

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-6	TEMPORARY WATER POLLUTION CONTROL PLANS
7	PLANT LIST
8-13	PLANTING PLANS
14-18	IRRIGATION PLANS
19-21	LANDSCAPE DETAILS
22-23	IRRIGATION QUANTITIES
24-25	MONUMENT LIGHTING ELECTRIC SERVICE (IRRIGATION) PLANS
26	CONSTRUCTION AREA SIGNS
27-48	REVISED AND NEW STANDARD 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 ORANGE COUNTY IN IRVINE**  
**FROM SAN DIEGO CREEK**  
**TO VON KARMAN AVENUE OVERCROSSING**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Oran	405	6.4/7.4	1	48

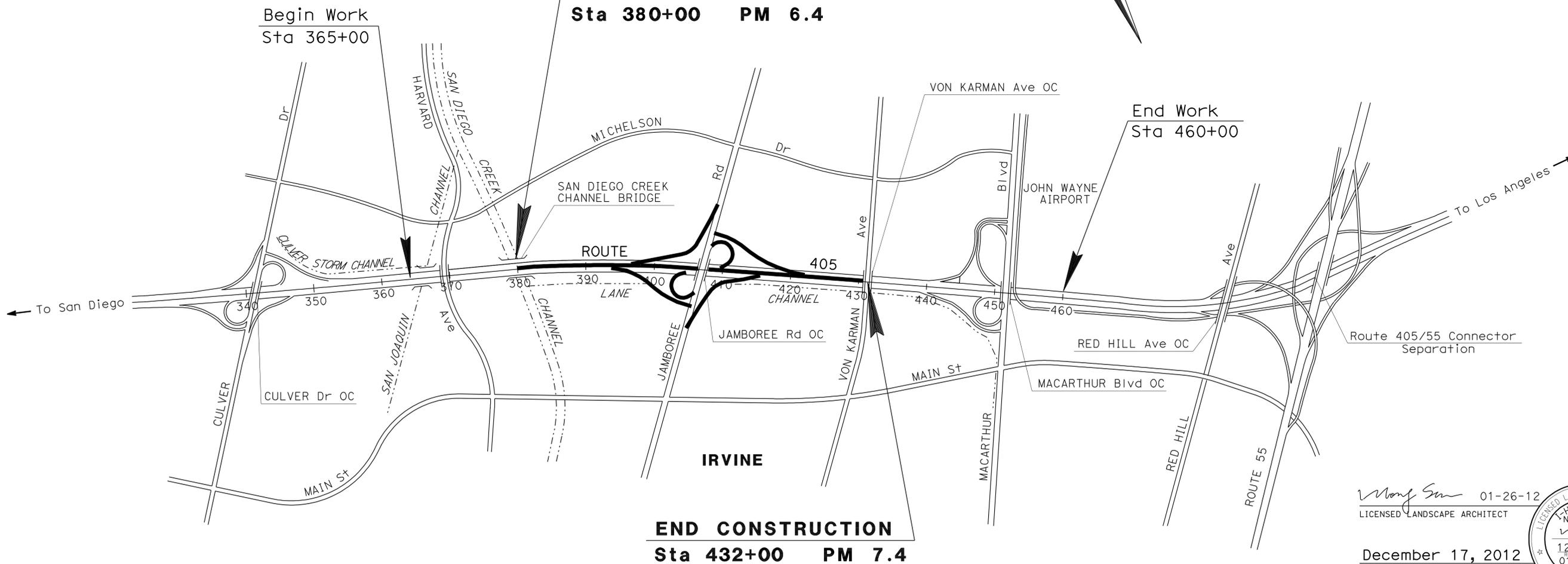




LOCATION MAP

**BEGIN CONSTRUCTION**

**Sta 380+00 PM 6.4**



**END CONSTRUCTION**

**Sta 432+00 PM 7.4**

*Wong Sun* 01-26-12  
 LICENSED LANDSCAPE ARCHITECT

**December 17, 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.

PROJECT MANAGER  
**BOB BAZAGON**  
 SENIOR LANDSCAPE ARCHITECT  
**ERIC DICKSON**

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

NO SCALE



USERNAME => s121614  
 DGN FILE => 1200020272ta001.dgn

CONTRACT No.	<b>12-OF5504</b>
PROJECT ID	<b>1200020272</b>

DATE PLOTTED => 14-DEC-2012  
 TIME PLOTTED => 12:42

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	2	48

<i>Wong Sun</i> 01-26-12	
LICENSED LANDSCAPE ARCHITECT	
12-17-12	PLANS APPROVAL DATE
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>	

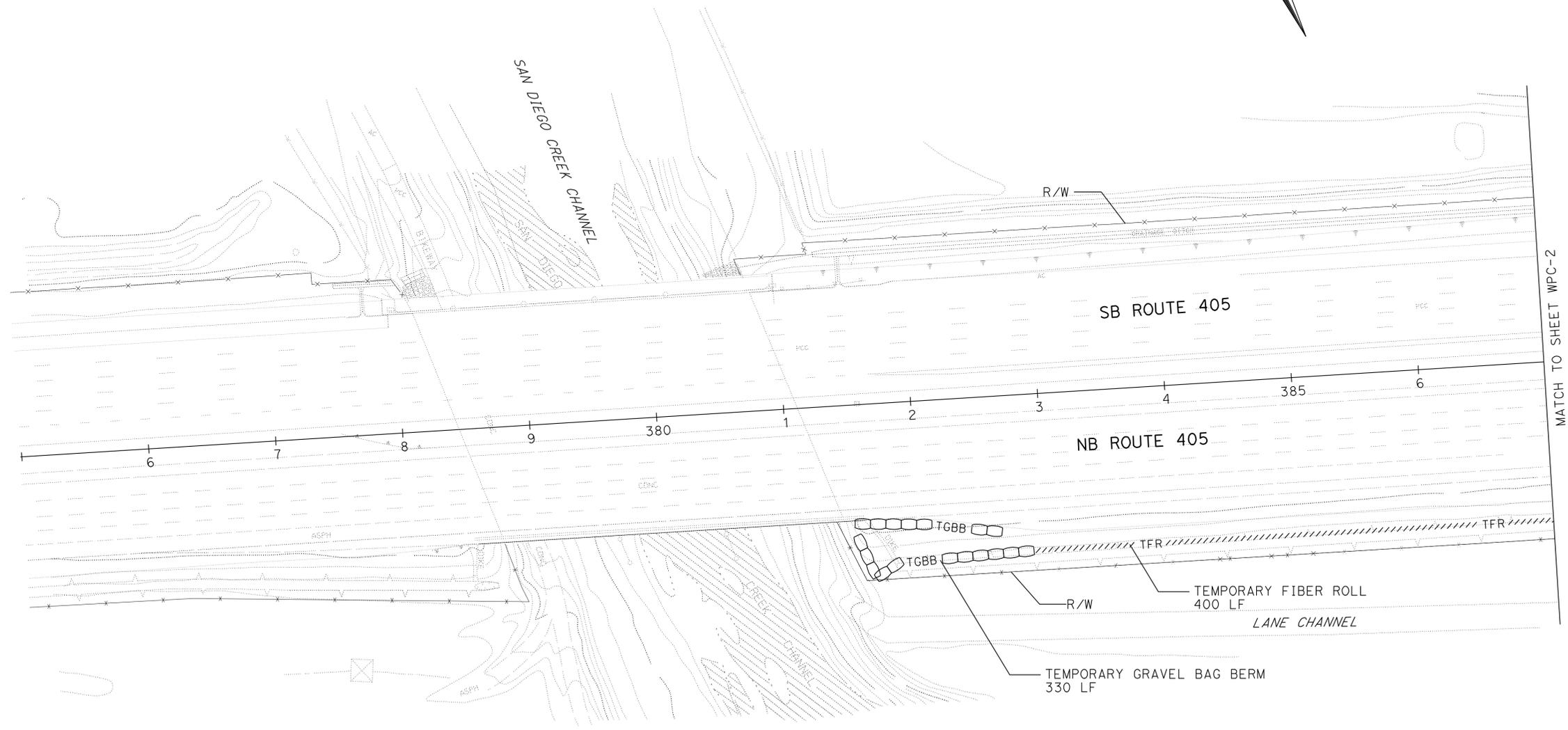
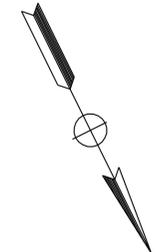


**NOTE:**

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

**LEGEND:**

- ////////// TFR ////////// TEMPORARY FIBER ROLL
-  TEMPORARY DRAINAGE INLET PROTECTION
-  TEMPORARY GRAVEL BAG BERM



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	LANDSCAPE ARCHITECTURE	SENIOR LANDSCAPE ARCHITECT	ERIC DICKSON	CALCULATED-DESIGNED BY	STEPHEN SU	REVISER BY	I-HONG SUN	DATE	1 SUN
--	------------------------	----------------------------	--------------	------------------------	------------	------------	------------	------	-------



APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

**TEMPORARY WATER POLLUTION CONTROL PLAN**

SCALE: 1" = 50'

**WPC-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	3	48

<i>Mong Sun</i>	01-26-12
LICENSED LANDSCAPE ARCHITECT	
12-17-12	PLANS APPROVAL DATE

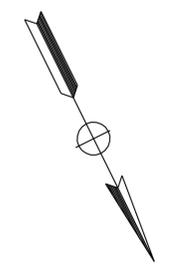
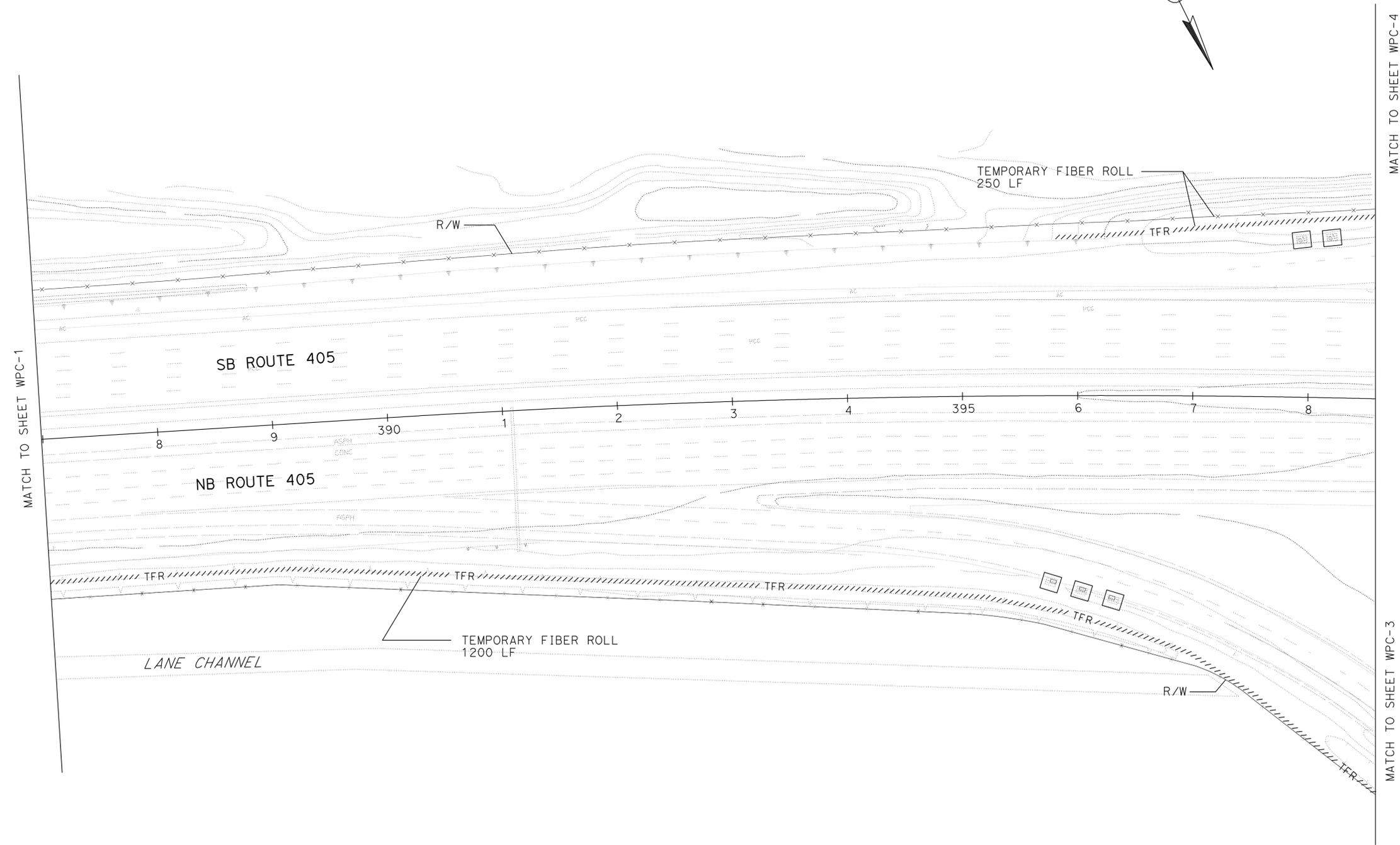
  

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	LANDSCAPE ARCHITECTURE	SENIOR LANDSCAPE ARCHITECT	CALCULATED/DESIGNED BY	I-HONG SUN	REVISOR	DATE
<b>Caltrans</b>		ERIC DICKSON	CHECKED BY	STEPHEN SU		



# TEMPORARY WATER POLLUTION CONTROL PLAN

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

SCALE: 1" = 50'

**WPC-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT  
**ERIC DICKSON**

CALCULATED-DESIGNED BY  
**ERIC DICKSON**

I-HONG SUN  
 STEPHEN SU

REVISED BY  
 DATE REVISED

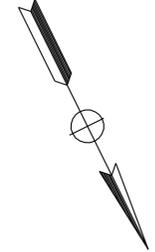
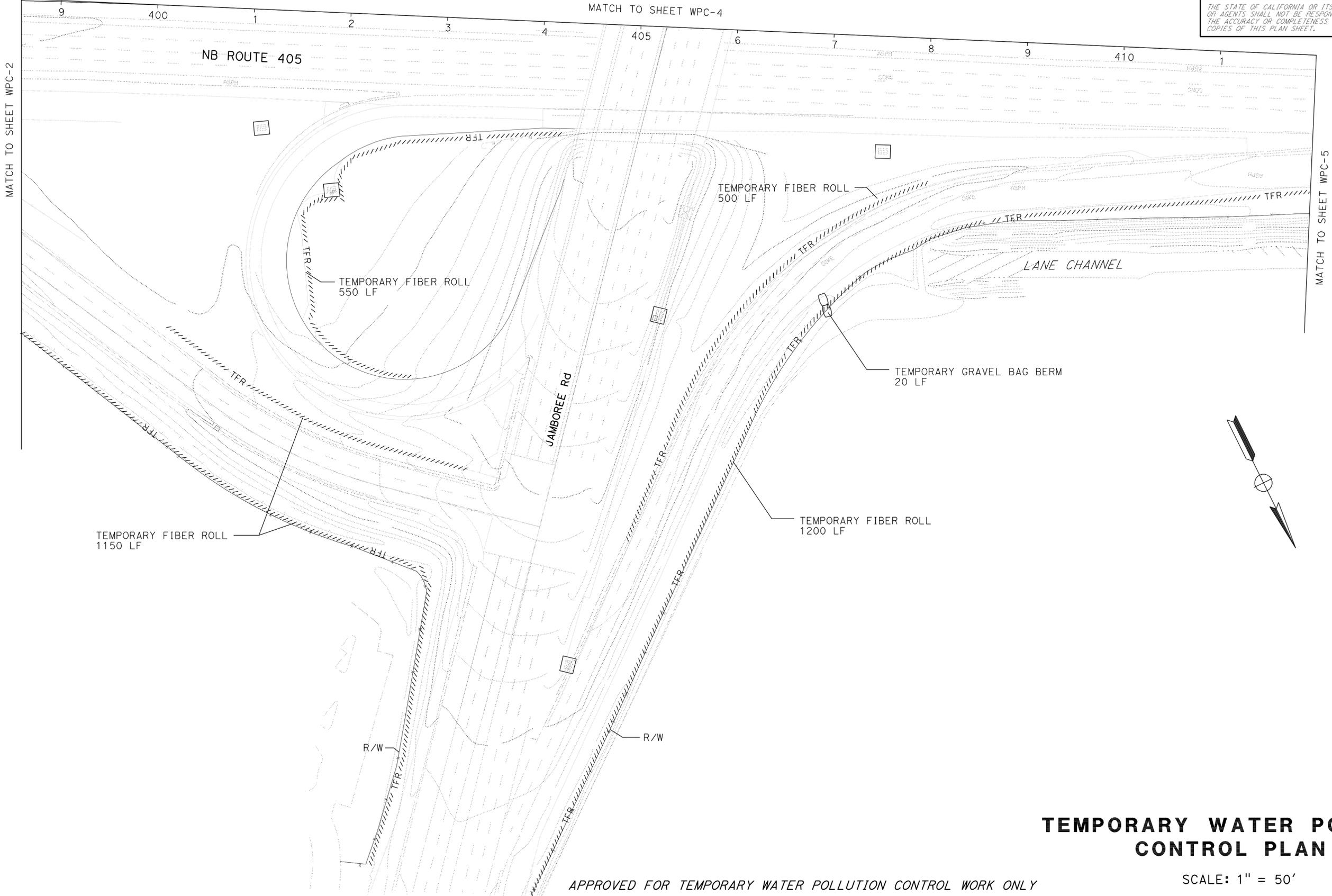
I SUN

**NOTE:**

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	4	48

*Wong Sun* 01-26-12  
 LICENSED LANDSCAPE ARCHITECT  
 SIGNATURE  
 12-17-12  
 PLANS APPROVAL DATE  
 01-26-12  
 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.



**TEMPORARY WATER POLLUTION CONTROL PLAN**

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

SCALE: 1" = 50'

**WPC-3**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	5	48

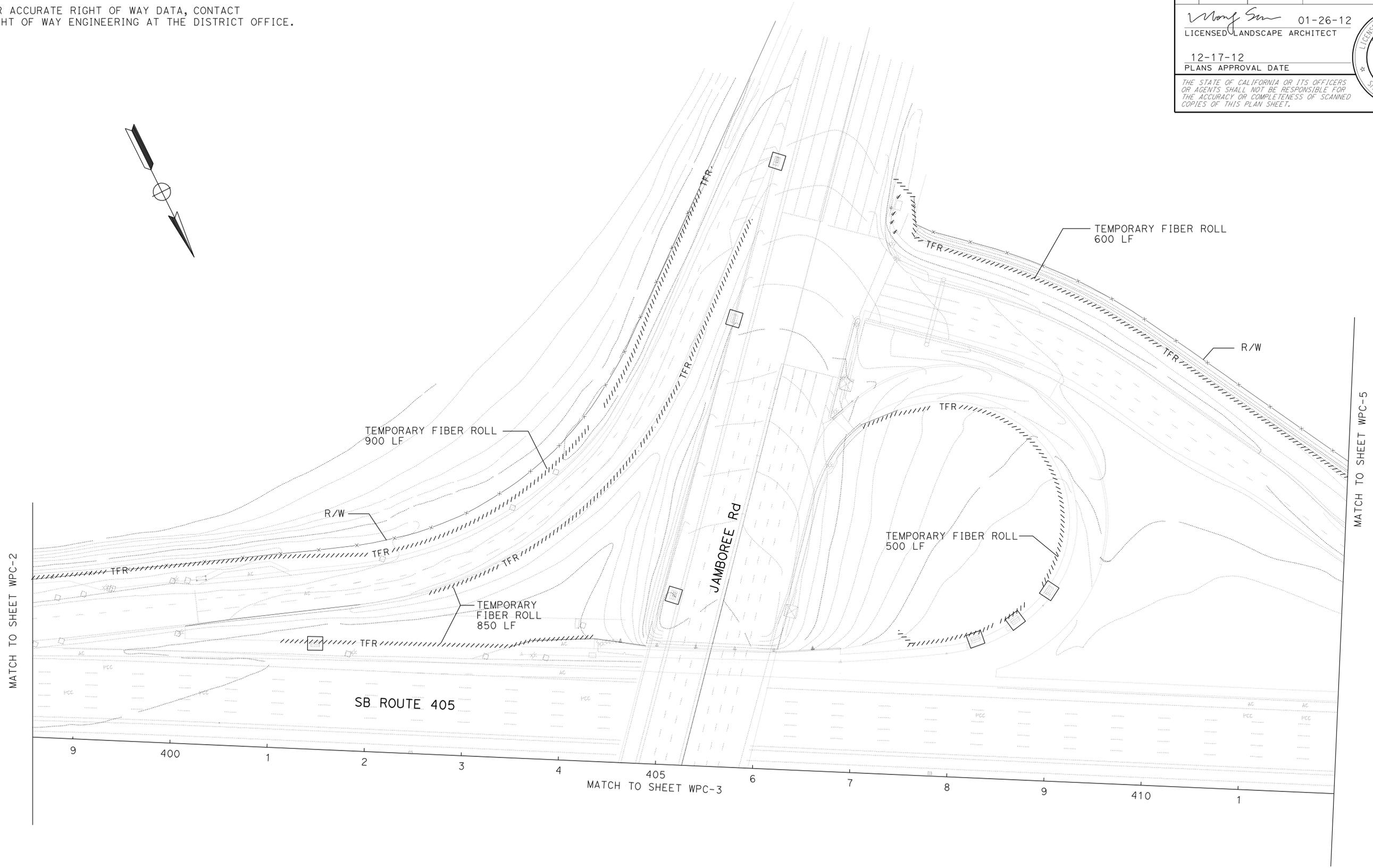
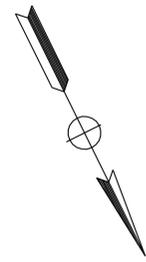
<i>Wong Sun</i>	01-26-12
LICENSED LANDSCAPE ARCHITECT	
12-17-12	
PLANS APPROVAL DATE	

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



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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 ERIC DICKSON  
 I-HONG SUN  
 REVISOR BY  
 DATE  
 I SUN  
 REVISOR BY  
 DATE  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 ERIC DICKSON  
 I-HONG SUN  
 REVISOR BY  
 DATE  
 I SUN  
 REVISOR BY  
 DATE

**TEMPORARY WATER POLLUTION CONTROL PLAN**  
 SCALE: 1" = 50'  
**WPC-4**

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

LAST REVISION: 11-15-11     
 DATE PLOTTED => 14-DEC-2012     
 TIME PLOTTED => 10:43

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	6	48

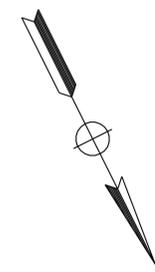
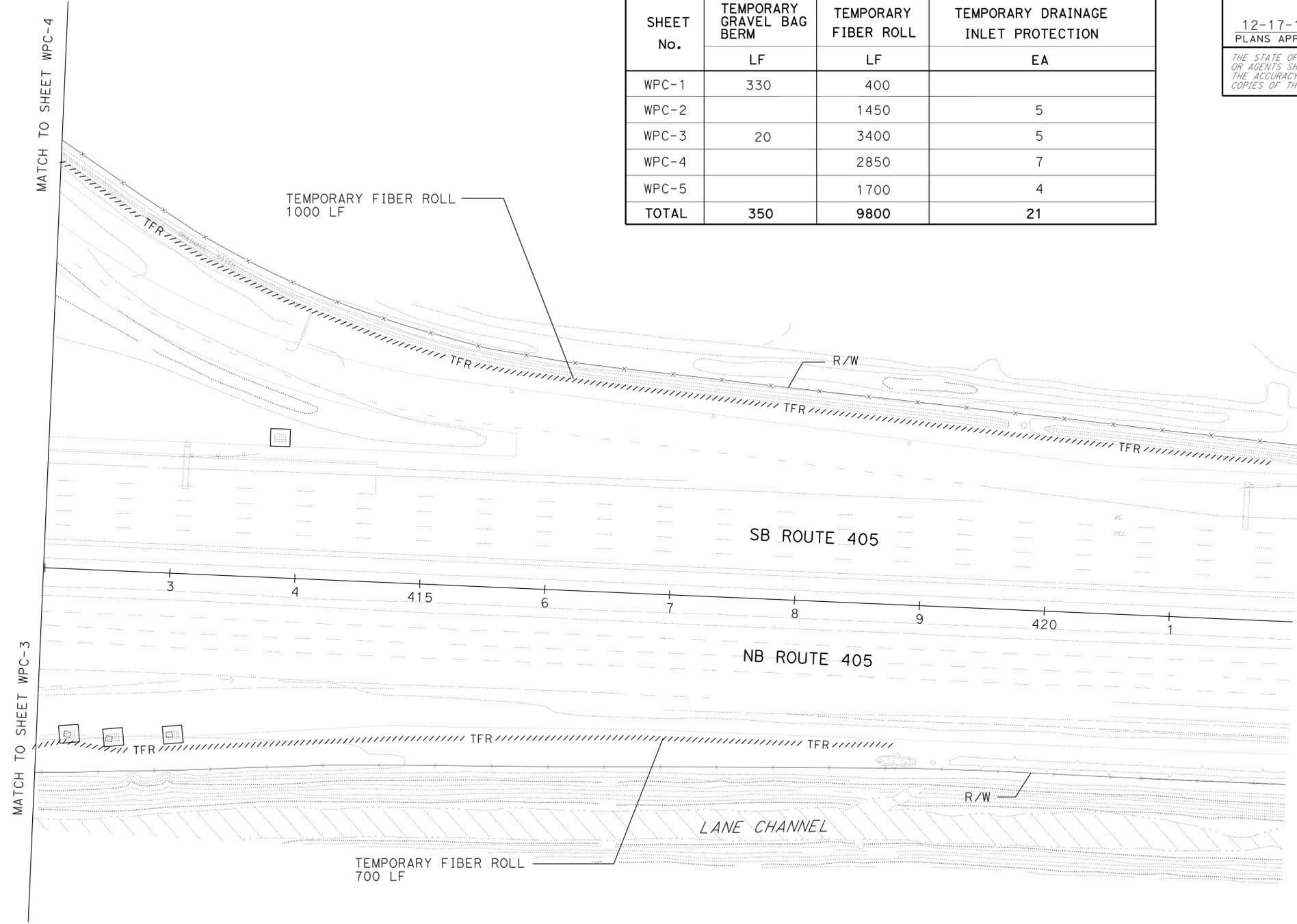
01-26-12  
 LICENSED LANDSCAPE ARCHITECT  
 12-17-12  
 PLANS APPROVAL DATE

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

### TEMPORARY WATER POLLUTION CONTROL QUANTITIES

SHEET No.	TEMPORARY GRAVEL BAG BERM	TEMPORARY FIBER ROLL	TEMPORARY DRAINAGE INLET PROTECTION
	LF	LF	EA
WPC-1	330	400	
WPC-2		1450	5
WPC-3	20	3400	5
WPC-4		2850	7
WPC-5		1700	4
<b>TOTAL</b>	<b>350</b>	<b>9800</b>	<b>21</b>

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - LANDSCAPE ARCHITECTURE

**Caltrans**

DESIGNED BY	ERIC DICKSON
CHECKED BY	
DESIGNED BY	ERIC DICKSON
CHECKED BY	
DESIGNED BY	I-HONG SUN
CHECKED BY	STEPHEN SU
DESIGNED BY	I SUN
CHECKED BY	

### TEMPORARY WATER POLLUTION CONTROL PLAN

SCALE: 1" = 50'

**WPC-5**

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

LAST REVISION: 11-15-11      DATE PLOTTED => 14-DEC-2012      TIME PLOTTED => 10:43

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	7	48

*Wong Sun* 01-26-12  
 LICENSED LANDSCAPE ARCHITECT  
 12-17-12  
 PLANS APPROVAL DATE



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

**ABBREVIATIONS**

AMEND — amendment	Min ——— minimum
B & B — balled and burlapped	NCN ——— no common name
Dia ——— diameter	No. ——— number
EA ——— each	Pkt ——— packet
lb ——— pound	PLT ESTB — plant establishment
oz. ——— ounce	Pvmt ——— pavement
F+ ——— foot/feet	R/W ——— right of way
SQFT — square feet	SF ——— state furnished
CF ——— cubic feet	TRVD ——— traveled
Max ——— maximum	

**PLANT LIST AND PLANTING SPECIFICATIONS**

PLANT GROUP	PLANT No.	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY EACH	HOLE SIZE (INCH)		BASIN TYPE	IRON SULFATE	SOIL AMEND ①	COMMERCIAL FERTILIZER ①		BASIN MULCH	STAKING	PLANTING LIMITS						REMARKS	
							Dia	DEPTH				PLANTING	PLT ESTB			TRVD WAY	PVMT	FENCE	WALL	PAVED DITCH	EARTH DITCH		ON CENTER (F+)
A	1		ACACIA REDOLENS 'LOW BOY'	ACACIA	No. 1	2210	12	8	II	-	0.3 CF	2 Oz	2 Oz	③	-	-	20	20	20	20	22	5	GROUND COVER
	2		COTONEASTER DAMMERI 'CORAL BEAUTY'	CORAL BEAUTY COTONEASTER	No. 1	5465	12	8	II	-	0.3 CF	2 Oz	2 Oz	③	-	-	10	10	10	10	12	5	GROUND COVER
	3		PITTOSPORUM TOBIRA 'VARIEGATA'	MOCK ORANGE	No. 1	2405	12	8	II	-	0.3 CF	2 Oz	2 Oz	③	-	-	10	10	10	10	12	5	SHRUB
M	4		MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	LINER ⑦	15900	②	②	-	-	-	5 lb/1000SF	5 lb/1000SF	③	-	-	8	4	4	4	4	2	GRASS
	5		FESTUCA MAIREI	ATLAS FESCUE	LINER ⑦	14200	②	②	-	-	-	5 lb/1000SF	5 lb/1000SF	③	-	-	8	4	4	4	4	2	GRASS
B	6		ARBUTUS UNEDO	STRAWBERRY TREE	No. 5	354	18	12	II	-	0.7 CF	3 Oz	3 Oz	0.7 CF	-	-	15	15	15	12	12	12	MULTI-TRUNK SHRUB
	7		ANISODONTEA 'TARA'S PINK'	HYBRID CAPE MALLOW	No. 5	23	18	12	II	-	0.7 CF	3 Oz	3 Oz	0.7 CF	-	-	8	6	6	4	4	10	SHRUB
U	8		PINUS CANARIENSIS	CANARY ISLAND PINE	No. 15	67	24	18	II	-	1.3 CF	4 Oz	4 Oz	2.7 CF	X	40	30	30	30	25	25	④	TREE
	9		KOELREUTERIA BIPINNATA	CHINESE FLAME TREE	No. 15	36	24	18	II	-	1.3 CF	4 Oz	4 Oz	2.7 CF	X	30	30	30	30	25	25	④	TREE

**APPLICABLE WHEN CIRCLED:**

- ① - Quantities shown are "per plant" unless shown as SQFT or SQYD application rates.
- ② - Sufficient to receive root ball.
- ③ - Apply mulch in ground cover and grass planting area, 2" thick
- ④ - As shown on plans.
- 5 - Unless otherwise shown on plans.
- 6 - See detail.
- ⑦ - See Special Provisions.

