

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala,CC, SM	24,80,92, 680,880	Var	1	16

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN ALAMEDA, CONTRA COSTA,
AND SAN MATEO COUNTIES
AT VARIOUS LOCATIONS

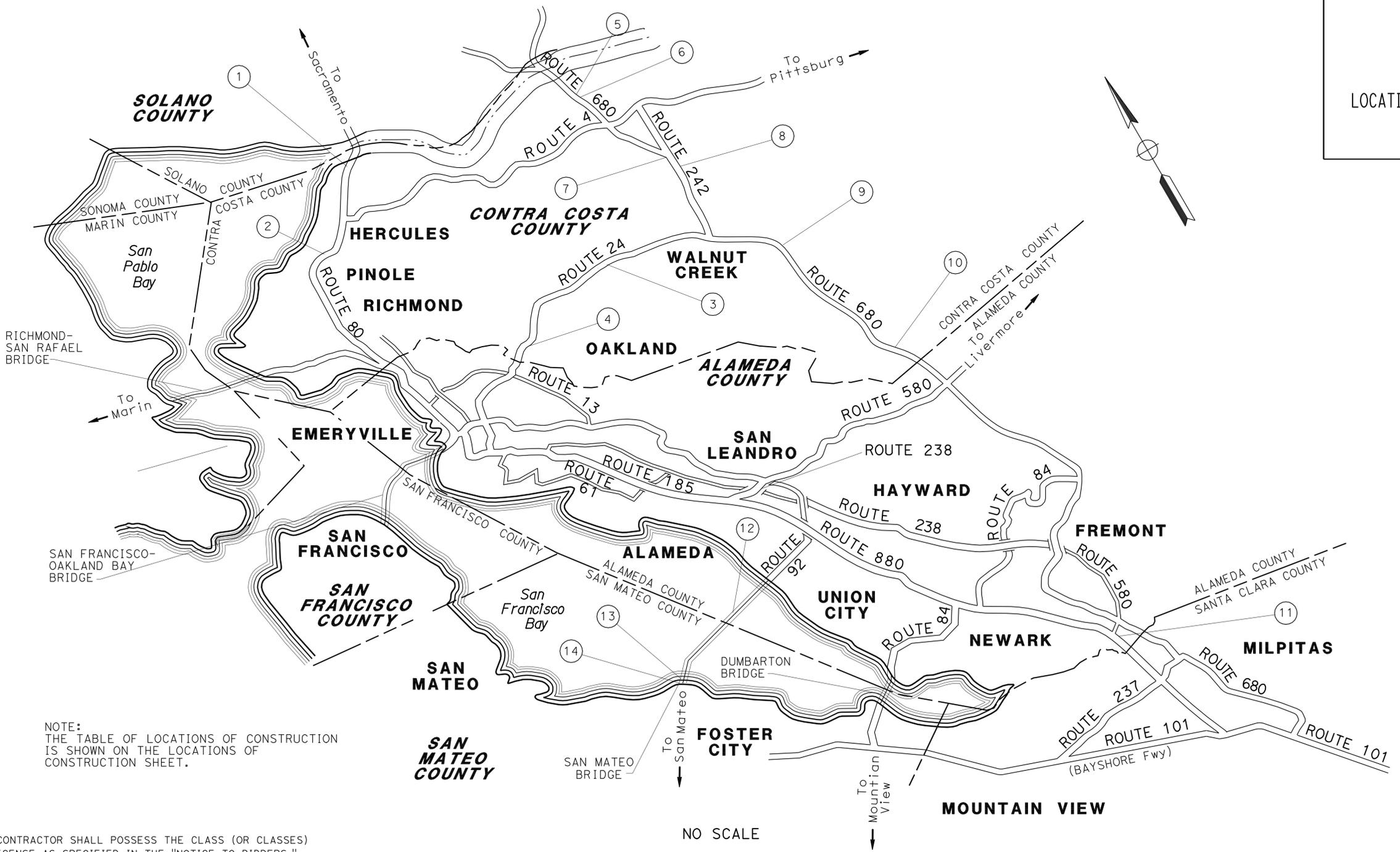


INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	LOCATIONS OF CONSTRUCTION
3-6	CONSTRUCTION AREA SIGNS
7-10	ELECTRICAL PLANS
11-16	REVISED STANDARD PLANS

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

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



NOTE:
 THE TABLE OF LOCATIONS OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTION SHEET.

NO SCALE

PROJECT MANAGER
 RAMSES SARGISS

DESIGN ENGINEER
 CHOON F. YONG

Yong Choon F. 2/8/11
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER

March 21, 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. **04-2E1704**
 PROJECT ID **0400020044**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

MINH VAN LE
 CHOON F. YONG

REVISOR BY
 DATE REVISED

MRL
 2/7/11

CALCULATED/DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR
 CHOON F. YONG

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC, SM	24, 80, 92, 680, 880	Var	2	16

Yousheng Fan 2/8/11
 REGISTERED CIVIL ENGINEER DATE
 3-21-11
 PLANS APPROVAL DATE

Choon F. Yong
 No. 51254
 Exp. 9-30-11
 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.

LOCATIONS OF CONSTRUCTION

LOCATION	COUNTY No.	COUNTY	ROUTE	DIRECTION	PM	DESCRIPTION
①	5928	CC	80	WB	13.41	WB 80 WEST OF CARQUINEZ BRIDGE
②	5928	CC	80	WB	7.60	WB 80 EAST OF APPIAN WAY
③	5928	CC	24	EB	R6.70	EB 24 EAST OF HAPPY VALLEY
④	5928	CC	24	WB	R2.28	WB 24 EAST OF CALDECOTT TUNNEL
⑤	5928	CC	680	SB	23.56	SB 680 SOUTH OF MARINA VISTA ON-RAMP
⑥	5928	CC	680	NB	23.78	NB 680 SOUTH OF MARINA VISTA OFF-RAMP
⑦	5928	CC	680	NB	R19.24	NB 680 SOUTH OF CONCORD Ave UC
⑧	5928	CC	680	SB	R17.68	SB 680 SOUTH OF MONUMENT Blvd
⑨	5928	CC	680	NB	R11.76	NB 680 SOUTH OF RUDGEAR UC
⑩	5928	CC	680	SB	R1.30	SB 680 NORTH OF ALCOSTA Blvd
⑪	5933	Ala	880	NB	R0.52	NORTH OF DIXON LANDING Rd (CM077)
⑫	5933	Ala	92	WB	R2.43	WB 92 JUST WEST OF SAN MATEO BRIDGE PLAZA (CM083)
⑬	5935	SM	92	EB	R14.2	BRIDGE INCLINE
⑭	5935	SM	92	WB	R14.0	WB 92 EAST OF FOSTER CITY Blvd

LOCATIONS OF CONSTRUCTION

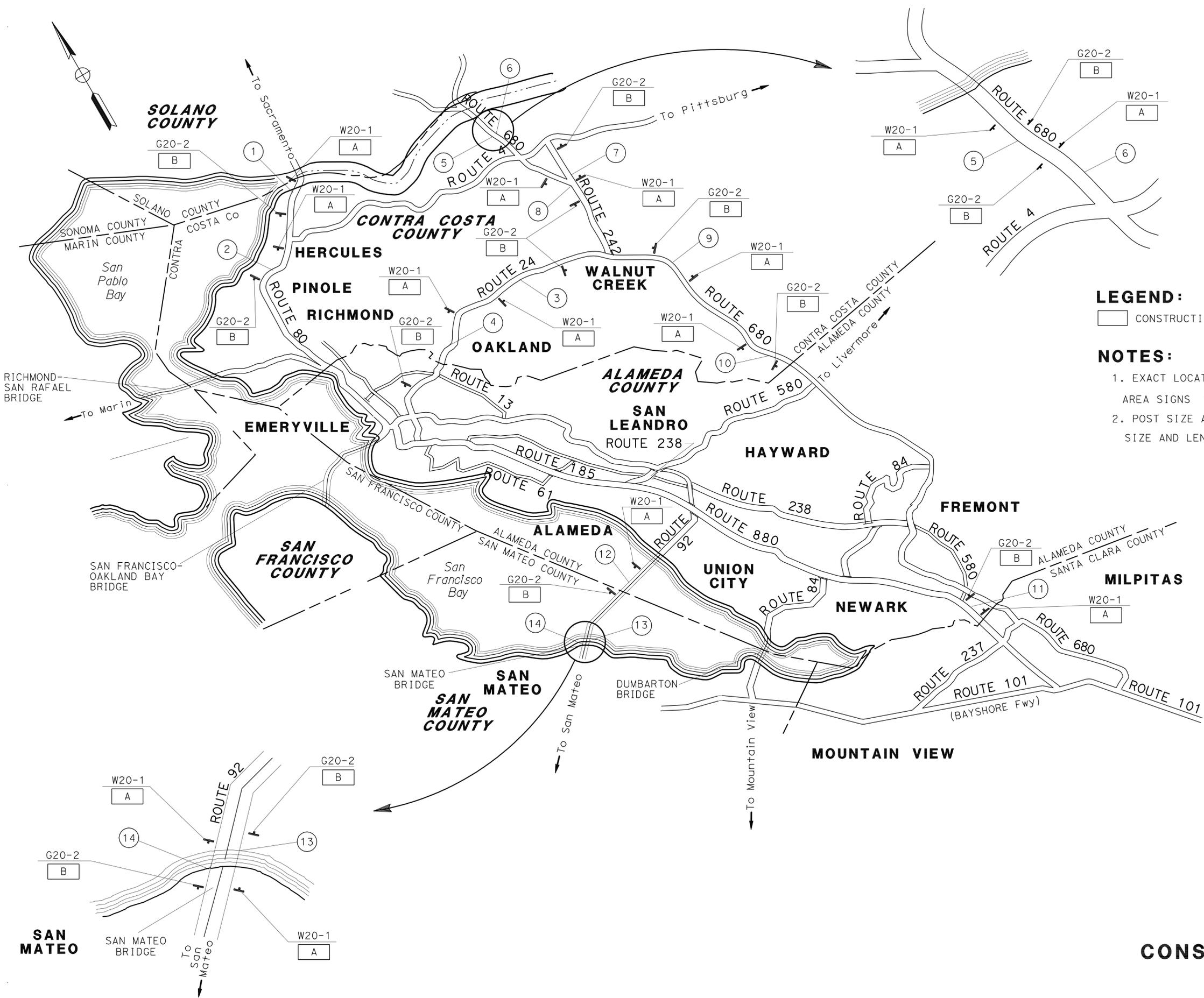
LC-1

LAST REVISION DATE PLOTTED => 25-MAR-2011
 02-07-11 TIME PLOTTED => 12:53

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC, SM	24,80,92, 680,880	Var	3	16

Marialda Lerma 2/8/11
 REGISTERED CIVIL ENGINEER DATE
 3-21-11
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
Maria R Lerma
 No. 75486
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA



LEGEND:
 [] CONSTRUCTION AREA SIGN DESIGNATION

NOTES:

1. EXACT LOCATION AND POSITION OF CONSTRUCTION AREA SIGNS WILL BE DETERMINED BY THE ENGINEER.
2. POST SIZE AND LENGTH ARE APPROXIMATE. EXACT SIZE AND LENGTH WILL BE DETERMINED BY THE ENGINEER.

