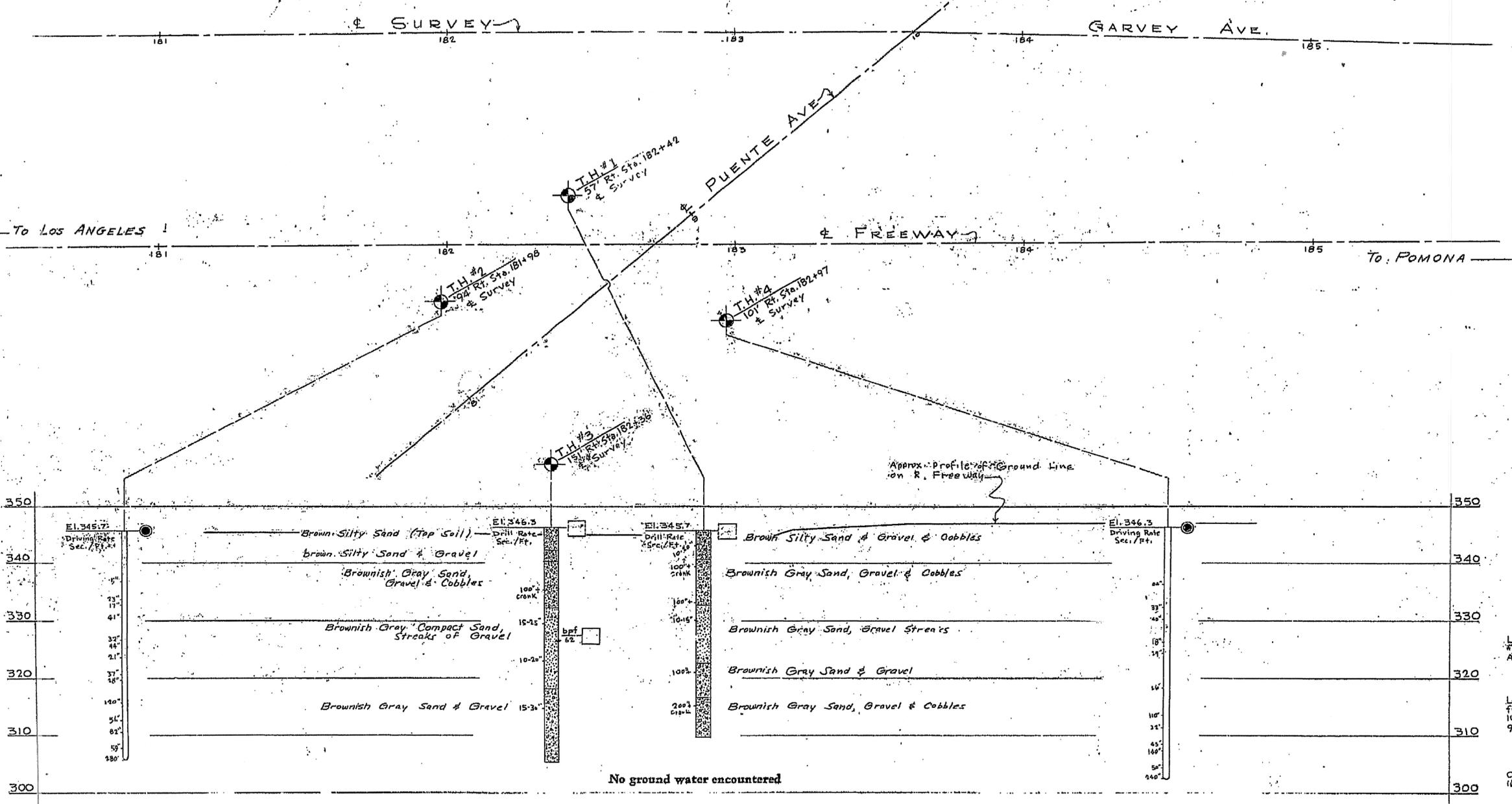


VI-211(32)

FED. PROJ. DIST. NO.	STATE	FISCAL YEAR	PROJECT NO.	SHEET NO.	TOTAL SHEETS
2	CAL.			156	178

BRIDGE ENGINEER CIVIL ENGINEER LICENSE 5585  
 APPROVED MAY 3 1954



Test Boring By Bridge Dept.

Core Drill Jan. 1952

NOTE: Blows per foot are blows required to drive a 1 1/2 inch test pipe one foot with a 140 lb drop hammer from a free fall of 30 inches.

B.M. # 11-B-43  
 Lead & conc. knob in sidewalk of Auto Ct. Cabin #845 on N. side Garvey Ave. 200' W. of Puente Ave. 71' Lh. Sta. 184+30.5  
 Elev. 346.47

B.M. # 12-B-43  
 Lead & conc. knob in W. end of P.C.C. porch step to frame house on N. side Garvey Ave. & about 100' E. of intersection Merced Ave. N.H. 91' Lh. Sta. 193+81.  
 Elev. 352.54

T.B.M.  
 Chiseled knob on P.C.C. wall. 33.0' R. Sta. 168+35.  
 Elev. 341.93

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

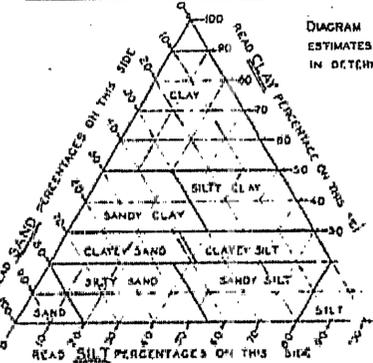


DIAGRAM AND TABLE SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.

CLASS NAME	SAND	SILT	CLAY
SAND	50-100	0-20	0-20
SILTY SAND	45-60	0-65	0-20
SANDY SILT	0-45	35-60	0-20
CLAYEY SAND	0-20	10-30	0-20
SILTY CLAY	0-20	0-42	20-30
CLAYEY SILT	0-30	34-60	20-30
SANDY CLAY	30-70	0-40	20-30
SILT	0-30	20-70	30-50
CLAY	0-50	0-30	30-100

IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM 'GRAVELLY' IS ADDED TO THE CLASS NAME, AND 'COARSE', 'MEDIUM' AND 'FINE' TO DESCRIBE GRAVEL, SAND AND SILT REFER TO STANDARD GRADE SIZE LIMITS.

LEGEND OF BORING OPERATIONS

- ⊙ PLAN OF ANY BORING
  - 1" SAAMPLER BORING
  - ROTARY WASH BORING
  - ⊙ 1" CLOSED SAMPLER DRIVEN
  - ⊙ CORE BORING
  - ⊙ 2 1/2" PENETROMETER DRIVEN
  - 1 3/8" SAMPLER BORING
  - 2" TO 5" AUGER BORING
  - 8" TO 20" AUGER BORING
  - CASING DRIVEN
  - JET BORING
  - ⊙ SAMPLE TAKEN
  - ⊙ 10" A. F. D. DRIVEN
- THE APPROPRIATE BORING SYMBOL DESIGNATE THE METHOD OF OPERATION AND SHOWN AT THE UPPER RIGHT HAND CORNER OF THE RESPECTIVE BORING WHERE TOOL CHANGES WERE MADE DURING THE BORING OPERATION SYMBOLS ARE SHOWN AT THE POINT OF CHANGE.

LEGEND OF EARTH MATERIALS

- GRAVEL - G
- SILTY CLAY - Si C

DIVISION OF ENGINEERING SERVICES - MATERIALS AND GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
07	LA	10	33.2/37.2	1201	1475

Sungro Cho 10/13/11  
 REGISTERED CIVIL ENGINEER DATE

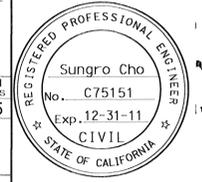
**PUNTE AVENUE WIDENING**  
**LOG OF TEST BORINGS 4 OF 4**

UNIT:	3643	CONTRACT No.	BRIDGE No.
PROJ. No. & PHASE:	07000000851	07-1170U1	53-0666

AS-BUILT VERT DATUM: xx CONVERSION: xx  
 NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

ABBREVIATIONS

- EL. 60.4 ELEVATION OF GROUND AT TEST HOLE
- PIPE
- NO AS BUILT CHANGES



NOTES

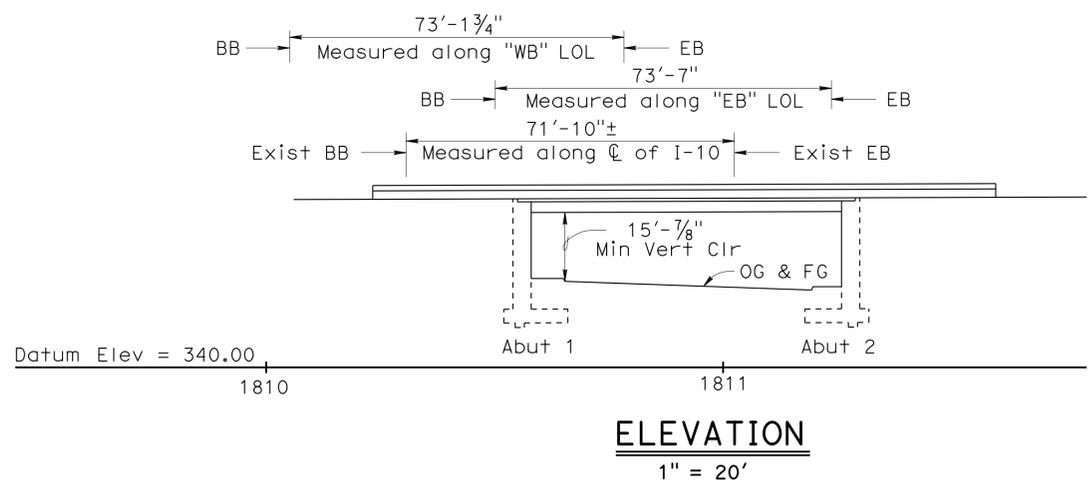
THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 2, ARTICLE (C) OF THE STANDARD SPECIFICATIONS AND TO THE SPECIAL PROVISIONS ACCOMPANYING THIS SET OF PLANS.

CLASSIFICATION OF EARTH MATERIAL AS SHOWN ON THIS SHEET IS BASED UPON FIELD INSPECTION AND IS NOT TO BE CONSTRUED TO IMPLY MECHANICAL ANALYSIS.

Puente Ave UC  
**ROUTE 26/170 SEPARATION**  
**LOG OF TEST BORINGS**  
 HORIZ. 1" = 20'  
 VERT. 1" = 10'  
 FILE NO. E-53  
 PROJ. NO. 53-666 DRAWING NO. 3209-13

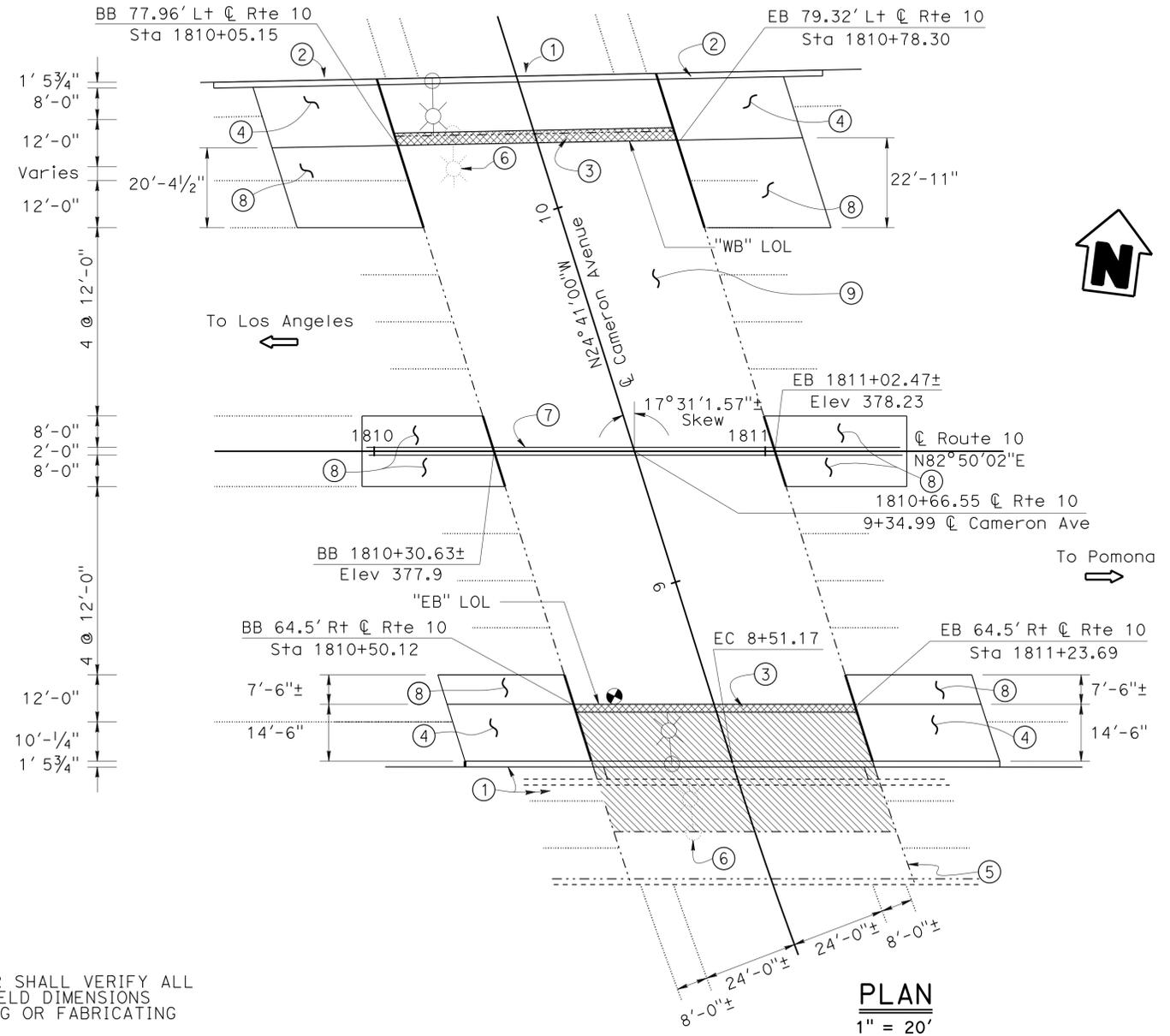
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1202	1475

REGISTERED CIVIL ENGINEER DATE 12/19/11  
 PLANS APPROVAL DATE 6-10-13  
 JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL  
 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.



**LEGEND**

- Indicates Existing Structure.
- Proposed New EB Off Ramp UC 53-3047S.
- Indicates New Structure.
- ▨ Closure Pour.
- Point of Minimum Vertical Clearance.
- ⊗ Existing Electroliers.
- ➔ Direction of Traffic.
- ▨ Indicates Existing Bridge to be Removed.
- ⊗ New Electroliers.
- Indicates location of New Joint Seal.



**NOTES:**

- ① Concrete Barrier Type 736A (Mod).
- ② Soundwall (Masonry Block) on Barrier Type 736A (Mod).
- ③ Closure Pour.
- ④ Structure Approach Type N(30S).
- ⑤ New EB Off Ramp UC 53-3047S.
- ⑥ Remove & Replace Existing Electroliers. See "ROAD PLANS".
- ⑦ Remove Existing Barrier Type 50A and Construct Concrete Barrier Type 60GA (Mod).
- ⑧ Structure Approach Type R(30S).
- ⑨ Prepare existing concrete bridge deck surface and treat bridge deck with Methacrylate, limit see "TYPICAL SECTION".

**QUANTITIES**

PREPARE CONCRETE BRIDGE DECK SURFACE	12,562	SQFT
BRIDGE REMOVAL (PORTION), LOCATION C	LUMP	SUM
STRUCTURE EXCAVATION (BRIDGE)	475	CY
STRUCTURE BACKFILL (BRIDGE)	799	CY
3" SUPPLY LINE (BRIDGE)	288	LF
AGGREGATE BASE (APPROACH SLAB)	11	CY
PRESTRESSING CAST-IN-PLACE CONCRETE	LUMP	SUM
JACKING SUPERSTRUCTURE	LUMP	SUM
STRUCTURAL CONCRETE, BRIDGE FOOTING	185	CY
STRUCTURAL CONCRETE, BRIDGE	355	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	70	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	109	CY
DRILL AND BOND DOWEL	245	LF
REFINISH CONCRETE SURFACE	269	SQFT
SOUND WALL (MASONRY BLOCK)	1,867	SQFT
JOINT SEAL (MR 1/2")	169	LF
BAR REINFORCING STEEL (BRIDGE)	97,750	LB
TREAT BRIDGE DECK	12,562	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	140	GAL
CONCRETE BARRIER (TYPE 60GA MODIFIED)	138	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	207	LF
CONCRETE BARRIER (TYPE 736A MODIFIED)	85	LF

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

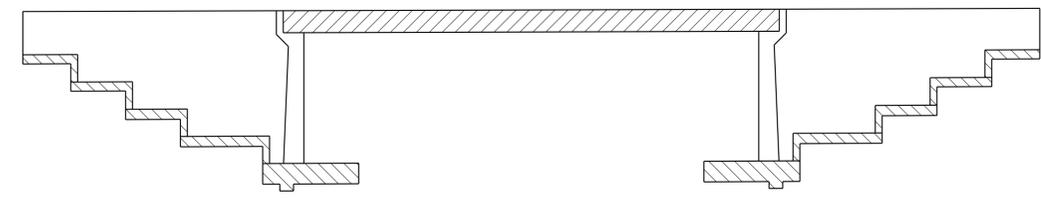
<b>HOWARD NG</b> DESIGN ENGINEER	DESIGN BY Brijeshkumar Patel CHECKED Homa Iraninejadian	LOAD & RESISTANCE FACTOR DESIGN LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO. 53-0667	<b>CAMERON AVE UC (WIDEN)</b> <b>GENERAL PLAN 1</b>
	DETAILS BY Antonette L. Ong CHECKED Homa Iraninejadian	LAYOUT BY Brijeshkumar Patel CHECKED Homa Iraninejadian			POST MILE 34.29	
	QUANTITIES BY Brijeshkumar Patel CHECKED Edward B. Mu	SPECIFICATIONS BY James Choi CHECKED James Choi				
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1 CONTRACT NO.: 1170U1		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)			FILE => 53-0667-a-gp01.dgn		REVISION DATES: 06/28/12, 06/21/12, 06/28/12 SHEET 1 OF 26	



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1204	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
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**STANDARD PLANS DATED MAY 2006**

- A10A ACRONYMS AND ABBREVIATIONS (A-L)
- A10B ACRONYMS AND ABBREVIATIONS (M-Z)
- A10C SYMBOLS (SHEET 1 OF 2)
- A10D SYMBOLS (SHEET 2 OF 2)
- A62C LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
- A76F CONCRETE BARRIER TYPE 60GE
- BO-1 BRIDGE DETAILS
- BO-3 BRIDGE DETAILS
- BO-5 BRIDGE DETAILS
- BO-13 BRIDGE DETAILS
- B6-10 UTILITY OPENING T-BEAM
- RSP B6-21 JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
- B8-5 CAST-IN-PLACE PRESTRESSED GIRDER DETAILS
- B11-52 CHAIN LINK RAILING TYPE 7
- B11-56 CONCRETE BARRIER TYPE 736
- B14-3 COMMUNICATION AND SPRINKLER CONTROL CONDUITS
- T3 TEMPORARY RAILING (TYPE K)



**CONCRETE STRENGTH AND TYPE LIMITS**

No Scale

- Structural Concrete, Bridge (3.6 ksi @ 28 days).
- Structural Concrete, Bridge (5.0 ksi @ 28 days).
- Structural Concrete, Bridge Footing.

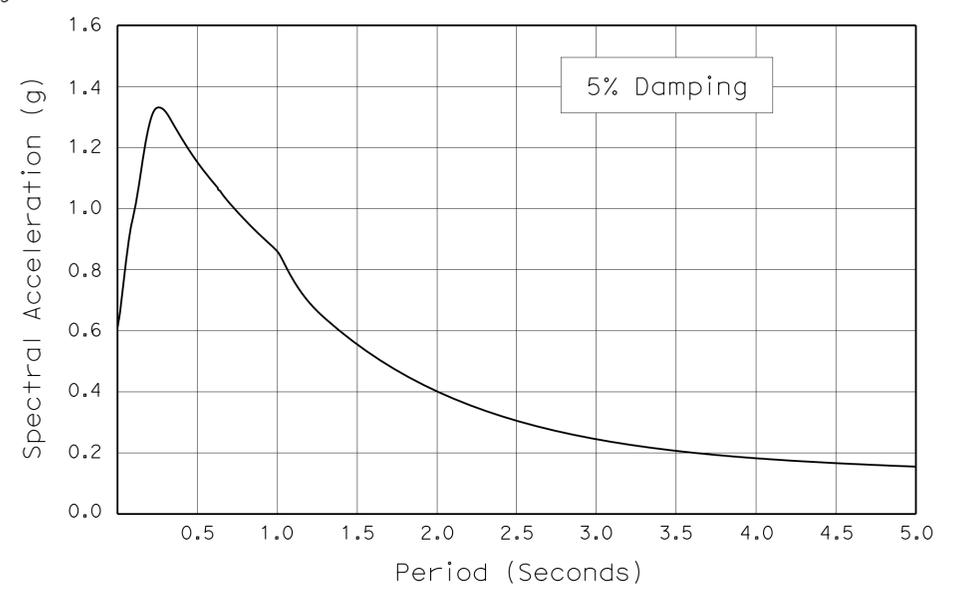
**GENERAL NOTES**

**LOAD AND RESISTANCE FACTOR DESIGN**

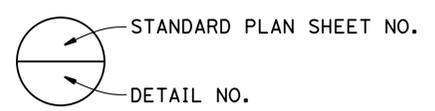
- DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition and the Caltrans Amendments, preface dated 2008; except that earth retaining wall, soundwall, approach slabs and bridge (includ barrier and railing ) details taken from Standard Plans May 2006 and Standard Bridge details XS sheets are desigend using bridge desingn specification ('96 AASTHO w/Revision by Caltrans).
- SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC) version 1.4 June 2006
- SOUNDWALL: Sound wall weight see "SOUNDWALL MASONRY BLOCK ON BRIDGE" SHEET, distributed as shown below.
- LEFT WIDEN
- |        |               |                |
|--------|---------------|----------------|
| Girder | Left Exterior | Right Exterior |
| Shear  | 100%          | 0%             |
| Moment | 20%           | 20%            |
- DEAD LOAD: Includes 35 PSF for future wearing surface. (Including 10% Metal Deck Form)
- LIVE LOAD: HL-93 and permit design load
- SEISMIC LOADING: Soil Profile : Vs30 = 1161 ft/s, Moment Magnitude = 7.5  
Peak Ground Acceleration = 0.60g  
See ARS Curve
- REINFORCED CONCRETE: ASTM A706  
f<sub>y</sub> = 60 ksi  
f<sub>c</sub> = 3.6 ksi  
n=8  
and see "CONCRETE STRENGTH AND TYPE LIMITS"
- PRESTRESSED CONCRETE: See "PRESTRESSING NOTES" on "GIRDER LAYOUT" sheet

**INDEX TO PLANS**

- | NO. | SHEET NAME                                       |
|-----|--|
| 1.  | GENERAL PLAN NO. 1                               |
| 2.  | GENERAL PLAN NO. 2                               |
| 3.  | INDEX TO PLANS                                   |
| 4.  | FOUNDATION PLAN                                  |
| 5.  | CONCRETE REMOVAL                                 |
| 6.  | ABUTMENT LAYOUT 1                                |
| 7.  | ABUTMENT LAYOUT 2                                |
| 8.  | ABUTMENT DETAILS NO. 1                           |
| 9.  | ABUTMENT DETAILS NO. 2                           |
| 10. | ABUTMENT DETAILS NO. 3                           |
| 11. | ABUTMENT RETAINING WALL DETAILS                  |
| 12. | TYPICAL SECTION                                  |
| 13. | GIRDER LAYOUT 1                                  |
| 14. | GIRDER LAYOUT 2                                  |
| 15. | GIRDER REINFORCEMENT                             |
| 16. | MISCELLANEOUS DETAILS                            |
| 17. | SOUNDWALL - MASONRY BLOCK WITH BARRIER ON BRIDGE |
| 18. | RETAINING WALL TYPE 1SWB                         |
| 19. | STRUCTURE APPROACH TYPE N(30S)                   |
| 20. | STRUCTURE APPROACH TYPE R(30S)                   |
| 21. | STRUCTURE APPROACH DRAIN DETAILS                 |
| 22. | CONCRETE BARRIER TYPE 736 (MOD) DETAILS          |
| 23. | LOG OF TEST BORINGS 1 OF 4                       |
| 24. | LOG OF TEST BORINGS 2 OF 4                       |
| 25. | LOG OF TEST BORINGS 3 OF 4                       |
| 26. | LOG OF TEST BORINGS 4 OF 4                       |



**ARS CURVE**



Support Location	Working Stress Design (WSD)	
	Permissible Gross Contact Stress (ksf)	Allowable Gross Contact Stress (ksf)
Abut No. 1	5.2	6.0
Abut No. 2	5.2	6.0

**SPREAD FOOTING DATA TABLE**

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1205	1475

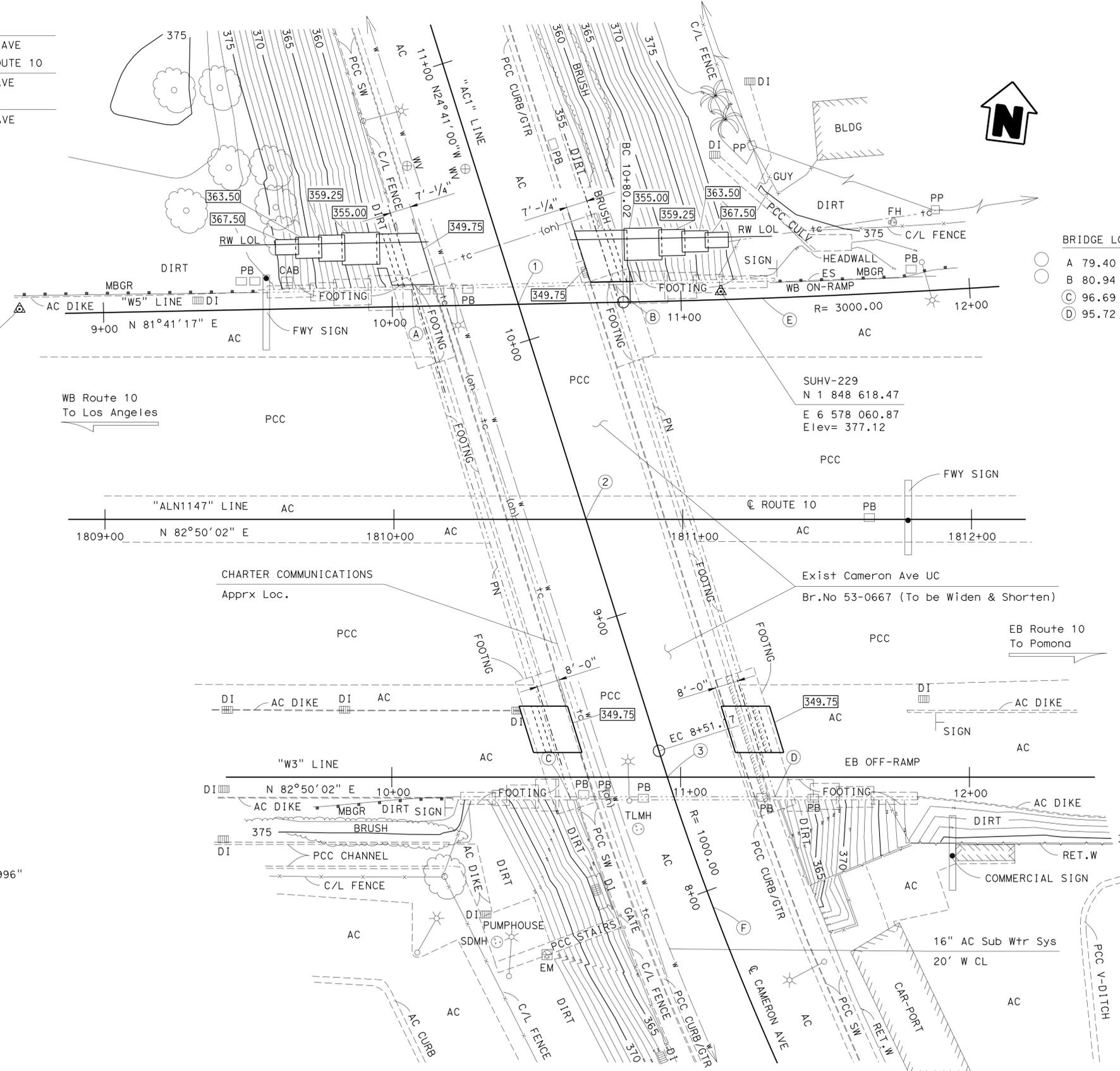
12/19/11  
REGISTERED CIVIL ENGINEER DATE

6-10-13  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 JASON FANG  
 No. C 70467  
 Exp. 09/30/2012  
 CIVIL  
 STATE OF CALIFORNIA

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- ① Sta 10+43.67, "W5" LINE =
- Sta 10+12.88, "AC1" LINE, @ CAMERON AVE
- Sta 1810+66.55, "ALN1147" LINE, @ ROUTE 10
- ② Sta 9+34.99, "AC1" LINE, @ CAMERON AVE
- Sta 10+95.42, "W3" LINE =
- ③ Sta 8+41.65, "AC1" LINE, @ CAMERON AVE



- BRIDGE LOCATION (Exist Br.No 53-0667)
- A 79.40 Ft Lt "ALN1147" Line, @ ROUTE 10 Sta 1810+06.16, Elev= 376.73±
  - B 80.94 Ft Lt "ALN1147" Line, @ ROUTE 10 Sta 1810+76.71, Elev= 376.94±
  - C 96.69 Ft Rt "ALN1147" Line, @ ROUTE 10 Sta 1810+61.20, Elev= 377.23±
  - D 95.72 Ft Rt "ALN1147" Line, @ ROUTE 10 Sta 1811+32.06, Elev= 378.16±

CURVE DATA				
No.	R	Δ	T	L
E	3000.00	04°51'42"	127.35	254.55
F	1000.00	23°52'44"	211.45	416.76

**LEGEND:**  
 [XXX.XX] Indicates bottom of footing elevation

**NOTES:**  
 UNDERGROUND UTILITIES AS SHOWN ARE APPROXIMATE

**SURVEY CONTROL**

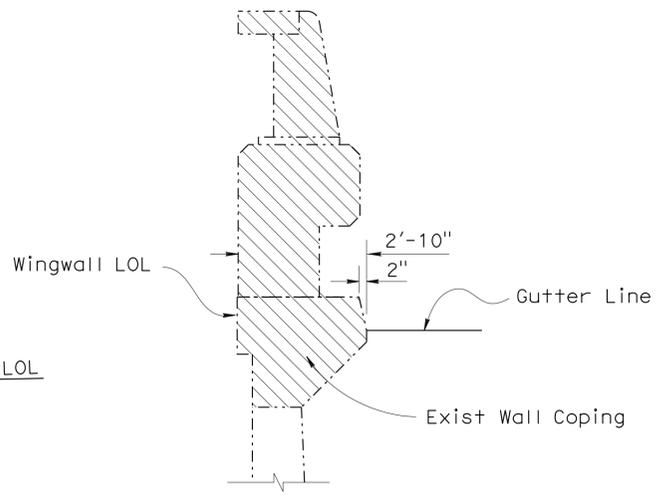
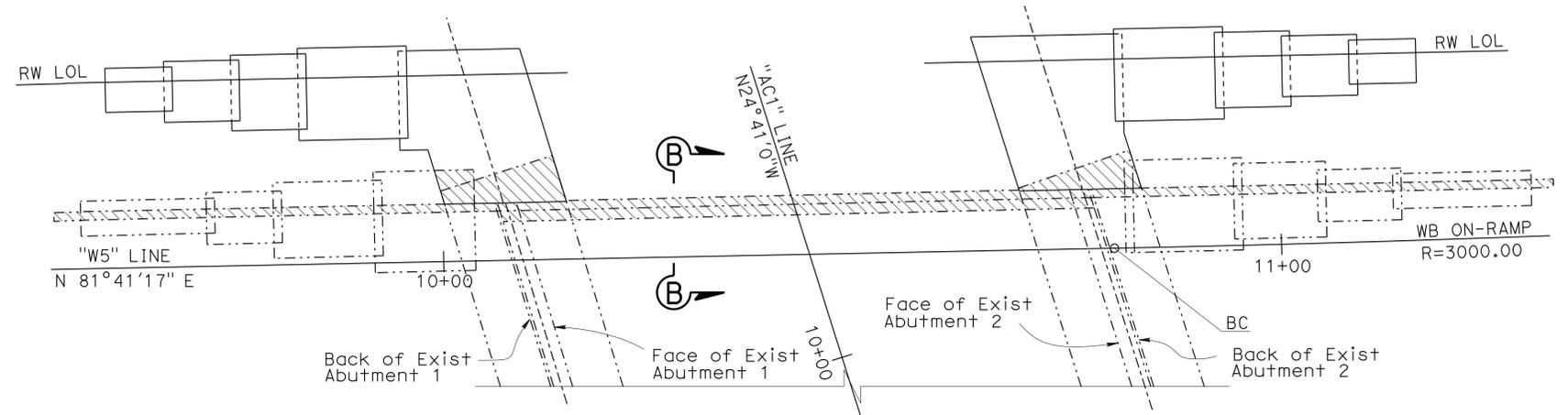
PRHV-912  
 FND BRASS DISK STAMPED "LA 10-34.3 1996"  
 72.62 Ft Lt @ ROUTE 10  
 Sta 1808+70.39  
 N 1 848 582.14  
 E 6 577 820.74  
 Elev= 376.05

SUHV-229  
 SET PK Nail in Shoulder  
 78.71 Ft Lt @ ROUTE 10  
 Sta 1811+13.18  
 N 1 848 618.47  
 E 6 578 060.87  
 Elev= 377.12

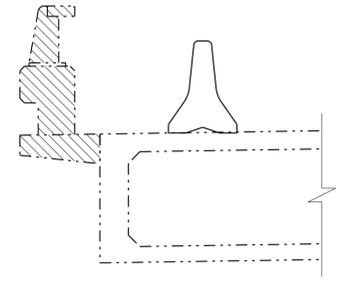
<b>PRELIMINARY INVESTIGATION SECTION</b>				DESIGN BY Brijeshkumar Patel	CHECKED Homay Iraninejadan	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO. 53-0667	<b>CAMERON AVE UC (WIDEN)</b> <b>FOUNDATION PLAN</b>
SCALE 1"=20'	VERT.DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY Antonette L. Ong	CHECKED Homay Iraninejadan	POST MILE 34.29				
ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED BY V.PHAM 04/2009	CHECKED BY S.ALIVIO 04/2009	QUANTITIES BY Brijeshkumar Patel	CHECKED Edward B. Mu					

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1 CONTRACT NO.: 1170U1 DISREGARD PRINTS BEARING EARLIER REVISION DATES 12/19/11 07/24/11 08/28/11 SHEET 4 OF 26

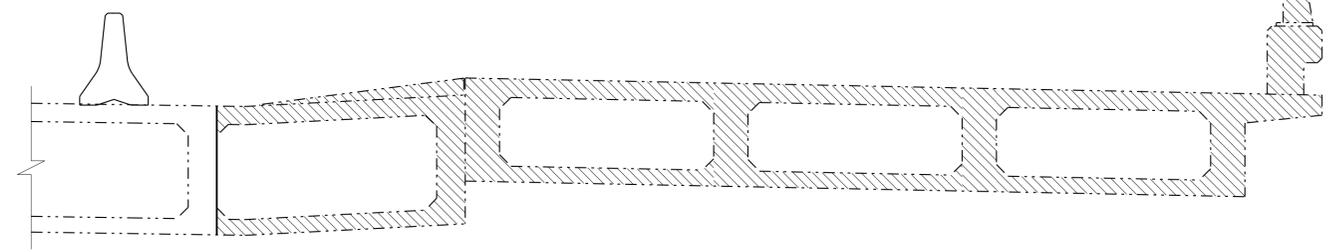
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1206	1475
			12/19/11	DATE	
			6-10-13	PLANS APPROVAL DATE	
REGISTERED CIVIL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



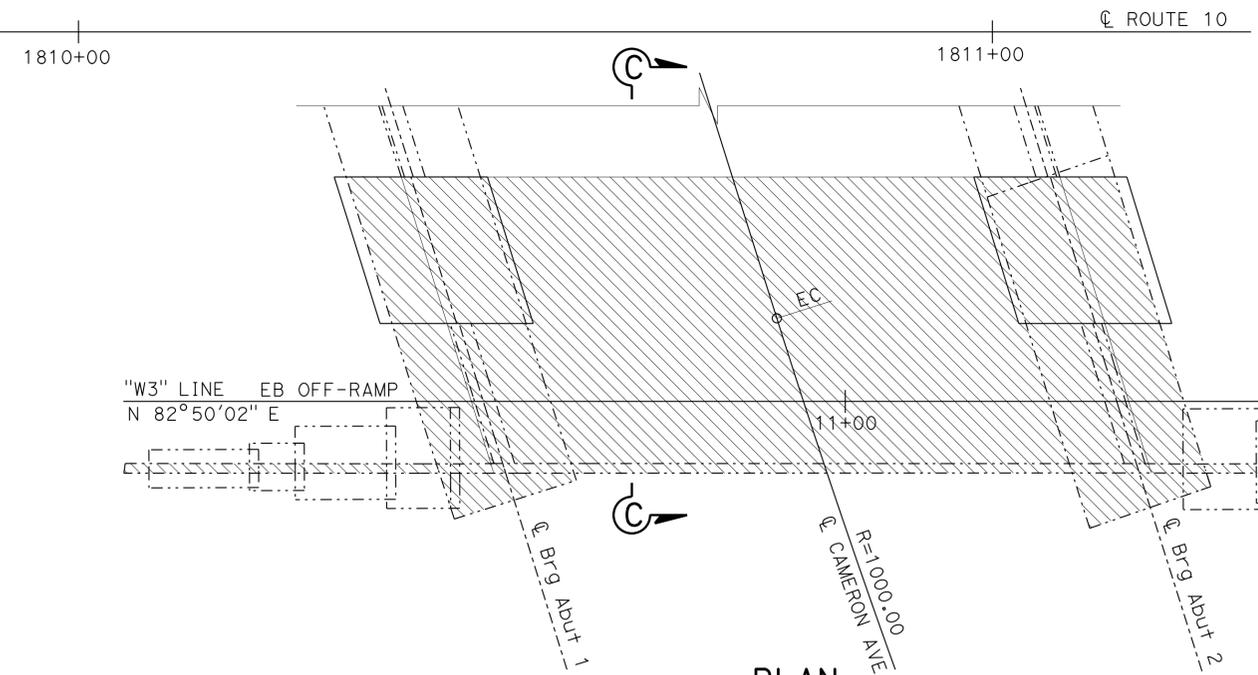
**SECTION A-A**  
No Scale



**SECTION B-B**  
3/8" = 1'-0"



**SECTION C-C**  
3/8" = 1'-0"



**PLAN**  
1" = 10'

**LEGEND**

Bridge Removal (Portion)

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

DESIGN	BY Brijesh kumar Patel	CHECKED Homa. Iraninejadian
DETAILS	BY Antonette L. Ong	CHECKED Homa. Iraninejadian
QUANTITIES	BY Brijesh kumar Patel	CHECKED Edward B. Mu

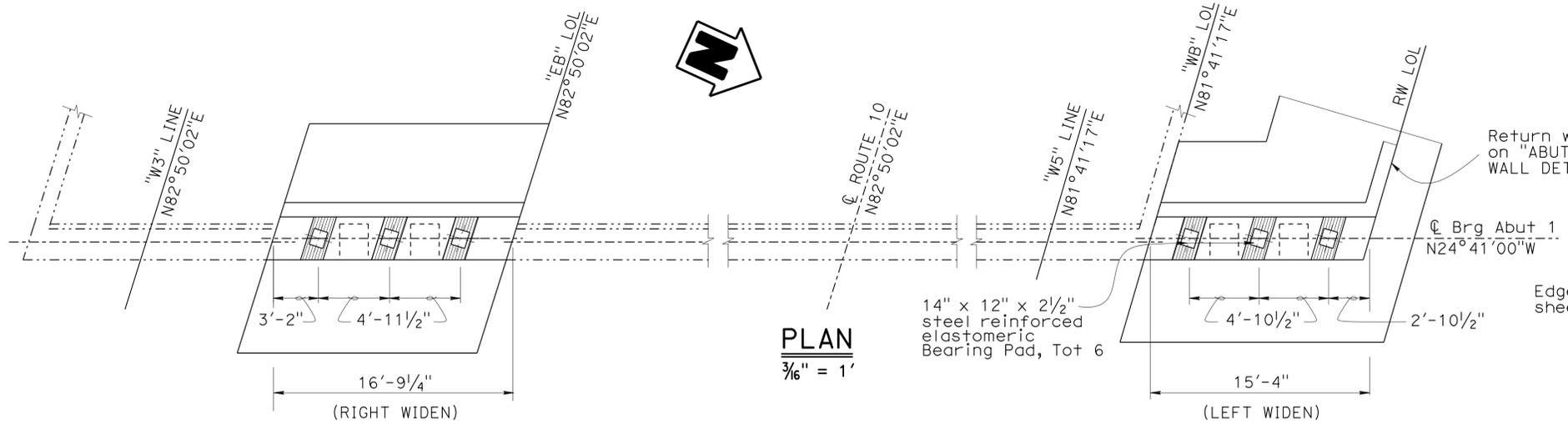
**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

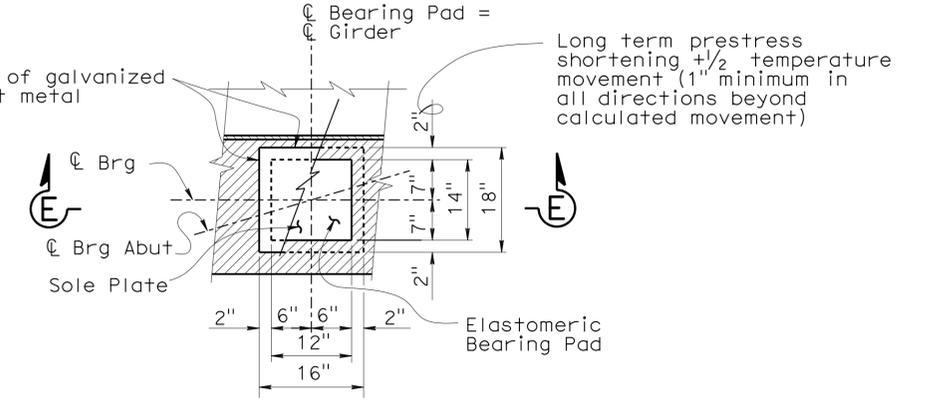
BRIDGE NO.	53-0667
POST MILE	34.29

**CAMERON AVE UC (WIDEN)**  
**CONCRETE REMOVAL**

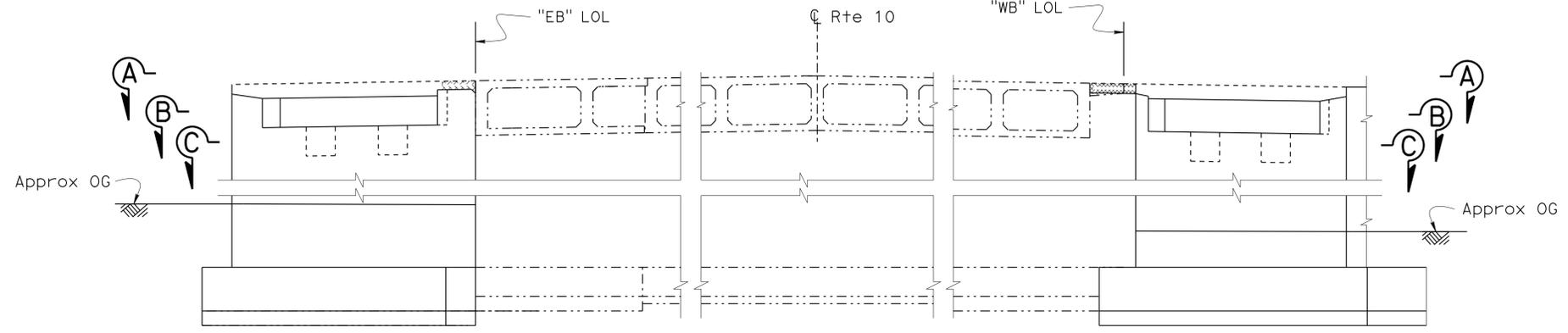
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1207	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



**PLAN**  
3/16" = 1'

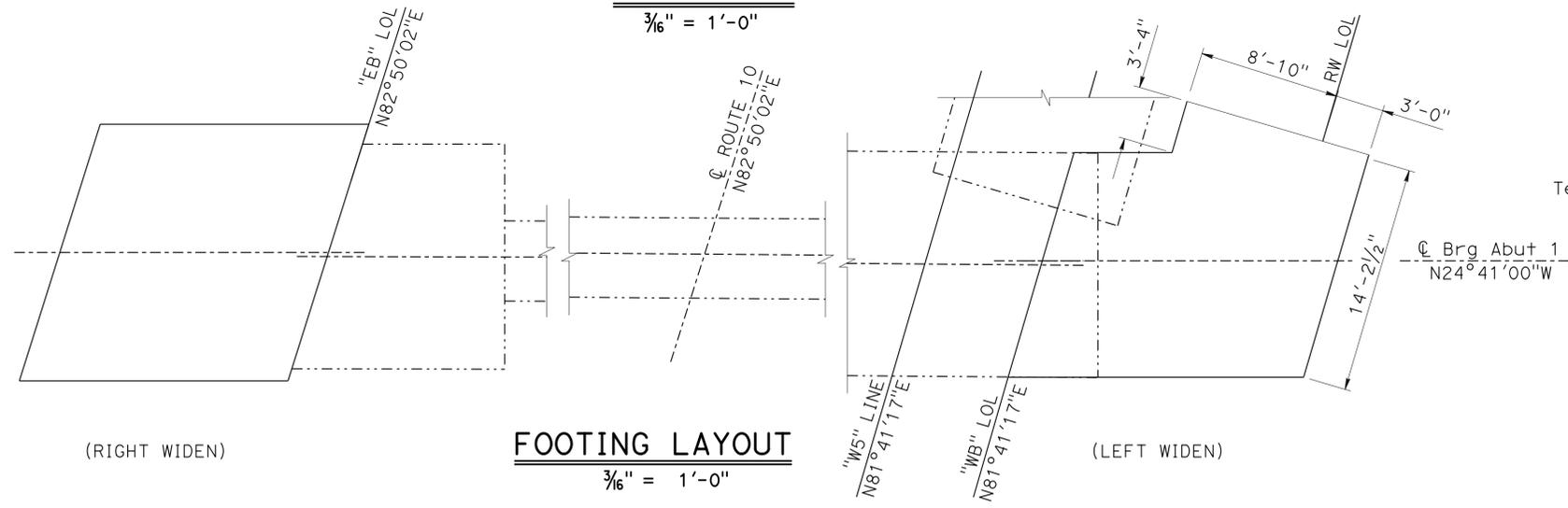


**PLAN**

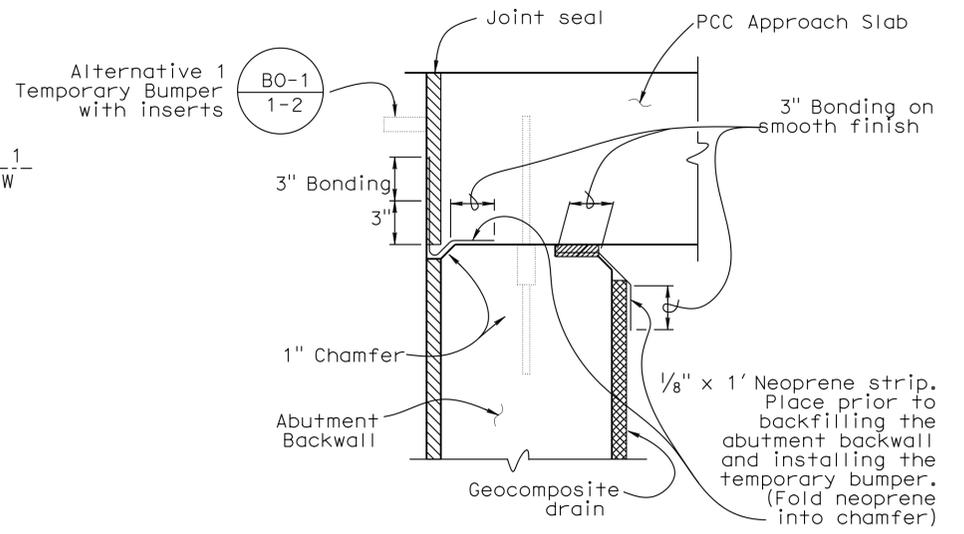


**ELEVATION**  
3/16" = 1'-0"

**SECTION E-E  
BEARING PAD DETAIL**  
No Scale  
Details typical at all bearing pads



**FOOTING LAYOUT**  
3/16" = 1'-0"



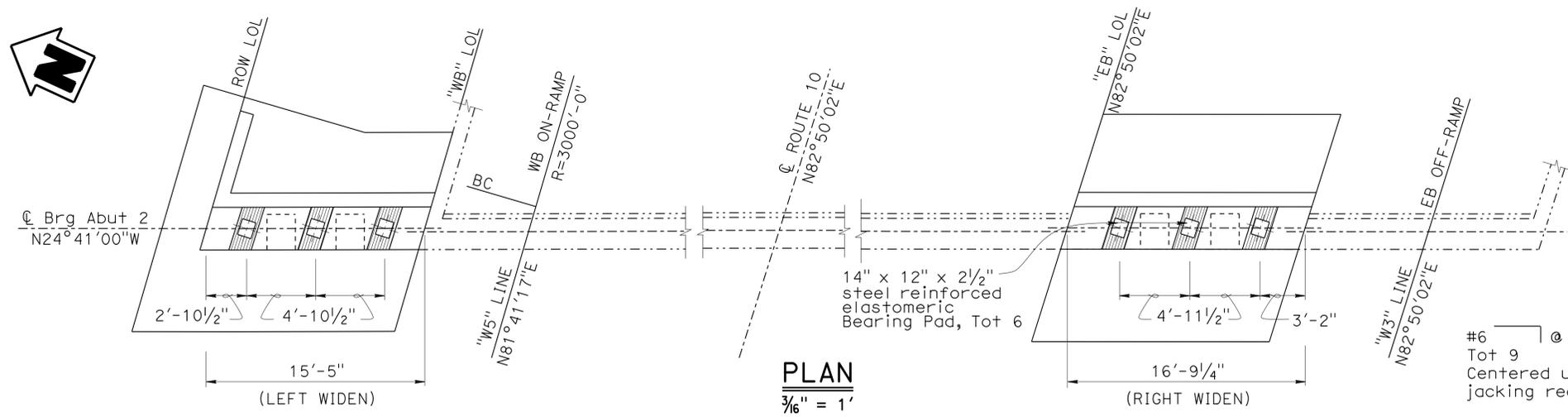
**JOINT PROTECTION DETAIL**  
No Scale

NOTE:  
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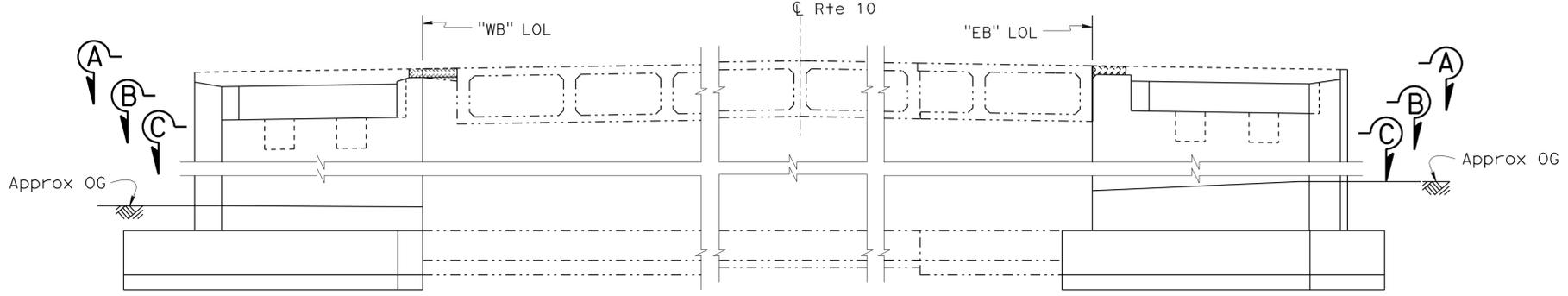
- NOTES:**
1. For "Section A-A", see " ABUTMENT DETAILS NO. 2" sheet.
  2. For "Section B-B and C-C", see " ABUTMENT DETAILS NO. 3" sheet.
  3. For Drill and Bond Details, see "ABUTMENT DETAIL NO. 1" sheet.

DESIGN	BY	Brijesh kumar Patel	CHECKED	Homa. Iraninejadian	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO.	53-0667	<b>CAMERON AVE UC (WIDEN)</b>					
	DETAILS	BY	Antonette L. Ong	CHECKED			Homa. Iraninejadian	POST MILE		34.29	<b>ABUTMENT 1 LAYOUT</b>			
QUANTITIES	BY	Brijesh kumar Patel	CHECKED	Edward B. Mu	UNIT: 3622	PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.: 1170U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF			
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)										07/26/11	08/02/11	12/17/11	6	26

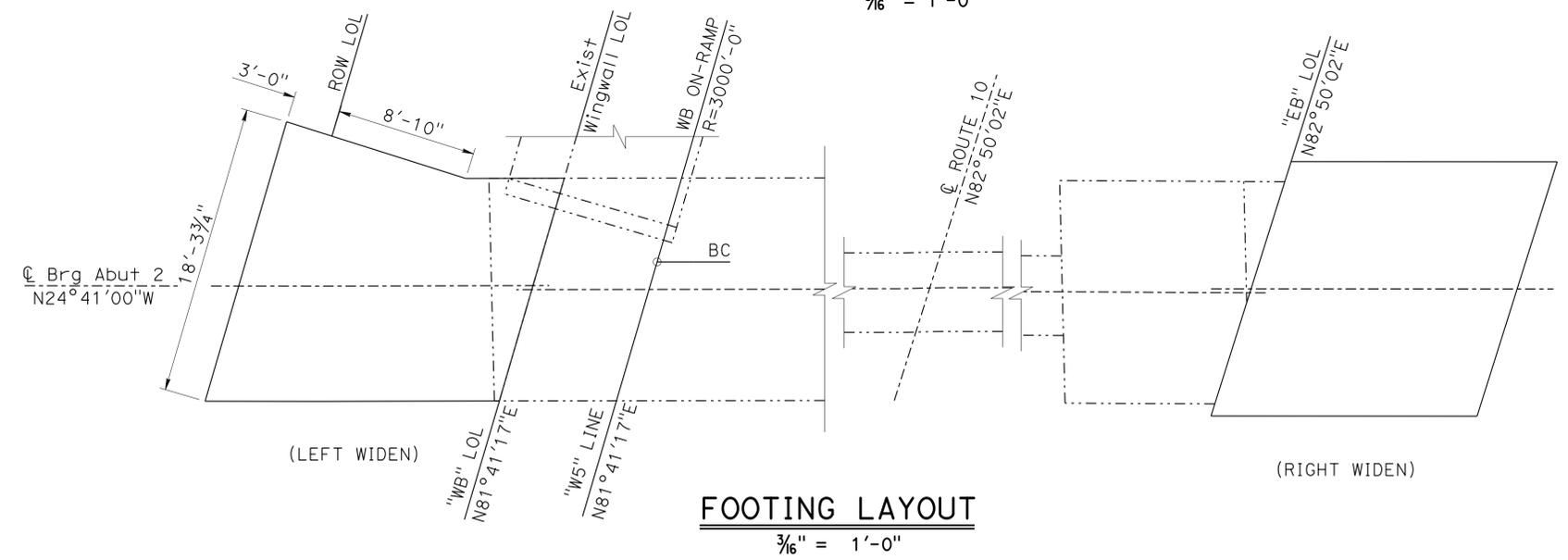
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07	LA	10	33.2/37.2	1208	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



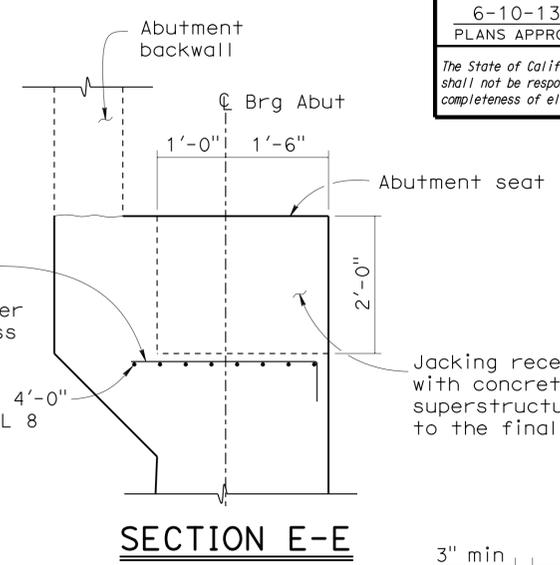
**PLAN**  
3/16" = 1'



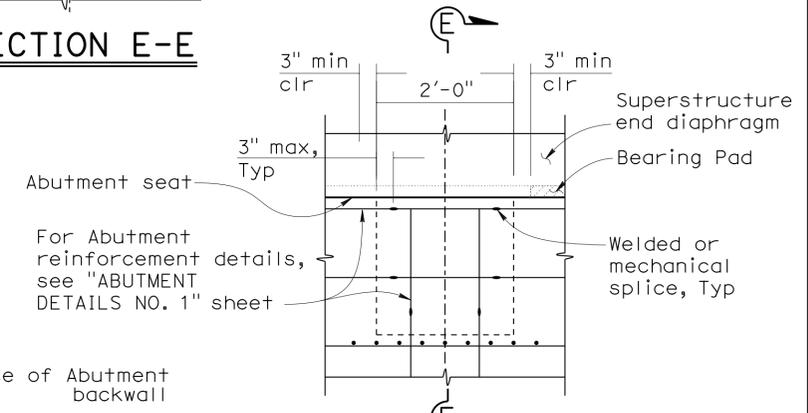
**ELEVATION**  
3/16" = 1'-0"



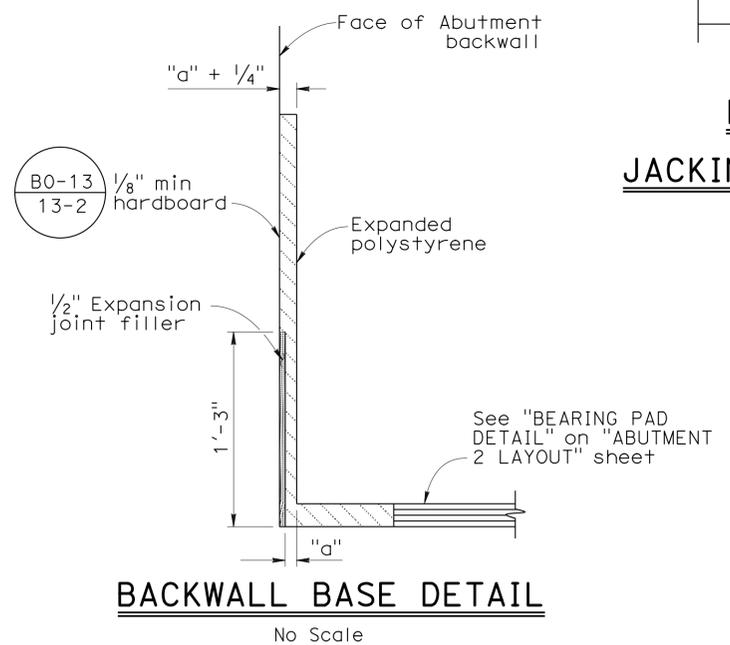
**FOOTING LAYOUT**  
3/16" = 1'-0"



**SECTION E-E**



**FRONT VIEW JACKING RECESS DETAIL**  
No Scale



**BACKWALL BASE DETAIL**  
No Scale

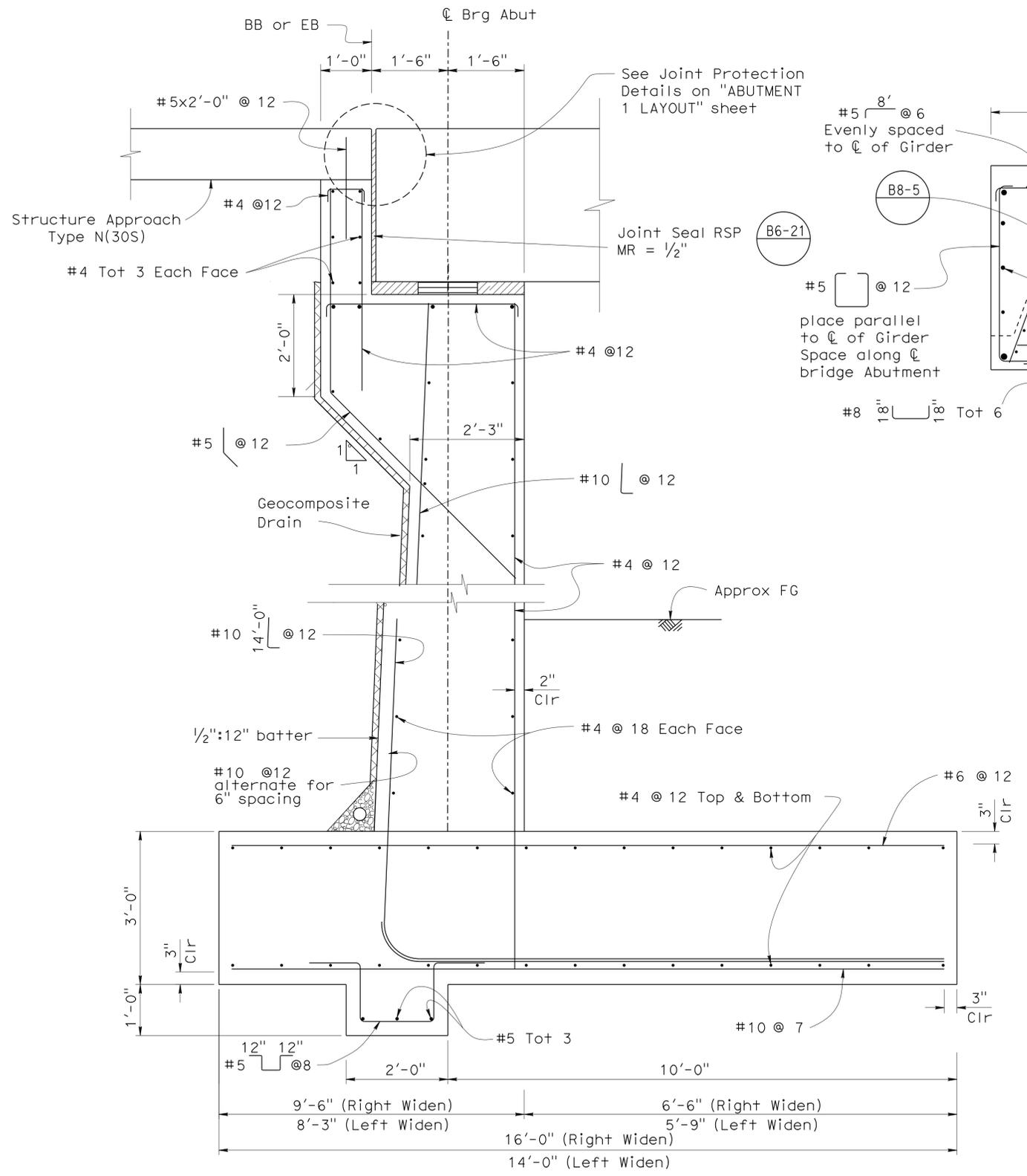
**NOTES:**

1. For "Section A-A", see " ABUTMENT DETAILS NO. 2" sheet.
2. For "Section B-B and C-C", see " ABUTMENT DETAILS NO. 3" sheet.
3. For Drill and Bond Details, see "ABUTMENT DETAIL NO. 1" sheet.

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

DESIGN	BY	Brijesh kumar Patel	CHECKED	Homa. Iraninejadian	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO.	53-0667	<b>CAMERON AVE UC (WIDEN)</b>					
	DETAILS	BY	Antonette L. Ong	CHECKED			Homa. Iraninejadian	POST MILE		34.29	<b>ABUTMENT 2 LAYOUT</b>			
QUANTITIES	BY	Brijesh kumar Patel	CHECKED	Edward B. Mu	UNIT: 3622	PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.: 1170U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF			
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)										07/22/11	08/02/11	12/12/11	7	26

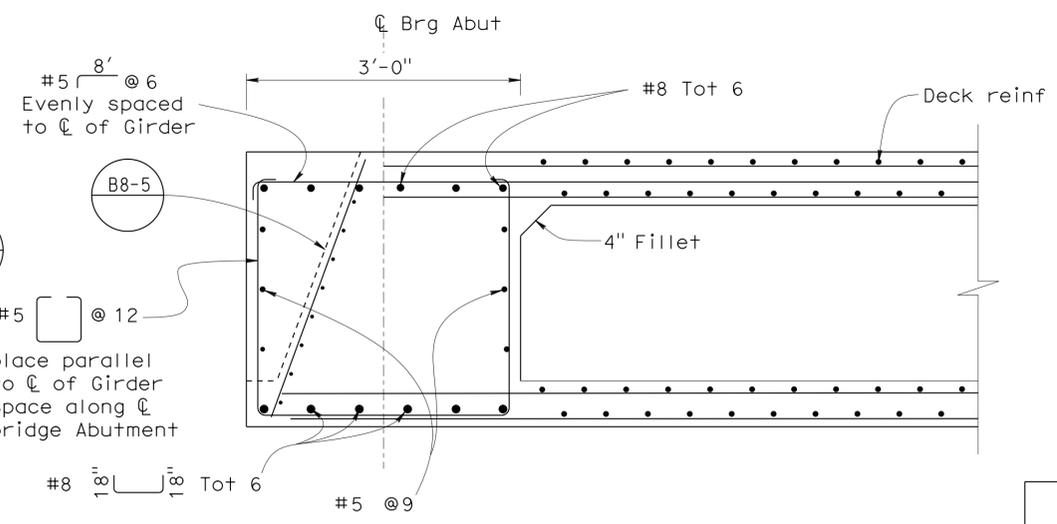
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1209	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA					
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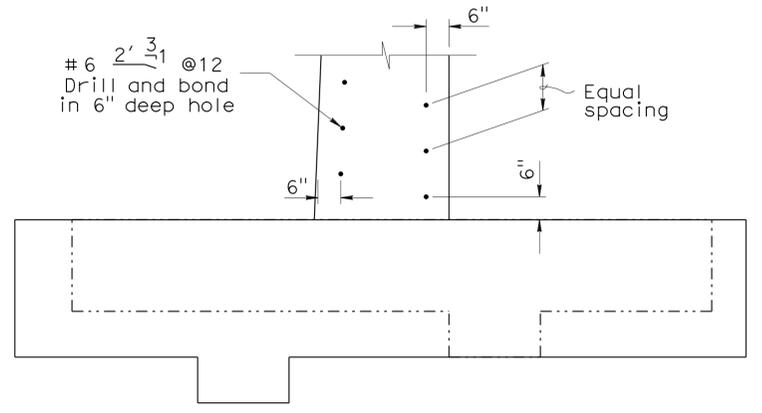
**ABUTMENT SECTION**  
3/4" = 1'-0"

NOTE:  
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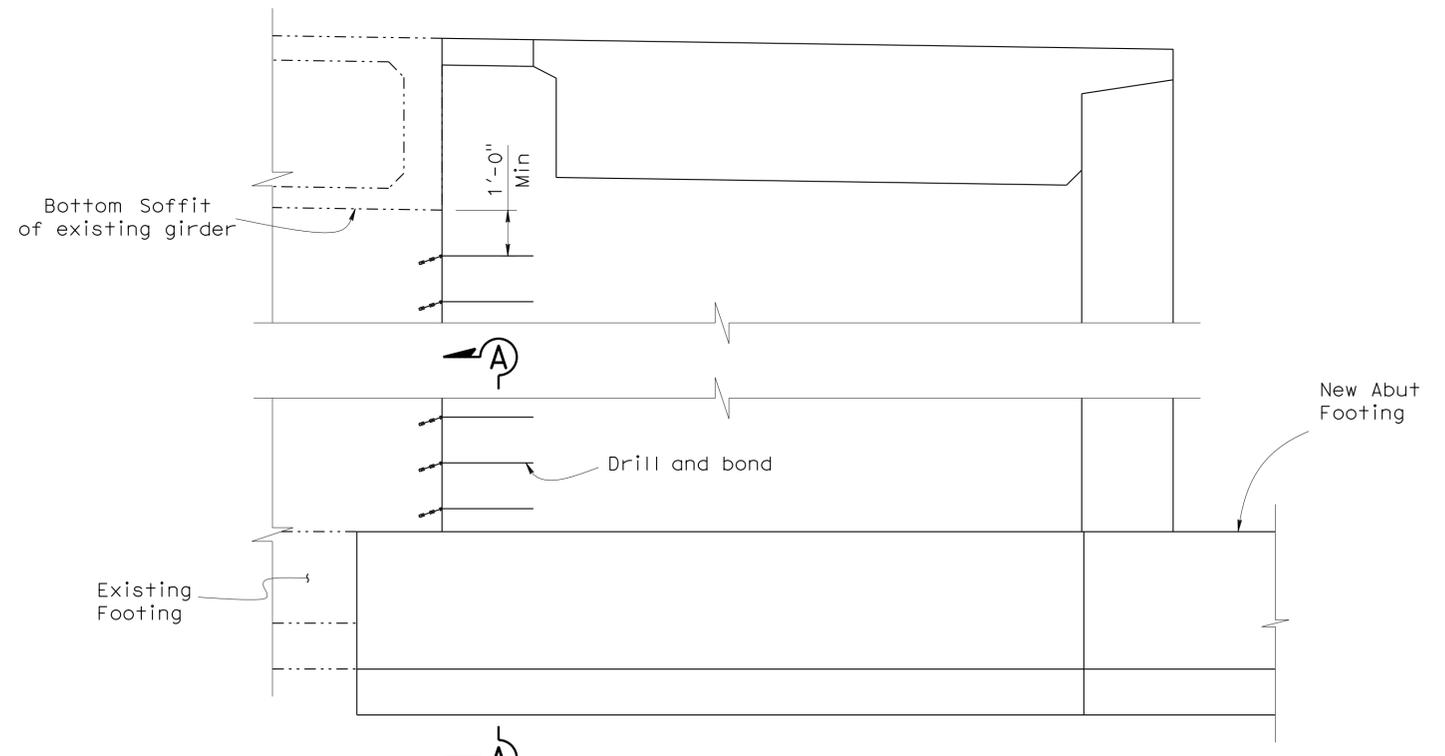
NOTES: Abutment 1 details shown, Abutment 2 similar  
For drainage details see, "STRUCTURE APPROACH DRAINAGE DETAILS" sheet



**END DIAPHRAGM DETAIL**  
1" = 1'-0"



**SECTION A-A**  
1/2" = 1'-0"



**JOINT DETAIL**  
1/2" = 1'-0"

DESIGN	BY Brijesh kumar Patel	CHECKED Homa. Iraninejadan
DETAILS	BY Antonette L. Ong	CHECKED Homa. Iraninejadan
QUANTITIES	BY Brijesh kumar Patel	CHECKED Edward B. Mu

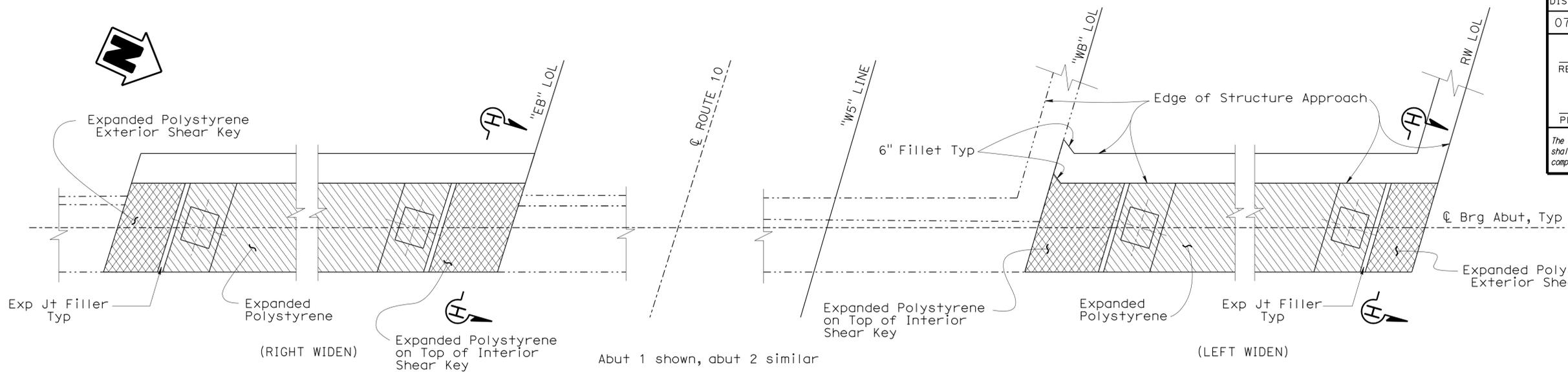
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

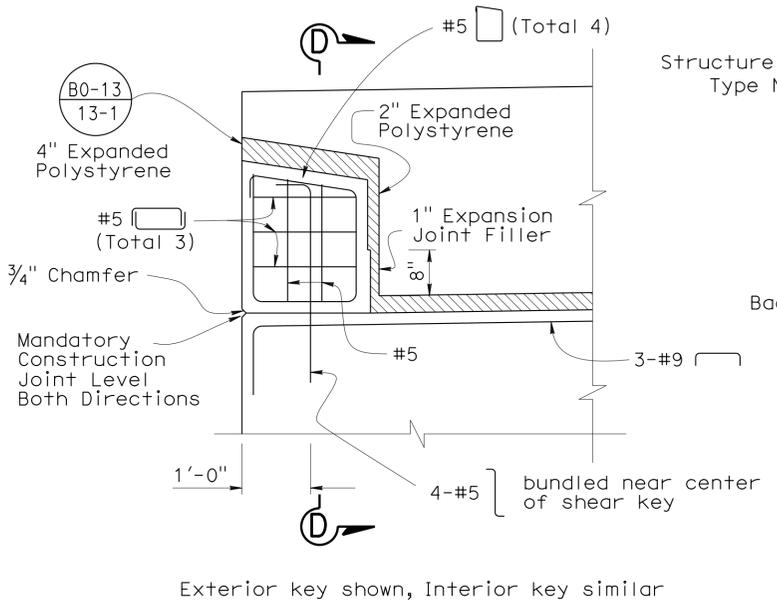
BRIDGE NO.	53-0667
POST MILE	34.29

**CAMERON AVE UC (WIDEN)**  
**ABUTMENT DETAILS NO. 1**

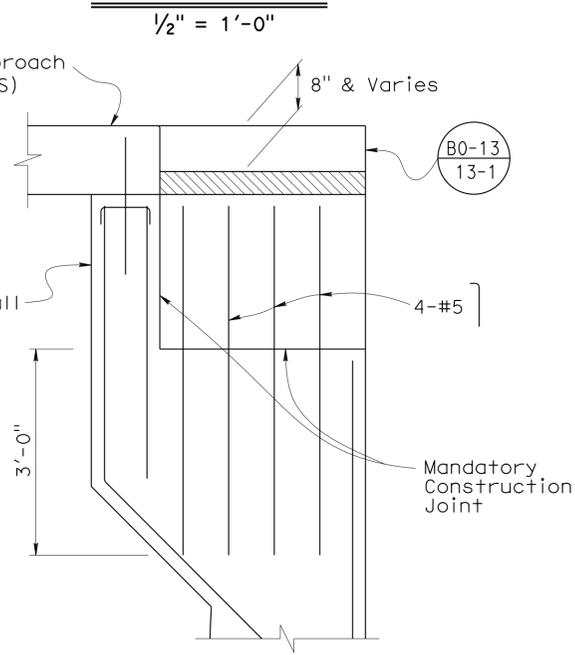
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1210	1475
			12/19/11	DATE	
			6-10-13	PLANS APPROVAL DATE	
REGISTERED CIVIL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA					
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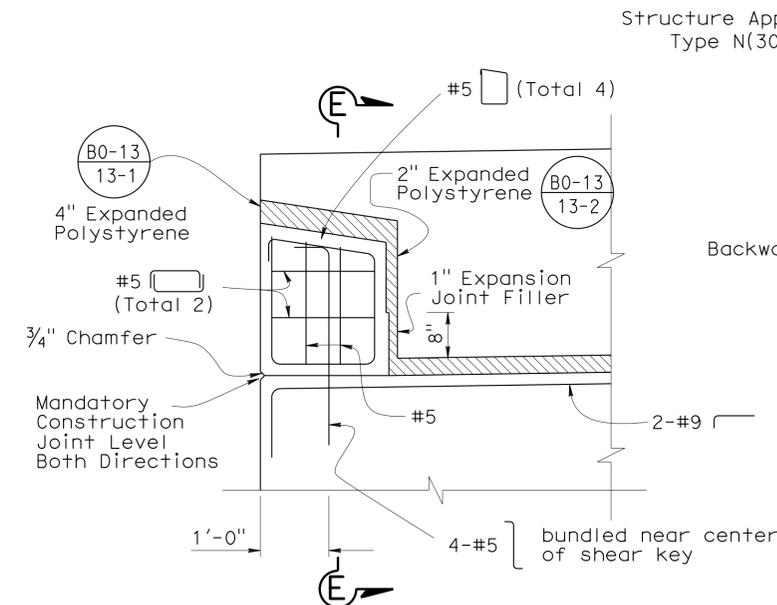
**SECTION A-A**  
1/2" = 1'-0"



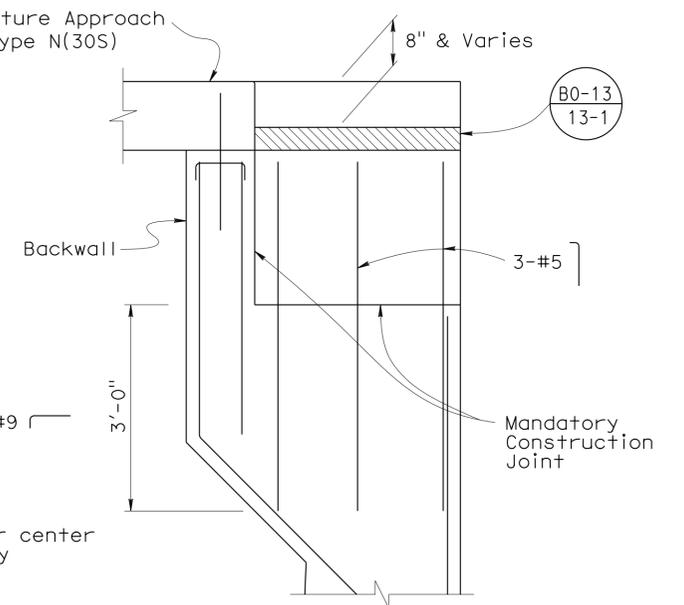
**SHEAR KEY DETAILS (LEFT WIDENING)**  
3/4" = 1'-0"



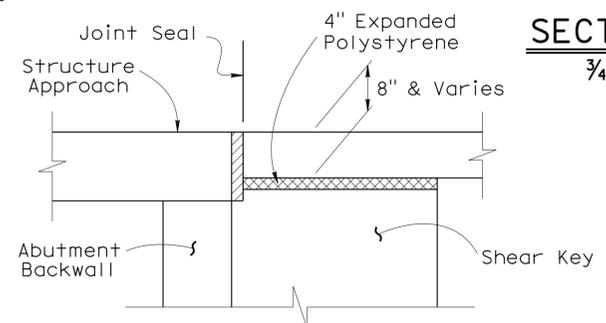
**SECTION D-D**  
3/4" = 1'-0"



**SHEAR KEY DETAILS (RIGHT WIDENING)**  
3/4" = 1'-0"



**SECTION E-E**  
3/4" = 1'-0"



**SECTION H-H**  
No Scale

- NOTES:**
- Mandatory construction joint surface to be smooth and lined with 15lb construction paper.
  - Shear key and wingwall reinforcement to be discontinuous as shown.
  - Vertical shear key reinforcement (#9 Bar) to be galvanized.
  - For details not shown see "ABUTMENT DETAILS No. 3" SHEET.

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

DESIGN	BY Brijesh kumar Patel	CHECKED Homa. Iraninejadian
DETAILS	BY Antonette L. Ong	CHECKED Homa. Iraninejadian
QUANTITIES	BY Brijesh kumar Patel	CHECKED Edward B. Mu

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

BRIDGE NO.	53-0667
POST MILE	34.29

**CAMERON AVE UC (WIDEN)**  
**ABUTMENT DETAILS NO. 2**

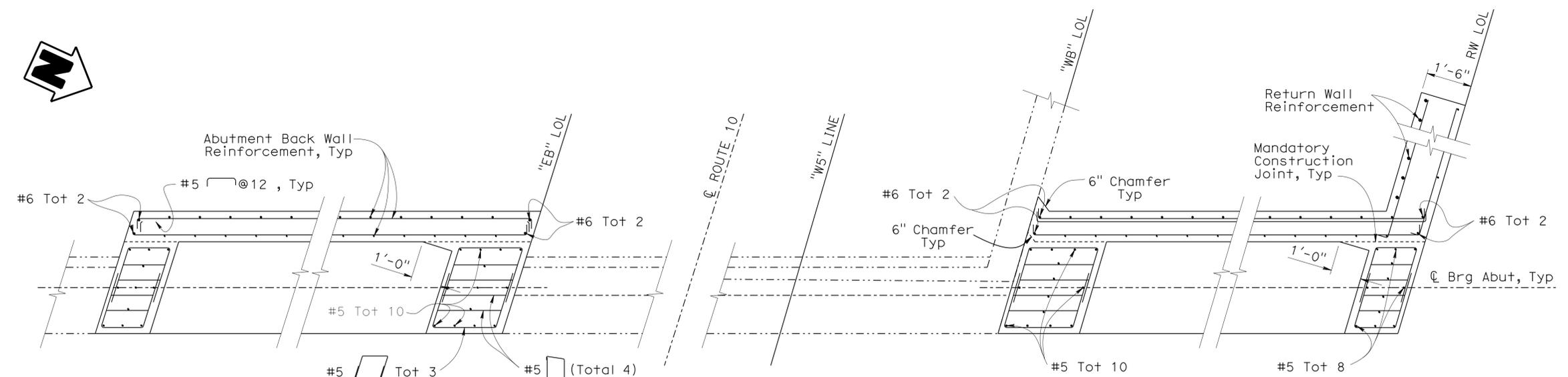
DATE PLOTTED => 12-JUN-2013 15:53 USERNAME => s124486

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1211	1475

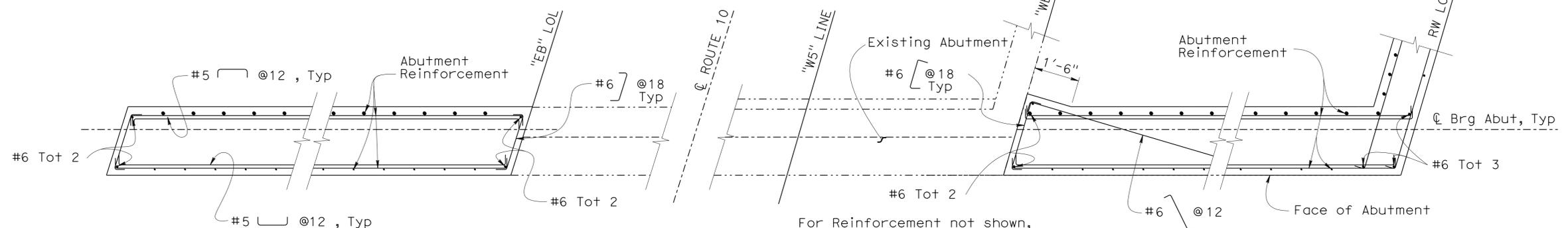
12/19/11  
 REGISTERED CIVIL ENGINEER DATE  
 6-10-13  
 PLANS APPROVAL DATE

JASON FANG  
 No. C 70467  
 Exp. 09/30/2012  
 CIVIL  
 STATE OF CALIFORNIA

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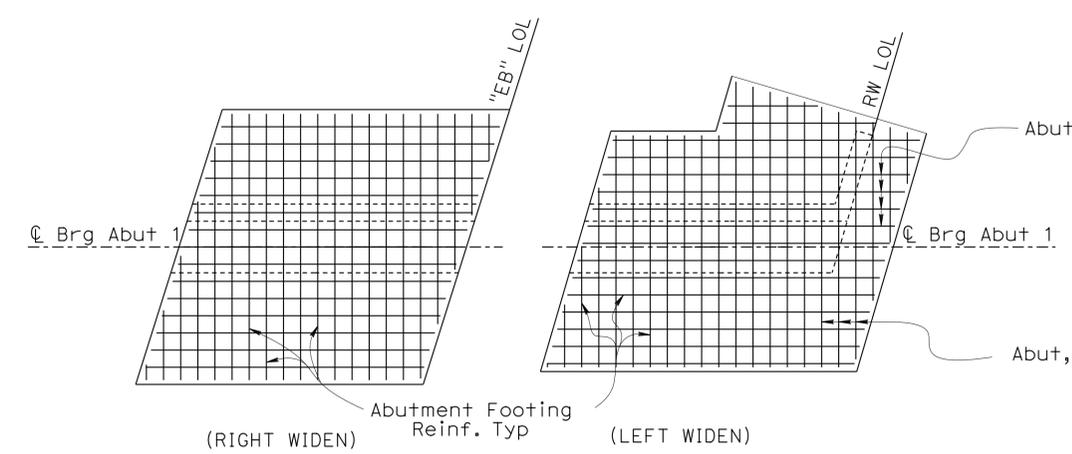


**SECTION B-B**  
 $\frac{1}{2}'' = 1'-0''$

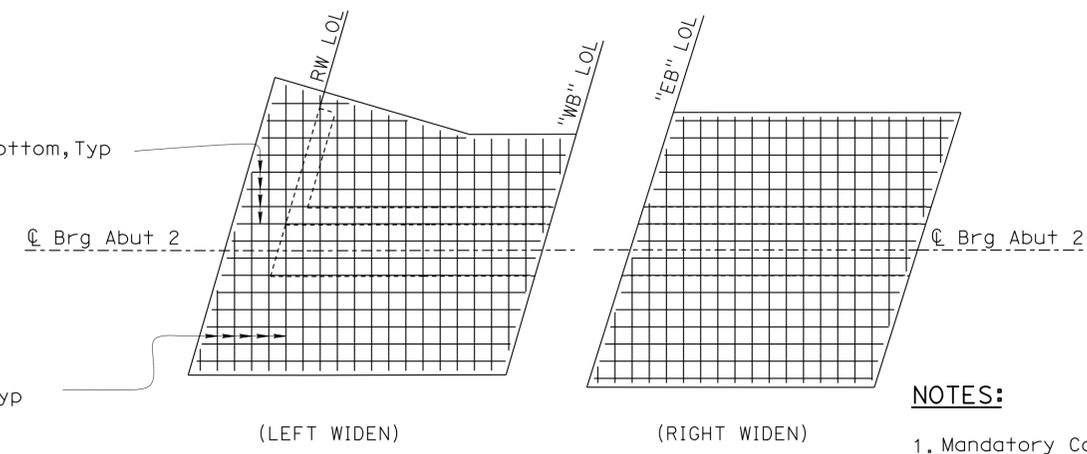


**SECTION C-C**  
 $\frac{1}{2}'' = 1'-0''$

For Reinforcement not shown, see "SECTION B-B"



**ABUTMENT 1 FOOTING DETAIL PLAN**  
 $\frac{3}{16}'' = 1'-0''$



**ABUTMENT 2 FOOTING DETAIL PLAN**  
 $\frac{3}{16}'' = 1'-0''$

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

- NOTES:**
- Mandatory Construction Joint surface to be Smooth and lined with 15lb Construction Paper.
  - Shear Key and Wingwall reinforcement to be discontinuous as shown.
  - Abutment 1 shown, Abutment 2 similar.

DESIGN	BY Brijesh kumar Patel	CHECKED Homa. Iraninejadian
DETAILS	BY Antonette L. Ong	CHECKED Homa. Iraninejadian
QUANTITIES	BY Brijesh kumar Patel	CHECKED Edward B. Mu

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

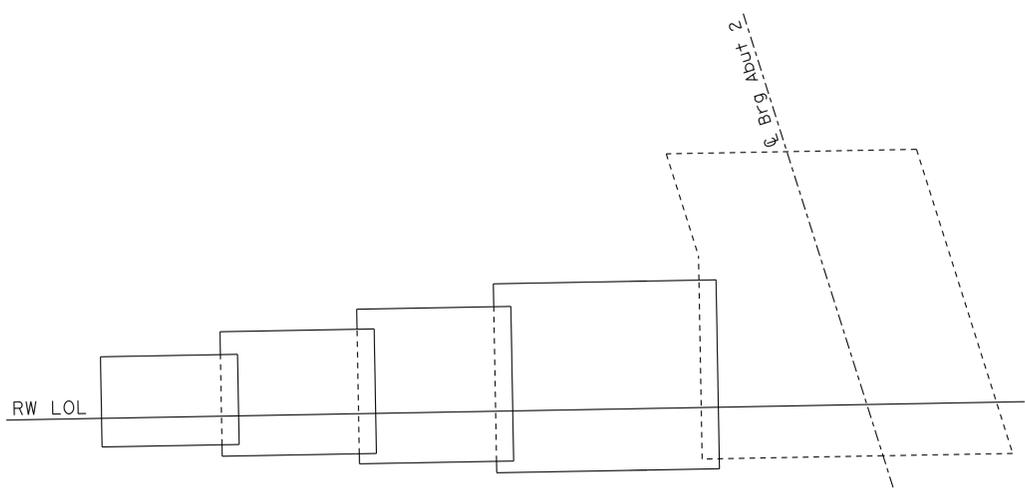
DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0667
POST MILE	34.29

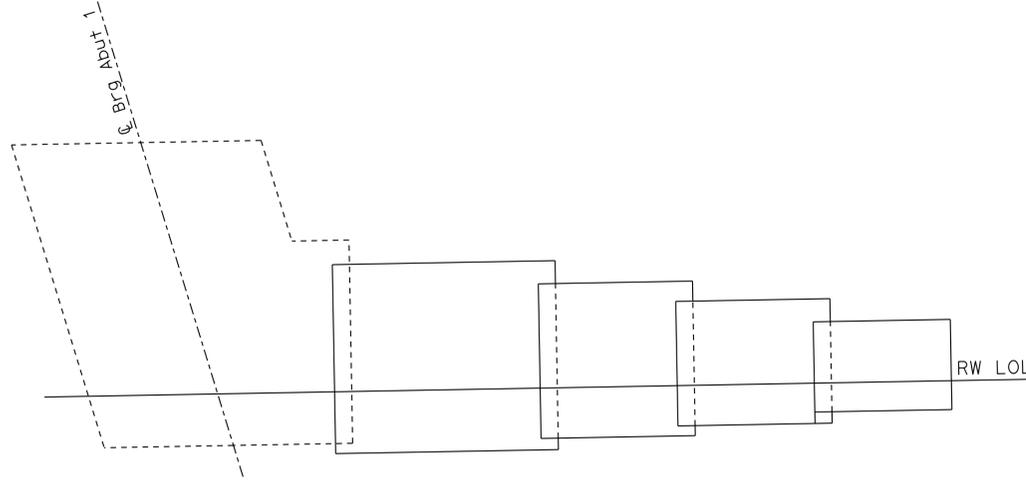
**CAMERON AVE UC (WIDEN)**  
**ABUTMENT DETAILS NO. 3**

15:53  
 12-JUN-2013  
 DATE PLOTTED =>  
 USERNAME => s124496

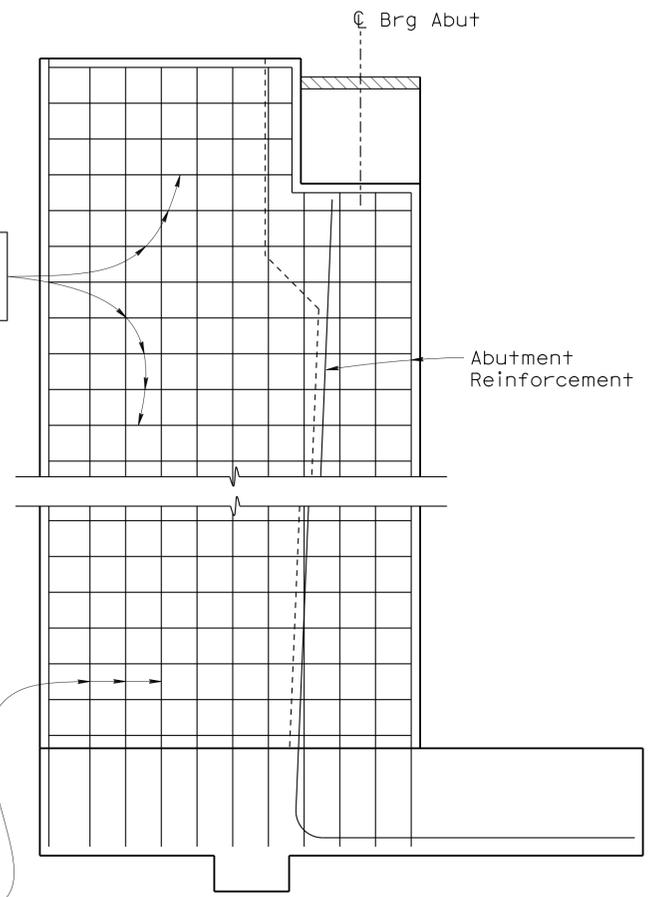
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1212	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA					
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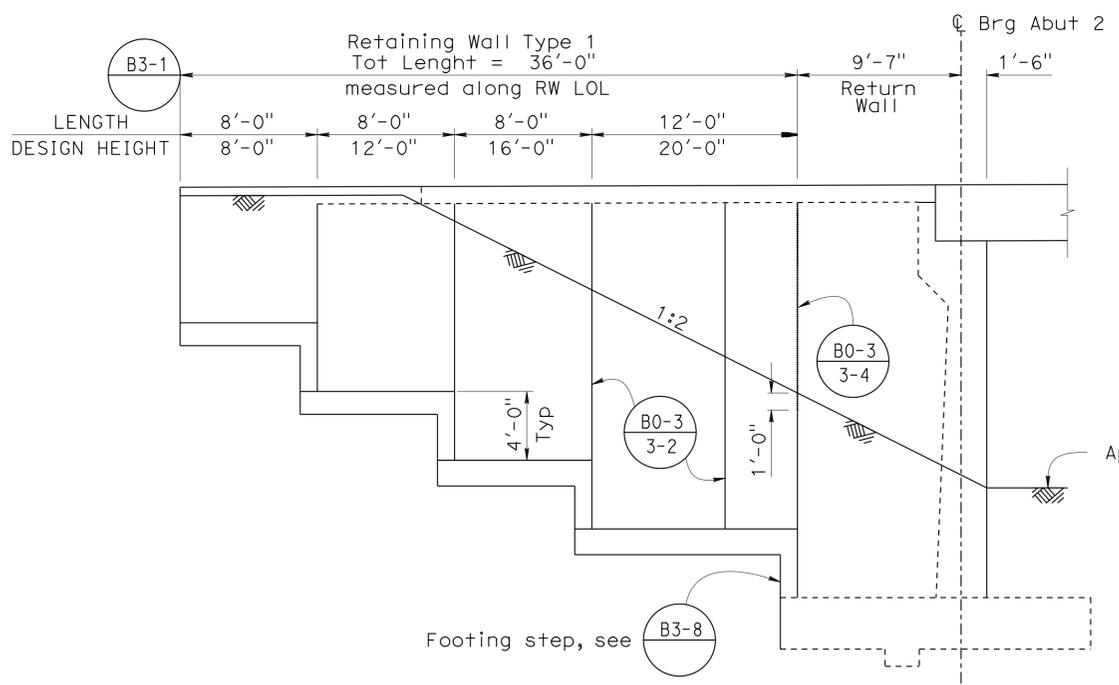
**ABUTMENT 2 RETAINING WALL PLAN**  
 $\frac{3}{16}'' = 1'-0''$



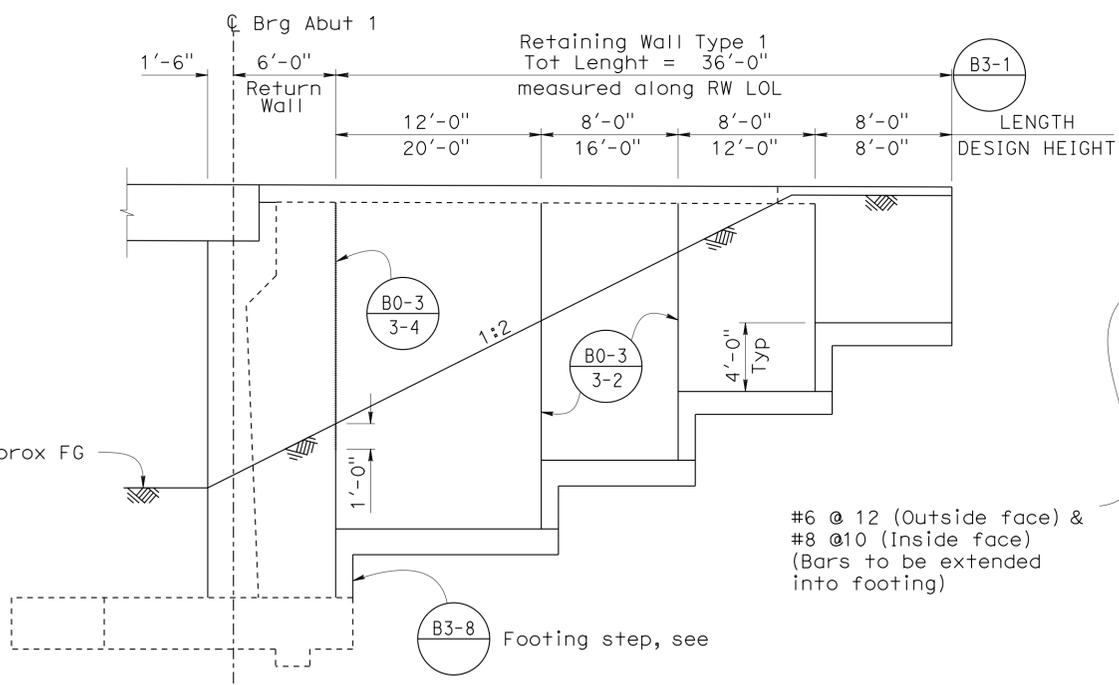
**ABUTMENT 1 RETAINING WALL PLAN**  
 $\frac{3}{16}'' = 1'-0''$



**ABUTMENT RETURN WALL ELEVATION (TYP)**  
 No Scale



**ABUTMENT WINGWALL ELEVATION**  
 $\frac{3}{16}'' = 1'-0''$



$\frac{3}{16}'' = 1'-0''$

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

DESIGN	BY Brijesh kumar Patel	CHECKED Homa. Iraninejadian
DETAILS	BY Antonette L. Ong	CHECKED Homa. Iraninejadian
QUANTITIES	BY Brijesh kumar Patel	CHECKED Edward B. Mu

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0667
POST MILE	34.29

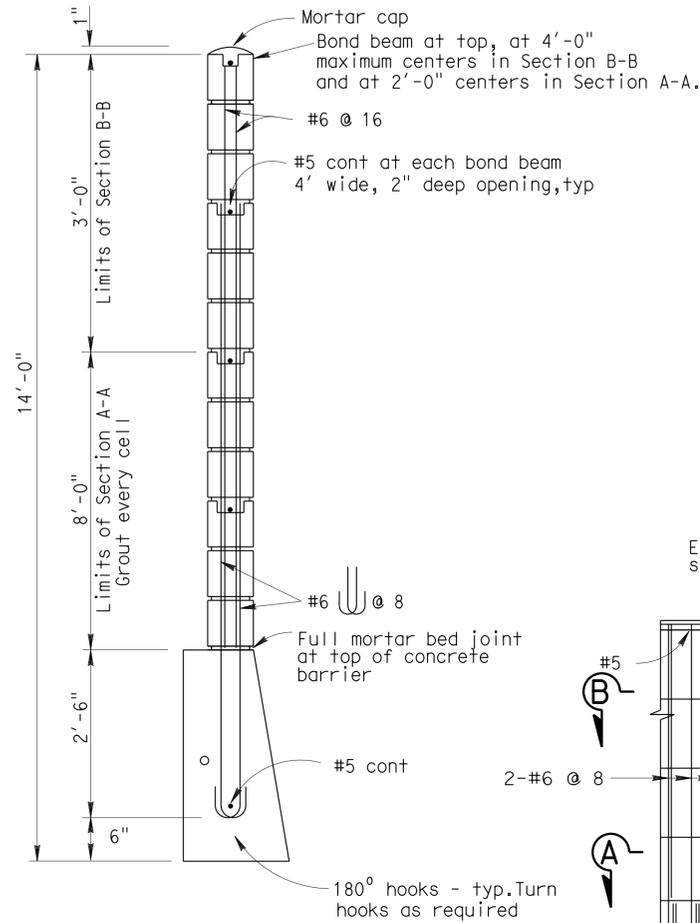
**CAMERON AVE UC (WIDEN)**  
**ABUTMENT RETAINING WALL DETAILS**

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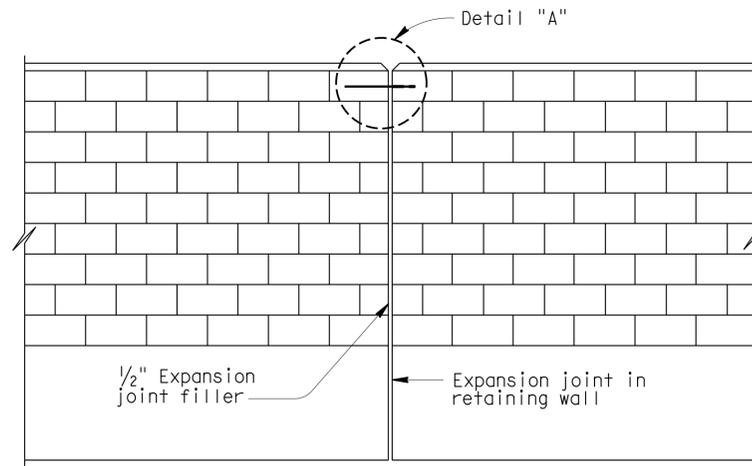
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1213	1475
			12/19/11	DATE	
			6-10-13	PLANS APPROVAL DATE	

### GENERAL NOTES

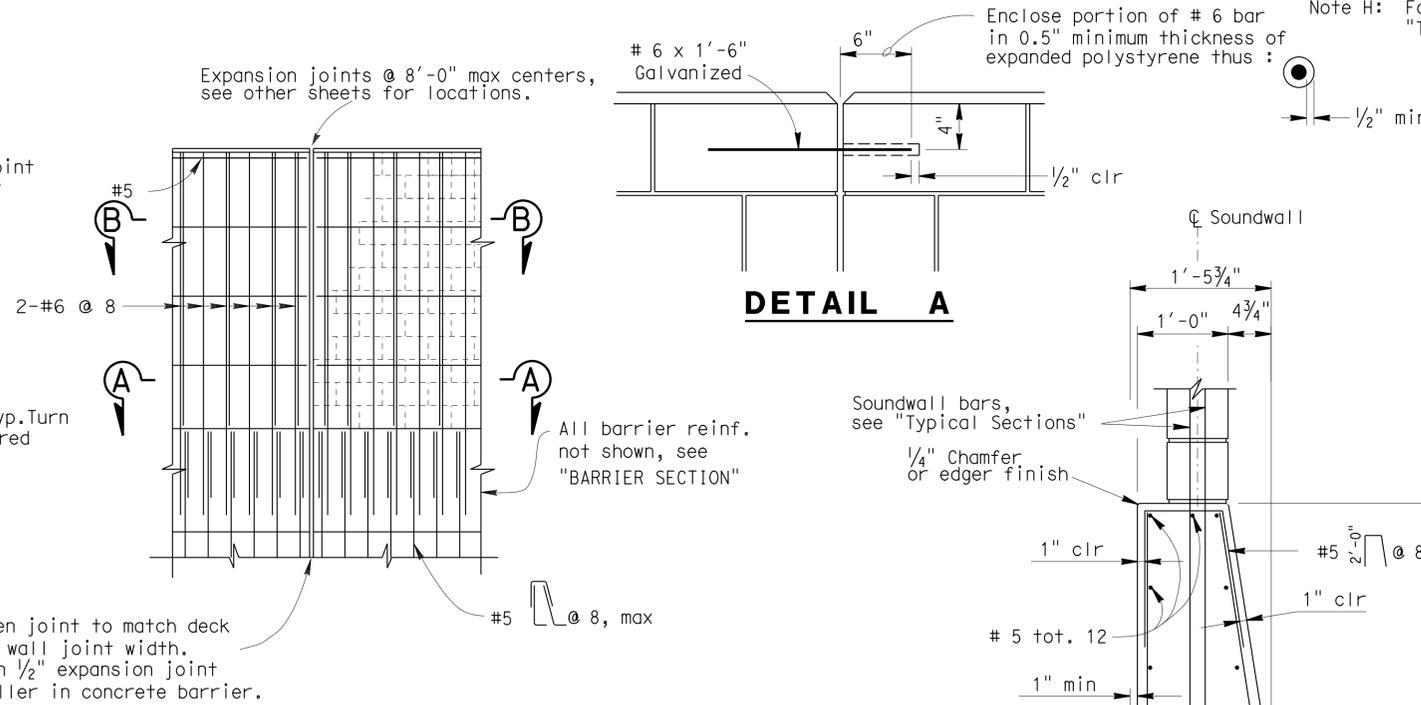
- Note A: For type of block, type of block bond and joint finish, see other sheets.
- Note B: When blocks are laid in stacked bond, ladder type, galvanized joint reinforcement shall be provided. A minimum of 0.07"-0.14" wires continuous at 4'-0" maximum to be used. Locate reinforcement in joints that are at the approximate midpoint between bond beams.
- Note C: Horizontal joints shall be tooled concave or may be weathered. Vertical joints shall be tooled concave or may be raked.
- Note D: All masonry to be high strength unless otherwise noted.
- Note E: Class 2 concrete to be used for barrier.
- Note F: Expansion joints in concrete barrier and masonry block to match deck joints and at ends of wing walls.
- Note G: Expansion joints in Sound Wall (Masonry Block) shall be at each support, center of span, and at ends of each wingwall.
- Note H: For dimensions and reinforcement not shown see "Typical Section" sheet.