**NOTE:**

Underlined portions of botanical name indicate abbreviations used on Planting Plans.

**CONSTRUCTION LEGEND**

- GRAVEL (MISCELLANEOUS AREAS)  
525 SQYD
- WILDFLOWER SEEDING AREA  
915 SQYD
- MULCH  
3050 CY
- MINOR CONCRETE (TEXTURED PAVING)  
20220 SQFT
- ROADSIDE PAVING (MISCELLANEOUS AREAS)  
645 SQYD
- REMOVE EXISTING TREES

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 ERIC DICKSON  
 SENIOR LANDSCAPE ARCHITECT  
 I-HONG SUN  
 ERIC DICKSON  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISED BY  
 DATE REVISED

**PLANT LIST**

**PL-1**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	8	48

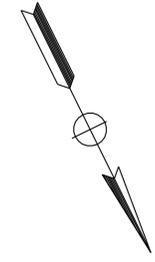
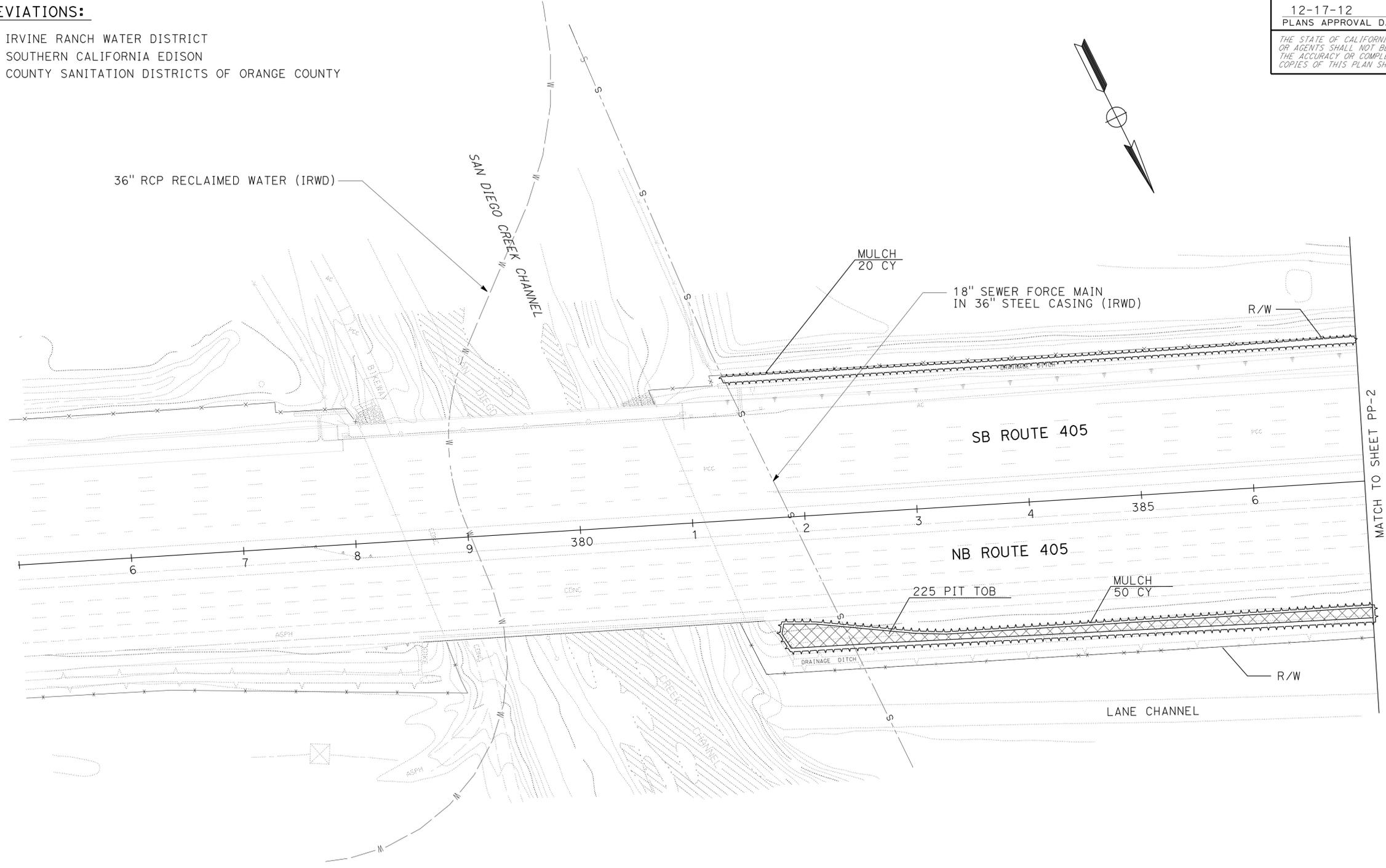
  

<i>Wong Sun</i> 01-26-12	
LICENSED LANDSCAPE ARCHITECT	
12-17-12	PLANS APPROVAL DATE
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>	



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

**ABBREVIATIONS:**  
 IRWD IRVINE RANCH WATER DISTRICT  
 SCE SOUTHERN CALIFORNIA EDISON  
 CSDOC COUNTY SANITATION DISTRICTS OF ORANGE COUNTY



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	LANDSCAPE ARCHITECTURE	SENIOR LANDSCAPE ARCHITECT	ERIC DICKSON	CALCULATED/DESIGNED BY	ERIC DICKSON	REVISOR	I SUN
		CHECKED BY	ERIC DICKSON	DATE			

APPROVED FOR PLANTING WORK ONLY

**PLANTING PLAN**  
SCALE: 1" = 50' **PP-1**

LAST REVISION DATE PLOTTED => 14-DEC-2012 11-15-11 TIME PLOTTED => 10:43



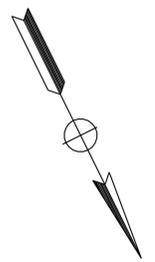
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	10	48

<i>Wong Sun</i>	01-26-12
LICENSED LANDSCAPE ARCHITECT	
12-17-12	PLANS APPROVAL DATE
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>	



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



**PLANTING PLAN**  
**PP-3**  
SCALE: 1" = 50'

APPROVED FOR PLANTING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 ERIC DICKSON  
 CHECKED BY  
 ERIC DICKSON  
 DESIGNED BY  
 ERIC DICKSON  
 I-HONG SUN  
 ERIC DICKSON  
 REVISED BY  
 I SUN  
 DATE REVISIED

LAST REVISION    DATE PLOTTED => 14-DEC-2012    TIME PLOTTED => 10:43





STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - LANDSCAPE ARCHITECTURE

ERIC DICKSON

SENIOR LANDSCAPE ARCHITECT

ERIC DICKSON

CALCULATED/DESIGNED BY

CHECKED BY

I-HONG SUN

ERIC DICKSON

REVISED BY

DATE REVISED

P SUN

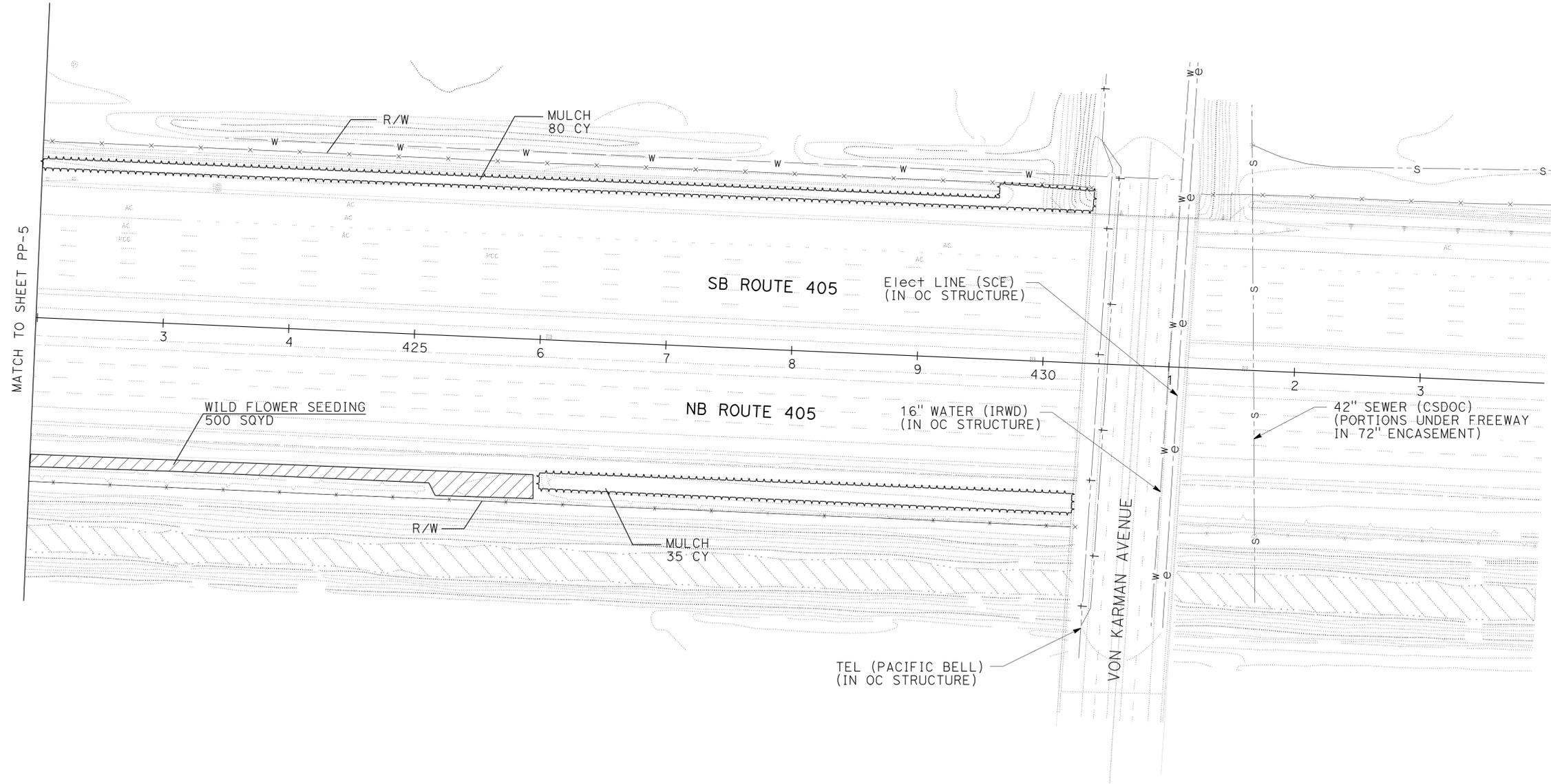
**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	13	48

01-26-12  
 LICENSED LANDSCAPE ARCHITECT

12-17-12  
 PLANS APPROVAL DATE

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



APPROVED FOR PLANTING WORK ONLY

**PLANTING PLAN**

SCALE: 1" = 50' **PP-6**

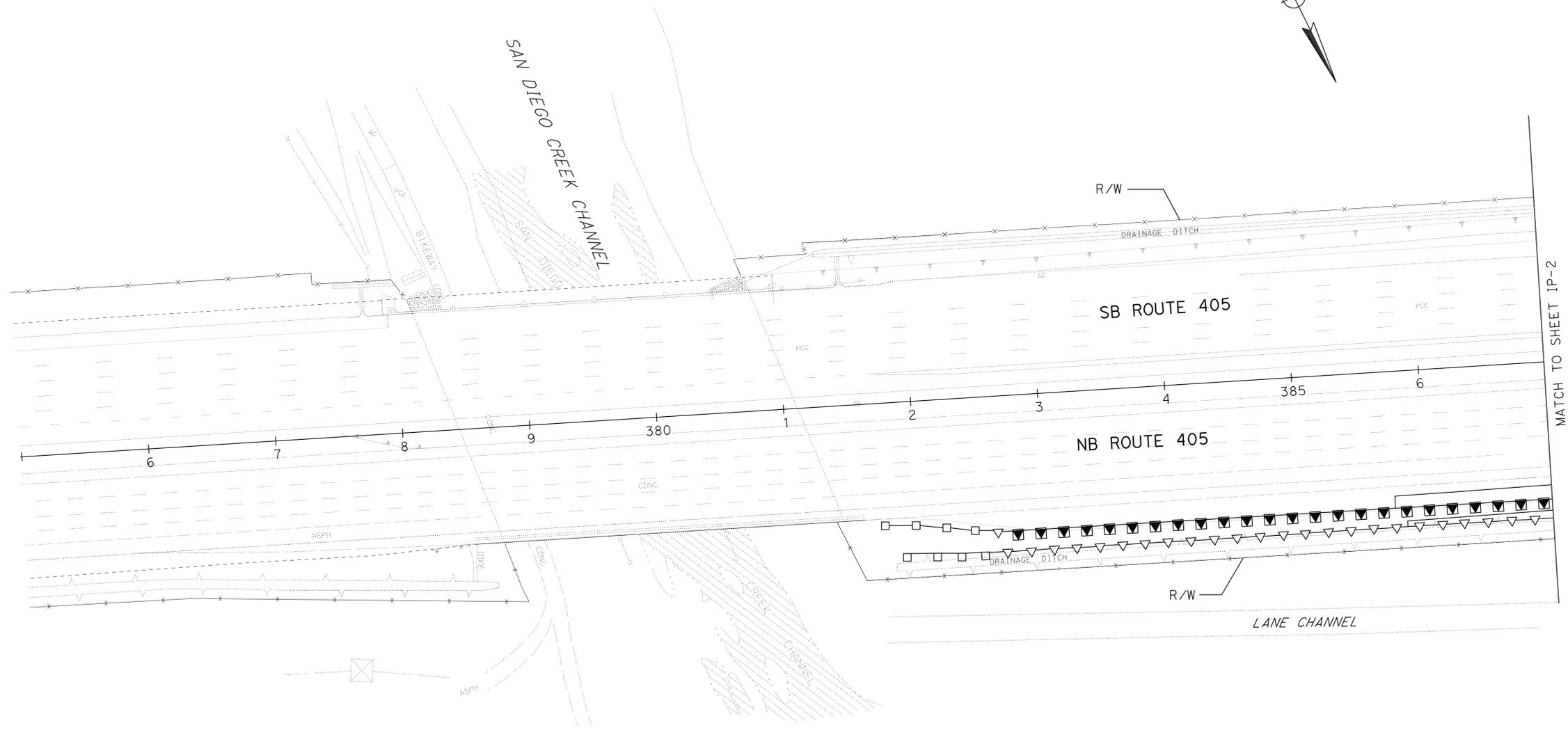
LAST REVISION DATE PLOTTED => 14-DEC-2012 11-15-11 TIME PLOTTED => 10:59

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 I-HONG SUN  
 DRIC DICKSON  
 CHECKED BY  
 DESIGNED BY  
 I-SUN  
 REVISED BY  
 DATE REVISED

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	14	48

01-26-12  
 LICENSED LANDSCAPE ARCHITECT  
 12-17-12  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



APPROVED FOR IRRIGATION WORK ONLY

**IRRIGATION PLAN**  
 SCALE: 1" = 50' **IP-1**

LAST REVISION DATE PLOTTED => 14-DEC-2012 TIME PLOTTED => 10:59

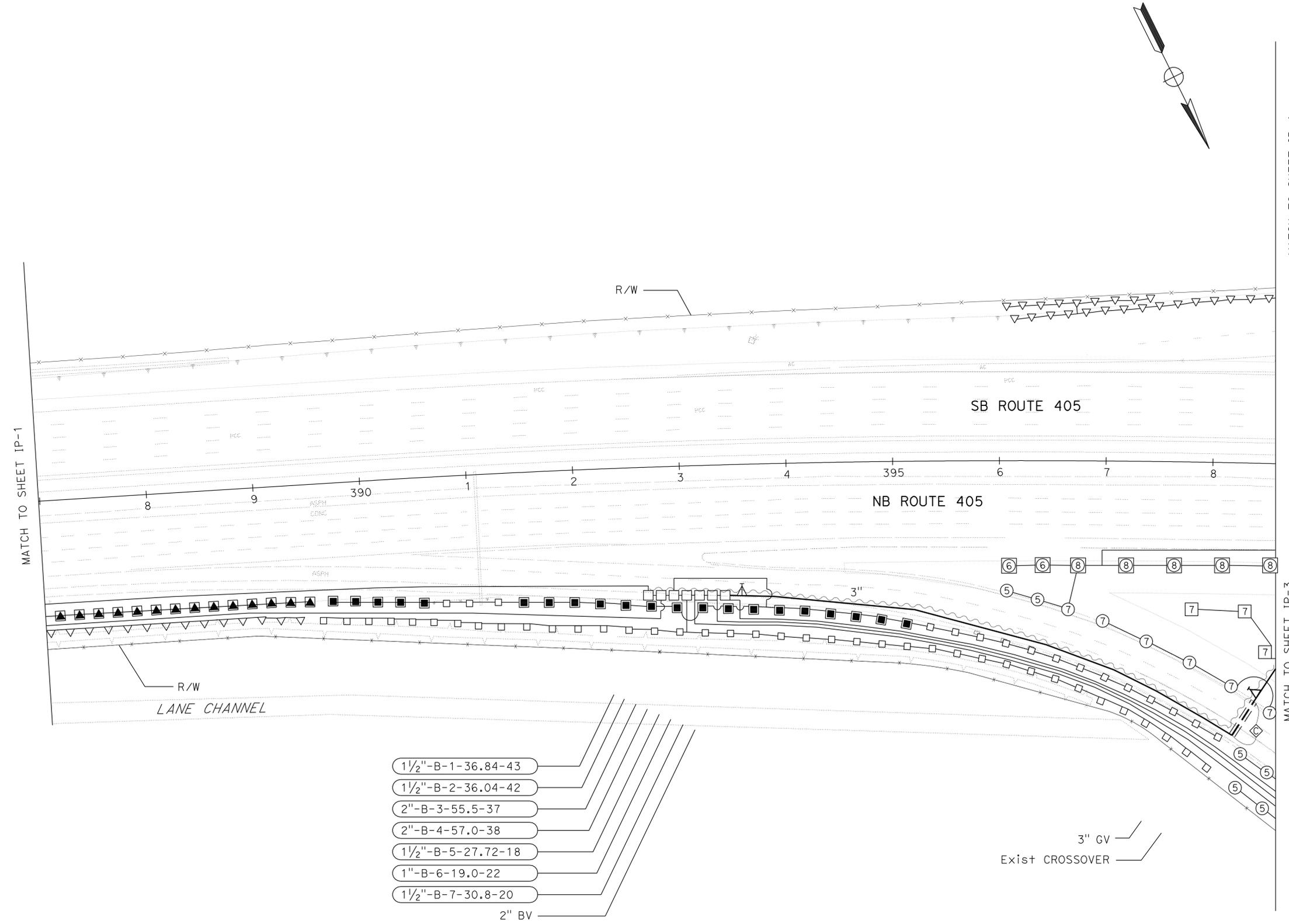
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 ERIC DICKSON  
 CALCULATED/DESIGNED BY  
 ERIC DICKSON  
 I-HONG SUN  
 ERIC DICKSON  
 REVISED BY  
 DATE  
 P SUN  
 DATE

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	15	48

01-26-12  
 LICENSED LANDSCAPE ARCHITECT  
 12-17-12  
 PLANS APPROVAL DATE

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



- 1 1/2" B-1-36.84-43
- 1 1/2" B-2-36.04-42
- 2" B-3-55.5-37
- 2" B-4-57.0-38
- 1 1/2" B-5-27.72-18
- 1" B-6-19.0-22
- 1 1/2" B-7-30.8-20
- 2" BV

APPROVED FOR IRRIGATION WORK ONLY

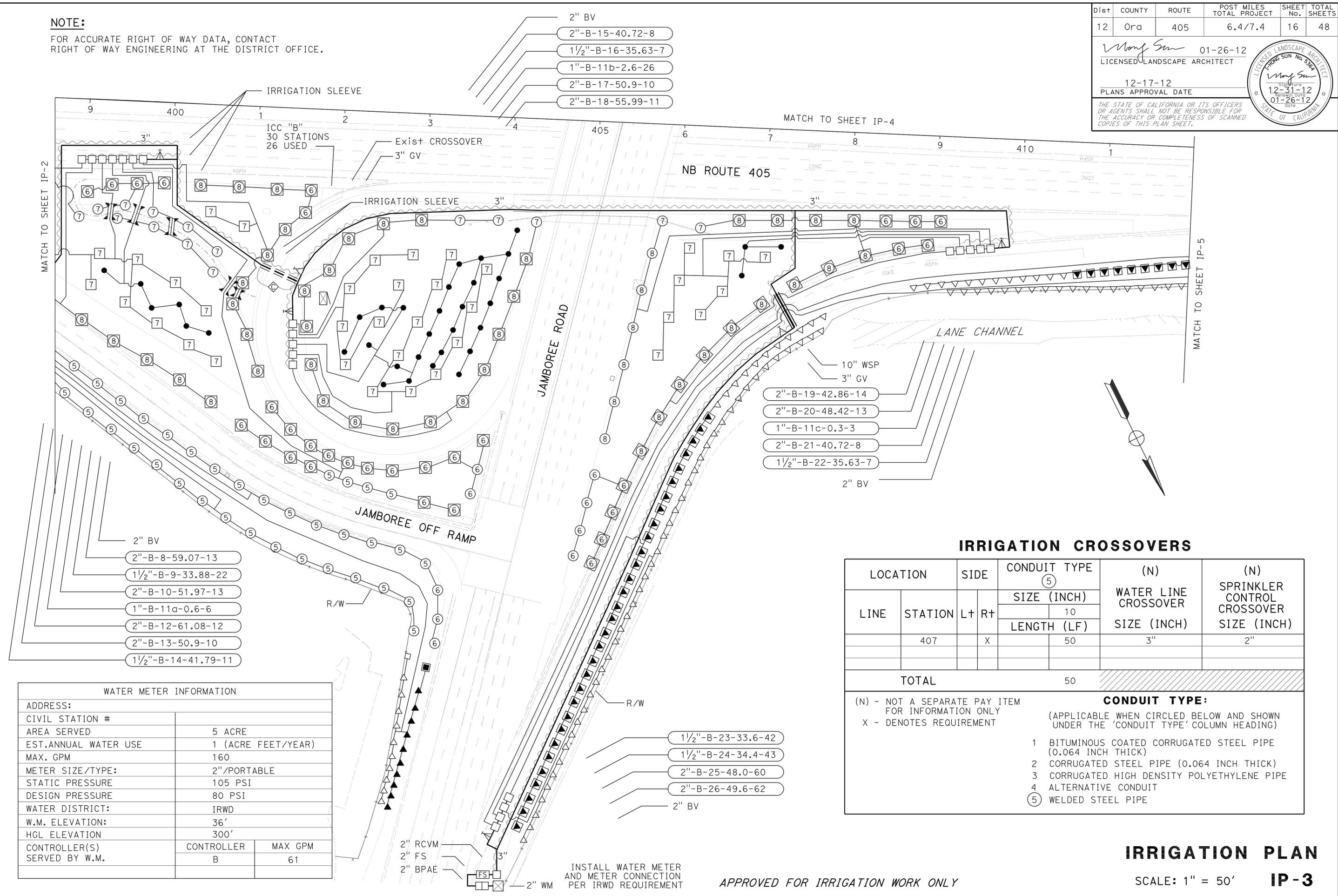
**IRRIGATION PLAN**  
**IP-2**  
 SCALE: 1" = 50'

DATE PLOTTED => 14-DEC-2012 TIME PLOTTED => 10:59

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	16	48

01-26-12  
 LICENSED LANDSCAPE ARCHITECT  
 12-17-12  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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



- 2" BV
- 2"-B-8-59.07-13
- 1 1/2"-B-9-33.88-22
- 2"-B-10-51.97-13
- 1"-B-11a-0.6-6
- 2"-B-12-61.08-12
- 2"-B-13-50.9-10
- 1 1/2"-B-14-41.79-11

- 10" WSP
- 3" GV
- 2"-B-19-42.86-14
- 2"-B-20-48.42-13
- 1"-B-11c-0.3-3
- 2"-B-21-40.72-8
- 1 1/2"-B-22-35.63-7
- 2" BV

- 1 1/2"-B-23-33.6-42
- 1 1/2"-B-24-34.4-43
- 2"-B-25-48.0-60
- 2"-B-26-49.6-62
- 2" BV

WATER METER INFORMATION		
ADDRESS:		
CIVIL STATION #		
AREA SERVED	5 ACRE	
EST. ANNUAL WATER USE	1 (ACRE FEET/YEAR)	
MAX. GPM	160	
METER SIZE/TYPE:	2"/PORTABLE	
STATIC PRESSURE	105 PSI	
DESIGN PRESSURE	80 PSI	
WATER DISTRICT:	IRWD	
W.M. ELEVATION:	36'	
HGL ELEVATION	300'	
CONTROLLER(S) SERVED BY W.M.	CONTROLLER	MAX GPM
	B	61

IRRIGATION CROSSOVERS						
LINE	STATION	SIDE		CONDUIT TYPE	(N) WATER LINE CROSSOVER SIZE (INCH)	(N) SPRINKLER CONTROL CROSSOVER SIZE (INCH)
		L+	R+	SIZE (INCH)		
	407		X	50	3"	2"
TOTAL				50		

(N) - NOT A SEPARATE PAY ITEM FOR INFORMATION ONLY  
 X - DENOTES REQUIREMENT

**CONDUIT TYPE:**  
 (APPLICABLE WHEN CIRCLED BELOW AND SHOWN UNDER THE 'CONDUIT TYPE' COLUMN HEADING)

- 1 BITUMINOUS COATED CORRUGATED STEEL PIPE (0.064 INCH THICK)
- 2 CORRUGATED STEEL PIPE (0.064 INCH THICK)
- 3 CORRUGATED HIGH DENSITY POLYETHYLENE PIPE
- 4 ALTERNATIVE CONDUIT
- ⑤ WELDED STEEL PIPE

