - FLASHING BEACON

CONSTRUCTION AREA SIGNS STATIONARY MOUNTED

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	No. OF SIGNS
	FEDERAL	CALIFORNIA				
(A)		C40 (Mod)	48" x 36" (S)	TRAFFIC FINES DOUBLED IN WORK ZONES	1 - 4" x 6"	2
(B)	W20-1	C23	48" x 48" (S)	ROAD WORK AHEAD	1 - 4" x 6"	2
		C23B	48" x 24" (S)	BRIDGE REPLACEMENT		
(C)	G20-2	C14	36" x 18" (S)	END ROAD WORK	1 - 4" x 4"	5
(D)	W20-4		48" x 24" (S)	ONE LANE ROAD AHEAD	1 - 4" x 6"	2
(E)	W3-3		48" x 48" (S)	TEMPORARY TRAFFIC SIGNAL (SYMBOL)	1 - 4" x 6"	2
				FLASHING BEACON		
(F)	R10-6		24" x 36" (S)	STOP HERE ON RED	1 - 4" x 4"	4
(H)	W20-1		48" x 48" (S)	ROAD WORK AHEAD	1 - 4" x 6"	3
(I)	R3-5A		30" x 36" (S)	(ARROW) ONLY	1 - 4" x 4"	1
(J)	R4-7A		30" x 36" (S)	(ARROW) KEEP RIGHT	1 - 4" x 4"	1
(K)	W3-3		48" x 48"	TEMPORARY TRAFFIC SIGNAL (SYMBOL)	1 - 4" x 4"	2



**CONSTRUCTION AREA SIGNS
(LOCATION 2)
NO SCALE**

CS-2

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

01:57 21-DEC-2009 11:11:57 R:\NPSE\02-2c1101\22c1101a002.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH DESIGN BRANCH S14
 FUNCTIONAL SUPERVISOR
 NESAR FORMOLI
 CALCULATED-DESIGNED BY
 CHECKED BY
 J. LOPEZ
 J. TAN
 REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	13	67

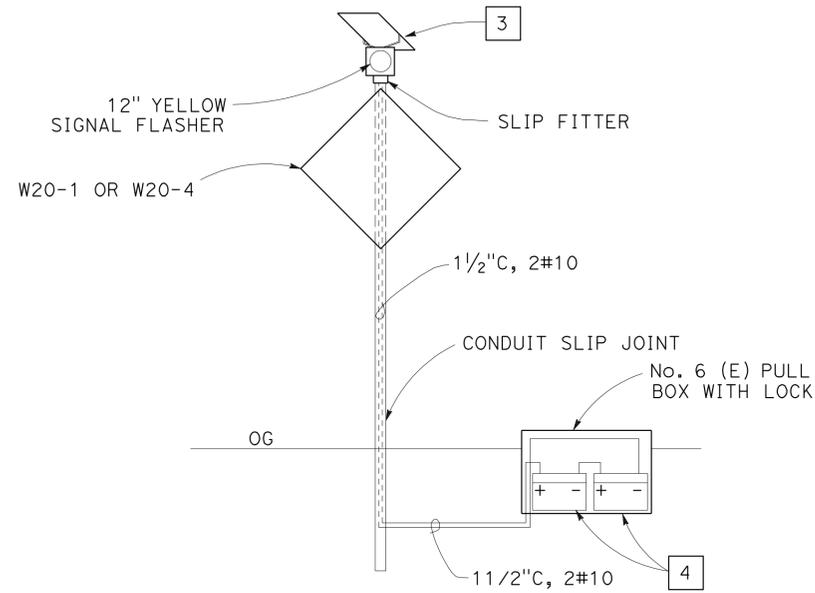
Jose O. Lopez
 REGISTERED CIVIL ENGINEER DATE 9-25-09
 12-14-09
 PLANS APPROVAL DATE

JOSE O. LOPEZ
 No. 64619
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

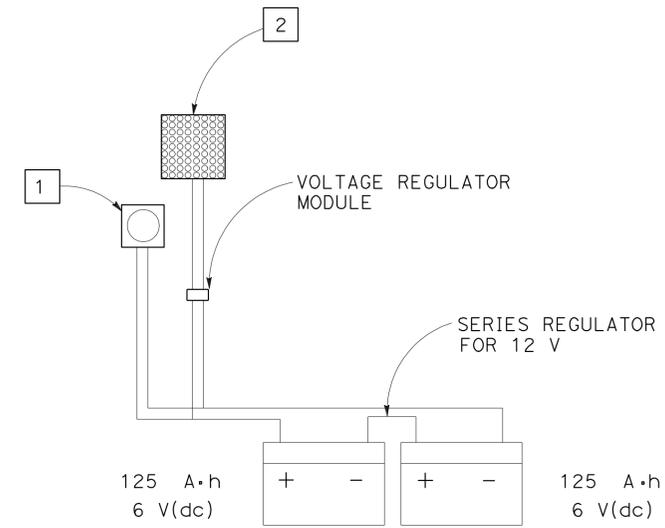
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

- 1 12" 12 VOLT SIGNAL HEAD WITH FLASHER MODULE.
- 2 75 W SOLAR PANEL, EACH HEAD.
- 3 SOLAR PANEL AND ADJUSTABLE MOUNT.
- 4 PROVIDE BATTERIES IN PLASTIC BATTERY CONTAINERS.



TEMPORARY FLASHING BEACON DETAIL



CONNECTION DIAGRAM

TEMPORARY FLASHING BEACON

QUANTITY (EA)	REMARKS
2	SOLAR-POWERED; TO BE MOUNTED ON 4" X 6" POST

CONSTRUCTION AREA SIGNS
NO SCALE

CS-3

07:57 21-DEC-2009 11:11:51 R:\NPSE\02-2c1101\22c1101a003.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH
 DESIGN BRANCH S14
 J. LOPEZ
 J. TAN
 Nesar Formoli
 FUNCTIONAL SUPERVISOR
 CALCULATED-DESIGNED BY
 CHECKED BY
 REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	14	67

Jose O. Lopez
 REGISTERED CIVIL ENGINEER DATE 9-25-09

12-14-09
 PLANS APPROVAL DATE

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

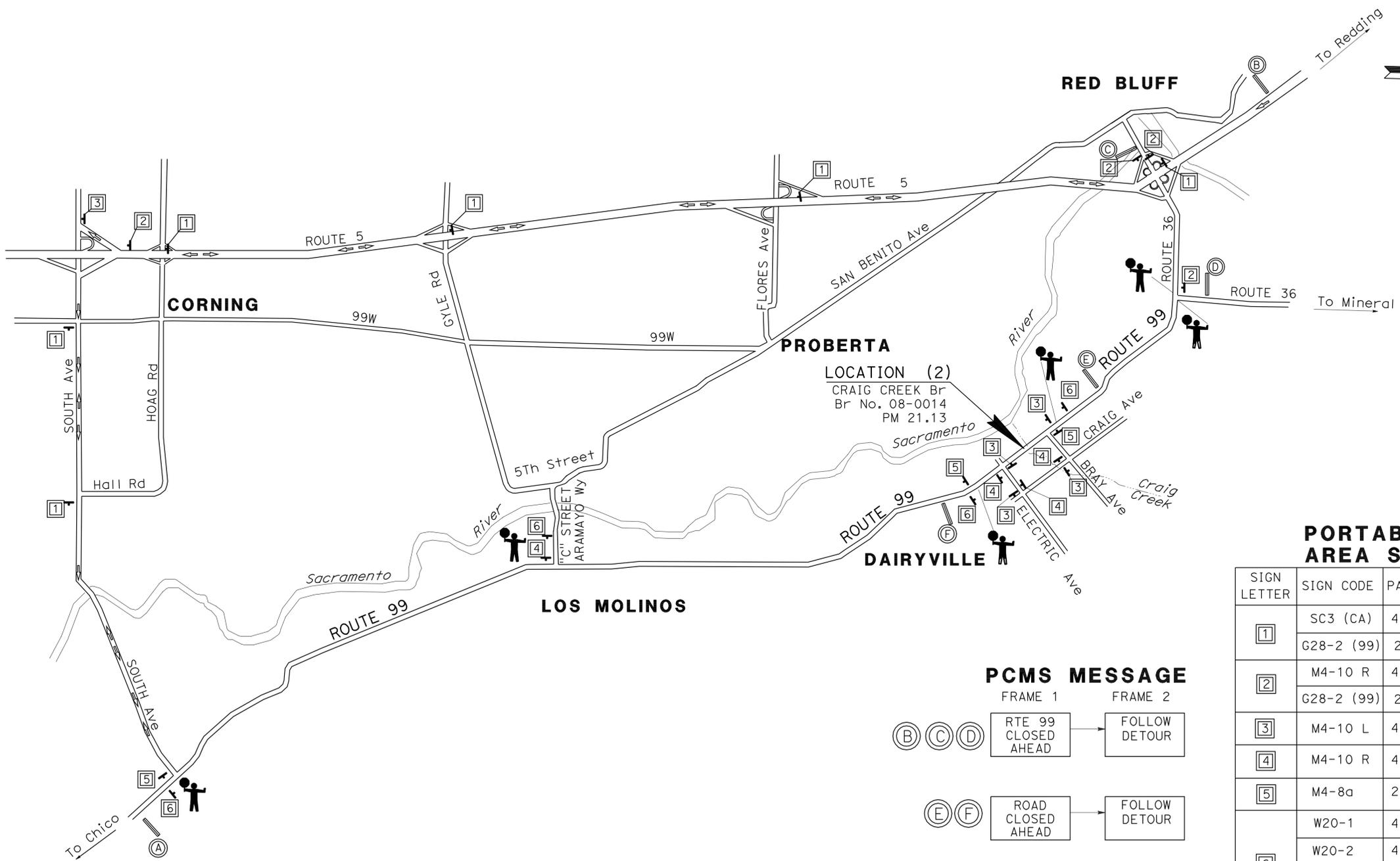
REGISTERED PROFESSIONAL ENGINEER
JOSE O. LOPEZ
 No. 64619
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

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

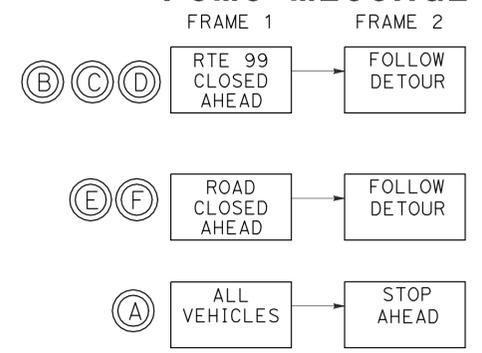


LOCATION (2)
 CRAIG CREEK Br
 Br No. 08-0014
 PM 21.13

PORTABLE CONSTRUCTION AREA SIGNS FOR DETOUR

SIGN LETTER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF SIGNS
1	SC3 (CA)	48" x 18"	DETOUR (ARROW) ↕	6
	G28-2 (99)	24" x 25"	99	6
2	M4-10 R	48" x 18"	DETOUR (RIGHT ARROW)	4
	G28-2 (99)	24" x 25"	99	4
3	M4-10 L	48" x 18"	DETOUR (LEFT ARROW)	5
4	M4-10 R	48" x 18"	DETOUR (RIGHT ARROW)	4
5	M4-8a	24" x 18"	END DETOUR	3
6	W20-1	48" x 48"	ROAD WORK AHEAD	3
	W20-2	48" x 48"	DETOUR AHEAD	3
	C9A (CA)	48" x 48"		4
	W3-4	48" x 48"	BE PREPARED TO STOP	4

PCMS MESSAGE



DETOUR FOR COMPLETE HIGHWAY CLOSURE

CONSTRUCTION AREA SIGNS

NO SCALE **CS-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH DESIGN BRANCH S14
 07:57 21-DEC-2009 fmmikesi R:\NPSE\02-2c1101\22c1101a004.dgn

J. LOPEZ
 J. TAN
 REVISIONS:

CALCULATED-DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR
 NESAR FORMOLI

REVISIONS:

REVISIONS:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	15	67

REGISTERED CIVIL ENGINEER
 DATE 9-25-09
 12-14-09
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

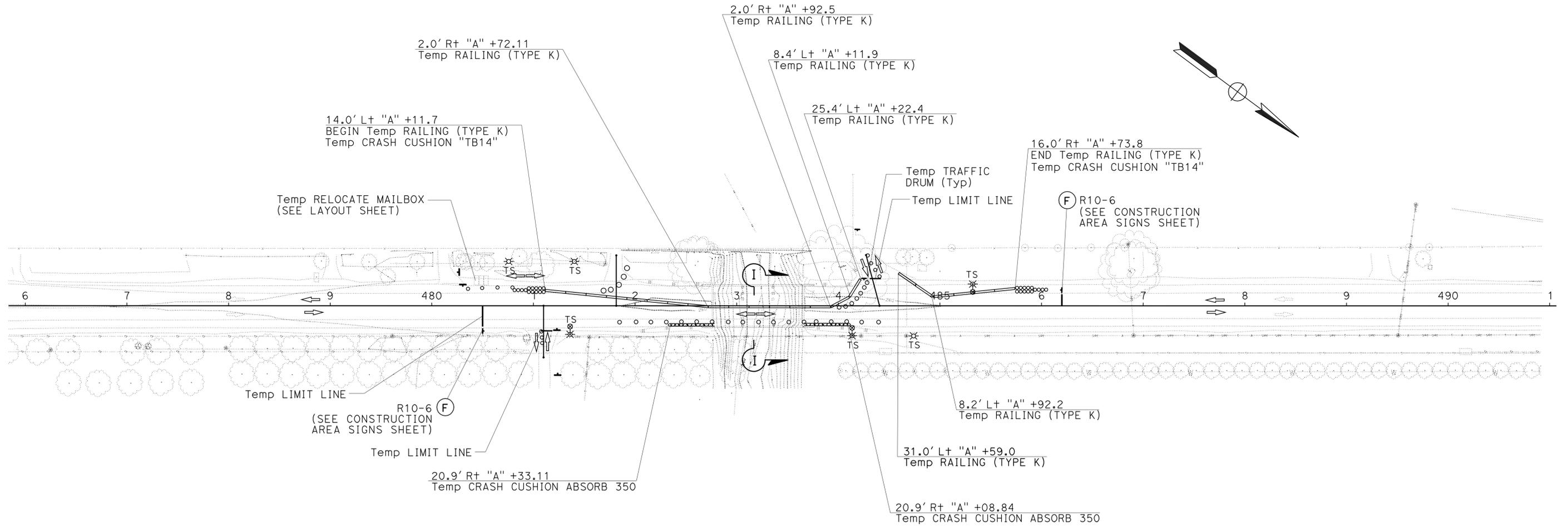
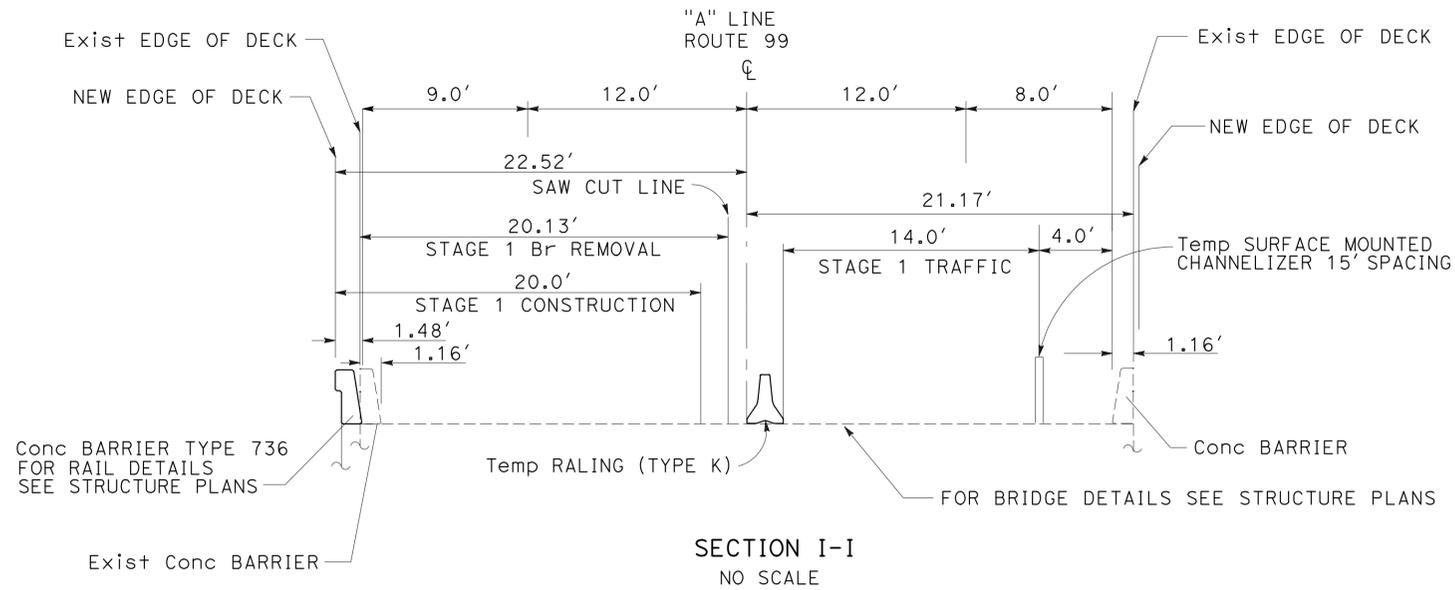
REGISTERED PROFESSIONAL ENGINEER
 JOSE O. LOPEZ
 No. 64619
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

NOTES:

- Temp RAILING (TYPE K) 10:1 TAPER.
- NUMBER OF SIGN AND PANELS REQUIRED PER STAGE CONSTRUCTION DOES NOT INCLUDE SIGNS SHOWN ON THE STANDARD PLANS.
- ALL SIGNS SHOWN ON THE STAGE CONSTRUCTION PLANS WILL COUNT AS CONSTRUCTION AREA SIGNS.
- EXACT SIGNS LOCATION, INCLUDING PCMS, TO BE DETERMINED BY THE ENGINEER.
- Temp RAILING (TYPE K) ON BRIDGE DECK IS TO BE PINNED.

LEGEND:

- ⊗ TS Temp TRAFFIC SIGNAL AND LUMINAIRE ON 6' LMA
- ⊗ TS Temp TRAFFIC SIGNAL (SEE ELECTRICAL PLANS)



**STAGE CONSTRUCTION PLAN
STAGE 1
(LOCATION 2)**

SCALE: 1" = 50'

SC-1

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY.

RELATIVE BORDER SCALE
IS IN INCHES



USERNAME => fmmikes1
DGN FILE => 22c110ma001.dgn

CU 03264

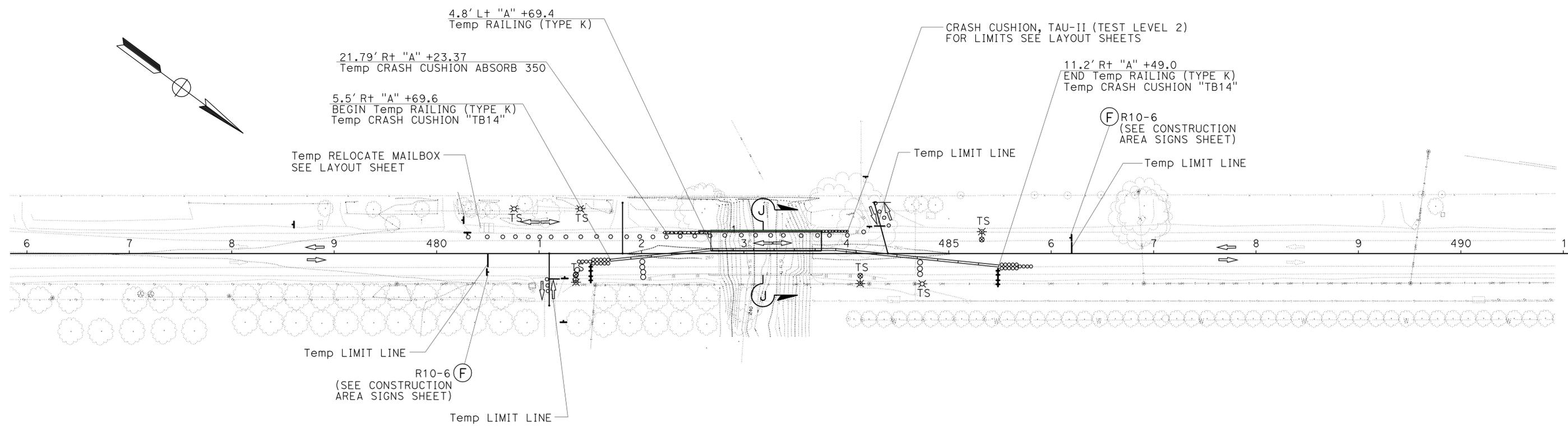
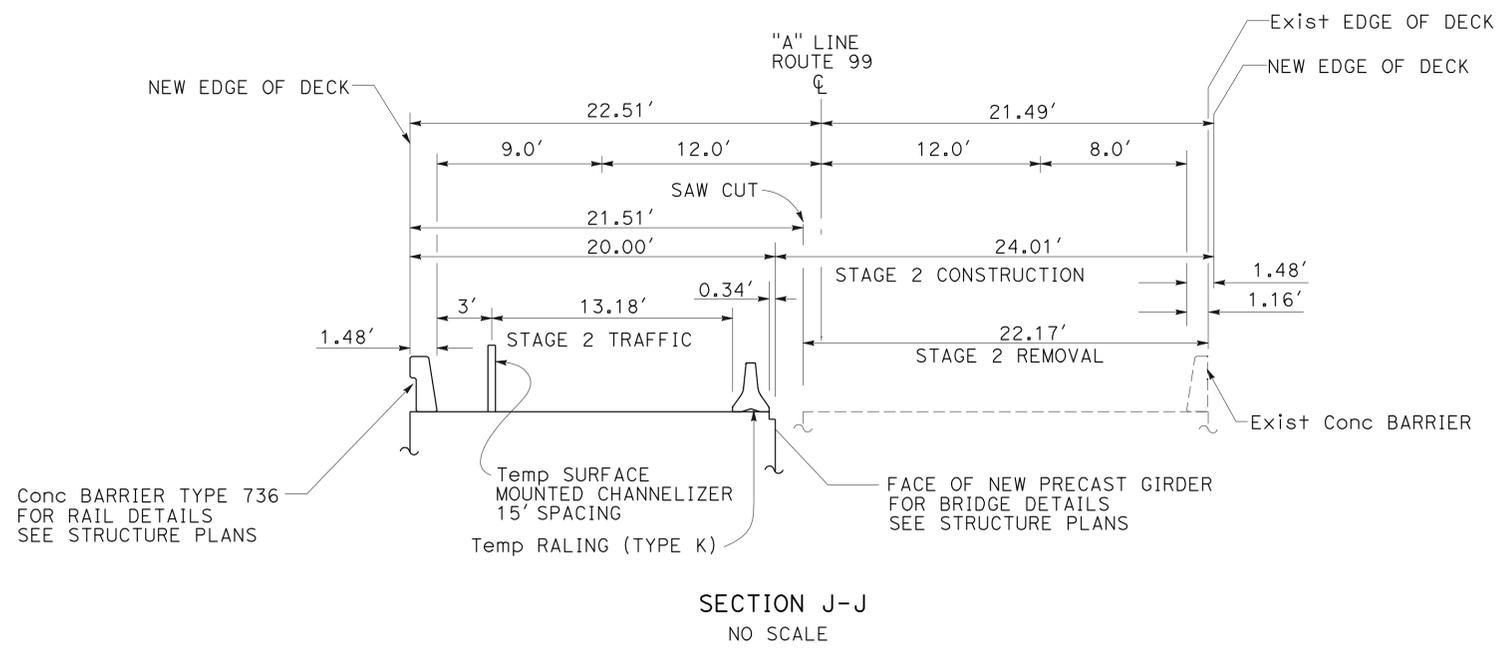
EA 2C1101

07:58 21-DEC-2009 fmmikes1 R: NPSE\02-2c1101\22c110ma001.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH
 DESIGN BRANCH S14
 FUNCTIONAL SUPERVISOR
 NESAR FORMOLI
 CALCULATED-DESIGNED BY
 CHECKED BY
 J. LOPEZ
 J. TAN
 REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	16	67

Jose O. Lopez
 REGISTERED CIVIL ENGINEER DATE 9-25-09
 12-14-09
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
JOSE O. LOPEZ
No. 64619
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA



STAGE CONSTRUCTION PLAN
STAGE 2
(LOCATION 2)
 SCALE: 1" = 50'
SC-2

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY.



USERNAME => frrmikes1
 DGN FILE => 22C110ma002.dgn

CU 03264

EA 2C1101

07:58 21-DEC-2009 frrmikes1 R:\NPSE\02-2c1101\22C110ma002.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH
 DESIGN BRANCH S14
 Caltrans

REVISOR
 J. LOPEZ
 DATE
 J. TAN

CALCULATED-DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR
 NESAR FORMOLI

REVISIONS
 REVISION NO. DATE BY DESCRIPTION

BORDER LAST REVISED 4/11/2008

LAST REVISION DATE PLOTTED => 21-DEC-2009
 TIME PLOTTED => 07:58

07:59 21-DEC-2009 11:11:59 R:\NPSE\02-2c1101\22c110pa001.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH
 DESIGN BRANCH S14
 FUNCTIONAL SUPERVISOR
 NESAR FORMOLI
 CALCULATED-DESIGNED BY
 CHECKED BY
 J. LOPEZ
 J. TAN
 REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	19	67

Jose O. Lopez
 REGISTERED CIVIL ENGINEER DATE 9-25-09
 12-14-09
 PLANS APPROVAL DATE
 JOSE O. LOPEZ
 No. 64619
 Exp. 6-30-11
 CIVIL
 REGISTERED PROFESSIONAL ENGINEER
 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.

ROADWAY QUANTITY SUMMARY

LOCATION	STATION "A" LINE		HOT MIX ASPHALT (TYPE A)	COLD PLANE AC PAVEMENT (0.2')	ROADWAY EXCAVATION	(N)	TACK COAT	MINOR CONCRETE (MINOR STRUCTURE)	CHANNEL EXCAVATION (CHANNEL LINING)
	FROM	TO	TON	SQYD	CY	TON	TON	CY	CY
1	187+33.41	188+13.00	52	355			0.15		
	188+39.00	189+28.28	57	387			0.16		
	"M1" 10+00	"M1" 10+85							140
2	480+50.00	482+67.72	141	964			0.40		
	483+75.72	486+20.00	157	1072			0.44		
	482+05.19	482+67.72	31						
	483+75.72	484+04.21							
	482+05.19	482+67.72			11				
	483+75.72	484+04.21	14		5				
	DRIVEWAY "DR1"		12		6				
	DRIVEWAY "DR2"		12		3	20			
	DRIVEWAY "DR3"		25		12				
	482+77, L+ 57							15	
TOTAL			501	2778	37.0	20	1.15	15	140

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

ROADWAY QUANTITY SUMMARY ROCK SLOPE PROTECTION (RSP)

LOCATION	STATION "M1" LINE/"A" LINE		ROCK SLOPE PROTECTION (BACKING NO.3 METHOD B)	ROCK SLOPE PROTECTION (1/4TON, METHOD B)	CLEAN SAND AND GRAVEL	CLEAN WASHED GRAVEL
	FROM	TO	TON	TON	TON	TON
1	"M1" 10+03	"M1" 10+89			91	
	"M1" 10+08	"M1" 10+13		39		
	"M1" 10+47	"M1" 10+52		39		
	"M1" 10+08	"M1" 11+05	144			
2	483+05	483+39				319
TOTAL			144	78	91	319

METAL BEAM GUARD RAILING

STATION "A" LINE LOCATION 2	REMOVE MBGR	METAL BEAM GUARD RAILING (WOOD POST)	ALTERNATIVE FLARED TERMINAL END SYSTEM	TRANSITION RAILING (TYPE WB)	END ANCHOR ASSEMBLY (TYPE SFT)	SALVAGE TERMINAL SYSTEM
	LF	LF	EA	EA	EA	EA
482+03.00 TO 482+67.62 L+	65					1
481+94.72 TO 482+57.21 L+		62.5			1	
482+03.00 TO 482+66.30 R+	63					1
481+69.22 TO 482+57.19 R+		25	1	1		
483+75.63 TO 484+11.50 L+	70					1
483+75.82 TO 484+38.82 R+	63					
483+86.24 TO 484+48.74 R+		62.5			1	
TOTAL	261	150	1	1	2	3

TOPSOIL

LOCATION	LIMITS	CY
1	"M1" 10+70 TO 11+05	7

SUMMARY OF QUANTITIES

Q-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	20	67

Jose O. Lopez
 REGISTERED CIVIL ENGINEER 9-25-09 DATE
 12-14-09
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JOSE O. LOPEZ
 No. 64619
 Exp. 6-30-11
 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.

SUMMARY OF QUANTITIES

LOCATION	STAGE	STATION "A" LINE		Temp RAILING (TYPE K)	Temp CRASH CUSHION ARRAY TB14	Temp CRASH CUSHION ABSORB 350	CRASH CUSHION (TAU-II TEST LEVEL2)	TYPE III BARRICADE	TRAFFIC PLASTIC DRUM	CHANNELIZER (SURFACE MOUNTED)	TEMPORARY SIGNAL SYSTEM	TEMPORARY FLASHING BEACON
		FROM	TO									
2	1	481+11.66	484+22.4	324								
		484+59.00	485+73.80	122								
	2	481+69.60	485+49.00	381								
		481+11.66	481+11.66		14							
	1	485+73.80	485+73.80		14							
		481+69.60	481+69.60		14							
	2	485+49.00	485+49.00		14							
		482+33.11	482+65.40			1						
	1	483+76.51	484+08.84			1						
		482+69.60	482+65.66			1						
	2	483+75.72	484+02.55					1				
									5			
								5				
									20			
									20			
										20		
											30	
	1 AND 2										1	1
TOTAL				827	56	3	1	10	40	50	1	1

PAVEMENT MARKER (RETROREFLECTIVE)

LOCATION	TYPE D (EA)	TYPE H (EA)
1	17	
2	22	18
TOTAL	39	18

4" THERMOPLASTIC TRAFFIC STRIPE

LOCATION	DETAIL No.	(LF)
1	22	400
	27B	400
2	19	835
	6	155
	27B	1140
TOTAL		2930

REMOVE MARKER (RETROREFLECTIVE)

LOCATION	(EA)
1	17
2	40
TOTAL	57

RESET MAIL BOX

LOCATION	STATION	EA	REMARKS
2	"A" 479+38 25.0 L+	6	MOVE 3 MAIL BOXES DURING CONSTRUCTION AND RESET TO ORIGINAL LOCATION

REMOVE THERMOPLASTIC TRAFFIC STRIPE

LOCATION	DETAIL No.	(LF)
1		0
2	27B	1140
	TOTAL	1140

RESET ROAD SIGN (ONE POST)

LOCATION	STATION	EA
2	"A" 482+55 21.5' R+	1

OBJECT MARKER (TYPE L-1)

LOCATION	EA	REMARKS
1	8	SEE LAYOUT SHEETS
2	13	SEE LAYOUT SHEETS
TOTAL	21	

Temp CONCRETE WASHOUT (PORTABLE)

	(LS)
Temp CONCRETE WASHOUT (PORTABLE)	1

TEMPORARY PAVEMENT MARKING (PAINT)

DESCRIPTION	QUANTITY	LENGTH	AREA (SQFT)
LIMIT LINE	4	12	48

REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE

LOCATION	DETAIL No.	(LF)
2	6	40
	19	521
	TOTAL	561

TEMPORARY FENCE TYPE ESA

LOCATION	(LF)	REMARKS
2	250	SEE LAYOUT SHEET

Temp BEST MANAGEMENT PRACTICE (BMP)

Temp FIBER ROLL	Temp SILT FENCE	Temp CONSTRUCTION ENTRANCE	Temp COVER	Temp CHECK DAM	Temp TACKED STRAW
LF	LF	EA	SQYD	LF	SQYD
1200	750	3	222	110	450

SUMMARY OF QUANTITIES

07:59 21-DEC-2009 11:11 AM I:\Projects\2009\21-DEC-2009\22C110pa002.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 NORTH REGION
 OFFICE OF DESIGN, SOUTH DESIGN BRANCH S14
 J. LOPEZ
 J. TAN
 Nesar Formoli
 Functional Supervisor
 Formoli
 REVISIONS: 01, 02, 03, 04, 05, 06, 07, 08, 09, 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.

R:\PSE\02-2c1101\22c110ua001.dgn
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
 ARTURO ROBLES
 JIM HANNIGAN
 REVISOR
 DATE
 REVISION
 DATE
 REVISION
 ROB STINGER
 FUNCTIONAL SUPERVISOR
 CHECKED BY
 CALCULATED-DESIGNED BY

NOTES:

1. EXACT EQUIPMENT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. MARK WOOD POLES WITH RETROREFLECTIVE SHEETING.
3. PROVIDE SIGNAL HEADS WITH 12" SECTIONS.
- 4 SEE CONSTRUCTION AREA SIGNS PLAN FOR FLASHING BEACON LOCATIONS (TOTAL OF 2 FB).
- 5 INSTALL STATE-FURNISHED CONTROLLER ASSEMBLY (TYPE 332 CABINET).
- 6 PROVIDE 200 W HPS LUMINAIRE ON 6' LMA.
- 7 CLASS 2 WOOD POLE. PROVIDE 310 W HPS LUMINAIRE ON 6' LMA WITH 35' MOUNTING HEIGHT. PROVIDE 12' SMA.
- 8 GENERATOR SYSTEM.
- 9 PREFORMED INDUCTIVE LOOP. DEPTH AS DIRECTED BY THE ENGINEER.
- 10 CLASS 2 WOOD POLE.
11. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

LEGEND

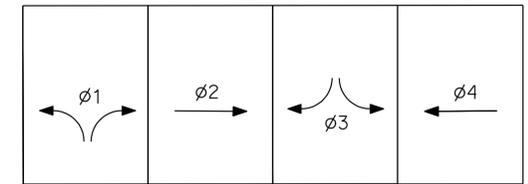
 SOLAR POWERED FLASHING BEACON

ABBREVIATIONS

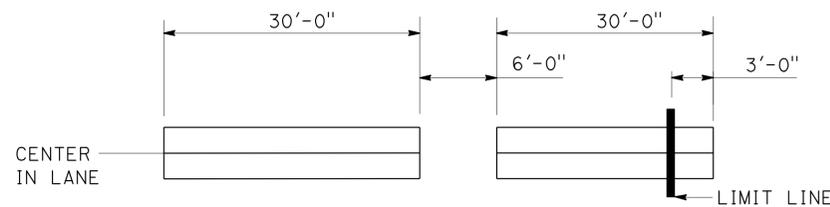
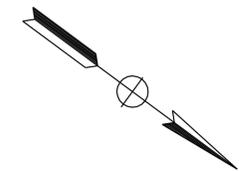
TCE TEMPORARY CONSTRUCTION EASEMENT
 PEC PERMIT TO ENTER AND CONSTRUCT

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	21	67

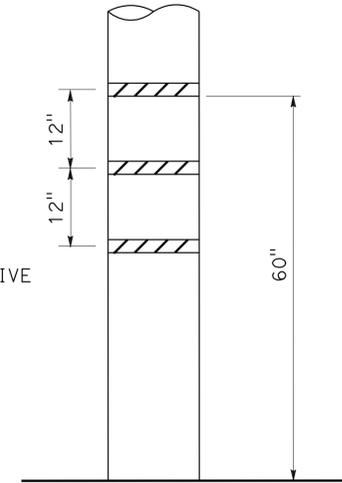
Steve J. Rogers 09-23-09
 REGISTERED ELECTRICAL ENGINEER
 12-14-09
 PLANS APPROVAL DATE
 No. 49641
 Exp. 09-30-10
 S.J. ROGERS
 REGISTERED PROFESSIONAL ENGINEER
 ELECTRICAL
 STATE OF CALIFORNIA
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



PHASE DIAGRAM

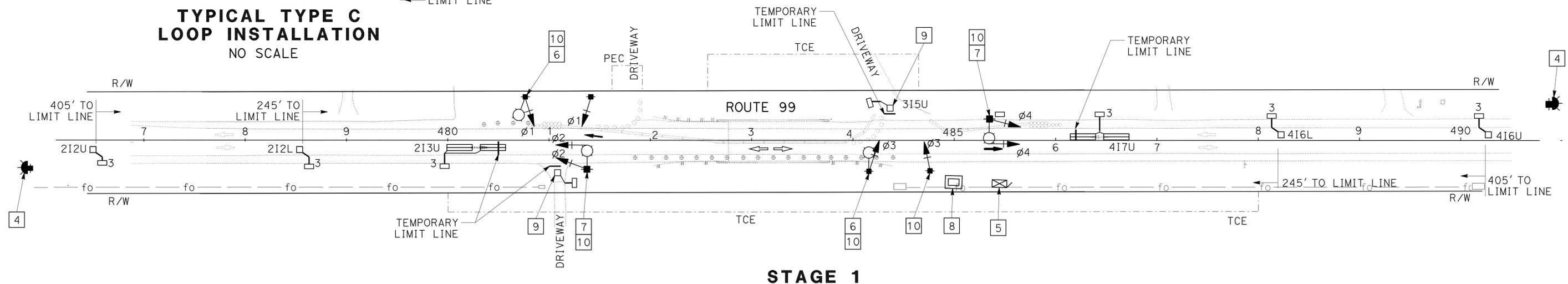


TYPICAL TYPE C LOOP INSTALLATION
NO SCALE

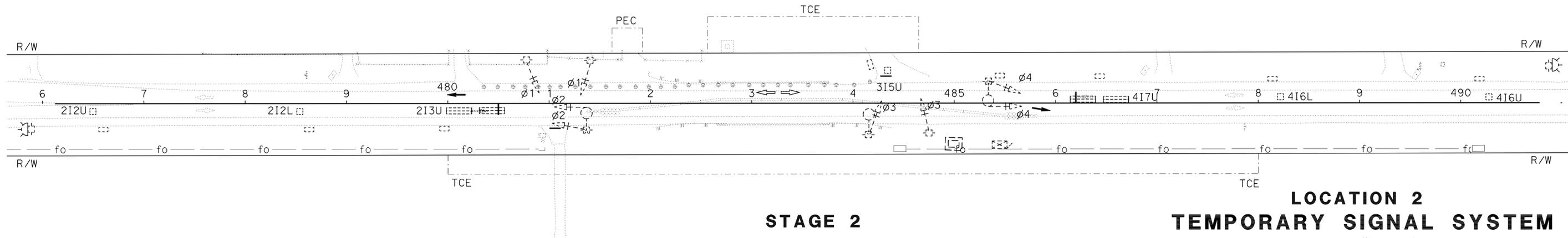


RETROREFLECTIVE SHEETING
NO SCALE

YELLOW RETROREFLECTIVE SHEETING (Typ OF 3)
2" WIDE x 12" LONG



STAGE 1



STAGE 2

**LOCATION 2
TEMPORARY SIGNAL SYSTEM**

SCALE: 1" = 50'

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	22	67

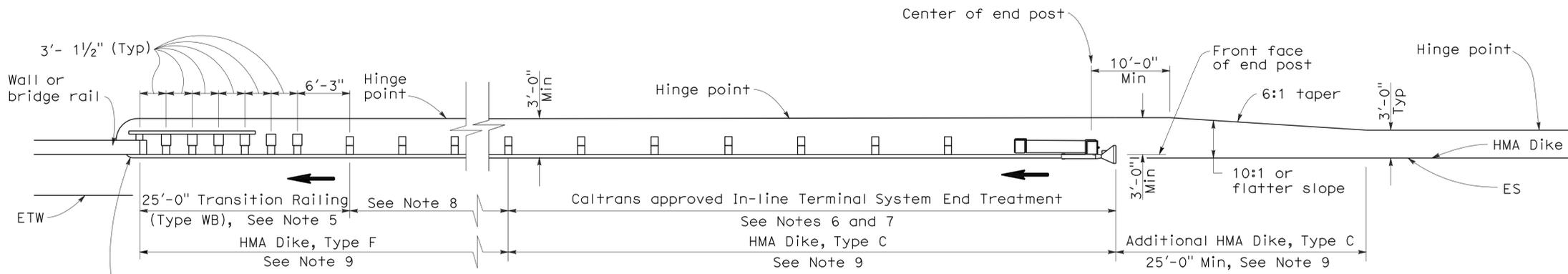
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

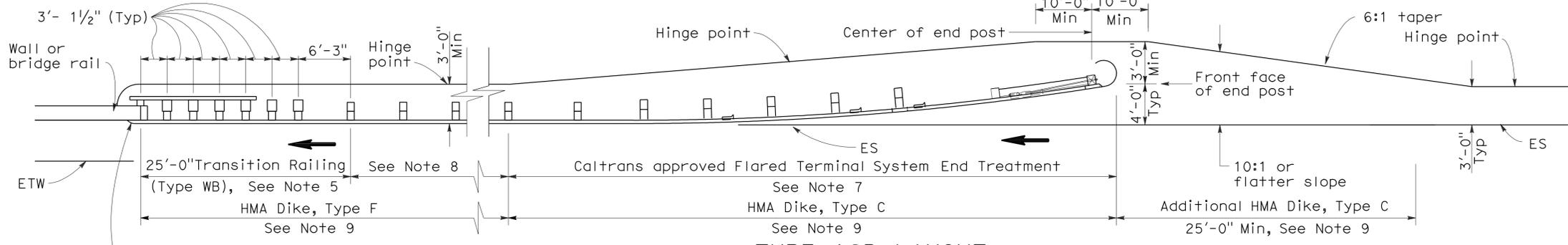
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 12-14-09



TYPE 12A LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10



TYPE 12B LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- For Transition Railing (Type WB) details for Types 12A and 12B Layouts, see Standard Plan A77J4.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, or other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatment.

- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- Type 12A or Type 12B Layouts are typically used:
 - To the right of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the left of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
 - To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
- See Revised Standard Plan RSP A77F3 for typical layout used left of approaching traffic at the ends of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.

- For additional details of typical connections to bridge rail, see Connection Detail AA on Revised Standard Plans RSP A77J1 and RSP A77J2 and Connection Detail FF on Standard Plans A77K1 and A77K2.
- For additional details of a typical connection to walls or abutments, see Standard Plan A77J3.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

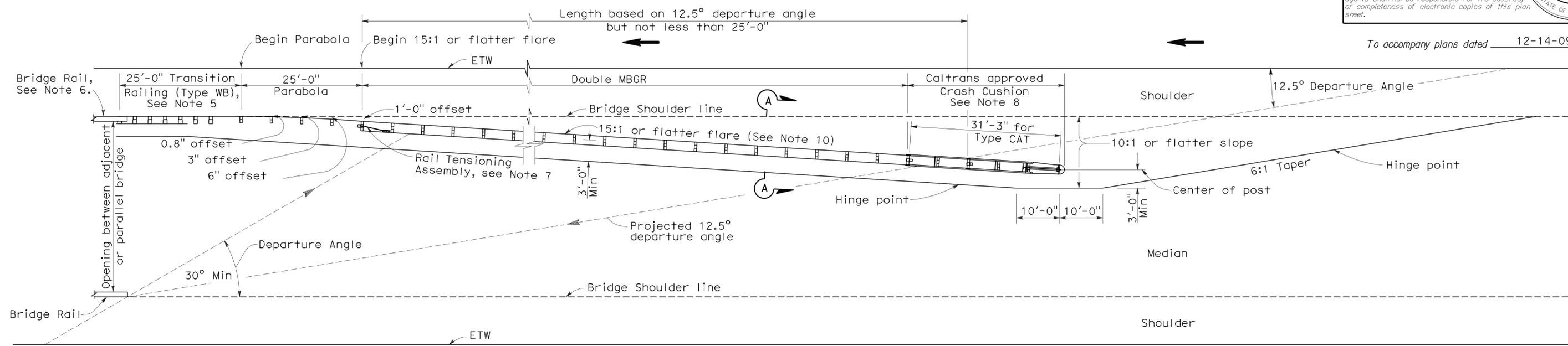
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
STRUCTURE APPROACH**

NO SCALE

RSP A77F1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F1
DATED MAY 1, 2006 - PAGE 54 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77F1

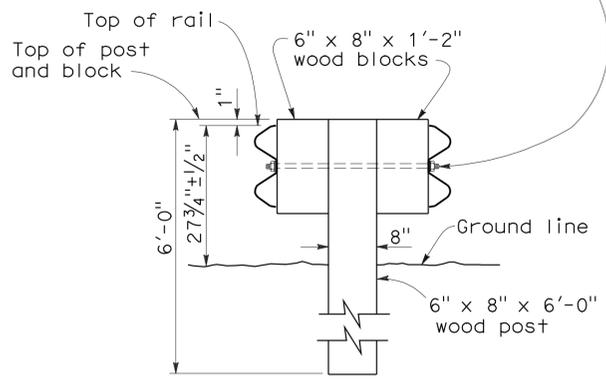
2006 REVISED STANDARD PLAN RSP A77F1



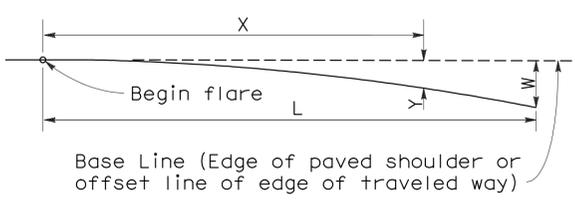
TYPE 12E LAYOUT

See Note 10

5/8" Ø Button head bolt with hex nut or 5/8" Ø Rod, threaded both ends, with hex nuts. 1/2" Max exposed threads after hex nut(s) tightened. No washer on rail faces for bolted connection to line post.



SECTION A-A
TYPICAL DOUBLE METAL BEAM GUARD RAILING

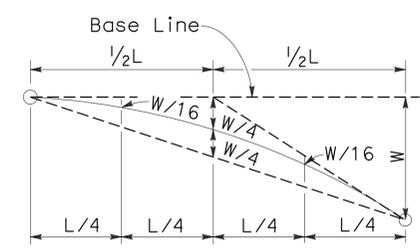


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

$Y = \frac{WX^2}{L^2}$

Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS



TYPICAL PARABOLIC LAYOUT

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- For Transition Railing (Type WB) details, see Standard Plan A77J4.
- For additional details of a typical connection to bridge rail, see Connection Detail AA on Revised Standard Plan RSP A77J1.
- For Rail Tensioning Assembly details, see Standard Plan A77H2.
- The type of Crash Cushion to be used will be shown on the Project Plans.
- Type 12E Layout is typically used left of approaching traffic at the end of each structure on multilane freeways or expressways where a median type barrier is not constructed between separated roadbeds.
- The 15:1 or flatter flare is measured off of the edge of traveled way.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
STRUCTURE APPROACH

NO SCALE

RSP A77F3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F3
DATED MAY 1, 2006 - PAGE 56 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77F3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	24	67

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

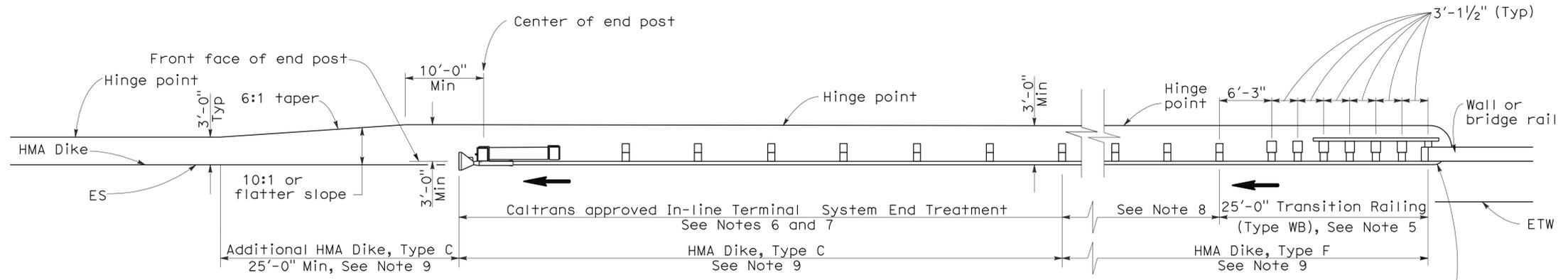
June 6, 2008
PLANS APPROVAL DATE

Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
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.

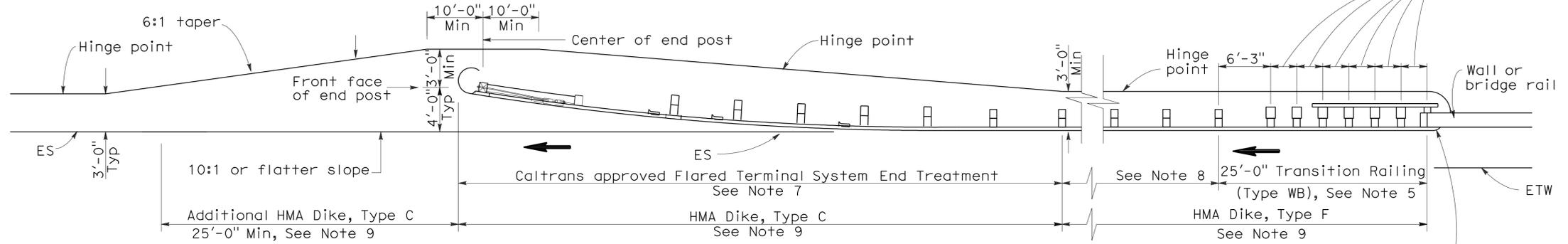
To accompany plans dated 12-14-09

2006 REVISED STANDARD PLAN RSP A77F4



TYPE 12AA LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH AN IN-LINE END TREATMENT AT TRAILING END OF RAILING)
See Notes 9 and 10



TYPE 12BB LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH A FLARED END TREATMENT AT TRAILING END OF RAILING)
See Notes 9 and 10

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- For Transition Railing (Type WB) details for Types 12AA and 12BB Layouts, see Standard Plan A77J4.
- In-line Terminal System Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatments.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- Type 12AA or Type 12BB Layouts are typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is less than 40 feet.
- For additional details of typical connections to bridge rail, see Connection Detail CC on Revised Standard Plan RSP A77J2 and Connection Detail HH on Standard Plans A77K2.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
STRUCTURE DEPARTURE**

NO SCALE

RSP A77F4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F4
DATED MAY 1, 2006 - PAGE 57 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77F4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	25	67

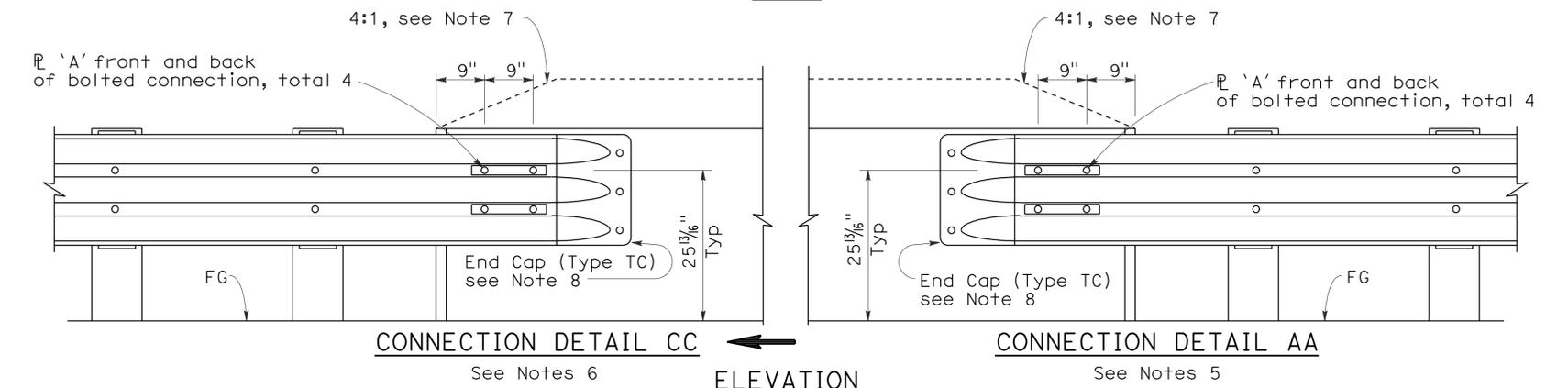
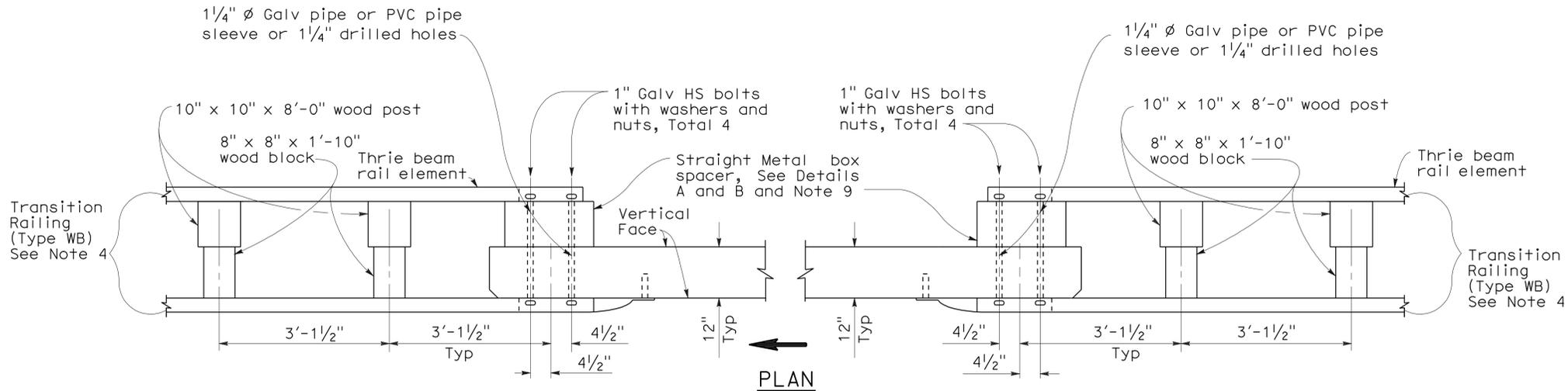
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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

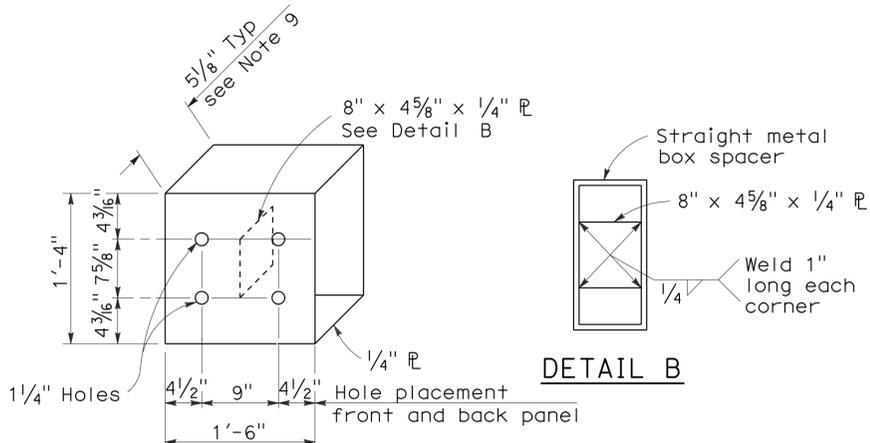
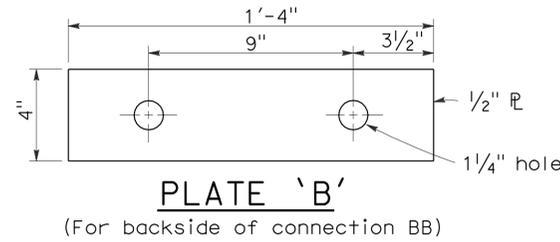
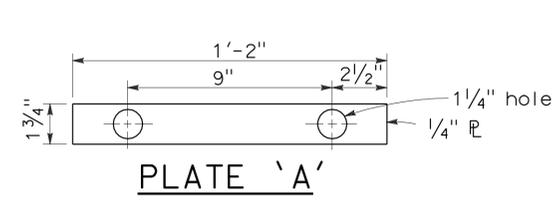
To accompany plans dated 12-14-09



GUARD RAILING CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77J1 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Standard Plan A77B1, A77C1 and A77C2.
3. Direction of adjacent traffic indicated by →.
4. For additional details of Transition Railing (Type WB), see Standard Plan A77J4. Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
5. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77F1, Layout Types 12C and 12D on Standard Plan A77F2, and Layout Type 12E on Revised Standard Plan RSP A77F3.
6. For typical use of Connection Detail CC, see Layout Types 12AA and 12BB on Standard Plan A77F4 and Layout Type 12CC on Standard Plan A77F5.
7. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA and connection Detail CC, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
8. For details of End Cap (Type TC), see Standard Plans A77J4.
9. See Standard Plans A77J4 for additional details regarding depth dimension for straight metal box spacer.



**DETAIL A
STRAIGHT METAL BOX SPACER**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
CONNECTIONS TO BRIDGE RAILINGS
WITHOUT SIDEWALKS DETAILS No.2**

NO SCALE
RSP A77J2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77J2
DATED MAY 1, 2006 - PAGE 73 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77J2

2006 REVISED STANDARD PLAN RSP A77J2

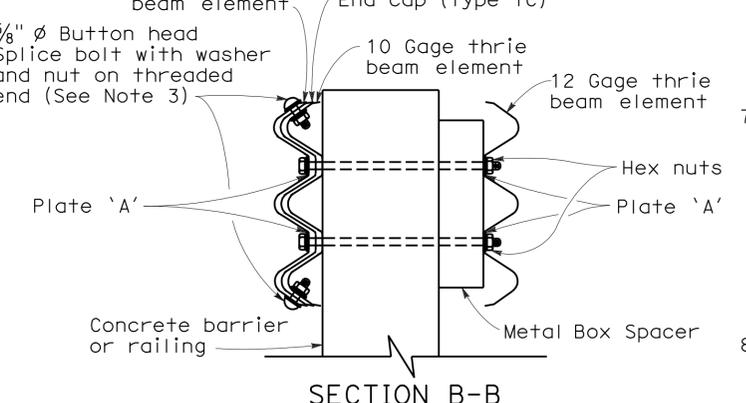
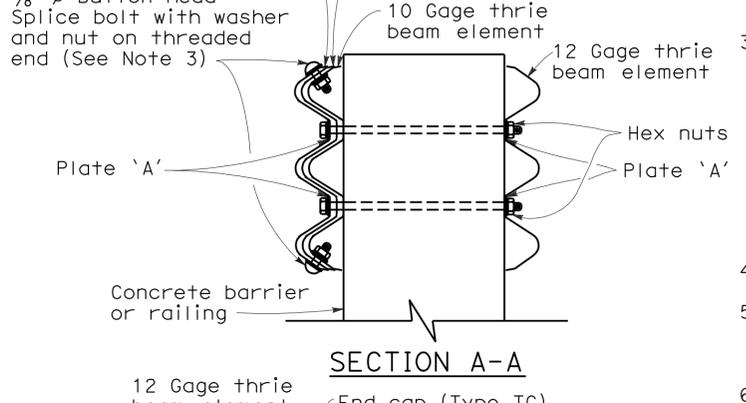
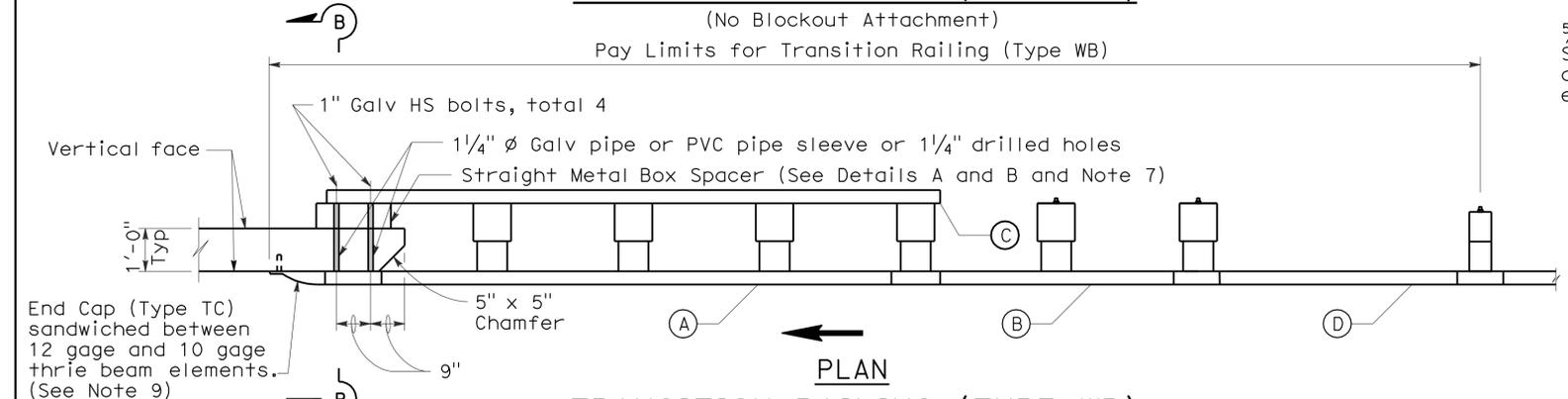
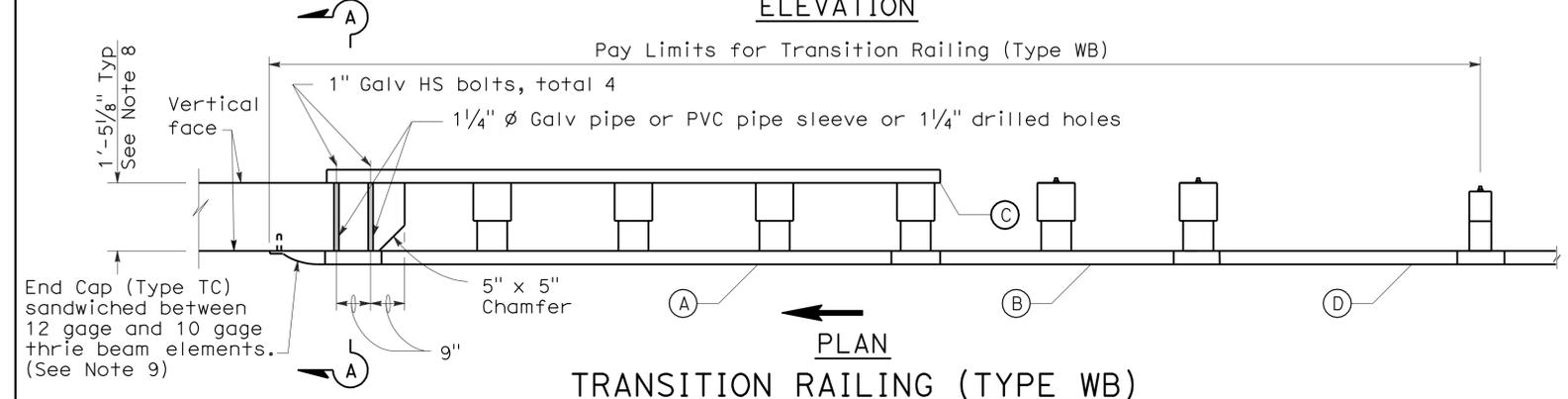
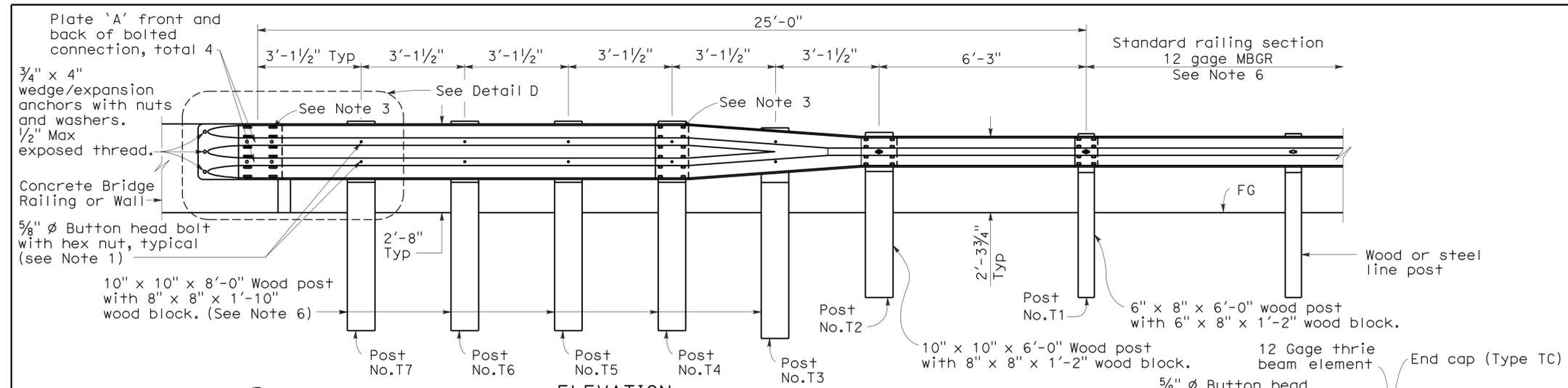
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	26	67

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 5, 2009
PLANS APPROVAL DATE

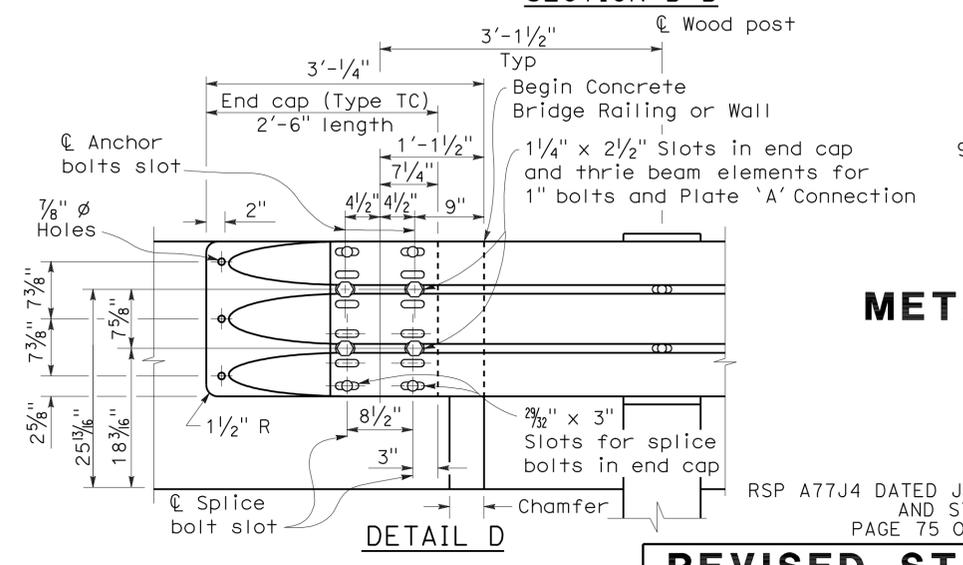
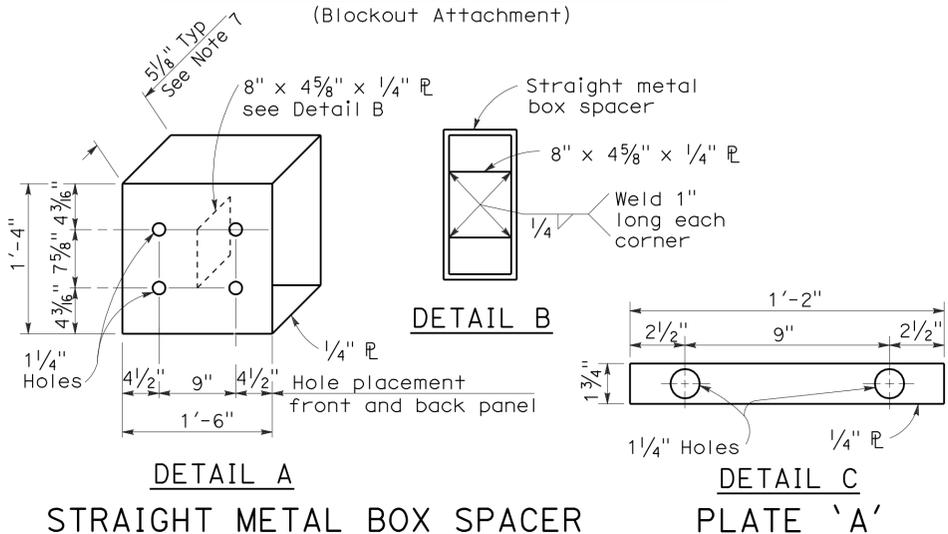
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA



- NOTES:** To accompany plans dated 12-14-09
- Use 5/8 " ϕ 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 29/32 " x 1 1/8 " slot size. Interior splice bolt holes at these locations may be increased up to 1 1/4 " ϕ . 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 Post Nos.T2 through 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 or an approved Caltrans end treatment attached to Post No.T1.
 - The depth of the metal box spacer varies from the 5 1/8 " 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.4 through No.7 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.

- 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)

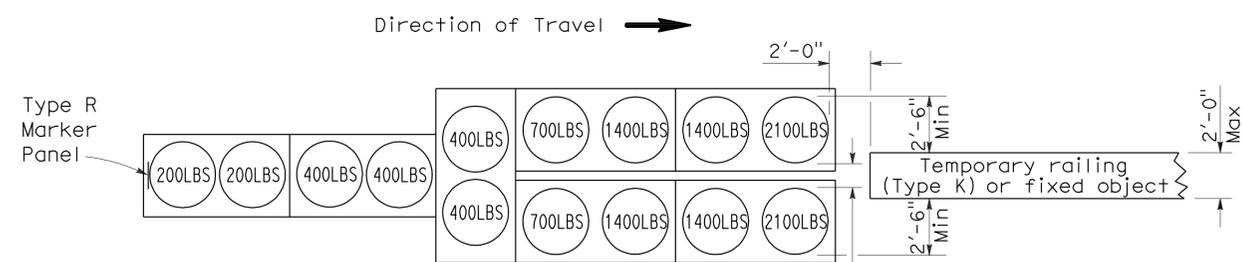
NO SCALE

RSP A77J4 DATED JUNE 5, 2009 SUPERSEDES 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

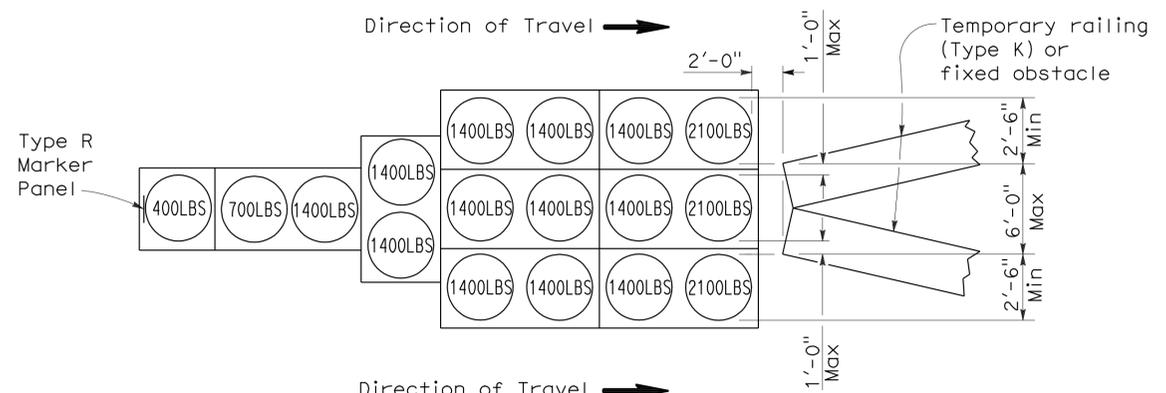
To accompany plans dated 12-14-09

2006 REVISED STANDARD PLAN RSP T1A



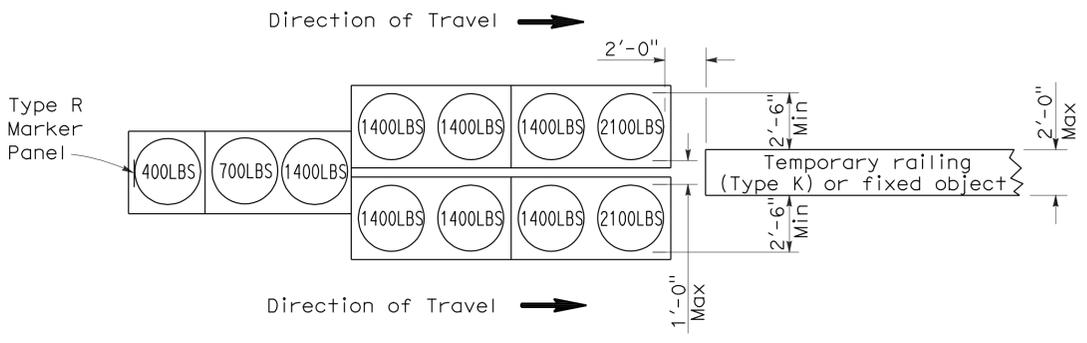
ARRAY 'TU14'

Approach speed 45 mph or more



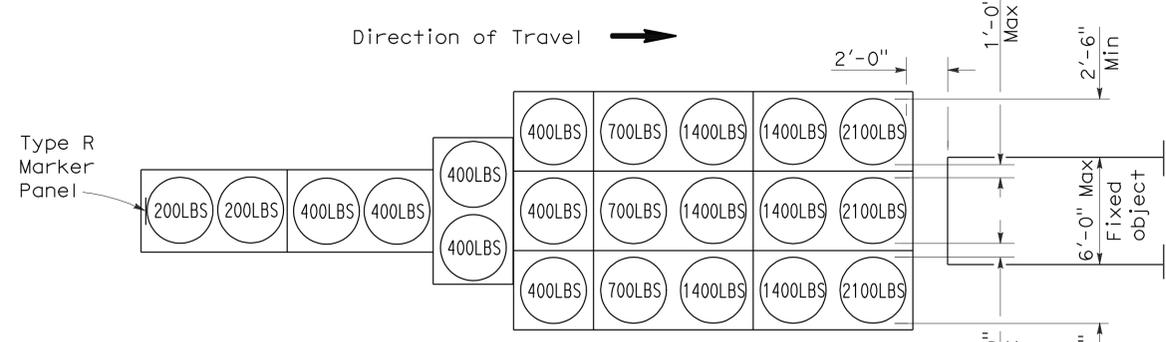
ARRAY 'TU17'

Approach speed less than 45 mph



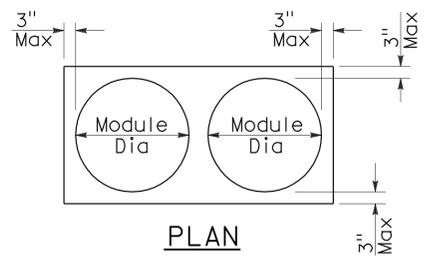
ARRAY 'TU11'

Approach speed less than 45 mph

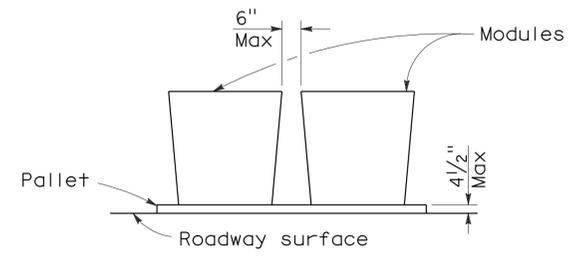


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	28	67

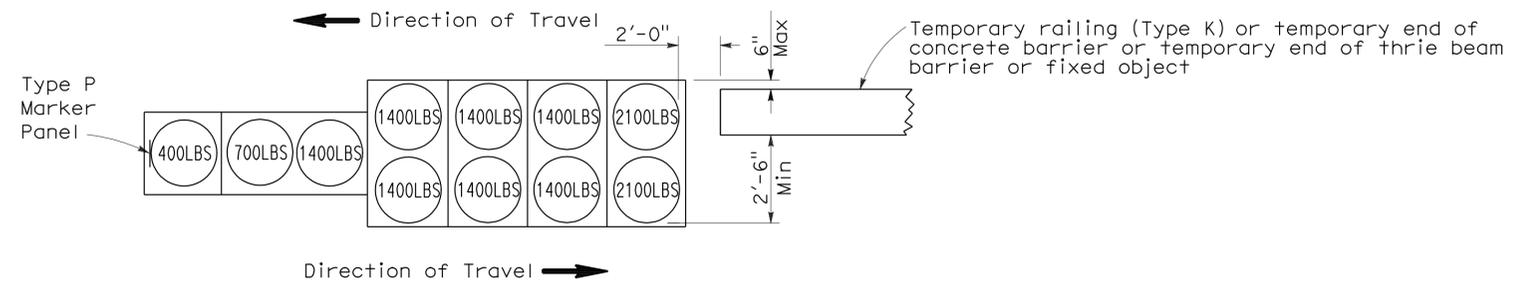
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

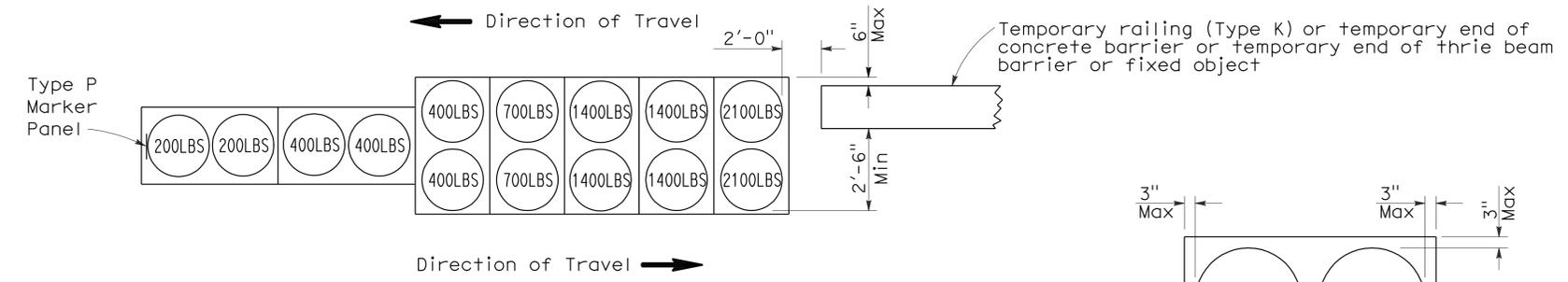
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 12-14-09



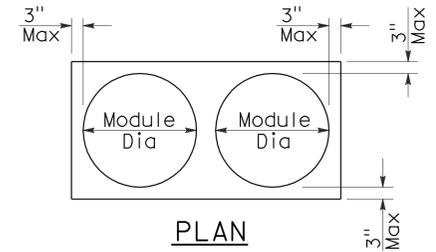
ARRAY 'TB11'

Approach speed less than 45 mph

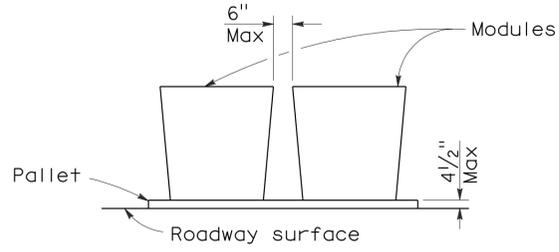


ARRAY 'TB14'

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	15.4/15.7, 20.9/21.3	29	67

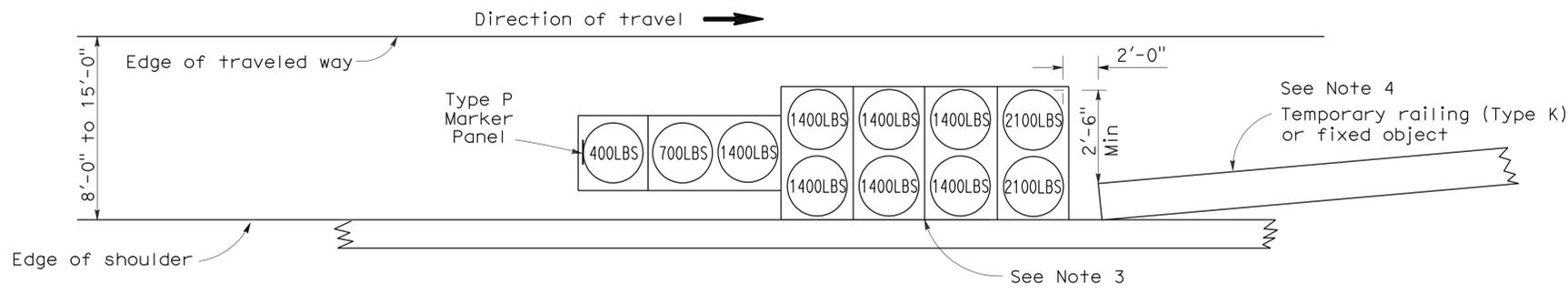
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

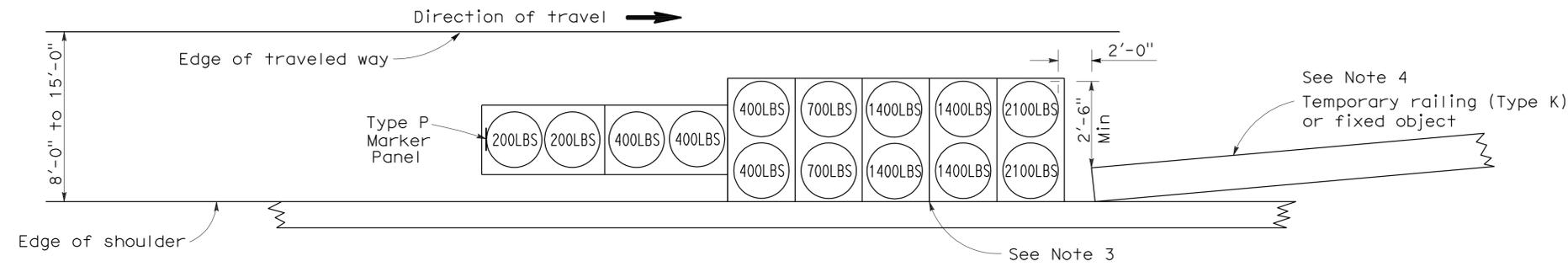
Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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.

