Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	1	44

INDEX OF PLANS

Sheet No.	Description
1	Title and Location Map
2-5	Typical Cross Sections
6-9	Layout
10	Construction Area Signs
11-21	Traffic Handling Plans and Quantities
22-24	Pavement Delineation Quantities
25	Summary of Quantities
26-36	Electrical Plans
37-44	Revised Standard Plans

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

STATE OF CALIFORNIA

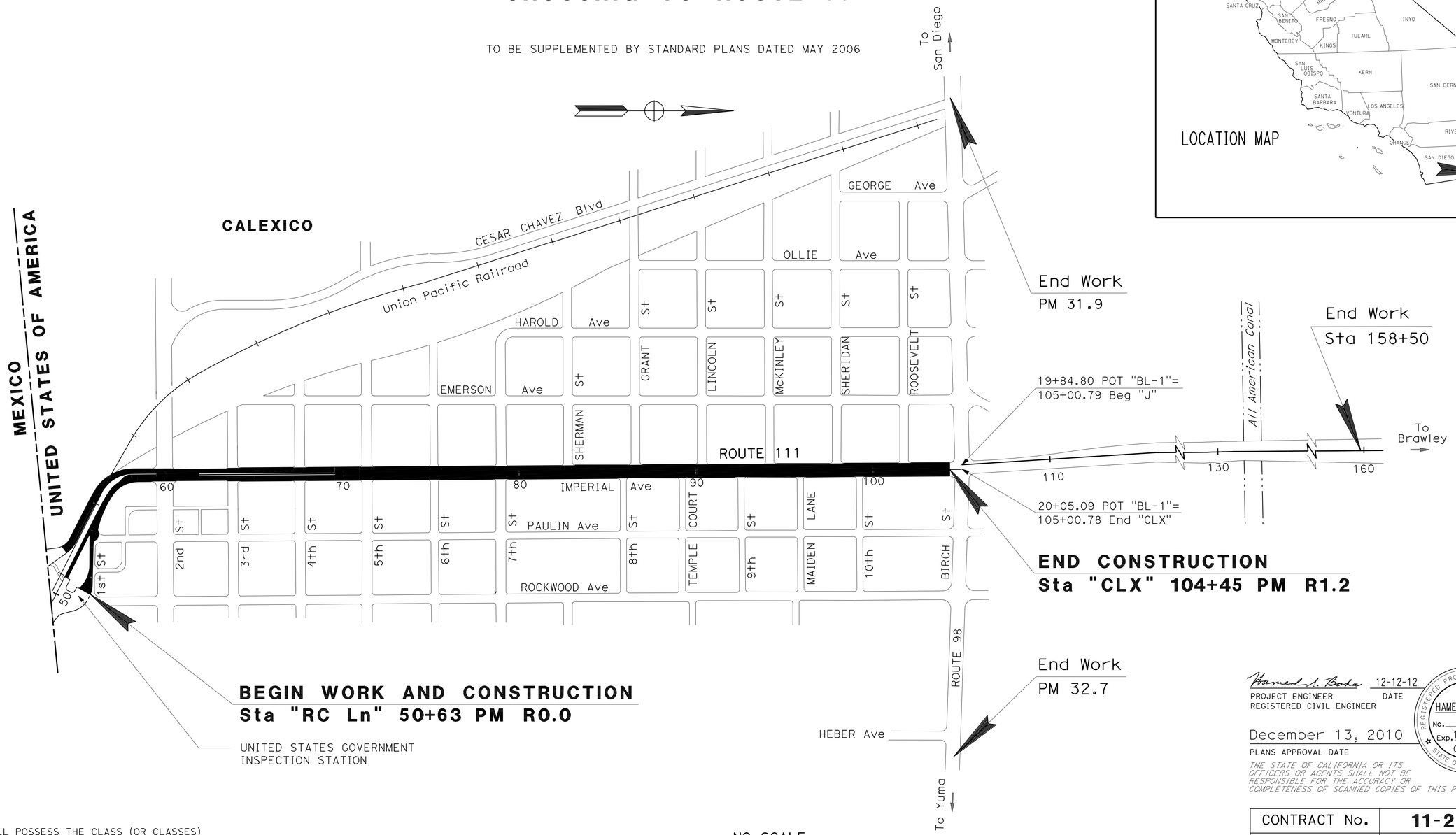
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

IN IMPERIAL COUNTY IN CALEXICO FROM THE INTERNATIONAL BORDER CROSSING TO ROUTE 98

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

LOCATION MAP



NO SCALE

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

Hamed S. Baha 12-12-12
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

December 13, 2010
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
HAMED S. BAHA
No. 74499
Exp. 12-31-11
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.

PROJECT MANAGER ALBERTO GAYON
DESIGN ENGINEER ALBERTO GAYON

CONTRACT No.	11-2M2204
PROJECT ID	1100020038

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	2	44

Hamed J. Baha 12-12-12
REGISTERED CIVIL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HAMED S. BAHA No. 74499 Exp. 12-31-11 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.

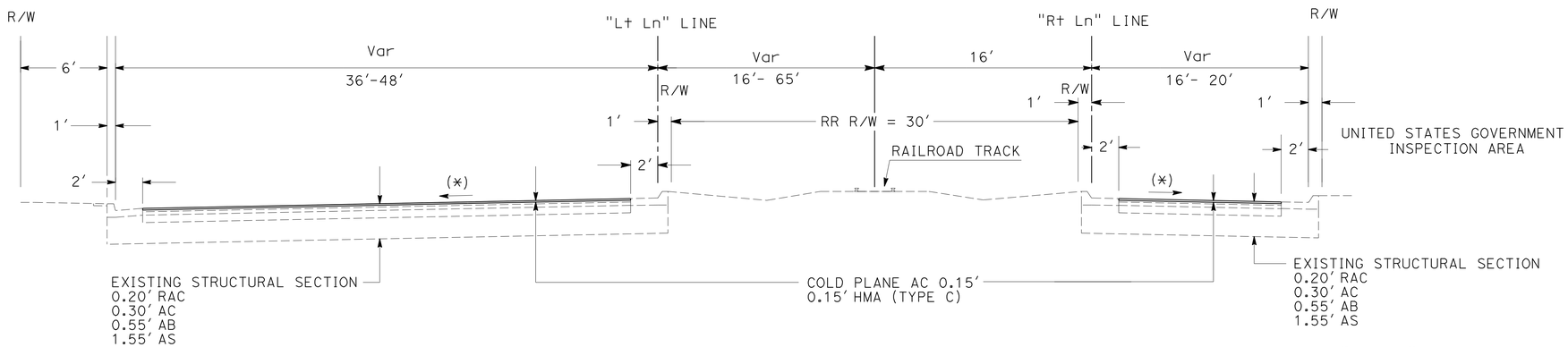
NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
3. (*) = MATCH EXISTING.
4. FOR COLD PLANE AC AREAS SEE LAYOUTS.

RAC = RUBBERIZED ASPHALT CONCRETE

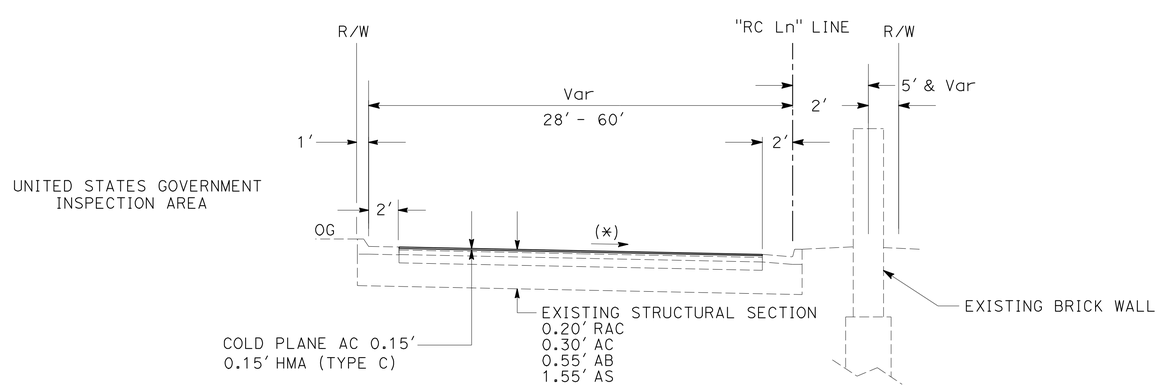
DESIGN DESIGNATION (Rte 111)

2008	ADT	= 36,500	D = 56 % (SB)
2020	ADT	= 57,500	T = 8 %
2020	DHV	= 4,200	V = 35 MPH



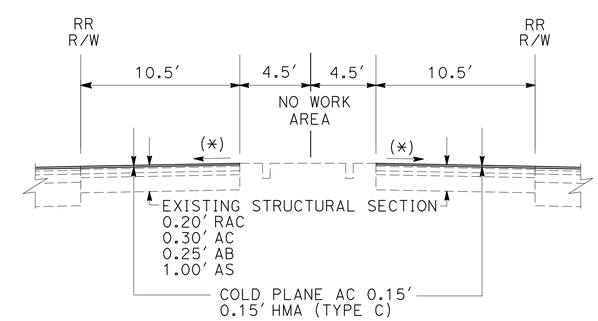
Sta 52+00 to Sta 57+00 "Lt Ln"

Sta 51+05 to Sta 54+30 "Rt Ln"



Sta 50+63 to Sta 54+30 "RC Ln"

ROUTE 111



Sta 53+00 to Sta 53+32 "Lt Ln"
Sta 56+80 to Sta 57+60 "Lt Ln"

RAILROAD CROSSING

TYPICAL CROSS SECTIONS

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: ALBRTO GAYON
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: REBECCA IGNACIO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:06

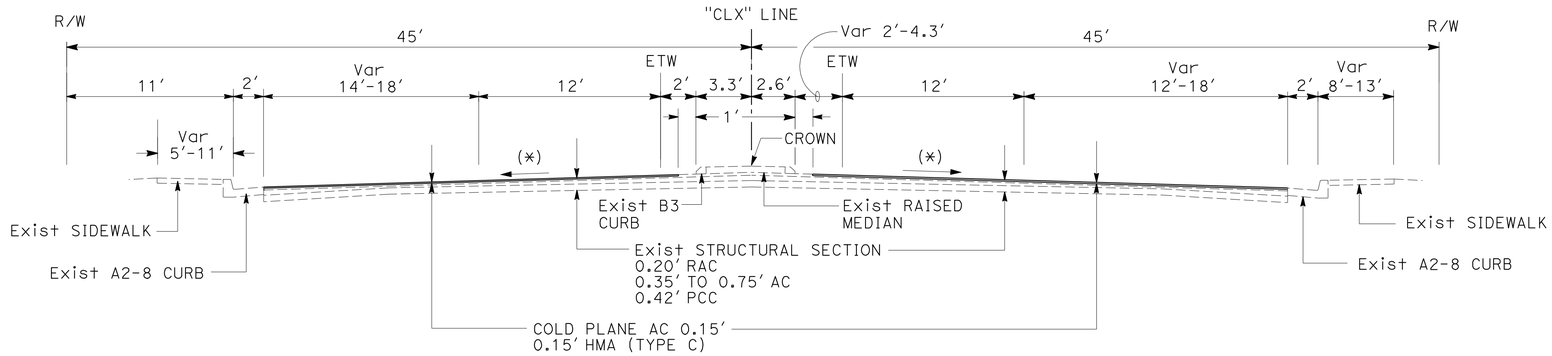
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	3	44

Hamed S. Baha 12-12-12
REGISTERED CIVIL ENGINEER DATE

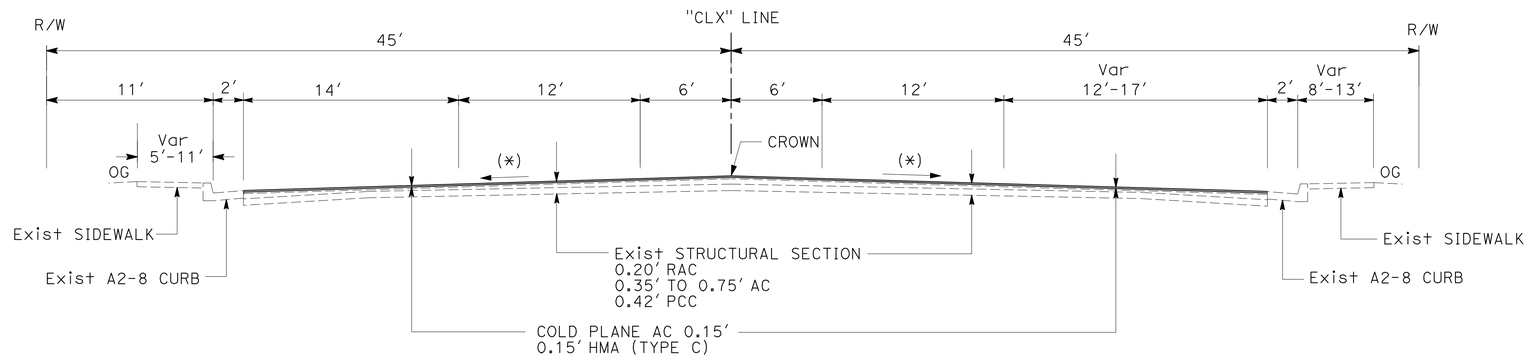
12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HAMED S. BAHA No. 74499 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA

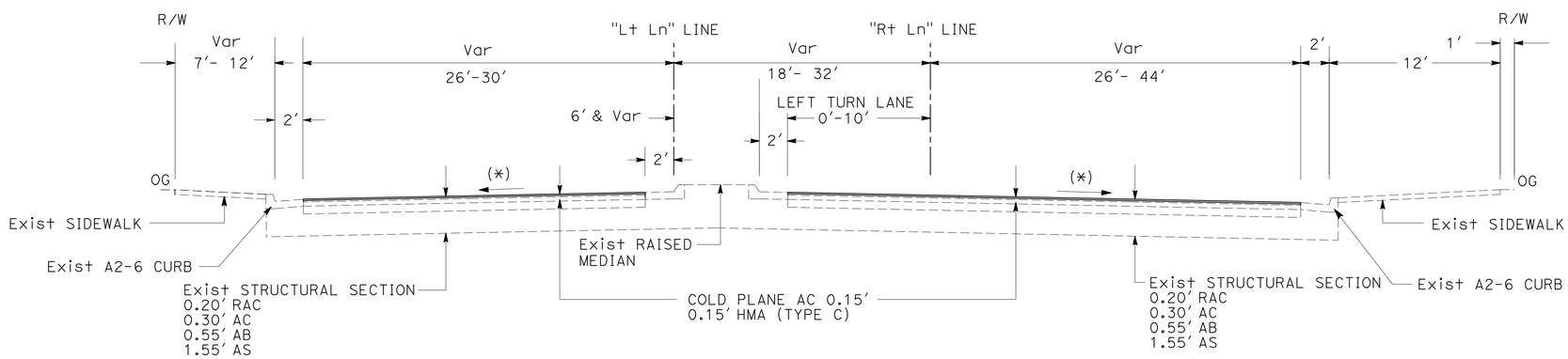
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



Sta 62+15 TO Sta 69+14 "CLX" LINE



Sta 59+50 "Lt Ln" TO Sta 62+15 "CLX" LINE



Sta 57+00 to Sta 59+50 "Lt Ln"

Sta 54+30 to Sta 59+50 "Rt Ln"

ROUTE 111

TYPICAL CROSS SECTIONS

NO SCALE

X-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
MAINTENANCE

FUNCTIONAL SUPERVISOR: ALBERTO GAYON
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: REBECCA IGNACIO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:07

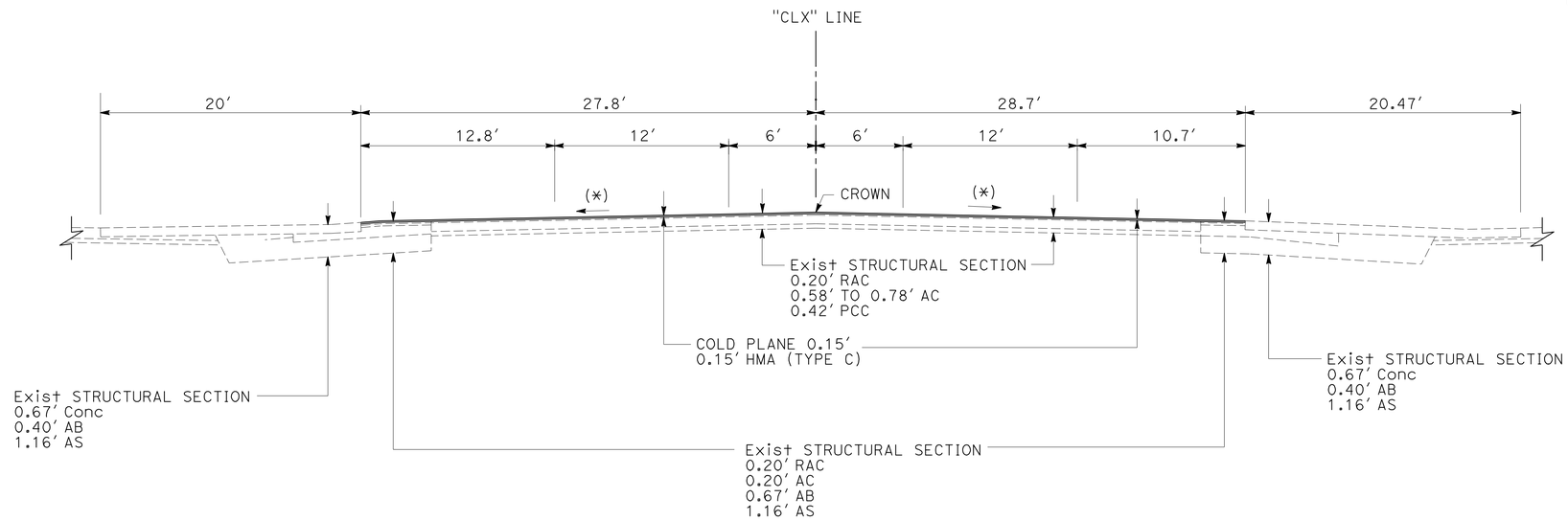
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	4	44

Hamed S. Baha 12-12-12
REGISTERED CIVIL ENGINEER DATE

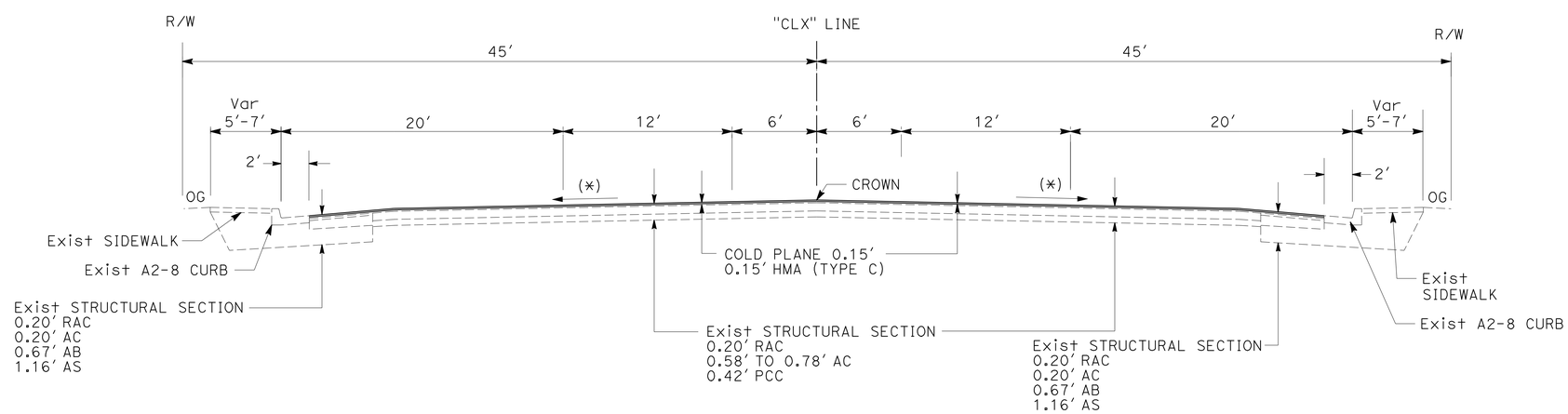
12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
HAMED S. BAHA
No. 74499
Exp. 12-31-11
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.



Sta 78+53 TO Sta 79+37 "CLX" LINE



Sta 69+14 TO Sta 78+53 "CLX" LINE

ROUTE 111

TYPICAL CROSS SECTIONS

NO SCALE

X-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
MAINTENANCE

FUNCTIONAL SUPERVISOR: ALBERTO GAYON
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: REBECCA IGNACIO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:07

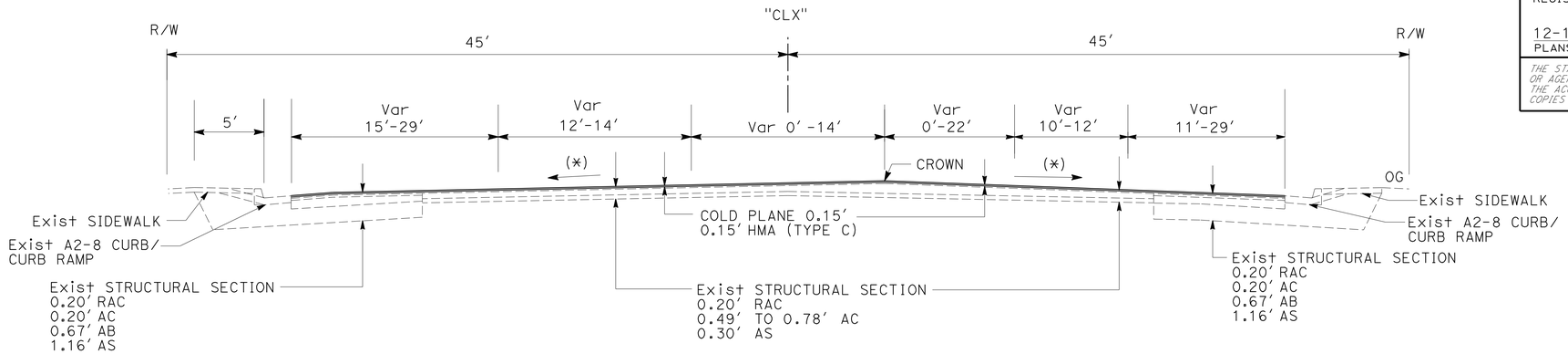
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	5	44

Hamed S. Baha 12-12-12
REGISTERED CIVIL ENGINEER DATE

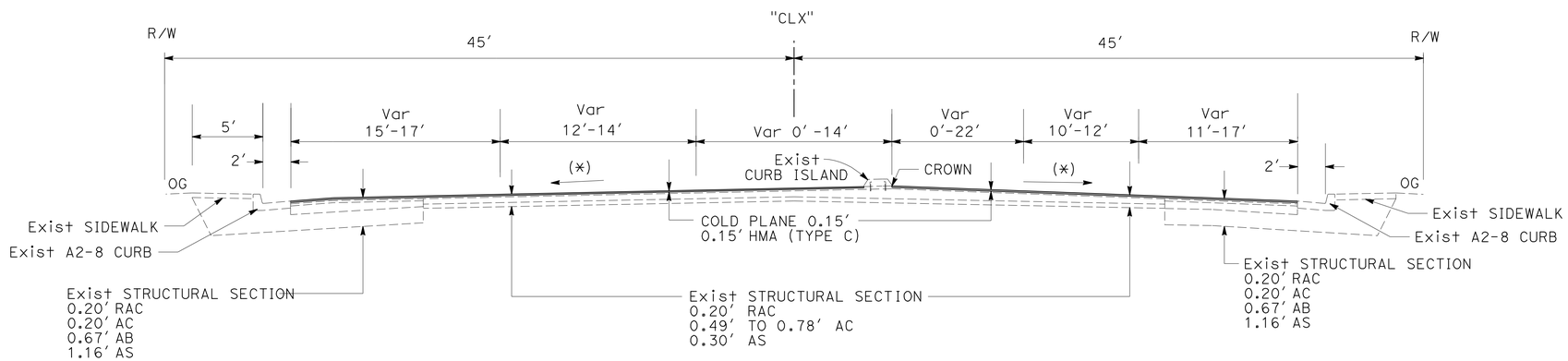
12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HAMED S. BAHA No. 74499 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA

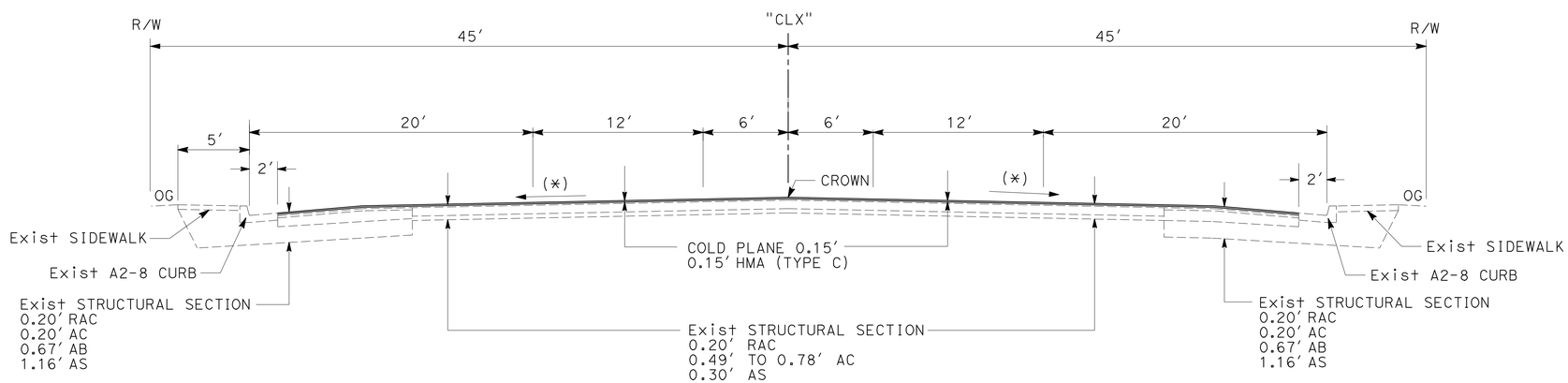
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



Sta 104+30 TO Sta 104+45 "CLX" LINE



Sta 99+50 TO Sta 104+30 "CLX" LINE



Sta 79+37 TO Sta 99+50 "CLX" LINE

ROUTE 111

TYPICAL CROSS SECTIONS

NO SCALE

X-4

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

FUNCTIONAL SUPERVISOR: ALBERTO GAYON
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: REBECCA IGNACIO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	6	44

Hamed J. Baha 12-12-12
REGISTERED CIVIL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HAMED S. BAHA No. 74499 Exp. 12-31-11 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.