INSTALL WATER METER AND METER CONNECTION PER IRWD REQUIREMENT

APPROVED FOR IRRIGATION WORK ONLY

**IRRIGATION PLAN**  
 SCALE: 1" = 50'  
**IP-3**

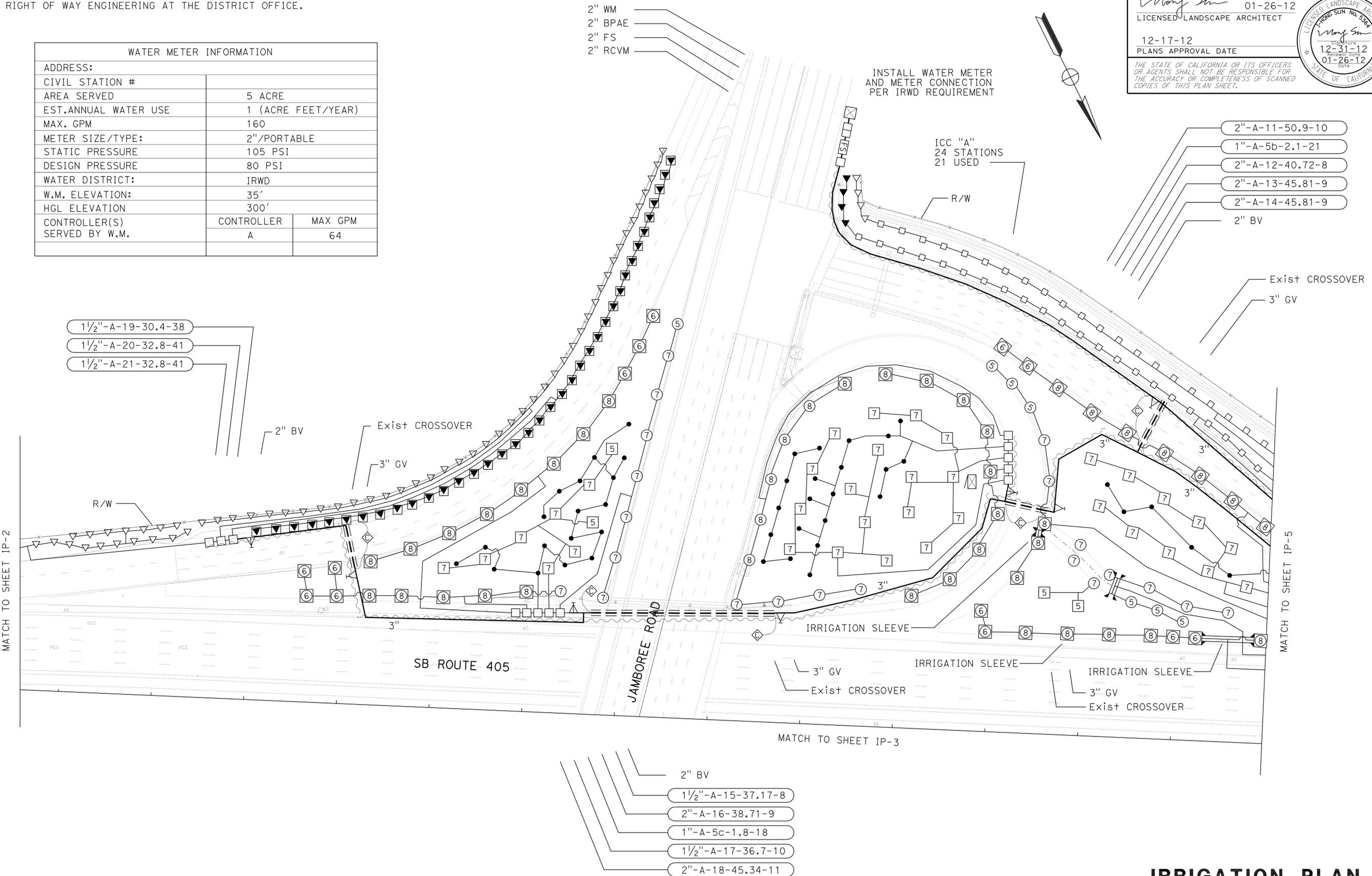
**NOTE:**

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

WATER METER INFORMATION		
ADDRESS:		
CIVIL STATION #		
AREA SERVED	5 ACRE	
EST. ANNUAL WATER USE	1 (ACRE FEET/YEAR)	
MAX. GPM	160	
METER SIZE/TYPE:	2"/PORTABLE	
STATIC PRESSURE	105 PSI	
DESIGN PRESSURE	80 PSI	
WATER DISTRICT:	IRWD	
W.M. ELEVATION:	35'	
HGL ELEVATION	300'	
CONTROLLER(S) SERVED BY W.M.	CONTROLLER	MAX GPM
	A	64

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	17	48

*Wong Sun* 01-26-12  
 LICENSED LANDSCAPE ARCHITECT  
 12-17-12  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



- 1 1/2" - A - 19 - 30.4 - 38
- 1 1/2" - A - 20 - 32.8 - 41
- 1 1/2" - A - 21 - 32.8 - 41

- 2" WM
- 2" BPAE
- 2" FS
- 2" RCVM

INSTALL WATER METER AND METER CONNECTION PER IRWD REQUIREMENT

ICC "A"  
24 STATIONS  
21 USED

- 2" - A - 11 - 50.9 - 10
- 1" - A - 5b - 2.1 - 21
- 2" - A - 12 - 40.72 - 8
- 2" - A - 13 - 45.81 - 9
- 2" - A - 14 - 45.81 - 9
- 2" BV

Exist CROSSOVER  
3" GV

MATCH TO SHEET IP-2

MATCH TO SHEET IP-5

MATCH TO SHEET IP-3

- 2" BV
- 1 1/2" - A - 15 - 37.17 - 8
- 2" - A - 16 - 38.71 - 9
- 1" - A - 5c - 1.8 - 18
- 1 1/2" - A - 17 - 36.7 - 10
- 2" - A - 18 - 45.34 - 11

**IRRIGATION PLAN**

SCALE: 1" = 50' **IP-4**

APPROVED FOR IRRIGATION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - LANDSCAPE ARCHITECTURE  
 ERIC DICKSON  
 SENIOR LANDSCAPE ARCHITECT  
 ERIC DICKSON  
 I-HONG SUN  
 ERIC DICKSON  
 REVISOR  
 DATE  
 I SUN  
 REVISOR  
 DATE

x  
x  
x  
x  
x  
x  
x  
x  
x  
x  
x

LAST REVISION DATE PLOTTED => 14-DEC-2012 11-15-11 TIME PLOTTED => 12:52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	18	48

<i>Monty Sun</i>	01-26-12
LICENSED LANDSCAPE ARCHITECT	
12-17-12	
PLANS APPROVAL DATE	

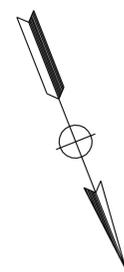
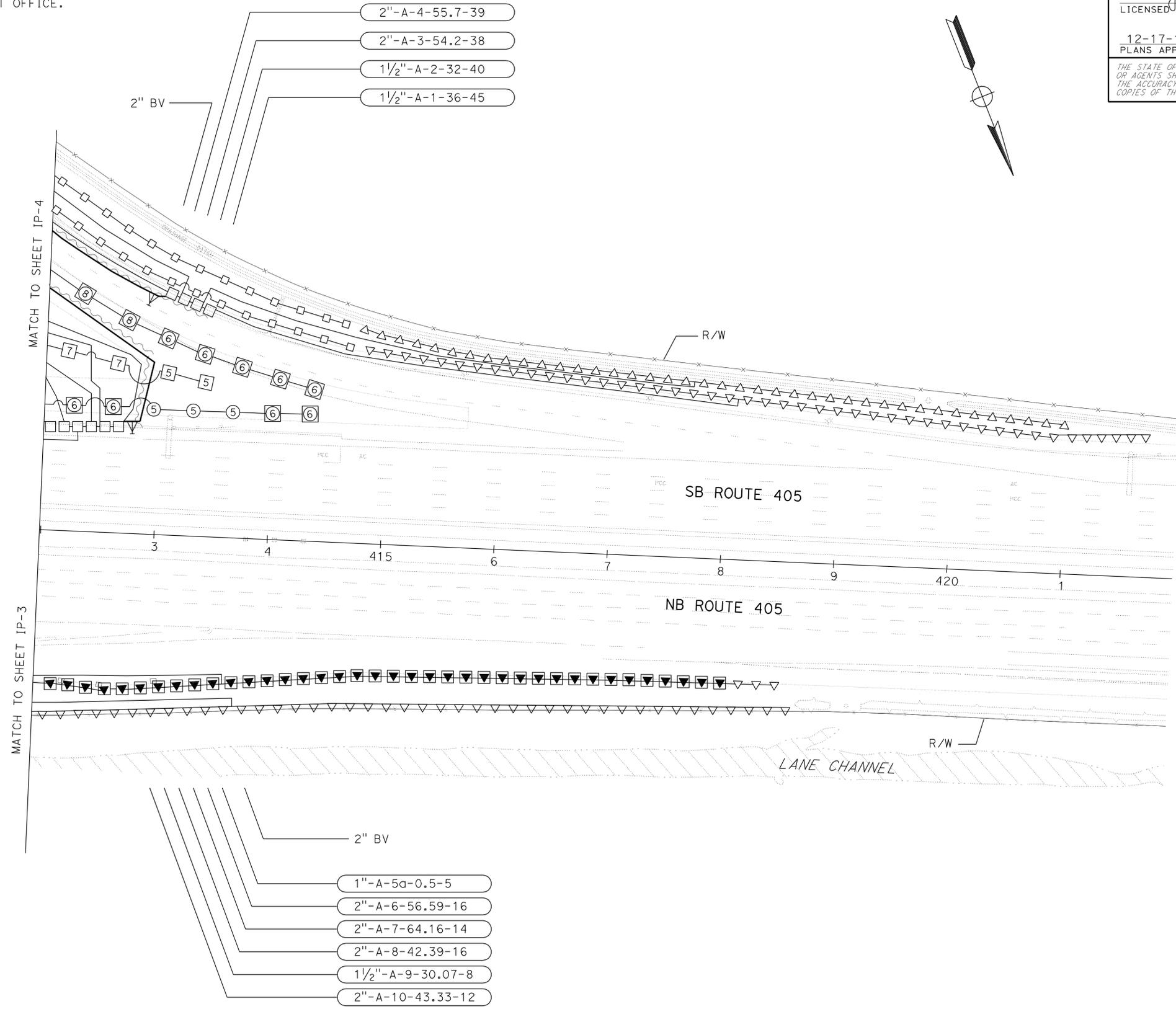
  

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**NOTE:**

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	LANDSCAPE ARCHITECTURE
<b>Caltrans</b>	
SENIOR LANDSCAPE ARCHITECT	ERIC DICKSON
CALCULATED/DESIGNED BY	CHECKED BY
I-HONG SUN	ERIC DICKSON
REVISED BY	DATE REVISED
I SUN	

APPROVED FOR IRRIGATION WORK ONLY

**IRRIGATION PLAN**  
SCALE: 1" = 50'  
**IP-5**

DATE PLOTTED => 14-DEC-2012  
TIME PLOTTED => 11:00  
LAST REVISION 11-15-11

### SPRINKLER SCHEDULE

SYMBOL	TYPE	DESCRIPTION	SPRAY PATTERN	OPERATING PRESSURE (PSI)	PRESSURE COMPENSATING	PLUS/MINUS 5% ②				MATERIAL	NOZZLE SIZE (INCH)	INLET CONNECTION (NPT INCH)	IN-STEM PRESSURE REGULATOR (PRS)	BACKSPASH PREVENTER	DIFFUSER PIN	DISTANCE CONTROL FLAP	ADJ DISCHARGE	RISER ⑤					SWING JOINT (TYPE)	RISER SUPPORT	SPRINKLER PROTECTOR (TYPE)	REMARKS
						DISCHARGE		RADIUS (F+)	WIDTH x LENGTH (F+)									MATERIAL		SIZE (IPS INCH)	HEIGHT (INCH)	FLOW SHUTOFF DEVICE				
						GALLONS PER MINUTE (GPM)	GALLONS PER HOUR (GPH)											PLASTIC	GALVANIZED							
⑤	A-5	Gear driven	P	45	-	1.54	-	35	-	PL	-	3/4"	X	-	-	-	-	IV	X	-	3/4"	18	-	I	-	
⑤	A-5	Gear driven	F	45	-	1.54	-	35	-	PL	-	3/4"	X	-	-	-	-	IV	X	-	3/4"	18	-	I	-	
⑥	A-6	Gear driven	P	45	-	1.54	-	35	-	PL	-	3/4"	X	-	-	-	-	-	-	-	-	-	I	-	II	12" Pop-up ⑥
⑦	A-7	Gear driven	P	45	-	5.09	-	45	-	PL	-	3/4"	X	-	-	-	-	IV	X	-	3/4"	18	-	I	-	
⑦	A-7	Gear driven	F	45	-	5.09	-	45	-	PL	-	3/4"	X	-	-	-	-	IV	X	-	3/4"	18	-	I	-	
⑧	A-8	Gear driven	P	45	-	5.09	-	45	-	PL	-	3/4"	X	-	-	-	-	-	-	-	-	-	I	-	II	12" Pop-up ⑥
●	C-1	Spray head	Q	30	X	0.1	-	5	-	PL	-	1/2"	-	-	-	-	-	IV	X	-	1/2"	6	-	I	-	
△	B-1	Spray with Rotary Nozzle	H Q	30	-	0.80 0.40	-	13-18	-	PL	-	1/2"	-	-	-	-	-	II	X	-	1/2"	18	-	I	-	
▲	B-2	Spray with Rotary Nozzle	H Q	30	-	0.80 0.40	-	13-18	-	PL	-	1/2"	-	-	-	-	-	-	-	-	-	-	I	-	II	12" Pop-up ⑥
□	B-3	Spray with Rotary Nozzle	H Q	30	-	1.5 0.75	-	17-24	-	PL	-	1/2"	-	-	-	-	-	II	X	-	1/2"	18	-	I	-	
■	B-4	Spray with Rotary Nozzle	H Q	30	-	1.5 0.75	-	17-24	-	PL	-	1/2"	-	-	-	-	-	-	-	-	-	-	I	-	II	12" Pop-up ⑥

**ABBREVIATIONS**

- F — full circle
- P — part circle
- F/P — full/part circle
- Q — quarter circle
- T — third circle
- H — half circle
- TT — two third circle
- TQ — three quarter circle
- CST — center strip
- SST — side strip
- EST — end strip
- Ft — feet/foot
- GPM — gallons per minute
- GPH — gallons per hour
- Adj — adjustable
- PL — plastic
- B/B — brass/bronze
- B/PL — brass/plastic
- B/B/PL — brass/bronze/plastic
- NPT — national pipe thread
- IPS — iron pipe size
- PSI — pounds per square inch
- IRWD — Irvine Ranch Water District

X IN BOX DENOTES REQUIREMENT

**APPLICABLE WHEN CIRCLED BELOW:**

- 1 - See Special Provisions.
- ② - If a pressure compensating device is specified, the discharge and radii shown reflect its use.
- 3 - Arc Stop shall be fitted with a nut and bolt.
- 4 - Vinyl-coated cast iron housing.
- ⑤ - Swing Joints required adjacent to shoulders, curbs, sidewalks, and dikes.
- ⑥ - Sprinkler protector required adjacent to travel way. ⑥ ⑧ ▲ ■

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	19	48

01-26-12  
 LICENSED LANDSCAPE ARCHITECT  
 12-17-12  
 PLANS APPROVAL DATE

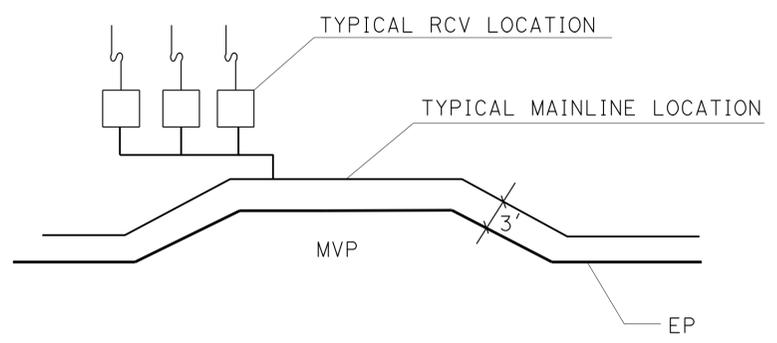
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
	0-12 GPM	12-22 GPM	22-30 GPM	30-50 GPM	50-75 GPM	75-110 GPM
⑤ A-5	1-7	8-14	15-19	20-32	33-48	49-71
⑤ A-5	1-7	8-14	15-19	20-32	33-48	49-71
⑥ A-6	1-7	8-14	15-19	20-32	33-48	49-71
⑦ A-7	1-2	3-4	5	6-9	10-14	15-21
⑦ A-7	1-2	3-4	5	6-9	10-14	15-21
⑧ A-8	1-2	3-4	5	6-9	10-14	15-21
● C-1	1-120					
△ B-1	1-15	16-27	28-37	38-62	63-93	93-137
▲ B-2	1-15	16-27	28-37	38-62	63-93	93-137
□ B-3	1-8	9-14	15-20	21-33	34-50	50-73
■ B-4	1-8	9-14	15-20	21-33	34-50	50-73

**PIPE SIZING CHART**

**NOTE:**

- IRRIGATION SLEEVES REQUIRED WHEN LATERAL LINES CROSS UNDER MAINTENANCE ACCESS ROAD
- C-1 SPRINKLER TO BE INSTALLED ON THE LOWER SIDE OF SLOPE SPRAYING TOWARD THE TREE BEING WATERED
- INSTALL A CHECK VALVE AT THE LOWEST SPRINKLER HEAD OF EACH STATION
- LOCATE VALVE GROUPING BEHIND THE NEAREST MVP WHEN FEASIBLE



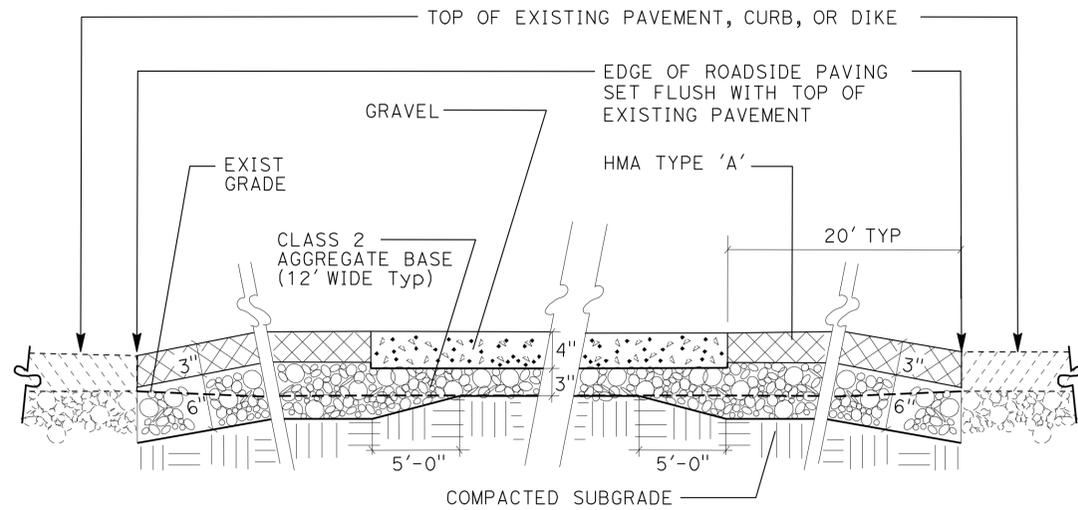
NO SCALE  
**TYPICAL RCV LOCATION NEAR MVP**

## SPRINKLER SCHEDULE LD-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	20	48

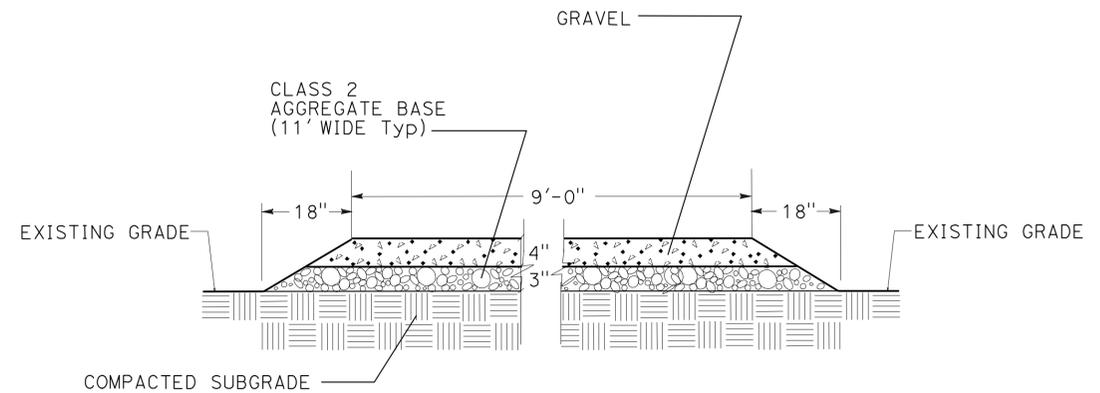
02-16-12  
 LICENSED LANDSCAPE ARCHITECT  
 12-17-12  
 PLANS APPROVAL DATE

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



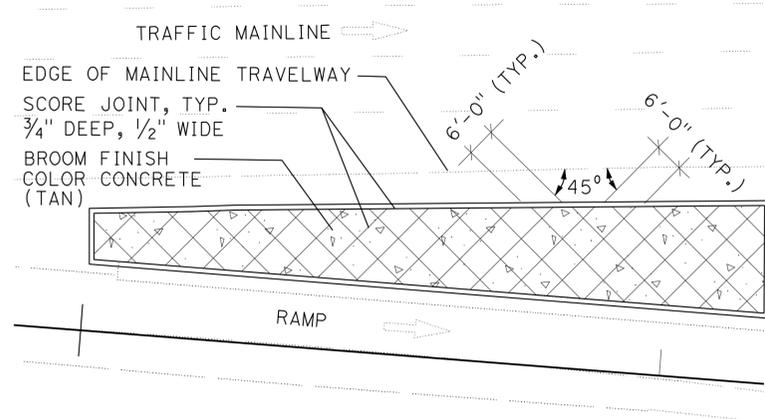
**ROADSIDE PAVING AND GRAVEL (MISCELLANEOUS AREAS)**

SECTION NO SCALE



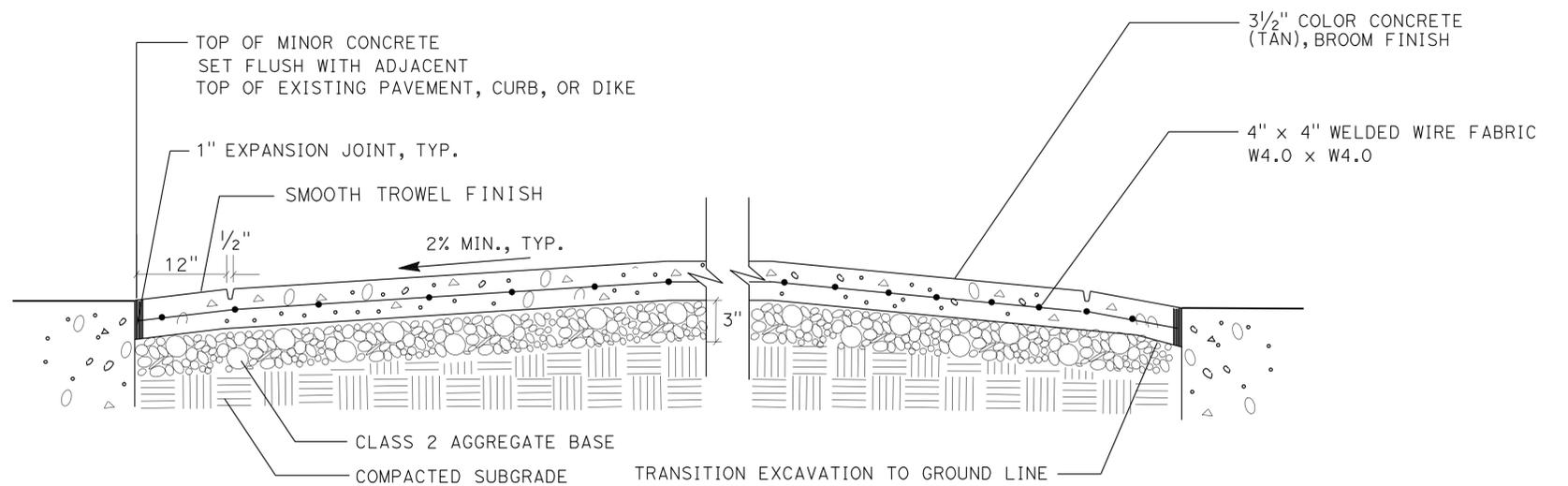
**GRAVEL (MISCELLANEOUS AREAS)**

SECTION NO SCALE



**MINOR CONCRETE (TEXTURED PAVING)**

PLAN VIEW NO SCALE



**MINOR CONCRETE (TEXTURED PAVING)**

SECTION NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 ERIC DICKSON  
 I-HONG SUN  
 REVISOR BY DATE  
 CALCULATED/DESIGNED BY CHECKED BY  
 USERNAME => s119571  
 DGN FILE => 1200020272tn002.dgn



UNIT 3014

PROJECT NUMBER & PHASE

12000202721

**LANDSCAPE DETAILS  
LD-2**

LAST REVISION DATE PLOTTED => 14-DEC-2012  
 02-16-12 TIME PLOTTED => 11:00

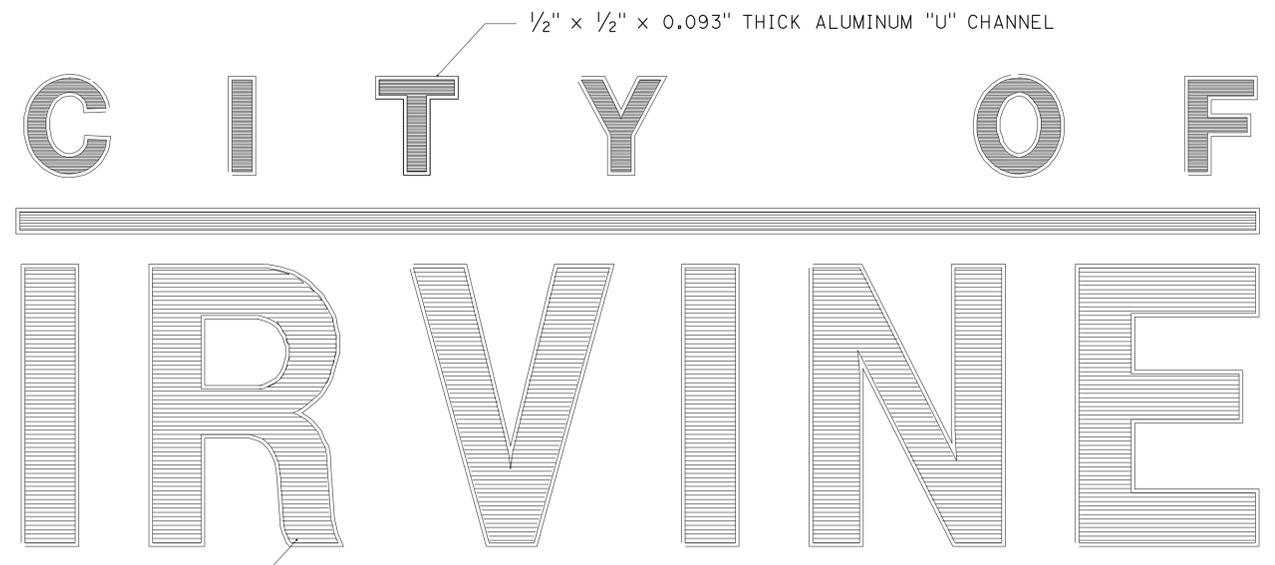
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Orca	405	6.4/7.4	21	48

	04-24-12
REGISTERED CIVIL ENGINEER	DATE
12-17-12	
PLANS APPROVAL DATE	

RBF CONSULTING 14725 ALTON PARKWAY IRVINE, CA 92618	CITY OF IRVINE ONE CIVIC CENTER PLAZA IRVINE, CA 92623
---	--

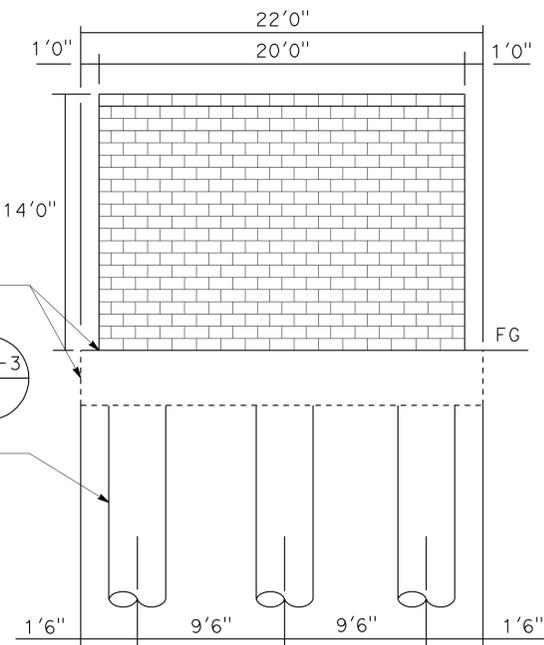
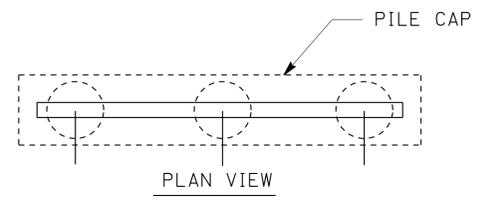


9 GA ALUMINUM SHEET METAL,  
POWDER COAT FINISHED SURFACE

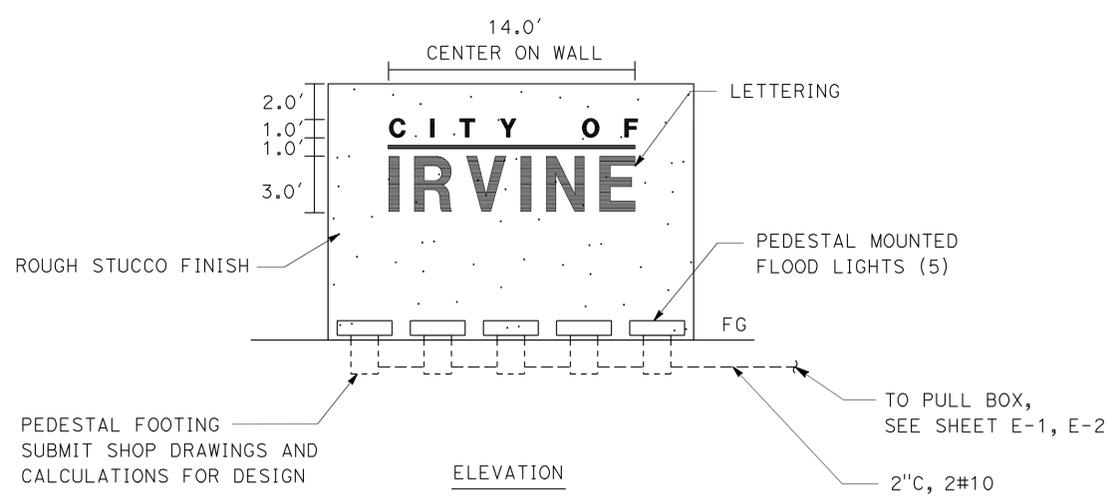
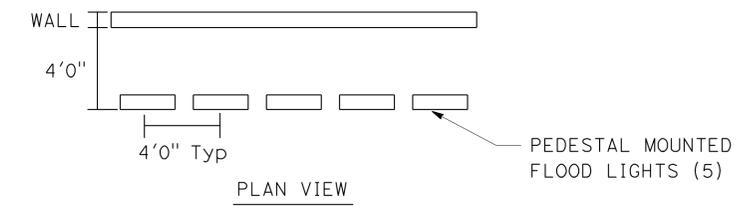
ELEVATION  
LETTERING

**NOTES:**

1. PREPARE AND SUBMIT SHOP DRAWINGS FOR DESIGN AND CONSTRUCTION OF FOOTINGS FOR WALLS AND LIGHTING PEDESTALS.
2. SUBMIT MANUFACTURER'S PRODUCT SHEETS FOR LIGHTING FIXTURES, SAMPLE OF STUCCO MATERIAL AND FINISHED COLOR, SAMPLE LETTERING AND FINISH COLOR.
3. FORM LETTERING FROM 'U' CHANNEL, PER THE SPECIFIED FONT. OUTLINE AND DELINEATE CHARACTERS, MITERING AT CORNERS, FORMING STRAIGHT LINES AND SMOOTH ARCS, AS NEEDED. TACK WELD TO BACKING. MOUNT LETTERING SECURELY TO WALL WITH CONSTRUCTION ADHESIVE PRIOR TO APPLYING SCRATCH COAT.
4. APPLY ROUGH STUCCO FINISH OVER SCRATCH COAT TO THE DEPTH OF THE CHANNEL USED TO TRIM LETTERING. STUCCO FINISH MUST COVER EXPOSED SURFACES OF WALL AND TO A DEPTH 1'0" BELOW FINISH GRADE.
5. DIRECT LIGHT FIXTURES TO ILLUMINATE FACE OF MONUMENT AND LETTERING AND TO AVOID SPILLOVER BEYOND MONUMENT.



