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

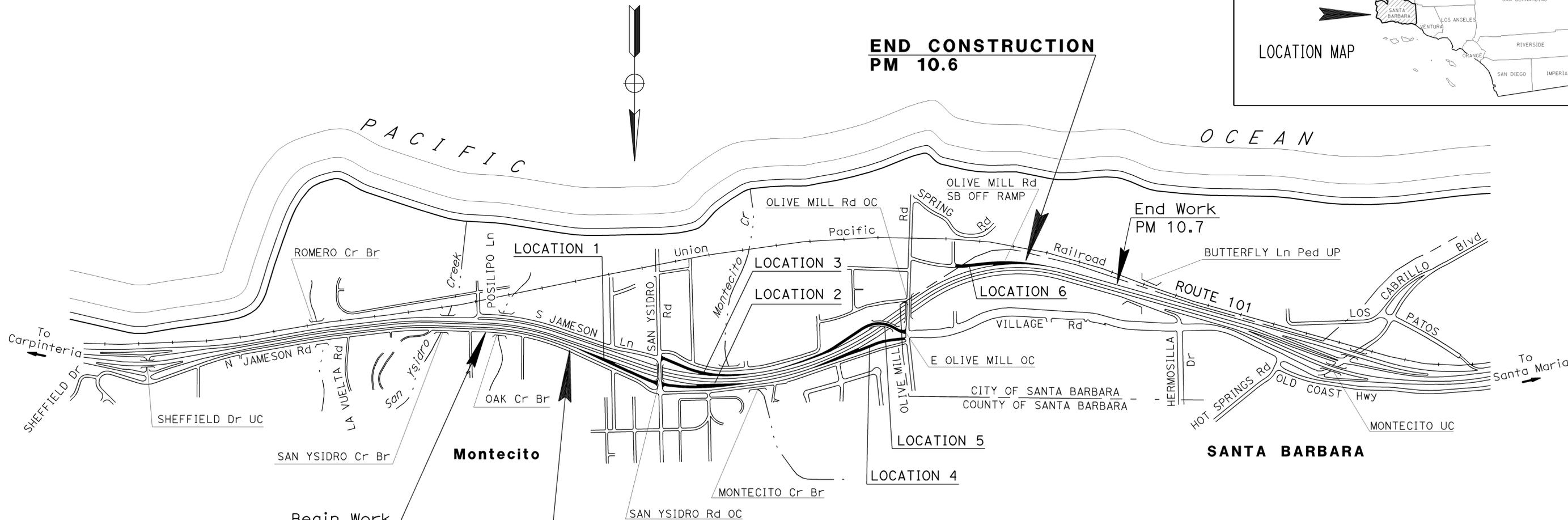
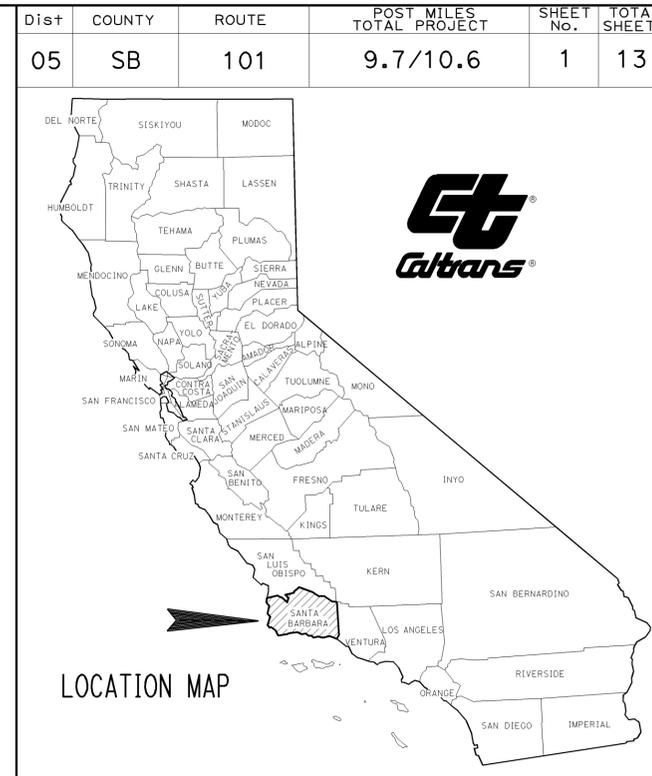
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY

IN SANTA BARBARA COUNTY  
IN AND NEAR SANTA BARBARA

AT VARIOUS LOCATIONS FROM SAN YSIDRO ROAD OVERCROSSING  
TO OLIVE MILL ROAD SOUTHBOUND OFF RAMP

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



Begin Work  
PM 9.5  
**BEGIN CONSTRUCTION  
PM 9.7**

**END CONSTRUCTION  
PM 10.6**

End Work  
PM 10.7

LOCATIONS OF CONSTRUCTION

LOCATION	DESCRIPTION	POST MILE
1	SAN YSIDRO NB OFF RAMP	9.7 TO 9.8
2	SAN YSIDRO NB ON RAMP	9.8 TO 9.9
3	SAN YSIDRO SB OFF RAMP	9.8 TO 9.9
4	OLIVE MILL NB OFF RAMP	10.3 TO 10.5
5	OLIVE MILL SB ON RAMP	10.3 TO 10.5
6	OLIVE MILL SB OFF RAMP	10.55 TO 10.6

*Kenneth J. Romero* 2-14-11  
PROJECT ENGINEER DATE  
REGISTERED CIVIL ENGINEER  
**February 14, 2011**  
PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CONTRACT No.	<b>05-0T3204</b>
PROJECT ID	<b>0500000838</b>

