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

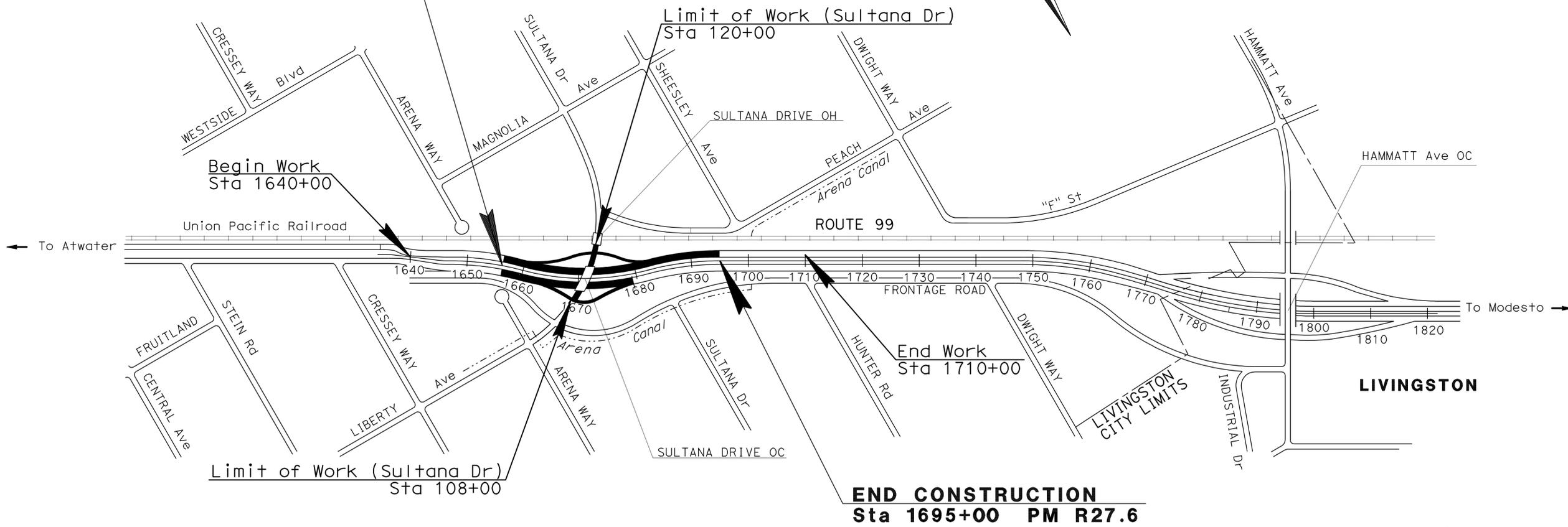
STATE OF CALIFORNIA  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN MERCED COUNTY**  
**NEAR LIVINGSTON**  
**FROM 0.3 MILE SOUTH TO 0.5 MILE NORTH**  
**OF SULTANA DRIVE OVERCROSSING**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	1	34

LOCATION MAP

**BEGIN CONSTRUCTION**  
**Sta 1657+00 PM R26.8**



**END CONSTRUCTION**  
**Sta 1695+00 PM R27.6**

NO SCALE

PROJECT MANAGER  
**PETER JEMERICBE**  
 SENIOR LANDSCAPE ARCHITECT  
**BRAD COLE**

*Edward A. Hibbs*  
 LICENSED LANDSCAPE ARCHITECT

November 17, 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.

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

**CONTRACT No. 10-3169C4**

LAST REVISION    DATE PLOTTED => 20-06-2009  
 TIME PLOTTED => 09-01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	2	34

*Edward A. Hibbs*  
 LICENSED LANDSCAPE ARCHITECT  
 11-17-08  
 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.

**ABBREVIATIONS**

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

**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			MINIMUM DISTANCE (Ft) FROM					ON CENTER (Ft)		
																TRVD WAY	Pvmt	FENCE	WALL	PAVED DITCH		EARTH DITCH	
A	1		<u>CHILOPSIS LINEARIS</u>	DESERT WILLOW	No. 1	54	⑧	②	II	—	1/4 CF	1 Pkt	1/4 LB	1 CF	—	-	20	15	15	15	17	15	SHRUB
	2		<u>LAGERSTROEMIA INDICA TRI 'MUSKOGEE'</u>	CRAPE MYRTLE - LAVENDER	No. 1	4	⑧	②	II ⑩	—	1/4 CF	1 Pkt	1/4 LB	1 CF	—	30	-	15	15	15	17	④	SHRUB ⑥
	3		<u>LAGERSTROEMIA INDICA TRI 'NATCHEZ'</u>	CRAPE MYRTLE - WHITE	No. 1	4	⑧	②	II ⑩	—	1/4 CF	1 Pkt	1/4 LB	1 CF	—	30	-	15	15	15	17	④	SHRUB ⑥
	4		<u>LAGERSTROEMIA INDICA TRI 'TUSCARORA'</u>	CRAPE MYRTLE - PINK	No. 1	4	⑧	②	II ⑩	—	1/4 CF	1 Pkt	1/4 LB	1 CF	—	30	-	15	15	15	17	④	SHRUB ⑥
	5		<u>PITOSPORUM TOBIRA 'VARIGATA'</u>	VARIGATED TOBIRA	No. 1	320	⑧	②	II	—	1/4 CF	1 Pkt	1/4 LB	1 CF	—	-	12	12	10	10	12	④	SHRUB
	6		<u>RHUS LANCEA</u>	AFRICAN SUMAC	No. 1	157	⑧	②	II	—	1/4 CF	1 Pkt	1/4 LB	1 CF	—	-	20	15	15	15	17	4	SHRUB
	7		<u>ROSA BANKSAIE 'LUTEA'</u>	BANKS' YELLOW ROSE	No. 1	106	⑧	②	II	—	1/4 CF	1 Pkt	1/4 LB	1 CF	—	-	15	15	-	13	10	10	SHRUB
	8		<u>ROSA MEIDILAND 'MEIPADAN'</u>	MAGIC MEIDILAND ROSE	No. 1	189	⑧	②	II	—	1/4 CF	1 Pkt	1/4 LB	1 CF	—	-	8	8	8	8	10	6.5	SHRUB
	9		<u>ROSA MEIDILAND 'MEICOUBLAN'</u>	WHITE MEIDILAND ROSE	No. 1	145	⑧	②	II	—	1/4 CF	1 Pkt	1/4 LB	1 CF	—	-	8	8	8	8	10	6.5	SHRUB
	10		<u>SALVIA 'BEE'S BLISS'</u>	BEE'S BLISS SALVIA	No. 1	30	⑧	②	II	—	1/4 CF	1 Pkt	1/4 LB	1 CF	—	-	8	8	8	8	8	10	SHRUB
B	11		<u>CEDRUS DEODORA</u>	DEODAR CEDAR	No. 5	36	⑧	②	II	—	1 CF	3 Pkt	3/8 LB	1 CF	⑨	40	-	30	30	30	32	④	TREE
	12		<u>LAGERSTROEMIA IND. 'WATERMELON RED'</u>	CRAPE MYRTLE	No. 5	32	⑧	②	II	—	1 CF	3 Pkt	3/8 LB	1 CF	—	30	-	15	15	15	17	④	SHRUB
	13		<u>PISTACHE CHINENSIS 'KEITH DAVEY'</u>	CHINESE PISTACHE	No. 5	88	⑧	②	II	—	1 CF	3 Pkt	3/8 LB	1 CF	⑨	30	-	20	20	20	22	④	TREE
	14		<u>QUERCUS LOBATA</u>	VALLEY OAK	No. 5	52	⑧	②	II	—	1 CF	3 Pkt	3/8 LB	1 CF	⑨	30	-	20	20	20	23	④	TREE
	15		<u>ROBINIA AMBIGUA 'IDAHOENSIS'</u>	IDAHO LOCUST	No. 5	8	⑧	②	II	—	1 CF	3 Pkt	3/8 LB	1 CF	⑨	30	-	15	10	10	11	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 - Does not apply to mulch areas.
- ④- As shown on plans.
- 5 - Unless otherwise shown on plans.

**LEGEND:**

- MULCH AREAS
- ROADSIDE CLEARING AND PLT ESTB LIMITS (Typ)

**NOTE:**

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

**PLANT LIST PL-1**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	3	34

*Edward A. Hibbs*  
 LICENSED LANDSCAPE ARCHITECT  
 11-17-08  
 PLANS APPROVAL DATE

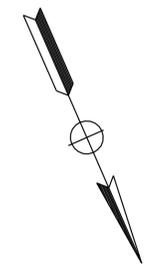
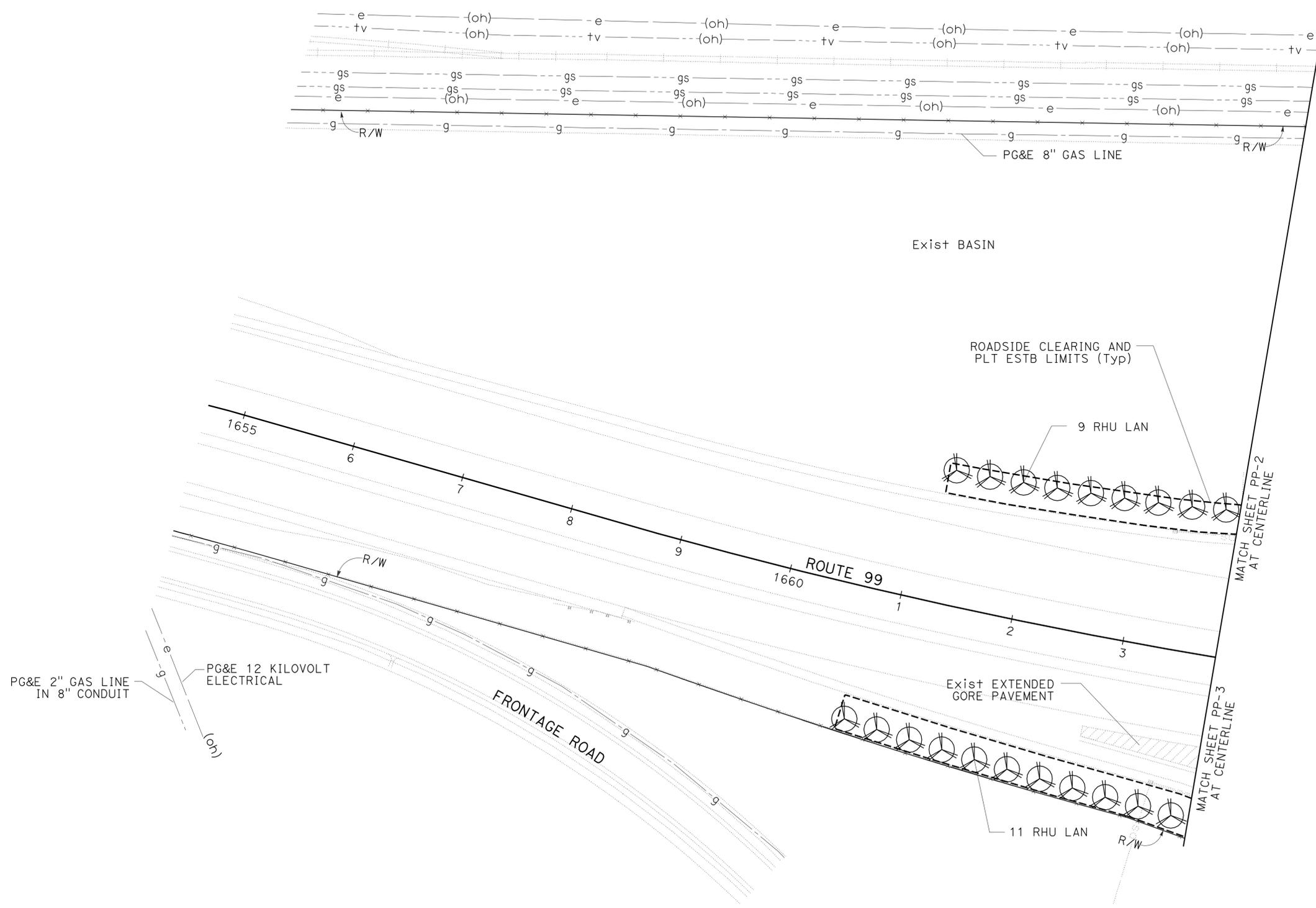
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

NOTE: FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

ABBREVIATIONS:

PG&E - PACIFIC GAS AND ELECTRIC  
 AT&T - AMERICAN TELEPHONE AND TELEGRAPH

REVISED BY	DATE REVISED
ED HIBBS	KEN THOMSON
CALCULATED/DESIGNED BY	CHECKED BY
SENIOR LANDSCAPE ARCHITECT	BRAD COLE
LANDSCAPE ARCHITECTURE	LANDSCAPE ARCHITECTURE



THIS PLAN ACCURATE FOR PLANTING WORK ONLY.

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

NOTE: FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

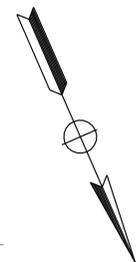
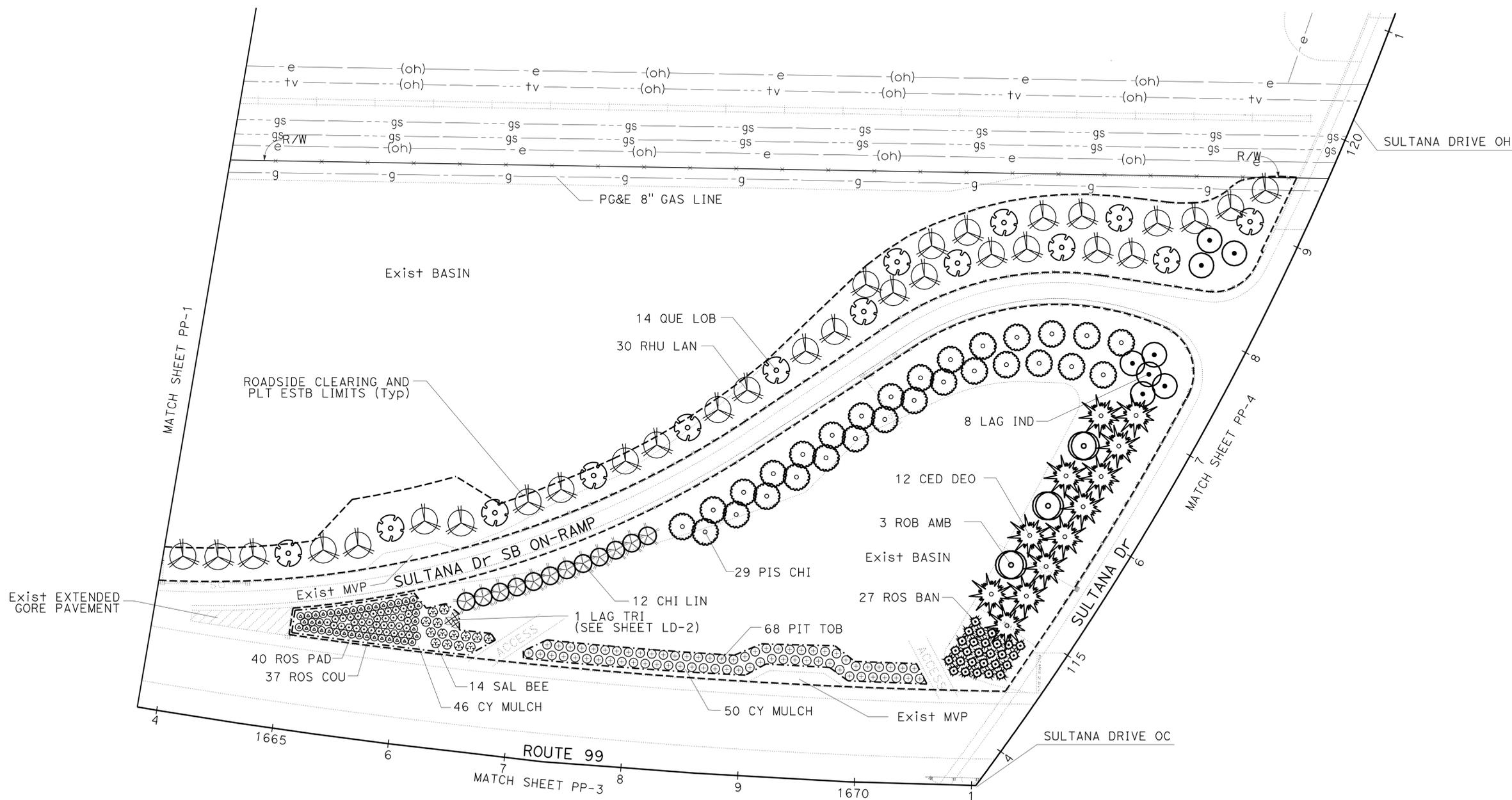
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	4	34

*Edward A. Hibbs*  
 LICENSED LANDSCAPE ARCHITECT

11-17-08  
 PLANS APPROVAL DATE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	SENIOR LANDSCAPE ARCHITECT	CALCULATED/DESIGNED BY	REVISOR	DATE
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	BRAD COLE	CHECKED BY	ED HIBBS	11-17-08
			KEN THOMSON	



THIS PLAN ACCURATE FOR PLANTING WORK ONLY.

