

CITY OF PHOENIX STREET TRANSPORTATION DEPARTMENT DESIGN & CONSTRUCTION MANAGEMENT DIVISION

SONORAN BOULEVARD - 10TH ST TO 26TH ST

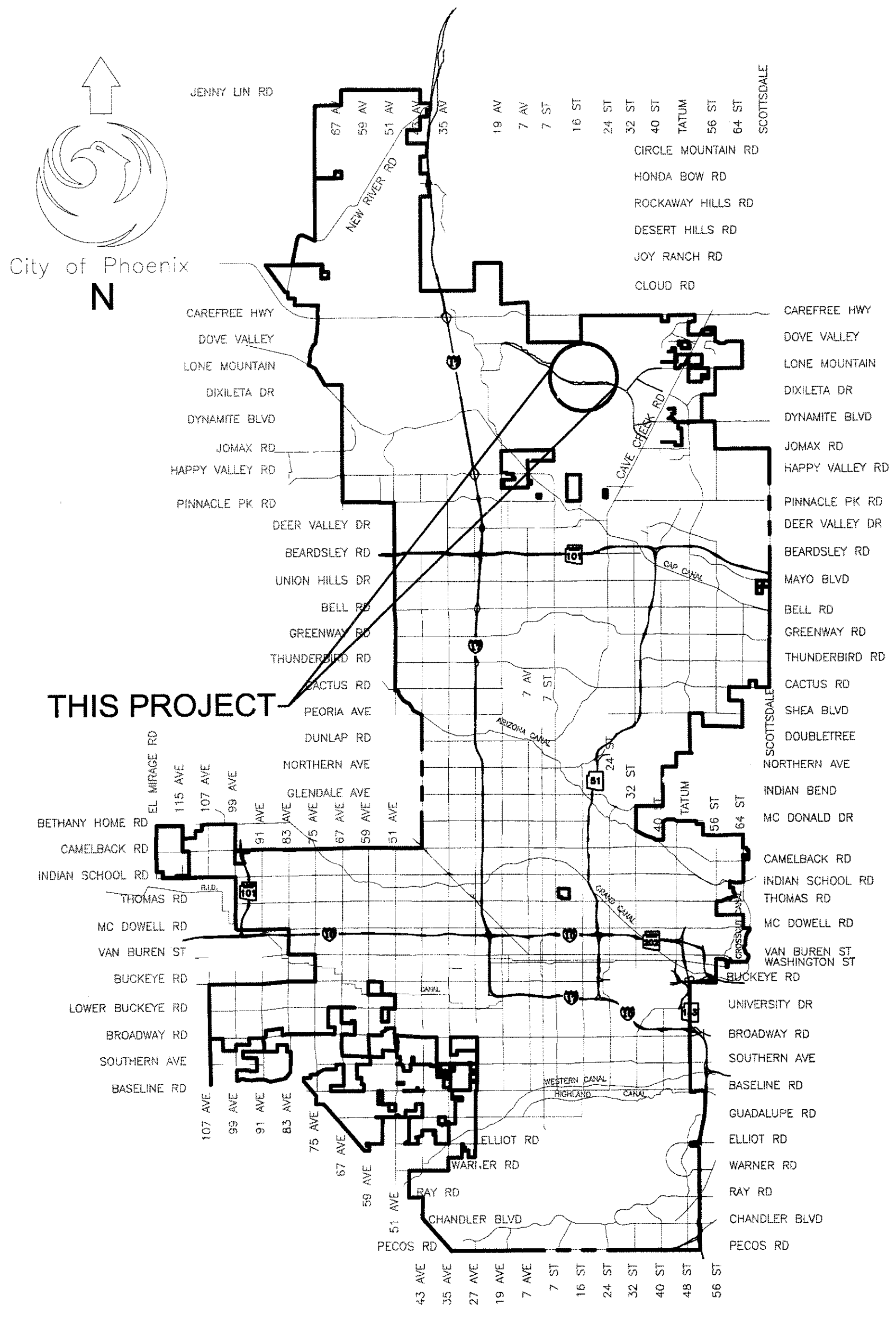
ST85100293



2012

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VICINITY MAP

APPROVED _____ DATE _____
 ASSISTANT STREET TRANSPORTATION DIRECTOR

APPROVED _____ DATE _____
 DEPUTY STREET TRANSPORTATION DIRECTOR

PREMIER ENGINEERING CORPORATION 6437 W CHANDLER BLVD, STE 1 CHANDLER, AZ 85226; 480-829-6000	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	001	352
DES: DVW	DR:RR/MEK	CK: KJB	DATE: 12/09		

- ### MAYOR
- PHIL GORDON
- ### CITY MANAGER
- DAVID CAVAZOS
- ### CITY COUNCIL
- | | |
|----------------|--------------------|
| DISTRICT NO 1. | THELDA WILLIAMS |
| DISTRICT NO 2. | PEGGY NEELY |
| DISTRICT NO 3. | BILL GATES |
| DISTRICT NO 4. | TOM SIMPLOT |
| DISTRICT NO 5. | CLAUDE MATTOX |
| DISTRICT NO 6. | SAL DICICCIO |
| DISTRICT NO 7. | MICHAEL NOWAKOWSKI |
| DISTRICT NO 8. | MICHAEL JOHNSON |

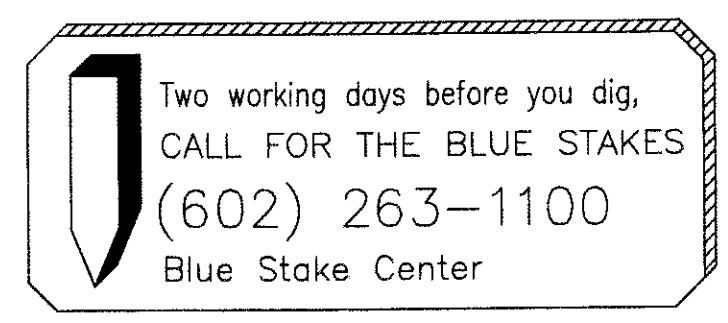
- #### CITY BENCHMARK:
- ▲ 27th AVE (NORTH VALLEY PKWY) AND DOVE VALLEY (ALIGN) 1631.349 C.O.P. B.C. IN H.H.
 - ▲ CAVE CREEK ROAD AND JOMAX ROAD 1683.678 C.O.P. B.C. IN H.H. (C.O.P. RECORDED ELEV = 1683.678, PREMIER MEASURED ELEV = 1683.94)
 - ▲ CAVE CREEK ROAD AND DYNAMITE BOULEVARD 1756.533 C.O.P. B.C. IN H.H.

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER _____ DATE _____
 REGISTRATION NUMBER _____



	NO SERVICES WITHIN PROJECT	PLANS REVIEWED BY	PERMIT RECEIVED
AZ DEPT. OF TRANSPORTATION			
AZ PUBLIC SERVICE			
CABLE T.V.			
MARICOPA COUNTY DEPT. OF TRANSPORTATION			
QWEST			
SALT RIVER POWER DISTRICT			
S.R.V.W.U.A.			
SOUTHWEST GAS			
WATER & WASTEWATER			

REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION

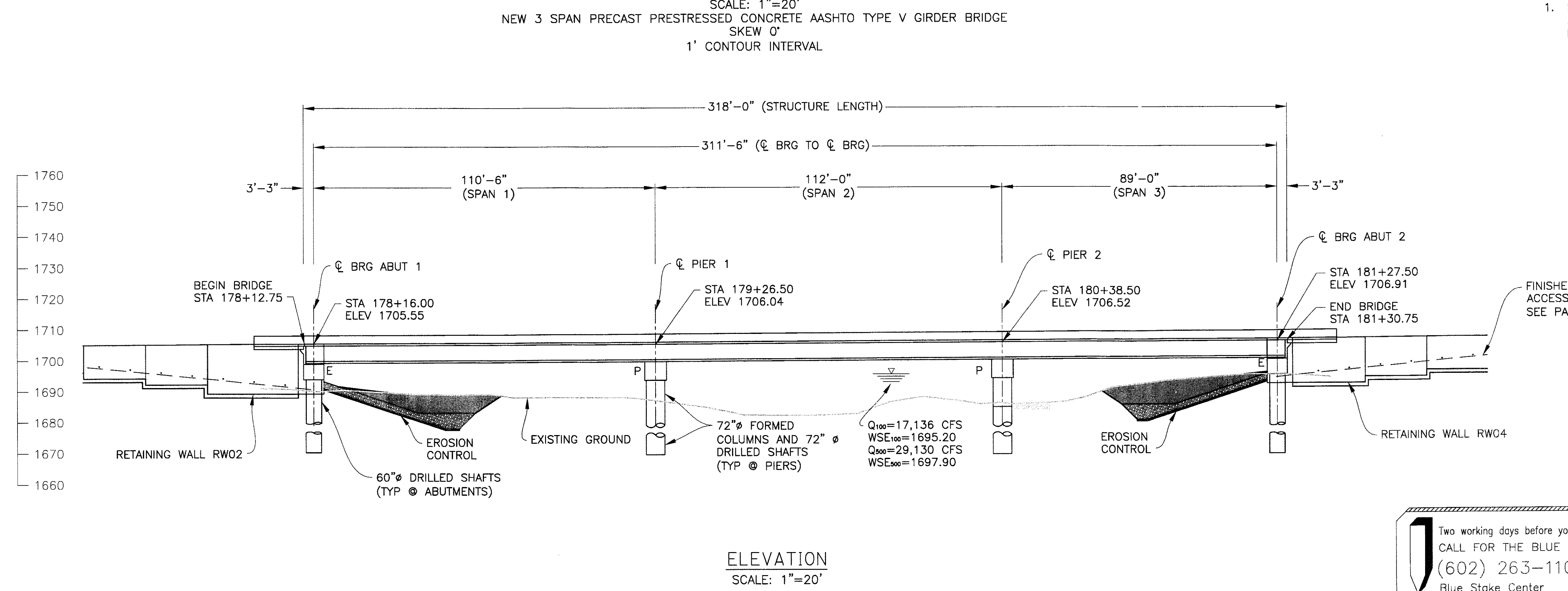
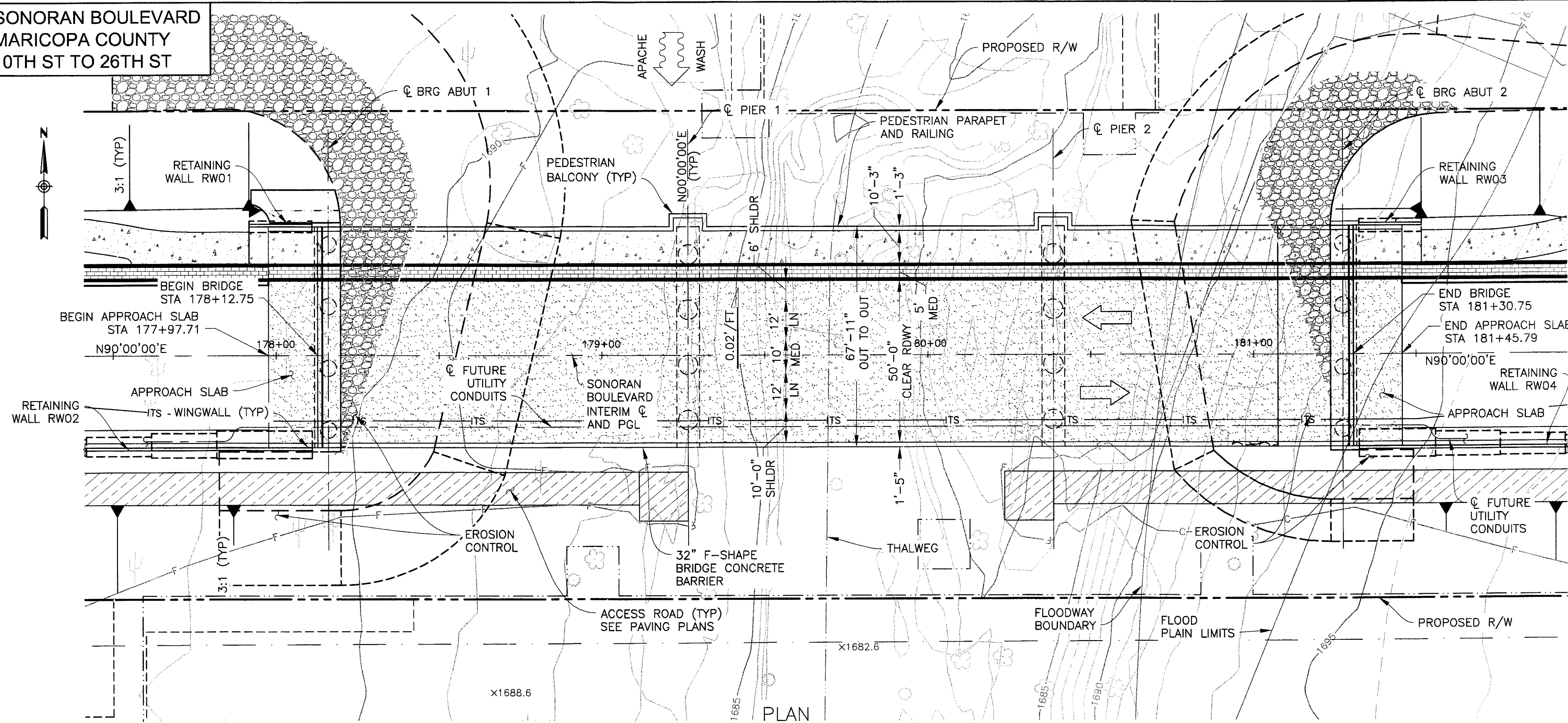
PROJECT NUMBER: ST85100293 - 90% SUBMITTAL - SONORAN BOULEVARD - 10th ST. TO 26th ST.

