INDEX OF PLANS

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5-6	LAYOUTS
7	PROFILES
8	TEMPORARY WATER POLLUTION CONTROL PLAN
9	EROSION CONTROL PLAN
10	CONSTRUCTION AREA SIGNS
11	TRAFFIC HANDLING PLAN AND QUANTITIES
12	PAVEMENT DELINEATION PLAN AND QUANTITIES
13	SUMMARY OF QUANTITIES
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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

ACSTP-43L2(004)E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	1	49

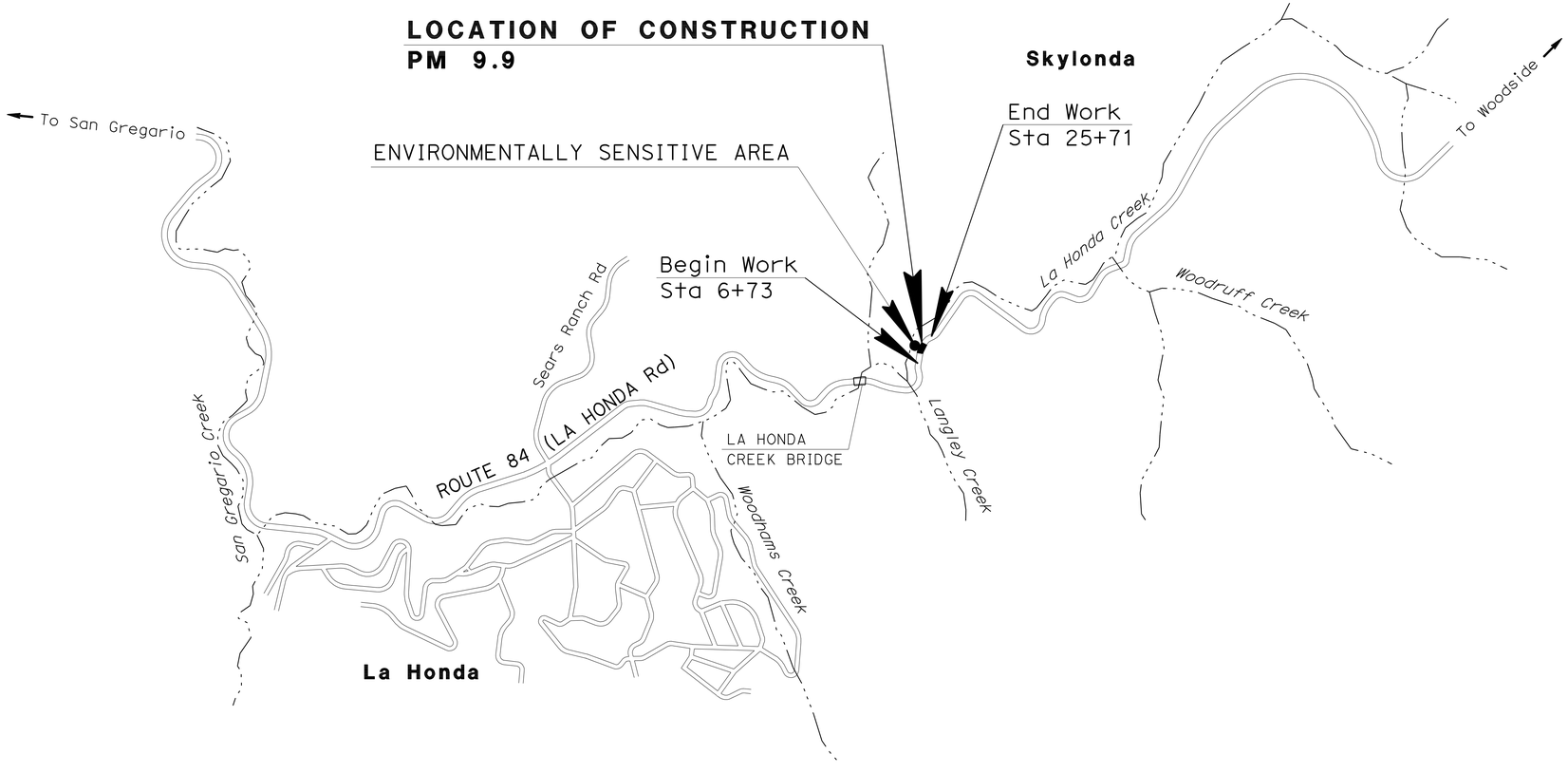
PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

IN SAN MATEO COUNTY
NEAR LA HONDA
0.2 MILE EAST OF LA HONDA CREEK BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

LOCATION MAP

LOCATION OF CONSTRUCTION
PM 9.9



NO SCALE

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

Getachew Eshete 4-29-10
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

June 21, 2010
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
GETACHEW ESHETE
No. 52245
Exp. 12-31-10
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.

PROJECT MANAGER: MOHAMMED SULEIMAN
DESIGN ENGINEER: GETACHEW ESHETE

CONTRACT No.	04-3S8204
PROJECT ID	0400001035

LAST REVISION: DATE PLOTTED => 29-SEP-2010
04-29-10 TIME PLOTTED => 11:20

BORDER LAST REVISED 8/1/2008 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => trienard DGN FILE => 43S820ab001.dgn | CU 06261 | EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	2	49

Getachew Eshete 4-29-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
GETACHEW ESHETE
No. 52245
Exp. 12-31-10
CIVIL
STATE OF CALIFORNIA

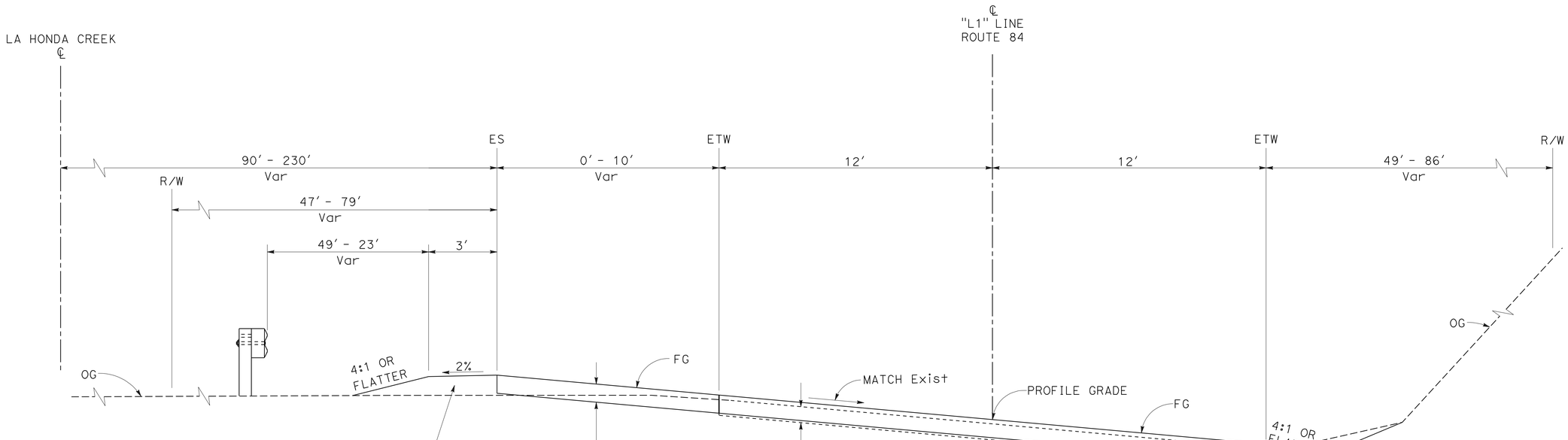
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DESIGN DESIGNATION ROUTE 84

2007 ADT = 6,155 (TWO WAY) D = 55%
2027 ADT = 8,258 (TWO WAY) T = 8%
2027 DHV = 950 (TWO WAY) V = 35 mph
Truck % of ADT = 2.5%



ROUTE 84

Sta 15+34.38 TO 15+90.00

TYPICAL CROSS SECTIONS

NO SCALE

X-1

REVISED BY | DATE REVISED
WILLIAM LEE | WILLIAM LEON
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: GETACHEW ESHETE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
06-DESIGN

LAST REVISION | DATE PLOTTED => 24-JUN-2010 | TIME PLOTTED => 10:11
04-29-10

BORDER LAST REVISED 4/11/2008
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
USERNAME => trstrk
DGN FILE => 43S820ca001.dgn
CU 06261
EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	3	49

Getachew Eshete 4-29-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
GETACHEW ESHETE
No. 52245
Exp. 12-31-10
CIVIL
STATE OF CALIFORNIA

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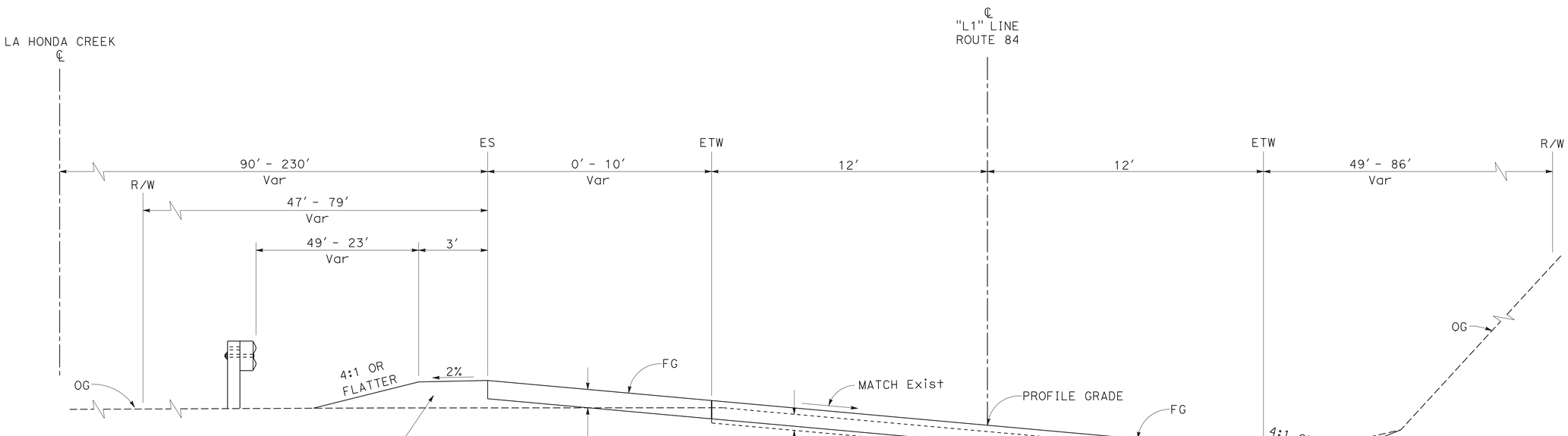


ROUTE 84

Sta 15+90.00 TO 16+29.14
Sta 18+33.99 TO 18+89.50

TYPICAL CROSS SECTIONS

NO SCALE

X-2

REVISED BY | WILLIAM LEE
DATE REVISED | WILLIAM LEON
CALCULATED-DESIGNED BY | WILLIAM LEON
CHECKED BY | WILLIAM LEON
FUNCTIONAL SUPERVISOR | GETACHEW ESHETE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | 06-DESIGN
Caltrans

LAST REVISION | DATE PLOTTED => 24-JUN-2010 | TIME PLOTTED => 10:11
04-29-10

BORDER LAST REVISED 4/11/2008
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
USERNAME => trstrk
DGN FILE => 43S820ca002.dgn
CU 06261
EA 3S8201

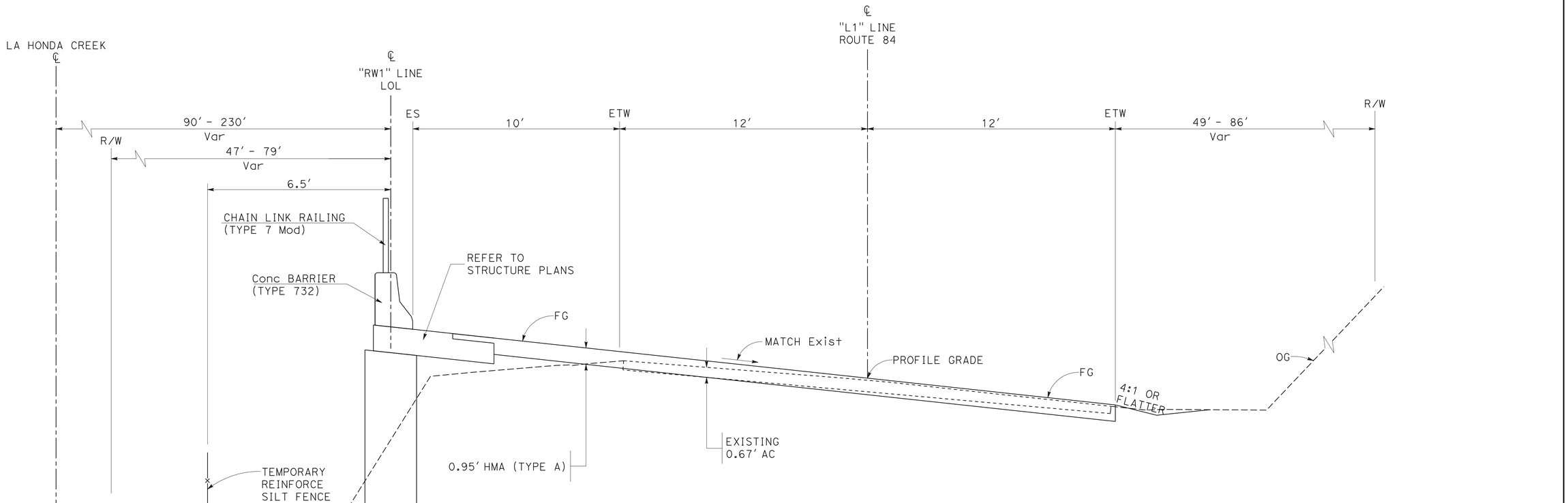
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	4	49

Getachew Eshete 4-29-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
GETACHEW ESHETE
No. 52245
Exp. 12-31-10
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.



ROUTE 84

Sta 16+29.14 TO 18+33.99

TYPICAL CROSS SECTIONS

NO SCALE

X-3

REVISED BY | WILLIAM LEE
DATE REVISED | WILLIAM LEON
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR | GETACHEW ESHETE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | 06-DESIGN
Caltrans

LAST REVISION | DATE PLOTTED => 24-JUN-2010
04-29-10 | TIME PLOTTED => 10:11

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => trstrk
DGN FILE => 43S820ca003.dgn

CU 06261

EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	5	49

Getachew Eshete 4-28-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
GETACHEW ESHETE
No. 52245
Exp. 12-31-10
CIVIL
STATE OF CALIFORNIA

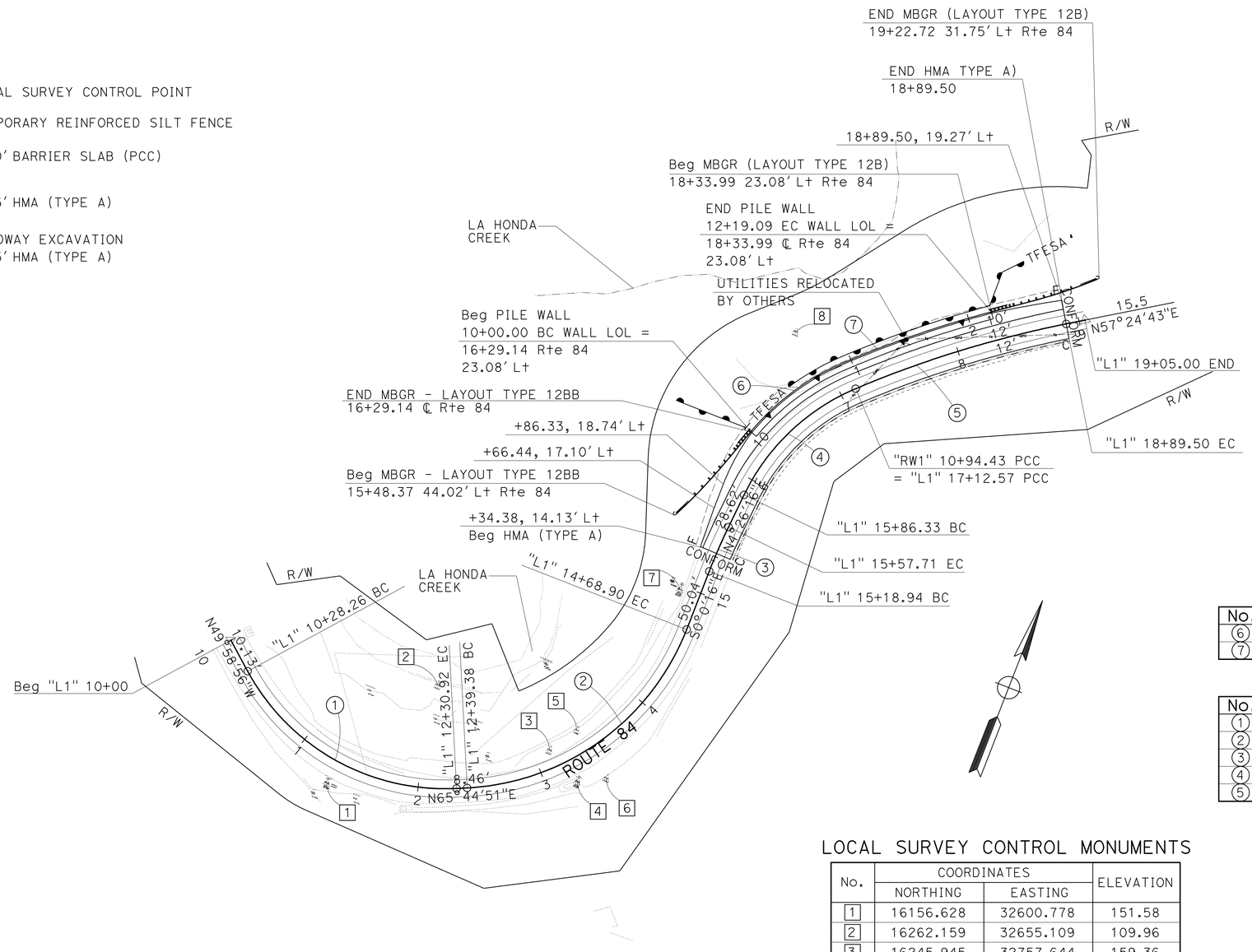
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

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

LEGEND:

- No. — LOCAL SURVEY CONTROL POINT
- TFESA — TEMPORARY REINFORCED SILT FENCE
- 1.50′ BARRIER SLAB (PCC)
- 0.95′ HMA (TYPE A)
- ROADWAY EXCAVATION 0.95′ HMA (TYPE A)



PILE WALL CURVE DATA

No.	R	Δ	T	L
⑥	198.08′	27°18′53"	48.13′	94.43′
⑦	893.67′	7°59′29"	62.42′	124.64′

CURVE DATA

No.	R	Δ	T	L
①	180.00′	64°30′42"	113.60′	202.67′
②	200.00′	65°45′07"	129.27′	229.52′
③	500.00′	4°26′32"	19.39′	38.77′
④	175.00′	41°19′46"	66.00′	126.23′
⑤	870.59′	11°38′41"	88.77′	176.94′

LOCAL SURVEY CONTROL MONUMENTS

No.	COORDINATES		ELEVATION
	NORTHING	EASTING	
1	16156.628	32600.778	151.58
2	16262.159	32655.109	109.96
3	16245.945	32757.644	159.36
4	16230.588	32787.697	159.08
5	16268.655	32772.132	157.75
6	16241.503	32808.333	163.24
7	16404.167	32808.333	164.04
8	16630.390	32819.678	139.55

LAYOUT

SCALE: 1" = 50′

L-1

W LEE	05/26/10	WILLIAM LEE	WILLIAM LEON
REVISED BY	DATE REVISED	CALCULATED-DESIGNED BY	CHECKED BY

FUNCTIONAL SUPERVISOR: GETACHEW ESHETE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
06-DESIGN

LAST REVISION: DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:11
04-29-10

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => trstrk
DGN FILE => 43S820ea001.dgn

CU 06261

EA 3S8201

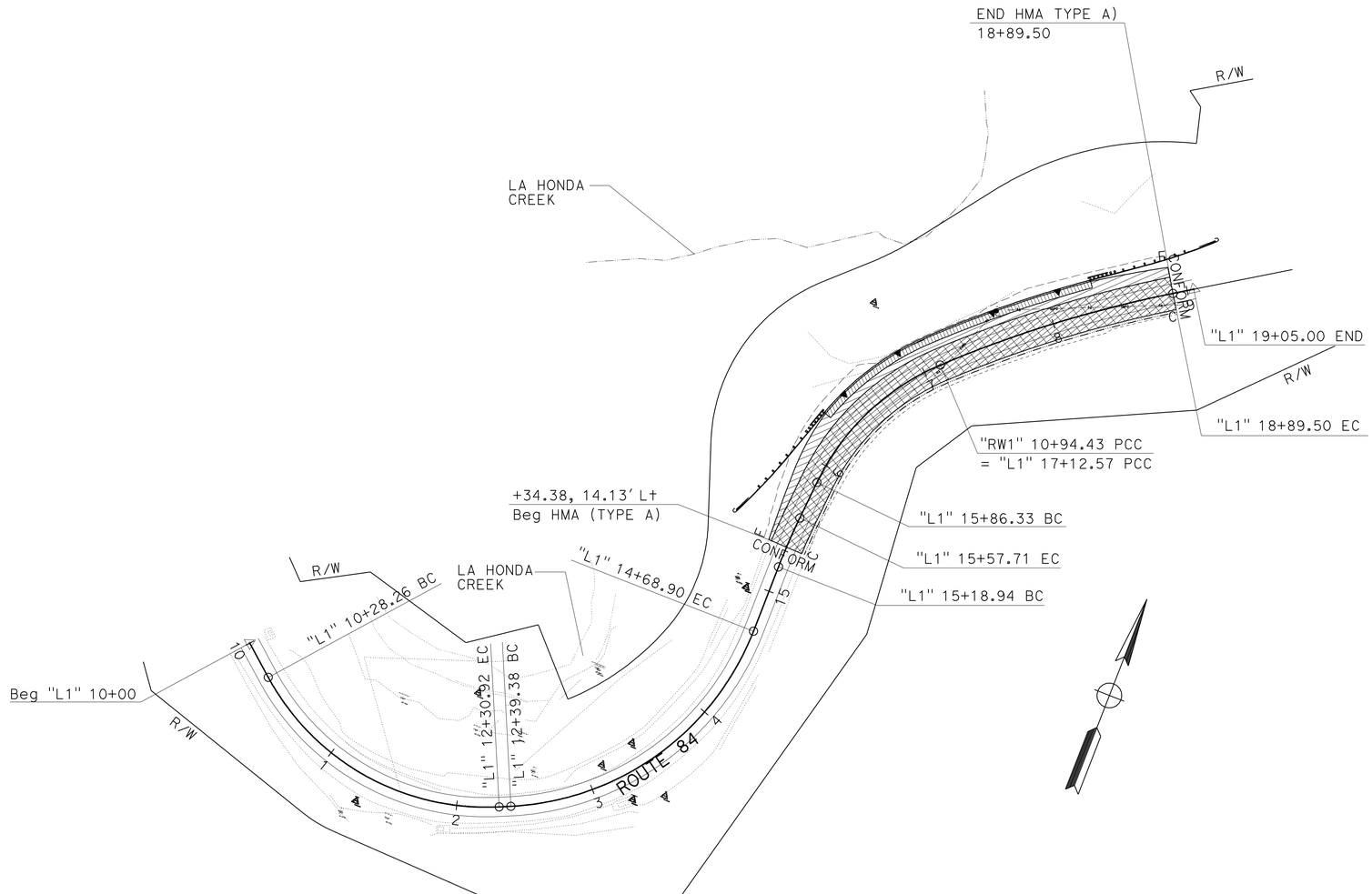
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	6	49

Getachew Eshete 4-28-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
GETACHEW ESHETE
No. 52245
Exp. 12-31-10
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.



LAYOUT

SCALE: 1" = 50'

L-2

LAST REVISION | DATE PLOTTED => 24-JUN-2010
04-29-10 | TIME PLOTTED => 10:11

CALCULATED-DESIGNED BY	WILLIAM LEE	REVISED BY	W LEE
CHECKED BY	WILLIAM LEON	DATE REVISED	05/26/10

FUNCTIONAL SUPERVISOR: GETACHEW ESHETE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
06-DESIGN

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => trstrk
DGN FILE => 435820ea002.dgn

CU 06261

EA 3S8201

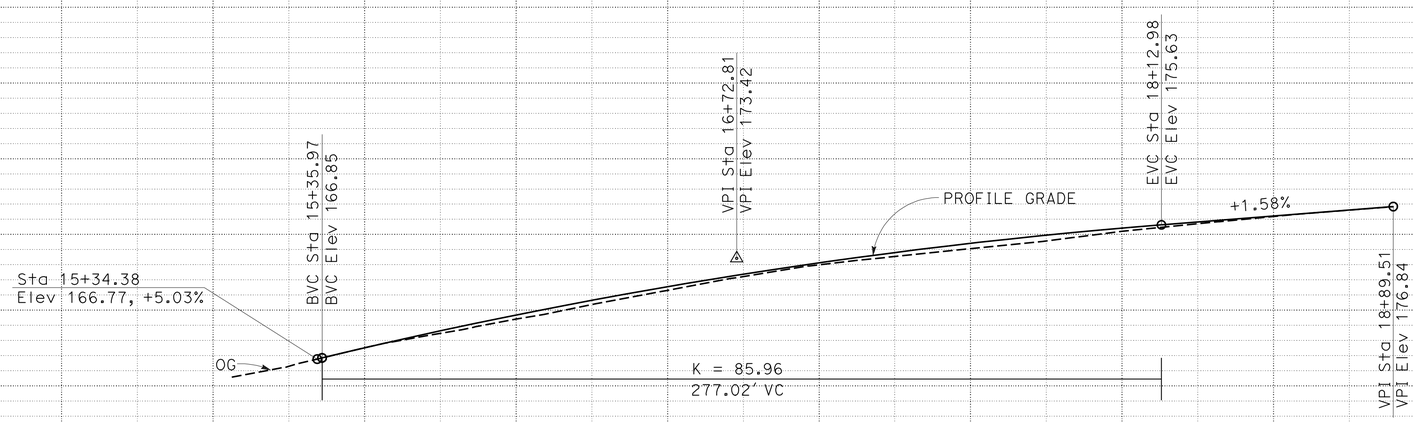
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	7	49

Getachew Eshete 4-29-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
GETACHEW ESHETE
No. 52245
Exp. 12-31-10
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.



ROUTE 84 PROFILE

PROFILE
SCALE: Horiz 1" = 25'
Vert 1" = 5'

P-1

STATION	15	16	17	18	19	TOTAL
CY Exc	← 15 →					
CY Emb	← 76 →					

WILLIAM LEE — CALCULATED-DESIGNED BY
WILLIAM LEON — CHECKED BY
REVISED BY
DATE REVISED
GETACHEW ESHETE — FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN
Caltrans

LAST REVISION DATE PLOTTED => 24-JUN-2010
TIME PLOTTED => 10:12

BORDER LAST REVISED 4/11/2008
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
USERNAME => trstrk
DGN FILE => 43S820fa001.dgn
CU 06261
EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	8	49

Getachew Eshete 4-28-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
GETACHEW ESHETE
No. 52245
Exp. 12-31-10
CIVIL
STATE OF CALIFORNIA

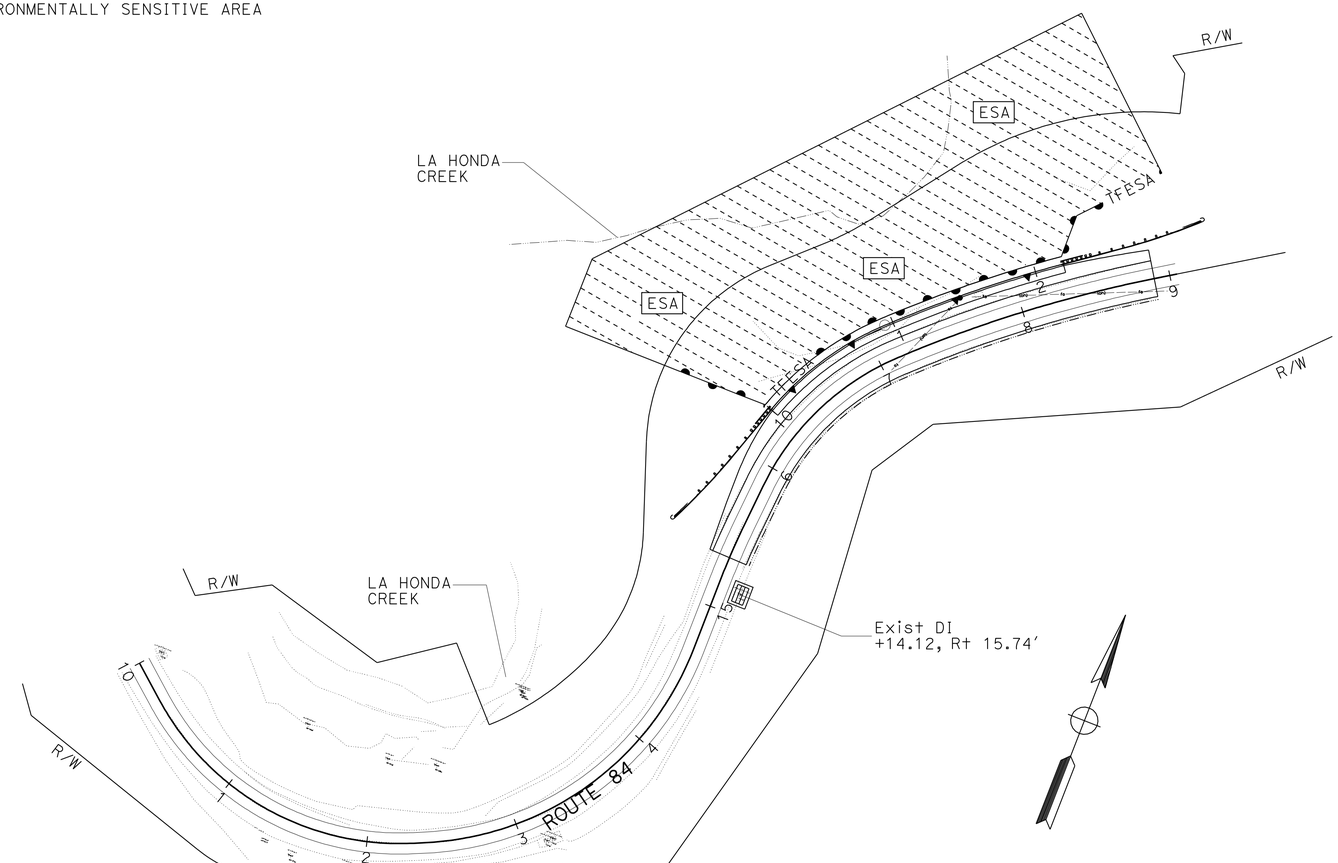
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:

TEMPORARY DRAINAGE INLET PROTECTION

TFESA — TEMPORARY REINFORCED SILT FENCE

ESA — ENVIRONMENTALLY SENSITIVE AREA



TEMPORARY WATER POLLUTION CONTROL PLAN

SCALE: 1" = 50'

WPC-1

THIS PLAN ACCURATE FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY.