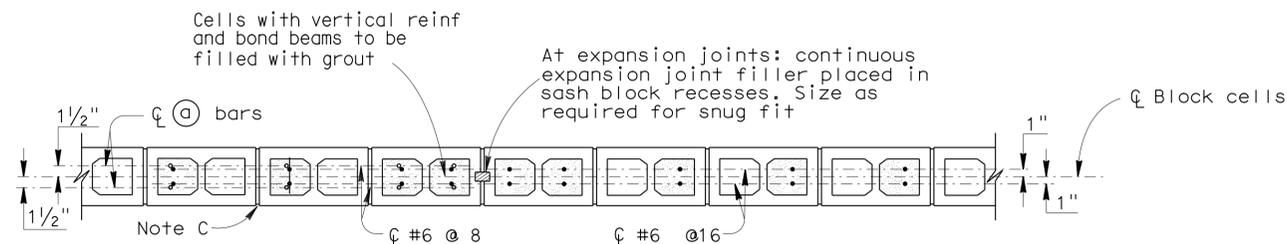
**SOUND WALL SECTION**



**ALIGNMENT KEY DETAIL**

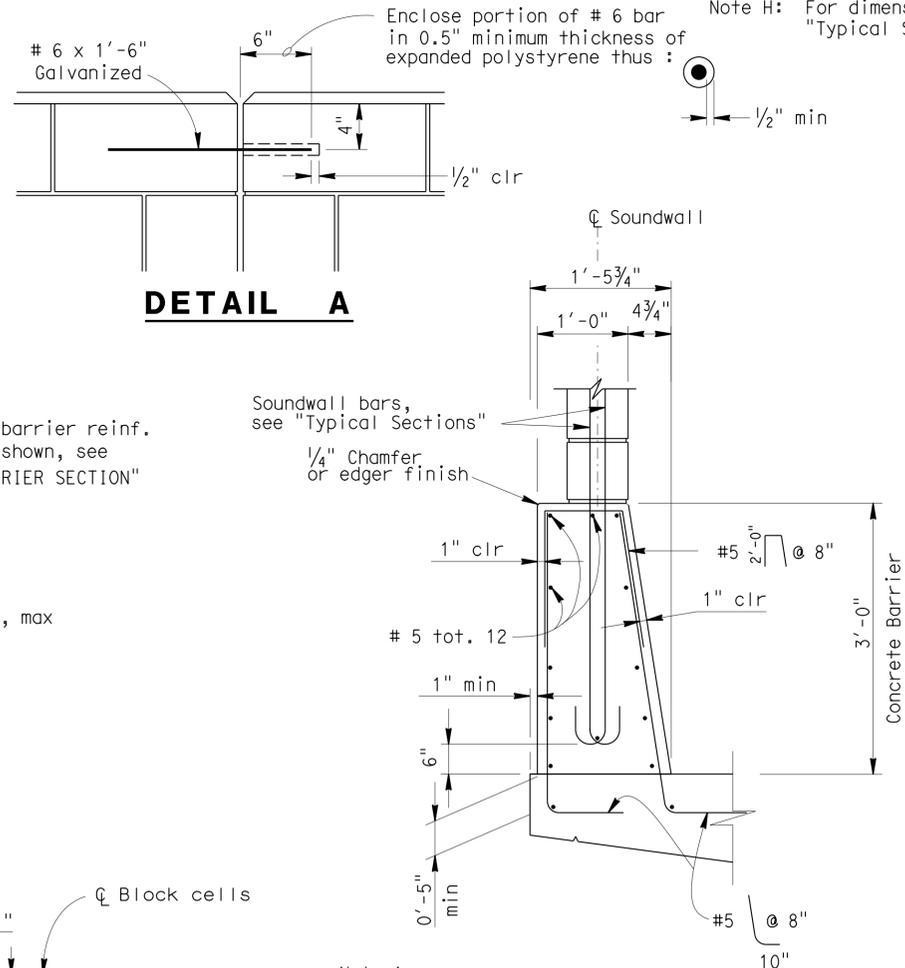


**DECK AND WALL JOINT ELEVATION**



**SECTION A-A**

**SECTION B-B**



**BARRIER SECTION**

### DESIGN NOTES

**DESIGN**

Uniform Building Code, 1997 Edition and the Bridge Design Specifications.

**DESIGN WIND LOAD**

37 PSF

**DESIGN SEISMIC LOAD**

2.0 Dead load

**REINFORCED CONCRETE**

f'c = 4000 PSI  
fy = 60000 PSI

**CONCRETE MASONRY**

**HIGH STRENGTH**  
f'm = 2500 PSI  
fy = 60000 PSI

**LOAD FACTORS AND LOAD COMBINATIONS**

Load Factor Design ( LFD )

- Group A: BD + 1.7 E + 1.7 SC
- Group B: BD + 1.7 E + 1.3 W
- Group C: BD + 1.3 E + 1.0 EQE
- Group D: BD + 1.3 E + 1.0 EQD
- Group E: BD + 1.1 E + 0.85 ( EQE + EQD )

Where : B = 0.9 or 1.2, whichever controls in design  
D = Dead load  
E = Lateral earth pressure  
SC = Live load surcharge  
W = Wind load  
EQD = Seismic dead load  
EQE = Seismic earth load

**STRENGTH REDUCTION FACTORS, φ**

Reinforced concrete:  
For flexure ----- φ=0.90  
For shear ----- φ=0.85

Concrete masonry:  
For flexure ----- φ=0.80  
For shear ----- φ=0.60

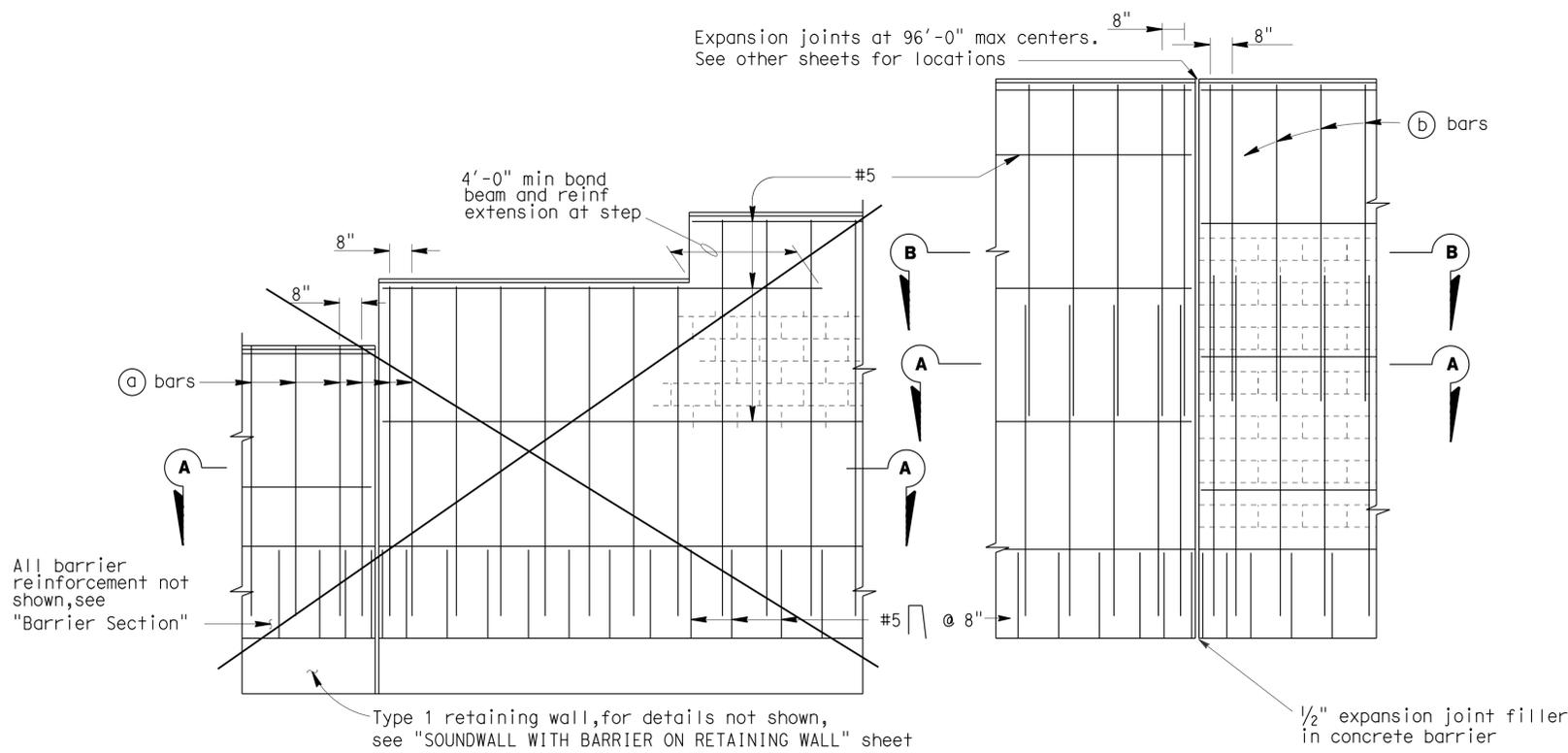
Note 1 :  
Barrier, Deck and Concrete Masonry are designed by the Strength Design Method.

STANDARD DRAWING	
FILE NO. <b>xs15-130-2e</b>	APPROVAL DATE <u>10/22/09</u>

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	
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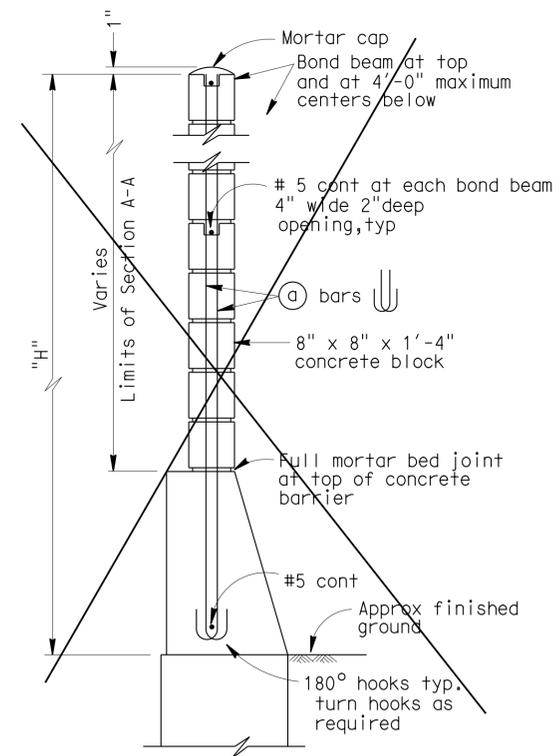
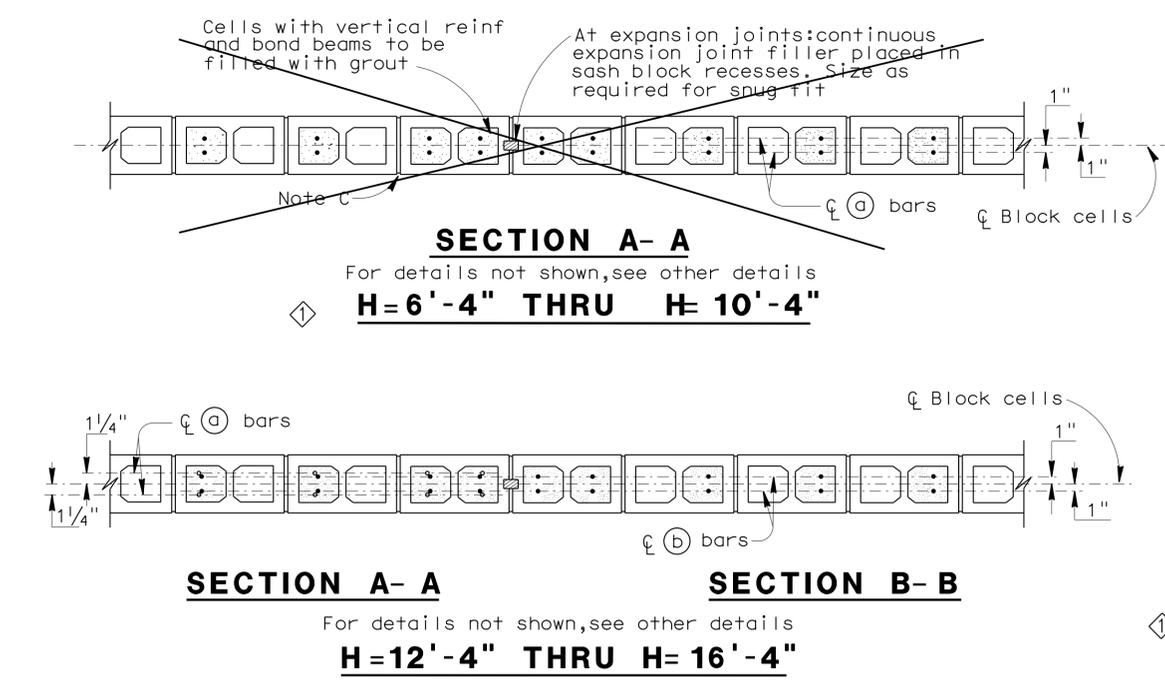
DIVISION OF ENGINEERING SERVICES	
BRIDGE NO. 53-0667	POST MILE 34.29

CAMERON AVE UC (WIDEN)	
SOUNDWALL - MASONRY BLOCK ON BRIDGE	



**PART ELEVATIONS**

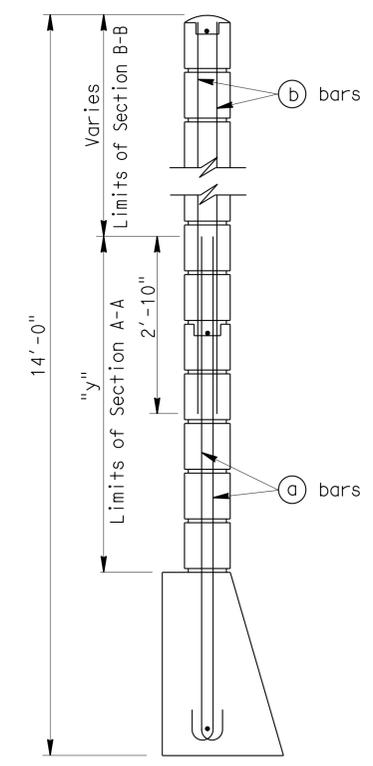
Maximum H	(a) bars @ 1'-4" max	(b) bars @ 1'-4" max	"y"	f'm (KSI)	Compressive Strength of CMU (KSI)	Maximum H
6'-4"	# 4	---	---	1.5	1.9	6'-4"
8'-4"	# 4	---	---	1.5	1.9	8'-4"
10'-4"	# 4	---	---	1.5	1.9	10'-4"
12'-4"	# 5	# 4	5'-0"	1.5	1.9	12'-4"
14'-4"	# 6	# 4	7'-0"	1.5	1.9	14'-4"
16'-4"	# 6	# 4	9'-0"	2.5	3.7	16'-4"



**TYPICAL SECTIONS**

**H=6'-4" THRU H=10'-4"**  
For details not shown, see H=12'-4" thru H=16'-4"

**H=12'-4" THRU H=16'-4"**  
For details not shown, see H=6'-4" thru H=10'-4"

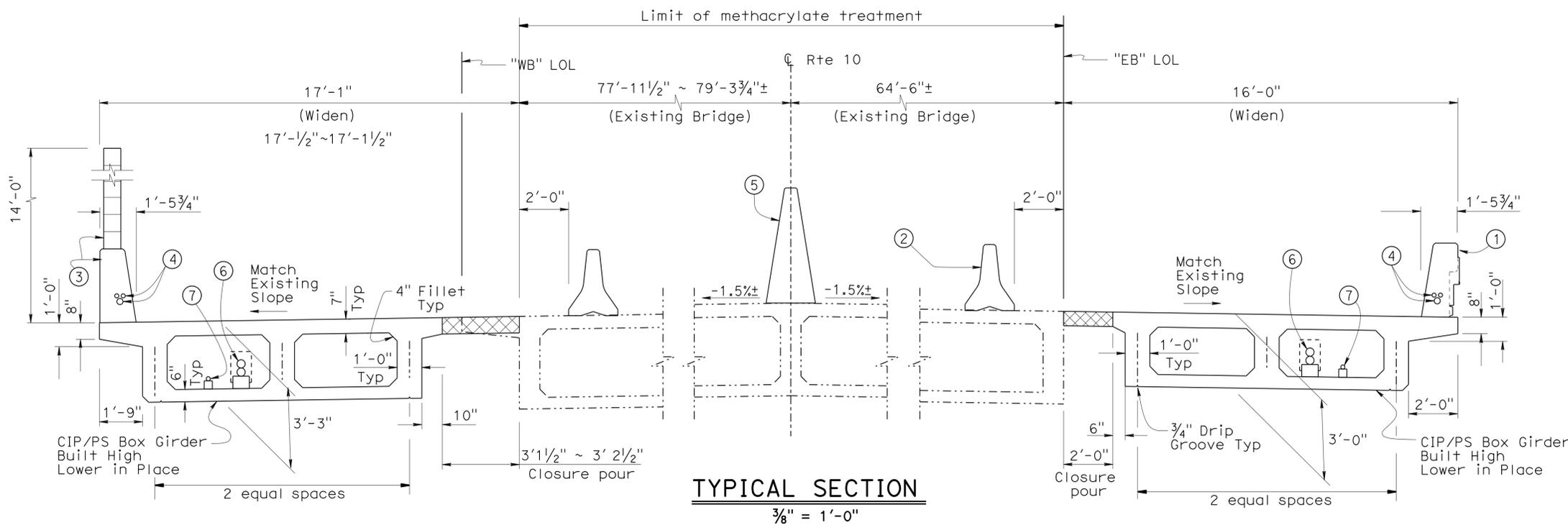


- Note I : For details not shown, see "SOUNDWALL WITH BARRIER ON RETAINING WALL - MASONRY BLOCK -- DETAILS NO.2" sheet.
- Note II : Slope ground at traffic side of barrier to drain. Maximum slope ±10%.
- Note III: See "SOUNDWALL MASONRY BLOCK - MISCELLANEOUS DETAILS" sheet for other details.

**GENERAL NOTES**

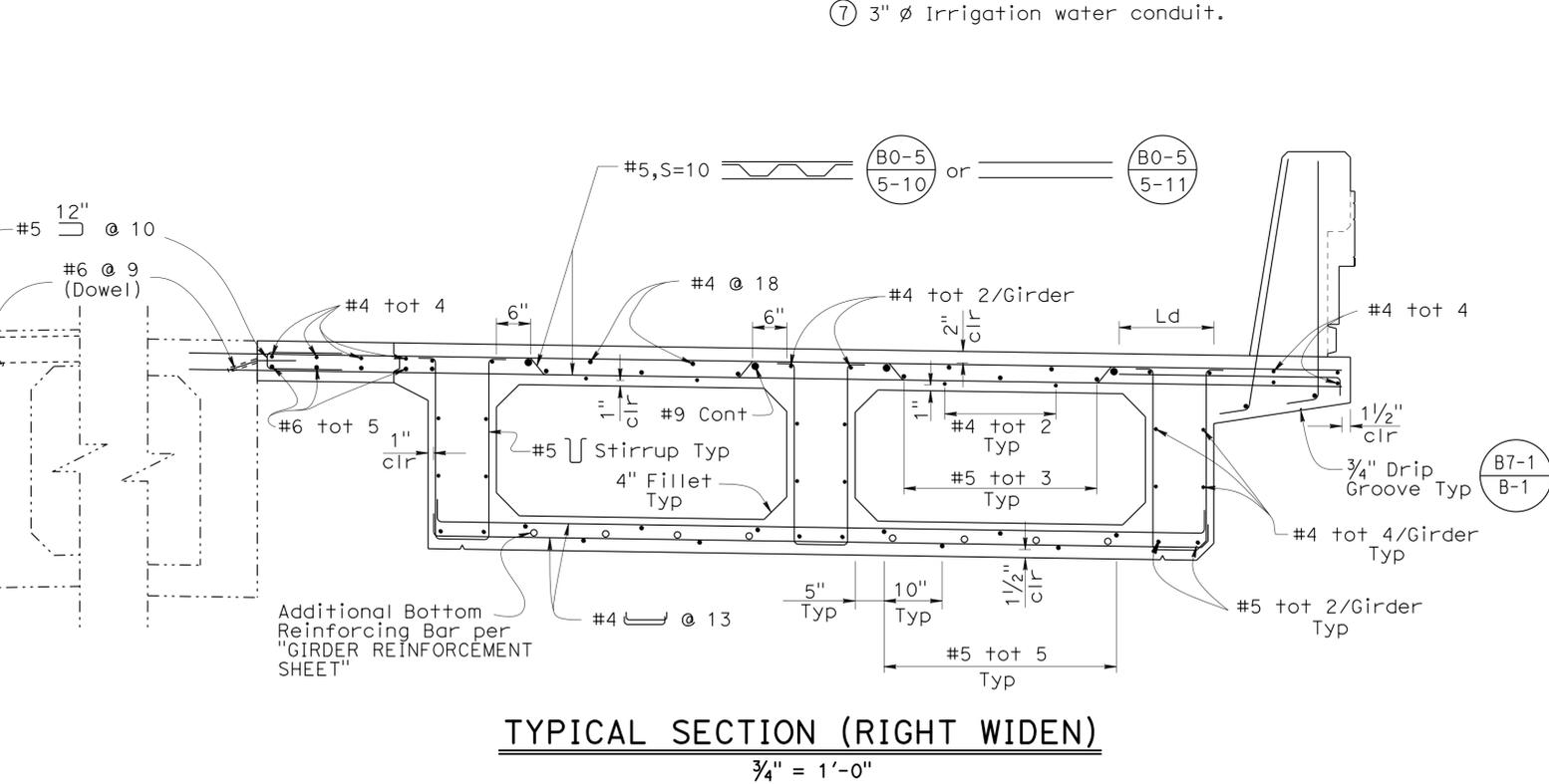
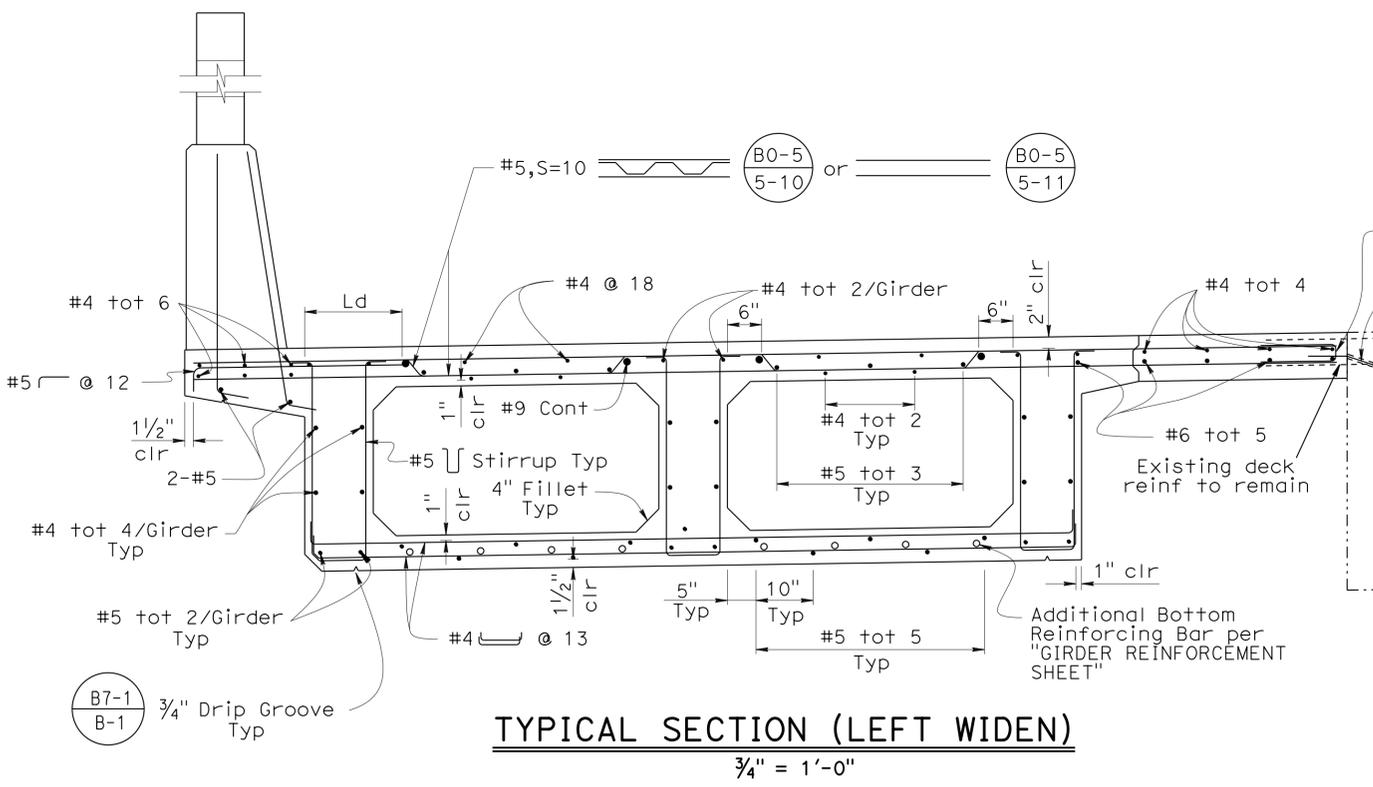
- Note A: For type of block and joint finish, see other sheets.
- Note B: When blocks are laid in stacked bond, ladder type, galvanized joint reinforcement shall be provided. A minimum of 0.07"-0.14" wire continuous at 4'-0" maximum to be used. Locate reinforcement in joints that are at the approximate midpoint between bond beams.
- Note C: Horizontal joints shall be tooled concave or may be weathered. Vertical joints shall be tooled concave or may be raked.
- Note D: For intermediate wall heights that are between the "H's" given. Use the tabular information for the next higher "H".
- Note E: Masonry strengths are listed in "SOUNDWALL REINFORCEMENT TABLE".
- Note F: Concrete to be used for the barrier shall contain not less than 590 pounds of cementitious material per cubic yard.

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			6-10-13	PLANS APPROVAL DATE	
REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA					
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**NOTES:**

- falsework shall be removed as soon as permitted by the Specifications.
- Closure Pours shall not be placed sooner than 60 days after the falsework has been released.
- ① Concrete Barrier Type 736 (Mod).
- ② Temporary Railing Type (K), See "ROAD PLANS".
- ③ Masonry Block Soundwall on Barrier Type 736 (Mod).
- ④ 2-2"Ø Utility Lines and 1-3"Ø Sprinkler Control Conduit.
- ⑤ Median Concrete Barrier Rail Type 60GA (Mod).
- ⑥ 2-3/2" Ø Communication conduits, see "ROAD PLANS".
- ⑦ 3" Ø Irrigation water conduit.



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

DESIGN	BY Brijesh kumar Patel	CHECKED Homa. Iraninejadan
DETAILS	BY Antonette L. Ong	CHECKED Homa. Iraninejadan
QUANTITIES	BY Brijesh kumar Patel	CHECKED Edward B. Mu

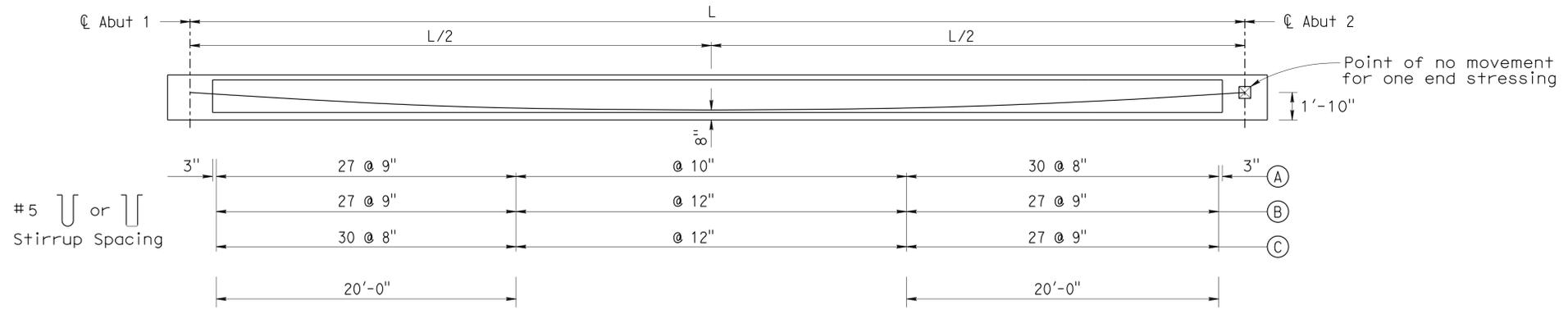
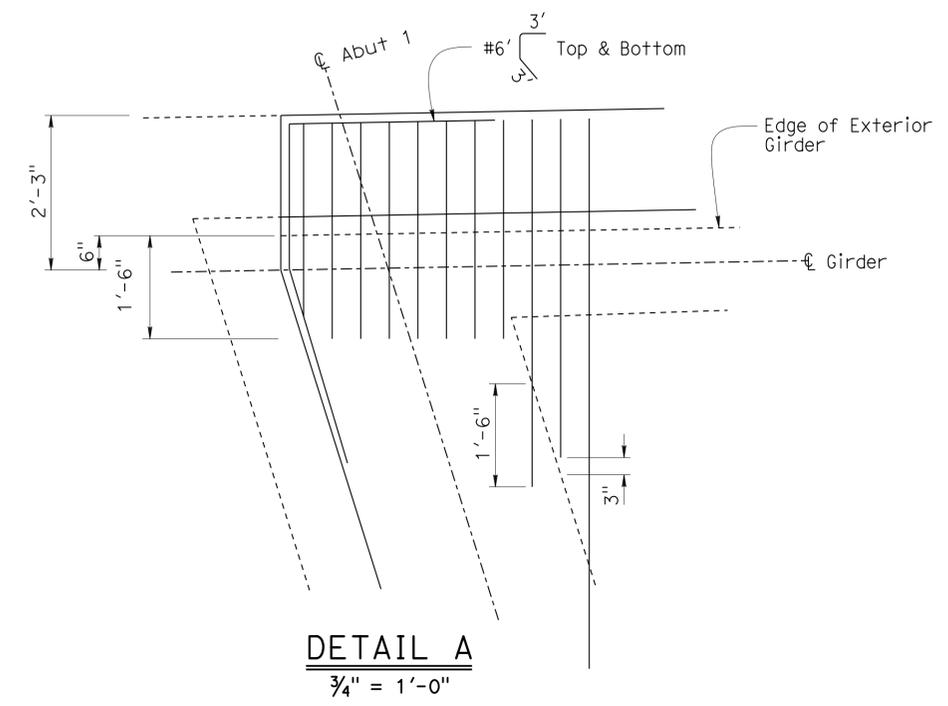
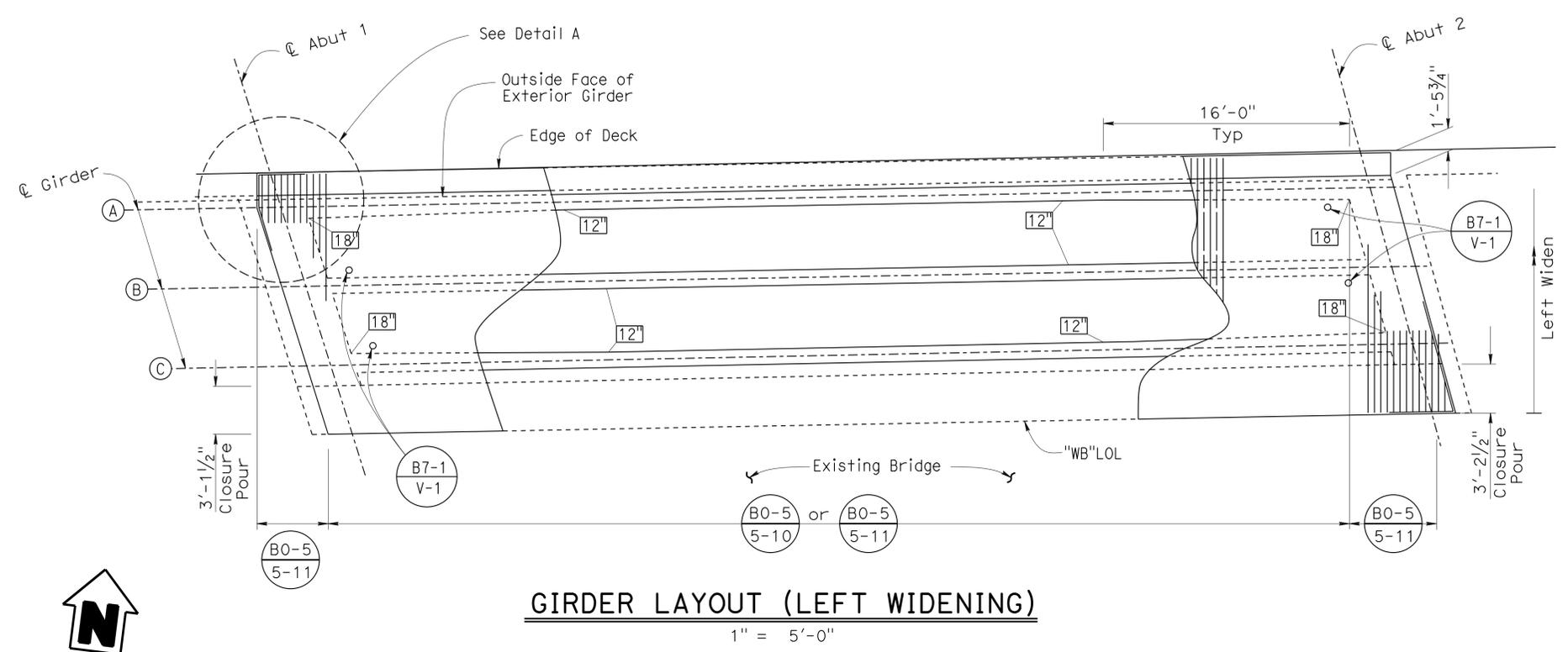
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

BRIDGE NO.	53-0667
POST MILE	34.29

CAMERON AVE UC (WIDEN)  
TYPICAL SECTION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1216	1475
			12/19/11		
REGISTERED CIVIL ENGINEER			DATE		
6-10-13			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.					



Abut 1 Left widen shown  
Abut 2 rightt widen similar

**PRESTRESSING NOTES  
WEST BOUND**

270 KSI Low Relaxation Strand:  
 $P_{jack} = 3500$  kips  
Anchor Set =  $\frac{3}{8}$  in  
Total Number of Girders = 3

Distribution of prestress force ( $P_{jack}$ ) between girders shall not exceed the ratio of 3:2.  
Maximum final force variation between girders shall not exceed 725 kips.  
Concrete:  $f'_c = 5$  ksi @ 28 days  
 $f'_{ci} = 4$  ksi @ time of stressing

Contractor shall submit elongation calculations based on initial stress at  
 $\lambda = 0.938$  times jacking stress.

One end stressing shall be performed from the long-span end only.

NOTE:  
 Indicates girder stem width.

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

DESIGN	BY Brijesh kumar Patel	CHECKED Homa. Iraninejadian
DETAILS	BY Antonette L. Ong	CHECKED Homa. Iraninejadian
QUANTITIES	BY Brijesh kumar Patel	CHECKED Edward B. Mu

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

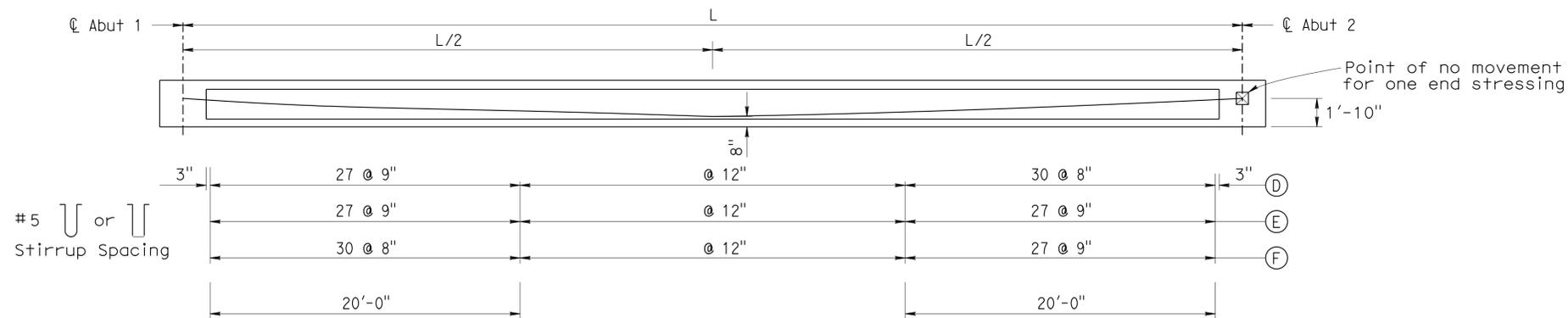
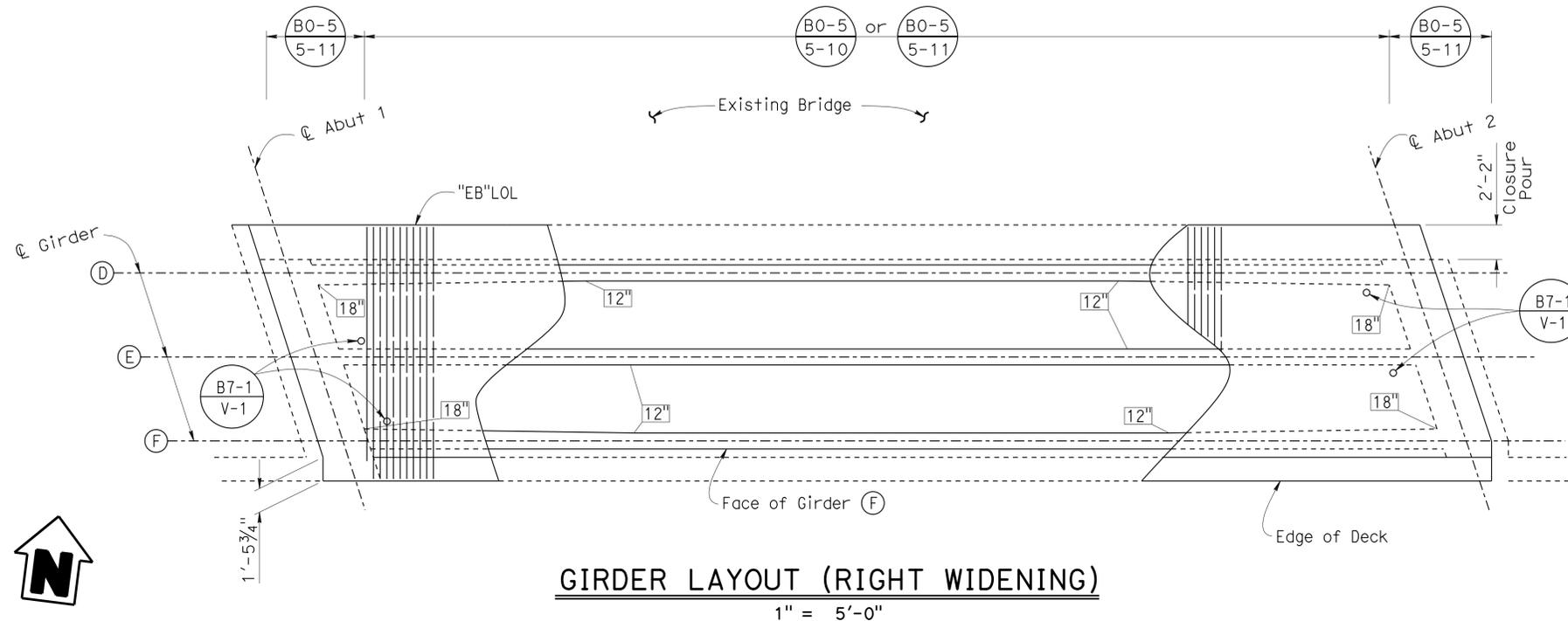
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0667
POST MILE	34.29

**CAMERON AVE UC (WIDEN)**  
**GIRDER LAYOUT 1**

TIME PLOTTED => 15:53  
DATE PLOTTED => 12-JUN-2013  
USER NAME => s124486

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1217	1475
			12/19/11	DATE	
			6-10-13	PLANS APPROVAL DATE	
REGISTERED CIVIL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA					
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**PRESTRESSING NOTES  
EAST BOUND**

270 KSI Low Relaxation Strand:  
 $P_{jack} = 3400$  kips  
 Anchor Set =  $\frac{3}{8}$  in  
 Total Number of Girders = 3

Distribution of prestress force ( $P_{jack}$ ) between girders shall not exceed the ratio of 3:2. Maximum final force variation between girders shall not exceed 725 kips.

Concrete:  $f'_c = 5$  ksi @ 28 days  
 $f'_{ci} = 4$  ksi @ time of stressing

Contractor shall submit elongation calculations based on initial stress at

$\lambda = 0.937$  times jacking stress.

One end stressing shall be performed from the long-span end only.

NOTE:  
 Indicates girder stem width.

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

DESIGN	BY Brijesh kumar Patel	CHECKED Homa. Iraninejadan
DETAILS	BY Antonette L. Ong	CHECKED Homa. Iraninejadan
QUANTITIES	BY Brijesh kumar Patel	CHECKED Edward B. Mu

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0667
POST MILE	34.29

**CAMERON AVE UC (WIDEN)**  
**GIRDER LAYOUT 2**

USERNAME => s124486 DATE PLOTTED => 12-JUN-2013 TIME PLOTTED => 15:53

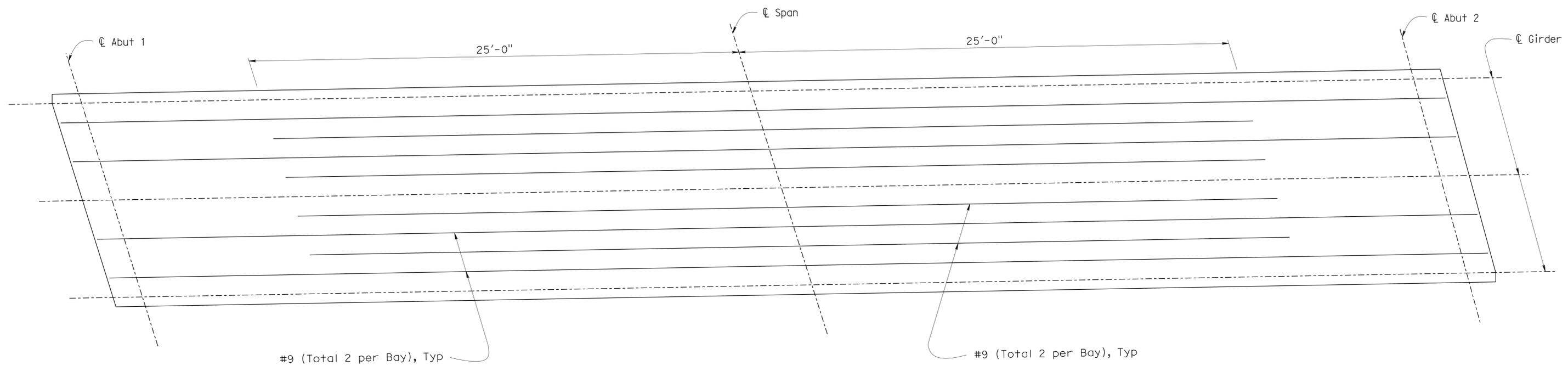
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1218	1475

12/19/11  
REGISTERED CIVIL ENGINEER DATE

6-10-13  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
JASON FANG  
No. C 70467  
Exp. 09/30/2012  
CIVIL  
STATE OF CALIFORNIA

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**ADDITIONAL BOTTOM GIRDER REINFORCEMENT (LEFT WIDENING)**

$\frac{3}{8}'' = 1'-0''$

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

- NOTES:**
- 1 - Reinforcement spaced evenly between  $\text{\O}$  Girders.
  - 2 - Left widen shown, Right widen similar
  - 3 - Bar splices when required shall conformed to "Service Splice" specifications

DESIGN	BY Brijesh kumar Patel	CHECKED Homa. Iraninejadian
DETAILS	BY Antonette L. Ong	CHECKED Homa. Iraninejadian
QUANTITIES	BY Brijesh kumar Patel	CHECKED Edward B. Mu

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0667
POST MILE	34.29

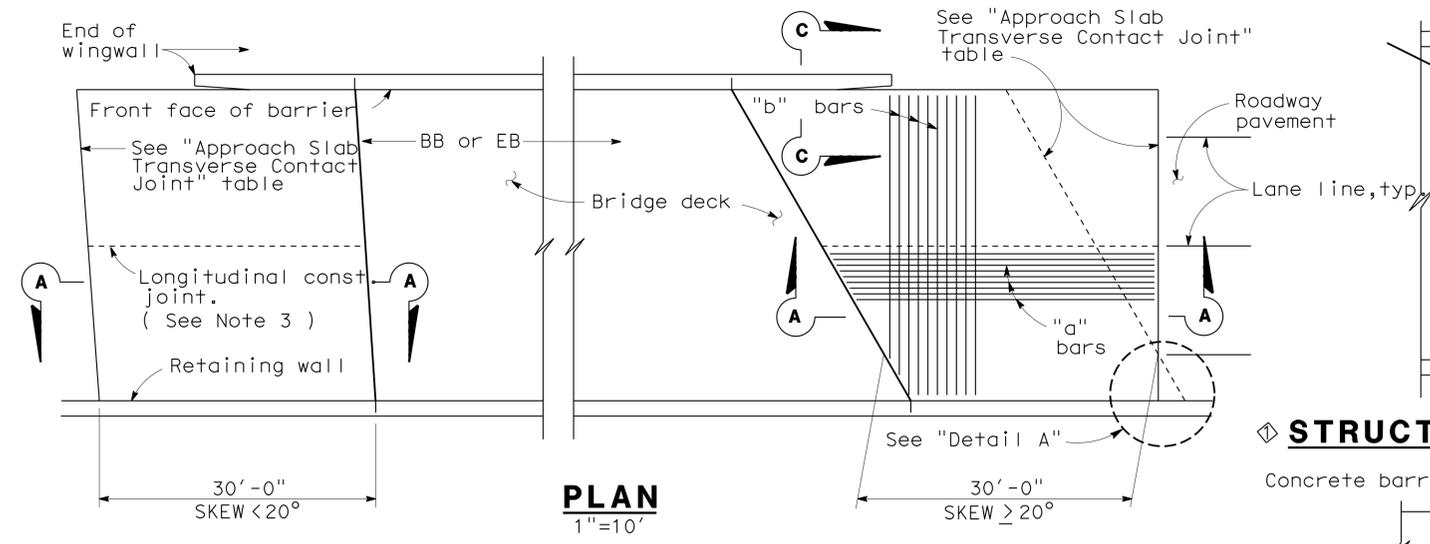
**CAMERON AVE UC (WIDEN)**  
**GIRDER REINFORCEMENT**

12-JUN-2013 15:53 TIME PLOTTED => 6/24/2013 8:12:48 AM DATE PLOTTED =>

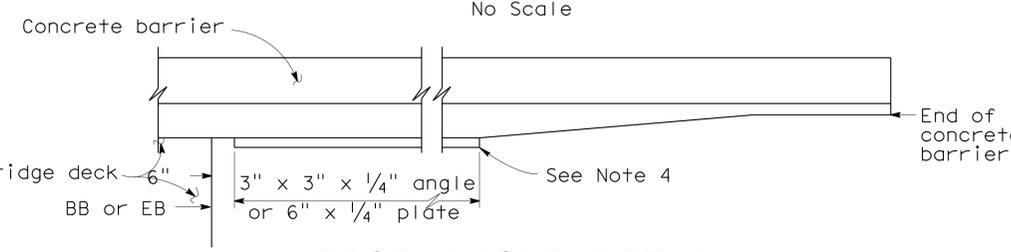
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07	LA	10	33.2/37.2	1219	1475

12/19/11  
 REGISTERED CIVIL ENGINEER DATE  
 6-10-13  
 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.

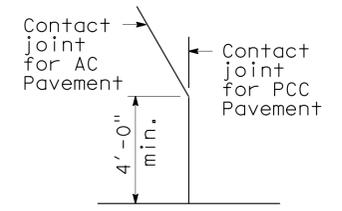
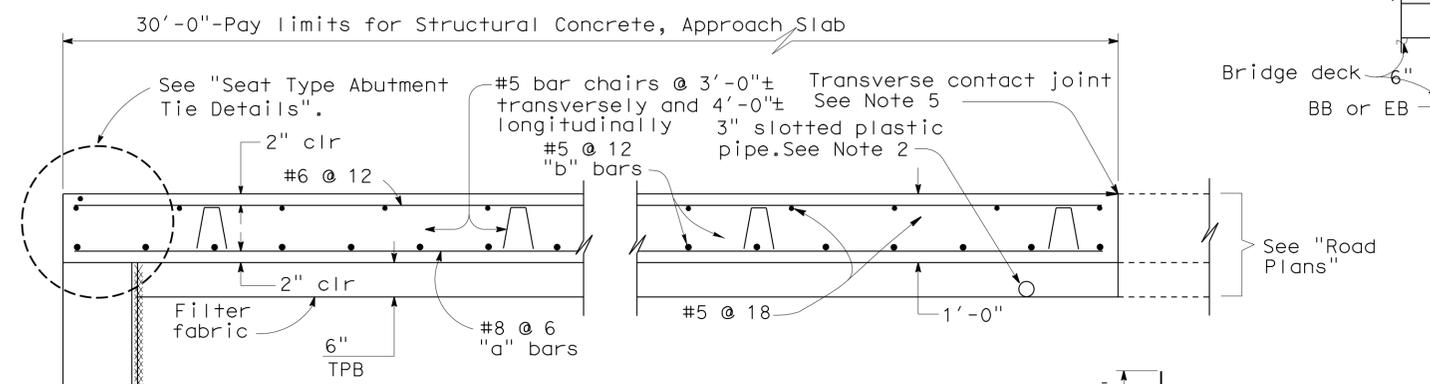
REGISTERED PROFESSIONAL ENGINEER  
 JASON FANG  
 No. C 70467  
 Exp. 09/30/2012  
 CIVIL  
 STATE OF CALIFORNIA



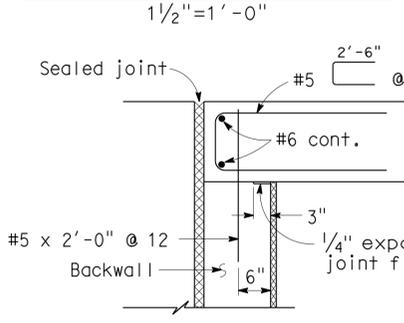
**STRUCTURE APPROACH - END STAGGER DETAIL**



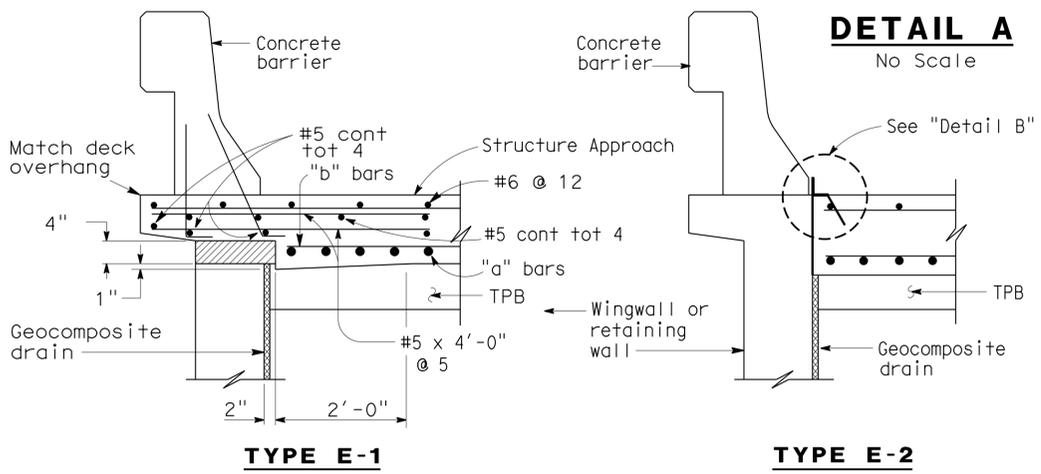
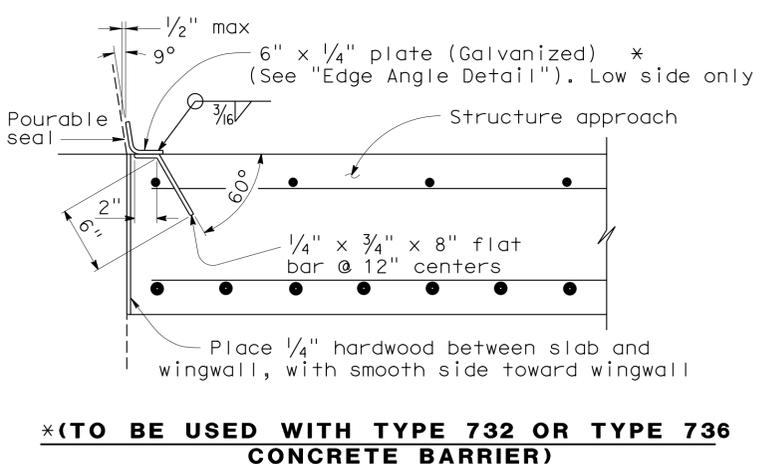
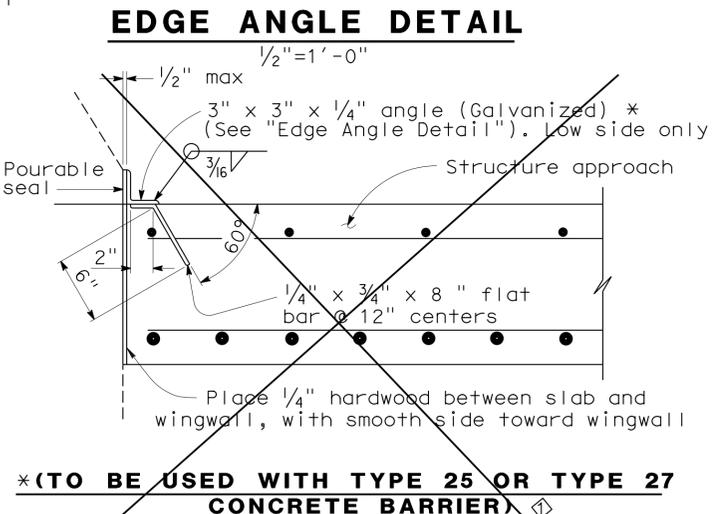
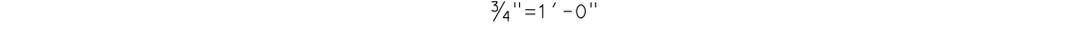
APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 20°	Parallel to face of paving notch	Parallel to face of paving notch
20° - 45°	Parallel to face of P N use (Detail A)	Stagger lines 24' to 36' apart.
> 45°	Parallel to face of P N use (Detail A)	Stagger at each lane line.



**BAR CHAIR DETAIL**



**SEAT TYPE ABUTMENT TIE DETAILS (SEE NOTE 1)**



(Type E-1 to be used, unless otherwise shown on plans)

- NOTES:**
- For details not shown, see Structure Plans. For MR ≤ 2", adjust bar reinforcement to clear a sawcut for sealed joint, when required.
  - For drainage details, see "Structure Approach Drainage Details" sheet.
  - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
  - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.
  - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
  - At the contractor's option, approach slab transverse reinforcement may be placed parallel to paving notch. Spacing of transverse reinforcement is measured along roadway.
- Remove all polystyrene.

REVISED STANDARD DRAWING

Deleted

FILE NO. **xs3-120e**

APPROVAL DATE July 2011

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 53-0667  
 POST MILE 34.29

CAMERON AVE UC (WIDEN)  
 STRUCTURE APPROACH TYPE N(30S)

UNIT: 3622  
 PROJECT NUMBER & PHASE: 0700000085-1  
 CONTRACT NO.: 1170U1

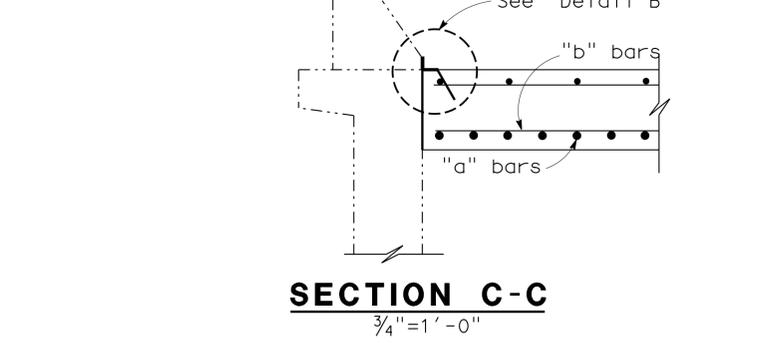
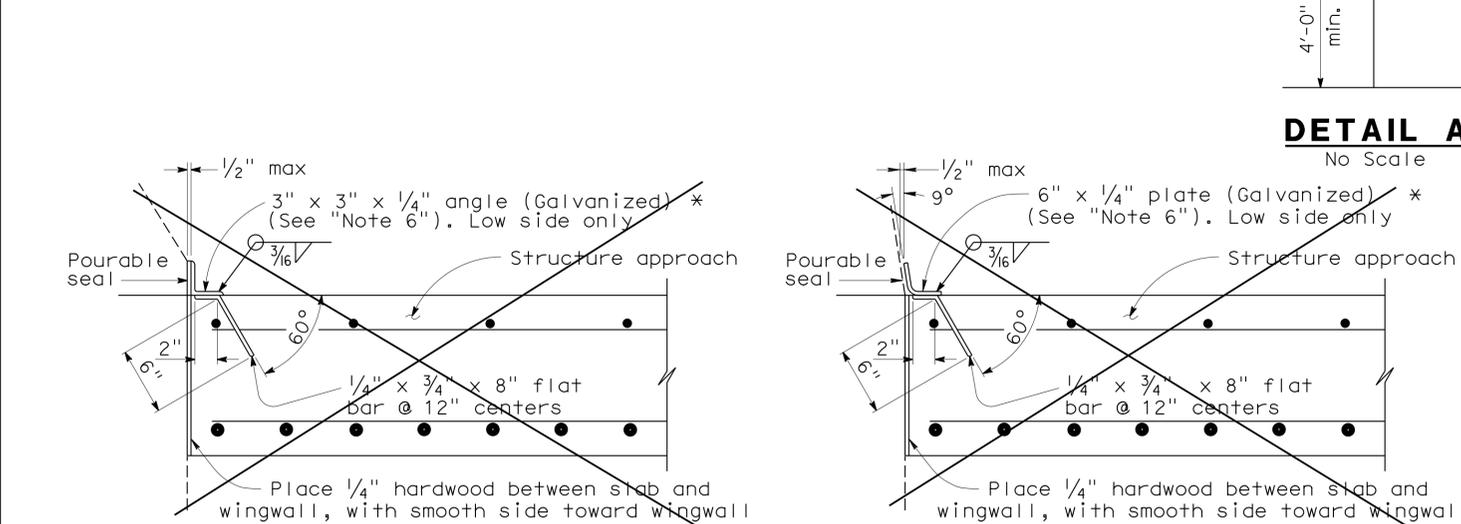
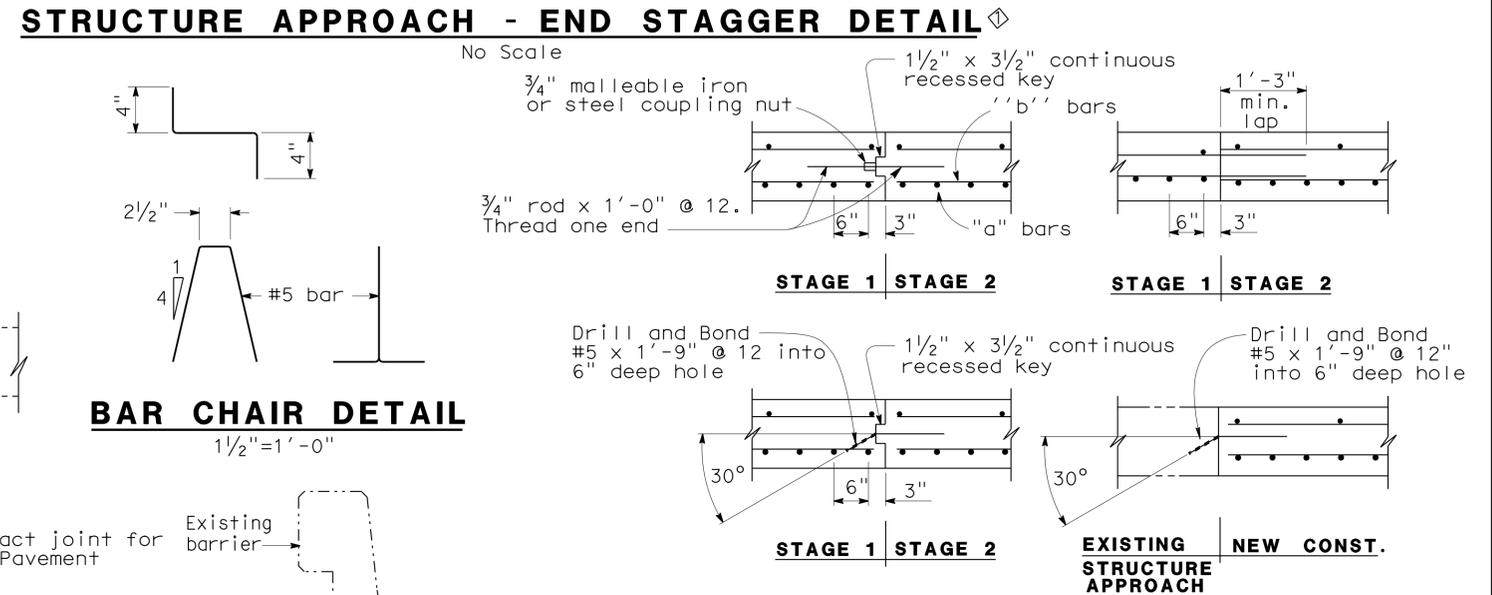
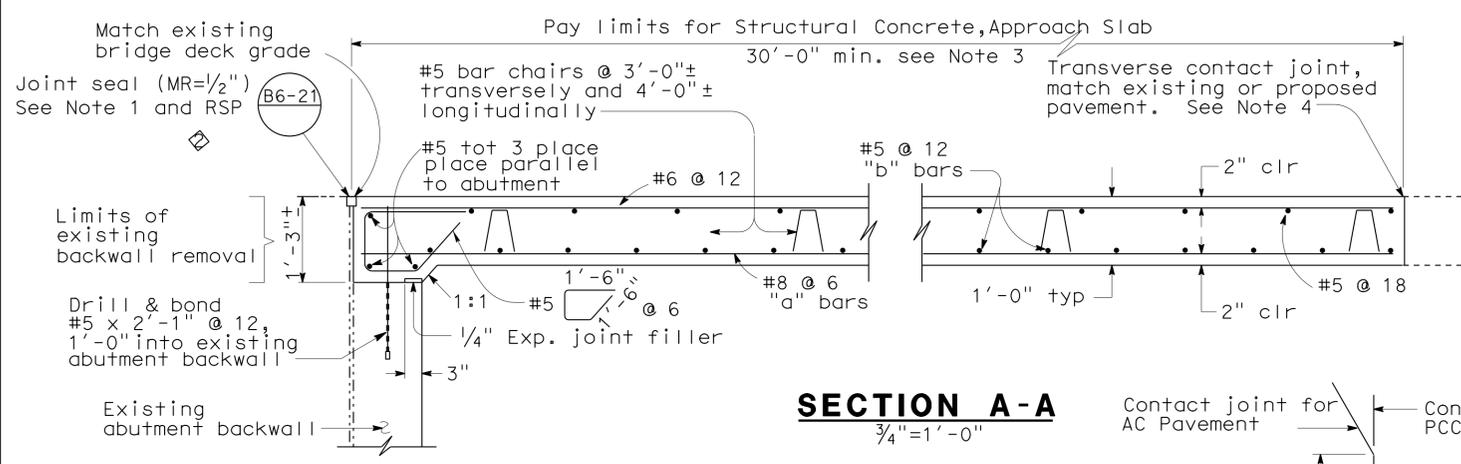
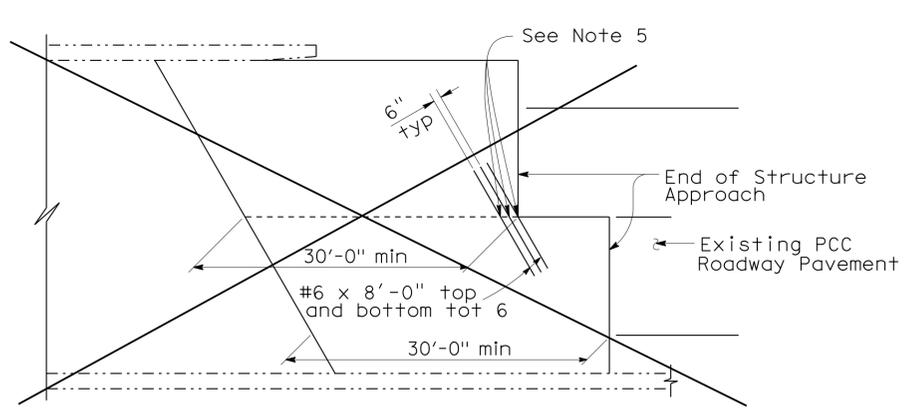
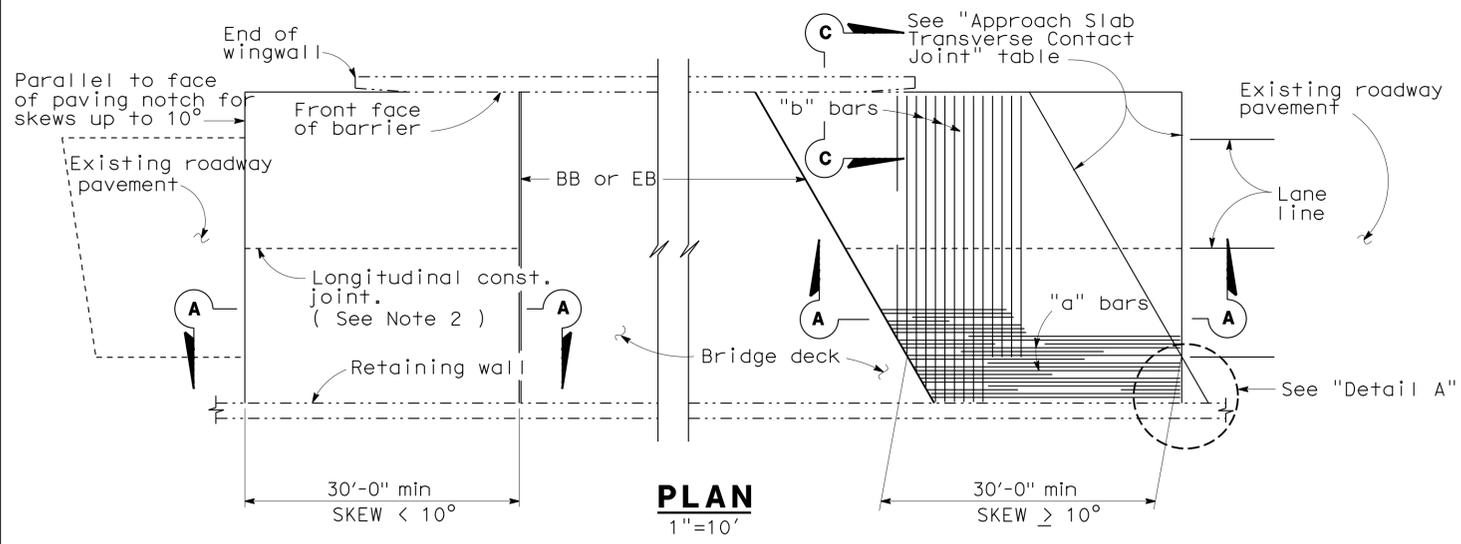
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
04/28/10 08/04/11	19	26

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1220	1475

12/19/11  
 REGISTERED CIVIL ENGINEER DATE  
 6-10-13  
 PLANS APPROVAL DATE  
 JASON FANG  
 No. C 70467  
 Exp. 09/30/2012  
 CIVIL  
 STATE OF CALIFORNIA

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APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	Parallel to face of paving notch	Parallel to face of paving notch
10° - 45°	Parallel to face of P N use (Detail A)	Stagger lines 24' to 36' apart
> 45°	Parallel to face of P N use (Detail A)	Stagger at each lane line

- NOTES:**
- Sealed joint, for M.R. see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required.
  - Longitudinal construction joints, when permitted by Engineer, shall be located on lane lines.
  - Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint.
  - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
  - Couplers are required for stage construction.
  - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.
- NOTE:  
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

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

REVISED STANDARD DRAWING  
 FILE NO. **xs3-130e**  
 APPROVAL DATE **July 2011**

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 Revised Note

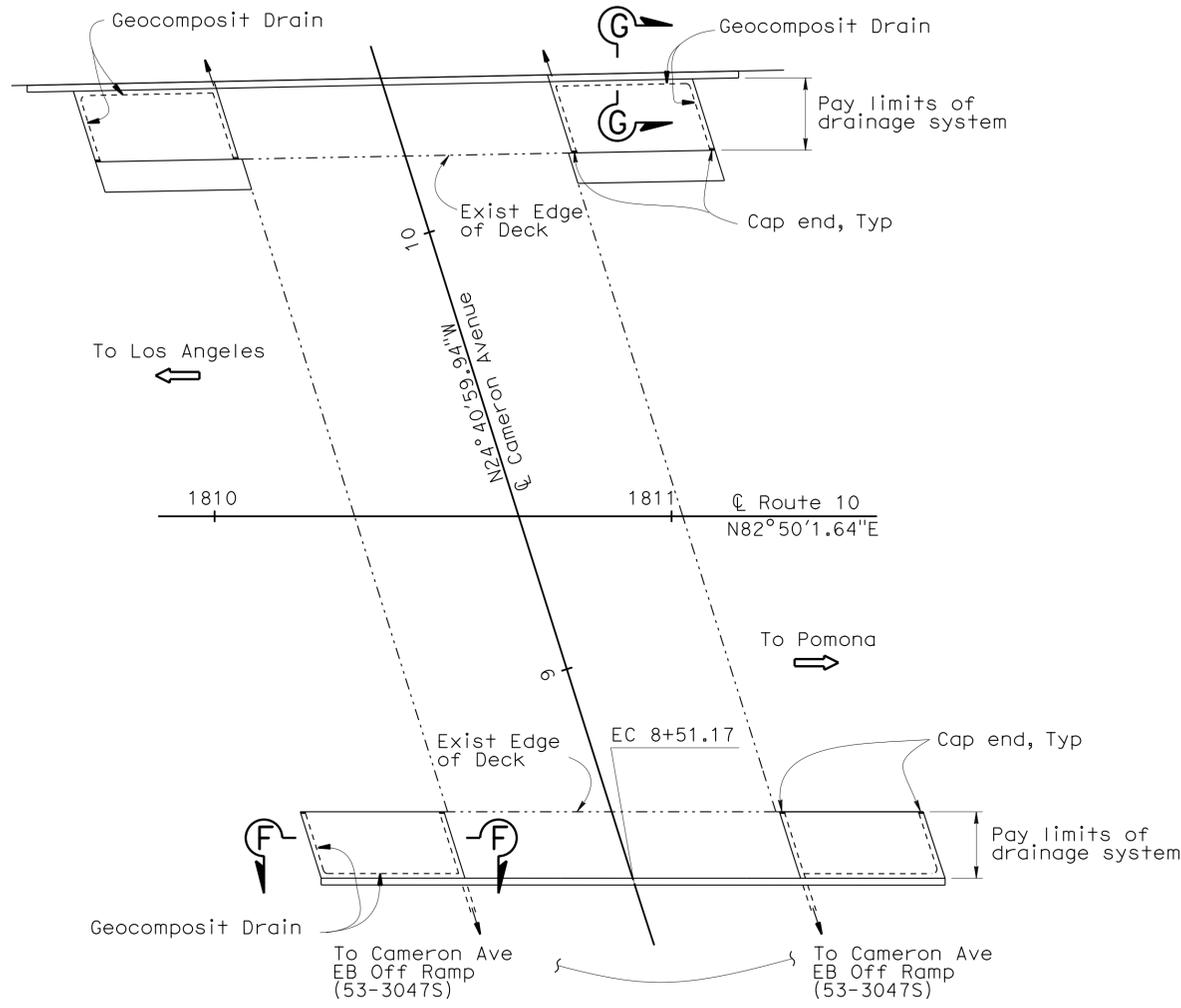
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

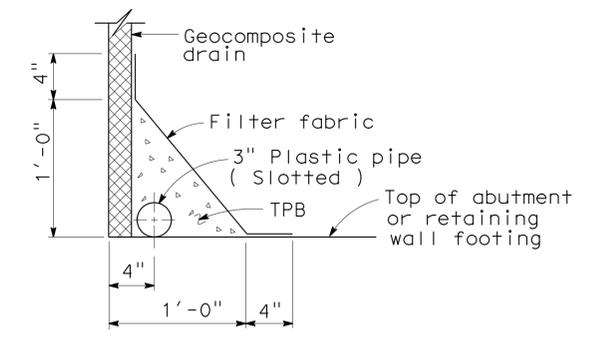
BRIDGE NO. 53-0667  
 POST MILE 34.29

**CAMERON AVE UC (WIDEN)**  
**STRUCTURE APPROACH TYPE R(30S)**

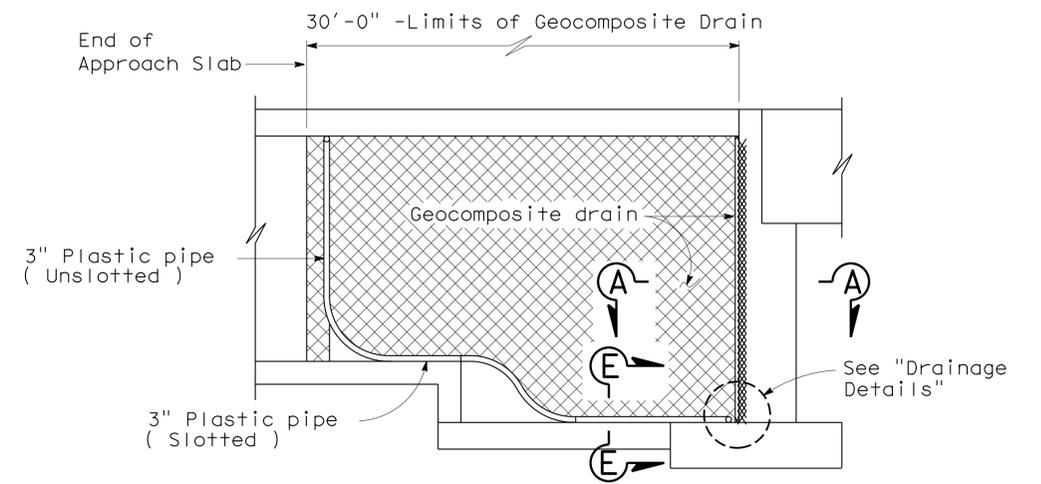
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1221	1475
			DATE		
			12/19/11		
			REGISTERED CIVIL ENGINEER		
			6-10-13		
			PLANS APPROVAL DATE		
			JASON FANG		
			No. C 70467		
			Exp. 09/30/2012		
			CIVIL		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



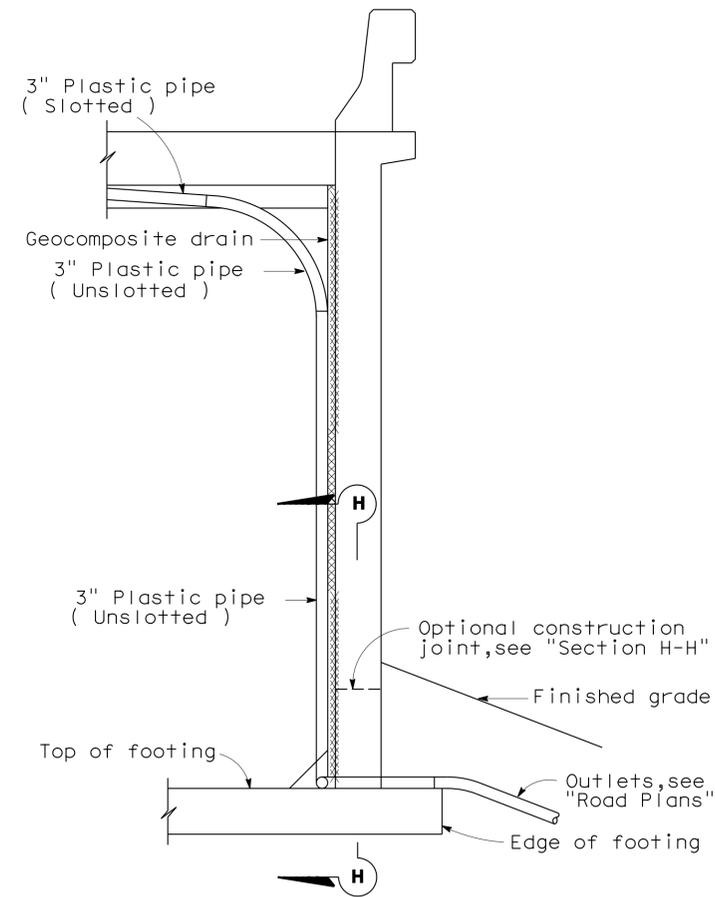
**VIEW F-F LIMITS OF DRAINAGE LAYOUT**  
No Scale



**DRAINAGE DETAILS SECTION E-E WITH FOOTING**

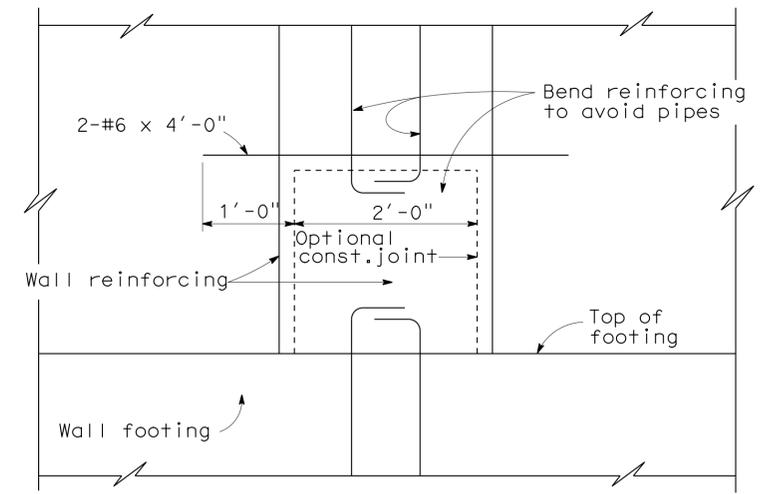


**RETAINING WALL WINGWALL SECTION F-F**  
1/4"=1'-0"



**SECTION G-G**  
1/2"=1'-0"

NOTE: Bends and junctions in 3" plastic pipe are 30" radius min.



**SECTION H-H**  
1"=1'-0"

DESIGN	BY Brijesh kumar Patel	CHECKED Homa. Iraninejadian
DETAILS	BY Antonette L. Ong	CHECKED Homa. Iraninejadian
QUANTITIES	BY Brijesh kumar Patel	CHECKED Edward B. Mu

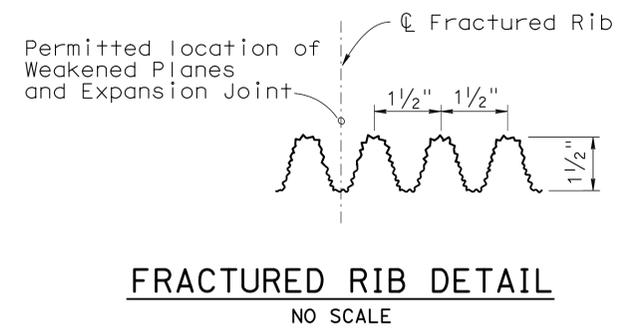
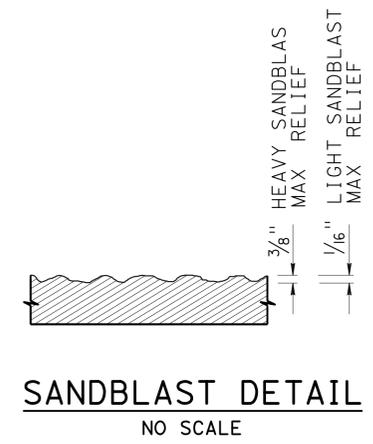
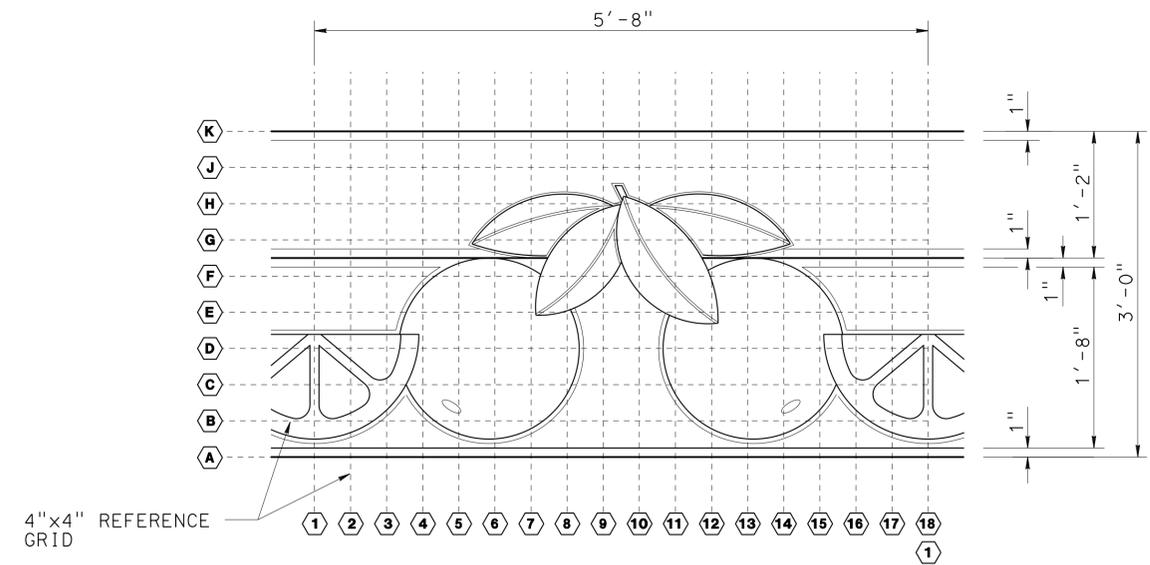
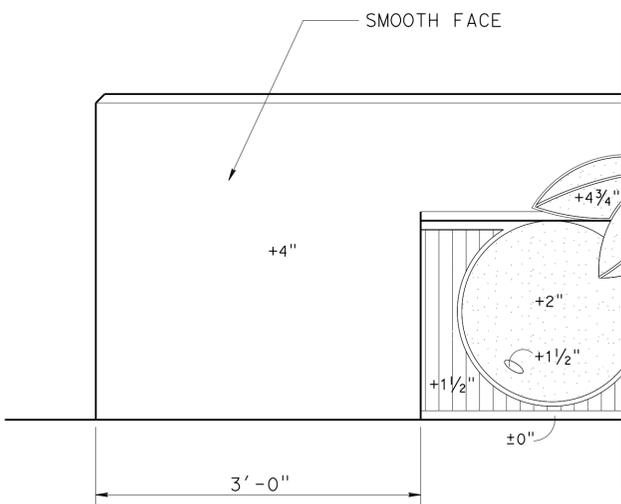
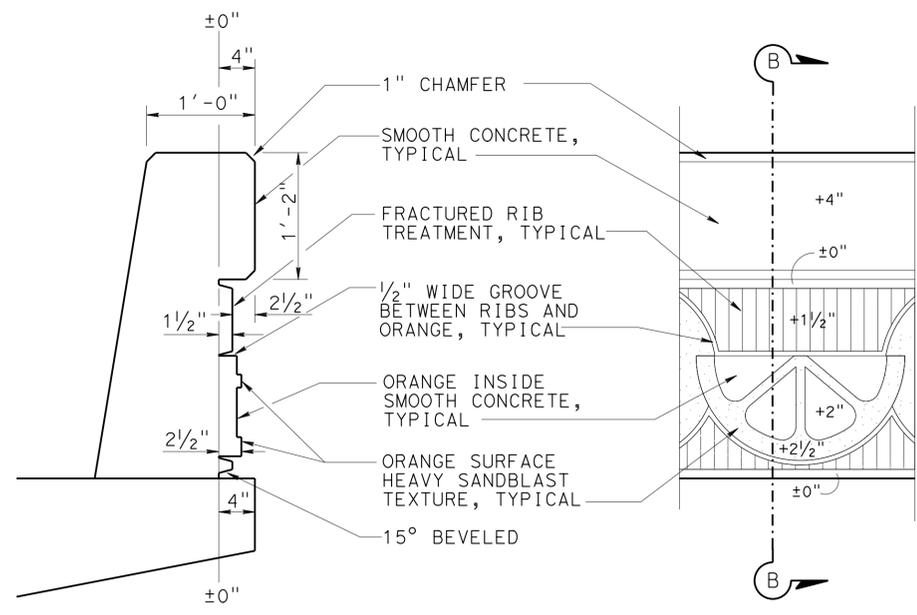
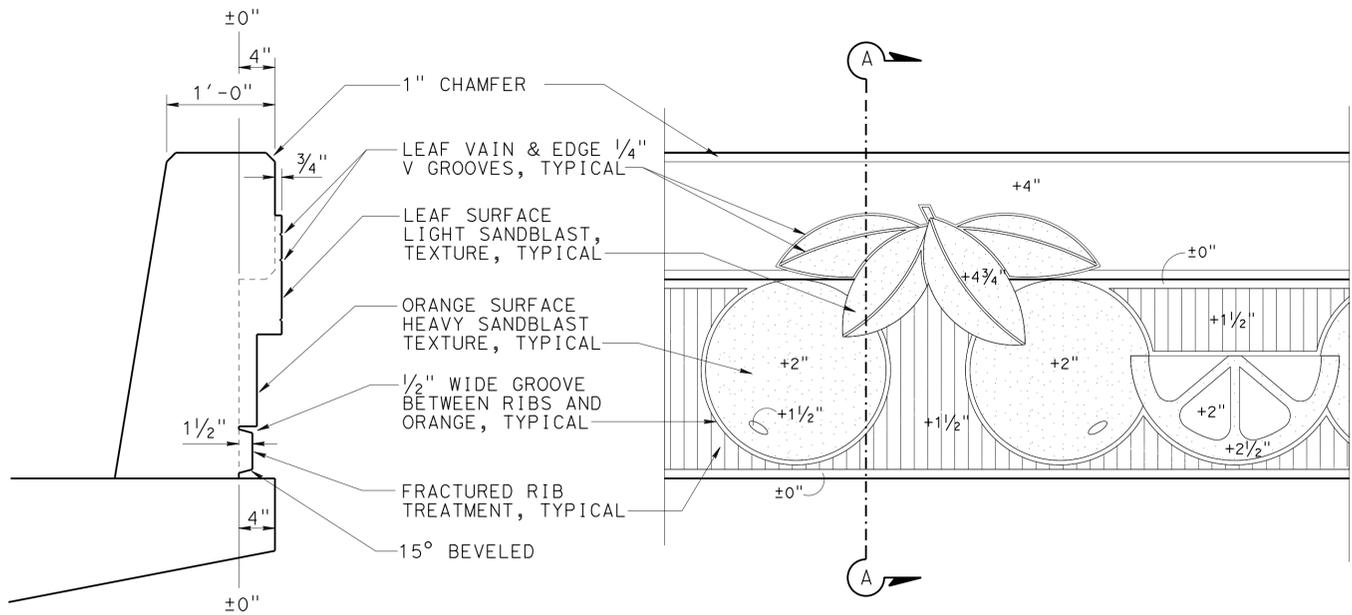
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0667
POST MILE	34.29

**CAMERON AVE UC (WIDEN)**  
**STRUCTURE APPROACH DRAINAGE DETAILS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1222	1475
			12/19/11	DATE	
			6-10-13	PLANS APPROVAL DATE	
REGISTERED CIVIL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA					
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STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY K. Li	CHECKED Edward B. Mu	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO.	53-0667	<b>CAMERON AVE UC (WIDEN)</b> <b>CONCRETE BARRIER TYPE 736 (MOD) DETAILS</b>	
	DETAILS	BY K. Li/K. Farahzadiyazdi	CHECKED Edward B. Mu			POST MILE	34.29		
	QUANTITIES	BY Brijesh K. Patel	CHECKED Edward B. Mu			CONTRACT NO.:	1170U1		
				UNIT: 3622	PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.: 1170U1		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
								REVISION DATES	SHEET 22 OF 26

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1223	1475

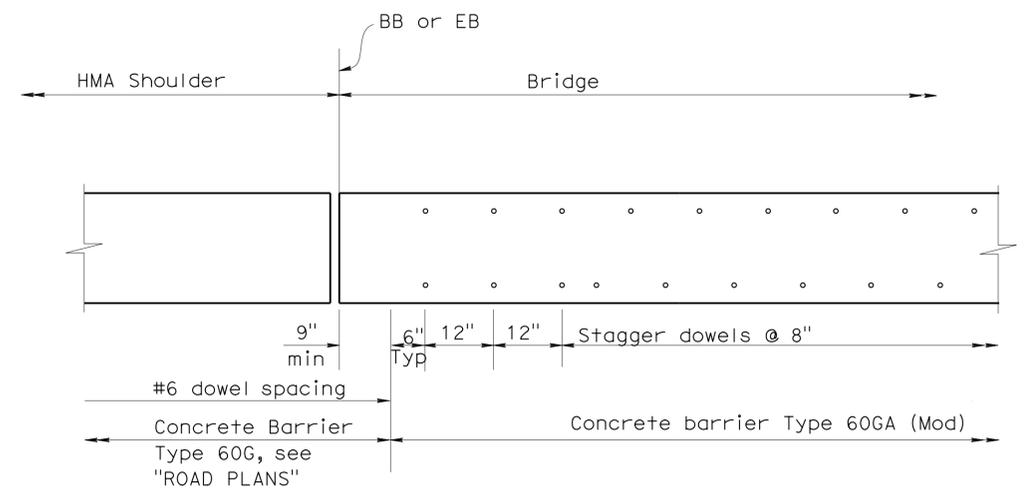
12/19/11  
DATE

REGISTERED CIVIL ENGINEER

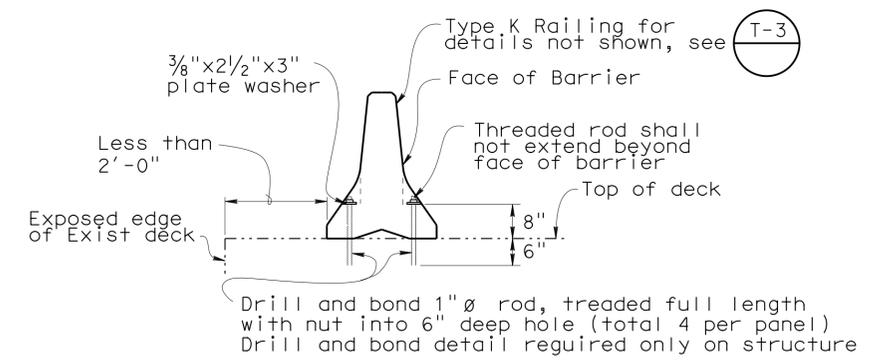
6-10-13  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
No. C 70467  
Exp. 09/30/2012  
CIVIL  
STATE OF CALIFORNIA

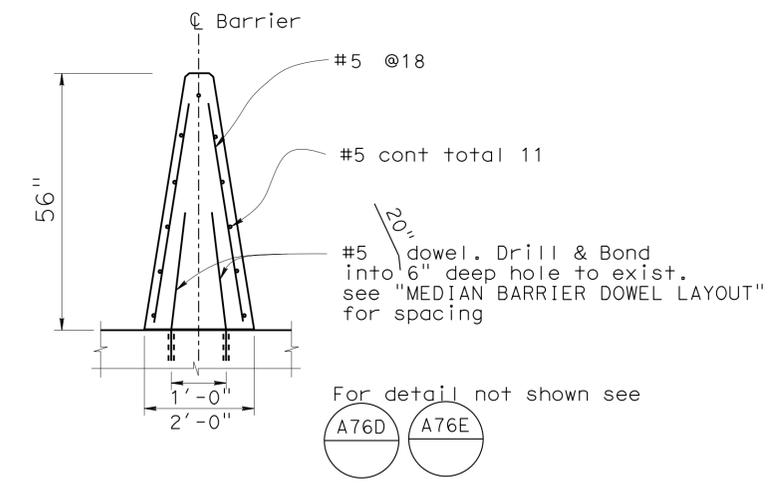
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



**MEDIAN BARRIER DOWEL LAYOUT**  
3/4" = 1'-0"



**TYPE K RAILING ATTACHMENT DETAIL**  
No Scale



**CONCRETE BARRIER TYPE 60GA (MOD)**  
No Scale

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

DESIGN	BY Brijesh kumar Patel	CHECKED Homa. Iraninejadian
DETAILS	BY Antonette L. Ong	CHECKED Homa. Iraninejadian
QUANTITIES	BY Brijesh kumar Patel	CHECKED Edward B. Mu

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

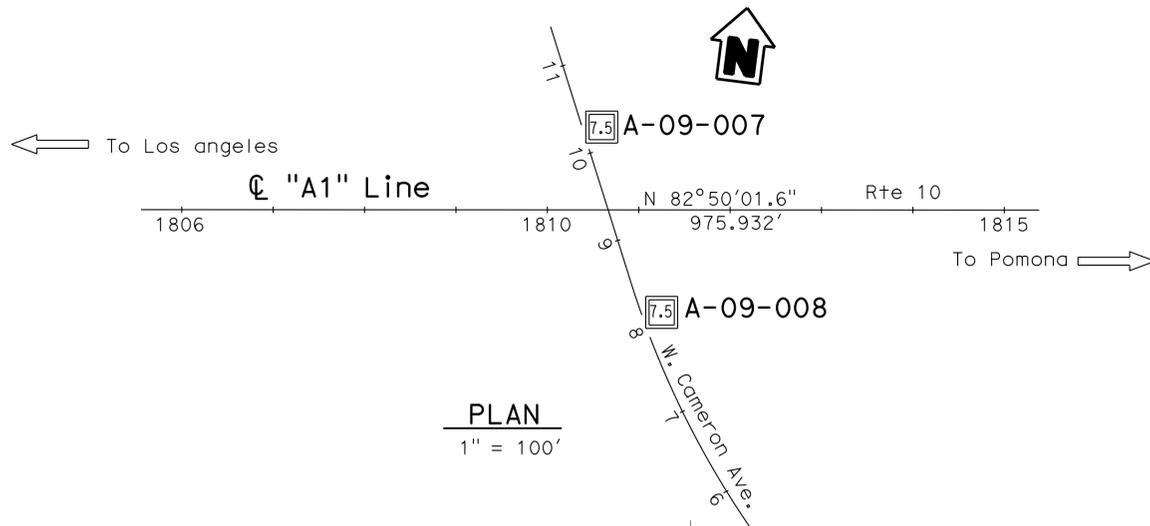
BRIDGE NO.	53-0667
POST MILE	34.29

**CAMERON AVE UC (WIDEN)**  
**MISCELLANEOUS DETAILS**

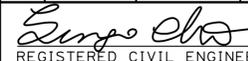
DATE PLOTTED => 12-JUN-2013 15:54 USERNAME => s124486

**BENCH MARK**

BM #98-i-67 Elev 376.15'  
 Hilti Nail in the S. curb of  
 Service Ave. across from the  
 A Coving Branch of the LA  
 County Public Library.



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1224	1475

  
 REGISTERED CIVIL ENGINEER DATE 10-14-11

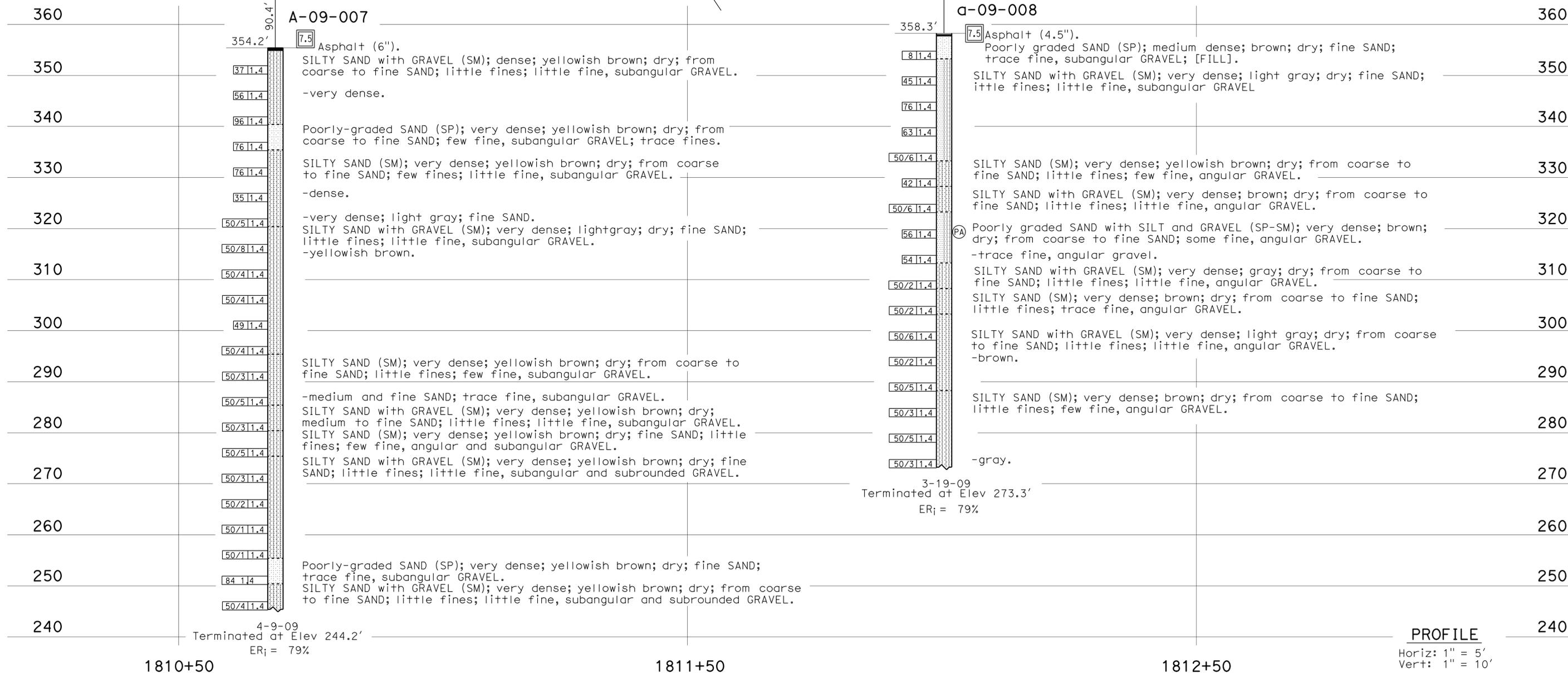
6-10-13  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Sungro Cho  
 No. C75151  
 Exp. 12-31-11  
 CIVIL  
 STATE OF CALIFORNIA

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

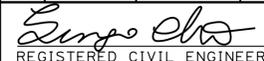
Note: No ground water encountered during field investigation.