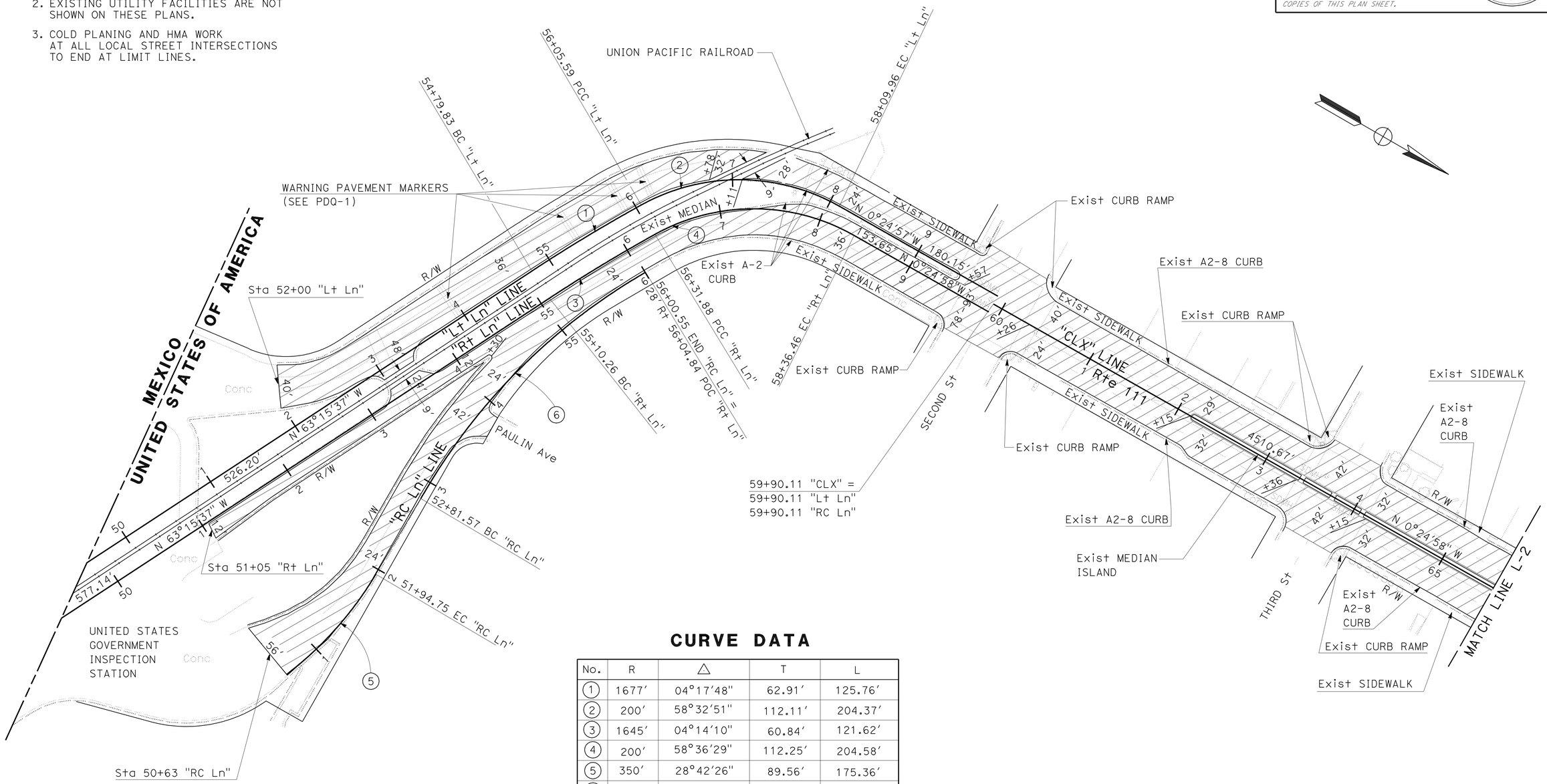
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY AT THE DISTRICT OFFICE.
2. EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
3. COLD PLANING AND HMA WORK AT ALL LOCAL STREET INTERSECTIONS TO END AT LIMIT LINES.

LEGEND:

COLD PLANE AC PAVEMENT (0.15′ Max)
0.15′ HMA (TYPE C)

CALEXICO



CURVE DATA

No.	R	△	T	L
1	1677′	04°17′48"	62.91′	125.76′
2	200′	58°32′51"	112.11′	204.37′
3	1645′	04°14′10"	60.84′	121.62′
4	200′	58°36′29"	112.25′	204.58′
5	350′	28°42′26"	89.56′	175.36′
6	600′	30°27′38"	163.36′	318.98′

SCALE: 1"=50′

LAYOUTS
L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

FUNCTIONAL SUPERVISOR: ALBERTO GAYON
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: REBECCA IGNACIO
REVISED BY / DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	7	44

Hamed S. Baha 12-12-12
REGISTERED CIVIL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

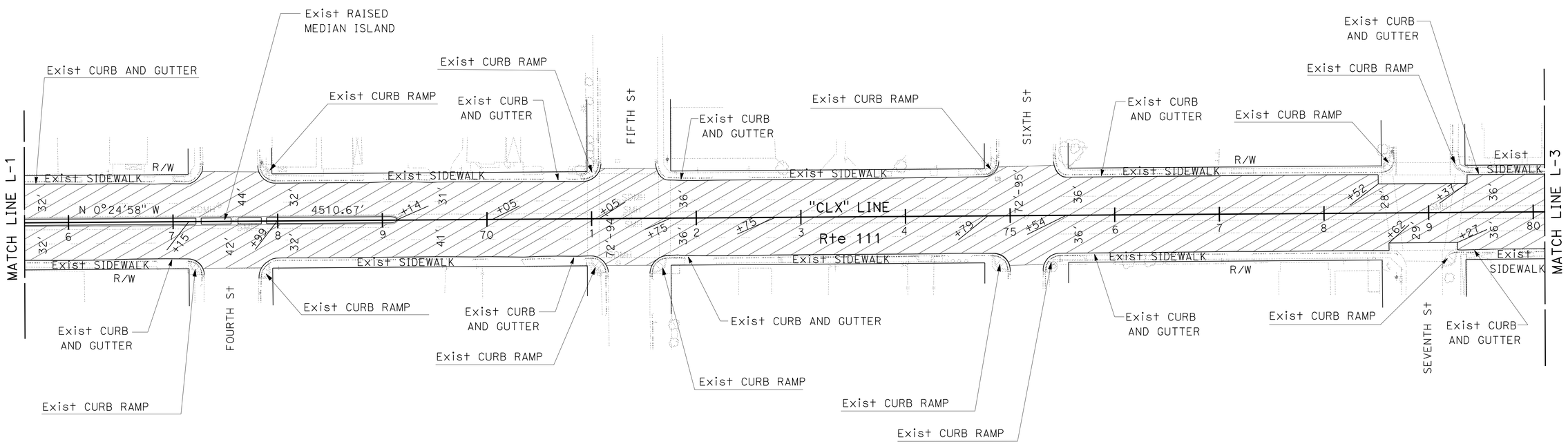
REGISTERED PROFESSIONAL ENGINEER
HAMED S. BAHA
No. 74499
Exp. 12-31-11
CIVIL
STATE OF CALIFORNIA

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

NOTE:

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

CALEXICO



SCALE: 1"=50'

LAYOUT
L-2

REVISED BY	DATE REVISED

HAMED BAHA	REBECCA IGNACIO
CALCULATED-DESIGNED BY	CHECKED BY

FUNCTIONAL SUPERVISOR
ALBERTO GAYON

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 01-03-11 | DATE PLOTTED => 06-JAN-2011 | TIME PLOTTED => 09:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	8	44

Hamed S. Baha 12-12-12
REGISTERED CIVIL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

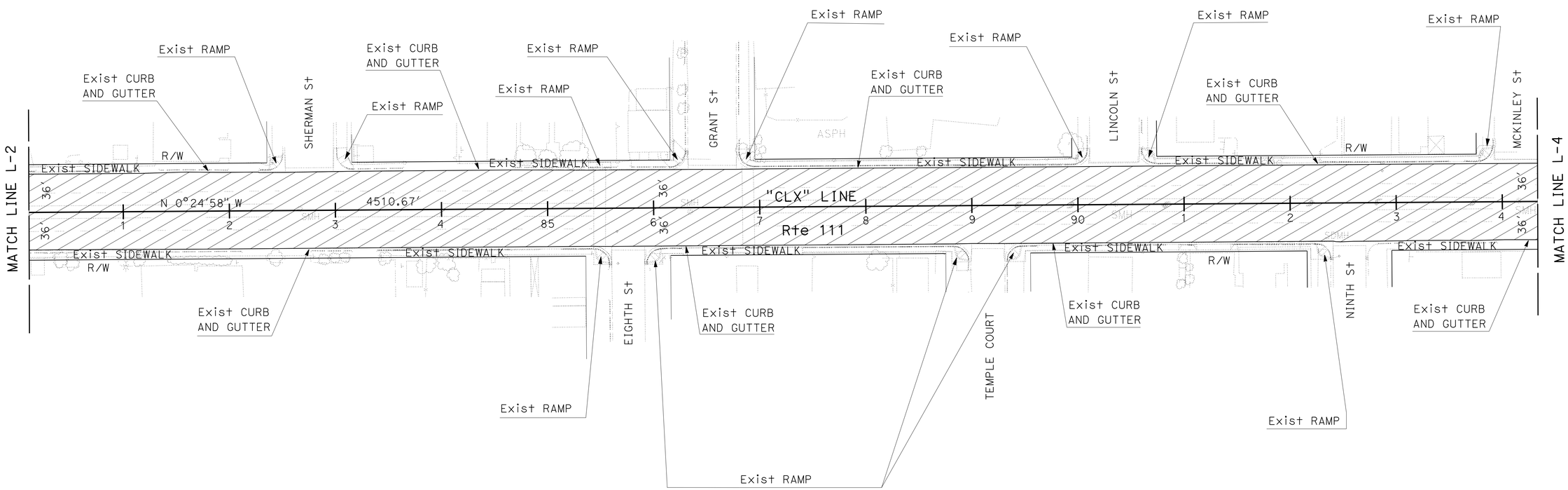
REGISTERED PROFESSIONAL ENGINEER HAMED S. BAHA No. 74499 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA

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

NOTE:

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

CALEXICO



SCALE: 1"=50'

LAYOUT L-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: ALBRTO GAYON
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: REBECCA IGNACIO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	9	44

Hamed S. Baha 12-12-12
REGISTERED CIVIL ENGINEER DATE

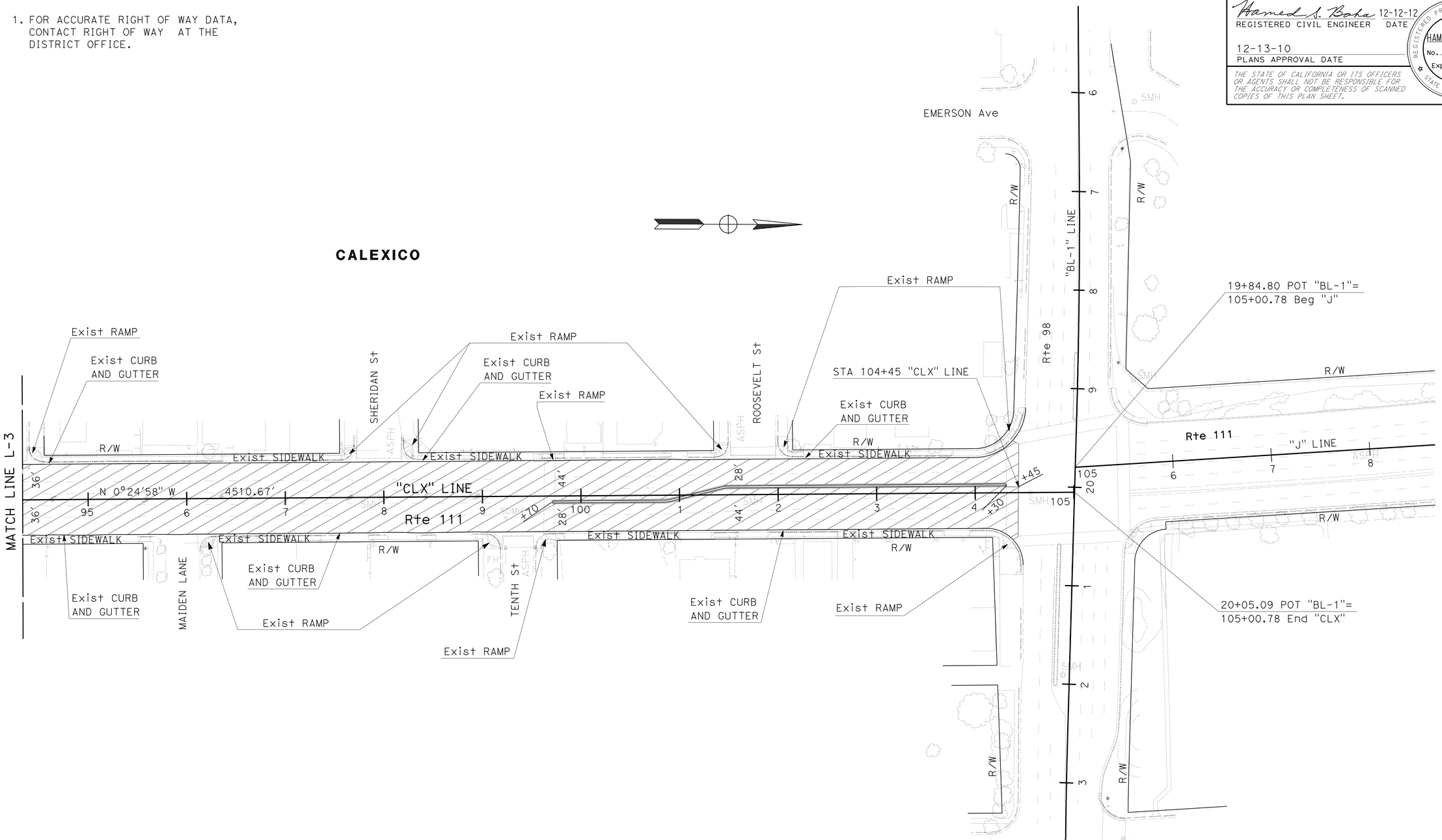
12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HAMED S. BAHA No. 74499 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA

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

NOTE:

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



SCALE: 1"=50'

LAYOUT
L-4

REVISED BY	DATE REVISED
HAMED BAHA	REBECCA IGNACIO

CALCULATED-DESIGNED BY	CHECKED BY

FUNCTIONAL SUPERVISOR: ALBERTO GAYON

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 01-03-11 | DATE PLOTTED => 06-JAN-2011 | TIME PLOTTED => 09:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	10	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHAHIN ADIBI No. 54839 Exp. 06-30-12 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. EXACT LOCATION OF CONSTRUCTION AREA SIGNS SHALL BE DETERMINED BY THE ENGINEER.
2. FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA), INDICATING CALIFORNIA MUTCD.
3. SEE TRAFFIC HANDLING PLANS FOR ADDITIONAL CONSTRUCTION AREA SIGNS.
4. EXISTING UTILITIES ARE NOT SHOWN ON THESE PLAN SHEETS. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES AND ADJUST THE FIELD LOCATION OF SIGN POSTS IN CONSULTATION WITH THE ENGINEER.

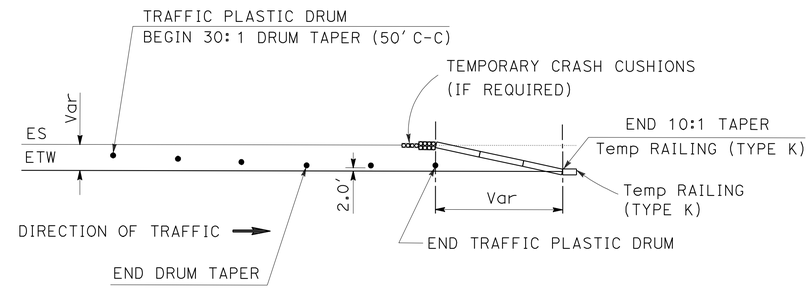
LEGEND:

XX - CONSTRUCTION AREA SIGNS

← - DIRECTION OF TRAVEL

C† = COURT

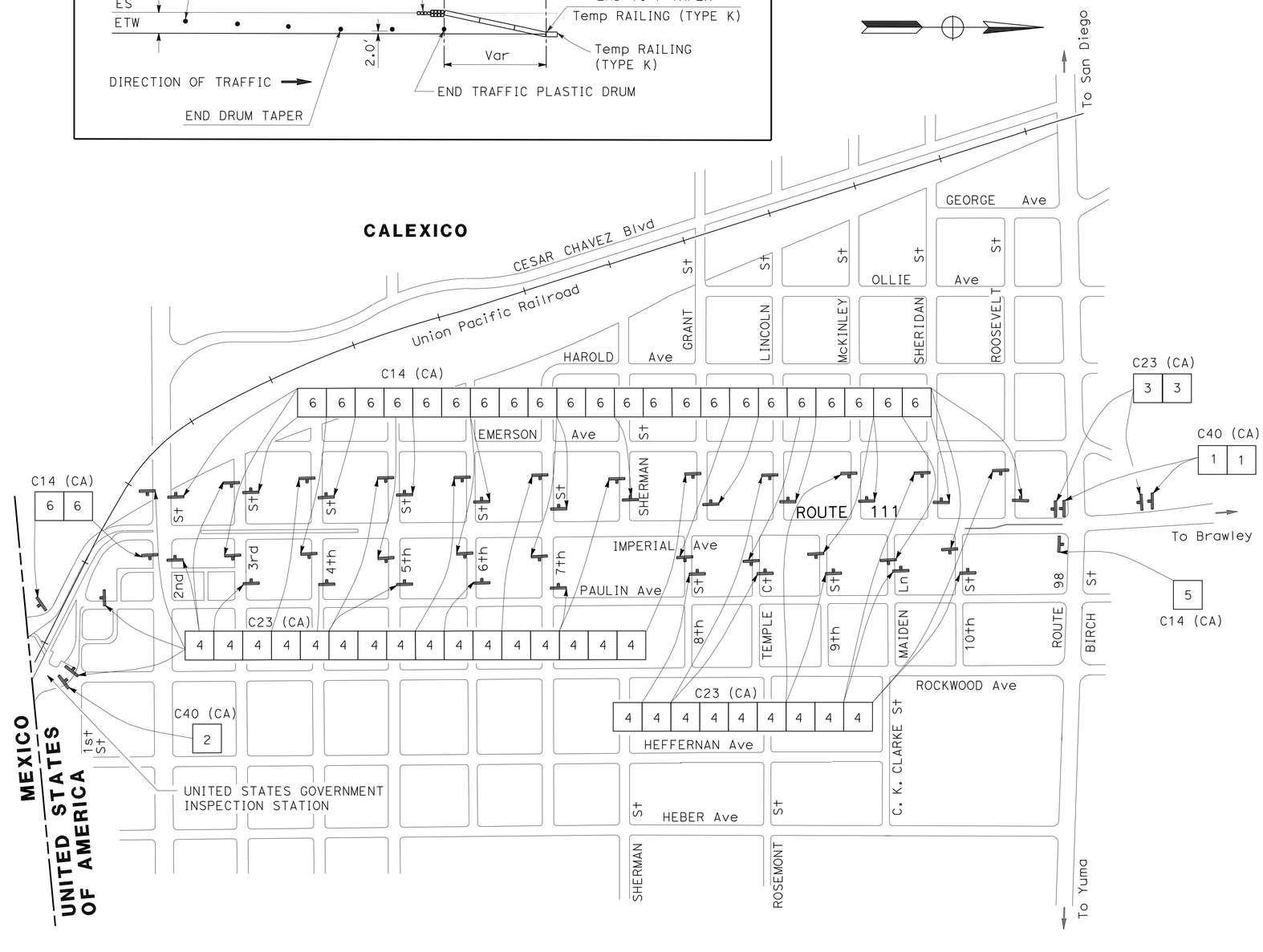
TYPICAL- PLACEMENT OF TRAFFIC PLASTIC DRUM



CONSTRUCTION AREA SIGNS

SIGN No.	TYPE	PANEL SIZE (In)	No. OF POST AND SIZE (In)	No. OF SIGNS	REMARKS
1	C40 (CA)	108 X 42	2-4 X 6 (S)	2	
2	C40 (CA)	108 X 42	PORTABLE	1	
3	C23 (CA)	48 X 48	1-4 X 6 (S)	2	
4	C23 (CA)	48 X 48	PORTABLE	25	
5	C14 (CA)	48 X 24	1-4 X 4 (S)	1	
6	C14 (CA)	48 X 24	PORTABLE	24	
			TOTAL	55	

(S) DENOTES STATIONARY MOUNTED SIGN



THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: RYAN CHAO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	11	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHAHIN ADIBI No. 54839 Exp. 06-30-12 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.