**PLANTING PLAN**  
**PP-2**

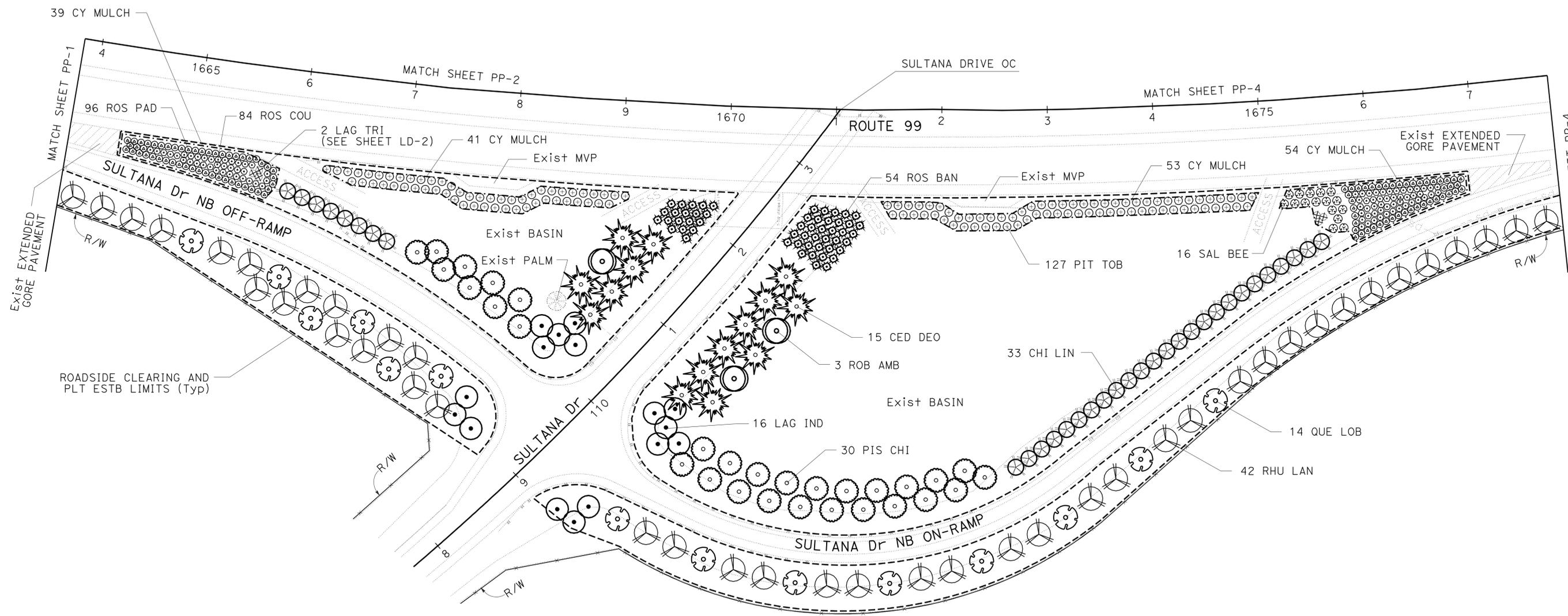
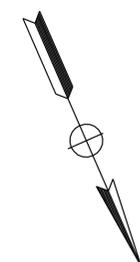
SCALE: 1"=50'

NOTE: FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	5	34

*Edward A. Hibbs*  
 LICENSED LANDSCAPE ARCHITECT  
 11-17-08  
 PLANS APPROVAL DATE

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ROADSIDE CLEARING AND PLT ESTB LIMITS (Typ)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 BRAD COLE  
 CHECKED BY  
 ED HIBBS  
 KEN THOMSON  
 REVISOR BY  
 DATE REVISOR

THIS PLAN ACCURATE FOR PLANTING WORK ONLY.

**PLANTING PLAN**  
**PP-3**

SCALE: 1"=50'

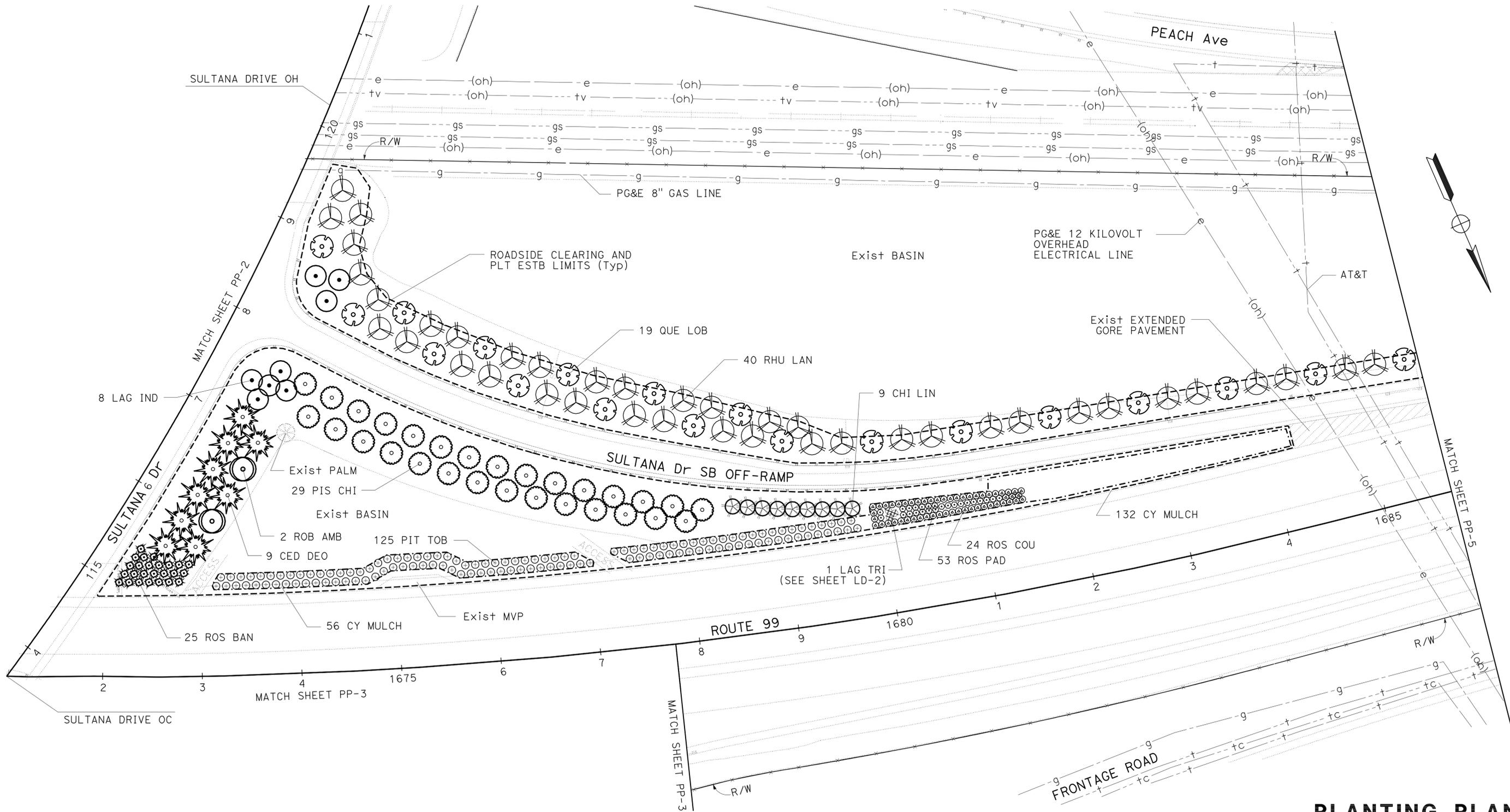
NOTE: FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA,  
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	6	34

*Edward A. Hibbs*  
 LICENSED LANDSCAPE ARCHITECT  
 11-17-08  
 PLANS APPROVAL DATE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT: BRAD COLE  
 CHECKED BY: ED HIBBS  
 DESIGNED BY: KEN THOMSON  
 REVISIONS: (None listed)



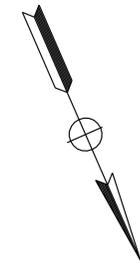
THIS PLAN ACCURATE FOR PLANTING WORK ONLY.

**PLANTING PLAN**  
**PP-4**

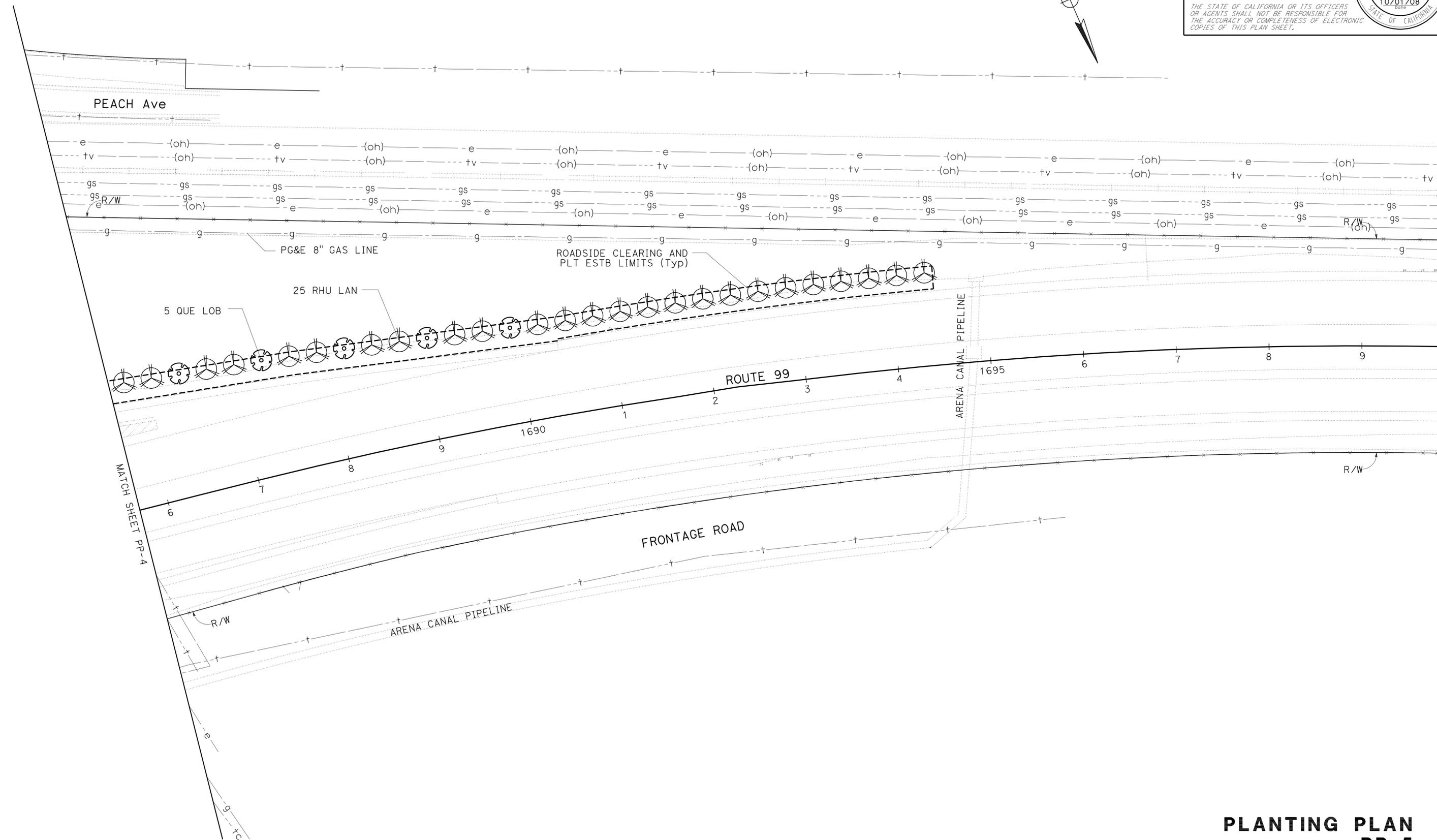
SCALE: 1"=50'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	7	34
<i>Edward A. Hibbs</i> LICENSED LANDSCAPE ARCHITECT 11-17-08 PLANS APPROVAL DATE <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.</small>					

NOTE: FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	REVISOR	DATE
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	ED HIBBS	11-17-08
SENIOR LANDSCAPE ARCHITECT	KEN THOMSON	
BRAD COLE		
CHECKED BY		
DESIGNED BY		



THIS PLAN ACCURATE FOR PLANTING WORK ONLY.

**PLANTING PLAN**  
SCALE: 1"=50'  
**PP-5**



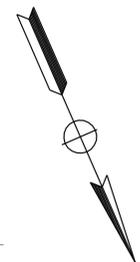
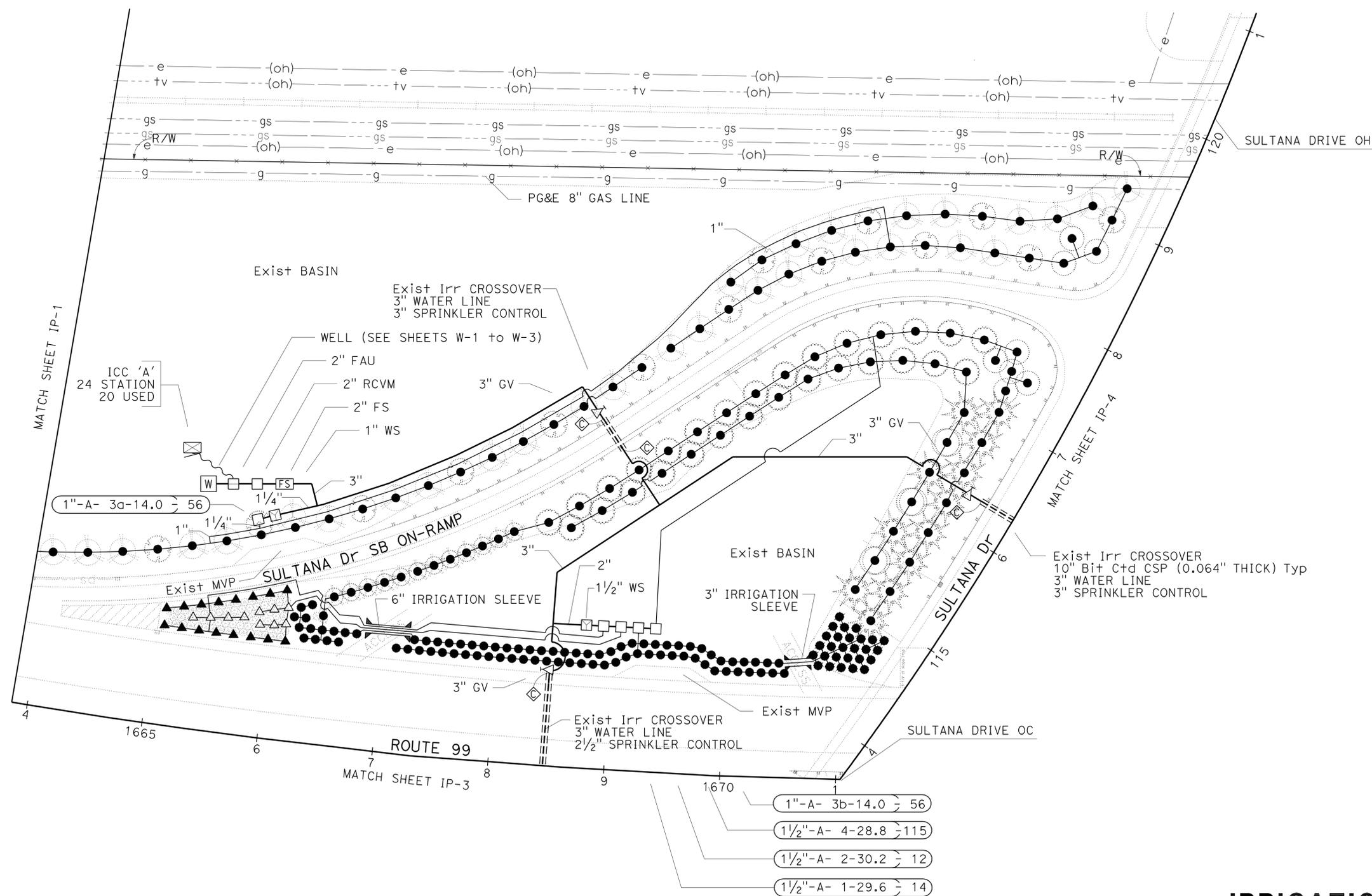
NOTE: FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA,  
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	9	34

*Edward A. Hibbs*  
 LICENSED LANDSCAPE ARCHITECT  
 11-17-08  
 PLANS APPROVAL DATE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 BRAD COLE  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 ED HIBBS  
 KEN THOMSON  
 REVISED BY  
 DATE REVISED



THIS PLAN ACCURATE FOR IRRIGATION WORK ONLY.

