

USER: oh2140
OFFICE: RCH
PROJECT * 27379
FILE: 27379-COVER.dgn
TIME: 2:14:34 PM
DATE: 4/29/2010

PLANS FOR THE CONSTRUCTION OF
PONTE AVENUE & BELLA LANE VEHICULAR BRIDGES
& THE SOUTHERN PEDESTRIAN BRIDGE FOR VITRUVIAN PARK
KNOWN AS
VITRUVIAN PARK PUBLIC INFRASTRUCTURE - PHASE 1D
TOWN OF ADDISON, TEXAS

PUBLIC WORKS # 2009-05

APRIL 2010



JOE CHOW
MAYOR

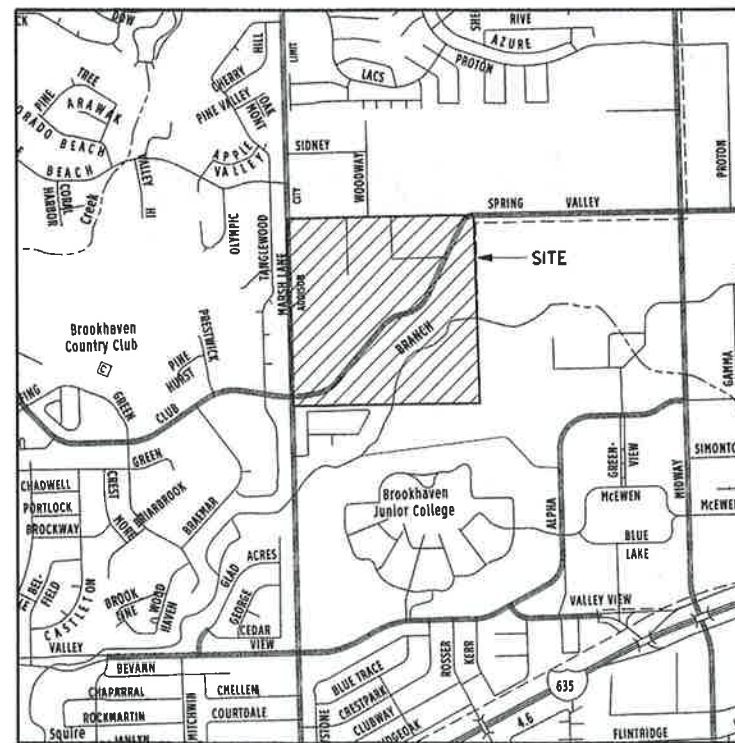
ROGER MELLOW
TOM BRAUN
BLAKE CLEMENS
DON DASEKE
KIMBERLY LAY
BIANCA NOBLE
COUNCIL MEMBERS

RON WHITEHEAD
CITY MANAGER

NANCY CLINE, P.E.
DIRECTOR OF PUBLIC WORKS

CLAY BARNETT, P.E.
TOWN ENGINEER

LEA DUNN
CITY SECRETARY



VICINITY MAP
NOT TO SCALE

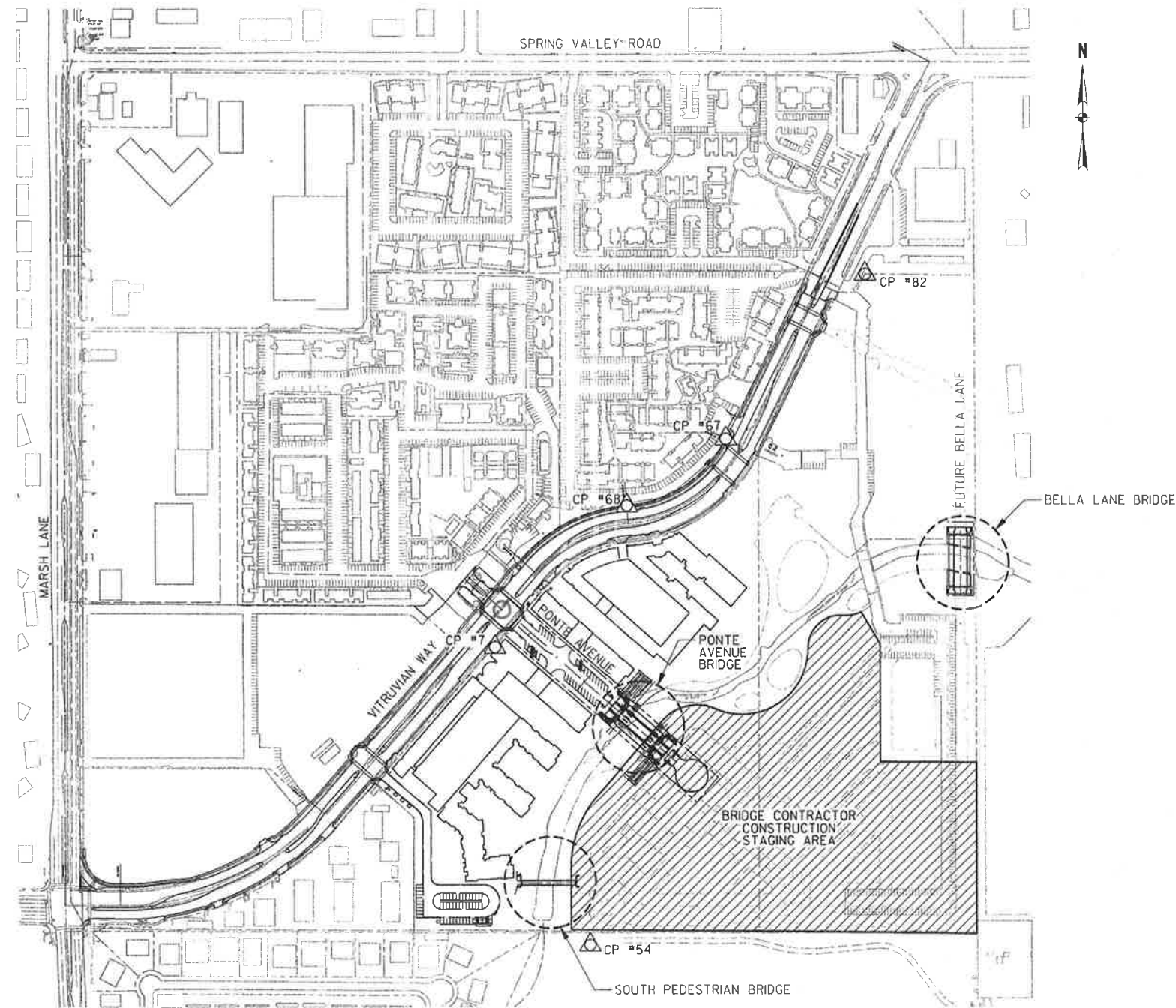
CENTERLINE GEOMETRY AND CONTROL POINTS
PROVIDED BY ICON CONSULTING ENGINEERS, INC.
ON APRIL 9, 2010.

**APPROVED FOR
CONSTRUCTION**
Town of Addison
Public Works Department
APPROVED BY: CLAY BARNETT
DATE: 7-14-2010

All responsibility for the adequacy of these plans remains with the Engineer who prepared them. In approving these plans, the Town of Addison makes no representation of adequacy of the work of the Design Engineer.

 **HALFF**
1201 NORTH BOWSER ROAD
RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200
FAX (214) 739-0095

USER: ah2140
OFFICE: RCH
PROJECT #: 27379
FILE: 27379-LOCPLN.dgn
DATE: 4/29/2010
TIME: 2:58:54 PM



LOCATION PLAN

SCALE: 1" = 200'-0"

CONTROL POINTS

BM #1 REF. ELEVATION = 559.47
SQUARE CUT IN TOP OF CURB, SOUTH MEDIAN END NOSE, MARSH LANE
1127' NORTH OF VITRUVIAN WAY.

BM #2 REF. ELEVATION = 547.84
SQUARE CUT IN TOP OF CURB, NORTH MEDIAN END NOSE, AT INTERSECTION
OF VITRUVIAN WAY AND MARSH LANE.

CP #7 CPIR 5/8 YC2509 N 8354.44 E 11036.81 ELEV 564.75	CP #54 CPIR 5/8 YC #2509J N 7549.40 E 11283.24 ELEV 549.86	CP #67 IRF 1/2 N 8751.47 E 11411.24 ELEV 570.89
CP #68 IRF 1/2 BENT N 8604.13 E 11117.93 ELEV 569.99	CP #82 IRF 1/2 N 9391.52 E 12074.82 ELEV 573.99	

GENERAL

- S0-00 Cover Sheet
- S0-01 Location Plan and Sheet Index

STRUCTURAL - PONTE AVENUE BRIDGE

- S1-01 Bridge Layout - Plan
- S1-02 Bridge Layout - Elevation
- S1-03 Bridge Layout - Typical Section
- S1-04 Estimated Quantities
- S1-05 Abutment No. 1 Plan and Elevation
- S1-06 Abutment No. 2 Plan and Elevation
- S1-07 Abutment Details - Sections
- S1-08 Abutment Details - Stem Wall Elevation
- S1-09 Abutment Details - Wingwall Details
- S1-10 Abutment Details - Wingwall Details
- S1-11 Abutment Details - Support Wall Details
- S1-12 Abutment Details - Wall Corners & Dr. Shafts
- S1-13 Abutment Details - Bar Bending Diagrams
- S1-14 Abutment Details - Data Tables
- S1-15 Framing Plan
- S1-16 Deck Plan
- S1-17 Deck Details
- S1-18 Miscellaneous Details
- S1-19 Arch Details - Elevation
- S1-20 Arch Details - Lower Arch Segment
- S1-21 Arch Details - Upper Arch Segment
- S1-22 Arch Details - Erection Details
- S1-23 Arch Details - Sections and Details
- S1-24 Arch Details - Embed Details
- S1-25 Temporary Special Shoring

STRUCTURAL - BELLA LANE BRIDGE

- S2-01 Bridge Layout
- S2-02 Bridge Section
- S2-03 Estimated Quantities
- S2-04 Abutment No. 1 Plan and Elevation
- S2-05 Abutment No. 4 Plan and Elevation
- S2-06 Abutment Details - Sections
- S2-07 Abutment Details - Wingwall Details
- S2-08 Bent No. 2 & 3 Details
- S2-09 Bent No. 2 & 3 Details - Sections
- S2-10 Framing Plan
- S2-11 14' Pre Str Conc - Box Beam Unit
- S2-12 Deck Details
- S2-13 Deck Details
- S2-14 Waterline Support Details
- S2-15 Arch Elevation
- S2-16 Beginning Arch Segment
- S2-17 Center Arch Segment
- S2-18 Ending Arch Segment
- S2-19 Arch Details - Sections
- S2-20 Arch Details - Sections
- S2-21 Temporary Special Shoring

STRUCTURAL - SOUTHERN PEDESTRIAN BRIDGE

- S3-01 Bridge Layout
- S3-02 Estimated Quantities
- S3-03 Abutment Details - Elevation and Details
- S3-04 Abutment Details - Sections

** STRUCTURAL - TXDOT STANDARD DRAWINGS

- S4-01 BBND
- S4-02 UBND
- S4-03 BAS-C (MOD)
- S4-04 BB-B28 (MOD) Sheet 1 of 3
- S4-05 BB-B28 (MOD) Sheet 2 of 3
- S4-06 BB-B28 (MOD) Sheet 3 of 3
- S4-07 BBEB
- S4-08 CRR (MOD)
- S4-09 PCP SHEET 1 OF 4
- S4-10 PCP SHEET 2 OF 4
- S4-11 PCP SHEET 3 OF 4
- S4-12 PCP SHEET 4 OF 4
- S4-13 PMDF Sheet 1 of 2
- S4-14 PMDF Sheet 2 of 2
- S4-15 SEJ-A
- S4-16 T401 (MOD) Sheet 1 of 3
- S4-17 T401 (MOD) Sheet 2 of 3
- S4-18 T401 (MOD) Sheet 3 of 3
- S4-19 UBD Sheet 1 of 3
- S4-20 UBD Sheet 2 of 3
- S4-21 UBD Sheet 3 of 3
- S4-22 UBEB (MOD)
- S4-23 UBMS
- S4-24 UBTS

ELECTRICAL

- E0-01 Light Fixture Schedule
- E1-01 Electrical Plan - Ponte Avenue
- E1-02 Electrical Elevation - Ponte Avenue
- E1-03 Electrical Details - Ponte Avenue
- E2-01 Electrical Plan - Bella Lane
- E2-02 Electrical Elevation - Bella Lane
- E2-03 Electrical Details - Bella Lane
- E3-01 Electrical Plan - Southern Pedestrian

LANDSCAPE ARCHITECTURE

- L1-01 Handrail Layout & Profile - Ponte Avenue
- L1-10 Handrail & Paving Layout - Ponte Avenue
- L1-11 Handrail & Paving Layout - Ponte Avenue
- L1-20 Handrail & Paving Layout - Ponte Avenue
- L1-21 Abutment Elevations - Ponte Avenue
- L1-30 Stone Details - Ponte Avenue
- L2-01 Handrail Layout & Profile - Bella Lane
- L2-10 Handrail & Paving Layout - Bella Lane
- L2-11 Handrail & Paving Layout - Bella Lane
- L2-20 Wing Wall Elevations - Bella Lane
- L2-21 Abutment Elevations - Bella Lane
- L2-30 Stone Details - Bella Lane
- L3-01 Handrail Details
- L3-02 Handrail & Paving Details
- L3-03 Stone Details

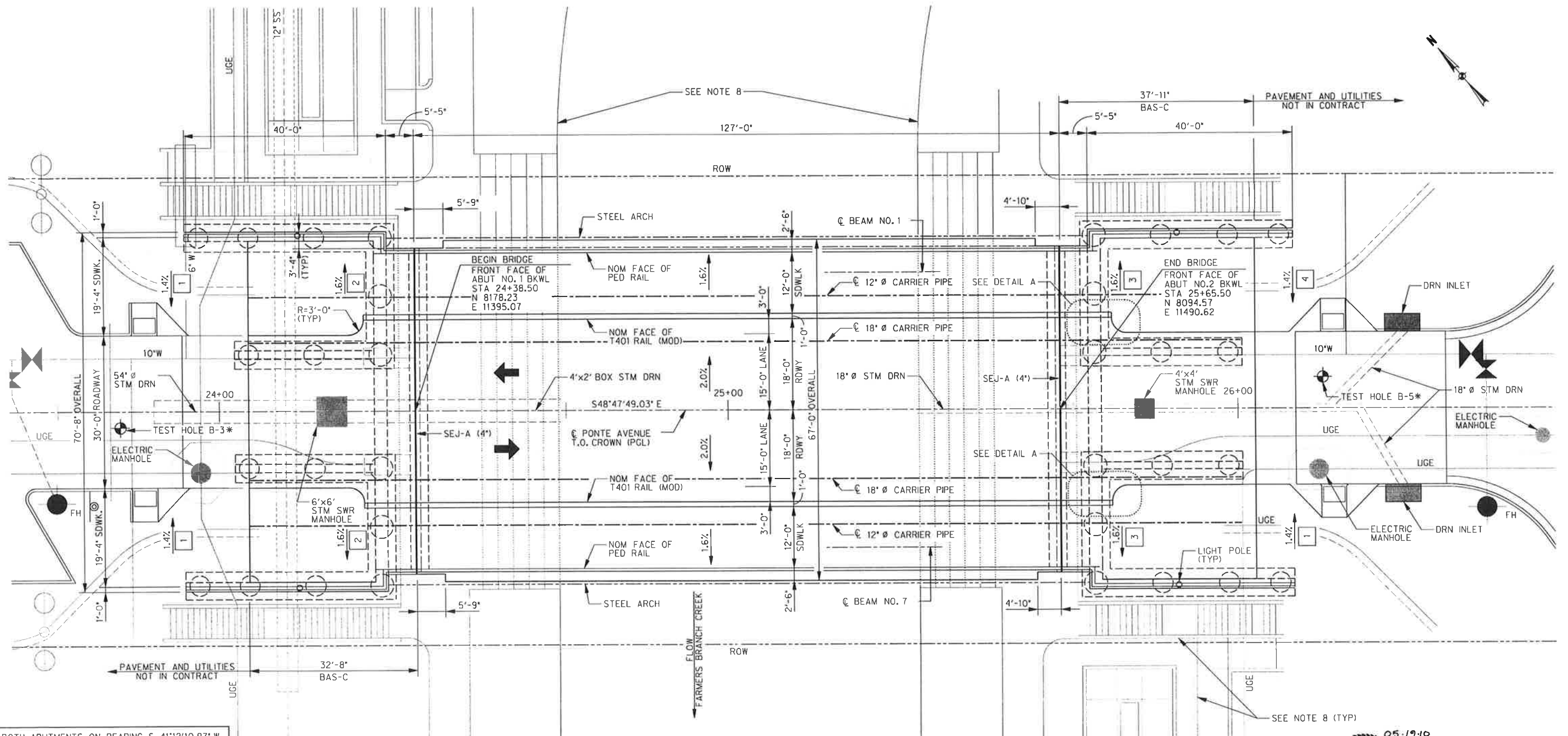
** THE TXDOT STANDARD SHEETS SPECIFICALLY IDENTIFIED IN THIS SHEET INDEX, HAVE BEEN ISSUED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

04-29-10



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ERIC S. CHRISTENSEN, P.E. #5412 ON 04-29-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF HALFF ASSOCIATES, 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS, 75081, TELE. FIRM #7-312.

NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES			
LOCATION PLAN AND SHEET INDEX			
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 346-0200 FAX (214) 736-0095			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
	SO-01		



BOTH ABUTMENTS ON BEARING S 41°12'10.97" W

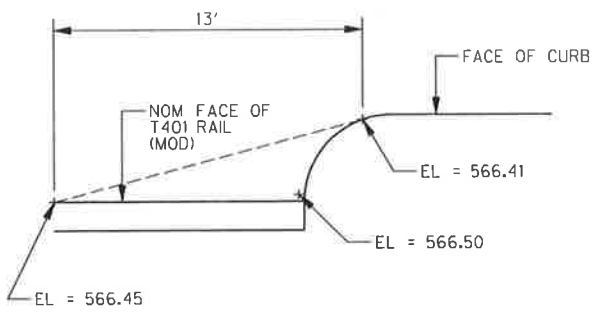
FARMERS BRANCH CREEK HYDRAULIC DATA

100 YEAR FLOOD (PROPOSED)

Q = 8,944 cfs
 V = 8.33 fps
 HW = 554.08'

SIDEWALK SLOPE TRANSITIONS

- 1 BEGIN TRANSITION STA 23+93.08
- 2 END TRANSITION STA 24+30.58
- 3 BEGIN TRANSITION STA 25+73.42
- 4 END TRANSITION STA 26+10.92



DETAIL A
SCALE: NTS

PLAN

SCALE: 1" = 10'-0"

* - BORING TEST HOLES SHOWN IN APPROXIMATE LOCATIONS.

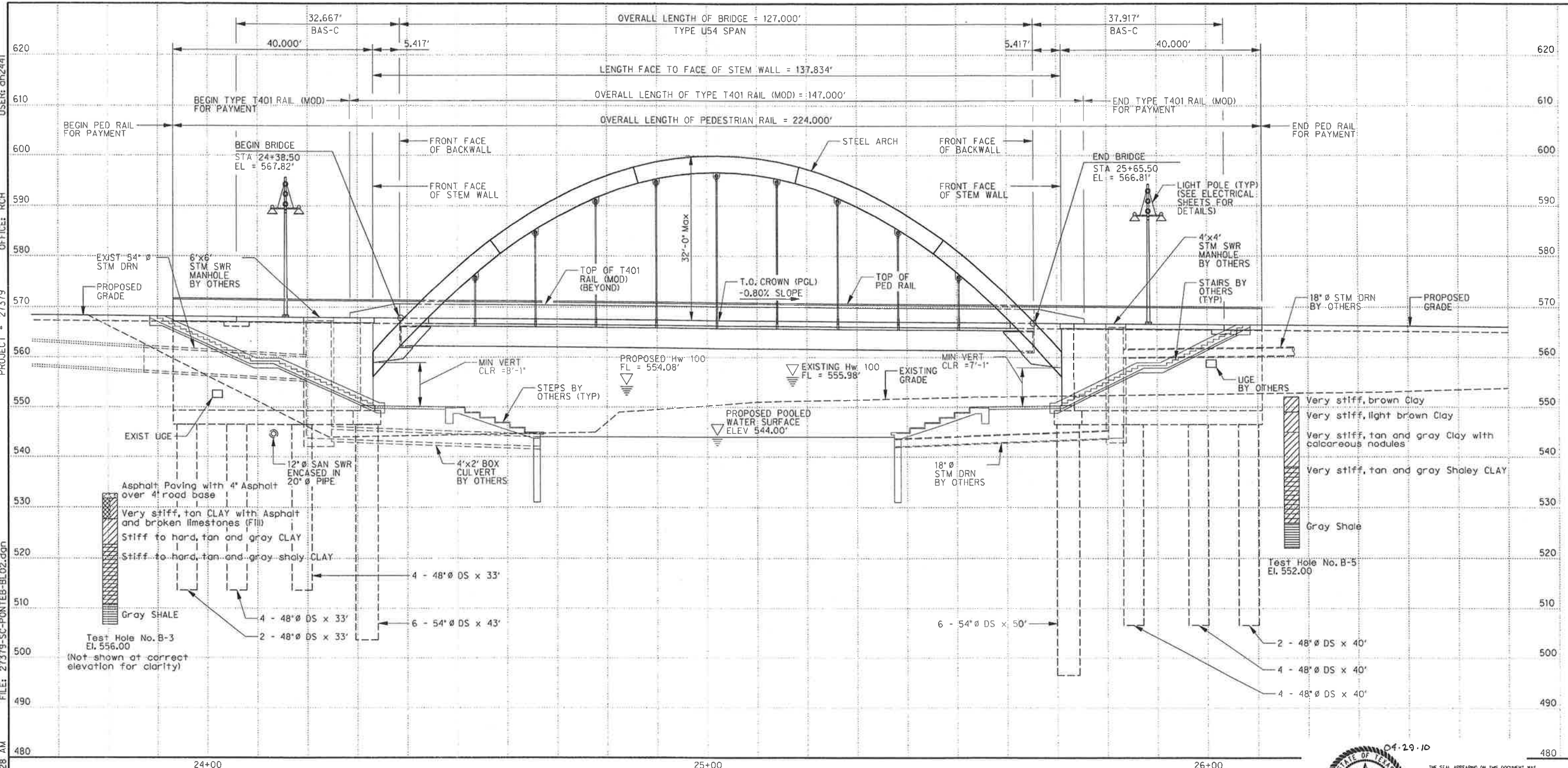
DESIGN NOTES:

1. BRIDGE DESIGNED FOR HL93 LOADING AND 25 PSF FUTURE OVERLAY PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (2007) AND INTERIM REVISIONS THERETO.
2. CONTRACTOR SHALL LOCATE ALL UTILITIES AND INFORM THE ENGINEER IN WRITING OF ANY CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
3. FOR BRIDGE ELEVATION AND BORING LOG INFORMATION, SEE SHEET 2 OF 3.
4. FOR TYPICAL SECTION, SEE SHEET 3 OF 3.
5. DESIGN SPEED = 30 MPH
6. ADT = 8,871
7. FUNCTIONAL CLASSIFICATION = LOCAL COLLECTOR STREET
8. STAIRS, RAMPS, AND BOARDWALKS ARE NOT PART OF THIS CONTRACT. SEE CIVIL DRAWINGS FOR DETAILS.
9. CONTRACTOR SHALL EXTEND CARRIER PIPES TO THE OUTSIDE EDGE OF THE SUPPORT SLAB OF EACH BRIDGE APPROACH SLAB AND CAP THEM.



Addendum #2		ESC	05/19/10
NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES PONTE AVENUE			
BRIDGE LAYOUT - PLAN			
HALFF		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-8200 FAX (214) 739-0065	
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
	S1-01		

USER: ch2441
 OFFICE: RCH
 PROJECT #: 27379
 FILE: 27379-SC-PONTEB-BL02.dgn
 TIME: 5:30:28 AM
 DATE: 4/29/2010



ELEVATION
 SCALE: 1" = 10'-0"

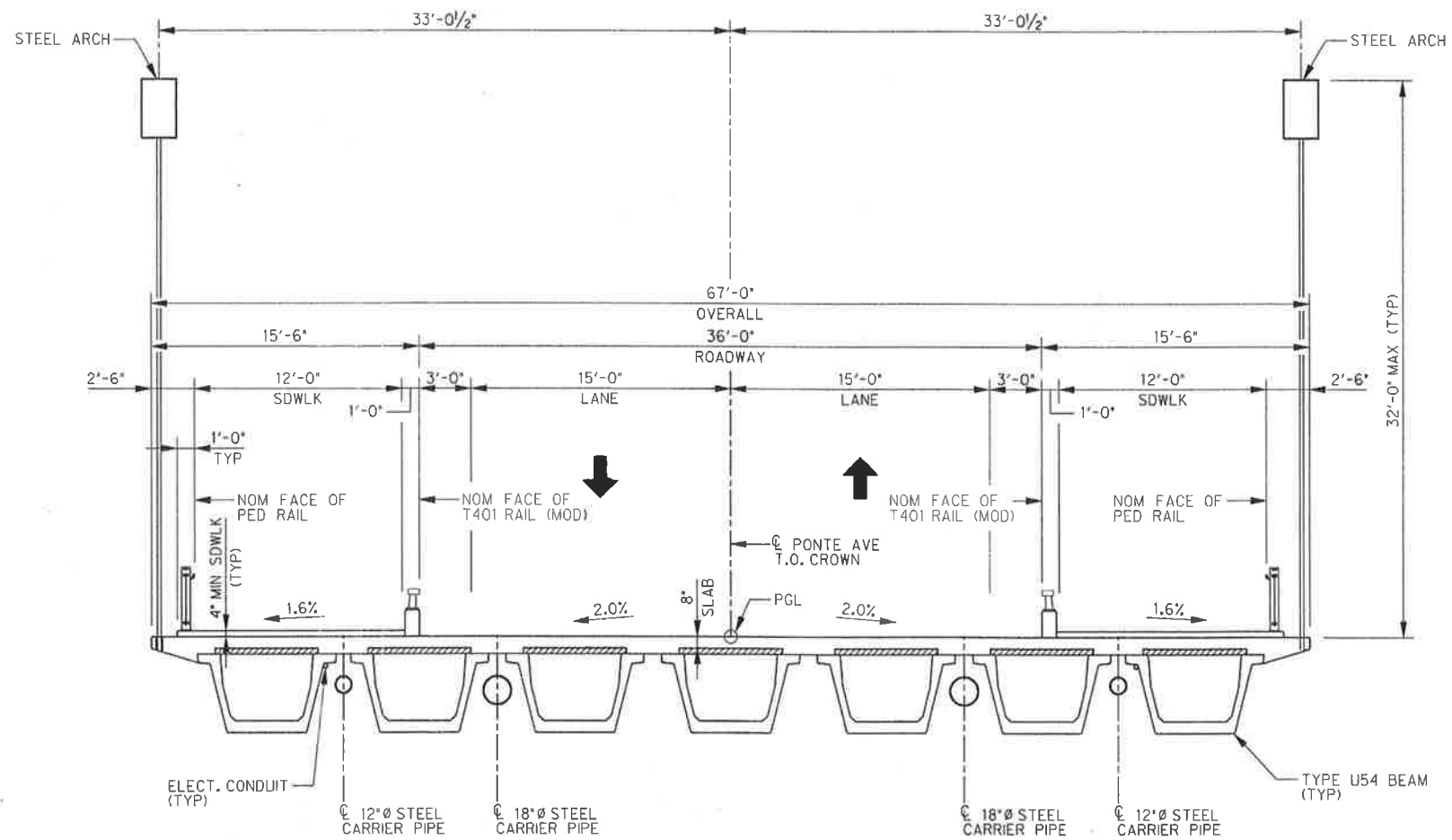
04-29-10
 THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ERIC S. CHRISTIANSEN P.E. 185412 ON 04-29-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF HALFF ASSOCIATES, 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS, 75081, TPE FIRM #9-312.

FARMERS BRANCH CREEK
 HYDRAULIC DATA
 100 YEAR FLOOD (PROPOSED)
 Q = 8,944 cfs
 V = 8.33 fps
 HW = 554.08'

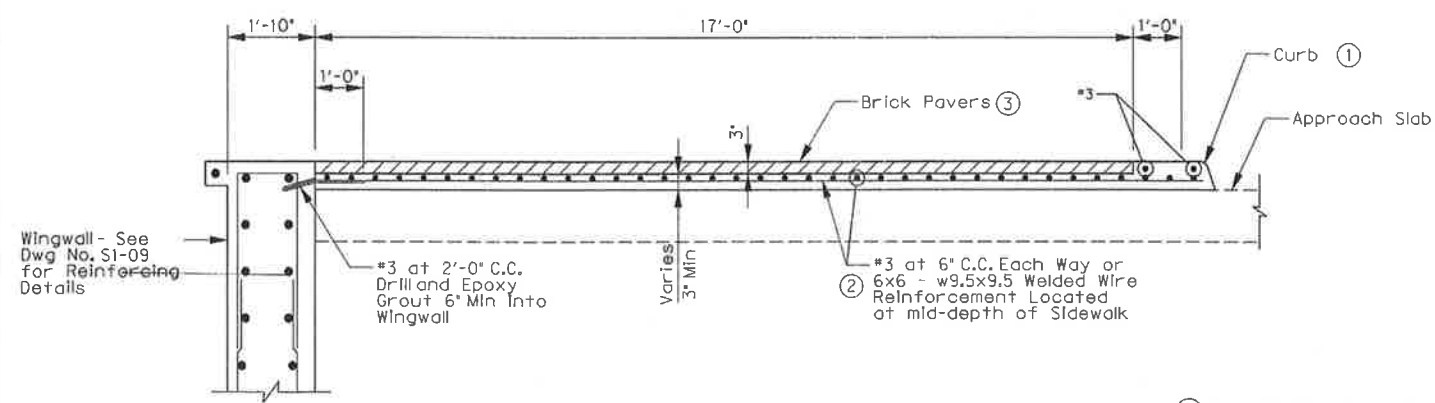
GENERAL NOTES:
 1. FOR BRIDGE PLAN, SEE SHEET 1 OF 3.
 2. FOR TYPICAL SECTION, SEE SHEET 3 OF 3.

FOUNDATION NOTES:
 1. ALL DRILLED SHAFTS AT ABUTMENTS ARE DESIGNED FOR COMBINED SKIN FRICTION AND POINT BEARING.
 2. FOUND DRILLED SHAFTS AT THE DEPTHS SHOWN OR DEEPER AS NECESSARY TO PENETRATE DARK, GRAY SHALE A MINIMUM OF 20'-0" (48" DIA.) 30'-0" (54" DIA.)

NO.	REVISION	BY	DATE		
TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES PONTE AVENUE BRIDGE LAYOUT - ELEVATION					
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 346-8200 FAX (214) 739-0065					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S1-02



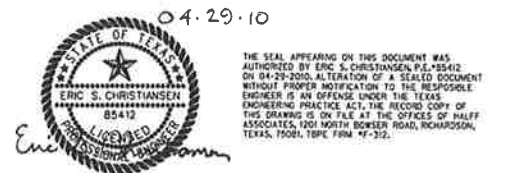
TYPICAL SECTION
SCALE: 1" = 10'-0"



SIDEWALK ON APPROACH SLAB DETAIL
SCALE: 1/2" = 1'-0"

- ① See Civil Drawings for Curb Details.
- ② Epoxy coat all sidewalk reinforcing.
- ③ See Landscape Architecture drawings for paver details.

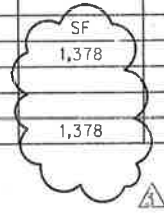
GENERAL NOTES:
1. FOR BRIDGE PLAN, SEE SHEET 1 OF 3.
2. FOR BRIDGE ELEVATION, SEE SHEET 2 OF 3.



NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES PONTE AVENUE			
BRIDGE LAYOUT - TYPICAL SECTION			
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-0200 FAX (214) 738-0066			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S1-03		

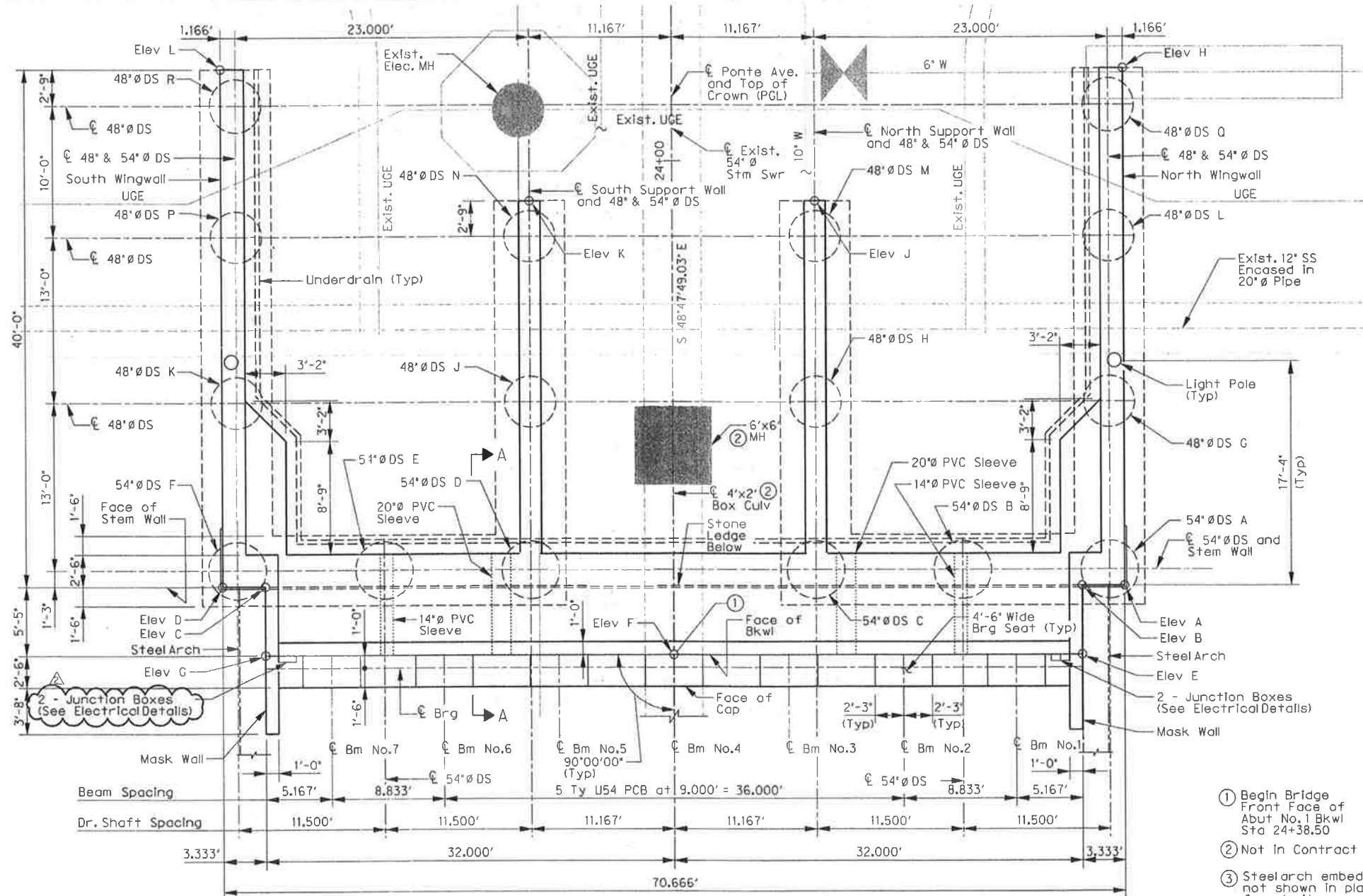
SUMMARY OF ESTIMATED STRUCTURAL QUANTITIES - PONTE AVE BRIDGE

BRIDGE ELEMENT	BASE BID ITEM TXDOT SPEC ITEM	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	21	22	23
	DESCRIPTION	BACKFILL	TEMP SPECIAL SHORING	DRILL SHAFT	DRILL SHAFT	CL 'F' CONC (MASS PLACEMENT) (ABUT)	CL 'S' CONC (APRR SLAB)	CL 'S' CONC (BRIDGE SDWLK)	REINF CONC SLAB	PRESTR CONC BEAM (U54)	CONC SURF TREAT (CLASS 1)	STR STL (MISC)	STR STL (STEEL ARCH)	STR STL (MISC) (12" PIPE)	STR STL (MISC) (18" PIPE)	RAIL (T401)(MOD)	RAIL (PED RAIL)	SEALED EXPANSION JOINT (4 IN) (SEJ-A)	JOINT SEALANT
	(TY C)			(48" DIA)	(54" DIA)	CY	CY	CY	SF	LF	SY	LB	LB	△ LB	LB	LF	LF	LF	LF
2 ~ ABUTMENTS		3,141	1,378	730	558	969.7	207.2	36.7				1,020		7,700	15,900	40.0	194.0		
1 ~ PRESTRESSED CONCRETE BEAM UNITS									8,477	886	550.3	16,600		13,100	26,700	254.0	254.0	74.3	52.0
2 ~ STEEL ARCHES													178,800						
TOTAL		3,141	1,378	730	558	969.7	207.2	36.7	8,477	886	550.3	17,620 (2)	178,800	20,800	42,600	294.0	448.0	74.3	52.0



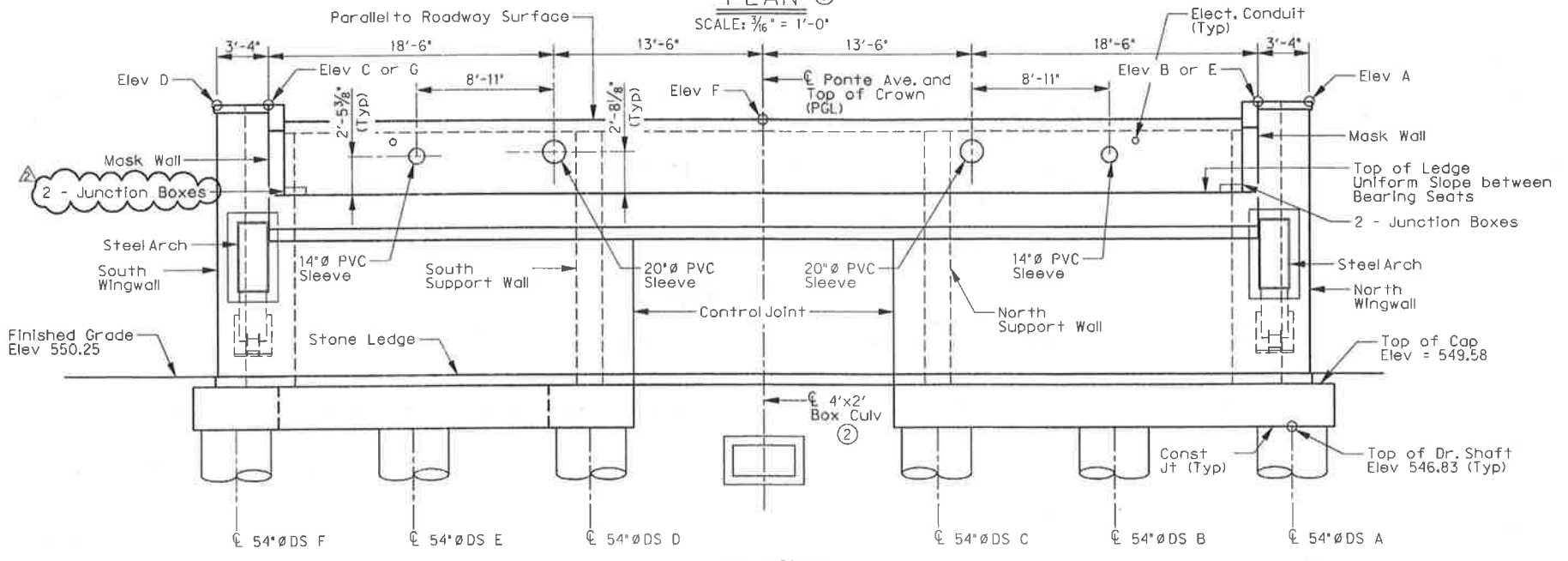
- ① Quantity Includes sidewalk concrete on approach slab only.
- ② Structural Steel quantity includes all structural angles and plates used as bridge deck forms, stone ledges, and light mounts.

△ Addendum #3	ESC	05/24/10			
△ Addendum #2	ESC	05/19/10			
REVISION					
NO.	BY	DATE			
TOWN OF ADDISON DALLAS COUNTY, TEXAS					
VITRUVIAN PARK BRIDGES PONTE AVENUE					
ESTIMATED QUANTITIES					
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-6200 FAX (214) 799-0096					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379		AHH	APRIL 2010		S1-04



PLAN 3

SCALE: 1/16" = 1'-0"



ELEVATION

SCALE: 1/16" = 1'-0"

- ① Begin Bridge Front Face of Abut No. 1 Bkwl Sta 24+38.50
- ② Not in Contract
- ③ Steel arch embeds not shown in plan for clarity.

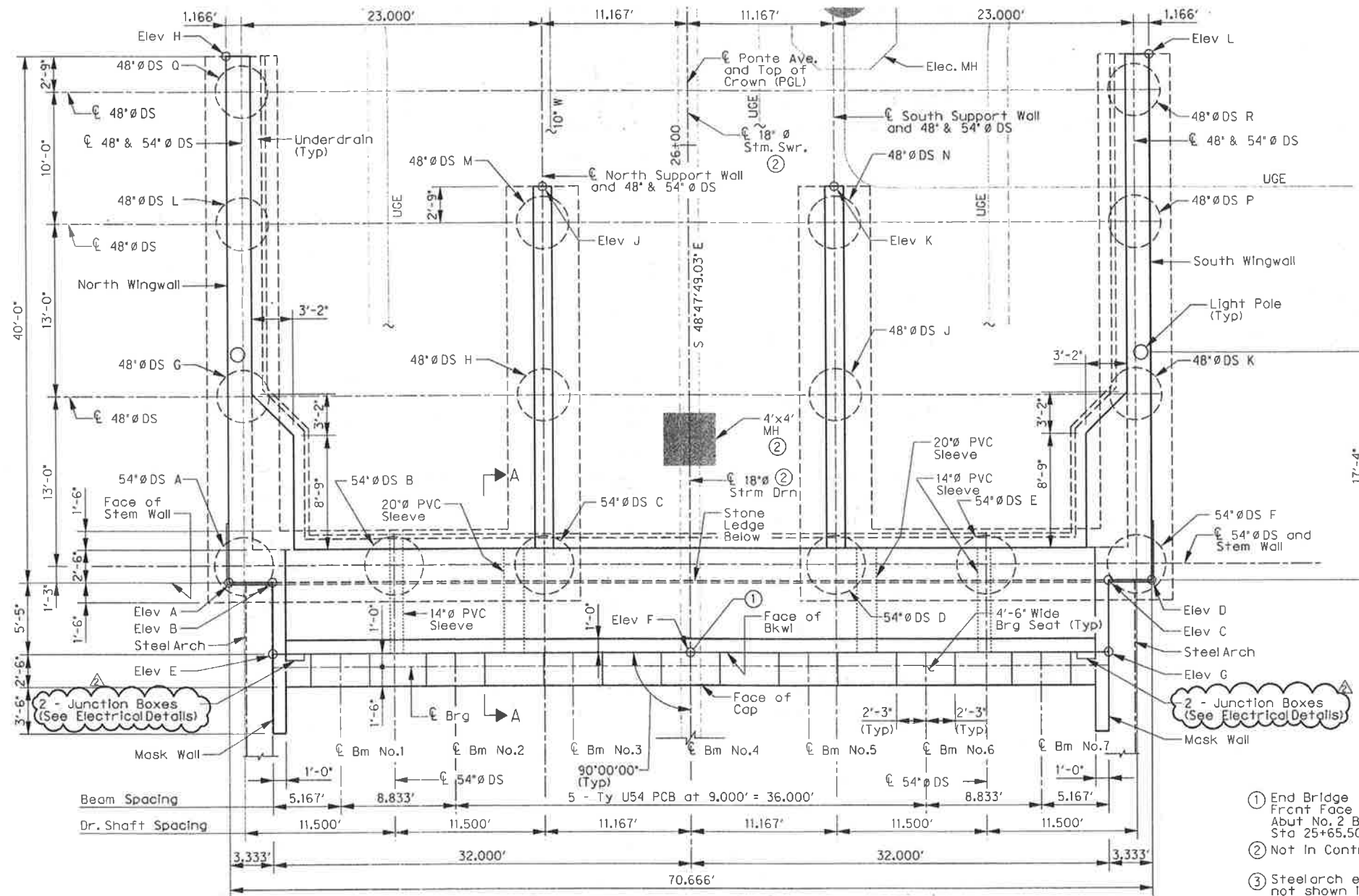
General Notes:
 Provide Class F Concrete, f'c = 4000 psi.
 The price bid per foot of Drilled Shaft shall include the reinforcing extending from the shaft into the footing.
 Spiral steel shall have one extra turn at the top, bottom, and at splices.
 All cap and wall reinforcing shall be grade 60 except as noted on Sheet 10 of 10.
 Steel angles for stone ledges shall be grade A36 and galvanized.
 Provide a 3/4" minimum chamfer for all exposed edges of concrete.
 See sheet 8 of 10 for underdrain detail. Tie underdrain into the proposed 4' x 2' box culvert at Abut No. 1 and into the proposed 18" storm drain at Abut No. 2.
 Drilled shaft reinforcing may be grade 40.
 The bearing seats shall receive a wood float finish.
 Calculated drilled shaft foundation loads:
 408 tons (Max Comp) per drilled shaft (54")
 271 tons (Max Comp) per drilled shaft (48")
 72 tons (Max Tens) per drilled shaft (48")
 See Drawing No. S1-18, Misc Details for rail anchorage in wingwalls.
 See civil drawings for adjacent stairs, ramps, and paving.
 For Section A-A and Mask Wall Detail, see Sheet 3 of 10.
 For Stem Wall Reinforcing, see Sheet 4 of 10.
 For Wingwall details, see Sheet 5 and 6 of 10.
 For Support Wall details, see Sheet 7 of 10.
 For Wall Corner Details, and Drilled Shaft Details, see Sheet 8 of 10.
 For Bending Diagrams, see Sheet 9 of 10.
 For Bearing Seat Elevations, Control Elevations, Bar Schedule and Estimated Quantities see sheet 10 of 10.

Select fill used as backfill material shall consist of very sandy clays or clayey sands with liquid limits of less than 40. The plasticity index of this material should be less than 15. The select fill shall have an effective angle of shearing resistance of at least 28 degrees with 200 psf in cohesion. The select fill shall be wellmixed to eliminate the presence of 'clay balls'. The fill shall be free of deleterious material that will prevent proper compaction, contain environmentally hazardous materials, or will decay.
 Wall backfill material shall be placed in maximum 8 inch lifts and uniformly compacted to at least 95% maximum dry density as determined by ASTM D-698 for cohesive soils. Moisture content for cohesive soils shall be within -2 to +2 percent of the optimum moisture content as measured in test method ASTM D-698.

Locate electrical conduits according to Electrical Plan. Provide a minimum of 2" clear cover for conduits in cap and walls. For conduits penetrating the backwall or top cap, do not locate more than one conduit between Bars S1 or S2.

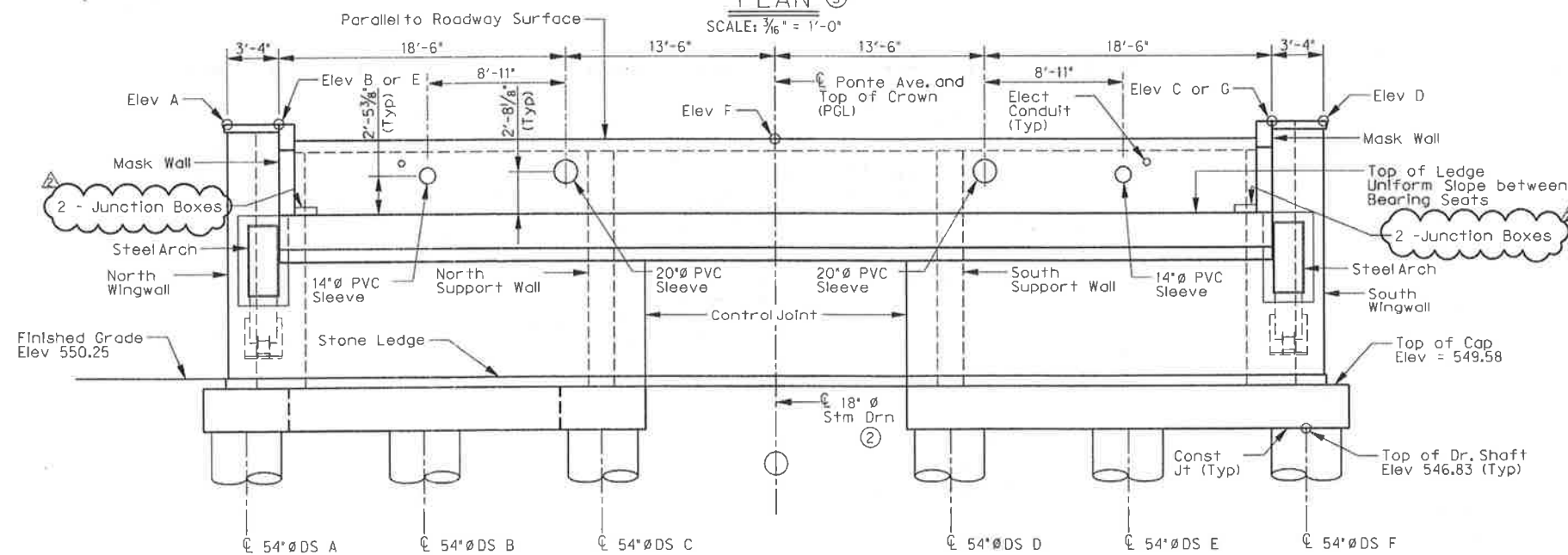


Addendum #2		ESC	05/19/10
NO.	REVISION	BY	DATE
 VITRUVIAN PARK BRIDGES PONTE AVENUE ABUTMENT NO. 1 PLAN AND ELEVATION			
		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-9200 FAX (214) 739-0096	
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S1-05		



PLAN 3

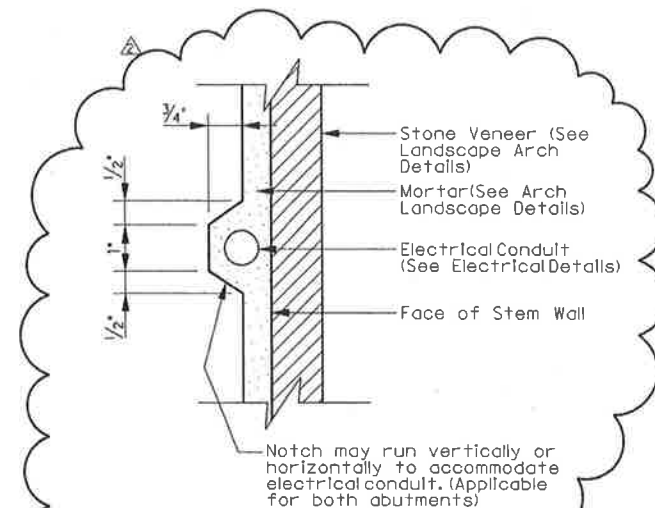
SCALE: 3/16" = 1'-0"



ELEVATION

SCALE: 3/16" = 1'-0"

General Notes:
See sheet 1 of 10 for General Notes.



CONDUIT NOTCH DETAIL

SCALE: NTS



CONTROL JOINT DETAIL

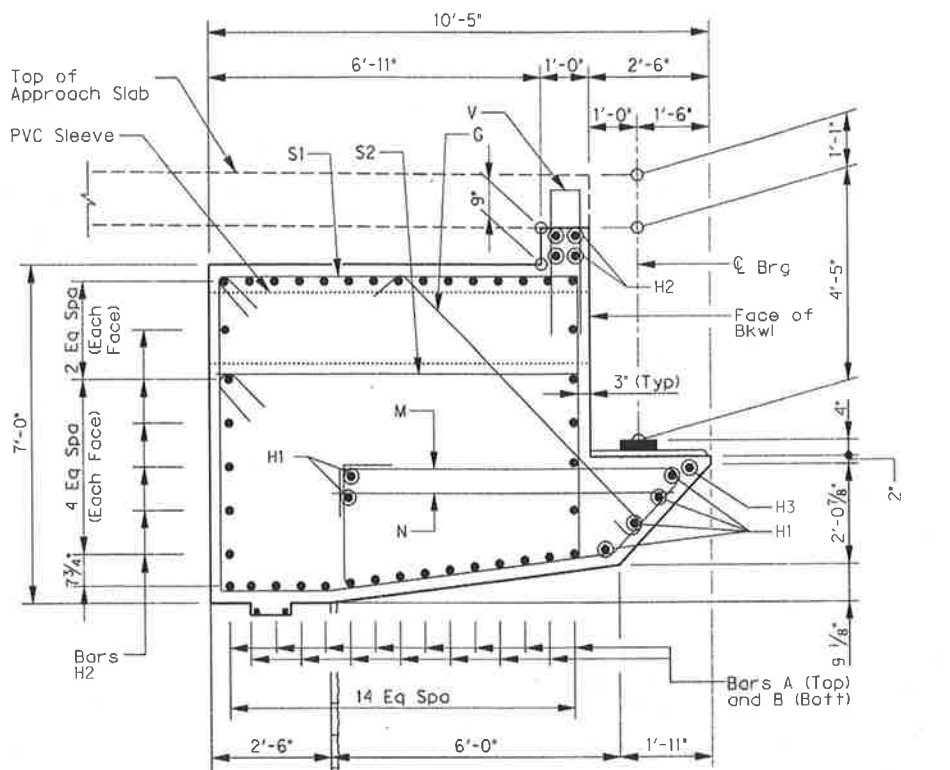
SCALE: NTS

- ① End Bridge Frnt Face of Abut. No. 2 Bkwl Sta 25+65.50
- ② Not in Contract
- ③ Steelarch embeds not shown in plan for clarity.

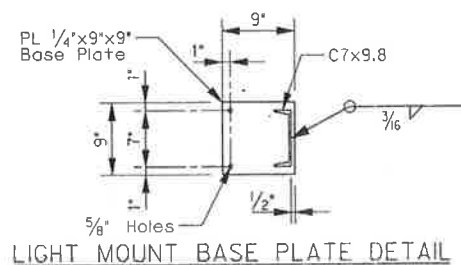


THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ERIC S. CHRISTENSEN, P.E. #85412 ON 05-19-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF HALFF ASSOCIATES, 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS, 75081, TELE. FIRM #7-312.

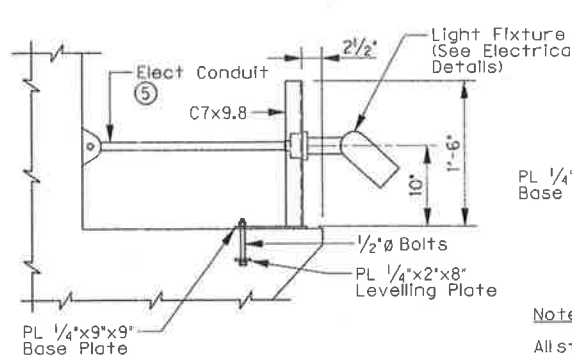
Addendum #2		ESC	05/19/10
NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES PONTE AVENUE			
ABUTMENT NO. 2 PLAN AND ELEVATION			
		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-8200 FAX (214) 739-0065	
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S1-06		



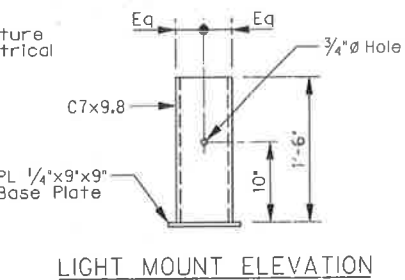
SECTION A-A (CAP)
SCALE: 1/2" = 1'-0"



LIGHT MOUNT BASE PLATE DETAIL

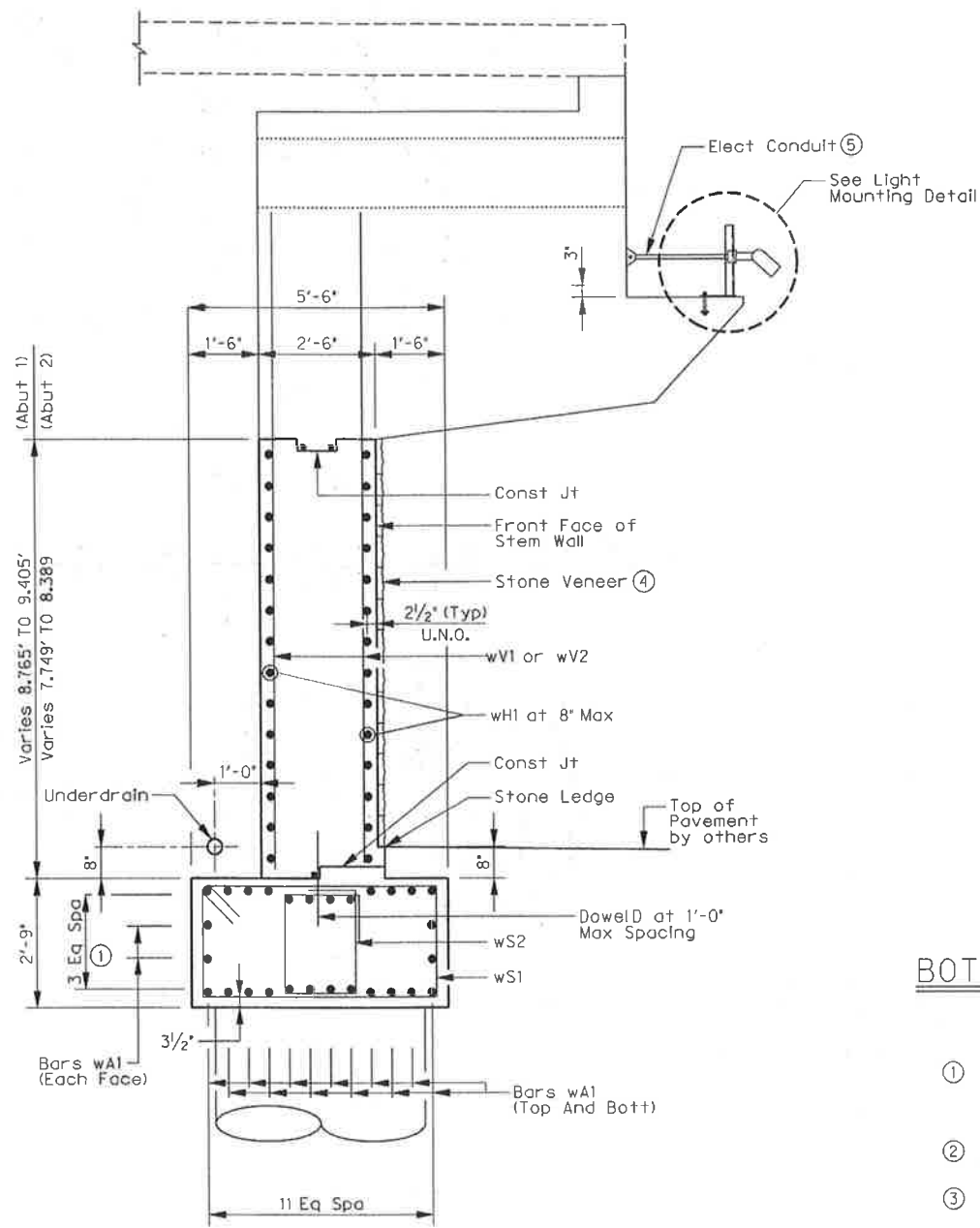


LIGHT MOUNTING DETAIL
SCALE: 1" = 1'-0"

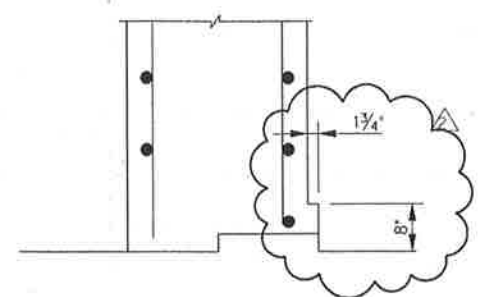


LIGHT MOUNT ELEVATION

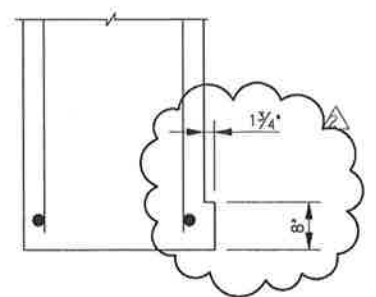
Notes:
All steel components shall be galvanized.
Two light mounting supports shall be located as follows on both abutments:
centered between Bm Nos 2 and 3
centered between Bm Nos 5 and 6



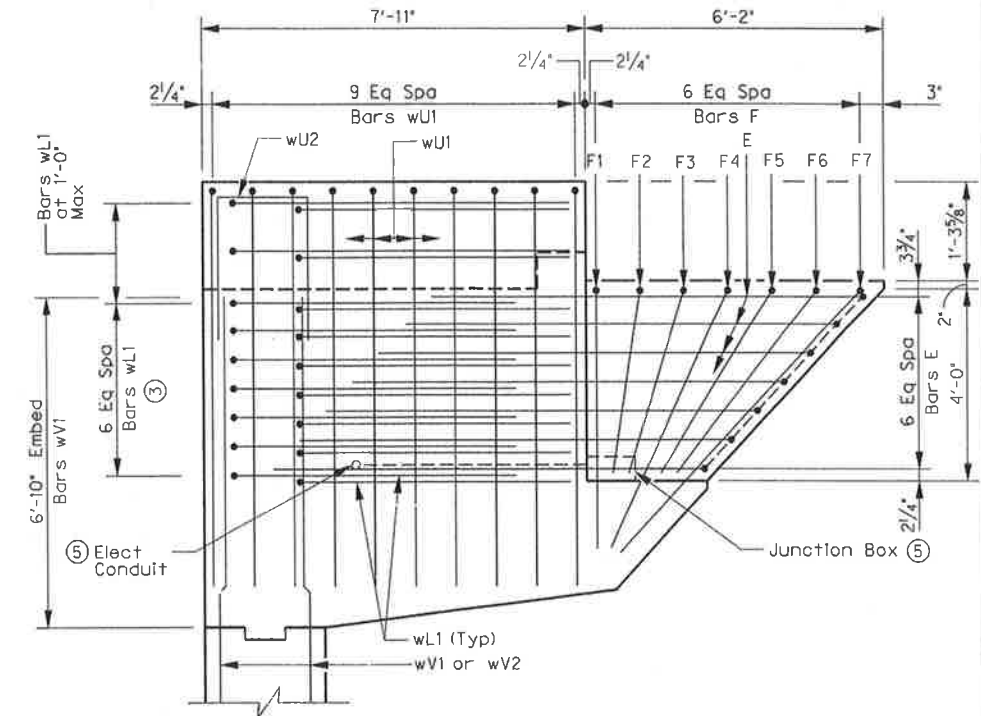
SECTION A-A (STEM WALL & FOOTING)
SCALE: 1/2" = 1'-0"



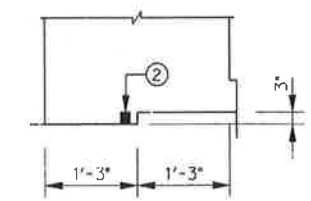
STONE LEDGE DETAIL AT CAP
SCALE: NTS



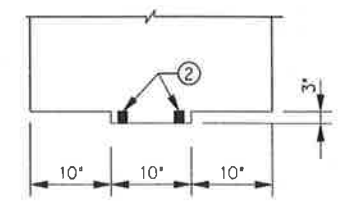
STONE LEDGE DETAIL OFF OF CAP
SCALE: NTS



MASK WALL DETAIL
SCALE: 1/2" = 1'-0"



BOTTOM CONST JT DETAIL
SCALE: NTS



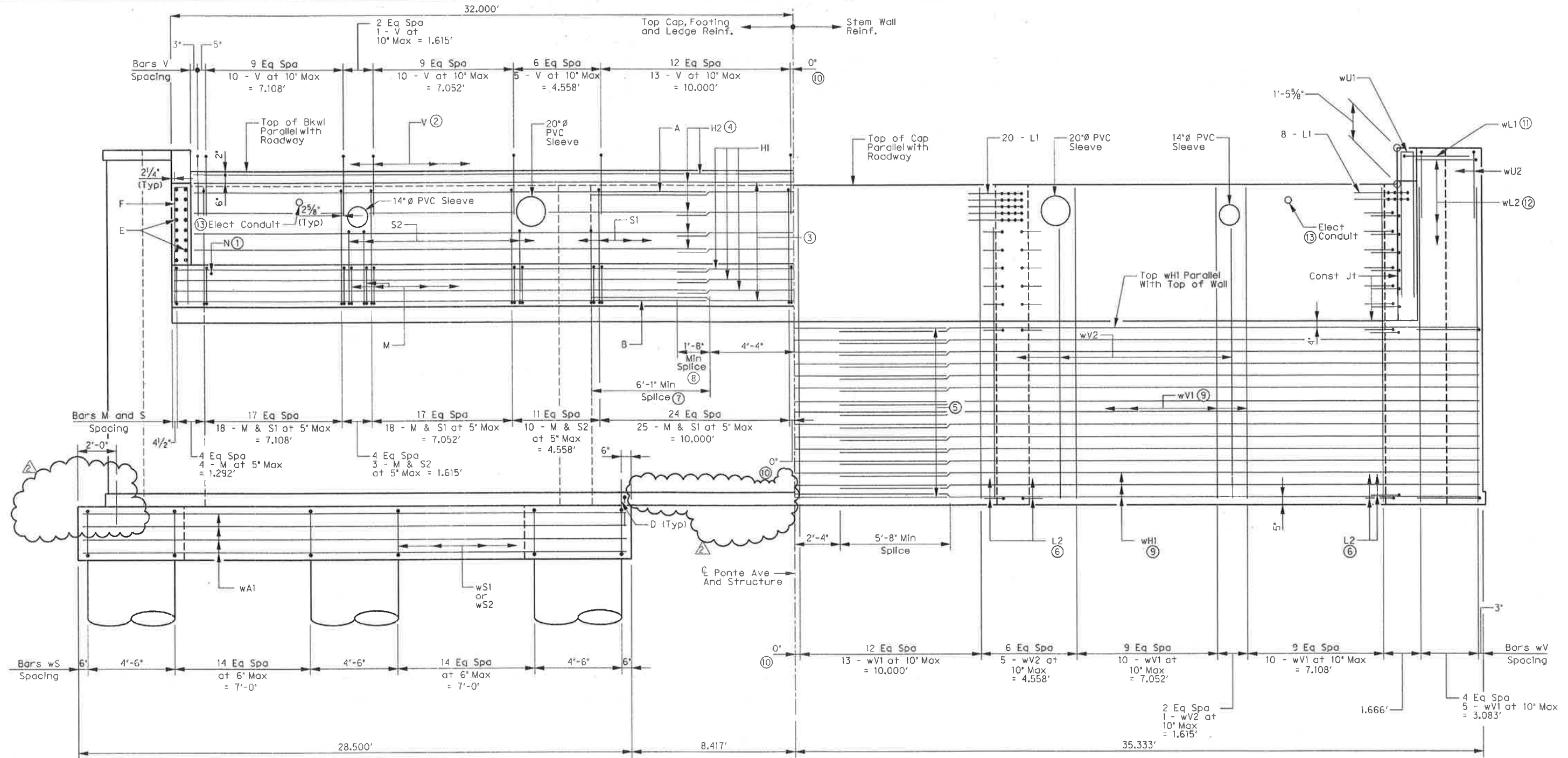
TOP CONST JT DETAIL
SCALE: NTS

- ① Adjust top and bottom rows of Bars wA1 to allow for embedment of wA2 and wA3 from support wall and wingwall footings.
- ② Greenstreak 1" x 3/4" Lockstop waterstop or approved equal
- ③ Lap Bars wL1 with Bars E where possible.
- ④ See landscape architecture drawings for stone veneer details.
- ⑤ See electrical drawings for details.



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Addendum #2		ESC	05/19/10
REVISION		BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES PONTE AVENUE			
ABUTMENT DETAILS - SECTIONS			
		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 345-0200 FAX (214) 739-0096	
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S1-07		



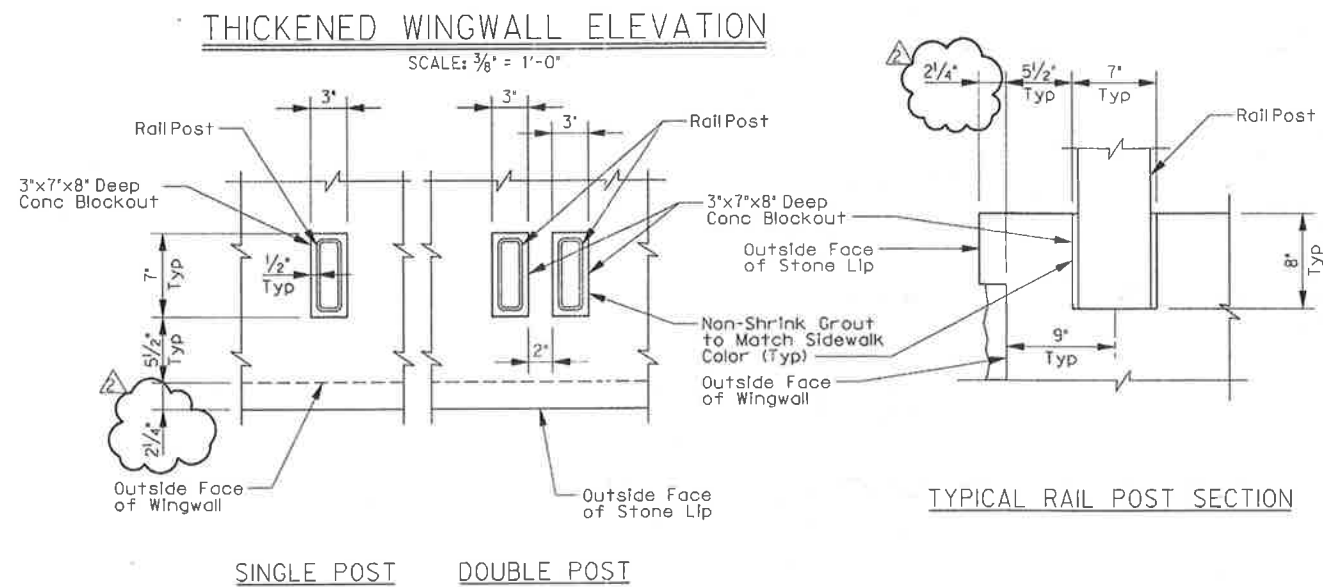
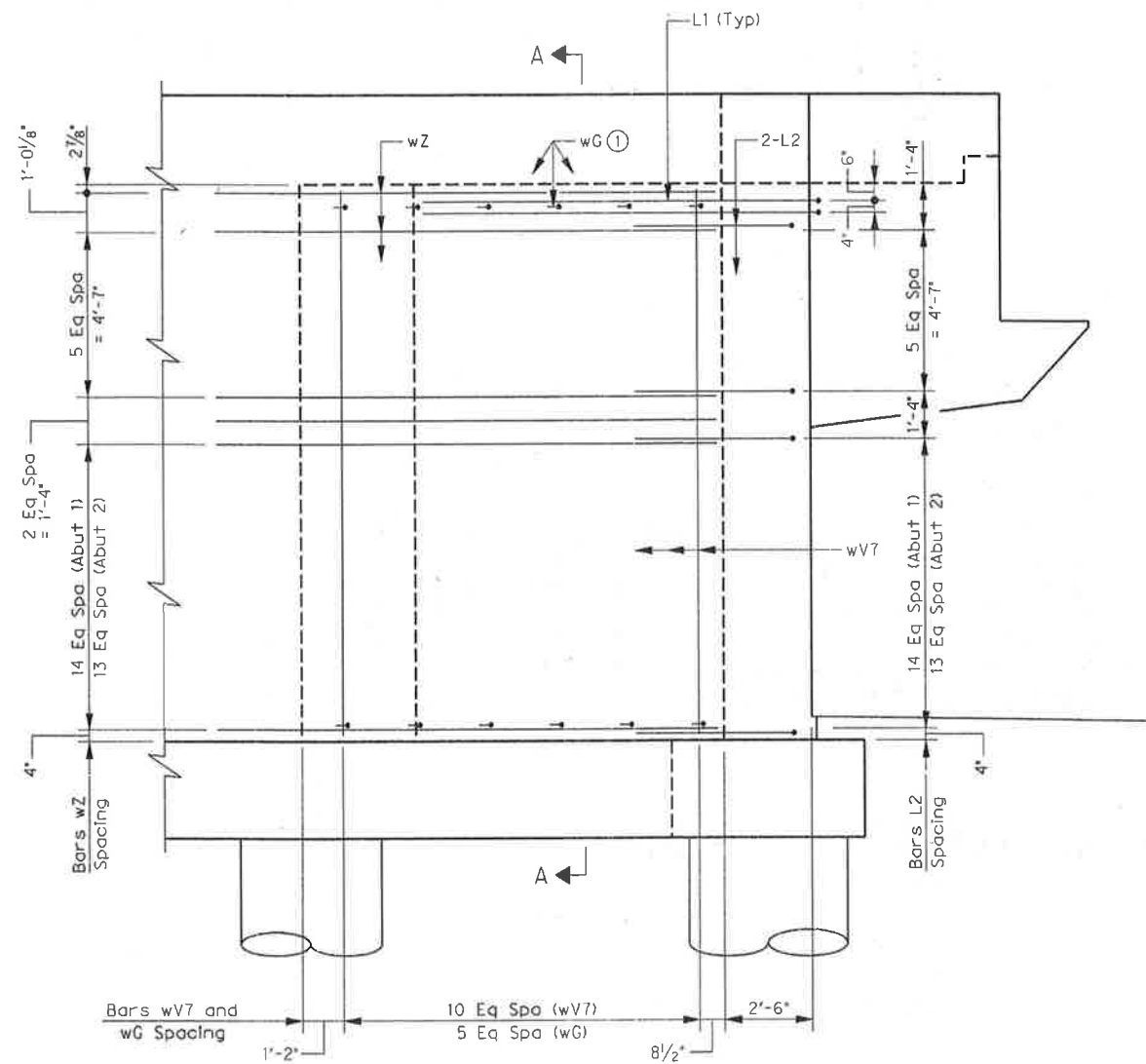
- ① Space Bars N and G at every other Bar M. Alternate Bars N and G.
- ② Field cut Bars V 2' from pipe penetrations.
- ③ See sheet 3 of 10, Section A-A for spacing of Bars H.
- ④ Field cut Bars H2 2' from pipe penetrations where applicable.
- ⑤ 14 Eq Spa (Abut 1) (Shown)
13 Eq Spa (Abut 2)
- ⑥ Space Bars L2 with every Bar wH1 in the stem wall.
- ⑦ 6'-1" Min Splice for Bars A and B. Splice 50% of the Bars on one side of the centerline of structure and the remaining on the other side.
- ⑧ 1'-8" Min Splice for Bars H1 and H2 100% of the bars may be spliced in one location.
- ⑨ Field cut Bars wH1 and wV1 2' from steelarch embeds where applicable.
- ⑩ Bars not shown at centerline of Structure for clarity.
- ⑪ See Sheet 3 of 10, Mask Wall Detail for Bars wL1 spacing.
- ⑫ See Sheet 5 of 10 for Bars wL2 spacing.
- ⑬ See Electrical details.

STEM WALL ELEVATION
SCALE: 3/8" = 1'-0"

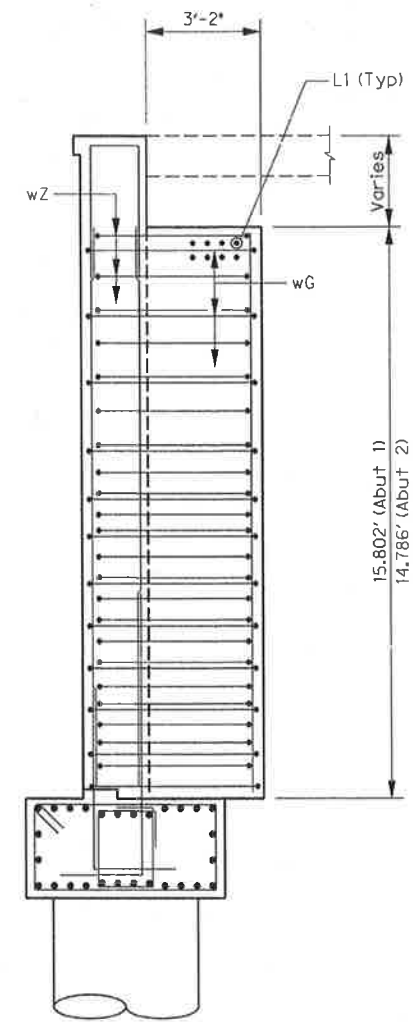


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Addendum #2		ESC	05/19/10
NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES PONTE AVENUE ABUTMENT DETAILS - STEM WALL ELEVATION			
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 346-0200 FAX (214) 790-0096			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S1-08		



NOTE: Railposts shall be placed plumb and level.



Note: Bars wH2 not shown for clarity. See sheet 5 of 10 for reinforcement not shown.

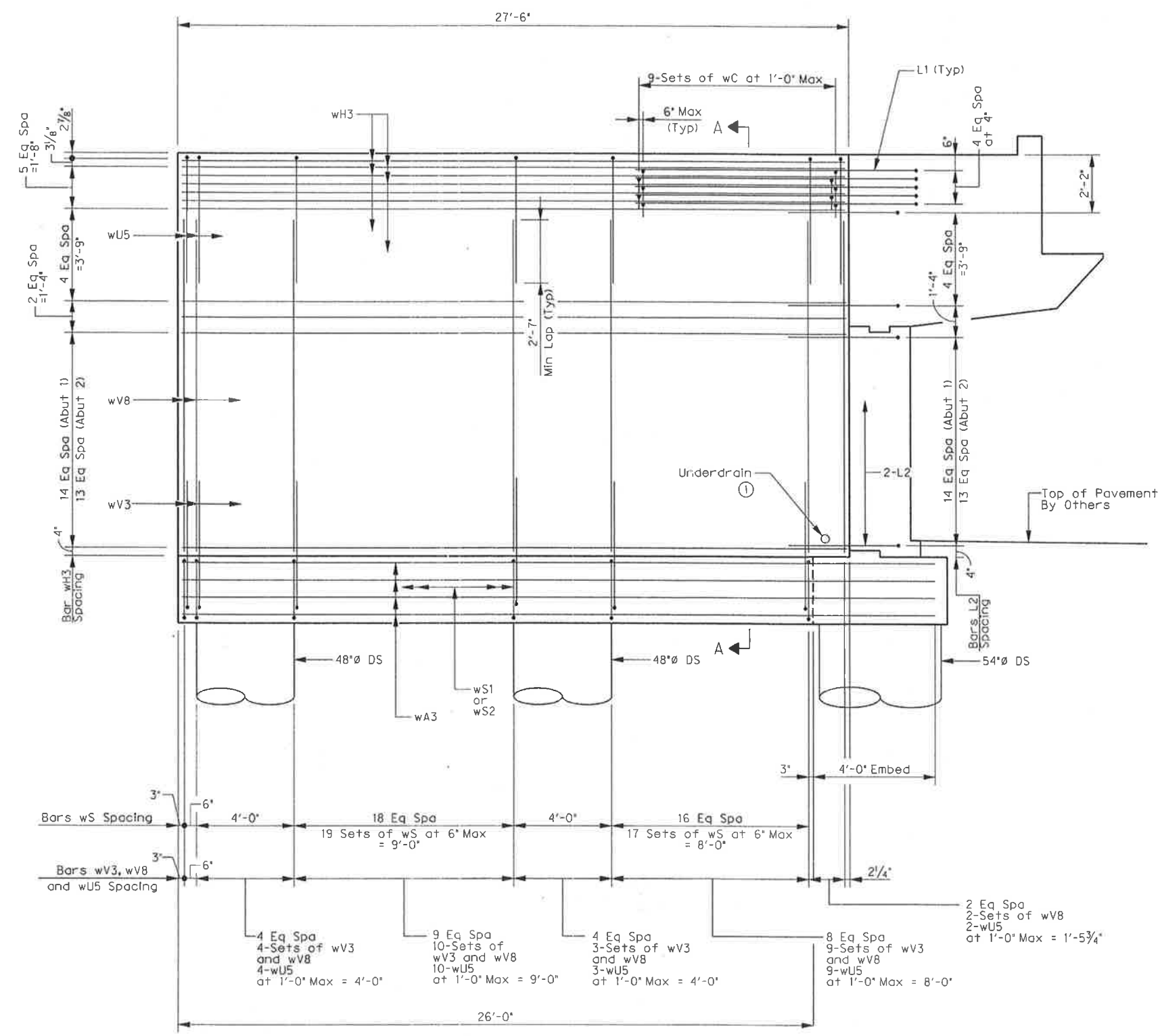
SECTION A-A
SCALE: 3/8" = 1'-0"

① Bars wG spaced at every other Bar wV7 (horizontally) and every other Bar wZ (vertically). Omit Bars wG where they interfere with the steelembed.

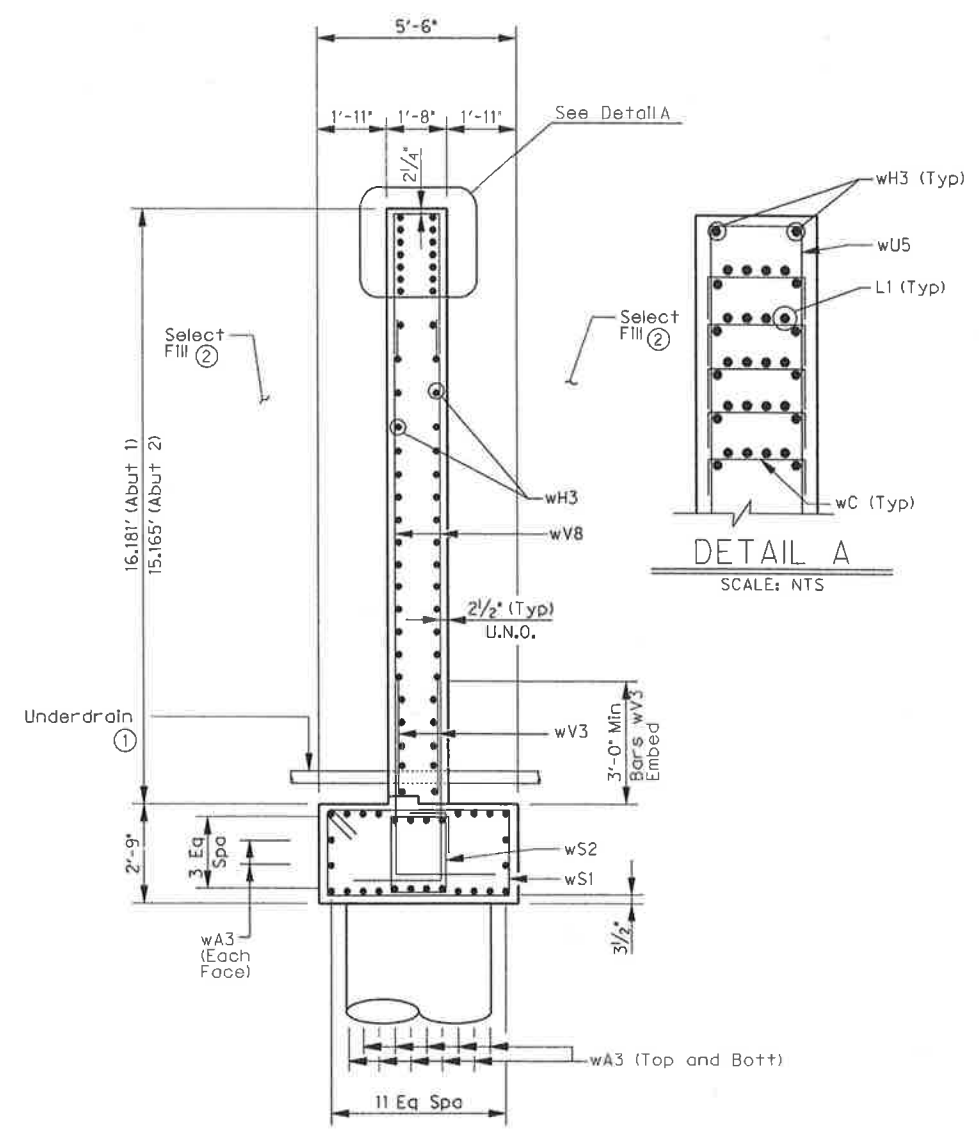


06-19-10
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<p>NO. Addendum #2 REVISION ESC 05/19/10</p>					
<p>HALFF TOWN OF ADDISON DALLAS COUNTY, TEXAS</p>					
<p>VITRUVIAN PARK BRIDGES PONTE AVENUE</p>					
<p>ABUTMENT DETAILS - WINGWALL DETAILS</p>					
<p>1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-8200 FAX (214) 739-0096</p>					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S1-10



SUPPORT WALL ELEVATION
SCALE: 3/8" = 1'-0"



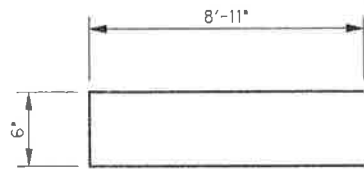
SECTION A-A
SCALE: 3/8" = 1'-0"

- ① See Sheet 8 of 10 for underdrain detail.
- ② See Sheet 1 of 10 for select fill notes.

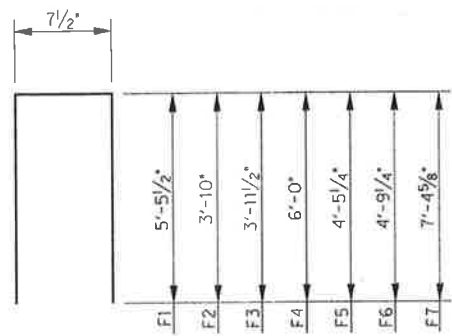


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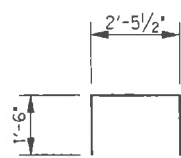
NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES PONTE AVENUE ABUTMENT DETAILS - SUPPORT WALL DETAILS HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 346-6200 FAX (214) 738-0066			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
	S1-11		



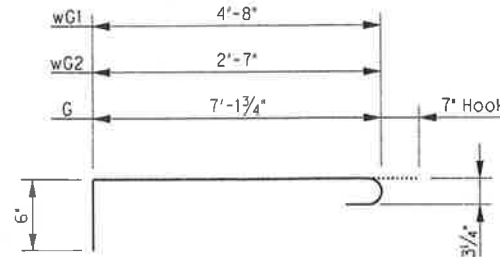
BARS E



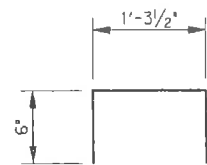
BARS F



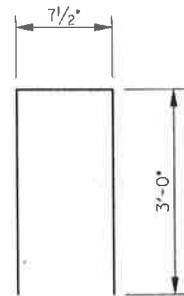
BARS eU



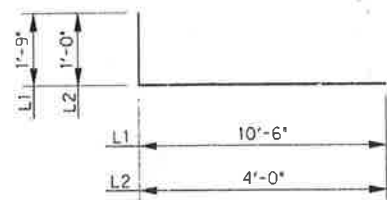
BARS G & wG



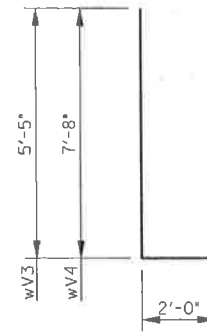
BARS wC



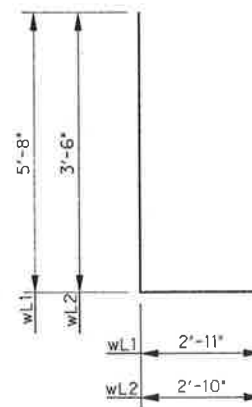
BARS V



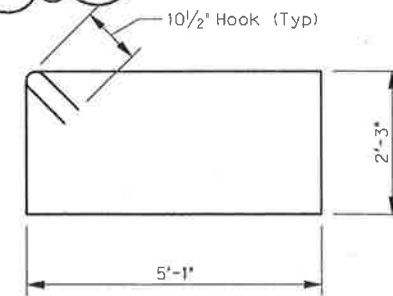
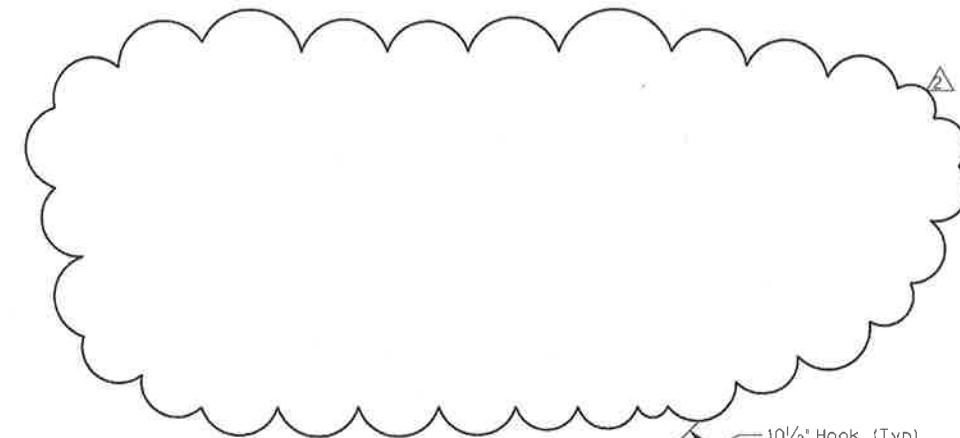
BARS L



BARS wV3 & wV4



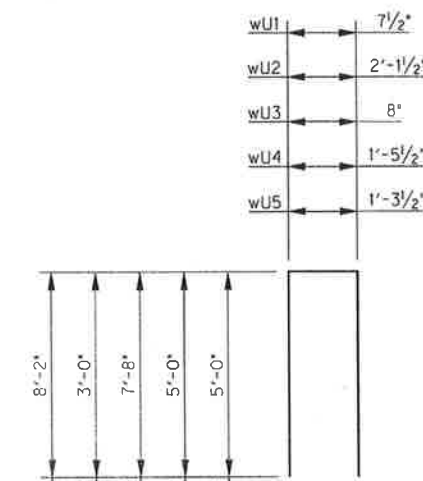
BARS wL



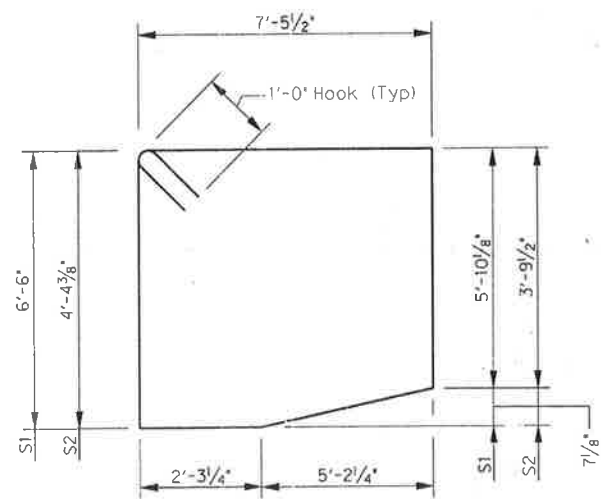
BARS wS1



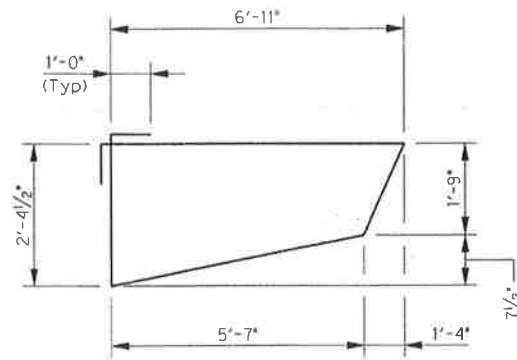
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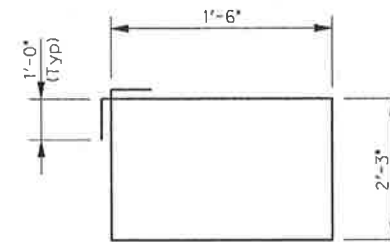
BARS wU



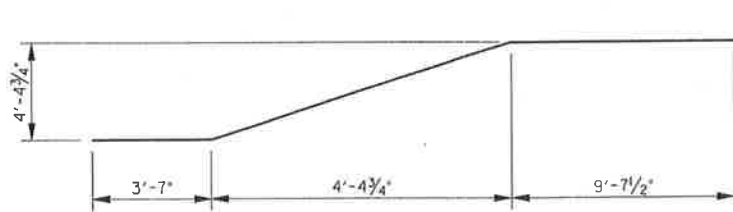
BARS S



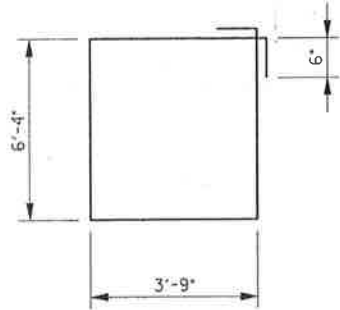
BARS M



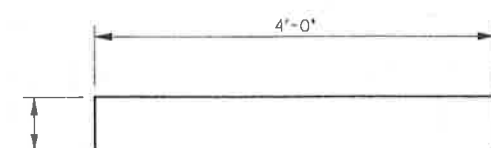
BARS wS2



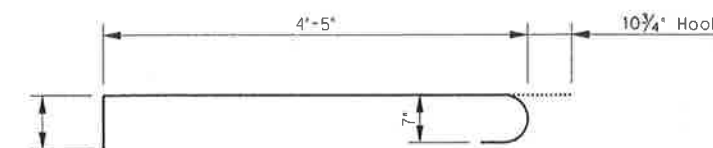
BARS wZ



BARS eS



BARS eH1



BARS eH2

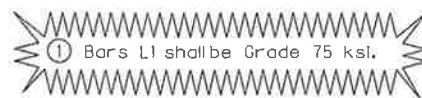
Addendum #2		ESC	05/19/10
NO. REVISION		BY	DATE
 TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES PONTE AVENUE ABUTMENT DETAILS - BAR BENDING DIAGRAMS			
HALFF		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-0200 FAX (214) 738-0098	
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S1-13		

BAR SCHEDULE ~ ONE CAP

Table with 6 columns: Bar, Type, No., Size, Length, Weight. Lists bars A through WZ with their respective specifications and weights.

BAR SCHEDULE ~ ONE CAP

Table with 6 columns: Bar, Type, No., Size, Length, Weight. Lists bars A through WZ with their respective specifications and weights.



Quantity Includes one 6'-1" splice.



Quantity includes one 5'-8" splice.

Quantity Includes one 2'-6" Splice

Average Length

For Contractor's Information only.

Use Type II Cement

Quantities Includes pipe off of bridge extending to the limits of approach slab.

PVC pipe underdrains, drains, and sleeves shall be subsidiary to the abutment concrete item 420.

CONTROL ELEVATIONS

Table with columns: Abutment, Station, and Top of Cap (Elev A through L). Shows elevation data for abutments 1 and 2.

BEARING SEAT ELEVATIONS

Table with columns: Abutment, Station, Position, and Bm No. 1 through 7. Shows bearing seat elevation data for abutments 1 and 2.

ESTIMATED QUANTITIES

Table with 3 columns: Item, Unit, QUANTITY. Lists items like Drilled Shaft, Reinf Steel, Steel Pipe, PVC Pipe Underdrain, etc.

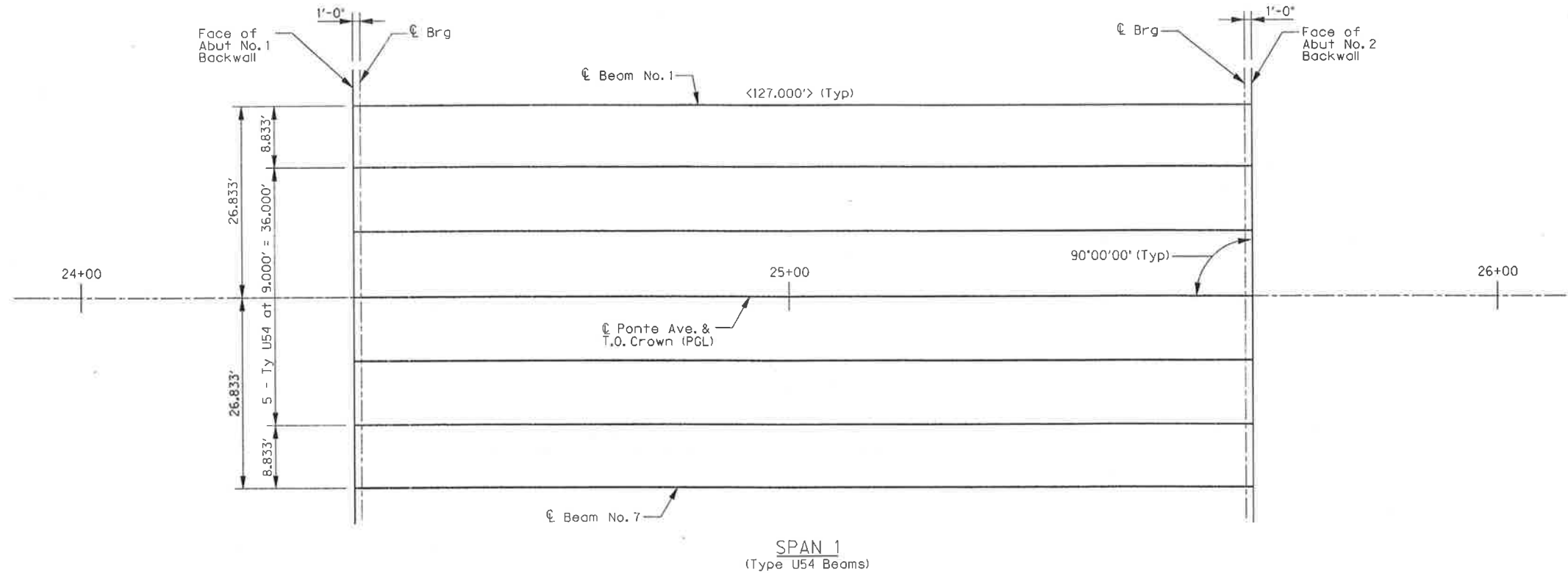
ESTIMATED QUANTITIES

Table with 3 columns: Item, Unit, QUANTITY. Lists items like Drilled Shaft, Reinf Steel, Steel Pipe, PVC Pipe Underdrain, etc.