SONORAN BOULEVARD
 MARICOPA COUNTY
 10TH ST TO 26TH ST

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	135	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				
CONSULTING ENGINEER DES: RMD DR: JRR CK: SEO DATE: 12/09				

INDEX OF DRAWINGS

DRAWING NO.	DRAWING TITLE
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S-1.02	GENERAL NOTES & TYPICAL SECTION
S-1.03	QUANTITIES
S-1.04	EXCAVATION AND BACKFILL
S-1.05	FOUNDATION PLAN
S-1.06	DRILLED SHAFT DETAILS
S-1.07	ABUTMENT 1 PLAN AND ELEVATION
S-1.08	ABUTMENT 2 PLAN AND ELEVATION
S-1.09	ABUTMENT DETAILS 1
S-1.10	ABUTMENT DETAILS 2
S-1.11	WINGWALL DETAILS
S-1.12	EROSION CONTROL PLAN
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S-1.18	TYPICAL DECK & REINFORCING
S-1.19	GIRDER DETAILS SPAN 1
S-1.20	GIRDER DETAILS SPAN 2
S-1.21	GIRDER DETAILS SPAN 3
S-1.22	GIRDER DETAILS
S-1.23	BEARING PAD DETAILS
S-1.24	ABUTMENT DIAPHRAGM DETAILS
S-1.25	PIER DIAPHRAGM DETAILS
S-1.26	DIAPHRAGM SECTIONS
S-1.27	PEDESTRIAN PARAPET AND RAILING DETAILS 1
S-1.28	PEDESTRIAN PARAPET AND RAILING DETAILS 2
S-1.29	PEDESTRIAN BALCONY DETAILS
S-1.30	SHADE STRUCTURE DETAILS
S-1.31	MISCELLANEOUS DETAILS 1
S-1.32	MISCELLANEOUS DETAILS 2
S-1.33	SCREED ELEVATIONS
S-1.34	F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (32") NOMINAL APPROACH SLAB DETAILS
S-1.35	DECK JOINT ASSEMBLY STRIP SEAL



NOTE:
 1. STATIONING DIMENSIONS, AND ELEVATIONS ARE GIVEN ALONG SONORAN BOULEVARD INTERIM CL.

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GENERAL PLAN AND ELEVATION

CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

DR: JRR DATE: 12/09	DES: RMD DATE: 12/09	CK: SEO DATE: 12/09	SHEET NO: 135	TOTAL SHEETS 352
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Two working days before you dig,
 CALL FOR THE BLUE STAKES
 (602) 263-1100
 Blue Stake Center

NO.	DESCRIPTION	REV BY	CHK BY	DATE

P:\200805\CAD\CAD\Drawings\Structures\101 - Apache Plan and Elevation.dwg - plotted by James Rojas at 12/21/2009 8:55:09 AM
 I:\scenic\1.0000 - Preliminary - PRELIMINARY - NOT FOR CONSTRUCTION
 DATE: 12/09

GENERAL NOTES

DESIGN SPECIFICATIONS

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CUSTOMARY US UNITS, FOURTH EDITION, 2007 AND REVISIONS TO DATE.

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION AND REVISIONS TO DATE.

CONSTRUCTION SPECIFICATIONS

MARICOPA ASSOCIATION OF GOVERNMENTS (MAG), UNIFORM STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION AND REVISION DATE.

CITY OF PHOENIX SUPPLEMENT TO MAG UNIFORM STANDARD SPECIFICATIONS.

ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2008 EDITION. APPLICABLE WHEN REFERENCED IN THESE PLANS AND AREAS NOT COVERED BY MAG SPECIFICATION.

MAG SPECIFICATIONS SHALL TAKE PRECEDENCE OVER ADOT SPECIFICATIONS, UNLESS NOTED OTHERWISE.

DESIGN LOADINGS

LIVE LOAD, HL-93 (LRFD)

DEAD LOAD INCLUDES ALLOWANCES OF 25 PSF FOR FUTURE WEARING SURFACE.

THE SUPERSTRUCTURE IS DESIGNED AS A COMPOSITE SECTION WITH THE TOP 1/2" OF SLAB THICKNESS REMOVED FROM THE DESIGN SECTION PROPERTIES TO ACCOUNT FOR GRINDING, GROOVING & WEARING.

SEISMIC PERFORMANCE ZONE I (ACCELERATION COEFFICIENT OF 0.04).

DESIGN MAXIMUM SCOUR 35'-0"

RATING

RATING FACTORS ARE BASED ON LRFR METHODOLOGY AND HL-93 LOADING

INVENTORY1.33
OPERATING2.01

CONCRETE STRESSES

DECK, DIAPHRAGMS, CURB FOR BRIDGE RAIL ..f'c = 4500 psi - CLASS S
 MEDIANf'c = 4000 psi - CLASS S
 ABUTMENTS, PIERS, COLUMNSf'c = 3500 psi - CLASS S
 GIRDERSf'c = VARIES - SEE GIRDER SHTS
 DRILLED SHAFTSf'c = 3500 psi - CLASS S
 OTHER CONCRETEf'c = 3000 psi - CLASS S

REINFORCING STEEL SHALL CONFORM TO ASTM A615 EXCEPT WHERE ASTM A706 IS SPECIFIED FOR WELDABILITY. ALL REINFORCING STEEL SHALL BE FURNISHED AS GRADE 60.

PRESTRESSING STEEL SHALL CONFORM TO ASTM A416 GRADE 270 LOW RELAXATION 7-WIRE STRAND.

ALL BENDS AND HOOKS SHALL MEET THE REQUIREMENTS OF AASHTO LRFD SECTION 5.10.2. ALL BEND DIMENSIONS FOR REINFORCING STEEL SHALL BE OUT-TO-OUT OF BARS. ALL PLACEMENT DIMENSIONS FOR REINFORCING STEEL SHALL BE CENTER OF BARS UNLESS NOTED OTHERWISE.

ALL REINFORCING STEEL SHALL HAVE 2 INCH CLEAR COVER, UNLESS NOTED OTHERWISE.

CHAMFER ALL EXPOSED CORNERS 3/4" UNLESS NOTED OTHERWISE.

BRIDGE BARRIERS SHALL NOT BE CAST BY THE SLIP-FORM METHOD.

ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY BRIDGE WELDING CODE D1.5-2002, UNLESS NOTED OTHERWISE.

ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A36, UNLESS NOTED OTHERWISE.

DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.

STRUCTURE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATION AND THE SPECIAL PROVISIONS.

ABBREVIATIONS

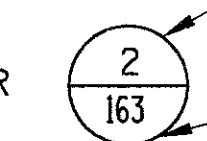
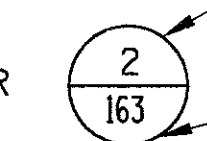
@	AT	LT	LEFT
AB	ANCHOR BOLT	LONGIT	LONGITUDINAL
ABUT	ABUTMENT	MAX	MAXIMUM
ADD'L	ADDITIONAL	MI	MILES
APPROX	APPROXIMATE	MIN	MINIMUM
B/B	BACK-TO-BACK	MISC	MISCELLANEOUS
BIT	BITUMINOUS	MOD	MODIFIED
BM	BEAM	NB	NORTH BOUND
BOTT	BOTTOM	NIC	NOT IN CONTRACT
BRG	BEARING	NO.#	NUMBER
BTWN	BETWEEN	NTS	NOT TO SCALE
CL	CENTERLINE	OC	ON CENTER
CIP	CAST-IN-PLACE	OD	OUTSIDE DIAMETER
C	CENTER	OPNG	OPENING
CY	CUBIC YARDS	P	PINNED
CLR	CLEAR	PGL	PROFILE GRADE LINE
COL	COLUMN	P	PLATE
CONC	CONCRETE	PSI	POUNDS PER SQUARE INCH
CONT	CONTINUOUS	PVC	POLYVINYL CHLORIDE
CST	CONSTRUCTION	PED	PEDESTRIAN
DIAG	DIAGONAL	R	RADIUS
DIAG #	DIAMETER	R/W	RIGHT OF WAY
DIAPH	DIAPHRAGM	RDWY	ROADWAY
DTL	DETAIL	REINF	REINFORCEMENT
DWG	DRAWING	REQ'D	REQUIRED
EA	EACH	RET	RETAINING
EB	EAST BOUND	RT	RIGHT
EF	EACH FACE	SB	SOUTH BOUND
ELEV	ELEVATION	SCHED	SCHEDULE
EMBED	EMBEDMENT	SECT	SECTION
EQ	EQUAL	SF	SQUARE FOOT
EW	EACH WAY	SHLDR	SHOULDER
EXIST	EXISTING	SHT	SHEET
EXP,E	EXPANSION	SIM	SIMILAR
EXT	EXTERIOR	SPA	SPACE
F	FIXED	SPECS	SPECIFICATION
FIN	FINISHED	STA	STATION
FLR	FLOOR	STD	STANDARD
FTG	FOOTING	STL	STEEL
GA	GAUGE	STR	STRUCTURAL
GALV	GALVANIZED	SWLK	SIDEWALK
GR	GRADE	SY	SQUARE YARD
HS	HIGH STRENGTH	SYM	SYMMETRICAL
HK	HOOK	TOW	TOP OF WALL
HORIZ	HORIZONTAL	TEMP	TEMPORARY
ID	INSIDE DIAMETER	TRANS	TRANSITION
INT	INTERIOR	TYP	TYPICAL
JT	JOINT	VERT	VERTICAL
LBS	POUNDS	W/	WITH
LF	LINEAR FOOT	WB	WEST BOUND
LN	LANE	WSE	WATER SURFACE ELEVATION
LS	LUMP SUM		