REVISED BY	W LEE		
DATE REVISED	05/26/10		
WILLIAM LEE			
WILLIAM LEON			
CALCULATED-DESIGNED BY			
CHECKED BY			
FUNCTIONAL SUPERVISOR	G. ESHETE		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	06-DESIGN		

LAST REVISION 04-29-10
DATE PLOTTED => 24-JUN-2010
TIME PLOTTED => 10:12

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => trstrk
DGN FILE => 43S820gb001.dgn

CU 06261

EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	9	49

Getachew Eshete 4-28-10
REGISTERED CIVIL ENGINEER DATE

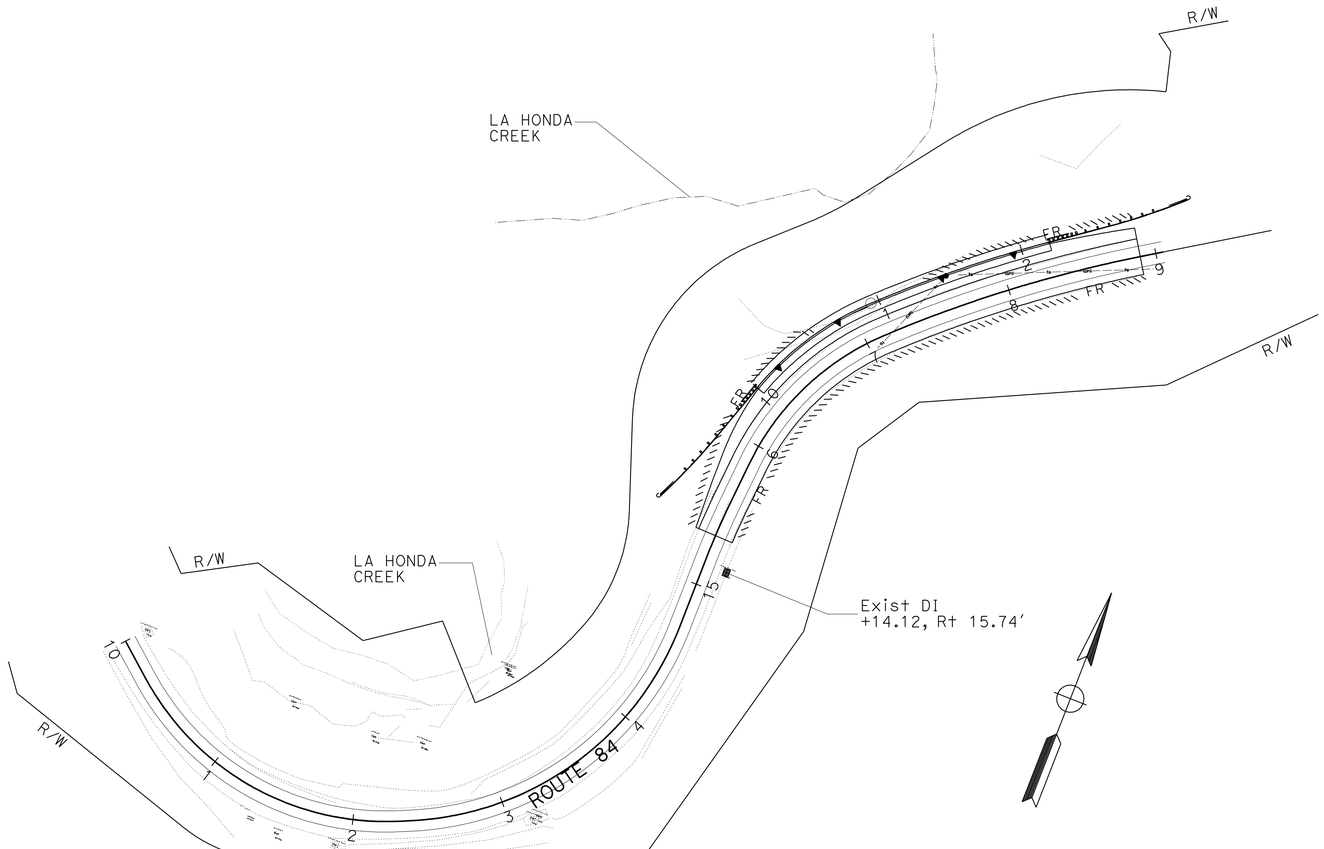
6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
GETACHEW ESHETE
No. 52245
Exp. 12-31-10
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:

\\\\\\ FR \\\\ FIBER ROLL



EROSION CONTROL PLAN

SCALE: 1" = 50'

EC-1

THIS PLAN ACCURATE FOR EROSION CONTROL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
06-DESIGN
FUNCTIONAL SUPERVISOR: G. ESHETE
CALCULATED-DESIGNED BY:
CHECKED BY:
WILLIAM LEE
WILLIAM LEON
REVISED BY: W LEE
DATE REVISED: 05/26/10

LAST REVISION
DATE PLOTTED => 24-JUN-2010
TIME PLOTTED => 10:12

BORDER LAST REVISED 4/11/2008
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
USERNAME => trstrk
DGN FILE => 43S820ge001.dgn
CU 06261
EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	10	49

Hassan Taha 3-01-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
HASSAN M. TAHA
No. 60130
Exp. 06/30/10
CIVIL
STATE OF CALIFORNIA

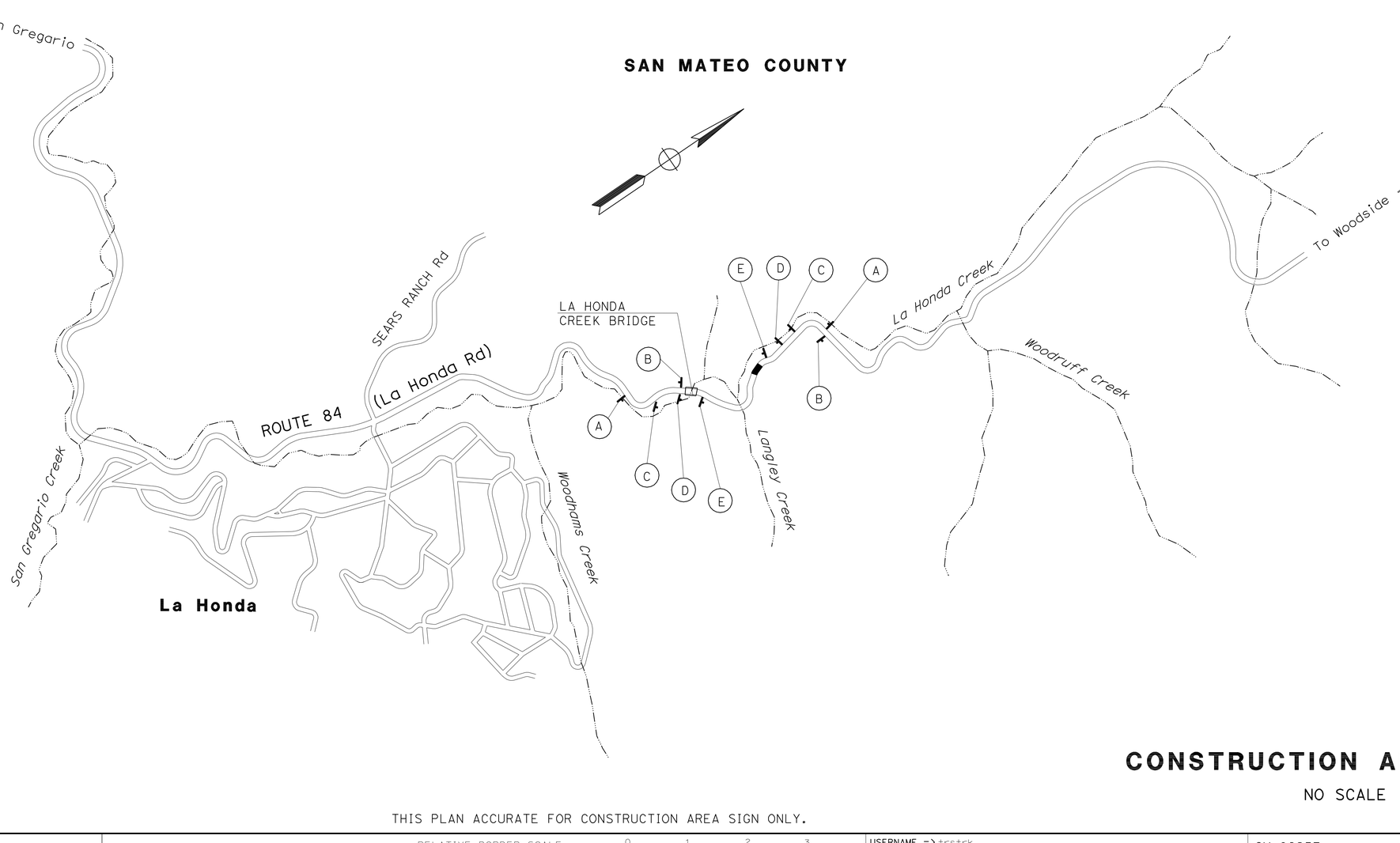
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN (No.)	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POSTS	POST SIZE	No. OF SIGNS
(A)	W20-1	48" x 48"	ROAD WORK AHEAD	1	6" x 6"	2
(B)	G20-2	48" x 24"	END ROAD WORK	1	4" x 6"	2
(C)	W20-4	36" x 36"	ONE LANE ROAD AHEAD	1	4" x 6"	2
(D)	W3-4	36" x 36"	BE PREPARED TO STOP	1	4" x 6"	2
(E)	W13-1(20)	30" x 30"	20 MPH	1	4" x 4"	2

NOTES: 1. LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.

2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, REFER TO SHEET TH-1.



CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN ONLY.

CALCULATED-DESIGNED BY	AMIR KAZEMI	REVISED BY	W LEE
CHECKED BY	HASSAN M. TAHA	DATE REVISED	05/26/10
FUNCTIONAL SUPERVISOR	MOHAMMED QATAMI		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
06-TRAFFIC DESIGN

LAST REVISION | DATE PLOTTED => 24-JUN-2010
04-29-10 | TIME PLOTTED => 10:12

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => trstrk
DGN FILE => 43S8201a001.dgn

CU 06257

EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	11	49

Hassan Taha 3-01-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
HASSAN M. TAHA
No. 60130
Exp. 06/30/10
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.

LEGEND

- ROADSIDE SIGN ONE-POST
- DIRECTION OF TRAFFIC
- Temp RAILING (TYPE K)
- CHANNELIZERS (SURFACED MOUNTED)

TEMPORARY RAILING (TYPE K)

SHEET No.	Sta TO Sta	LF
TH-1	15+61 TO 18+80	319
TOTAL		319

CHANNELIZER (SURFACE MOUNTED)

SHEET No.	EA
TH-1	11
TOTAL	11

TEMPORARY PAVEMENT DELINEATION

SHEET No.	LOCATION Sta TO Sta	DETAIL No.	REMOVE PAVEMENT MARKER	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUSE WASTE)	Temp PAVEMENT MARKING (TAPE)	
				YELLOW		
			EA	LF	DESCRIPTION	SQFT
TH-1	13+48 TO 20+71	22	62	1446	LIMIT LINE	24
TOTAL			62	1446		24

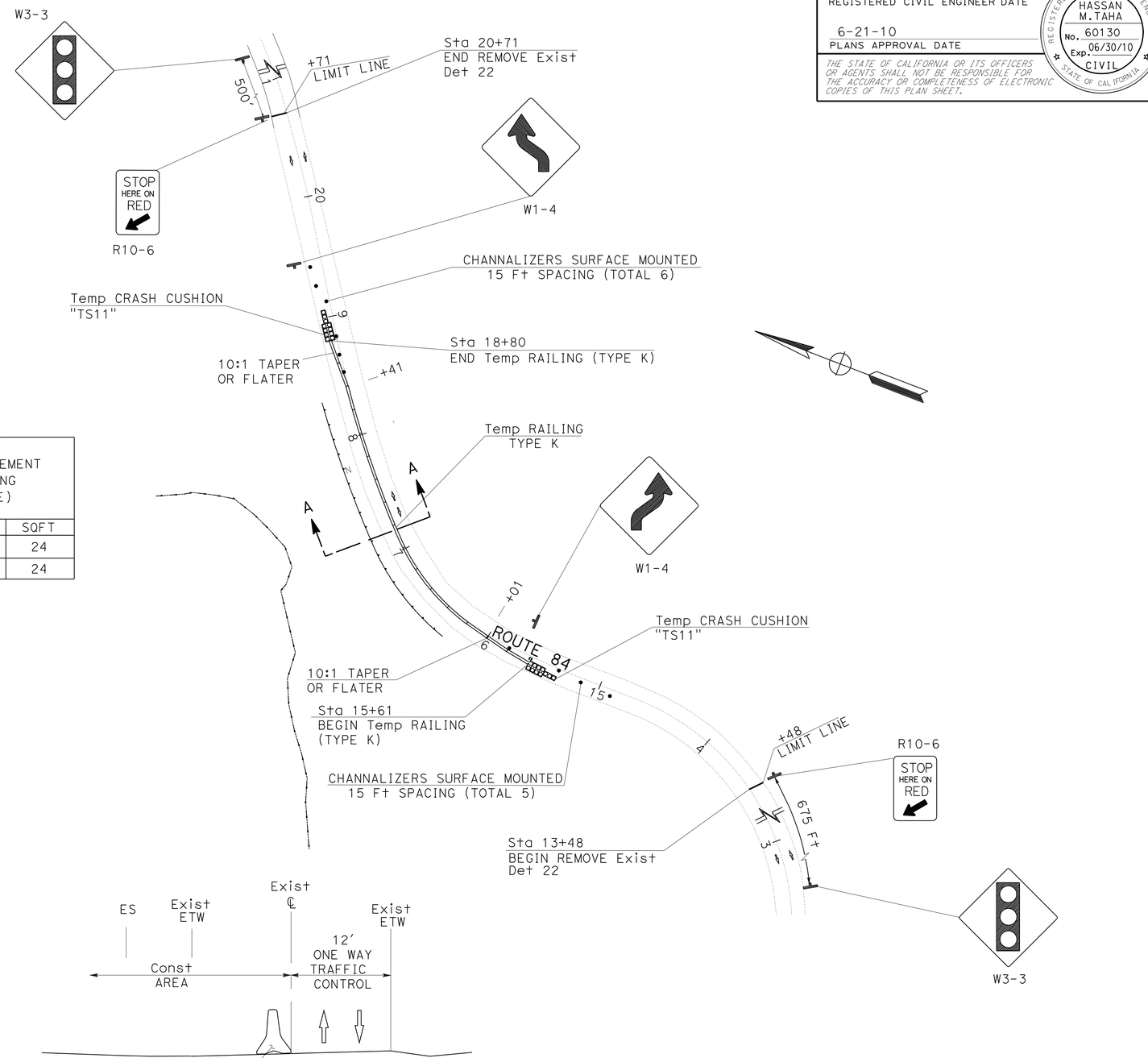
TEMPORARY CRASH CUSHION MODULE

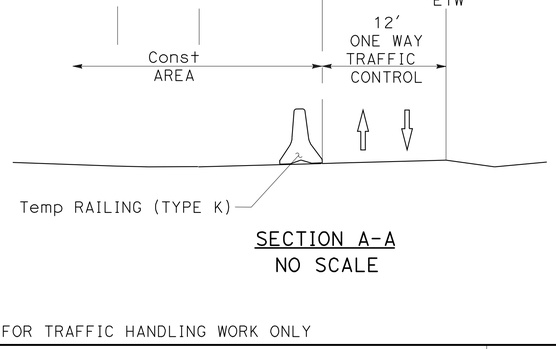
SHEET No.	EA
TH-1	22
TOTAL	22

CONSTRUCTION AREA SIGNS (TRAFFIC HANDLING)

SHEET No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE	No. OF POST AND SIZE	No. OF SIGNS
TH-1	W3-3	AS SHOWN ON PLAN	36" x 36"	MOUNT ON BEACON	2
	R10-6	AS SHOWN ON PLAN	36" x 24"	1-4" x 4"	2
	W1-4	AS SHOWN ON PLAN	36" x 36"	1-4" x 4"	2

NOTE: FOR ADDITIONAL CONSTRUCTION AREA SIGNS, REFER TO SHEET CS-1.





SECTION A-A
NO SCALE

TRAFFIC HANDLING PLAN AND QUANTITIES

SCALE: 1" = 50'

TH-1

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
06-TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: MOHAMMED QATAMI
CALCULATED-DESIGNED BY: AMIR KAZEMI
CHECKED BY: HASSAN TAHA
REVISED BY: W LEE
DATE REVISED: 05/26/10

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
USERNAME => trstrk
DGN FILE => 43S820md001.dgn
CU 06386
EA 3S8201
LAST REVISION | DATE PLOTTED => 24-JUN-2010
04-29-10 | TIME PLOTTED => 10:18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	12	49

Hassan Taha 3-01-10
REGISTERED CIVIL ENGINEER DATE

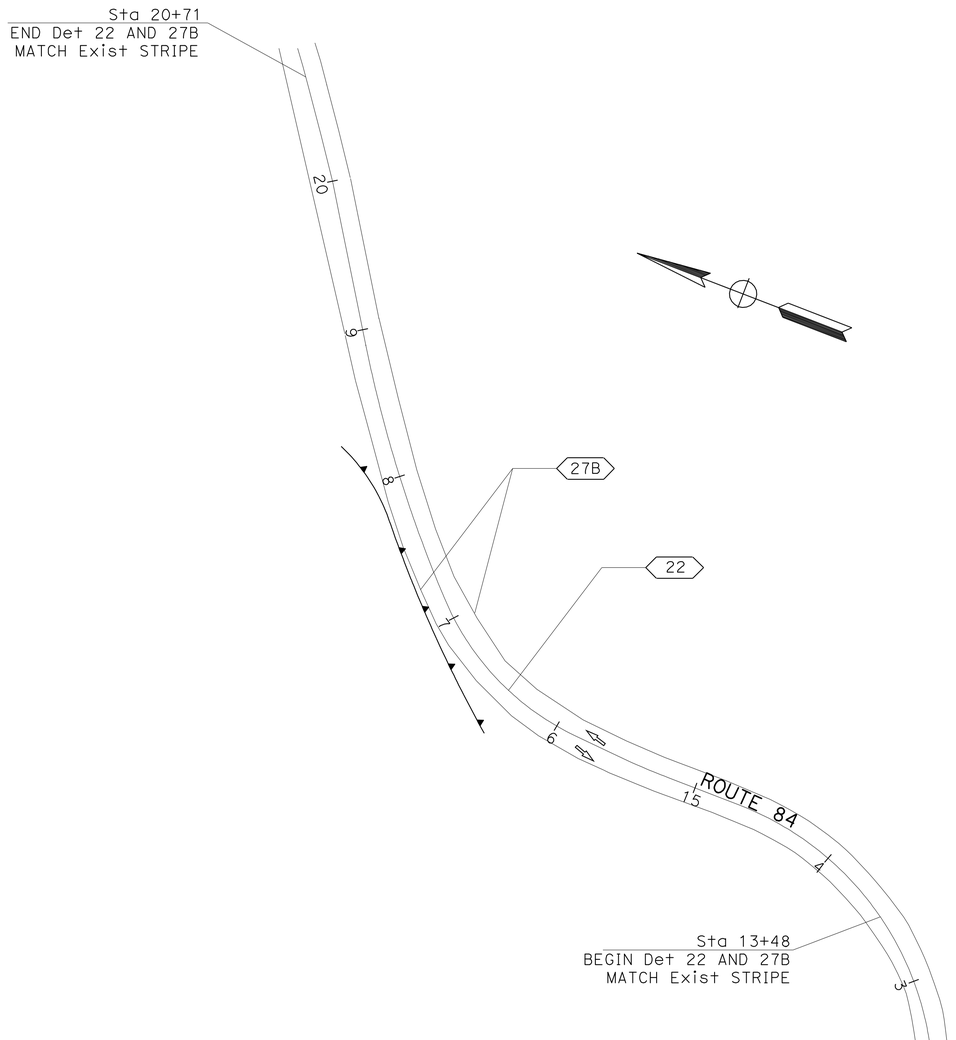
6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
HASSAN M. TAHA
No. 60130
Exp. 06/30/10
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.

LEGEND:

XX TRAFFIC STRIPE DETAIL



PAVEMENT DELINEATION

SHEET No.	LOCATION Sta TO Sta	DETAIL No.	PAVEMENT MARKER (RETRO-REFLECTIVE)	4" THERMOPLASTIC TRAFFIC STRIPE
			EA	LF
PD-1	13+48 TO 20+71	22	62	1446
		27B		1446
TOTAL			62	2892

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION ONLY

PAVEMENT DELINEATION PLAN AND QUANTITIES

SCALE: 1" = 50'

PD-1

CALCULATED-DESIGNED BY	AMIR KAZEMI	REVISED BY	W LEE
CHECKED BY	HASSAN TAHA	DATE REVISED	05/26/10
FUNCTIONAL SUPERVISOR	MOHAMMED QATAMI		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06-TRAFFIC DESIGN

LAST REVISION 04-29-10 | DATE PLOTTED => 24-JUN-2010 | TIME PLOTTED => 10:12

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => trstrk
DGN FILE => 43S820na001.dgn

CU 06261

EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	13	49

Getachew Eshete 4-29-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
GETACHEW ESHETE
No. 52245
Exp. 12-31-10
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.

ROADWAY QUANTITIES

LOCATION		(N) EMBANKMENT	IMPORTED MATERIAL (SHOULDER BACKING)	ROADWAY EXCAVATION	HOT MIX ASPHALT (TYPE A)	ASPHALTIC EMULSION (PAINT BINDER)	FIBER ROLL
FROM	TO	CY	TON	CY	TON	TON	LF
15+34.38	16+29.14	10	14	80	204	1.30	190
16+29.14	18+33.99	9		151	411	2.69	364
18+33.99	18+89.50	13		45	129	0.81	111
TOTAL		32	14	276	744	4.80	665

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

METAL BEAM GUARD RAILING

LOCATION		ALTERNATIVE FLARED TERMINAL SYSTEM	TRANSITION RAILING (TYPE WB)	MBGR (WOOD POST)	DESCRIPTION
FROM	TO	EA	EA	LF	
15+42.19	16+29.14	1	1	25	TYPE 12 BB LAYOUT
18+33.99	19+25.50	1	1	25	TYPE 12 B LAYOUT
TOTAL		2	2	50	

WATER POLLUTION CONTROL QUANTITIES

SHEET NUMBER	DESCRIPTION	UNIT	QUANTITY
WPC-1	TEMPORARY REINFORCED SILT FENCE	LF	374
WPC-1	TEMPORARY DRAINAGE INLET PROTECTION	EA	1

SUMMARY OF QUANTITIES
Q-1

REVISED BY | DATE REVISED
MAHESH MONGA | BILL LEE
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: G. ESHETE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN
Caltrans

LAST REVISION 04-29-10
DATE PLOTTED => 24-JUN-2010
TIME PLOTTED => 10:19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	14	49

4-29-10
REGISTERED ELECTRICAL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

HASHIM KHALID
No. 18054
Exp. 6/30/11
ELECTRICAL
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 ELECTRONIC COPIES OF THIS PLAN SHEET.

GENERAL NOTES:

1. LOWEST SAG POINT OF MESSENGER WIRE SHALL BE 25′ MINIMUM CLEARANCE FROM FINISHED GRADE OR ROADWAY.
2. OVERHEAD CONDUCTORS SHALL BE TIED ON MESSENGER WIRE WITH UV RESISTANT TIES AT EVERY 3′ MAXIMUM WITH SELF-CLINGING NYLON TIES.
3. OVERHEAD ENTRANCE CONDUIT FITTING SHALL BE INSTALLED IN SUCH A WAY SO THAT RAINWATER SHALL NOT SEEP INTO ELECTRICAL EQUIPMENT THROUGH THE ENTRANCE FITTING, FORM A DRIP LOOP AT THE ENTRANCE FITTING.
4. PROVIDE GUY WIRE, GUY GUARDS AND ANCHOR AS REQUIRED. POLE GUY SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER.
5. ESTABLISH CONTINUOUS GROUND WITH SYSTEM GROUND TO ALL METAL PARTS IN THE SYSTEM BY BONDING JUMPERS AND CONDUITS.
6. A GROUNDING ELECTRODE SHALL BE INSTALLED IN PULL BOXES ADJACENT TO WOOD POLES AND BOND TO RIGID METAL CONDUIT, UNLESS OTHERWISE NOTED.
7. MAXIMUM SPACING BETWEEN WOOD POLES WITH OVERHEAD CONDUCTORS SHALL NOT EXCEED 200′.
8. SIGNS SHOWN ARE "CONSTRUCTION AREA SIGNS". SEE TRAFFIC HANDLING PLANS FOR DETAILS.

PROJECT NOTES:

[1] INSTALL STATE-FURNISHED MODEL 170 CONTROLLER ASSEMBLY ON TEMPORARY FOUNDATION PLATFORM FOR MODEL 332 CABINET PER DETAIL 4 ON SHEET E-5. INSTALL UPS IN CONTROLLER CABINET.

[2] 2"C, 2#8 (LTG), 2#6 (SIGNAL), 2#8 (EB FB AND SIGN LTG), 2#8 (WB FB AND SIGN LTG)

[3] 2"C, 6 DLC, 2#6 (SIGNAL), 2#14 (PPB Ø1), 3#14 (SIGNAL Ø1), 2#14 (PPB Ø2), 3#14 (SIGNAL Ø2), 2#8 (SIGNAL COMMON), 6#14 (SPARES).

[4] 2"C, 6 DLC, 4#8 (LTG), 2#8 (EB FB AND SIGN LTG), 2#8 (WB FB AND SIGN LTG), 2#14 (PPB Ø1), 3#14 (SIGNAL Ø1), 2#14 (PPB Ø2), 3#14 (SIGNAL Ø2), 2#8 (SIGNAL COMMON), 6#14 (SPARES).

[5] 6 DLC, 4#8 (LTG), 3#4, 2#8 (EB FB AND SIGN LTG), 2#8 (WB FB AND SIGN LTG), 2#14 (PPB Ø1), 3#14 (SIGNAL Ø1), 2#14 (PPB Ø2), 3#14 (SIGNAL Ø2), 2#8 (SIGNAL COMMON), 6#14 (SPARES).

[6] 3 DLC, 2#8 (LTG), 2#8 (WB FB AND SIGN LTG), 2#14 (PPB Ø2), 3#14 (SIGNAL Ø2), 1#8 (SIGNAL COMMON), 3#14 (SPARES).

[7] 1 DLC, 2#8 (WB FB AND SIGN LTG).

[8] 2#8 (WB FB AND SIGN LTG).

[9] 3 DLC, 3#4, 2#8 (LTG), 2#8 (EB FB AND SIGN LTG), 2#14 (PPB Ø1), 3#14 (SIGNAL Ø1). 1#8 (SIGNAL COMMON), 3#14 (SPARES).

[10] 2"C, 1 DLC, 3#4, 2#8 (EB FB AND SIGN LTG).

[11] 2"C, 3#4, 2#8 (EB FB AND SIGN LTG).

[12] 2"C, 2#8 (EB FB AND SIGN LTG).

[13] LOOP DETECTOR SHALL HAVE 5 TURNS.

[14] [RC] Exist ELECTRICAL EQUIPMENT ON EXISTING POLE.

INDEX TO ELECTRICAL PLANS:

LEGEND, SYMBOLS & ABBREVIATIONS:

PROPOSED

WOOD POLE WITH 200 W HPS LUMINAIRE (ON MASTARM), SIGNAL HEAD, PPB, R10-6 SIGN AND CONDUIT RISER. SEE DETAIL 3 ON E-5.

Y / Y — ADVANCE FLASHING BEACON WITH A W3-3 SIGN AND SIGN LIGHTING MOUNTED ON A WOOD POLE. SEE DETAIL 1 ON E-5.

WOOD POLE WITH 200 W HPS LUMINAIRE (ON MASTARM), SIGNAL HEAD (ON MASTARM AND POLE) AND CONDUIT RISER. SEE DETAIL 2 ON E-5.

FUEL — FUEL TANK

—X—X— TEMPORARY FENCE WITH GATE

—F— FUEL LINE

OH — OVERHEAD 5/8", 7 STRAND GALVANIZED MESSENGER CABLE WITH CONDUCTORS AS NOTED UNLESS OTHERWISE SPECIFIED.

