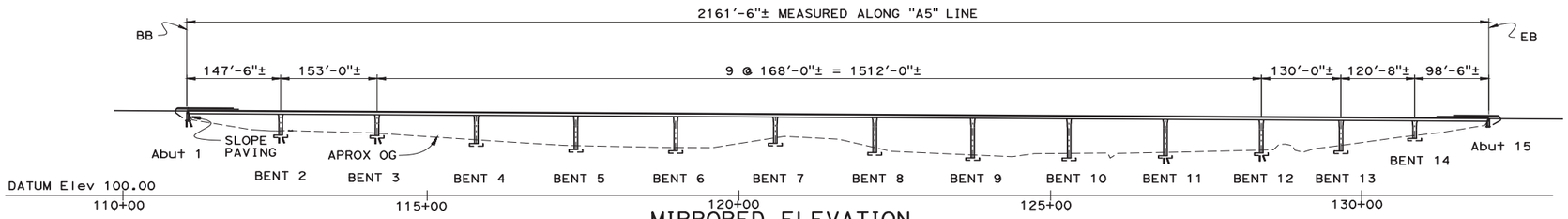
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

DIST	COUNTY	ROUTE	POST MILE
03	Pla	80/65	

To get to the Caltrans web site, go to: http://www.dot.ca.gov



MIRRORED ELEVATION

1" = 200'

LEGEND:

Indicates Bridge Removal (Portion)

NOTES:

(A) Existing Concrete Barrier Type 25 to be removed

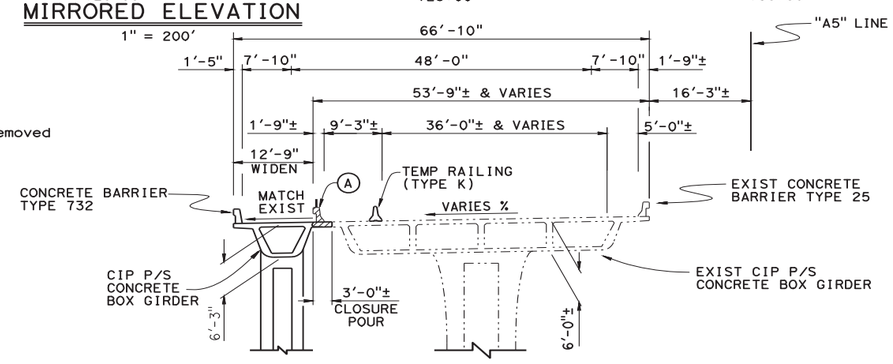
1. Traffic will pass through construction 21'-6" Min vertical clearance required under falsework

"A5" LINE

R=3000'
Δ=35°10'43"
T=951.04'
L=1841.95'

"S2" LINE

R=900'	R=3000'
Δ=99°00'57"	Δ=10°32'28"
T=1054.06'	T=276.75'
L=1555.34'	L=551.93'



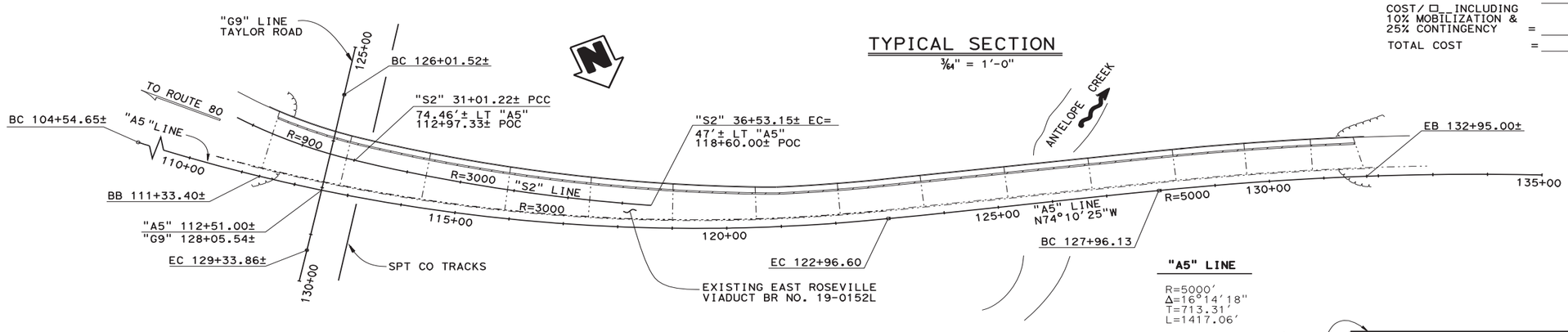
From Cell Library

Add

DATE OF ESTIMATE - -
BRIDGE REMOVAL =
STRUCTURE DEPTH =
LENGTH =
WIDTH =
AREA =
COST/ □ INCLUDING 10% MOBILIZATION & 25% CONTINGENCY =
TOTAL COST =

TYPICAL SECTION

3/64" = 1'-0"



"A5" LINE

R=5000'
Δ=16°14'18"
T=713.31'
L=1417.06'

PLAN

1" = 200'

More than one Alternative

ALTERNATIVE NO. 1

PLANNING STUDY

EAST VIADUCT (WIDEN)

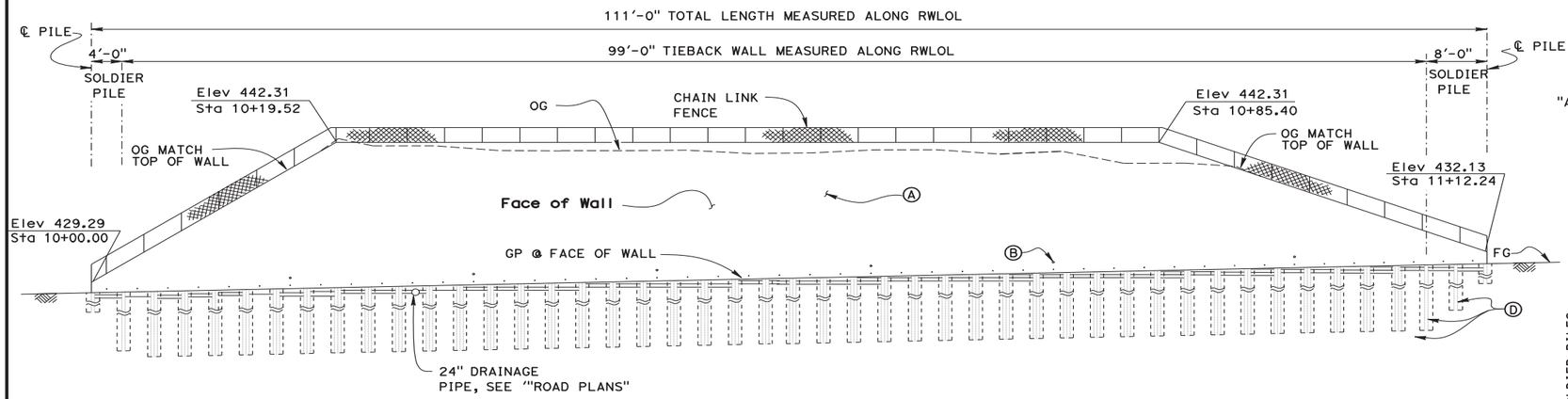
DESIGNED BY Name	DATE Date
DRAWN BY Name	DATE Date
CHECKED BY Name	DATE Date
APPROVED Signature of Branch Chief	DATE Date