ELEVATION  
MONUMENT WALL



ELEVATION  
MONUMENT WALL AND LIGHTING

STANDARD PLANS DATED MAY 2006

- A10A ACRONYMS AND ABBREVIATIONS
- A10B ACRONYMS AND ABBREVIATIONS
- A10C SYMBOLS
- A10D SYMBOLS
- B15-3 SOUND WALL MASONRY BLOCK ON PILE CAP DETAILS
- B15-4 SOUND WALL MASONRY BLOCK ON PILE CAP DETAILS
- B15-5 SOUND WALL MASONRY BLOCK ON PILE CAP DETAILS



**MONUMENT WALL AND LIGHTING**  
NO SCALE

**LANDSCAPE DETAILS**  
NO SCALE

**LD-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Et Caltrans®  
 CONSULTANT - SENIOR LANDSCAPE ARCHITECT  
 CATHY L. JOHNSON  
 C L JOHNSON  
 C H HARDEN  
 REVISIONS: [Table with columns for REVISION BY, DATE, REVISION]

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	22	48

01-26-12  
 LICENSED LANDSCAPE ARCHITECT  
 12-17-12  
 PLANS APPROVAL DATE

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

**SUBTOTALS PER VALVE ON LATERAL SUPPLY SIDE OF CONTROL VALVE**

DESCRIPTION	UNIT	VALVE A																						SUBTOTALS	UNIT	DESCRIPTION	
		A1	A2	A3	A4	A5a	A5b	A5c	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20				A21
1" PLASTIC PIPE SUPPLY LINE	LF	470	480	370	380	400	830	700	295	310	350	210	170	180	285	180	210	220	260	220	240	490	520	640	8410	LF	1"
1 1/4" PLASTIC PIPE SUPPLY LINE	LF	230	150	310	310				180	210	130	50	75	160	45	180	170		50	130	160	110	180	180	3010	LF	1 1/4"
1 1/2" PLASTIC PIPE SUPPLY LINE	LF			160	160				115	40	90		10	50				90	40		25				780	LF	1 1/2"
2" PLASTIC PIPE SUPPLY LINE	LF	525	500	15	15				20	25	120	340	220	25	70	20	290	175	85	90	350	440	425	230	3980	LF	2"
2 1/2" PLASTIC PIPE SUPPLY LINE	LF			250	250				230	150				390											1270	LF	2 1/2"
3" PLASTIC PIPE SUPPLY LINE	LF																									LF	3"
SPRINKLER TYPE	EA																								10	EA	5
5	EA																								6	EA	5
6 (6)	EA																								(22)	EA	6 (6)
7	EA																								21	EA	7
7	EA																								36	EA	7
8 (8)	EA																								5 (40)	EA	8 (8)
•	EA					5	21	18																	46	EA	•
Δ	EA	45	40	4																					171	EA	Δ
▲ (▲)	EA				4																				4 (38)	EA	▲ (▲)
□	EA			34	35																				69	EA	□
■ (■)	EA																									EA	■ (■)

DESCRIPTION	UNIT	VALVE B																										SUBTOTALS	UNIT	DESCRIPTION		
		B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11a	B11b	B11c	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23	B24				B25	B26
1" PLASTIC PIPE SUPPLY LINE	LF	410	510	380	360	530	360	500	255	635	330	440	1200	410	350	200	250	220	190	200	180	360	260	280	180	550	550	530	530	11150	LF	1"
1 1/4" PLASTIC PIPE SUPPLY LINE	LF	270	260	290	290	110	1390	175	180	25	30	40			170	180	170	90	150	195	180	160	120	65	90	210	230	420	430	5890	LF	1 1/4"
1 1/2" PLASTIC PIPE SUPPLY LINE	LF			200	180	955			40	580					40	50	25		50	70	25						80	120	2415	LF	1 1/2"	
2" PLASTIC PIPE SUPPLY LINE	LF	710	720		45			920	45		70				30		220	90	210		20	390	170	430	550	450	1350	1350	8220	LF	2"	
2 1/2" PLASTIC PIPE SUPPLY LINE	LF			130	35				215		60				140	220				190	240								1230	LF	2 1/2"	
3" PLASTIC PIPE SUPPLY LINE	LF																													LF	3"	
SPRINKLER TYPE	EA					18		17		4																			41	EA	5	
5	EA																													EA	5	
6 (6)	EA							3	(2)	2(16)	(4)											4(4)	(5)						9 (33)	EA	6 (6)	
7	EA									9																			21	EA	7	
7	EA									2					12														39	EA	7	
8 (8)	EA									(9)																			6 (48)	EA	8 (8)	
•	EA											6	26	3															37	EA	•	
Δ	EA	1	38				10																						178	EA	Δ	
▲ (▲)	EA	(38)					10																						10 (116)	EA	▲ (▲)	
□	EA	4	4	16	38		1																						63	EA	□	
■ (■)	EA			(21)			(1)																						(22)	EA	■ (■)	

**SUBTOTALS PER PLAN SHEET ON MAIN SUPPLY SIDE OF CONTROL VALVE**

DESCRIPTION	UNIT	SHEET NUMBER																SUBTOTALS
		IP1	IP2	IP3	IP4	IP5	IP6											
BPA 2"				1	1												2	
ENCLOSURE	EA			1	1												2	
BOOSTER PUMP																		
30 STATION	EA			1													1	
24 STATION	EA				1												1	
SINGLE	EA			1	1												2	
DOUBLE	EA																	
2"	EA		1	4	3	2											10	
1"	EA		1	3	2	1											7	
1 1/2"	EA		4	6	5	3											18	
2"	EA		2	13	7	6											28	
3"	EA		1	2	4												7	
2"	EA			1	1												2	
10"	LF			50													50	
1"	LF																19560	
1 1/4"	LF																8900	
1 1/2"	LF																3195	
2"	LF																12185	
2 1/2"	LF																2500	
3"	LF		600	2800	2500	400											6300	
2"	LF			25	25												50	

**TOTAL QUANTITIES**

TOTALS	UNIT	DESCRIPTION
2		2"
2		ENCLOSURE
1	EA	30 STATION
1	EA	24 STATION
2	EA	SINGLE
10	EA	DOUBLE
7	EA	1"
18	EA	1 1/2"
28	EA	2"
7	EA	3"
2	EA	2"
50	LF	10"
19560	LF	1"
8900	LF	1 1/4"
3195	LF	1 1/2"
12185	LF	2"
2500	LF	2 1/2"
6300	LF	3"
50	LF	2"
51	EA	⑤
6	EA	⑤
9 (55)	EA	⑥ (⑥)
42	EA	⑦
75	EA	⑦
11 (88)	EA	⑧ (⑧)
79	EA	●
349	EA	△
14 (154)	EA	▲ (▲)
132	EA	□
- (22)	EA	■ (■)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	23	48

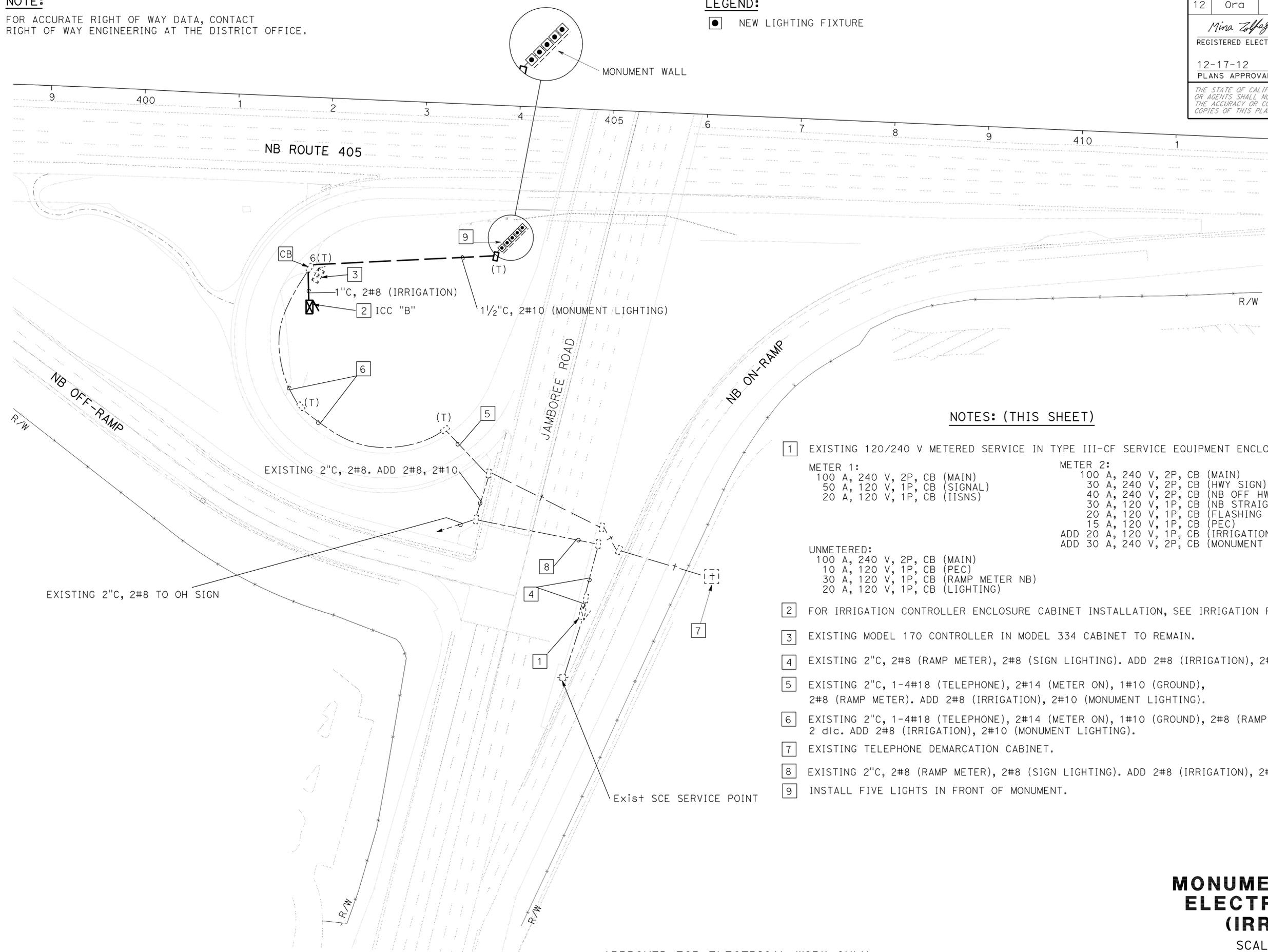
01-26-12  
 LICENSED LANDSCAPE ARCHITECT  
 12-31-12  
 PLANS APPROVAL DATE  
 01-26-12  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**IRRIGATION QUANTITIES**  
**IQ-2**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	24	48
		Mina Zolfaghari 01-26-12		REGISTERED ELECTRICAL ENGINEER DATE	
		12-17-12		PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

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

**LEGEND:**  
 NEW LIGHTING FIXTURE



**NOTES: (THIS SHEET)**

- 1 EXISTING 120/240 V METERED SERVICE IN TYPE III-CF SERVICE EQUIPMENT ENCLOSURE TO REMAIN:  
METER 1:  
100 A, 240 V, 2P, CB (MAIN)  
50 A, 120 V, 1P, CB (SIGNAL)  
20 A, 120 V, 1P, CB (IISNS)  
METER 2:  
100 A, 240 V, 2P, CB (MAIN)  
30 A, 240 V, 2P, CB (HWY SIGN)  
40 A, 240 V, 2P, CB (NB OFF HWY AND LIGHTING)  
30 A, 120 V, 1P, CB (NB STRAIGHT AND LOOP RAMP METERING)  
20 A, 120 V, 1P, CB (FLASHING BEACON)  
15 A, 120 V, 1P, CB (PEC)  
ADD 20 A, 120 V, 1P, CB (IRRIGATION)  
ADD 30 A, 240 V, 2P, CB (MONUMENT LIGHTING)
- 2 FOR IRRIGATION CONTROLLER ENCLOSURE CABINET INSTALLATION, SEE IRRIGATION PLANS.
- 3 EXISTING MODEL 170 CONTROLLER IN MODEL 334 CABINET TO REMAIN.
- 4 EXISTING 2"C, 2#8 (RAMP METER), 2#8 (SIGN LIGHTING). ADD 2#8 (IRRIGATION), 2#10 (MONUMENT LIGHTING).
- 5 EXISTING 2"C, 1-4#18 (TELEPHONE), 2#14 (METER ON), 1#10 (GROUND), 2#8 (RAMP METER). ADD 2#8 (IRRIGATION), 2#10 (MONUMENT LIGHTING).
- 6 EXISTING 2"C, 1-4#18 (TELEPHONE), 2#14 (METER ON), 1#10 (GROUND), 2#8 (RAMP METER), 2 dic. ADD 2#8 (IRRIGATION), 2#10 (MONUMENT LIGHTING).
- 7 EXISTING TELEPHONE DEMARCATION CABINET.
- 8 EXISTING 2"C, 2#8 (RAMP METER), 2#8 (SIGN LIGHTING). ADD 2#8 (IRRIGATION), 2#10 (MONUMENT LIGHTING).
- 9 INSTALL FIVE LIGHTS IN FRONT OF MONUMENT.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** ELECTRICAL DESIGN  
 FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 MINA ZOLFAGHARI  
 VANESSA TRUONG  
 REVISED BY: [Blank]  
 DATE REVISED: [Blank]

APPROVED FOR ELECTRICAL WORK ONLY

**MONUMENT LIGHTING  
ELECTRIC SERVICE  
(IRRIGATION)**

SCALE: 1" = 50' **E-1**

LAST REVISION: DATE PLOTTED => 14-DEC-2012  
 02-08-12 TIME PLOTTED => 10:37

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	25	48

Mina Zolfaghari		01-26-12
REGISTERED ELECTRICAL ENGINEER	DATE	
12-17-12		
PLANS APPROVAL DATE		

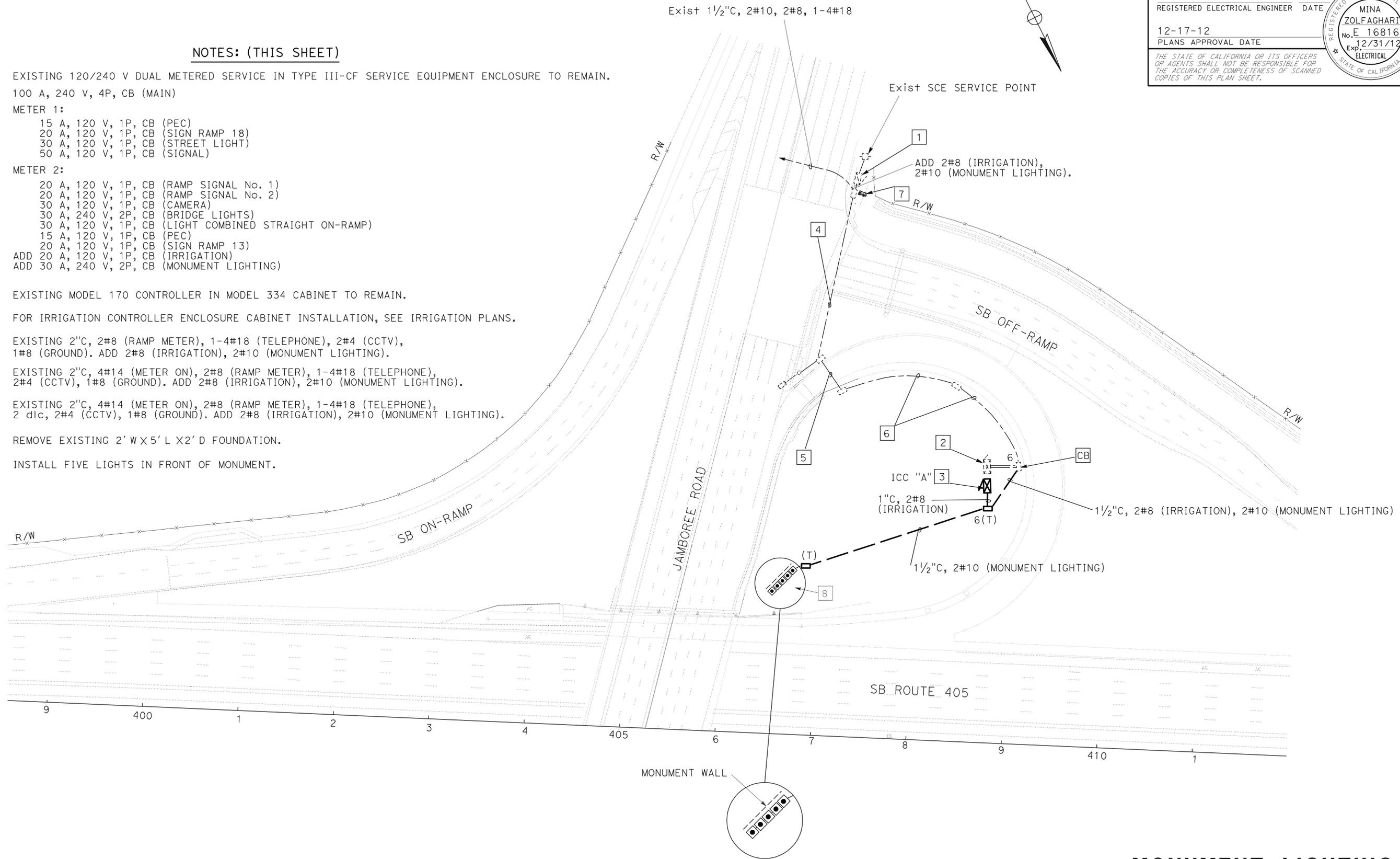
Mina ZOLFAGHARI	
No. E. 16816	Exp. 12/31/12
ELECTRICAL	

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.

**NOTES: (THIS SHEET)**

- 1 EXISTING 120/240 V DUAL METERED SERVICE IN TYPE III-CF SERVICE EQUIPMENT ENCLOSURE TO REMAIN.  
100 A, 240 V, 4P, CB (MAIN)  
METER 1:  
15 A, 120 V, 1P, CB (PEC)  
20 A, 120 V, 1P, CB (SIGN RAMP 18)  
30 A, 120 V, 1P, CB (STREET LIGHT)  
50 A, 120 V, 1P, CB (SIGNAL)  
METER 2:  
20 A, 120 V, 1P, CB (RAMP SIGNAL No. 1)  
20 A, 120 V, 1P, CB (RAMP SIGNAL No. 2)  
30 A, 120 V, 1P, CB (CAMERA)  
30 A, 240 V, 2P, CB (BRIDGE LIGHTS)  
30 A, 120 V, 1P, CB (LIGHT COMBINED STRAIGHT ON-RAMP)  
15 A, 120 V, 1P, CB (PEC)  
20 A, 120 V, 1P, CB (SIGN RAMP 13)  
ADD 20 A, 120 V, 1P, CB (IRRIGATION)  
ADD 30 A, 240 V, 2P, CB (MONUMENT LIGHTING)
- 2 EXISTING MODEL 170 CONTROLLER IN MODEL 334 CABINET TO REMAIN.
- 3 FOR IRRIGATION CONTROLLER ENCLOSURE CABINET INSTALLATION, SEE IRRIGATION PLANS.
- 4 EXISTING 2"C, 2#8 (RAMP METER), 1-4#18 (TELEPHONE), 2#4 (CCTV), 1#8 (GROUND). ADD 2#8 (IRRIGATION), 2#10 (MONUMENT LIGHTING).
- 5 EXISTING 2"C, 4#14 (METER ON), 2#8 (RAMP METER), 1-4#18 (TELEPHONE), 2#4 (CCTV), 1#8 (GROUND). ADD 2#8 (IRRIGATION), 2#10 (MONUMENT LIGHTING).
- 6 EXISTING 2"C, 4#14 (METER ON), 2#8 (RAMP METER), 1-4#18 (TELEPHONE), 2 dlc, 2#4 (CCTV), 1#8 (GROUND). ADD 2#8 (IRRIGATION), 2#10 (MONUMENT LIGHTING).
- 7 REMOVE EXISTING 2' W X 5' L X 2' D FOUNDATION.
- 8 INSTALL FIVE LIGHTS IN FRONT OF MONUMENT.



**MONUMENT LIGHTING  
ELECTRIC SERVICE  
(IRRIGATION)**

SCALE: 1" = 50'

**E-2**

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: SON NGUYEN

DESIGNED BY: M. ALTAKBARZADEH

CHECKED BY:

REVISOR: I. SUN

DATE REVISOR: DATE

**CONSTRUCTION AREA SIGNS**

SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POST AND SIZE	No. OF SIGNS
(A)	W20-1	72" x 72"	ROAD WORK AHEAD	2 - 4" x 6"	2
(B)	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 4" x 4"	5
(C)	G20-2	60" x 24"	END ROAD WORK	2 - 4" x 4"	2
(D)	G20-2	42" x 24"	END ROAD WORK	1 - 4" x 4"	3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Oran	405	6.4/7.4	26	48

Mostafa Aliakbarzadeh 01-26-12  
 REGISTERED CIVIL ENGINEER DATE  
 12-17-12  
 PLANS APPROVAL DATE

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

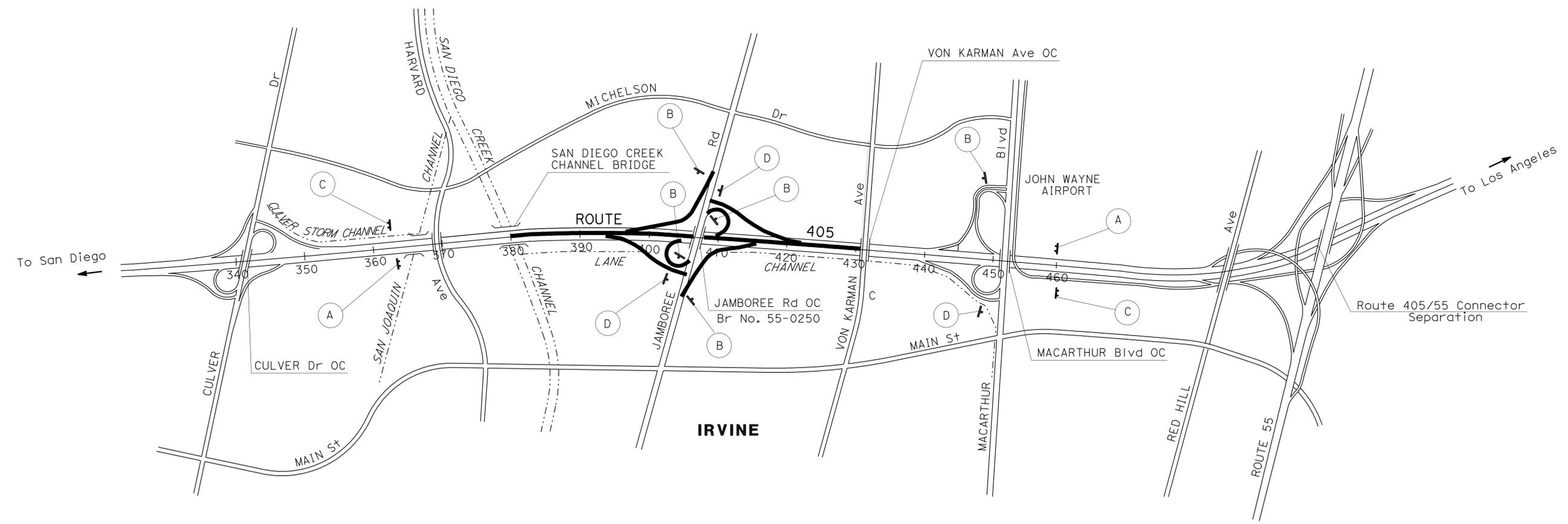
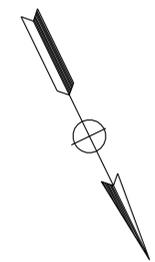
REGISTERED PROFESSIONAL ENGINEER  
 MOSTAFA ALIAKBARZADEH  
 No. C-53003  
 Exp. 03-31-13  
 CIVIL  
 STATE OF CALIFORNIA

**NOTE:**

1. SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.

**LEGEND:**

- ↑ ONE (1) POST
- ↑ TWO (2) POST



**CONSTRUCTION AREA SIGNS**

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

**CS-1**

DATE PLOTTED => 14-DEC-2012 TIME PLOTTED => 10:38

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	27	48

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 12-17-12

2006 REVISED STANDARD PLAN RSP H1

**A**

AB aggregate base  
 ABS acrylonitrile-butadiene-styrene  
 AC asphalt concrete  
 Adj adjacent/adjustable  
 AIC auxiliary irrigation controller  
 Alt alternative  
 AMEND amendment  
 ARV air release valve  
 AUTO automatic  
 AUX auxiliary  
 AVB atmospheric vacuum breaker

**B**

B&B balled and burlapped  
 B/B brass/bronze  
 B/B/PL brass/bronze/plastic  
 B/PL brass/plastic  
 BFM bonded fiber matrix  
 Bit C+D bituminous coated  
 BP booster pump  
 BPA backflow preventer assembly  
 BPAE backflow preventer assembly in enclosure  
 BPE backflow preventer enclosure  
 BV ball valve

**C**

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

**D**

Dia diameter  
 DIP ductile iron pipe  
 DN diameter nominal

**E**

EA each  
 Elect electric/electrical  
 Elev elevation  
 ENCL enclosure  
 EP edge of pavement  
 ES edge of shoulder  
 EST end strip  
 ESTB establishment  
 ETW edge of traveled way

**F**

F full circle  
 F/P full/part circle  
 FAU filter assembly unit  
 FCV flow control valve  
 FERT fertilizer  
 FG finished grade  
 FIPT female iron pipe thread  
 FIS fertilizer injector system  
 FL flow line  
 FM flow monitor  
 FS flow sensor  
 Ft foot/feet  
 FV flush valve

**G**

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

**H**

H half circle  
 HB hose bib  
 HDPE high density polyethylene  
 HP horsepower/hinge point  
 HPL high pressure line  
 Hwy highway

**I**

IC irrigation controller  
 ICC irrigation controller(s) in controller enclosure cabinet  
 ID inside diameter  
 In inches  
 IFS irrigation filtration system  
 IPS iron pipe size  
 IPT iron pipe thread  
 Irr irrigation

**L**

L length  
 LF linear foot

**M**

Max maximum  
 MBGR metal beam guard railing  
 MCV manual control valve  
 MIC master irrigation controller  
 Min minimum  
 MIPT male iron pipe thread  
 Misc miscellaneous  
 M+I material  
 MVP maintenance vehicle pullout

**N**

NCN no common name  
 NL nozzle line  
 No. number  
 NPT national pipe thread

**O**

O/C on center  
 OD outside diameter  
 Oz ounce

**P**

P part circle  
 PB pull box  
 PCC portland cement concrete  
 PE polyethylene  
 PK+ packet  
 PL plastic  
 PLT plant/planting  
 PLT ESTB plant establishment  
 PM post mile  
 PR pressure rated  
 PRLV pressure relief valve  
 PSFM polymer stabilized fiber matrix  
 PSI pounds per square inch  
 PRV pressure reducing valve  
 PVC polyvinyl chloride  
 Pvm+ pavement

**Q**

Q quarter circle  
 QCV quick coupling valve

**R**

R radius  
 RCP reinforced concrete pipe  
 RCV remote control valve  
 RCVM remote control valve (master)  
 RCVMF remote control valve (master) w/ flow meter  
 RCW recycled/reclaimed water  
 RECP rolled erosion control product  
 REQ required  
 R/W right of way

**S**

S slip  
 SCC sprinkler control conduit  
 SCH schedule  
 SF state-furnished  
 Shld shoulder  
 SQFT square foot/feet  
 SQYD square yard(s)  
 SST side strip  
 Sta station  
 Std standard  
 SW sidewalk/sound wall

**T**

T third circle/thread  
 TLS truck loading standpipe  
 TQ three quarter circle  
 TRM turf reinforcement mat  
 TRVD traveled  
 TT two third circle  
 Typ typical