LEGEND:

[X] = CONSTRUCTION AREA SIGN
SPCL = SPECIAL CONSTRUCTION AREA SIGN
Caps = CAPITAL LETTERING
→ = DETOUR DIRECTION OF TRAVEL
Ct = COURT

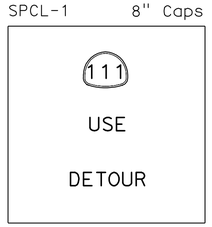
NOTES:

1. EXACT LOCATION OF CONSTRUCTION AREA SIGNS WILL BE DETERMINED BY THE ENGINEER.
2. FEDERAL MUTCD SIGN CODES ARE SHOWN UNLESS DESIGNATED (CA) INDICATING STANDARD CALIFORNIA SIGN SPECIFICATIONS ARE USED.
3. SEE CONSTRUCTION AREA SIGN PLAN FOR ADDITIONAL CONSTRUCTION AREA SIGNS.
4. EXISTING UTILITIES ARE NOT SHOWN ON THESE PLAN SHEETS. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES AND ADJUST THE FIELD LOCATION OF THE SIGN POSTS IN CONSULTATION WITH THE ENGINEER.

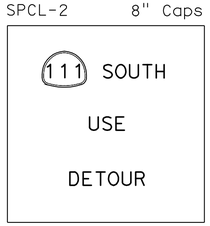
CONSTRUCTION AREA SIGNS

SIGN No.	TYPE	PANEL SIZE (In)x(In)	No. OF POST AND SIZE	No. OF SIGNS	REMARKS
7	SPCL-1	72 X 72	PORTABLE	8	
8	M4-10 (L)	48 X 18	PORTABLE	9	
9	M4-10 (R)	48 X 18	PORTABLE	7	
10	SC3 (CA)	48 X 18	PORTABLE	21	
11	M4-8a	24 X 18	PORTABLE	11	
12	SC9 (CA)	36 X 36	PORTABLE	26	
13	SPCL-2	72 X 72	PORTABLE	4	
14	SPCL-3	72 X 72	PORTABLE	2	
			TOTAL	88	

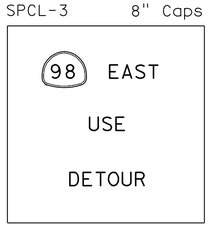
SIGN # 7
SPCL-1 8" Caps

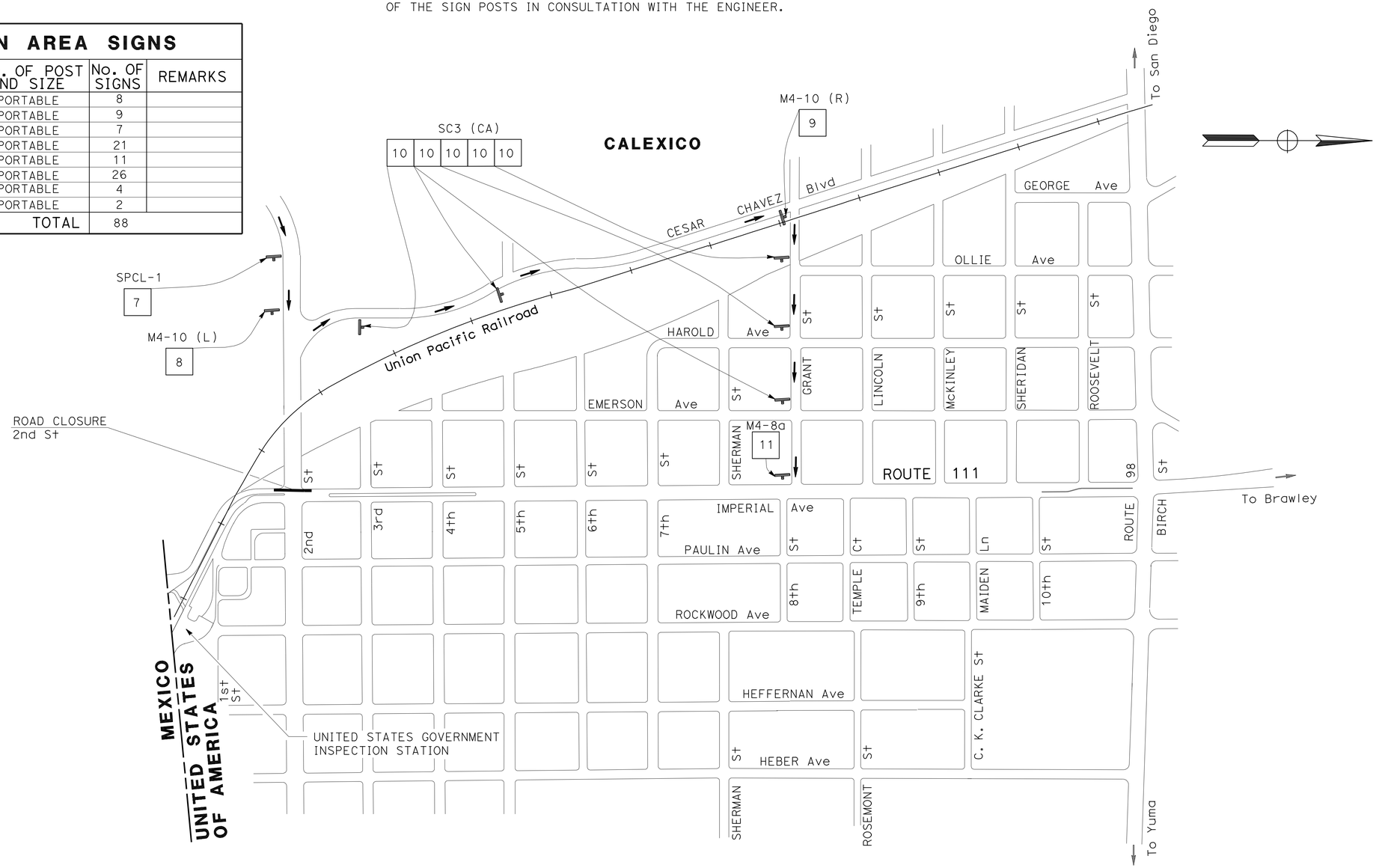


SIGN # 13
SPCL-2 8" Caps



SIGN # 14
SPCL-3 8" Caps





THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: RYAN CHAO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:07

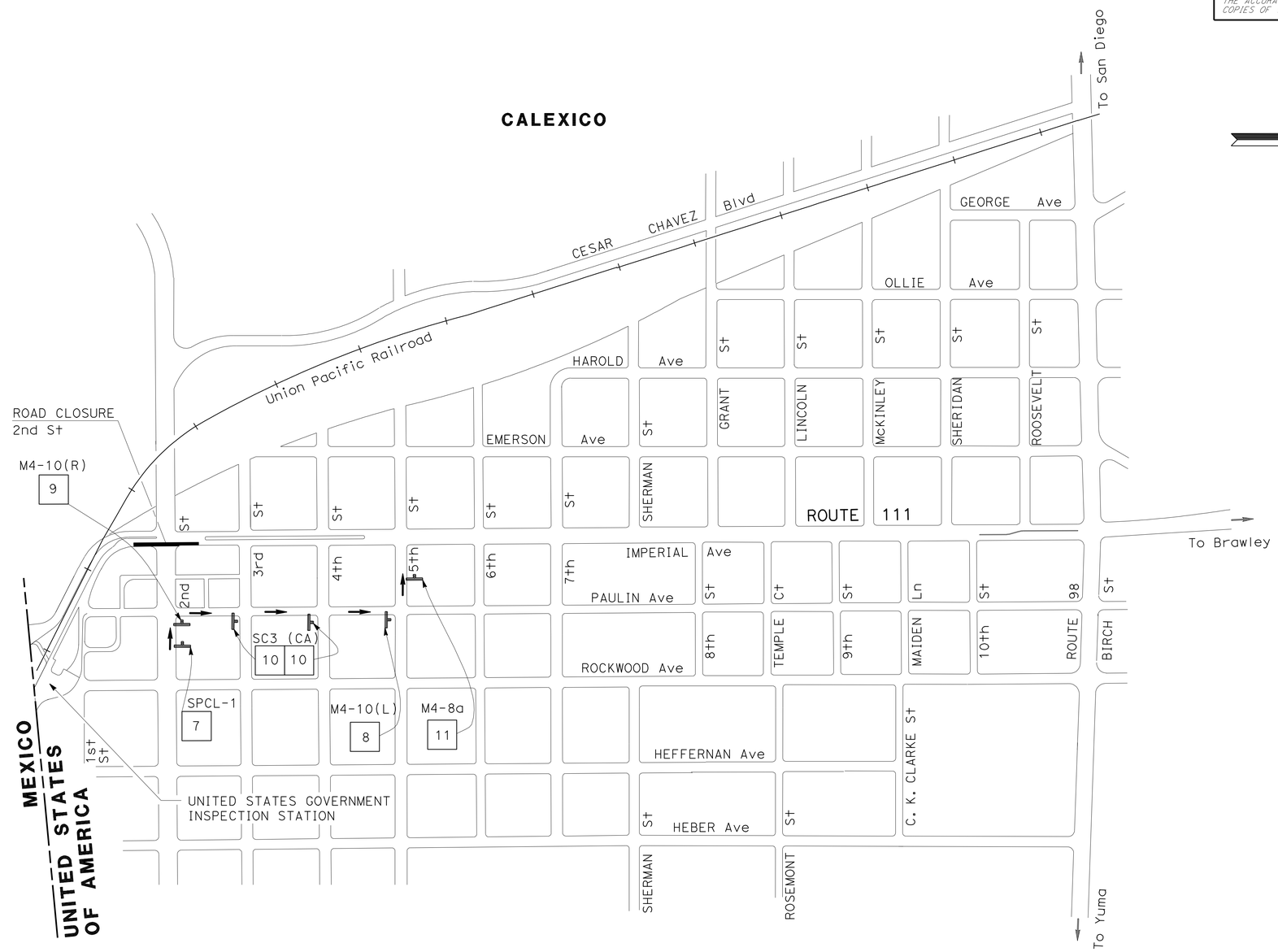
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	12	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN ADIBI
No. 54839
Exp. 06-30-12
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.



THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: RYAN CHAO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	13	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHAHIN ADIBI No. 54839 Exp. 06-30-12 CIVIL STATE OF CALIFORNIA

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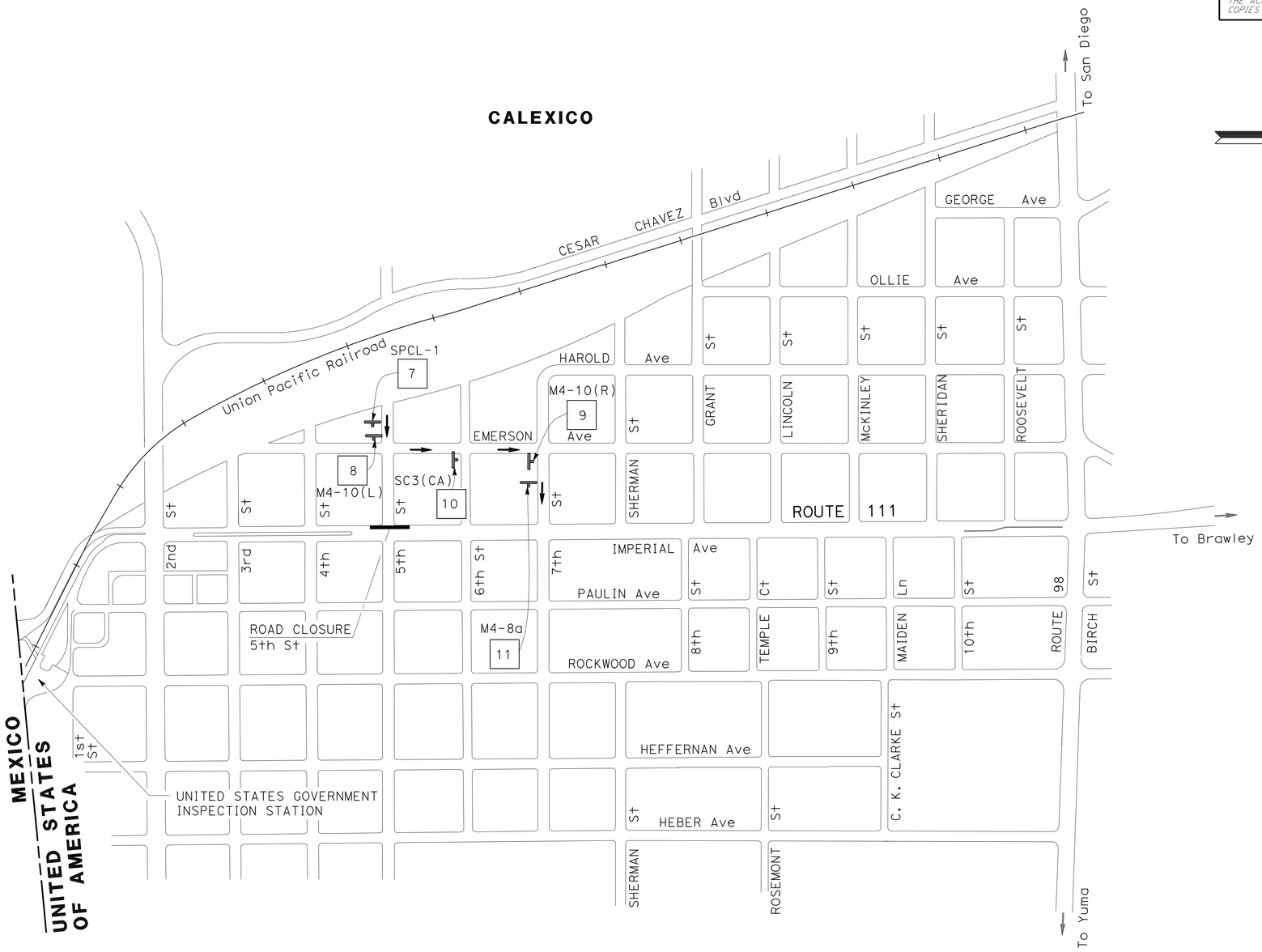

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: RYAN CHAO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	14	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHAHIN ADIBI No. 54839 Exp. 06-30-12 CIVIL STATE OF CALIFORNIA

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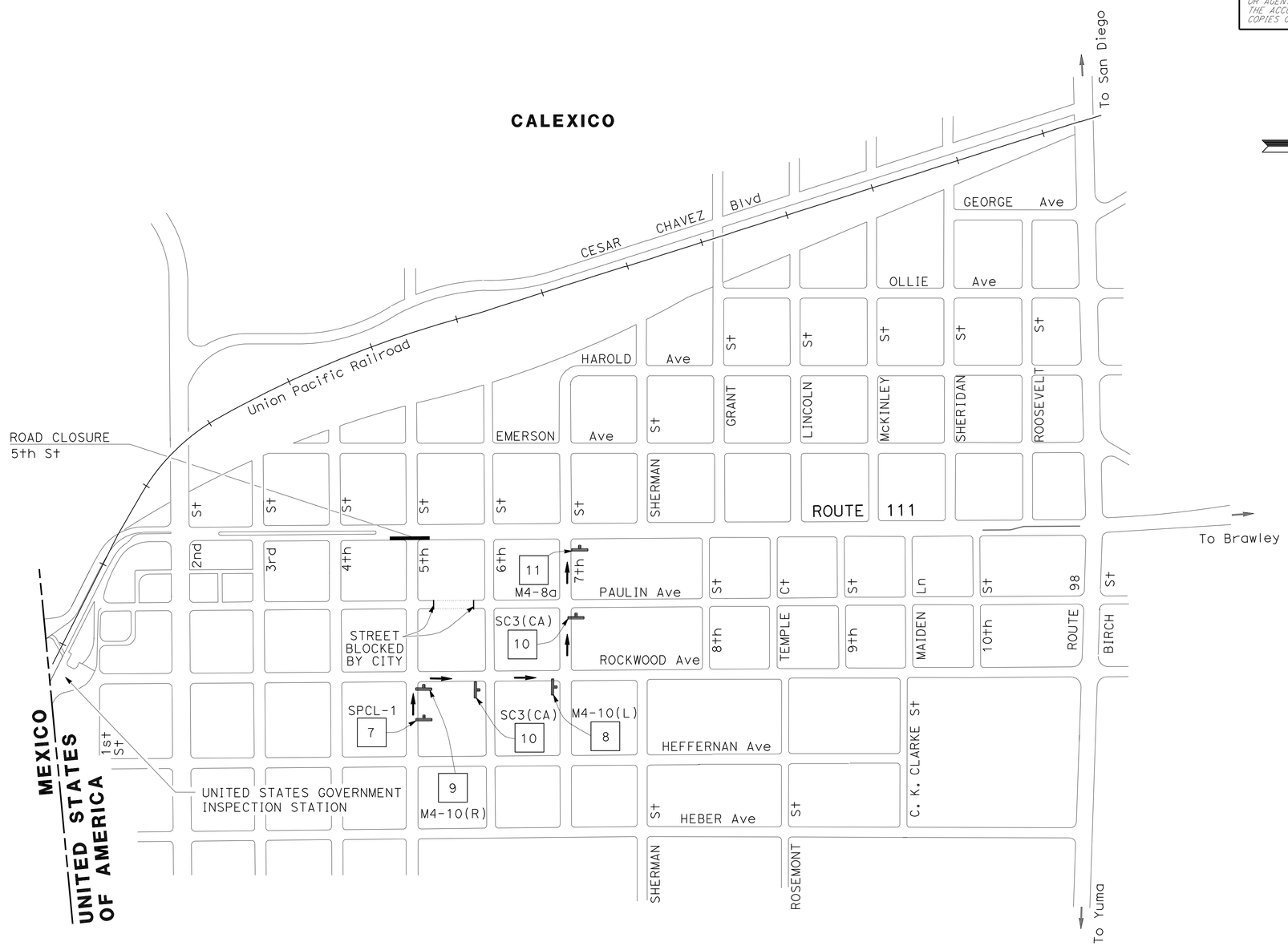

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL

CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: RYAN CHAO

REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	15	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN ADIBI
No. 54839
Exp. 06-30-12
CIVIL
STATE OF CALIFORNIA

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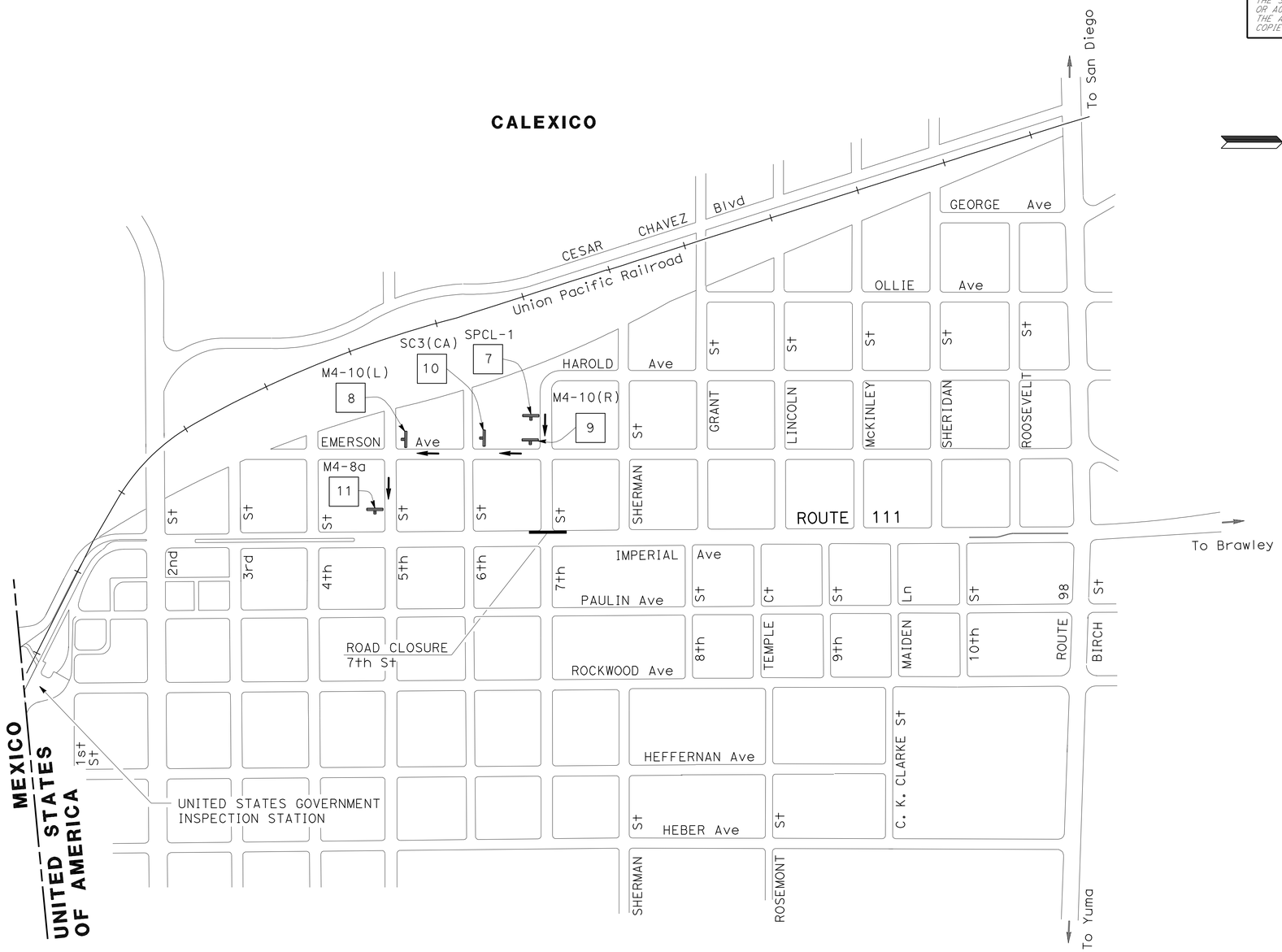

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL

CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: RYAN CHAO

REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	16	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN ADIBI
No. 54839
Exp. 06-30-12
CIVIL
STATE OF CALIFORNIA

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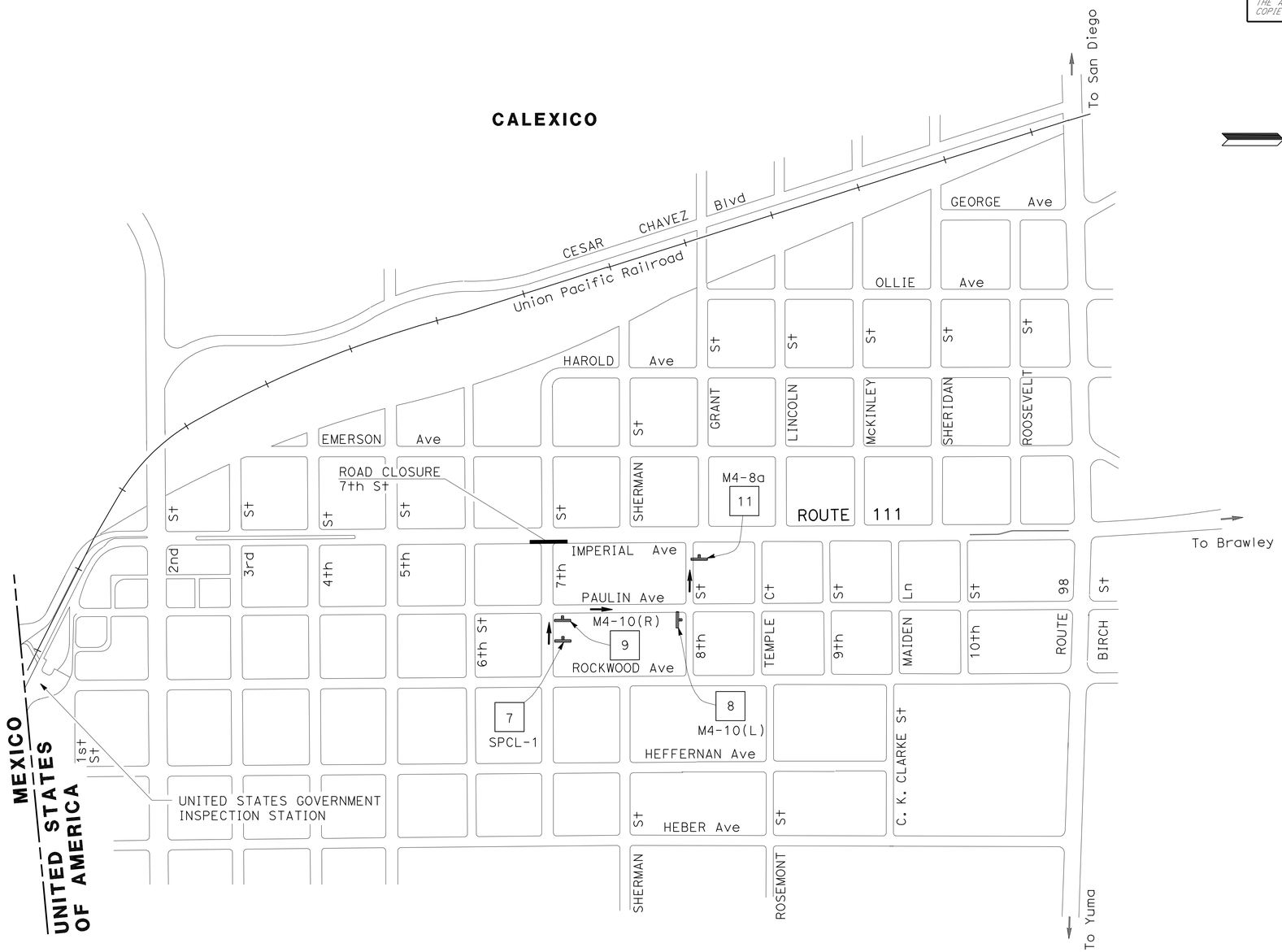