STRUCTURE DESIGN BRANCH

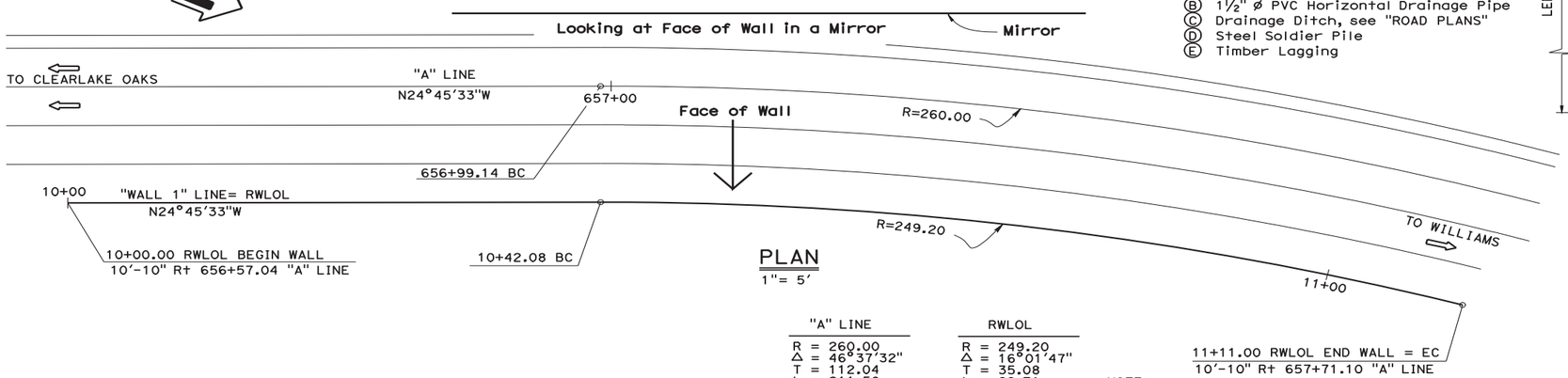
BRIDGE NO. 19-0000L	CU 03
SCALE: As Shown	EA 40000K

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 10/25/05)

FILE => 01a-bdd-1-16-aps-01.dgn



MIRRORED ELEVATION
1"= 5'



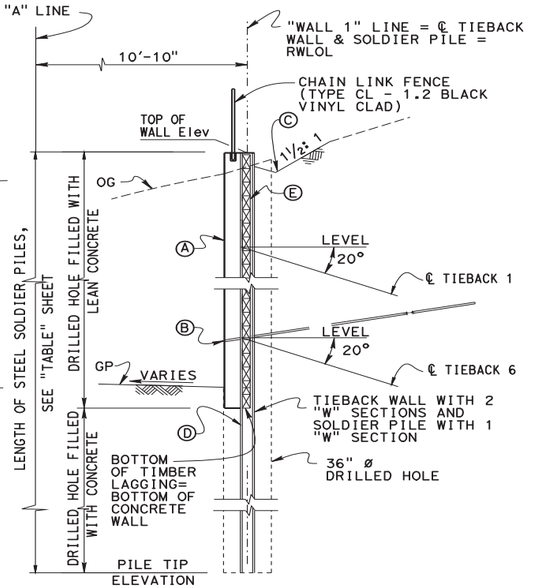
PLAN
1"= 5'

"A" LINE	RWLOL
R = 260.00	R = 249.20
Δ = 46°37'32"	Δ = 16°01'47"
T = 112.04	T = 35.08
L = 211.58	L = 69.71

11+11.00 RWLOL END WALL = EC
10'-10" Rt 657+71.10 "A" LINE

NOTES:
- Ⓐ Colored CIP Concrete Wall Facing
- Ⓑ 1½" ø PVC Horizontal Drainage Pipe
- Ⓒ Drainage Ditch, see "ROAD PLANS"
- Ⓓ Steel Soldier Pile
- Ⓔ Timber Lagging

NOTE:
1. For "GENERAL NOTES" and "INDEX TO PLANS" see "INDEX TO PLANS" sheet



TYPICAL SECTION
¼" = 1'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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To get to the Caltrans web site, go to: http://www.dot.ca.gov

DESIGN	BY	CHECKED	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	
DETAILS	BY	CHECKED	LAYOUT	BY	CHECKED
QUANTITIES	BY	CHECKED	SPECIFICATIONS	BY	PLANS AND SPECS COMPARED

DESIGN ENGINEER

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH

CU
EA

BRIDGE NO. 14E0001
POST MILE

RETAINING WALL
GENERAL PLAN

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES | SHEET | OF

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.07-24-06)

FILE => 01b-bdd-mirrored-gp.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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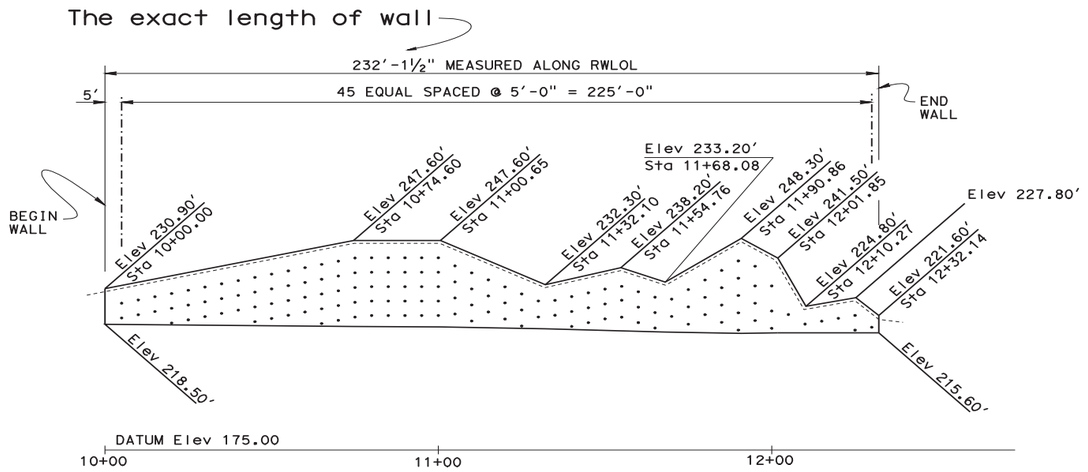
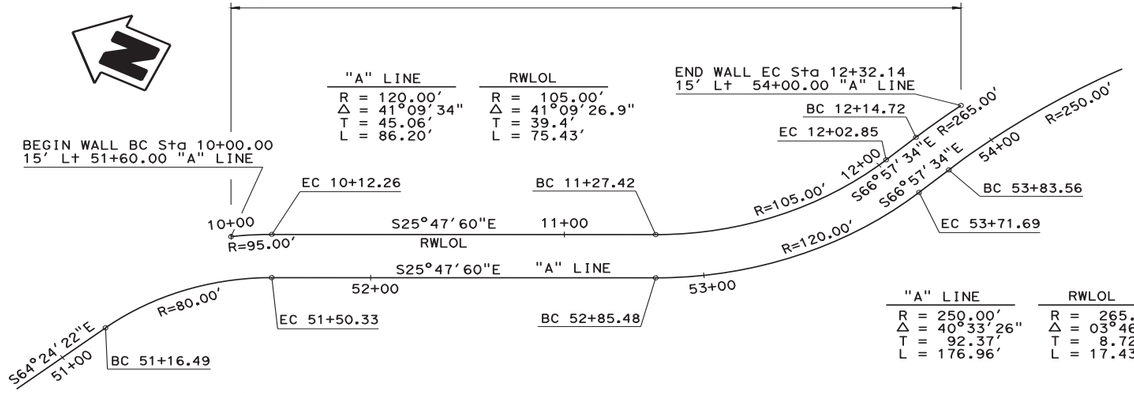
The exact length of wall