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: LOURDES DAVID
 CALCULATED/DESIGNED BY: [] CHECKED BY: []
 REVISIONS BY: RAMON N. CRUZ, MARIA LERMA
 DATE REVISION: 2/7/11
 MRL

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY



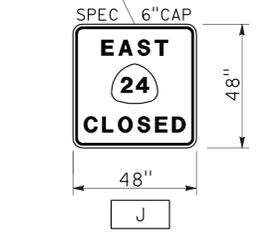
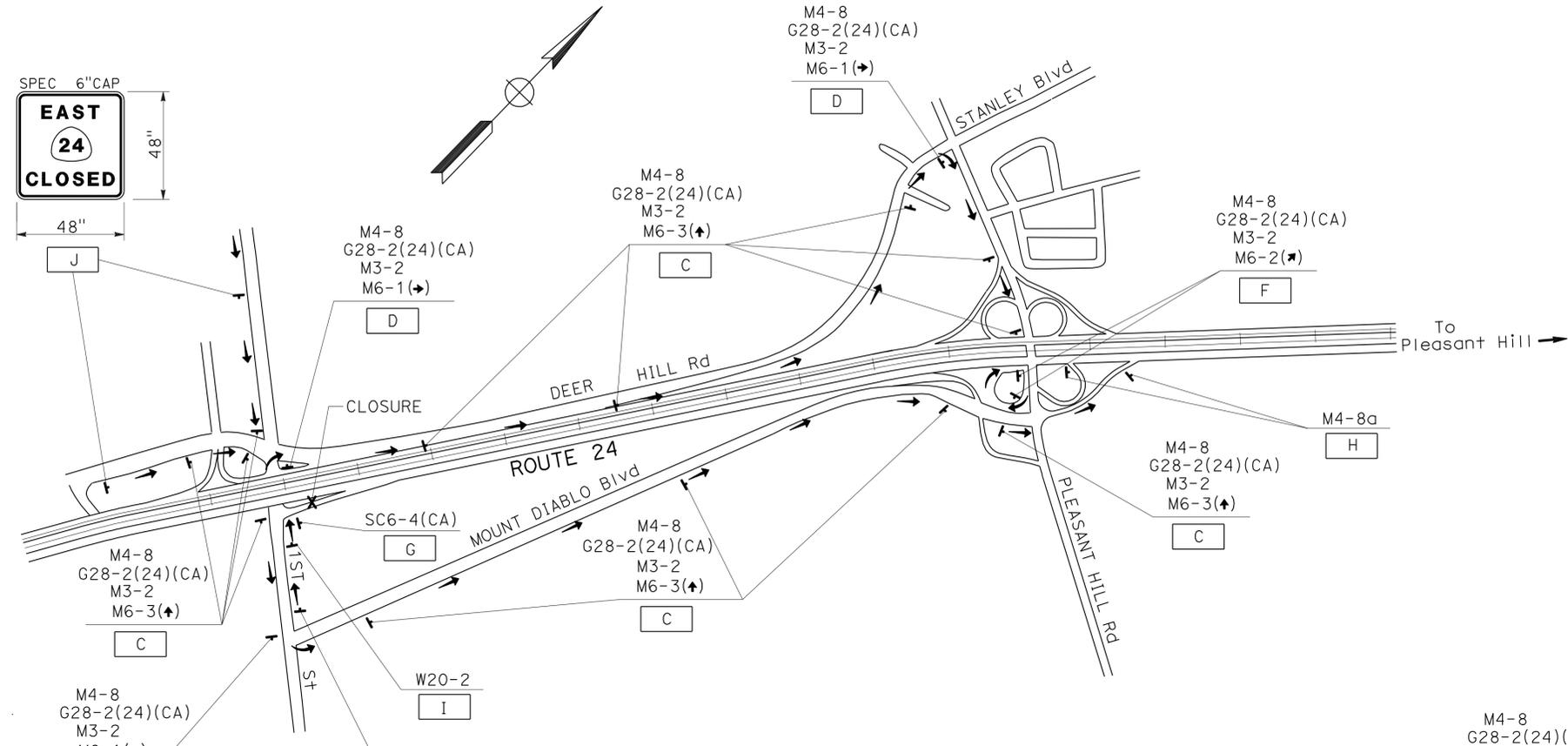
LAST REVISION: DATE PLOTTED => 25-MAR-2011
 02-07-11 TIME PLOTTED => 15:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC, SM	24, 80, 92, 680, 880	Var	4	16
<i>Maribel Lerma</i> REGISTERED CIVIL ENGINEER			2/8/11	DATE	
3-21-11 PLANS APPROVAL DATE					
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: LOURDES DAVID
 TRAFFIC

REVISOR	DATE	REVISION
MRL	2/7/11	
RAMON N. CRUZ	MARIA LERMA	
CALCULATED/DESIGNED BY	CHECKED BY	

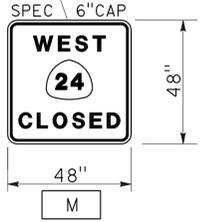
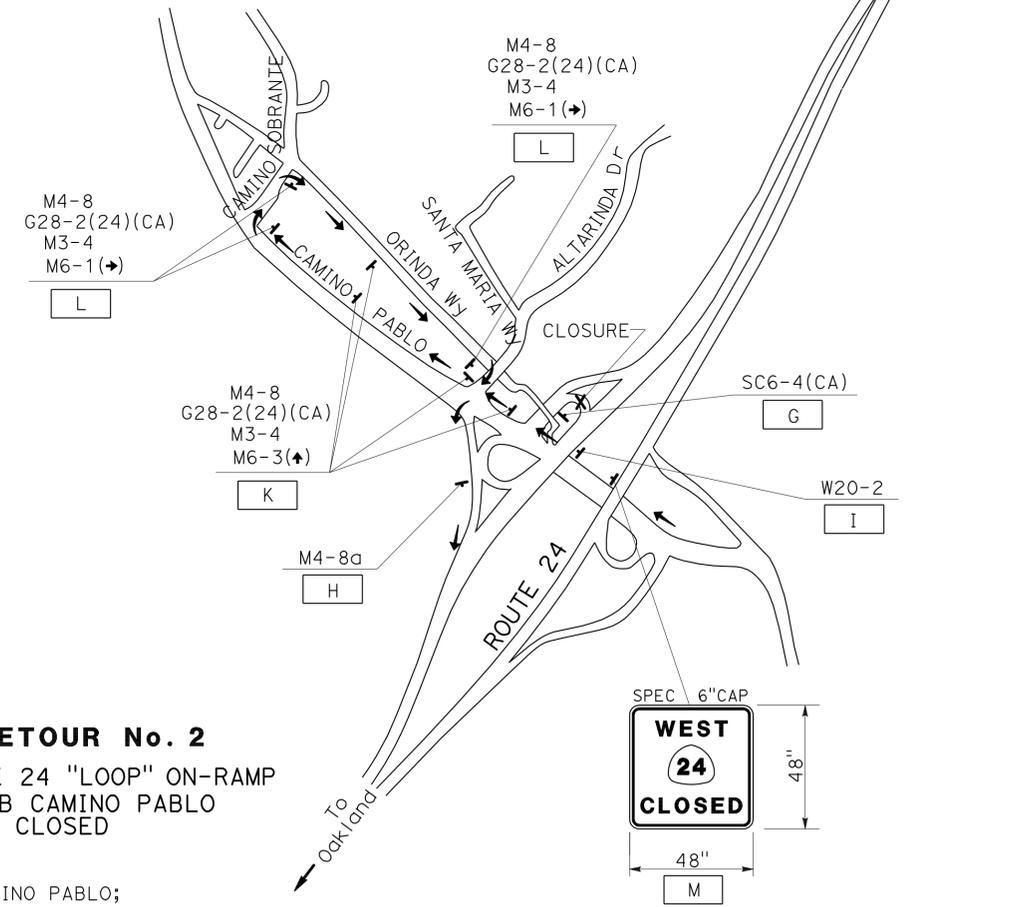


LOCATION No. 3

DETOUR No. 1
 EB ROUTE 24 ON-RAMP FROM FIRST ST
 CLOSED

TRAFFIC FROM NB FIRST ST
 VIA:
 NB FIRST St;
 EB DEER HILL Rd;
 SB PLEASANT HILL Rd;
 ON-RAMP TO EB ROUTE 24.

TRAFFIC FROM SB FIRST ST
 VIA:
 SB FIRST St;
 EB MOUNT DIABLO Blvd;
 ON-RAMP TO EB ROUTE 24.



LOCATION No. 4

DETOUR No. 2
 WB ROUTE 24 "LOOP" ON-RAMP
 FROM NB CAMINO PABLO
 CLOSED

VIA:
 NB CAMINO PABLO;
 EB CAMINO SOBRANTE;
 SB ORINDA WAY;
 WB SANTA MARIA WAY;
 TO WB ROUTE 24 ON-RAMP.