**U**

UG underground

**V**

VAU valve assembly unit

**W**

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

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

**PLANTING AND IRRIGATION ABBREVIATIONS**

NO SCALE

RSP H1 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H1  
 DATED MAY 1, 2006 - PAGE 201 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP H1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	28	48

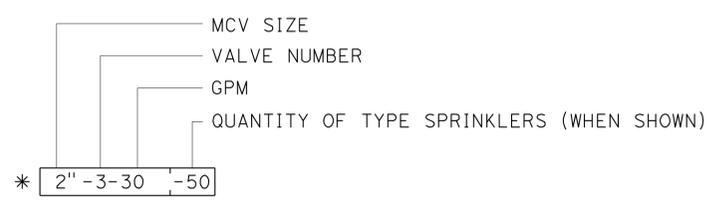
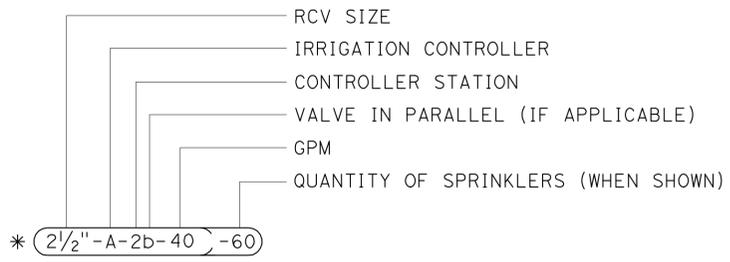
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 12-17-12

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

EXISTING	PROPOSED	ITEM DESCRIPTION
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		PRESSURE REDUCING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		NOZZLE LINE W/TURNING UNION
		IRRIGATION SYSTEM
		IRRIGATION SYSTEM TO BE REMOVED
		CHAIN LINK GATE
		QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		SPRINKLER W/SPRINKLER PROTECTOR
		CONNECT TO EXISTING SYSTEM
		CAP
		CAP EXISTING

**VALVE CODE**



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

**PLANTING AND IRRIGATION SYMBOLS**

NO SCALE

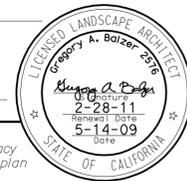
RSP H2 DATED JUNE 5, 2009 SUPERSEDES RSP H2 DATED MARCH 7, 2008 AND STANDARD PLAN H2 DATED MAY 1, 2006 - PAGE 202 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP H2**

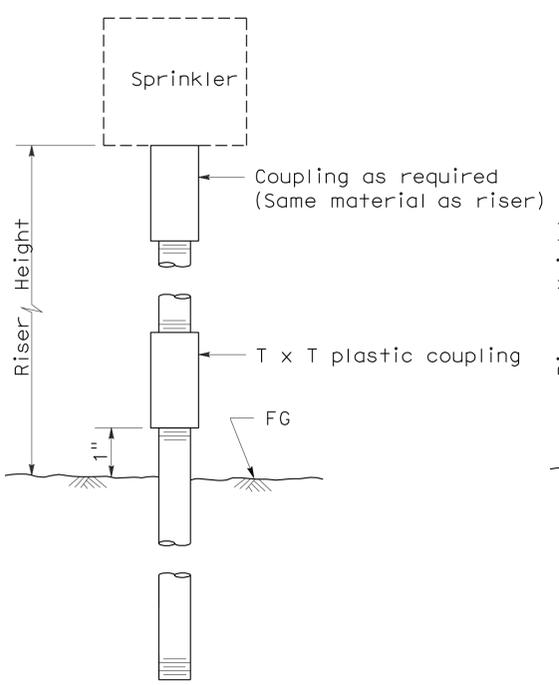
2006 REVISED STANDARD PLAN RSP H2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	29	48

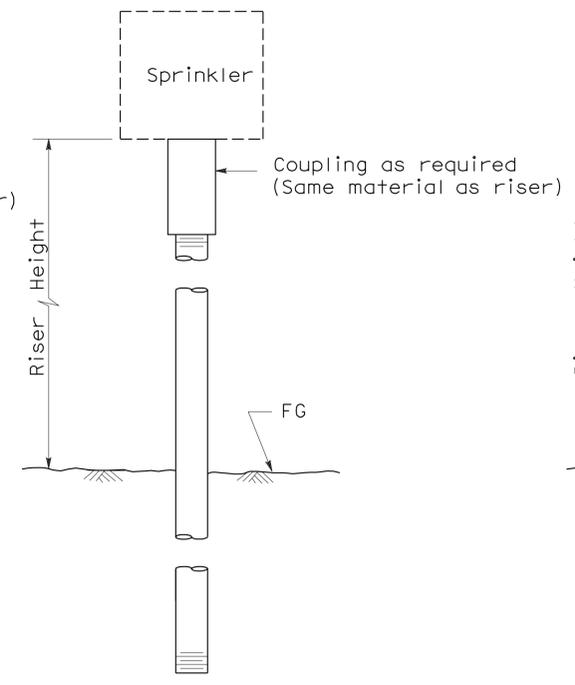
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



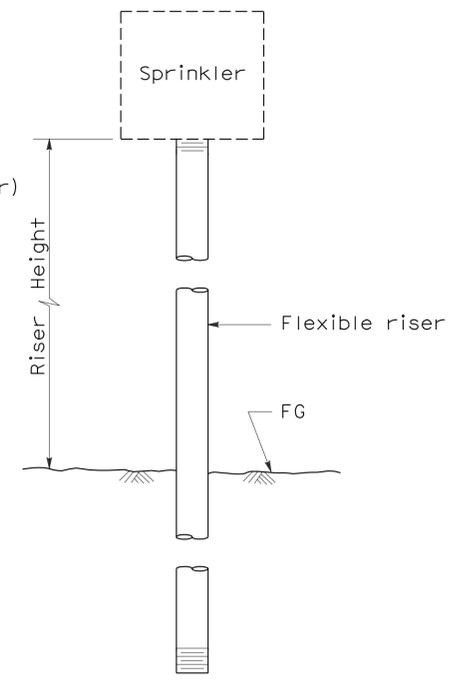
To accompany plans dated 12-17-12



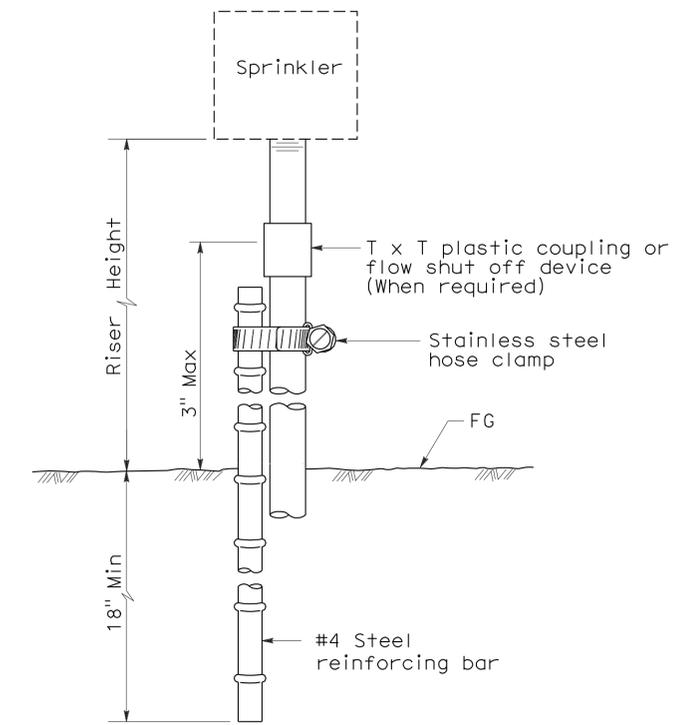
ELEVATION  
RISER TYPE I



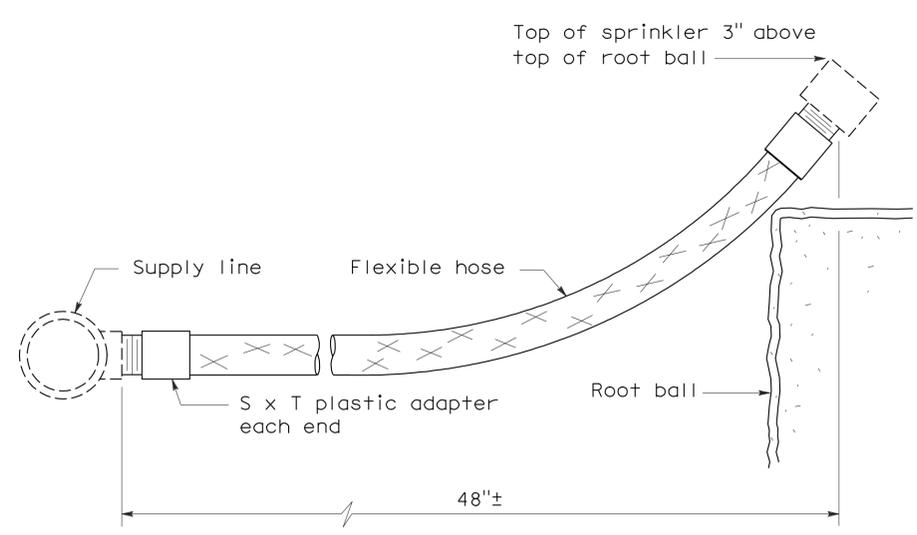
ELEVATION  
RISER TYPE II



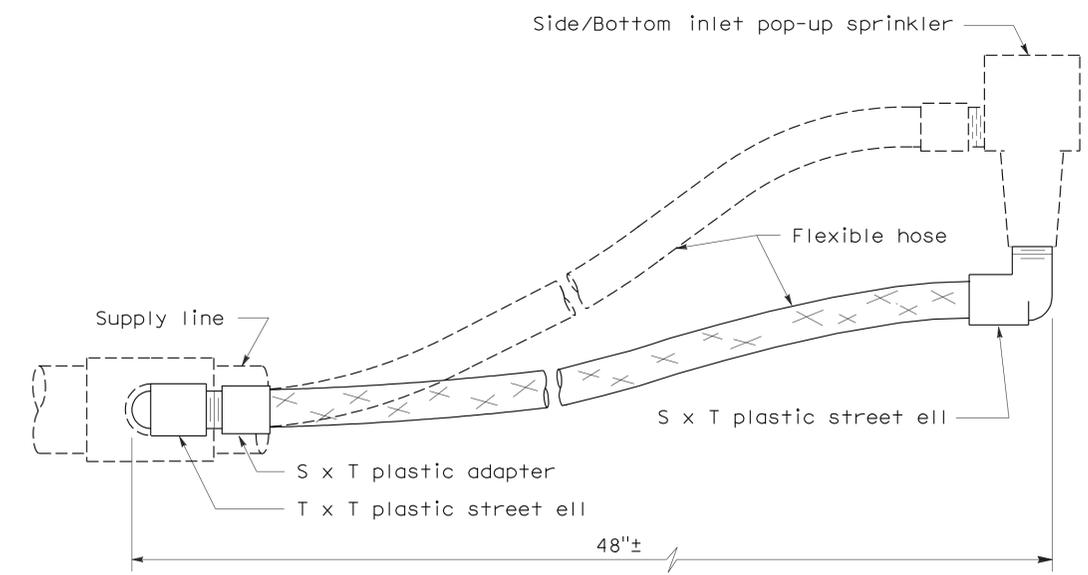
ELEVATION  
RISER TYPE III



ELEVATION  
RISER TYPE IV



ELEVATION  
RISER TYPE V



ELEVATION  
RISER TYPE VI

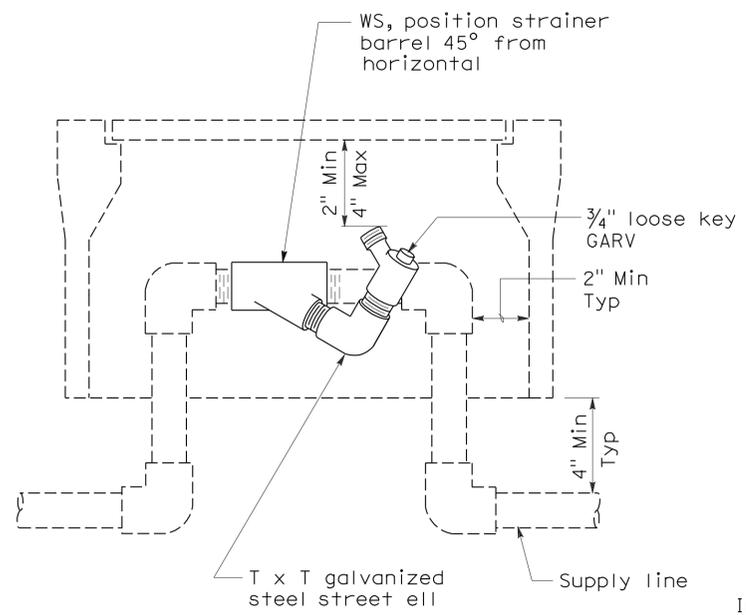
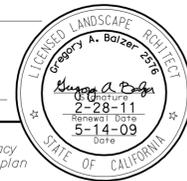
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**PLANTING AND IRRIGATION  
DETAILS**  
NO SCALE

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

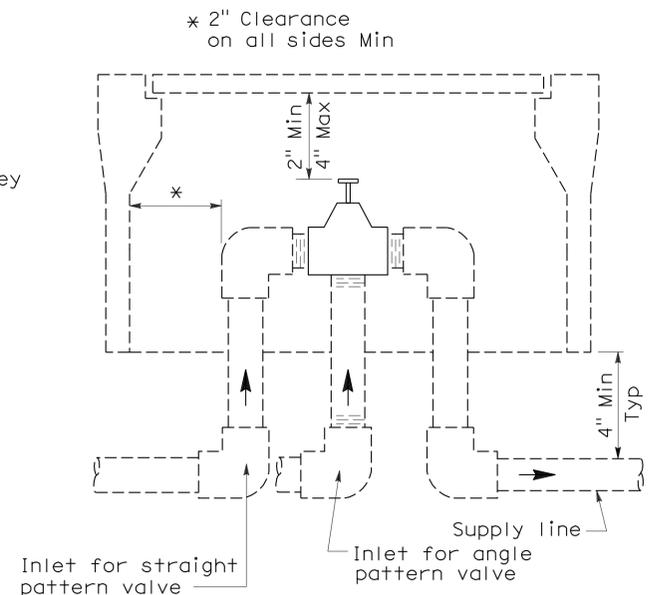
2006 REVISED STANDARD PLAN RSP H5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	30	48

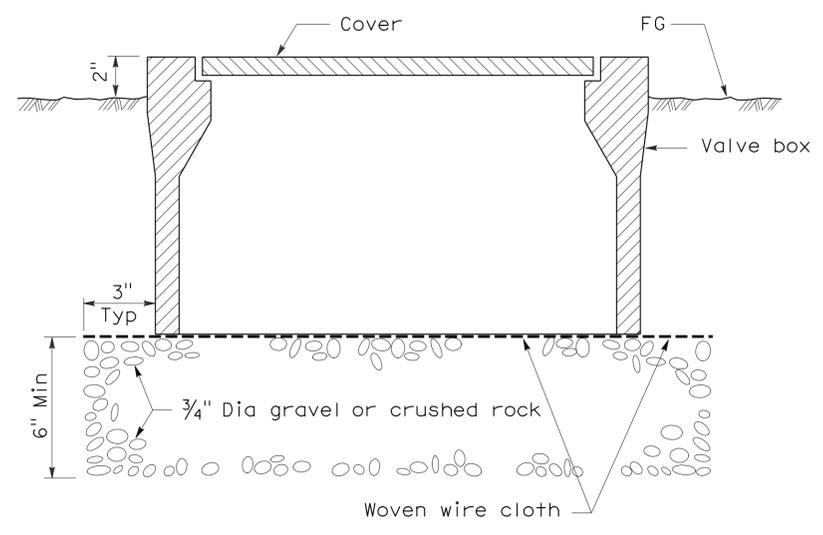
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



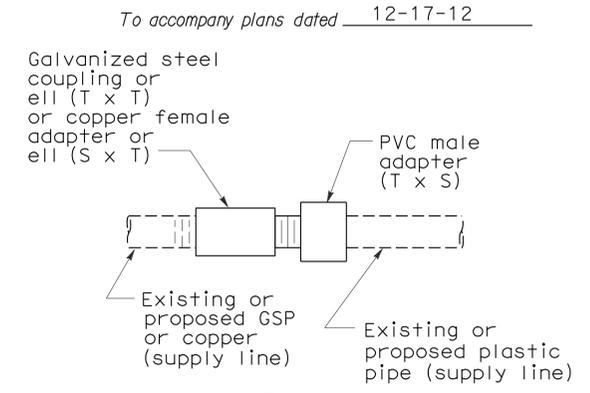
**ELEVATION  
WYE STRAINER**



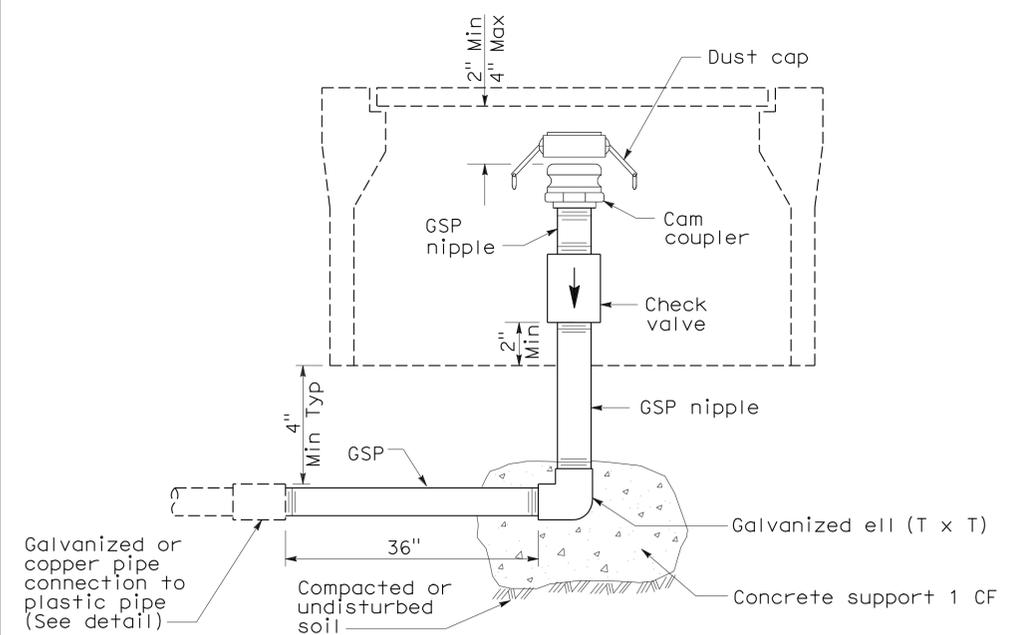
**ELEVATION  
VALVE**



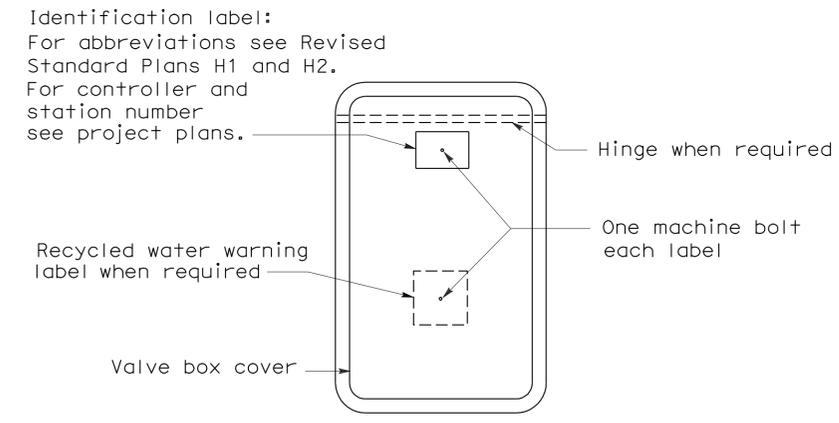
**SECTION  
VALVE BOX**



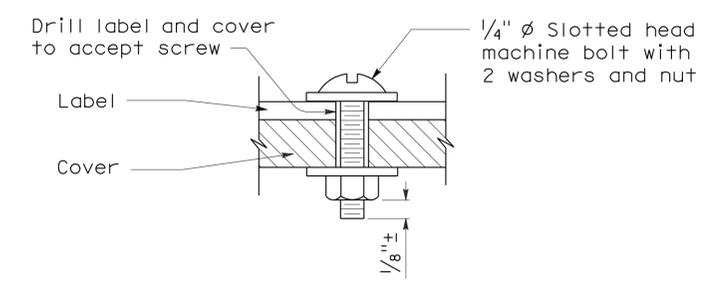
**PLAN  
GALVANIZED OR COPPER PIPE  
CONNECTION TO PLASTIC PIPE**



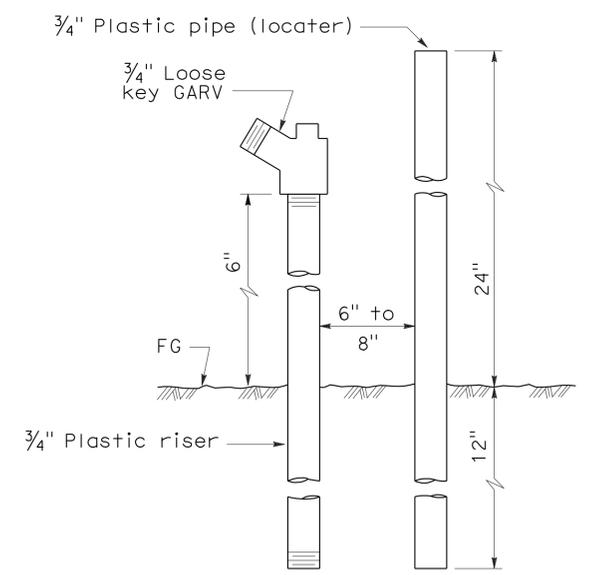
**ELEVATION  
CAM COUPLER ASSEMBLY**



**PLAN**



**SECTION  
VALVE BOX IDENTIFICATION**



**ELEVATION  
FLUSH VALVE**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**PLANTING AND IRRIGATION  
DETAILS**

NO SCALE

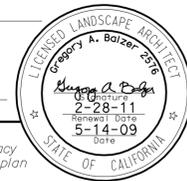
RSP H7 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H7  
DATED MAY 1, 2006 - PAGE 207 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP H7**

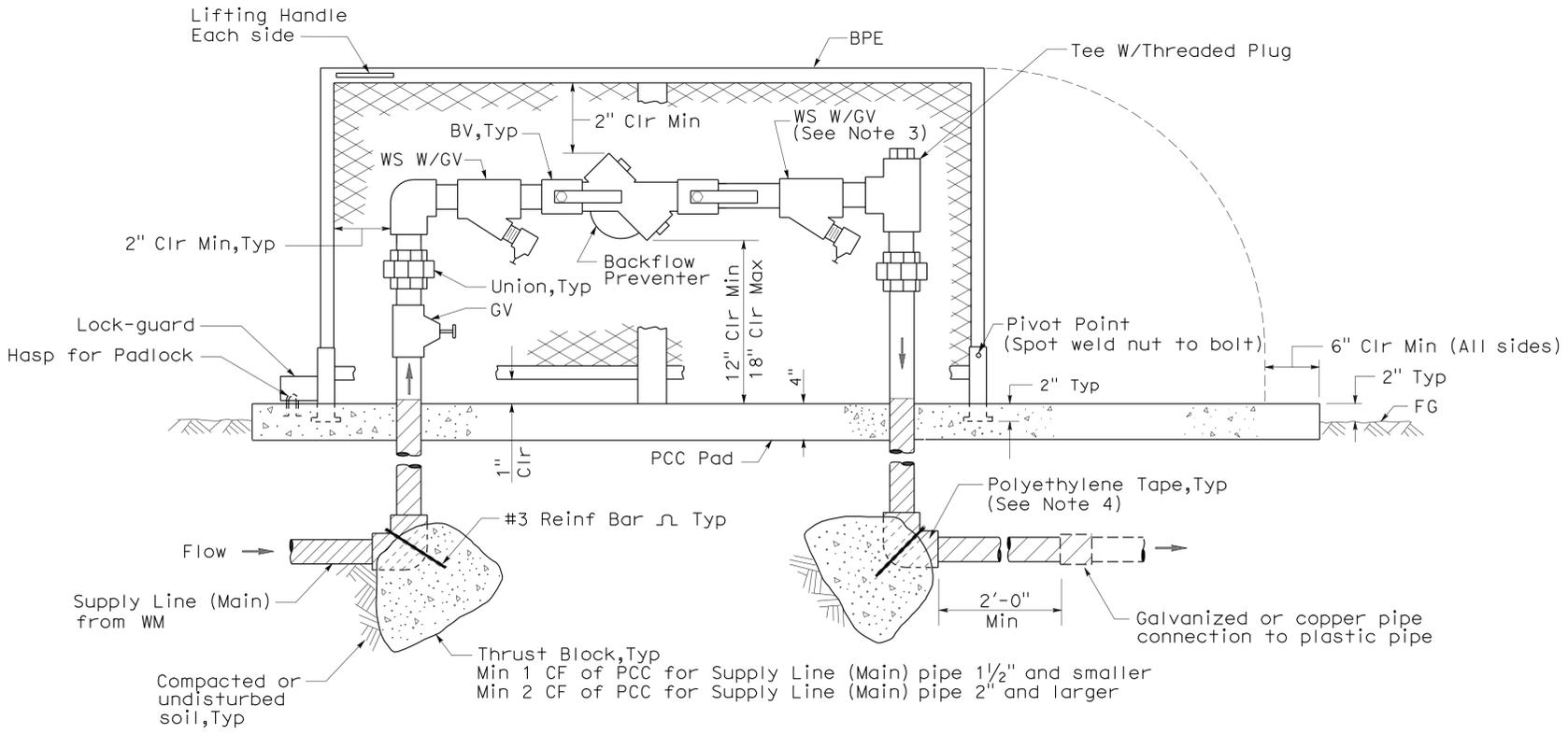
2006 REVISED STANDARD PLAN RSP H7

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	31	48

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



To accompany plans dated 12-17-12

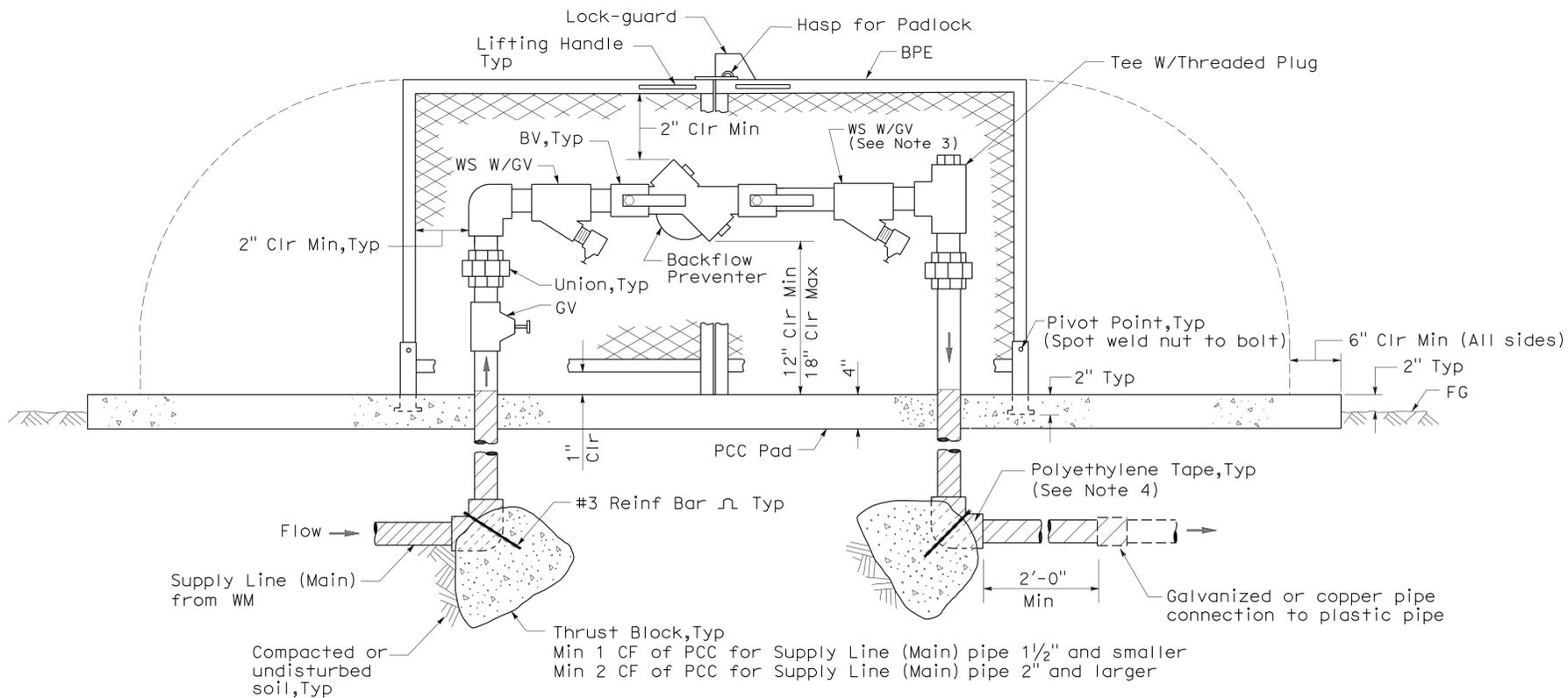


**ELEVATION**

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

**NOTES:**

1. Wye strainer and fittings must be the same size as the backflow preventer shown on the plans.
2. Backflow preventer assembly manifold pipe must be the same pipe as the supply line (main) pipe to be installed from the water meter to the backflow preventer assembly.
3. Wye strainer location shown downstream of the backflow preventer is for District 11 projects only.
4. All metal in contact with soil and Portland Cement Concrete must be polyethylene wrapped using 2" wide plastic backed adhesive tape 20 mil thick with 1/2" overlap.



