

INDEX OF PLANS

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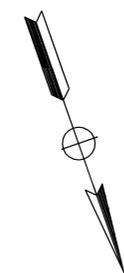
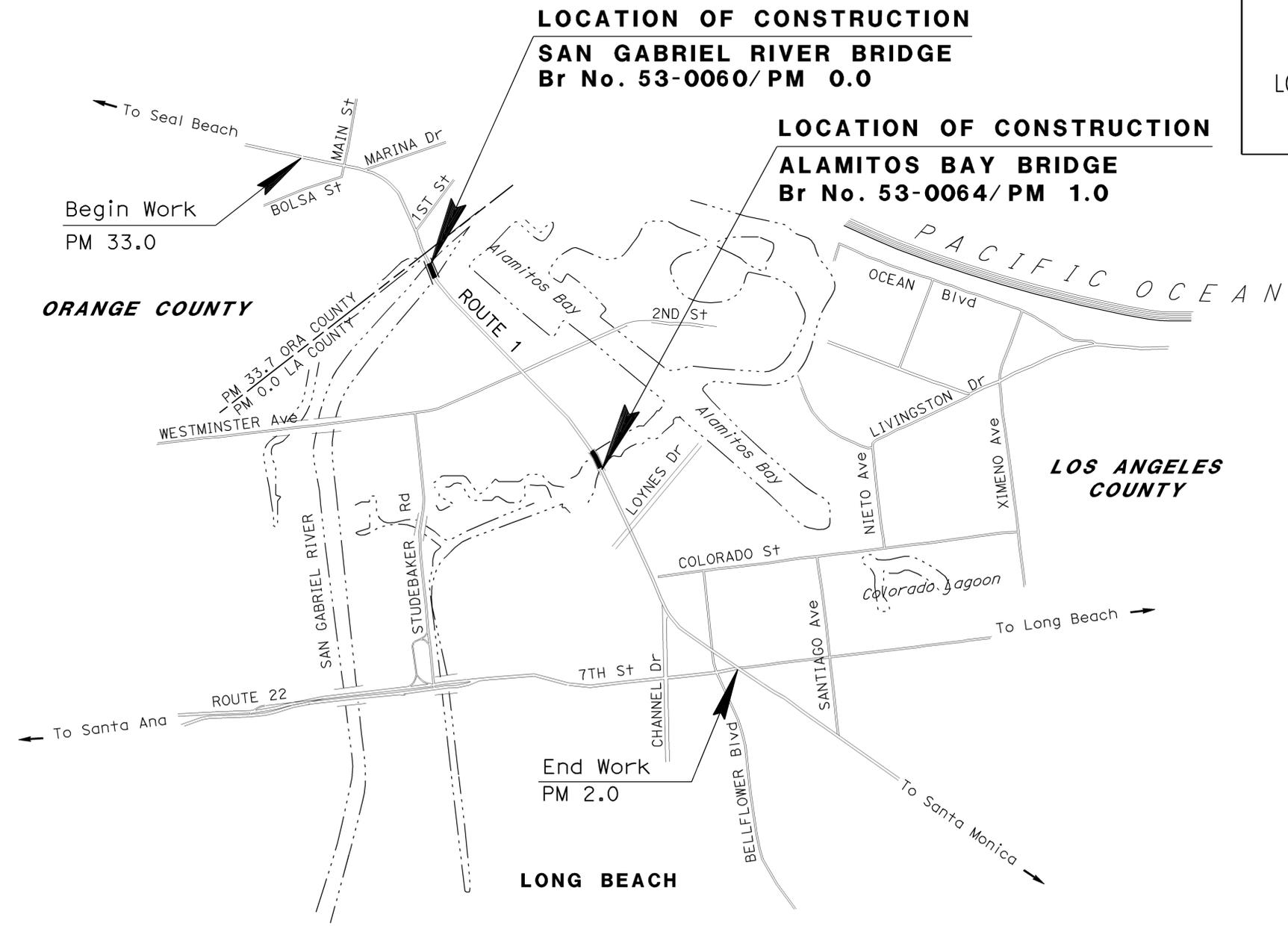
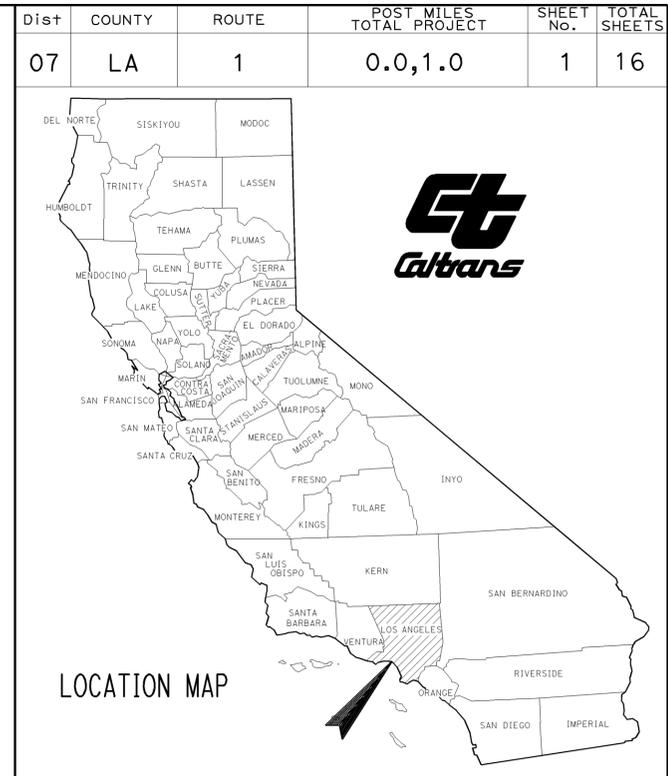
STRUCTURE PLANS

13-16	ROUTE 1 BRIDGES
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THE STANDARD PLANS LIST APPLICABLE TO THIS CONSTRUCT 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 LOS ANGELES COUNTY
IN LONG BEACH
AT SAN GABRIEL RIVER BRIDGE AND
AT ALAMITOS BAY BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



PROJECT MANAGER
CHRISTIAN SAM
DESIGN ENGINEER
HAMID SAADATNEJADI

f. M. Tehrani 1-28-10
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

February 1, 2010
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.

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

NO SCALE

CONTRACT No. **07-4S8504**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	0.0,1.0	2	16

f. M. Tehrani 1-28-10
REGISTERED CIVIL ENGINEER DATE

2-1-10
PLANS APPROVAL DATE

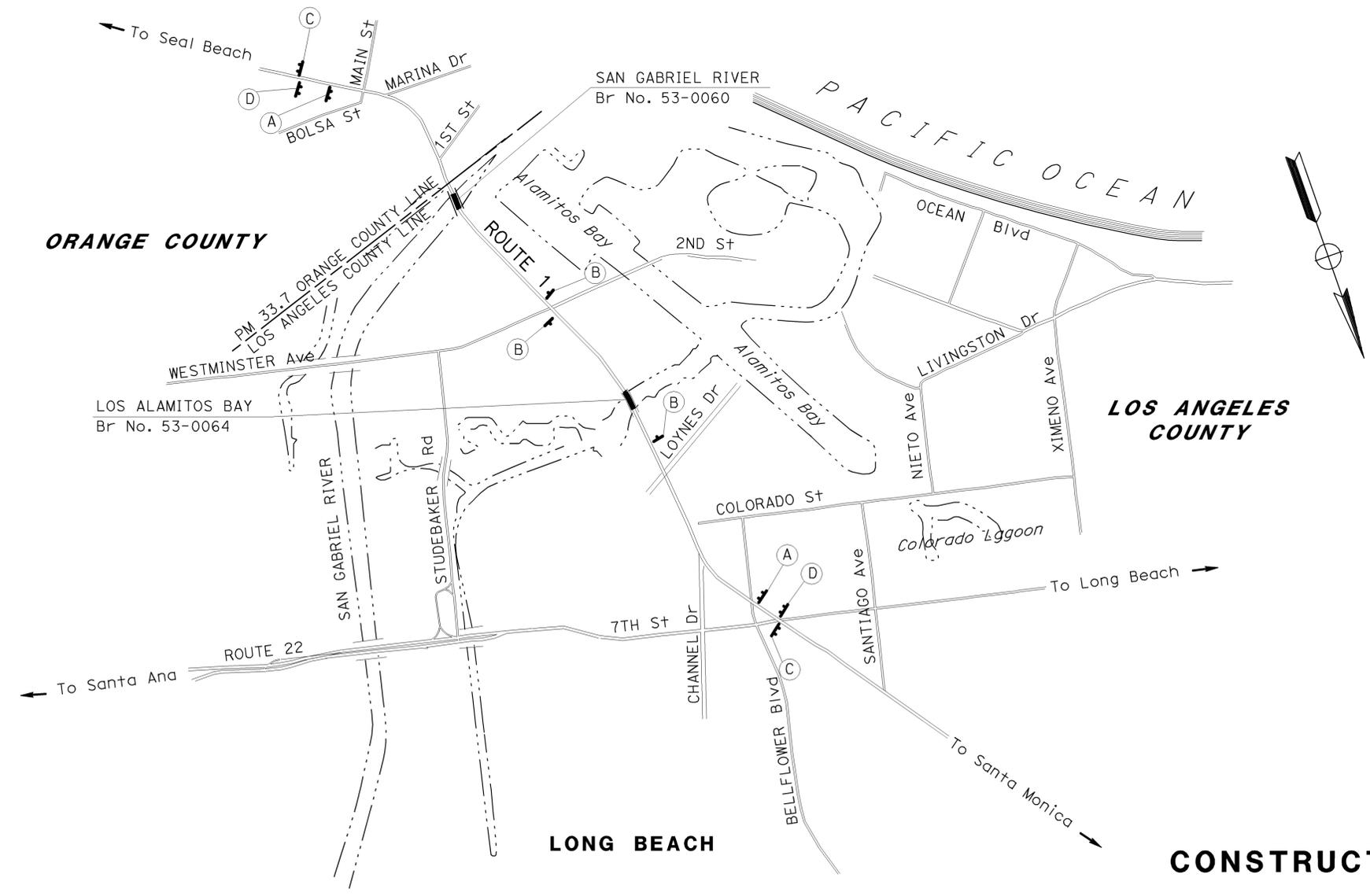
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NOTES:

1. LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER.
2. FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
4. SEE STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN AND SUMMARY OF QUANTITIES SHEETS FOR ADDITIONAL CONSTRUCTION AREA.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN NUMBER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
(A)	G20-1	36" x 18"	ROAD WORK NEXT XX MILES	2-4" x 4"	2
(B)	W20-1	36" x 36"	ROAD WORK AHEAD	1-6" x 6"	3
(C)	G20-2	36" x 18"	END ROAD WORK	2-4" x 4"	2
(D)	C40 (CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2-4" x 6"	2



CONSTRUCTION AREA SIGNS
NO SCALE

CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI

DESIGNED BY: FARIBORZ TEHRANI
CHECKED BY: HAMID SAADATNEJADI

REVISOR: FARIBORZ TEHRANI
DATE: 1-28-10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	0.0,1.0	3	16

<i>f.M. Tehrani</i>	1-28-10
REGISTERED CIVIL ENGINEER	DATE
2-1-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
FARIBORZ M. TEHRANI
 No. 59694
 Exp. 12-31-11
 CIVIL
 STATE OF CALIFORNIA

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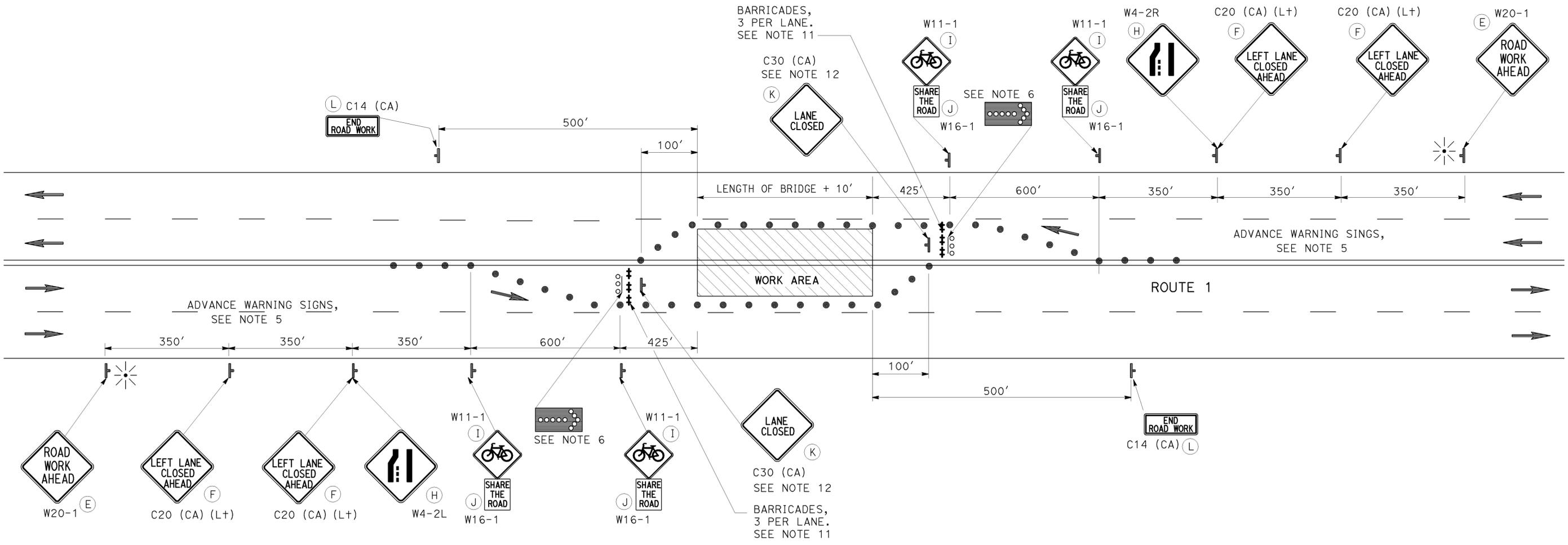
NOTES:

1. LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. SEE CONSTRUCTION AREA SIGNS FOR ADDITIONAL CONSTRUCTION AREA SIGNS.
3. FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
4. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
5. EACH ADVANCED WARNING SIGN IN EACH DIRECTION OF TRAVEL SHALL BE EQUIPPED WITH AT LEAST TWO FLAGS FOR DAYTIME CLOSURE. EACH FLAG SHALL BE AT LEAST 16" X 16" IN SIZE AND SHALL BE ORANGE OR FLUORESCENT RED-ORANGE IN COLOR. FLASHING BEACONS SHALL BE PLACED AT THE LOCATIONS INDICATED FOR LANE CLOSURE DURING HOURS OF DARKNESS.
- 6 FLASHING ARROW SIGN SHALL BE EITHER TYPE I OR TYPE II.
7. TRAFFIC LINES SHALL BE REPLACED AT COMPLETION OF EACH STAGE.
8. CHANNELIZERS (SURFACE MOUNTED) SHALL BE MAINTAINED THROUGH THE ENTIRE CLOSURE PERIOD.
9. ADVISORY SPEED WILL BE DETERMINED BY THE ENGINEER. THE W13-1 SIGN WILL NOT BE REQUIRED WHEN ADVISORY SPEED IS MORE THAN THE POSTED OR MAXIMUM SPEED LIMIT.
10. THE MAXIMUM SPACING BETWEEN CHANNELIZERS SHALL BE 50'.
11. BARRICADES SHALL BE TYPE III.
12. PLACE C30 (CA) "LANE CLOSED" SIGN AT 500' TO 1000' INTERVALS THROUGHOUT EXTENDED WORK AREAS.

LEGEND

- CHANNELIZER
- ⊥ TEMPORARY SIGN
- ← DIRECTION OF TRAVEL
- ⬢ FLASHING ARROW SIGN (FAS)
- ⊖ FAS SUPPORT OR TRAILER
- ⊛ PORTABLE FLASHING BEACON
- ‡ BARRICADES

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI
 CALCULATED/DESIGNED BY: FARIBORZ TEHRANI
 CHECKED BY: HAMID SAADATNEJADI
 REVISED BY: [] DATE: []
 REVISIONS: []



SAN GABRIEL RIVER BRIDGE
Br No. 53-0060

TYPICAL LANE CLOSURE

**STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
STAGE 1**

NO SCALE

TH-1

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	0.0,1.0	4	16

f.M. Tehrani 1-28-10
REGISTERED CIVIL ENGINEER DATE

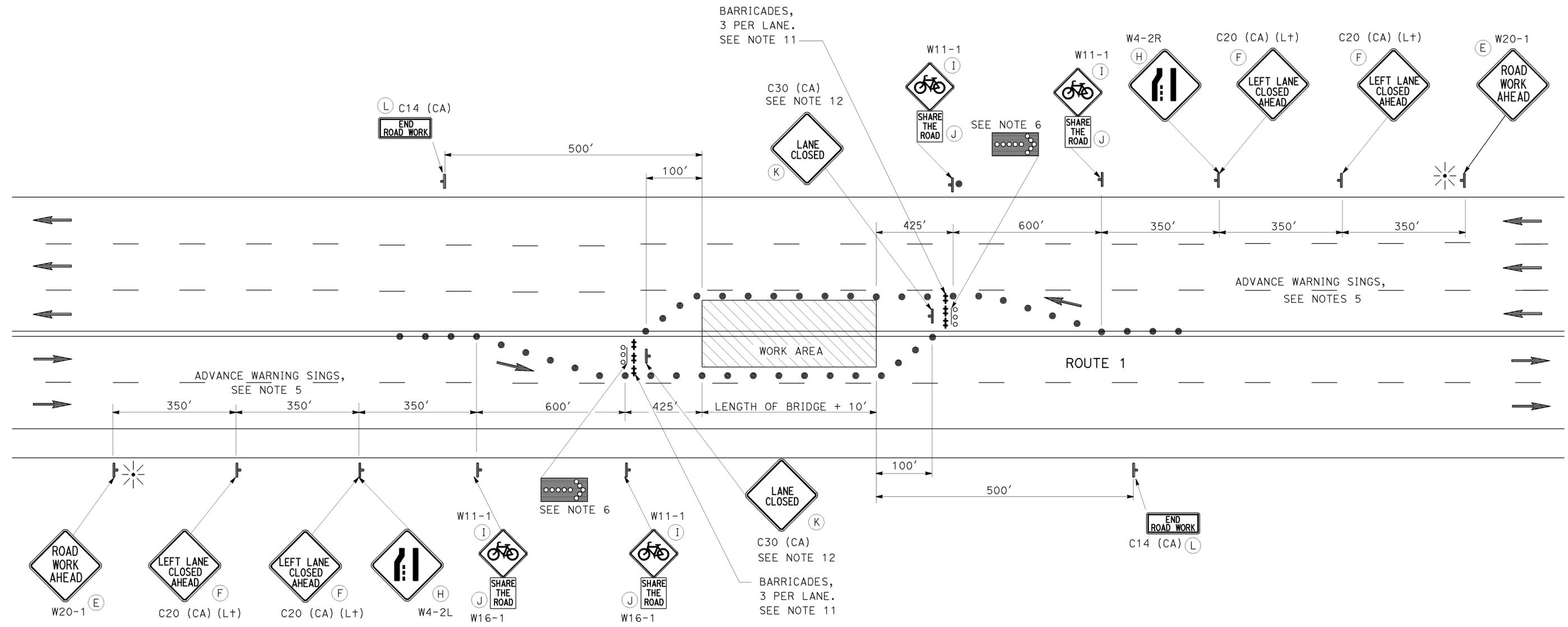
2-1-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
FARIBORZ M TEHRANI
No. 59694
Exp. 12-31-11
CIVIL
STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI
DESIGNED BY: FARIBORZ TEHRANI
CHECKED BY: HAMID SAADATNEJADI
REVISOR: FARIBORZ TEHRANI
DATE: 1-28-10
REVISOR: HAMID SAADATNEJADI
DATE: 2-1-10



LOS ALAMITOS BAY BRIDGE
Br No. 53-0064

TYPICAL LANE CLOSURE

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
STAGE 1
NO SCALE

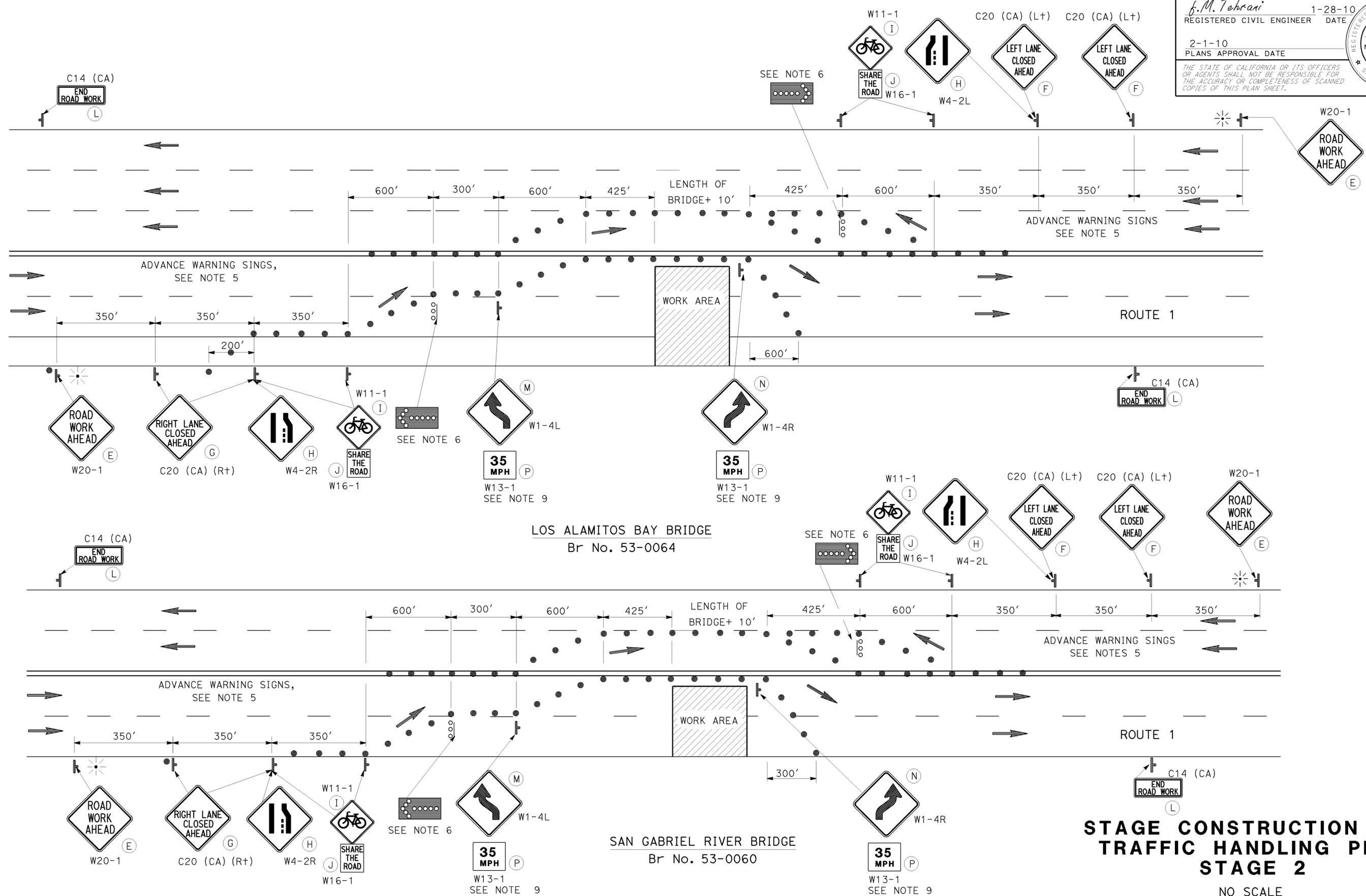
TH-2

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	0.0,1.0	5	16

f.M. Tehrani 1-28-10
 REGISTERED CIVIL ENGINEER DATE
 2-1-10
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
FARIBORZ M. TEHRANI
 No. 59694
 Exp. 12-31-11
 CIVIL
 STATE OF CALIFORNIA



STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
STAGE 2
NO SCALE

TYPICAL CLOSING OF HALF ROADWAY

TH-3

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI
 CHECKED BY: HAMID SAADATNEJADI
 CALCULATED/DESIGNED BY: FARIBORZ TEHRANI
 REVISIONS: REVISED BY: FARIBORZ TEHRANI, DATE: 1-28-10
 REVISIONS: REVISED BY: HAMID SAADATNEJADI, DATE: 2-1-10