CONSTRUCTION AREA SIGNS

NO SCALE

CS-2

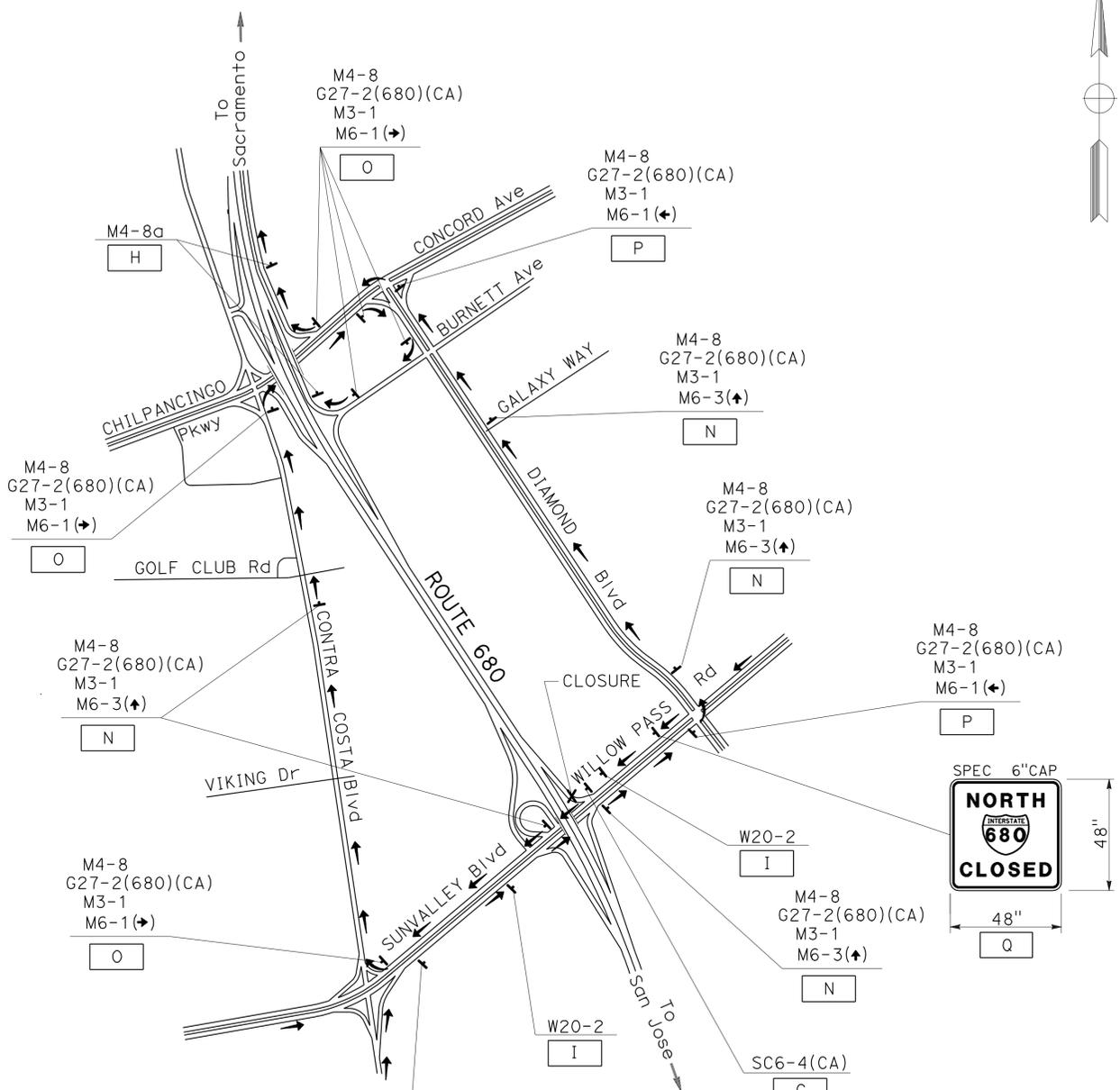


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC, SM	24,80,92, 680,880	Var	5	16

Maribel R. Lerma 2/8/11
 REGISTERED CIVIL ENGINEER DATE
 3-21-11
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 No. 75486
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
Caltrans	LOURDES DAVID	RAMON N. CRUZ	MRL	2/7/11
	TRAFFIC		MARIA LERMA	DATE

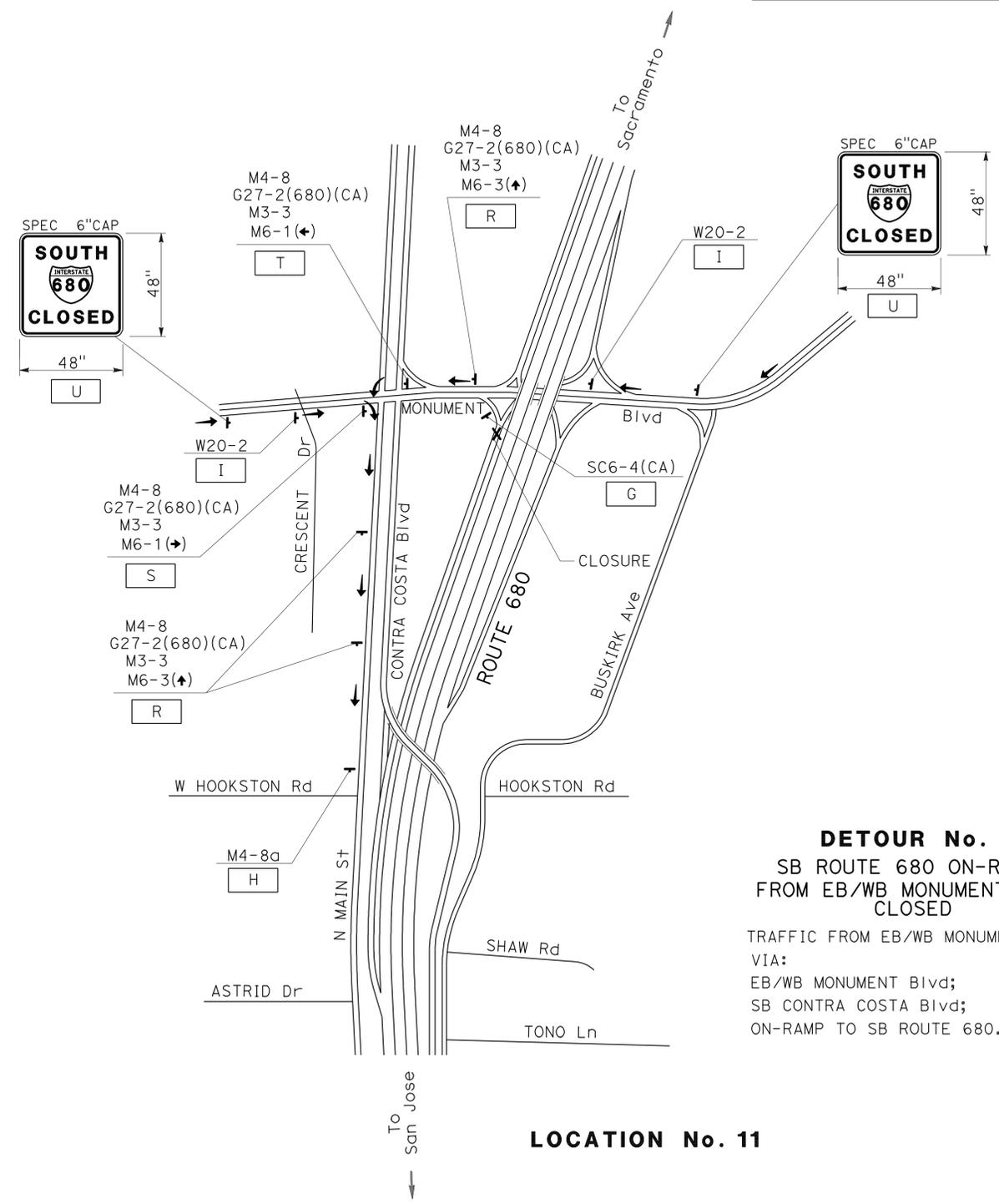


DETOUR No. 3
 NB ROUTE 680 ON-RAMP FROM WILLOW PASS Rd CLOSED

WB WILLOW PASS Rd TRAFFIC VIA:
 WB WILLOW PASS Rd;
 NB CONTRA COSTA Blvd;
 EB CONCORD Ave;
 SB DIAMOND Blvd;
 WB BURNETT Ave;
 ON-RAMP TO NB ROUTE 680.

EB WILLOW PASS Rd TRAFFIC:
 EB WILLOW PASS Rd;
 NB DIAMOND Blvd;
 WB CONCORD Ave;
 ON-RAMP TO NB ROUTE 680.

LOCATION No. 9



DETOUR No. 4
 SB ROUTE 680 ON-RAMP FROM EB/WB MONUMENT Blvd CLOSED

TRAFFIC FROM EB/WB MONUMENT Blvd VIA:
 EB/WB MONUMENT Blvd;
 SB CONTRA COSTA Blvd;
 ON-RAMP TO SB ROUTE 680.