DEVELOPED ELEVATION

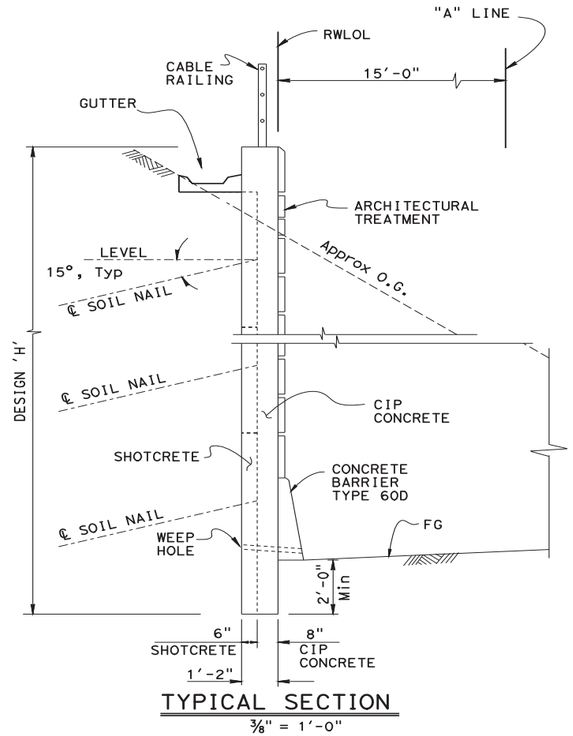
1"=20′

If projected as usual, the accurate view would not be shown



PLAN

1"=20′



TYPICAL SECTION

⅜" = 1′-0"

NOTES:

1. For "INDEX TO PLANS", see "INDEX TO PLANS" sheet

DESIGN ENGINEER	DESIGN	BY	CHECKED	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
	DETAILS	BY	CHECKED	LAYOUT BY	CHECKED		BRIDGE NO. 14E0001
	QUANTITIES	BY	CHECKED	SPECIFICATIONS BY	PLANS AND SPECS COMPARED		POST MILE

SOIL NAIL WALL

GENERAL PLAN

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU EA

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES | SHEET | OF

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.07-24-06)

FILE => 01c-bdd-developed-gp.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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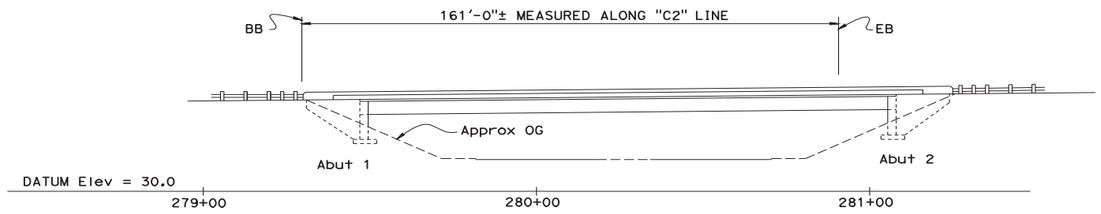
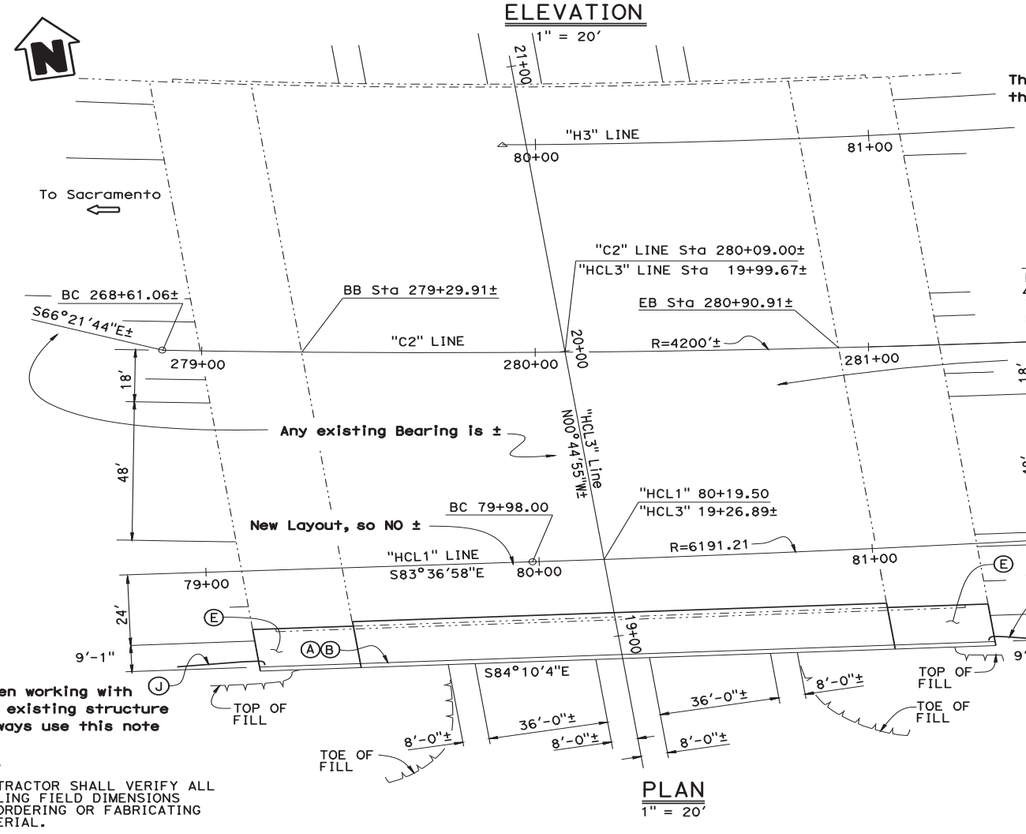


