ACSTP-P001(579)E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	1	48

INDEX OF PLANS

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

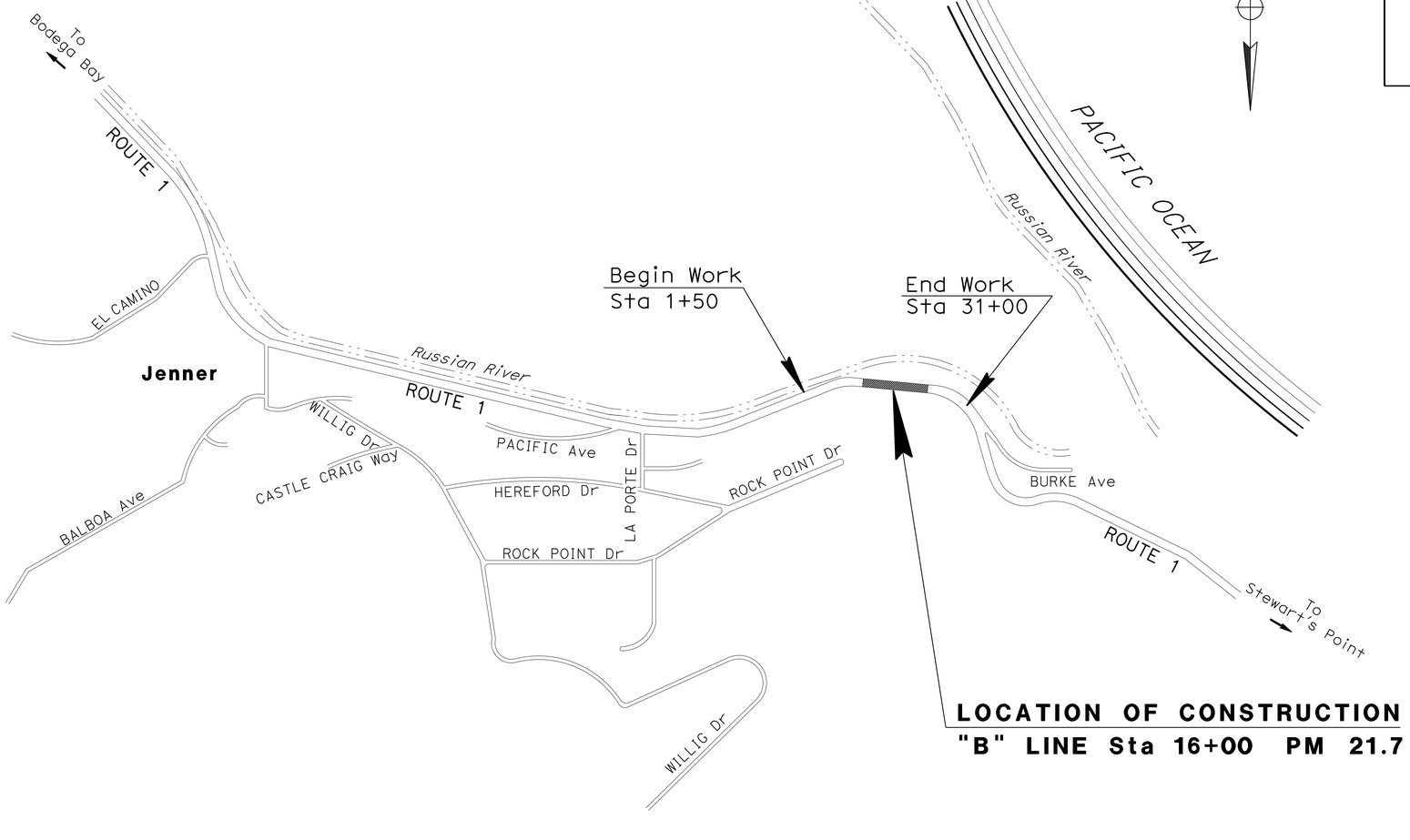
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN SONOMA COUNTY
AT JENNER
AT 0.1 MILE SOUTH OF BURKE AVENUE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2010

LOCATION MAP



NO SCALE

LOCATION OF CONSTRUCTION
"B" LINE Sta 16+00 PM 21.7

PROJECT MANAGER: JAY HAGHPARAST

DESIGN ENGINEER: THANH NGUYEN

10/23/12
PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE

HARPREET BINNING
No. 68470
Exp. 9/30/13
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

February 19, 2013
PLANS APPROVAL DATE

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

CONTRACT No.	04-4S1604
PROJECT ID	0400001213

LAST REVISION 11-29-12
DATE PLOTTED => 18-JUN-2013
TIME PLOTTED => 13:32

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	2	48

REGISTERED CIVIL ENGINEER — DATE: 10/23/12

REGISTERED PROFESSIONAL ENGINEER — HARPREET BINNING — No. 68470 — Exp. 9/30/13 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE: 2-19-13

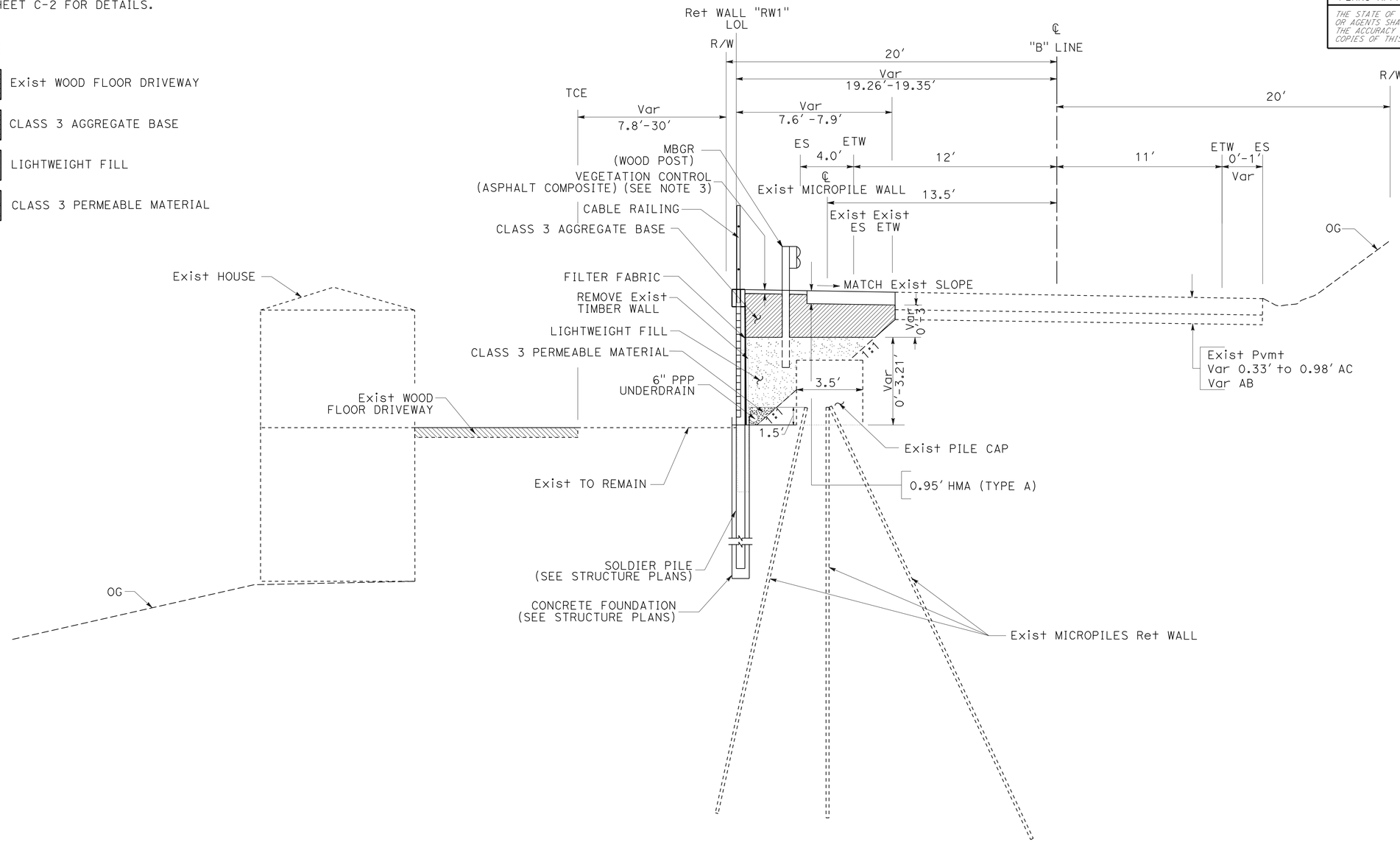
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. SEE SHEET C-2 FOR DETAILS.

LEGEND:

- Exist WOOD FLOOR DRIVEWAY
- CLASS 3 AGGREGATE BASE
- LIGHTWEIGHT FILL
- CLASS 3 PERMEABLE MATERIAL



"B" STATION 15+31.90 TO 15+85.58

TYPICAL CROSS SECTIONS

NO SCALE

X-1

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

FUNCTIONAL SUPERVISOR: THANH NGUYEN
CALCULATED-DESIGNED BY: DEBRA FRANCO
CHECKED BY: HARPREET BINNING
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 21-FEB-2013
11-29-12 | TIME PLOTTED => 13:56

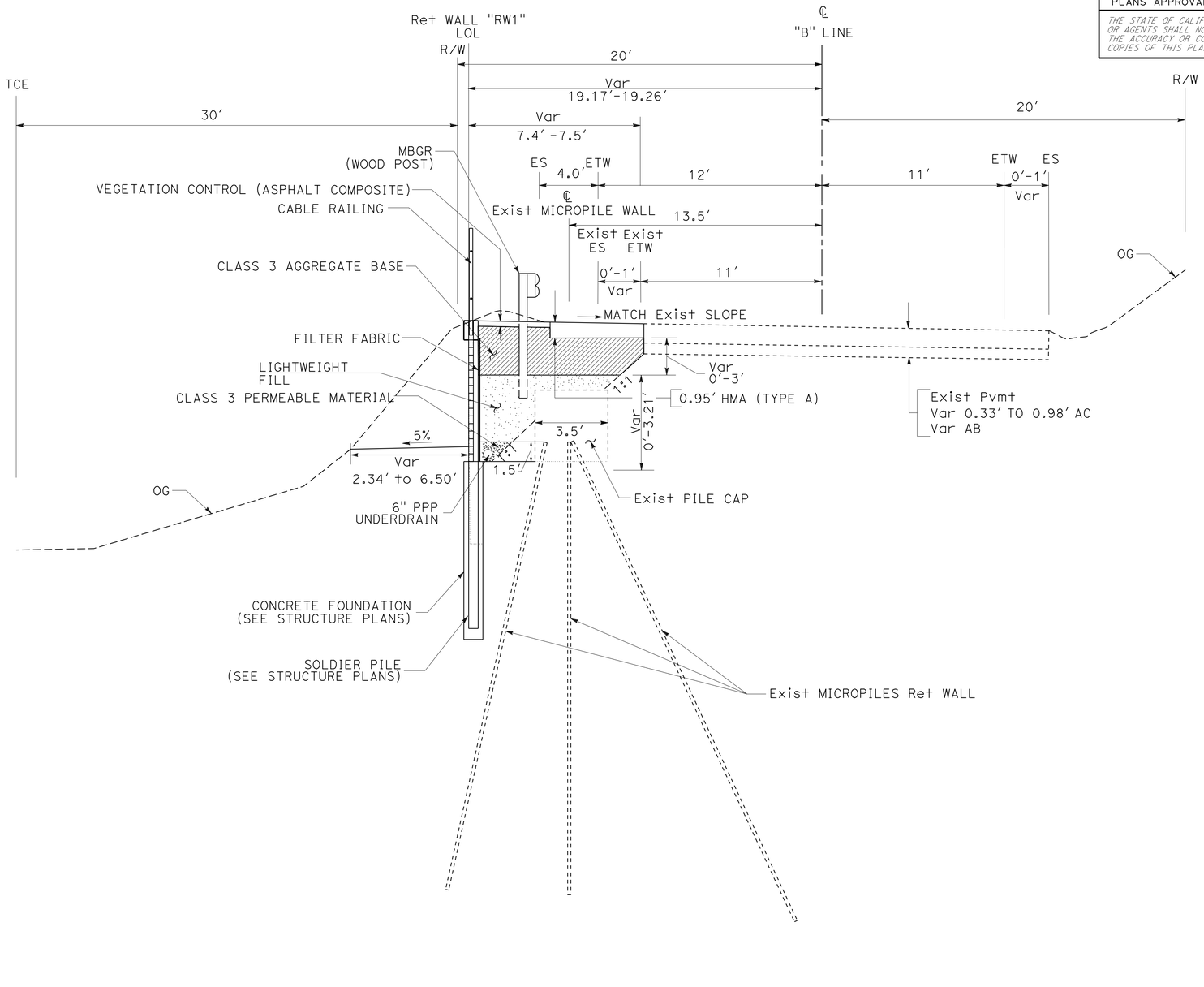
BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 0400001213ca001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1459
PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	3	48

10/23/12
REGISTERED CIVIL ENGINEER DATE

HARPREET BINNING
No. 68470
Exp. 9/30/13
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

2-19-13
PLANS APPROVAL DATE



"B" STATION 15+85.58 TO 16+36.55

TYPICAL CROSS SECTIONS

NO SCALE

X-2

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

CALCULATED-DESIGNED BY	DEBRA FRANCO
CHECKED BY	HARPREET BINNING
FUNCTIONAL SUPERVISOR	THANH NGUYEN
REVISED BY	
DATE REVISED	

LAST REVISION
DATE PLOTTED => 21-FEB-2013
TIME PLOTTED => 13:56
11-29-12

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 0400001213ca002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1459
PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	4	48

10/23/12
REGISTERED CIVIL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
HARPREET BINNING
No. 68470
Exp. 9/30/13
CIVIL
STATE OF CALIFORNIA

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

NOTE:

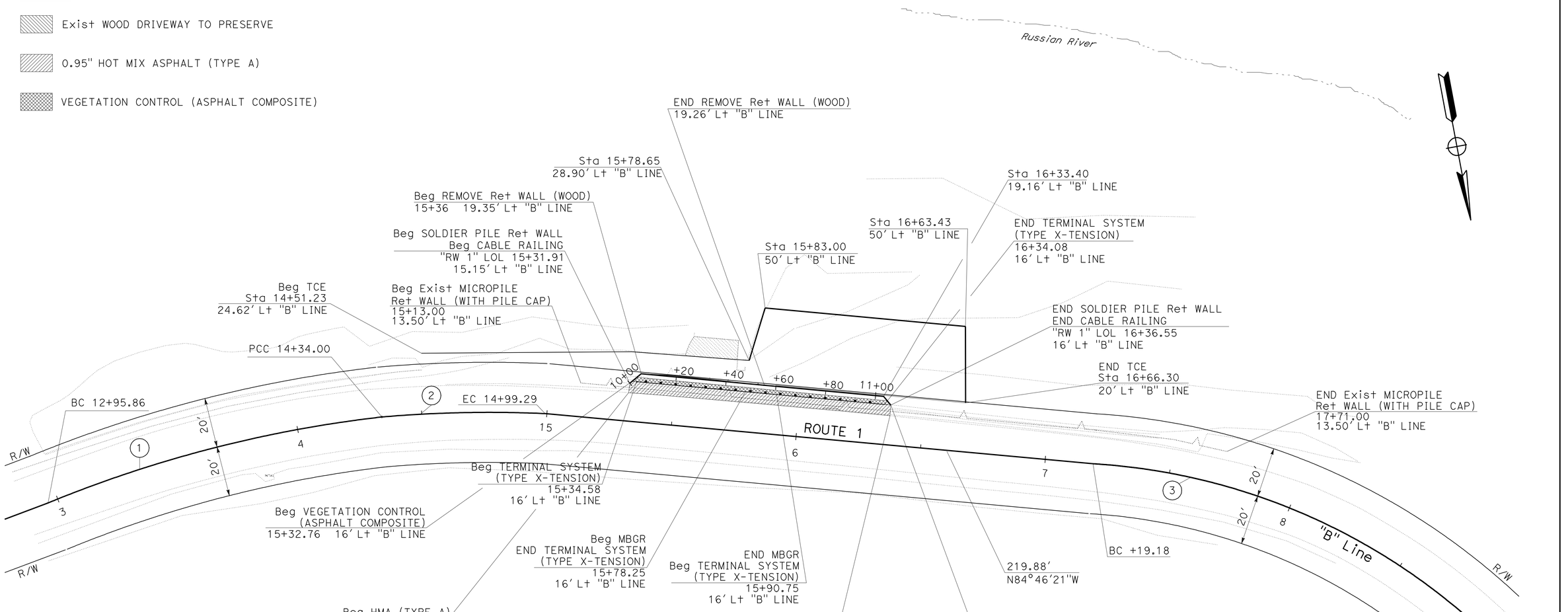
FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND:

- Exist WOOD DRIVEWAY TO PRESERVE
- 0.95" HOT MIX ASPHALT (TYPE A)
- VEGETATION CONTROL (ASPHALT COMPOSITE)

CURVE DATA

No.	R	Δ	T	L
1	500.00′	15°49′48"	69.51′	138.14′
2	500.00′	7°28′56"	32.69′	65.29′
3	250.00′	66°15′05"	163.13′	289.08′



LAYOUT

SCALE: 1" = 20′ **L-1**

REVISED BY | DATE REVISED
AMIT NIJHAWAN | HARPREET BINNING
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: THANH NGUYEN

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

LAST REVISION 11-29-12
DATE PLOTTED => 21-FEB-2013
TIME PLOTTED => 13:56

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 0400001213ea001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1459
PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	5	48

REGISTERED CIVIL ENGINEER — DATE 10/23/12

PLANS APPROVAL DATE 2-19-13

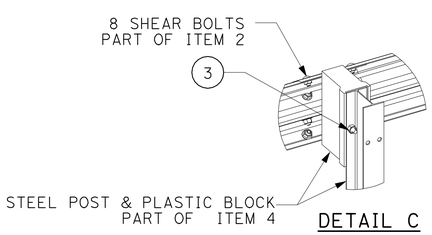
REGISTERED PROFESSIONAL ENGINEER — HARPREET BINNING — No. 68470 — Exp. 9/30/13 — CIVIL — STATE OF CALIFORNIA

NOTES:(THIS SHEET)

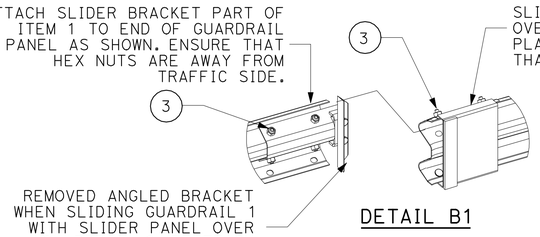
1. SEE MANUFACTURER PLANS FOR ADDITIONAL DETAILS AND DIMENSIONS NOT SHOWN ON PLANS.
2. SYSTEM TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
3. ONLY TIGHTEN THE CABLE ASSEMBLIES USING THE NUTS AT THE CABLE BRACKET (SEE DETAIL D). DO NOT TIGHTEN THE CABLES AT THE FRONT OF THE GROUND ANCHOR.
4. WHEN DRIVING STEEL POST, ENSURE THAT A DRIVING CAP WITH TIMBER OR PLASTIC INSERT IS USED TO PREVENT DAMAGE TO THE GALVANIZING TO THE TOP OF THE STEEL POST.
5. EXISTING UTILITY FACILITIES HAVE NOT BEEN SHOWN ON THE PLANS.

LEGEND:

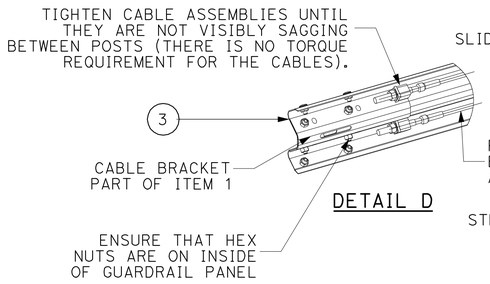
ITEM	DESCRIPTION
(1)	X-TENSION TERMINAL COMPONENT KIT
(2)	X-TENSION HARDWARE KIT
(3)	X-TENSION SYSTEM HARDWARE KIT
(4)	X-TENSION GUARDRAIL COMPONENT KIT 3
(5)	I-BEAM POST, MIDDLE, X350



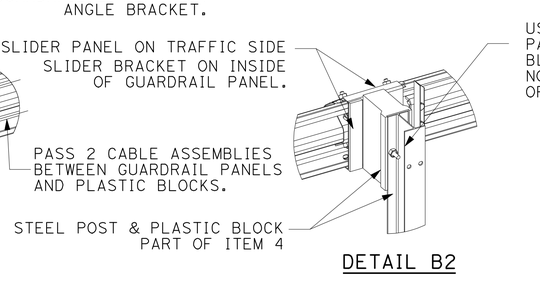
DETAIL C



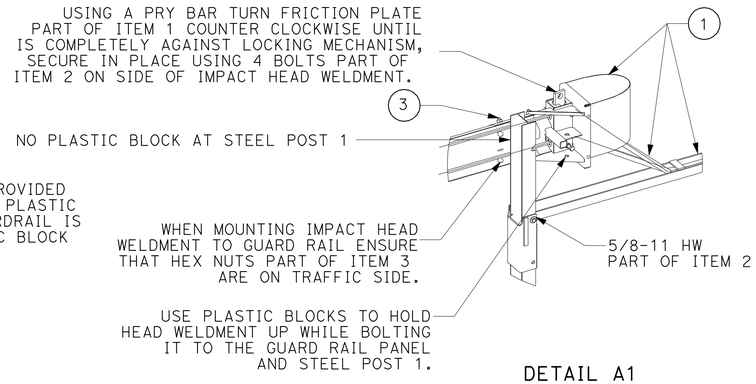
DETAIL B1



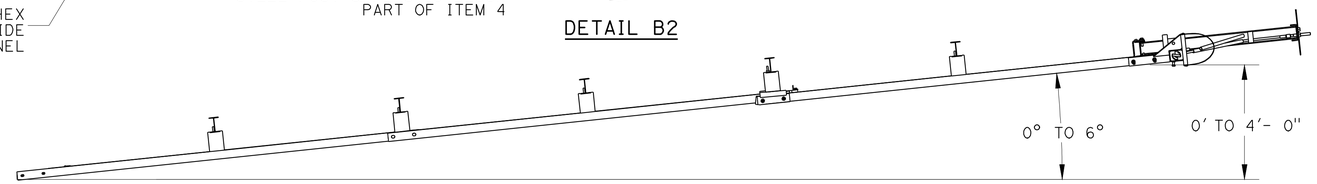
DETAIL D



DETAIL B2

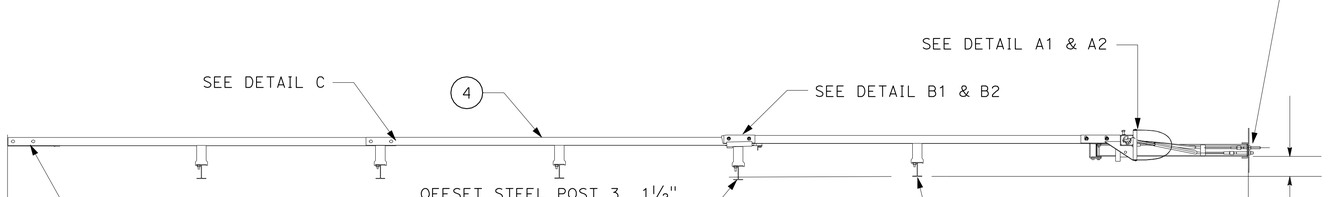


DETAIL A1

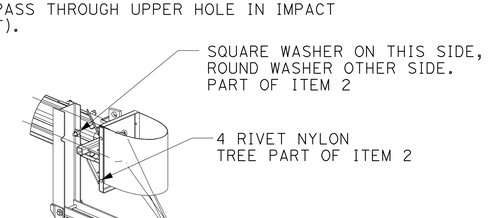


FLARED TERMINAL SYSTEM DETAIL

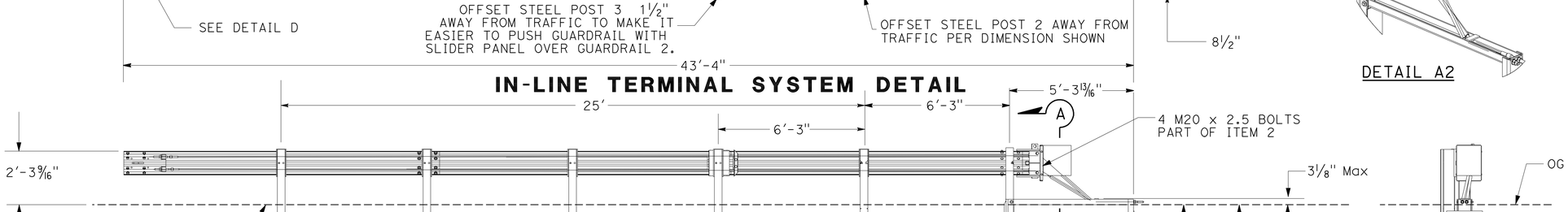
PASS CABLE ASSEMBLY UNDER THE STEEL STRAP ON THE GROUND STRUT AND FORWARD THROUGH THE HOLES AT FRONT END OF GROUND STRUT. THEN PASS CABLE ASSEMBLY THROUGH LOWER HOLE IN IMPACT HEAD WELDMENT AND THROUGH FRICTION PLATE AND OUT THE BACK SIDE OF THE IMPACT HEAD. (REPEAT FOR SECOND CABLE ASSEMBLY TO PASS THROUGH UPPER HOLE IN IMPACT HEAD WELDMENT).



IN-LINE TERMINAL SYSTEM DETAIL



DETAIL A2



TERMINAL SYSTEM (TYPE X-TENSION) MODEL No. XTGTSS3

SECTION A-A

CONSTRUCTION DETAILS

NO SCALE — C-1

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

FUNCTIONAL SUPERVISOR: THANH NGUYEN

CALCULATED-DESIGNED BY: AMIT NIJHAWAN

CHECKED BY: HARPREET BINNING

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 21-FEB-2013 | TIME PLOTTED => 13:56 | 11-29-12

BORDER LAST REVISED 7/2/2010

USERNAME => s123631
DGN FILE => 04000001213ga001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1459

PROJECT NUMBER & PHASE 04000012131

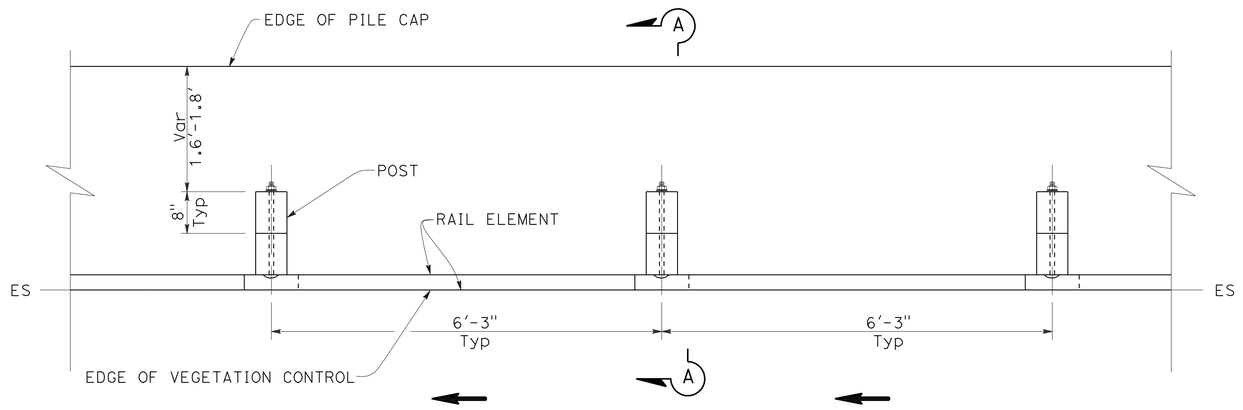
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	6	48

10/23/12
REGISTERED CIVIL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
HARPREET BINNING
No. 68470
Exp. 9/30/13
CIVIL
STATE OF CALIFORNIA

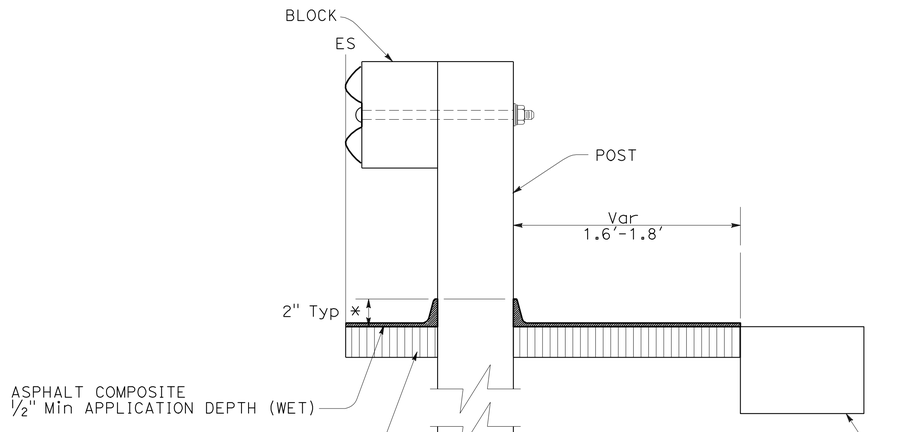
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



PLAN

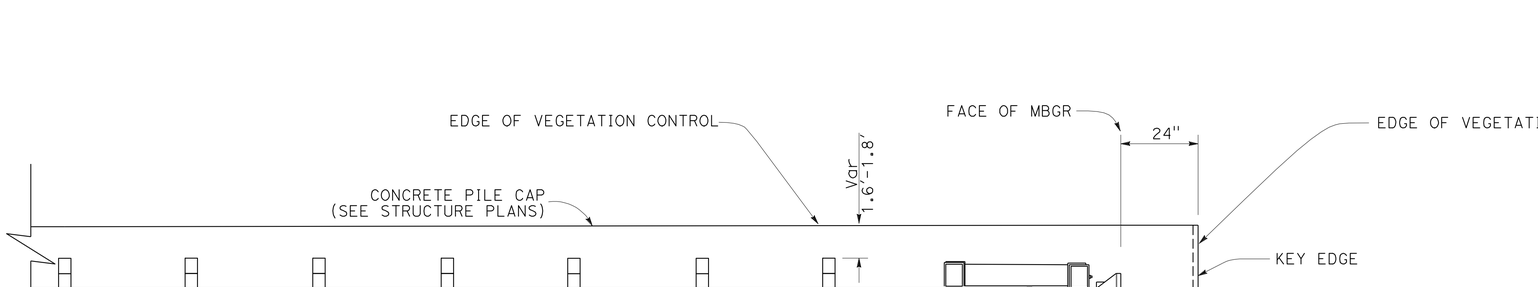
NOTES:

1. WHERE THE DISTANCE BETWEEN BACK OF POST AND HINGE POINT IS LESS THAN 24", VEGETATION CONTROL TO BE CONSTRUCTED 6" BEYOND THE HINGE POINT WITH THE EDGE KEYED IN.
2. WHERE CURB OR DIKE IS CONSTRUCTED UNDER RAILING, CONSTRUCT VEGETATION CONTROL TO BACK EDGE OF CURB OR DIKE. WHERE PAVED SHOULDER IS CONSTRUCTED WITHIN 24" IN FRONT OF THE POST, CONSTRUCT VEGETATION CONTROL TO THE EDGE OF PAVED SHOULDER.
3. FEATHER EDGE OF ASPHALT COMPOSITE TRANSITION UP POSTS AND BACK OF CURBS AND DIKES. TRANSITION LINE SHALL FORM A REASONABLY STRAIGHT LINE, HORIZONTALLY FROM POST TO POST OR ALONG TOP EDGE OF CURB OR DIKE.
4. DIRECTION OF ADJACENT TRAFFIC INDICATED BY ← .