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

NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	101	9.7/10.6	2	13

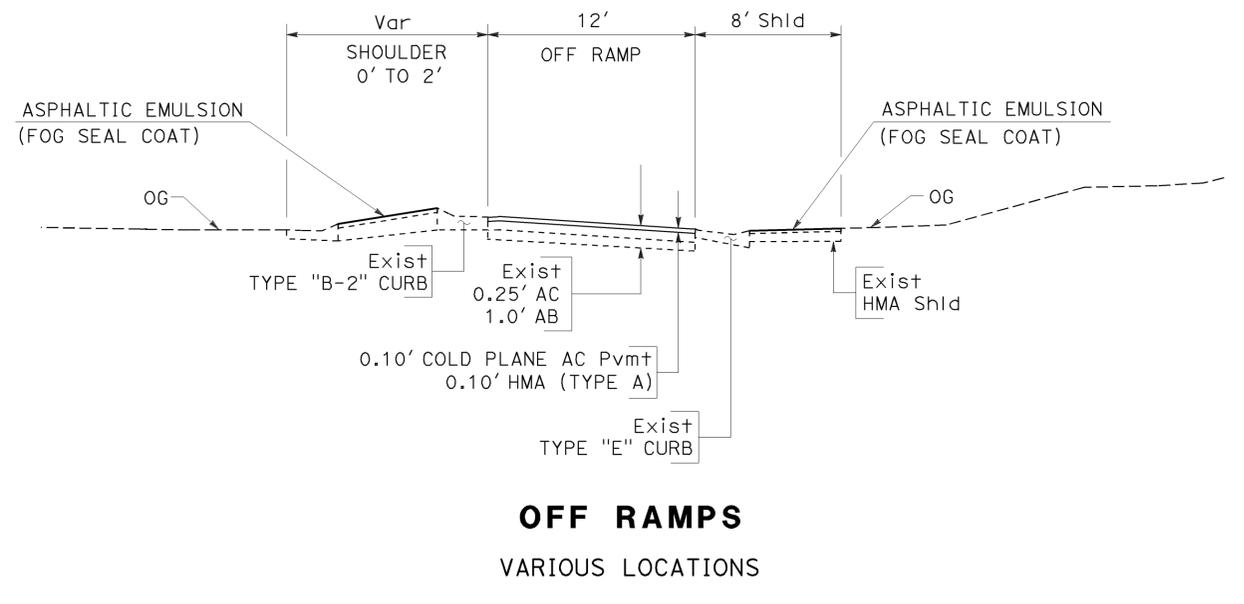
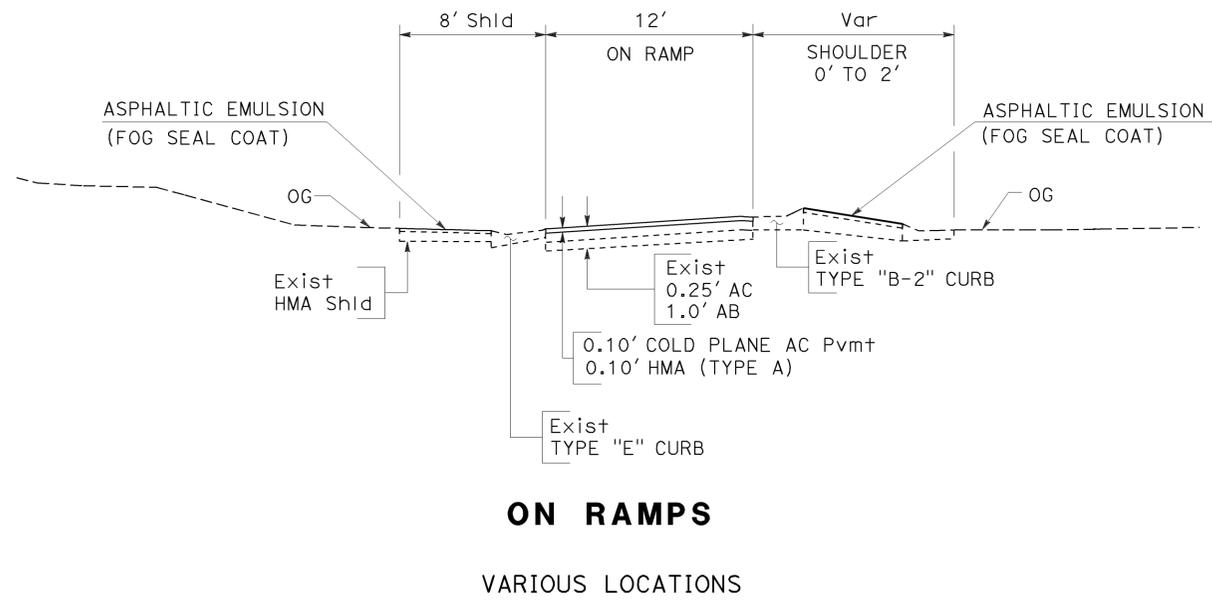
Kenneth J. Romero 2-14-11  
 REGISTERED CIVIL ENGINEER DATE  
 2-14-11  
 PLANS APPROVAL DATE

K.J. ROMERO  
 No. 49645  
 Exp. 9-30-12  
 CIVIL  
 STATE OF CALIFORNIA

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

- NOTES:**
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
  2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
  3. FOG SEAL COAT SHALL NOT BE PLACED ON PCC CURB, GUTTER, DRAINAGE INLETS APRONS, PCC STRUCTURES, OR UTILITY COVERS.
  4. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE DESIGN  
 FUNCTIONAL SUPERVISOR: KELLY J. McCLAIN  
 CHECKED BY: KELLY J. McCLAIN  
 REVISIONS: (None)  
 DESIGNED BY: KEN ROMERO  
 DATE: 2-14-11  
 REVISIONS: (None)  
 DESIGNED BY: KELLY J. McCLAIN



**TYPICAL CROSS SECTIONS**  
NO SCALE  
**X-1**

LAST REVISION | DATE PLOTTED => 16-FEB-2011 | TIME PLOTTED => 10:48



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	101	9.7/10.6	4	13

*Kenneth J. Romero* 2-14-11  
 REGISTERED CIVIL ENGINEER DATE

2-14-11  
 PLANS APPROVAL DATE

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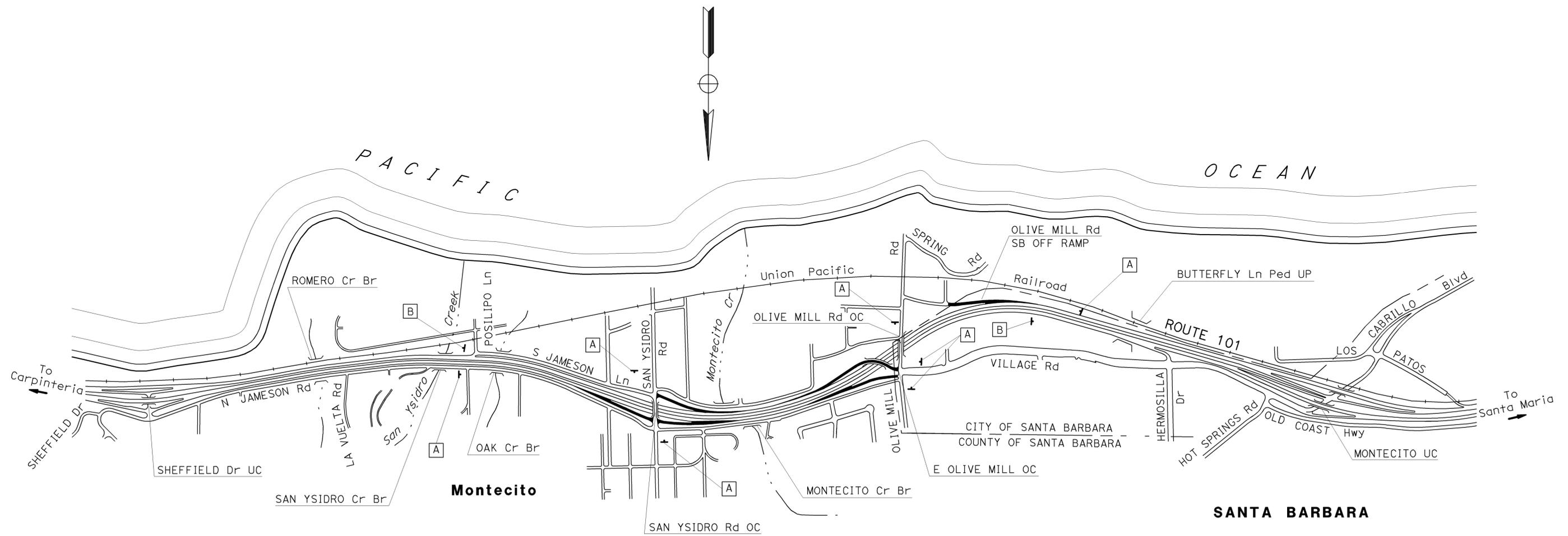
REGISTERED PROFESSIONAL ENGINEER  
**K.J. ROMERO**  
 No. 49645  
 Exp. 9-30-12  
 CIVIL  
 STATE OF CALIFORNIA

### STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE	No. OF POSTS AND SIZE	No. OF SIGNS
A	W20-1	ROAD WORK AHEAD	36" x 36"	1- 4" x 6"	7
B	G20-2	END ROAD WORK	36" x 18"	1- 4" x 4"	2

**NOTE:** EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE DESIGN  
 FUNCTIONAL SUPERVISOR: KELLY J. McCLAIN  
 CALCULATED/DESIGNED BY: CHECKED BY:  
 KEN ROMERO KELLY J. McCLAIN  
 REVISED BY: DATE REVISED:



THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

## CONSTRUCTION AREA SIGNS NO SCALE CS-1

LAST REVISION DATE PLOTTED => 16-FEB-2011  
 02-14-11 TIME PLOTTED => 10:48

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	101	9.7/10.6	5	13

*Kenneth J. Romero* 2-14-11  
REGISTERED CIVIL ENGINEER DATE

2-14-11  
PLANS APPROVAL DATE

**K.J.ROMERO**  
No. 49645  
Exp. 9-30-12  
CIVIL

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### PAVEMENT DELINEATION

LOCATION	DETAIL No. OR PAVEMENT MARKING	PAVEMENT MARKER (RETROREFLECTIVE)		4" THERMOPLASTIC TRAFFIC STRIPE		4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17-7)	8" THERMOPLASTIC TRAFFIC STRIPE	THERMOPLASTIC PAVEMENT MARKING
		TYPE G	TYPE H	YELLOW	WHITE			
		EA	EA	LF	LF			
SAN YSIDRO ROAD NB OFF RAMP PM 9.7 TO 9.8	25A		27	638				
	27B				957			
	36	13					320	
	"STOP"							44
	"AHEAD"							31
	LIMIT LINE							62
	ARROW TYPE V							66
SAN YSIDRO ROAD NB ON RAMP PM 9.8 TO 9.9	8					105		
	25A		20	475				
	27B				953			
SAN YSIDRO ROAD SB OFF RAMP PM 9.8 TO 9.9	36A	4					98	
	25A		20	495				
	27B				923			
	36	14					321	
	"STOP"							44
	"AHEAD"							31
	LIMIT LINE							51
ARROW TYPE V							66	
OLIVE MILL ROAD NB OFF RAMP PM 10.3 TO 10.5	25A		24	558				
	27B				1006			
	36	11					270	
	"STOP"							44
	"AHEAD"							31
	LIMIT LINE							25
	ARROW TYPE V							66
OLIVE MILL ROAD SB ON RAMP PM 10.3 TO 10.5	8					120		
	25A		28	658				
	27B				1159			
	36A	4					95	
	ARROW TYPE V							33
OLIVE MILL ROAD SB OFF RAMP PM 10.55 TO 10.6	25A		20	475				
	27B				990			
	36	15					365	
	ARROW TYPE IV(R)							15
	ARROW TYPE V							33
SUBTOTAL		61	139	3299	5988			
TOTAL		200		9287		225	1469	642

### SUMMARY OF QUANTITIES Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE DESIGN

FUNCTIONAL SUPERVISOR  
**KELLY J. McCLAIN**

CALCULATED/DESIGNED BY  
**KEN ROMERO**  
CHECKED BY  
**KELLY J. McCLAIN**

REVISOR  
**KEN ROMERO**  
DATE REVISOR  
**KELLY J. McCLAIN**



REVISOR  
 REVISED BY  
 DATE

DESIGNER  
 KEN ROMERO  
 CHECKED BY  
 KELLY J. McCLAIN

FUNCTIONAL SUPERVISOR  
 KELLY J. McCLAIN

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	101	9.7/10.6	6	13

*Kenneth J. Romero* 2-14-11  
 REGISTERED CIVIL ENGINEER DATE

2-14-11  
 PLANS APPROVAL DATE

**K. J. ROMERO**  
 No. 49645  
 Exp. 9-30-12  
 CIVIL

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

**PAVEMENT STRUCTURE**

LOCATION	TACK COAT	HOT MIX ASPHALT (TYPE A)	COLD PLANE ASPHALT CONCRETE PAVEMENT	ASPHALTIC EMULSION (FOG SEAL COAT)	IMPORTED MATERIAL (Shld BACKING)
	TON	TON	SQYD	TON	TON
SAN YSIDRO NB OFF RAMP PM 9.7 TO 9.8	0.43	140	1728	0.20	1.2
SAN YSIDRO NB ON RAMP PM 9.8 TO 9.9	0.40	130	1610	0.21	1.8
SAN YSIDRO SB OFF RAMP PM 9.8 TO 9.9	0.40	130	1565	0.18	
OLIVE MILL NB OFF RAMP PM 10.3 TO 10.5	0.44	140	1762	0.23	1.6
OLIVE MILL SB ON RAMP PM 10.3 TO 10.5	0.47	150	1902	0.19	
OLIVE MILL SB OFF RAMP PM 10.55 TO 10.6	0.53	170	2122		
REPAIR FAILED ROADWAY	0.15	54	535		
<b>TOTAL</b>	<b>2.82</b>	<b>914</b>	<b>11,224</b>	<b>1.01</b>	<b>4.6</b>

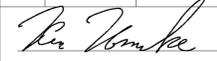
**REPAIR FAILED ROADWAY**

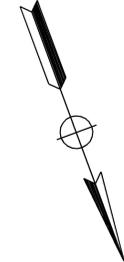
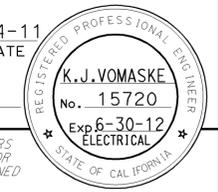
LOCATION	COLD PLANE AC PAVEMENT	HMA (TYPE A)	TACK COAT
	SQYD	TON	TON
SAN YSIDRO NB OFF RAMP	45	4.5	0.01
SAN YSIDRO NB ON RAMP	135	13.7	0.04
SAN YSIDRO SB OFF RAMP	90	9.0	0.02
OLIVE MILL SB ON RAMP	220	22.3	0.07
OLIVE MILL SB OFF RAMP	45	4.5	0.01
<b>TOTAL</b>	<b>535*</b>	<b>54*</b>	<b>0.15*</b>

\* QUANTITIES ARE INCLUDED IN PAVEMENT STRUCTURE SUMMARY.