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-6

REVISED BY	DATE REVISED
HAMED BAHA	
RYAN CHAO	

CALCULATED-DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR
CAMILLE ABOUFADEL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	17	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHAHIN ADIBI No. 54839 Exp. 06-30-12 CIVIL STATE OF CALIFORNIA

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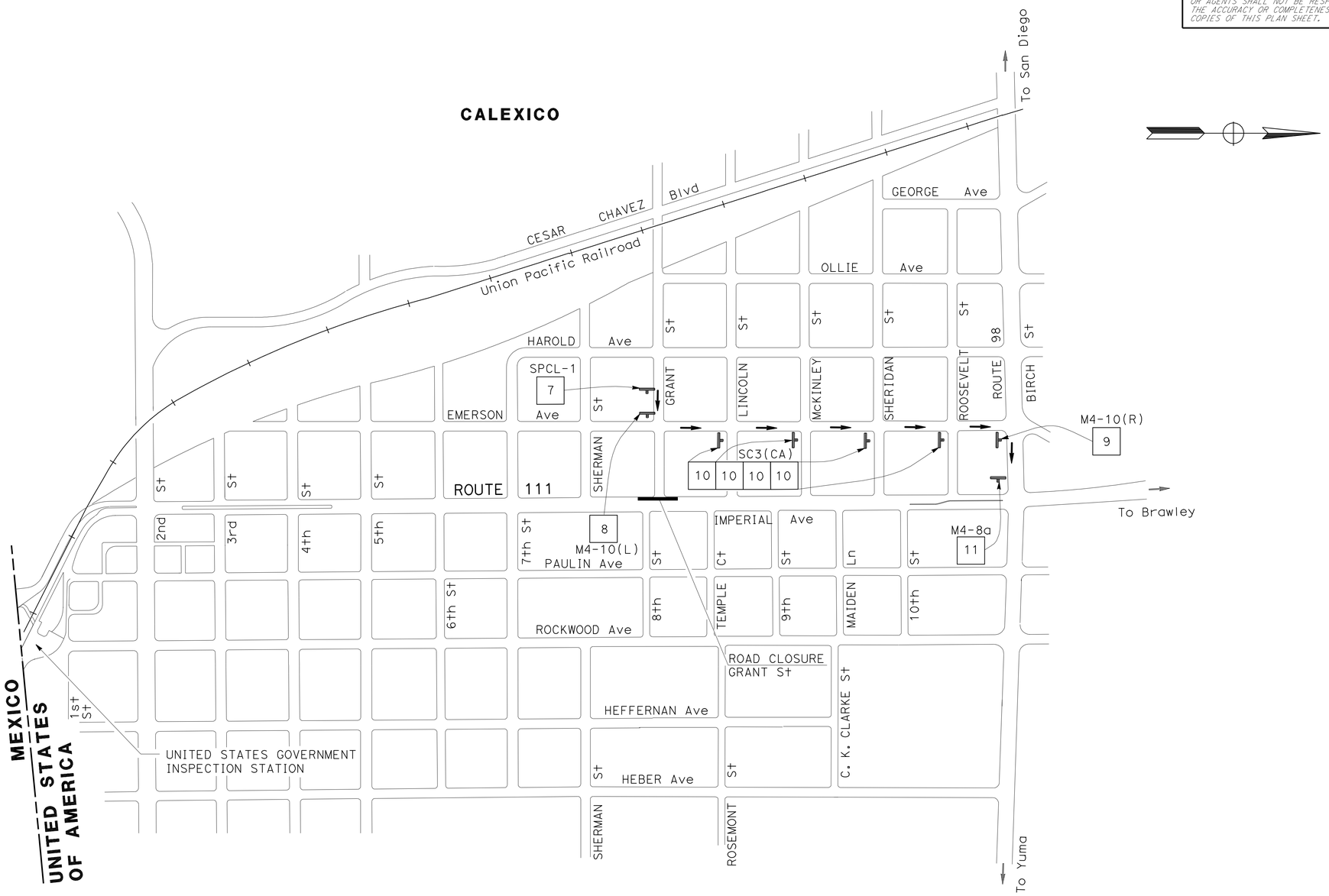

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-7

REVISED BY	DATE REVISED
HAMED BAHA	

CALCULATED-DESIGNED BY	CHECKED BY
RYAN CHAO	

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® TRAFFIC DESIGN

LAST REVISION 01-03-11 | DATE PLOTTED => 06-JAN-2011 | TIME PLOTTED => 09:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	18	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN ADIBI
No. 54839
Exp. 06-30-12
CIVIL
STATE OF CALIFORNIA

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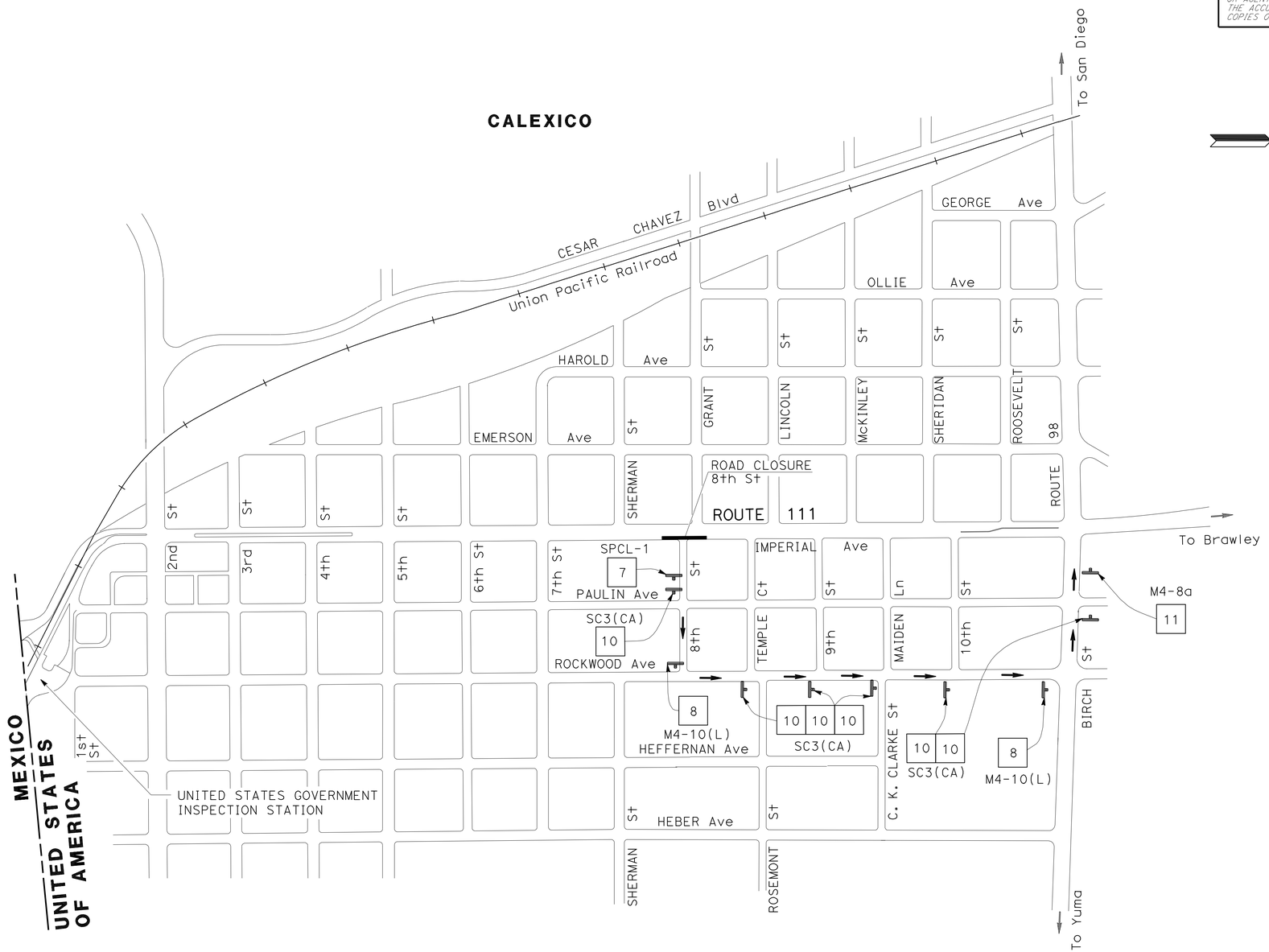

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: RYAN CHAO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	19	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN ADIBI
No. 54839
Exp. 06-30-12
CIVIL
STATE OF CALIFORNIA

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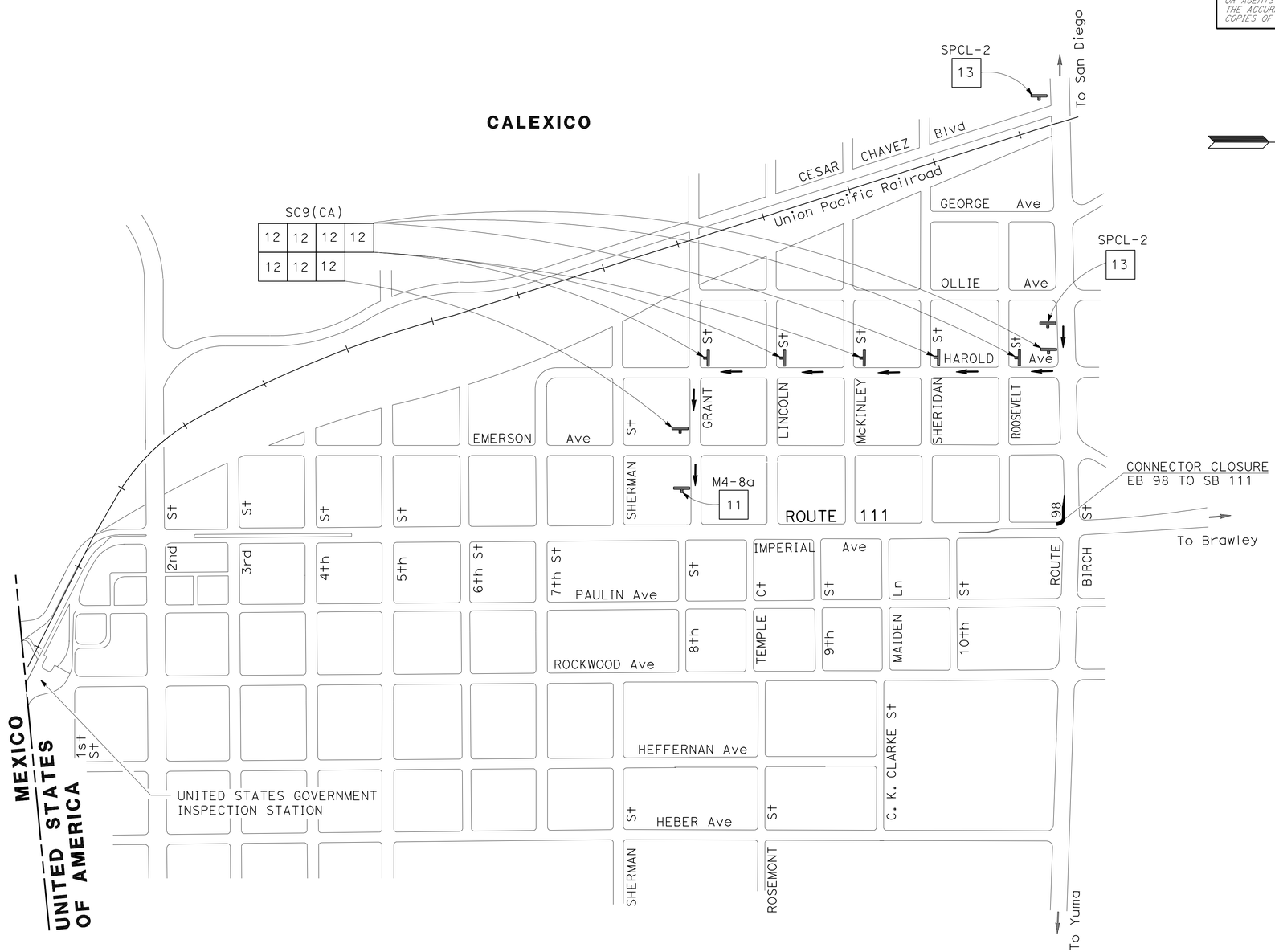

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: RYAN CHAO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	20	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN ADIBI
No. 54839
Exp. 06-30-12
CIVIL
STATE OF CALIFORNIA

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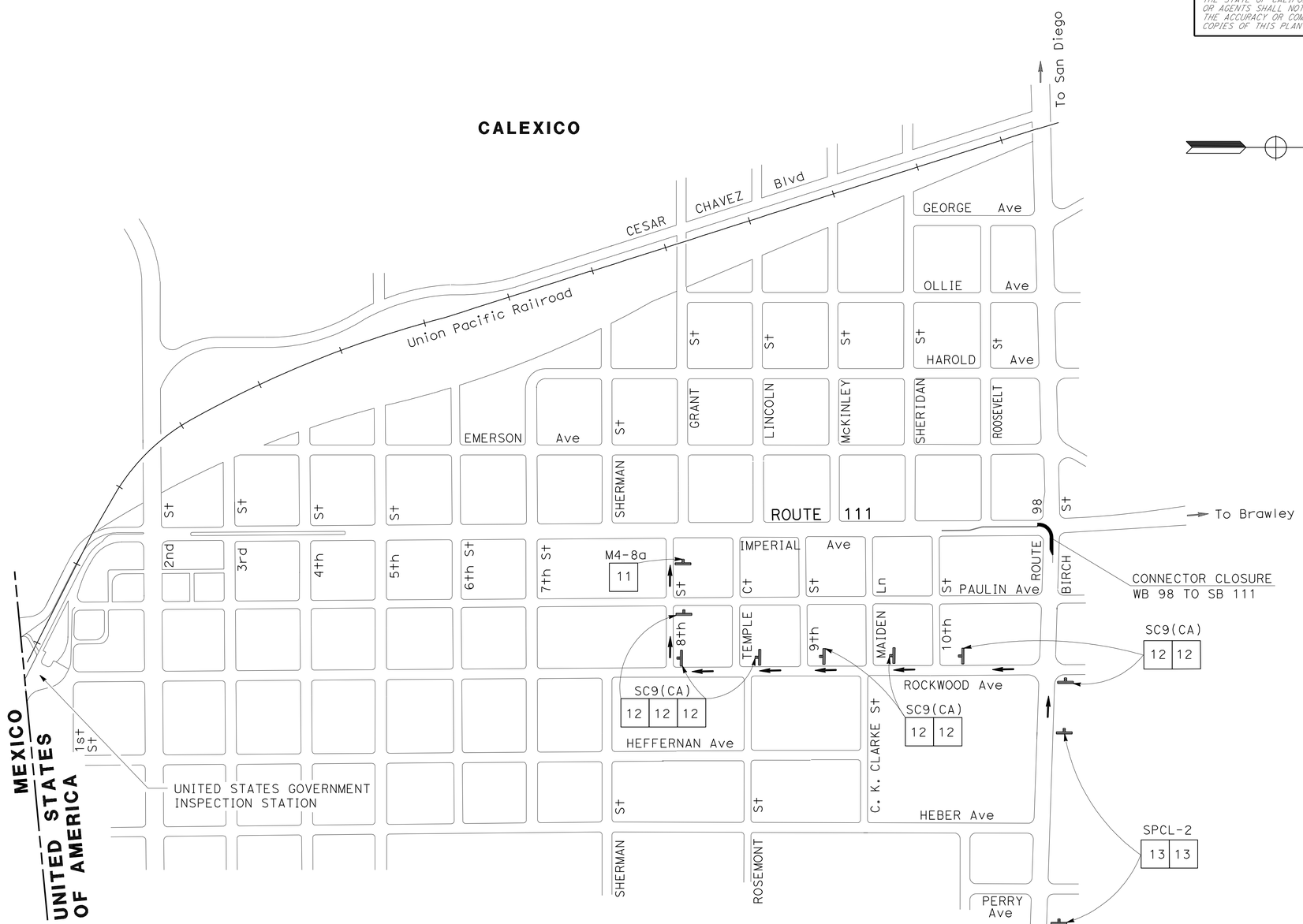

TRAFFIC HANDLING PLAN

NO SCALE

TH-10

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: RYAN CHAO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	21	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN ADIBI
No. 54839
Exp. 06-30-12
CIVIL
STATE OF CALIFORNIA

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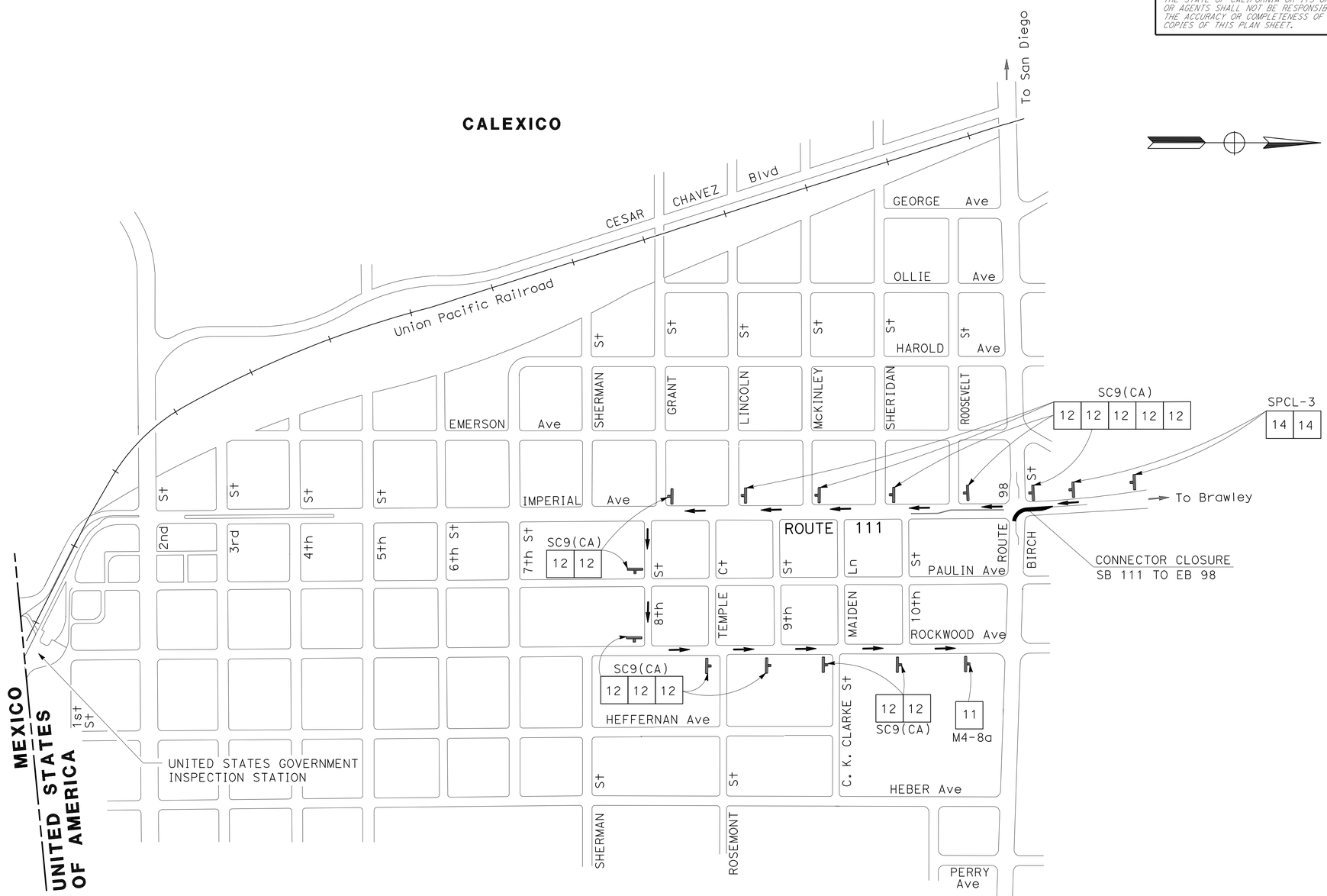

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
CALCULATED-DESIGNED BY: HAMED BAHA
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LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	22	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHAHIN ADIBI No. 54839 Exp. 06-30-12 CIVIL STATE OF CALIFORNIA

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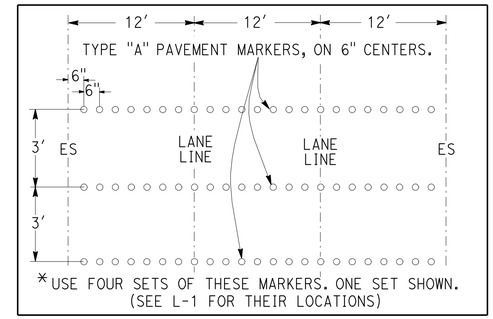
NOTE:
1. ALL PAVEMENT DELINEATION SHALL BE REPLACED IN KIND UNLESS INDICATED OTHERWISE.
2. (N) = NOT A PAY ITEM, FOR INFORMATION ONLY.
3. Dir = DIRECTION

(N) = NOT A PAY ITEM

PAVEMENT MARKER SUMMARY

LOCATION / DESCRIPTION							NON-REFLECTIVE (EA)		RETROREFLECTIVE (EA)		REMOVE PAVEMENT MARKER	REMARKS
ROUTE	Dir	LINE	BEGIN Sta	END Sta	LENGTH (LF) (N)	DETAIL No.	TYPE A White	TYPE AY Yellow	TYPE D Yellow	TYPE G Clear	(N)	
111	NB	RC Ln	51+60	53+45	185	10	24			5	29	BEGIN PROJECT
	NB	Rt Ln	54+45	59+50	505	10	66			12	78	BEGIN PROJECT
	NB	Rt Ln	58+20	59+50	130	38C	60			14	74	
	SB	Lt Ln	52+00	56+15	830	10	108			18	126	BEGIN PROJECT/3 LANES
	SB	Lt Ln	56+15	56+90	75	10	12			3	15	
	SB	Lt Ln	57+75	59+50	175	10	24			5	29	
	SB	Lt Ln	54+00	57+20	*	*	864				864	WARNING PAVEMENT MARKERS*
	NB	CLK	60+32	63+35	303	10	42			7	49	
	NB		64+10	65+60	150	10	24			4	28	
	SB		64+10	65+60	150	10	24			4	28	
	SB		60+32	63+35	303	10	42			7	49	
	SB		60+32	61+55	123	38C	60			14	74	
	NB		60+32	65+50	518	23		220	46		266	
	SB		62+15	65+50	335	23		140	30		170	
	NB		65+50	67+20	170	10	24			5	29	
	SB		65+50	67+20	170	10	24			5	29	
	NB		65+50	69+14	364	23		160	34		194	
	SB		65+50	71+00	550	23		230	48		278	
	NB		67+90	71+00	310	10	42			7	49	
	SB		67+90	71+00	310	10	42			7	49	
	NB		70+50	71+00	50	38C	30			8	38	
	NB		71+70	74+85	315	10	42			8	50	
	SB		71+70	74+85	315	10	42			8	50	
	NB		71+70	72+70	100	23		50	12		62	
	SB		73+85	74+85	100	23		50	12		62	
	NB/SB		72+70	73+85	115	33		68	17		85	
	NB		73+85	74+85	100	23		50	12		62	
	NB		74+35	74+85	50	38C	30			8	38	
	NB		75+45	78+65	320	10	42			8	50	
	SB		75+45	78+65	320	10	42			8	50	
	NB		75+45	76+45	100	23		50	12		62	
	NB/SB		76+45	77+65	120	33		70	18		88	
	NB		78+15	78+65	50	38C	30			8	38	
	SB		75+45	75+95	50	38C	30			8	38	
	NB		77+65	78+65	100	23		50	12		62	
	NB		79+25	80+11	86	10	12			3	15	
	SB		79+25	80+11	86	10	12			3	15	
	NB		79+25	80+11	86	23		40	10		50	
	SB		79+25	79+75	50	38C	30			8	38	
	NB		80+11	82+56	245	10	36			6	42	
	SB		80+11	82+56	245	10	36			6	42	
	NB		80+11	80+25	14	23		6	2		8	
	NB/SB		80+25	81+53	128	33		75	19		94	
	SB		81+53	82+53	100	23		50	12		62	
	NB		82+03	82+53	50	38C	30			8	38	
	NB		82+98	85+48	250	10	36			6	42	
	SB		82+98	85+48	250	10	36			6	42	
	NB		82+98	84+48	150	23		70	16		86	
						SUBTOTAL 1	1,998	1,379	312	227		