* (SEE NOTE 3)

SECTION A-A



PLAN

CONSTRUCTION DETAILS

NO SCALE **C-2**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR: THANH NGUYEN
AMIT NIJHAWAN
HARPREET BINNING

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

LAST REVISION 12-04-12
DATE PLOTTED => 22-FEB-2013
TIME PLOTTED => 06:02

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => 0400001213ga002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1459
PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	7	48

10/23/12
REGISTERED CIVIL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
HARPREET BINNING
No. 68470
Exp. 9/30/13
CIVIL
STATE OF CALIFORNIA

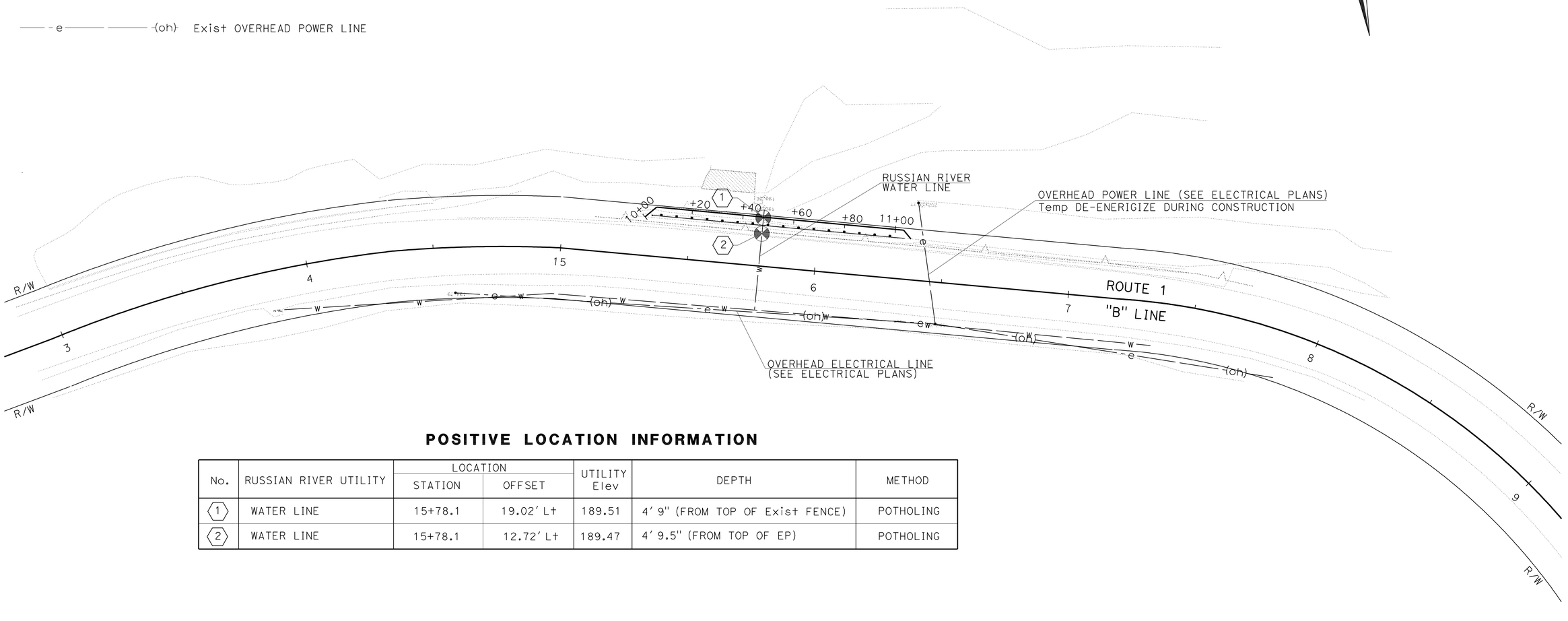
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. LOCATIONS OF UTILITY FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. ALL ELEVATIONS SHOWN REFER TO THE TOP OF PIPE ELEVATION UNLESS OTHERWISE INDICATED.

LEGEND:

- POTHOLE LOCATION
- E (OH) OVERHEAD ELECTRICAL
- POWER POLE
- W Exist WATER LINE
- e (oh) Exist OVERHEAD POWER LINE



POSITIVE LOCATION INFORMATION

No.	RUSSIAN RIVER UTILITY	LOCATION		UTILITY Elev	DEPTH	METHOD
		STATION	OFFSET			
(1)	WATER LINE	15+78.1	19.02' Lt	189.51	4' 9" (FROM TOP OF Exist FENCE)	POTHOLING
(2)	WATER LINE	15+78.1	12.72' Lt	189.47	4' 9.5" (FROM TOP OF EP)	POTHOLING

UTILITY PLAN

SCALE: 1" = 20'

U-1

APPROVED FOR UTILITY INFORMATION ONLY

REVISED BY | DATE REVISED
AMIT NIJHAWAN | HARPREET BINNING
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: THANH NGUYEN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-DESIGN DIVISION

LAST REVISION | DATE PLOTTED => 21-FEB-2013
11-29-12 | TIME PLOTTED => 13:56

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	8	48

MAZIN H. AL-ALI — REGISTERED CIVIL ENGINEER — 12-04-12 — DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — MAZIN H. AL-ALI — No. 65523 — Exp. 9/30/13 — CIVIL — STATE OF CALIFORNIA

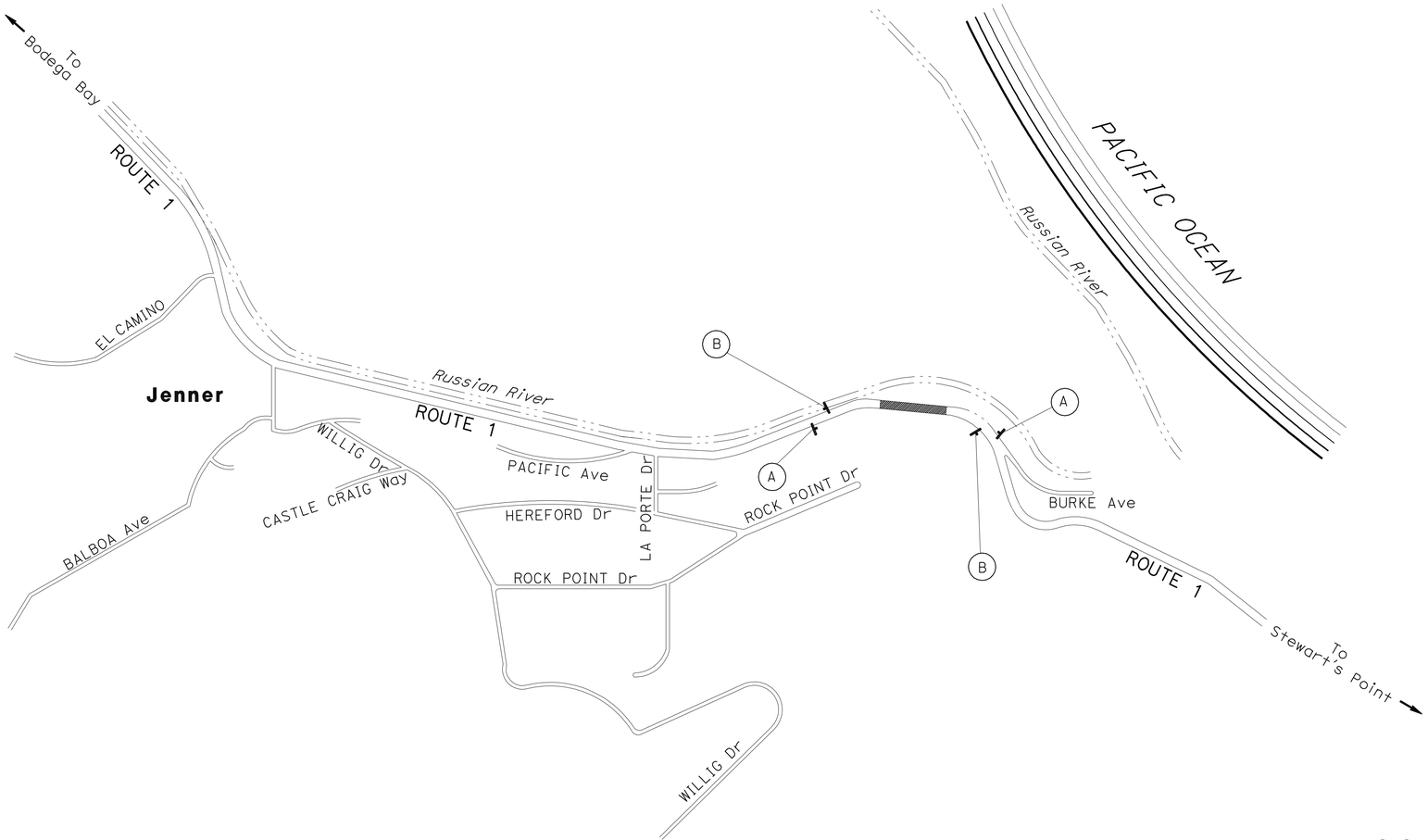
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE, EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE TRAFFIC HANDLING QUANTITIES.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POST AND SIZE	EACH
(A)	W20-1	48" x 48"	ROAD WORK AHEAD	1-6" x 6"	2
(B)	G20-2	36" x 18"	END ROAD WORK	1-4" x 4"	2



CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

REVISED BY | DATE REVISED
MAZIN AL-ALI | HASEEB YOUSAF
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: MOHAMMED OATAMI
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-TRAFFIC DESIGN

LAST REVISION | DATE PLOTTED => 21-FEB-2013
11-29-12 | TIME PLOTTED => 13:56

BORDER LAST REVISED 7/2/2010 | USERNAME => s123631 | DGN FILE => 04000012131a001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1513 | PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	9	48

MAZ - ALI 12-04-12
REGISTERED CIVIL ENGINEER DATE

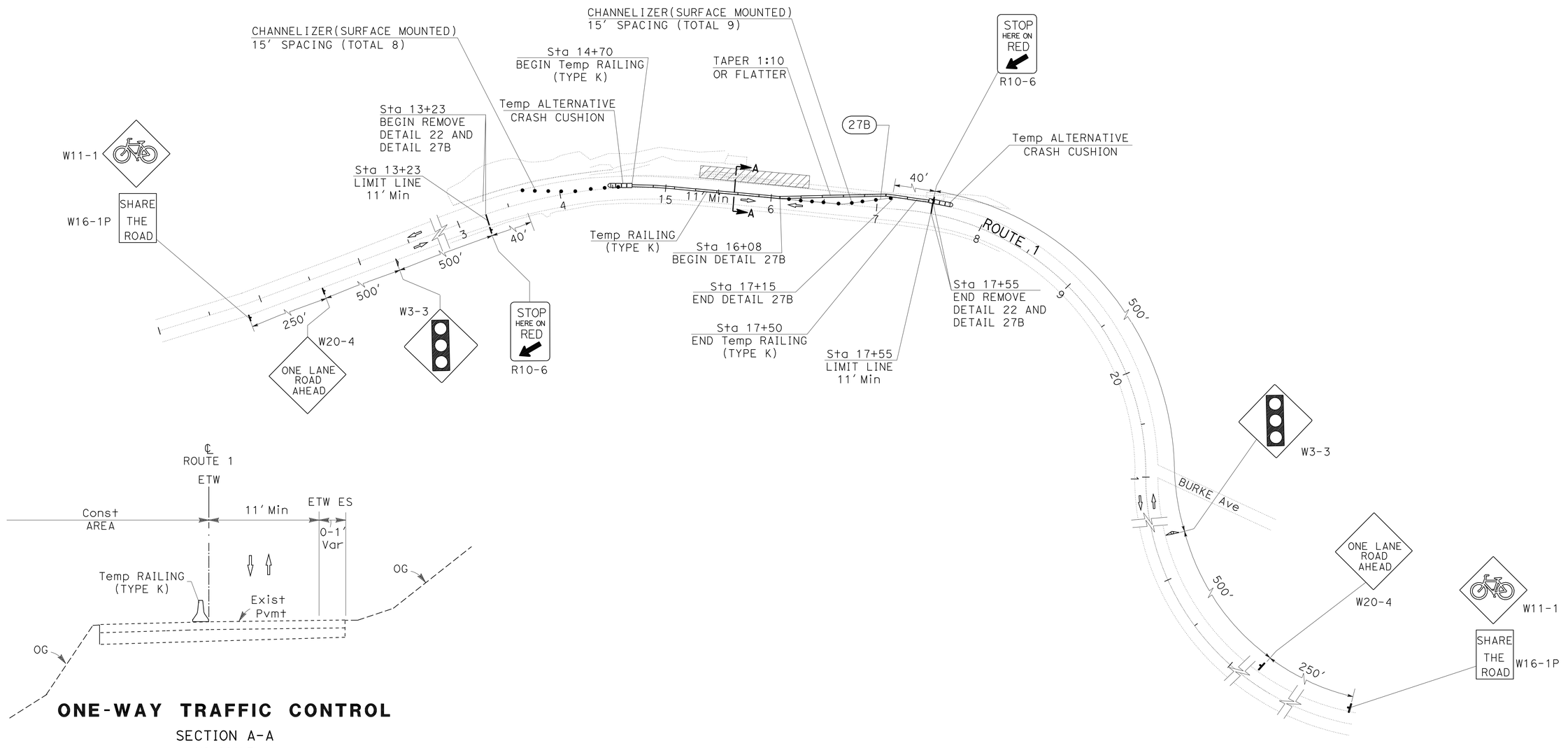
2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MAZIN H. AL-ALI
No. 65523
Exp. 9/30/13
CIVIL
STATE OF CALIFORNIA

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

LEGEND:

- Temp RAILING (TYPE K)
- CHANNELIZER (SURFACED MOUNTED)
- CONSTRUCTION AREA
- (XX) TEMPORARY TRAFFIC STRIPE (PAINT) DETAIL NUMBER



ONE-WAY TRAFFIC CONTROL

SECTION A-A

NO SCALE

TRAFFIC HANDLING PLAN

SCALE: 1" = 50'

TH-1

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: MOHAMMED QATAMI
CALCULATED-DESIGNED BY: MAZIN AL-ALI
CHECKED BY: HASEEB YOUSAF
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 21-FEB-2013
12-04-12 | TIME PLOTTED => 13:56

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 0400001213md001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1513
PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	10	48

MAZIN H. AL-ALI — 12-04-12
REGISTERED CIVIL ENGINEER — DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — MAZIN H. AL-ALI No. 65523 Exp. 9/30/13 CIVIL — STATE OF CALIFORNIA

CHANNELIZER (SURFACE MOUNTED)

SHEET No.	EA
TH-1	17

TEMPORARY ALTERNATIVE CRASH CUSHION

SHEET No.	EA
TH-1	2

TEMPORARY RAILING (TYPE K)

SHEET No.	LOCATION	LF
TH-1	Sta 14+70 TO Sta 17+50	280

PAVEMENT DELINEATION (TRAFFIC HANDLING)

SHEET No.	LOCATION	DETAIL No.	REMOVE PAVEMENT MARKER	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	REMOVE THERMOPLASTIC TRAFFIC STRIPE	TEMPORARY TRAFFIC STRIPE (PAINT)	TEMPORARY PAVEMENT MARKING (PAINT)	DESCRIPTION/ COMMENTS
			EA	LF	LF	LF	SQFT	
TH-1	Sta 13+23 TO Sta 17+55	22	37	864			22	2-LIMIT LINE
	Sta 13+23 TO Sta 17+55	27B			432			
	Sta 16+08 TO Sta 17+15	27B				107		
TOTAL			37	864	432	107	22	

CONSTRUCTION AREA SIGNS (TRAFFIC HANDLING)

SHEET No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE	No. OF POST AND SIZE	INSTALL ROADSIDE (SSBM) (N)	No. OF SIGNS
TH-1	W3-3	AS SHOWN ON PLAN	36" x 36"	MOUNT ON FLASHING BEACON	2	
	R10-6	AS SHOWN ON PLAN	36" x 24"	1-4" x 4"		2
	W20-4	AS SHOWN ON PLAN	36" x 36"	1-4" x 6"		2
	W11-1	AS SHOWN ON PLAN	30" x 30"	1-4" x 4"		2
	W16-1P		18" x 24"			

NOTES:
1. (SSBM)-STRAP AND SADDLE BRACKET METHOD
2. (N)-NOT A SEPARATE PAID ITEM. FOR INFORMATION ONLY.
3. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE CONSTRUCTION AREA SIGN PLANS.

TRAFFIC HANDLING QUANTITIES

THQ-1

REVISED BY | DATE REVISED
MAZIN AL-ALI | HASEEB YOUSAF
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: MOHAMMED QATAMI
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-TRAFFIC DESIGN

LAST REVISION 12-04-12 | DATE PLOTTED => 21-FEB-2013 | TIME PLOTTED => 13:56

BORDER LAST REVISED 7/2/2010 | USERNAME => s123631 | DGN FILE => 0400001213mf001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1513 | PROJECT NUMBER & PHASE 04000012131

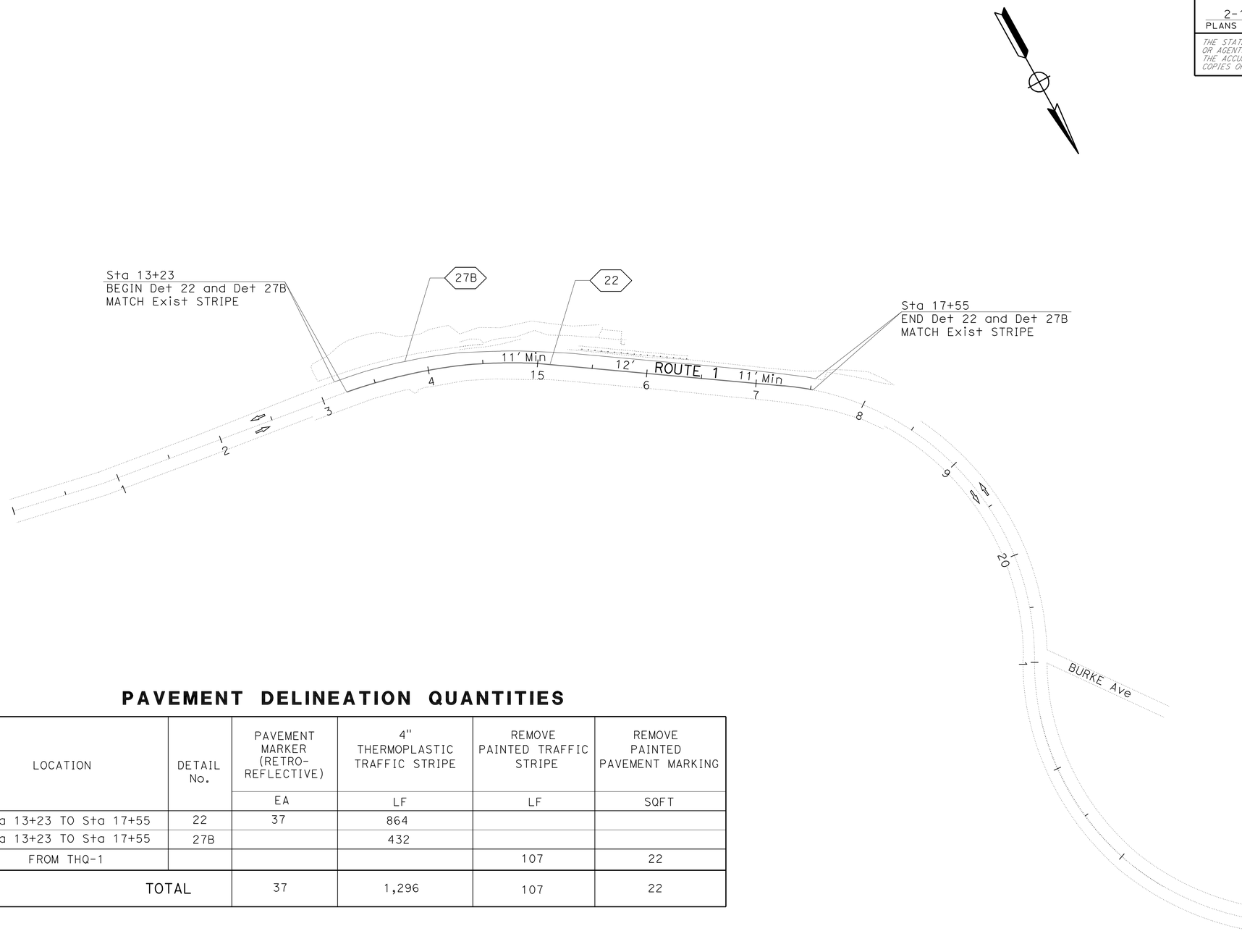
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	11	48

REGISTERED CIVIL ENGINEER — DATE 12-04-12

MAZIN H. AL-ALI No. 65523 Exp. 9/30/13 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

2-19-13
PLANS APPROVAL DATE

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



PAVEMENT DELINEATION QUANTITIES

LOCATION	DETAIL No.	PAVEMENT MARKER (RETRO-REFLECTIVE)	4" THERMOPLASTIC TRAFFIC STRIPE	REMOVE PAINTED TRAFFIC STRIPE	REMOVE PAINTED PAVEMENT MARKING
		EA	LF	LF	SQFT
Sta 13+23 TO Sta 17+55	22	37	864		
Sta 13+23 TO Sta 17+55	27B		432		
FROM THQ-1				107	22
TOTAL		37	1,296	107	22

PAVEMENT DELINEATION PLAN AND QUANTITIES

SCALE: 1" = 50'

PD-1

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: MOHAMMED QATAMI
CALCULATED-DESIGNED BY: MAZIN AL-ALI
CHECKED BY: HASEEB YOUSAF
REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 21-FEB-2013 | 12-04-12 | TIME PLOTTED => 13:56

BORDER LAST REVISED 7/2/2010 | USERNAME => s123631 | DGN FILE => 0400001213na001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1513 | PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	12	48

10/23/12
REGISTERED CIVIL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
HARPREET BINNING
No. 68470
Exp. 9/30/13
CIVIL
STATE OF CALIFORNIA

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

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

LOCATION/STATION	TEMPORARY CONSTRUCTION ENTRANCE	TEMPORARY GRAVEL BAG BERM	TEMPORARY SILT FENCE
	EA	LF	LF
15+10 TO 16+50			140
14+90 TO 16+57		334	
15+10	1		
TOTAL	1	334	140

ROADWAY QUANTITIES

LOCATION/STSTION	ROADWAY EXCAVATION	* MBGR (WOOD POST)	HMA (TYPE A)	CLASS 3 AGGREGATE BASE	6" PPP UNDERDRAIN	TERMINAL SYSTEM (TYPE X-TENSION)	VEGETATION CONTROL (ASPHALT COMPOSITE)
	CY	LF	TON	CY	LF	EA	SQYD
15+35 TO 15+85							
15+78.25 TO 15+90.75		12.5					
15+32 TO 16+37	80		36	96	101		38
15+34.58 TO 15+78.25						1	
15+90.75 TO 16+34.08						1	
TOTAL	80	12.5	36	96	101	2	38

* 7' LONG (WOOD POST)

SUMMARY OF QUANTITIES

Q-1

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY: AMIT NIJHAWAN
CHECKED BY: HARPREET BINNING
FUNCTIONAL SUPERVISOR: THANH NGUYEN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
06-DESIGN

LAST REVISION | DATE PLOTTED => 22-FEB-2013
12-05-12 | TIME PLOTTED => 06:08

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => 0400001213pa001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1459
PROJECT NUMBER & PHASE 0400001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	13	48

LICENSED LANDSCAPE ARCHITECT

2-19-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
DAVID WARREN YAM No. 3758
Registered
11-30-13
Renewal Date
10-22-12
Date
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:
UNDERLINED PORTIONS OF BOTANICAL NAME INDICATE ABBREVIATIONS USED ON PLANTING PLANS.

PLANT LIST AND PLANTING SPECIFICATIONS

PLANT GROUP	PLANT No.	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY EACH	HOLE SIZE (INCH)		BASIN TYPE	IRON SULFATE ①	SOIL AMEND ①	COMMERCIAL FERTILIZER ①		BASIN MULCH	STAKING	PLANTING LIMITS							REMARKS
																MINIMUM DISTANCE (FEET) FROM						ON CENTER	
							Dia	DEPTH				PLANTING	PLT ESTB	CY		ETW	Pvmt	FENCE	WALL	PAVED DITCH	EARTH DITCH	FEET	
A	1		ERIOGONUM FASCICULATUM	CALIFORNIA BUCKWHEAT	No. 1	35	③	③	I	--	--	1 PACKET	--	0.03	--	⑦	⑦	--	--	--	--	⑦	SHRUB
	2		SALVIA MELLIFERA	BLACK SAGE	No. 1	37	③	③	I	--	--	1 PACKET	--	0.03	--	⑦	⑦	--	--	--	--	⑦	SHRUB
	3		NASSELLA PULCHRA	PURPLE NEEDLEGRASS	No. 1	15	③	③	I	--	--	1 PACKET	--	0.03	--	⑦	⑦	--	--	--	--	⑦	PERENNIAL

APPLICABLE WHEN CIRCLED:

① - QUANTITIES SHOWN ARE "PER PLANT" UNLESS SHOWN AS SQFT OR SQYD APPLICATION RATES
2 - BASIN MULCH IS INCLUDED WITH MULCH QUANTITIES SHOWN ON PLANTING PLAN
③ - SUFFICIENT TO RECEIVE ROOT BALL AND AMENDMENTS IF REQUIRED
4 - SEE DETAIL
5 - SEE SPECIAL PROVISIONS
6 - SEE STANDARD SPECIFICATIONS
⑦ - AS SHOWN ON PLANS
8 - UNLESS OTHERWISE SHOWN ON PLANS
9 - FOLIAGE PROTECTOR REQUIRED
10 - ROOT PROTECTOR REQUIRED
11 - ROOT BARRIER REQUIRED
12 - STATE-FURNISHED

APPROVED FOR LANDSCAPE WORK ONLY

PLANT LIST
NO SCALE
PL-1

REVISED BY | DATE REVISED
CALIE TSUI | DAVID YAM
CALCULATED-DESIGNED BY | CHECKED BY
SENIOR LANDSCAPE ARCHITECT
DAVID W. YAM
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® WATER QUALITY

LAST REVISION 11-29-12
DATE PLOTTED => 21-FEB-2013
TIME PLOTTED => 13:57

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 0400001213te001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0792
PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	14	48

LICENSED LANDSCAPE ARCHITECT

2-19-13
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
DAVID WARREN YAM
Signature
11-30-13
Renewal Date
0-32-12
Date
STATE OF CALIFORNIA

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

NOTES:

1. FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. REMOVE LISTED INVASIVE NON-NATIVE SPECIES PRIOR TO PLANTING AND DURING PLANT ESTABLISHMENT PERIOD.

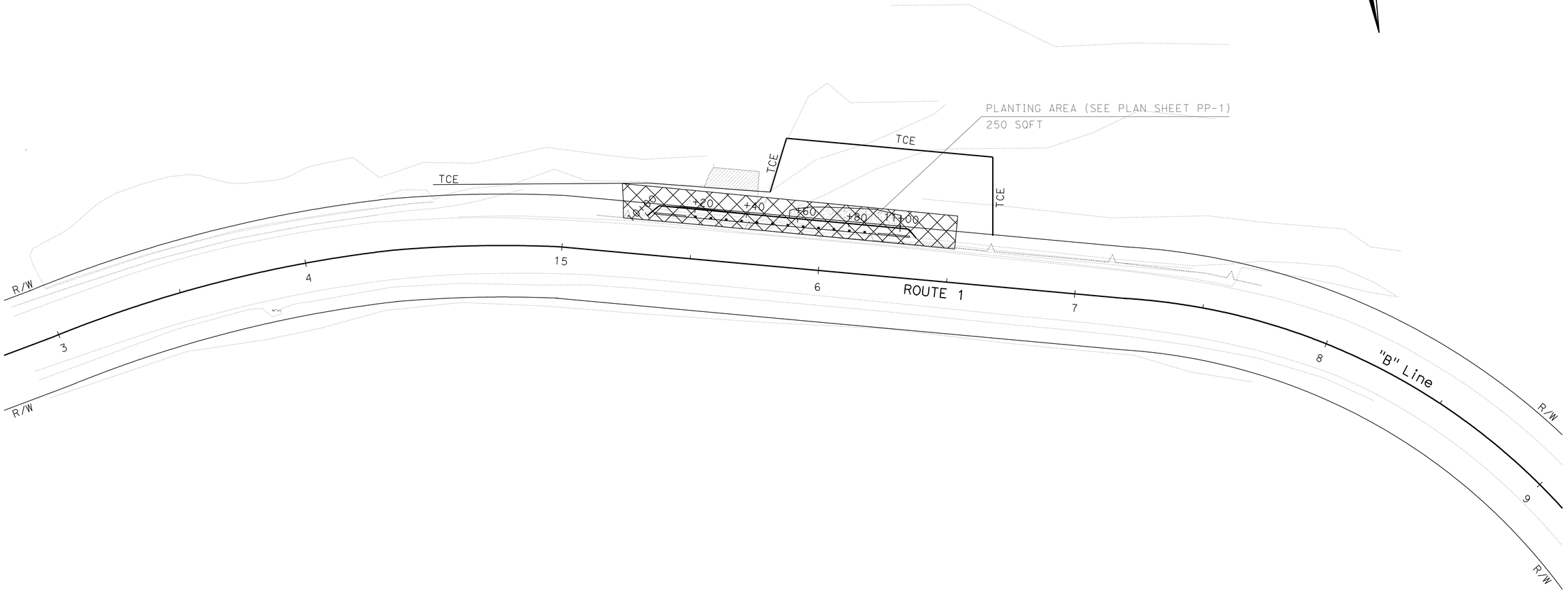
LEGEND:

PLANTING AREA

ROADSIDE CLEARING AREA

NON-NATIVE SPECIES FOR REMOVAL

BOTANICAL NAME	COMMON NAME
CORTADERIA SELLOANA	PAMPAS GRASS
ULEX EUROPAEUS	GORSE
CYTISUS SCOPARIUS	BROOM
ECHIUM CANDICANS	PRIDE OF MADEIRA
HEDERA HELIX	ENGLISH IVY



ROADSIDE CLEARING PLAN

SCALE: 1" = 20'

RCP-1

APPROVED FOR LANDSCAPE WORK ONLY

CALCULATED-
DESIGNED BY

CHECKED BY

CALIE TSUI

DAVID W. YAM

REVISED BY

DATE REVISED

SENIOR LANDSCAPE ARCHITECT

DAVID W. YAM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

WATER QUALITY

LAST REVISION
DATE PLOTTED => 21-FEB-2013
TIME PLOTTED => 13:57
11-29-12

BORDER LAST REVISED 7/2/2010

USERNAME => s123631
DGN FILE => 0400001213tg001.dgn

RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3

UNIT 0792

PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	15	48

LICENSED LANDSCAPE ARCHITECT

2-19-13
PLANS APPROVAL DATE

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

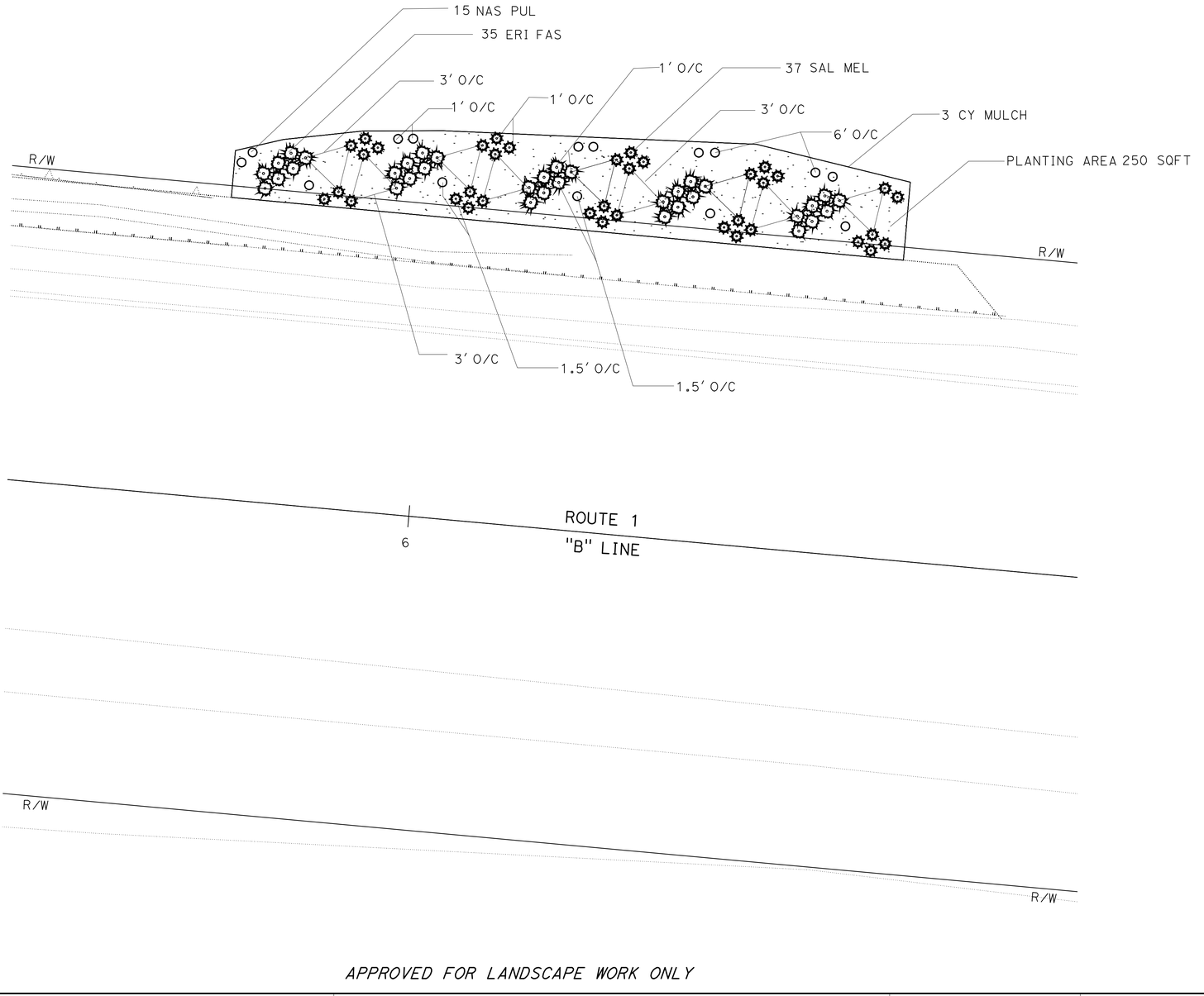
LICENSED LANDSCAPE ARCHITECT
DAVID WARREN YAM No. 5023
Signature
11-30-13
Renewal Date
10-22-12
Date
STATE OF CALIFORNIA

NOTE:

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

LEGEND:

- PLANTING AREA
- ERIOGONUM FASCICULATUM
- SALVIA MELLIFERA
- NASSELLA PULCHRA



APPROVED FOR LANDSCAPE WORK ONLY

PLANTING PLAN

NO SCALE

PP-1

REVISED BY	DATE REVISED

CALIE TSUI — CALCULATED-DESIGNED BY
DAVID W. YAM — CHECKED BY
DAVID W. YAM — SENIOR LANDSCAPE ARCHITECT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® WATER QUALITY

LAST REVISION 11-29-12
DATE PLOTTED => 21-FEB-2013
TIME PLOTTED => 13:57

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 0400001213ti001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0792
PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	16	48

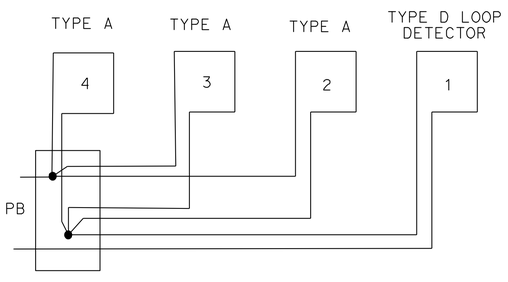
Daniel Thanh Vo 11-26-12
REGISTERED ELECTRICAL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANIEL THANH VO
No. 17408
Exp. 9-30-14
ELECTRICAL
STATE OF CALIFORNIA

NOTES:

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



DETAIL A

1D + 3A LOOP CONNECTION

LEGEND:

[1] POWER MUST BE PROVIDED BY A GENERATOR WITH A BACKUP GENERATOR. SEE DETAIL 5 ON SHEET E-5.