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



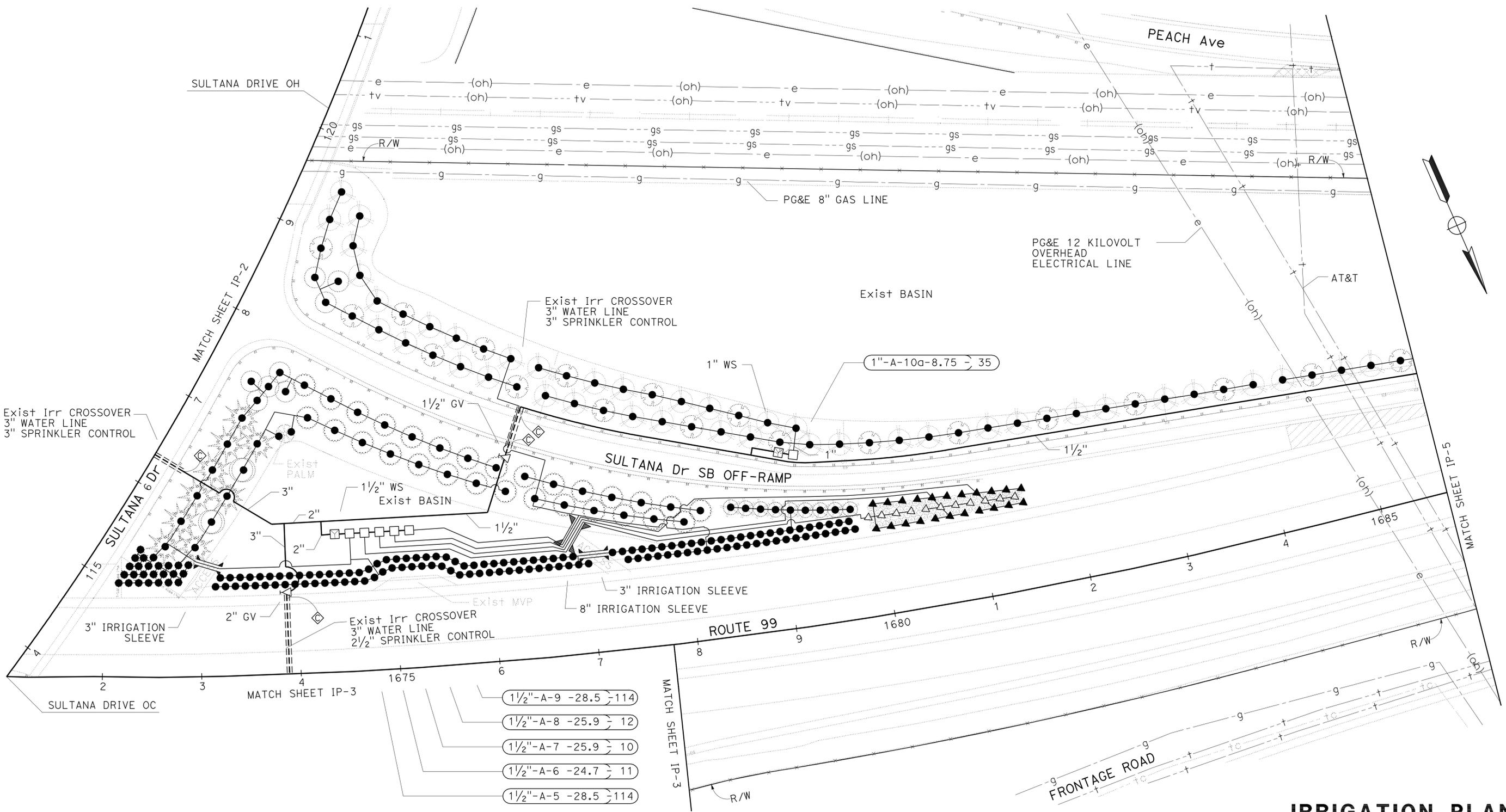
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	11	34

*Edward A. Hibbs*  
 LICENSED LANDSCAPE ARCHITECT  
 11-17-08  
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	LANDSCAPE ARCHITECTURE	SENIOR LANDSCAPE ARCHITECT	CALCULATED/DESIGNED BY	ED HIBBS	REVISOR	ED HIBBS
			CHECKED BY	KEN THOMSON	DATE	



- 1 1/2" - A-9 -28.5 -114
- 1 1/2" - A-8 -25.9 -12
- 1 1/2" - A-7 -25.9 -10
- 1 1/2" - A-6 -24.7 -11
- 1 1/2" - A-5 -28.5 -114

THIS PLAN ACCURATE FOR IRRIGATION WORK ONLY.

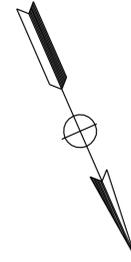
**IRRIGATION PLAN**  
**IP-4**  
 SCALE: 1"=50'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	12	34

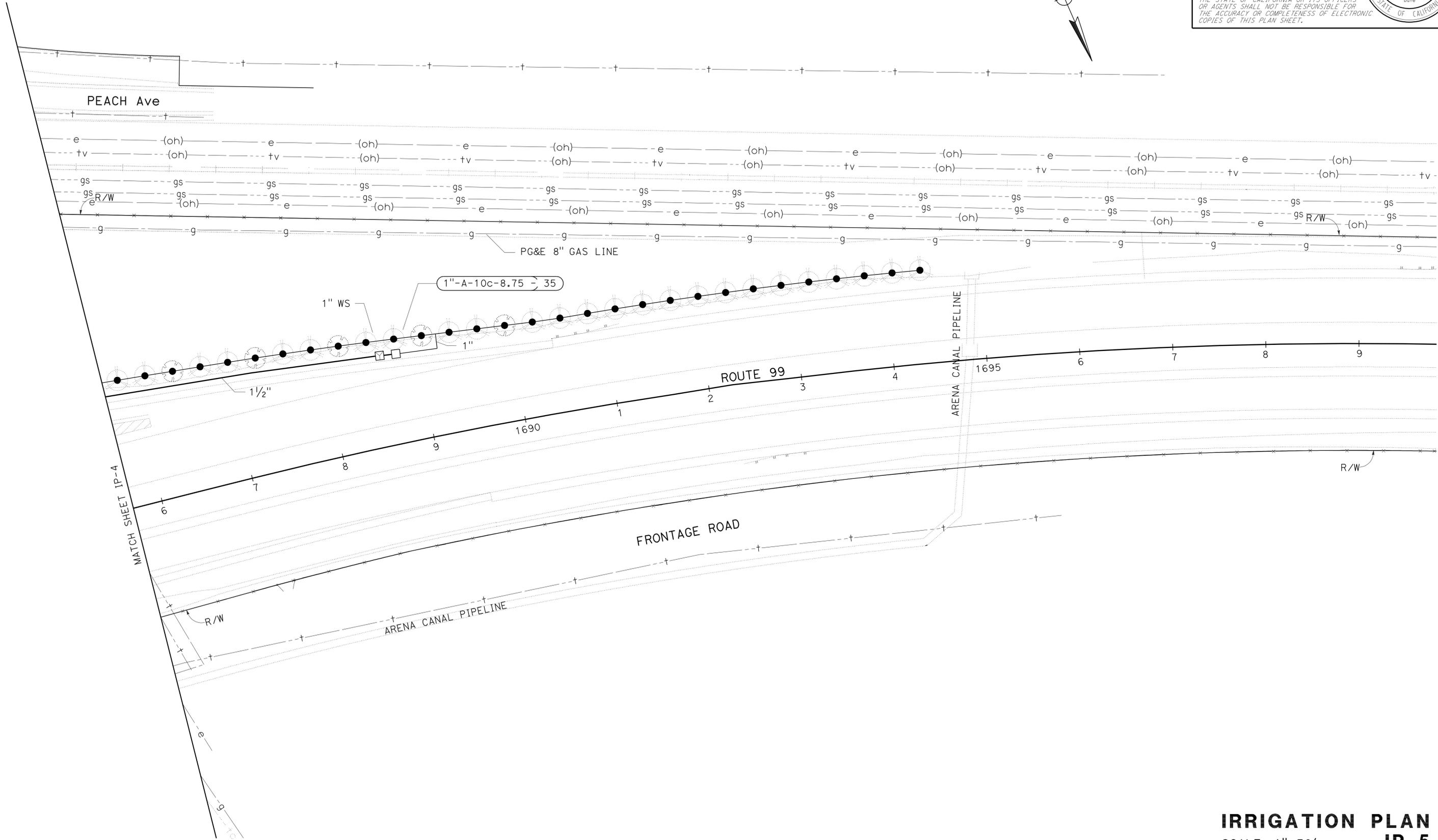
*Edward A. Hibbs*  
 LICENSED LANDSCAPE ARCHITECT  
 11-17-08  
 PLANS APPROVAL DATE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	REVISOR	DATE
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	ED HIBBS	11-17-08
	KEN THOMSON	
	BRAD COLE	



THIS PLAN ACCURATE FOR IRRIGATION WORK ONLY.

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	13	34

*Edward A. Hibbs*  
 LICENSED LANDSCAPE ARCHITECT

11-17-08  
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### SPRINKLER SCHEDULE

SYMBOL	TYPE	DESCRIPTION	SPRAY PATTERN	OPERATING PRESSURE (PSI)	PRESSURE COMPENSATING	PLUS/MINUS 5% ②				MATERIAL	INLET CONNECTION (NPT INCH)	POSITIVE-LOCKING ADJ ARC STOP	BACKSLASH PREVENTER	DIFFUSER PIN	DISTANCE CONTROL FLAP	ADJ DISCHARGE	RISER					REMARKS				
						DISCHARGE		RADIUS (Ft)	WIDTH X LENGTH (Ft)								TYPE	MATERIAL		SIZE (IPS INCH)	HEIGHT (INCH)		FLOW SHUTOFF DEVICE	SWING JOINT (TYPE)	RISER SUPPORT	SPRINKLER PROTECTOR (TYPE)
						GALLONS PER MINUTE (GPM)	GALLONS PER HOUR (GPH)											PLASTIC	GALVANIZED							
△	B-1	SPRAY	H	30	X	1.85	-	15	-	PL	1/2	-	-	-	-	X	VII	X	-	1/2	12	-	I	-	-	⑦
△	B-1	SPRAY	F	30	X	3.70	-	15	-	PL	1/2	-	-	-	-	X	VII	X	-	1/2	12	-	I	-	-	⑦
▲	B-2	SPRAY	Q	30	X	0.92	-	15	-	PL	1/2	-	-	-	-	X	VI	X	-	1/2	-	-	-	I	6" POPUP ⑦	
▲	B-2	SPRAY	T	30	X	1.23	-	15	-	PL	1/2	-	-	-	-	X	VI	X	-	1/2	-	-	-	I	6" POPUP ⑦	
▲	B-2	SPRAY	H	30	X	1.85	-	15	-	PL	1/2	-	-	-	-	X	VI	X	-	1/2	-	-	-	I	6" POPUP ⑦	
●	C-3	SPRAY	Q	30	X	0.25	-	8	-	PL	1/2	-	-	-	-	X	VIII	X	-	1/2	4	-	-	-	-	⑧

X IN BOX DENOTES REQUIREMENT

**APPLICABLE WHEN CIRCLED BELOW:**

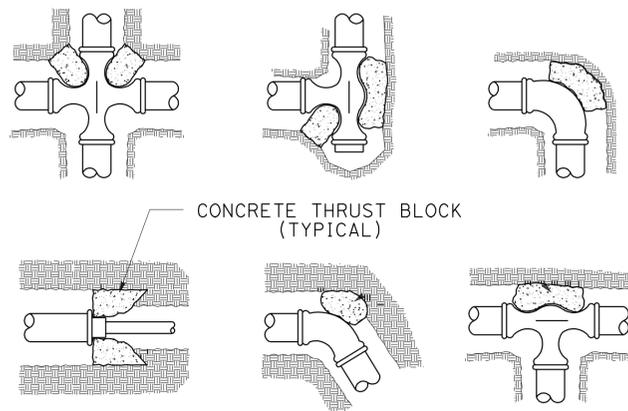
- 1 - See Special Provisions.
- ② - If a pressure compensating device is specified, the discharge and radii shown reflect its use.
- 3 - Arc Stop shall be fitted with a nut and bolt.
- 4 - Vinyl-coated cast iron housing.
- 5 - Swing Joints required adjacent to shoulders, curbs, sidewalks, and dikes.
- 6 - Unless otherwise shown on plans.
- ⑦ - Matched precipitation rate nozzles
- ⑧ - Sprinkler requires drain check valve at low elevations.

**ABBREVIATIONS**

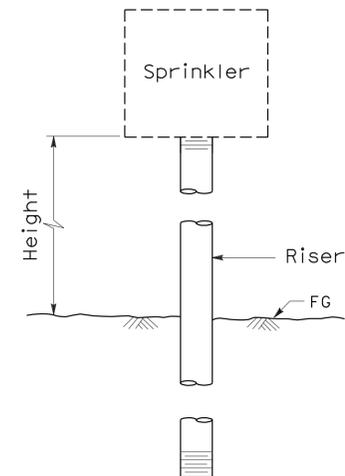
- |                           |                               |
|---------------------------|-------------------------------|
| F — full circle           | Ft — feet/foot                |
| P — part circle           | GPM — gallons per minute      |
| F/P — full/part circle    | GPH — gallons per hour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

Gallons Per Minute	No. Sprinklers by Type	Pipe Size (*)
B-1/B-2	C-3	
≤10	≤28	3/4"
>10-≤16	≤48	1"
>16-≤26	≤78	1 1/4"
>26-≤35	≤105	1 1/2"
—	≤200	2"

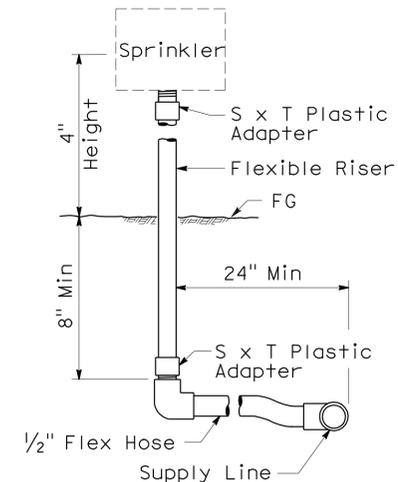
(\*) UNLESS DESIGNATED OTHERWISE ON PLANS



**TYPICAL THRUST BLOCK**



**ELEVATION  
RISER TYPE VII**



**ELEVATION  
RISER TYPE VIII**

**LANDSCAPE DETAILS  
NO SCALE  
LD-1**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	15	34

*Edward A. Hibbs*  
 LICENSED LANDSCAPE ARCHITECT

11-17-08  
 PLANS APPROVAL DATE

*Edward A. Hibbs*  
 Signature  
 2/28/10  
 Renewal Date  
 10/01/08  
 Date

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

DESCRIPTION	UNIT	A VALVE OR ASSEMBLY NUMBER																			SUBTOTALS	UNIT	DESCRIPTION				
		1	2	3a	3b	4	5	6	7	8	9	10a	10b	10c	11	12	13	14	15a	15b				16	17	18	19
PLASTIC PIPE SUPPLY LINE PR 200	3/4"	175	140	1636	959	1421	1716	135	118	148	1912	998	1058	1018	130	117	114	1501	1017	1348	1209	135	76	120	17201	LF	3/4"
	1"	-	-	664	260	22	198	5	-	-	70	15	55	60	-	-	-	95	100	70	82	-	45	15	1756	LF	1"
	1 1/4"	10	15	7	15	332	22	7	13	13	135	-	-	-	10	12	15	75	-	155	-	15	-	-	851	LF	1 1/4"
	1 1/2"	321	306	-	-	-	-	549	610	630	181	-	-	-	275	300	251	10	-	-	60	400	405	405	4703	LF	1 1/2"
	2"	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	120	-	-	-	150	LF	2"
SPRINKLER TYPE	B-1	4	6	-	-	-	4	4	3	-	-	-	-	3	3	5	-	-	-	-	6	4	3	45	EA	B-1	
	B-2	10	6	-	-	-	7	6	9	-	-	-	-	8	7	5	-	-	-	-	5	5	8	76	EA	B-2	
	C-3	-	-	56	56	115	114	-	-	-	114	35	37	35	-	-	-	106	36	72	113	-	-	-	889	EA	C-3

IRRIGATION SLEEVE					
LOCATION		PVC PLASTIC PIPE			
		PR 315		SCH 40	
SHEET	STATION	SIZE (INCH)			
		3	6	8	
		LENGTH (LF)			
IP-2	1667+00	—		39	—
	1670+65	23		—	—
IP-3	1666+75	—		29	—
	1669+20	44		—	—
	1671+40	24		—	—
IP-4	1675+00	—		24	—
	1673+09	27		—	—
	1676+87	—		—	32
	1677+06	29		—	—
SUBTOTAL		147		92	32
TOTAL		271			

**IRRIGATION QUANTITIES  
IQ-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 SENIOR LANDSCAPE ARCHITECT  
 ED HIBBS  
 CALCULATED/DESIGNED BY  
 KEN THOMSON  
 CHECKED BY  
 BRAD COLE

LAST REVISION | DATE PLOTTED => 20-0CT-2009  
 09-15-08 TIME PLOTTED => 09:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	16	34

Edward A. Hibbs  
LICENSED LANDSCAPE ARCHITECT

11-17-08  
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.