ELEVATION

1" = 20'

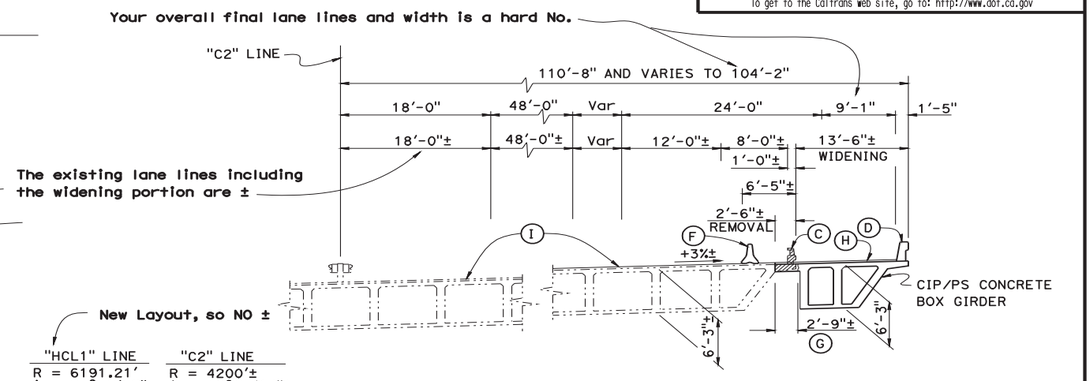


NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PLAN

1" = 20'

Your overall final lane lines and width is a hard No.



The existing lane lines including the widening portion are ±

New Layout, so NO ±

"HCL1" LINE	"C2" LINE
R = 6191.21'	R = 4200'±
Δ = 03°50'12"	Δ = 40°03'14"±
T = 207.37'	T = 1530.91'±
L = 414.58'	L = 2936.10'±

Any existing curve data is ±

TYPICAL SECTION

1/8" = 1'-0"

LEGEND:

- Indicates Existing Structure
- Indicates New Structure
- Indicates Concrete Removal

NOTES:

- (A) Paint "STREET UNDERCROSSING"
- (B) Paint "BR NO. 01-0001"
- (C) Existing Concrete Barrier Type 9 to be removed
- (D) Concrete Barrier Type 732
- (E) New Structure Approach Type N(30D)
- (F) Temporary Railing (Type K), see "ROAD PLANS"
- (G) Closure Pour
- (H) Match existing grade & chip seal
- (I) Remove & replace existing chip seal
- (J) MBGR, see "ROAD PLANS"

1. For "GENERAL NOTES" and "INDEX TO PLANS", see "INDEX TO PLANS" sheet

DESIGN ENGINEER	DESIGN	BY	CHECKED	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
	DETAILS	BY	CHECKED	LAYOUT	BY / CHECKED		
	QUANTITIES	BY	CHECKED	SPECIFICATIONS	BY / PLANS AND SPECS COMPARED		

BRIDGE NO. | POST MILE

STREET UNDERCROSSING (WIDEN)

GENERAL PLAN

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

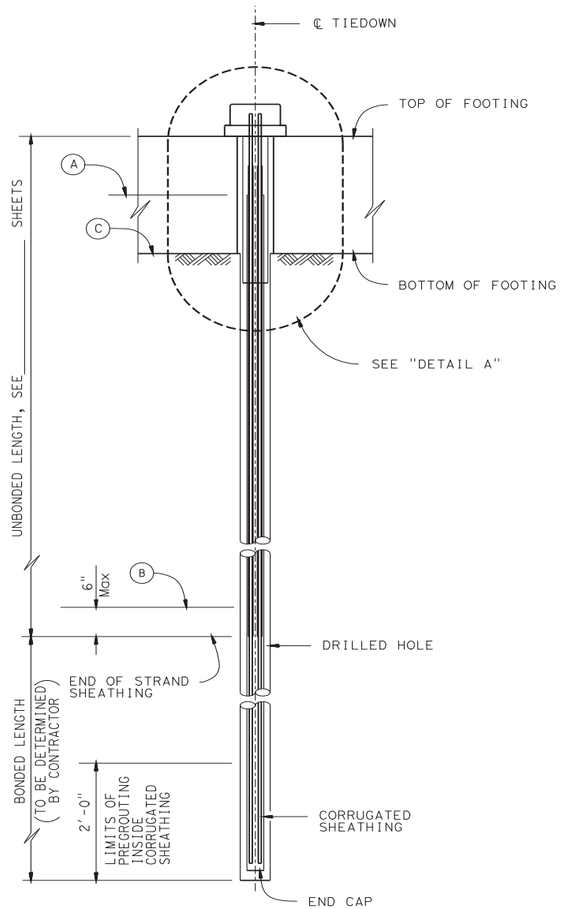
CU EA

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES | SHEET | OF

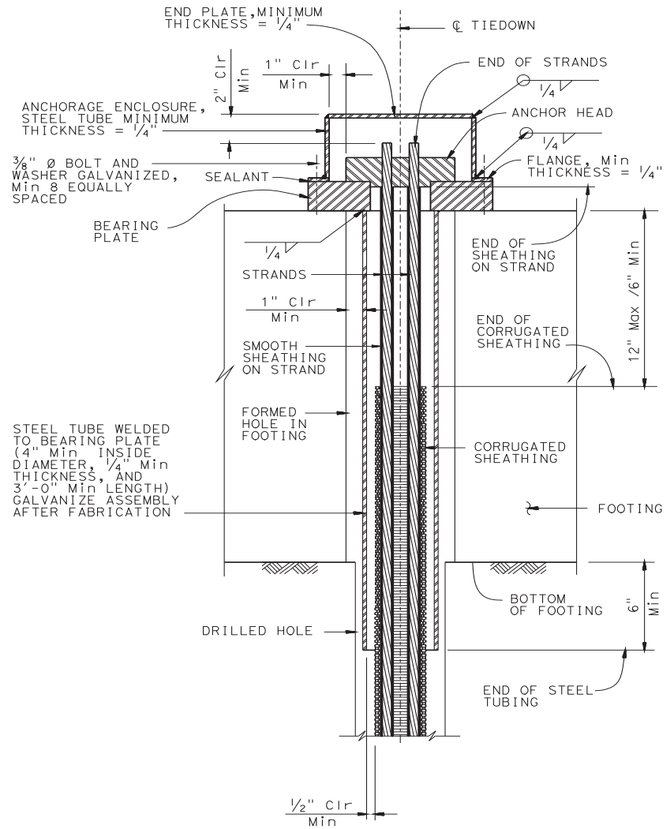
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.07-24-06)

FILE => 01d-bdd-existing-gp.dgn



TIEDOWN TENDON DETAILS (STRANDS)

1"=1'-0"