PG&E — PACIFIC GAS AND ELECTRIC

UPS — UNINTERRUPTIBLE POWER SUPPLY

ATS — AUTOMATIC TRANSFER SWITCH

(G) — GENERATOR

TEMPORARY SIGNAL SYSTEM

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY | DATE REVISED
HASHIM KHALID | RAJPREET SINGH
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | ALI BAKHDOUD
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-ELECTRICAL DESIGN

LAST REVISION | DATE PLOTTED => 24-JUN-2010
04-29-10 | TIME PLOTTED => 11:09

BORDER LAST REVISED 4/11/2008 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s128647 DGN FILE => 43S820ua001 | CU 06391 | EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	15	49

4-29-10
REGISTERED ELECTRICAL ENGINEER DATE

HASHIM KHALID
No. 18054
Exp. 6/30/11
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

6-21-10
PLANS APPROVAL DATE

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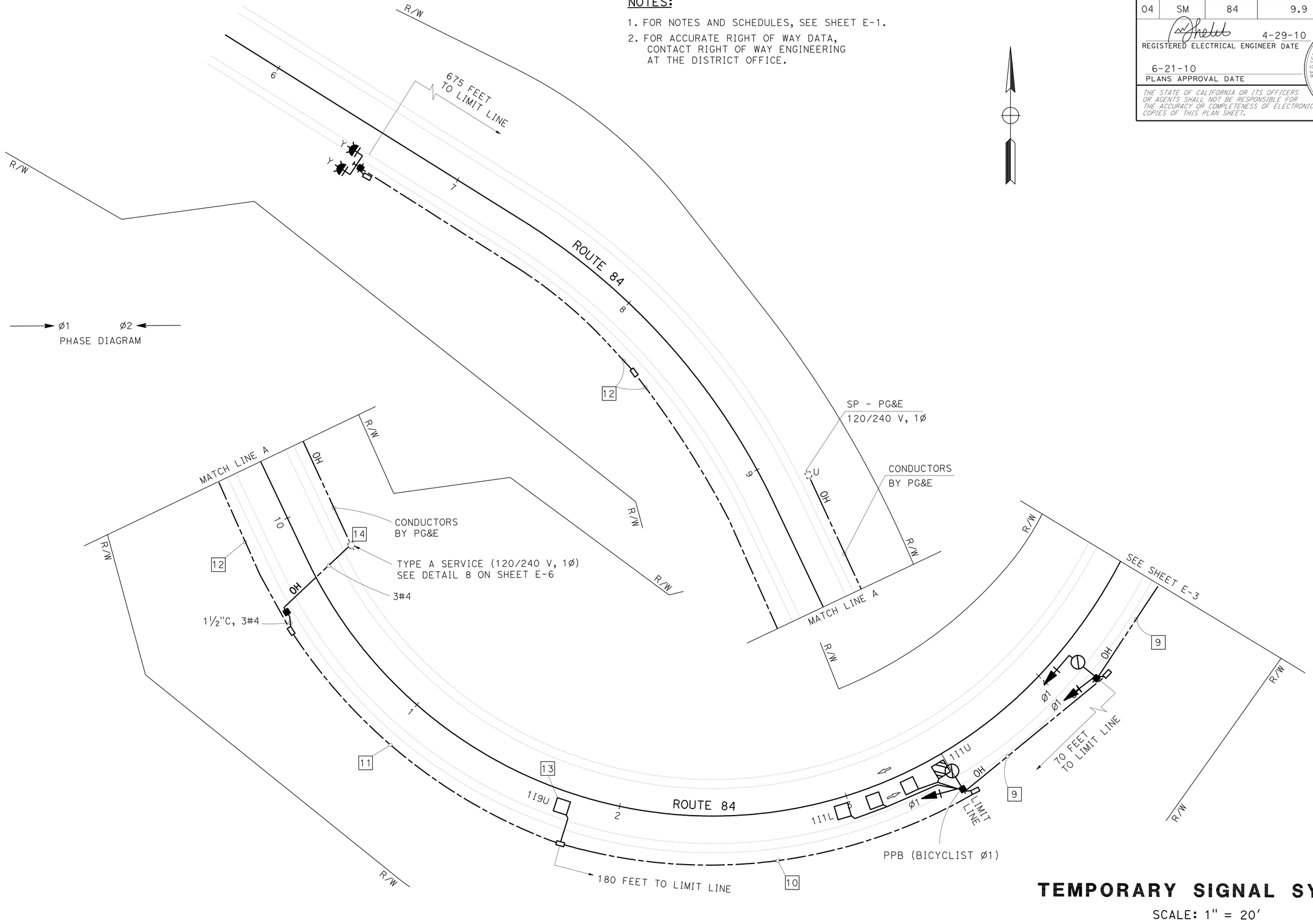
NOTES:

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



TEMPORARY SIGNAL SYSTEM

SCALE: 1" = 20'

E-2

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR: ALI BAKHDOUD
CALCULATED-DESIGNED BY: HASHIM KHALID
CHECKED BY: RAJPREET SINGH
REVISED BY / DATE REVISED

LAST REVISION: DATE PLOTTED => 24-JUN-2010; TIME PLOTTED => 10:12
04-29-10

BORDER LAST REVISED 4/11/2008
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
USERNAME => s128647
DGN FILE => 43S820ua002
CU 06391
EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	16	49

REGISTERED ELECTRICAL ENGINEER — 4-29-10

PLANS APPROVAL DATE — 6-21-10

HASHIM KHALID
No. 18054
Exp. 6/30/11
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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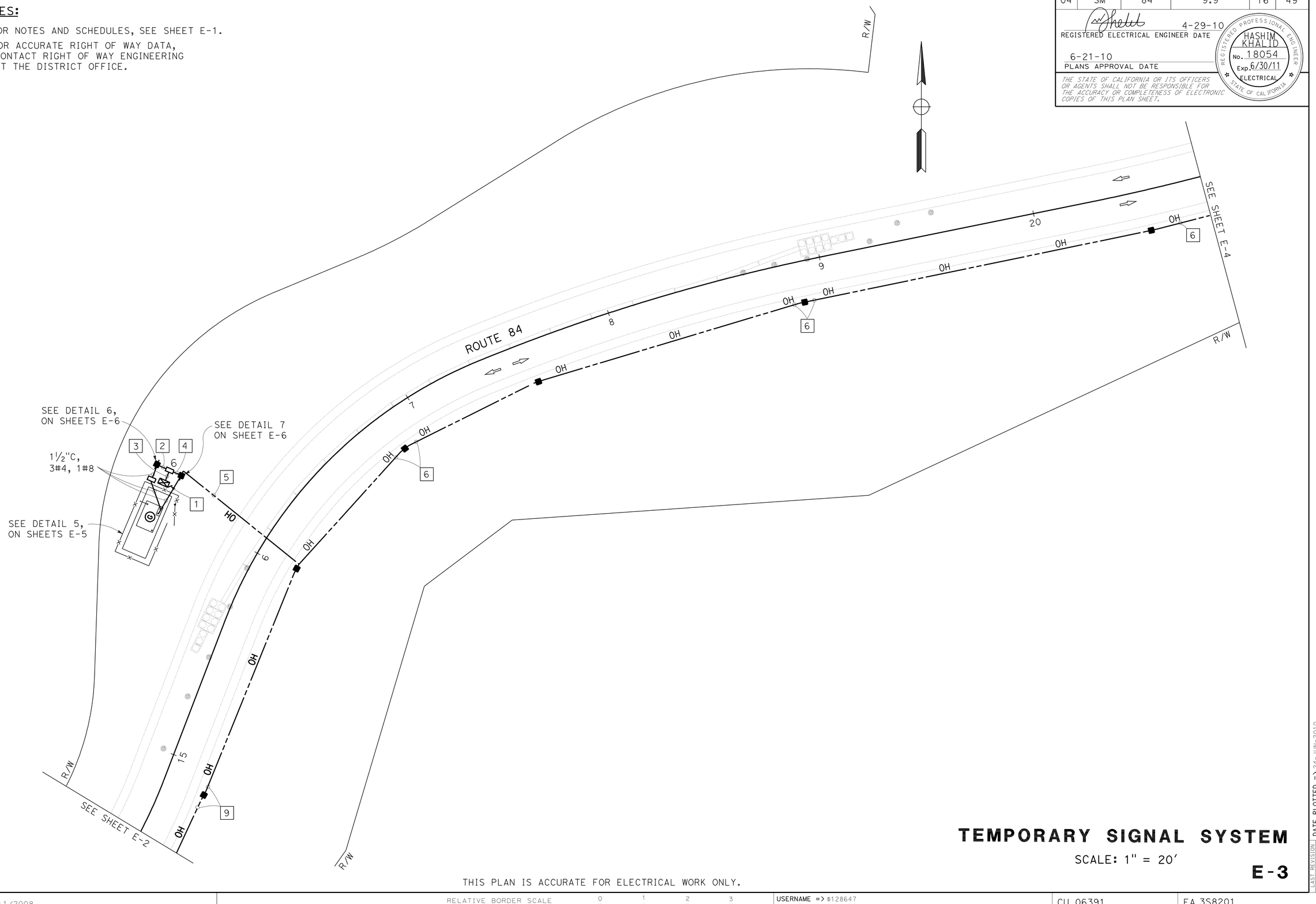
NOTES:

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



TEMPORARY SIGNAL SYSTEM

SCALE: 1" = 20'

E-3

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: ALI BAKHDOUD
CALCULATED-DESIGNED BY: HASHIM KHALID
CHECKED BY: RAJPREET SINGH
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 24-JUN-2010 | TIME PLOTTED => 11:23

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => s128647
DGN FILE => 43S820ua003

CU 06391

EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	17	49

REGISTERED ELECTRICAL ENGINEER — 4-29-10

PLANS APPROVAL DATE — 6-21-10

HASHIM KHALID No. 18054 Exp. 6/30/11 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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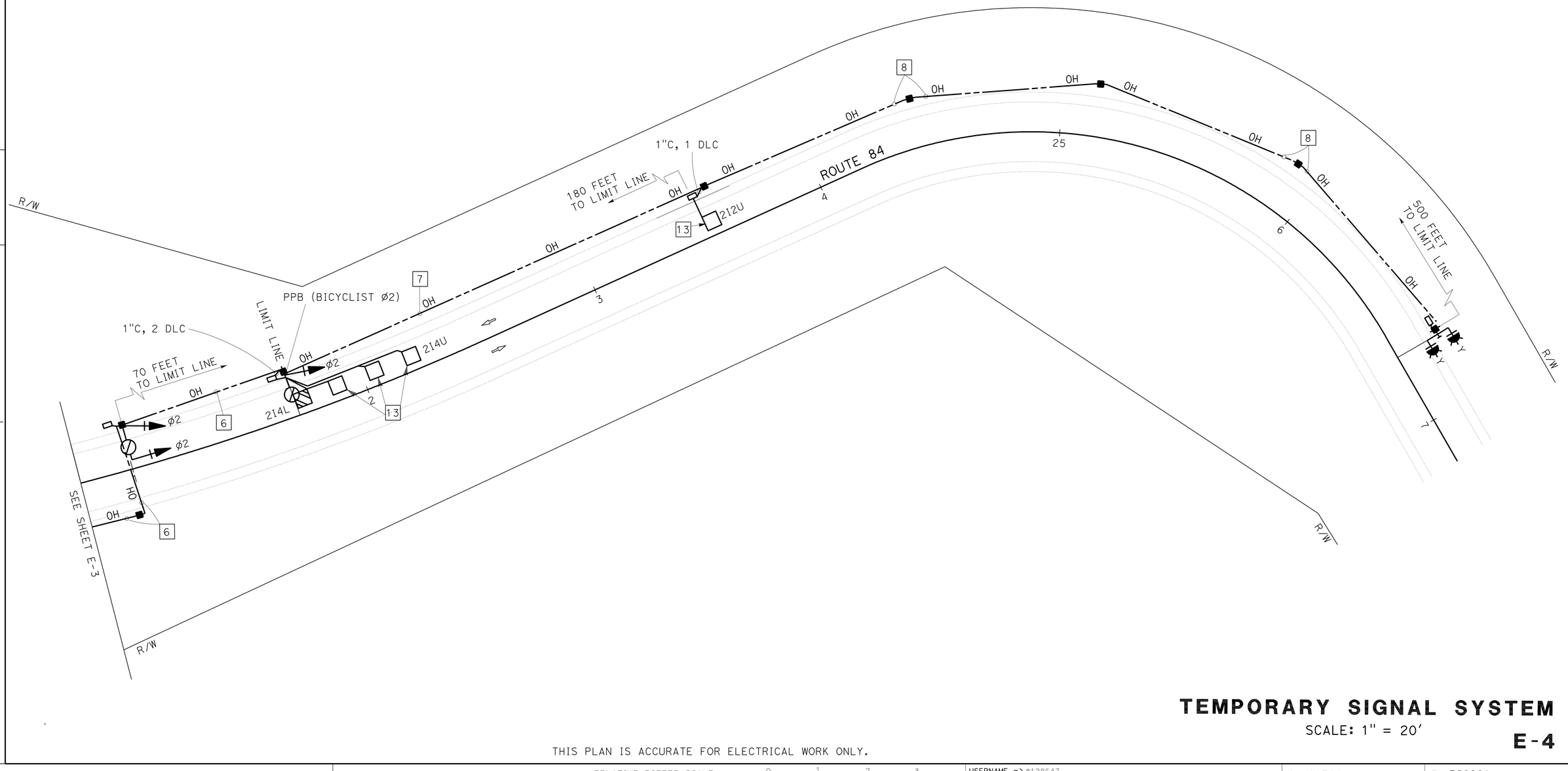
NOTES:

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



TEMPORARY SIGNAL SYSTEM

SCALE: 1" = 20'

E-4

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

CALCULATED-DESIGNED BY: HASHIM KHALID
CHECKED BY: RAJPREET SINGH
FUNCTIONAL SUPERVISOR: ALI BAKHDOUD
REVISED BY / DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-ELECTRICAL DESIGN

LAST REVISION: DATE PLOTTED => 24-JUN-2010; TIME PLOTTED => 11:23; 04-29-10

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => s128647
DGN FILE => 43S820ua004

CU 06391

EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	18	49

REGISTERED ELECTRICAL ENGINEER — 4-29-10 DATE

HASHIM KHALID No. 18054 Exp 6/30/11 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

6-21-10
PLANS APPROVAL DATE

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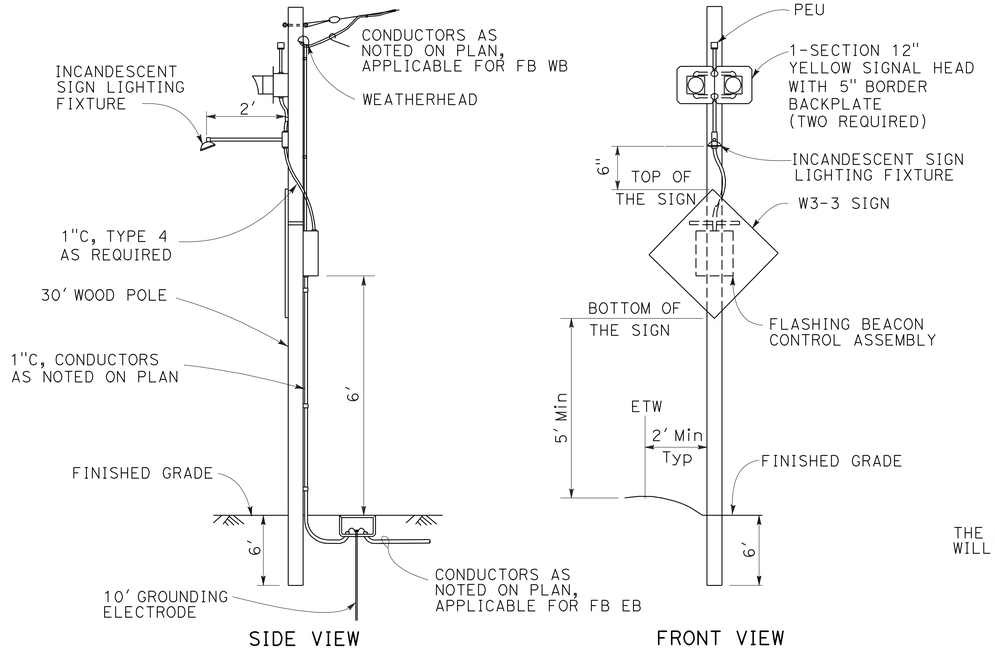
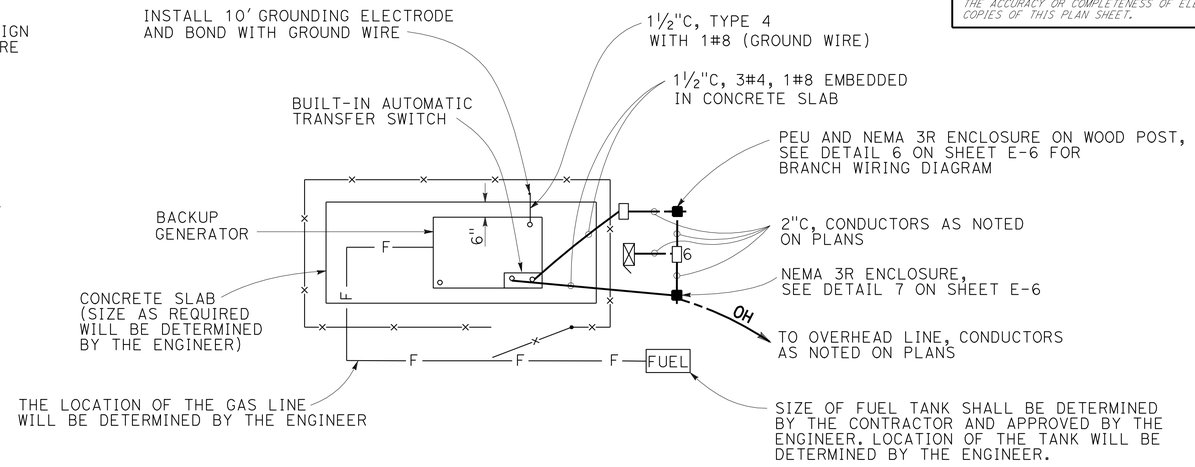
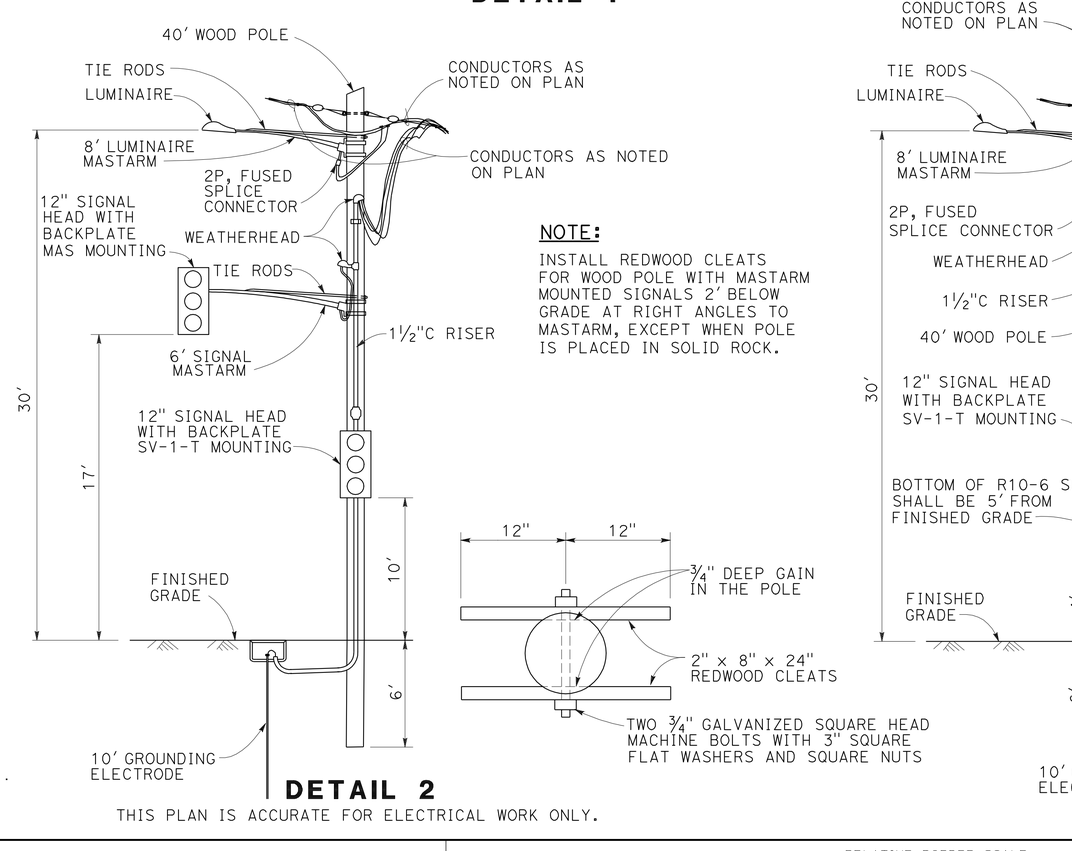


DETAIL 1



INSTALL CONDUIT RUNS AS DIRECTED BY THE ENGINEER

DETAIL 5

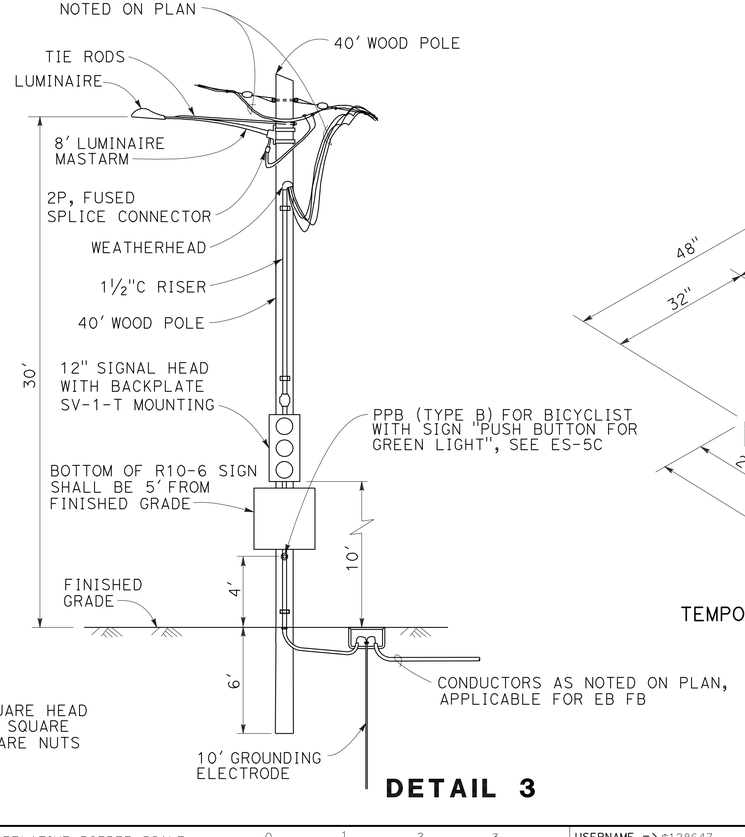


NOTE:

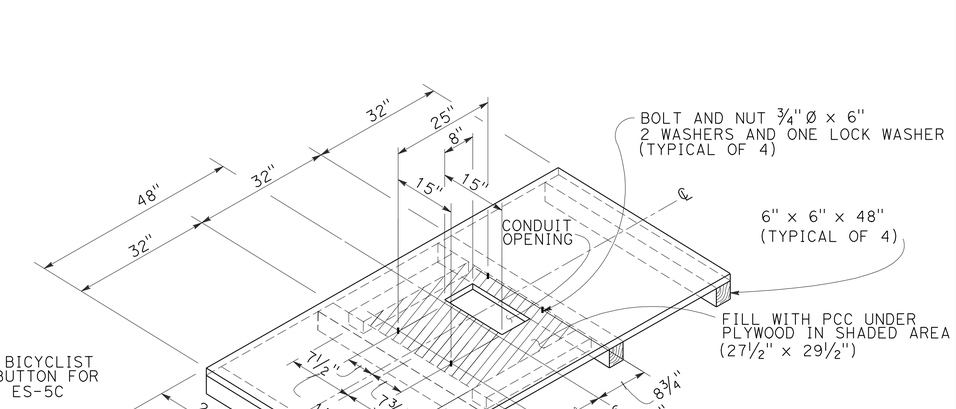
INSTALL REDWOOD CLEATS FOR WOOD POLE WITH MASTARM MOUNTED SIGNALS 2' BELOW GRADE AT RIGHT ANGLES TO MASTARM, EXCEPT WHEN POLE IS PLACED IN SOLID ROCK.

DETAIL 2

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



DETAIL 3



TEMPORARY MODEL 332 CABINET FOUNDATION PLATFORM

DETAIL 4

TEMPORARY SIGNAL SYSTEM
(ELECTRICAL DETAILS)

NO SCALE

E-5

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
HASHIM KHALID	RAJPREET SINGH		

FUNCTIONAL SUPERVISOR: ALI BAKHDOUD

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-ELECTRICAL DESIGN

LAST REVISION | DATE PLOTTED => 24-JUN-2010
TIME PLOTTED => 11:23
04-29-10

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => s128647
DGN FILE => 43S820ua005

CU 06391

EA 3S8201

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	84	9.9	19	49

REGISTERED ELECTRICAL ENGINEER — 4-29-10 DATE

HASHIM KHALID No. 18054 Exp. 6/30/11 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

6-21-10
PLANS APPROVAL DATE

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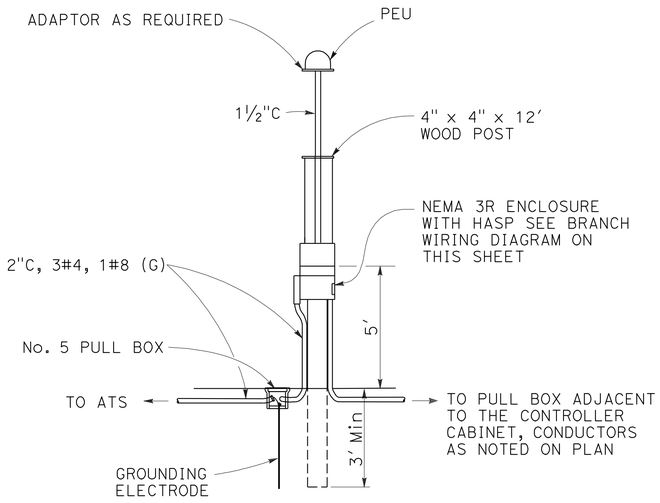
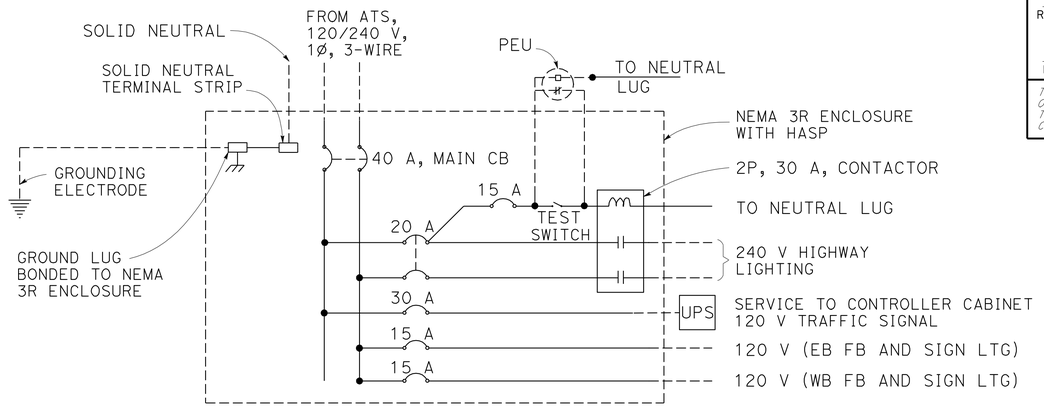
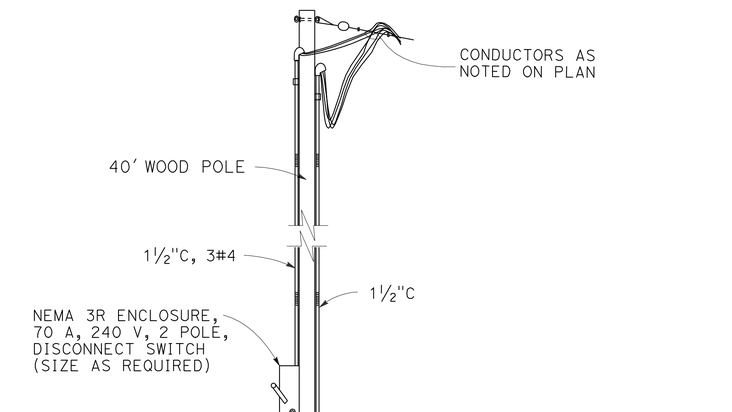


DETAIL 6

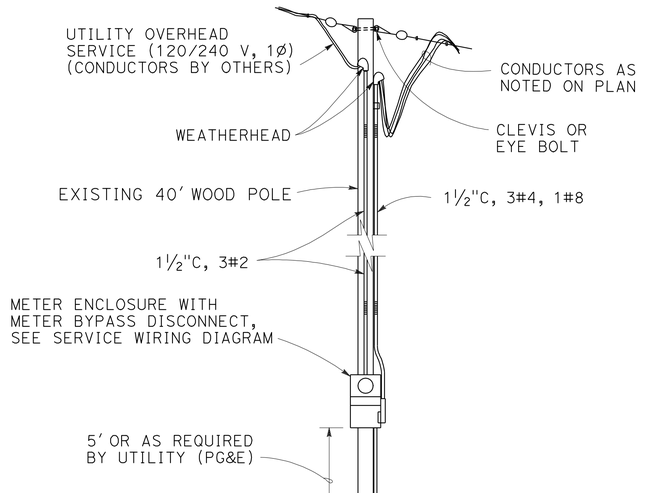


PROVIDE ITEMS SHOWN IN THIS DIAGRAM, SEE RSP ES-2C AND RSP ES-2D FOR MORE INFORMATION.