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

**TOTAL QUANTITIES**

DESCRIPTION	UNIT	IP SHEET NUMBER										SUBTOTALS			
		1	2	3	4	5									
BPA															
ENCLOSURE															
IRRIGATION CONTROLLER															
24 STATION	EA	-	1	-	-	-									1
SINGLE	EA	-	1	-	-	-									1
DOUBLE	EA	-	1	-	-	-									1
2"	EA	-	1	-	-	-									1
1"	EA	-	2	3	1	1									7
1 1/2"	EA	-	3	8	5	-									16
1"	EA	-	-	-	-	-									-
1 1/4"	EA	-	-	1	-	-									1
1 1/2"	EA	-	-	2	1	-									3
2"	EA	-	-	-	1	-									1
3"	EA	-	3	-	-	-									3
2"	EA	-	1	-	-	-									1
2"	EA	-	1	-	-	-									1
1"	EA	-	1	2	1	1									5
1 1/2"	EA	-	1	2	1	-									4
CONDUIT															
WSP CSP															
3/4"	F+	-	-	-	-	-									-
1"	F+	-	-	30	-	-									30
1 1/4"	F+	-	55	128	-	-									183
1 1/2"	F+	-	-	569	1149	315									2033
2"	F+	-	90	225	73	-									388
2 1/2"	F+	-	-	-	-	-									-
3"	F+	-	931	165	177	-									1273
PLASTIC PIPE SUPPLY LINE															
PR 200															
PR 315															
GSP															
DIP															

TOTALS	UNIT	DESCRIPTION
		BPA
		ENCLOSURE
1	EA	24 STATION
1	EA	SINGLE
1	EA	DOUBLE
1	EA	2"
7	EA	1"
16	EA	1 1/2"
	EA	1"
1	EA	1 1/4"
3	EA	1 1/2"
1	EA	2"
3	EA	3"
1	EA	2"
1	EA	2"
5	EA	1"
4	EA	1 1/2"
		CONDUIT
		WSP CSP
17201	F+	3/4"
1786	F+	1"
1034	F+	1 1/4"
6736	F+	1 1/2"
538	F+	2"
-	F+	2 1/2"
1273	F+	3"
		PLASTIC PIPE SUPPLY LINE
		PR 200
		PR 315
		GSP
		DIP
45	EA	B-1
76	EA	B-2
889	EA	C-3

**ABBREVIATIONS**

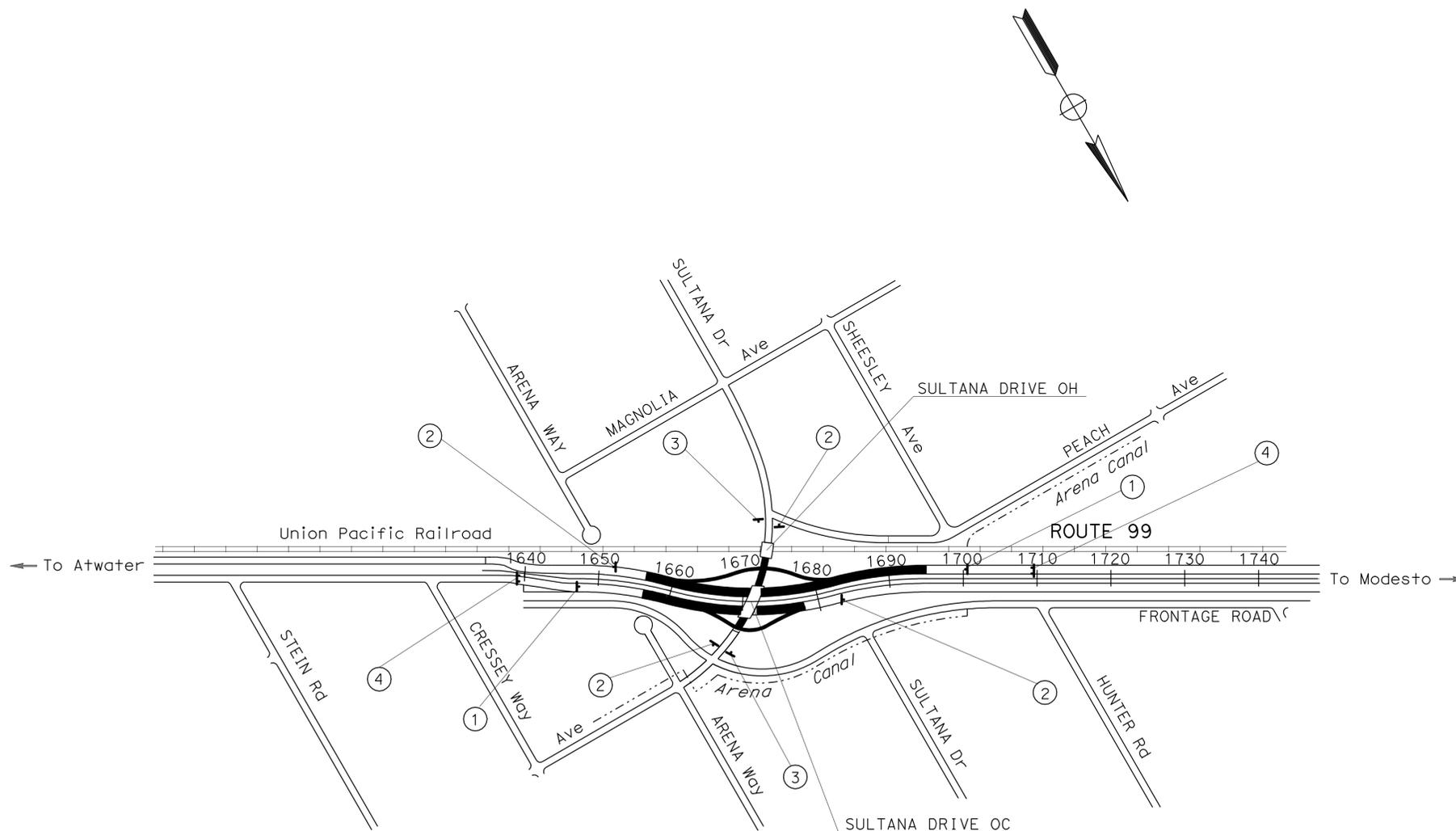
- |                                  |                           |                                    |
|----------------------------------|---------------------------|------------------------------------|
| BPA—backflow preventer assembly  | FCV—flow control valve    | PR—pressure rated                  |
| BV—ball valve                    | FS—flow sensor            | PRV—pressure reducing valve        |
| CV—check valve                   | FV—flush valve            | PRLV—pressure relief valve         |
| CEC—controller enclosure cabinet | GSP—galvanized steel pipe | QCV—quick coupling valve           |
| CSP—corrugated steel pipe        | GV—gate valve             | RCV—remote control valve           |
| DIP—ductile iron pipe            | MCV—manual control valve  | RCVM—remote control valve (master) |
| EA—each                          | Ft—foot/feet              | VAU—valve assembly unit            |
| FAU—filter assembly unit         |                           | WSP—welded steel pipe              |
|                                  |                           | WS—wye strainer                    |

**IRRIGATION QUANTITIES  
IQ-2**

# STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POST AND SIZE	No. OF SIGNS
					EA
①	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	2
②	G20-2	48" x 24"	END ROAD WORK	1 - 4" x 4"	4
③	W20-1	30" x 30"	ROAD WORK AHEAD	1 - 4" x 4"	2
④	C40(CA)	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 6"	2

NOTE: SIGN LOCATIONS SHOWN ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	17	34

*Ali Juma* 10-01-08  
 REGISTERED CIVIL ENGINEER DATE  
 11-17-08  
 PLANS APPROVAL DATE

Ali M. Juma  
 No. C055709  
 Exp. 12/31/09  
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 TRAFFIC DESIGN  
 HASSAN MAREI  
 FUNCTIONAL SUPERVISOR  
 CHECKED BY  
 ALI JUMA  
 DESIGNED BY  
 FERNANDO LOPEZ  
 REVISOR  
 DATE

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

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGNS ONLY

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

NOTES: (FOR THIS SHEET ONLY)

- 1 Exist 120/240 V, 1Ø, 3-WIRE, TYPE III-CF SERVICE EQUIPMENT ENCLOSURE.
- 2 120/240 V, 1Ø, 3-WIRE, TYPE III-AF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING CIRCUIT BREAKERS:  
CTID No. 1039099X026868I

AMPERES	VOLTS	POLES	LOAD	METER
100	240	2	MAIN BREAKER	YES
40	240	2	WELL PUMP EEE	YES
20	240	2	SPARE	YES
15	120	1	SPARE	YES

- 3 THE CONTRACTOR SHALL COORDINATE WITH PG&E FOR SERVICE REQUIREMENTS.
- 4 FOR WELL PUMP ELECTRICAL SYSTEM, SEE EE SHEETS.
- 5 ICC IS NOT A PART OF THE ELECTRICAL WORK. SEE IP SHEETS.

ABBREVIATIONS:

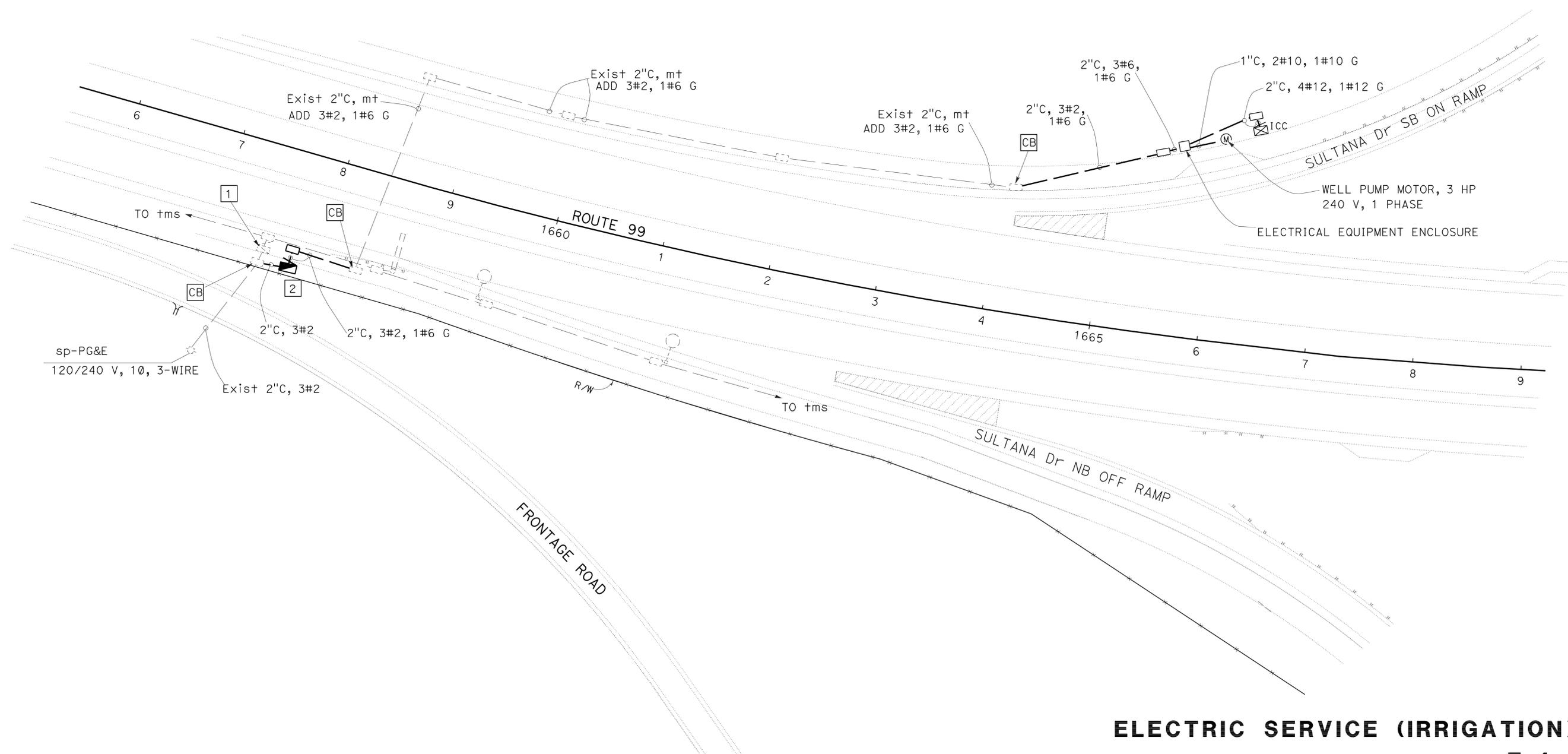
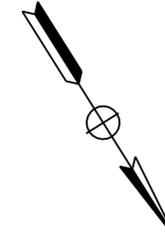
- PG&E - PACIFIC GAS AND ELECTRIC COMPANY
- CTID - CALTRANS IDENTIFICATION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	18	34

10-01-08  
 REGISTERED ELECTRICAL ENGINEER  
 11-17-08  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**JASPAL SINGH**  
 No. 16657  
 Exp 6/30/10  
 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.



**ELECTRIC SERVICE (IRRIGATION)**

SCALE: 1"=50'

**E-1**

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** ELECTRICAL DESIGN  
 FUNCTIONAL SUPERVISOR **ALI BAKHDOUD**  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISOR **JASPAL SINGH**  
 DATE REVISOR **FRED IYASERE**

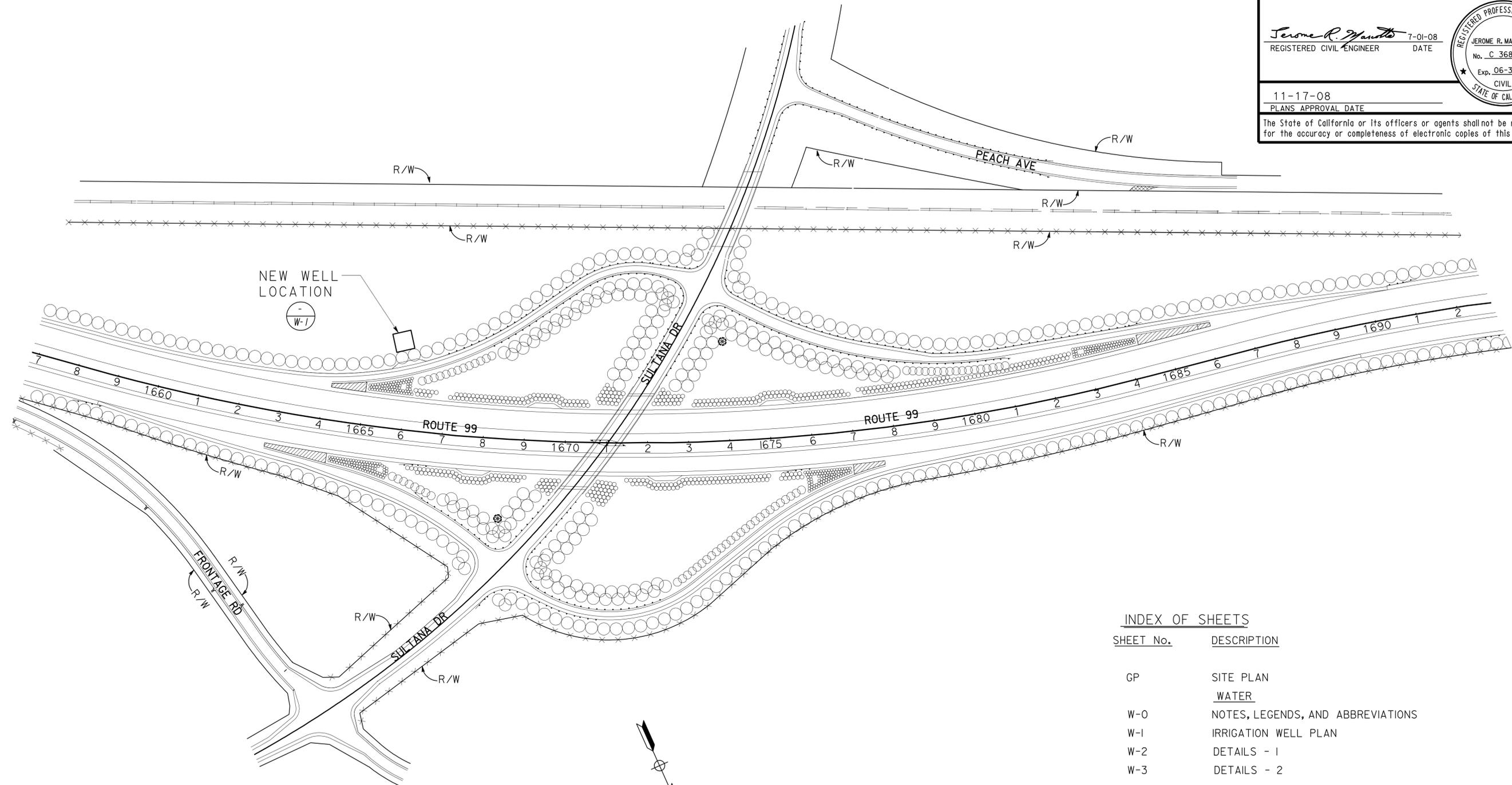
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	19	34

*Jerome R. Marcotte*  
 REGISTERED CIVIL ENGINEER  
 No. C 36844  
 Exp. 06-30-10  
 CIVIL  
 STATE OF CALIFORNIA

7-01-08  
 DATE

11-17-08  
 PLANS APPROVAL DATE

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**SITE PLAN**  
 NO SCALE

**INDEX OF SHEETS**

SHEET No.	DESCRIPTION
GP	SITE PLAN WATER
W-0	NOTES, LEGENDS, AND ABBREVIATIONS
W-1	IRRIGATION WELL PLAN
W-2	DETAILS - 1
W-3	DETAILS - 2
	<b>ELECTRICAL</b>
EE-1	SCHEMATIC DIAGRAM 1
EE-2	ELECTRICAL EQUIPMENT ENCLOSURE

DESIGN SUPERVISOR <i>Paul Schreff</i> DESIGN ENGINEER <i>Jerome R. Marcotte</i>	DESIGN BY Andy Quan	CHECKED Don Hansen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO.	<b>LIVINGSTON LANDSCAPE IRRIGATION WELL</b>	SHEET <b>GP</b>
	DETAILS BY Andy Quan	CHECKED Don Hansen			POST MILE R26.8/R27.6		
	QUANTITIES BY Andy Quan	CHECKED Jerome Marcotte	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	CU 06342 EA 3169C1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY) 6/28/08 7/01/08	SHEET OF