<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>CAMERON AVE UC (WIDEN)</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: B. Huddleston, I.G-Remmen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		53-0667		<b>LOG OF TEST BORINGS 1 OF 4</b>	
NAME: D. Jang		CHECKED BY: H. Yang		PROJECT NUMBER & PHASE: 0700000085-1		DESIGN BRANCH <b>20</b>		POST MILE			
				CONTRACT NO.: 1170U1		34.29				REVISION DATES	
065 CIVIL LOG OF TEST BORINGS SHEET				UNIT: 3622						SHEET 23 OF 26	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3  
 FILE => 53-0667-z-1+D01.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1225	1475


 10-14-11  
 REGISTERED CIVIL ENGINEER DATE

6-10-13  
 PLANS APPROVAL DATE

Sungro Cho  
 No. C75151  
 Exp. 12-31-11  
 CIVIL  
 STATE OF CALIFORNIA

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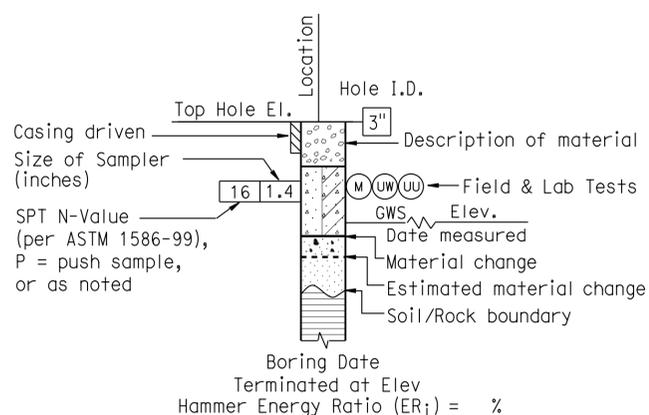
CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS				
Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

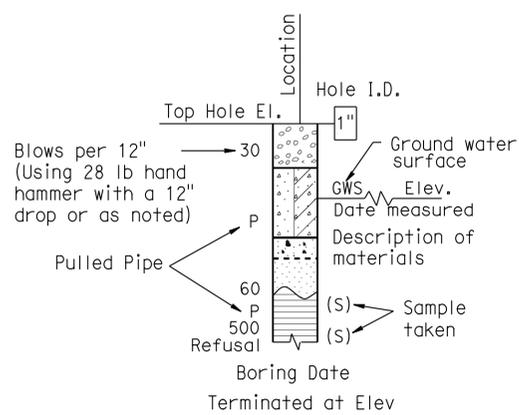
BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring
	R	Rotary drilled boring
	P	Rotary percussion boring (air)
	R	Rotary drilled diamond core
	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778-95)
	O	Other

**Note: Size in inches.**

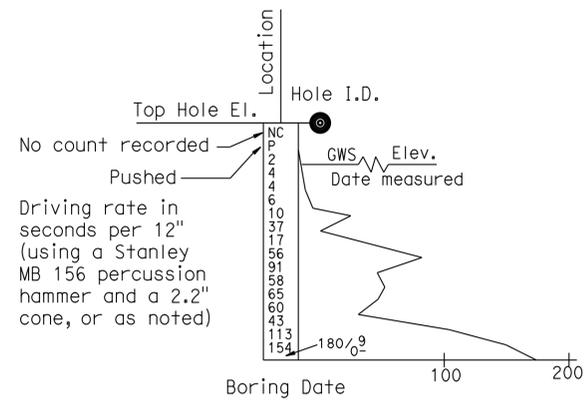
PLASTICITY OF FINE-GRAINED SOILS	
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



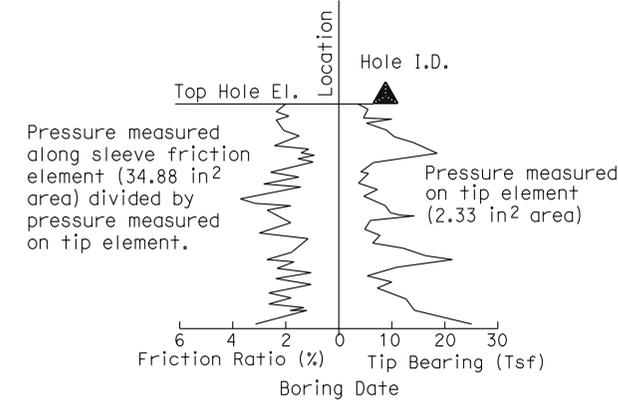
**ROTARY BORING**



**HAND BORING**



**DYNAMIC CONE PENETRATION BORING**



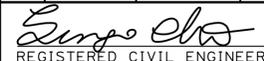
**CONE PENETRATION TEST (CPT) SOUNDING**

<b>ENGINEERING SERVICES</b>	<b>GEOTECHNICAL SERVICES</b>	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	<b>DIVISION OF ENGINEERING SERVICES</b> STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO. 53-0667 POST MILE 34.29	<b>CAMERON AVE UC (WIDEN)</b> <b>LOG OF TEST BORINGS 2 OF 4</b>
	PREPARED BY: I.G-Remmen				
GS LOTB SOIL LEGEND	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.: 1170U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES
					REVISION DATES SHEET OF 24 26

FILE => 53-0667-Z-1+D02.dgn

USERNAME => s124496 DATE PLOTTED => 12-JUN-2013 TIME PLOTTED => 15:54

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1226	1475

  
 REGISTERED CIVIL ENGINEER DATE 10-14-11  
 6-10-13  
 PLANS APPROVAL DATE  
  
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GROUP SYMBOLS AND NAMES			
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	GW Well-graded GRAVEL		CL Lean CLAY
	GW Well-graded GRAVEL with SAND		CL Lean CLAY with SAND
	GP Poorly graded GRAVEL		CL SANDY lean CLAY
	GP Poorly graded GRAVEL with SAND		CL GRAVELLY lean CLAY
	GW-GM Well-graded GRAVEL with SILT		CL-ML SILTY CLAY
	GW-GM Well-graded GRAVEL with SILT and SAND		CL-ML SILTY CLAY with SAND
	GW-GC Well-graded GRAVEL with CLAY (or SILTY CLAY)		CL-ML SILTY CLAY with GRAVEL
	GW-GC Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		CL-ML SANDY SILTY CLAY
	GP-GM Poorly graded GRAVEL with SILT		CL-ML SANDY SILTY CLAY with GRAVEL
	GP-GM Poorly graded GRAVEL with SILT and SAND		CL-ML GRAVELLY SILTY CLAY
	GP-GC Poorly graded GRAVEL with CLAY (or SILTY CLAY)		CL-ML GRAVELLY SILTY CLAY with SAND
	GP-GC Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
	GM SILTY GRAVEL		ML SILT
	GM SILTY GRAVEL with SAND		ML SILT with SAND
	GC CLAYEY GRAVEL		ML SILT with GRAVEL
	GC CLAYEY GRAVEL with SAND		ML SANDY SILT
	GC-GM SILTY, CLAYEY GRAVEL		ML SANDY SILT with GRAVEL
	GC-GM SILTY, CLAYEY GRAVEL with SAND		ML GRAVELLY SILT
	SW Well-graded SAND		ML GRAVELLY SILT with SAND
	SW Well-graded SAND with GRAVEL		
	SP Poorly graded SAND		OL ORGANIC lean CLAY
	SP Poorly graded SAND with GRAVEL		OL ORGANIC lean CLAY with SAND
	SW-SM Well-graded SAND with SILT		OL ORGANIC lean CLAY with GRAVEL
	SW-SM Well-graded SAND with SILT and GRAVEL		OL SANDY ORGANIC lean CLAY
	SW-SC Well-graded SAND with CLAY (or SILTY CLAY)		OL SANDY ORGANIC lean CLAY with GRAVEL
	SW-SC Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		OL GRAVELLY ORGANIC lean CLAY
	SP-SM Poorly graded SAND with SILT		OL GRAVELLY ORGANIC lean CLAY with SAND
	SP-SM Poorly graded SAND with SILT and GRAVEL		
	SP-SC Poorly graded SAND with CLAY (or SILTY CLAY)		CH Fat CLAY
	SP-SC Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		CH Fat CLAY with SAND
	SM SILTY SAND		CH Fat CLAY with GRAVEL
	SM SILTY SAND with GRAVEL		CH SANDY fat CLAY
	SC CLAYEY SAND		CH SANDY fat CLAY with GRAVEL
	SC CLAYEY SAND with GRAVEL		CH GRAVELLY fat CLAY
	SC-SM SILTY, CLAYEY SAND		CH GRAVELLY fat CLAY with SAND
	SC-SM SILTY, CLAYEY SAND with GRAVEL		
	PT PEAT		MH Elastic SILT
			MH Elastic SILT with SAND
			MH Elastic SILT with GRAVEL
			MH SANDY elastic SILT
			MH SANDY elastic SILT with GRAVEL
			MH GRAVELLY elastic SILT
			MH GRAVELLY elastic SILT with SAND
			OH ORGANIC fat CLAY
			OH ORGANIC fat CLAY with SAND
			OH ORGANIC fat CLAY with GRAVEL
			OH SANDY ORGANIC fat CLAY
			OH SANDY ORGANIC fat CLAY with GRAVEL
			OH GRAVELLY ORGANIC fat CLAY
			OH GRAVELLY ORGANIC fat CLAY with SAND
			OH ORGANIC elastic SILT
			OH ORGANIC elastic SILT with SAND
			OH ORGANIC elastic SILT with GRAVEL
			OH SANDY ORGANIC elastic SILT
			OH SANDY ORGANIC elastic SILT with GRAVEL
			OH GRAVELLY ORGANIC elastic SILT
			OH GRAVELLY ORGANIC elastic SILT with SAND
			OL/OH ORGANIC SOIL
			OL/OH ORGANIC SOIL with SAND
			OL/OH ORGANIC SOIL with GRAVEL
			OL/OH SANDY ORGANIC SOIL
			OL/OH SANDY ORGANIC SOIL with GRAVEL
			OL/OH GRAVELLY ORGANIC SOIL
			OL/OH GRAVELLY ORGANIC SOIL with SAND

FIELD AND LABORATORY TESTING	
(C)	Consolidation (ASTM D 2435)
(CL)	Collapse Potential (ASTM D 5333)
(CP)	Compaction Curve (CTM 216)
(CR)	Corrosivity Testing (CTM 643, CTM 422, CTM 417)
(CU)	Consolidated Undrained Triaxial (ASTM D 4767)
(DS)	Direct Shear (ASTM D 3080)
(EI)	Expansion Index (ASTM D 4829)
(M)	Moisture Content (ASTM D 2216)
(OC)	Organic Content-% (ASTM D 2974)
(P)	Permeability (CTM 220)
(PA)	Particle Size Analysis (ASTM D 422)
(PI)	Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
(PL)	Point Load Index (ASTM D 5731)
(PM)	Pressure Meter
(PP)	Pocket Penetrometer
(R)	R-Value (CTM 301)
(SE)	Sand Equivalent (CTM 217)
(SG)	Specific Gravity (AASHTO T 100)
(SL)	Shrinkage Limit (ASTM D 427)
(SW)	Swell Potential (ASTM D 4546)
(TV)	Pocket Torvane
(UC)	Unconfined Compression-Soil (ASTM D 2166)
(UC)	Unconfined Compression-Rock (ASTM D 2938)
(UU)	Unconsolidated Undrained Triaxial (ASTM D 2850)
(UW)	Unit Weight (ASTM D 4767)
(VS)	Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N <sub>60</sub> (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE	
Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS	
Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE		
Description	Size	
Boulder	> 12"	
Cobble	3" to 12"	
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO. 53-0667	CAMERON AVE UC (WIDEN) LOG OF TEST BORINGS 3 OF 4
				POST MILE 34.29	
PREPARED BY: I.G-Remmen	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.: 1170U1	REVISION DATES	SHEET 25 OF 26

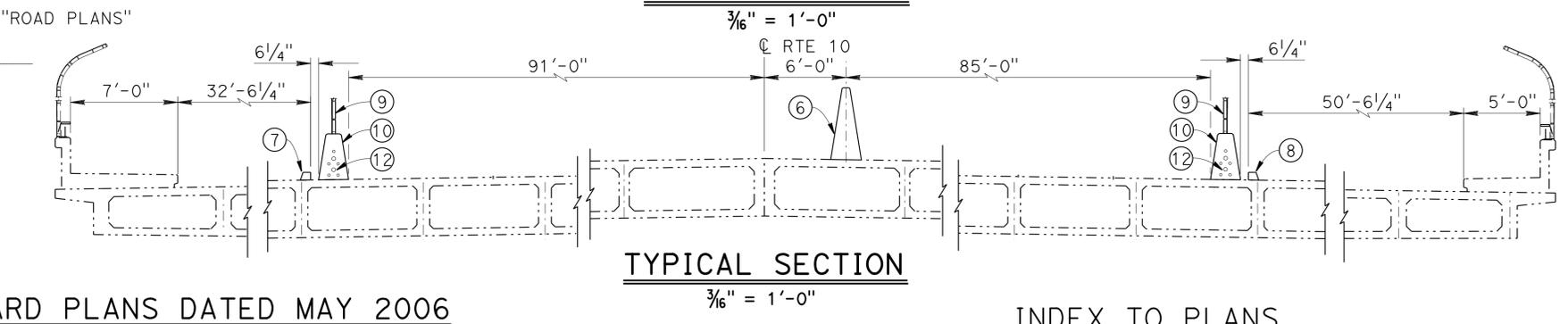
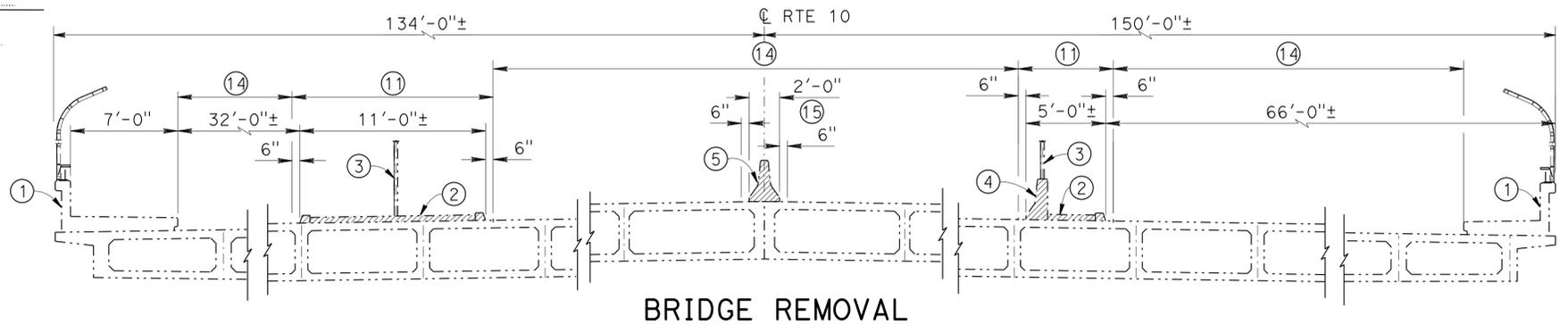
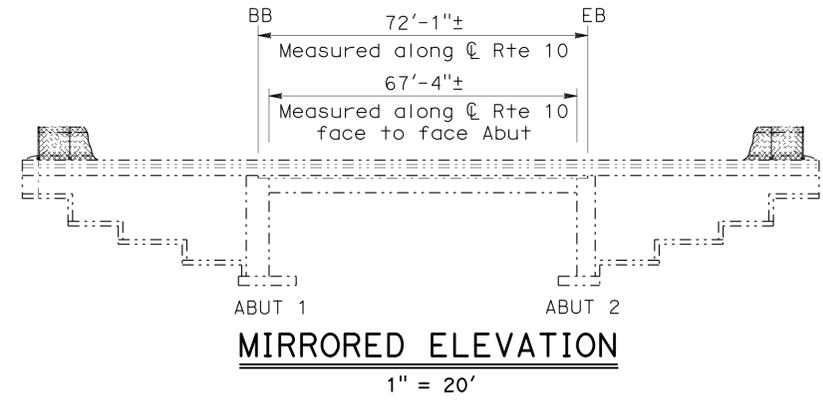
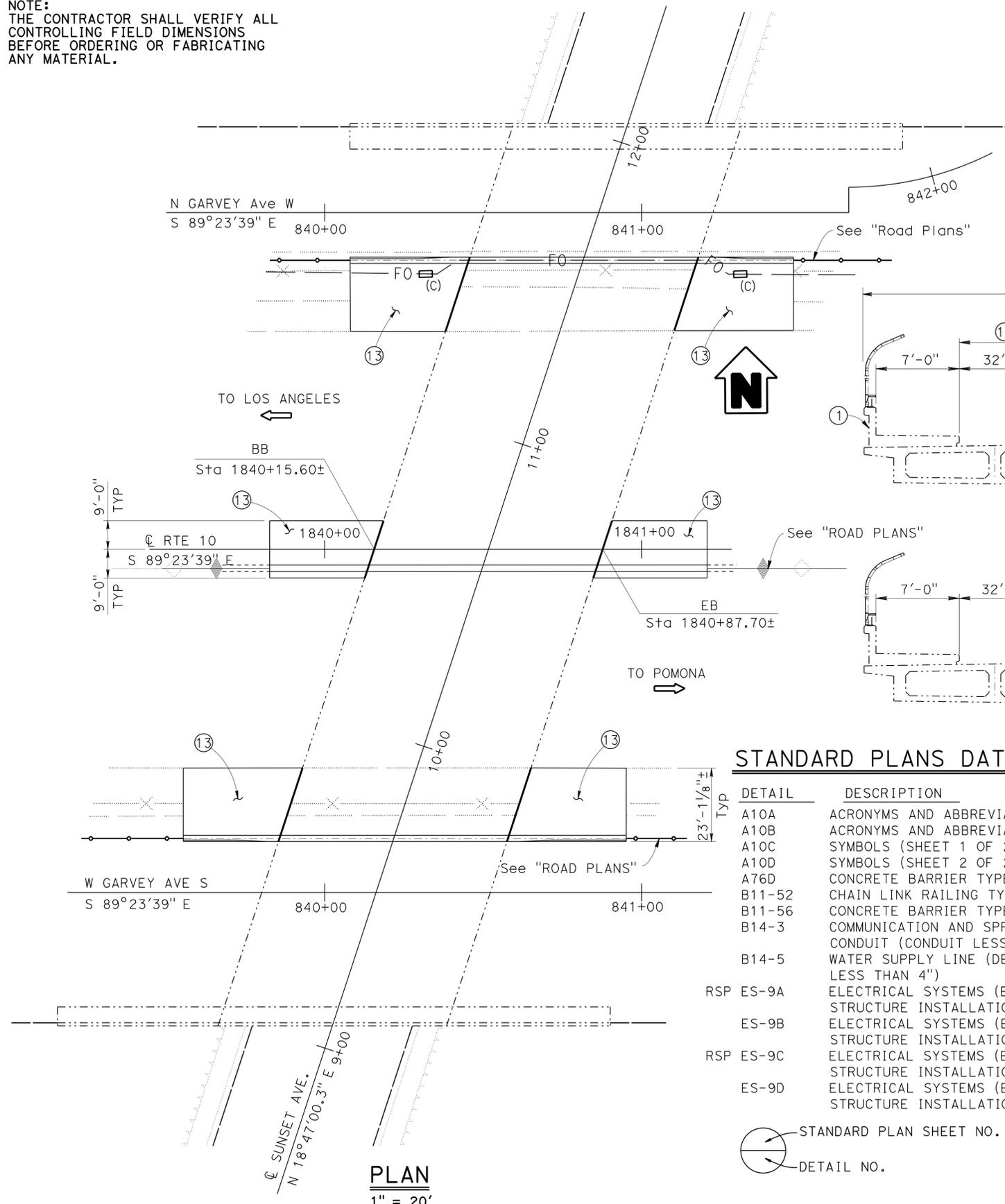
GS LOTB SOIL LEGEND  
 USERNAME => s124496 DATE PLOTTED => 12-JUN-2013 TIME PLOTTED => 15:54  
 FILE => 53-0667-z-1+b03.dgn



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

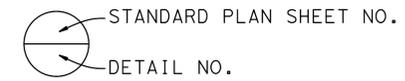
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1228	1475

REGISTERED CIVIL ENGINEER  
 Carl Duan  
 No. C59976  
 Exp. 06-30-12  
 CIVIL  
 DATE 12/21/11  
 PLANS APPROVAL DATE 6-10-13  
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**STANDARD PLANS DATED MAY 2006**

DETAIL	DESCRIPTION
A10A	ACRONYMS AND ABBREVIATIONS A-L
A10B	ACRONYMS AND ABBREVIATIONS M-Z
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
A76D	CONCRETE BARRIER TYPE 60GA
B11-52	CHAIN LINK RAILING TYPE 7
B11-56	CONCRETE BARRIER TYPE 736
B14-3	COMMUNICATION AND SPRINKLER CONTROL CONDUIT (CONDUIT LESS THAN 4")
B14-5	WATER SUPPLY LINE (DETAILS) (PIPE SIZES LESS THAN 4")
RSP ES-9A	ELECTRICAL SYSTEMS (ELECTRICAL DETAILS STRUCTURE INSTALLATIONS)
ES-9B	ELECTRICAL SYSTEMS (ELECTRICAL DETAILS STRUCTURE INSTALLATIONS)
RSP ES-9C	ELECTRICAL SYSTEMS (ELECTRICAL DETAILS STRUCTURE INSTALLATIONS)
ES-9D	ELECTRICAL SYSTEMS (ELECTRICAL DETAILS STRUCTURE INSTALLATIONS)



**NOTES:**

- Exist Barrier Railing Type 12
- Curb and green median to be removed.
- Exist Chain Link Fence to be removed
- Exist Concrete Barrier Type 51A to be removed.
- Exist Type 50 A.4 Concrete Barrier to be removed.
- Concrete Barrier Type 60GA (MOD)
- Type A1-6 Curb. See "ROAD PLANS" and "CONCRETE BARRIER TYPE 736 (MOD)" sheet
- Type A1-8 Curb. See "ROAD PLANS" and "CONCRETE BARRIER TYPE 736 (MOD)" sheet
- Chain Link Railing Type 7 (MOD)
- Concrete Barrier Type 736 (MOD)
- After complete 2, 3 & 4 remove 3/4" of bridge deck and replace with polyester concrete overlay to match existing
- Utility lines, see "CONCRETE BARRIER TYPE 736 (MOD)" sheet
- Structure Approach Type R(30D)
- Prepare existing concrete bridge deck surface and treat bridge deck with methacrylate.
- After 5, refinish bridge deck.

**INDEX TO PLANS**

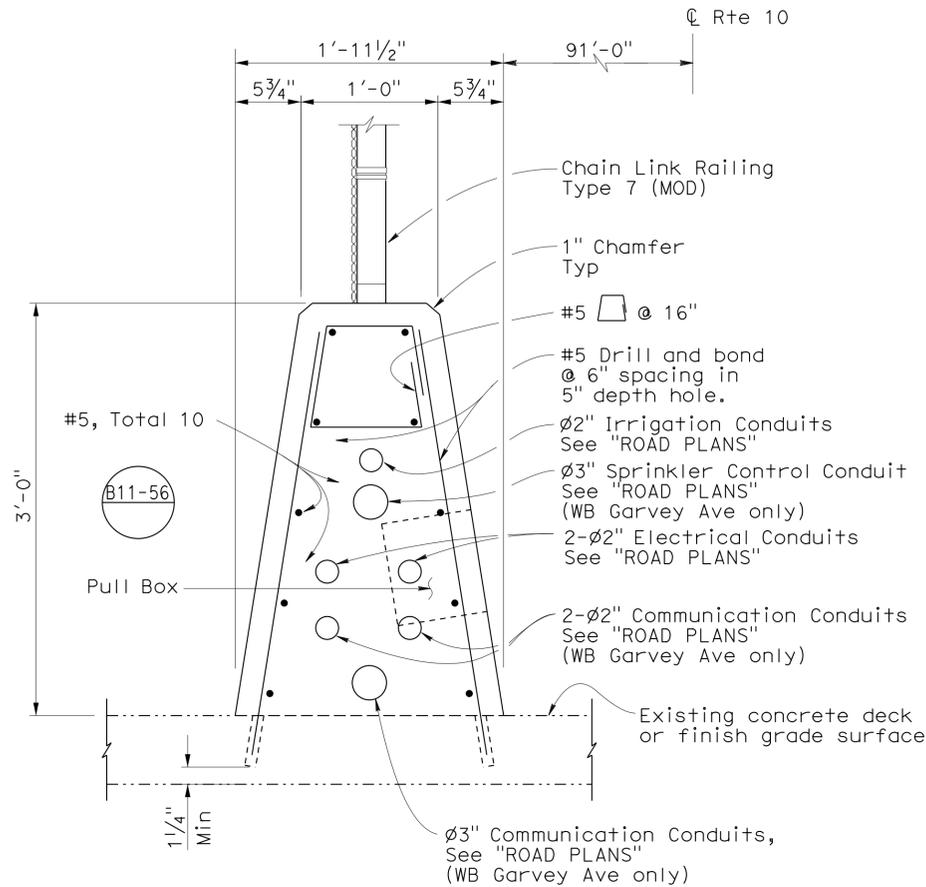
SHEET NO.	TITLE
1.	GENERAL PLAN
2.	CONCRETE BARRIER TYPE 736 (MOD) NO. 1
3.	CONCRETE BARRIER TYPE 736 (MOD) NO. 2
4.	CHAIN LINK RAILING TYPE 7 (MOD)
5.	STRUCTURE APPROACH TYPE R(30D)

QUANTITIES		
REMOVE CONCRETE DECK SURFACE	137	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	20,761	SQFT
BRIDGE REMOVAL (PORTION), LOCATION B	LUMP	SUM
AGGREGATE BASE (APPROACH SLAB)	16	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	160	CY
MINOR CONCRETE (MINOR STRUCTURE)	1	CY
PAVING NOTCH EXTENSION	102	CF
DRILL AND BOND DOWEL	125	LF
REFINISH BRIDGE DECK	217	SQFT
FURNISH POLYESTER CONCRETE OVERLAY	82	CF
PLACE POLYESTER CONCRETE OVERLAY	1,298	SQFT
JOINT SEAL (MR 1/2")	136	LF
TREAT BRIDGE DECK	19,463	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	217	GAL
CHAIN LINK RAILING (TYPE 7 MODIFIED)	211	LF
CONCRETE BARRIER (TYPE 60GA MODIFIED)	138	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	211	LF

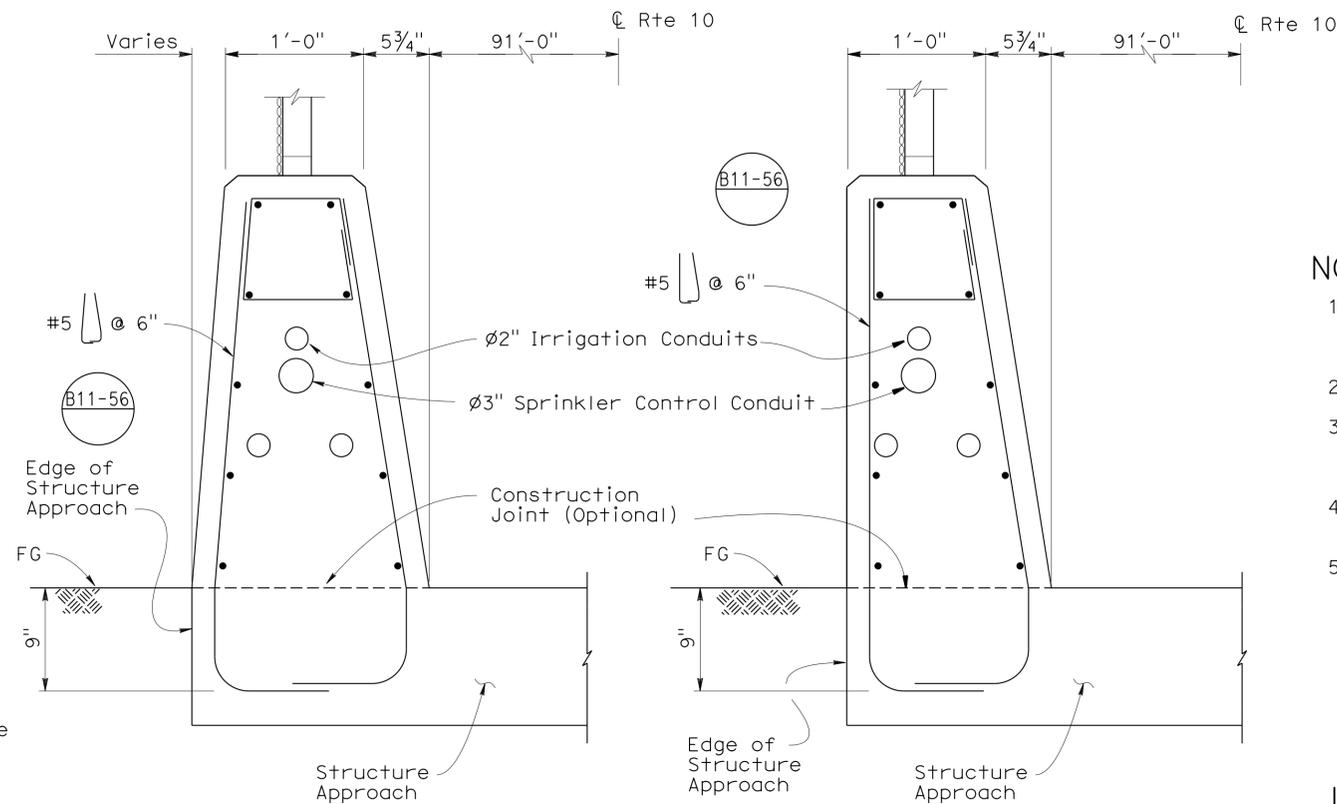
HOWARD NG DESIGN ENGINEER	DESIGN BY Carl Duan	CHECKED Edward B Mu	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO. 53-0668 POST MILE 34.9	<b>SUNSET AVENUE UNDERCROSSING</b> <b>GENERAL PLAN</b>
	DETAILS BY Lan T Tran	CHECKED Edward B Mu	LAYOUT BY Carl Duan	CHECKED Edward B Mu	PLANS AND SPECS COMPARED BY JAMES CHOI	UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085 1	CONTRACT NO.: 1170U1	
	QUANTITIES BY Carl Duan	CHECKED Edward B Mu	SPECIFICATIONS BY JAMES CHOI	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES: 06/27/12, 07/18/12, 06/24/12	

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)  
 FILE => 53-0668-a-gp.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1229	1475
<i>C.M. Duan</i> 12/21/11 REGISTERED CIVIL ENGINEER DATE			Carl Duan No. C59976 Exp. 06-30-12 CIVIL STATE OF CALIFORNIA		
6-10-13 PLANS APPROVAL DATE					
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**SECTION A-A**  
1/2" = 1'-0"



**SECTION B-B**  
1/2" = 1'-0"

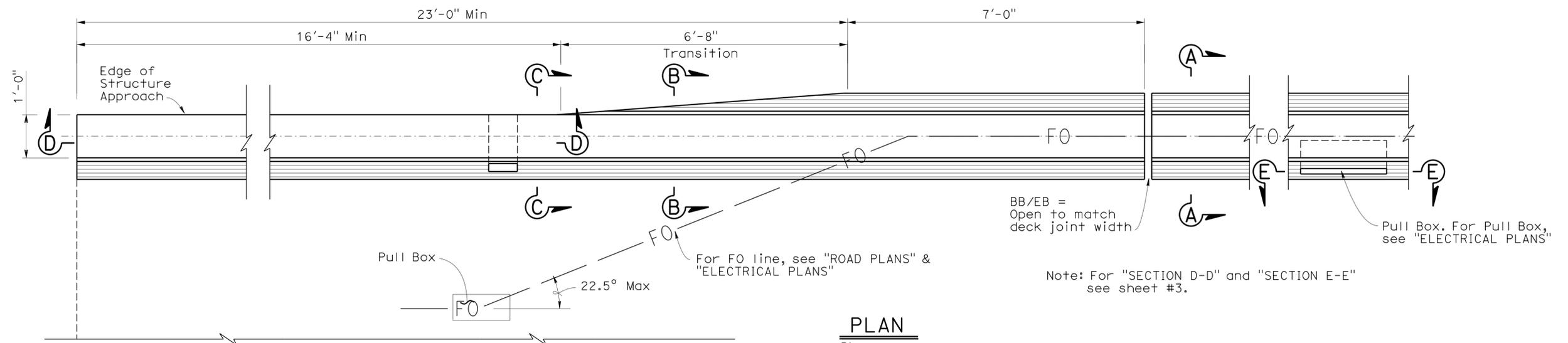
**SECTION C-C**  
1/2" = 1'-0"

**NOTES:**

1. Drill & bond shall be embedded 5" Min into existing deck with at least 1/4" clear distance to bottom concrete surface
2. Avoid existing reinforcement when drilling.
3. Clearance to reinforcing steel in barrier to be 1", except as noted. Longitudinal reinforcement to stop at all expansion joints.
4. For typical metal railing connection details not shown, see Standard Plan A77J1 & A77J2.
5. See Standard Plan RSP ES-9A, ES-9B, RSP ES-9C, ES-9D and ES-9E for electrical details. When a 3" Communication Conduit is used, it is restricted to the base of the barrier.

**LEGEND:**

- Existing structure
- New structure.



**PLAN**  
3/4" = 1'-0"

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

DESIGN	BY Carl Duan	CHECKED Edward B Mu
DETAILS	BY Lan T Tran	CHECKED Edward B Mu
QUANTITIES	BY Carl Duan	CHECKED Edward B Mu

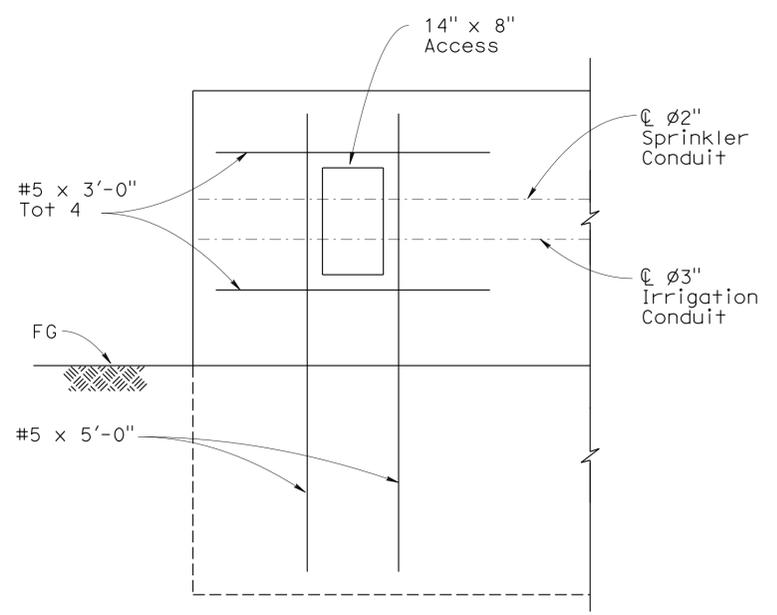
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

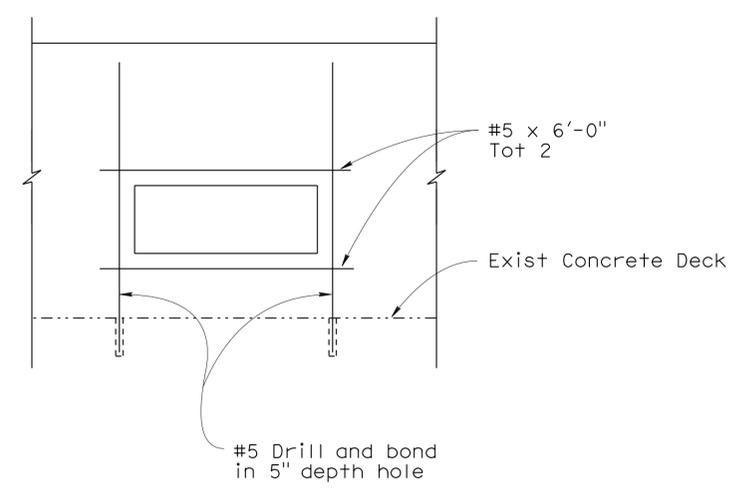
BRIDGE NO.	53-0668
POST MILE	34.9

**SUNSET AVENUE UNDERCROSSING**  
**CONCRETE BARRIER TYPE 736 (MOD) NO. 2**

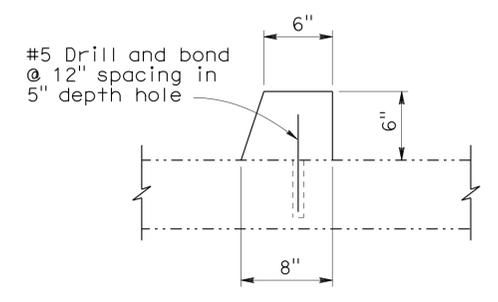
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1230	1475
			DATE		
			12/21/11		
			REGISTERED CIVIL ENGINEER		
			6-10-13		
			PLANS APPROVAL DATE		
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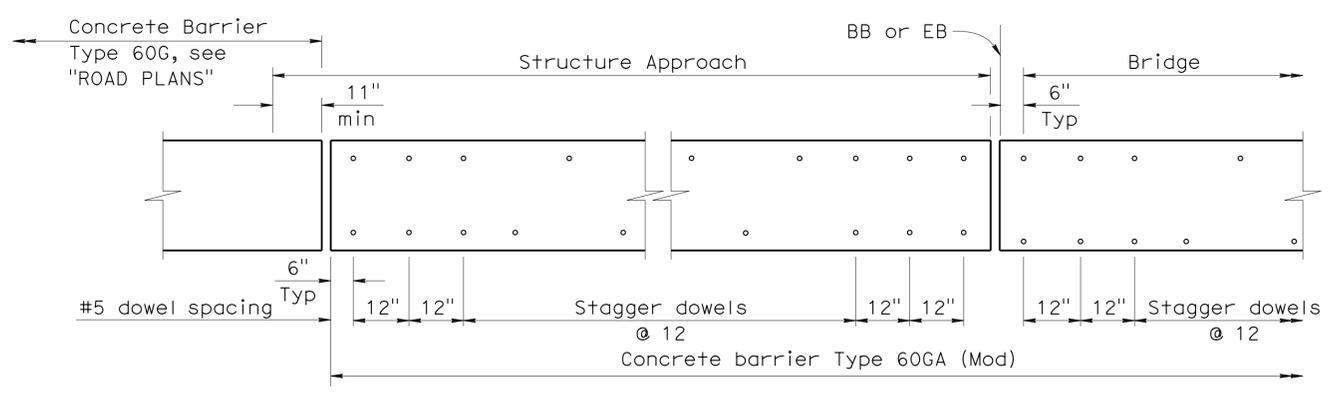
**SECTION D-D**  
1" = 1'-0"



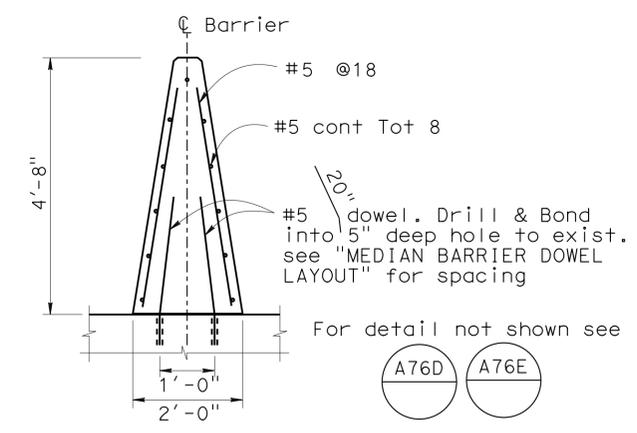
**SECTION E-E**  
1" = 1'-0"



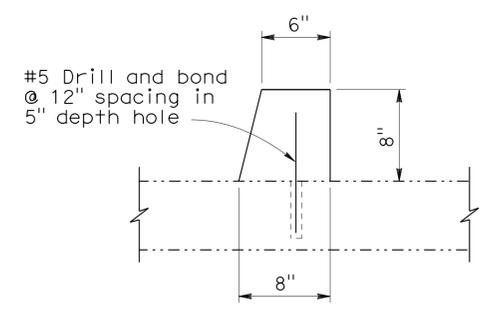
**TYPE A1-6 CURB**  
1 1/2" = 1'-0"



**MEDIAN BARRIER DOWEL LAYOUT**  
No Scale



**CONCRETE BARRIER TYPE 60GA (MOD)**  
No Scale



**TYPE A1-8 CURB**  
1 1/2" = 1'-0"

NOTE:  
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STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Carl Duan	CHECKED Edward B Mu	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO.	53-0668	<b>SUNSET AVENUE UNDERCROSSING</b> <b>CONCRETE BARRIER TYPE 736 (MOD) NO. 2</b>		
	DETAILS	BY Lan T Tran	CHECKED Edward B Mu			POST MILE	34.9			
	QUANTITIES	BY Carl Duan	CHECKED Edward B Mu			UNIT: 3622	PROJECT NUMBER & PHASE: 0700000085 1		CONTRACT NO.: 1170U1	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS								DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 09/16/11 09/20/11 09/27/11	SHEET 3 OF 5

NOTES:

- Railing assembly except chain link fabric must be galvanized after fabrication.
- Peen bolt threads.
- Railing shall conform to horizontal and vertical alignment. Posts shall be vertical. Top and bottom pipes shall be bent if radius is 148'-0" or less; may be on 8'-0" chords if radius is over 148'-0".
- When railing is on slope, chain link fabric shall be placed parallel to slope.
- For details and reinforcement not shown see Standard Plan B11-52.
- See project plans for limits of Chain Link Railing.

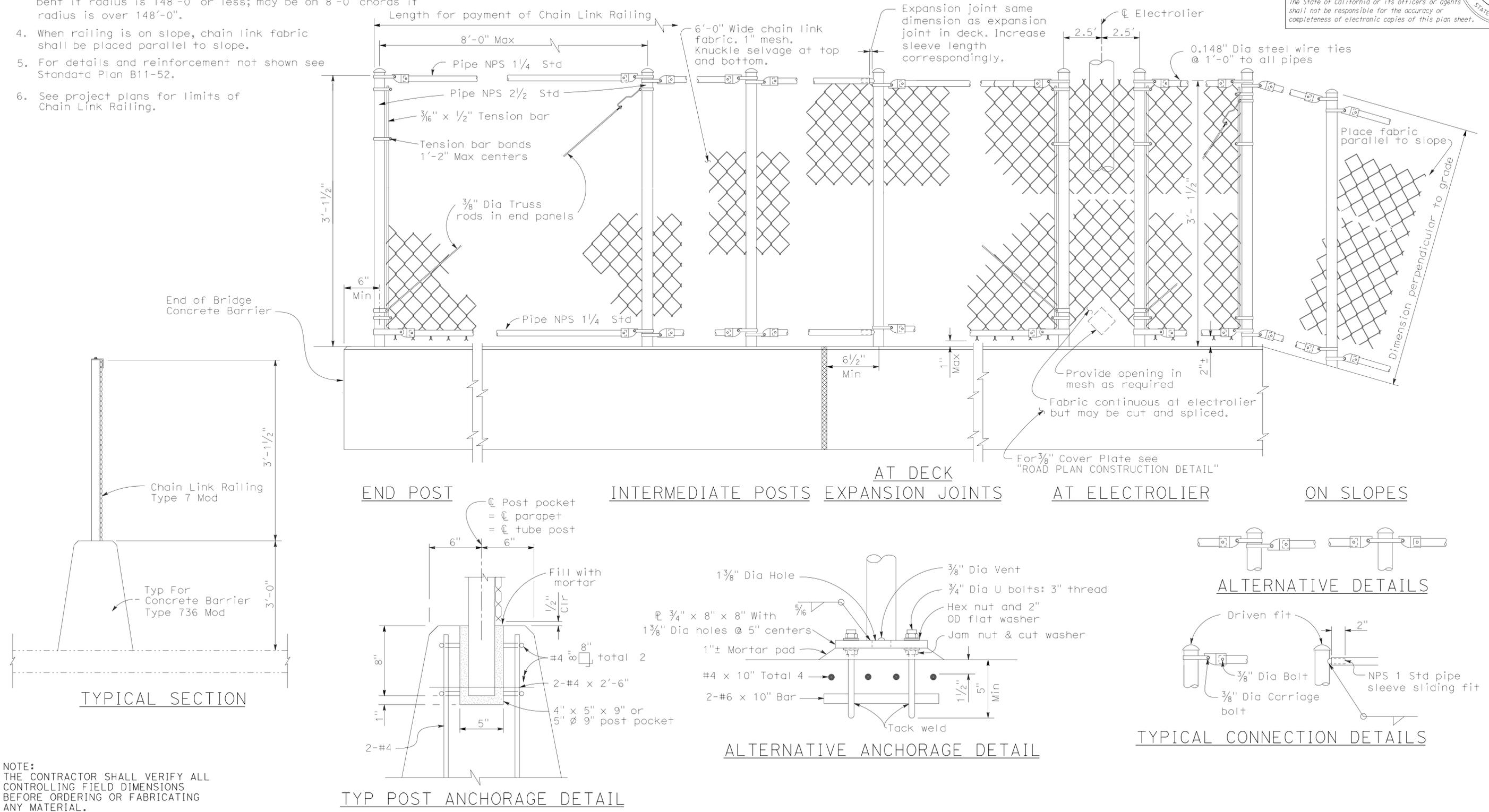
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1231	1475

*Carl Duan* 12/21/11  
 REGISTERED CIVIL ENGINEER DATE

6-10-13  
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
 Carl Duan  
 No. C59976  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



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

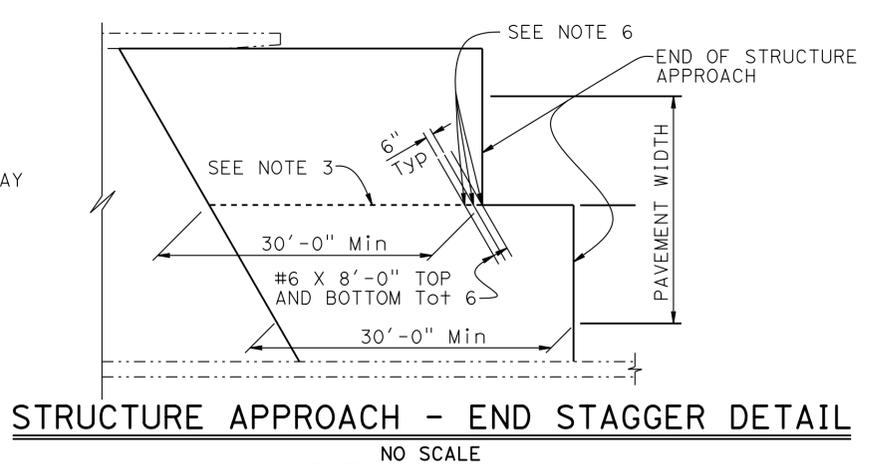
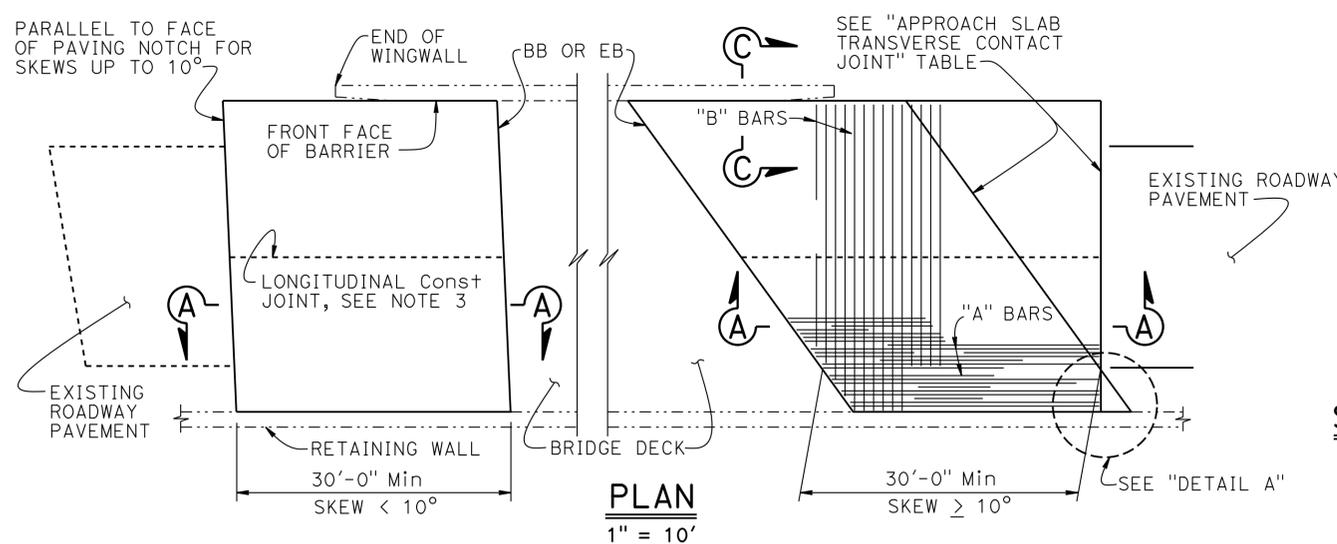
DESIGN	BY Carl Duan	CHECKED Sharareh Bikae
DETAILS	BY Lan T Tran	CHECKED Carl Duan
QUANTITIES	BY Carl Duan	CHECKED Sharareh Bikae

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

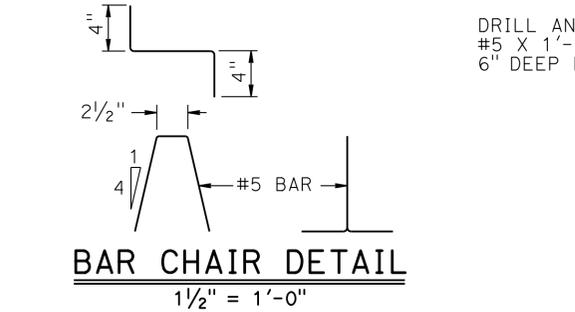
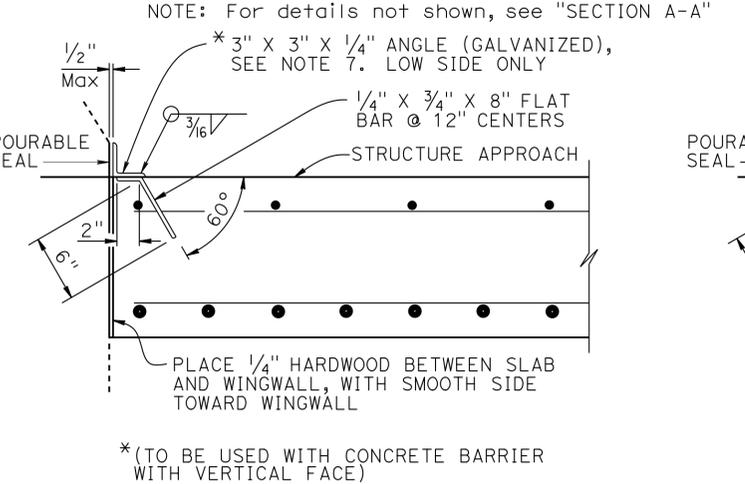
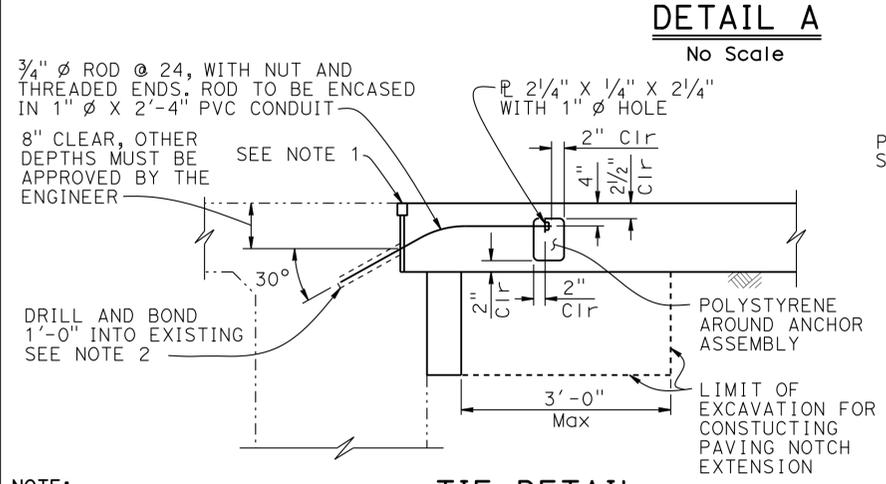
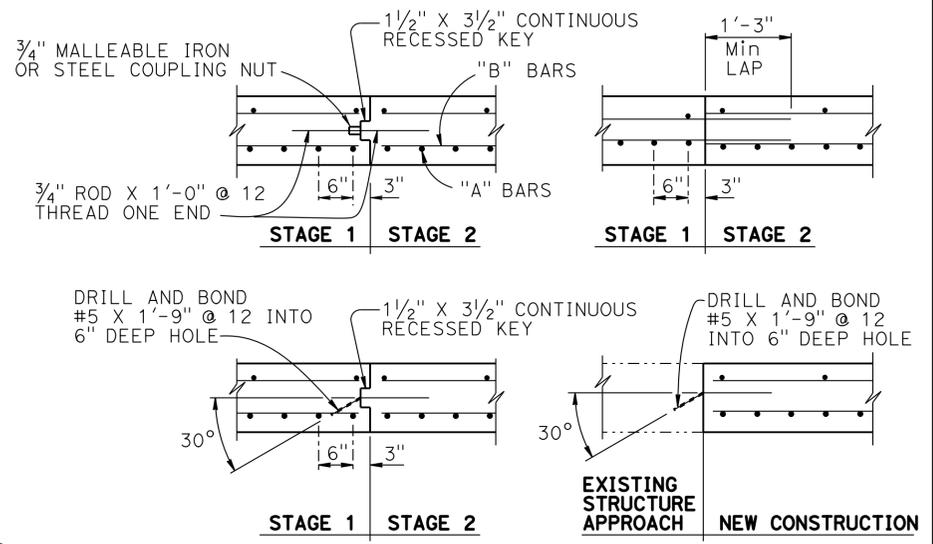
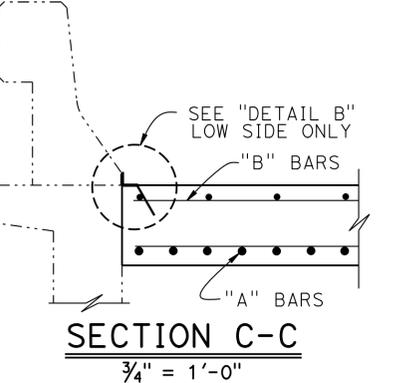
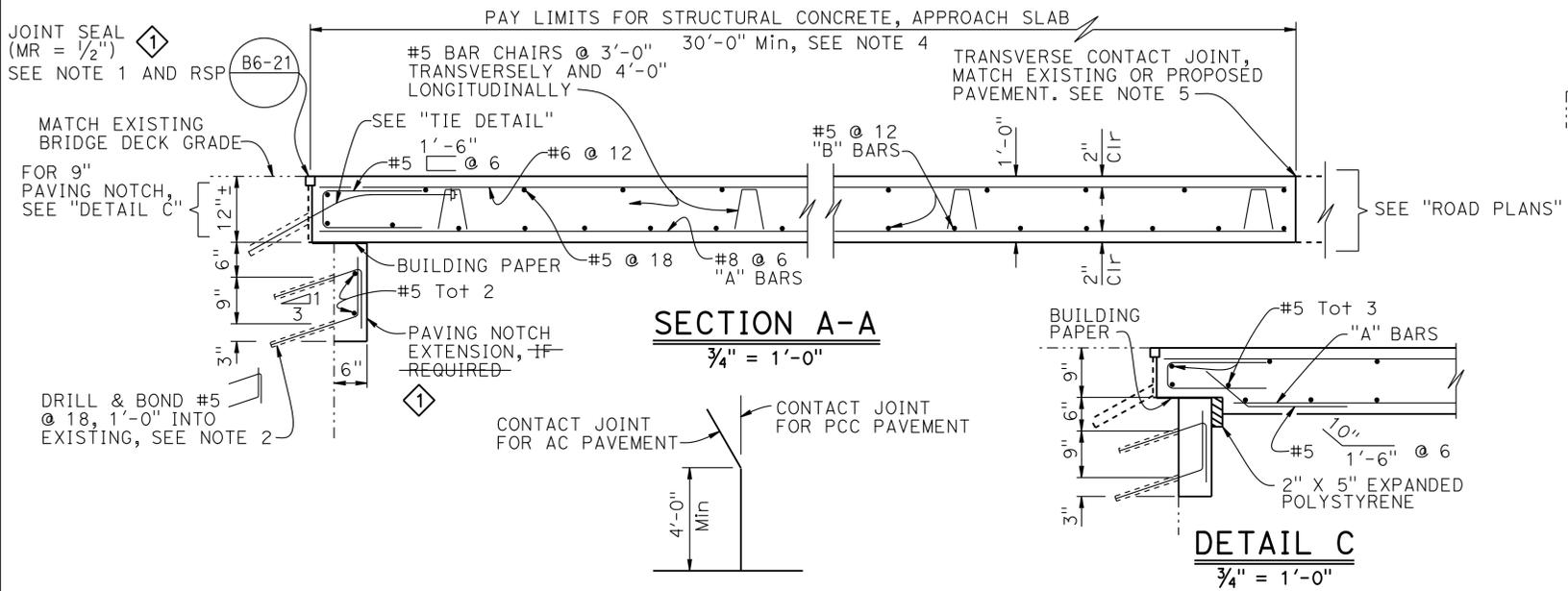
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

BRIDGE NO.	53-0668
POST MILE	34.9

SUNSET AVENUE UNDERCROSSING  
CHAIN LINK RAILING TYPE 7 (MOD)



APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PAVING NOTCH
10° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT EACH LANE LINE



- NOTES:
- For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required
  - Space to avoid existing prestress anchorages and main reinforcement
  - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines
  - Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint
  - For transverse contact joint with new PCC paving, refer to Standard Plan P10
  - Couplers are required for stage construction
  - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable

NOTE:  
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REVISED STANDARD DRAWING  
 FILE NO. **xs3-150**  
 APPROVAL DATE July 2011

REVISED NOTE

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 53-0668  
 POST MILE 34.9  
**SUNSET AVENUE UNDERCROSSING**  
**STRUCTURE APPROACH TYPE R(30D)**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1233	1475

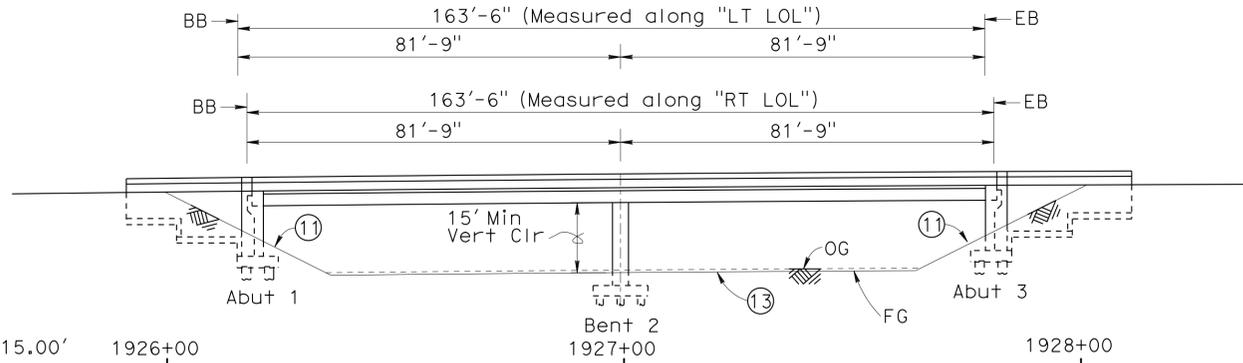
  

REGISTERED CIVIL ENGINEER	DATE
12/19/11	
6-10-13	PLANS APPROVAL DATE

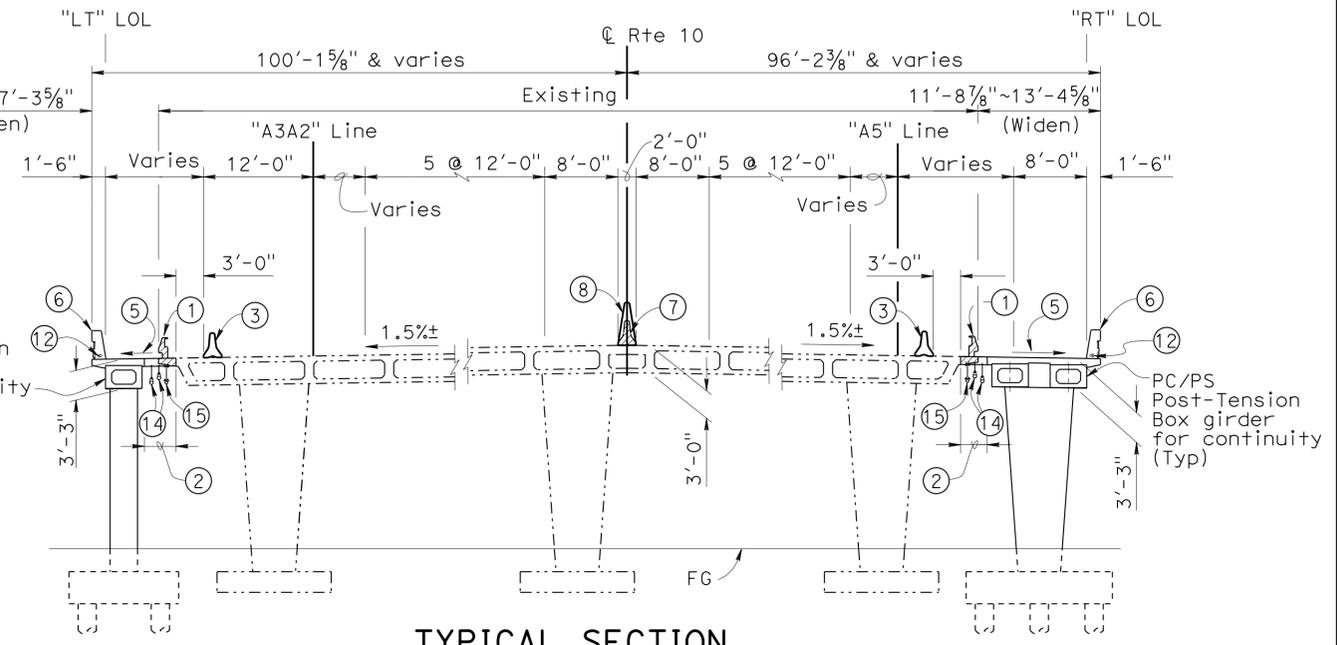
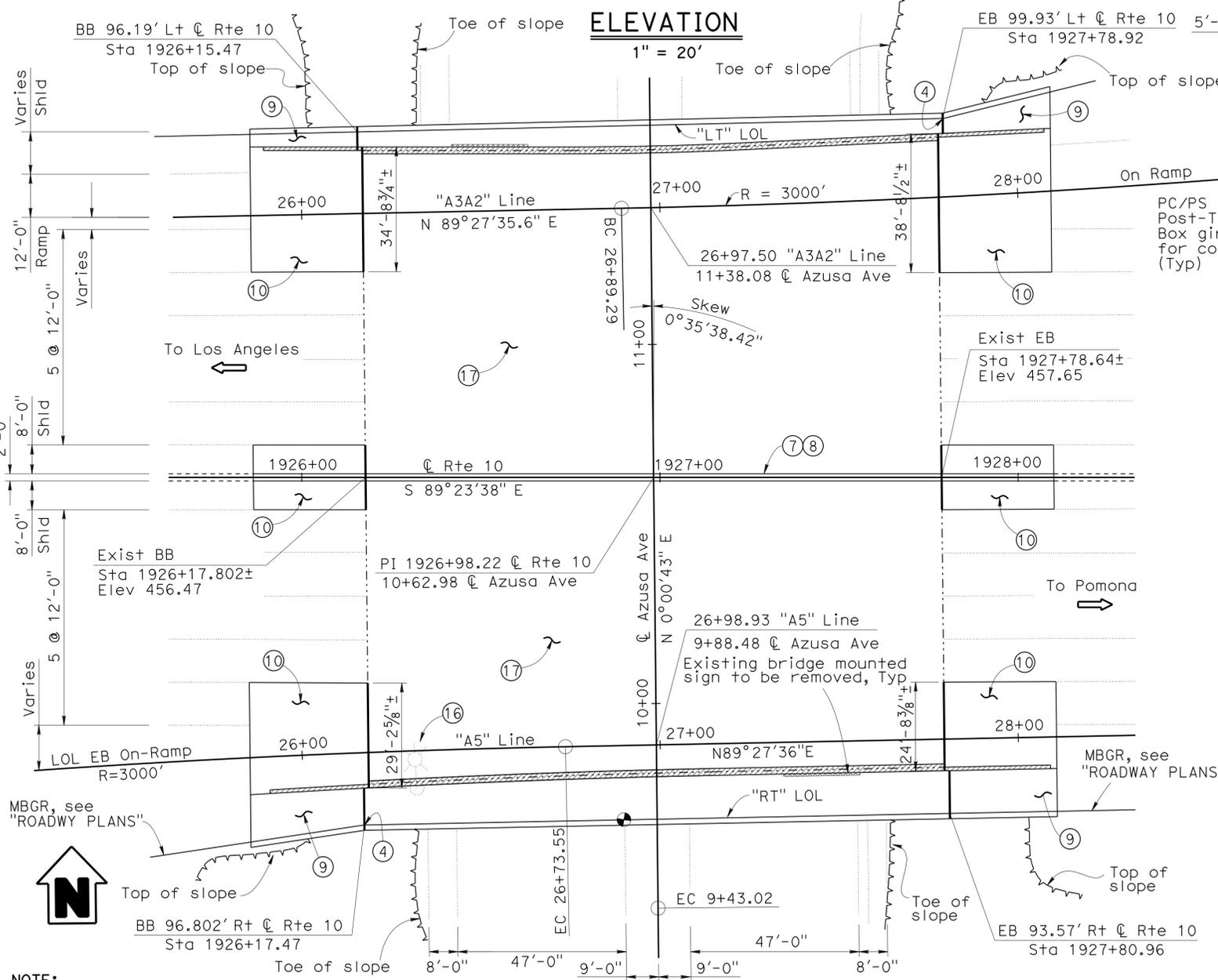
  

REGISTERED PROFESSIONAL ENGINEER	JASON FANG
No. C 70467	Exp. 09/30/2012
CIVIL	STATE OF CALIFORNIA

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- LEGEND**
- New Structure
  - Existing Structure
  - ▨ Concrete Removal
  - Point of Minimum Vertical Clearance
  - Direction of traffic
  - / Indicates location of new joint seal



- NOTES**
- ① Remove existing Concrete Barrier and portion of overhang (Overhang remove width 1'-11" on both sides)
  - ② Closure pour.
  - ③ Temporary railing, Type K, see "ROAD PLANS".
  - ④ Paint bridge name and number.
  - ⑤ Match existing slope.
  - ⑥ Concrete Barrier Type 736 (Mod).
  - ⑦ Remove existing Concrete Barrier Type 50A.
  - ⑧ Median Concrete Barrier Type 60GA (Mod), see "ROAD PLANS".
  - ⑨ Structure Approach Type N(30S).
  - ⑩ Structure Approach Type R(30D).
  - ⑪ Slope paving match existing Grade and Cross Slope.
  - ⑫ 2-2"Ø Light Conduits and 1-3" Sprinkler Control Conduit, see "ROAD PLANS".
  - ⑬ Local roadway lowered by 12" maximum to meet the 15' minimum vertical clearance.
  - ⑭ 2-3/2"Ø Communication Conduits, see "ROAD PLANS".
  - ⑮ 1-3"Ø Irrigation Waterline.
  - ⑯ Electrolier pole to be relocated, see "ROAD PLANS".
  - ⑰ Prepare existing concrete bridge deck surface and treat bridge deck with methacrylate, limit see "TYPICAL SECTION".

**QUANTITIES**

PREPARE CONCRETE BRIDGE DECK SURFACE	27,966	SQFT
BRIDGE REMOVAL (PORTION), LOCATION G	LUMP	SUM
STRUCTURE EXCAVATION (BRIDGE)	504	CY
STRUCTURE BACKFILL (BRIDGE)	419	CY
3" SUPPLY LINE (BRIDGE)	467	LF
AGGREGATE BASE (APPROACH SLAB)	19	CY
24" CAST-IN-DRILLED-HOLE CONCRETE PILING	736	LF
PRESTRESSING	LUMP	SUM
STRUCTURAL CONCRETE, BRIDGE FOOTING	125	CY
STRUCTURAL CONCRETE, BRIDGE	211	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	46	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	182	CY
PAVING NOTCH EXTENSION	123	CF
DRILL AND BOND DOWEL	82	LF
FURNISH PRECAST PRESTRESSED CONCRETE BOX GIRDER (70'-80')	6	EA
ERECT PRECAST PRESTRESSED CONCRETE BOX GIRDER	6	EA
JOINT SEAL (MR 1 1/2")	201	LF
BAR REINFORCING STEEL (BRIDGE)	99,400	LB
HEADED BAR REINFORCEMENT	196	EA
TREAT BRIDGE DECK	27,966	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	311	GAL
SLOPE PAVING (CONCRETE)	40	CY
CONCRETE BARRIER (TYPE 60GA MODIFIED)	221	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	450	LF

**NOTE:**  
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**PLAN**  
1" = 20"

**TYPICAL SECTION**  
1" = 10"

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
DETAILS	BY L. Tran/A. Ong	CHECKED Sharareh Bikae	LAYOUT	BY Bin Shen
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae	SPECIFICATIONS	BY James Choi

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES**  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO. 53-0669  
POST MILE 36.48

**AZUSA AVE UC (WIDEN)**  
**GENERAL PLAN**

UNIT: 3622  
PROJECT NUMBER & PHASE: 0700000085-1 CONTRACT NO.: 1170U1

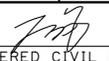
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
06/20/12 06/22/12 06/27/12	1	29

USERNAME => s124496 DATE PLOTTED => 12-JUN-2013 TIME PLOTTED => 16:19

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1234	1475

 REGISTERED CIVIL ENGINEER DATE 12/19/11	
6-10-13 PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER  
 JASON FANG  
 No. C 70467  
 Exp. 09/30/2012  
 CIVIL  
 STATE OF CALIFORNIA

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## GENERAL NOTES

### LOAD AND RESISTANCE FACTOR DESIGN

### INDEX TO PLANS

NO.	SHEET NAME
1.	GENERAL PLAN
2.	INDEX TO PLANS
3.	CONSTRUCTION SEQUENCE
4.	FOUNDATION PLAN
5.	CONCRETE REMOVAL DETAILS
6.	ABUTMENT 1 LAYOUT
7.	ABUTMENT 3 LAYOUT
8.	ABUTMENT DETAILS NO. 1
9.	ABUTMENT DETAILS NO. 2
10.	BENT LAYOUT (LEFT WIDEN)
11.	BENT LAYOUT (RIGHT WIDEN)
12.	BENT DETAILS (LEFT WIDEN)
13.	BENT DETAILS (RIGHT WIDEN)
14.	TYPICAL SECTION
15.	GIRDER LAYOUT
16.	PRECAST GIRDER DETAILS NO. 1
17.	PRECAST GIRDER DETAILS NO. 2
18.	GIRDER REINFORCEMENT
19.	RETAINING WALL LAYOUT (LEFT WIDEN)
20.	RETAINING WALL LAYOUT (RIGHT WIDEN)
21.	STRUCTURE APPROACH TYPE N(30S)
22.	STRUCTURE APPROACH TYPE R(30D)
23.	STRUCTURE APPROACH DRAINAGE DETAILS
24.	CONCRETE BARRIER TYPE 736 (MOD) DETAILS
25.	SLOPE PAVING-FULL SLOPE
26.	LOG OF TEST BORINGS 1 OF 4
27.	LOG OF TEST BORINGS 2 OF 4
28.	LOG OF TEST BORINGS 3 OF 4
29.	LOG OF TEST BORINGS 4 OF 4

**DESIGN:** AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th Edition dated with the Caltrans Amendments, preface dated Dec 2008; except that geotechnical design of deep foundations, earth retaining systems, bridge (incl. barrier and railing) details taken from Standard Plans May 2006 and Standard Bridge details xs sheets, are designed using Bridge Design Specifications (96 AASTHO w/ Revisions by Caltrans).

**SEISMIC DESIGN:** Caltrans Seismic Design Criteria (SDC) version 1.4 dated June 2006

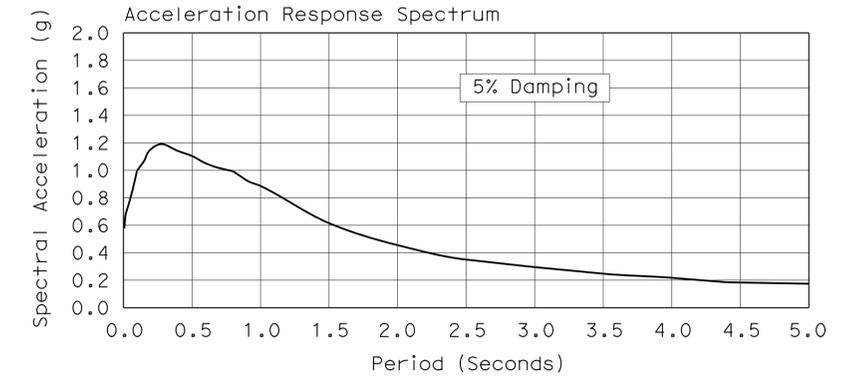
**DEAD LOAD:** Includes 35 psf for future wearing surface.

**LIVE LOAD:** HL-93 and permit design load.

**SEISMIC LOADING:** Soil profile:  $V_{s30} = 978$  ft/sec  
 Moment Magnitude = 7.5, Peak Ground Acceleration = 0.6g  
 (See ARS Curve)

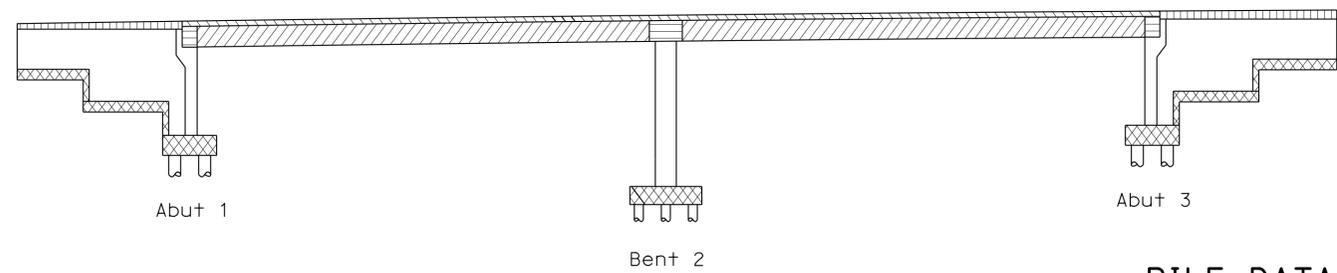
**REINFORCED CONCRETE:**  $f_y = 60$  Ksi  
 $f'_c = 3.6$  ksi,  $n = 8$  and see "CONCRETE STRENGTH AND TYPE LIMITS"

**PRESTRESSED CONCRETE:** See "PRESTRESSING NOTES" on "GIRDER LAYOUT" sheet



### STANDARD PLANS DATED MAY 2006

A10A	ACRONYMS AND ABBREVIATIONS (A-L)
A10B	ACRONYMS AND ABBREVIATIONS (M-Z)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
A76D	CONCRETE BARRIER TYPE 60GA (MOD)
A76E	CONCRETE BARRIER TYPE 60G
B0-3	BRIDGE DETAILS
B0-5	BRIDGE DETAILS
B2-3	24" CASH-IN-DRILLED-HOLE CONCRETE PILE
B3-1	RETAINING WALL TYPE 1, (H=4' THROUGH 30')
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING=2")
B7-1	BOX GIRDER DETAILS
B7-10	UTILITY OPENING, BOX GIRDER
B8-5	CAST-IN-PLACE PRESTRESSED GIRDER DETAILS
B11-56	CONCRETE BARRIER TYPE 736
B14-3	COMMUNICATION AND SPRINKLER CONTROL CONDUITS (CONDUITS LESS THAN 4")
B14-4	WATER SUPPLY LINE (BRIDGE) (PIPE SIZES LESS THAN 4")



### PILE DATA TABLE

LOCATION	CIDH PILE DIAMETER (IN)	NOMINAL RESISTANCE		DESIGN TIP ELEVATION (FT)	SPECIFIED TIP ELEVATION (FT)
		COMPRESSION (KIP)	TENSION (KIP)		
Abut 1 Left Widen	24	170	0	418.60 (a) 413.60 (b)	413.00
Abut 1 Right Widen	24	280	0	409.60 (a) 413.60 (b)	409.00
Bent 2 Left Widen	24	330	140	409.30 (a) 406.30 (b)	406.00
Bent 2 Right Widen	24	260	100	409.30 (a) 406.30 (b)	406.00
Abut 3 Left Widen	24	170	0	419.60 (a) 414.60 (b)	414.00
Abut 3 Right Widen	24	280	0	409.60 (a) 414.60 (b)	409.00

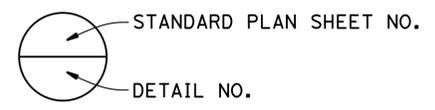
	Structural Concrete, Bridge ( $f'_c = 4$ ksi @ 28 days)
	Precast Pre-stressed Concrete Box Girder see "PRESTRESSED GIRDER DETAILS" sheet ( $f'_c = 6$ ksi @ 28 days)
	Structural Concrete, Bridge ( $f'_c = 5$ ksi @ 28 days)
	Structural Concrete, Bridge Footing ( $f'_c = 4$ ksi @ 28 days)
	Structural Concrete, Approach Slab Type N(30S) and R(30D)
	Structural Concrete, Bridge ( $f'_c = 6$ ksi @ 28 days)

### CONCRETE STRENGTH AND TYPE LIMITS

No Scale

Note: Design tip elevation are controlled by:  
 (a) compression  
 (b) lateral

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DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY Antonette L. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

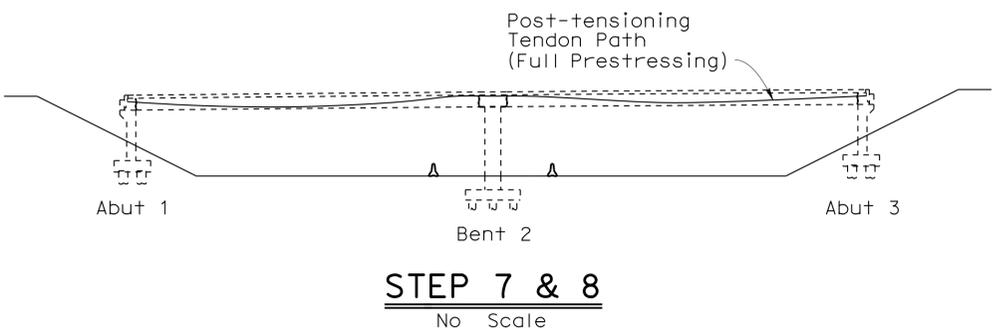
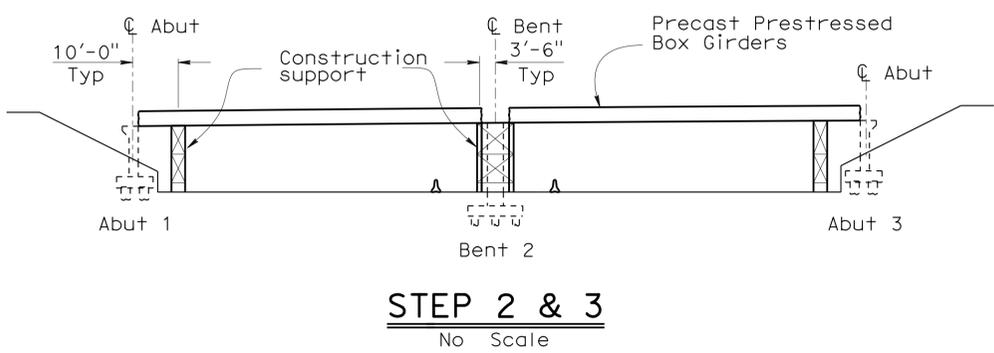
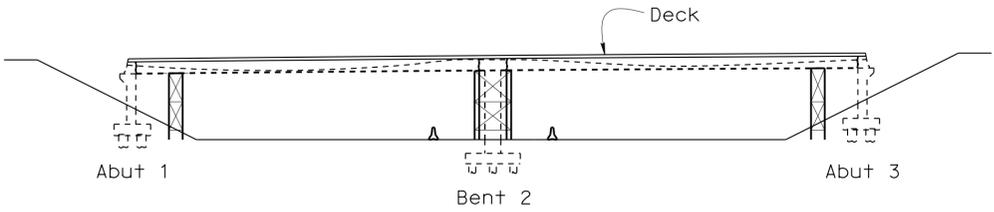
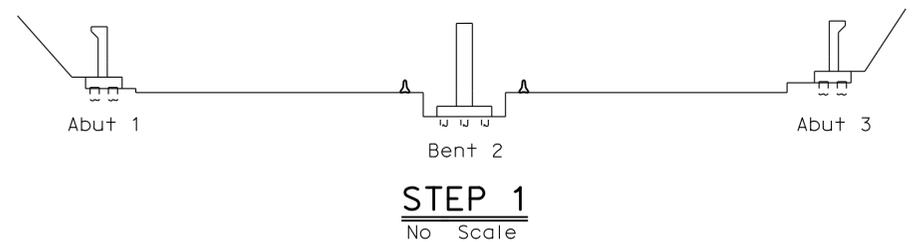
BRIDGE NO.	53-0669
POST MILE	36.48

## AZUSA AVE UC (WIDEN)

### INDEX TO PLANS

USERNAME => s124496 DATE PLOTTED => 12-JUN-2013 TIME PLOTTED => 16:19

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1235	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
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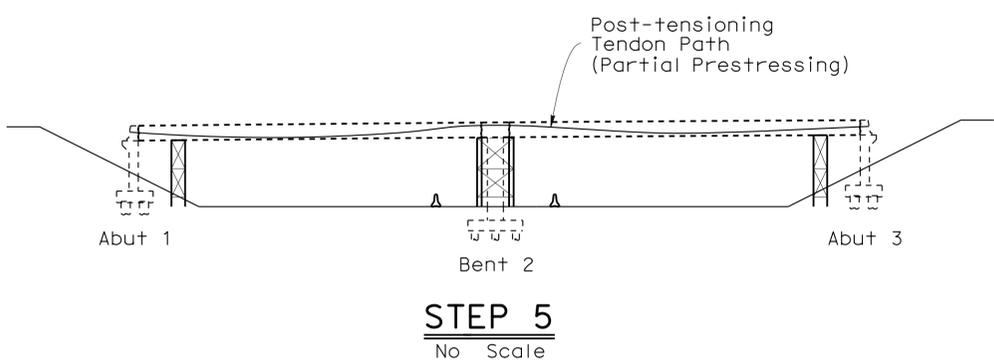
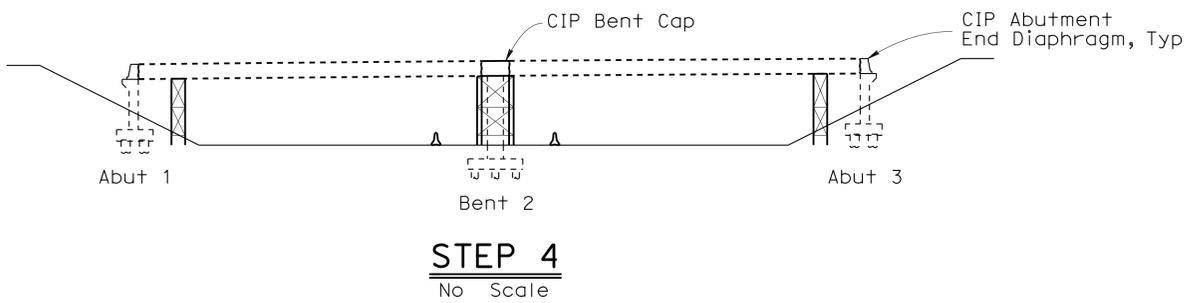
**LEGEND**

----- Indicates previously completed steps.

**BRIDGE CONSTRUCTION SEQUENCE**

- Step 1. Construct abutments, retaining walls (not shown), bent footings, and columns.
- Step 2. Erect construction supports at abutment and bent. Supports shall be capable of supporting a minimum girder and deck load reaction of 120 kips per box girder end. This reaction does not include forces due to wind, impact or construction loads.
- Step 3. Erect PC/PS box girders on construction supports.
- Step 4. Construct cast-in-place end diaphragms, bent cap, and intermediate diaphragms. Allow CIP end diaphragms, bent cap, and intermediate diaphragms concrete to reach minimum strength of 6 ksi.
- Step 5. Partial longitudinal prestressing (220 kips per girder)
- Step 6. Place deck concrete.
- Step 7. Complete longitudinal post-tensioning. Post-tensioning must be placed at least 10 days after deck concrete has been placed, and the concrete compressive strength at time of stressing has reached the minimum specified  $f'_{ci}$ .
- Step 8. Remove supports, complete remaining item of work before construction of closure pour. Closure pour shall not be placed sooner than 14 days after construction supports have been removed.

NOTE: Alternatives to this construction sequence must be reviewed and approved by the Engineer.



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DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY Antonette L. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

BRIDGE NO.	53-0669
POST MILE	36.48

**AZUSA AVE UC (WIDEN)  
CONSTRUCTION SEQUENCE**

DATE PLOTTED => 12-JUN-2013 16:19 USERNAME => s124496

- (AA) Sta 1926+98.218 @ Route 10 =
- (BB) Sta 10+62.980 @ Azusa
- (BB) Sta 26+97.498 "A3A2" Line
- (CC) Sta 9+88.483 @ Azusa =
- (CC) Sta 26+98.934 "A5" Line

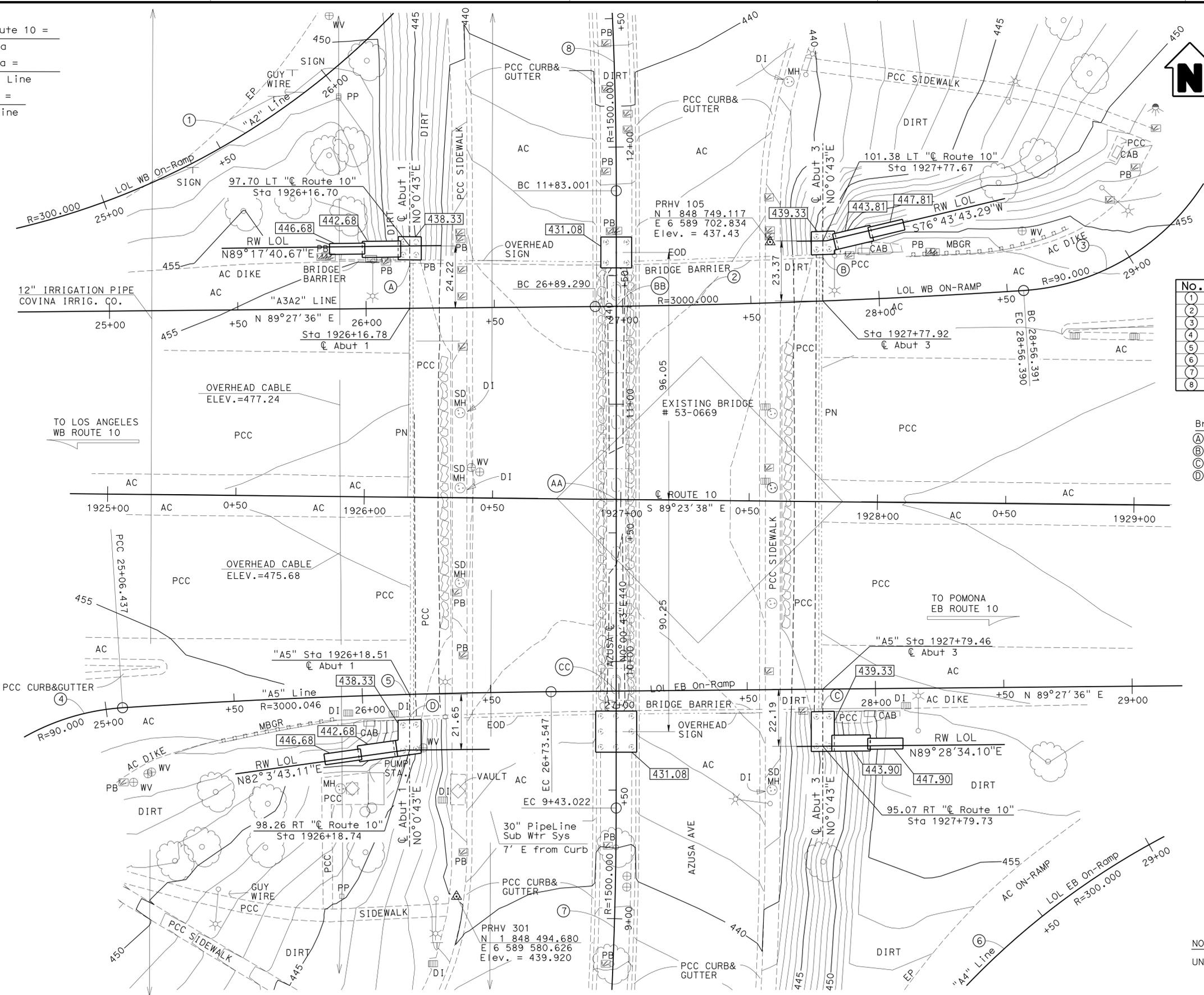
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1236	1475

12/19/11  
REGISTERED CIVIL ENGINEER DATE

6-10-13  
PLANS APPROVAL DATE



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No.	R	Δ	T	L
①	300.000	43°39'25"	120.164	228.587
②	3000.000	3°11'29"	83.572	167.100
③	90.000	102°49'48"	112.800	161.523
④	90.000	119°50'13"	155.373	188.239
⑤	3000.046	3°11'29"	83.577	167.110
⑥	300.000	42°44'04"	117.371	223.757
⑦	1500.000	5°23'51"	70.705	141.306
⑧	1500.000	5°24'12"	70.780	141.455

- Bridge Location
- (A) - 90.915 Lt @ Sta.1926+16.897 Elev=455.236 ±
  - (B) - 94.769 Lt @ Sta1927+77.949 Elev=456.326 ±
  - (C) - 80.366 Rt @ Sta1927+79.119 Elev=456.554 ±
  - (D) - 85.146 Rt @ Sta1926+18.854 Elev=455.342 ±

**SURVEY CONTROL**  
 PRHV 303 ( NOT SHOWN)  
 Fnd Scribe "+" on SW  
 69.013 Rt @ AZUSA AVE  
 Sta 13+06.377  
 N 1 848 897.920  
 E 6 589 706.630  
 Elev = 443.750  
 PRHV 301  
 Fnd Scribe "+" on SW  
 61.801 Lt @ AZUSA AVE  
 Sta 9+07.161  
 N 1 848 494.680  
 E 6 589 580.626  
 Elev = 439.920

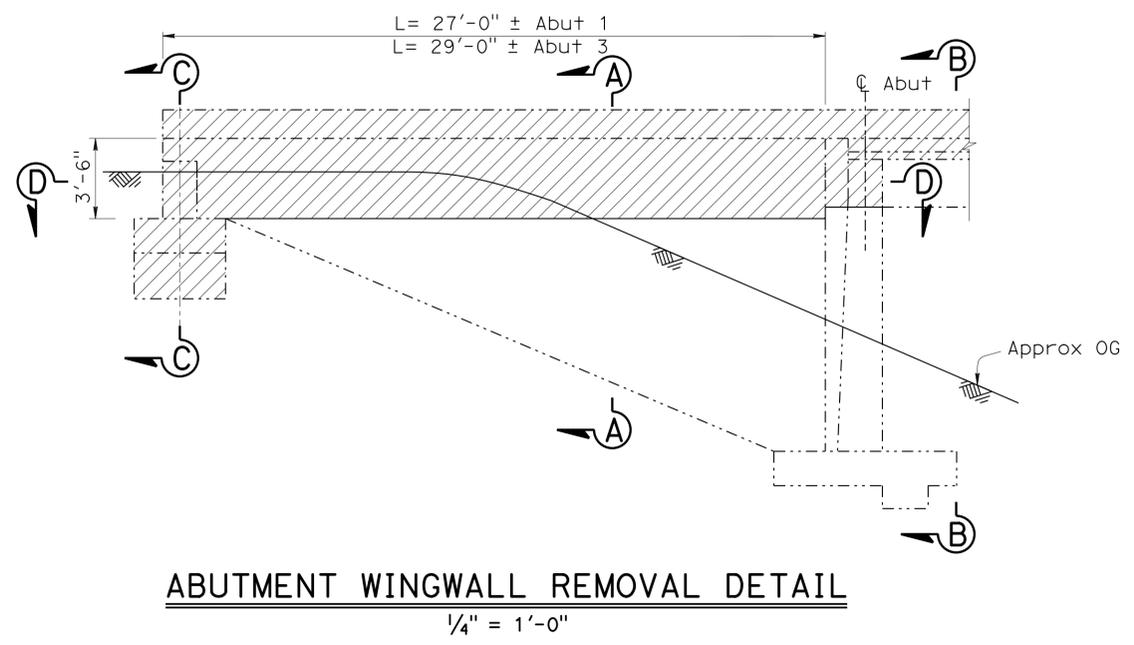
NOTES:  
 UNDERGROUND UTILITIES AS SHOWN ARE APPROXIMATE

<b>PRELIMINARY INVESTIGATION SECTION</b>				DESIGN BY Bin Shen	CHECKED Sharareh Bikae	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	<b>DIVISION OF ENGINEERING SERVICES</b> STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO. 53-0669	<b>AZUSA AVE UC (WIDEN)</b> <b>FOUNDATION PLAN</b>	
SCALE VERT.DATUM NAVD 88	PHOTOGRAMMETRY AS OF: X	DETAILS BY Antonette L. Ong	CHECKED Sharareh Bikae	POST MILE 36.48						
1"=20'	HORIZ.DATUM NAD 83	QUANTITIES BY Bin Shen	CHECKED Sharareh Bikae							
ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED BY M. Sadaghiani 05-2009	CHECKED BY L. Manabo 04-2009	CHECKED BY L. Manabo 04-2009	UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085 1		CONTRACT NO.: 1170U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 4 OF 29

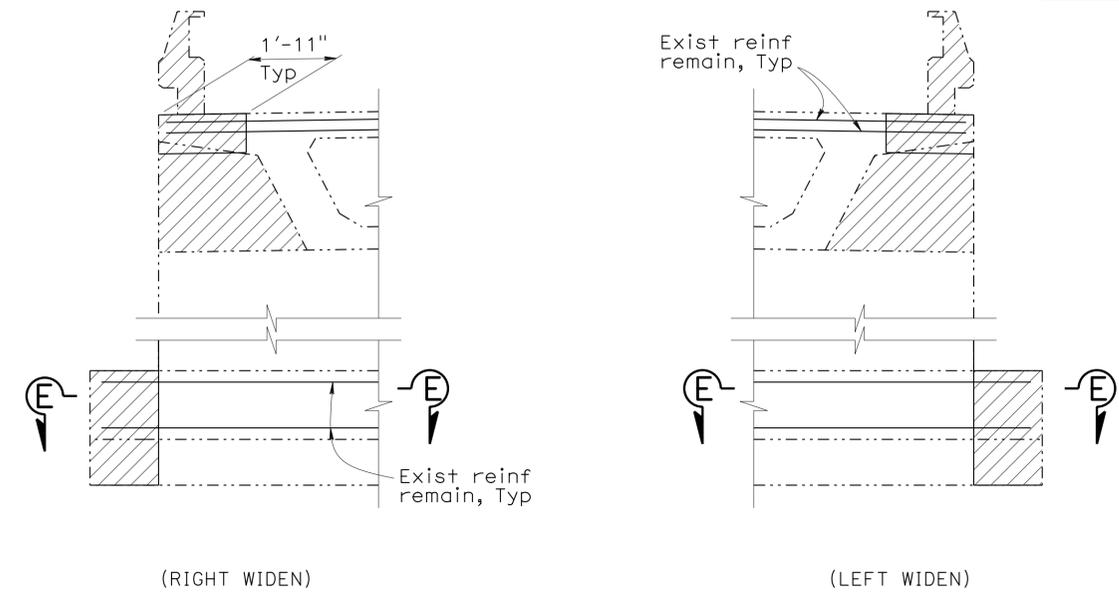
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FILE => 53-0669-b-fdpl.dgn

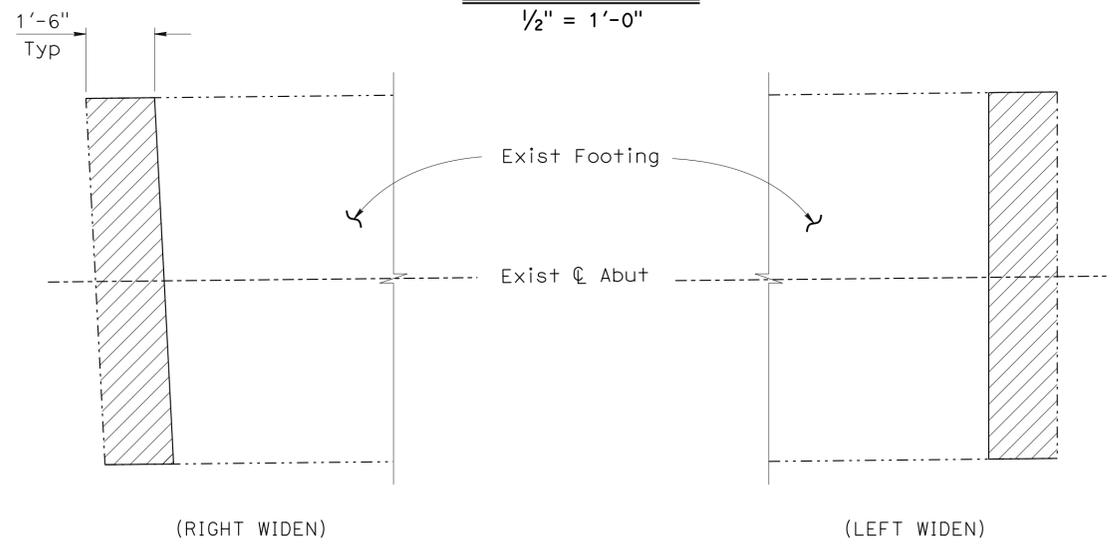
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1237	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
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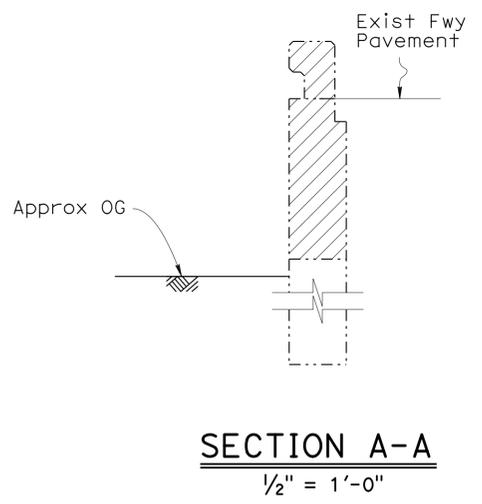
**ABUTMENT WINGWALL REMOVAL DETAIL**  
1/4" = 1'-0"



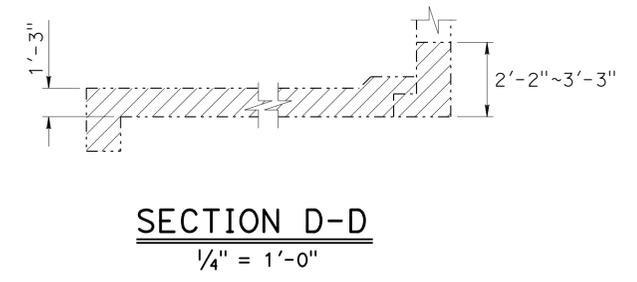
**SECTION B-B**  
1/2" = 1'-0"



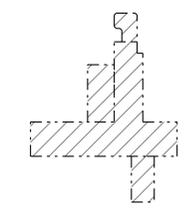
**SECTION E-E**  
1/2" = 1'-0"



**SECTION A-A**  
1/2" = 1'-0"



**SECTION D-D**  
1/4" = 1'-0"



**SECTION C-C**  
1/4" = 1'-0"

**LEGEND**

	Bridge Removal (Portion)
	Existing Structure
	New Construction

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

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY L. Tran/A. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

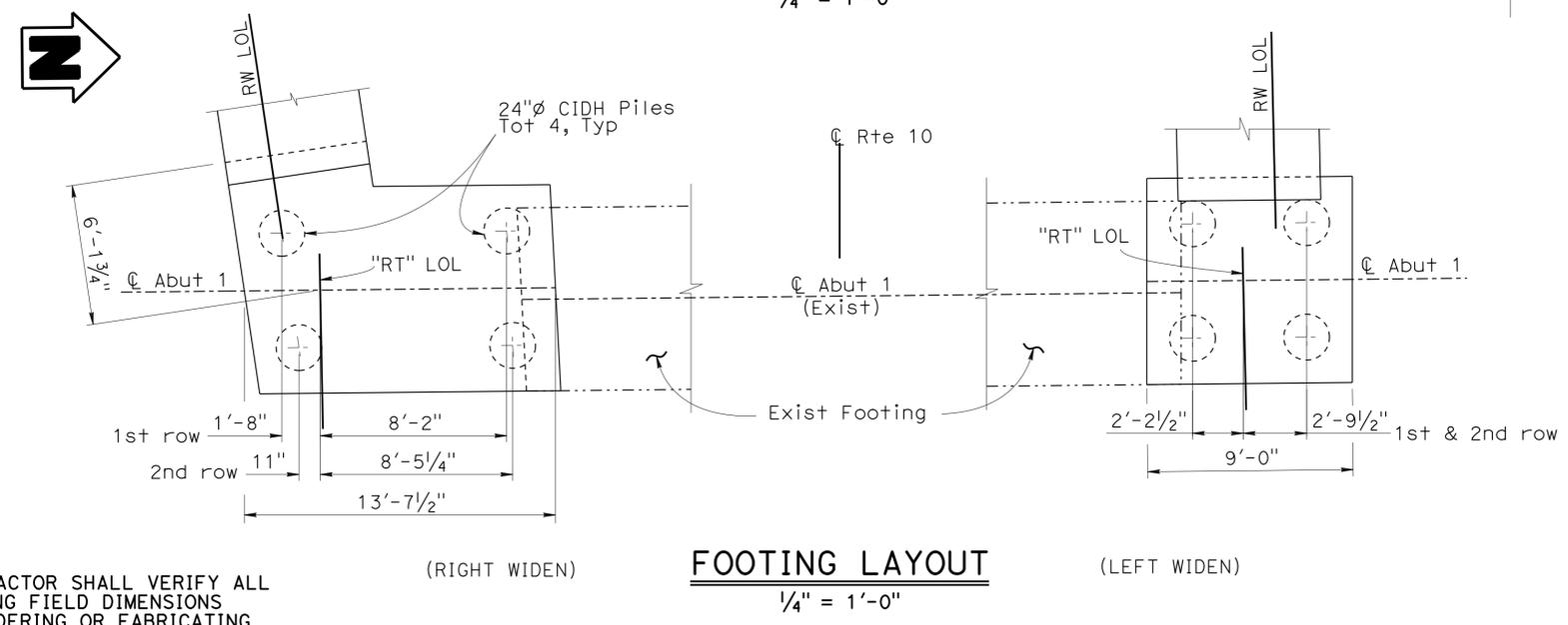
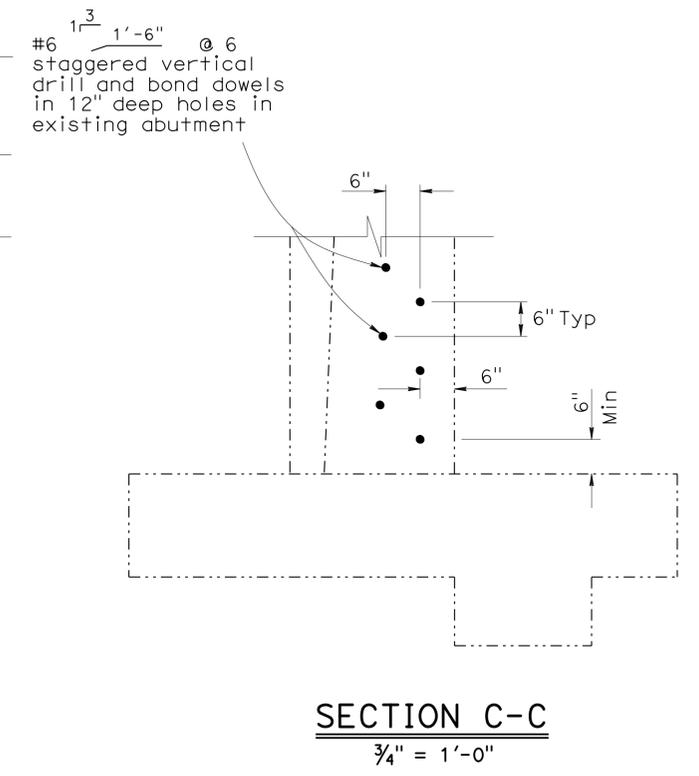
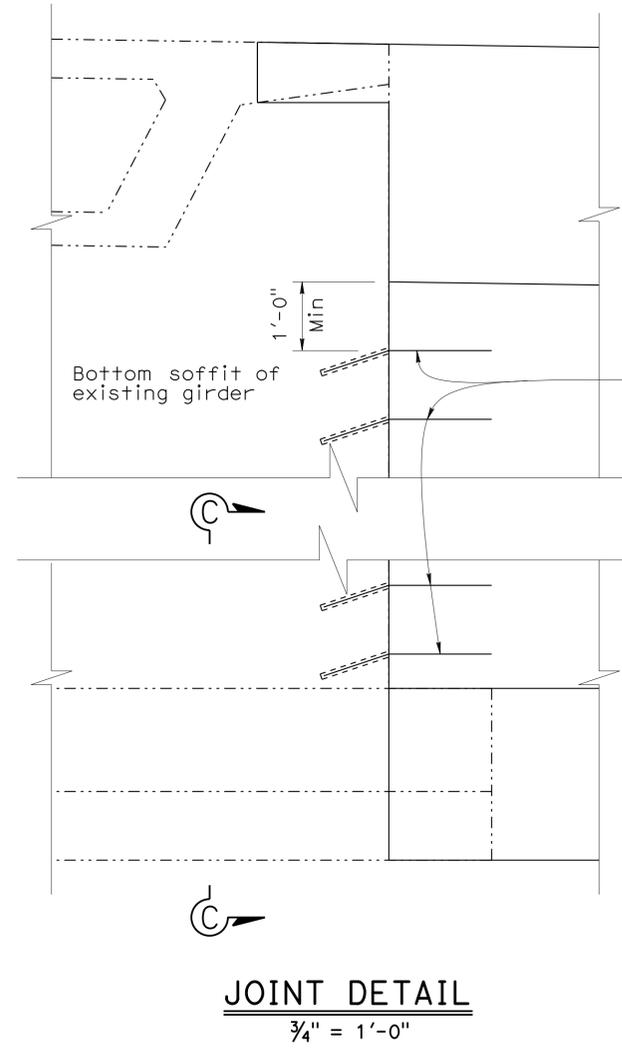
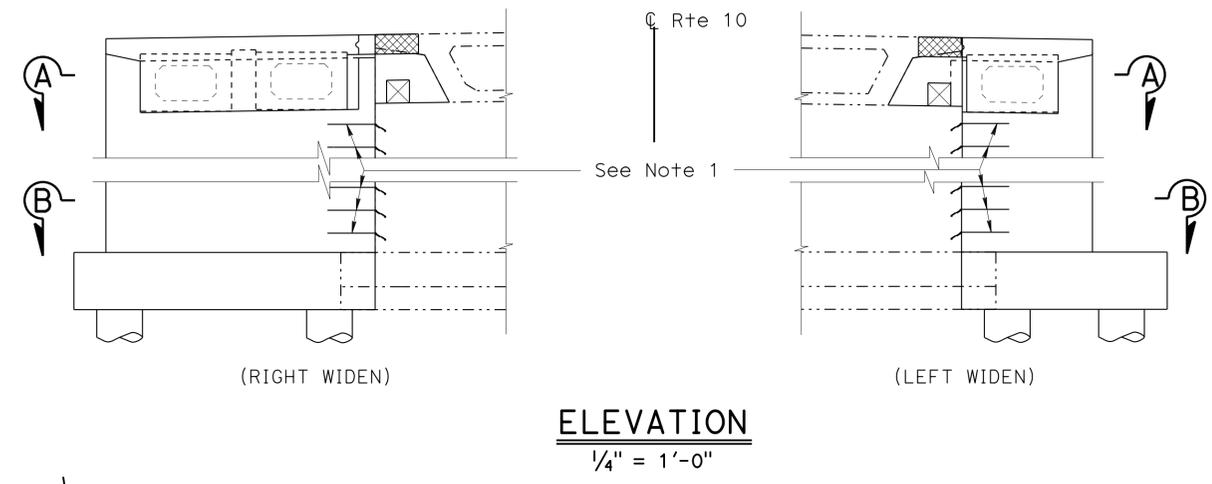
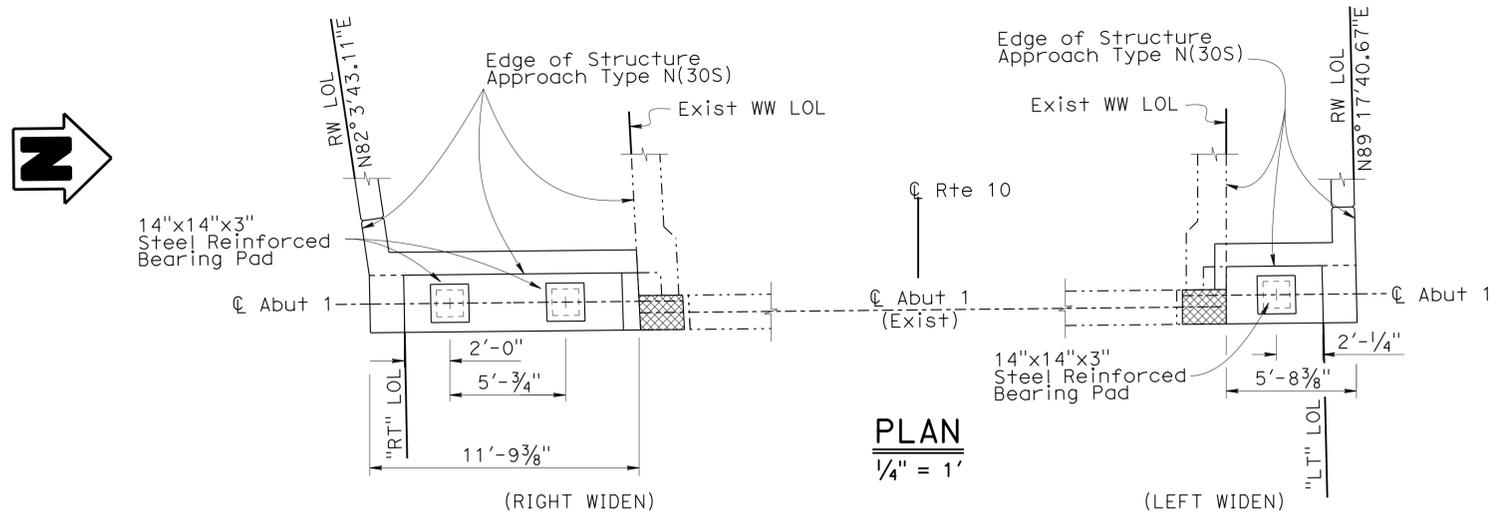
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0669
POST MILE	36.48

**AZUSA AVE UC (WIDEN)**  
**CONCRETE REMOVAL DETAILS**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1238	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 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.					



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

**NOTES:**

1. For drill and bond details, see "ABUTMENT DETAILS NO. 3" sheet.
2. For section A-A and B-B, see "ABUTMENT DETAILS NO. 2" sheet.
3. For footing details, see "ABUTMENT DETAILS NO. 2" sheet.
4. For retaining wall details, see "RETAINING WALL LAYOUT" sheets.