BRANCH WIRING DIAGRAM

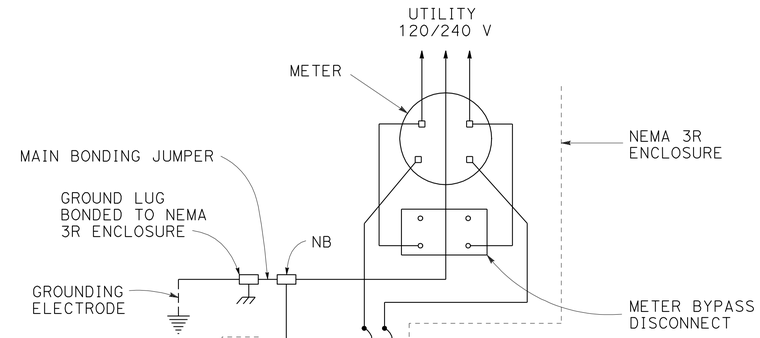


DETAIL 7



DETAIL 8

ELECTRICAL SERVICE ON WOOD POLE



SERVICE WIRING DIAGRAM

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

TEMPORARY SIGNAL SYSTEM
(ELECTRICAL DETAILS)
E-6

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR: ALI BAKHDOUD
CALCULATED-DESIGNED BY: HASHIM KHALID
CHECKED BY: RAJPREET SINGH
REVISED BY
DATE REVISED

LAST REVISION 04-29-10
DATE PLOTTED => 24-JUN-2010
TIME PLOTTED => 11:24

BORDER LAST REVISED 4/11/2008
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
USERNAME => s128647
DGN FILE => 43S820ua006
CU 06391
EA 3S8201

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	20	49

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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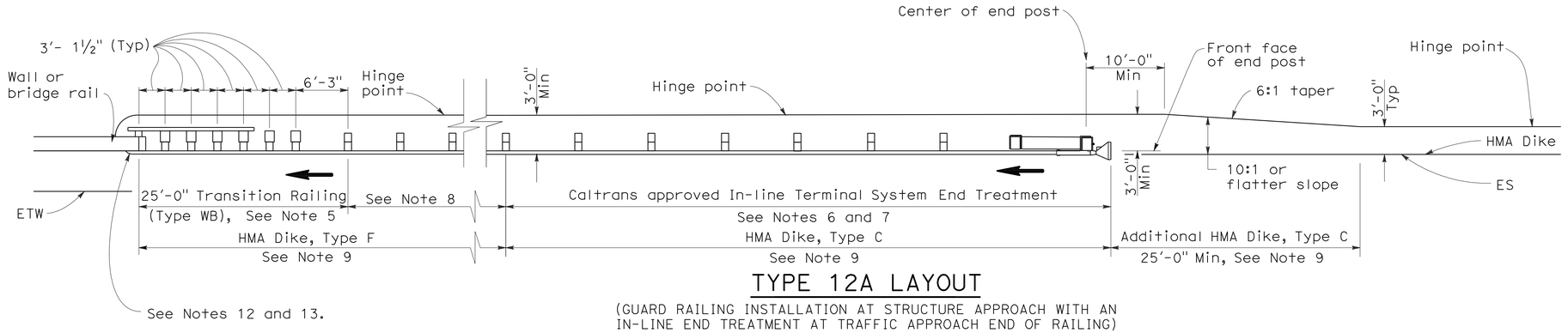
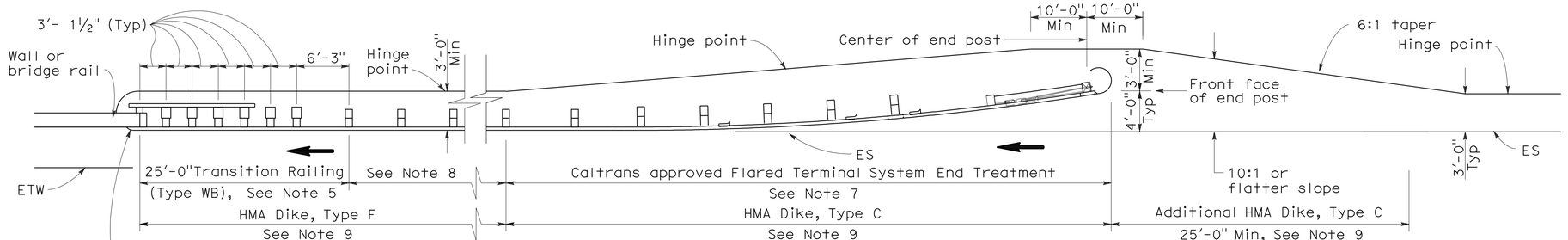
To accompany plans dated 6-21-10



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:

1. Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
2. Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
3. 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.
4. Direction of adjacent traffic indicated by ➔.
5. For Transition Railing (Type WB) details for Types 12A and 12B Layouts, see Standard Plan A77J4.
6. In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
7. The type of terminal system end treatment to be used will be shown on the Project Plans.
8. 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.
9. Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
10. Type 12A or Type 12B Layouts are typically used:
    a. 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.
    b. 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.
    c. To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
    d. To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
11. 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.
12. 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.
13. 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

12-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	21	49

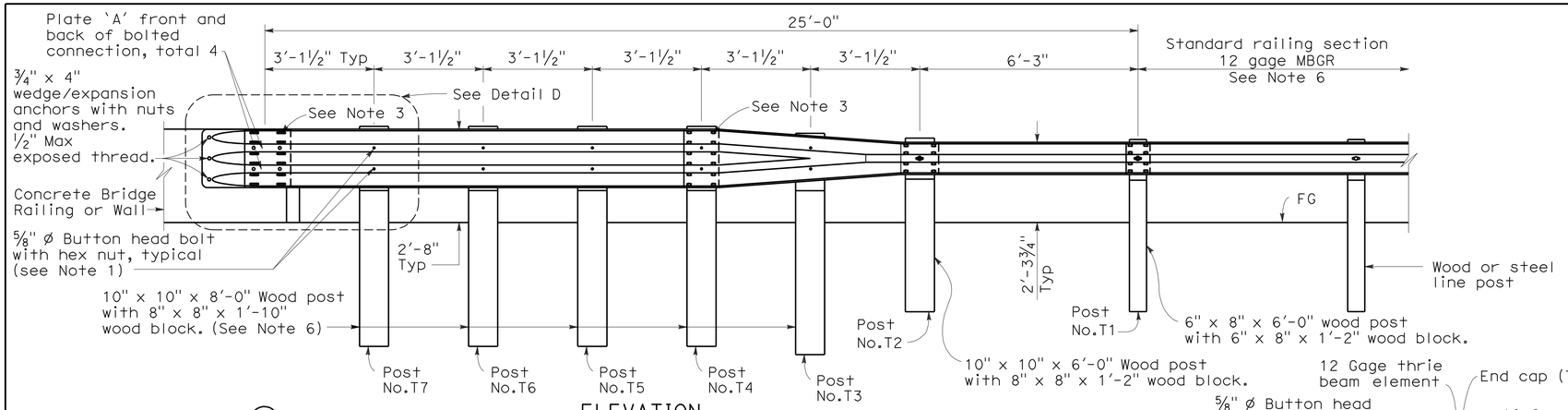
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 5, 2009
PLANS APPROVAL DATE

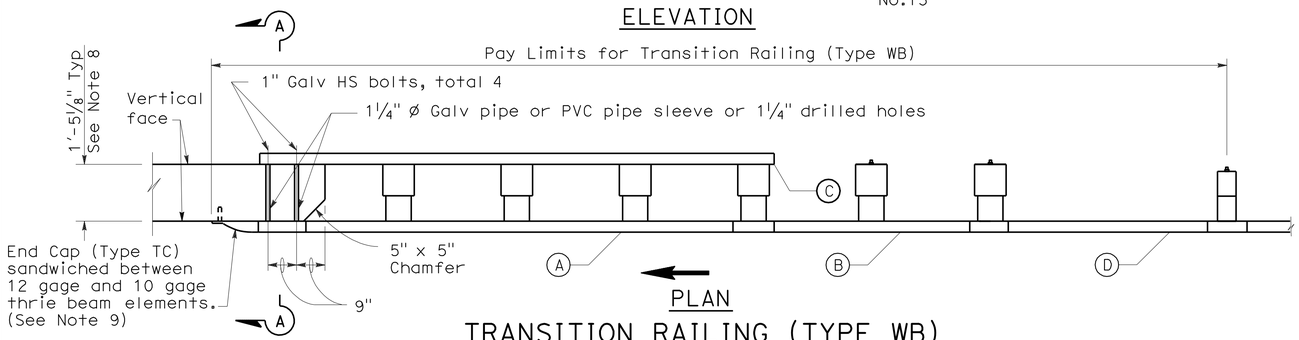
REGISTERED PROFESSIONAL ENGINEER — Randell D. Hiatt — No. C50200 — Exp. 6-30-09 CIVIL — STATE OF CALIFORNIA

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 6-21-10



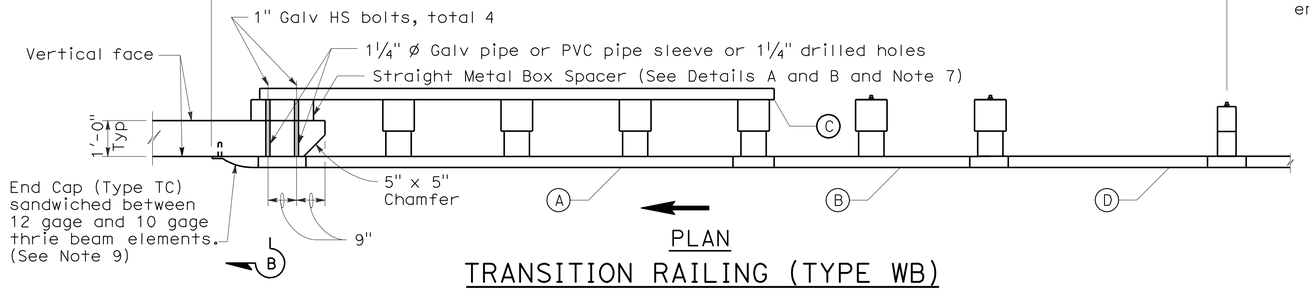
ELEVATION



PLAN

TRANSITION RAILING (TYPE WB)

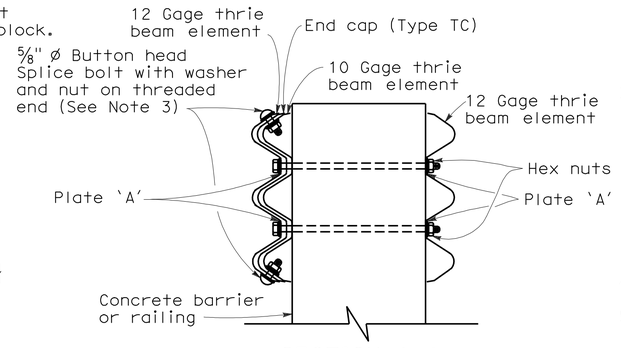
(No Blockout Attachment)



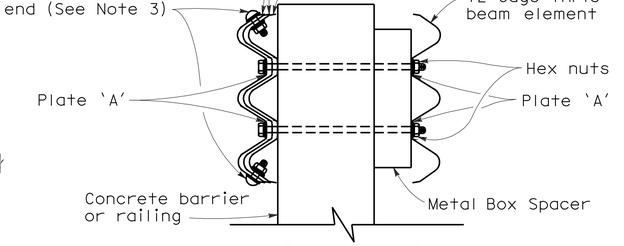
PLAN

TRANSITION RAILING (TYPE WB)

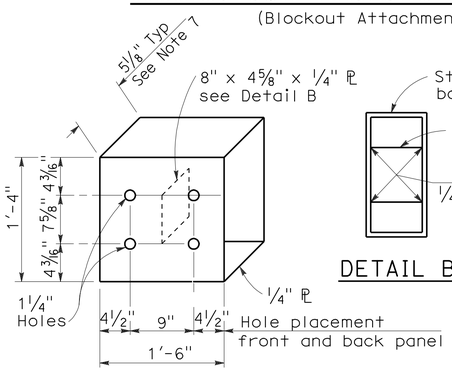
(Blockout Attachment)



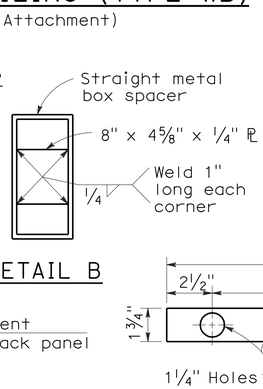
SECTION A-A



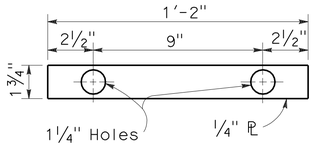
SECTION B-B



DETAIL A



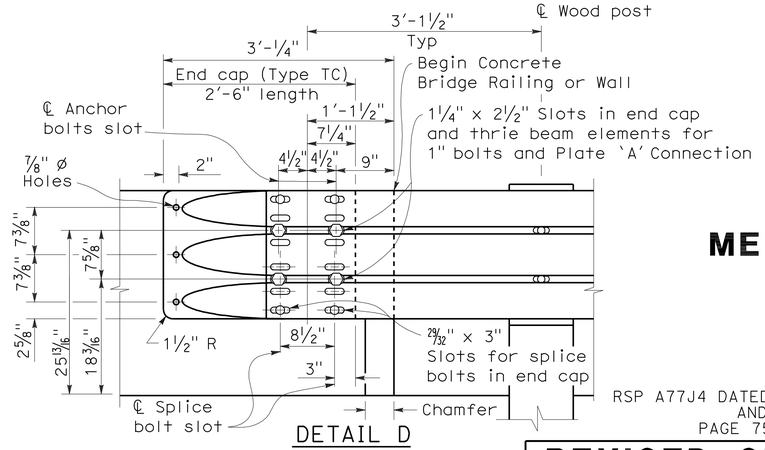
DETAIL B



DETAIL C

STRAIGHT METAL BOX SPACER

PLATE 'A'



DETAIL D

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'-3½" length)

  10 gage = 0.135" thick

  12 gage = 0.108" thick

NOTES:

1. Use 5/8 " ø Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
2. 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.
3. 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 " ø. 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.
4. Direction of adjacent traffic indicated by →.
5. The top elevation of Post Nos.T2 through T7 shall not project more than 1" above the top elevation of the rail element.
6. 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.
7. 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.
8. 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.
9. 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.

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.

REVISED STANDARD PLAN RSP A77J4

2006 REVISED STANDARD PLAN RSP A77J4

5-14-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	22	49

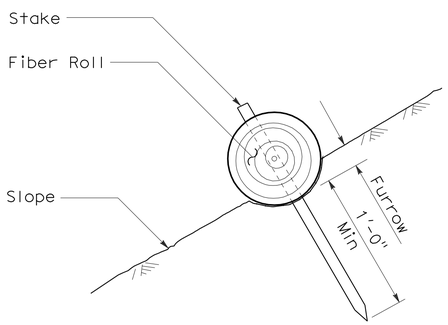
LICENSED LANDSCAPE ARCHITECT

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.

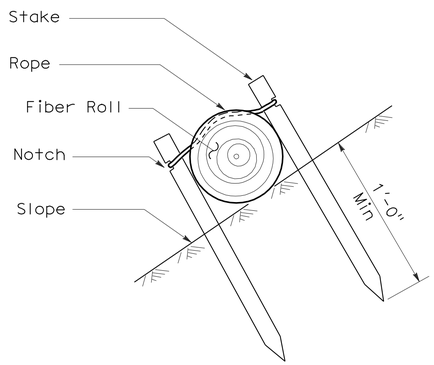
LICENSED LANDSCAPE ARCHITECT
Gregory A. Balzer 2978
Signature
02-28-11
Renewal Date
03-04-09
Date
STATE OF CALIFORNIA

To accompany plans dated 6-21-10

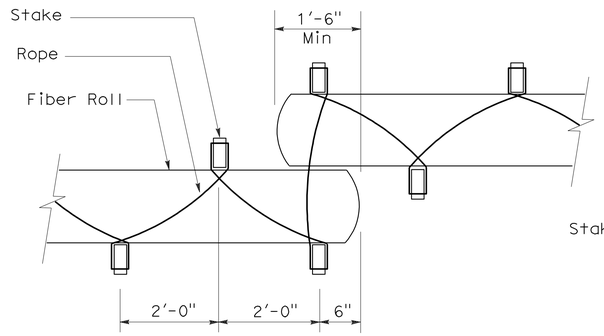


SECTION

FIBER ROLL (TYPE 1)

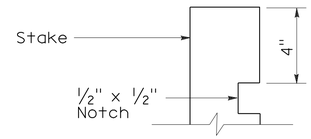


SECTION



PLAN

FIBER ROLL (TYPE 2)

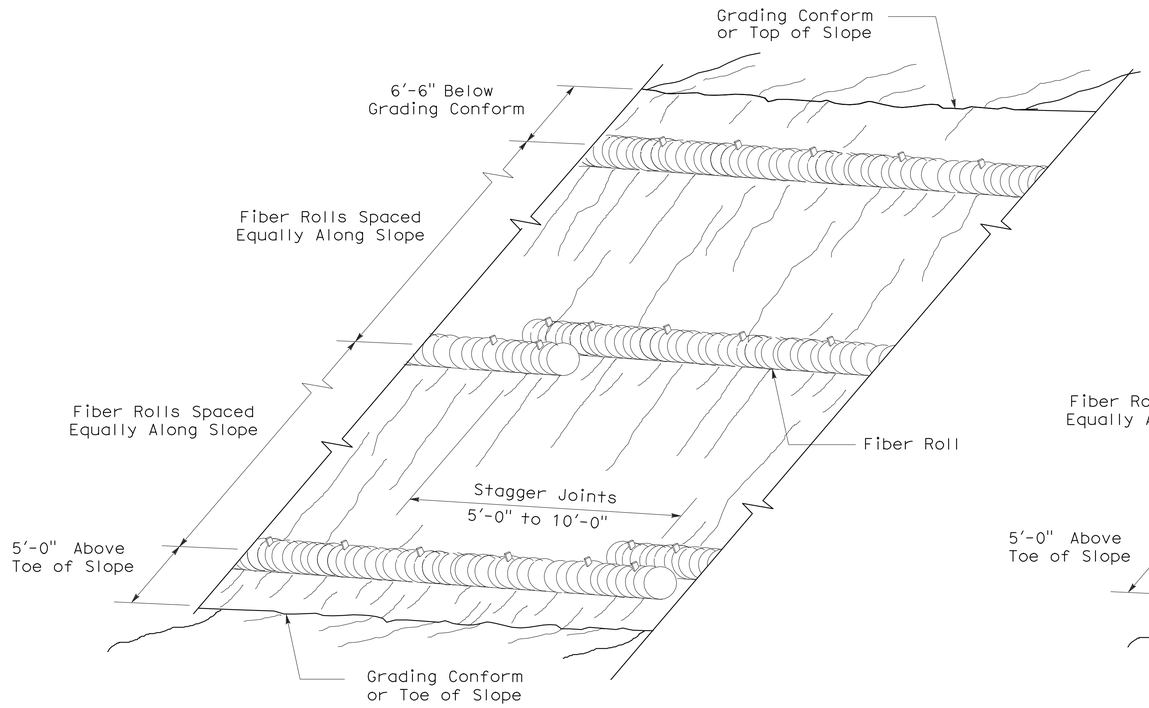


ELEVATION

STAKE NOTCH DETAIL

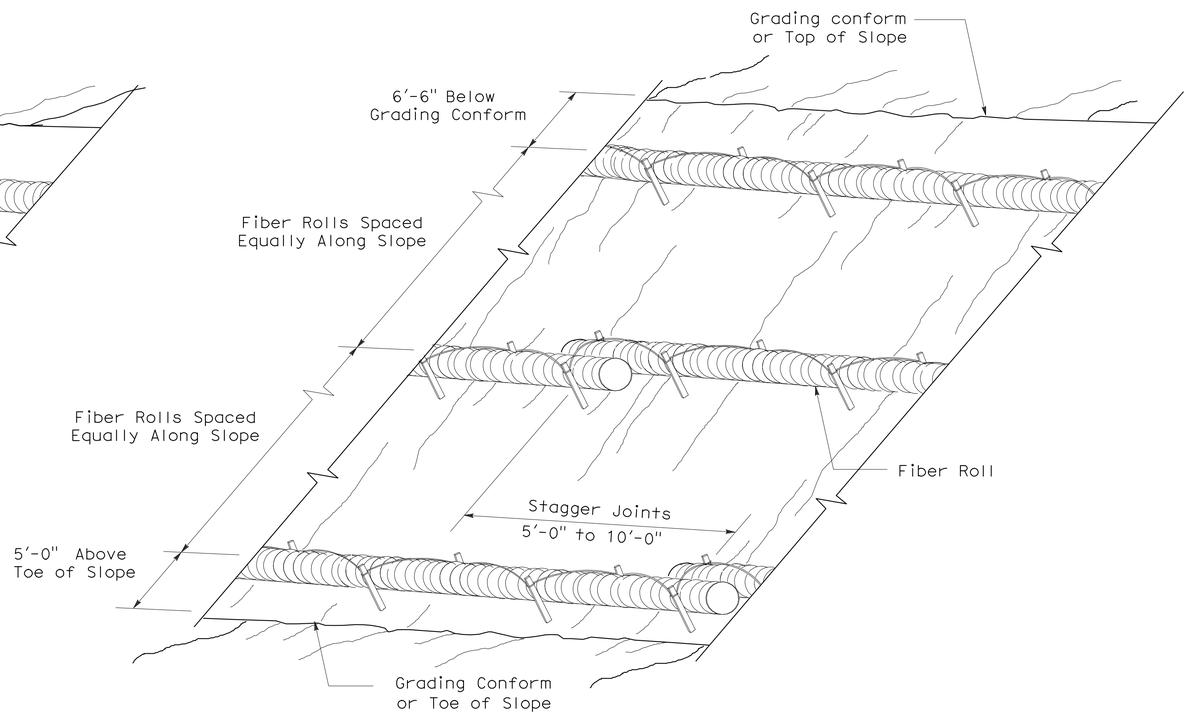
NOTES:

1. Fiber roll spacing varies depending upon slope inclination.
2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



PERSPECTIVE

FIBER ROLL (TYPE 1)



PERSPECTIVE

FIBER ROLL (TYPE 2)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL DETAILS (FIBER ROLL)

NO SCALE

RNSP H51 DATED APRIL 3, 2009 SUPERSEDES NSP H51 DATED DECEMBER 1, 2006
THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED NEW STANDARD PLAN RNSP H51

2006 REVISED NEW STANDARD PLAN RNSP H51

3-4-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	23	49

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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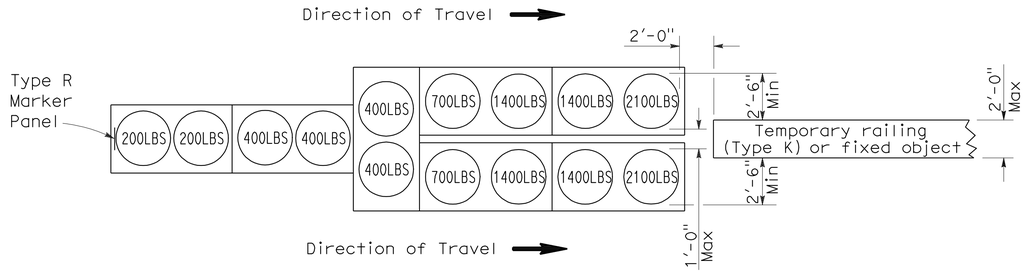
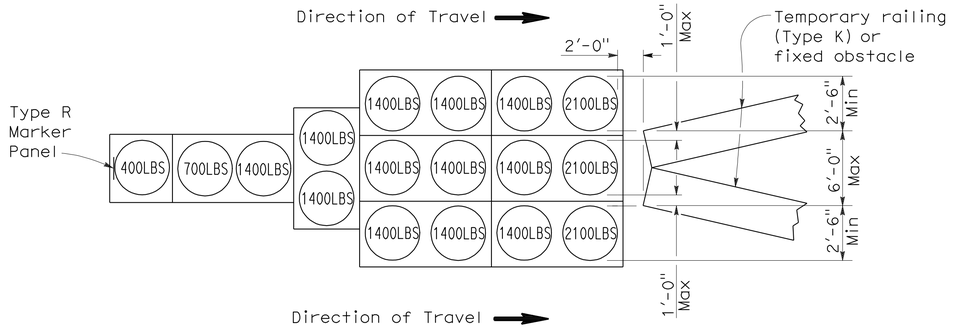
To accompany plans dated 6-21-10



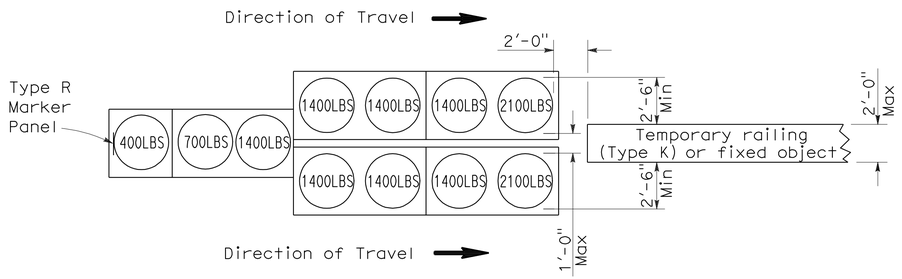
ARRAY 'TU14'

Approach speed 45 mph or more



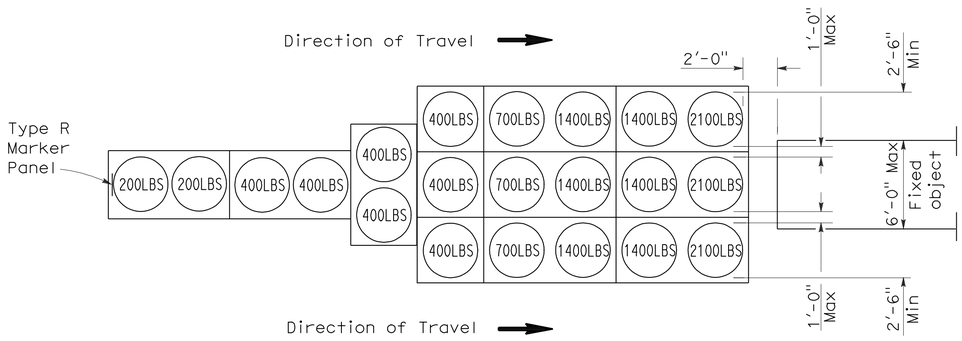
ARRAY 'TU17'

Approach speed less than 45 mph



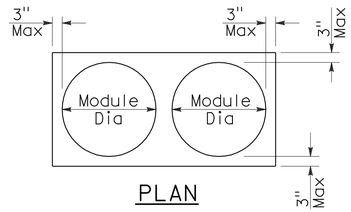
ARRAY 'TU11'

Approach speed less than 45 mph

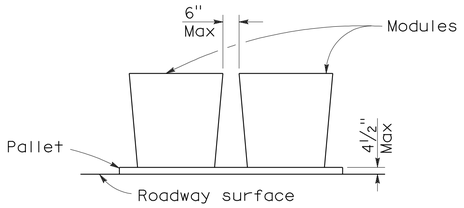


ARRAY 'TU21'

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

2006 REVISED STANDARD PLAN RSP T1A

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	24	49

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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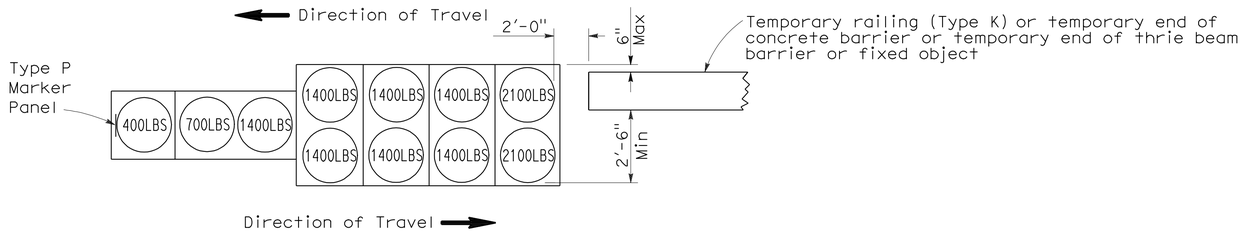
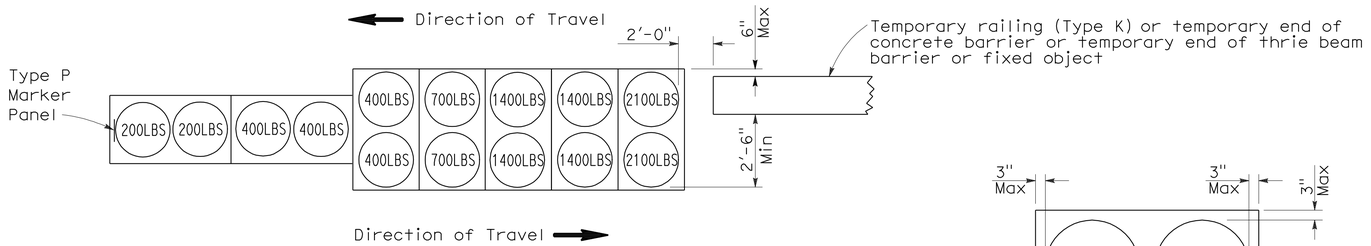
To accompany plans dated 6-21-10



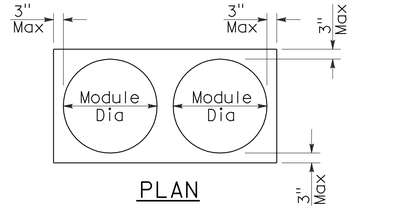
ARRAY 'TB11'

Approach speed less than 45 mph

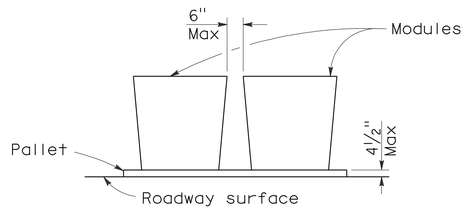


ARRAY 'TB14'

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

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	25	49

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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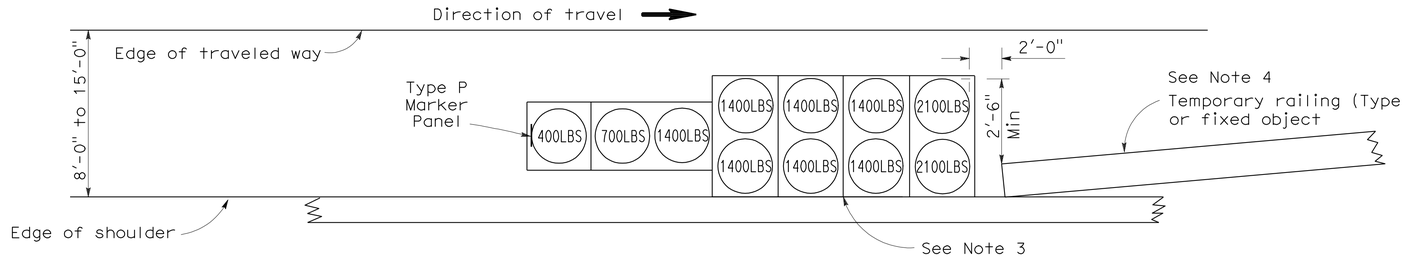
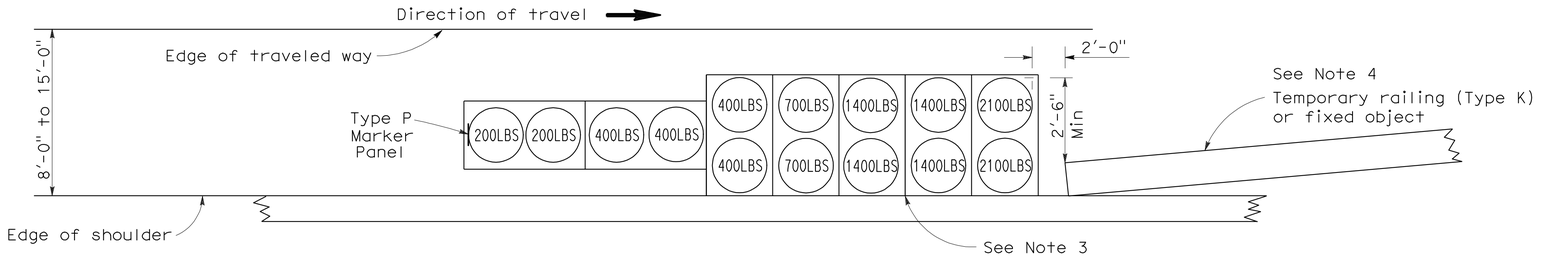
To accompany plans dated 6-21-10



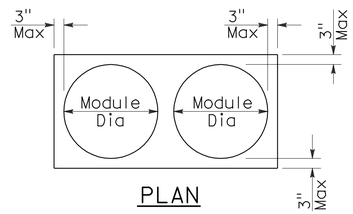
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

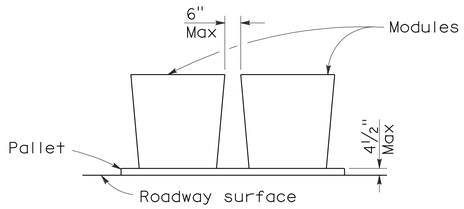


ARRAY 'TS14'

Approach speed 45 mph or more
See Note 9



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 11

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (SHOULDER INSTALLATIONS)