LOCATION No. 11

CONSTRUCTION AREA SIGNS

NO SCALE **CS-3**

THIS PLAN ACCURATE FOR DETOUR CONSTRUCTION WORK ONLY

LAST REVISION: DATE PLOTTED => 25-MAR-2011 TIME PLOTTED => 13:03

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	MESSAGE	PANEL SIZE	NUMBER OF POSTS AND SIZE	No. OF SIGNS
X					
A	W20-1	ROAD WORK AHEAD	48" x 48"	(ONE) 4" x 6"	14
B	G20-2	END ROAD WORK	36" x 18"	(ONE) 4" x 4"	14
C	M4-8	DETOUR	24" x 12"	(ONE) 4" x 6"	13
	G28-2(24)(CA)	ROUTE 24	21" x 18"		
	M3-2	EASTBOUND	24" x 12"		
D	M6-3(↗)	STRAIGHT ARROW	21" x 15"	(ONE) 4" x 6"	2
	M4-8	DETOUR	24" x 12"		
	G28-2(24)(CA)	ROUTE 24	21" x 18"		
E	M3-2	EASTBOUND	24" x 12"	(ONE) 4" x 6"	1
	M6-1(↘)	RIGHT ARROW	21" x 15"		
	M4-8	DETOUR	24" x 12"		
F	G28-2(24)(CA)	ROUTE 24	21" x 18"	(ONE) 4" x 6"	2
	M3-2	EASTBOUND	24" x 12"		
	M6-2(↖)	UP-RIGHT ARROW	21" x 15"		
G	SC6-4(CA)	RAMP CLOSURE NOTICE	48" x 60"	(ONE) 6" x 6"	4
H	M4-8a(CA)	END DETOUR	30" x 18"	(ONE) 4" x 4"	6
I	W20-2	DETOUR AHEAD	36" x 36"	(ONE) 4" x 6"	6
J	SPECIAL SIGN	EAST 24 CLOSED	48" x 48"	(ONE) 6" x 6"	3
K	M4-8	DETOUR	24" x 12"	(ONE) 4" x 6"	4
	G28-2(24)(CA)	ROUTE 24	21" x 18"		
	M3-4	WESTBOUND	24" x 12"		
	M6-3(↗)	STRAIGHT ARROW	21" x 15"		
L	M4-8	DETOUR	24" x 12"	(ONE) 4" x 6"	3
	G28-2(24)(CA)	ROUTE 24	21" x 18"		
	M3-4	WESTBOUND	24" x 12"		
	M6-1(↘)	RIGHT ARROW	21" x 15"		
M	SPECIAL SIGN	WEST 24 CLOSED	48" x 48"	(ONE) 4" x 6"	1
N	M4-8	DETOUR	24" x 12"	(ONE) 4" x 6"	5
	G27-2(680)(CA)	ROUTE 680	21" x 18"		
	M3-1	NORTHBOUND	24" x 12"		
	M6-3(↗)	STRAIGHT ARROW	21" x 15"		
O	M4-8	DETOUR	24" x 12"	(ONE) 4" x 6"	6
	G27-2(680)(CA)	ROUTE 680	21" x 18"		
	M3-1	NORTHBOUND	24" x 12"		
	M6-1(↘)	RIGHT ARROW	21" x 15"		
P	M4-8	DETOUR	24" x 12"	(ONE) 4" x 6"	2
	G27-2(680)(CA)	ROUTE 680	21" x 18"		
	M3-1	NORTHBOUND	24" x 12"		
	M6-1(↖)	LEFT ARROW	21" x 15"		
Q	SPECIAL SIGN	NORTH 680 CLOSED	48" x 48"	(ONE) 4" x 6"	2

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	MESSAGE	PANEL SIZE	NUMBER OF POSTS AND SIZE	No. OF SIGNS
X					
R	M4-8	DETOUR	24" x 12"	(ONE) 4" x 6"	3
	G27-2(680)(CA)	ROUTE 680	21" x 18"		
	M3-3	SOUTHBOUND	24" x 12"		
	M6-3(↗)	STRAIGHT ARROW	21" x 15"		
S	M4-8	DETOUR	24" x 12"	(ONE) 4" x 6"	1
	G27-2(680)(CA)	ROUTE 680	21" x 18"		
	M3-3	SOUTHBOUND	24" x 12"		
	M6-1(↘)	RIGHT ARROW	21" x 15"		
T	M4-8	DETOUR	24" x 12"	(ONE) 4" x 6"	1
	G27-2(680)(CA)	SOUTHBOUND	21" x 18"		
	M3-3	SOUTHBOUND	24" x 12"		
	M6-1(↖)	LEFT ARROW	21" x 15"		
U	SPECIAL SIGN	SOUTH 680 CLOSED	48" x 48"	(ONE) 4" x 6"	2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda, SM	24,80,92, 680,880	Var	6	16

Maria R Lerma 2/8/11
 REGISTERED CIVIL ENGINEER DATE

3-21-11
 PLANS APPROVAL DATE

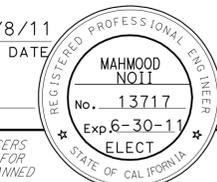
No. 75486
 Exp. 6-30-12
 CIVIL

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 TRAFFIC
 FUNCTIONAL SUPERVISOR: LOURDES DAVID
 CHECKED BY: MARIA LERMA
 REVISIONS: MRL 2/7/11
 REVISIONS: DATE REVISIONS

LAST REVISION DATE PLOTTED => 25-MAR-2011
 02-07-11 TIME PLOTTED => 13:04

CONSTRUCTION AREA SIGNS CS-4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda, CC, SM	24,80,92, 680,880	Var	7	16
			2/8/11		
REGISTERED ELECTRICAL ENGINEER			DATE		
3-21-11			PLANS APPROVAL DATE		
					
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ELECTRICAL INDEX

- E-1 ELECTRICAL INDEX, NOTES AND ABBREVIATIONS
- E-2 & E-3 MODIFY TRAFFIC OPERATIONS SYSTEM (LOCATIONS 1 TO 14)
- E-4 MODIFY TRAFFIC OPERATIONS SYSTEM (ELECTRICAL DETAILS FOR CMS RETROFIT MODEL 500 LED PMM DIMENSIONS AND SHAPE)

PROJECT NOTES

- 1 RC EXISTING CMS XENON PIXEL MATRIX MODULES. INSTALL LED PIXEL MATRIX MODULES. SEE E-4 FOR DETAILS.
- 2 RC EXISTING MAIN DISCONNECT INSIDE CMS INTERFACE PANEL. INSTALL TWO (2) - POLE, 30 A, 120 V GANGED CIRCUIT BREAKERS AS MAIN DISCONNECT.

LEGEND

PMM PIXEL MATRIX MODULE

GENERAL NOTES

1. PRIOR TO ANY WORK ON PG&E SERVICE CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE PG&E INSPECTOR.
2. THE CONTRACTOR SHALL VERIFY THROUGH TESTING EQUIPMENT THAT THE POWER FOR THE CMS SYSTEM HAS BEEN SHUT OFF BEFORE ANY WORK ON THE CMS SYSTEM.
3. EXISTING CMS DISCONNECT IS MOUNTED TYPICALLY 6' ABOVE FINISHED GRADE ON CMS STRUCTURE.
4. THE CONTRACTOR SHALL TEST THE CMS IN THE PRESENCE OF THE ENGINEER BEFORE AND AFTER THE MODULE REPLACEMENTS. THE CONTRACTOR SHALL PROVIDE TWO REPORTS PER CMS LOCATION ON THE WORKING STATUS OF EACH PIXEL MATRIX MODULE. THE REPORTS SHALL BE SUBMITTED TO THE ENGINEER, ONE BEFORE STARTING REPLACEMENT AND THE OTHER AFTER REPLACEMENT HAS BEEN COMPLETED AT EACH CMS LOCATION.
5. DURING THE TEST OF THE EXISTING XENON CMS SIGNS, THE CONTRACTOR SHALL SELECT AND LABEL THE EXISTING XENON PIXEL MATRIX MODULES FOR SALVAGE. SELECTED EXISTING XENON PIXEL MATRIX MODULES TO BE SALVAGED SHALL BE APPROVED BY THE ENGINEER IN THE FIELD.

ELECTRICAL INDEX, NOTES AND ABBREVIATIONS

E-1



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC, SM	24,80,92, 680,880	Var	8	16

M. Noor 2/8/11
 REGISTERED ELECTRICAL ENGINEER DATE
 3-21-11
 PLANS APPROVAL DATE

MAHMOOD NOOI
 No. 13717
 Exp. 6-30-11
 ELECT

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.

CMS AND CONTROLLER LOCATION DESCRIPTION	WB 80 WEST OF CARQUINEZ BRIDGE	WB 80 EAST OF APPIAN WAY	EB 24 EAST OF HAPPY VALLEY	WB 24 EAST OF CALDECOTT TUNNEL	SB 680 SOUTH OF MARINA VISTA ON-RAMP	NB 680 SOUTH OF MARINA VISTA ON-RAMP	CONCORD AVE UNDER CROSSING	
LOCATION NO.	1	2	3	4	5	6	7	
COUNTY	CC	CC	CC	CC	CC	CC	CC	
ROUTE	80	80	24	24	680	680	680	
POST MILE	13.4 - 13.5	7.6 - 7.7	6.7 - 6.8	2.2 - 2.3	23.5 - 23.6	23.7 - 23.8	19.2 - 19.3	
DIRECTION: A. NB (NORTHBOUND) B. SB (SOUTHBOUND) C. EB (EASTBOUND) D. WB (WESTBOUND)	WB	WB	EB	WB	SB	NB	NB	
LOCATION: A. RIGHT SHOULDER/(RIGHT ETW) B. LEFT SHOULDER/(LEFT ETW) C. MEDIAN D. OVERHEAD STRUCTURE	A	A	A	A	A	A	A	
EXISTING CMS TYPE: X. XENON CMS PANELS	X	X	X	X	X	X	X	
PROPOSED CMS TYPE: L. LED CMS PANELS	L	L	L	L	L	L	L	
HARNES REPLACEMENT (Y=YES N=NO)	N	N	N	N	N	N	N	
TYPE OF HARNES SHALL BE REPLACED A. HARNES 4 B. HARNES 5 C. NONE	C	C	C	C	C	C	C	
PROPOSED COMPLETE XENON CMS ON EXISTING FRAME	1	1	1	1	1	1	1	
WORK DESCRIPTION	1 2	1 2	1 2	1 2	1 2	1 2	1 2	
							TOTAL PROPOSED LED CMS ON EXISTING FRAME (E-2)	7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL
 PARWIZ KHAZI
 MAHMOOD NOOI
 CALCULATED/DESIGNED BY
 CHECKED BY
 FUNCTIONAL SUPERVISOR
 LAT HONG CHIU
 PK
 2/7/11
 REVISED BY
 DATE REVISED

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY



UNIT 0976

PROJECT NUMBER & PHASE

04000200441

MODIFY TRAFFIC OPERATIONS SYSTEM
E-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL

PARWIZA KHAZI
 MAHMOOD NOII

REVISOR BY
 DATE REVISED

PK
 2/7/11

FUNCTIONAL SUPERVISOR
 LAI HONG CHIU

CALCULATED/DESIGNED BY
 CHECKED BY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda, CC, SM	24,80,92, 680,880	Var	9	16