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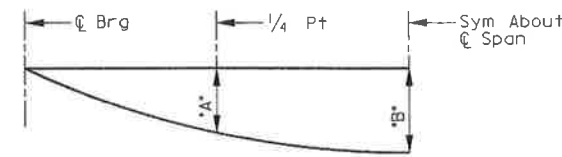
Project information block including Addendum #2, Town of Addison, Dallas County, Texas, Vitruvian Park Bridges, Ponte Avenue, Abutment Details - Data Tables, Halff logo, and project details (27379, ESC, AHH, APRIL 2010, SHEET S1-14).



FRAMING PLAN

SCALE: 1" = 10'-0"

Dimensions shown thus <XXX.XXX'> represents horizontal beam length between front faces of abutment backwalls.

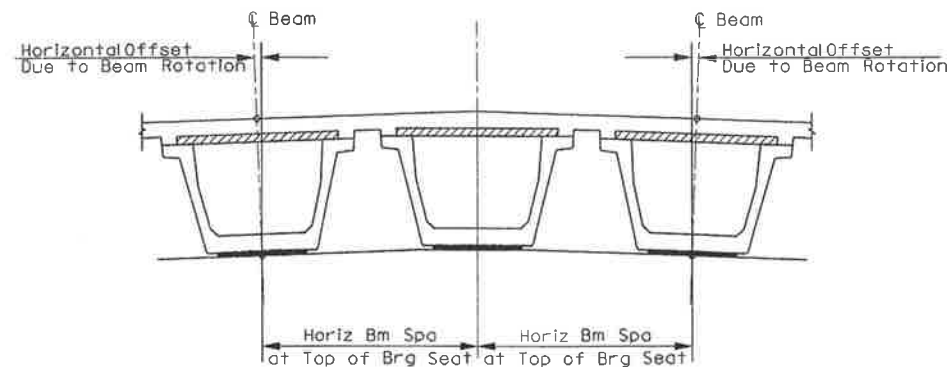


DEAD LOAD DEFLECTION DIAGRAM

Note: Deflections shown are due to concrete slab only ($E_c = 5 \times 10^6$ psi). Calculated deflections shown are theoretical; actual dimensions may be less.

TABLE OF BEAM LENGTHS AND DEAD LOAD DEFLECTIONS				
Span No.	Beam No.	"A"	"B"	Length
		FT	FT	
1	1 & 7	0.156	0.219	126.500
	2 & 6	0.133	0.187	126.500
	3 & 5	0.136	0.191	126.500
	4	0.136	0.191	126.500

Note: All girder lengths are horizontal length end to end of girder.



BEAM SPACING DETAIL

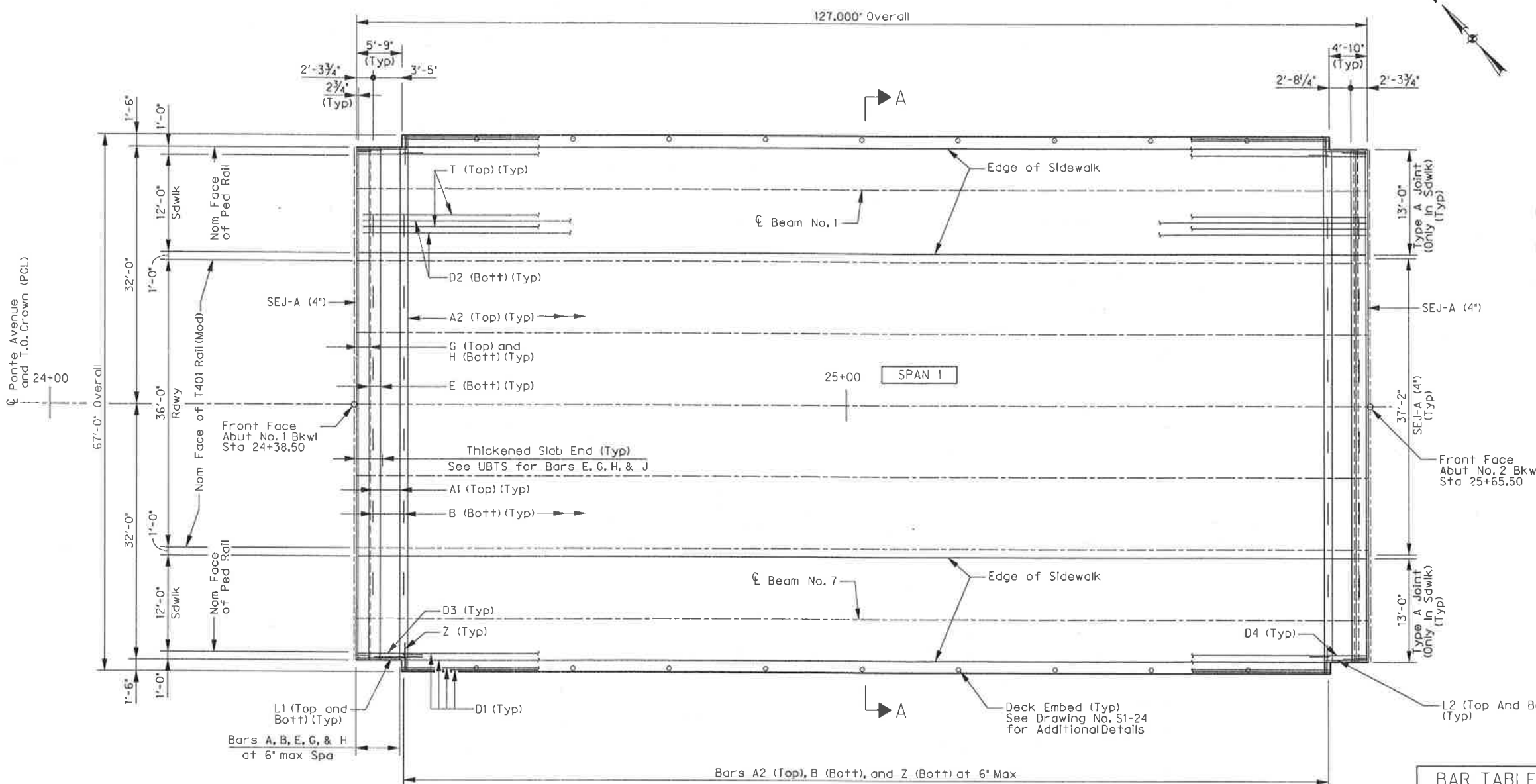
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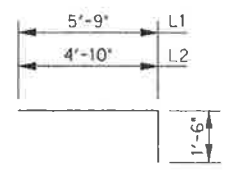
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NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES PONTE AVENUE FRAMING PLAN			
<small>1201 NORTH DOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-6200 FAX (214) 739-0060</small>			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S1-15		

USER: dh2140
 OFFICE: RCH
 PROJECT #: 27379
 FILE: 27379-SC-PONTEB-DD01.dgn
 TIME: 8:50:03 AM
 DATE: 4/29/2010



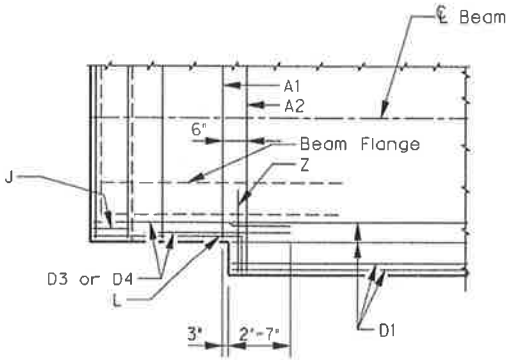
DECK PLAN
 SCALE: 1/8" = 1'-0"



BARS L

TABLE OF SECTION DEPTHS - SPAN 1

SPAN NO.	BEAM NO.	*X* AT C.L. BRG	*Z* AT C.L. SPAN
1	All	1'-0"	10"



DECK CORNER DETAIL
 SCALE: 1/4" = 1'-0"

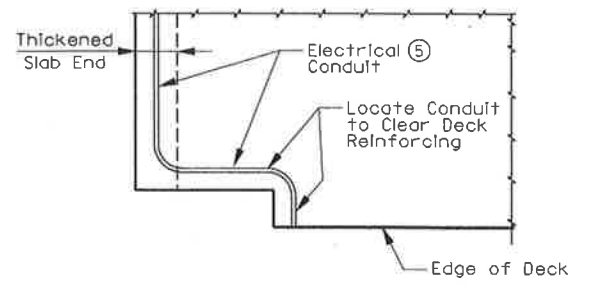
BAR TABLE

Bar	Size
A1-A2	#5
B	#5
D1-D4	#5
E	#5
G	#5
H	#6
J	#5
L1-L2	#5
P	#3
sA	#3
sT	#3
T	#4
UP	#4
Z	#4

TABLE OF ESTIMATED QUANTITIES - SPAN 1

SPAN NO.	REINF CONCRETE SLAB	PRSTR CONCRETE BEAM (U54)	① CLASS S CONCRETE (SLAB)	③ CLASS S CONCRETE (SDWLK)	REINF STEEL ①②	SDWLK DRAIN ①⑥	① STEEL PIPE (12 IN)	① STEEL PIPE (18 IN)	⑦ MISC STEEL
	SF	LF	CY	CY	LB	LF	LF	LF	LB
1	8,477	885.50	238.9	83.6	57,645	253	254	254	16,601
TOTAL	8,477	885.50	238.9	83.6	57,645	253	254	254	16,601

- General Notes:**
- All concrete shall be Class S, f'c = 4,000 psi.
 - All reinforcing shall be grade 60.
 - All reinforcing steel shall be epoxy coated. Bar laps, where required, shall be as follows:
 #4 = 2'-1"
 #5 = 2'-7"
 - The minimum rate of concrete placing and finishing shall not be less than 30 feet of bridge deck per hour.
 - For chamfer limits and drip bead detail, see Standard UBMS.
 - For Section A-A, see Sheet 2 of 2.
 - For Traffic Rail Details not shown, see Standard T401 (Mod).
 - For Pedestrian Rail Details not shown, see Landscape Architecture detail sheets.
 - For Beam, Bearing Pad, Misc, Slab and Thickened Slab and details not shown See Standards UB0, UBEB (Mod), UBMS, and UTBS.
 - For Prestressed Concrete Panel and Permanent Metal Deck Form details not shown, see Standards PCP and PMDF.
 - For sealed expansion joint details not shown, see Standard SEJ-A.
 - For quantities not shown, see Estimated Quantity Sheet (Drawing No. S1-04).



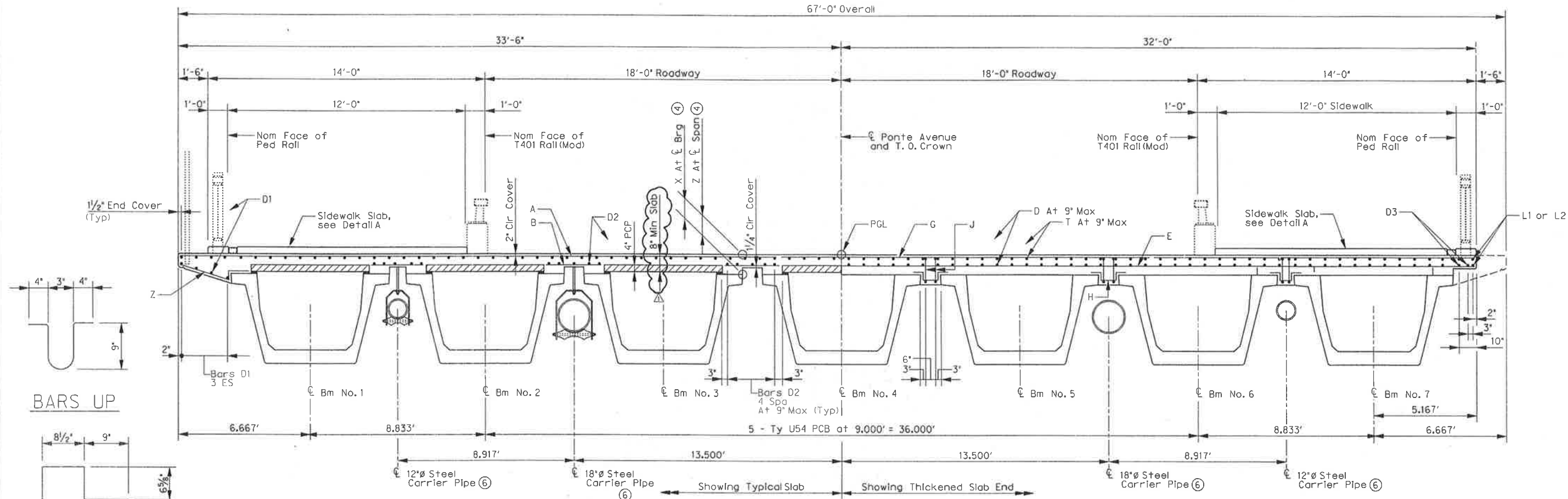
DECK CONDUIT DETAIL
 SCALE: 1/4" = 1'-0"

- For contractor's information only.
- Reinforcing steel weight is calculated using an approximate factor of 6.8 lbs/sf.
- Quantity includes sidewalk on approach slab.
- Theoretical dimension.
- See Electrical Details, Run conduit through center of thickened slab end.
- Sidewalk drains are subsidiary to Reinforced Concrete Slab, item 422.
- Quantity includes all angles and plates.



NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES PONTE AVENUE DECK PLAN			
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-6200 FAX (214) 739-0095			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S1-16		

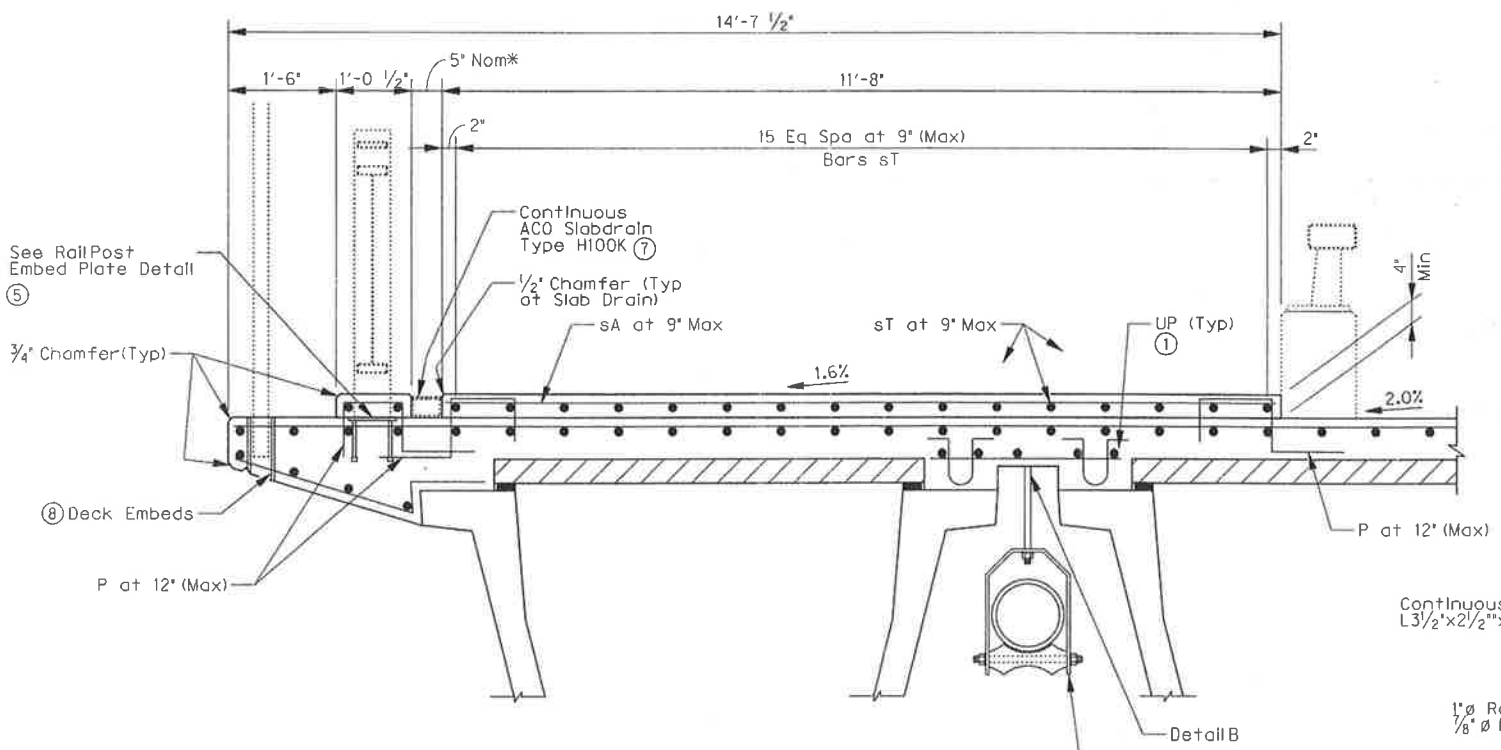
67'-0" Overall



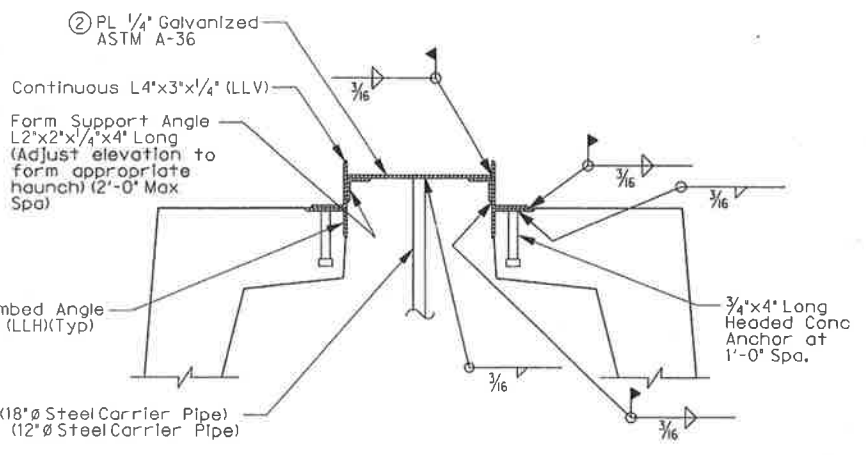
SECTION A-A
SCALE: 3/8" = 1'-0"

- ① Space bars UP with beam bars R in all areas where measured haunch exceeds 3'.
- ② Replace galvanized sheet steel with a 1/4" galvanized steel plate see UBMS standard for galvanized sheet steel detail.
- ③ Copper B-line B3110-18 (18" Ø steel carrier pipe) spaced at 6'-0" Max C.C. Copper B-line B3110-12 (12" Ø steel carrier pipe) spaced at 6'-0" Max C.C. Pipe supports are subsidiary to Steel Pipe Item 442, Misc. Steel.
- ④ See sheet 1 of 2 for table of dimensions.
- ⑤ Leave the bottom 1 inch of post ungalvanized.
- ⑥ 18" Ø steel pipe shall be schedule 40 pipe with 18" O.D. 12" Ø steel pipe shall be schedule 40 with 12" O.D. All steel pipes shall be galvanized.
- ⑦ Use grate Type 4100 or 4120 galvanized steel. The contractor shall submit a sample of the grate prior to installation.
- ⑧ See Drawing No. S1-24 for additional details.

BARS P



DETAIL A
SCALE: 3/4" = 1'-0"



DETAIL B
SCALE: NTS

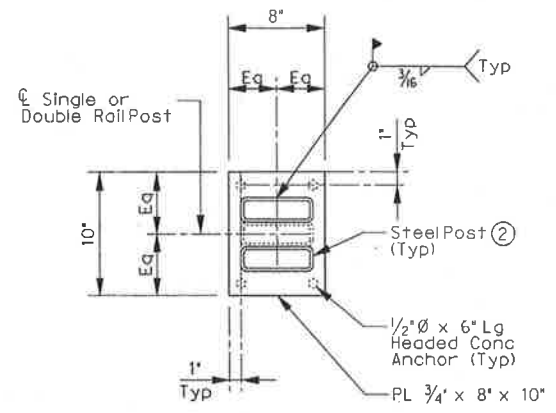
* Refer To Manufacturer For Slab Drain Dimensions.



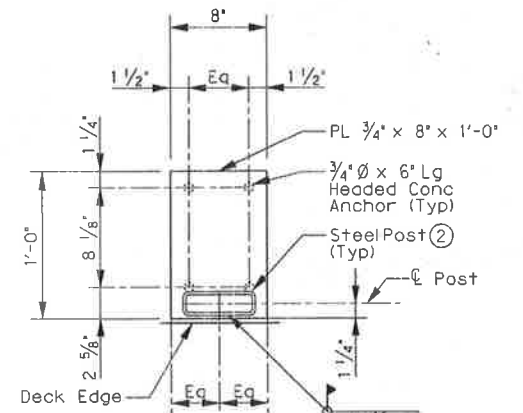
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ERIC S. CHRISTENSEN, P.E. #85412 ON 05-14-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE SECOND COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF HALFF ASSOCIATES, 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS, 75081, TEL: 972-739-0085.

ADDENDUM #1		ESC	5/14/10
NO.	REVISION	BY	DATE
ADDISON TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES PONTE AVENUE			
DECK DETAILS			
HALFF		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-6200 FAX (214) 739-0085	
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S1-17		

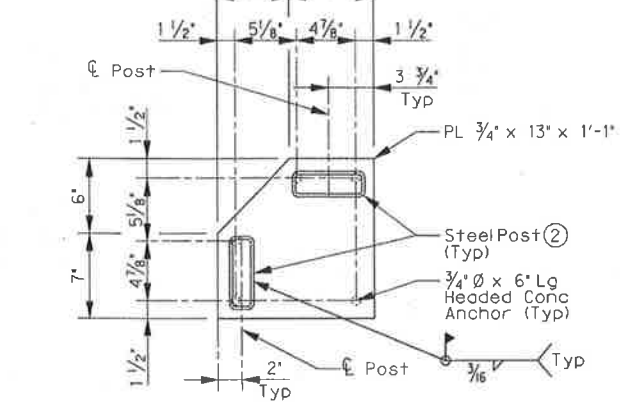
DATE: 5/19/2010 TIME: 2:27:45 PM FILE: 27379-SC-PONTEB-DD03.dgn PROJECT # 27379 OFFICE: RCH USER: gnt2140



TYPICAL RAIL POST EMBED PLATE DETAIL ①
SCALE: 1 1/2" = 1'-0"

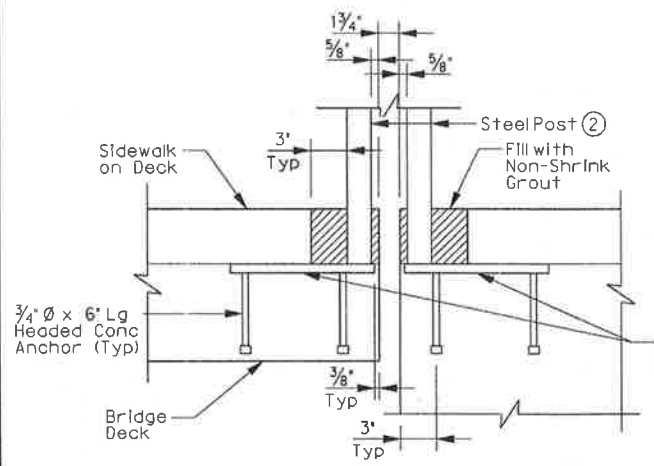


RAIL POST EMBED PLATE AT BRIDGE SEJ DETAIL ①
SCALE: 1 1/2" = 1'-0"

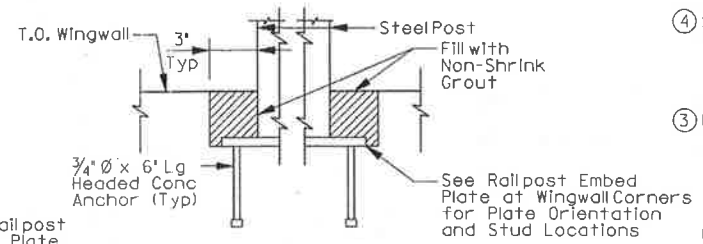


RAIL POST EMBED PLATE AT WINGWALL CORNERS DETAIL ①
SCALE: 1 1/2" = 1'-0"

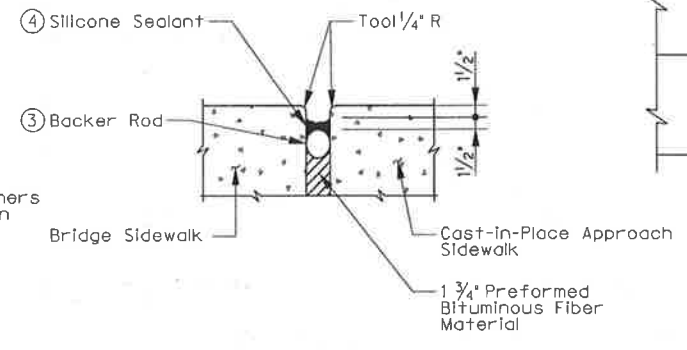
- ① Roll embeds are subsidiary to Ped Rail Item.
- ② Leave the bottom one inch of post ungalvanized.



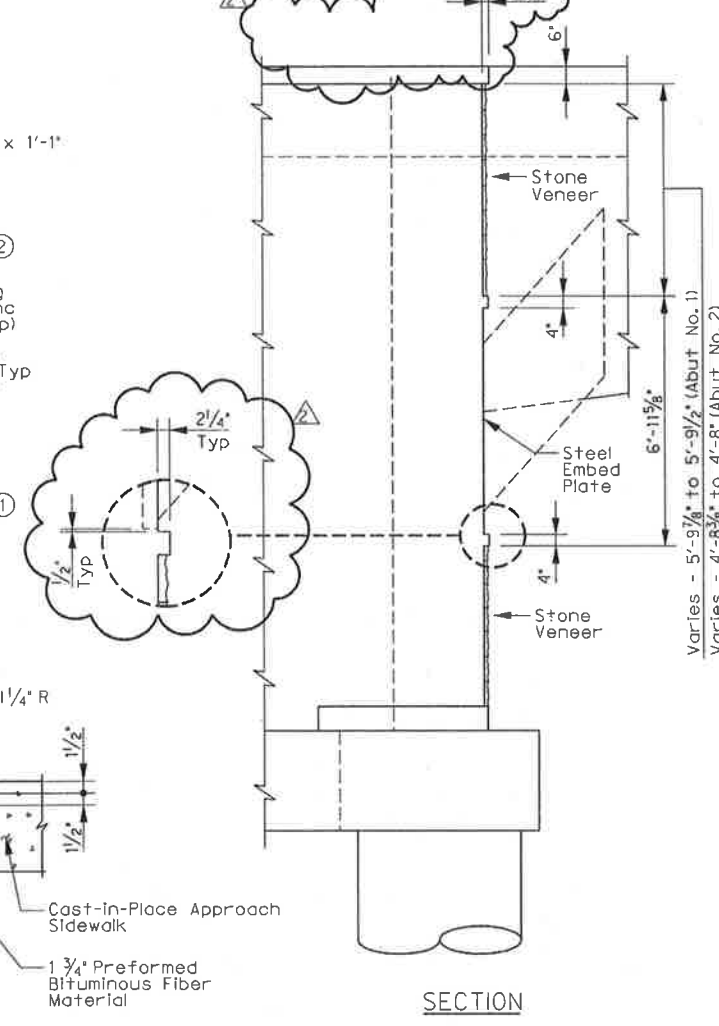
RAIL POST EMBED PLATE AT BRIDGE SEJ SECTION ①
SCALE: 1 1/2" = 1'-0"



RAIL POST EMBED PLATE AT WINGWALL CORNERS SECTION ①
SCALE: 1 1/2" = 1'-0"

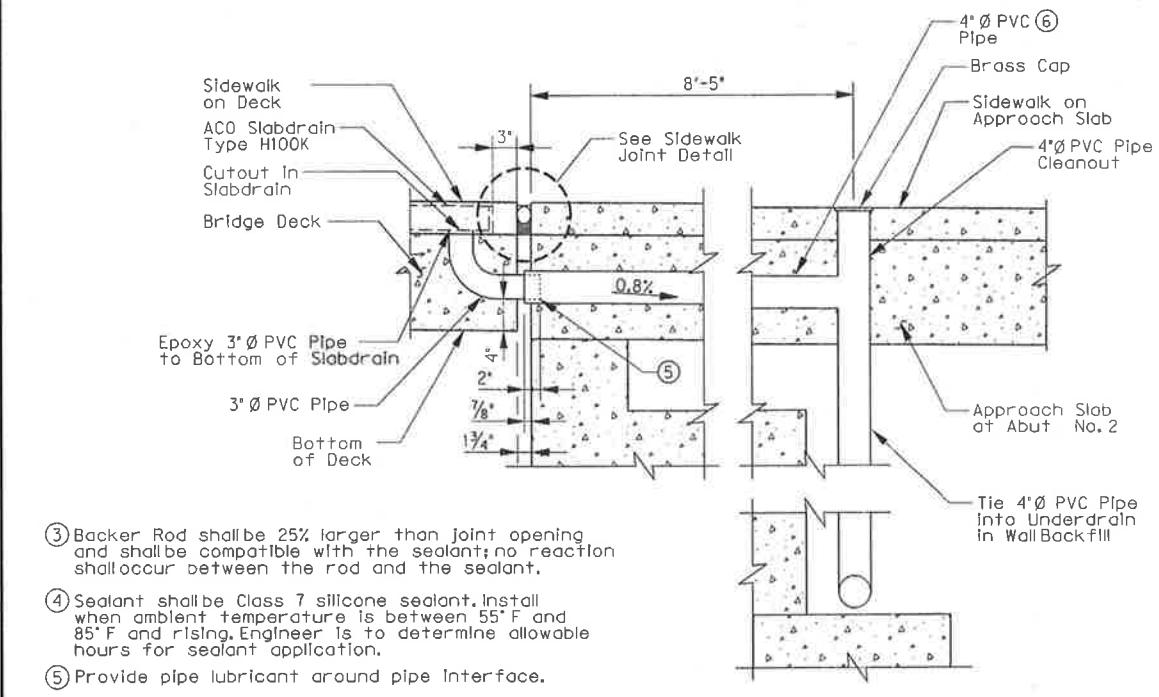


SIDEWALK JOINT DETAIL
SCALE: NTS

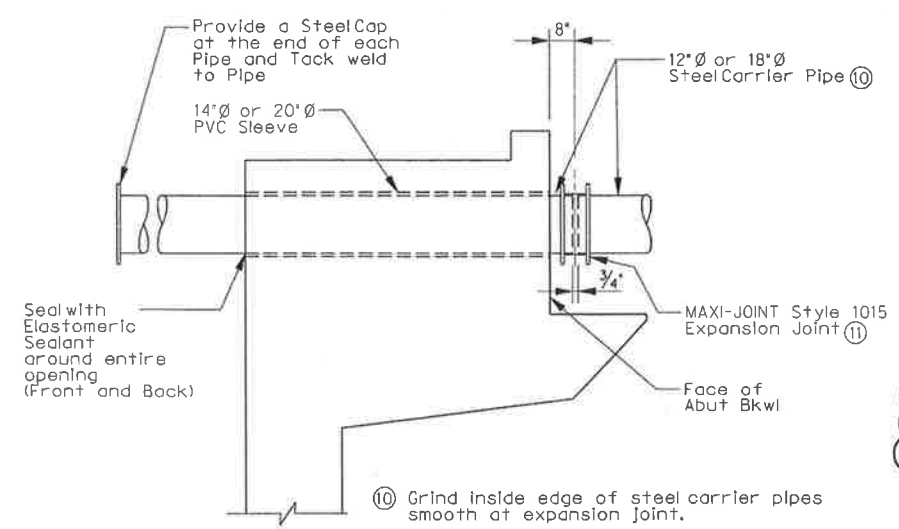


STONE COLLAR DETAILS ⑥
SCALE: 3/8" = 1'-0"

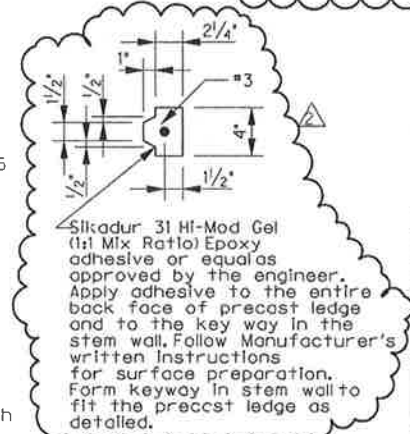
⑧ For Abutment details and bar details not shown, see Drawing Nos. S1-05 to S1-14.
 ⑨ Prior to Arch installation a temporary stone support (L5 x 3 x 1/4 (LLV)) shall be used. Installation with three 1/2 inch Hilti Quik Bolt 3 expansion anchors embedded 3 1/2 min. Coordinate removal of stone veneer and temporary stone support with steel arch erector. Replace the temporary stone ledge with precast ledge after arch has been installed. At the Contractor's option, the stone veneer may be installed after the Arch is fully erected. If this option is used, the temporary stone support (L5 x 3 x 1/4) is not needed. For either option, the precast ledge shall be installed only after the Arch is fully erected.



DRAIN DETAIL
SCALE: NTS

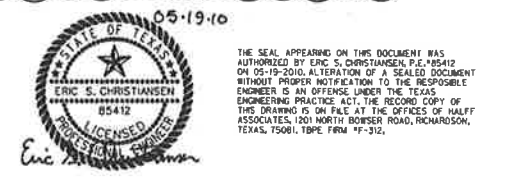


STEEL PIPE EMBED AND EXPANSION JOINT DETAIL
SCALE: NTS



PRECAST LEDGE DETAIL
SCALE: NTS

- ③ Backer Rod shall be 25% larger than joint opening and shall be compatible with the sealant; no reaction shall occur between the rod and the sealant.
- ④ Sealant shall be Class 7 silicone sealant. Install when ambient temperature is between 55° F and 85° F and rising. Engineer is to determine allowable hours for sealant application.
- ⑤ Provide pipe lubricant around pipe interface.
- ⑥ Provide bends in PVC pipe where necessary to avoid thickened wingwall. See Sheet S1-14 for quantity of drain pipe.
- ⑦ Drain located in both sidewalks at Abut No. 2.



Addendum #2		REVISION	BY	DATE
NO.				
ESC				05/19/10

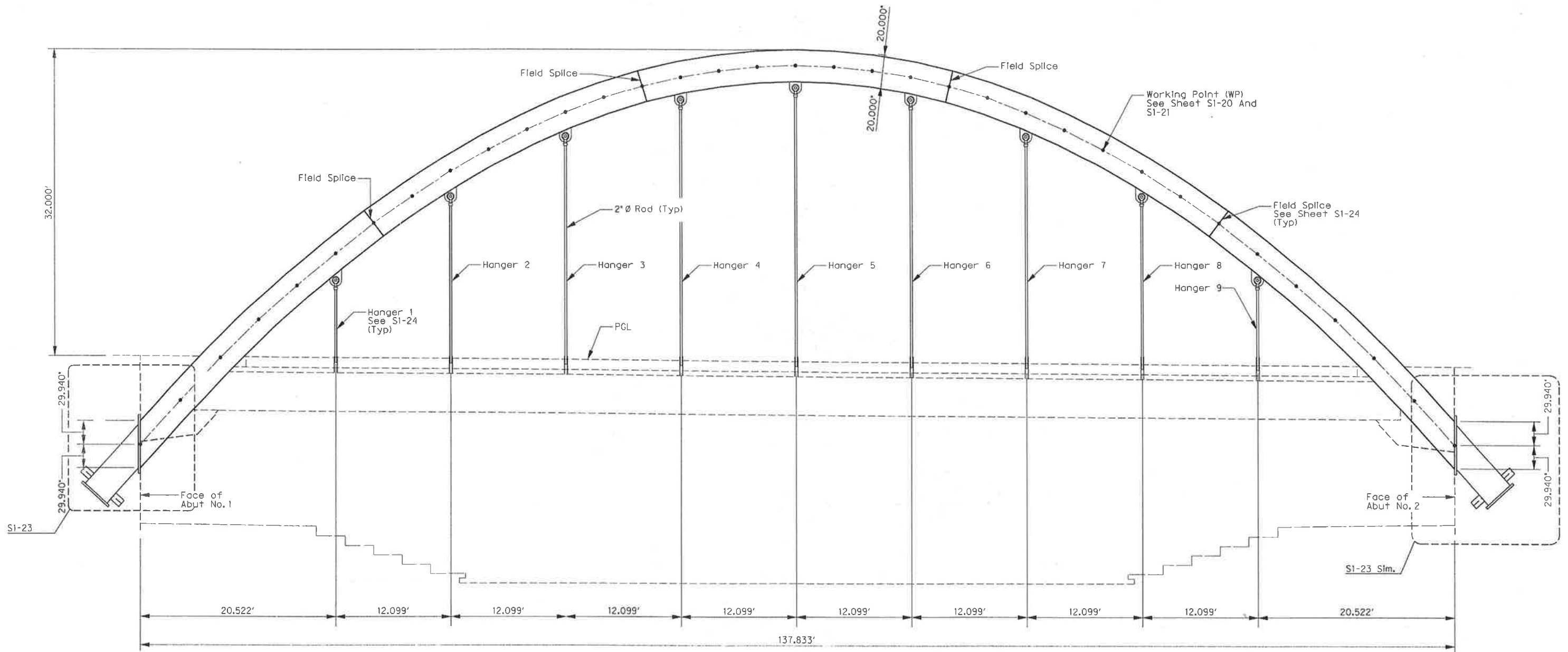
TOWN OF ADDISON
DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES
PONTE AVENUE

MISCELLANEOUS DETAILS

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010		S1-18

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 348-0200 FAX (214) 730-0066



ELEVATION
SCALE: 3/16" = 1'-0"

ESTIMATED QUANTITIES

Item	Unit	Quantity
Two Steel Archs	LB	138,900
Four Embed Anchors	LB	35,240
Eighteen Hangers (2" Dia. Rod w/ #5 Clevis)	LB	4,632
Total	LB	178,772

Notes:
Slide bearings are subsidiary to embed anchors.
Hanger quantity includes deck embed.



05-14-10

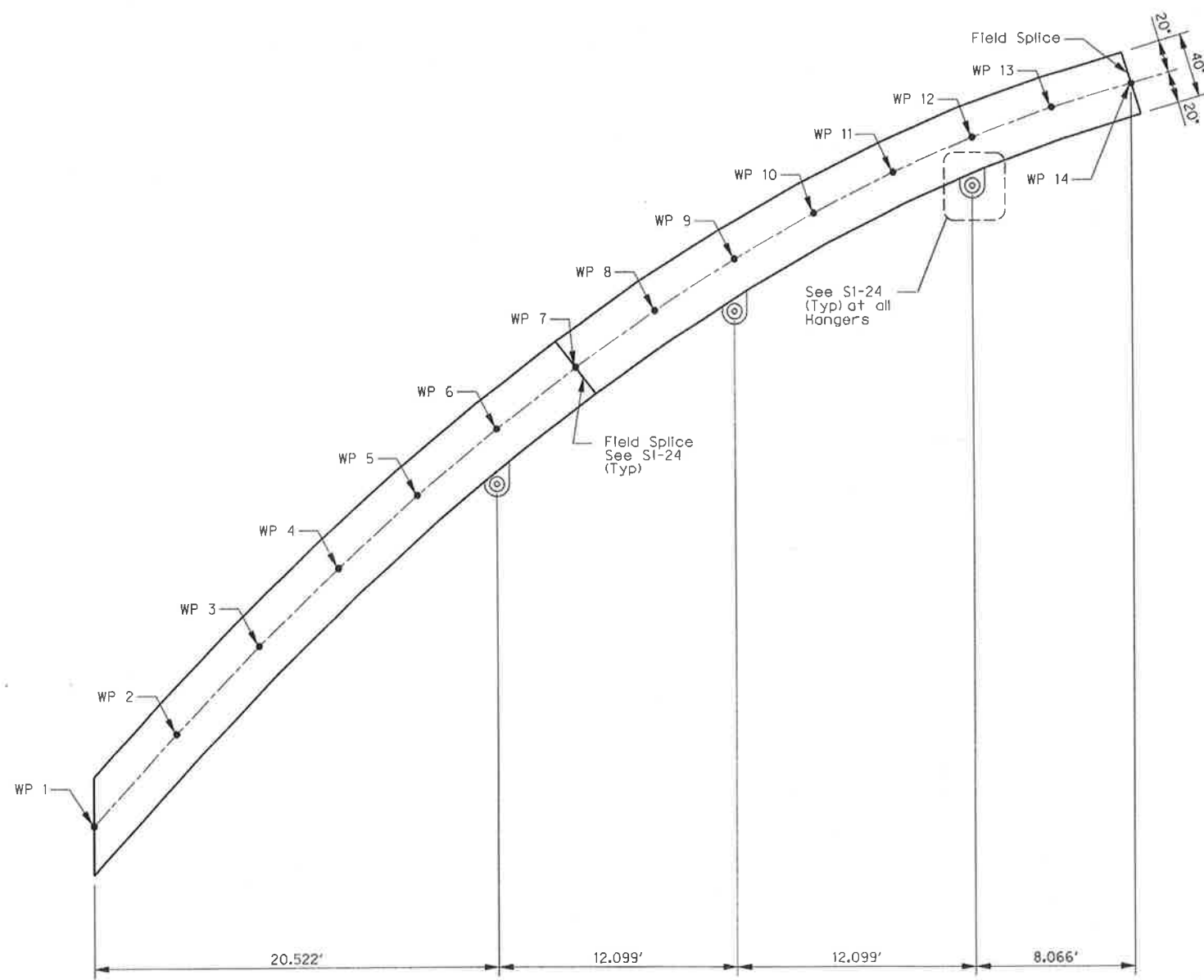
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ADDENDUM #1	REVISION	BY	DATE

TOWN OF ADDISON
 DALLAS COUNTY, TEXAS
 VITRUVIAN PARK BRIDGES
 PONTE AVENUE
 ARCH DETAILS - ELEVATION

1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
 TEL (214) 346-6200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S1-19



ELEVATION
SCALE: 1/4" = 1'-0"

Working Point (WP)	Coordinate	
	X (ft)	Y (ft)
1	0.000	0.000
2	4.212	4.692
3	8.424	9.089
4	12.457	13.021
5	16.489	16.682
6	20.522	20.072
7	24.555	23.191
8	28.588	26.039
9	32.621	28.615
10	36.654	30.920
11	40.687	32.954
12	44.719	34.717
13	48.752	36.208
14	52.785	37.429
15	56.818	38.378
16	60.851	39.056
17	64.883	39.463
18	68.917	39.598
19	72.950	39.463
20	76.982	39.056
21	81.015	38.378
22	85.048	37.429
23	89.081	36.208
24	93.114	34.717
25	97.147	32.954
26	101.180	30.920
27	105.212	28.615
28	109.245	26.039
29	113.278	23.191
30	117.311	20.072
31	121.344	16.682
32	125.377	13.021
33	129.409	9.089
34	133.421	4.692
35	137.433	0.000

Note: Geometry Shown Is That Required For Fabrication And Does Not Represent Changes In Shape Due To Loading

Fabrication Notes:

All Structural Steel Shall Conform To The Requirements Of ASTM A36, Unless Noted Otherwise.
 All Steel Shall Be Painted, Except Hanger Rods and Clevis.
 Hanger Rods And Clevis Shall Be Galvanized In Accordance with Item 445, "Galvanizing."
 Field Splices Shall Be Made By Full Penetration Groove Welds In Accordance With Item 441, "Steel Structures".
 Bolted Field Splices Are Not Permitted.
 See S1-24 For Field Splice Details.
 Arch Curve To Be Fabricated Flat Based On Working Points
 Arch Sections Between WP1 And WP2, And Between WP34 And WP 35 Shall Be Linear.

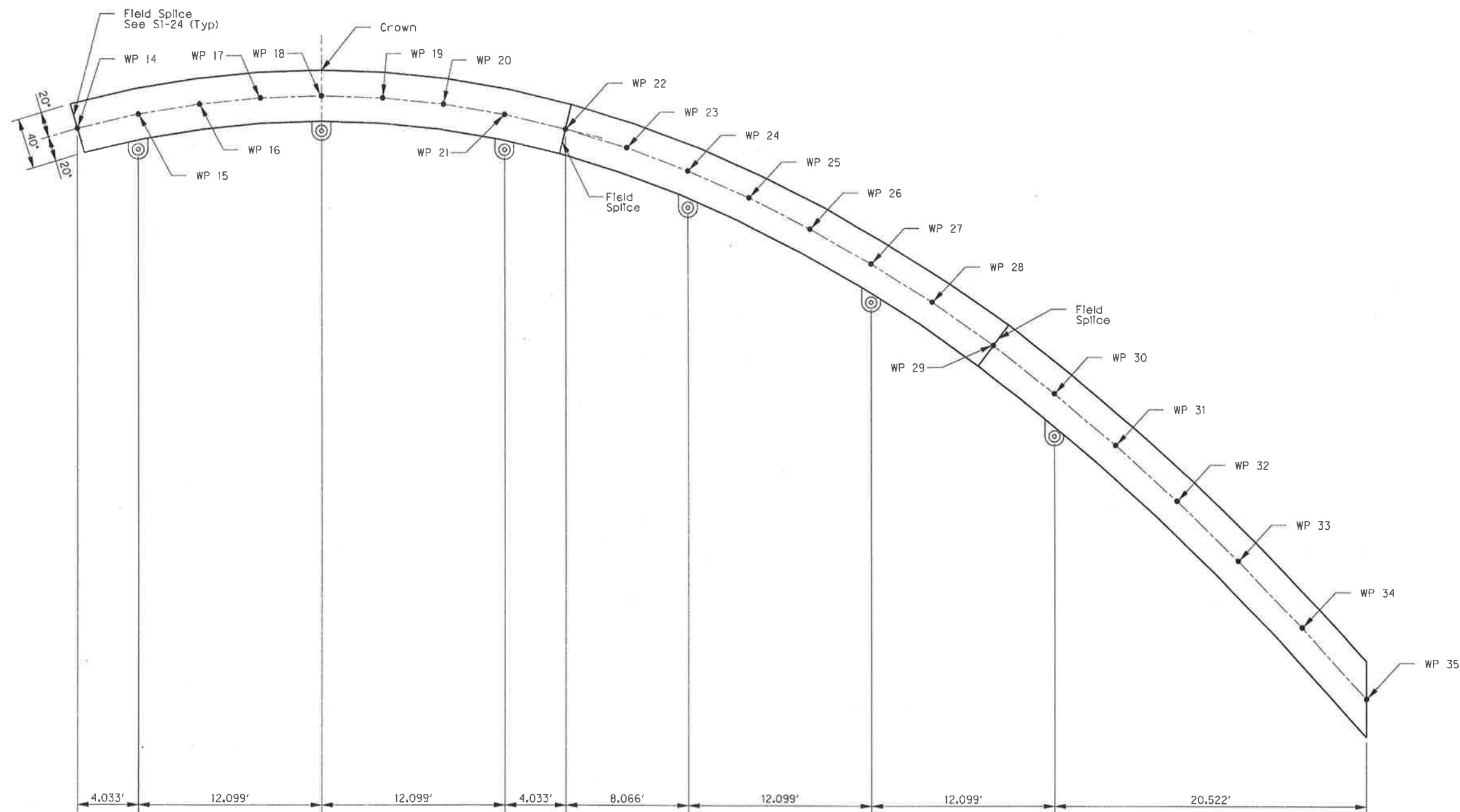


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NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES PONTE AVENUE			
ARCH RIB PROFILE			
		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-6200 FAX (214) 730-0096	
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S1-20		

DATE: 4/29/2010 TIME: 9:10:13 AM FILE: 27379-SC-PONTEB-AE03.dgn PROJECT # 27379 OFFICE: RCH USER: ah2441

See Sheet S1-20 For Working Point Coordinates



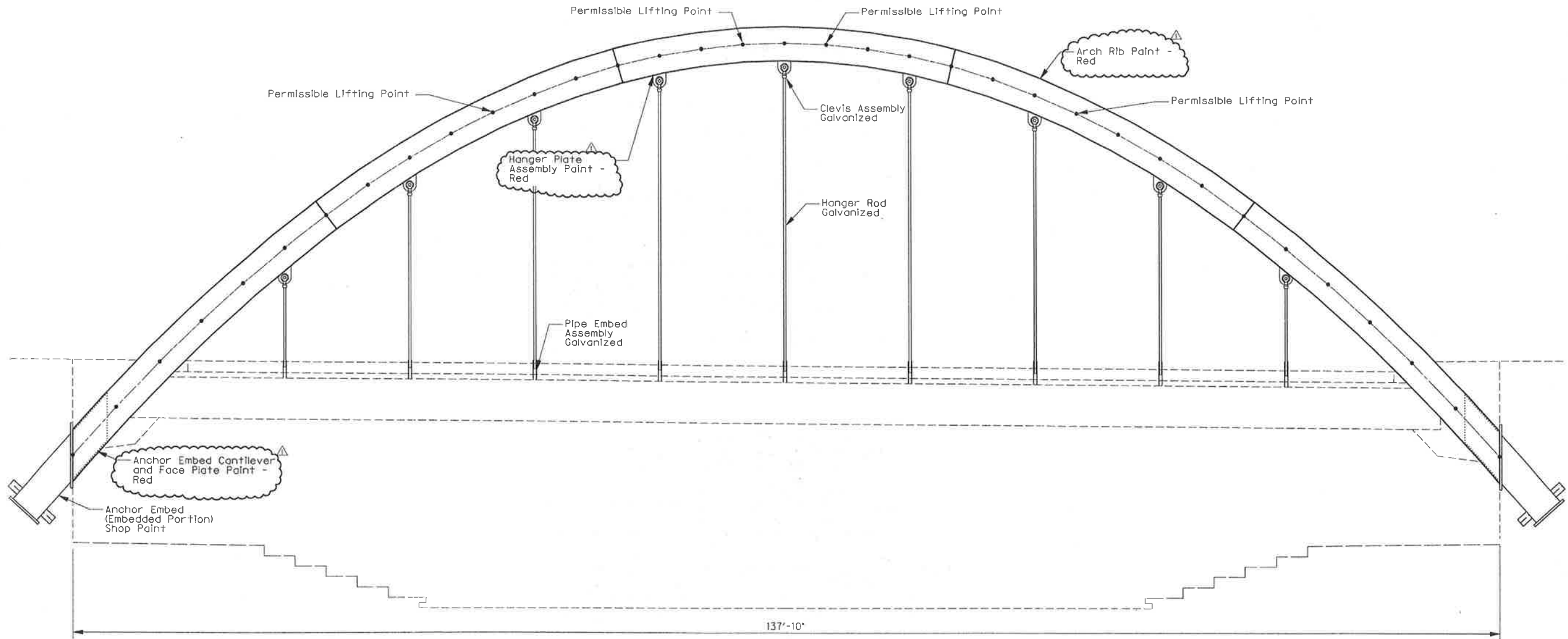
ELEVATION
SCALE: 1/4" = 1'-0"



04-29-10

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NO.	REVISION	BY	DATE		
TOWN OF ADDISON DALLAS COUNTY, TEXAS					
VITRUVIAN PARK BRIDGES PONTE AVENUE					
ARCH RIB PROFILE					
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 549-0200 FAX (214) 730-0096					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S1-21



ELEVATION
SCALE: 3/16" = 1'-0"

Painting Notes:

Cleaning and painting shall be in accordance with item 446, "Cleaning and Painting Steel" and Manufacturer's Instructions.

Materials manufactured by the following manufacturers are acceptable:

- Carboline
- Coronado
- Porter
- Sherwin-Williams
- Tnemec

Acceptable Materials:

Primer: Organic zinc-rich primer. Provide factory formulated prime coat material compatible with the substrate and finish coats indicated. Primer shall be a two or three component polyamide epoxy zinc-rich coating. Primers shall contain no lead.

- Carboline: No. 858
- Coronado: Polyamide Epoxy Zinc Rich Primer, 101-152
- Porter: Zinc-Lock No. 308
- Sherwin-Williams: Zinc Clad IV
- Tnemec: 90-97

Intermediate Coat: High build epoxy. Provide factory formulated polyamide epoxy intermediate coat compatible with prime coat and topcoat indicated.

- Carboline: No. 893
- Coronado: Polyamide Epoxy 111-111
- Porter: "M.C.R. High Build Epoxy" No. 4500
- Sherwin-Williams: "Recoatable Epoxy Primer," B67 Series
- Tnemec: Series 66 "Hi-Build Epoxoline"

Topcoat: Polyurethane. Provide factory formulated polyurethane. Material shall be compatible with the intermediate coat indicated. Sheen shall be gloss.

- Carboline: 134 HS
- Coronado: Superthane, 827 Series
- Porter: "Hythane Super" No. 8600
- Sherwin-Williams: "High Solids Polyurethane," B65 Series
- Tnemec: Series 75, "Endura-Shield" High Build Polyurethane

Color of Topcoat:

- Red: R 117
- G 52
- B 65

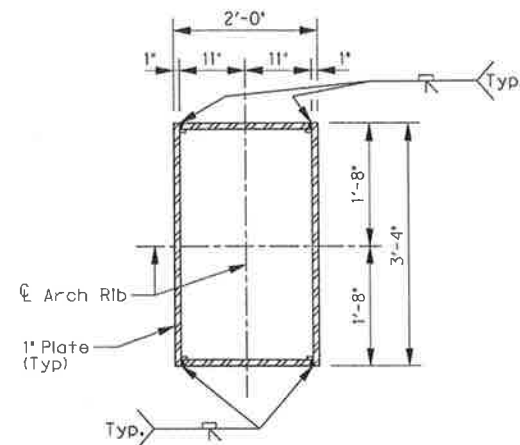
Erection Notes:

Field splices shall be made with arch flat, prior to lifting arch.
 Field splices shall be made by full penetration groove welds in accordance with Item 441, "Steel Structures." Nondestructive Examination (NDE) shall be performed as specified in AWS D1.5.
 Arch shall be lifted using a spreader bar and shall be lifted, at a minimum, from the points shown to allow for adequate clear distance from the face of the abutment. The Contractor may adjust the location of the lifting points as approved by the Engineer.
 Contractor shall submit an erection and bracing plan signed and sealed by a Licensed Professional Engineer in the State of Texas for the Engineer's approval prior to erection.
 Lifting points shall not be located at field splices.
 Arch shall be fully braced until bottom plates of arch rib have been installed.
 The Contractor may modify the method of erection as approved by the Engineer.
 Touch up any damaged paint in accordance with Item 446, "Cleaning and Painting Steel" and paint manufacturer's recommendations.

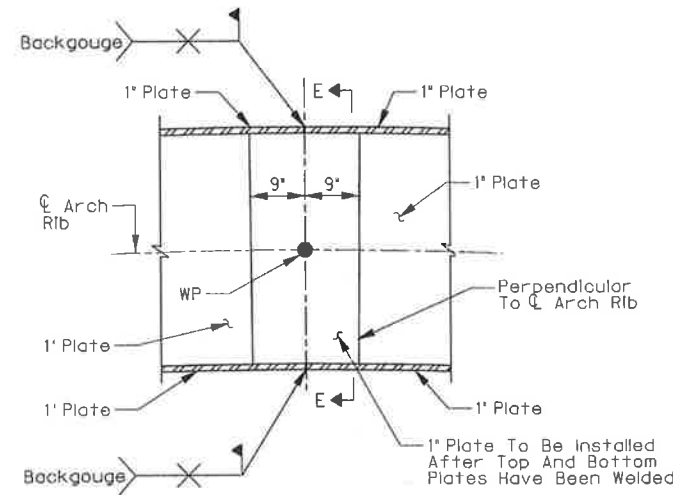


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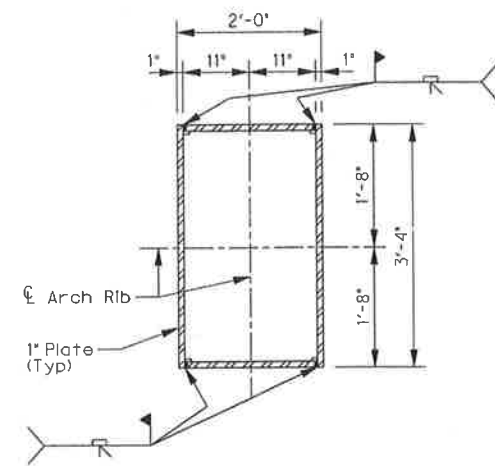
ADDENDUM #1		ESC	5/14/10
REVISION		BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES PONTE AVENUE			
ARCH ERECTION & PAINTING PLAN			
		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 346-8200 FAX (214) 739-0096	
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S1-22		



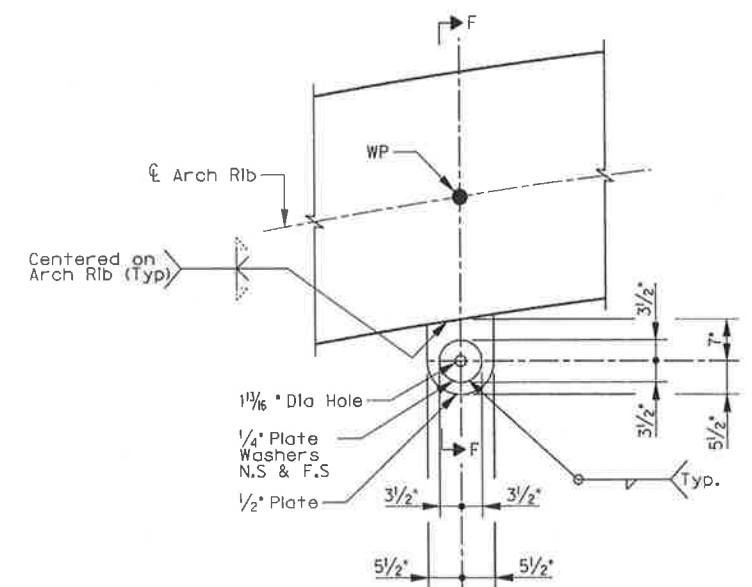
SECTION THROUGH ARCH RIB
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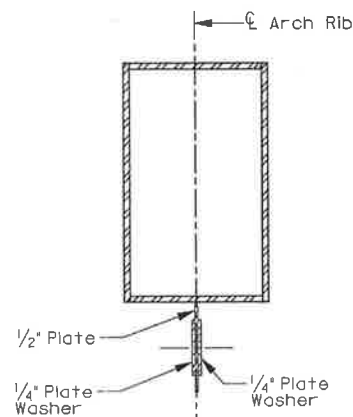
FIELD SPLICE
SCALE: 3/4" = 1'-0"



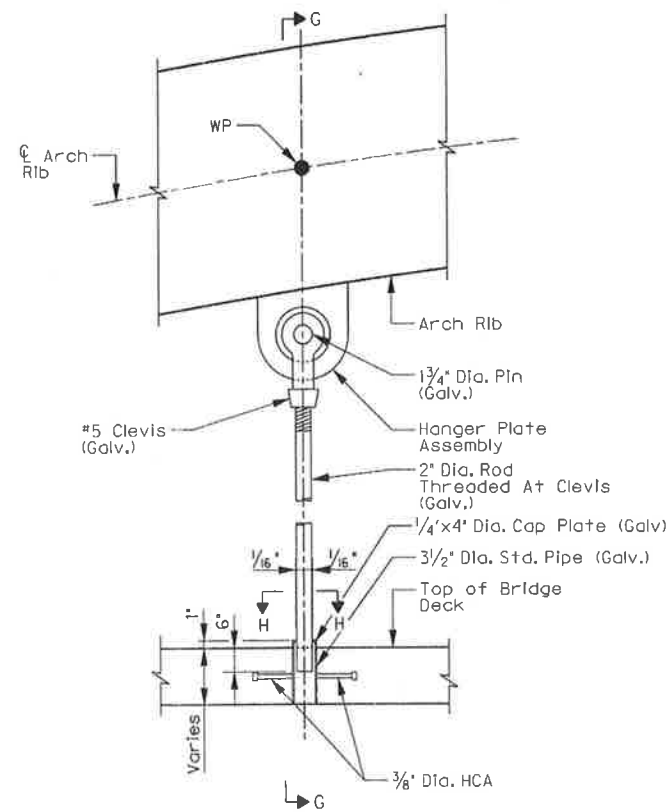
SECTION E-E
SCALE: 3/4" = 1'-0"



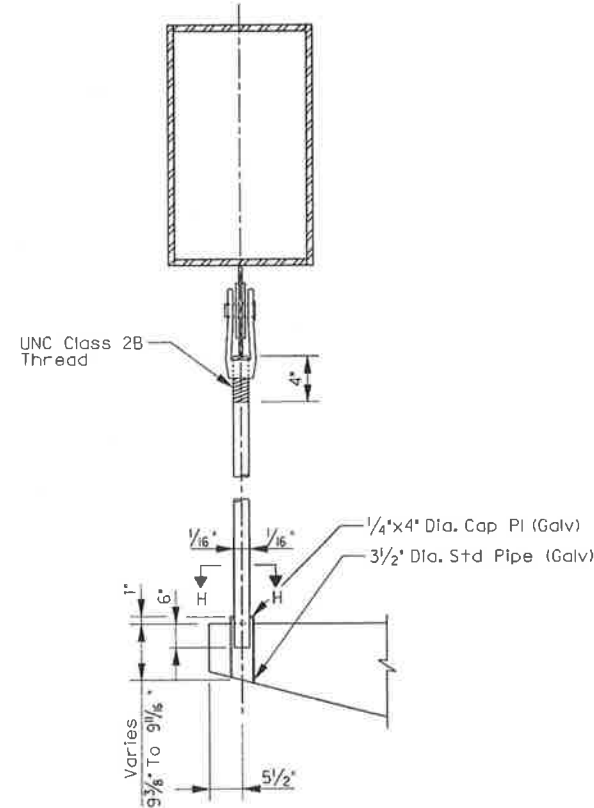
HANGER PLATE ASSEMBLY
SCALE: 3/4" = 1'-0"



SECTION F-F
SCALE: 3/4" = 1'-0"

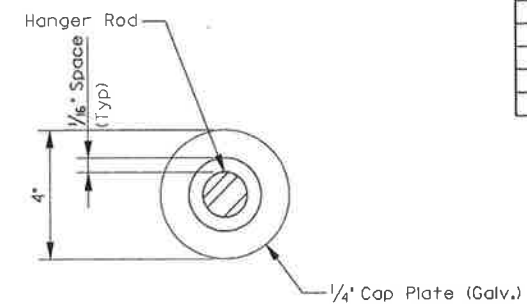


ROD HANGER ASSEMBLY
SCALE: 3/4" = 1'-0"



SECTION G-G
SCALE: 3/4" = 1'-0"

Note: Coordinate thread requirements with Clevis manufacturer.



SECTION H-H
SCALE: N.T.S.

Hanger	Quantity	Length (Feet)
1	2	8'-1 1/2"
2	2	17'-0"
3	2	23'-4 1/2"
4	2	27'-2 1/2"
5	2	28'-7"
6	2	27'-5"
7	2	23'-9"
8	2	17'-7"
9	2	8'-11 1/4"

HANGER LENGTHS



NO.	REVISION	BY	DATE

ADDISON TOWN OF ADDISON
DALLAS COUNTY, TEXAS

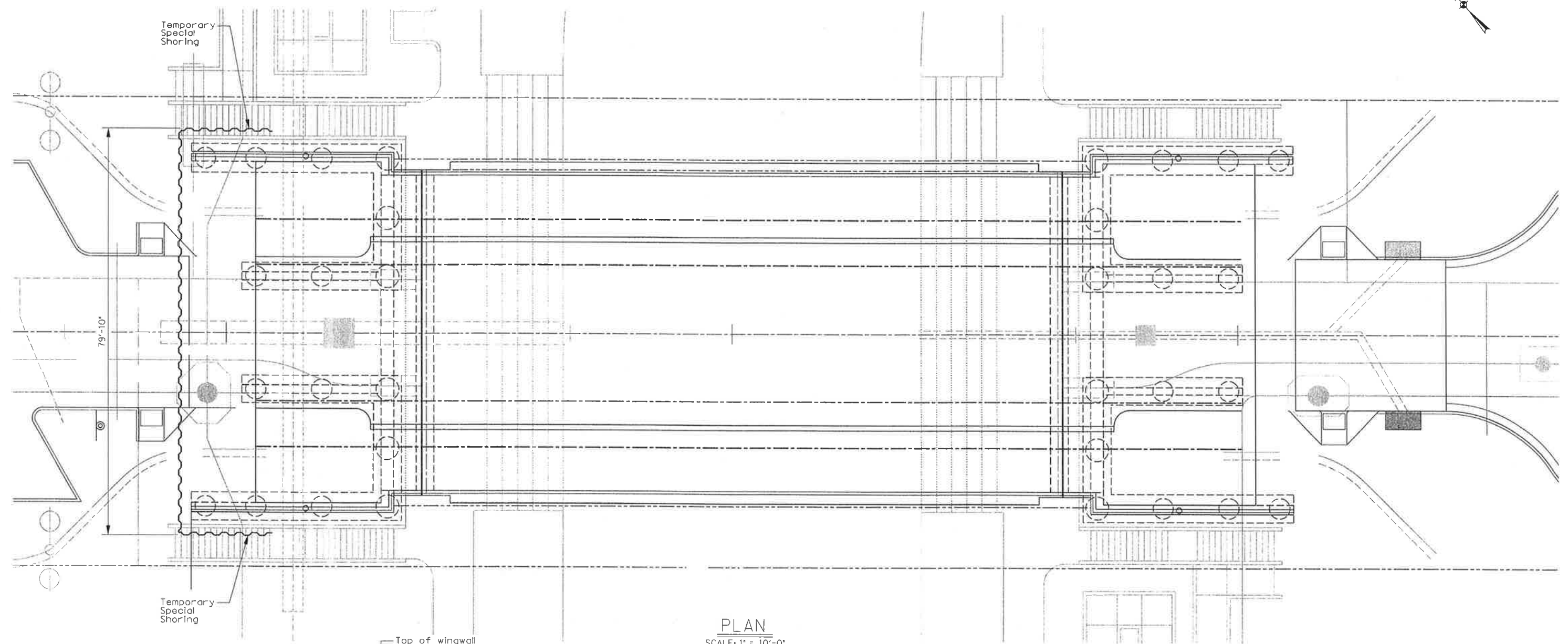
VITRUVIAN PARK BRIDGES
PONTE AVENUE

ARCH DETAILS
SECTIONS AND DETAILS

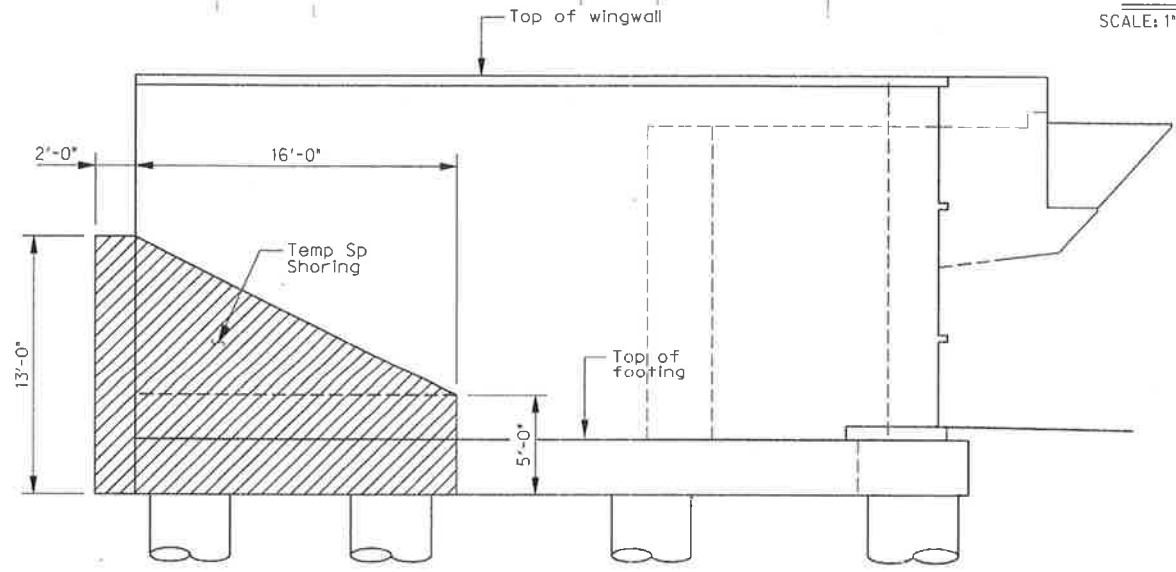
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
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PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S1-24

DATE: 4/29/2010 TIME: 3:11:52 PM FILE: 27379-SC-PONTEB-TS01.dgn PROJECT # 27379 OFFICE: RCH USER: ch2441



PLAN
SCALE: 1" = 10'-0"



LIMITS OF TEMPORARY SPECIAL SHORING
SCALE: NTS

Note: Dimensions shown are for quantify calculations only. Actual dimensions may vary.

04-29-10

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NO.	REVISION	BY	DATE		
TOWN OF ADDISON DALLAS COUNTY, TEXAS					
VITRUVIAN PARK BRIDGES PONTE AVENUE					
BRIDGE LAYOUT TEMPORARY SPECIAL SHORING					
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 346-0200 FAX (214) 730-0098					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S1-25

USER: ch2140

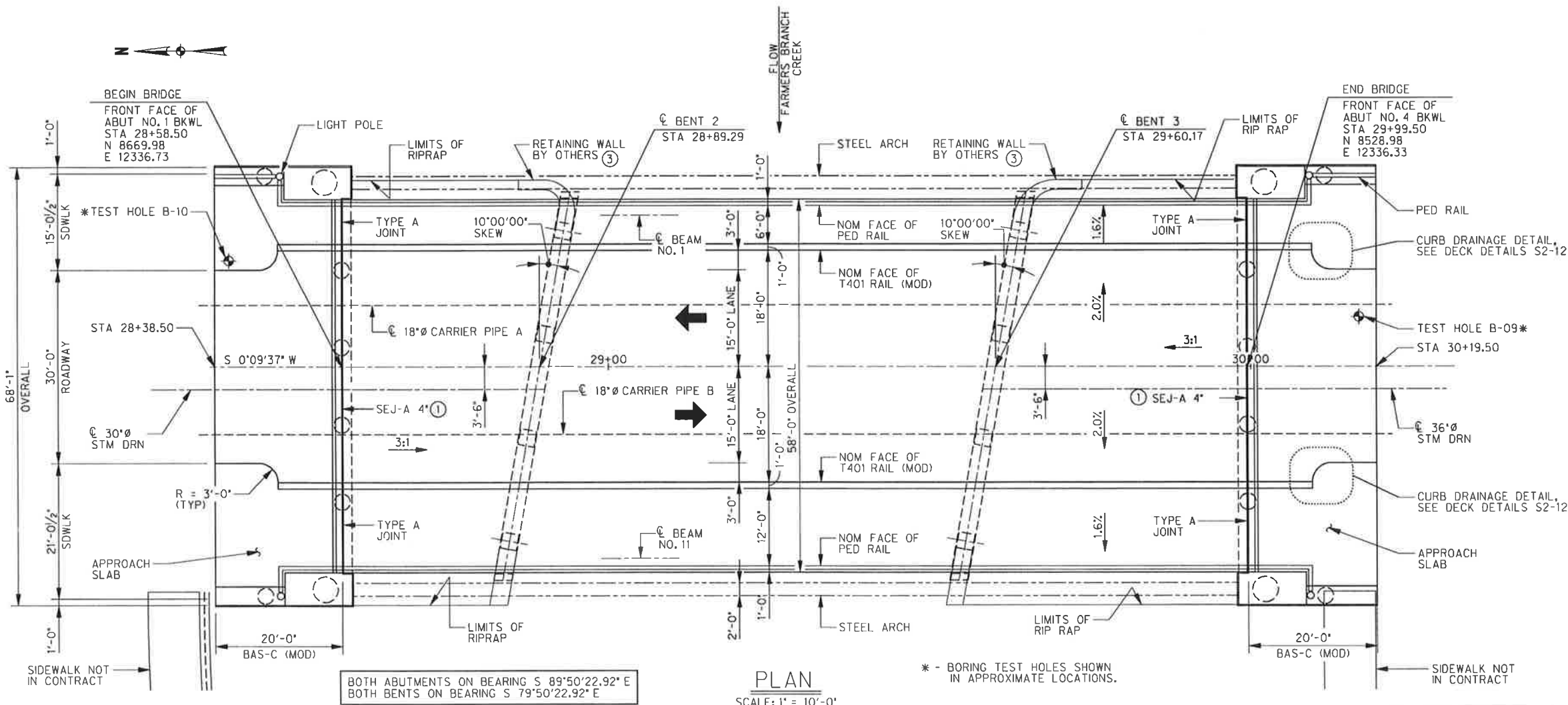
OFFICE: RCH

PROJECT # 27379

FILE: 27379-SC-BELLABL-BL01.dgn

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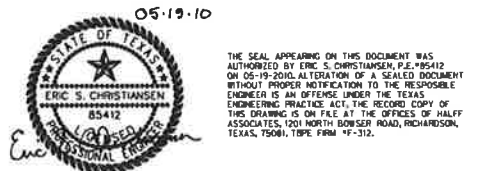
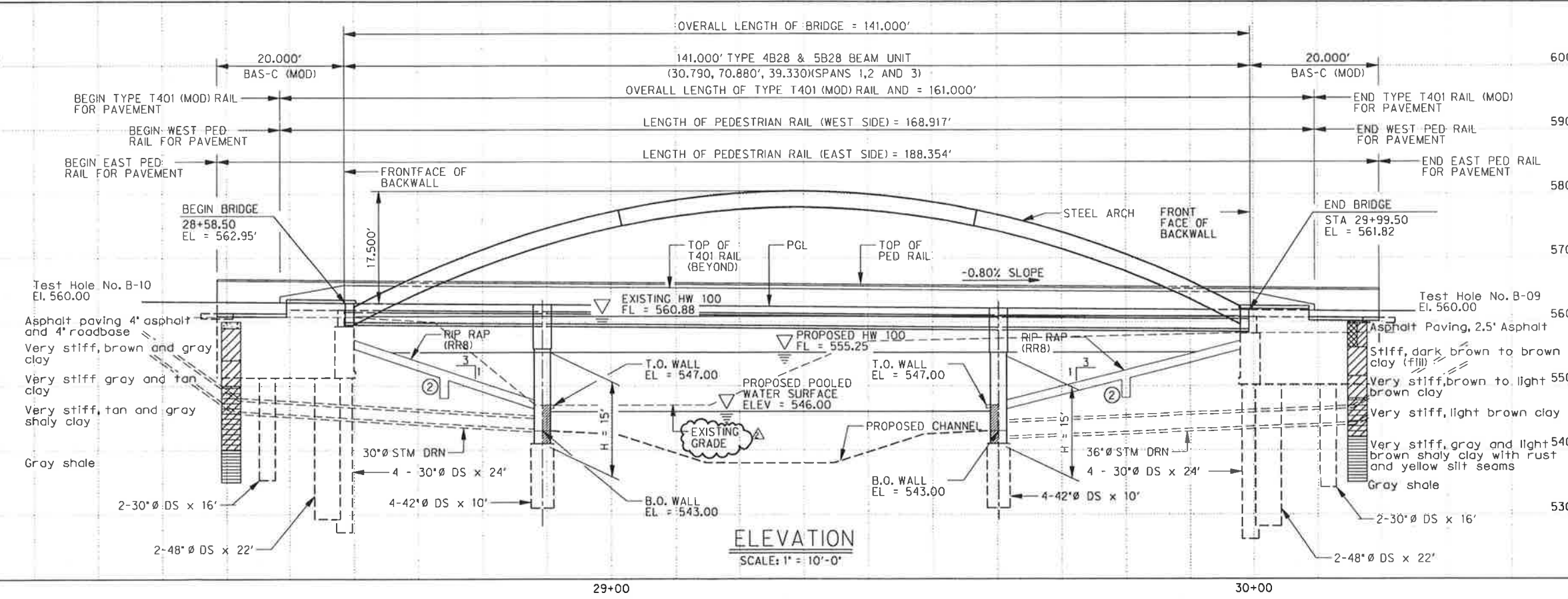
DATE: 7/12/2010



- DESIGN NOTES:**
- BRIDGE DESIGNED FOR HL93 LOADING AND 25 PSF FUTURE OVERLAY PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (2007) AND INTERIM REVISIONS THERETO.
 - CONTRACTOR SHALL LOCATE ALL UTILITIES AND INFORM THE ENGINEER IN WRITING OF ANY CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
 - FOR TYPICAL SECTION, SEE SHEET 2 OF 2.
 - DESIGN SPEED = 30 MPH
 - ADT = 3,636
 - FUNCTIONAL CLASSIFICATION = LOCAL RESIDENT STREET
 - CONTRACTOR SHALL EXTEND CARRIER PIPES TO THE OUTSIDE EDGE OF THE SUPPORT SLAB OF EACH BRIDGE APPROACH SLAB AND CAP THEM.

- FOUNDATION NOTES:**
- ALL DRILLED SHAFTS AT ABUTMENT AND BENTS ARE DESIGNED FOR SKIN FRICTION AND POINT BEARING.
 - FOUND DRILLED SHAFTS AT THE ELEVATIONS SHOWN OR DEEPER AS NECESSARY TO PENETRATE GRAY SHALE
- A MINIMUM OF:
 5'-0" (30" DIA.) WINGWALL
 10'-0" (30" DIA.) ABUTMENT
 10'-0" (42" DIA.)
 11'-0" (48" DIA.)
- SEJ SHALL TERMINATE AT T401 (MOD) RAIL. TYPE A JOINT SHALL BE USED AT SIDEWALKS.
 - INTERMEDIATE TOE WALL SEE CRR (MOD)
 - CONNECTION OF WINGWALL TO BRIDGE COLUMN TO BE REVIEWED AND APPROVED BY BRIDGE ENGINEER.

- FARMERS BRANCH CREEK HYDRAULIC DATA**
 100 YEAR FLOOD (PROPOSED)
- Q = 8,944 cfs
 V = 8.33 fps
 HW = 555.25'



NO.	REVISION	BY	DATE
1	ADDENDUM #2	ESC	05/19/10

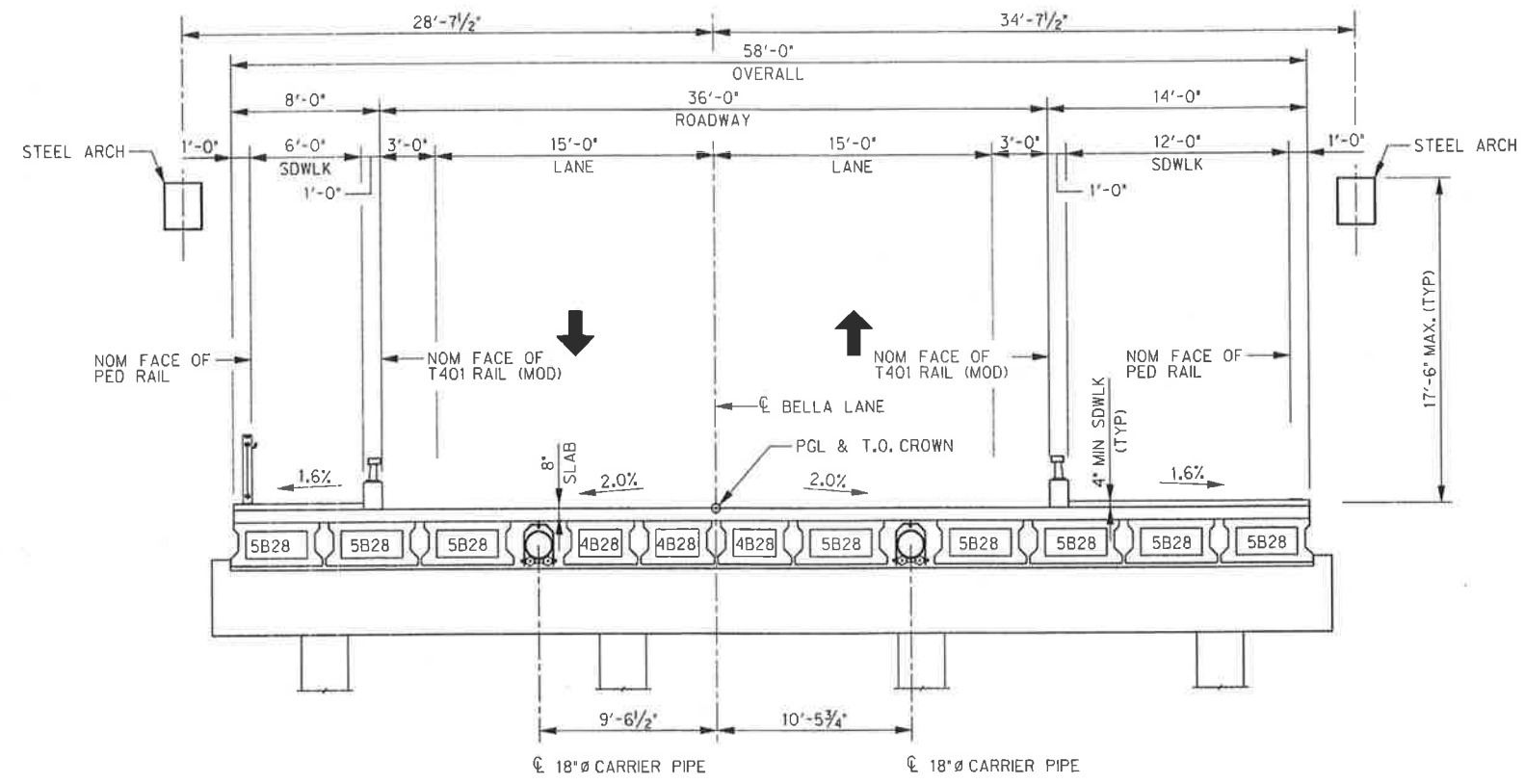
TOWN OF ADDISON
DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES
BELLA LANE

BRIDGE LAYOUT - PLAN

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S2-01

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
 TEL (214) 348-8200 FAX (214) 738-0095



TYPICAL SECTION
SCALE: 1" = 10'-0"

GENERAL NOTES:
1. FOR BRIDGE PLAN AND ELEVATION, SEE SHEET 1 OF 2.





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NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES BELLA LANE			
TYPICAL SECTION			
HALFF		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 346-8200 FAX (214) 736-0066	
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S2-02		

SUMMARY OF ESTIMATED STRUCTURAL QUANTITIES - BELLA LANE BRIDGE											
BRIDGE ELEMENT	BASE BID ITEM NO. TXDOT SPEC NO.	35	36	37	38	39	40	41	42	43	44
	DESCRIPTION	400	403	416	416	416	420	420 (4)	420	420	420 (1)
		STRUCTURAL EXCAVATION AND BACKFILL (A)	TEMPORARY SPECIAL SHORING	DRILL SHAFT (30" DIA)	DRILL SHAFT (42" DIA)	DRILL SHAFT (48" DIA)	CL 'C' CONC (ABUT)	CL 'C' CONC (MASS PLACEMENT) (ABUT) (A)	CL 'C' CONC (BENT)	CL 'S' CONC (APRR SLAB)	CL 'S' CONC (BRIDGE SIDEWALK)
		CY	SF	LF	LF	LF	CY	CY	CY	CY	CY
2 ~ ABUTMENTS		3,075	1,780	256		88	95.8	145.0		111.0	20.7
2 ~ INTERIOR BENTS					80				108.8		
1 ~ PRESTRESSED CONCRETE BEAM UNITS											
2 ~ STEEL ARCHES											
TOTAL		3,075	1,780	256	80	88	95.8	145.0	108.8	111.0	20.7

SUMMARY OF ESTIMATED STRUCTURAL QUANTITIES CONTINUED- BELLA LANE BRIDGE													
BRIDGE ELEMENT	BASE BID ITEM NO. TXDOT SPEC NO.	45	46	47	48	49	50	51	52	54	55 (2)	56 (3)	57
	DESCRIPTION	422	425	425	428	4332	442	442	442	450		454	454
		REINF CONC SLAB	PRESTR CONC BOX BEAM (4B28)	PRESTR CONC BOX BEAM (5B28)	CONC SURF TREAT (CLASS 1)	RIPRAP CONC (5')	STR STL (MISC)	STR STL (STEEL ARCH)	STR STL (MISC) (18 IN PIPE)	RAIL (T401) (MOD)	RAIL (PED RAIL)	SEALED EXPANSION JOINT (4 IN) (SEJ-A) (MISC)	JOINT SEALANT
		SF	LF	LF	SY	CY	LB	LB	LB	LF	LB	LF	LF
2 ~ ABUTMENTS						84.0			9,450	40	74	75	
2 ~ INTERIOR BENTS													
1 ~ PRESTRESSED CONCRETE BEAM UNITS		8,178	272	1,226	611.0		8,540		29,610	282	282		40
2 ~ STEEL ARCHES								129,200					
TOTAL		8,178	272	1,226	611.0	84.0	8,540	129,200	39,060	322	356	75	40

- ① Quantity only includes sidewalk placed on approach slab.
- ② Quantity includes pipe under bridge approach slab.
- ③ Structural Steel Quantity includes all structural angles and plates used as bridge deck forms and stone ledges.
- ④ Mass Placement Quantity includes wingwalls only.

Addendum #3	ESC	05/24/10			
Addendum #2	ESC	05/19/10			
REVISION					
NO.	BY	DATE			
 TOWN OF ADDISON DALLAS COUNTY, TEXAS					
VITRUVIAN PARK BRIDGES BELLA LANE					
ESTIMATED QUANTITIES					
 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-6200 FAX (214) 738-0096					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379		AHH	APRIL 2010	-	S2-03

USER: ah2441
 OFFICE: RCH
 PROJECT # 27379
 FILE: 27379-SC-BELLABL-AB01-01.dgn
 DATE: 5/24/2010
 TIME: 4:08:26 PM

BAR SCHEDULE ~ ONE CAP

Bar	Type	No.	Size	Length	Weight	
A	S+	28	#11	58'-1"	8,641	
H	S+	8	#6	57'-8"	693	
L1	B+	12	#6	5'-0"	91	
L2	B+	24	#6	12'-6"	451	
S1	B+	55	#5	18'-2"	1,043	
V	B+	59	#5	9'-2 1/2"	567	
wH1	S+	22	#6	21'-2"	700	
wH2	S+	38	#6	10'-2"	581	
wH3	S+	22	#6	10'-8"	353	
wU	B+	26	#8	26'-2 1/2"	1,820	
wV1	S+	24	#8	11'-8 3/4"	752	
wV2	S+	24	#6	9'-8 3/4"	351	
wZ	B+	22	#6	6'-2 1/2"	206	
Total Reinforcing Steel					LB	16,250
Cl C Conc (Abut)					CY	47.9
Cl C Conc (Mass Placement)					CY	72.5

ESTIMATED QUANTITIES

Item	Unit	QUANTITY
Drilled Shaft (48 IN)	FT	44
Drilled Shaft (30 IN)	FT	150
Cl C Conc (Abut)	CY	47.9
Cl C Conc (Mass Placement)	CY	72.5
Reinf Steel	LB	16,250

① For contractor's information only.

General Notes:

- Designed per AASHTO LRFD Bridge Design Specifications (2007) with Interim specifications thereto.
- Concrete strength $f'c = 3,600$ psi.
- The price bid per foot of Drilled Shaft shall include the reinforcing extending from the shaft into the cap.
- Spiral steel shall have one extra turn at the top, bottom and at splices.
- All cap and wall reinforcing shall be grade 60 steel.
- Drilled shaft reinforcing may be grade 40.
- Calculated drilled shaft foundation load is as follows:
 146 tons per shaft (48")
 104 tons per shaft (30")



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NO.	REVISION	BY	DATE
①	Addendum #3	ESC	05/24/10
②	Addendum #2	ESC	05/19/10

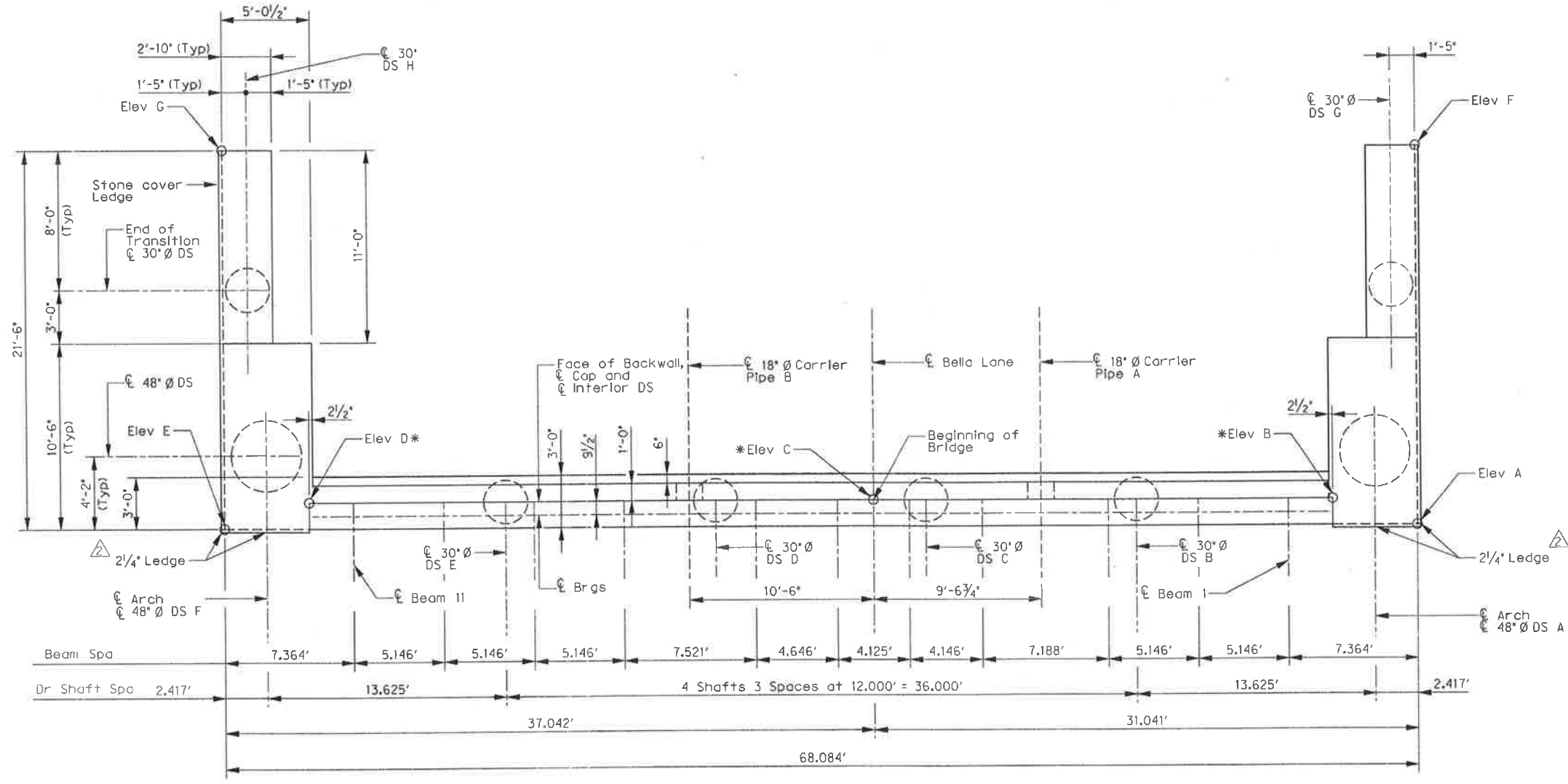
TOWN OF ADDISON
 DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES
 BELLA LANE

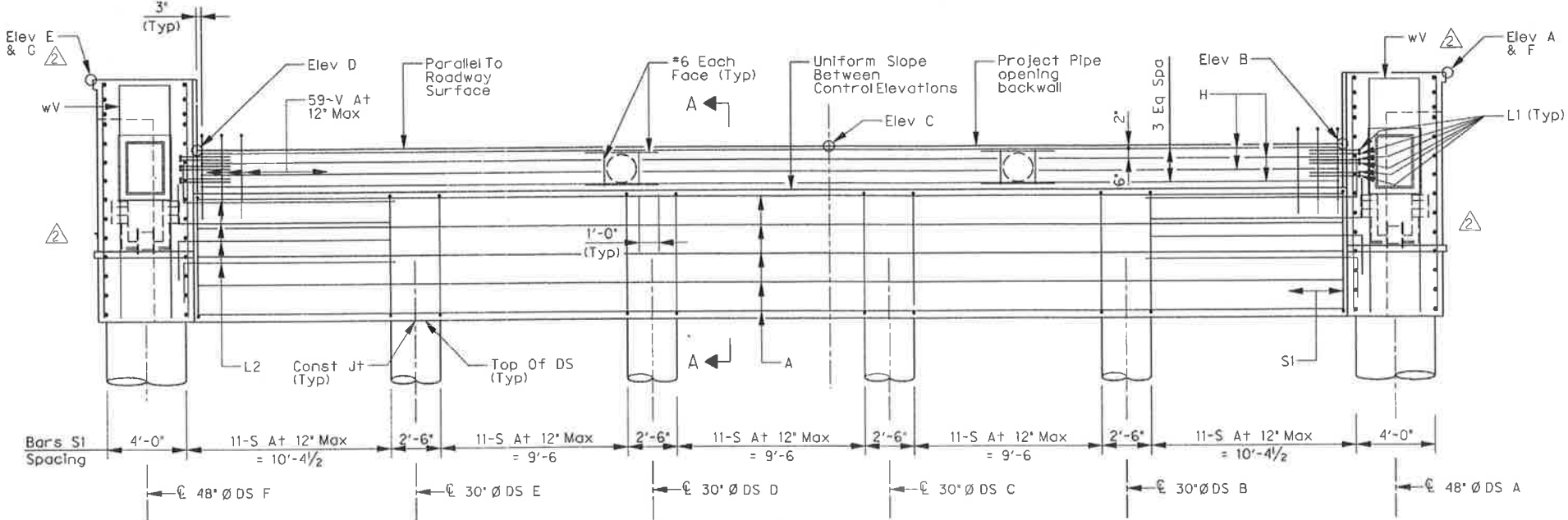
ABUTMENT No. 1
 PLAN AND ELEVATION

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
 TEL (214) 348-0200 FAX (214) 730-0065

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S2-04



PLAN
 SCALE: 1/4" = 1'-0"
 *Denotes elevation taken at top, frontface of backwall along centerline of abutment.