**ELEVATION**

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

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

NO SCALE

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

**REVISED STANDARD PLAN RSP H8**

2006 REVISED STANDARD PLAN RSP H8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	32	48

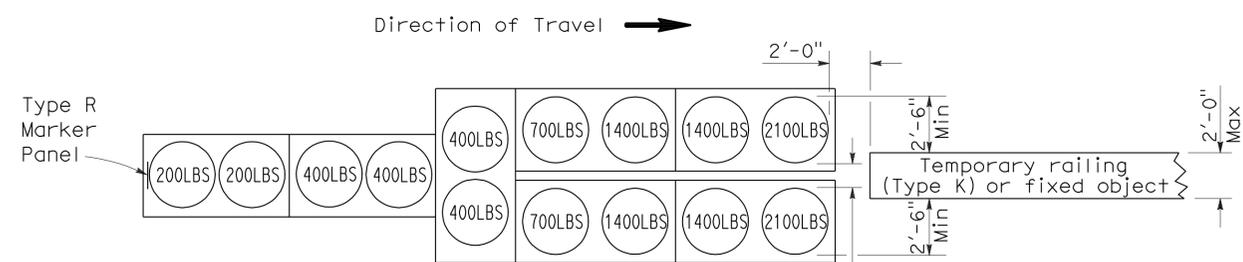
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

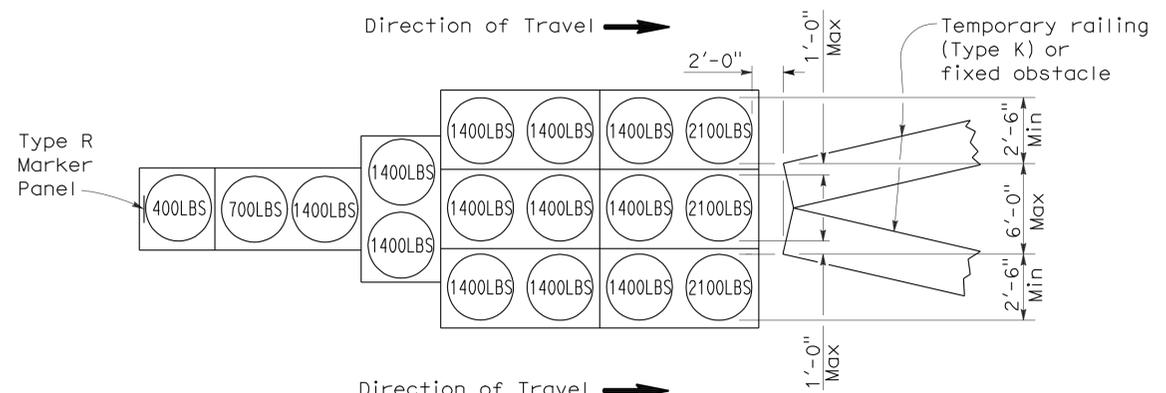
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 12-17-12



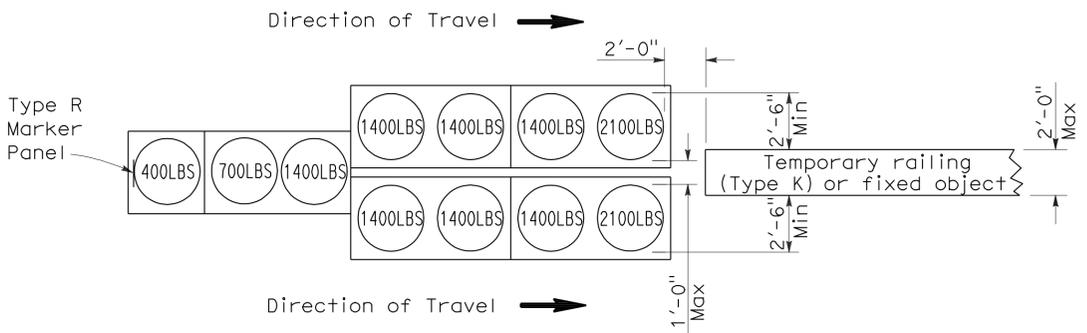
**ARRAY 'TU14'**

Approach speed 45 mph or more



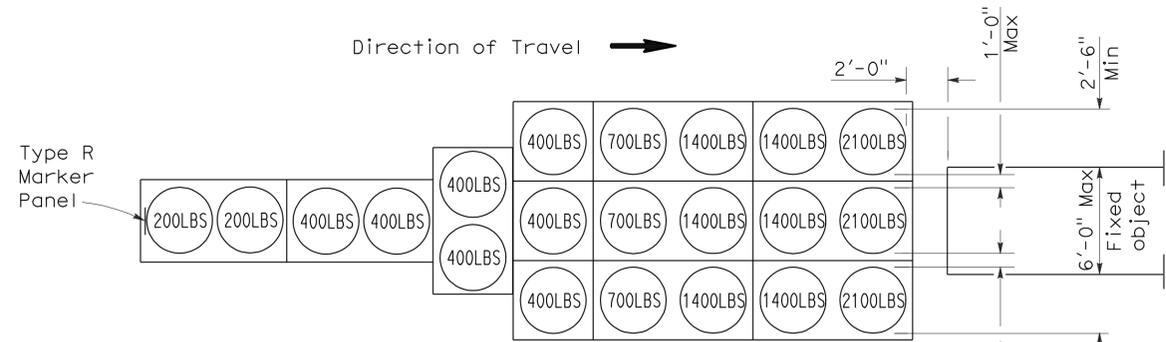
**ARRAY 'TU17'**

Approach speed less than 45 mph



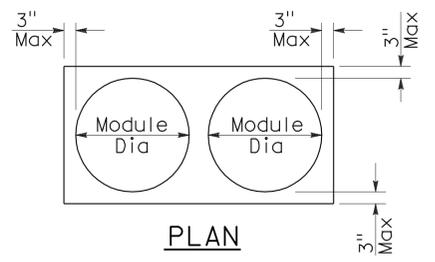
**ARRAY 'TU11'**

Approach speed less than 45 mph

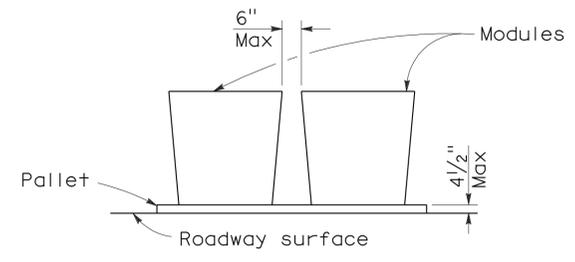


**ARRAY 'TU21'**

Approach speed 45 mph or more



**PLAN**



**ELEVATION**

**CRASH CUSHION PALLET DETAIL**

See Note 7

**NOTES:**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**REVISED STANDARD PLAN RSP T1A**

2006 REVISED STANDARD PLAN RSP T1A

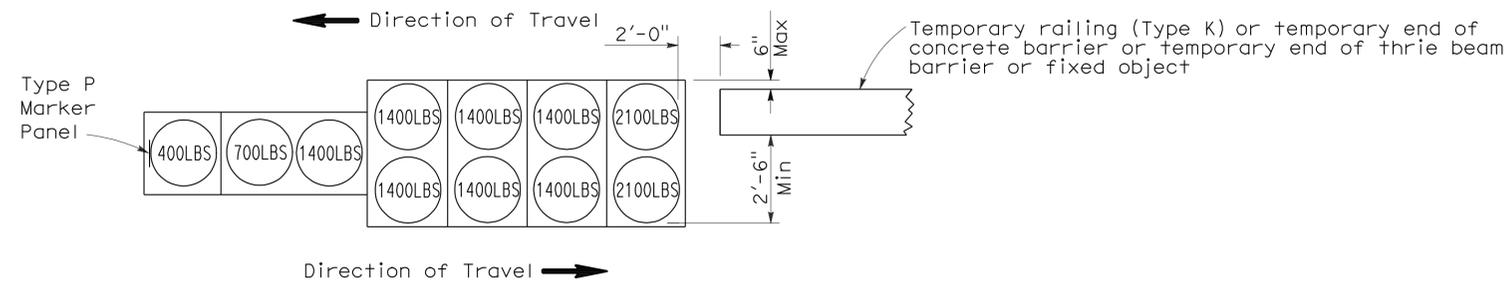
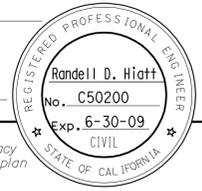
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	33	48

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

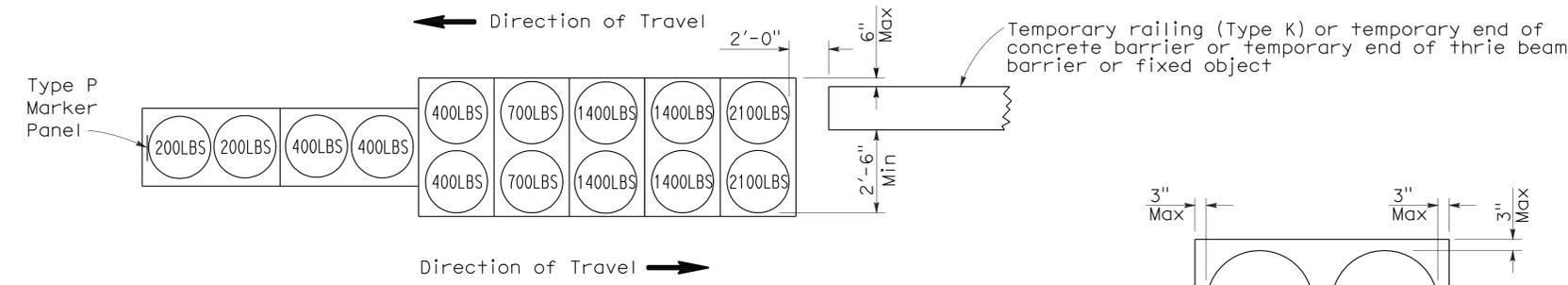
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

To accompany plans dated 12-17-12



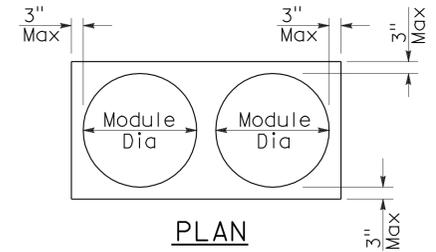
**ARRAY 'TB11'**

Approach speed less than 45 mph

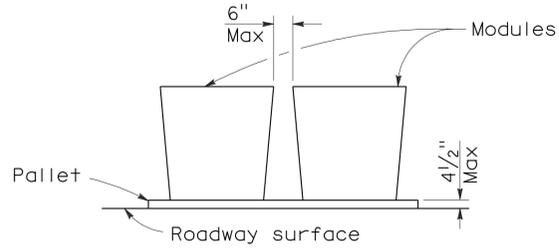


**ARRAY 'TB14'**

Approach speed 45 mph or more



PLAN



ELEVATION

**CRASH CUSHION PALLET DETAIL**

See Note 7

**NOTES:**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**REVISED STANDARD PLAN RSP T1B**

2006 REVISED STANDARD PLAN RSP T1B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	34	48

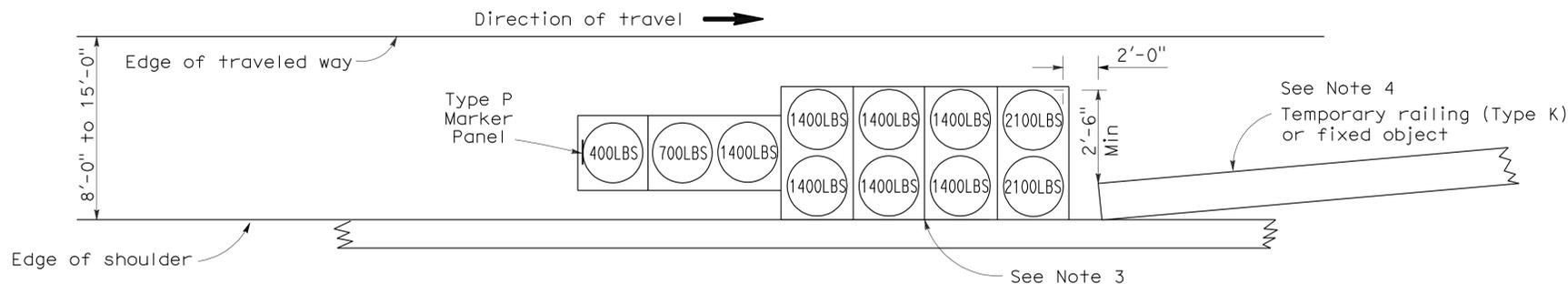
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

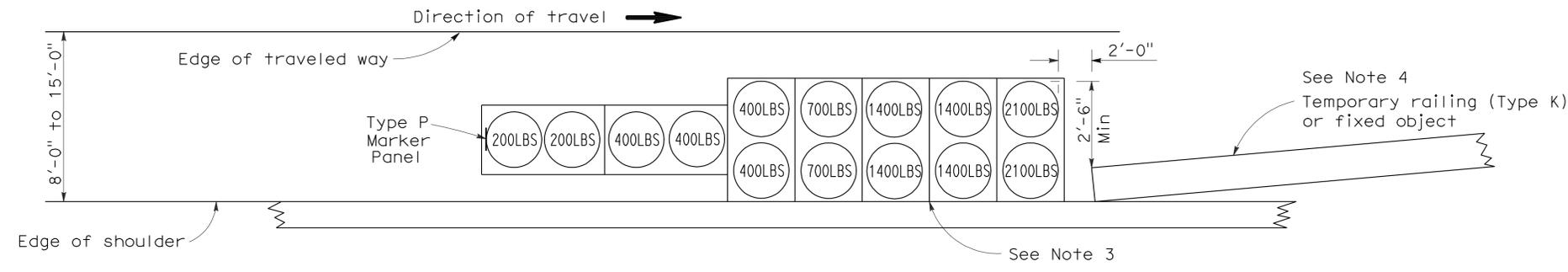
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

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

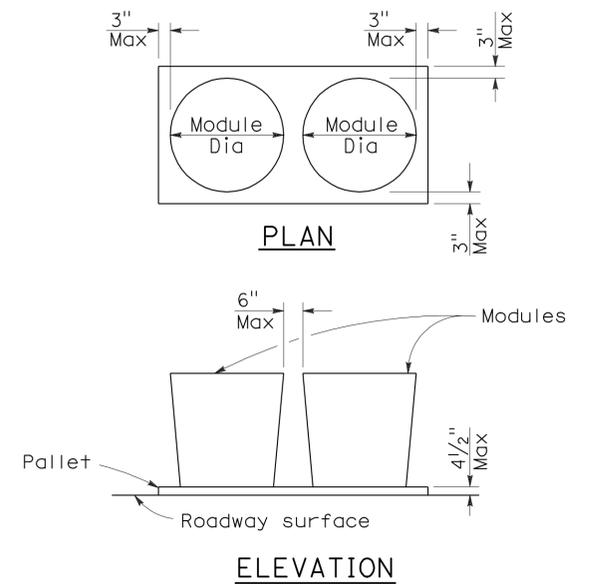
To accompany plans dated 12-17-12



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



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



**CRASH CUSHION PALLET DETAIL**  
See Note 11

**NOTES:**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(SHOULDER INSTALLATIONS)**

NO SCALE  
RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2  
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T2**

2006 REVISED STANDARD PLAN RSP T2

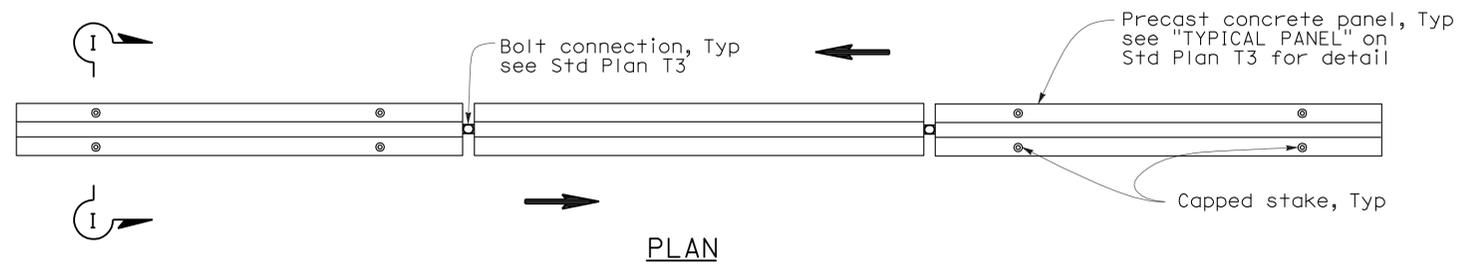
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	6.4/7.4	35	48

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

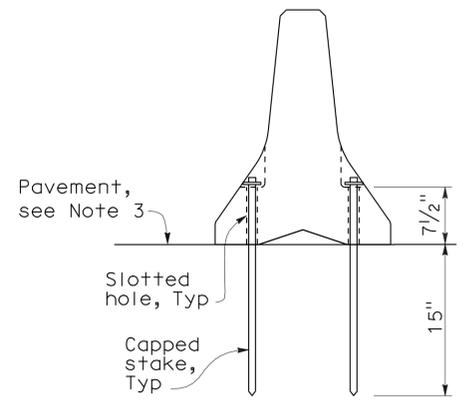
May 20, 2011  
PLANS APPROVAL DATE

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

To accompany plans dated 12-17-12



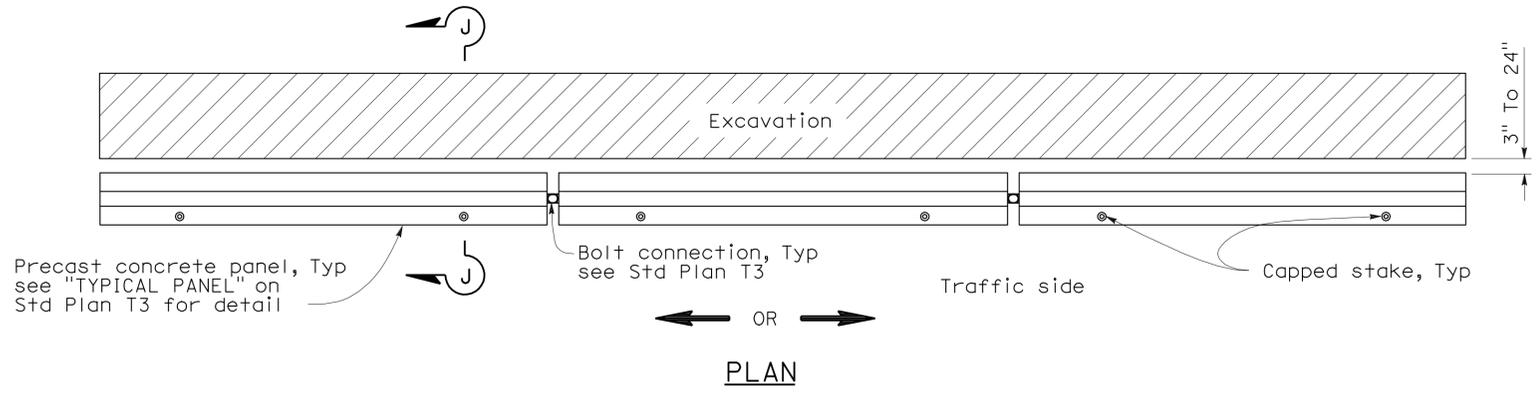
**RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC**  
See Note 1



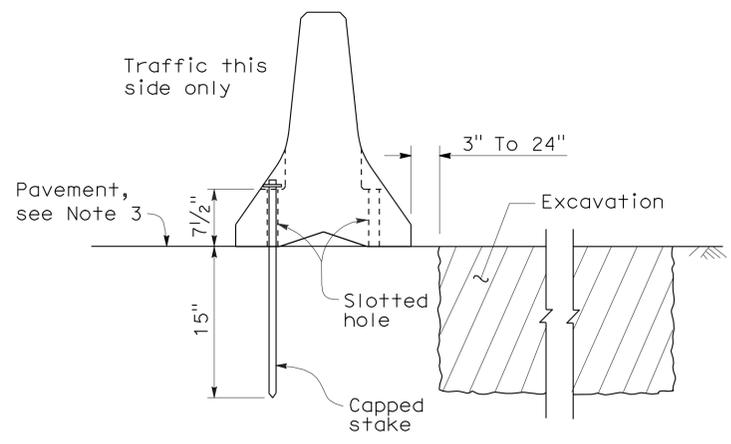
**SECTION I-I**

**NOTES:**

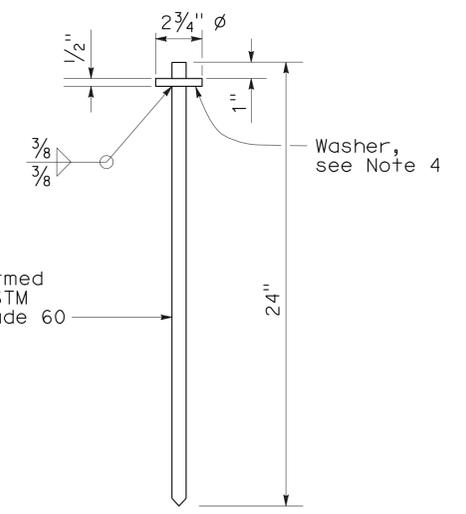
1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of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



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



**SECTION J-J**



**CAPPED STAKE DETAIL**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY RAILING  
(TYPE K)**

NO SCALE

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

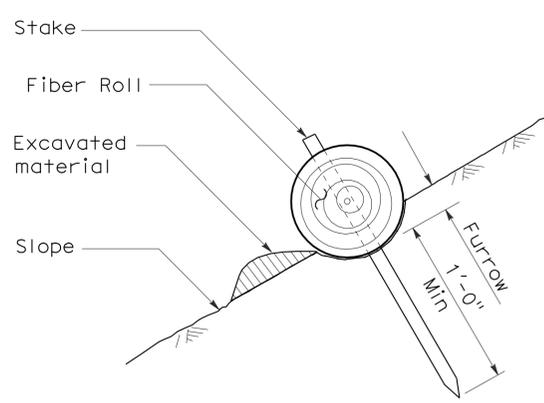
2006 NEW STANDARD PLAN NSP T3A



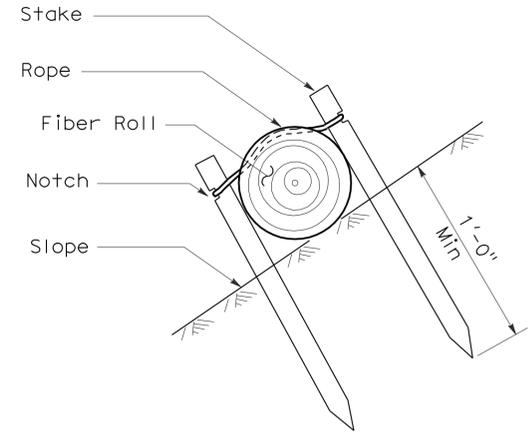
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	37	48

*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 April 3, 2009  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

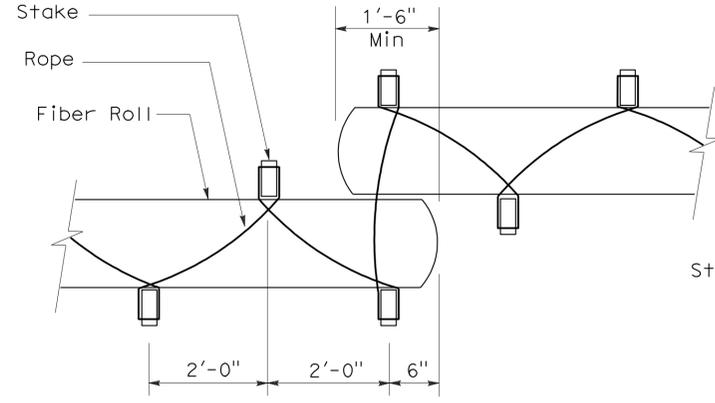
To accompany plans dated 12-17-12



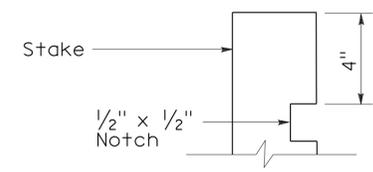
**SECTION**  
**TEMPORARY FIBER ROLL**  
**(TYPE 1)**



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

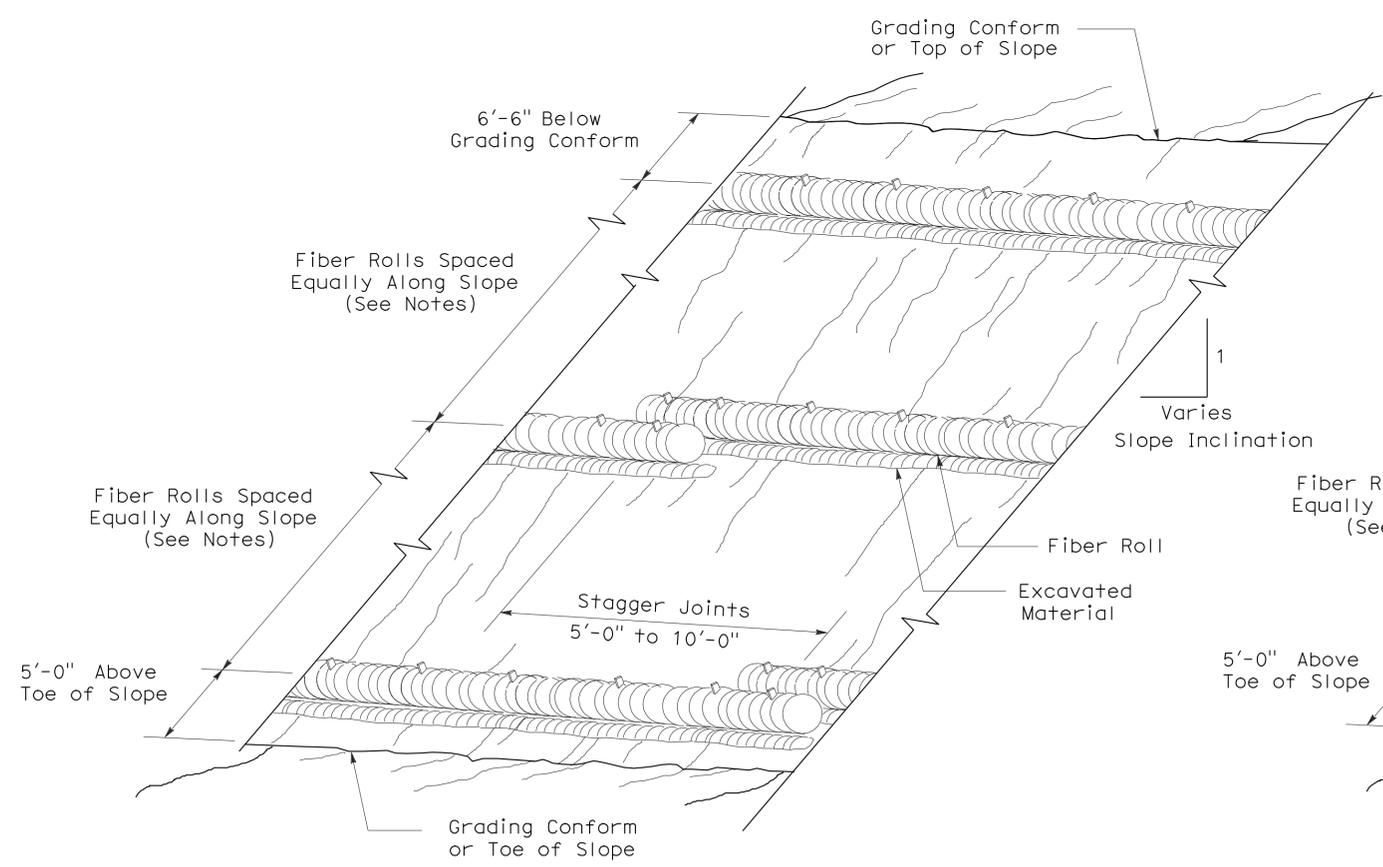


**PLAN**

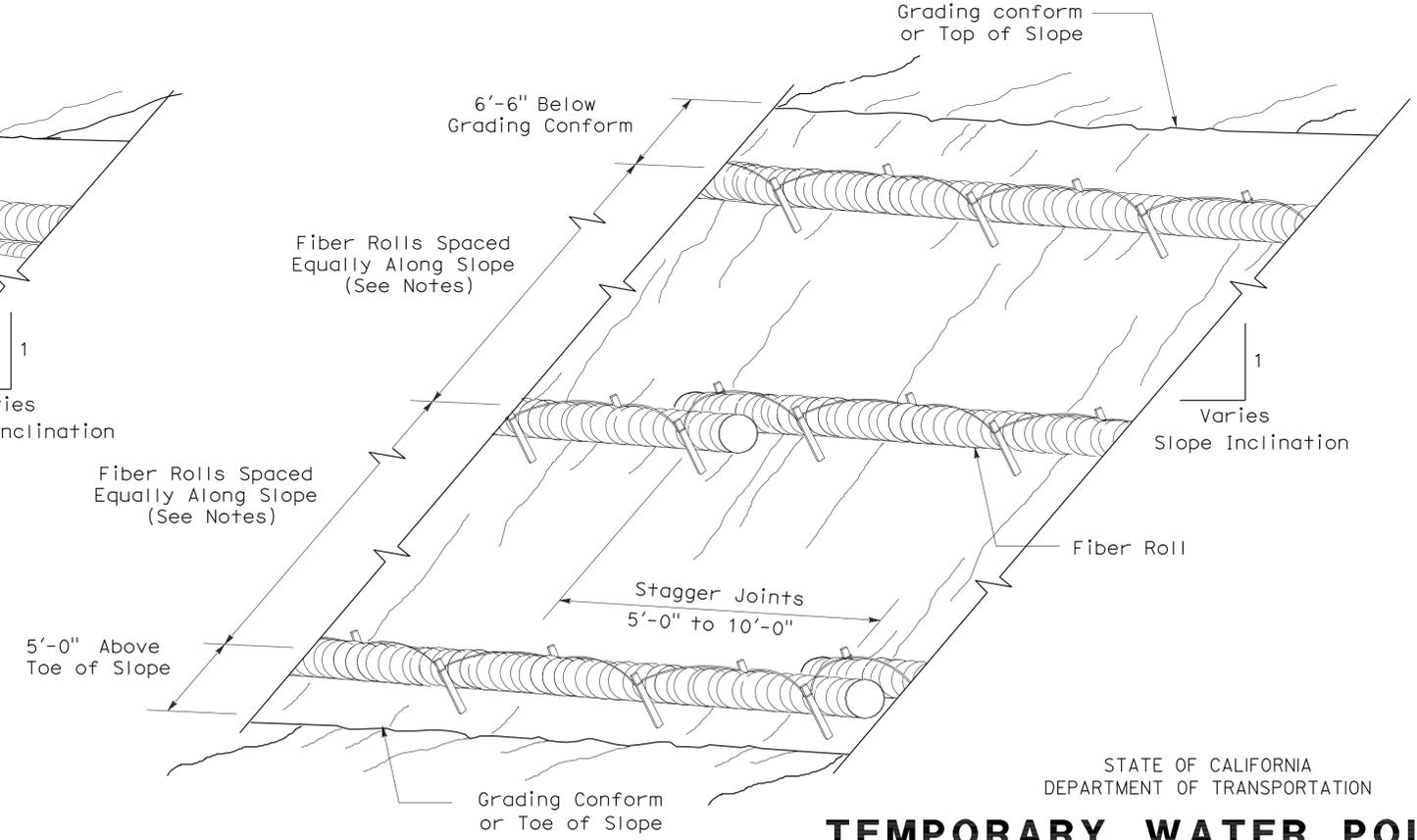


**ELEVATION**  
**STAKE NOTCH DETAIL**

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



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



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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)**