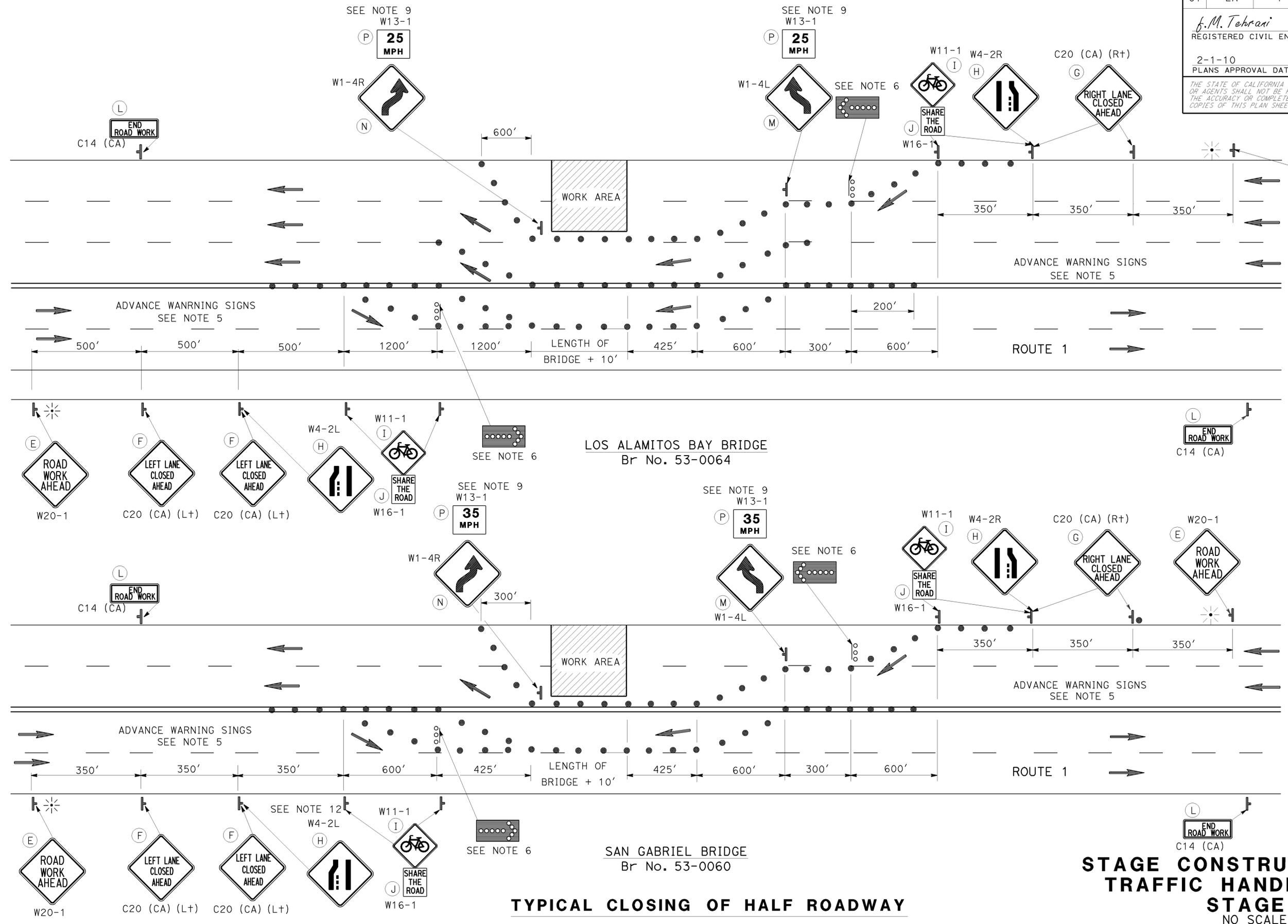
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	0.0,1.0	6	16

f.M. Tehrani 1-28-10
 REGISTERED CIVIL ENGINEER DATE
 2-1-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 FARIBORZ M. TEHRANI
 No. 59694
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI
 CHECKED BY: HAMID SAADATNEJADI
 CALCULATED/DESIGNED BY: FARIBORZ TEHRANI
 REVISIONS: REVISED BY: DATE
 REVISIONS: REVISED BY: DATE



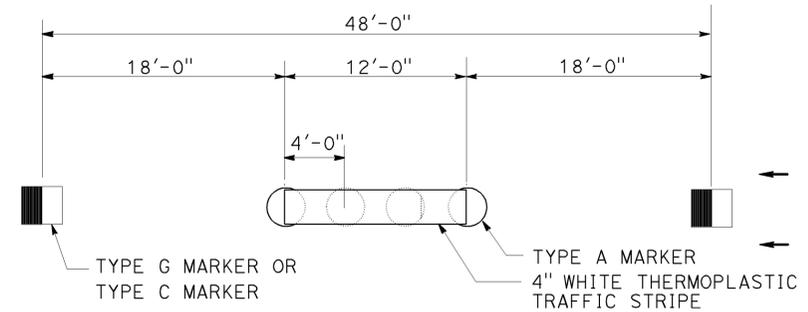
THIS PLAN ACCURATE FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
STAGE 3
NO SCALE

TH-4

TRAFFIC HANDLING QUANTITIES

LOCATION	FLASHING ARROW SIGN	TYPE III BARRICADE	CHANNELIZER (SURFACE MOUNTED)	FLASHING BEACON (PORTABLE)	EA			
					EA	EA	EA	EA
SAN GABRIEL RIVER Br No. 53-0060	6	6	343	6				
LOS ALAMITOS BAY Br No. 53-0064	6	6	496	6				
SUBTOTAL	12	12	839	12				
TOTAL	12	12	839	12				



DETAIL 13/14 (MODIFIED)

NOTES:

1. APPLY 4" WIDE WHITE THERMOPLASTIC TRAFFIC STRIPE ON TOP OF TYPE A NON-REFLECTIVE MARKERS.
2. SEE CONSTRUCTION AREA SIGNS SHEET FOR ADDITIONAL CONSTRUCTION AREA SIGNS.

LEGEND:

- 4" WHITE THERMOPLASTIC STRIPE
- DIRECTION OF TRAVEL

PAVEMENT DELINEATION QUANTITIES

LOCATION	THERMOPLASTIC TRAFFIC STRIPE					PAVEMENT MARKER			
	Det 9	Det 13/14 (Mod)	Det 27B	Det 28	REMOVE THERMOPLASTIC TRAFFIC STRIPE	Det 9	Det 13/14 (Mod)		REMOVE PAVEMENT MARKER
	4" WHITE (BROKEN 17-7)	4" WHITE (BROKEN 36-12)	4" SOLID WHITE	4" SOLID YELLOW		RETROREFLECTIVE (TYPE G)	RETROREFLECTIVE (TYPE G)	NON-REFLECTIVE (TYPE A)	
SAN GABRIEL RIVER Br No. 53-0060		1285	856	1713	3854		27	108	135
LOS ALAMITOS BAY Br No. 53-0064	809		809	1618	3236	17			17
SUBTOTAL	809	1285	1665	3331	7090	17	27	108	152
TOTAL	809	1285	4996	7090	7090	44		108	152

CONSTRUCTION AREA SIGNS (PORTABLE)

SIGN NUMBER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF SIGNS
(E)	W20-1	36" x 36"	ROAD WORK AHEAD	12
(F)	C20 (CA)(L+)	36" x 36"	LEFT LANE CLOSED AHEAD	16
(G)	C20 (CA)(R+)	36" x 36"	RIGHT LANE CLOSED AHEAD	4
(H)	W4-2L	36" x 36"		12
(I)	W11-1	24" x 24"		16
(J)	W16-1	18" x 24"	SHARE THE ROAD	16
(K)	C30 (CA)	30" x 30"	LANE CLOSED	4
(L)	C14 (CA)	36" x 18"	END ROAD WORK	12
(M)	W1-4L	36" x 36"		4
(N)	W1-4R	36" x 36"		4
(P)	W13-1	24" x 24"	35 MPH	8

SUMMARY OF QUANTITIES

NO SCALE

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI
 CALCULATED/DESIGNED BY: FARIBORZ TEHRANI
 CHECKED BY: HAMID SAADATNEJADI
 REVISED BY: FARIBORZ TEHRANI
 DATE REVISED:

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	0.0, 1.0	8	16

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

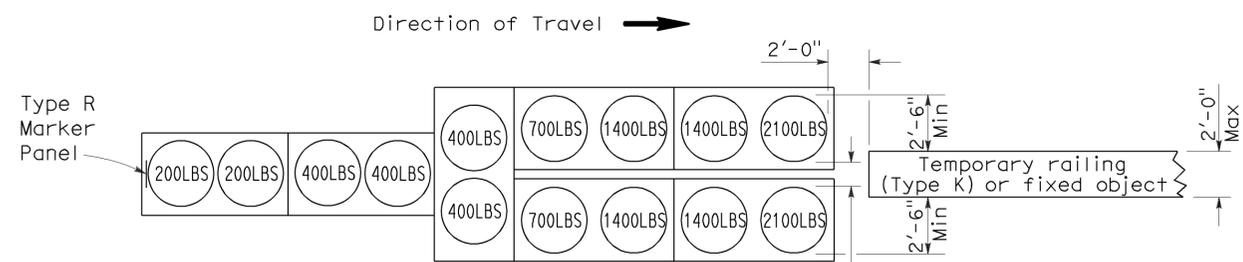
June 6, 2008
PLANS APPROVAL DATE

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

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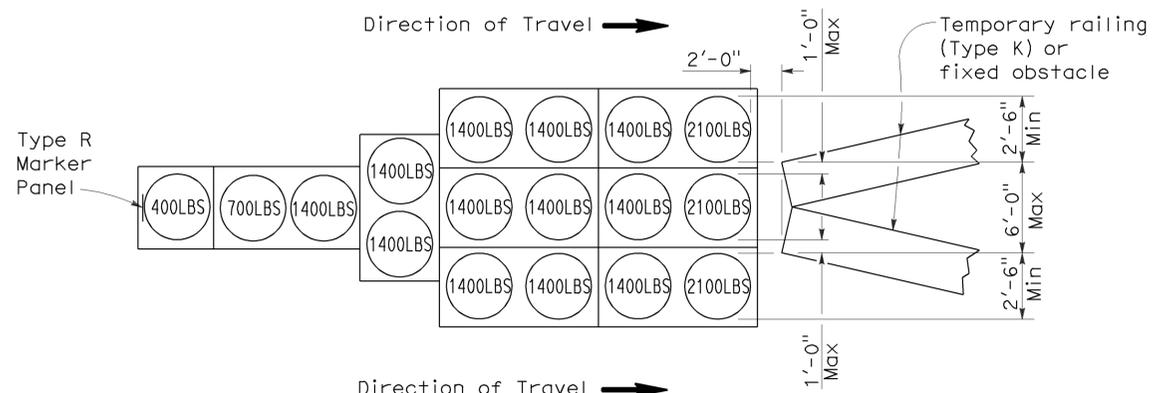
To accompany plans dated 2-1-10

2006 REVISED STANDARD PLAN RSP T1A



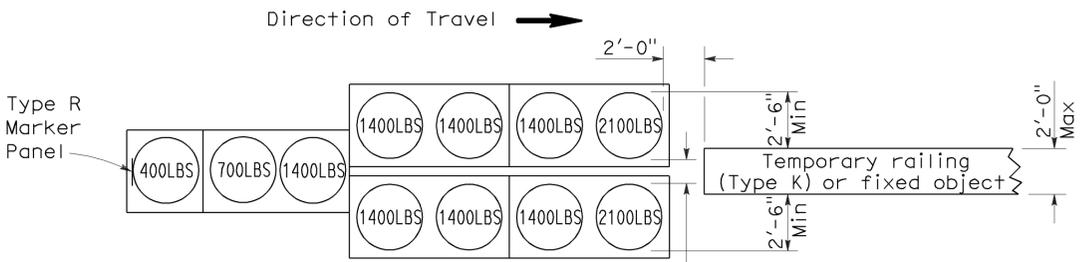
ARRAY 'TU14'

Approach speed 45 mph or more



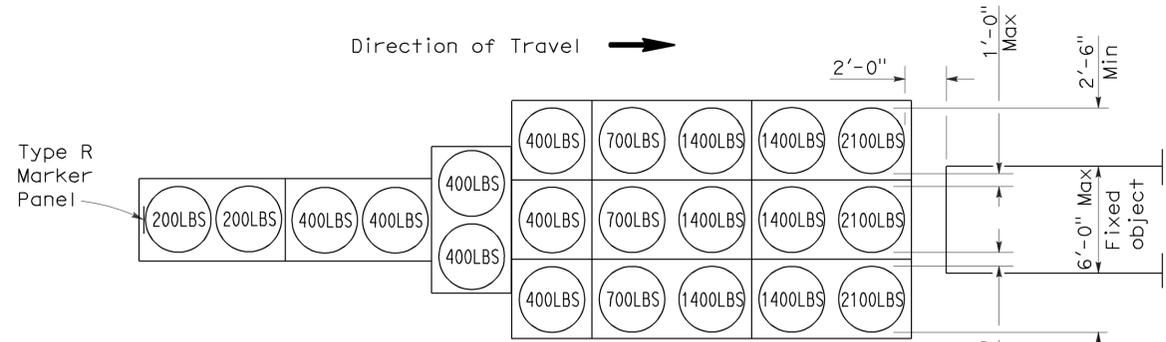
ARRAY 'TU17'

Approach speed less than 45 mph



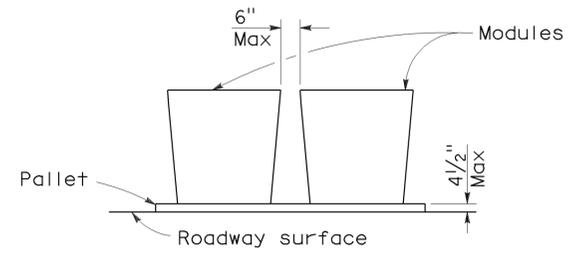
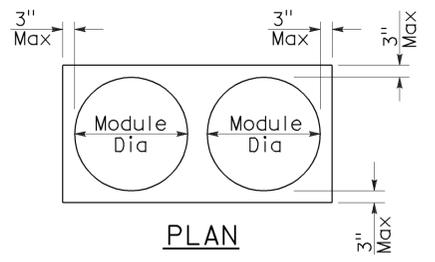
ARRAY 'TU11'

Approach speed less than 45 mph



ARRAY 'TU21'