WARNING PAVEMENT MARKERS



*USE FOUR SETS OF THESE MARKERS. ONE SET SHOWN. (SEE L-1 FOR THEIR LOCATIONS)

PAVEMENT DELINEATION QUANTITIES
PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOU-FADEL
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: RYAN CHAO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	23	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHAHIN ADIBI No. 54839 Exp. 06-30-12 CIVIL STATE OF CALIFORNIA

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PAVEMENT MARKER SUMMARY

LOCATION / DESCRIPTION							NON-REFLECTIVE (EA)		RETROREFLECTIVE (EA)		REMOVE PAVEMENT MARKER	REMARKS
ROUTE	Dir	LINE	BEGIN Sta	END Sta	LENGTH (LF) (N)	DETAIL No.	TYPE A White	TYPE AY Yellow	TYPE D Yellow	TYPE G Clear	(N)	
111	SB	CLK	82+98	83+48	50	38C	30			8	38	
	NB/SB		83+98	84+48	50	33		30	9		39	
	SB		84+48	85+48	100	23		50	12		62	
	NB		84+98	85+48	50	38C	30			8	38	
	NB		86+92	88+87	195	10	30			5	35	
	SB		86+92	88+87	195	10	30			5	35	
	NB		86+92	87+92	100	23		50	12		62	
	NB/SB		87+92	88+87	95	33		56	15		71	
	SB		86+92	87+49	57	38C	30			8	38	
	NB		89+47	90+09	62	10	12			2	14	
	SB		89+47	90+09	62	10	12			2	14	
	NB/SB		89+47	90+09	62	33		37	11		48	
	NB		90+59	92+26	167	10	24			4	28	
	SB		90+59	92+26	167	10	24			4	28	
	NB/SB		90+59	92+26	167	33		98	24		122	
	NB		92+90	93+90	100	10	18			3	21	
	SB		92+90	93+90	100	10	18			3	21	
	NB/SB		92+90	93+90	100	33		59	16	2	75	
	NB		94+36	94+60	24	10	6				8	
	SB		94+36	94+60	24	10	6			2	8	
	NB/SB		94+36	94+60	24	33		28	8		36	
	NB		94+60	95+76	116	10	18			3	21	
	SB		94+60	95+76	116	10	18			3	21	
	NB/SB		94+60	95+76	116	33		68	18		102	
	NB		96+17	97+67	150	10	24			4	28	
	SB		96+17	97+67	150	10	24			4	28	
	NB/SB		96+17	97+67	150	33		88	22		110	
	NB		98+22	99+16	94	10	12			3	15	
	SB		98+22	99+16	94	10	12			3	15	
	NB/SB		98+22	99+16	94	33		55	15		70	
	NB		99+69	104+30	461	10	60			11	71	END PROJECT
	SB		99+75	104+30	455	10	60			10	70	END PROJECT
	NB		101+90	104+30	240	10	30			6	36	END PROJECT
	SB		99+72	100+81	109	38C	50			12	62	END PROJECT
	NB		101+90	104+30	240	38C	100			22	122	END PROJECT
					SUBTOTAL 2		678	619	162	137		
					SUBTOTAL 1		1,998	1,379	312	227		
					TOTAL		4,674		838			

PAVEMENT DELINEATION QUANTITIES
PDQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOU-FADEL
CALCULATED-DESIGNED BY: HAMED BAHA
CHECKED BY: RYAN CHAO
REVISED BY
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	24	44

REGISTERED CIVIL ENGINEER 12-12-12 DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN ADIBI
No. 54839
Exp. 06-30-12
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.

THERMOPLASTIC PAVEMENT MARKINGS

LOCATION		ARROW TYPE V SQFT	ARROW TYPE II SQFT	ARROW TYPE III SQFT	RR SQFT	LANE LINE / LANE LINE 2' x LANE WIDTH TRANSVERSE LINE TO INCLUDE WITH R/R PAVEMENT MARKINGS SQFT	CROSS-WALK AND 12" LIMIT LINE SQFT	PED SQFT	SIGNAL SQFT	AHEAD SQFT	SLOW SQFT	XING SQFT	SCHOOL SQFT	REMARKS
Rte 111	50+63 "RC Ln" - 65+58 "CLX"	33	45	126	140	144	460	108	128	124		126		
Rte 111/SECOND St							525							
Rte 111	65+58 "CLX" - 80+11 "CLX"			252							46*	42*	70*	*(YELLOW)
Rte 111/FIFTH St							505							
Rte 111/SEVENTH St							295							
Rte 111	80+11 "CLX" - 94+34 "CLX"			420			216				46*	42*	70*	*(YELLOW)
Rte 111	94+34 "CLX" - 104+45 "CLX"	33	45	504			322		64	62		84	140	
SUB-TOTAL		66	90	1,302	140	144	2,323	108	192	186	92	294	280	
TOTAL		5,217												

PAINT PAVEMENT MARKING

LOCATION	12" LIMIT LINE SQFT	REMARKS
Rte 111	52	Rte 111/THIRD St
	54	Rte 111/FOURTH St
	36	Rte 111/SIXTH St
TOTAL	142	

PAVEMENT DELINEATION QUANTITIES
PDQ-3

REVISED BY | DATE REVISED
HAMED BAHA | RYAN CHAO
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
CAMILLE ABOU-FADEL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION 01-03-11 | DATE PLOTTED => 06-JAN-2011 | TIME PLOTTED => 09:09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	25	44

Hamed S. Baha 12-12-12
REGISTERED CIVIL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HAMED S. BAHA No. 74499 Exp. 12-31-11 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.

ROADWAY QUANTITIES

LOCATION/DESCRIPTION						LENGTH	WIDTH	AREA	HMA THICKNESS	COLD PLANE AC PAVEMENT	HMA (TYPE C)	TACK COAT	REMARKS
	LAYOUT	Dir	LINE	FROM Sta	TO Sta	LF (N)	LF (N)	SQFT (N)	FT (N)	SQYD	TON	TON	
Imp-111	L-1	NB	RC Ln	50+63	54+30	367	56-24	11,635	0.15	1,293	125	0.27	BEGIN PROJECT
Imp-111	L-1	NB	Rt Ln	51+05	54+30	325	12-24	4,507	0.15	501	49	0.10	BEGIN PROJECT
Imp-111	L-1	NB	Rt Ln	54+30	59+57	527	24-36	15,523	0.15	1,725	167	0.36	
Imp-111	L-1	SB	Lt Ln	52+00	57+00	500	36-48	18,609	0.15	2,068	201	0.43	BEGIN PROJECT
Imp-111	L-1	SB	Lt Ln	57+11	59+57	246	24-26	5,806	0.15	645	63	0.13	
Imp-111/SECOND St	L-1	NB/SB	Rt Ln/CLX	59+57	60+26	69	78-93	6,283	0.15	698	68	0.15	
Imp-111	L-1	NB	CLX	60+26	63+36	310	24-32	8,680	0.15	964	94	0.20	
Imp-111/THIRD St	L-1	NB	CLX	63+36	64+15	79	32-42	2,923	0.15	325	32	0.07	
Imp-111/THIRD St	L-1	SB	CLX	60+26	61+36	310	29-40	10,695	0.15	1,188	115	0.25	
Imp-111/THIRD St	L-1	SB	CLX	63+36	64+15	79	29-42	2,805	0.15	312	30	0.06	
Imp-111/THIRD St	L-1	SB	CLX	64+15	65+58	143	32	4,576	0.15	508	49	0.11	
Imp-111/THIRD St	L-1	NB	CLX	64+15	65+58	143	32	4,576	0.15	508	49	0.11	
Imp-111/THIRD St	L-2	NB	CLX	65+58	67+15	157	32	5,024	0.15	558	54	0.12	
Imp-111/THIRD St	L-2	SB	CLX	65+58	67+15	157	32	5,024	0.15	558	54	0.12	
Imp-111/FOURTH St	L-2	NB	CLX	67+15	67+99	84	32-42	3,108	0.15	345	33	0.07	
Imp-111/FOURTH St	L-2	SB	CLX	67+15	67+99	84	32-42	3,192	0.15	355	34	0.07	
Imp-111	L-2	NB	CLX	67+99	70+05	306	32-41	11,169	0.15	1,241	120	0.26	
Imp-111	L-2	SB	CLX	67+99	70+95	296	31-32	9,324	0.15	1,036	100	0.22	
Imp-111/FIFTH St	L-2	NB/SB	CLX	71+05	71+75	70	72-94	6,459	0.15	718	70	0.15	
Imp-111	L-2	SB	CLX	71+75	74+79	304	36	10,944	0.15	1,216	118	0.25	
Imp-111	L-2	NB	CLX	71+75	74+79	304	36	10,944	0.15	1,216	118	0.25	
Imp-111/SIXTH St	L-2	NB/SB	CLX	74+79	75+54	75	72-95	6,539	0.15	727	70	0.15	
Imp-111	L-2	NB	CLX	75+54	78+62	308	36	11,088	0.15	1,232	120	0.26	
Imp-111	L-2	SB	CLX	75+54	78+62	298	36	10,728	0.15	1,192	116	0.25	
Imp-111/SEVENTH St	L-2	NB	CLX	78+62	79+27	65	29	1,885	0.15	209	20	0.04	
Imp-111	L-2	NB	CLX	79+27	80+11	84	36	3,024	0.15	336	33	0.07	
Imp-111	L-2	SB	CLX	78+52	79+37	85	28	2,380	0.15	264	26	0.06	
Imp-111/SEVENTH St	L-2	SB	CLX	79+37	80+11	74	36	2,664	0.15	296	29	0.06	
Imp-111	L-3	NB	CLX	80+11	94+34	1,423	36	51,228	0.15	5,692	552	1.19	
Imp-111	L-3	SB	CLX	80+11	94+34	1,423	36	51,228	0.15	5,692	552	1.19	
Imp-111	L-4	NB	CLX	94+34	99+70	536	36	19,296	0.15	2,144	208	0.45	
Imp-111/Imp-98	L-4	NB	CLX	99+70	104+45	475	28-44	17,100	0.15	1,900	184	0.40	END PROJECT
Imp-111/Imp-98	L-4	SB	CLX	94+34	99+70	536	36	19,296	0.15	2,144	208	0.45	
Imp-111/Imp-98	L-4	SB	CLX	99+70	104+45	475	44-28	17,100	0.15	1,900	184	0.40	END PROJECT
									TOTAL	41,707	4,045	8.72	

(N) = NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

SUMMARY OF QUANTITIES
Q-1

REVISED BY | DATE REVISED
HAMED BAHA | REBECCA IGNACIO
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: CAMILLE ABOU-FADEL
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION 01-03-11 | DATE PLOTTED => 06-JAN-2011 | TIME PLOTTED => 09:09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	26	44

Enrique P. Bernal 12-12-10
REGISTERED ELECTRICAL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

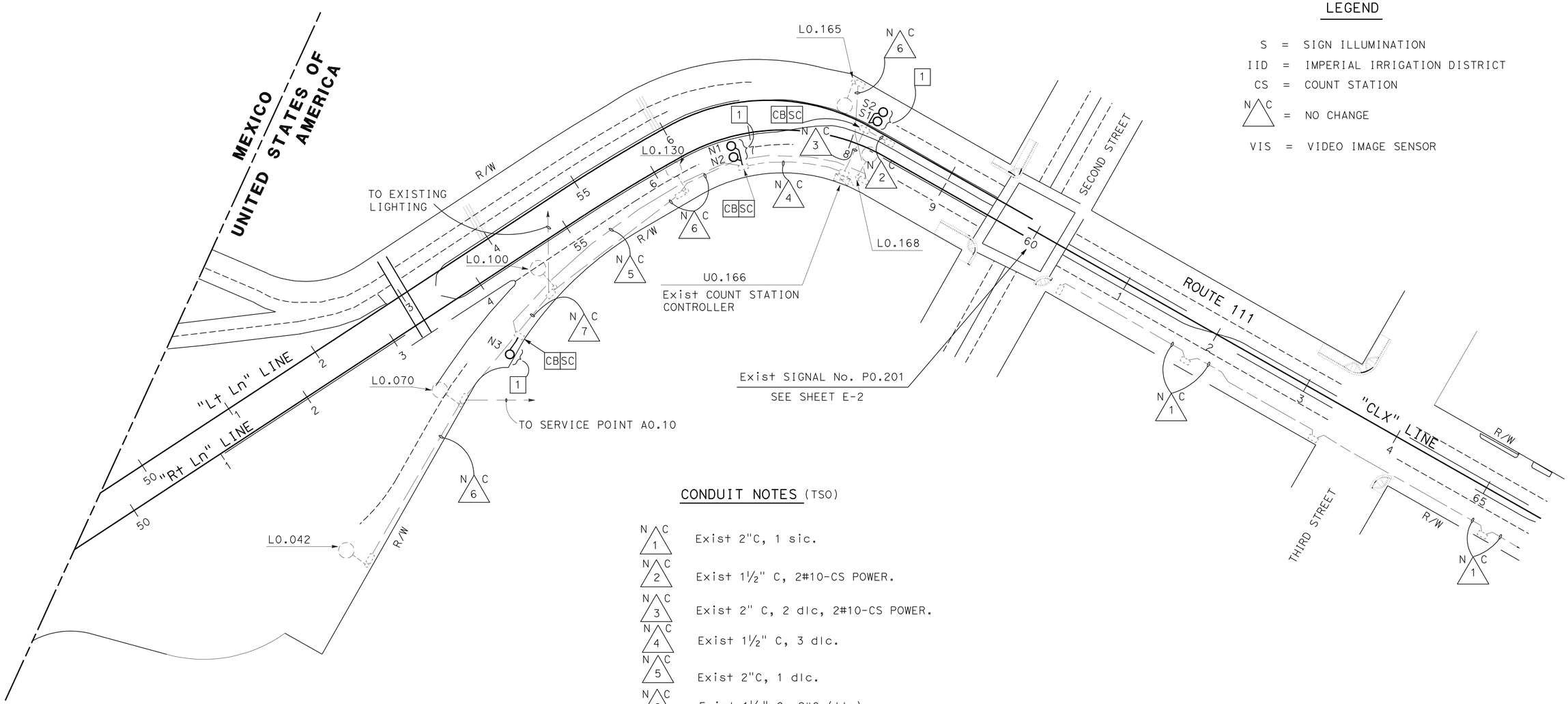
REGISTERED PROFESSIONAL ENGINEER
E.P. BERNAL
No. 15675
Exp. 06-30-12
ELECTRICAL
STATE OF CALIFORNIA

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

NOTES

1 - ABANDON EXISTING LOOPS.

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



LEGEND

S = SIGN ILLUMINATION

IID = IMPERIAL IRRIGATION DISTRICT

CS = COUNT STATION

N C = NO CHANGE

VIS = VIDEO IMAGE SENSOR

CONDUIT NOTES (TSO)

N C 1 — Exist 2"C, 1 sic.

N C 2 — Exist 1½" C, 2#10-CS POWER.

N C 3 — Exist 2" C, 2 dlc, 2#10-CS POWER.

N C 4 — Exist 1½" C, 3 dlc.

N C 5 — Exist 2"C, 1 dlc.

N C 6 — Exist 1½" C, 2#8 (ltg).

N C 7 — Exist 1½" C, 4#8 (ltg).

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

INDUCTIVE LOOP DETECTOR

SCALE: 1"=50'

E-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE J. WILSON
CALCULATED-DESIGNED BY: ANTONIO A. RODRIGUEZ
CHECKED BY: ENRIQUE BERNAL
REVISED BY
DATE REVISED

LAST REVISION: DATE PLOTTED => 06-JAN-2011 TIME PLOTTED => 09:09
01-03-11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	27	44

Enrique P. Bernal 12-12-10
REGISTERED ELECTRICAL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER E.P. BERNAL No. 15675 Exp. 6-30-12 ELECTRICAL STATE OF CALIFORNIA

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

NOTES:

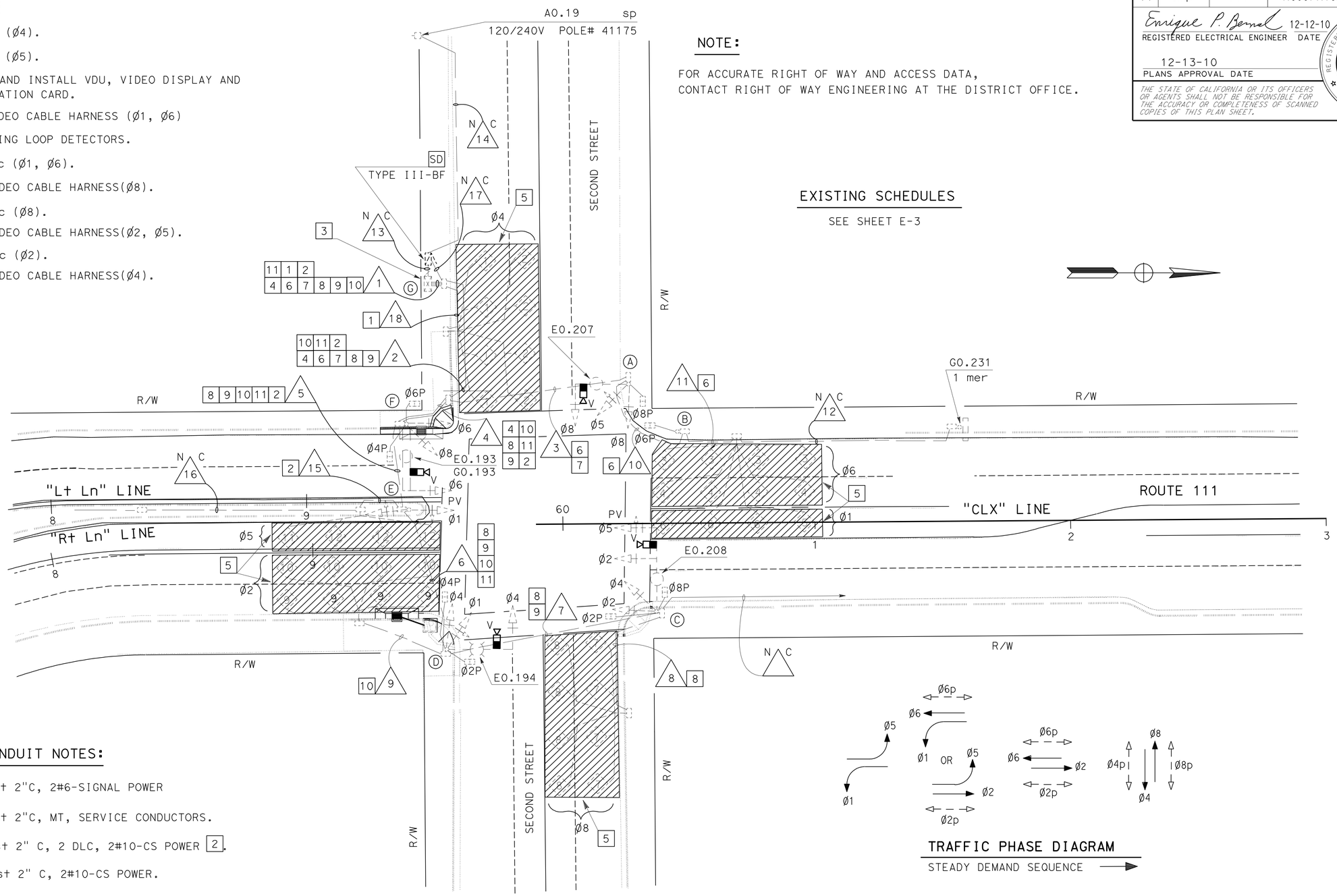
1 - RC 2 dlc (Ø4).
2 - RC 2 dlc (Ø5).
3 - FURNISH AND INSTALL VDU, VIDEO DISPLAY AND COMMUNICATION CARD.
4 - ADD 1 VIDEO CABLE HARNESS (Ø1, Ø6)
5 - AB EXISTING LOOP DETECTORS.
6 - RC 4 dlc (Ø1, Ø6).
7 - ADD 1 VIDEO CABLE HARNESS(Ø8).
8 - RC 2 dlc (Ø8).
9 - ADD 1 VIDEO CABLE HARNESS(Ø2, Ø5).
10 - RC 2 dlc (Ø2).
11 - ADD 1 VIDEO CABLE HARNESS(Ø4).

NOTE:

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

EXISTING SCHEDULES

SEE SHEET E-3



CONDUIT NOTES:

N C 13 -Exist 2"C, 2#6-SIGNAL POWER
N C 14 -Exist 2"C, MT, SERVICE CONDUCTORS.
15 -Exist 2" C, 2 DLC, 2#10-CS POWER 2.
N C 16 -Exist 2" C, 2#10-CS POWER.
N C 17 -Exist 2" C, 2#10-(ltg), 2#10-(s). 4#14-(peu's)(s<g), 2#10-(cs).
18 -2" C, 2 dlc 1 .