90% NOT FOR CONSTRUCTION

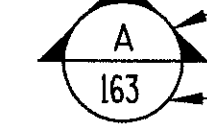
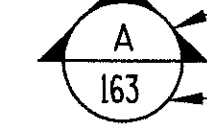
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	136	352

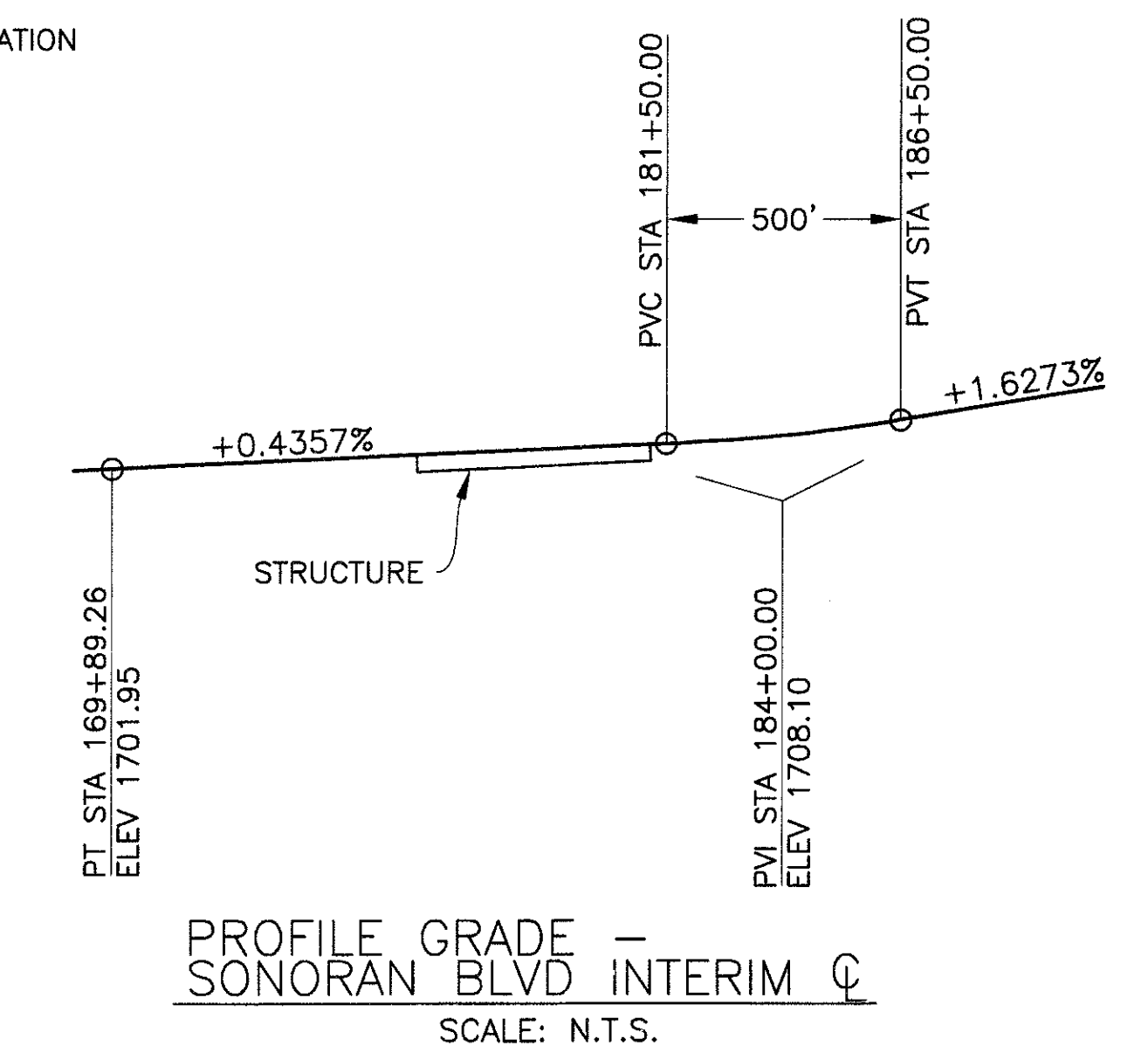
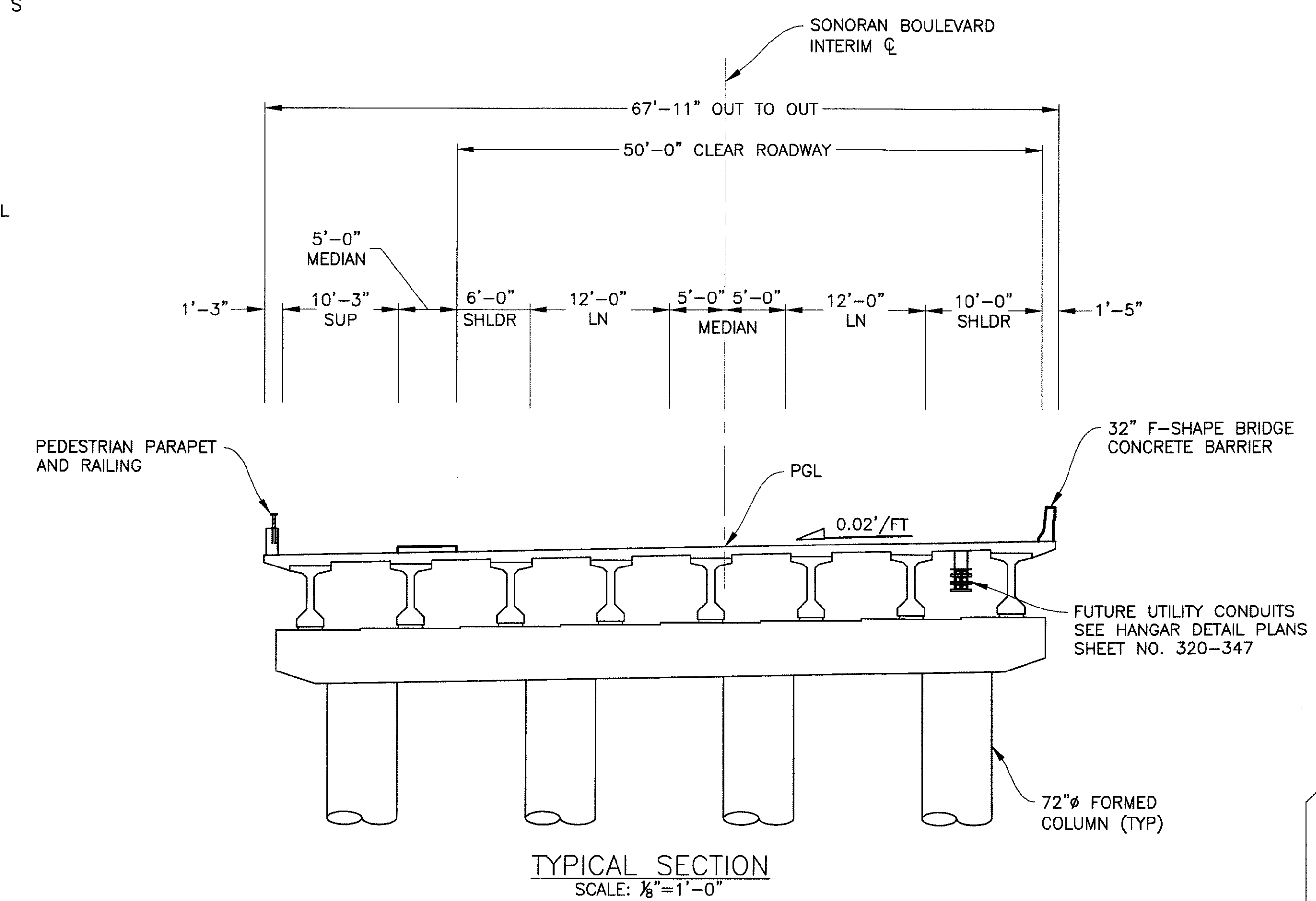
PREMIER
ENGINEERING CORPORATION
6437 W CHANDLER BLVD., SUITE 1
CHANDLER, AZ 85226 480-829-8000
CONSULTING ENGINEER
DES: RMD DR: JRR CK: SEO DATE: 12/09

LEGEND:

TITLE/DETAIL MARKER  DETAIL NUMBER
 SHEET NUMBER

SECTION MARKER  SECTION LETTER
 SHEET NUMBER

ELEVATION MARKER  ELEVATION LETTER
 SHEET NUMBER



"PER CITY OF PHOENIX ORDINANCE C-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

GENERAL NOTES & TYPICAL SECTION

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293**

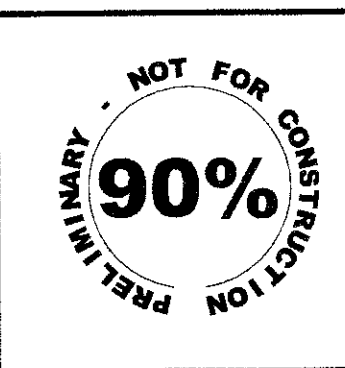
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DATE: 12/09	DATE: 12/09	DATE: 12/09	136	352

DWG NO: S-1.02

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REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				

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 Plot Scale: 1:1
 File Size: 1,020,000
 Plot Date: 12/21/2009 8:55:14 AM



F.H.W.A. REGION 9	STATE ARIZ.	PROJ. NO. ST85100293	NO. 137	TOTAL 352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				CONSULTING ENGINEER
DES: RMD	DR: JRR	CK: SEO	DATE: 12/09	

ITEM	STRUCTURE EXCAVATION CY	STRUCTURE BACKFILL CY	CONCRETE			REINFORCING STEEL LB	AASHTO GIRDER TYPE V LF	60" Ø DRILLED SHAFT LF	72" Ø DRILLED SHAFT LF	32" F-SHAPE BRIDGE CONCRETE BARRIER LF	PEDESTRIAN PARAPET AND RAILING LF
			CLASS S (f'c=3500 psi) CY	CLASS S (f'c=4000 psi) CY	CLASS S (f'c=4500 psi) CY						
ABUTMENT 1	145	85	175			20,160		288			
ABUTMENT 2	80	90	165			17,730		299			
PIER 1			154			23,870			320		
PIER 2			156			24,195			320		
SUPERSTRUCTURE				20	889	203,660	2,480			575	349
TOTAL	225	175	650	20	889	289,615	2,480	587	640	575	349
AS BUILT											

APPROACH SLABS..... 2,038 SF
 DECK JOINT ASSEMBLIES (STRIP SEAL)..... 131 LF
 ELASTOMERIC BEARING PADS..... 48 EA
 UTILITY HANGERS AND CONDUITS..... 324 LF

REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION

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NO.	DESCRIPTION

REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION

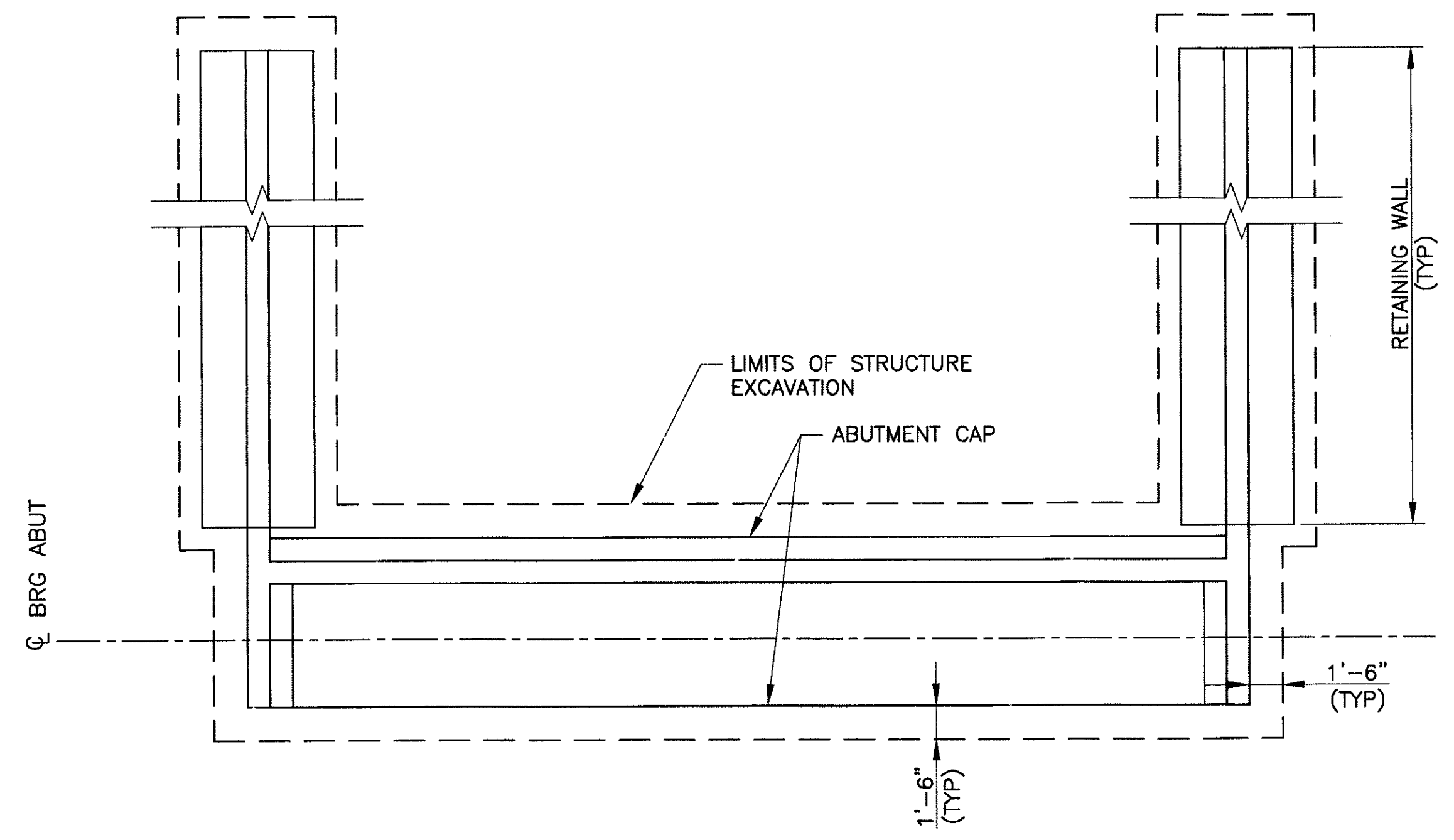
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QUANTITIES	
CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT	
SONORAN BOULEVARD APACHE WASH BRIDGE ST85100293	
DR: JRR	DES: RMD
DATE: 12/09	DATE: 12/09
CK: SEO	DATE: 12/09
SHEET NO: 137	TOTAL SHEETS: 352
DWG NO: S-1.03	

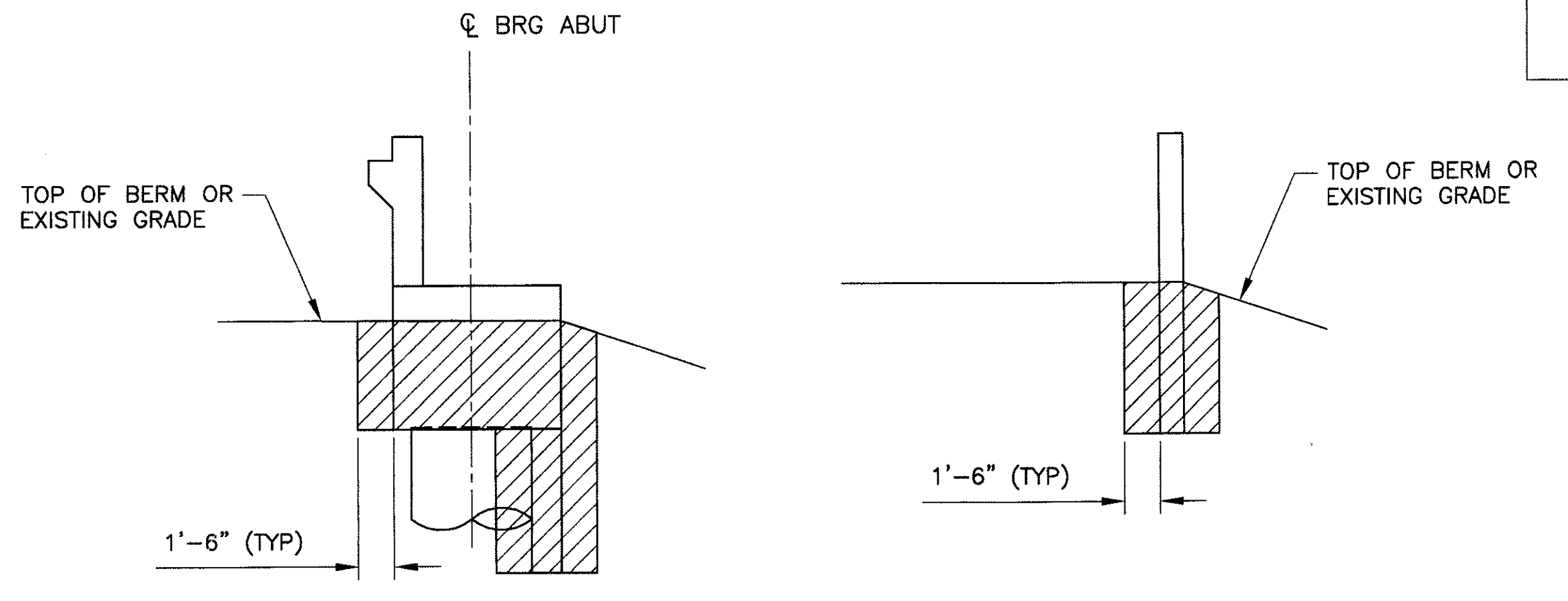
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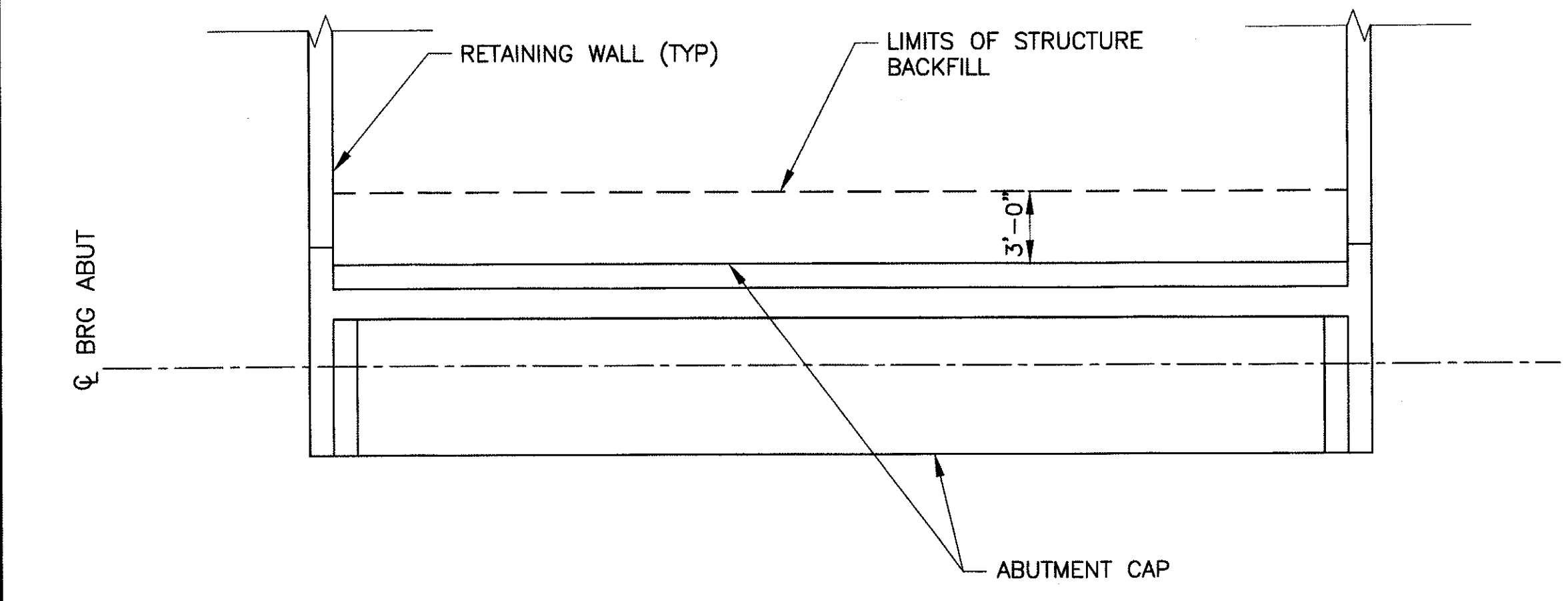
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REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