M Noii 2/8/11
 REGISTERED ELECTRICAL ENGINEER DATE

3-21-11
 PLANS APPROVAL DATE

MAHMOOD NOII
 No. 13717
 Exp. 6-30-11
 ELECT

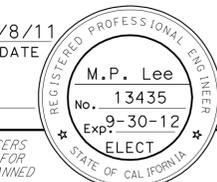
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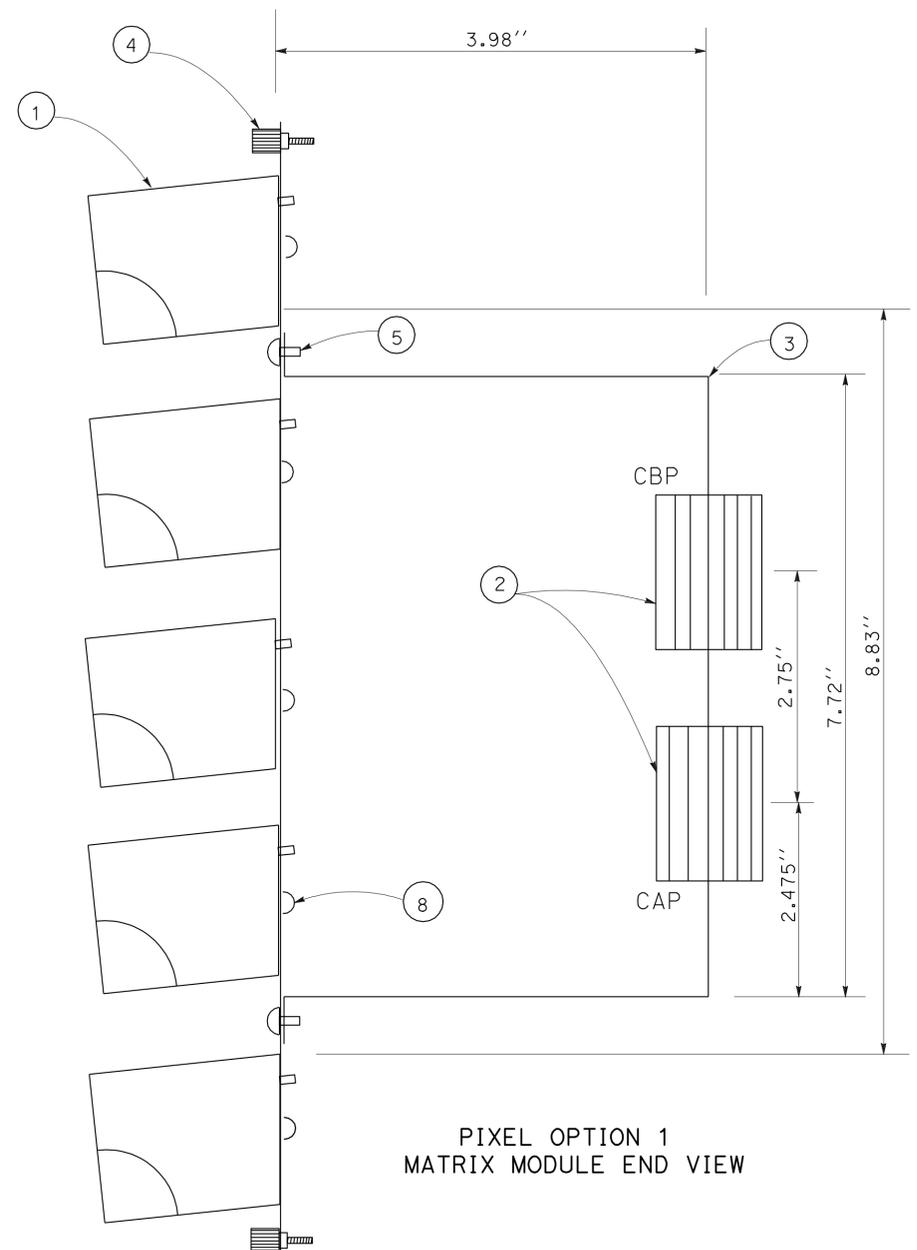
CMS AND CONTROLLER LOCATION DESCRIPTION	SB 680 SOUTH OF MONUMENT Blvd	NB 680 SOUTH OF RUDGER UNDER CROSSING	SB 680 NORTH OF ALCOSTA Blvd	NB 880 NORTH OF DIXON LANDING Rd	WB 92 WEST OF SAN MATEO BRIDGE PLAZA	EB 92 SAN MATEO BRIDGE INCLINE	WB 92 EAST OF FOSTER CITY Blvd
LOCATION NO.	8	9	10	11	12	13	14
COUNTY	CC	CC	CC	Alameda	Alameda	SM	SM
ROUTE	680	680	680	880	92	92	92
POST MILE	17.6 - 17.7	11.7 - 11.8	1.3 - 1.4	0.5 - 0.6	2.4 - 2.5	14.1 - 14.2	14.0 - 14.1
DIRECTION: A. NB (NORTHBOUND) B. SB (SOUTHBOUND) C. EB (EASTBOUND) D. WB (WESTBOUND)	SB	NB	SB	NB	WB	EB	WB
LOCATION: A. RIGHT SHOULDER/(RIGHT ETW) B. LEFT SHOULDER/(LEFT ETW) C. MEDIAN D. OVERHEAD STRUCTURE	A	A	A	A	A	A	A
EXISTING CMS TYPE: X. XENON CMS PANELS	X	X	X	X	X	X	X
PROPOSED CMS TYPE: L. LED CMS PANELS	L	L	L	L	L	L	L
HARNESS REPLACEMENT (Y=YES N=NO)	N	N	N	N	N	N	N
TYPE OF HARNESS SHALL BE REPLACED A. HARNESS 4 B. HARNESS 5 C. NONE	C	C	C	C	C	C	C
PROPOSED COMPLETE XENON CMS ON EXISTING FRAME	1	1	1	1	1	1	1
WORK DESCRIPTION	1 2	1 2	1 2	1 2	1 2	1 2	1 2

TOTAL PROPOSED LED CMS ON EXISTING FRAME (E-3)	7
GRAND TOTAL PROPOSED LED CMS SIGN ON EXISTING FRAME (E-2 TO E-3)	14

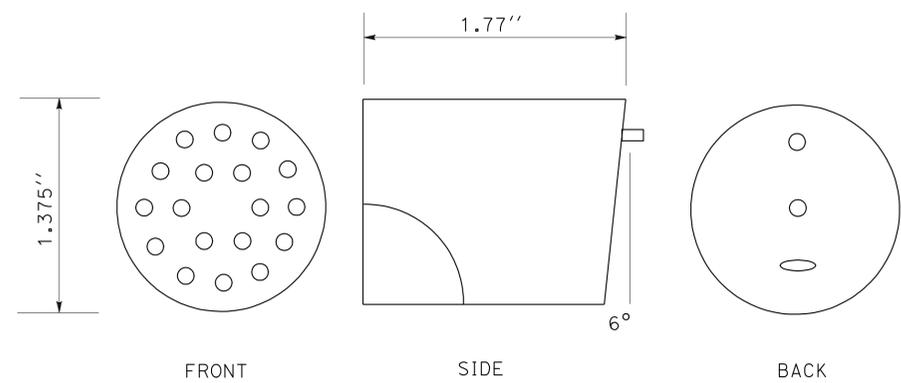
MODIFY TRAFFIC OPERATIONS SYSTEM
E-3

FUNCTIONAL SUPERVISOR	CHARLES PRICE
CALCULATED/DESIGNED BY	CHECKED BY
MICHAEL P LEE	MICHAEL P LEE
REVISOR	DATE
MPL	2/7/11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC, SM	24,80,92, 680,880	Var	10	16
			2/8/11		
REGISTERED ELECTRICAL ENGINEER			DATE		
3-21-11			PLANS APPROVAL DATE		
					
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PIXEL OPTION 1
MATRIX MODULE END VIEW



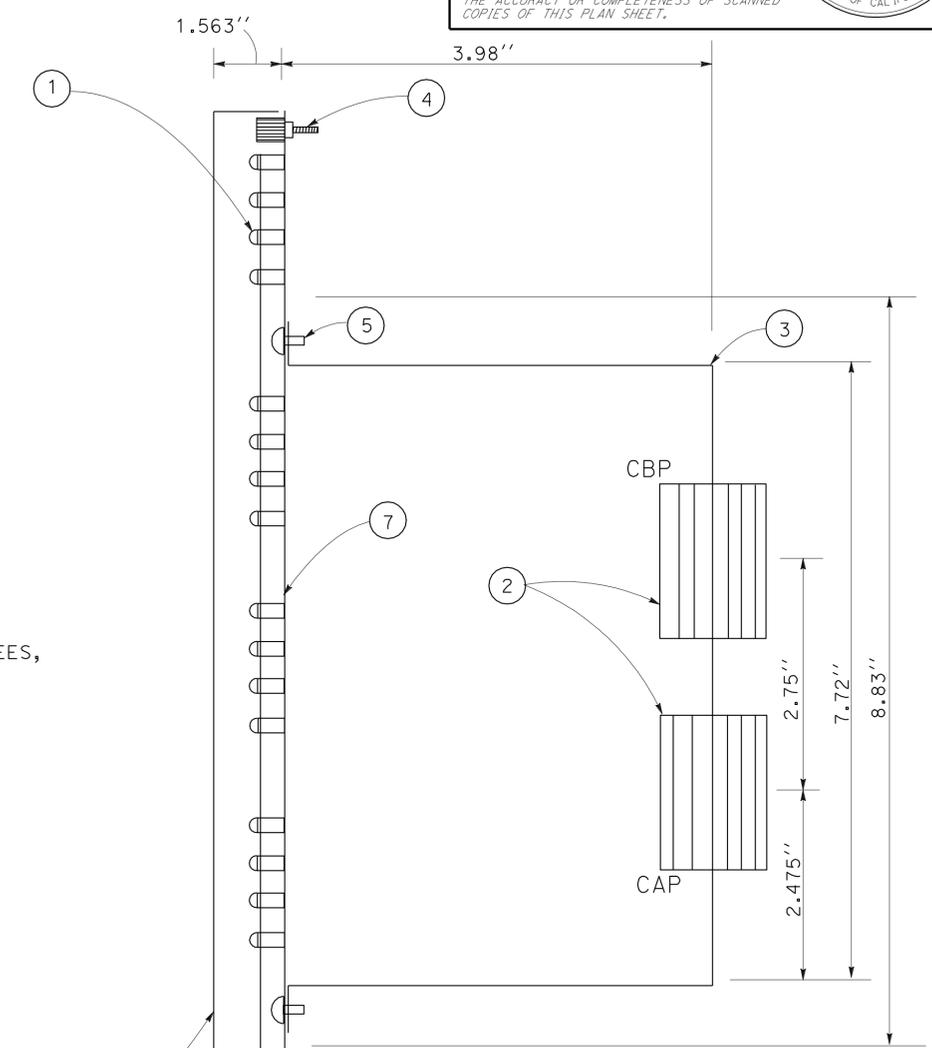
PIXEL OPTION 1
PMM (TYPE 1)