ELEVATION
 SCALE: 1/4" = 1'-0"

Note: For information not shown see Section A-A/S2-07

CONTROL ELEVATIONS

Abutment	Station	Top of Abutment							Top of Drilled Shafts							
		Elev A	Elev B	Elev C	Elev D	Elev E	Elev F	Elev G	DS A	DS B	DS C	DS D	DS E	DS F	DS G	DS H
1	28+58.50	564.84	561.34	561.87	561.34	564.94	563.35	563.45	552.54	552.80	553.04	552.92	552.68	552.42	552.48	552.48

USER: ah2481
 OFFICE: RCH
 PROJECT # 27379
 FILE: 27379-SC-BELLABL-AB01-02.dgn
 DATE: 5/24/2010
 TIME: 4:15:49 PM

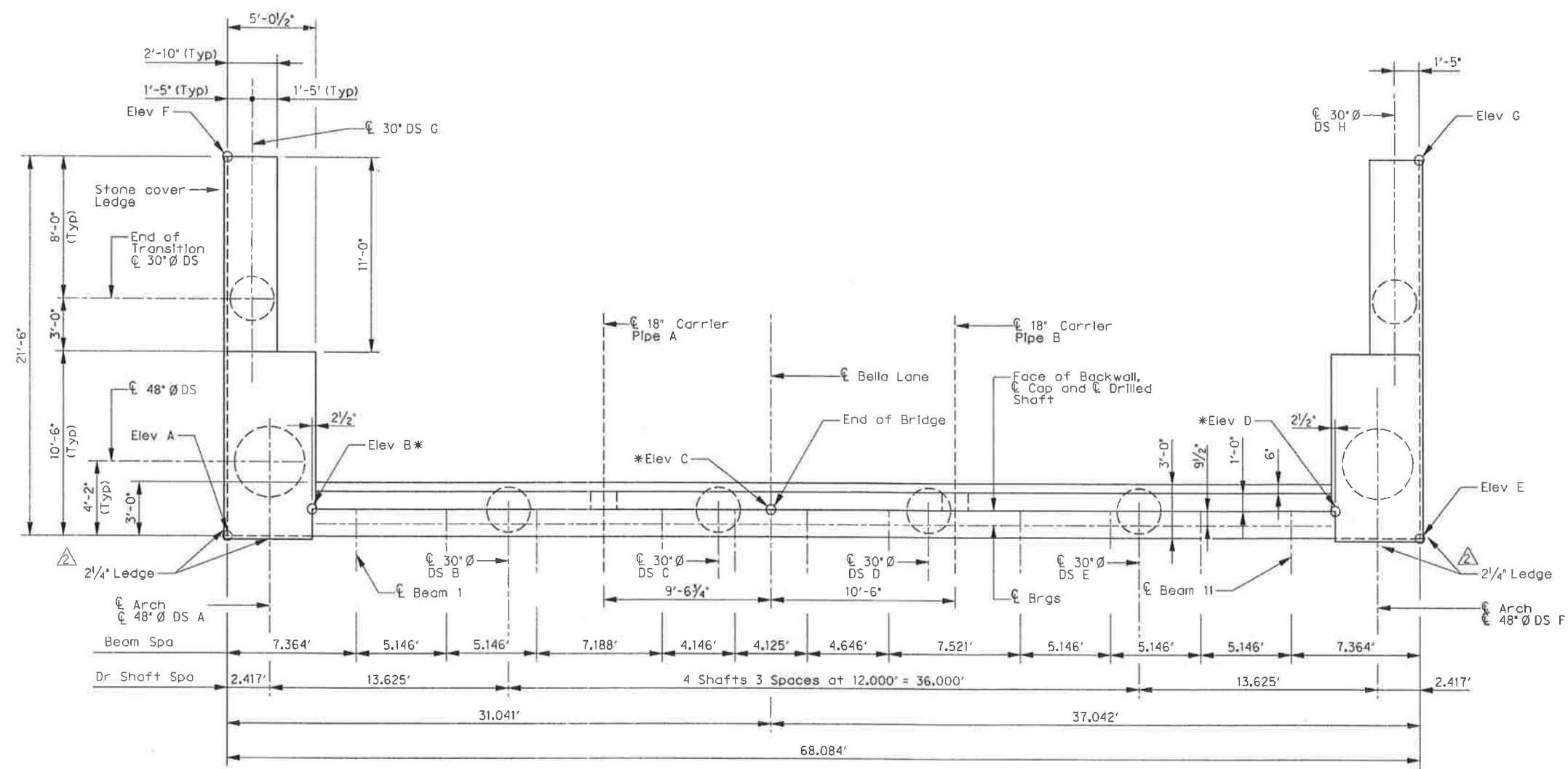
BAR SCHEDULE ~ ONE CAP

Bar	Type	No.	Size	Length	Weight	
A	S†	28	#11	58'-1"	8,641	
H	S†	8	#6	57'-8"	693	
L1	B†	12	#6	5'-0"	91	
L2	B†	24	#6	12'-6"	451	
S1	B†	55	#5	18'-2"	1,043	
V	B†	59	#5	9'-2 1/2"	567	
wH1	S†	22	#6	21'-2"	700	
wH2	S†	38	#6	10'-2"	581	
wH3	S†	22	#6	10'-8"	353	
wU	B†	26	#8	26'-2 1/2"	1,820	
wV1	S†	24	#8	11'-8 3/4"	752	
wV2	S†	24	#6	9'-8 3/4"	351	
wZ	B†	22	#6	6'-2 1/2"	206	
① Total Reinforcing Steel					LB	16,250
② Cl C Conc (Abut)					CY	47.9
③ Cl C Conc (Mass Placement)					CY	72.5

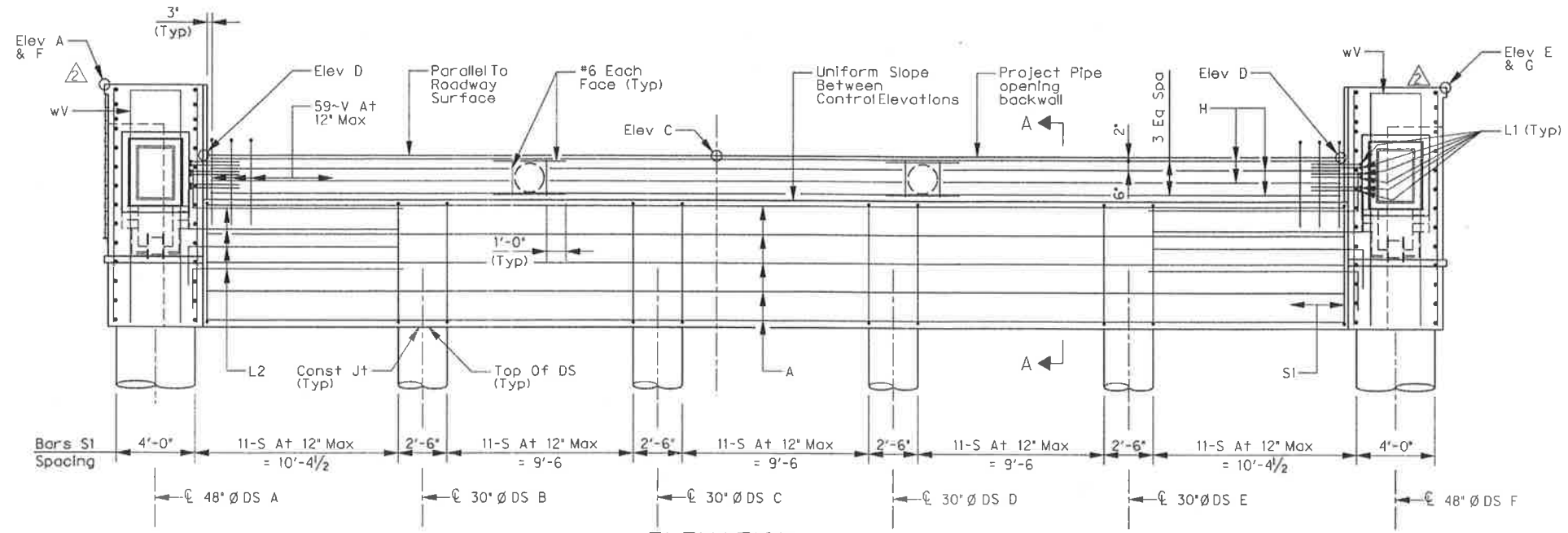
ESTIMATED QUANTITIES

Item	Unit	QUANTITY
Drilled Shaft (48 IN)	FT	44
Drilled Shaft (30 IN)	FT	150
Cl C Conc (Abut)	CY	47.9
Cl C Conc (Mass Placement)	CY	72.5
① Reinf Steel	LB	16,250
② Sidewalk Drain Pipe (4")	LF	70

- ① For contractor's information only.
- ② Sidewalk drains are subsidiary to Item 420.



PLAN
 SCALE: 1/4" = 1'-0"
 *Denotes elevation taken at top, frontface of backwall along centerline of abutment.



ELEVATION
 SCALE: 1/4" = 1'-0"

Note: For information not shown see Section A-A/S2-07

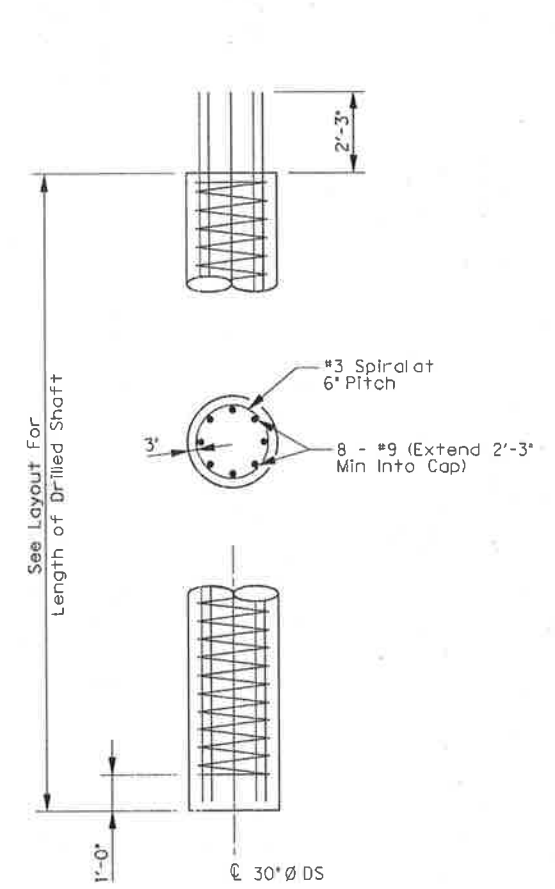
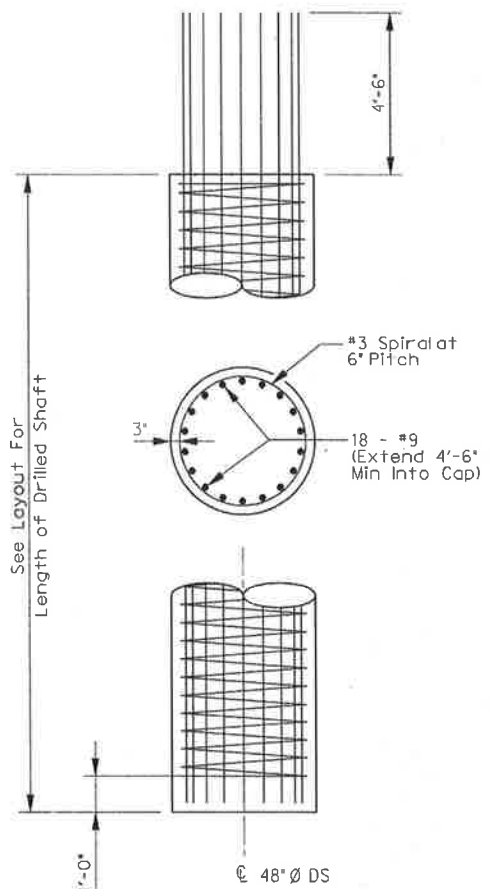
CONTROL ELEVATIONS

Abutment	Station	Top of Abutment							Top of Drilled Shafts							
		Elev A	Elev B	Elev C	Elev D	Elev E	Elev F	Elev G	DS A	DS B	DS C	DS D	DS E	DS F	DS G	DS H
4	29+99.50	563.74	560.21	560.74	560.21	563.84	561.91	562.00	551.37	551.67	551.91	551.79	551.55	551.25	551.16	551.16

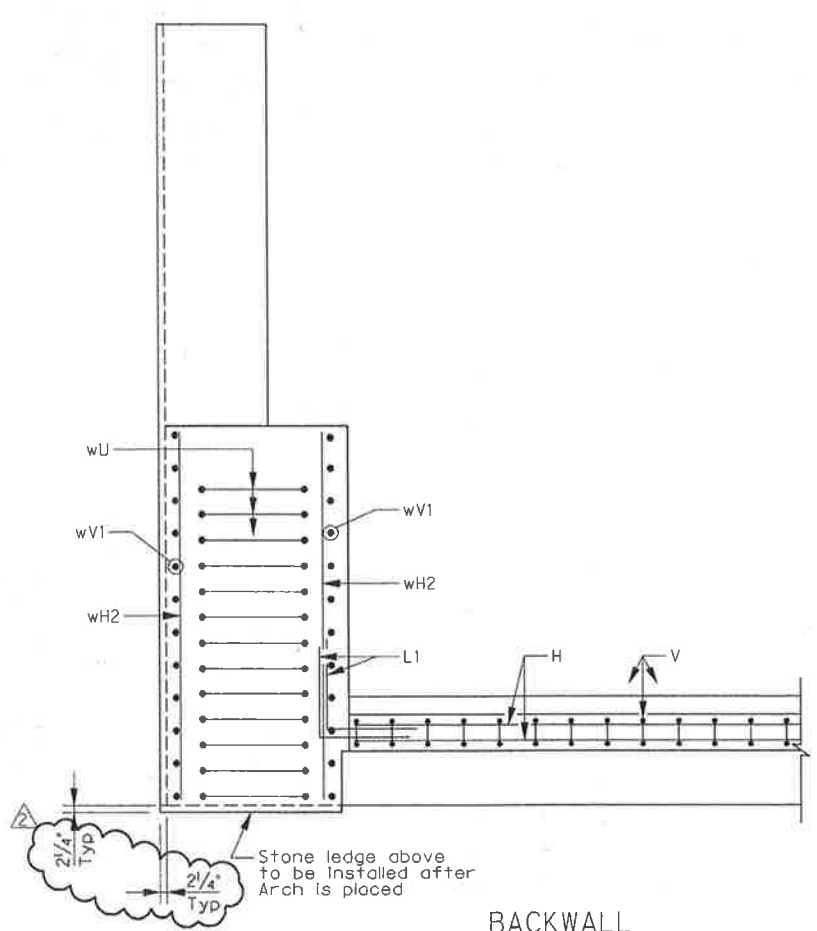


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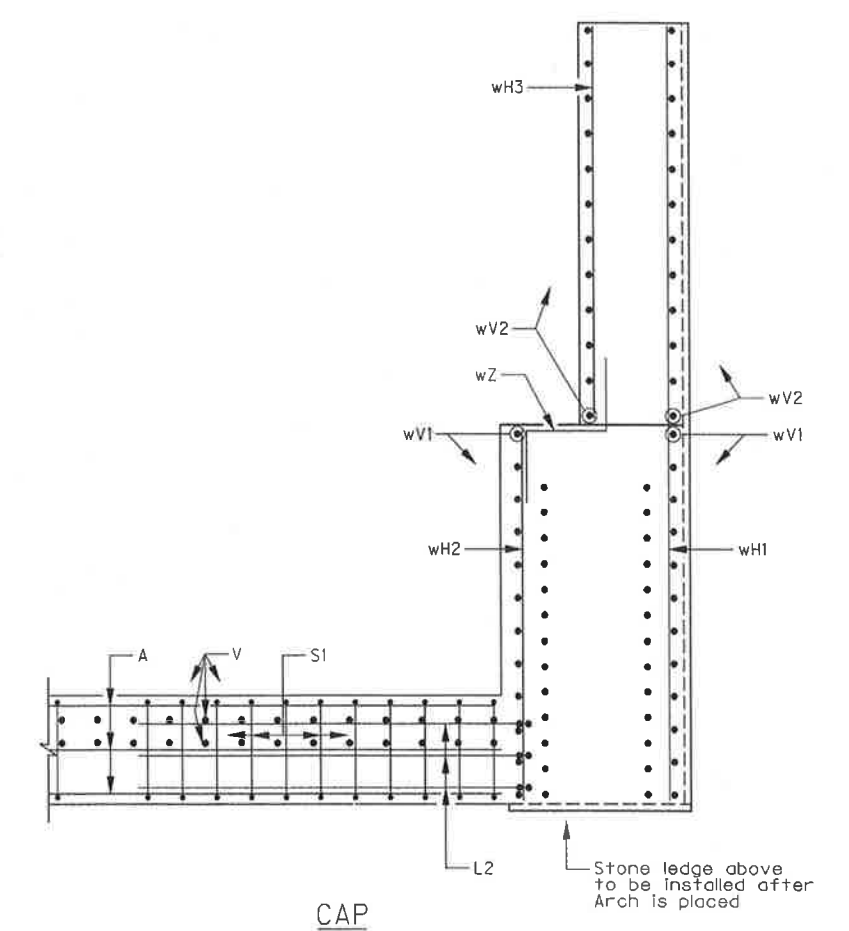
ADDENDUM #3	ESC	05/24/10
ADDENDUM #2	ESC	05/19/10
REVISION		
TOWN OF ADDISON DALLAS COUNTY, TEXAS		
VITRUVIAN PARK BRIDGES BELLA LANE		
ABUTMENT NO. 4 PLAN AND ELEVATION		
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-8200 FAX (214) 739-0095		
PROJECT	DESIGN	DRAWN
DATE	FILE	SHEET
27379	ESC	AHH
APRIL 2010	-	S2-05



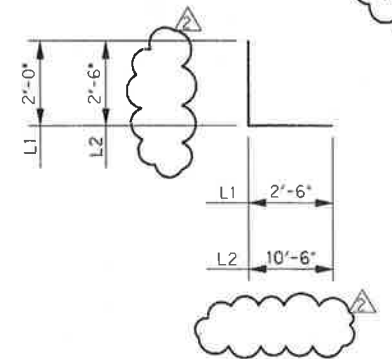
DRILLED SHAFT DETAILS
SCALE: 3/8" = 1'-0"



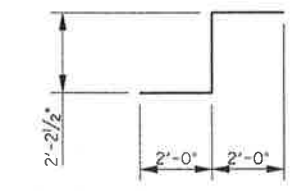
BACKWALL



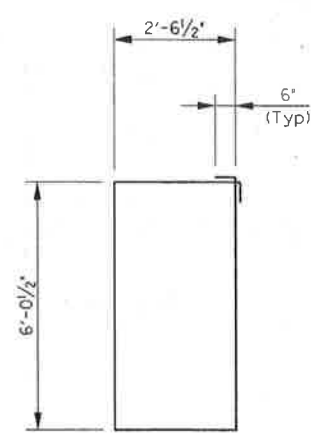
CAP



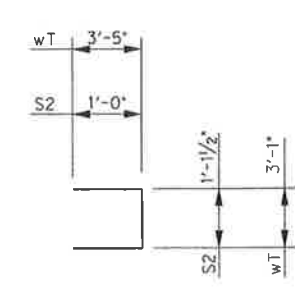
BARS L1, L2, and sL



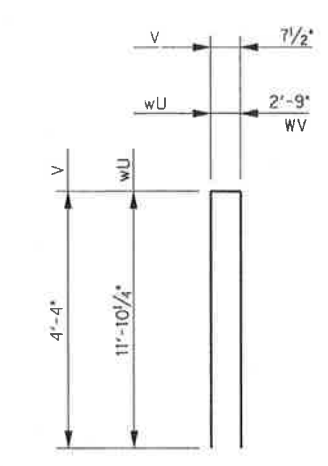
BARS wZ



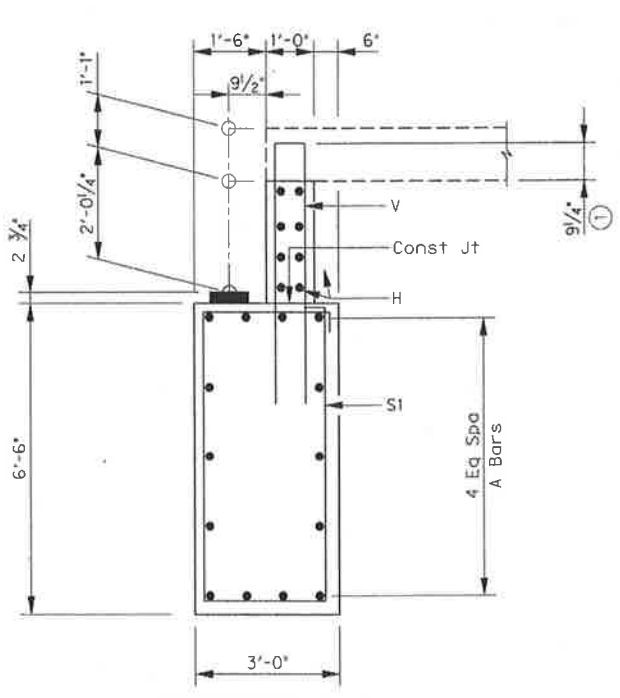
BARS S1



BARS S2 AND wT



BARS V AND wU



SECTION A-A
SCALE: 1/2" = 1'-0"

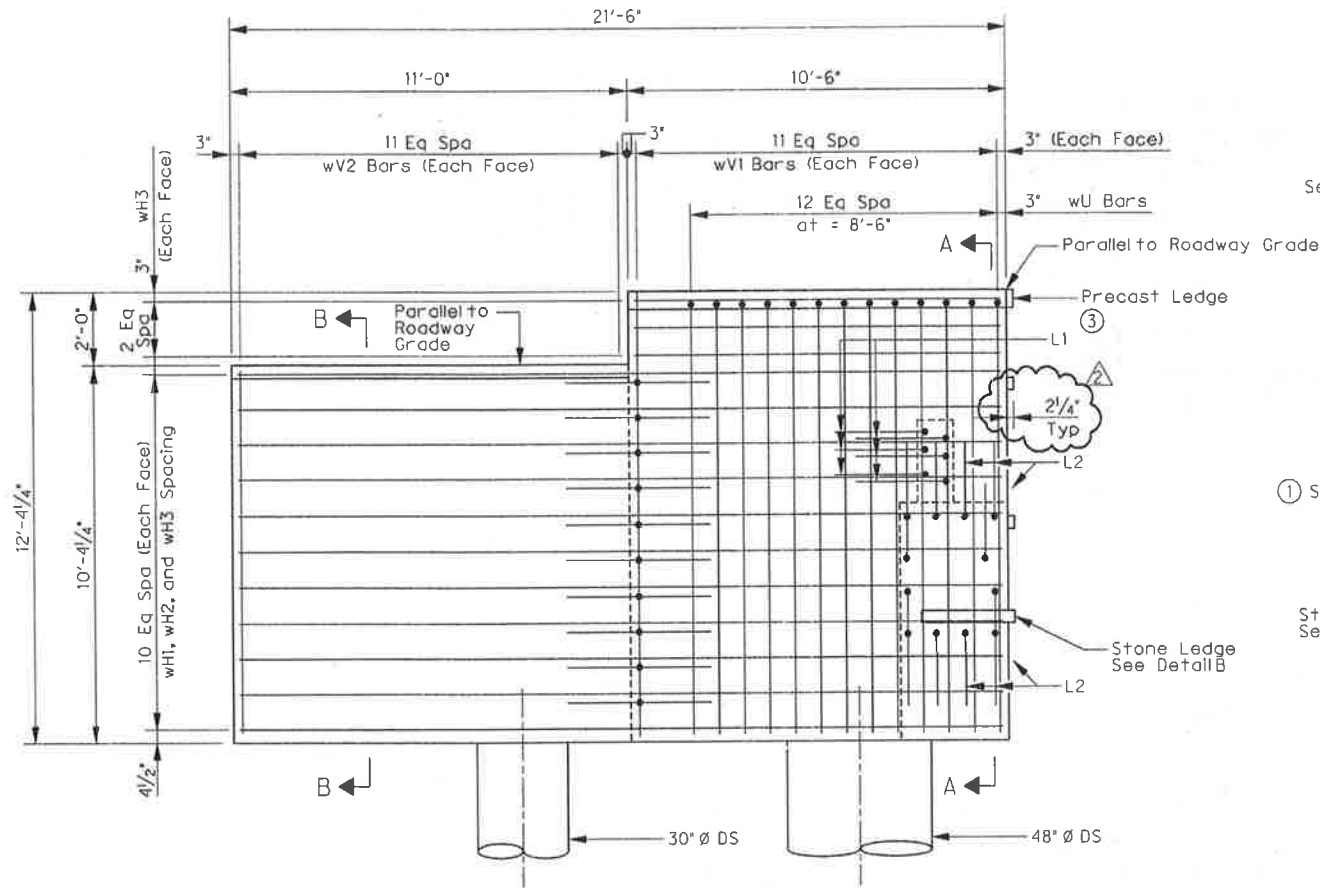
CORNER DETAILS
SCALE: 3/8" = 1'-0"

① Increase as required to maintain 3 3/4" from finished grade.

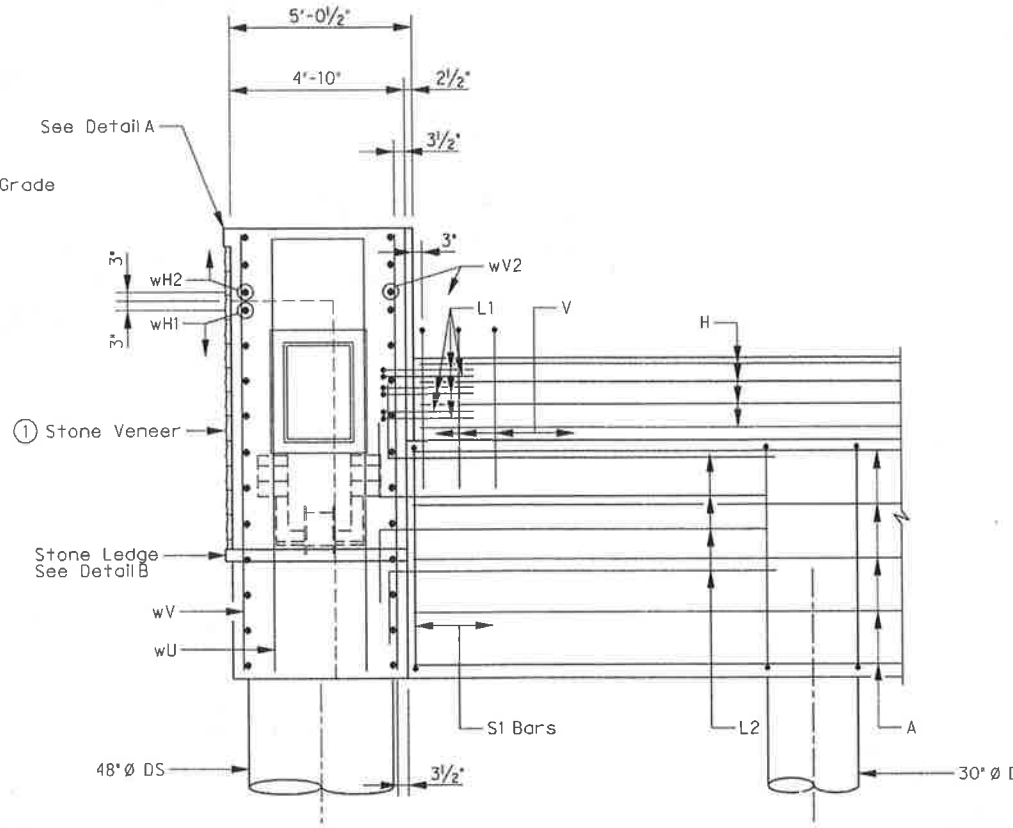


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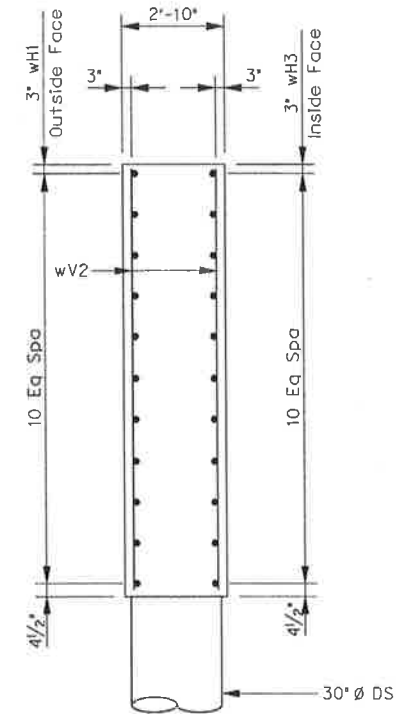
Addendum #2		ESC	05/19/10
NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES BELLA LANE			
ABUTMENT DETAILS SECTIONS			
HALFF			
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 346-8200 FAX (214) 738-0096			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
	S2-06		



WINGWALL ELEVATION
SCALE: 3/8" = 1'-0"



SECTION A-A
SCALE: 3/8" = 1'-0"



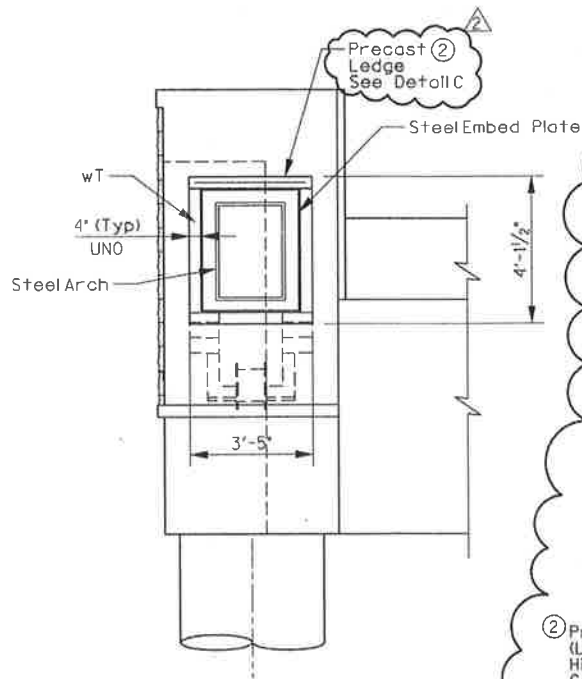
SECTION B-B
SCALE: 3/8" = 1'-0"

③ Precast ledge to be installed after arch is erected. See Note 2 below for attachment.

① Stone ledge shall be a 5 x 3 x 1/2" angle with 1/2" Ø Hilti Quik Bolt 3 expansion anchors embedded a minimum of 3/2" and spaced at 1'-6" C.C. Refer to landscape architecture sheets for location of stone veneer and stone ledges.

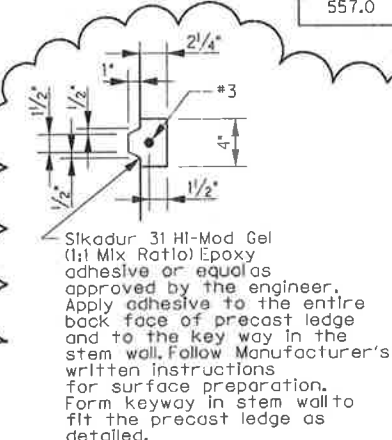
TABLE A - WINGWALL LEDGE ELEVATIONS

NORTH ABUTMENT		SOUTH ABUTMENT	
EAST WW	WEST WW	EAST WW	WEST WW
557.0	555.0	557.0	555.0

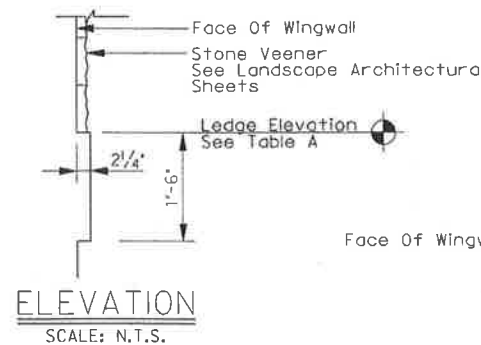


STONE COLLAR DETAILS
SCALE: 3/8" = 1'-0"

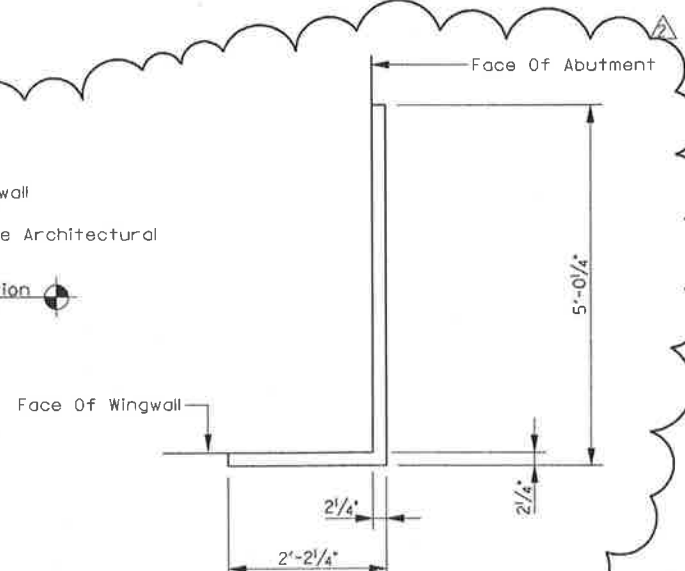
Note: See Wingwall Elevation and Section A-A for abutment details and reinforcing not shown.



DETAIL C
SCALE: N.T.S.

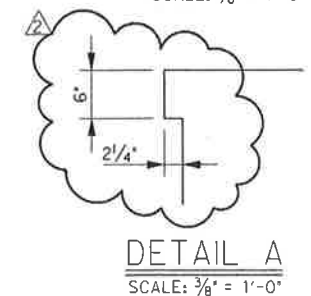


ELEVATION
SCALE: N.T.S.



DETAIL B
SCALE: N.T.S.

PLAN
SCALE: N.T.S.



DETAIL A
SCALE: 3/8" = 1'-0"



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NO.	REVISION	BY	DATE
1	Addendum #2	ESC	05/19/10

TOWN OF ADDISON
DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES
BELLA LANE

ABUTMENT DETAILS
WINGWALL DETAILS

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 346-8200 FAX (214) 739-0066

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S2-07

USER: ah2482

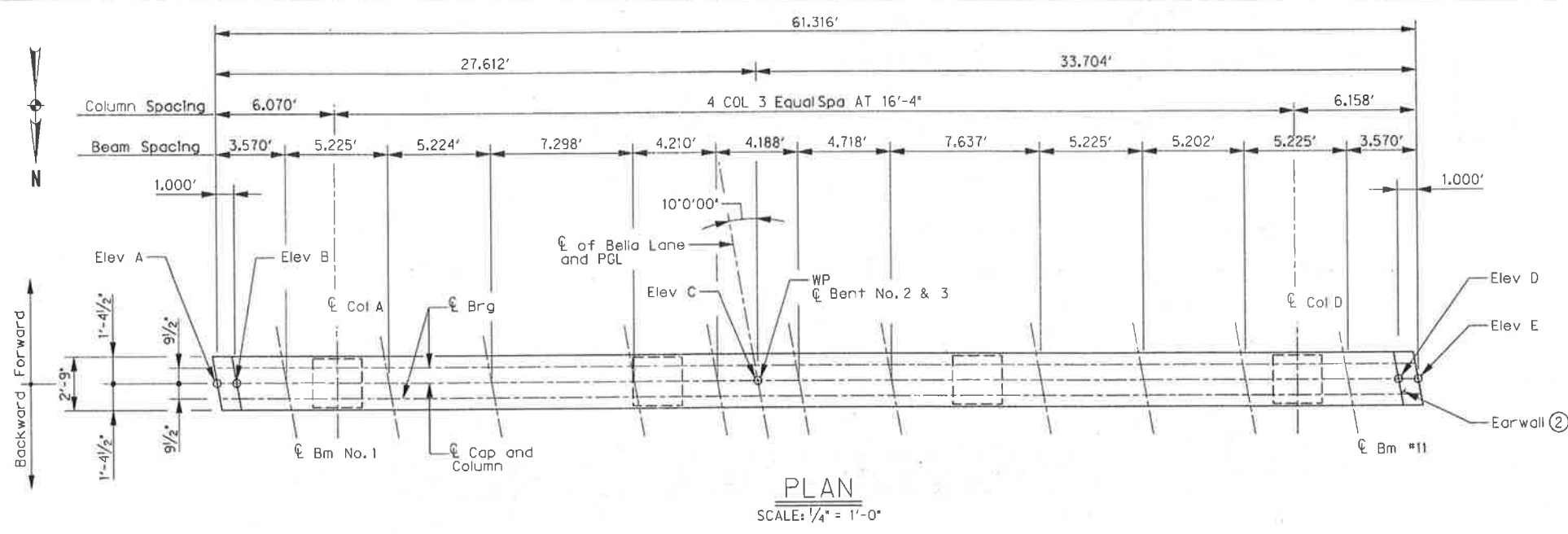
OFFICE: RCH

PROJECT = 27379

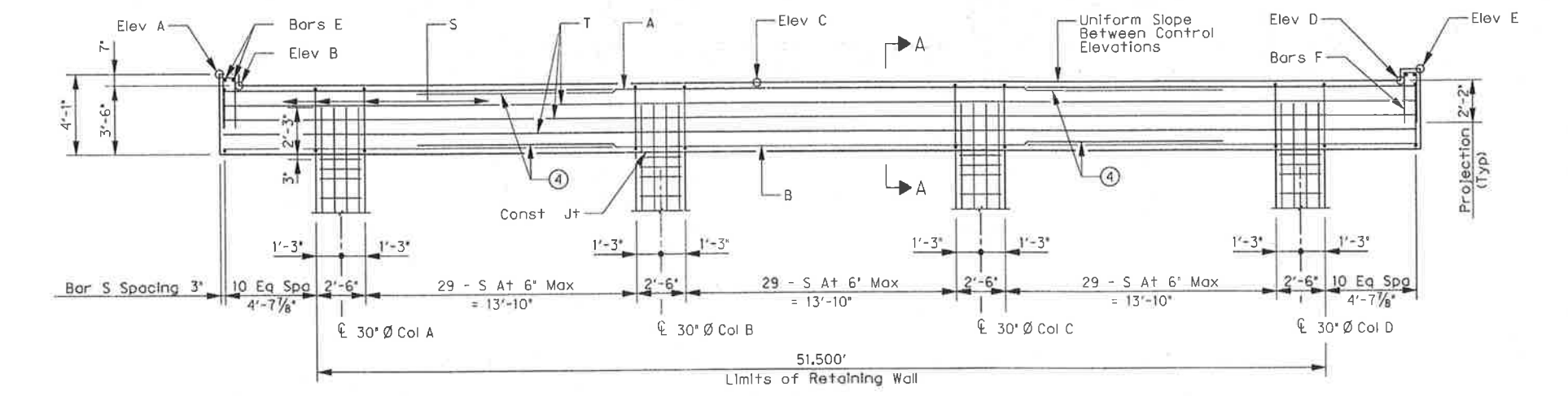
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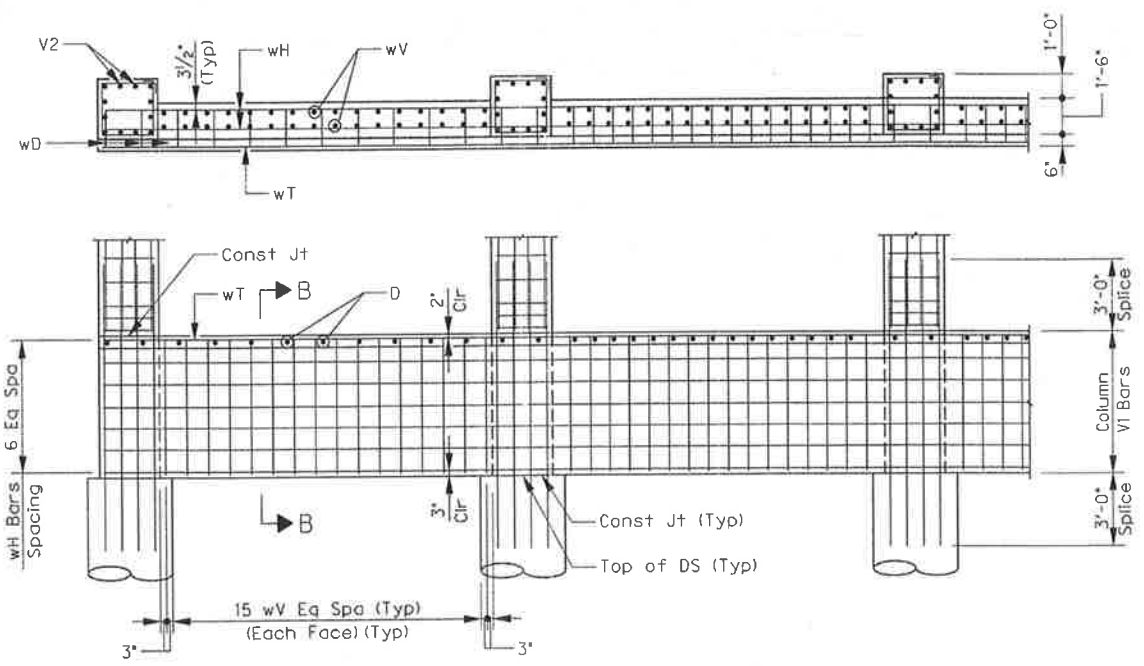
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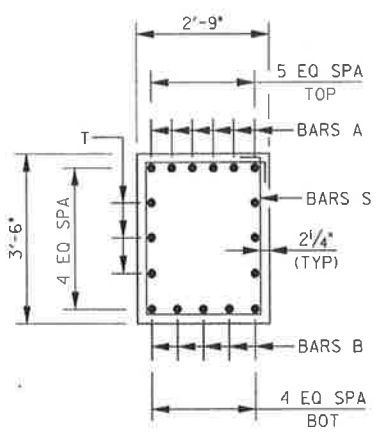
PLAN
SCALE: 1/4" = 1'-0"



51.500'
Limits of Retaining Wall



ELEVATION
SCALE: 1/4" = 1'-0"



SECTION A-A
SCALE: 1/2" = 1'-0"

BAR SCHEDULE ~ ONE CAP

Bar	Type	No.	Size	Length	Weight
A	S+	6	#11	70'-10"	2,259
B	S+	5	#11	67'-8"	1,798
E	S+	4	#5	2'-5"	11
F	B+	10	#5	6'-1 1/2"	64
S	B+	109	#5	12'-0"	1,365
T	S+	6	#5	66'-1"	414
wD	S+	36	#5	1'-6"	57
wH	S+	14	#7	51'-2"	1,465
wT	S+	1	#5	51'-2"	54
wV	S+	45	#5	5'-7"	263

1	Total Reinforcing Steel	LB	7,750
5	Cl C Conc (Bent)	CY	40.5

COLUMN SCHEDULE ~ ONE COLUMN

"H"	Bars V1-12-#8	Bars V2-12-#8	Bars Z-#3 Ties	Reinf Steel	Class C Concrete			
FT	Length	Weight	Length	Weight	LB	CY		
13	12'-0"	385	15'-3"	489	17	62	936	12.1
14	12'-0"	385	16'-3"	521	18	66	972	13.0
15	12'-0"	385	17'-3"	553	19	70	1,008	13.9
16	12'-0"	385	18'-3"	585	20	73	1,043	14.9
17	12'-0"	385	19'-3"	617	21	77	1,079	15.8

ESTIMATED QUANTITIES

Item	Unit	BENT 2	BENT 3
Drilled Shaft (42 IN)	FT	40	40
Cl C Conc (Bent)	CY	54.4	54.4
1 Reinf Steel	LB	8,758	8758.0

- 1 For Contractor's Information only.
- 2 Do not cast earwalls until beams are erected in their final position.
- 3 Length of bar includes 10'-0" splice length.
- 4 Top splices shall be near midspan and bottom splices near supports. Adjacent bars cannot be spliced at the same location.
- 5 Quantity includes retaining wall

General Notes:

Concrete strength $f'c = 3,600$ psi.
 The price bid per foot of column shall include the reinforcing extending from the shaft into the cap.
 Spiral steel shall have one extra turn at the top, bottom, and at splices.
 All cap reinforcing shall be grade 60.
 Column and Drilled Shaft reinforcing may be grade 40.
 Cap form supports shall remain in place until the entire cap is ready for form removal.
 Calculated drilled shaft foundation load: 156 Tons per Drilled Shaft

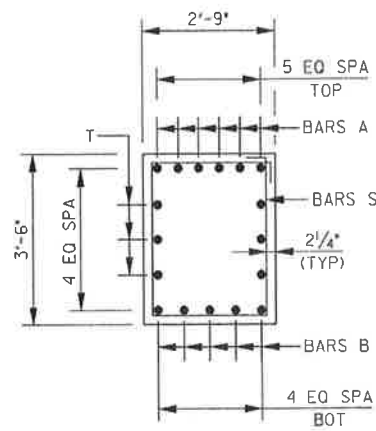


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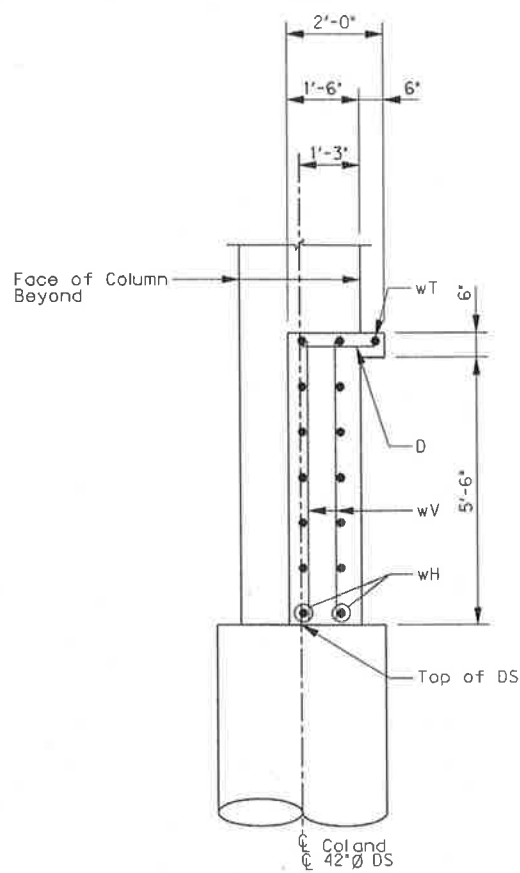
NO.	REVISION	ESC	05/19/10
1	Addendum #2	BY	DATE

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 346-8200 FAX (214) 730-0096

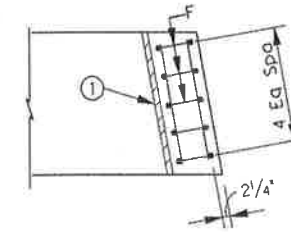
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S2-08



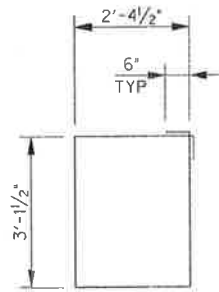
SECTION A-A
SCALE: 1/2" = 1'-0"



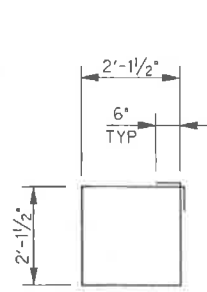
SECTION B-B
SCALE: 1/2" = 1'-0"



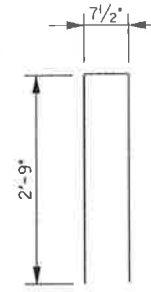
EARWALL PLAN ②



BARS S



BARS Z



BARS F

- ① 1/2" Preformed Bituminous Fiber material between box beam and earwall. Bond to beam with an approved adhesive. Inside Face of earwall to be cast with vertical side of beam
- ② Do not cast earwalls until beams are erected in their final position.

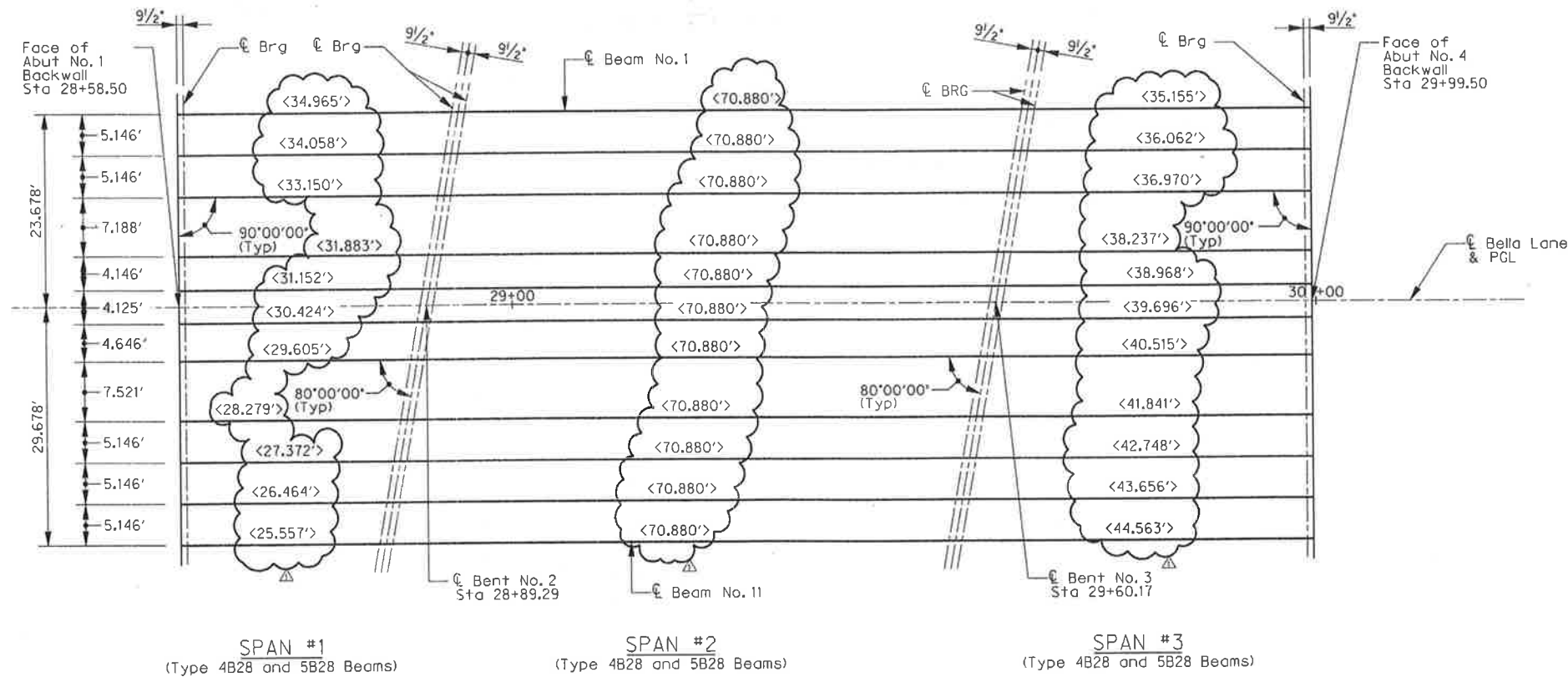
CONTROL ELEVATIONS

Bent	Station	Top of Cap					Top of Columns			
		Elev A	Elev B	Elev C	Elev D	Elev E	Col A	Col B	Col C	Col D
2	28+89.29	559.23	558.66	559.22	558.75	559.31	555.27	555.62	555.52	555.22
3	29+60.17	558.66	558.10	558.66	558.18	558.74	554.71	555.05	554.95	554.65



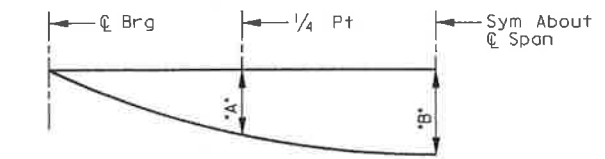
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NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES BELLA LANE BENT No. 2 & 3 DETAILS			
HALFF		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-8200 FAX (214) 738-0096	
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S2-09		



Span No.	Beam No.	"A"	"B"	Length
		FT	FT	FT
1	1	0.002	0.003	34.465
	2	0.002	0.003	33.558
	3	0.002	0.003	32.650
	4	0.002	0.003	31.383
	5	0.001	0.002	30.652
	6	0.001	0.002	29.924
	7	0.001	0.002	29.105
	8	0.001	0.002	27.779
	9	0.001	0.001	26.872
	10	0.001	0.001	25.964
	11	0.001	0.001	25.057
2	1	0.043	0.061	70.380
	2	0.045	0.064	70.380
	3	0.053	0.074	70.380
	4	0.066	0.092	70.380
	5	0.043	0.061	70.380
	6	0.043	0.061	70.380
	7	0.045	0.064	70.380
	8	0.053	0.074	70.380
	9	0.045	0.064	70.380
	10	0.043	0.061	70.380
	11	0.043	0.060	70.380
3	1	0.002	0.003	34.655
	2	0.003	0.004	35.562
	3	0.004	0.005	36.470
	4	0.004	0.006	37.737
	5	0.004	0.005	38.468
	6	0.001	0.002	39.196
	7	0.005	0.006	40.015
	8	0.006	0.009	41.341
	9	0.006	0.008	42.248
	10	0.006	0.008	43.156
	11	0.006	0.009	44.063

All beam lengths are horizontal lengths measured end to end.



DEAD LOAD DEFLECTION DIAGRAM

Note: Deflections shown are due to concrete slab only (E_c = 5 x 10⁶ psi). Calculated deflections shown are theoretical; actual dimensions may be less.

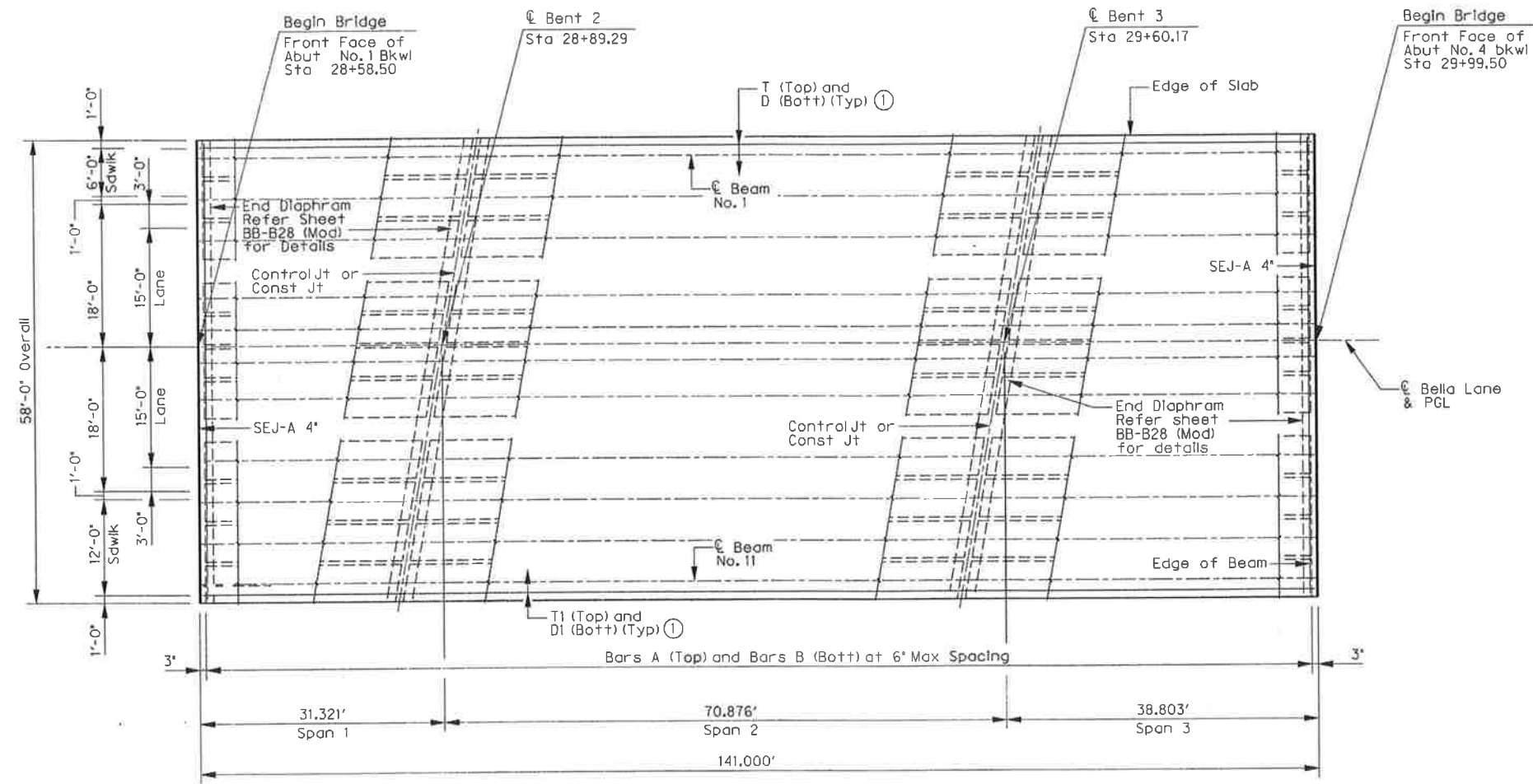
FRAMING PLAN

SCALE: 1" = 10'-0"
Dimensions shown thus <XXX.XXX'> represents horizontal beam length between cap centerlines.



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ADDENDUM #1	ESC	5/13/10
NO.	REVISION	BY DATE
 TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES BELLA LANE FRAMING PLAN		
 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL. (214) 348-8200 FAX (214) 739-0095		
PROJECT	DESIGN	DRAWN
DATE	FILE	SHEET
27379	ESC	AHH
APRIL 2010	-	S2-10



PLAN
SCALE: 1" = 10'-0"

General Notes:

All concrete shall be Class S, f'c = 4,000 psi.
 For Sealed Expansion Joint details not shown see SEJ-A.
 For SEJ-A quantities not shown see Estimated Quantities.
 The minimum rate of concrete placing and finishing shall be not less than 30 feet of Bridge Deck per hour. For all details not shown, see Traffic Roll Type T401 (Mod) and Deck Details on Sheet S2-12.
 For beam layouts, see Framing Plan Sheets. All reinforcing shall be Grade 60 and epoxy coated.
 Bar laps, where required shall be as follows:
 #4 = 2'-1"
 #5 = 2'-7"

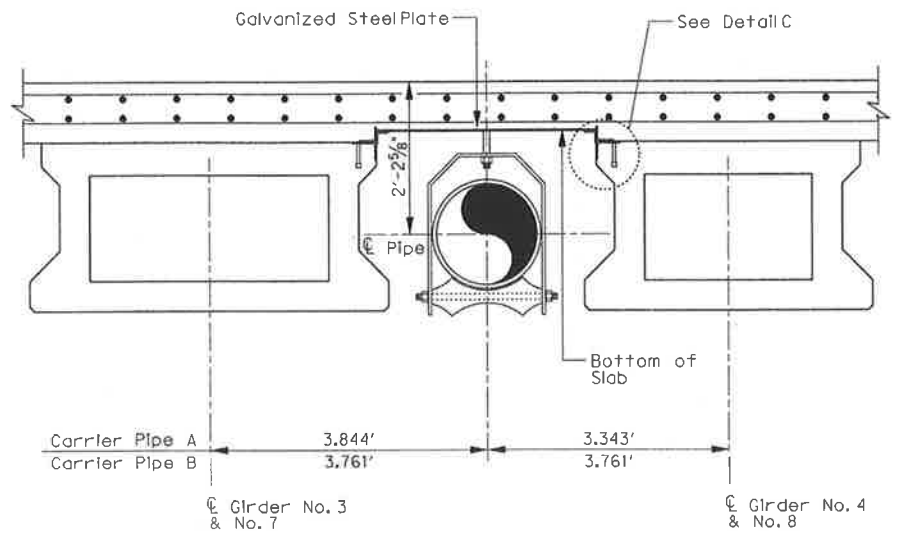
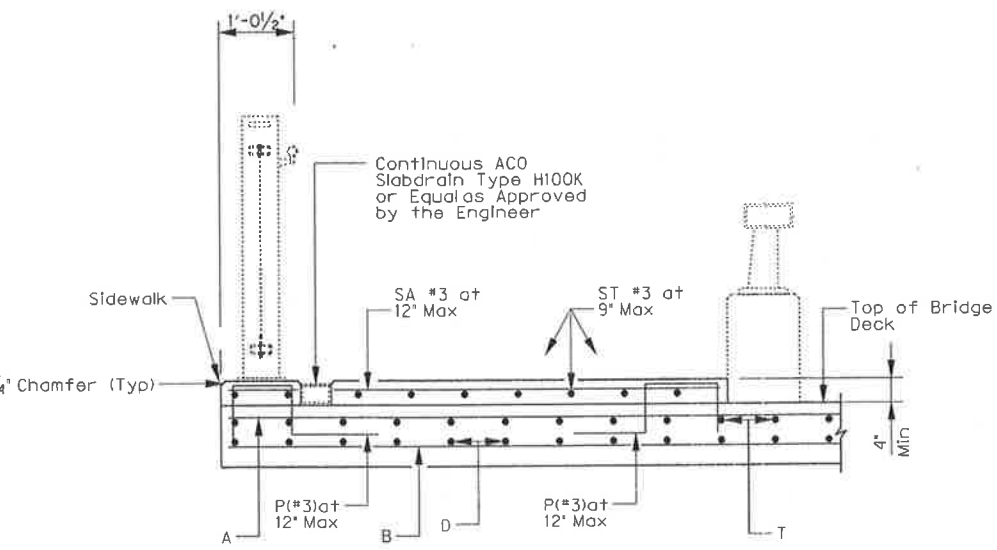
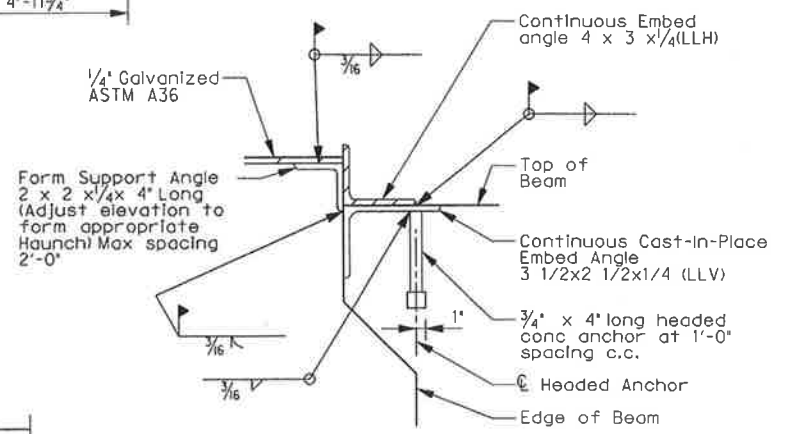
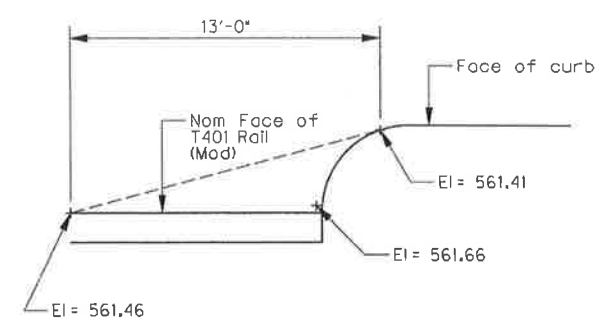
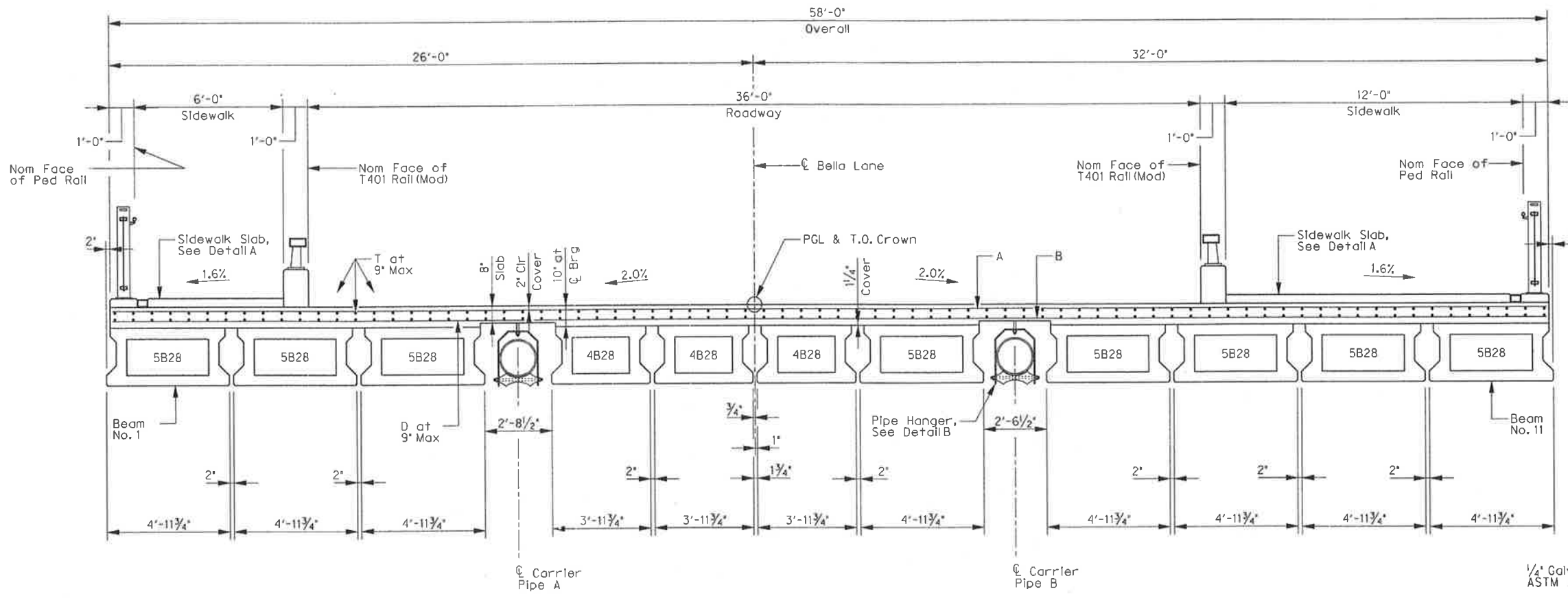
① Where Slab is Continuous at Bents, Bars T and D shall Extend Through Joint.



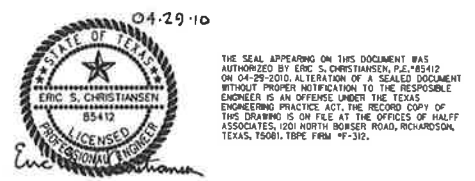
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NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES BELLA LANE			
141' PRE STR CONC BOX BEAM UNIT			
HALFF			
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 346-8200 FAX (214) 736-0095			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S2-11		

USER: ah2441
 OFFICE: RCH
 PROJECT #: 27379
 FILE: 27379-SC-BELLABEL-DD02.dgn
 TIME: 12:34:05 PM
 DATE: 4/29/2010

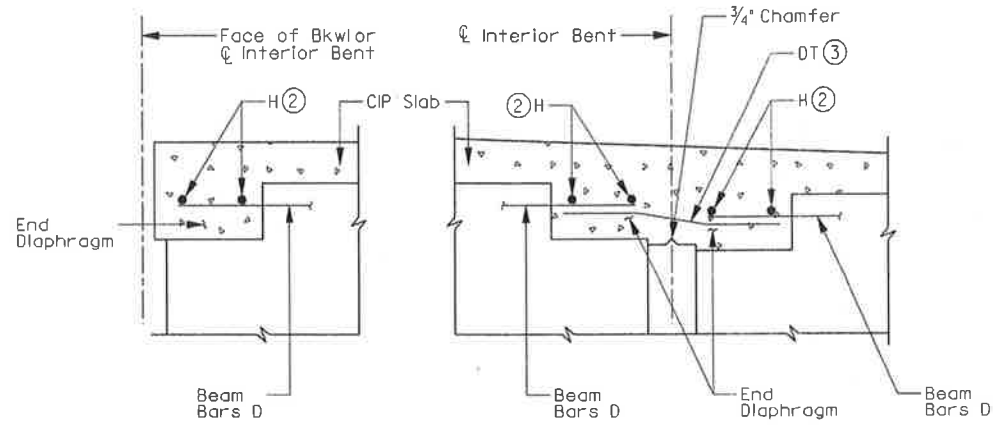


Notes: For information not shown see Pipe Hanger Assembly Typical Section/S2-14
 Steel Carrier Pipe shall be 18" diameter schedule 40 pipe.



NO.	REVISION	BY	DATE
ADDISON TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES BELLA LANE DECK DETAILS			
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-8200 FAX (214) 730-0095			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S2-12		

SPAN NO.	REINF CONCRETE SLAB	PRSTR CONCRETE BEAM (4B28)	PRSTR CONCRETE BEAM (5B28)	CLASS S CONCRETE (SLAB)	CLASS (9) S CONCRETE (SOWLK)	REINF STEEL
	SF	LF	LF	CY	CY	LB
1	1,786	91.96	235.45	47.3	18.0	11,609
2	4,111	211.14	563.04	105.6	17.5	26,720
3	2,281	115.40	317.51	59.7	20.1	14,828
TOTAL	8,178	418.50	1,116.00	212.7	55.5	53,157

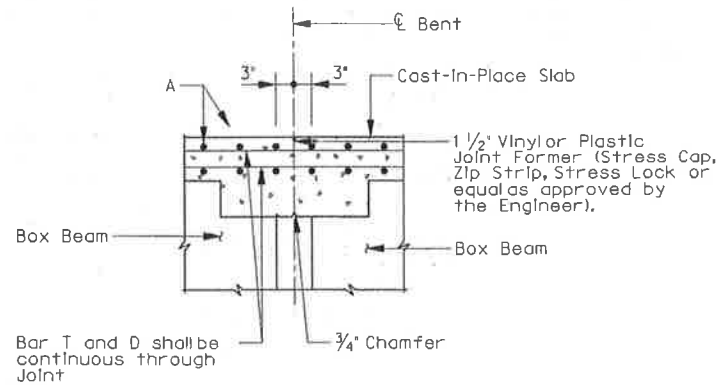


ABUTMENT OR INTERIOR BENT

INTERIOR BENT (Without Expansion Joint)

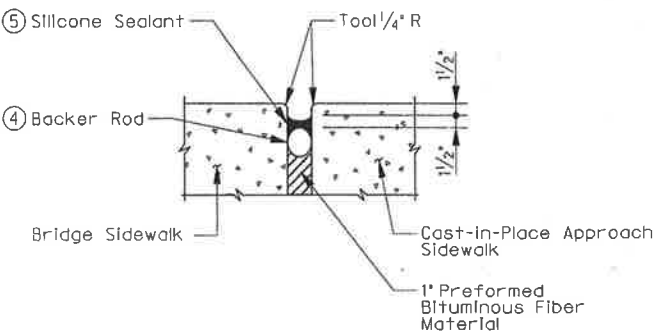
TYPICAL END DIAPHRAGM SECTIONS

SCALE: NTS (Along centerline of Box Beam) (Slab reinforcing not shown for clarity)



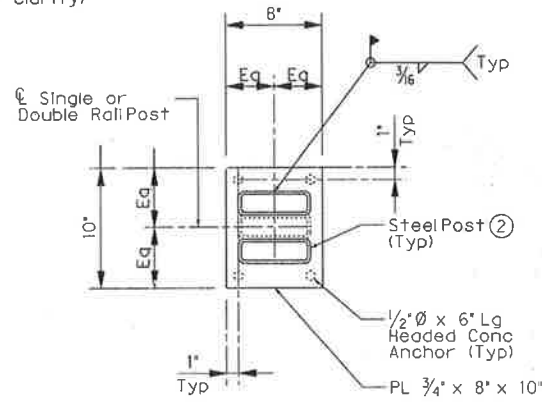
CONTINUOUS SLAB DETAIL

SCALE: NTS (Diaphragm reinforcing not shown for clarity)



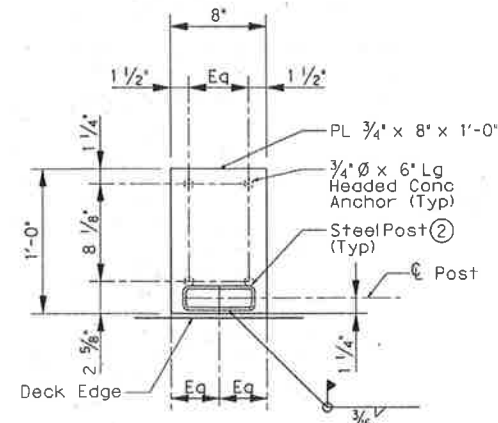
CONTINUOUS SLAB DETAIL

SCALE: NTS



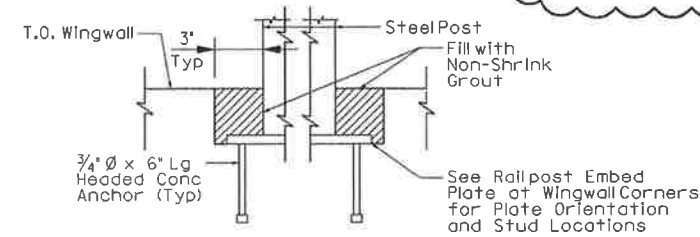
TYPICAL RAIL POST EMBED PLATE DETAIL

SCALE: 1/4" = 1'-0"



RAIL POST EMBED PLATE AT BRIDGE SEJ DETAIL

SCALE: 1/4" = 1'-0"



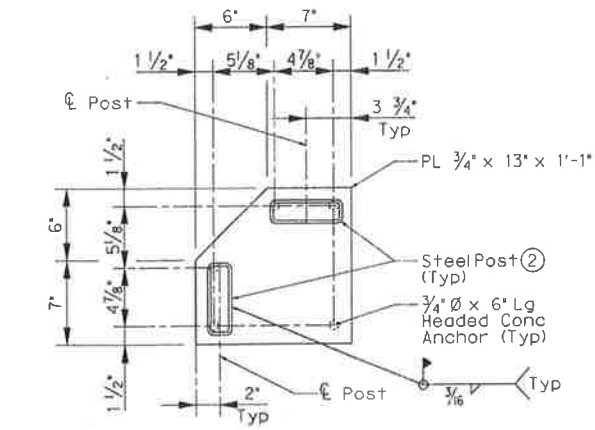
RAIL POST EMBED PLATE AT WINGWALL CORNERS SECTION

SCALE: 1/4" = 1'-0"



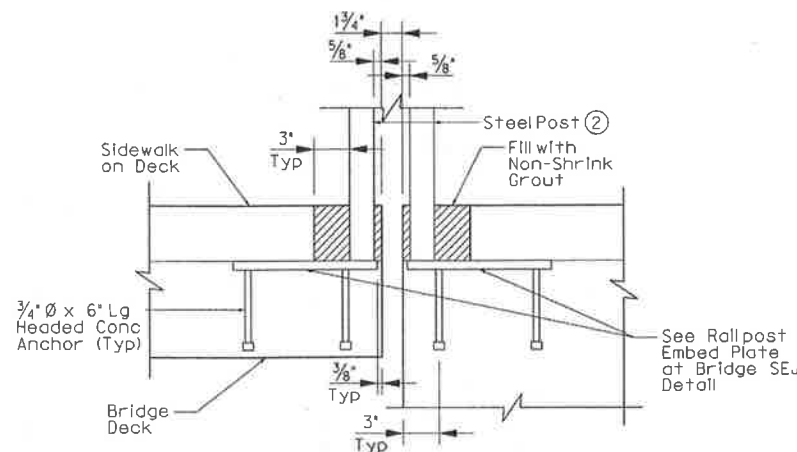
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Bar	Size
A	#5
B	#5
D	#5
DT	#5
H	#5
SA	#3
ST	#3
T	#4



RAIL POST EMBED PLATE AT WINGWALL CORNERS DETAIL

SCALE: 1/4" = 1'-0"



RAIL POST EMBED PLATE AT BRIDGE SEJ SECTION

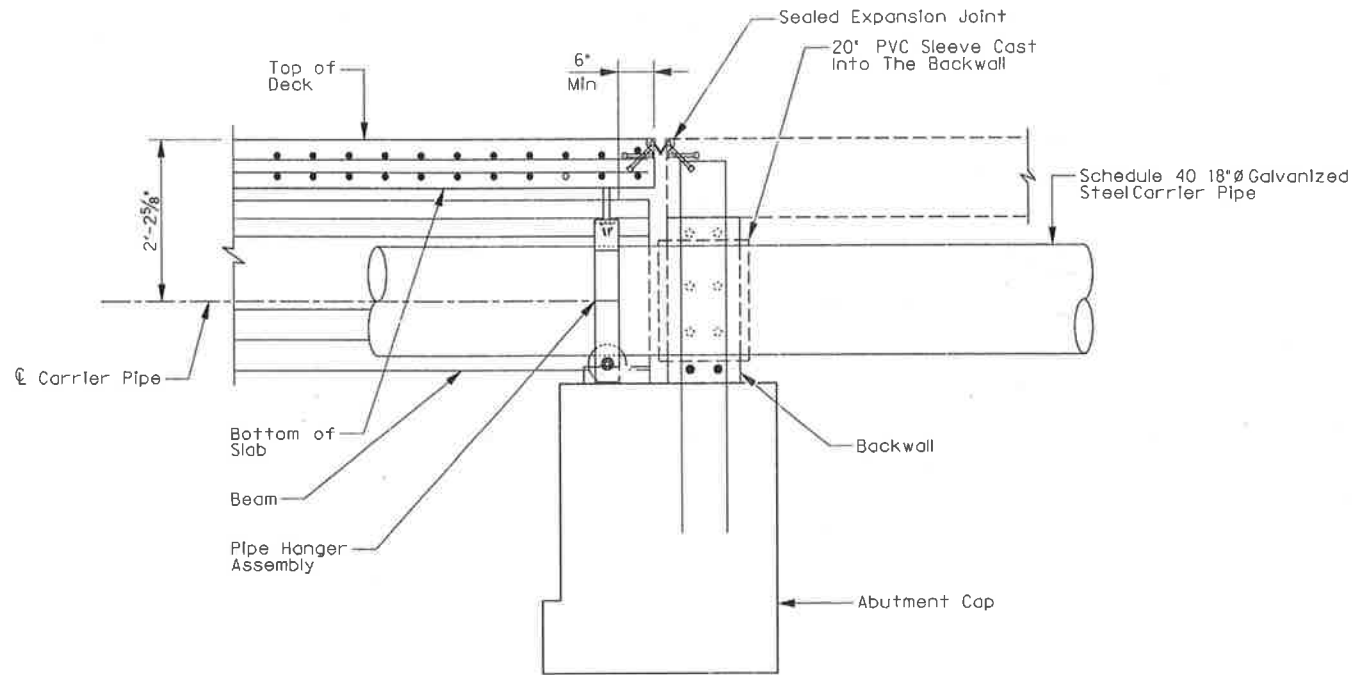
SCALE: 1/4" = 1'-0"

TABLE OF SECTION DEPTHS - UNIT 1

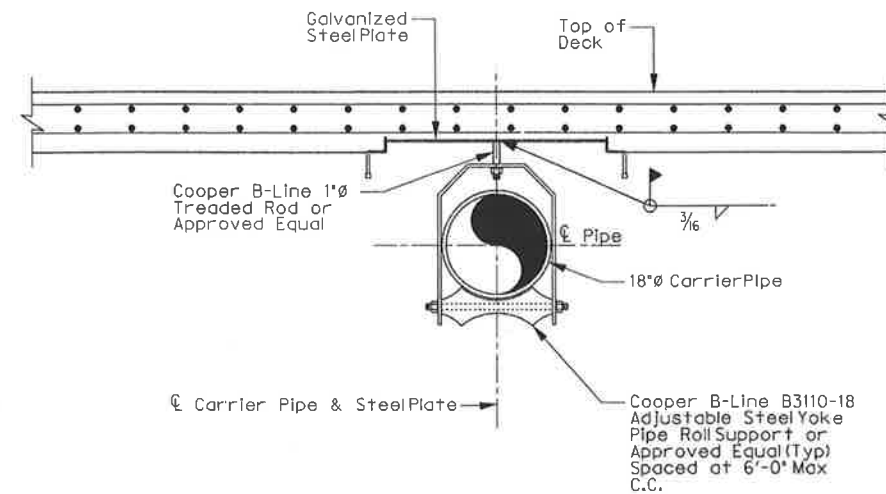
SPAN NO.	BEAM NO.	*X' AT C.L. BRG	*Y' AT C.L. BRG	(B) *Z' AT C.L. SPAN
1	1, 10 & 11	9 1/2"	3'-1 1/2"	9 1/2"
	2-9	9 1/2"	3'-1 1/2"	9 1/4"
2	1, 10 & 11	11"	3'-3"	9 3/4"
	2-9	11"	3'-3"	9 1/2"
3	ALL	9 1/2"	3'-1 1/2"	9 1/4"

- 1 See Bridge Layout for Joint type.
- 2 Provide 1 1/2" end cover to Bars H. After all beams have been placed, weld one Bar H to two Bars D at each end of all beams.
- 3 Lap Bars DT 9" Min with each Beam Bar D at Interior Bents without Expansion Joints. Bars DT shown bent for clarity only.
- 4 Backer Rod shall be 25% larger than joint opening and shall be compatible with the sealant; no reaction shall occur between the rod and the sealant.
- 5 Sealant shall be Class 7 silicone sealant. Install when ambient temperature is between 55°F and 85°F and rising. Engineer is to determine allowable hours for sealant application.
- 6 Reinforcing steel weight is calculated using an approximate factor of 6.5 lbs/SF.
- 7 Theoretical Dimension.
- 8 Quantity is for contractor's information only. Quantity includes sidewalk on approach slab.

ADDENDUM #1	NO.	REVISION	ESC	5/14/10
		BY		DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS				
VITRUVIAN PARK BRIDGES BELLA LANE				
DECK DETAILS				
HALFF				
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 346-6200 FAX (214) 738-0096				
PROJECT	DESIGN	DRAWN	DATE	SHEET
27379	ESC	AHH	APRIL 2010	S2-13

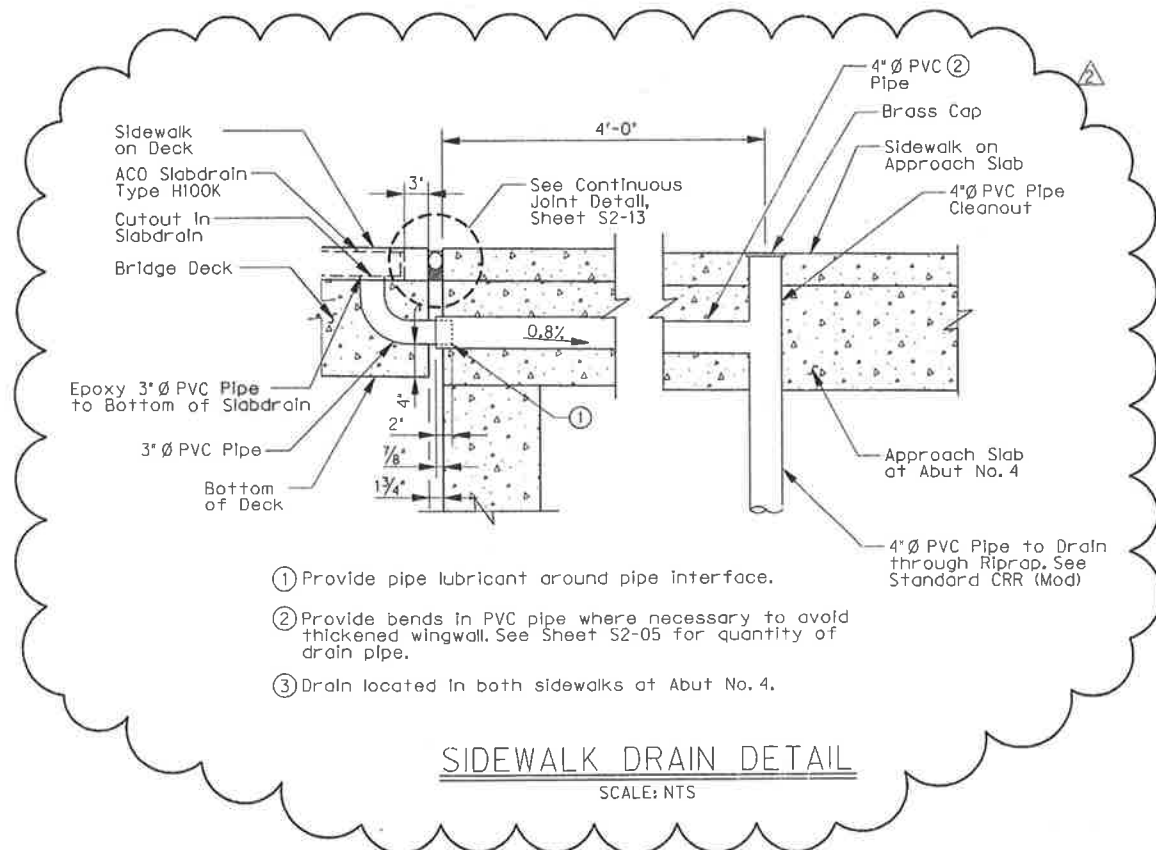


PIPE HANGER ASSEMBLY TYPICAL SECTION
SCALE: 3/4" = 1'-0"



Notes:
For information not shown see Details B/S2-10
Pipe supports are subsidiary to steel pipe
item 442, misc. steel

PIPE HANGER ASSEMBLY TYPICAL SECTION
SCALE: 3/4" = 1'-0"
(Girders not shown for clarity.)



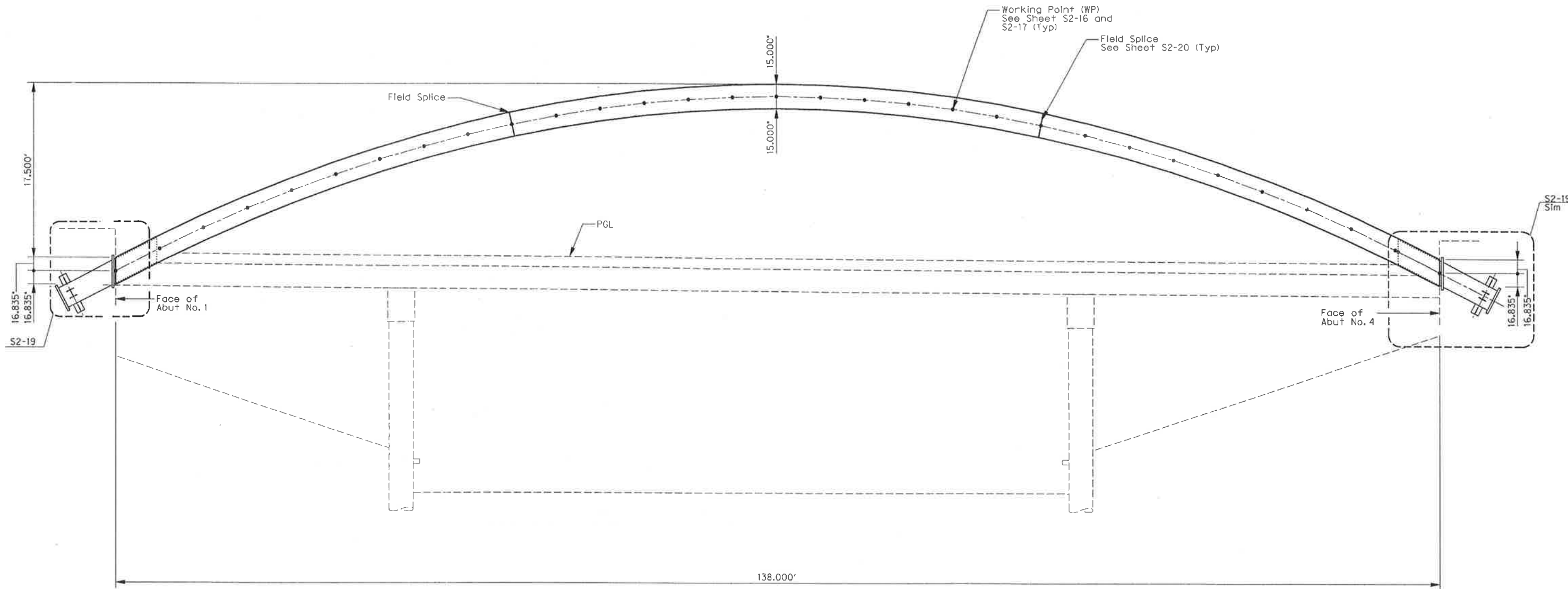
- ① Provide pipe lubricant around pipe interface.
- ② Provide bends in PVC pipe where necessary to avoid thickened wingwall. See Sheet S2-05 for quantity of drain pipe.
- ③ Drain located in both sidewalks at Abut. No. 4.

SIDEWALK DRAIN DETAIL
SCALE: NTS



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Addendum #2		ESC	05/19/10
NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES BELLA LANE			
WATERLINE SUPPORT DETAILS			
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 346-9200 FAX (214) 738-0068			
PROJECT	DESIGN	DRAWN	DATE
27379	888	AHH	APRIL 2010
FILE	SHEET		
	S2-14		



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ELEVATION
SCALE: 1/16" = 1'-0"

ESTIMATED QUANTITIES

Item	Unit	Quantity
Two Steel Archs	LB	101,900
Four Embed Anchors	LB	27,250
Total	LB	129,150

Note:
Slide bearings are subsidiary to embed anchors.

NO.	REVISION	BY	DATE

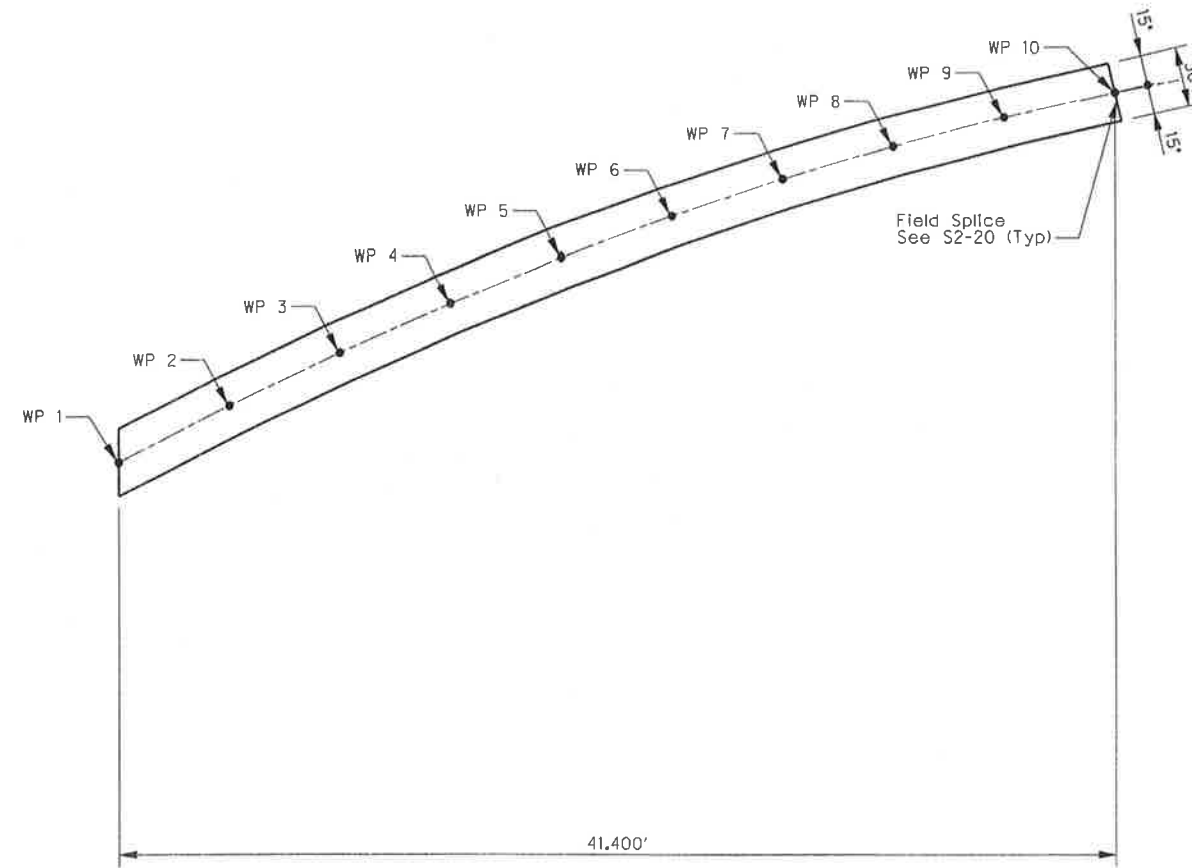
Addison TOWN OF ADDISON
DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES
BELLA LANE

ARCH ELEVATION

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 348-6200 FAX (214) 739-0065

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S2-15



ELEVATION
SCALE: 1/4" = 1'-0"

Working Point (WP)	Coordinate	
	X (ft)	Y (ft)
1	0.000	0.000
2	4.600	2.344
3	9.200	4.527
4	13.800	6.547
5	18.400	8.406
6	23.000	10.104
7	27.600	11.640
8	32.200	13.014
9	36.800	14.226
10	41.400	15.277
11	46.000	16.166
12	50.600	16.894
13	55.200	17.460
14	59.800	17.864
15	64.400	18.106
16	69.000	18.187
17	73.600	18.106
18	78.200	17.864
19	82.800	17.460
20	87.400	16.894
21	92.000	16.166
22	96.600	15.277
23	101.200	14.226
24	105.800	13.014
25	110.400	11.640
26	115.000	10.104
27	119.600	8.406
28	124.200	6.547
29	128.800	4.527
30	133.400	2.344
31	138.000	0.000

Note:
Geometry Shown Is That Required For Fabrication And Does Not Represent Changes In Shape Due To Loading.



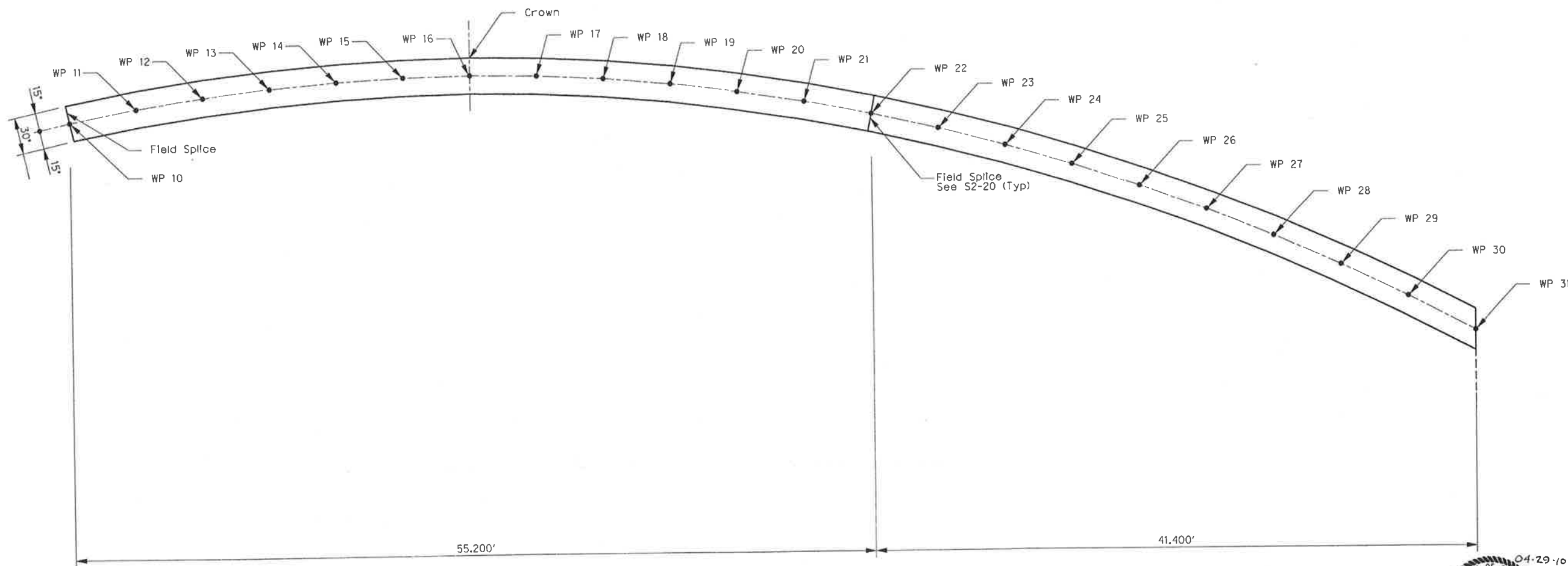
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Fabrication Notes:
 All Structural Steel Shall Conform To The Requirements Of ASTM A36, Unless Noted Otherwise.
 All Steel Shall Be Painted.
 Field Splices Shall Be Made By Full Penetration Groove Welds In Accordance With Item 441, "Steel Structures". Bolted Field Splices Are Not Permitted.
 See S2-20 For Field Splice Details.
 Arch Curve To Be Fabricated Flat Based On Working Points.
 Arch Sections Between WP1 And WP2, And Between WP30 And WP31 Shall Be Linear.

NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES BELLA LANE			
ARCH RIB PROFILE			
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-6200 FAX (214) 738-0066			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S2-16		

See Sheet S2-16 For Working Point Coordinates.