DETAIL A

3"= 1'-0"

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED ENGINEER - CIVIL

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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GENERAL NOTES-TIEDOWN ANCHOR

PRESTRESSING (TIEDOWNS):
BARS- ASTM Designation: A722 Type II
STRANDS-ASTM Designation: A416
T= DESIGN FORCE PER TIEDOWN (K)
fpu= MINIMUM TENSILE STRENGTH OF PRESTRESSING STEEL (PSI)

As= MINIMUM CROSS SECTIONAL AREA OF PRESTRESSING STEEL IN TIEDOWN TENDON (square inches)

$$As\ (Min) = \frac{1.5T}{0.75\ fpu}$$

NOTES:

1. Anchorage enclosure shall have provisions to allow injecting grout at low end and venting at high end. Galvanize enclosure after fabrication
2. Alternative anchor enclosure shown on sheet "TIEDOWN ANCHOR DETAILS NO.2" sheet

(A) Level of initial grouting inside corrugated sheathing

(B) Level of initial grouting in drilled hole

(C) Level of secondary grouting in drilled hole

Insert Revised Date

STANDARD DRAWING

FILE NO. xs12-030-1e

APPROVED BY Mary Smith (RESPONSIBLE TECHNICAL SPECIALIST) APPROVAL DATE 5-13-08

RELEASED BY John Doe (RESPONSIBLE OFFICE CHIEF) RELEASE DATE 5-13-08

DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. 01/11/08)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

CU EA

BRIDGE NO.

POST MILE

WESTBOUND CONNECTOR UC (WIDEN)

TIEDOWN ANCHOR DETAILS NO. 1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET OF

01e-bdd-1-16-4-revise-perm-xs.dgn

ATTACHMENT 1-22F

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED ENGINEER - CIVIL

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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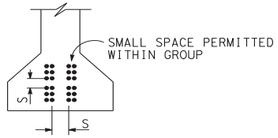
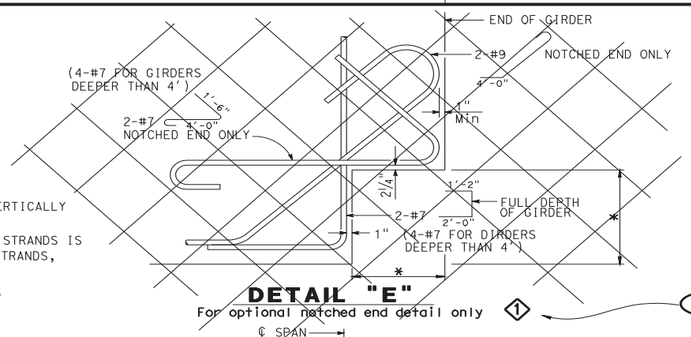
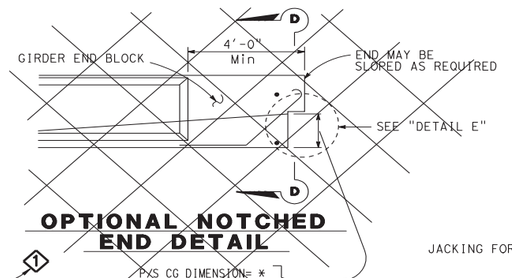
CLEARANCES FOR PRETENSIONED STRANDS

1. STRANDS MAY BE BUNDLED IN GROUPS CONSISTING OF 3 VERTICALLY 2 HORIZONTALLY, AND SEPARATED AT THE ENDS
2. THE Min DISTANCE "S" BETWEEN GROUPS OR INDIVIDUAL STRANDS IS 1½" FOR ⅜" STRANDS, 1¾" FOR 7/16" STRANDS AND ½" STRANDS, 2" FOR 0.6" STRANDS
3. "S" IS MEASURED BETWEEN CENTERS OF ADJACENT STRANDS
4. APPROVAL OF ENGINEER IS REQUIRED FOR DEVIATION





DETAIL "E"
For optional notched end detail only



OPTIONAL NOTCHED END DETAIL

P/S CG DIMENSION= *
TOLERANCE ± *

Add ①

PRESTRESSING NOTES

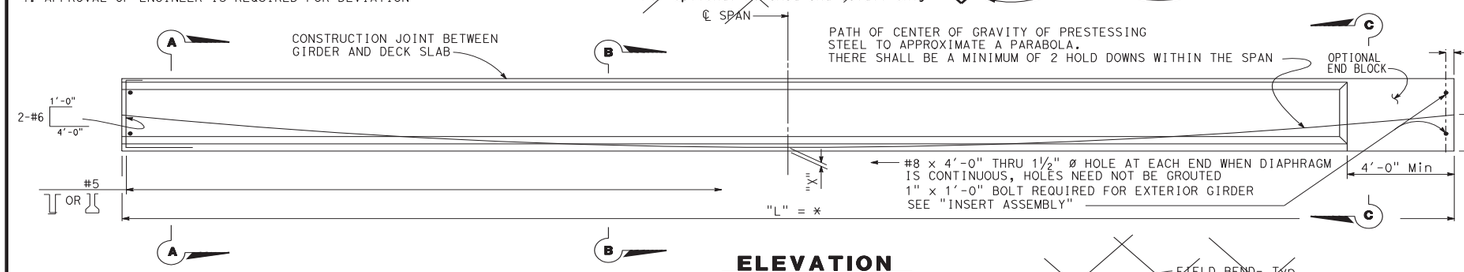
JACKING FORCE (P): The manufacture jacking force required at point of control along the span. The jacking force does not include any fabrication specific losses.

CONCRETE STRENGTH: f'ci (Ksi) is at time of initial stressing. f'c (ksi) is at 28 days

DEFLECTION COMPONENTS: Informational - to be used in setting screed line elevations.

Screed line elevations for deck concrete will be determined by the Engineer.

Contractor may interpolate "P" and "X" values between limits shown, as approved by the Engineer.

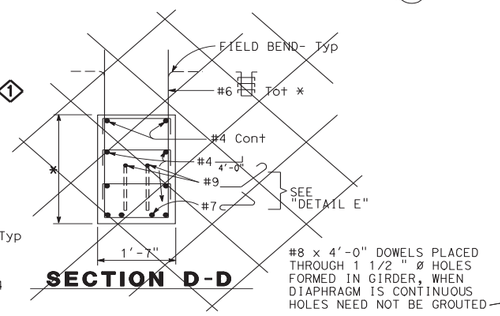


ELEVATION

* Engineer to fill in these values

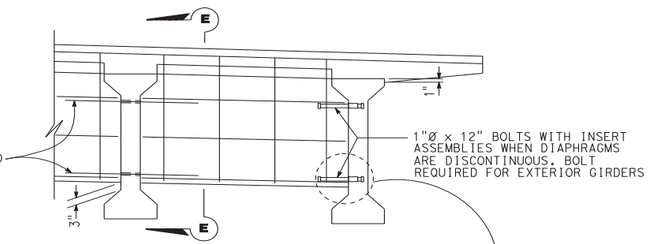
GIRDER LOCATION OR DESIGNATION AND LENGTH	JACKING FORCE (P) IN KIPS "X"		CONCRETE STRENGTH (Ksi) f'ci	f'c	DEFLECTION COMPONENTS IN INCHES ① DECK DL	② RAIL DL