**SUMMARY OF QUANTITIES  
 Q-2**

LAST REVISION DATE PLOTTED => 16-FEB-2011 02-14-11 TIME PLOTTED => 10:48

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	101	9.7/10.6	7	13
 REGISTERED ELECTRICAL ENGINEER No. 15720 2-14-11 PLANS APPROVAL DATE			2-14-11 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:**

- RIGHT OF WAY LIMITS ARE INDETERMINATE AND ARE NOT SHOWN. THE CONTRACTOR MUST CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE FOR CONDITIONS OF USE PRIOR TO COMMENCING WORK.

**LEGEND:**

- 1 VEHICLE SENSOR NODE SHALL BE REMOVED AND REINSTALLED.

**VEHICLE SENSOR NODE REMOVAL AND REINSTALLATION PROCEDURE:**

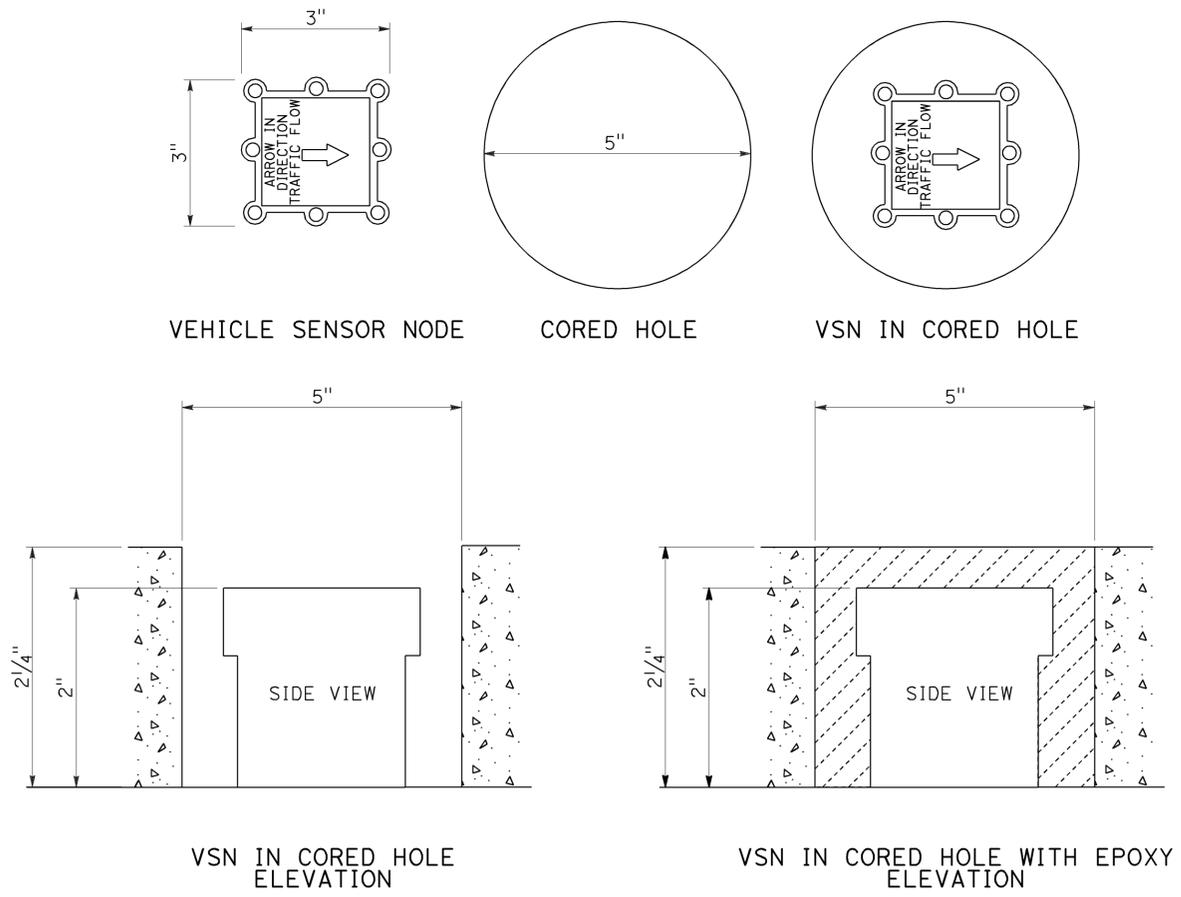
- PRIOR TO REMOVAL, REFERENCE THE SENSOR'S LOCATION AND ORIENTATION IN THE LANE.
- CORE A 5" Dia HOLE INTO THE ROAD AROUND THE SENSOR TO A DEPTH OF Approx 2 1/2".
- PERMANENTLY MARK THE DIRECTION OF TRAFFIC ONTO THE TOP OF THE SENSOR/EPOXY PLUG.
- USE PRY BAR AS NEEDED TO WORK THE SENSOR/EPOXY PLUG FREE FROM THE BOTTOM OF THE HOLE.
- PULL THE SENSOR/EPOXY PLUG FREE FROM THE HOLE. REMOVE LOOSE DIRT OR DEBRIS FROM THE SENSOR.
- STORE THE SENSOR/EPOXY UNIT IN NORMAL SHOP CONDITIONS.
- TO REINSTALL THE UNIT, VACUUM AND BRUSH THE HOLE AT THE SAME LOCATION. ENSURE THAT THE HOLE IS CLEAR OF DUST AND DEBRIS. ENSURE IT IS DRY AS MOISTURE MAY IMPEDE THE CURING OF THE EPOXY.
- APPLY EPOXY TO THE BOTTOM OF THE HOLE AT A DEPTH OF APPROXIMATELY 1 1/2".
- PLACE SENSOR IN HOLE. VERIFY THE FOLLOWING:
  - SENSOR IS DRY AND CLEAN
  - SENSOR IS LEVEL
  - LABEL IS VISIBLE
  - ARROW ON LABEL POINTS IN THE DIRECTION OF TRAFFIC FLOW
- MAKE SURE THE SENSOR LAYS FLAT IN THE CORED HOLE AND IS NOT TILTED.
- FILL THE HOLE WITH EPOXY, COMPLETELY COVERING THE SENSOR.