**LEGEND**

- ▨ Closure Pour
- - - Indicates existing structure
- Indicates new structure
- ⊠ 12"x12" Utility opening (B7-10)

DESIGN BY Bin Shen	CHECKED Sharareh Bikae	<b>STATE OF CALIFORNIA</b> <b>DEPARTMENT OF TRANSPORTATION</b>	BRIDGE NO. 53-0669	<b>AZUSA AVE UC (WIDEN)</b> <b>ABUTMENT 1 LAYOUT</b>
DETAILS BY L. Tran/A. Ong	CHECKED Sharareh Bikae		POST MILE 36.48	
QUANTITIES BY Bin Shen	CHECKED Sharareh Bikae		DESIGN BRANCH <b>20</b>	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3622	DISREGARD PRINTS BEARING EARLIER REVISION DATES
		0 1 2 3	PROJECT NUMBER & PHASE: 0700000085-1	REVISION DATES
			CONTRACT NO.: 1170U1	07/20/11 08/12/11 12/19/11
			FILE => 53-0669-FR-001_101.dgn	SHEET 6 OF 29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1239	1475

12/19/11  
DATE

REGISTERED CIVIL ENGINEER

6-10-13  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

JASON FANG

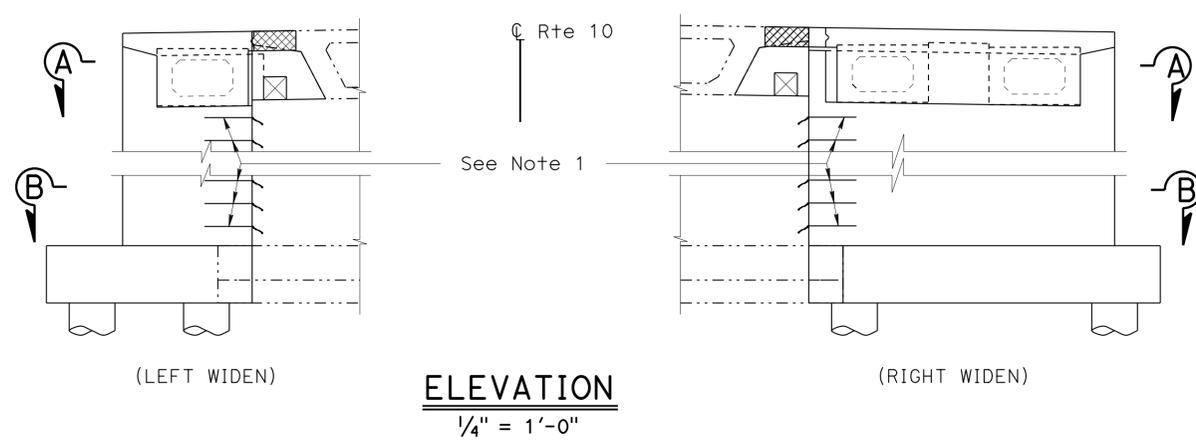
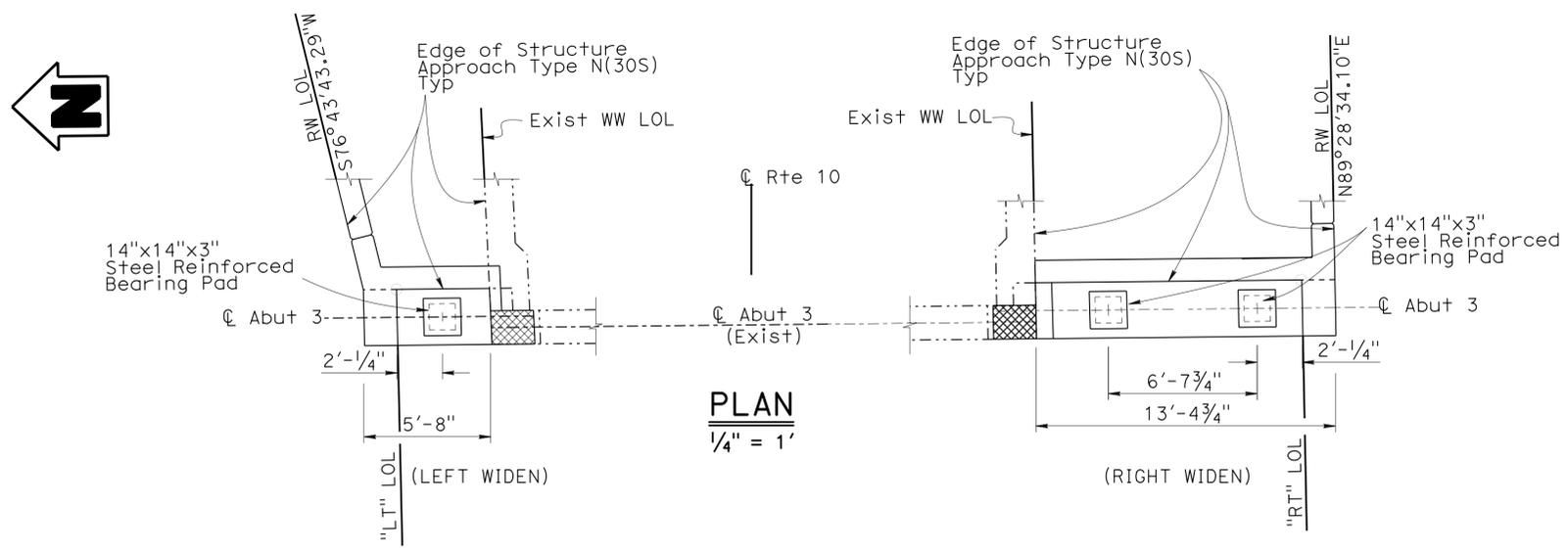
No. C 70467

Exp. 09/30/2012

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.

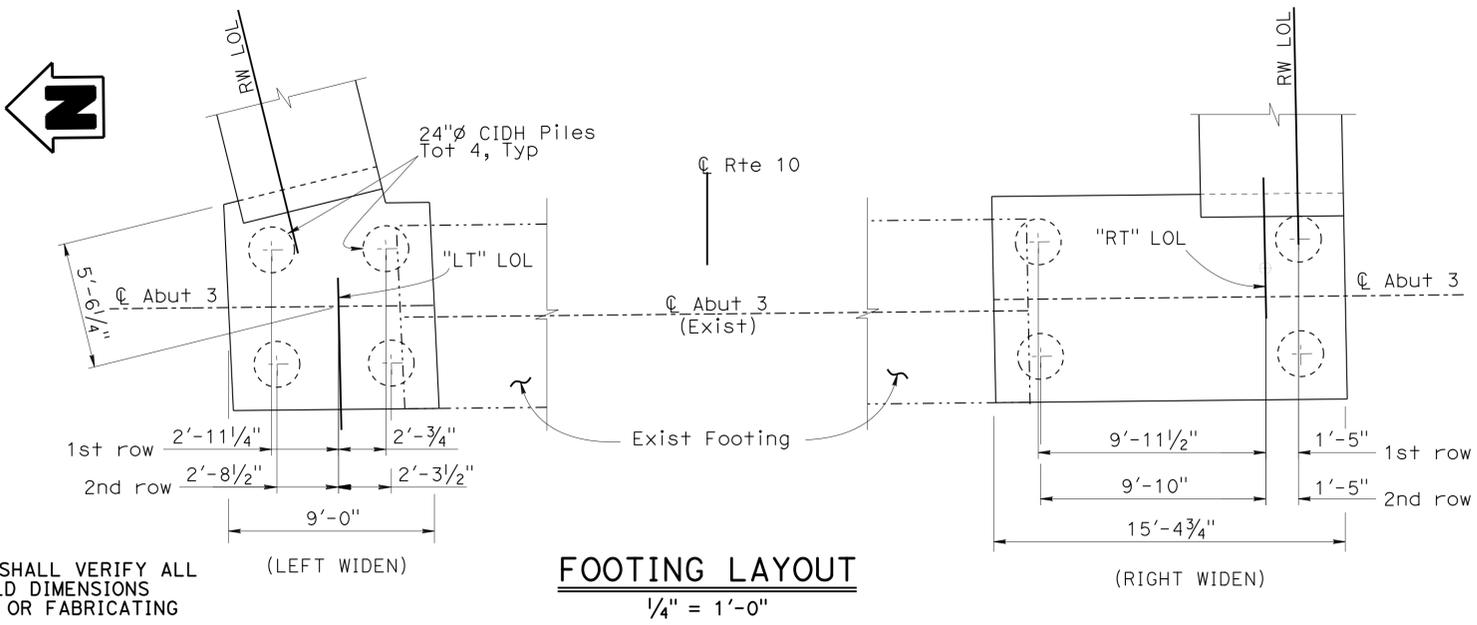


**LEGEND**

- Closure Pour
- Indicates existing structure
- Indicates new structure
- 12"x12" Utility opening (B7-10)

**NOTES:**

1. For drill and bond details, see "ABUTMENT DETAILS NO. 3" sheet.
2. For section A-A and B-B, see "ABUTMENT DETAILS NO. 2" sheet.
3. For footing details, see "ABUTMENT DETAILS NO. 2" sheet.
4. For retaining wall details, see "RETAINING WALL LAYOUT" sheets.



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

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY Antonette L. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

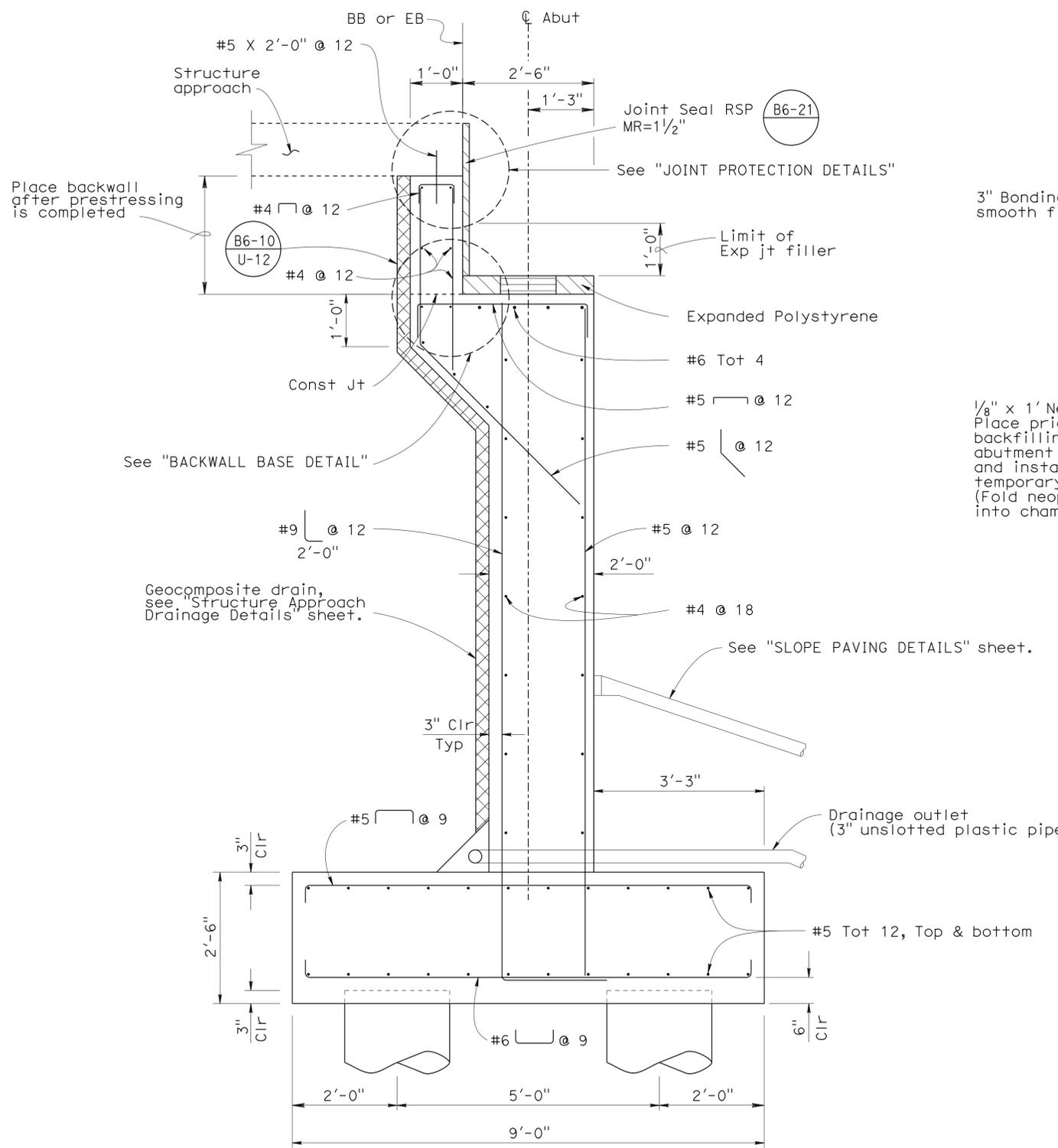
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0669
POST MILE	36.48

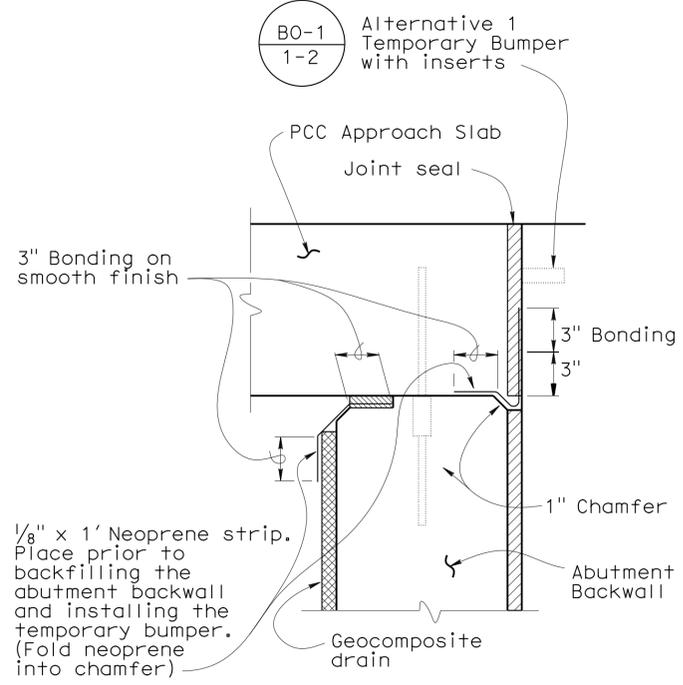
**AZUSA AVE UC (WIDEN)**  
**ABUTMENT 3 LAYOUT**

DATE PLOTTED => 12-JUN-2013 16:19 USERNAME => s124486

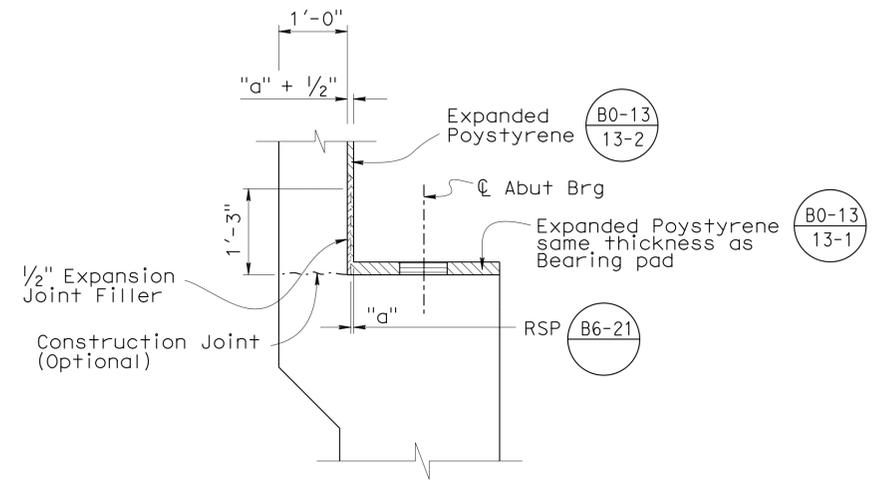
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07	LA	10	33.2/37.2	1240	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER <b>JASON FANG</b> No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



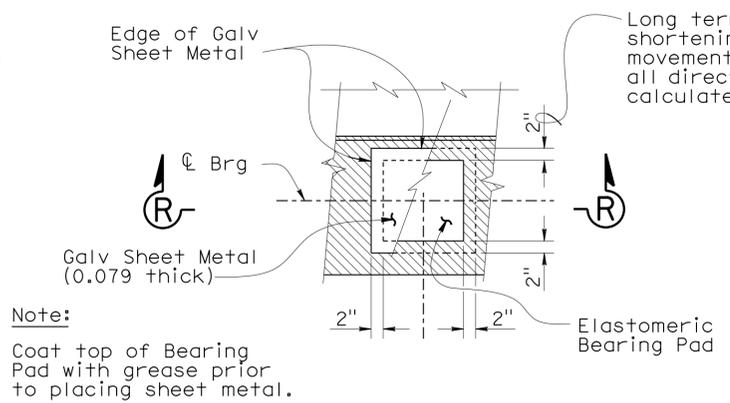
**TYPICAL SECTION**  
3/4" = 1'-0"



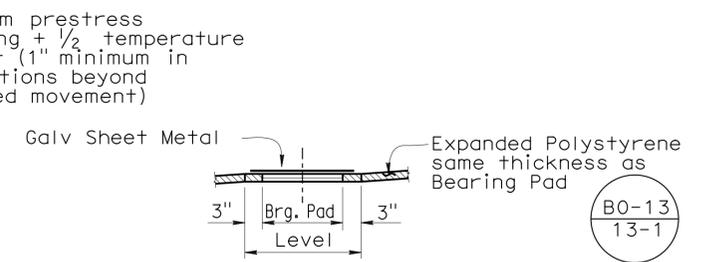
**JOINT PROTECTION DETAIL**  
No Scale



**BACKWALL BASE DETAIL**  
3/4" = 1"



**PLAN**



**SECTION R-R**

**BEARING PAD DETAIL**  
No Scale  
Details typical at all bearing pads

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

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY L. Tran/A. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

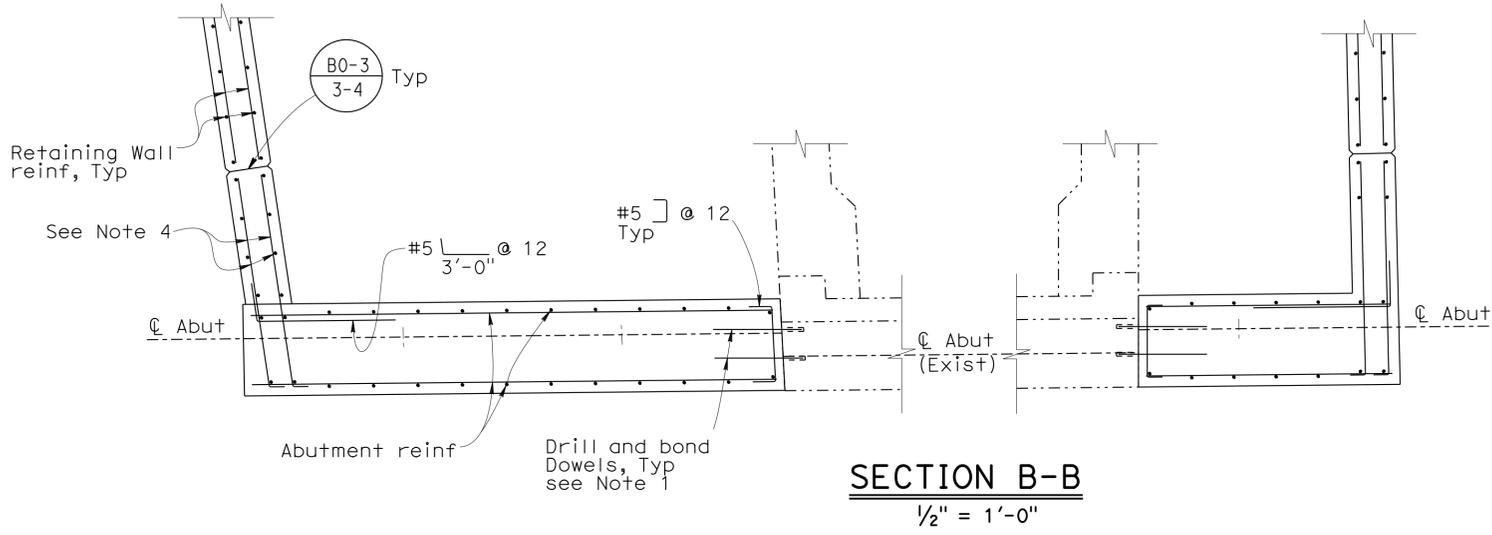
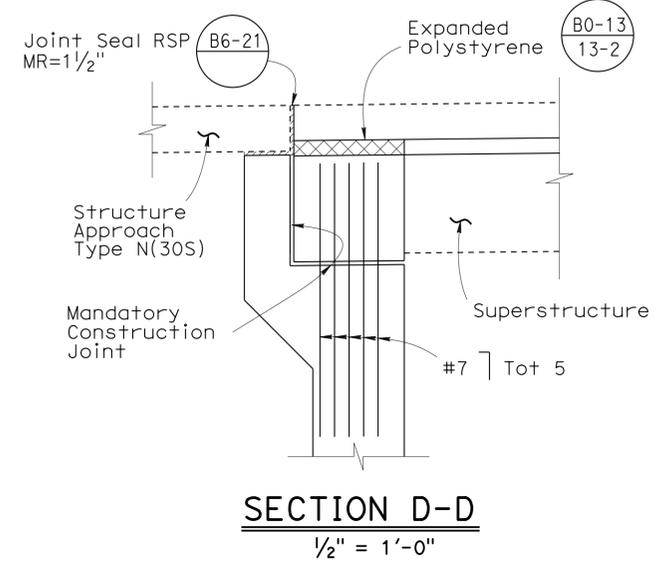
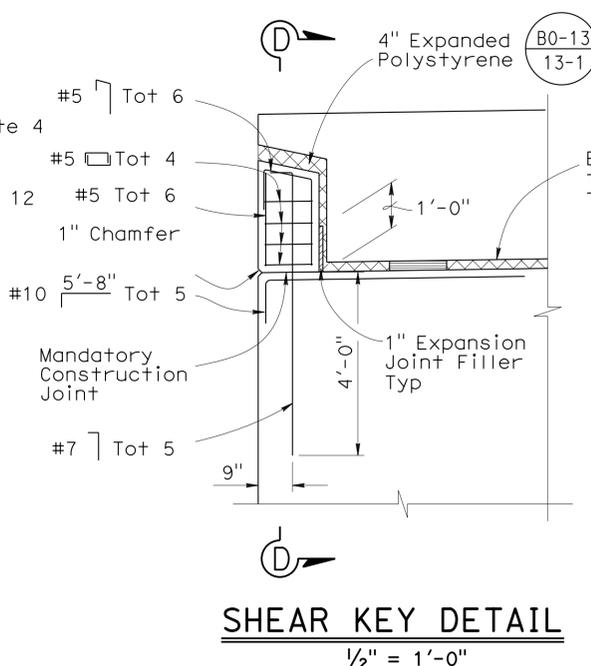
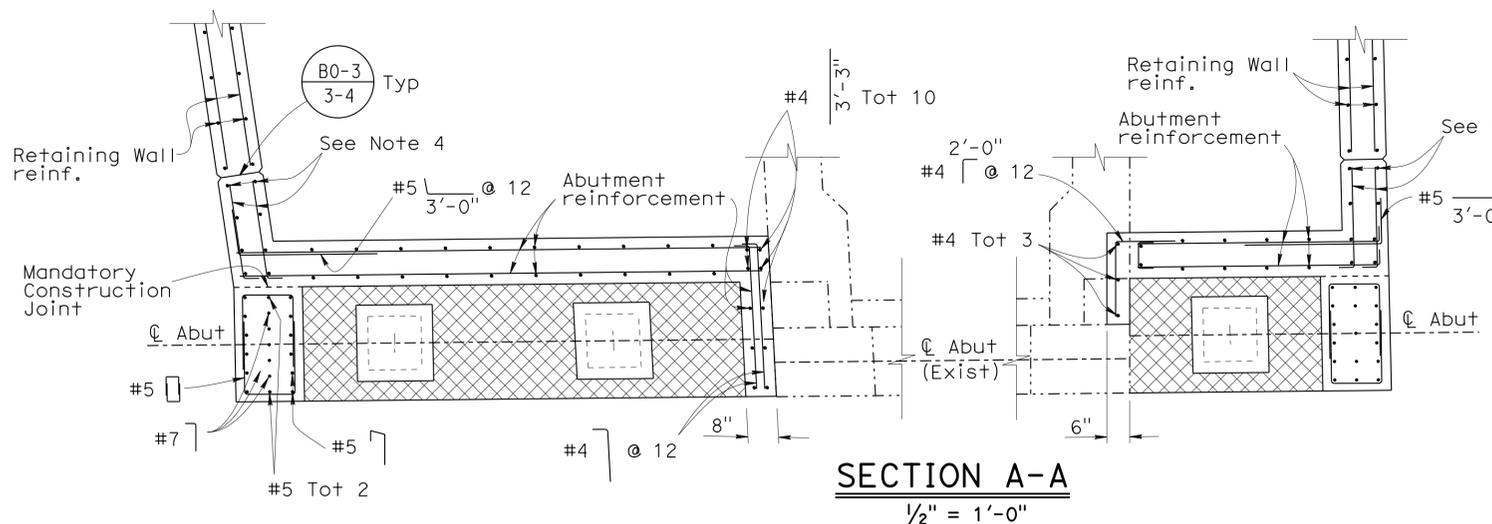
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0669
POST MILE	36.48

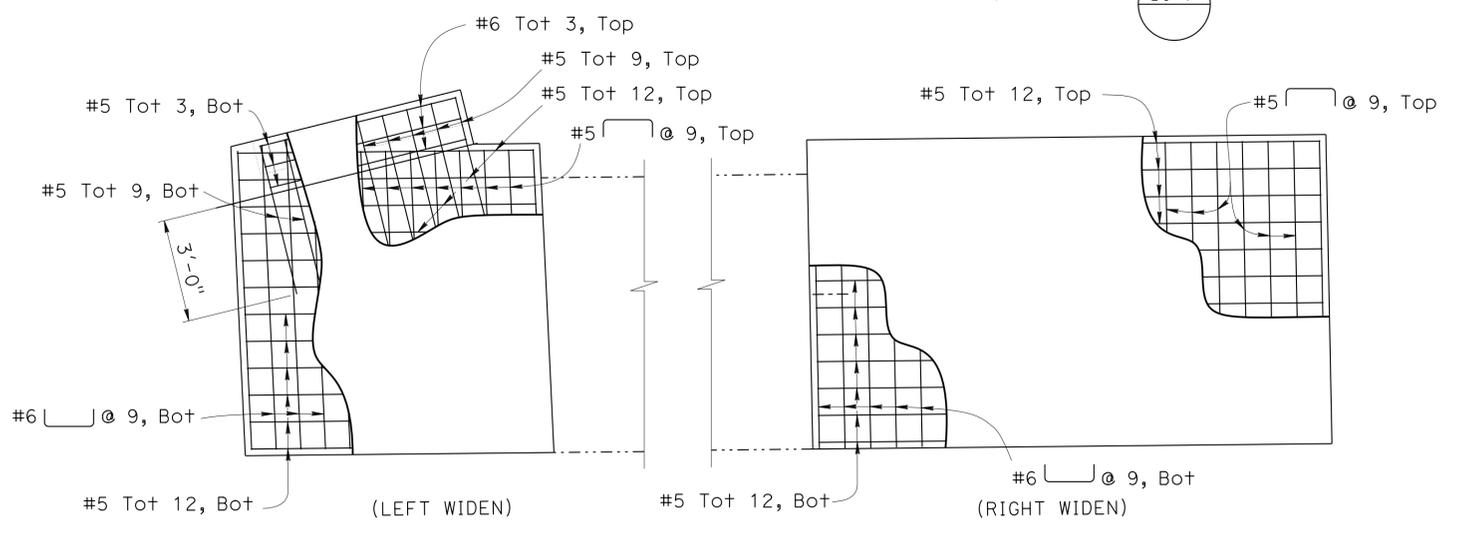
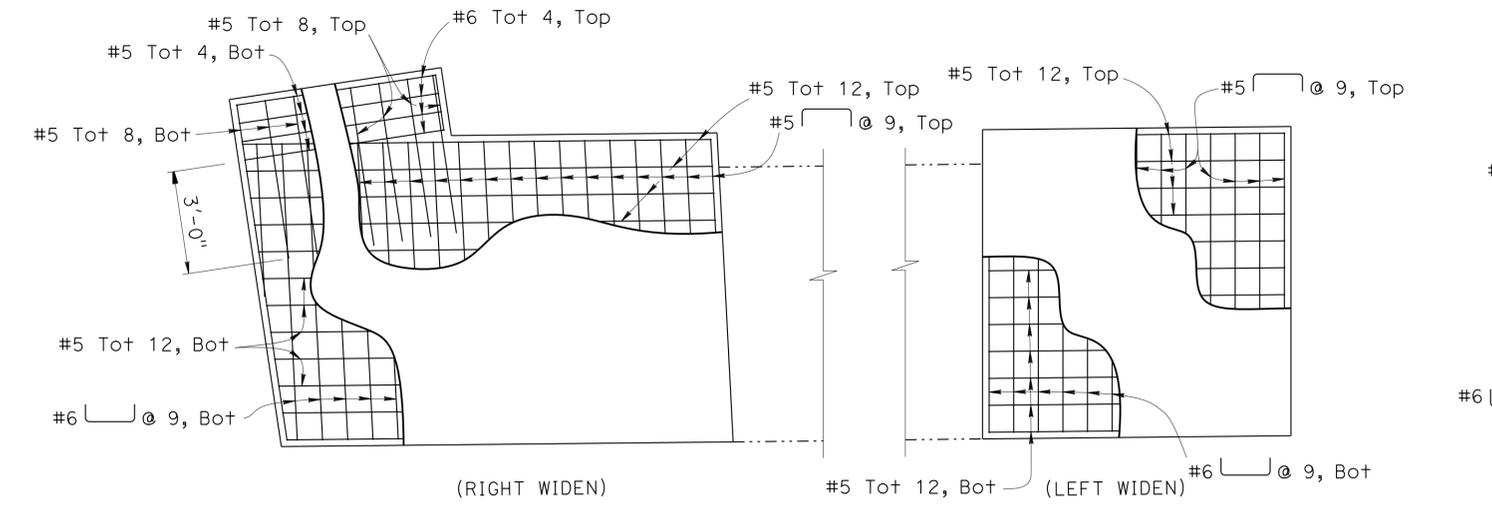
**AZUSA AVE UC (WIDEN)**  
**ABUTMENT DETAILS NO. 1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1241	1475
			12/19/11	DATE	
			6-10-13	PLANS APPROVAL DATE	
			REGISTERED CIVIL ENGINEER		
			JASON FANG		
			No. C 70467		
			Exp. 09/30/2012		
			CIVIL		
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**LEGEND**  
 ——— New Structure  
 - - - - Existing Structure

- NOTES:**
- For drill and bond details, see "ABUTMENT DETAILS NO.3" sheet.
  - Mandatory construction joint surface to be smooth finished and lined with 15 lb construction paper.
  - Vertical shear key reinforcement (#7) to be galvanized.
  - For stem reinforcement, see Detail B3-1 DH= 14'



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

**ABUTMENT 1 FOOTING DETAIL**  
 3/8" = 1'-0"

**ABUTMENT 3 FOOTING DETAIL**  
 3/8" = 1'-0"

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY L. Tran/A. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

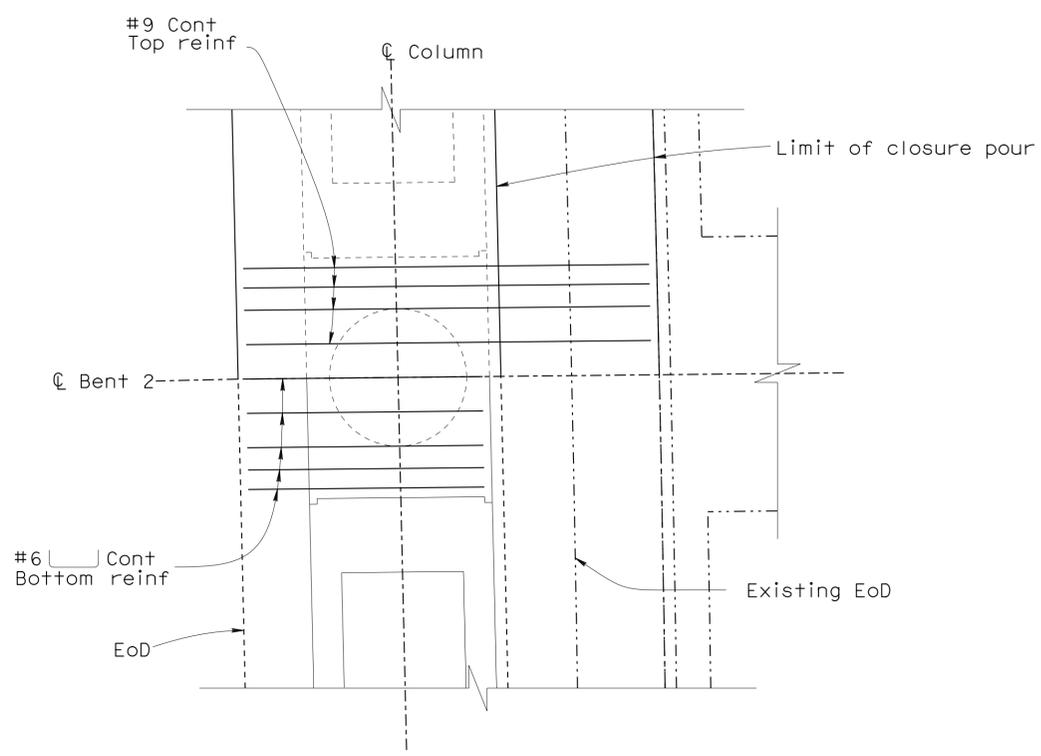
DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0669
POST MILE	36.48

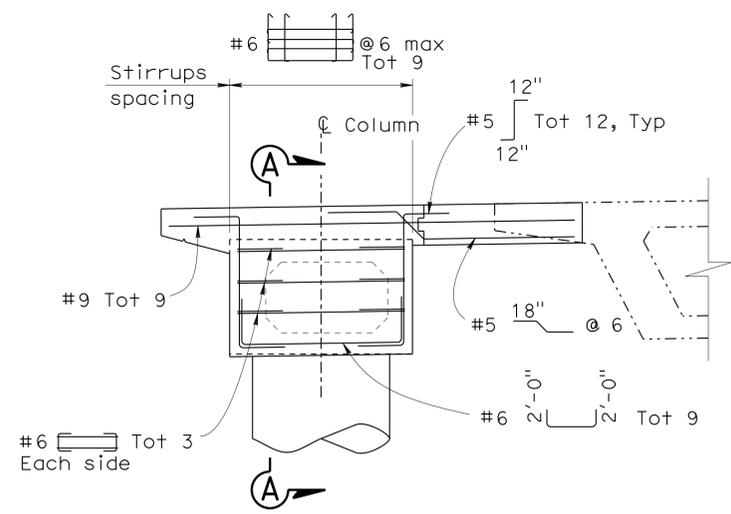
**AZUSA AVE UC (WIDEN)**  
**ABUTMENT DETAILS NO. 2**

USERNAME => s124486 DATE PLOTTED => 12-JUN-2013 TIME PLOTTED => 16:19

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1242	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	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.					

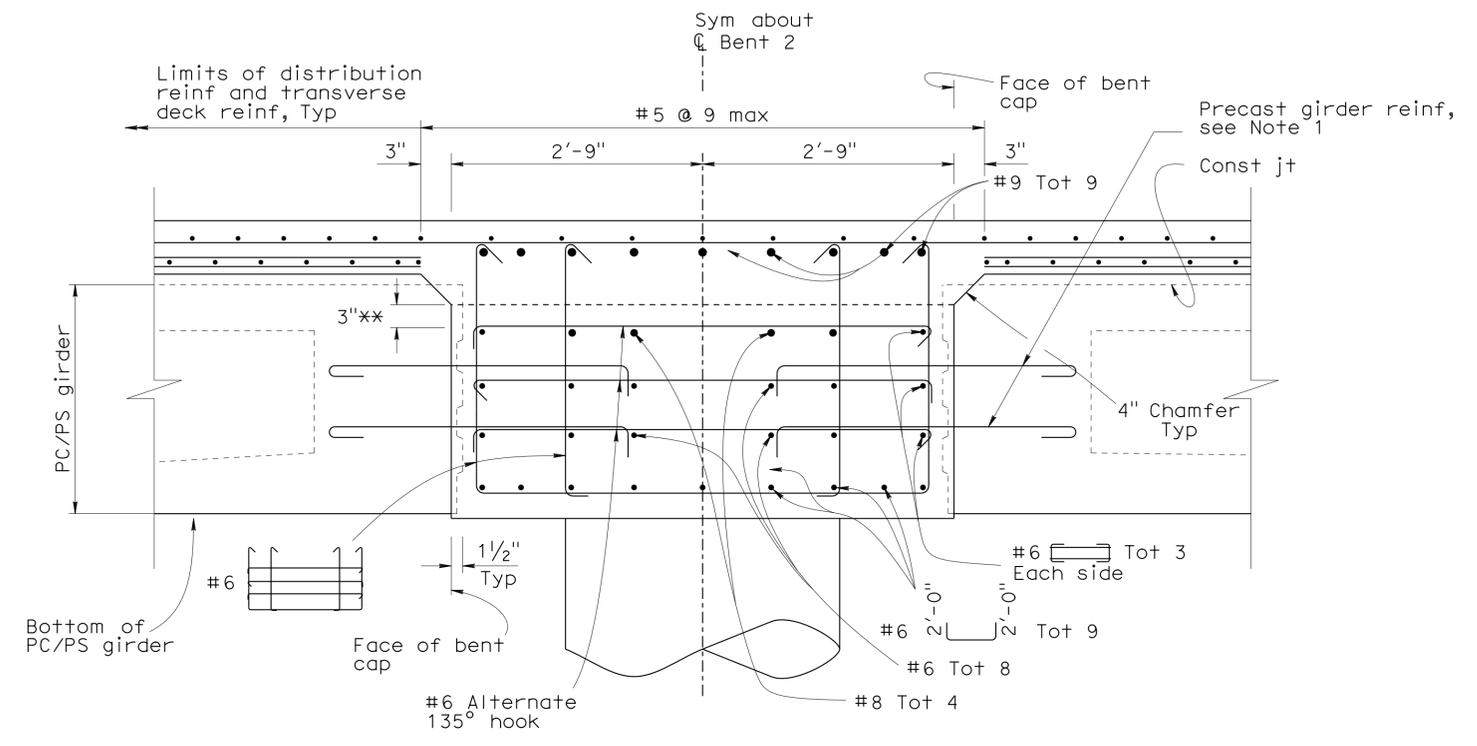


**PLAN**  
1/2" = 1'



**ELEVATION**  
1/2" = 1'-0"

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



**SECTION A-A**  
1' = 1'-0"

**LEGEND**

- New Structure
- - - Existing Structure

**NOTES:**

1. For reinforcement not shown, see "PRECAST GIRDER DETAILS" sheet.
  2. For column reinforcement and column geometry see "BENT 2 DETAILS (LEFT WIDEN)" sheet.
  3. No splice is allowed in main cap top and bottom reinf.
- \*\* Reinforcement may be adjusted to clear post tensioning ducts.

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY L. Tran/A. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

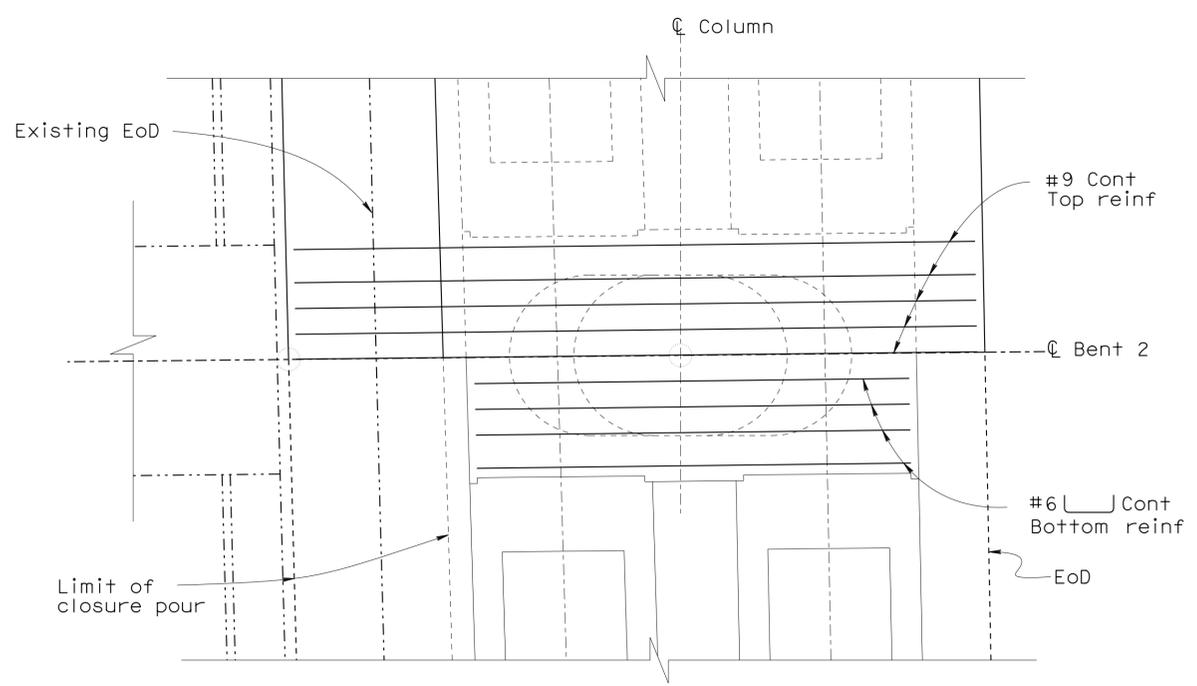
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

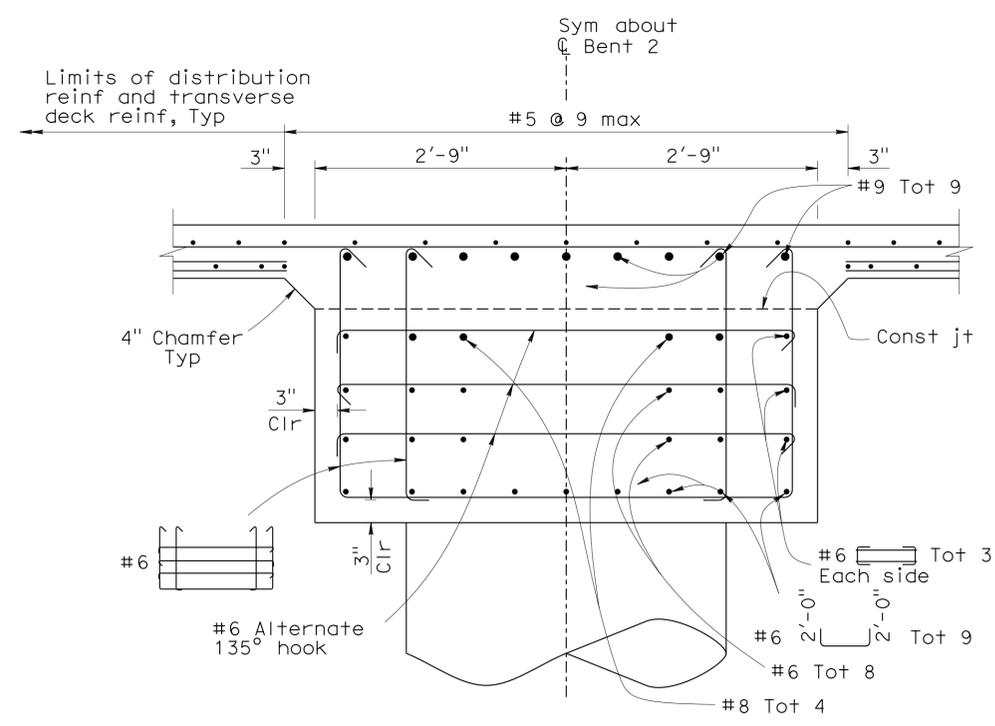
BRIDGE NO.	53-0669
POST MILE	36.48

**AZUSA AVE UC (WIDEN)**  
**BENT LAYOUT (LEFT WIDEN)**

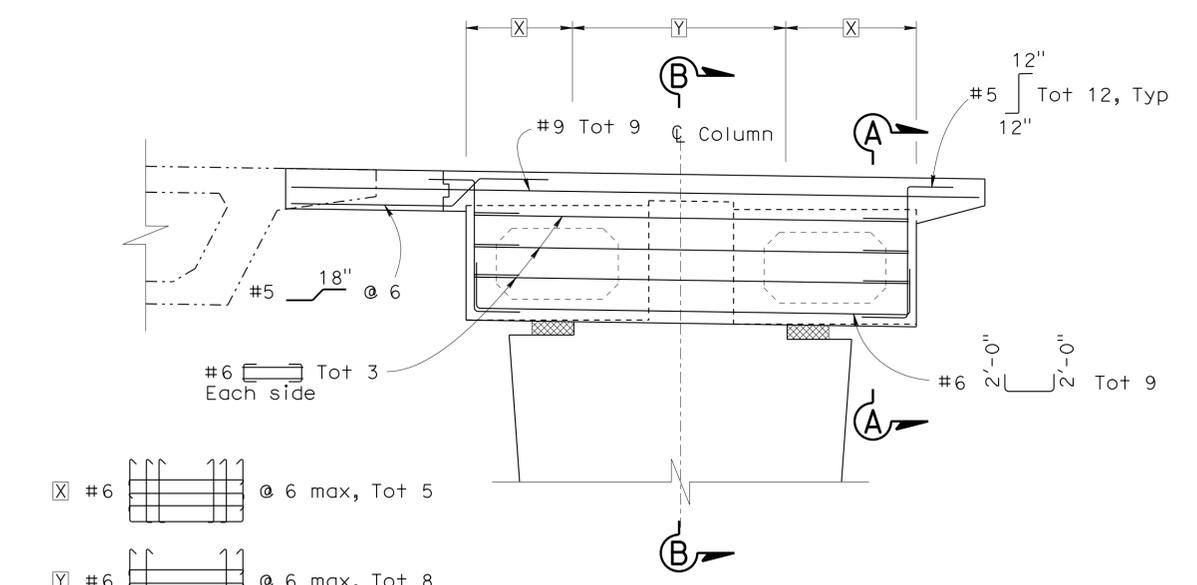
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1243	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
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**PLAN**  
1/2" = 1'

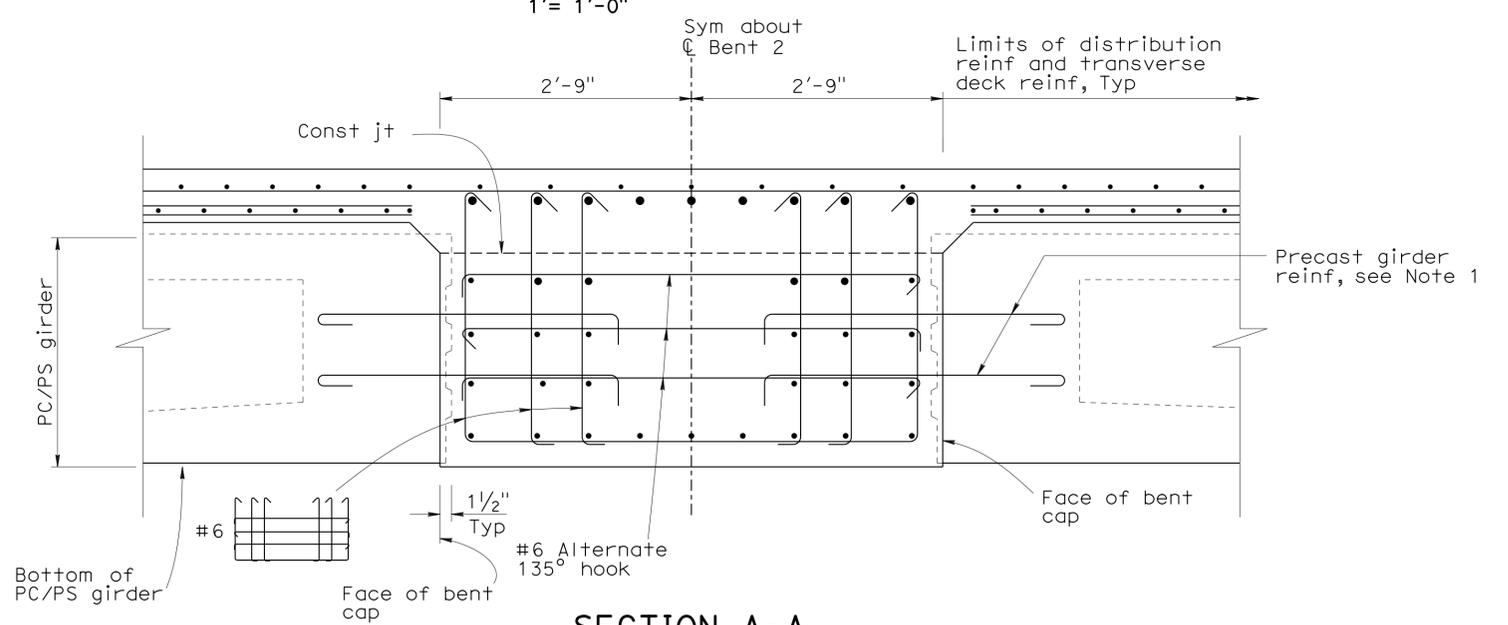


**SECTION B-B**  
1' = 1'-0"



**ELEVATION**  
1/2" = 1'-0"

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



**SECTION A-A**  
1' = 1'-0"

**LEGEND**

- New Structure
- - - Existing Structure

**NOTES:**

1. For reinforcement not shown, see "PRECAST GIRDER DETAILS" sheet.
  2. For column reinforcement and column geometry see "BENT 2 DETAILS (RIGHT WIDEN)" sheet.
  3. No splice is allowed in main cap top and bottom reinf
- \*\* Reinforcement may be adjusted to clear post tensioning ducts.

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY L. Tran/A. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

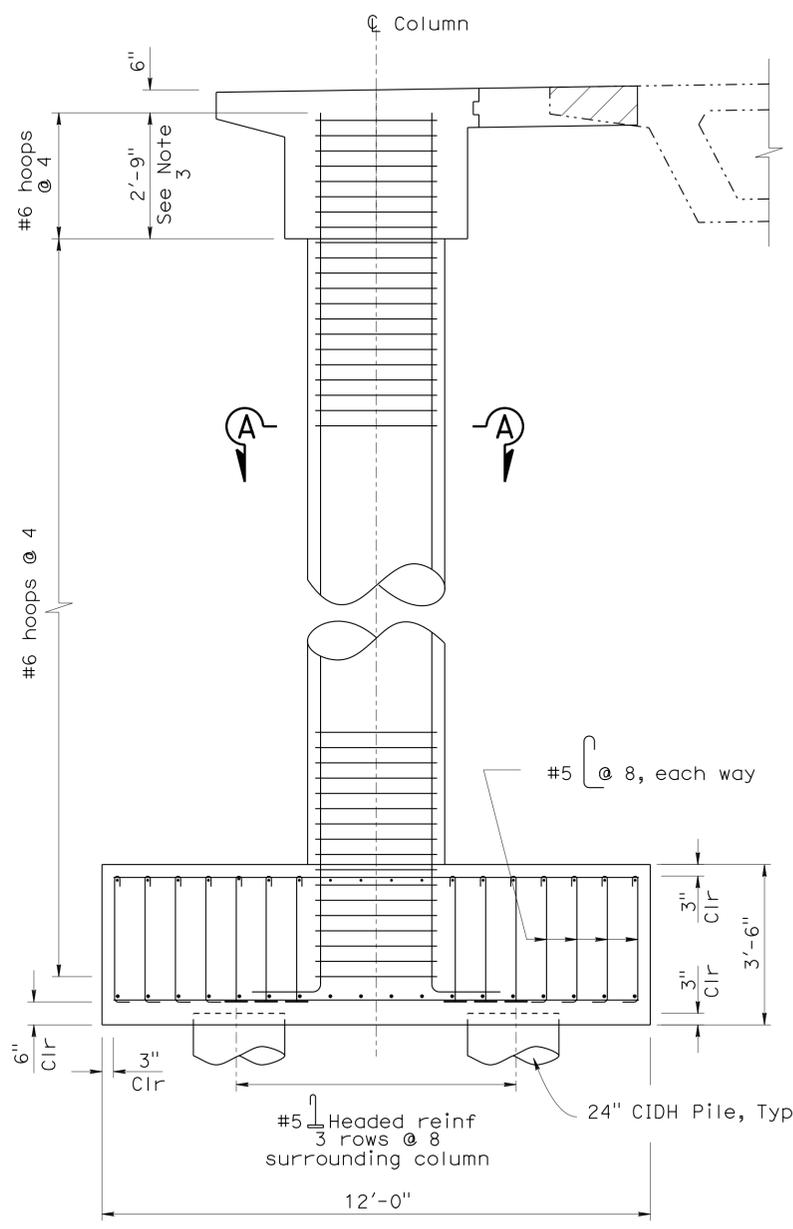
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0669
POST MILE	36.48

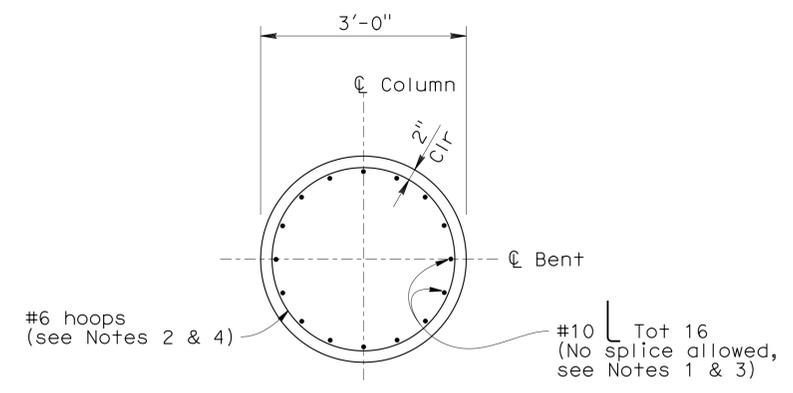
**AZUSA AVE UC (WIDEN)**  
**BENT LAYOUT (RIGHT WIDEN)**

DATE PLOTTED => 12-JUN-2013 16:19 USERNAME => s124486

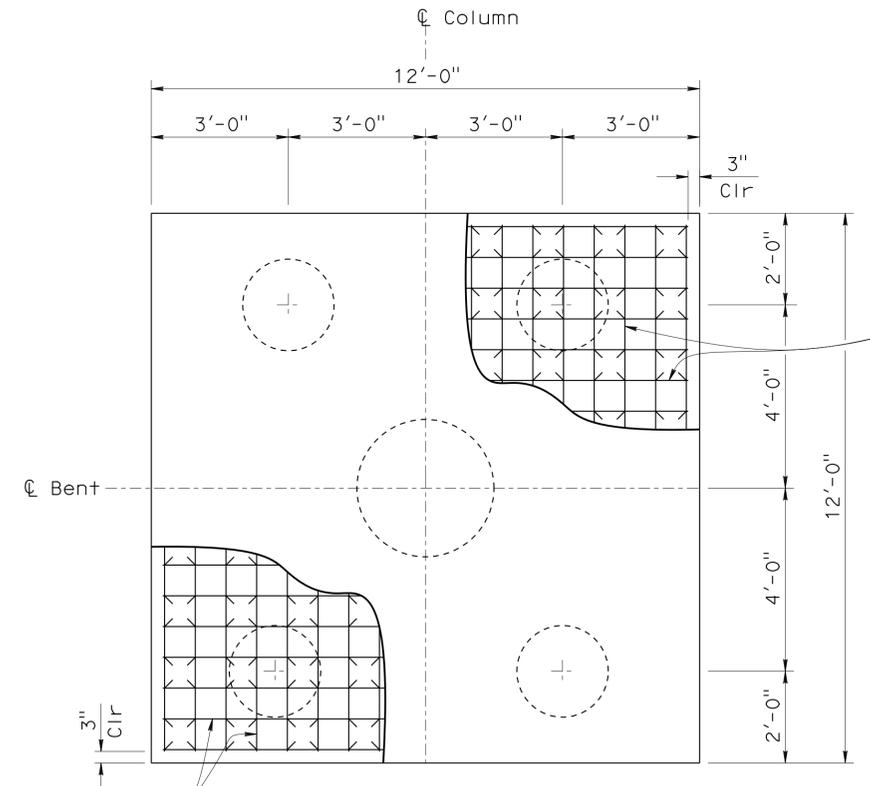
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1244	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



**ELEVATION**  
1/2" = 1'-0"



**SECTION A-A**  
3/4" = 1'-0"



**FOOTING PLAN**  
1/2" = 1'-0"

**LEGEND**

- New Structure
- - - Existing Structure

**NOTES:**

1. No splices in main longitudinal column reinforcement.
2. All main reinforcement hoops are ultimate butt spliced continuous.
3. Adjust column reinforcement at bent to clear prestressing ducts.
4. Alternatively, #5, 2-bar bundled hoops at 6" spacing can be used.

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

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY L. Tran/A. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

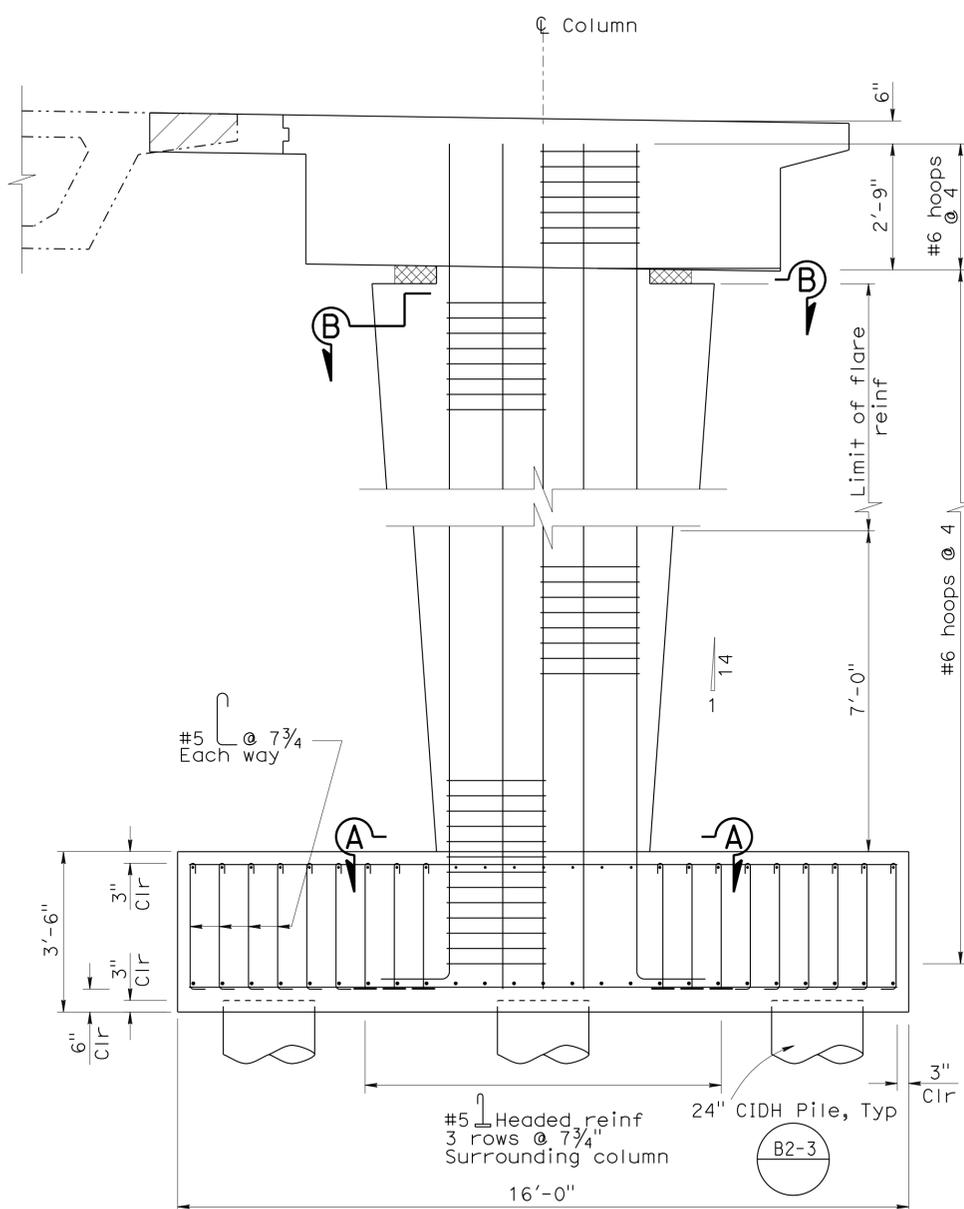
**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0669
POST MILE	36.48

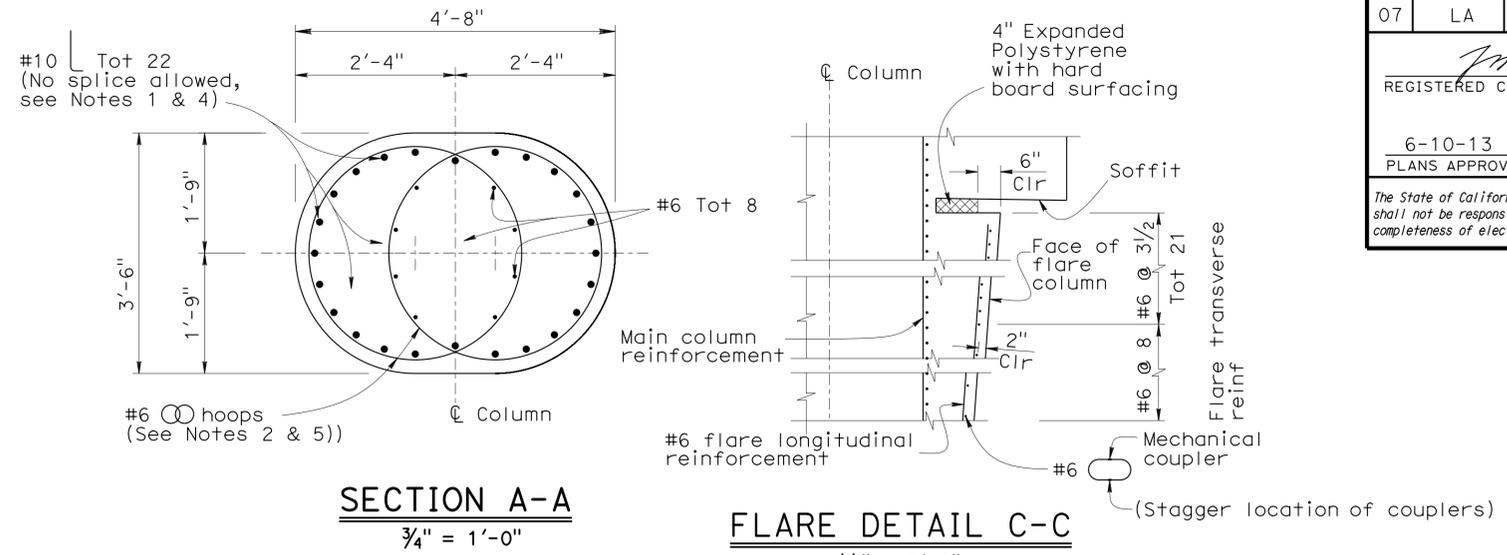
**AZUSA AVE UC (WIDEN)**  
**BENT DETAILS (LEFT WIDEN)**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1245	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 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.					



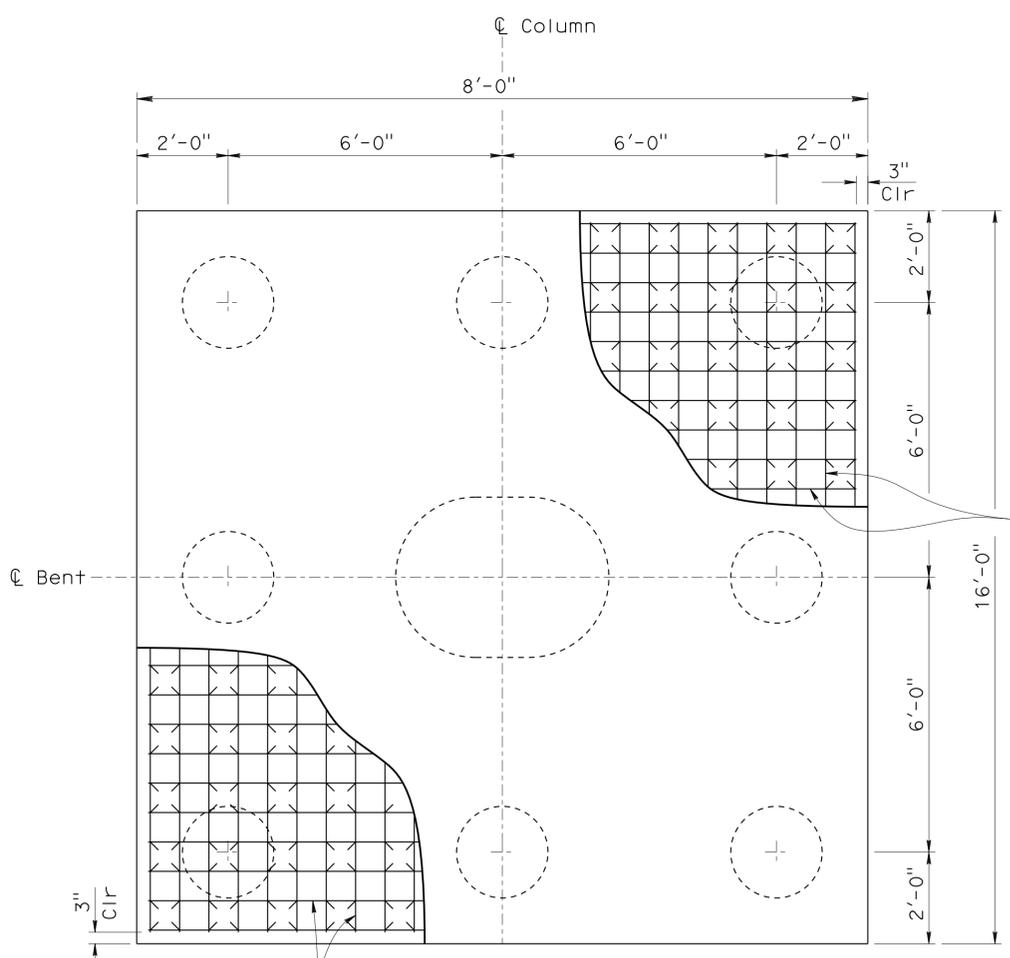
**ELEVATION**  
1/2" = 1'-0"

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

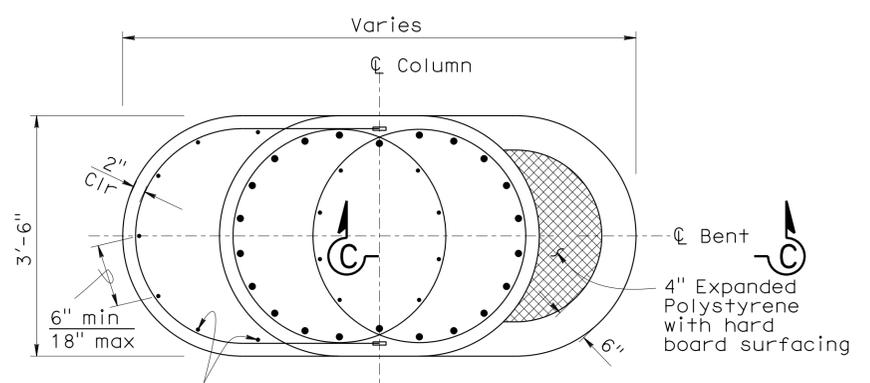


**SECTION A-A**  
3/4" = 1'-0"

**FLARE DETAIL C-C**  
1/2" = 1'-0"



**FOOTING PLAN**  
1/2" = 1'-0"



**SECTION B-B**  
3/4" = 1'-0"

**LEGEND**

- New Structure
- - - Existing Structure

**NOTES:**

1. No splices in main longitudinal column reinforcement.
2. All main reinforcement hoops are ultimate butt spliced continuous.
3. The contractor shall verify all controlling field dimensions before ordering or fabricating any material.
4. Adjust column reinforcement at bent to clear prestressing ducts.
5. Alternatively, #5, 2-bar bundled hoops at 6" spacing can be used.

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY L. Tran/A. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

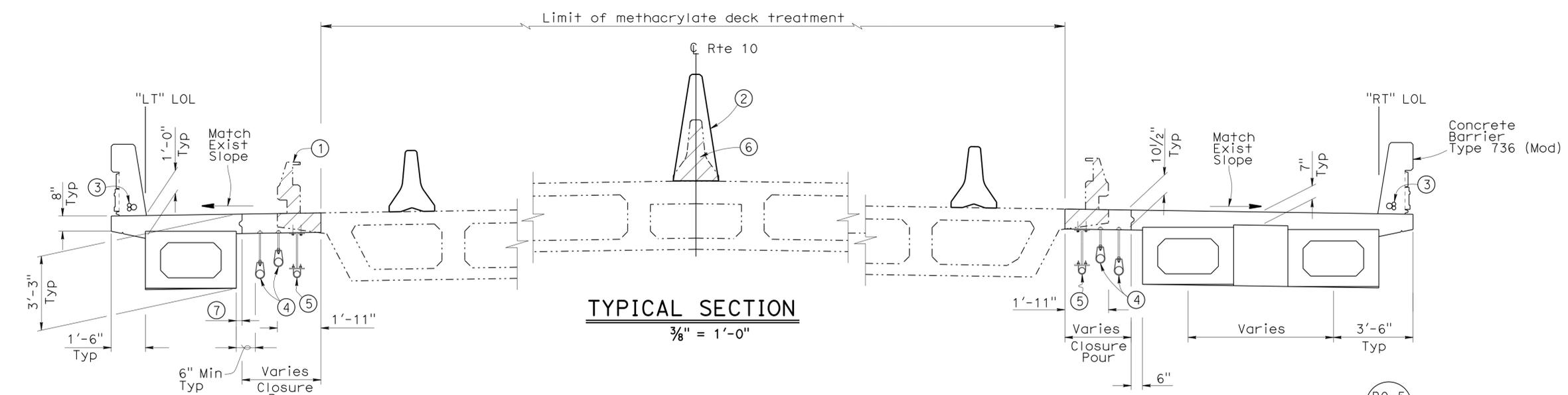
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

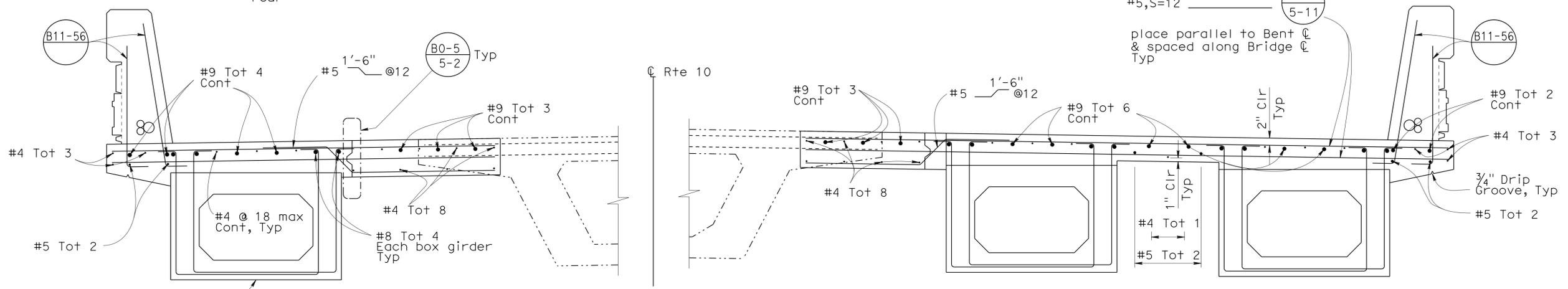
BRIDGE NO.	53-0669
POST MILE	36.48

**AZUSA AVE UC (WIDEN)**  
**BENT DETAILS (RIGHT WIDEN)**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1246	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA		
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**TYPICAL SECTION**  
3/8" = 1'-0"

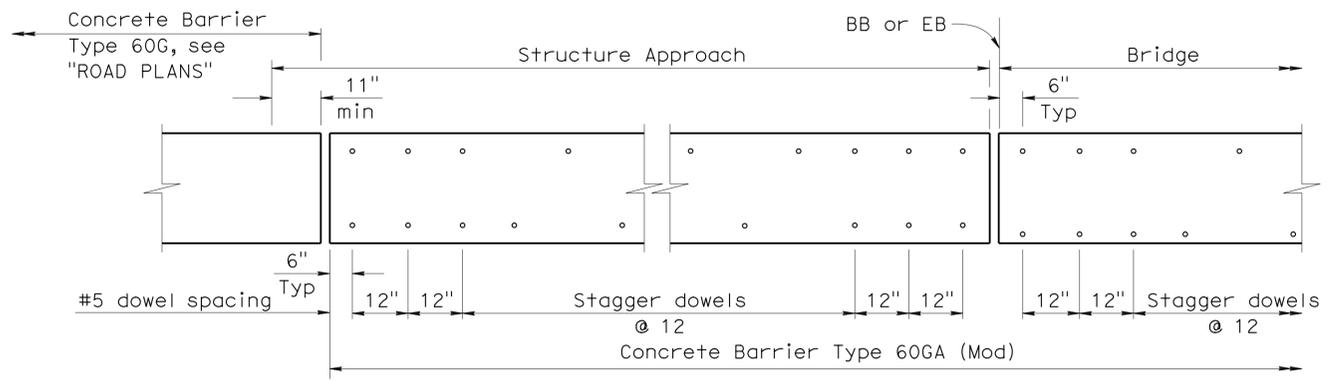


**PART TYPICAL SECTION**  
3/4" = 1'-0"

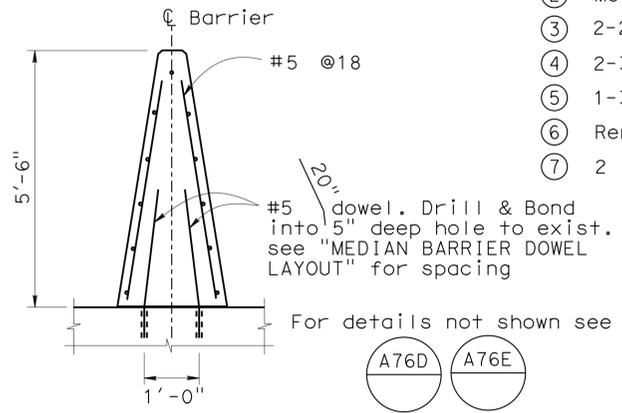
Precast prestressed concrete box girder, Typ For details, see "PRECAST GIRDER DETAILS" sheet

**NOTES:**

- ① Existing Concrete Barrier and Railing and part of overhang to be removed. Existing transverse deck reinforcement to remain in place.
- ② Median Concrete Barrier Type 60GA (Mod).
- ③ 2-2"Ø Light Conduits and 1-3" Sprinkler Control Conduit.
- ④ 2-3 1/2"Ø Communication Conduits, see "ROAD PLANS".
- ⑤ 1-3"Ø Irrigation Waterline.
- ⑥ Remove Existing Concrete Barrier Type 50.
- ⑦ 2 1/3"± ~ 3"±



**MEDIAN BARRIER DOWEL LAYOUT**  
No Scale



**CONCRETE BARRIER TYPE 60GA (MOD)**  
No Scale

**LEGEND**

- Bridge Removal (Portion)
- Existing Structure
- New Construction

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

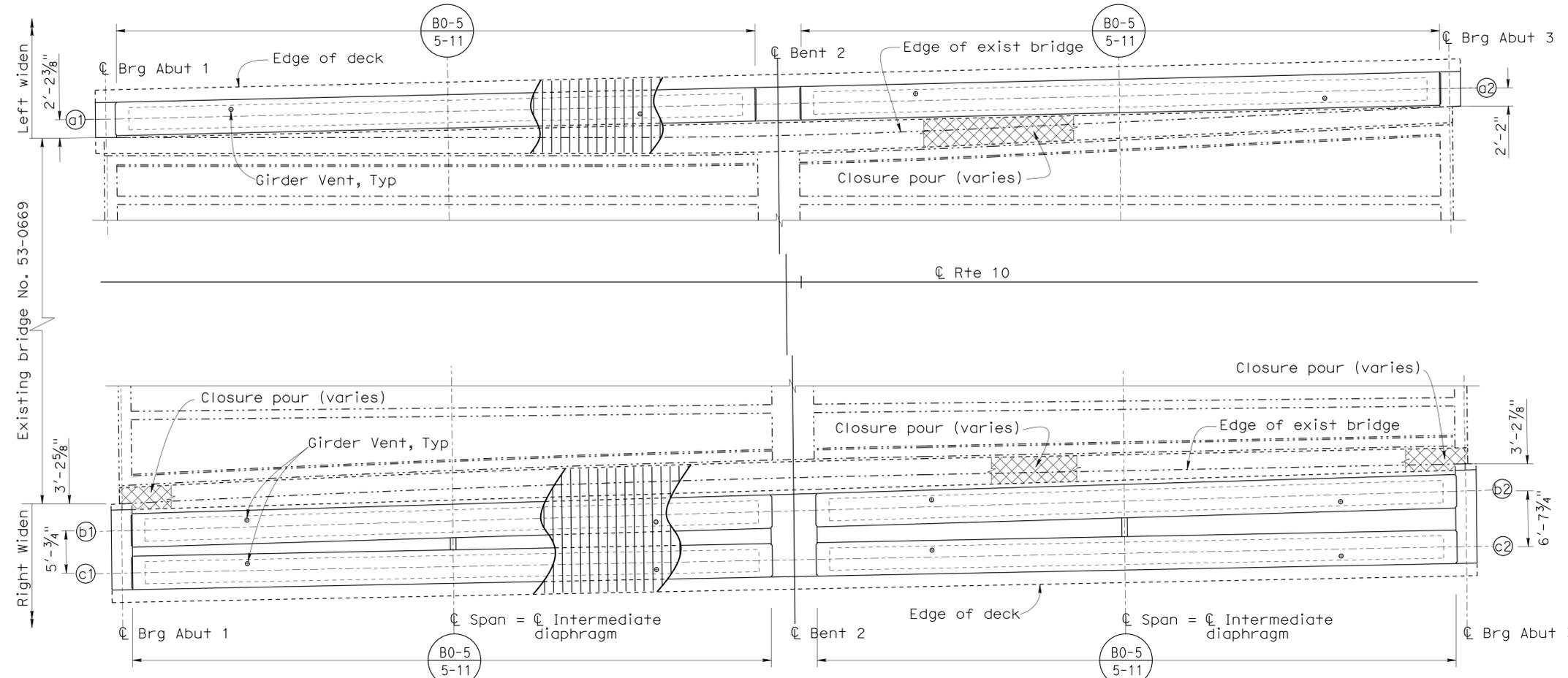
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Bin Shen	CHECKED Sharareh Bikae	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-0669	AZUSA AVE UC (WIDEN) TYPICAL SECTION
	DETAILS	BY L. Tran/A. Ong	CHECKED Sharareh Bikae			POST MILE	36.48	
	QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae			CONTRACT NO.:	1170U1	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3622	PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.:	1170U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES
				0	1	2	3	REVISION DATES
								06/20/12
								10/12/11
								12/19/11
								14
								29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1247	1475

12/19/11  
REGISTERED CIVIL ENGINEER DATE  
6-10-13  
PLANS APPROVAL DATE

JASON FANG  
No. C 70467  
Exp. 09/30/2012  
CIVIL  
STATE OF CALIFORNIA

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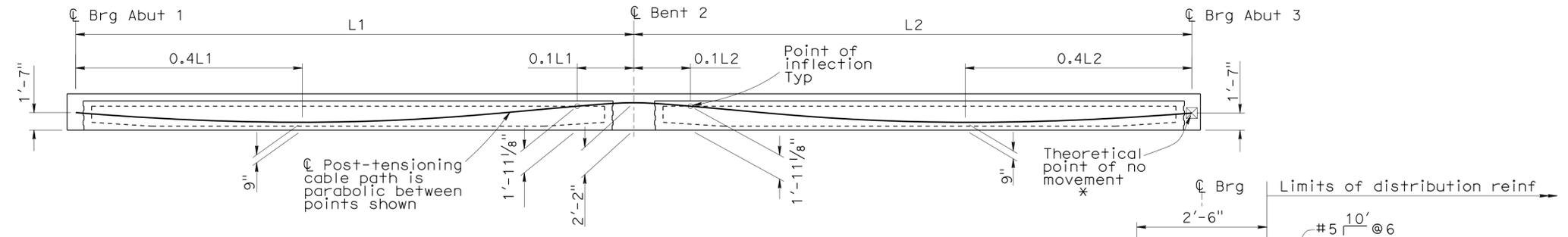


**GIRDER LAYOUT**  
1/8" = 1'-0'

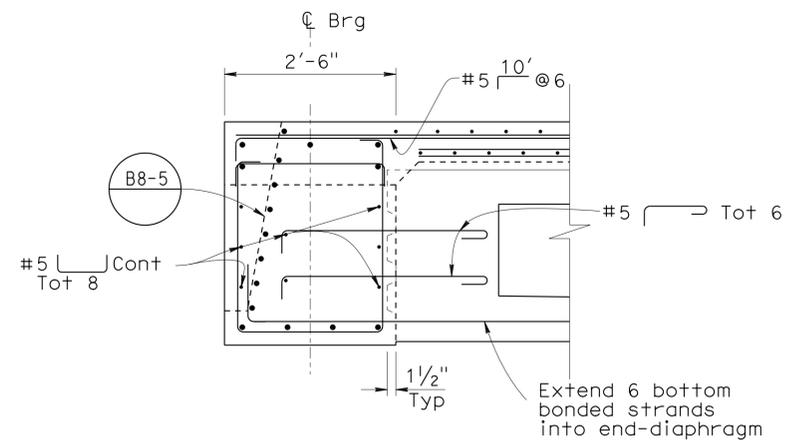


**PRESTRESSING NOTES**  
270 KSI Low Relaxation Strand:  
 $P_{jack} = 930$  kips  
Anchor Set = 3/8" in  
Total Number of Girders = 6  
Design is based on  $\mu = 0.15$ ,  $k = 0.0002/ft$   
Concrete:  $f'_c = 6$  ksi @ 28 days  
 $f'_{ci} = 4.5$  ksi @ time of stressing  
Contractor shall submit elongation calculations based on initial stress at  
 $\eta = 0.95$  times jacking stress.  
One end stressing shall be performed from either end.

**NOTE:**  
\* See "CONSTRUCTION SEQUENCE" sheet for  $P_{jack}$  sequence.



**LONGITUDINAL SECTION**  
No Scale



**ABUTMENT END DIAPHRAGM (AT GIRDER)**  
3/4" = 1'-0"

**ABUTMENT END DIAPHRAGM (BETWEEN GIRDERS)**  
3/4" = 1'-0"

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

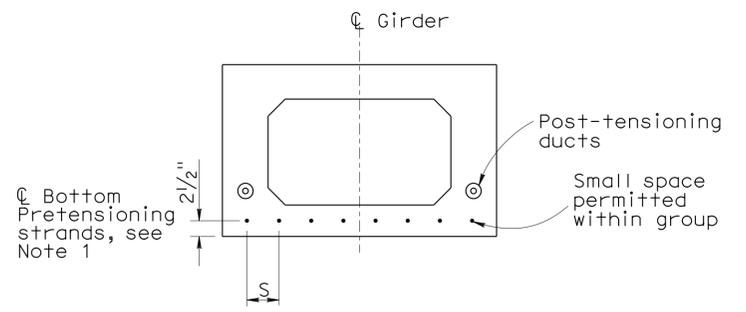
DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY L. Tran/A. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0669	<b>AZUSA AVE UC (WIDEN)</b>
POST MILE	36.48	
<b>GIRDER LAYOUT</b>		

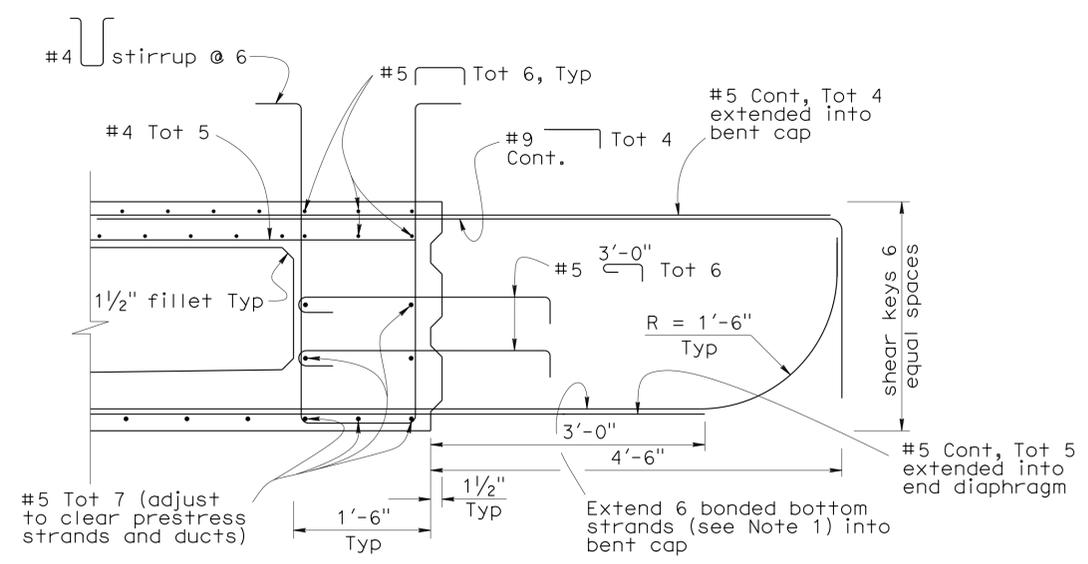
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1248	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER <b>JASON FANG</b> No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA		
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**CLEARANCES FOR PRETENSIONED STRANDS**

$\frac{3}{4}'' = 1'-0''$

1. If necessary strands may be bundled in groups consisting of up to 3 vertically 2 horizontally, and separated at the ends.
2. The min distance "S" between groups or individual strands is 1/2" for 3/8" strands, 1 3/4" for 1/4" strands, and 2" for 1/2" and 9/16" strands.
3. "S" if measured between centers of adjacent strands.
4. Approval of Engineer is required for deviation.

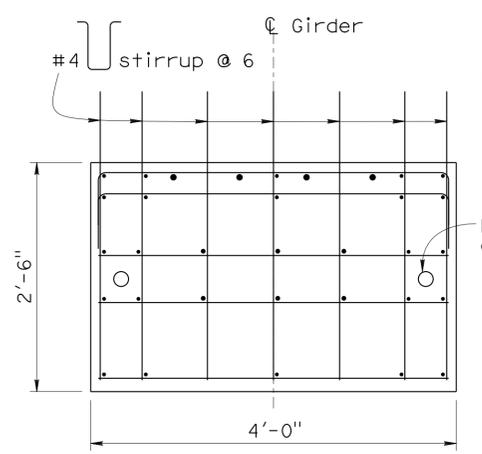


**GIRDER END AT BENT CAP**

$1'' = 1'-0''$

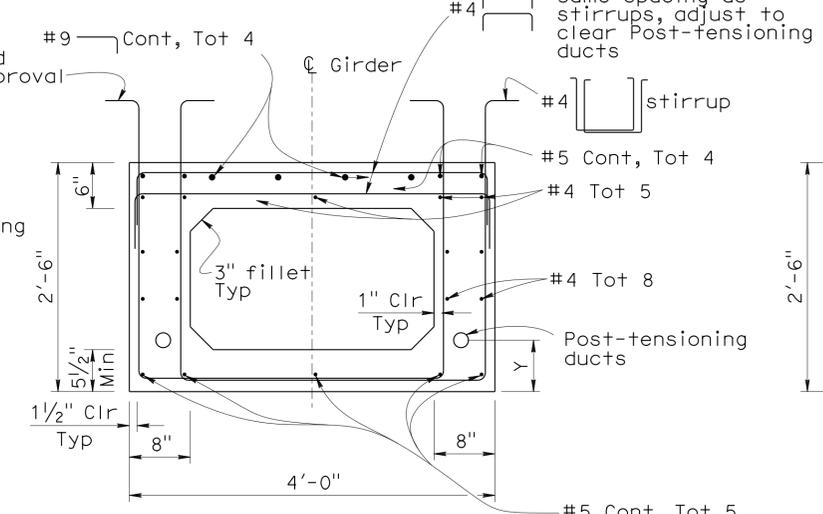
**NOTES:**

1. For prestressing notes and number of bonded and debonded strands, see "PRESTRESSED GIRDER DETAILS NO. 2" sheet.
2. For detail of intermediate diaphragm see, "PRESTRESSED GIRDER DETAILS NO.2" sheet.



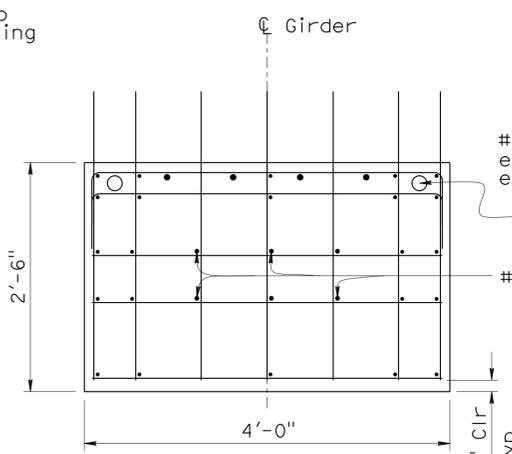
**SECTION A-A**

$1'' = 1'-0''$



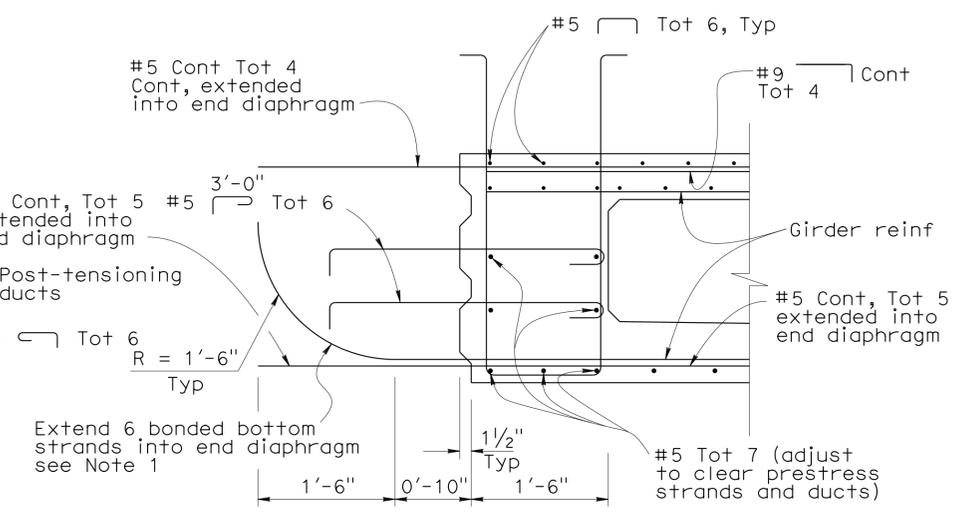
**SECTION B-B**

$1'' = 1'-0''$



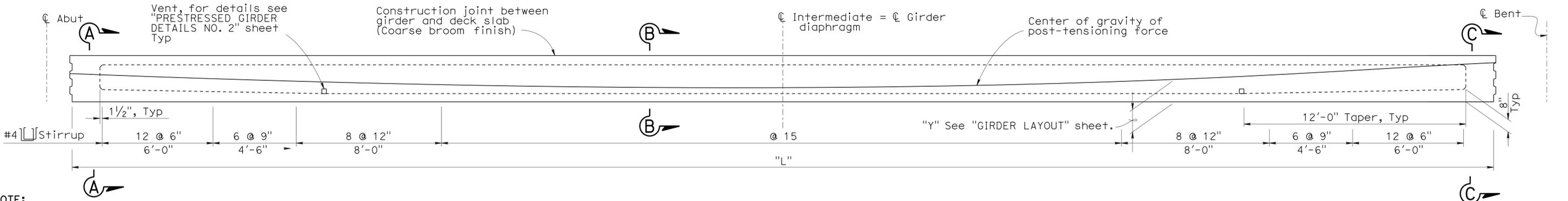
**SECTION C-C**

$1'' = 1'-0''$



**GIRDER END AT ABUTMENT**

$1'' = 1'-0''$



**LONGITUDINAL SECTION**

$\frac{3}{8}'' = 1'-0''$

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

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY L. Tran/A. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0669
POST MILE	36.48

**AZUSA AVE UC (WIDEN)**  
**PRECAST GIRDER DETAILS NO. 1**

DATE PLOTTED => 12-JUN-2013 16:19

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1249	1475

12/19/11  
REGISTERED CIVIL ENGINEER DATE

6-10-13  
PLANS APPROVAL DATE

JASON FANG  
No. C 70467  
Exp. 09/30/2012  
CIVIL  
STATE OF CALIFORNIA

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Girder Location	Designation	Length "L"	Number of Strands		Deflection @ Midspan				
			Top	Bottom	Pretensioning	Girder	CIP Deck	Post Tensioning	Railing
Span 1	a1	76'-6"	-	Bonded 6 Debonded 2	0.32	-0.71	-0.31	0.55	-0.22
Span 1	b1	76'-6"	-	8	0.32	-0.71	-0.31	0.55	-0.27
Span 1	c1	76'-6"	-	8	0.32	-0.71	-0.31	0.55	-0.32
Span 2	a2	76'-6"	-	6	0.32	-0.71	-0.31	0.59	-0.22
Span 2	b2	76'-6"	-	8	0.32	-0.71	-0.31	0.59	-0.27
Span 2	c2	76'-6"	-	8	0.32	-0.71	-0.31	0.59	-0.32

### LEGENDS OF LOAD TYPES FOR DEFLECTION

Pretensioning = Estimated prestress deflection at release due to pretensioning only.

Girder = Precast girder deflection at release to self weight.

CIP Deck = Deflection of composite girder due to cast in place deck, overhang and intermediate diaphragm after removal of temporary support.

Post-tensioning = Estimated post-tensioning deflection of composite girder due to the effect of post-tensioning after the removal of temporary support.

Railing = Deflection of composite girder due to bridge barrier, soundwall and closure pour.

**NOTE:**

- Minimum of two vents per span in each precast girder. Both to be located at 12' from inside face of girder end.

### PRESTRESSING NOTES (PRE-TENSIONING)

Number of prestressing strands based on 0.6"Ø  
 $F_{pu} = 270$  ksi, low relaxation strands stress for pre-tensioning shall be 202.5 ksi.

Concrete strength:  $f'_c = 6.0$  ksi @ 28 days

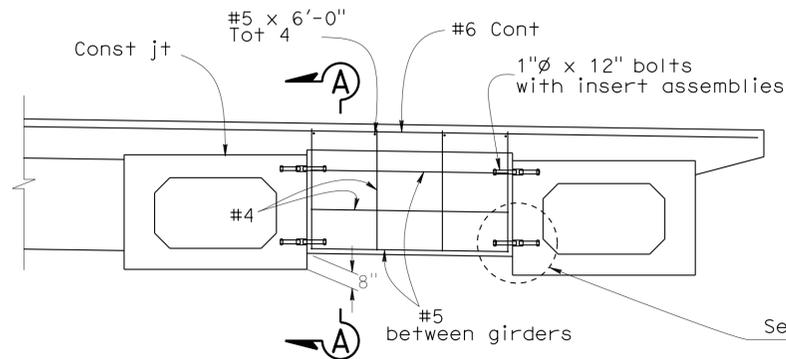
$f'_{ci} = 4.5$  ksi @ time of stressing

Deflection components: information to be used in setting screed line elevations.

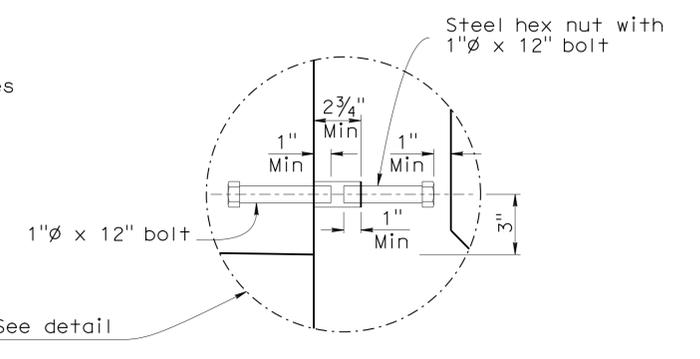
Screed line elevation for deck concrete will be determined by Engineers.

Debonded strands shall be placed symmetrically along  $\bar{C}$  of girders. Debonded length shall be 10'-0" from end of the girders.

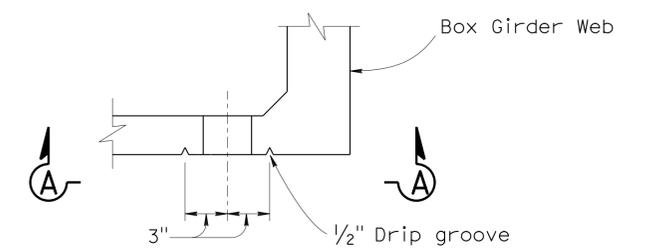
**NOTE:**  
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



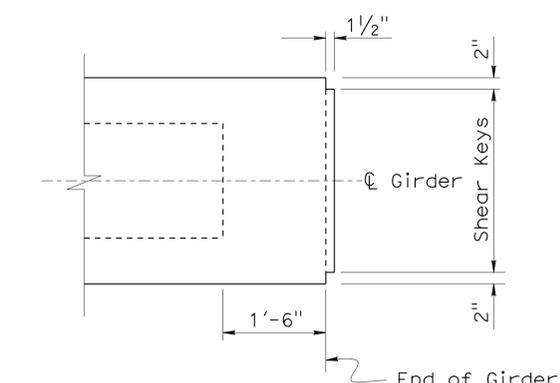
**INTERMEDIATE DIAPHRAGM (RIGHT WIDEN)**  
 $1/2" = 1'-0"$



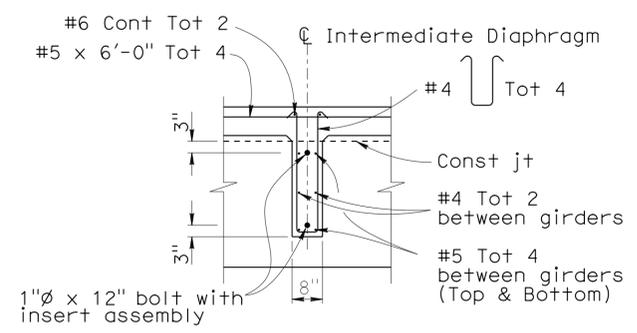
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 No Scale



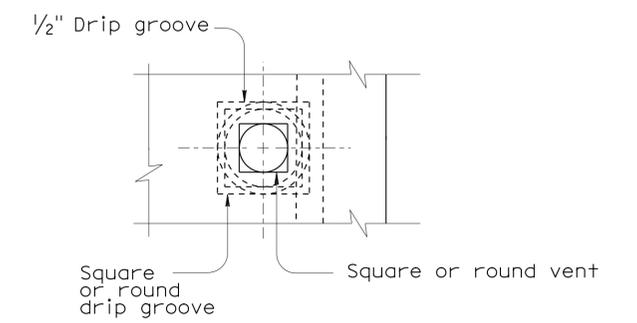
**VENT DETAIL**  
 No Scale



**GIRDER END DIAPHRAGM-PLAN VIEW**  
 $3/4" = 1'-0"$



**SECTION A-A**  
 $1/2" = 1'-0"$



**VIEW A-A**  
 No Scale

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY Antonette L. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

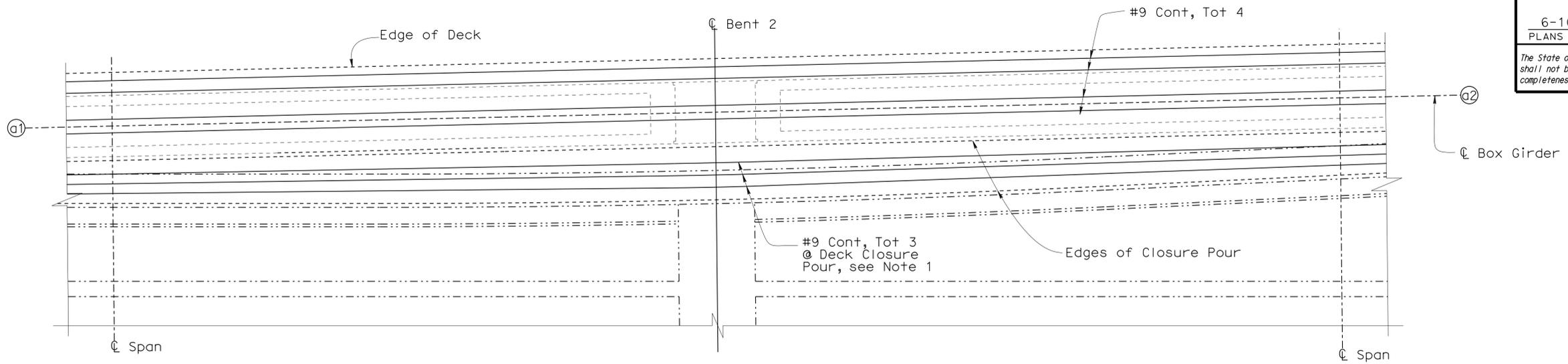
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

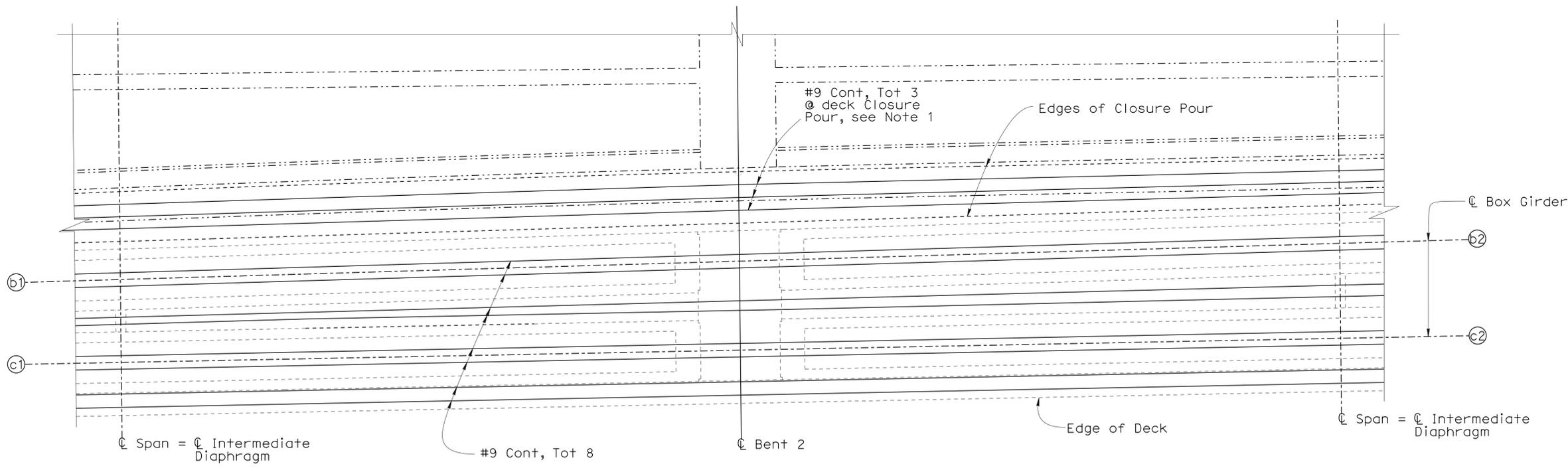
BRIDGE NO.	53-0669
POST MILE	36.48

**AZUSA AVE UC (WIDEN)**  
**PRECAST GIRDER DETAILS NO. 2**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1250	1475
			12/19/11		
REGISTERED CIVIL ENGINEER			DATE		
6-10-13			PLANS APPROVAL DATE		
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**TOP LONGITUDINAL REINFORCEMENT (LEFT WIDEN)**  
1/4" = 1'-0"



**TOP LONGITUDINAL REINFORCEMENT (RIGHT WIDEN)**  
1/4" = 1'-0"

NOTE:  
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NOTE:  
1. Bars to be curved as shown and to be evenly spaced.