[2] INSTALL DEPARTMENT FURNISHED MODEL 170E CONTROLLER ASSEMBLY ON TEMPORARY FOUNDATION PLATFORM FOR MODEL 332L CABINET PER DETAIL 6 ON SHEET E-5. INSTALL UPS IN CONTROLLER CABINET.

[3] SEE DETAIL A FOR LOOP CONNECTION.

[4] 2"C, 3#4, 1#8 (G).

[5] 2"C, 2#8 (SIG), 2#8 (LTG), 2#10 (NB FB), 2#10 (SB FB), 1#8 (G).

[6] 2"C, 2#8 (LTG), 6#14 (SPARE), 4 DLC, 2#14 (PPB Ø1), 3#14 (SIG Ø1), 2#14 (PPB Ø2), 3#14 (SIG Ø2), 2#10 (SIG NEUTRAL), 1#8 (G), 2#10 (NB FB), 2#10 (SB FB).

[7] 2"C, 2#8 (SIG), 6#14 (SPARE), 4 DLC, 2#14 (PPB Ø1), 3#14 (SIG Ø1), 2#14 (PPB Ø2), 3#14 (SIG Ø2), 2#10 (SIG NEUTRAL), 1#8 (G).

[8] 2#8 (LTG), 6#14 (SPARE), 2 DLC, 3#14 (SIG Ø2), 2#14 (PPB Ø1), 3#14 (SIG Ø1), 1#10 (SIG NEUTRAL), 1#8 (G), 2#10 (NB FB).

[9] 2#8 (LTG), 3#14 (SPARE), 2 DLC, 2#14 (PPB Ø1), 3#14 (SIG Ø1), 1#10 (SIG NEUTRAL), 1#8 (G), 2#10 (NB FB).

[10] 1 DLC, 2#10 (NB FB), 1#8 (G).

[11] 2#10 (NB FB), 1#8 (G).

[12] 1 DLC, 2#10 (SB FB), 1#8 (G).

[13] 2#10 (SB FB), 1#8 (G).

[14] 2#8 (LTG), 1#8 (G).

[15] DOUBLE WOOD POLE.

INDEX TO ELECTRICAL PLANS:

SYMBOLS:

PROPOSED

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

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

WOOD POLE WITH 200 W HPS LUMINAIRE (ON MAST ARM), SIGNAL HEAD, PPB, R10-6 SIGN AND CONDUIT RISER. SEE DETAIL 4 ON SHEET E-5.

WOOD POLE WITH SIGNAL HEAD (ON MAST ARM) AND CONDUIT RISER. SEE DETAIL 3 ON SHEET E-5.

(G) — GENERATOR WITH A BACKUP GENERATOR.

OH — OVERHEAD, 7 STRAND GALVANIZED. MESSENGER WIRE WITH CONDUCTORS AS NOTED.

FUEL — FUEL TANK.

—X—X— TEMPORARY CHAIN LINK FENCE (TYPE CL-6) WITH 4' CHAIN LINK GATE (TYPE CL-6)

—F— FUEL LINE.

ABBREVIATIONS:

UPS	UNINTERRUPTIBLE POWER SUPPLY.

NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS

NO SCALE

E-1

APPROVED FOR ELECTRICAL WORK ONLY

REVISED BY | DATE REVISED
DANIEL VO | KARIM ABDOLLAHIAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: ALI BAKHDOUD

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

LAST REVISION 11-26-12 | DATE PLOTTED => 21-FEB-2013 | TIME PLOTTED => 13:57

BORDER LAST REVISED 7/2/2010 | USERNAME => s123631 | DGN FILE => 400001213ua001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1515 | PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	17	48

Daniel Thanh Vo 11-26-12
REGISTERED ELECTRICAL ENGINEER DATE

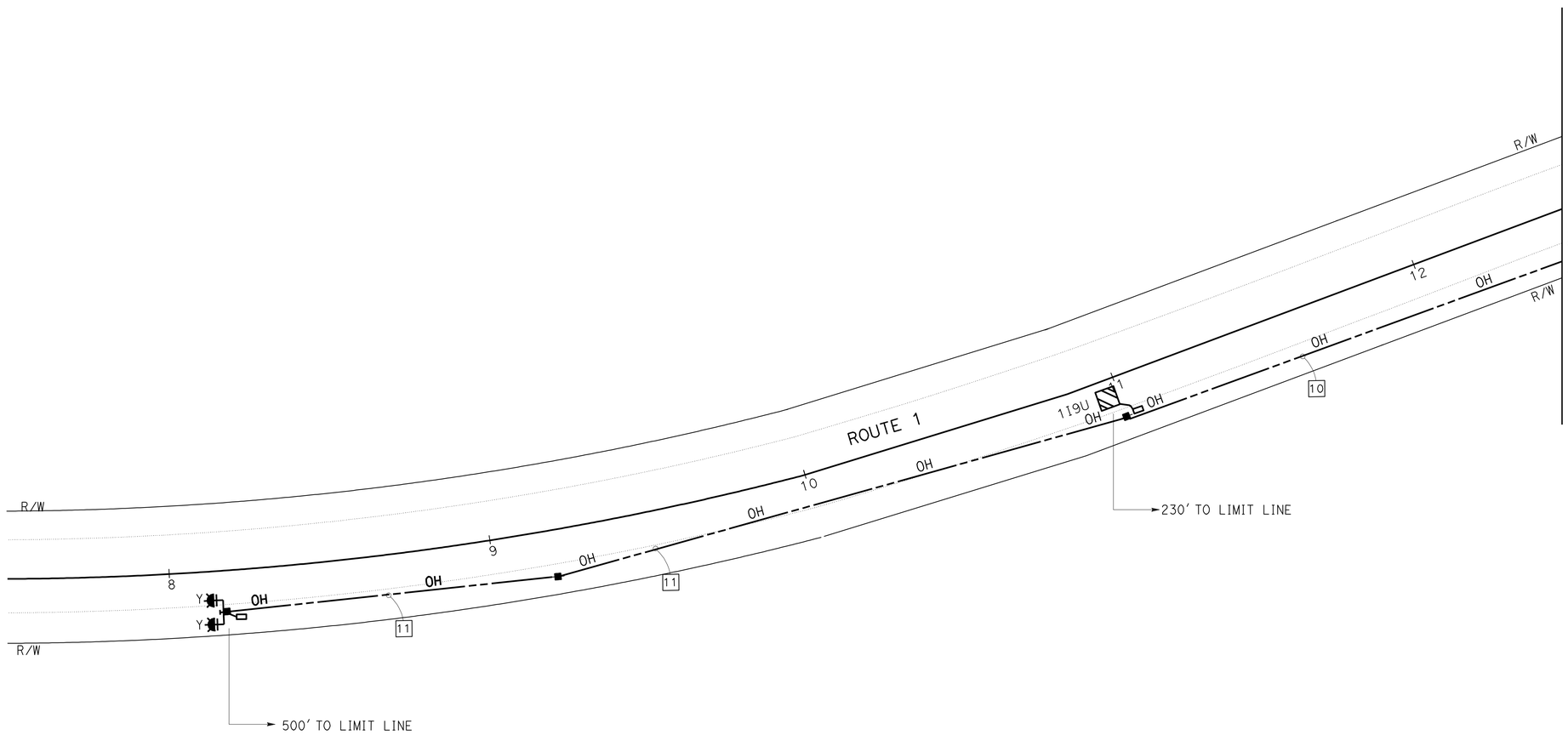
2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANIEL THANH VO
No. 17408
Exp 9-30-14
ELECTRICAL
STATE OF CALIFORNIA

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

NOTE:

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



TEMPORARY SIGNAL SYSTEM

SCALE: 1" = 20'

E-2

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR: ALI BAKHDOUD
CALCULATED-DESIGNED BY: DANIEL THANH VO
CHECKED BY: MONA ATTALLAH
REVISED BY
DATE REVISED

LAST REVISION 11-26-12
DATE PLOTTED => 21-FEB-2013
TIME PLOTTED => 13:57

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 400001213ua002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1515
PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	18	48

Daniel Thanh Vo 11-26-12
REGISTERED ELECTRICAL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANIEL THANH VO
No. 17408
Exp 9-30-14
ELECTRICAL
STATE OF CALIFORNIA

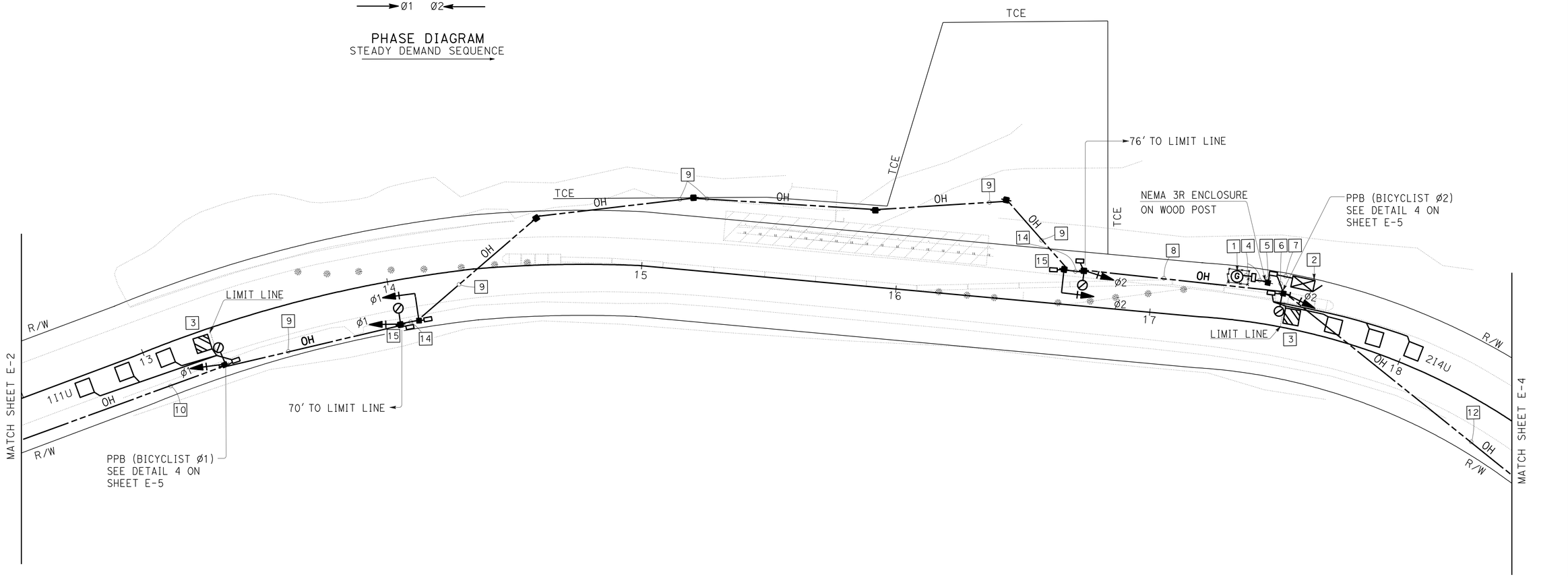
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

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

Ø1 Ø2

PHASE DIAGRAM
STEADY DEMAND SEQUENCE



TEMPORARY SIGNAL SYSTEM

SCALE: 1" = 20'

E-3

APPROVED FOR ELECTRICAL WORK ONLY

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

FUNCTIONAL SUPERVISOR: ALI BAKHDOUD
CALCULATED-DESIGNED BY: DANIEL THANH VO
CHECKED BY: MONA ATTALLAH
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 21-FEB-2013
11-26-12 | TIME PLOTTED => 13:57

BORDER LAST REVISED 7/2/2010 | USERNAME => s123631 | DGN FILE => 400001213ua003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1515 | PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	19	48

Daniel Thanh Vo 11-26-12
REGISTERED ELECTRICAL ENGINEER DATE

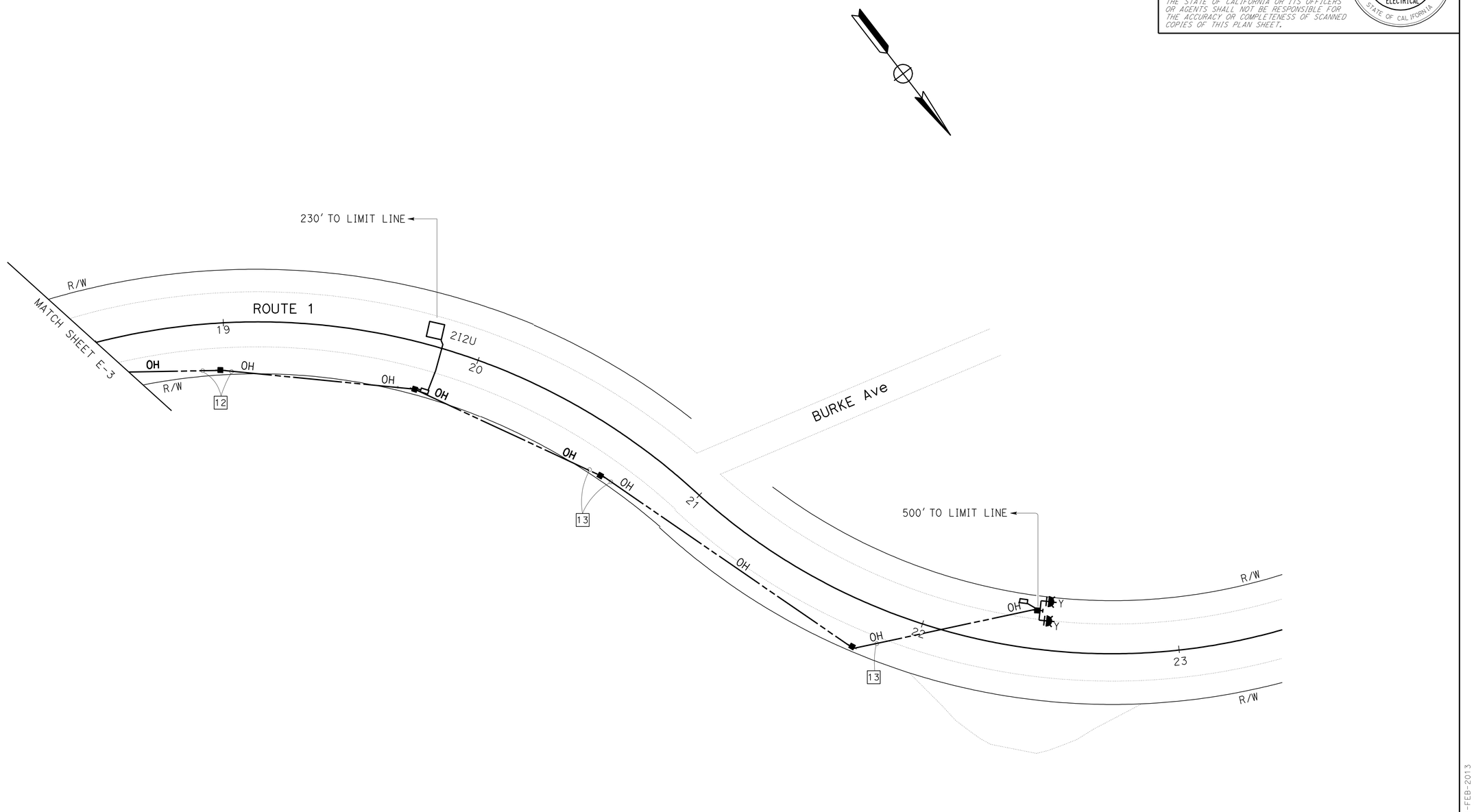
2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANIEL THANH VO
No. 17408
Exp 9-30-14
ELECTRICAL
STATE OF CALIFORNIA

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

NOTE:

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



TEMPORARY SIGNAL SYSTEM

SCALE: 1" = 20'

E-4

APPROVED FOR ELECTRICAL WORK ONLY

REVISED BY | DATE REVISED
DANIEL THANH VO | MONA ATTALLAH
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
ALI BAKHDOUD
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-ELECTRICAL DESIGN

LAST REVISION | DATE PLOTTED => 21-FEB-2013
11-26-12 | TIME PLOTTED => 13:57

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 400001213ua004.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1515
PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	20	48

Daniel Thanh Vo 11-26-12
REGISTERED ELECTRICAL ENGINEER DATE

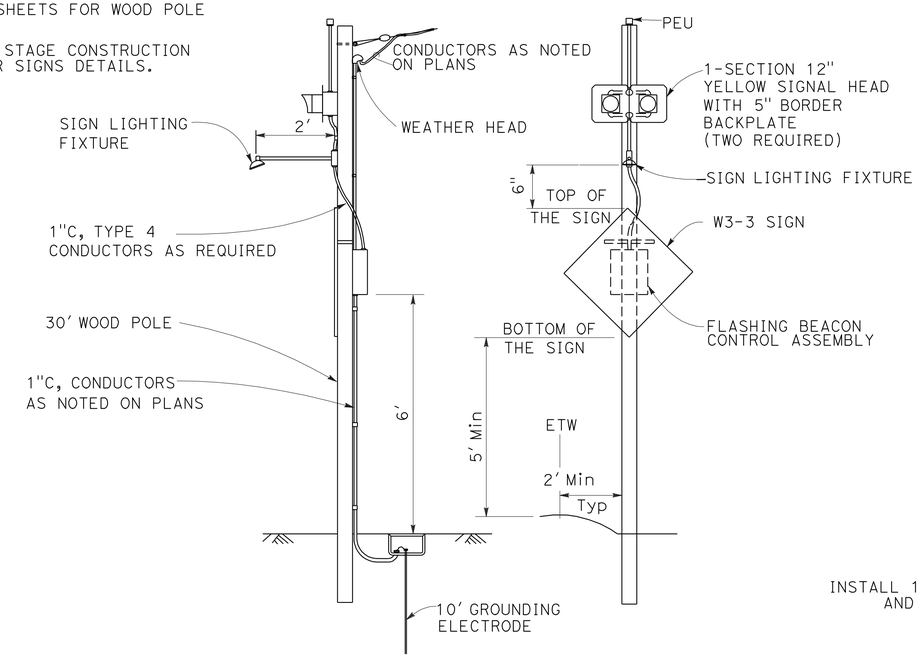
2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — DANIEL THANH VO No. 17408 Exp. 9-30-14 ELECTRICAL — STATE OF CALIFORNIA

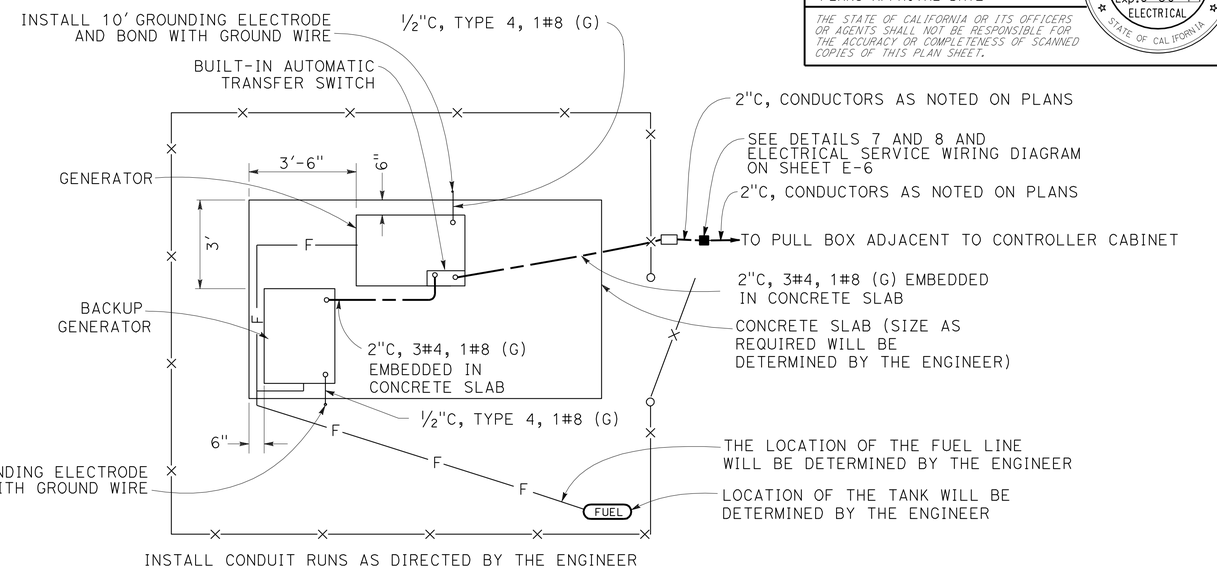
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. SEE SES SHEETS FOR WOOD POLE DETAILS.
2. REFER TO STAGE CONSTRUCTION PLANS FOR SIGNS DETAILS.

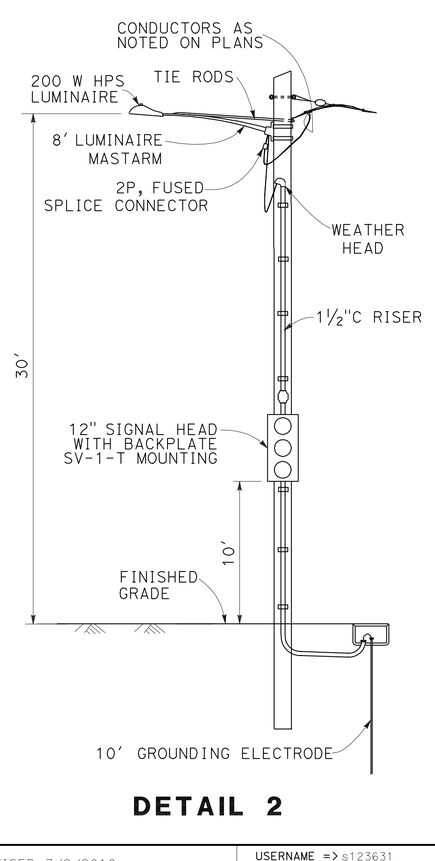


DETAIL 1

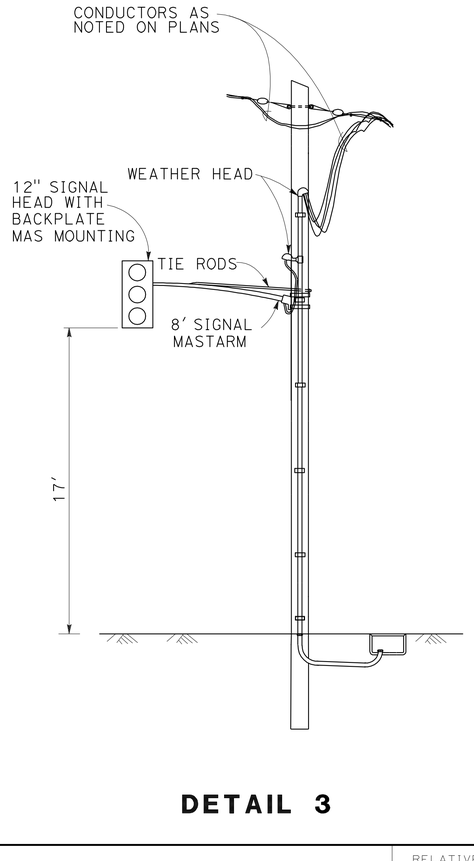


GENERATOR WITH BACKUP GENERATOR

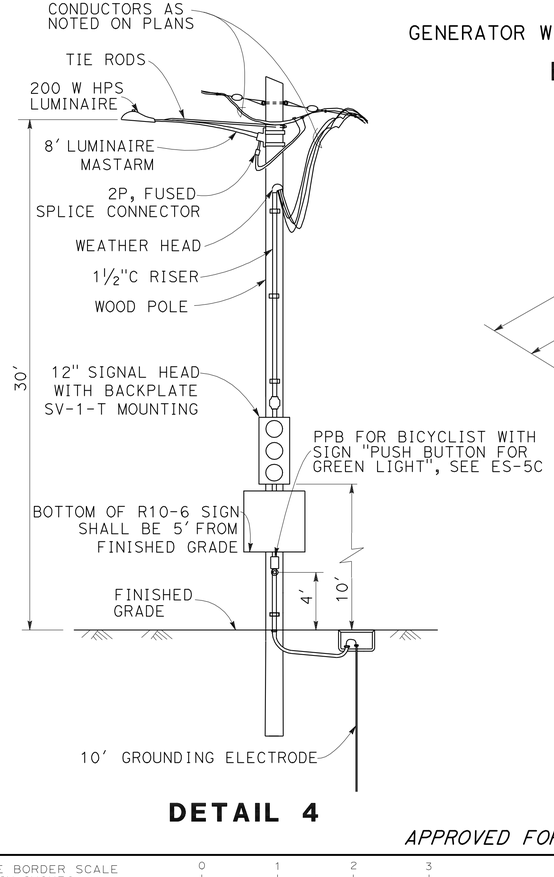
DETAIL 5



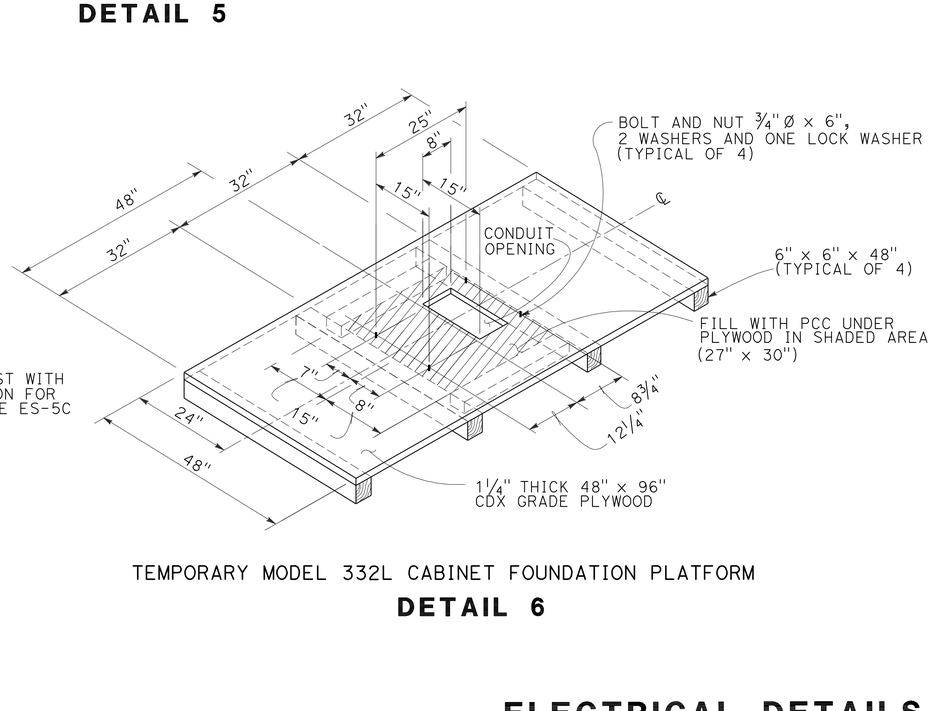
DETAIL 2



DETAIL 3



DETAIL 4



TEMPORARY MODEL 332L CABINET FOUNDATION PLATFORM

DETAIL 6

ELECTRICAL DETAILS

NO SCALE **E-5**

APPROVED FOR ELECTRICAL WORK ONLY

CALCULATED-DESIGNED BY
CHECKED BY
DANIEL VO
KARIM ABDOLLAHIAN
FUNCTIONAL SUPERVISOR
ALI BAKHDOUD
REVISED BY
DATE REVISED

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

LAST REVISION | DATE PLOTTED => 21-FEB-2013
11-26-12 | TIME PLOTTED => 13:57

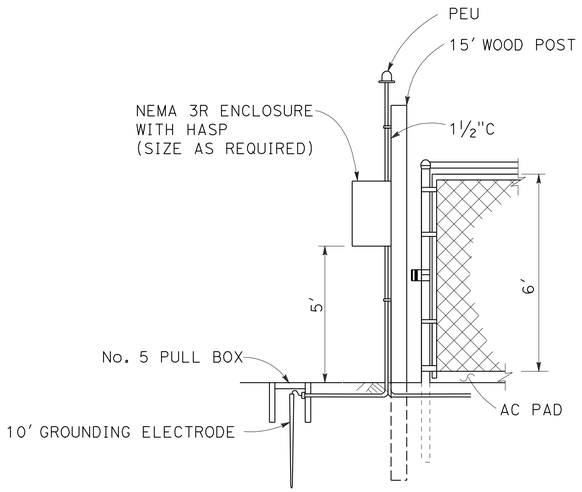
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	21	48

Daniel Thanh Vo 11-26-12
REGISTERED ELECTRICAL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

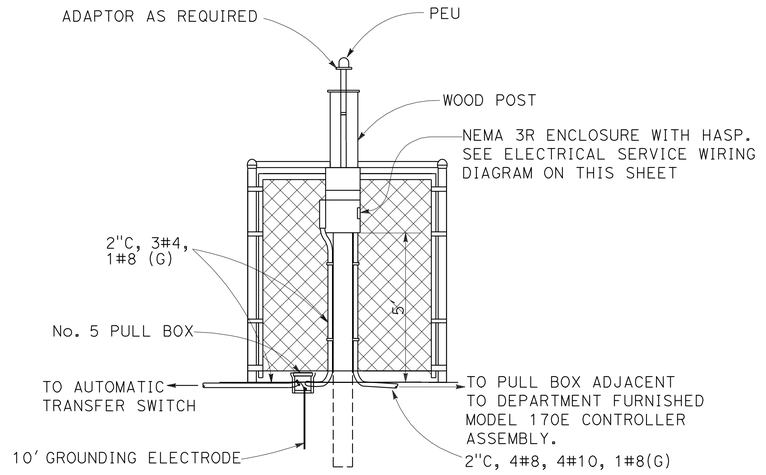
REGISTERED PROFESSIONAL ENGINEER
DANIEL THANH VO
No. 17408
Exp. 9-30-14
ELECTRICAL
STATE OF CALIFORNIA

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



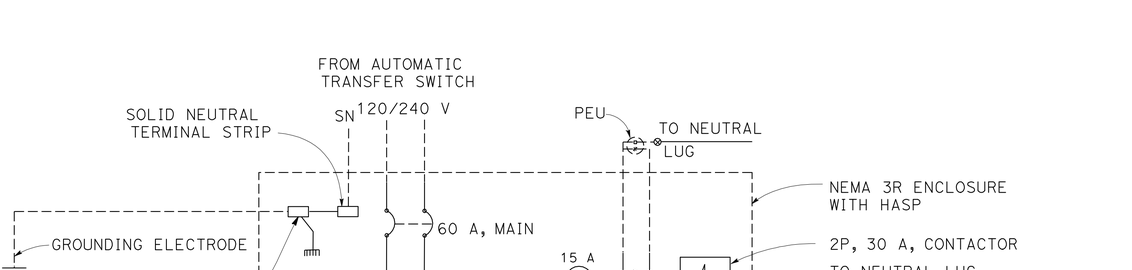
ELECTRICAL SERVICE SIDE VIEW

DETAIL 7



ELECTRICAL SERVICE FRONT VIEW

DETAIL 8



ELECTRICAL SERVICE WIRING DIAGRAM

APPROVED FOR ELECTRICAL WORK ONLY

ELECTRICAL DETAILS

NO SCALE **E-6**

LAST REVISION 11-26-12
DATE PLOTTED => 21-FEB-2013
TIME PLOTTED => 13:57

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR: ALI BAKHDOUD
CALCULATED-DESIGNED BY: KARIM ABDOLLAHIAN
CHECKED BY: DANIEL VO
REVISED BY | DATE REVISED

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 400001213ua006.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1515
PROJECT NUMBER & PHASE 04000012131

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	22	48

Daniel Thanh Vo 11-26-12
REGISTERED ELECTRICAL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANIEL THANH VO
No. 17408
Exp. 9-30-14
ELECTRICAL
STATE OF CALIFORNIA

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

NOTE:

THE QUANTITIES ON THIS SHEET ARE FOR INFORMATION ONLY, AND ARE NOT SEPARATE PAY ITEMS.