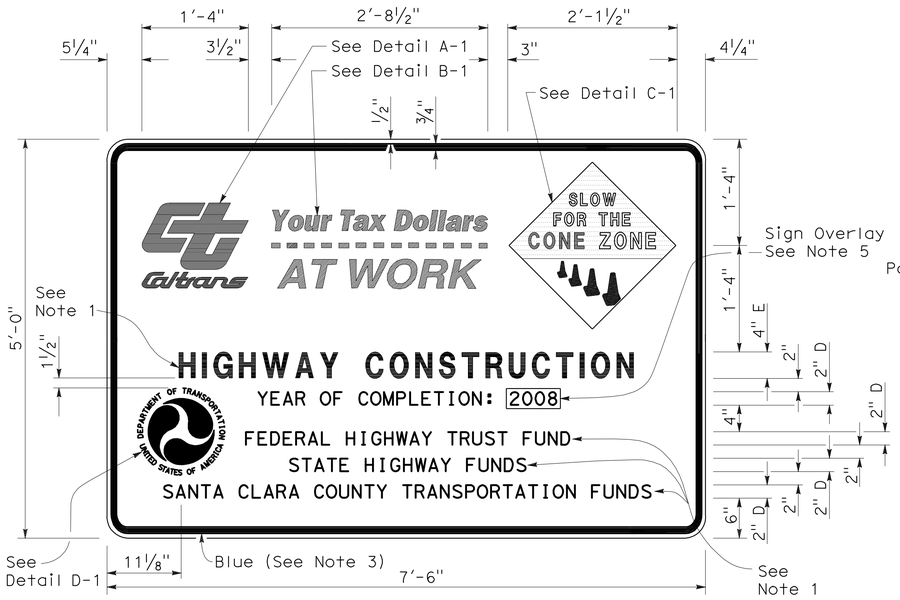
NO SCALE

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

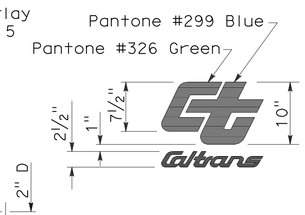
REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

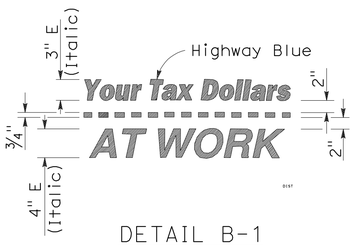
5-15-08



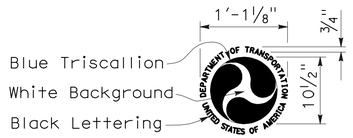
TYPE 1



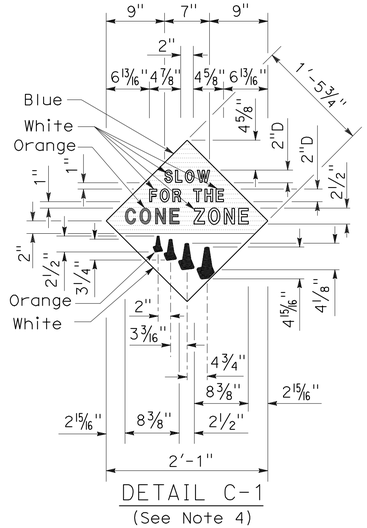
DETAIL A-1



DETAIL B-1
(See Note 3)



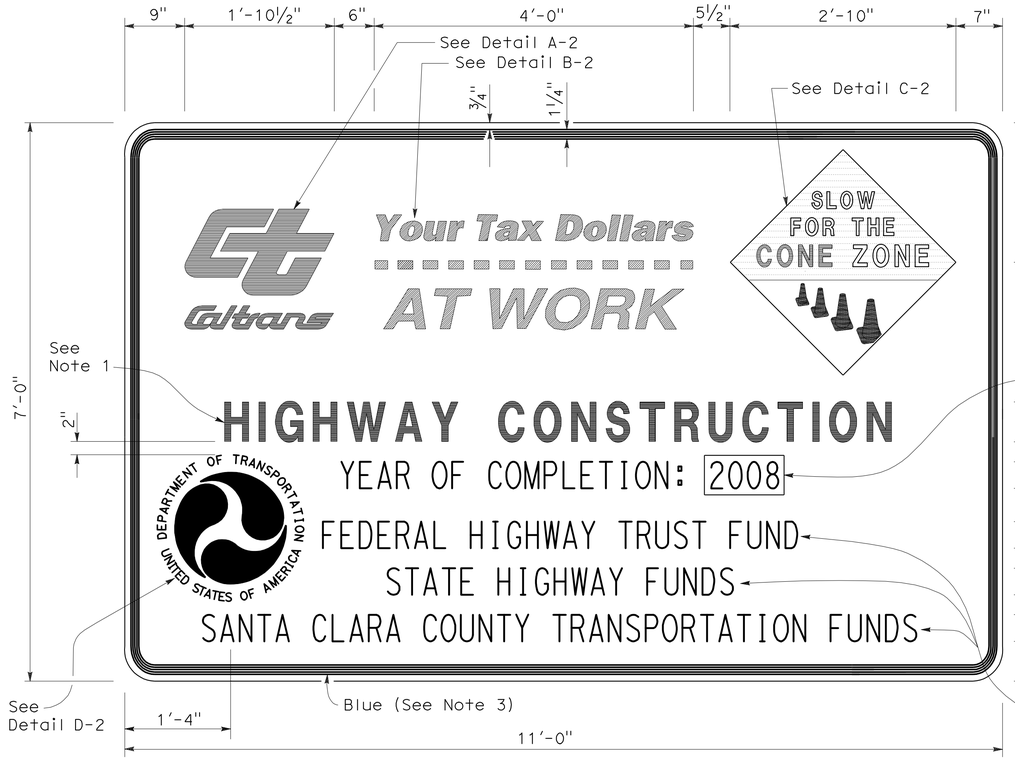
DETAIL D-1
(See Note 6)



DETAIL C-1
(See Note 4)

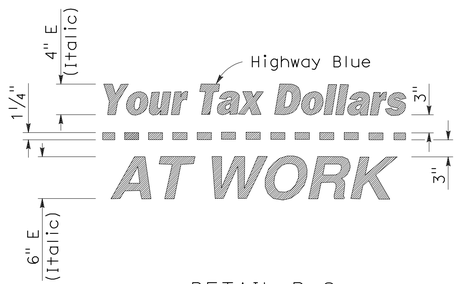
NOTES:

1. The sign messages shown for type of project and fund types are examples only. See the Special Provisions for the applicable type of project and fund type messages to be used.
2. Except as otherwise shown, the legend of sign shall be black on a white background (non-reflective).
3. The border of the signs and details "B-1" and "B-2" shall be blue (non-reflective).
4. The diamond in details "C-1" and "C-2" shall be blue for the background of message, " SLOW FOR THE CONE ZONE", and white background for the orange cones. The color and type of font for the "SLOW FOR THE CONE ZONE" message shall be: "SLOW" white D; "FOR THE" white D; "CONE" orange Arial font; "ZONE" white Arial font.
5. Year of completion of project construction shown on the overlay is an example only. See the Special Provisions.
6. Use when the Project involves Federal Highway Trust Fund.

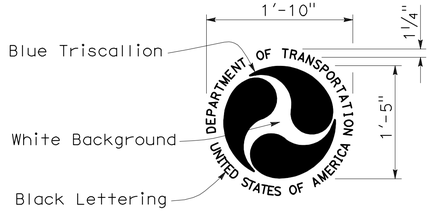


TYPE 2

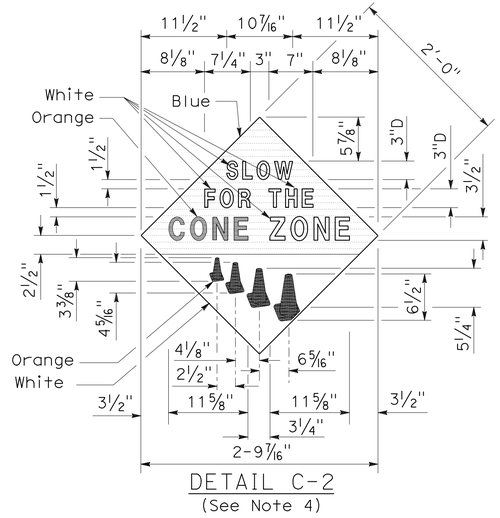
DETAIL A-2



DETAIL B-2
(See Note 3)



DETAIL D-2
(See Note 6)



DETAIL C-2
(See Note 4)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PROJECT FUNDING IDENTIFICATION SIGNS

NO SCALE

RSP T7 DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN T7
DATED MAY 1, 2006 - PAGE 217 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T7

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	26	49

REGISTERED CIVIL ENGINEER

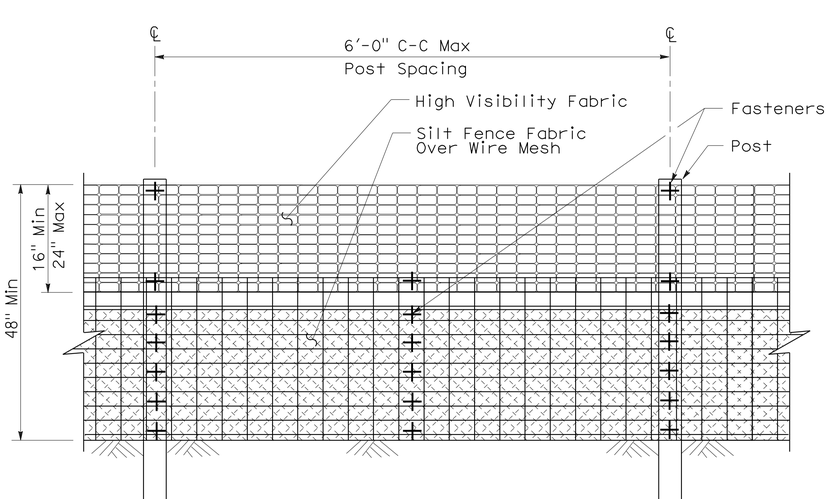
Greg W. Edwards
No. C36386
Exp. 6-30-08
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

November 17, 2006
PLANS APPROVAL DATE

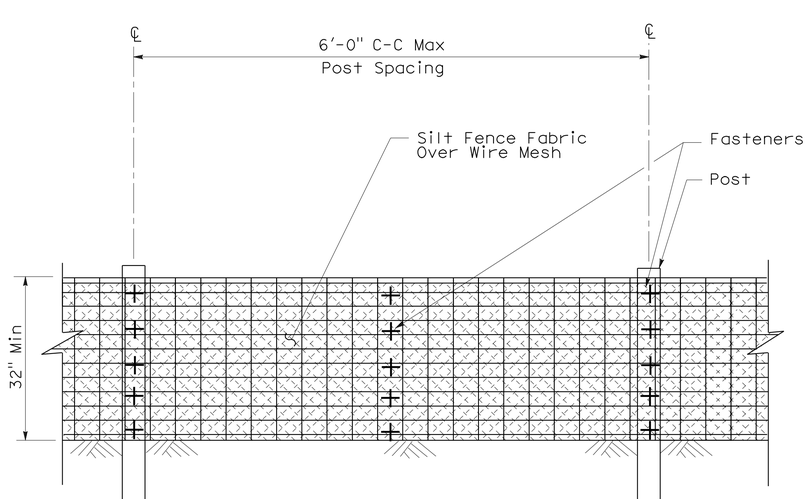
To accompany plans dated 6-21-10

2006 REVISED STANDARD PLAN RSP T7

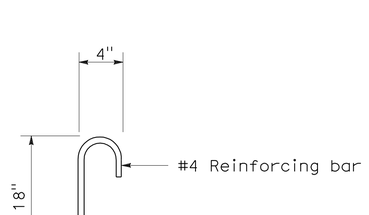
9-7-06



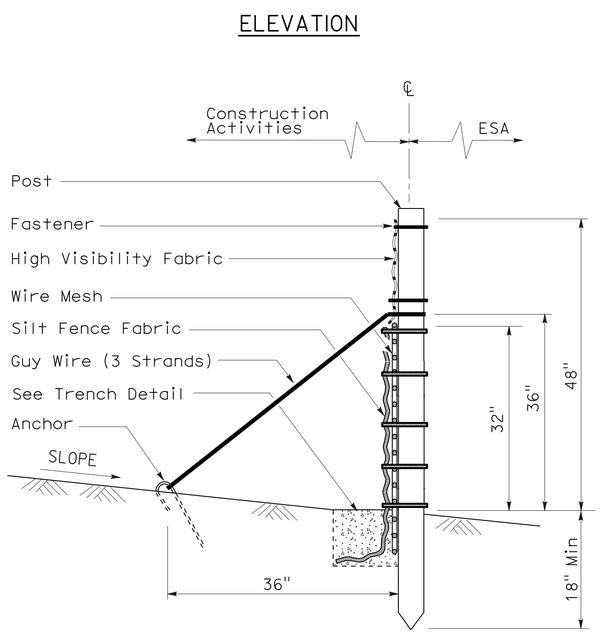
ELEVATION



ELEVATION

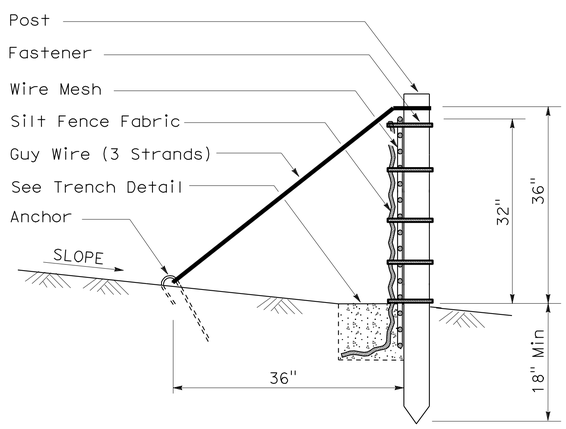


ANCHOR



SECTION

TEMPORARY REINFORCED SILT FENCE (TYPE 1)



SECTION

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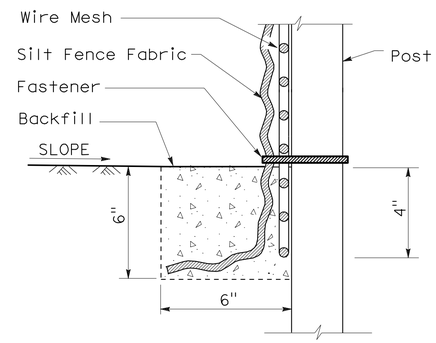


SECTION

TRENCH DETAIL

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	27	49

Robert B Schott
LICENSED LANDSCAPE ARCHITECT

April 3, 2009
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
Robert B. Schott 3035
Signature
11-30-10
Renewal Date
2-25-09
Date
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 6-21-10

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY REINFORCED SILT FENCE)

NO SCALE

NSP T60 DATED APRIL 3, 2009 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T60

2006 NEW STANDARD PLAN NSP T60

1-7-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	28	49

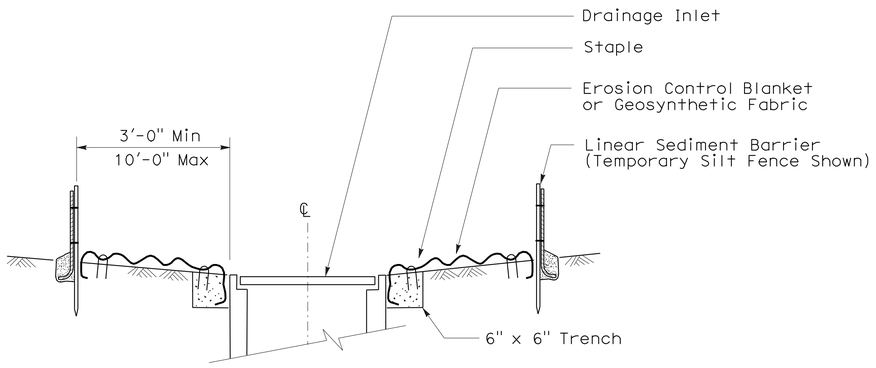
Robert B Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS Approval DATE

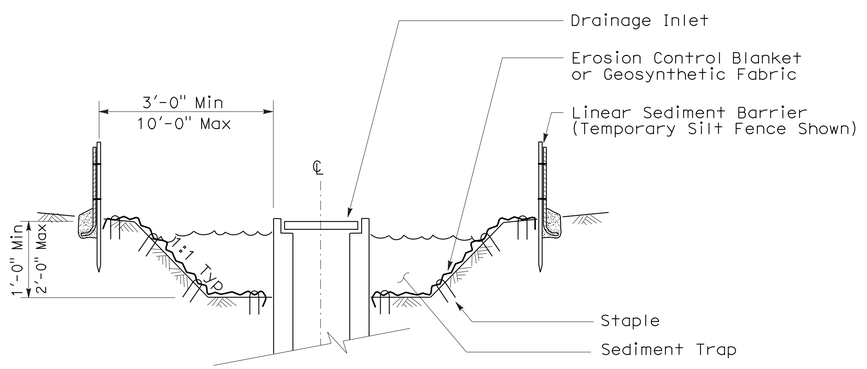
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott 3035 — Signature — 11-04-08 Renewal Date — 08-11-08 Date — STATE OF CALIFORNIA

To accompany plans dated 6-21-10



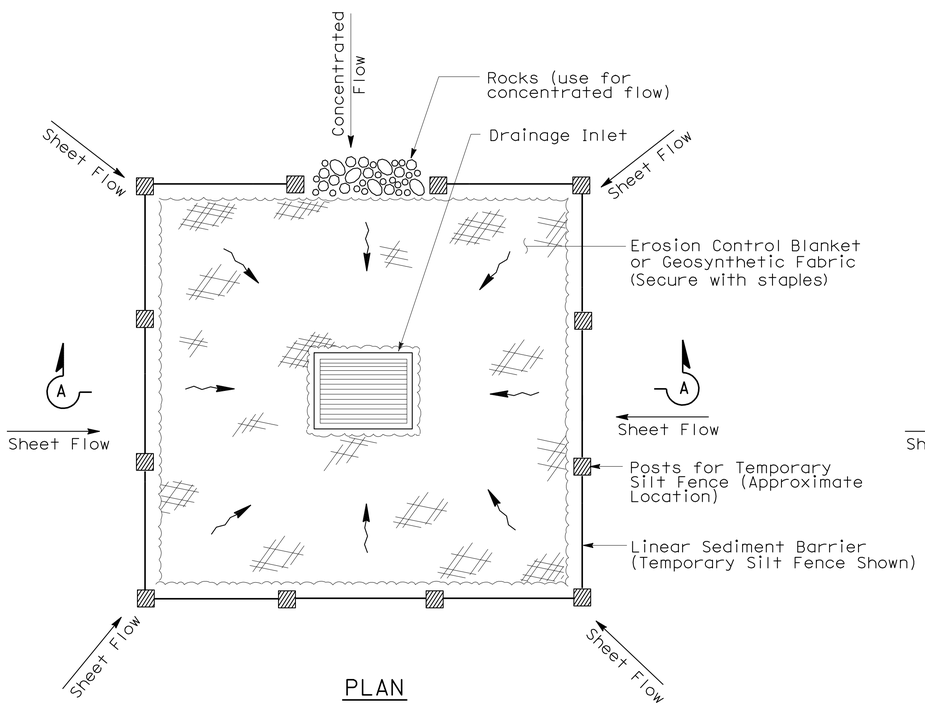
SECTION A-A



SECTION B-B

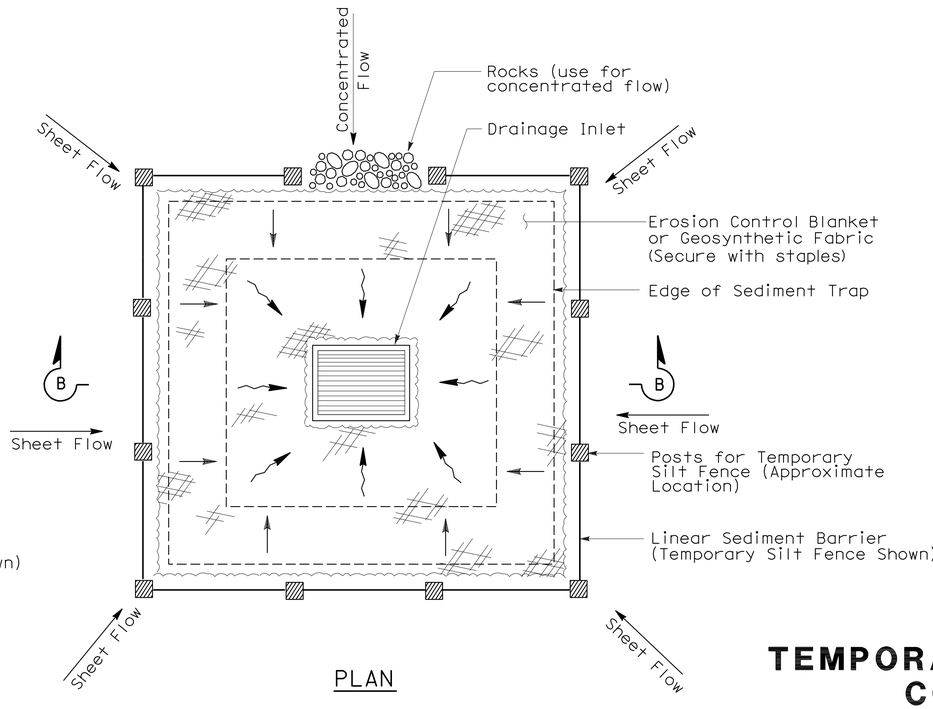
NOTES:

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



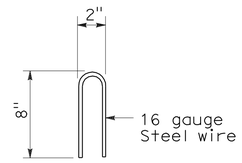
PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



PLAN

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



STAPLE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

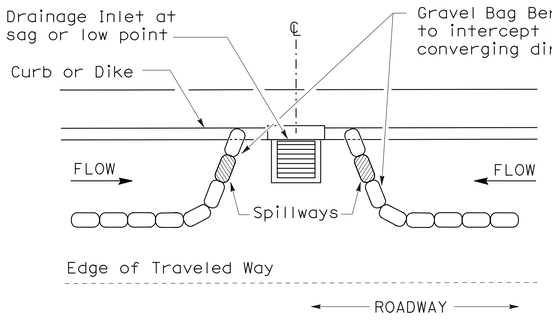
NO SCALE

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

NEW STANDARD PLAN NSP T61

2006 NEW STANDARD PLAN NSP T61

7-11-08



PLAN

CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)

GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

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

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	29	49

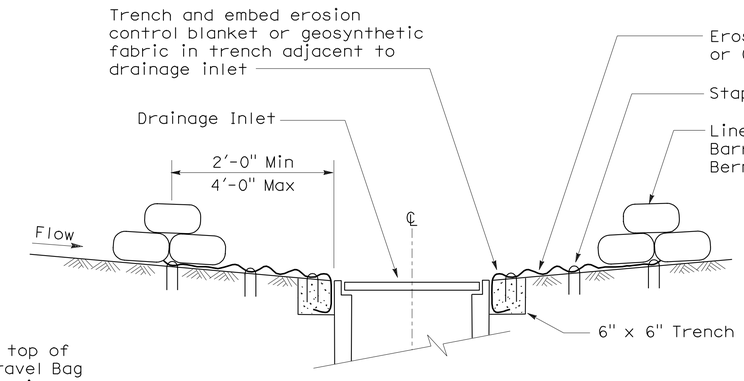
Robert B Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT Robert B. Schott 3035 Signature Date 11-04-08 Renewal Date 08-11-08 Date 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.

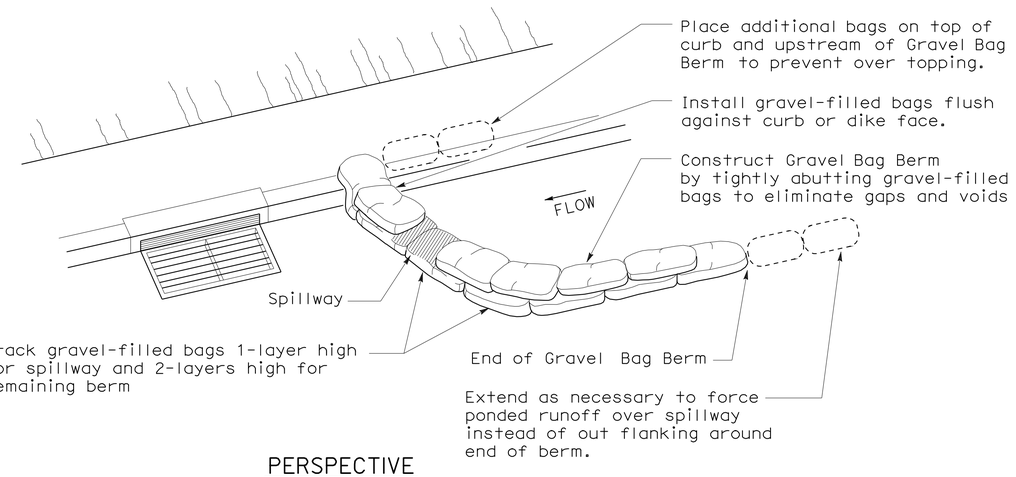
To accompany plans dated 6-21-10



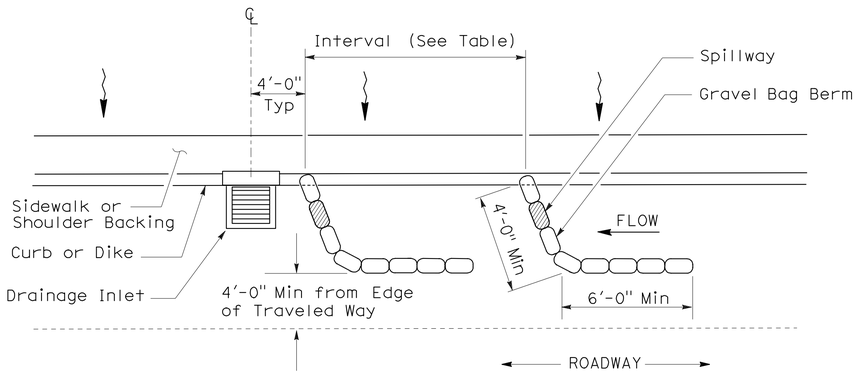
SECTION A-A

NOTES:

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

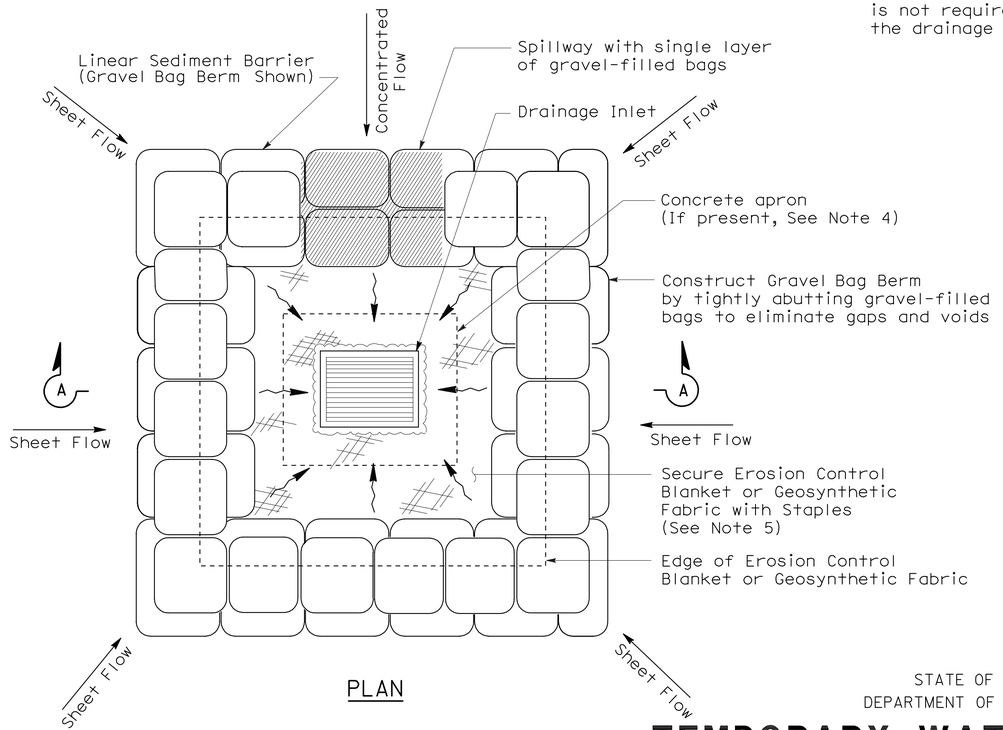


PERSPECTIVE



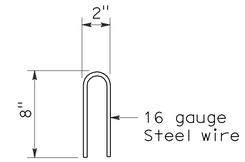
PLAN

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



PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)



STAPLE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T62

2006 NEW STANDARD PLAN NSP T62

7-11-08

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	30	49

Robert B Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott 3035 — Signature — 11-04-08 Renewal Date — 08-11-08 Date — STATE OF CALIFORNIA

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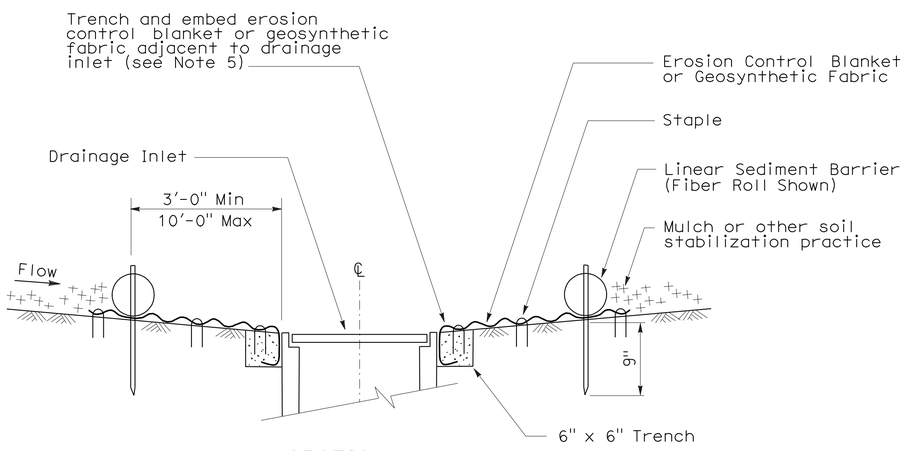
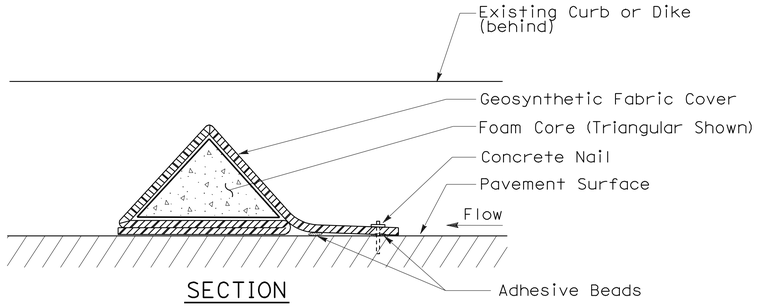
To accompany plans dated 6-21-10