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY Antonette L. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

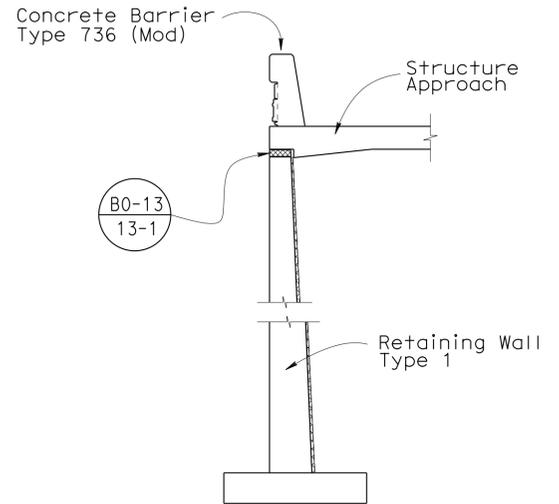
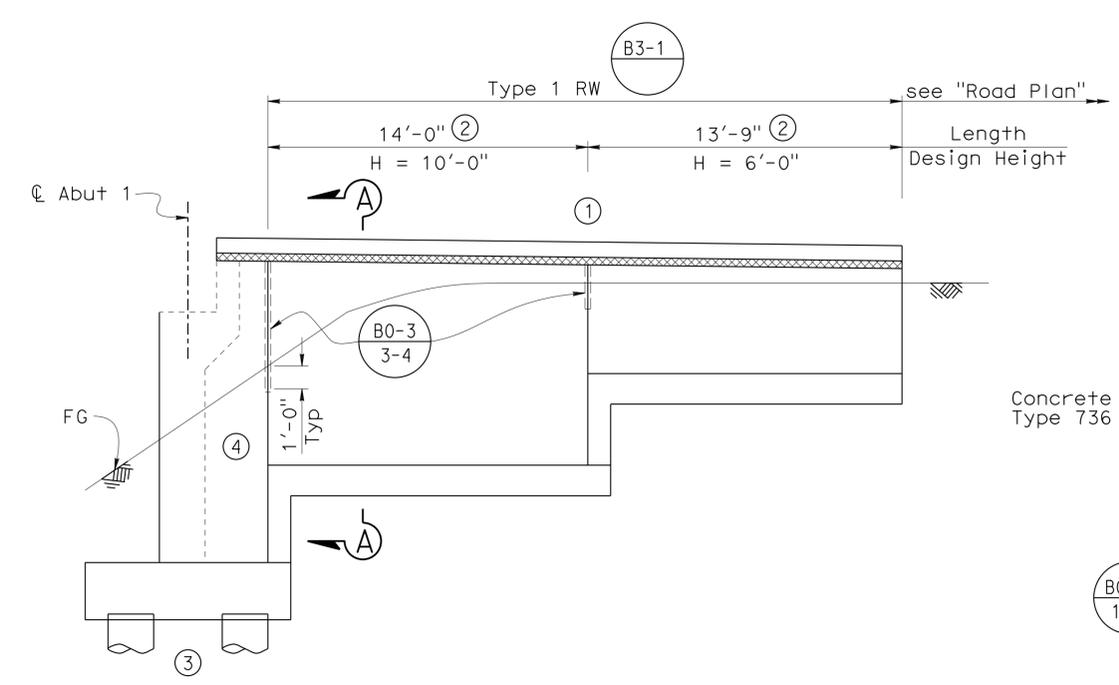
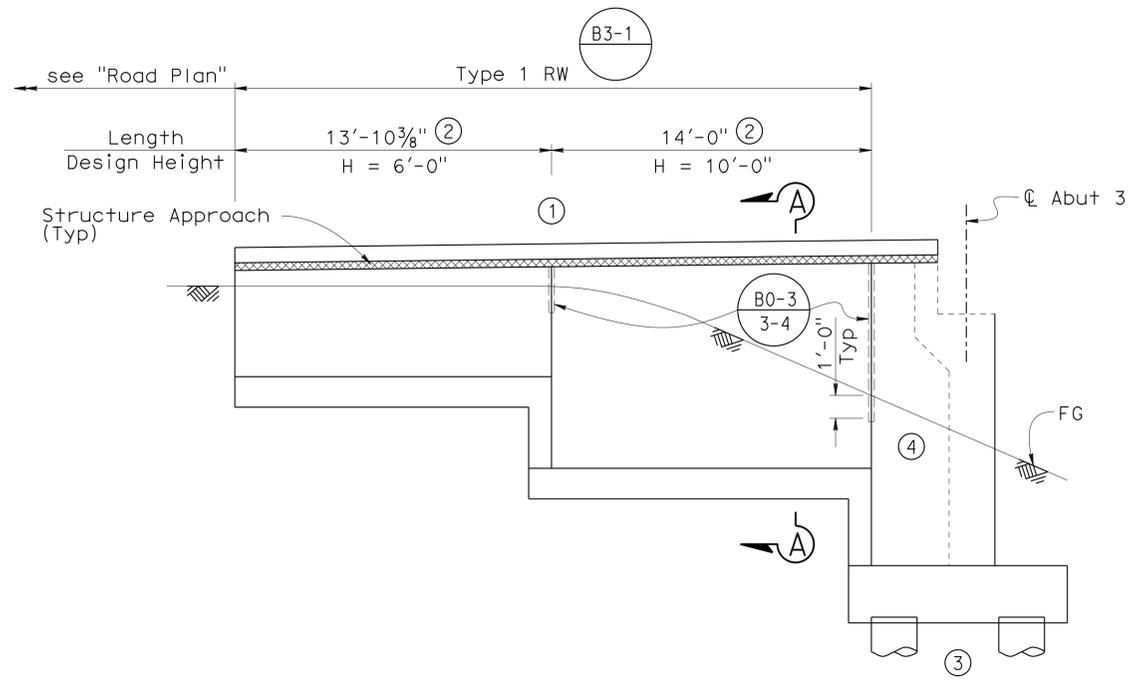
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

BRIDGE NO.	53-0669
POST MILE	36.48

**AZUSA AVE UC (WIDEN)**  
**GIRDER REINFORCEMENT**

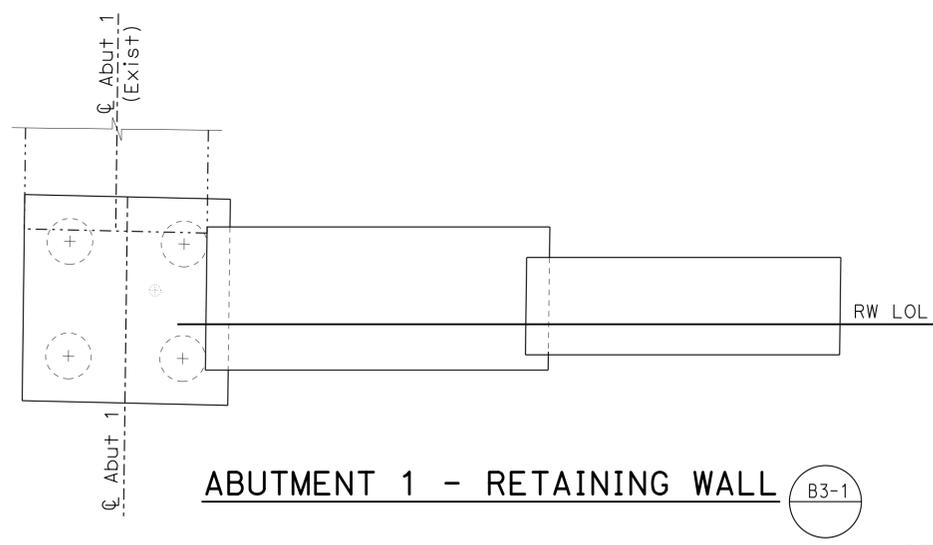
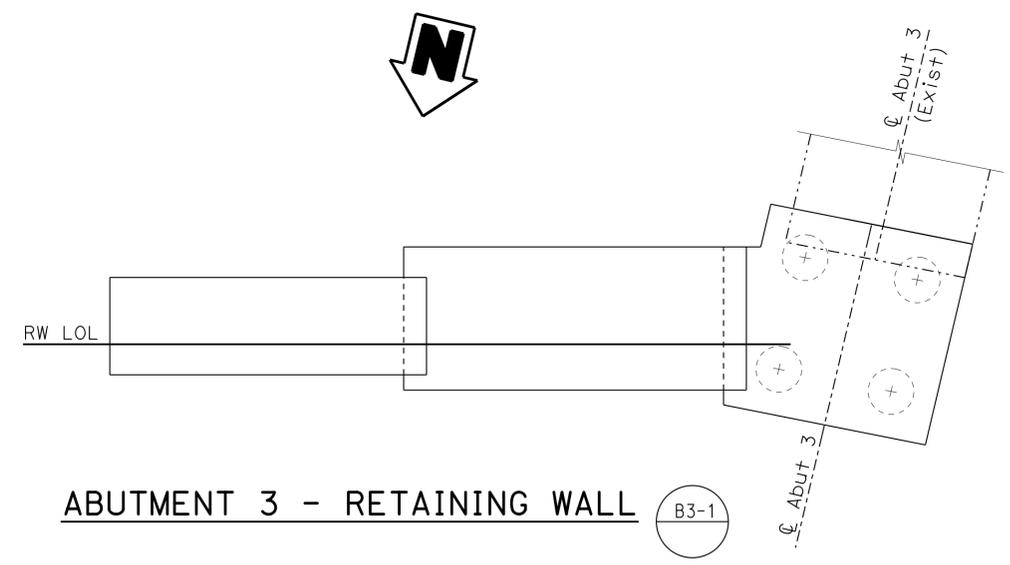
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1251	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
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**ELEVATION**  
1/4" = 1'-0"

**SECTION A-A**  
No Scale

**LEGEND**  
 ——— New Structure  
 - - - - Existing Structure



**FOOTING PLAN**  
1/4" = 1'-0"

**ABUTMENT 1 - RETAINING WALL** B3-1

**ABUTMENT 3 - RETAINING WALL** B3-1

**NOTES**

- ① Concrete Barrier Type 736 (Mod) not shown.
- ② Measured along Retaining Wall LOL.
- ③ Not all Piles are shown.
- ④ For Stem reinforcement, see detail B3-1 DH=14'-0"

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

DESIGN	BY Bin Shen	CHECKED Sharareh Bikae
DETAILS	BY Antonette L. Ong	CHECKED Sharareh Bikae
QUANTITIES	BY Bin Shen	CHECKED Sharareh Bikae

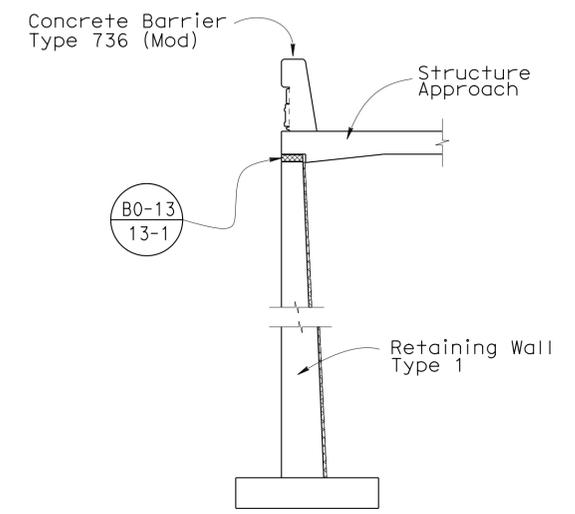
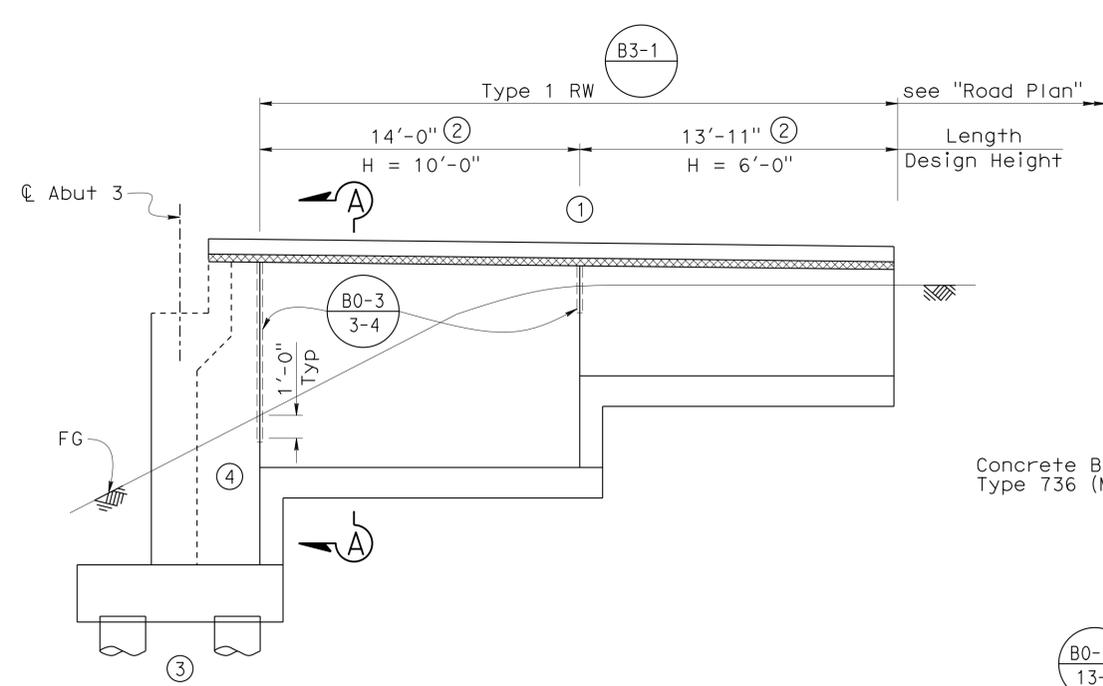
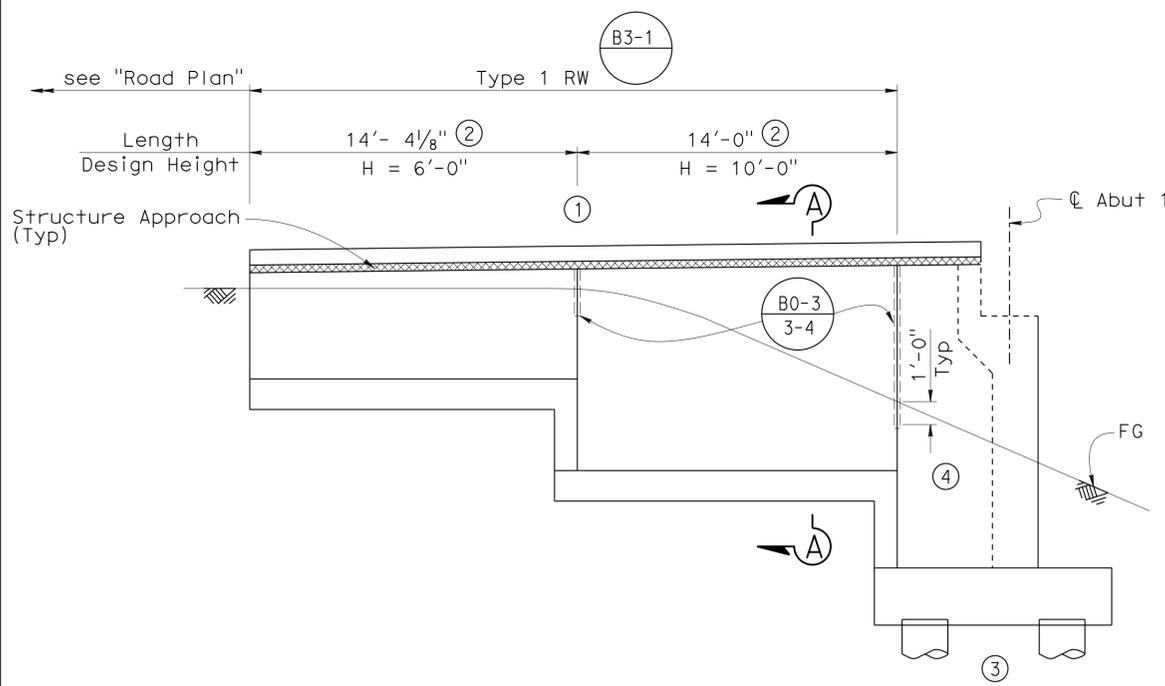
**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES**  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-0669
POST MILE	36.48

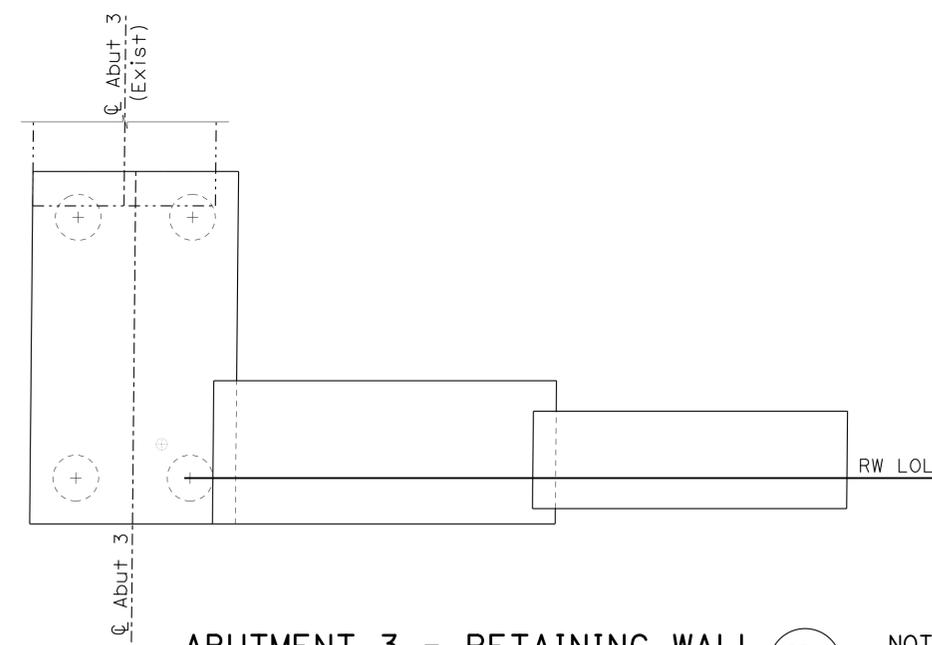
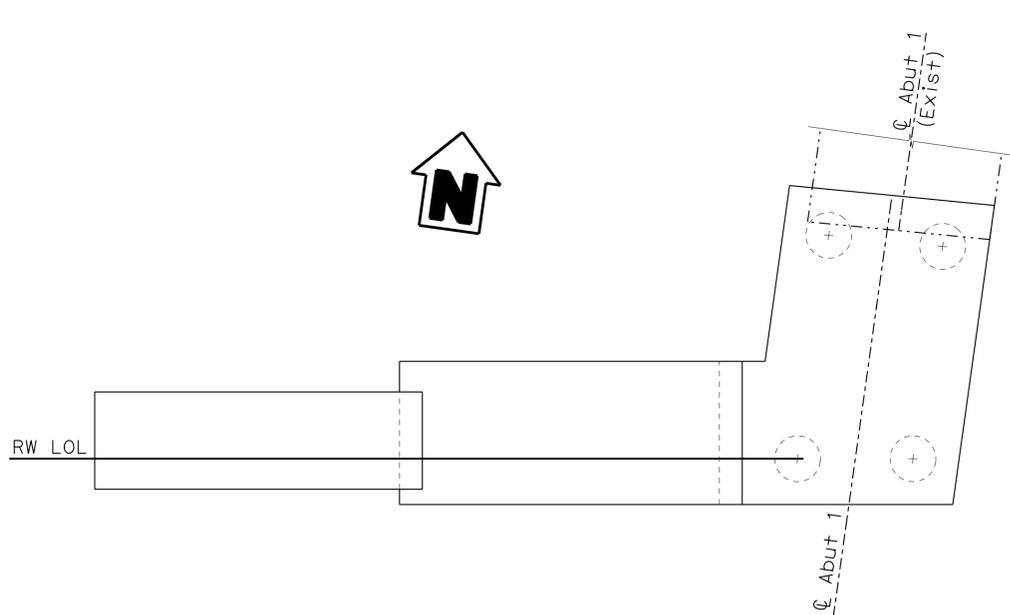
**AZUSA AVE UC (WIDEN)**  
**RETAINING WALL LAYOUT (LEFT WIDEN)**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1252	1475
			12/19/11	DATE	
			REGISTERED CIVIL ENGINEER	DATE	
			6-10-13	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA		
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**ELEVATION**  
1/4" = 1'-0"

**SECTION A-A**  
No Scale



- LEGEND**
- New Structure
  - - - Existing Structure

**ABUTMENT 1 - RETAINING WALL** B3-1

**ABUTMENT 3 - RETAINING WALL** B3-1

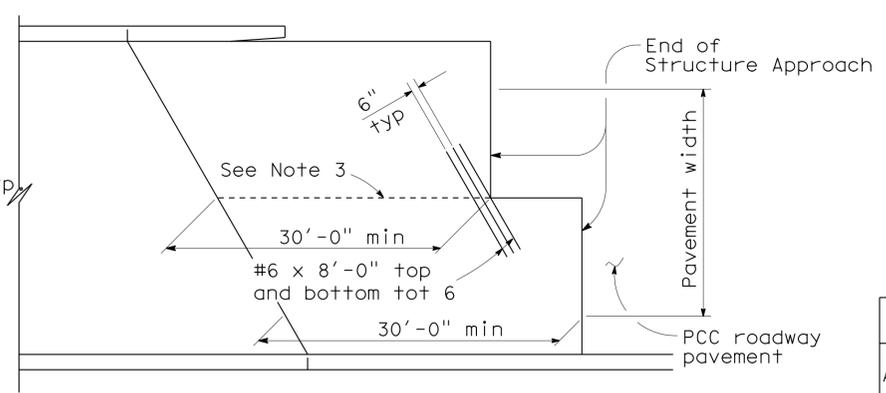
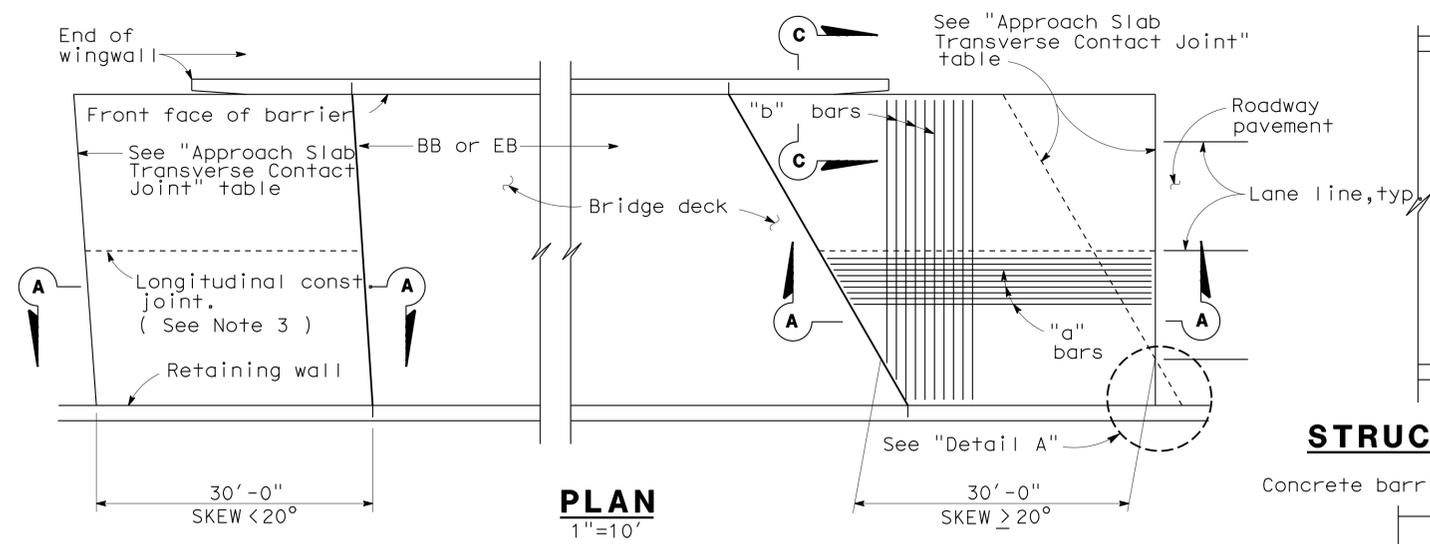
**FOOTING PLAN**  
1/4" = 1'-0"

**NOTES**

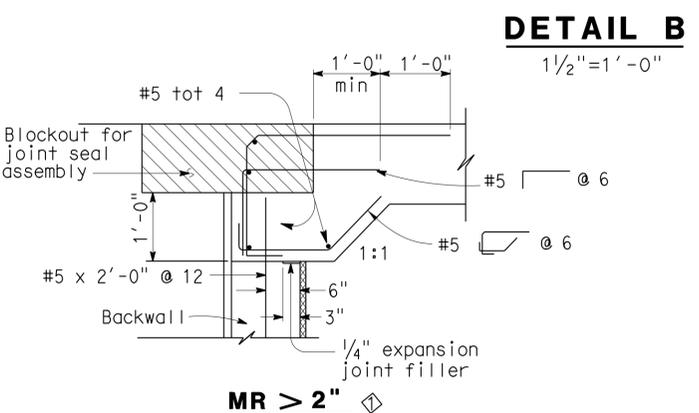
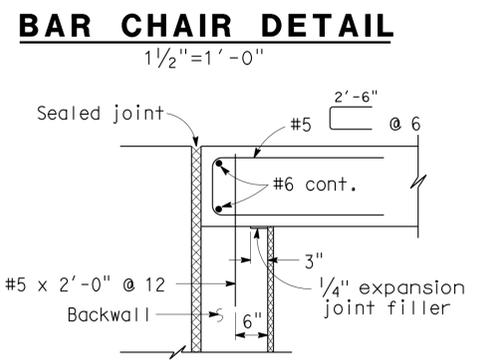
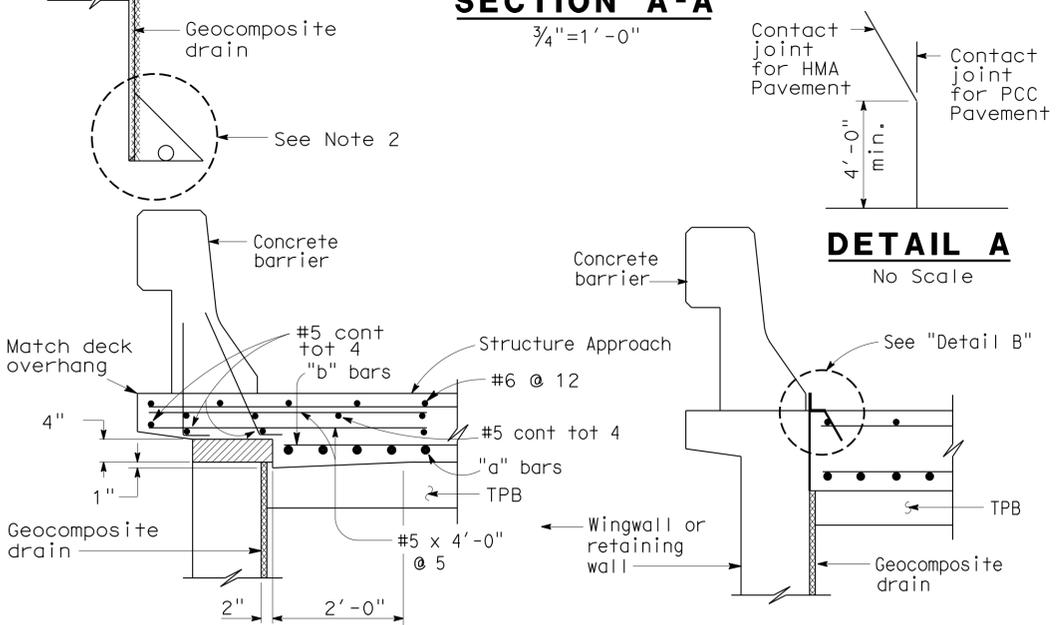
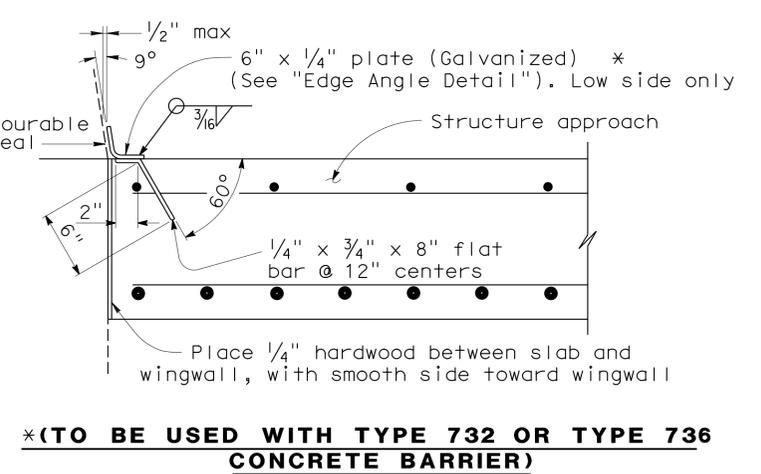
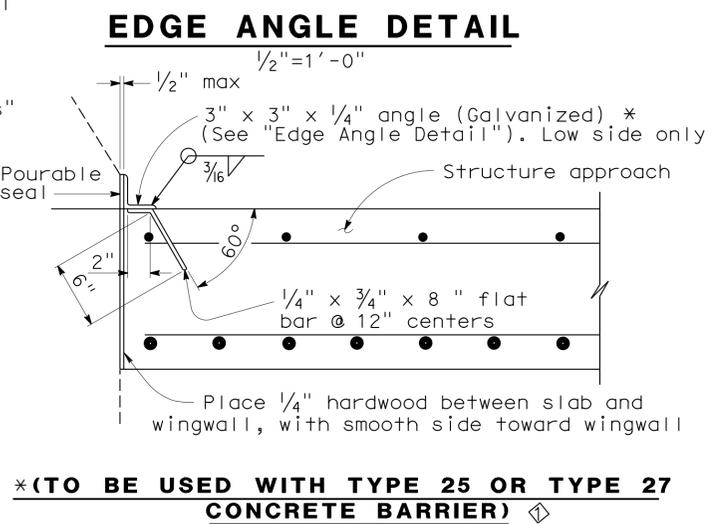
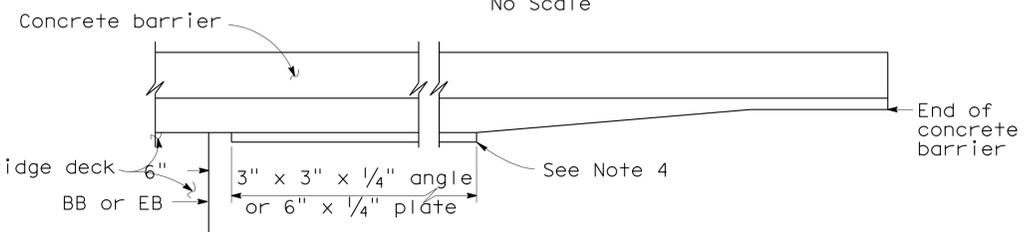
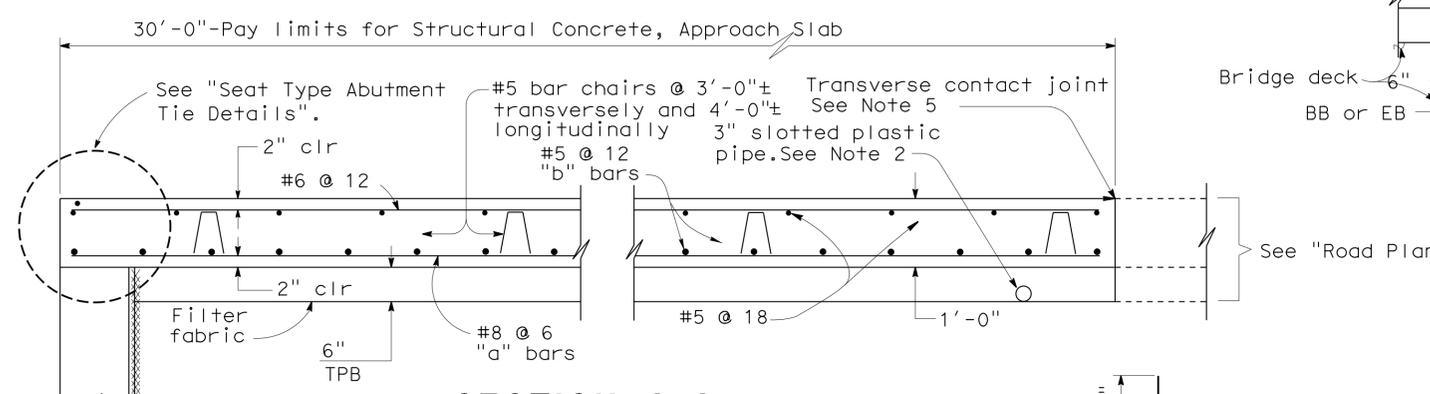
- ① Concrete Barrier Type 736 (Mod) not shown.
- ② Measured along Retaining Wall LOL.
- ③ Not all Piles are shown.
- ④ For Stem reinforcement, see detail B3-1 DH=14'-0"

NOTE:  
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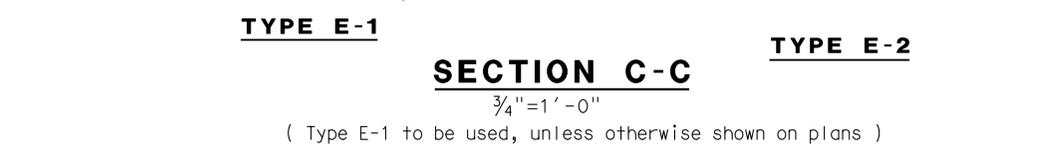
DESIGN BY Bin Shen CHECKED Sharareh Bikae DETAILS BY Antonette L. Ong CHECKED Sharareh Bikae QUANTITIES BY Bin Shen CHECKED Sharareh Bikae	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO. 53-0669	<b>AZUSA AVE UC (WIDEN)</b> <b>RETAINING WALL LAYOUT (RIGHT WIDEN)</b>
			POST MILE 36.48	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.: 1170U1
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES SHEET 20 OF 29

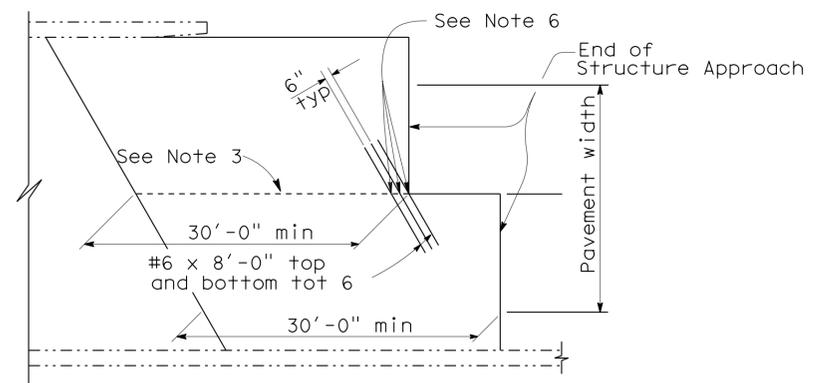
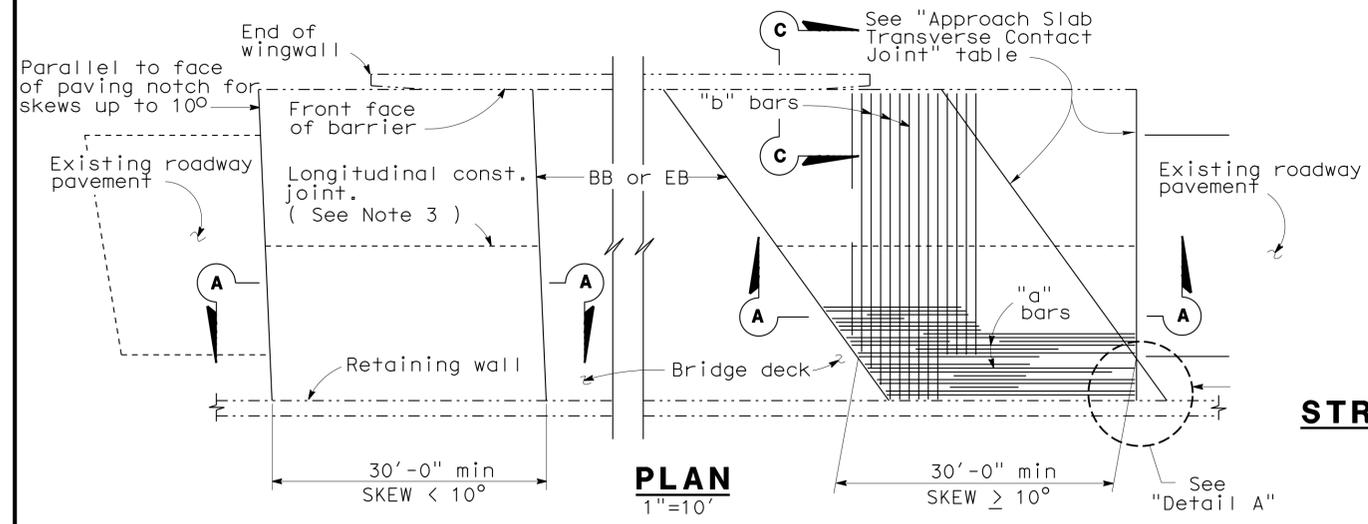


APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 20°	Parallel to face of paving notch	Parallel to face of paving notch
20° - 45°	Parallel to face of P N use (Detail A)	Stagger lines 24' to 36' apart.
> 45°	Parallel to face of P N use (Detail A)	Stagger at each lane line.

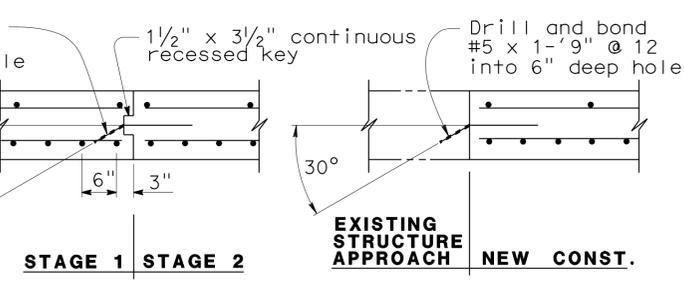
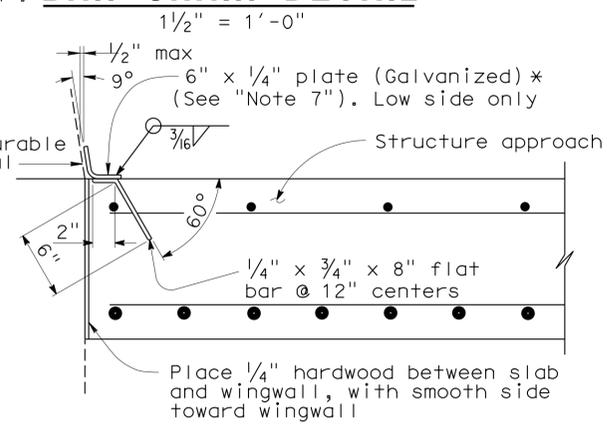
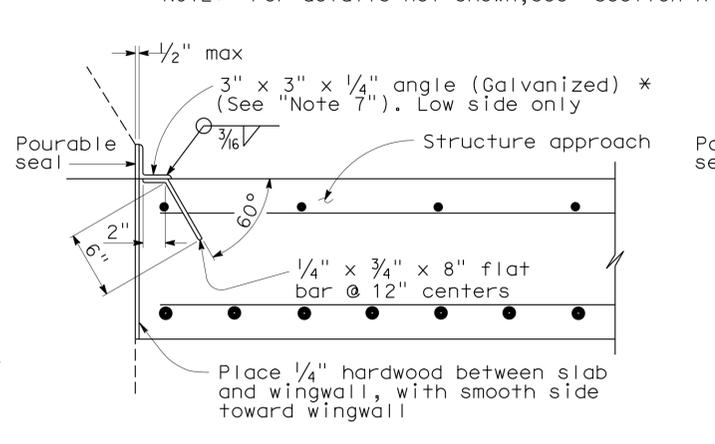
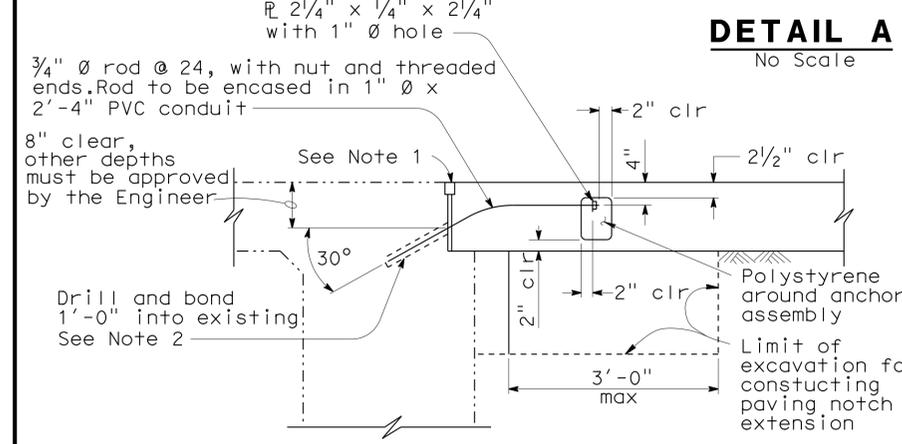
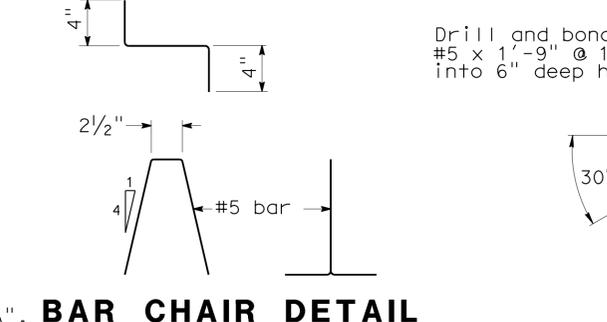
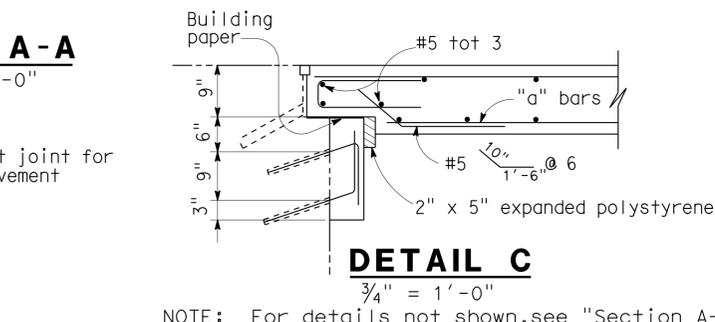
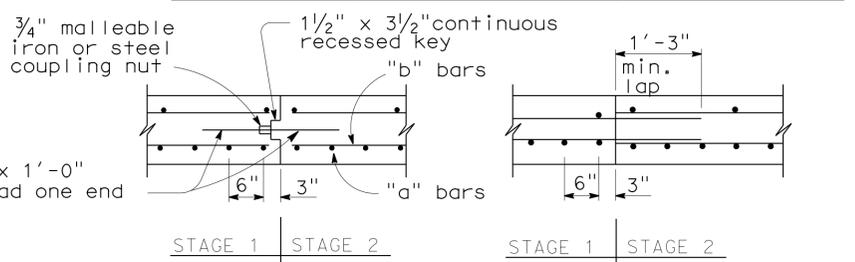
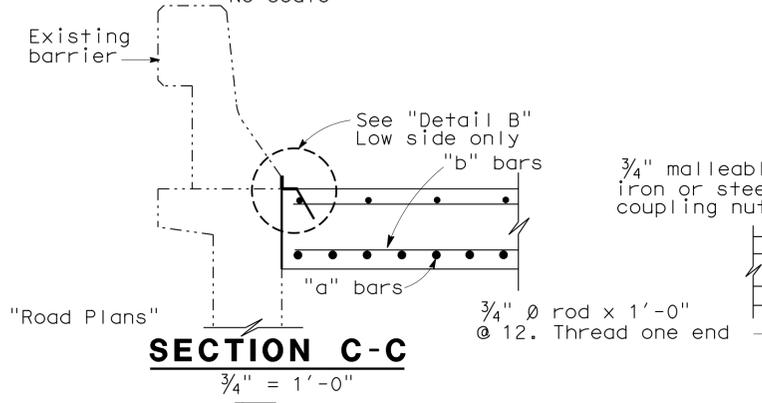
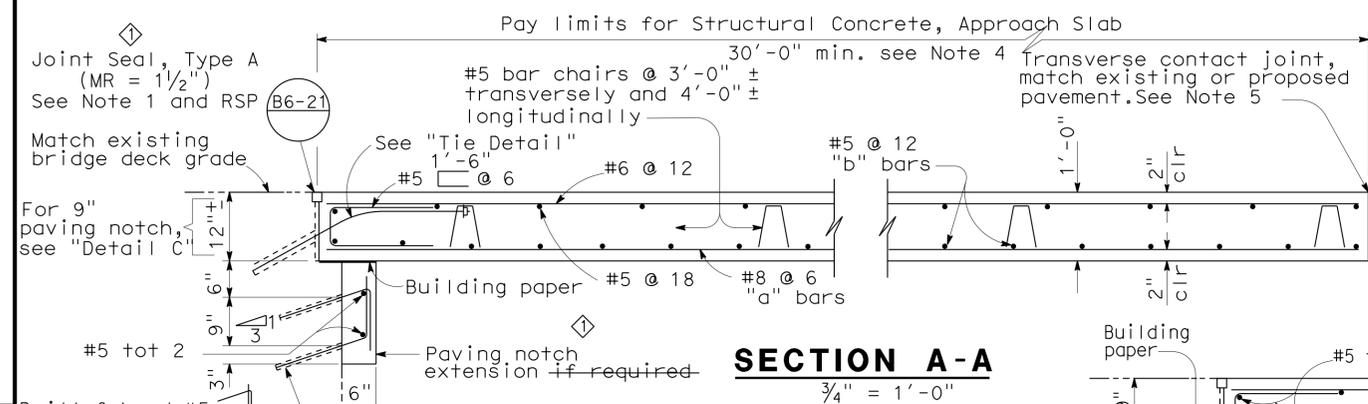


- NOTES:**
- For details not shown, see Structure Plans. For MR ≤ 2, adjust bar reinforcement to clear a sawcut for sealed joint, when required.
  - For drainage details, see "Structure Approach Drainage Details" sheet.
  - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
  - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.
  - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
  - At the contractor's option, approach slab transverse reinforcement may be placed parallel to paving notch. Spacing of transverse reinforcement is measured along @ roadway.
- Remove all polystyrene.





APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	Parallel to face of paving notch	Parallel to face of paving notch
10° - 45°	Parallel to face of P N use (Detail A)	Stagger lines 24' to 36' apart
> 45°	Parallel to face of P N use (Detail A)	Stagger at each lane line



**LONGITUDINAL CONSTRUCTION JOINT ALTERNATIVES**  
3/4" = 1'-0"

- NOTES:**
- For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required.
  - Space to avoid existing prestress anchorages and main reinforcement.
  - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
  - Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint.
  - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
  - Couplers are required for stage construction.
  - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.

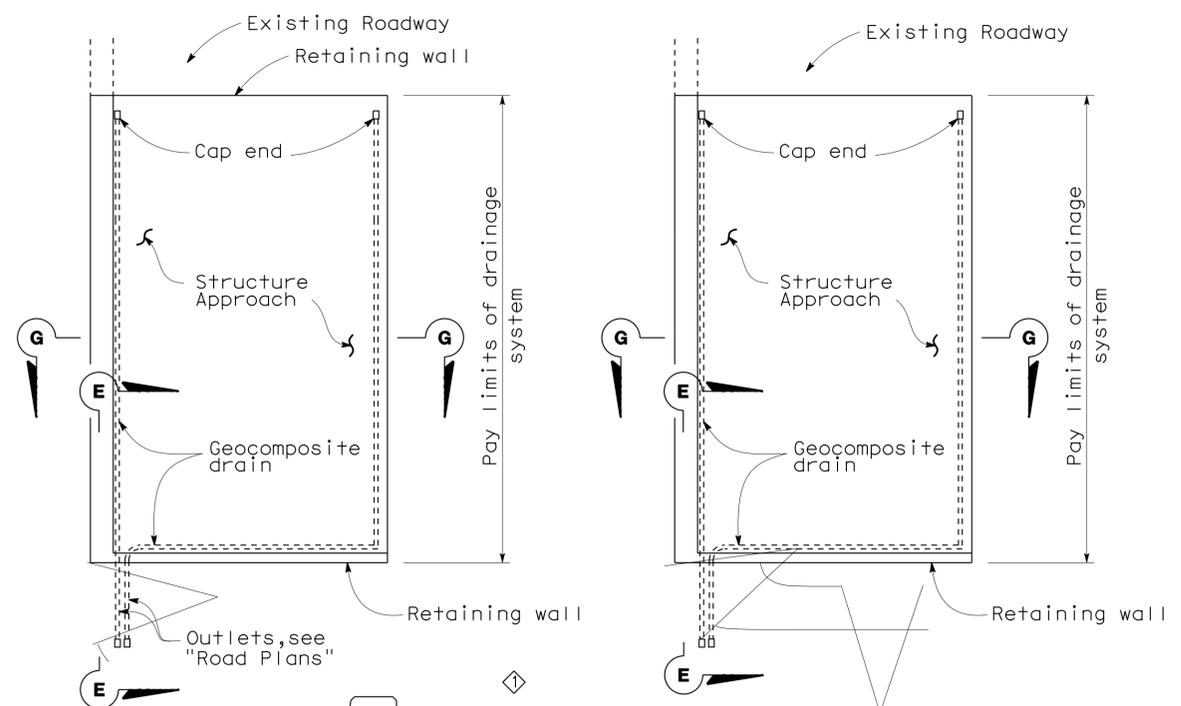
**NOTE:**  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

REVISED STANDARD DRAWING	Revised Note
FILE NO. <b>xs3-150</b>	APPROVAL DATE <u>July 2011</u>

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 53-0669 POST MILE 36.48	<b>AZUSA AVE UC (WIDEN)</b> <b>STRUCTURE APPROACH TYPE R(30D)</b>
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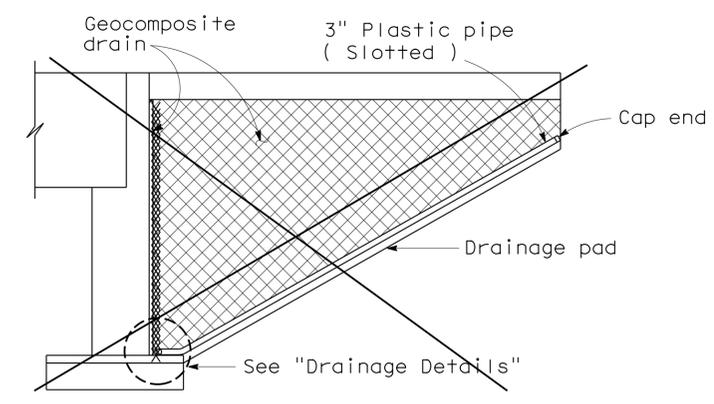
UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.: 1170U1	REVISION DATES	SHEET 22 OF 29
DISREGARD PRINTS BEARING EARLIER REVISION DATES		12/19/11 06/20/12	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1255	1475
			12/19/11	DATE	
			REGISTERED CIVIL ENGINEER	DATE	
			6-10-13	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 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.					

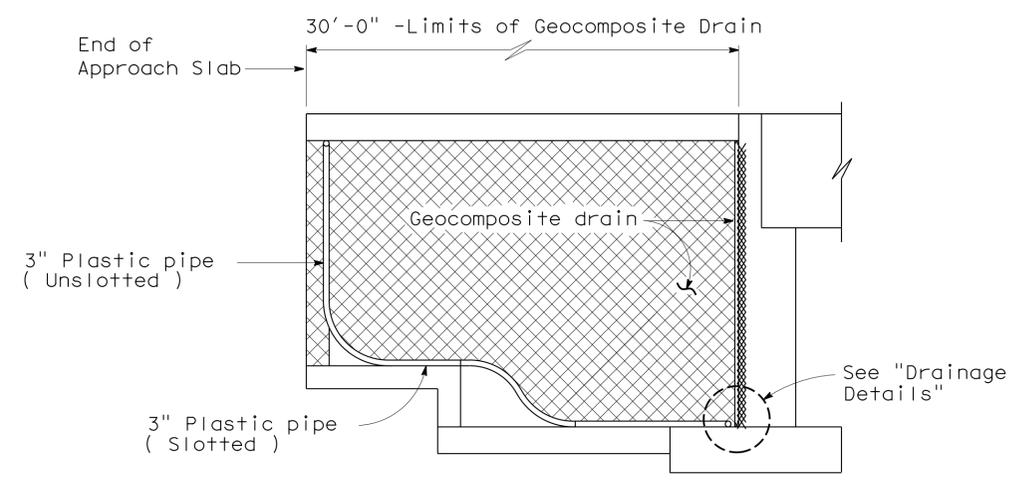


**TYPICAL PLAN**  
1"=10'

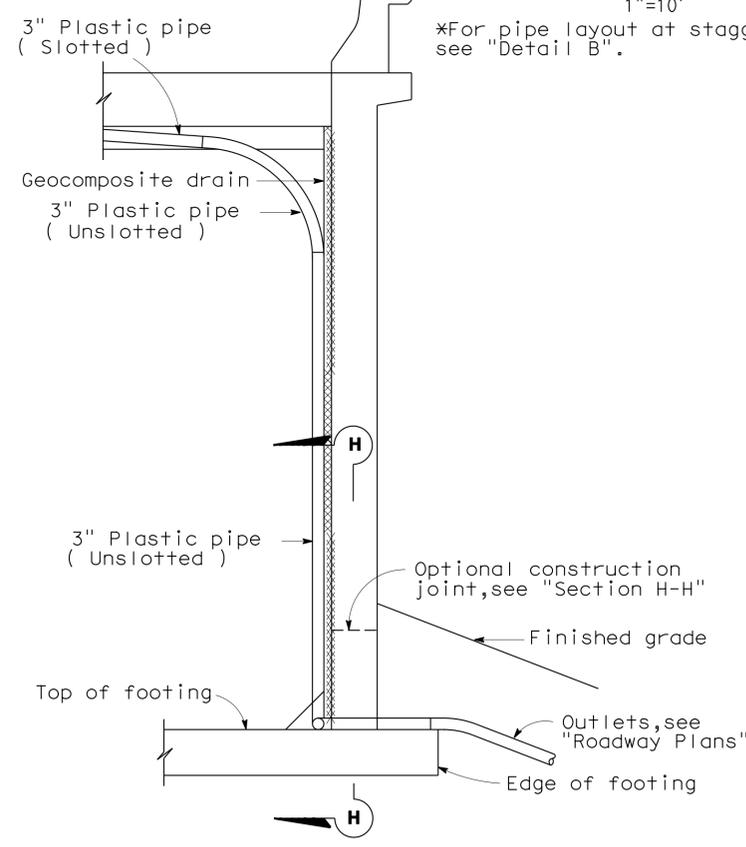
\*For pipe layout at staggered end, see "Detail B".



**CANTILEVER WINGWALL SECTION F-F**  
1/4"=1'-0"

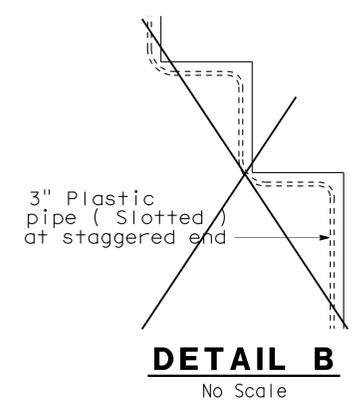


**RETAINING WALL WINGWALL SECTION G-G**  
1/4"=1'-0"

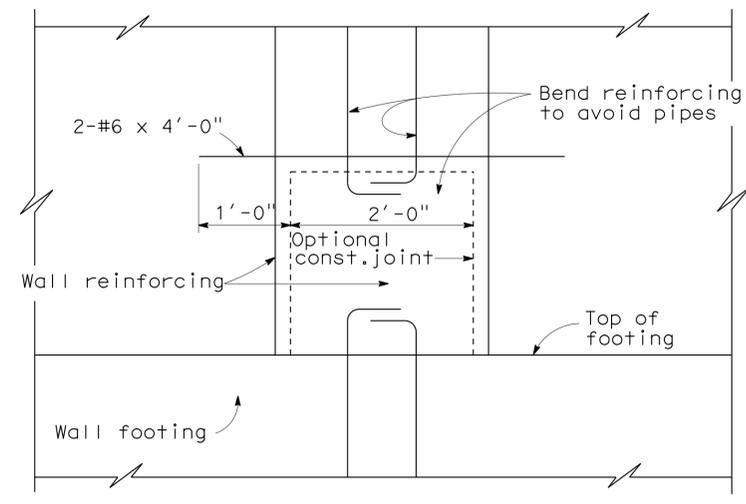


**SECTION E-E**  
1/2"=1'-0"

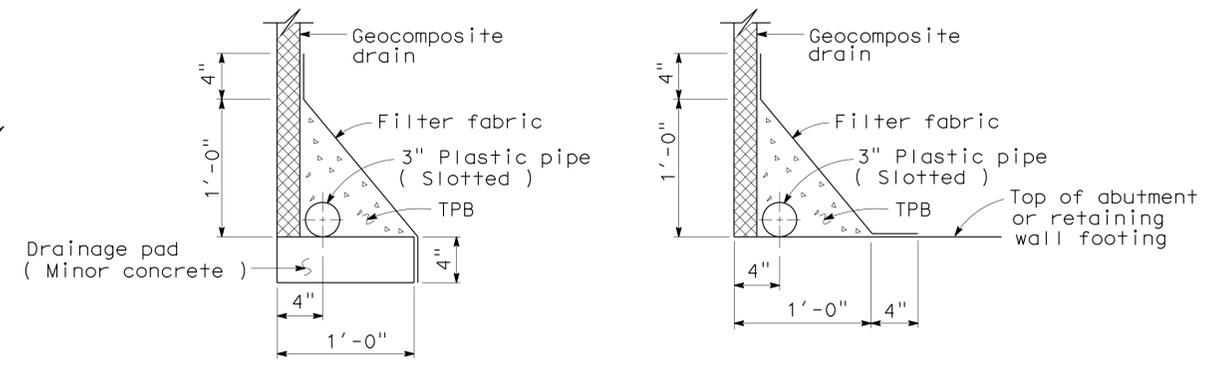
NOTE: Bends and junctions in 3" plastic pipe are 30" radius min.



**DETAIL B**  
No Scale



**SECTION H-H**  
1"=1'-0"



**WITHOUT FOOTING**

**WITH FOOTING**

**DRAINAGE DETAILS**  
1/2"=1'-0"

REVISED STANDARD DRAWING	
FILE NO. <b>xs3-110</b>	APPROVAL DATE <u>July 2011</u>

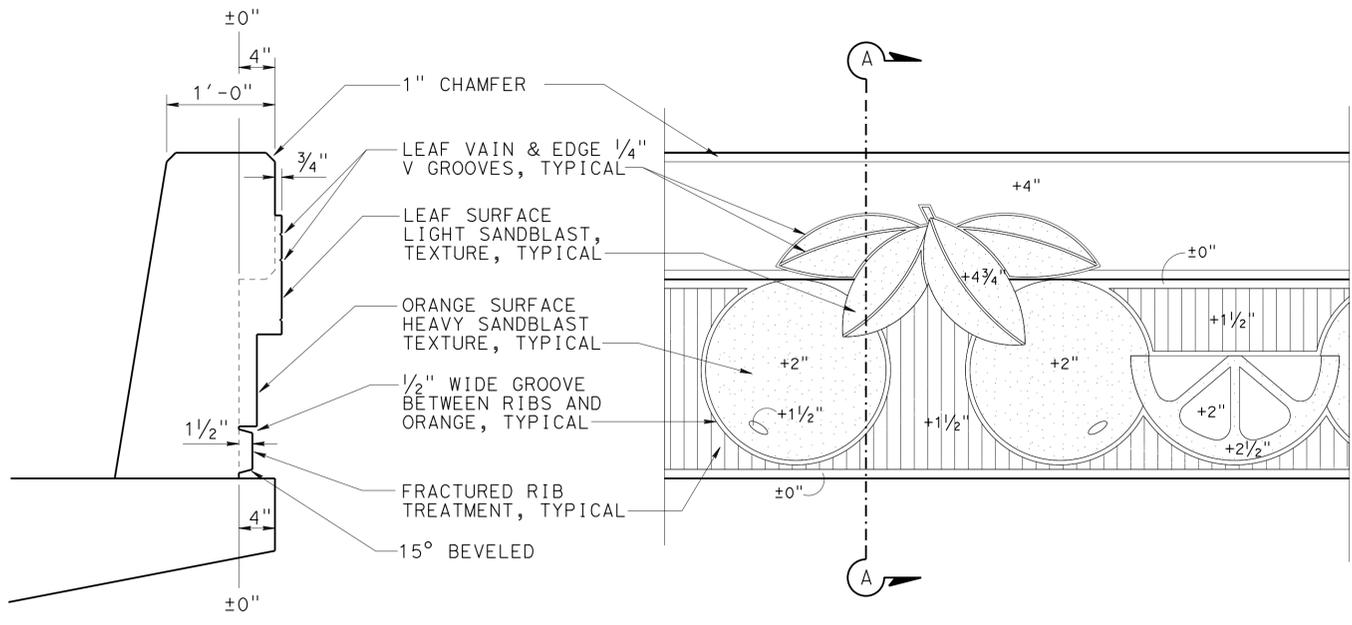
Modified detail

STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES
DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 53-0669
	POST MILE 36.48

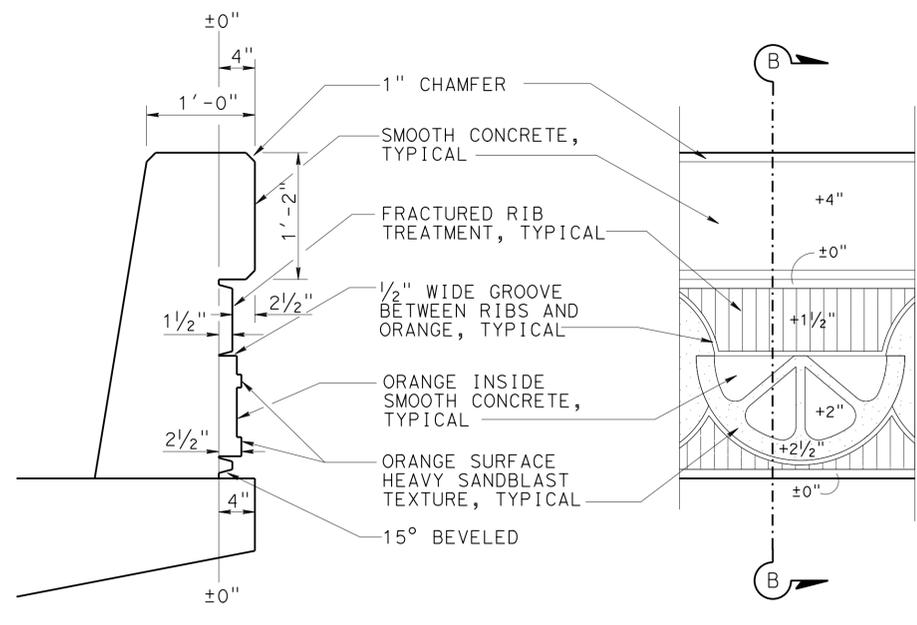
AZUSA AVE UC (WIDEN)	
STRUCTURE APPROACH DRAINAGE DETAILS	

USERNAME => s124496 DATE PLOTTED => 12-JUN-2013 TIME PLOTTED => 16:19

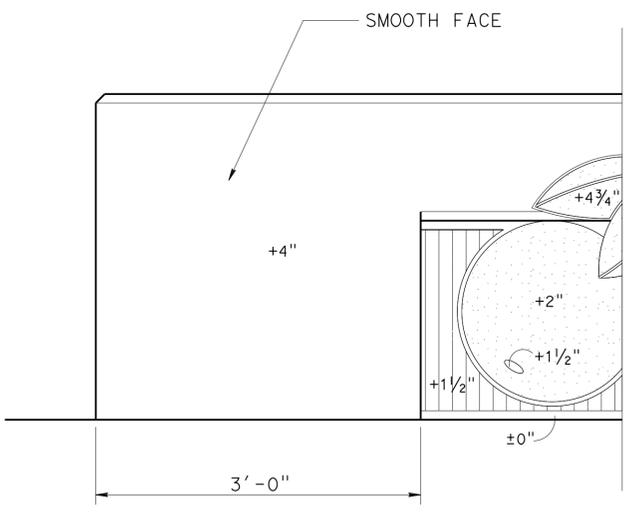
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1256	1475
			12/19/11		
			REGISTERED CIVIL ENGINEER		
			PLANS APPROVAL DATE		
			6-10-13		
			REGISTERED PROFESSIONAL ENGINEER No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



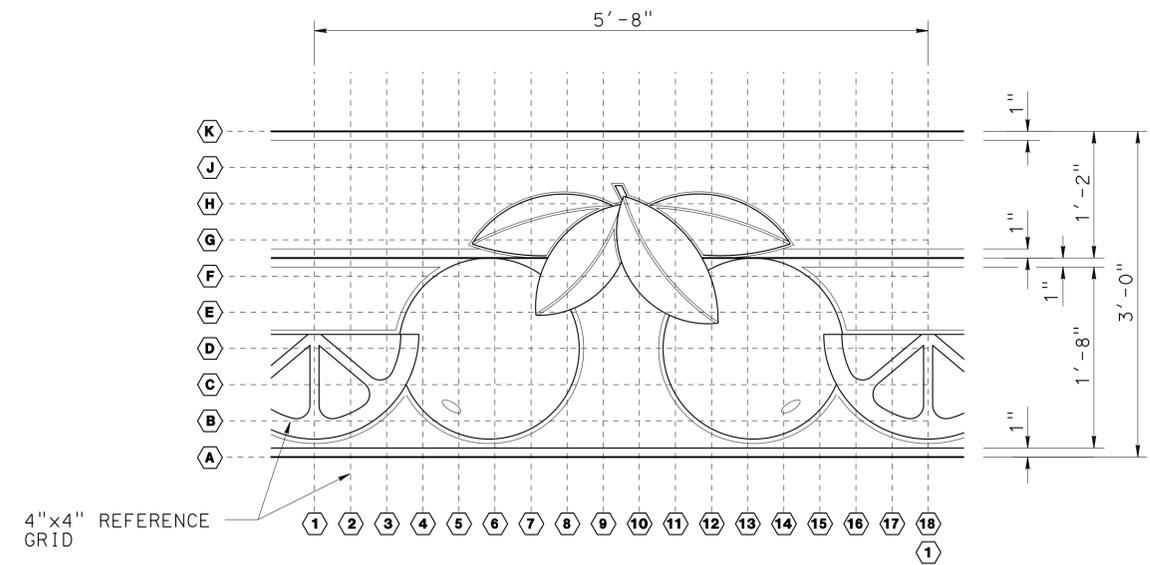
**SECTION A-A**  
NO SCALE



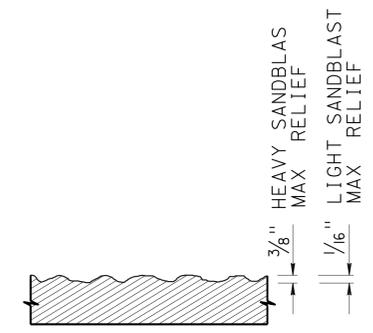
**SECTION B-B**  
NO SCALE



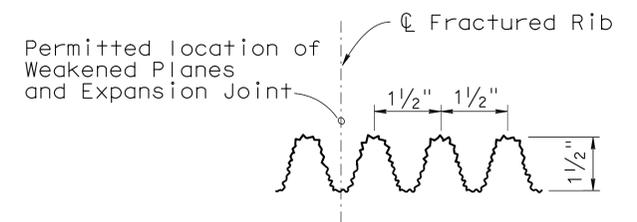
**BARRIER ENDING**  
NO SCALE



**ORANGE MOTIF MOCK-UP PANEL**  
NO SCALE



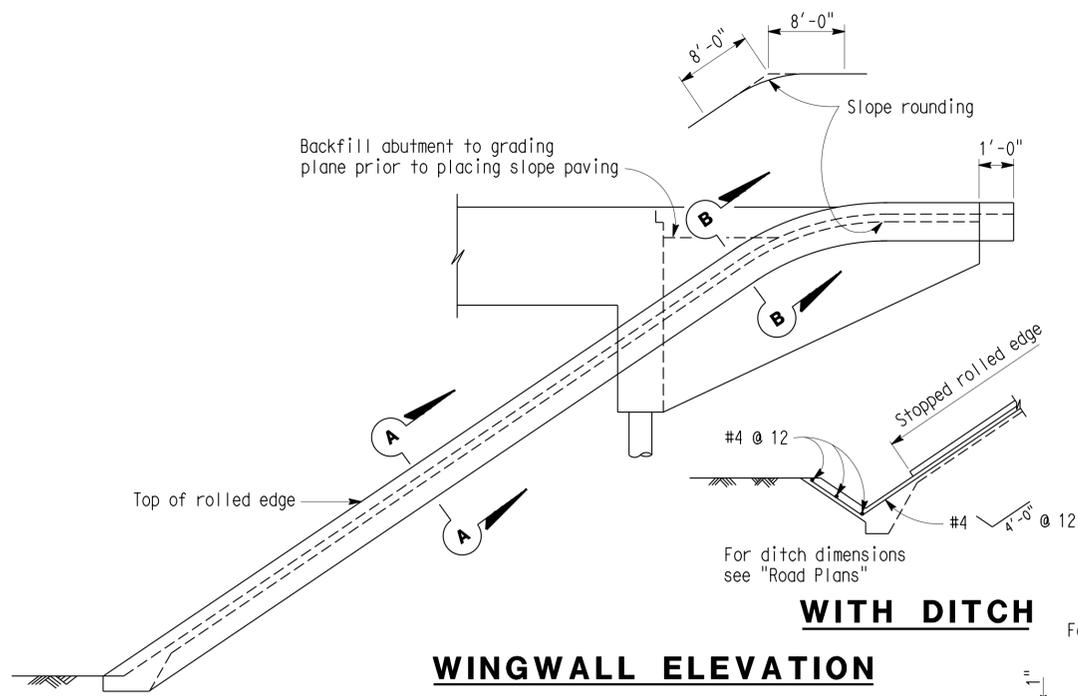
**SANDBLAST DETAIL**  
NO SCALE



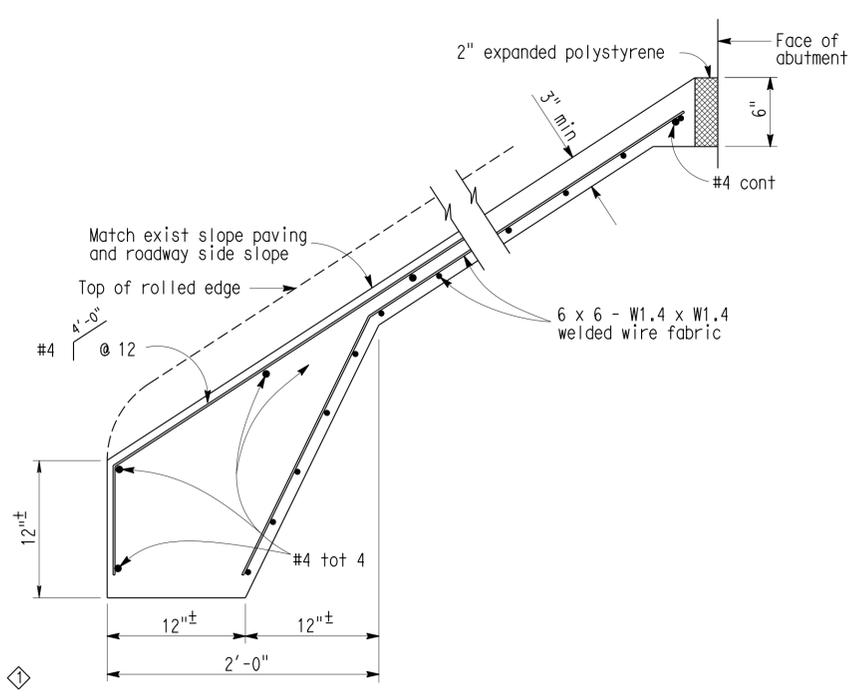
**FRACTURED RIB DETAIL**  
NO SCALE

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	DESIGN BY	K. Li	CHECKED	Edward B. Mu	<b>STATE OF CALIFORNIA</b> <b>DEPARTMENT OF TRANSPORTATION</b>	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO.	53-0669	<b>AZUSA AVE UC (WIDEN)</b> <b>CONCRETE BARRIER TYPE 736 (MOD) DETAILS</b>
	DETAILS BY	K. Li/K. Farahzadiyazdi	CHECKED	Edward B. Mu			POST MILE	36.48	
	QUANTITIES BY	Bin Shen	CHECKED	Sharareh Bikaei			CONTRACT NO.:	1170U1	
UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1						DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 12/08/11 12/16/11 03/21/12	SHEET OF 24 29

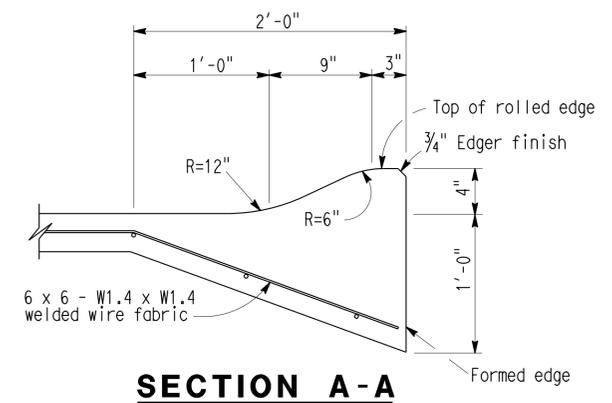
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1257	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



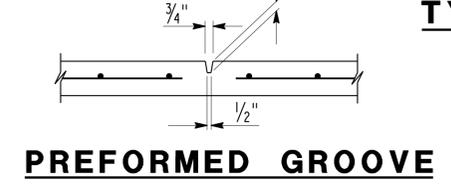
**WINGWALL ELEVATION**



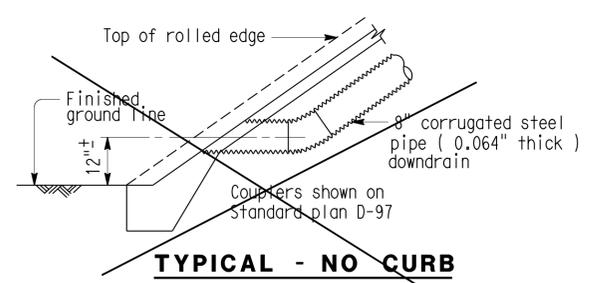
**TYPICAL SECTION - CONCRETE PAVING**



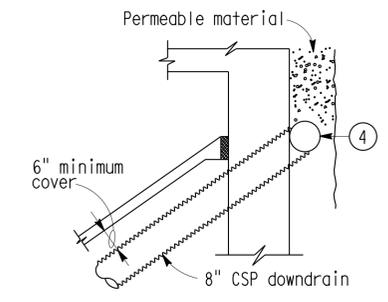
**SECTION A-A**



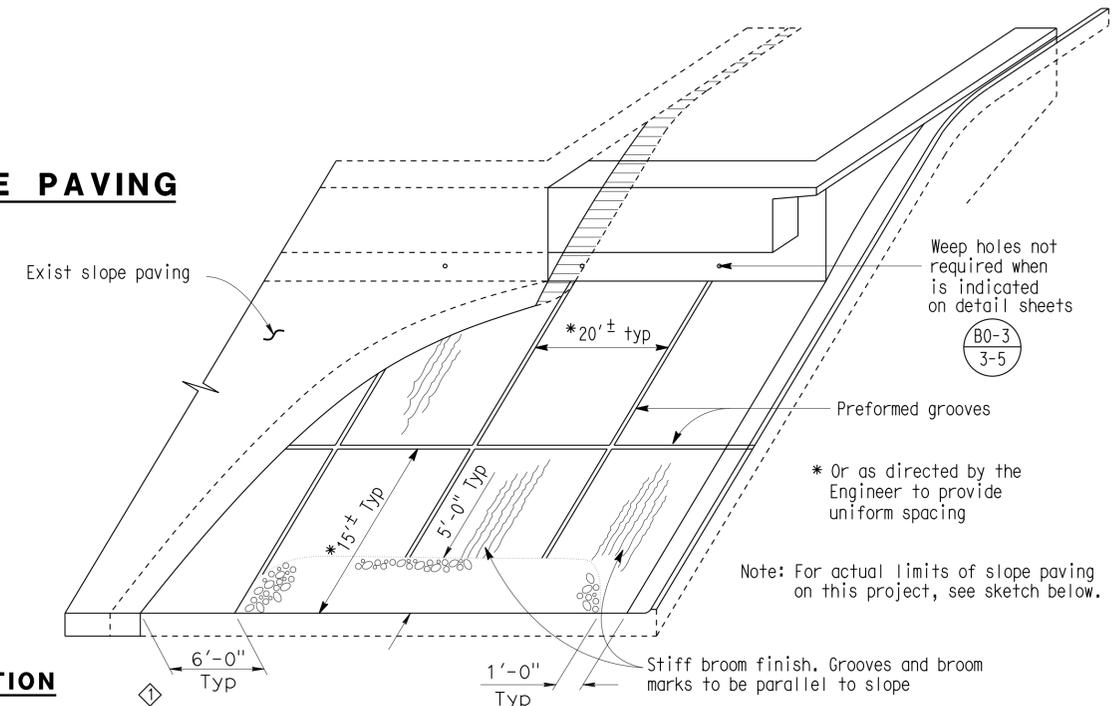
**PREFORMED GROOVE**



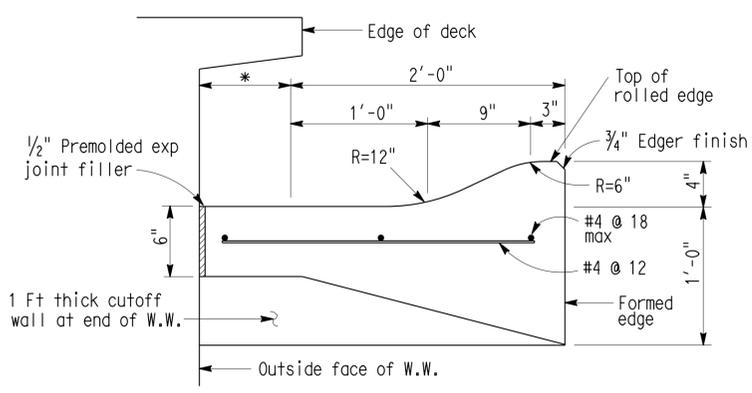
**TYPICAL - NO CURB**



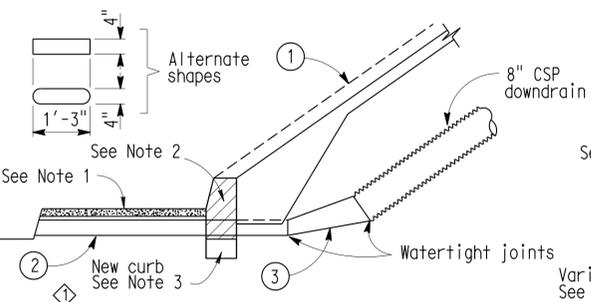
**TYPICAL - DRAIN CONNECTION**



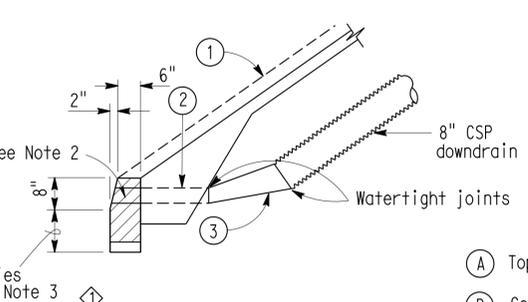
**PICTORIAL VIEW OF TYPICAL INSTALLATION**



**SECTION B-B**



**TYPICAL - WITH SIDEWALK**



**TYPICAL - WITH CURB**

**DRAINAGE DETAILS**

Note: Drainage details are only applicable when is indicated on detail sheets.

**NOTES**

1. Sidewalk to be lowered 12" maximum, see "ROAD PLANS".
2. Remove and replace existing sidewalk curb.
3. Bottom of curb at least 8" below top of sidewalk, except at existing CSP down drain pipe, bottom of curb shall be built over the pipe.

\* This dimension becomes zero when edge of deck is at outside face of W.W.

REVISED STANDARD DRAWING	
FILE NO. <b>xs4-210</b>	APPROVAL DATE <u>July 2011</u>

◇ Modified detail
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STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES
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BRIDGE NO. 53-0669	AZUSA AVE UC (WIDEN) SLOPE PAVING-FULL SLOPE
POST MILE 36.48	

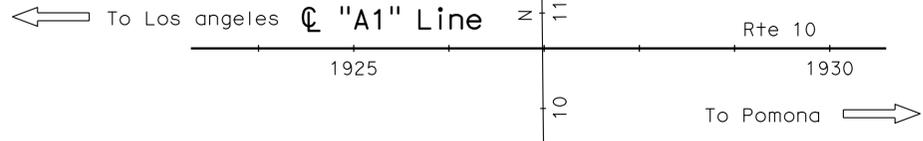
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1258	1475

Sungro Cho  
 REGISTERED CIVIL ENGINEER  
 DATE 10-14-11  
 PLANS APPROVAL DATE 6-10-13  
 No. C75151  
 Exp. 12-31-11  
 CIVIL  
 STATE OF CALIFORNIA

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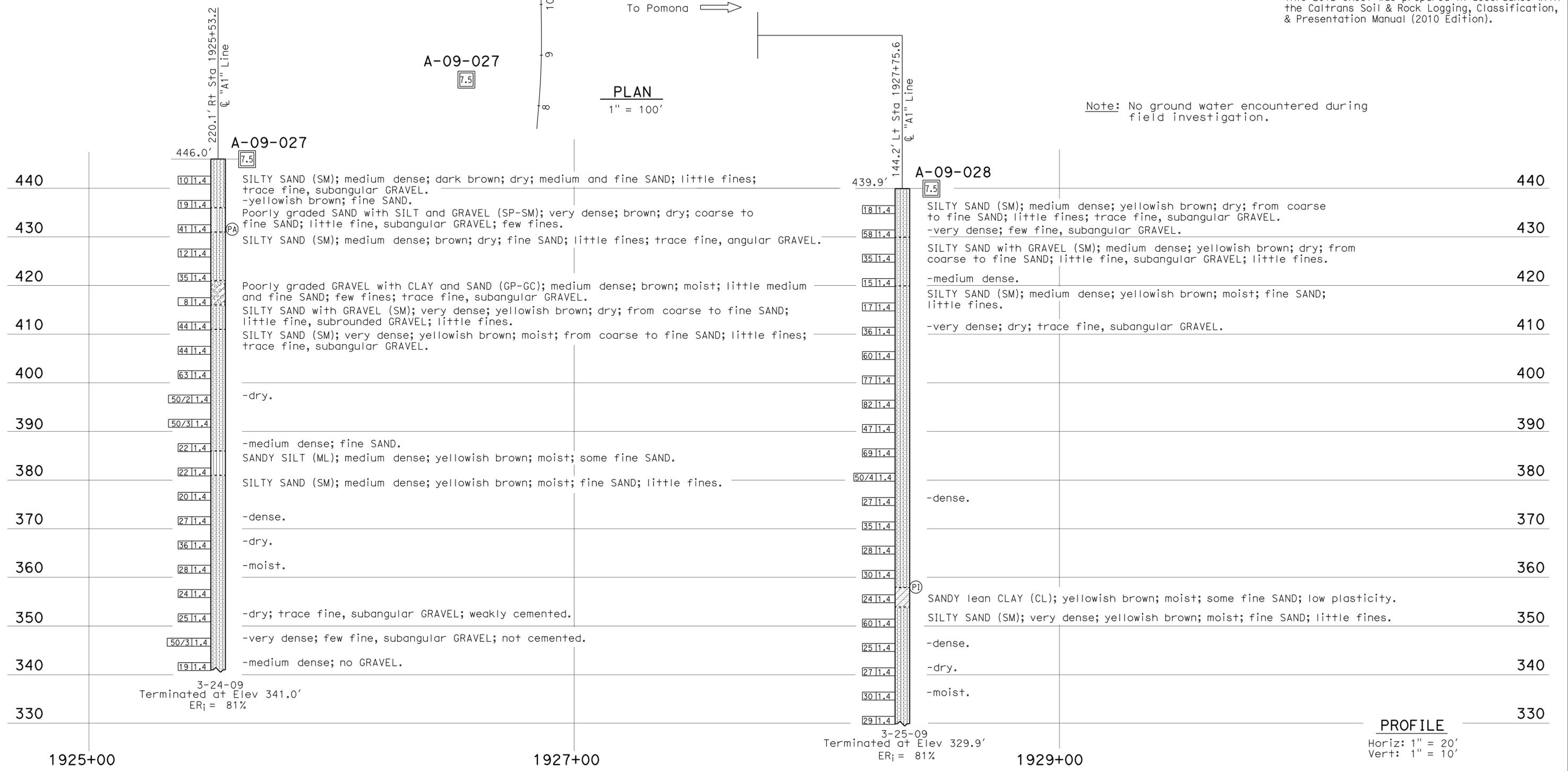
**BENCH MARK**

BM #98-I-67 Elev 395.36  
 Hilti Nail in the east curb of California Ave. 90 ft N of Center St. and 24 ft. E of California Ave., in front of 150 N California Ave.



**PLAN**  
1" = 100'

Note: No ground water encountered during field investigation.



**PROFILE**  
 Horiz: 1" = 20'  
 Vert: 1" = 10'

<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>AZUSA AVE UC (WIDEN)</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: B. Huddleston, I.G-Remmen		FIELD INVESTIGATION BY:		STRUCTURE DESIGN		53-0669		<b>LOG OF TEST BORINGS 1 OF 4</b>	
NAME: D. Jang		CHECKED BY: H. Yang		S. Cho		<b>DESIGN BRANCH 20</b>		36.48			
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3622		PROJECT NUMBER & PHASE: 0700000085-1		CONTRACT NO.: 1170U1		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3						REVISION DATES	
										07-21-11 08-21-11 10-12-11	
										SHEET 26 OF 29	

FILE => 53-0669-Z-1+D01.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1259	1475

**Sungro Cho**  
 REGISTERED CIVIL ENGINEER  
 DATE: 10-14-11  
 PLANS APPROVAL DATE: 6-10-13  
 No. C75151  
 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 electronic copies of this plan sheet.

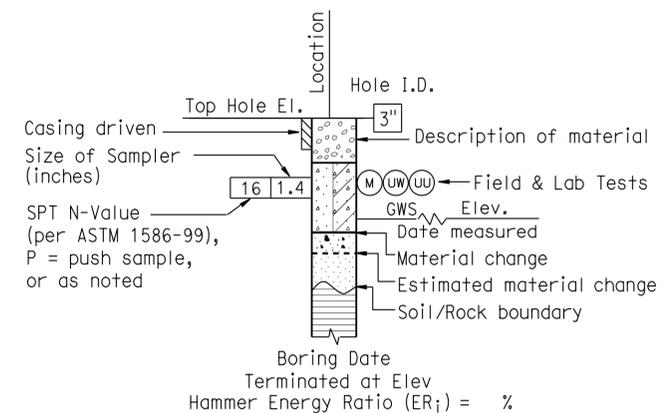
CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS				
Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

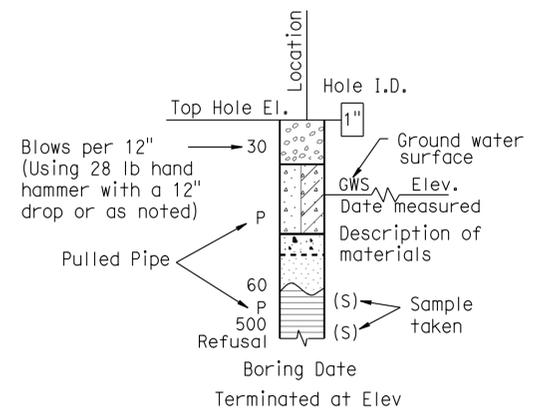
BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring
	R	Rotary drilled boring
	P	Rotary percussion boring (air)
	R	Rotary drilled diamond core
	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778-95)
	O	Other

Note: Size in inches.

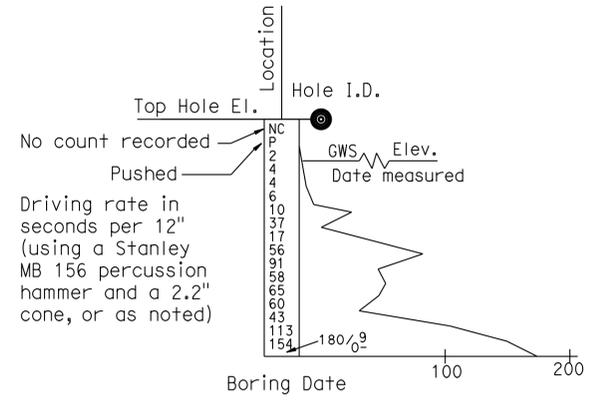
PLASTICITY OF FINE-GRAINED SOILS	
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



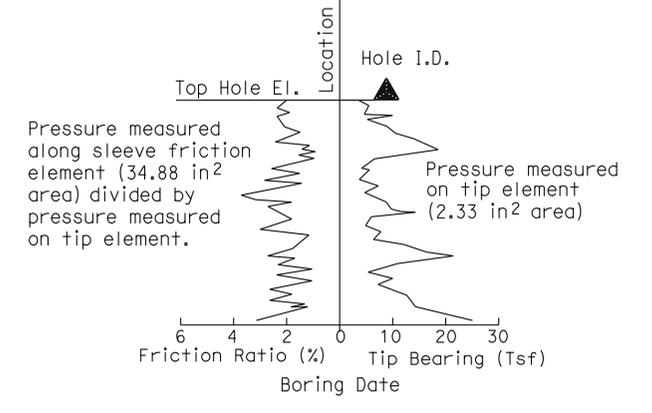
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) SOUNDING

ENGINEERING SERVICES	GEOTECHNICAL SERVICES PREPARED BY: I.G-Remmen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO. 53-0669	<b>AZUSA AVE UC (WIDEN)</b> <b>LOG OF TEST BORINGS 2 OF 4</b>	
				POST MILE 36.48		
GS LOTB SOIL LEGEND	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.: 1170U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 27 OF 29

FILE => 53-0669-Z-1+D02.dgn

*Sungro Cho* 10-14-11  
 REGISTERED CIVIL ENGINEER DATE

6-10-13  
 PLANS APPROVAL DATE

Sungro Cho  
 No. C75151  
 Exp. 12-31-11  
 CIVIL

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GROUP SYMBOLS AND NAMES			
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	GW Well-graded GRAVEL		Lean CLAY
	GW Well-graded GRAVEL with SAND		Lean CLAY with SAND
	GP Poorly graded GRAVEL		Lean CLAY with GRAVEL
	GP Poorly graded GRAVEL with SAND		SANDY lean CLAY
	GW-GM Well-graded GRAVEL with SILT		SANDY lean CLAY with GRAVEL
	GW-GM Well-graded GRAVEL with SILT and SAND		GRAVELLY lean CLAY
	GW-GC Well-graded GRAVEL with CLAY (or SILTY CLAY)		GRAVELLY lean CLAY with SAND
	GW-GC Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		SILTY CLAY
	GP-GM Poorly graded GRAVEL with SILT		SILTY CLAY with SAND
	GP-GM Poorly graded GRAVEL with SILT and SAND		SILTY CLAY with GRAVEL
	GP-GC Poorly graded GRAVEL with CLAY (or SILTY CLAY)		SANDY SILTY CLAY
	GP-GC Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		SANDY SILTY CLAY with GRAVEL
	GM SILTY GRAVEL		GRAVELLY SILTY CLAY
	GM SILTY GRAVEL with SAND		GRAVELLY SILTY CLAY with SAND
	GC CLAYEY GRAVEL		ORGANIC lean CLAY
	GC CLAYEY GRAVEL with SAND		ORGANIC lean CLAY with SAND
	GC-GM SILTY, CLAYEY GRAVEL		ORGANIC lean CLAY with GRAVEL
	GC-GM SILTY, CLAYEY GRAVEL with SAND		SANDY ORGANIC lean CLAY
	SW Well-graded SAND		SANDY ORGANIC lean CLAY with GRAVEL
	SW Well-graded SAND with GRAVEL		GRAVELLY ORGANIC lean CLAY
	SP Poorly graded SAND		GRAVELLY ORGANIC lean CLAY with SAND
	SP Poorly graded SAND with GRAVEL		ORGANIC SILT
	SW-SM Well-graded SAND with SILT		ORGANIC SILT with SAND
	SW-SM Well-graded SAND with SILT and GRAVEL		ORGANIC SILT with GRAVEL
	SW-SC Well-graded SAND with CLAY (or SILTY CLAY)		SANDY ORGANIC SILT
	SW-SC Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		SANDY ORGANIC SILT with GRAVEL
	SP-SM Poorly graded SAND with SILT		GRAVELLY ORGANIC SILT
	SP-SM Poorly graded SAND with SILT and GRAVEL		GRAVELLY ORGANIC SILT with SAND
	SP-SC Poorly graded SAND with CLAY (or SILTY CLAY)		ORGANIC fat CLAY
	SP-SC Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		ORGANIC fat CLAY with SAND
	SM SILTY SAND		ORGANIC fat CLAY with GRAVEL
	SM SILTY SAND with GRAVEL		SANDY ORGANIC fat CLAY
	SC CLAYEY SAND		SANDY ORGANIC fat CLAY with GRAVEL
	SC CLAYEY SAND with GRAVEL		GRAVELLY ORGANIC fat CLAY
	SC-SM SILTY, CLAYEY SAND		GRAVELLY ORGANIC fat CLAY with SAND
	SC-SM SILTY, CLAYEY SAND with GRAVEL		ORGANIC elastic SILT
	PT PEAT		ORGANIC elastic SILT with SAND
	PT COBBLES COBBLES and BOULDERS BOULDERS		ORGANIC elastic SILT with GRAVEL
			SANDY ORGANIC elastic SILT
			SANDY ORGANIC elastic SILT with GRAVEL
			GRAVELLY ORGANIC elastic SILT
			GRAVELLY ORGANIC elastic SILT with SAND
			ORGANIC SOIL
			ORGANIC SOIL with SAND
			ORGANIC SOIL with GRAVEL
			SANDY ORGANIC SOIL
			SANDY ORGANIC SOIL with GRAVEL
			GRAVELLY ORGANIC SOIL
			GRAVELLY ORGANIC SOIL with SAND

FIELD AND LABORATORY TESTING	
(C)	Consolidation (ASTM D 2435)
(CL)	Collapse Potential (ASTM D 5333)
(CP)	Compaction Curve (CTM 216)
(CR)	Corrosivity Testing (CTM 643, CTM 422, CTM 417)
(CU)	Consolidated Undrained Triaxial (ASTM D 4767)
(DS)	Direct Shear (ASTM D 3080)
(EI)	Expansion Index (ASTM D 4829)
(M)	Moisture Content (ASTM D 2216)
(OC)	Organic Content-% (ASTM D 2974)
(P)	Permeability (CTM 220)
(PA)	Particle Size Analysis (ASTM D 422)
(PI)	Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
(PL)	Point Load Index (ASTM D 5731)
(PM)	Pressure Meter
(PP)	Pocket Penetrometer
(R)	R-Value (CTM 301)
(SE)	Sand Equivalent (CTM 217)
(SG)	Specific Gravity (AASHTO T 100)
(SL)	Shrinkage Limit (ASTM D 427)
(SW)	Swell Potential (ASTM D 4546)
(TV)	Pocket Torvane
(UC)	Unconfined Compression-Soil (ASTM D 2166)
(UC)	Unconfined Compression-Rock (ASTM D 2938)
(UU)	Unconsolidated Undrained Triaxial (ASTM D 2850)
(UW)	Unit Weight (ASTM D 4767)
(VS)	Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N <sub>60</sub> (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE	
Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS	
Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE		
Description	Size	
Boulder	> 12"	
Cobble	3" to 12"	
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

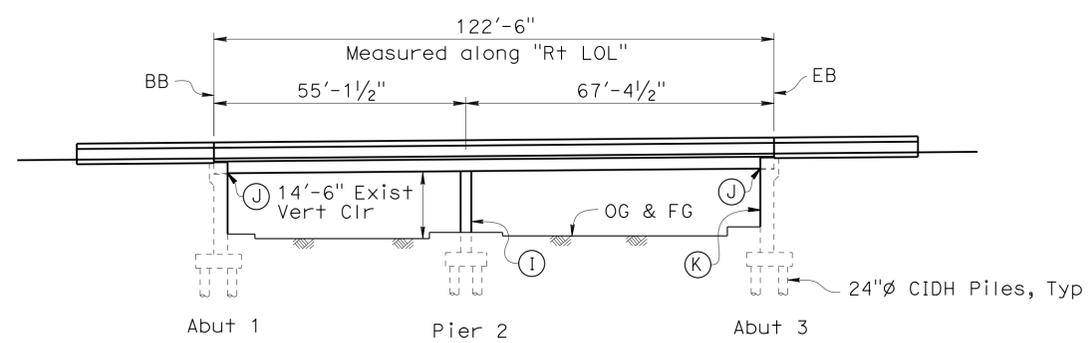
ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO. 53-0669	AZUSA AVE UC (WIDEN) LOG OF TEST BORINGS 3 OF 4
				POST MILE 36.48	
PREPARED BY: I.G-Remmen	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.: 1170U1	REVISION DATES	SHEET 28 OF 29

GS LOTB SOIL LEGEND

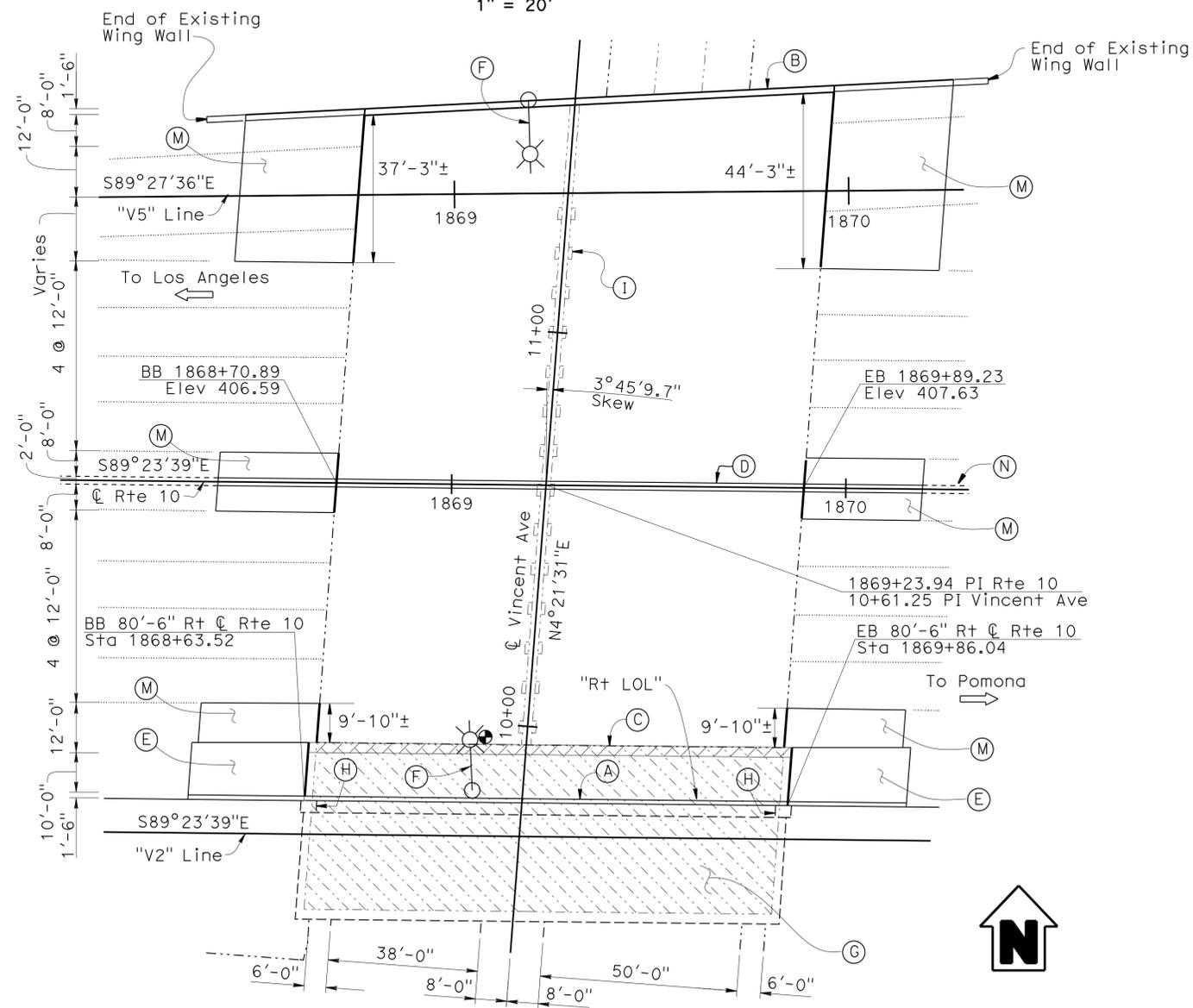
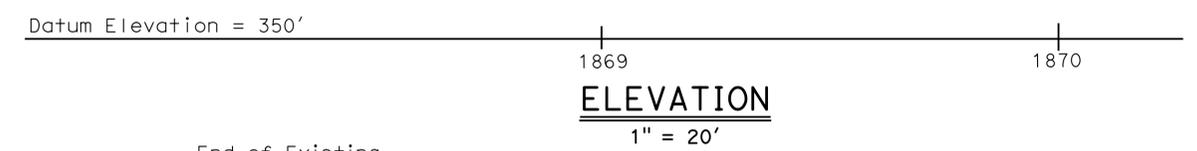
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1262	1475
			REGISTERED CIVIL ENGINEER	DATE	
			6-10-13	PLANS APPROVAL DATE	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



- LEGEND:**
- Existing structure
  - - - Proposed new bridge
  - New structure
  - ▨ 2'-3" closure pour
  - ▩ Existing structure to be removed
  - ➔ Direction of traffic
  - Point of minimum vertical clearance
  - ⊙ Electrolier
  - Indicates location of new joint seal.