**ABBREVIATIONS:**

- WVDS WIRELESS VEHICLE DETECTION SYSTEM
- VSN VEHICLE SENSOR NODE

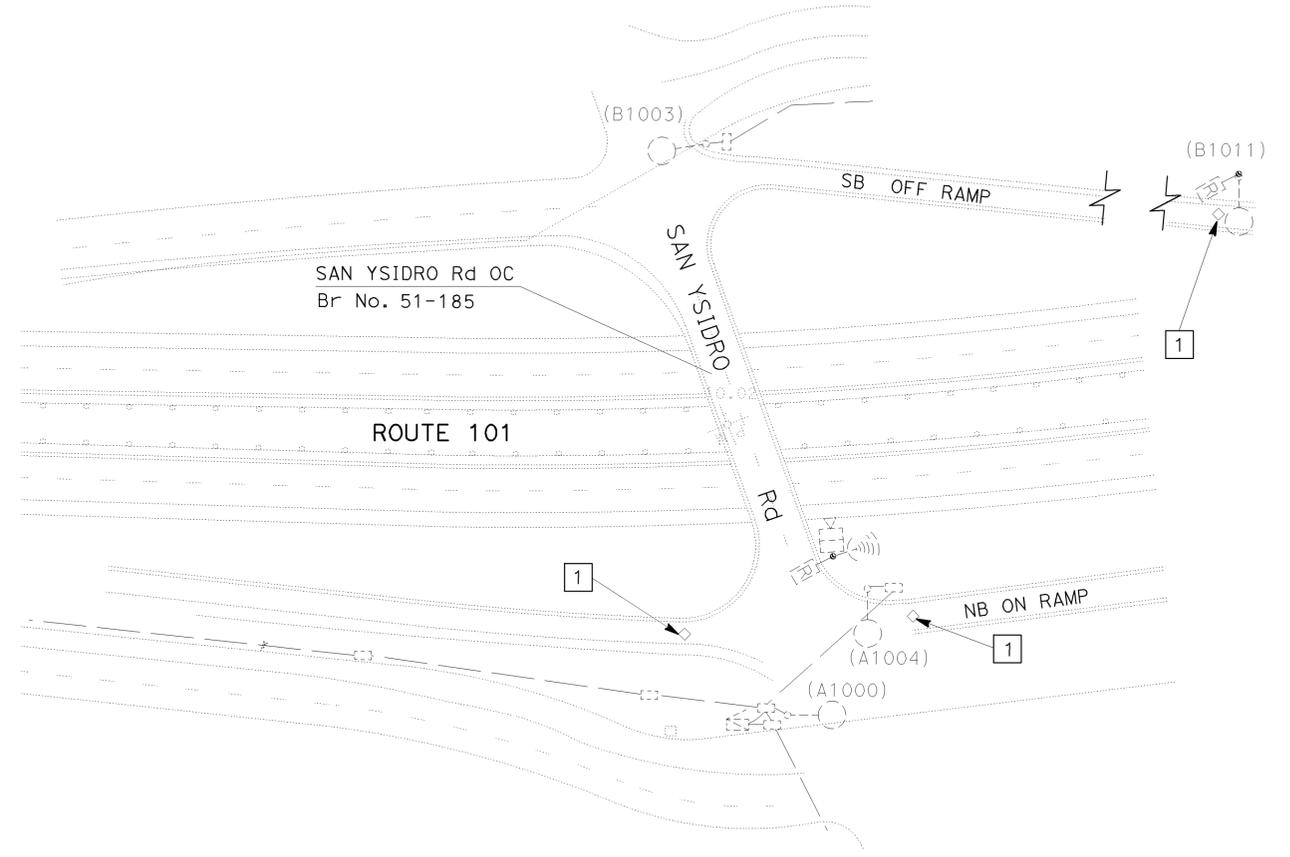
**SYMBOLS:**

- ◊ Exist VEHICLE SENSOR NODE
-  Exist WVDS REPEATER



**DETAIL**

**VEHICLE SENSOR NODE INSTALLATION DETAIL**



**MODIFY WIRELESS VEHICLE DETECTION SYSTEM**

NO SCALE

**E-1**

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - TRAFFIC OPERATIONS  
 KEN VOMASKE  
 JULIE M. GONZALEZ  
 JULIE M. GONZALEZ  
 JULIE M. GONZALEZ  
 REVISIONS: 02-14-11

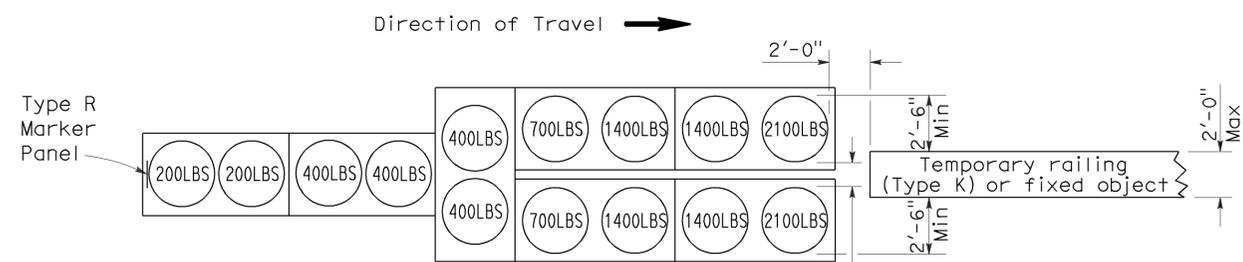
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	SB	101	9.7/10.6	8	13

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

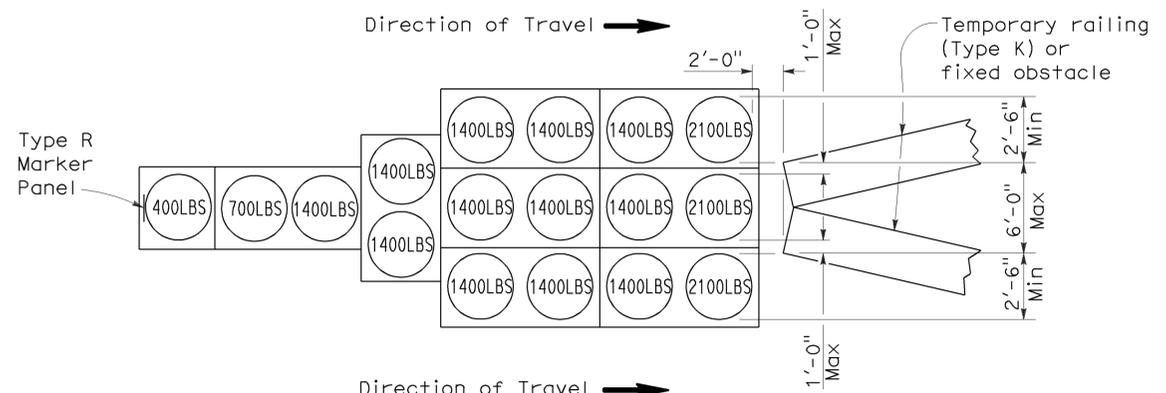
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To accompany plans dated 2-14-11