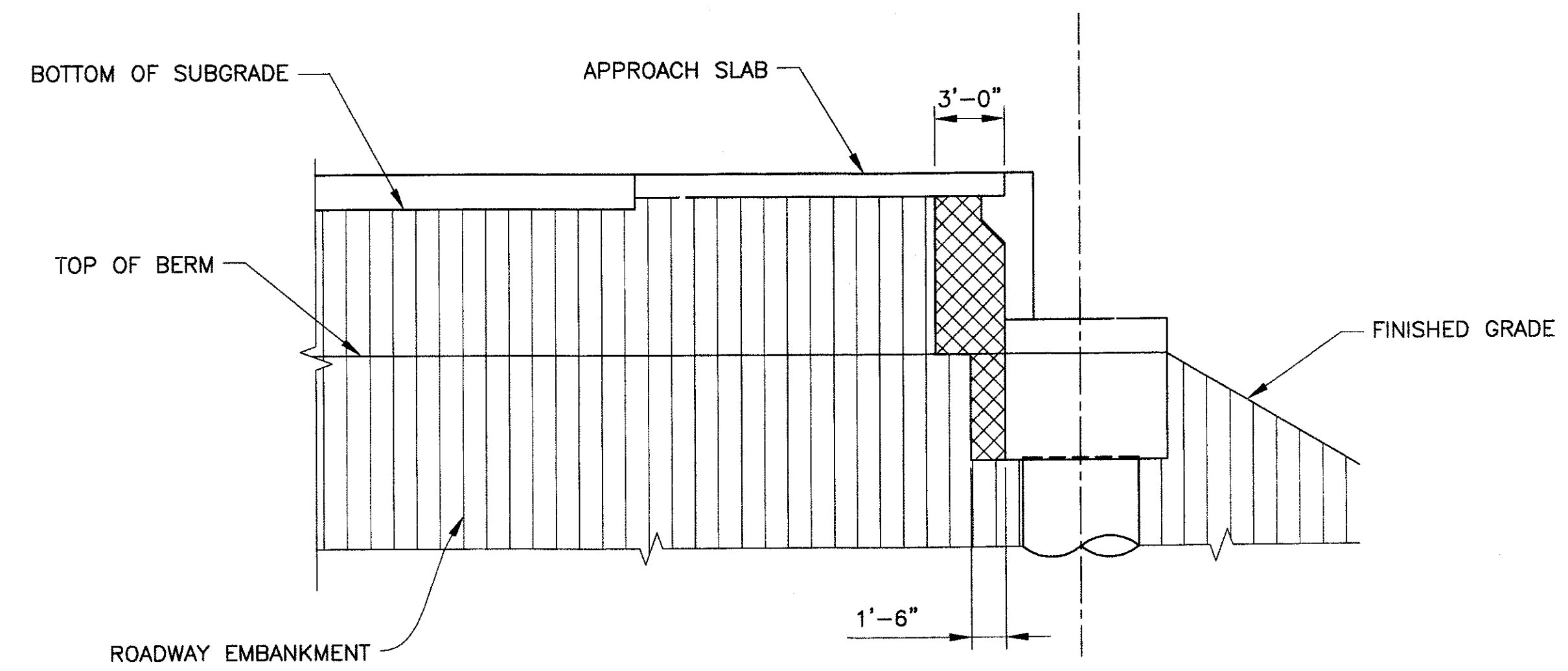
PLAN OF STRUCTURE EXCAVATION AT ABUTMENTS
 ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR
 SCALE: 3/16" = 1'-0"



STRUCTURE EXCAVATION PAYMENT LIMITS
 SCALE: 3/16" = 1'-0"



PLAN OF STRUCTURE BACKFILL AT ABUTMENTS
 ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR
 SCALE: 3/16" = 1'-0"



STRUCTURE BACKFILL PAYMENT LIMITS
 SCALE: 3/16" = 1'-0"

- LEGEND**
- INDICATES STRUCTURE EXCAVATION
 - INDICATES STRUCTURE BACKFILL
 - ROADWAY EMBANKMENT

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EXCAVATION AND BACKFILL
 CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
 APACHE WASH BRIDGE
 ST85100293**

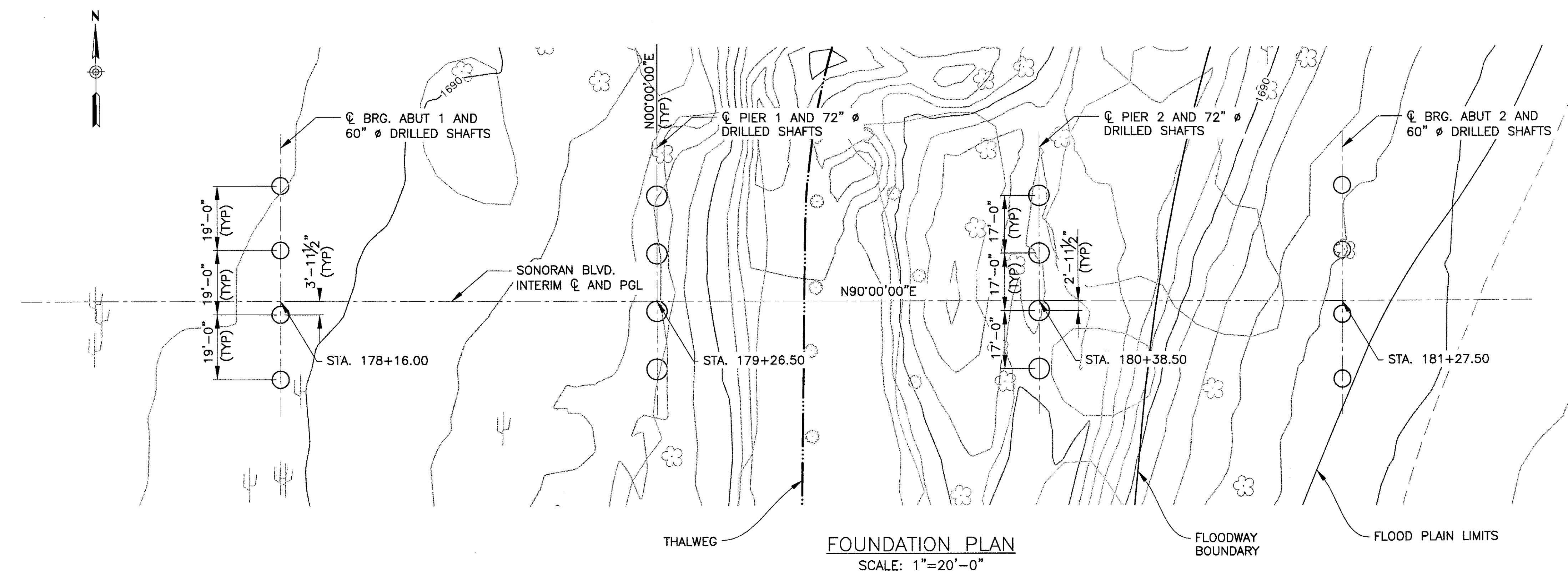
DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	138	352
DWG NO: S-1.04				

P:\20080029\2009\0121\21\2009_85526 AM - plotted by James Rojas at 12/21/2009 8:55:26 AM
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90%
PRELIMINARY - NOT FOR CONSTRUCTION

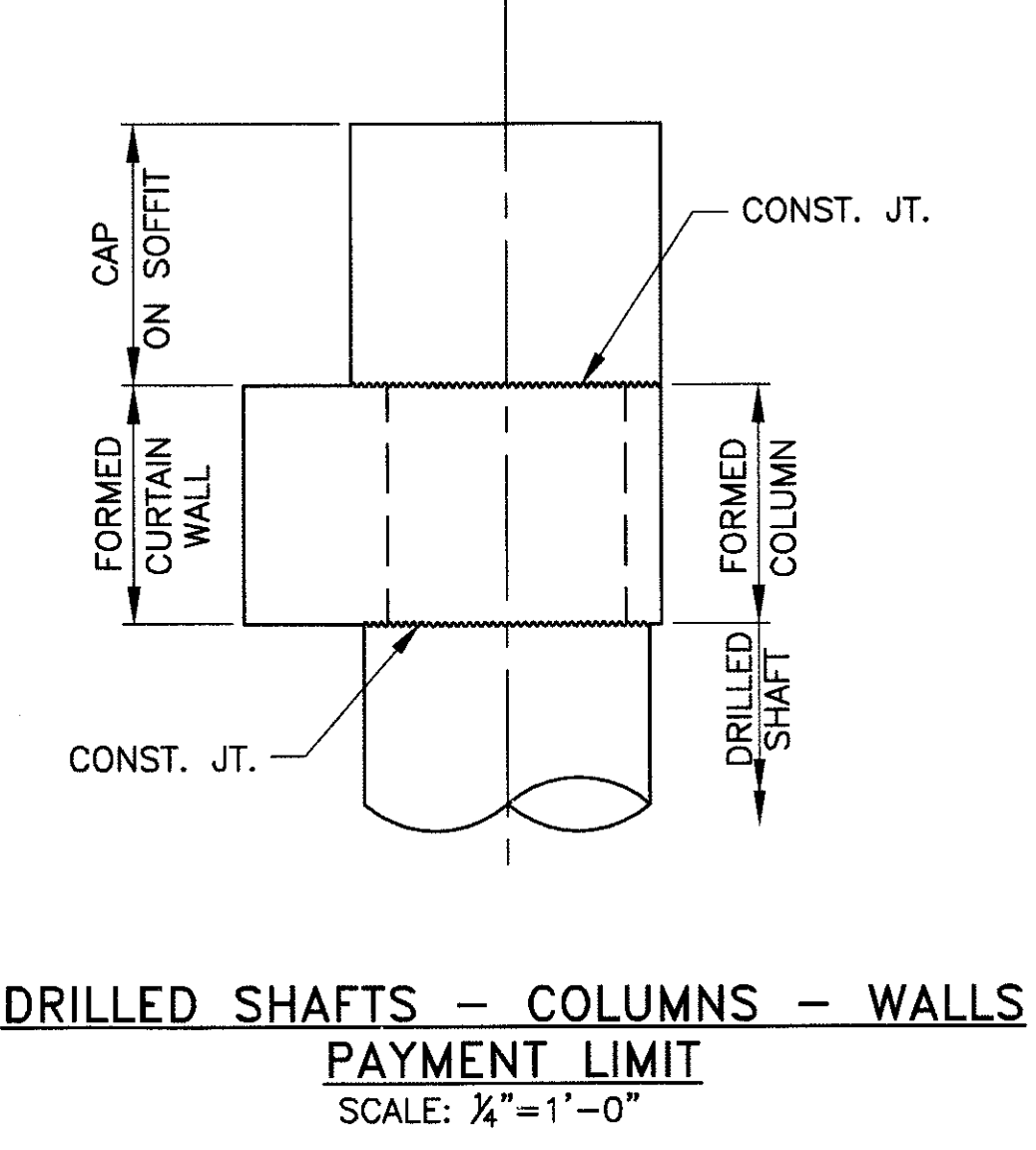
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ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226 480-829-6000				
DES: RMD			DR: JRR	CONSULTING ENGINEER
DATE: 12/09			CK: SEO	DATE: 12/09

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				



DRILLED SHAFT NOTES:

- DESIGN LOADS
ABUTMENTS..... 713 KIPS (EXTREME EVENT LIMIT STATE)
PIERS 1365 KIPS (STRENGTH LIMIT STATE)
- NO NEW SHAFT DRILLING IS PERMITTED WITHIN 4 SHAFT DIAMETERS MEASURED CENTER TO CENTER UNTIL 48 HOURS AFTER THE CONCRETING OF THE DRILLED SHAFT
- IF SLURRY ASSISTED DRILLING IS REQUIRED, PROVIDE 6-2 1/2" DIA. SCHEDULE 80 RIGID PVC PIPES SPACED EQUALLY AS SHOWN TO ALLOW INSPECTION OF THE DRILLED SHAFT FOUNDATIONS BY MEANS OF GAMMA RAY LOGGING DEVICE. SECURELY TIE THE PIPE TO THE INSIDE OF THE REINFORCING CAGE AND EXTEND FROM THE BOTTOM OF THE REINFORCING CAGE TO 12" ABOVE THE TOP OF DRILLED SHAFTS WITH CAPS AT EACH END.
- THE LENGTH OF DRILLED SHAFT IS BASED ON A COMBINATION OF END BEARING AND SIDE FRICTION RESISTANCE OF THE SHAFT LENGTH BELOW THE MAXIMUM ANTICIPATED SCOUR DEPTH, AND IS THE MINIMUM LENGTH REQUIRED.