- NOTES:**
- (A) Concrete Barrier Type 736 (Mod)
  - (B) Concrete Barrier Type 736 (Mod)
  - (C) 2'-6" Closure Pour
  - (D) Remove Existing Barrier Type 50A & 50B and Construct Concrete Barrier Type 60GA (Mod)
  - (E) Structure Approach Type N(30S)
  - (F) Remove and replace existing Electrolier, see "ROADWAY PLANS"
  - (G) New Bridge On-Ramp UC 53-3049S
  - (H) Retaining wall will be constructed with New Bridge On-Ramp
  - (I) Install pier stiffener on both sides of pier wall
  - (J) Install abutment seat extender
  - (K) Paint "Vincent Ave UC" and "Bridge No. 53-1043"
  - (M) Structure Approach Slab Type R(30D)
  - (N) Concrete Barrier Type 60G, See " Road Plans"

**QUANTITIES**

DESCRIPTION	QUANTITY	UNIT	LUMP SUM
BRIDGE REMOVAL (PORTION), LOCATION E			
STRUCTURE EXCAVATION (BRIDGE)	227	CY	
STRUCTURE BACKFILL (BRIDGE)	215	CY	
3" SUPPLY LINE (BRIDGE)	193	LF	
AGGREGATE BASE (APPROACH SLAB)	16	CY	
24" CAST-IN-DRILLED-HOLE CONCRETE PILING	473	LF	
PRESTRESSING CAST-IN-PLACE CONCRETE JACKING SUPERSTRUCTURE			LUMP SUM
STRUCTURAL CONCRETE, BRIDGE FOOTING	48	CY	
STRUCTURAL CONCRETE, BRIDGE	253	CY	
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	32	CY	
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	153	CY	
PAVING NOTCH EXTENSION	108	CF	
DRILL AND BOND DOWEL	2,120	LF	
DRILL AND BOND DOWEL (CHEMICAL ADHESIVE)	222	EA	
REFINISH CONCRETE SURFACE	515	SQFT	
CORE CONCRETE (1 3/4")	1,160	LF	
JOINT SEAL (MR 1")	167	LF	
BAR REINFORCING STEEL (BRIDGE)	83,600	LB	
STRUCTURAL STEEL (BRIDGE)	414	LB	
CONCRETE BARRIER (TYPE 60GA MODIFIED)	183	LF	
CONCRETE BARRIER (TYPE 736 MODIFIED)	391	LF	

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

DESIGN ENGINEER: **HOWARD NG**

DESIGN	BY: Chad Lim	CHECKED: Carl Duan	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
DETAILS	BY: K. Farahzadi/E. Hallstrom	CHECKED: Carl Duan	LAYOUT	BY: Chad Lim
QUANTITIES	BY: Chad Lim	CHECKED: Carl Duan	SPECIFICATIONS	BY: James Choi

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES**  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

**VINCENT AVENUE UC (WIDEN)**  
**GENERAL PLAN NO. 1**

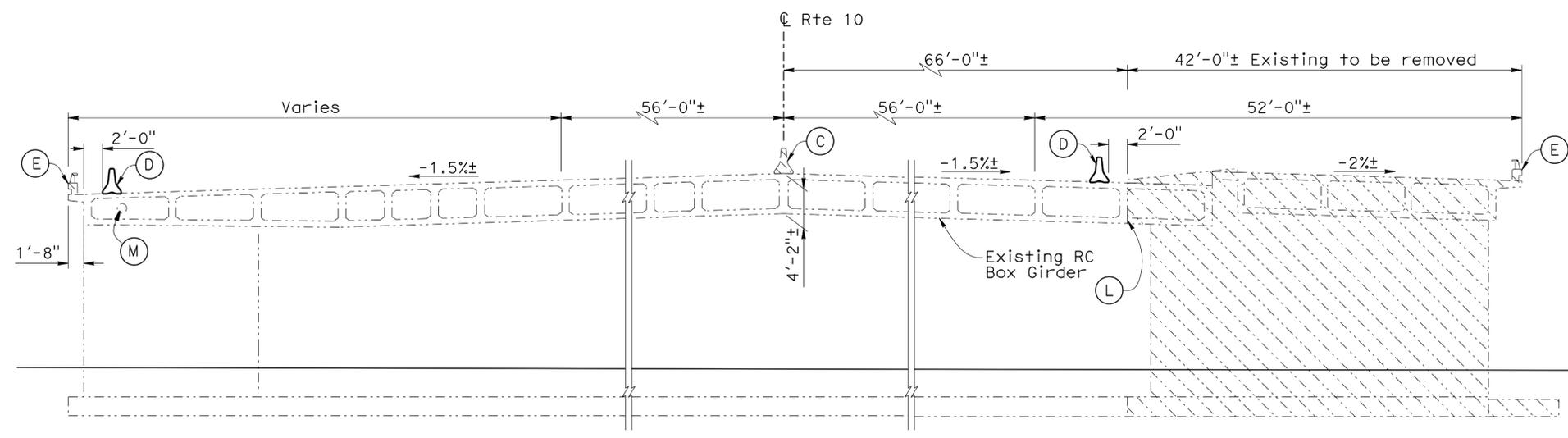
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1263	1475

*Carl Duan* 12/21/11  
 REGISTERED CIVIL ENGINEER DATE

6-10-13  
 PLANS APPROVAL DATE

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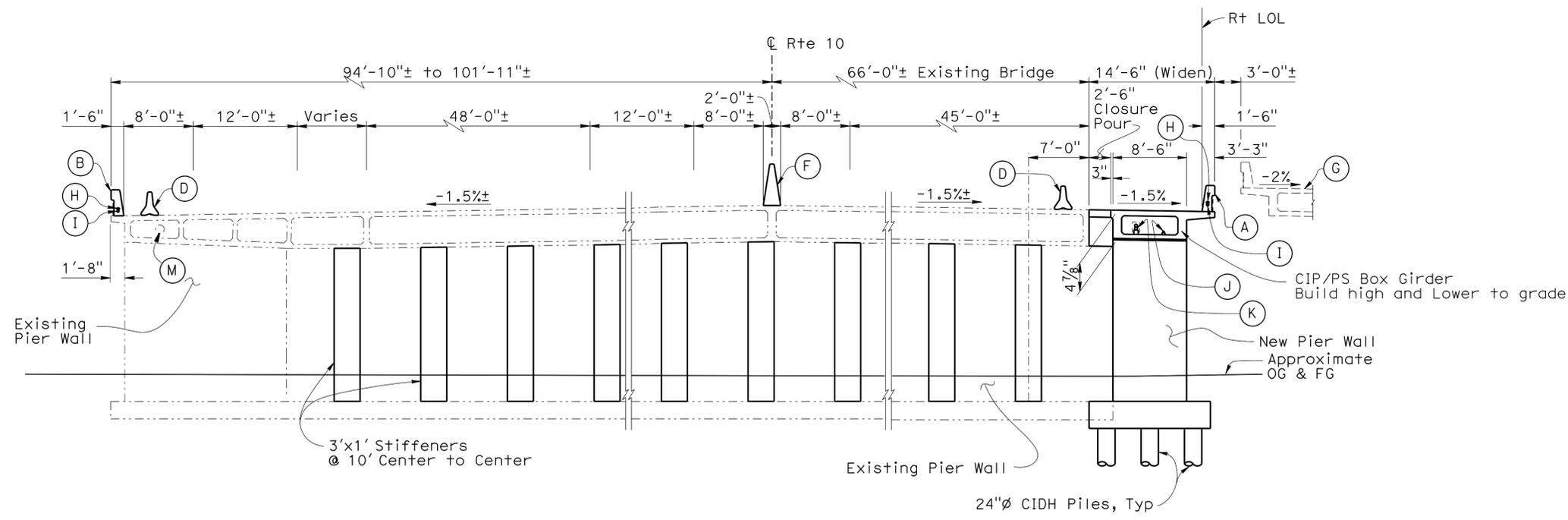
REGISTERED PROFESSIONAL ENGINEER  
 Carl Duan  
 No. C59976  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



**EXISTING TYPICAL SECTION (REMOVAL)**  
 $\frac{1}{8}'' = 1'-0''$

**NOTES:**

- (A) Concrete Barrier Type 736 (Mod)
- (B) Concrete Barrier Type 736 (Mod)
- (C) Existing Barrier Type 50A & 50B to be removed and deck refinished
- (D) Temporary Railing Type K, see "ROAD PLANS"
- (E) Existing Barrier Railing Type 9 to be removed
- (F) Median Concrete Barrier Type 60GA (Mod)
- (G) Vincent Ave On-Ramp UC 53-3049S
- (H) 2 - 2"Ø Lighting conduits, see "ROAD PLANS"
- (I) 3"Ø Sprinkler control conduit, see "ROAD PLANS"
- (J) 3"Ø Irrigation water line.
- (K) 2 - 3/2" Ø Communication conduits, see "ROAD PLANS"
- (L) Refinish concrete surface after saw cut
- (M) Existing utility opening



**LEGEND:**

- Existing structure
- New Structure
- - - - - New bridge
- ▨ Existing bridge removal (Portion)

**TYPICAL SECTION (WIDEN)**  
 $\frac{1}{8}'' = 1'-0''$

**NOTE:**  
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: x-small;">DESIGN</td> <td style="font-size: x-small;">BY</td> <td style="font-size: x-small;">CHECKED</td> </tr> <tr> <td style="font-size: x-small;">DETAILS</td> <td style="font-size: x-small;">BY</td> <td style="font-size: x-small;">CHECKED</td> </tr> <tr> <td style="font-size: x-small;">QUANTITIES</td> <td style="font-size: x-small;">BY</td> <td style="font-size: x-small;">CHECKED</td> </tr> <tr> <td></td> <td style="font-size: x-small;">Chad Lim</td> <td style="font-size: x-small;">Carl Duan</td> </tr> <tr> <td></td> <td style="font-size: x-small;">K. Farahzadi/E. Hallstrom</td> <td style="font-size: x-small;">Carl Duan</td> </tr> <tr> <td></td> <td style="font-size: x-small;">Chad Lim</td> <td style="font-size: x-small;">Carl Duan</td> </tr> </table>	DESIGN	BY	CHECKED	DETAILS	BY	CHECKED	QUANTITIES	BY	CHECKED		Chad Lim	Carl Duan		K. Farahzadi/E. Hallstrom	Carl Duan		Chad Lim	Carl Duan	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	<b>DIVISION OF ENGINEERING SERVICES</b> STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: x-small;">BRIDGE NO.</td> <td style="font-size: x-small;">53-1043</td> </tr> <tr> <td style="font-size: x-small;">POST MILE</td> <td style="font-size: x-small;">35.4</td> </tr> </table> <p style="text-align: center; font-weight: bold; font-size: large;">VINCENT AVENUE UC (WIDEN)</p> <p style="text-align: center; font-weight: bold; font-size: large;">GENERAL PLAN NO. 2</p>	BRIDGE NO.	53-1043	POST MILE	35.4
DESIGN	BY	CHECKED																							
DETAILS	BY	CHECKED																							
QUANTITIES	BY	CHECKED																							
	Chad Lim	Carl Duan																							
	K. Farahzadi/E. Hallstrom	Carl Duan																							
	Chad Lim	Carl Duan																							
BRIDGE NO.	53-1043																								
POST MILE	35.4																								
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3622 PROJECT NUMBER & PHASE: 070000000085 1	CONTRACT NO.: 1170U1																						
		DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="font-size: x-small;">REVISION DATES</th> <th style="font-size: x-small;">SHEET</th> <th style="font-size: x-small;">OF</th> </tr> <tr> <td style="font-size: x-small;">07/17/10 06/20/12 11/28/11</td> <td style="font-size: x-small;">2</td> <td style="font-size: x-small;">26</td> </tr> </table>	REVISION DATES	SHEET	OF	07/17/10 06/20/12 11/28/11	2	26																
REVISION DATES	SHEET	OF																							
07/17/10 06/20/12 11/28/11	2	26																							

DATE PLOTTED => 12-JUN-2013 17:06

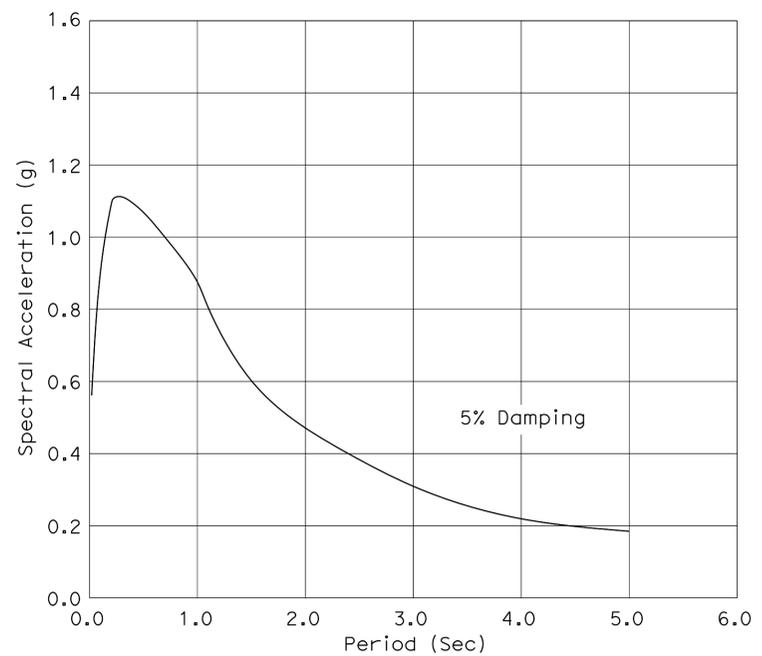
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1264	1475
			12/21/11		
REGISTERED CIVIL ENGINEER			DATE		
6-10-13			PLANS APPROVAL DATE		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

**STANDARD PLANS DATED MAY 2006**

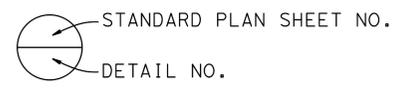
**INDEX TO PLANS**

DETAIL	DESCRIPTION
A10A	ACRONYMS AND ABBREVIATIONS A-L
A10B	ACRONYMS AND ABBREVIATIONS M-Z
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
A76D	CONCRETE BARRIER TYPE 60GA
B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B0-5	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
B2-3	16" AND 24" CAST-IN-DRILLED-HOLE CONCRETE PILE
RSP B6-21	JOINT SEALS (MAX MOVEMENT RATING = 2")
B7-1	BOX GIRDER DETAILS
B7-10	UTILITY OPENING BOX GIRDER
B8-5	CAST-IN-PLACE PRESTRESSED GIRDER DETAILS
B11-56	CONCRETE BARRIER TYPE 736
B14-3	COMMUNICATION AND SPRINKLER CONTROL CONDUIT (CONDUIT LESS THAN 4")
B14-5	WATER SUPPLY LINE (DETAILS) (PIPE SIZES LESS THAN 4")
T3	TEMPORARY RAILING (TYPE K)

SHEET NO.	TITLE
1	GENERAL PLAN NO. 1
2	GENERAL PLAN NO. 2
3	INDEX TO PLANS
4	CONSTRUCTION SEQUENCE
5	FOUNDATION PLAN
6	CONCRETE REMOVAL
7	ABUTMENT LAYOUT
8	ABUTMENT DETAILS NO. 1
9	ABUTMENT DETAILS NO. 2
10	ABUTMENT DETAILS NO. 3
11	PIER LAYOUT
12	PIER DETAILS NO. 1
13	PIER DETAILS NO. 2
14	PIER STRENGTHENING DETAILS
15	TYPICAL SECTION
16	GIRDER LAYOUT
17	ADDITIONAL GIRDER REINFORCEMENT
18	MISCELLANEOUS DETAILS
19	STRUCTURE APPROACH TYPE N(30S)
20	STRUCTURE APPROACH TYPE R(30D)
21	STRUCTURE APPROACH DRAINAGE DETAILS
22	CONCRETE BARRIER TYPE 736 (MOD) DETAILS
23	LOG OF TEST BORINGS 1 OF 4
24	LOG OF TEST BORINGS 2 OF 4
25	LOG OF TEST BORINGS 3 OF 4
26	LOG OF TEST BORINGS 4 OF 4



**MODIFIED ACCELERATION RESPONSE SPECTRA CURVE**



**GENERAL NOTES**

**LOAD AND RESISTANCE FACTOR DESIGN**

**DESIGN:**  
AASHTO LRFD Bridge Design Specifications, Fourth Edition and the Caltrans Amendments, preface dated 2008, except that CIDH piles, concrete barrier, and approach slab are designed using Bridge Design Specifications. (96 AASHTO w/Revision by Caltrans)

**SEISMIC DESIGN:**  
Caltrans Seismic Design Criteria (SDC), Version 1.4 dated June 2006

**DEAD LOAD:**  
Includes 35 psf for future wearing surface.

**LIVE LOADING:**  
HL-93 and permit design load.

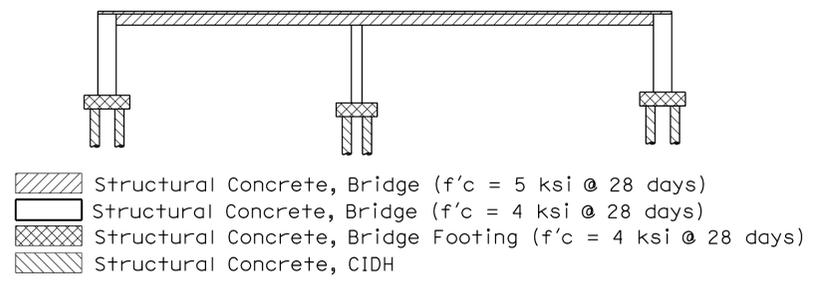
**SEISMIC LOADING:**  
Soil Profile: Vs30 = 915 ft/s  
Moment Magnitude = 7.5  
Peak Ground Acceleration = 0.6g (See APS Curve)

**CONCRETE:**  
fy = 60 ksi  
f'c = see "CONCRETE STRENGTH AND TYPE LIMITS"

**PRESTRESSED CONCRETE:**  
See "PRESTRESSING NOTES" on "GIRDER LAYOUT" sheet.

Location	Pile Type	Cut-off Elevation (ft)	Nominal Resistance (Kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)
			Compression	Tension		
ABUT 1	24" CIDH	381.63	360	0	355.63	355.0
PIER 2	24" CIDH	382.04	300	140	356.04	356.0
ABUT 3	24" CIDH	382.04	360	0	356.04	356.0

Design Tip Elevations are controlled by compression



**CONCRETE STRENGTH AND TYPE LIMITS**

No Scale

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Chad Lim	CHECKED Carl Duan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO.	VINCENT AVENUE UC (WIDEN)
	DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan			53-1043	
	QUANTITIES	BY Chad Lim	CHECKED Carl Duan			POST MILE 35.4	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						UNIT: 3622	CONTRACT NO.: 1170U1
PROJECT NUMBER & PHASE: 070000000085 1						DISREGARD PRINTS BEARING EARLIER REVISION DATES	
						REVISION DATES	SHEET 3 OF 26

USERNAME => s124486 DATE PLOTTED => 12-JUN-2013 TIME PLOTTED => 17:06

### CONSTRUCTION SEQUENCES

- STAGE 1 CONSTRUCTION**
- Construct abutments, pier wall and pipes from Pier 2.
- STAGE 2 CONSTRUCTION**
- Align corrugated pipe holes for the pipes on top of pier before pouring superstructure concrete.
  - Construct bridge superstructure at an elevated position.
  - Stress and grout tendons.
  - Install jacks and backup system after providing temporary supports at Abutment 1, Abutment 3 and Pier 2.
- STAGE 3 CONSTRUCTION**
- Remove falsework.
  - Lower bridge superstructure to the final grade.
  - Fill bent cap corrugated holes with non-shrinking grout.
  - Construct abutment backwalls, shear keys, barriers, closure pour and structure approaches.

- NOTES:**
- Bridge superstructure shall not be lowered and falsework shall not be released less than 28 days after the last concrete has been poured.
  - The superstructure should be lowered simultaneously at all supports. The maximum relative vertical displacements of supporting points shall be less than a half-inch.

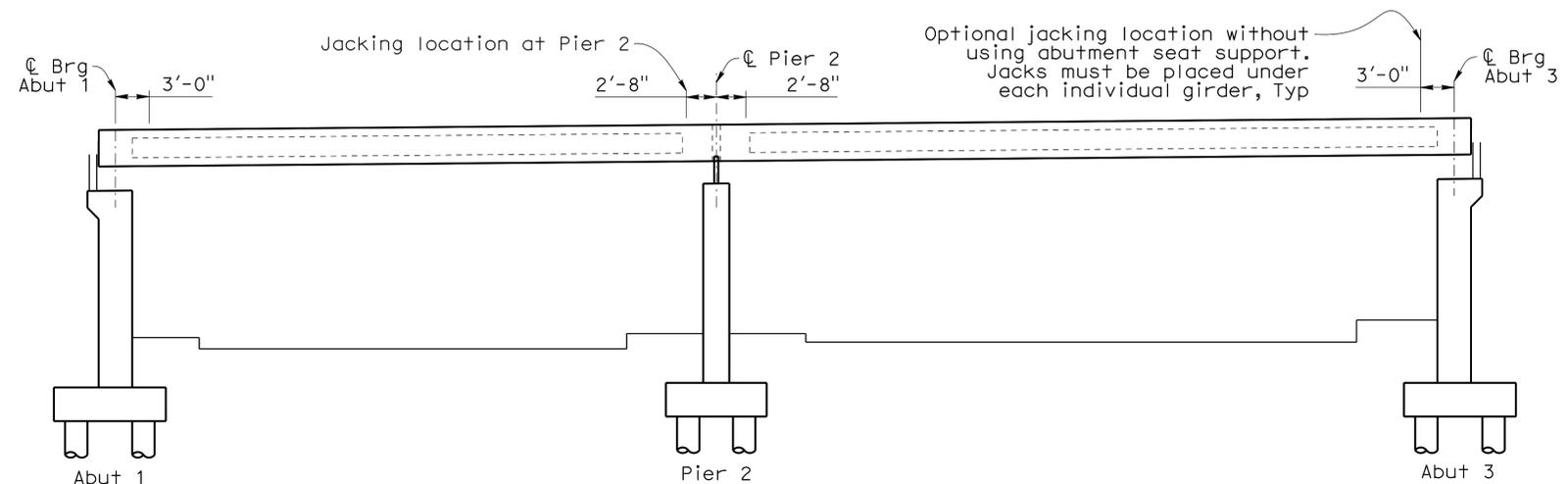
### LOAD TABLE

Location	Minimum Structure Dead load	Minimum Lateral Design Forces
Abut 1	47 kips	1.0 kips
Pier 2 (Span 1)	101 kips	2.3 kips
Pier 2 (Span 2)	113 kips	2.3 kips
Abut 3	67 kips	1.5 kips



**ELEVATION - STAGE 1**  
NO SCALE

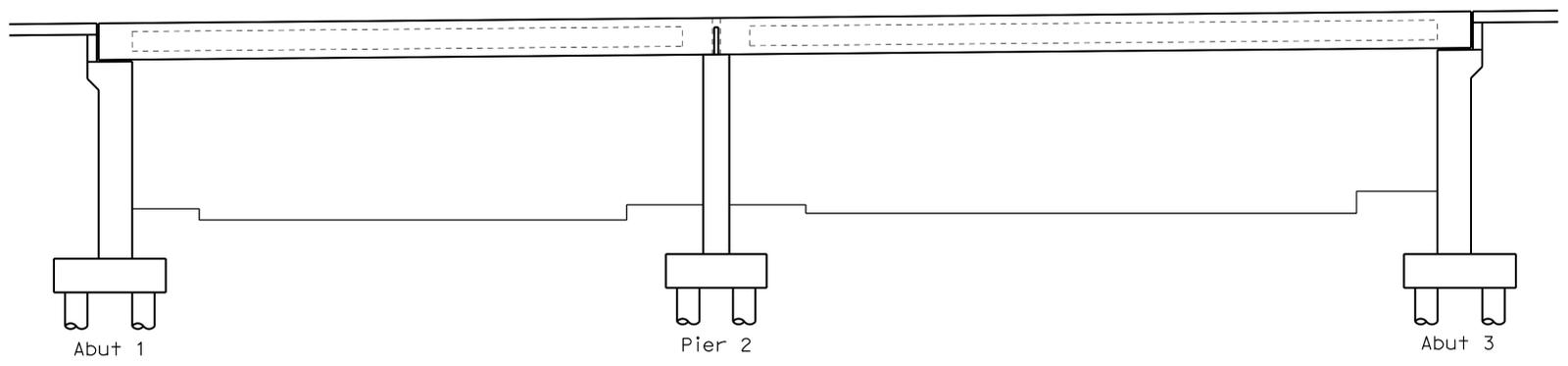
**PIER 2 SECTION - STAGE 1**  
NO SCALE



**ELEVATION - STAGE 2**  
NO SCALE

**PIER 2 SECTION - STAGE 2**  
NO SCALE

Fill bent cap corrugated hole with high strength rapid set non-shrinking grout, see "Section P-P" on "PIER DETAILS NO. 1" sheet



**ELEVATION - STAGE 3**  
NO SCALE

**PIER 2 SECTION - STAGE 3**  
NO SCALE

NOTE:  
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DESIGN	BY Chad Lim	CHECKED Carl Duan
DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan
QUANTITIES	BY Chad Lim	CHECKED Carl Duan

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

BRIDGE NO.	53-1043
POST MILE	35.4

VINCENT AVENUE UC (WIDEN)  
CONSTRUCTION SEQUENCE

**CURVE DATA**

No.	R	Δ	T	L
①	210.000	66°51'21"	138.616	245.040
②	3001.333	1°50'40"	48.311	96.614
③	125.000	130°46'11"	272.832	285.295
④	115.000	272°12'38"	110.647	546.362
⑤	1500.000	4°55'53"	64.590	129.101
⑥	200.000	32°1'26"	57.394	111.785
⑦	108.000	149°9'16"	391.483	281.149

- Ⓐ STA. 11+35.308 Vincent C=
- Ⓑ STA. 69+28.849 NB Vincent ON-Rmp to WB Route 10
- Ⓒ STA. 10+61.250 Vincent C=
- Ⓓ STA. 1869+23.942 ROUTE 10 C=
- Ⓔ STA. 9+72.059 Vincent C=
- Ⓕ STA. 69+17.780 SB Vincent ON-Rmp to EB Route 10

- Bridge Location
- Ⓐ - 94.084 Lt. C, Sta.1868+76.917, Elev.=405.139±
  - Ⓑ - 101.346 Lt. C, Sta.1869+95.626, Elev.=406.119±
  - Ⓒ - 107.010 Rt. C, Sta.1869+82.219, Elev.=407.173±
  - Ⓓ - 107.077 Rt. C, Sta.1868+63.838, Elev.=406.070±



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1266	1475

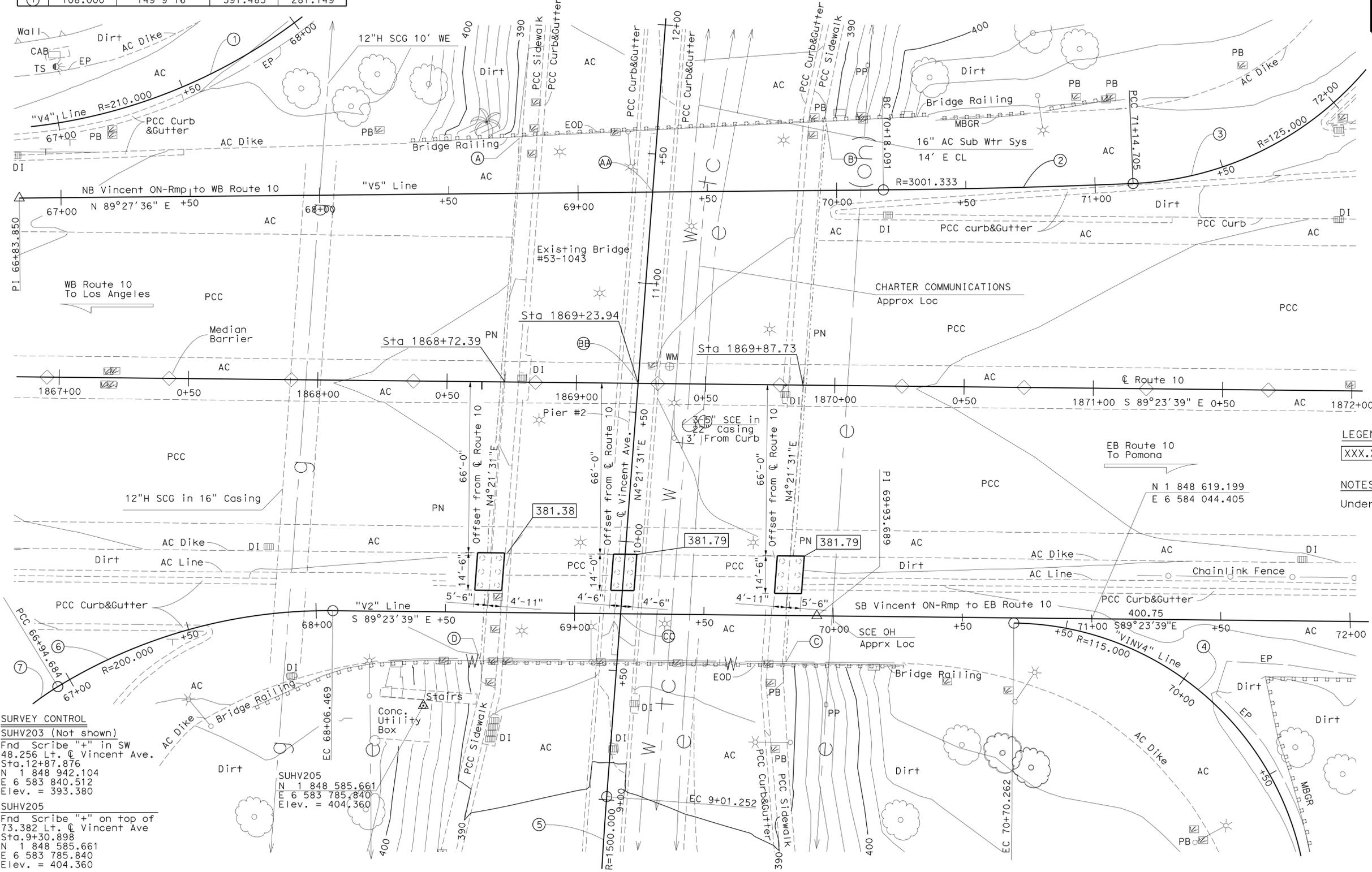
12/21/11

*C.M. Duan*  
REGISTERED CIVIL ENGINEER DATE

6-10-13  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
No. C59976  
Exp. 06-30-12  
CIVIL  
STATE OF CALIFORNIA



**LEGEND:**  
XXX.XX Bottom of footing elevation

**NOTES:**  
Underground utilities as shown are approximate

**SURVEY CONTROL**  
SUHV203 (Not shown)  
Fnd Scribe "+" in SW  
48.256 Lt. Vincent Ave.  
Sta.12+87.876  
N 1 848 942.104  
E 6 583 840.512  
Elev. = 393.380

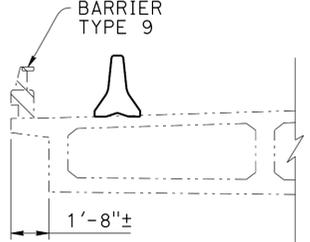
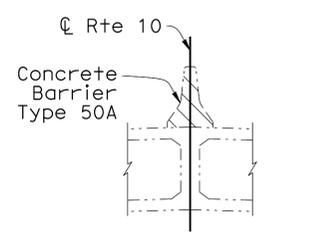
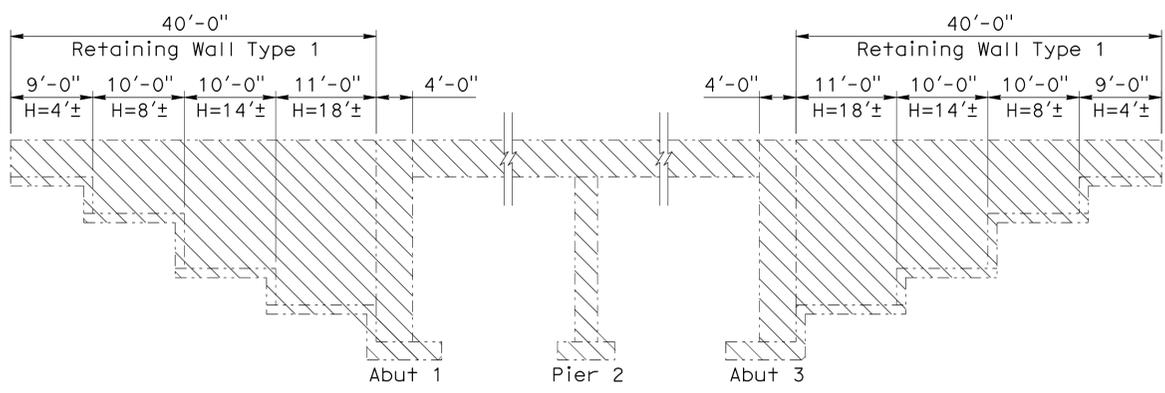
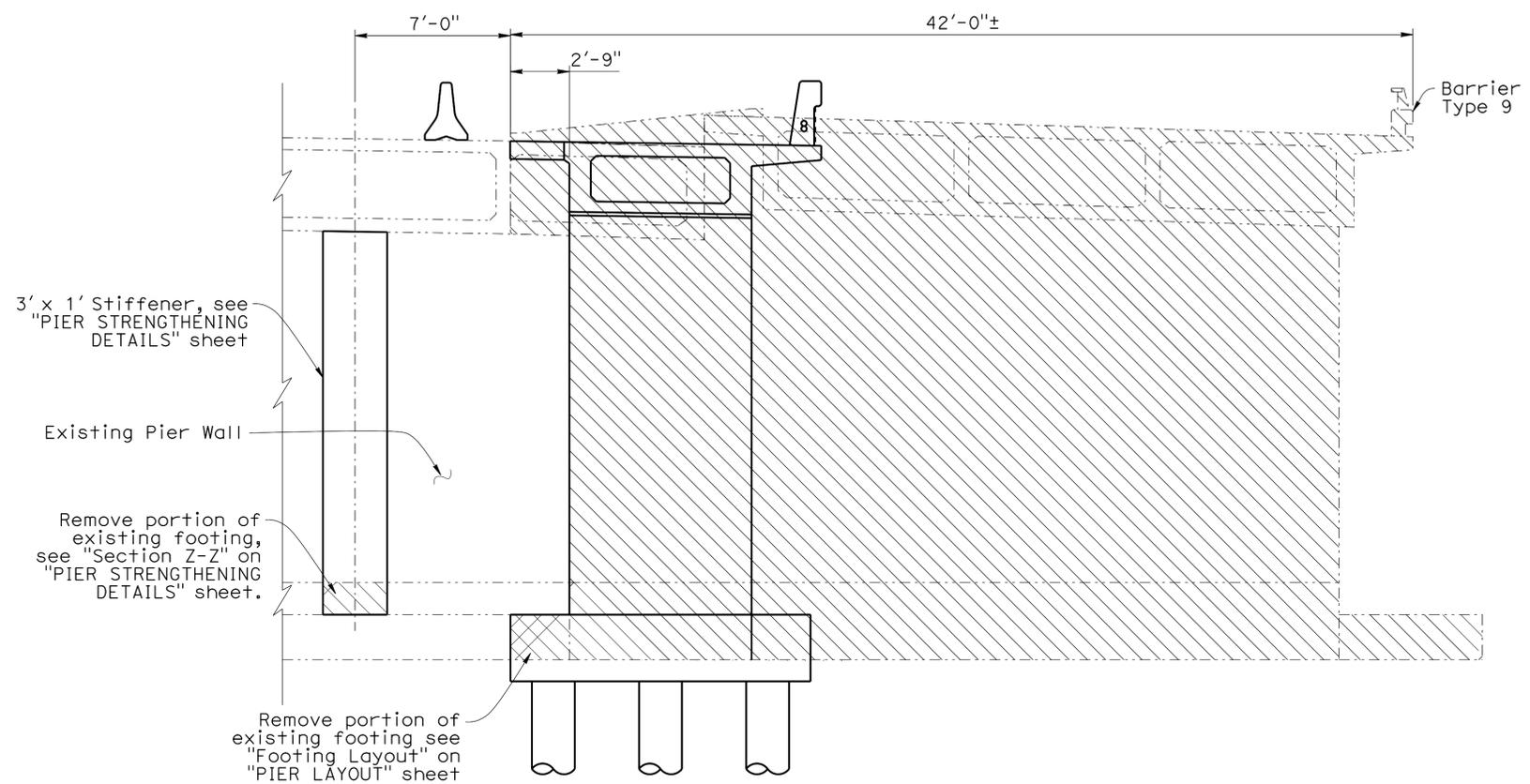
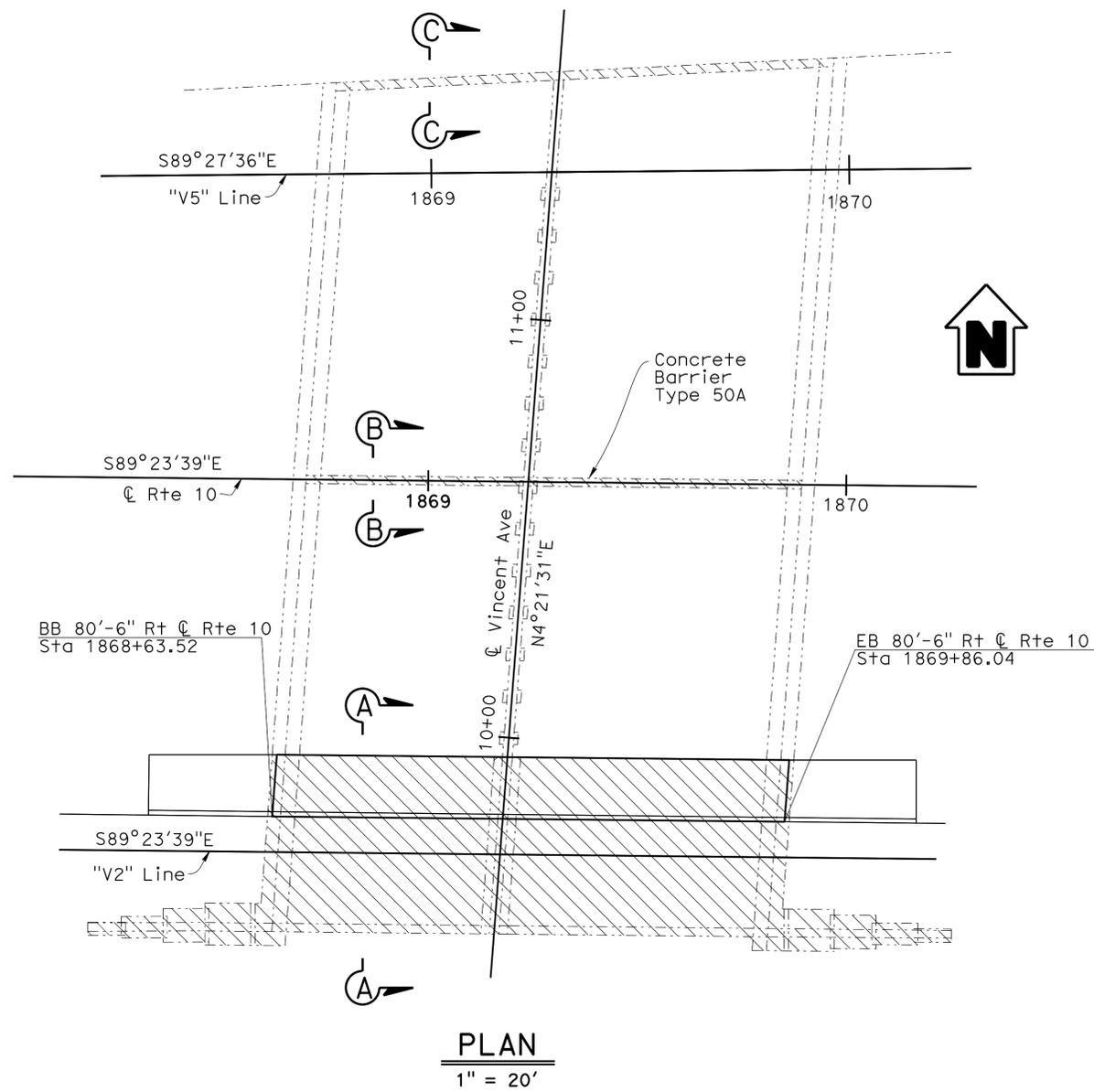
SUHV205  
Fnd Scribe "+" on top of  
73.382 Lt. Vincent Ave  
Sta.9+30.898  
N 1 848 585.661  
E 6 583 785.840  
Elev. = 404.360

<b>PRELIMINARY INVESTIGATION SECTION</b>		DESIGN BY Chad Lim	CHECKED Carl Duan	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	<b>DIVISION OF ENGINEERING SERVICES</b> STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO. 53-1043	<b>VINCENT AVENUE UC (WIDEN)</b> <b>FOUNDATION PLAN</b>
SCALE VERT. DATUM NAVD 88	PHOTOGRAMMETRY AS OF: X	DETAILS BY Kay Farahzadi	CHECKED Carl Duan			POST MILE 35.40	
1"=20' HORZ. DATUM NAD 83	SURVEYED BY District	CHECKED BY C. Stewart	CHECKED Carl Duan				
ALIGNMENT TIES Dist. Traverse Sheet	TRAFICED BY M. sadaghiani 11/09	CHECKED BY L. Manabo 11/09	CHECKED Carl Duan	UNIT: 3647 PROJECT NUMBER & PHASE: 0700000085 1 CONTRACT NO.: 1170U1		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		REVISION DATES	
				0 1 2 3		SHEET 5 OF 26	

FILE => 53-1043-e-fp.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1267	1475
			DATE		
			12/21/11		
			REGISTERED CIVIL ENGINEER		
			6-10-13		
			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.					

- LEGEND:**
- New structure
  - - - Existing structure
  - ▨ Bridge removal (Portion)

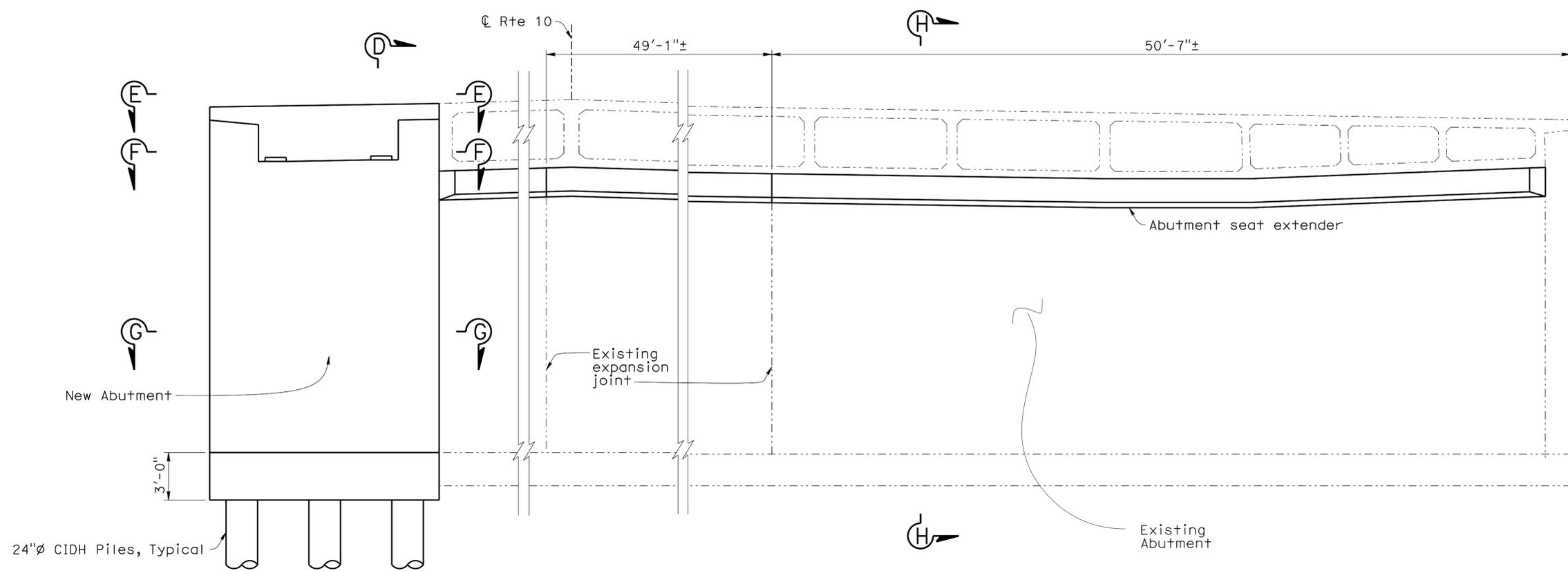


**NOTE:**  
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

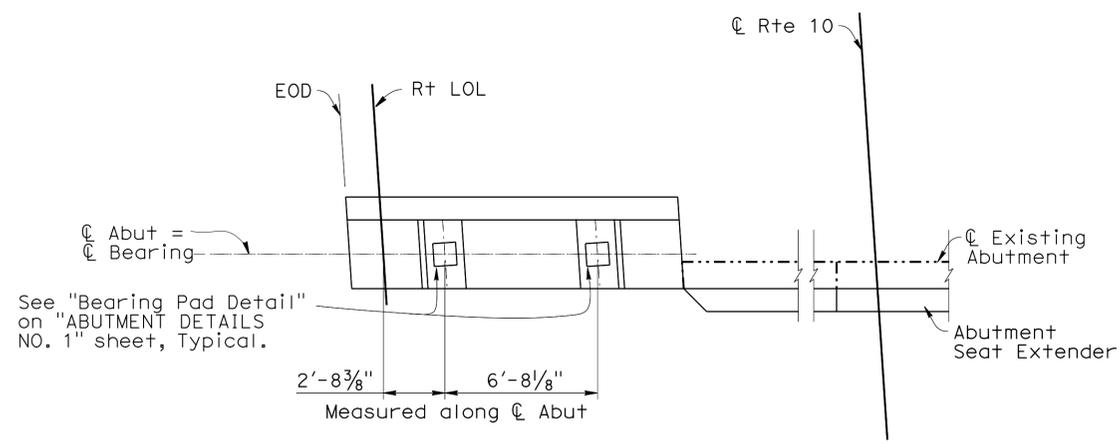
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY Chad Lim	CHECKED Carl Duan	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO.	53-1043	<b>VINCENT AVENUE UC (WIDEN)</b> <b>CONCRETE REMOVAL</b>	
	DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan			POST MILE	35.4		
	QUANTITIES	BY Chad Lim	CHECKED Carl Duan			CONTRACT NO.:	1170U1		
UNIT: 3622 PROJECT NUMBER & PHASE: 070000000085 1 CONTRACT NO.: 1170U1								REVISION DATES EARLIER REVISION DATES	SHEET OF 6 26

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1268	1475

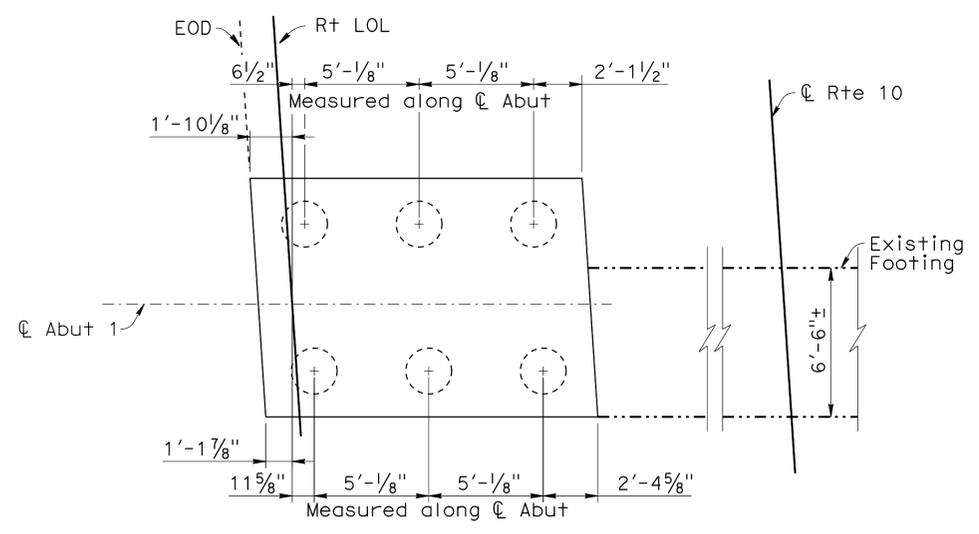
*Carl Duan* 12/21/11  
 REGISTERED CIVIL ENGINEER DATE  
 6-10-13  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



**ELEVATION**  
1/4" = 1'-0"



**PLAN**  
1/4" = 1'-0"



**FOOTING LAYOUT**  
1/4" = 1'-0"

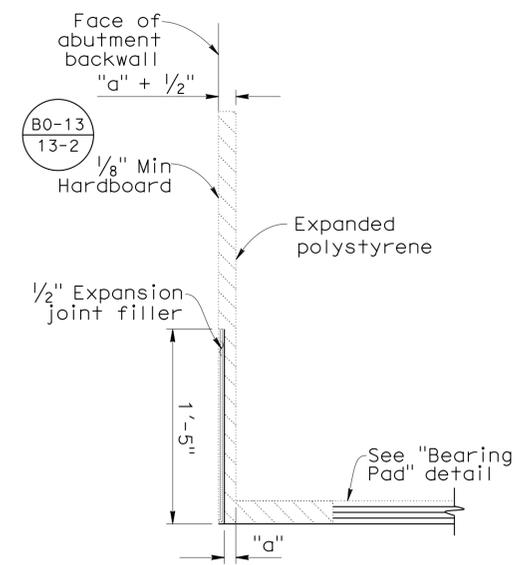
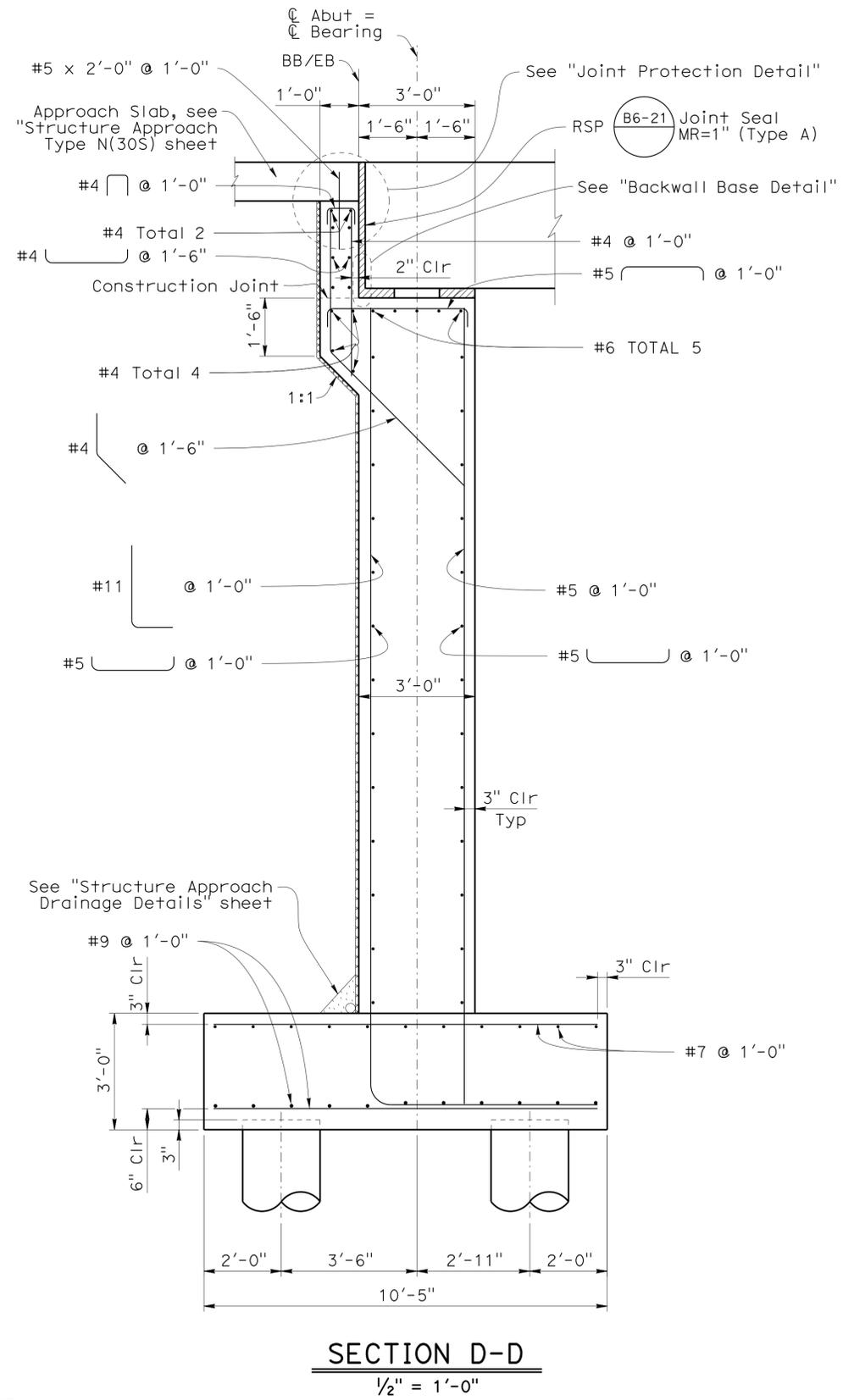
**NOTES:**

1. Abutment 1 is shown, Abutment 3 is similar.
2. For "Section D-D" see "ABUTMENT DETAILS NO. 1" sheet.
3. For "Section E-E", "Section F-F" and "Section G-G" see "ABUTMENT DETAILS NO. 2" sheet.
4. For "Section H-H" see "ABUTMENT DETAILS NO. 3" sheet.
5. Abutment seat extender is discontinued at each existing expansion joint.

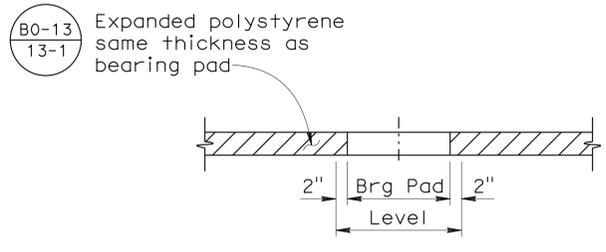
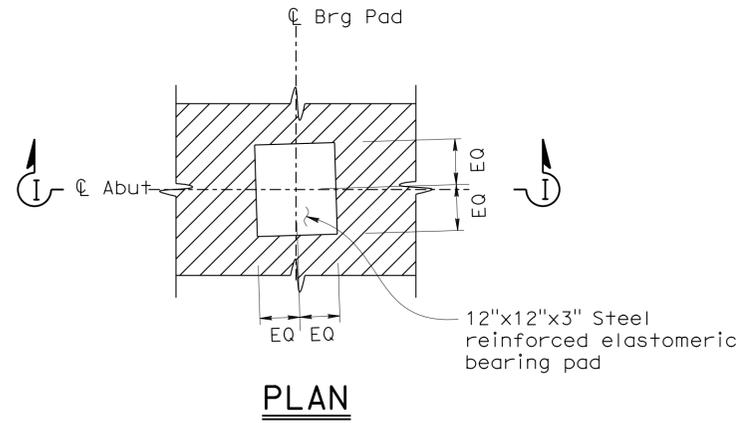
NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN BY Chad Lim CHECKED Carl Duan DETAILS BY K. Farahzadi/E. Hallstrom CHECKED Carl Duan QUANTITIES BY Chad Lim CHECKED Carl Duan	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO. 53-1043	<b>VINCENT AVENUE UC (WIDEN)</b> <b>ABUTMENT 1 LAYOUT</b>
			POST MILE 35.4	
			UNIT: 3622 PROJECT NUMBER & PHASE: 070000000085 1 CONTRACT NO.: 1170U1	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			REVISION DATES 08/22/11 12/16/10 12/28/10	SHEET OF 7 26

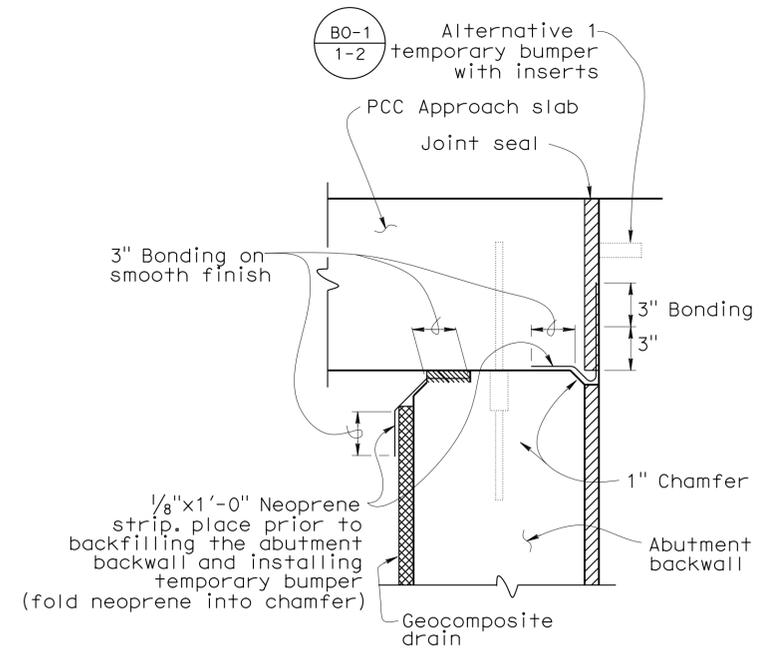
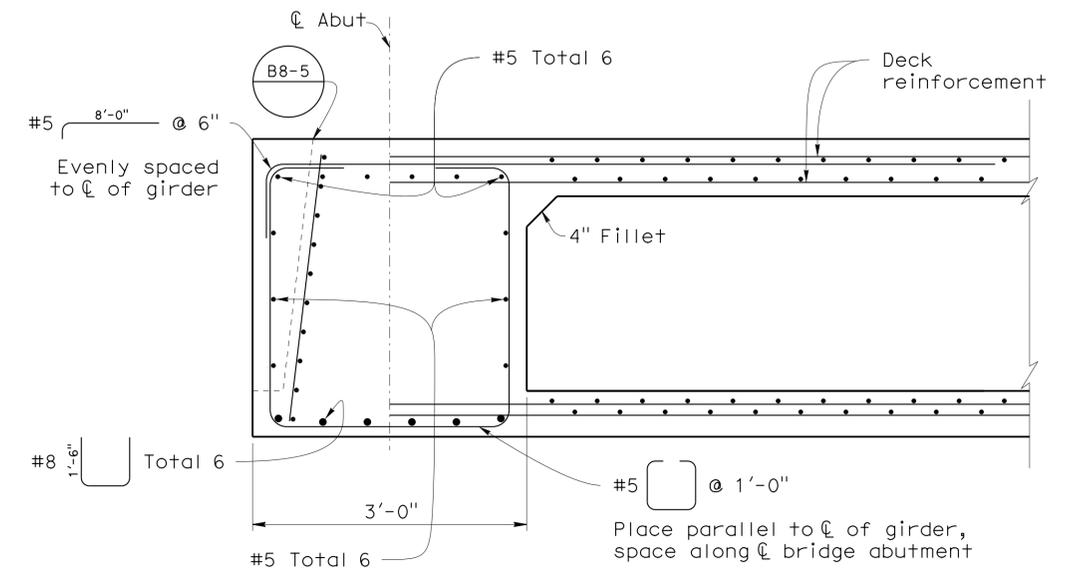
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1269	1475
			DATE		
			12/21/11		
			REGISTERED CIVIL ENGINEER		
			6-10-13		
			PLANS APPROVAL DATE		
			REGISTERED PROFESSIONAL ENGINEER		
			Carl Duan		
			No. C59976		
			Exp. 06-30-12		
			CIVIL		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



Note:  
1. For "a" dimension, see "JOINT RSP (B6-21) SEALS (MAXIMUM MOVEMENT RATING = 2)" sheet.



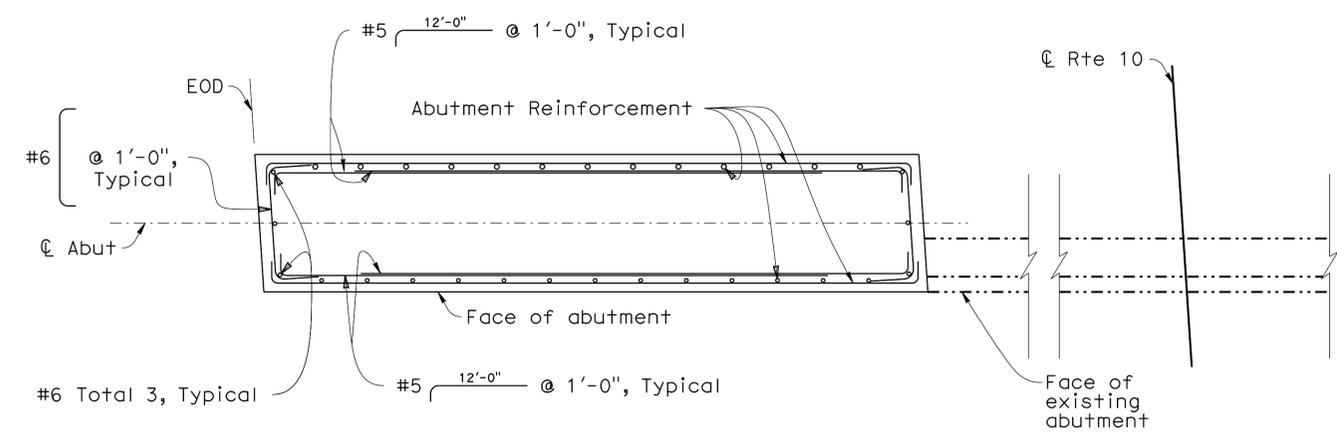
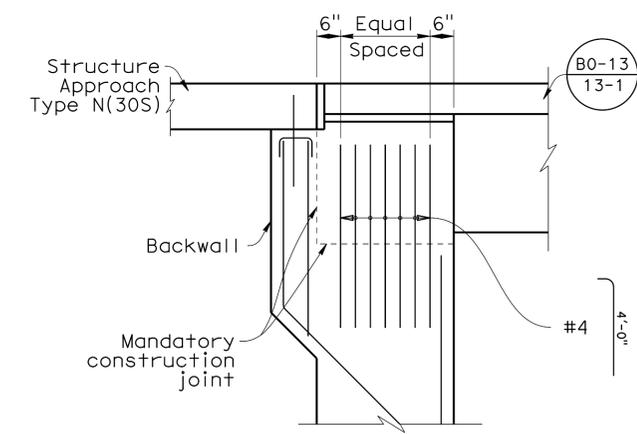
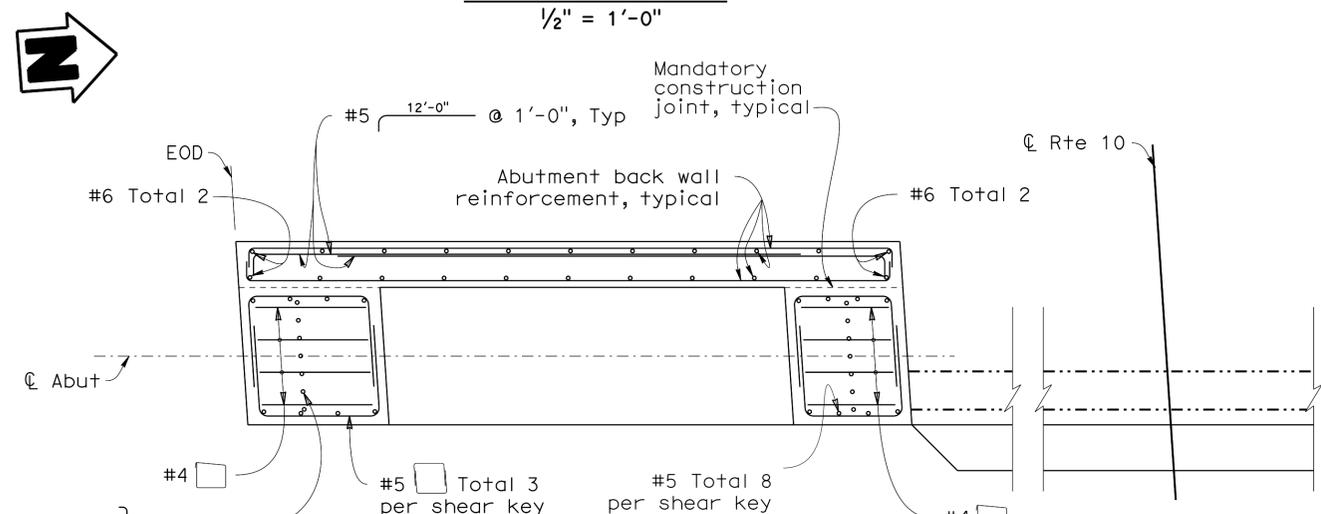
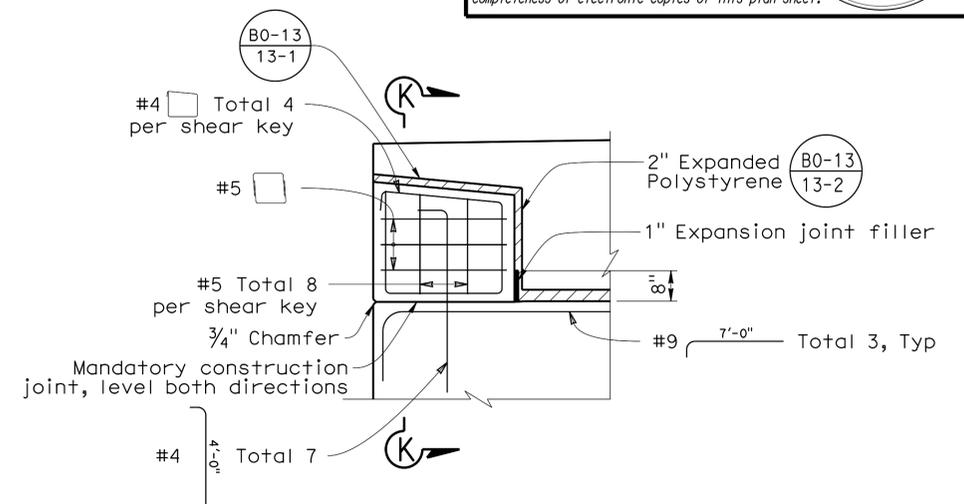
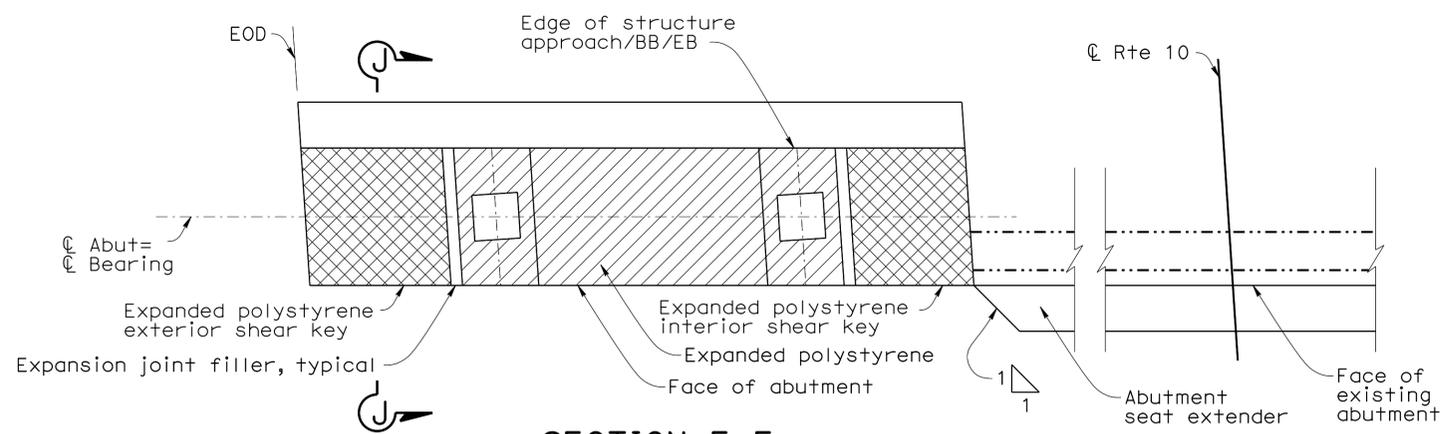
ABUTMENT BEARING PAD DETAIL  
No Scale



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

DESIGN	BY	Chad Lim	CHECKED	Carl Duan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-1043	VINCENT AVENUE UC (WIDEN) ABUTMENT DETAILS NO. 1	
	DETAILS	BY	K. Farahzadi/E. Hallstrom	CHECKED			Carl Duan	POST MILE		35.4
	QUANTITIES	BY	Chad Lim	CHECKED			Carl Duan			
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)						UNIT: 3622	PROJECT NUMBER & PHASE: 070000000085 1		CONTRACT NO.: 1170U1	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0	1	2	3	DISREGARD PRINTS BEARING EARLIER REVISION DATES
						0	1	2	3	REVISION DATES
										09/15/10
										12/18/10
										1/24/11
										06/18/12
										8
										26

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1270	1475
			DATE		
			12/21/11		
			REGISTERED CIVIL ENGINEER		
			PLANS APPROVAL DATE		
			6-10-13		
			The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.		



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

- NOTES:
1. Mandatory construction joint surface to be smooth finished and lined with 15 lb construction paper.
  2. Shear key and reinforcement to be discontinuous as shown.
  3. Abutment 1 shown, Abutment 3 similar.
  4. For "Section J-J" see "ABUTMENT DETAILS NO. 3" sheet.

DESIGN	BY Chad Lim	CHECKED Carl Duan
DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan
QUANTITIES	BY Chad Lim	CHECKED Carl Duan

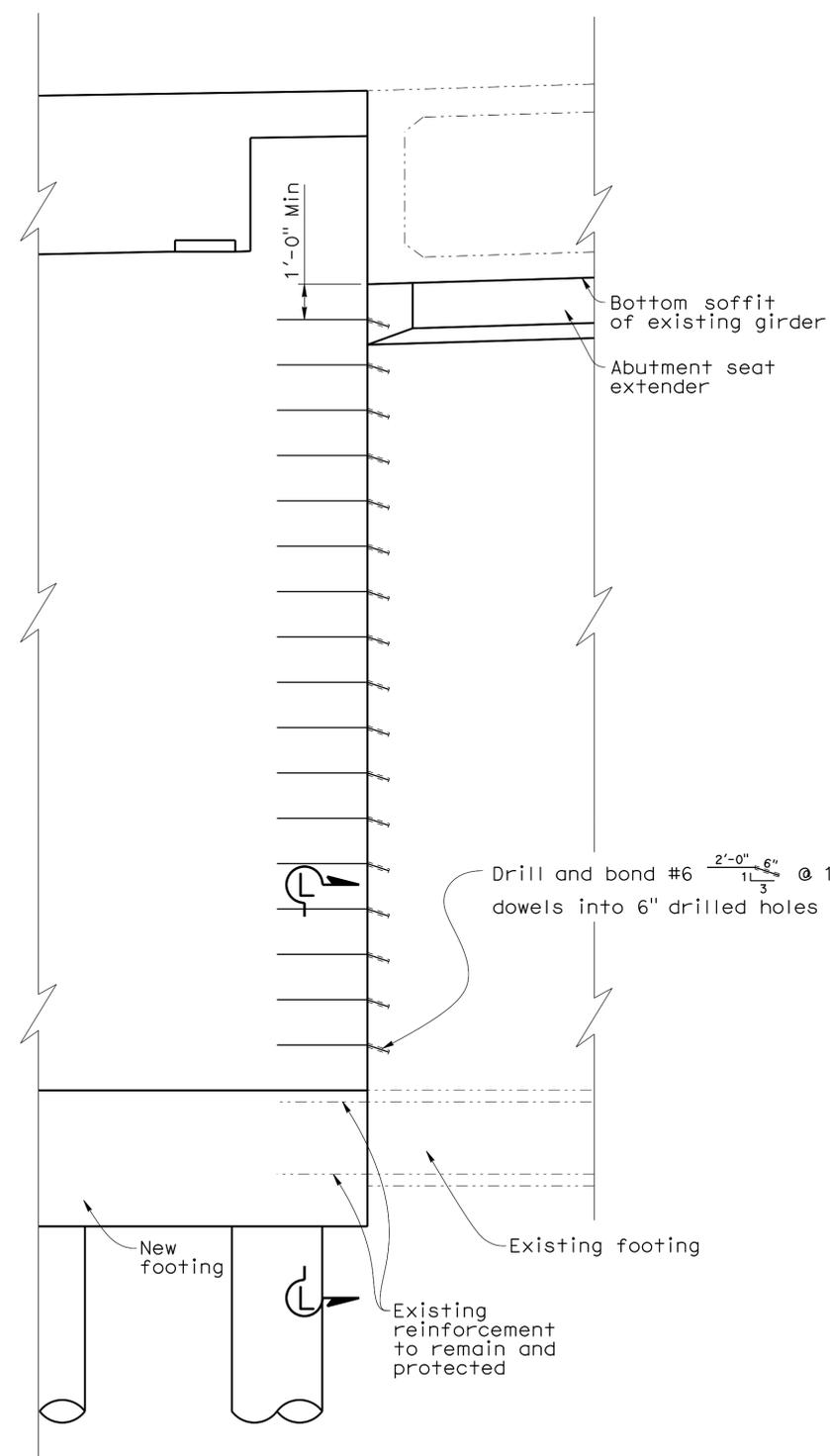
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

BRIDGE NO.	53-1043
POST MILE	35.4

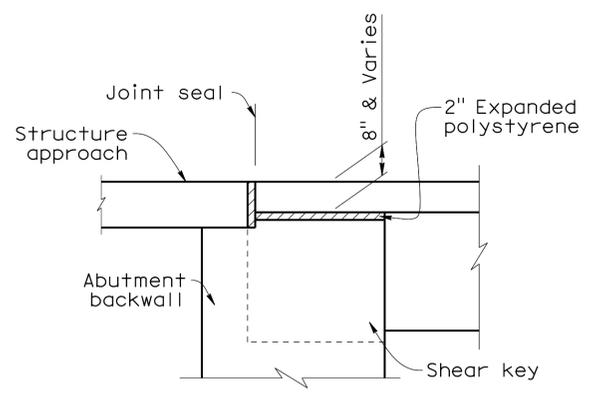
VINCENT AVENUE UC (WIDEN)  
ABUTMENT DETAILS NO. 2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1271	1475
			DATE		
			12/21/11		
			REGISTERED CIVIL ENGINEER		
			6-10-13		
			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.					

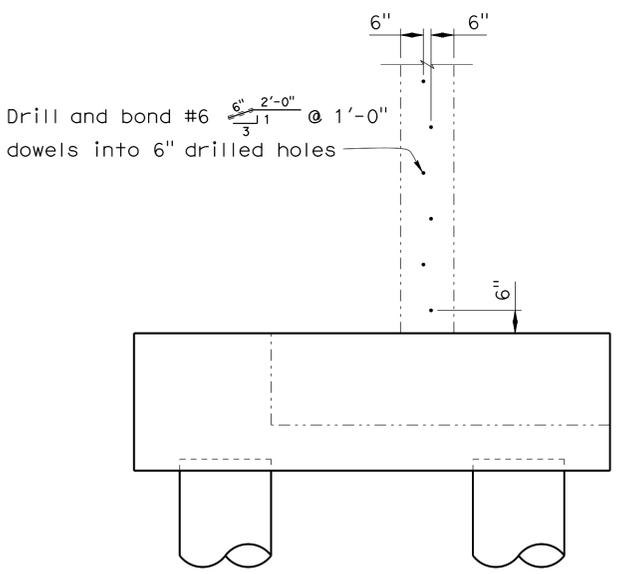


**JOINT DETAIL**  
1/2" = 1'-0"

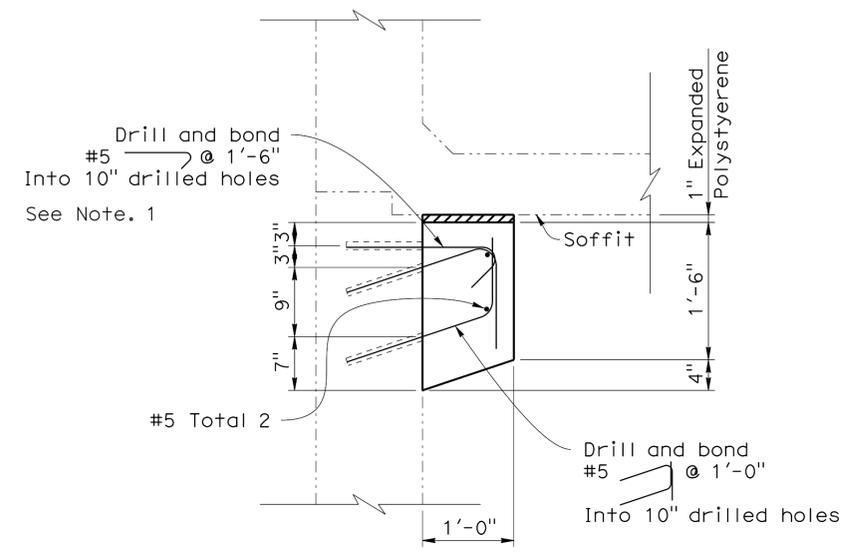
NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



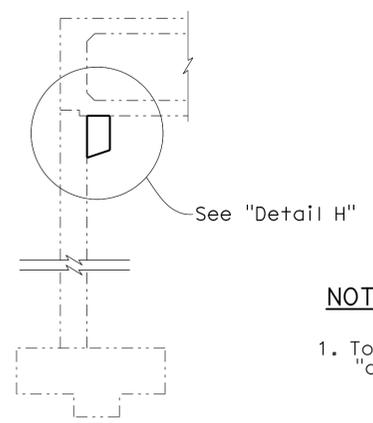
**SECTION J-J**  
1/2" = 1'-0"



**SECTION L-L**  
1/2" = 1'-0"



**DETAIL H**  
1" = 1'-0"



**SECTION H-H**  
1/4" = 1'-0"

NOTE:  
1. Top row of dowel should be "chemical adhesive."

DESIGN	BY Chad Lim	CHECKED Carl Duan
DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan
QUANTITIES	BY Chad Lim	CHECKED Carl Duan

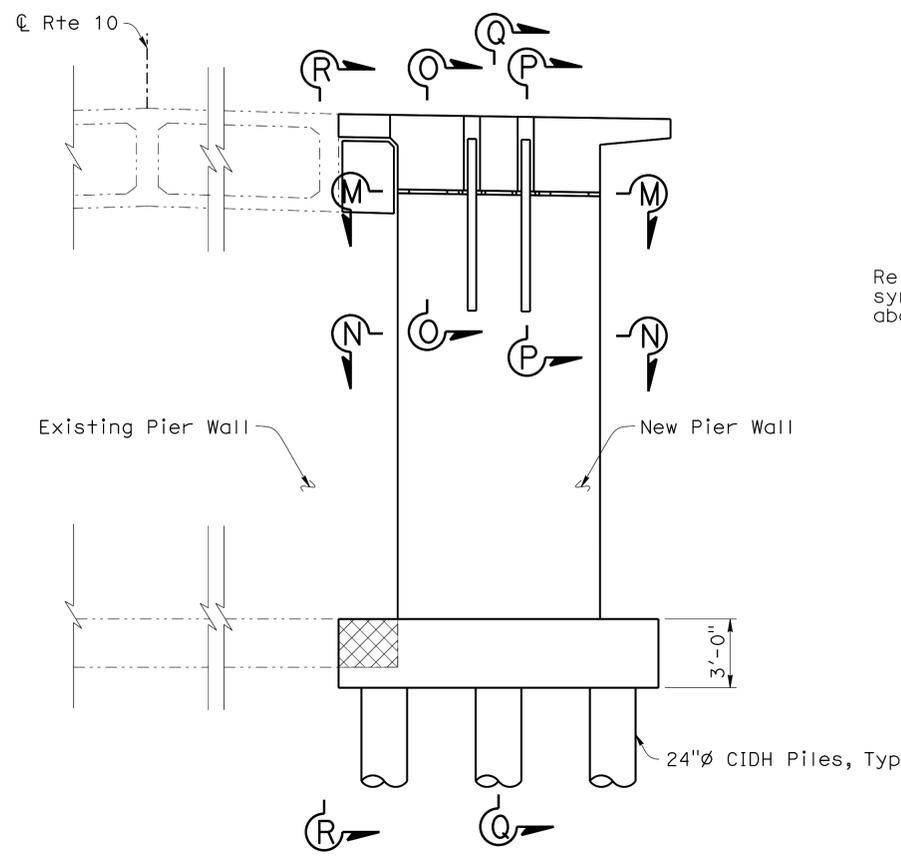
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

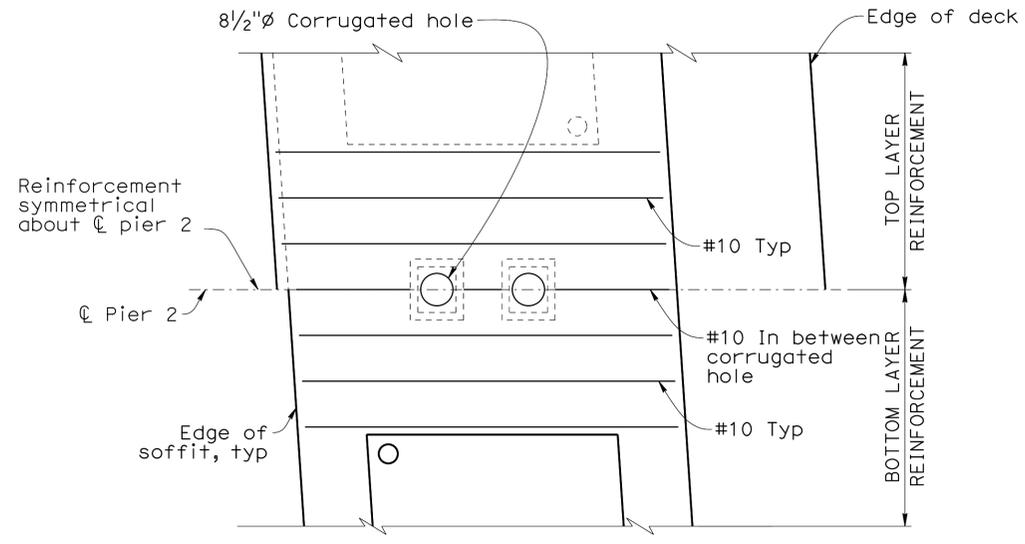
BRIDGE NO.	53-1043
POST MILE	35.4

**VINCENT AVENUE UC (WIDEN)**  
**ABUTMENT DETAILS NO. 3**

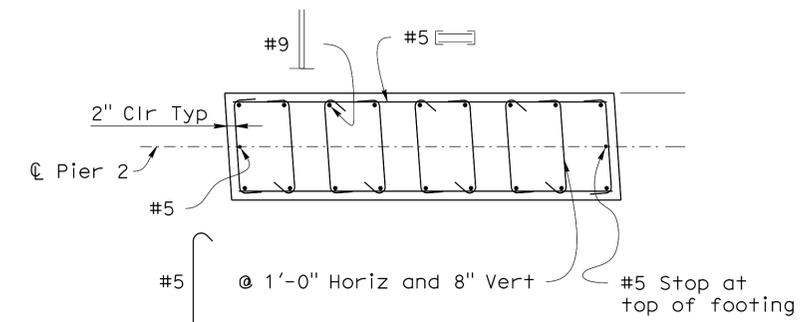
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1272	1475
			12/21/11		
			REGISTERED CIVIL ENGINEER	DATE	
			6-10-13	PLANS APPROVAL DATE	
			The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.		



**ELEVATION**  
1/4" = 1'-0"

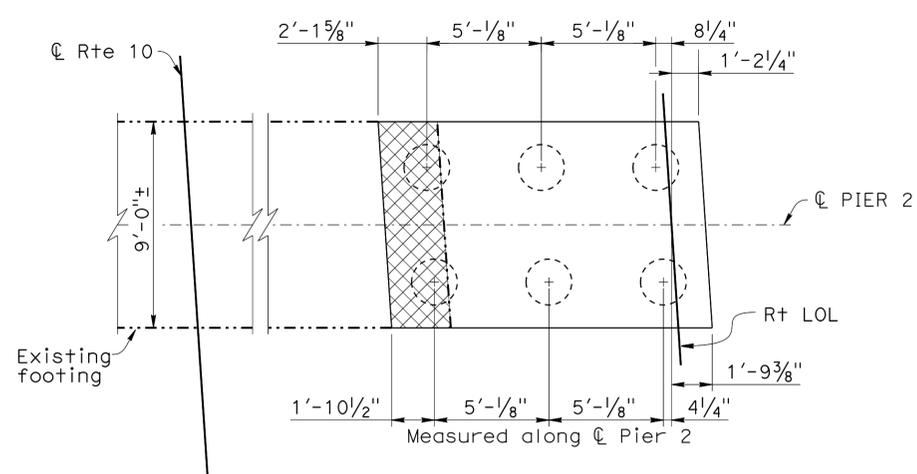


**PLAN**  
1/2" = 1'-0"

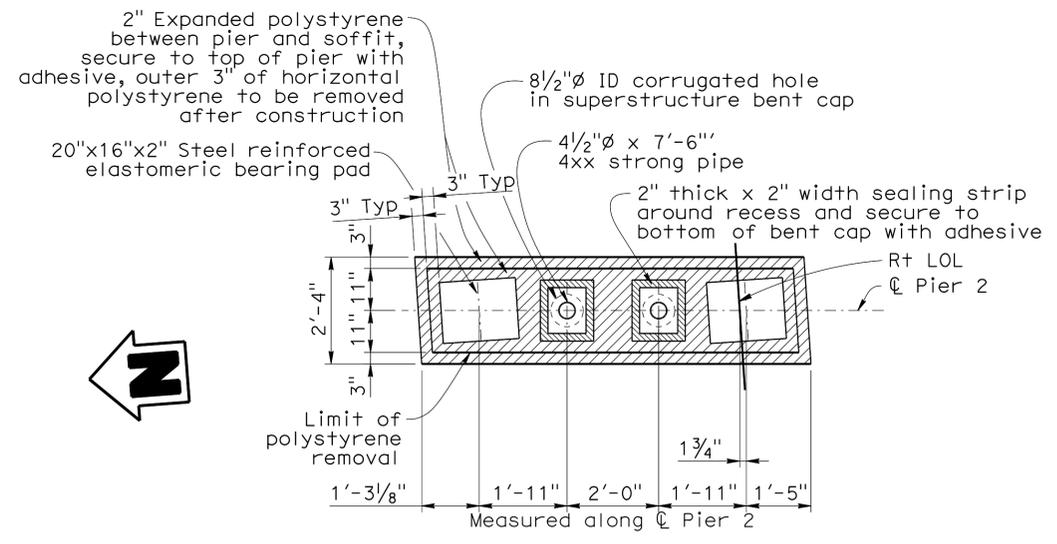


Alternate hooks of adjacent cross ties to face each other in space between pairs of vertical reinforcement providing space for placing concrete. For information not shown see "Section Q-Q" on "PIER DETAILS NO. 2" sheet.

**SECTION N-N**  
1/2" = 1'-0"



**FOOTING LAYOUT**  
1/4" = 1'-0"



**SECTION M-M**  
1/2" = 1'-0"

**NOTES:**

- For "Section 0-0" and "Section P-P" see "PIER DETAILS NO. 1" sheet.
- For "Section Q-Q" and "Section R-R" see "PIER DETAILS NO. 2" sheet.
- Contractor may adjust the pipe location to clear the pier wall stirrup upon approval of the Engineer

**LEGEND**

- Existing Structure
- New Structure
- Bridge Removal (Portion)

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

DESIGN	BY Chad Lim	CHECKED Carl Duan
DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan
QUANTITIES	BY Chad Lim	CHECKED Carl Duan

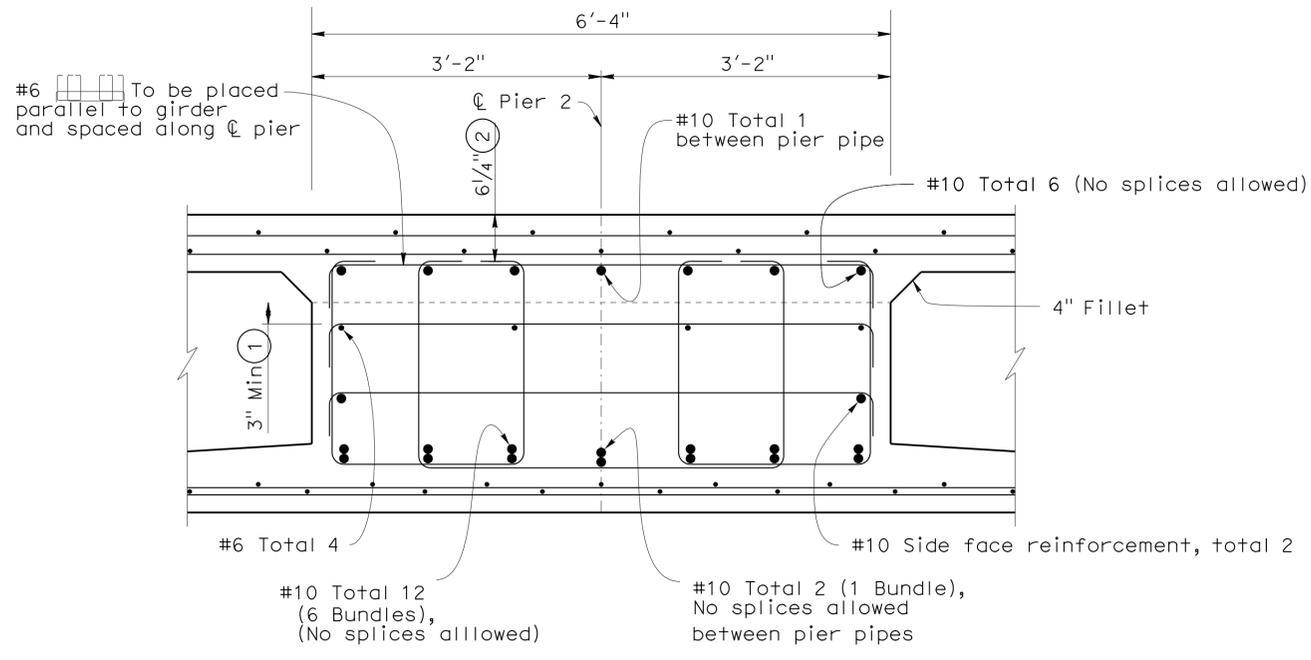
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

BRIDGE NO.	53-1043
POST MILE	35.4

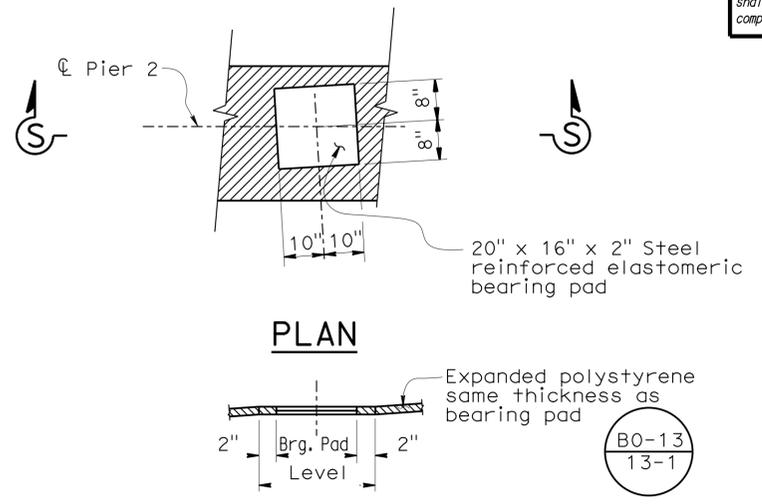
VINCENT AVENUE UC (WIDEN)  
PIER LAYOUT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1273	1475
			12/21/11		
REGISTERED CIVIL ENGINEER			DATE		
6-10-13			PLANS APPROVAL DATE		
No. C59976			Exp. 06-30-12		
No. C59976			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 electronic copies of this plan sheet.					

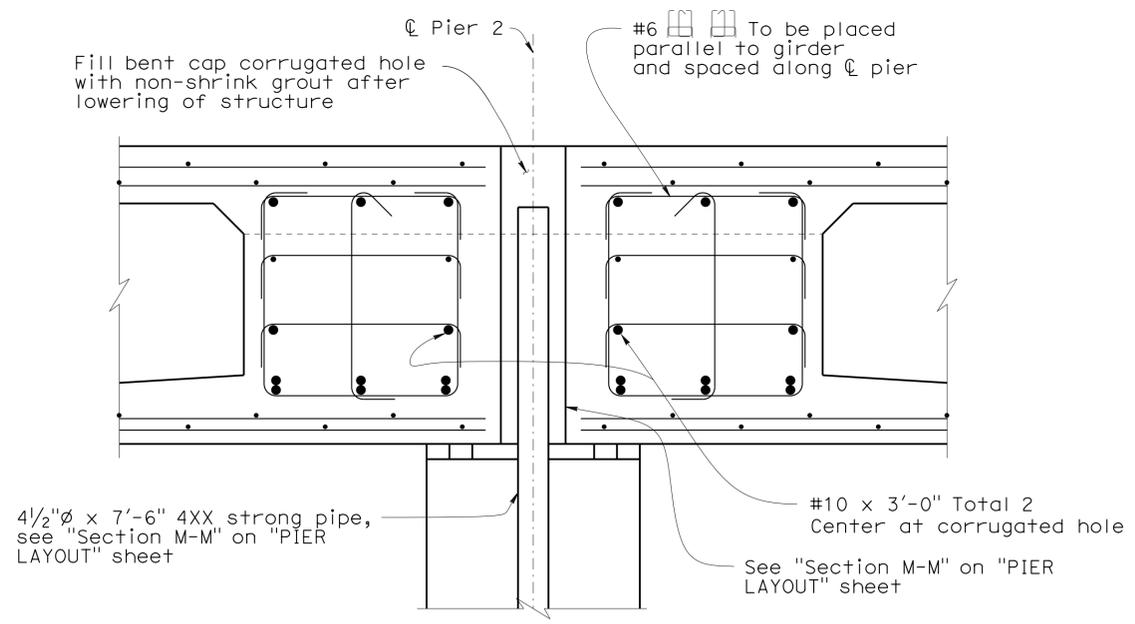


- NOTES:
- Place reinforcement as required to clear prestressing ducts.
  - Clearance to main cap reinforcement.

**SECTION 0-0**  
1" = 1'-0"



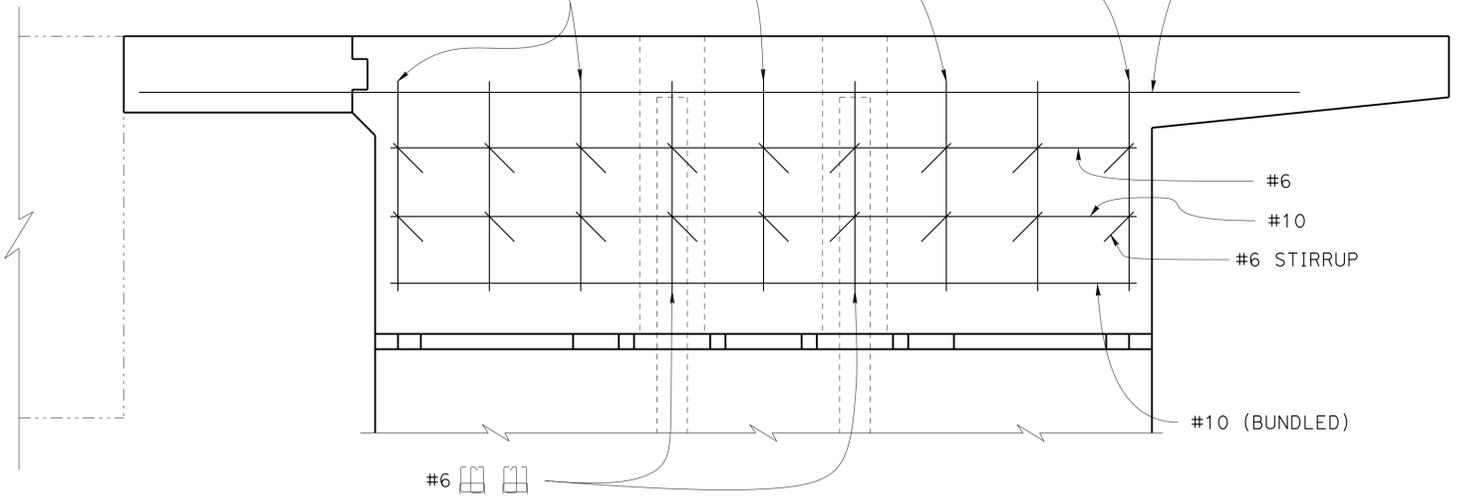
**SECTION S-S**  
**PIER BEARING PAD DETAIL**  
NO SCALE



For information not shown, see "Section 0-0"

**SECTION P-P**  
1" = 1'-0"

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



**STIRRUP DETAIL**  
1" = 1'-0"

DESIGN	BY Chad Lim	CHECKED Carl Duan
DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan
QUANTITIES	BY Chad Lim	CHECKED Carl Duan

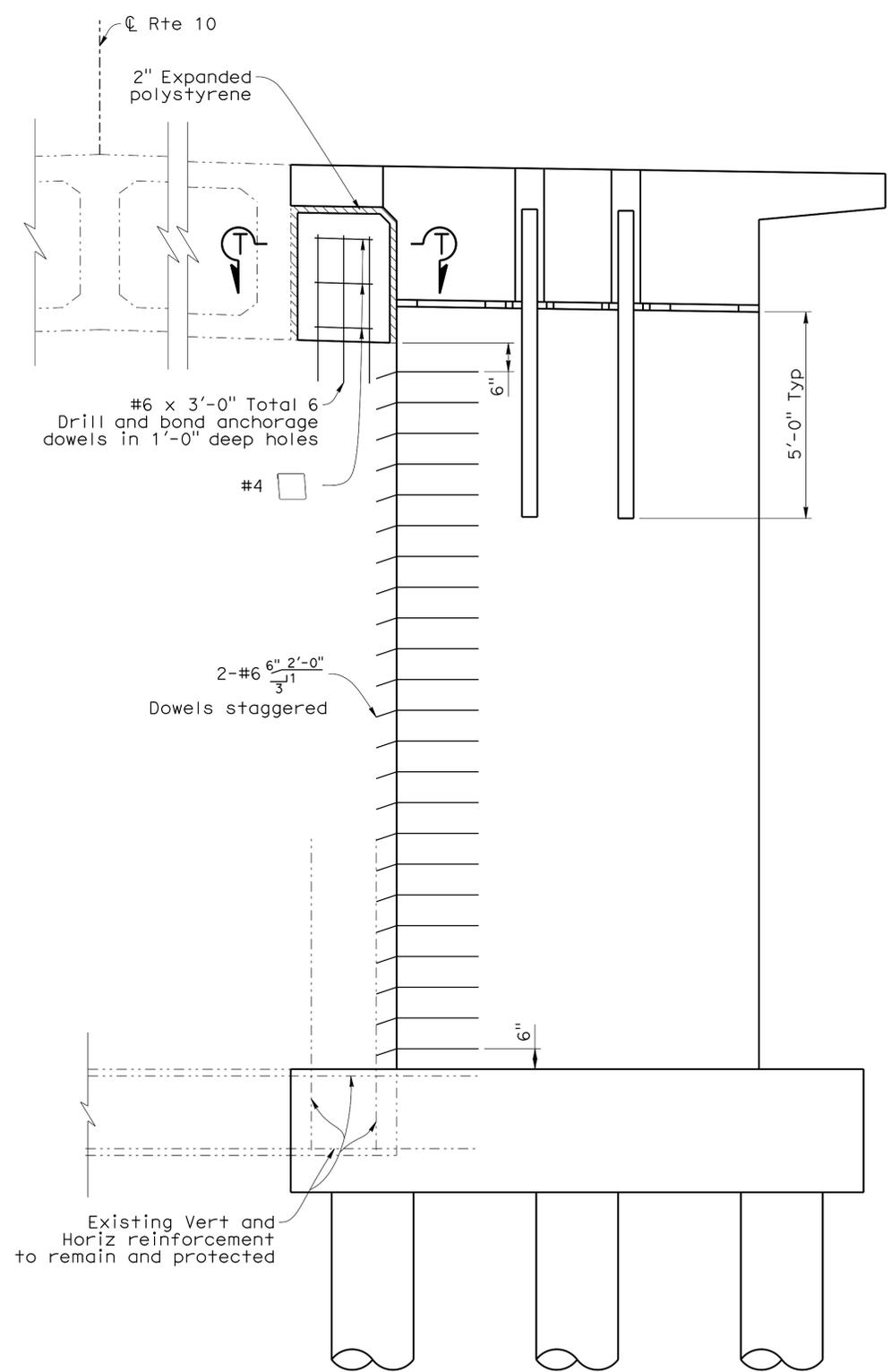
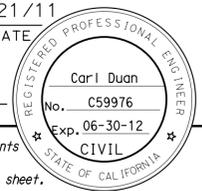
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

BRIDGE NO.	53-1043
POST MILE	35.4

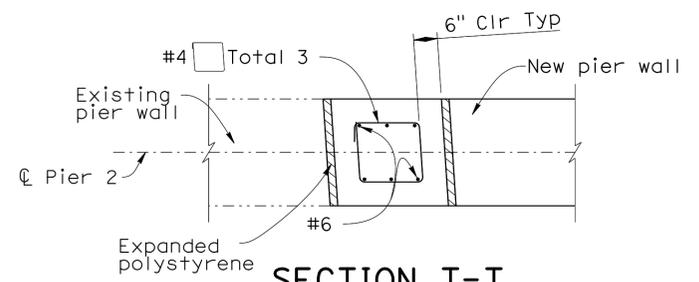
VINCENT AVENUE UC (WIDEN)  
PIER DETAILS NO. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1274	1475
			DATE		
			12/21/11		
			REGISTERED CIVIL ENGINEER		
			6-10-13		
			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.					

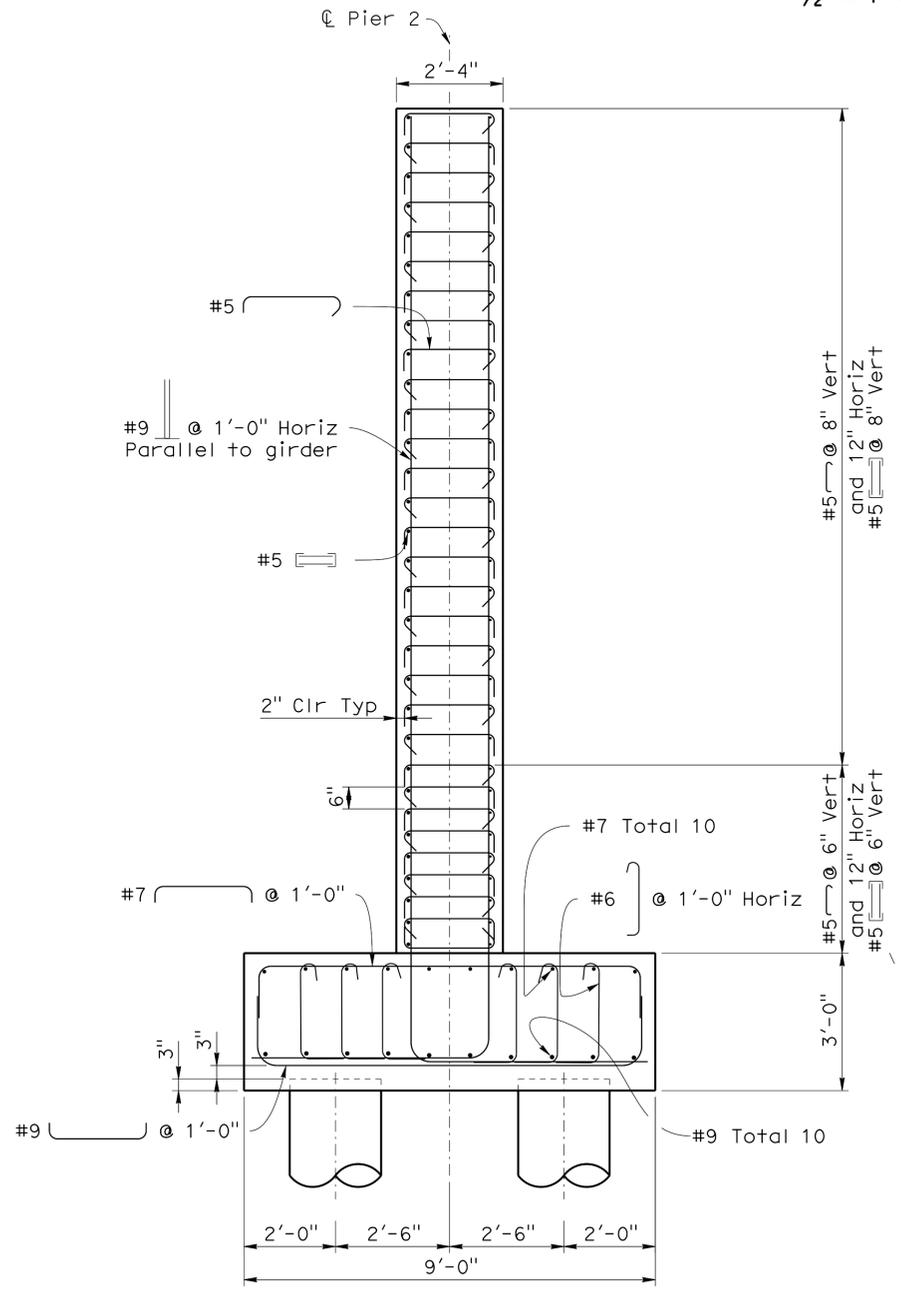


**ELEVATION**  
1/2" = 1'-0"

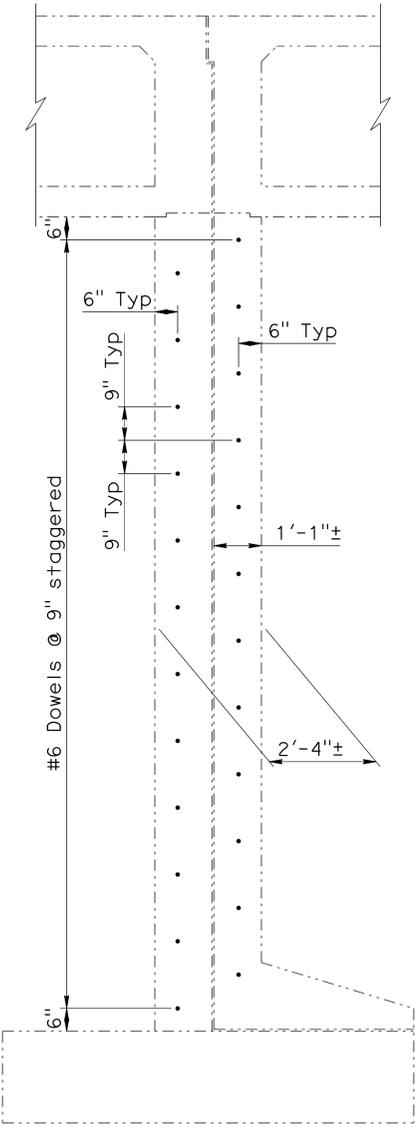
NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



**SECTION T-T**  
1/2" = 1'-0"



For information not shown, see "Section N-N" on "PIER LAYOUT" sheet  
**SECTION Q-Q**  
1/2" = 1'-0"



NOTES:  
1. No splices allowed  
2. Some reinforcement not shown for clarity

**SECTION R-R**  
1/2" = 1'-0"

DESIGN	BY Chad Lim	CHECKED Carl Duan
DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan
QUANTITIES	BY Chad Lim	CHECKED Carl Duan

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

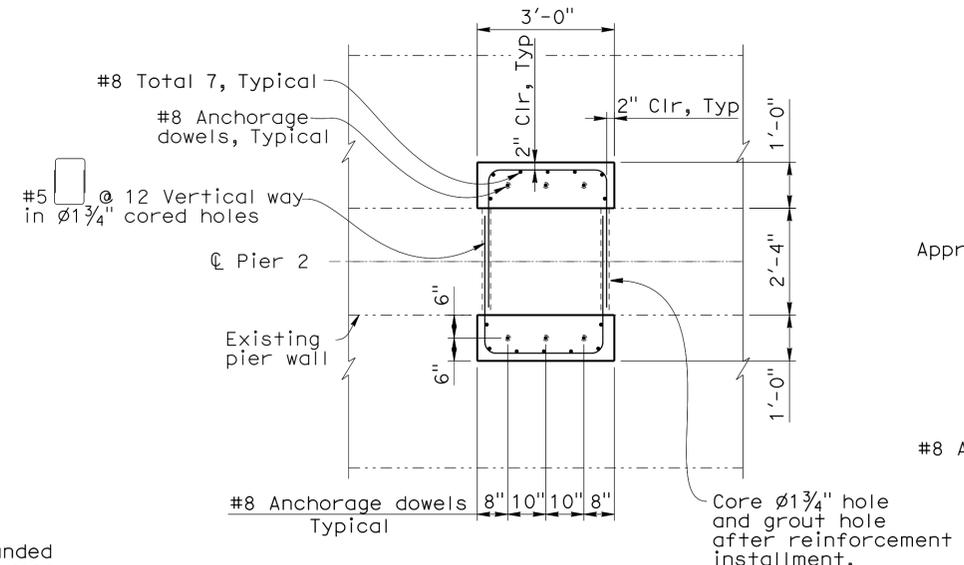
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-1043
POST MILE	35.4

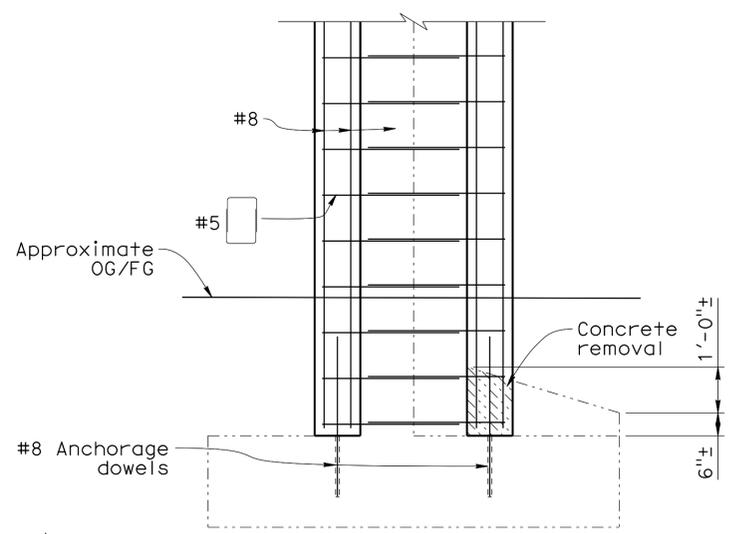
**VINCENT AVENUE UC (WIDEN)**  
**PIER DETAILS NO. 2**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1275	1475
			12/21/11		
			REGISTERED CIVIL ENGINEER		
			6-10-13		
			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

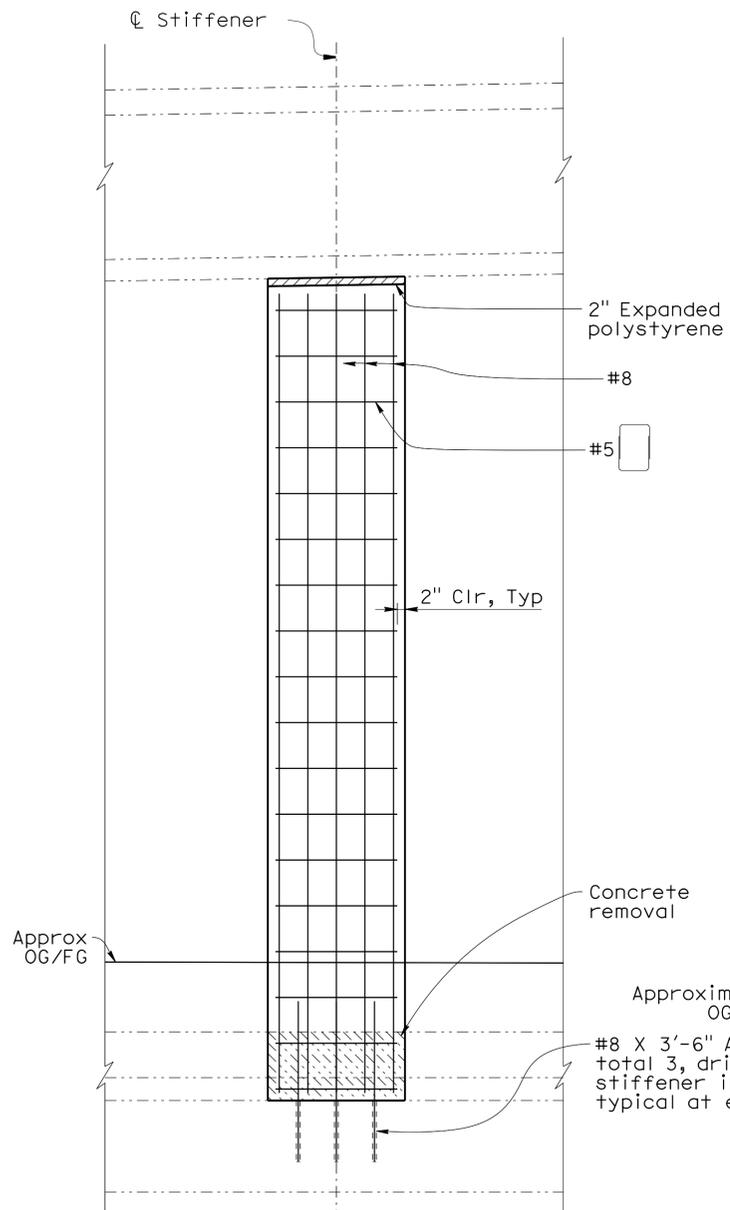
NOTE:  
 Location of cored and drilled holes shown in the plans are approximate. Prior to placing holes in concrete, the contractor shall locate all reinforcing steel and adjust the location of the holes to clear all reinforcing bars (except as noted). Final hole locations are subject to the approval of the Engineer.