PROJECT NOTES:

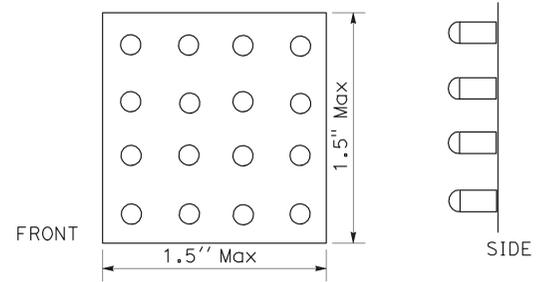
- (FOR THIS SHEET ONLY)
- LED "PIXEL" ASSEMBLY.
 - PLASTIC CABLE HARNESS MATING CONNECTOR PLUG.
 - 0.0625" ALUMINUM U SHAPED CONNECTOR MOUNTING BRACKET.
 - THUMB SCREW DEVICE (TSD No. 2)- TYPICAL (SOUTH Co No. 47-62-301-60 OR EQUAL)
 - UNIVERSAL HEAD ALUMINUM DRIVE RIVET-TYPICAL (SOUTH Co No. 38-104-04-13 OR EQUAL)
 - FORMED PLASTIC COVER ON LED PMM WITH 0.080" UV STABILIZED. THE COVER SHALL BE COATED OR TREATED FOR GLARE & SHALL NOT DISMINISH LIGHT OUTPUT BY MORE THAN 15%.
 - ALL PIXELS SHALL BE MOUNTED TO THE SAME PC BOARD
 - EACH PIXEL SHALL HAVE TWO 12.02" LEADS TO CONNECT TO THE CAP OR CBP AS PER SECTION 8-8 OF CALTRANS TEES, CHAPTER 8, SPECIFICATIONS FOR CMS SYSTEMS, FEBRUARY 2003.

GENERAL NOTES:

- (FOR THIS SHEET ONLY)
- NOMINAL CENTER TO CENTER SPACING OF PIXEL: 2.75".
 - SEE CMS MODEL 500 SPECIFICATIONS, SECTION 8 OF CALTRANS TEES, CHAPTER 8, SPECIFICATIONS FOR CMS SYSTEMS, FEBRUARY 2003, FIGURES 8-8-5 AND 8-8-6 FOR ADDITIONAL DETAILS.
 - REMOVE EXISTING XENON PMM AND INSTALL 60 LED PMM (CONTRACTOR FURNISHED) PER SIGN PANEL. CONNECT EXISTING CABLE HARNESSES WITH CONNECTORS TO THE MATING CONNECTORS ON THE BACK OF PIXEL MATRIX MODULE UNIT. SECURE PMM WITH FOUR THUMB SCREWS TO MODULE MOUNTING FRAME.
 - RC** EXISTING CMS SCREEN.



PIXEL OPTION 2
MATRIX MODULE END VIEW



PIXEL OPTION 2
PMM (TYPE 2)

MODIFY TRAFFIC OPERATIONS SYSTEM
(ELECTRICAL DETAILS FOR CMS RETROFIT MODEL 500 LED PMM DIMENSIONS AND SHAPE)

NO SCALE

E-4

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC, SM	24,80,92, 680,880	Var	11	16

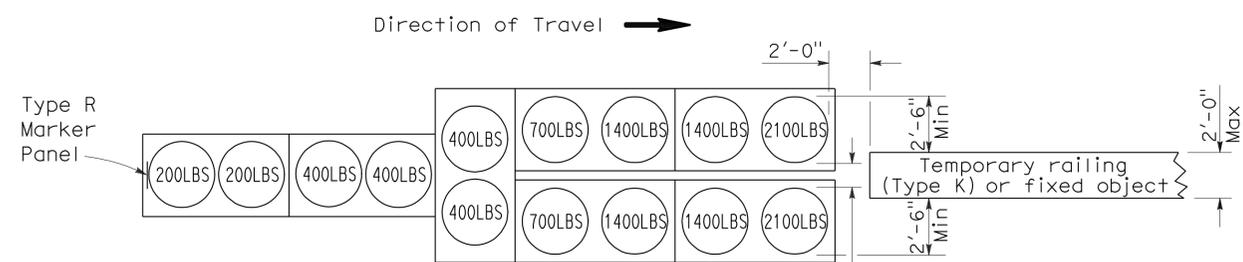
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

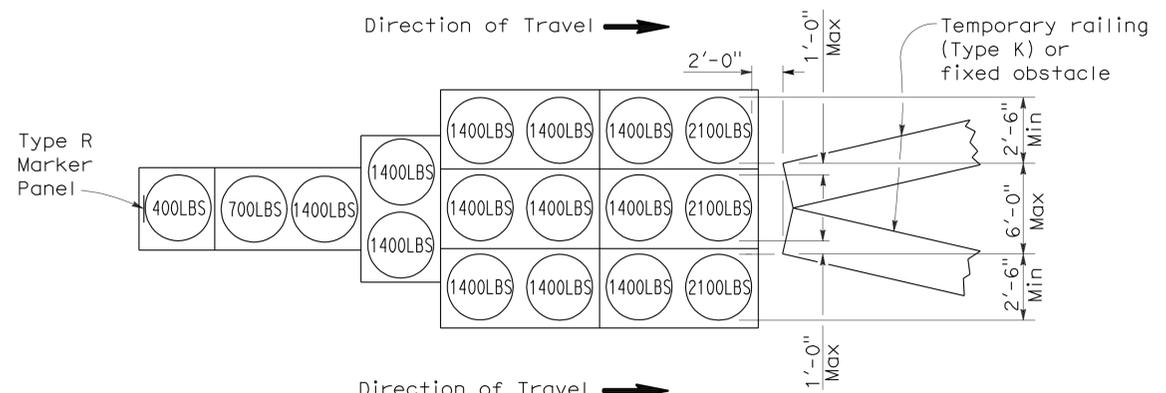
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 3-21-11



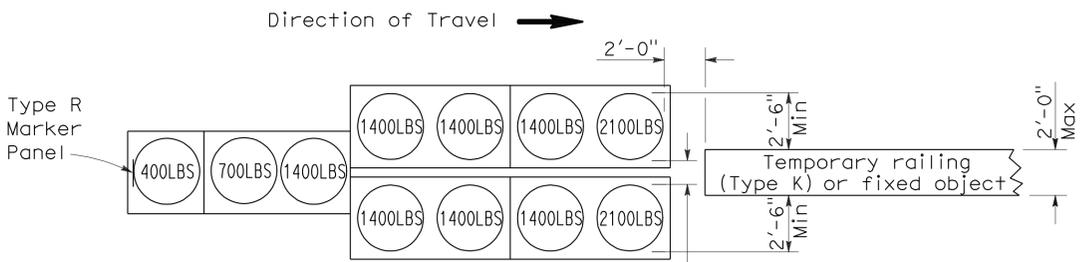
ARRAY 'TU14'

Approach speed 45 mph or more



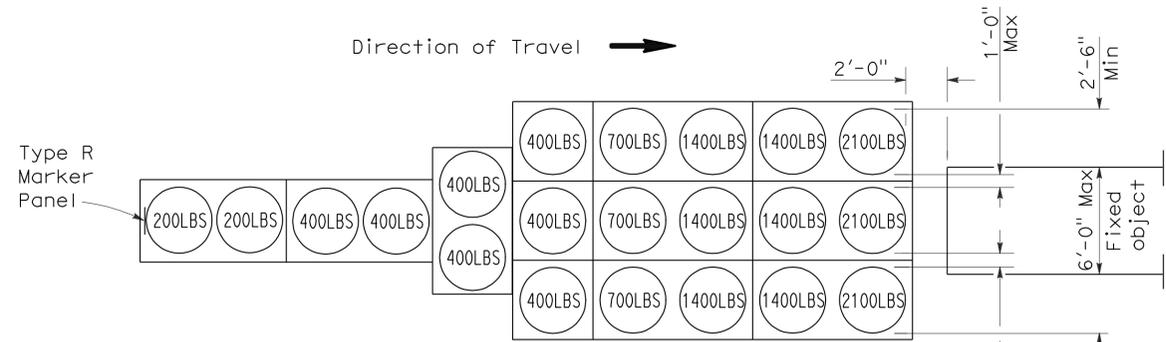
ARRAY 'TU17'

Approach speed less than 45 mph



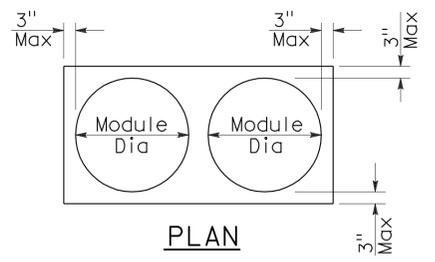
ARRAY 'TU11'

Approach speed less than 45 mph

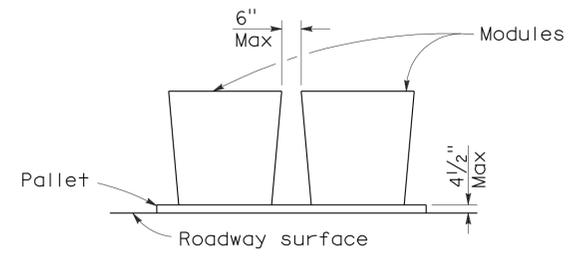


ARRAY 'TU21'