Add ①

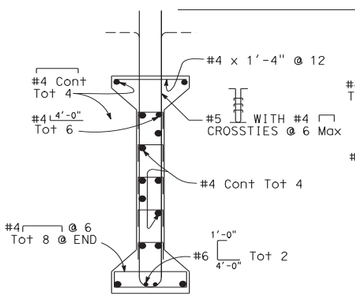


SECTION D-D

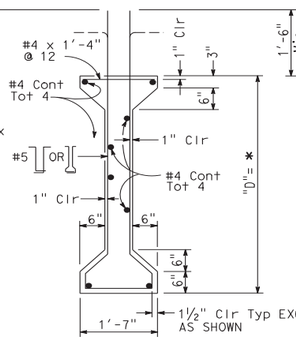
#8 x 4'-0" DOWELS PLACED THROUGH 1 1/2 " ø HOLES FORMED IN GIRDER, WHEN DIAPHRAGM IS CONTINUOUS HOLES NEED NOT BE GROUTED



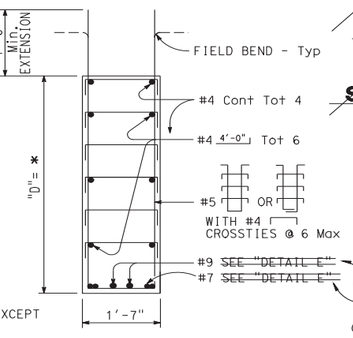
INTERMEDIATE DIAPHRAGM



SECTION A-A

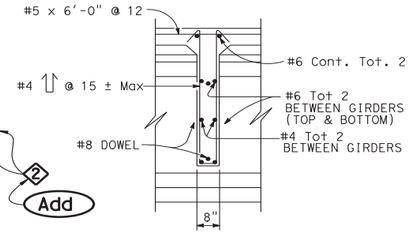


SECTION B-B

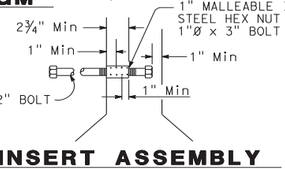


SECTION C-C

Add ②



SECTION E-E



INSERT ASSEMBLY

Add SPECIAL DETAILS

ABC Toggle "REVISED"

REVISED STANDARD DRAWING

FILE NO. xs 1-120-e

APPROVED BY Mary Smith — RESPONSIBLE TECHNICAL SPECIALIST

APPROVAL DATE 07-21-08

RELEASED BY John Doe — RESPONSIBLE OFFICE CHIEF

RELEASE DATE 07-21-08

① Does Not Apply
② Revised Note
Add

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO.	BIG OLD SEPARATION
06-0126L	
POST MILE 15.4	PRECAST PRESTRESSED I GIRDER (LRFD)

DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. 01/11/08)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03247
EA 3C0001

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)						SHEET	OF
10-31-06	11-08-06	12-26-07	07-21-08	08-01-08	08-05-08		

01f-bdd-1-16-5-mod-xs.dgn

DATE PLOTTED => 23-MAR-2010 TIME PLOTTED => 07:59

ATTACHMENT 1-22G

Add 591R1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO	TOTAL SHEETS
08	BB	75	11.1-55.7	591R1	893

REGISTERED CIVIL ENGINEER — DATE 1-1-09

REGISTERED PROFESSIONAL ENGINEER — Name — No. 12345 — Exp. 6-30-10 — CIVIL — STATE OF CALIFORNIA

3-3-09
PLANS APPROVAL DATE

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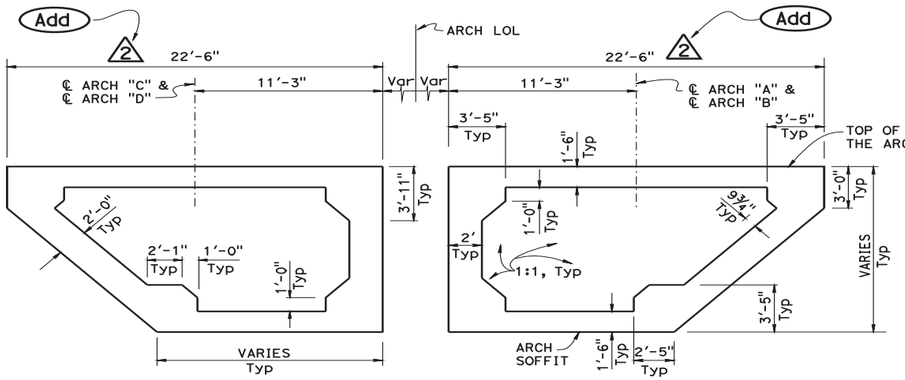
To get to the Caltrans web site, go to: http://www.dot.ca.gov

NOTES:

1. Place bars normal to and radially space along ℄ Arch "A", "B", "C" and "D"
2. These bars shall be radially spaced along ℄ Arch "A", "B", "C" and "D"
3. For location of "SECTION O-O", see "ARCH GEOMETRICS DETAIL NO. 1" sheet



SECTION O-O
¼" = 1'-0"

NOTE:
Dimensions are normal to ℄ Arch "A", "B", "C" & "D"

Add

MARK	DATE	REVISION(S) DESCRIPTIONS	DES	CHK	DET
2	3-30-09	CORRECTED DIMENSION	EE	AA	JC
1	3-30-09	CHANGED BAR	EE	AA	JC

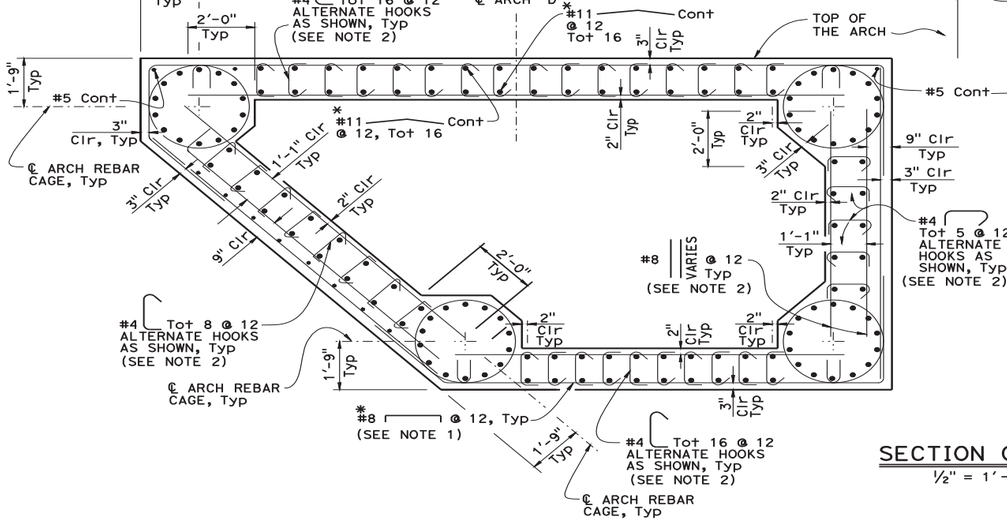
REGISTERED PROFESSIONAL ENGINEER — ENGINEER'S NAME — No. PE Number — Exp. Date — CIVIL — STATE OF CALIFORNIA