CONSTRUCTION SEQUENCE FOR ABUTMENT:

- THE FOLLOWING CONSTRUCTION SEQUENCE IS SPECIFIED FOR THE CONSTRUCTION OF ABUTMENT DRILLED SHAFTS, COLUMNS, CURTAIN WALL AND CAP BEAM. SEE DRILLED SHAFT-COLUMN-WALL PAYMENT LIMIT.
- STEP 1: DRILLED SHAFT: CONSTRUCT DRILLED SHAFTS AS SHOWN ON PLANS UP TO THE CONSTRUCTION JOINT BETWEEN DRILLED SHAFTS AND FORMED COLUMNS PORTION OF ABUTMENT FOUNDATION.
 - STEP 2: FORMED COLUMN: USE FORMS TO CONSTRUCT COLUMNS FROM THE CONSTRUCTION JOINT TO THE BOTTOM OF ABUTMENT CAP.
 - STEP 3: CURTAIN WALLS: PLACE DOWELS IN THE COLUMNS AS SHOWN IN PLANS. USE FORMS TO CONSTRUCT CURTAIN WALLS. WALLS SHALL BE BUILT UP TO THE BOTTOM OF ABUTMENT CAP BEAM.
 - STEP 4: BACKFILL: PLACE BACKFILL UP TO THE BOTTOM OF CAP BEAM AND COMPACT AS PER SPECIFICATION.
 - STEP 5: ABUTMENT CAP: CONSTRUCT CAP BEAM ON SOFFIT.

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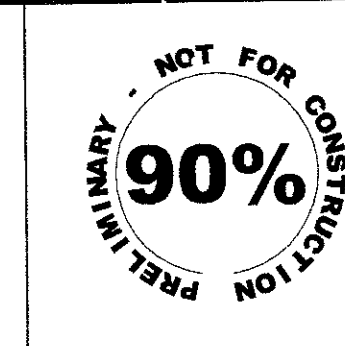
FOUNDATION PLAN
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

Two working days before you dig,
CALL FOR THE BLUE STAKES
(602) 263-1100
Blue Stake Center

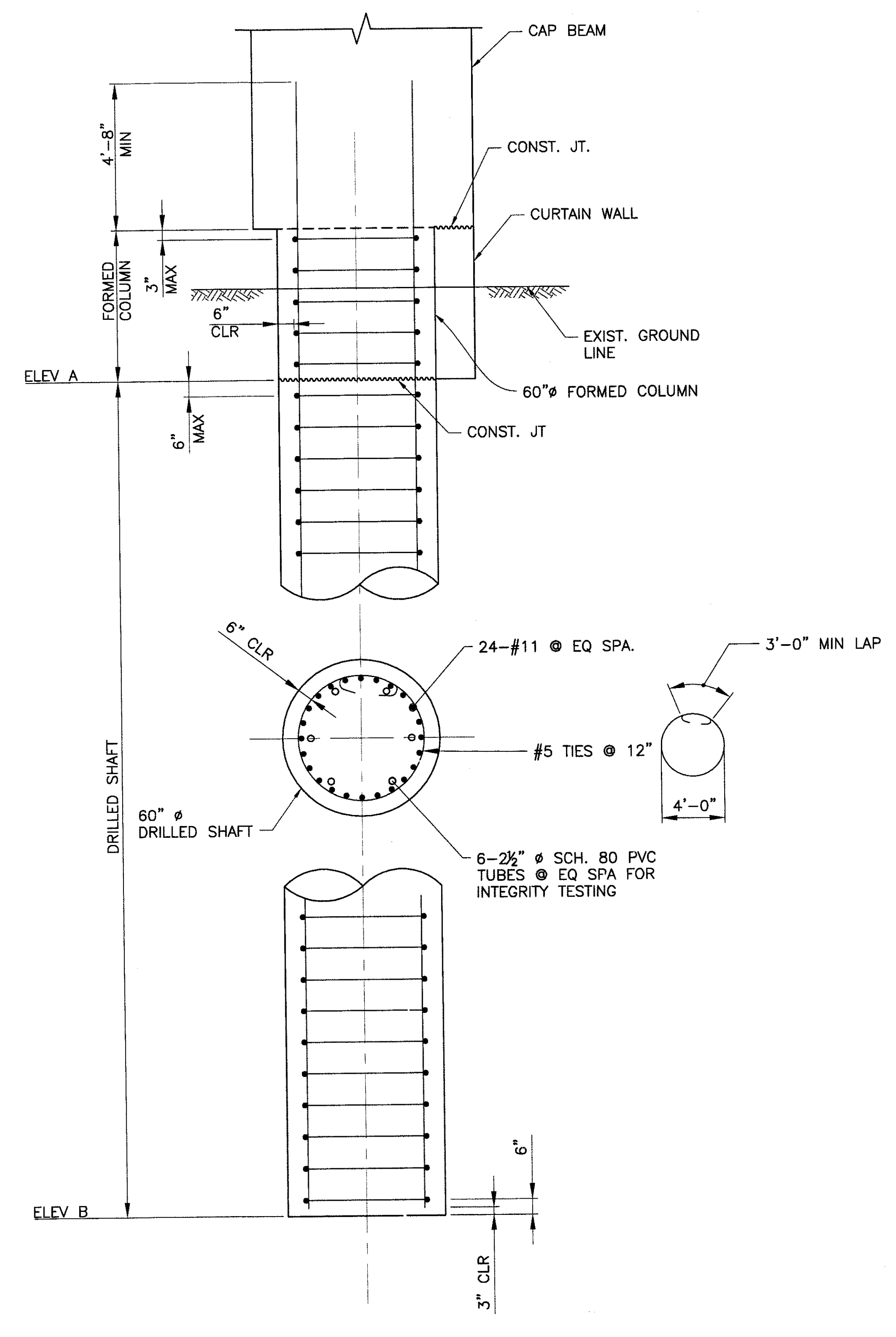
DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	NO:	352
DWG NO: S-1.05			139	352

P:\2008005\CA07\Civil\Sheets\Structures\04-APACHE FOUNDATION PLAN.dwg - plotted by James Rojas at 12/21/2009 8:55:34 AM



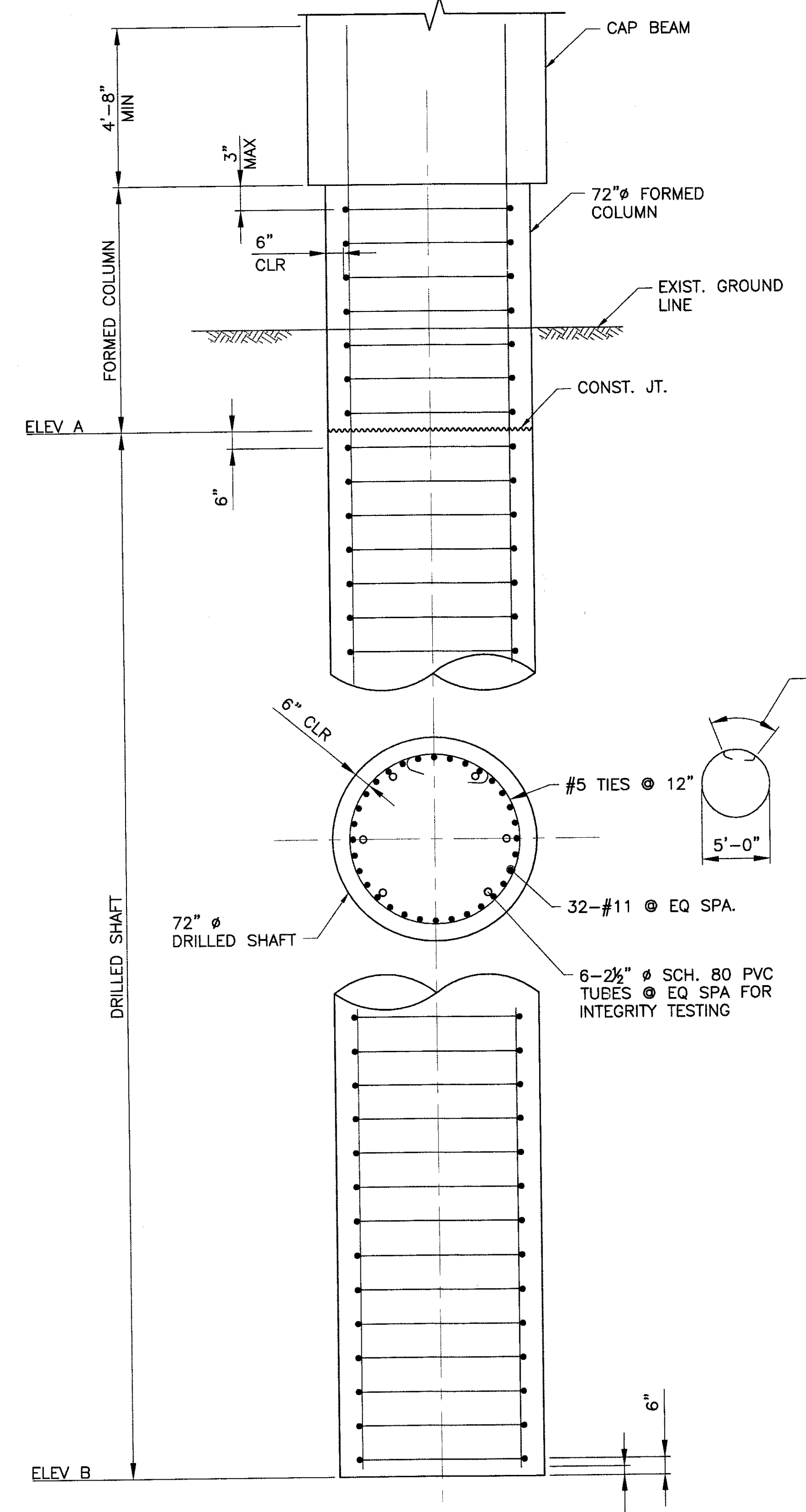
F.H.W.A REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	140	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-8000				
		CONSULTING ENGINEER		
DES: BAG	DR: JRR	CK: SEO	DATE: 12/09	