To accompany plans dated 12-14-09



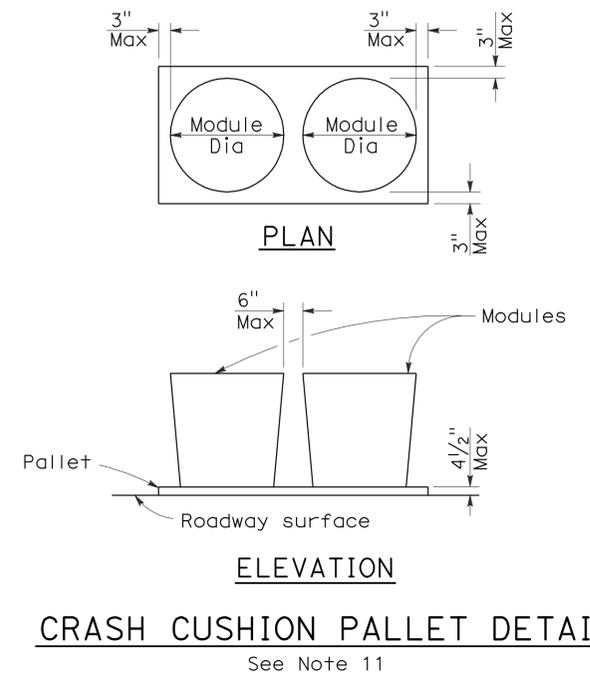
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



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

NOTES:

- (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.
- All sand weights are nominal.
- 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.
- 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.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- 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.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- Use of pallets is optional.



CRASH CUSHION PALLET DETAIL
See Note 11

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.

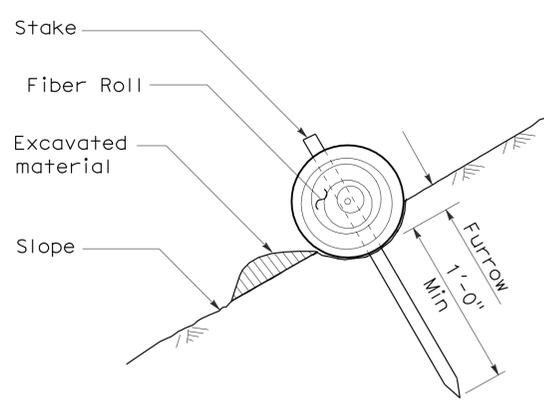
REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

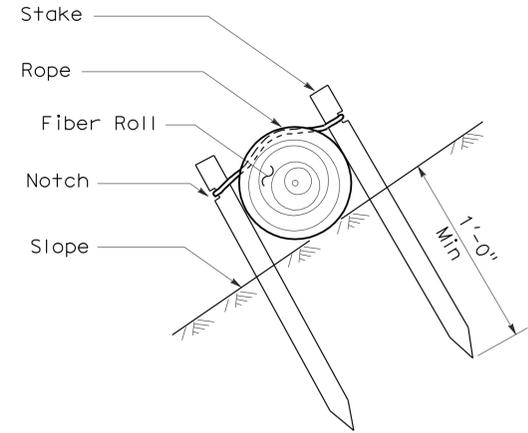
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	31	67

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.

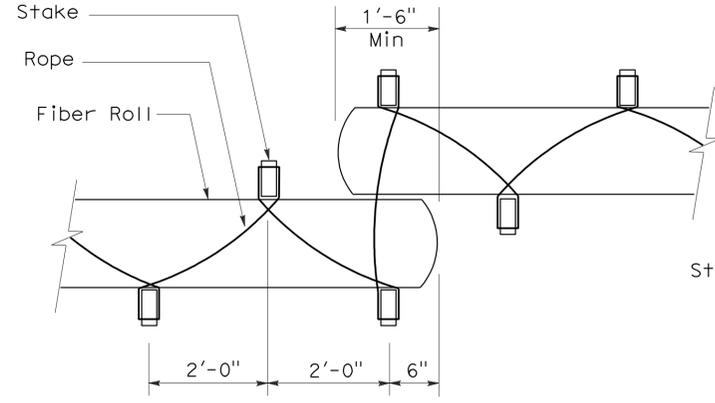
To accompany plans dated 12-14-09



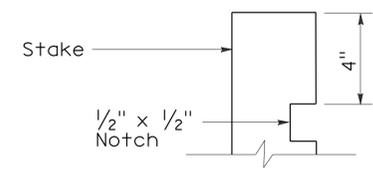
SECTION
TEMPORARY FIBER ROLL
(TYPE 1)



SECTION
TEMPORARY FIBER ROLL
(TYPE 2)

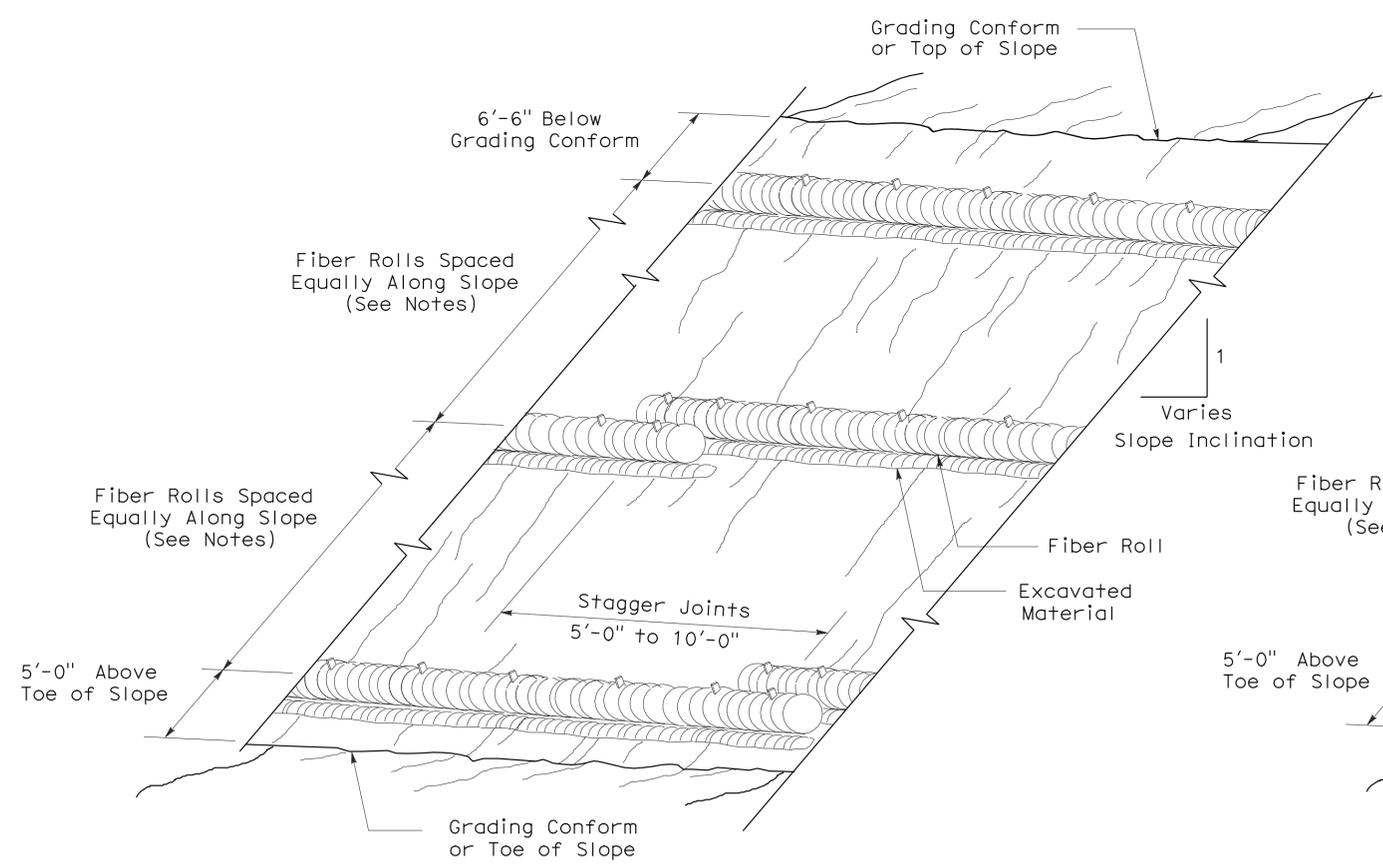


PLAN

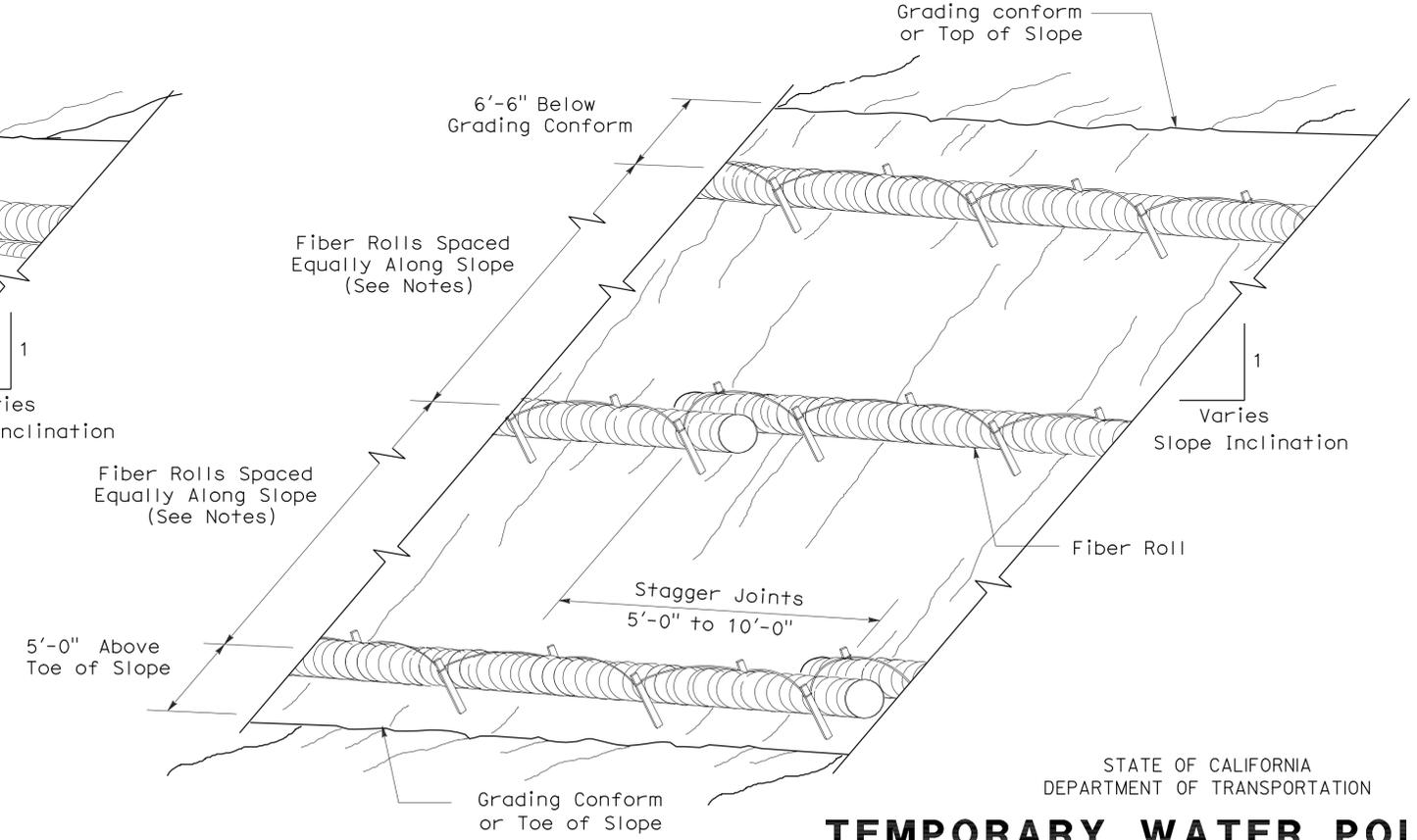


ELEVATION
STAKE NOTCH DETAIL

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



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 1)



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 2)

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY FIBER ROLL)

NO SCALE

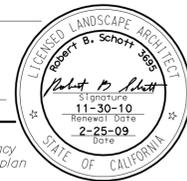
RSP T56 DATED APRIL 3, 2009 SUPERSEDES STANDARD PLAN T56
 DATED MAY 1, 2006 - PAGE 232 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T56

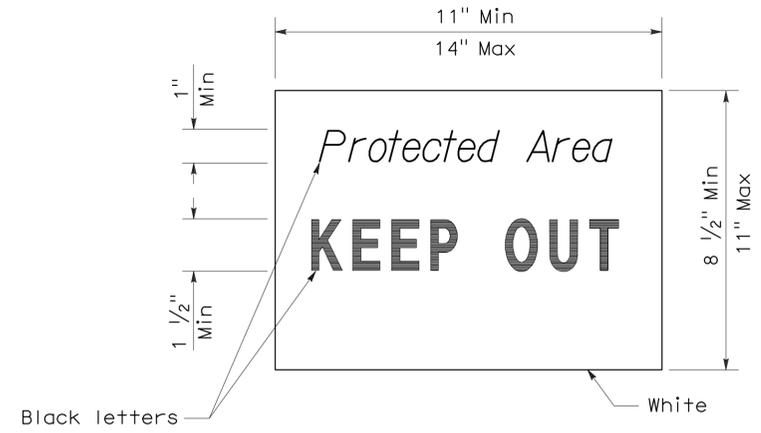
2006 REVISED STANDARD PLAN RSP T56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	32	67

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.



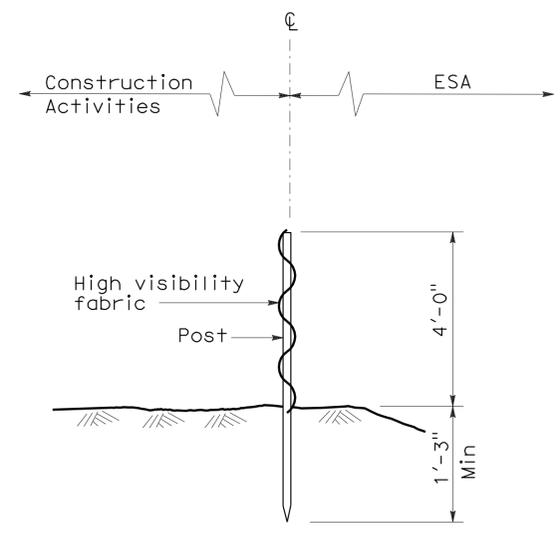
To accompany plans dated 12-14-09



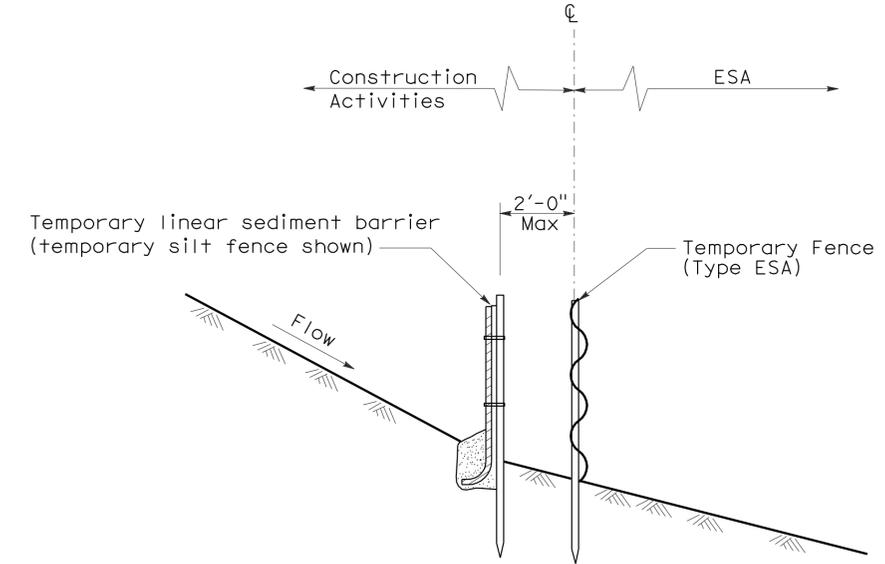
SIGN DETAIL

NOTE:

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

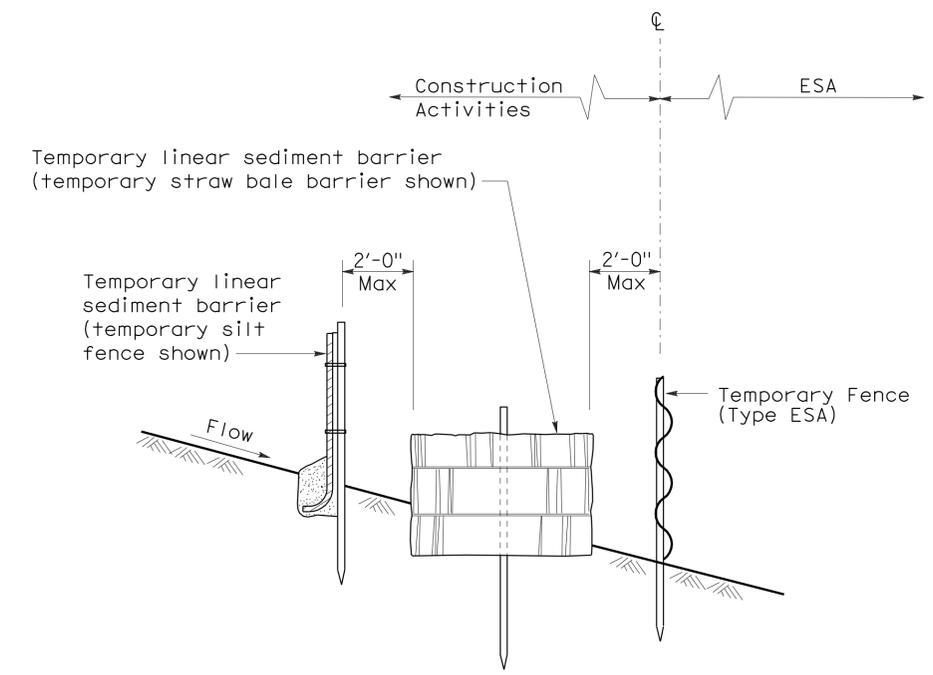


SECTION TEMPORARY FENCE (TYPE ESA)



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

(See Note 1)



SECTION PLACEMENT DETAIL FOR TEMPORARY 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

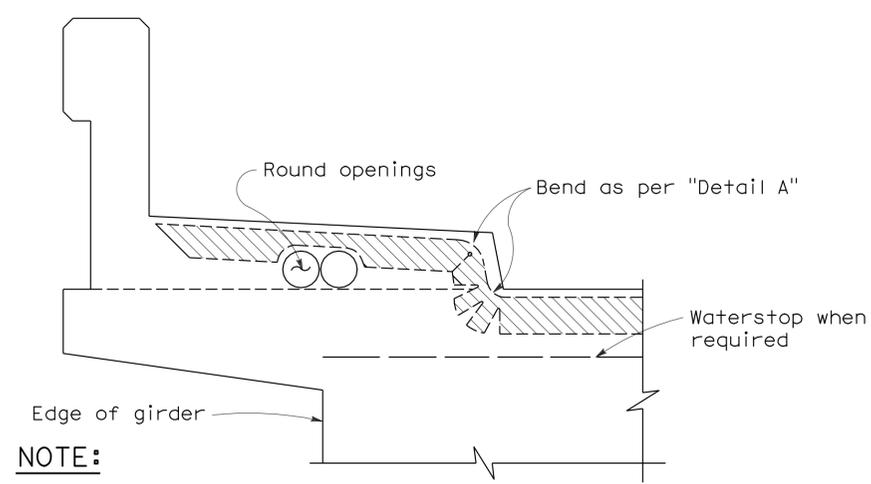
NSP T65 DATED APRIL 3, 2009 SUPPLEMENTS
 THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T65

2006 NEW STANDARD PLAN NSP T65

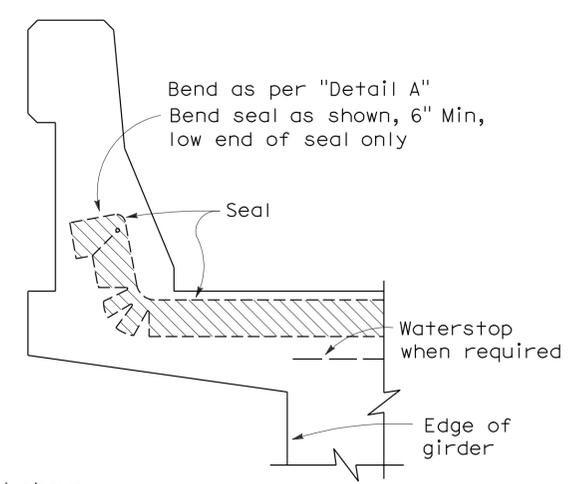
To accompany plans dated 12-14-09

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

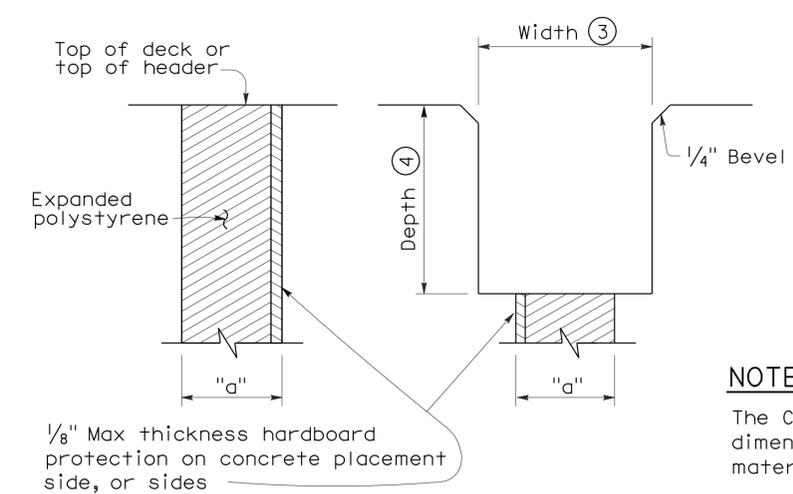


NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend Type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK

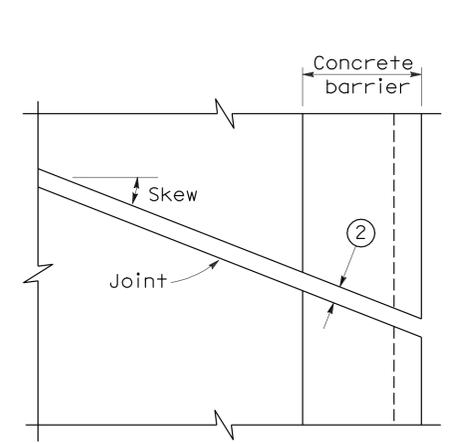


CONCRETE BARRIER



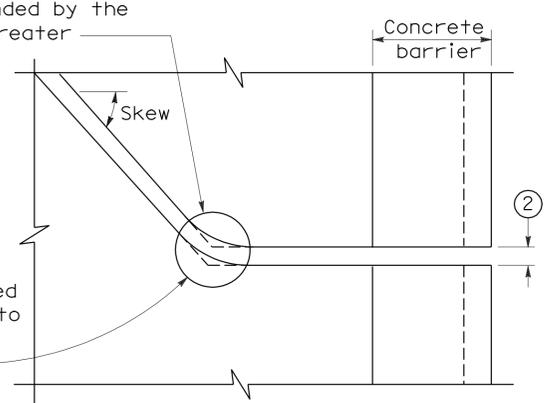
FORMING DETAIL SAWCUT DETAIL

JOINT SEALS DETAILS



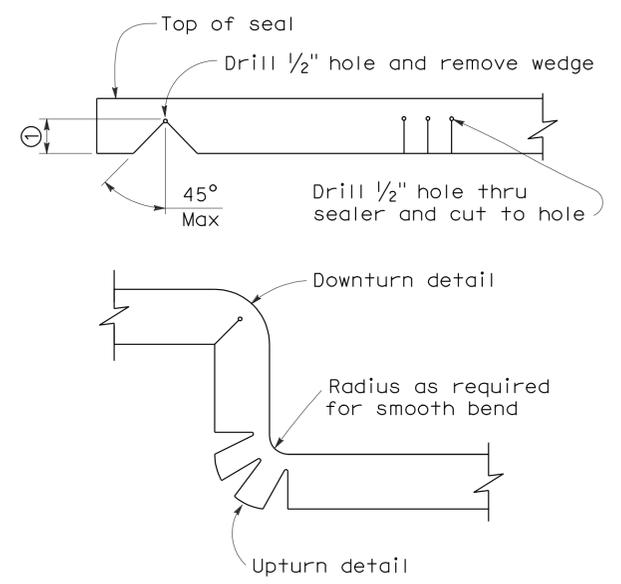
PLAN OF JOINT (SKEW ≤ 20°)

Min ϕ 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.



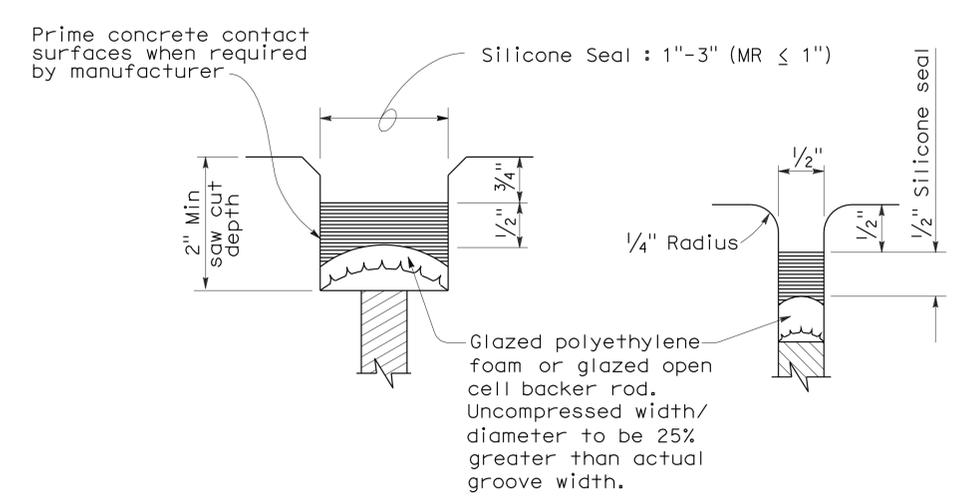
DETAIL A

- NOTES:**
- Make smooth cuts from the bottom of seal to 1/2" 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 (W₂) plus dimensions shown.
 - MR (movement rating) as shown on other plan sheets.
 - Other depths must be approved by the Engineer.

DIMENSIONS "a" OF JOINT REQUIRED

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

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

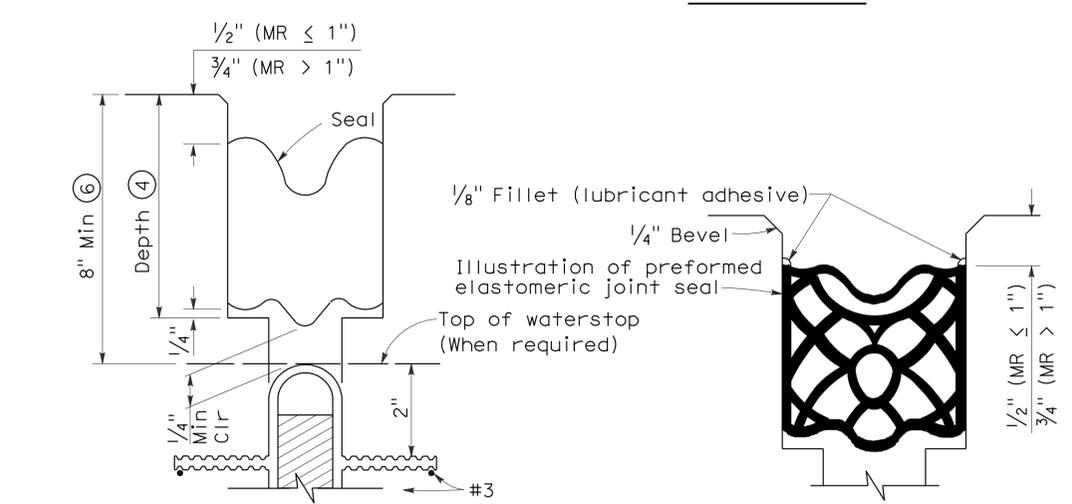


TYPE A SEAL

Movement rating : Silicone = 1" Max

TYPE AL SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W₂)

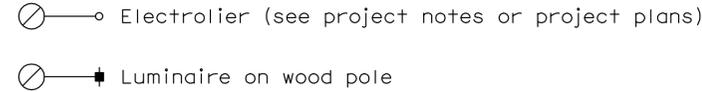
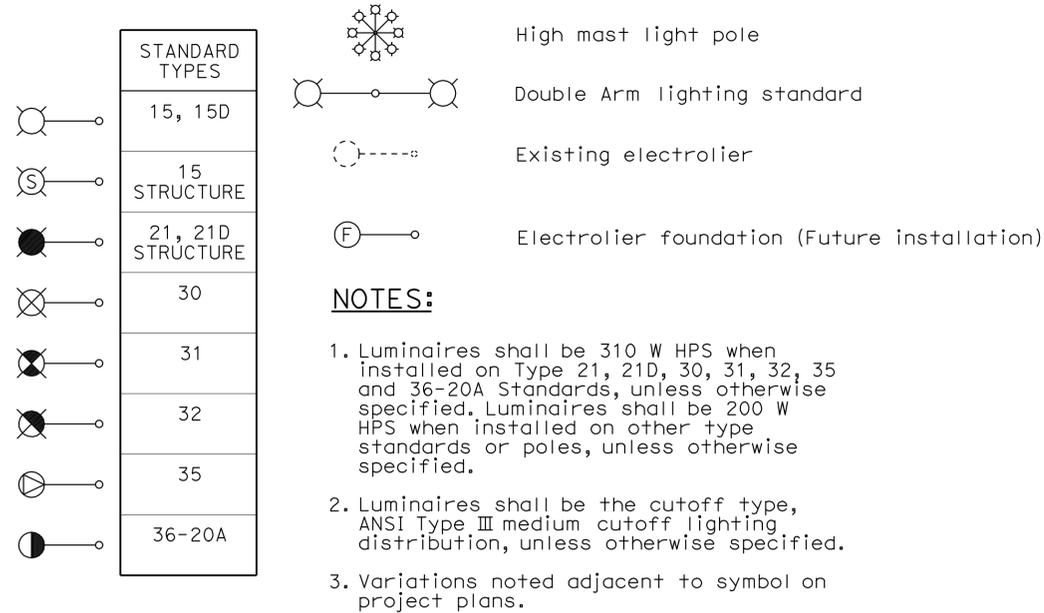
TYPE B SEAL

Movement Rating ≤ 2"

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

2006 REVISED STANDARD PLAN RSP B6-21

ELECTROLIERS



STANDARD NOTES:

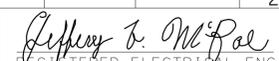
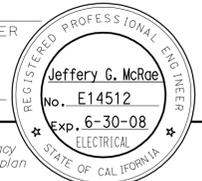
- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

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

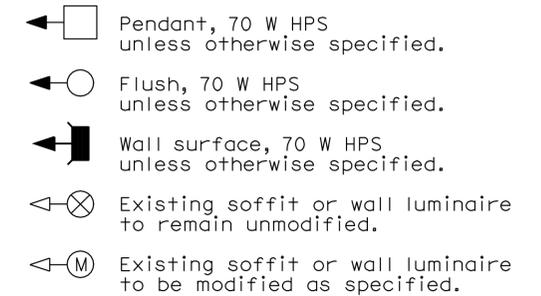
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	34	67


 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 12-14-09

SOFFIT AND WALL MOUNTED LUMINAIRES



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	15.4/15.7, 20.9/21.3	35	67

Jeffrey 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

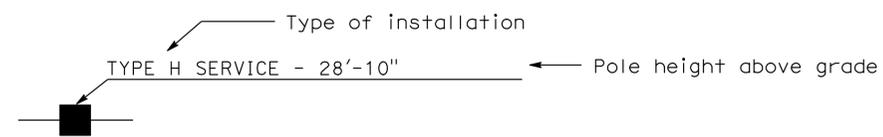
SIGNAL EQUIPMENT

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:

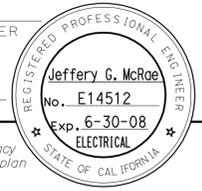
- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.
- Signal indication shall be LED.

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

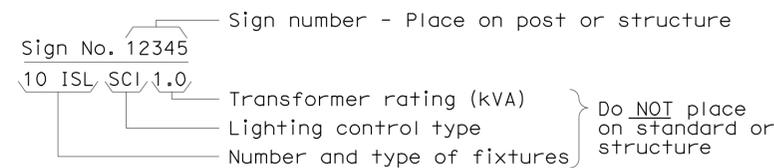
2006 REVISED STANDARD PLAN RSP ES-1B



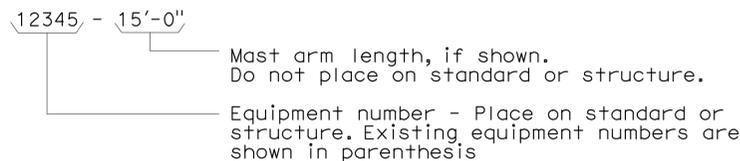
To accompany plans dated 12-14-09

EQUIPMENT IDENTIFICATION

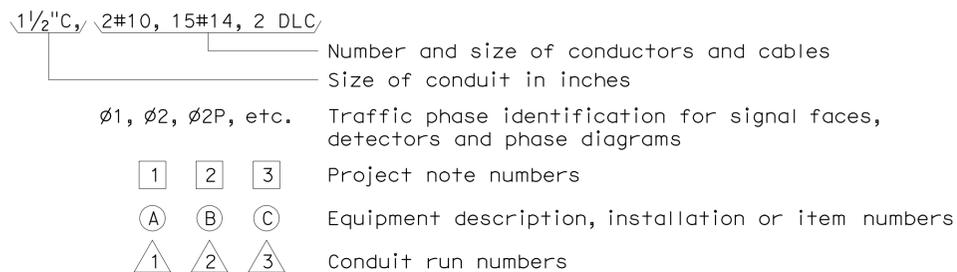
ILLUMINATED SIGN IDENTIFICATION NUMBER:



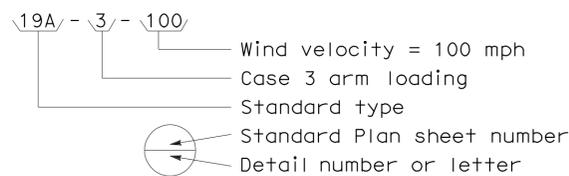
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



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

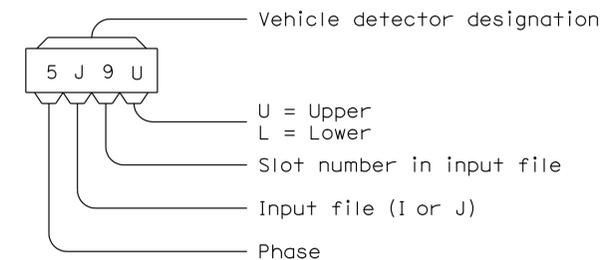
WIRING DIAGRAM LEGEND

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	— —	Terminal blocks
NB Neutral bus	— —	Contactor, Contact NC
GB Ground bus	— —	Enclosure bond
G Equipment grounding conductor	— —	
N Grounded conductor (Neutral)	— —	
	⋮	Grounding electrode
	— —	Circuit breaker
	Ⓜ	Receptacle

PULL BOXES

PROPOSED	EXISTING	
		Pull box-No. 5 unless otherwise indicated or noted.
		Pull box-Additional designations or descriptions
3 = No. 3 1/2 pull box		(C) = Communications pull box
5 = No. 5 pull box		(E) = Pull box with extension
6 = No. 6 pull box		(S) = Sprinkler control pull box
7 = No. 7 (Ceiling pull box)		(21) = Anchor bolts and conduit for future installation of Type 21 Standard
8 = No. 8 (Pendant soffit pull box)		(T) = Traffic pull box
9 = No. 9 pull box		
9A = No. 9A pull box		

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)

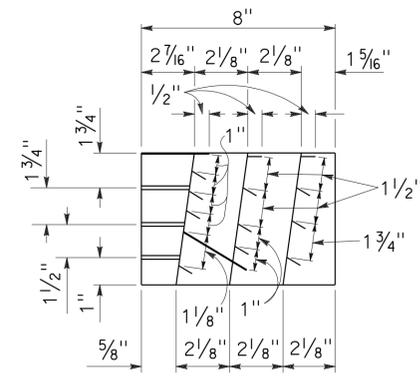
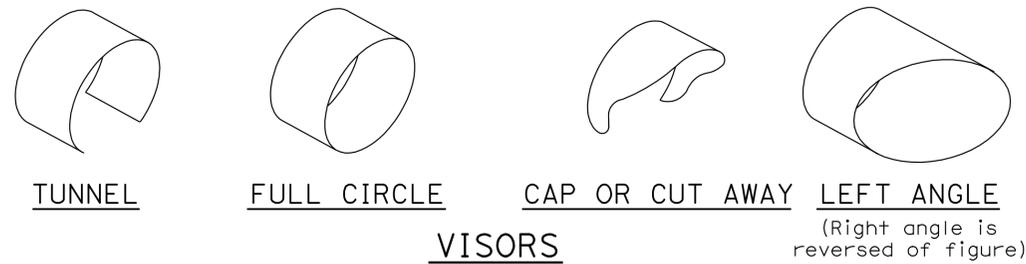
NO SCALE

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.