ROUTE 111(IMPERIAL Ave)/SECOND St
(CALEXICO)
SIGNAL No. P0.201

SIGNAL AND LIGHTING
(LOCATION 1)

SCALE: 1"=20'

E-2

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE J. WILSON
CALCULATED-DESIGNED BY: ANTONIO A. RODRIGUEZ
CHECKED BY: ENRIQUE BERNAL
REVISED BY / DATE REVISED

LAST REVISION 09-15-10 DATE PLOTTED => 10-JAN-2011 TIME PLOTTED => 10:10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	28	44

Enrique P. Bernal 12-12-10
REGISTERED ELECTRICAL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
E.P. BERNAL
No. 15675
Exp. 6-30-12
ELECTRICAL
STATE OF CALIFORNIA

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

EXISTING CONDUIT AND CONDUCTOR SCHEDULE

AWG SIZE OR CABLE TYPE	PHASE	POLE OR CIRCUIT	EXISTING CONDUIT SIZE AND RUN SCHEDULE											
			3-3" 1	3-3" 2	3" 3	2-3" 4	3" 5	3" 6	3" 7	2" 8	2" 9	2" 10	2" 11	2" N/C 12
		POLE - A	2	2	2									
3CSC		B	1	1	1							1		
		C	2	2		2	2	2	2					
		D	2	2		2	2	2						
		E	1	1		1	1							
		F	2	2		2								
12CSC														
TOTAL CABLES		3CSC/12CSC	10	10	3	7	5	4	2			1		
10		SIGN LIGHTING		2	2	2						2	2	2
10		LIGHTING		2	2	2	2	2	2					
14		PEU		4		4								
10		CS POWER		2		2	2							
TYPE B DLC	Ø1	LOOP DETECTOR	2	2	2							2	2	
	Ø2	LOOP DETECTOR	2	2		2	2	2			2			
	Ø4	LOOP DETECTOR	2											
	Ø5	LOOP DETECTOR	2	2		2	2							
	Ø6	LOOP DETECTOR	2	2	2							2	2	
	Ø8	LOOP DETECTOR	2	2		2	2	2	2	2				
EV-DLC			4	4	1	3	2	2	1					
SIC			1	1		1	1	1	1					
TOTAL CONDUCTORS/CABLES			27	35	12	27	18	13	8	2	2	7	6	2
NOTES SEE SHEET E-2			4, 6, 7, 8, 9, 10, 11, 1, 2	4, 6, 7, 8, 9, 10, 11, 2	6, 7	4, 8, 9, 10, 11, 2	8, 9, 10, 11, 2	8, 9, 10, 11	8, 9	8	10	6	6	

EXISTING POLE AND EQUIPMENT SCHEDULE

Loc	STANDARD TYPE	STANDARD SMA	STANDARD LMA	PLACEMENT DIMENSIONS A Ft	PLACEMENT DIMENSIONS B Ft	SIGNAL MOUNTING AND PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN ppb	HPS LUMINAIRE	REMARKS
A	17	18′	12′	Exist		SV-2-TC	mas Ø8	SP-1-T	—	200 W	ADD VIS
B	1-A	—	—	Exist		—	—	SP-1-T	—		NO WORK
C	19	30′	12′	Exist		SV-2-T	mat Ø5 mas Ø2	SP-1-T	—	200 W	ADD VIS
D	19-3-80	25′	12′	Exist		SV-2-TC	mas Ø4	SP-2-T	—	200 W	ADD VIS
E	1-A	—	—	Exist		SV-1-T TV-1-T	—	—	—		NO WORK
F	LIGHWEIGHT SIGN TYPE C-2 MAST ARM TS10x6-28′ SPAN ARM POST NPS 14-LMA 15′					SV-2-T	TWO mas Ø6	SP-2-T	—	200 W	ADD VIS
G	MODEL 170 CONTROLLER ASSEMBLY (TYPE 332 CABINET)										

ROUTE 111(IMPERIAL Ave)/SECOND St
(CALEXICO)
SIGNAL No. P0.201

SIGNAL AND LIGHTING
(LOCATION 1)

E-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE J. WILSON
CALCULATED-DESIGNED BY: ANTONIO A. RODRIGUEZ
CHECKED BY: ENRIQUE BERNAL
REVISED BY
DATE REVISED

LAST REVISION 09-14-10
DATE PLOTTED => 10-JAN-2011
TIME PLOTTED => 10:11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	29	44

Enrique P. Bernal 12-12-10
REGISTERED ELECTRICAL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER E.P. BERNAL No. 15675 Exp. 06-30-12 ELECTRICAL STATE OF CALIFORNIA

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

NOTES:

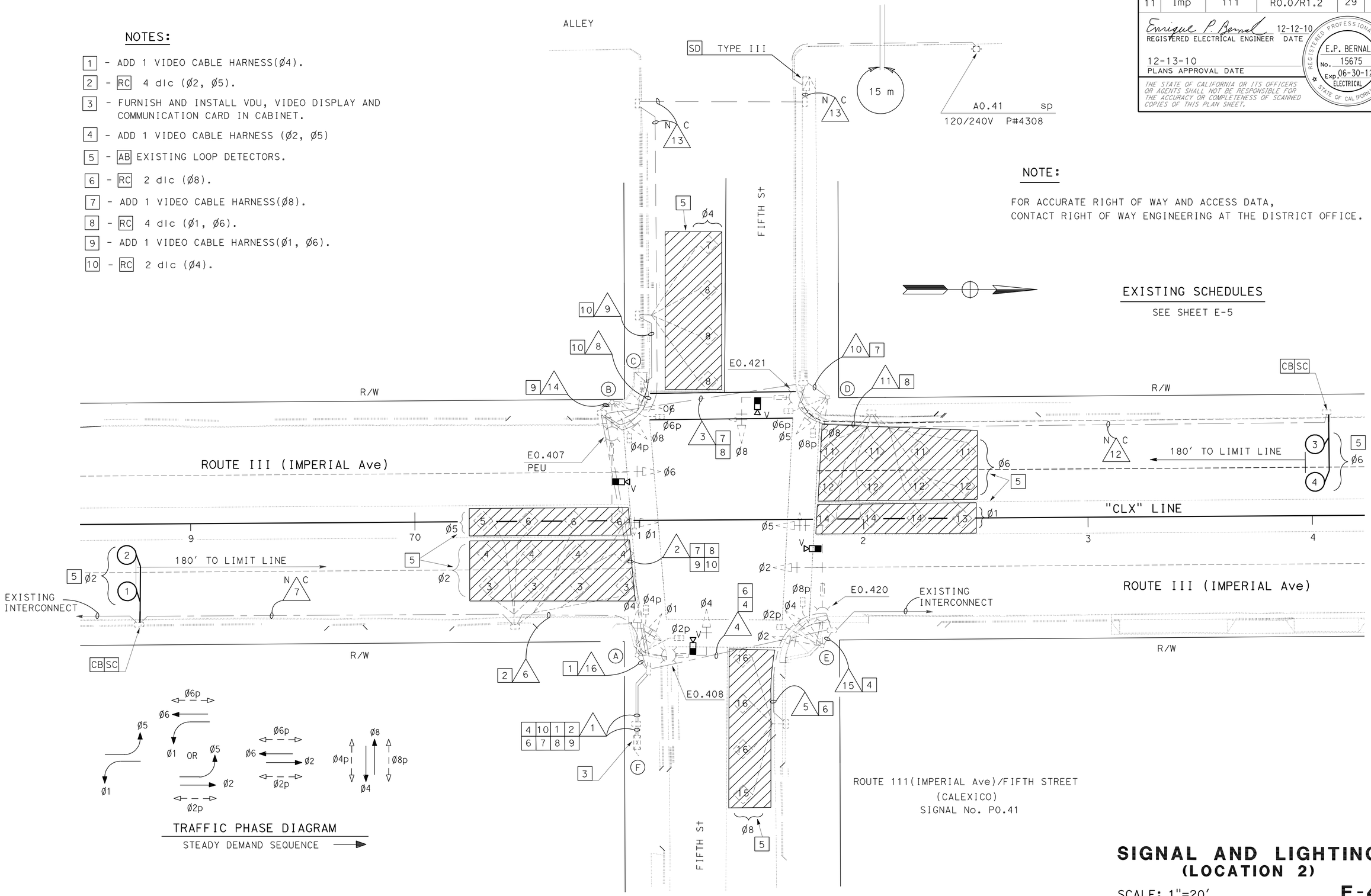
1 - ADD 1 VIDEO CABLE HARNESS(Ø4).
2 - RC 4 dlc (Ø2, Ø5).
3 - FURNISH AND INSTALL VDU, VIDEO DISPLAY AND COMMUNICATION CARD IN CABINET.
4 - ADD 1 VIDEO CABLE HARNESS (Ø2, Ø5)
5 - AB EXISTING LOOP DETECTORS.
6 - RC 2 dlc (Ø8).
7 - ADD 1 VIDEO CABLE HARNESS(Ø8).
8 - RC 4 dlc (Ø1, Ø6).
9 - ADD 1 VIDEO CABLE HARNESS(Ø1, Ø6).
10 - RC 2 dlc (Ø4).

NOTE:

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

EXISTING SCHEDULES

SEE SHEET E-5



THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING (LOCATION 2)

SCALE: 1"=20'

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE J. WILSON
CALCULATED-DESIGNED BY: ANTONIO A. RODRIGUEZ
CHECKED BY: ENRIQUE BERNAL
REVISED BY / DATE REVISED

LAST REVISION 01-03-11 | DATE PLOTTED => 06-JAN-2011 | TIME PLOTTED => 09:09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	30	44

Enrique P. Bernal 12-12-10
REGISTERED ELECTRICAL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER E.P. BERNAL No. 15675 Exp. 06-30-12 ELECTRICAL STATE OF CALIFORNIA

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

EXISTING CONDUIT AND CONDUCTOR SCHEDULE

AWG SIZE OR CABLE TYPE	PHASE	POLE OR CIRCUIT	EXISTING CONDUIT SIZE AND RUN SCHEDULE															
			2-3" 1	2-3" 2	3" 3	3" 4	2" 5	2" 6	2" NAC 7	2" 8	2" 9	2" 10	2" 11	2" NAC 12	2" NAC 13	2" 14	2" 15	2" 16
		POLE - A	2 2															2 2
3CSC		B	1 2	1 2												1 2		
		C	1	1						1								
		D	2 2	2 2	2 2							2 2						
		E	2 2			2 2											2 2	
12CSC																		
TOTAL CABLES		3CSC/12CSC	8 8	4 4	2 2	2 2				1		2 2				1 2	2 2	2 2
2		SIGNAL POWER	2	2											2			
8		LIGHTING		2	2	2						2			2	2	2	2
14		PEU													3	3		
TYPE B DLC	Ø1	LOOP DETECTOR	2	2	2								2					
	Ø2	LOOP DETECTOR	4					4	2									
	Ø4	LOOP DETECTOR	2	2						2	2							
	Ø5	LOOP DETECTOR	2					2										
	Ø6	LOOP DETECTOR	4	4	4								4	2				
	Ø8	LOOP DETECTOR	2			2	2											
EV-DLC			3	1		1										1	1	1
sic			2			1		1	1									
TOTAL CONDUCTORS/CABLES			39	21	12	10	2	7	3	3	2	6	6	2	7	9	7	7
NOTES SEE SHEET E-4			4 6 7 8 9 10 1 2	7 8 9 10	7 8	4 6	6	2		10	10	7	8			9	4	1

EXISTING EQUIPMENT AND POLE SCHEDULE

Loc	STANDARD TYPE	STANDARD SMA	STANDARD LMA	PLACEMENT DIMENSIONS A Ft	PLACEMENT DIMENSIONS B Ft	SIGNAL MOUNTING AND PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN p p b	HPS LUMINAIRE	REMARKS
A	19-2-129	7.6	3.7	3.4	2.4	SV-2-TD	mas Ø4	SP-2-T	Ø4P → Ø2P ←	200w	ADD VIS
B	26-4-129	13.7	4.6	3.0	1.6	SV-2-TD	mat Ø1 mas Ø6	SP-2-T	Ø4P ←	200W	peu ADD VIS
C	ppb POST	—	—	3.0	0.5	—	—	—	Ø6P →		NO WORK
D	19-2-129	9.1	4.9	5.4	2.4	SV-2-TD	mas Ø8	SP-2-T	Ø6P ← Ø8P →	200w	ADD VIS
E	26-4-129	13.7	4.6	5.2	2.4	SV-2-TD	mat Ø5 mas Ø2	SP-2-T	Ø2P → Ø8P ←	200w	ADD VIS
F	MODEL 170 CONTROLLER ASSEMBLY (TYPE 332 CABINET)										

ROUTE 111(IMPERIAL Ave)/FIFTH STREET
(CALEXICO)
SIGNAL No. P0.41

SIGNAL AND LIGHTING
(LOCATION 2)

E-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE J. WILSON
CALCULATED-DESIGNED BY: ENRIQUE BERNAL
CHECKED BY: ANTONIO A. RODRIGUEZ
REVISED BY / DATE REVISED

LAST REVISION 01-03-11 | DATE PLOTTED => 06-JAN-2011 | TIME PLOTTED => 09:09

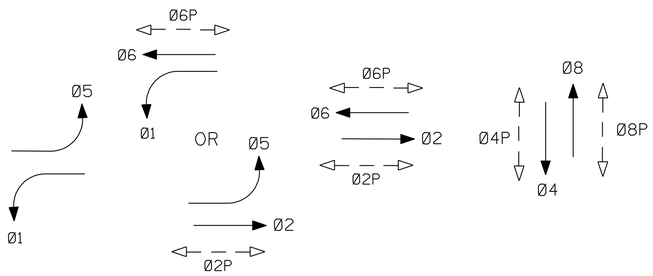
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	31	44

Enrique P. Bernal 12-12-10
REGISTERED ELECTRICAL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER E.P. BERNAL No. 15675 Exp. 06-30-12 ELECTRICAL STATE OF CALIFORNIA

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

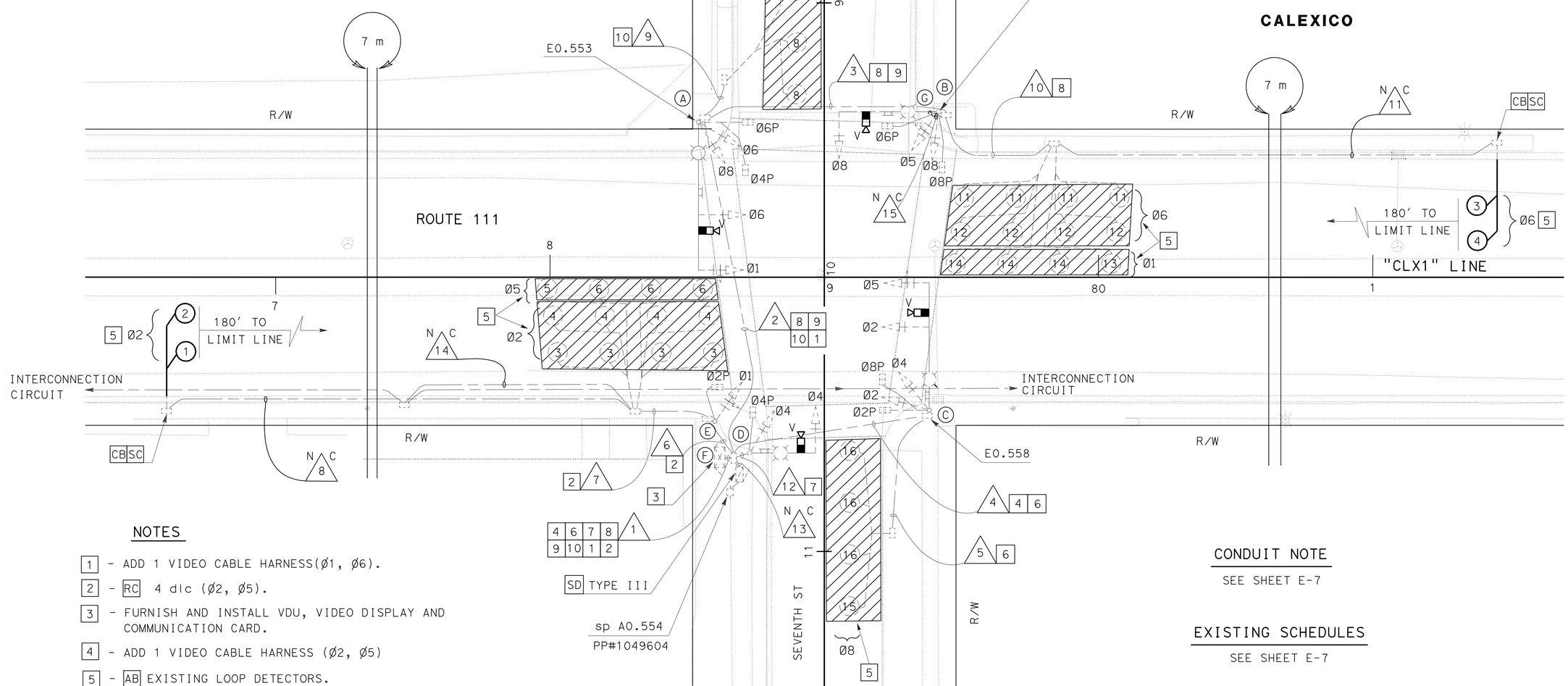


PHASE DIAGRAM

STEADY DEMAND SEQUENCE →

NOTE:

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



NOTES

1 - ADD 1 VIDEO CABLE HARNESS(Ø1, Ø6).

2 - RC 4 dlc (Ø2, Ø5).

3 - FURNISH AND INSTALL VDU, VIDEO DISPLAY AND COMMUNICATION CARD.

4 - ADD 1 VIDEO CABLE HARNESS (Ø2, Ø5)

5 - AB EXISTING LOOP DETECTORS.

6 - RC 2 dlc (Ø8).

7 - ADD 1 VIDEO CABLE HARNESS(Ø4).

8 - RC 4 dlc (Ø1, Ø6).

9 - ADD 1 VIDEO CABLE HARNESS(Ø8).

10 - RC 2 dlc (Ø4).

CONDUIT NOTE

SEE SHEET E-7

EXISTING SCHEDULES

SEE SHEET E-7

7TH/ROUTE 111

No. P0.561

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING (LOCATION 3)

SCALE: 1"=20'

E-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE J. WILSON

CALCULATED-DESIGNED BY: ANTONIO A. RODRIGUEZ

CHECKED BY: ENRIQUE BERNAL

REVISED BY / DATE REVISED

LAST REVISION 01-03-11

DATE PLOTTED => 06-JAN-2011

TIME PLOTTED => 09:09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	32	44

Enrique P. Bernal 12-12-10
REGISTERED ELECTRICAL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER E.P. BERNAL No. 15675 Exp. 06-30-12 ELECTRICAL STATE OF CALIFORNIA

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

EXISTING CONDUIT AND CONDUCTOR SCHEDULE

AWG SIZE OR CABLE TYPE	PHASE	POLE OR CIRCUIT	EXISTING CONDUIT SIZE AND RUN												
			2-103 (1)	103 (2)	103 (3)	78 (4)	53 (5)	78 (6)	53 (7)	53 N C (8)	53 (9)	53 (10)	53 N C (11)	53 (12)	27 N C (15)
3CSC		POLE - A	2 2	2 2											
		B	2 2	2 2	2 2										
		C	2 2			2 2									
		D	1 1											1 1	
		E	1 1					1 1							
		G	1 —	1 —	1 —										1 —
12CSC															
TOTAL CABLES		3 CSC/12 CSC	9 8	6 4	3 2	2 2		1 1						1 1	1 —
8		SIGNAL POWER	2												
10		LIGHTING		2	2	2								2	
14		PEU												3	
TYPE B DLC	Ø1	LOOP DETECTOR	2	2	2							2			
	Ø2	LOOP DETECTOR	4					4	4	2					
	Ø3	LOOP DETECTOR													
	Ø4	LOOP DETECTOR	2	2							2				
	Ø5	LOOP DETECTOR	2					2	2						
	Ø6	LOOP DETECTOR	4	4	4							4	2		
	Ø7	LOOP DETECTOR													
	Ø8	LOOP DETECTOR	2			2	2								
SIC			2					2	2						
EVC			4	2	1	1								1	
TOTAL CONDUCTORS/CABLES			41	21	11	9	2	10	8	2	2	6	2	8	
NOTES SEE SHEET E-6			4 6 7 8 9 10 1 2	8 9 10 1	8 9	4 6	6	2	2		10	8		7	

CONDUIT NOTES:

N C 13 -Exist 2", 2#8 (signal power), 2#10 (street ltg), 3#14 (peu).

N C 14 -Exist 2", 2 sic.

EXISTING EQUIPMENT AND POLE SCHEDULE

Loc	STANDARD TYPE	MASTARM SMA	MASTARM LMA	PLACEMENT DIMENSIONS A F+	PLACEMENT DIMENSIONS B F+	SIGNAL MOUNTING AND PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN ppb	HPS LUMINAIRE	REMARKS
A	26-4-129	13.7	4.6	EXISTING		SV-2-T	(1)mat (1)mas	SP-2-T	Ø6P → Ø4P ←	200 w	sns ADD VIS
B	19-4-129	9.1	3.7	0.8	2.0	SV-2-T	(1)mas	SP-2-T	—	200 w	sns ADD VIS
C	26-4-129	12.2	3.7	0.5	1.5	SV-2-T	(1)mat (1)mas	SP-2-T	Ø2P → Ø8P ←	200 w	ADD VIS
D	17-3-129	6.1	1.8	0.4	1.6	SV-1-T	(1)mas	SP-1-T	Ø2P ←	200 w	peu E0.554 sns ADD VIS
E	1-A	—	—	0.2	1.5	TV-1-T	—	SP-1-T	Ø4P →	—	NO WORK
F	MODEL 170 CONTROLLER ASSEMBLY(TYPE 332 CABINET), WITH BATTERY BACK-UP SYSTEM.										
G	ppb	—	—	0.8	1.5	—	—	—	Ø6P ← Ø8P →	—	

SIGNAL AND LIGHTING (LOCATION 3)

E-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE J. WILSON
CALCULATED-DESIGNED BY: ANTONIO A. RODRIGUEZ
CHECKED BY: ENRIQUE BERNAL
REVISED BY / DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	33	44

Enrique P. Bernal 12-12-10
REGISTERED ELECTRICAL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER E.P. BERNAL No. 15675 Exp. 06-30-12 ELECTRICAL STATE OF CALIFORNIA

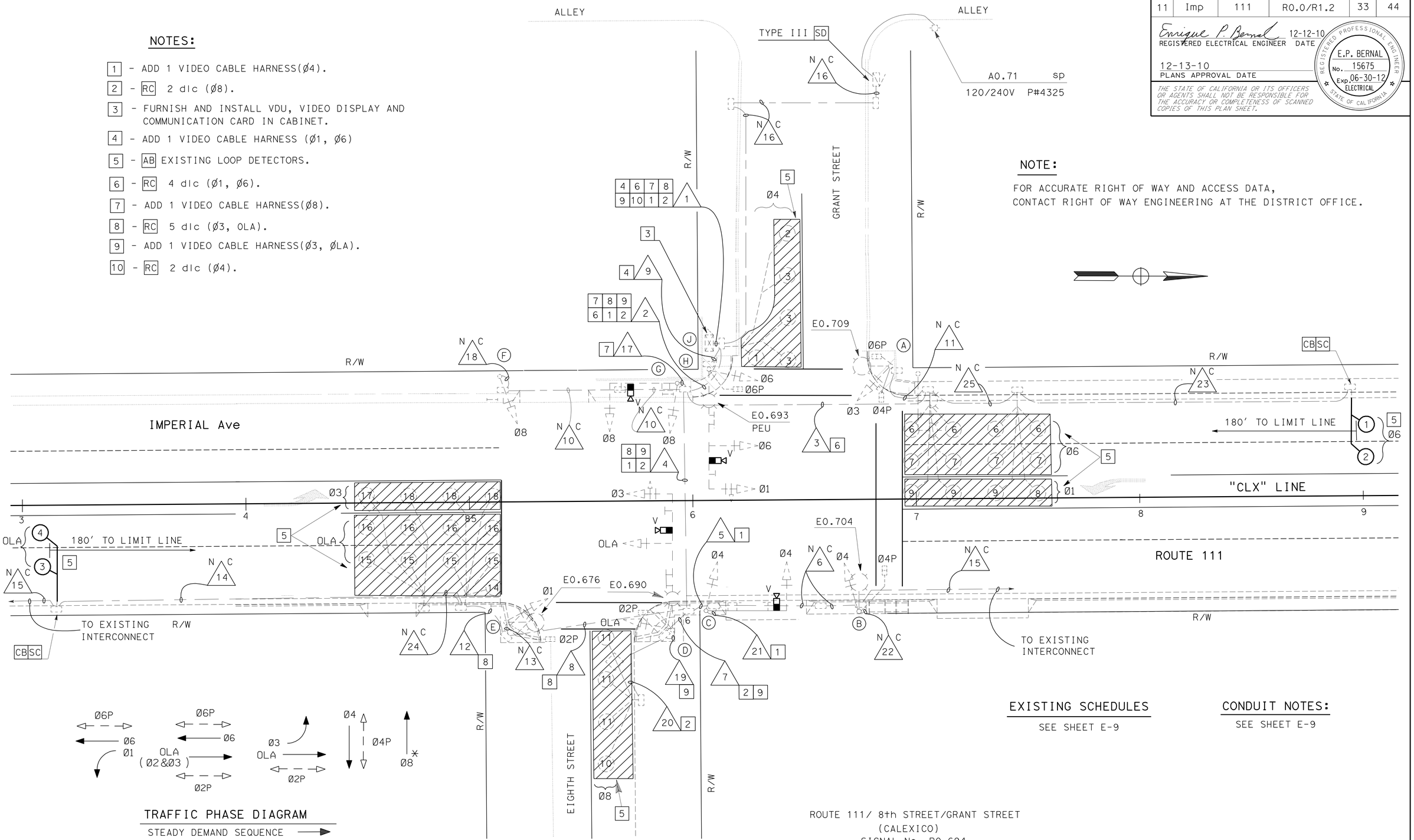
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. ADD 1 VIDEO CABLE HARNESS(Ø4).
2. RC 2 dlc (Ø8).
3. FURNISH AND INSTALL VDU, VIDEO DISPLAY AND COMMUNICATION CARD IN CABINET.
4. ADD 1 VIDEO CABLE HARNESS (Ø1, Ø6)
5. AB EXISTING LOOP DETECTORS.
6. RC 4 dlc (Ø1, Ø6).
7. ADD 1 VIDEO CABLE HARNESS(Ø8).
8. RC 5 dlc (Ø3, OLA).
9. ADD 1 VIDEO CABLE HARNESS(Ø3, ØLA).
10. RC 2 dlc (Ø4).