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

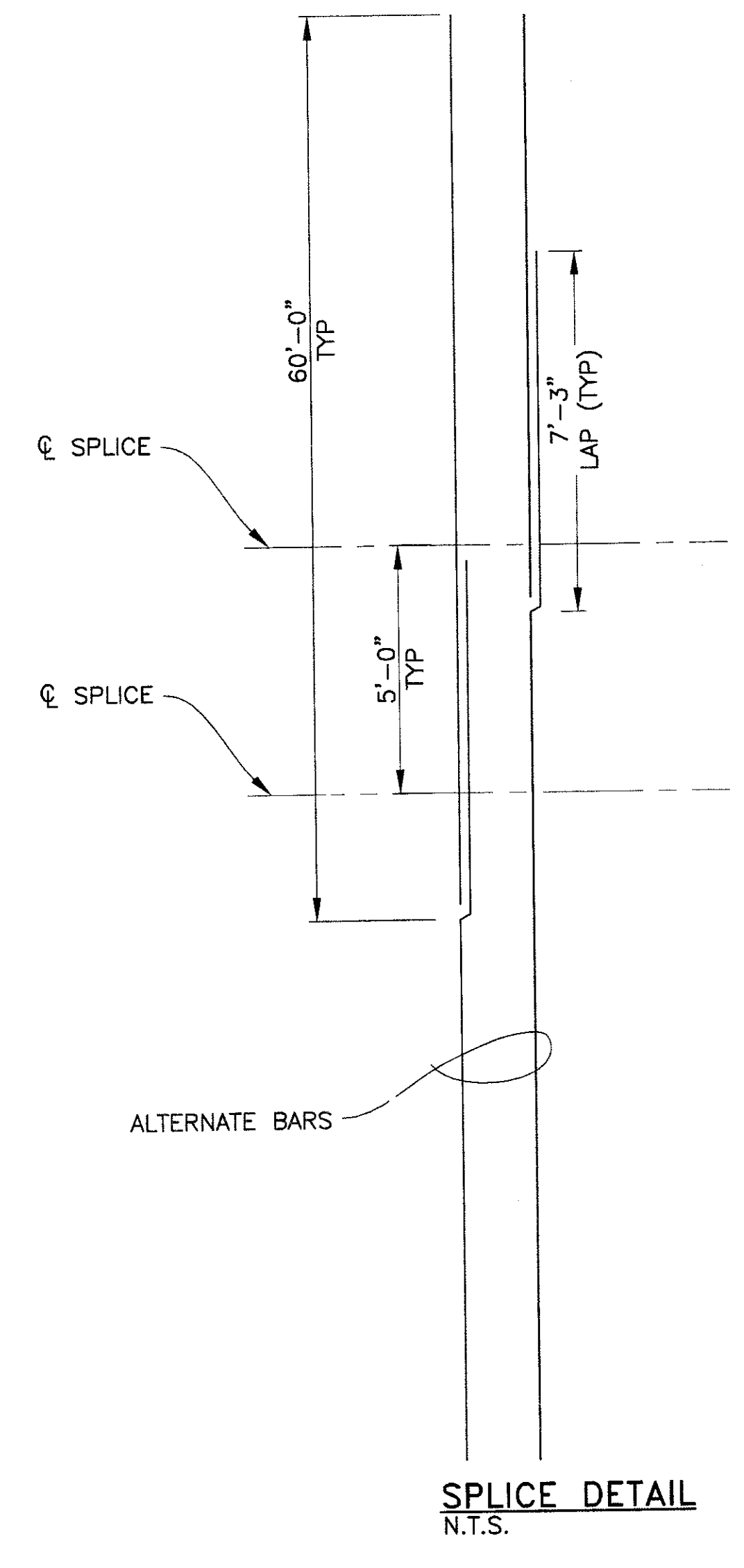


DRILLED SHAFT AT ABUTMENT #1 AND #2
SCALE = 3/8" = 1'-0"

	DRILLED SHAFT ELEVATIONS	
	ELEVATION A	ELEVATION B
ABUTMENT 1	1687.80	1616.00
ABUTMENT 2	1690.66	1616.00
PIER 1	1681.00	1601.00
PIER 2	1681.00	1601.00



DRILLED SHAFT AT PIER
SCALE = 3/8" = 1'-0"



SPLICE DETAIL
N.T.S.

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(602) 263-1100
Blue Stake Center

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DRILLED SHAFT DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

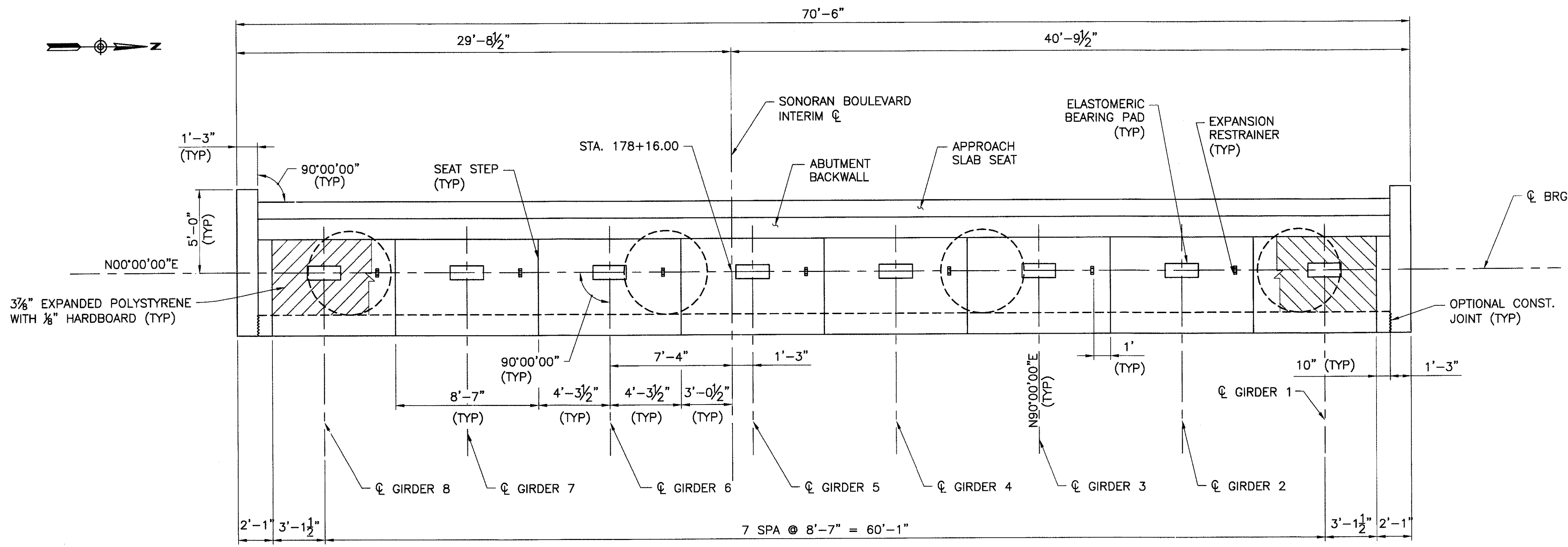
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DATE: 12/09	DATE: 12/09	DATE: 12/09	140	352
DWG NO: S-1.06			140	352

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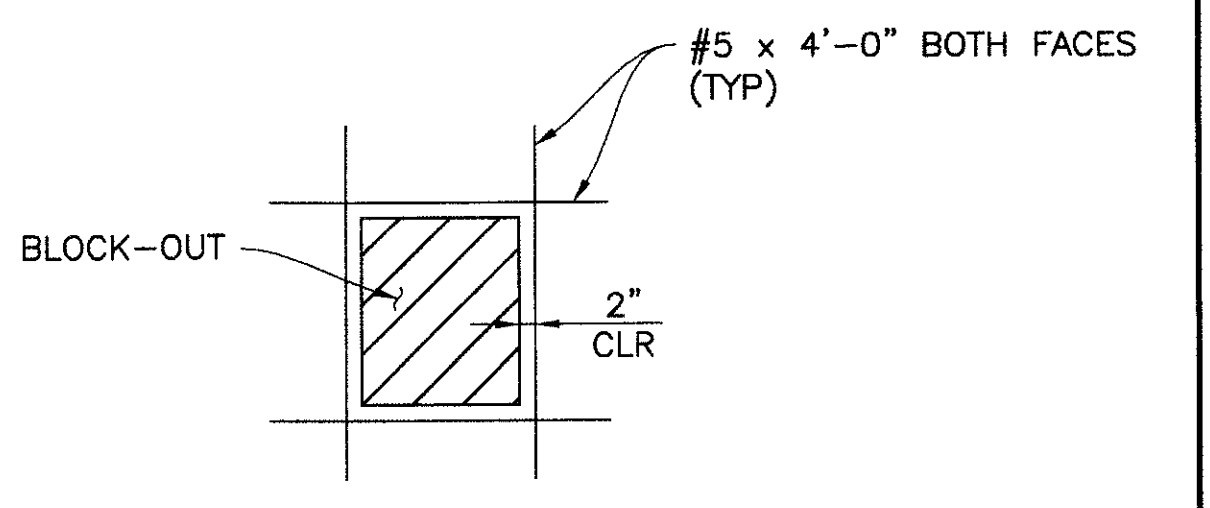
NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE

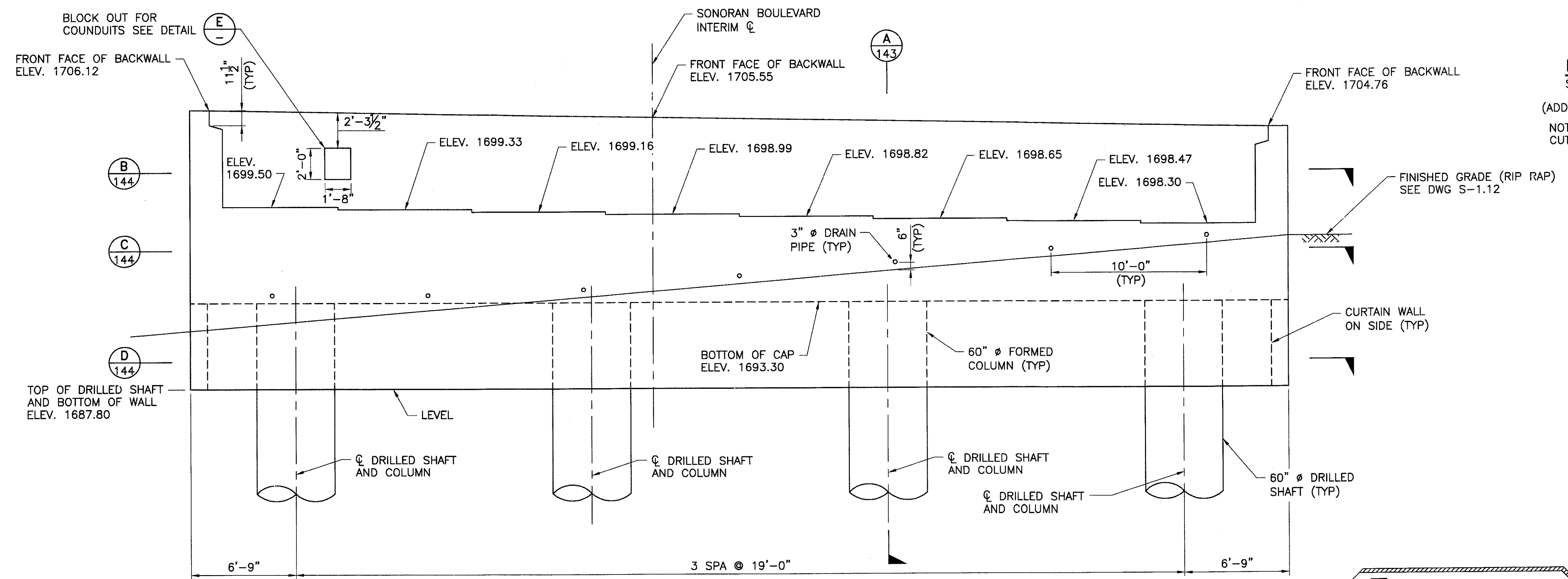


PLAN
(LOOKING BACK STATION)
SCALE: 1/4" = 1'-0"



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

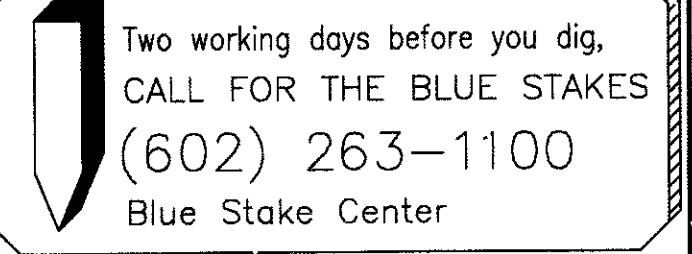
(ADDITIONAL REINFORCEMENT @ BLOCK-OUT)
NOTE:
CUT WALL REINFORCEMENT AS NECESSARY.