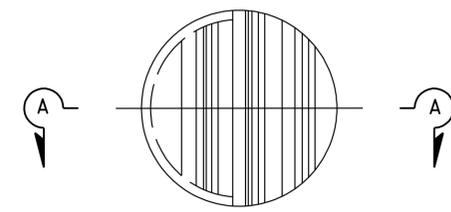
2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	37	67

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

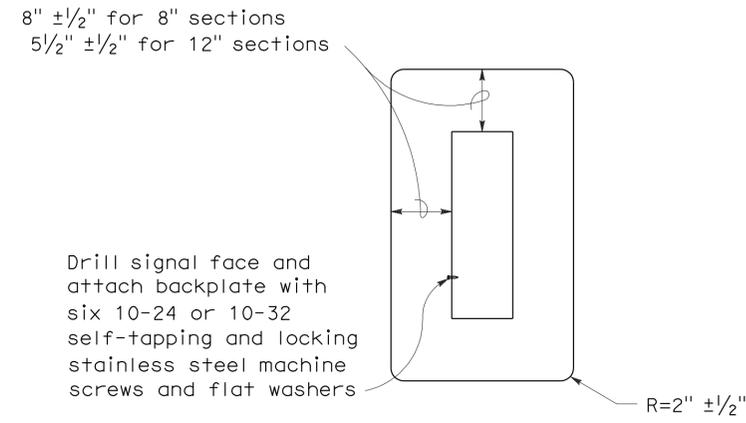


SECTION A-A



FRONT VIEW
DIRECTIONAL LOUVER

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

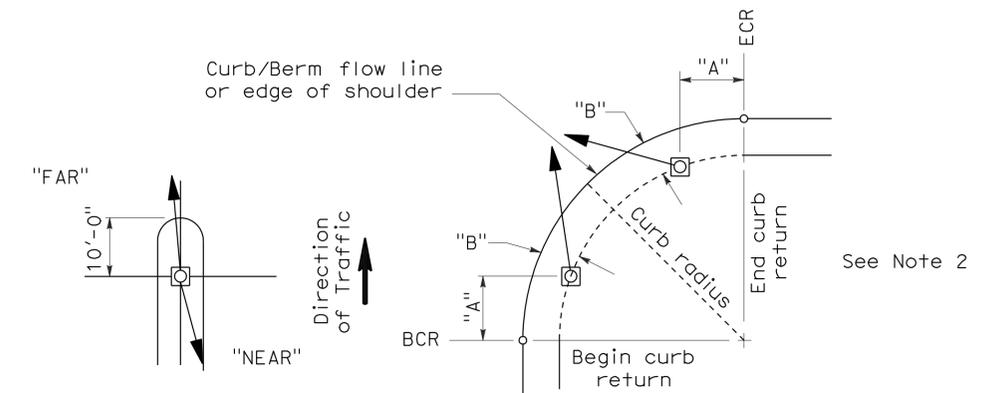


8" AND 12" SECTIONS

BACKPLATE

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

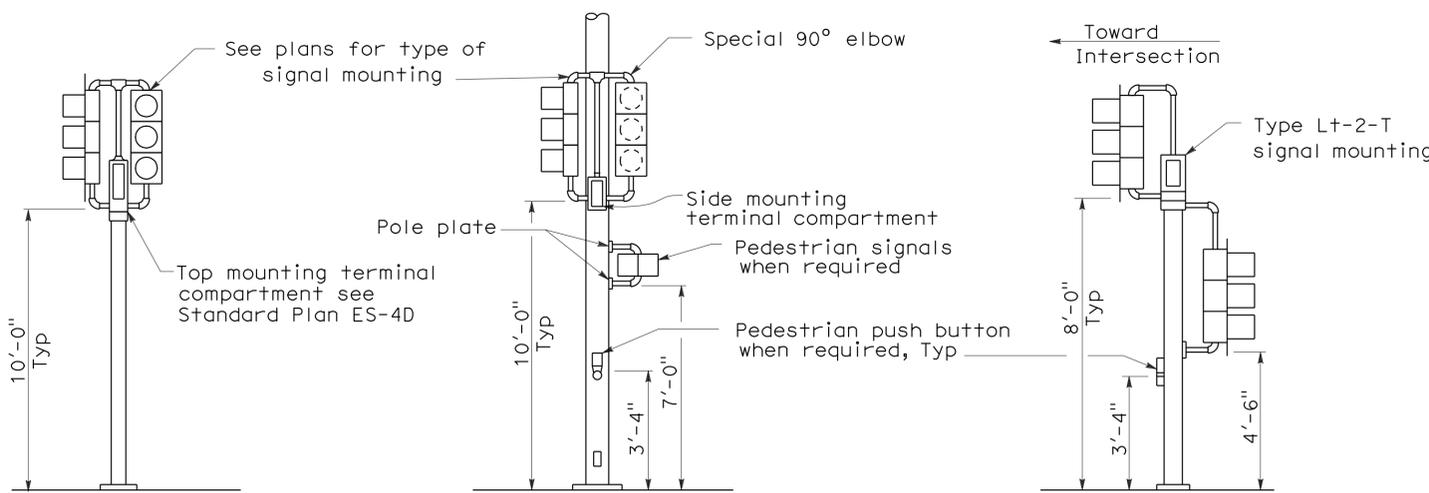
Drill signal face and attach backplate with six 10-24 or 10-32 self-tapping and locking stainless steel machine screws and flat washers



NOTES:

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

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



TOP MOUNTED SIGNALS (TV)

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

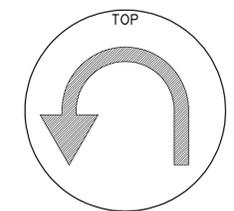
SIDE MOUNTED SIGNALS (SV AND SP)

Normally used on standards with luminaire or signal mast arm

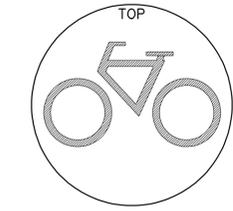
LEFT TURN LANE SIGNAL

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

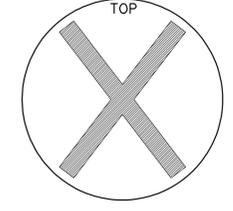
TYPICAL SIGNAL INSTALLATIONS



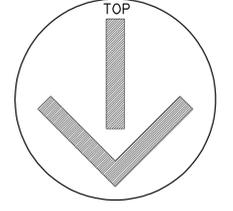
U-TURN SIGNAL FACE



BICYCLE SIGNAL FACE



LANE CONTROL SIGNAL FACE



LANE CONTROL SIGNAL FACE

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

NO SCALE

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

REVISED STANDARD PLAN RSP ES-4C

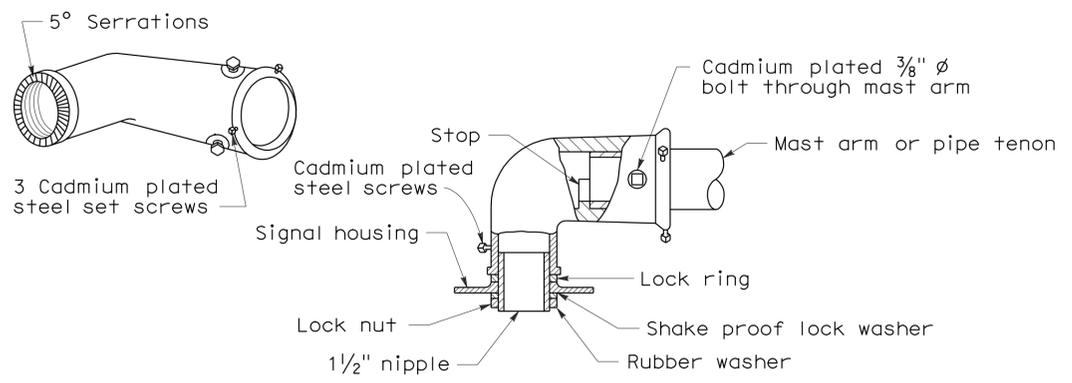
2006 REVISED STANDARD PLAN RSP ES-4C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	38	67

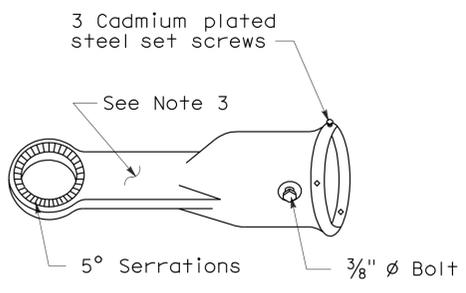
Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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

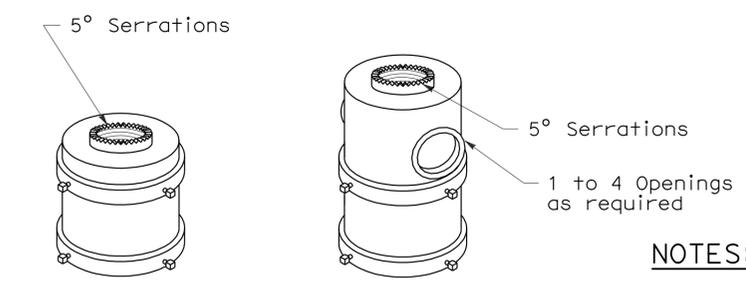
To accompany plans dated 12-14-09



MAST ARM MOUNTING - TYPE "MAT"
 For 2 NPS pipe, see Note 1.



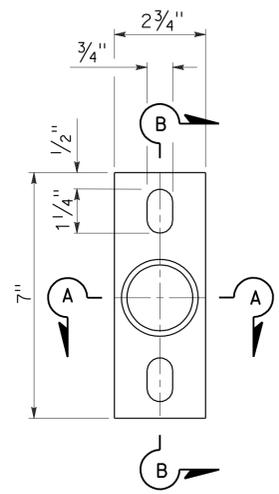
MAST ARM MOUNTING - TYPE "MAS"
 For 2 NPS pipe. See Note 1.



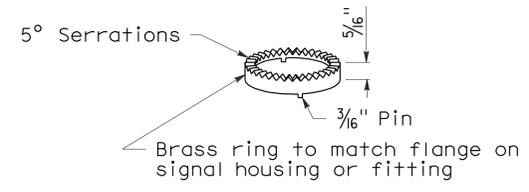
For one mounting For multiple mountings
TOP MOUNTINGS
 For 4 NPS pipe, see Note 2.

- NOTES:**
- After mast arm signal has been plumbed and secured, drill 1/16" hole through mast arm tenon in line with slip fitter hole. Place a cadmium plated 3/8" ø galvanized bolt with washer under bolt head through hole and secure with washer, nut, and locknut. Seal openings between mast arm mountings and mast arm with mastic.
 - (a) Threaded top mounted slip fitter openings shall be 1/2 NPS.
 (b) Serrations in fittings shall match those on bottom of signal heads or in lock ring.
 (c) Top opening shall be offset when backplate is used.
 - Wireway shall have a cross section area of 0.95 square inch minimum. Minimum width of 1/2".

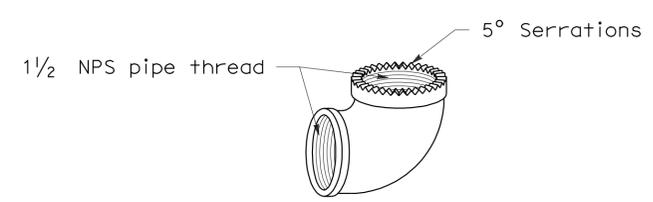
SIGNAL SLIP FITTERS



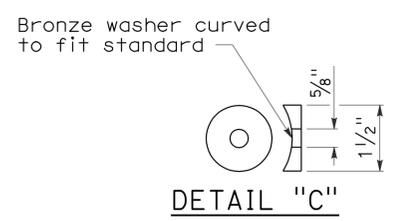
POLE PLATE
 For side mountings



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

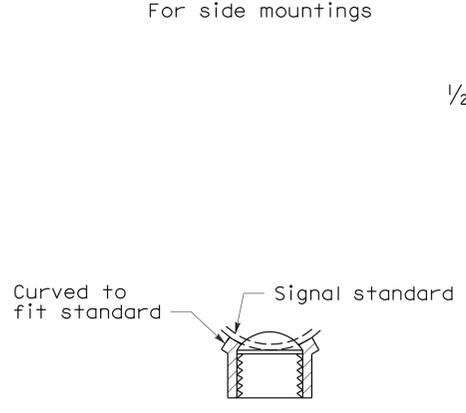


SPECIAL 90° ELBOW
 One for each signal head, except those with special slip fitter mounting

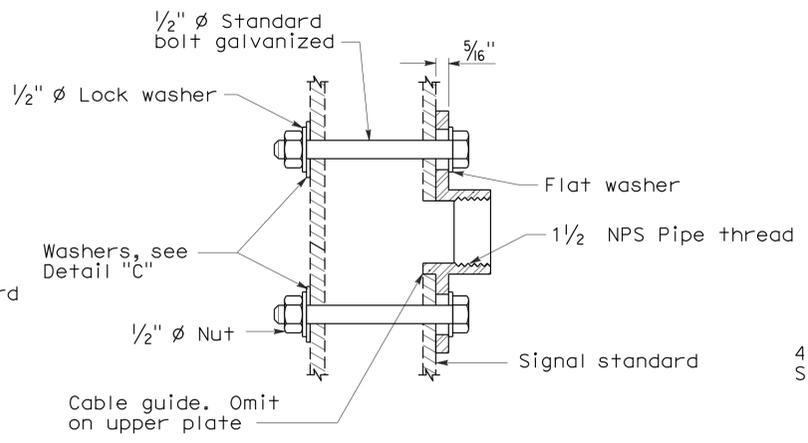


DETAIL "C"

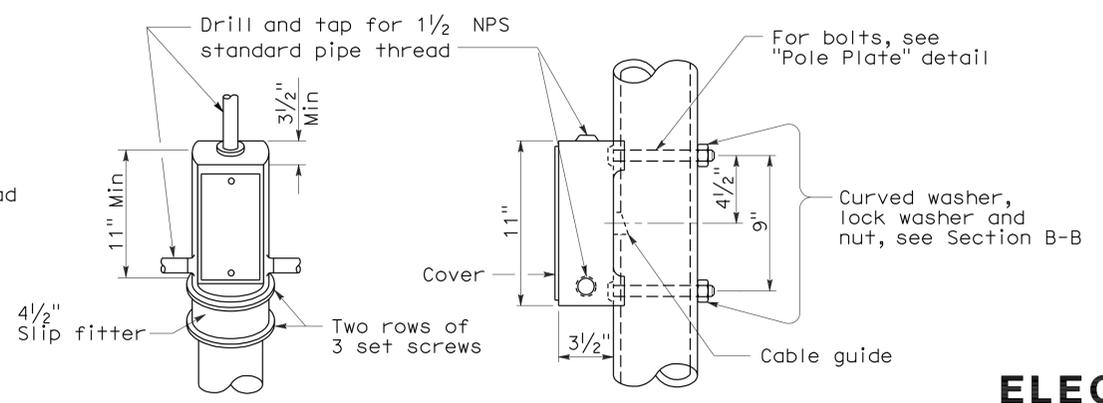
MISCELLANEOUS MOUNTING HARDWARE



SECTION 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

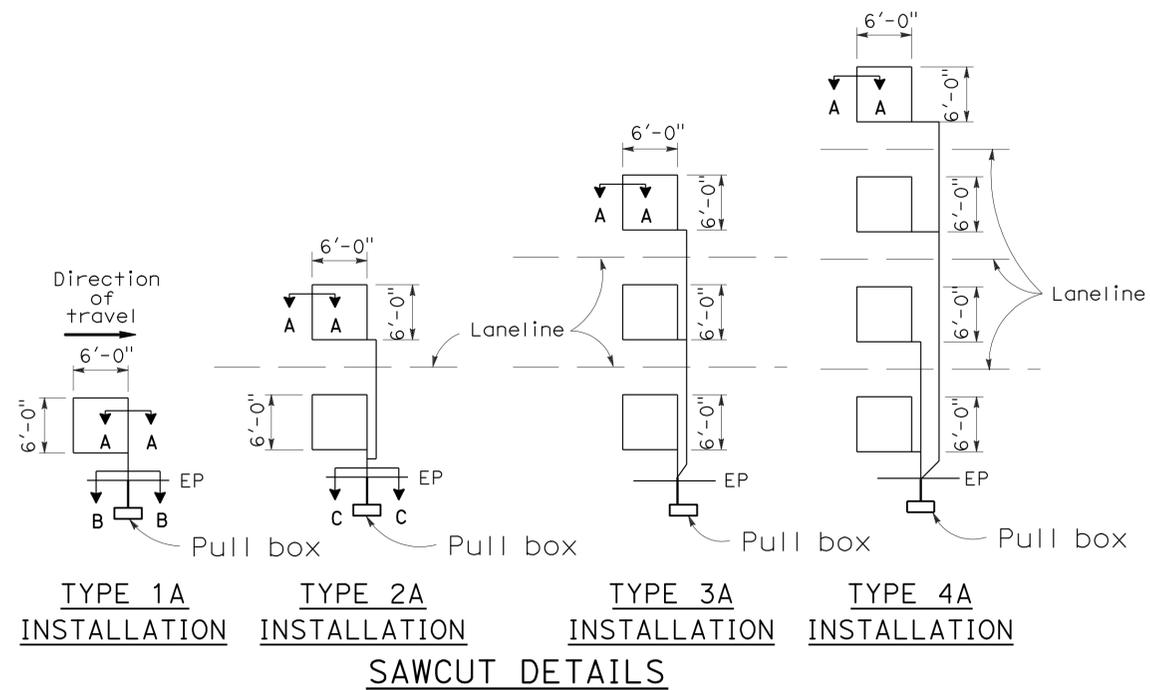
2006 REVISED STANDARD PLAN RSP ES-4D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	39	67

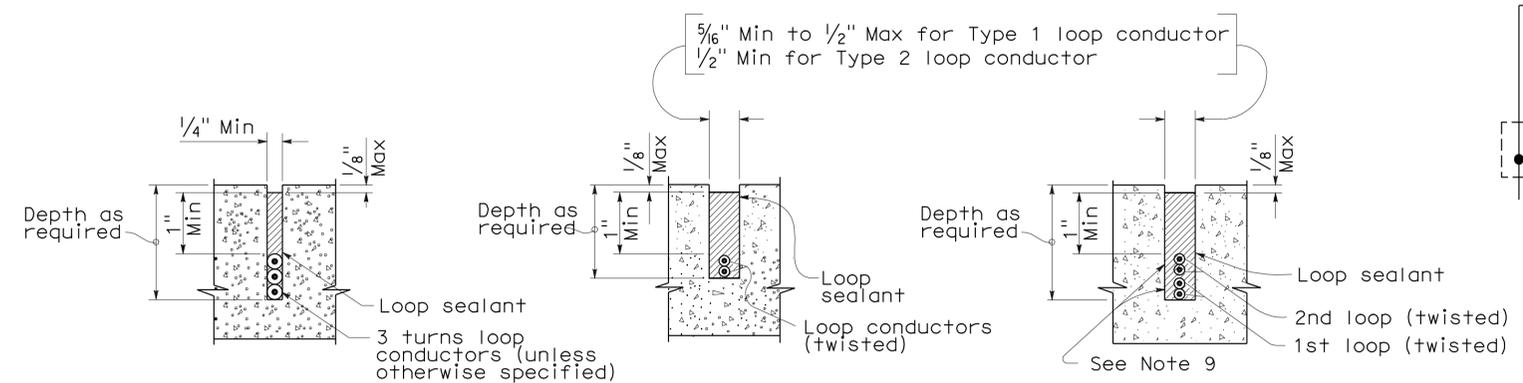
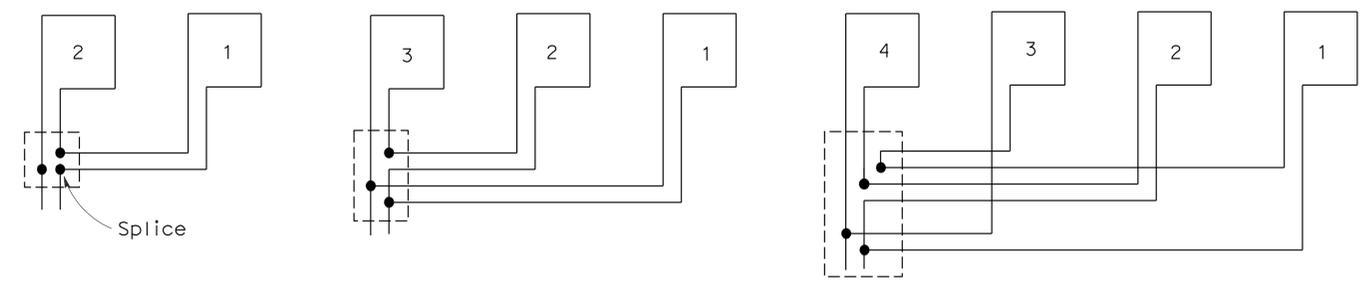
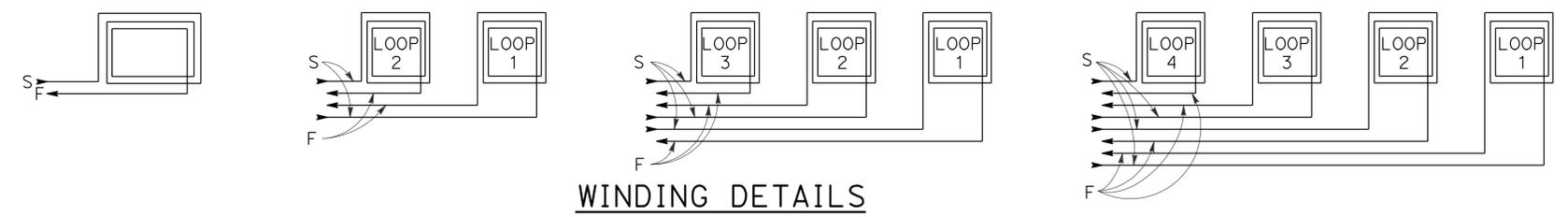
Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.
 REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512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

LOOP INSTALLATION PROCEDURE

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



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



ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

NO SCALE

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

REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A

To accompany plans dated 12-14-09

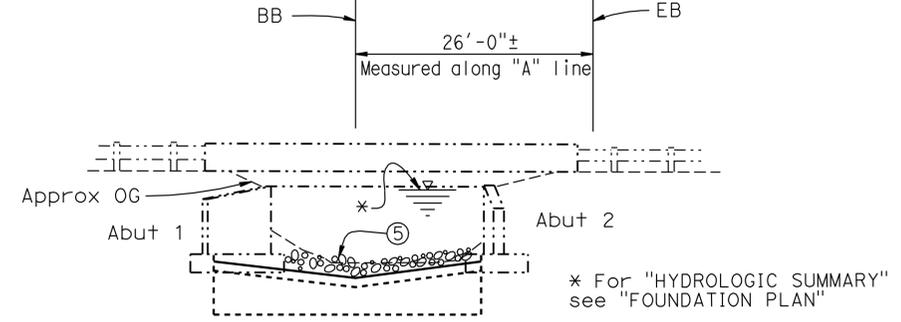
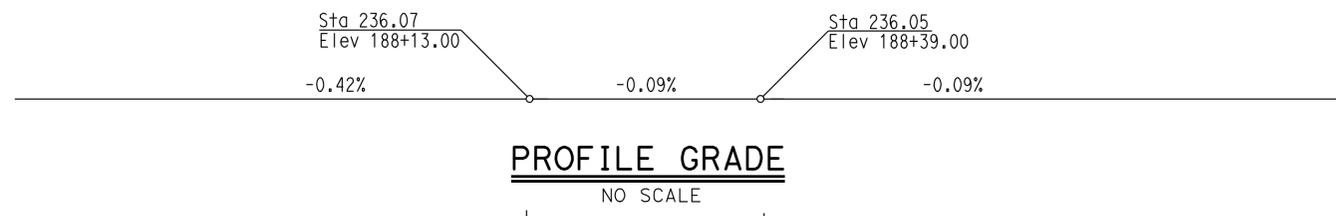
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	40	67

Randy S Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE

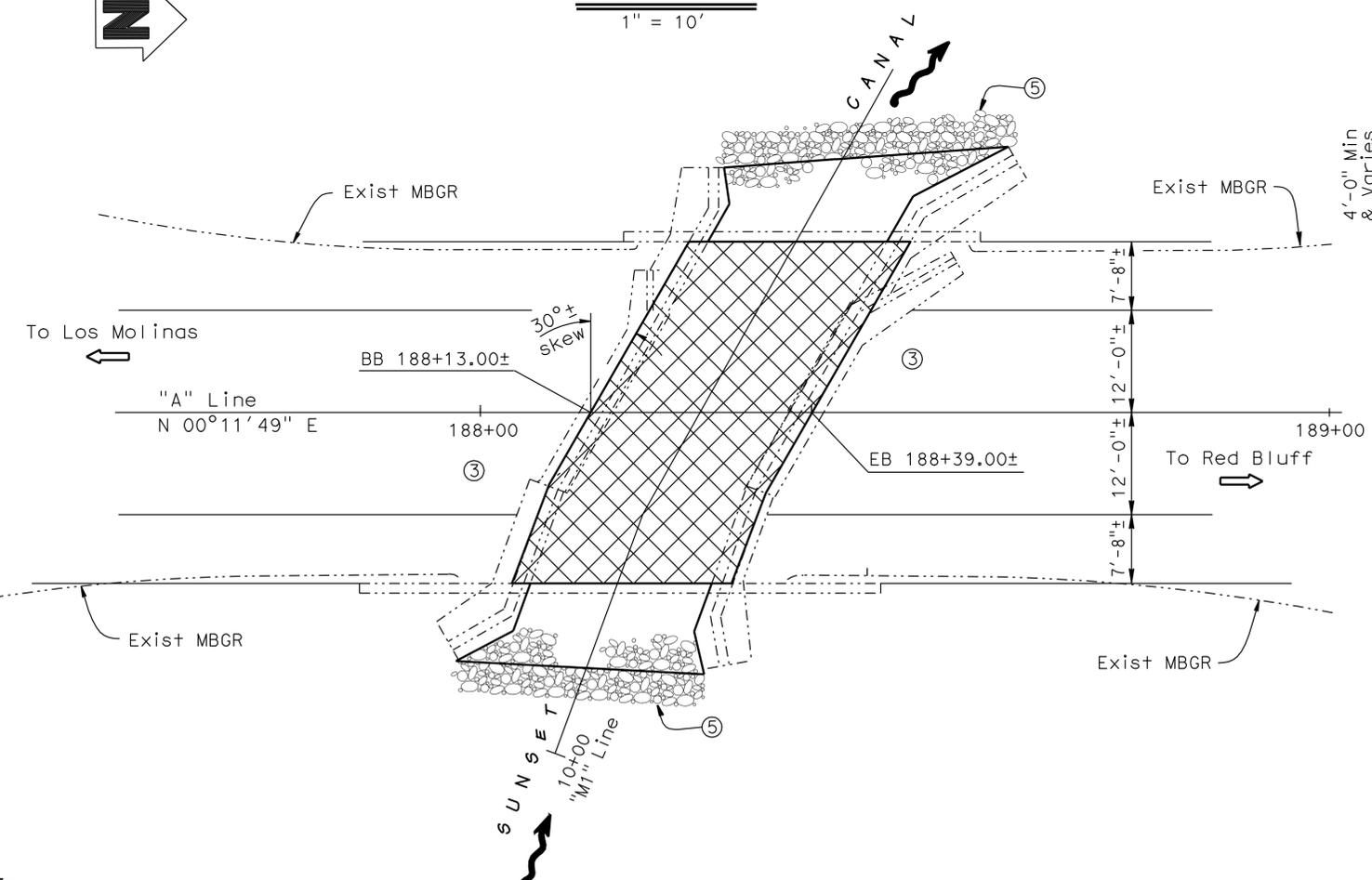
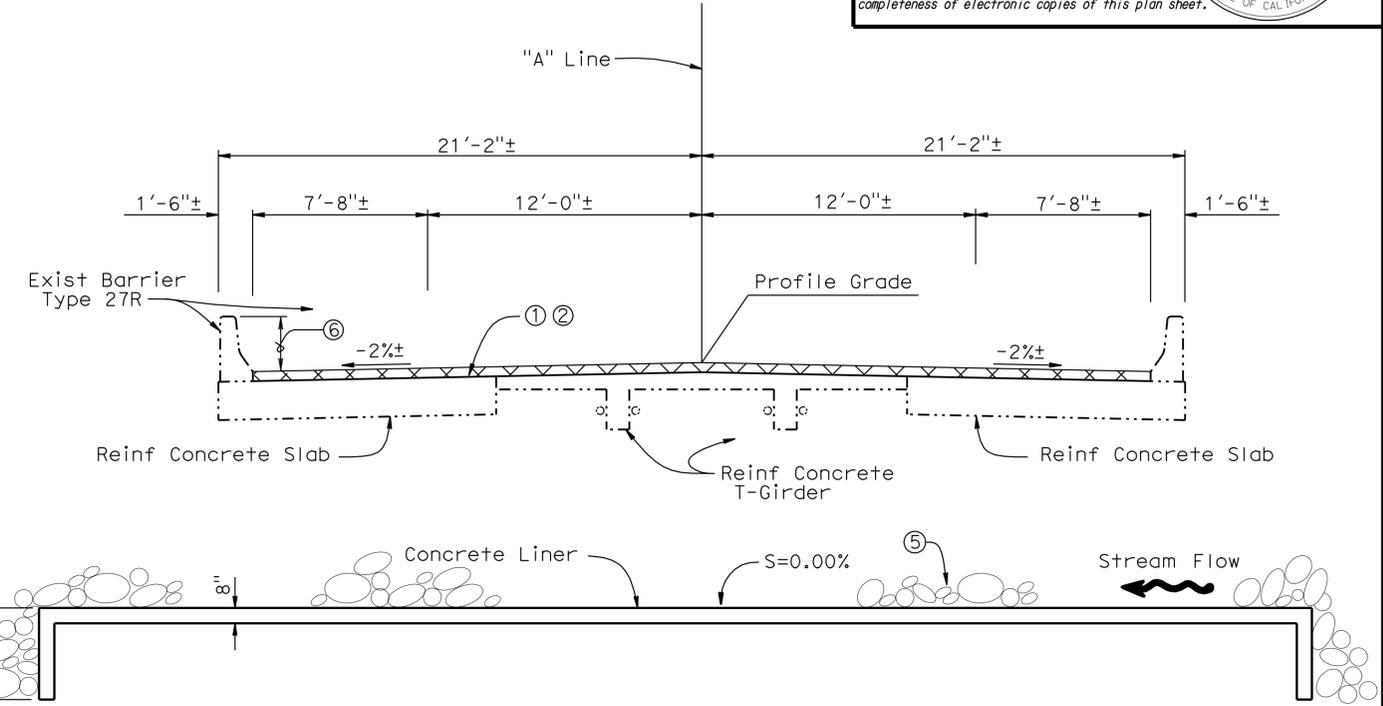
12-14-09
 PLANS APPROVAL DATE

Randy S Bains
 No. 64172
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

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



ELEVATION
1" = 10'



PLAN
1" = 10'

- NOTES:**
- Indicates existing structure
 - ▨ Indicates limits of AC removal and placing 5" Polyester Concrete Overlay
 - ① Remove existing AC wearing surface
 - ② Place 5" Polyester Concrete Overlay on bridge deck
 - ③ AC approaches to conform, see "ROAD PLANS"
 - ④ For traffic handling during deck rehabilitation work, see "ROAD PLANS"
 - ⑤ Rock slope protection, see "ROAD PLANS"
 - ⑥ Barrier height shall not be less than 2'-5" following the overlay operation. Taper polyester overlay at barrier rail to ensure minimum barrier height. See "DETAIL A" on "INDEX TO PLANS" sheet
- For "GENERAL NOTES" and "INDEX TO PLANS" see "INDEX TO PLANS" sheet

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

QUANTITIES		
REMOVE ASPHALT CONCRETE SURFACING	1,023	SOFT
PREPARE CONCRETE BRIDGE DECK SURFACE	1,023	SOFT
STRUCTURE EXCAVATION (BRIDGE)	14	CY
STRUCTURAL CONCRETE	38	CY
DRILL AND BOND DOWEL	44	LF
FURNISH POLYESTER CONCRETE OVERLAY	432	CF
PLACE POLYESTER CONCRETE OVERLAY	1,023	SOFT
BAR REINFORCING STEEL (LINER)	7,000	LB

DESIGN	BY Mike Bergman	CHECKED Randip S Bains	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
DETAILS	BY Nancy C Gwynn	CHECKED Randip S Bains	LAYOUT	BY Mike Bergman
QUANTITIES	BY Art V Herrera	CHECKED Mike Bergman	SPECIFICATIONS	BY Dave Klein

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 3

BRIDGE NO. 08-0010
 POST MILE 15.55

SUNSET CANAL BRIDGE
GENERAL PLAN

SHEET 1 OF 8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	41	67

Randip S Bains 8/27/09
REGISTERED CIVIL ENGINEER DATE

12-14-09
PLANS APPROVAL DATE

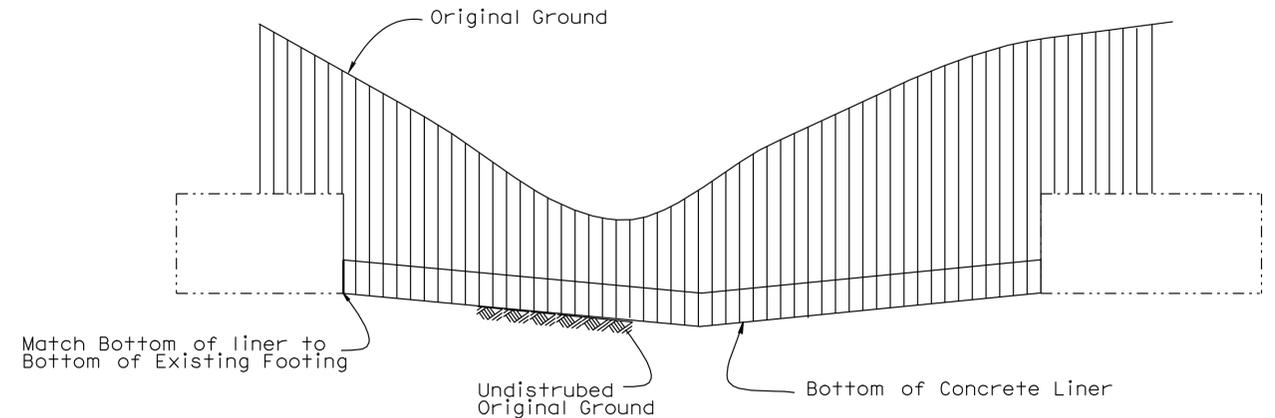
Randip S Bains
No. 64172
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD Bridge Design Specifications, 3rd edition with the Interims through 2006 and the Caltrans Amendments v 3.06.01

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

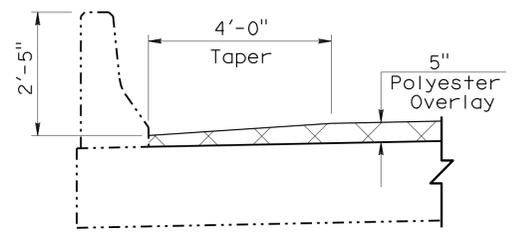


INDEX TO PLANS

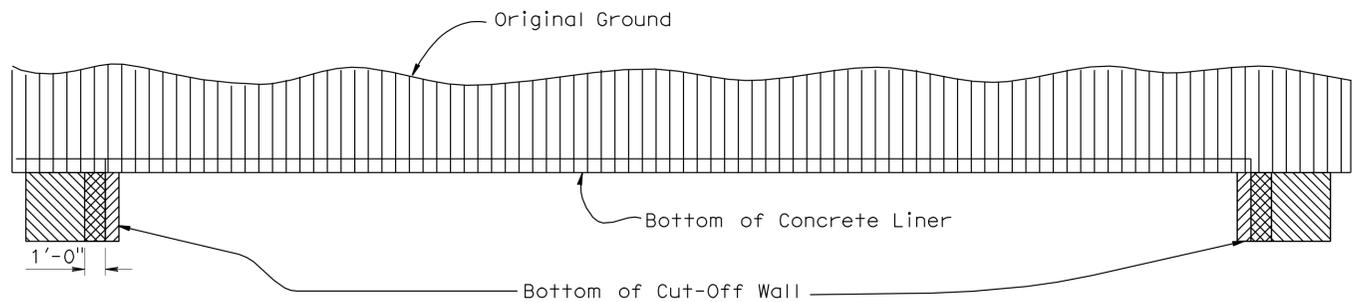
SHEET NO	TITLE
1	GENERAL PLAN
2	INDEX TO PLANS
3	FOUNDATION PLAN
4	CONCRETE LINER DETAILS NO. 1
5	CONCRETE LINER DETAILS NO. 2
6	CONCRETE LINER DETAILS NO. 3
7	CONCRETE LINER DETAILS NO. 4
8	LOG OF TEST BORINGS