USER: dh2441
 PROJECT = 27379 OFFICE: RCH
 FILE: 27379-SC-BELLABL-AE03.dgn
 TIME: 9:08:22 AM
 DATE: 4/29/2010



ELEVATION
 SCALE: 1/4" = 1'-0"



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NO.	REVISION	BY	DATE

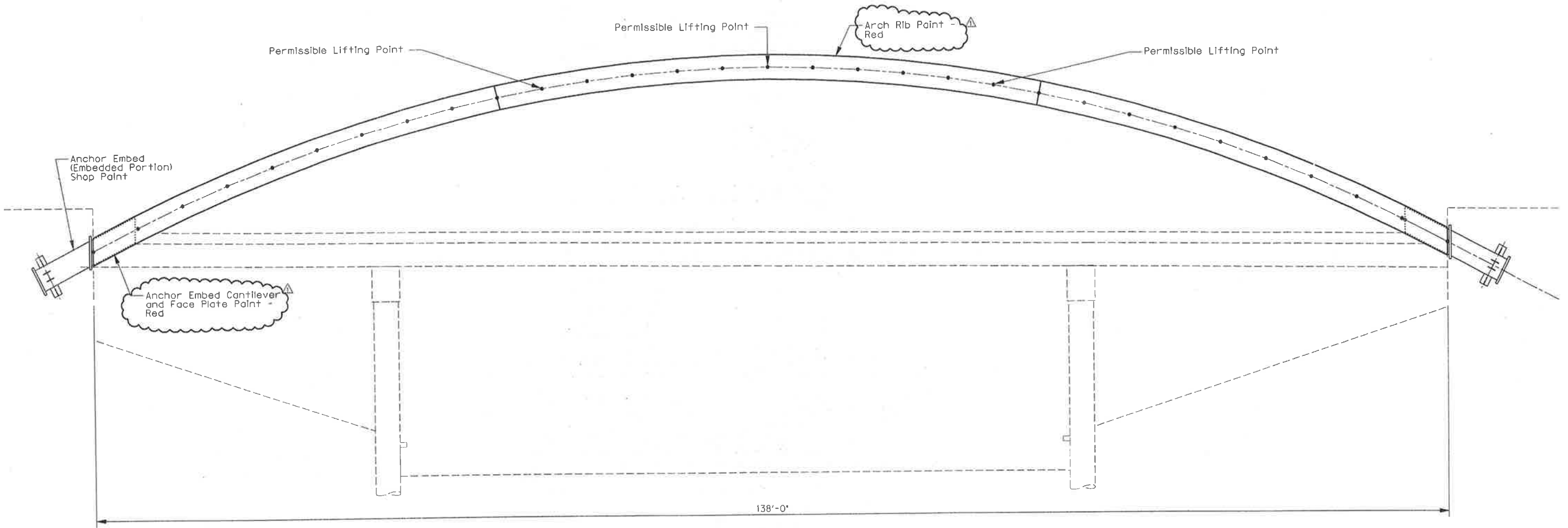
ADDISON TOWN OF ADDISON
 DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES
 BELLA LANE

ARCH RIB PROFILE

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276
 TEL (214) 348-6200 FAX (214) 738-0065

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S2-17



ELEVATION
SCALE: 3/16" = 1'-0"

Painting Notes:

Cleaning and painting shall be in accordance with Item 446, "Cleaning and Painting Steel" and Manufacturer's Instructions.
Materials manufactured by the following manufacturers are acceptable:
Carboline
Coronado
Porter
Sherwin-Williams
Tnemec

Acceptable Materials:

Primer: Organic Zinc-rich primer. Provide factory formulated prime coat material compatible with the substrate and finish coats indicated. Primer shall be a two or three component polyamide epoxy zinc-rich coating. Primers shall contain no lead.

- Carboline: No. 858
- Coronado: Polyamide Epoxy Zinc Rich Primer, 101-152
- Porter: Zinc-Lock No. 308
- Sherwin-Williams: Zinc Clad IV
- Tnemec: 90-97

Intermediate Coat: High build epoxy. Provide factory formulated polyamide epoxy intermediate coat compatible with prime coat and topcoat indicated.

- Carboline: No. 893
- Coronado: Polyamide Epoxy 111-111
- Porter: "M.C.R. High Build Epoxy" No. 4500
- Sherwin-Williams: "Recoatable Epoxy Primer," B67 Series
- Tnemec: Series 66 "Hi-Build Epoxaline"

Topcoat: Polyurethane. Provide factory formulated polyurethane. Material shall be compatible with the intermediate coat indicated. Sheen shall be gloss.

- Carboline: 134 HS
- Coronado: Superthane, 827 Series
- Porter: "Hythane Super" No. 8600
- Sherwin-Williams: "High Solids Polyurethane," B65 Series
- Tnemec: Series 75, "Endura-Shield" High Build Polyurethane

Color of Topcoat:

- Red: R 117
- G 52
- B 65

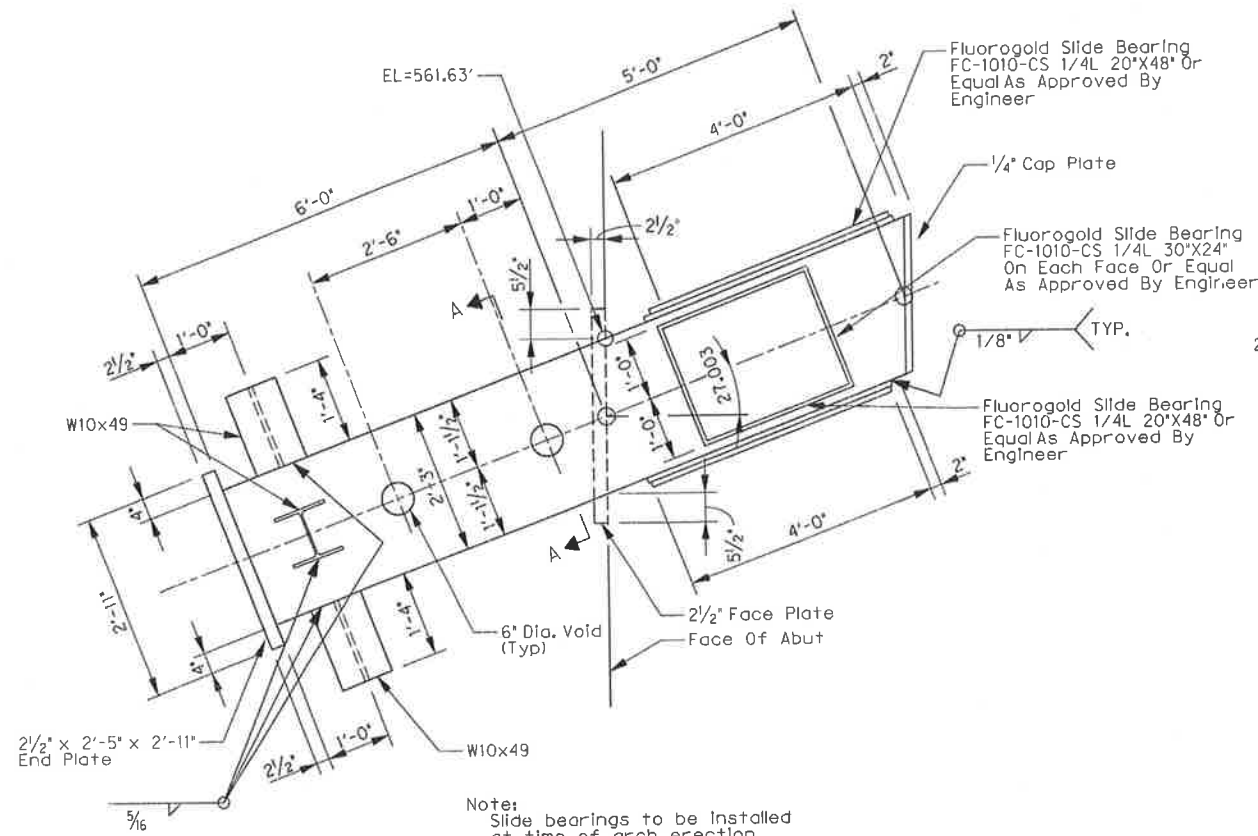
Erection Notes:

Field splices shall be made with arch flat, prior to lifting arch.
Field splices shall be made by full penetration groove welds in accordance with Item 441, "Steel Structures." Nondestructive Examination (NDE) shall be performed as specified in AWS D1.5.
Arch shall be lifted using a spreader bar and shall be lifted, at a minimum, from the points shown to allow for adequate clear distance from the face of the abutment. The Contractor may adjust the location of the lifting points as approved by the Engineer.
Contractor shall submit an erection and bracing plan signed and sealed by a Licensed Professional Engineer in the State of Texas for the Engineer's approval prior to erection.
Lifting points shall not be located at field splices.
Arch shall be fully braced until bottom plates of arch rib have been installed. The Contractor may modify the method of erection as approved by the Engineer.
Touch up any damaged paint in accordance with Item 446, "Cleaning and Painting Steel" and paint manufacturer's recommendations.

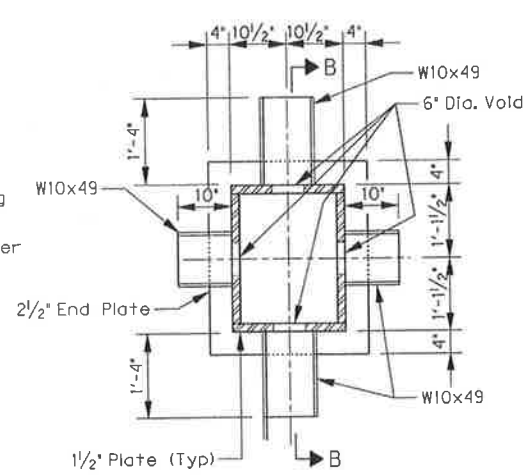


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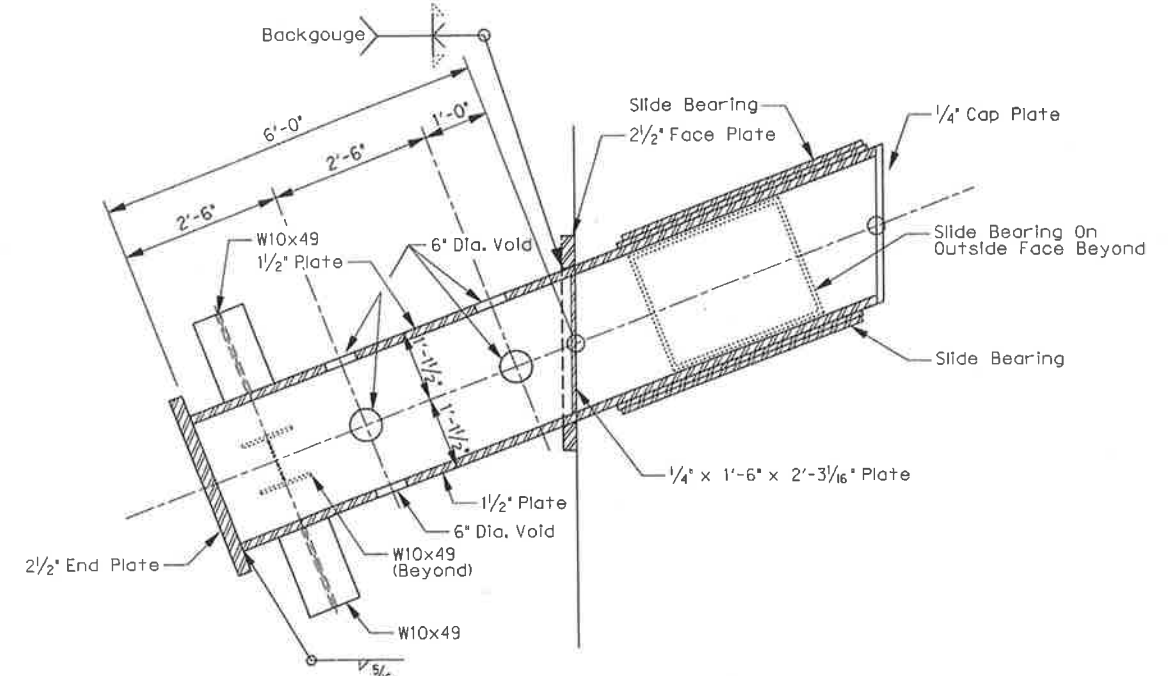
ADDENDUM #1		ESC	5/14/10
NO.	REVISION	BY	DATE
 TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES BELLA LANE			
ARCH ERECTION & PAINTING PLAN			
		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 346-6200 FAX (214) 736-0065	
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S2-18		



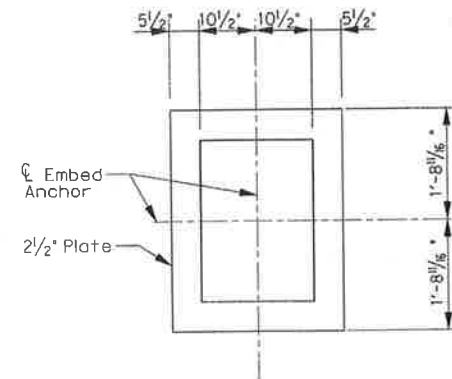
EMBED ANCHOR ELEVATION
SCALE: 3/4" = 1'-0"



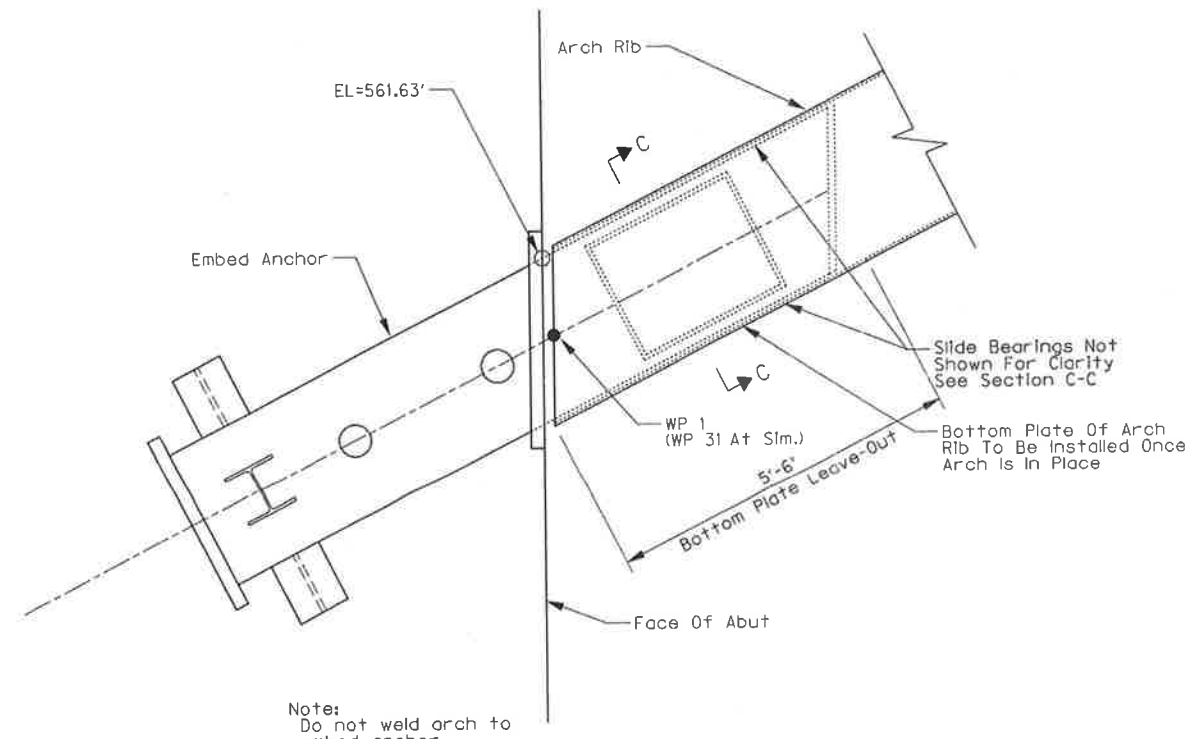
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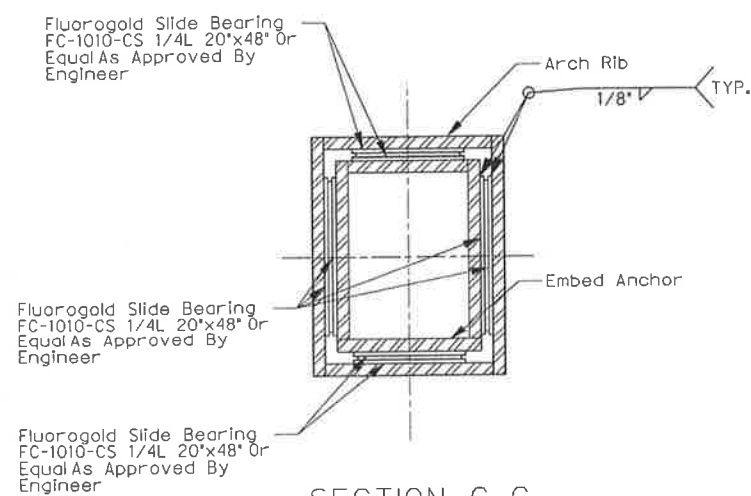
SECTION B-B
SCALE: 3/4" = 1'-0"



FACE PLATE
SCALE: N.T.S.



ARCH / EMBED ANCHOR CONNECTION
SCALE: 3/4" = 1'-0"



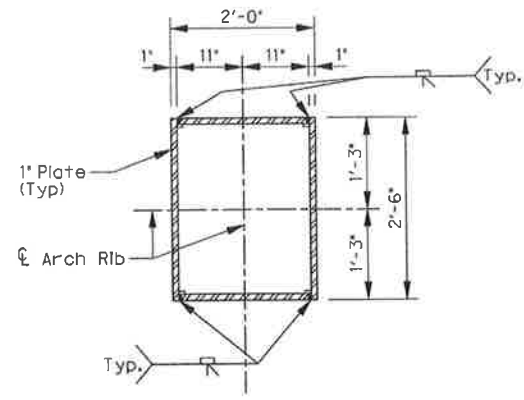
SECTION C-C
SCALE: N.T.S.



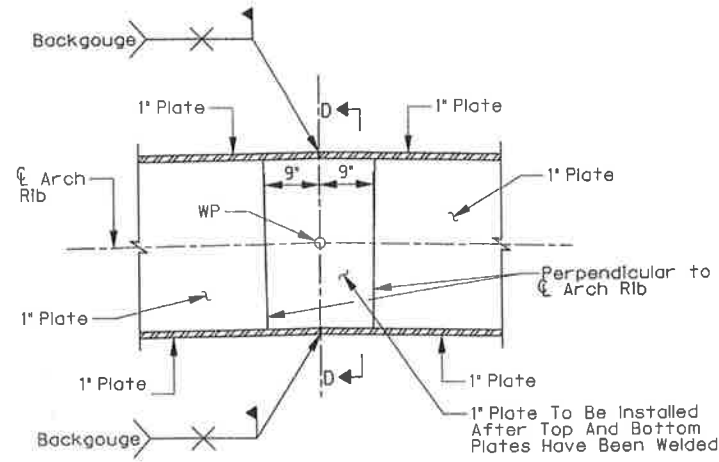
04-29-10

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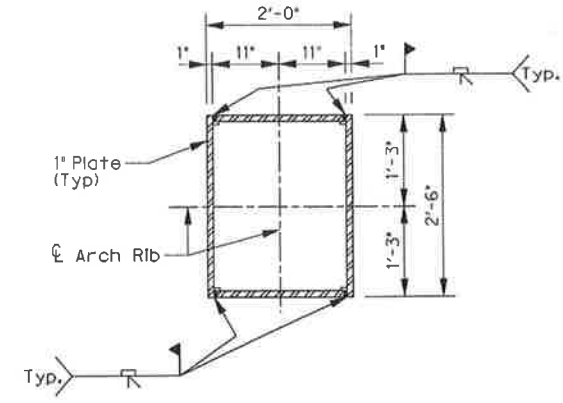
NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES BELLA LANE			
EMBED DETAILS			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S2-19		



SECTION THROUGH ARCH RIB
SCALE: 3/4" = 1'-0"



FIELD SPLICE
SCALE: 3/4" = 1'-0"

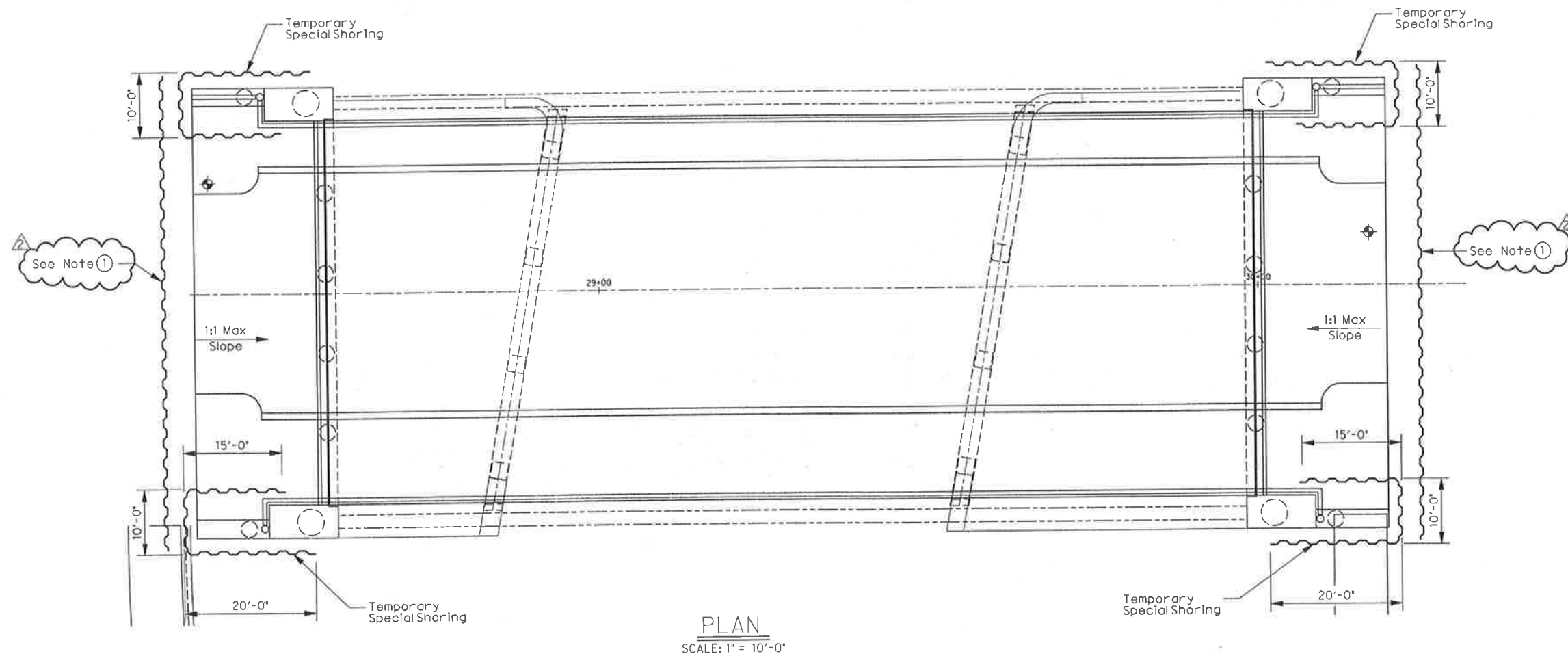


SECTION D-D
SCALE: 3/4" = 1'-0"

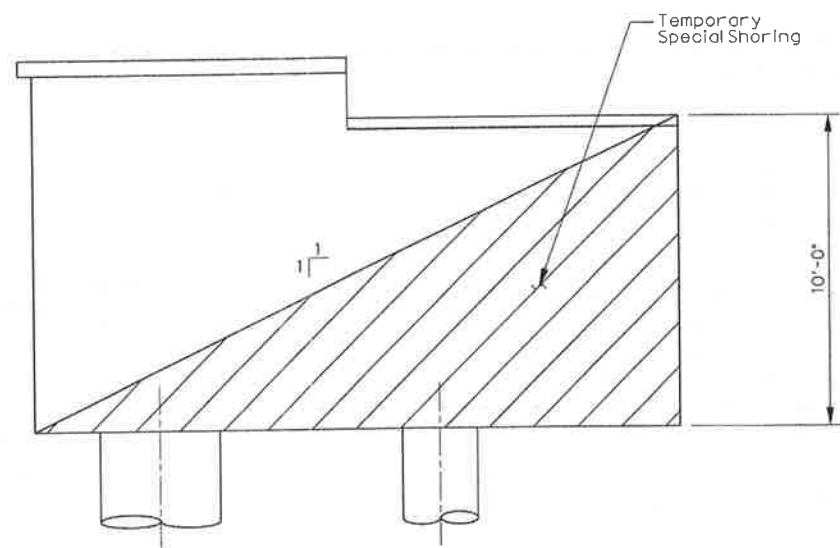


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NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES BELLA LANE			
ARCH DETAILS			
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-8200 FAX (214) 739-0095			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S2-20		



PLAN
SCALE: 1" = 10'-0"



LIMITS OF TEMPORARY SPECIAL SHORING
SCALE: NTS

① Temporary Special Shoring to be provided at the ends of the Approach Slabs.

Note: Dimensions shown are for quantity calculations only. Actual dimensions may vary.



NO.	REVISION	BY	DATE
1	Addendum #2	ESC	05/19/10

ADDISON TOWN OF ADDISON
DALLAS COUNTY, TEXAS

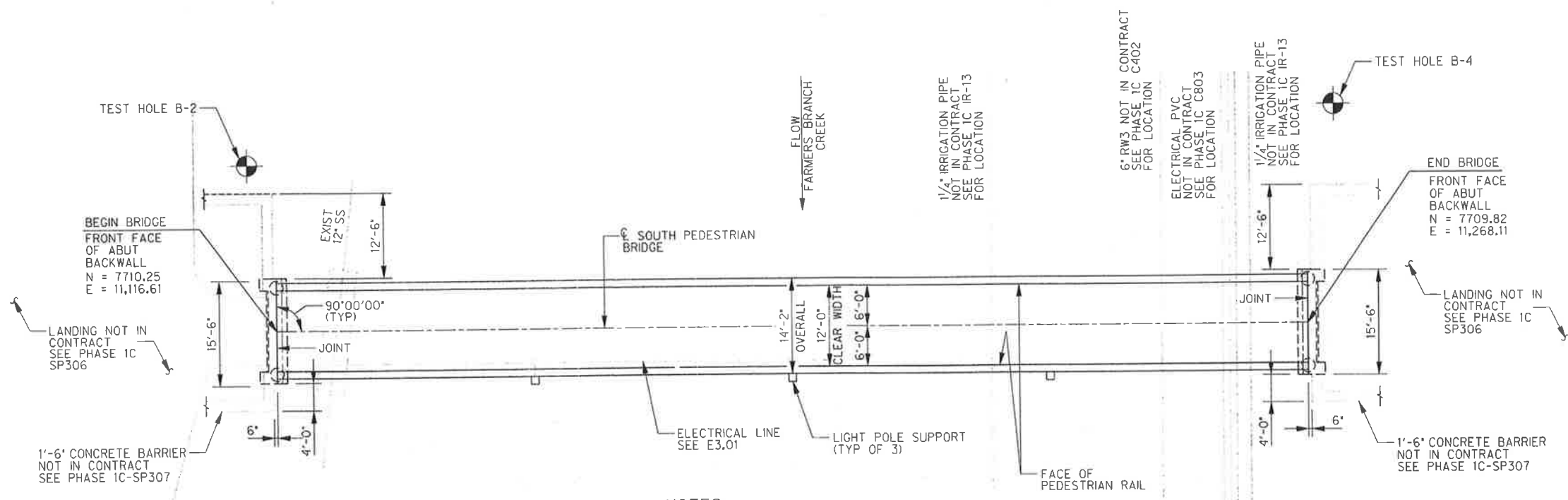
VITRUVIAN PARK BRIDGES
BELLA LANE

BRIDGE LAYOUT
TEMPORARY SPECIAL SHORING

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75061-2276
TEL (214) 346-6200 FAX (214) 736-0066

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S2-21

USER: ch2454
 OFFICE: RCH
 PROJECT # 27379
 FILE: 27379-SC-PEDSOU-BL01.dgn
 TIME: 10:57:04 PM
 DATE: 4/28/2010



NOTES:
 1. OVERALL BRIDGE DIMENSION SUBJECT TO CHANGE. DIMENSION BASED ON PREFABRICATED BRIDGE DESIGN.

PLAN
 SCALE: 1" = 10'-0"

- DESIGN NOTES:**
- BRIDGE DESIGNED FOR PEDESTRIAN LOADING ONLY. LL = 85 PSF
 - TEST HOLE DATA PROVIDED BY GEOTEL ENGINEERING, INC. REPORT No. E08-130 DATED MARCH 6, 2008. TEST HOLE LOCATIONS ARE APPROXIMATE.
 - CONTRACTOR SHALL LOCATE ALL UTILITIES AND INFORM THE ENGINEER IN WRITING OF ANY CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
 - DESIGN LOADS (ESTIMATES FROM BRIDGE MANUFACTURER): HORIZONTAL ABUTMENT REACTION = 21.53K VERTICAL ABUTMENT REACTION = 98.06K
 - CONTRACTOR TO VERIFY ABUTMENT BACKWALL TO ABUTMENT BACKWALL LENGTH WITH BRIDGE MANUFACTURER.
 - MODIFIED LANDING DIMENSIONS SHOWN IN PLAN VIEW. REFER TO PHASE 1C - SP306 FOR OTHER LANDING DIMENSIONS
 - LIGHT POLE SUPPORTS SHALL BE LOCATED ON VERTICAL TRUSS MEMBERS AT APPROXIMATE BRIDGE QUARTER POINTS. TOP OF SUPPORT SHALL BE AT THE SAME ELEVATION AS THE TOP OF DECKING. EXACT LOCATION TO BE CONFIRMED IN SHOP DRAWING.

- FOUNDATION NOTES:**
- ALL DRILLED SHAFTS AT ABUTMENTS ARE DESIGNED FOR COMBINED SKIN FRICTION AND POINT BEARING.
 - FOUND DRILLED SHAFTS AT THE DEPTHS SHOWN OR DEEPER AS NECESSARY TO PENETRATE DARK SHALE A MINIMUM OF 8'-0".

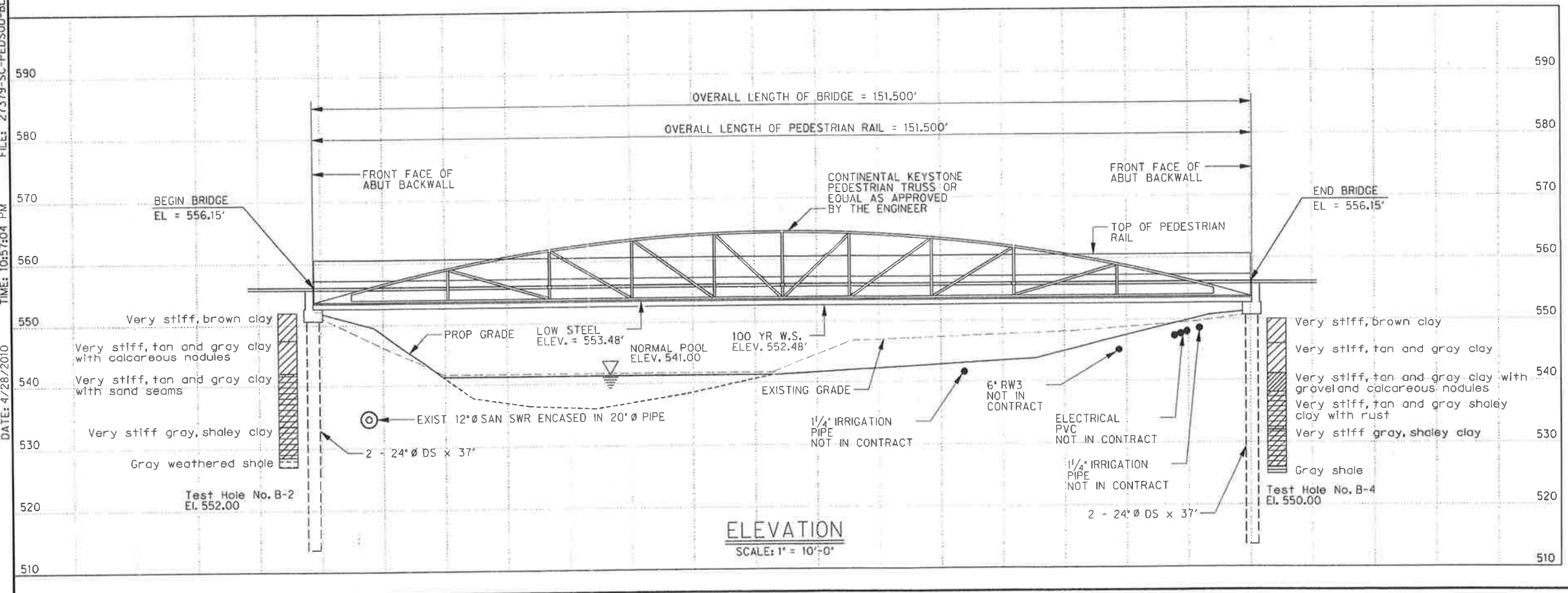
**FARMERS BRANCH CREEK
 HYDRAULIC DATA**

100 YEAR FLOOD (PROPOSED)

Q = 8,944 cfs
 V = 9.11 fps
 HW = 552.48'



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

ELEVATION
 SCALE: 1" = 10'-0"

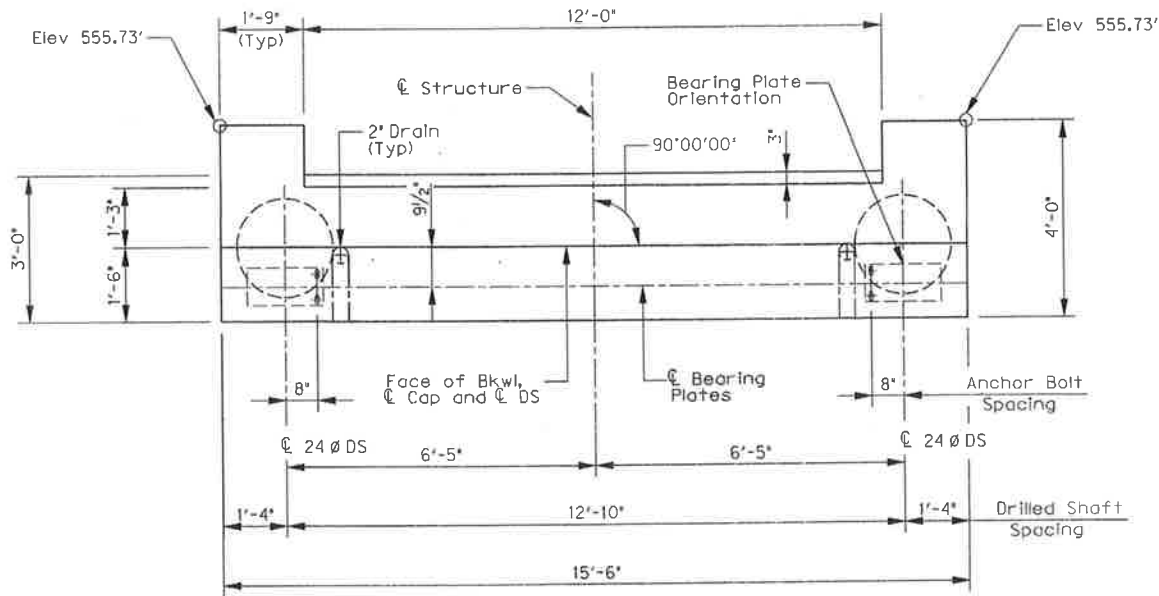
NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES SOUTHERN PEDESTRIAN BRIDGE			
BRIDGE LAYOUT PLAN AND ELEVATION			
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 946-0200 FAX (214) 730-0096			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S3-01		

SUMMARY OF ESTIMATED STRUCTURAL QUANTITIES - SOUTHERN PEDESTRIAN BRIDGE					
BRIDGE ELEMENT	BASE BID ITEM NO.	66	67	68	69
	TxDOT SPEC NO.	416	420	427	
DESCRIPTION	DRILL SHAFT 24" DIA	CL "C" CONC (ABUT)	OPAQUE SEALER FINISH (ABUT)	CONTINENTAL KEYSTONE PEDESTRIAN BRIDGE (OR EQUAL)	
	LF	CY	SF	EA	
2 ~ ABUTMENTS	148	12.4	188.0		
1 ~ PREFABRICATED BRIDGE					1
TOTAL	148	12.4	188.0		1



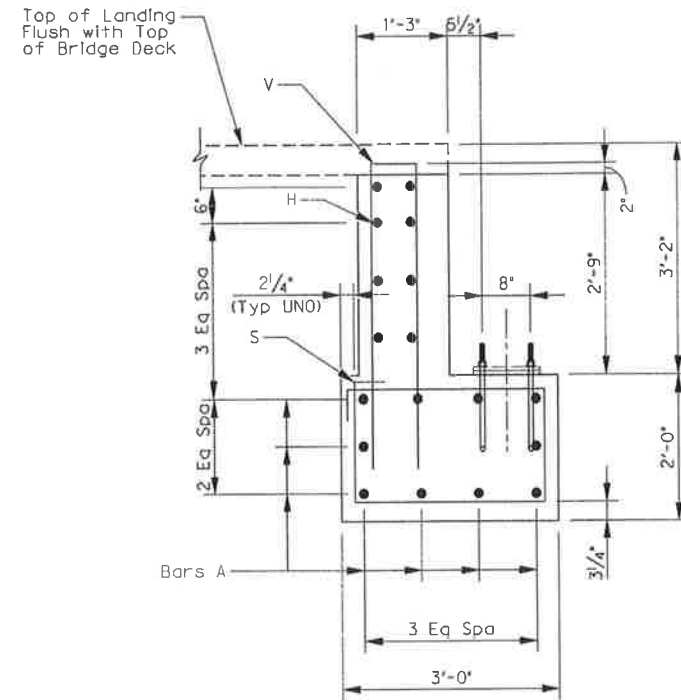
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NO.	REVISION	BY	DATE		
 TOWN OF ADDISON DALLAS COUNTY, TEXAS					
VITRUVIAN PARK BRIDGES SOUTHERN PEDESTRIAN BRIDGE					
ESTIMATED QUANTITIES					
 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-8200 FAX (214) 739-0086					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S3-02

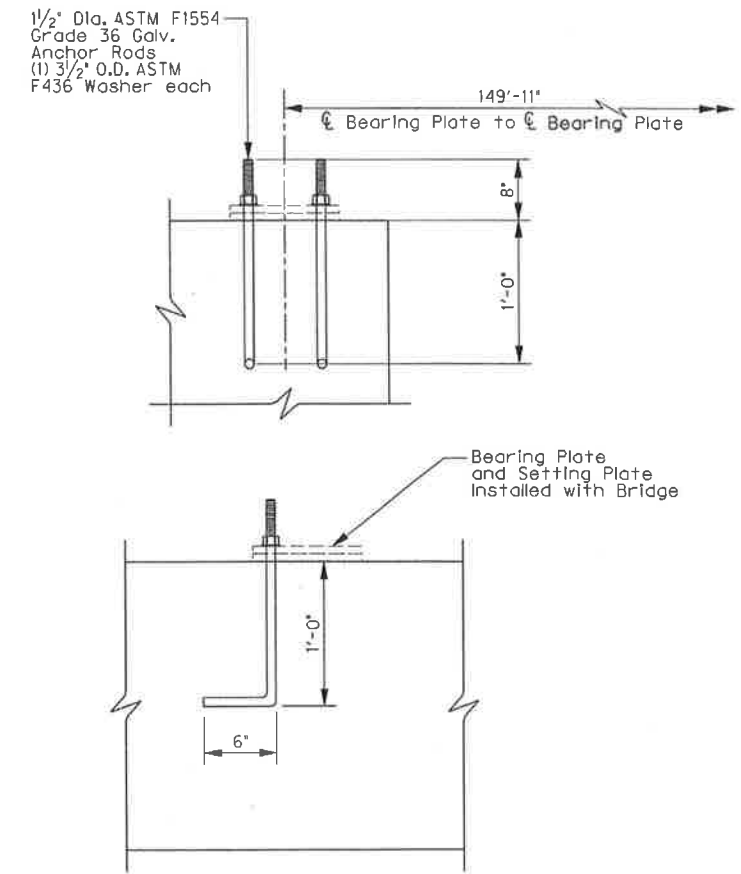


Note: Slope top of Abutment Cap from edges toward 2" Drain Pipes. Provide flat surface under bearing plate location.

PLAN
SCALE: 1/2" = 1'-0"

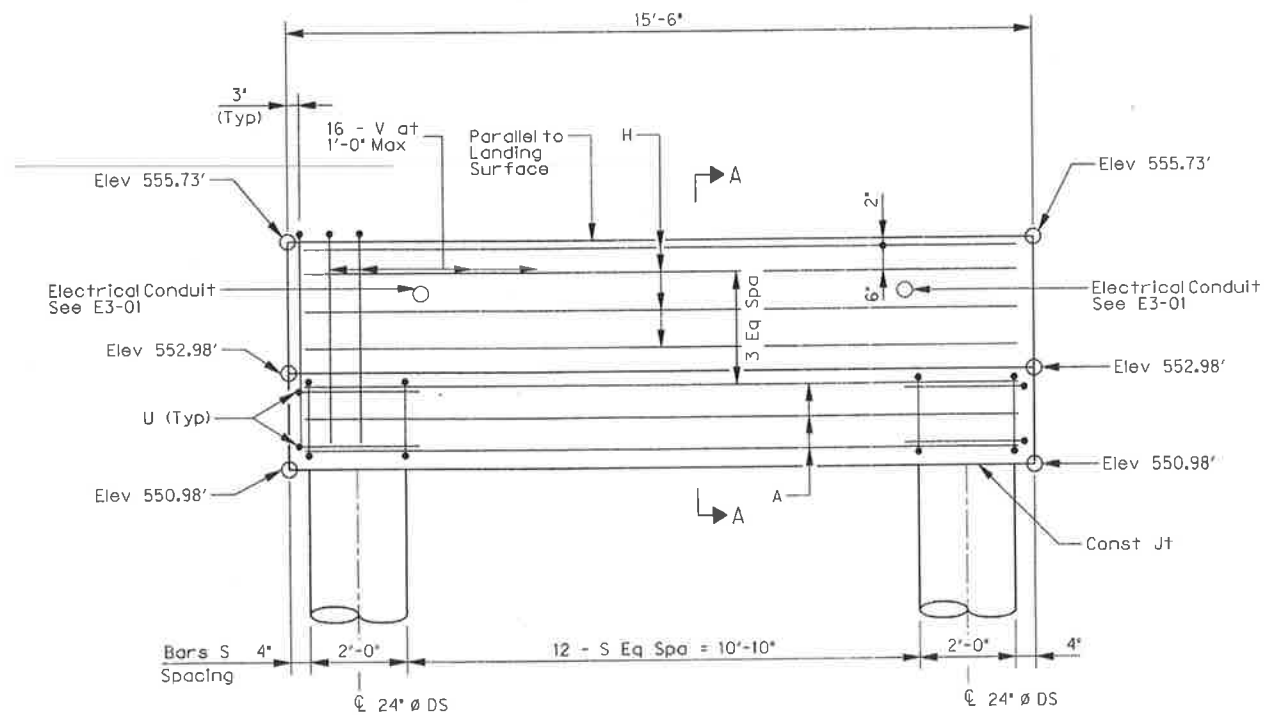


SECTION A-A
SCALE: 3/4" = 1'-0"

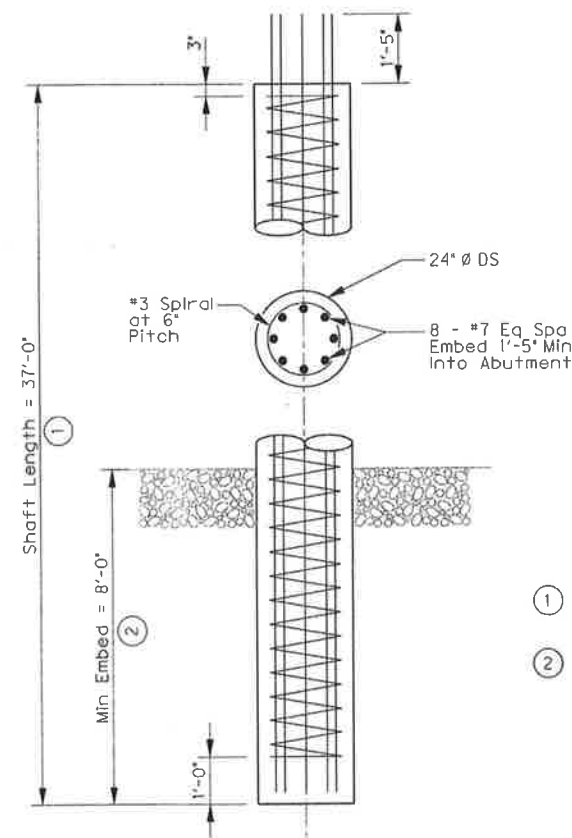


ANCHOR BOLT DETAILS

- NOTES:
1. Abutment dimensions and anchor rod locations are to be coordinated with bridge manufacturer prior to construction. Abutment dimensions shown are per detail provided by CONTECH for Keystone Pedestrian Truss Bridge.
 2. Anchor Rods and Washers to be subsidiary to the concrete Abutment.



ELEVATION
SCALE: 1/2" = 1'-0"



DRILLED SHAFT
SCALE: 3/4" = 1'-0"

- ① Length of Drilled Shafts for Contractor's Information only.
- ② Drill Shafts to the depth shown or deeper, as necessary, to Penetrate Gray Shale to Min Embed.



<p>04-29-10</p> <p>THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ERIC S. CHRISTIANSEN, P.E. #85412 ON 04-29-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PRIOR NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF HALFF ASSOCIATES, 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS, 75081. TDP# FPM 17-312.</p>					
NO.	REVISION	BY	DATE		
<p>ADDISON TOWN OF ADDISON DALLAS COUNTY, TEXAS</p>					
<p>VITRUVIAN PARK BRIDGES SOUTHERN PEDESTRIAN BRIDGE</p>					
<p>ABUTMENT PLAN ELEVATION AND DETAILS</p>					
<p>HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-9200 FAX (214) 738-0086</p>					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	ESC	AHH	APRIL 2010	-	S3-03

BAR SCHEDULE ~ ONE CAP

Bar	Type	No.	Size	Length	Weight
A	St	10	#10	15'-0"	646
H	St	8	#5	15'-2"	127
S	Bt	15	#5	9'-4"	147
V	Bt	16	#5	8'-11 1/2"	150
U	Bt	4	#6	7'-6"	46
wH1	Bt	16	#6	3'-9"	91
wH2	St	12	#6	3'-6"	64
wU	Bt	6	#4	2'-4"	10
wV	St	6	#6	10'-6 1/2"	96
Total Reinforcing Steel					LB 1,377
CIC Conc (Abut)					CY 6.2

ESTIMATED QUANTITIES

Item	Unit	QUANTITY
Drilled Shaft (24 IN)	FT	74
CIC Conc (Abut)	CY	6.2
Reinf Steel	LB	1,377

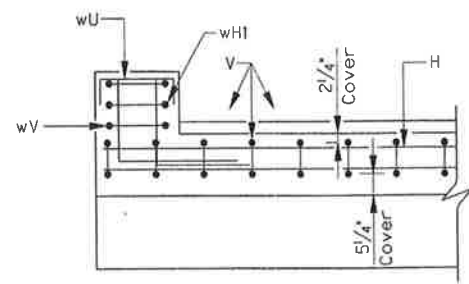
① For Contractor's Information only.

DESIGN NOTES:

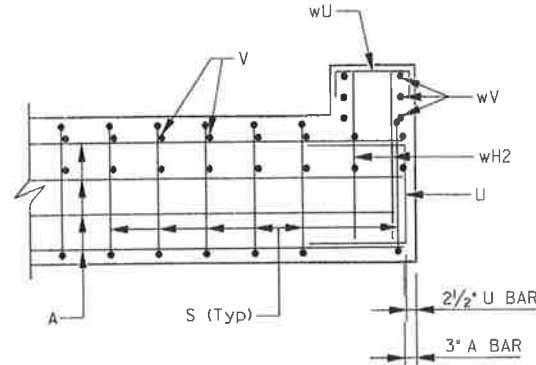
- All concrete excluding the landing shall be Class 'C' with a minimum compressive strength of 3600 PSI and coarse aggregate grade No. 2 - 5.
- All reinforcing steel shall be grade 60.
- Quantities shown are for 1 abutment.
- Splir steel shall have one extra turn at the top, bottom of drilled shafts, and at splices.
- All construction materials and workmanship for abutments shall be in accordance with Texas Department of Transportation 2004 Standard Specifications for Construction of Highways, Streets and Bridges.
- All construction materials & workmanship for the Pedestrian Bridge shall be in accordance with the 'Special Specification for Prefabricated Bridge.'
- Seal exposed surfaces of abutment with Opaque Sealer Finish.

LIGHT POLE SUPPORT NOTES:

- Support to be designed by bridge Manufacturer.
- Supported fixture is a BEGA 9801 MH on a 1108GP Pole Shortened to 9'-0". Total Structure height = 12'-7". Pole EPA = 3 sq ft BEGA 9801 MH EPA = 2.4 sq ft



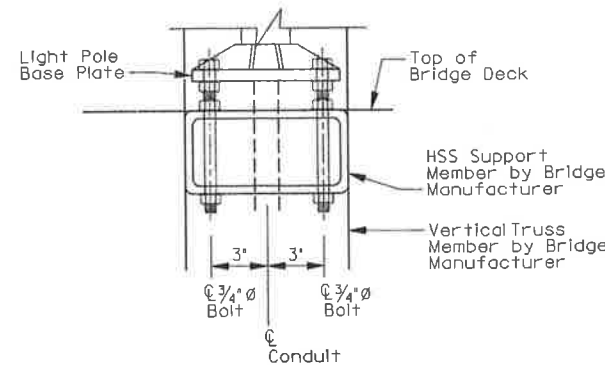
BACKWALL



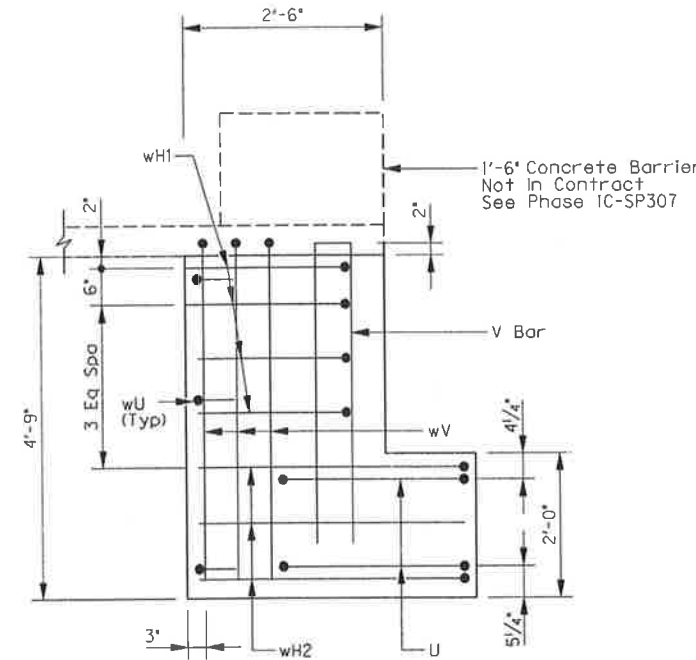
CAP

CORNER DETAILS

SCALE: 1/2" = 1'-0"

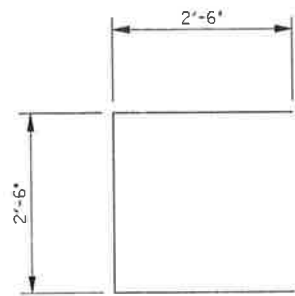


SECTION A-A

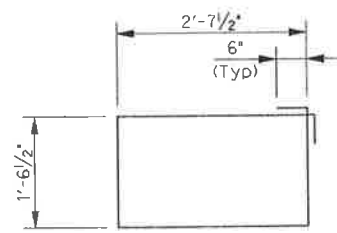


WINGWALL ELEVATION

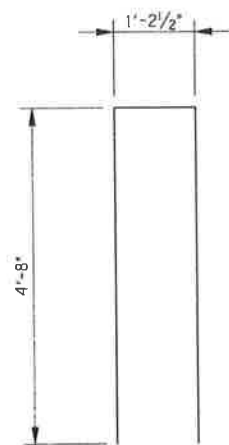
SCALE: 3/4" = 1'-0"



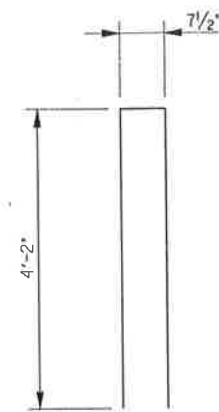
BARS U



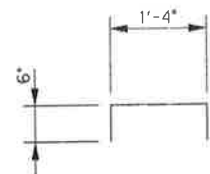
BARS S



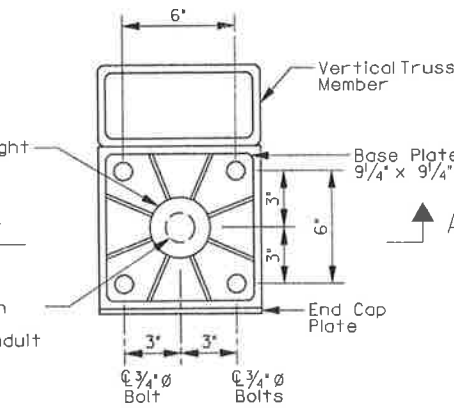
BARS WV



BARS V

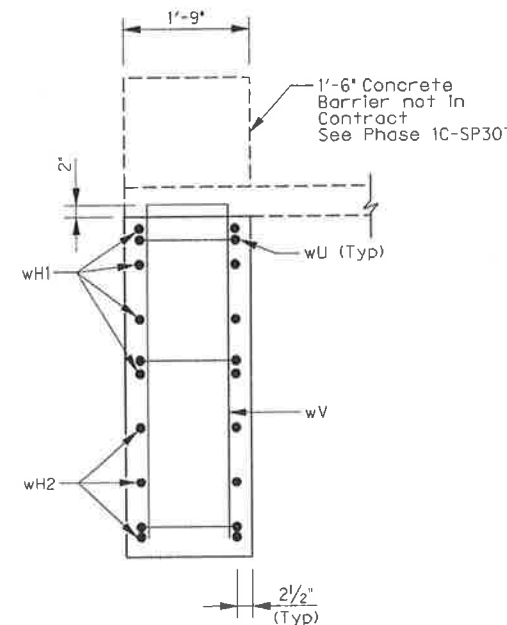


BARS WU



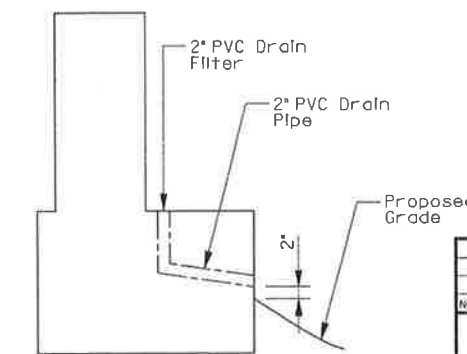
POLE SUPPORT DETAIL

NOT TO SCALE



WINGWALL SECTION

SCALE: 3/4" = 1'-0"



DRAIN DETAIL

NOTE: Slope top of abutment cap from edges toward 2" Drain Pipes.



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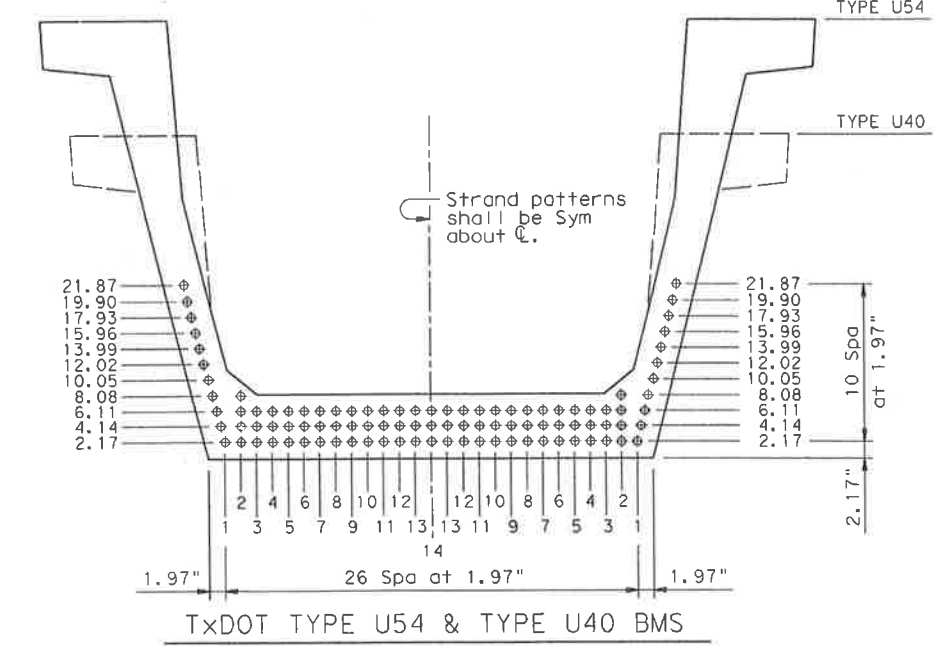
NO.	REVISION	BY	DATE
VITRUVIAN PARK BRIDGES SOUTHERN PEDESTRIAN BRIDGE			
ABUTMENT DETAILS			
<small>1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-8200 FAX (214) 730-0085</small>			
PROJECT	DESIGN	DRAWN	DATE
27379	ESC	AHH	APRIL 2010
FILE	SHEET		
-	S3-04		

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LEVELS DISPLAYED

1

STRUCTURE	DESIGNED BEAMS (STRAIGHT STRANDS)																	OPTIONAL DESIGN																				
	SPAN NO.	BEAM NO.	BEAM TYPE	PRESTRESSING STRANDS							DEBONDED STRAND PATTERN PER ROW										CONCRETE		DESIGN LOAD COMP STRESS (TOP ϕ) (SERV I) fct (ksi)	DESIGN LOAD TENSILE STRESS (BOTT ϕ) (SERV II) fcb (ksi)	REQUIRED MINIMUM ULTIMATE MOMENT CAPACITY (STRGTH I) (ft-kips)	LIVE LOAD DISTRIB FACTOR ϕ												
				STRAND PATTERN NO.	TOTAL NO.	SIZE (in)	STRGTH fpu (ksi)	"e" ϕ (in)	"e" END (in)	TOT NO. DEB	DIST FROM BOTTOM (in)	NO. OF STRANDS	NUMBER OF STRANDS DEBONDED TO (ft from end)														MINIMUM RELEASE STRGTH f'ci (ksi)	MINIMUM 28 DAY COMP STRGTH f'c (ksi)										
													TOTAL	DE-BONDED	3	6	9	12	15																			
PONTE AVE BRIDGE	1	1 & 7	U54		95	1/2	270	17.12	15.88	32	2.17	27	20	0	10	4	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.105	9.675	5.590	-4.589	10,334	0.999
	1	2-6	U54		87	1/2	270	18.00	16.95	38	4.14	27	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.645	8.114	5.077	-4.304	10,268	0.392



GENERAL NOTES:

Designed in accordance with AASHTO LRFD Specifications.

All concrete must be Class H. Use Class H (HPC) if required elsewhere in plans. All reinforcing bars shall be Grade 60.

When shown on this sheet, the Fabricator has the option of furnishing either the designed beam or an approved optional beam design. All optional design submittals and shop drawings must be signed, sealed and dated by a registered Professional Engineer.

Optional designs must have a calculated residual camber equal to or greater than that of the designed beam.

Prestress losses for the designed beams have been calculated for a relative humidity of 65 percent. Optional designs must likewise conform.

Locate strands for the designed beam as low as possible on the 1.97" grid system. Fill row "2.17", then row "4.14", then row "6.11", etc., beginning each row in the "1" position and, distributing uniformly as practical, working inward until the required number of strands is reached. All strands, including those in the web, must be adequately tied to reinforcing steel, bar supports, or other devices to prevent displacement during concrete placement.

Do not debond strands in position "1". Distribute debonded strands equally about the vertical centerline. Debonded lengths must decrease working inward, with debonding staggered in each row.

Encase debonded strands in plastic tubing along entire debonded length, and seal ends of tubing with waterproof tape. Split plastic tubing may be used provided the seam of the tubing is sufficiently sealed with waterproof tape to prohibit grout infiltration. Wrapping of strands with tape to provide debonding is not permitted.

Full-length debonded strands are not permitted in strand positions 1 and 2. If placing concrete in two stages, double wrap all full-length debonded strands in row "2.17" and internal vibrator diameter cannot exceed 1/8" diameter for first stage. Full-length debonding must comply with Item 426.4.F.4.

Strands for the designed beam must be low relaxation strands pretensioned to 75 percent of fpu each.

The grid pattern for the strands is based on exact conversions from a metric grid spacing of 50mm.

① Portion of full HL 93

HL93 LOADING

Texas Department of Transportation
Bridge Division

**PRESTRESSED
CONCRETE U-BEAMS
(DESIGN DATA)**

UBND

FILE: ubstde04.dgn	DW: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS		COUNTY	CONTROL SECT	JOB HIGHWAY
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BAR TABLE	
BAR	SIZE
A	#8
B	#5
D	#5
E	#5
F	#5
G	#5
T	#5

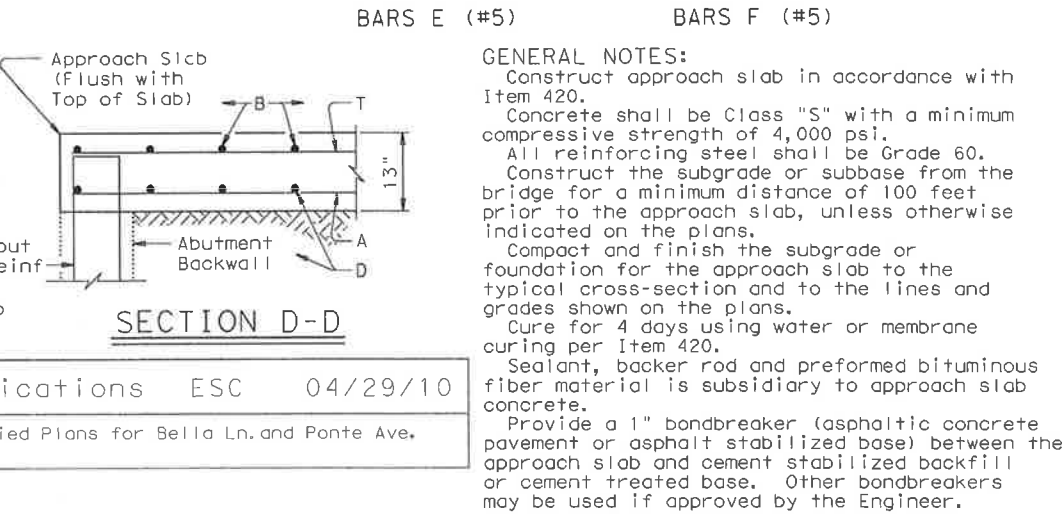
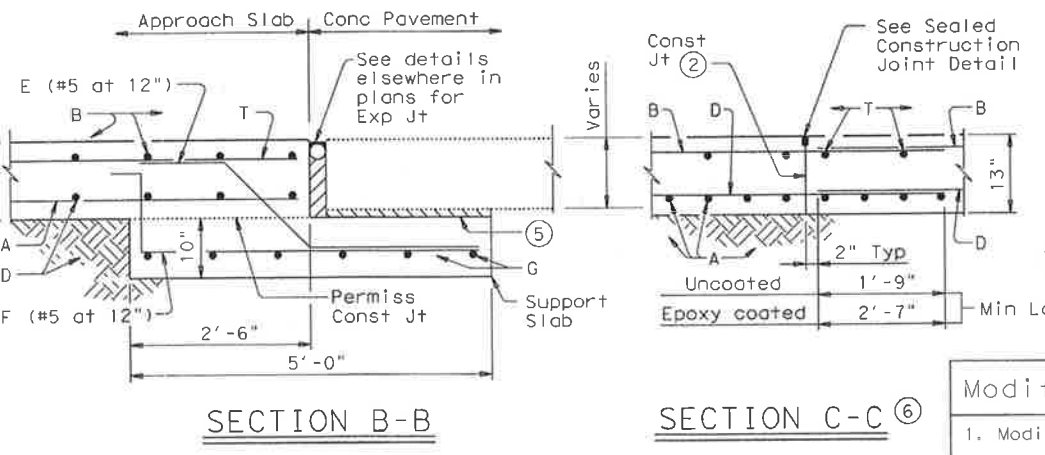
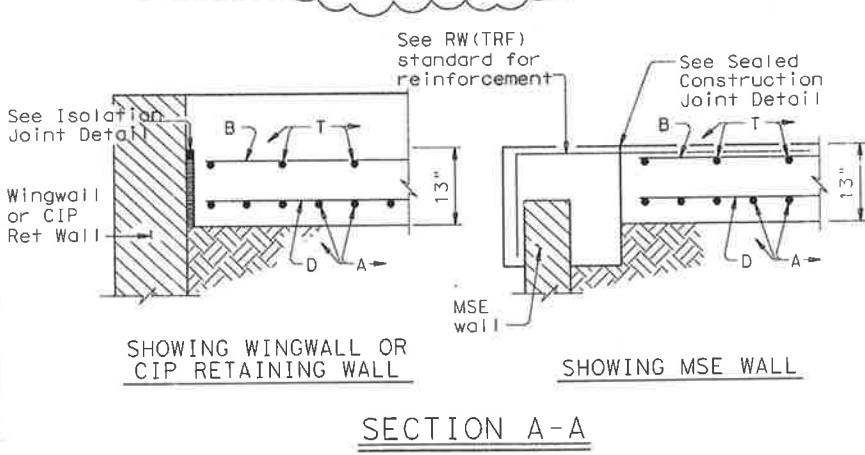
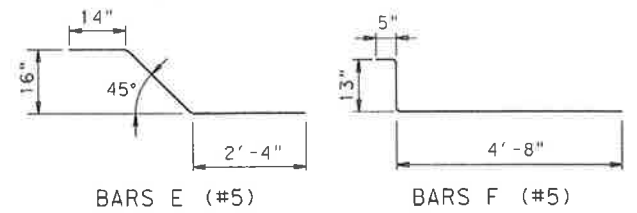
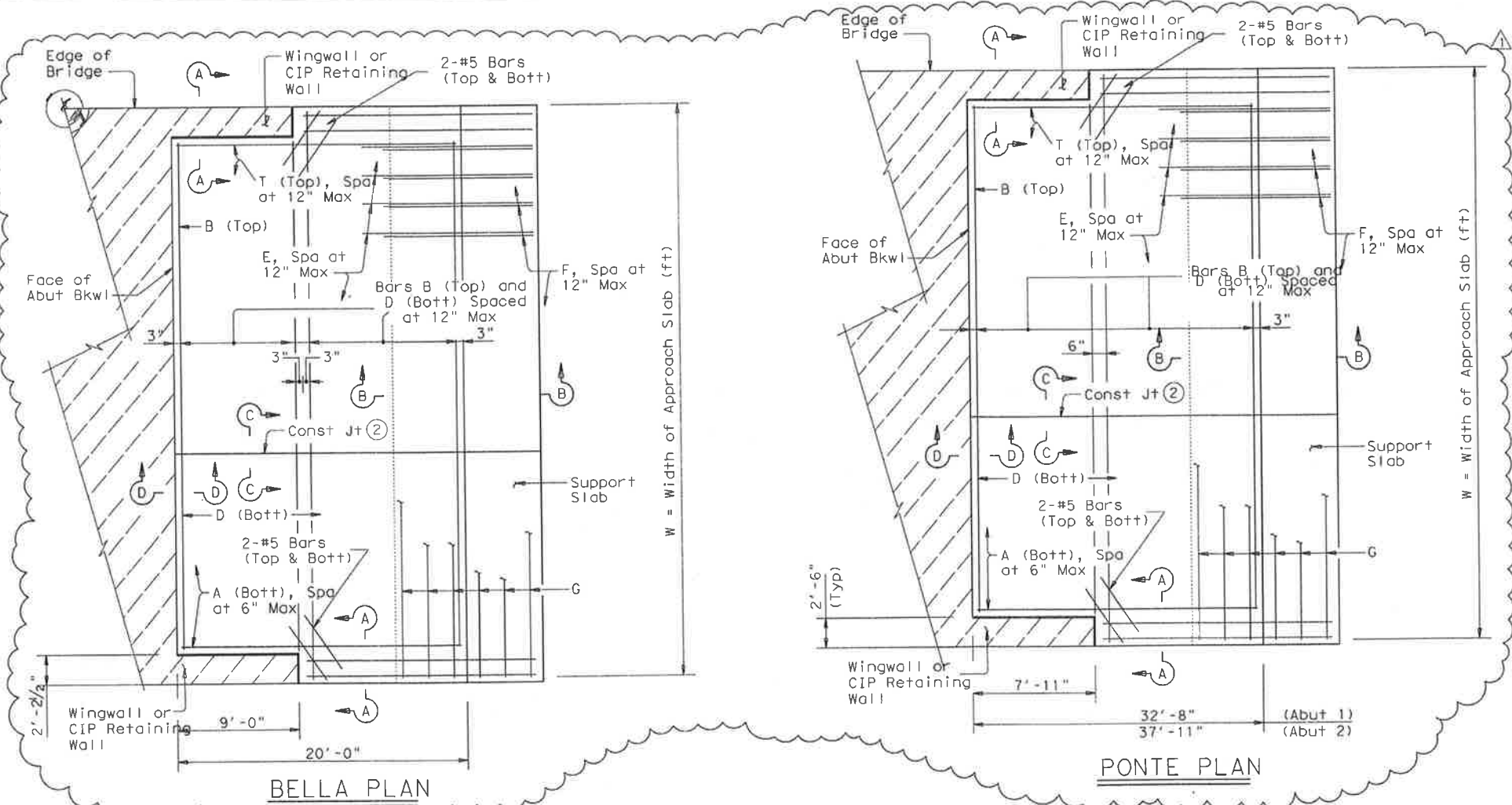
APPROXIMATE QUANTITIES ④

Reinf steel weight = 8.5 Lbs/SF of Approach Slab
 = 18.4 Lbs/LF of Support Slab

Area of Appr Slab = $20W + 0.5W^2 \tan S$ (SF)
 (Support Slab not included)

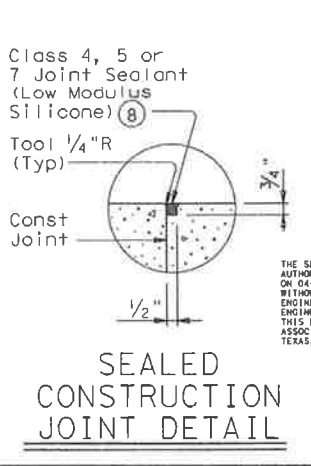
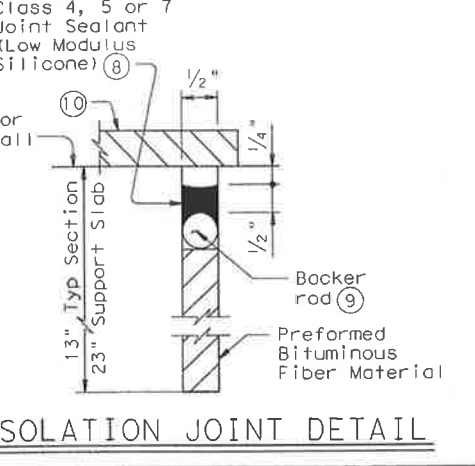
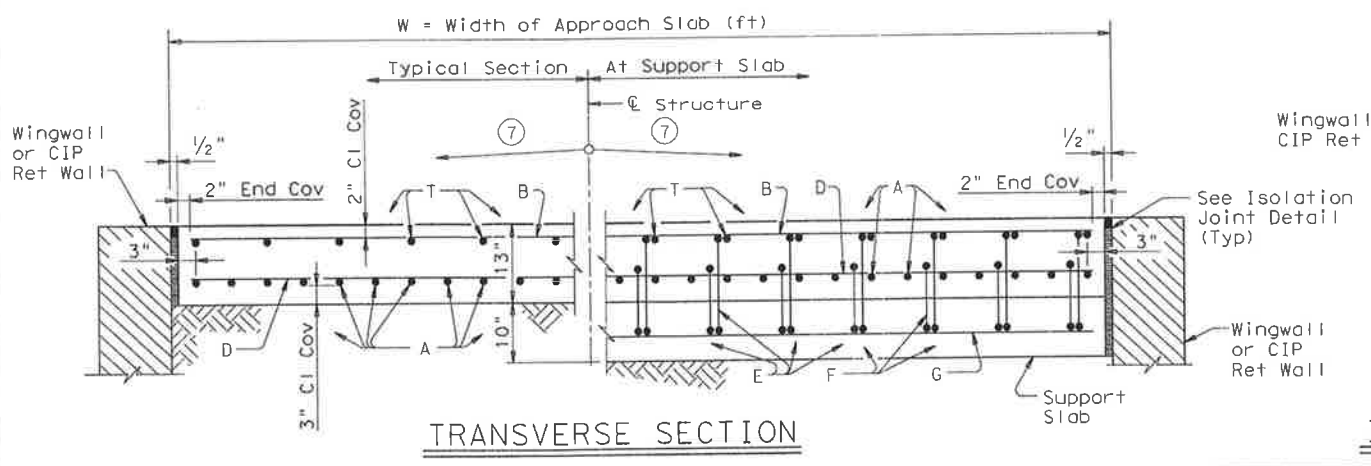
W = Width of Approach Slab Varies
 S = Skew Angle (deg)

- Flare Bars B and D in this region (1'-6" Max Spa, 3" Min Spa). Minimum flared bar length = 2'-6". Bend bars as necessary.
- Provide longitudinal construction joints that align with longitudinal construction joints in the bridge slab with bridges built in stages. Other longitudinal construction joints must receive approval of the Engineer.
- See details elsewhere in plans for shoulder drain location and details.
- For Contractor's information only.
- On portion of support slab that supports the concrete pavement, adjust top surface elevation, if required, to accommodate concrete pavement thickness. Smooth trowel finish. Oil top of support slab with 60 grade oil and apply heavy coat of powdered graphite. Press down one layer of 30# roofing felt.
- Multiple piece tie bars are acceptable at longitudinal construction joints provided minimum laps shown are achieved.
- See details elsewhere in plans for required cross-slope.
- Place in accordance with Item 438.
- Backer rod shall be 25% larger than joint opening and shall be compatible with the sealant.
- Place 1/2" Preformed Bituminous Fiber Material between concrete railing and top of approach slab as shown when concrete railing projects over the approach slab.



Modifications ESC 04/29/10
 1. Modified Plans for Bella Ln. and Ponte Ave.

GENERAL NOTES:
 Construct approach slab in accordance with Item 420.
 Concrete shall be Class "S" with a minimum compressive strength of 4,000 psi.
 All reinforcing steel shall be Grade 60.
 Construct the subgrade or subbase from the bridge for a minimum distance of 100 feet prior to the approach slab, unless otherwise indicated on the plans.
 Compact and finish the subgrade or foundation for the approach slab to the typical cross-section and to the lines and grades shown on the plans.
 Cure for 4 days using water or membrane curing per Item 420.
 Sealant, backer rod and preformed bituminous fiber material is subsidiary to approach slab concrete.
 Provide a 1" bondbreaker (asphaltic concrete pavement or asphalt stabilized base) between the approach slab and cement stabilized backfill or cement treated base. Other bondbreakers may be used if approved by the Engineer.



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Texas Department of Transportation
 Bridge Division

**BRIDGE APPROACH SLAB
 CONCRETE PAVEMENT**

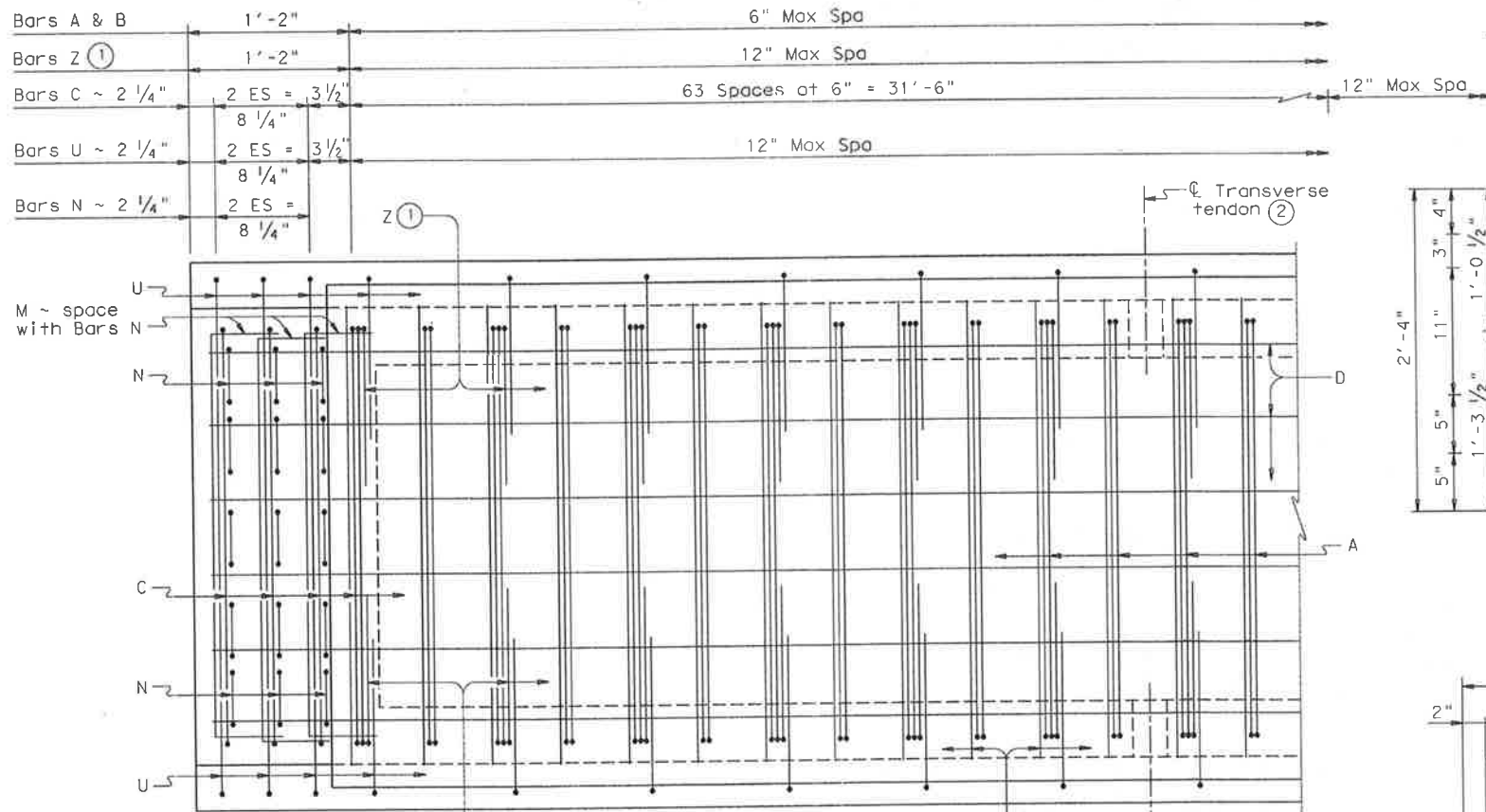
BAS-C (MOD)

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© TxDOT April 2006	DISTRICT	FEDERAL AID PROJECT	SHEET	
REVISIONS		COUNTY		CONTROL SECT JOB HIGHWAY
				S4-03

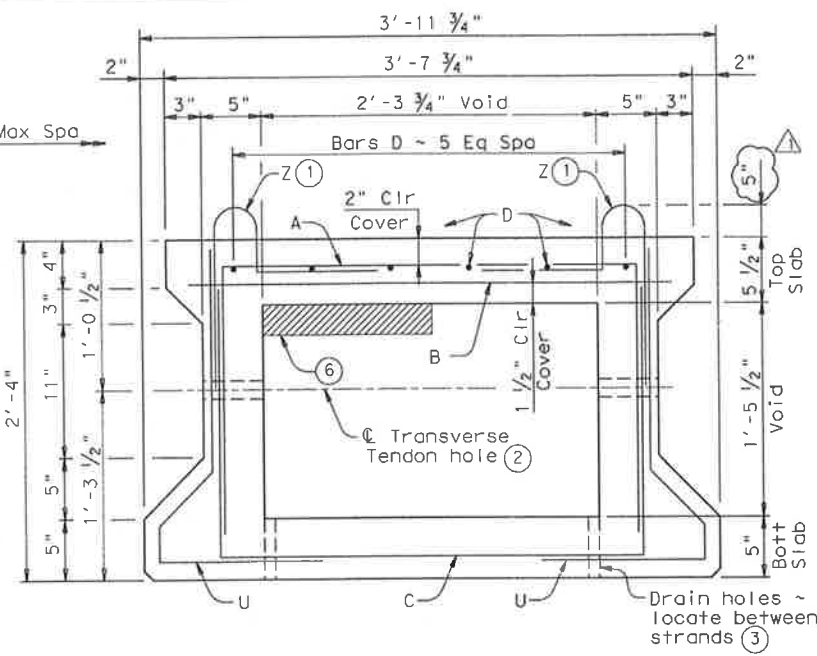
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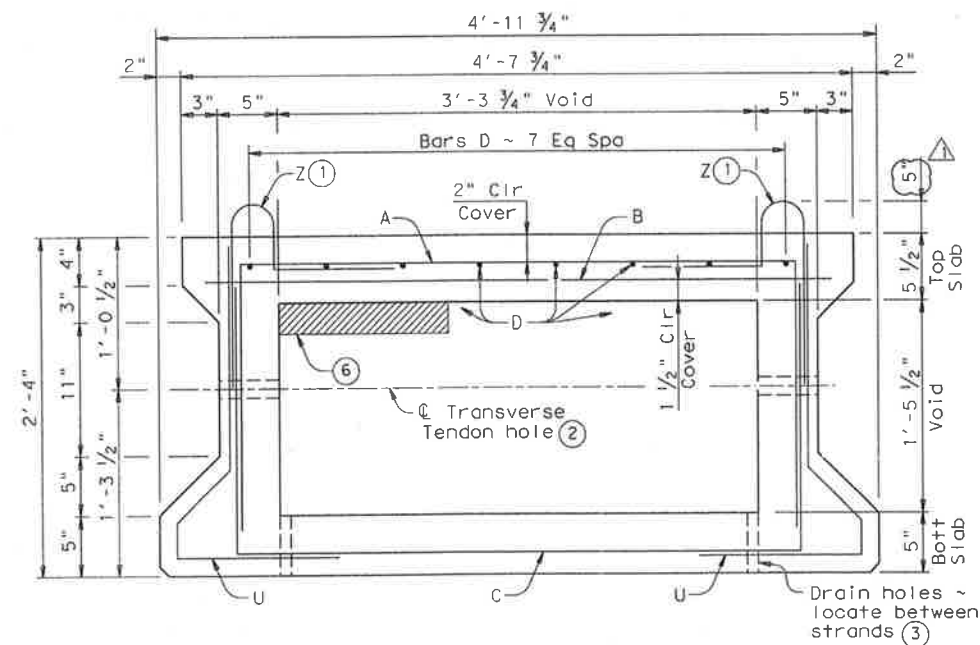
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PARTIAL PLAN
(Showing Type 4B28)



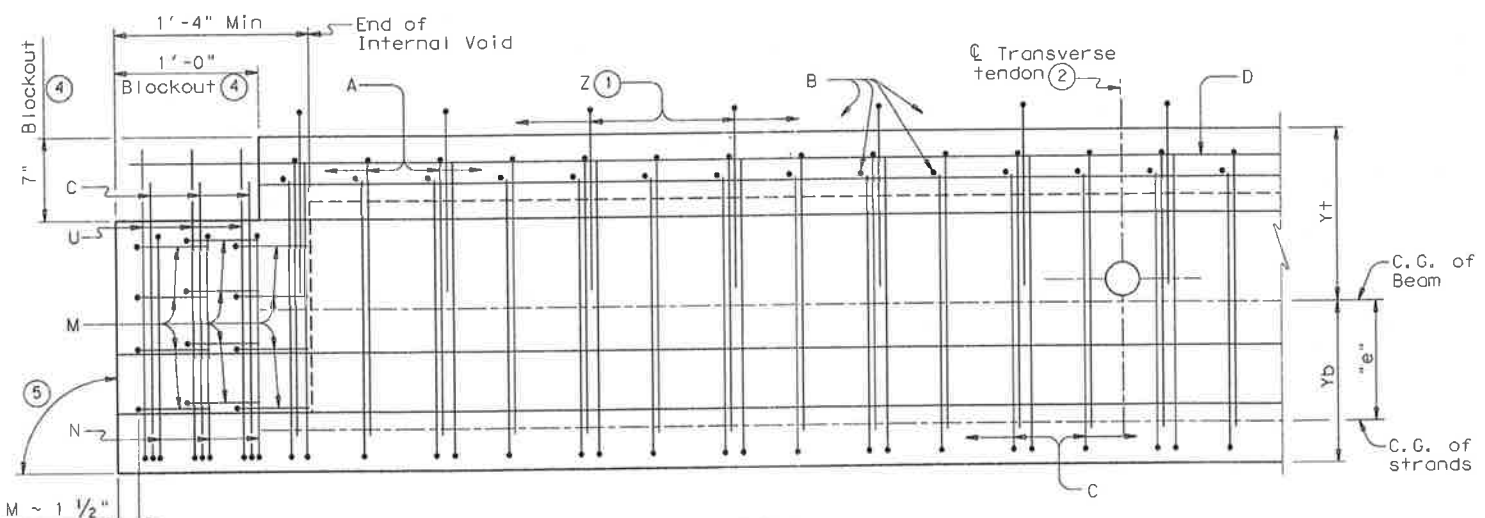
TYPICAL SECTION ~ TYPE 4B28



TYPICAL SECTION ~ TYPE 5B28

- ① Bars Z are required for beams topped with a cast-in-place concrete slab only.
- ② Post-tensioning tendons are required for beams not topped with a Min 5" cast-in-place concrete slab. See span details for number and spacing of transverse tendons. Cast interior diaphragms in exterior beams and beams that serve temporarily as exterior beams in staged constructed bridges. See "Blockout, Interior Diaphragm, and Drain Details". Form 3" Dia holes in interior beams. See standard BBPT for details.
- ③ Place drain holes (1" Dia PVC Sch 40 Pipe) as shown in all beam void corners including each side of interior diaphragms. See "Blockout, Interior Diaphragm, and Drain Details".
- ④ Blockouts required at ends of all beams. Extend beam reinforcement into blockouts.
- ⑤ 90° at conventional Interior Bents. Ends of beams shall be vertical at Abutment backwall and Inverted Tee Bent Stems.
- ⑥ Showing void modification required in exterior beams not topped with a Min 5" cast-in-place concrete slab. See standard BBRA0 for void modification dimensions.
- ⑦ Based on 150 pcf weight density of concrete. Weight of end blocks and interior diaphragms is not included.

GENERAL NOTES:
Designed according to AASHTO LRFD Specifications. Use Class H concrete. Use Class H (HPC) if required elsewhere in plans. All reinforcing steel must be Grade 60.
Two-stage monolithic casting is required. The concrete in the first stage cast (bottom beam flange) must remain plastic until the second stage cast (webs and top beam flange) is placed. Vibrate as required to ensure consolidation between the two casts.
1/4" clear cover to reinforcement is required unless noted otherwise.
See standard BBRAS or BBRA0 for railing anchorage at bridge edges to be cast in beams.
An equal area of welded wire reinforcement (WWR) meeting the requirements of ASTM A 497 may be substituted for Bars A, B, C, and D.
These details are applicable for skews up to 30 degrees only.
Chamfer bottom beam corners 3/4" or round to a 3/4" radius.



ELEVATION

BEAM PROPERTIES			
		Type 4B28	Type 5B28
Area	in ²	678.8	804.8
Y top	in	14.38	14.26
Y bott	in	13.62	13.74
I	in ⁴	68,745	85,370
Weight ⑦	lb/ft	707	838

Modifications ESC 04/29/10
 ▲ Revised Z bar

Texas Department of Transportation
 Bridge Division
**PRESTRESSED CONCRETE
 BOX BEAM DETAILS
 (TYPE B28)**

BB-B28 (MOD)

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© TxDOT December 2006	DISTRICT	FEDERAL AID PROJECT	SHEET	
REVISIONS			S4-04	
	COUNTY	CONTROL SECT	JOB	HIGHWAY

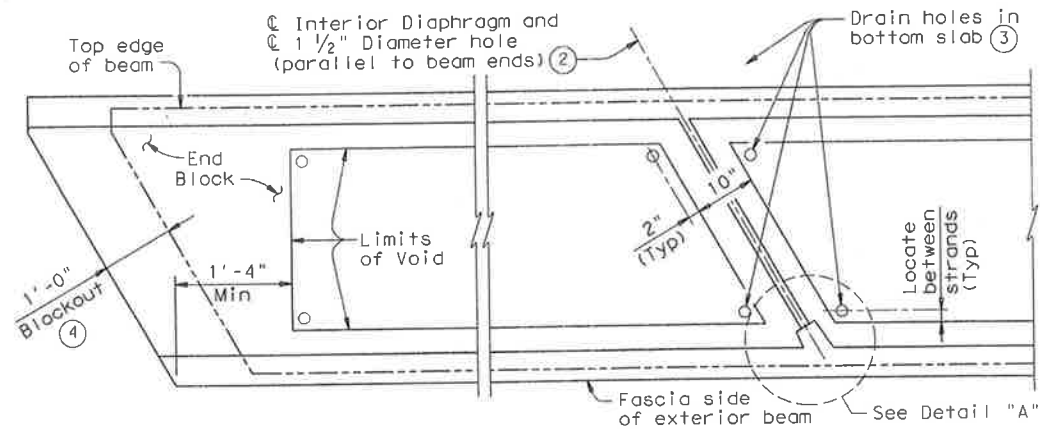
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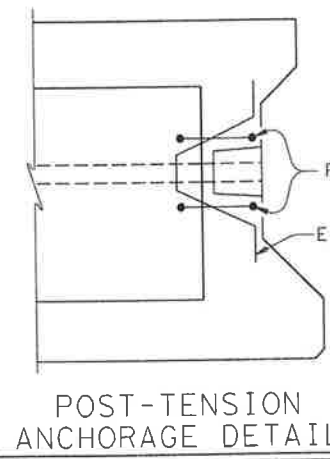
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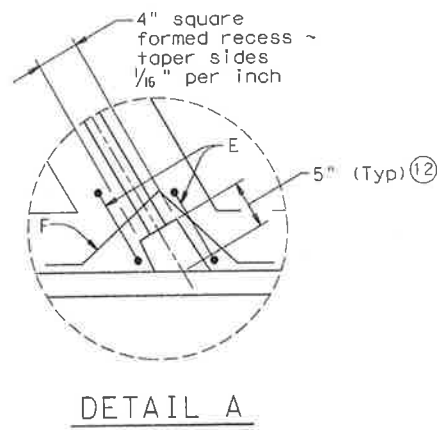


BLOCKOUT, INTERIOR DIAPHRAGM AND DRAIN DETAILS

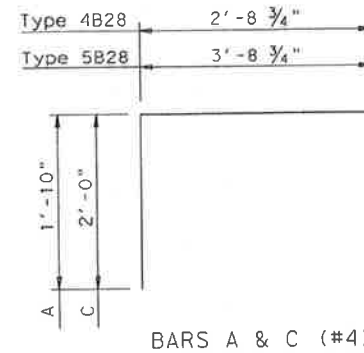
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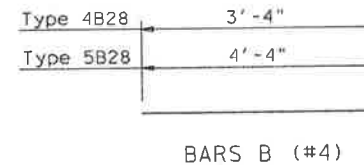
POST-TENSION ANCHORAGE DETAIL



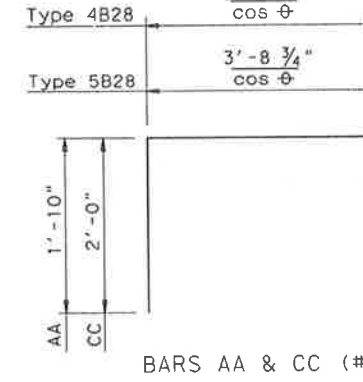
DETAIL A



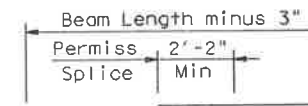
BARS A & C (#4)



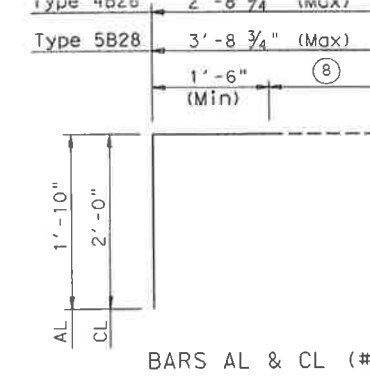
BARS B (#4)



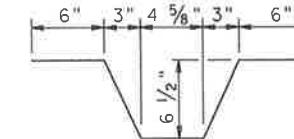
BARS AA & CC (#4)



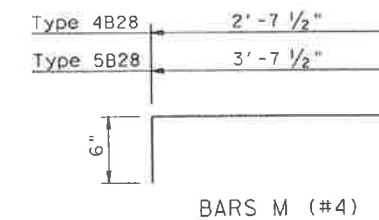
BARS D (#5)
Permissible splices to be placed in middle third of span



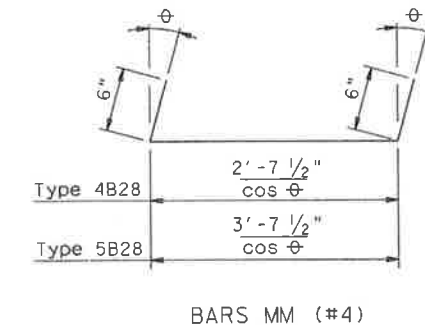
BARS AL & CL (#4)



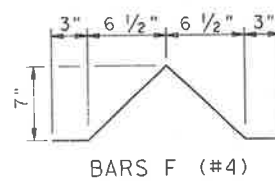
BARS E (#4)



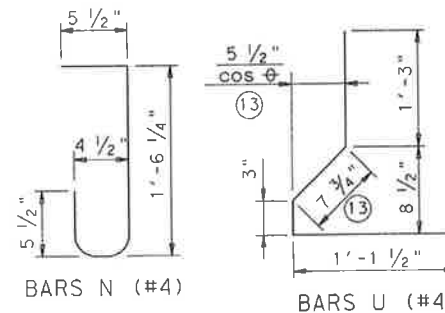
BARS M (#4)



BARS MM (#4)

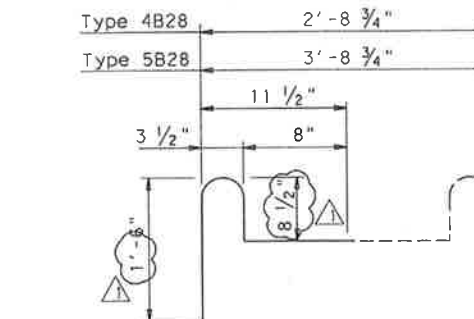


BARS F (#4)



BARS N (#4)

BARS U (#4)



BARS Z (#4) ①

At fabricator's option, Bars Z pairs may be fabricated using one continuous bar. If this option is used, Bars B at Bar Z locations (only) may be omitted.

- ① Bars Z are required for beams topped with a cast-in-place concrete slab only.
- ② Post-tensioning tendons are required for beams not topped with a Min 5" cast-in-place concrete slab. See span details for number and spacing of transverse tendons. Cast interior diaphragms in exterior beams and beams that serve temporarily as exterior beams in staged constructed bridges. Form 3" Dia holes in interior beams. See "Blockout, Interior Diaphragm, and Drain Details". See standard BBPT for details.
- ③ Place drain holes (1" Dia PVC Sch 40 Pipe) as shown in all beam void corners including each side of interior diaphragms. See "Blockout, Interior Diaphragm, and Drain Details".
- ④ Blockouts required at ends of all beams. Extend beam reinforcement into blockouts.
- ⑧ Cut as required to maintain one inch clear between bars.
- ⑫ 5" (Typ) or sufficient depth to provide 1" Cover on cut-off tendon. See BBPT for details.
- ⑬ Dimension will vary slightly with skew. Adjust as necessary.