NOTE:

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



TRAFFIC PHASE DIAGRAM

STEADY DEMAND SEQUENCE →
*EXCLUSIVE PHASE

ROUTE 111/ 8th STREET/GRANT STREET
(CALEXICO)
SIGNAL No. P0.694

EXISTING SCHEDULES

SEE SHEET E-9

CONDUIT NOTES:

SEE SHEET E-9

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING (LOCATION 4)

SCALE: 1"=20'

E-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE J. WILSON
CALCULATED-DESIGNED BY: ENRIQUE BERNAL
CHECKED BY: ANTONIO A. RODRIGUEZ
REVISED BY / DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	34	44

Enrique P. Bernal 12-12-10
REGISTERED ELECTRICAL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER E.P. BERNAL No. 15675 Exp. 06-30-12 ELECTRICAL STATE OF CALIFORNIA

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

EXISTING CONDUIT AND CONDUCTOR SCHEDULE

AWG SIZE OR CABLE TYPE	PHASE	POLE OR CIRCUIT	EXISTING CONDUIT SIZE AND RUN																						
			3-3" 1	3-3" 2	1-3" 3	2-3" 4	3" 5	2" N C 6	2" 7	3" 8	2" 9	2" N C 10	2" N C 11	2" 12	2" N C 13	2" N C 14	2" N C 15	2" N C 16	2" 17	2" N C 18	2" 19	2" 20	2" 21	2" N C 22
		POLE - A	2 1	2 1	2 1								2 1											
3CSC		B	1 1	1 1		1 1	1 1	1 1																1 1
		C	1	1		1	1																1	
		D	1 1	1 1		1 1			1 1												1 1			
		E	1 1	1 1		1 1				1 1					2 1									
		F	1	1								1								1				
		G	1	1															1					
12CSC		H	1 1								1 1													
TOTAL CABLES		3CSC/12CSC	6 8	5 7	2 1	3 4	1 2	1 1	1 1	1 1	1 1	1 1	2 1		2 1				1	1 1	1 1		1 1	1 1
6		SIGNAL POWER																2						
8		LIGHTING		2	2	2	2	2	2	2	2		2		2			2			2			2
14		PEU									3							3						
TYPE B DLC	Ø1	LOOP DETECTOR	2	2	2																			
	ØLA	LOOP DETECTOR	5	5		5				5				5		2								
	Ø4	LOOP DETECTOR	3																					
	Ø3	LOOP DETECTOR	2	2		2				2				2										
	Ø6	LOOP DETECTOR	4	4	4																			
	Ø8	LOOP DETECTOR	2	2		2			2													2		
EVC			4	3		2	1		2		1								1		1		1	
sic			2	2		2	1	1						1		1	1							
TOTAL CONDUCTORS/CABLES			38	34	11	22	7	5	8	11	8	1	5	8	4	3	1	7	2	1	5	2	2	4
NOTES SEE SHEET E-8			4 6 7 8 9 10 1 2	7 8 9 1 2 6	6	8 9 1 2	1		2 9	8	4			8					7		9	2	1	

CONDUIT NOTES:

N C 23 - Exist 53C, 2 dlc.

N C 24 - Exist 53C, 12 LOOP WIRES

N C 25 - Exist 53C, 2 dlc, 12 LOOP WIRES.

EXISTING EQUIPMENT AND POLE SCHEDULE

Loc	STANDARD TYPE	SMA	LMA	PLACEMENT DIMENSIONS A Ft	B Ft	SIGNAL MOUNTING AND PLACEMENT VEHICLE POLE	MASTARM	PEDESTRIAN SIGNAL	ppb	HPS LUMINAIRE	REMARKS
A	15	—	3.7	Exist		SV-1-T	—	SP-2-T	Ø8P ← Ø6P →	200w	
B	15	—	3.7	Exist		SV-1-T	—	SP-1-T	Ø4P →	200w	
C	18-3-129	9.1	—	Exist		SV-1-T	mas	—	—	—	sns ADD VIS
D	29-5-129	15.2	4.6	Exist		SV-1-T	mat mas	SP-1-T	Ø2P →	200w	sns ADD VIS
E	15	—	3.7	Exist		SV-1-T	—	SP-1-T	Ø2P ←	200w	
F	1-A	—	—	Exist		TV-1-T	—				
G	18-3-129	7.6	—	Exist		SV-1-T	mas	—	—	—	sns ADD VIS
H	26-4-129	13.7	4.6	Exist		SV-1-T	mat mas	SP-1-T	Ø6P →	200w	sns ADD VIS
J	MODEL 170 CONTROLLER ASSEMBLY (TYPE 332 CABINET).										

ROUTE 111/ 8th STREET/GRANT STREET
(CALEXICO)
SIGNAL No. P0.694

SIGNAL AND LIGHTING (LOCATION 4)

E-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE J. WILSON
CALCULATED-DESIGNED BY: ENRIQUE BERNAL
CHECKED BY: ANTONIO A. RODRIGUEZ
REVISED BY / DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	35	44

Enrique P. Bernal 12-12-10
REGISTERED ELECTRICAL ENGINEER DATE

12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER E.P. BERNAL No. 15675 Exp. 06-30-12 ELECTRICAL STATE OF CALIFORNIA

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

NOTES:

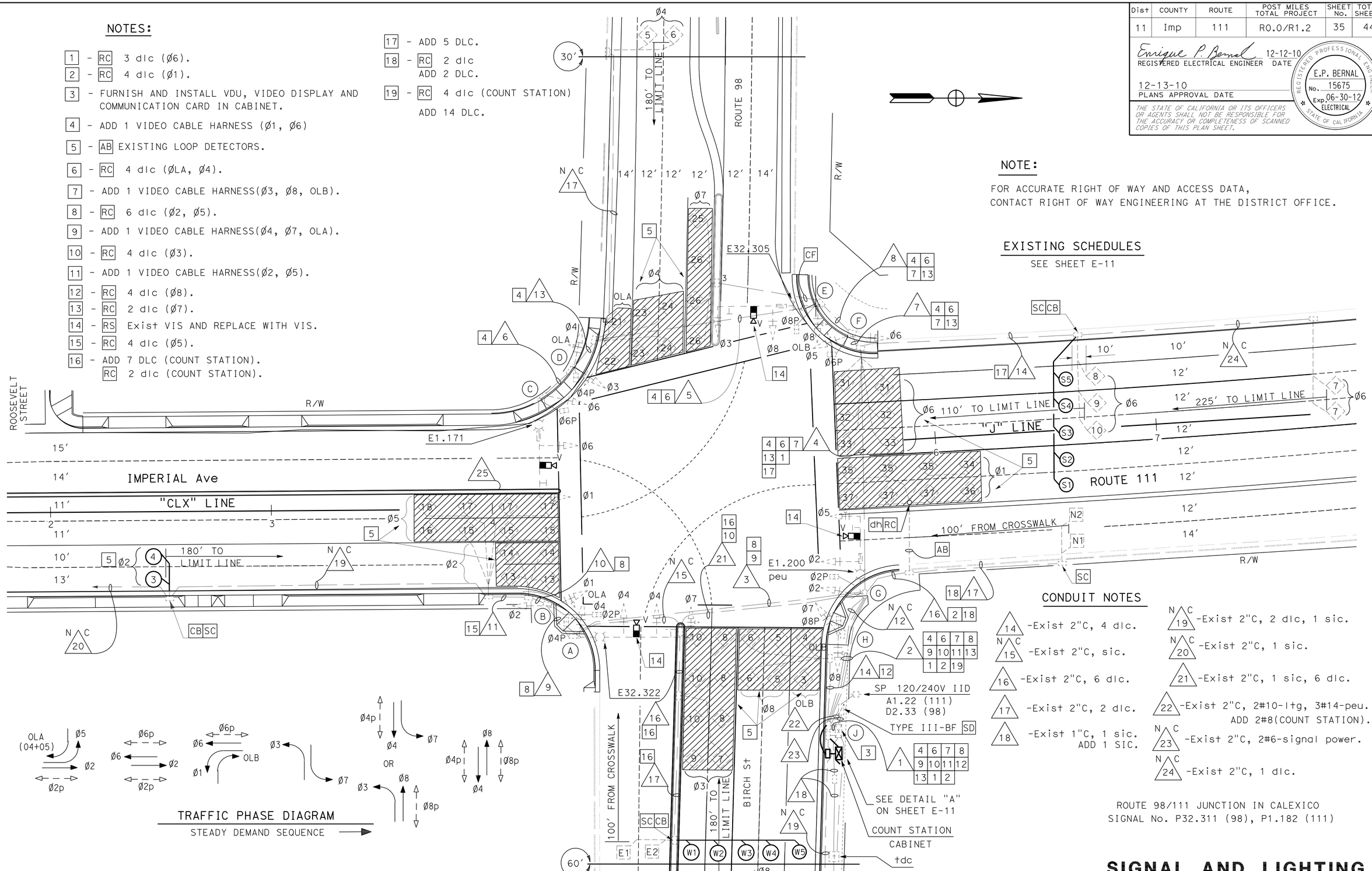
1 - RC 3 dlc (Ø6).
2 - RC 4 dlc (Ø1).
3 - FURNISH AND INSTALL VDU, VIDEO DISPLAY AND COMMUNICATION CARD IN CABINET.
4 - ADD 1 VIDEO CABLE HARNESS (Ø1, Ø6)
5 - AB EXISTING LOOP DETECTORS.
6 - RC 4 dlc (ØLA, Ø4).
7 - ADD 1 VIDEO CABLE HARNESS(Ø3, Ø8, OLB).
8 - RC 6 dlc (Ø2, Ø5).
9 - ADD 1 VIDEO CABLE HARNESS(Ø4, Ø7, OLA).
10 - RC 4 dlc (Ø3).
11 - ADD 1 VIDEO CABLE HARNESS(Ø2, Ø5).
12 - RC 4 dlc (Ø8).
13 - RC 2 dlc (Ø7).
14 - RS Exist VIS AND REPLACE WITH VIS.
15 - RC 4 dlc (Ø5).
16 - ADD 7 DLC (COUNT STATION).
RC 2 dlc (COUNT STATION).
17 - ADD 5 DLC.
18 - RC 2 dlc
ADD 2 DLC.
19 - RC 4 dlc (COUNT STATION)
ADD 14 DLC.

NOTE:

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

EXISTING SCHEDULES

SEE SHEET E-11



TRAFFIC PHASE DIAGRAM
STEADY DEMAND SEQUENCE

CONDUIT NOTES

14 -Exist 2"C, 4 dlc.
15 -Exist 2"C, sic.
16 -Exist 2"C, 6 dlc.
17 -Exist 2"C, 2 dlc.
18 -Exist 1"C, 1 sic. ADD 1 SIC.
19 -Exist 2"C, 2 dlc, 1 sic.
20 -Exist 2"C, 1 sic.
21 -Exist 2"C, 1 sic, 6 dlc.
22 -Exist 2"C, 2#10-ltg, 3#14-peu. ADD 2#8(COUNT STATION).
23 -Exist 2"C, 2#6-signal power.
24 -Exist 2"C, 1 dlc.

ROUTE 98/111 JUNCTION IN CALEXICO
SIGNAL No. P32.311 (98), P1.182 (111)

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING (LOCATION 5)

SCALE: 1"=20'

E-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE J. WILSON
CALCULATED-DESIGNED BY: ENRIQUE BERNAL
CHECKED BY: ANTONIO A. RODRIGUEZ
REVISED BY / DATE REVISED

LAST REVISION 01-03-11 DATE PLOTTED => 06-JAN-2011 TIME PLOTTED => 09:10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	36	44

Enrique P. Bernal 12-12-10
REGISTERED ELECTRICAL ENGINEER DATE

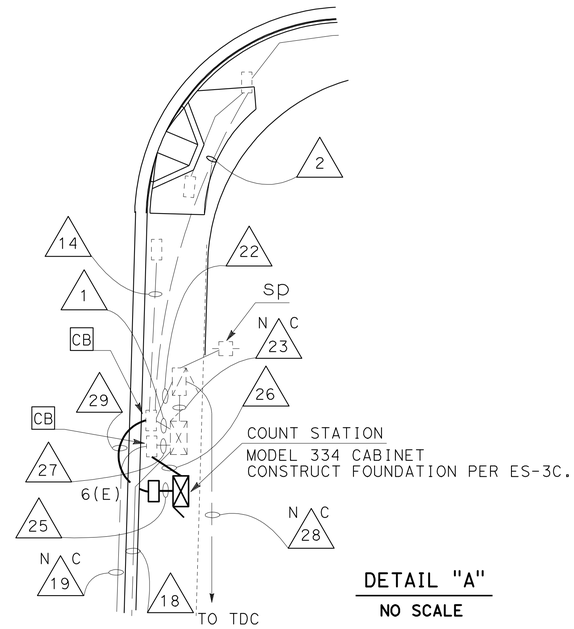
12-13-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER E.P. BERNAL No. 15675 Exp. 06-30-12 ELECTRICAL STATE OF CALIFORNIA

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

EXISTING CONDUIT AND CONDUCTOR SCHEDULE

AWG SIZE OR CABLE TYPE	PHASE	POLE OR CIRCUIT	EXISTING CONDUIT SIZE AND RUN SCHEDULE												
			3-3" (1)	3-3" (2)	3" (3)	2-3" (4)	3" (5)	2" (6)	3" (7)	2" (8)	2" (9)	2" (10)	2" (11)	2" N C (12)	2" (13)
		POLE - A	1 2	1 2	1 2										
3CSC		B	1 1	1 1	1 1						1 1				
		C	1 2	1 2		1 2	1 2	1 2	1 2	1 2					1 2
		D	1 1	1 1		1 1	1 1		1 1	1 1					1 1
		E	1 2	1 2		1 1			1 2	1 2					
		F	1 1	1 1		1 1			1 1						
		G	1 2	1 2											
12CSC		H	1 1	1 1										1 1	
TOTAL CABLES		3CSC/12CSC	8 12	8 12	2 3	4 6	2 3	1 2	4 6	3 5	1 1			1 1	2 3
10		LIGHTING		2	2	2	2	2	2	2					2
14		PEU		3											
TYPE B DLC	Ø1	LOOP DETECTOR	4	4											
	Ø2	LOOP DETECTOR	4	4	4						4	4	2		
	Ø3	LOOP DETECTOR	4	4											
	Ø4	LOOP DETECTOR	6	6		6	6		6	6					
	Ø5	LOOP DETECTOR	4	4	4						4	4	4		
	Ø6	LOOP DETECTOR	7	7		7			4						
	Ø7	LOOP DETECTOR	2	2		2			2	2					
	Ø8	LOOP DETECTOR	4												
	CS	LOOP DETECTOR	4	4											
EVC			4	4	1	2	1	1	2	2					1
SIC			1	1							1	1	1		
TOTAL CONDUCTORS/CABLES			64	65	16	29	14	6	26	20	11	9	7	2	8
NOTES SEE SHEET E-10			4, 6, 7, 8, 9, 10, 11, 12, 13, 1, 2	4, 6, 7, 8, 9, 10, 11, 13, 1, 2, 19	8, 9	4, 6, 7, 13, 1, 17	4, 6	4	4, 6, 7, 13	4, 6, 7, 13	8	8	15		4



DETAIL "A"
NO SCALE

EXISTING EQUIPMENT AND POLE SCHEDULE

Loc	STANDARD TYPE	STANDARD SMA	STANDARD LMA	PLACEMENT DIMENSIONS A F†	PLACEMENT DIMENSIONS B F†	SIGNAL MOUNTING AND PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN PPB	HPS LUMINAIRE	REMARKS
A	29-5-80	50′	12′	15½	3½	SV-1-T	mat Ø7 mas Ø4	SP-1-T	Ø2P ←	200 w	ADD VIS
B	1-A	—	—	16	5½	TV-2-T	—	SP-1-T	Ø4P →	—	NO WORK
C	26-4-80	45′	12′	20	5½	SV-1-T	mat Ø1 mas Ø6	SP-1-T	Ø4P ←	200 w	ADD VIS
D	1-A	—	—	22	6	TV-2-T	—	SP-1-T	Ø6P →	—	NO WORK
E	29-4-80	45′	12′	14	6	SV-1-T	mat Ø3 mas Ø8	SP-1-T	Ø6P ←	200 w	ADD VIS
F	1-A	—	—	8	6	TV-2-T	—	SP-1-T	Ø8P →	—	NO WORK
G	24-4-80	35′	12′	17	4½	SV-1-T	mat Ø5 mas Ø2	SP-1-T	Ø8P ←	200 w	peu ADD VIS
H	1-A	—	—	5	5	TV-2-T	—	SP-1-T	Ø2P →	—	NO WORK
J	MODEL 170 CONTROLLER ASSEMBLY (TYPE 332 CABINET)										

CONDUIT NOTES:

SEE SHEET E-10 FOR CONDUIT NOTES NOT SHOWN

(25) - TWO 3"C, 14 DLC, 2#8 (COUNT STATION).

(26) - 2"C, 1 sic.

(27) -Exist 2"C, 2 dlc, 1 SIC.
ADD 1 SIC.

N C (28) -Exist 1"C, 2#10-TDC POWER.

(29) - 3"C, 14 DLC, 2#8 (COUNT STATION).

ROUTE 98/111 JUNCTION IN CALEXICO
(CALEXICO)
SIGNAL No. P32.311 (98),P1.182 (111)

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING
(LOCATION 5)

E-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE J. WILSON
CALCULATED-DESIGNED BY: ENRIQUE BERNAL
CHECKED BY
REVISED BY: ANTONIO A. RODRIGUEZ
DATE REVISED

LAST REVISION 01-03-11
DATE PLOTTED => 06-JAN-2011
TIME PLOTTED => 09:10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	37	44

REGISTERED CIVIL ENGINEER

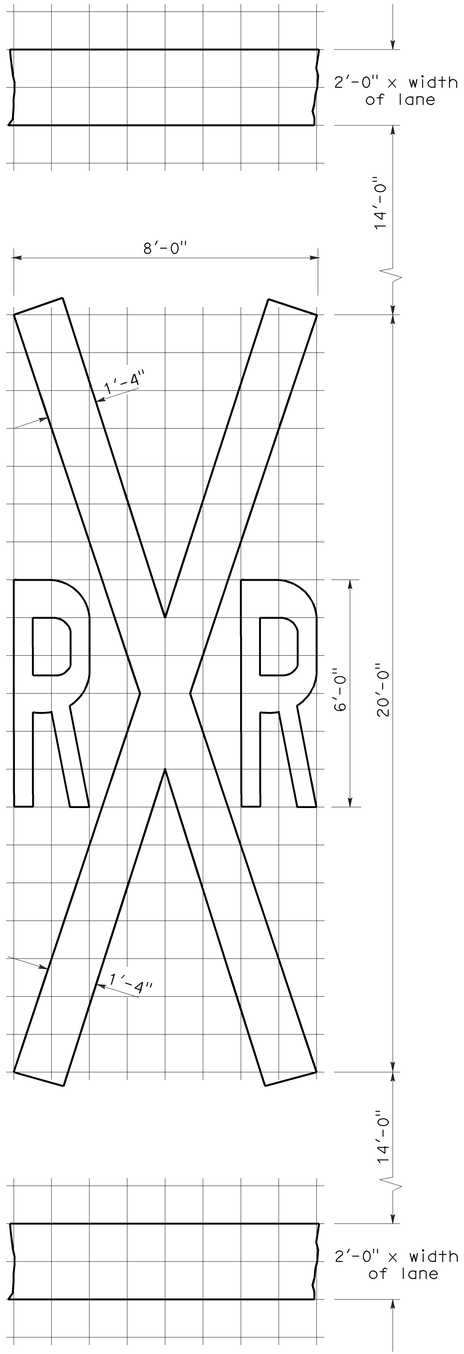
June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Donald E. Howe
No. C46402
Exp. 3-31-09
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.