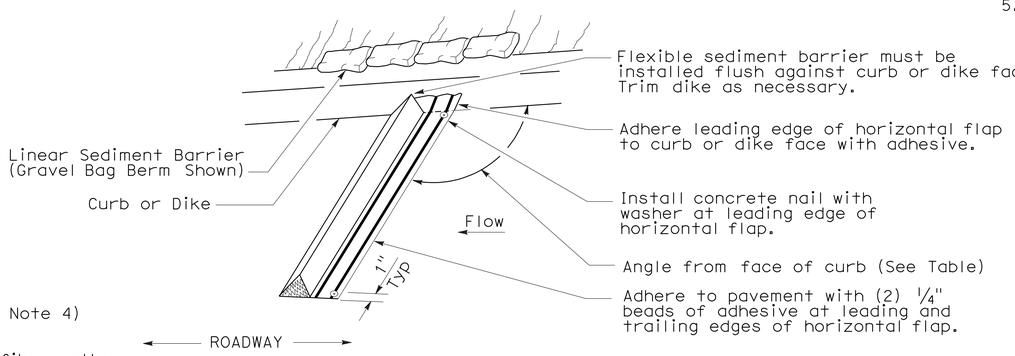


SECTION A-A



SECTION

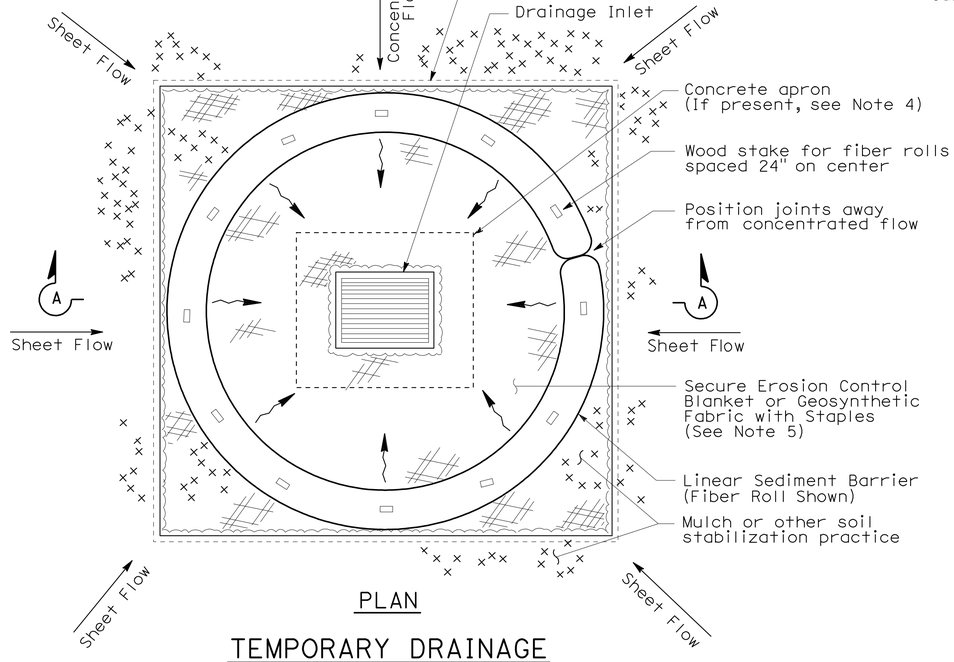
FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)



PERSPECTIVE

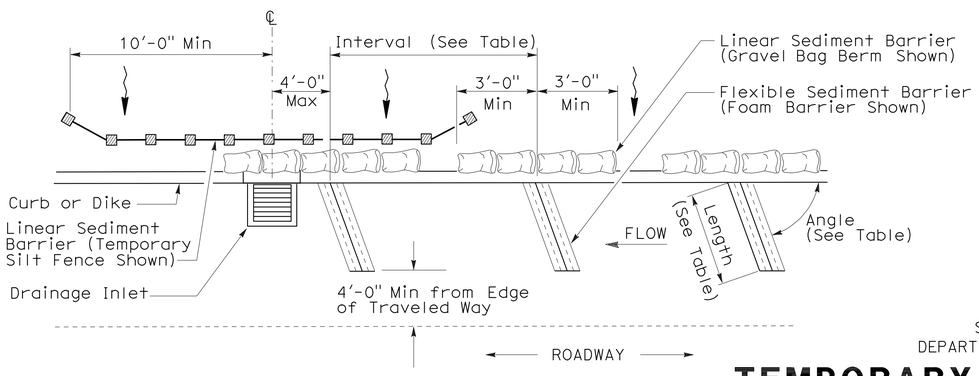
NOTES:

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



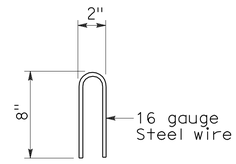
PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)



PLAN

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



STAPLE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T63

2006 NEW STANDARD PLAN NSP T63

7-11-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	31	49

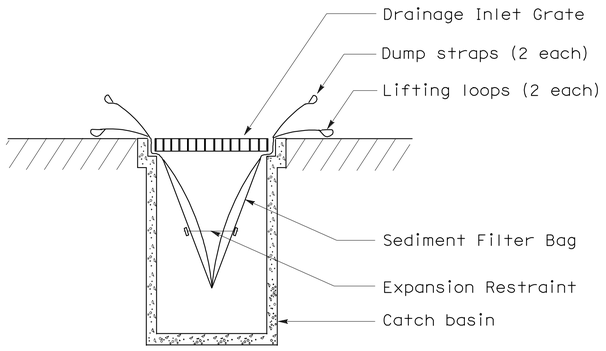
Robert B Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott 3035 — Signature — 11-04-08 Renewal Date — 08-11-08 Date — STATE OF CALIFORNIA

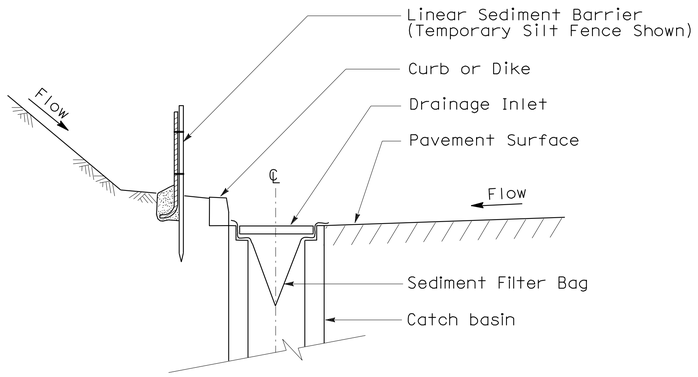
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 6-21-10

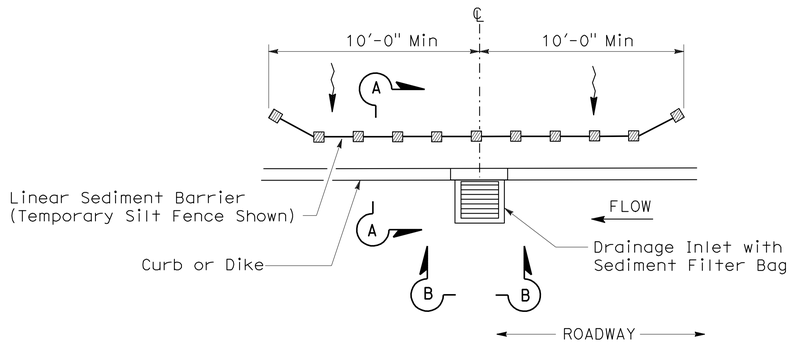


SECTION B-B

SEDIMENT FILTER BAG DETAIL

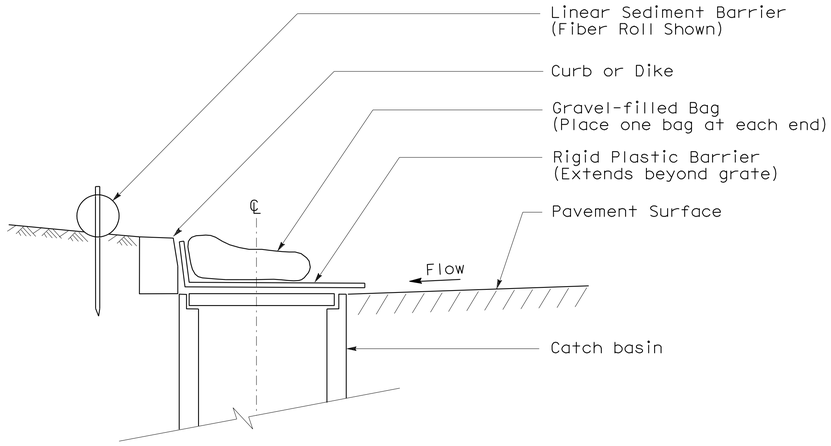


SECTION A-A



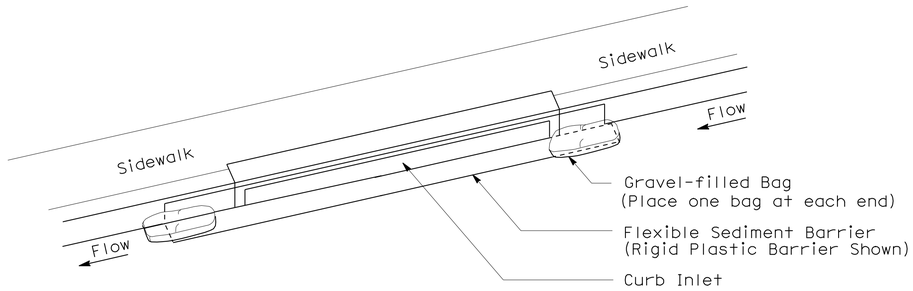
PLAN

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



SECTION

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



PERSPECTIVE

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

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

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

NEW STANDARD PLAN NSP T64

2006 NEW STANDARD PLAN NSP T64

7-11-08

ELECTROLIERS

STANDARD TYPES
15, 15D
15 STRUCTURE
21, 21D STRUCTURE
30
31
32
35
36-20A

High mast light pole

Double Arm lighting standard

Existing electrolier

Electrolier foundation (Future installation)

NOTES:

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

Electrolier (see project notes or project plans)

Luminaire on wood pole

STANDARD NOTES:

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

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED	EXISTING	
BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces,
MAS-4B	mas-4B	side attachment - 4 signal section
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces,
MAS-5B	mas-5B	side attachment - 5 signal section
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
04	SM	84	9.9	32	49

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

To accompany plans dated 6-21-10

SOFFIT AND WALL MOUNTED LUMINAIRES

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

NOTE:
Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	33	49

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 6-21-10

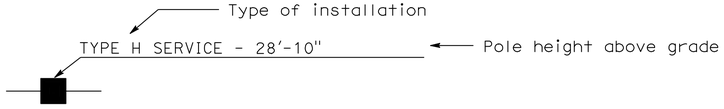
CONDUIT

PROPOSED	EXISTING	
— — —	— — —	Lighting Conduit, unless otherwise indicated or noted
— - — - —	— - — - —	Traffic signal conduit
—C— —	—c— —	Communication conduit
—T— —	—t— —	Telephone conduit
—F— —	—f— —	Fire alarm conduit
—FO— —	—fo— —	Fiber optic conduit
— — —]	— — —]	Conduit termination (RSP ES-9A C)
R	r	Conduit riser in/on structure or service pole

SERVICE EQUIPMENT

PROPOSED	EXISTING	
—OH—	—oh—	Overhead lines
U	U	Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
III		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
T	t	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

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
PV	PV	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
R	Y	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

SIGNAL EQUIPMENT Cont

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

NOTES:

1. All signal sections shall be 12" unless shown otherwise.
2. Signal heads shall be provided with backplates unless shown otherwise.
3. 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

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	34	49

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

To accompany plans dated 6-21-10

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

Sign No. 12345
10 ISL SCI 1.0

- Sign number - Place on post or structure
- Transformer rating (kVA)
- Lighting control type
- Number and type of fixtures

Do NOT place on standard or structure

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 15'-0"

- Mast arm length, if shown. Do not place on standard or structure.
- Equipment number - Place on standard or structure. Existing equipment numbers are shown in parenthesis

CONDUIT AND CONDUCTOR IDENTIFICATION:

1½"C, 2#10, 15#14, 2 DLC

- Number and size of conductors and cables
- Size of conduit in inches

Ø1, Ø2, Ø2P, etc. — Traffic phase identification for signal faces, detectors and phase diagrams

[1] [2] [3] — Project note numbers

Ⓐ Ⓑ Ⓒ — Equipment description, installation or item numbers

△1 △2 △3 — Conduit run numbers

SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):

19A - 3 - 100

- Wind velocity = 100 mph
- Case 3 arm loading
- Standard type
- Standard Plan sheet number
- Detail number or letter

MISCELLANEOUS EQUIPMENT

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

WIRING DIAGRAM LEGEND

P	Pole
CB	Circuit breaker
A	Ampere
V	Volt
M	Metered
UM	Unmetered
NB	Neutral bus
GB	Ground bus
G	Equipment grounding conductor
N	Grounded conductor (Neutral)

- External conductor
- Conductor or bus
- Tie point
- Contactor coil
- Contactor, Contact NO
- Terminal blocks
- Contactor, Contact NC
- Enclosure bond
- Grounding electrode
- Circuit breaker
- Receptacle

PULL BOXES

PROPOSED	EXISTING
3	9A(21)

Pull box-No. 5 unless otherwise indicated or noted.

Pull box-Additional designations or descriptions

- (C) = Communications pull box
- (E) = Pull box with extension
- (S) = Sprinkler control pull box
- (21) = Anchor bolts and conduit for future installation of Type 21 Standard
- (T) = Traffic pull box

3 = No. 3½ pull box
5 = No. 5 pull box
6 = No. 6 pull box
7 = No. 7 (Ceiling pull box)
8 = No. 8 (Pendant soffit pull box)
9 = No. 9 pull box
9A = No. 9A pull box

VEHICLE DETECTORS

5 J 9 U

- Vehicle detector designation
- U = Upper, L = Lower
- Slot number in input file
- Input file (I or J)
- Phase

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
DH	dh	Detector handhole
		Microwave or video detection zone

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	35	49

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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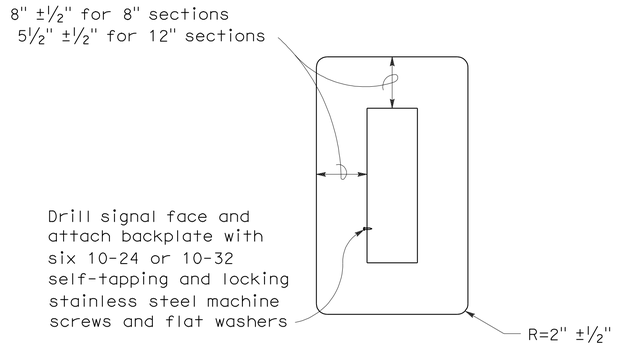
To accompany plans dated 6-21-10

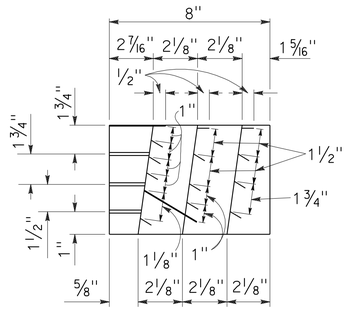
VISORS



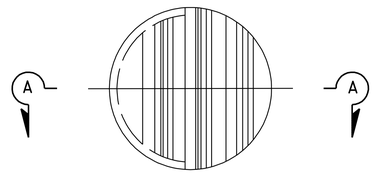
8" AND 12" SECTIONS

BACKPLATE

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



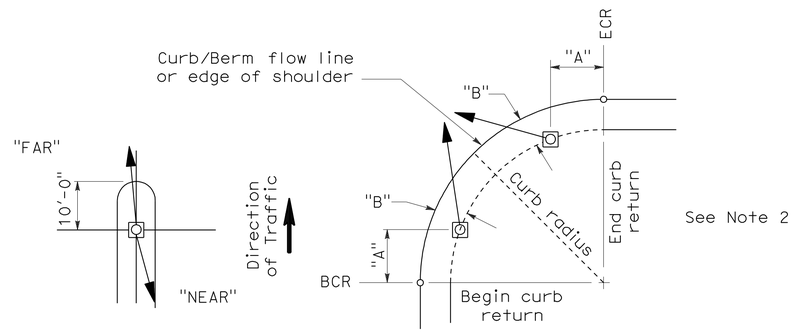
SECTION A-A



FRONT VIEW

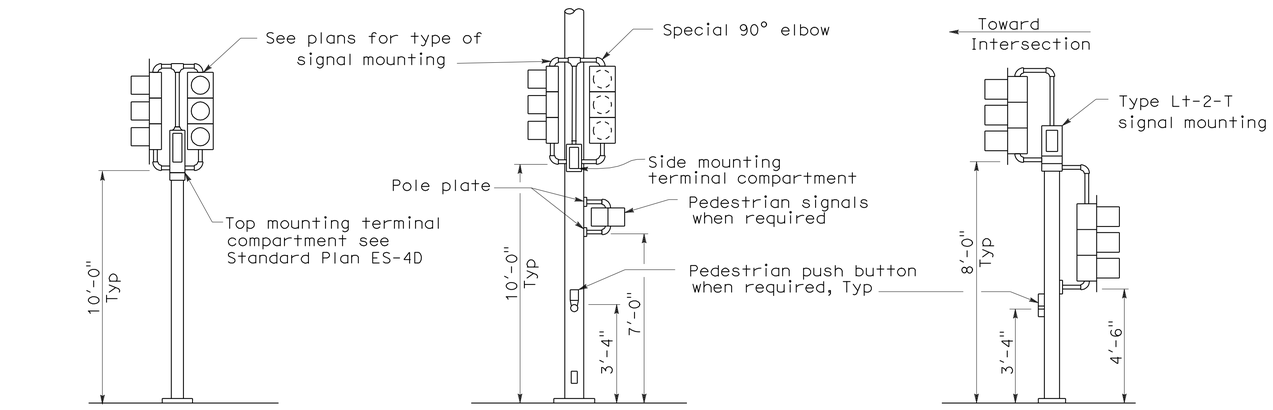
DIRECTIONAL LOUVER

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



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.



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)

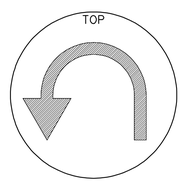
Normally used on standards with luminaire or signal mast arm

LEFT TURN LANE SIGNAL

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

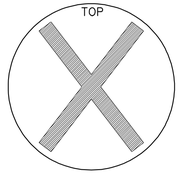
TYPICAL SIGNAL INSTALLATIONS

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS

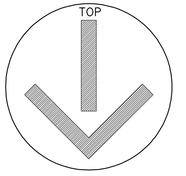


U-TURN SIGNAL FACE

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

5-19-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	36	49

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

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

June 6, 2008
PLANS APPROVAL DATE

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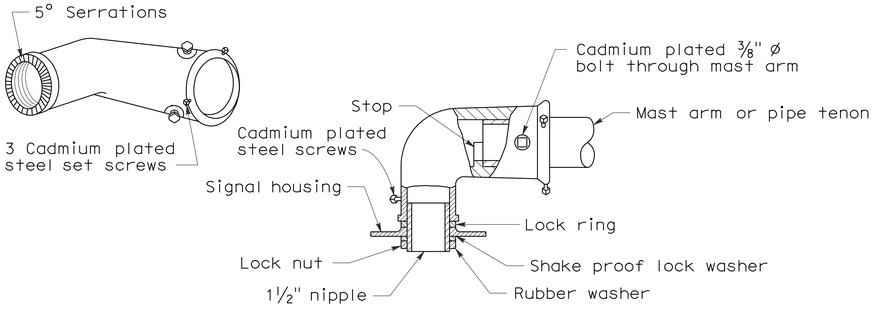
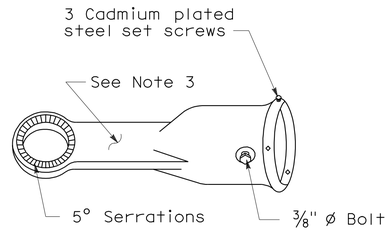
To accompany plans dated 6-21-10



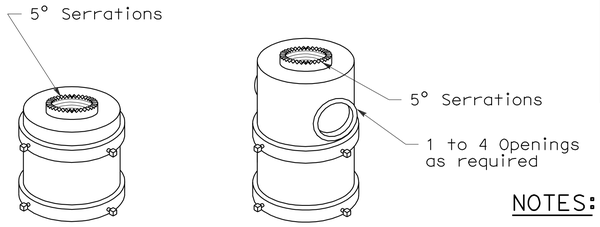
MAST ARM MOUNTING - TYPE "MAT"

For 2 NPS pipe, see Note 1.



MAST ARM MOUNTING - TYPE "MAS"

For 2 NPS pipe. See Note 1.



For one mounting For mulitiple mountings

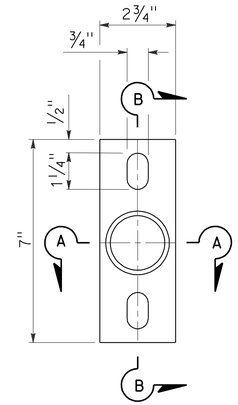
TOP MOUNTINGS

For 4 NPS pipe, see Note 2.

NOTES:

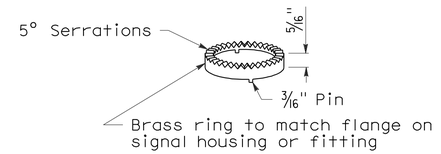
1. After mast arm signal has been plumbed and secured, drill 7/16" hole through mast arm tenon in line with slip fitter hole. Place a cadmium plated ⅜" ø galvanized bolt with washer under bolt head through hole and secure with washer, nut, and locknut. Seal openings between mast arm mountings and mast arm with mastic.
2. (a) Threaded top mounted slip fitter openings shall be 1½ 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.
3. Wireway shall have a cross section area of 0.95 square inch minimum. Minimum width of ½".

SIGNAL SLIP FITTERS



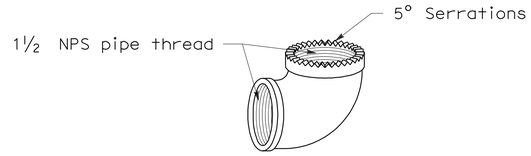
POLE PLATE

For side mountings



LOCK RING

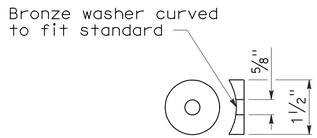
Use where locking ring is not integral with signal housing or fitting.



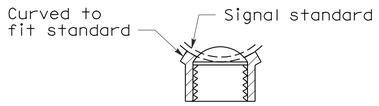
SPECIAL 90° ELBOW

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

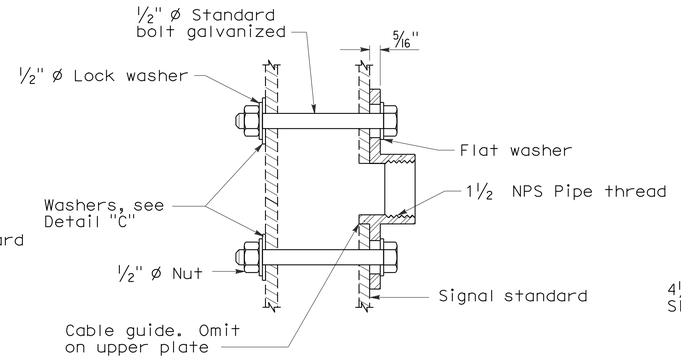
MISCELLANEOUS MOUNTING HARDWARE



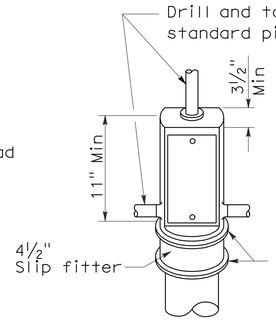
DETAIL "C"



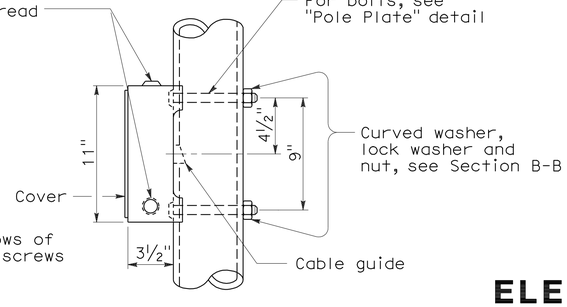
SECTION A-A



SECTION B-B



TOP MOUNTING



SIDE MOUNTING

TERMINAL COMPARTMENTS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-4D

2006 REVISED STANDARD PLAN RSP ES-4D

5-19-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	84	9.9	37	49

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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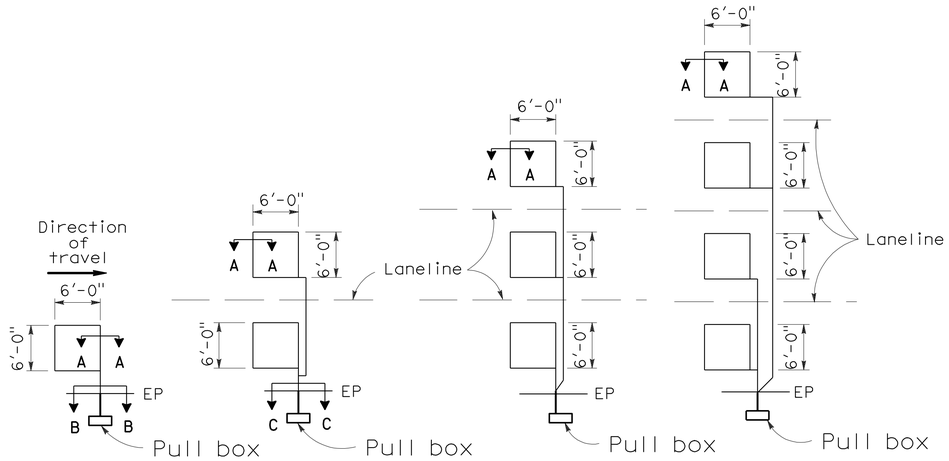
To accompany plans dated 6-21-10

LOOP INSTALLATION PROCEDURE

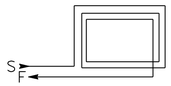
1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. 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.
8. 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.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
11. 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.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in-cable. Splices shall be soldered.
15. 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.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. 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.