NO SCALE

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

**REVISED STANDARD PLAN RSP T56**

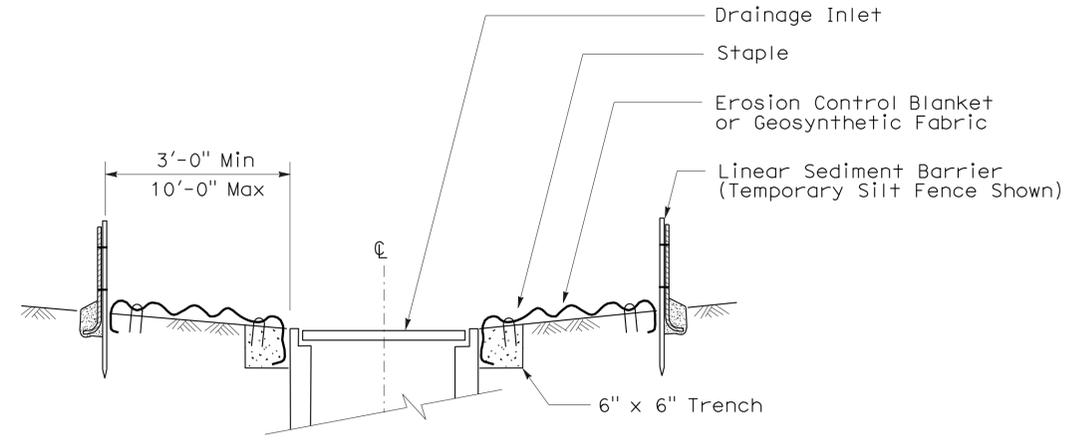
2006 REVISED STANDARD PLAN RSP T56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	38	48

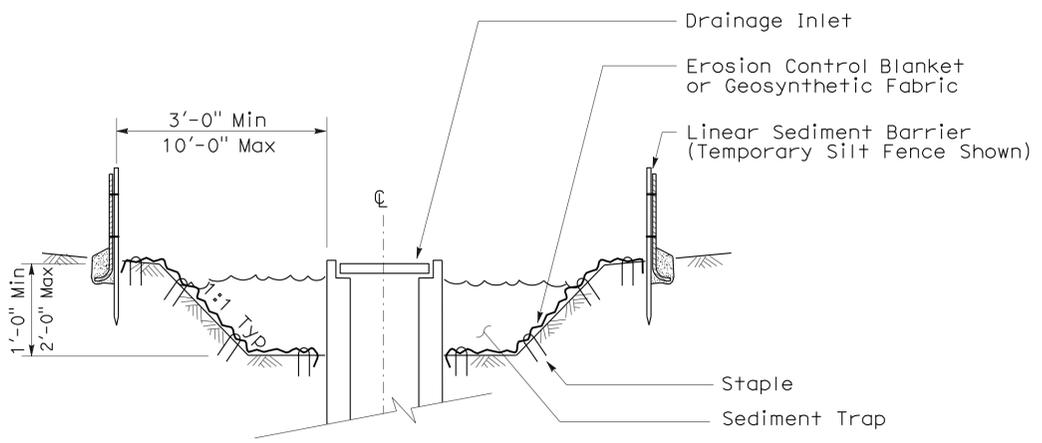
Robert B. Schott  
 LICENSED LANDSCAPE ARCHITECT  
 August 15, 2008  
 PLANS Approval DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



To accompany plans dated 12-17-12

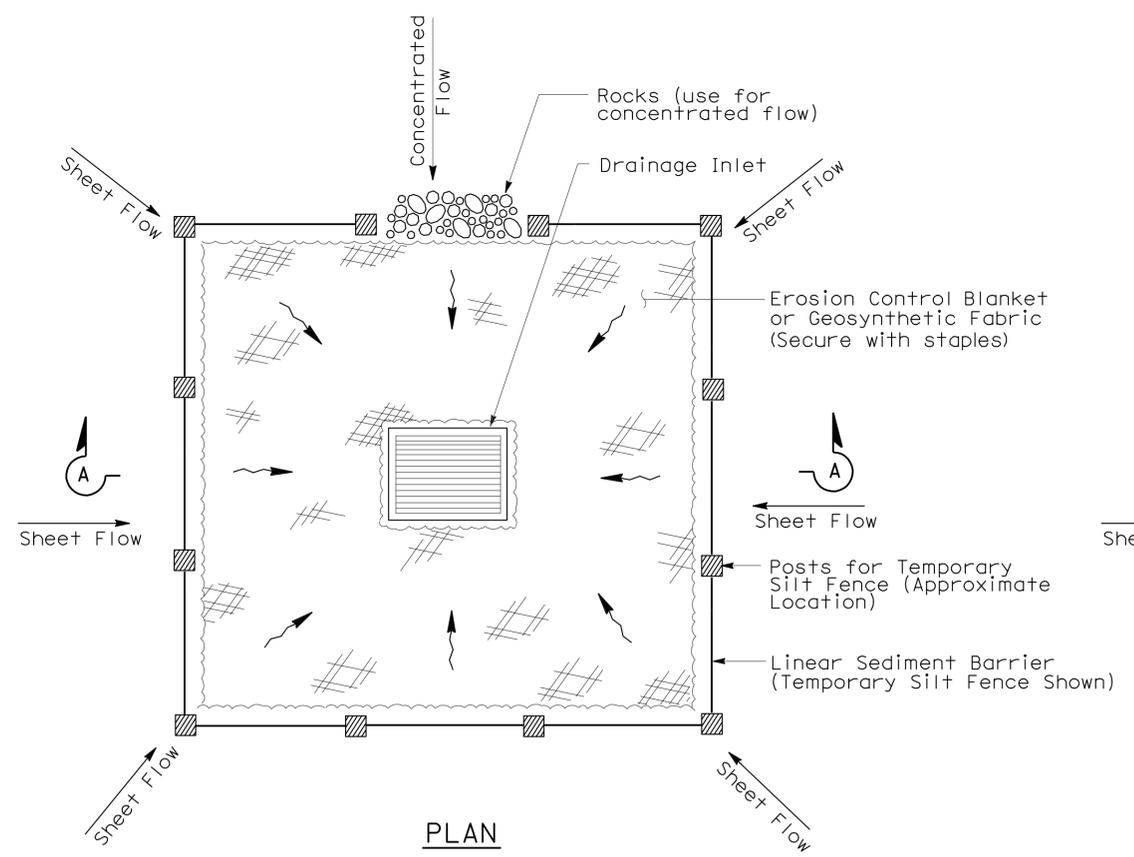


SECTION A-A

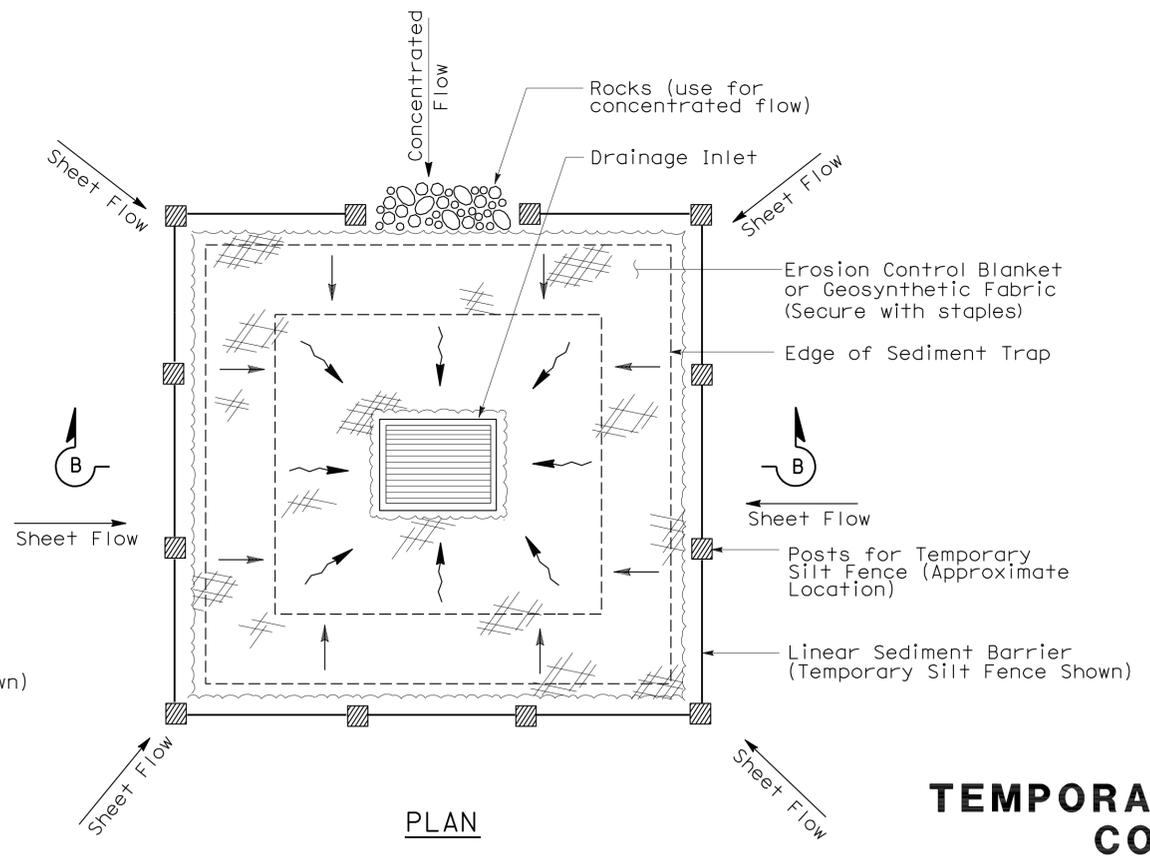


SECTION B-B

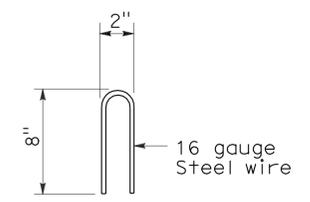
- NOTES:**
1. See Standard Plan T51 for Temporary Silt Fence.
  2. Dimensions may vary to fit field conditions.



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



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



STAPLE DETAIL

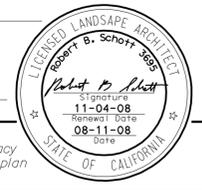
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS**  
**(TEMPORARY DRAINAGE INLET PROTECTION)**  
 NO SCALE

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

2006 NEW STANDARD PLAN NSP T61

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	39	48

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

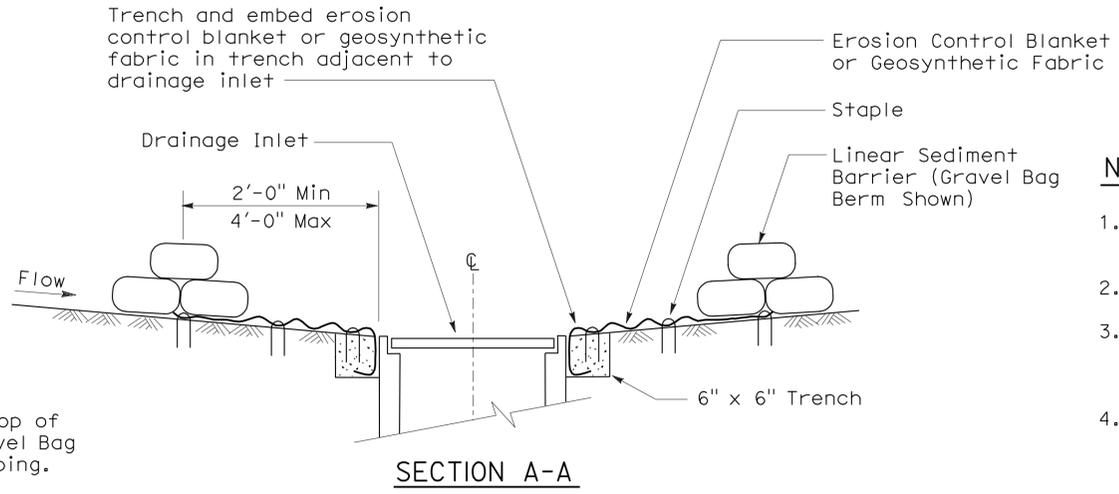
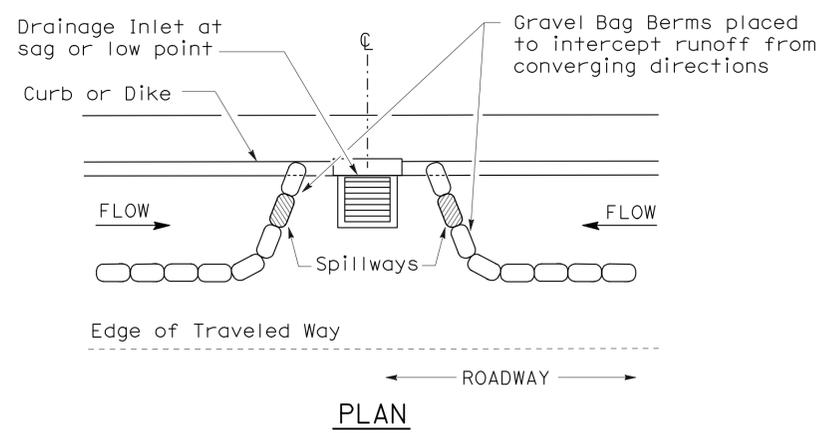


To accompany plans dated 12-17-12

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

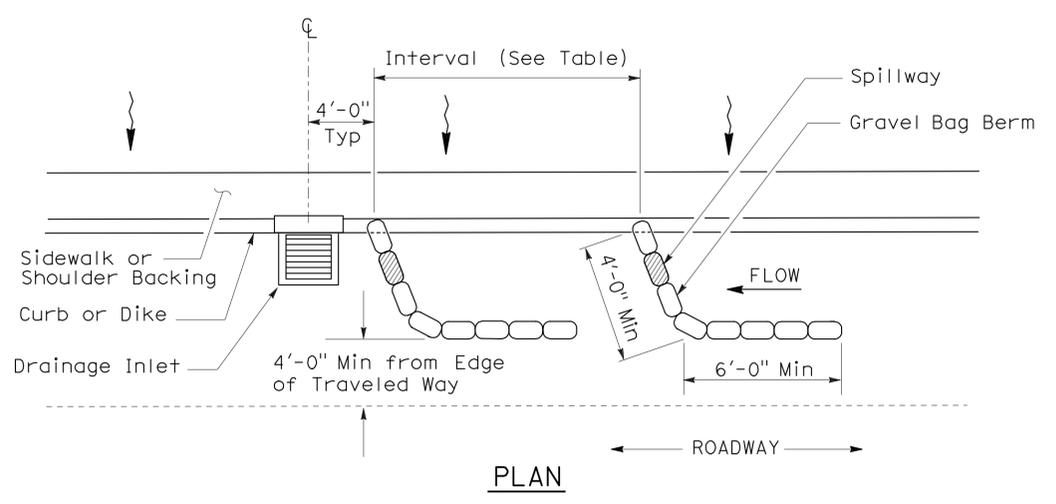
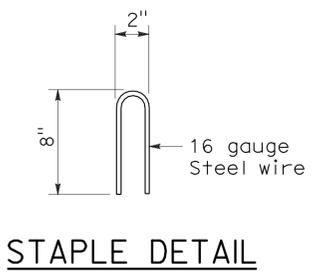
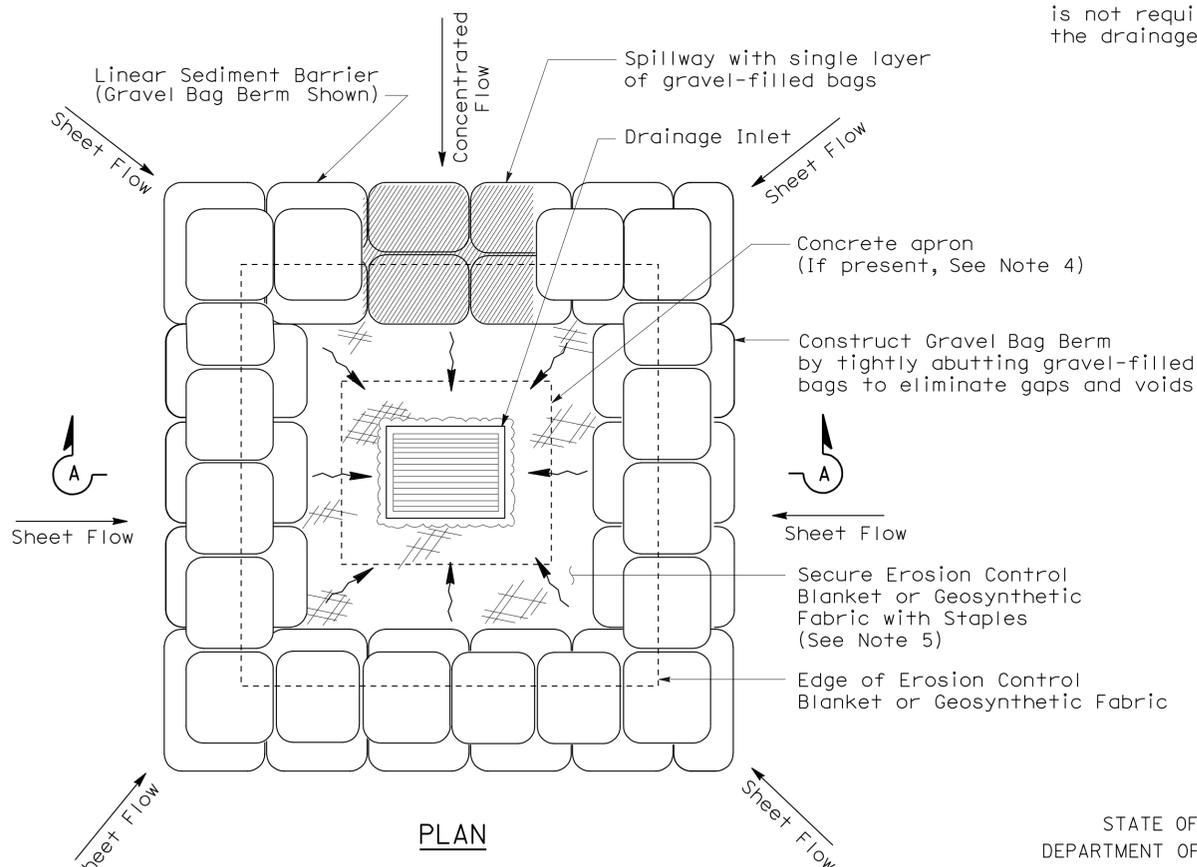
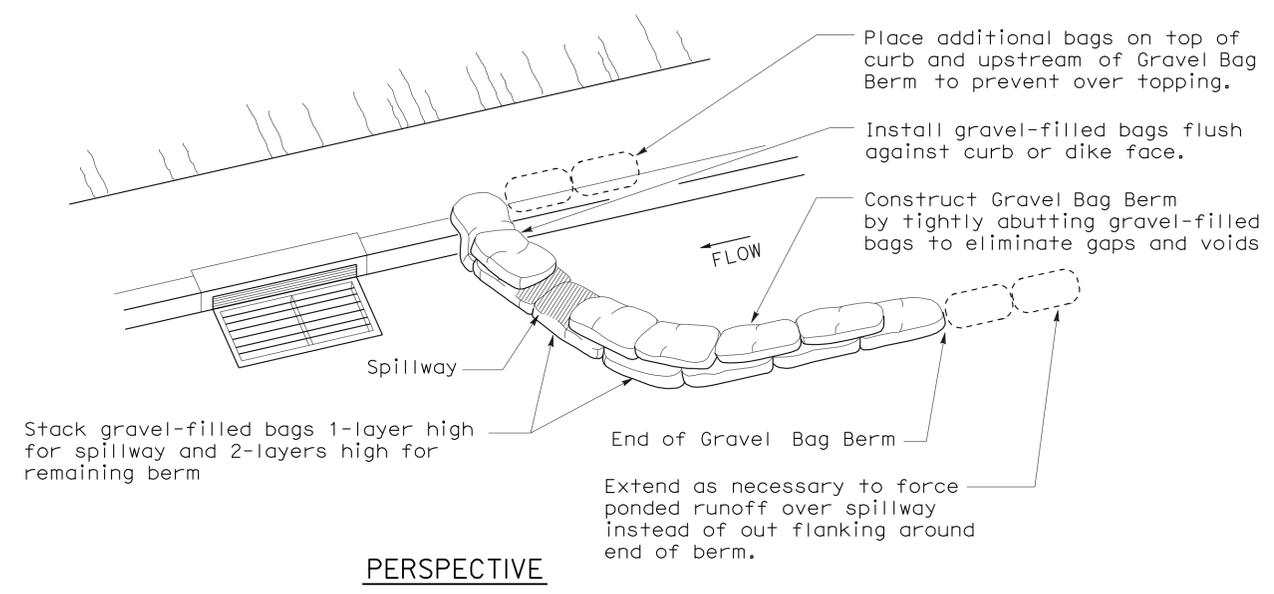
SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100'	75'	50'	25'	12'

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



#### NOTES:

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



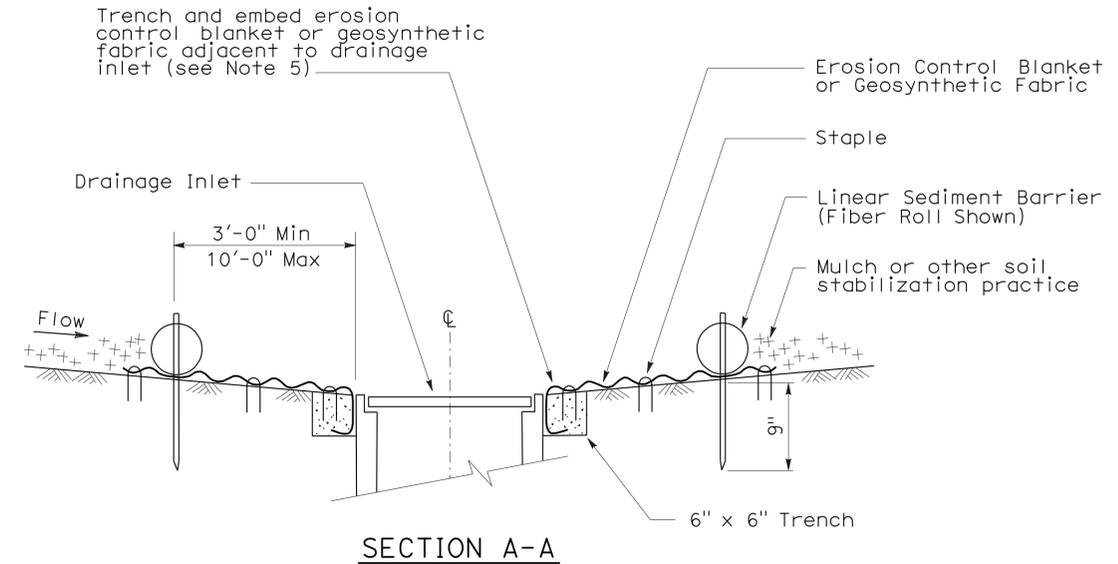
## TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

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

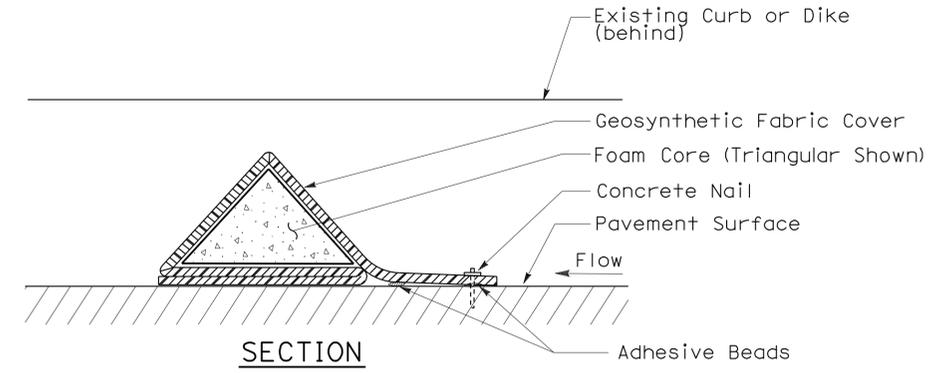
2006 NEW STANDARD PLAN NSP T62

**FLEXIBLE SEDIMENT BARRIER SPACING TABLE**

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



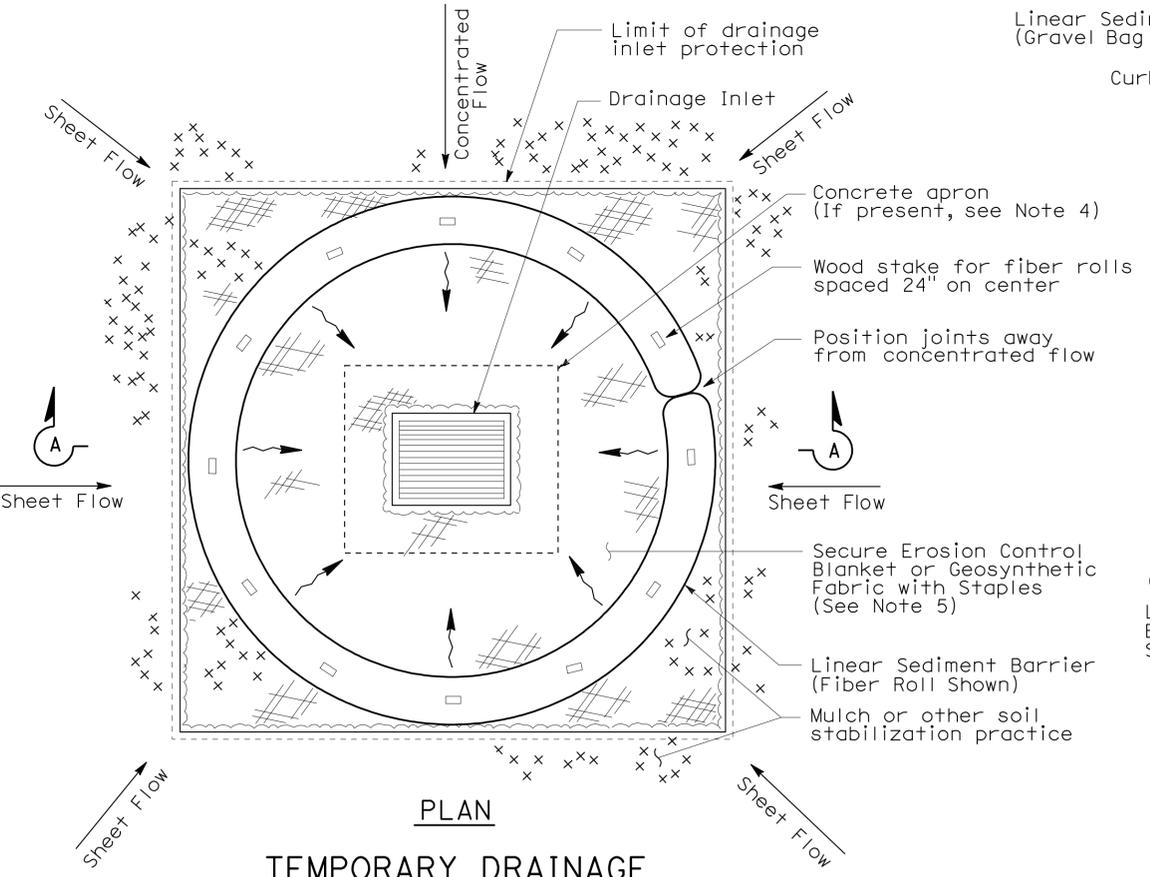
**SECTION A-A**



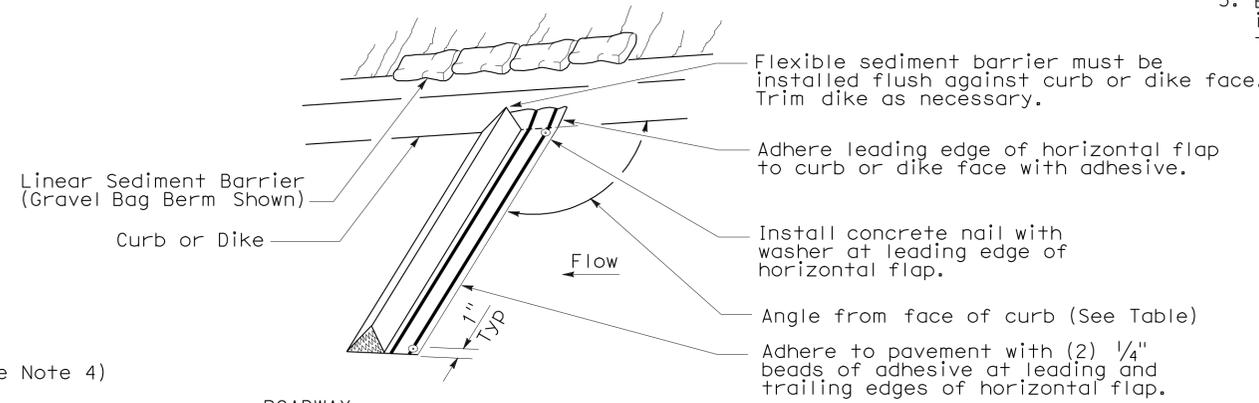
**SECTION FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)**