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

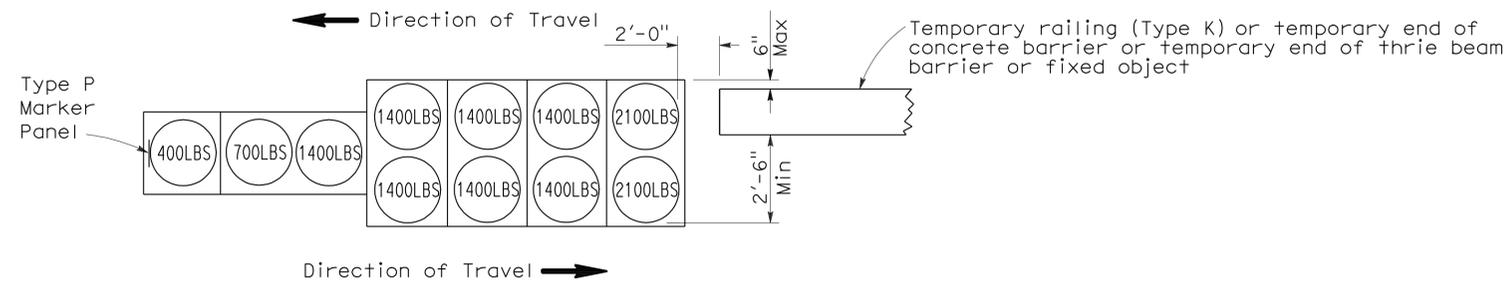
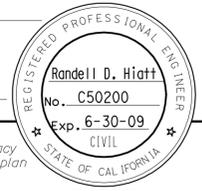
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC, SM	24,80,92, 680,880	Var	12	16

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

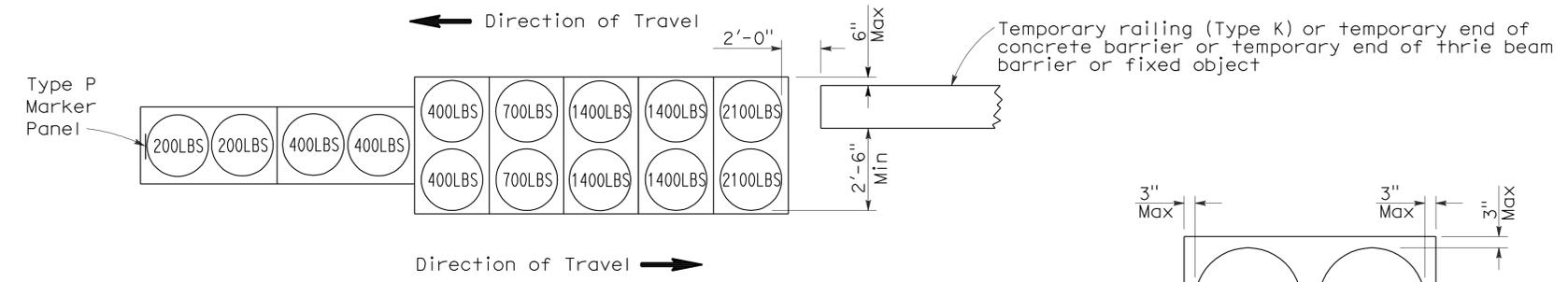
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To accompany plans dated 3-21-11



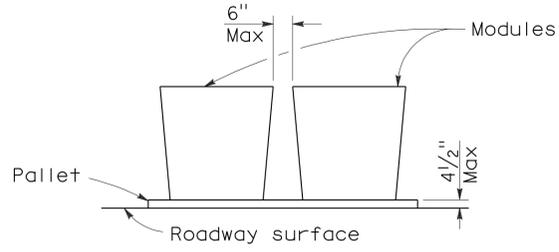
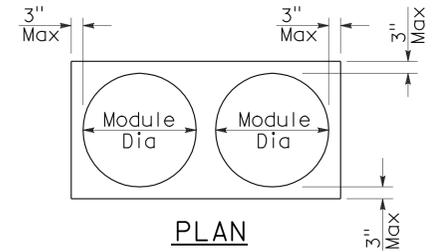
ARRAY 'TB11'

Approach speed less than 45 mph



ARRAY 'TB14'

Approach speed 45 mph or more



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
04	Ala, CC, SM	24,80,92, 680,880	Var	13	16

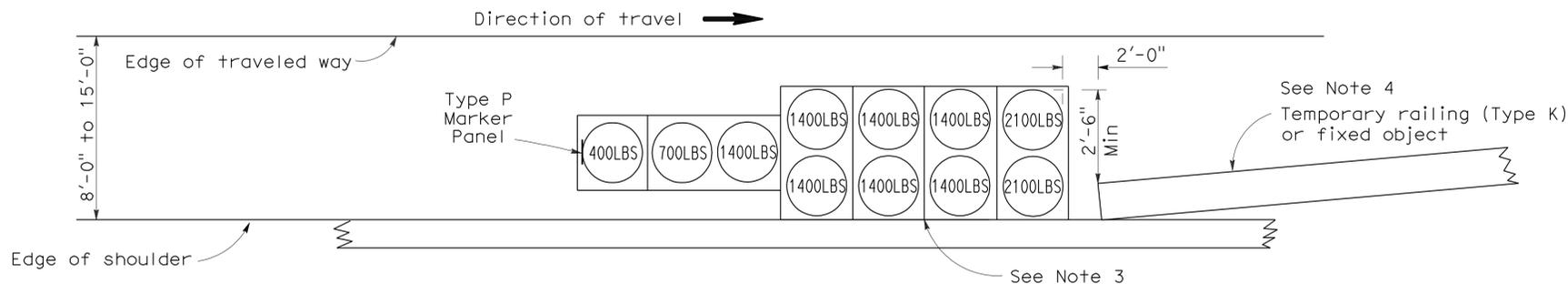
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

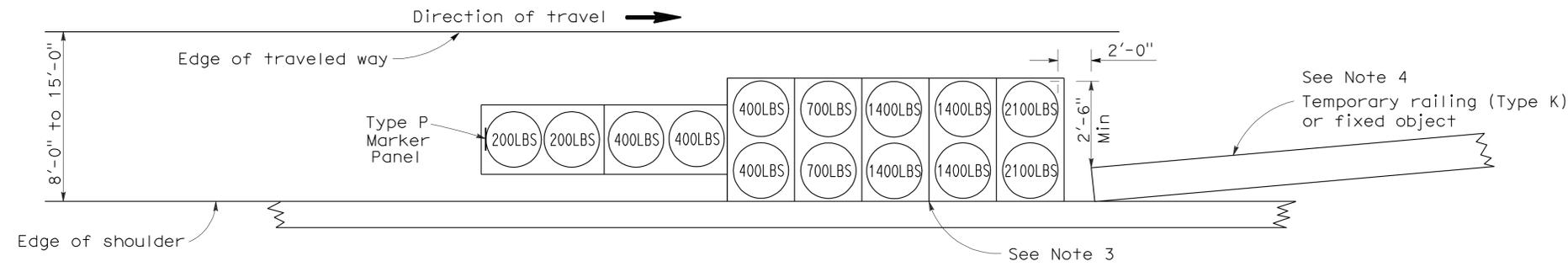
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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

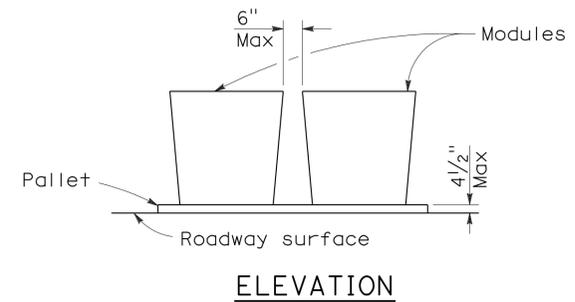
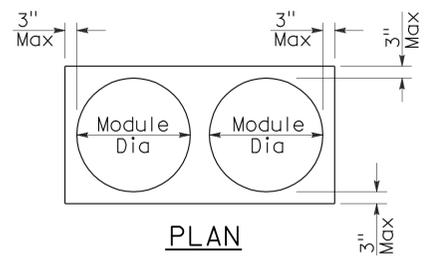
To accompany plans dated 3-21-11



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



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



CRASH CUSHION PALLET DETAIL
See Note 11

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

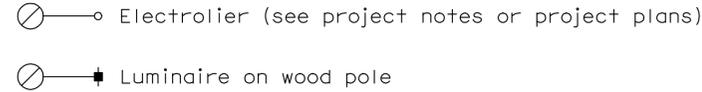
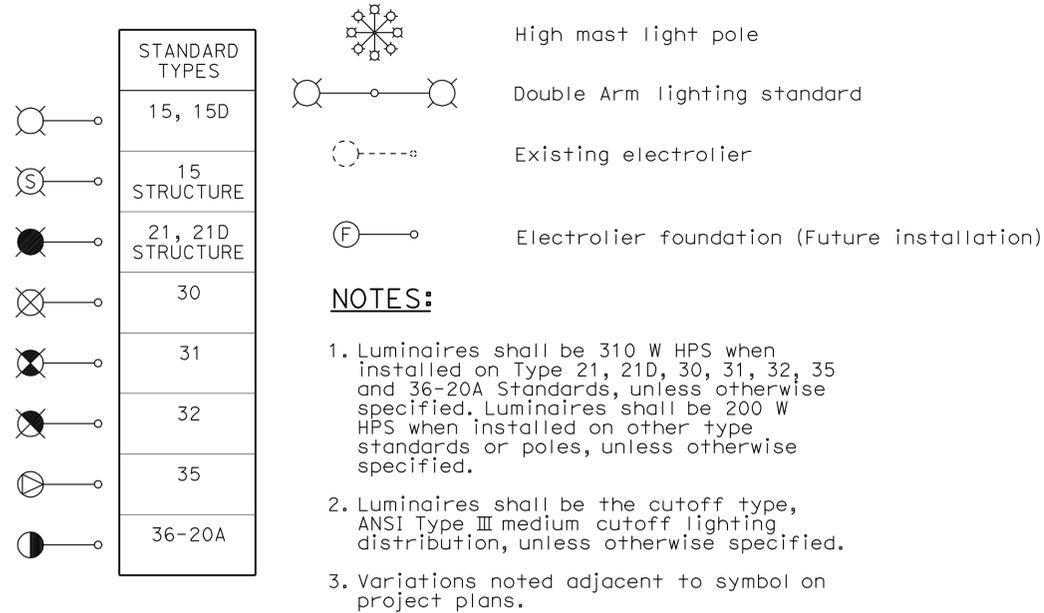
**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**