Approach speed 45 mph or more



CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	0.0, 1.0	9	16

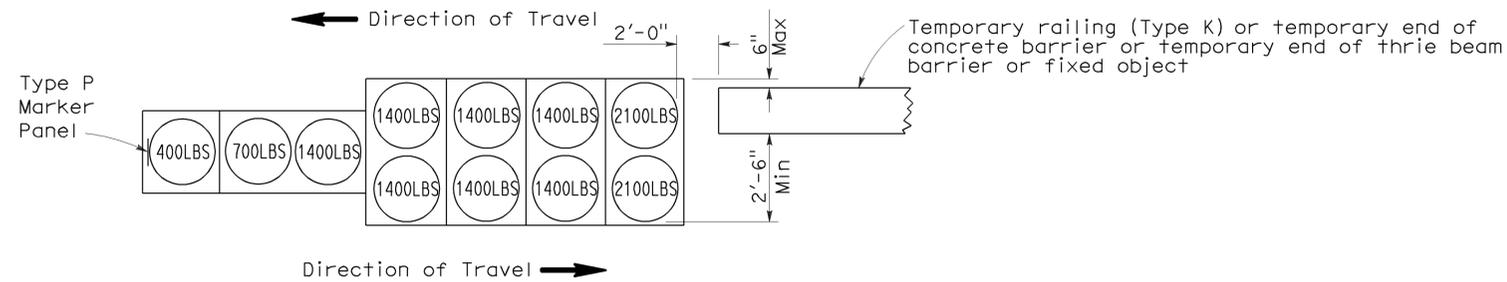
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

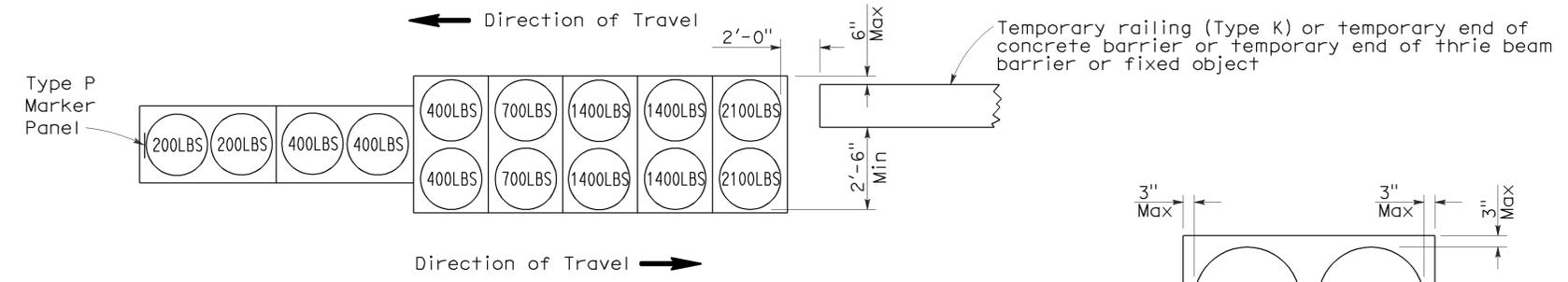
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To accompany plans dated 2-1-10



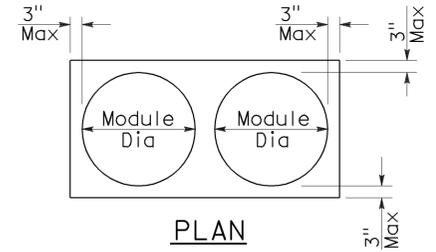
ARRAY 'TB11'

Approach speed less than 45 mph

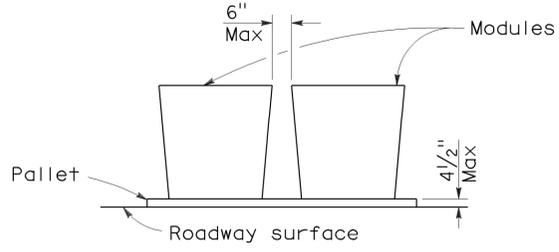


ARRAY 'TB14'

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	0.0, 1.0	10	16

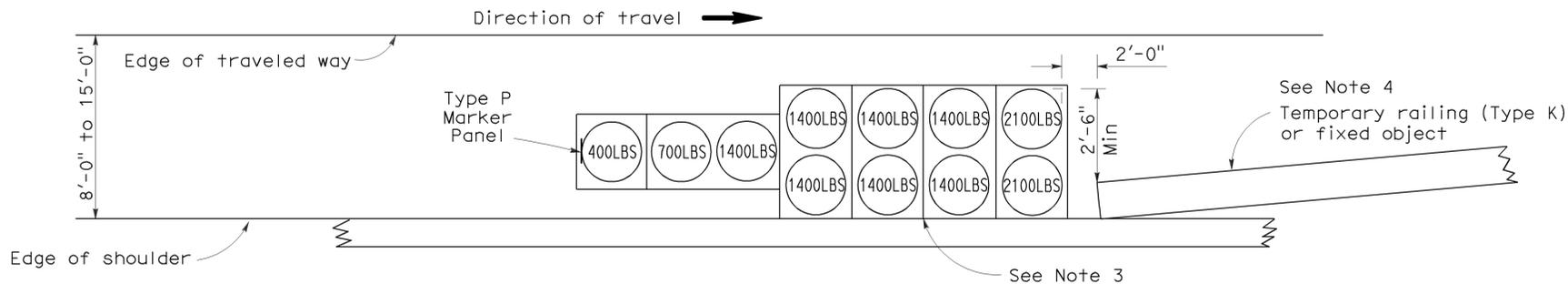
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

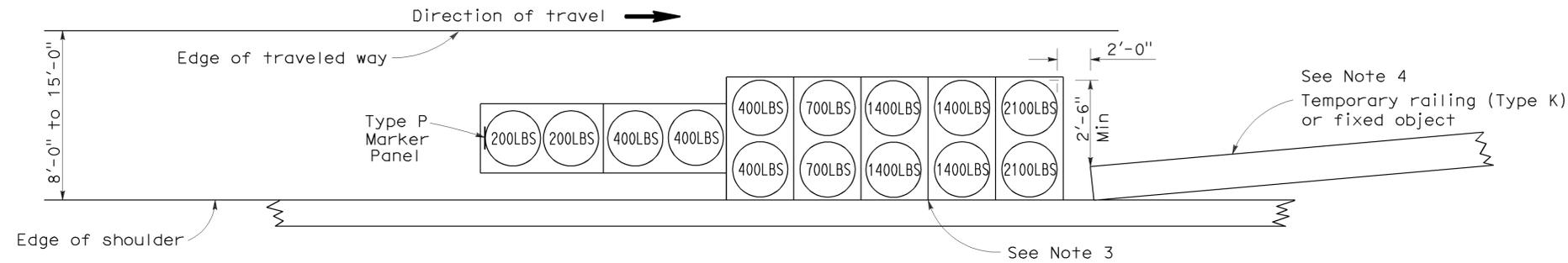
Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated 2-1-10



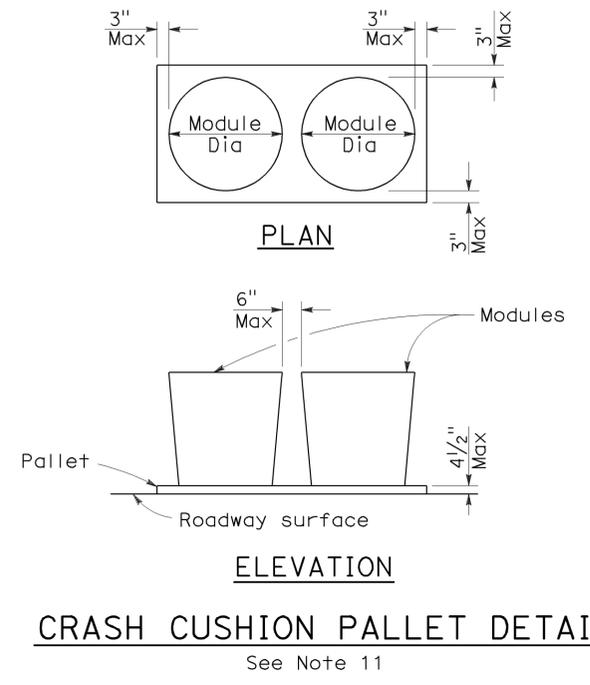
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



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

NOTES:

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



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	0.0, 1.0	11	16

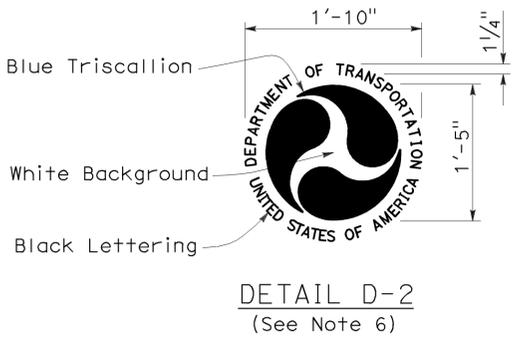
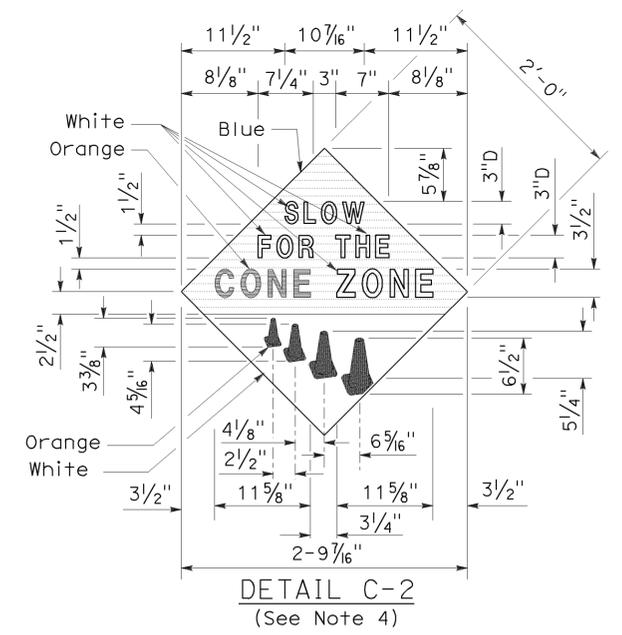
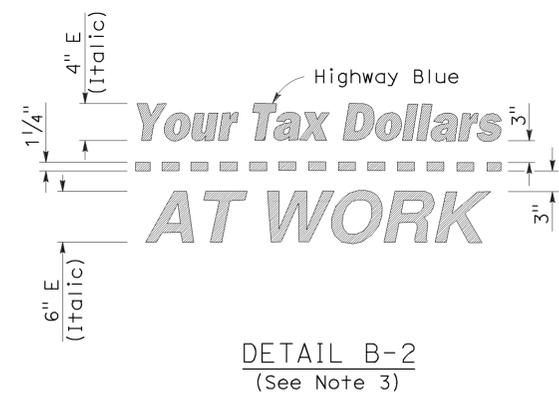
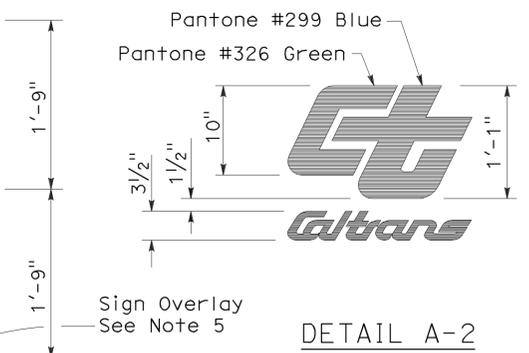
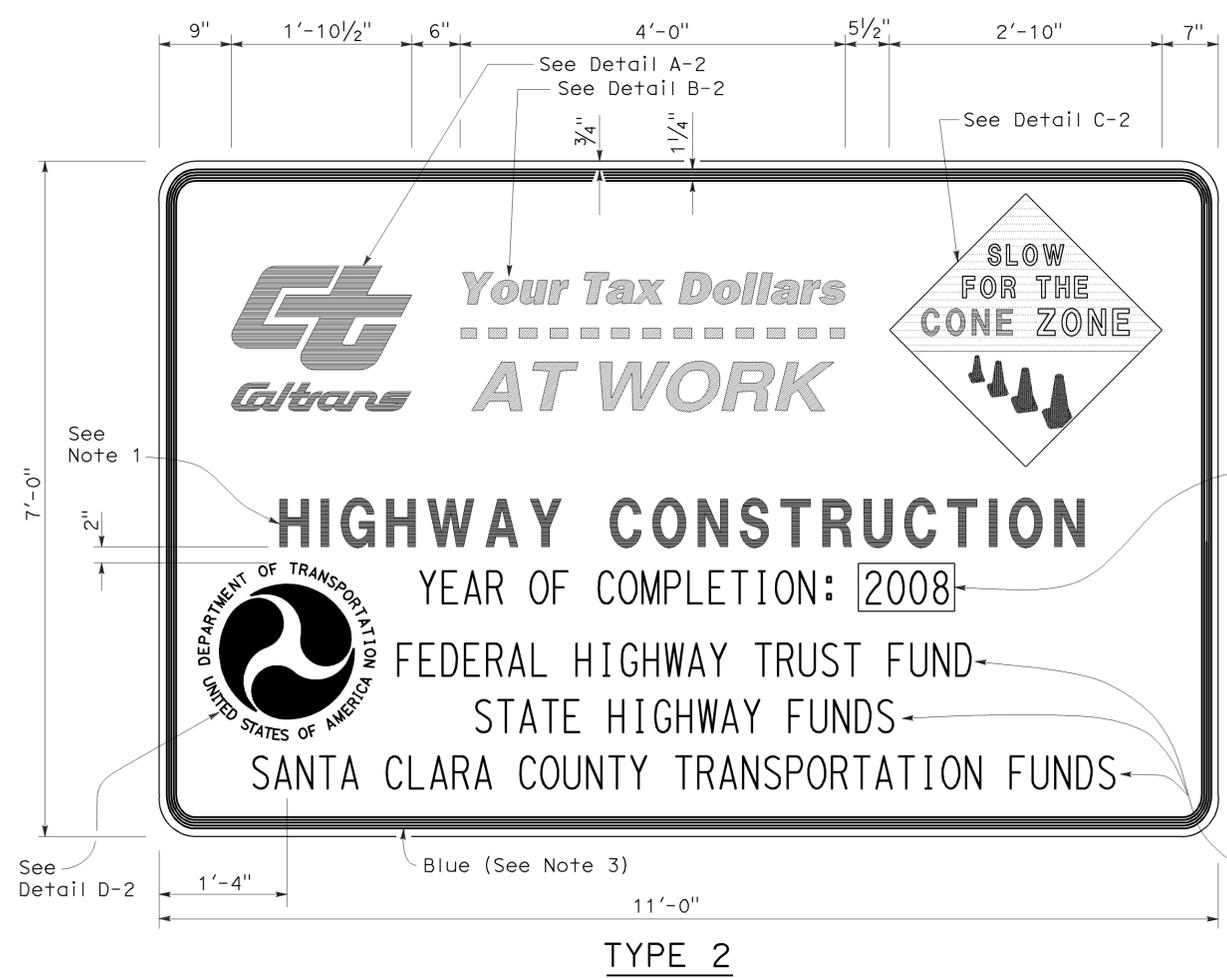
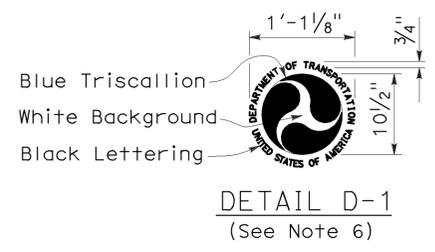
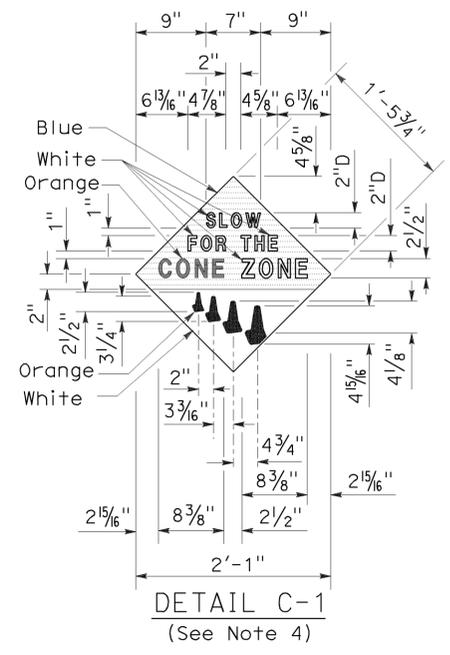
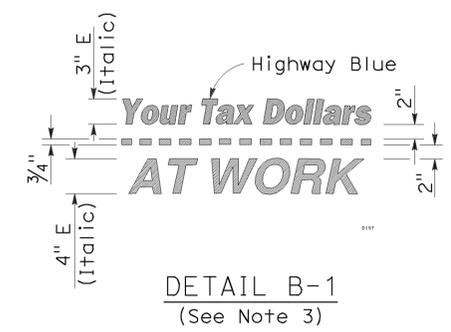
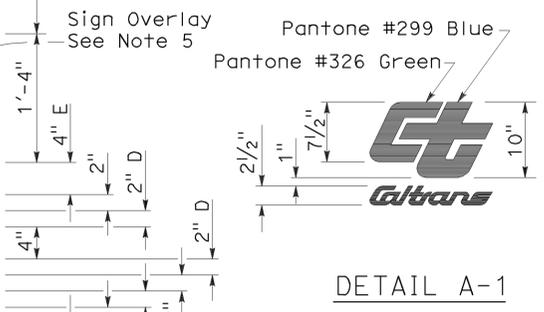
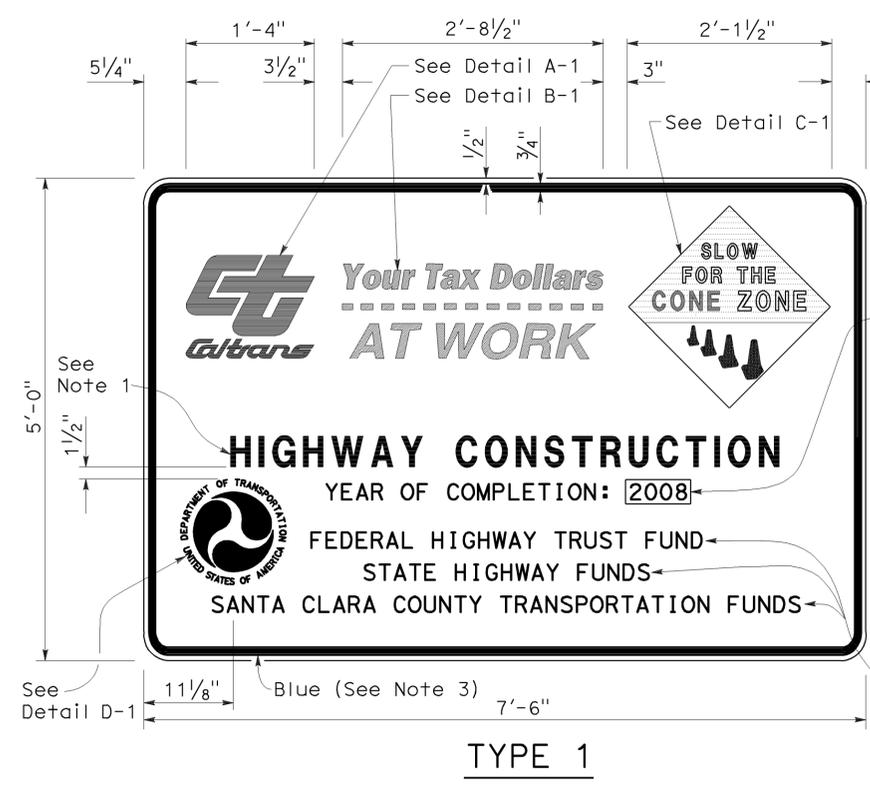
Greg W. Edwards
 REGISTERED CIVIL ENGINEER
 November 17, 2006
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
 Greg W. Edwards
 No. C36386
 Exp. 6-30-08
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 2-1-10

NOTES:

1. The sign messages shown for type of project and fund types are examples only. See the Special Provisions for the applicable type of project and fund type messages to be used.
2. Except as otherwise shown, the legend of sign shall be black on a white background (non-reflective).
3. The border of the signs and details "B-1" and "B-2" shall be blue (non-reflective).
4. The diamond in details "C-1" and "C-2" shall be blue for the background of message, "SLOW FOR THE CONE ZONE", and white background for the orange cones. The color and type of font for the "SLOW FOR THE CONE ZONE" message shall be: "SLOW" white D; "FOR THE" white D; "CONE" orange Arial font; "ZONE" white Arial font.
5. Year of completion of project construction shown on the overlay is an example only. See the Special Provisions.
6. Use when the Project involves Federal Highway Trust Fund.



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PROJECT FUNDING IDENTIFICATION SIGNS

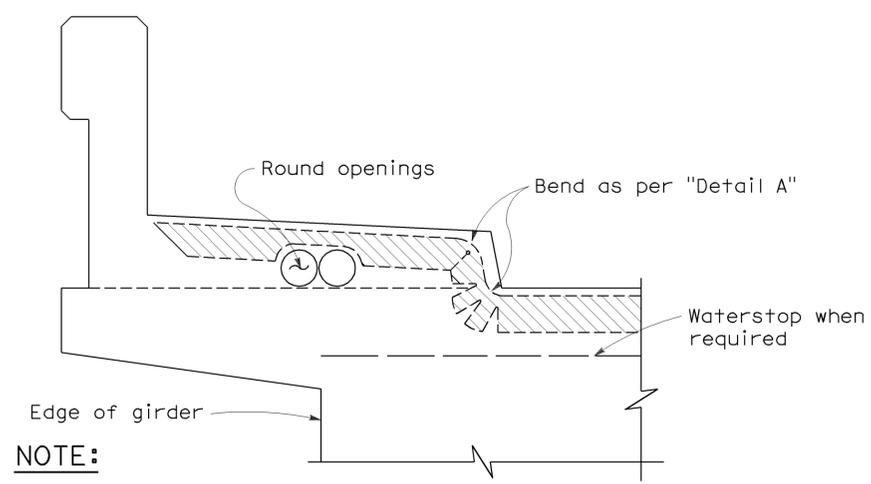
NO SCALE

RSP T7 DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN T7
 DATED MAY 1, 2006 - PAGE 217 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T7

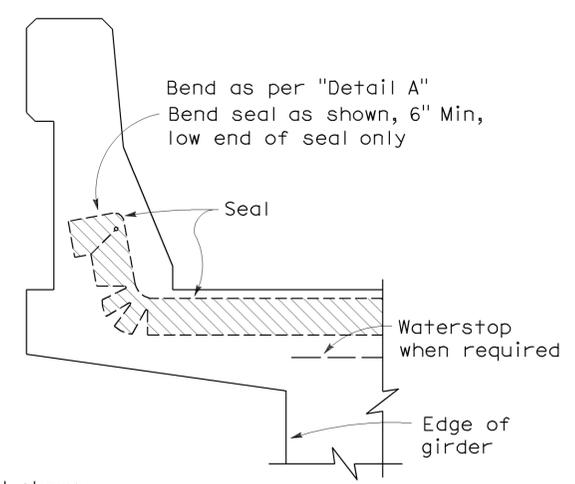
2006 REVISED STANDARD PLAN RSP T7

To accompany plans dated 2-1-10

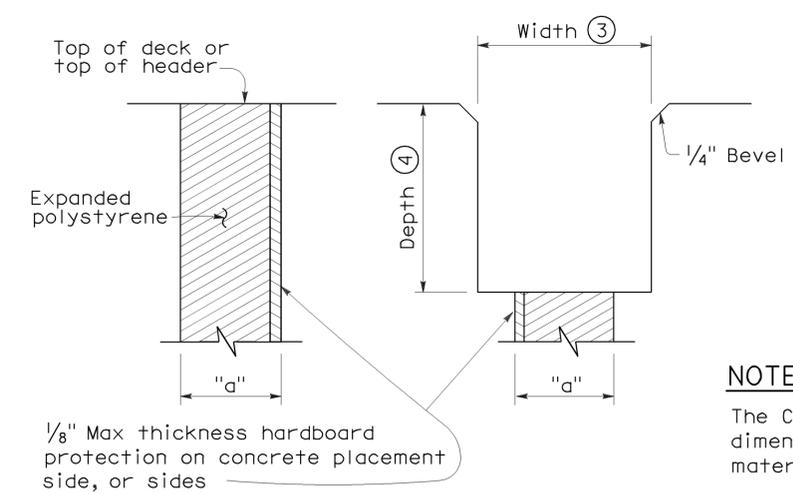


NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend Type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK



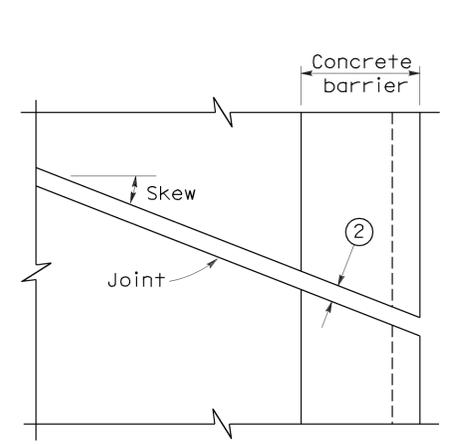
CONCRETE BARRIER



FORMING DETAIL SAWCUT DETAIL

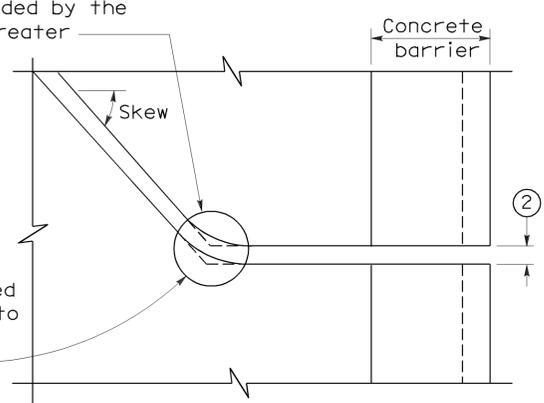
NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

JOINT SEALS DETAILS



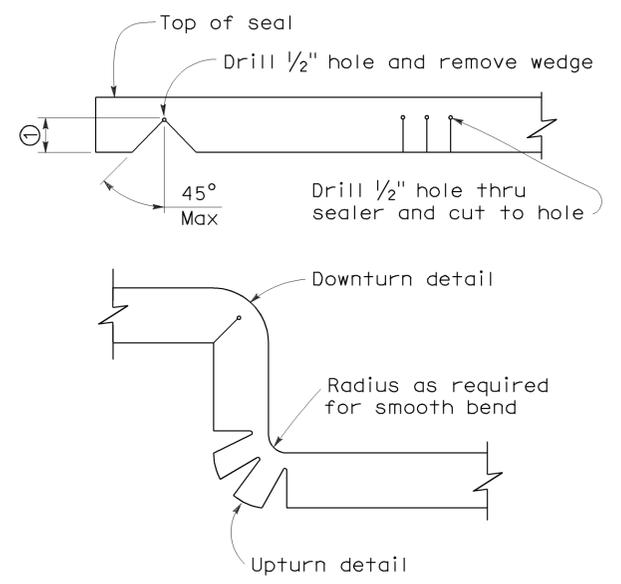
PLAN OF JOINT (SKEW ≤ 20°)

Min ϕ radius to be 4 times uncompressed width of seal or as recommended by the manufacturer, whichever is greater



PLAN OF JOINT (SKEW > 20°)

In lieu of saw cutting, this area may be blocked out and reconstructed to match saw cutting on both sides.