**NOTES:**

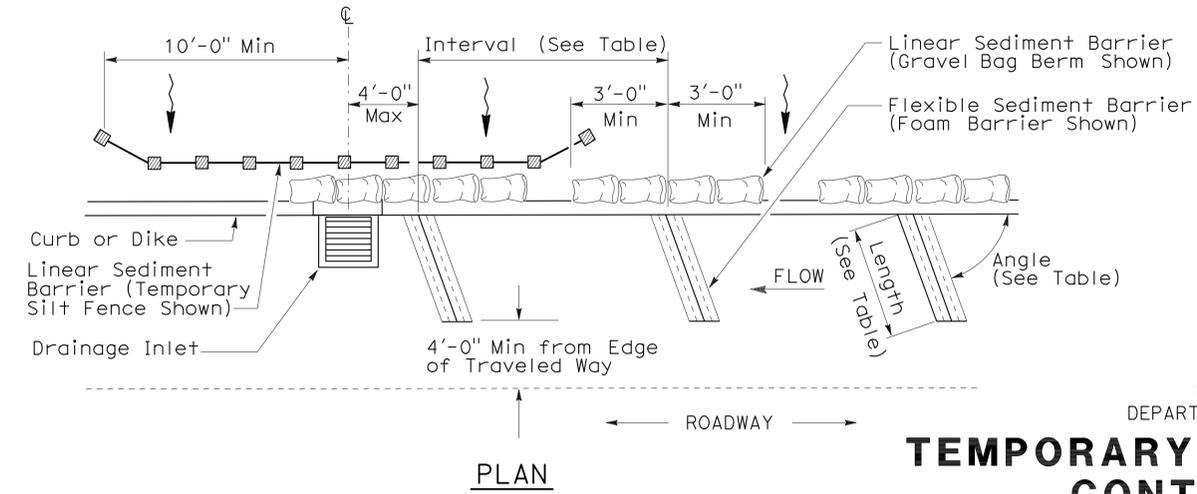
1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.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



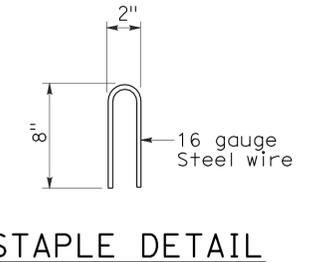
**PLAN TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)**



**PERSPECTIVE**



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



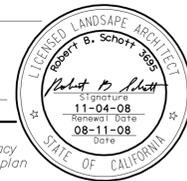
**STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)**

NO SCALE  
 NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

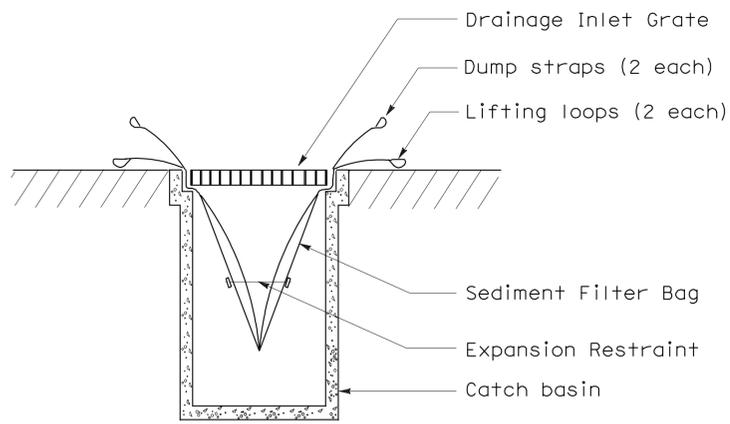
2006 NEW STANDARD PLAN NSP T63

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	41	48

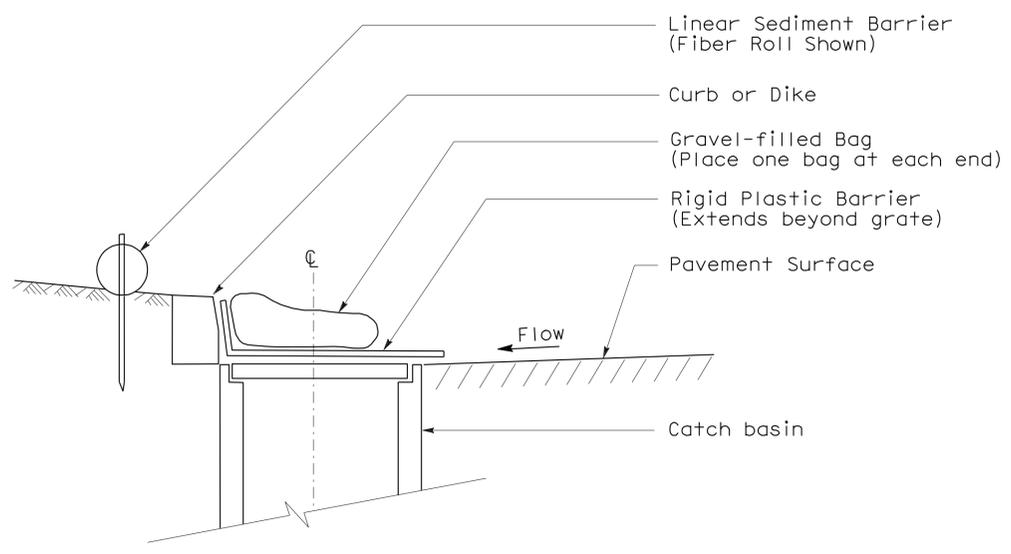
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 August 15, 2008  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



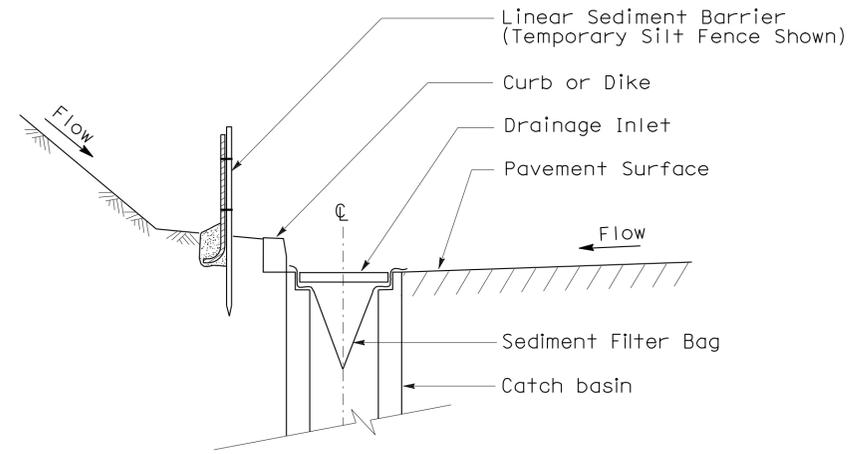
To accompany plans dated 12-17-12



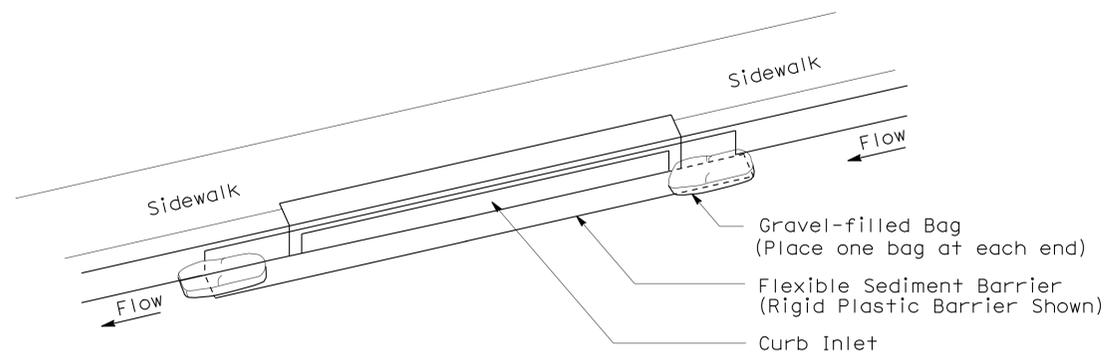
**SECTION B-B**  
**SEDIMENT FILTER BAG DETAIL**



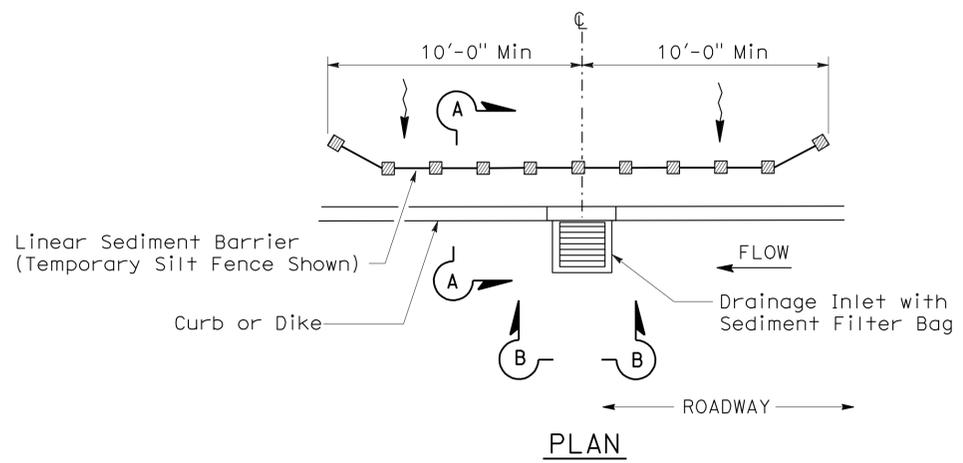
**SECTION**  
**TEMPORARY DRAINAGE**  
**INLET PROTECTION (TYPE 6A)**  
**(CATCH BASIN WITH GRATE)**



**SECTION A-A**



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



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

**NOTES:**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**NEW STANDARD PLAN NSP T64**

2006 NEW STANDARD PLAN NSP T64

# ELECTROLIERS

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

**NOTES:**

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

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

## STANDARD NOTES:

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

# ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

## PROPOSED EXISTING

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	42	48

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
PLANS APPROVAL DATE

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

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

To accompany plans dated 12-17-12

## SOFFIT AND WALL MOUNTED LUMINAIRES

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

### NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

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

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Oran	405	6.4/7.4	43	48

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

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

### CONDUIT

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

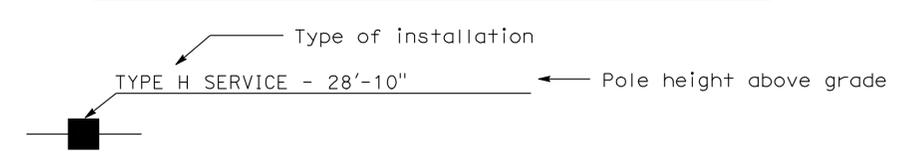
### SIGNAL EQUIPMENT

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

### SERVICE EQUIPMENT

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

### POLE-MOUNTED SERVICE DESIGNATION



### ILLUMINATED OVERHEAD SIGN

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

### SIGNAL EQUIPMENT Cont

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

### NOTES:

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

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

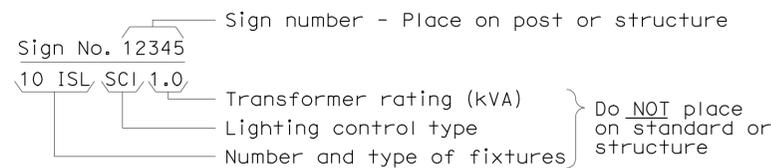
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B  
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

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

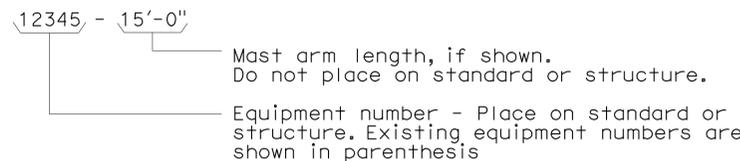
2006 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

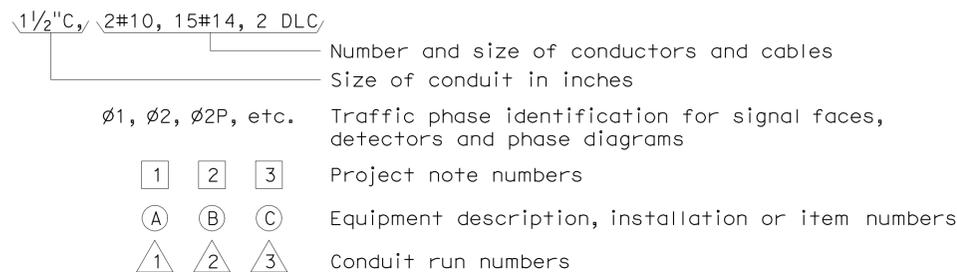
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



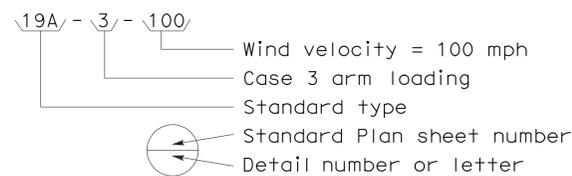
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



#### CONDUIT AND CONDUCTOR IDENTIFICATION:



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



### MISCELLANEOUS EQUIPMENT

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

### WIRING DIAGRAM LEGEND

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

### PULL BOXES

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

### VEHICLE DETECTORS

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

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

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	45	48

*Jeffery G. McRae*  
 REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
 PLANS APPROVAL DATE

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

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

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

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

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

To accompany plans dated 12-17-12

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

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

2006 REVISED STANDARD PLAN RSP ES-2C

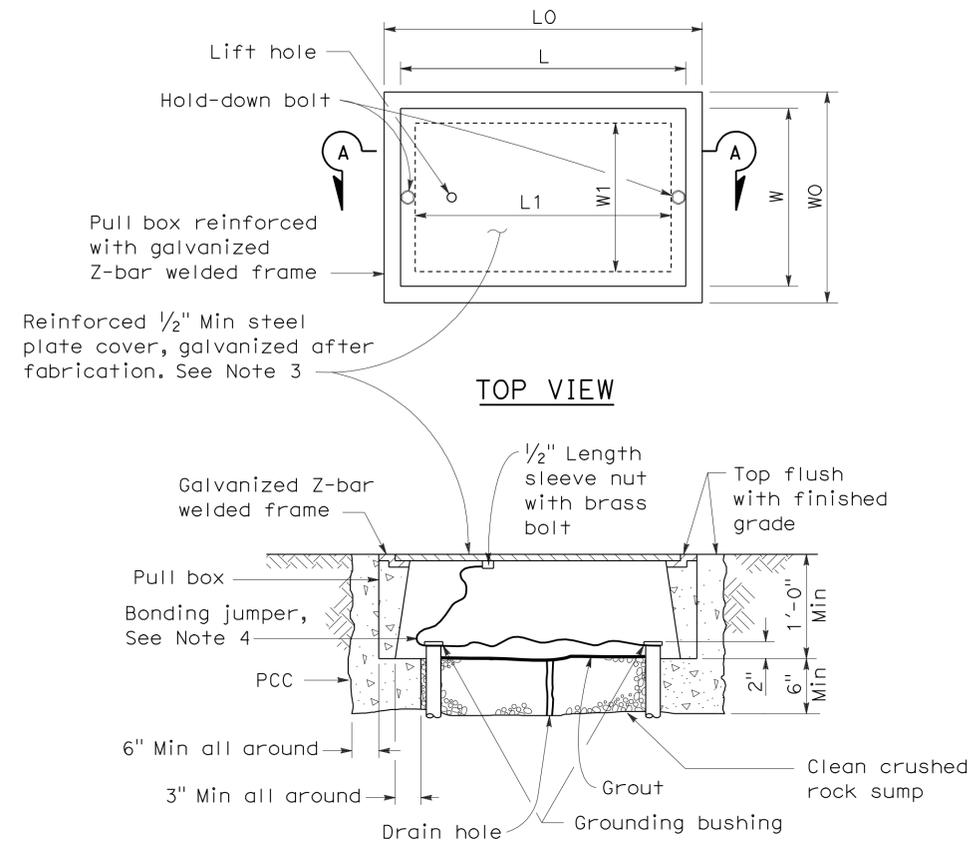
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	46	48

*Jeffery G. McRae*  
 REGISTERED ELECTRICAL ENGINEER  
 January 20, 2012  
 PLANS APPROVAL DATE

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

To accompany plans dated 12-17-12

2006 NEW STANDARD PLAN NSP ES-8B



**No. 3 1/2(T), No. 5(T) AND No. 6(T) TRAFFIC PULL BOX**

**NOTES ON PULL BOXES:**

- Traffic pull box shall be provided with steel cover and special concrete footing. Steel cover shall have embossed non-skid pattern.
- Steel reinforcing shall be as regularly used in the standard products of the respective manufacturer.
- Pull box covers must be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" Sprinkler control circuits, 50 V or less; "CALTRANS" On all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service.
  - No. 3 1/2(T) pull box.
    - "SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
    - "ST LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
  - No. 5(T) or 6(T) pull box.
    - "TRAFFIC SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
    - "STREET LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
    - "STREET LIGHTING-HIGH VOLTAGE" - Street or sign lighting circuits where voltage is above 600 V.
    - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
    - "RAMP METER" - Ramp meter circuits.
    - "COUNT STATION" - Count or speed monitor circuits.
    - "COMMUNICATION" - Communication circuits.
    - "TOS COMMUNICATIONS" - TOS communications line.
    - "TOS POWER" - TOS power.
    - "TDC POWER" - Telephone demarcation cabinet power.
    - "CCTV" - Closed circuit television circuits.
    - "TMS" - Traffic monitoring station circuits.
    - "CMS" - Changeable message sign circuits.
    - "HAR" - Highway advisory radio circuits.
- Bonding jumper for metal covers shall be 3' long, minimum.
- The nominal dimensions of the opening in which the cover sets must be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes must be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces must be flush within 1/8".

PULL BOX	BOX						COVER				
	Minimum * Thickness	Minimum Depth Box and Extension	W0	L0	L1	W1	L **	W **	R	Edge Thickness	Edge Taper
No. 3 1/2(T)	1 1/2"	1'-0"	1'-5"± 1"	1'-8 7/8"±	1'-2 1/2"±	10 5/8"± 1"	1'-8"±	1'-1 3/4"±	0"	1/2"	None
No. 5(T)	1 3/4"	1'-0"	1'-11 1/2"± 1"	2'-5 1/2"±	1'-7"±	1'-1"± 1"	2'-3"±	1'-4"±	0"	1/2"	None
No. 6(T)	2"	1'-0"	2'-6"± 1"	2'-11 1/2"±	1'-11 1/2"±	1'-5"± 1"	2'-9"±	1'-8"±	0"	1/2"	None

\* Excluding conduit web      \*\* Top dimension

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

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	6.4/7.4	47	48

*Douglas J. Dunrud*  
 REGISTERED CIVIL ENGINEER

October 5, 2007  
 PLANS APPROVAL DATE

Douglas J. Dunrud  
 No. C47240  
 Exp. 12-31-07  
 CIVIL  
 STATE OF CALIFORNIA

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

To accompany plans dated 12-17-12

**GENERAL NOTES:**

- A. For type of block and joint finish, see other sheets.
- B. When blocks are laid in stacked bond, ladder type, galvanized joint reinforcement shall be provided. A minimum of 2-9 gauge wires continuous at 4'-0" maximum to be used. Locate reinforcement in joints that are at the approximate midpoint between bond beams.
- C. Horizontal joints shall be tooled concave or may be weathered. Vertical joints shall be tooled concave or may be raked.
- D. For intermediate wall heights that are between the "H's" given, use the tabular information for the next higher "H".
- E. Masonry strengths are listed in the "SOUND WALL REINFORCEMENT TABLE". See Standard Plan B15-3.

**DESIGN NOTES:**

**DESIGN**

Uniform Building Code, 1997 Edition  
and the Bridge Design Specifications.

**DESIGN WIND LOAD**

20 psf

**DESIGN SEISMIC LOAD**

0.57 Dead load

**REINFORCED CONCRETE**

f'c = 3.6 ksi  
fy = 60 ksi

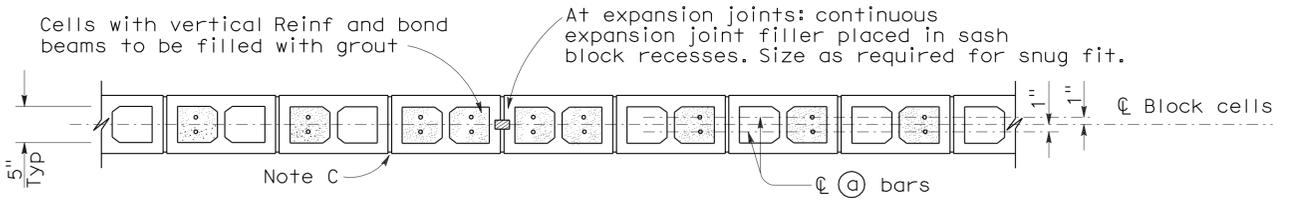
**CONCRETE MASONRY**

**REGULAR STRENGTH**

f'm = 1500 psi  
fb = 495 psi  
fs = 24,000 psi  
n = 25.8

**HIGH STRENGTH**

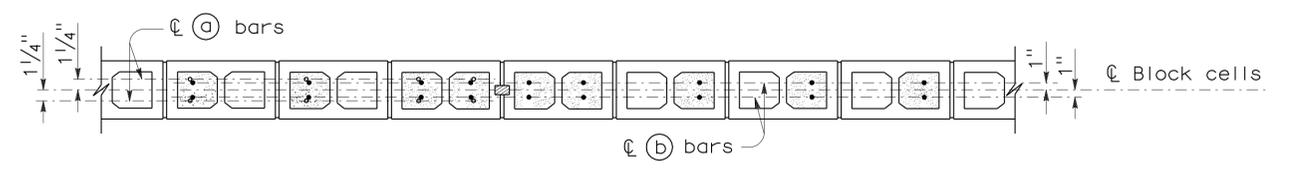
f'm = 2000 psi    f'm = 2500 psi  
fb = 660 psi     fb = 830 psi  
fs = 24,000 psi   fs = 24,000 psi  
n = 19.3          n = 15.5



**SECTION A-A**

For details not shown, see other sections.

**H=6'-0" THRU H=10'-0"**



**SECTION A-A**

For details not shown, see other sections.

**H=12'-0" THRU H=16'-0"**

**SECTION B-B**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**SOUND WALL  
MASONRY BLOCK ON PILE CAP  
DETAILS (2)**

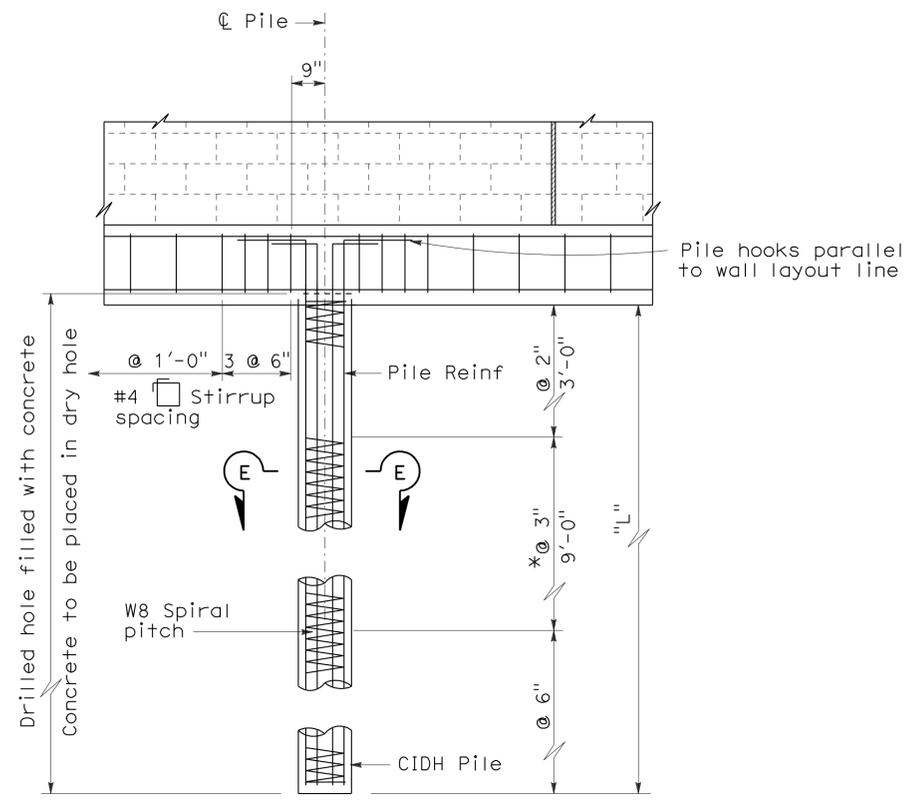
NO SCALE

RSP B15-4 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B15-4  
DATED MAY 1, 2006 - PAGE 294 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP B15-4**

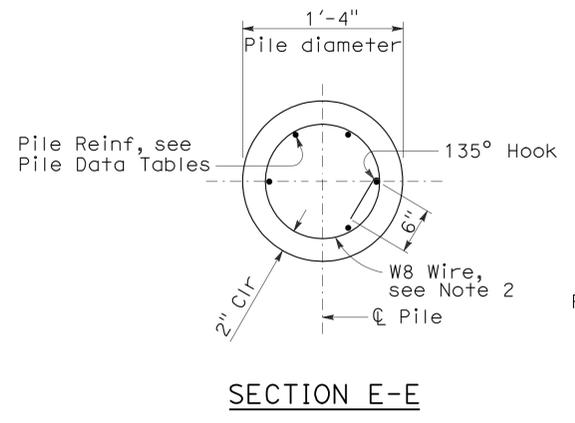
2006 REVISED STANDARD PLAN RSP B15-4

To accompany plans dated 12-17-12

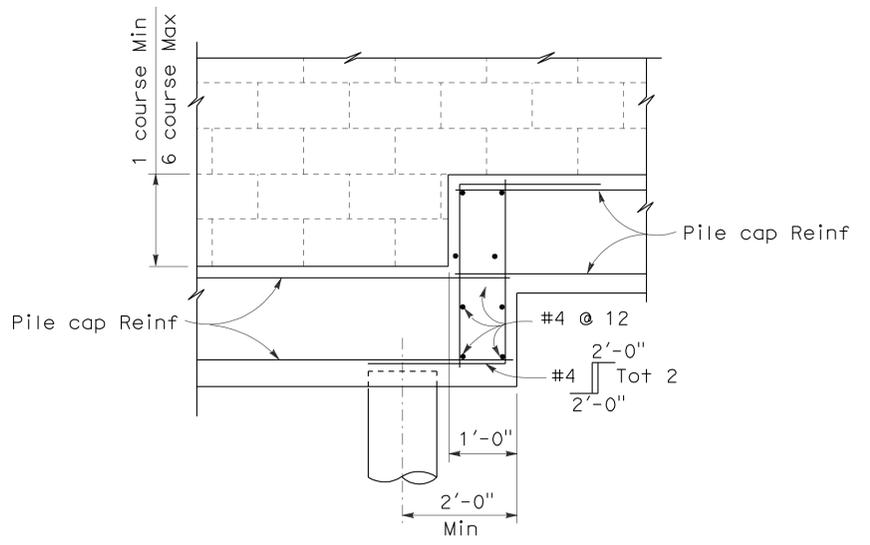


**DETAIL D**

\* @ 2" at option of Contractor



**SECTION E-E**



**PILE CAP STEP DETAIL**

**NOTES:**

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

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

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

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

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

2006 REVISED STANDARD PLAN RSP B15-5