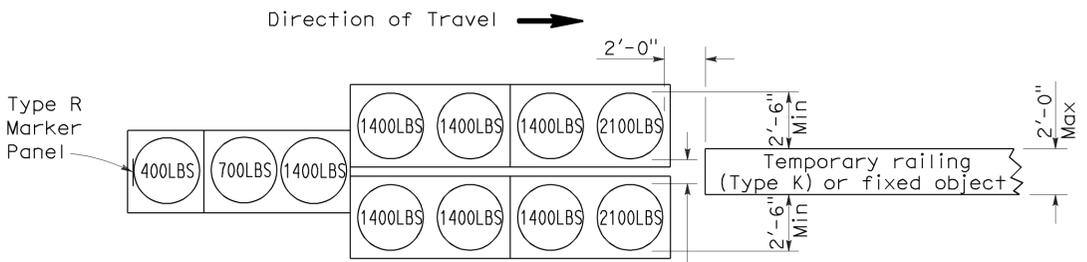
**ARRAY 'TU14'**

Approach speed 45 mph or more



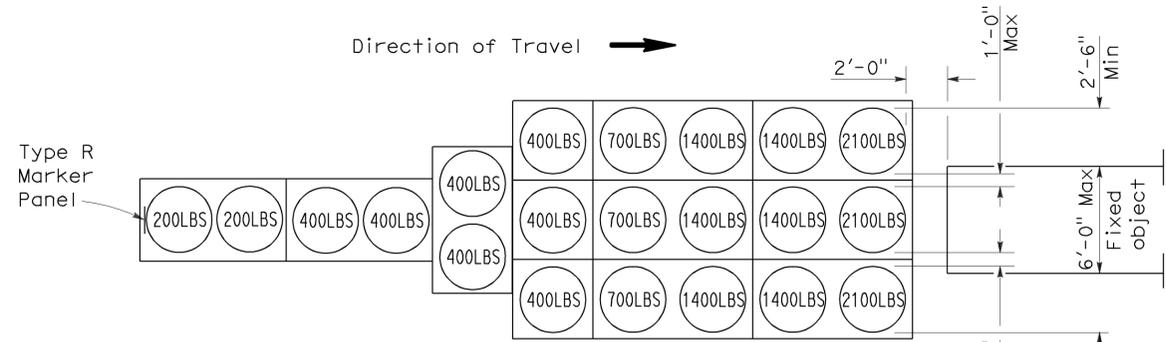
**ARRAY 'TU17'**

Approach speed less than 45 mph



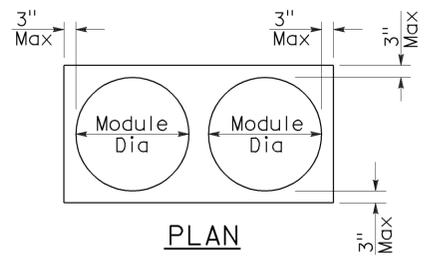
**ARRAY 'TU11'**

Approach speed less than 45 mph

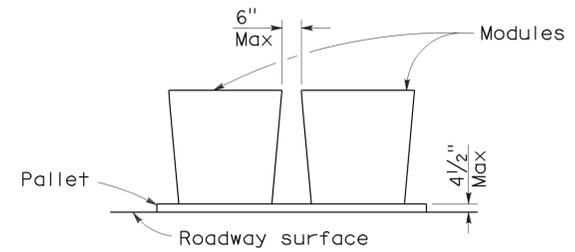


**ARRAY 'TU21'**

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
05	SB	101	9.7/10.6	9	13

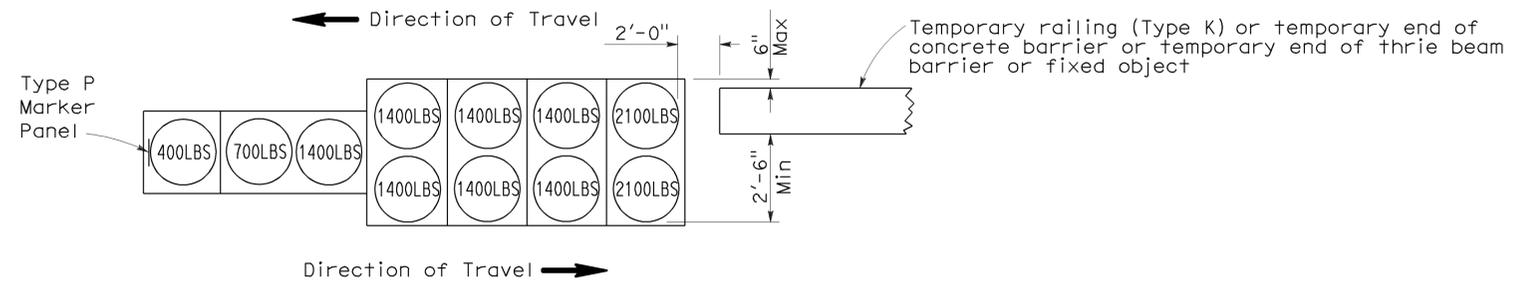
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

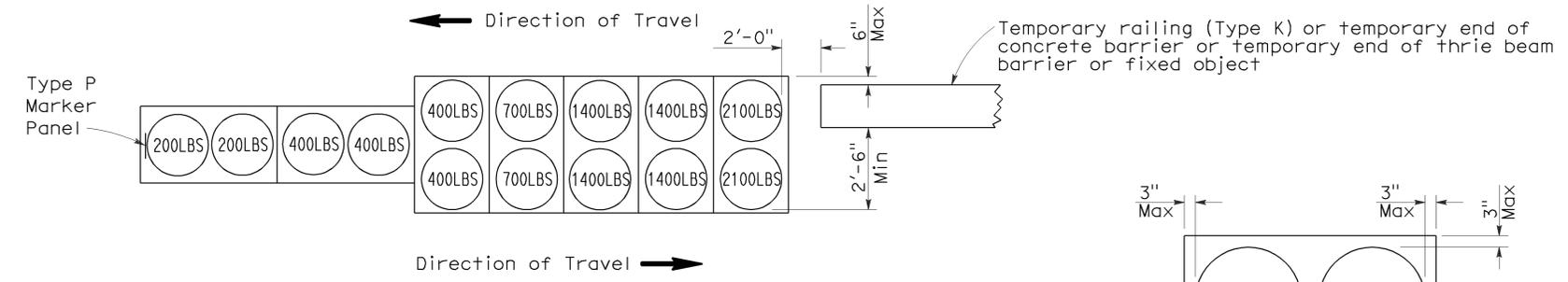
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To accompany plans dated 2-14-11