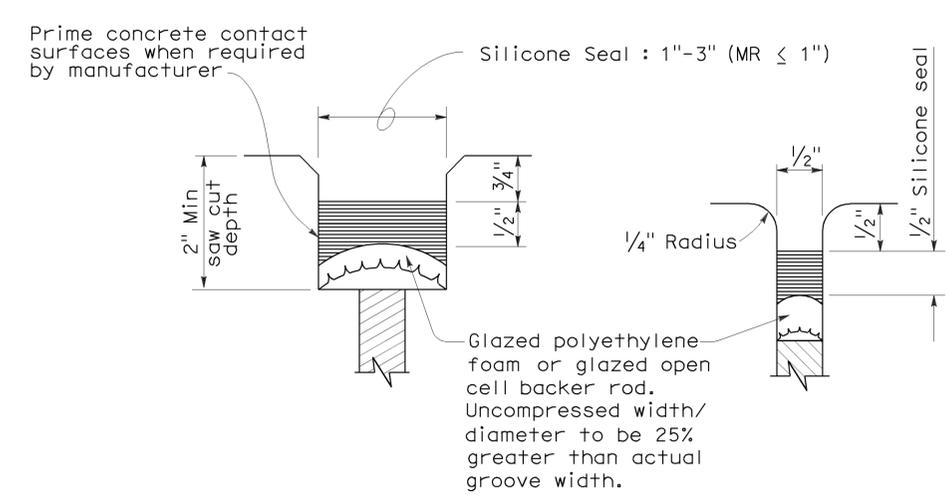
DETAIL A

NOTES:

- Make smooth cuts from the bottom of seal to 1/2" clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
- Opening in barrier to match width of sawn deck joint.
- Sawcut groove widths shall be as ordered by the Engineer.
- Depth of sawcut: Type A - Depth to be 2" minimum.
 Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W₂) plus dimensions shown.
- MR (movement rating) as shown on other plan sheets.
- Other depths must be approved by the Engineer.

DIMENSIONS "a" OF JOINT REQUIRED

Movement Rating (MR) ⑤	Bridge Type	"a" Dimension		
		Deck Concrete Placed		
		Winter	Fall-Spring	Summer
2"	All except CIP/PS	1 1/2"	1 1/4"	3/4"
	CIP/PS	1 1/4"	1"	1/2"
1 1/2"	All except CIP/PS	1 1/4"	1"	1/2"
	CIP/PS	1"	3/4"	1/2"
1"	All except CIP/PS	1"	3/4"	1/2"
	CIP/PS	3/4"	1/2"	1/2"
1/2"	All except CIP/PS	3/4"	3/4"	1/2"
	CIP/PS	1/2"	1/2"	1/2"

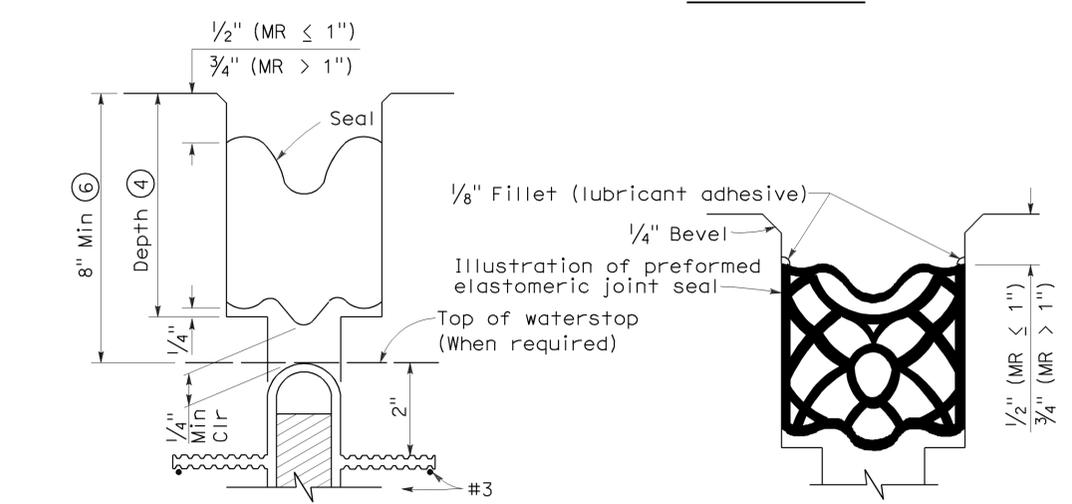


TYPE A SEAL

Movement rating : Silicone = 1" Max

TYPE AL SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W₂)

TYPE B SEAL

Movement Rating ≤ 2"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINT SEALS
(MAXIMUM MOVEMENT RATING = 2")
 NO SCALE

RSP B6-21 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B6-21 DATED MAY 1, 2006 - PAGE 258 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B6-21

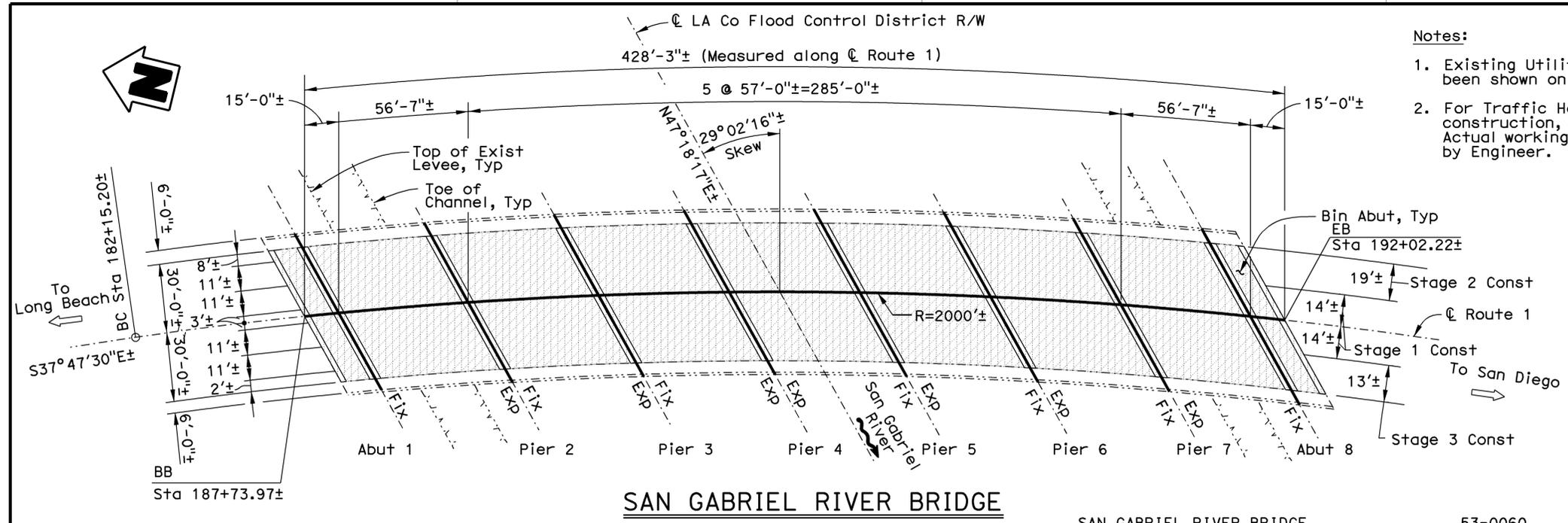
2006 REVISED STANDARD PLAN RSP B6-21

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	1	0.0, 1.0	13	16

A. O. Wang
 REGISTERED CIVIL ENGINEER DATE 12-09-09
 2-1-10
 PLANS APPROVAL DATE
 Y. Nien Wang
 No. C043559
 Exp. 6-30-10
 CIVIL
 STATE OF CALIFORNIA
 HNTB Corporation
 200 E. SANDPOINT AVENUE, SUITE 200
 SANTA ANA, CALIFORNIA 92707

Notes:

- Existing Utility facilities have not been shown on these plans.
- For Traffic Handling Details in stage construction, see "Roadway Plans". Actual working limits are to be approved by Engineer.



SAN GABRIEL RIVER BRIDGE

ALAMITOS BAY BRIDGE QUANTITIES 53-0064

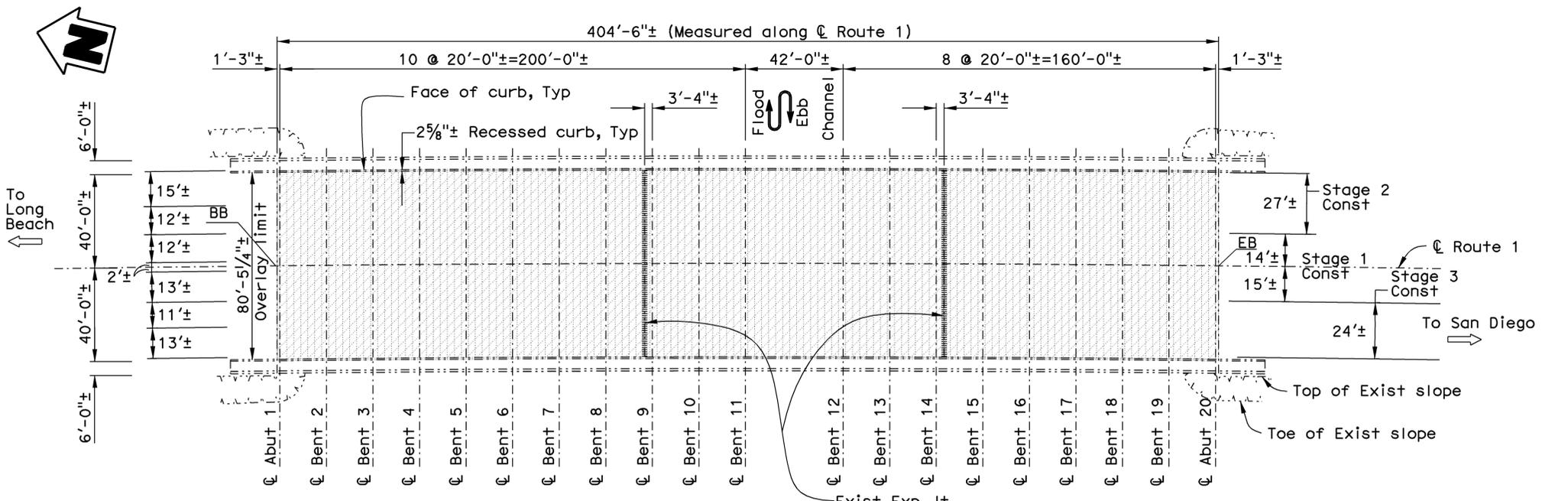
REMOVE ASPHALT CONCRETE SURFACING	32,500	SQFT
REMOVE UNSOUND CONCRETE	82	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	32,400	SQFT
RAPID SETTING CONCRETE (PATCH)	82	CF
FURNISH POLYESTER CONCRETE OVERLAY	2,700	CF
PLACE POLYESTER CONCRETE OVERLAY	32,400	SQFT
FURNISH LITHIUM BRIDGE DECK TREATMENT MATERIAL	195	GAL
TREAT BRIDGE DECK (LITHIUM)	32,400	SQFT
PUBLIC SAFETY PLAN	LUMP	SUM
MISCELLANEOUS METAL (BRIDGE)	5,740	LB

SAN GABRIEL RIVER BRIDGE QUANTITIES 53-0060

REMOVE ASPHALT CONCRETE SURFACING	25,700	SQFT
REMOVE UNSOUND CONCRETE	65	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	25,700	SQFT
CLEAN EXPANSION JOINT	1,080	LF
RAPID SETTING CONCRETE (PATCH)	65	CF
FURNISH POLYESTER CONCRETE OVERLAY	6,125	CF
PLACE POLYESTER CONCRETE OVERLAY	24,500	SQFT
FURNISH LITHIUM BRIDGE DECK TREATMENT MATERIAL	155	GAL
TREAT BRIDGE DECK (LITHIUM)	25,700	SQFT
PUBLIC SAFETY PLAN	LUMP	SUM
POLYESTER CONCRETE EXPANSION DAM	302	CF
JOINT SEAL (MR 1/2")	656	LF
JOINT SEAL (TYPE AL)	429	LF

LEGEND:

- Indicates existing structure
- Indicates new structure
- ⇒ Indicates direction of traffic
- Exp Indicates expansion bearing
- Fix Indicates fixed bearing
- ⇒ Indicates direction of flow
- ⇄ Indicates flood ebb
- ▨ Indicates limits of preparing concrete bridge deck surface, furnish and place new polyester concrete overlay (see "Overlay Thickness Table" on "Deck Repair Details" sheet for thickness). Prior to placing new polyester concrete overlay, remove unsound concrete, treat bridge deck with lithium, and patch with rapid setting concrete as shown on the "Deck Spall Repair Detail" on the "Deck Repair Details" sheet.
- ▨ Indicates limits of removing existing asphaltic concrete deck surface (see "Overlay Thickness Table" on "Deck Repair Details" sheet for thickness).
- Indicates locations of placing new joint seal. For Details, see "Joint Seal Details No. 1" sheet. Prior to placement of new joint seal, repair joint spalls.
- Indicates locations of removing existing joint seal, placing new joint seal and polyester concrete expansion dam along both sides of joint per details on "Joint Seal Details No. 1" sheet. Prior to placement of new joint seal, repair joint spalls.
- Indicates locations of placing polyester concrete expansion dam along paving notch per details on "Joint Seal Details No. 1" sheet.
- Indicates locations of expansion joint modification. For details, see "Joint Seal Details No. 2" sheet.