REGISTERED CIVIL ENGINEER: DATE: 6-30-10

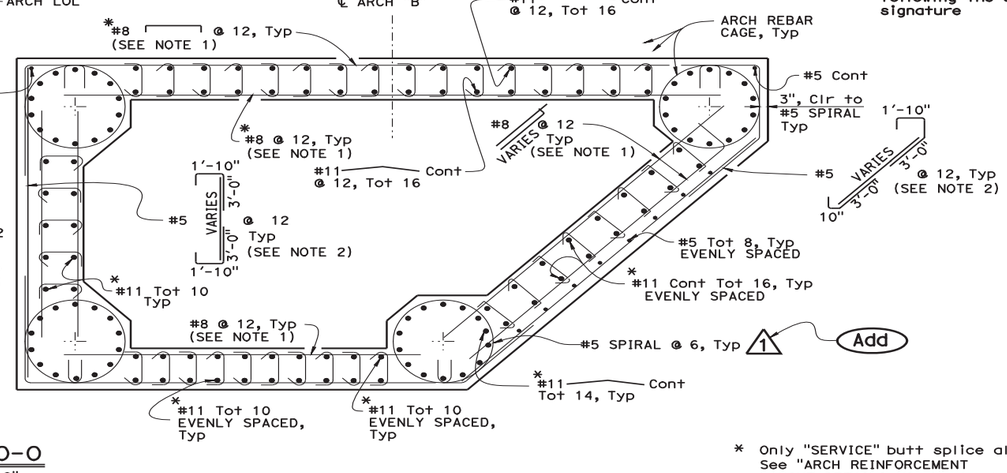
Electronic Signature

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

The Date on which the authorization form was signed shall be placed following the electronic signature



SECTION O-O
½" = 1'-0"



* Only "SERVICE" butt splice allowed, See "ARCH REINFORCEMENT LAYOUT DETAILS NO. 1" sheet for Configuration and Limitation

	BY	CHECKED
DESIGN	Name	Name
DETAILS	Name	Name
QUANTITIES	Name	Name

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH

CU
EA

BRIDGE NO.
POST MILE

66TH STREET ARCH BRIDGE
TYPICAL SECTION

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 2-4-09, 2-25-09

SHEET 9 OF 30

FILE => 01g-bdd-1-20-5-cco-rev.dgn

ATTACHMENT 1-22H

New Date for Signature Author

Add
58R1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Sac	50	22.4	58R1	167

2-19-09
DATE
REGISTERED CIVIL ENGINEER

3-3-09
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Name
No. 12345
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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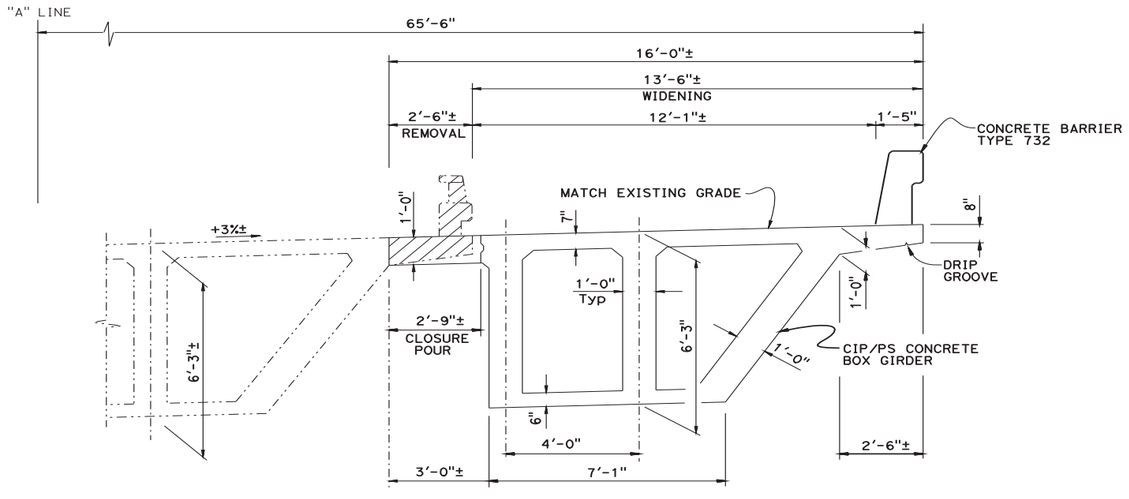
Add
THIS SHEET REPLACES SHEET NO. 58 OF 167
OF PLAN APPROVED MARCH 3, 2009



TYPICAL SECTION
½" = 1'-0"

FALSEWORK RELEASE

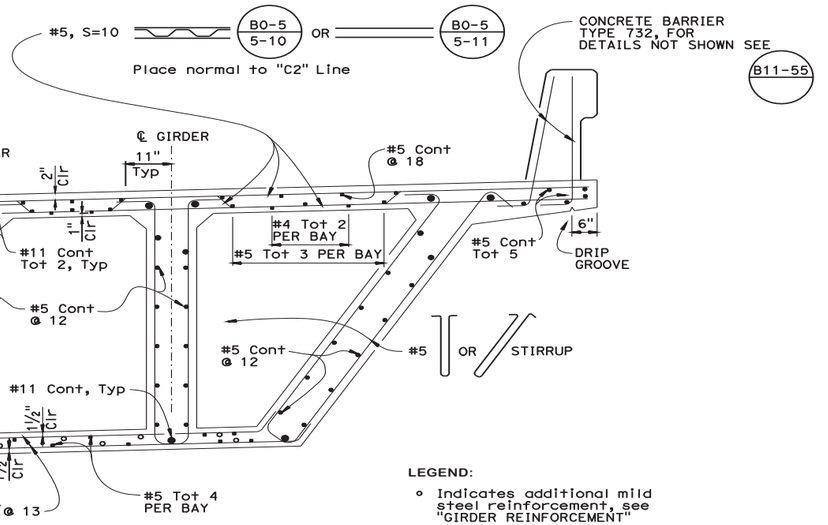
Alternative 1:

Falsework shall be released as soon as permitted by the specifications. Closure pour shall not be placed sooner than 60 days after the falsework has been released.

Alternative 2:

Falsework shall not be released less than 28 days after the last concrete has been placed. Closure pour shall not be placed sooner than 14 days after the falsework has been released.