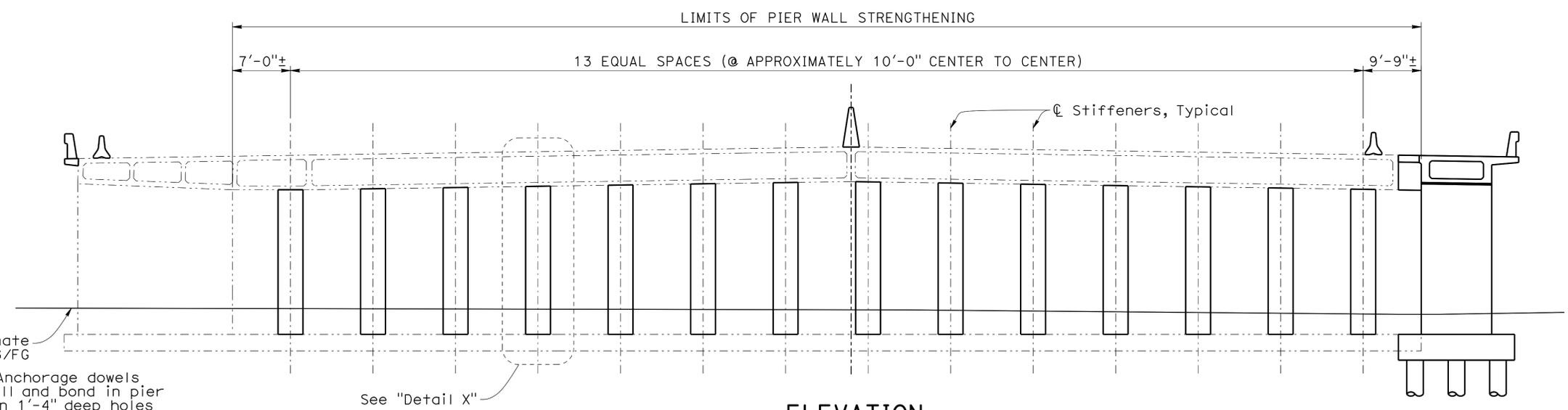
**DETAIL Y**  
 1/2"=1'-0"



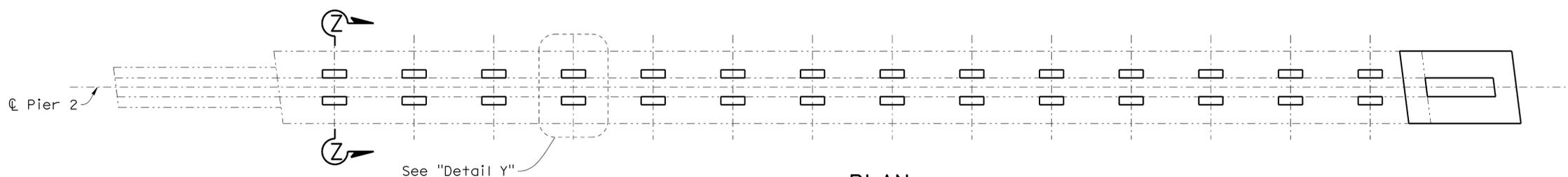
**SECTION Z-Z**  
 1/2"=1'-0"



**DETAIL X**  
 1/2"=1'-0"



**ELEVATION**  
 1/8"=1'-0"



**PLAN**  
 1/8"=1'-0"

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

DESIGN	BY Chad Lim	CHECKED Carl Duan
DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan
QUANTITIES	BY Chad Lim	CHECKED Carl Duan

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

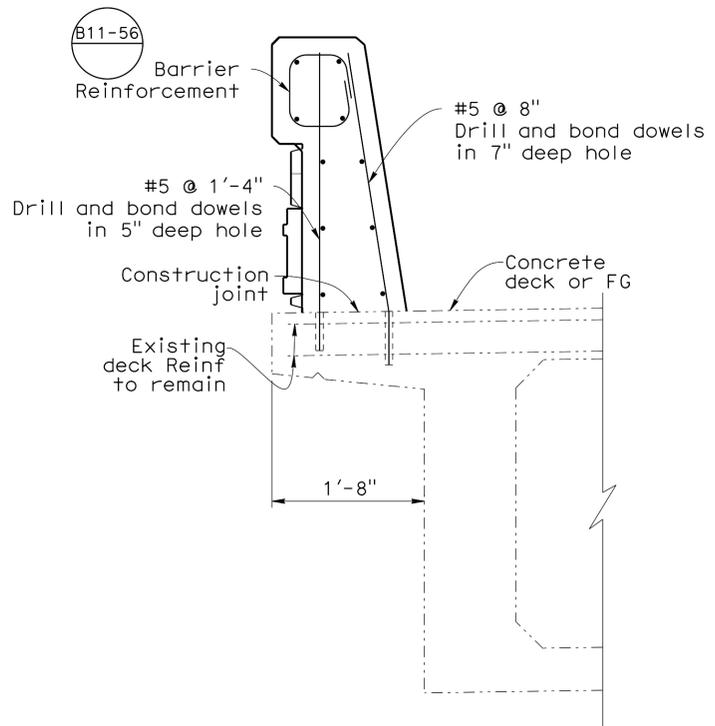
DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-1043
POST MILE	35.4

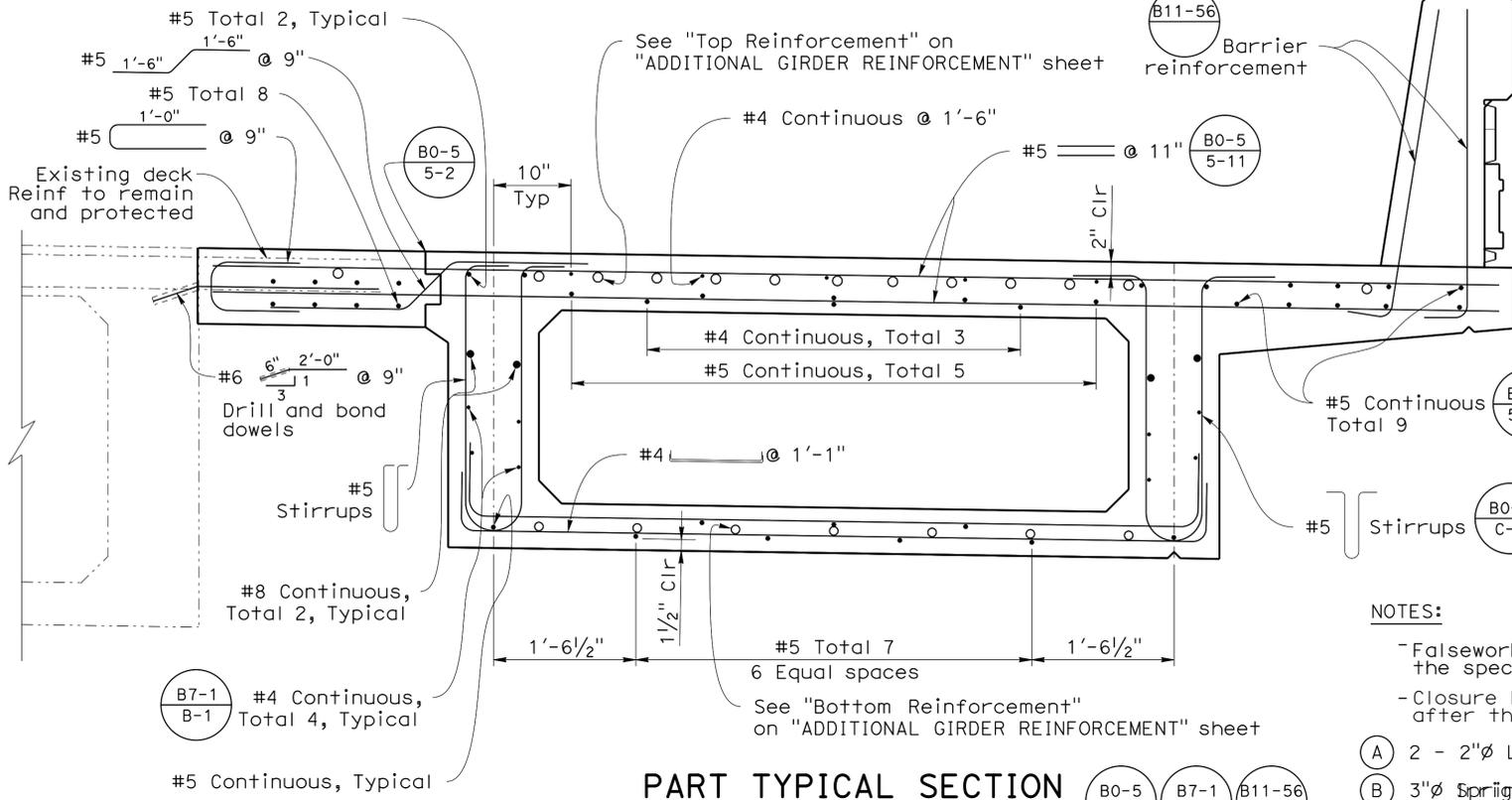
**VINCENT AVENUE UC (WIDEN)**  
**PIER STRENGTHENING DETAILS**

USERNAME => s124486 DATE PLOTTED => 12-JUN-2013 TIME PLOTTED => 17:06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1276	1475
			DATE		
			12/21/11		
			REGISTERED CIVIL ENGINEER		
			PLANS APPROVAL DATE		
			6-10-13		
			REGISTERED PROFESSIONAL ENGINEER		
			No. C59976		
			Exp. 06-30-12		
			CIVIL		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



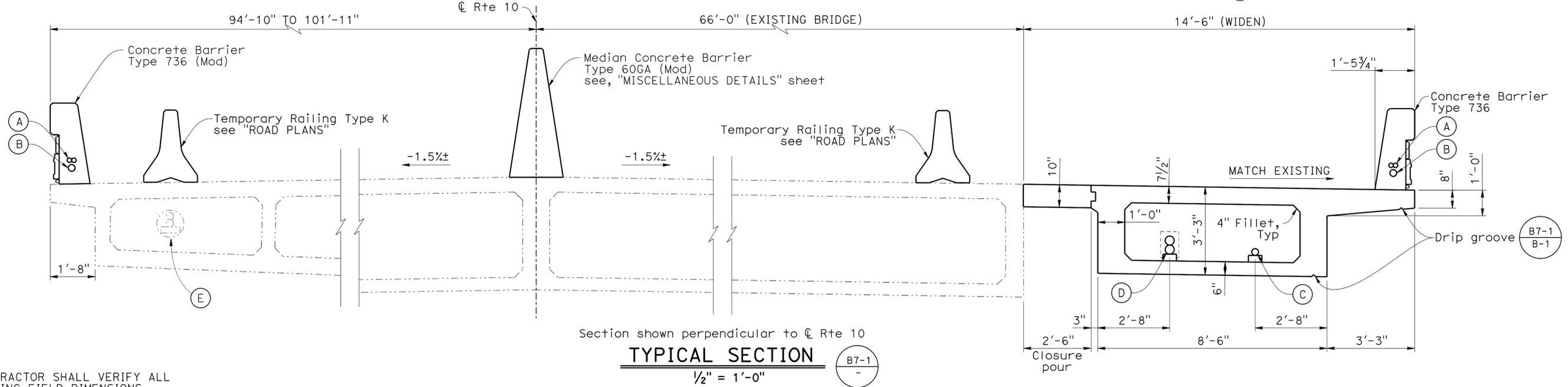
**TYPE 736 (MODIFIED)** (B11-56)  
1" = 1'-0"



**PART TYPICAL SECTION** (B0-5) (B7-1) (B11-56)  
1" = 1'-0"

**NOTES:**

- Falsework shall be released as soon as permitted by the specifications.
- Closure Pour shall not be placed sooner than 60 days after the concrete barrier has been completed.
- (A) 2 - 2"  $\phi$  Lighting conduits, see "ROAD PLANS"
- (B) 3"  $\phi$  Spring control conduits, see "ROAD PLANS"
- (C) 2"  $\phi$  Irrigation water line.
- (D) 2 - 3/2"  $\phi$  Communication conduits, see "ROAD PLANS"
- (E) Existing utility opening



**TYPICAL SECTION** (B7-1)  
1/2" = 1'-0"

DESIGN	BY Chad Lim	CHECKED Carl Duan
DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan
QUANTITIES	BY Chad Lim	CHECKED Carl Duan

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-1043
POST MILE	35.4

**VINCENT AVENUE UC (WIDEN)**  
**TYPICAL SECTION**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1277	1475
			DATE		
			12/21/11		
			REGISTERED CIVIL ENGINEER		
			6-10-13		
			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.		

### PRESTRESSING NOTES

270 KSI Low Relaxation Strand:  
 $P_{jack} = 1582$  kips  
 Anchor Set =  $\frac{3}{8}$  in  
 Total Number of Girders = 2

Distribution of prestress force ( $P_{jack}$ ) between girders shall not exceed the ratio of 3:2.  
 Maximum final force variation between girders shall not exceed 725 kips.

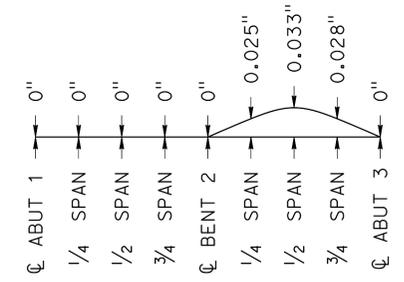
Concrete:  $f'_c = 5$  ksi @ 28 days  
 $f'_{ci} = 3.6$  ksi @ time of stressing

Contractor shall submit elongation calculations based on initial stress at

$\lambda = 0.9104$  times jacking stress.

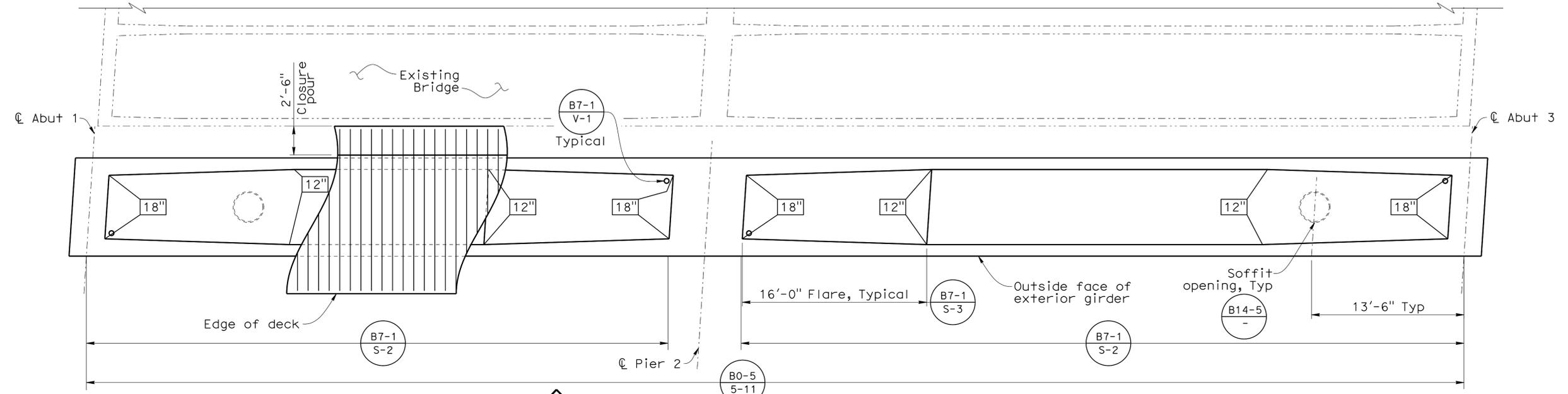
One end stressing shall be performed from the long-span end only.

$\lambda$  Theoretical point of no movement  
 Friction curvature = 0.15  
 Friction wobble = 0.0002/ft



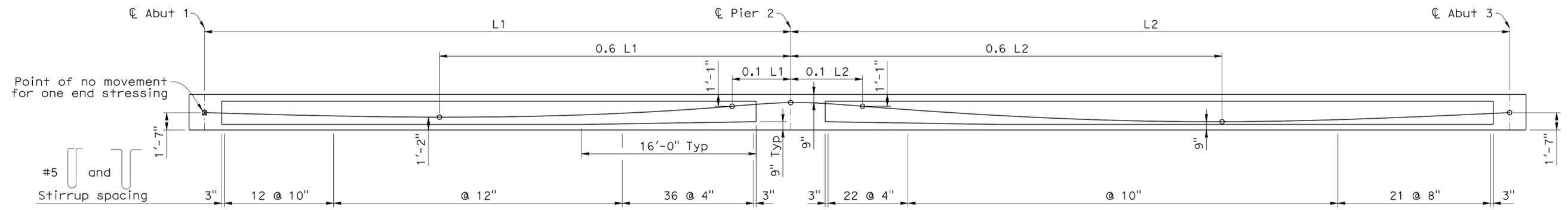
### CAMBER DIAGRAM

NO SCALE  
 Does not include allowance for falsework settlement.



### GIRDER LAYOUT

1" = 5'-0"



### LONGITUDINAL SECTION

1" = 5'-0"

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

DESIGN	BY Chad Lim	CHECKED Carl Duan
DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan
QUANTITIES	BY Chad Lim	CHECKED Carl Duan

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-1043
POST MILE	35.4

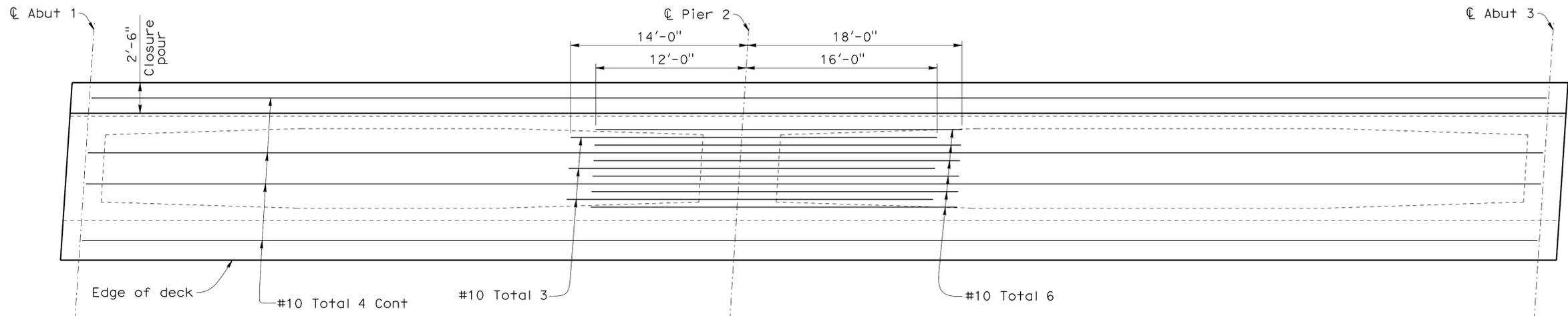
VINCENT AVENUE UC (WIDEN)  
**GIRDER LAYOUT**



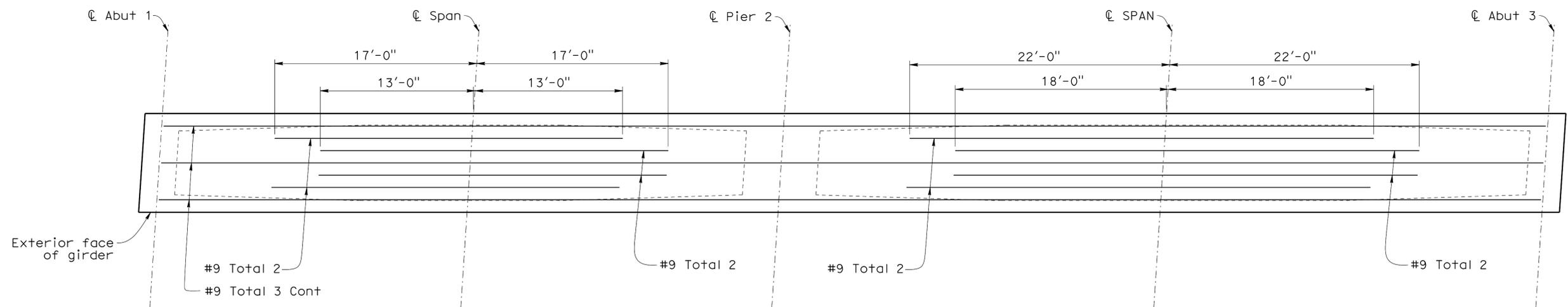
REVISION DATES	SHEET	OF
06/12/10 09/15/10 12/16/10 1/24/11	16	26

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1278	1475

*Carl Duan* 12/21/11  
 REGISTERED CIVIL ENGINEER DATE  
 6-10-13  
 PLANS APPROVAL DATE  
 Carl Duan  
 No. C59976  
 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 electronic copies of this plan sheet.



**TOP REINFORCEMENT**  
1" = 5'-0"



**BOTTOM REINFORCEMENT**  
1" = 5'-0"

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

- NOTES:
1. Reinforcement shown is in addition to that shown on "TYPICAL SECTION" sheet.
  2. All bars are evenly spaced within the limits shown.
  3. Bar splices when required shall conform to "SERVICE SPLICE" specifications.

DESIGN	BY Chad Lim	CHECKED Carl Duan
DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan
QUANTITIES	BY Chad Lim	CHECKED Carl Duan

**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

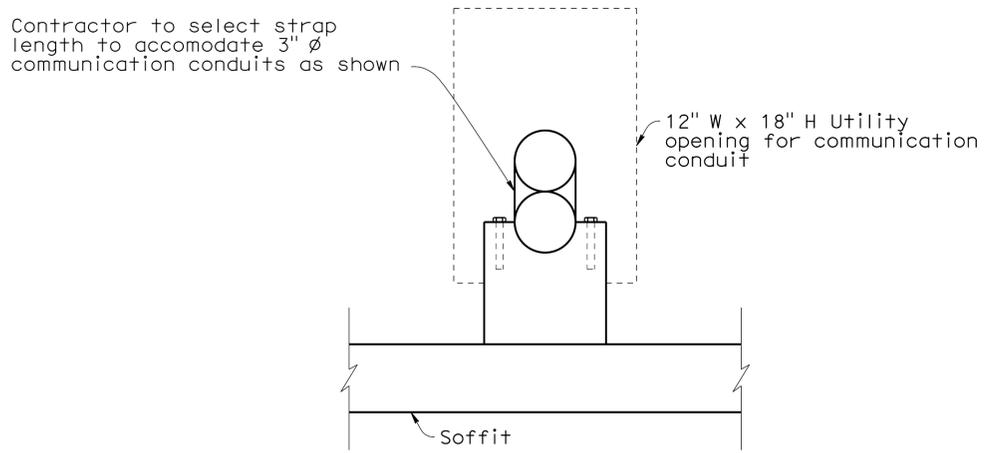
DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-1043
POST MILE	35.4

**VINCENT AVENUE UC (WIDEN)**  
**ADDITIONAL GIRDER REINFORCEMENT**

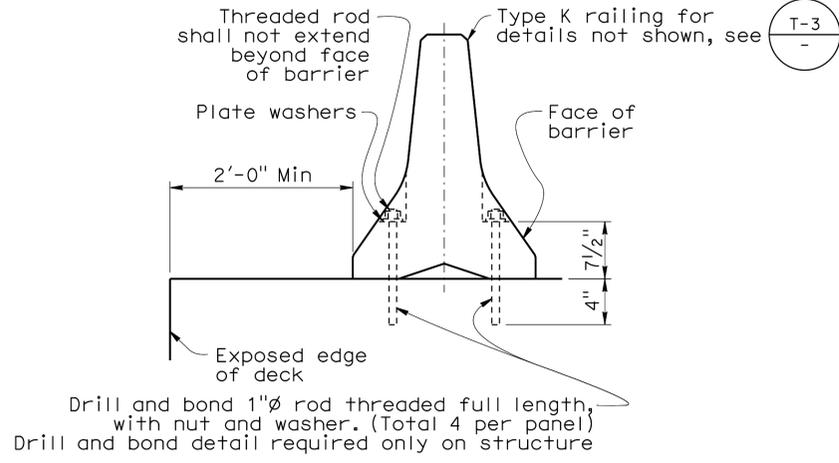
USERNAME => s124486 DATE PLOTTED => 12-JUN-2013 TIME PLOTTED => 17:06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1279	1475
			DATE		
			12/21/11		
			REGISTERED CIVIL ENGINEER		
			6-10-13		
			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.					

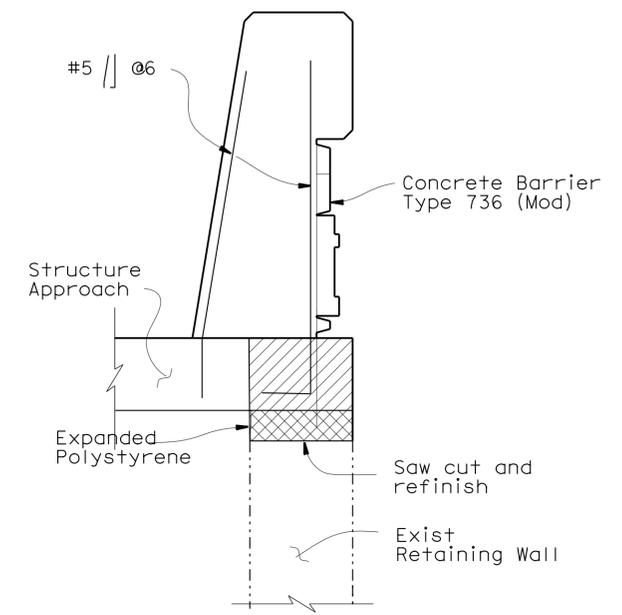


- NOTES:
1. Details only for use with communication conduits.
  2. For details not shown, see

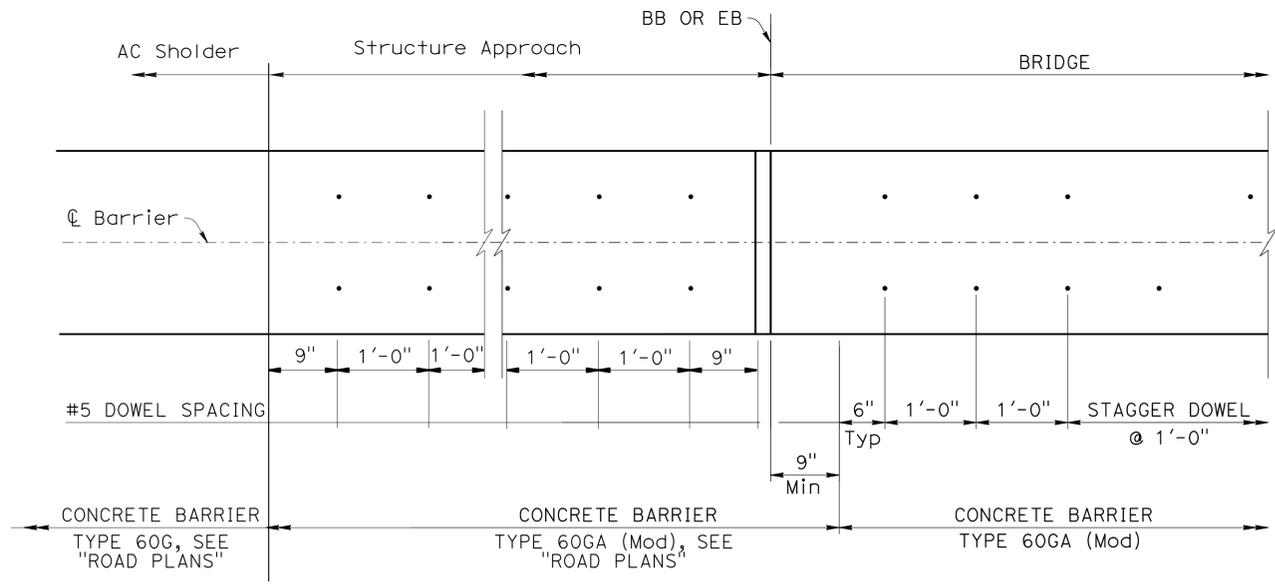
**MODIFIED CONCRETE CRADLE DETAIL**  
NO SCALE



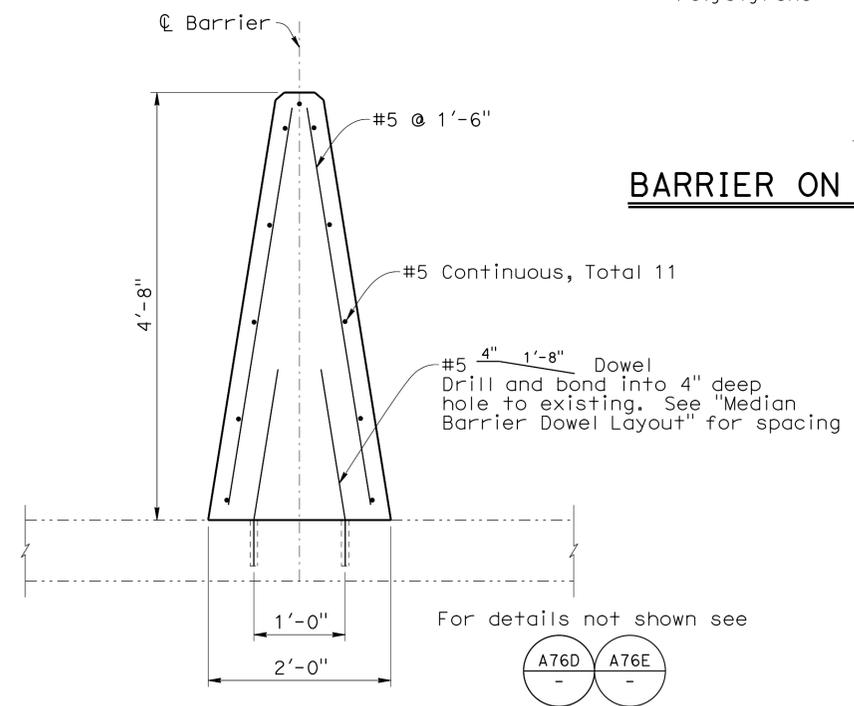
**TYPE K RAILING ATTACHMENT**  
NO SCALE



**BARRIER ON EXISTING WINGWALL**



**MEDIAN BARRIER DOWEL LAYOUT**  
1"=1'-0"



**CONCRETE BARRIER TYPE 60GA (MOD)**  
1"=1'-0"

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

DESIGN	BY Chad Lim	CHECKED Carl Duan
DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan
QUANTITIES	BY Chad Lim	CHECKED Carl Duan

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

BRIDGE NO.	53-1043
POST MILE	35.4

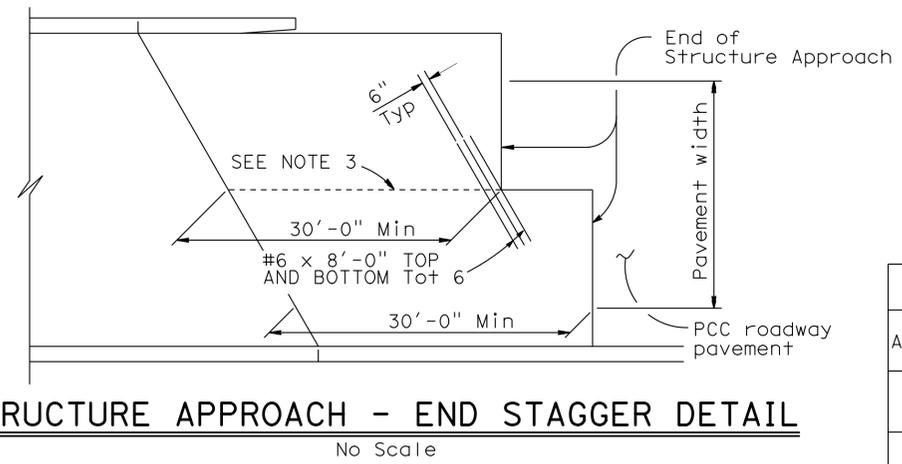
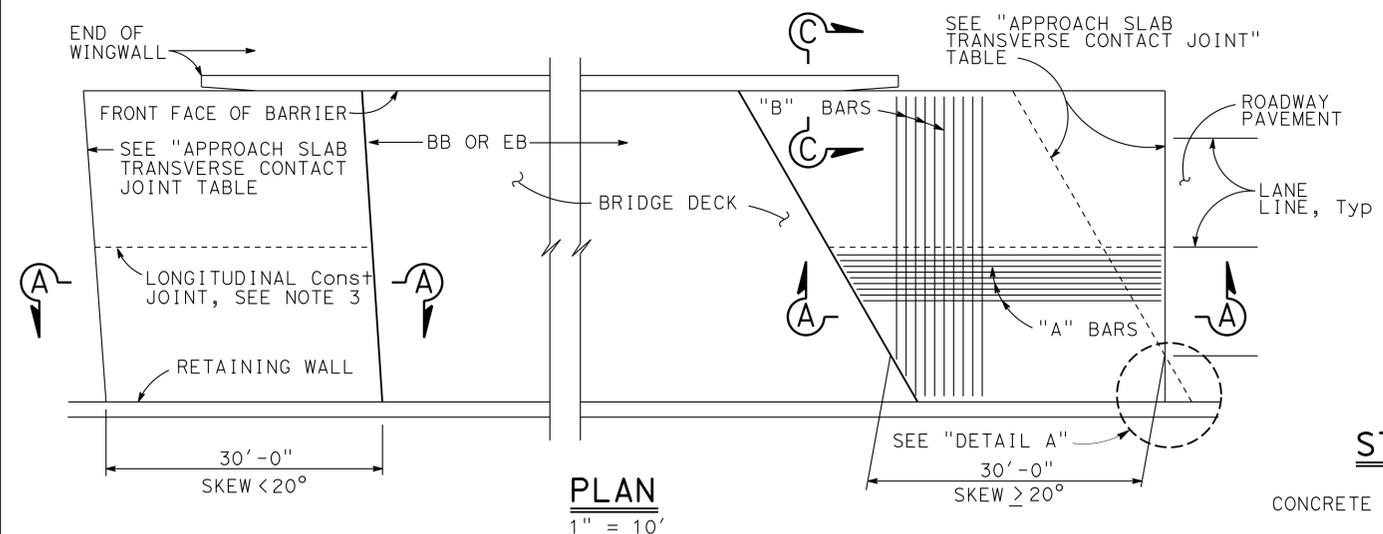
VINCENT AVENUE UC (WIDEN)  
MISCELLANEOUS DETAILS

DATE PLOTTED => 12-JUN-2013 17:06

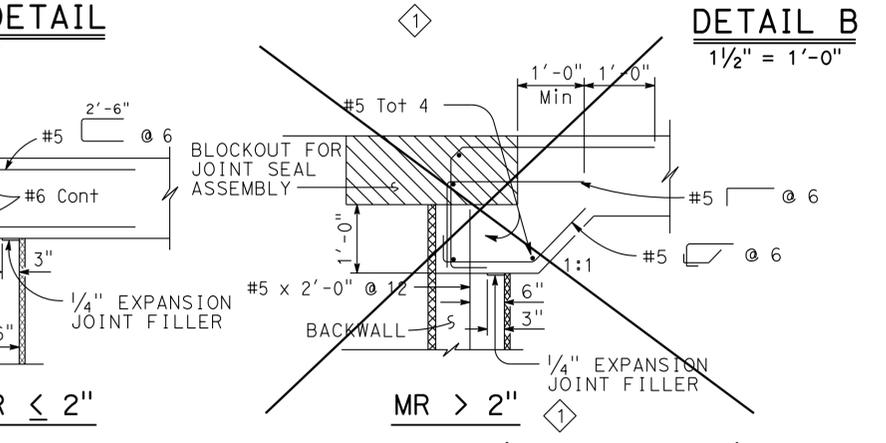
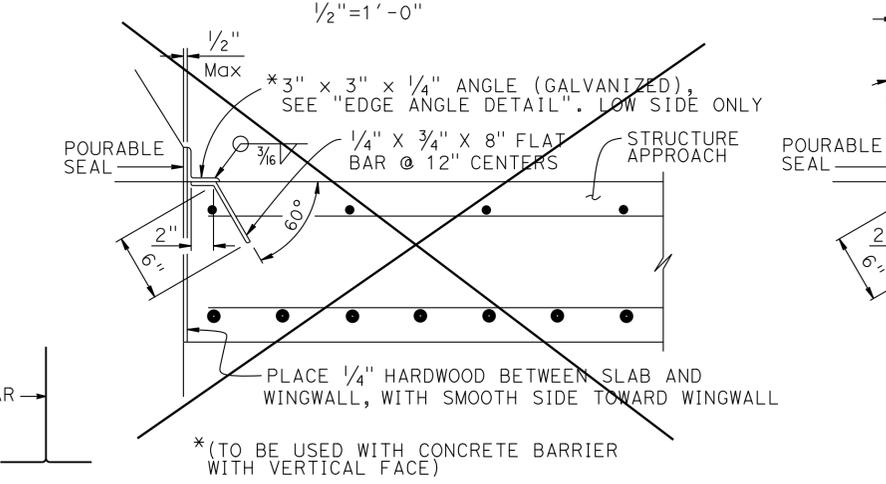
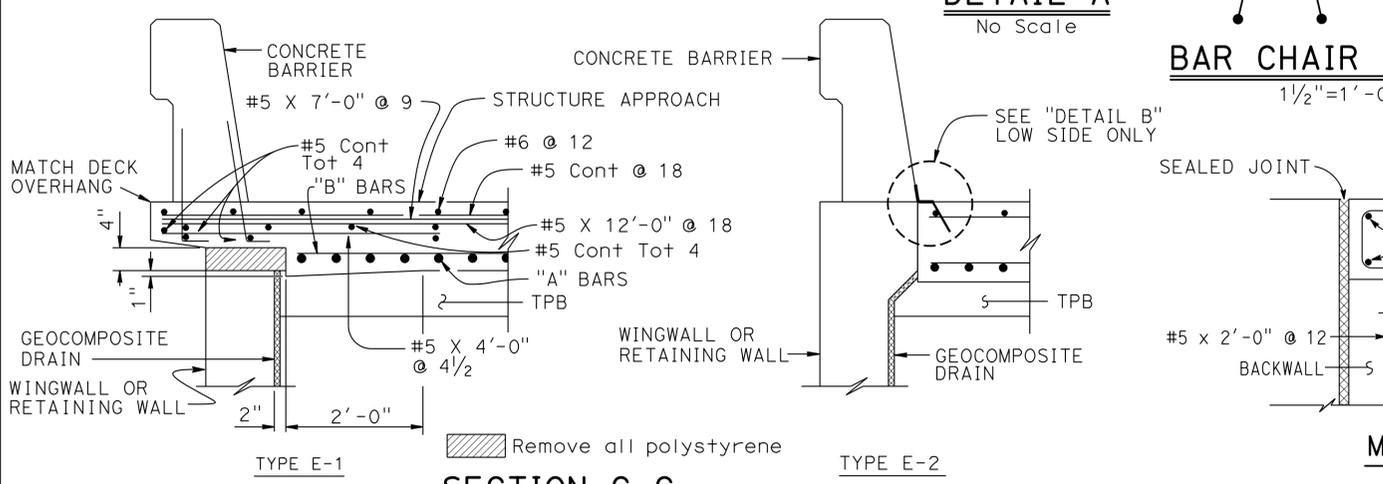
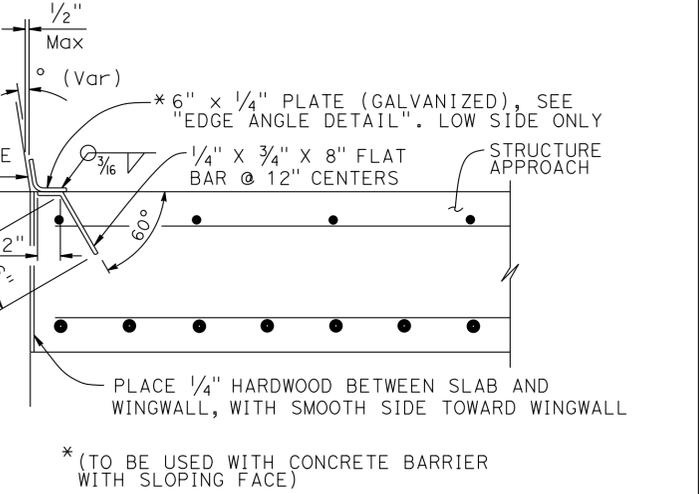
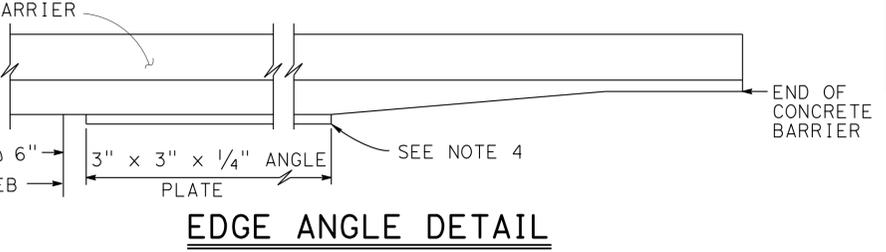
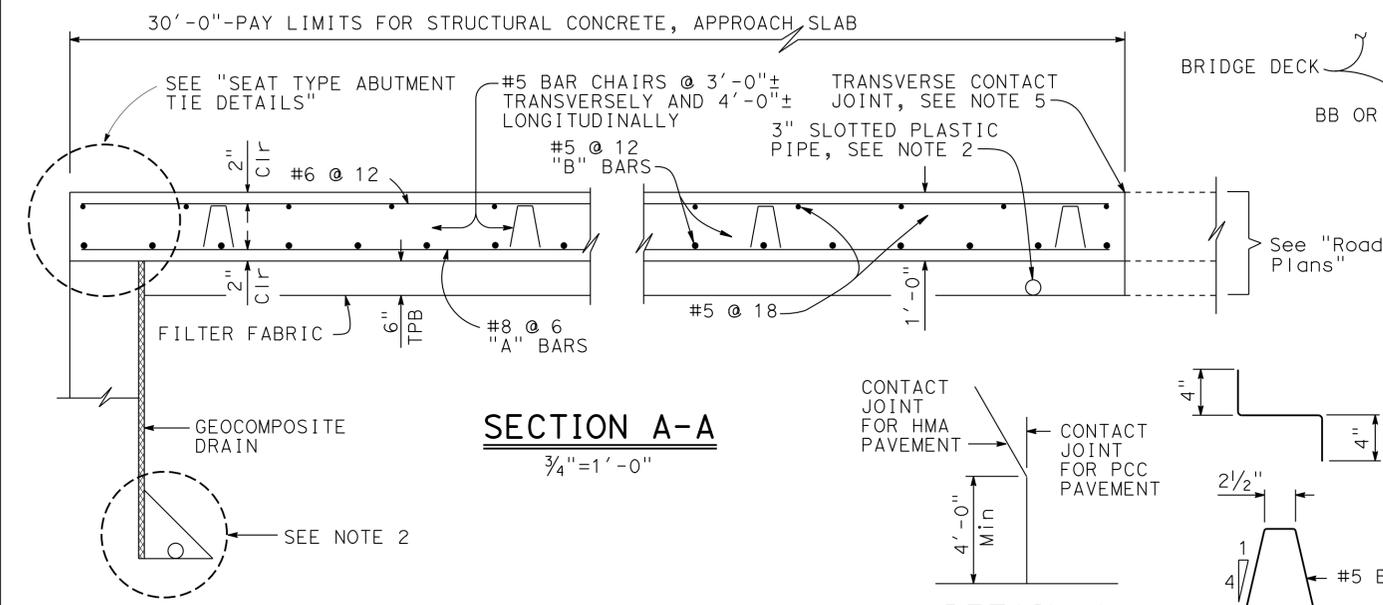
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1280	1475

12/21/11  
 REGISTERED CIVIL ENGINEER DATE  
 6-10-13  
 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  
 Carl Duan  
 No. C59976  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 20°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PN
20° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT EACH LANE LINE



- NOTES:**
- For details not shown, see Structure Plans. For MR < 2", adjust bar reinforcement to clear a sawcut for sealed joint, when required.
  - For drainage details, see "STRUCTURE APPROACH DRAINAGE DETAILS" sheet.
  - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
  - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.
  - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
  - At the Contractor's option, approach slab transverse reinforcement may be placed parallel to paving notch. Spacing of transverse reinforcement is measured along CL roadway.

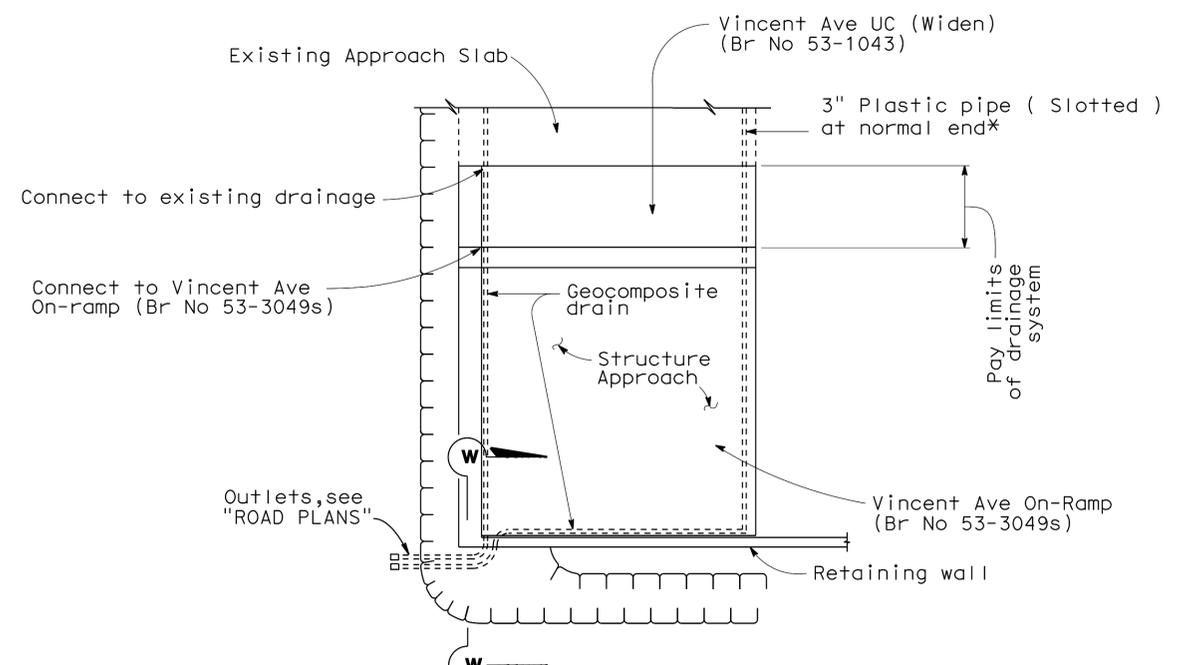
STANDARD DRAWING  
 FILE NO. **xs3-120**  
 APPROVAL DATE July 2011

Deleted Detail

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES

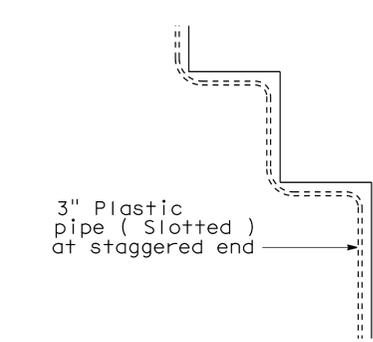
BRIDGE NO. 53-1043  
 POST MILE 35.4  
**VINCENT AVENUE UC (WIDEN)**  
**STRUCTURE APPROACH TYPE N(30S)**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1281	1475
			12/21/11	DATE	
			6-10-13	PLANS APPROVAL DATE	
REGISTERED CIVIL ENGINEER Carl Duan No. C59976 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 electronic copies of this plan sheet.					

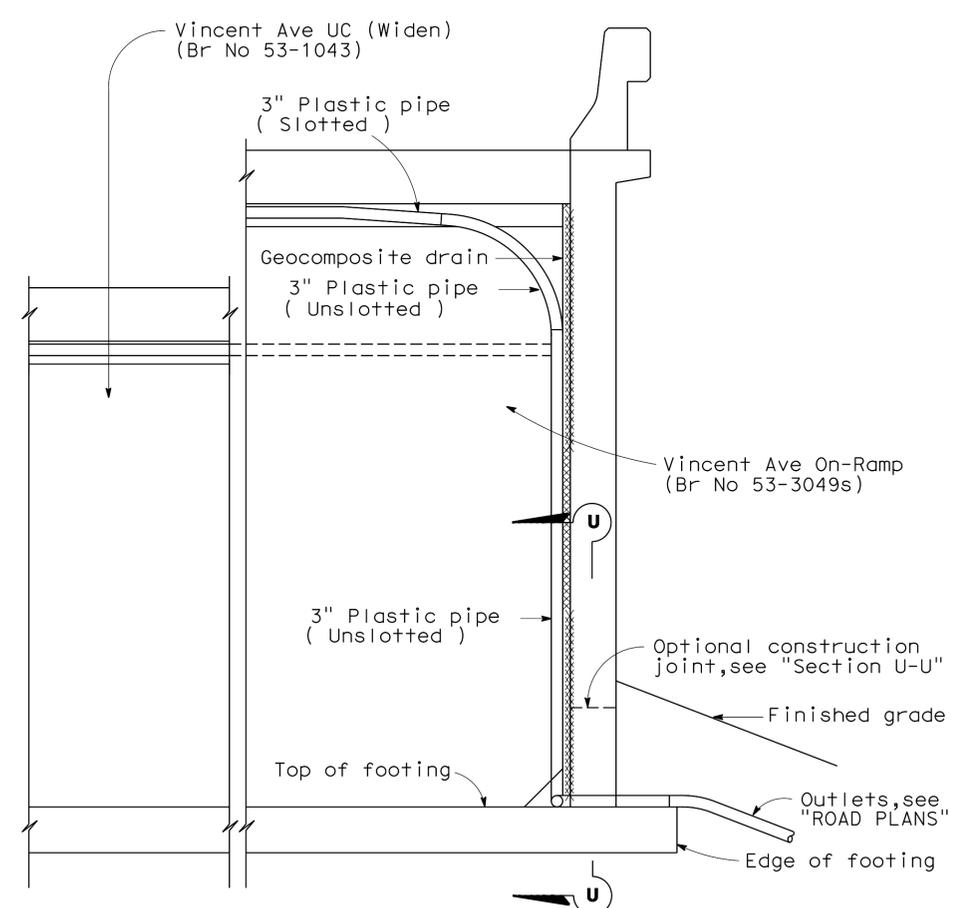


**TYPICAL PLAN**  
1"=10'

\*For pipe layout at staggered end, see "Detail V".



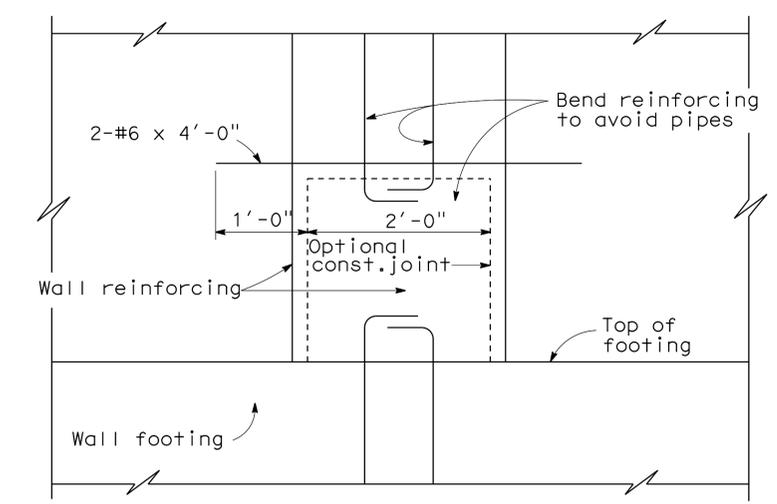
**DETAIL V**  
No Scale



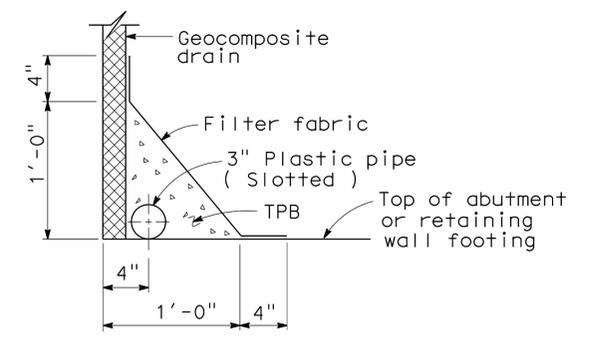
**SECTION W-W**  
1/2"=1'-0"

NOTE: Bends and junctions in 3" plastic pipe are 30" radius min.

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

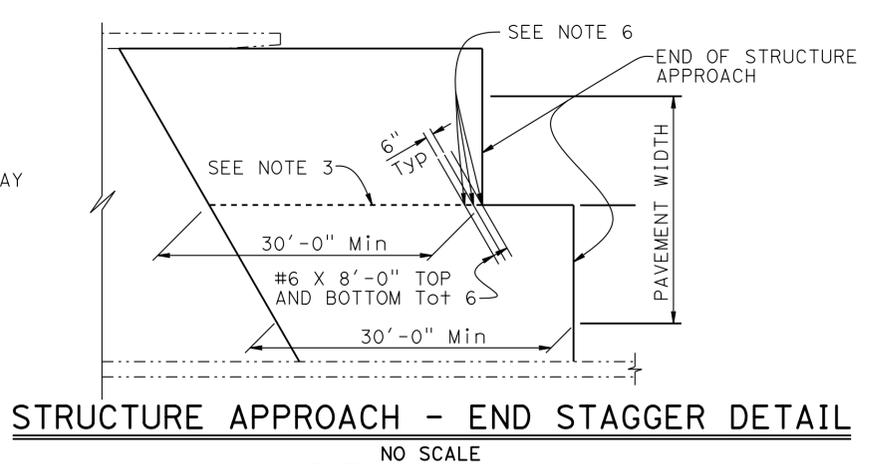
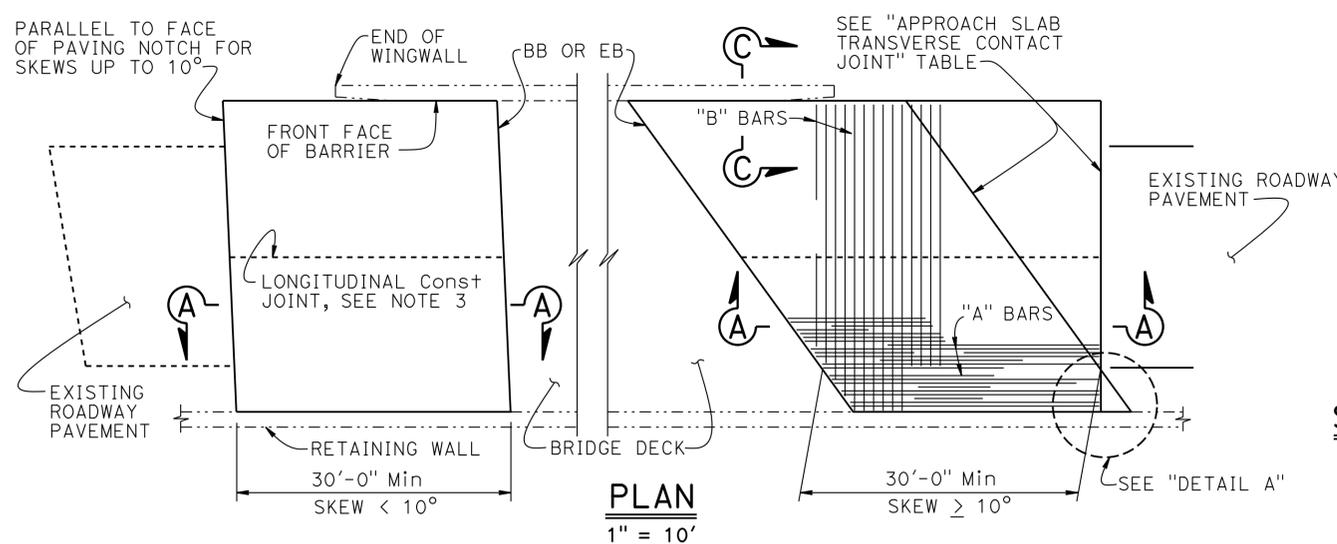


**SECTION U-U**  
1"=1'-0"

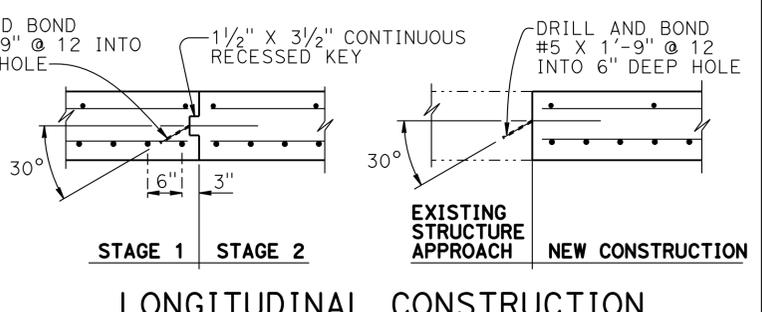
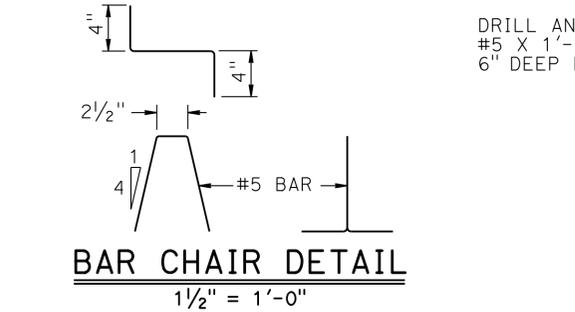
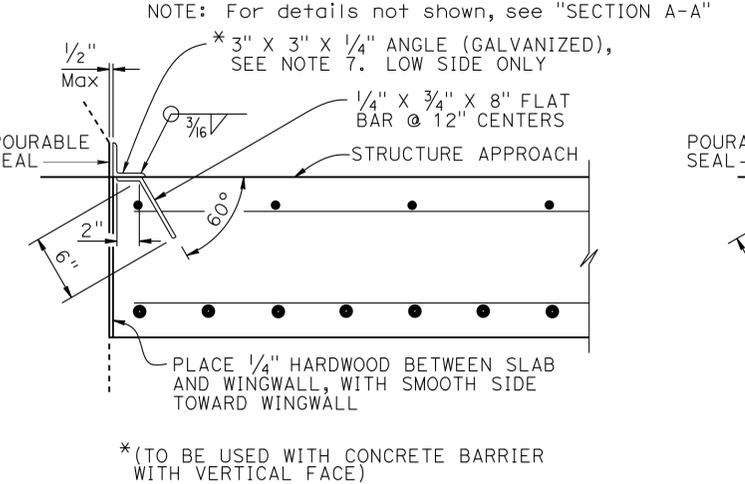
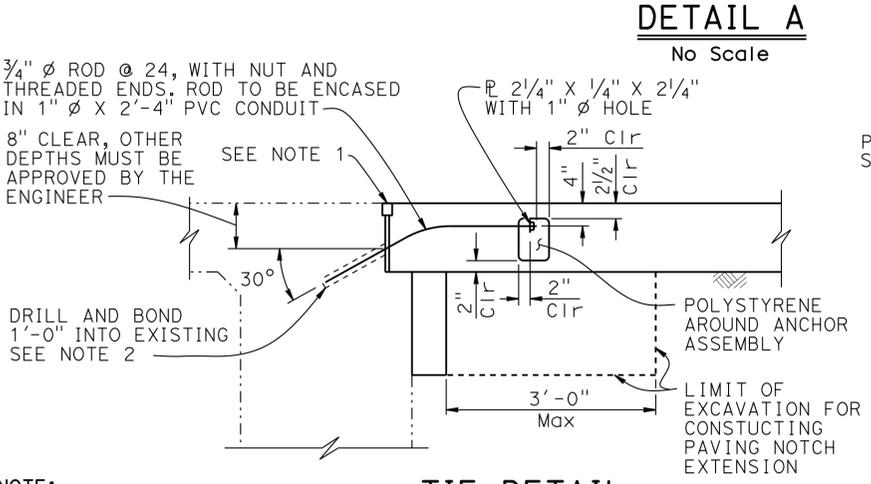
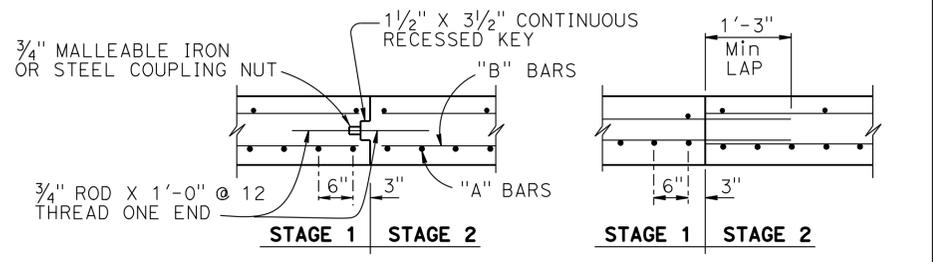
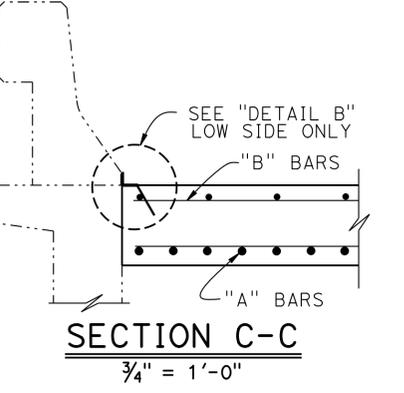
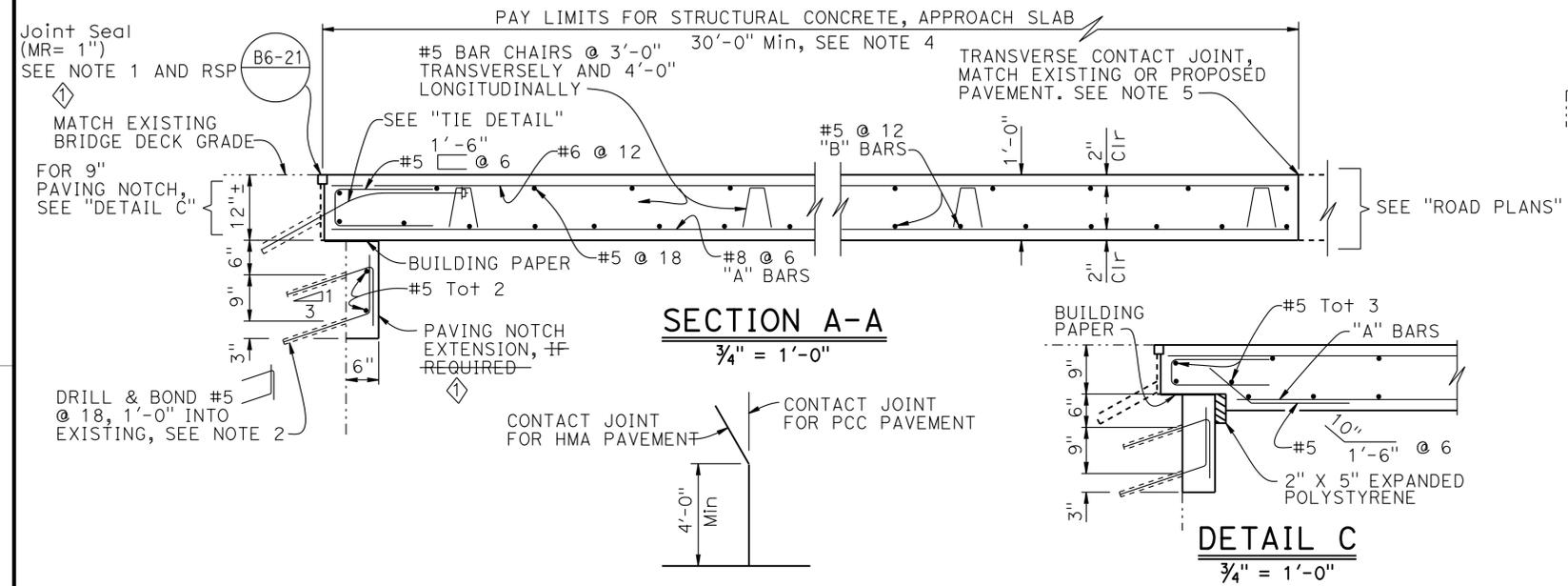


**WITH FOOTING DRAINAGE DETAILS**  
1/2"=1'-0"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Chad Lim	CHECKED Carl Duan	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	VINCENT AVENUE UC (WIDEN)	
	DETAILS	BY K. Farahzadi/E. Hallstrom	CHECKED Carl Duan			53-1043	STRUCTURE APPROACH DRAINAGE DETAILS	
	QUANTITIES	BY Chad Lim	CHECKED Carl Duan			POST MILE 35.4		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3622	PROJECT NUMBER & PHASE: 070000000085 1		CONTRACT NO.: 1170U1
					DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 21 OF 26



APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PAVING NOTCH
10° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT EACH LANE LINE



- NOTES:
- For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required
  - Space to avoid existing prestress anchorages and main reinforcement
  - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines
  - Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint
  - For transverse contact joint with new PCC paving, refer to Standard Plan P10
  - Couplers are required for stage construction
  - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable

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

REVISED STANDARD DRAWING  
 FILE NO. **xs3-150**  
 APPROVAL DATE July 2011

Revised Note

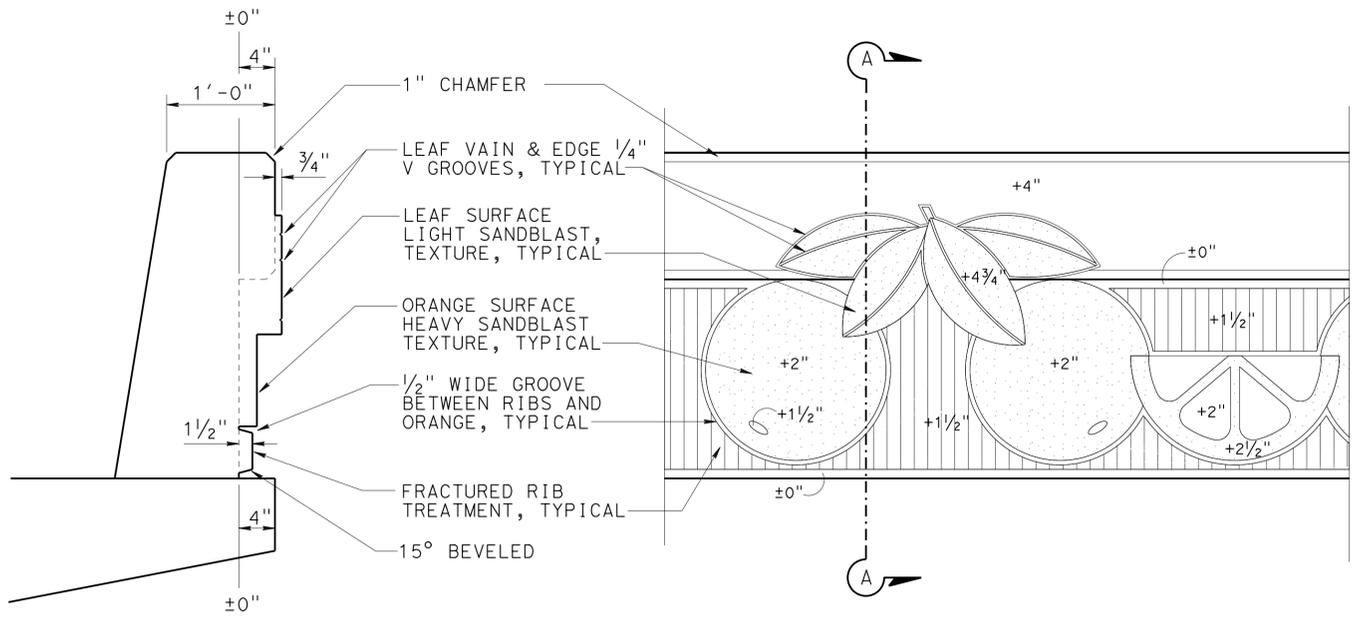
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 53-1043  
 POST MILE 35.4  
**VINCENT AVENUE UC (WIDEN)**  
**STRUCTURE APPROACH TYPE R(30D)**

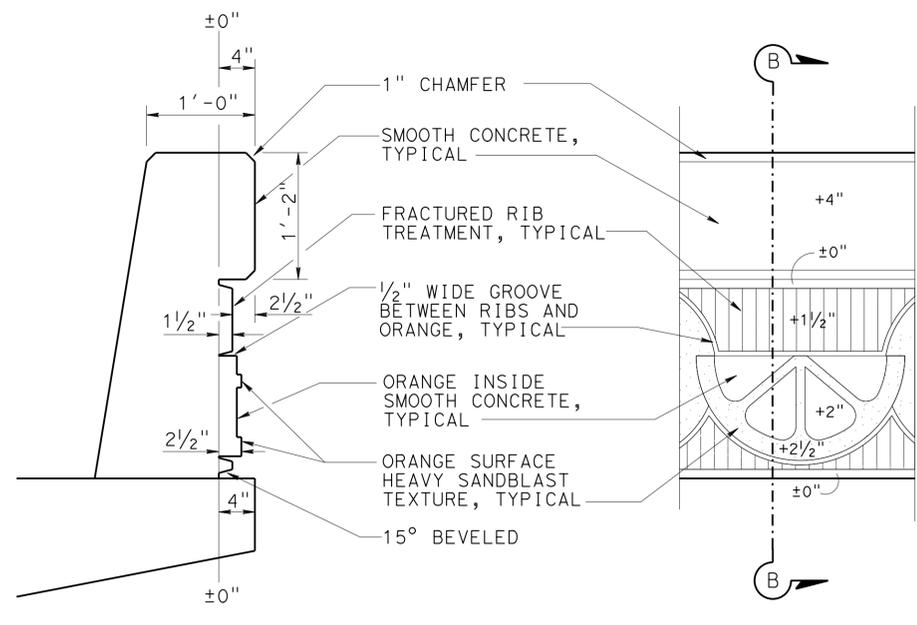
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1283	1475

C.M. Duan 12/21/11  
 REGISTERED CIVIL ENGINEER DATE  
 6-10-13  
 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.

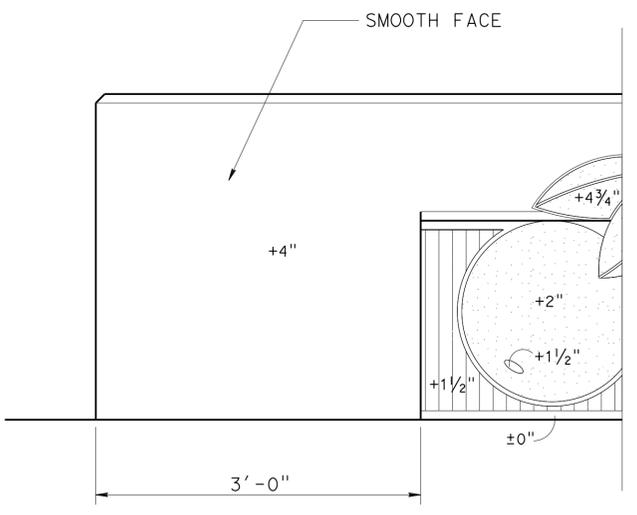
REGISTERED PROFESSIONAL ENGINEER  
 Carl Duan  
 No. C59976  
 Exp. 06-30-12  
 CIVIL  
 STATE OF CALIFORNIA



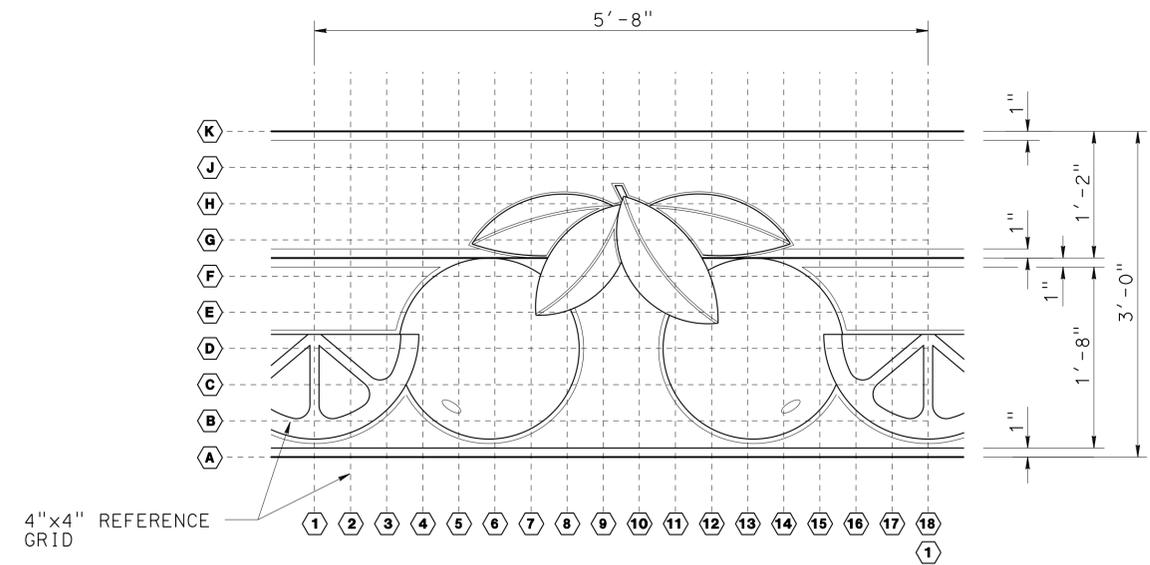
**SECTION A-A**  
NO SCALE



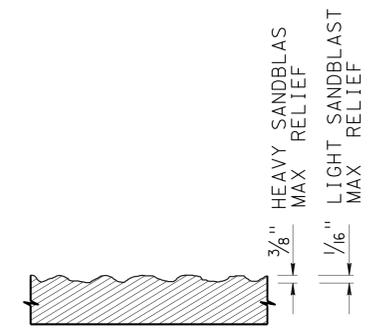
**SECTION B-B**  
NO SCALE



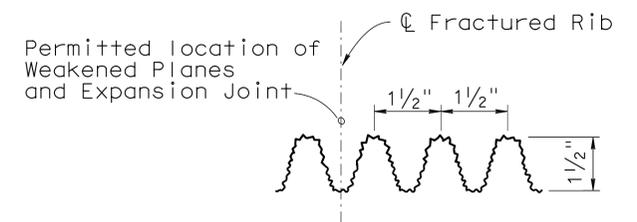
**BARRIER ENDING**  
NO SCALE



**ORANGE MOTIF MOCK-UP PANEL**  
NO SCALE



**SANDBLAST DETAIL**  
NO SCALE



**FRACTURED RIB DETAIL**  
NO SCALE

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY K. Li	CHECKED Edward B. Mu	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO.	<b>VINCENT AVENUE UC (WIDEN)</b> <b>CONCRETE BARRIER TYPE 736 (MOD) DETAILS</b>
	DETAILS	BY K. Li/K. Farahzadiyazdi	CHECKED Edward B. Mu			53-1043	
	QUANTITIES	BY Chad Lim	CHECKED Carl Duan			POST MILE 35.4	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3622	PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.: 1170U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 12/08/11, 12/16/11, 03/21/12 SHEET 22 OF 26

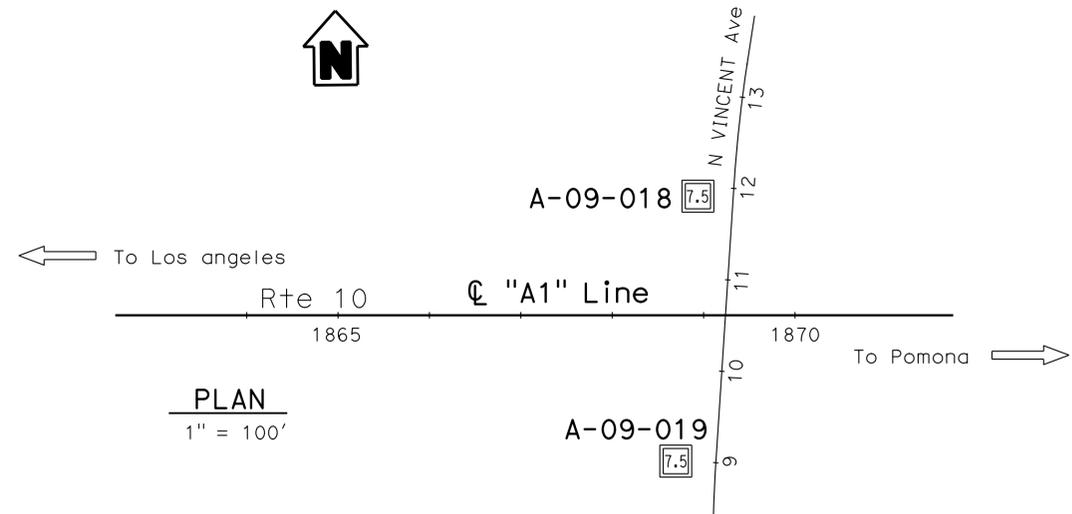
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1284	1475

*Sungro Cho*  
 REGISTERED CIVIL ENGINEER DATE 10-14-11  
 6-10-13  
 PLANS APPROVAL DATE  
 Sungro Cho  
 No. C75151  
 Exp. 12-31-11  
 CIVIL  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

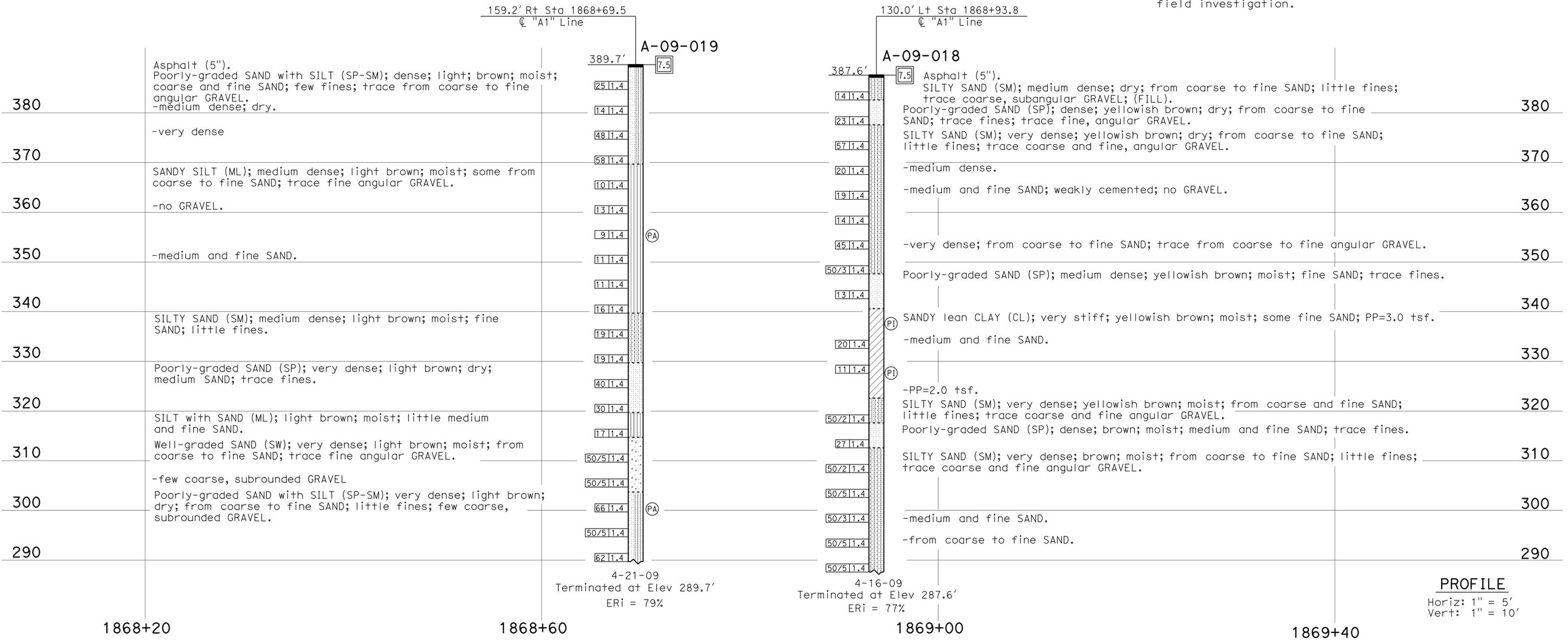
**BENCH MARK**

BM #98-I-67 Elev 395.36'  
 Hilti Nail in the east curb of California Ave. 90 ft N of Center St. and 24 ft. E of California Ave., in front of 150 N California Ave.



**PLAN**  
 1" = 100'

Note: No ground water encountered during field investigation.



**PROFILE**  
 Horiz: 1" = 5'  
 Vert: 1" = 10'

<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>VINCENT AVENUE UC (WIDEN)</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: B. Huddleston, I.G-Remmen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		53-1043		<b>LOG OF TEST BORINGS 1 OF 4</b>	
NAME: D. Jang		CHECKED BY: H. Yang		FIELD INVESTIGATION BY: S. Cho		<b>DESIGN BRANCH X</b>		POST MILE			
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 07000000851		CONTRACT NO.: 07-1170U1		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3		07-07-11 08-02-11 10-12-11		SHEET 23		OF 26	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1285	1475

10-14-11  
 REGISTERED CIVIL ENGINEER DATE

6-10-13  
 PLANS APPROVAL DATE

Sungro Cho  
 No. C75151  
 Exp. 12-31-11  
 CIVIL  
 STATE OF CALIFORNIA

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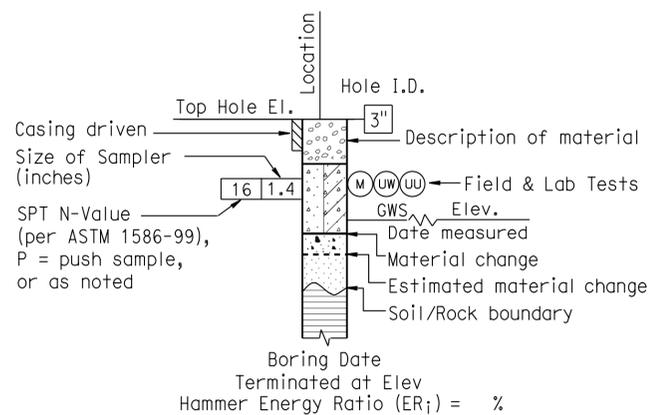
CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS				
Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

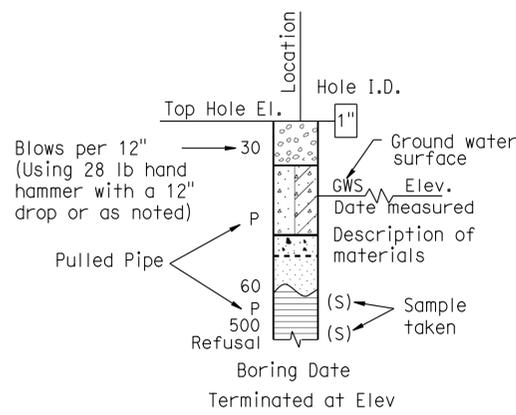
BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring
	R	Rotary drilled boring
	P	Rotary percussion boring (air)
	R	Rotary drilled diamond core
	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778-95)
	O	Other

Note: Size in inches.

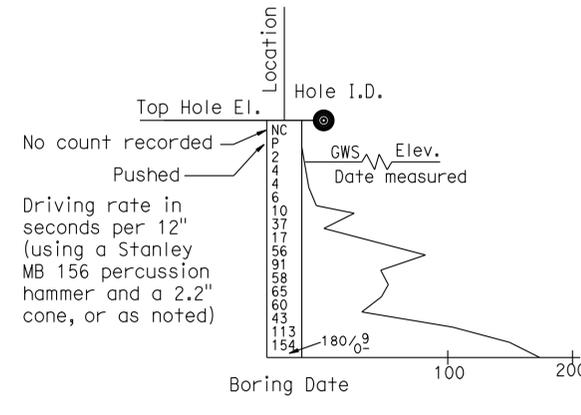
PLASTICITY OF FINE-GRAINED SOILS	
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



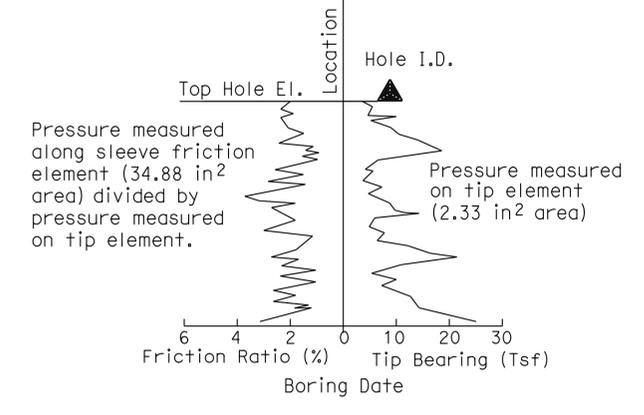
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING

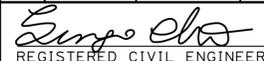


CONE PENETRATION TEST (CPT) SOUNDING

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X	BRIDGE NO. 53-1043 POST MILE 35.4	VINCENT AVENUE UC (WIDEN) LOG OF TEST BORINGS 2 OF 4
	PREPARED BY: I.G-Remmen				
GS LOTB SOIL LEGEND	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3643 PROJECT NUMBER & PHASE: 07000000851	CONTRACT NO.: 07-1170U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES SHEET OF 24 26

USERNAME => s124496 DATE PLOTTED => 12-JUN-2013 TIME PLOTTED => 17:06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1286	1475


 10-14-11  
 REGISTERED CIVIL ENGINEER DATE

6-10-13  
 PLANS APPROVAL DATE

Sungro Cho  
 No. C75151  
 Exp. 12-31-11  
 CIVIL  
 STATE OF CALIFORNIA

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GROUP SYMBOLS AND NAMES			
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	GW Well-graded GRAVEL		CL Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
	GP Poorly graded GRAVEL Poorly graded GRAVEL with SAND		
	GW-GM Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND		CL-ML SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
	GW-GC Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
	GP-GM Poorly graded GRAVEL with SILT Poorly graded GRAVEL with SILT and SAND		ML SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
	GP-GC Poorly graded GRAVEL with CLAY (or SILTY CLAY) Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
	GM SILTY GRAVEL SILTY GRAVEL with SAND		OL ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
	GC CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
	GC-GM SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND		OL ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
	SW Well-graded SAND Well-graded SAND with GRAVEL		
	SP Poorly graded SAND Poorly graded SAND with GRAVEL		CH Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
	SW-SM Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
	SW-SC Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		MH Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
	SP-SM Poorly graded SAND with SILT Poorly graded SAND with SILT and GRAVEL		
	SP-SC Poorly graded SAND with CLAY (or SILTY CLAY) Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		OH ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
	SM SILTY SAND SILTY SAND with GRAVEL		
	SC CLAYEY SAND CLAYEY SAND with GRAVEL		OH ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
	SC-SM SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
	PT PEAT		OL/OH ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND

FIELD AND LABORATORY TESTING	
(C)	Consolidation (ASTM D 2435)
(CL)	Collapse Potential (ASTM D 5333)
(CP)	Compaction Curve (CTM 216)
(CR)	Corrosivity Testing (CTM 643, CTM 422, CTM 417)
(CU)	Consolidated Undrained Triaxial (ASTM D 4767)
(DS)	Direct Shear (ASTM D 3080)
(EI)	Expansion Index (ASTM D 4829)
(M)	Moisture Content (ASTM D 2216)
(OC)	Organic Content-% (ASTM D 2974)
(P)	Permeability (CTM 220)
(PA)	Particle Size Analysis (ASTM D 422)
(PI)	Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
(PL)	Point Load Index (ASTM D 5731)
(PM)	Pressure Meter
(PP)	Pocket Penetrometer
(R)	R-Value (CTM 301)
(SE)	Sand Equivalent (CTM 217)
(SG)	Specific Gravity (AASHTO T 100)
(SL)	Shrinkage Limit (ASTM D 427)
(SW)	Swell Potential (ASTM D 4546)
(TV)	Pocket Torvane
(UC)	Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
(UU)	Unconsolidated Undrained Triaxial (ASTM D 2850)
(UW)	Unit Weight (ASTM D 4767)
(VS)	Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N <sub>60</sub> (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE	
Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS	
Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE		
Description	Size	
Boulder	> 12"	
Cobble	3" to 12"	
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

ENGINEERING SERVICES	GEOTECHNICAL SERVICES PREPARED BY: I.G-Remmen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>X</b>	BRIDGE NO. 53-1043	<b>VINCENT AVENUE UC (WIDEN)</b> <b>LOG OF TEST BORINGS 3 OF 4</b>
				POST MILE 35.4	
GS LOTB SOIL LEGEND	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3643 PROJECT NUMBER & PHASE: 07000000851	CONTRACT NO.: 07-1170U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES SHEET 25 OF 26

FILE => 53-1043-Z-1+D03.dgn

DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	33.2 / 40.9	485	749

DESIGN SECTION SUPERVISOR: *[Signature]*  
 REGISTERED CIVIL ENGINEER No. 0756  
 DATE APPROVED: November 29, 1971



DIVISION OF ENGINEERING SERVICES - MATERIALS AND GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
07	LA	10	33.2/37.2	1287	1475

REGISTERED CIVIL ENGINEER: *[Signature]* DATE: 10/13/11

**VINCENT AVENUE UC (WIDEN)**  
**LOG OF TEST BORINGS 4 OF 4**

UNIT: 3643 CONTRACT No. 07000000851 BRIDGE No. 53-1043  
 PROJ. No. & PHASE: 07-1170U1

AS-BUILT VERT DATUM: xx CONVERSION: xx Sheet of

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

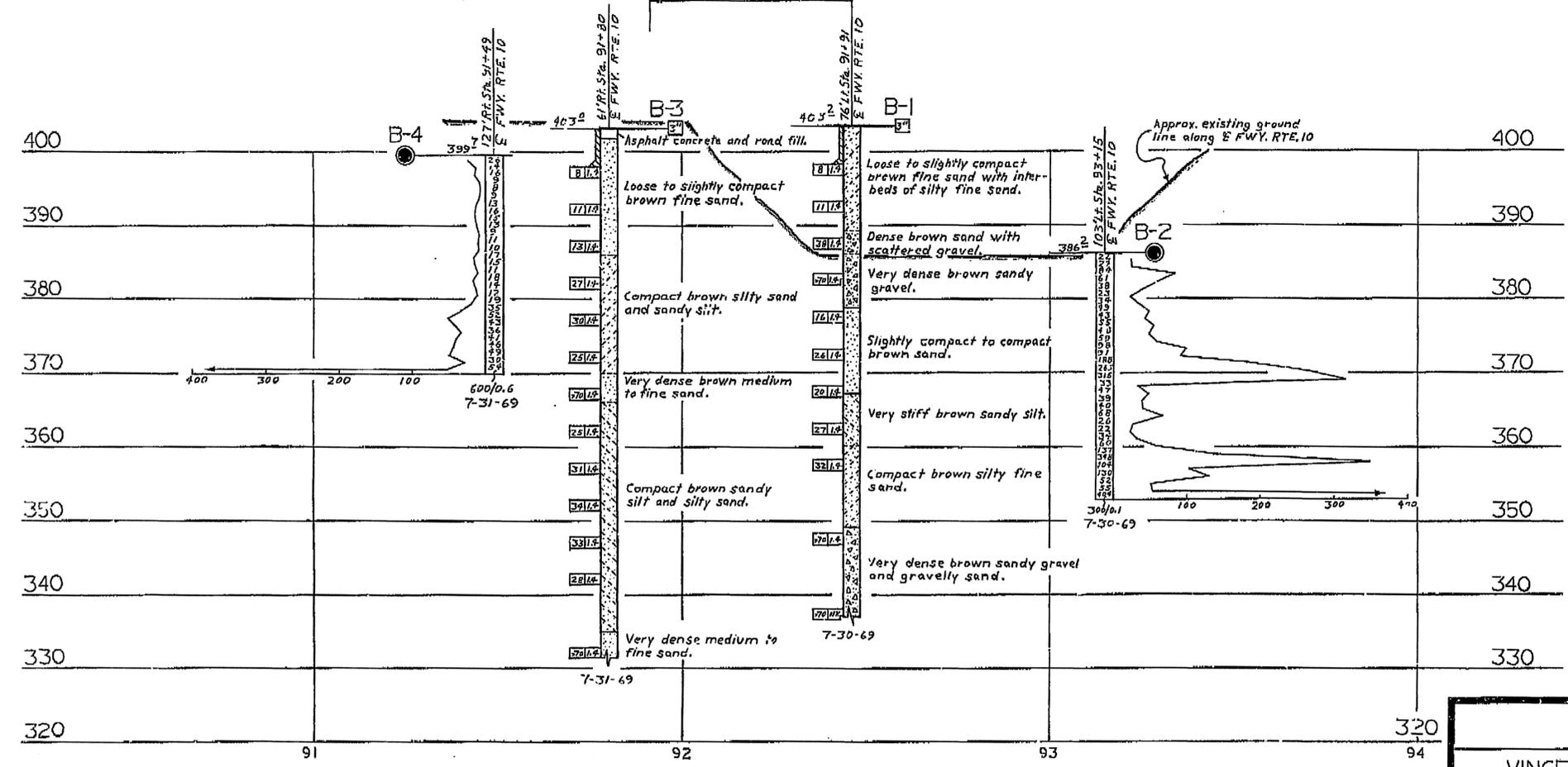
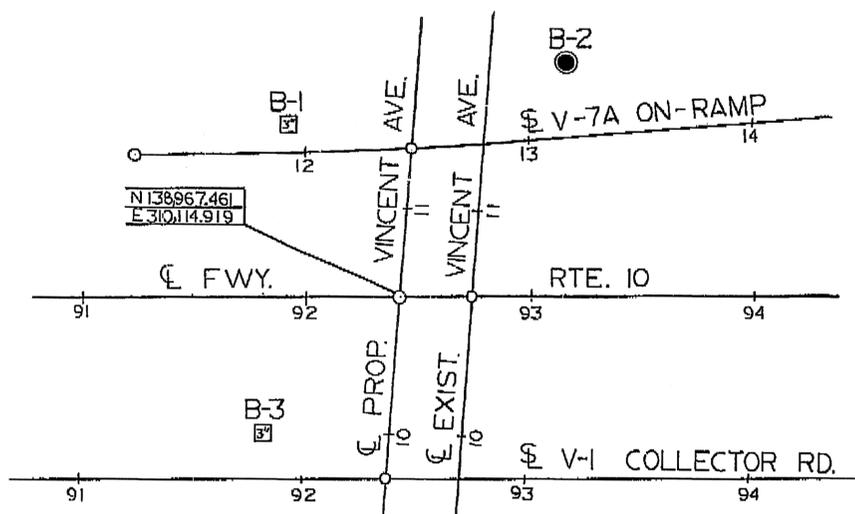
TO ACCOMPANY PLANS DATED 6-10-13

PLAN  
Scale: 1" = 40'

PROFILE  
Scale: Vert. 1" = 10'  
Horiz. 1" = 20'

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION DATE JULY, 69

**BENCH MARKS**  
 BM # 88-I-67 Elev. 395.76'  
 Set on Hilltop in the east curb of California Ave. 90 feet North of E of Center St. and 24 feet east of E of California Ave., in front of 150 North California Ave.



AS BUILT NONE  
 CORRECTIONS BY Paul Vucovich (4/9/85)  
 CONTRACT NO. 07-038824  
 DATE 8-18-75

LEGEND

PHENOMENON: 2 1/2" CONE PENETROMETER, SAMPLER BORING (DRY), ROYALTY BORING (WET), AUGER BORING (DRY), JET BORING, CORE BORING, TEST PIT

1" SOIL TUBE

ROCKET BORING

Penetration Boring

Top Hole El. (ft.)  
 Penetration Boring  
 Auger Boring  
 Jet Boring  
 Core Boring  
 Test Pit

LEGEND OF EARTH MATERIALS

SILTY CLAY OR CLAYEY SILT	GRAVEL
PEAT	SAND
ORGANIC MATTER	SILT
FILL MATERIAL	CLAY
IGNEOUS ROCK	SANDY CLAY OR CLAYEY SAND
SEDIMENTARY ROCK	SANDY SAND OR SILTY SAND
METAMORPHIC ROCK	

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

UNIFORMITY COEFFICIENT (U) = W<sub>60</sub> / W<sub>20</sub>

PLASTICITY INDEX (PI) = W<sub>L</sub> - W<sub>P</sub>

LIQUIDITY INDEX (LI) = W<sub>L</sub> - 25

CLAYEY SAND (CS) - U > 2, PI < 7

SANDY CLAY (SC) - U > 2, 7 < PI < 17

CLAY (CL) - U > 2, PI > 17

SANDY SILT (SM) - U > 2, PI < 4

SILT (ML) - U > 2, 4 < PI < 17

SILT (MH) - U > 2, PI > 17

SANDY SILT (MS) - U > 2, PI < 4

SILT (ML) - U > 2, 4 < PI < 17

SILT (MH) - U > 2, PI > 17

SANDY SILT (MS) - U > 2, PI < 4

SILT (ML) - U > 2, 4 < PI < 17

SILT (MH) - U > 2, PI > 17

SANDY SILT (MS) - U > 2, PI < 4

SILT (ML) - U > 2, 4 < PI < 17

SILT (MH) - U > 2, PI > 17

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

**AS BUILT PLANS**  
 Contract No. 07-038824  
 Date Completed -  
 Document No. 70073444

REVISIONS  
 DEC 1975

STATE OF CALIFORNIA TRANSPORTATION AGENCY DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS			
VINCENT AVENUE UNDERCROSSING (MODIFY)			
LOG OF TEST BORINGS			
BRIDGE NO. 53-1043	POST MILE 35.4	DRAWING NO.	SHEET 13 OF 13
REVISION DATES		(PRELIMINARY STAGE ONLY)	

WO 038821  
 CU 07213

Discard prints bearing earlier revision dates

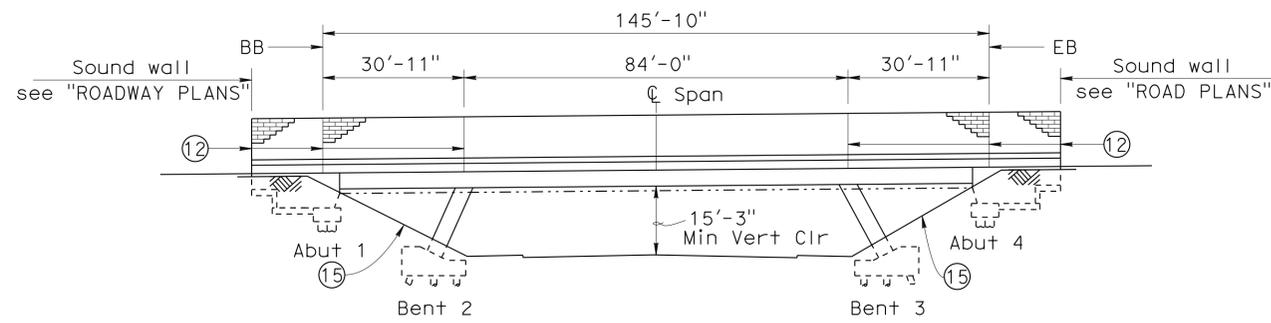
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1288	1475

12/19/11  
 REGISTERED CIVIL ENGINEER DATE

6-10-13  
 PLANS APPROVAL DATE

JASON FANG  
 No. C 70467  
 Exp. 09/30/2012  
 CIVIL  
 STATE OF CALIFORNIA

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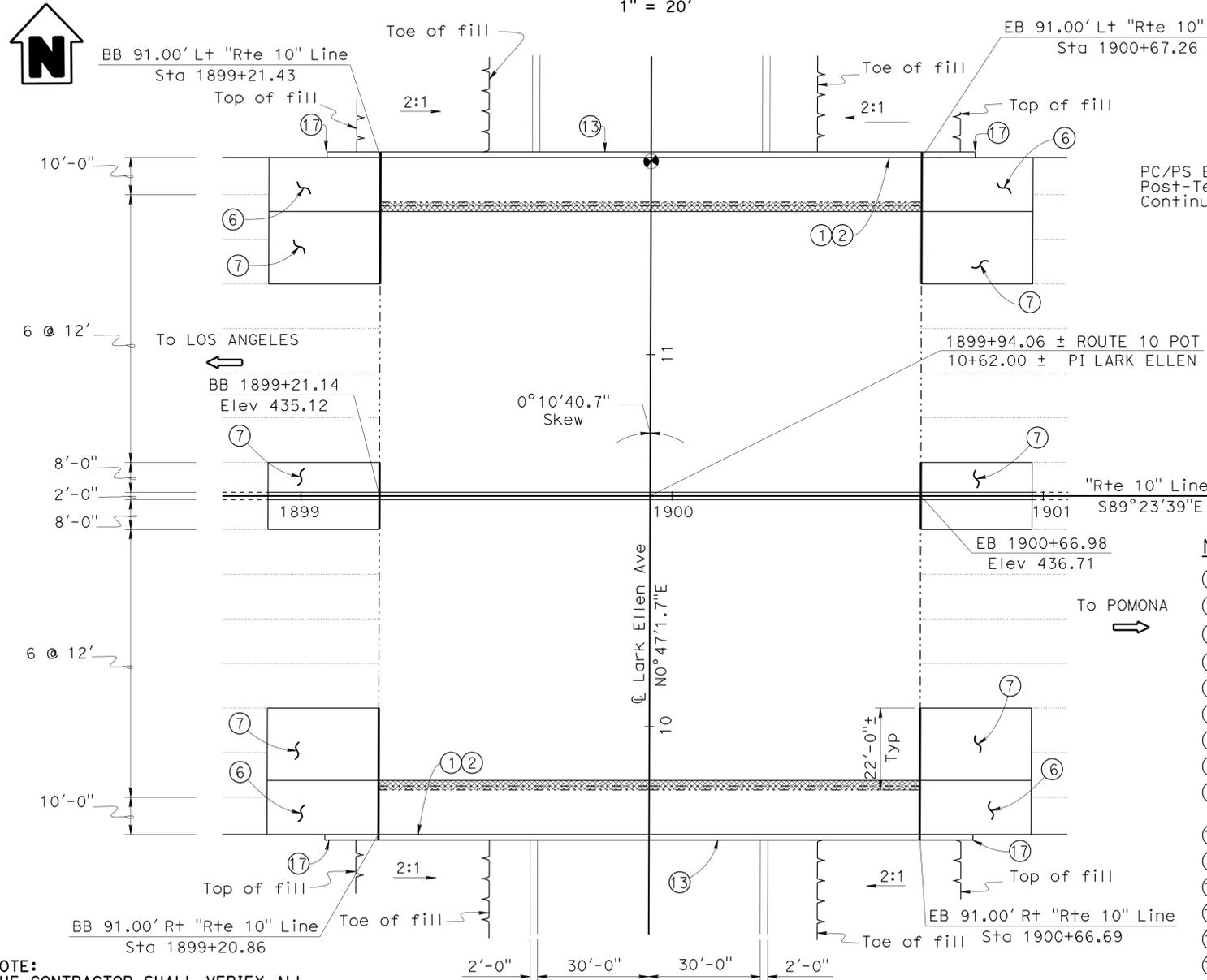
**LEGEND:**

- Remove exist Concrete Barrier Railing Type 9 and overhang
- Existing Structure
- New Construction
- Indicates point of Minimum Vertical Clearance
- Directions of traffic
- Indicates location of new joint seal

Datum Elev = 390.00

**ELEVATION**

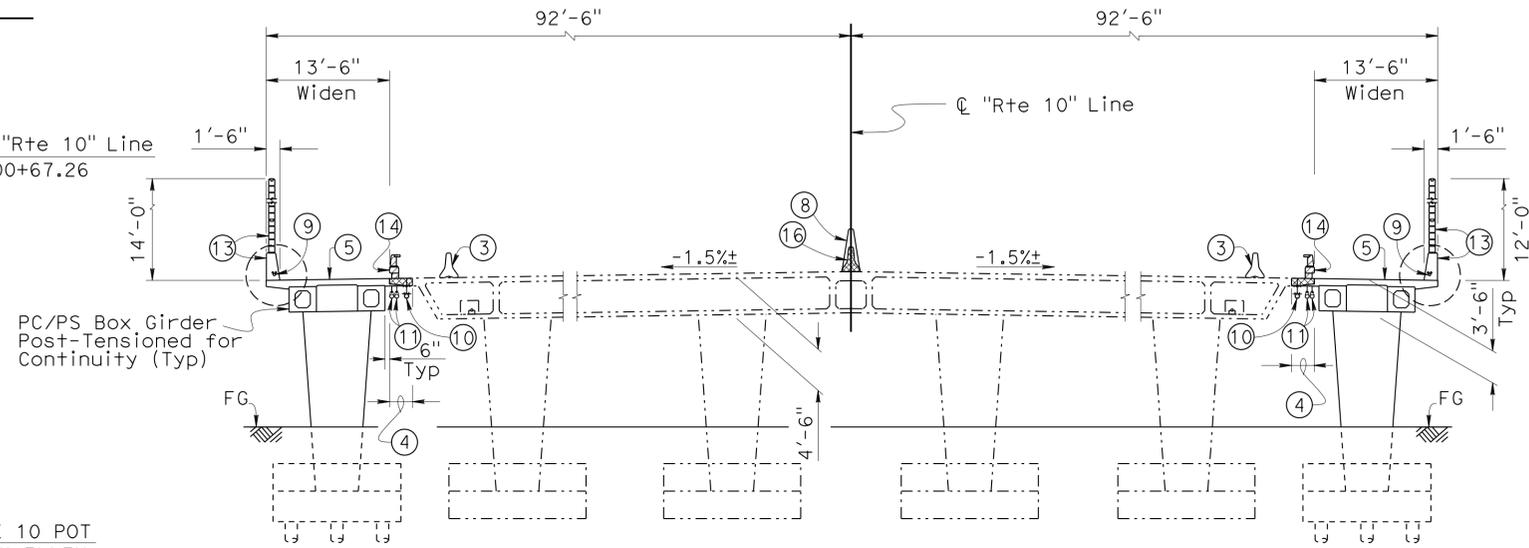
1" = 20'



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

**PLAN**

1" = 20'



**TYPICAL SECTION**

1" = 10'

**NOTES:**

- ① Paint "Bridge No. 53-2270".
- ② Paint "LARK ELLEN AVE. UC".
- ③ Temporary Railing (Type K), see "ROAD PLANS".
- ④ 2'-6" Closure Pour.
- ⑤ Match existing Grade and Cross Slope.
- ⑥ Structure Approach Type N(30D).
- ⑦ Structure Approach Type R(30D).
- ⑧ Median Concrete Barrier Type 60GA (Mod).
- ⑨ 2-2"Ø Light Conduits and 1-3"Ø Sprinkler Control Conduit see "ROAD PLANS".
- ⑩ 1-3"Ø Irrigation Waterline.
- ⑪ 2-3/2"Ø Communication Conduits see "ROAD PLANS".
- ⑫ Expansion Joint.
- ⑬ Soundwall (Masonry Block) on Barrier Type 736 (Mod).
- ⑭ Remove Barrier Railing Type 9 and overhang.
- ⑮ Slope Paving.
- ⑯ Remove Concrete Barrier Type 50A.
- ⑰ CONCRETE BARRIER Type 736A (Mod).