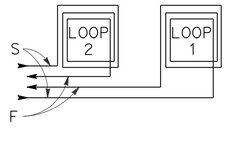


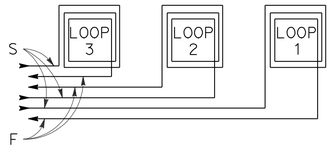
SAWCUT DETAILS

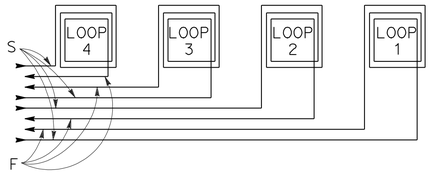
(Type A loop detector configurations illustrated)

1. 1A thru 4A = 1 Type A loop configuration in each lane.
2. 1B thru 4B = 1 Type B loop configuration in each lane.
3. 1C = 1 Type C loop configuration entering lanes as required.
4. 1D thru 4D = 1 Type D loop configuration in each lane.
5. 1E thru 4E = 1 Type E loop configuration in each lane.
6. 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)



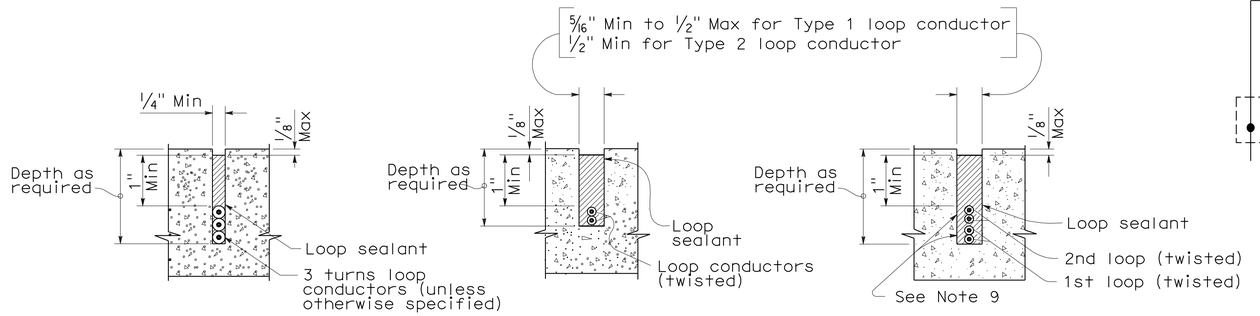






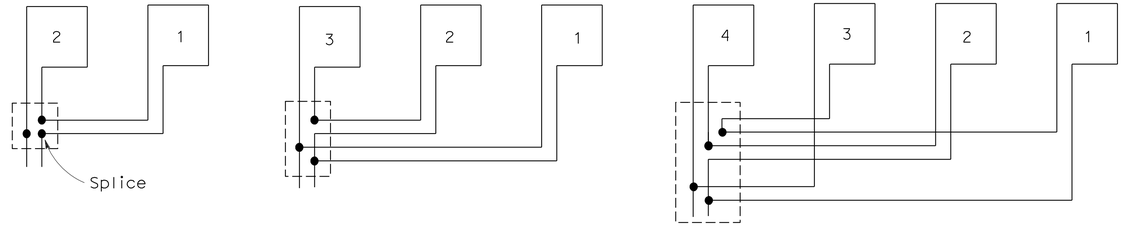
WINDING DETAILS

See Notes 6 and 7



SECTION A-A SECTION B-B SECTION C-C

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A

8-17-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	38	49

I Yalan — 3-18-10
REGISTERED CIVIL ENGINEER — DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ISAIAS D. YALAN — No. 68269 — Exp. 9-30-2011 — CIVIL — STATE OF CALIFORNIA

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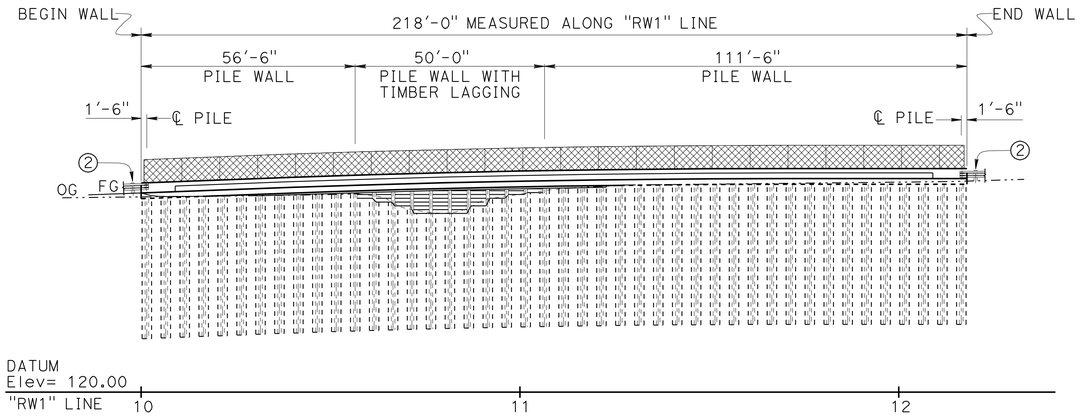
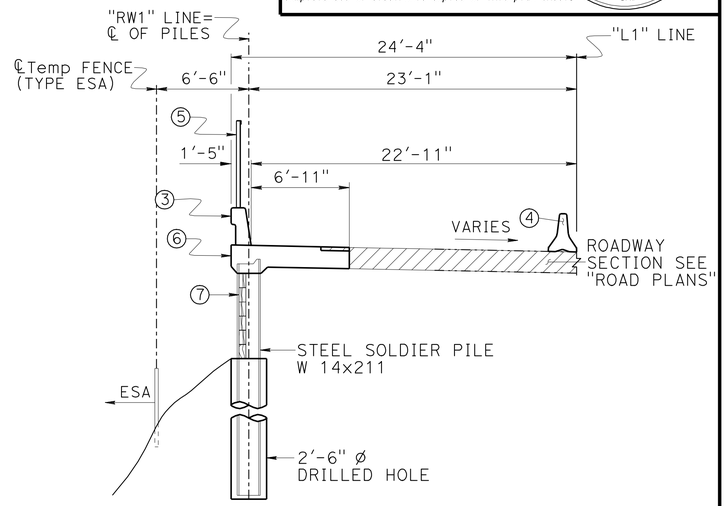


DEVELOPED MIRRORED ELEVATION

1" = 20'

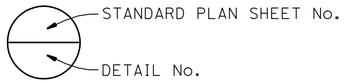
QUANTITIES	
STRUCTURE EXCAVATION (SOLDIER PILE WALL)	14 CY
STRUCTURE BACKFILL (SOLDIER PILE WALL)	21 CY
CONCRETE BACKFILL (SOLDIER PILE WALL)	280 CY
STEEL SOLDIER PILING (W14 X 211)	1,610 LF
STRUCTURAL CONCRETE, BARRIER SLAB	102 CY
30" DRILLED HOLE	1,565 LF
TIMBER LAGGING	1.2 MFBM
CLEAN AND PAINT STEEL SOLDIER PILE	LUMP SUM
CHAIN LINK RAILING (TYPE 7 MODIFIED)	217 LF
CONCRETE BARRIER (TYPE 732)	218 LF

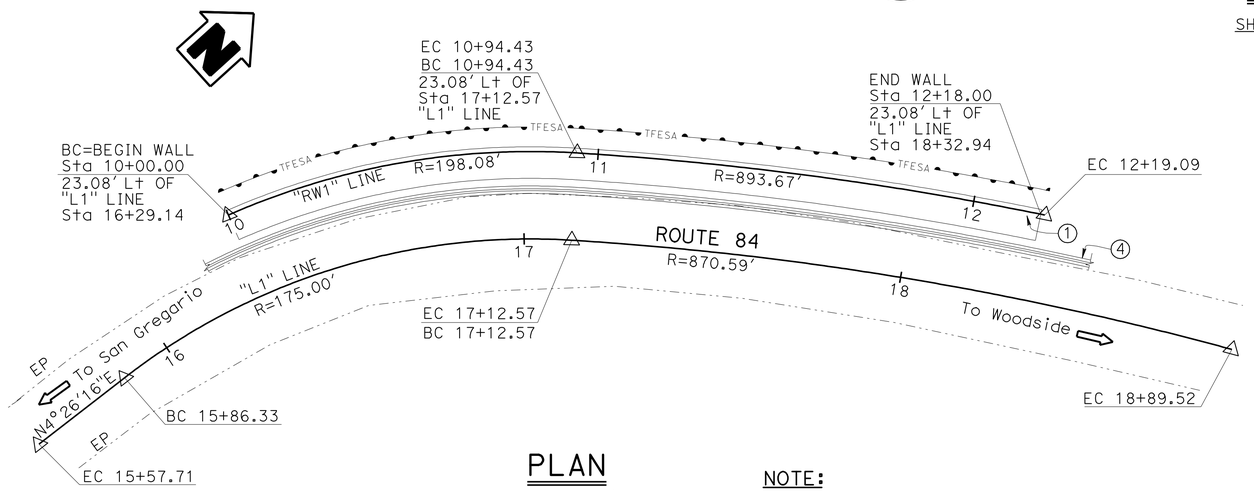


PILE WALL WITH TIMBER LAGGING

STANDARD PLANS DATED MAY 2006

A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
B11-52	CHAIN LINK RAILING TYPE 7
B11-55	CONCRETE BARRIER TYPE 732





PLAN

1" = 20'

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

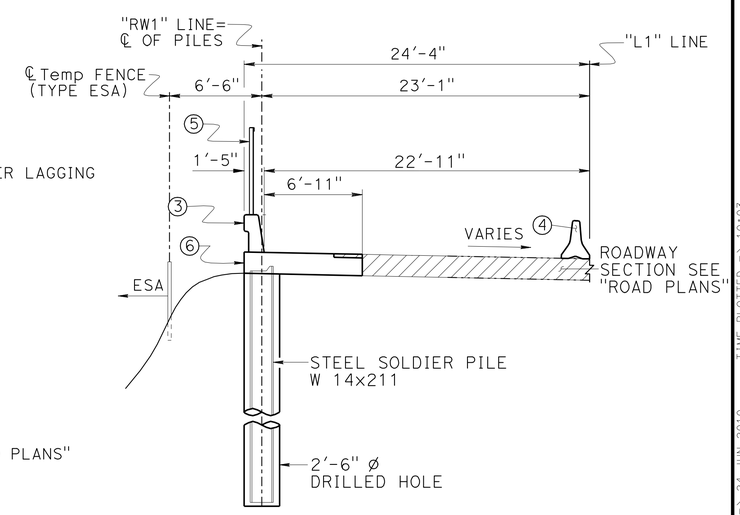
NOTE:
METAL BEAM GUARD RAIL AND CONCRETE BARRIER NOT SHOWN.

INDEX TO PLANS

LEGEND:

① PAINT "RETAINING WALL No. 35E0034"
② MBGR, SEE "ROAD PLANS"
③ CONCRETE BARRIER TYPE 732
④ TEMPORARY RAILING TYPE K SEE "ROAD PLANS"
⑤ CHAIN LINK RAILING TYPE 7
⑥ STRUCTURAL CONCRETE, BARRIER SLAB
⑦ TREATED TIMBER LAGGING 6" x 12"

NOTE:
FOR "GENERAL NOTES" SEE "TYPICAL SECTION PILE WALL WITH TIMBER LAGGING" SHEET



PILE WALL TYPICAL SECTIONS

3/16" = 1'

Gordon Danke, DESIGN ENGINEER	DESIGN	BY I. Yalan	CHECKED E. Francliiso	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 9	BRIDGE NO. 35E0034	LA HONDA CREEK RETAINING WALL AT PM 9.9
	DETAILS	BY I. Yalan/Tim Fairall	CHECKED E. Francliiso	LAYOUT	BY I. Yalan	CHECKED E. Francliiso				POST MILE 9.9	GENERAL PLAN
	QUANTITIES	BY I. Yalan	CHECKED C. Chuan	SPECIFICATIONS	BY E. Francliiso	PLANS AND SPECS COMPARED E. Francliiso			CU 04 EA 3S8201	DISREGARD PRINTS BEARING EARLIER REVISION DATES →	REVISION DATES: 8-24-09; 9-11-09; 9-30-09; 11-10-09; 2-04-10; 2-09-10; 2-16-10; 2-18-10; 3-01-10	SHEET 1	OF 12

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

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

FILE => 35e0034-a-gp.dgn

USERNAME => fyrstrk DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	39	49

I Yalan 3-18-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

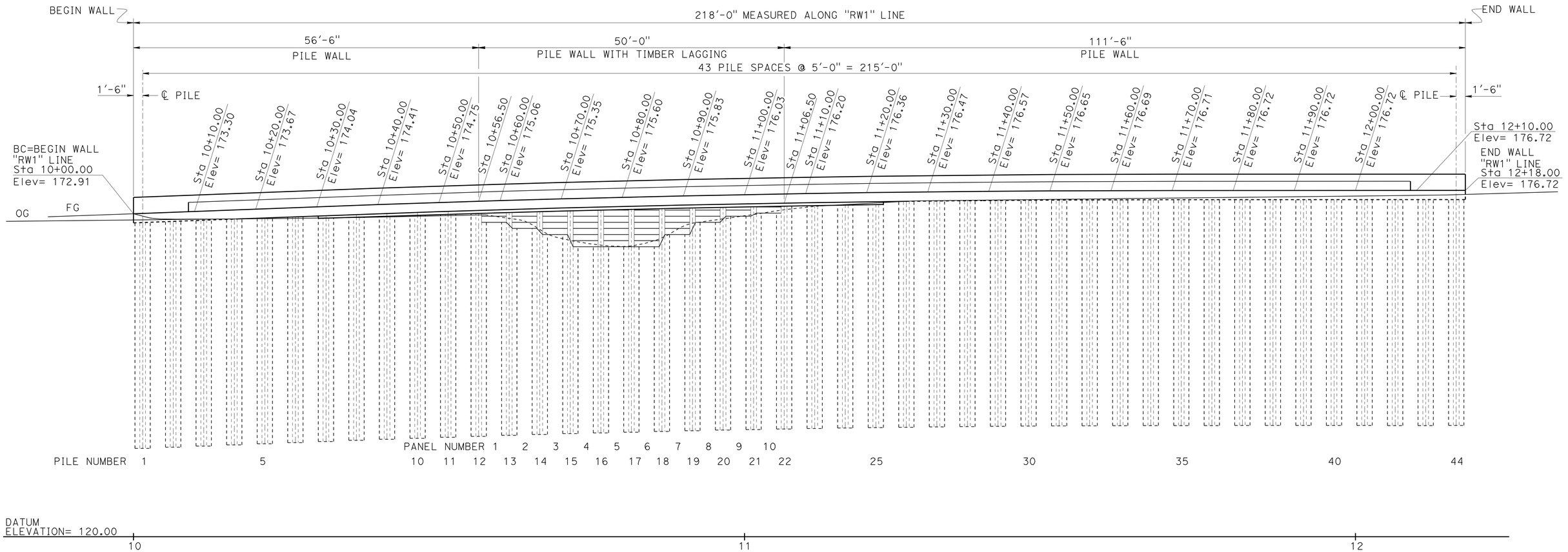
REGISTERED PROFESSIONAL ENGINEER
ISAIAS D. YALAN
No. 68269
Exp. 9-30-2011
CIVIL
STATE OF CALIFORNIA

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

NOTES:

1. ELEVATIONS GIVEN ALONG "RW1" LINE AT TOP OF BARRIER SLAB ARE APPROXIMATE. ADJUST TO MATCH ACTUAL PROFILEM AND SUPERELEVATION IN THE FIELD.
2. CHAIN LINK RAILING AND MBGR NOT SHOWN.
3. FINISHED GRADE AT TIMBER LAGGING SECTION IS AT BOTTOM OF LAGGING.

PANEL	BOTTOM OF LAGGING Elev
1	171.94
2	170.50
3	169.50
4	167.50
5	167.50
6	167.50
7	169.50
8	171.50
9	172.50
10	173.00



DEVELOPED MIRRORED ELEVATION

1/8" = 1'

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

DESIGN	BY I. Yalan	CHECKED E. Franciliso	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO. 35E0034
DETAILS	BY Tim Fairall	CHECKED E. Franciliso			POST MILE 9.9
QUANTITIES	BY I. Yalan	CHECKED C. Chuan		CU 04 EA 3S8201	

LA HONDA CREEK RETAINING WALL AT PM 9.9

STRUCTURE PLAN

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 9-08-09 | 9-08-09 | 9-28-09 | 10-19-09 | 11-02-09 | 11-10-09 | 2-09-10 | 3-01-10

SHEET 2 OF 12

FILE => 35e0034-c-sp01.dgn

USERNAME => ttrstrk DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:03

CURVE DATA

No.	R	Δ	T	L
(A)	198.08	27°18'53"	48.13	94.43
(B)	893.67	7°59'29"	62.42	124.64
(C)	200.00	65°45'07"	129.27	229.52
(D)	500.00	4°26'32"	19.39	38.77
(E)	175.00	41°19'46"	66.00	126.23
(F)	870.59	11°38'46"	88.79	176.96

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	40	49

I Yalan 3-18-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

ISAIAS D. YALAN No. 68269 Exp. 9-30-2011 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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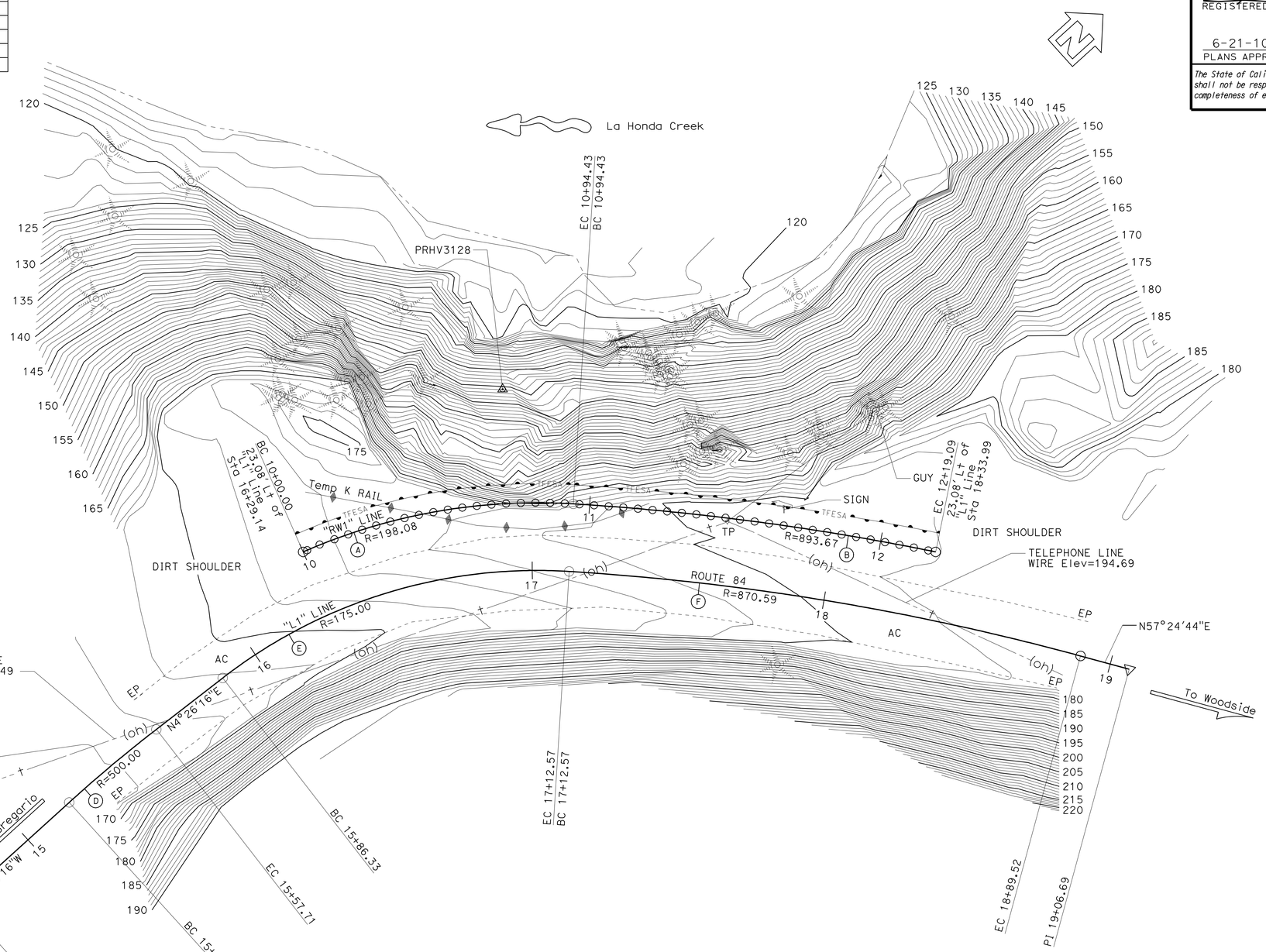

SURVEY CONTROL

PRHV1
Fnd Rebar
16.47 FT Lt. "L1" Line
Sta. 14+96.76
N 16,404.17
E 32,808.33
Elev. = 164.04

PRHV22 (Not Shown On Plan)
Fnd Brass Disk
18.55 FT Rt. "L1" Line
Sta. 13+22.93
N 16,230.59
E 32,787.70
Elev. = 159.08

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

LEGEND:
O DENOTES 2'-6" DRILLED HOLE
TFESA TEMPORARY FENCE (TYPE ESA)

NOTE:
* TREE DIAMETERS ARE NOT PROVIDED

PRELIMINARY INVESTIGATION SECTION									
SCALE 1"=20'	VERT.DATUM Assumed	PHOTOGRAMMETRY AS OF: X							
	HORZ.DATUM Assumed	SURVEYED	BY T.Gillett 2006	CHECKED	BY T.Gillett 06/2009				
	ALIGNMENT TIES Dist.Traverse Sheet	DRAFTED	BY J.Martinez 06/2009	CHECKED	BY L.Lew 06/2009				

DESIGN	BY I. Yalan	CHECKED E. Francilisco
DETAILS	BY Tim Fairall	CHECKED E. Francilisco
QUANTITIES	BY I. Yalan	CHECKED C. Chuan

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO.	LA HONDA CREEK RETAINING WALL AT PM 9.9
35E0034	
POST MILE 9.9	FOUNDATION PLAN

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04
EA 3S8201

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 6/18/09 | 9/24/09 | 2/04/10 | 3/02/10

SHEET 3 OF 12

FILE => 35e0034-e-fp101.dgn

USERNAME => trsitk DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	41	49

I Yalan 3-18-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

ISAIAS D. YALAN No. 68269 Exp. 9-30-2011 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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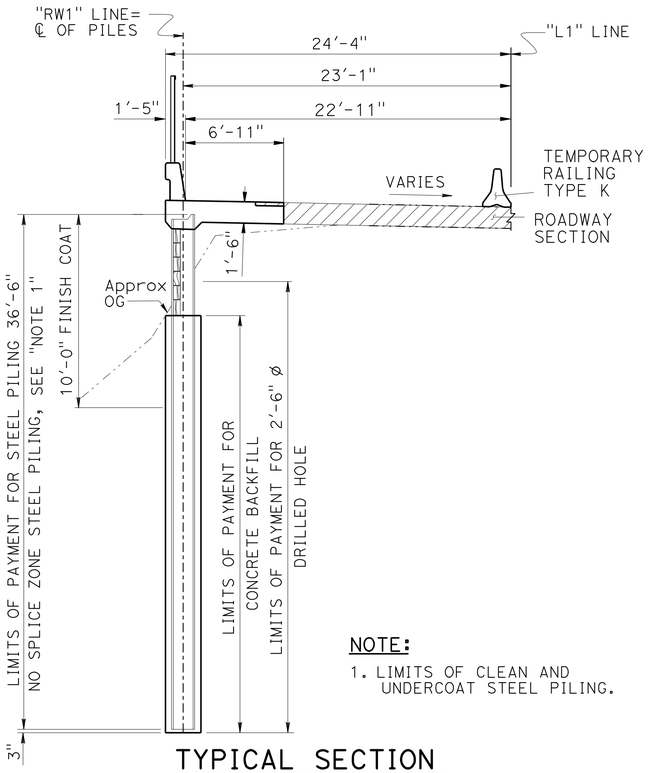
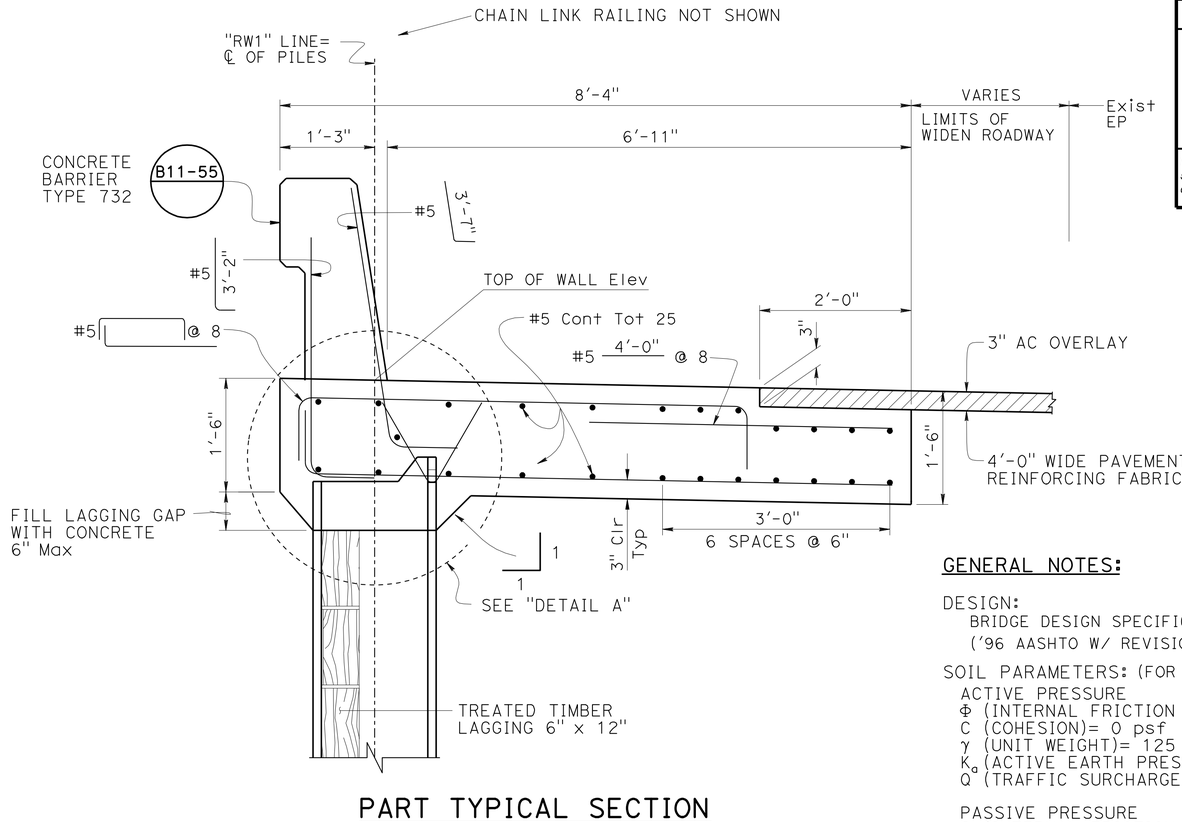


NOTE:

1. LIMITS OF CLEAN AND UNDERCOAT STEEL PILING.

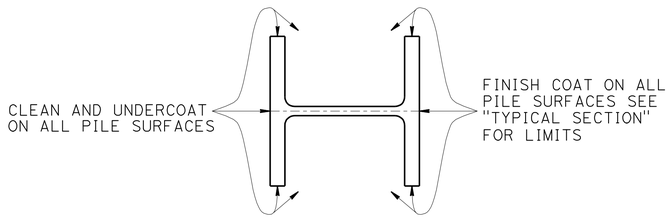
TYPICAL SECTION

3/16" = 1'



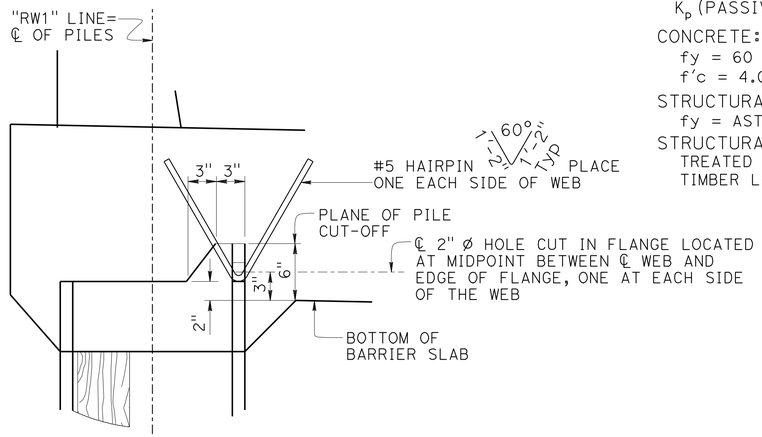
PART TYPICAL SECTION

1" = 1'



LIMITS OF CLEAN & PAINT STEEL SOLDIER PILE

1½" = 1'



DETAIL A

1½" = 1'

GENERAL NOTES:

DESIGN:
BRIDGE DESIGN SPECIFICATIONS
('96 AASHTO W/ REVISIONS BY CALTRANS)

SOIL PARAMETERS: (FOR DETERMINATION OF LATERAL EARTH PRESSURE)
ACTIVE PRESSURE
Φ (INTERNAL FRICTION ANGLE)= 35°
C (COHESION)= 0 psf
γ (UNIT WEIGHT)= 125 lb/ft^3
K_a (ACTIVE EARTH PRESSURE COEFFICIENT)= 0.30
Q (TRAFFIC SURCHARGE)= 240 psf

PASSIVE PRESSURE
Φ (INTERNAL FRICTION ANGLE)= 34°
C (COHESION)= 600 psf
γ (UNIT WEIGHT)= 147 lb/ft^3
K_p (PASSIVE EARTH PRESSURE COEFFICIENT)= 3.54

CONCRETE:
fy = 60 ksi
f'c = 4.0 ksi

STRUCTURAL STEEL:
fy = ASTM A709 GRADE 50

STRUCTURAL TIMBER:
TREATED DOUGLAS FIR, GRADE No. 1 OR BETTER
TIMBER LAGGING SHALL BE FULL SAWN

DESIGN	BY I. Yalan	CHECKED E. Franciliso	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY Tim Fairall	CHECKED E. Franciliso	
QUANTITIES	BY I. Yalan	CHECKED C. Chuan	

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN
DESIGN BRANCH 9

CU 04
EA 3S8201

BRIDGE NO. 35E0034
POST MILE 9.9

LA HONDA CREEK RETAINING WALL AT PM 9.9
TYPICAL SECTION PILE WALL WITH TIMBER LAGGING

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 7-08-09 | 9-28-09 | 11-04-09 | 11-16-09 | 2-04-10 | 2-16-10 | 2-22-10 | 3-08-10 | 3-17-10

SHEET 4 OF 12

FILE => 35e0034-m-typ01.dgn

USERNAME => tristrk DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:04

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	42	49

I Yalan 3-18-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ISAIAS D. YALAN — No. 68269 — Exp. 9-30-2011 — CIVIL — STATE OF CALIFORNIA

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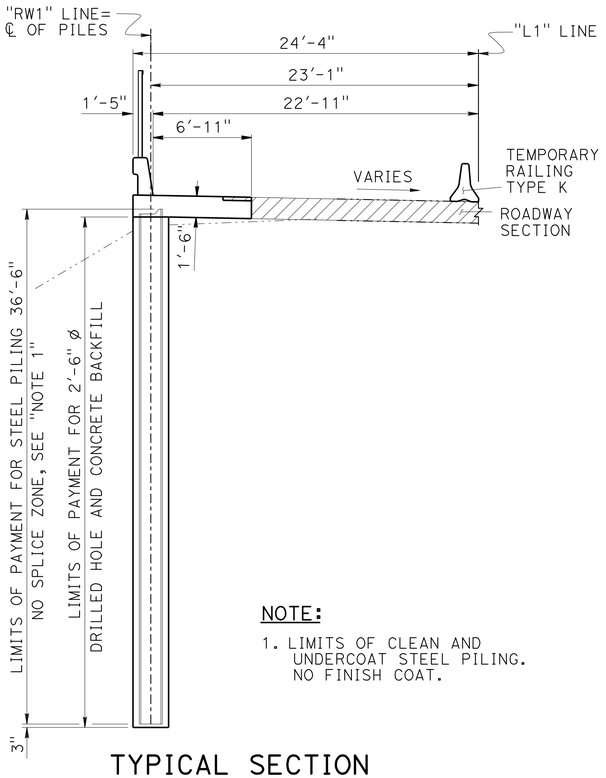
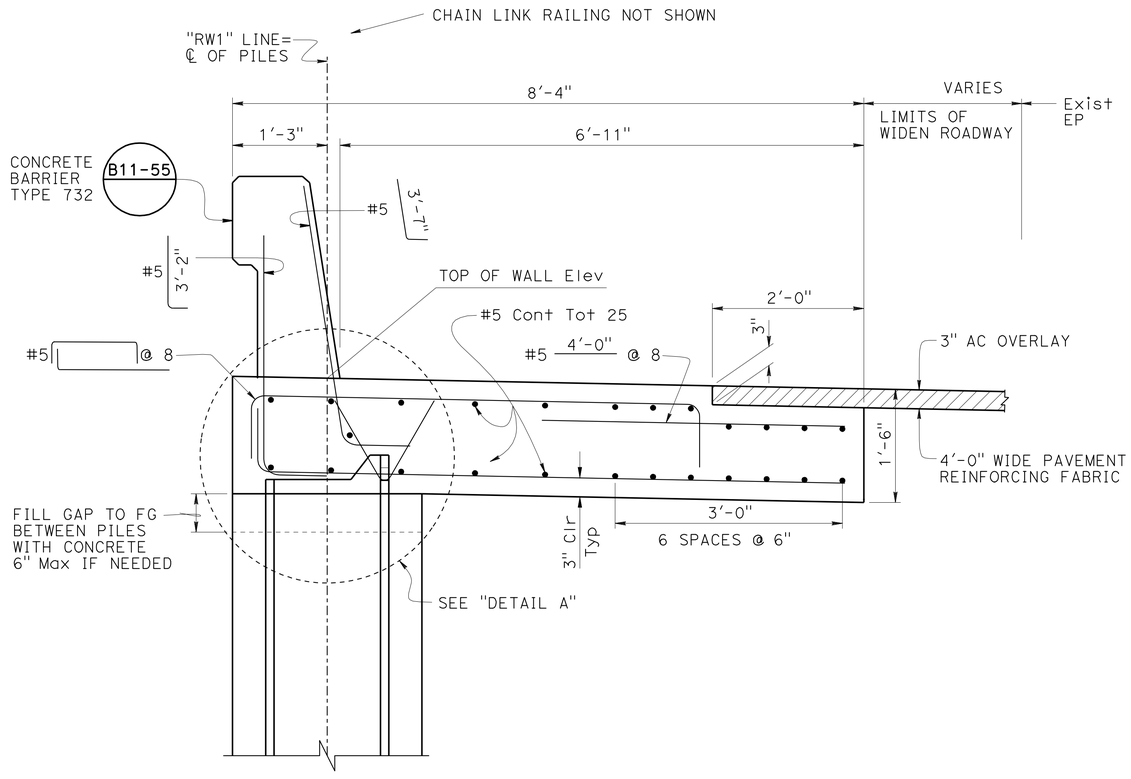