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)



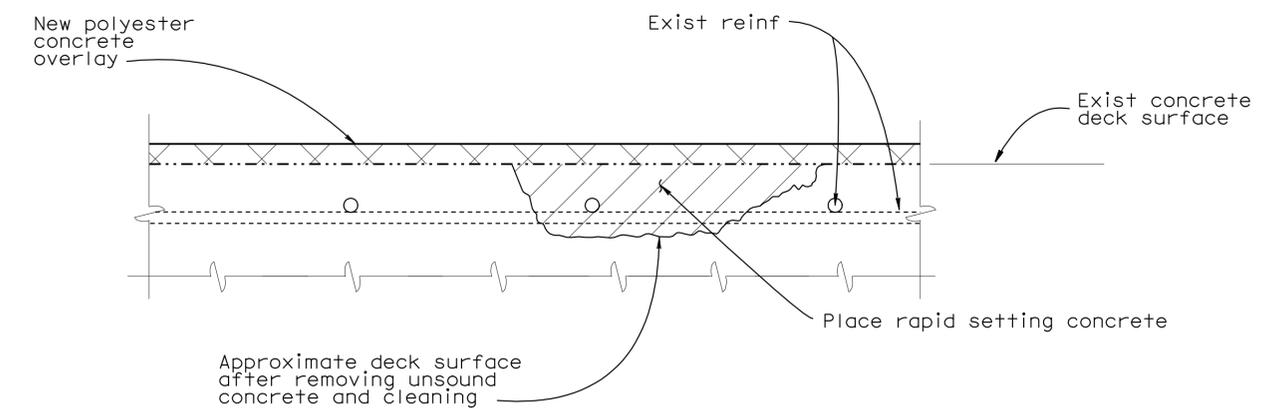
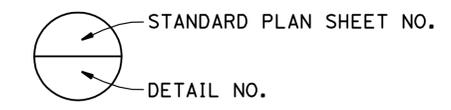
DETAIL A
No Scale



- Roadway Excavation (see "ROAD PLANS")
- Structure Excavation
- Roadway RSP (see "ROAD PLANS")

LIMITS OF EXCAVATION
No Scale

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



DECK REPAIR DETAIL
NO SCALE

NOTES:
Locations to be determined by the Engineer
Reinforcement may be encountered during deck concrete removal



DESIGN	BY Mike Bergman	CHECKED Randip S Bains
DETAILS	BY Shadi Motalebi	CHECKED Randip S Bains
QUANTITIES	BY Art V Herrera	CHECKED Mike Bergman

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

BRIDGE NO.	08-0010
POST MILE	15.55

SUNSET CANAL BRIDGE
INDEX TO PLANS

USERNAME => hrmikes DATE PLOTTED => 21-DEC-2009 TIME PLOTTED => 08:04

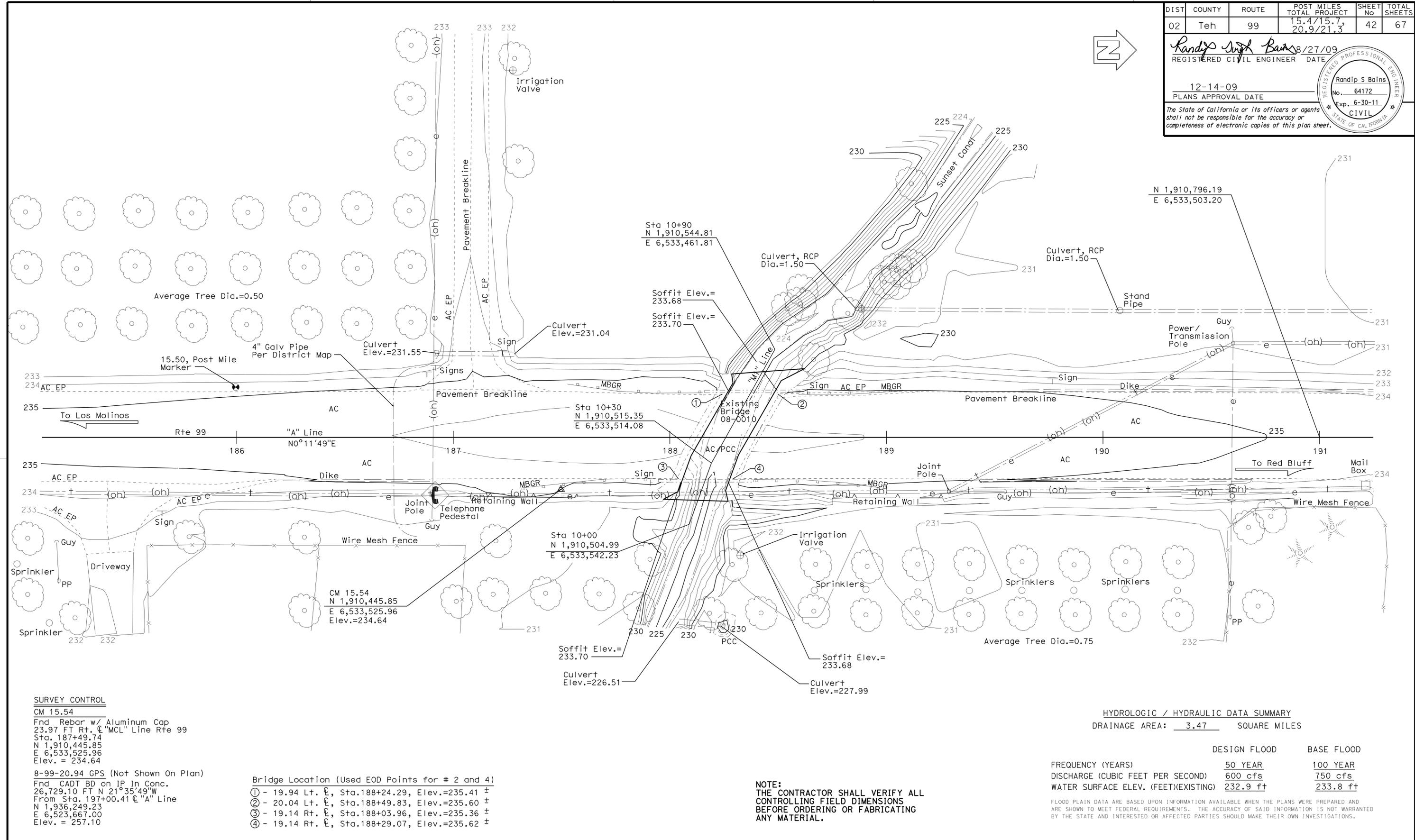
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.6, 20.9/21.3	42	67

Randip Singh Bains 8/27/09
REGISTERED CIVIL ENGINEER DATE

12-14-09
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
Randip S Bains
No. 64172
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA



SURVEY CONTROL
CM 15.54
Fnd Rebar w/ Aluminum Cap
23.97 FT Rt. @ "MCL" Line Rte 99
Sta. 187+49.74
N 1,910,445.85
E 6,533,525.96
Elev. = 234.64
8-99-20.94 GPS (Not Shown On Plan)
Fnd CADT BD on IP in Conc.
26,729.10 FT N 21°35'49"W
From Sta. 197+00.41 @ "A" Line
N 1,936,249.23
E 6,523,667.00
Elev. = 257.10

Bridge Location (Used EOD Points for # 2 and 4)
① - 19.94 Lt. @ Sta.188+24.29, Elev.=235.41 ±
② - 20.04 Lt. @ Sta.188+49.83, Elev.=235.60 ±
③ - 19.14 Rt. @ Sta.188+03.96, Elev.=235.36 ±
④ - 19.14 Rt. @ Sta.188+29.07, Elev.=235.62 ±

HYDROLOGIC / HYDRAULIC DATA SUMMARY
DRAINAGE AREA: 3.47 SQUARE MILES

	DESIGN FLOOD	BASE FLOOD
FREQUENCY (YEARS)	50 YEAR	100 YEAR
DISCHARGE (CUBIC FEET PER SECOND)	600 cfs	750 cfs
WATER SURFACE ELEV. (FEET)(EXISTING)	232.9 ft	233.8 ft

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

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				DESIGN BY: Mike Bergman	CHECKED: Randip S Bains	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO. 08-0010	SUNSET CANAL BRIDGE FOUNDATION PLAN
SCALE: 1"=20'	VERT. DATUM: NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY: Shadi Motalebi	CHECKED: Randip S Bains	POST MILE: 15.55				
ALIGNMENT TIES: Dist. Traverse Sheet	SURVEYED BY: District	CHECKED BY: T.Gillett 04/2008	QUANTITIES BY: Art V Herrera	CHECKED: Mike Bergman					

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

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

CU 03264 EA 2C1101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 07/22/08, 07/24/08, 7-29-09

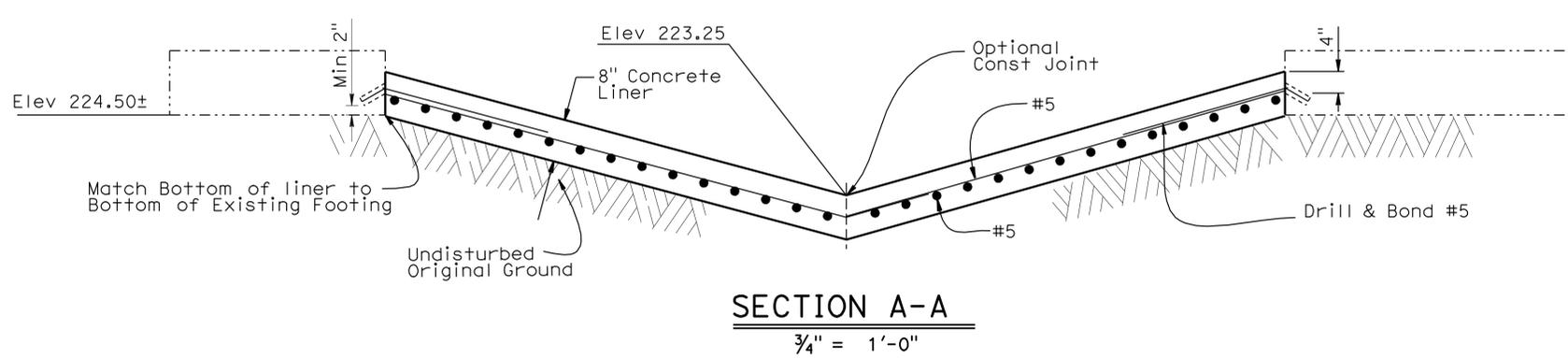
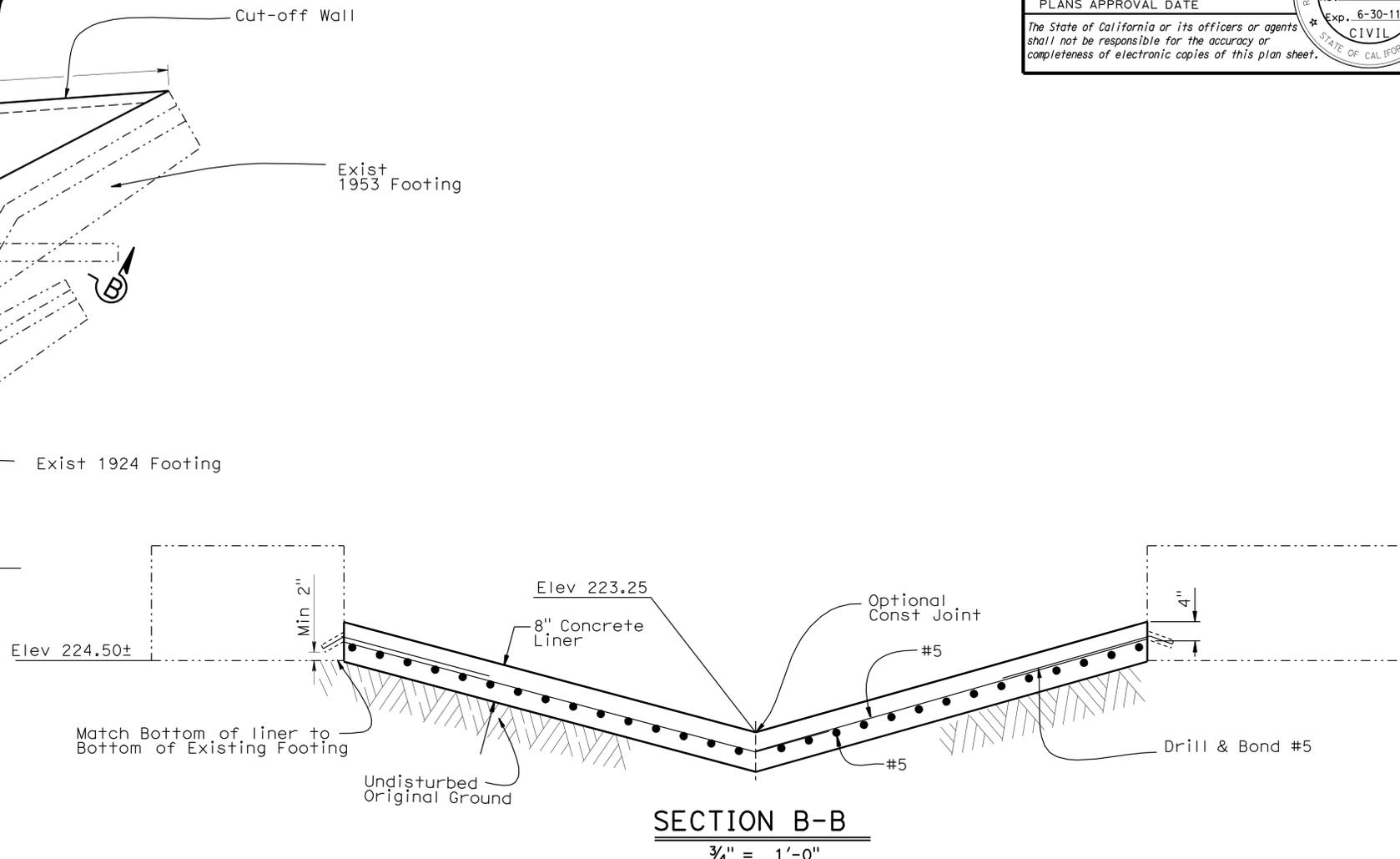
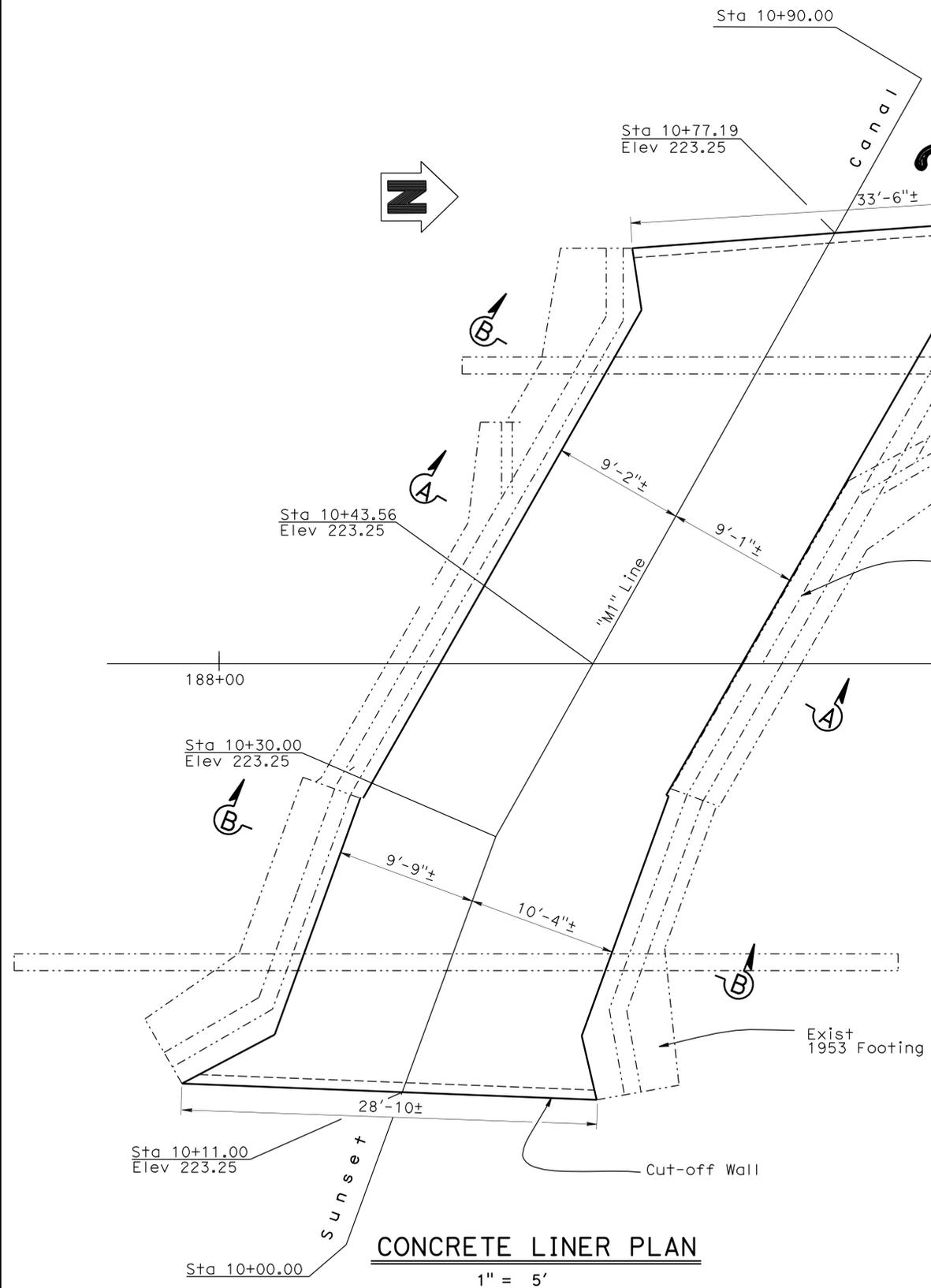
SHEET 3 OF 8

FILE => 08-0010-e-fp101.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	43	67

Randy Singh Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE
 12-14-09
 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
 Randip S Bains
 No. 64172
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA



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

CONCRETE LINER PLAN
 1" = 5'

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

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

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY Mike Bergman	CHECKED Randip S Bains	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	SUNSET CANAL BRIDGE				
	DETAILS	BY Shadi Motalebi	CHECKED Randip S Bains			08-0010					
	QUANTITIES	BY Art V Herrera	CHECKED Mike Bergman			POST MILE 15.55					
					CU 03264 EA 2C1101	CONCRETE LINER DETAILS NO. 1					
						DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES				SHEET 4 OF 8

USERNAME => fhmikes DATE PLOTTED => 21-DEC-2009 TIME PLOTTED => 08:04

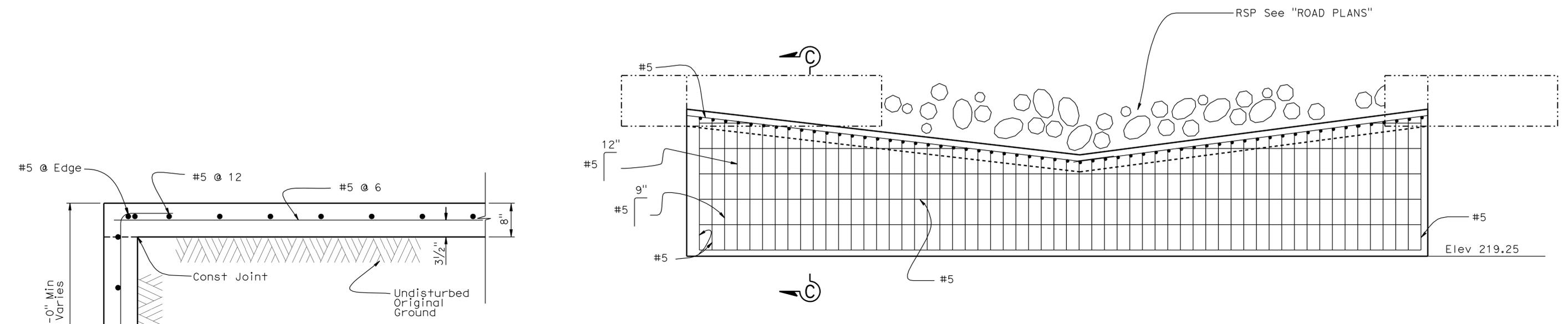
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	44	67

Randip Singh Bains 8/27/09
REGISTERED CIVIL ENGINEER DATE

12-14-09
PLANS APPROVAL DATE

Randip S Bains
No. 64172
Exp. 6-30-11
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 C-C
1" = 1'-0"

CUT-OFF WALL ELEVATION
1/2" = 1'-0"

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

DESIGN	BY Mike Bergman	CHECKED Randip S Bains
DETAILS	BY Shadi Motalebi	CHECKED Randip S Bains
QUANTITIES	BY Art V Herrera	CHECKED Mike Bergman

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

BRIDGE NO.	08-0010
POST MILE	15.55

SUNSET CANAL BRIDGE
CONCRETE LINER DETAILS NO. 2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	45	67

Randy Singh Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE
 12-14-09
 PLANS APPROVAL DATE
 Randip S Bains
 No. 64172
 Exp. 6-30-11
 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.



See "DETAIL E",
"CONCRETE LINER
DETAILS NO . 4"

See "DETAIL F",
"CONCRETE LINER
DETAILS NO . 4"

"A" Line
N 00°11'49" E
188+00

Drill & Bond #5
dowel in 5" deep
hole @ 3'-0" Typ

#5 @ Edge

#5 @ Edge

#5 @ Edge

#5 @ Edge

See "DETAIL G"

Sunset
"M1" Line

See "DETAIL I",
"CONCRETE LINER
DETAILS NO . 4"

See "DETAIL H",
"CONCRETE LINER
DETAILS NO . 4"

DETAIL G
NO SCALE

CONCRETE LINER
1" = 5'-0"

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

DESIGN	BY Mike Bergman	CHECKED Randip S Bains
DETAILS	BY Shadi Motalebi	CHECKED Randip S Bains
QUANTITIES	BY Art V Herrera	CHECKED Mike Bergman

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 3

BRIDGE NO.	08-0010
POST MILE	15.55

SUNSET CANAL BRIDGE
CONCRETE LINER DETAILS NO. 3

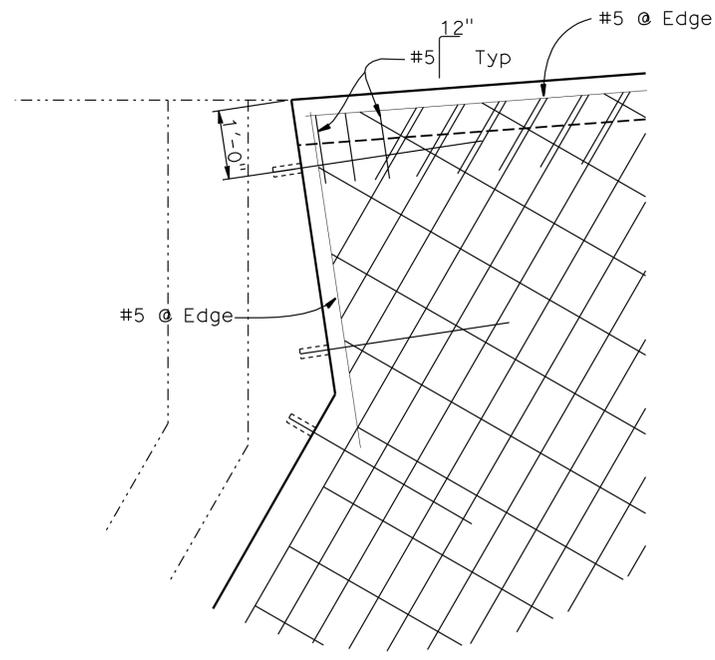
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	46	67

Randip Singh Bains 8/27/09
REGISTERED CIVIL ENGINEER DATE

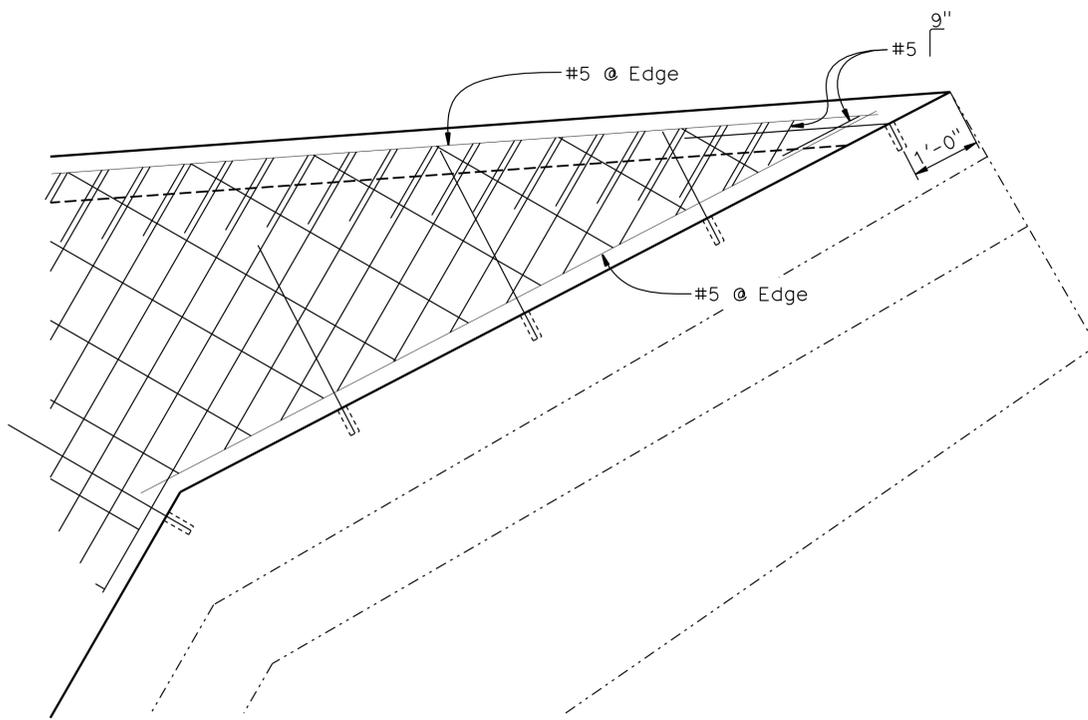
12-14-09
PLANS APPROVAL DATE

Randip S Bains
REGISTERED PROFESSIONAL ENGINEER
No. 64172
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

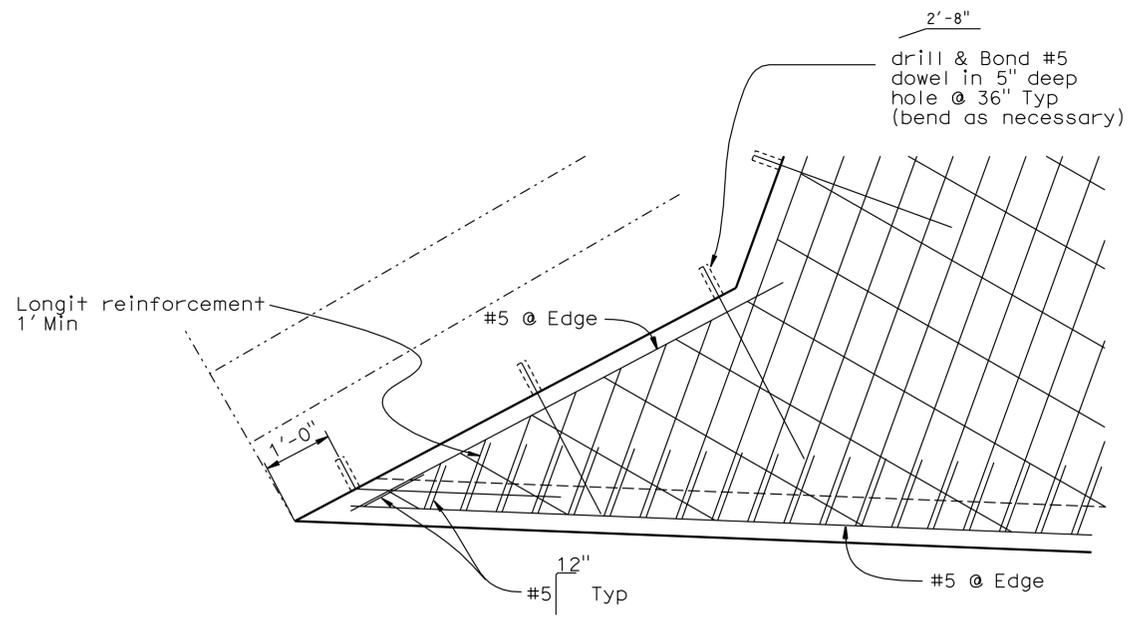
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



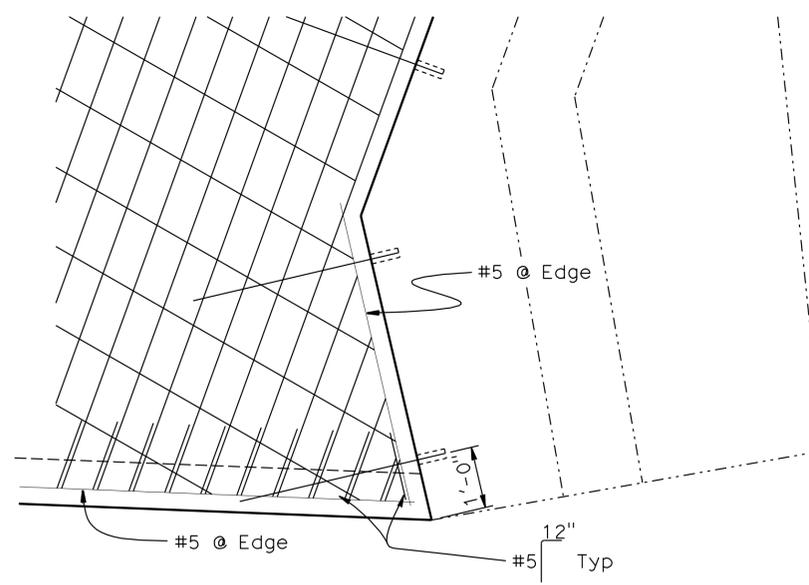
DETAIL E
 $\frac{3}{4}'' = 1'-0''$



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



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



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

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

DESIGN	BY Mike Bergman	CHECKED Randip S Baine
DETAILS	BY Shadi Motalebi	CHECKED Randip s Bains
QUANTITIES	BY Art V Herrera	CHECKED Mike Bergman

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

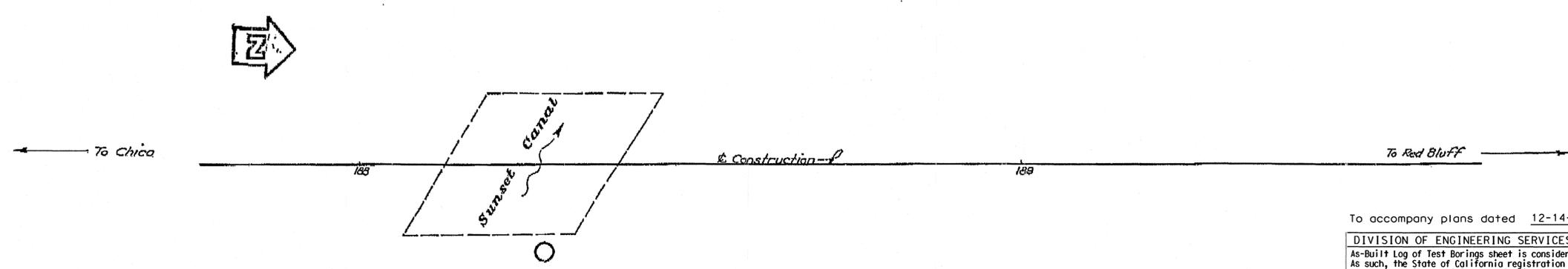
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 3

BRIDGE NO.	08-0010
POST MILE	15.55

SUNSET CANAL BRIDGE
CONCRETE LINER DETAILS NO. 4



Stewart Mitchell
SEPTEMBER 17 1951



To accompany plans dated 12-14-09

DIVISION OF ENGINEERING SERVICES - 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. 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	15.4/15.7,20.9/21.3	47	67

CERTIFIED ENGINEERING GEOLOGIST: *Xiing Zheng* DATE: 7/1/2009

SUNSET CANAL BRIDGE
LOG OF TEST BORINGS

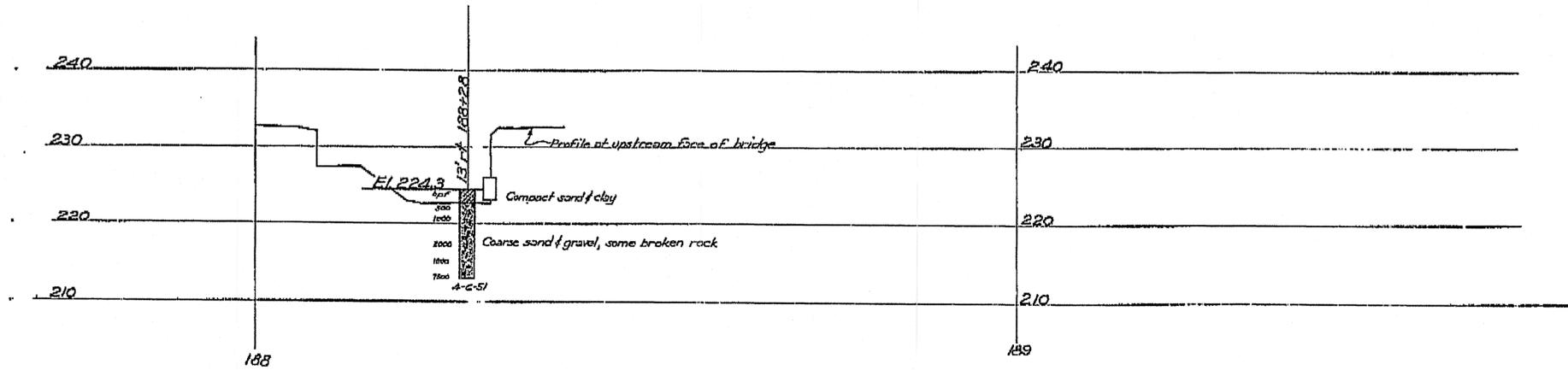
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

As-Built Vertical Datum: NGVD29
Datum conversion: NAVD88 = NGVD29 + 2.4 feet

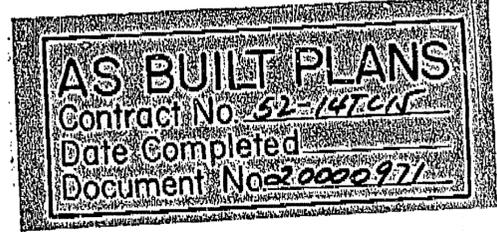
CU: 02	BRIDGE No.
EA: 2C1101	08-0010
Sheet	of
8	8



NOTE: Blows per foot were made using a 28 lb. hand hammer with a 18 inch free fall.



BM
Nail in 30" Cedar
32' RI sta 193+77
Elev 231.315



CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

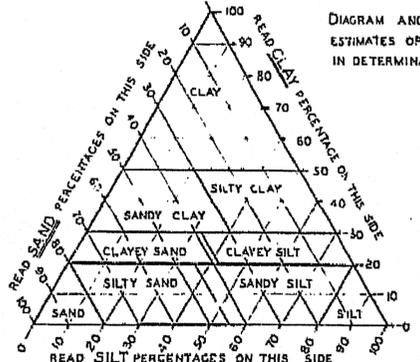


DIAGRAM AND TABLE SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.

CLASS NAME	PERCENTAGE OF SIZES PRESENT		
	SAND	SILT	CLAY
SAND	80-100	0-20	0-20
SILTY SAND	43-80	0-55	0-20
SANDY SILT	0-43	35-80	0-20
SILT	0-20	80-100	0-20
CLAYEY SAND	38-60	0-42	20-30
CLAYEY SILT	0-38	32-80	20-30
SANDY CLAY	30-70	0-40	30-50
SILTY CLAY	0-30	20-70	30-50
CLAY	0-50	0-50	50-100

LEGEND OF BORING OPERATIONS

- PLAN OF ANY BORING
 - 1" SAMPLER BORING
 - ROTARY WASH BORING
 - 1" CLOSED SAMPLER DRIVEN
 - ⊙ 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
 - (S) 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-SI S
- ▨ CLAYEY SAND-C S
- ▨ SANDY SILT-S SI
- ▨ CLAYEY SILT-C SI
- ▨ SANDY CLAY-SC
- ▨ SILTY CLAY-SI C
- ▨ PEAT $\geq 5\%$ 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
- b p f BLOWS PER FOOT - (SEE NOTE ABOVE)
- P PULLED PIPE
- M MOISTURE AS % DRY WEIGHT
- EL 84.3 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.

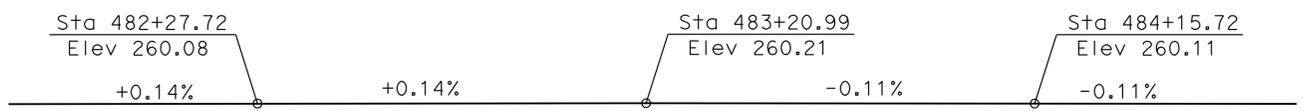
CLASSIFICATION OF EARTH MATERIAL AS SHOWN ON THIS SHEET IS BASED UPON FIELD INSPECTION AND IS NOT TO BE CONSTRUED TO IMPLY MECHANICAL ANALYSIS.