When Falsework Release Alternative 2 is used, camber values are 0.75 times those shown.



LEGEND:

- Indicates additional mild steel reinforcement, see "GIRDER REINFORCEMENT" sheet

Add
CONTRACT CHANGE ORDER NO. _____
SHEET ____ OF ____

PART TYPICAL SECTION (B7-1 / B-1)
¾" = 1'-0"

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

DESIGN	BY Name	CHECKED Name	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH	BRIDGE NO.	66TH STREET UNDERCROSSING (WIDEN)
DETAILS	BY Name	CHECKED Name			POST MILE	TYPICAL SECTION
QUANTITIES	BY Name	CHECKED Name				

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU
EA

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 2-4-09, 2-15-09

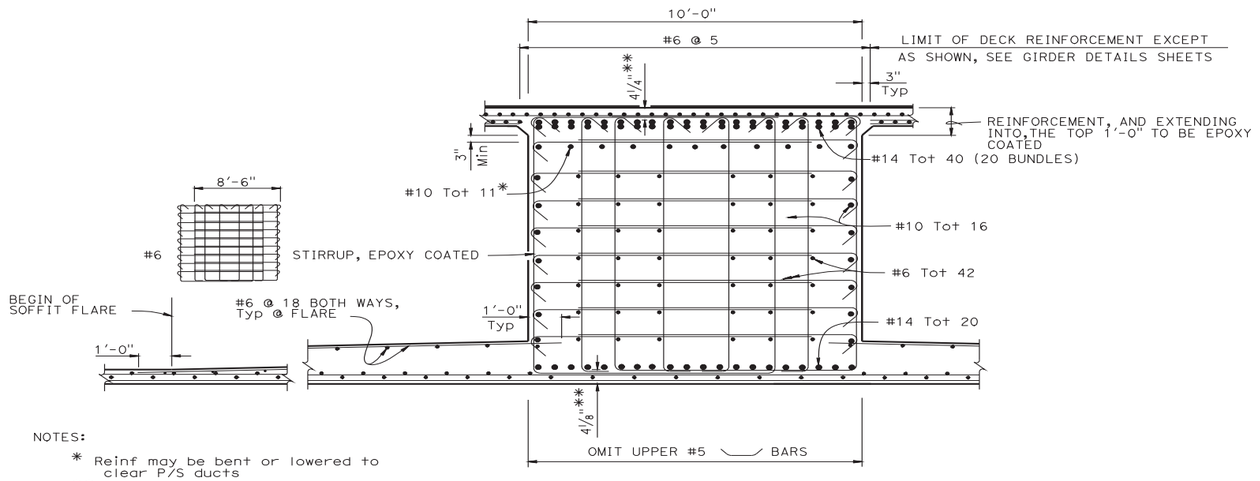
SHEET 9 OF 30

FILE => 01h-bdd-1-20-6-replace.dgn

ATTACHMENT 1-22I

Add
New Signature & Date

Add
591S1



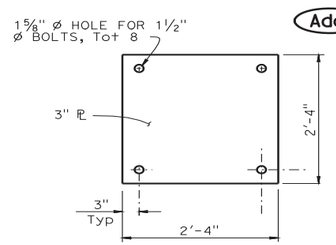
NOTES:

* Reinf may be bent or lowered to clear P/S ducts

** Clearance to main cap reinforcement

1. No splices allowed in main bent cap reinforcement (#14 bars, top & bottom)
2. Arch not shown

SECTION A-A
½" = 1'-0"



Add

JACKING PLATE
1" = 1'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	18	11.1-55.7	591S1	893

1-1-09
REGISTERED CIVIL ENGINEER DATE

Add
3-3-09
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Name — No. 12345 — Exp. 6-30-10 — CIVIL — STATE OF CALIFORNIA

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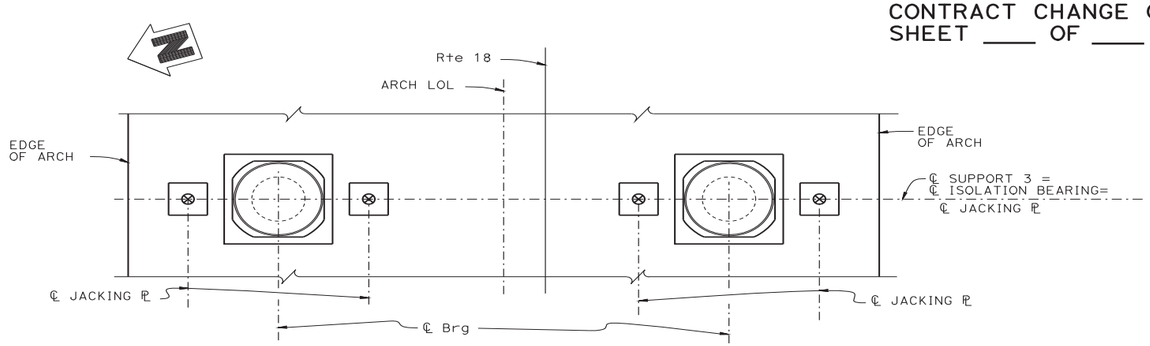
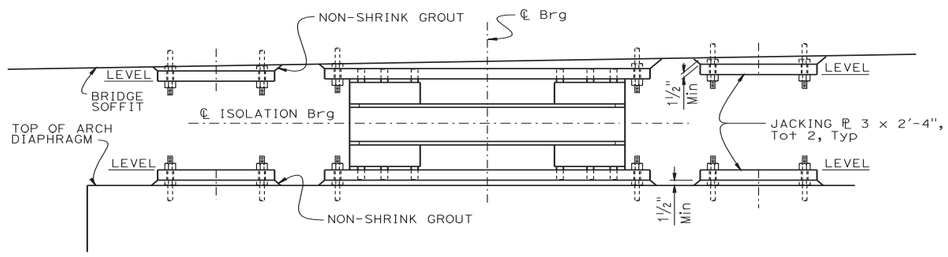
JACKING LOADS (PER JACKING PLATE)		
LOCATION	DEAD LOAD (Kip)	*LIVE LOAD (Kip)
SUPPORT 3	2270	690

Max load per jack = 1,900 Ton
Locate Jack at center of plate
⊗ Jacking Location
* Indicates LRFD Design Vehicle with Dynamic Allowance
Jacking Plate to be galvanized

Add
CONTRACT CHANGE ORDER NO. ____
SHEET ___ OF ___



SECTION B-B
¼" = 1'-0"



DETAIL C
¾" = 1'-0"

Add
SUPPLEMENTAL SHEET

DESIGN	BY Name	CHECKED Name	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH	BRIDGE NO.	LAKE BRIDGE	
DETAILS	BY Name	CHECKED Name			POST MILE	SUPPORT 3 DETAILS NO. 2	
QUANTITIES	BY Name	CHECKED Name					

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU
EA

FILE => 011-bdd-1-20-7-supp.dgn

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 2-19-09

SHEET 26 OF 118