Modifications	ESC	04/29/10
▲ Revised Z bar		



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HL93 LOADING SHEET 3 OF 3

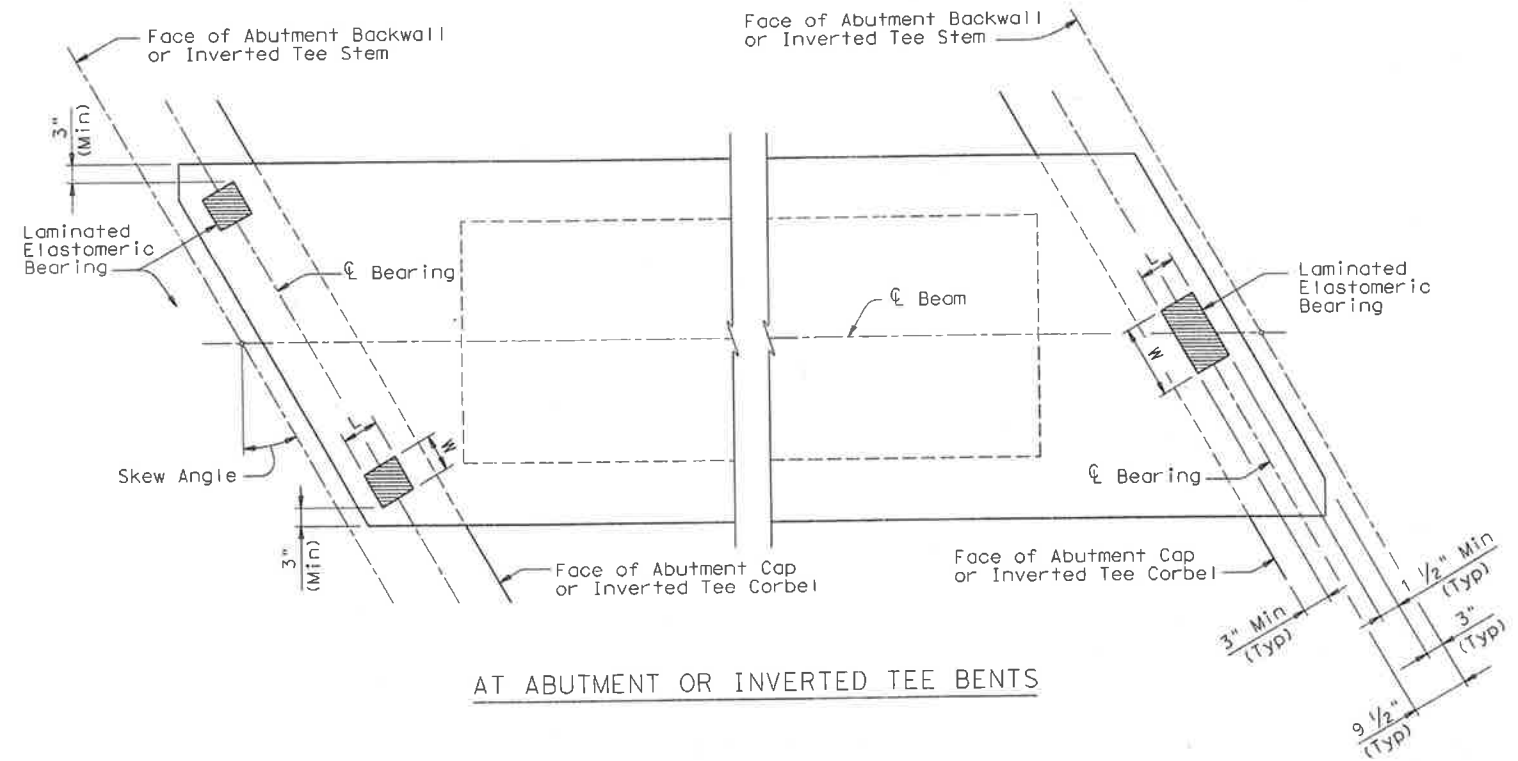
Texas Department of Transportation
Bridge Division
**PRESTRESSED CONCRETE
BOX BEAM DETAILS
(TYPE B28)**

BB-B28 (MOD)

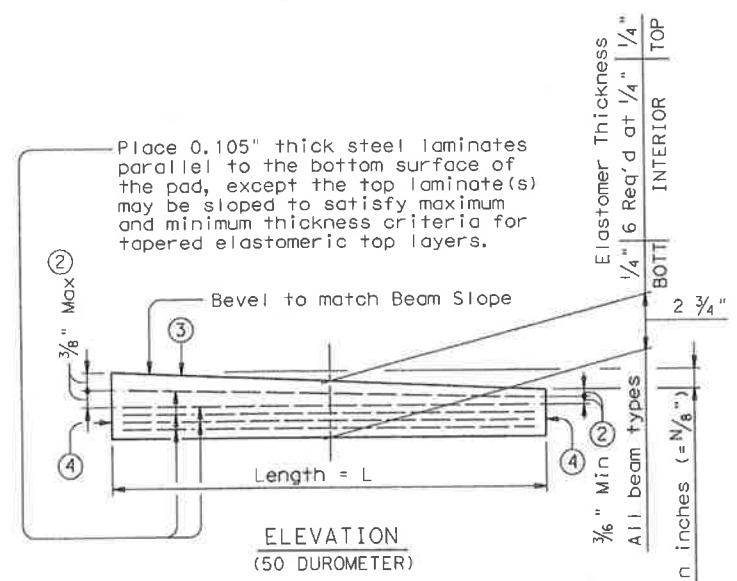
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© TxDOT December 2006	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS				S4-06
COUNTY	CONTROL	SECT	JOB	HIGHWAY

ELASTOMERIC BEARING DIMENSIONS

BEARING TYPE	BEAM TYPE	ONE BEARING		TWO BEARINGS	
		L	W	L	W
B20-"N"	4B20	6"	12"	6"	6"
	5B20	6"	12"	6"	6"
B28-"N"	4B28	6"	14"	6"	7"
	5B28	6"	14"	6"	7"
B34-"N"	4B34	6"	16"	6"	8"
	5B34	6"	16"	6"	8"
B40-"N"	4B40	6"	20"	6"	10"
	5B40	6"	20"	6"	10"

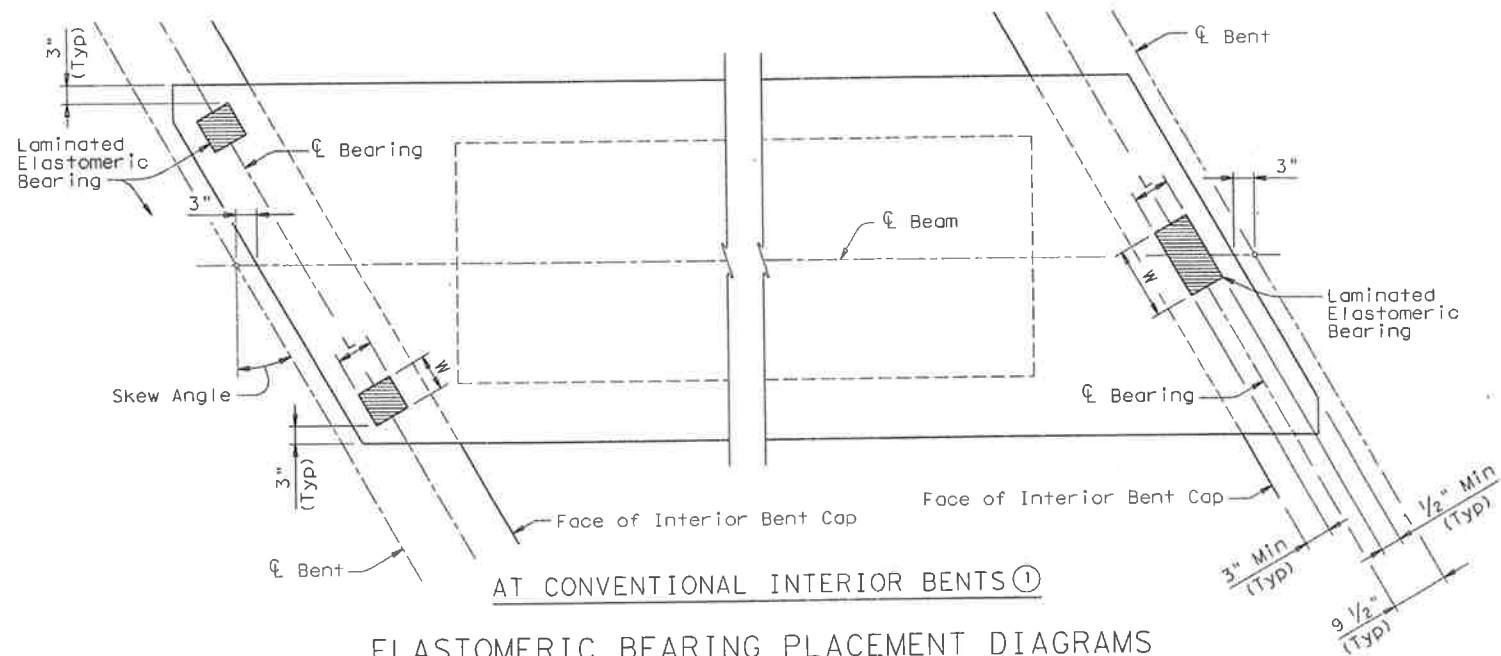


AT ABUTMENT OR INVERTED TEE BENTS



ELASTOMERIC BEARING SECTION

(50 DUROMETER)
The use of Polyisoprene (natural rubber), for the manufacture of bearing pads, is not permitted.



AT CONVENTIONAL INTERIOR BENTS ①

ELASTOMERIC BEARING PLACEMENT DIAGRAMS

The Forward Station Beam End will have one bearing and the Back Station Beam End will have two bearings.

- For Transition Bents with backwall, beams and elastomeric bearings will receive the same treatment as shown for Abutment Bents.
- Maximum and minimum layer thicknesses shown are for elastomer only, on tapered layers.
- Indicate BEARING TYPE on all pads. For tapered pads, BEARING TYPE will be located on the high side. The Fabricator will include the value of "N" (amount of taper in 1/8" increments) in this mark. Examples: N=0, (for 0" taper)
N=1, (for 1/8" taper)
N=2, (for 1/4" taper)
(etc.)
Fabricated pad top surface slope must not vary from plan beam slope by more than $\left(\frac{0.0625}{\text{Length}}\right)$ IN/IN.
- Locate Permanent Mark here.

GENERAL NOTES:

Set beams on elastomeric bearings of the dimensions shown. Center bearings as near nominal L^c bearing as possible within limits shown.
Constant thickness bearings may be used for moderate beam slopes up to 0.0113 ft/ft.
For skewed supports, Bearings beveled for beam slope may not provide uniform contact. However, predicted contact is considered within allowable tolerances.
Shop drawings for approval are required.
A bearing layout which identifies location and orientation of all bearings will be developed by the bearing fabricator. Permanently mark each bearing in accordance with the bearing layout. A copy of the bearing layout is to be provided to the Engineer.
Cost of furnishing and installing elastomeric bearings is to be included in unit price bid for "Prestressed Concrete Box Beams".
Details are drawn showing right forward skew. See Bridge Layout for actual direction.
These details are applicable for skews up to 30 degrees only.

HL93 LOADING

Texas Department of Transportation
Bridge Division

ELASTOMERIC BEARING DETAILS PRESTR CONC BOX BEAMS

BBEB

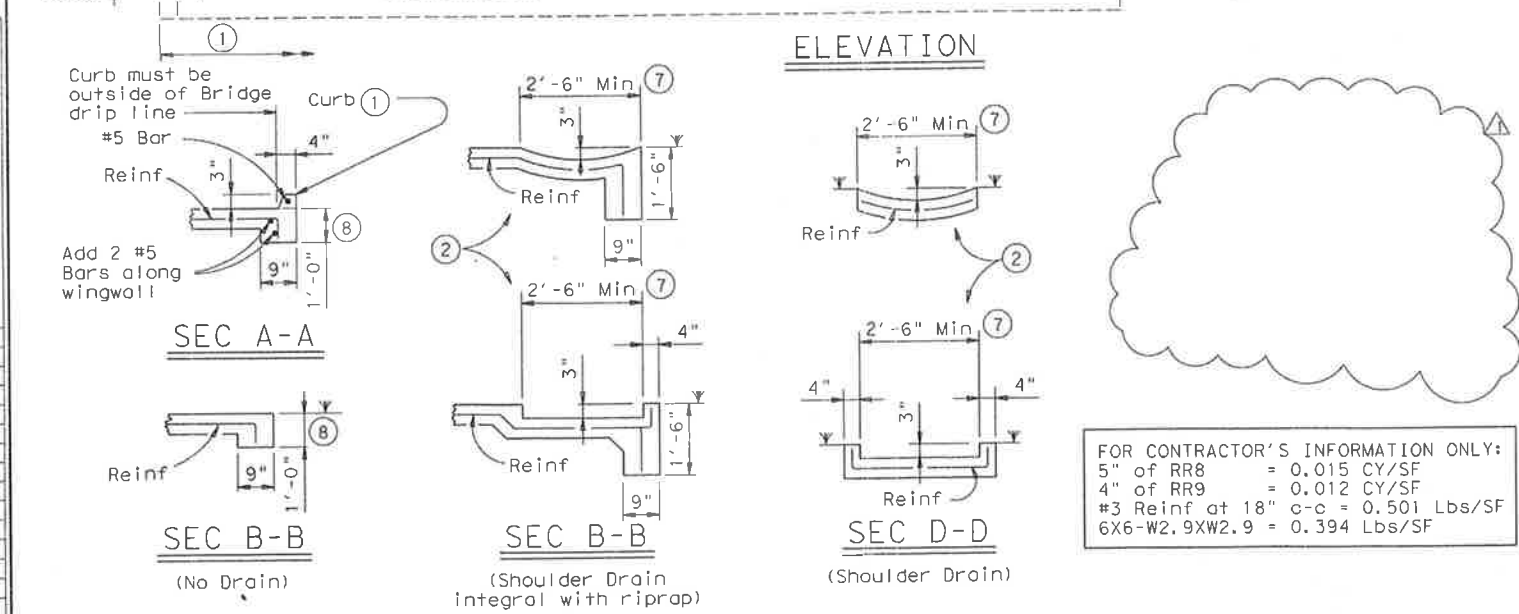
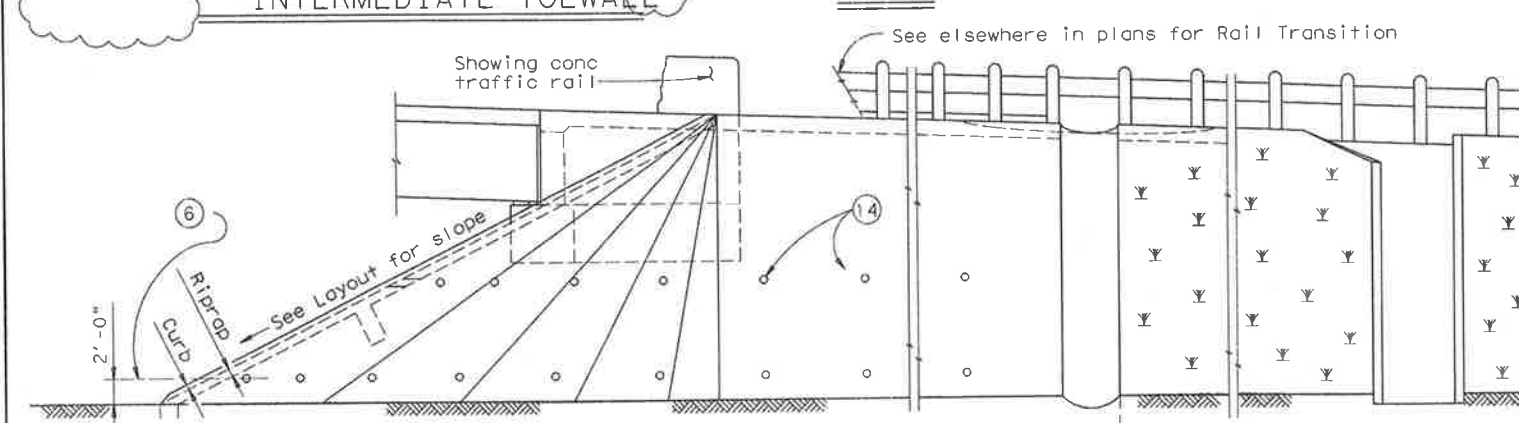
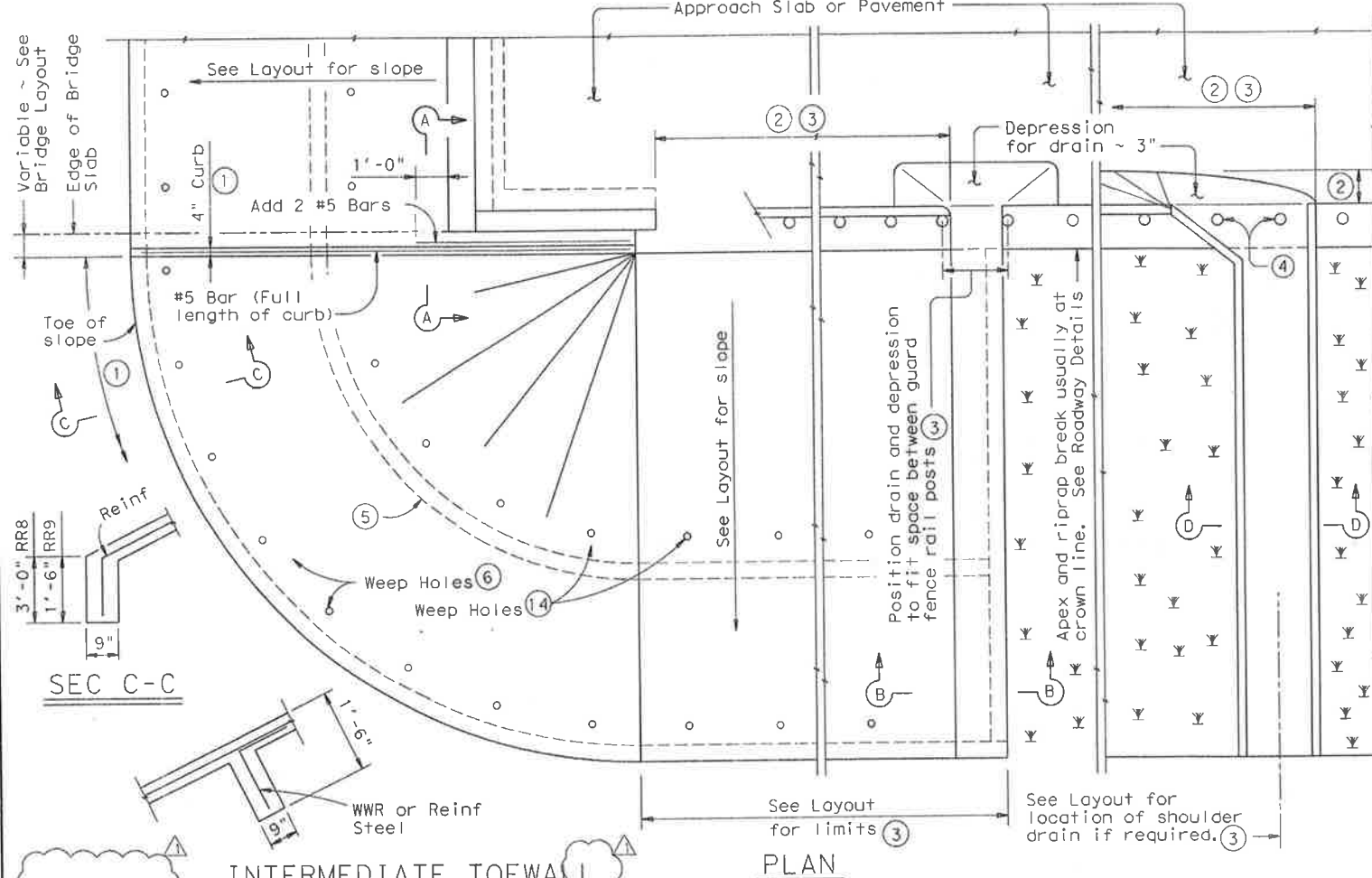
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REVISIONS		S4-07		
COUNTY	CONTROL SECT	JOB	HIGHWAY	

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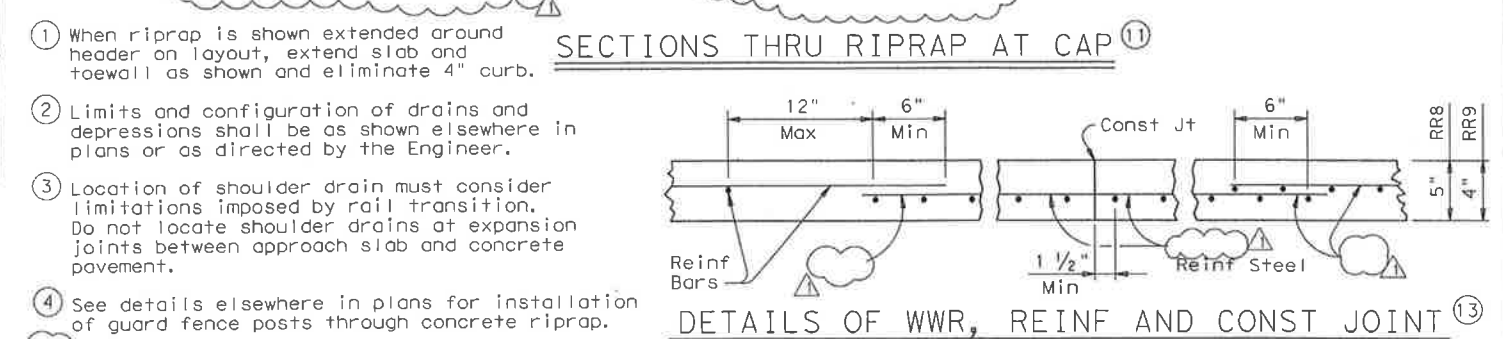
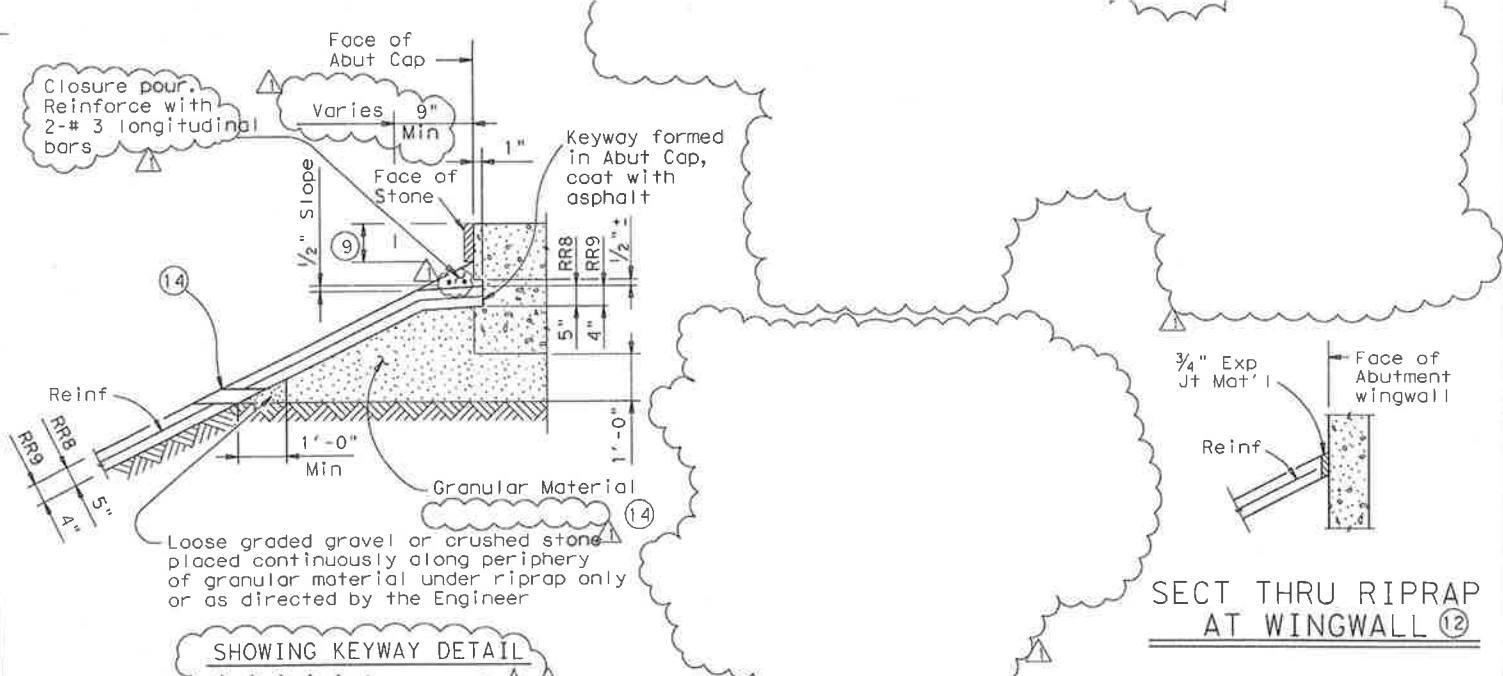
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LEVELS DISPLAYED



FOR CONTRACTOR'S INFORMATION ONLY:
 5" of RR8 = 0.015 CY/SF
 4" of RR9 = 0.012 CY/SF
 #3 Reinf at 18" c-c = 0.501 Lbs/SF
 6X6-W2, 9XW2.9 = 0.394 Lbs/SF



- When riprap is shown extended around header on layout, extend slab and toewall as shown and eliminate 4" curb.
- Limits and configuration of drains and depressions shall be as shown elsewhere in plans or as directed by the Engineer.
- Location of shoulder drain must consider limitations imposed by rail transition. Do not locate shoulder drains at expansion joints between approach slab and concrete pavement.
- See details elsewhere in plans for installation of guard fence posts through concrete riprap.
- Provide lower level of 2" Dia weep holes at 10' c-c backed by 1 CF packet of gravel and galvanized hardware cloth at all locations unless directed by the Engineer to eliminate.
- Wider or other drain configurations shall be used if shown elsewhere in plans or if directed by the Engineer.
- Wall extension may be reduced or modified if approved by the Engineer. Wall extension shall be increased to 1'-6" whenever the optional intermediate toewall is called for in the plans.
- Top of cap to top of riprap dimension varies as directed by the Engineer. Should be 9" Min for beam/slab type bridges and 1'-6" for slab span, box beam, or slab beam bridges.
- 8" x 18 Gage Galv Sheet Metal
- The sealing option of the joint between the face of cap and riprap shall be as designated by the Engineer or as shown elsewhere on plans.
- Flashing (shown in Cap Option A) may be used at wingwall in addition to Exp Jt Mat'l if shown on plans or directed by the Engineer.
- Reinforcing bars shall be #3 at 18" Spd c-c. Lap splices shall be a minimum of 6 inches, measured from the ends of reinforcing bars.
- provide upper level of 2" Dia weep holes at 10' c-c backed by galvanized hardware cloth.

GENERAL NOTES:
 Concrete shall be Class "B" with a minimum compressive strength of 2,000 psi unless noted elsewhere in plans.
 All reinforcing steel shall be Grade 60.
 Reinforcing other than that shown may be used by substituting reinforcement of equal or greater unit cross-sectional area. The maximum reinforcement spacing shall be 18 inches.
 Construction joints or grooved joints extending the full slant slope height shall be at intervals of approximately 20 feet unless otherwise directed by the Engineer.
 Hardware cloth, loose graded stone behind weep holes, flashing, or other sealing material shall not be paid for directly but shall be subsidiary to the bid item "Riprap".
 Unless specified elsewhere in the plans to be only reinforcing bars, the riprap reinforcing may be composed of reinforcing bars, Welded Wire Reinforcement (WWR), or any suitable combination of both types.
 See Layout for limits of riprap.
 RR8 is to be used on stream crossings.
 RR9 is to be used on other embankments.



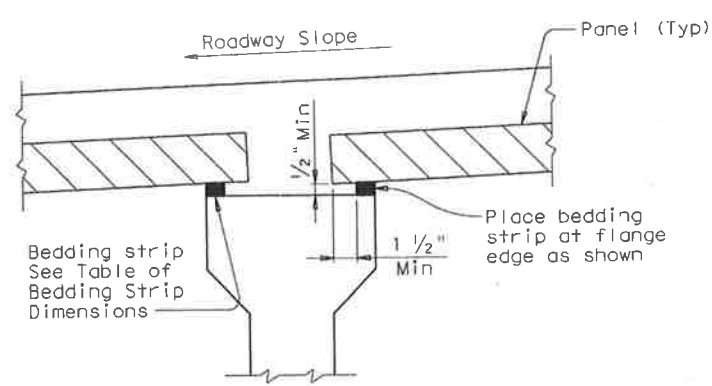
04-29-10
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Modifications ESC 04/29/10
 Revised cap options, revise reinforcing revise keyway.

Texas Department of Transportation
 Bridge Division
CONCRETE RIPRAP AND SHOULDER DRAINS EMBANKMENTS AT BRIDGE ENDS (TYPES RR8 & RR9)
 CRR (MOD)

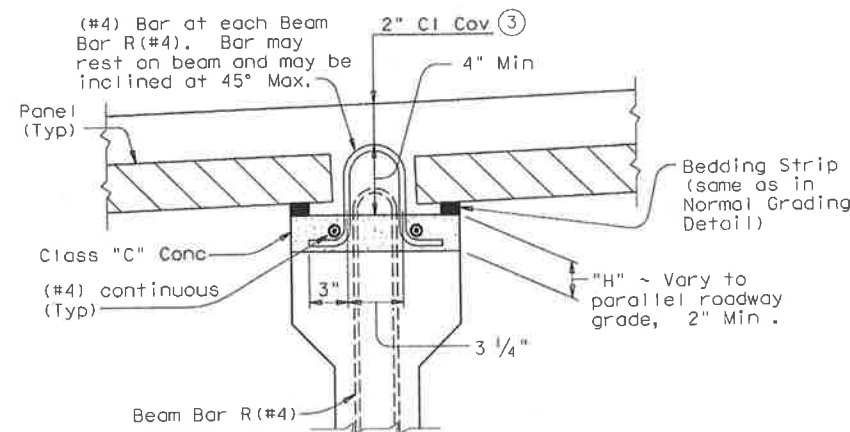
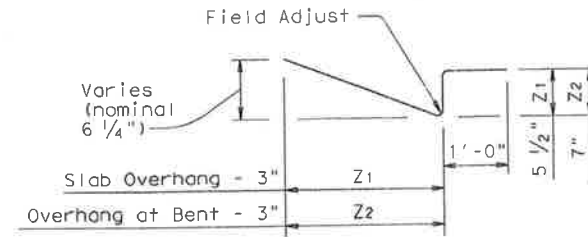
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©TxDOT April 2006	DISTRICT	FEDERAL AID PROJECT	SHEET S4-08	
08-2007: Revised Note 6, removed "H" reference, added Note 14 & changed weep hole size & spacing.	COUNTY	CONTROL SECT	JOB	HIGHWAY

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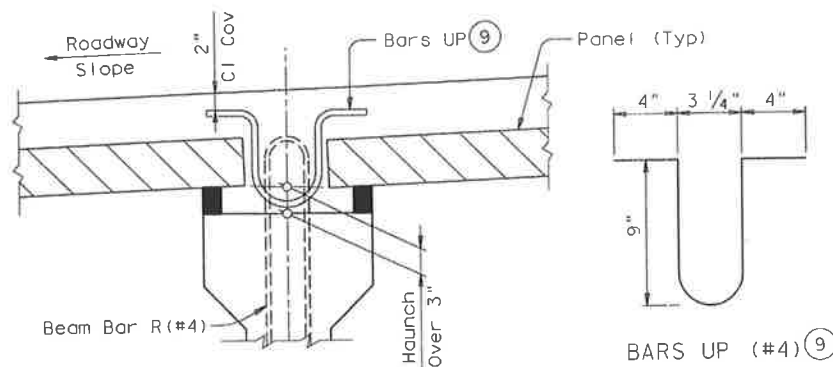


NORMAL GRADING DETAIL^①
Showing Prestressed Concrete I-Beams.
(Other Beam Types Similar)

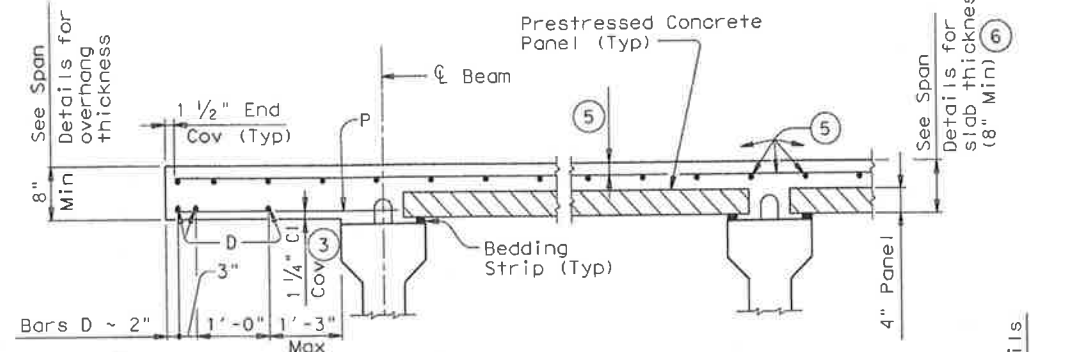
TABLE OF BEDDING STRIP DIMENSIONS		
WIDTH	HEIGHT ^②	
	Min	Max
1" (Min)	1/2"	2"
1 1/4"	1/2"	2 1/2"
1 1/2"	1/2"	3"
1 3/4"	1/2"	3 1/2"
2" (Max)	1/2"	4"



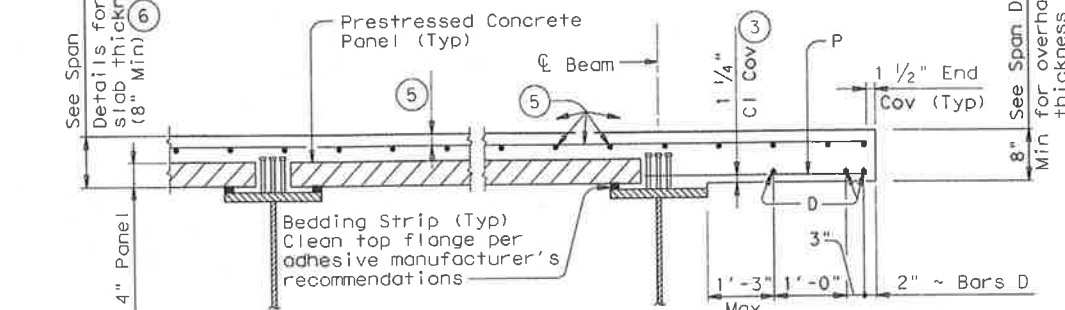
SPECIAL GRADING DETAILS FOR CONCRETE BEAMS^④
Showing Prestressed Concrete I-Beams.
(U-Beams and I-Girders Similar)



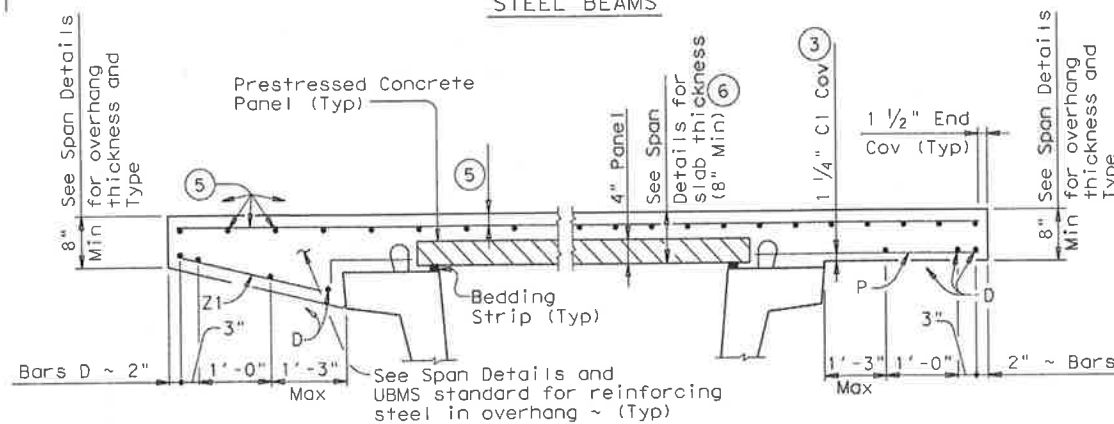
HAUNCH REINFORCING DETAIL
Showing Prestressed Concrete I-Beams.
(U-Beams and I-Girders Similar)



PRESTRESSED CONCRETE I-BEAMS OR I-GIRDERS



STEEL BEAMS



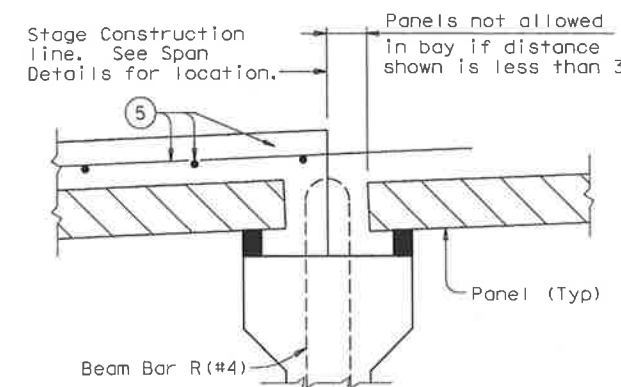
SLOPED OVERHANG WITH PRESTR CONC U-BEAMS **NORMAL OVERHANG WITH PRESTR CONC U-BEAMS**

TYPICAL PART TRANSVERSE SECTIONS

- To reduce the quantity of cast-in-place concrete, bedding strip thickness may be increased in 1/4" increments. Bedding strips must be comprised of one layer. Bond bedding strips to the beams with an adhesive compatible with bedding strips. Bedding strips over 2.5" high may need to be bonded to panels. The same thickness strip must be used under any one panel edge and the maximum change in thickness between adjacent panels must be 1/4". Alternatively, bedding strips may be cut to grade. Panels may be supported by an alternate method, using a commercial product, if approved by the Engineer of Bridge Design, Bridge Division.
- Height must not exceed twice the width.
- Clear cover shall be as indicated unless otherwise shown on Span Details.
- For use where the distance between top of beam and finished grade can not be achieved within tolerances on cast-in-place slab thickness and thickness of bedding strips. Control dimensions shown in Normal Grading Detail still apply.
- See Span Details for top slab reinforcement and clear cover. Longitudinal top slab reinforcement may rest on top of prestressed concrete panels if necessary to maintain clear cover.
- The actual thickness constructed may exceed the slab thickness shown on the Span Details but, the extra thickness shall be no more than 2" for Prestressed Concrete I-Beams and 1" for Prestressed Concrete U-Beams and Steel Beams. Bearing Seat Elevations or finished grade may be adjusted.
- Bars Z1 (#4) shall be field adjusted to match actual slope of slab overhangs. Width of slab overhang will vary along span with curved slab edges. Adjust Bar Z1 (#4) dimensions to maintain proper cover. Bars Z2 (#4) are located at Inv-T stems only.
- Max Spacing as listed unless otherwise shown.
- Space Bars UP (#4) with Beam Bars R (#4) in all areas where measured haunch exceeds 3".

CONSTRUCTION NOTES:
Erected panels must bear uniformly on bedding strips of extruded polystyrene placed along top flange edges.
If additional blocking is needed, special grading details for supporting the panels and extra reinforcing between beam and slab will be considered subsidiary to deck construction.
Care must be taken to ensure proper cleaning of construction debris and consolidation of concrete mortar under the edges of the panels. Bedding strips must be placed at beam flange edges so that adequate space is provided for the mortar to flow a minimum of 1 1/2" under the panels as the slab concrete is placed.
To allow the proper amount of mortar to flow between beam and panel, the minimum vertical opening must be at least 1/2". Roadway cross-slope reduces the opening available for entry of the mortar. Bedding strips varying in thickness across the beam are therefore required.
All reinforcing steel in the cast-in-place slab must be Grade 60. See Table of Reinforcing Steel for size and spacing of reinforcement. Orientation of reinforcement (normal or skewed) must match that shown on the Span Details.
If the top and bottom layer of reinforcing steel is shown on the Span Details to be epoxy coated, then the A, D, E, P, & Z bars must be epoxy coated.
For clear span between U-beams less than or equal to 18", see Permissible Slab Forming Detail on Miscellaneous Slab Detail sheets, UBMS.
Bar Laps, where required, must be as follows:
Uncoated ~ #4 = 1'-5"
 ~ #5 = 1'-9"
Epoxy Coated ~ #4 = 2'-1"
 ~ #5 = 2'-7"

GENERAL NOTES:
Designed according to AASHTO LRFD Specifications.
Use of Prestressed Concrete Panels is not permitted for horizontally curved steel plate or tub girders. See Span Details for other possible restrictions on their use.
These details are to be used in conjunction with the Span Details and applicable Standard sheets.
Any additional reinforcement or concrete required on this standard is to be considered subsidiary to the bid item "Reinforced Concrete Slab".



STAGE CONSTRUCTION LIMITATIONS ON PANELS
Showing Prestressed Concrete I-Beams.
(Other Beam Types Similar)

TABLE OF REINFORCING STEEL ^⑧		
BAR	SIZE	Max Spa (in.)
A	#5	~
D	#5	9
E	#5	6
P	#4	18
UP	#4	~
Z	#4	18



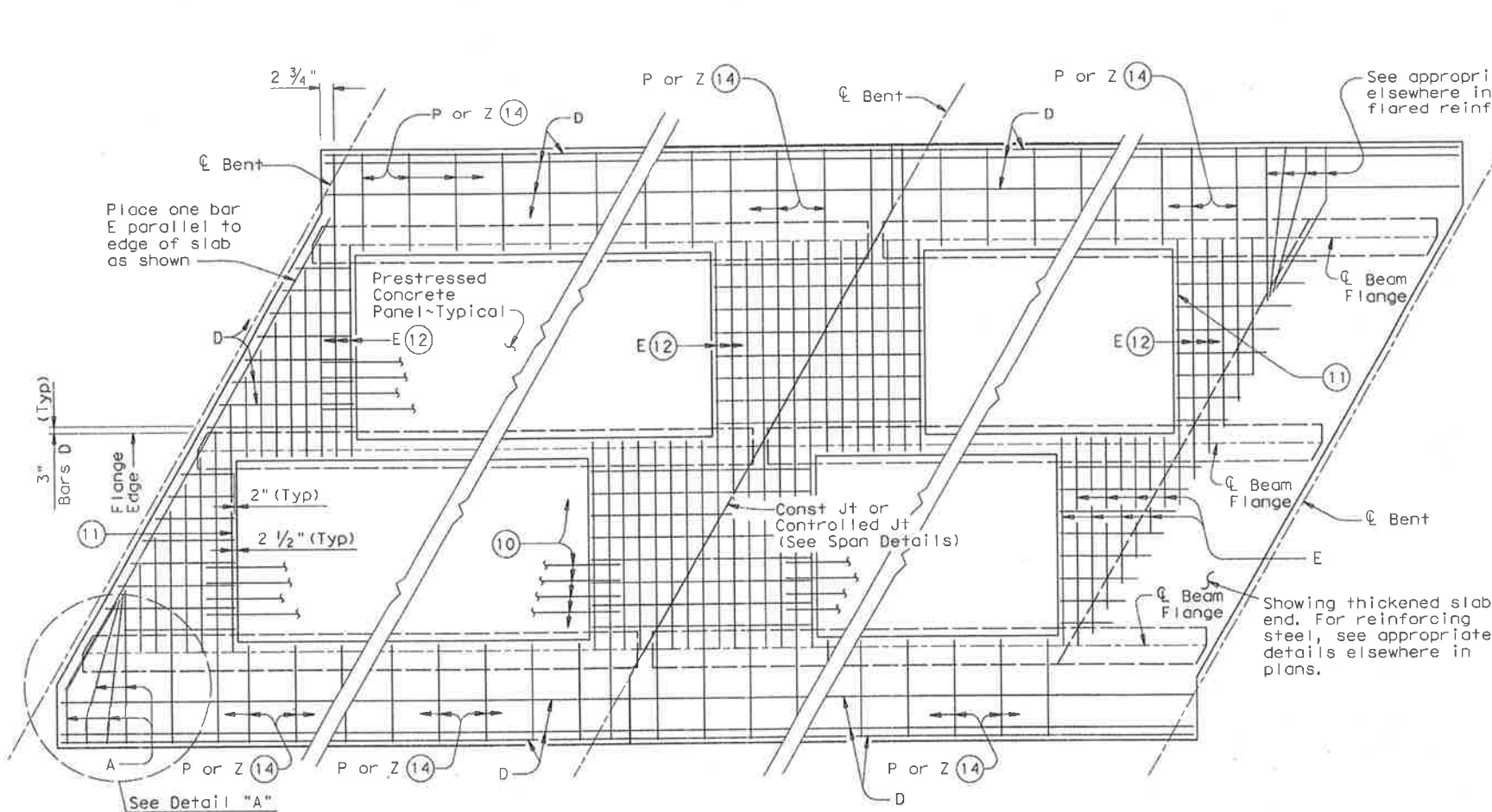
PRESTRESSED CONCRETE PANELS
OPTIONAL DECK DETAILS FOR BEAM SPANS

PCP

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REVISIONS				
08-07: Added I-Girders and added note to WBR splice detail.	COUNTY	CONTROL SECT	JOB	HIGHWAY

LEVELS DISPLAYED	ACC:
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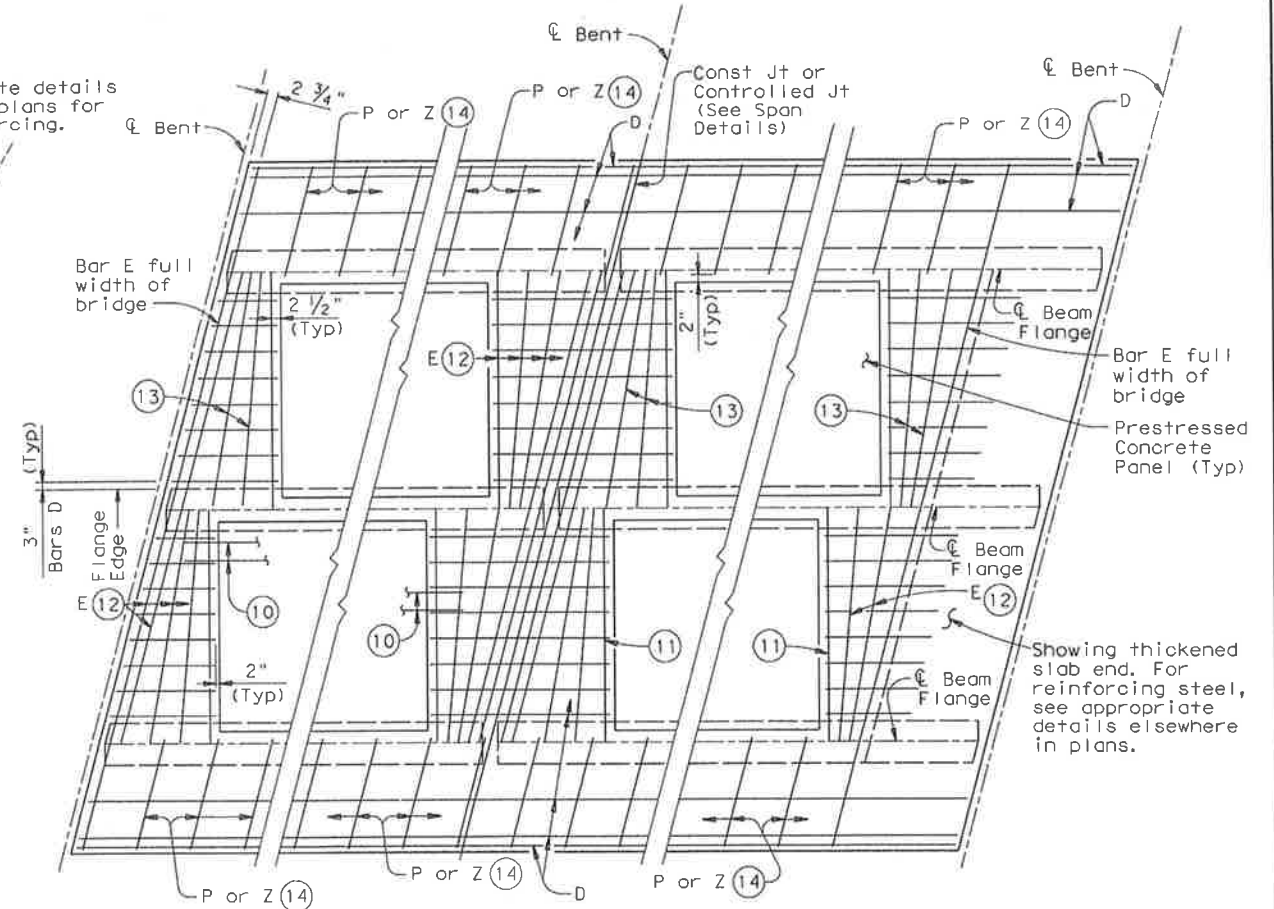
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AT ALL SPAN ENDS UNLESS NOTED OTHERWISE AT INTERIOR BENTS AT THICKENED END SLABS ON STEEL, CONC I-BEAMS, I-GIRDERS OR U-BEAMS

PLAN OF SLABS WITH NORMAL REINFORCEMENT

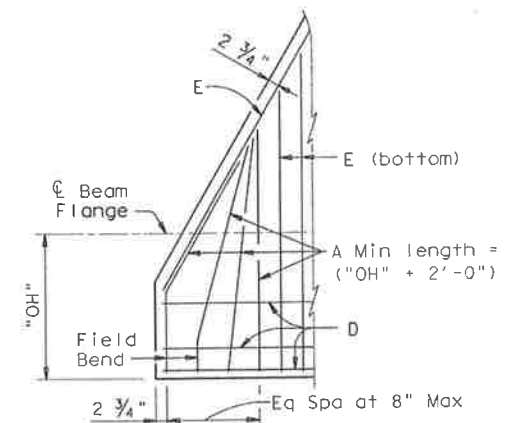
(Showing bottom reinforcing steel. See Span Details for top reinforcement steel.)



AT ALL SPAN ENDS UNLESS NOTED OTHERWISE AT INTERIOR BENTS AT THICKENED END SLABS ON STEEL, CONC I-BEAMS, I-GIRDERS OR U-BEAMS

PLAN OF SLABS WITH SKEWED REINFORCEMENT

(Showing bottom reinforcing steel. See Span Details for top reinforcement steel.)



DETAIL "A"

APPROXIMATE QUANTITIES FOR ONE SQUARE FOOT OF SLAB (15)

Slab Thickness (In.)	Class S Concrete CY
8	0.0123
8 1/4	0.0131
8 1/2	0.0139

(For Contractor's information only)

- 8 Max Spacing as listed unless otherwise shown.
- 10 At connection with cast-in-place slab, extend longitudinal panel reinforcement 1'-0" (+2", -0") past panel end. Alternatively, provide (#3) x 2'-0" dowels at 6" Max spacing and extend dowels 1'-0" past panel end.
- 11 Maintain one Bar E(#5) parallel to panel ends (Typ).
- 12 Bars E(#5) not continuous over beam flanges must overlap beam flange 6" Min.
- 13 Add flared Bars E(#5) (Min Spa = 2", Max Spa = 10") as required at panel ends.
- 14 Where possible, Bars E(#5) may be extended into overhangs to replace Bars P(#4). Bars Z(#4) are required for sloped overhangs with U-Beams.
- 15 These approximate quantities are for a typical square foot of cast-in-place slab over the PCP. They do not include an allowance for slab overhangs, thickened ends at diaphragms, or the portion between panels over the beams.

TABLE OF REINFORCING STEEL (8)

BAR	SIZE	Max Spa (in.)
A	#5	~
D	#5	9
E	#5	6
P	#4	18
UP	#4	~
Z	#4	18



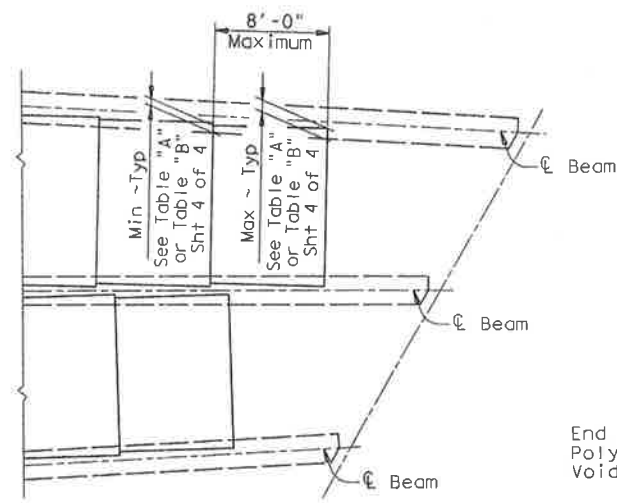
PRESTRESSED CONCRETE PANELS
OPTIONAL DECK DETAILS FOR BEAM SPANS

PCP

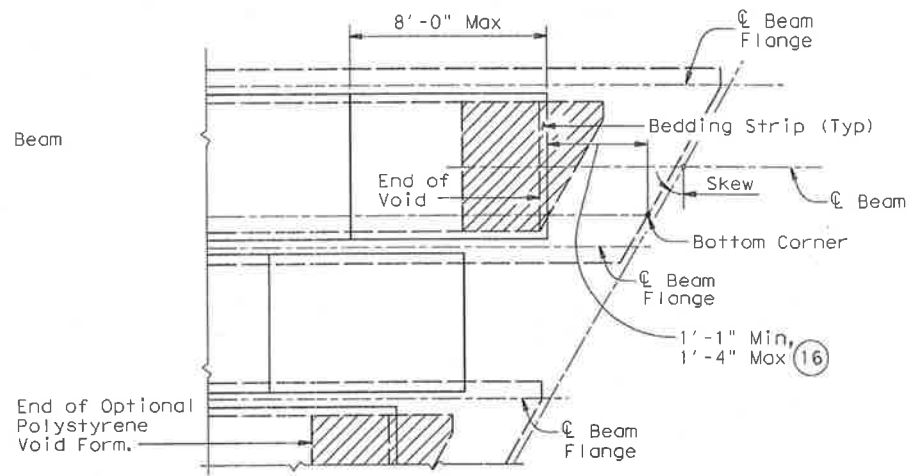
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REVISIONS				
08-07: Added I-Girders and added note to WWR splice detail.	COUNTY	CONTROL	SECT	JOB
				HL93

LEVELS DISPLAYED

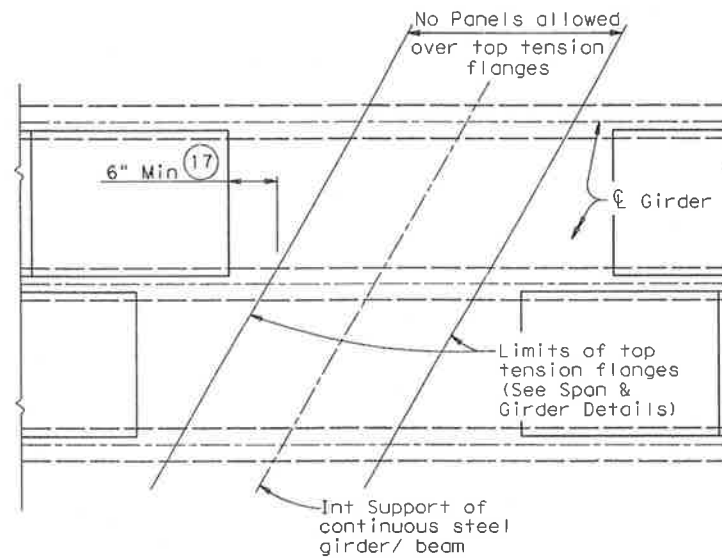
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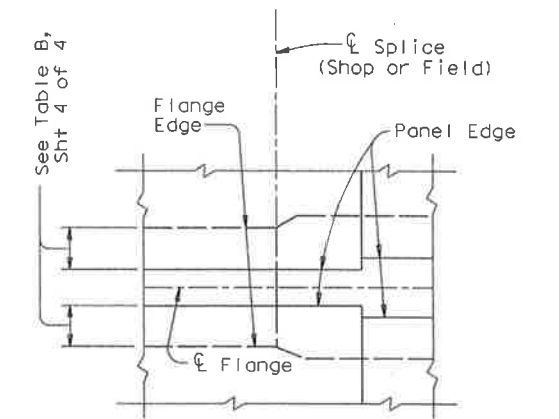
AT ENDS OF FLARED I-BEAMS OR I-GIRDERS
(Showing thickened slab end condition)



AT ENDS OF CONC U-BEAMS

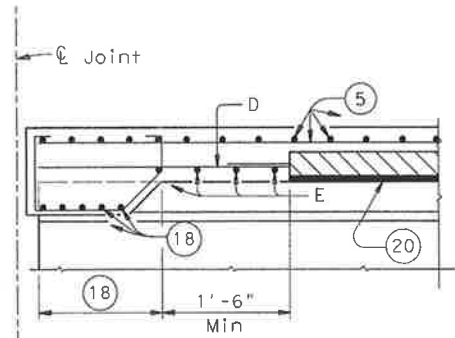


AT INT SUPPORTS OF CONTINUOUS STEEL GIRDERS

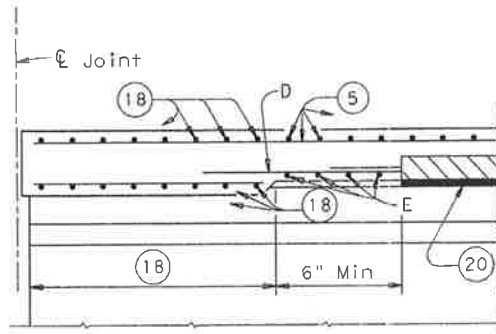


PLAN AT SPLICE
(Showing Steel Bms with flange width transition)

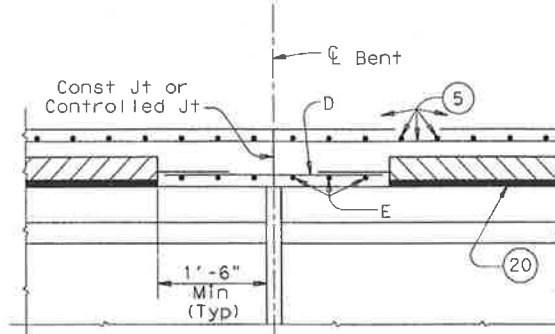
PART PLANS OF PANEL PLACEMENT



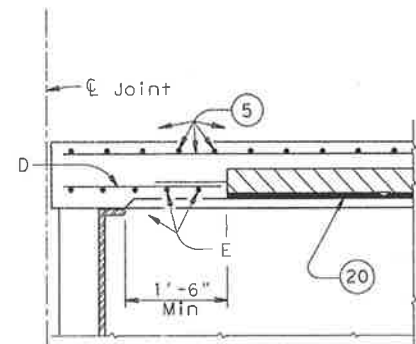
AT THICKENED SLAB ENDS FOR PRESTR CONC U-BMS



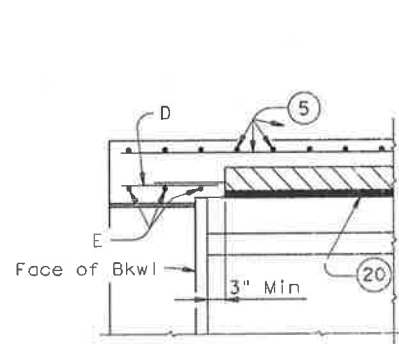
AT THICKENED SLAB ENDS FOR PRESTR CONC I-BMS AND STEEL BMS



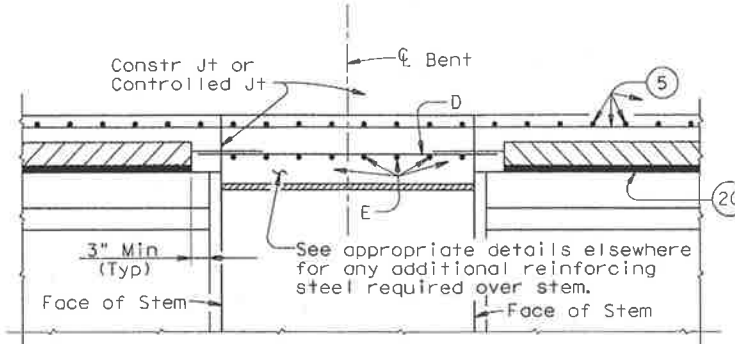
AT SLAB CONTINUOUS OVER CONVENTIONAL INTERIOR BENTS FOR ALL SIMPLE SPAN BMS



AT CONVENTIONAL END DIAPHRAGMS FOR STEEL BMS



AT SLAB OVER ABUTMENT BACKWALL FOR ALL BMS

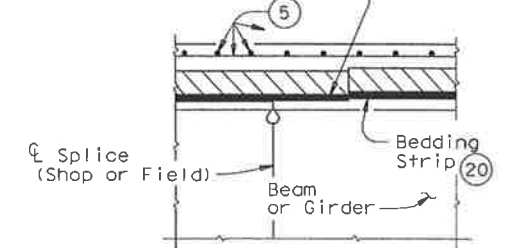


AT SLAB CONTINUOUS OVER INVERTED-T BENTS FOR ALL BMS

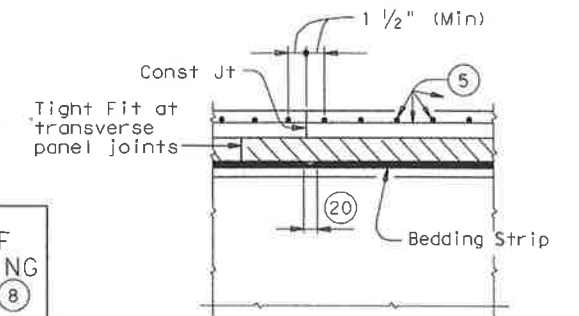
ELEVATIONS AT BEAM ENDS

- 5 See Span Details for top slab reinforcement and clear cover. Longitudinal top slab reinforcement may rest on top of prestressed concrete panels if necessary to maintain clear cover.
- 8 Max Spacing as listed unless otherwise shown.
- 16 For panel placement at ends of dapped end U-Beams, with Skews under 30°, use 2'-9" ± 1" or with Skews 30° thru 45°, use 3'-3" ± 1".
- 17 Location of concrete placement sequence boundaries and bolted field splices should be considered by the contractor in determining panel limits.
- 18 See appropriate thickened slab end details for reinforcing and limits of thickened slab end.
- 19 When flange thickness differs or flange cover plates are used the Contractor must compensate by using different thickness bedding strips to assure that the tops of Precast Panels are within 1/4" of alignment. See Normal Grading Detail for additional notes.
- 20 Butt adjacent bedding strips together with adhesive. Cut v-notches, approx 1/4" deep, in the top of the bedding strips at 8' o.c..

Contractor to field cut bedding strip to adjust for difference in flange thickness.

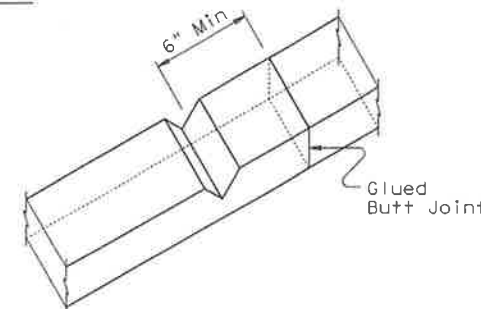


ELEVATION AT SPLICE
(Showing Steel Bms with different flange thickness)



TRANSVERSE PANEL JOINTS AND SLAB CONST JOINTS

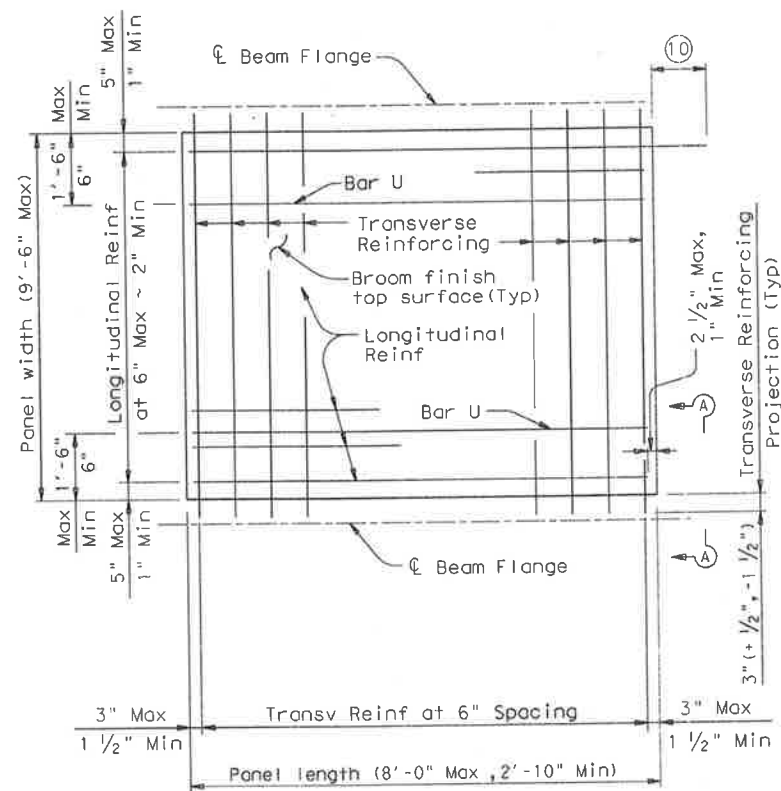
TABLE OF REINFORCING STEEL 8		
BAR	SIZE	Max Spa (in.)
A	#5	~
D	#5	9
E	#5	6
P	#4	18
UP	#4	~
Z	#4	18



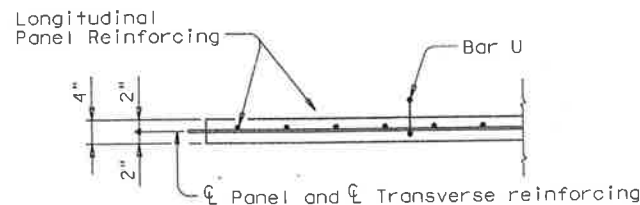
EXAMPLE OF BEDDING STRIPS BUTTED TOGETHER WITH V-NOTCH

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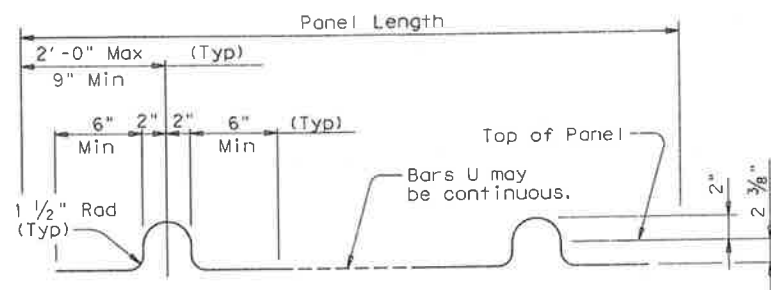
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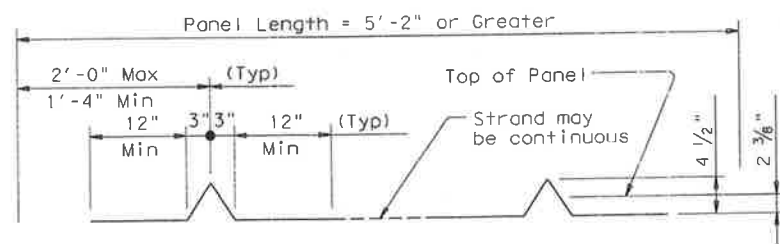
TYPICAL PANEL PLAN



SECTION A-A

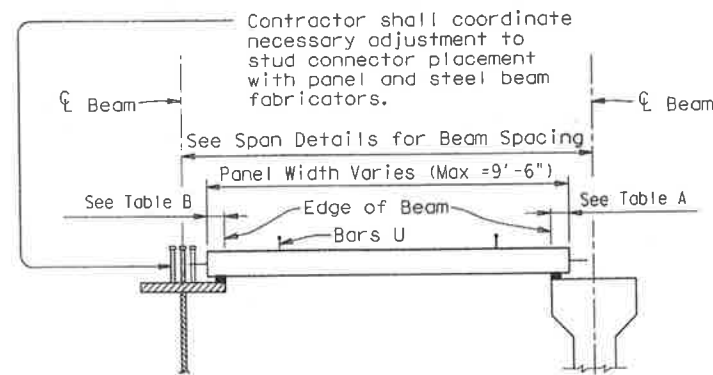


BARS U (#3) (21)



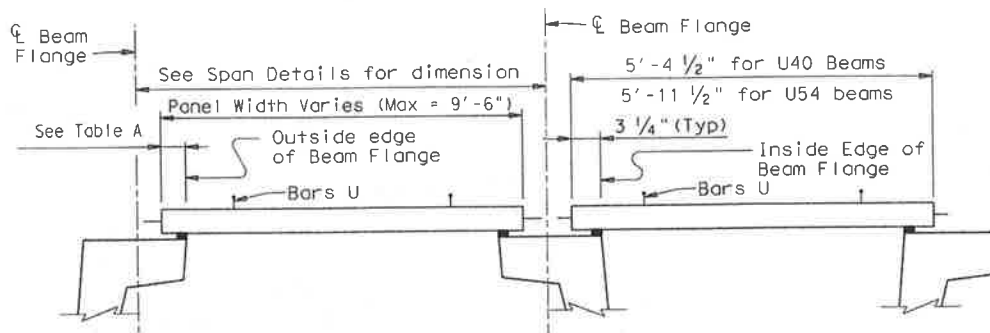
OPTIONAL STRAND FOR BARS U (22)

- (10) At connection with cast-in-place slab, extend longitudinal panel reinforcement 1'-0" (+2", -0") past panel end. Alternatively, provide (#3) x 2'-0" dowels at 6" Max Spacing and extend dowels 1'-0" past panel end.
- (21) Four loops required per panel.
- (22) Four loops required per panel. 3/8" or 1/2" strands may be used.
- (23) Normal dimensions must be used on spans with parallel beams. Maximum and Minimum dimensions apply only to spans with flared beams.
- (24) See Normal Grading Detail on Sht 1 of 4 for lap requirements and bedding strip dimensions. Some laps shown in tables cannot utilize all bedding strip widths.
- (25) One Splice allowed per panel.



STEEL BEAMS

PRESTRESSED CONCRETE I-BEAMS OR I GIRDERS



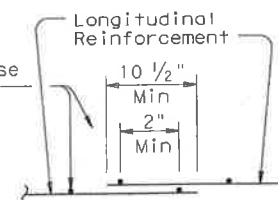
PRESTRESSED CONCRETE U-BEAMS

TYPICAL SECTIONS FOR DETERMINING PANEL WIDTH

Beam Type	Normal (In.)	Min (In.)	Max (In.)
A	3	2 1/2	3 1/2
B	3	2 1/2	3 1/2
C	4	3	4 1/2
IV	6	4	7 1/2
VI	6 1/2	4 1/2	8 1/2
U40	5 1/2	5 1/2	7
U54	5 1/2	5 1/2	7
Tx28-70	6	4	7 1/2

Top Flange Width	Normal (In.)	Min (In.)	Max (In.)
11" to 12"	2 3/4	2 1/2	2 3/4
Over 12" to 15"	3 1/4	3	3 1/4
Over 15" to 18"	4	3	4 3/4
Over 18"	5	3 1/2	6 1/4

No splice required for wires parallel to strands (transverse panel reinforcement)



WELDED WIRE REINFORCEMENT (WWR) SPLICE DETAIL (25)

FABRICATION NOTES:
 All concrete for panels is to be Class H. Use Class H (HPC) concrete for panels if required elsewhere in plans. Release strength f'_{ci} = 4000 psi. Minimum 28 day strength f'_c = 5000 psi.
 Remove laitance from top panel surface.
 A minimum of 90 percent of the top surface area must have the required broom finish.
 Shop drawings for the fabrication of panels will not require the Engineer's approval if fabrication is in accordance with the details shown on this standard.
 A panel layout which identifies location of each panel must be developed by the fabricator. Permanently mark each panel in accordance with the panel layout. A copy of the layout is to be provided to the Engineer.

TRANSVERSE PANEL REINFORCEMENT:
 For panel widths over 5', use 3/8" or 1/2" Dia (270k) prestressing strands with an initial tension of 16.1 kips per strand.
 For panel widths over 3'-6" up to and including 5', use 3/8" or 1/2" Dia (270k) prestressing strands with an initial tension of 16.1 kip per strand. Optionally, #4 Grade 60 reinforcing bars may be used in lieu of prestressed strands.
 For panel widths up to 3'-6", use #4 Grade 60 reinforcing bars (prestressed strands are not allowed).
 Place transverse panel reinforcement at panel centroid and space at 6" Max.

LONGITUDINAL PANEL REINFORCEMENT:
 Any of the following options may be used for longitudinal panel reinforcement:
 1. (#3) Grade 60 reinforcing steel at 6" Max Spacing. No splices allowed.
 2. 3/8" Dia prestressing strands at 4 1/2" Max Spacing (unstressed). No splices allowed.
 3. 1/2" Dia prestressing strands at 6" Max Spacing (unstressed). No splices allowed.
 4. Deformed Welded Wire Reinforcement (WWR) (ASTM A497) providing 0.22 sq in per foot of panel width. Wires larger than D11 not permitted. Provide transverse wires to ensure proper handling of reinforcing. One splice per panel is allowed. See WWR Splice Detail.
 No combination of longitudinal reinforcement options in a panel is allowed.
 Place longitudinal panel reinforcement above transverse panel reinforcement.



PRESTRESSED CONCRETE PANELS
 OPTIONAL DECK DETAILS FOR BEAM SPANS

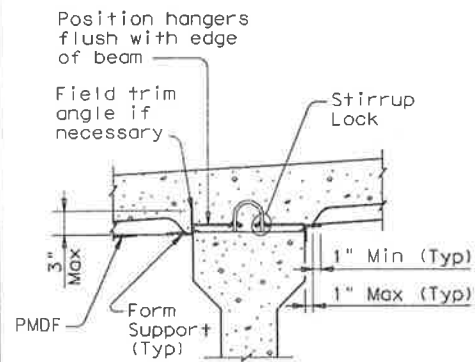
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REVISIONS				S4-12
08-07: Added I-Girders and added note to WWR splice detail.				
COUNTY	CONTROL SECT	JOB	HIGHWAY	

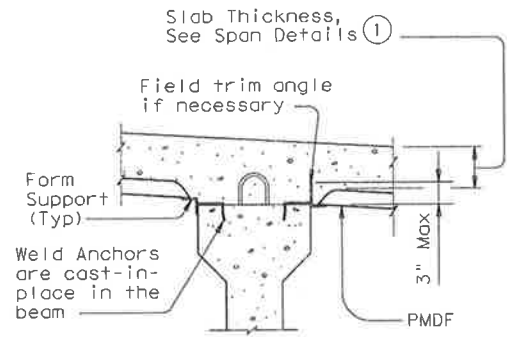
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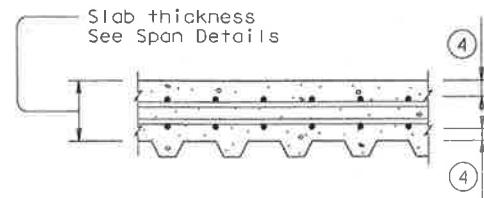
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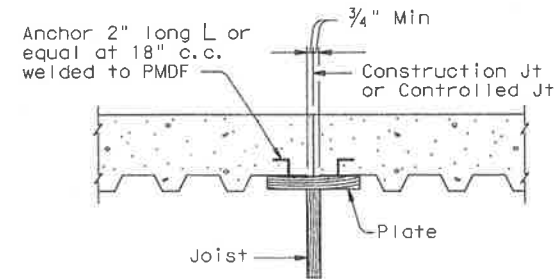
PRESTR CONC I-BEAMS AND I-GIRDERS WITH STIRRUP LOCKS



PRESTR CONC I-BEAMS AND I-GIRDERS WITH WELD ANCHORS



TYP LONGITUDINAL SLAB SECTION

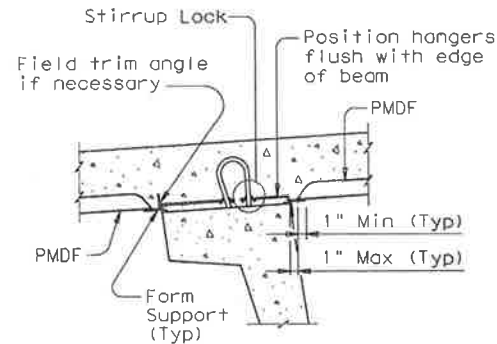


Note: In spans where PMD forms are used, timber forms must be used at construction joints. Adequate provision must be made to support edge of metal form and to provide anchorage of metal form to slab concrete where joined to wood forms.

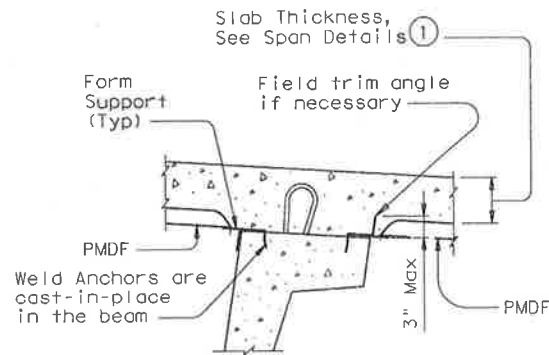
SECTION THRU CONSTRUCTION JOINT

FOR PRESTR CONC U-BEAM BRIDGES:

Size, spacing, and orientation of bottom mat of slab reinforcement must match the top mat of reinforcing shown on the span details except all bottom mat bars are to be #5.



U-BEAMS WITH STIRRUP LOCKS



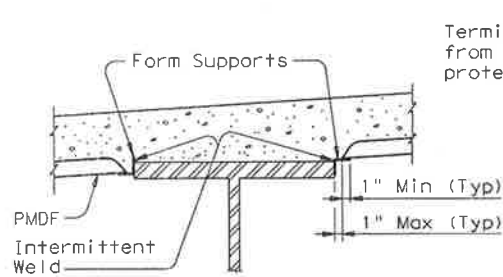
U-BEAMS WITH WELD ANCHORS

Place concrete in direction of lap (3) →

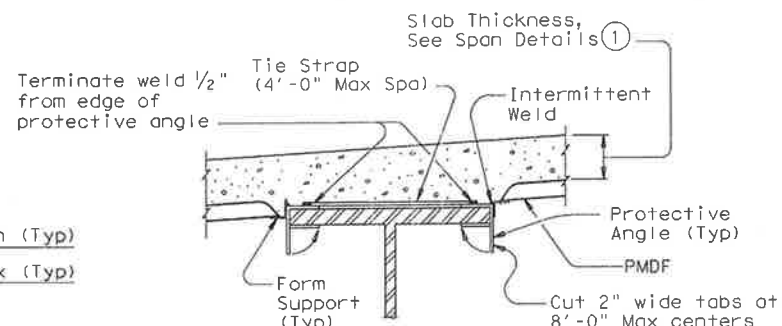


SIDE LAP DETAILS

- (1) Slab thickness minus 5/8" if corrugations match reinforcing bars.
- (2) Welding of form supports to tension flanges will not be permitted. Other methods of providing wind hold down resistance for PMDF in tension flange zones will be considered. At least one layer of sheet metal must be provided between the flange and the weld joint.
- (3) The direction of concrete placement will be such that the upper layer of the form overlap is loaded first.
- (4) See Span details for cover requirements.

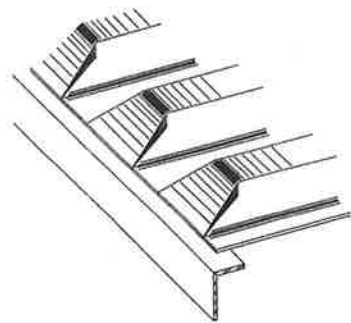


STEEL BEAMS AT COMPRESSION FLANGES

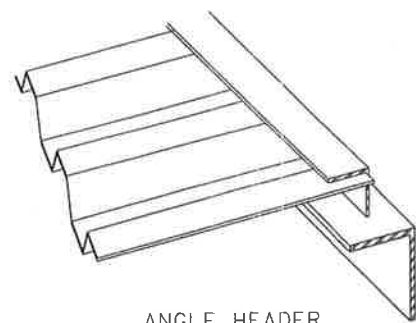


STEEL BEAMS AT TENSION FLANGES (2)

TYPICAL TRANSVERSE SECTIONS



PRECLOSED



ANGLE HEADER

NOTE: This type is to be used for skewed ends only.

TYPES OF END CLOSURES

GENERAL NOTES:

Steel for Permanent Metal Deck Forms (PMDF) and support angles shall conform to ASTM A653, Structural Steel (SS), with coating designation G165. Steel must have a minimum yield strength of 33 ksi. Minimum thickness of PMDF is 20 gage and that of support angles and protective angles is 12 gage. Submit two copies of forming plans for PMDF to the Engineer. These plans must show all essential details of proposed form sheets, closures, fasteners, supports, connectors, special conditions and size and location of welds. These plans must clearly show areas of tension flanges for steel beams and provisions for protecting the tension flanges from welding notch effects by inclusion of separating sheet metal or other positive method. These plans must be designed, signed, and sealed by a licensed professional engineer. Department approval of these plans is not required, but the Department reserves the right to require modifications to the plans. The Contractor is responsible for the adequacy of these plans. The details and notes shown on this standard are to be used as a guide in preparation of the forming plans. All material, labor, tools and incidentals necessary to form a bridge deck with Permanent Metal Deck Forms is considered subsidiary to Item 422, "Reinforced Concrete Slab".

DESIGN NOTES:

As a minimum, PMDF and support angles must be designed for the dead load of the form, reinforcement and concrete plus 50 psf for construction loads. Flexural stresses due to these design loads must not exceed 75 percent of the yield strength of the steel. Allowable stress for weld metal must be 12,400 psi. Maximum deflection under the weight of forms, reinforcement and concrete or 120 psf, whichever is greater, shall not exceed the following:

1/180 of the form design span, but not more than 0.50", for design spans of 10' or less.

1/240 of the form design span, but not more than 0.75", for design spans greater than 10'.

The form design span must not be less than the clear distance between beam flanges, measured parallel to the form flutes, minus 2".

CONSTRUCTION NOTES:

Form sheets must not be permitted to rest directly on the top of beam flanges. Form sheets must be securely fastened to form supports and must have a minimum bearing length of one inch at each end. Form supports must be placed in direct contact with beam flanges.

All attachments must be made by permissible welds, screws, bolts, clips or other means shown on the the forming plans. All sheet metal assembly screws must be installed with torque-limiting devices to prevent stripping. Only welds or bolts must be used to support vertical loads.

Welding and welds must be in accordance with the provisions of Item 448, "Structural Field Welding", pertaining to fillet welds. All welds must be made by a qualified welder in accordance with Item 448.

All permanently exposed form metal, where the galvanized coating has been damaged, must be thoroughly cleaned and repaired in accordance with Item 445, "Galvanizing". Minor heat discoloration in areas of welds need not be touched up.

Flutes must line up uniformly across the entire width of the structure where main reinforcing steel is located in the flute.

Construction joints will not be permitted unless shown on the plans. The location of and forming details for any construction joint used must be shown on the forming plans. Forms below a construction joint must be removed after curing of the slab.

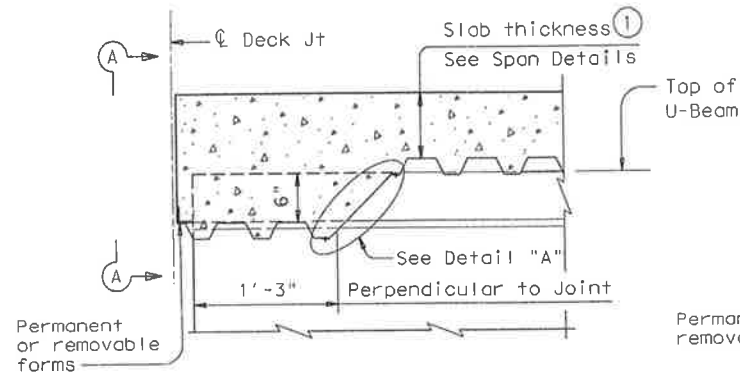
A sequence for uniform vibration of concrete must be approved by the Engineer prior to concrete placement. Attention must be given to prevent damage to the forms, yet provide proper vibration to prevent voids or honeycomb in the flutes and at headers and/or construction joints.

PERMANENT METAL DECK FORMS

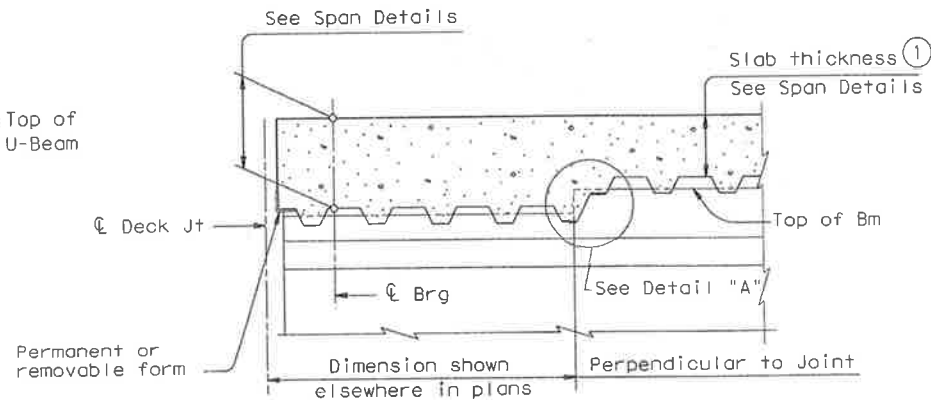
PMDF

FILE: pmdfstel.dgn	DN: TxDOT	CK: TxDOT	DN: TxDOT	CK: TxDOT
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REVISIONS			S4-13	
08-2007: Added I-Girders.	COUNTY	CONTROL	SECT	JOB
				HIGHWAY

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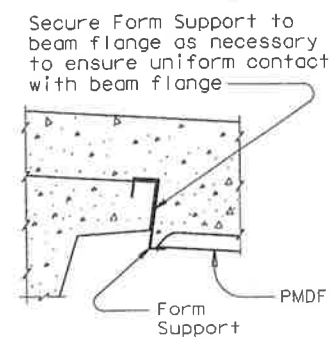


AT THICKENED SLAB END FOR U-BEAMS

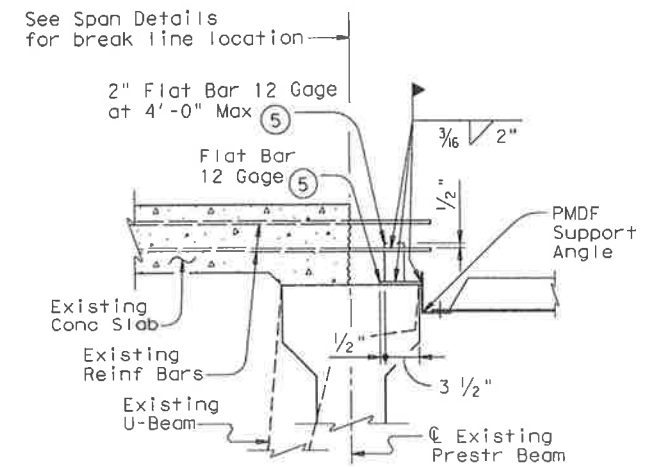


AT THICKENED SLAB END FOR PRESTRESSED I-BEAMS, I-GIRDERS AND STEEL BEAMS

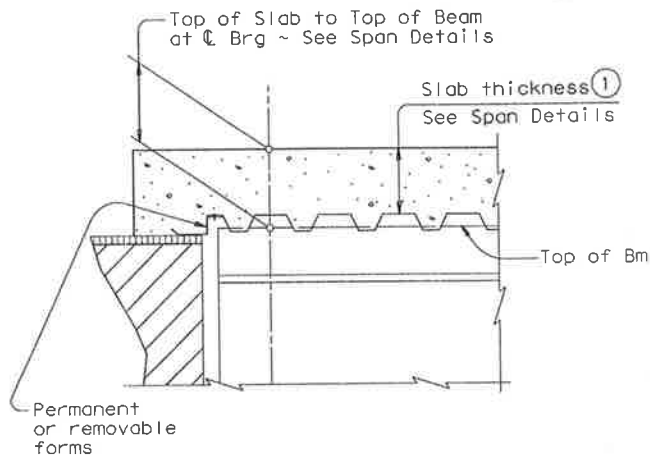
Showing I-Beam block-out. No block-out for I-Girders or Steel Beams.



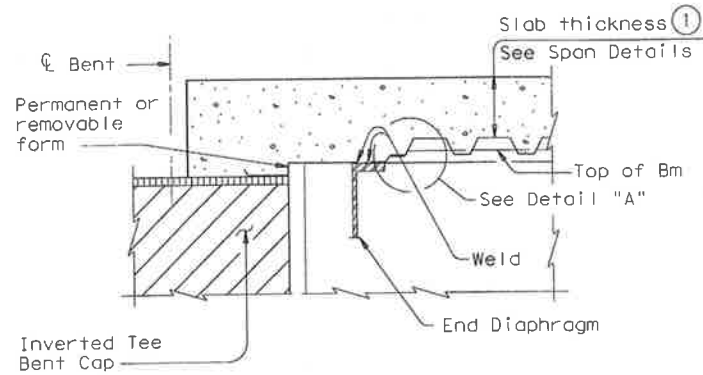
SECTION A-A



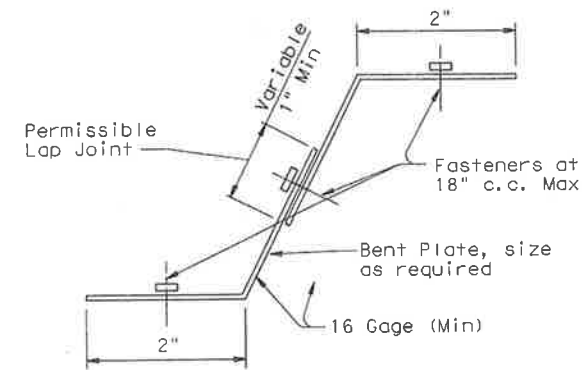
SHOWING PRESTRESSED CONCRETE I-BEAMS, I-GIRDERS AND U-BEAMS



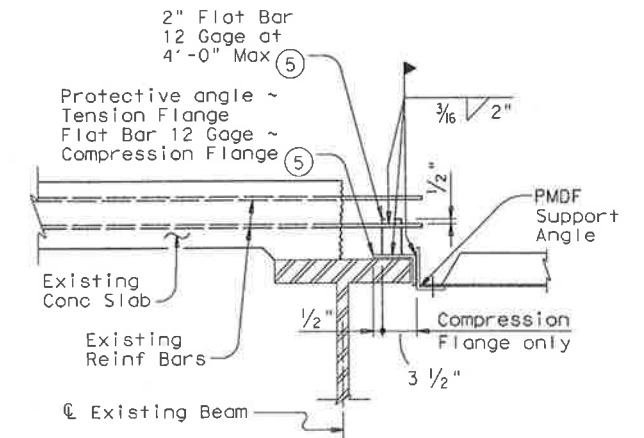
AT SLAB OVER ABUT BKWL OR INV TEE STEM FOR CONC BEAMS WITHOUT THICKENED SLAB END



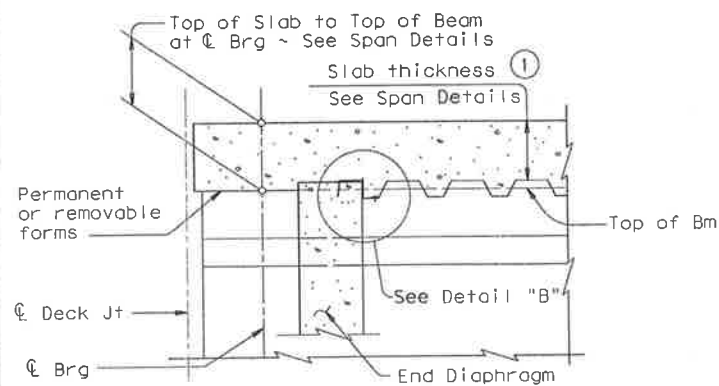
AT SLAB OVER INV TEE STEM FOR STEEL BEAMS WITHOUT THICKENED SLAB END



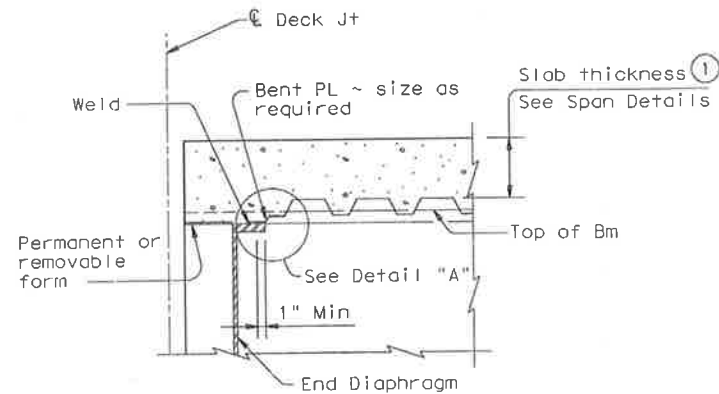
DETAIL "A"



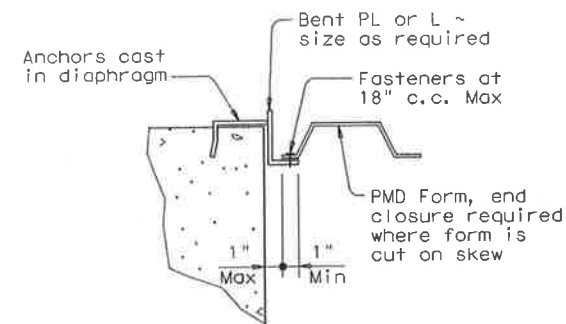
SHOWING STEEL BEAMS



AT CONC END DIAPHRAGM FOR PRESTRESSED I-BEAMS AND STEEL BEAMS



AT END DIAPHRAGM FOR STEEL BEAMS WITHOUT THICKENED SLAB END



DETAIL "B"

- 1 Slab thickness minus 5/8" if corrugations match reinforcing bars
- 5 Minimum yield stress of 12 Gage bars shall be 40 ksi

DETAILS AT ENDS OF BEAMS

WIDENING DETAILS

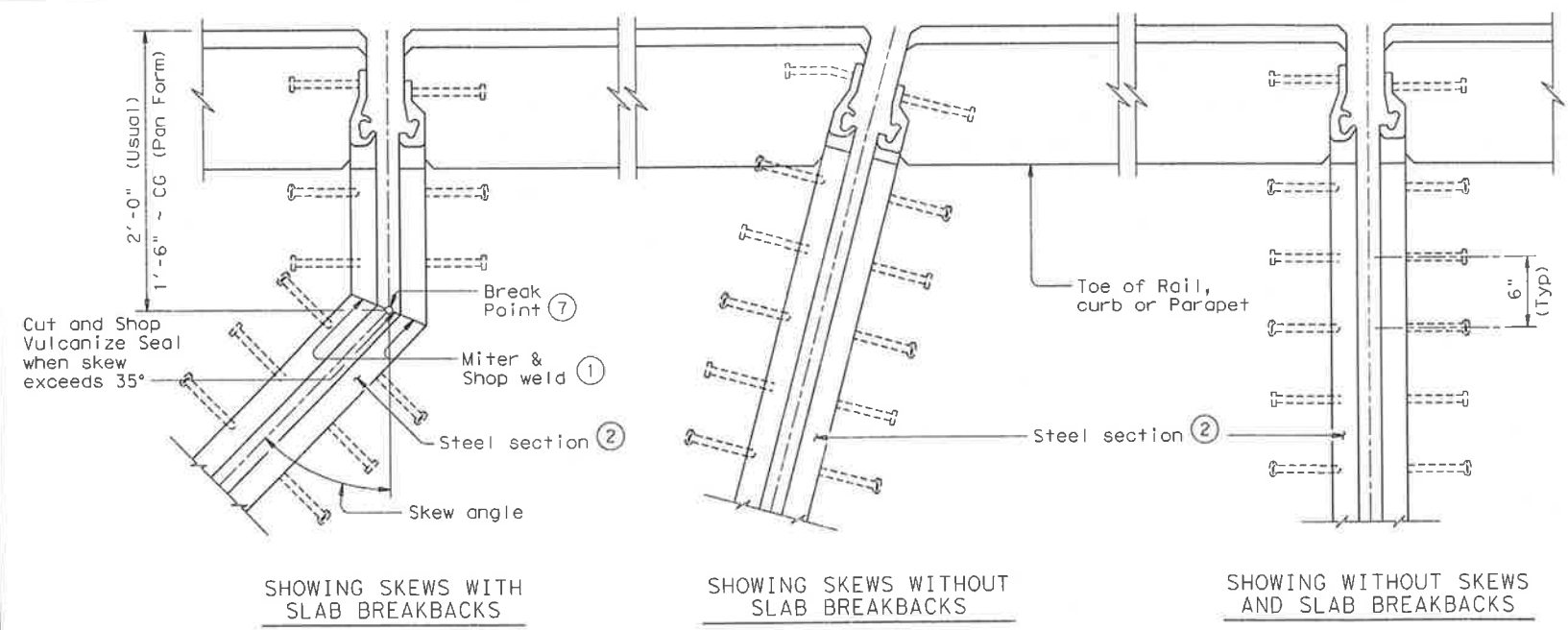
PERMANENT METAL DECK FORMS

PMDF

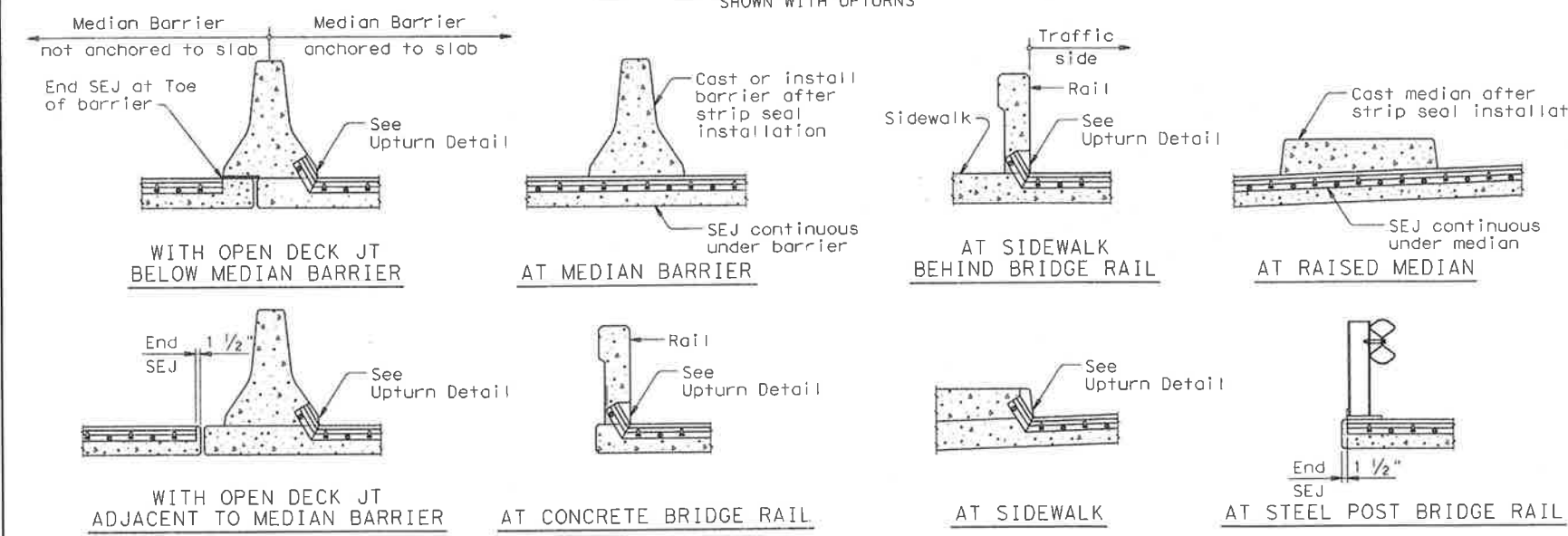
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REVISIONS			S4-14	
08-2007: Added I-Girders.	COUNTY	CONTROL	SECT	JOB
				HIGHWAY

LEVELS DISPLAYED

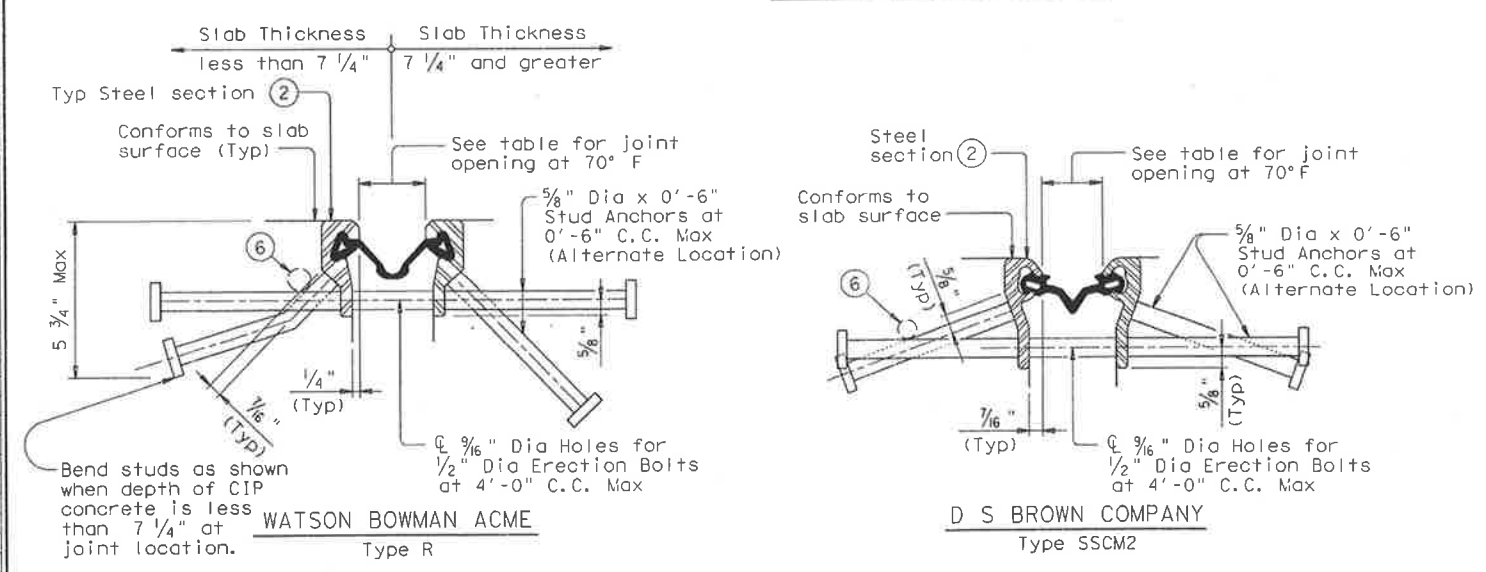
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PLANS OF END CONDITIONS
SHOWN WITH UPTURNS

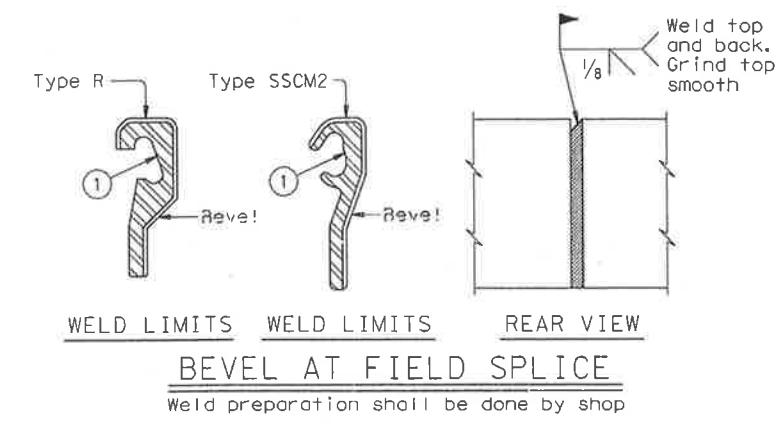


TYPICAL SECTIONS ⑤



SECTIONS THRU SEALED EXPANSION JOINT

TABLE OF SEALED EXPANSION JOINT INFORMATION					
MANUFACTURER	STEEL SECTION ②	NEOPRENE STRIP SEAL			
		4" JOINT		5" JOINT	
		Seal Type	Joint Opening ③	Seal Type	Joint Opening ③
D. S. Brown	Type SSCM2	A2R-400	1 3/4"	A2R-XTRA	2"
Watson Bowman Acme	Type R	SE-400	1 3/4"	SE-500	2"



FABRICATION NOTES:
Corresponding sections of Sealed Exp Jts shall be temporarily shop assembled, checked for fit, and match marked for shipment.
Erection holes shall be punched so as to line up when Sealed Exp Jts are in their final position.
Weld studs in accordance with AWS D1.1.
The neoprene seal shall be continuous and included in the price bid for Sealed Exp Jt.
Steel sections shall be shipped in convenient lengths of 24'-0" Max and 10'-0" Min unless otherwise necessary for stage construction or widenings. One shop splice will be permitted in each shipping length provided no piece is less than 2'-0" in length and sufficient studs are added to limit the stud to shop or field splice distance to 2" Min and 4" Max.
Shop and field splices shall be made by butt welding with areas in contact with seal to be ground smooth.
Paint portions of steel sections not in contact with concrete with the primer specified for System II paint.
Shop drawings for the fabrication of Sealed Expansion Joints will not require the Engineer's approval if fabrication is in accordance with the details shown on this standard.
An SEJ Layout which identifies location of each steel section shall be developed. Permanently mark each steel section in accordance with the SEJ Layout.