WIDENING BRIDGE ACROSS SUNSET CANAL
LOG OF TEST BORINGS

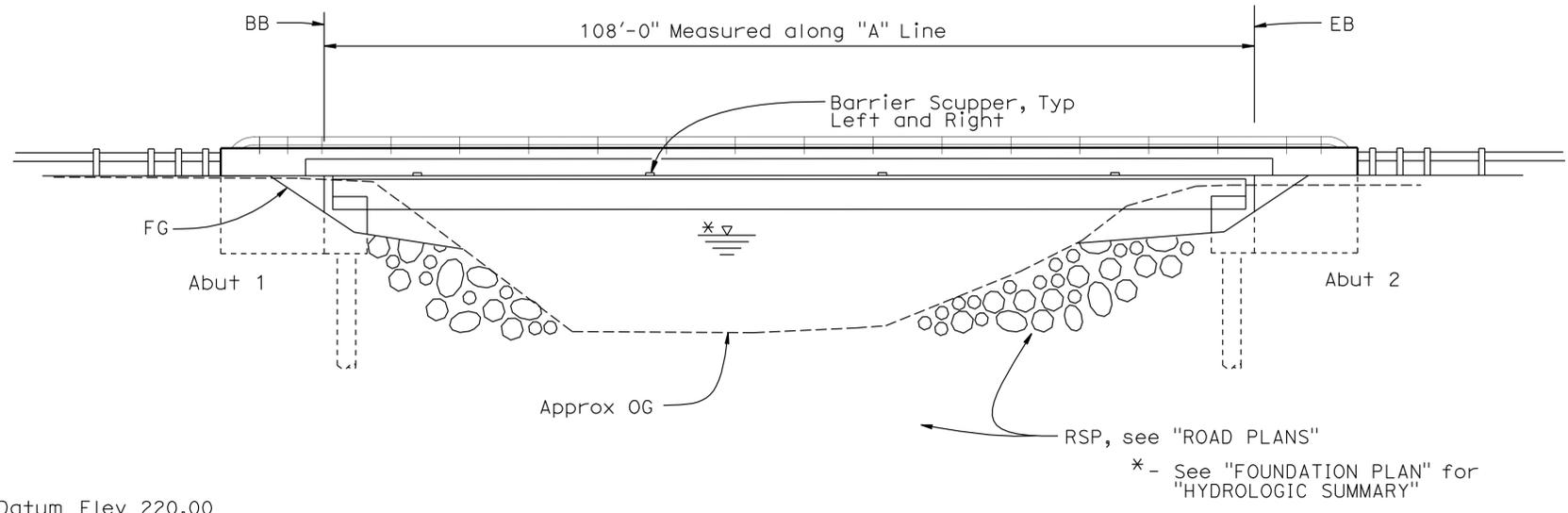
SCALE 1" = 10'
BRIDGE NO 8-10
FILE NO
DRAWING NO B-2614-7

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	48	67

Randy S Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE
 12-14-09
 PLANS APPROVAL DATE
 No. 64172
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA



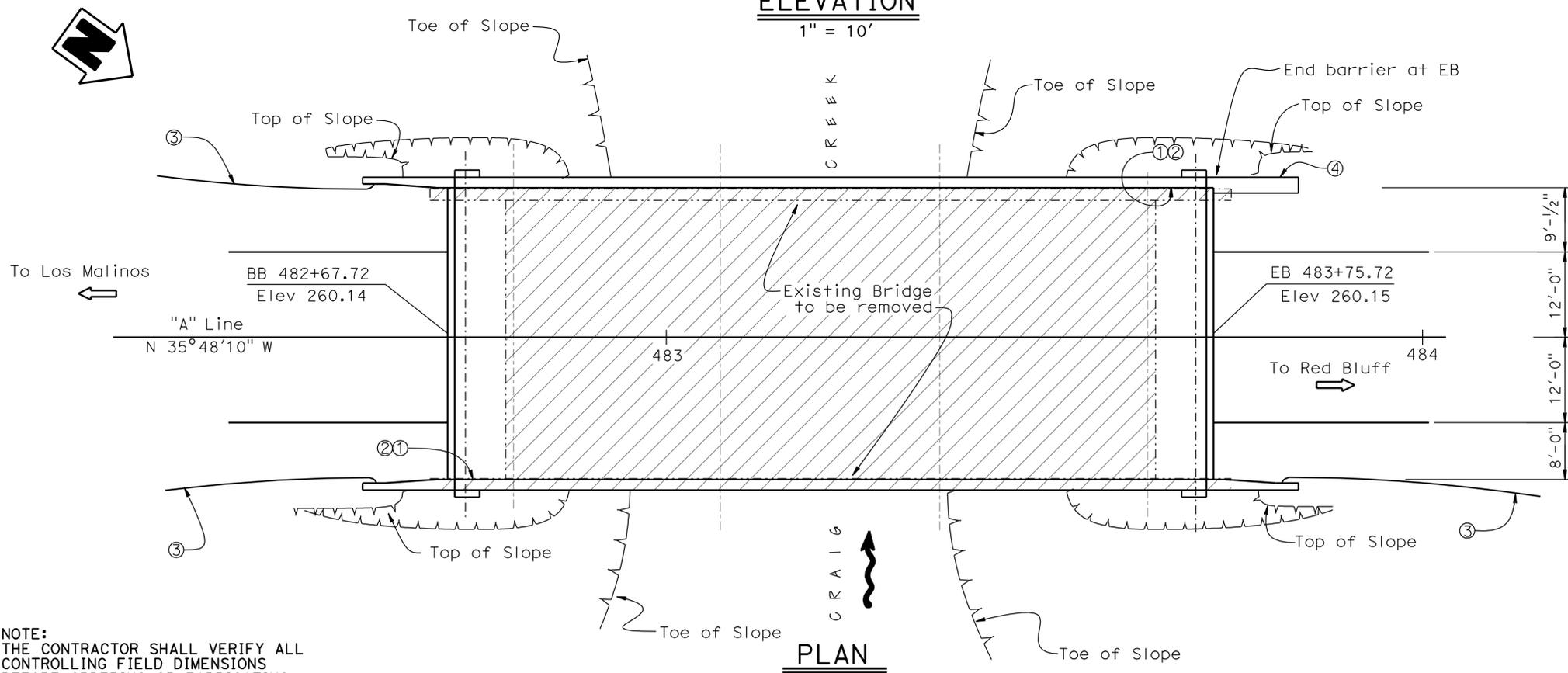
PROFILE GRADE
No Scale



- NOTES:**
- Indicates Existing Bridge Removal "Br No. 08-0014"
 - Indicates Existing Structure
 - Indicates New Structure
- ① Paint "CRAIG CREEK"
 - ② Paint "BRIDGE NO. 08-0168"
 - ③ MBGR, see "ROAD PLANS"
 - ④ Crash Cushion, see "ROAD PLANS"
Place over precast wingwall
- Scuppers required in Left and Right Barrier Rails at Stations 482+80, 483+07, 483+34, 483+61
- For "GENERAL NOTES", "PILE DATA TABLE", and "INDEX TO PLANS" see "INDEX TO PLANS" sheet
- For "TYPICAL SECTION" see "GENERAL PLAN NO. 2" sheet



ELEVATION
1" = 10'



PLAN
1" = 10'

QUANTITIES		LUMP	SUM
TEMPORARY SUPPORT BRIDGE REMOVAL		LUMP	SUM
STRUCTURE EXCAVATION (BRIDGE)	590	CY	
STRUCTURE BACKFILL (BRIDGE)	106	CY	
FURNISH 24" CAST-IN-STEEL SHELL CONCRETE PILING	785	LF	
DRIVE 24" CAST-IN-STEEL SHELL CONCRETE PILE	12	EA	
STRUCTURAL CONCRETE, BRIDGE	150	CY	
FURNISH PRECAST PRESTRESSED CONCRETE BOX BEAM (100'-110')	11	EA	
FURNISH PRECAST ABUTMENT	4	EA	
FURNISH PRECAST WINGWALL	4	EA	
ERECT PRECAST PRESTRESSED CONCRETE BOX BEAM	11	EA	
ERECT PRECAST ABUTMENT	4	EA	
ERECT PRECAST WINGWALL	4	EA	
JOINT SEAL (MR 1")	85	LF	
BAR REINFORCING STEEL (BRIDGE)	36,800	LB	
TUBULAR BICYCLE RAILING	264	LF	
CONCRETE BARRIER (TYPE 736)	264	LF	

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

Joseph E Downing DESIGN ENGINEER	DESIGN	By Randip S Bains	CHECKED Jose M Aquino III	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 3	BRIDGE NO.	08-0168	CRAIG CREEK BRIDGE (REPLACE) GENERAL PLAN NO. 1	
	DETAILS	By Jay Reid	CHECKED Jose M Aquino III	LAYOUT	By Randip S Bains			CHECKED Jose M Aquino III	POST MILE		21.13
	QUANTITIES	By Art Herrera	CHECKED Mike Bergman	SPECIFICATIONS	By Dave Klein			PLANS AND SPECS COMPARED Dave Klein	CU 03264 EA 2C1101		REVISION DATES

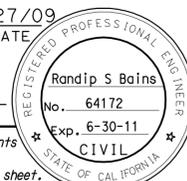
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

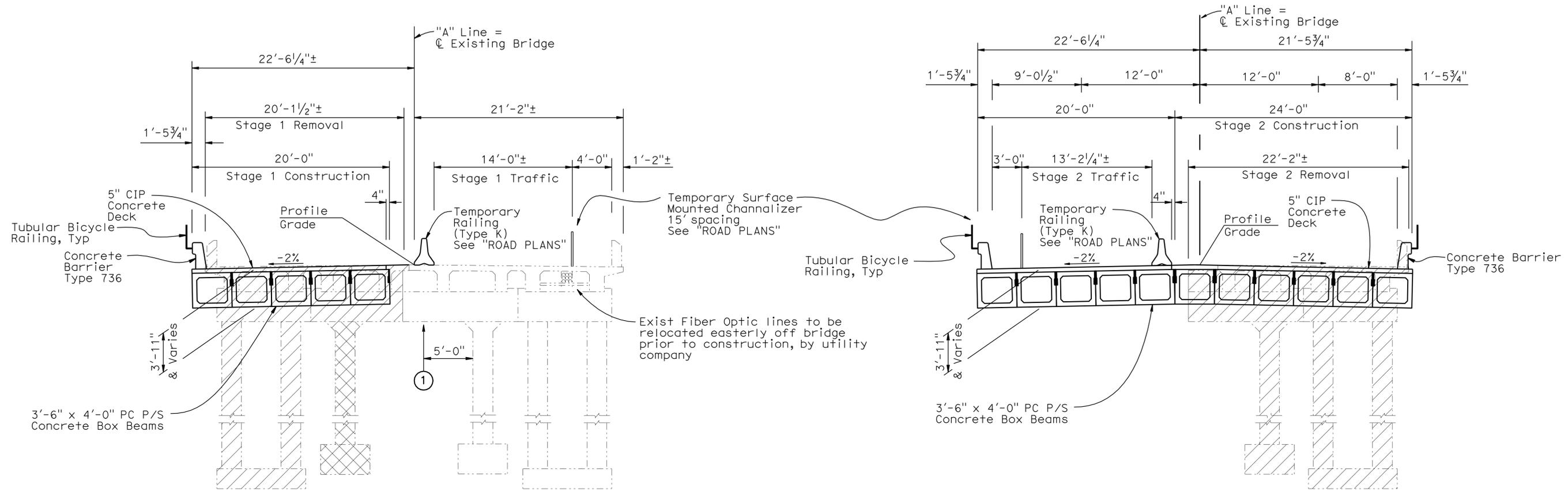
DISREGARD PRINTS BEARING EARLIER REVISION DATES

FILE => 08-0168-a-gp01.dgn

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

USERNAME => fhmikes DATE PLOTTED => 21-DEC-2009 TIME PLOTTED => 08:05

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	49	67
Randy S Bains REGISTERED CIVIL ENGINEER			8/27/09 DATE		
12-14-09 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

STAGE 2

TYPICAL SECTION

3/16" = 1'-0"

NOTES:
For details not shown see "GENERAL PLAN NO. 1" sheet

- ① Temporary Support Reaction for Stage 1 Construction
DL=40 kip (unfactored)
LL=45 kip (unfactored)

-  Indicates Existing Bridge Removal
-  Indicates existing column may be utilized for Temporary Support system
-  Indicates Existing Structure
-  Indicates New Structure

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

Joseph E Downing DESIGN ENGINEER	DESIGN	By Randip S Bains	CHECKED Jose M Aquino III	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 3	BRIDGE NO.	CRAIG CREEK BRIDGE (REPLACE) GENERAL PLAN NO. 2
	DETAILS	By Jay Reid	CHECKED Jose M Aquino III	LAYOUT	By Randip S Bains			CHECKED Jose M Aquino III	
	QUANTITIES	By Art Herrera	CHECKED Mike Bergman	SPECIFICATIONS	By Dave Klein	PLANS AND SPECS COMPARED	Dave Klein	21.13	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



CU 03264
EA 2C1101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES							
12-28-08	12-24-08	02-04-09	05-12-09	05-18-09	3-24-09	4-1-09	7-1-09

SHEET	OF
2	20

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	50	67

Randip S Bains 8/27/09
REGISTERED CIVIL ENGINEER DATE

12-14-09
PLANS APPROVAL DATE

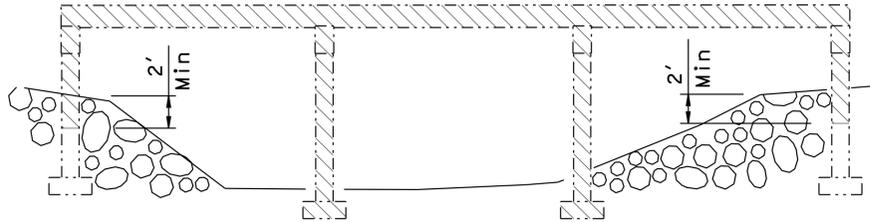
Randip S Bains
No. 64172
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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.



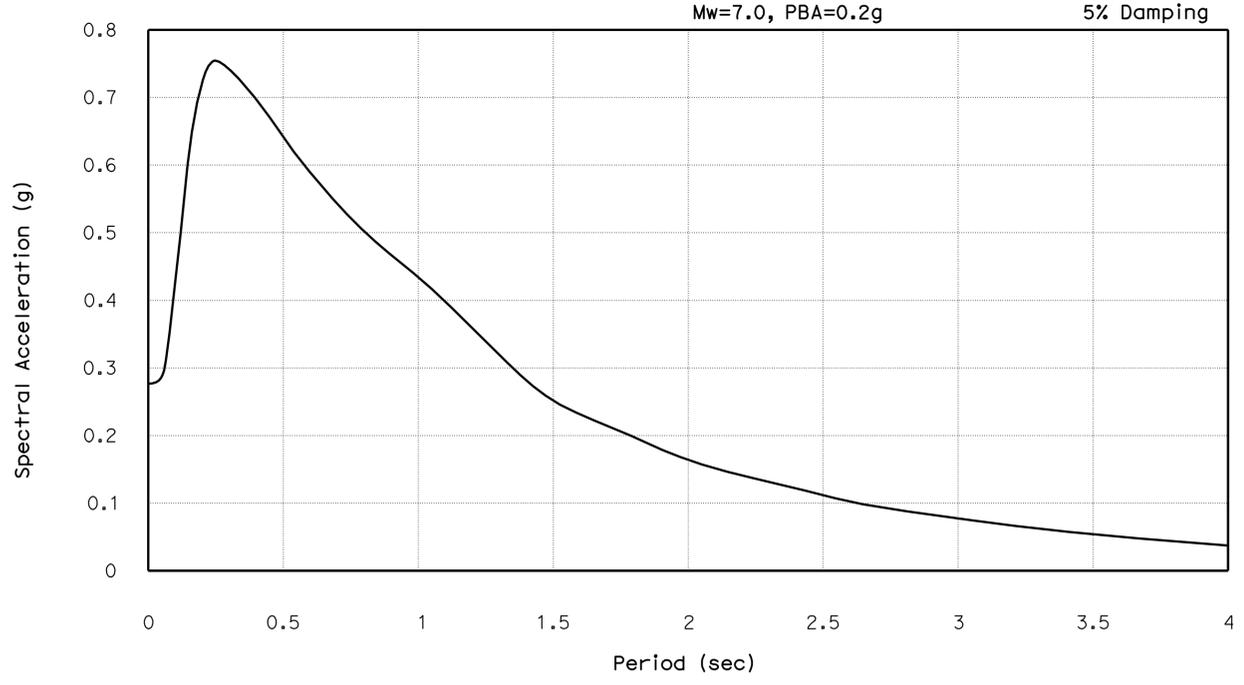
- Structural Concrete, Bridge, 4 ksi @ 28 days
- PC/PS Concrete Box Beam. See "PRESTRESSED BOX BEAM DETAILS NO. 1"
- PC Abutment / Wingwall 4 ksi @ 28 days
- 2'-0" ϕ CISS Concrete Pile

CONCRETE STRENGTH AND TYPE LIMITS
No Scale



Existing Bridge Removal Limits

LIMITS OF BRIDGE REMOVAL
No Scale



SITE SPECIFIC ARS CURVE

PILE DATA TABLE

Location	Pile Type	Nominal Resistance		Cut-Off Elevation	Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance
		Compression	Tension				
Abutment 1	24" x 0.5" CISS	480 kips	0 kips	250.45	185.0 (a) 200.0 (b)	185.0	520 (kips)
Abutment 2	24" x 0.5" CISS	480 kips	0 kips	250.45	185.0 (a) 200.0 (b)	185.0	520 (kips)

- NOTES:
- Design Tip Elevations for Abutments are controlled by: (a) Compression, (b) Lateral Load
 - The Specified Tip Elevation shall not be raised above the Design Tip Elevation for tension load, and lateral load
 - Unsuitable soil layers that do not contribute to the design Nominal Resistance at Abutment 1 and 2 extend to Elevation 235.0 ft. Scour potential exists to Elevation 235.0 ft.

INDEX TO PLANS

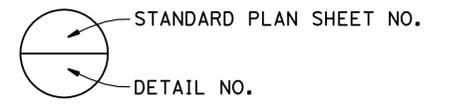
Sheet No.	Title
1	GENERAL PLAN NO. 1
2	GENERAL PLAN NO. 2
3	INDEX TO PLANS
4	DECK CONTOURS
5	FOUNDATION PLAN
6	PRECAST ABUTMENT LAYOUT
7	PRECAST ABUTMENT DETAILS NO. 1
8	PRECAST ABUTMENT DETAILS NO. 2
9	PRECAST ABUTMENT DETAILS NO. 3
10	TYPICAL SECTION
11	GIRDER LAYOUT
12	PRESTRESSED BOX BEAM DETAILS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

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

- DESIGN:**
AASHTO LRFD Bridge Design Specifications, 3 edition with the Interims through 2006 and the Caltrans Amendments v 3.06.01
- SEISMIC DESIGN:**
Caltrans Seismic Design Criteria (SDC), Version 1.4 dated June 2006
- DEAD LOAD:**
Includes 35 psf for future wearing surface.
- LIVE LOADING:**
HL93 and permit design load.
- SEISMIC LOADING:**
See "SITE SPECIFIC ARS CURVE"
- CONCRETE:**
fy = 60 ksi
f'c = 3.6 ksi
n = 8
See "PRESTRESSING NOTES" on "PRESTRESSED BOX BEAM 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")
B7-1	BOX GIRDER DETAILS
B7-8	DECK DRAINAGE DETAILS
B11-56	CONCRETE BARRIER TYPE 736



DESIGN	BY	Randip S Bains	CHECKED	Jose M Aquino III	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	08-0168	CRAIG CREEK BRIDGE (REPLACE) INDEX TO PLANS	
	DETAILS	BY	Jay Reid	CHECKED			Jose M Aquino III	POST MILE		21.13
	QUANTITIES	BY	Art Herrera	CHECKED			Mike Bergman	REVISION DATES		

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

CU 03264
EA 2C1101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

12-22-08	12-24-08	02-04-09	05-12-09	05-18-09	3-26-09	7-29-09	8-31-09	SHEET 3 OF 20
----------	----------	----------	----------	----------	---------	---------	---------	---------------

FILE => 08-0168-b-1.dwg

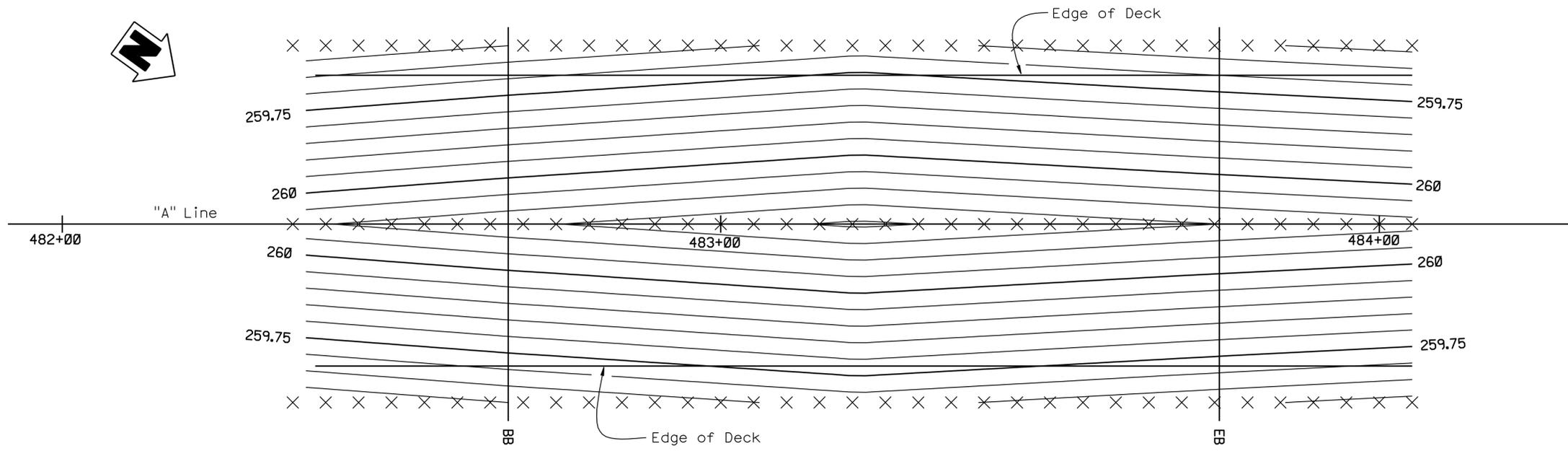
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7 20.9/21.3	51	67

Randip Singh Bains 8/27/09
REGISTERED CIVIL ENGINEER DATE

12-14-09
PLANS APPROVAL DATE

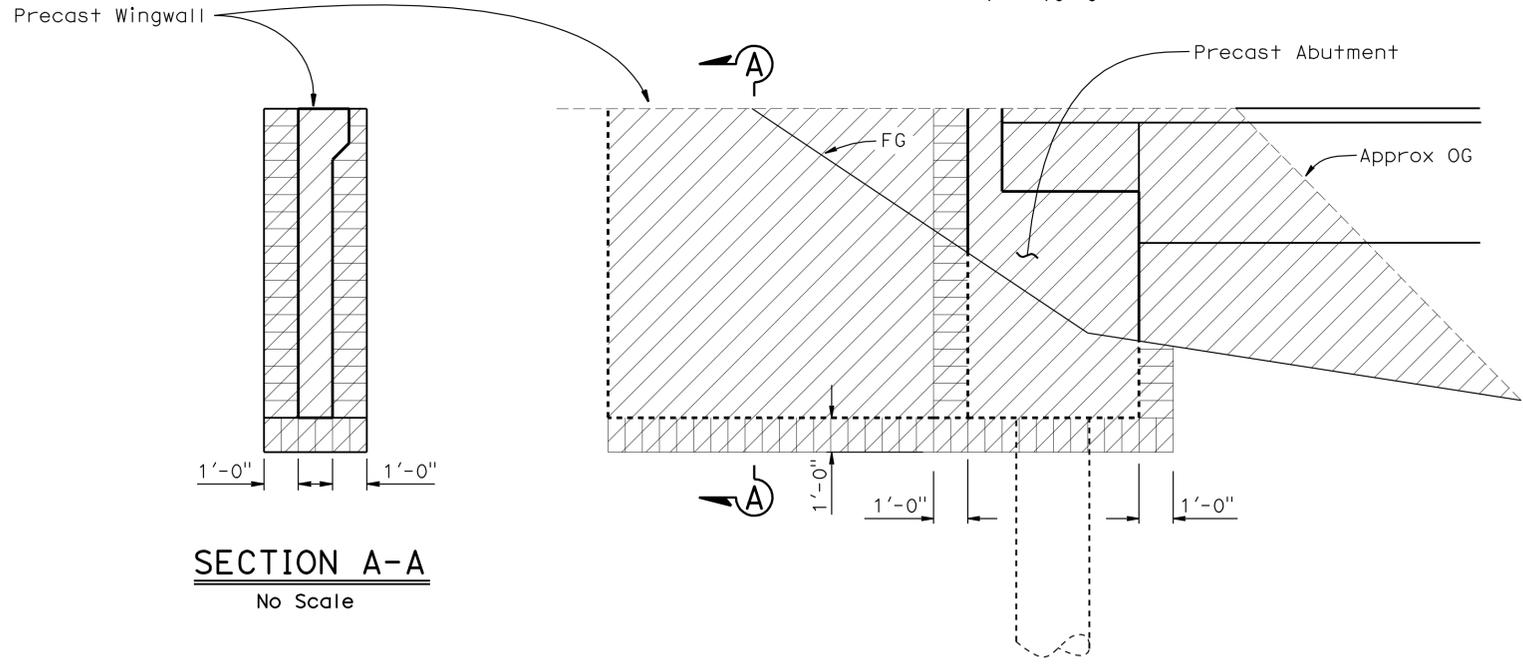
Randip S Bains
No. 64172
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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:
 Contours are at 0.05' intervals
 X Indicates 5' intervals along Station Line
 Contours do not include camber

PLAN
1" = 10'-0"



SECTION A-A
No Scale

- Structure Excavation
- Structure Backfill
- Class 2 aggregate base material (leveling pad)

LIMITS OF STRUCTURE EXCAVATION & BACKFILL
No Scale

DESIGN	BY Randip S Bains	CHECKED Jose M Aquino III
DETAILS	BY Jay Reid	CHECKED Jose M Aquino III
QUANTITIES	BY Art Herrera	CHECKED Mike Bergman

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 3

BRIDGE NO.	08-0168
POST MILE	21.13

CRAIG CREEK BRIDGE (REPLACE)
DECK CONTOURS

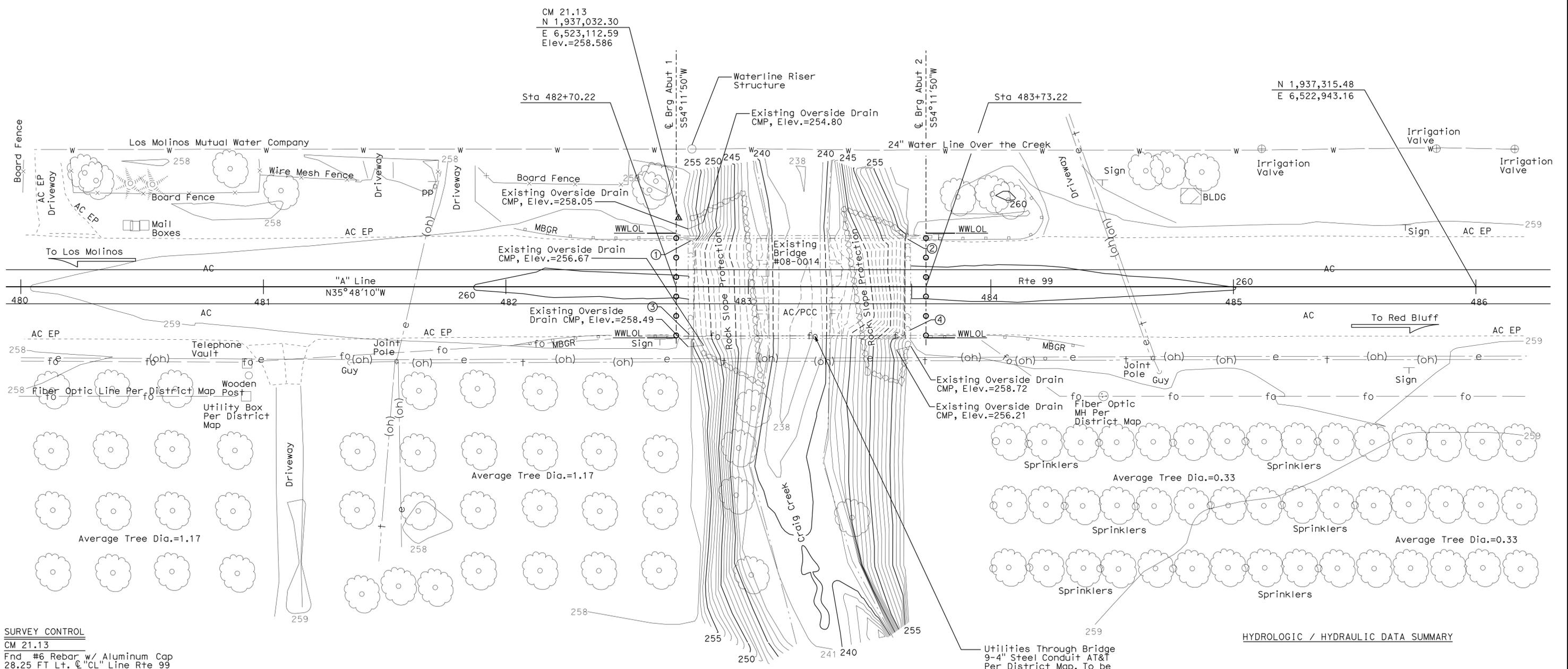
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	52	67

Randip S Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE

12-14-09
 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
 Randip S Bains
 No. 64172
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA



SURVEY CONTROL

CM 21.13

Fnd #6 Rebar w/ Aluminum Cap
 28.25 FT Lt. @ "CL" Line Rte 99
 Sta. 482+71.22
 N 1,937,032.30
 E 6,523,112.59
 Elev. = 258.59

8-99-20.94 GPS (Not Shown On Plan)

Fnd CADT BD on IP in Conc.
 191.75 FT S24°46'25"E
 From Sta. 475+00.00 @ "A" Line Rte 99
 N 1,936,249.23
 E 6,523,667.00
 Elev. = 257.10

Bridge Location

①	- 19.06 Lt. @	Sta.482+75.60,	Elev.=259.26 ±
②	- 19.30 Lt. @	Sta.483+66.26,	Elev.=259.41 ±
③	- 19.71 Rt. @	Sta.482+75.72,	Elev.=259.31 ±
④	- 19.58 Rt. @	Sta.483+66.41,	Elev.=259.34 ±

NOTE:

○ Indicates 24" CISS Pile, see "PRECAST ABUTMENT LAYOUT" sheet for layout

HYDROLOGIC / HYDRAULIC DATA SUMMARY

	DESIGN FLOOD	BASE FLOOD
FREQUENCY (YEARS)	50 year	100 year
DISCHARGE (CUBIC FEET PER SECOND)	2700 cfs	2700 cfs
WATER SURFACE ELEV. (FEET)	254.7 ft	254.7 ft

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
ALIGNMENT TIES	Dist. Traverse Sheet	DRAFTED BY T.Zolnikova	CHECKED BY L.Lew

DESIGN	BY Randip S Bains	CHECKED Jose M Aquino III
DETAILS	BY Jay Reid	CHECKED Jose M Aquino III
QUANTITIES	BY Art Herrera	CHECKED Mike Bergman

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 3

BRIDGE NO. 08-0168
 POST MILE 21.13

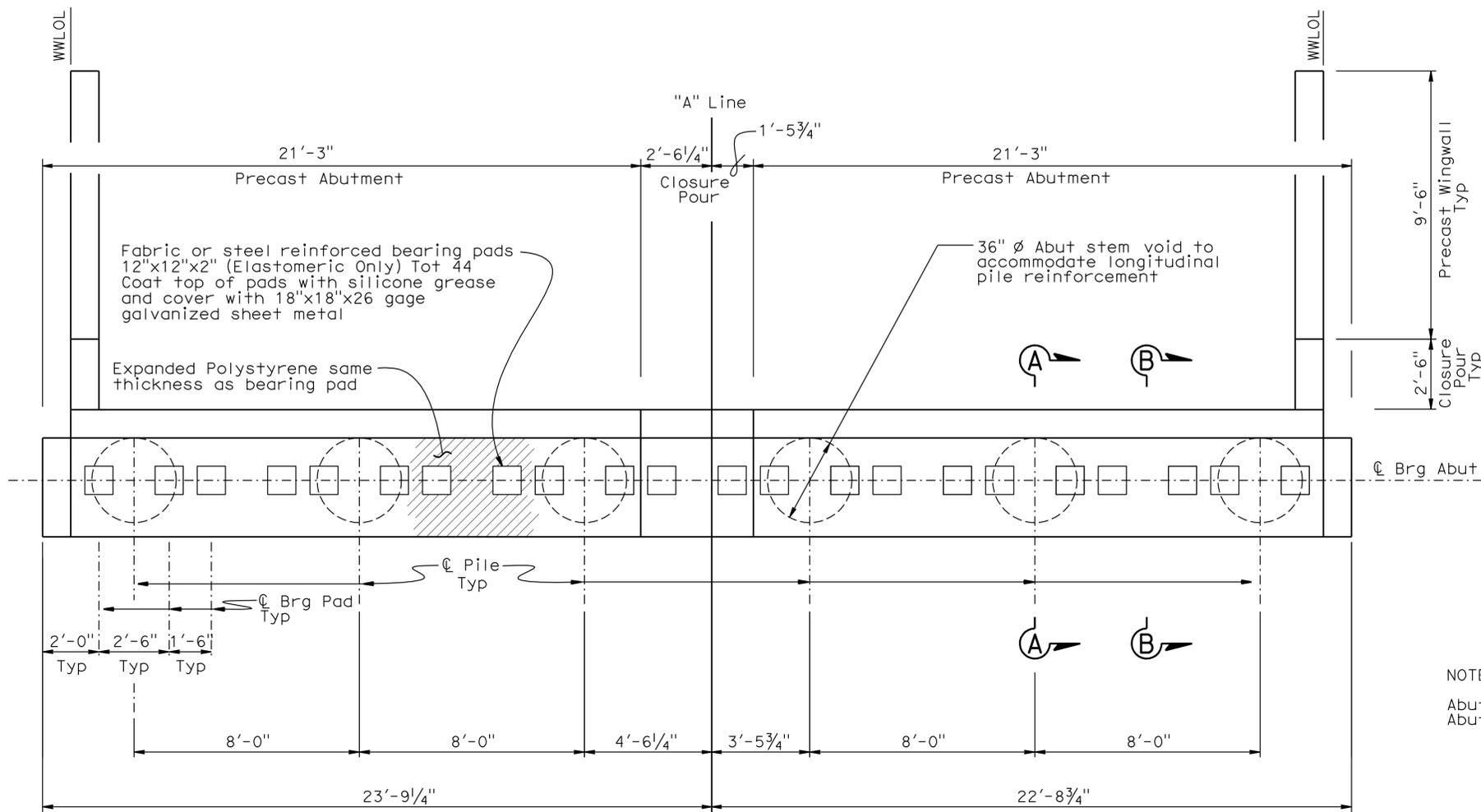
CRAIG CREEK BRIDGE
FOUNDATION PLAN

REVISION DATES	SHEET 5	OF 20
----------------	---------	-------

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	53	67

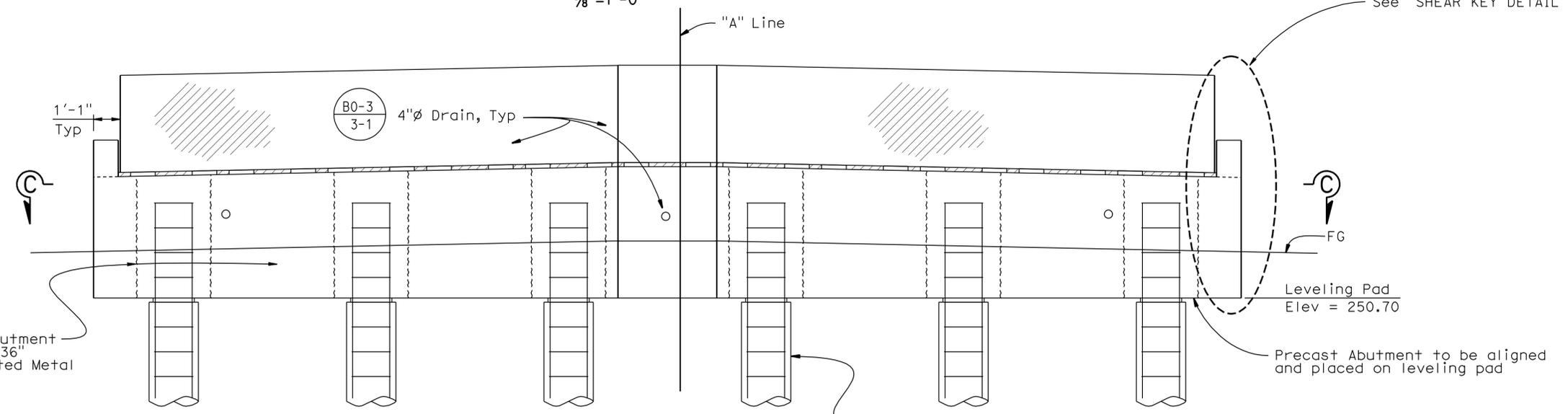
Randy Singh Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE
 12-14-09
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
 Randip S Bains
 No. 64172
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA



PLAN
3/8"=1'-0"

NOTE:
Abut 2 Shown
Abut 1 Similar



ELEVATION
3/8"=1'-0"

NOTES:
For "SECTION C-C", see "PRECAST ABUTMENT DETAILS NO. 1" sheet
For "SECTION A-A" and "SECTION B-B", see "PRECAST ABUTMENT DETAIL NO. 2" sheet
For "SHEAR KEY DETAIL", see "PRECAST ABUTMENT DETAIL NO. 3" sheet

DESIGN	BY Randip S Bains	CHECKED Jose M Aquino III
DETAILS	BY Jay Reid	CHECKED Jose M Aquino III
QUANTITIES	BY Art Herrera	CHECKED Mike Bergman

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

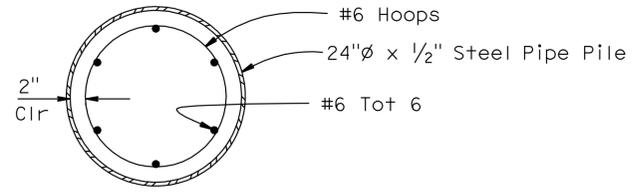
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 3

BRIDGE NO.	08-0168
POST MILE	21.13

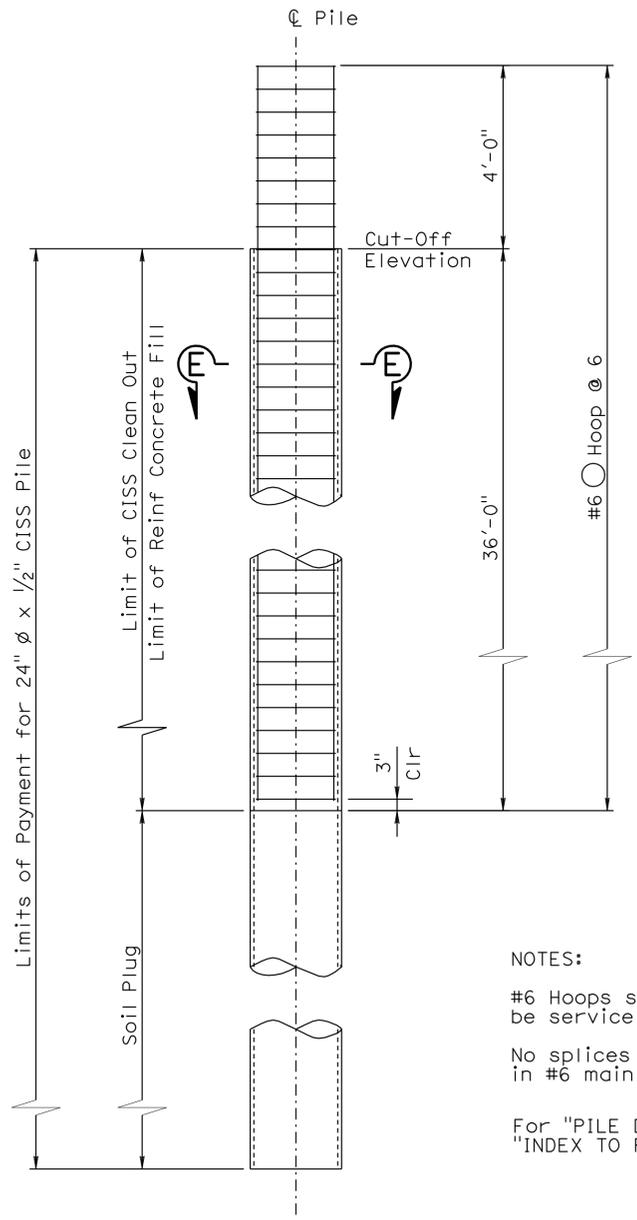
CRAIG CREEK BRIDGE (REPLACE)
PRECAST ABUTMENT LAYOUT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	55	67

REGISTERED CIVIL ENGINEER DATE 8/27/09
 REGISTERED CIVIL ENGINEER No. 64172
 PLANS APPROVAL DATE 12-14-09
 Exp. 6-30-11
 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.