TEMPORARY SIGNAL SYSTEM

SHEET No.	WOOD POLE	2"C, TYPE 3	GENERATOR	No. 5 PULL BOX	3 SECTION SIGNAL HEAD	2 SECTION SIGNAL HEAD	FLASHING BEACON CONTROLL ASSEMBLY	SIGN LIGHTING FIXTURE	200 WATT LUMINAIRE	MESSENGER CABLE	TYPE D LOOP	TYPE A LOOP	DETECTOR LEAD-IN CABLE	#4 CONDUCTORS	#8 CONDUCTORS	#8 CONDUCTORS (G)	#10 CONDUCTORS	#14 CONDUCTORS	MEMA 3R ENCLOSURE	MODEL 332L CABINET FOUNDATION PLATFORM	PPB	UPS	CHAIN LINK FENCE (TYPE CL-6)	4' CHAIN LINK GATE (TYPE CL-6)	FUEL TANK
	EA	LF	EA	EA	EA	EA	EA	EA	EA	LF	EA	EA	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA	EA
E-2	3	30		2		1	1	1		430	1		145			450	860								
E-3	11	100	2	8	6				4	650	2	6	1235	90	900	635	1455	4040	1	1	2	1	75	1	1
E-4	5	30		2		1	1	1		380		1	110			380	750								

ELECTRICAL QUANTITIES

E-7

CALCULATED-DESIGNED BY	DANIEL VO	REVISED BY	
CHECKED BY	KARIM ABDOLLAHIAN	DATE REVISED	
FUNCTIONAL SUPERVISOR	ALI BAKHDOUD		

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

LAST REVISION 11-26-12
DATE PLOTTED => 21-FEB-2013
TIME PLOTTED => 13:57

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 400001213ua007.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1515
PROJECT NUMBER & PHASE 04000012131

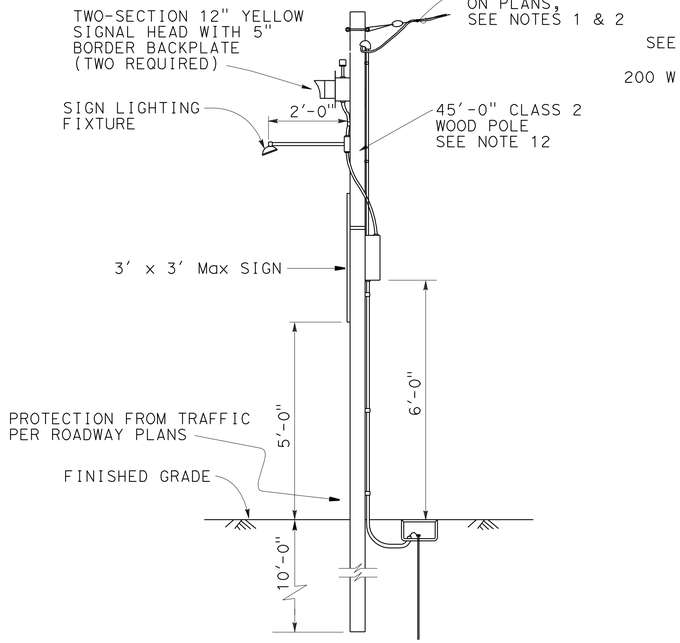
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	1	21.7	23	48

REGISTERED CIVIL ENGINEER — 8/30/12 DATE

2-19-13
PLANS APPROVAL DATE

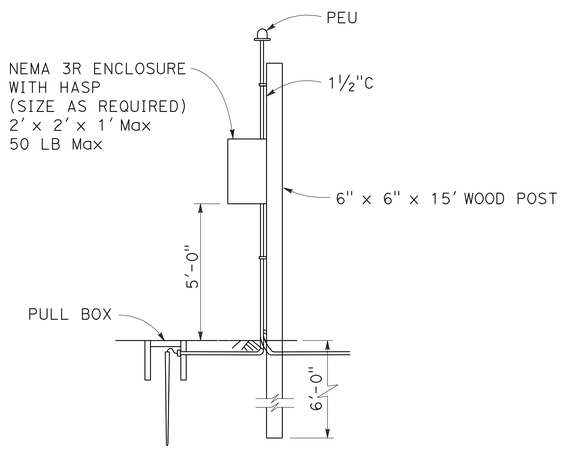
REGISTERED PROFESSIONAL ENGINEER — TAMARA S. MARCHENKO — No. C76837 — Exp. 12/31/12 — CIVIL — STATE OF CALIFORNIA

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



WOOD POLE SUPPORT FOR BEACON

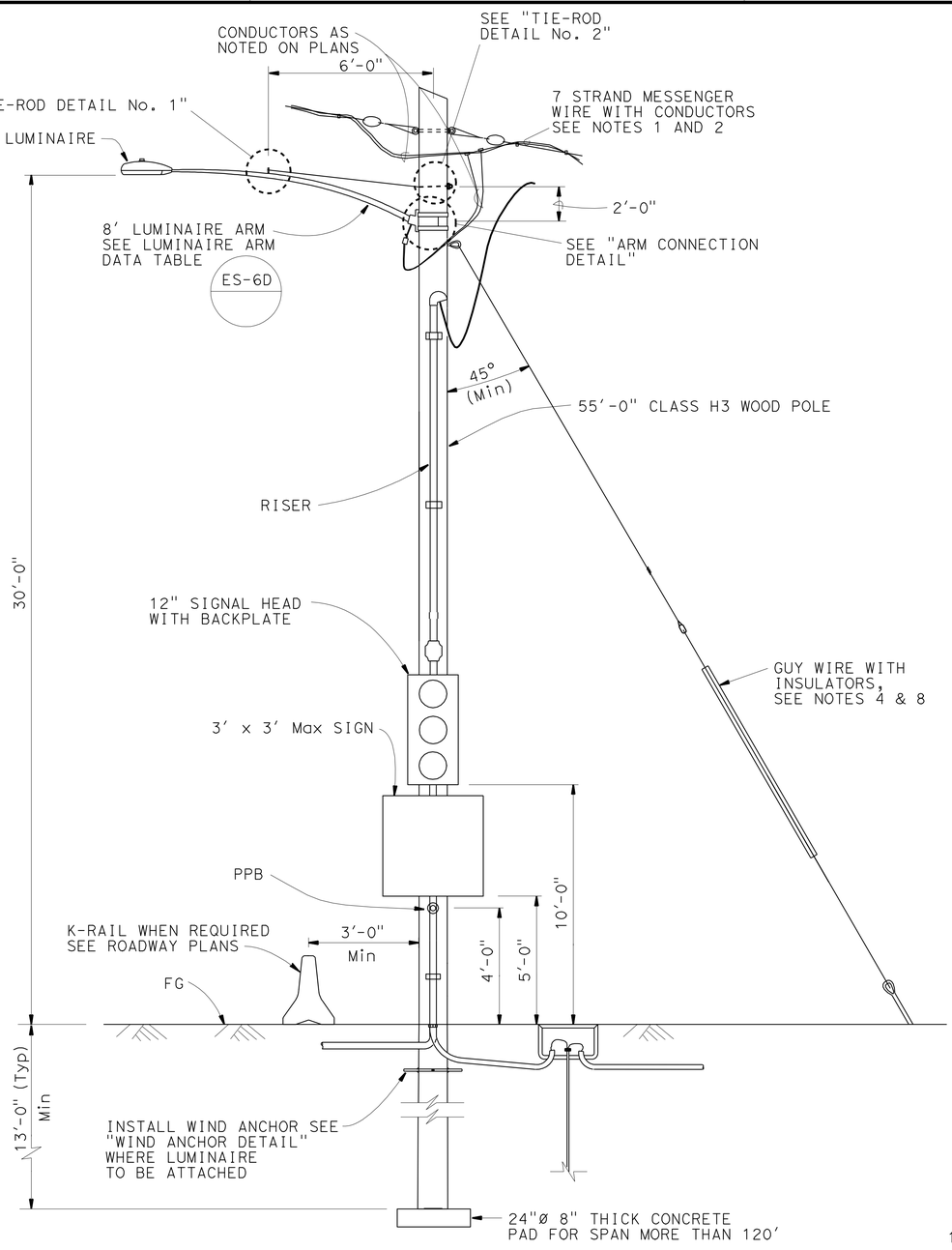
See Note 12



TEMPORARY WOOD POST DETAIL

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

NO SCALE



TYPICAL WOOD POLE SUPPORT

GENERAL NOTES:

Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2009 and 2010 Interim Revisions.

LOADING

Wind Loadings: 85 MPH

UNIT STRESSES

Timber Poles: Tapered treated round pole ASTM D2899 Standard
Fb = 1850 psi
Fv = 110 psi
E = 1500 x 10^3 psi

TREATMENT

To conform with Section 86 Standard Specifications

SPECIFICATIONS

Caltrans Standard Specifications 2010
ANSI 05 Wood Poles
ASTM A475 Utility Grade Wires

NOTES:

1. All overhead cables shall be slack spanned with 25'-0" minimum overhead clearance.
2. Conductors shall be suspended from span-wire as follows: A) Main run ⅜" span-wire with 5% + 0.5% sag. No spare conductors allowed except as noted.
3. Overhead line construction not specifically covered here shall conform with the provisions of General Order No. 95 of Public Utilities Commission.
4. Wood poles shall be stabilized using guy wires, breast blocks or rakes at each dead end, corner, drop or line deviation more than 10° from straight line. The direction of the guy shall counteract the resultant of unbalanced force applied to pole. Where space or conflict prevent guy installation, a diagonal brace shall be used. The brace shall be wood and shall be connected to the pole by means to satisfy structural and electrical requirements. The direction of the brace shall counteract the resultant of unbalanced horizontal force of 4000 pounds (Min) applied to the pole.
5. Guy wire shall be attached to pole as nearly as practical to the center of conductors load, or 3'-0" Max otherwise, See Note 4.
6. All attachments shall be mounted with stainless steel straps or other manufacturers methods without drilling holes in pole, except as shown. Drilling through pole will require the Engineer's approval.
7. Foundation design is based on AASHTO 2009 article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of Internal friction used is 30° and unit weight of soil used is 120 lb/ft^3. The Contractor to verify actual soil condition.
8. If pole is located on or near a steep slope add 2 feet extra for embedment and add one guy extra for anchoring.
9. See Sheets SES-2 thru SES-6 for details.
10. For details not shown, see "2010 STANDARD PLANS".
11. All temporary poles support OH Conductors. Attach luminaire arm and combination of attachments as specified at locations where indicated on Electrical Sheets.
12. For wood pole with beacon, Max span 100' for messenger carrying 2#10 and 1#8 or 3#8, total 3 conductors only, see Electrical Sheets for locations.
13. The Contractor to verify with tie back wall and soil nails structures where occurs.

BRANCH CHIEF	JAMES SAGAR		
DESIGN	BY T MARCHENKO	CHECKED V LOPEZ	
DETAILS	BY H NGUYEN	CHECKED V LOPEZ	
QUANTITIES	BY	CHECKED	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH

B

BRIDGE NO. N/A
POST MILE 21.7

TEMPORARY SIGNAL SYSTEM
TEMPORARY WOOD POLE

SES-1

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3619
PROJECT NUMBER & PHASE: 0400001213
CONTRACT NO.: 04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-19-12	6-12-12			1	6

FILE => spec_des_br_prj/2011sd/04-4s1601_ses1.dgn

USERNAME => s1149317 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 13:56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	24	48

REGISTERED CIVIL ENGINEER — 8/30/12 DATE

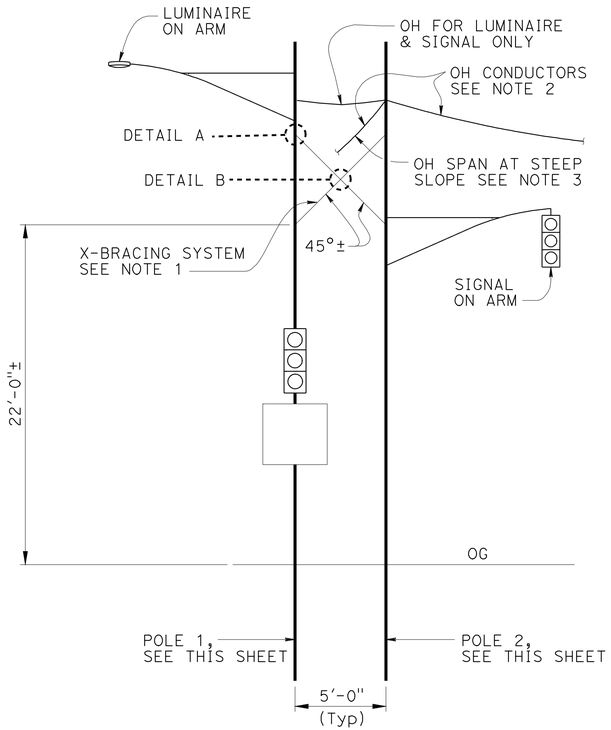
2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAMARA S. MARCHENKO — No. C76837 — Exp. 12/31/12 — CIVIL — STATE OF CALIFORNIA

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

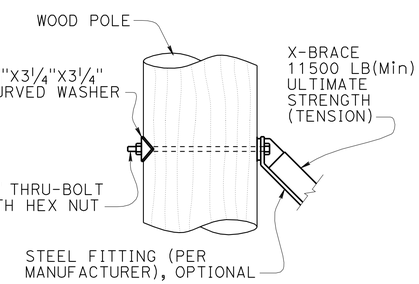
NOTES:

1. X-braces shall be with center clamp and attached to the pole with thru-bolt and curved wahser. No more than 1" drill hole allowed without the Engineer approval.
2. OH conductors & messenger shall be attached to the pole to satisfy radial clearance requiremnets. Refer to Note 3, sheet SES-1
3. Maximum Elevation Drop to adjacent pole shall be 20'.



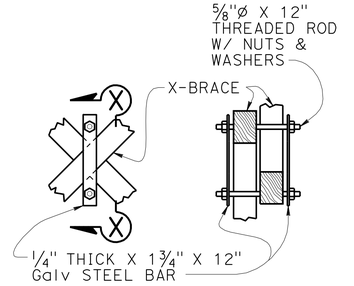
DOUBLE POLE

NO SCALE



DETAIL A

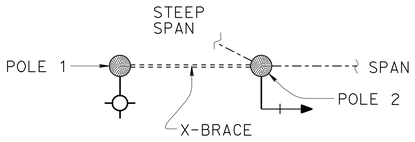
NO SCALE



VIEW SECTION X-X

DETAIL B

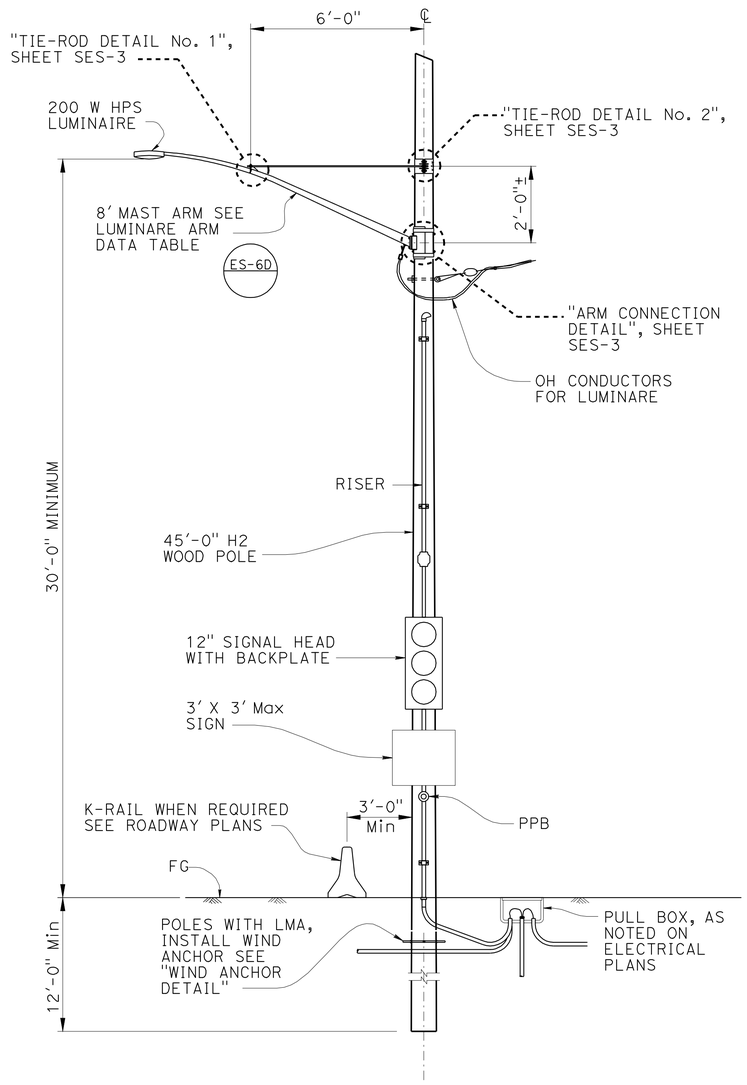
NO SCALE



DOUBLE POLE LAYOUT

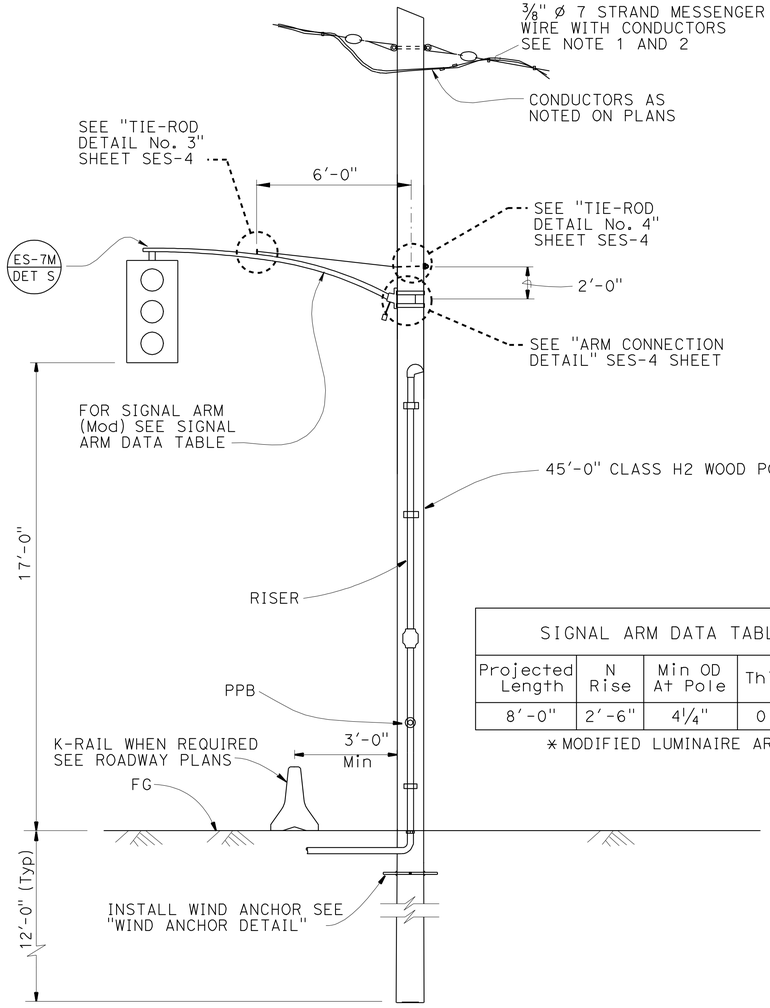
NO SCALE

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



POLE 1

NO SCALE
X-BRACE NOT SHOWN



SIGNAL ARM DATA TABLE *			
Projected Length	N Rise	Min OD At Pole	Thickness
8'-0"	2'-6"	4 1/4"	0.1196"

* MODIFIED LUMINAIRE ARM

POLE 2 (FOR SIGNAL ON ARM)

NO SCALE
X-BRACE NOT SHOWN

BRANCH CHIEF	JAMES SAGAR		
DESIGN	BY T MARCHENKO	CHECKED V LOPEZ	
DETAILS	BY H NGUYEN	CHECKED V LOPEZ	
QUANTITIES	BY X	CHECKED X	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
SPECIAL DESIGN BRANCH

BRIDGE NO. N/A
POST MILE 21.7

TEMPORARY SIGNAL SYSTEM
DOUBLE WOOD POLE

SES-2

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3619
PROJECT NUMBER & PHASE: 0400001213 CONTRACT NO.: 04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 10-14-11, 6-12-12

SHEET 2 OF 6

FILE => 04-4s1601_ses2.dgn

USERNAME => s1149357 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 13:56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	1	21.7	25	48

REGISTERED CIVIL ENGINEER — 8/30/12 DATE

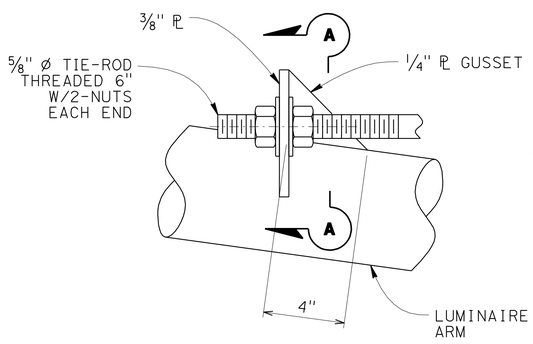
TAMARA S. MARCHENKO — No. C76837 — Exp. 12/31/12 — CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

2-19-13
PLANS APPROVAL DATE

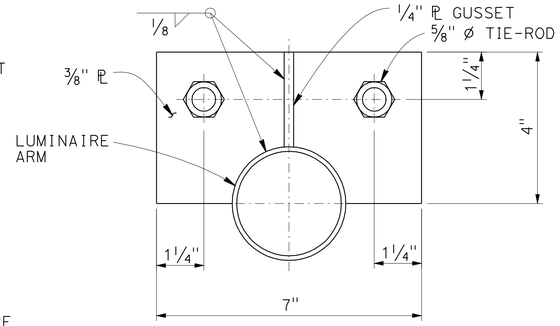
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

NOTES:

1. All hardware and steel shall be galvanized after fabrication.
2. Arm Base connection details shall be in compliance with Standard Plans Detail Sheet ES-6D with noted modifications.
3. 2000 lb Min capacity strap system shall be used for top and bottom of plate.
4. The Contractor to verify pole dimensions at Tie-Rod attachment height. Fabricate 8" flat bar with "L" Dimension to maintain an open gap between encasement in finished installation.

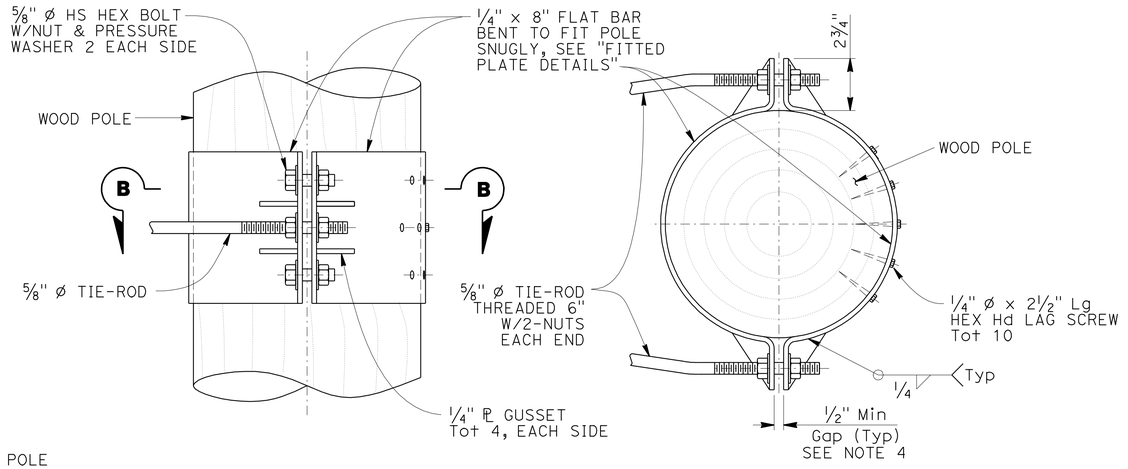


ELEVATION



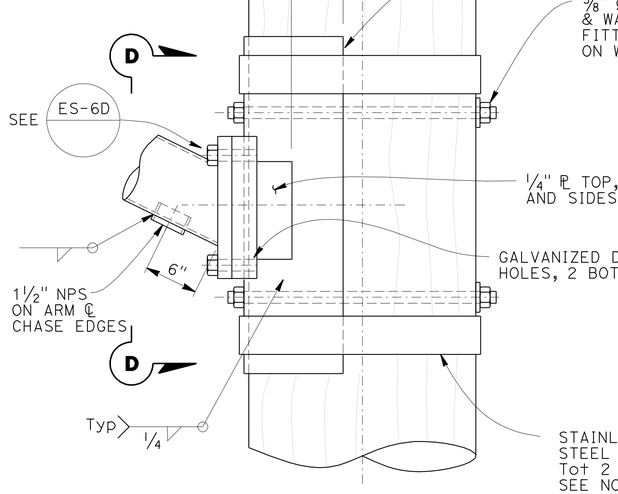
SECTION A-A

TIE-ROD DETAIL No. 1

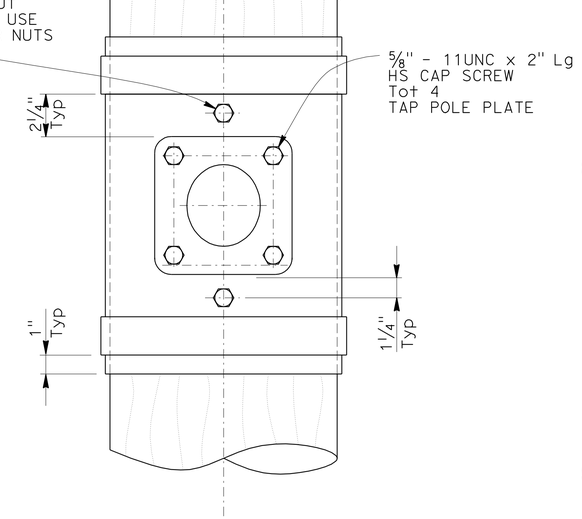


ELEVATION **SECTION B-B**

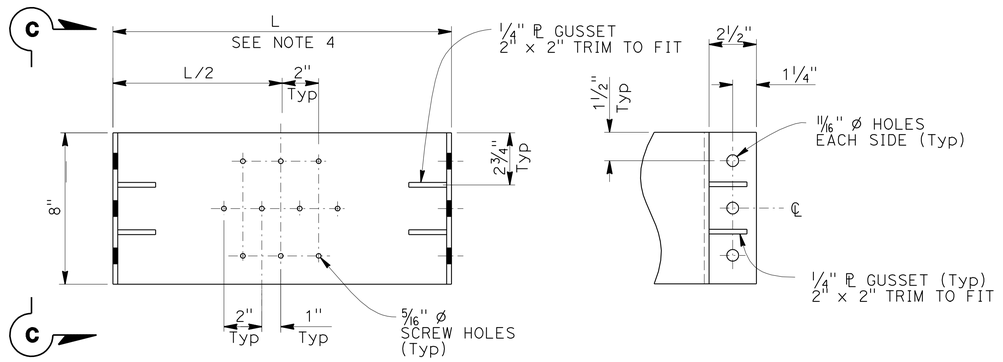
TIE-ROD DETAIL No. 2



ELEVATION



VIEW D-D



ELEVATION **VIEW C-C**

FITTED PLATE DETAILS

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

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

ARM CONNECTION DETAILS

NO SCALE

BRANCH CHIEF JAMES SAGAR

	BY	CHECKED
DESIGN	T MARCHENKO	V LOPEZ
DETAILS	H NGUYEN	V LOPEZ
QUANTITIES		

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH
B

BRIDGE NO. N/A
POST MILE 21.7

TEMPORARY SIGNAL SYSTEM
LUMINAIRE ARM MOUNTING DETAILS

SES-3

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3619
PROJECT NUMBER & PHASE: 0400001213
CONTRACT NO.: 04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-19-12	6-12-12			3	6

FILE => spec_des_br_prj/2012sd/04-4s1601_ses3.dgn

USERNAME => s1149337 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 13:56

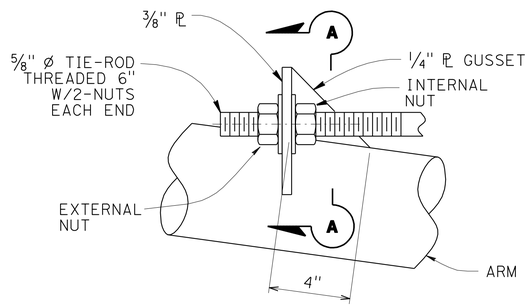
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	26	48

REGISTERED CIVIL ENGINEER — 8/30/12 DATE

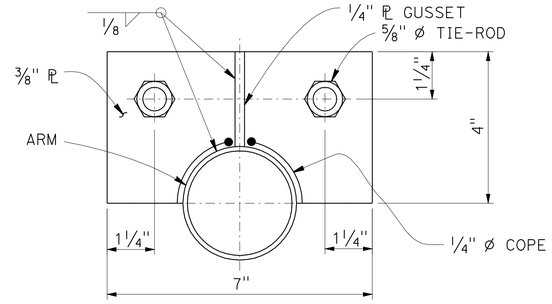
2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAMARA S. MARCHENKO — No. C76837 — Exp. 12/31/12 — CIVIL — STATE OF CALIFORNIA

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



ELEVATION



SECTION A-A

NOTES:

1. All hardware and steel shall be galvanized after fabrication.
2. Arm Base connection details shall be in compliance with Standard Plans Detail Sheet ES-6A with noted modifications.
3. 3500 lb Min capacity strap system shall be used for top and bottom of plate.
4. The Contractor to verify pole dimensions at Tie-Rod attachment height. Fabricate 8" flat bar with "L" Dimension to maintain an open gap between encasement in finished installation.