CONSTRUCTION NOTES:
The Contractor shall arrange for securing the Sealed Exp Jt in position, and placing to the proper grade and alignment by welding braces to adjacent reinf steel, to prestressed beam stirrups, or to anchors cast in concrete diaphragms. Cost of temporary bracing is to be included in the price bid for Sealed Exp Jt.
After bracing and welding the steel section, remove the erection bolts and spacers and seal erection holes before placing concrete.
Seal cavity shall be cleaned and prepared for seal installation as per the manufacturer's suggested installation procedures.

GENERAL NOTES:
Sealed Exp Jts shall be provided in the size and at locations shown on plans.
Minimum slab and overhang thickness required for the use of SEJ-A is 6 1/2".

- Remove all burrs which will be in contact with seal prior to making splice.
- Shape of steel section shown is typical. Variations in sections must be approved by the Engineer.
- These openings are also the recommended minimum installation openings.
- Reduce for sidewalk or parapet heights less than 6".
- Other conditions affecting the joint profile should be noted elsewhere.
- Transverse bars in conflict with SEJ studs in either the bridge slab or approach slab shall be moved to rest at the junction of the studs.
- See Span details for location of break point.



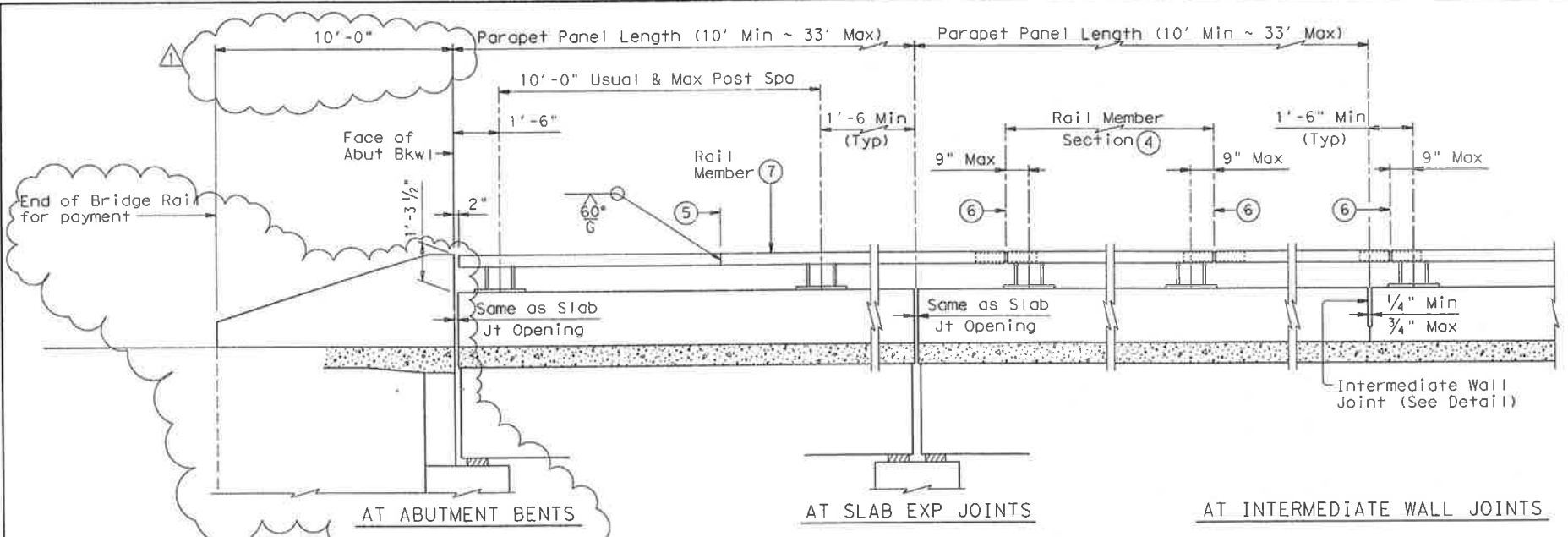
SEALED EXPANSION JOINT TYPE A WITHOUT OVERLAY

SEJ-A

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COUNTY	CONTROL SECT	JOB	HIGHWAY	

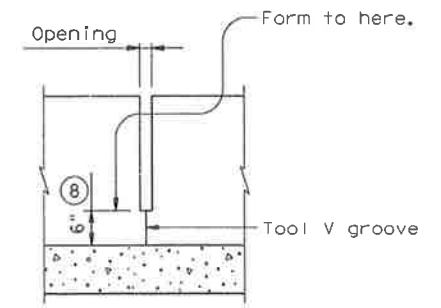
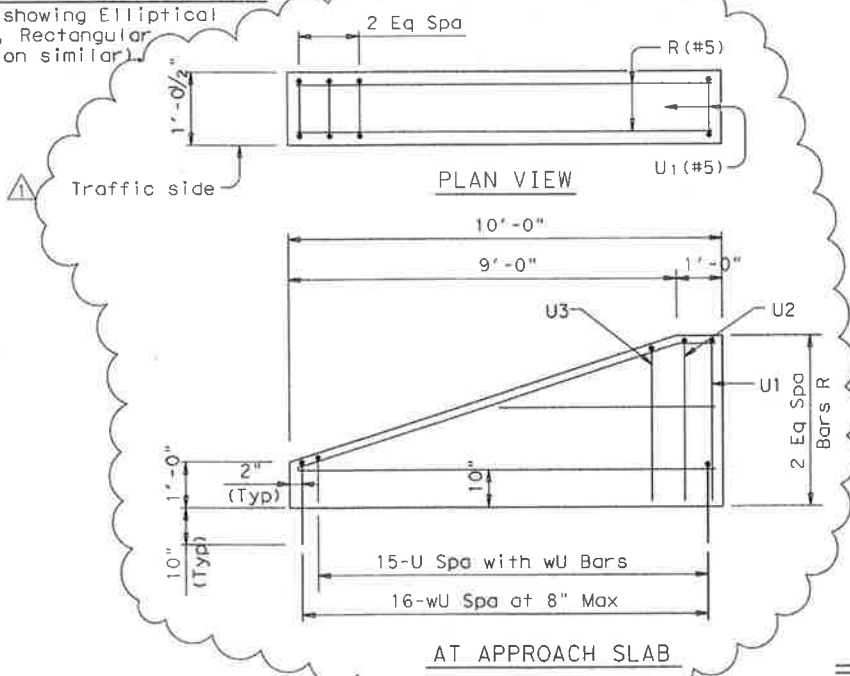
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LEVELS DISPLAYED



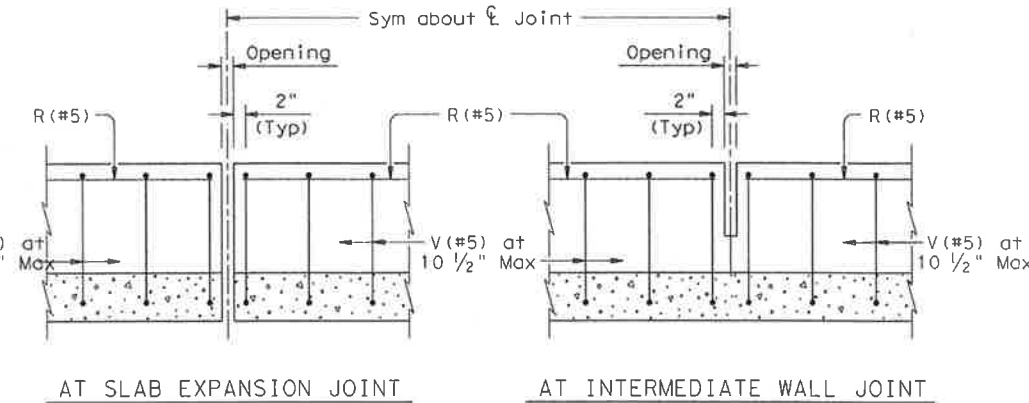
ROADWAY ELEVATION OF RAIL

(Rail Member showing Elliptical Tube Option, Rectangular Tube Option similar)



INTERMEDIATE WALL JOINT DETAIL

Note: Provide intermediate wall joints over all slab construction joints, over interior supports on continuous units, and at equal intervals in between as necessary to maintain a 33' maximum length of unbroken wall. Location independent of pipe rail splices.



ELEVATION SHOWING TYPICAL REINFORCING PLACEMENT

- ① Showing TL-3 Splice location, TL-2 Splice location is 1'-0".
- ② ξ Splice ~ Metal Beam Guard Fence Transitions must be attached to the bridge rail and extended along the embankment unless otherwise shown in the plans.
- ③ Terminal Connectors and associated hardware are to be paid for under the Item "Metal Beam Guard Fence".
- ④ Rail member sections must have at least two posts but not more than four.
- ⑤ One shop splice per rail member section is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
- ⑥ ξ Exp Jt or Splice Jt as required.
- ⑦ Unless directed otherwise by the Engineer, the fabricator may use the rectangular tube in lieu of the elliptical tube for the rail member.
- ⑧ Increase 2" for structures with overlay.
- ⑨ Bolts must be of sufficient length to extend 1/2" to 3/4" beyond nut.
- ⑩ Bolt recesses are only required when pedestrian sidewalks are adjacent to back of rail.
- ⑪ 4 additional Bars R(#5) 3'-8" in length must be placed inside Bars U(#5) and centered 2'-0" from end of rail when Terminal Connections are required. Field bend as needed.

Modifications ESC 04/29/10
 ⚠ Revised End Rail, Eliminate Connections, and modified material notes.

SHEET 1 OF 3



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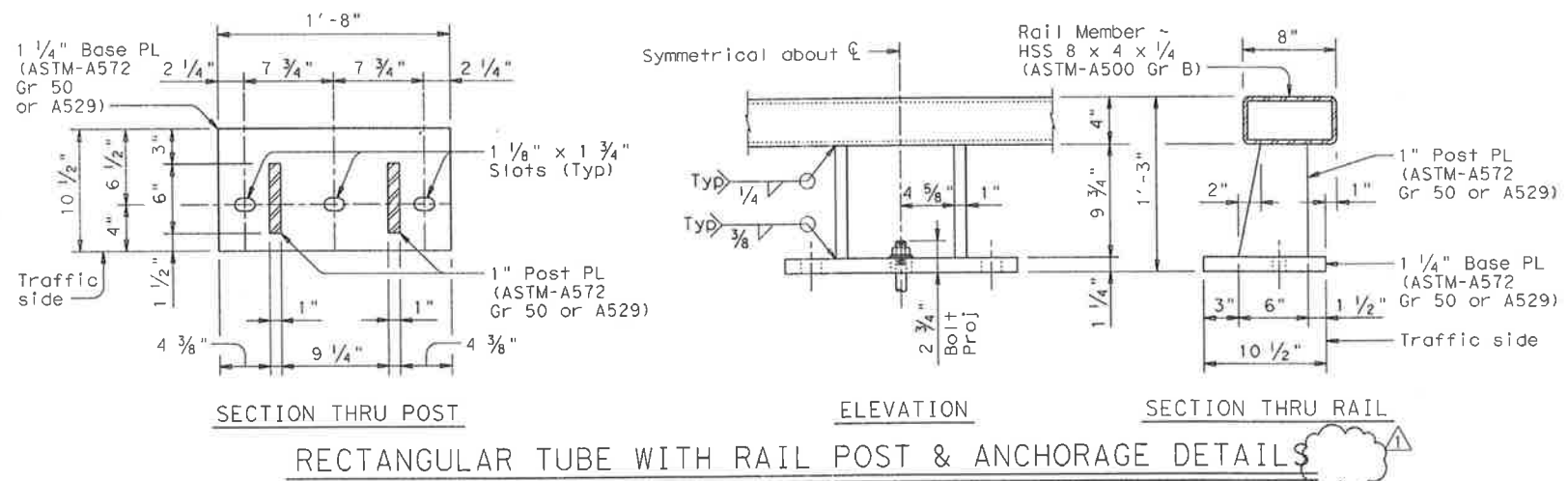
TRAFFIC RAIL

TYPE T401 (MOD)

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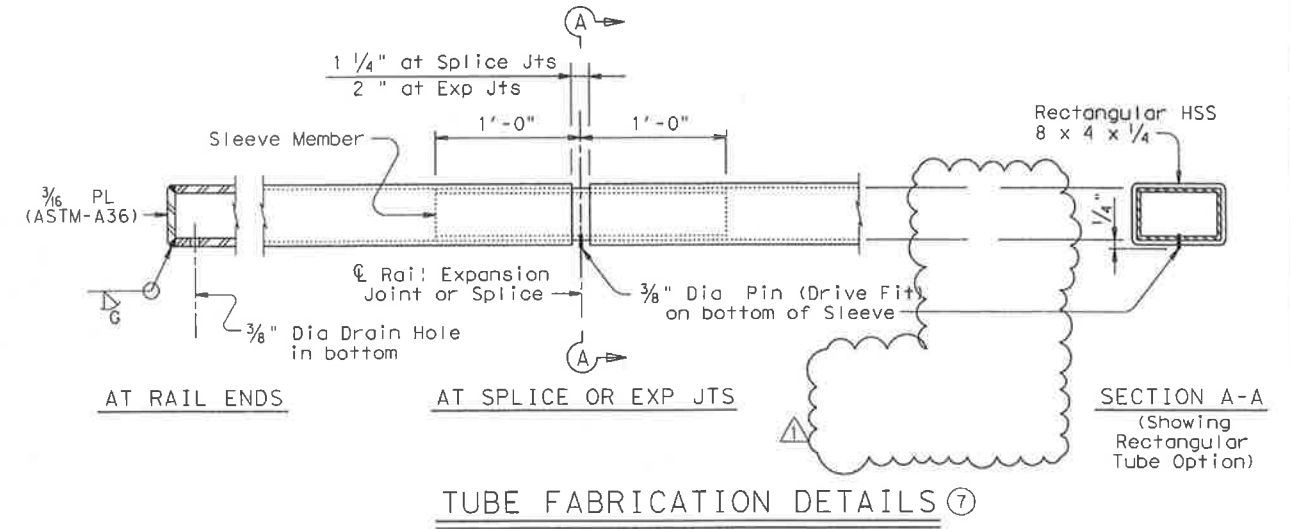
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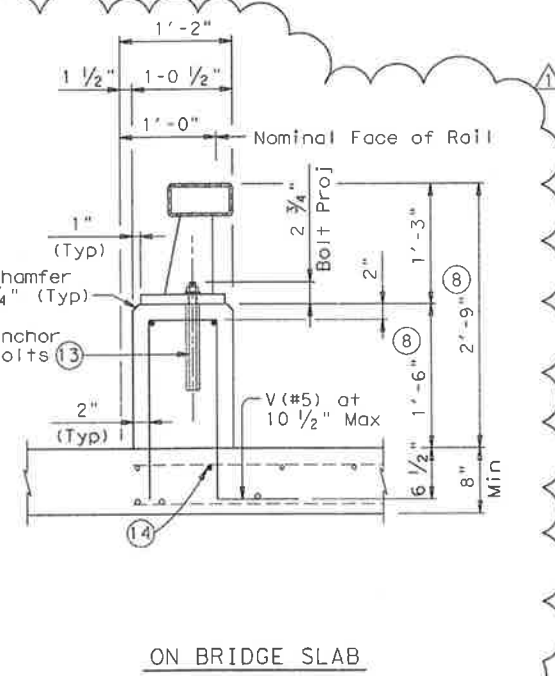
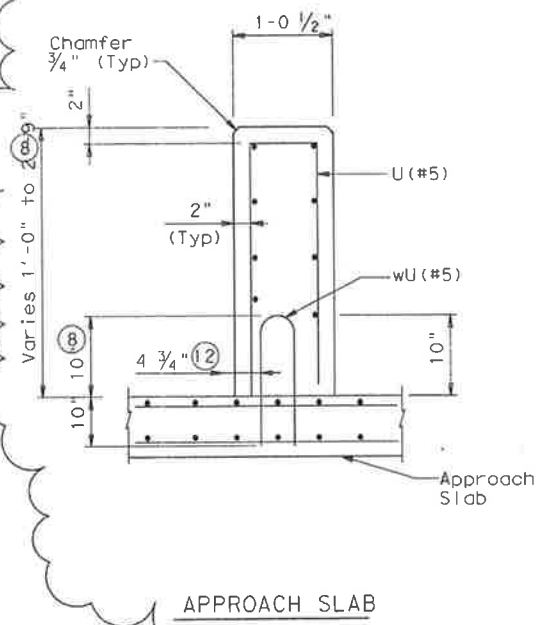
RECTANGULAR TUBE WITH RAIL POST & ANCHORAGE DETAILS



04.29.10
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TUBE FABRICATION DETAILS



SECTIONS THRU RAIL

- (8) Increase 2" for structures with overlay.
- (12) 5 1/2" when vertical reinforcing has closer clear cover over horizontal reinforcing in abutment wingwalls or retaining walls on traffic side of wall.
- (13) See "General Notes" for anchor bolt information.
- (14) Top longitudinal slab bar may be adjusted laterally 3" plus or minus to tie reinforcing.

Modifications	ESC	04/29/10
Revised End Rail, Eliminate Connections, and modified material notes		

SHEET 2 OF 3



TRAFFIC RAIL

TYPE T401 (MOD)

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COUNTY	CONTROL	SECT	JOB	HIGHWAY
				S4-17

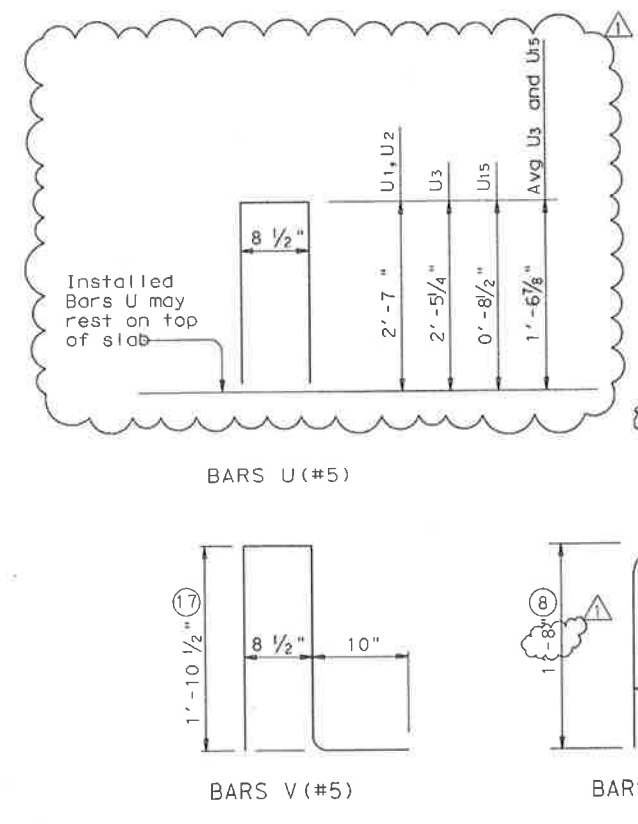
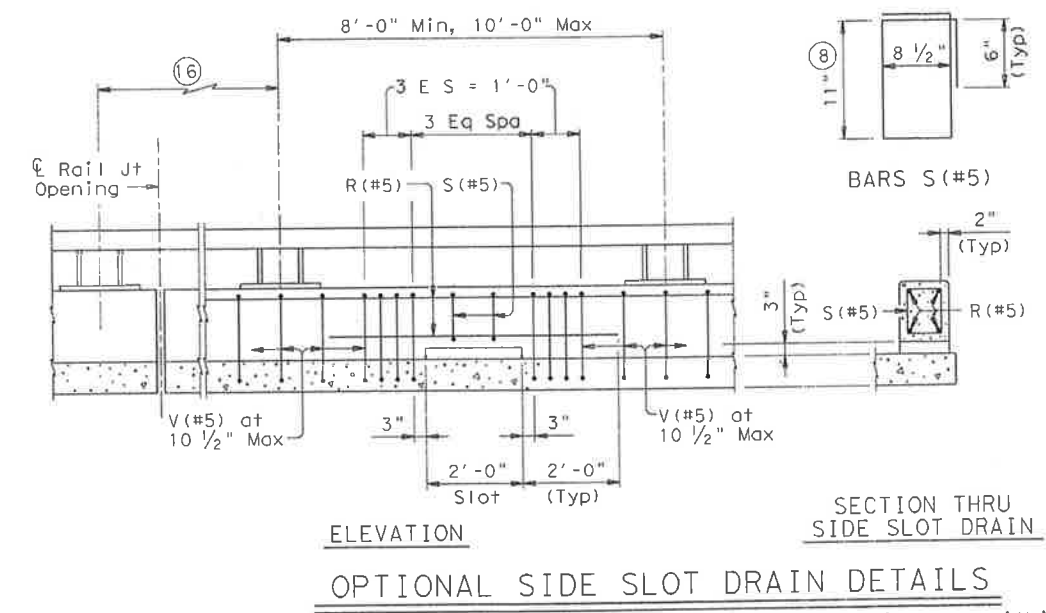
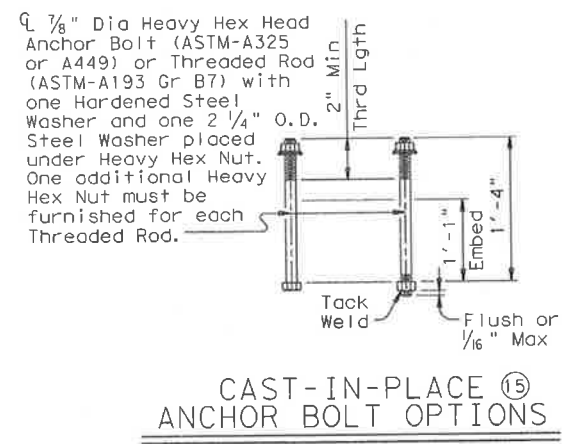
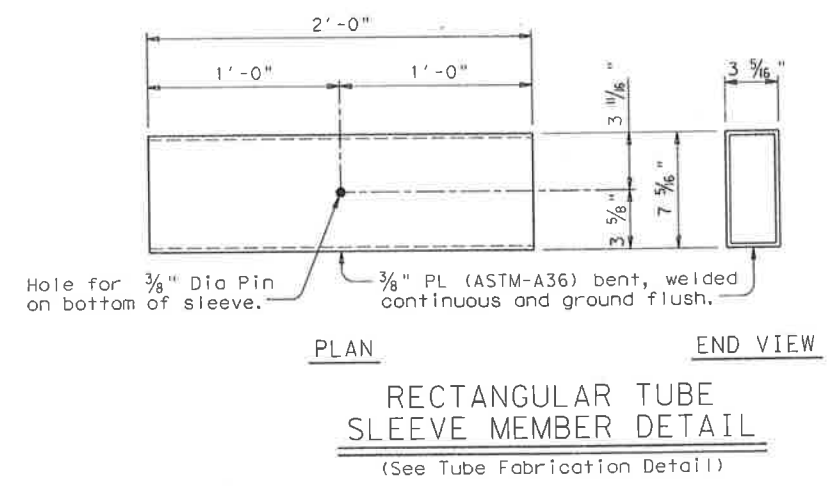
	RADIUS TO FACE OF RAIL	MAX CHORD LENGTH	CONSTRUCT OR FABRICATE
Rail Members	Over 2800'	29'-0"	Straight rail sections
	Over 1400' thru 2800'	14'-6"	To required radius (18)
	Over 700' thru 1400'	7'-3"	or to chords shown (18)
	Thru 700'	Zero	To required radius (18)

- (8) Increase 2" for structures with overlay.
- (15) See "General Notes" for anchor bolt information.
- (16) Slots are not allowed in areas where there is a joint in the concrete parapet between rail post.
- (17) Length shown for 6 1/2" Min bar embedment with no overlay. Adjust as required.
- (18) Shop drawings for approval required for tubular steel sections.

CONSTRUCTION NOTES:
 This rail may be slip-formed if approved by the Engineer when epoxy adhesive anchor bolts are used.
 Cap all open ends of tubular steel sections.
 At the contractor's option anchor bolts may be cast with the parapet (See Cast-in-Place Anchor Bolt Options).
 Slip-forming parapet is not allowed if anchor bolts are cast with parapet wall.
 Rail parapet must be plumb unless otherwise approved by the Engineer. Steel posts must be square to the top of parapet. Use epoxy mortar under post base plates if gaps larger than 1/16" exist.
 Rail member sections must have at least two posts but not more than four.
 Round or chamfer all exposed edges of steel components 1/16" by grinding prior to galvanizing.

MATERIAL NOTES:
 Galvanize all steel components except reinforcing steel.
 Anchor bolts must be 7/8" Dia ASTM A193 Grade B7 fully threaded rods with heavy hex nuts, one hardened washer and one (2 1/4" OD) washer each. Embed threaded rods into parapet wall with a Type III Class C epoxy anchorage system. Minimum embedment depth is 8". Anchorage system chosen must be able to achieve an ultimate tensile resistance of 34 kips per bolt. The Contractor must provide evidence to the Engineer that this can be achieved. Evidence of adequate tensile resistance can be based on the manufacturer's published values of ultimate tensile strength (anchor spacing and edge distance must be accounted for). Anchor installation, including hole size, drilling, and clean-out, must be in accordance with the manufacturer's instructions.
 Optional cast-in-place anchor bolts must be 7/8" Dia ASTM A325 or A449 bolts (or A193 Gr B7 threaded rods with one tack welded heavy hex nut each) with one heavy hex nut and one hardened steel washer plus one 2 1/4" O.D. steel washer at each bolt. Nuts must conform to A563 requirements.
 Use Class "C" concrete. Use Class "C" (HRC) if required elsewhere. Chamfer all exposed corners. Concrete color shall be Elephant Gray.
 Reinforcing steel must be Grade 60.
 Epoxy coat all rail reinforcement if slab bars are epoxy coated.

GENERAL NOTES:
 This rail has been evaluated to be of equal strength to the T4 (A) railing, which has been crash tested to meet NCHRP Report 350 TL-3 criteria. This rail can be used for design speeds of 50 mph and greater when a TL-3 rated guard fence transition is used. When a TL-2 rated guard fence transition is used, this rail can only be used for design speeds of 45 mph and less.
 This railing cannot be used on bridges with expansion joints providing more than 5" movement.
 Rail anchorage details shown on this standard may require modification for select structure types. See appropriate details elsewhere in plans for these modifications.
 Erection drawings showing panel lengths, rail post spacing, and anchor bolt setting must be submitted to the Engineer for approval.
 Average weight of railing with no overlay: 263 plf total
 234 plf (Conc)
 29 plf (Steel).



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Modifications	ESC	04/29/10
Revised End Rail, Eliminate Connections, and modified material notes		

SHEET 3 OF 3

Texas Department of Transportation
 Bridge Division

TRAFFIC RAIL

TYPE T401 (MOD)

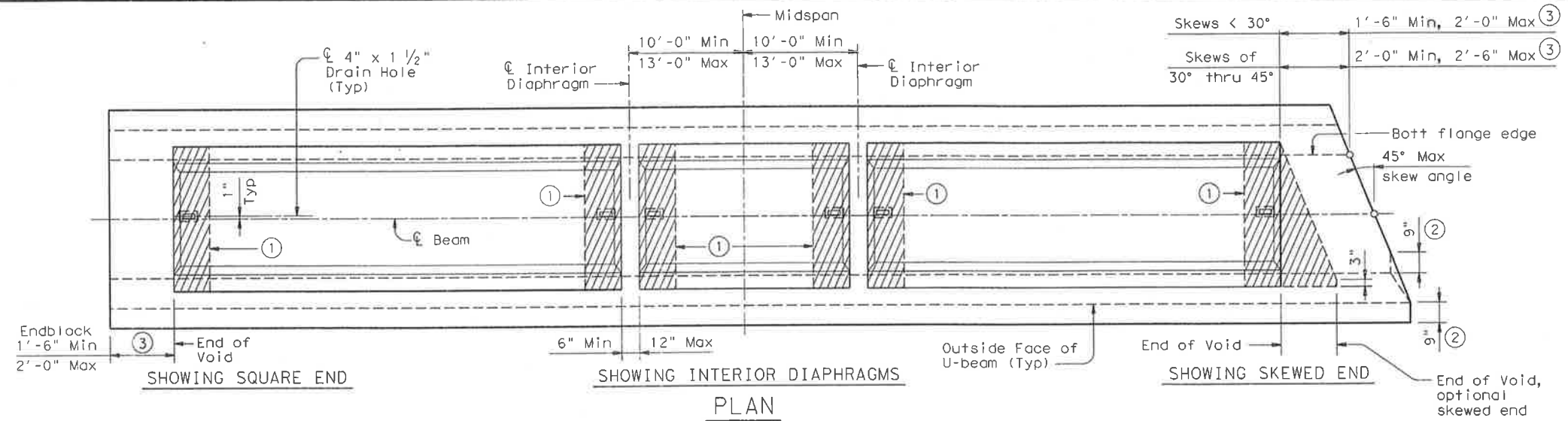
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				HIGHWAY

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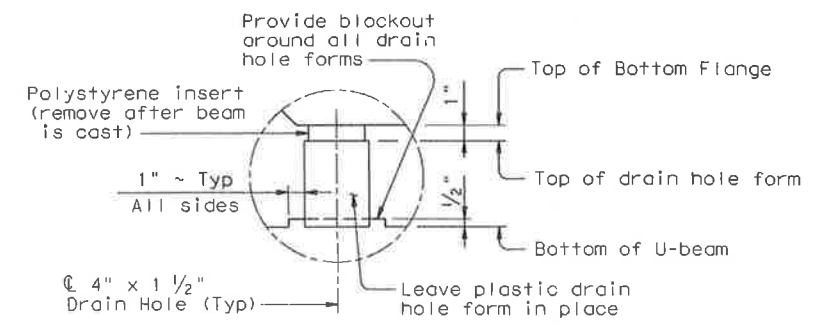
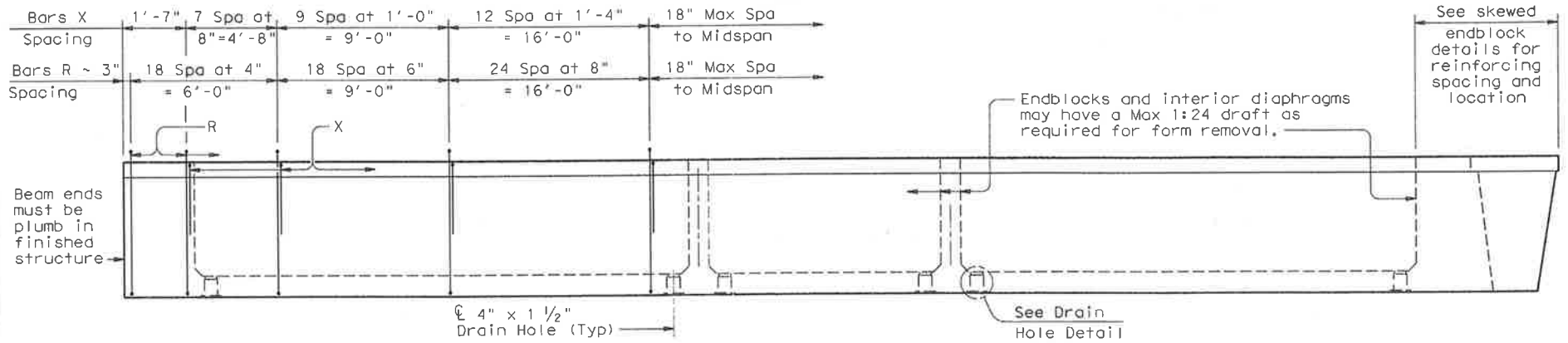
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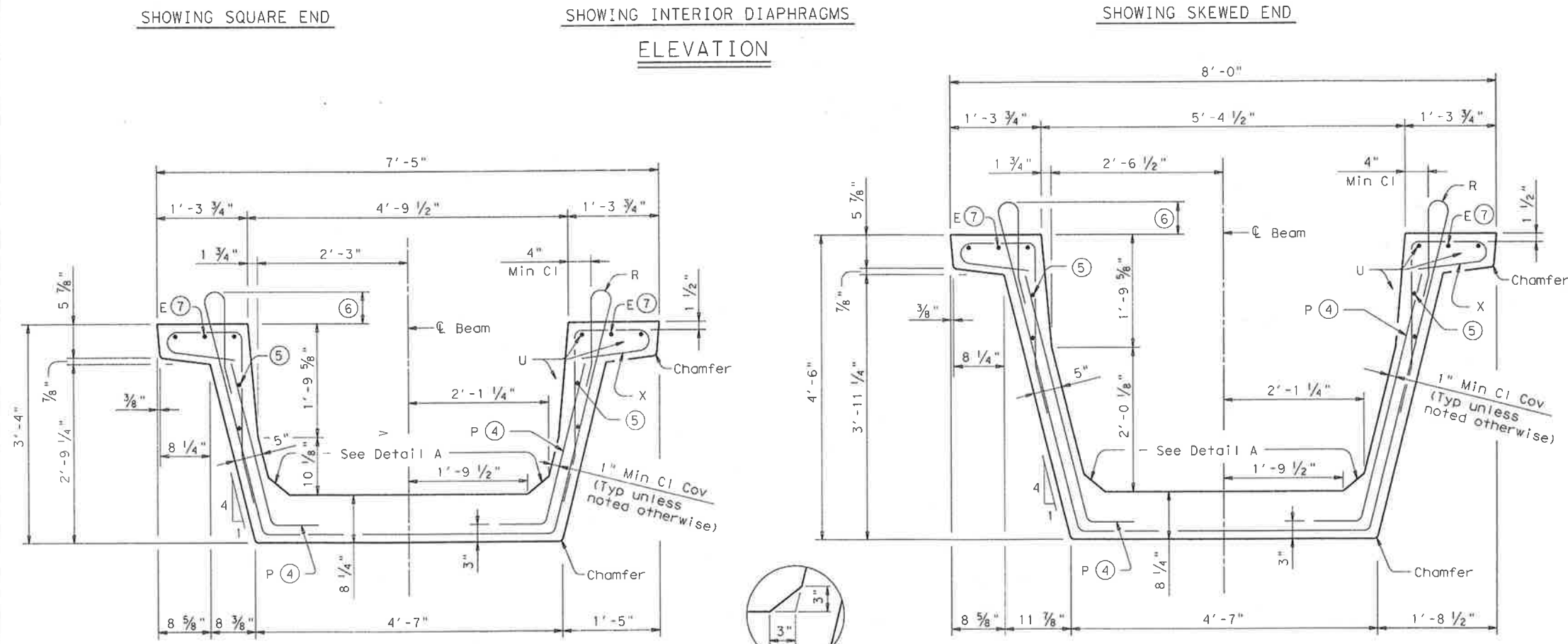
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- ① Polystyrene may be used at ends of inside forms (12" maximum in length except at optional skewed ends) and left in place. Offset drain holes if not removing polystyrene.
- ② For skews greater than 15 degrees, breakback both top and bottom flanges 9" as shown. Provide a smooth transition between top and bottom flange breakbacks. Adjust reinforcement as necessary to maintain minimum clear cover.
- ③ Minimum and maximum endblock dimensions apply throughout the endblock depth. This dimension control applies to the narrowest portion of endblocks at skewed beam ends.
- ④ Required for beams that will support cantilevered slab overhang formwork and exterior beams only.
- ⑤ Optional Bar U for beams requiring Bars P.
- ⑥ 5 1/2" for normal Bars R, 5 1/2" - 6 1/2" Max for Bars R at skewed beam ends.
- ⑦ Provide Bars E (#5 x 15'-0") at beam ends.



DRAIN HOLE DETAIL
Provide 1/4" clear between strands and drain hole form.



Beam Type	Y _t (in.)	Y _b (in.)	Area (in. ²)	I (in. ⁴)	Weight (plf)⑧
U40	23.66	16.30	979.9	183,108	1021
U54	31.58	22.36	1120.0	403,020	1167

⑧ Weights shown assume a concrete density of 150 pcf and are for the typical section only. These weights do not include weight of diaphragms or endblocks.

LEVELS DISPLAYED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
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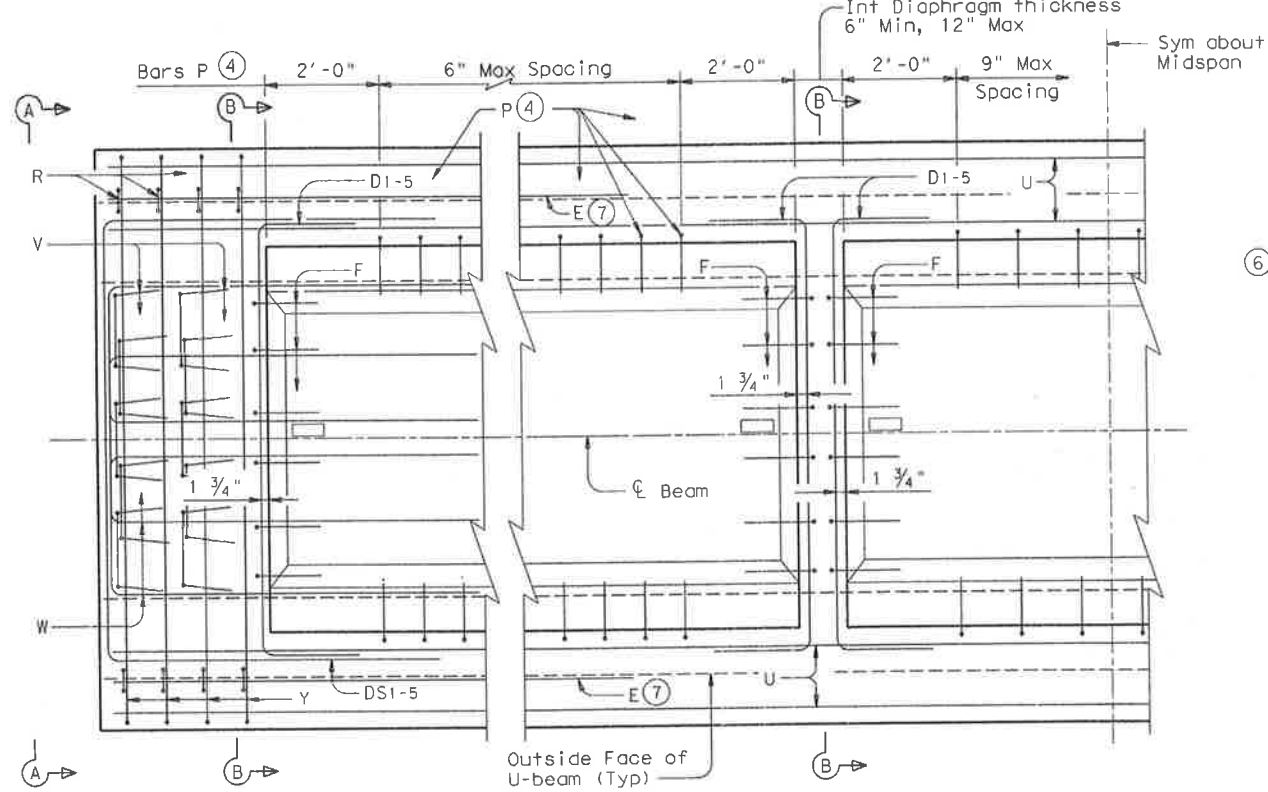
**PRESTRESSED CONCRETE
U-BEAM DETAILS**

UBD

FILE: ubstd01.dgn	DN: TxDOT	CK: TxDOT	DN: TxDOT	CK: TxDOT
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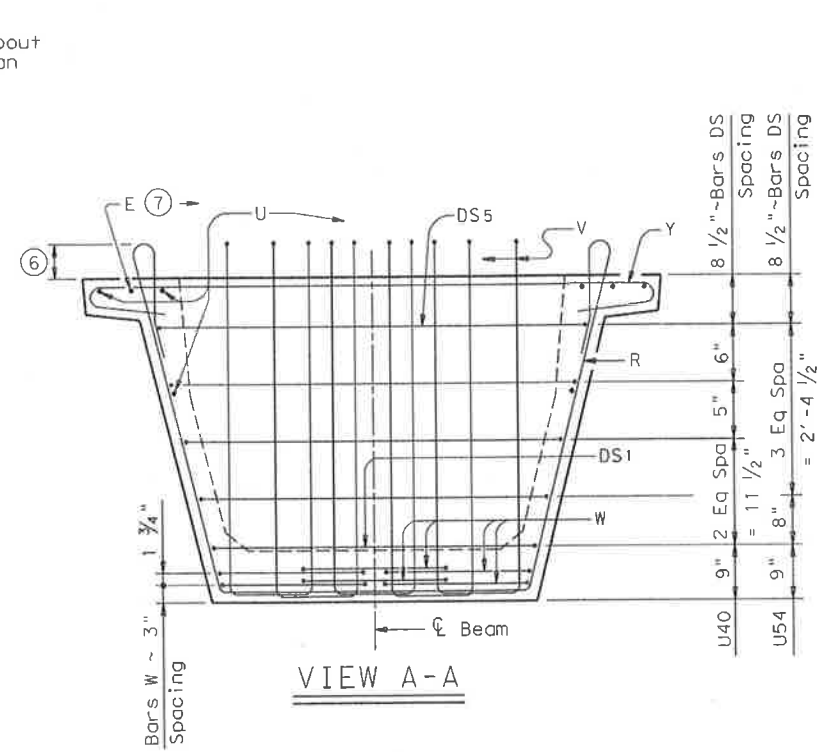
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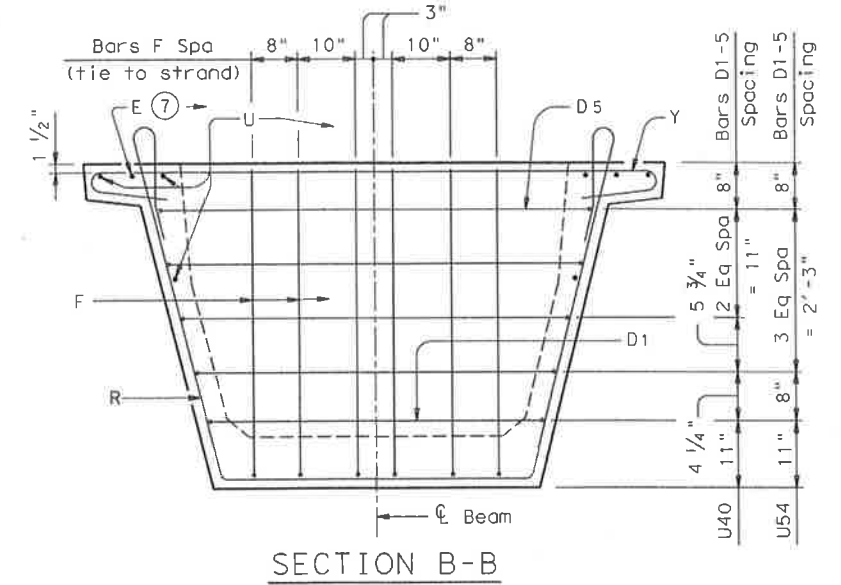
SHOWING SQUARE END

SHOWING INTERIOR DIAPHRAGM

PLAN

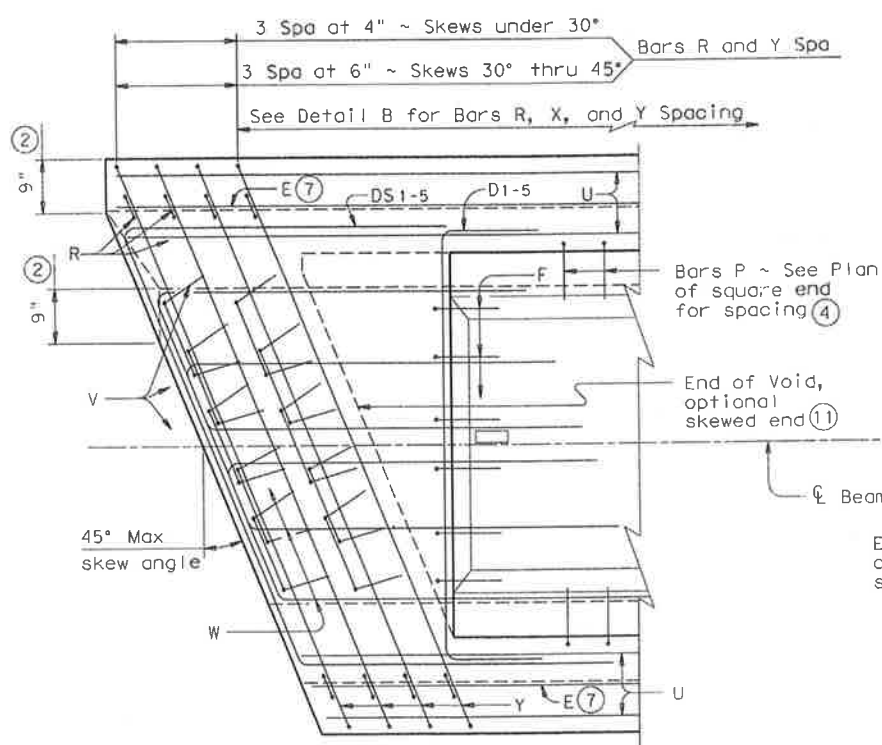


VIEW A-A



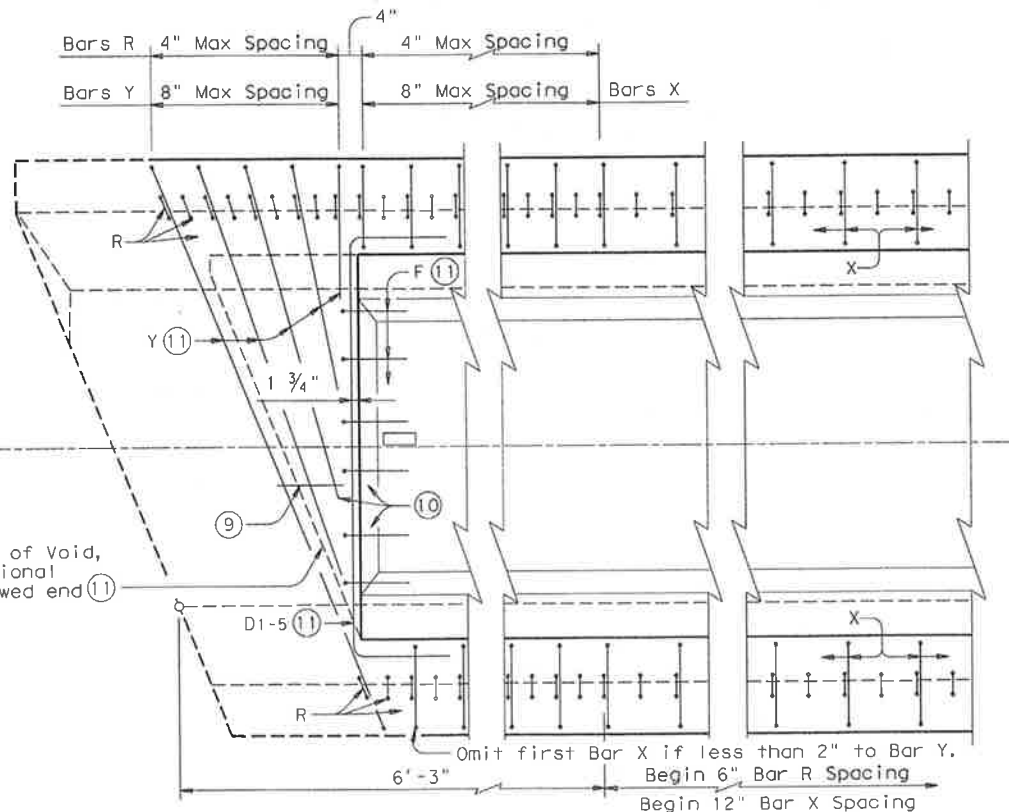
SECTION B-B

- ② For skews greater than 15 degrees, breakback both top and bottom flanges 9" as shown. Provide a smooth transition between top and bottom flange breakbacks. Adjust reinforcement as necessary to maintain minimum clear cover.
- ④ Required for beams that will support cantilevered slab overhang formwork and exterior beams only.
- ⑥ 5 1/2" for normal Bars R.
5 1/2" - 6 1/2" Max for Bars R at skewed beam ends.
- ⑦ Provide Bars E (#5 x 15'-0") at beam ends.
- ⑨ Add support bars for Bars Y as necessary.
- ⑩ Cut Bars Y and Bars R as necessary to provide 2" clear between adjacent bars.
- ⑪ When fabricating beams using the optional skewed end, replace Bars Y that are shown to be cut with Bars X, adjust location of Bars F, and adjust Bars D1-5 in shape and location. Shop drawings must show details used.



PLAN ~ SKEWED END

(Skews thru 45°)



DETAIL B

(Bars DS, E, P, U, V and W not shown for clarity)

HL93 LOADING

SHEET 2 OF 3

Texas Department of Transportation
Bridge Division

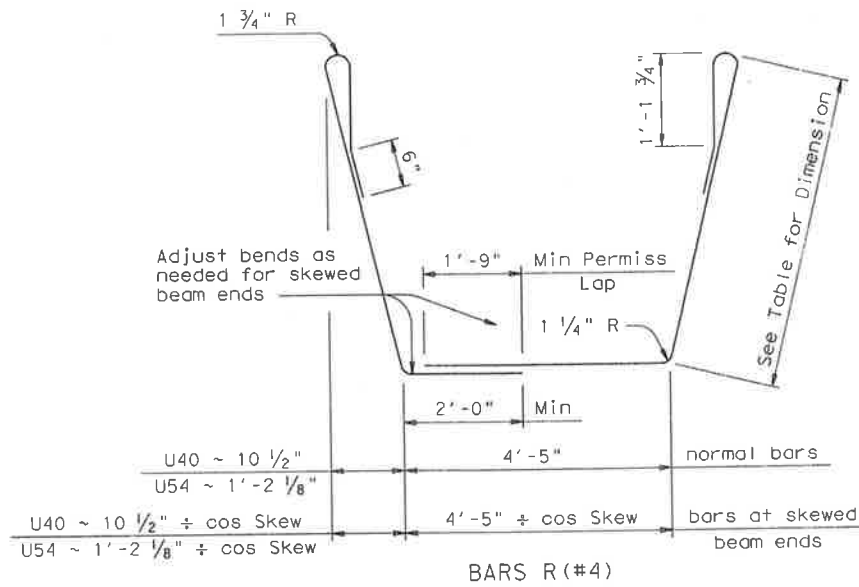
PRESTRESSED CONCRETE
U-BEAM DETAILS

UBD

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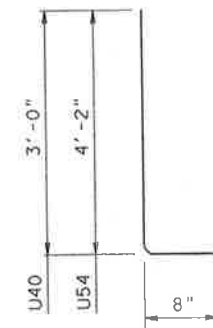
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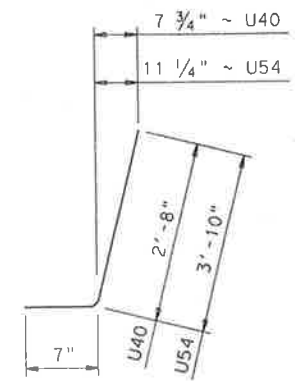


BARS R (#4)

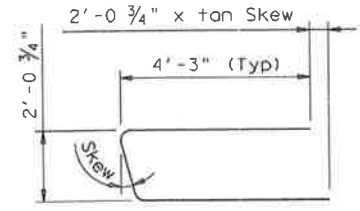
Skew Angle	Beam Type	
	U40	U54
0° thru 15°	3' - 9 1/4"	4' - 11 1/2"
15° thru 30°	3' - 9 1/2"	5' - 0"
30° thru 45°	3' - 10 1/4"	5' - 1"



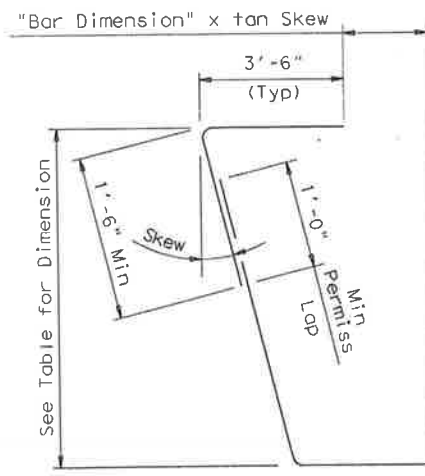
BARS F (#4)



BARS P (#4)

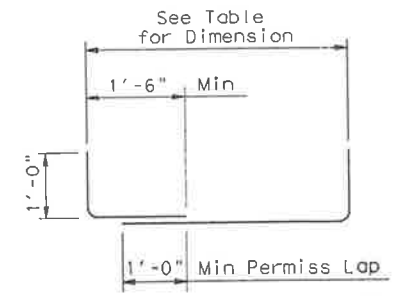


BARS W (#4)



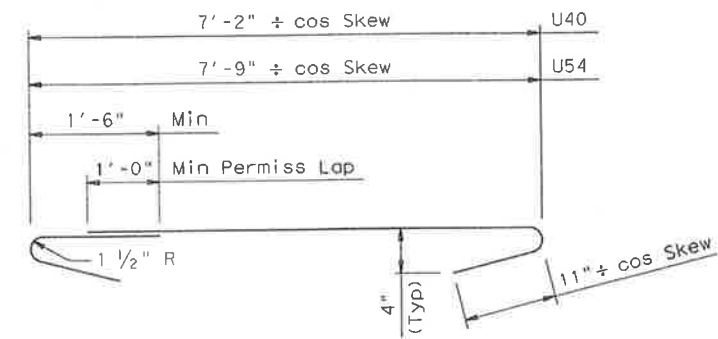
BARS DS1-5 (#4)

Bar	Beam Type	
	U40	U54
DS1	4' - 8"	4' - 8"
DS2	4' - 11"	5' - 0"
DS3	5' - 2"	5' - 5"
DS4	5' - 4 1/4"	5' - 9 1/2"
DS5	5' - 6 1/2"	6' - 1 1/4"

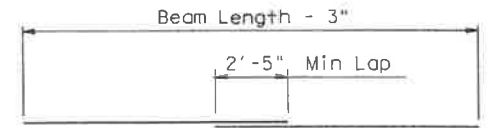


BARS D1-5 (#4)

Bar	Beam Type	
	U40	U54
D1	4' - 9"	4' - 9"
D2	4' - 11 1/4"	5' - 1"
D3	5' - 2"	5' - 5 1/2"
D4	5' - 4"	5' - 10"
D5	5' - 6 1/2"	6' - 1 1/4"

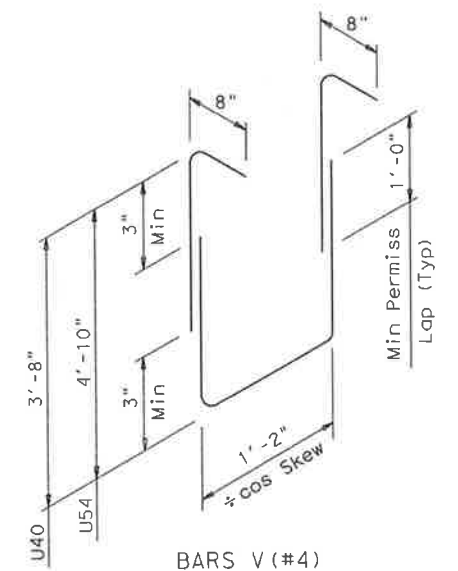


BARS Y (#4)

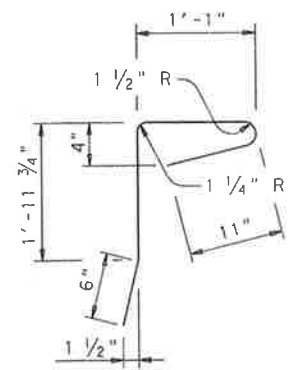


BARS U (#5)

Bars U may be placed with multiple segments, provided no segment is less than 10 ft in length and 40 ft Min C-C splices.



BARS V (#4)
 (ISOMETRIC VIEW)



BARS X (#4)

GENERAL NOTES:
 Designed according to AASHTO LRFD Specifications.
 Details are provided for skew angles up to 45 degrees. Concrete must be Class H. Use Class H (HPC) if required elsewhere in plans.
 All reinforcing steel must be Grade 60. An equal area of welded wire reinforcement, conforming to ASTM A 497, may be substituted for Bars R, P, X and Y.
 Reinforcing steel dimensions and bend radii are shown to bar centerlines.
 Provide a minimum of 1" clear cover to all reinforcing steel unless shown otherwise.
 Chamfer all acute corners for skews over 20 degrees. Provide 3/4" chamfer or 1 3/8" radius at all corners noted to require a chamfer.
 Horizontal form joints on exterior forms are not permitted.
 Shop drawings can be prepared with horizontal skews rounded to nearest 1/4 degree and beam end vertical batter rounded to the nearest 1/4". These shop drawing tolerances are in addition to the fabrication tolerances listed in Item 424, "Precast Concrete Structures (Fabrication)".

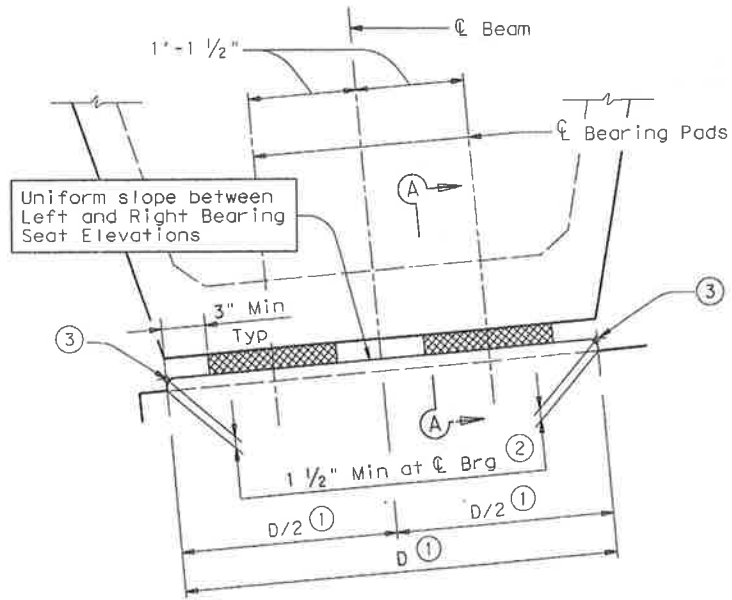
Texas Department of Transportation
 Bridge Division
**PRESTRESSED CONCRETE
 U-BEAM DETAILS**

UBD

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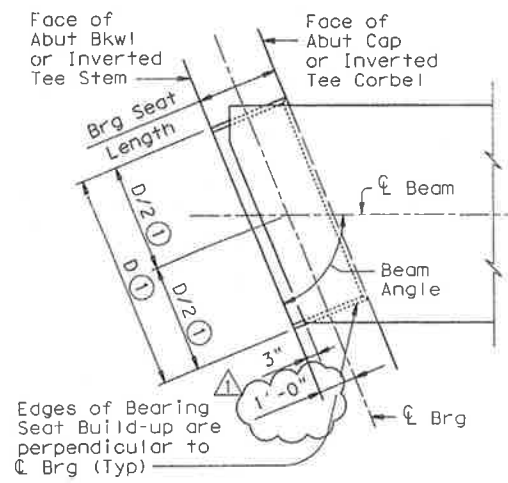
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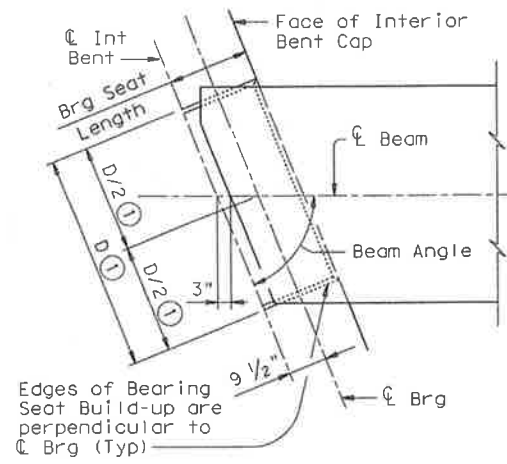
BEARING SEAT DETAIL

Looking up-station with two-pad condition.



BEAM END DETAIL

(At Abutment Backwall or Inverted Tee Stem)



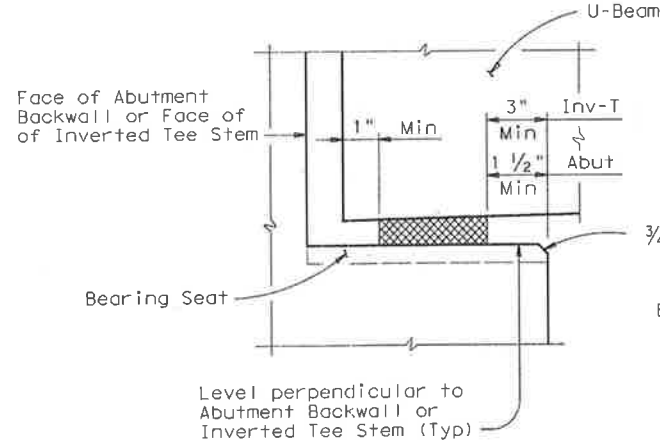
BEAM END DETAIL

(At Conventional Bent)

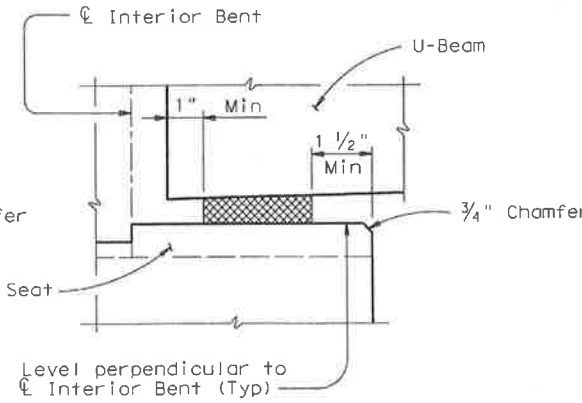
BEARING DIMENSIONS

BEARING SEAT DIMENSION "D" ④	
BEAM ANGLE	"D"
75° + thru 90°	4'-6"
60° + thru 75°	5'-0"
45° thru 60°	5'-6"

- ① Measured along C of Bearing.
- ② Reinforce bearing seat build-ups greater than 3" high with #4 bars at 12" Max Spa as per Item 420, "Concrete Structures".
- ③ See Estimated Quantities and Bearing Seat Elevations sheet for right and left elevations and locations.
- ④ Unless noted otherwise in the plans.
- ⑤ Locate permanent mark here.
- ⑥ Fabricated pad top surface slope must not vary from plan bearing pad taper by more than $(\frac{0.0625"}{Length})$ (IN/IN).
- ⑦ Place 0.105" thick steel laminates parallel to the bottom surface of the pad, except the top laminate(s) may be sloped to satisfy maximum and minimum thickness criteria for tapered elastomeric layers.
- ⑧ Indicate BEARING TYPE on all pads. For tapered pads, locate BEARING TYPE on the high side. The Fabricator must include the value of "N" (amount of taper in 1/8" increments) in this mark. Examples: N=0, (for 0" taper)
N=1, (for 1/8" taper)
N=2, (for 1/4" taper)
(etc.)



AT ABUTMENT OR INVERTED TEE BENT



AT CONVENTIONAL BENT

SECTION A-A

GENERAL NOTES:

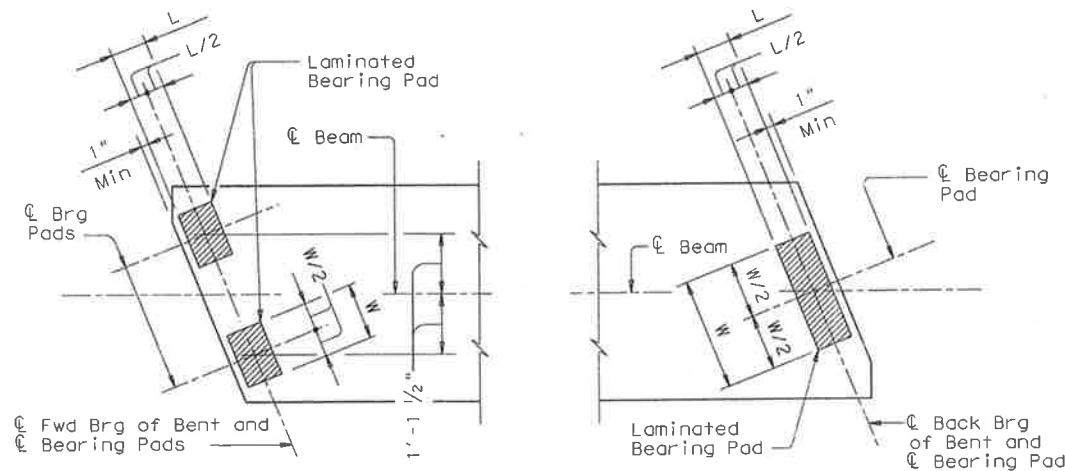
Shop drawings for approval are required. Finish Bearing Surface with a wood float finish. Bearing Surface must be clean and free of all loose material before placing Bearing Pads. For Transition Bents with backwall, the beams and elastomeric bearing pads must receive the same treatment as shown for Abutments. See Bearing Pad Taper Report sheet for Fabricator's Report of bearing pad taper. A bearing layout which identifies location and orientation of all bearings will be developed by the bearing fabricator. Permanently mark each bearing in accordance with the bearing layout. Provide a copy of the bearing layout to the Engineer. Cost of furnishing and installing elastomeric bearings is included in unit price bid for "Prestressed Concrete U-Beams".

Note: The use of Polyisoprene (natural rubber) for the manufacture of bearing pads is not permitted.

Modifications ESC 04/29/10

⚠ Changed distance from L bearing to face of backwall to 1'-0"

HL93 LOADING

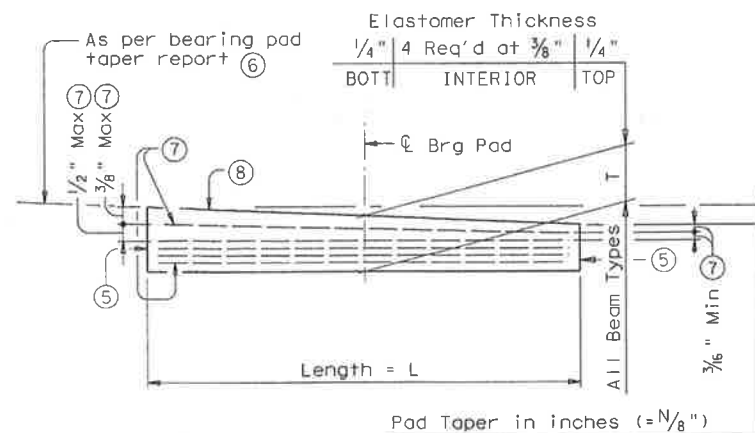


TWO-PAD DETAIL
Type U2-"N" Bearing

ONE-PAD DETAIL
Type U1-"N" Bearing

BEARING PAD DETAILS

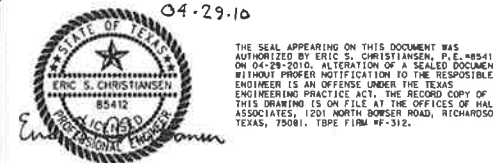
Place one bearing at forward station beam end.
Place two bearings at back station beam end.



LAMINATED BEARING PAD
(50 DUROMETER)

TABLE OF ELASTOMERIC BEARING PAD DIMENSIONS (ALL U-BEAM TYPES)

One-Pad (Ty U1-"N") ⑧			Two-Pad (Ty U2-"N") ⑧		
W	L	T	W	L	T
32"	9"	2 1/2"	16"	9"	2 1/2"



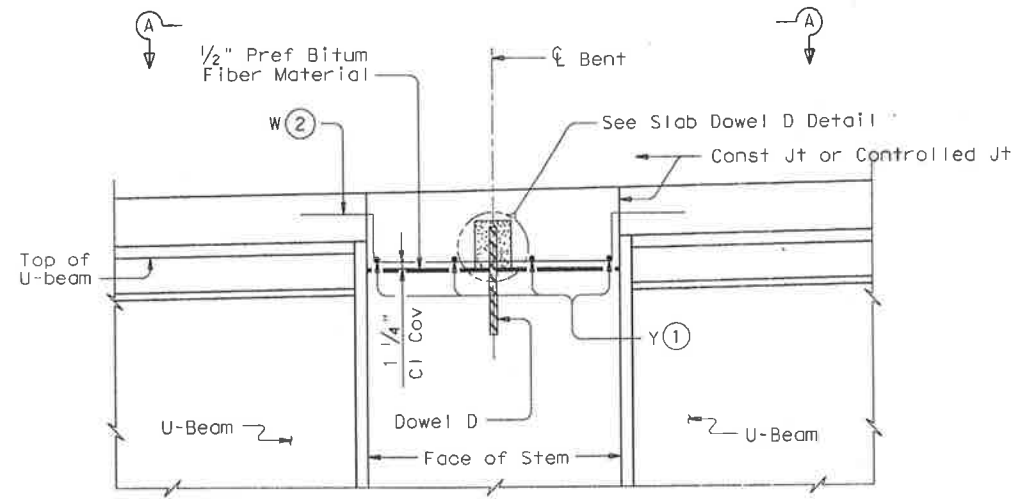
Texas Department of Transportation
Bridge Division
ELASTOMERIC BEARING AND BEARING SEAT DETAILS
PRESTR CONC U-BEAMS

UBEB (MOD)

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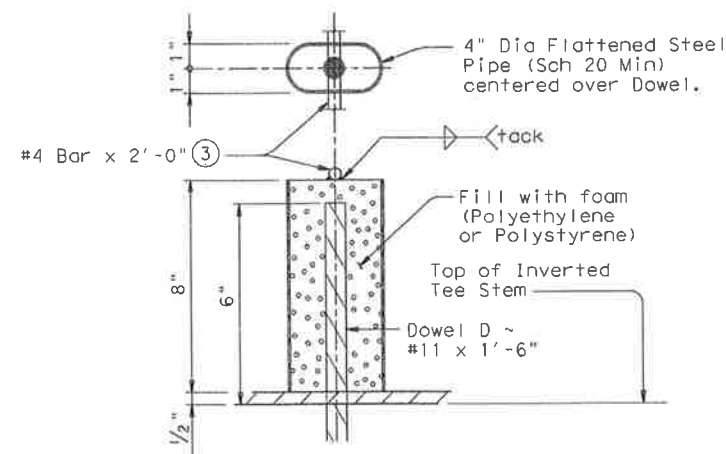
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LEVELS DISPLAYED



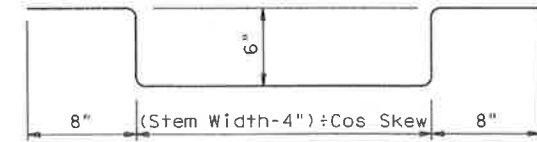
CONTINUOUS SLAB OVER INVERTED TEE BENT

Slab reinforcement not shown for clarity.



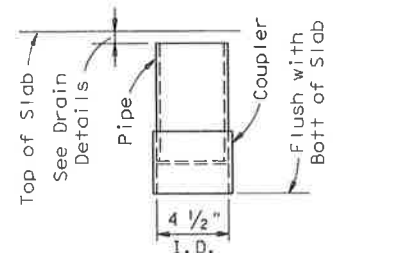
SLAB DOWEL D DETAIL

See Bent Details for number and location.

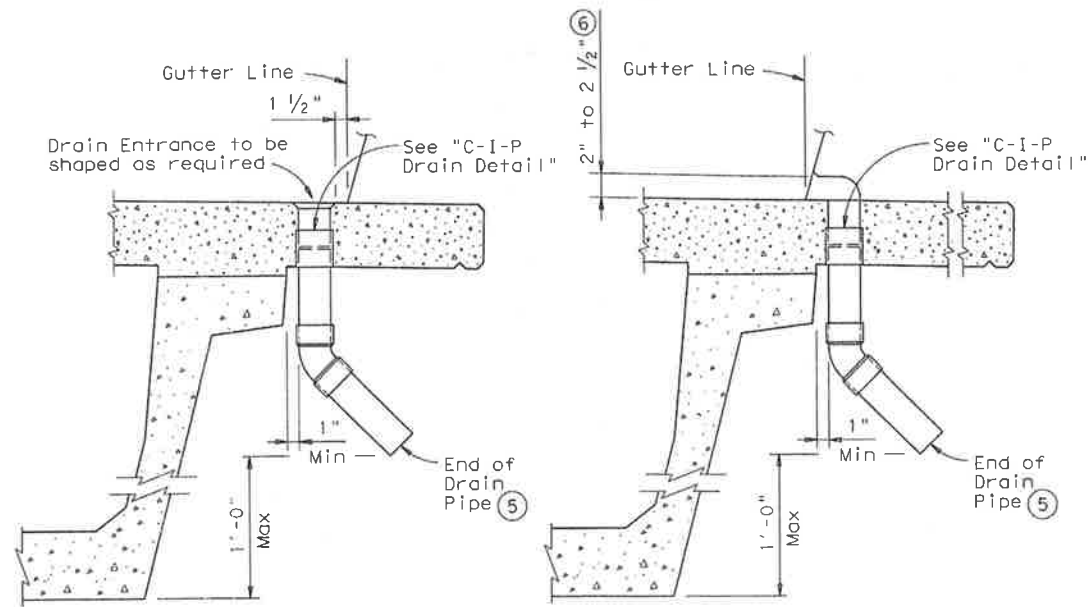


BARS W (#4)

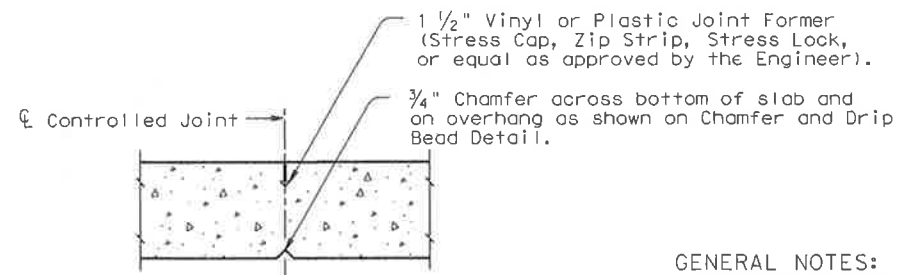
- ① Space Bars Y (#4) at 12" Max. Use 2" end cover. Number of Bars Y must satisfy spacing limit. Place parallel to bent.
- ② Space Bars W at 12" Max (3" from end of cap). Tilt if necessary to maintain cover requirements. Place parallel to longitudinal slab reinforcement.
- ③ Field bend #4 Bars and tie securely to slab steel.
- ④ Roughen outside of PVC with coarse rasp or equal to ensure bond with cast-in-place concrete.
- ⑤ Water must not be discharged onto beams.
- ⑥ Drain Entrance formed in Rail or Sidewalk.
- ⑦ All drain pipe and fittings to be 4" diameter (Sch 40) PVC. See Item 481 "PVC Pipe for Drains" for pipe, connections and solvent welding. Bend reinforcing steel to clear PVC 1". Drain length and location will be as directed by the Engineer. No drains will be permitted over roadways or railways, or within 10'-0" of Bent Caps. Degrease outside of exposed PVC, apply acrylic water base primer, then coat with same surface finishing material as used for outside beam face. Variations of the above designs, as required for the type of rail used and its location on the structure, may be installed with the approval and direction of the Engineer.
- ⑧ Galvanized sheet steel can be used to form the slab when clear distance between beams is 1'-6" and less. All requirements for permanent metal deck forms shown on standard PMDF apply.
- ⑨ Bottom slab reinforcing for Permissible Slab Forming Detail must match the size and spacing of the top mat of steel as shown on the span details unless otherwise noted, except bottom reinforcing steel must be #5 bars. Transverse bottom slab reinforcing must have 1" end clear to edge of panel when used with PCP option.



C-I-P DRAIN DETAIL ④



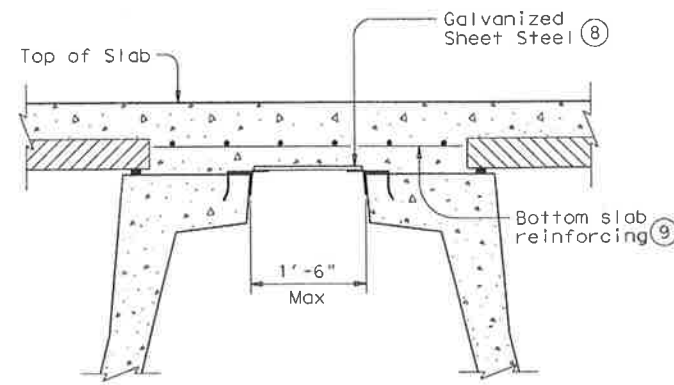
DRAIN DETAILS ⑦



CONTROLLED JOINT DETAIL

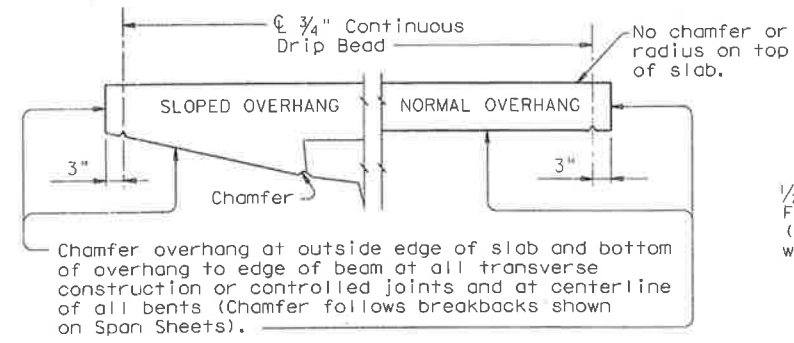
(Saw-cutting is not allowed)

GENERAL NOTES:
Designed in accordance with AASHTO LRFD Specifications.
All items (reinforcing steel, drains, joint formers, etc.) shown on this sheet are subsidiary to other bid items.

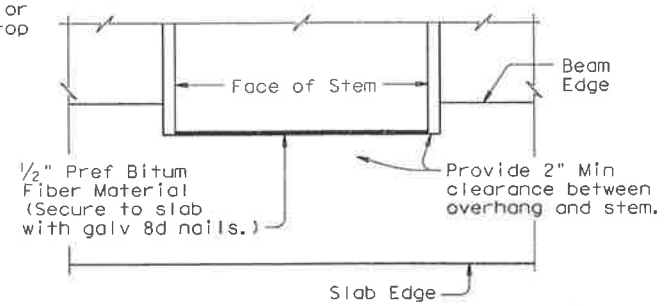


PERMISSIBLE SLAB FORMING DETAIL

See standard PMDF for connection details



CHAMFER AND DRIP BEAD DETAIL



VIEW A-A

Applies to sloped overhang only

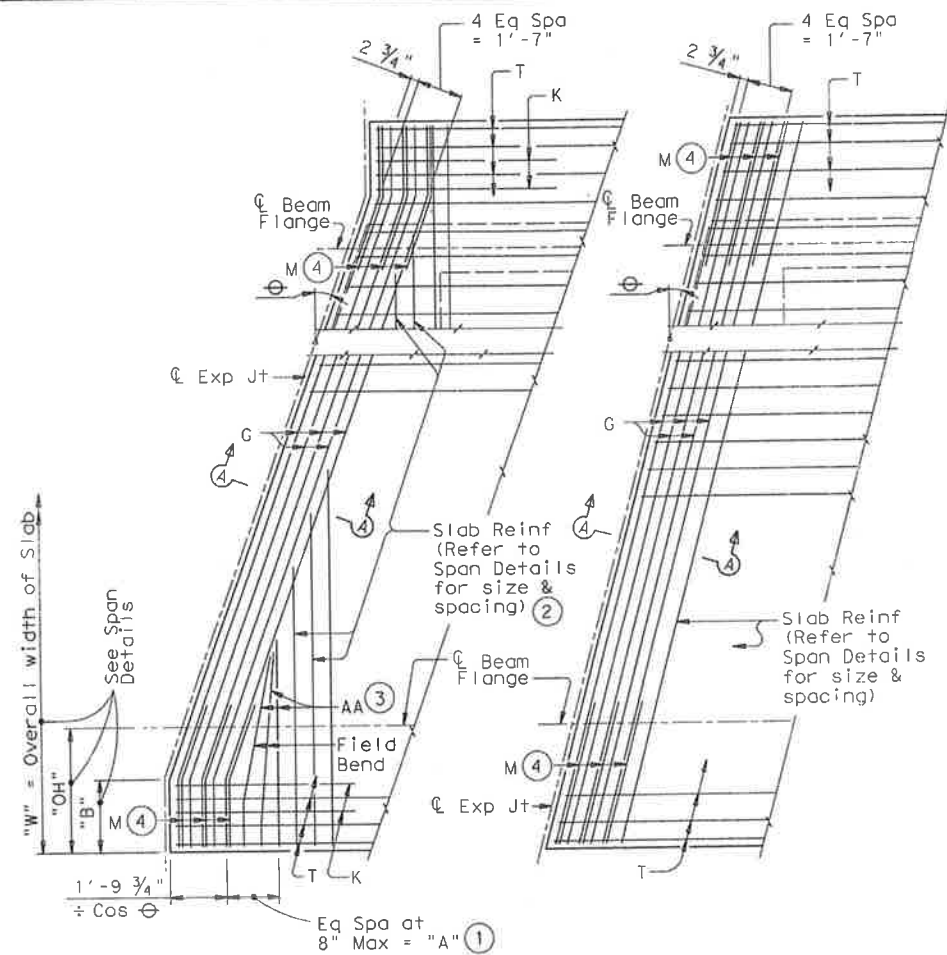
Texas Department of Transportation
Bridge Division
MISCELLANEOUS SLAB DETAILS
PRESTR CONC U-BEAM SPANS

UBMS

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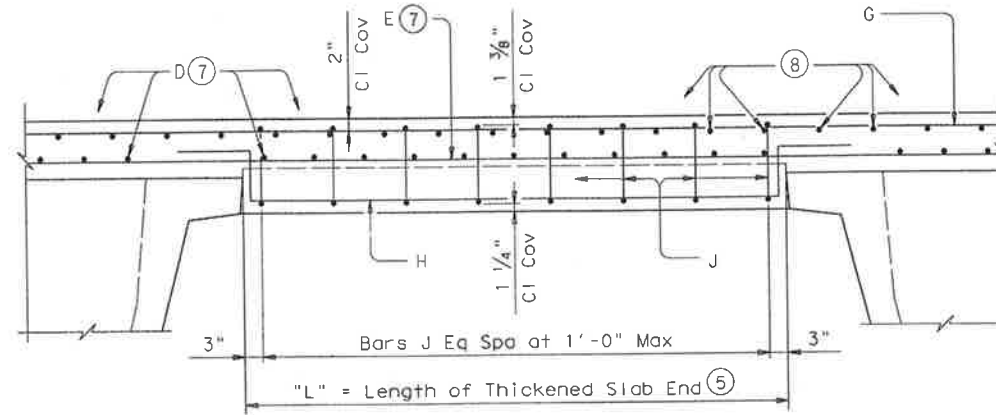


WITH BREAKBACK

WITHOUT BREAKBACK

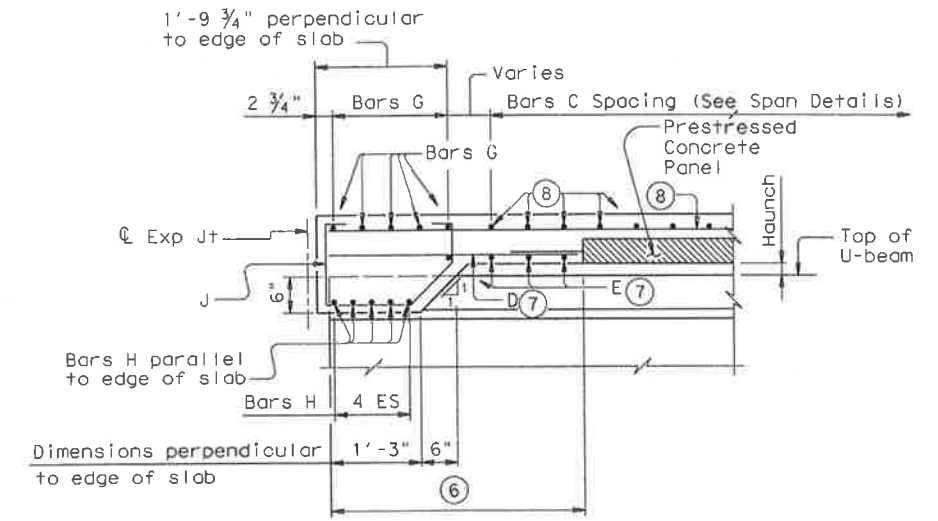
PARTIAL PLAN

(Showing top reinforcing steel only unless noted otherwise)

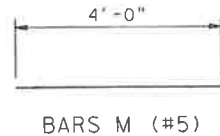
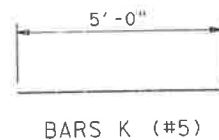
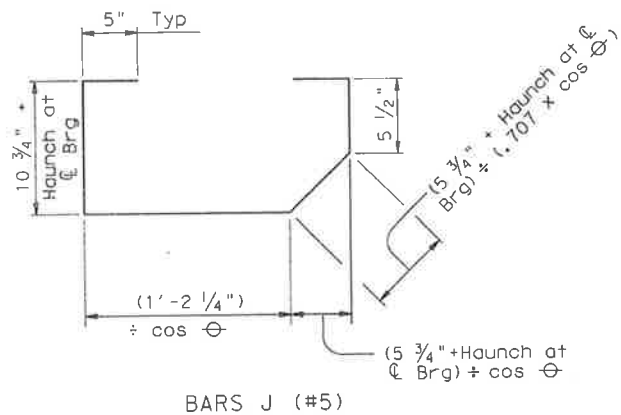
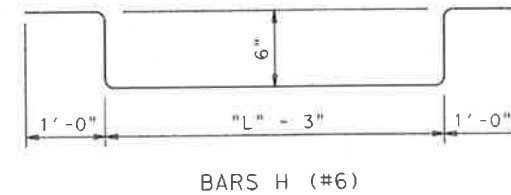
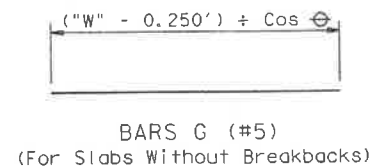
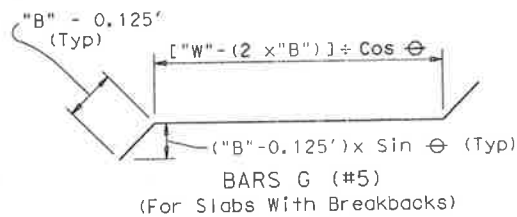
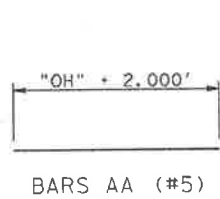


TYPICAL TRANSVERSE SECTION

- ① "A" = ("OH" + 2.125' + $\frac{0.052'}{\sin \theta}$ - "B") x Tan θ
- ② End the top transverse reinforcement steel at inside Bar G. End the bottom transverse reinforcement steel 1'-0" beyond inside Bar G.
- ③ Bars AA (Top & Bott)
- ④ Place 3 Bars M (Bott) at 10" Max. Field bend as necessary. Substitute Bars Z1 for Bars M when sloped overhangs are required. Bars Z1 are shown on standard PCP.
- ⑤ Thickened slab end not required for lengths less than 1'-6".
- ⑥ See standard PCP for panel placement.
- ⑦ See standard PCP for Bars D and E.
- ⑧ See Span Details for reinforcement size and spacing.