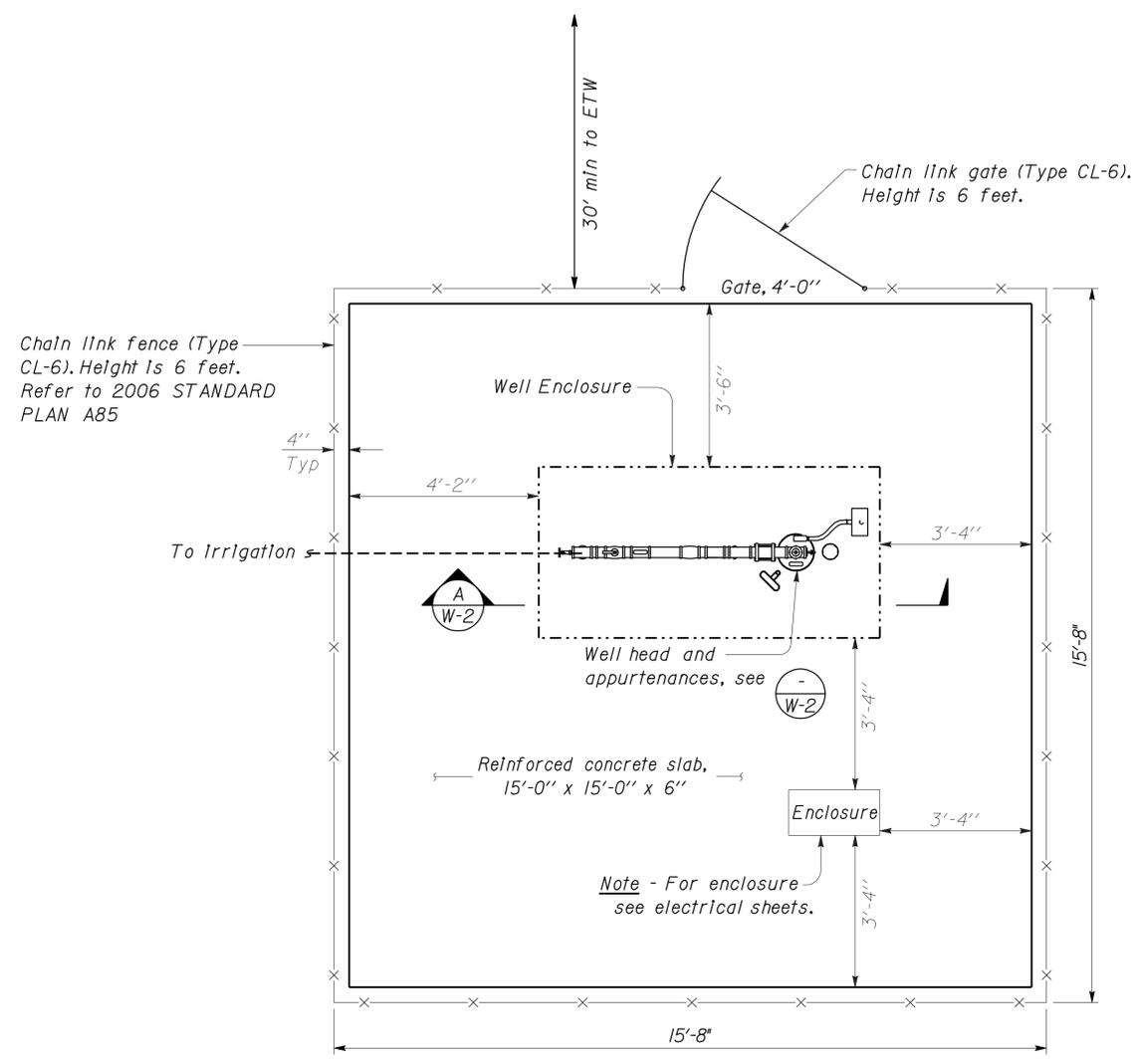
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	21	34

*Jerome R. Marcotte* 7-01-08  
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER  
JEROME R. MARCOTTE  
No. C 36844  
Exp. 06-30-10  
CIVIL  
STATE OF CALIFORNIA

11-17-08  
PLANS APPROVAL DATE

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**IRRIGATION WELL PLAN**

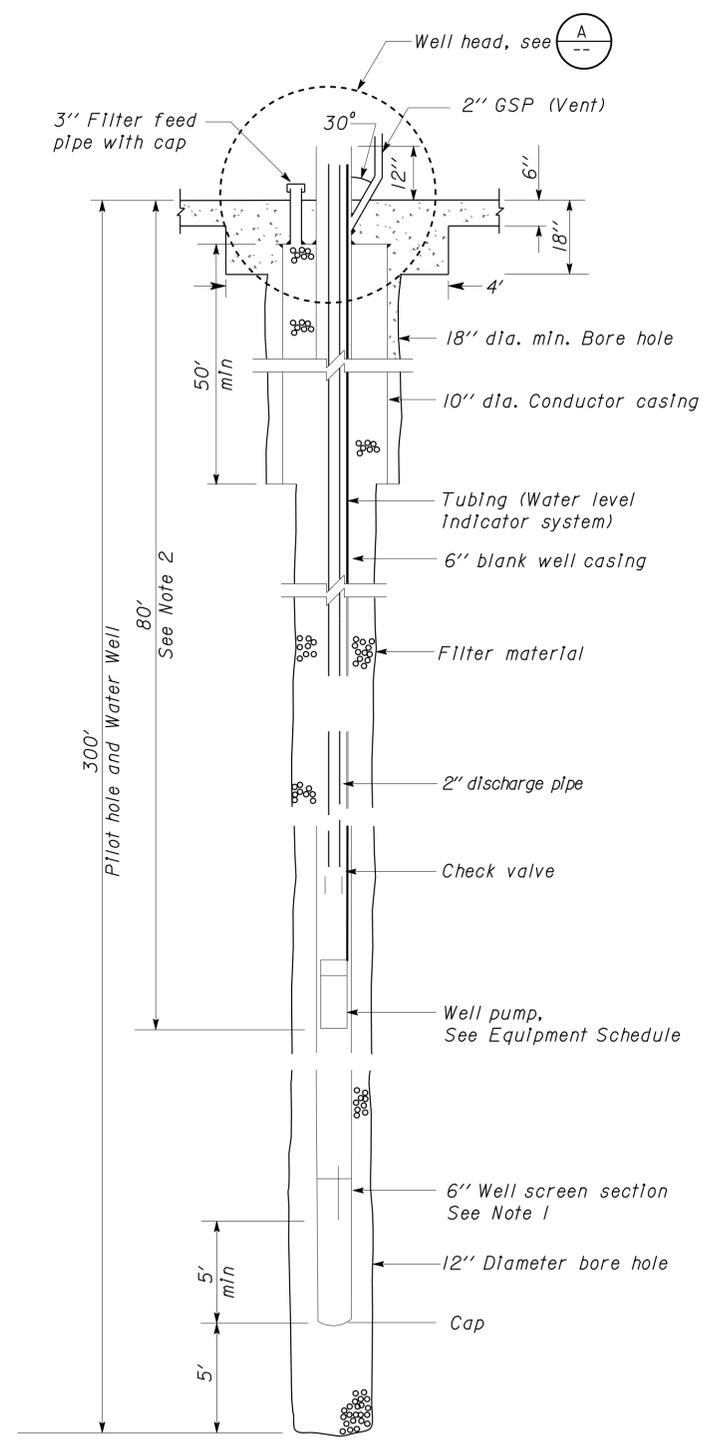
Scale 1" = 2'-0"

<i>Jerome R. Marcotte</i> DESIGN ENGINEER	DESIGN BY <i>Andy Quan</i>	CHECKED <i>Don Hansen</i>
	DETAILS BY <i>Andy Quan</i>	CHECKED <i>Don Hansen</i>
	QUANTITIES BY <i>Andy Quan</i>	CHECKED <i>Jerome Marcotte</i>

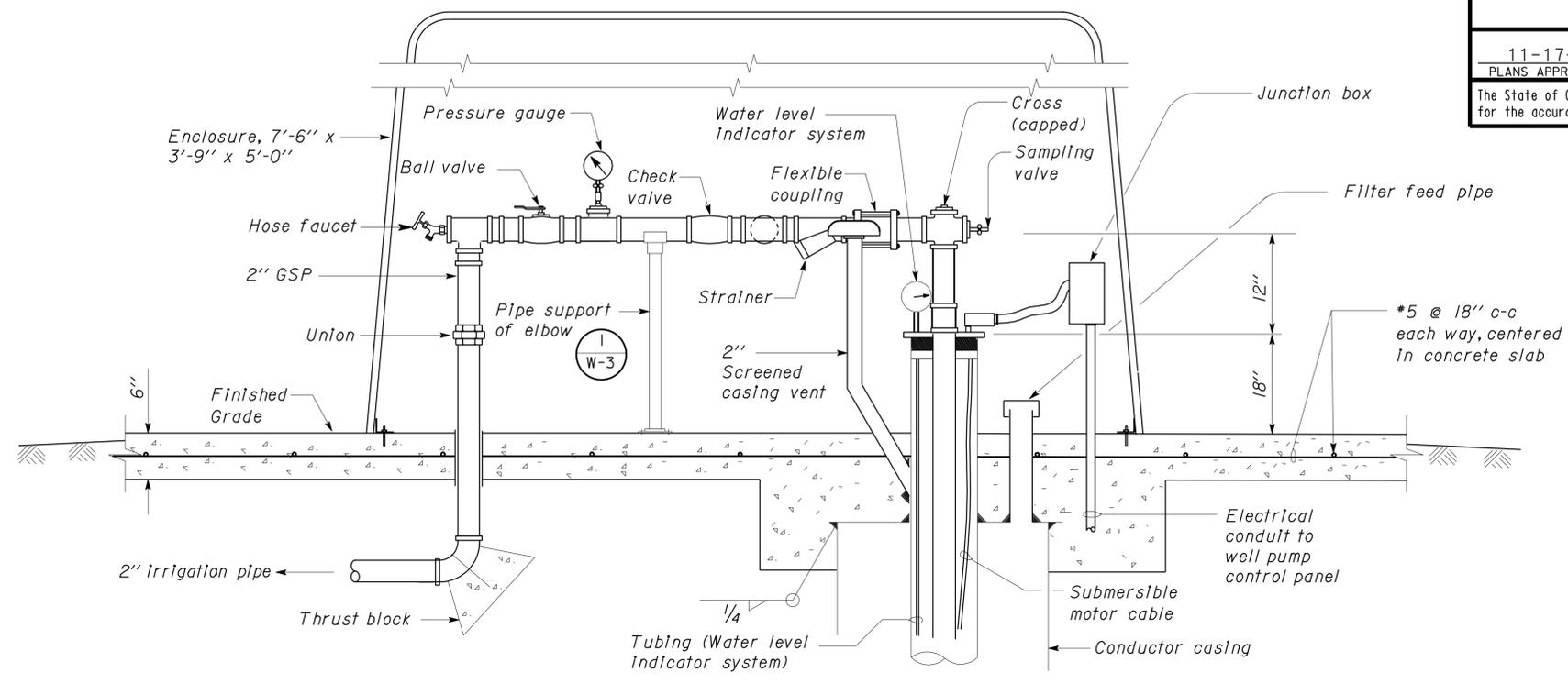
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN

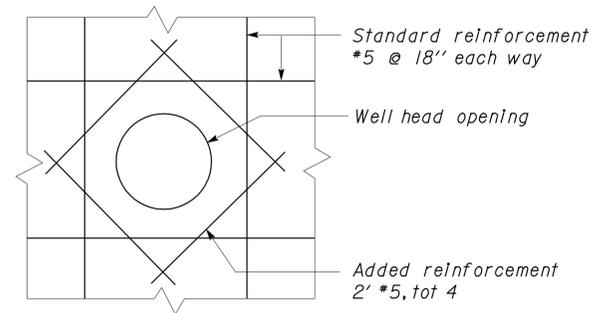
BRIDGE NO.	LIVINGSTON LANDSCAPE IRRIGATION WELL	SHEET
POST MILE R26.8/R27.6	IRRIGATION WELL PLAN	W-1



**WATER WELL - SECTION**  
NO SCALE



**ELEVATION WELL HEAD**  
NO SCALE



**WELL OPENING REINFORCEMENT**  
NO SCALE

EQUIPMENT SCHEDULE						
EQUIPMENT	SPEED (RPM)	HP	VOLTS	PHASE	PUMPING RATE (gpm)	TOTAL DYNAMIC HEAD (ft)
SUBMERSIBLE WELL PUMP					24	120
					29	118
					34	116

- Notes:
- Exact locations and lengths of well screen sections shall be field determined.
  - Actual depth of well pump shall be determined from on-site well testing.

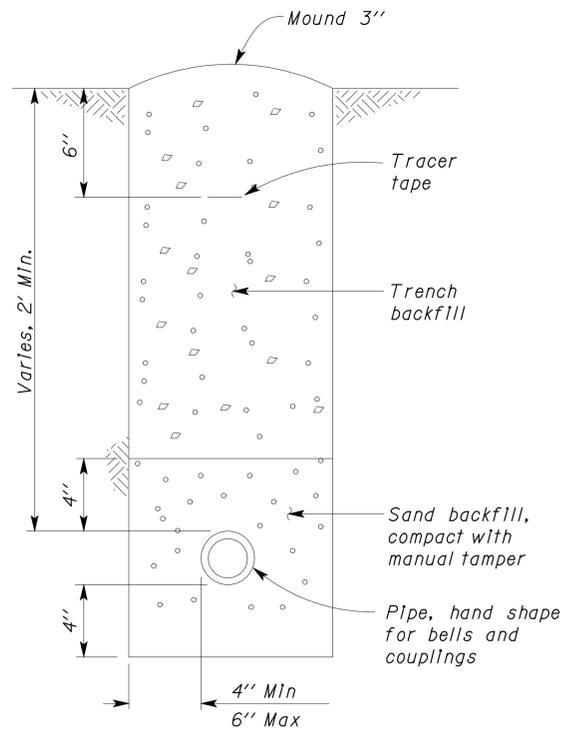
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	23	34

*Jerome R. Marcotte* 7-01-08  
 REGISTERED CIVIL ENGINEER DATE

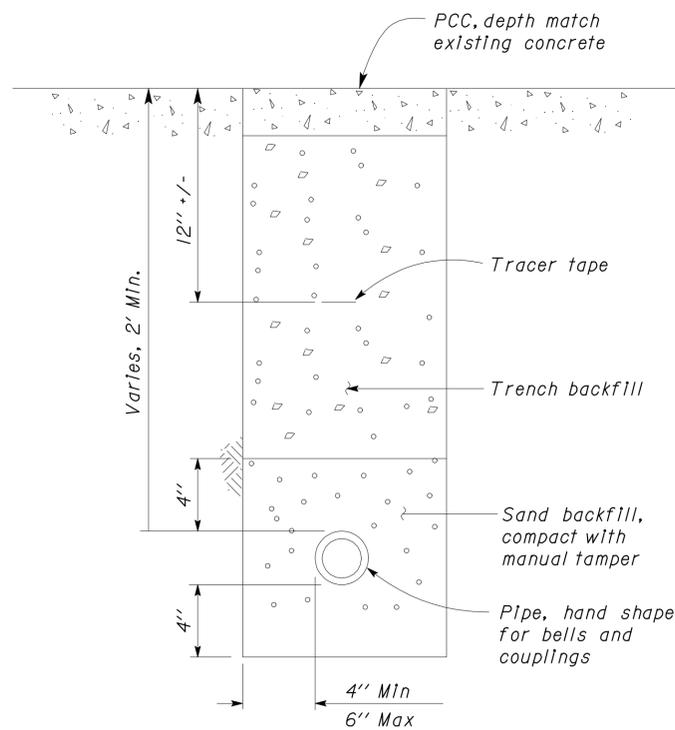
REGISTERED PROFESSIONAL ENGINEER  
 JEROME R. MARCOTTE  
 No. C 36844  
 Exp. 06-30-10  
 CIVIL  
 STATE OF CALIFORNIA

11-17-08  
 PLANS APPROVAL DATE

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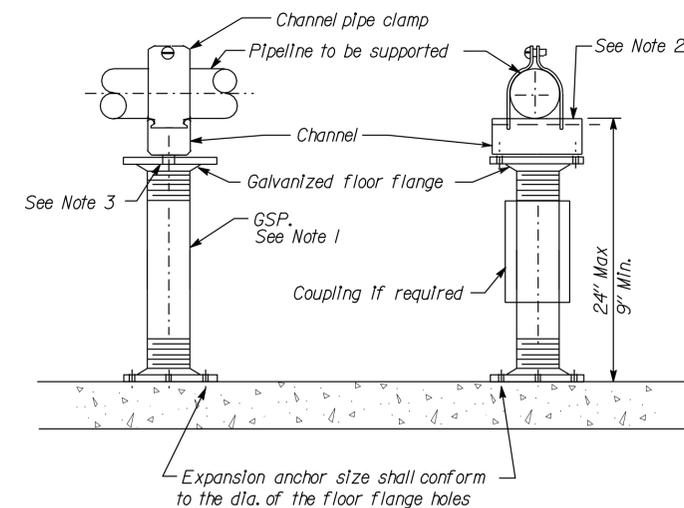
**PIPE UNDER EARTH**



**PIPE UNDER PCC**

**2 WATER PIPE**  
NO SCALE

REQUIRED THRUST BLOCK BEARING AREA- TOTAL SQUARE FEET					
TYPE OF FITTING	90° BEND	45° BEND	11-1/4 BEND 22-1/2 BEND	TEE OR DEAD END	
TYPICAL INSTALLATION					
PIPE SIZE (in)	≤4	1	1	2	
	6	2	1	3	
	8	4	2	5	
	10	6	3	8	