TIE-ROD TENSIONING:

T1. After installing the pole, signal arm, tie rods, and after all connecting hardware have been attached and tightened, the installed tension in the tie rods shall be verified as follows in T2 to T8.

T2. At the signal arm end of the tie rods, back off the internal nuts from 3/8" connection plate by 1" and retighten the external nuts simultaneously until the connection plate is in the adequately firm contact with the both external nuts.

T3. Mark the nut position of the external nuts.

T4. Tighten each of the external nuts by 1/12 (30°) turn.

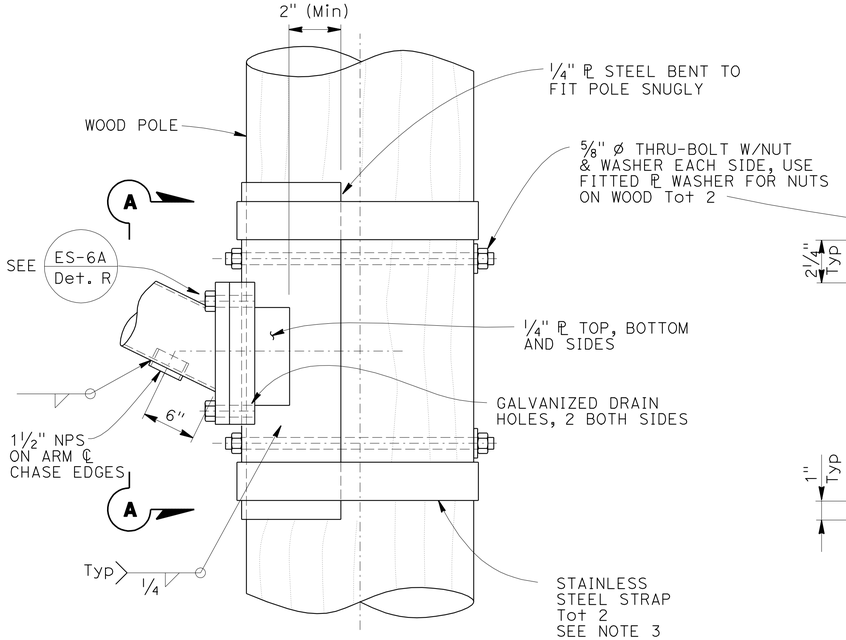
T5. Ensure that the end of the tie rod extends at least 1/2" past the outside face of the external nut.

T6. Tightening the internal nuts until they are in firm contact with the connection plate.

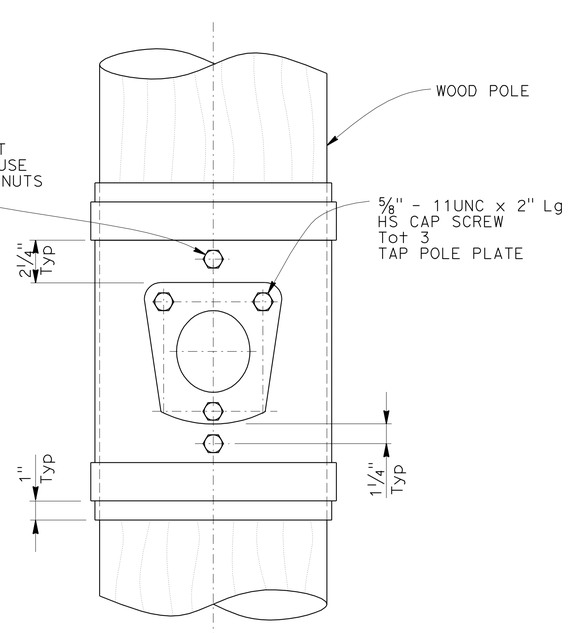
T7. Mark this position of the internal nuts.

T8. Tighten the internal nuts with an additional 1/12 (30°) turn.

TIE-ROD DETAIL No. 3



ELEVATION

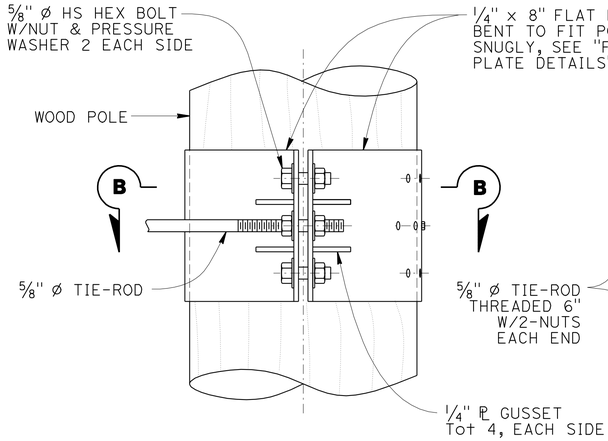


VIEW A-A

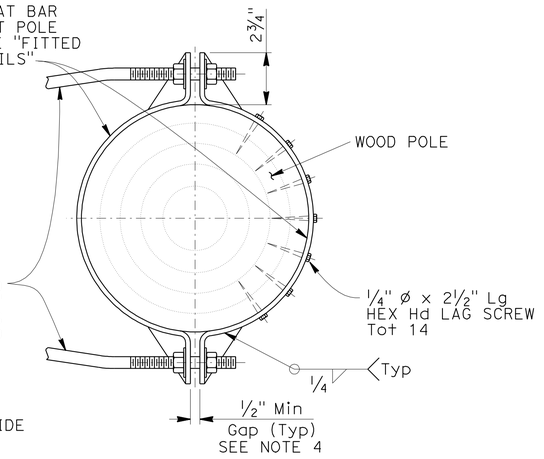
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

ARM CONNECTION DETAILS

NO SCALE

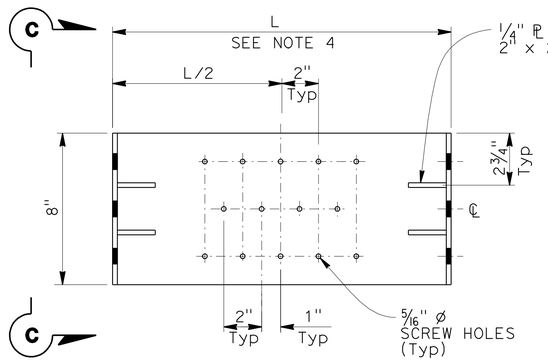


ELEVATION

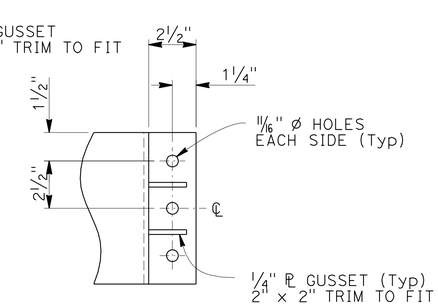


SECTION B-B

TIE-ROD DETAIL No. 4



ELEVATION



SECTION C-C

FITTED PLATE DETAILS

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

BRANCH CHIEF: JAMES SAGAR	DESIGN	BY T MARCHENKO	CHECKED V LOPEZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH B
	DETAILS	BY H NGUYEN	CHECKED V LOPEZ		
	QUANTITIES	BY	CHECKED X		

BRIDGE NO.	TEMPORARY SIGNAL SYSTEM	SES-4
N/A	SIGNAL ARM MOUNTING DETAILS	
POST MILE 21.7		

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT:3619 PROJECT NUMBER & PHASE:0400001213 CONTRACT NO.:04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
3-21-12				4	6

FILE => spec_des_br_proj\ 04-4s1601_ses4.dgn

USERNAME => s114937 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 13:56

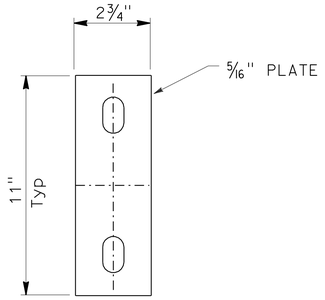
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	1	21.7	27	48

REGISTERED CIVIL ENGINEER — 8/30/12 DATE

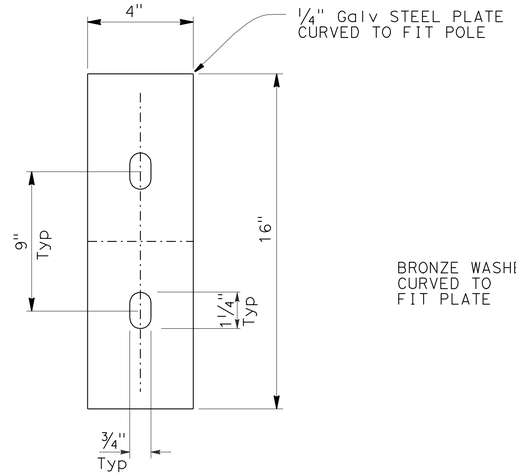
2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAMARA S. MARCHENKO — No. C76837 — Exp. 12/31/12 — CIVIL — STATE OF CALIFORNIA

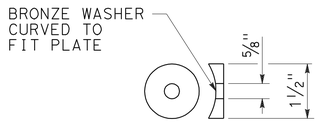
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



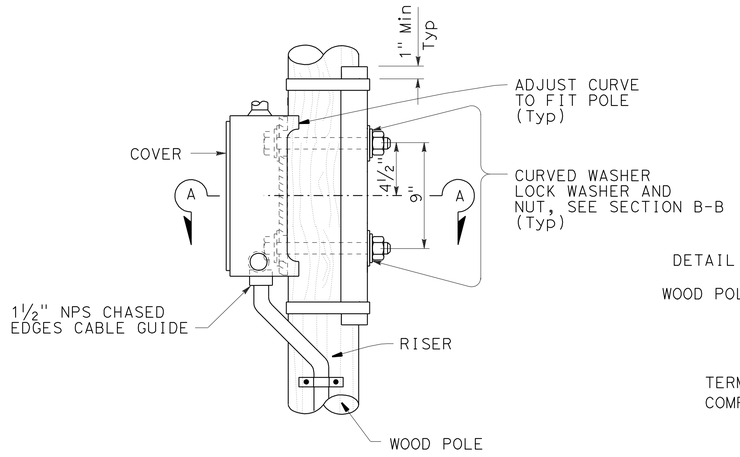
COMPARTMENT PLATE (MOD)



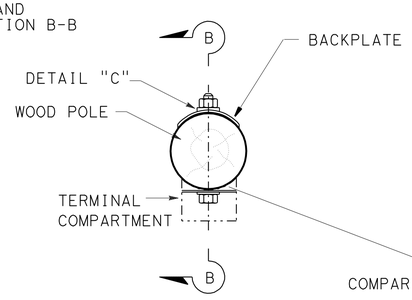
BACKPLATE



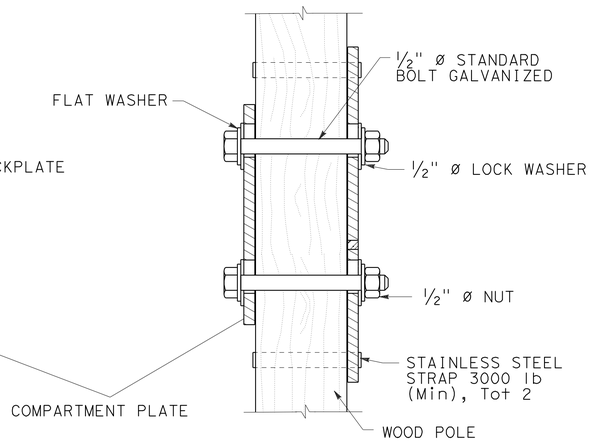
DETAIL "C"



SIDE MOUNTING
TERMINAL COMPARTMENT



SECTION A-A



SECTION B-B

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

SIGNAL HEAD MOUNTING

For Details Not Shown See ES-4D Sheet

NO SCALE

DESIGN	BY T MARCHENKO	CHECKED V LOPEZ	
DETAILS	BY HUNG NGUYEN	CHECKED V LOPEZ	
QUANTITIES	BY	CHECKED	

BRANCH CHIEF JAMES SAGAR

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH — B

BRIDGE NO. N/A
POST MILE 21.7

TEMPORARY SIGNAL SYSTEM
WOOD POLE DETAILS

SES-5

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3619
PROJECT NUMBER & PHASE: 0400001213
CONTRACT NO.: 04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 2-28-13 | 6-12-12

SHEET 5 OF 6

FILE => spec_des_br_prj/2011sd/04-4a07u1/04-4s1601_ses5.dgn

USERNAME => s135318 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 14:04

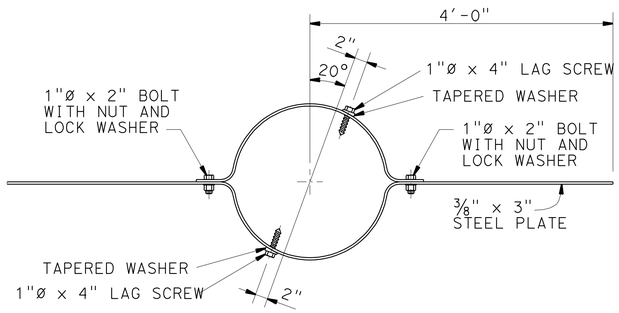
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	1	21.7	28	48

REGISTERED CIVIL ENGINEER — DATE 8/30/12

TAMARA S. MARCHENKO — REGISTERED PROFESSIONAL ENGINEER — No. C76837 — Exp. 12/31/12 — CIVIL — STATE OF CALIFORNIA

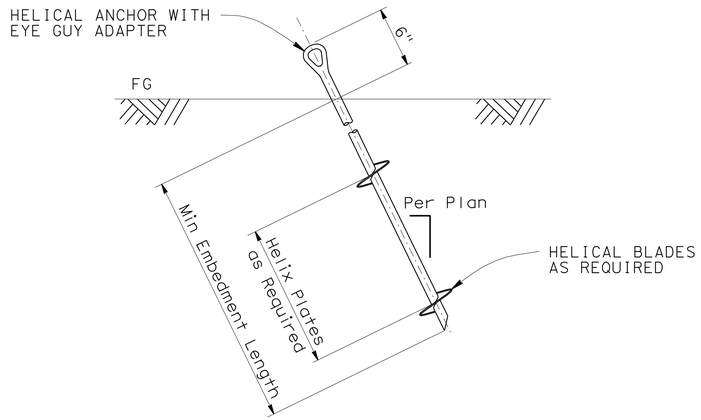
2-19-13
PLANS APPROVAL DATE

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.



WIND ANCHOR

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



ALTERNATIVE GUY WIRE INSTALLATION DETAIL

(See Helical Anchor Specifications Table)

HELICAL ANCHOR SPECIFICATIONS

Anchor Location	Type	Helix Plate Diameter*	Allowable Min Tension Cap., "Q_a"	Embedment Length (Min)	Installation Torque (Min)**, "T"
Detail	Tension	12"	5000 lb	10'-0"	1000 Ft-lb

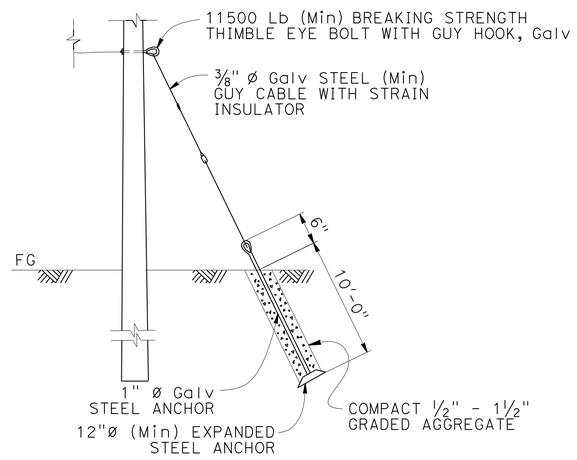
SPECIFICATION NOTES:

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

2 Anchors and hardware to be installed per the manufacturers specifications.

* Number of helical plates is not specified; Contractors choice.

** Adjust accordingly if required, See Note 3.



GUY WIRE INSTALLATION DETAIL

NOTES:

1. The Contractor to verify soil condition, slope, and adjust anchoring to satisfy basic design requirements per Note 7 on SES-1 sheet.
2. Use of Alternative Guy Wire Installation Detail requires that the soil bearing capacity be verified by the Contractor.
3. The Contractor shall determine the most appropriate value for k_t based on soil conditions and shall adjust the Minimum Installation Torque based on the revised k_t. A k_t value of 10 was assumed for the Minimum Installation Torque shown in the table.

   The Helical Installation torque formula is $Q_u = k_t * T$ where,

   $Q_u = Q_a * FS$ = Ultimate Helical Anchor Capacity (lb)
   FS = Factor of Safety = 2.0
   Q_a = Allowable Helical Anchor Capacity (lb)
   k_t = Empirical Torque Factor (ft^{-1})
   T = Min Installation Torque (ft-lb)

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

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

NO SCALE

BRANCH CHIEF JAMES SAGAR

	BY	CHECKED
DESIGN	T MARCHENKO	V LOPEZ
DETAILS	H NGUYEN	V LOPEZ
QUANTITIES		

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH B

BRIDGE NO. N/A
POST MILE 21.7

TEMPORARY SIGNAL SYSTEM
WOOD POLE ANCHORING DETAILS

SES-6

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3619
PROJECT NUMBER & PHASE: 0400001213
CONTRACT NO.: 04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-19-13	6-12-12			6	6

FILE => spec_des_br_prj/2012sd/04-4s1601_ses6.dgn

USERNAME => s135318 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 14:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	29	48

12-7-12
REGISTERED CIVIL ENGINEER — DATE

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

2-19-13
PLANS APPROVAL DATE

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

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR

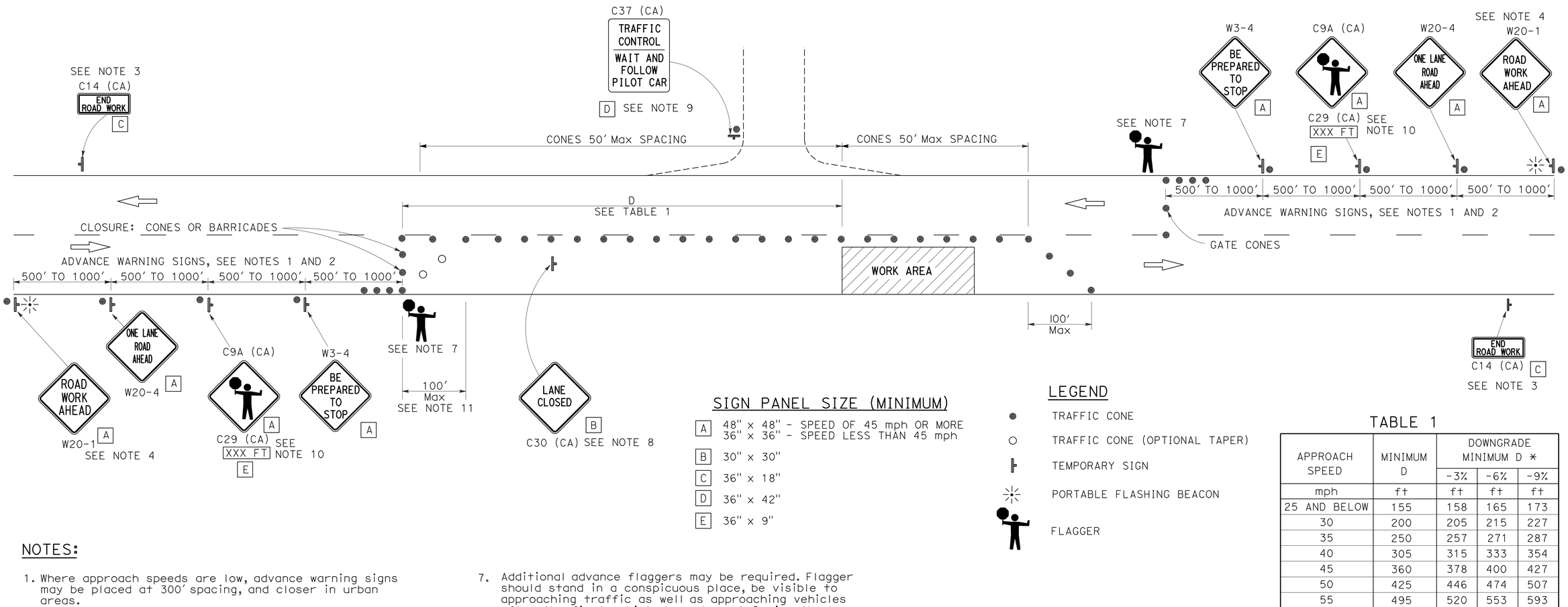
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

NOTES:

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on orange background.

California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



SIGN PANEL SIZE (MINIMUM)

- A — 48" x 48" - SPEED OF 45 mph OR MORE; 36" x 36" - SPEED LESS THAN 45 mph
- B — 30" x 30"
- C — 36" x 18"
- D — 36" x 42"
- E — 36" x 9"

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- TEMPORARY SIGN
- PORTABLE FLASHING BEACON
- FLAGGER

TABLE 1

APPROACH SPEED	MINIMUM D	DOWNGRADE MINIMUM D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 AND BELOW	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785

* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

NOTES:

1. Where approach speeds are low, advance warning signs may be placed at 300' spacing, and closer in urban areas.
2. Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
4. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____MILES", use a W20-4 sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
8. Place C30 (CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
9. When a pilot car is used, place a C37 (CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign at all intersections within traffic control area. Signs shall be clean and visible at all times.
10. An optional C29 (CA) sign may be placed below the C9A (CA) sign.
11. Traffic cones or barricades may be placed on the optional taper as shown, barricades shall be Type I, II, or III.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

TCS-1

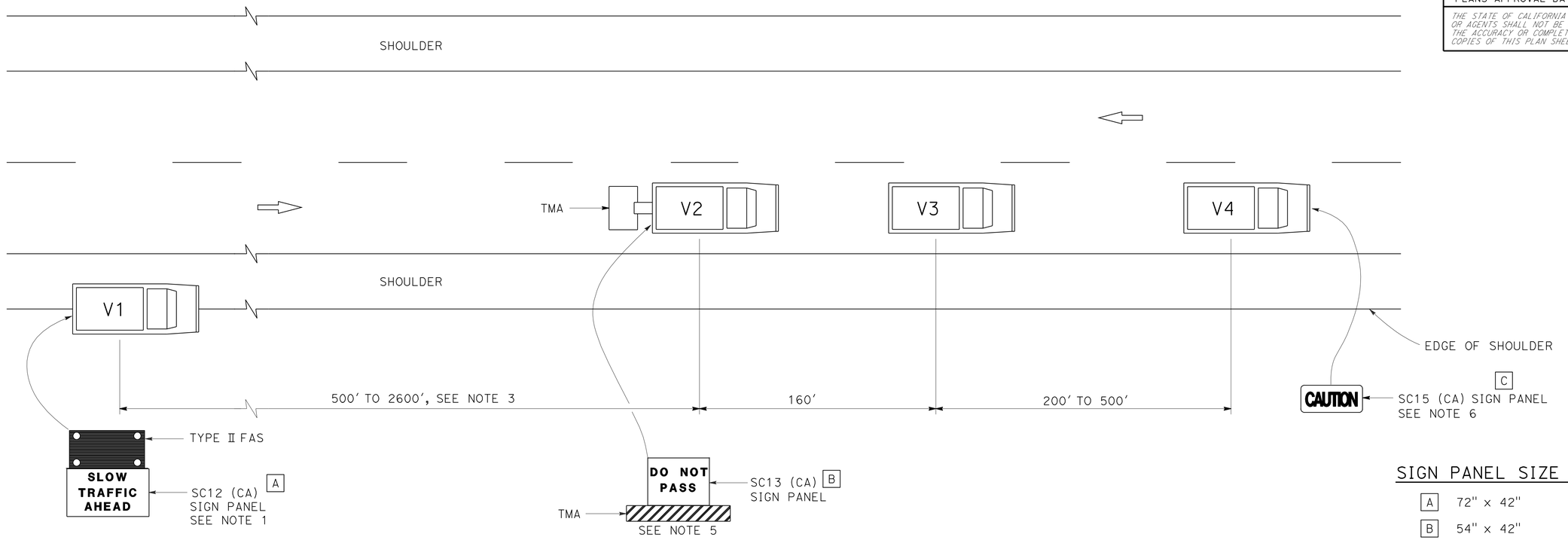
LAST REVISION | DATE PLOTTED => 21-FEB-2013
00-00-00 | TIME PLOTTED => 14:36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	30	48

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

2-19-13
PLANS APPROVAL DATE

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



SIGN PANEL SIZE (Min)

- A — 72" x 42"
- B — 54" x 42"
- C — 54" x 24"

LEGEND

V1	SIGN VEHICLE
V2	SHADOW VEHICLE
V3	WORK/APPLICATION VEHICLE
V4	SIGN VEHICLE
TMA	TRUCK-MOUNTED ATTENUATOR
	FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE

NOTES:

1. Either a changeable message sign or a SC12 (CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V1. A Type II flashing arrow sign may be used with the SC12 (CA) sign panel.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall be Type III, IV VII, VIII or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Gross Vehicle Weight of shadow vehicle shall be a minimum of 20,000 pounds and shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.
7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2' or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON TWO LANE HIGHWAYS

NO SCALE

TCS-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
LAST REVISION
DATE PLOTTED => 21-FEB-2013
TIME PLOTTED => 14:36
00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	31	48

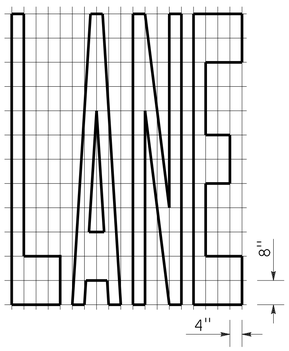
Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

July 20, 2012
PLANS APPROVAL DATE

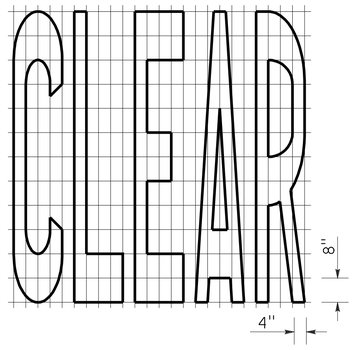
REGISTERED PROFESSIONAL ENGINEER
Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
CIVIL
STATE OF CALIFORNIA

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

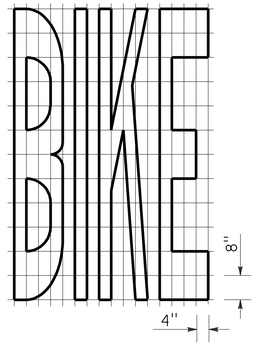
TO ACCOMPANY PLANS DATED 2-19-13



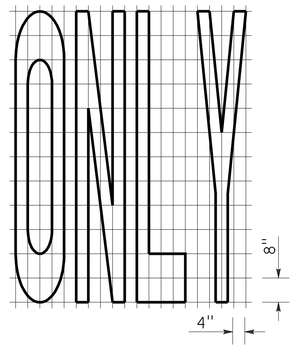
A=24 ft²



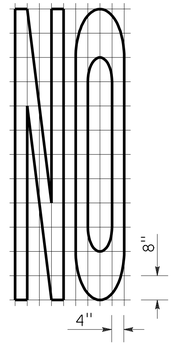
A=27 ft²



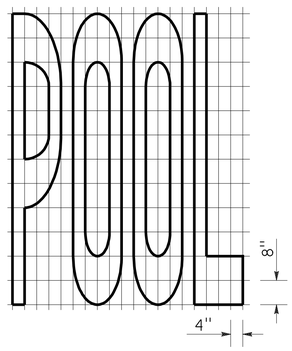
A=21 ft²



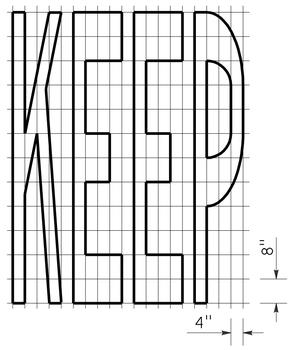
A=22 ft²



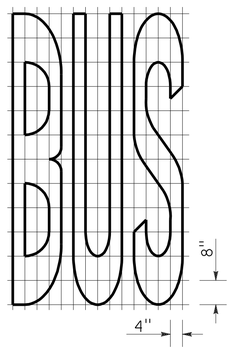
A=14 ft²



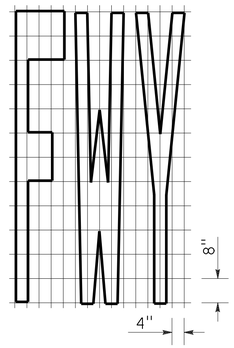
A=23 ft²



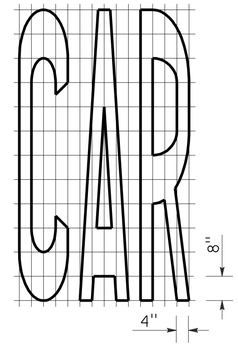
A=24 ft²



A=20 ft²

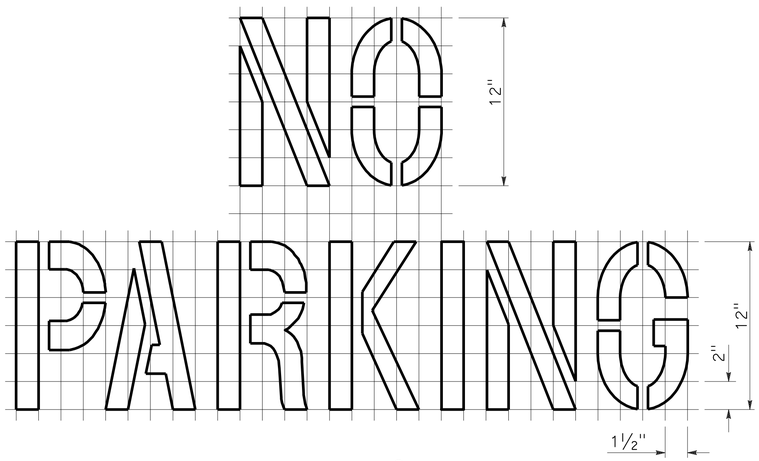


A=16 ft²

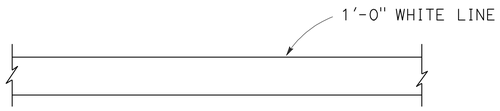


A=17 ft²

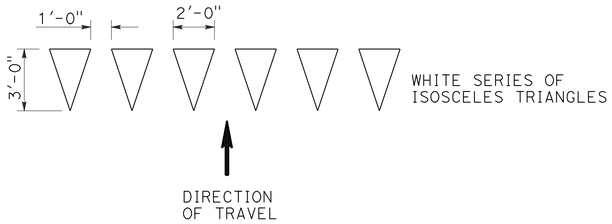
WORD MARKINGS			
ITEM	ft²	ITEM	ft²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft²
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

1. If a message consists of more than one word, it should read "UP", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
WORDS, LIMIT AND YIELD LINES

NO SCALE

RSP A24E DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN A24E
DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24E