SECTION A-A



GENERAL NOTES:
 Designed according to AASHTO LRFD Specifications. These details are to be used in conjunction with the Span Details and Standard PCP (if prestressed concrete panels are used).
 All reinforcing bars must be Grade 60 steel. Unless otherwise shown or noted hereon, all Span Details remain unchanged.
 If slab reinforcing steel is shown on the Span Details to be epoxy coated, then Bars AA, G, K, H, J and M must be epoxy coated.
 Bar laps, where required, will be as follows:
 Uncoated ~ #4 = 1'-5"
 ~ #5 = 1'-9"
 Epoxy Coated ~ #4 = 2'-1"
 ~ #5 = 2'-7"

HL93 LOADING

Texas Department of Transportation
 Bridge Division

**THICKENED SLAB END
 DETAILS
 PRESTR CONC U-BEAM SPANS**

UBTS

FILE: ubstde05.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CR: TxDOT
© TxDOT July 2006	DISTRICT	FEDERAL AID PROJECT	SHEET	S4-24
REVISIONS	COUNTY	CONTROL	SECT	JOB
				HIGHWAY

LIGHT FIXTURE SCHEDULE					
MARK	MANUFACTURER/ MODEL	VOL TAGE	LAMP	DESCRIPTION	FUNCTION
A	SHERIDAN 2)SH82-25M-3-H2-CA10-B- SP25-14-RTC-20-SLR ABS LIGHTING 3-5700-HFM-150MH-240-EL- YMS-CD3-CC-SLV	240	2-250W CMH ED28 3-150W CMH ED17	DOUBLE FIXTURE ROADWAY ASSEMBLY ON ROUND TAPERED STEEL POLE WITH 12" WELDED BASE PLATE, LUG NUT COVERS AND ROADWAY FIXTURES WITH CAST ALUMINUM BALLAST CHAMBER, SPUN ALUMINUM DECORATIVE SKIRT, IES TYPE II, FULL CUT OFF, SILVER FINISH, STAINLESS STEEL HARDWARE, ANCHOR BOLTS PER STRUCTURAL DETAIL AND THREE FLOOD LIGHTS WITH ALUMINUM HOUSING, ALUMINUM DOOR/LENS, DOOR SAFETY CHAIN, STEEL YOKE MOUNT, EGG-CRATE LOUVER AND SILVER FINI.	PONTE BRIDGE ROADWAY 20' POLE WITH TWO STREETLIGHTS AND THREE SPOT LIGHTS
B	SHERIDAN 1)SH82-150M-3-H2-CA10-B- SP15-14-RTC-20-SLR	240	1-175W MH ED28	SINGLE FIXTURE ROADWAY ASSEMBLY ON ROUND TAPERED STEEL POLE WITH , LUG NUT COVERS AND ROADWAY FIXTURE WITH CAST ALUMINUM BALLAST CHAMBER, SPUN ALUMINUM DECORATIVE SKIRT, IES TYPE II, FULL CUT OFF, SILVER FINISH, STAINLESS STEEL HARDWARE AND ANCHOR BOLTS PER STRUCTURAL DETAIL.	BELLA BRIDGE ROADWAY 15' POLE WITH ONE STREET LIGHT
C	BEGA 9801MH BEGA 0908HR 9'-8" HINGED POLE	240	1-50W ED17 MH	SINGLE PEDESTRIAN LEVEL POLE MOUNTED FIXTURE ON 5" TO 3" DIAMETER TAPERED AND HINGED POLE. THE SINGLE FIXTURE ON SPREADER ARM AND POLE EXTENSION HAS FLAT GLASS ANCHOR BOLTS PER STRUCTURAL DETAIL AND SILVER FINISH.	SOUTH PEDESTRIAN BRIDGE 9' 8" TAPERED WITH 5'
D1	BEGA CUS1909-58-311	240	1-CMH39MR1625	METAL HALIDE FLOOD WITH MACHINED ALUMIN CONSTRUCTION, KNUCLE MOUNT, SEALED OPTICAL COMPARTMENT , CLEAR TEMPERED GLASS LENS, TAMPERPROOF DESIGNSILVER FINISH, AND MOUNTED ON SURFACE BALLAST HOUSING OF EXTRUDED ALUMINUM, CAST END CAPS, MULTI-TAP ELECTRIC BALLAST, TAMPER RESISTANT, STAINLESS STEEL MOUNTING SCREWS, SILVER FINISH.	PONTE CABLES SURFACE MOUNT 35 W METAL HALIDE
D2	BEGA CUS1909-58-312	240	1-ES 16 MH	METAL HALIDE FLOOD WITH MACHINED ALUMIN CONSTRUCTION, KNUCLE MOUNT, SEALED OPTICAL COMPARTMENT , CLEAR TEMPERED GLASS LENS, TAMPERPROOF DESIGNSILVER FINISH, AND MOUNTED ON SURFACE BALLAST HOUSING OF EXTRUDED ALUMINUM, CAST END CAPS, MULTI-TAP ELECTRIC BALLAST, TAMPER RESISTANT, STAINLESS STEEL MOUNTING SCREWS, SILVER FINISH.	PONTE CABLES SURFACE MOUNT 35 W METAL HALIDE

LIGHT FIXTURE SCHEDULE					
MARK	MANUFACTURER/ MODEL	VOL TAGE	LAMP	DESCRIPTION	FUNCTION
D3	BEGA CUS-1909-58-312	240	1-ES 16 MH	METAL HALIDE FLOOD WITH MACHINED ALUMIN CONSTRUCTION, KNUCLE MOUNT, SEALED OPTICAL COMPARTMENT , CLEAR TEMPERED GLASS LENS, TAMPERPROOF DESIGNSILVER FINISH, AND MOUNTED ON SURFACE BALLAST HOUSING OF EXTRUDED ALUMINUM, CAST END CAPS, MULTI-TAP ELECTRIC BALLAST, TAMPER RESISTANT, STAINLESS STEEL MOUNTING SCREWS, SILVER FINISH.	
D4	BEGA CUS-1909-58-312	240	1-ES 16 MH	METAL HALIDE FLOOD WITH MACHINED ALUMIN CONSTRUCTION, KNUCLE MOUNT, SEALED OPTICAL COMPARTMENT , CLEAR TEMPERED GLASS LENS, TAMPERPROOF DESIGNSILVER FINISH, AND MOUNTED ON SURFACE BALLAST HOUSING OF EXTRUDED ALUMINUM, CAST END CAPS, MULTI-TAP ELECTRIC BALLAST, TAMPER RESISTANT, STAINLESS STEEL MOUNTING SCREWS AND SILVER FINISH.	
D5	BEGA CUS-1909-59-30/312	240	1-ES 16 MH	METAL HALIDE FLOOD WITH MACHINED ALUMIN CONSTRUCTION, KNUCLE MOUNT, SEALED OPTICAL COMPARTMENT , CLEAR TEMPERED GLASS LENS, TAMPER PROOF DESIGN, SILVER FINISH, AND MOUNTED ON SURFACE BALLAST HOUSING OF EXTRUDED ALUMINUM, CAST END CAPS AND WITH 24 INCH 2 1/4 DIA MACHINED ALUMINUM TUBE, MULTI-TAP ELECTRIC BALLAST.	
E	LIGHTWIELD COOL WHITE LUMENPOWER PLUS v2.0 VERTICAL LINEAR FIXTURE	120 PRI 24V AC	LED	LINEAR BRACKET MOUNTED LED FIXTURE EIGHT FEET LONG WITH EXTRUDED ALUMINUM HOUSING, STAINLESS STEEL HARDWARE, 40 DEGREE BEAM ANGLE, 6500K COOL WHITE LED LAMPS, COMPLETE WITH 24 VOLT POWER SUPPLY IN WEATHER PROFF ENCLOSURE.	PONTE BOTTOM PART OF ARCH SIDE RECESS
F	BEGA 6538MH	120	1-50W ED-17 MH	BRACKET MOUNTED METAL HALIDE WITH CAST ALUMINUM HOUSING, UP TO 12 DEGREE TILT, TEMPERED CLEAR GLASS, STAINLESS STEEL SCREWS, SILICONE RUBBER GASKET, ELECTRONIC BALLAST AND SILVER FINISH.	PONTE UNDER BRIDGE
G	BEGA 2287P	120	1-13W CF TWIN TUBE	WALL MOUNT FLUORESCENT CONSTRUCTED OF DIE CAST AND EXTRUDED ALUMINUM WITH INTEGRAL WIRING COMPARTMENT FOR THROUGH WIRING, DIE CAST ALUMINUM FACE PLATE, CLEAR TEMPERED GLASS WITH TRANSLUCENT WHITE CERAMIC COATING, STAINLESS STEEL CAPTIVE SCREWS AND SILVER FINISH	PONTE UNDER BRIDGE WALL MOUNT

FLOOD LIGHT SCHEDULE				
BRIDGE	POLE	MANUFACTURER/ MODEL	QUANTITY	DESIGNATIONS
PONTE	SA1	BSA 5700-XXX-150MH240-ELYMX-CD	3	3,3,3
PONTE	SA4	BSA 5700-XXX-150MH240-ELYMX-CD	3	3,3,3
PONTE	SA2	BSA 5700-XXX-150MH240-ELYMX-CD	3	3,2,3
PONTE	SA4	BSA 5700-XXX-150MH240-ELYMX-CD	3	1,2,3
BELLA	SA1	BSA 5700-HFM-150MH-240-EL	3	3,3
BELLA	SA3	BSA 5700-HFM-150MH-240-EL	3	3,3

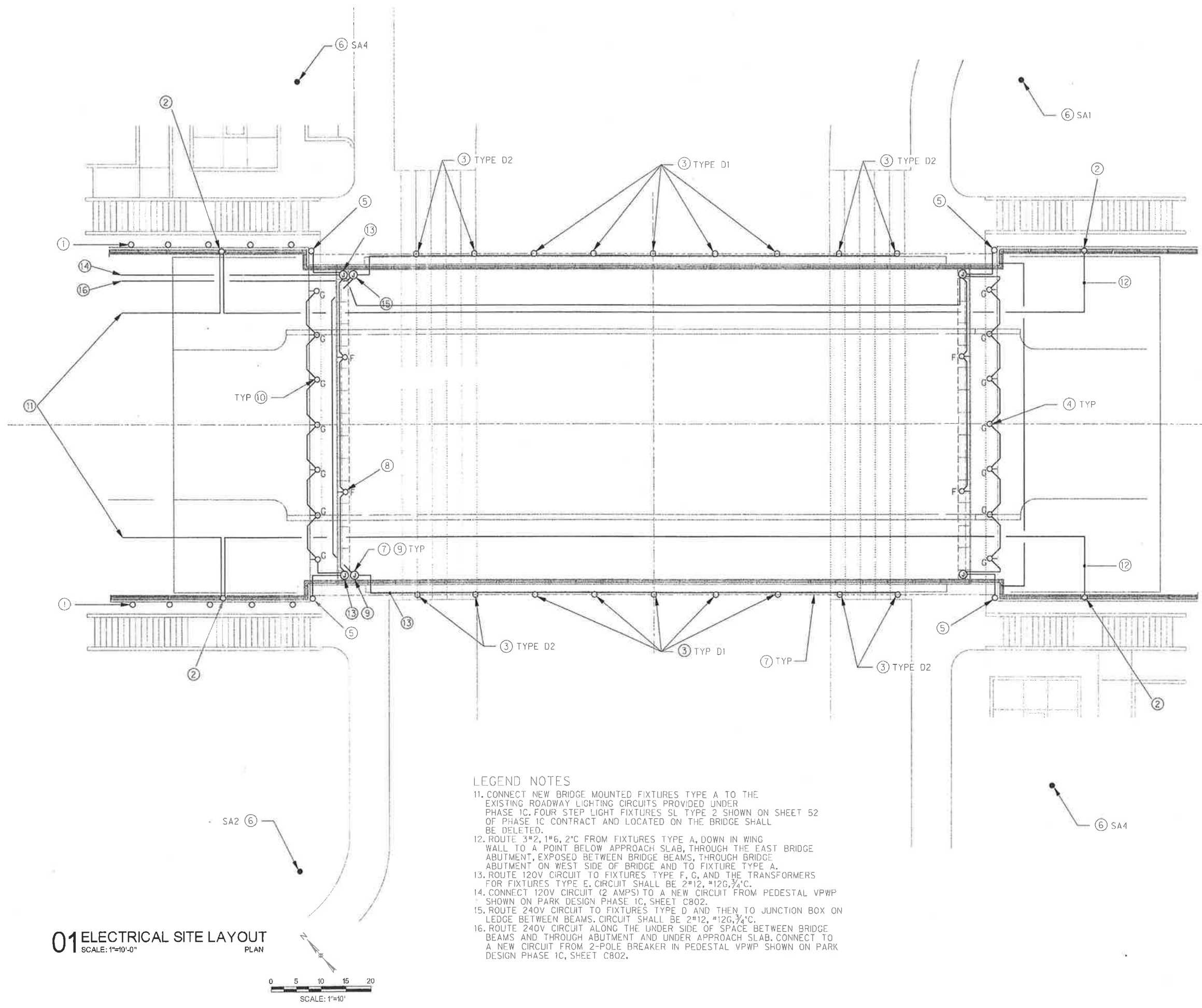


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4-28-10

NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES LIGHT FIXTURE SCHEDULE			
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-0200 FAX (214) 738-0085			
PROJECT	DESIGN	DRAWN	DATE
27379		AHH	APRIL 2010
FILE	SHEET		
-	E0-01		

DATE: 4/28/2010 TIME: 7:07:12 PM FILE: E101-SP-Ponte-27379.dgn PROJECT = 27379 OFFICE: RCH USER: dh2481



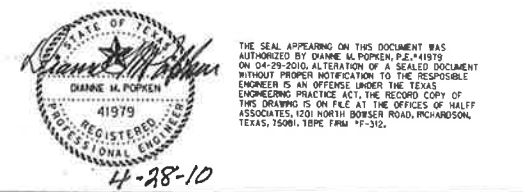
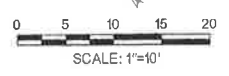
- ### GENERAL NOTES
- THE LIGHTING DESIGN FOR THE NEW SOUTH PEDESTRIAN BRIDGE WILL REQUIRE SOME CHANGES TO THE PARK LIGHTING & ELECTRICAL DESIGN REPRESENTED ON SHEET C803 OF THE PARK AND STREETScape IMPROVEMENTS FOR THE VITRUVIAN PARK PUBLIC INFRASTRUCTURE-PHASE 1C AND TO SHEET 52 OF THE STREET LIGHT AND CONDUIT PLAN OF THE PAVING, DRAINAGE, & UTILITY IMPROVEMENTS, VITRUVIAN PARK PUBLIC INFRASTRUCTURE-PHASE 1B. THE NECESSARY CHANGES IN THE 1B AND 1C DESIGN WILL BE PERFORMED BY THE CONTRACTOR FOR PHASES 1B AND 1C. THE CHANGES ARE REPRESENTED ON THIS DESIGN PLAN SO THE CONTRACTOR WILL HAVE ACCESS TO THE RELEVANT DATA FOR CONSTRUCTION COORDINATION.
 - THE STAIRS, RAMPS, AND ROADWAYS BEYOND THE BRIDGE ARE CONSTRUCTED UNDER ANOTHER PHASE OF WORK AND ARE NOT IN THIS CONTRACT.
 - PROVIDE ALL FIXTURES, RACEWAYS, CONDUCTORS, AND ACCESSORIES SCHEDULED AND SPECIFIED FOR THE BRIDGE.
 - COORDINATE INSTALLATION WITH THE BRIDGE CONSTRUCTION.
 - POWER TO THE PONTE BRIDGE IS IN BOTH THE PHASE 1B AND 1C CONTRACTS. REFERENCE THE LEGEND NOTES FOR THE SPECIFIC LIMITS OF CONSTRUCTION UNDER THIS CONTRACT.
 - COORDINATE THE CONNECTION OF THE BRIDGE CIRCUITS TO THE PHASE 1B AND 1C CIRCUITS WITH THE PHASE 1B AND 1C CONTRACTORS.
 - ALL CONDUITS SHALL BE CONCEALED IN THE BRIDGE CONSTRUCTION UNLESS OTHERWISE NOTED OR DETAILED. CONDUIT IN CONCRETE SHALL BE SCHEDULE 40 PVC. ALL EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL SECTION.
 - SUBMIT SHOP DRAWINGS FOR MOUNTING OF ALL FIXTURES AND THE ROUTE OF CONDUITS IN AND ON THE BRIDGE CONSTRUCTION.

- ### LEGEND NOTES
- TEN STEP LIGHT FIXTURES TYPE SC, SHOWN ON SHEET C802 OF THE PHASE 1C DRAWINGS WILL BE DELETED FROM THE PHASE 1C CONTRACT.
 - PROVIDE FIXTURES TYPE A. REFERENCE DETAIL 01/E1.03 AND STRUCTURAL SHEETS FOR MOUNTING POLE ON WING WALL. ROUTE CONDUIT DOWN IN WINGWALL THROUGH ABUTMENT, AND UNDER SPACE BETWEEN BRIDGE BEAMS. REFERENCE STRUCTURAL.
 - PROVIDE FLOOD LIGHTS TYPE D. REFERENCE DETAIL 02/E1.03 FOR MOUNTING FIXTURE ON EDGE OF BRIDGE.
 - NOT USED.
 - PROVIDE FIXTURES TYPE E, LINEAR FIXTURE MOUNTED VERTICALLY TO LIGHT OUTSIDE OF ARCH BELOW BRIDGE DECK. REFERENCE LANDSCAPE DETAIL OF FIXTURE RECESSED IN STONE ON BRIDGE ABUTMENT. ROUTE CONDUIT IN MORTAR BEHIND STONE AND UP TO J-BOX ON BEAM SHELF.
 - FIXTURES TYPE SA1, SA2, AND SA4 ARE PROVIDED UNDER THE PARK IMPROVEMENTS CONTRACT-PHASE 1C. TWO FLOOD LIGHTS WILL BE ADDED TO EACH POLE AND FOCUSED ON THE UPPER PART OF THE OUTSIDE OF THE ARCH. REFERENCE PARK FIXTURE SCHEDULE, SHEET E0.01.
 - ALL CONDUIT ON THE BRIDGE SHALL BE RIGID STEEL GALVANIZED. JUNCTION BOXES SHALL BE MALLEABLE IRON WITH HUBS FOR THREADED RIGID STEEL CONDUIT WITH WEATHERPROOF CAST COVER AND NEOPRENE GASKET.
 - PROVIDE FIXTURES TYPE F MOUNTED ON ROADWAY BEAM SHELF. REF. STRUCTURAL DETAIL ON SHEET S1-07. ROUTE CIRCUIT ALONG THE BACK OF BRIDGE BEAM SHELF TO J-BOX.
 - LOCATE JUNCTION ON BRIDGE BEAM SHELF BETWEEN BEAMS. FOR BOTH 120V AND 240V CIRCUITS.
 - PROVIDE FIXTURES TYPE G RECESS WALL MOUNTED AT WALKWAY UNDER BRIDGE. REFERENCE SHEET E1.02 AND LANDSCAPE ELEVATIONS OF WALL. ROUTE CONDUIT CONCEALED IN ABUTMENT TO 120V J-BOX.

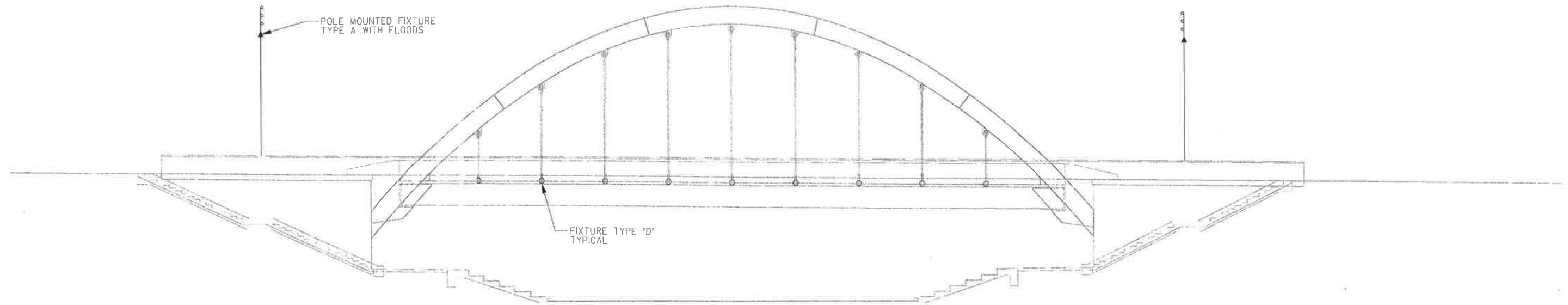
- ### LEGEND NOTES
- CONNECT NEW BRIDGE MOUNTED FIXTURES TYPE A TO THE EXISTING ROADWAY LIGHTING CIRCUITS PROVIDED UNDER PHASE 1C. FOUR STEP LIGHT FIXTURES SL TYPE 2 SHOWN ON SHEET 52 OF PHASE 1C CONTRACT AND LOCATED ON THE BRIDGE SHALL BE DELETED.
 - ROUTE 3"2, 1"6, 2"0 FROM FIXTURES TYPE A, DOWN IN WING WALL TO A POINT BELOW APPROACH SLAB, THROUGH THE EAST BRIDGE ABUTMENT, EXPOSED BETWEEN BRIDGE BEAMS, THROUGH BRIDGE ABUTMENT ON WEST SIDE OF BRIDGE AND TO FIXTURE TYPE A.
 - ROUTE 120V CIRCUIT TO FIXTURES TYPE F, G, AND THE TRANSFORMERS FOR FIXTURES TYPE E. CIRCUIT SHALL BE 2"12, #12G, 3/4"C.
 - CONNECT 120V CIRCUIT (2 AMPS) TO A NEW CIRCUIT FROM PEDESTAL VPWP SHOWN ON PARK DESIGN PHASE 1C, SHEET C802.
 - ROUTE 240V CIRCUIT TO FIXTURES TYPE D AND THEN TO JUNCTION BOX ON LEDGE BETWEEN BEAMS. CIRCUIT SHALL BE 2"12, #12G, 3/4"C.
 - ROUTE 240V CIRCUIT ALONG THE UNDER SIDE OF SPACE BETWEEN BRIDGE BEAMS AND THROUGH ABUTMENT AND UNDER APPROACH SLAB. CONNECT TO A NEW CIRCUIT FROM 2-POLE BREAKER IN PEDESTAL VPWP SHOWN ON PARK DESIGN PHASE 1C, SHEET C802.

01 ELECTRICAL SITE LAYOUT

SCALE: 1"=10'-0"
PLAN

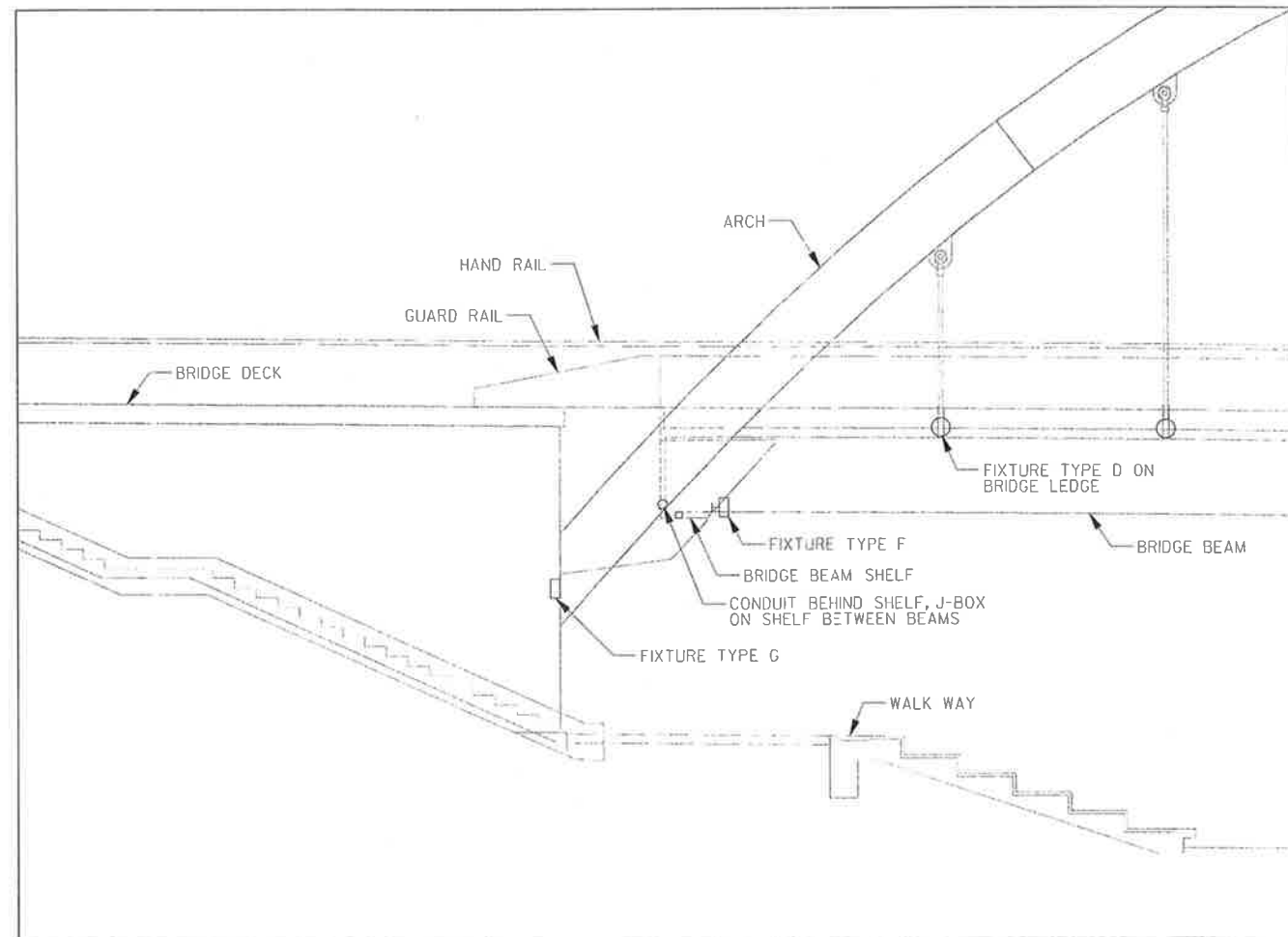


NO.	REVISION	BY	DATE
ADDISON TOWN OF ADDISON DALLAS COUNTY, TEXAS VITRUVIAN PARK BRIDGES PONTE AVENUE ELECTRICAL PLAN			
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-8200 FAX (214) 730-0066			
PROJECT	DESIGN	DRAWN	DATE
27379	DMP	AHH	APRIL 2010
FILE	SHEET		
-	E1-01		



01 ELEVATION

SCALE: 1" = 10'-0"



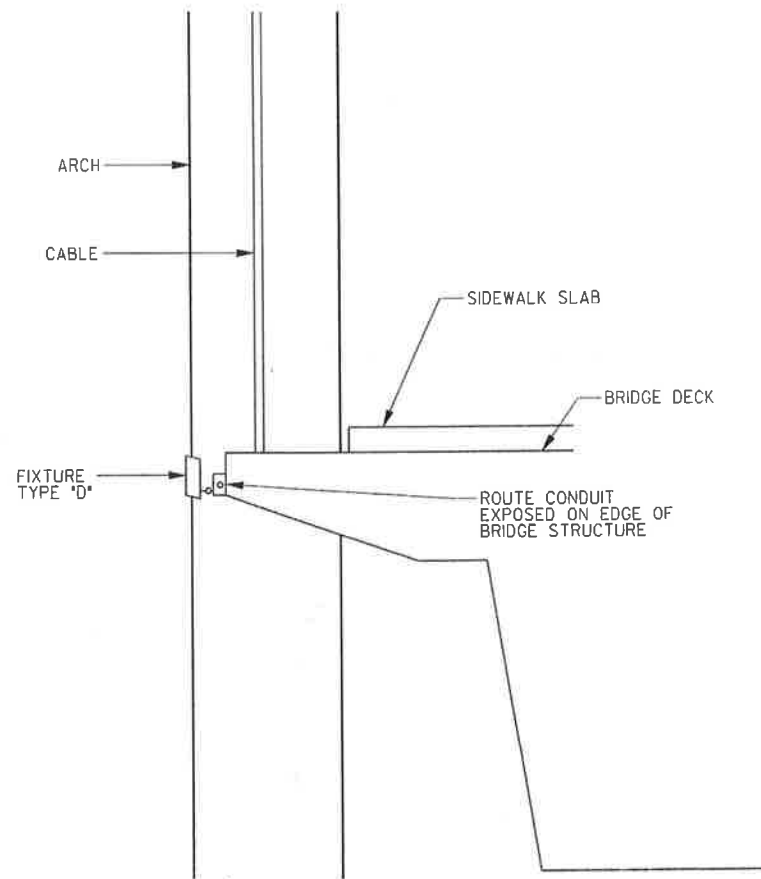
ENLARGED ELEVATION

SCALE: 1" = 5'-0"

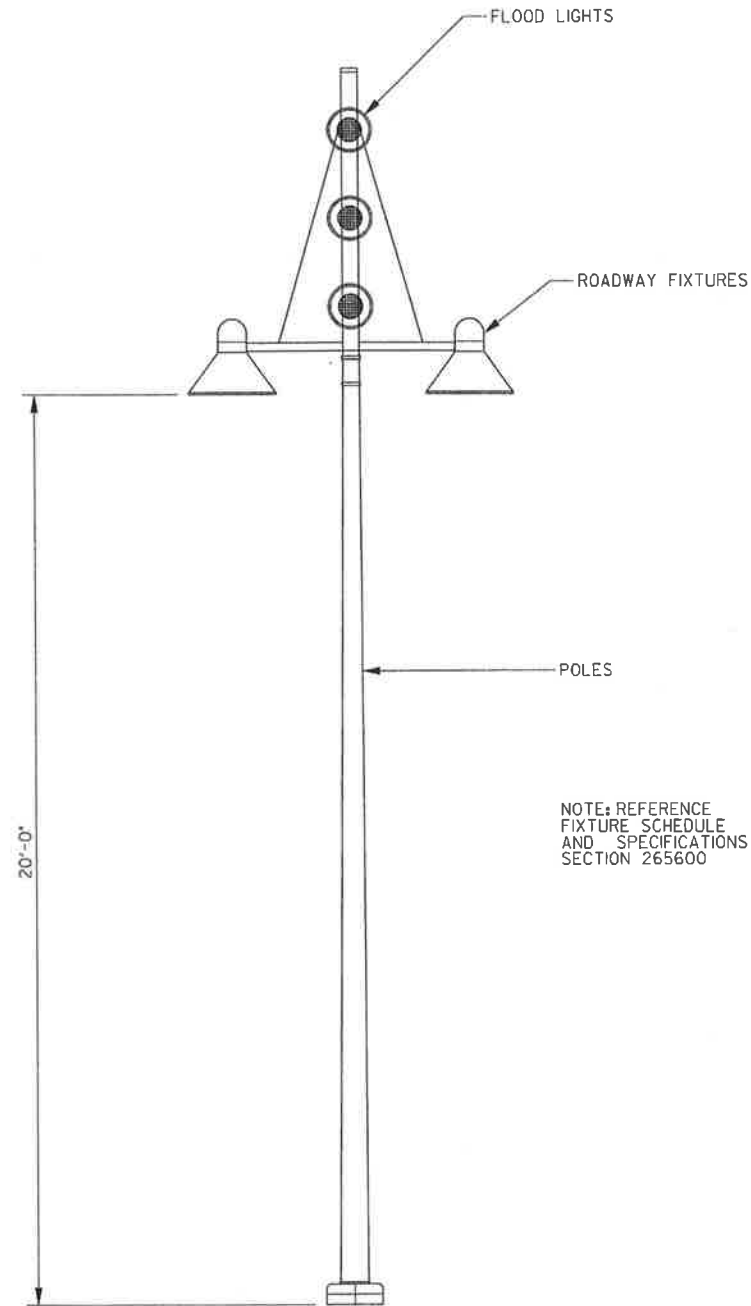


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NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES PONTE AVENUE			
ELECTRICAL ELEVATION			
HALFF		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 348-8200 FAX (214) 734-0080	
PROJECT	DESIGN	DRAWN	DATE
27379	DMP	AHH	APRIL 2010
FILE	SHEET		
-	E1-02		



02 MOUNTING TYPE D
NOT TO SCALE



NOTE: REFERENCE
FIXTURE SCHEDULE
AND SPECIFICATIONS
SECTION 265600

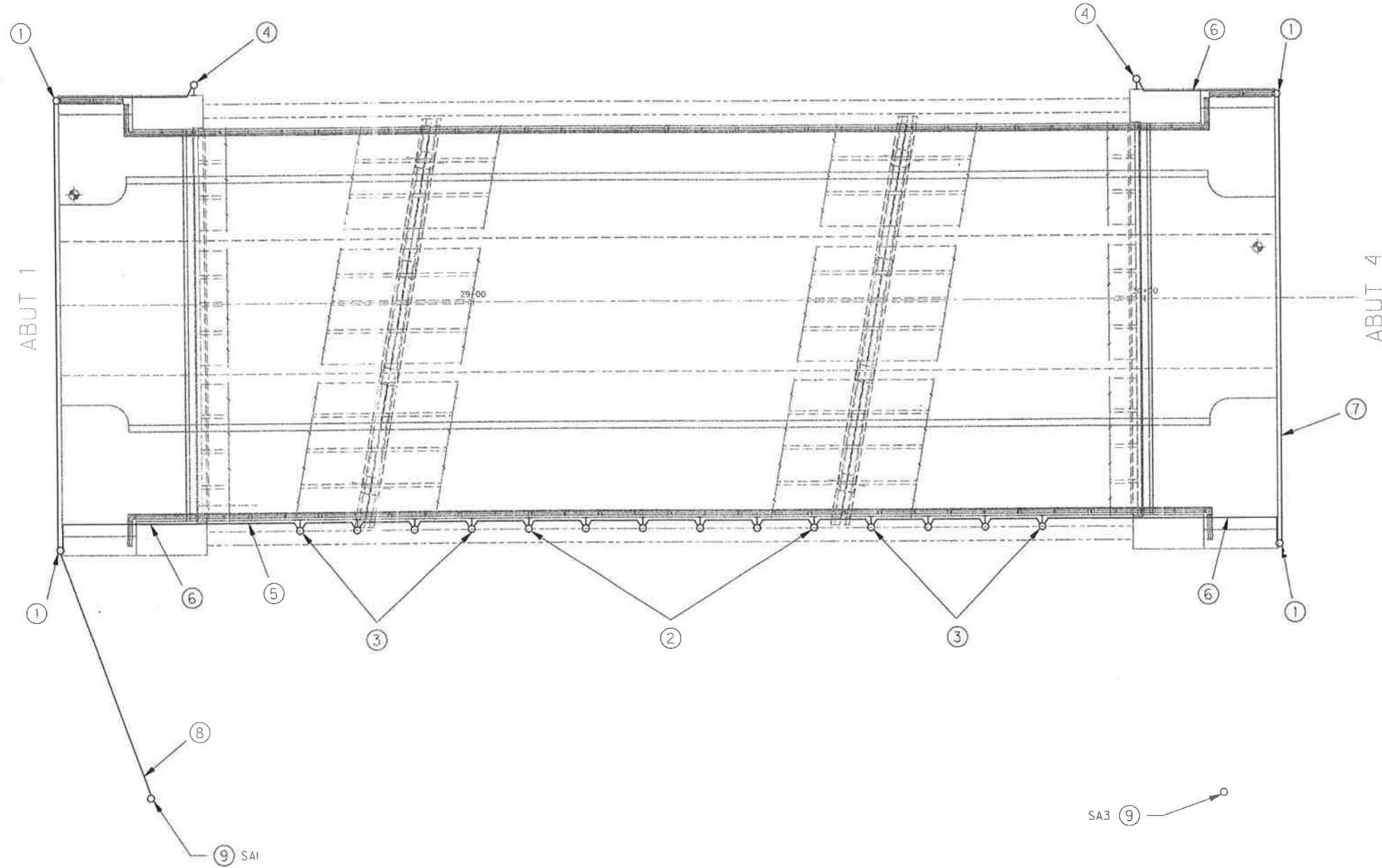
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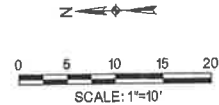
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4-28-10

NO.	REVISION	BY	DATE		
TOWN OF ADDISON DALLAS COUNTY, TEXAS					
VITRUVIAN PARK BRIDGES PONTE AVENUE					
ELECTRICAL DETAILS					
HALFF					
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-6200 FAX (214) 738-0065					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379		AHH	APRIL 2010	-	E1-03



01 ELECTRICAL SITE LAYOUT
SCALE: 1"=10'-0"
PLAN



GENERAL NOTES

- A. THE LIGHTING DESIGN FOR THE BELLA BRIDGE WILL REQUIRE SOME CHANGES TO THE PARK LIGHTING & ELECTRICAL DESIGN REPRESENTED ON SHEET C801 OF THE PARK AND STREETScape IMPROVEMENTS FOR THE VITRUVIAN PARK PUBLIC INFRASTRUCTURE-PHASE 1C. THE NECESSARY CHANGES IN THE 1C DESIGN WILL BE PERFORMED BY THE CONTRACTOR FOR PHASE 1C. THE CHANGES ARE REPRESENTED ON THIS DESIGN PLAN SO THE CONTRACTOR WILL HAVE ACCESS TO THE RELEVANT DATA FOR CONSTRUCTION COORDINATION.
- B. PROVIDE ALL FIXTURES, RACEWAYS, CONDUCTORS, AND ACCESSORIES SCHEDULED AND SPECIFIED FOR THE BRIDGE.
- C. COORDINATE INSTALLATION WITH THE BRIDGE CONSTRUCTION.
- D. POWER TO SERVE LIGHTING ON THE BELLA BRIDGE IS IN THE PHASE 1C CONTRACT. REFERENCE THE LEGEND NOTES FOR THE SPECIFIC LIMITS OF CONSTRUCTION UNDER THIS CONTRACT.
- E. COORDINATE THE CONNECTION OF THE BRIDGE CIRCUITS TO THE PHASE 1C CIRCUITS WITH THE PHASE 1C CONTRACTORS.
- F. ALL CONDUITS SHALL BE CONCEALED IN THE BRIDGE CONSTRUCTION UNLESS OTHERWISE NOTED OR DETAILED. CONDUIT IN CONCRETE SHALL BE SCHEDULE 40 PVC. ALL EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL.
- G. FIXTURES TYPE SA1 AND SA3 ARE PROVIDED UNDER THE PARK IMPROVEMENTS CONTRACTS-PHASE 1C. TWO FLOOD LIGHTS (TYPE ABS 3) WILL BE ADDED TO EACH POLE AND FOCUSED ON THE UPPER PART OF THE OUTSIDE OF THE ARCH. PROVIDE EQUIPMENT AND LABOR FOR THE NIGHT-TIME SETTING OF THE TWO FIXTURES MOUNTED ON EACH POLE SA1 AND SA3.
- H. JUNCTION BOXES MOUNTED ON THE BRIDGE SHALL BE MALLEABLE IRON WITH HUBS FOR THREADED RIGID STEEL CONDUIT WITH WEATHERPROOF CAST COVER AND NEOPRENE GASKET.
- I. SUBMIT SHOP DRAWINGS FOR MOUNTING OF ALL FIXTURES AND THE ROUTE OF CONDUITS IN AND ON THE BRIDGE CONSTRUCTION.

LEGEND NOTES

1. MOUNT FIXTURES TYPE B ON WING WALL. REFERENCE STRUCTURAL DETAIL FOR ANCHOR BOLT REQUIREMENT.
2. MOUNT FIXTURE TYPE D3 (TYPICAL OF 6) ON OUTSIDE OF BRIDGE DECK. REFERENCE DETAIL 02/E2.03.
3. MOUNT FIXTURES TYPE D4 (TYPICAL OF 8) ON THE OUTSIDE OF BRIDGE DECK. REFERENCE DETAIL 02/E2.03.
4. MOUNT FIXTURE TYPE D5 ON BRIDGE ABUTMENT. REFERENCE DETAIL 02/E2.03.
5. SURFACE MOUNT CONDUIT TO FIXTURES TYPE D ON EDGE OF BRIDGE BEAM. REFERENCE DETAIL 02/E2.03.
6. ROUTE CONDUIT CONCEALED IN WING WALL.
7. ROUTE CONDUIT BELOW APPROACH SLAB.
8. ROUTE CONDUIT UNDERGROUND, WITH 24" COVER TO PARK POLE FIXTURE TYPE SA1 AND CONNECT BRIDGE LIGHT CIRCUIT TO LIGHTING CIRCUIT FROM NORTH ELECTRICAL SERVICE PEDESTAL. THE CIRCUIT WILL HAVE BEEN CHANGED FROM 2-#8, 1-#12 IN 1" SCH 40 PVC, TO 2-#6, 1-#10 IN 1" SCH 40 PVC. CONFIRM THE PHASE 1C PARK CONSTRUCTION BEFORE MAKING FINAL CONNECTIONS.
9. APPROXIMATE LOCATION OF PARK FIXTURES SA1 AND SA3 ARE SHOWN. VERIFY ACTUAL LOCATION AT SITE.



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4-28-10

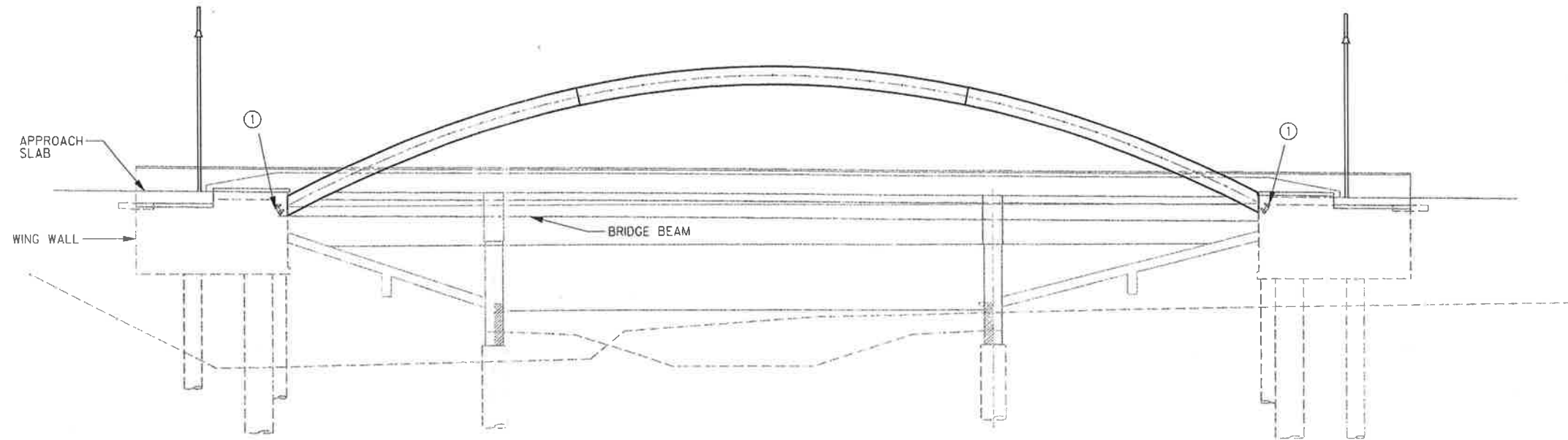
NO.	REVISION	BY	DATE		
TOWN OF ADDISON DALLAS COUNTY, TEXAS					
VITRUVIAN PARK BRIDGES BELLA LANE					
ELECTRICAL PLAN					
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 346-8200 FAX (214) 789-0095					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	DMP	AHH	APRIL 2010	-	E2-01

GENERAL NOTES



A. STUDY STRUCTURAL SHEETS FOR COORDINATION OF FIXTURE LOCATIONS AND ROUTE OF CONDUIT.

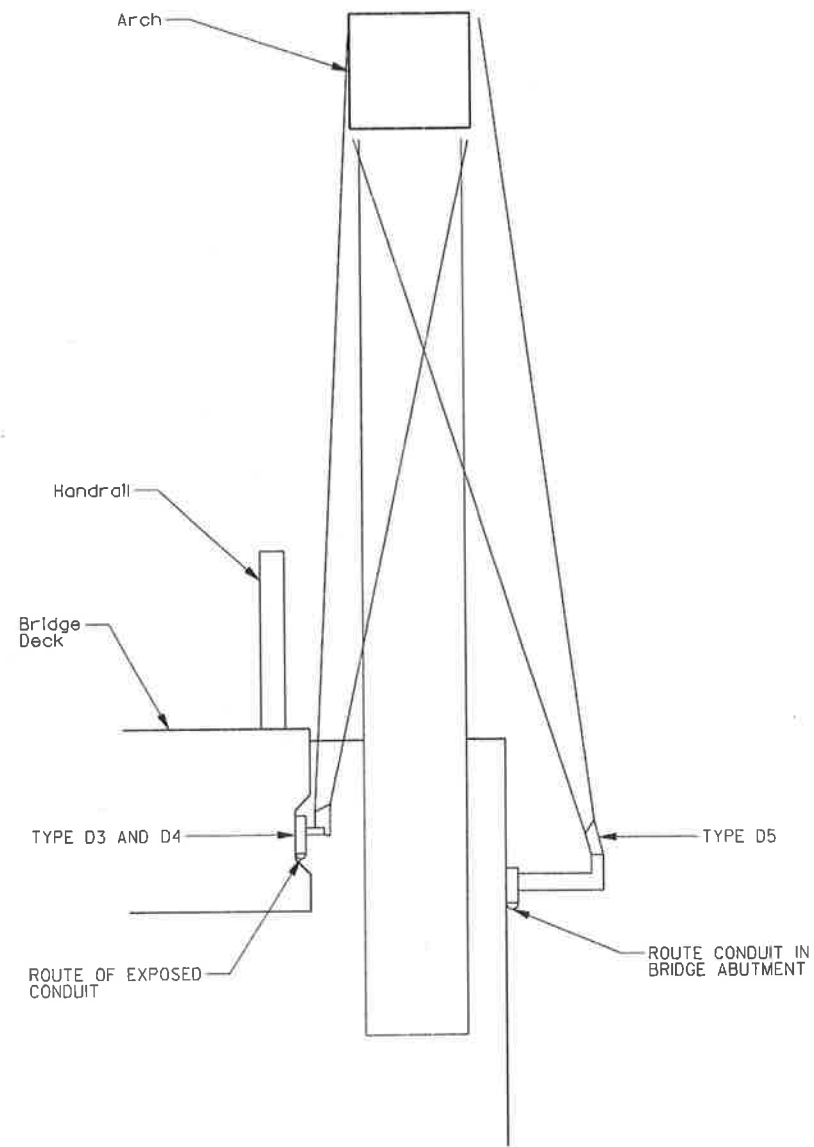
LEGEND NOTES

1. LOCATE FIXTURES D5 ON THE BRIDGE ABUTMENT AND IN LINE WITH THE CENTERLINE OF THE ARCH.

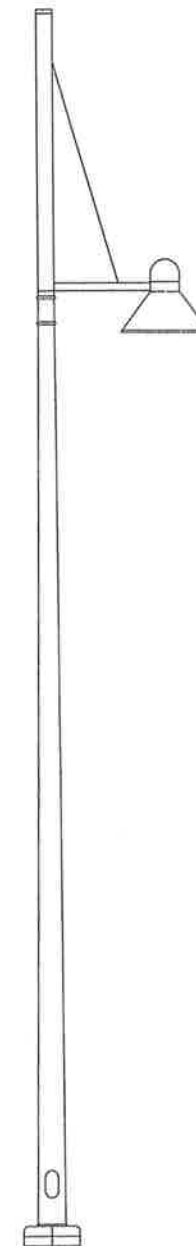


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NO.	REVISION	BY	DATE		
 TOWN OF ADDISON DALLAS COUNTY, TEXAS					
VITRUVIAN PARK BRIDGES BELLA LANE					
ELECTRICAL ELEVATION					
 HALFF					
<small>1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-8200 FAX (214) 738-0066</small>					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	DMP	AHH	APRIL 2010	-	E2-02



02 TYPES D
NOT TO SCALE





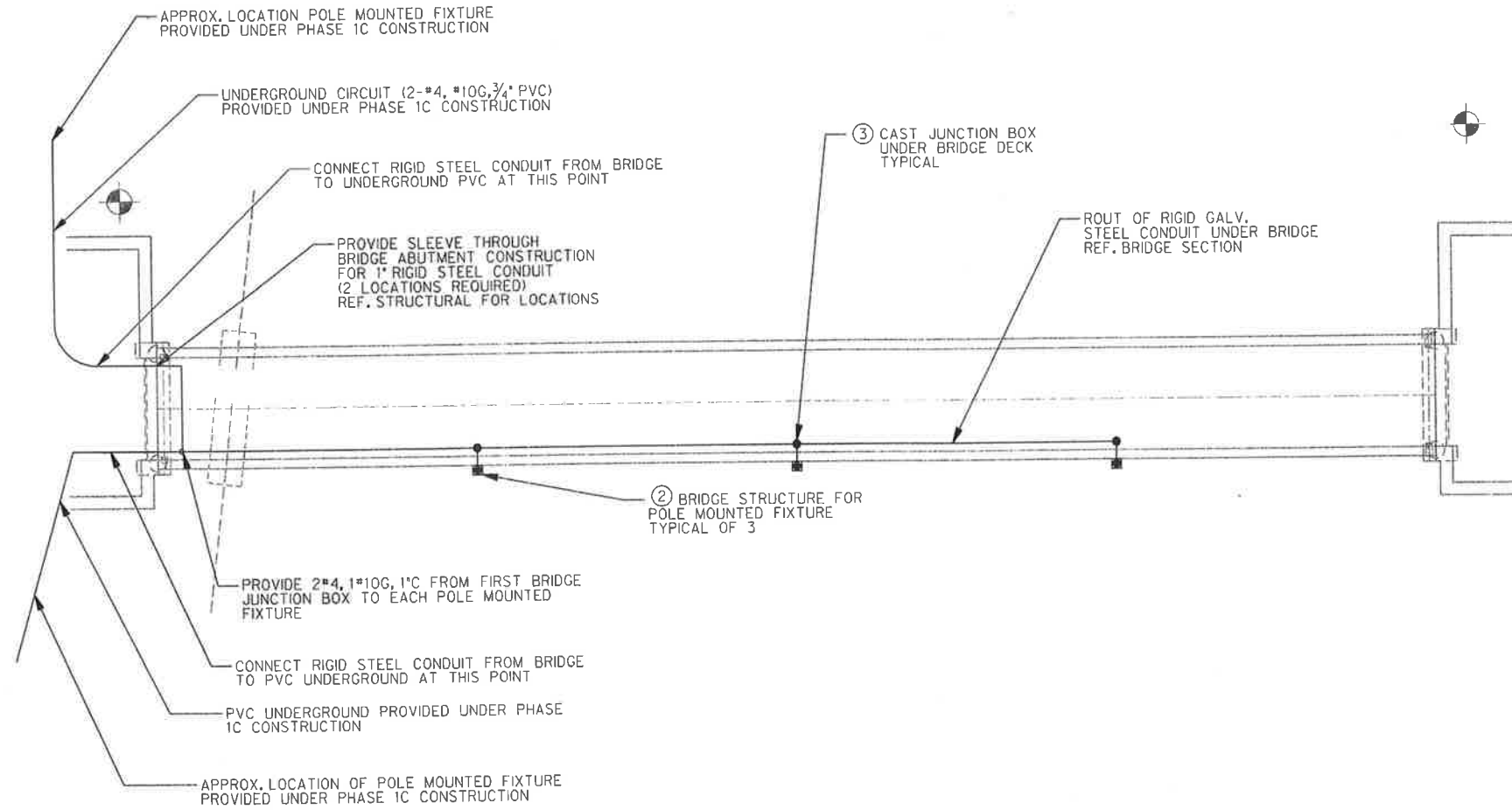
01 TYPES B
NOT TO SCALE



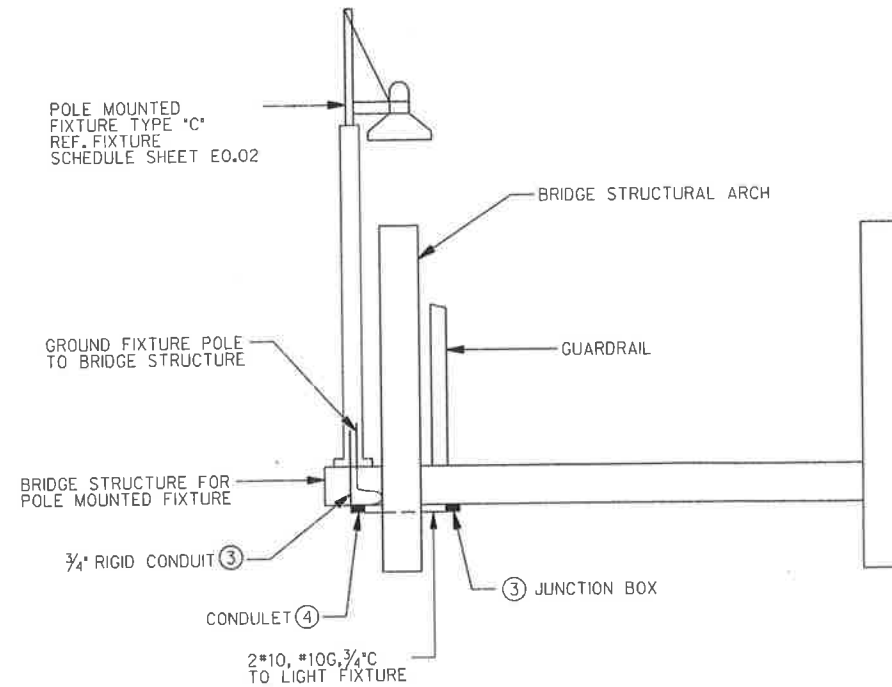
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY DIANNE H. POPPEN, P.E., NO. 41979 ON 04-29-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF HALFF ASSOCIATES, 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS, 75081, PHONE (972) 348-0200.

4-28-10

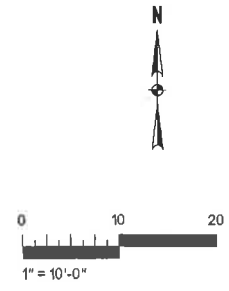
NO.	REVISION	BY	DATE		
 TOWN OF ADDISON DALLAS COUNTY, TEXAS					
VITRUVIAN PARK BRIDGES BELLA LANE					
ELECTRICAL DETAILS					
 HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-0200 FAX (214) 798-0065					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379		AHH	APRIL 2010	-	E2-03



01 PLAN
SCALE: 1" = 10'-0"



02 BRIDGE SECTION
NOT TO SCALE



GENERAL NOTES

- A. THE LIGHTING DESIGN FOR THE NEW SOUTH PEDESTRIAN BRIDGE WILL REQUIRE SOME CHANGES TO THE PARK LIGHTING & ELECTRICAL DESIGN REPRESENTED ON SHEET C803 OF THE PARK AND STREETSCAPE IMPROVEMENTS FOR THE VITRUVIAN PARK PUBLIC INFRASTRUCTURE - PHASE 1C. THE NECESSARY CHANGES IN THE PHASE 1C DESIGN WILL BE PERFORMED BY THE CONTRACTOR FOR THE PHASE 1C CONSTRUCTION. THE CHANGES ARE REPRESENTED ON THIS DESIGN PLAN SO THE CONTRACTOR WILL HAVE EASY ACCESS TO THE RELEVANT DATA WHILE BIDDING AND DURING CONSTRUCTION COORDINATION.
- B. PROVIDE THE POLE MOUNTED FIXTURES LOCATED ON THE BRIDGE. COORDINATE THE INSTALLATION OF THE FIXTURES WITH THE BRIDGE MANUFACTURER.
- C. PROVIDE ALL CONDUIT AND CONDUCTORS ON THE BRIDGE FOR THE FIXTURES MOUNTED ON THE BRIDGE.
- D. POWER TO THE SOUTH PEDESTRIAN BRIDGE IS PROVIDED UNDER THE PHASE 1C CONTRACT AND IS NOT A PART OF THIS CONTRACT.
- E. COORDINATE THE CONNECTION OF THE BRIDGE CIRCUITS TO THE PHASE 1C CIRCUITS WITH THE PHASE 1C CONTRACTOR.
- F. REFERENCE THE LEGEND NOTES FOR THE SPECIFIC LIMITS OF CONSTRUCTION UNDER THIS CONTRACT.

LEGEND NOTES

- 1. FOUR FIXTURES TYPE SE PROVIDING SUSPENDED STRAND LIGHTING AND ASSOCIATED TRANSFORMERS SE-T WILL BE DELETED FROM THE PHASE 1C CONTRACT.
- 2. PROVIDE THREE BRIDGE MOUNTED FIXTURES TYPE 'C'.
- 3. ALL CONDUIT UNDER BRIDGE SHALL BE RIGID STEEL GALVANIZED. JUNCTION BOXES SHALL BE MALLEABLE IRON WITH HUBS FOR THREADED RIGID STEEL CONDUIT WITH WEATHERPROOF CAST COVER AND NEOPRENE GASKET.
- 4. PROVIDE 1/2\"/>



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY DIANNE M. POPKEN, P.E. #41979 ON 04-28-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF HALFF ASSOCIATES, 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS. TOOL: TWP: FPM: 11-312.

NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES SOUTH PEDESTRIAN BRIDGE			
ELECTRICAL PLAN			
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 76081-2275 TEL (214) 348-8200 FAX (214) 739-0096			
PROJECT	DESIGN	DRAWN	DATE
27379		AHH	APRIL 2010
FILE	SHEET		
-	E3-01		

USER: ah2214

OFFICE: RCH

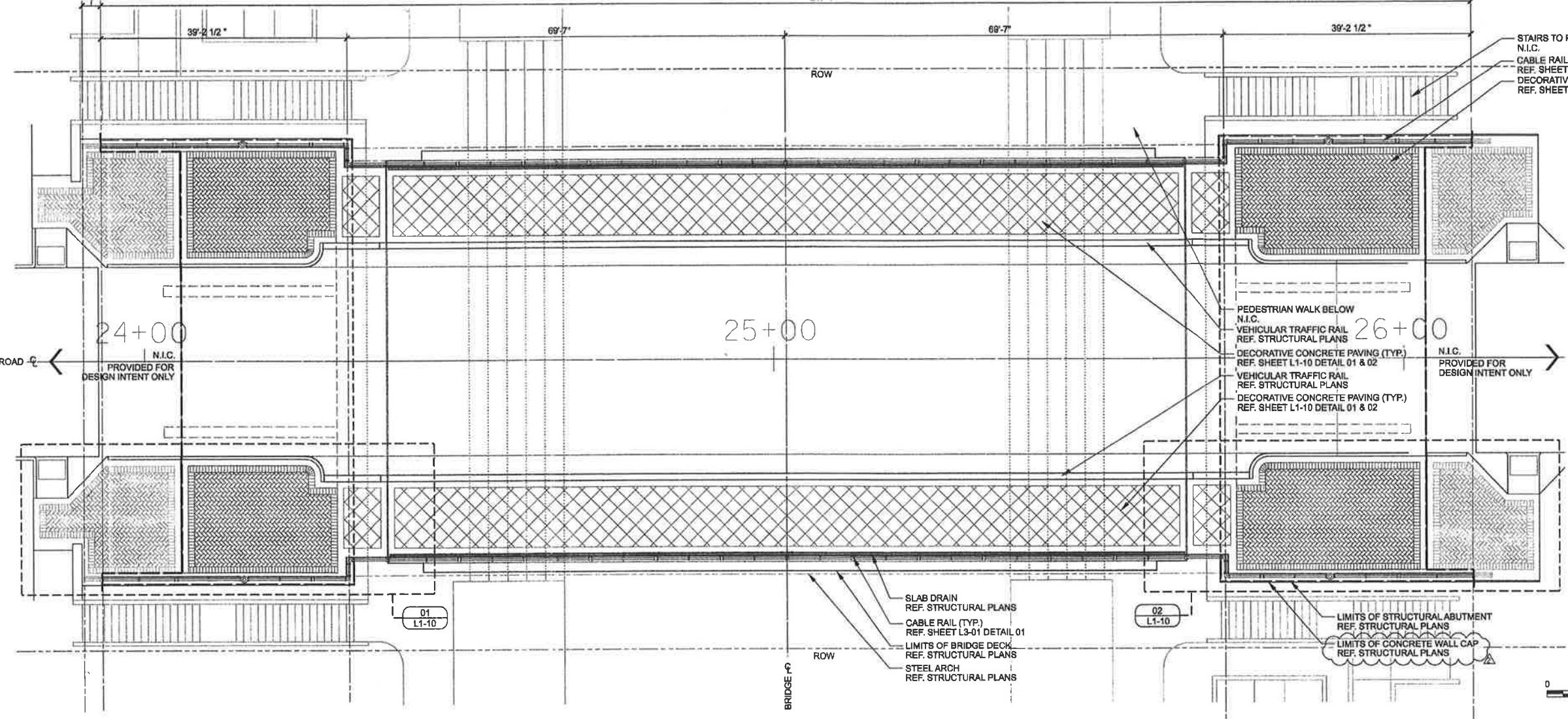
PROJECT # 27379

FILE: L101-SP-Ponte-27379.dgn

TIME: 5:15:12 PM

DATE: 5/19/2010

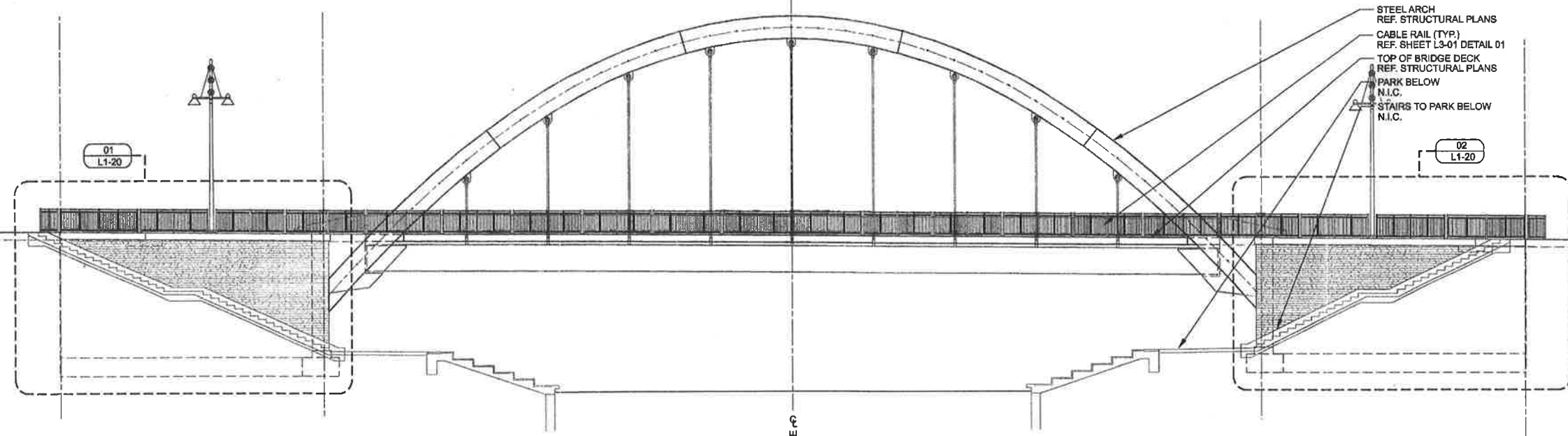
± 3'-0"
CONTRACTOR TO FIELD VERIFY AND COORDINATE
THE EXACT LENGTH OF RAIL REQUIRED. TYP. FOR
ALL CORNERS



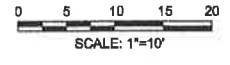
GENERAL NOTES

1. REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
2. ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
3. ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
4. REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
5. ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
6. ALL DIMENSIONS AND ITEM LOCATIONS ARE TO MIRROR ALONG THE ROAD CENTERLINE UNLESS OTHERWISE NOTED.

01 CABLE RAIL AND PAVING LAYOUT
SCALE: 10"= 1'-0" PLAN

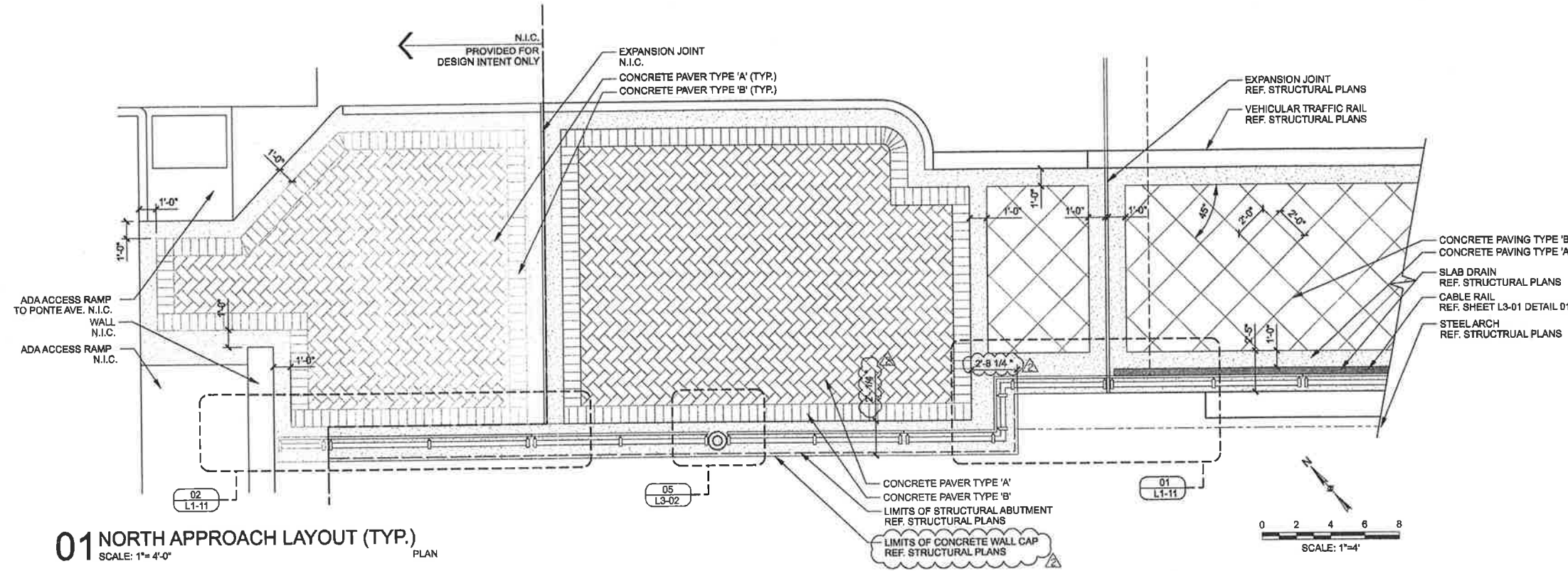


02 CABLE RAIL AND WALL ABUTMENT LAYOUT
SCALE: 10"= 1'-0" ELEVATION

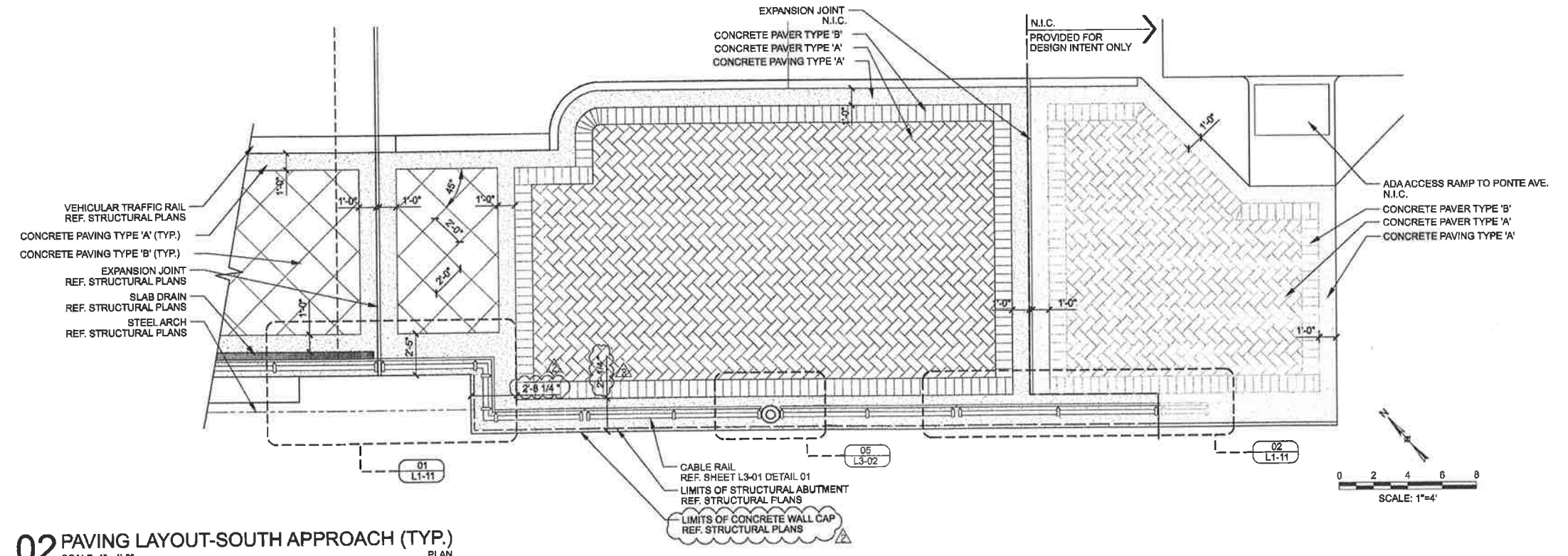


THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LENNY L. HUGHES, R.L.S., #2087 ON 05-19-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE LAND SURVEYOR IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF HALFF ASSOCIATES, INC., 1201 NORTH BOWSER, RICHARDSON, TEXAS 75081. T&E FORM #P-012

ADDENDUM #2	NO.	REVISION	JOB NO.	DATE
			05/19/10	
ADDISON TOWN OF ADDISON DALLAS COUNTY, TEXAS				
VITRUVIAN PARK BRIDGES PONTE AVENUE				
HANDRAIL LAYOUT & PROFILE				
HALFF		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 348-8200 FAX (214) 738-0085		
PROJECT	DESIGN	DRAWN	DATE	FILE SHEET
27379	JDB	AHH	APRIL 2010	L1-01



01 NORTH APPROACH LAYOUT (TYP.) PLAN
SCALE: 1"=4'-0"



02 PAVING LAYOUT-SOUTH APPROACH (TYP.) PLAN
SCALE: 1"=4'-0"

GENERAL NOTES

1. REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
2. ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
3. ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
4. REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
5. ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
6. ALL DIMENSIONS AND ITEM LOCATIONS ARE TO MIRROR ALONG THE ROAD CENTERLINE UNLESS OTHERWISE NOTED.
7. ALL PAVER SQUARE FOOTAGES NOTED, REPRESENT TOTAL BRIDGE QUANTITIES UNLESS OTHERWISE NOTED.

DESIGN SELECTION: PAVING

CONCRETE PAVERS:

CONCRETE PAVER TYPE 'A'
CITY STONE I
SIZE: 11 3/4L x 5 13/16W x 2 3/8H
COLOR: TRAVERTINE BLEND
PATTERN: HERRINGBONE
△ QUANTITY: 1,415 S.F.

CONCRETE PAVER TYPE 'B'
CITY STONE I
SIZE: 11 3/4L x 5 13/16W x 2 3/8H
COLOR: BELLOW BROWN
PATTERN: SINGLE BRICK HEADER
△ QUANTITY: 330 S.F.

CONCRETE PAVING:

CONCRETE PAVING TYPE 'A'
FINISH: HEAVY SANDBLAST
△ COLOR: NONE

CONCRETE PAVING TYPE 'B'
FINISH: ROCK SALT
△ COLOR: NONE
SAW-CUT PATTERN

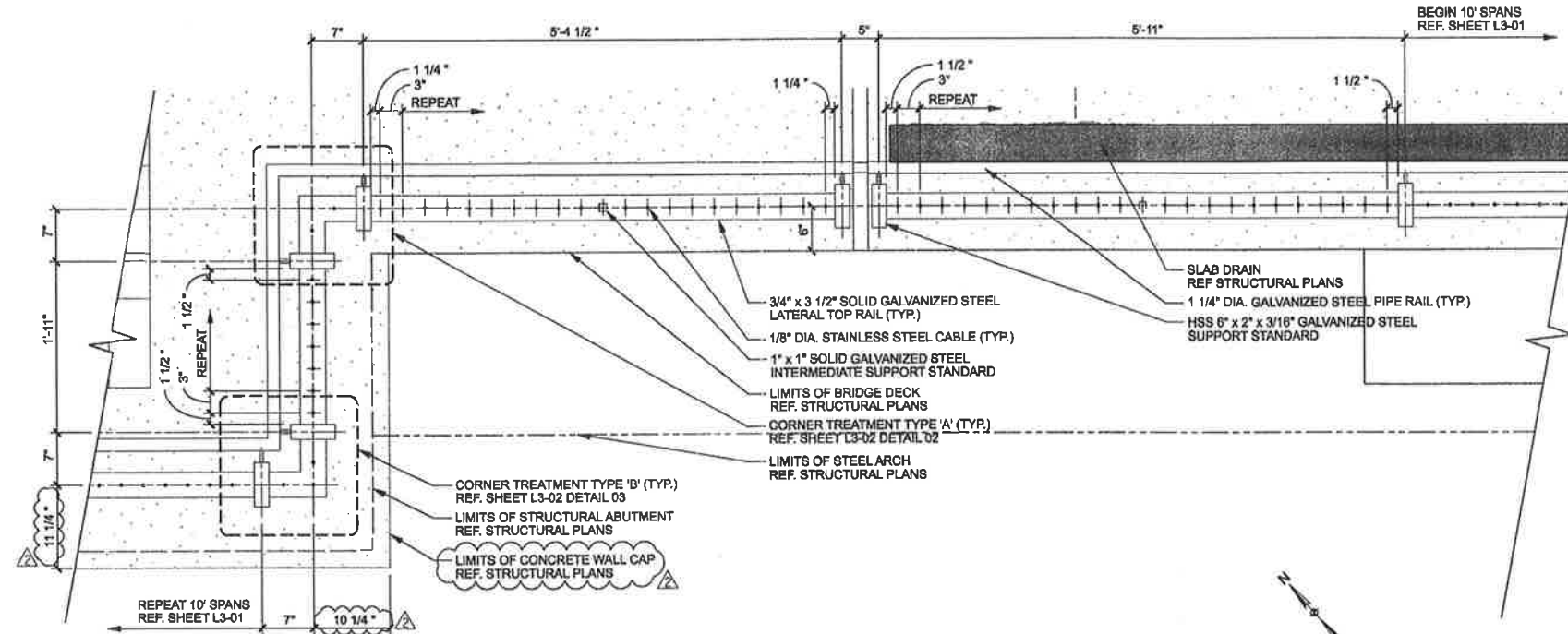
PAVING GENERAL NOTES:

1. SEE ON-SITE MOCK-UP FOR ALL REFERENCED CONCRETE AND STONE COLORS AND TEXTURES.
2. CONTRACTOR TO PROVIDE A 4' x 4' MOCK-UP OF ALL REFERENCED CONCRETE PAVING AND PAVER COLOR, PATTERNS AND TEXTURES FOR APPROVAL PRIOR TO WORK COMMENCEMENT.

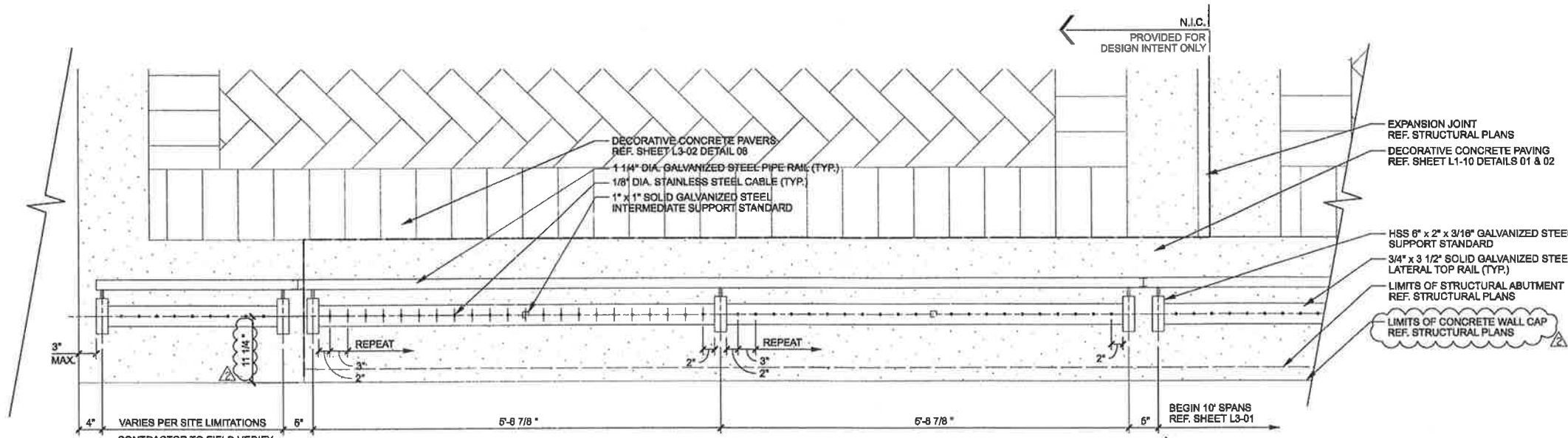
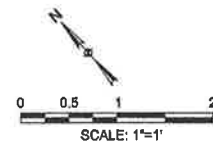


THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LEANN L. HUGHES, P.L.A. (BIRTH 04-06-19-2010) ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE LANDSCAPE ARCHITECT IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF HALFF ASSOCIATES, INC., 1201 NORTH BOWSER, RICHARDSON, TEXAS 75081. TYPE FORM #F-312

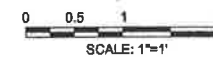
ADDENDUM #2	JOB	05/19/10			
ADDENDUM #1	JOB	05/14/10			
NO.	REVISION	BY DATE			
ADDISON TOWN OF ADDISON DALLAS COUNTY, TEXAS					
VITRUVIAN PARK BRIDGES PONTE AVENUE					
ENLARGED PAVING LAYOUT					
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 346-6200 FAX (214) 730-0066					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	JDB	AHH	APRIL 2010	-	L1-10



01 RAIL AT ABUTMENT FACE (TYP.)
SCALE: 1"=1'-0" PLAN



02 RAIL AT BRIDGE APPROACH (TYP.)
SCALE: 1"=1'-0" PLAN



GENERAL NOTES

1. REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
2. ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
3. ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
4. REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
5. ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
6. ALL DIMENSIONS AND ITEM LOCATIONS ARE TO MIRROR ALONG THE ROAD CENTERLINE UNLESS OTHERWISE NOTED.

DESIGN SELECTION: RAILING

- CONNECTORS / FITTINGS:**
- FIXED BUTTON HEAD CONNECTOR
MODEL #: 3287
CONTACT: FEENEY ARCHITECTURAL PRODUCTS *OR APPROVED EQUAL
 - THREADED TERMINAL CABLE FITTING
MODEL #: 3191
CONTACT: FEENEY ARCHITECTURAL PRODUCTS *OR APPROVED EQUAL

- CABLES:**
- 1/8" DIA. STAINLESS STEEL CABLE
MODEL #: 4140
CONTACT: FEENEY ARCHITECTURAL PRODUCTS *OR APPROVED EQUAL

FEENEY ARCHITECTURAL PRODUCTS
TRANG NGUYEN
1-800-888-2418
WWW.FEENEYARCHITECTURAL.COM
OR APPROVED EQUAL

- RAILING GENERAL NOTES:**
1. ALL STEEL COMPONENTS TO BE GALVANIZED UNLESS OTHERWISE NOTED.
 2. ALL LATERAL AND INTERMEDIATE STEEL RAILS TO BE PARALLEL TO SIDEWALK SLOPES UNLESS OTHERWISE NOTED.
 3. HSS 6" x 2" x 3/16" GALVANIZED STEEL SUPPORT STANDARDS TO BE PLUMB.
 4. EXPOSED EDGES OF ALL STEEL MEMBERS SHALL BE ROUNDED TO MIN. 1/16" BY GRINDING UNLESS OTHERWISE NOTED.
 5. ALL STANDARD TXDOT TYPE T401 VEHICULAR RAILING POSTS TO BE CENTERED WITH THE PEDESTRIAN RAIL STEEL SUPPORT STANDARDS AS SHOWN ON SHEET L3-02 DETAIL 07.
 6. CONTRACTOR TO SUBMIT PEDESTRIAN RAIL SHOP DRAWINGS FOR APPROVAL.
 7. MAXIMUM 4" SPACING BETWEEN ALL RAIL AND CABLE MEMBERS.
 8. 3/16" WELD REQUIRED FOR ALL STEEL MEMBER CONNECTIONS UNLESS OTHERWISE NOTED.
 9. REF. STRUCTURAL PLANS FOR ALL POST EMBEDMENT DETAILS.
 10. CONTRACTOR TO PROVIDE A 20' CABLE RAIL MOCK-UP ON SITE FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LENNY L. HUGHES, P.L.A. #0087 ON 08-19-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE LANDSCAPE ARCHITECT IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE REPRODUCED COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF HALFF ASSOCIATES, INC., 1221 NORTH BOWBER, RICHARDSON, TEXAS 75081. TRS, FROM #6-312.

NO.	REVISION	BY	DATE
ADDENDUM #2			05/19/10

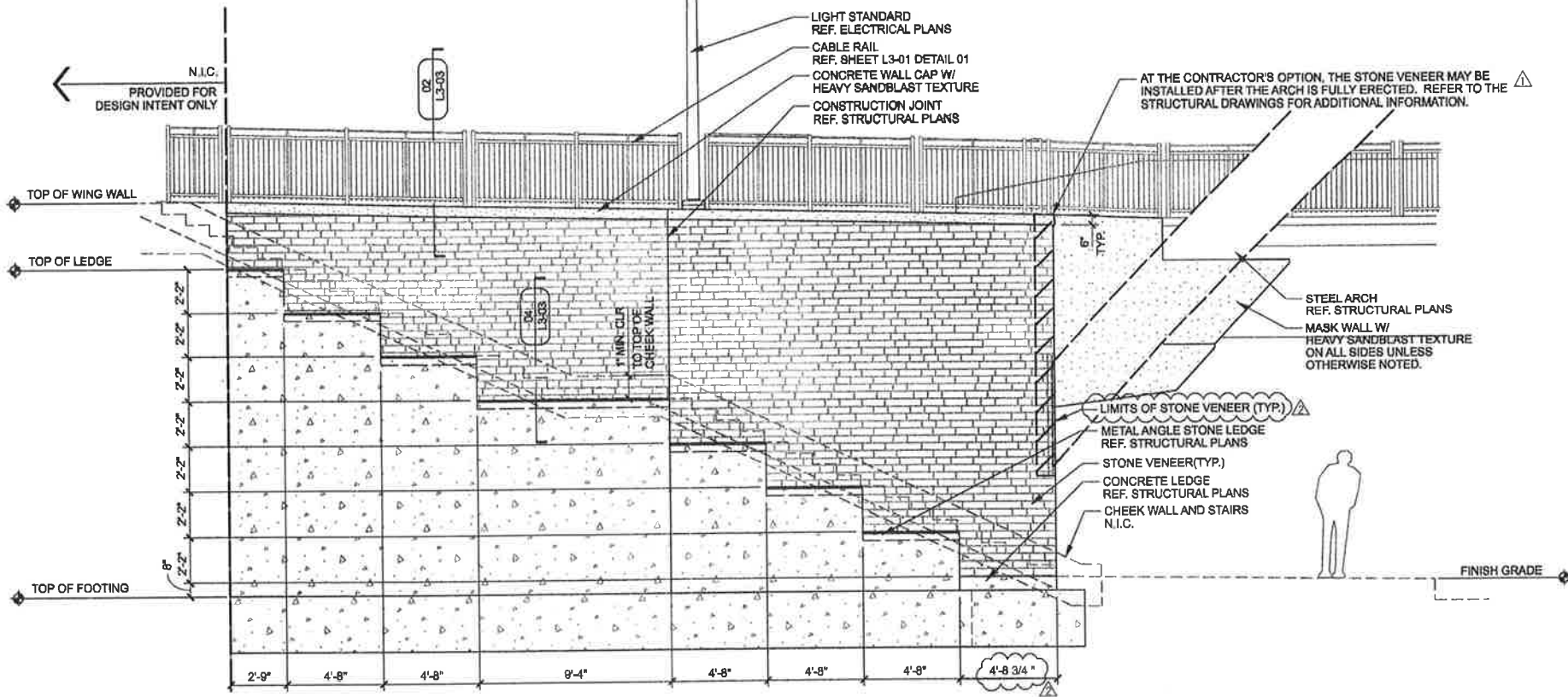
TOWN OF ADDISON
DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES
PONTE AVENUE

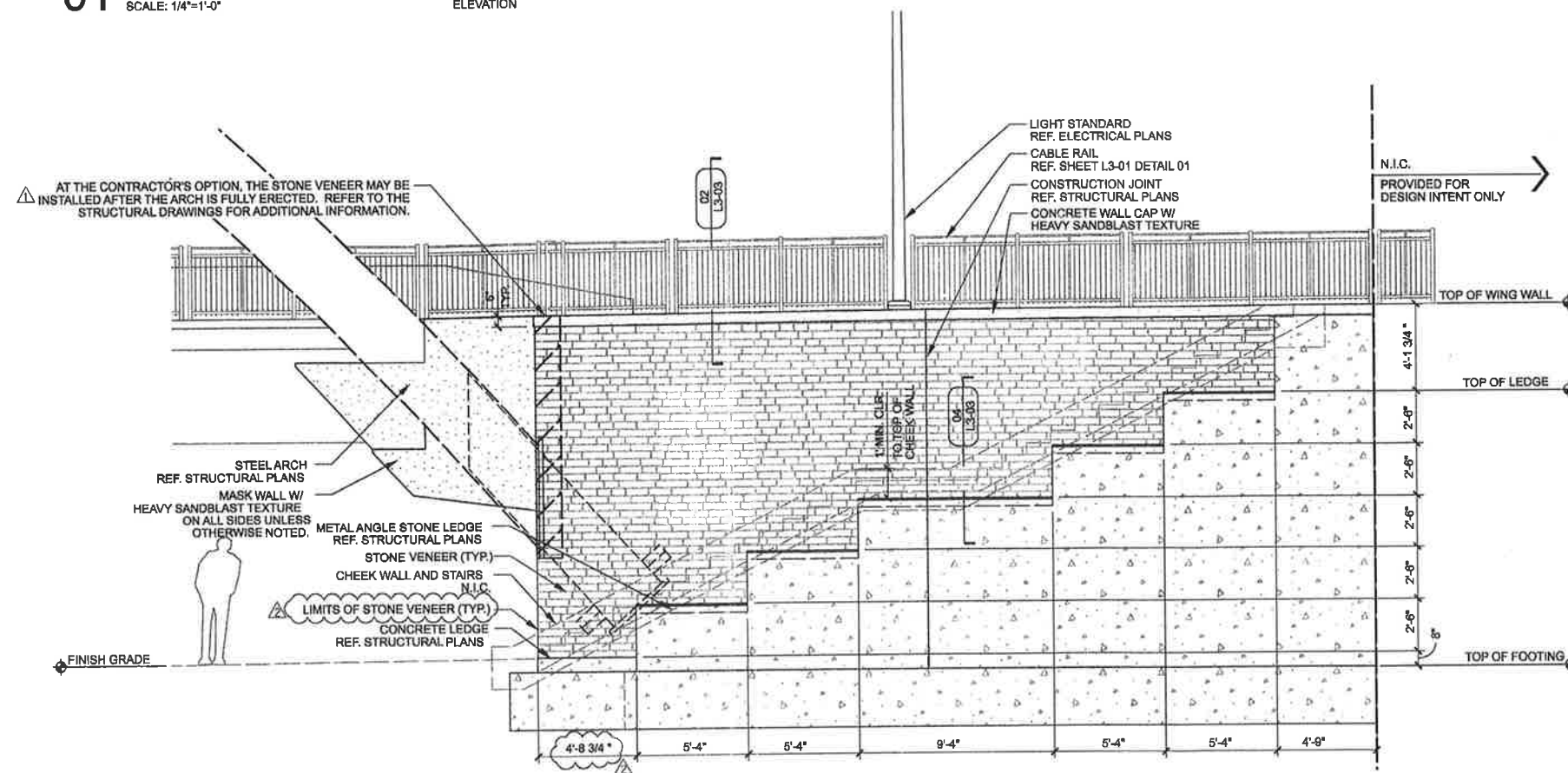
ENLARGED HANDRAIL LAYOUT

HALFF 1201 NORTH BOWBER ROAD, RICHARDSON, TEXAS 75081-2276
TEL (214) 348-8200 FAX (214) 738-0085

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	JDB	AHH	APRIL 2010	-	L1-11



01 ABUTMENT # 1- WING WALLS (TYP.)
 SCALE: 1/4"=1'-0"
 ELEVATION



02 ABUTMENT # 2- WING WALLS (TYP.)
 SCALE: 1/4"=1'-0"
 ELEVATION

GENERAL NOTES

1. REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
2. ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
3. ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
4. REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
5. ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
6. ALL DIMENSIONS AND ITEM LOCATIONS ARE TO MIRROR ALONG THE ROAD CENTERLINE UNLESS OTHERWISE NOTED.

DESIGN SELECTION: STRUCTURE

STONE:
 BLUE GREEN CHINESE STONE
 VENEER THICKNESS: 3 cm
 VENEER HEIGHT: 4"
 VENEER LENGTH: 8", 13" AND 21"
 VENEER FINISH: THERMAL
 VENEER EDGES: ALL FOUR SIDES TO BE SAW CUT
 MORTAR: TO MATCH ON SITE MOCK-UP
 COURSING: TO MATCH ON SITE MOCK-UP

CONCRETE ELEMENTS:
MASK WALL
 FINISH: HEAVY SANDBLAST ALL SIDES
 COLOR: NONE
WALL CAP
 FINISH: HEAVY SANDBLAST
 COLOR: NONE

STRUCTURE GENERAL NOTES:
 1. SEE ON-SITE MOCK-UP FOR ALL REFERENCED CONCRETE AND STONE, COLORS AND TEXTURES. FINAL APPROVAL BY OWNER OR OWNERS REPRESENTATIVE IS REQUIRED PRIOR TO WORK COMMENCEMENT.
 2. CONTRACTOR TO PROVIDE A 4' x 4' MOCK-UP OF ALL REFERENCED CONCRETE AND STONE, COLORS AND TEXTURES FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LENNY L. HUGHES, F.L.A. #2061 ON 05-18-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE LANDSCAPE ARCHITECT IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THIS RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICE OF HALFF ASSOCIATES, INC., 1201 NORTH BOWSER, RICHARDSON, TEXAS 75081. TSPS FORM #F-512

ADDENDUM #2	JDB	05/19/10
ADDENDUM #1	JDB	05/14/10
NO.	REVISION	BY DATE

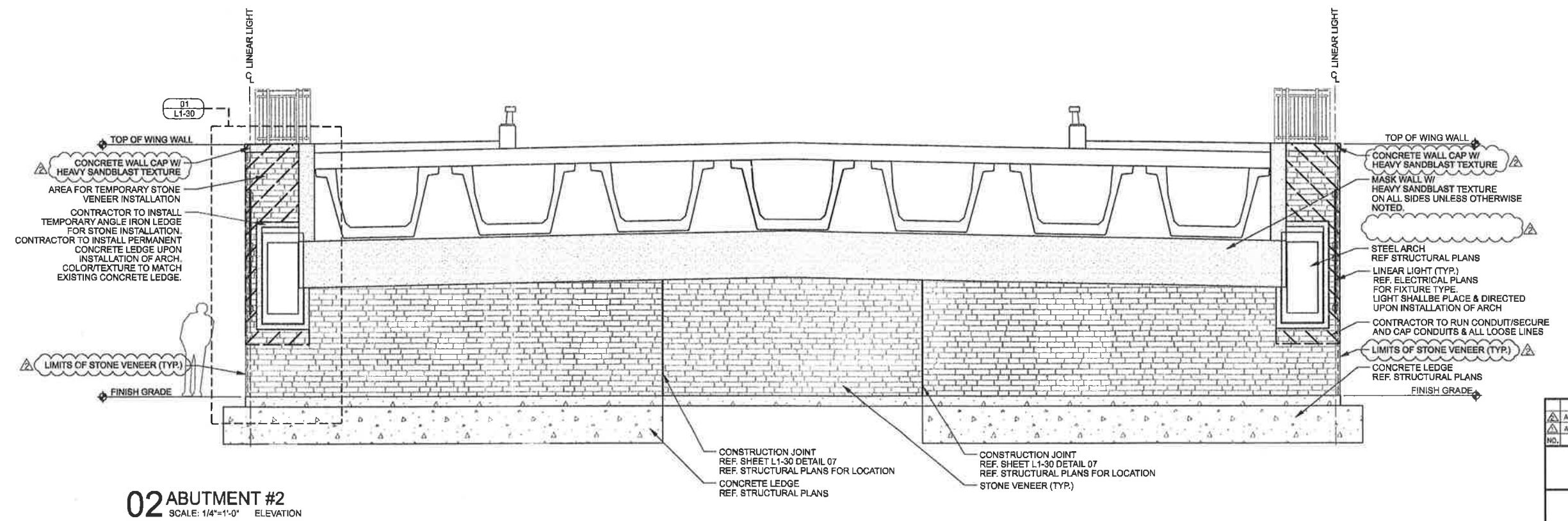
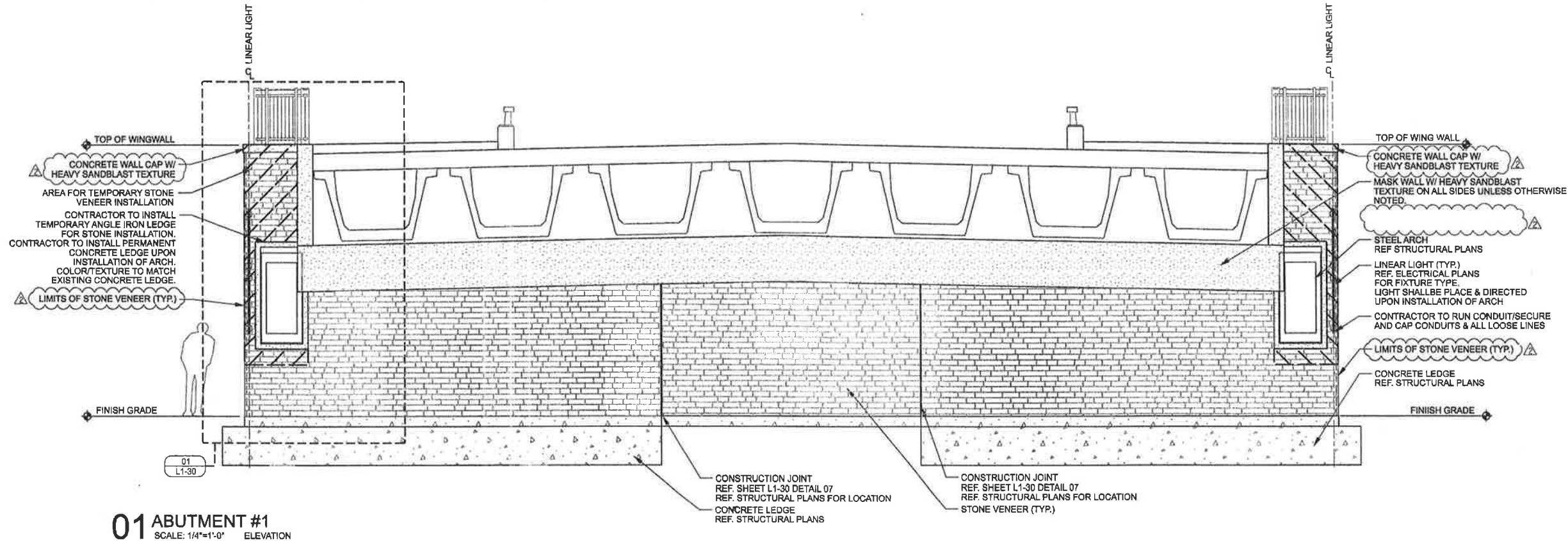
Addison **TOWN OF ADDISON**
 DALLAS COUNTY, TEXAS
VITRUVIAN PARK BRIDGES
 PONTE AVENUE

WING WALL ELEVATIONS

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2273
 TEL (214) 348-8200 FAX (214) 738-0065

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	JDB	AHH	APRIL 2010		L1-20

USER: gr2214
 OFFICE: RCH
 PROJECT #: 27379
 FILE: L121-DT-Ponte-27379.dgn
 TIME: 3:56:48 PM
 DATE: 6/22/2010



- GENERAL NOTES**
- REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
 - ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
 - ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
 - REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
 - ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
 - ALL DIMENSIONS AND ITEM LOCATIONS ARE TO MIRROR ALONG THE ROAD CENTERLINE UNLESS OTHERWISE NOTED.
 - AT THE CONTRACTOR'S OPTION, THE STONE VENEER MAY BE INSTALLED AFTER THE ARCH IS FULLY ERECTED. REFER TO THE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

DESIGN SELECTION: STRUCTURE

STONE:

BLUE GREEN CHINESE STONE

VENEER THICKNESS: 3 cm
 VENEER HEIGHT: 4"
 VENEER LENGTH: 8", 13" AND 21"
 VENEER FINISH: THERMAL
 VENEER EDGES: ALL FOUR SIDES TO BE SAW CUT
 MORTAR: TO MATCH ON SITE MOCK-UP
 COURSING: TO MATCH ON SITE MOCK-UP

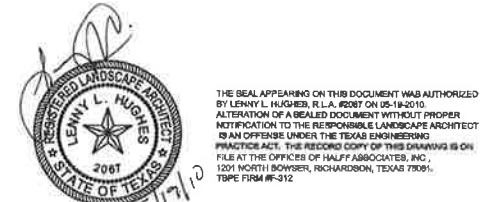
CONCRETE ELEMENTS:

MASK WALL
 FINISH: HEAVY SANDBLAST ALL SIDES
 COLOR: NONE

WALL CAP
 FINISH: HEAVY SANDBLAST
 COLOR: NONE

STRUCTURE GENERAL NOTES:

- SEE ON-SITE MOCK-UP FOR ALL REFERENCED CONCRETE AND STONE, COLORS AND TEXTURES. FINAL APPROVAL BY OWNER OR OWNERS REPRESENTATIVE IS REQUIRED PRIOR TO WORK COMMENCEMENT.
- CONTRACTOR TO PROVIDE A 4' x 4' MOCK-UP OF ALL REFERENCED CONCRETE AND STONE, COLORS AND TEXTURES FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



ADDENDUM NO.	REVISION	JOB NO.	DATE
ADDENDUM #2		JOB	05/19/10
ADDENDUM #1		JOB	05/14/10

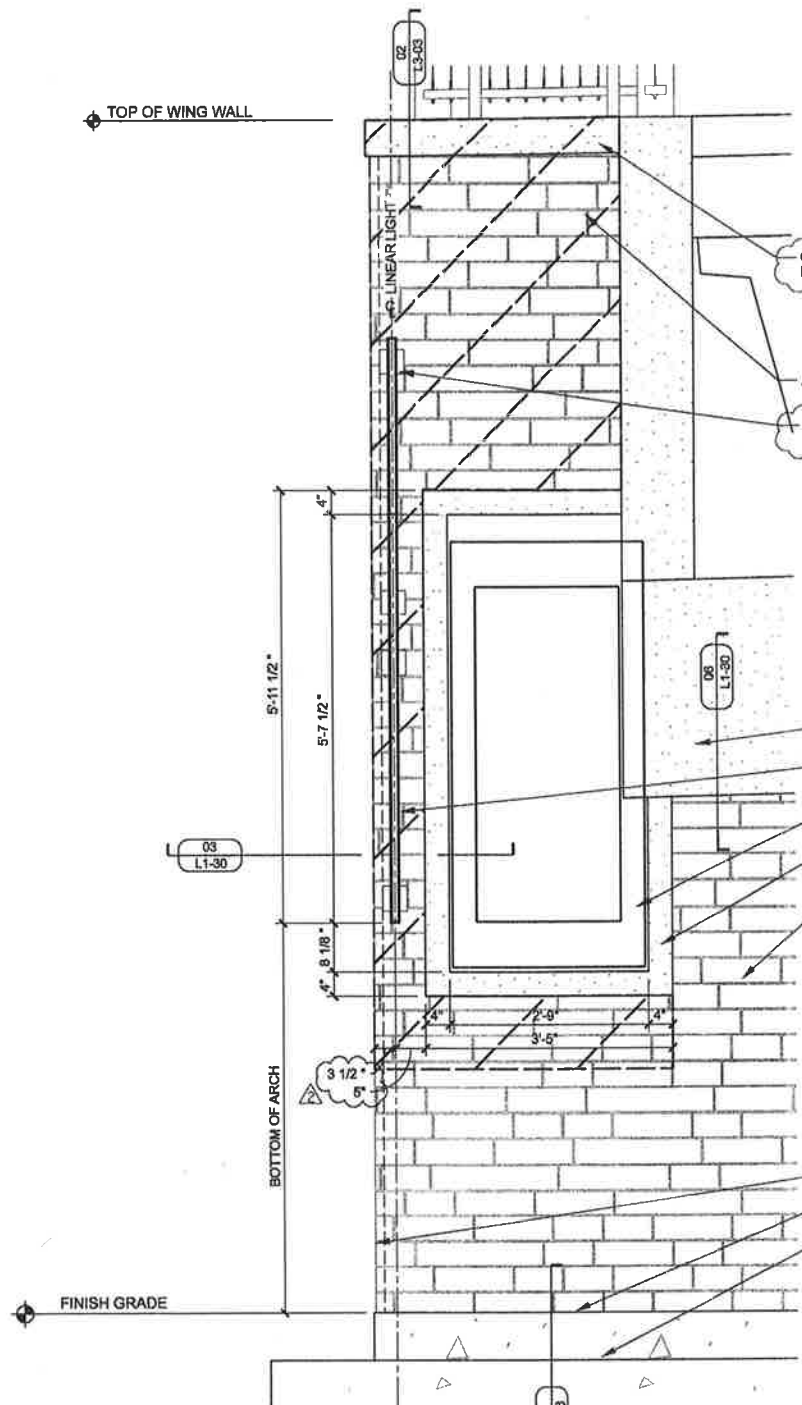
ADDISON TOWN OF ADDISON DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES PONTE AVENUE

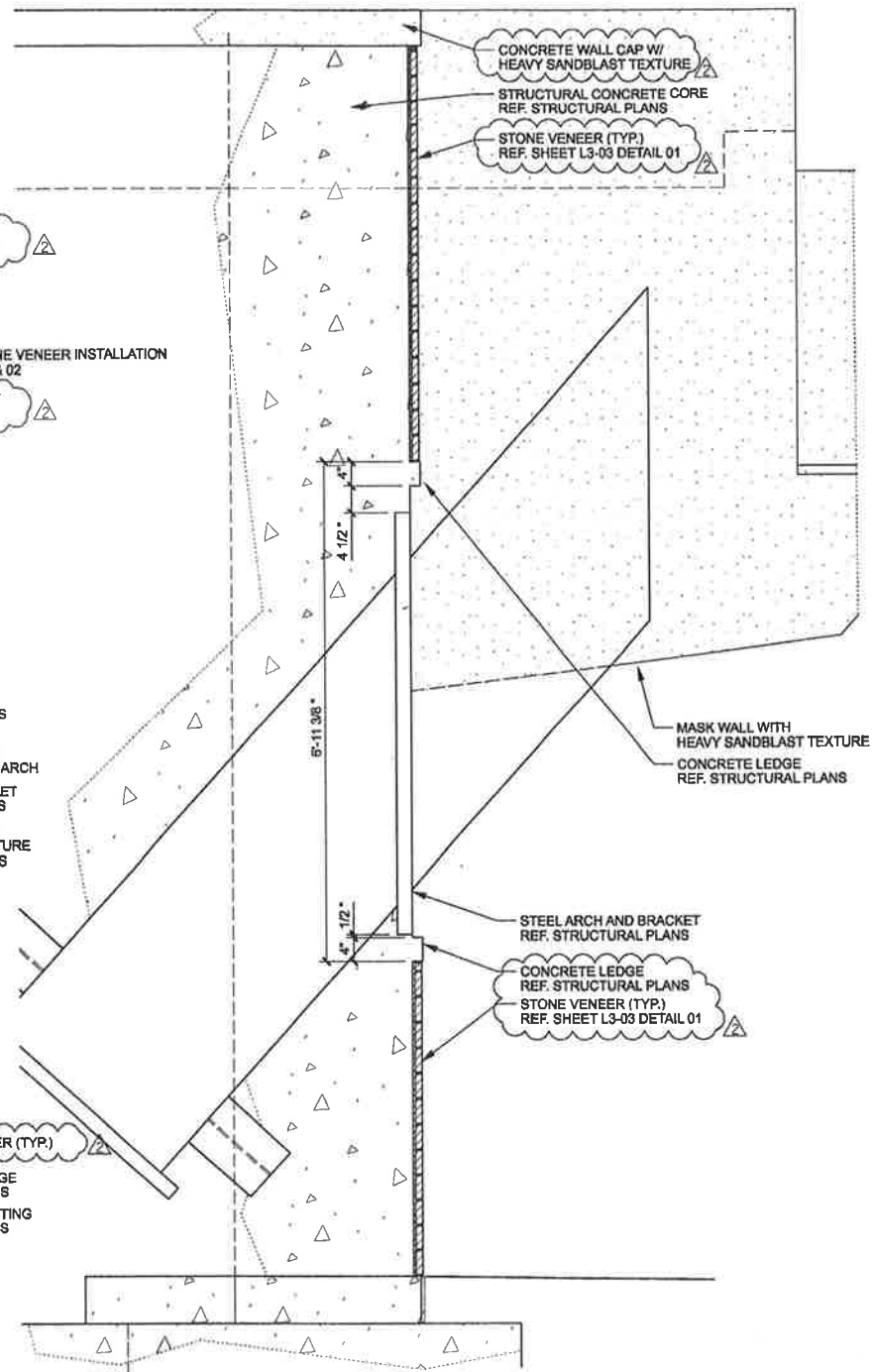
ABUTMENT ELEVATIONS

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
 TEL (214) 346-8200 FAX (214) 738-0095

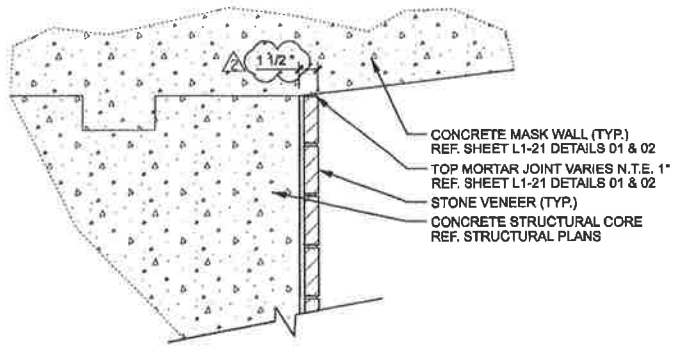
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	JOB	AHH	APRIL 2010	-	L1-21



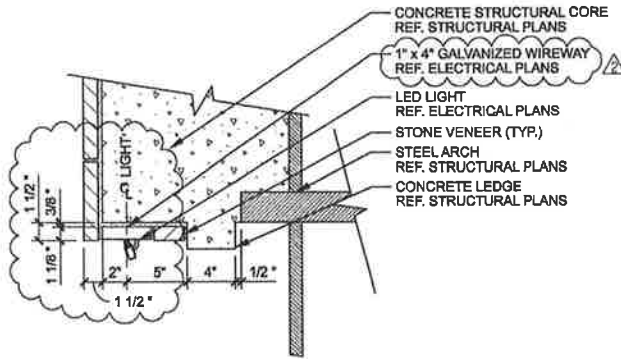
01 ARCH AT ABUTMENT (TYP.)
SCALE: 3/4"=1'-0"
ELEVATION



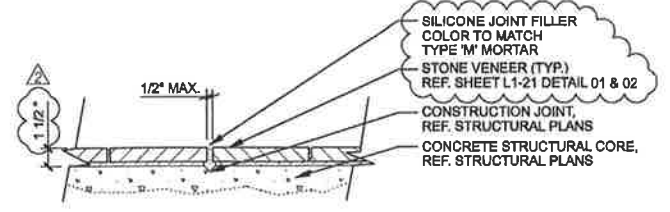
02 ARCH AT ABUTMENT (TYP.)
SCALE: 3/4"=1'-0"
ELEVATION



06 STONE VENEER AT MASK WALL (TYP.)
SCALE: 1 1/2"=1'-0"
SECTION



03 STONE WALL AT LED LIGHT (TYP.)
SCALE: 1 1/2"=1'-0"
SECTION

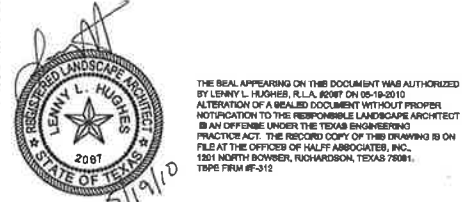


07 CONSTRUCTION JOINT STONE TREATMENT (TYP.)
SCALE: 1 1/2"=1'-0"
SECTION

- GENERAL NOTES**
1. REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
 2. ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
 3. ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
 4. REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
 5. ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
 6. ALL DIMENSIONS AND ITEM LOCATIONS ARE TO BE MIRRORED ALONG THE ROAD CENTERLINE UNLESS OTHERWISE NOTED.