To accompany plans dated 12-13-10

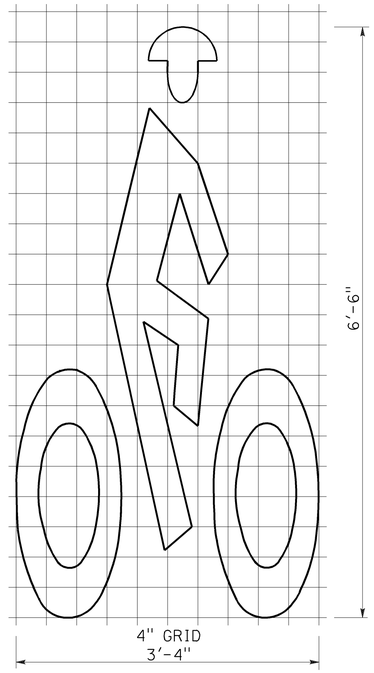
2006 REVISED STANDARD PLAN RSP A24C



1'-0" GRID
A=70 sq ft ✳

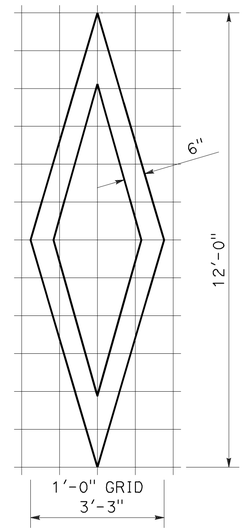
RAILROAD CROSSING SYMBOL

✳70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



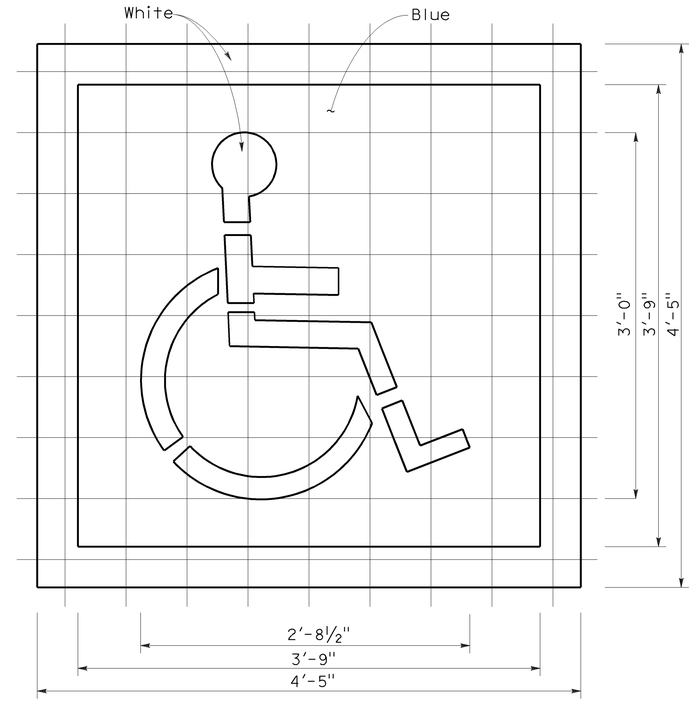
A=7 sq ft

BIKE LANE SYMBOL



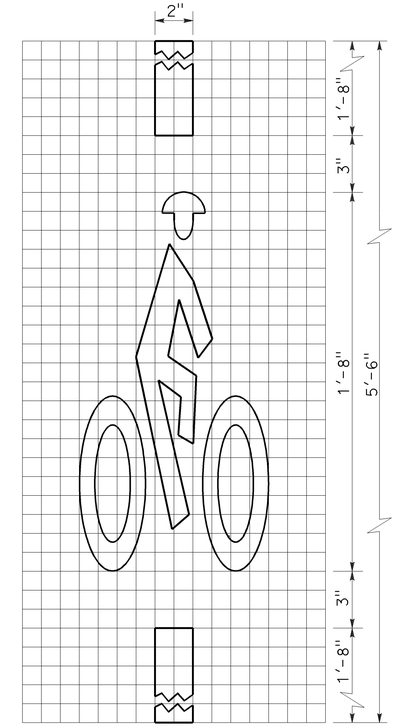
A=11 sq ft

DIAMOND SYMBOL



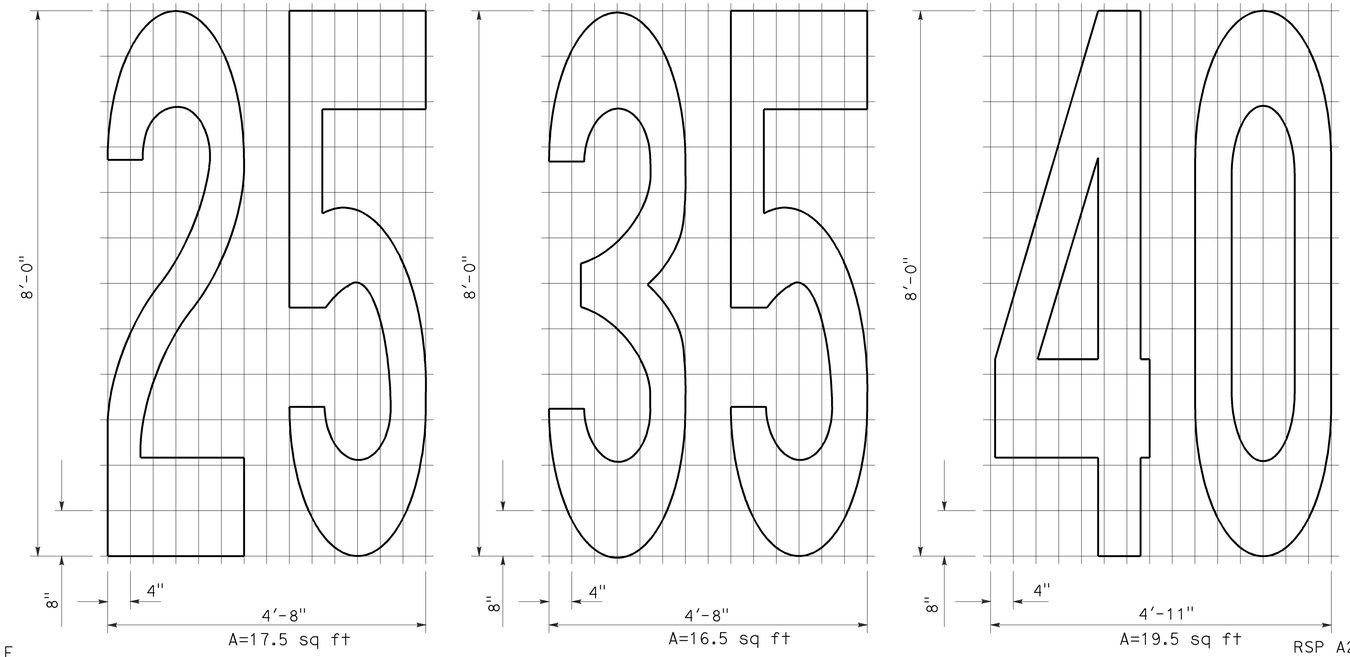
6" GRID
A (White) =9 sq ft
A (Blue) =14 sq ft

INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING



1" GRID
10"
A=2 sq ft

BICYCLE LOOP DETECTOR SYMBOL



A=17.5 sq ft
A=16.5 sq ft
A=19.5 sq ft

NUMERALS

NOTE:

1. Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS SYMBOLS AND NUMERALS

NO SCALE

RSP A24C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A24C DATED MAY 1, 2006 - PAGE 11 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A24C

5-27-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	38	44

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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

To accompany plans dated 12-13-10

2006 REVISED STANDARD PLAN RSP ES-1A

ELECTROLIERS

STANDARD TYPES
15, 15D
15 STRUCTURE
21, 21D STRUCTURE
30
31
32
35
36-20A

High mast light pole

Double Arm lighting standard

Existing electrolier

Electrolier foundation (Future installation)

NOTES:

1. 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.
2. Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
3. 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	
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

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	39	44

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 12-13-10

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 (RSP ES-9A C)
R	r	Conduit riser in/on structure or service pole

SERVICE EQUIPMENT

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

POLE-MOUNTED SERVICE DESIGNATION

Type of installation

TYPE H SERVICE - 28'-10" ← Pole height above grade

ILLUMINATED OVERHEAD SIGN

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

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
PV	PV	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
R	Y	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

SIGNAL EQUIPMENT Cont

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

NOTES:

1. All signal sections shall be 12" unless shown otherwise.
2. Signal heads shall be provided with backplates unless shown otherwise.
3. 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

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	40	44

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 12-13-10

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

Sign No. 12345 — Sign number - Place on post or structure

10 ISL SCI 1.0

- 1.0 — Transformer rating (kVA)
- SCI — Lighting control type
- ISL — Number and type of fixtures

Do NOT place on standard or structure

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 15'-0"

- 15'-0" — Mast arm length, if shown. Do not place on standard or structure.
- 12345 — Equipment number - Place on standard or structure. Existing equipment numbers are shown in parenthesis

CONDUIT AND CONDUCTOR IDENTIFICATION:

1½"C, 2#10, 15#14, 2 DLC

- 2#10, 15#14, 2 DLC — Number and size of conductors and cables
- 1½"C — Size of conduit in inches

Ø1, Ø2, Ø2P, etc.	Traffic phase identification for signal faces, detectors and phase diagrams
1 2 3	Project note numbers
A B C	Equipment description, installation or item numbers
1 2 3	Conduit run numbers

SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):

19A - 3 - 100

- 100 — Wind velocity = 100 mph
- 3 — Case 3 arm loading
- 19A — Standard type
- Standard Plan sheet number
- Detail number or letter

MISCELLANEOUS EQUIPMENT

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

WIRING DIAGRAM LEGEND

P	Pole
CB	Circuit breaker
A	Ampere
V	Volt
M	Metered
UM	Unmetered
NB	Neutral bus
GB	Ground bus
G	Equipment grounding conductor
N	Grounded conductor (Neutral)

- External conductor
- Conductor or bus
- Tie point
- Contactor coil
- Contactor, Contact NO
- Terminal blocks
- Contactor, Contact NC
- Enclosure bond
- Grounding electrode
- Circuit breaker
- Receptacle

PULL BOXES

PROPOSED EXISTING

Pull box-No. 5 unless otherwise indicated or noted.

3 — 9A(21)

Pull box-Additional designations or descriptions

3 = No. 3½ pull box
5 = No. 5 pull box
6 = No. 6 pull box
7 = No. 7 (Ceiling pull box)
8 = No. 8 (Pendant soffit pull box)
9 = No. 9 pull box
9A = No. 9A pull box

(C) = Communications pull box
(E) = Pull box with extension
(S) = Sprinkler control pull box
(21) = Anchor bolts and conduit for future installation of Type 21 Standard
(T) = Traffic pull box

VEHICLE DETECTORS

5 J 9 U

- U — U = Upper, L = Lower
- 9 — Slot number in input file
- J — Input file (I or J)
- 5 — Phase

Vehicle detector designation

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	41	44

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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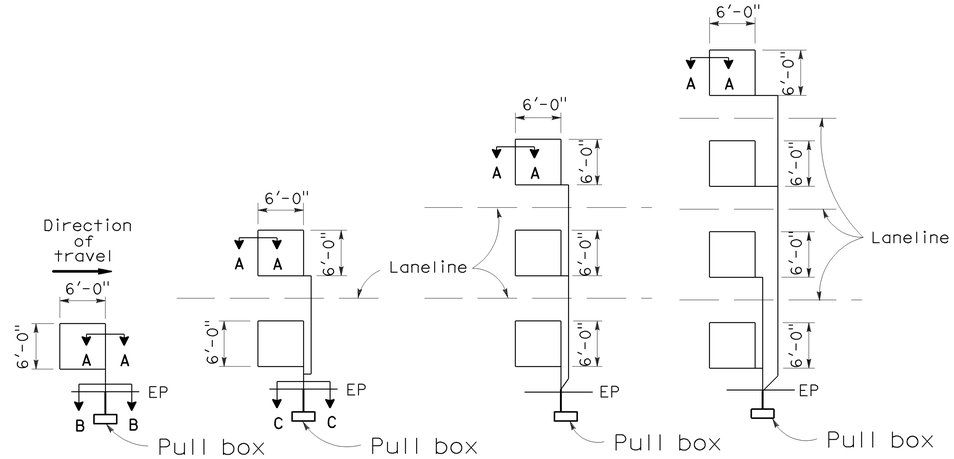
To accompany plans dated 12-13-10

2006 REVISED STANDARD PLAN RSP ES-5A

LOOP INSTALLATION PROCEDURE

1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
8. Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
11. The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in-cable. Splices shall be soldered.
15. End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.

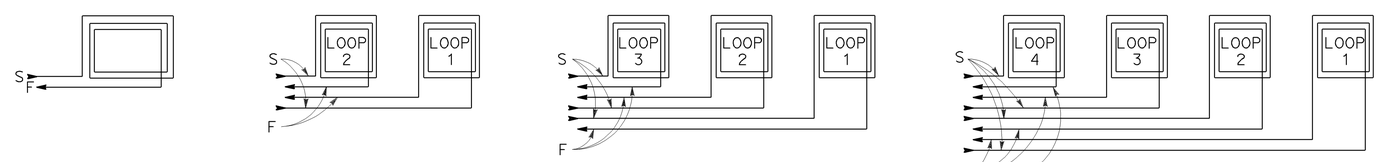


TYPE 1A INSTALLATION | TYPE 2A INSTALLATION | TYPE 3A INSTALLATION | TYPE 4A INSTALLATION

SAWCUT DETAILS

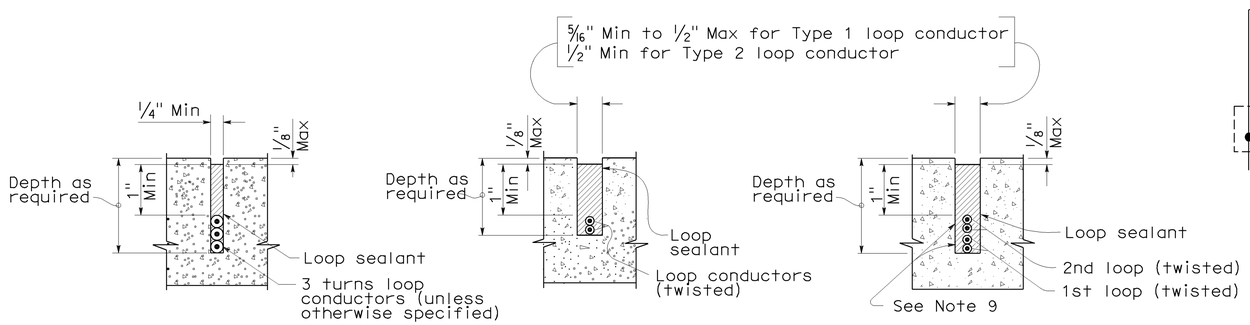
(Type A loop detector configurations illustrated)

1. 1A thru 4A = 1 Type A loop configuration in each lane.
2. 1B thru 4B = 1 Type B loop configuration in each lane.
3. 1C = 1 Type C loop configuration entering lanes as required.
4. 1D thru 4D = 1 Type D loop configuration in each lane.
5. 1E thru 4E = 1 Type E loop configuration in each lane.
6. 1Q thru 4Q = 1 Type Q loop configuration in each lane. (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)



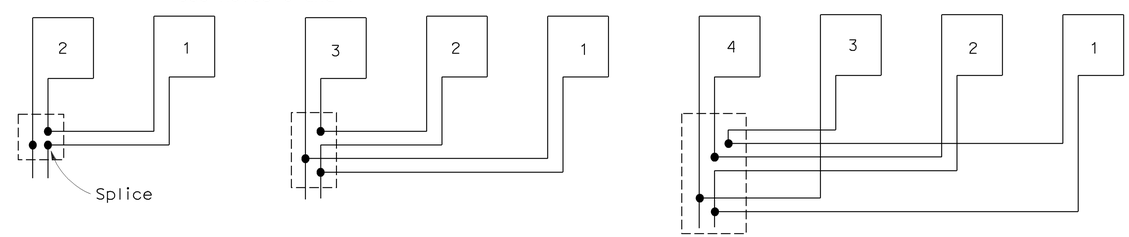
WINDING DETAILS

See Notes 6 and 7



SECTION A-A | SECTION B-B | SECTION C-C

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-5A

8-17-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	42	44

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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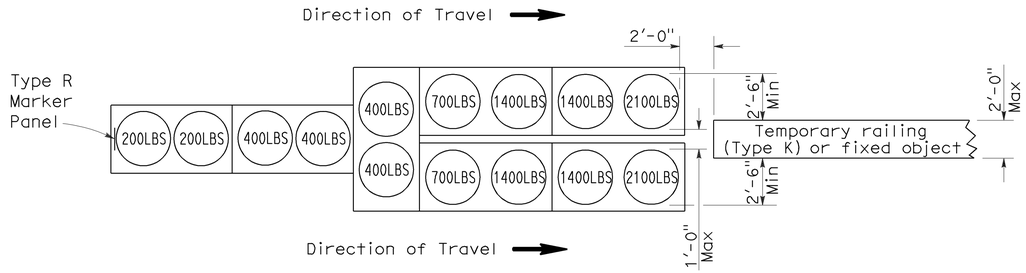
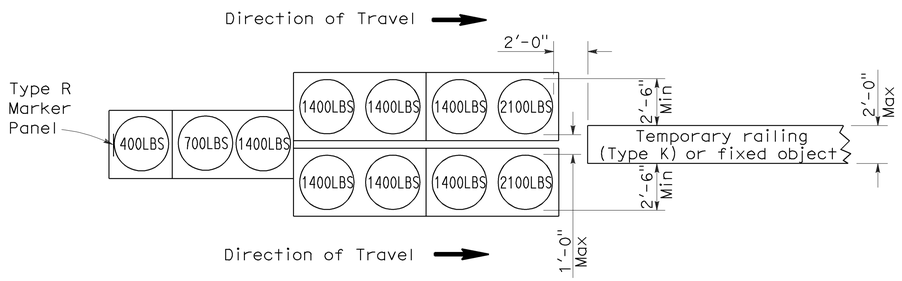
To accompany plans dated 12-13-10



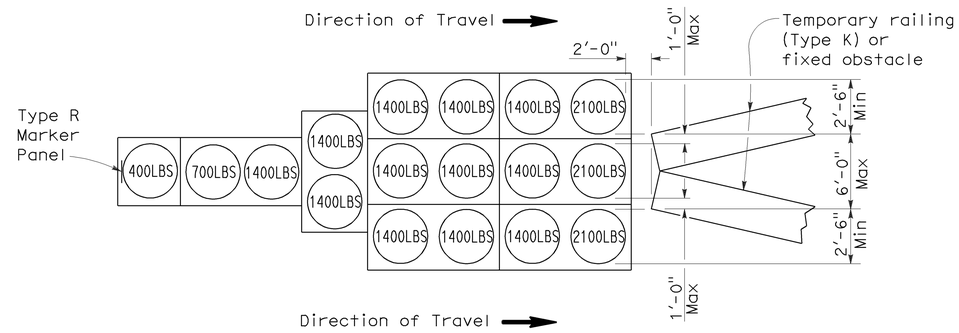
ARRAY 'TU14'

Approach speed 45 mph or more



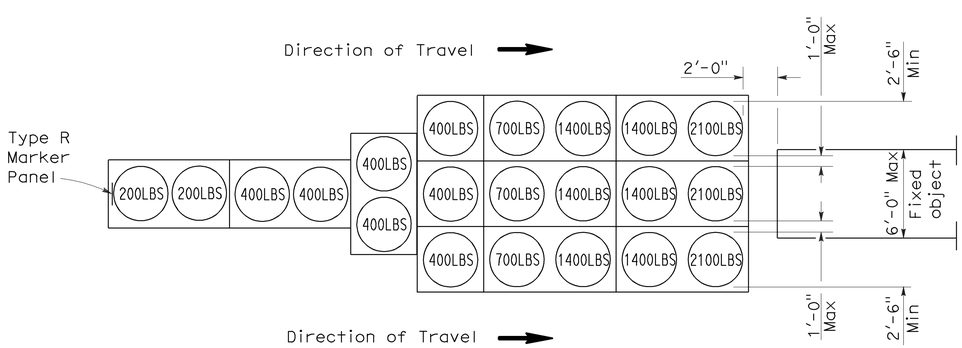
ARRAY 'TU11'

Approach speed less than 45 mph



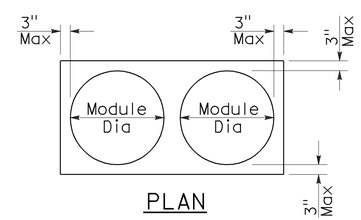
ARRAY 'TU17'

Approach speed less than 45 mph

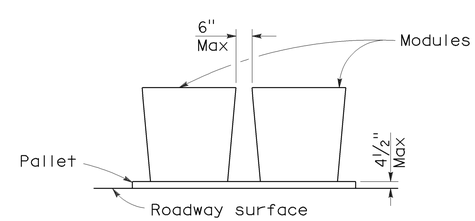


ARRAY 'TU21'

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
11	Imp	111	R0.0/R1.2	43	44

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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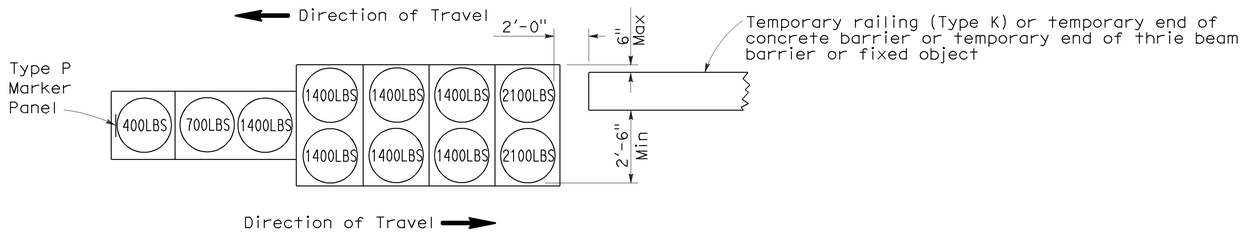
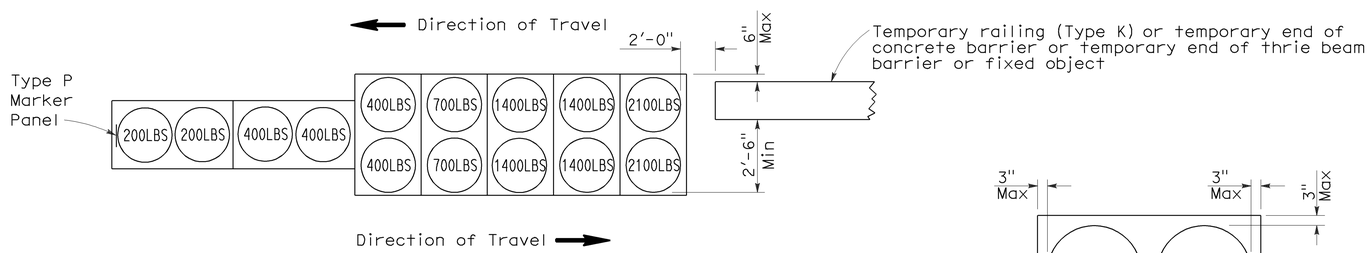
To accompany plans dated 12-13-10



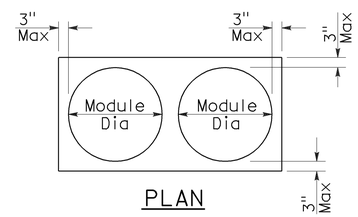
ARRAY 'TB11'

Approach speed less than 45 mph

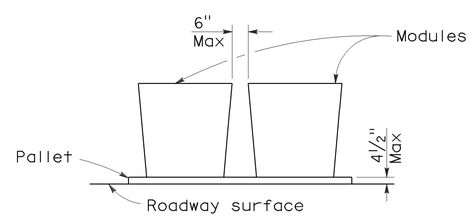


ARRAY 'TB14'

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

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	Imp	111	R0.0/R1.2	44	44

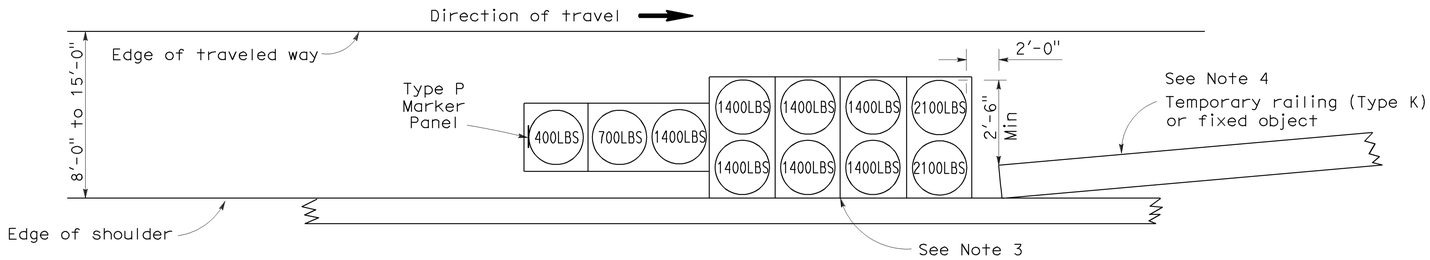
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

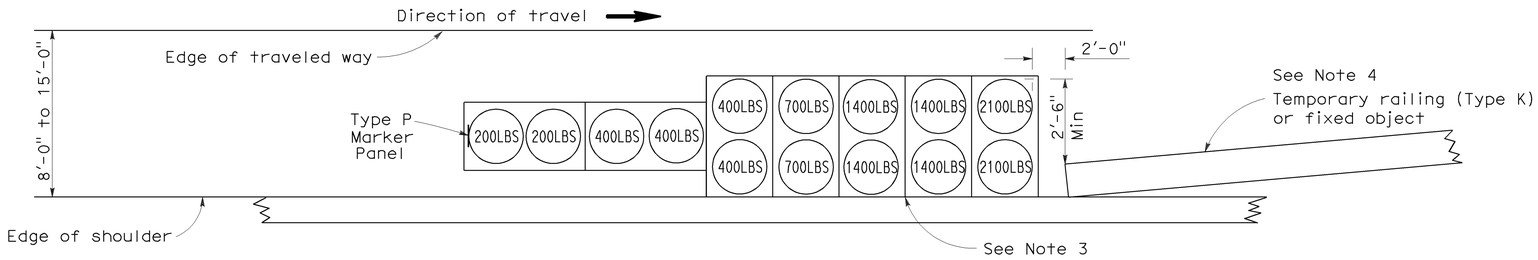
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 12-13-10



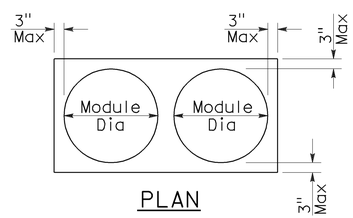
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

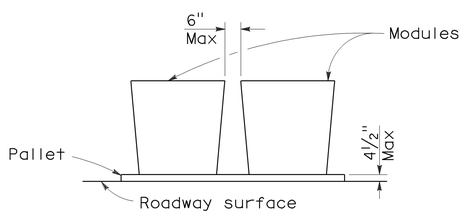


ARRAY 'TS14'

Approach speed 45 mph or more
See Note 9



PLAN



ELEVATION

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

5-15-08