2010 REVISED STANDARD PLAN RSP A24E

6-12-12

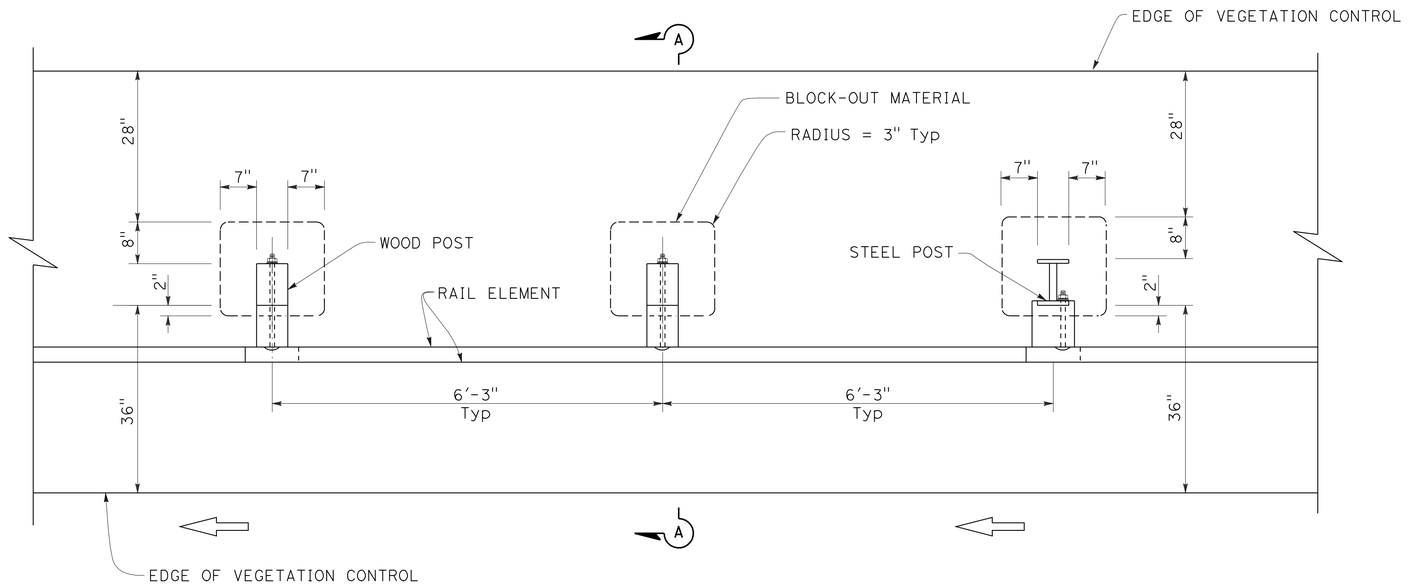
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	32	48

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

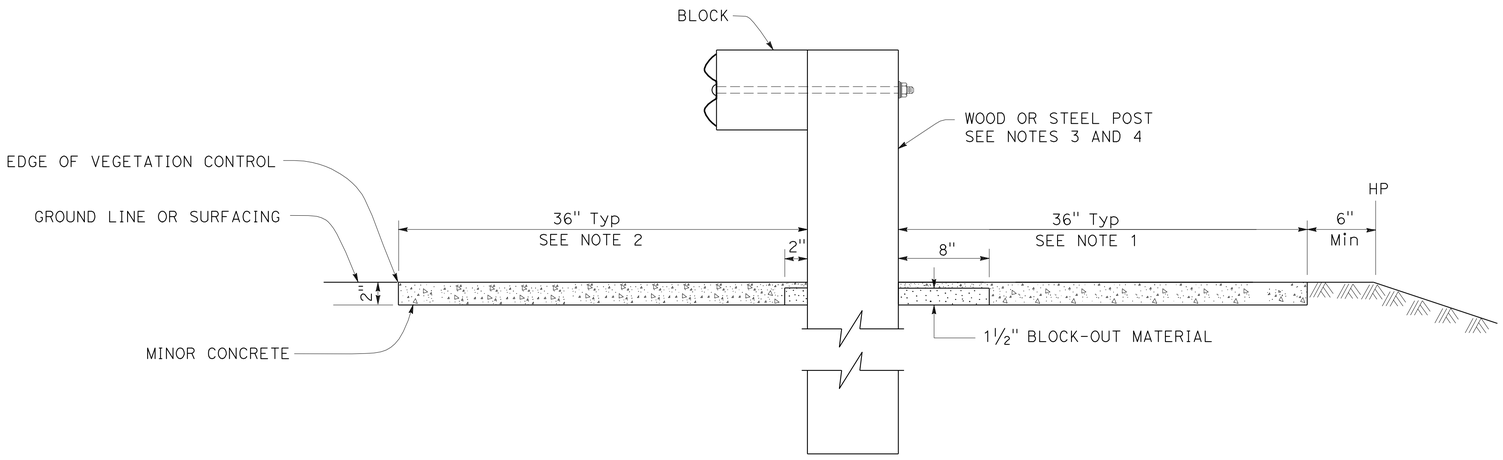
October 19, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 2-19-13



PLAN



SECTION A-A

NOTES:

1. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.
3. For wood post sizes, see Standard Plan A77C1.
4. For steel post sizes, see Standard Plan A77C2.
5. For details not shown, see Standard Plans A77A1 and A77A2.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL
STANDARD RAILING SECTION

NO SCALE

RSP A77C5 DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A77C5 DATED MAY 20, 2011 - PAGE 53 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77C5

2010 REVISED STANDARD PLAN RSP A77C5

9-26-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	33	48

REGISTERED CIVIL ENGINEER

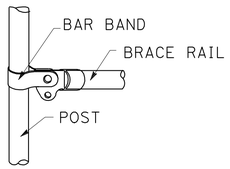
Glenn DeCou
No. C34547
Exp. 9-30-13
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

October 19, 2012
PLANS APPROVAL DATE

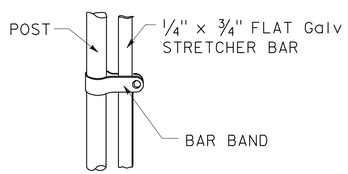
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 2-19-13

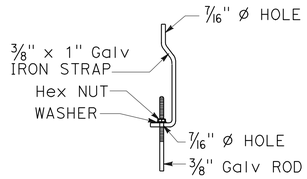
2010 REVISED STANDARD PLAN RSP A85B



BRACE RAIL



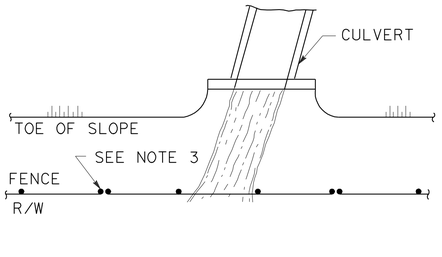
STRETCHER BAR



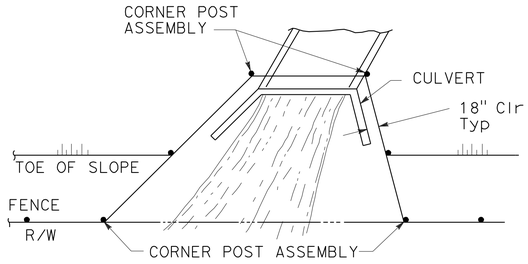
TRUSS TIGHTENER

NOTES:

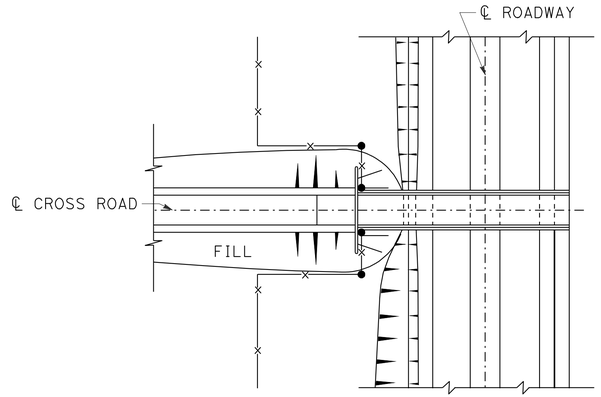
1. All material for abutment connection to be galvanized.
2. The chain link fabric shall be replaced by barbed wire strands at 12" maximum centers between the double posts.
3. When the width of the culvert makes it necessary to anchor a post to the top of the culvert, a cast iron shoe or other device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



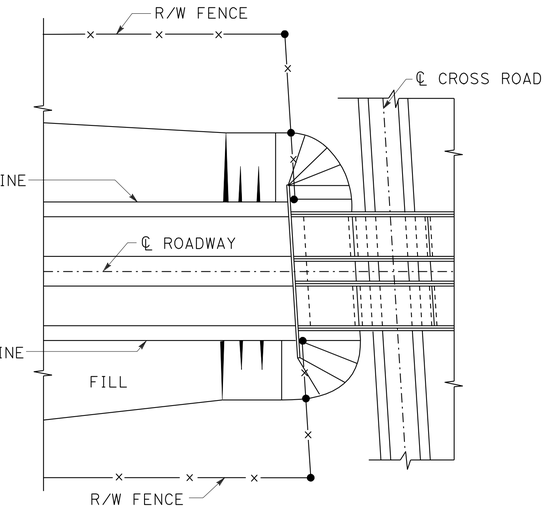
PLAN



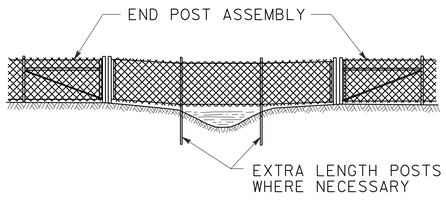
PLAN



PLAN OF ROADWAY - OVERCROSSING

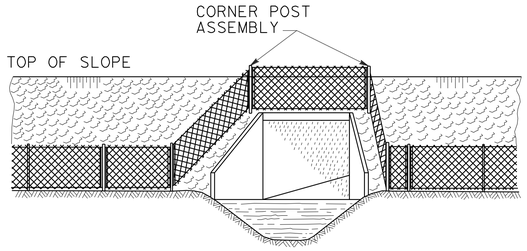


PLAN OF ROADWAY - UNDERCROSSING



ELEVATION

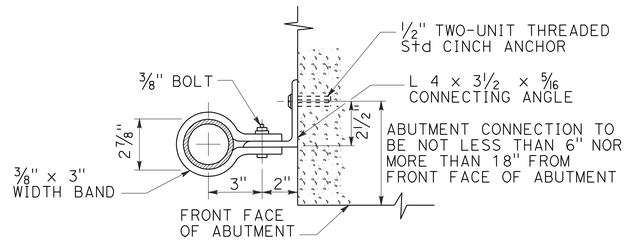
INSTALLATION OVER STREAM



ELEVATION

INSTALLATION AROUND HEADWALL

See Note 4



ABUTMENT CONNECTION

TYPICAL INSTALLATION AT BRIDGES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE DETAILS

NO SCALE

RSP A85B DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A85B DATED MAY 20, 2011 - PAGE 114 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A85B

7-19-12

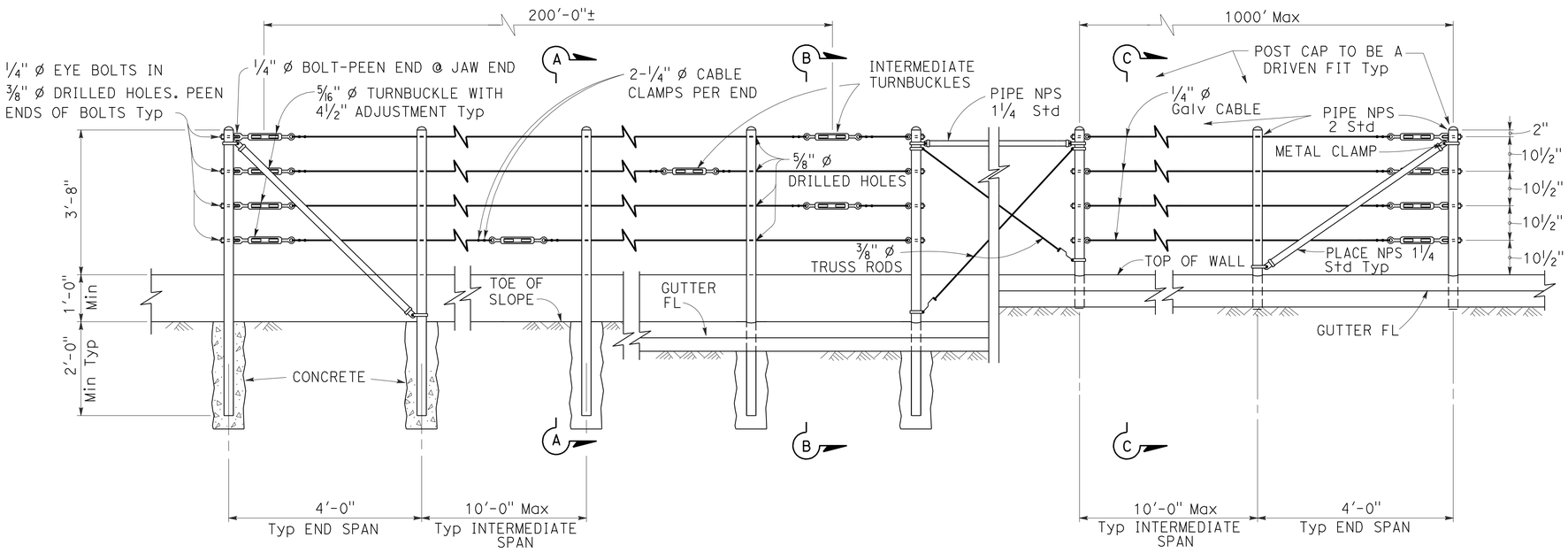
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	34	48

REGISTERED CIVIL ENGINEER

October 21, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Tillat Satter — No. C42892 — Exp. 3-31-12 — CIVIL — STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 2-19-13

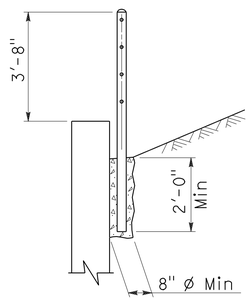


EXISTING WALL (WITHOUT GUTTER)
Existing

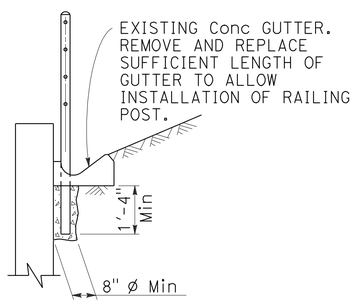
RETAINING WALL (WITH GUTTER)
Existing

RETAINING WALL (WITH GUTTER)
New construction

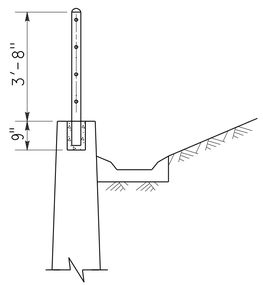
ELEVATION



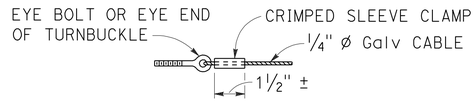
SECTION A-A
Existing



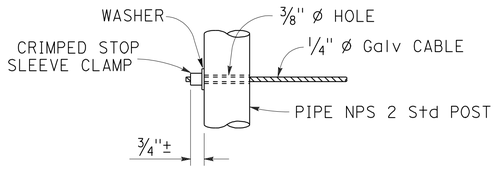
SECTION B-B
Existing



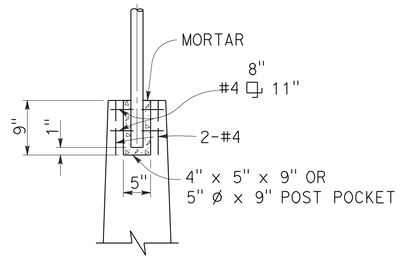
SECTION C-C
New construction



ALTERNATIVE CABLE CONNECTION



ALTERNATIVE DEAD END ANCHORAGE



POST POCKET

NOTES:

1. Maximum distance between turnbuckles shall be 200'-0"±.
2. Intermediate turnbuckles to be placed in adjacent spans.
3. Cable shall not be spliced between intermediate turnbuckles and end posts.
4. Posts to be vertical.
5. Alignment of holes in posts may vary to conform to slope of top of retaining wall.
6. The Contractor shall verify all dependent dimensions in the field before ordering or fabricating any material.
7. Line posts shall be braced horizontally and trussed diagonally in both directions at intervals not to exceed 1000'.
8. Post pockets to be centered in top of wall.
9. Typical end spans, braced in both directions, shall be constructed at changes in line where the angle of deflection is 15° or more.
10. Provide thimbles at all cable loops.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CABLE RAILING

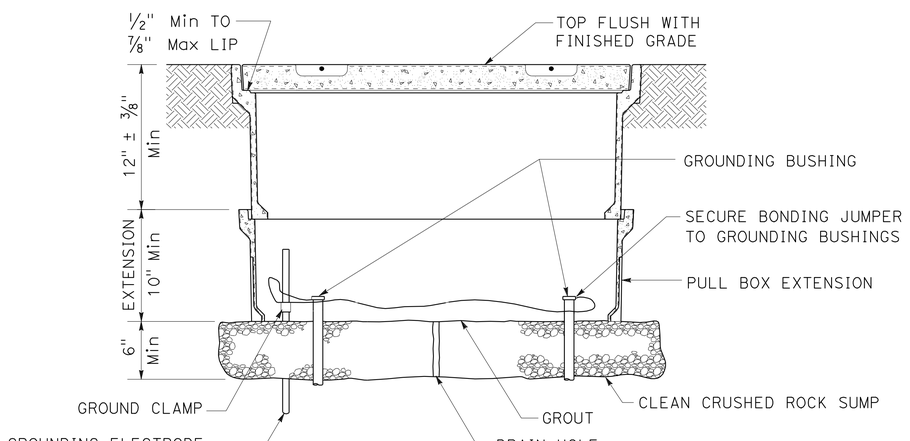
NO SCALE

RSP B11-47 DATED OCTOBER 21, 2011 SUPERSEDES STANDARD PLAN B11-47 DATED MAY 20, 2011 - PAGE 293 OF THE STANDARD PLANS BOOK DATED 2010.

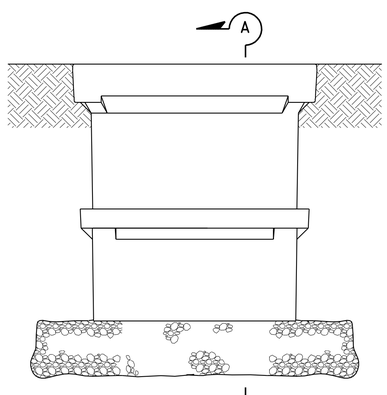
REVISED STANDARD PLAN RSP B11-47

2010 REVISED STANDARD PLAN RSP B11-47

9-14-11



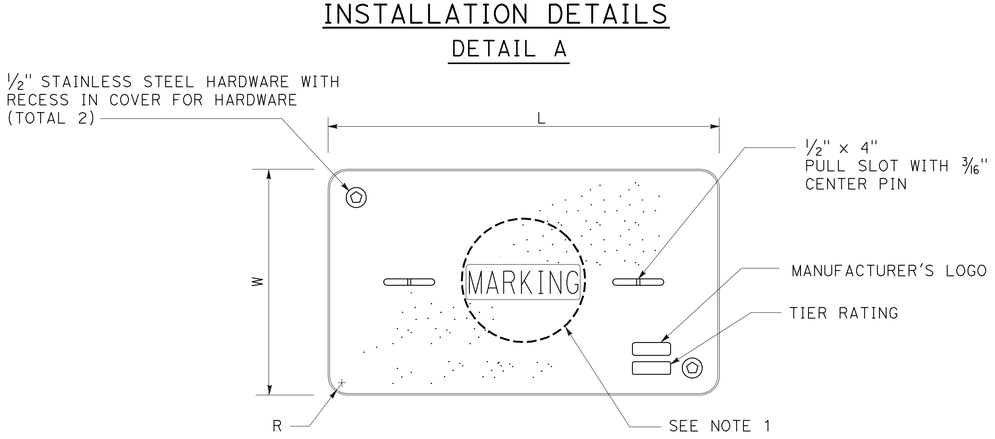
SECTION A-A



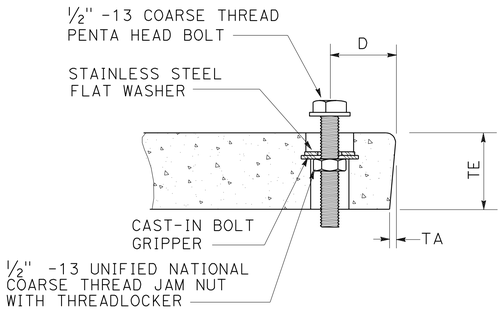
SIDE VIEW

INSTALLATION DETAILS

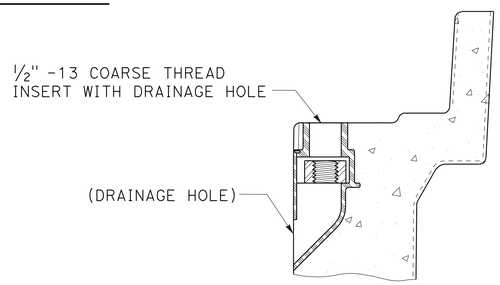
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

DIMENSION TABLE

PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MAXIMUM WEIGHT	L	W	R	TE	TA	D	MAXIMUM WEIGHT
No. 3½	12"	N/A	40 lb	1' - 3⅜"	10⅛"	1⅜"	2"	⅛"	1¾"	30 lb
No. 5	12"	10"	55 lb	1' - 11¼"	1' - 1¾"	1⅜"	2"	⅛"	1¾"	60 lb
No. 6	12"	10"	70 lb	2' - 6½"	1' - 5½"	1⅜"	2"	⅛"	2"	85 lb

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	1	21.7	35	48

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

January 20, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
No. E14512
Exp. 6-30-12
ELECTRICAL
STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 2-19-13

NOTES ON PULL BOXES:

1. Pull box covers must be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;

   A) No. 3½ pull box.
   1) "SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
   2) "ST LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.

   B) No. 5, 6, 9 or 9A pull box.
   1) "TRAFFIC SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
   2) "STREET LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
   3) "STREET LIGHTING-HIGH VOLTAGE" - Street or sign lighting circuits where voltage is above 600 V.
   4) "IRRIGATION" - Circuits to irrigation controller 120 V or more.
   5) "RAMP METER" - Ramp meter circuits.
   6) "COUNT STATION" - Count or speed monitor circuits.
   7) "COMMUNICATIONS" - Communication circuits.
   8) "TOS COMMUNICATIONS" - TOS communication line.
   9) "TOS POWER" - TOS power.
   10) "TDC POWER" - Telephone demarcation cabinet power.
   11) "CCTV" - Closed circuit television circuits.
   12) "TMS" - Traffic monitoring station circuits.
   13) "CMS" - Changeable message sign circuits.
   14) "HAR" - Highway advisory radio circuits.

2. The nominal dimensions of the opening in which the cover sets must be the same as the cover dimensions (L and W) plus ⅛" or greater.
3. Covers and boxes must be interchangeable with California Standard. When interchanged with a standard, the top surfaces must be flush within ⅛". Top outside radius of covers and pull boxes must have a ⅛" radius.
4. Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (PULL BOX)

NO SCALE

RSP ES-8A DATED JANUARY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8A

2010 REVISED STANDARD PLAN RSP ES-8A

01-09-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	36	48

Jeffery G. McRoe
REGISTERED ELECTRICAL ENGINEER

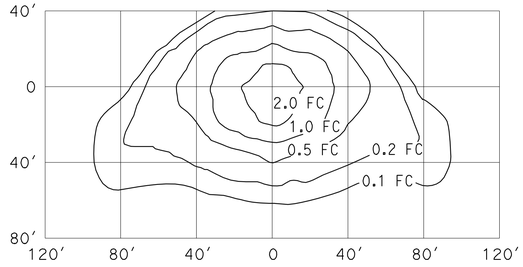
July 20, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRoe
No. E14512
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 2-19-13

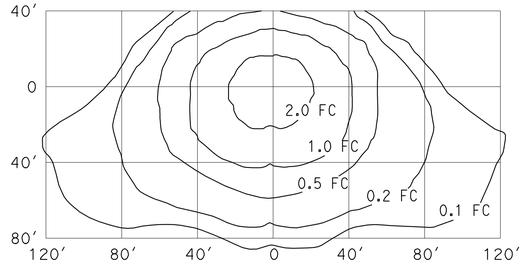
ISOFOOTCANDLE CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

Cutoff Luminaire
34′ Mounting Height
Lamp operated at 22,000 lm
200-W high pressure sodium lamp
ANSI Designation S66

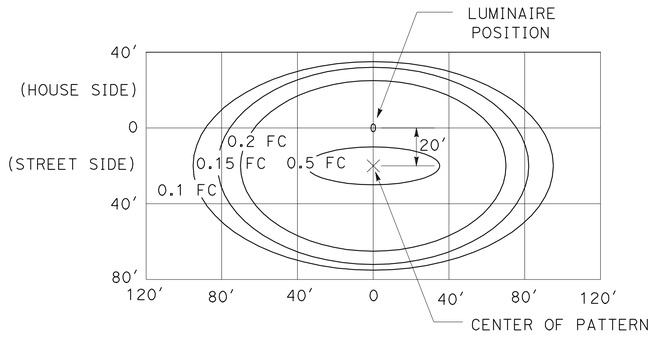
ISOFOOTCANDLE CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

Cutoff Luminaire
40′ Mounting Height
Lamp operated at 37,000 lm
310-W high pressure sodium lamp
ANSI Designation S67

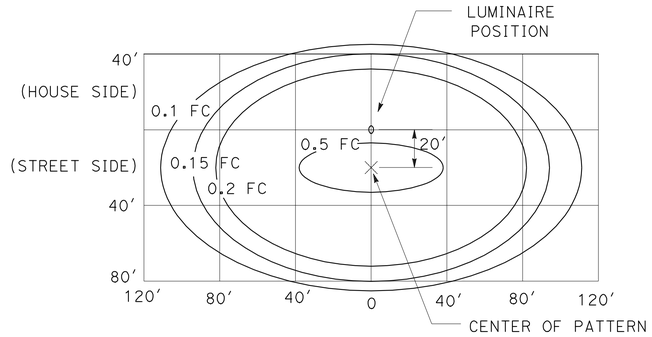
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 1

200-W HPS Equivalent at 34′ Mounting Height

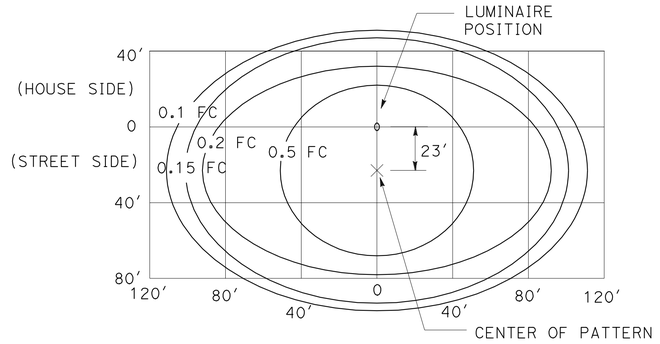
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 2

310-W HPS Equivalent at 40′ Mounting Height

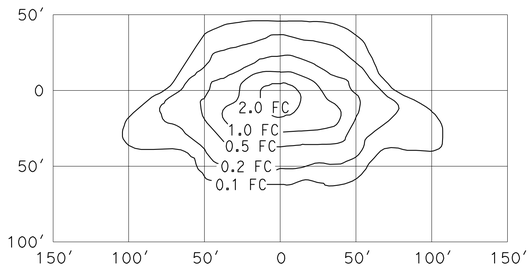
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 4

400-W HPS Equivalent at 40′ Mounting Height

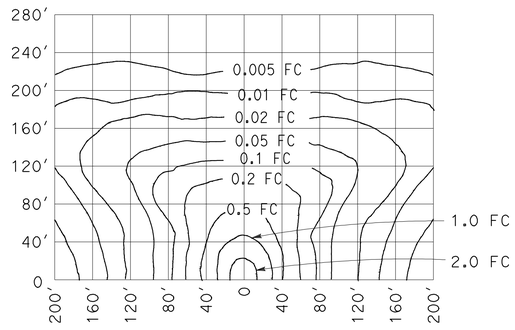
ISOFOOTCANDLE CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

Cutoff Luminaire
30′ Mounting Height
Lamp operated at 16,000 lm
150-W high pressure sodium lamp
ANSI Designation S55

ISOFOOTCANDLE CURVE - MINIMUM



LOW PRESSURE SODIUM LUMINAIRE

40′ Mounting Height
Lamp operated at 33,000 lm
180-W low pressure sodium lamp

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (ISOFOOTCANDLE DIAGRAMS)

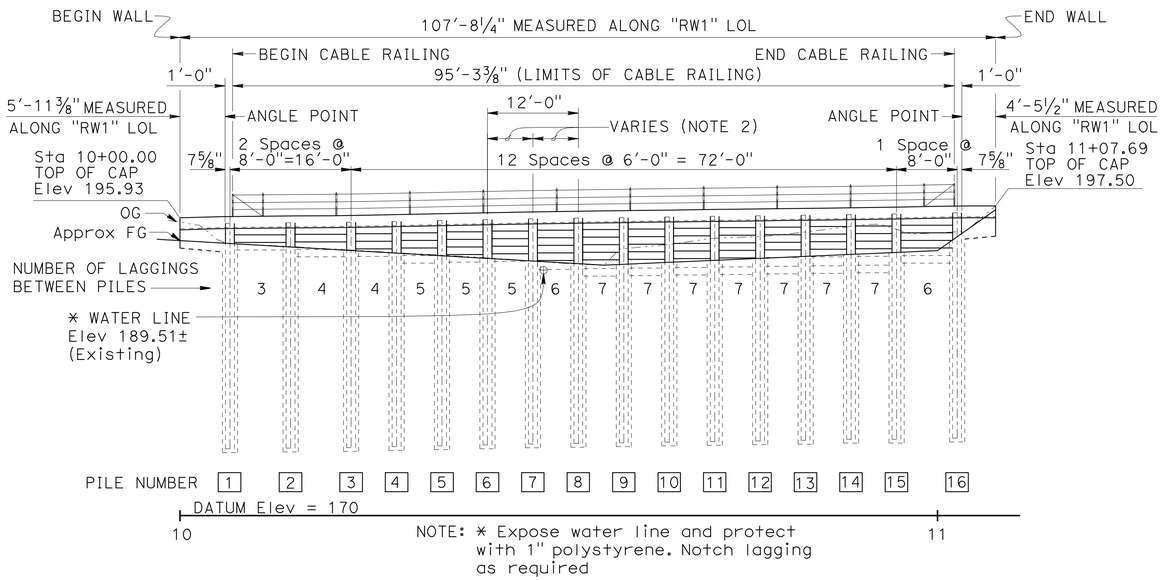
NO SCALE

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

REVISED STANDARD PLAN RSP ES-10A

REVISED STANDARD PLAN RSP ES-10A

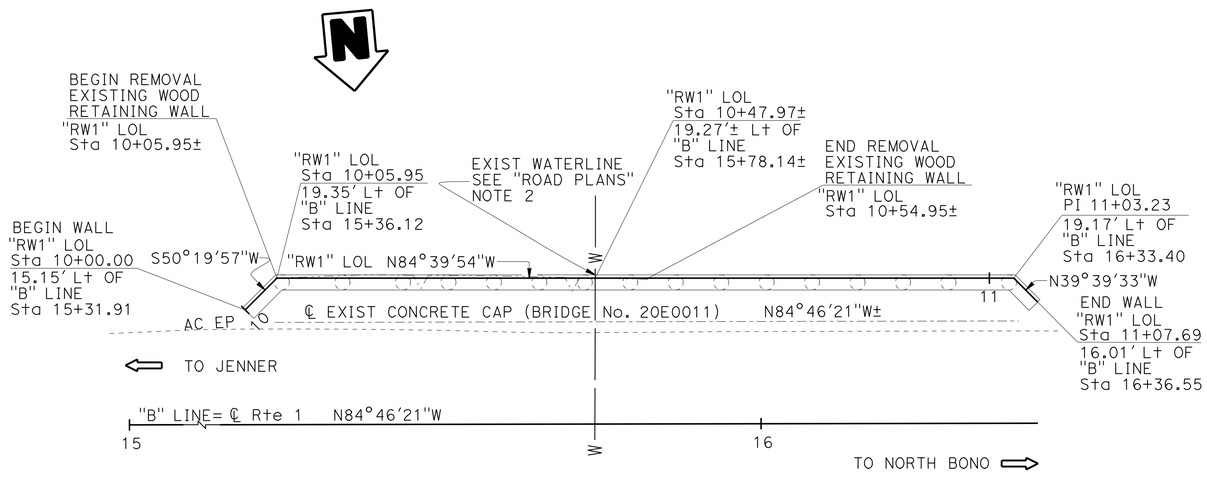
2-16-12



NOTE: * Expose water line and protect with 1" polystyrene. Notch lagging as required

DEVELOPED MIRRORED ELEVATION

1" = 10'



PLAN

1" = 10'

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

QUANTITIES

REMOVE RETAINING WALL (WOOD)	49	LF
STRUCTURE EXCAVATION (SOLDIER PILE WALL)	33	CY
CONCRETE BACKFILL (SOLDIER PILE WALL)	29	CY
LEAN CONCRETE BACKFILL	21	CY
IMPORTED BORROW (LIGHTWEIGHT AGGREGATE)	43	CY
STEEL SOLDIER PILE (W 14 X 68)	480	LF
24" DIAMETER DRILLED HOLE	432	LF
STRUCTURAL CONCRETE, RETAINING WALL	14	CY
BAR REINFORCING STEEL (RETAINING WALL)	3,420	LB
TIMBER LAGGING	4	MFBM
CLEAN AND PAINT STEEL SOLDIER PILING	LUMP	SUM
CABLE RAILING	95	LF

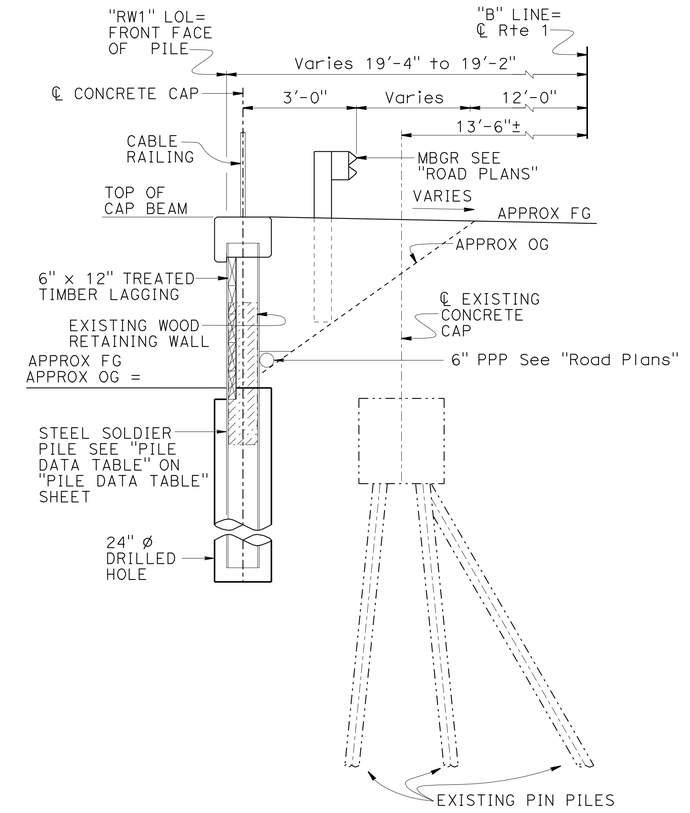
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	37	48

Pete W. Norboe 9-26-12
REGISTERED CIVIL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PETER W. NORBOE No. 57519 Exp.12-31-2013 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.