**1 PIPE SUPPORT**  
NO SCALE

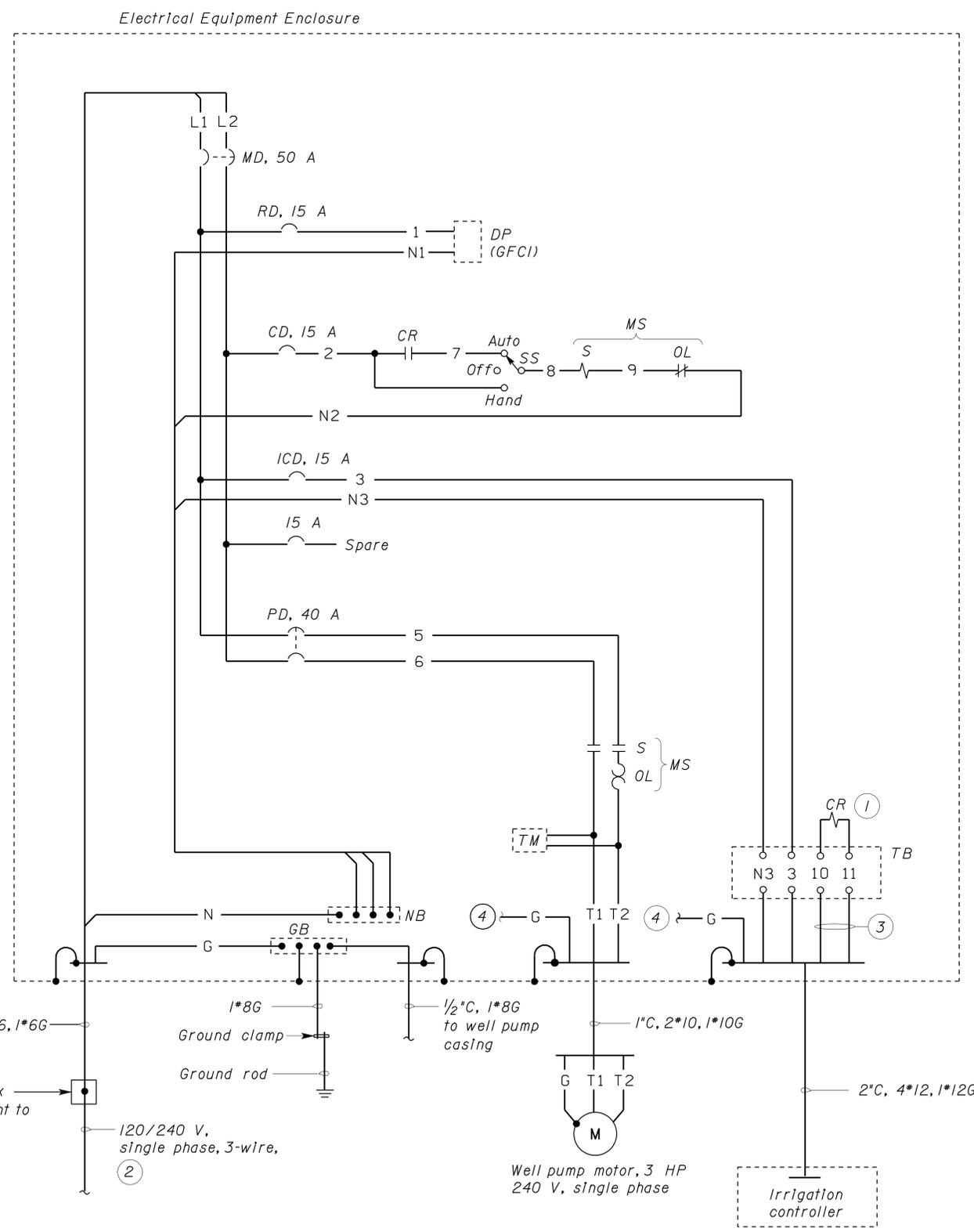
- NOTES:
- Galvanized steel pipe diameter shall be equal to pipe supported.
  - Channel shall be Uni-Strut, Kin-Line or equal.
  - Bolt channel to floor flange using bolt with the same diameter as the floor flange bolt hole.
  - For supports less than 9' high use Uni-Strut, Kin-Line or equal.
  - All fasteners to concrete shall be expansion anchorage devices with Galvanized Threaded Stud, Hex Nut and flat washer.

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	24	34

*Christie H. Mamaril*  
REGISTERED ELECTRICAL ENGINEER DATE 6-26-08

11-17-08  
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.



**CONTROL SCHEMATIC**

**General Notes:**

- A. For exact location of well pump, electrical equipment enclosure and irrigation controller, see Irrigation Plans and Water "W" Plans.
- B. Pull boxes in between the electrical equipment enclosure and irrigation controller are not shown. See Electrical "E" Plans.

**Notes:**

- ① Pump control relay, 24 Volts AC coil.
- ② 2" C, 3\*2, 1\*6G. To Service Equipment Enclosure. For continuation, see Electrical "E" Plans.
- ③ To master valve/pump start terminals in the Irrigation controller. For location, see Irrigation Plans.
- ④ Connect to ground bar.

**ABBREVIATIONS**

A	AMPERES
AC	ALTERNATING CURRENT
CD	CONTROL DISCONNECT
CR	CONTROL RELAY
DP	DUPLEX PLUG RECEPTACLE
EEE	ELECTRICAL EQUIPMENT ENCLOSURE
G	GROUND
GB	GROUND BAR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
ICD	IRRIGATION CONTROLLER DISCONNECT
MD	MAIN DISCONNECT
MS	MOTOR STARTER
(N)	NEW
NB	NEUTRAL BAR
OL	OVERLOAD
PD	PUMP DISCONNECT
RD	RECEPTACLE DISCONNECT
S	STARTER COIL
SS	SELECTOR SWITCH
TB	TERMINAL BLOCK
TM	TIME METER
WP	WEATHERPROOF

**LEGEND**

SYMBOL	DESCRIPTION
	CIRCUIT BREAKER, SINGLE POLE
	CIRCUIT BREAKER, DOUBLE POLE
	CONTACT, NORMALLY OPEN
	CONTACT, NORMALLY CLOSED
	SWITCH, SINGLE-POLE, 3-POSITION
	OPERATING COIL
	THERMAL OVERLOAD
	MOTOR
	GROUNDING ELECTRODE

DESIGN SUPERVISOR <i>J. S. Sandhu</i> DESIGN ENGINEER <i>Jasvirinder K Sandhu</i>	DESIGN	BY C. H. Mamaril	CHECKED J. S. Sandhu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO.	<b>WELL PUMP ELECTRICAL SYSTEM</b>	SHEET <b>EE-1</b>
	DETAILS	BY Ed D. Tapalla 4-08	CHECKED C. H. Mamaril			POST MILE		
	QUANTITIES	BY C. H. Mamaril	CHECKED J. S. Sandhu					

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

CU 06342 EA 3169C1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)		SHEET	OF
9/26/08	6/26/08		

DOES SD Imperial Rev. 9/02

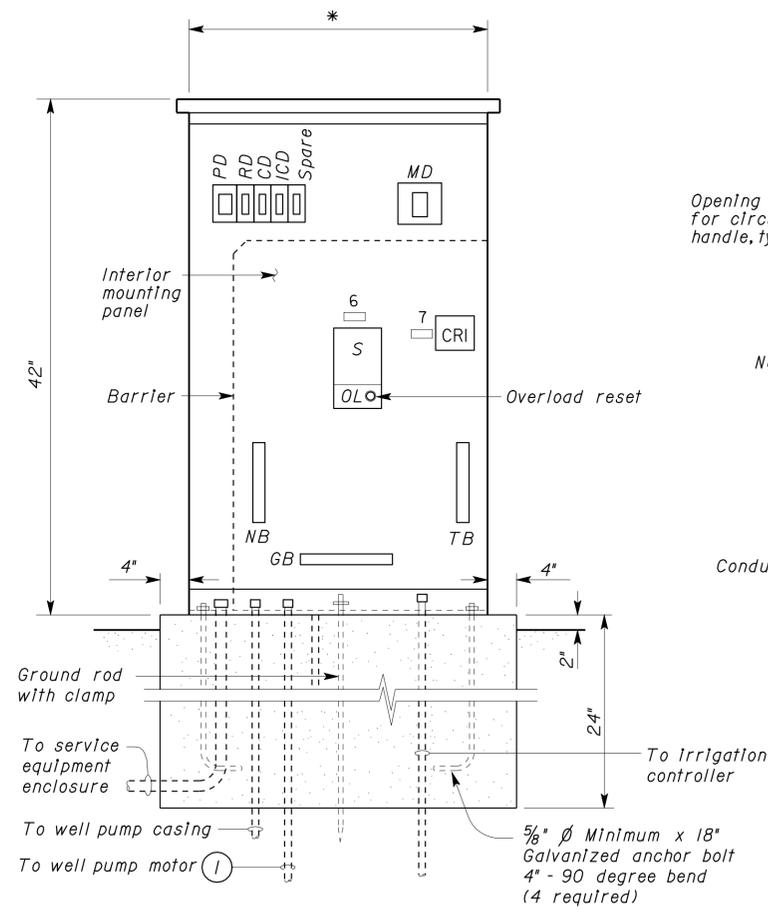
a3169Ctu001.dgn

**General notes:**

- A. Dimensions of enclosure shown are approximate only.
- B. For conduits and conductor sizes and quantity, see Electrical plan sheet EE-1.

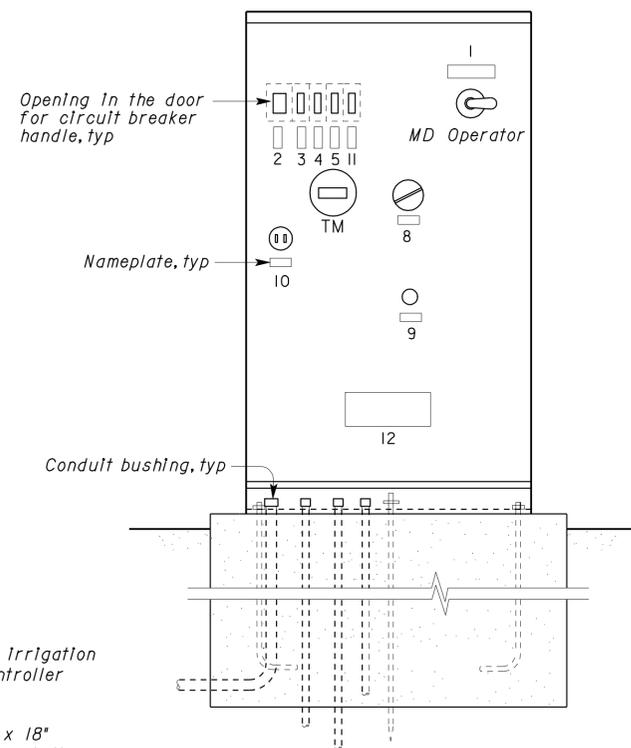
**Notes:**

- ① For routing conduit to well pump motor, see Water "W" plans.
- ② Mounted electrical components are not shown.

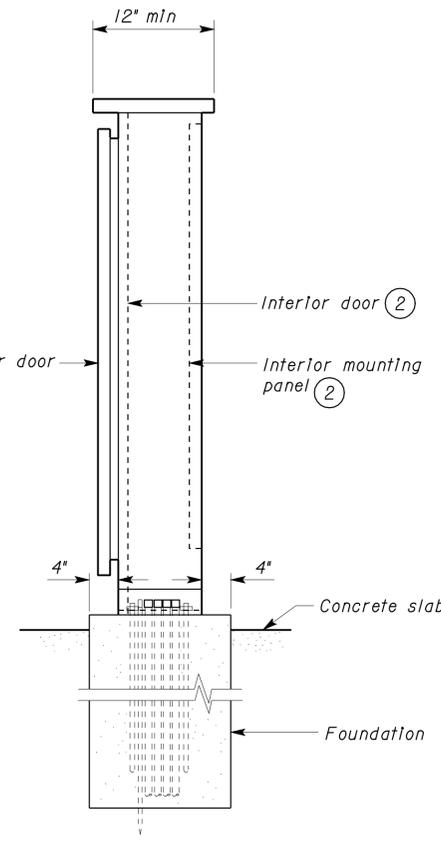


(INTERIOR AND EXTERIOR DOORS NOT SHOWN)

**ELEVATION**  
NO SCALE



(EXTERIOR DOOR NOT SHOWN)



**SIDE VIEW**  
NO SCALE

NAMEPLATE SCHEDULE		
ITEM No.	INSCRIPTION	LETTER HEIGHT
1	MAIN DISCONNECT	1"
2	WELL PUMP	1/2"
3	RECEPT	1/2"
4	CONTROL	1/2"
5	IRR CONT	1/2"
6	MOTOR STARTER	1/2"
7	CRI	1/2"
8	HAND-OFF-AUTO	1/2"
9	OL RESET	1/2"
10	120 V	1/2"
11	SPARE	1/2"

WARNING NAMEPLATE SCHEDULE		
ITEM No.	INSCRIPTION	LETTER HEIGHT
12	WELL PUMP DISCONNECT DOES NOT DE-ENERGIZE CONTROL CIRCUIT	1/2"

\* White letters against red background

THIS DRAWING ACCURATE FOR ELECTRICAL WORK ONLY

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	26	34

*Gregory A. Balzer*  
LICENSED LANDSCAPE ARCHITECT

March 7, 2008  
PLANS APPROVAL DATE

*Gregory A. Balzer*  
LICENSED LANDSCAPE ARCHITECT  
02-28-2009  
02-21-2008  
STATE OF CALIFORNIA

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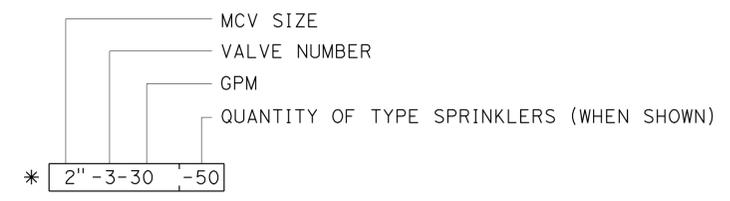
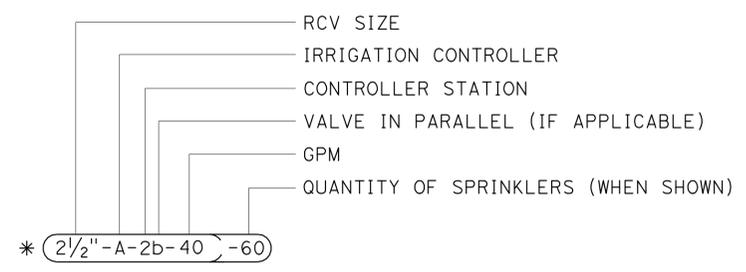
To accompany plans dated 11-17-08

2006 REVISED STANDARD PLAN RSP H2

EXISTING	PROPOSED	ITEM DESCRIPTION
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ASSEMBLY IN ENCLOSURE (BP AE)
		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(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)
		SPRINKLER CONTROL CONDUIT (SCC)
		CONDUIT (COND)
		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)
		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 COUPLER VALVE (QCV)
		CAM COUPLING 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.