ALAMITOS BAY BRIDGE

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

INDEX TO PLANS

SHEET NO.	TITLE
1	General Plan
2	Joint Seal Details No. 1
3	Joint Seal Details No. 2
4	Deck Repair Details

STANDARD PLANS (DATED MAY 2006)

A10A	Acronyms and Abbreviations (A-L)
A10B	Acronyms and Abbreviations (M-Z)
A10C	Symbols
A10D	Symbols
RSP B6-21	Joint Seals (Maximum Movement Rating = 2")

Standard Plan Sheet No. 
 Detail No. 

Edward Li DESIGN OVERSIGHT	DESIGN BY M. Van Duyn CHECKED D. Chang	LOAD FACTOR DESIGN BY L. Zhang CHECKED M. Van Duyn	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD CHECKED M. Van Duyn	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION PROJECT ENGINEER Y. Nien Wang	BRIDGE NO. Varies POST MILES Varies	ROUTE 1 BRIDGES GENERAL PLAN
SIGN OFF DATE	QUANTITIES BY M. Van Duyn CHECKED D. Chang	SPECIFICATIONS BY B. Sennett CHECKED A. Wang	PLANS AND SPECS COMPARED	CU 07 EA 4S8501	REVISION DATES (PRELIMINARY STAGE ONLY)	

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 2/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES

1	4
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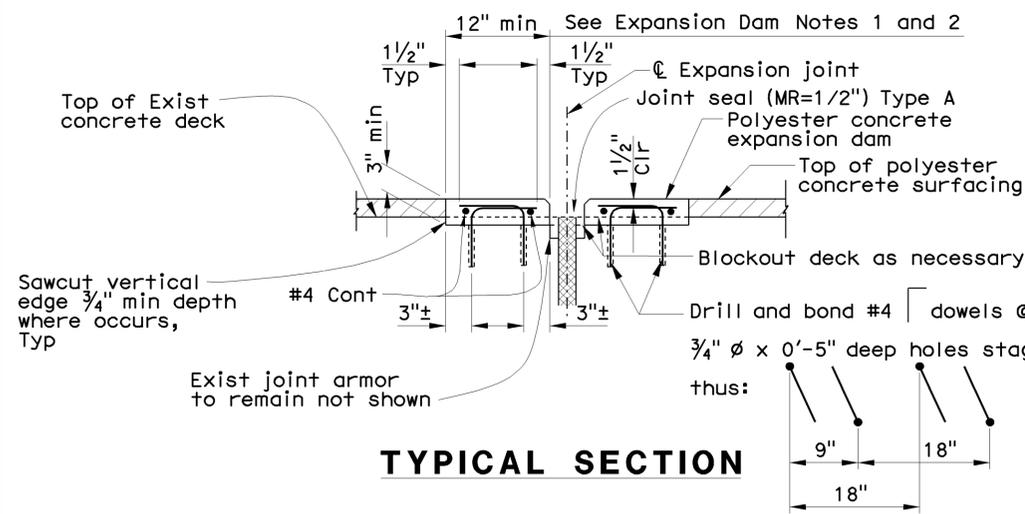
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL
07	LA	1	0.0, 1.0	14	16

REGISTERED CIVIL ENGINEER
 Y. Nien Wang
 No. C043559
 Exp. 6-30-10
 CIVIL
 STATE OF CALIFORNIA

12-09-09
 DATE
 2-1-10
 PLANS APPROVAL DATE

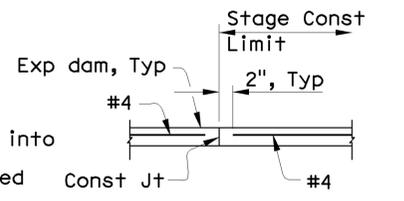
HNTB Corporation
 200 E. SANDPOINT AVENUE, SUITE 200
 SANTA ANA, CALIFORNIA 92707



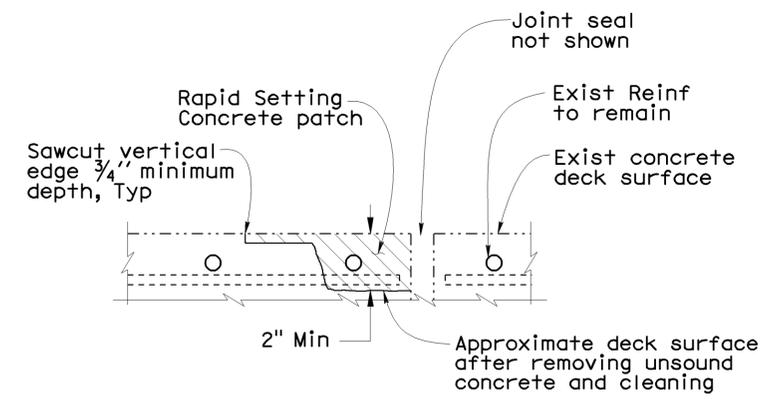
TYPICAL SECTION

POLYESTER CONCRETE EXPANSION DAM & JOINT SEAL DETAIL

No Scale



CONSTRUCTION JOINT DETAILS



JOINT SPALL REPAIR DETAIL

No Scale

Note: Reinforcement may be encountered during unsound deck concrete removal and is to remain undamaged.

LEGEND:

- Indicates polyester concrete overlay
- Indicates rapid setting concrete patch

Polyester Concrete Expansion Dam Notes:

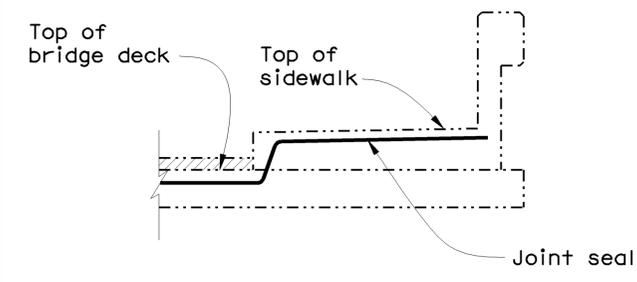
1. Prior to placement of expansion dam, the contact surfaces of existing concrete and joint armor where occurs shall be abrasive blast cleaned.
2. Expansion dam along end paving notch on span-side only; joint seal not required this location.

JOINT SEAL TYPE AL Notes:

1. Apply glazed polyethylene foam or glazed open cell backer rod.
2. Apply 1/2" Min polyurethane or silicone seal along entire joint.
3. For details not shown, see RSP B6-21 sheet.

JOINT SEAL TYPE A Notes:

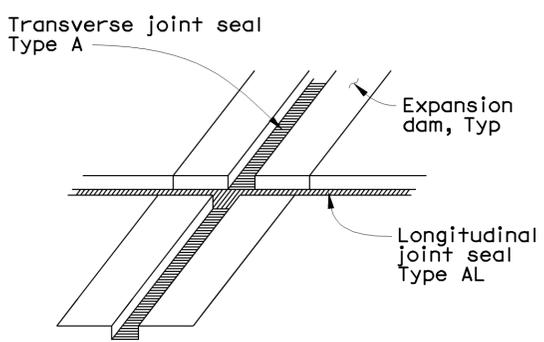
1. Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements.
 2. Minimum W1 is the calculated maximum width of the joint based on field measurements. After the joints have been cleaned, minimum W1 is to be recalculated by the Engineer.
 3. W1 shall be the smaller of the values determined as follows:
 - A) 0.85 times the manufacturer's designed minimum uncompressed width of the seal.
 - B) The width of the seal on the third successive test cycle of the pressure deflection test, when compressed to an average pressure of 3.0 pounds per square inch.
 4. Bend Type A joint seal up into sidewalk on the side of the deck where occurs. See details on this sheet.
- For details not shown, see RSP B6-21 sheet.



JOINT SEAL AT SIDEWALK

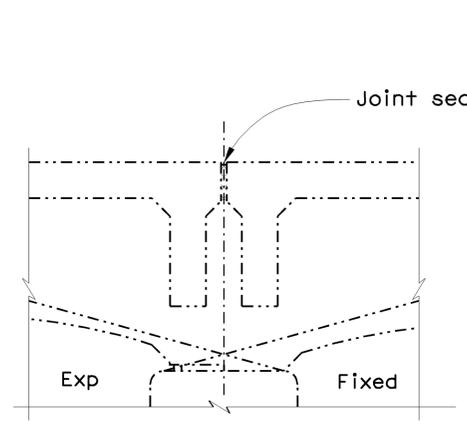
No Scale

Details shown for illustration purpose only. For use only where deck joint matches the sidewalk.



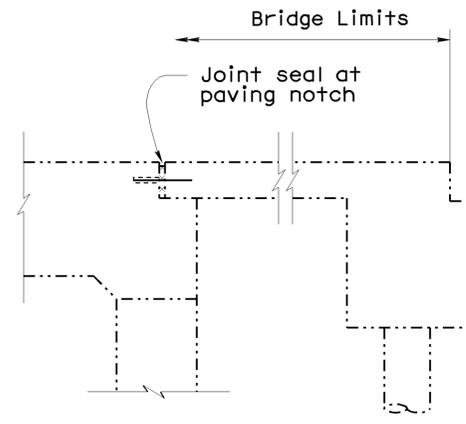
JOINT SEAL INTERSECTION DETAIL

No Scale



PIER

No Scale



BIN ABUTMENT

No Scale

LONGITUDINAL JOINT SEAL TABLE					
BRIDGE NO. BRIDGE NAME	LOCATION	JOINT TYPE /GAP WIDTH (IN)	APPROX LENGTH (FT)	EXISTING WATERSTOP (Y/N)	APPROX DEPTH TO CLEAN EXP JT (IN)
53-0060 SAN GABRIEL RIVER BRIDGE	℄	AL/1	429	N	12

TRANSVERSE JOINT SEAL TABLE								
BRIDGE NO. BRIDGE NAME	LOCATION	MINIMUM "MR" (in)	APPROX LENGTH (FT)	EXISTING WATERSTOP (Y/N)	APPROX DEPTH TO CLEAN EXP JOINT (IN)	APPROX DEPTH OF JOINT SPALLS (IN)	APPROX WIDTH OF JOINT SPALLS (IN)	APPROX LENGTH OF JOINT SPALLS (FT)
53-0060 SAN GABRIEL RIVER BRIDGE	Abut 1	1/2	82	N	12	3	6	5
	Pier 2	1/2	82	N	12	3	6	5
	Pier 3	1/2	82	N	12	3	6	5
	Pier 4	1/2	82	N	12	3	6	5
	Pier 5	1/2	82	N	12	3	6	5
	Pier 6	1/2	82	N	12	3	6	5
	Pier 7	1/2	82	N	12	3	6	5
	Abut 8	1/2	82	N	12	3	6	5

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Edward Li
DESIGN OVERSIGHT
SIGN OFF DATE

DESIGN	BY M. Van Duyn	CHECKED D. Chang
DETAILS	BY L. Zhang	CHECKED M. Van Duyn
QUANTITIES	BY M. Van Duyn	CHECKED D. Chang

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Y. Nien Wang
PROJECT ENGINEER

BRIDGE NO.
Varies
POST MILE
Varies

ROUTE 1 BRIDGES
JOINT SEAL DETAILS NO. 1

USERNAME => s1292339 DATE PLOTTED => 22-DEC-2009 TIME PLOTTED => 13:31

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL
07	LA	1	0.0, 1.0	15	16

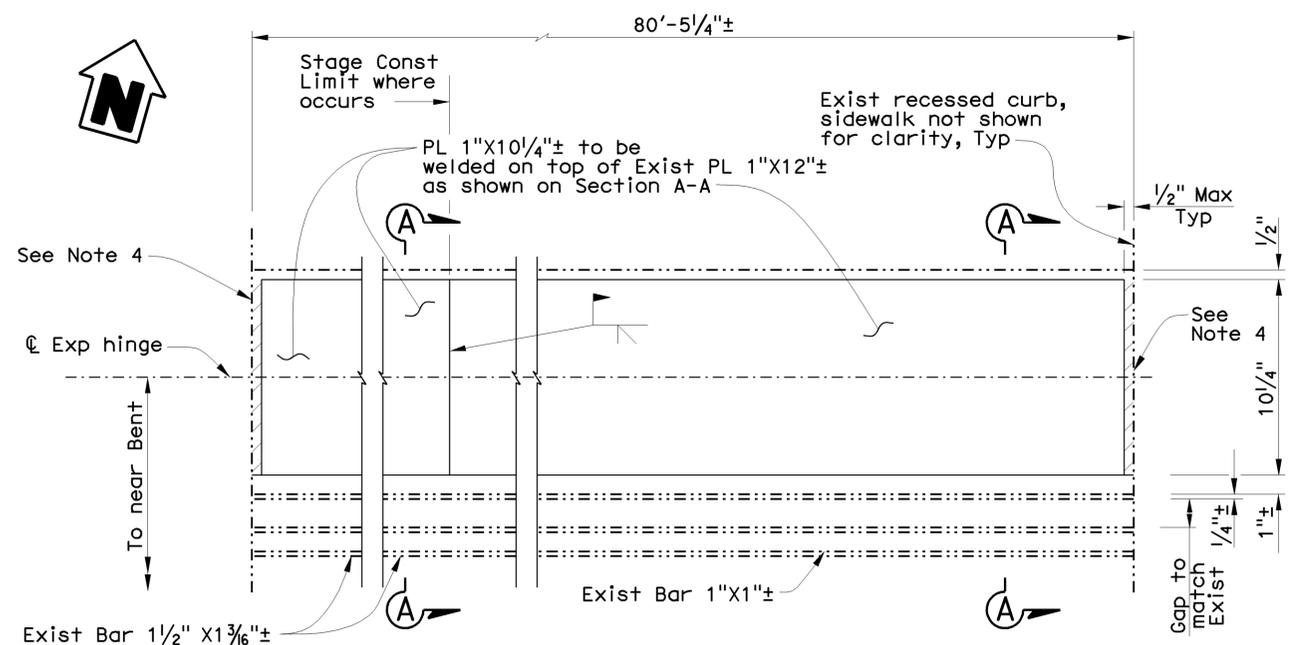
A. O. Wang
REGISTERED CIVIL ENGINEER DATE 12-09-09