TYPICAL SECTION

⅜" = 1'-0"

NOTES:

Denotes existing wood retaining wall to be removed.

INDEX TO PLANS

NOTES:

1. For "GENERAL NOTES" and "STANDARD PLANS" list see "PILE DATA" sheet.
2. Pile spacing may be adjusted to provide a 1 foot clearance to existing water line.

Gordon Danke
DESIGN ENGINEER

DESIGN	BY Merritt Mavy	CHECKED Pete Norboe	LOAD & RESISTANCE FACTOR DESIGN			
DETAILS	BY Tim Fairall	CHECKED Pete Norboe	LAYOUT	BY T. Merritt Mavy	CHECKED Pete Norboe	
QUANTITIES	BY Merritt Mavy	CHECKED Pete Norboe	SPECIFICATIONS	BY D. Klein	PLANS AND SPECS COMPARED D. Klein	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

UNIT: 3594
PROJECT NUMBER & PHASE: 04000012131 CONTRACT NO.: 04-4S1601

BRIDGE NO. 20E0065
POST MILE 21.70

RIVERS END RETAINING WALL
GENERAL PLAN

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
7-9-10	9-5-12	9-25-12	6-15-11	1	12

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

FILE => 20e0065-a-gp01.dgn

USERNAME => s135518 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 14:04

CURVE DATA

No.	R	Δ	T	L
Ⓐ	500.00	15°49'48"	69.51	138.14
Ⓑ	500.00	7°28'56"	32.69	65.29
Ⓒ	250.00	66°15'05"	163.13	289.08

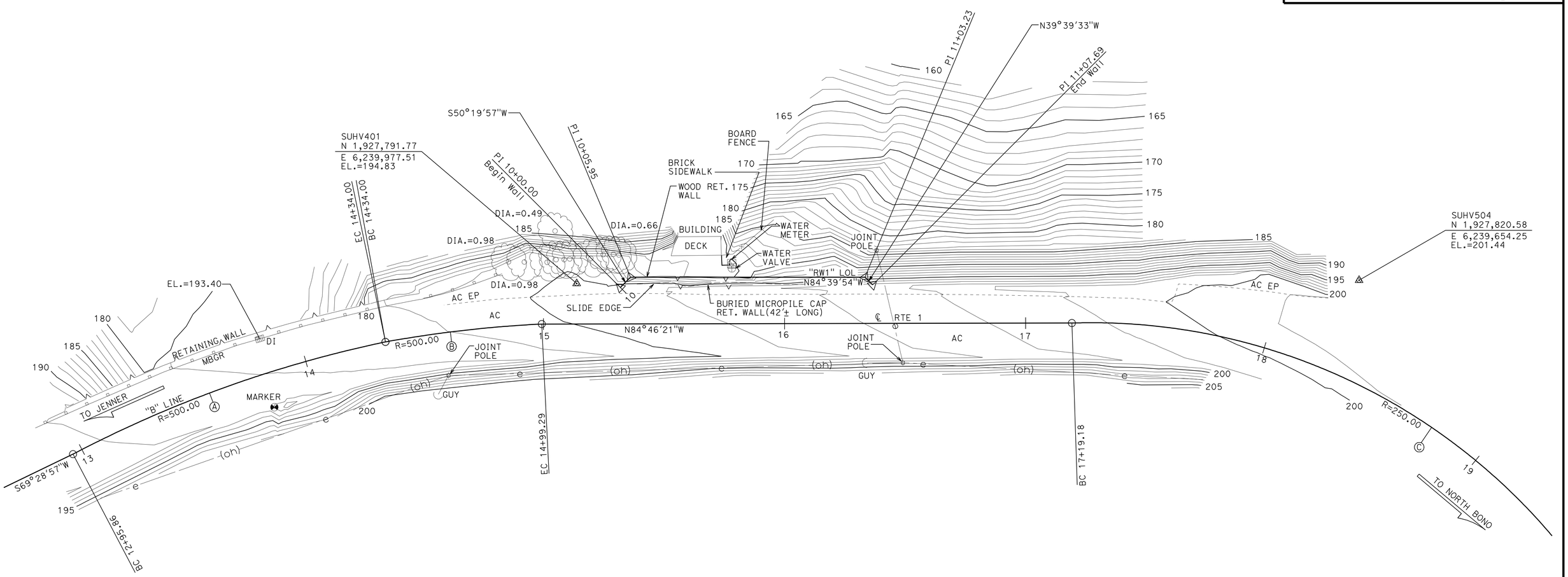
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	38	48

Peter W. Norboe 9-26-12
REGISTERED CIVIL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER W. NORBOE
No. 57519
Exp. 12-31-2013
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.



SURVEY CONTROL

SUHV401
Fnd 8" Spike
16.80 FT Rt. "B" Line ℄ Rte 1
Sta. 15+13.80
N 1,927,791.78
E 6,239,977.51
Elev. = 194.83

SUHV504
Fnd PK in AC Parking Lot
39.66 FT Lt. "B" Line ℄ Rte 1
Sta. 18+25.64
N 1,927,820.64
E 6,239,654.25
Elev. = 201.44

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

PRELIMINARY INVESTIGATION SECTION

SCALE 1"=20'	VERT.DATUM NAVD88	PHOTOGRAMMETRY AS OF: X			
	HORZ.DATUM NAD83 (1991.35)	SURVEYED	BY District	CHECKED	BY S. Sou 08/2010
	ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED	BY T.Zolnikov 08/2010	CHECKED	BY J.Pallares 08/2010

DESIGN	BY Merritt Mavy	CHECKED Pete Norboe
DETAILS	BY Tim Fairall	CHECKED Pete Norboe
QUANTITIES	BY Merritt Mavy	CHECKED Pete Norboe

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO. 20E0065
POST MILE 21.70

RIVERS END RETAINING WALL
FOUNDATION PLAN

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3646
PROJECT NUMBER & PHASE: 04000012131 CONTRACT NO.: 04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08/26/10	01/31/11	02/02/11	03/07/11	2	12

FILE => 20e0065-e-fpl01.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	39	48

Peter W. Norboe 9-26-12
REGISTERED CIVIL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER W. NORBOE
No. 57519
Exp. 12-31-2013
CIVIL
STATE OF CALIFORNIA

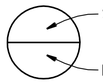
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

PILE DATA TABLE

STATION ALONG "RW1" LOL	PILE No.	TOP OF WALL Elev	TOP OF PILE Elev	BOTTOM OF PILE Elev	PILE SECTION
10+06.59	1	196.09	195.19	165.19	W14x68
10+14.59	2	196.17	195.28	165.28	W14x68
10+22.59	3	196.24	195.34	165.34	W14x68
10+28.59	4	196.35	195.45	165.45	W14x68
10+34.59	5	196.47	195.57	165.57	W14x68
10+40.59	6	196.59	195.69	165.69	W14x68
10+46.59	7	196.70	195.80	165.80	W14x68
10+52.59	8	196.79	195.89	165.89	W14x68
10+58.59	9	196.86	195.97	165.97	W14x68
10+64.59	10	196.95	196.05	166.05	W14x68
10+70.59	11	197.03	196.14	166.14	W14x68
10+76.59	12	197.10	196.20	166.20	W14x68
10+82.59	13	197.18	196.28	166.28	W14x68
10+88.59	14	197.25	196.36	166.36	W14x68
10+94.59	15	197.34	196.45	166.45	W14x68
11+02.59	16	197.49	196.59	166.59	W14x68

STANDARD PLANS DATED 2010

A10A ABBREVIATIONS (SHEET 1 OF 2)
A10B ABBREVIATIONS (SHEET 2 OF 2)
A10C SYMBOLS (SHEET 1 OF 3)
A10D SYMBOLS (SHEET 2 OF 3)
A10E SYMBOLS (SHEET 3 OF 3)
RSP B11-47 CABLE RAILING



GENERAL NOTES

DESIGN:

2007 AASHTO LRFD Version 4.0
with Interims and Revisions by CALTRANS

LIVE LOAD:
100 psf Surface Surcharge

SOIL
PARAMETERS:
From Grading Plane to 3'-0" Below Grading Plane
Backfill soil weight = 120 lb/ft^3
Friction Angle = 30°
Active Pressure coefficent, Ka = 0.333
Slope Angle = 0°
From 3'-0" Below Grading Plane to 15'-0" Below Grading Plane
Backfill soil weight = 60 lb/ft^3
Friction Angle = 30°
Active Pressure coefficent, Ka = 0.333
Slope Angle = 0°
From 15'-0" Below Grading Plane and lower
Backfill soil weight = 125 lb/ft^3
Friction Angle = 33°
Active Pressure coefficent, Ka = 0.295
Slope Angle = 0°
C = 700 psf

STRUCTURAL STEEL:
ASTM A709/A709M Grade 50 or 50W
fy = 50 ksi

STRUCTURAL TIMBER:
Treated Douglas Fir, Grade No. 1 or better.
Timber to be full sawn

STRUCTURAL CONCRETE:
fy = 60 ksi
f'c = 3.6 ksi (Cap Beam and Return Walls)
n = 8

DESIGN	BY Merritt Mavy	CHECKED Pete Norboe	
DETAILS	BY Tim Fairall	CHECKED Pete Norboe	
QUANTITIES	BY Merritt Mavy	CHECKED Pete Norboe	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO. 20E0065
POST MILE 21.70

RIVERS END RETAINING WALL
PILE DATA TABLE

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3594
PROJECT NUMBER & PHASE: 04000012131 CONTRACT NO.: 04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-5-11	9-25-12			3	12

FILE => 20e0065-f-piledat.dgn

USERNAME => s135318 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 14:04

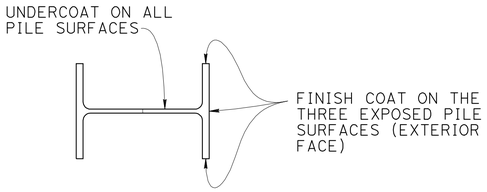
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	40	48

Peter W. Norboe 9-26-12
REGISTERED CIVIL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

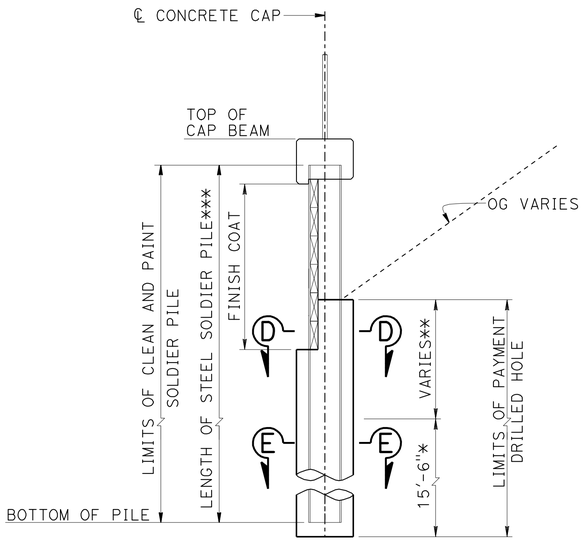
REGISTERED PROFESSIONAL ENGINEER
PETER W. NORBOE
No. 57519
Exp.12-31-2013
CIVIL
STATE OF CALIFORNIA

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.



LIMITS OF CLEAN & PAINT STEEL SOLDIER PILE

1½" = 1'-0"



LIMITS OF PAYMENT

⅜" = 1'-0"

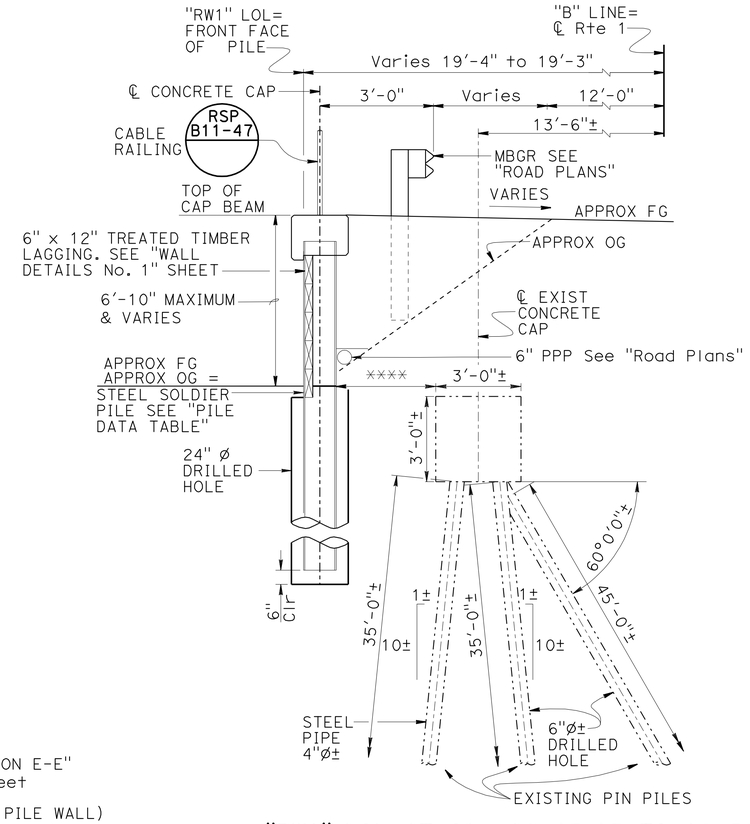
NOTES:

1. For "SECTION D-D" and "SECTION E-E" see "WALL DETAILS No. 3" sheet

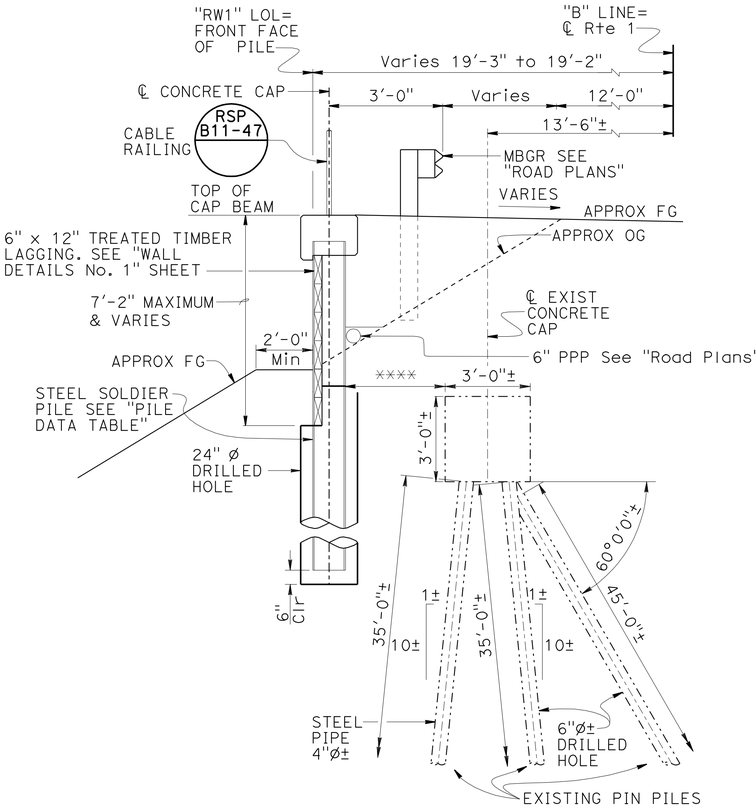
* CONCRETE BACKFILL (SOLDIER PILE WALL)

** LEAN CONCRETE BACKFILL

*** CLEAN AND UNDERCOAT STEEL SOLDIER PILE FROM TOP OF PILE TO BOTTOM OF PILE



"RW1" LOL AT Sta 10+05.95 TO 10+52.59



"RW1" LOL AT Sta 10+52.59 TO 11+03.23

NOTES:

1. Location of existing piles and cap to be verified in field.

**** Field verify distance front face of pile to existing pile cap = 2'-0" Min.

TYPICAL SECTION

⅜" = 1'-0"

DESIGN	BY Merritt Mavy	CHECKED Pete Norboe	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO. 20E0065	RIVERS END RETAINING WALL	
DETAILS	BY Tim Fairall	CHECKED Pete Norboe			POST MILE 21.70	TYPICAL SECTION	
QUANTITIES	BY Merritt Mavy	CHECKED Pete Norboe					

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3594
PROJECT NUMBER & PHASE: 04000012131 CONTRACT NO.: 04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
2-1-11	6-14-11	9-25-12		4	12

FILE => 20e0065-g-ts.dgn

USERNAME => 611396 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 14:08

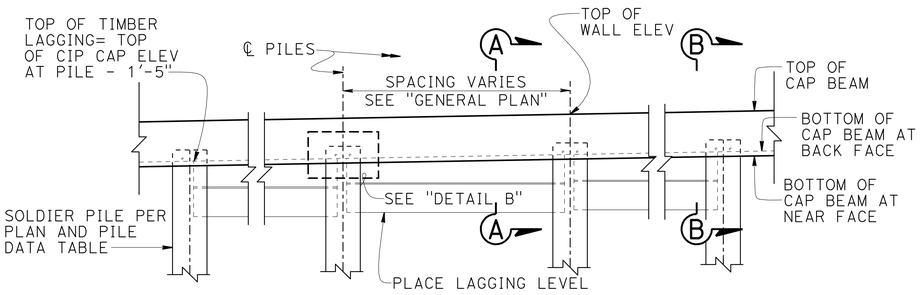
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	41	48

Peter W. Norboe 9-26-12
REGISTERED CIVIL ENGINEER DATE

2-19-13
PLANS APPROVAL DATE

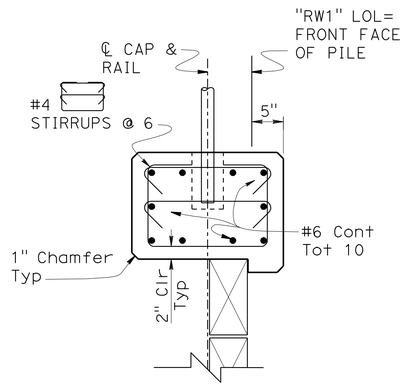
REGISTERED PROFESSIONAL ENGINEER — PETER W. NORBOE No. 57519 Exp. 12-31-2013 CIVIL — STATE OF CALIFORNIA

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.

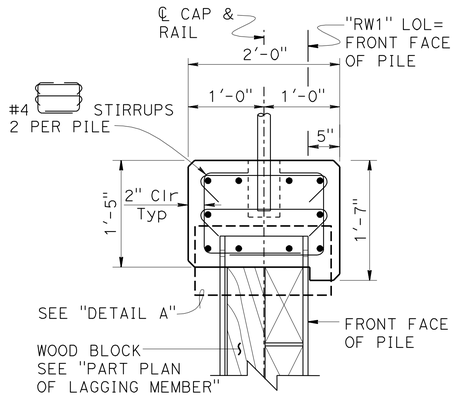


NOTE: Not all timber lagging shown

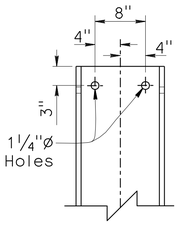
PART MIRRORED ELEVATION
3/8" = 1'-0"



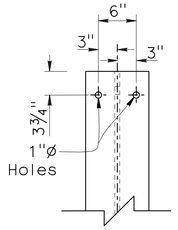
SECTION A-A
1" = 1'-0"



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



DETAIL A
1" = 1'-0"



DETAIL B
1" = 1'-0"

LAGGING PART ELEVATION
1" = 1'-0"

PART ELEVATION
1½" = 1'-0"

SHIM DETAIL
6" = 1'-0"

PART PLAN OF LAGGING MEMBER
1" = 1'-0"

NOTES:

1. Contractors' alternative to clip corners.
2. Length varies with location. Retain with ¼"Ø X 6" Galv Spikes Tot 4 Per lagging member 2 Per side Typ.

NOTE:
Only diagnally opposite corners may be clipped to facilitate placement.

PART PLAN OF LAGGING MEMBER CLIPPING ALTERNATIVE
1½" = 1'-0"

LAGGING DETAILS

DESIGN	BY Merritt Mavy	CHECKED Pete Norboe	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO. 20E0065	RIVERS END RETAINING WALL	
DETAILS	BY Tim Fairall	CHECKED Pete Norboe			POST MILE 21.70	WALL DETAILS No. 1	
QUANTITIES	BY Merritt Mavy	CHECKED Pete Norboe					

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3594
PROJECT NUMBER & PHASE: 04000012131 CONTRACT NO.: 04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-5-11	4-05-11	9-26-12		5	12

FILE => 20e0065-k-dets01.dgn

USERNAME => s113946 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 14:08

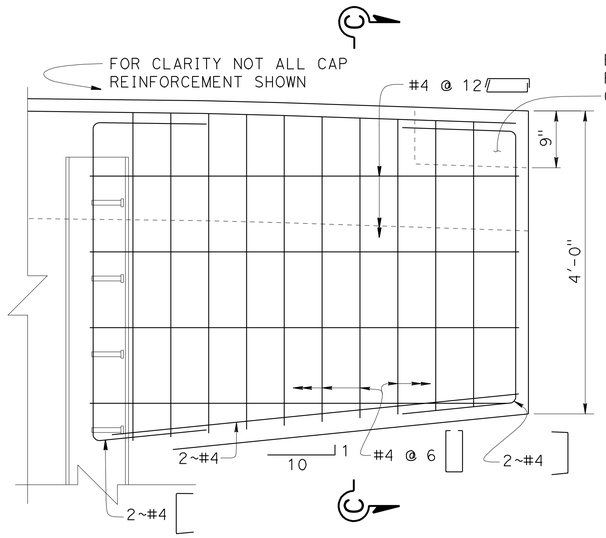
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	42	48

Peter W. Norboe 9-26-12
REGISTERED CIVIL ENGINEER DATE

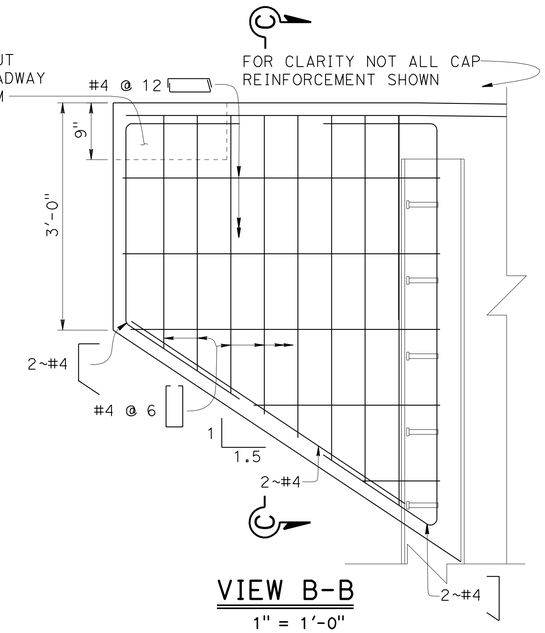
2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER W. NORBOE
No. 57519
Exp. 12-31-2013
CIVIL
STATE OF CALIFORNIA

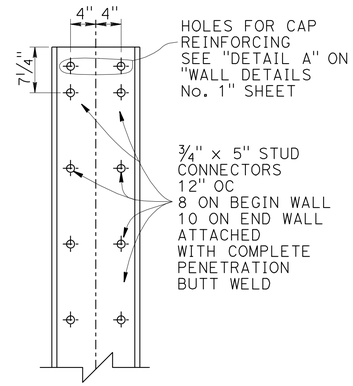
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



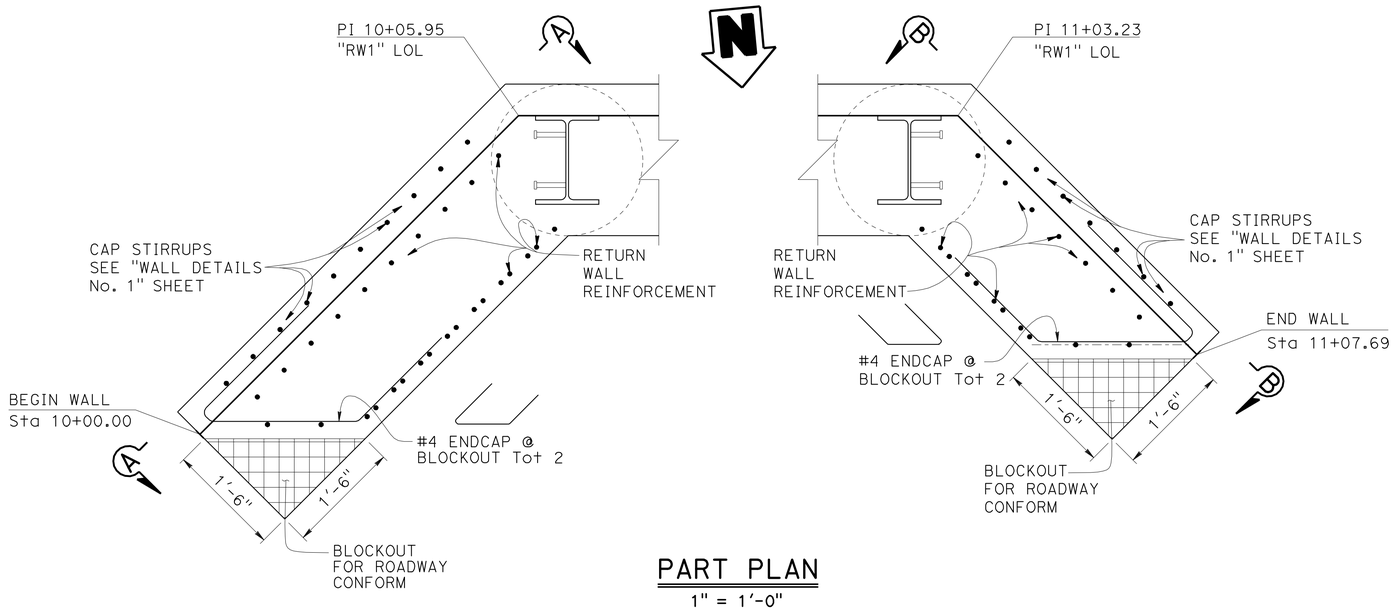
VIEW A-A
1" = 1'-0"



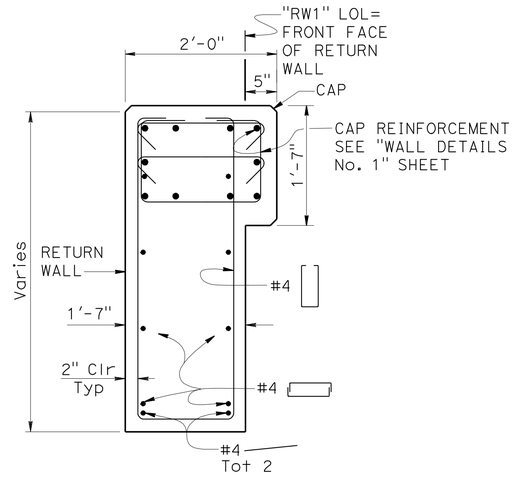
VIEW B-B
1" = 1'-0"



ANCHOR STUD DETAIL
1" = 1'-0"



PART PLAN
1" = 1'-0"



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

DESIGN	BY Merritt Mavy	CHECKED Pete Norboe	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO. 20E0065
DETAILS	BY Tim Fairall	CHECKED Pete Norboe			POST MILE 21.70
QUANTITIES	BY Merritt Mavy	CHECKED Pete Norboe			

RIVERS END RETAINING WALL
WALL DETAILS No. 2

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3594
PROJECT NUMBER & PHASE: 04000012131 CONTRACT NO.: 04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
2-3-11	4-05-11	9-26-12		6	12

FILE => 20e0065-k-dets02.dgn

USERNAME => 813946 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 14:08

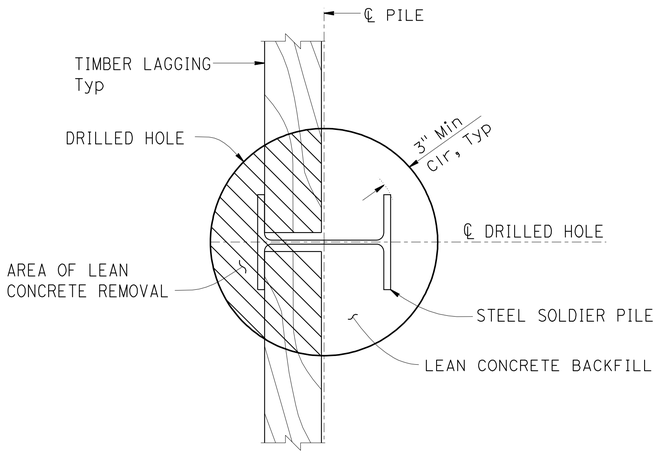
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	1	21.7	43	48

Peter W. Norboe 9-26-12
REGISTERED CIVIL ENGINEER DATE

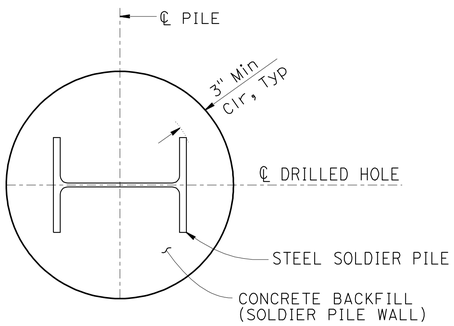
2-19-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER W. NORBOE
No. 57519
Exp.12-31-2013
CIVIL
STATE OF CALIFORNIA

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



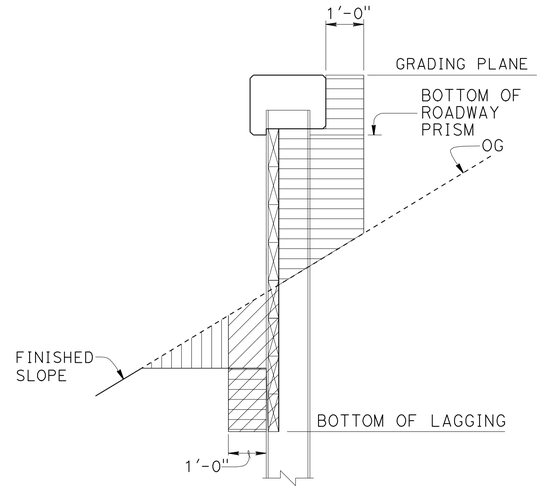
SECTION D-D
1½" = 1'-0"



SECTION E-E
1½" = 1'-0"

NOTES:

1. For Location of "SECTION D-D" and "SECTION E-E" see "TYPICAL SECTION" sheet



LIMITS OF EXCAVATION AND BACKFILL
½" = 1'-0"

DESIGN	BY Merritt Mavy	CHECKED Pete Norboe	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO. 20E0065	RIVERS END RETAINING WALL	
DETAILS	BY Tim Fairall	CHECKED Pete Norboe			POST MILE 21.70	WALL DETAILS No. 3	
QUANTITIES	BY Merritt Mavy	CHECKED Pete Norboe					

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3594
PROJECT NUMBER & PHASE: 04000012131 CONTRACT NO.: 04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-5-11	4-08-11	9-26-12		7	12

FILE => 20e0065-k-dets03.dgn

DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 14:08
USERNAME => s113946

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	1	21.7	44	48

REGISTERED CIVIL ENGINEER — 06-13-11

2-19-13
PLANS APPROVAL DATE

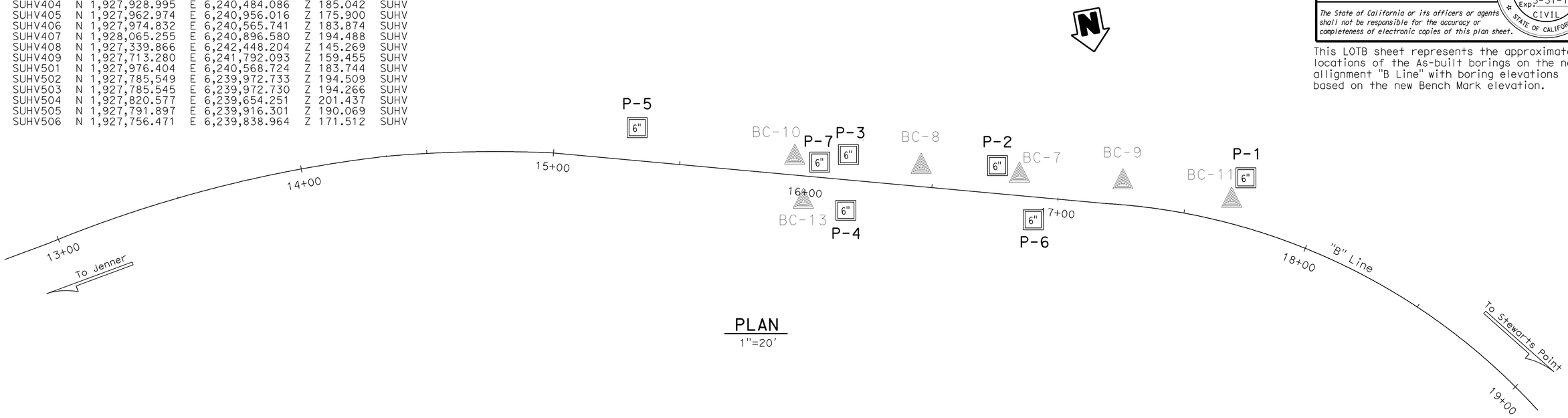
REGISTERED PROFESSIONAL ENGINEER — Hooshmand Nikoui-G — No. 42698 — Exp. 3-31-12 — CIVIL — STATE OF CALIFORNIA

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

This LOTB sheet represents the approximate locations of the As-built borings on the new allignment "B Line" with boring elevations based on the new Bench Mark elevation.