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

NO SCALE

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

**REVISED STANDARD PLAN RSP H2**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	27	34

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

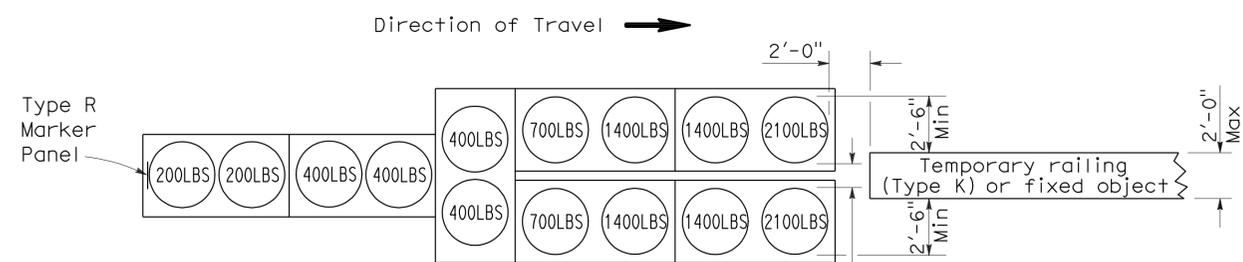
June 6, 2008  
PLANS APPROVAL DATE

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

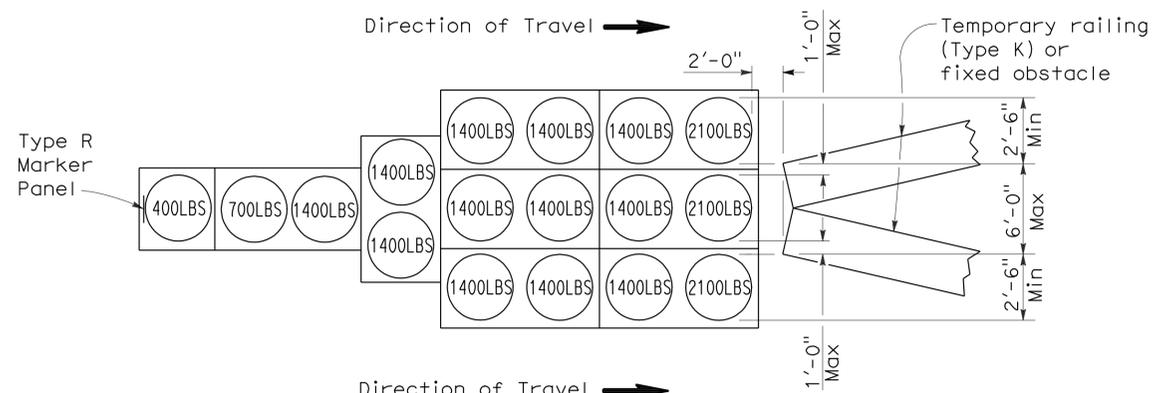
To accompany plans dated 11-17-08

2006 REVISED STANDARD PLAN RSP T1A



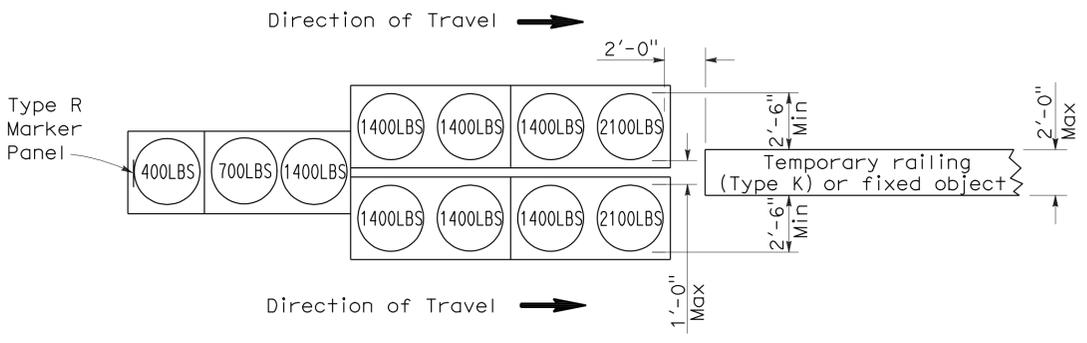
**ARRAY 'TU14'**

Approach speed 45 mph or more



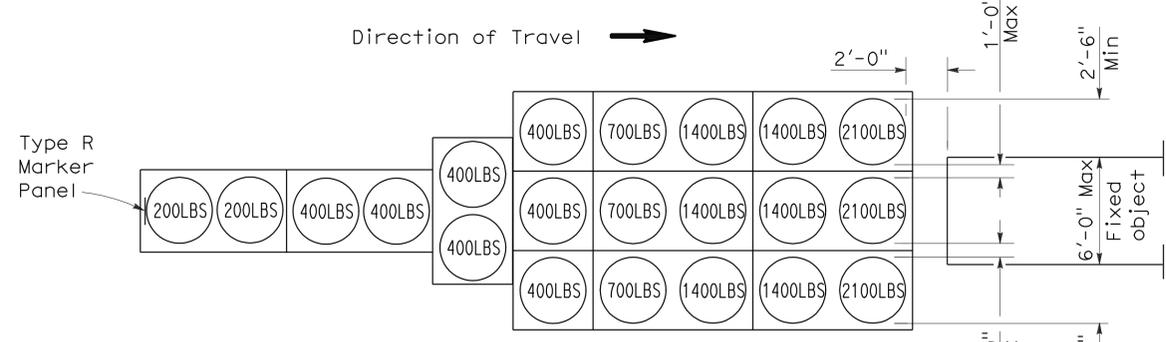
**ARRAY 'TU17'**

Approach speed less than 45 mph



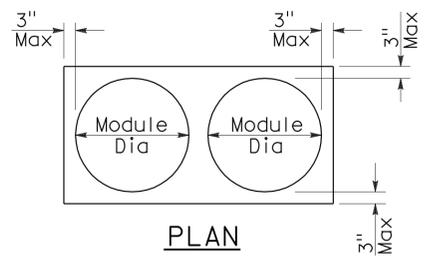
**ARRAY 'TU11'**

Approach speed less than 45 mph

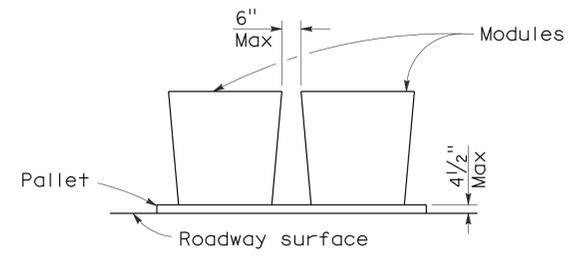


**ARRAY 'TU21'**

Approach speed 45 mph or more



**PLAN**



**ELEVATION**

**CRASH CUSHION PALLET DETAIL**

See Note 7

**NOTES:**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**REVISED STANDARD PLAN RSP T1A**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	28	34

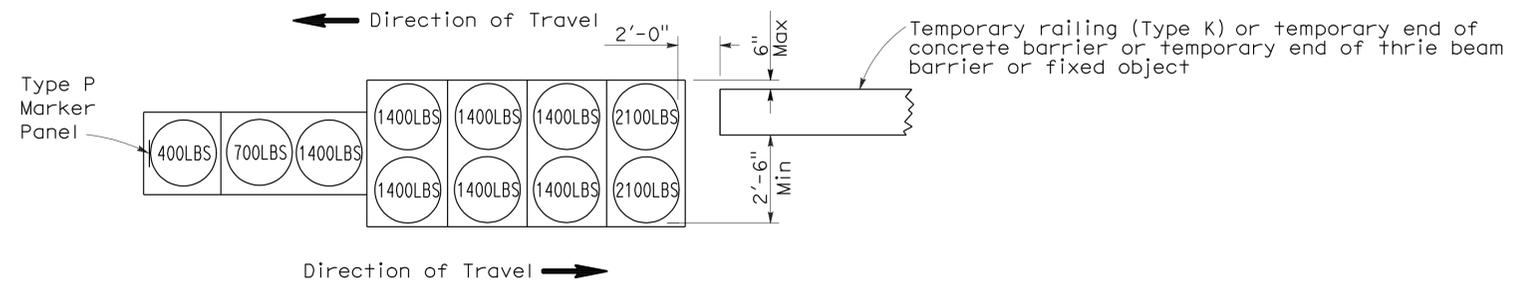
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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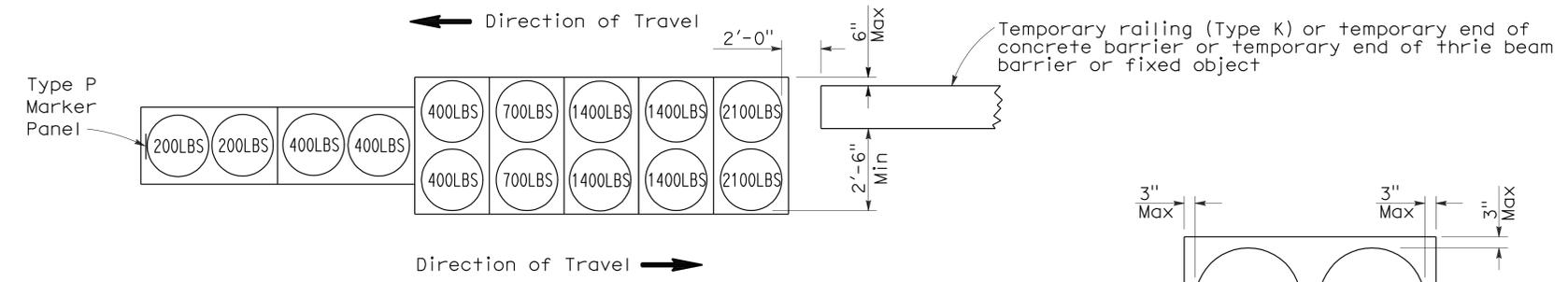
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 11-17-08



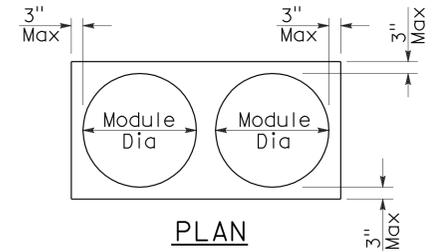
**ARRAY 'TB11'**

Approach speed less than 45 mph

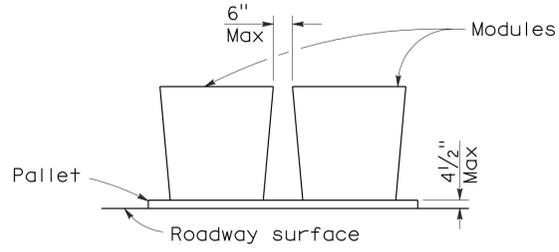


**ARRAY 'TB14'**

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
10	Mer	99	R26.8/R27.6	29	34

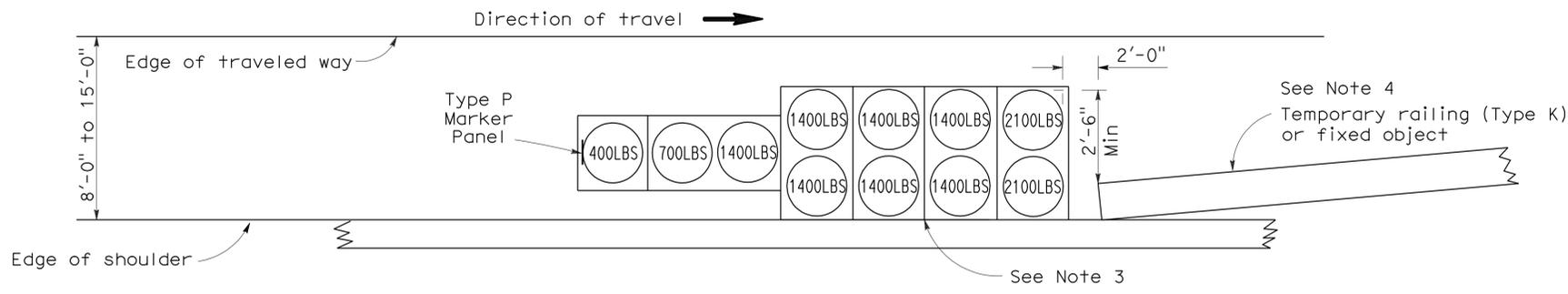
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

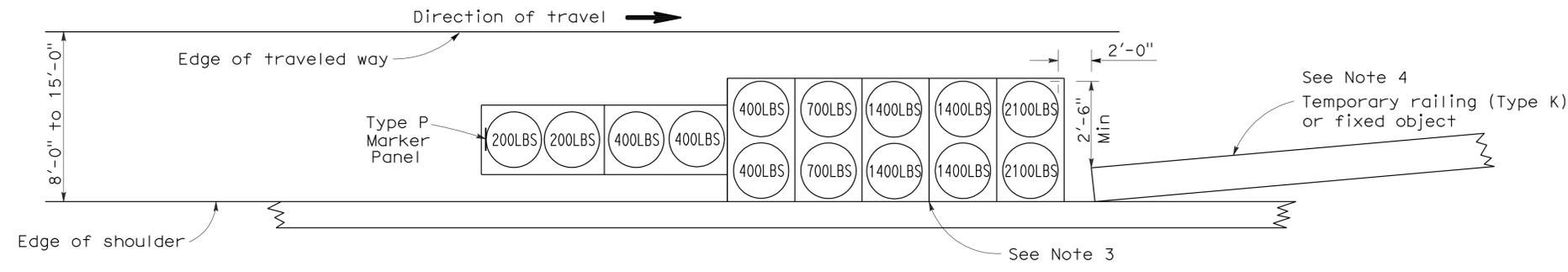
*Randell D. Hiatt*  
REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

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To accompany plans dated 11-17-08



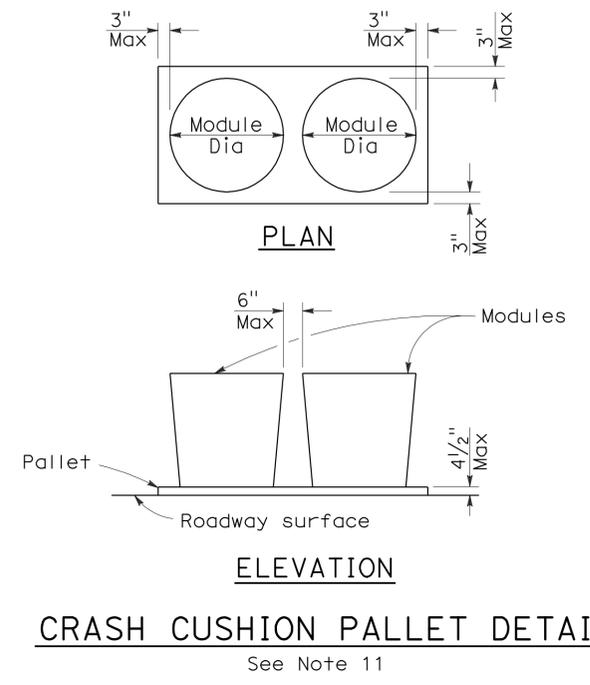
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



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

**NOTES:**

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



**CRASH CUSHION PALLET DETAIL**  
See Note 11

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(SHOULDER INSTALLATIONS)**

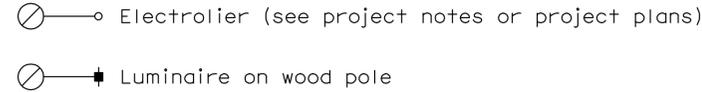
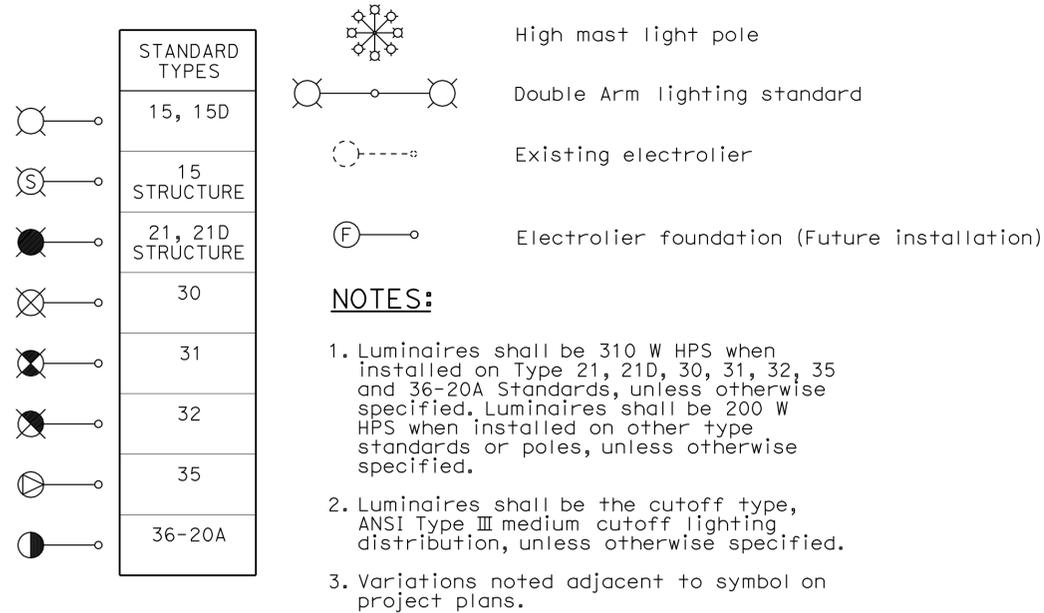
NO SCALE

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

**REVISED STANDARD PLAN RSP T2**

2006 REVISED STANDARD PLAN RSP T2

# ELECTROLIERS



## STANDARD NOTES:

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

# ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

## PROPOSED EXISTING

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	30	34

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

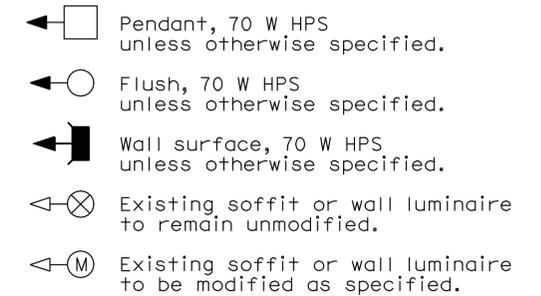
October 5, 2007  
PLANS APPROVAL DATE

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

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To accompany plans dated 11-17-08

## SOFFIT AND WALL MOUNTED LUMINAIRES



### NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

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

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	R26.8/R27.6	31	34

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

October 5, 2007  
 PLANS APPROVAL DATE

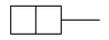
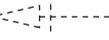
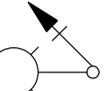
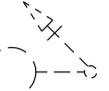
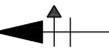
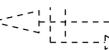
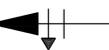
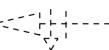
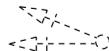
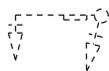
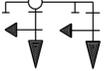
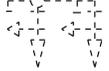
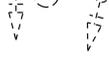
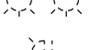
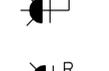
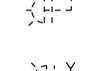
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To accompany plans dated 11-17-08

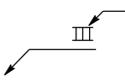
### CONDUIT

PROPOSED	EXISTING	
---	---	Lighting Conduit, unless otherwise indicated or noted
---	---	Traffic signal conduit
-C-	-c-	Communication conduit
-T-	-t-	Telephone conduit
-F-	-f-	Fire alarm conduit
-FO-	-fo-	Fiber optic conduit
---	---	Conduit termination 
		Conduit riser in/on structure or service pole

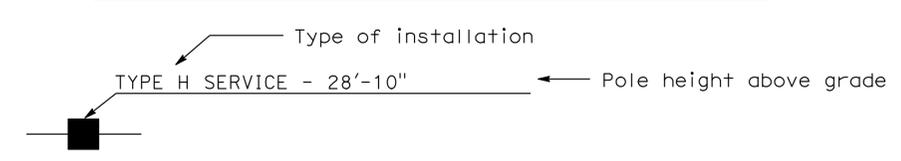
### SIGNAL EQUIPMENT

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	
---OH	---oh	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

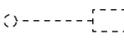
### POLE-MOUNTED SERVICE DESIGNATION



### 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

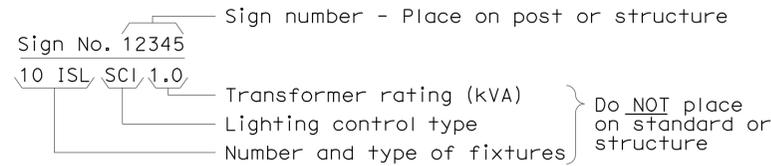
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B  
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