DESIGN SELECTION: STRUCTURE

- STONE:**
- BLUE GREEN CHINESE STONE
 - VENEER THICKNESS: 3 cm
 - VENEER HEIGHT: 4"
 - VENEER LENGTH: 8", 13" AND 21"
 - VENEER FINISH: THERMAL
 - VENEER EDGES: ALL FOUR SIDES TO BE SAW CUT
 - MORTAR: TO MATCH ON SITE MOCK-UP
 - COURSING: TO MATCH ON SITE MOCK-UP
- CONCRETE ELEMENTS:**
- MASK WALL**
- FINISH: HEAVY SANDBLAST ALL SIDES
 - COLOR: NONE
- WALL CAP**
- FINISH: HEAVY SANDBLAST
 - COLOR: NONE
- STRUCTURE GENERAL NOTES:**
1. SEE ON-SITE MOCK-UP FOR ALL REFERENCED CONCRETE AND STONE COLORS AND TEXTURES. FINAL APPROVAL BY OWNER OR OWNERS REPRESENTATIVE IS REQUIRED PRIOR TO WORK COMMENCEMENT.
 2. CONTRACTOR TO PROVIDE A 4' x 4' MOCK-UP OF ALL REFERENCED CONCRETE AND STONE, COLORS AND TEXTURES FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



ADDENDUM *2	JDB	05/19/10
ADDENDUM *1	JDB	05/14/10
NO.	REVISION	BY DATE

TOWN OF ADDISON
DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES
PONTE AVENUE

ABUTMENT DETAILS

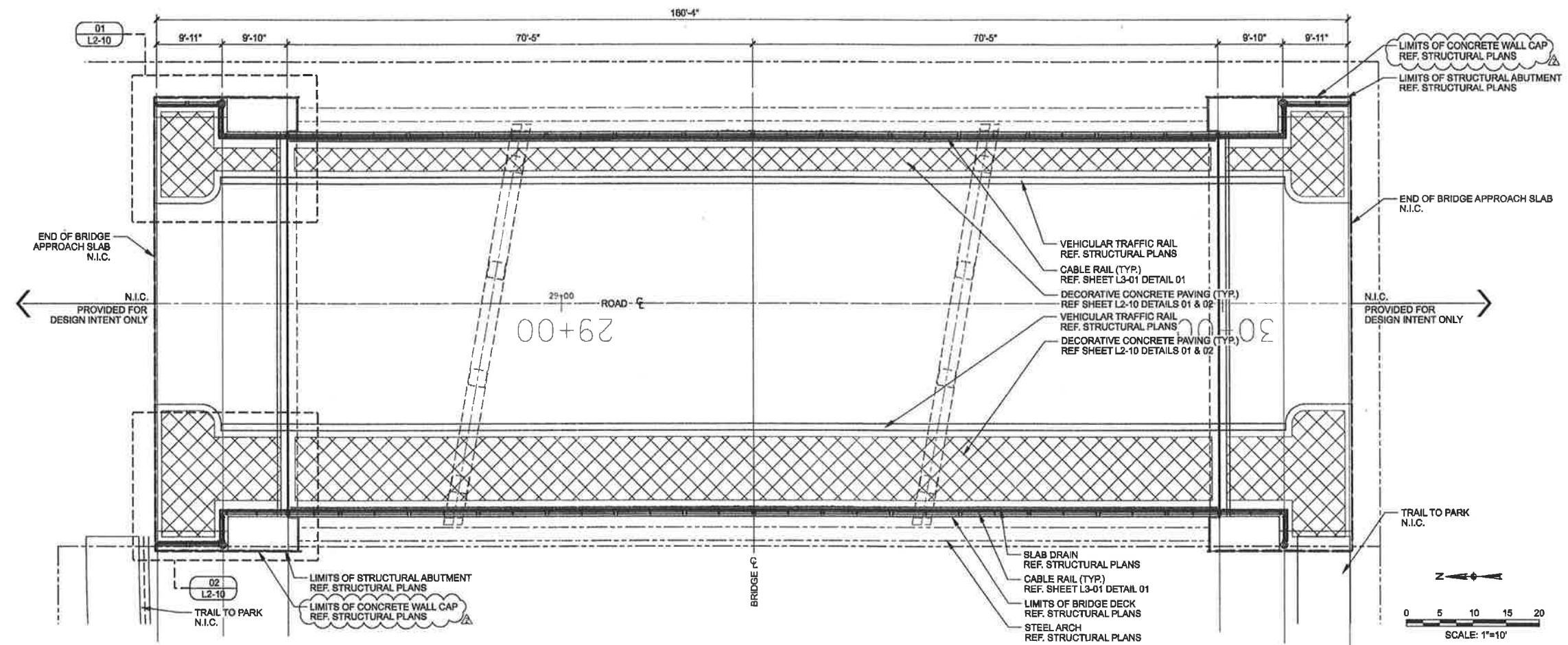
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL. (214) 348-8200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	JDB	AHH	APRIL 2010	-	L1-30

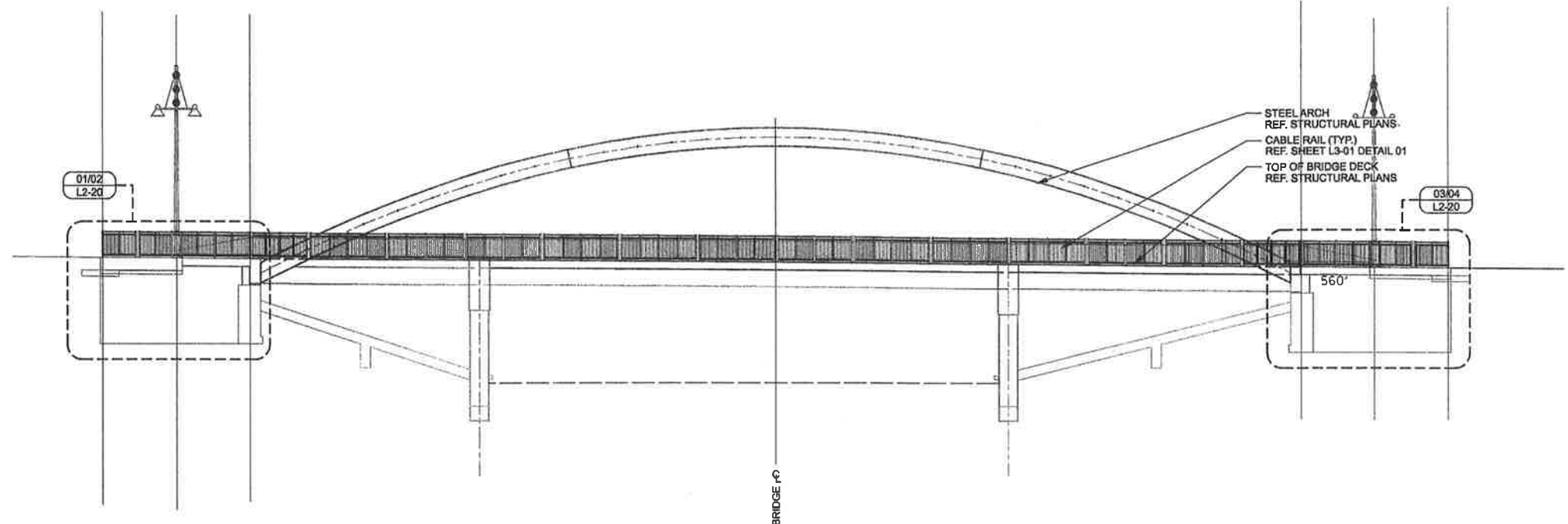
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 OFFICE: RCH
 PROJECT #: 27379
 FILE: L201-SP-Bella-27379.dgn
 TIME: 5:15:48 PM
 DATE: 5/19/2010

GENERAL NOTES

1. REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
2. ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
3. ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
4. REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
5. ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
6. ALL DIMENSIONS AND ITEM LOCATIONS ARE TO BE MIRRORED ALONG THE BRIDGE CENTERLINE UNLESS OTHERWISE NOTED.



01 CABLE RAIL AND PAVING LAYOUT
 SCALE: 10" = 1'-0"
 PLAN

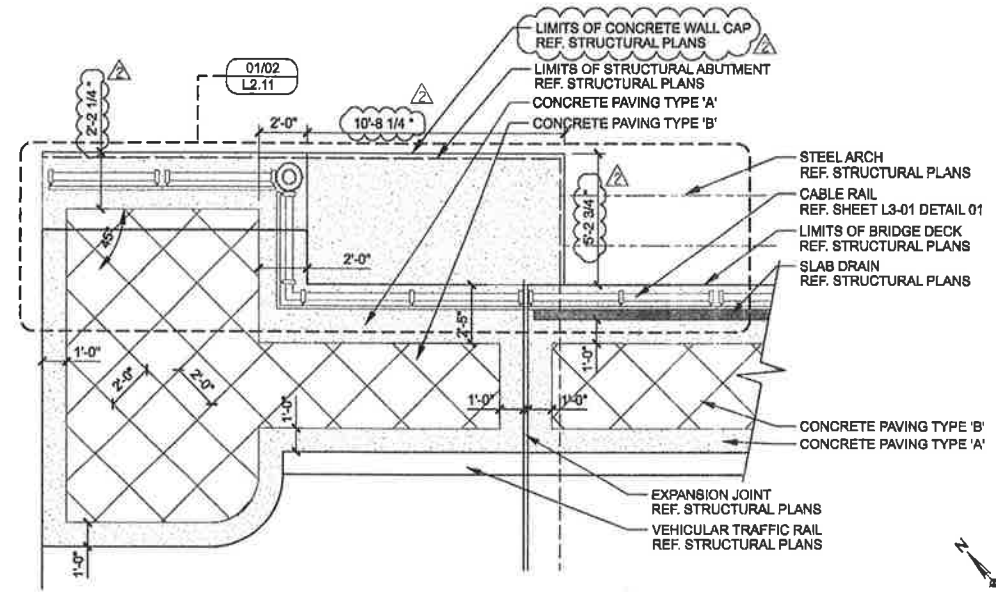


02 CABLE RAIL AND WALL ABUTMENT LAYOUT
 SCALE: 10" = 1'-0"
 ELEVATION

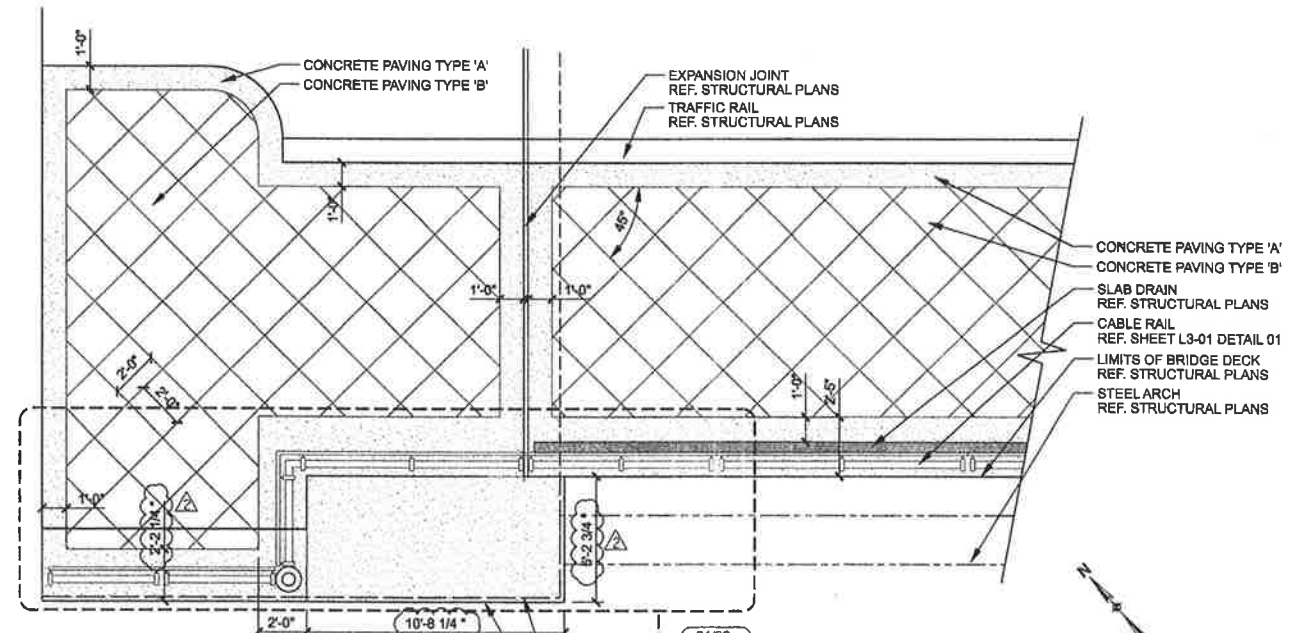
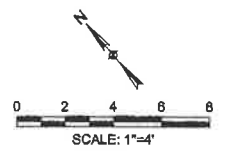


THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LENNY L. HUGHES, P.L.A. #2067 ON 05-19-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE LANDSCAPE ARCHITECT IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICE OF HALFF ASSOCIATES, INC., 1201 NORTH BOWSER, RICHARDSON, TEXAS 75081. T&E: FRM #F-312

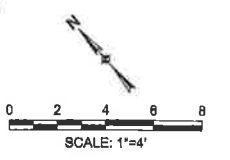
ADDENDUM #2		JOB	05/19/10
NO.	REVISION	BY	DATE
ADDISON TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES BELLA LANE			
HANDRAIL LAYOUT & PROFILE			
HALFF		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 346-8200 FAX (214) 738-0095	
PROJECT	DESIGN	DRAWN	DATE
27379	JDB	AHH	APRIL 2010
FILE	SHEET		
-	L2-01		



01 PAVING LAYOUT-EAST (TYP.)
SCALE: 1"=4'-0"
PLAN



02 PAVING LAYOUT-WEST (TYP.)
SCALE: 1"=4'-0"
PLAN



GENERAL NOTES

1. REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
2. ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
3. ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
4. REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
5. ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
6. ALL DIMENSIONS AND ITEM LOCATIONS ARE TO BE MIRRORED ALONG THE BRIDGE CENTERLINE UNLESS OTHERWISE NOTED.

DESIGN SELECTION: PAVING

CONCRETE PAVERS:

CONCRETE PAVER TYPE 'A'

CITY STONE I
SIZE: 11 3/4" x 5 13/16" x 2 3/8"
COLOR: TRAVERTINE BLEND
PATTERN: HERRINGBONE

CONCRETE PAVER TYPE 'B'

CITY STONE I
SIZE: 11 3/4" x 5 13/16" x 2 3/8"
COLOR: BELLOW BROWN
PATTERN: SINGLE BRICK HEADER

CONCRETE PAVING:

CONCRETE PAVING TYPE 'A'

FINISH: HEAVY SANDBLAST
COLOR: NONE

CONCRETE PAVING TYPE 'B'

FINISH: ROCK SALT
COLOR: NONE
SAW-CUT PATTERN

PAVING GENERAL NOTES:

1. SEE ON-SITE MOCK-UP FOR ALL REFERENCED CONCRETE AND STONE COLORS AND TEXTURES.
2. CONTRACTOR TO PROVIDE A 4' x 4' MOCK-UP OF ALL REFERENCED CONCRETE PAVING AND PAVER COLOR, PATTERNS AND TEXTURES FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LENNY L. HUGHES, R.L.A. 2067 ON 05-19-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE LANDSCAPE ARCHITECT IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORDED COPY OF THIS DRAWING IS ON FILE AT THE OFFICE OF HALFF ASSOCIATES, INC., 1201 NORTH BOWSER, RICHARDSON, TEXAS 75081. TSP# 190846-010

ADDENDUM *2	JDB	05/19/10
ADDENDUM *1	JDB	05/14/10
NO.	REVISION	BY DATE

ADDISON TOWN OF ADDISON
DALLAS COUNTY, TEXAS

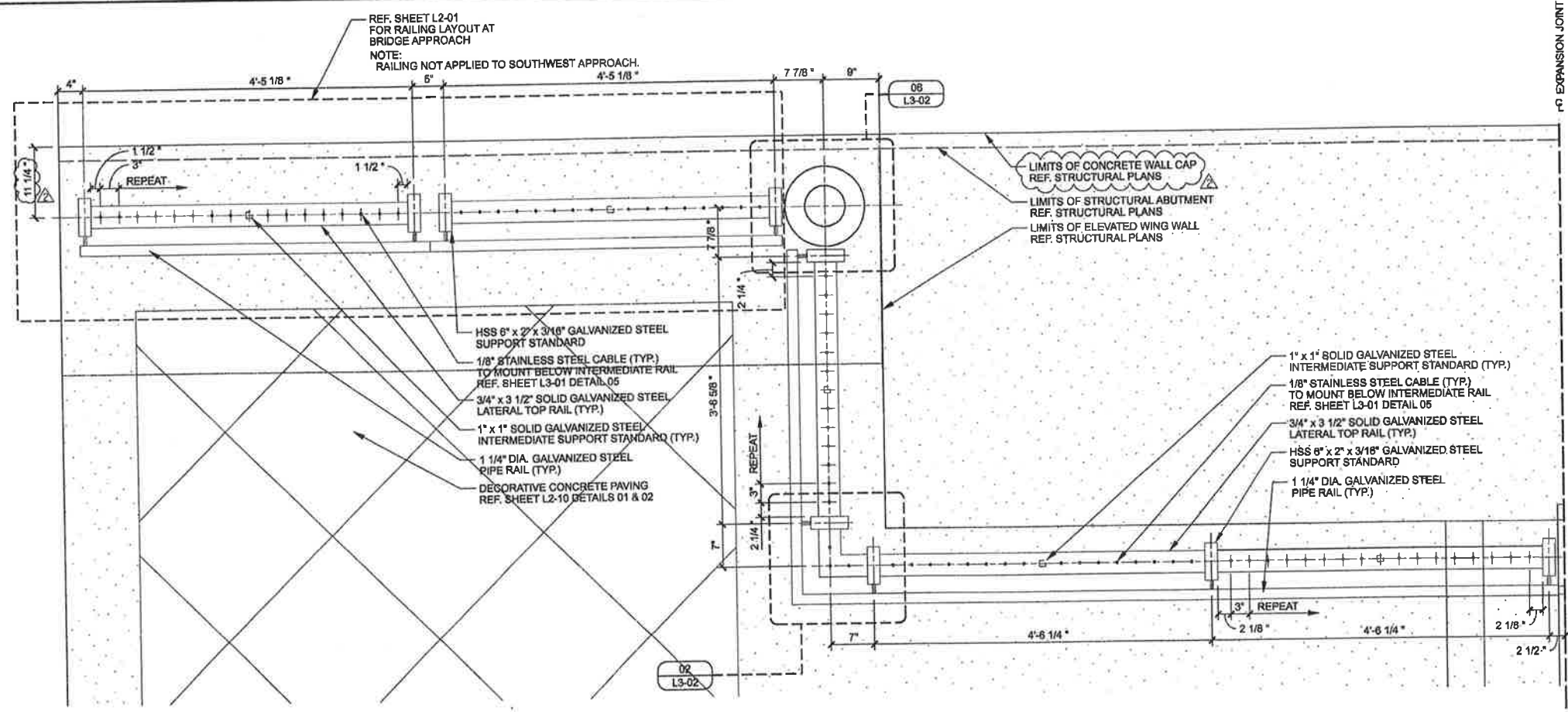
VITRUVIAN PARK BRIDGES
BELLA LANE

ENLARGED PAVING LAYOUT

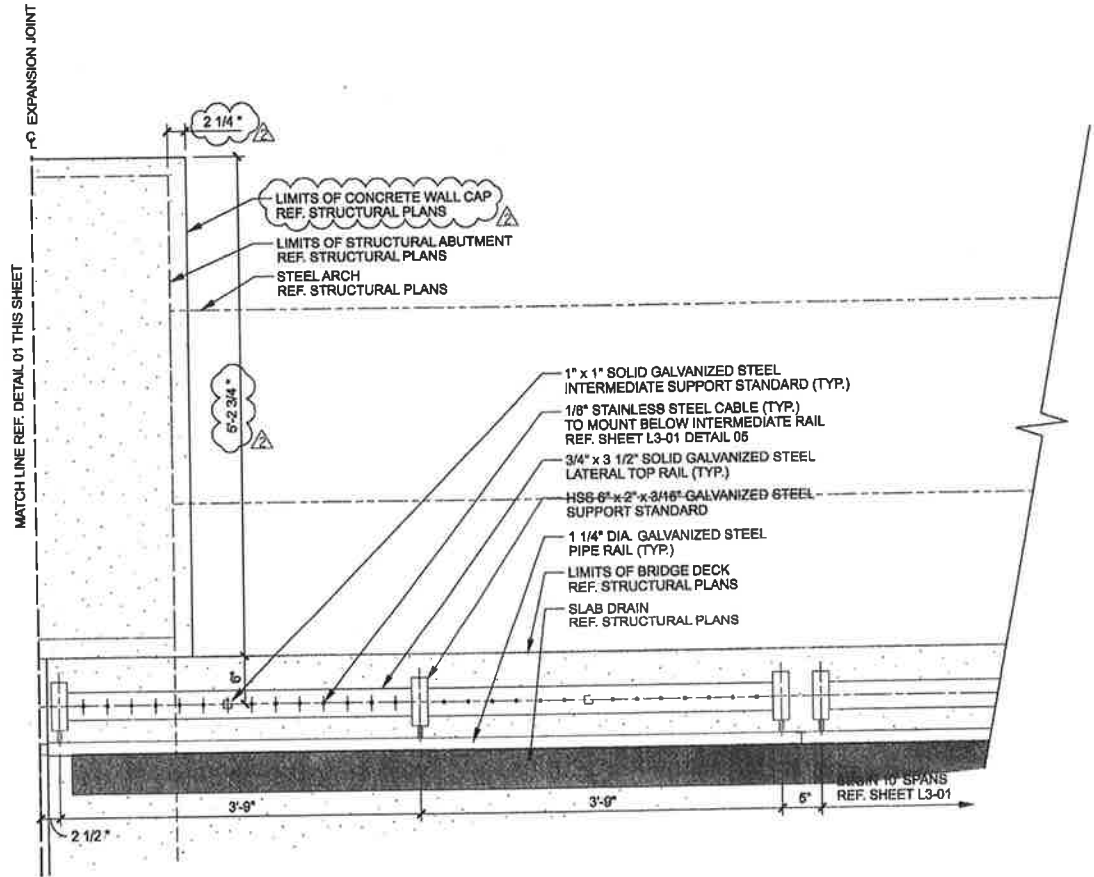
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276
TEL. (214) 346-8200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	JDB	AHH	APRIL 2010	-	L2-10

USER: oh2214
 OFFICE: RCH
 PROJECT #: 27379
 FILE: L211-SP-Bello-27379.dgn
 TIME: 5:16:01 PM
 DATE: 5/19/2010



01 RAIL TERMINUS AT APPROACH (TYP.)
 SCALE: 1"=1'-0"
 PLAN

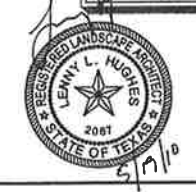


02 RAIL TERMINUS AT APPROACH (TYP.)
 SCALE: 1"=1'-0"
 PLAN

- GENERAL NOTES**
- REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
 - ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
 - ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
 - REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
 - ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
 - ALL DIMENSIONS AND ITEM LOCATIONS ARE TO BE MIRRORED ALONG THE BRIDGE CENTERLINE UNLESS OTHERWISE NOTED.

DESIGN SELECTION: RAILING

- CONNECTORS / FITTINGS:**
- FIXED BUTTON HEAD CONNECTOR
 MODEL #: 3287
 CONTACT: FEENEY ARCHITECTURAL PRODUCTS *OR APPROVED EQUAL
 - THREADED TERMINAL CABLE FITTING
 MODEL #: 3191
 CONTACT: FEENEY ARCHITECTURAL PRODUCTS *OR APPROVED EQUAL
- CABLES:**
- 1/8" DIA. STAINLESS STEEL CABLE
 MODEL #: 4140
 CONTACT: FEENEY ARCHITECTURAL PRODUCTS *OR APPROVED EQUAL
- FEENEY ARCHITECTURAL PRODUCTS**
 TRANG NGUYEN
 1-800-888-2419
 WWW.FEENEYARCHITECTURAL.COM
 OR APPROVED EQUAL
- RAILING GENERAL NOTES:**
- ALL STEEL COMPONENTS TO BE GALVANIZED UNLESS OTHERWISE NOTED.
 - ALL LATERAL AND INTERMEDIATE STEEL RAILS TO BE PARALLEL TO SIDEWALK SLOPES UNLESS OTHERWISE NOTED.
 - HSS 6" x 2" x 3/16" GALVANIZED STEEL SUPPORT STANDARDS TO BE PLUMB.
 - EXPOSED EDGES OF ALL STEEL MEMBERS SHALL BE ROUNDED TO MIN. 1/16" BY GRINDING UNLESS OTHERWISE NOTED.
 - ALL STANDARD TXDOT TYPE T401 VEHICULAR RAILING POSTS TO BE CENTERED WITH THE PEDESTRIAN RAIL STEEL SUPPORT STANDARDS AS SHOWN ON SHEET L3-02 DETAIL 07.
 - CONTRACTOR TO SUBMIT PEDESTRIAN RAIL SHOP DRAWINGS FOR APPROVAL.
 - MAXIMUM 4' SPACING BETWEEN ALL RAIL AND CABLE MEMBERS.
 - 3/16" WELD REQUIRED FOR ALL STEEL MEMBER CONNECTIONS UNLESS OTHERWISE NOTED.
 - REF. STRUCTURAL PLANS FOR ALL POST EMBEDMENT DETAILS.
 - CONTRACTOR TO PROVIDE A 20' CABLE RAIL MOCK-UP ON SITE FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LENNY L. HUGHES, P.L.L.C. 05/19/2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE LANDSCAPE ARCHITECT IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICE OF HALFF ASSOCIATES, INC., 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081. TSP# FIRM #F-312

NO.	REVISION	BY	DATE
ADDENDUM *2		JDB	05/19/10

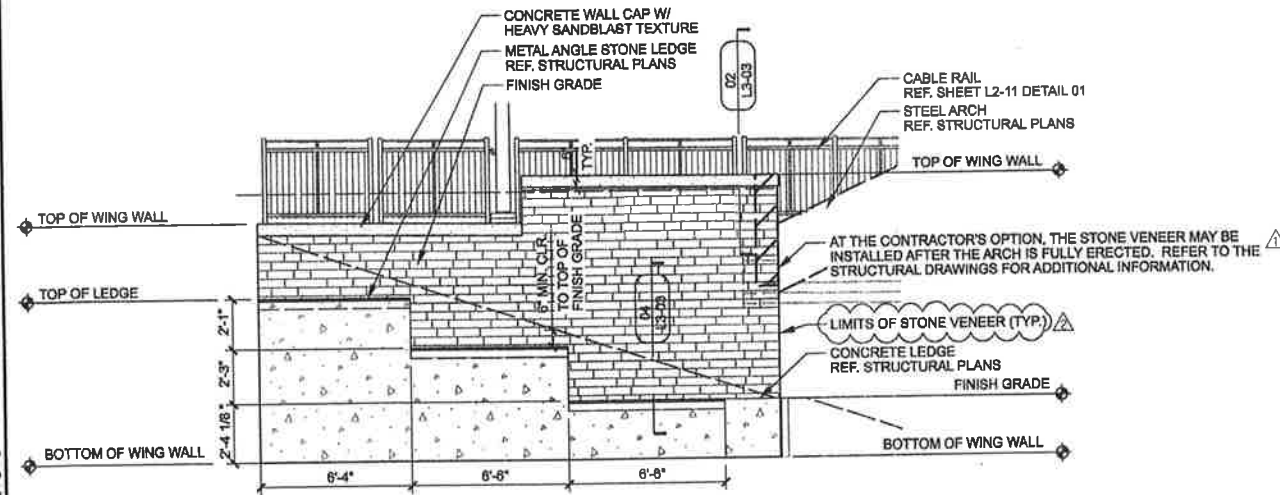
TOWN OF ADDISON
 DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES
 BELLA LANE

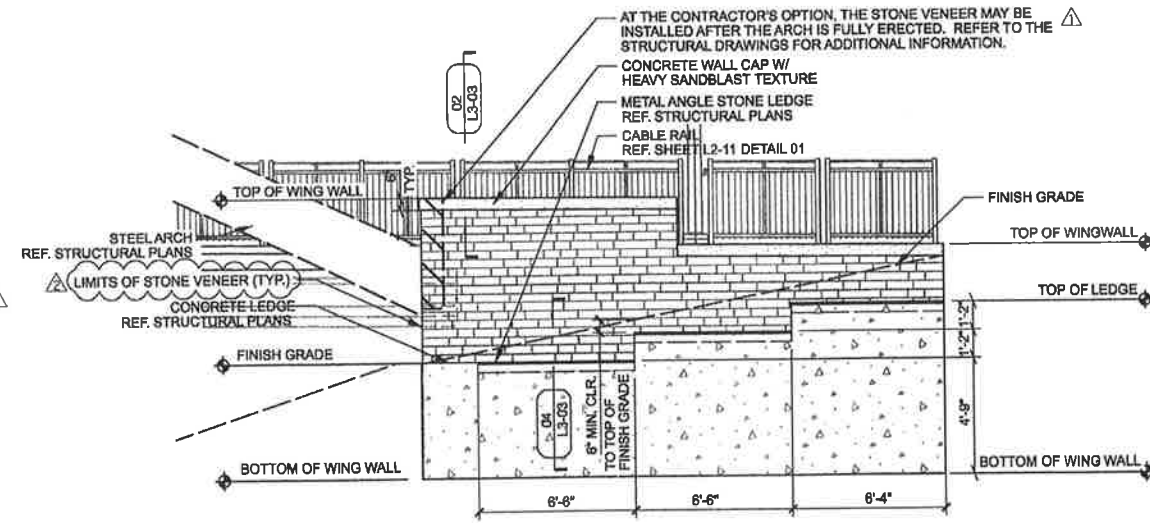
ENLARGED HANDRAIL LAYOUT

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276
 TEL (214) 348-6200 FAX (214) 739-0066

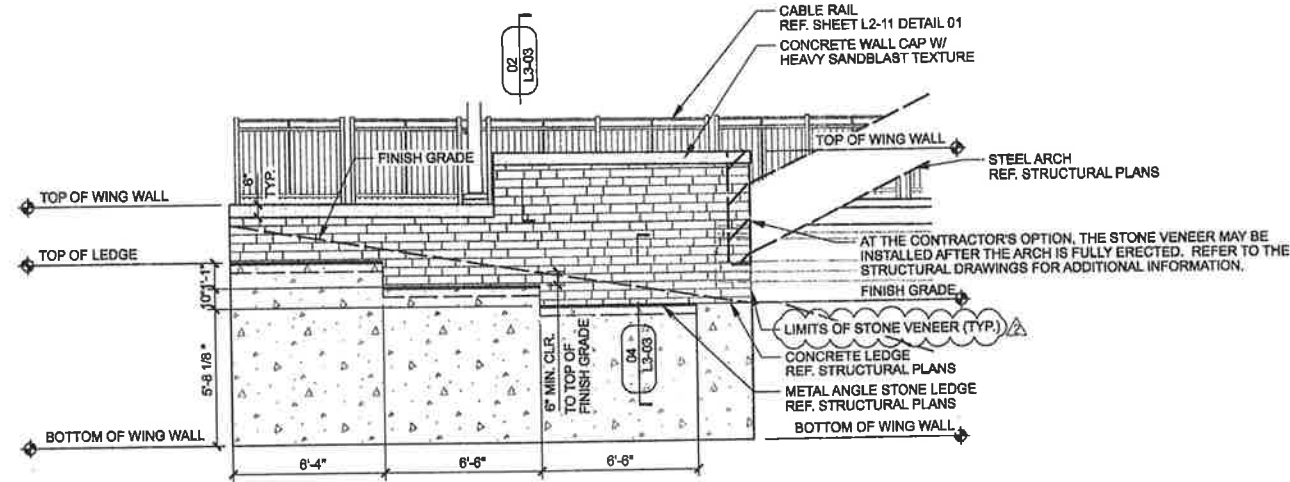
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	JDB	AHH	APRIL 2010	-	L2-11



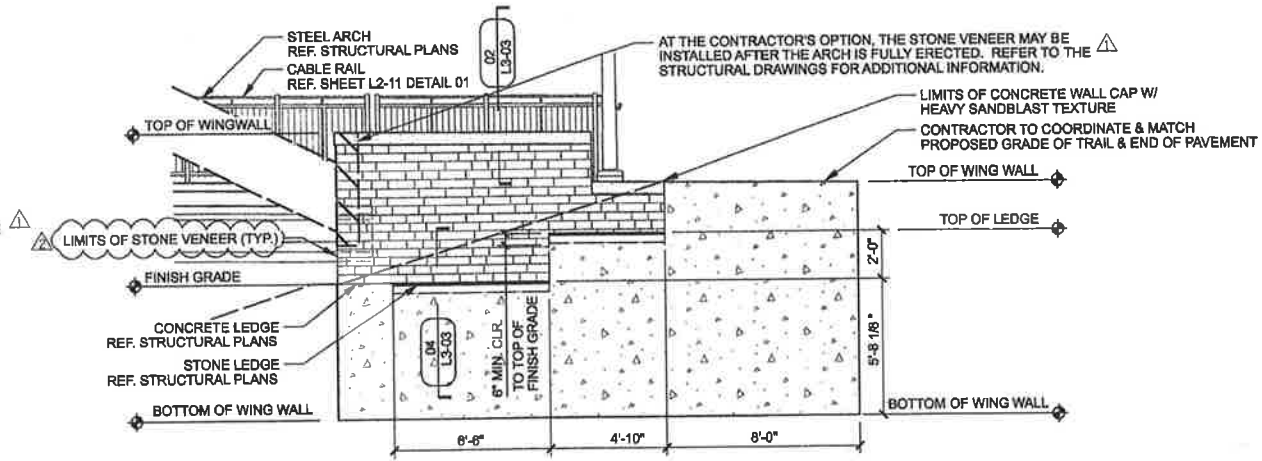
01 ABUTMENT # 1 - NORTHWEST WING WALL
SCALE: 1/4"=1'-0"
ELEVATION



02 ABUTMENT #1 - NORTHEAST WING WALL
SCALE: 1/4"=1'-0"
ELEVATION



03 ABUTMENT #2 - SOUTHEAST WING WALL
SCALE: 1/4"=1'-0"
ELEVATION



04 ABUTMENT #2 - SOUTHWEST WING WALL
SCALE: 1/4"=1'-0"
ELEVATION

GENERAL NOTES

- REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
- ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
- ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
- REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
- ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
- ALL DIMENSIONS AND ITEM LOCATIONS ARE TO MIRROR ALONG THE BRIDGE CENTERLINE UNLESS OTHERWISE NOTED.

DESIGN SELECTION: STRUCTURE

STONE:
BLUE GREEN CHINESE STONE
VENEER THICKNESS: 3 cm
VENEER HEIGHT: 4"
VENEER LENGTH: 9", 13" AND 21"
VENEER FINISH: THERMAL
VENEER EDGES: ALL FOUR SIDES TO BE SAW CUT
MORTAR: TO MATCH ON SITE MOCK-UP
COURSING: TO MATCH ON SITE MOCK-UP

CONCRETE ELEMENTS:
MASK WALL
FINISH: HEAVY SANDBLAST ALL SIDES
COLOR: NONE
WALL CAP
FINISH: HEAVY SANDBLAST
COLOR: NONE

STRUCTURE GENERAL NOTES:
1. SEE ON-SITE MOCK-UP FOR ALL REFERENCED CONCRETE AND STONE COLORS AND TEXTURES. FINAL APPROVAL BY OWNER OR OWNERS REPRESENTATIVE IS REQUIRED PRIOR TO WORK COMMENCEMENT.
2. CONTRACTOR TO PROVIDE A 4' x 4' MOCK-UP OF ALL REFERENCED CONCRETE AND STONE, COLORS AND TEXTURES FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LENZY L. HUGHES, R.L.A., REG.# 2061 ON 06-19-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE LANDSCAPE ARCHITECT IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICE OF HALFF ASSOCIATED, INC., 1201 NORTH BOWSER, RICHARDSON, TEXAS 75081. TPPE FORM #F-312

ADDENDUM #2	JOB	05/19/10
ADDENDUM #1	JOB	05/14/10
NO.	REVISION	BY DATE

ADDENDUM #1
TOWN OF ADDISON
DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES
BELLA LANE

WING WALL ELEVATIONS

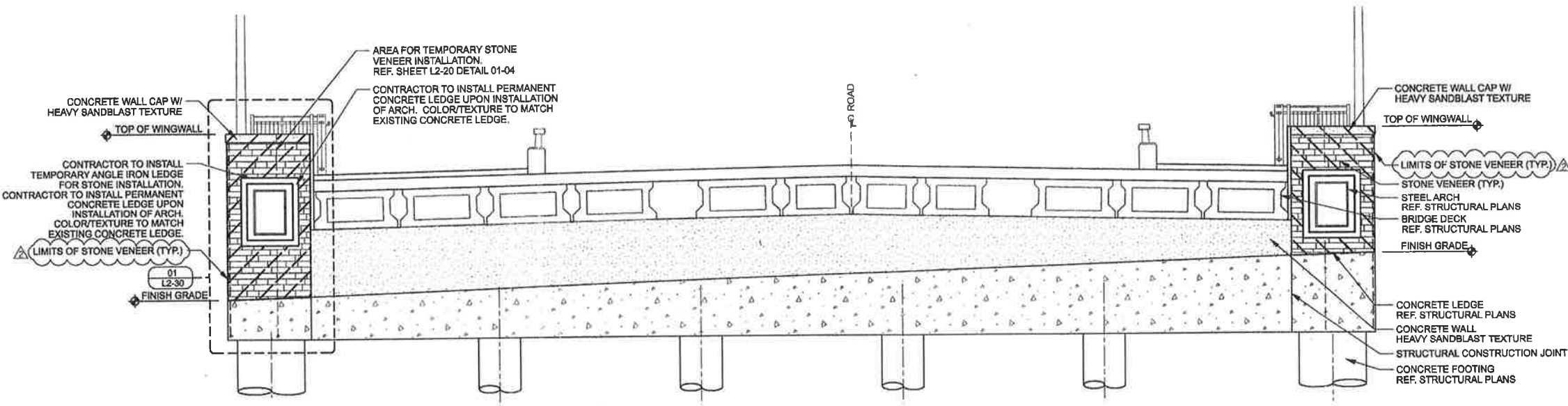
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2278
TEL (214) 348-8200 FAX (214) 739-0096

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	JDB	AHH	APRIL 2010	-	L2-20

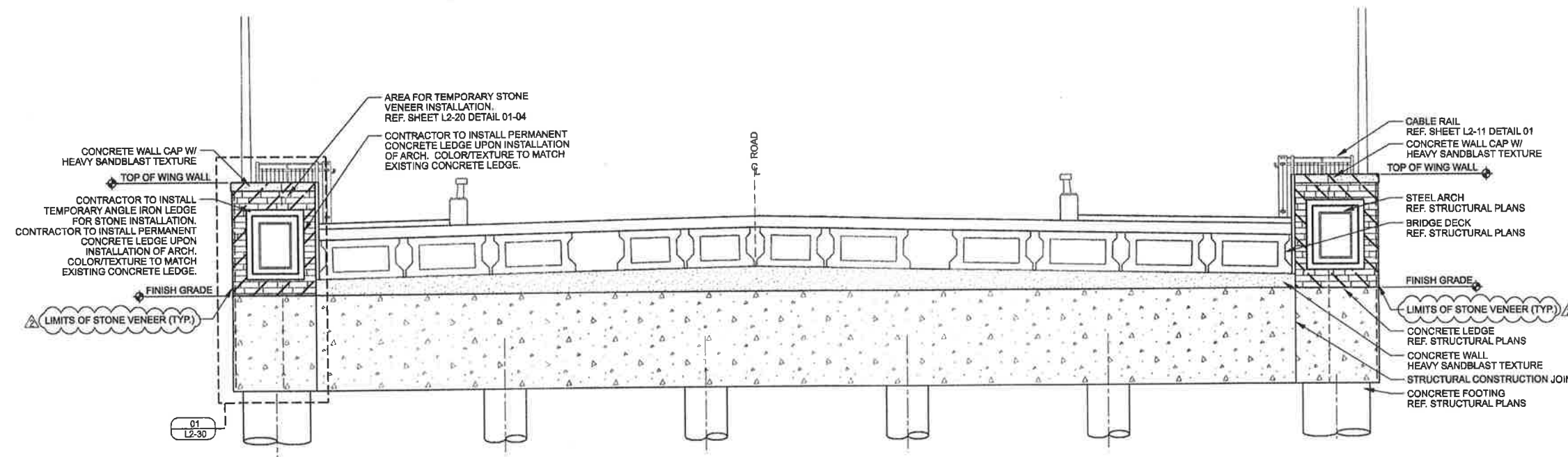
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 TIME: 3:53:43 PM
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GENERAL NOTES

1. REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
2. ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
3. ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
4. REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
5. ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
6. ALL DIMENSIONS AND ITEM LOCATIONS ARE TO BE MIRRORED ALONG THE BRIDGE CENTERLINE UNLESS OTHERWISE NOTED.
7. AT THE CONTRACTOR'S OPTION, THE STONE VENEER MAY BE INSTALLED AFTER THE ARCH IS FULLY ERECTED. REFER TO THE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.



01 ABUTMENT #1
 SCALE: 1/4"=1'-0" ELEVATION



02 ABUTMENT #2
 SCALE: 1/4"=1'-0" ELEVATION

DESIGN SELECTION: STRUCTURE

STONE:

BLUE GREEN CHINESE STONE

VENEER THICKNESS: 3 cm
 VENEER HEIGHT: 4"
 VENEER LENGTH: 8", 13" AND 21"
 VENEER FINISH: THERMAL
 VENEER EDGES: ALL FOUR SIDES TO BE SAW CUT
 MORTAR: TO MATCH ON SITE MOCK-UP
 COURSING: TO MATCH ON SITE MOCK-UP

CONCRETE ELEMENTS:

MASK WALL

FINISH: HEAVY SANDBLAST ALL SIDES
 COLOR: NONE

WALL CAP

FINISH: HEAVY SANDBLAST
 COLOR: NONE

STRUCTURE GENERAL NOTES:

1. SEE ON-SITE MOCK-UP FOR ALL REFERENCED CONCRETE AND STONE, COLORS AND TEXTURES. FINAL APPROVAL BY OWNER OR OWNERS REPRESENTATIVE IS REQUIRED PRIOR TO WORK COMMENCEMENT.
2. CONTRACTOR TO PROVIDE A 4' x 4' MOCK-UP OF ALL REFERENCED CONCRETE AND STONE, COLORS AND TEXTURES FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



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ADDENDUM #2	JDB	05/19/10
ADDENDUM #1	JDB	05/14/10
NO.	REVISION	BY DATE

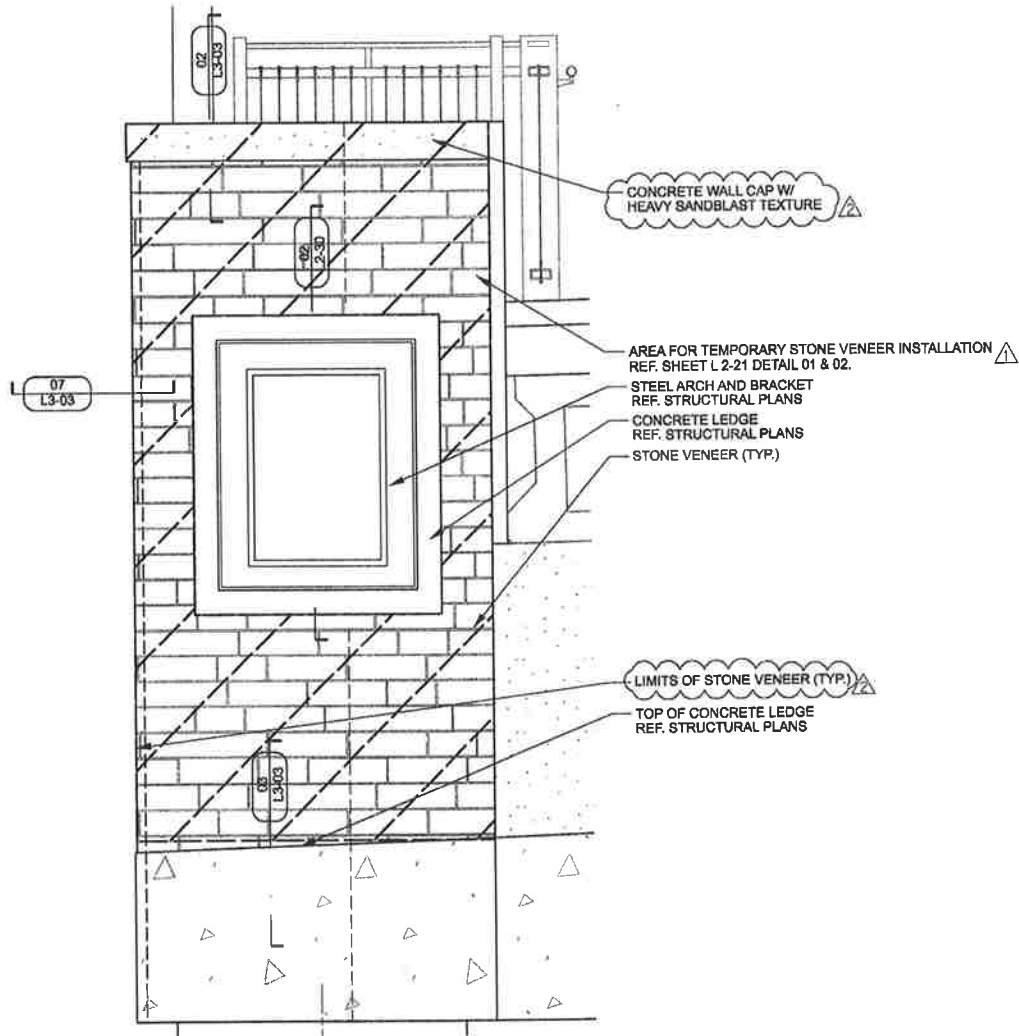
Addendum TOWN OF ADDISON
 DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES
 BELLA LANE

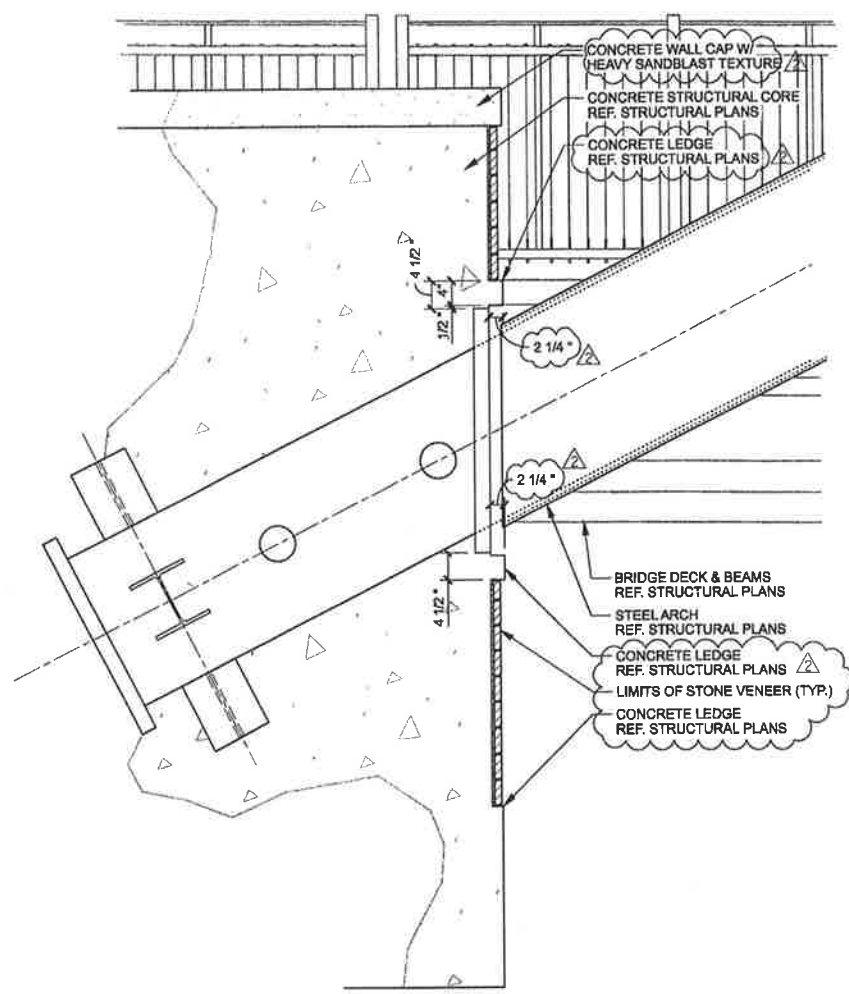
ABUTMENT ELEVATIONS

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
 TEL (214) 346-6200 FAX (214) 739-0065

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	JDB	AHH	APRIL 2010	-	L2-21



01 ARCH AT ABUTMENT (TYP.)
 SCALE: 3/4"=1'-0"
 ELEVATION



02 ARCH AT ABUTMENT (TYP.)
 SCALE: 3/4"=1'-0"
 SECTION

GENERAL NOTES

1. REF. STRUCTURAL DRAWINGS FOR ALL BRIDGE DIMENSIONS AND COORDINATES.
2. ALL RAILING SHALL BE SPACED AT TYPICAL 10'-0" INCREMENTS AS SHOWN ON SHEET L3-01 UNLESS OTHERWISE NOTED.
3. ALL WALK DIMENSIONS ARE GIVEN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
4. REF. ELECTRICAL DRAWINGS FOR ALL LIGHT FIXTURE TYPES.
5. ALL ITEMS AND APPURTANANCES N.I.C. TO BE COORDINATED BY THE CONTRACTOR PRIOR TO WORK COMMENCEMENT.
6. ALL DIMENSIONS AND ITEM LOCATIONS ARE TO BE MIRRORED ALONG THE ROAD CENTERLINE UNLESS OTHERWISE NOTED.

DESIGN SELECTION: STRUCTURE

STONE:

BLUE GREEN CHINESE STONE

VENEER THICKNESS: 3 cm
 VENEER HEIGHT: 4"
 VENEER LENGTH: 8", 13" AND 21"
 VENEER FINISH: THERMAL
 VENEER EDGES: ALL FOUR SIDES TO BE SAW CUT
 MORTAR: TO MATCH ON SITE MOCK-UP
 COURSING: TO MATCH ON SITE MOCK-UP

CONCRETE ELEMENTS:

MASK WALL

FINISH: HEAVY SANDBLAST ALL SIDES
 COLOR: NONE

WALL CAP

FINISH: HEAVY SANDBLAST
 COLOR: NONE

STRUCTURE GENERAL NOTES:

1. SEE ON-SITE MOCK-UP FOR ALL REFERENCED CONCRETE AND STONE, COLORS AND TEXTURES. FINAL APPROVAL BY OWNER OR OWNERS REPRESENTATIVE IS REQUIRED PRIOR TO WORK COMMENCEMENT.
2. CONTRACTOR TO PROVIDE A 4' x 4' MOCK-UP OF ALL REFERENCED CONCRETE AND STONE, COLORS AND TEXTURES FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



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ADDENDUM #2	JOB	05/19/10
ADDENDUM #1	JOB	05/14/10
NO.	REVISION	BY DATE
ADDISON TOWN OF ADDISON DALLAS COUNTY, TEXAS		
VITRUVIAN PARK BRIDGES BELLA LANE		
ABUTMENT DETAILS		
HALFF		
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 346-8200 FAX (214) 736-0095		
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DATE	FILE	SHEET
APRIL 2010	-	L2-30

USER: dh1940

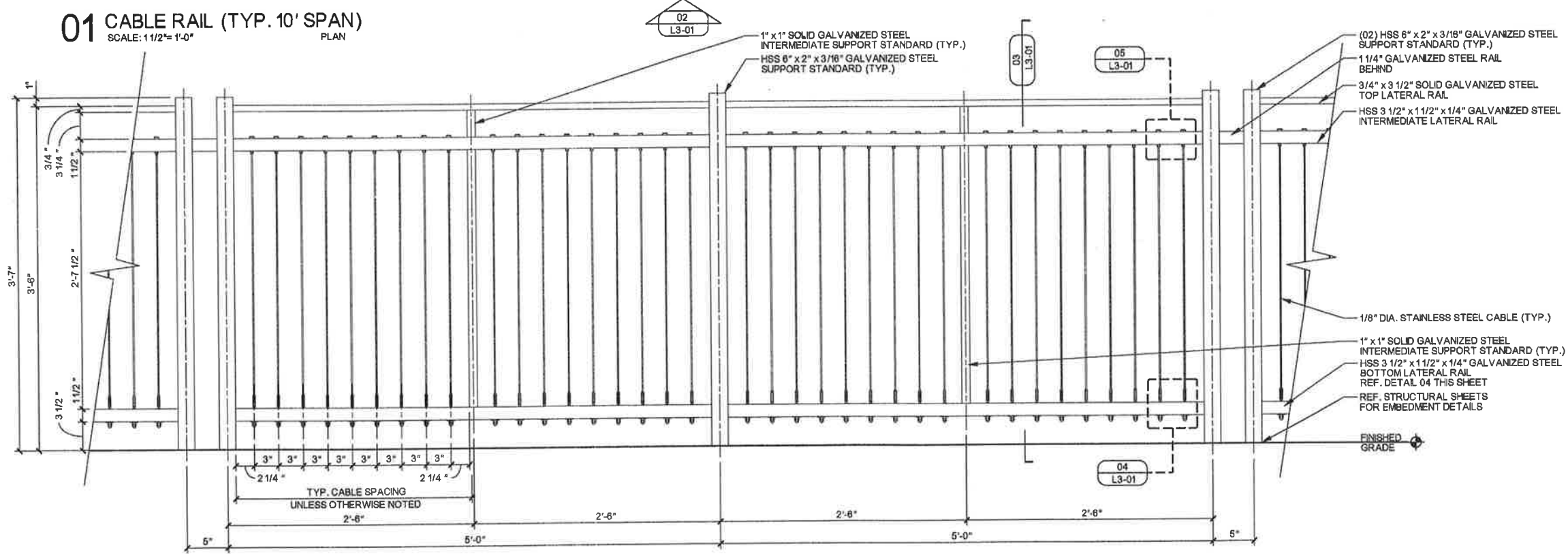
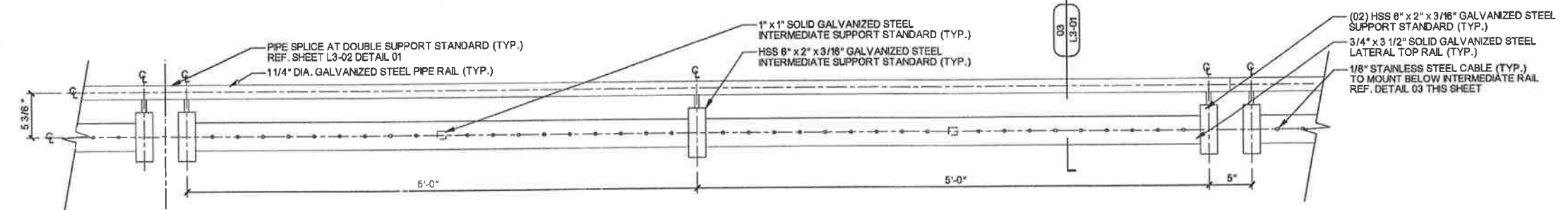
OFFICE: RCH

PROJECT #: 27379

FILE: L301-DT-27379.dgn

TIME: 10:36:26 AM

DATE: 4/29/2010



DESIGN SELECTION: RAILING

CONNECTORS / FITTINGS:

FIXED BUTTON HEAD CONNECTOR
MODEL #: 3287
CONTACT: FEENEY ARCHITECTURAL PRODUCTS OR APPROVED EQUAL

THREADED TERMINAL CABLE FITTING
MODEL #: 3191
CONTACT: FEENEY ARCHITECTURAL PRODUCTS OR APPROVED EQUAL

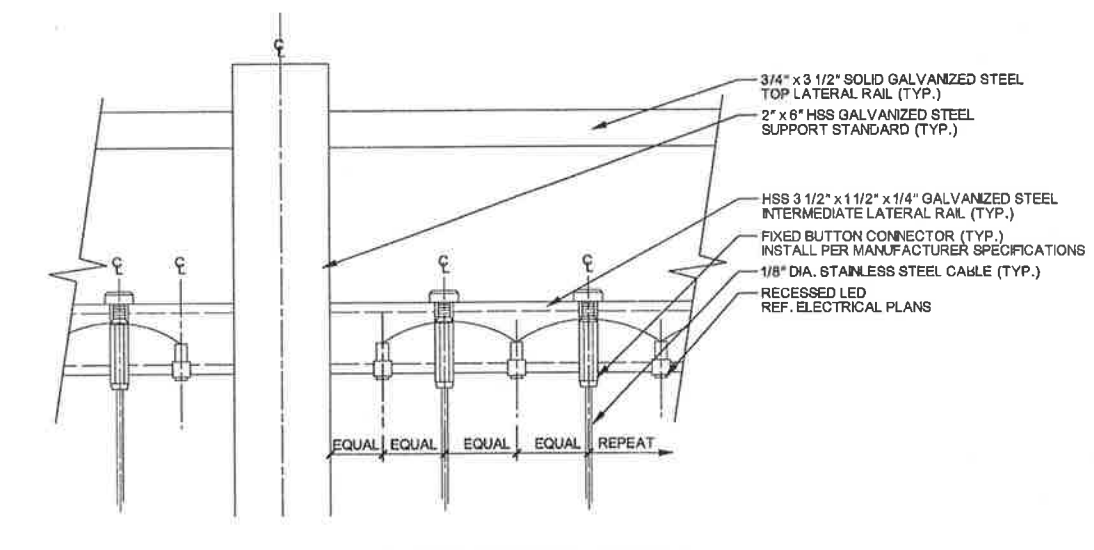
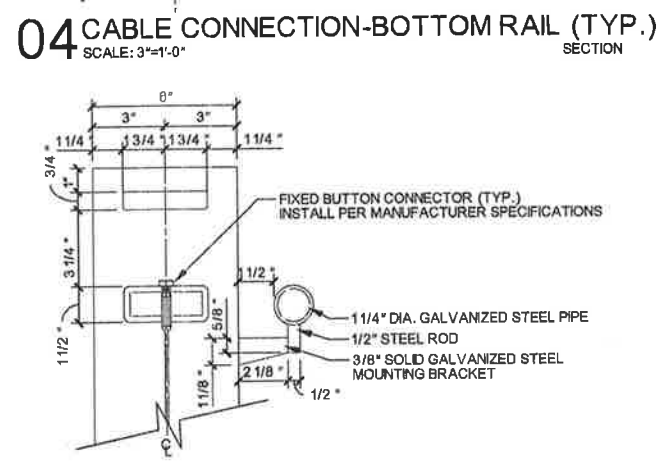
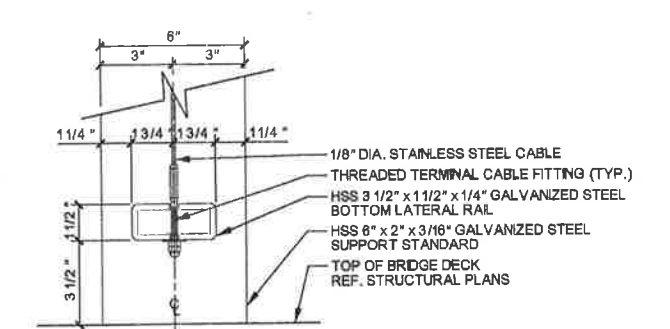
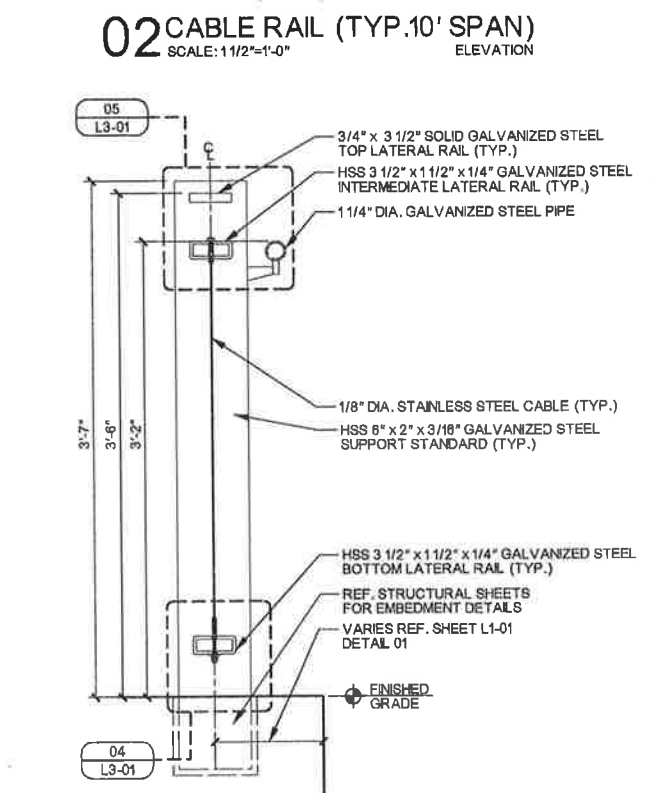
CABLES:

1/8" DIA. STAINLESS STEEL CABLE
MODEL #: 4140
CONTACT: FEENEY ARCHITECTURAL PRODUCTS OR APPROVED EQUAL

FEENEY ARCHITECTURAL PRODUCTS
TRANG NGUYEN
1-800-888-2418
WWW.FEENEYARCHITECTURAL.COM
OR APPROVED EQUAL

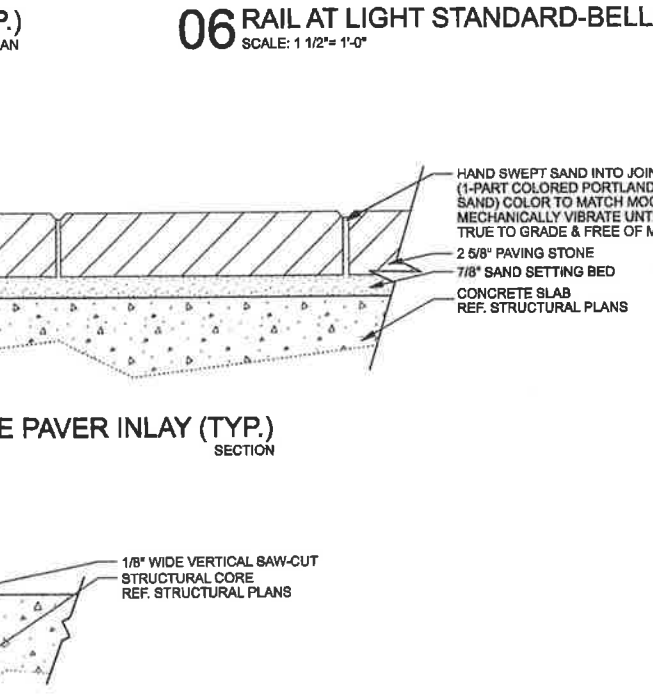
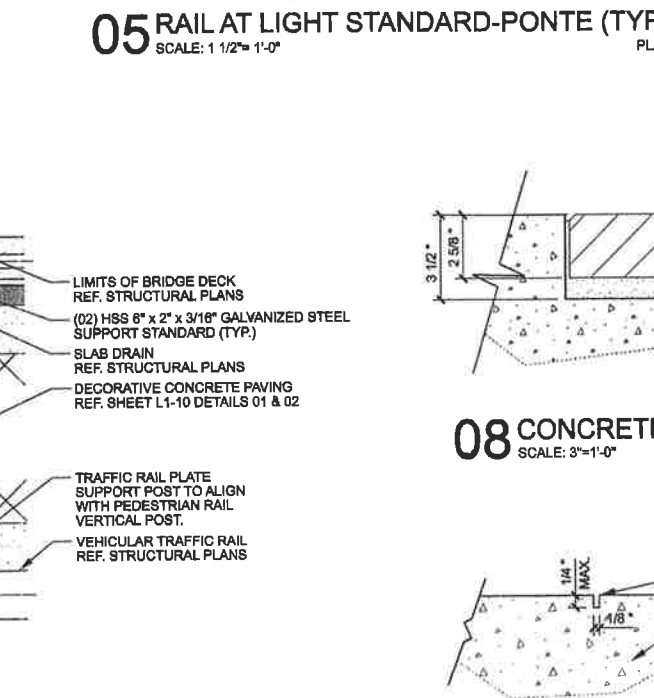
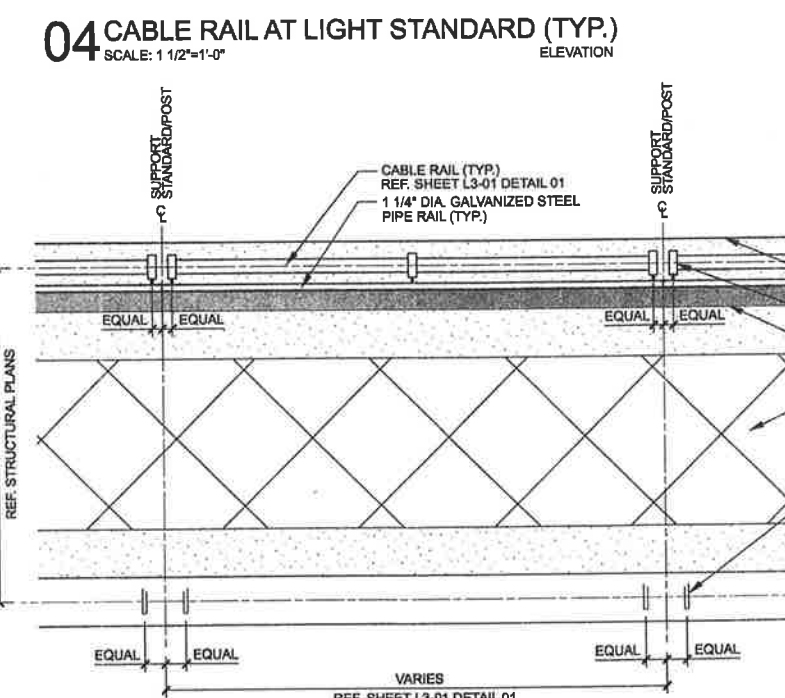
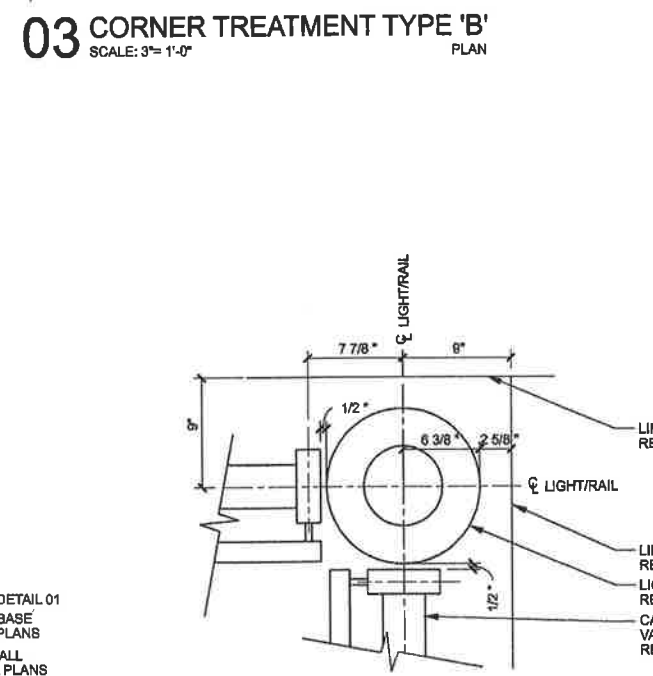
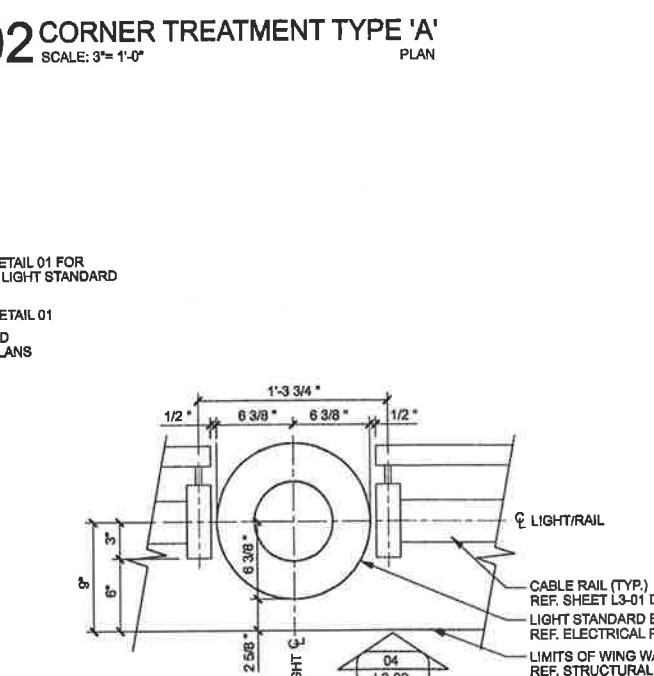
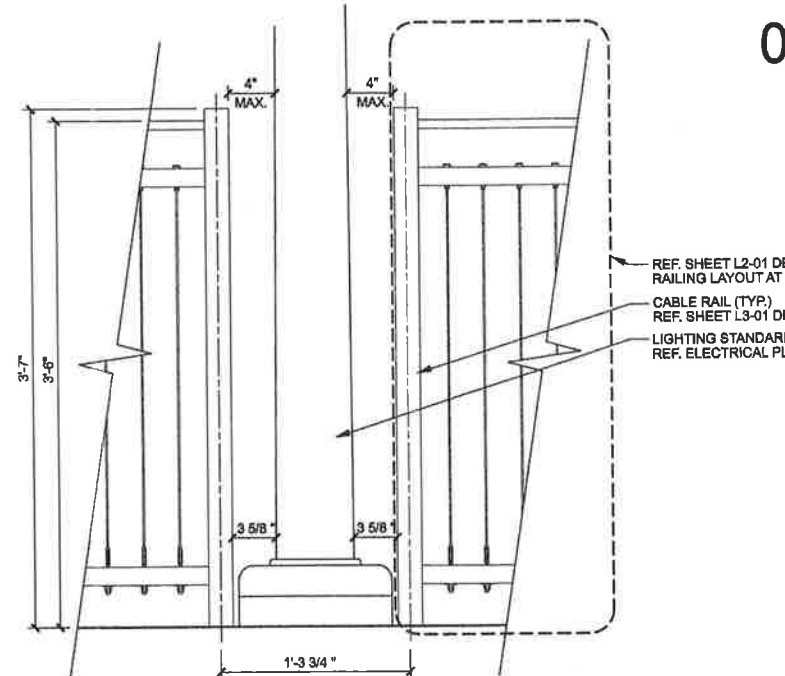
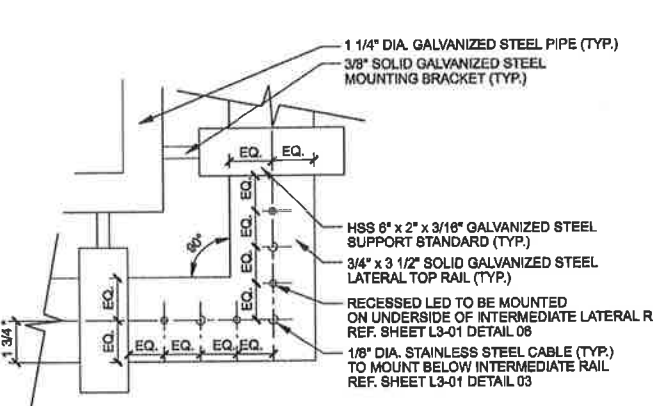
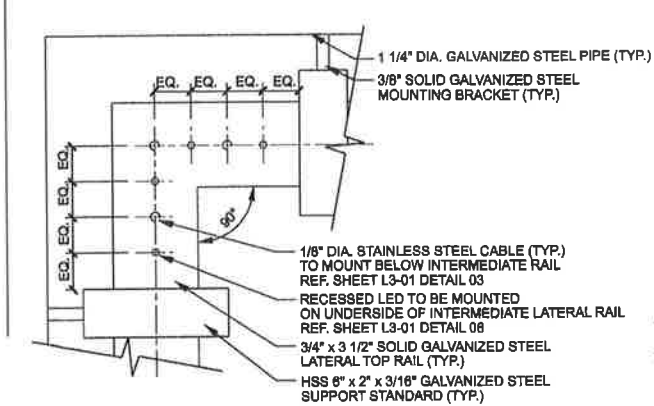
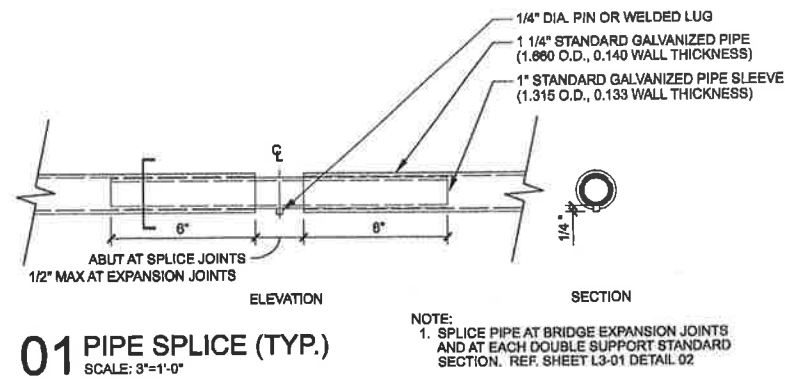
RAILING GENERAL NOTES:

- ALL STEEL COMPONENTS TO BE GALVANIZED UNLESS OTHERWISE NOTED.
- ALL LATERAL AND INTERMEDIATE STEEL RAILS TO BE PARALLEL TO SIDEWALK SLOPES UNLESS OTHERWISE NOTED.
- HSS 6" x 2" x 3/16" GALVANIZED STEEL SUPPORT STANDARDS TO BE PLUMB.
- EXPOSED EDGES OF ALL STEEL MEMBERS SHALL BE ROUNDED TO MIN. 1/16" BY GRINDING UNLESS OTHERWISE NOTED.
- ALL STANDARD TXDOT TYPE T401 VEHICULAR RAILING POSTS TO BE CENTERED WITH THE PEDESTRIAN RAIL STEEL SUPPORT STANDARDS AS SHOWN ON SHEET L3-02 DETAIL 07.
- CONTRACTOR TO SUBMIT PEDESTRIAN RAIL SHOP DRAWINGS FOR APPROVAL.
- MAXIMUM 4" SPACING BETWEEN ALL RAIL AND CABLE MEMBERS.
- 3/16" WELD REQUIRED FOR ALL STEEL MEMBER CONNECTIONS UNLESS OTHERWISE NOTED.
- REF. STRUCTURAL PLANS FOR ALL POST EMBEDMENT DETAILS.
- CONTRACTOR TO PROVIDE A 20' CABLE RAIL MOCK-UP ON SITE FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LENNY L. HUGHES, R.L.A. #2067 ON 04-29-2010. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE LANDSCAPE ARCHITECT IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICE OF HALFF ASSOCIATES, INC., 1201 NORTH BOWSER, RICHARDSON, TEXAS 75081. TSP# FIRM #912

NO.	REVISION	BY	DATE		
ADDISON TOWN OF ADDISON DALLAS COUNTY, TEXAS					
VITRUVIAN PARK BRIDGES					
GENERAL DETAILS					
HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 346-8200 FAX (214) 739-0065					
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	JDB	AHH	APRIL 2010	-	L3-01



DESIGN SELECTION: PAVING

CONCRETE PAVERS:

CONCRETE PAVER TYPE 'A'
CITY STONE I
SIZE: 11 3/4" x 5 13/16" x 2 3/8"
COLOR: TRAVERTINE BLEND
PATTERN: HERRINGBONE

CONCRETE PAVER TYPE 'B'
CITY STONE I
SIZE: 11 3/4" x 5 13/16" x 2 3/8"
COLOR: BELLOW BROWN
PATTERN: SINGLE BRICK HEADER

CONCRETE PAVING:

CONCRETE PAVING TYPE 'A'
FINISH: HEAVY SANDBLAST
COLOR: NONE

CONCRETE PAVING TYPE 'B'
FINISH: ROCK SALT
COLOR: NONE
SAW-CUT PATTERN

PAVING GENERAL NOTES:

1. SEE ON-SITE MOCK-UP FOR ALL REFERENCED CONCRETE AND STONE COLORS AND TEXTURES.
2. CONTRACTOR TO PROVIDE A 4' x 4' MOCK-UP OF ALL REFERENCED CONCRETE PAVING AND PAVER COLOR, PATTERNS AND TEXTURES FOR APPROVAL PRIOR TO WORK COMMENCEMENT.

DESIGN SELECTION: RAILING

CONNECTORS / FITTINGS:

FIXED BUTTON HEAD CONNECTOR
MODEL #: 3287
CONTACT: FEENEY ARCHITECTURAL PRODUCTS
*OR APPROVED EQUAL

THREADED TERMINAL CABLE FITTING
MODEL #: 3191
CONTACT: FEENEY ARCHITECTURAL PRODUCTS
*OR APPROVED EQUAL

CABLES:

1/8" DIA. STAINLESS STEEL CABLE
MODEL #: 4140
CONTACT: FEENEY ARCHITECTURAL PRODUCTS
*OR APPROVED EQUAL

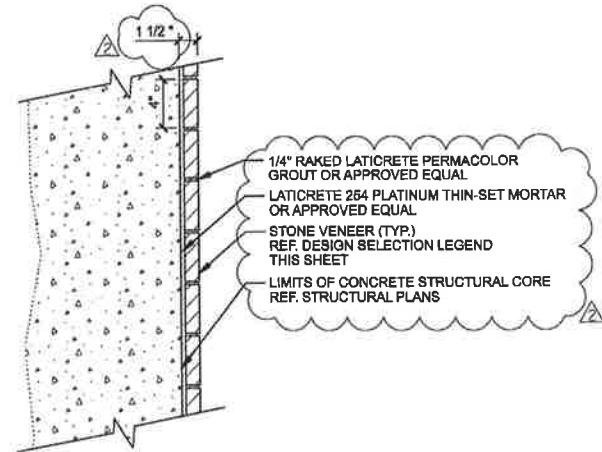
FEENEY ARCHITECTURAL PRODUCTS
TRANG NGUYEN
1-800-888-2418
WWW.FEENEYARCHITECTURAL.COM
OR APPROVED EQUAL

RAILING GENERAL NOTES:

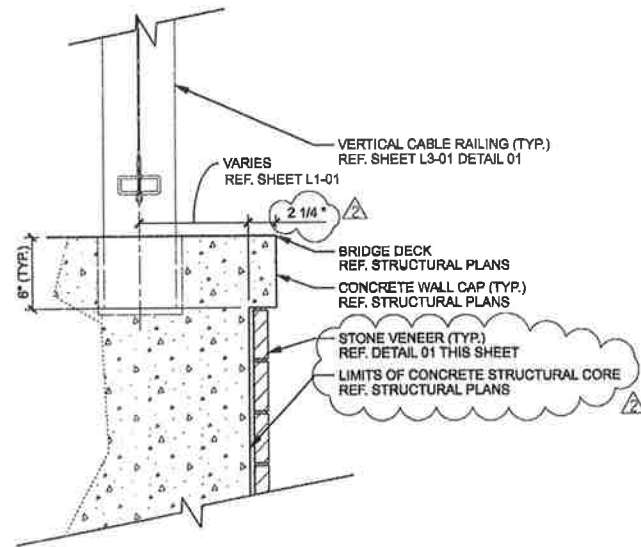
1. ALL STEEL COMPONENTS TO BE GALVANIZED UNLESS OTHERWISE NOTED.
2. ALL LATERAL AND INTERMEDIATE STEEL RAILS TO BE PARALLEL TO SIDEWALK SLOPES UNLESS OTHERWISE NOTED.
3. HSS 6" x 2" x 3/16" GALVANIZED STEEL SUPPORT STANDARDS TO BE PLUMB.
4. EXPOSED EDGES OF ALL STEEL MEMBERS SHALL BE ROUNDED TO MIN. 1/16" BY GRINDING UNLESS OTHERWISE NOTED.
5. ALL STANDARD TXDOT TYPE T401 VEHICULAR RAILING POSTS TO BE CENTERED WITH THE PEDESTRIAN RAIL STEEL SUPPORT STANDARDS AS SHOWN ON SHEET L3-02 DETAIL 07.
6. CONTRACTOR TO SUBMIT PEDESTRIAN RAIL SHOP DRAWINGS FOR APPROVAL.
7. MAXIMUM 4" SPACING BETWEEN ALL RAIL AND CABLE MEMBERS.
8. 3/16" WELD REQUIRED FOR ALL STEEL MEMBER CONNECTIONS UNLESS OTHERWISE NOTED.
9. REF. STRUCTURAL PLANS FOR ALL POST EMBEDMENT DETAILS.
10. CONTRACTOR TO PROVIDE A 20' CABLE RAIL MOCK-UP ON SITE FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



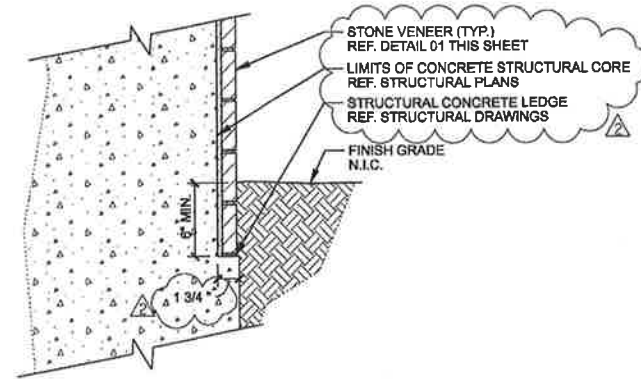
ADDENDUM #1		JOB	05/14/10
NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
VITRUVIAN PARK BRIDGES			
GENERAL DETAILS			
HALFF		1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2276 TEL (214) 346-8200 FAX (214) 736-0096	
PROJECT	DESIGN	DRAWN	DATE
27379	JDB	AHH	APRIL 2010
			SHEET
			L3-02



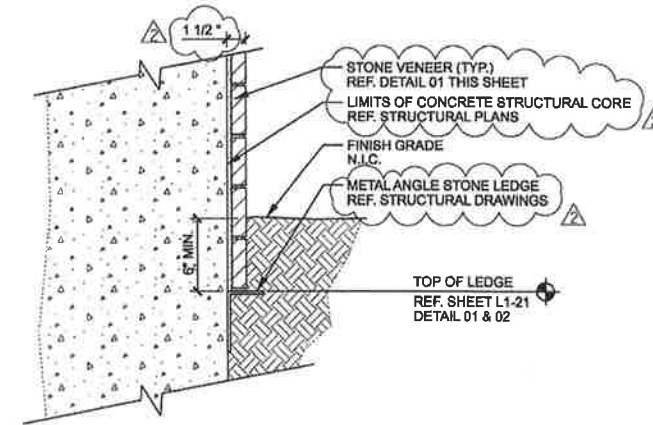
01 STONE WALL (TYP.)
 SCALE: 1 1/2"=1'-0" SECTION



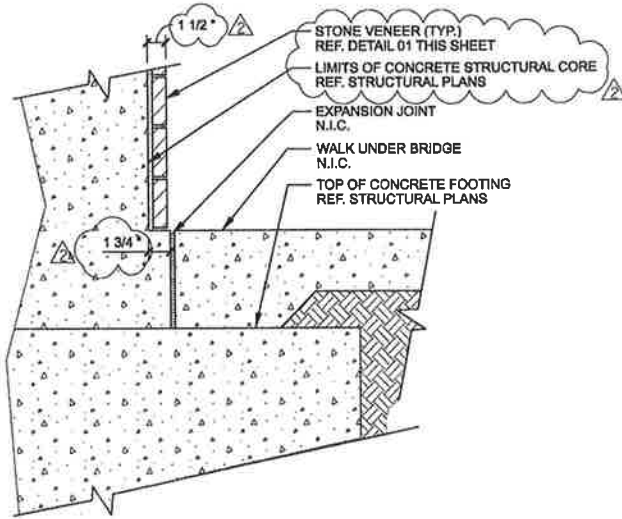
02 STONE VENEER AT WALL CAP (TYP.)
 SCALE: 1 1/2"=1'-0" SECTION



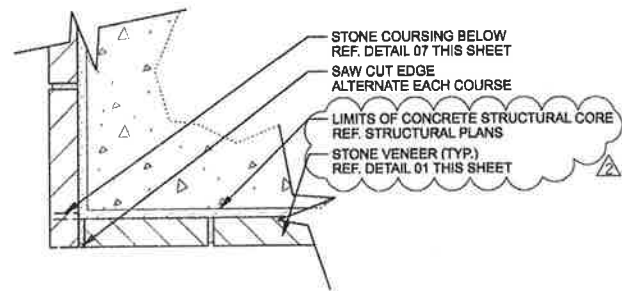
03 VENEER BASE AT CONCRETE LEDGE
 SCALE: 1 1/2"=1'-0" SECTION



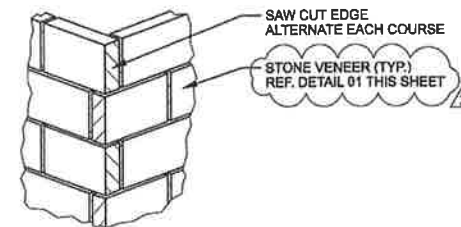
04 VENEER BASE AT STONE LEDGE
 SCALE: 1 1/2"=1'-0" SECTION



05 VENEER BASE BELOW BRIDGE
 SCALE: 1 1/2"=1'-0" SECTION



06 CORNER TREATMENT (TYP.)
 SCALE: 3"=1'-0" PLAN



07 CORNER TREATMENT (TYP.)
 NOT TO SCALE ISOMETRIC

DESIGN SELECTION: STRUCTURE

STONE:

BLUE GREEN CHINESE STONE

VENEER THICKNESS: 3 cm
 VENEER HEIGHT: 4"
 VENEER LENGTH: 8", 13" AND 21"
 VENEER FINISH: THERMAL
 VENEER EDGES: ALL FOUR SIDES TO BE SAW CUT
 MORTAR: TO MATCH ON SITE MOCK-UP
 COURSING: TO MATCH ON SITE MOCK-UP

CONCRETE ELEMENTS:

MASK WALL
 FINISH: HEAVY SANDBLAST ALL SIDES
 COLOR: NONE

WALL CAP
 FINISH: HEAVY SANDBLAST
 COLOR: NONE

STRUCTURE GENERAL NOTES:

- SEE ON-SITE MOCK-UP FOR ALL REFERENCED CONCRETE AND STONE. COLORS AND TEXTURES. FINAL APPROVAL BY OWNER OR OWNERS REPRESENTATIVE IS REQUIRED PRIOR TO WORK COMMENCEMENT.
- CONTRACTOR TO PROVIDE 4' x 4' MOCK-UP OF ALL REFERENCED CONCRETE AND STONE. COLORS AND TEXTURES FOR APPROVAL PRIOR TO WORK COMMENCEMENT.



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NO.	REVISION	BY	DATE
ADDENDUM *2		JDB	05/19/10
ADDENDUM *1		JDB	05/14/10

TOWN OF ADDISON
 DALLAS COUNTY, TEXAS

VITRUVIAN PARK BRIDGES

GENERAL DETAILS

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
27379	JDB	AHH	APRIL 2010	-	L3-03

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
 TEL (214) 348-6200 FAX (214) 738-0085