BENCH MARK

SUHV 30	N 1,927,614.216	E 6,242,269.372	Z 152.884	SUHV
SUHV 31	N 1,927,780.278	E 6,241,484.725	Z 166.145	SUHV
SUHV401	N 1,927,791.775	E 6,239,977.511	Z 194.830	SUHV
SUHV402	N 1,927,792.496	E 6,240,053.120	Z 193.340	SUHV
SUHV403	N 1,927,814.409	E 6,240,192.523	Z 191.735	SUHV
SUHV404	N 1,927,928.995	E 6,240,484.086	Z 185.042	SUHV
SUHV405	N 1,927,962.974	E 6,240,956.016	Z 175.900	SUHV
SUHV406	N 1,927,974.832	E 6,240,565.741	Z 183.874	SUHV
SUHV407	N 1,928,065.255	E 6,240,896.580	Z 194.488	SUHV
SUHV408	N 1,927,339.866	E 6,242,448.204	Z 145.269	SUHV
SUHV409	N 1,927,713.280	E 6,241,792.093	Z 159.455	SUHV
SUHV501	N 1,927,976.404	E 6,240,568.724	Z 183.744	SUHV
SUHV502	N 1,927,785,549	E 6,239,972.733	Z 194.509	SUHV
SUHV503	N 1,927,785.545	E 6,239,972.730	Z 194.266	SUHV
SUHV504	N 1,927,820.577	E 6,239,654.251	Z 201.437	SUHV
SUHV505	N 1,927,791.897	E 6,239,916.301	Z 190.069	SUHV
SUHV506	N 1,927,756.471	E 6,239,838.964	Z 171.512	SUHV



PLAN
1"=20'

BORING LOCATIONS/ ELEVATIONS

BORING LOG PROFILE #	STATION	OFFSET "B" Line	ELEV.
P-1	17+70	19' Lt.	199.97'
P-2	16+75	11' Lt.	198.20'
P-3	16+16	10' Lt.	196.97'
P-4	16+17	12' Rt.	197.01'
P-5	15+32	13' Lt.	195.70'
P-6	16+91	9' Rt.	198.44'
P-7	16+05	6' Lt.	196.67'

BORING LOCATIONS/ ELEVATIONS

BORING LOG PROFILE #	STATION	OFFSET "B" Line	ELEV.
BC-7	16+84	8' Lt.	198.27'
BC-8	16+45	8' Lt.	197.46'
BC-9	17+25	9' Lt.	199.13'
BC-10	15+95	7' Lt.	196.54'
BC-11	17+67	9' Lt.	200.12'
BC-13	16+00	10' Rt.	196.72'

ENGINEERING SERVICES

FUNCTIONAL SUPERVISOR
NAME: Helen O'Connel

DRAWN BY: M. Reynolds 06-11
CHECKED BY: Xavior Cougot

GEOTECHNICAL SERVICES

FIELD INVESTIGATION BY:
H. Nikoui

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 9

BRIDGE NO. 20E0065
POST MILES 21.70

RIVERS END RETAINING WALL
LOG OF TEST BORINGS 1 of 5

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3646
PROJECT NUMBER & PHASE: 040000012131 CONTRACT NO.:04-4S1601

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-13-11				8	12

FILE => 20e0065-z-ltb_01.dgn

USERNAME => s114640 DATE PLOTTED => 21-FEB-2013 TIME PLOTTED => 14:48

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	1	21.7		

REGISTERED CIVIL ENGINEER — 9 16 93

PROFESSIONAL ENGINEER — H.NIKOUI — No. 42698 — Exp. 3 31 96 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

GEOTECHNICAL SERVICES-DIVISION OF ENGINEERING SERVICES					
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.					
DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	1	21.7	45	48

REGISTERED ENGINEER- CIVIL — 6-13-11 DATE

RIVERS END RETAINING WALL

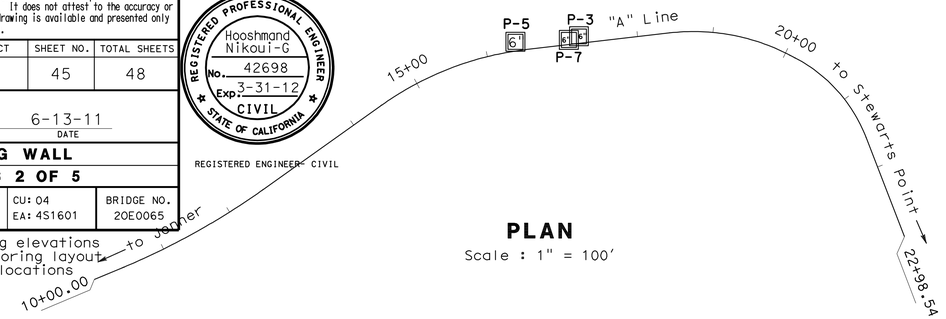
LOG OF TEST BORINGS 2 OF 5

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA.	CU: 04 EA: 4S1601	BRIDGE NO. 20E0065

Hooshmand Nikoui-G — REGISTERED PROFESSIONAL ENGINEER — No. 42698 — Exp. 3-31-12 — CIVIL — STATE OF CALIFORNIA

REGISTERED ENGINEER- CIVIL

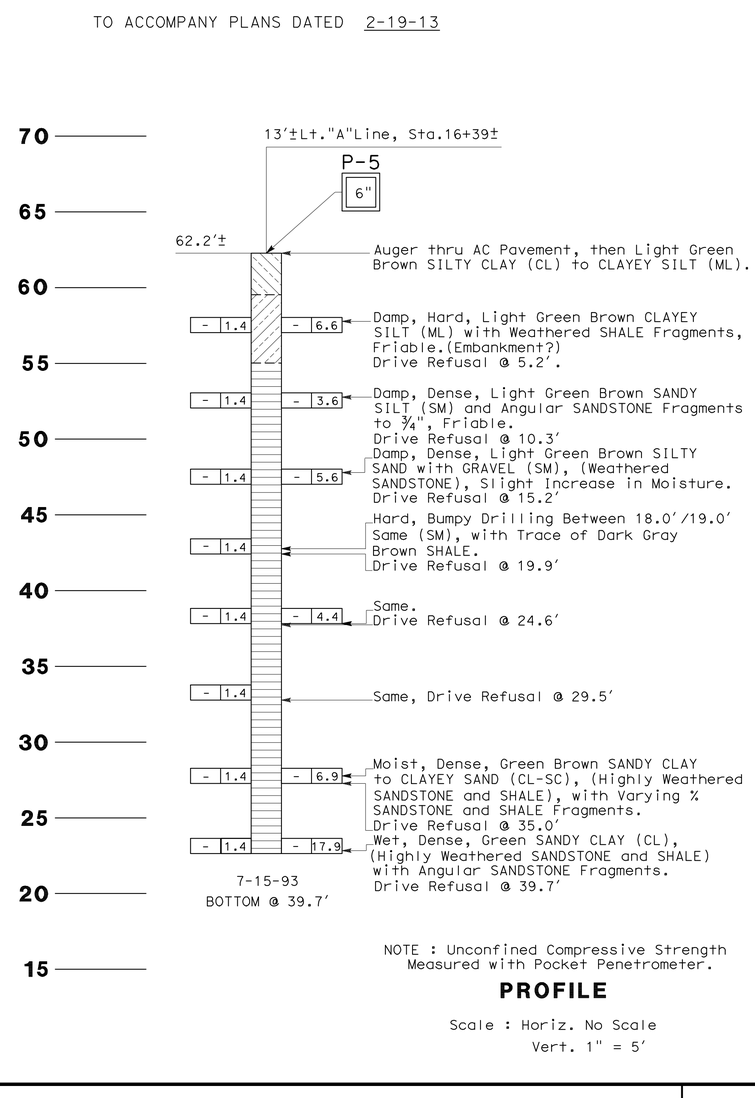
NOTE: The alignment and top of boring elevations have changed. Refer to log of test boring layout sheet 1 of 5 for the current boring locations and top of boring elevations.



PLAN

Scale : 1" = 100'

TO ACCOMPANY PLANS DATED 2-19-13



NOTE : Unconfined Compressive Strength Measured with Pocket Penetrometer.

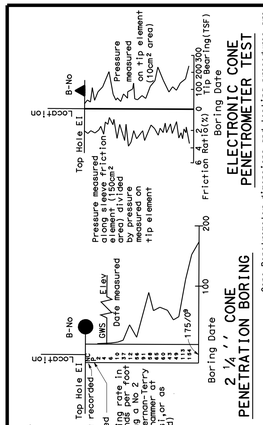
PROFILE

Scale : Horiz. No Scale
Vert. 1" = 5'

R-1

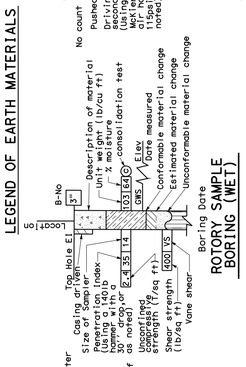
ELECTRONIC CONE PENETROMETER TEST

Cone Penetrometer dimensions and testing procedures are in accordance with ASTM standard D-3441-79,or as noted.

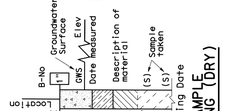


2 ¼ '' CONE PENETRATION BORING

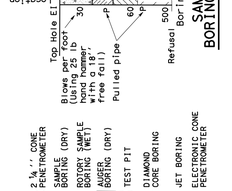
ROTARY SAMPLE BORING (WET)



SAMPLE BORING (DRY)



LEGEND OF EARTH MATERIALS



CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration test

Penetration Index (Blows/Ft)	Granular	Cohesive
0-4	Very loose	Very soft
5-9	Loose	Soft
10-19	Slightly compact	Stiff
20-34	Compact	Very stiff
35-69	Dense	Hard
>70	Very dense	Very hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

DRAWN BY	M. MEHTA
CHECKED BY	R. WARNER

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

BRIDGE NO

POST MILE

PIN PILE FOUNDATION

LOG OF TEST BORINGS (1 of 4)

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

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 9 OF 12

20e0065-z-11b_02.dgn 21-FEB-2013 14:26 s128843

FORM DC-OE-92-PF (REV. 3/88)

04235 EA 193961

GEOTECHNICAL SERVICES-DIVISION OF ENGINEERING SERVICES					
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.					
DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	1	21.7	46	48

Hooshmand Nikoui-G
REGISTERED PROFESSIONAL ENGINEER
No. 42698
Exp. 3-31-12
CIVIL
STATE OF CALIFORNIA

6-13-11
REGISTERED ENGINEER- CIVIL — DATE

RIVERS END RETAINING WALL

LOG OF TEST BORINGS 3 OF 5

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

CU: 04
EA: 4S1601

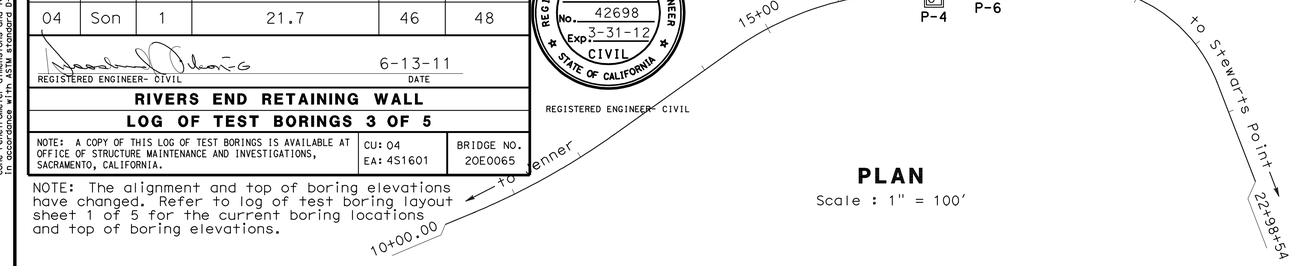
BRIDGE NO. 20E0065

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
~~04~~	~~Son~~	~~1~~	~~21.7~~		

~~9 16 93~~
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
~~H. NIKOUI~~
No. ~~42698~~
Exp. ~~3 31 96~~
CIVIL
STATE OF CALIFORNIA

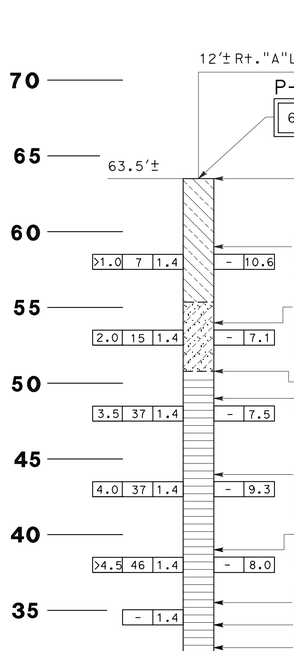
PLANS APPROVAL DATE



PLAN
Scale : 1" = 100'

NOTE: The alignment and top of boring elevations have changed. Refer to log of test boring layout sheet 1 of 5 for the current boring locations and top of boring elevations.

TO ACCOMPANY PLANS DATED 2-19-13



NOTE : Unconfined Compressive Strength Measured with Pocket Penetrometer.

PROFILE
Scale : Horiz. No Scale
Vert. 1" = 2'

R-2

DRAWN BY	M. MEHTA
CHECKED BY	R. WARNER

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

BRIDGE NO
POST MILE

PIN PILE FOUNDATION
LOG OF TEST BORINGS (2 of 4)

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

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY) | SHEET 10 | OF 12

20e0065-z-ltb_03.dgn 21-FEB-2013 14:26 s128843

FORM DC-OE-92-PF (REV. 3/88)

04235 | EA 193961

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
~~04~~	~~Son~~	~~1~~	~~21.7~~		

~~9-16-93~~
REGISTERED CIVIL ENGINEER

~~H. NIKOUI~~ ~~No. 42698~~ ~~Exp. 3-31-96~~ ~~CIVIL~~ ~~STATE OF CALIFORNIA~~ ~~REGISTERED PROFESSIONAL ENGINEER~~

PLANS APPROVAL DATE

GEOTECHNICAL SERVICES-DIVISION OF ENGINEERING SERVICES

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

DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	1	21.7	47	48

Hooshmand Nikoui-G
No. 42698
Exp. 3-31-12
CIVIL
STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

6-13-11
REGISTERED ENGINEER- CIVIL — DATE

REGISTERED ENGINEER- CIVIL

RIVERS END RETAINING WALL

LOG OF TEST BORINGS 4 OF 5

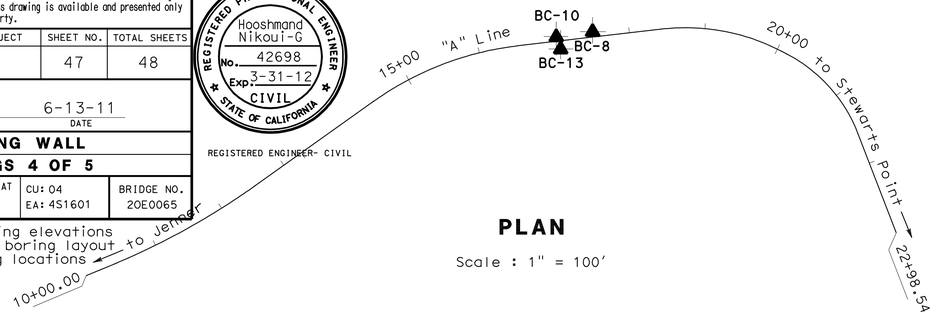
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA.

CU: 04
EA: 4S1601

BRIDGE NO. 20E0065

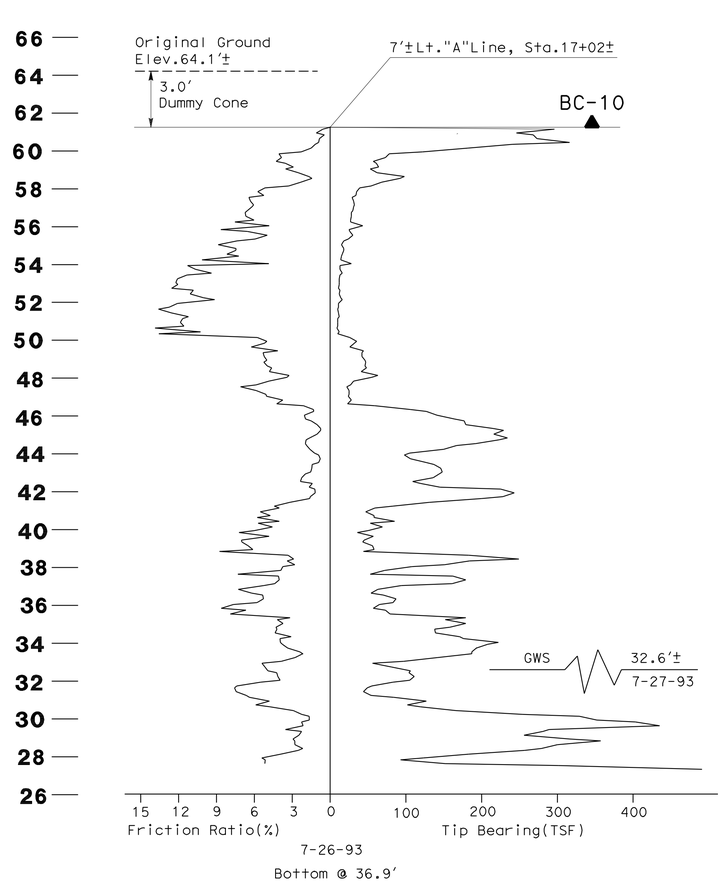
NOTE: The alignment and top of boring elevations have changed. Refer to log of test boring layout sheet 1 of 5 for the current boring locations and top of boring elevations.

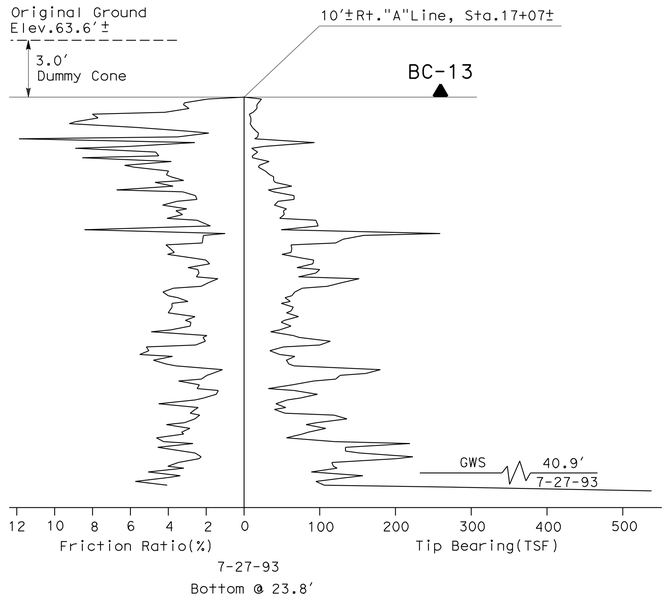
TO ACCOMPANY PLANS DATED 2-19-13

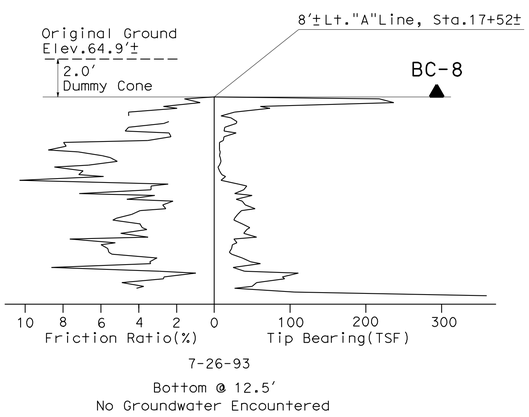


PLAN

Scale : 1" = 100'





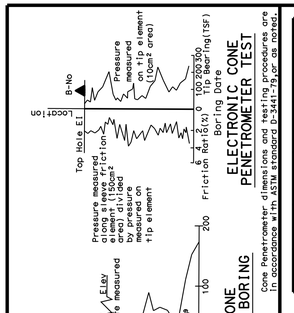


PROFILE

Scale : Horiz. No Scale
Vert. 1" = 4'

R-3

LEGEND OF EARTH MATERIALS



ELECTRONIC CONE PENETROMETER TEST

2 1/4" CONE PENETRATION BORING

Cone Penetrometer dimensions and testing procedures are in accordance with ASTM standard D-3441-79 or as noted.

ROTORY SAMPLE BORING (WET)

SAMPLE BORING (DRY)

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration test

Penetration Index (Blows/Ft)	Granular	Cohesive
0-4	Very loose	Very soft
5-9	Loose	Soft
10-19	Slightly compact	Stiff
20-34	Compact	Very stiff
35-69	Dense	Hard
>70	Very dense	Very hard

LEGEND OF EARTH MATERIALS

CLAY — CLAYEY SILT — SILT — ORGANIC MATTER AND PEAT — SAND — SEDIMENTARY ROCK — GRAVEL — METAMORPHIC ROCK — IGNEOUS ROCK — SANDY CLAY — CLAYEY SAND — SANDY SILT — SILTY SAND — SILTY CLAY

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

DRAWN BY	M. MEHTA
CHECKED BY	R. WARNER

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

BRIDGE NO
POST MILE

PIN PILE FOUNDATION
LOG OF TEST BORINGS (3 of 4)

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

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 11 OF 12

20e0065-z-ltb_04.dgn 21-FEB-2013 14:27 s128843

FORM DC-OE-92-PF (REV. 3/88)

04235 EA 193961

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
~~04~~	~~Son~~	~~1~~	~~21.7~~		

~~9-16-93~~

REGISTERED CIVIL ENGINEER

~~H.NIKOUI~~ ~~42698~~ ~~3 31 96~~ CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

PLANS APPROVAL DATE

GEOTECHNICAL SERVICES-DIVISION OF ENGINEERING SERVICES

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

DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	1	21.7	48	48

Hooshmand Nikoui-G

6-13-11

REGISTERED ENGINEER- CIVIL — DATE

REGISTERED PROFESSIONAL ENGINEER — Hooshmand Nikoui-G — No. 42698 — Exp: 3-31-12 — CIVIL — STATE OF CALIFORNIA

REGISTERED ENGINEER- CIVIL

RIVERS END RETAINING WALL

LOG OF TEST BORINGS 5 OF 5

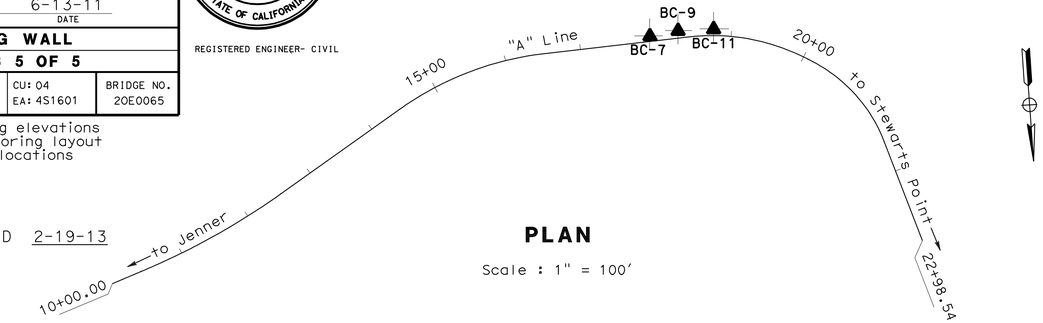
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA.

CU: 04
EA: 4S1601

BRIDGE NO. 20E0065

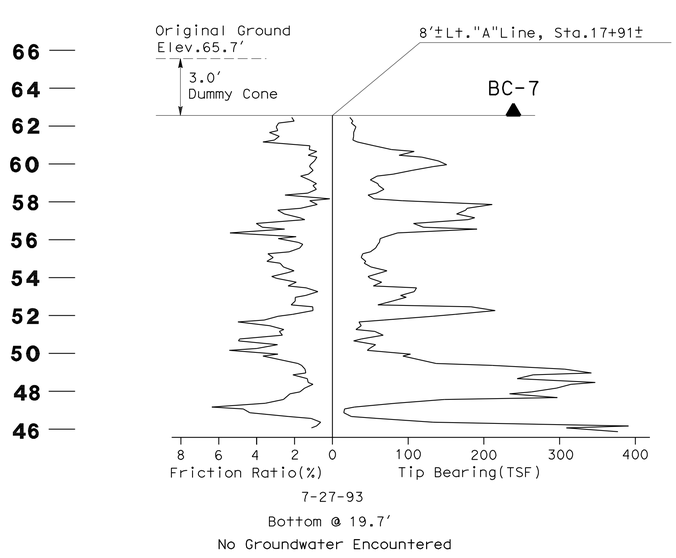
NOTE: The alignment and top of boring elevations have changed. Refer to log of test boring layout sheet 1 of 5 for the current boring locations and top of boring elevations.

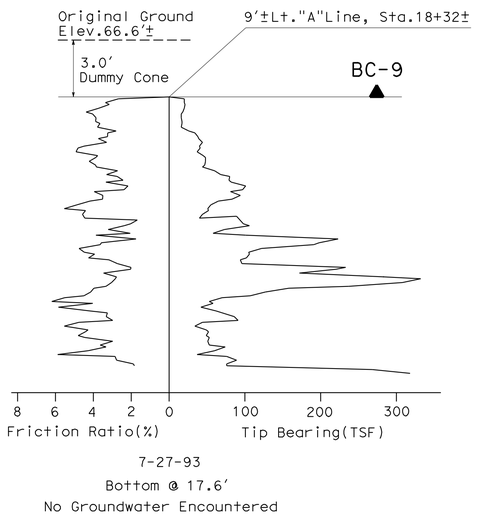
TO ACCOMPANY PLANS DATED 2-19-13

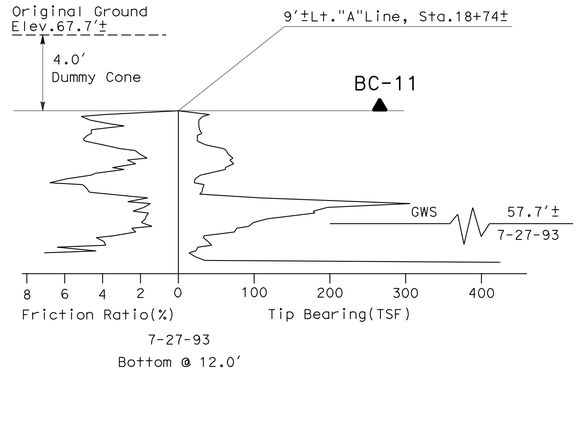


PLAN

Scale : 1" = 100'





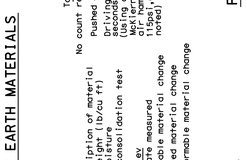


PROFILE

Scale : Horiz. No Scale
Vert. 1" = 4′

R-4

LEGEND OF EARTH MATERIALS

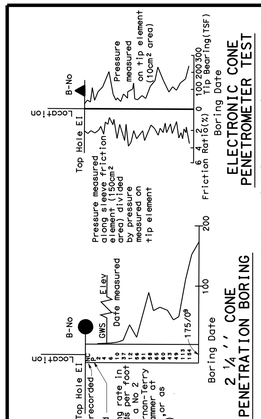


CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration test

Penetration Index (Blows/Ft)	Granular	Cohesive
0-4	Very loose	Very soft
5-9	Loose	Soft
10-19	Slightly compact	Stiff
20-34	Compact	Very stiff
35-69	Dense	Hard
>70	Very dense	Very hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



DRAWN BY	M. MEHTA
CHECKED BY	R. WARNER

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

BRIDGE NO
POST MILE

PIN PILE FOUNDATION
LOG OF TEST BORINGS (4 of 4)

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

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 12 OF 12

20e0065-z-1tb_05.dgn 21-FEB-2013 14:27 s128843

FORM DC-OE-92-PF (REV. 3/88)

04235 | EA | 193961