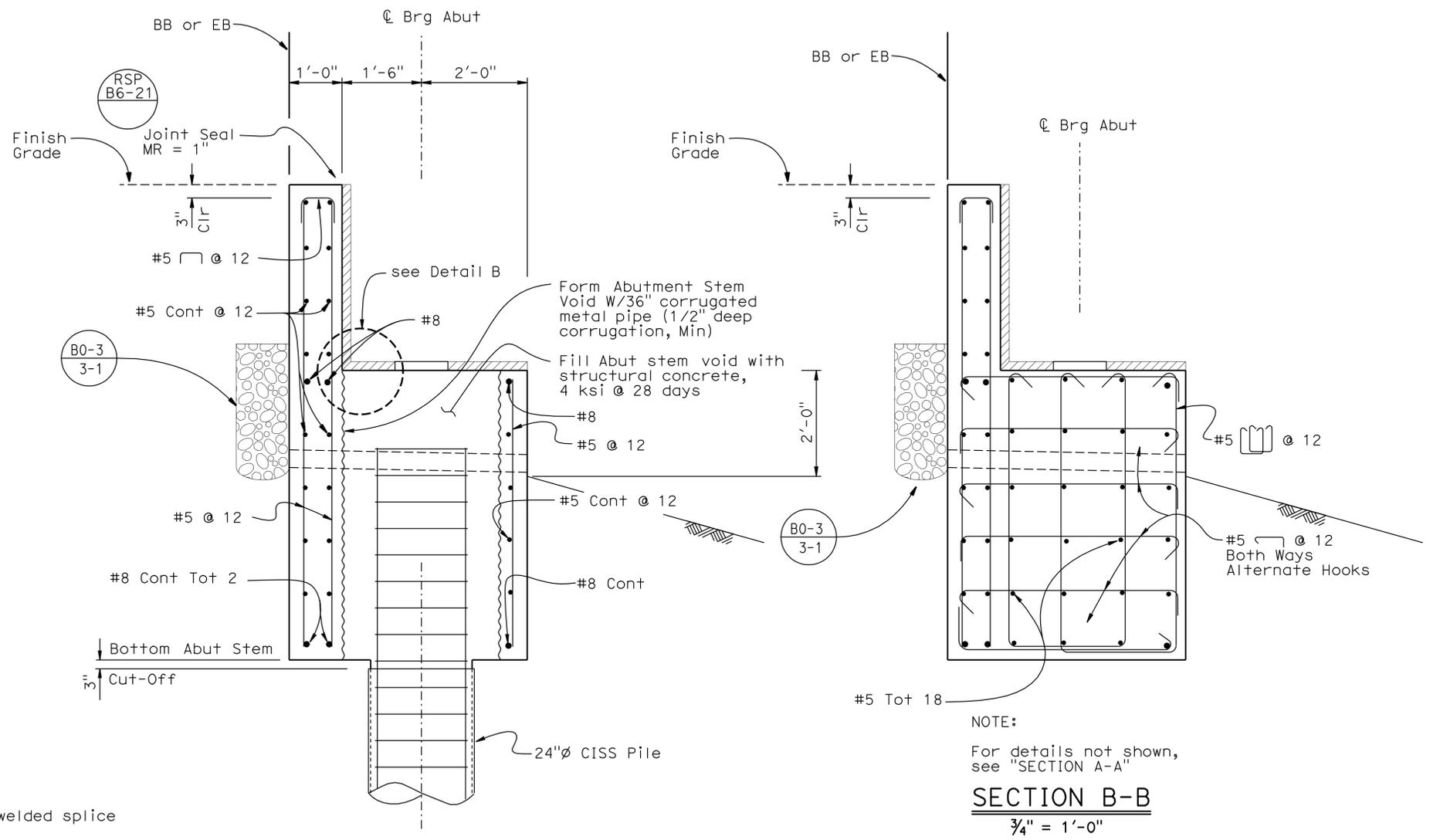


SECTION E-E
1" = 1'-0"



24" 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"

NOTE:
 For details not shown, see "SECTION A-A"
SECTION B-B
 3/4" = 1'-0"

NOTES:
 For location of "SECTION A-A" and "SECTION B-B" see "PRECAST ABUTMENT LAYOUT" sheet
 For "DETAIL B" see "PRECAST ABUTMENT DETAILS NO. 3" sheet

DESIGN	BY Randip S Bains	CHECKED Jose M Aquino III
DETAILS	BY Jay Reid	CHECKED Jose M Aquino III
QUANTITIES	BY Art Herrera	CHECKED Mike Bergman

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 3

BRIDGE NO.	08-0168
POST MILE	21.13

CRAIG CREEK BRIDGE (REPLACE)
PRECAST ABUTMENT DETAILS NO. 2

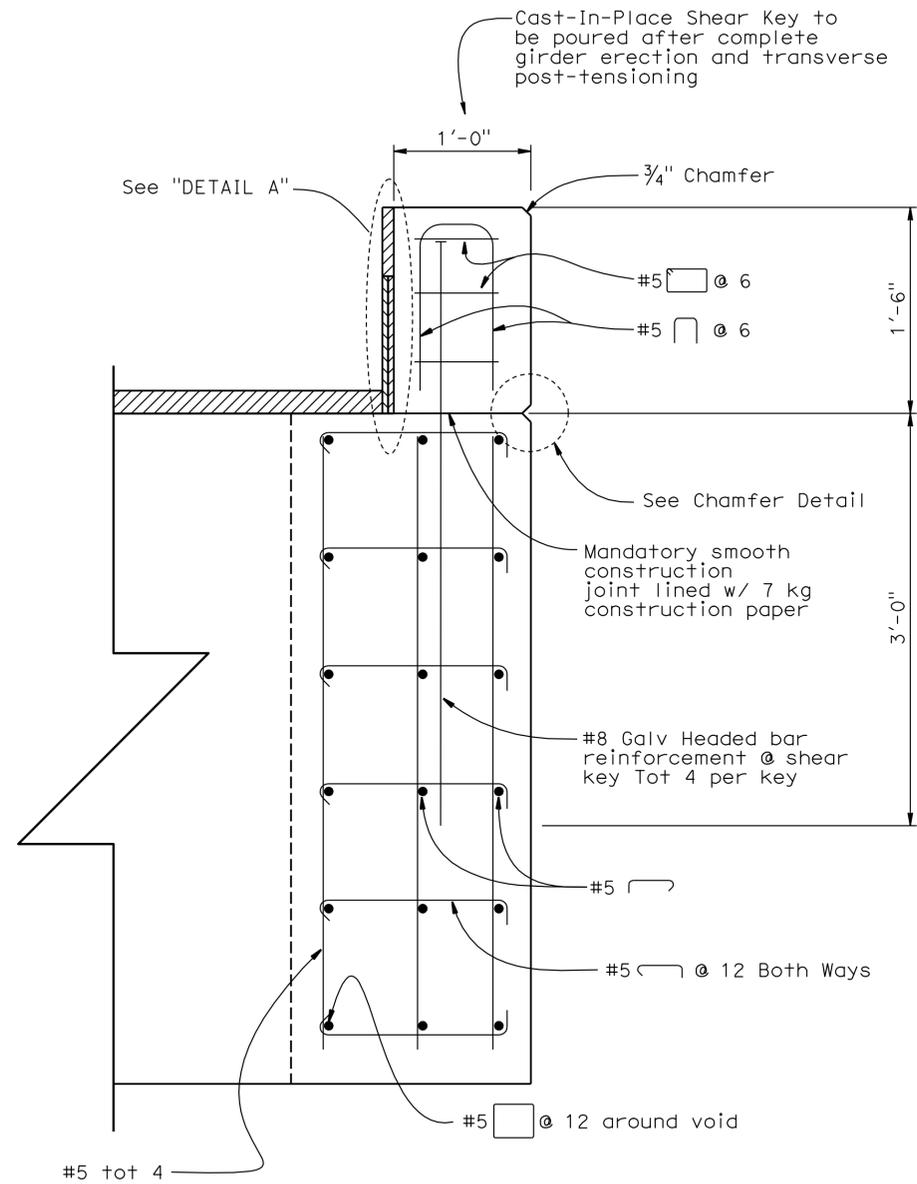
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7 20.9/21.3	56	67

Randip Singh Bains 8/27/09
REGISTERED CIVIL ENGINEER DATE

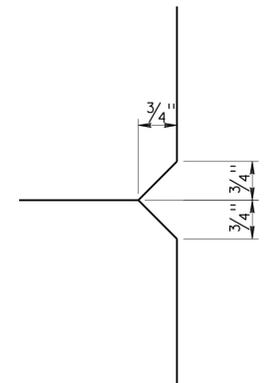
12-14-09
PLANS APPROVAL DATE

Randip S Bains
No. 64172
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

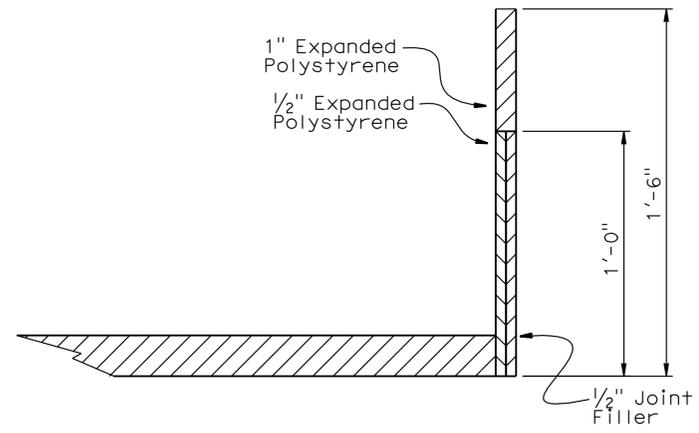
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



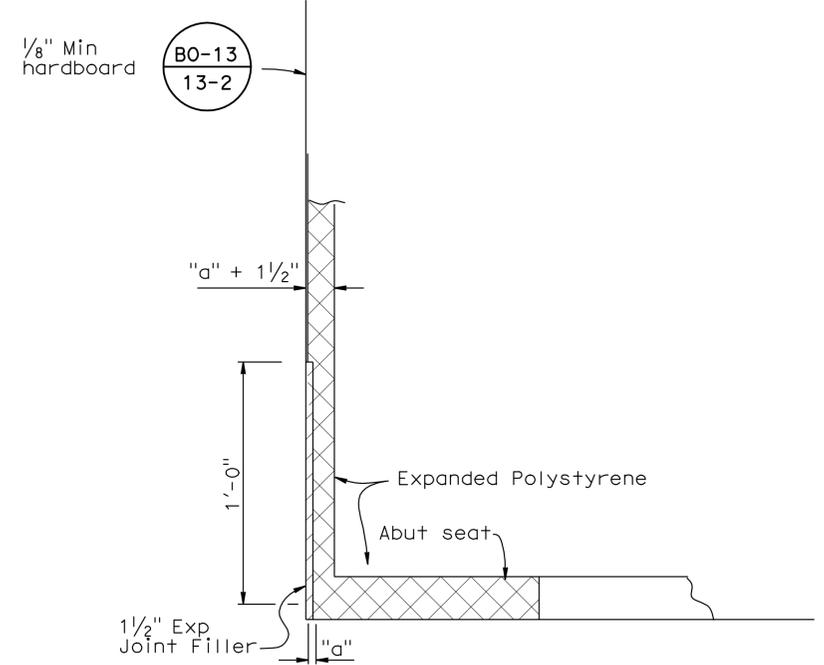
SHEAR KEY DETAIL
1/2"=1'-0"



CHAMFER DETAIL
No Scale



DETAIL A
No Scale



DETAIL B
No Scale

NOTES:
For location of "DETAIL B" see "PRECAST ABUTMENT DETAILS NO. 2" SHEET

DESIGN	BY Randip S Bains	CHECKED Jose M Aquino III
DETAILS	BY Jay Reid	CHECKED Jose M Aquino III
QUANTITIES	BY Art Herrera	CHECKED Mike Bergman

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

BRIDGE NO.	08-0168
POST MILE	21.13

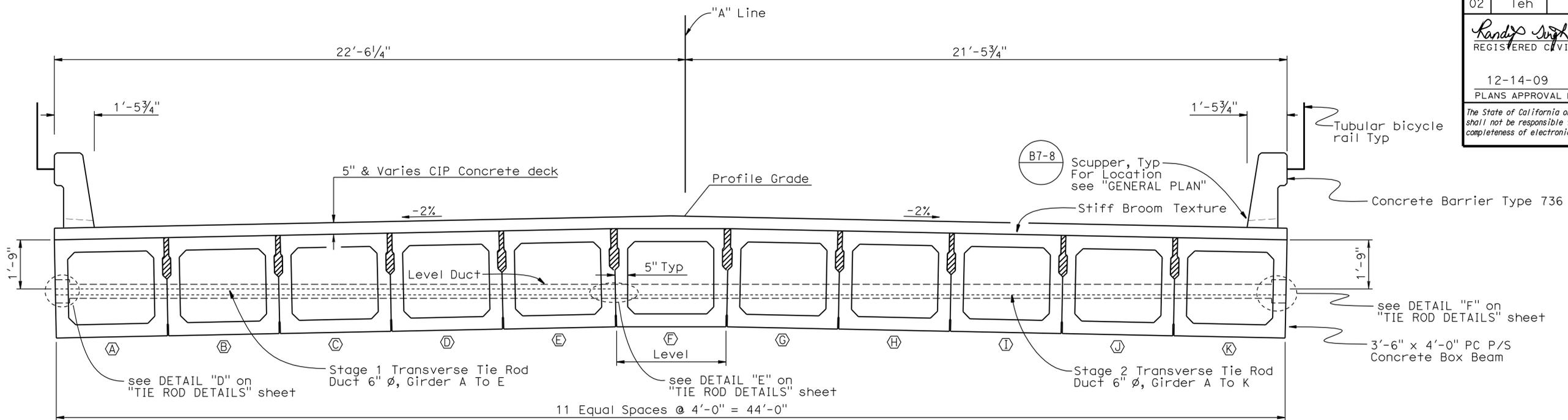
CRAIG CREEK BRIDGE (REPLACE)
PRECAST ABUTMENT DETAILS NO. 3

REVISION DATES	SHEET	OF
02-09-09 03-12-09 03-18-09 7-11-09 7-29-09 8-4-09	9	20

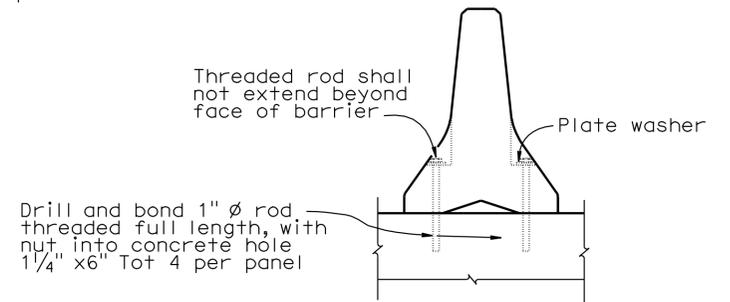
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	57	67

Randy S Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE
 12-14-09
 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
 Randy S Bains
 No. 64172
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

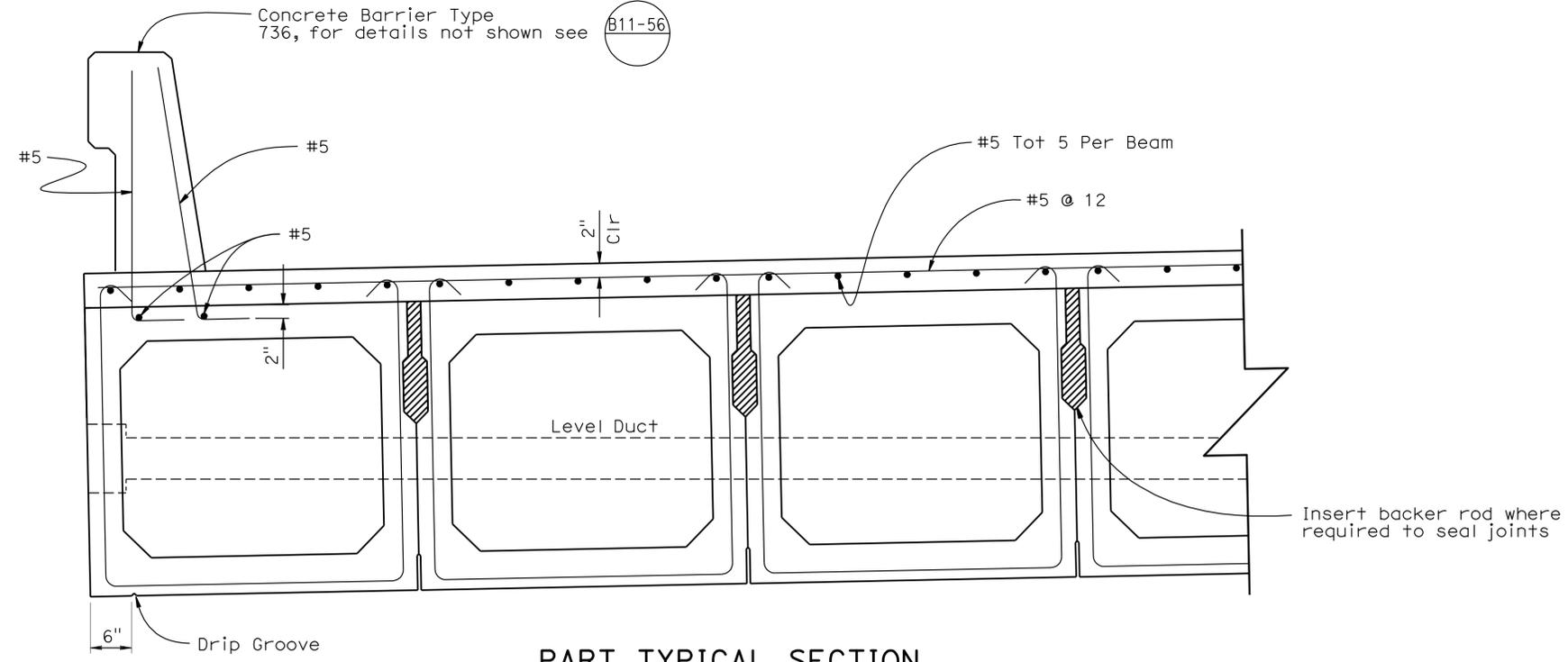


TYPICAL SECTION
 $\frac{1}{2}'' = 1'-0''$



Note:
 For Temporary Railing (Type K) location see 'Road Plans'

TYPE K RAILING ATTACHMENT
 No Scale



PART TYPICAL SECTION
 $1'' = 1'-0''$

- NOTES:
- All longitudinal keyways and diaphragm blockouts shall be sandblasted in the precasting plant to remove laitance and enhance bond
 - Area around keyway and blockouts shall be kept moist for 24 hours prior to grouting between girders
- * Adjust mild steel spacing to avoid conflict with P/S STRANDS.
- Eliminate grout keyway at exterior face of exterior girders A&K.
- For P/C P/S Box Beam see "PRESTRESSED BOX BEAM DETAILS NO. 2"

█ Indicates Non-Shrink grout

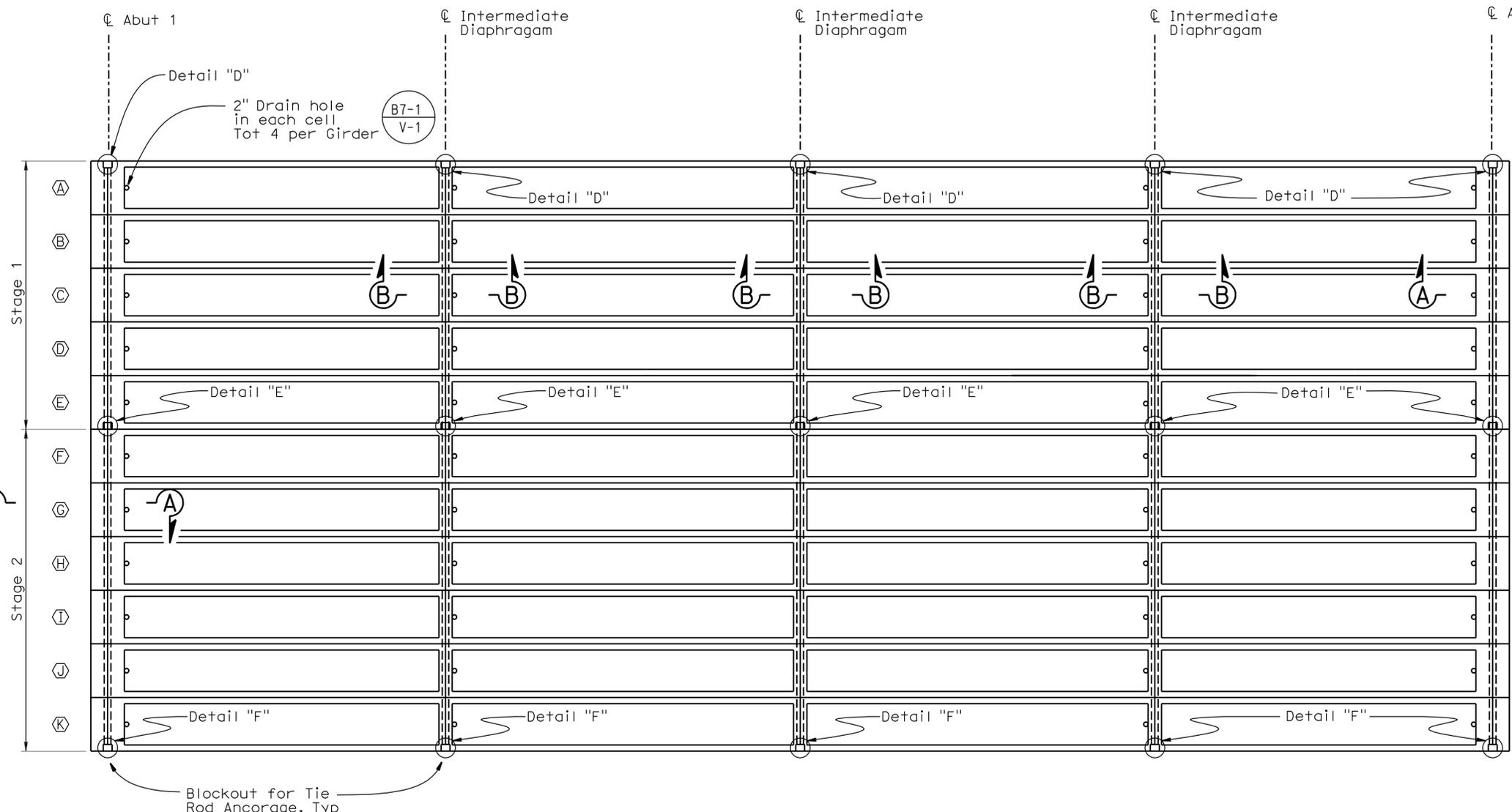
DESIGN BY Randy S Bains CHECKED Jose M Aquino III DETAILS BY Jay Reid CHECKED Jose M Aquino III QUANTITIES BY Art Herrera CHECKED Mike Bergman	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO. 08-0168 POST MILE 21.13	CRAIG CREEK BRIDGE (REPLACE) TYPICAL SECTION	REVISION DATES 12-28-08 12-24-08 02-04-09 05-12-09 05-18-09 4-2-09 7-1-09 7-29-09 SHEET 10 OF 20
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		CU 03264 EA 2C1101	DISREGARD PRINTS BEARING EARLIER REVISION DATES

USERNAME => fhmikes DATE PLOTTED => 21-DEC-2009 TIME PLOTTED => 08:07



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	58	67

Randy S Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE
 12-14-09
 PLANS APPROVAL DATE
 No. 64172
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA



GIRDER LAYOUT

1" = 5'-0"

TRANSVERSE POST TENSIONING NOTES:

1 3/8" HIGH STRENGTH TIE RODS. 150 ksi ASTM A722
 Pjack = 165 kip

CONSTRUCTION SEQUENCE:

Stage 1

- Erect PC Box Beams A to E
- Place upper transverse tie rods at diaphragms from girder A to E.
- Stress upper tie rods to 20% of Pjack to snug boxes.
- Fill in all longitudinal keyways and diaphragm blockouts with non shrink grout.
- Stress upper tie rods to Pjack after grout has cured to a minimum 5ksi strength.
- Place CIP deck and barrier.

Stage 2

- Erect PC Box Beams F to K
- Place lower transverse tie rods at diaphragms from girder A to K.
- Stress lower tie rods to 20% of Pjack to snug boxes. Fill in all longitudinal keyways and diaphragm blockouts with non shrink grout.
- Stress lower tie rods to 50% Pjack after grout has cured to a minimum 5ksi strength.
- Reduce stress on upper tie rods to 50% Pjack.
- Stress lower tie rods to Pjack.
- Release upper tie rod after lower tie rod has been fully tensioned.
- Place CIP deck and barrier.
- 6" ø 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 A-A" and "B-B" see "PRESTRESSRED BOX BEAM DETAILS NO. 2" sheet

For "INTERMEDIATE DIAPHRAM" see "PRESTRESSRED BOX BEAM DETAILS NO. 2" sheet

For "END DIAPHRAM" see "PRESTRESSRED BOX BEAM DETAILS NO. 2" sheet

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

DESIGN	BY Randip S Bains	CHECKED Jose M Aquino III
DETAILS	BY Jay Reid	CHECKED Jose M Aquino III
QUANTITIES	BY Art Herrera	CHECKED Mike Bergman

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

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

BRIDGE NO.	08-0168
POST MILE	21.13

CRAIG CREEK BRIDGE (REPLACE)

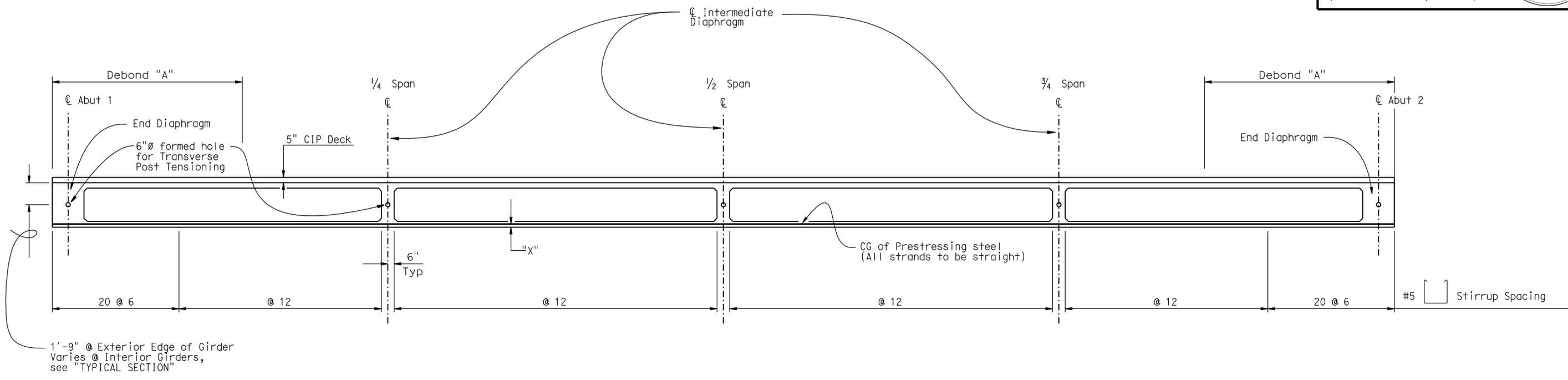
GIRDER LAYOUT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	59	67

Randy S Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE

12-14-09
 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.



LONGITUDINAL SECTION
 1/4" = 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 screened line elevations

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

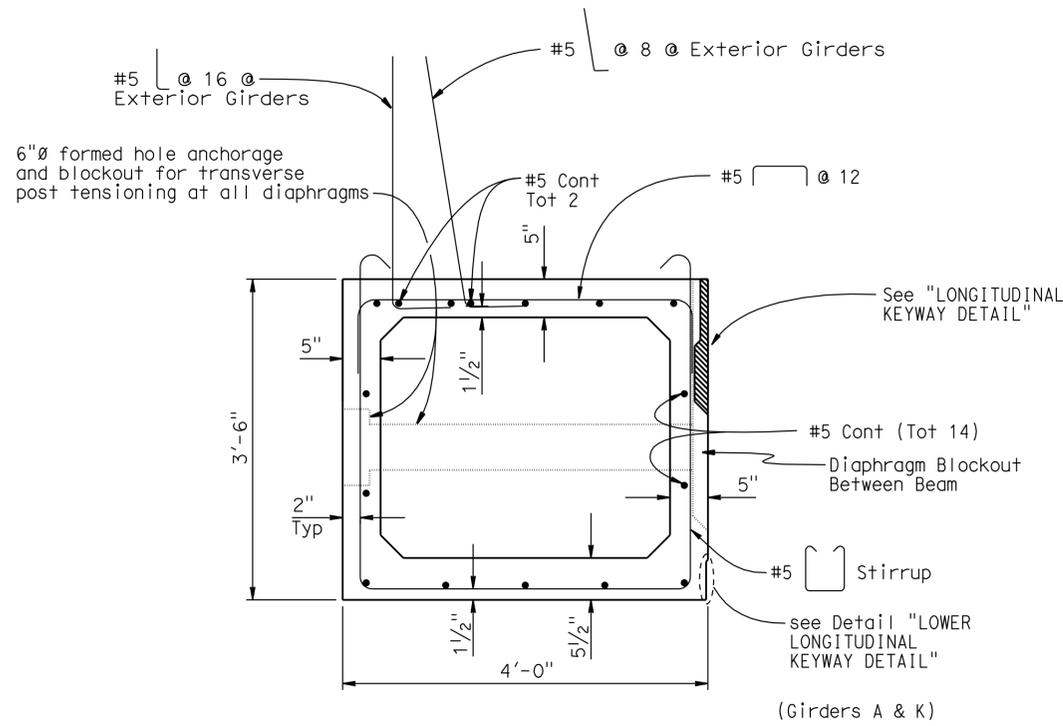
Girder location or designation and length	Jacking Force (P) in Kips		Concrete Strength (Ksi)		Deflection Components in Inches		Debond "A"	
	"X"		f'_{ci}	f'_c	① Deck DL	② Rail DL	Amount kip	Length
A Thru K Length=105'-8"	2 1/2"	967 KIP	4	6	1"	1/2"	176 kip	15'-0"

DESIGN BY DETAILS BY QUANTITIES BY	BY Randip S Bains BY Jay Reid BY Art Herrera	CHECKED Jose M Aquino III CHECKED Jose M Aquino III CHECKED Mike Bergman	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO. 08-0168 POST MILE 21.13	CRAIG CREEK BRIDGE (REPLACE) PRESTRESSED BOX BEAM DETAILS NO. 1	
	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				CU 03264 EA 2C1101		DISREGARD PRINTS BEARING EARLIER REVISION DATES
	FILE => 08-0168-1-gd101.dgn				REVISION DATES: 12-28-08, 12-24-08, 02-04-09, 05-12-09, 05-18-09, 4-3-09, 7-29-09		SHEET 12 OF 20

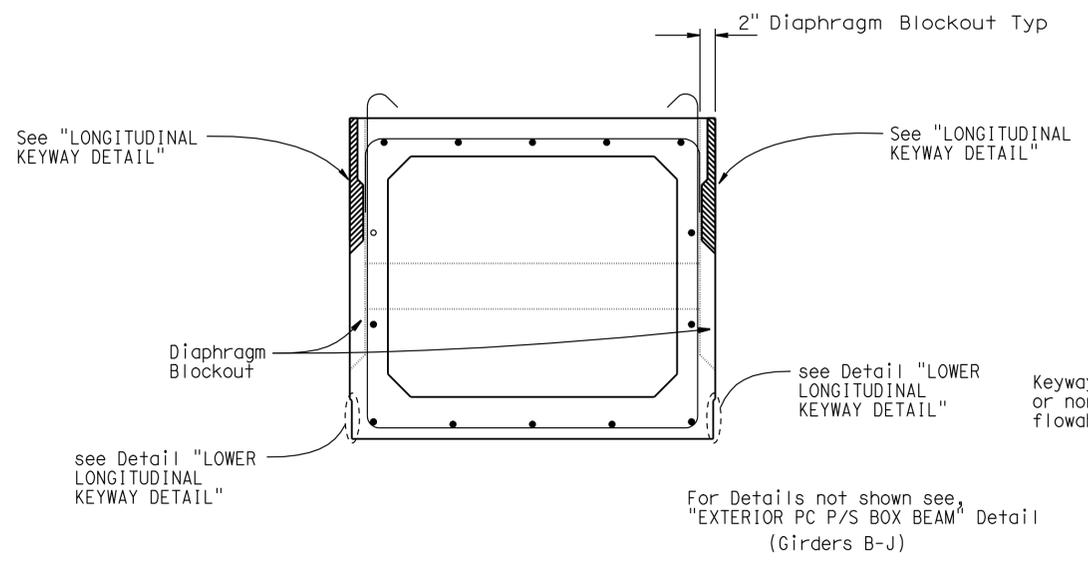
USERNAME => fhmikes | DATE PLOTTED => 21-DEC-2009 | TIME PLOTTED => 08:07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	60	67

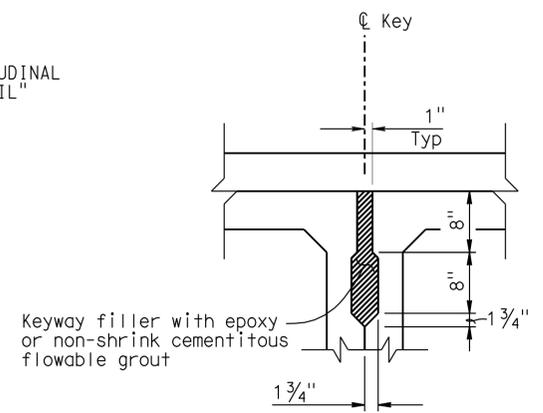
Randy S Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE
 12-14-09
 PLANS APPROVAL DATE
 No. 64172
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA



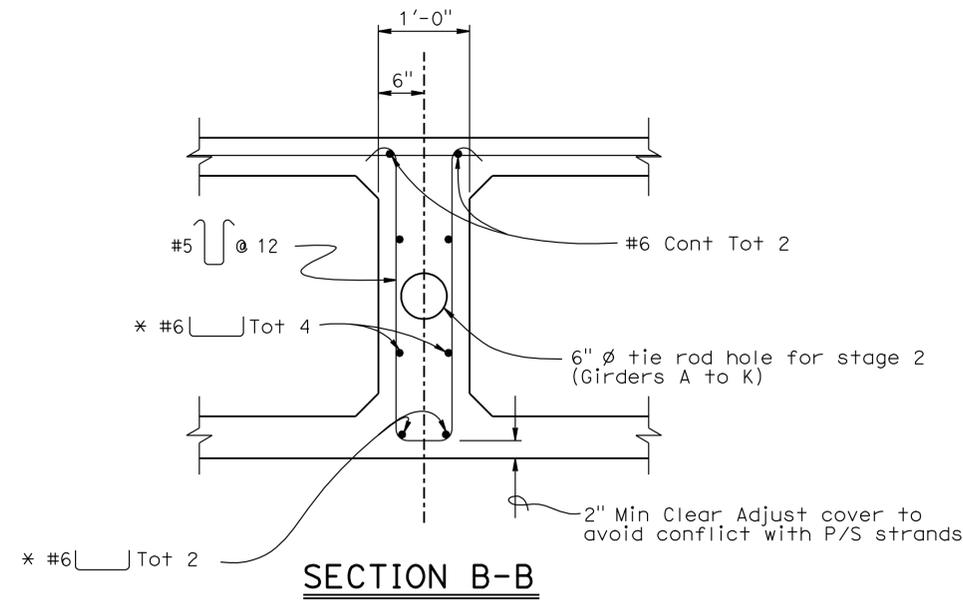
EXTERIOR P/C P/S BOX BEAM
1" = 1'-0"



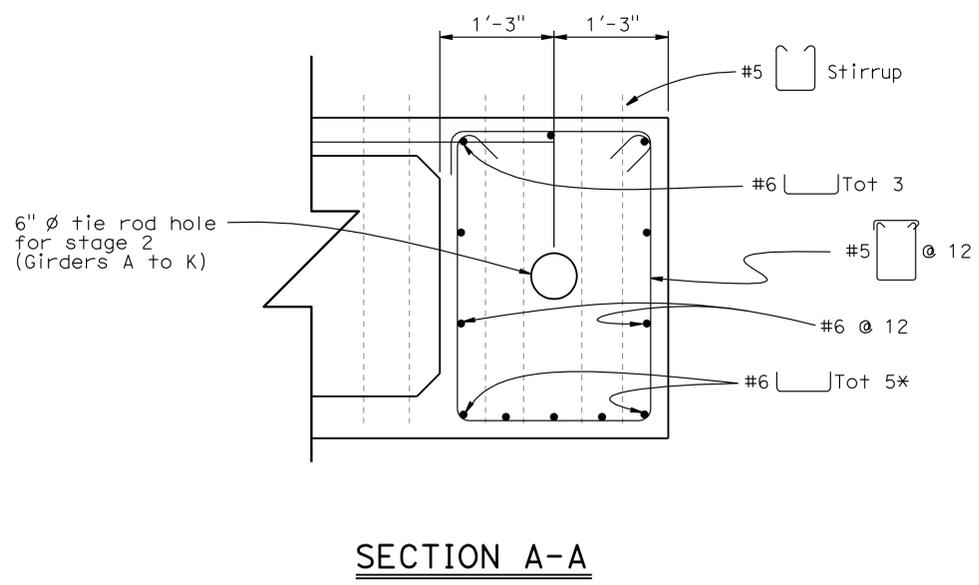
INTERIOR P/C P/S BOX BEAM
1" = 1'-0"



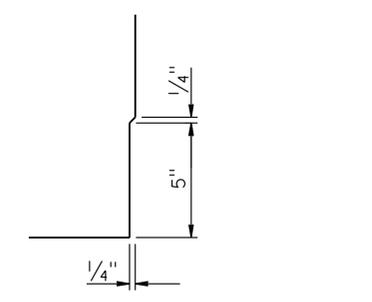
LONGITUDINAL KEYWAY DETAIL
1" = 1'-0"



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



SECTION A-A
END DIAPHRAGM AT ABUTMENTS
1" = 1'-0"



LOWER LONGITUDINAL KEYWAY DETAIL
3" = 1'-0"

NOTE:
 * Adjust mild steel spacing to avoid conflict with P/S strands
 For location of "SECTION A-A, B-B" see, "GIRDER LAYOUT" sheet

DESIGN	BY	BY	CHECKED
	Randip S Bains	Jose M Aquino III	Jose M Aquino III
DETAILS	BY	BY	CHECKED
	Jay Reid	Jose M Aquino III	Jose M Aquino III
QUANTITIES	BY	BY	CHECKED
	Art Herrera	Mike Bergman	Mike Bergman

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH **3**

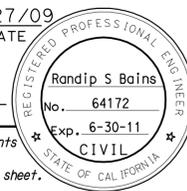
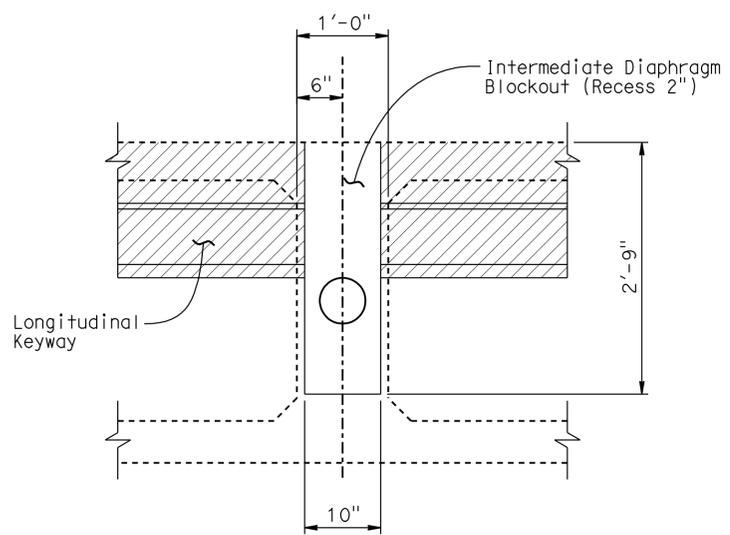
BRIDGE NO.	08-0168	CRAIG CREEK BRIDGE (REPLACE)
POST MILE	21.13	
PRESTRESSED BOX BEAM DETAILS NO. 2		

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	61	67

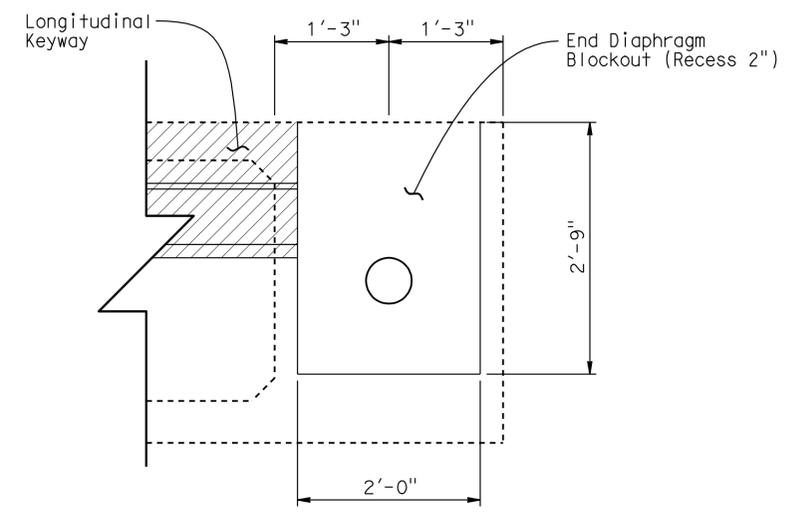
Randip Singh Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE

12-14-09
 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.