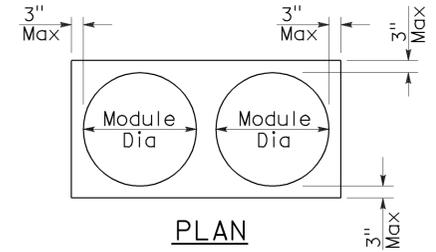
**ARRAY 'TB11'**

Approach speed less than 45 mph

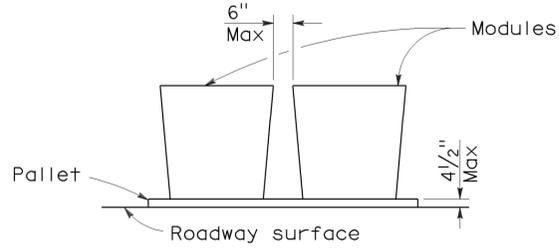


**ARRAY 'TB14'**

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

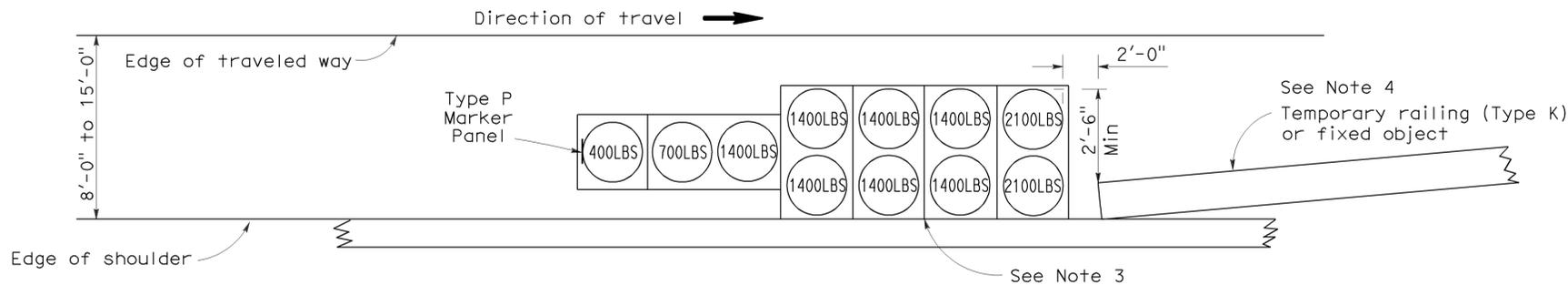
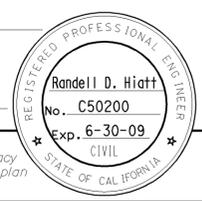
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	SB	101	9.7/10.6	10	13

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

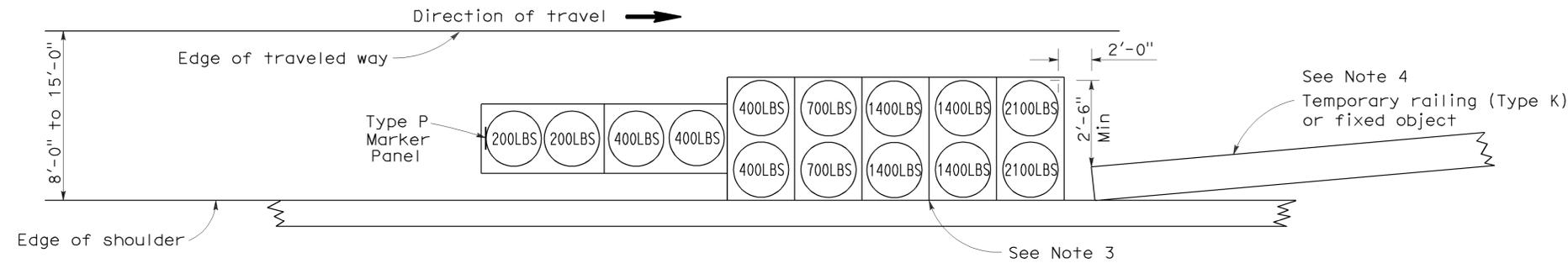
June 6, 2008  
PLANS APPROVAL DATE

*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 2-14-11



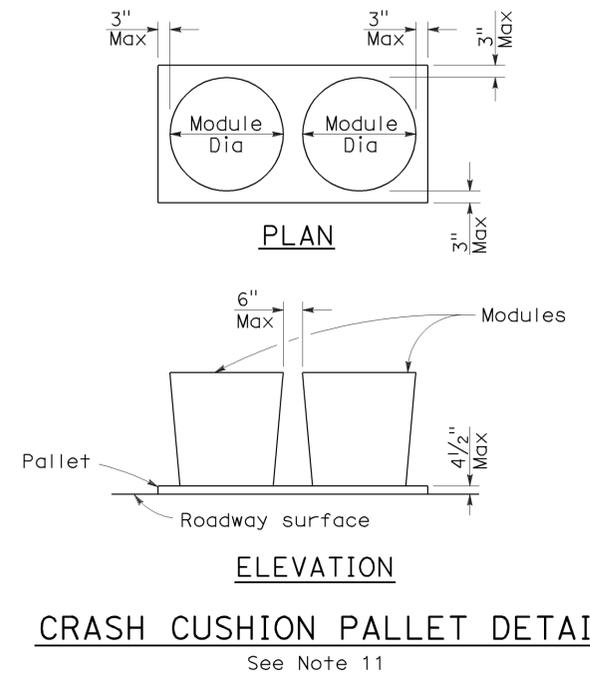
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



**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 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, side attachment - 4 signal section
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, side attachment - 5 signal section
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
N	N	Mercury vapor lighting fixture
NC	NC	Neutral (Grounded Conductor)
NO	NO	Normally closed
PB	pb	Normally open
PEC	pec	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
05	SB	101	9.7/10.6	11	13

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
PLANS APPROVAL DATE

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

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To accompany plans dated 2-14-11

## 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
05	SB	101	9.7/10.6	12	13

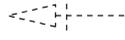
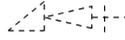
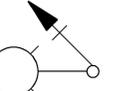
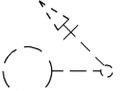
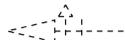
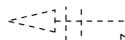
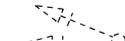
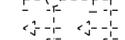
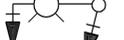
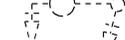
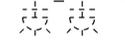
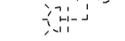
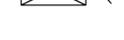
Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
 Jeffrey G. McRae  
 No. E14512  
 Exp. 6-30-08  
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 STATE OF CALIFORNIA

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### 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

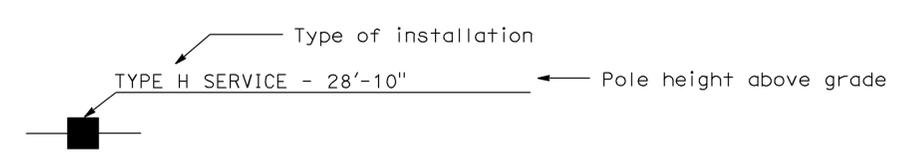
### SIGNAL EQUIPMENT

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

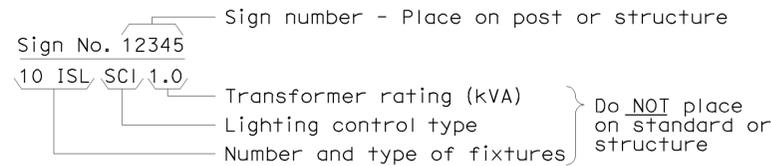
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B  
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

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

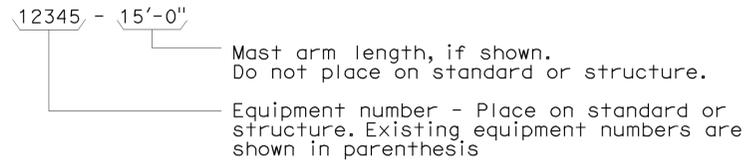
2006 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