2-1-10
PLANS APPROVAL DATE

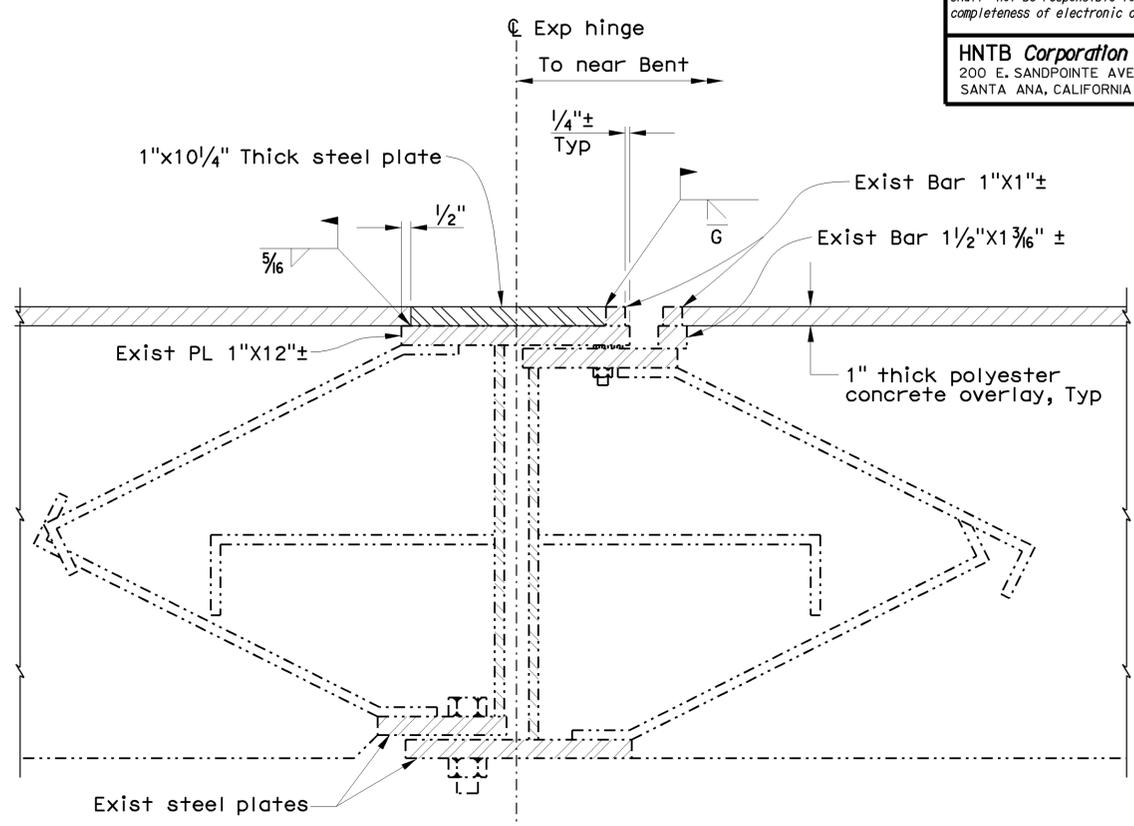
Y. Nien Wang
No. C043559
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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HNTB Corporation
200 E. SANDPOINT AVENUE, SUITE 200
SANTA ANA, CALIFORNIA 92707



PART PLAN - NEAR BENT 9
No Scale



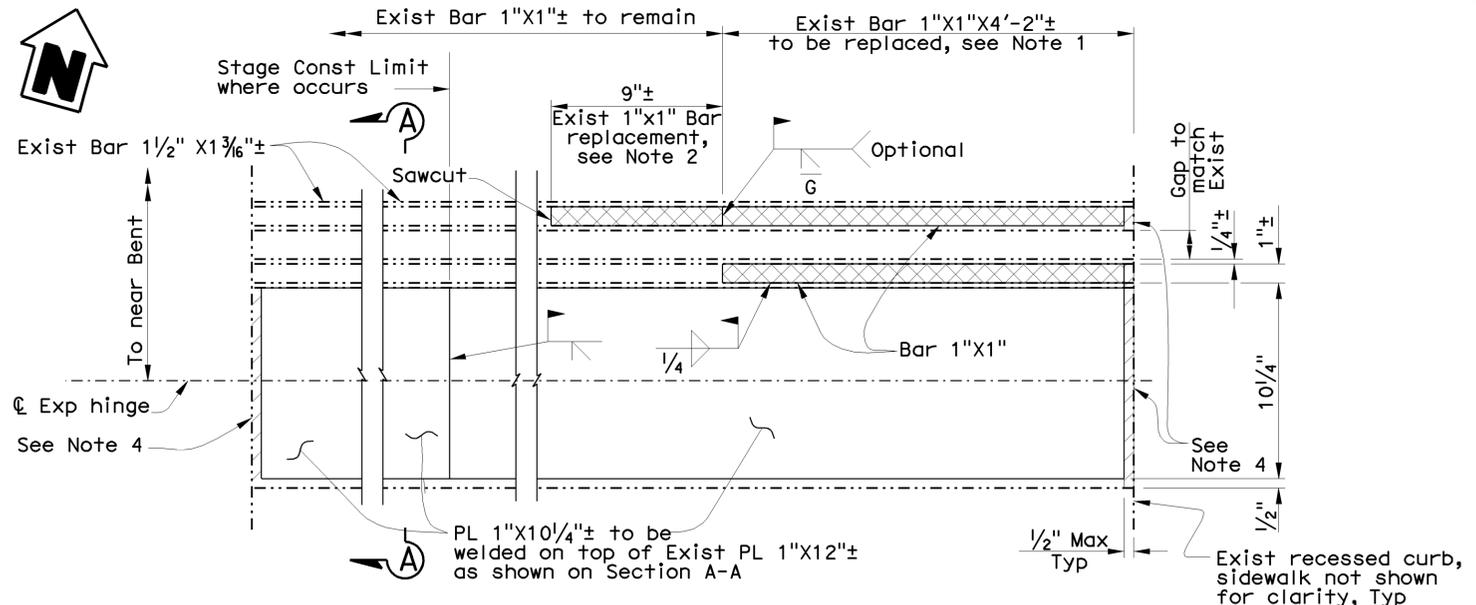
SECTION A-A
No Scale

LEGEND:

- Indicates polyester concrete overlay
- Indicates portions of existing steel to be replaced
- Indicates new steel plate
- Indicates existing steel plate

Notes:

1. Contractor shall field verify where existing bar needs to be replaced or modified prior to ordering or fabricating material. Contact surface to receive the new steel parts shall be prepared in accordance with the special provisions.
2. Section of existing bent bar to be removed and replaced near Bent 14 only.
3. All steel parts shall be ASTM designation A36.
4. Gap to be filled with polyester concrete.



PART PLAN - NEAR BENT 14
No Scale

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Edward Li
DESIGN OVERSIGHT

SIGN OFF DATE

DESIGN	BY M. Van Duyn	CHECKED D. Chang
DETAILS	BY C. Lapuz	CHECKED M. Van Duyn
QUANTITIES	BY M. Van Duyn	CHECKED D. Chang

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Y. Nien Wang
PROJECT ENGINEER

BRIDGE NO.	Varies
POST MILE	Varies

ROUTE 1 BRIDGES
JOINT SEAL DETAILS NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV. 2/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

CU 07
EA 4S8501

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)							SHEET	OF
4/10/09	5/20/09	7/28/09	10/28/09	11/20/09	01/25/10	3	4	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL
07	LA	1	0.0, 1.0	16	16

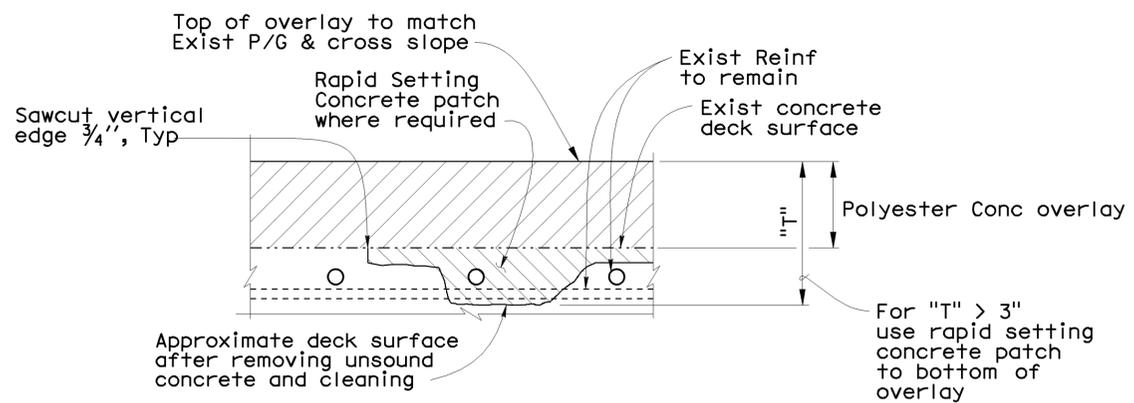
A. D. Wang 12-09-09
REGISTERED CIVIL ENGINEER DATE

2-1-10
PLANS APPROVAL DATE

Y. Nien Wang
No. C043559
Exp. 6-30-10
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.

HNTB Corporation
200 E. SANDPOINTE AVENUE, SUITE 200
SANTA ANA, CALIFORNIA 92707



DECK SPALL REPAIR DETAIL

No Scale

Note: Location will be determined by the Engineer, reinforcement may be encountered during unsound deck concrete removal and is to remain undamaged.

LEGEND:

- Indicates polyester concrete overlay
- Indicates rapid setting concrete patch

**DECK REPAIR TABLE
REMOVE UNSOUND CONCRETE AND RAPID SETTING CONCRETE (PATCH)**

BRIDGE NAME	BRIDGE NUMBER	APPROXIMATE AREA DAMAGED (PERCENT)	APPROXIMATE DEPTH (IN)
SAN GABRIEL RIVER BRIDGE	53-0060	1	3
ALAMITOS BAY BRIDGE	53-0064	1	3

Deck Spall Repair Notes:

1. Existing reinforcement shall be protected in place during unsound concrete removal and patching operations.
2. It is responsibility of the Contractor to repair any reinforcement that is accidentally cut by saw cutting operations.
3. When existing transverse reinforcement is exposed in the deck surface, saw cutting shall be waived with the approval of the Engineer.
4. The saw cut depth shall not exceed 3/4" or the concrete cover over the top reinforcing bars, whichever is less.
5. Remove unsound Portland Cement concrete and any unsound concrete patches to expose sound and hard concrete substrate. Replace to original deck surface with rapid setting concrete patch.

OVERLAY THICKNESS TABLE

BRIDGE NO. BRIDGE NAME	EXISTING ASPHALT CONC THICKNESS (IN)	MIN POLYESTER CONC THICKNESS (IN)
53-0060 SAN GABRIEL RIVER BRIDGE	3±	3
53-0064 ALAMITOS BAY BRIDGE	1±	1

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Edward Li DESIGN OVERSIGHT SIGN OFF DATE	DESIGN BY M. Van Duyn DETAILS BY L. Zhang QUANTITIES BY M. Van Duyn	CHECKED BY D. Chang CHECKED BY M. Van Duyn CHECKED BY D. Chang	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	Y. Nien Wang PROJECT ENGINEER	BRIDGE NO. Varies POST MILE Varies	ROUTE 1 BRIDGES DECK REPAIR DETAILS
DESIGN DETAIL SHEET (ENGLISH) (REV. 2/25/05)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 07 EA 4S8501	DISREGARD PRINTS BEARING EARLIER REVISION DATES	
			0 1 2 3	REVISION DATES (PRELIMINARY STAGE ONLY) 4/10/09 5/20/09 7/28/09 10/22/09 11/03/09		SHEET 4 OF 4

USERNAME => s129239 DATE PLOTTED => 22-DEC-2009 TIME PLOTTED => 13:31