TYPICAL SECTION

3/16" = 1'

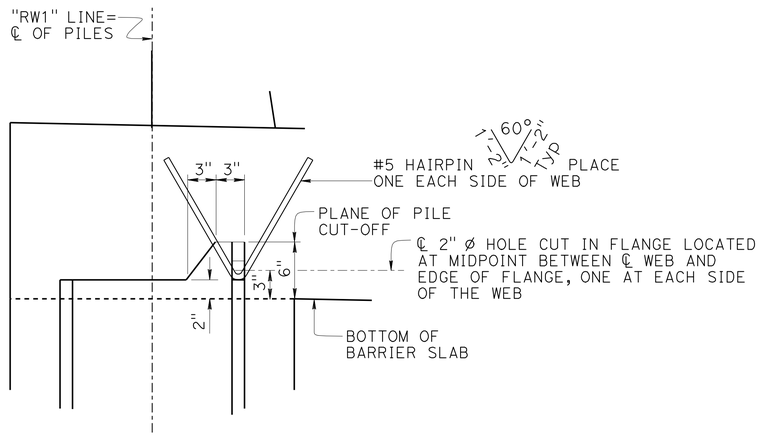
NOTE:

1. LIMITS OF CLEAN AND UNDERCOAT STEEL PILING. NO FINISH COAT.



PART TYPICAL SECTION

1" = 1'



DETAIL A

1½" = 1'

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

DESIGN	BY I. Yalan	CHECKED E. Francliliso	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO. 35E0034	LA HONDA CREEK RETAINING WALL AT PM 9.9
DETAILS	BY Tim Fairall	CHECKED E. Francliliso			POST MILE 9.9	TYPICAL SECTION PILE WALL
QUANTITIES	BY I. Yalan	CHECKED C. Chuan		CU 04 EA 3S8201		

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 9-08-09 | 9-30-09 | 11-04-09 | 11-10-09 | 2-04-10 | 2-22-10 | 3-17-10

SHEET 5 OF 12

FILE => 35e0034-m-typ02.dgn

USERNAME => tfairk DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:04

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	43	49

I Yalan 3-10-18
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
ISAIAS D. YALAN
No. 68269
Exp. 9-30-2011
CIVIL
STATE OF CALIFORNIA

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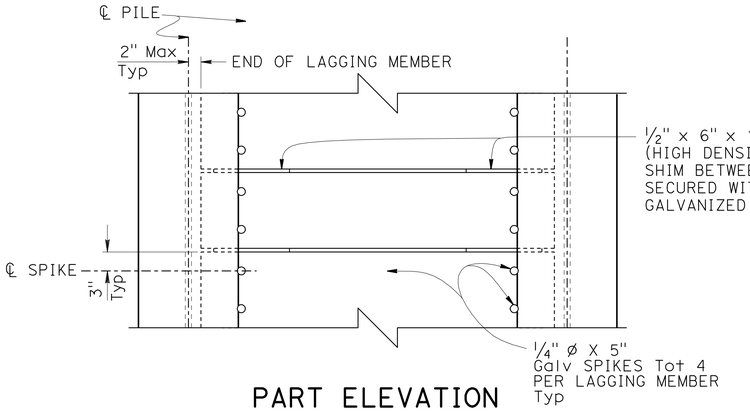
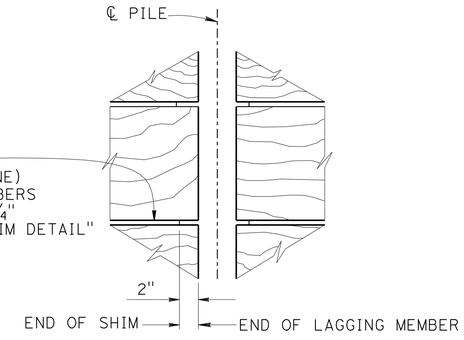
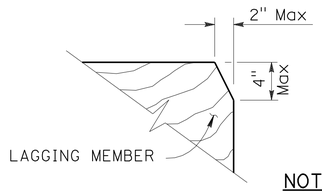


PART ELEVATION
1" = 1'

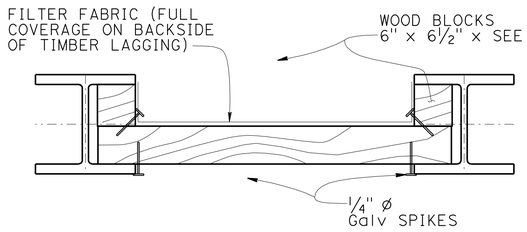


PART ELEVATION
1½" = 1'



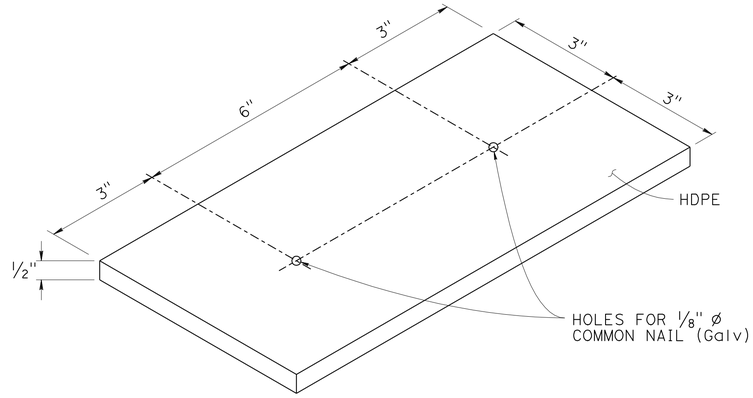
NOTE:
DIAGONALLY OPPOSITE CORNERS MAY BE CLIPPED TO FACILITATE PLACEMENT.

PART PLAN OF LAGGING MEMBER-ALT 2
1½" = 1'



NOTES:
1. NO CLIPPING OF CORNERS ALLOWED.
2. LENGTH VARIES WITH LOCATION. RETAIN WITH ¼" Ø X 6" Galv SPIKES Tot 4 PER LAGGING MEMBER 2 PER SIDE Typ.

PART PLAN OF LAGGING MEMBER-ALT 1
1" = 1'



SHIM DETAIL
6" = 1'

LAGGING DETAILS

DESIGN	BY I. Yalan	CHECKED E. Franciliso	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY Rania Heider/T. Fairall	CHECKED E. Franciliso	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9
QUANTITIES	BY I. Yalan	CHECKED C. Chuan	

BRIDGE NO. 35E0034
POST MILE 9.9

LA HONDA CREEK RETAINING WALL AT PM 9.9
TIMBER LAGGING DETAILS

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04
EA 3S8201

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 9-08-09 | 9-30-09 | 10-19-09 | 11-10-09 | 2-16-10 | 3-02-10

SHEET 6 OF 12

FILE => 35e0034-n-det01.dgn

USERNAME => rtrstrk DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:04

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	44	49

I Yalan 3-18-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
ISAIAS D. YALAN
No. 68269
Exp. 9-30-2011
CIVIL
STATE OF CALIFORNIA

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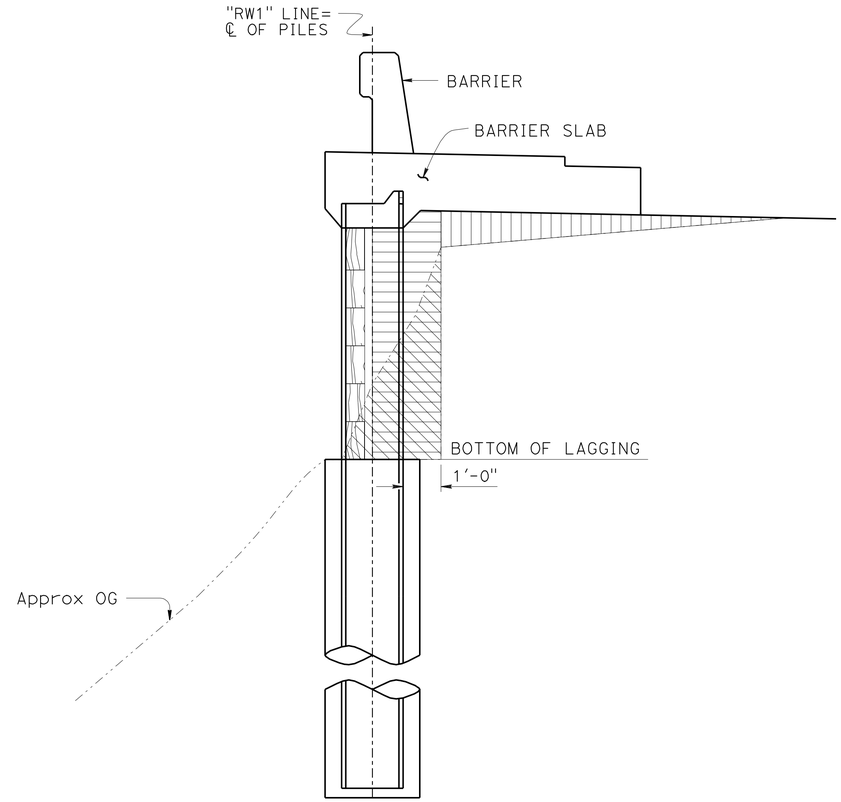
LEGEND:

STRUCTURE EXCAVATION (SOLDIER PILE WALL)

STRUCTURE BACKFILL (SOLDIER PILE WALL)

ROADWAY BACKFILL SEE "ROAD PLANS"



PILE WALL WITH TIMBER LAGGING
LIMITS OF EXCAVATION AND BACKFILL

½" = 1'

DESIGN	BY I. Yalan	CHECKED E. Franciliso	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO. 35E0034	LA HONDA CREEK RETAINING WALL AT PM 9.9
DETAILS	BY Tim Fairall	CHECKED E. Franciliso			POST MILE 9.9	LIMITS OF EXCAVATION AND BACKFILL
QUANTITIES	BY I. Yalan	CHECKED C. Chuan				

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04
EA 3S8201

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 10-15-09 | 10-22-09 | 11-10-09 | 2-04-10 | 2-09-10 | 3-09-10 | 3-17-10

SHEET 7 OF 12

FILE => 35e0034-n-det02.dgn

DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:04
USERNAME => trsitk

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	45	49

John C. Moore 03-16-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
John C. Moore
No. 61792
Exp 6-30-11
CIVIL
STATE OF CALIFORNIA

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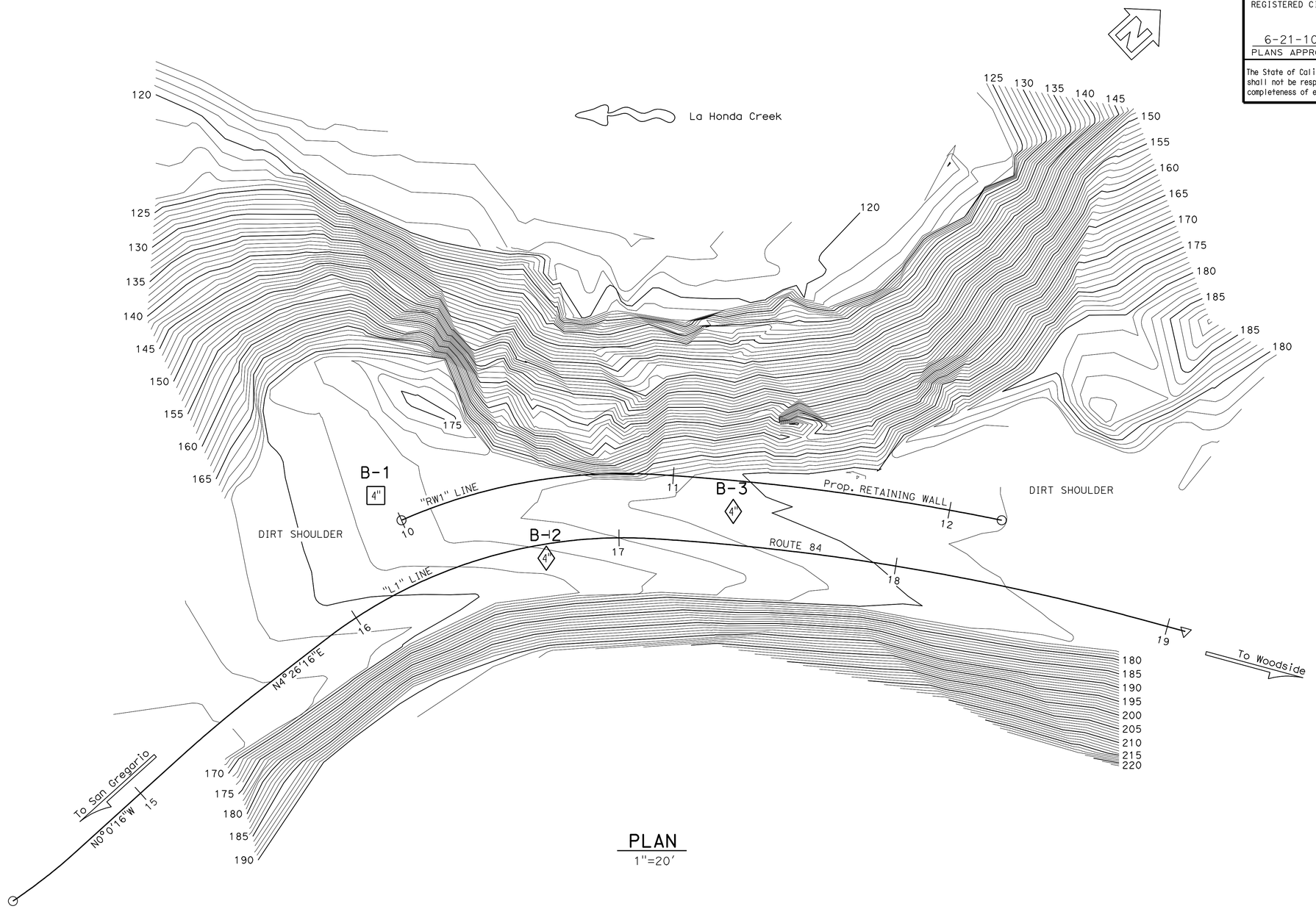

PLAN
1"=20'

ENGINEERING SERVICES		GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES OFFICE OF GEOTECHNICAL DESIGN BRANCH 9	BRIDGE NO. 35E0034	LA HONDA CREEK RETAINING WALL AT PM 9.9
FUNCTIONAL SUPERVISOR	DRAWN BY: M. Reynolds 11/09	FIELD INVESTIGATION BY: J. Moore			POST MILES 9.9	LOG OF TEST BORINGS 1 OF 5
NAME: M. Momenzadeh	CHECKED BY: C. Risden					
OGS CIVIL LOG OF TEST BORINGS SHEET	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3		CU 04 EA 3S8201	FILE => 35e0034-z-lotb01.dgn	DISREGARD PRINTS BEARING EARLIER REVISION DATES →	REVISION DATES / SHEET 8 OF 12

USERNAME => rrstrk DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:04

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	46	49

John C. Moore 03-16-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — John C. Moore — No. 61792 — Exp 6-30-11 — CIVIL — STATE OF CALIFORNIA

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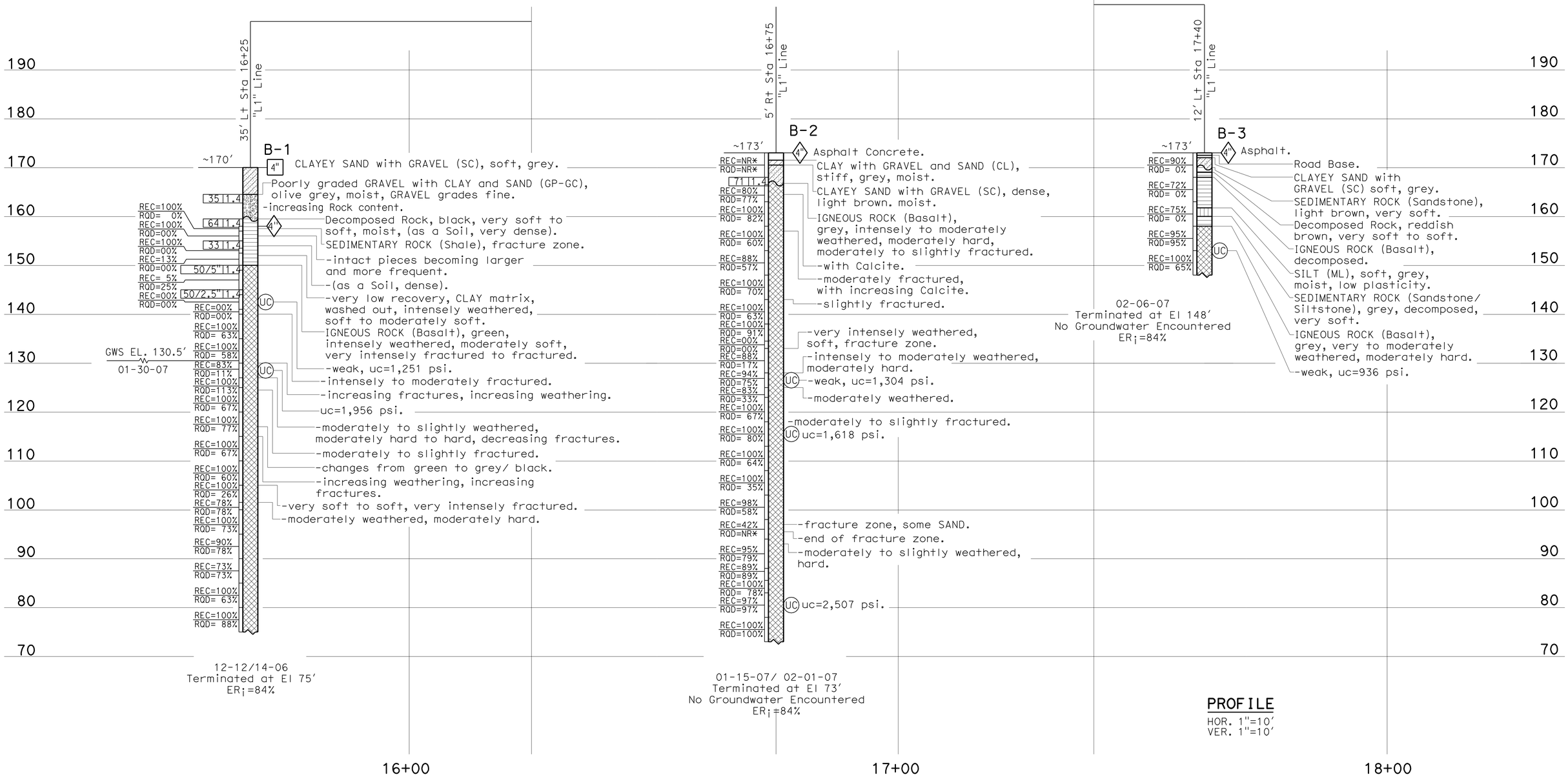
(For Boring Location See Plan, LOTB Sheet 1 of 5)



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

ENGINEERING SERVICES		GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES OFFICE OF GEOTECHNICAL DESIGN BRANCH 9	BRIDGE NO. 35E0034	LA HONDA CREEK RETAINING WALL AT PM 9.9
FUNCTIONAL SUPERVISOR	DRAWN BY: M. Reynolds 11/09	FIELD INVESTIGATION BY: J. Moore			POST MILES 9.9	LOG OF TEST BORINGS 2 OF 5
NAME: M. Momenzadeh	CHECKED BY: C. Risden					
OGS CIVIL LOG OF TEST BORINGS SHEET	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3		CU 04 EA 3S8201		DISREGARD PRINTS BEARING EARLIER REVISION DATES →	REVISION DATES / SHEET 9 OF 12

FILE => 35e0034-z-lotb02.dgn

USERNAME => trsitk DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:04

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	47	49

John C. Moore 03-16-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — John C. Moore — No. 61792 — Exp 6-30-11 — CIVIL — STATE OF CALIFORNIA

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CEMENTATION

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

BOREHOLE IDENTIFICATION

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

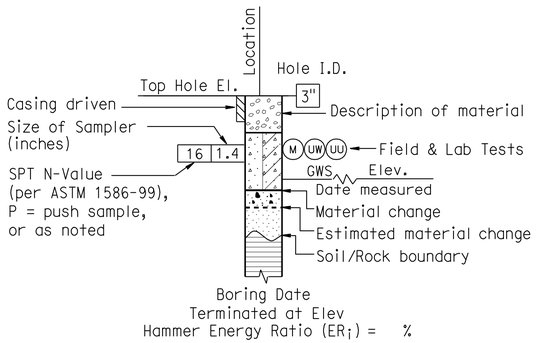
Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS

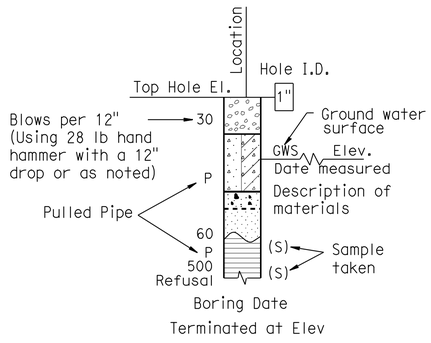
Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	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

PLASTICITY OF FINE-GRAINED SOILS

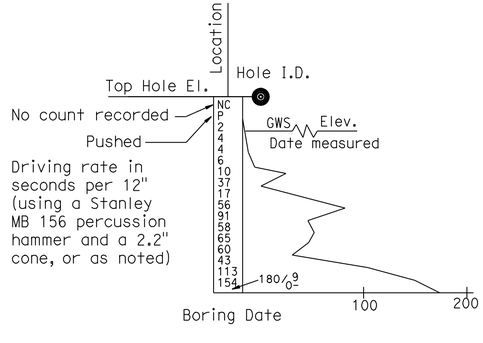
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be 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.



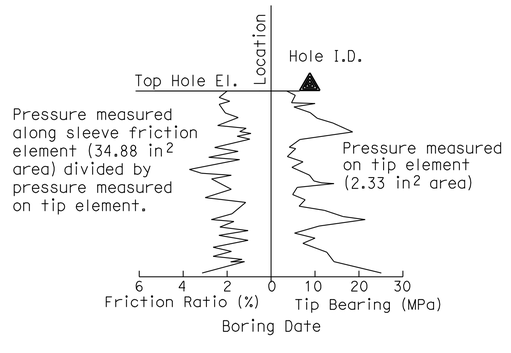
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) SOUNDING

ENGINEERING SERVICES			GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES OFFICE OF GEOTECHNICAL DESIGN BRANCH 9	BRIDGE NO. 35E0034	LA HONDA CREEK RETAINING WALL AT PM 9.9
FUNCTIONAL SUPERVISOR	PREPARED BY	M. Reynolds 11/09				POST MILE 9.9	LOG OF TEST BORINGS 3 OF 5
NAME: M. Momenzadeh	CHECKED BY	C. Risden	J. Moore				
GS LOTB SOIL LEGEND	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3				CU 04 EA 3S8201	DISREGARD PRINTS BEARING EARLIER REVISION DATES →	REVISION DATES / SHEET 10 OF 12

FILE => 35e0034-z-lotb03.dgn

DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:04
USERNAME => ttrstrk

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

GROUP SYMBOLS AND NAMES

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

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)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	48	49

John C. Moore 03-16-10
REGISTERED CIVIL ENGINEER DATE

6-21-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER John C. Moore No. 61792 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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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

ENGINEERING SERVICES			GEOTECHNICAL SERVICES
FUNCTIONAL SUPERVISOR	PREPARED BY	M. Reynolds 11/09	
NAME: M. Momenzadeh	CHECKED BY	C. Risden	J. Moore

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES OFFICE OF GEOTECHNICAL DESIGN BRANCH 9

BRIDGE NO. 35E0034
POST MILE 9.9

LA HONDA CREEK RETAINING WALL AT PM 9.9

LOG OF TEST BORINGS 4 OF 5

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04
EA 3S8201

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES

SHEET 11 OF 12

FILE => 35e0034-z-lotb04.dgn

USERNAME => tfsitk DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:05

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SM	84	9.9	49	49

John C. Moore 03-16-10
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6-21-10
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REGISTERED PROFESSIONAL ENGINEER — John C. Moore — No. 61792 — Exp 6-30-11 — CIVIL — STATE OF CALIFORNIA

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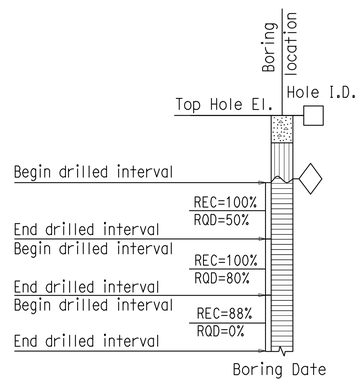
PERCENT CORE RECOVERY (REC) & ROCK QUALITY DESIGNATION (RQD)

$$REC = \frac{\sum \text{Length of the recovered core pieces (inches)}}{\text{Total length of core run (inches)}} \times 100\%$$

$$RQD = \frac{\sum \text{Length of intact core pieces} \geq 4\text{"}}{\text{Total length of core run (inches)}} \times 100\%$$



RELATIVE STRENGTH OF INTACT ROCK

Term	Uniaxial Compressive Strength (PSI)
Extremely Strong	> 30,000
Very Strong	14,500 - 30,000
Strong	7,000 - 14,500
Medium Strong	3,500 - 7,000
Weak	700 - 3,500
Very Weak	150 - 700
Extremely Weak	< 150

BEDDING SPACING

Description	Thickness / Spacing
Massive	Greater than 10 ft
Very thickly bedded	3 to 10 ft
Thickly bedded	1 to 3 ft
Moderately bedded	3-5/8" to 1 ft
Thinly bedded	1-1/4" to 3-5/8"
Very thinly bedded	3/8" to 1-1/4"
Laminated	Less than 3/8"

LEGEND OF ROCK MATERIALS

- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

ROCK HARDNESS

Description	Criteria
Extremely Hard	Specimen cannot be scratched with a pocket knife or sharp pick; can only be chipped with repeated heavy hammer blows.
Very Hard	Specimen cannot be scratched with a pocket knife or sharp pick. Breaks with repeated heavy hammer blows.
Hard	Specimen can be scratched with a pocket knife or sharp pick with difficulty (heavy pressure). Heavy hammer blows required to break specimen.
Moderately Hard	Specimen can be scratched with pocket knife or sharp pick with light or moderate pressure. Core breaks with moderate hammer pressure.
Moderately Soft	Specimen can be grooved 1/6" deep with a pocket knife or sharp pick with moderate or heavy pressure. Breaks with light hammer blow or heavy manual pressure.
Soft	Specimen can be grooved or gouged easily by a pocket knife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure.
Very Soft	Specimen can be readily indented, grooved or gouged with fingernail, or carved with a pocket knife. Breaks with light manual pressure.

FRACTURE DENSITY

Description	Observed Fracture Density
Unfractured	No fractures.
Very slightly fractured	Lengths greater than 3 feet.
Slightly fractured	Lengths from 1 to 3 feet with few lengths less than 1 foot or greater than 3 feet.
Moderately fractured	Lengths mostly in 4" to 1 foot range with most lengths about 8"
Intensely fractured	Lengths average from 1 to 4" with scattered fragmented intervals with lengths less than 4"
Very intensely fractured	Mostly chips and fragments with a few scattered short core lengths.

Combination descriptors (such as "Very intensely to intensely fractured") are used where equal distribution of both fracture density characteristics is present over a significant interval or exposure, or where characteristics are "in between" the descriptor definitions. Only two adjacent descriptors may be combined.

WEATHERING DESCRIPTORS FOR INTACT ROCK

Description	Diagnostic features: Chemical Weathering-Discoloration and/or oxidation — Body of Rock	Diagnostic features: Chemical Weathering-Discoloration and/or oxidation — Fracture Surfaces	Diagnostic features: Mechanical Weathering-Grain boundary conditions (disaggregation) primarily for granitics and some coarse-grained sediments	Diagnostic features: Texture and Solutioning — Texture	Diagnostic features: Texture and Solutioning — Solutioning	General Characteristics
Fresh	No discoloration, not oxidized.	No discoloration or oxidation.	No separation, intact (tight).	No change.	No solutioning.	Hammer rings when crystalline rocks are struck.
Slightly Weathered	Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull.	Minor to complete discoloration or oxidation of most surfaces.	No visible separation, intact (tight).	Preserved.	Minor leaching of some soluble minerals may be noted.	Hammer rings when crystalline rocks are struck. Body of rock not weakened.
Moderately Weathered	Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty," feldspar crystals are "cloudy."	All fracture surfaces are discolored or oxidized.	Partial separation of boundaries visible.	Generally preserved.	Soluble minerals may be mostly leached.	Hammer does not ring when rock is struck. Body of rock is slightly weakened.
Intensely Weathered	Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in-situ disaggregation, see grain boundary conditions.	All fracture surfaces are discolored or oxidized, surfaces friable.	Partial separation, rock is friable; in semiarid conditions granitics are disaggregated.	Texture altered by chemical disintegration (hydration, argillation).	Leaching of soluble minerals may be complete.	Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened.
Decomposed	Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay.		Complete separation of grain boundaries (disaggregated).	Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete.		Can be granulated by hand. Resistant minerals such as quartz may be present as "stringers" or "dikes."

Combination descriptors (such as "slightly weathered to fresh") are permissible where equal distribution of both weathering characteristics is present over significant intervals or where characteristics present are "in between" the diagnostic feature. However, combination descriptors should not be used where significant, identifiable zones can be delineated. Only two adjacent descriptors may be combined. "Very intensely weathered" is the combination descriptor for "intensely weathered to decomposed."

ENGINEERING SERVICES			GEOTECHNICAL SERVICES
FUNCTIONAL SUPERVISOR	PREPARED BY	M. Reynolds 11/09	FIELD INVESTIGATION BY:
NAME: M. Momenzadeh	CHECKED BY	C. Risden	J. Moore

GS LOTB ROCK LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
OFFICE OF GEOTECHNICAL
DESIGN BRANCH 9

CU 04
EA 3S8201

BRIDGE NO. 35E0034
POST MILE 9.9

LA HONDA CREEK RETAINING WALL AT PM 9.9

LOG OF TEST BORINGS 5 OF 5

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES

SHEET 12 OF 12

FILE => 35e0034-z-lotb05.dgn

USERNAME => trstrk DATE PLOTTED => 24-JUN-2010 TIME PLOTTED => 10:05