**QUANTITIES**

DESCRIPTION	UNIT	SUM
BRIDGE REMOVAL (PORTION), LOCATION F	LUMP	SUM
STRUCTURE EXCAVATION (BRIDGE)	759	CY
STRUCTURE BACKFILL (BRIDGE)	523	CY
3" SUPPLY LINE (BRIDGE)	432	LF
AGGREGATE BASE (APPROACH SLAB)	14	CY
FURNISH STEEL PILING (HP 14 X 89)	1,669	LF
DRIVE STEEL PILE (HP 14 X 89)	32	EA
24" CAST-IN-DRILLED-HOLE CONCRETE PILING	360	LF
PRESTRESSING	LUMP	SUM
STRUCTURAL CONCRETE, BRIDGE FOOTING	203	CY
STRUCTURAL CONCRETE, BRIDGE	359	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	60	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	138	CY
PAVING NOTCH EXTENSION	93	CF
FURNISH PRECAST PRESTRESSED CONCRETE BOX GIRDER (20'-30')	8	EA
FURNISH PRECAST PRESTRESSED CONCRETE BOX GIRDER (70'-80')	4	EA
ERECT PRECAST PRESTRESSED CONCRETE BOX GIRDER	12	EA
SOUND WALL (MASONRY BLOCK)	3,397	SQFT
JOINT SEAL (MR 1")	178	LF
BAR REINFORCING STEEL (BRIDGE)	136,200	LB
SLOPE PAVING (CONCRETE)	17	CY
CONCRETE BARRIER (TYPE 60GA MODIFIED)	230	LF
CONCRETE BARRIER (TYPE 736 MODIFIED)	292	LF
CONCRETE BARRIER (TYPE 736A MODIFIED)	64	LF

DESIGN	BY Jason Fang	CHECKED Dawit Worku	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
DETAILS	BY Antonette L. Ong	CHECKED Dawit Worku	LAYOUT	BY Jason Fang
QUANTITIES	BY Jason Fang	CHECKED Edward B. Mu	SPECIFICATIONS	BY James Choi

**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES**  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO. 53-2270  
 POST MILE 35.97

**LARK ELLEN AVE UC (WIDEN)**  
**GENERAL PLAN**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1289	1475

12/19/11  
REGISTERED CIVIL ENGINEER DATE

6-10-13  
PLANS APPROVAL DATE

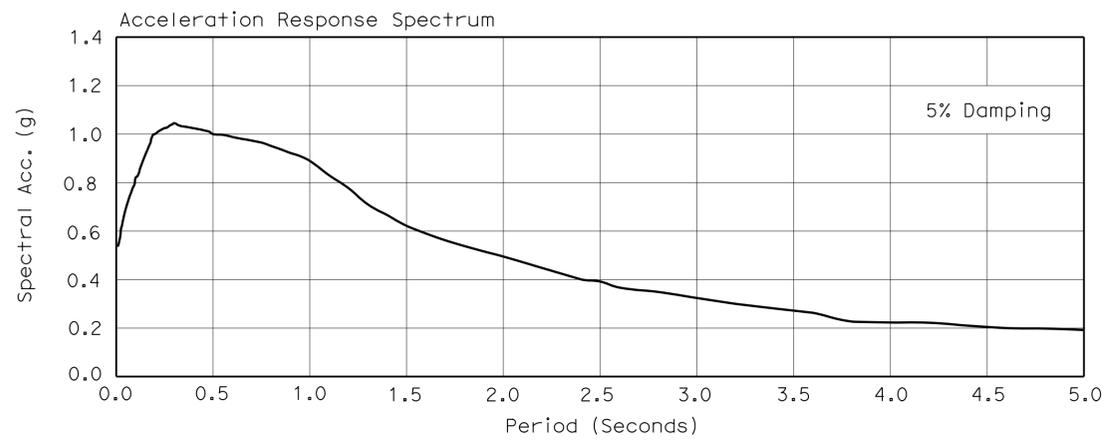
REGISTERED PROFESSIONAL ENGINEER  
 JASON FANG  
 No. C 70467  
 Exp. 09/30/2012  
 CIVIL  
 STATE OF CALIFORNIA

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### PILE DATA TABLE

LOCATION	PILE TYPE	REQUIRED NOMINAL RESISTANCE (KIPS) PER PILE		DESIGN TIP ELEVATION (FT)	SPECIFIED TIP ELEVATION (FT)	NOMINAL DRIVING RESISTANCE (KIPS)
		COMPRESSION	TENSION			
Abut 1	24" CIDH	164	0	395.95 (a) 391.95 (b)	392	N/A
Bents 2 & 3	Steel HP 14x89 Driven Pile	350	200	359.00 (a) 361.00 (b)	359	350
Abut 4	24" CIDH	164	0	397.00 (a) 393.00 (b)	393	N/A

Note: Design tip elevation are controlled by  
(a) compression (b) lateral load



**ARS CURVE**

### GENERAL NOTES LOAD AND RESISTANCE FACTOR DESIGN

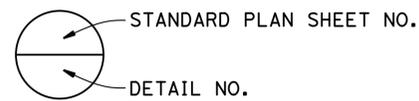
- DESIGN:** AASHTO LRFD Bridge Design Specifications, 4th Edition and the Caltrans Amendments, preface dated December 2008; except that geotechnical design of deep foundations, earth retaining systems and bridge (incl. barrier and railing) details taken from Standard Plans May 2006 and Standard Bridge Details XS sheets, etc are designed using Bridge Design Specifications ('96 AASHTO w/ Revisions by Caltrans).
- SEISMIC DESIGN:** Caltrans Seismic Design Criteria (SDC) version 1.4 June 2006
- DEAD LOAD:** Includes 35 PSF for future wearing surface.
- LIVE LOAD:** HL-93 and permit design load.
- SOUNDWALL DEAD LOAD:** The soundwall dead load is distributed on the bridge with 100% of moment and 100% of shear force on exterior girders
- SEISMIC LOADING:** Soil Profiles:  $V_{s30} = 820$  ft/s, Moment Magnitude = 7.5  
Peak Ground Acceleration = 0.6g  
(See ARS CURVE)
- REINFORCED CONCRETE:**  $f_y = 60$  ksi  
 $f'_c = 3.6$  ksi, see "CONCRETE STRENGTH AND TYPE LIMITS"  
 $n = 8$
- PRESTRESSED CONCRETE:** See "PRESTRESSING NOTES" on "GIRDER LAYOUT" sheet

### INDEX TO PLANS

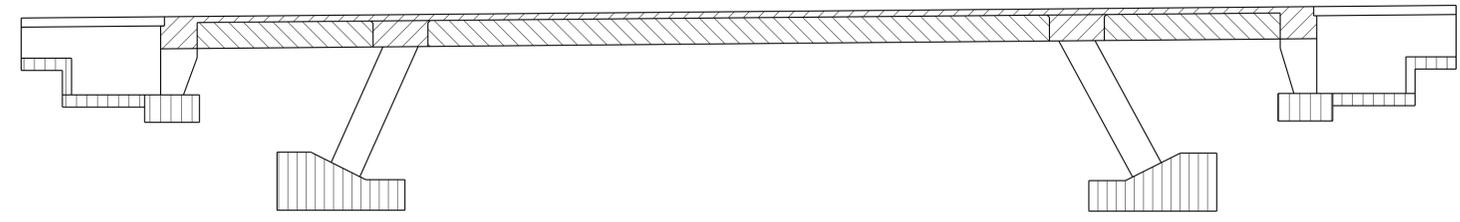
- | NO. | SHEET NAME   |
|-----|--|
| 1.  | GENERAL PLAN   |
| 2.  | INDEX TO PLANS   |
| 3.  | CONSTRUCTION SEQUENCE  |
| 4.  | FOUNDATION PLAN  |
| 5.  | ABUTMENT LAYOUT  |
| 6.  | ABUTMENT DETAILS NO. 1   |
| 7.  | ABUTMENT DETAILS NO. 2   |
| 8.  | BENT LAYOUT  |
| 9.  | BENT DETAILS NO. 1   |
| 10. | BENT DETAILS NO. 2   |
| 11. | TYPICAL SECTION  |
| 12. | GIRDER LAYOUT  |
| 13. | PRECAST GIRDER DETAILS NO. 1   |
| 14. | PRECAST GIRDER DETAILS NO. 2   |
| 15. | GIRDER REINFORCEMENT   |
| 16. | RETAINING WALL TYPE 1SWB   |
| 17. | SOUNDWALL-MASONRY BLOCK ON BRIDGE                                    |
| 18. | SOUNDWALL-MASONRY BLOCK WITH BARRIER ON RETAINING WALL, DETAIL NO. 1 |
| 19. | SOUNDWALL-MASONRY BLOCK WITH BARRIER ON RETAINING WALL, DETAIL NO. 2 |
| 20. | STRUCTURE APPROACH TYPE N(30D)                                       |
| 21. | STRUCTURE APPROACH TYPE R(30D)                                       |
| 22. | STRUCTURE APPROACH DRAINAGE DETAILS                                  |
| 23. | SLOPE PAVING FULL-SLOPE  |
| 24. | LOG OF TEST BORINGS 1 OF 4   |
| 25. | LOG OF TEST BORINGS 2 OF 4   |
| 26. | LOG OF TEST BORINGS 3 OF 4   |
| 27. | LOG OF TEST BORINGS 4 OF 4   |

### STANDARD PLANS DATED MAY 2006

- |        |  |
|--------|--|
| A10A   | ACRONYMS AND ABBREVIATIONS (A-L)                                     |
| A10B   | ACRONYMS AND ABBREVIATIONS (M-Z)                                     |
| A10C   | SYMBOLS (SHEET 1 OF 2)   |
| A10D   | SYMBOLS (SHEET 2 OF 2)   |
| A62C   | LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE                 |
| A76D   | CONCRETE BARRIER TYPE 60GA (MOD)                                     |
| A76E   | CONCRETE BARRIER TYPE 60G  |
| B0-3   | BRIDGE DETAILS   |
| B0-5   | BRIDGE DETAILS   |
| B2-3   | 24" CAST-IN-DRILLED-HOLE CONCRETE PILE                               |
| B3-1   | RETAINING WALL TYPE 1, (H=4' THROUGH 30')                            |
| B6-21  | JOINT SEALS (MAXIMUM MOVEMENT RATING=2")                             |
| B7-1   | BOX GIRDER DETAILS   |
| B7-10  | UTILITY OPENING, BOX GIRDER  |
| B8-5   | CAST-IN-PLACE PRESTRESSED GIRDER DETAILS                             |
| B11-56 | CONCRETE BARRIER TYPE 736  |
| B14-3  | COMMUNICATION AND SPRINKLER CONTROL CONDUITS (CONDUITS LESS THAN 4") |
| B14-4  | WATER SUPPLY LINE (BRIDGE) (PIPE SIZES LESS THAN 4")                 |



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



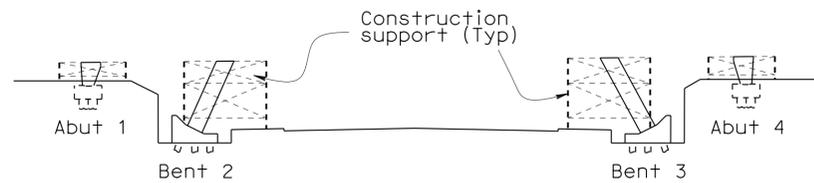
- Structural Concrete, Bridge (6 ksi @ 28 days)
- Structural Concrete, Bridge Footing
- Structural Concrete
- Precast pre-stressed concrete Box Girder (6 ksi @ 28 days)

### CONCRETE STRENGTH AND TYPE LIMITS

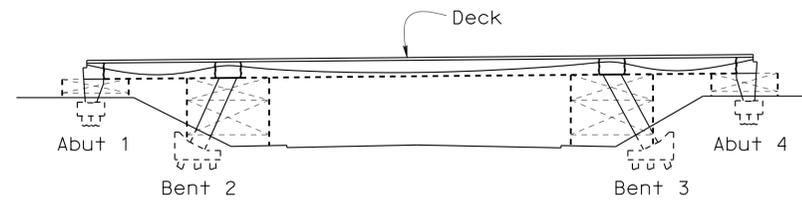
No Scale

DESIGN BY Jason Fang CHECKED Dawit Worku DETAILS BY Antonette L. Ong CHECKED Dawit Worku QUANTITIES BY Jason Fang CHECKED Edward B. Mu	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO. 53-2270 POST MILE 35.97	<b>LARK ELLEN AVE UC (WIDEN)</b> <b>INDEX TO PLANS</b>
	STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			
	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3		UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1 CONTRACT NO.: 1170U1	

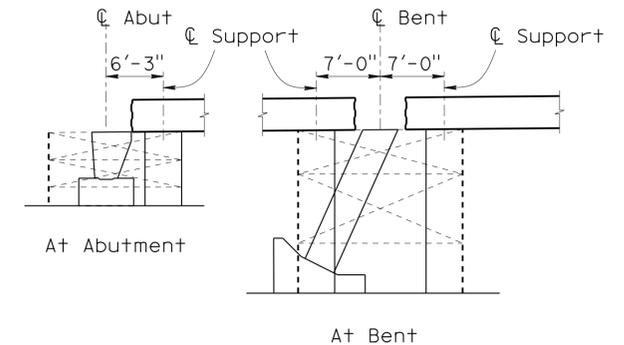
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1290	1475
			12/19/11		
REGISTERED CIVIL ENGINEER			DATE		
6-10-13			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



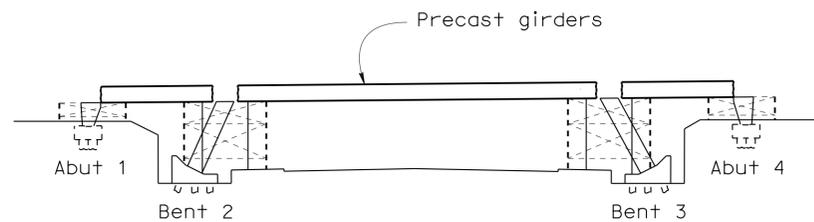
**STEP 1**  
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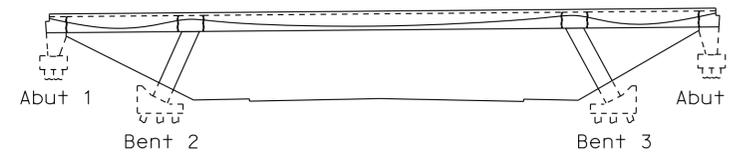
**STEP 5 & 6**  
No Scale



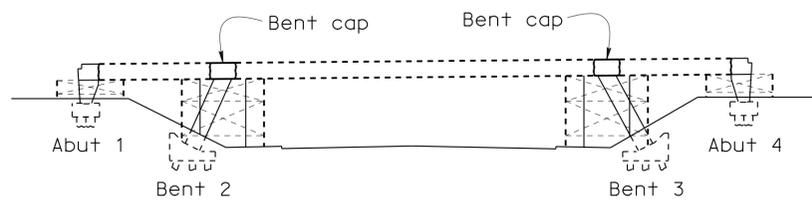
**CONSTRUCTION SUPPORT LOCATIONS**  
No Scale



**STEP 2**  
No Scale



**STEP 7 & 8**  
No Scale



**STEP 3 & 4**  
No Scale

**SUGGESTED BRIDGE CONSTRUCTION SEQUENCE**

- Step 1. Construct abutment footings and stems, bent footing, column and construction supports.
- Step 2. Erect precast/prestressed girders on supports.
- Step 3. Construct cast-in-place end diaphragms, bent cap, and intermediate diaphragms.
- Step 4. Allow cast-in-place end diaphragms and bent cap concrete to reach the strength of 28 days.
- Step 5. Place deck concrete.
- Step 6. Complete longitudinal prestressing (post-tensioning). Longitudinal prestressing shall not be permitted less than 10 days after deck concrete has been placed and before the concrete compressive strength at time of stressing has achieved the specified f'ci.
- Step 7. Remove supports and complete abutment construction.
- Step 8. Construct concrete barrier, soundwall and closure pour. Closure pour shall not be placed sooner than 14 days after construction supports have been removed.

DESIGN	BY Jason Fang	CHECKED Dawit Worku
DETAILS	BY Antonette L. Ong	CHECKED Dawit Worku
QUANTITIES	BY Jason Fang	CHECKED Edward B. Mu

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 20

BRIDGE NO.	53-2270
POST MILE	35.97

LARK ELLEN AVE UC (WIDEN)  
CONSTRUCTION SEQUENCE

Bridge Location

- ① - 77.865 Lt. C Rte 10, Sta 1899+21.430, Elev 434.061
- ② - 78.027 Lt. C Rte 10, Sta 1900+67.249, Elev 435.615
- ③ - 77.920 Rt. C Rte 10, Sta 1900+66.558, Elev 435.540
- ④ - 77.864 Rt. C Rte 10, Sta 1899+20.703, Elev 434.244
- ⑤ Sta 1899+94.062 C Rte 10 =  
Sta 10+62.000 C Lark Ellen Ave

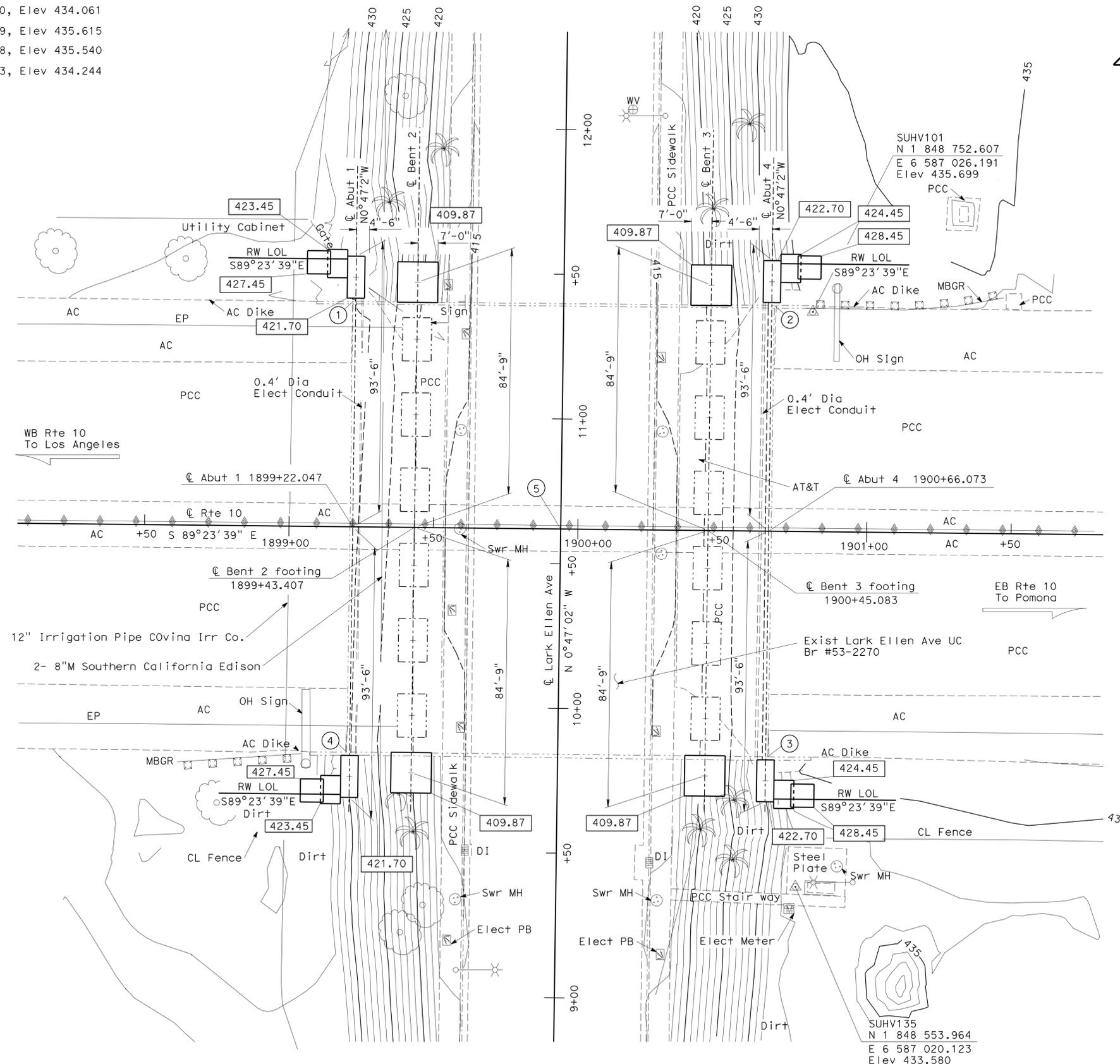
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1291	1475

12/19/11  
REGISTERED CIVIL ENGINEER DATE

6-10-13  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
No. C 70467  
Exp. 09/30/2012  
CIVIL  
STATE OF CALIFORNIA

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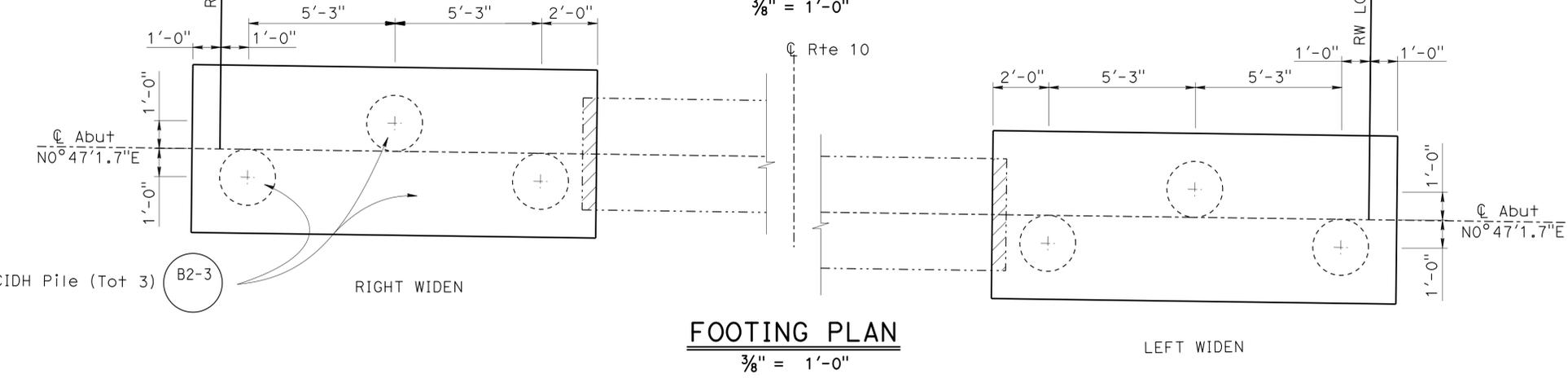
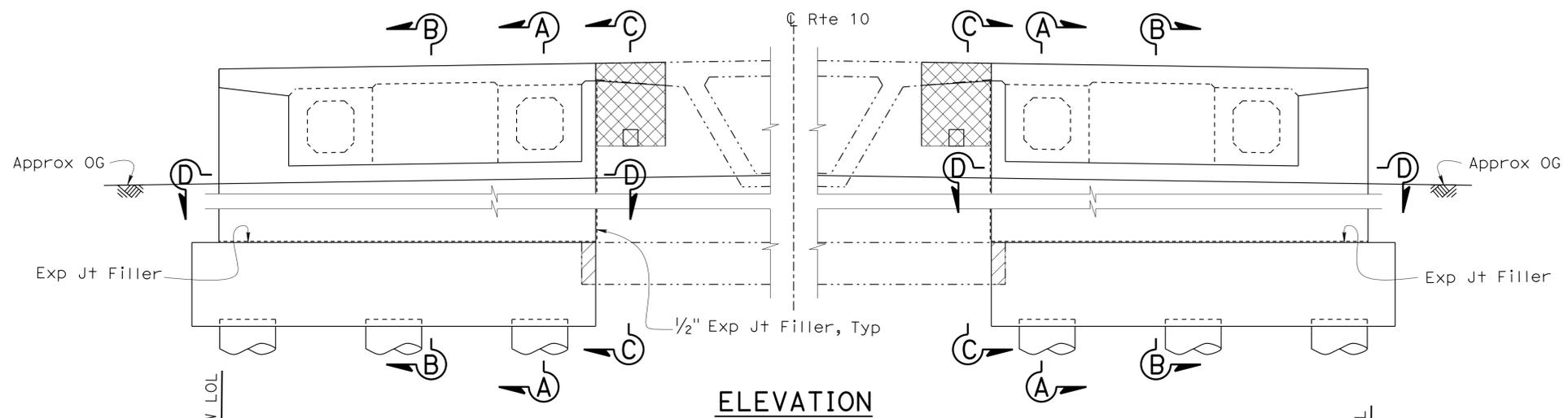
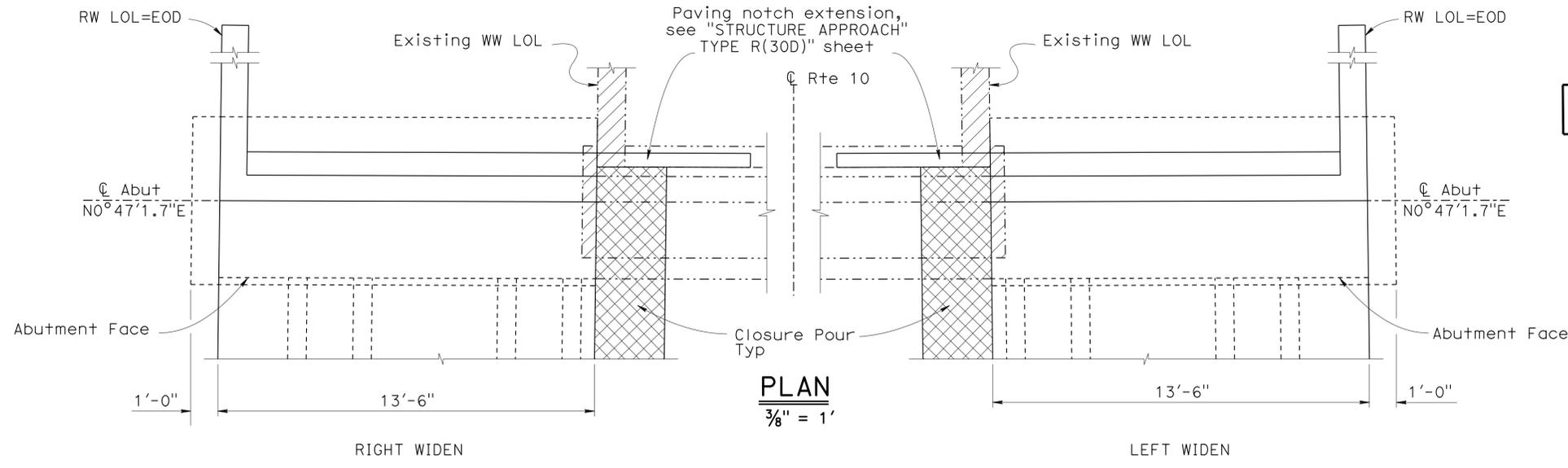
**SURVEY CONTROL**  
 SUHV101  
 Pd: Set PK/AC Shdr WB Rte 10  
 75.928 Lt. C Rte 10  
 Sta 1900+80.590  
 N 1 848 752.607  
 E 6 587 026.191  
 Elev 435.699  
 SUHV135  
 Pd: Fd Scribe '+' / PumpHouse  
 122.768 Rt. C Rte 10  
 Sta 1900+76.623  
 N 1 848 553.964  
 E 6 587 020.123  
 Elev 433.580

- NOTES:**
1. Underground utilities as shown are approximate.
  2. The bottom of footing elevation.
  3. Piles are not shown.

<b>PRELIMINARY INVESTIGATION SECTION</b>				DESIGN	By Jason Fang	CHECKED	Dawit Worku	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO.	53-2270	<b>LARK ELLEN AVE UC (WIDEN)</b> FOUNDATION PLAN
SCALE	VERT. DATUM	NAV D88	PHOTOGRAMMETRY AS OF: X	DETAILS	By Antonette L. Ong	CHECKED	Dawit Worku			POST MILE	35.97	
1"=20'	HORIZ. DATUM	NAD83	SURVEYED	BY T. Hung / C. Stewart	CHECKED	BY E. Viajar	QUANTITIES			BY Jason Fang	CHECKED	
ALIGNMENT TIES Dist. Traverse Sheet				DRAFTED	BY C. Pham	CHECKED	BY E. Viajar	UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1		CONTRACT NO.: 1170U1		
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10)												
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS								DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		
								12/19/11 02/14/11 08/24/11		SHEET 4 OF 27		

FILE => 53-2270-e-fdpl.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1292	1475
			12/19/11		
			REGISTERED CIVIL ENGINEER		
			6-10-13		
			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.					



**LEGEND**

	Bridge Removal (Portion)
	Closure Pour
	12" x 12" future utility opening

- NOTES:**
- For Section "A-A", "B-B", "C-C" and "D-D" see "ABUTMENT DETAILS NO. 1" sheet.
  - Abut 1 shown, Abut 4 similar.

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

DESIGN	BY Jason Fang	CHECKED Dawit Worku
DETAILS	BY Antonette L. Ong	CHECKED Dawit Worku
QUANTITIES	BY Jason Fang	CHECKED Edward B. Mu

**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

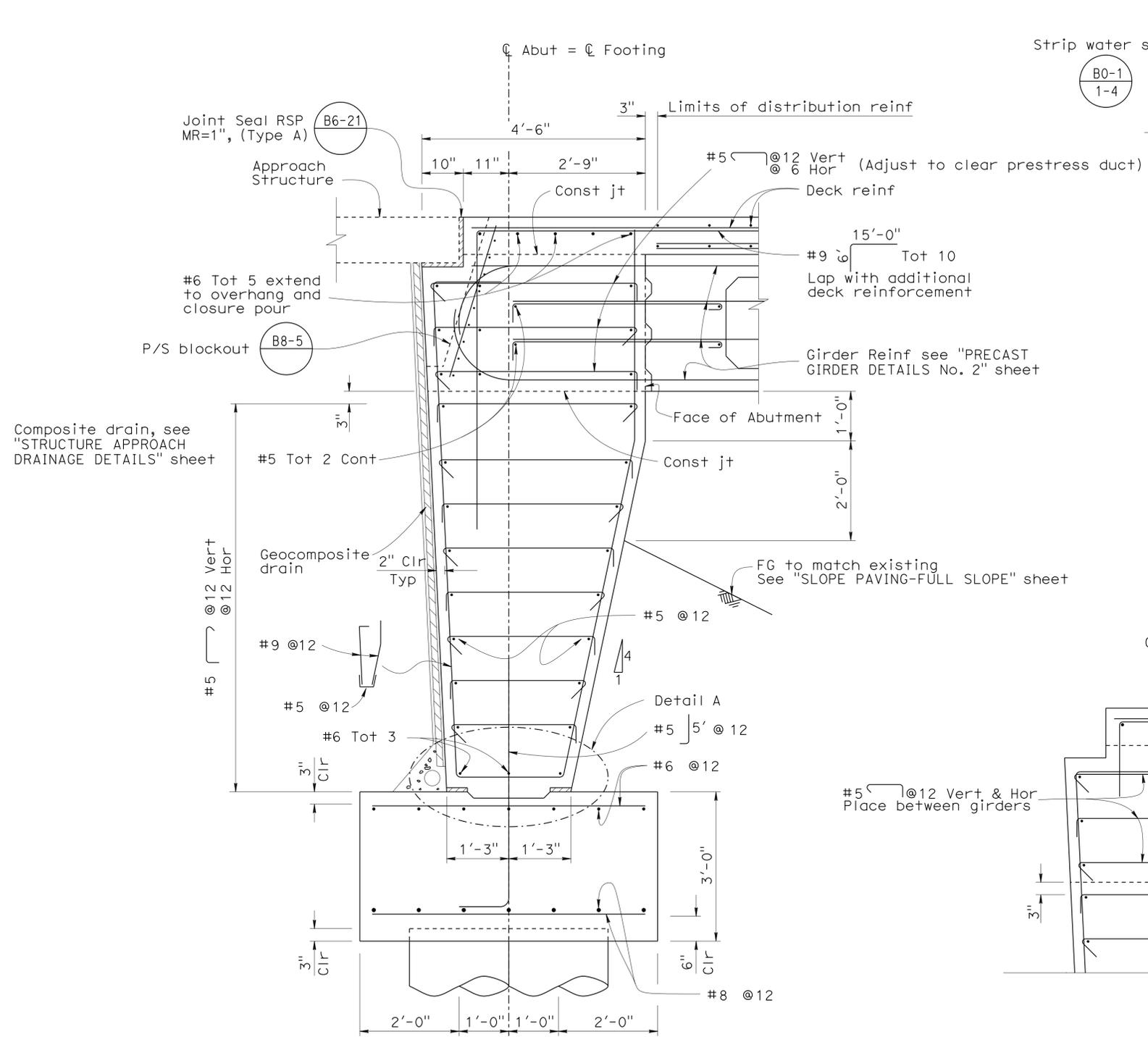
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-2270
POST MILE	35.97

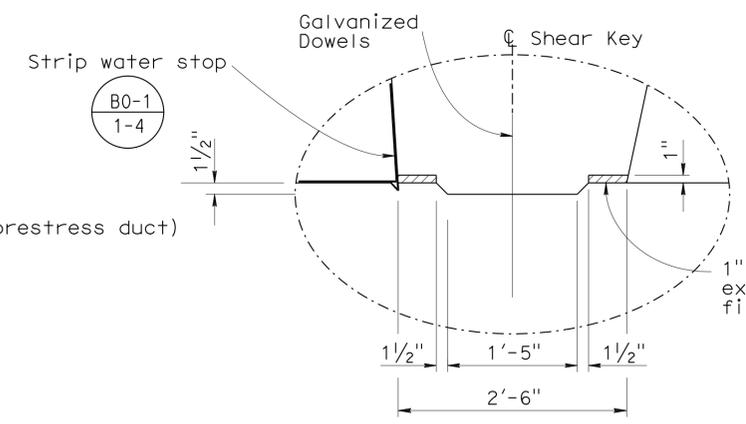
**LARK ELLEN AVE UC (WIDEN)**  
**ABUTMENT LAYOUT**

DATE PLOTTED => 12-JUN-2013 17:24 USERNAME => s124486

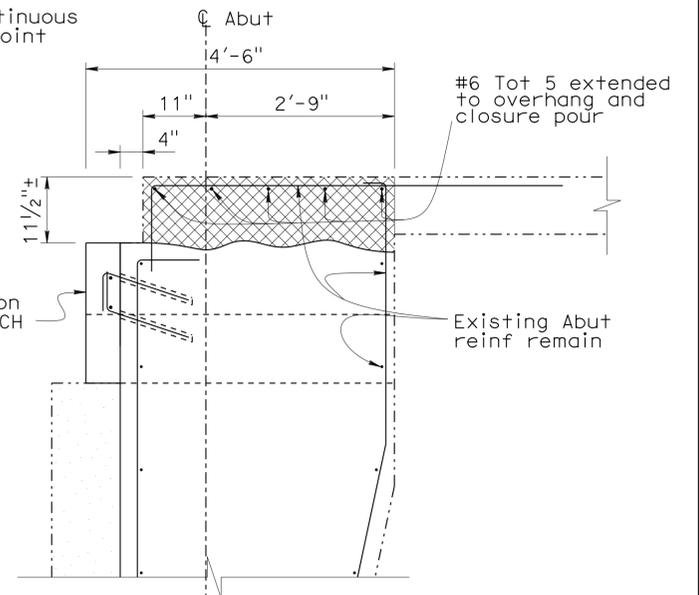
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1293	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



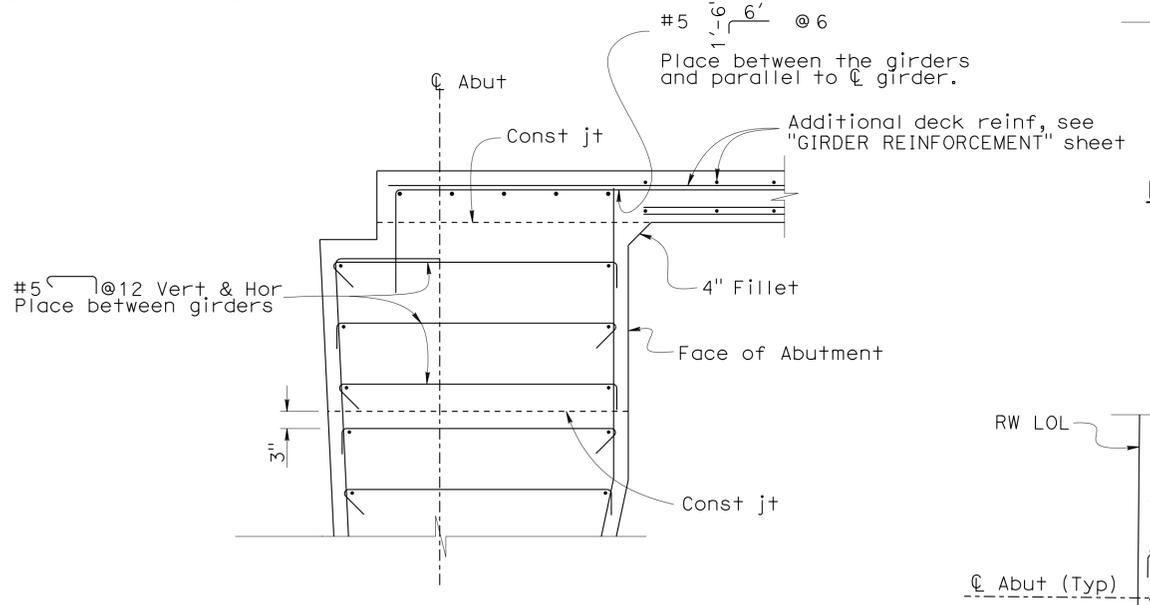
**SECTION A-A**  
3/4" = 1'-0"



**DETAIL A**  
1" = 1'-0"

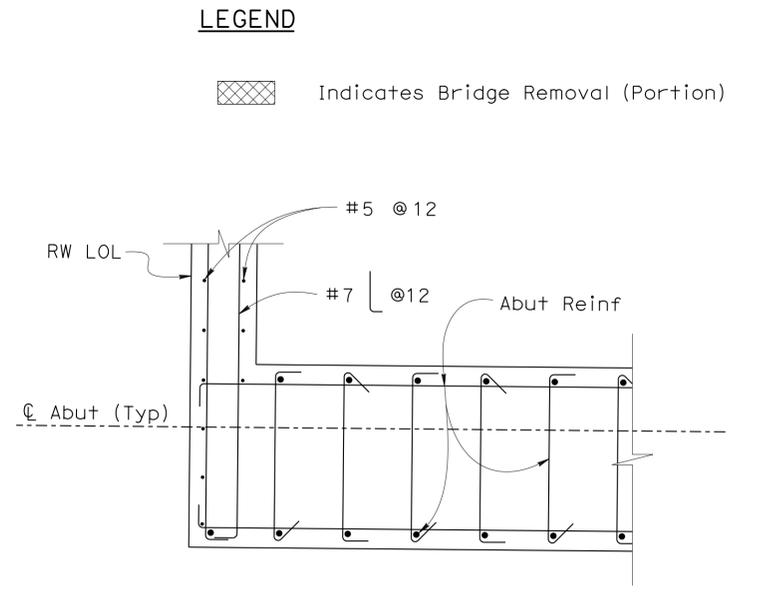


**SECTION C-C**  
3/4" = 1'-0"



**SECTION B-B**  
3/4" = 1'-0"

NOTE: For reinf not shown, see "SECTION A-A"



**SECTION D-D**  
3/4" = 1'-0"

**LEGEND**  
 [Hatched Box] Indicates Bridge Removal (Portion)

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

DESIGN	BY Jason Fang	CHECKED Dawit Worku
DETAILS	BY Antonette L. Ong	CHECKED Dawit Worku
QUANTITIES	BY Jason Fang	CHECKED Edward B. Mu

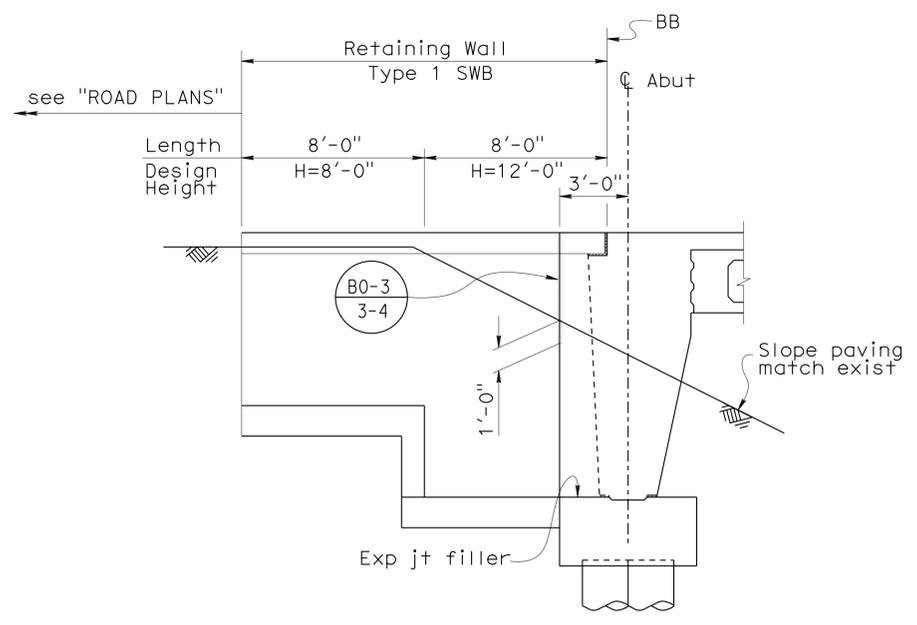
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 20**

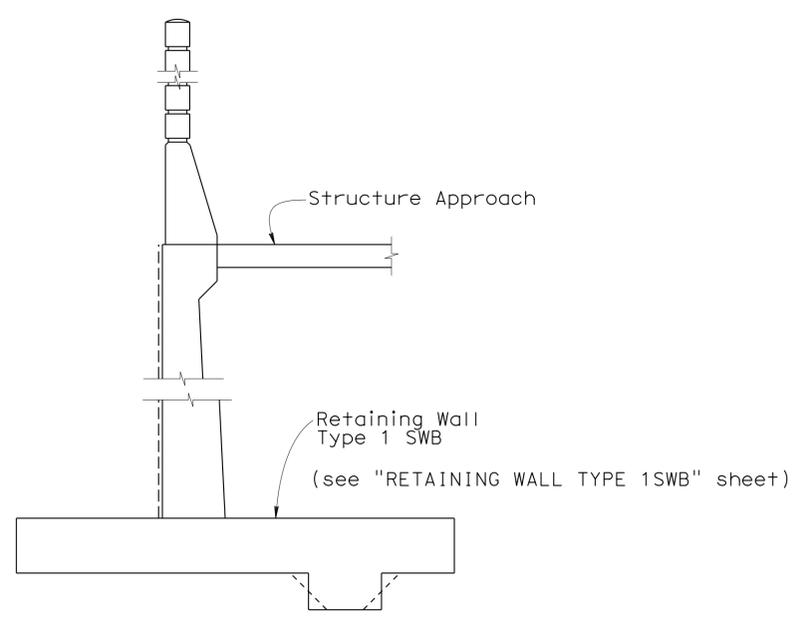
BRIDGE NO.	53-2270
POST MILE	35.97

**LARK ELLEN AVE UC (WIDEN)**  
**ABUTMENT DETAILS NO. 1**

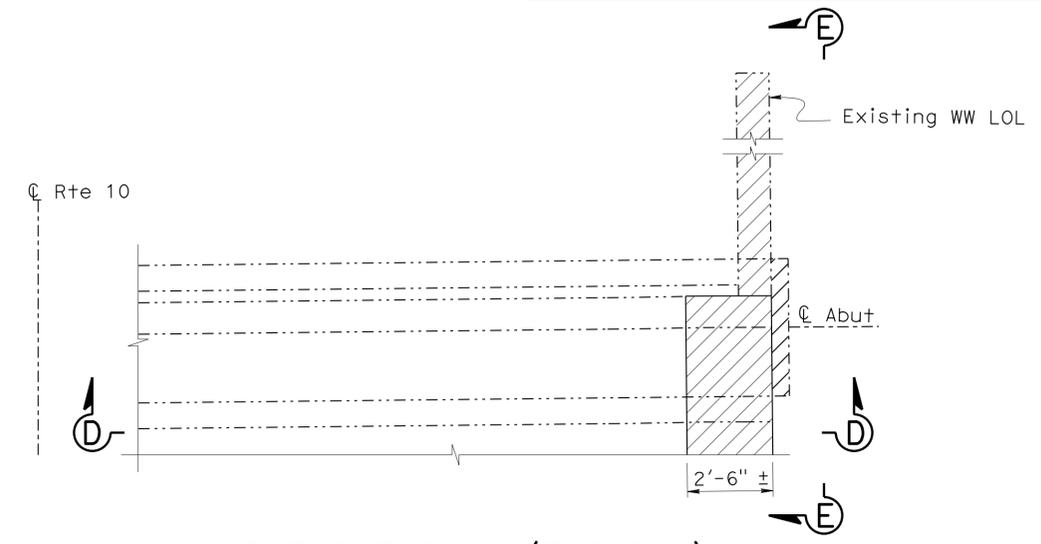
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1294	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



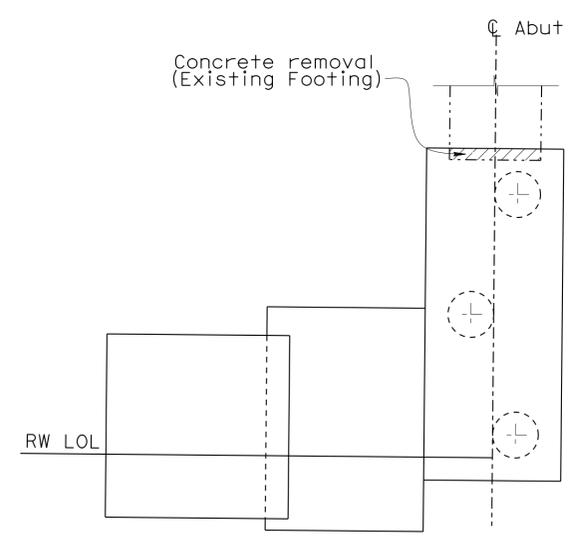
**ABUTMENT RETAINING WALL ELEVATION (TYP)**  
1/4" = 1'-0"



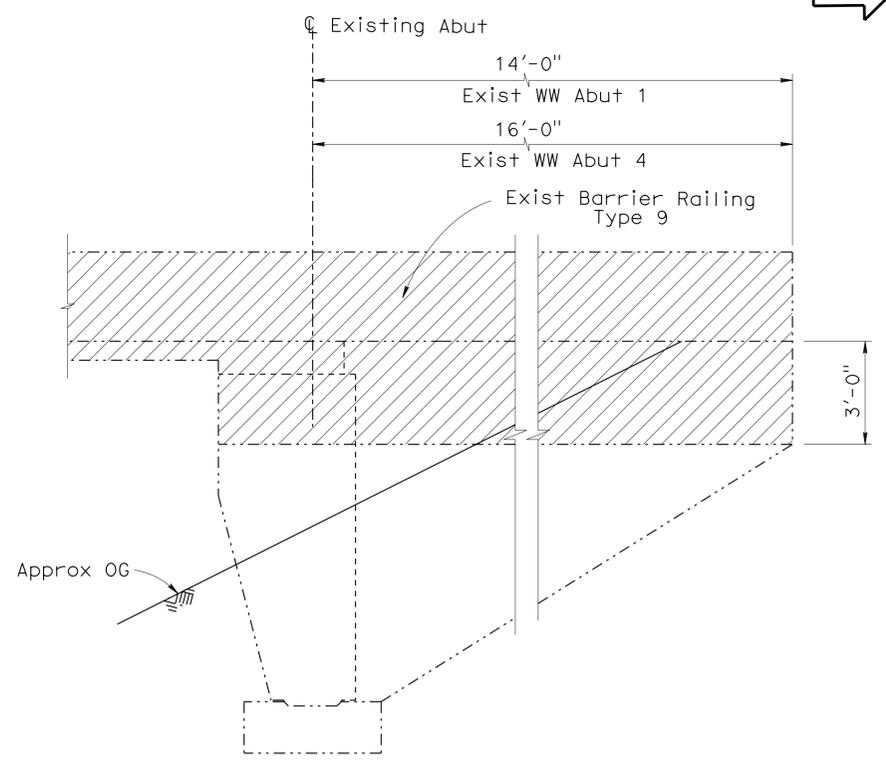
**TYPICAL SECTION**  
No Scale



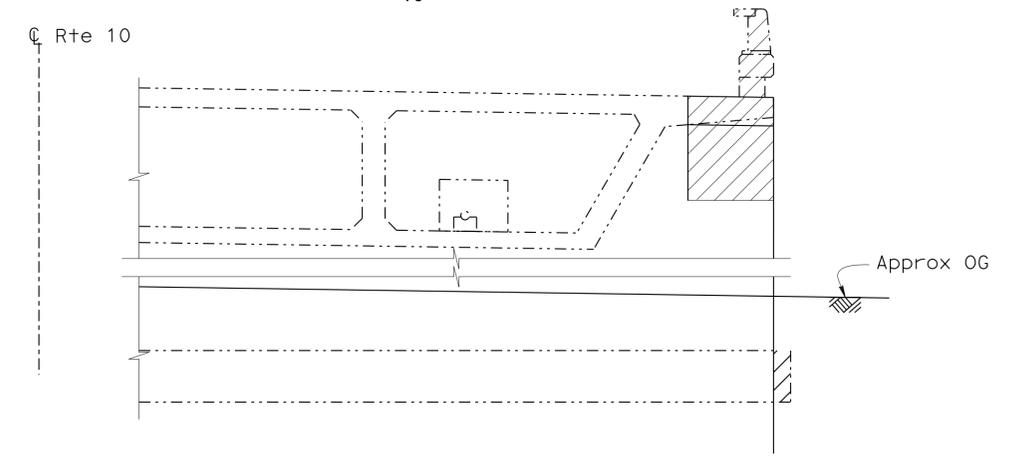
**ABUTMENT PLAN (TYPICAL)**  
3/8" = 1'-0"



**ABUTMENT RETAINING WALL PLAN (TYP)**  
1/4" = 1'-0"



**VIEW E-E**  
3/8" = 1'-0"



**SECTION D-D**  
3/8" = 1'-0"

1. Typical section see "RETAINING WALL TYPE 1 SWD" sheet.
2. Soundwall and concrete barrier not shown.

**NOTE:**  
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**NOTES:**

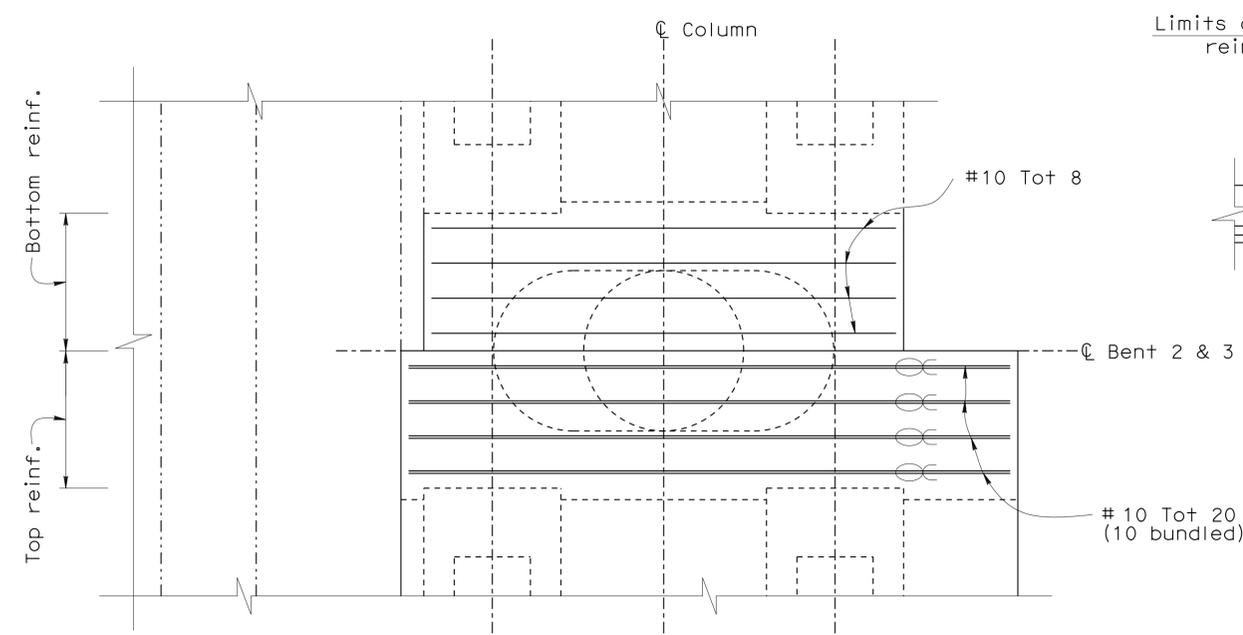
1. Concrete removed, reinforcement remain for Abutment, Overhang and Footing.

**LEGEND**

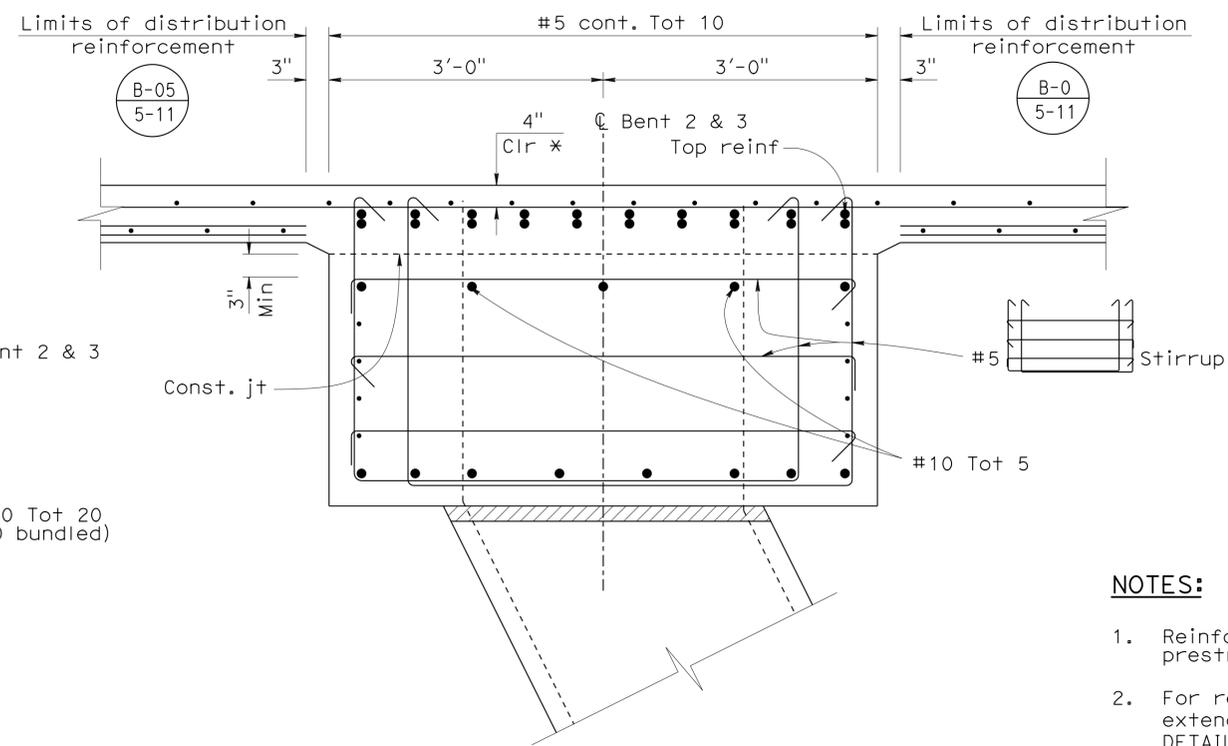
- Bridge Removal (Portion)
- Existing Structure
- New Construction

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Jason Fang	CHECKED Dawit Worku	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO.	53-2270	<b>LARK ELLEN AVE UC (WIDEN)</b>	
	DETAILS	BY Antonette L. Ong	CHECKED Dawit Worku			POST MILE	35.97		<b>ABUTMENT DETAILS NO. 2</b>
	QUANTITIES	BY Jason Fang	CHECKED Edward B. Mu			UNIT: 3622	PROJECT NUMBER & PHASE: 0700000085-1		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 7 OF 27		

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1295	1475
			12/19/11	DATE	
			REGISTERED CIVIL ENGINEER	DATE	
			6-10-13	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.		



**PLAN**  
1/2" = 1'

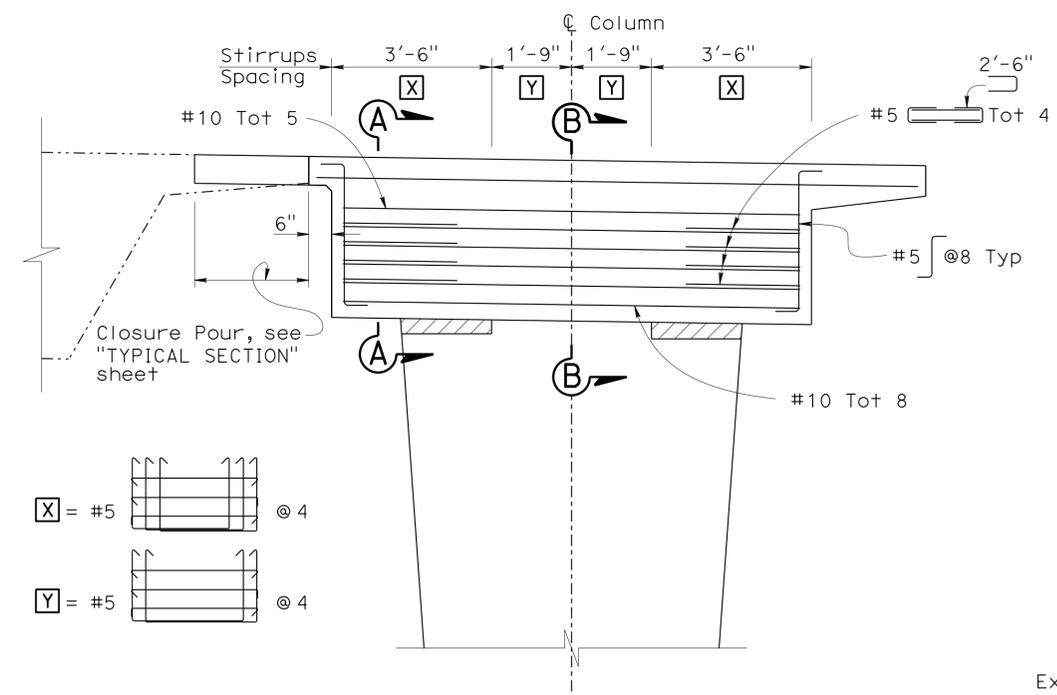


**SECTION B-B**  
1" = 1'-0"

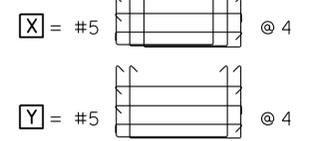
(Column reinf not shown for clarity)

**NOTES:**

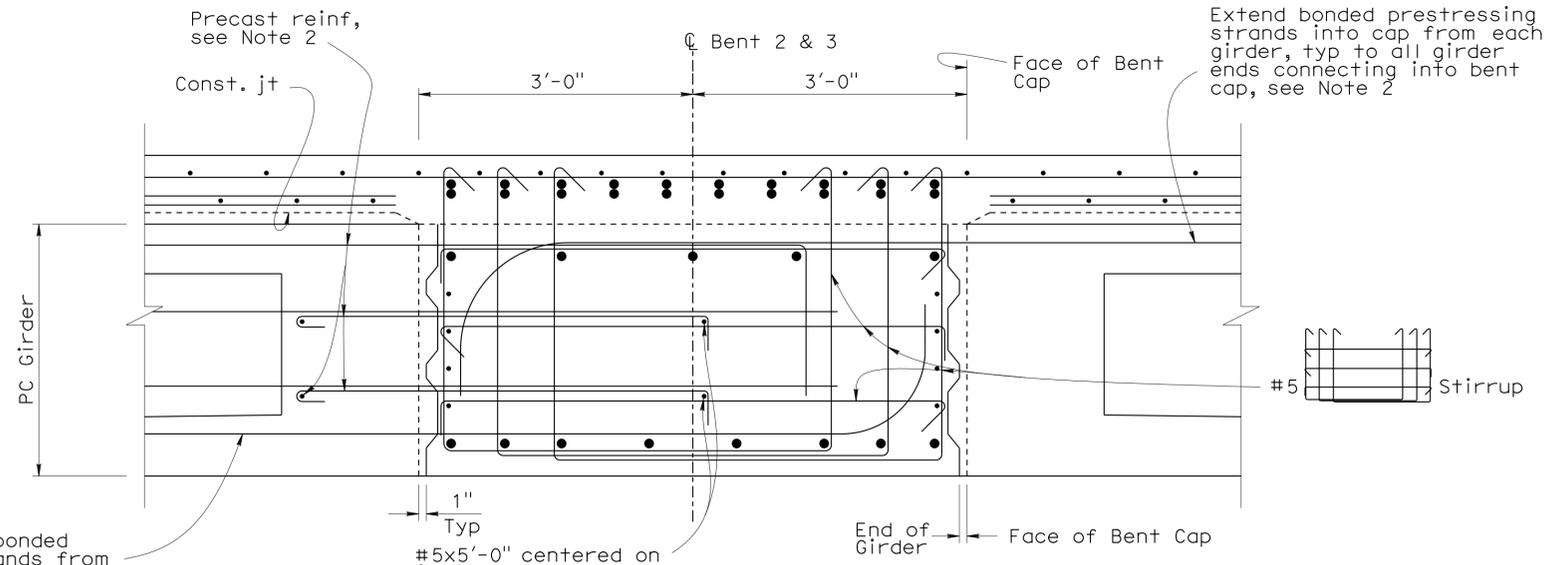
1. Reinforcement maybe adjusted to clear prestressing ducts.
  2. For reinforcement and prestressing strands, extended into cap not shown see "PRECAST GIRDER DETAILS NO. 2" sheet.
- ⊗ Denotes bundled reinforcement.  
\* Clearance at main cap reinforcement (Typ).



**ELEVATION**  
1/2" = 1'-0"



Extend into cap bonded prestressing strands from each girder, typ to all girder ends connecting into bent cap, see Note 2



**SECTION A-A**  
1" = 1'-0"

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

DESIGN	BY Jason Fang	CHECKED Dawit Worku
DETAILS	BY Antonette L. Ong	CHECKED Dawit Worku
QUANTITIES	BY Jason Fang	CHECKED Edward B. Mu

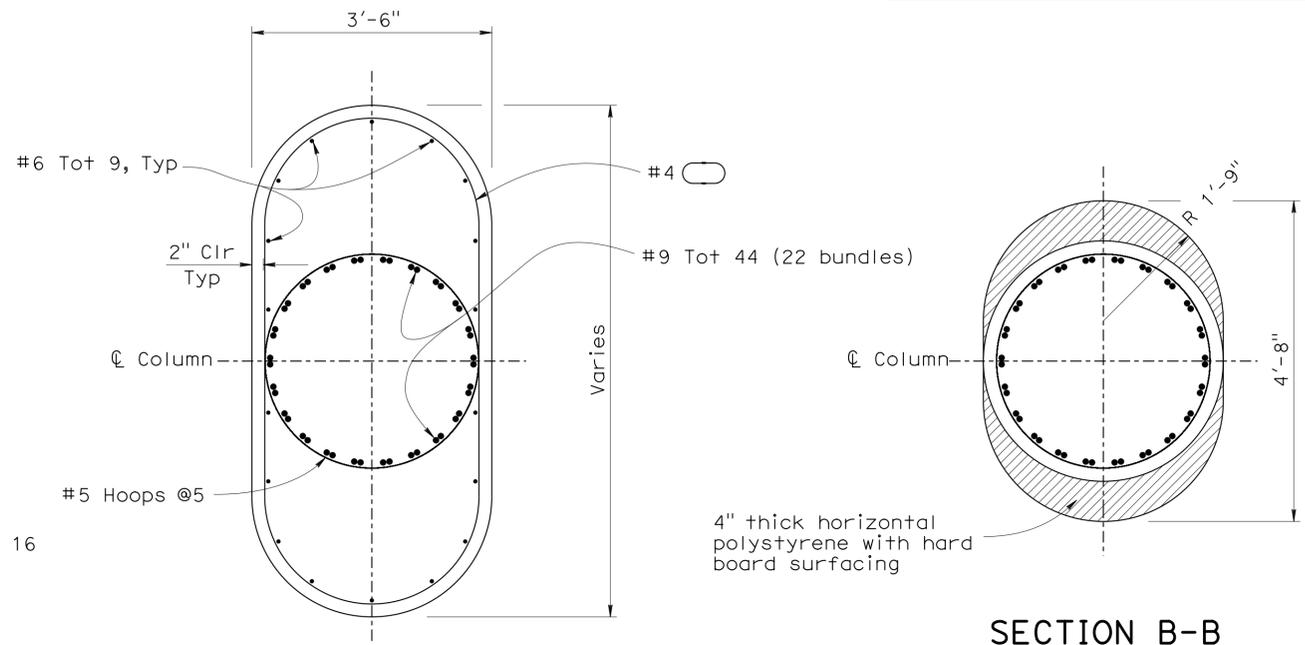
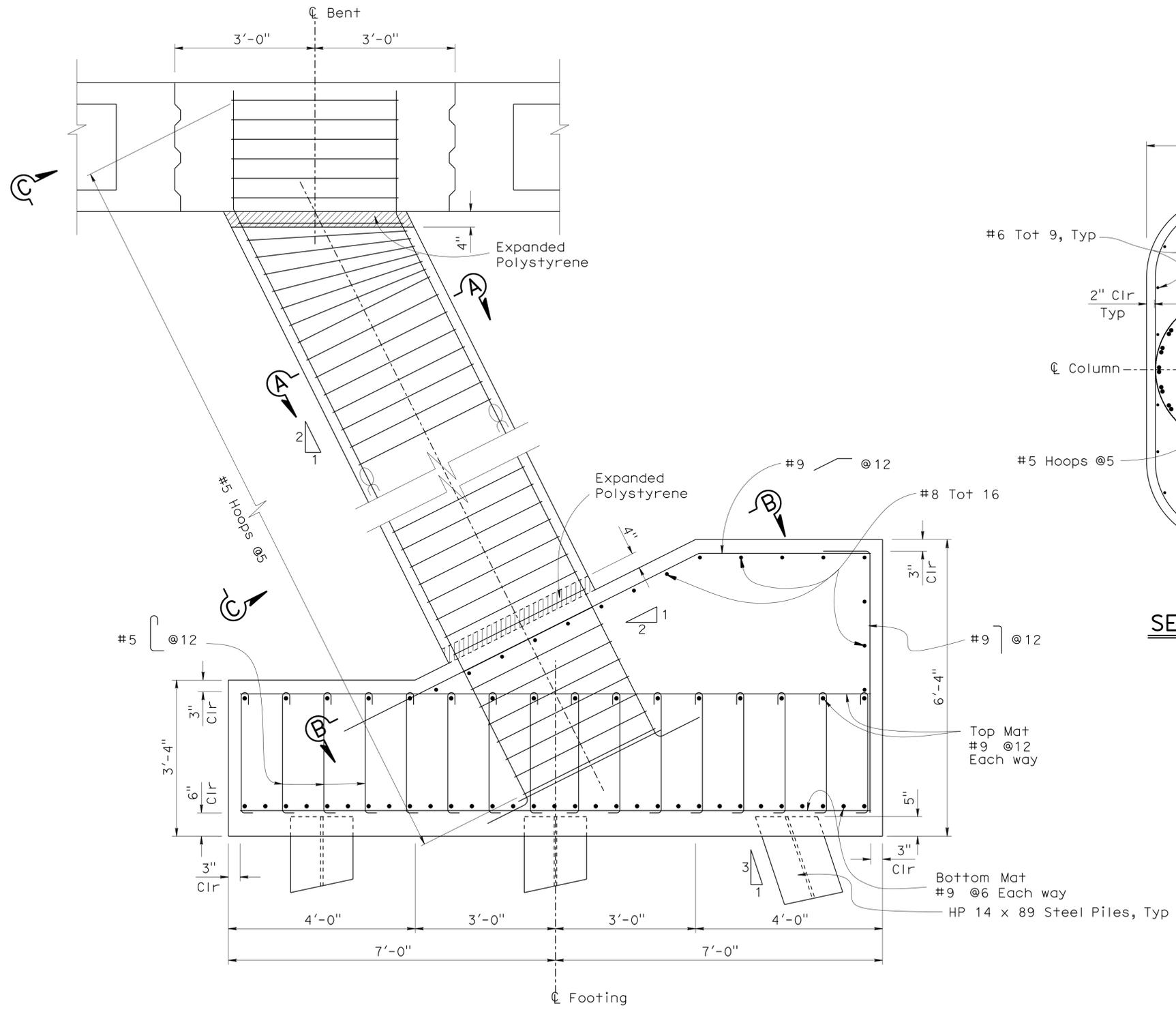
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-2270
POST MILE	35.97

**LARK ELLEN AVE UC (WIDEN)**  
**BENT LAYOUT**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1296	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
			6-10-13	PLANS APPROVAL DATE	
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



**SECTION B-B**  
3/4" = 1'-0"

**SECTION A-A**  
3/4" = 1'-0"

**BENT & FOOTING SECTION**  
3/4" = 1'-0"

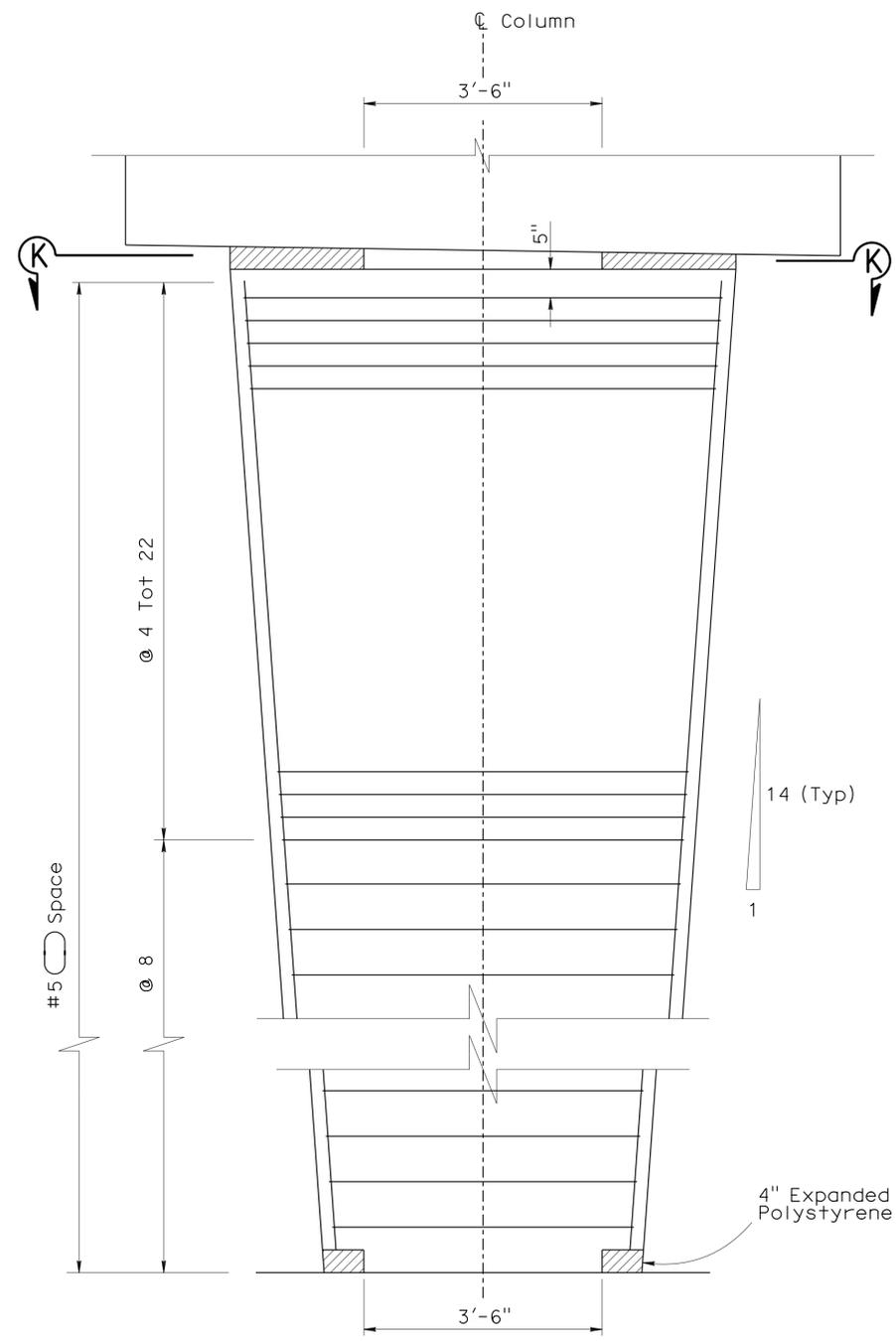
NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

**NOTES:**

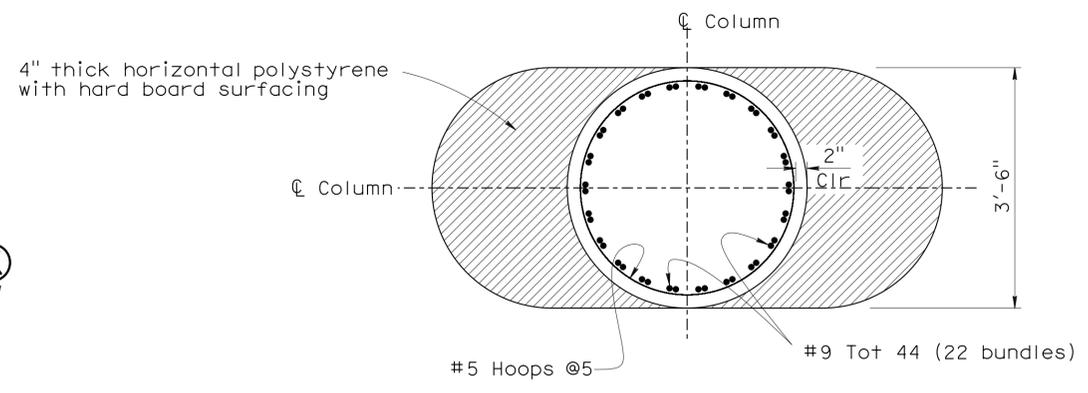
- No splices allowed in main column reinforcement.
  - All main reinforcement hoops are ultimate butt spliced continuous.
  - Transverse flare reinforcement hoops are mechanical coupler spliced (Service splice); The location of mechanical coupler should be staggered.
  - Column falsework to remain in place until temporary support of girder is removed.
  - View "C-C" see "BENT DETAILS DETAILS NO. 2" sheet.
- Denotes bundled reinforcement.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY Jason Fang	CHECKED Dawit Worku	<b>STATE OF CALIFORNIA</b> <b>DEPARTMENT OF TRANSPORTATION</b>	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 20</b>	BRIDGE NO.	53-2270	<b>LARK ELLEN AVE UC (WIDEN)</b> <b>BENT DETAILS NO. 1</b>
	DETAILS	BY Antonette L. Ong	CHECKED Dawit Worku			POST MILE	35.97	
	QUANTITIES	BY Jason Fang	CHECKED Edward B. Mu			UNIT: 3622	PROJECT NUMBER & PHASE: 0700000085-1	
REVISION DATES: 08/25/11, 12/19/11, 06/18/12								SHEET 9 OF 27

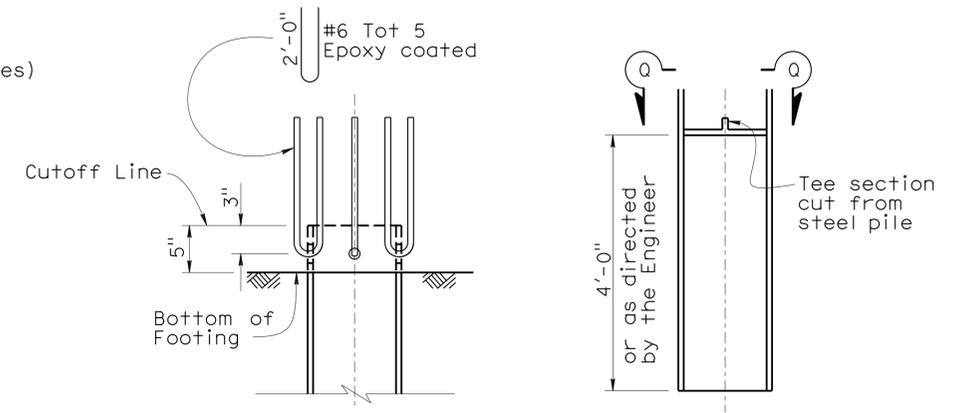
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1297	1475
			12/19/11	DATE	
			REGISTERED CIVIL ENGINEER	DATE	
			6-10-13	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA		
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**VIEW C-C**  
3/4" = 1'-0"

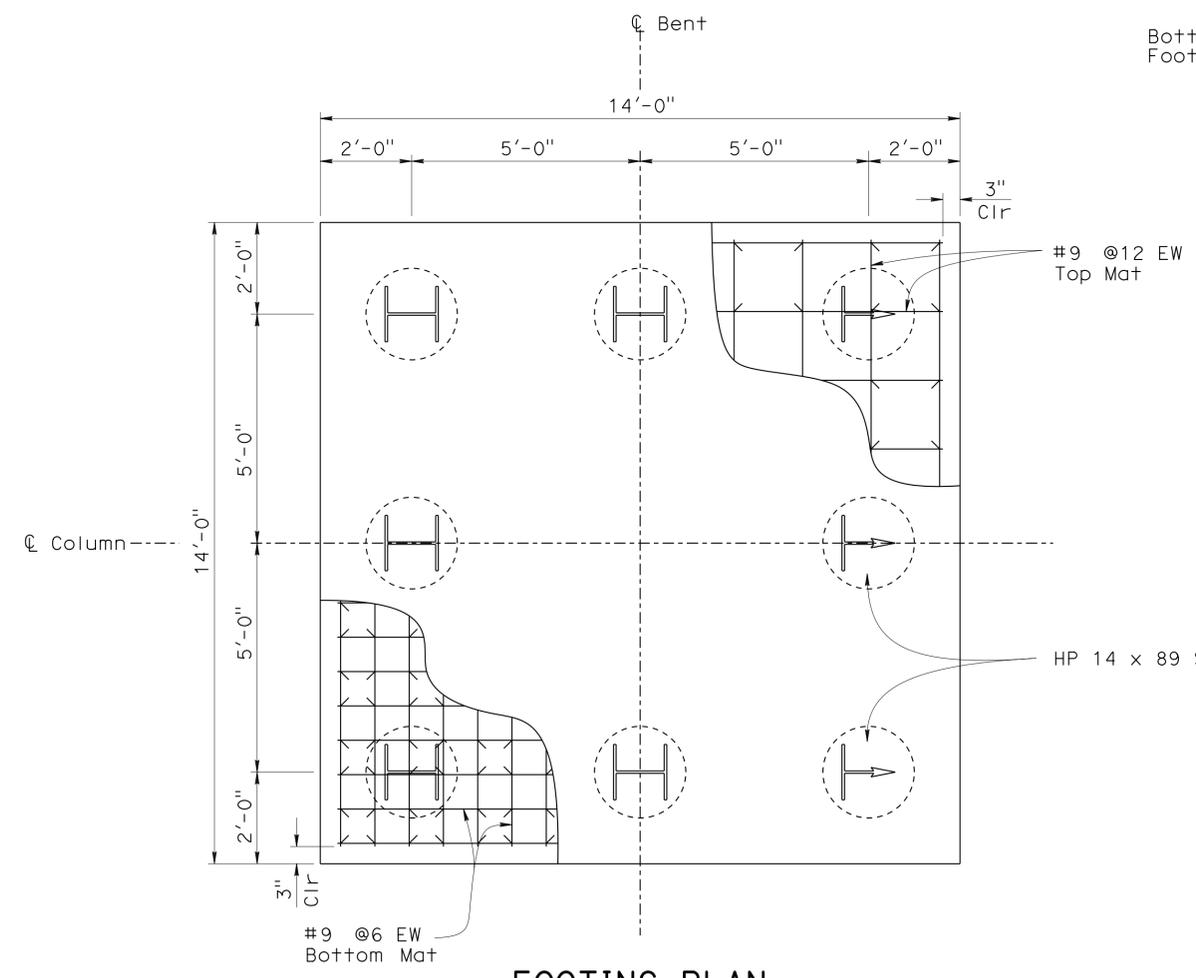


**SECTION K-K**  
3/4" = 1'-0"



**ELEVATION**

**SECTION Q-Q PILE PLUG**



**FOOTING PLAN**  
1/2" = 1'-0"

**PLAN**

**STEEL PILE ANCHOR**  
NO SCALE

**LEGEND**

- Vertical Piles
- Battered (1:3) Piles

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

DESIGN	BY Jason Fang	CHECKED Dawit Worku
DETAILS	BY Antonette L. Ong	CHECKED Dawit Worku
QUANTITIES	BY Jason Fang	CHECKED Edward B. Mu

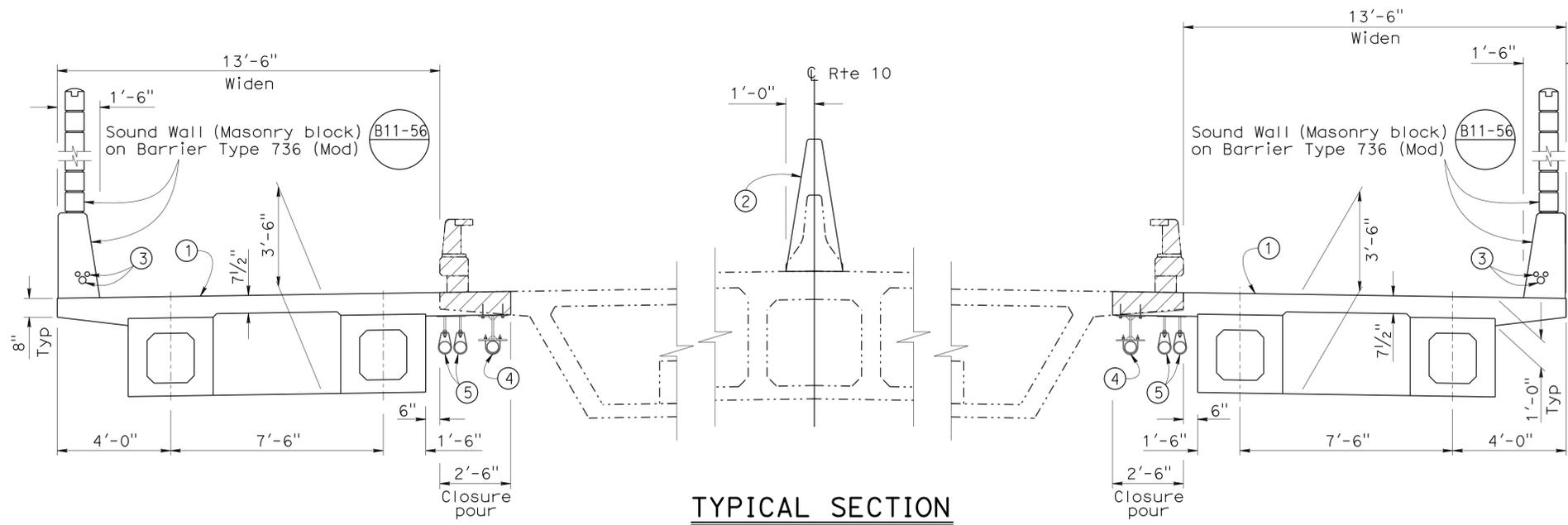
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-2270
POST MILE	35.97

**LARK ELLEN AVE UC (WIDEN)**  
**BENT DETAILS NO. 2**

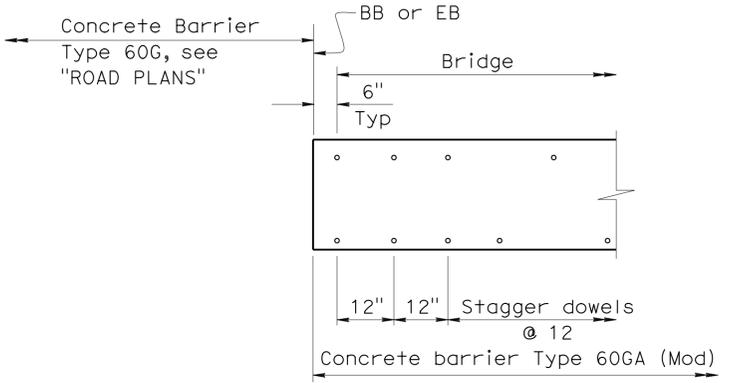
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1298	1475
			12/19/11	DATE	
			REGISTERED CIVIL ENGINEER	DATE	
			6-10-13	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER JASON FANG No. C 70467 Exp. 09/30/2012 CIVIL STATE OF CALIFORNIA		
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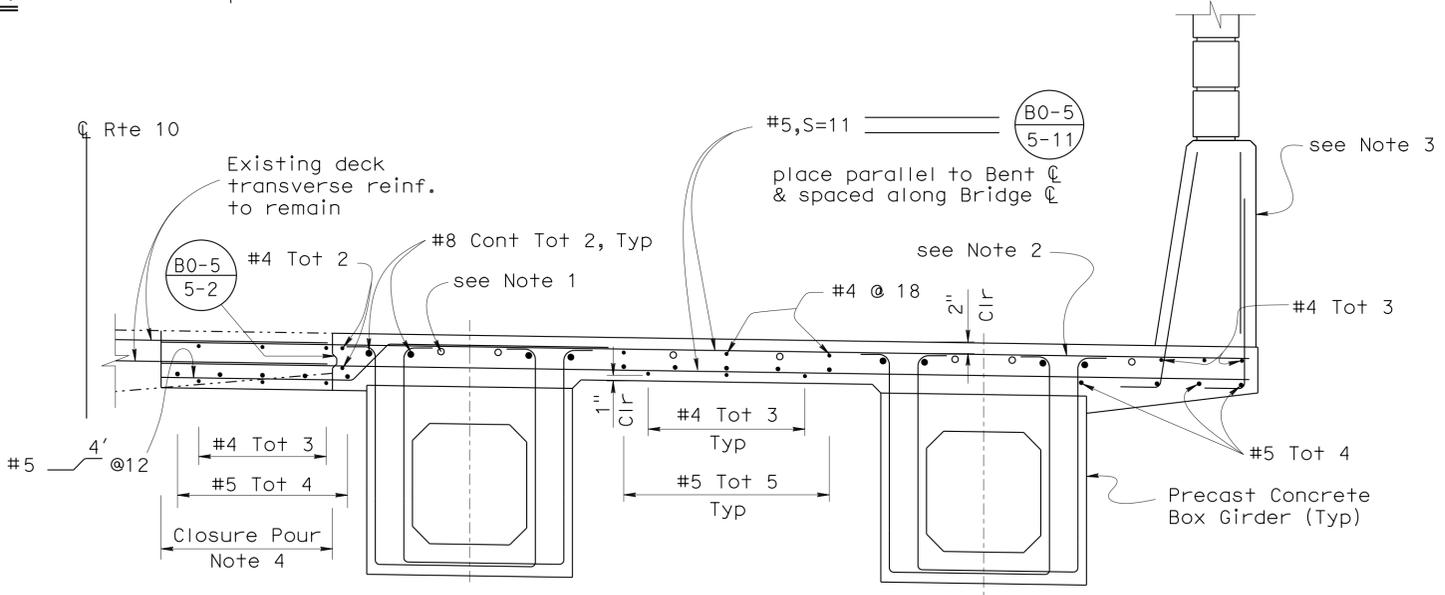
**TYPICAL SECTION**  
3/8" = 1'-0"

**NOTES:**

- ① Match existing grade and cross slope.
- ② Median Concrete Barrier Type 60GA(Mod).
- ③ 2-2"Ø Light Conduits and 1-3"Ø Sprinkler Control Conduit
- ④ 1-3"Ø Water Irrigation Waterline
- ⑤ 2-3/2"Ø Communication Conduits

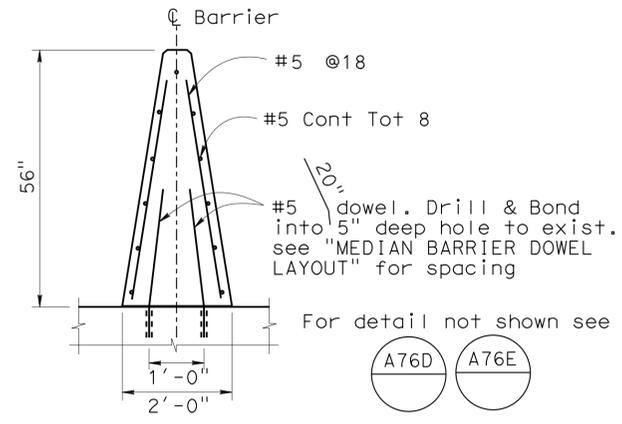


**MEDIAN BARRIER DOWEL LAYOUT**  
No Scale



**PART TYPICAL SECTION**  
3/4" = 1'-0"

NOTE: Right Widen shown, Left Widen similar.



**CONCRETE BARRIER TYPE 60GA (MOD)**  
No Scale

NOTE:  
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**LEGEND**

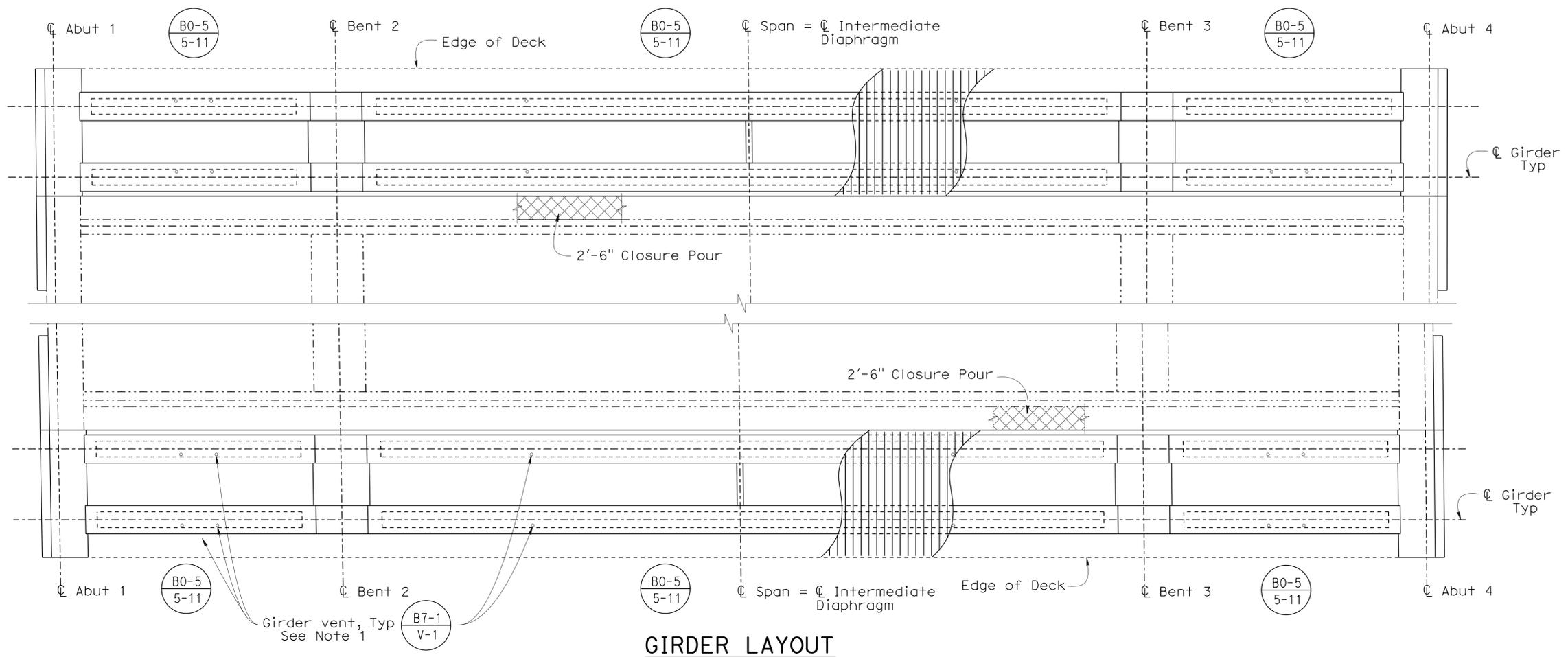
- Remove Exist Concrete Barrier Railing Type 9 and Overhang.
- Existing Structure.
- New Construction.

**NOTES:**

- 1. Additional reinforcement see " GIRDER REINFORCEMENT" sheet.
- 2. Provide #4 bars bundled with each alternating top transverse bar and extended to center line of girder.
- 3. Barrier details see "SOUNDWALL-MASONRY BLOCK ON BRIDGE" sheet.
- 4. Closure pour shall not be placed until the concrete barrier and soundwall have been completed.

DESIGN	BY	Jason Fang	CHECKED	Dawit Worku	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 20	BRIDGE NO.	53-2270	LARK ELLEN AVE UC (WIDEN) TYPICAL SECTION				
	DETAILS	BY	Antonette L. Ong	CHECKED			Dawit Worku	POST MILE		35.97			
	QUANTITIES	BY	Jason Fang	CHECKED			Edward B. Mu	CONTRACT NO.:		1170U1			
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3622 PROJECT NUMBER & PHASE: 0700000085-1	CONTRACT NO.:	1170U1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF	
					0	1	2	3	12/19/11	06/18/12	107/13/11	11	27

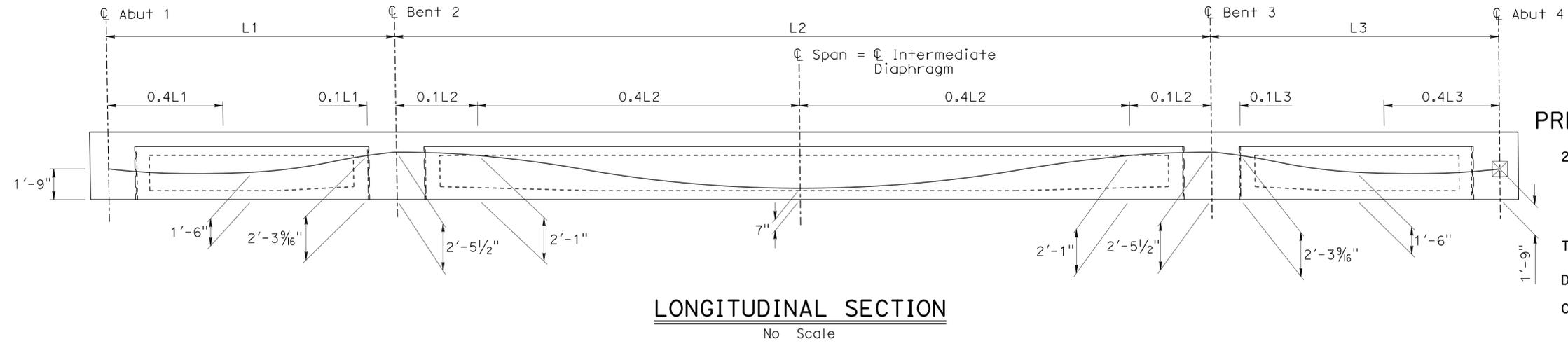
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1299	1475
			12/19/11		
			REGISTERED CIVIL ENGINEER DATE		
			6-10-13		
			PLANS APPROVAL DATE		
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**GIRDER LAYOUT**  
No Scale

**NOTE:**  
1. Minimum of two vents per span in each precast girder. Vent to be located within 12" from end of soffit flare.

**LEGEND**  
☒ Point of no movement.



**LONGITUDINAL SECTION**  
No Scale

**PRESTRESSING NOTES(Post-Tensioning)**

270 KSI Low Relaxation Strand:  
 $P_{jack} = 1250$  kips/box girder (Rt & Lt widen)  
 Anchor Set =  $\frac{3}{8}$ "  
 Total Number of Box Girders for each widen = 6  
 Design base on  $\mu=0.15$ ,  $k=0.0002/ft$   
 Concrete:  $f'_c = 6.0$  ksi @ 28 days  
 $f'_{ci} = 4.5$  ksi @ time of stressing  
 Contractor shall submit elongation calculations based on initial stress at  $X = 0.849$  times jacking stress.  
 One end stressing maybe performed from either end.

**NOTE:**  
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DETAILS	BY Antonette L. Ong	CHECKED Dawit Worku
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STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

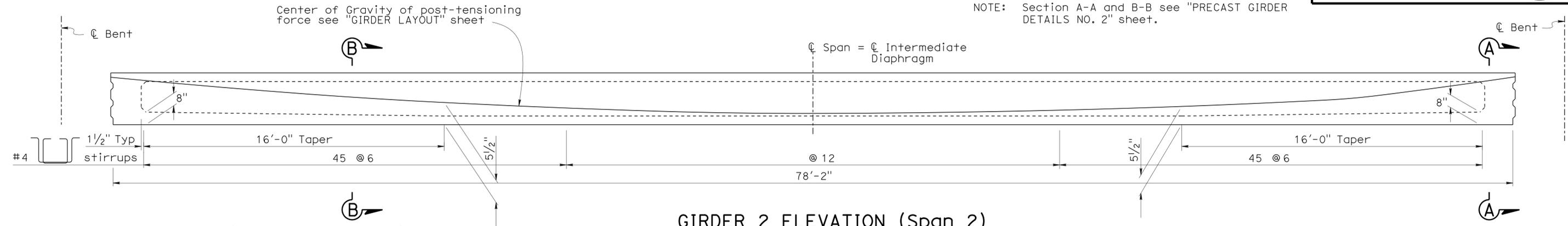
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 20**

BRIDGE NO.	53-2270
POST MILE	35.97

**LARK ELLEN AVE UC (WIDEN)**  
**GIRDER LAYOUT**

DATE PLOTTED => 12-JUN-2013 17:24 USERNAME => s124486

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	33.2/37.2	1300	1475
			12/19/11	REGISTERED CIVIL ENGINEER DATE	
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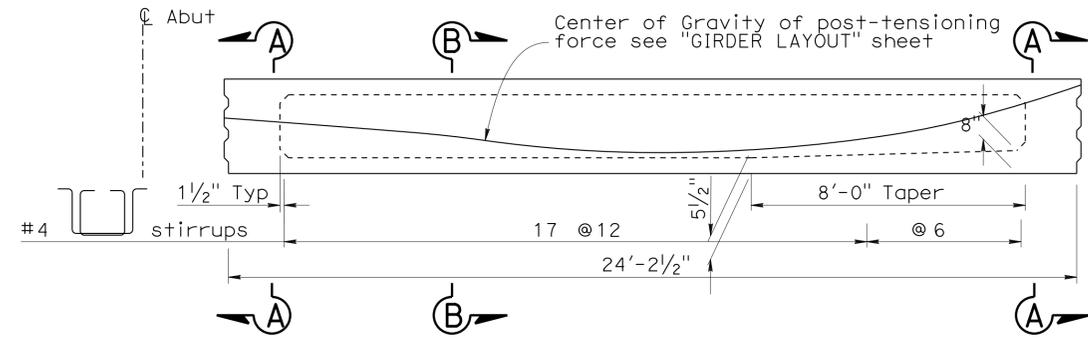


**GIRDER 2 ELEVATION (Span 2)**  
No Scale

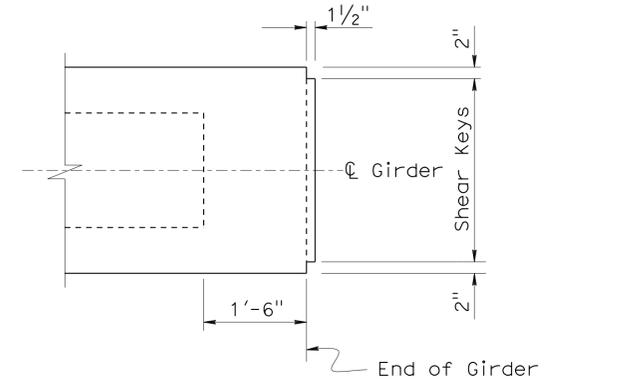
**PRESTRESSING NOTES (PRE-TENSIONING)**

270 ksi low relaxation strand jacking stress for pre-tensioning shall be 202 ksi.  
 Concrete strength:  $f'_c = 6.0$  ksi @ 28 days  
 $f'_{ci} = 4.5$  ksi @ time of stressing  
 Deflection components are for reference only, and to be used in setting screed line elevations, positive deflection up.

Midspan Deflection (Right Widen with 14 ft Soundwall)			
	Span 1 (in)	Span 2 (in)	Span 3 (in)
Pre-tension	0.003	0.430	0.003
Girder	-0.008	-1.071	-0.008
CIP Slab	-0.010	-0.953	-0.010
Post-tension	0.032	0.528	0.032
Supplemental DL	0.024	-0.494	0.024
Midspan Deflection (Left Widen)			
	Span 1 (in)	Span 2 (in)	Span 3 (in)
Pre-tension	0.003	0.430	0.003
Girder	-0.008	-1.071	-0.008
CIP Slab	-0.010	-0.953	-0.010
Post-tension	0.032	0.528	0.032
Supplemental DL	0.026	-0.536	0.026



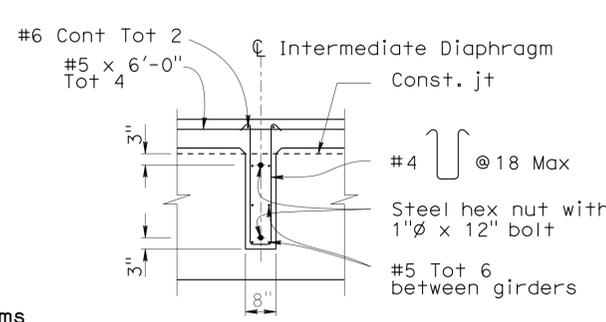
**GIRDER 1 ELEVATION (Span 1 and 3)**  
No Scale



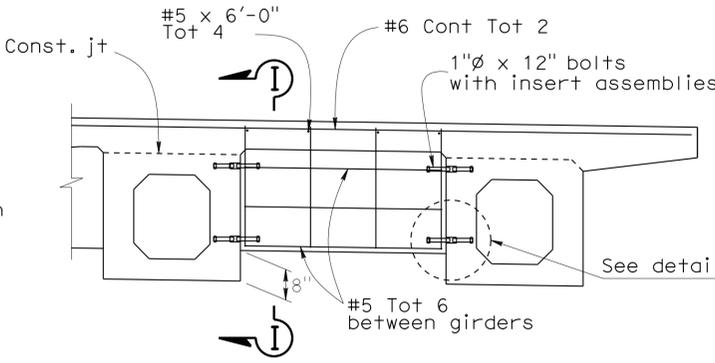
**GIRDER END DIAPHRAGM-PLAN VIEW**  
 $\frac{3}{4}'' = 1'-0''$

**LEGENDS OF LOAD TYPES**

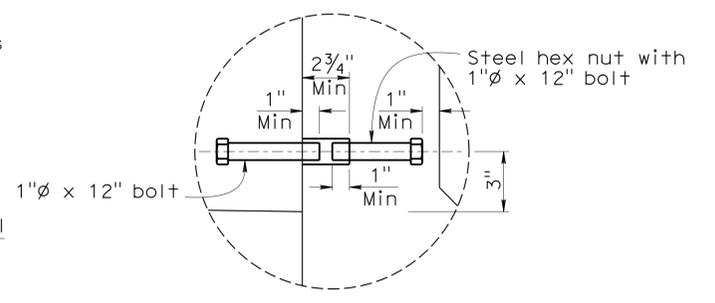
Pretensioning = Estimated prestress deflection component at release (does not include deflection due to girder dead load).  
 Girder = Deflection due to the self weight of girder.  
 CIP slab = deflection due to self weight of cast-in-place deck.  
 Post-tensioning = Estimated prestress deflection due to post-tensioning component.  
 Supplemental DL = Deflection due to barrier intermediate diaphragms and future wearing surface dead load.



**SECTION I-I**  
 $\frac{1}{2}'' = 1'-0''$



**INTERMEDIATE DIAPHRAGM**  
 $\frac{1}{2}'' = 1'-0''$



**INSERT ASSEMBLY**  
No Scale

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BRIDGE NO. 53-2270  
POST MILE 35.97

**LARK ELLEN AVE UC (WIDEN)**  
**PRECAST GIRDER DETAILS NO. 1**