INTERMEDIATE DIAPHRAGM BLOCKOUT
1" = 1'-0"



END DIAPHRAGM BLOCKOUT
1" = 1'-0"

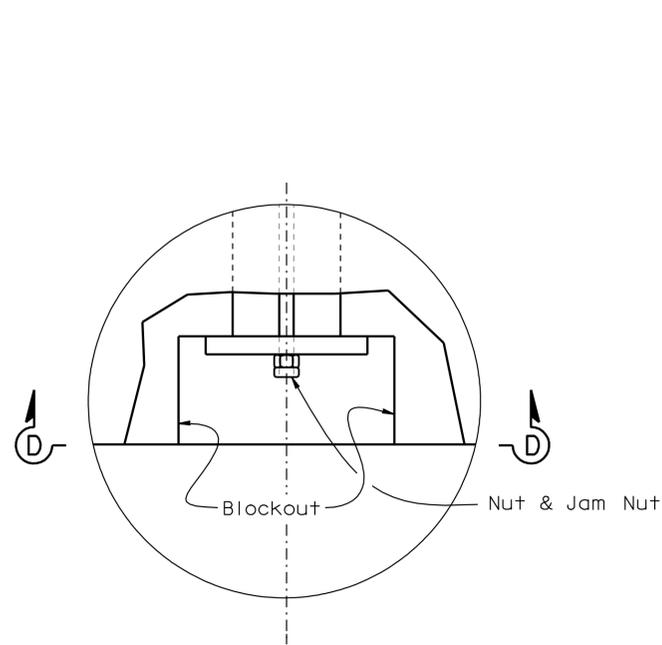
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY Randip S Bains	CHECKED Jose M Aquino III	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	08-0168	CRAIG CREEK BRIDGE (REPLACE) PRESTRESSED BOX BEAM DETAILS NO. 3	
	DETAILS	BY Jay Reid	CHECKED Jose M Aquino III			POST MILE	21.13		
	QUANTITIES	BY Art Herrera	CHECKED Mike Bergman						
				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	CU 03264 EA 2C1101	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 12-28-08 12-24-08 02-09-09 05-18-09	SHEET 14 OF 20

FILE => 08-0168-1-gd+03.dgn

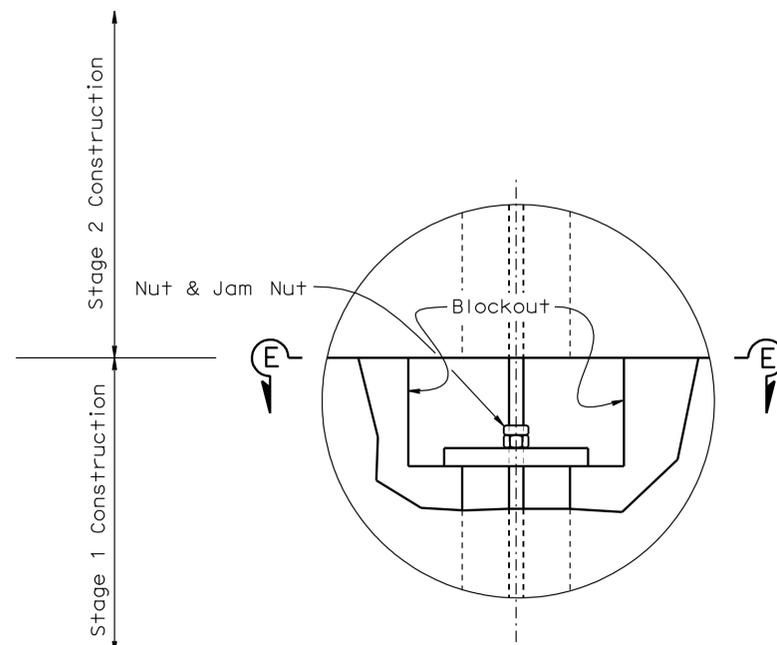
USERNAME => fhmikes | DATE PLOTTED => 21-DEC-2009 | TIME PLOTTED => 08:08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	62	67

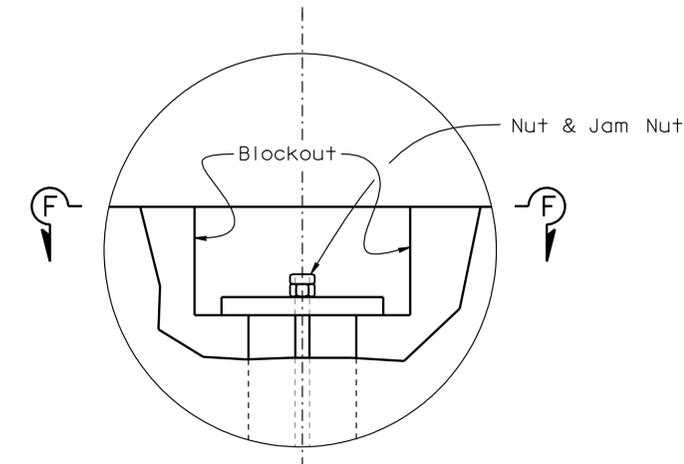
Randy S Bains 8/27/09
 REGISTERED CIVIL ENGINEER DATE
 12-14-09
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



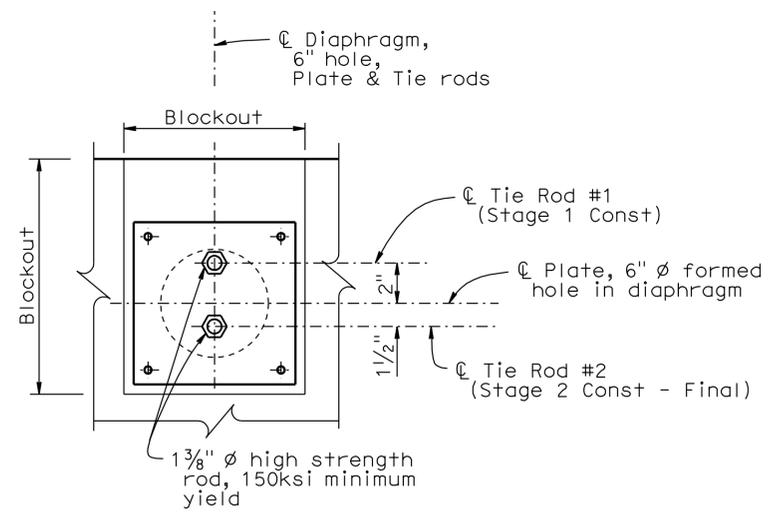
DETAIL "D"
1/2"=1'-0"



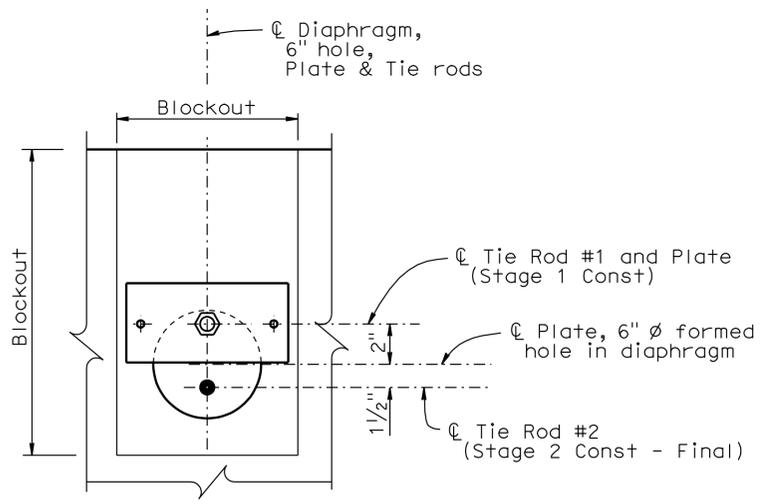
DETAIL "E"
1/2"=1'-0"



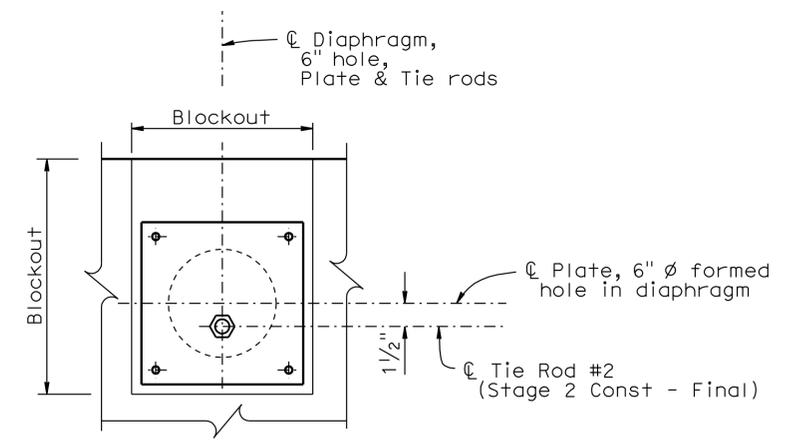
DETAIL "F"
1/2"=1'-0"



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



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



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

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

NOTES:
See Girder Layout Sheet for Tie Rod Locations

DESIGN	BY Randy S Bains	CHECKED Jose M Aquino III
DETAILS	BY Jay Reid	CHECKED Jose M Aquino III
QUANTITIES	BY Art Herrera	CHECKED Mike Bergman

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 3

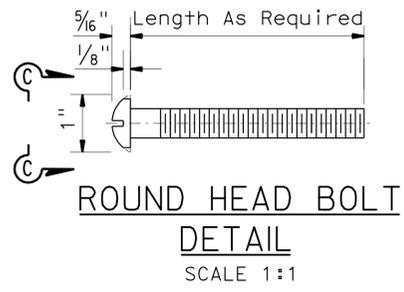
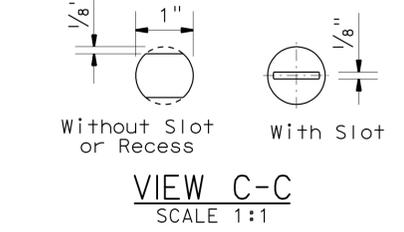
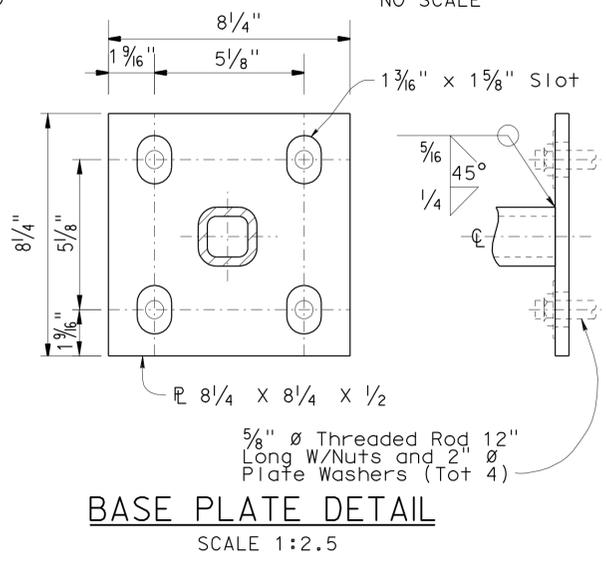
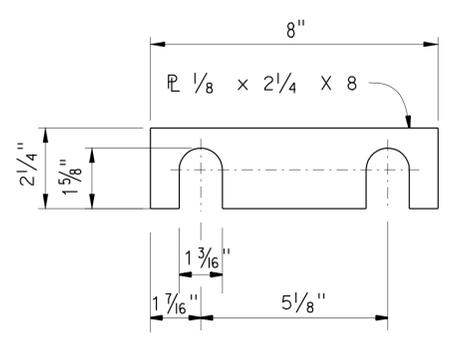
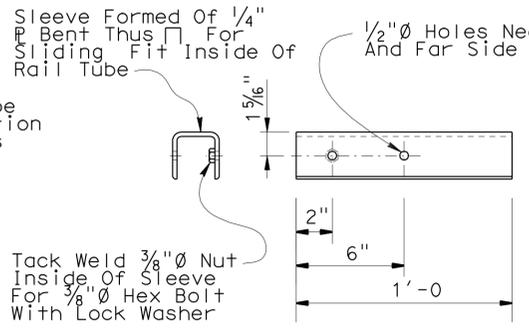
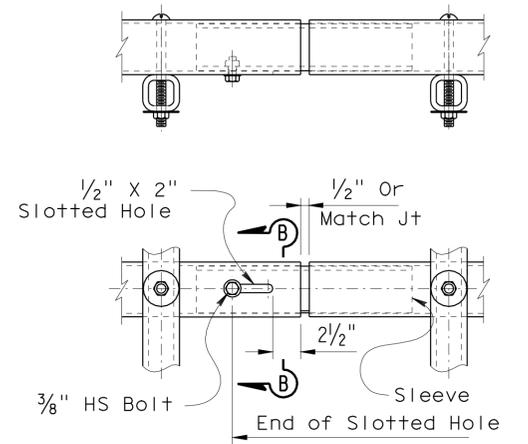
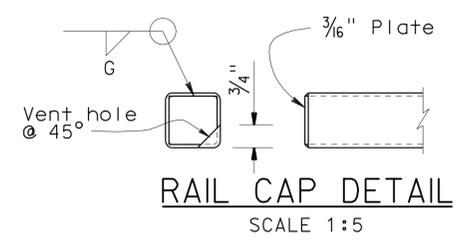
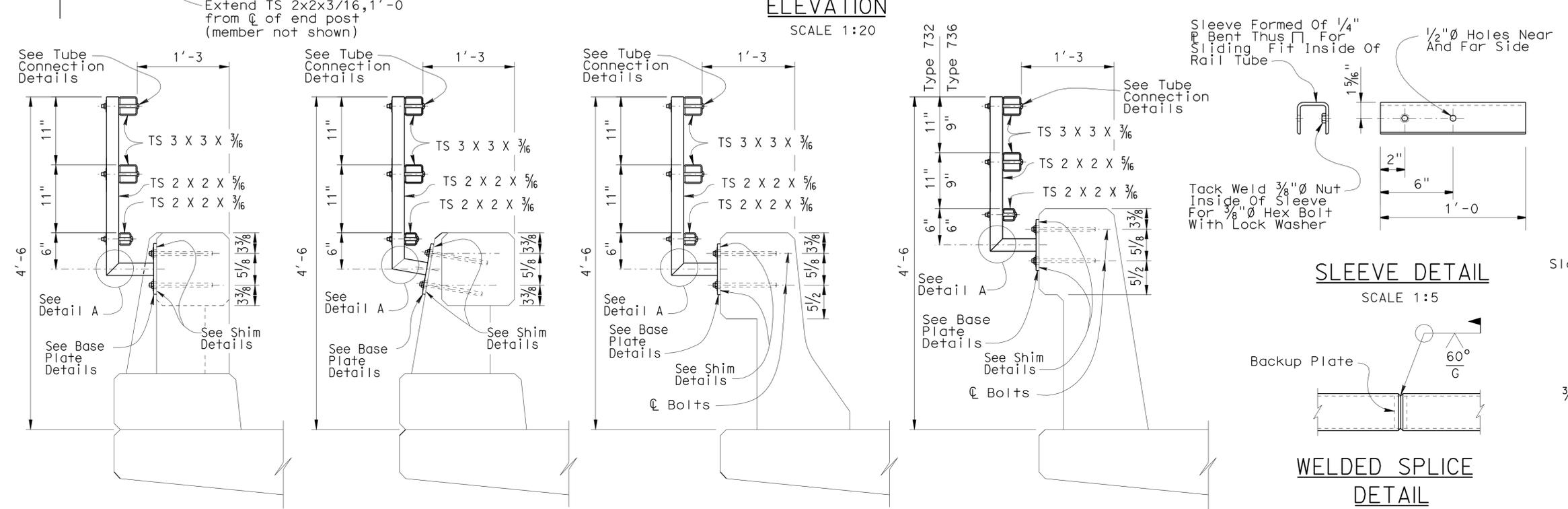
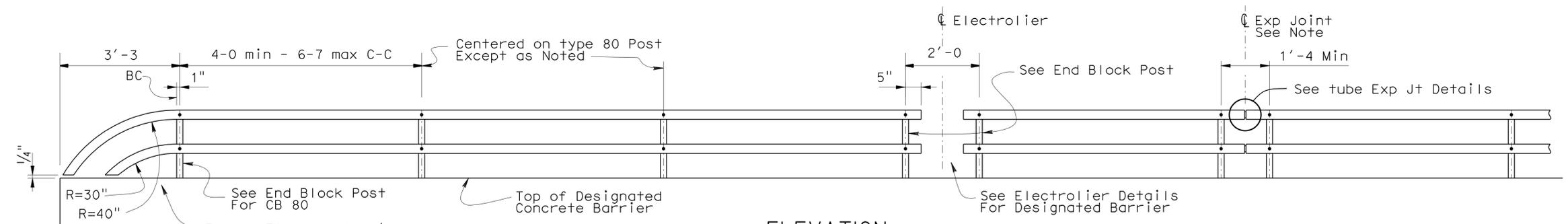
BRIDGE NO.	08-0168
POST MILE	21.13

CRAIG CREEK BRIDGE (REPLACE)
TIE ROD DETAILS

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	63	67

RANDIP S. BAINS 8/27/09
 REGISTERED ENGINEER - CIVIL
 No. 64172
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

12-14-09
 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.



- 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.

CRAIG CREEK BRIDGE (REPLACE)

TUBULAR BICYCLE RAILING

BARRIER RAILINGS TYPE 25, 80, 732 & 736

BRIDGE NO.	08-0168
POST MILE	21.13

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

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.6 20.9/21.3	64	67

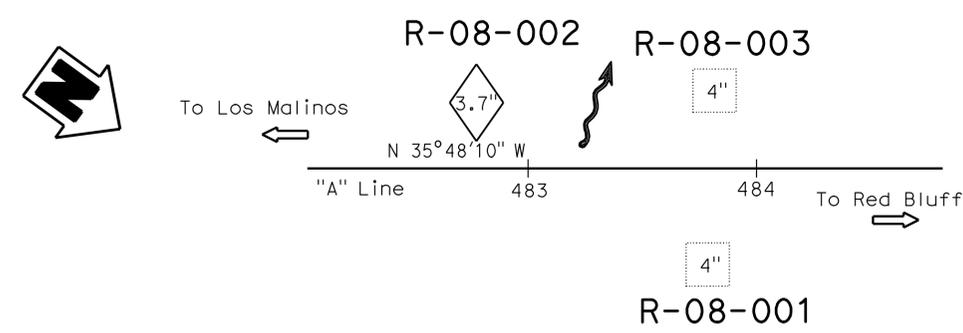
Xing Zheng 7/31/09
CERTIFIED ENGINEERING GEOLOGIST

12-14-09
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.

KLEINFELDER INC.
3077 FITE CIR.
SACRAMENTO, CA 95827

PROFESSIONAL GEOLOGIST
Xing Zheng
No. 2130
Exp. 3-31-11
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA



PLAN
1"=40'

BENCHMARK

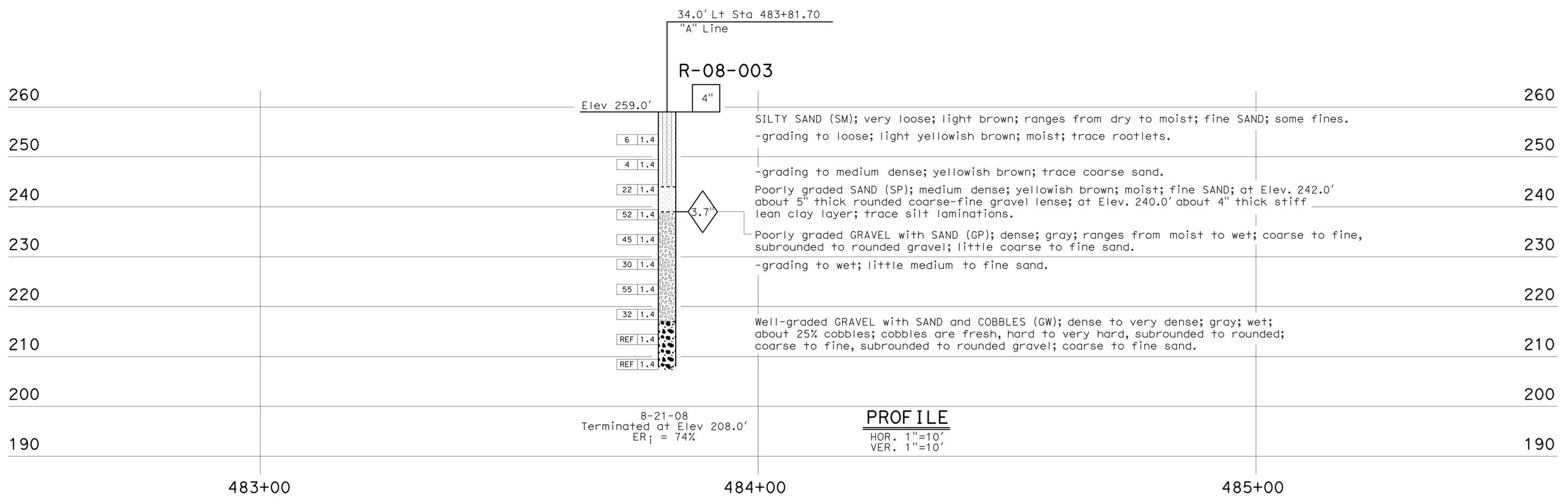
STATION	OFFSET	N	E	ELEV (feet)	DESCRIPTION
482+71.22	28.25' Lt	1,937,032.30	6,523,112.59	258.59	CM 21.13 Find #6 Rebar w/ Aluminum Cap

SURVEY CONTROL

- Horizontal Control based on NAD 83 HPGN, Zone 6.
- Vertical Control based on NAVD 88.

Notes:

- SPT N values shown on the Log of Test Boring (LOTB) sheet are actual values recorded in the field.
- Ground water was not measured in Borings R-08-002 and R-08-003.



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

DESIGN OVERSIGHT ENGINEER:		SIGN OFF DATE:		PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		BRIDGE NO. 08-0168		CRAIG CREEK BRIDGE (REPLACE) LOG OF TEST BORINGS 1 OF 4					
FUNCTIONAL SUPERVISOR NAME: R. Buell		DRAWN BY: A. Sanchez CHECKED BY: C. Zhen				FIELD INVESTIGATION BY: Xing Zheng Mar, Aug 2008						PROJECT ENGINEER Randip S Bains	
065 CIVIL LOG OF TEST BORINGS SHEET				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				CU 03264 EA 2C1101		DISREGARD PRINTS BEARING EARLIER REVISION DATES			
				0 1 2 3						REVISION DATES			
										SHEET 17 OF 20			

USERNAME => hrmkgs DATE PLOTTED => 21-DEC-2009 TIME PLOTTED => 08:08

FOR PLAN VIEW AND ADDITIONAL NOTES, SEE
"LOG OF TEST BORINGS" SHEET 1 OF 4

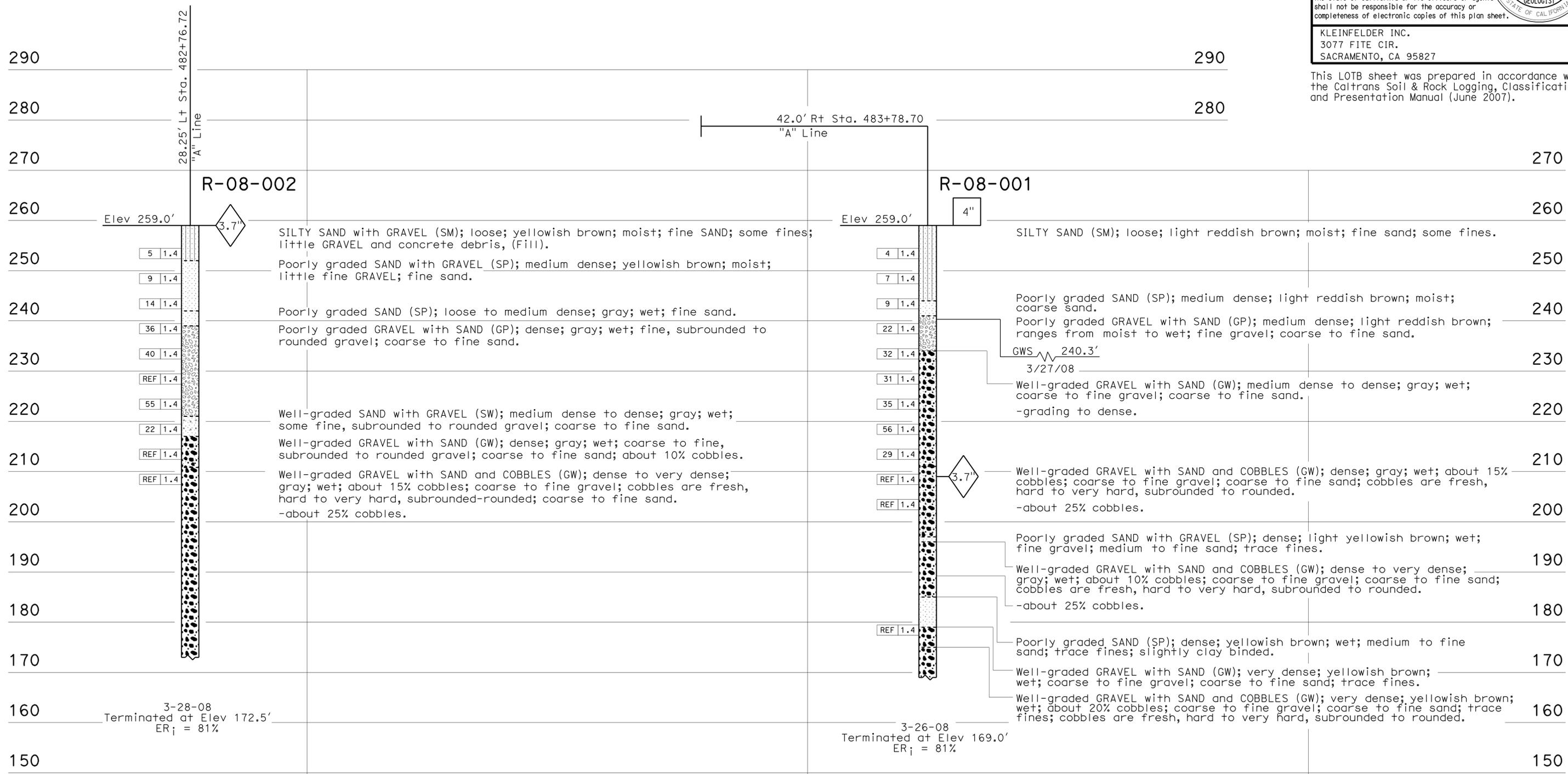
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Teh	99	15.4/15.7, 20.9/21.3	65	67

7/31/09
 CERTIFIER ENGINEERING GEOLOGIST
 Xing Zheng
 No. 2130
 Exp. 3-31-11
 CERTIFIED ENGINEERING GEOLOGIST
 STATE OF CALIFORNIA

12-14-09
 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.

KLEINFELDER INC.
 3077 FITE CIR.
 SACRAMENTO, CA 95827



483+00 **PROFILE** 484+00 485+00

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

DESIGN OVERSIGHT ENGINEER:	SIGN OFF DATE:	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	CRAIG CREEK BRIDGE (REPLACE) LOG OF TEST BORINGS 2 OF 4
FUNCTIONAL SUPERVISOR:	DRAWN BY: A. Sanchez		08-0168	
NAME: R. Buehl	CHECKED BY: C. Zhen	PROJECT ENGINEER	POST MILES	
		Randip S Bains	21.13	
065 CIVIL LOG OF TEST BORINGS SHEET		CU 03264 EA 2C1101	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES
		FILE => 08-0168-z-1tb-zof4.dgn	5-25-09	SHEET 18 OF 20

USERNAME => hrmkgs DATE PLOTTED => 21-DEC-2009 TIME PLOTTED => 08:03

7/31/09

Xing Zheng
 CERTIFIED ENGINEERING GEOLOGIST

12-14-09
 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.

KLEINFELDER INC.
 3077 FITE CIR.
 SACRAMENTO, CA 95827

PROFESSIONAL GEOLOGIST

Xing Zheng
 No. 2130
 Exp. 3-31-11
 CERTIFIED ENGINEERING GEOLOGIST

STATE OF CALIFORNIA

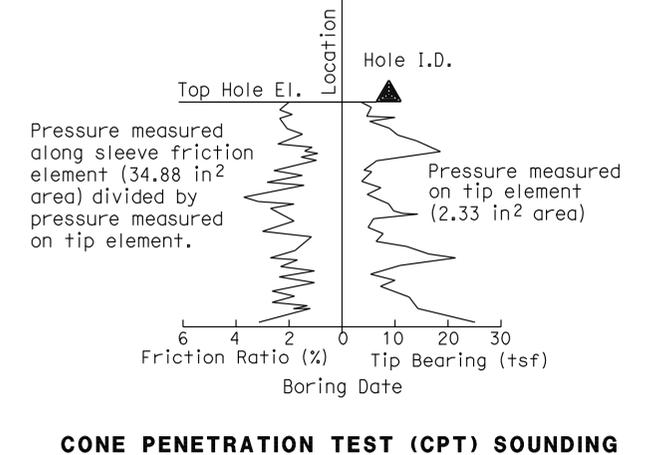
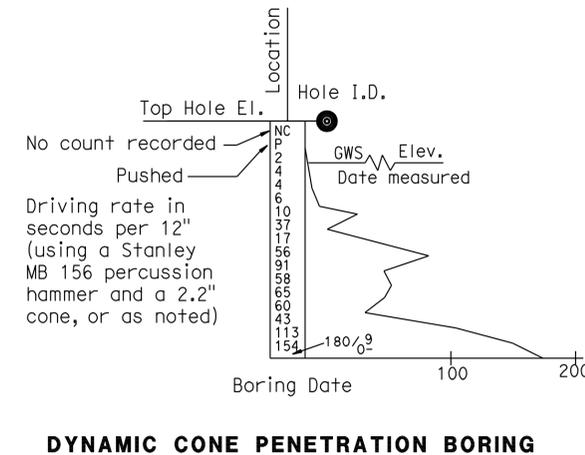
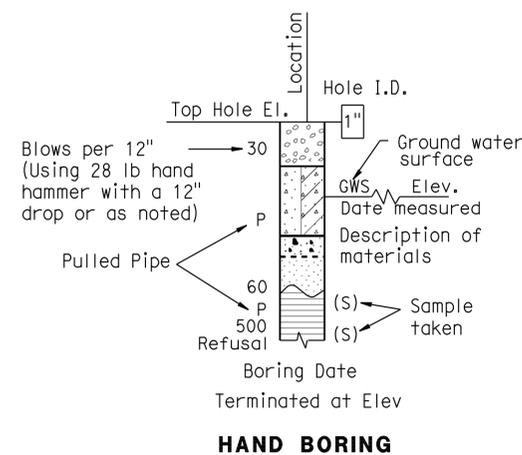
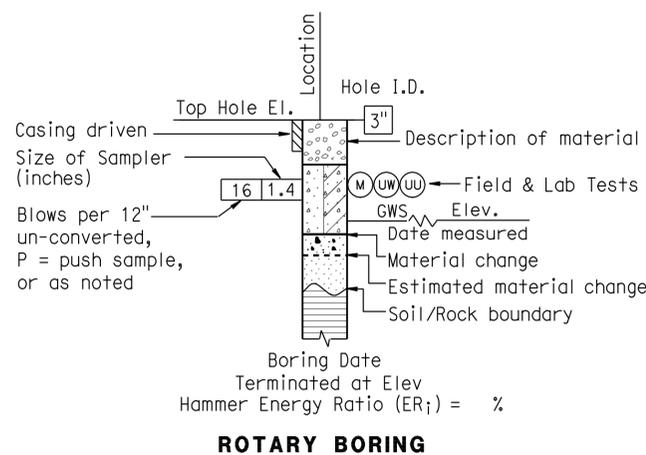
CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

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

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

Note: Size in inches.

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



DESIGN OVERSIGHT ENGINEER:	SIGN OFF DATE:
PREPARED BY: A. Sanchez	
CHECKED BY:	

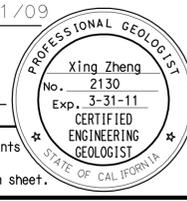
**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Randip S Bains
 PROJECT ENGINEER

**CRAIG CREEK BRIDGE (REPLACE)
 LOG OF TEST BORINGS 3 OF 4**

BRIDGE NO. 08-0168
 POST MILE 21.13

Cheng Xing 7/31/09
 CERTIFIED ENGINEERING GEOLOGIST
 12-14-09
 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.
 KLEINFELDER INC.
 3077 FITE CIR.
 SACRAMENTO, CA 95827



GROUP SYMBOLS AND NAMES			
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	Well-graded GRAVEL		Lean CLAY
	Well-graded GRAVEL with SAND		Lean CLAY with SAND
	Poorly graded GRAVEL		Lean CLAY with GRAVEL
	Poorly graded GRAVEL with SAND		SANDY lean CLAY
	Well-graded GRAVEL with SILT		GRAVELLY lean CLAY
	Well-graded GRAVEL with SILT and SAND		GRAVELLY lean CLAY with SAND
	Well-graded GRAVEL with CLAY (or SILTY CLAY)		SILTY CLAY
	Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		SILTY CLAY with SAND
	Poorly graded GRAVEL with SILT		SANDY SILTY CLAY
	Poorly graded GRAVEL with SILT and SAND		SANDY SILTY CLAY with GRAVEL
	Poorly graded GRAVEL with CLAY (or SILTY CLAY)		GRAVELLY SILTY CLAY
	Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		GRAVELLY SILTY CLAY with SAND
	SILTY GRAVEL		SILT
	SILTY GRAVEL with SAND		SILT with SAND
	CLAYEY GRAVEL		SILT with GRAVEL
	CLAYEY GRAVEL with SAND		SANDY SILT
	SILTY, CLAYEY GRAVEL		SANDY SILT with GRAVEL
	SILTY, CLAYEY GRAVEL with SAND		GRAVELLY SILT
	Well-graded SAND		GRAVELLY SILT with SAND
	Well-graded SAND with GRAVEL		ORGANIC lean CLAY
	Poorly graded SAND		ORGANIC lean CLAY with SAND
	Poorly graded SAND with GRAVEL		ORGANIC lean CLAY with GRAVEL
	Well-graded SAND with SILT		SANDY ORGANIC lean CLAY
	Well-graded SAND with SILT and GRAVEL		SANDY ORGANIC lean CLAY with GRAVEL
	Well-graded SAND with CLAY (or SILTY CLAY)		GRAVELLY ORGANIC lean CLAY
	Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		GRAVELLY ORGANIC lean CLAY with SAND
	Poorly graded SAND with SILT		Elastic SILT
	Poorly graded SAND with SILT and GRAVEL		Elastic SILT with SAND
	Poorly graded SAND with CLAY (or SILTY CLAY)		Elastic SILT with GRAVEL
	Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		SANDY elastic SILT
	SILTY SAND		GRAVELLY elastic SILT
	SILTY SAND with GRAVEL		GRAVELLY elastic SILT with SAND
	CLAYEY SAND		ORGANIC fat CLAY
	CLAYEY SAND with GRAVEL		ORGANIC fat CLAY with SAND
	SILTY, CLAYEY SAND		ORGANIC fat CLAY with GRAVEL
	SILTY, CLAYEY SAND with GRAVEL		SANDY ORGANIC fat CLAY
	PEAT		SANDY ORGANIC fat CLAY with GRAVEL
	COBBLES		GRAVELLY ORGANIC fat CLAY
	COBBLES and BOULDERS		GRAVELLY ORGANIC fat CLAY with SAND
	BOULDERS		ORGANIC elastic SILT

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

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

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

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

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

DESIGN OVERSIGHT ENGINEER: _____ SIGN OFF DATE: _____

PREPARED BY: A. Sanchez

CHECKED BY: _____

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Randip S Bains
PROJECT ENGINEER

BRIDGE NO. 08-0168

POST MILE 21.13

CRAIG CREEK BRIDGE (REPLACE)

LOG OF TEST BORINGS 4 of 4

USERNAME => hrmkgs DATE PLOTTED => 21-DEC-2009 TIME PLOTTED => 08:03