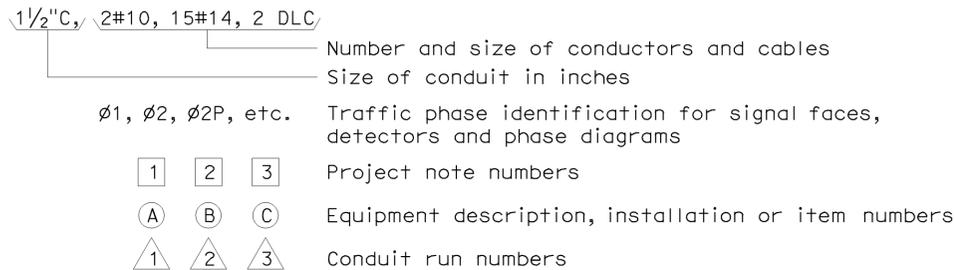
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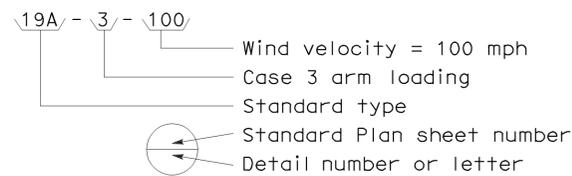
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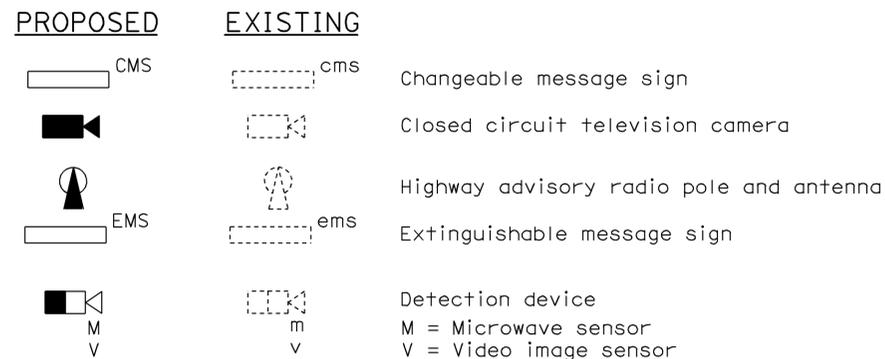
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



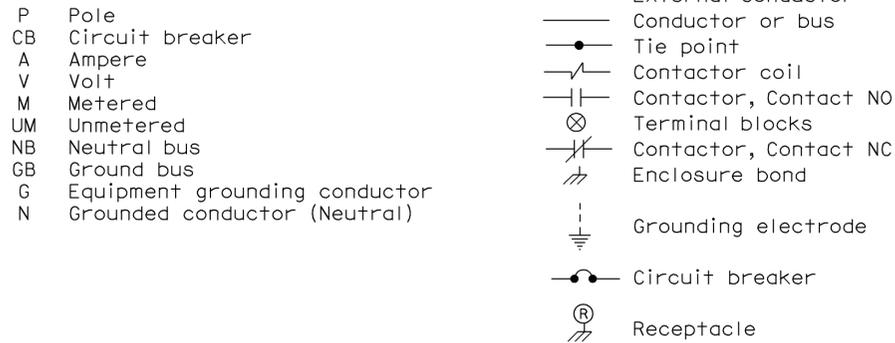
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



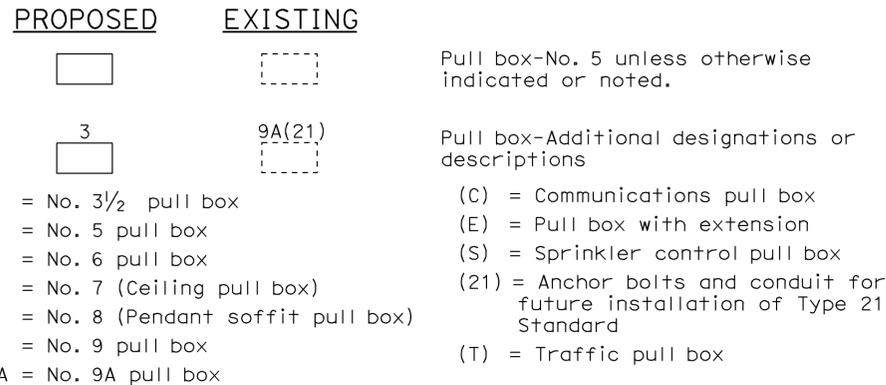
### MISCELLANEOUS EQUIPMENT



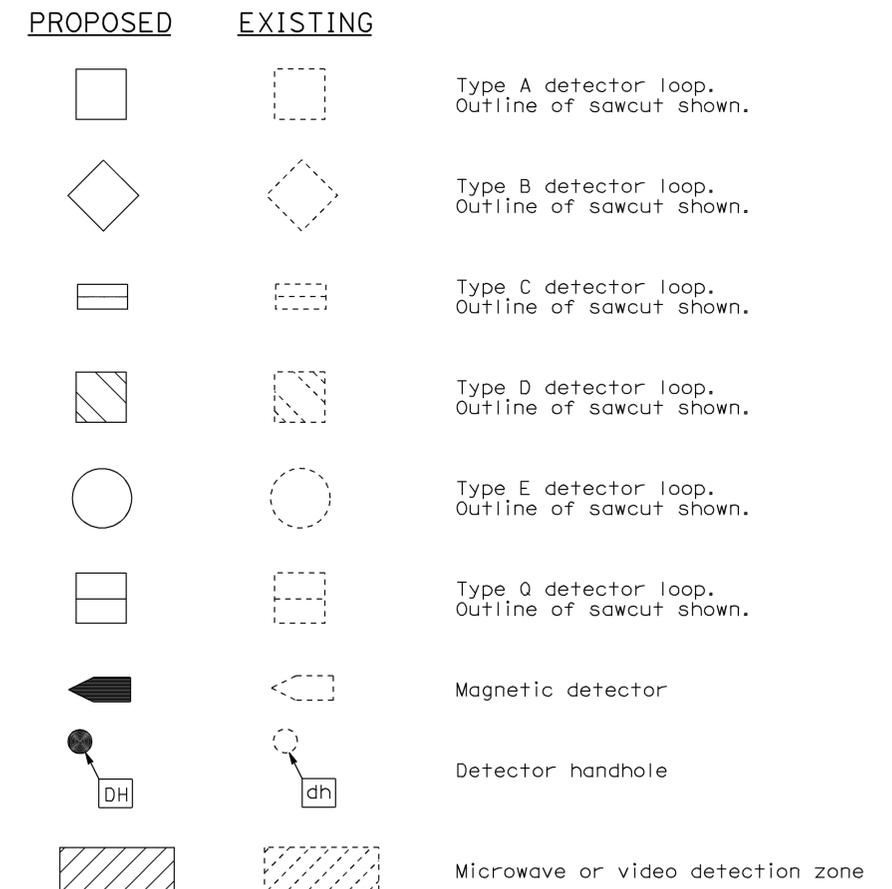
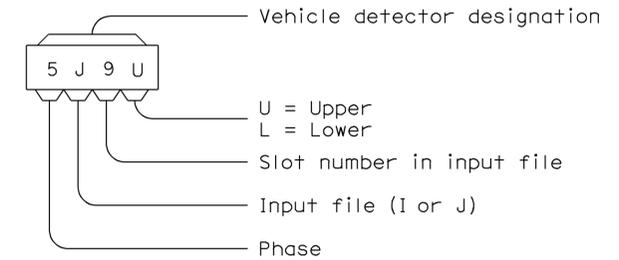
### WIRING DIAGRAM LEGEND



### 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.