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

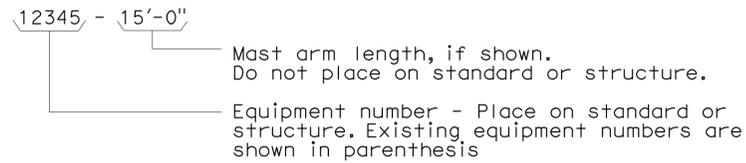
2006 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

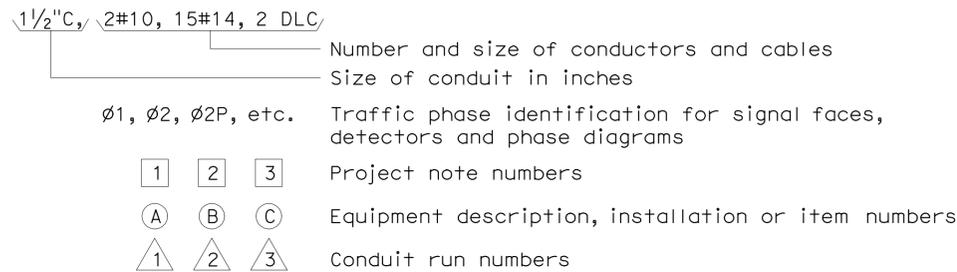
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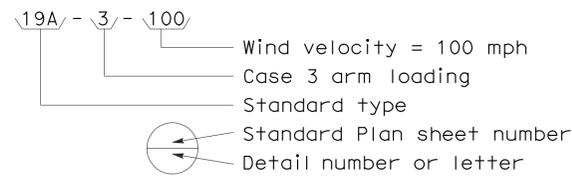
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



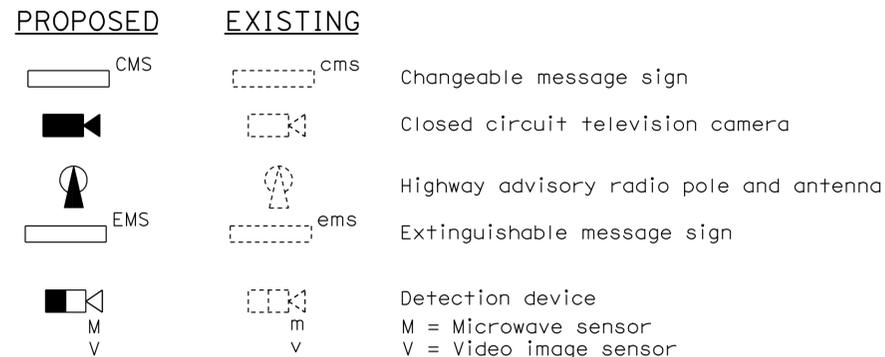
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



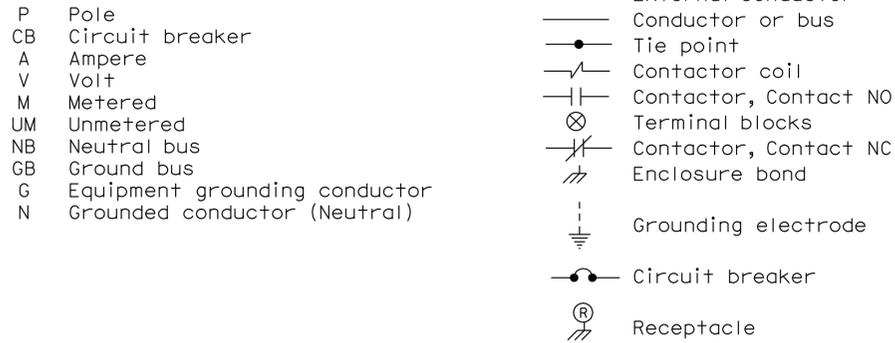
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



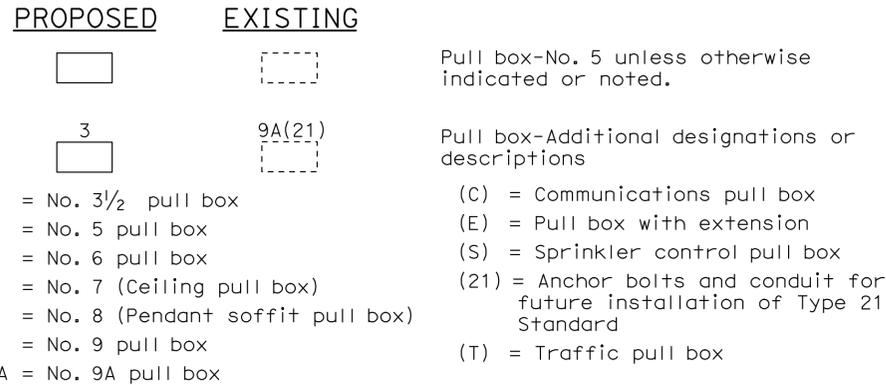
### MISCELLANEOUS EQUIPMENT



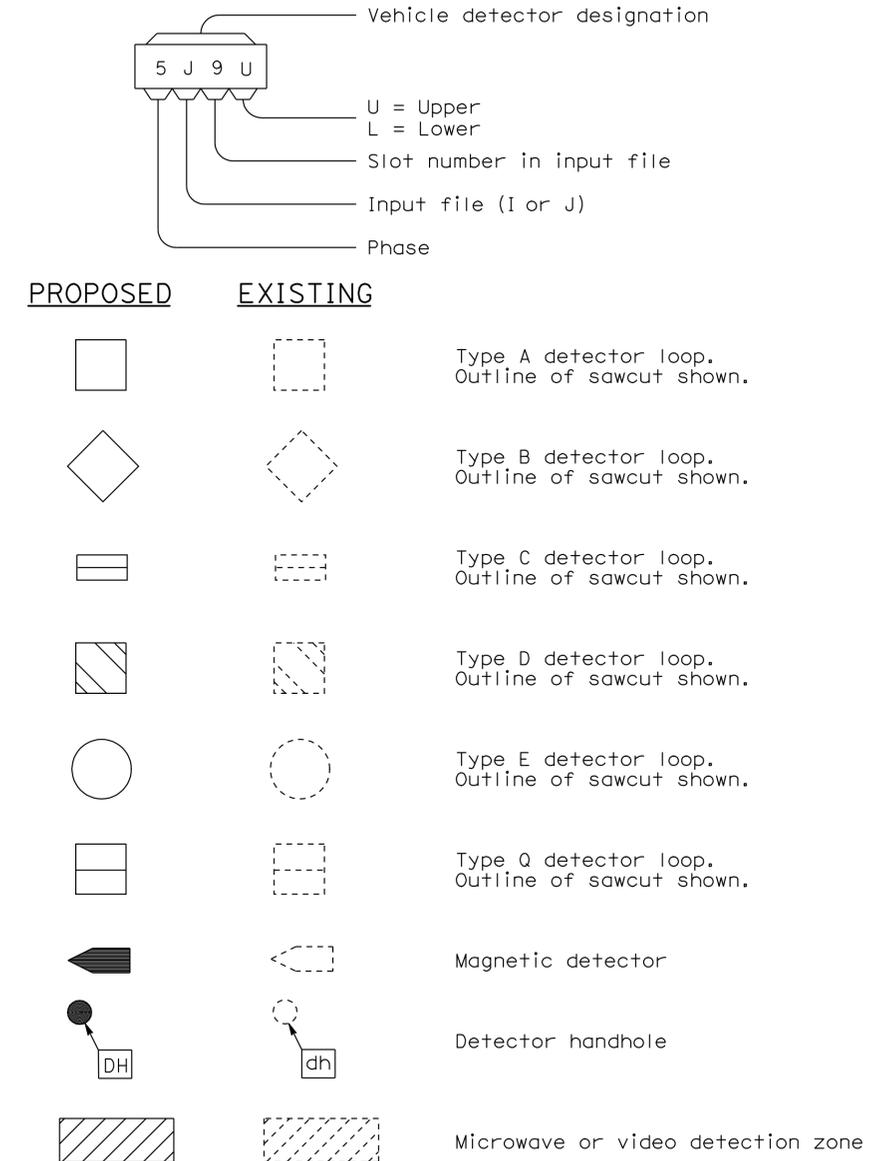
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



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
10	Mer	99	R26.8/R27.6	33	34

*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 11-17-08

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

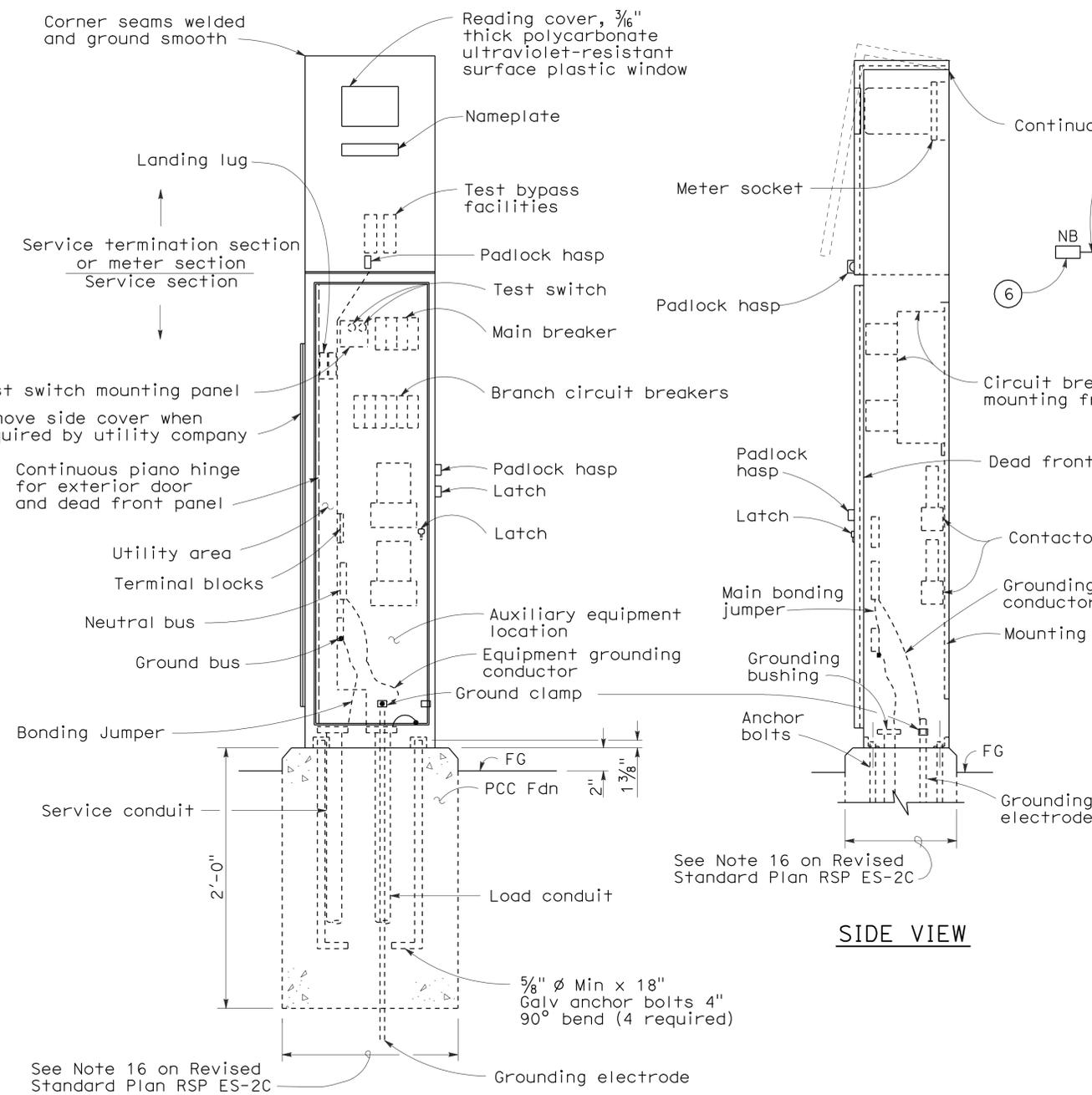
NO SCALE

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

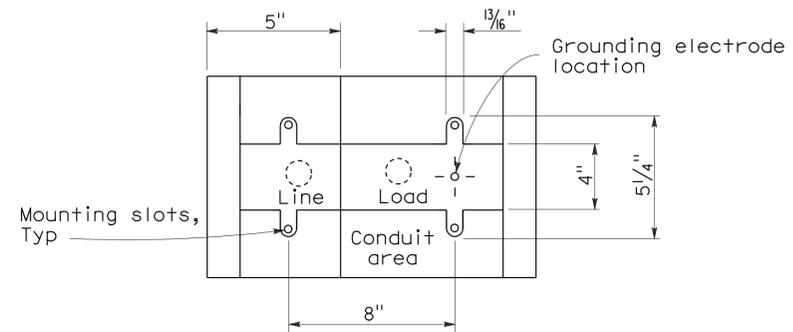
2006 REVISED STANDARD PLAN RSP ES-2D



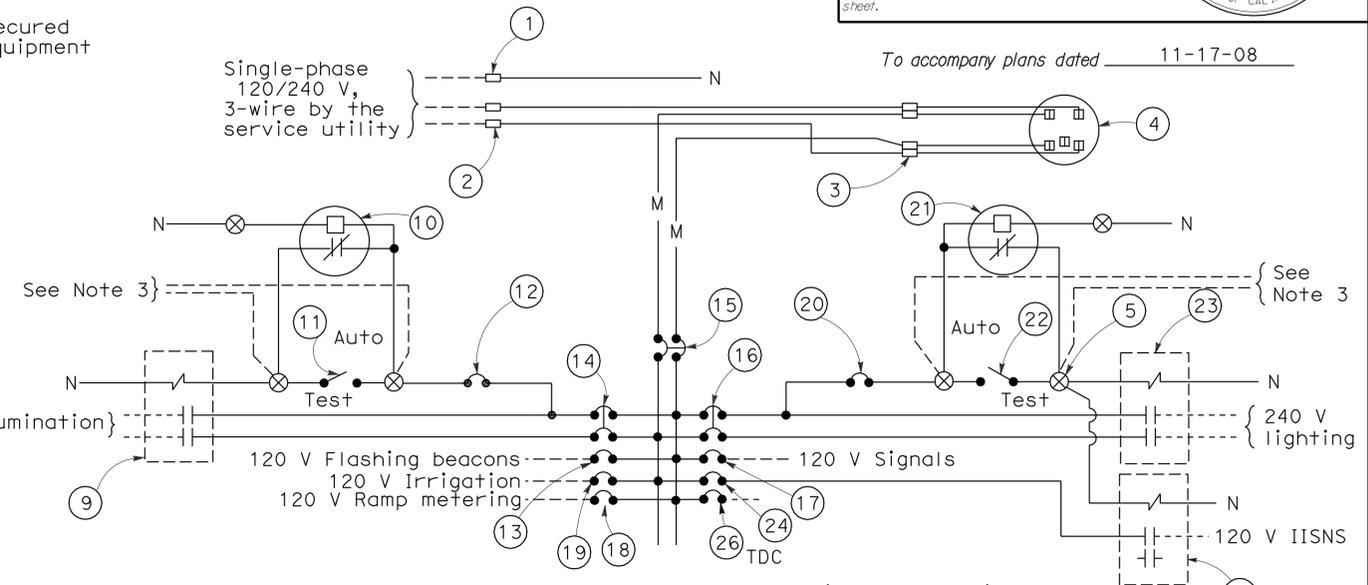
**TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)**

**FRONT VIEW**

**SIDE VIEW**



**BASE FOR TYPE III-A SERVICE EQUIPMENT ENCLOSURE**



**120/240 V SERVICE WIRING DIAGRAM (TYPICAL)**

TYPE III-A SERVICE (120/240 V) EQUIPMENT LEGEND					
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
1	Neutral lug		14	30 A, 240 V, 2P, CB	Sign Illumination
2	Landing lug (Note 6)		15	100 A, 240 V, 2P, CB	Main Breaker
3	Test bypass facility		16	30 A, 240 V, 2P, CB	Lighting
4	Meter socket and support		17	50 A, 120 V, 1P, CB	Signals
5	Terminal blocks		18	30 A, 120 V, 1P, CB	Ramp Metering
6	Neutral bus		19	20 A, 120 V, 1P, CB	Irrigation
7	Ground bus		20	15 A, 120 V, 1P, CB	Lighting Control
8	Grounding electrode		21	Photoelectric unit (Note 7)	
9	30 A, 2PNO Contactor	Sign Illumination	22	15 A, 1P, Test switch	Lighting Test Switch
10	Photoelectric unit (Note 7)		23	60 A, 2PNO Contactor	Lighting
11	15 A, 1P, Test switch	Sign Illumination Test Switch	24	15 A, 120 V, 1P, CB	IISNS
12	15 A, 120 V, 1P, CB	Sign Illumination Control	25	30 A, 2PNO Contactor	IISNS
13	15 A, 120 V, 1P, CB	Flashing Beacon	26	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet

**NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)**

- Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
- Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
- Connect to remote test switch mounted on lighting standards, sign post or structure when required.
- Items No. 1 and 6 shall be isolated from the service equipment enclosure.
- Meter sockets shall be 5 clip type.
- The landing lug shall be suitable for multiple conductors.
- Type I photoelectric control shall be used unless otherwise indicated on the plans.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SERVICE EQUIPMENT AND  
 TYPICAL WIRING DIAGRAM,  
 TYPE III-A SERIES)**

NO SCALE

RSP ES-2D DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2D DATED MAY 1, 2006 - PAGE 406 OF THE STANDARD PLANS BOOK DATED MAY 2006.