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

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

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	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
04	Ala, CC, SM	24,80,92, 680,880	Var	14	16

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 3-21-11

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
04	Ala, CC, SM	24,80,92, 680,880	Var	15	16

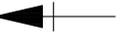
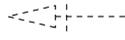
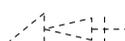
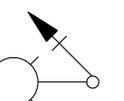
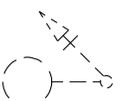
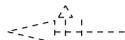
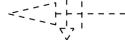
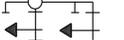
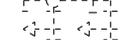
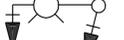
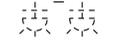
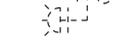
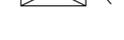
REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

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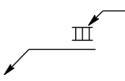
CONDUIT

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

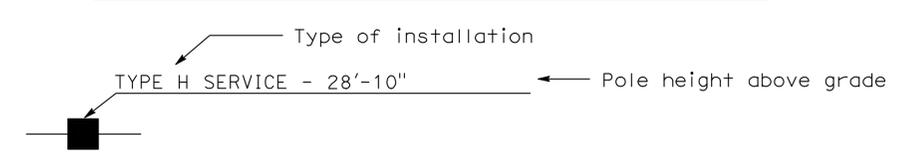
SIGNAL EQUIPMENT

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

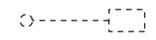
POLE-MOUNTED SERVICE DESIGNATION



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

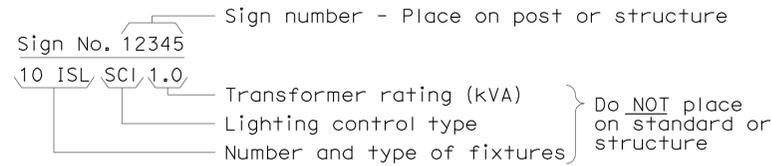
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

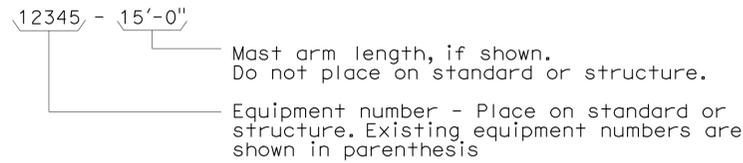
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

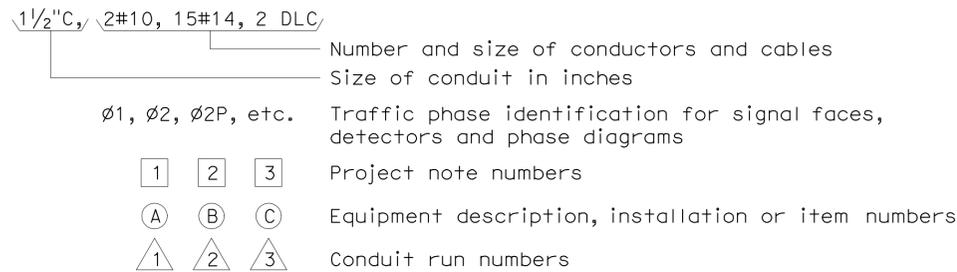
ILLUMINATED SIGN IDENTIFICATION NUMBER:



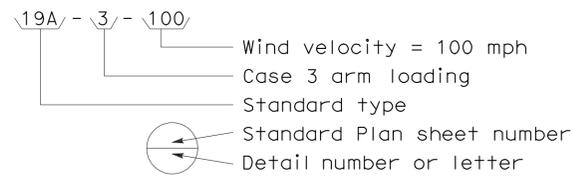
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



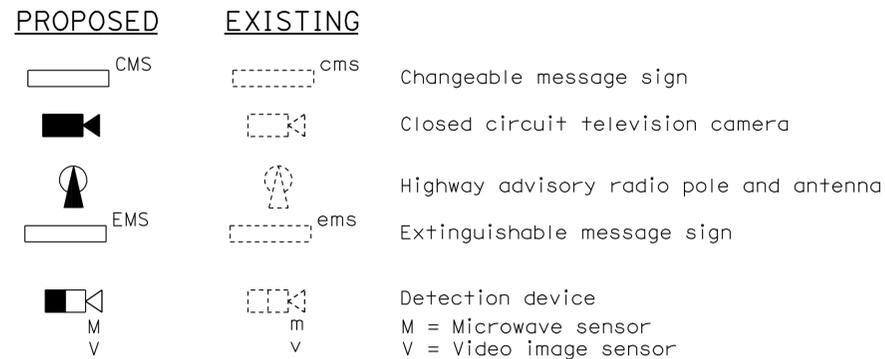
CONDUIT AND CONDUCTOR IDENTIFICATION:



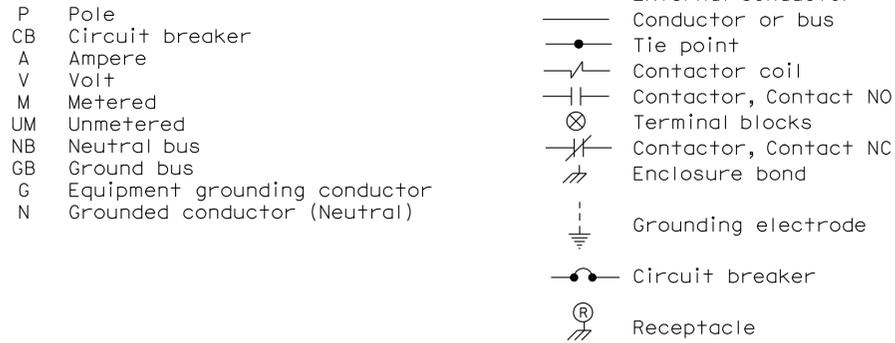
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



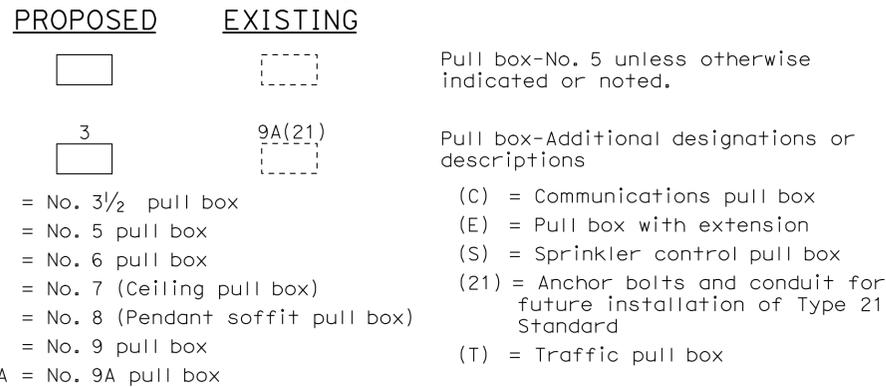
MISCELLANEOUS EQUIPMENT



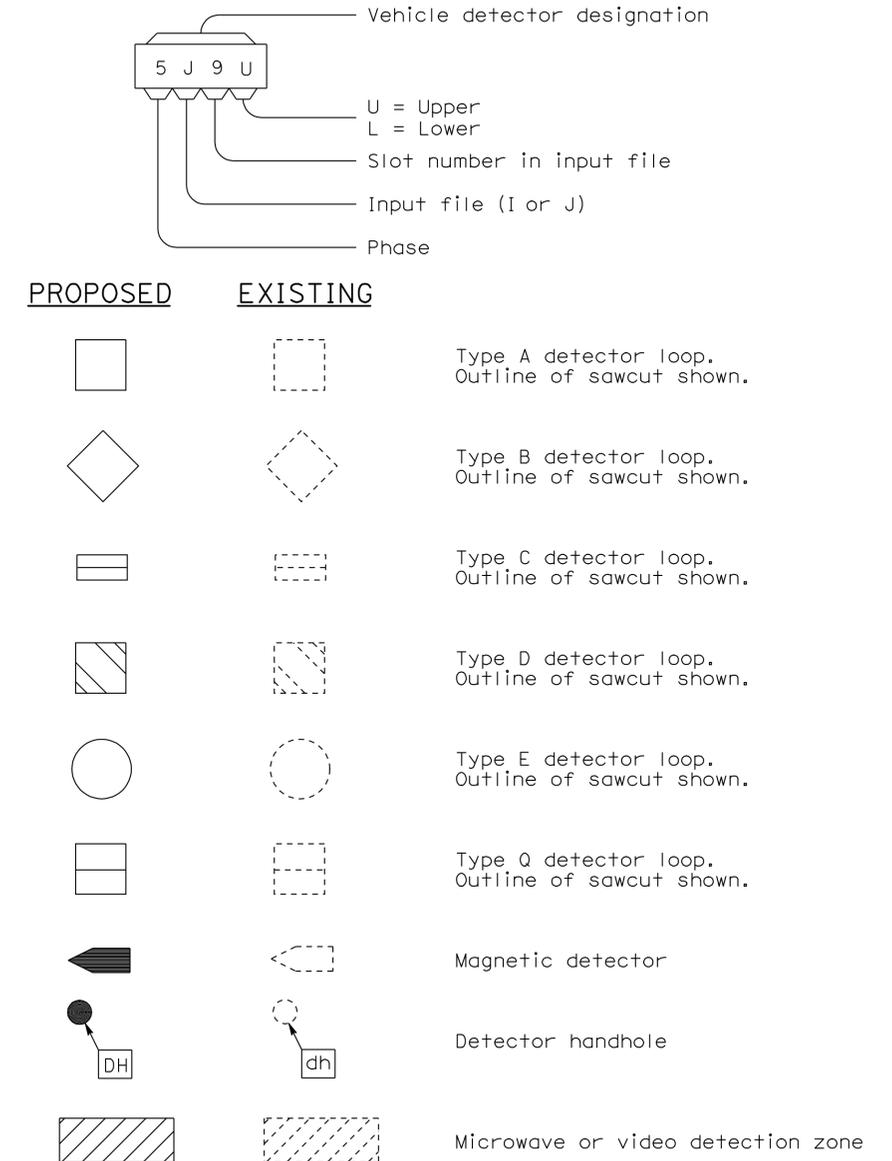
WIRING DIAGRAM LEGEND



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