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

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

ABUTMENT 1 PLAN & ELEVATION
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

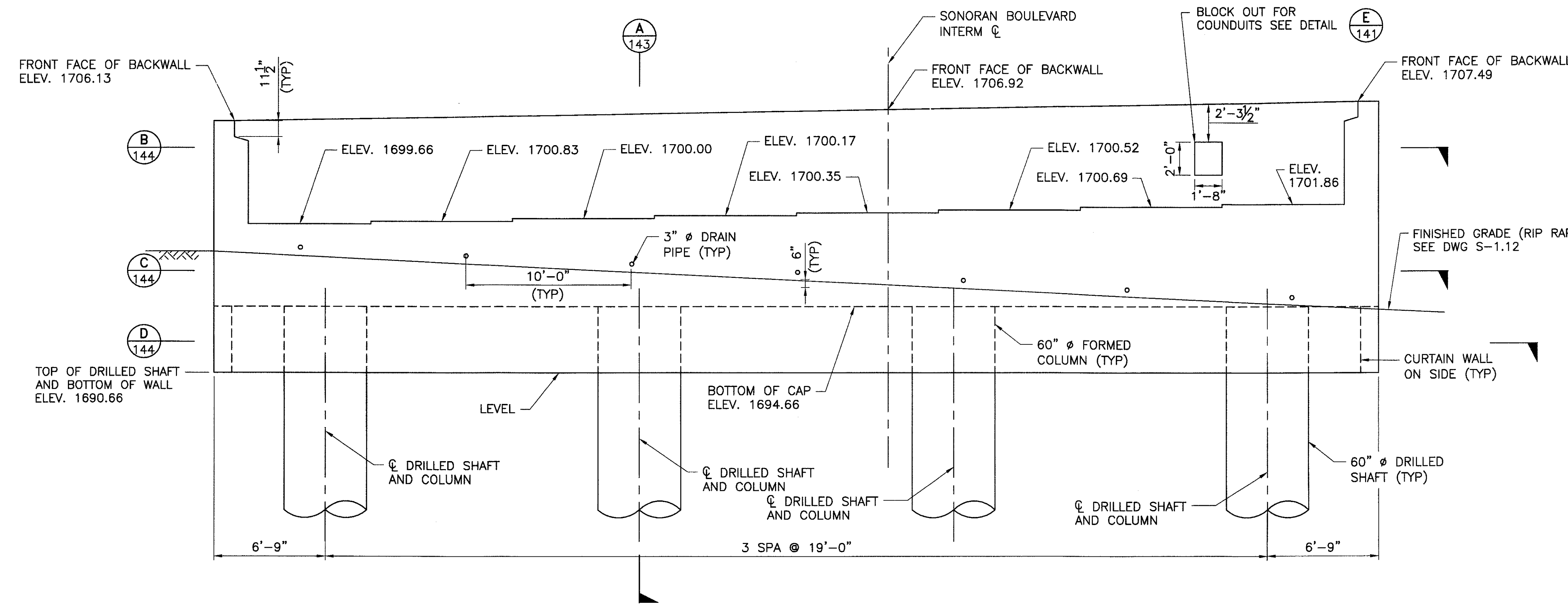
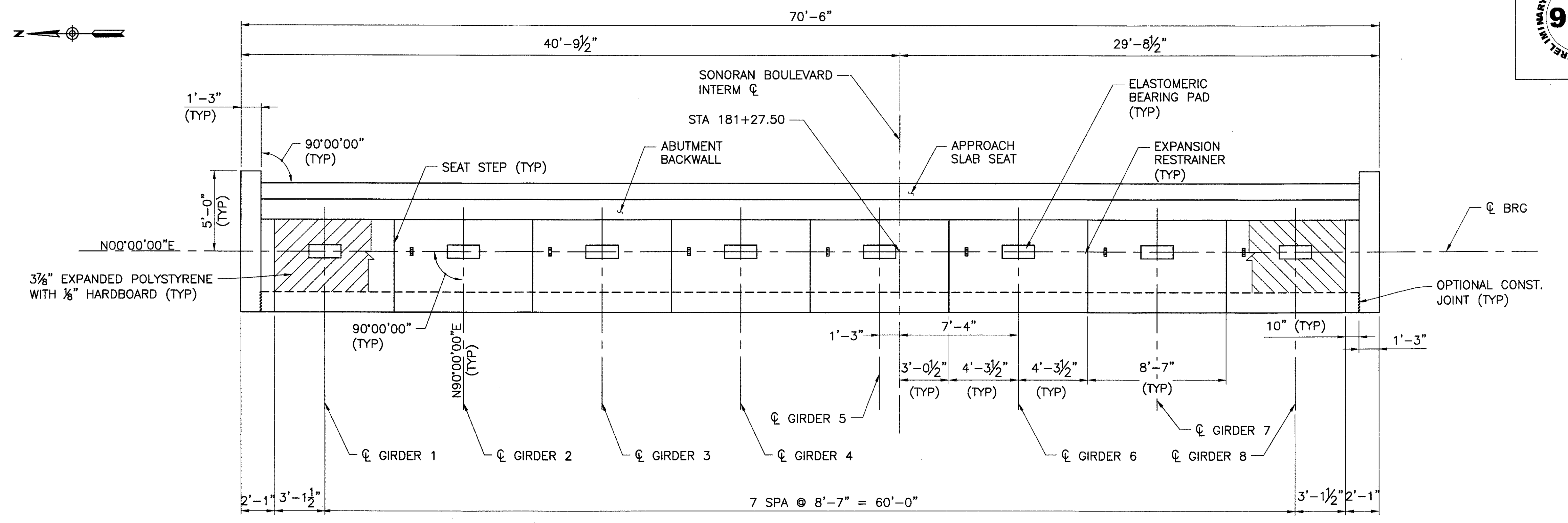


DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 09/09	DATE: 09/09	DATE: 12/09	141	352
DWG NO: S-1.07				

REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION

REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION

REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION



PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

ABUTMENT 2 PLAN & ELEVATION

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

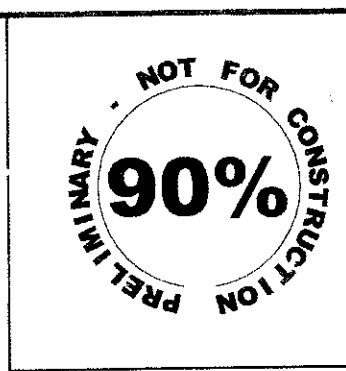
**SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293**

DR: JRR DATE: 12/09	DES: RMD DATE: 12/09	CK: SEO DATE: 12/09	SHEET NO: 142	TOTAL SHEETS: 352
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DWG NO: S-1.08

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CALL FOR THE BLUE STAKES
(602) 263-1100
Blue Stake Center

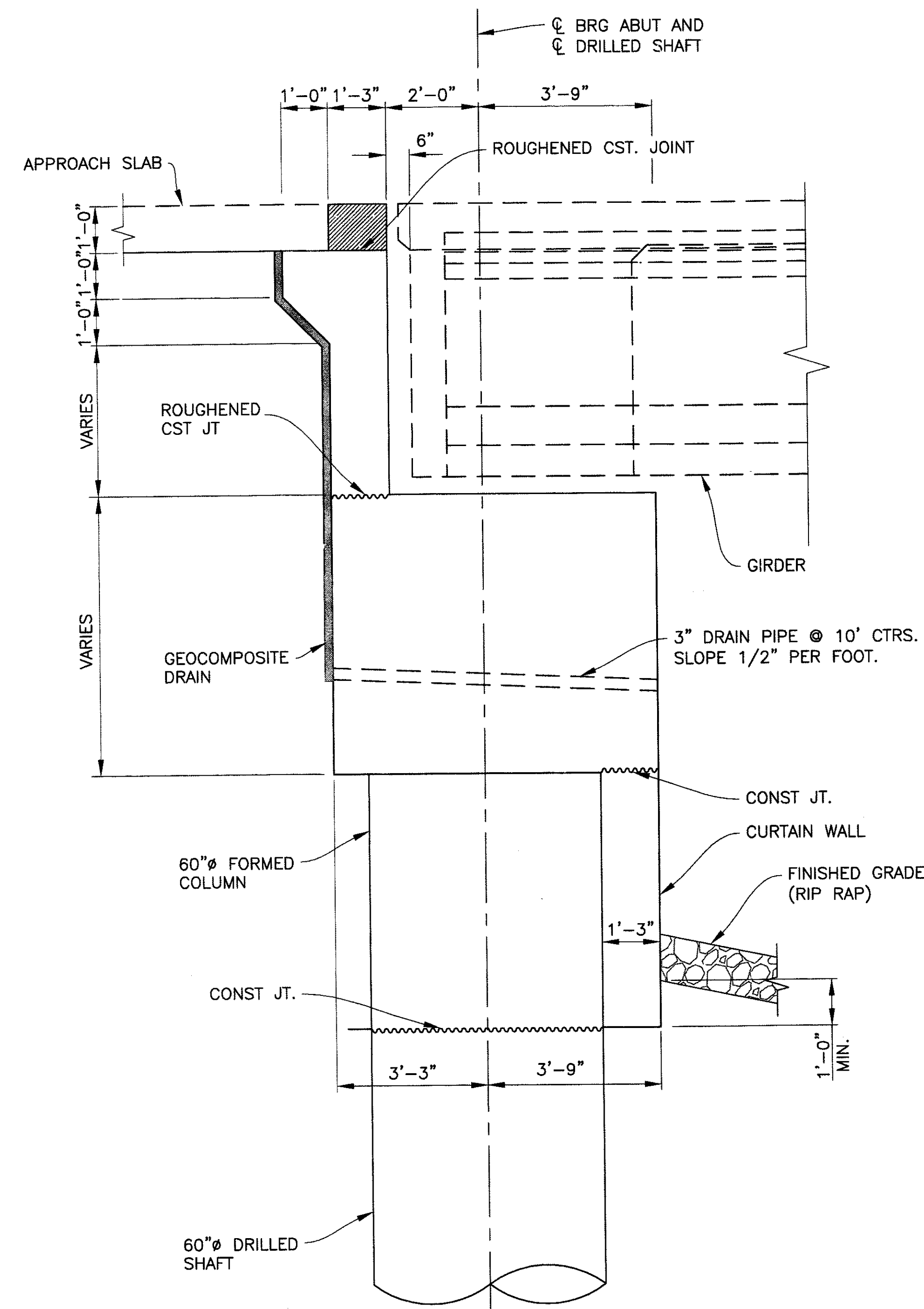
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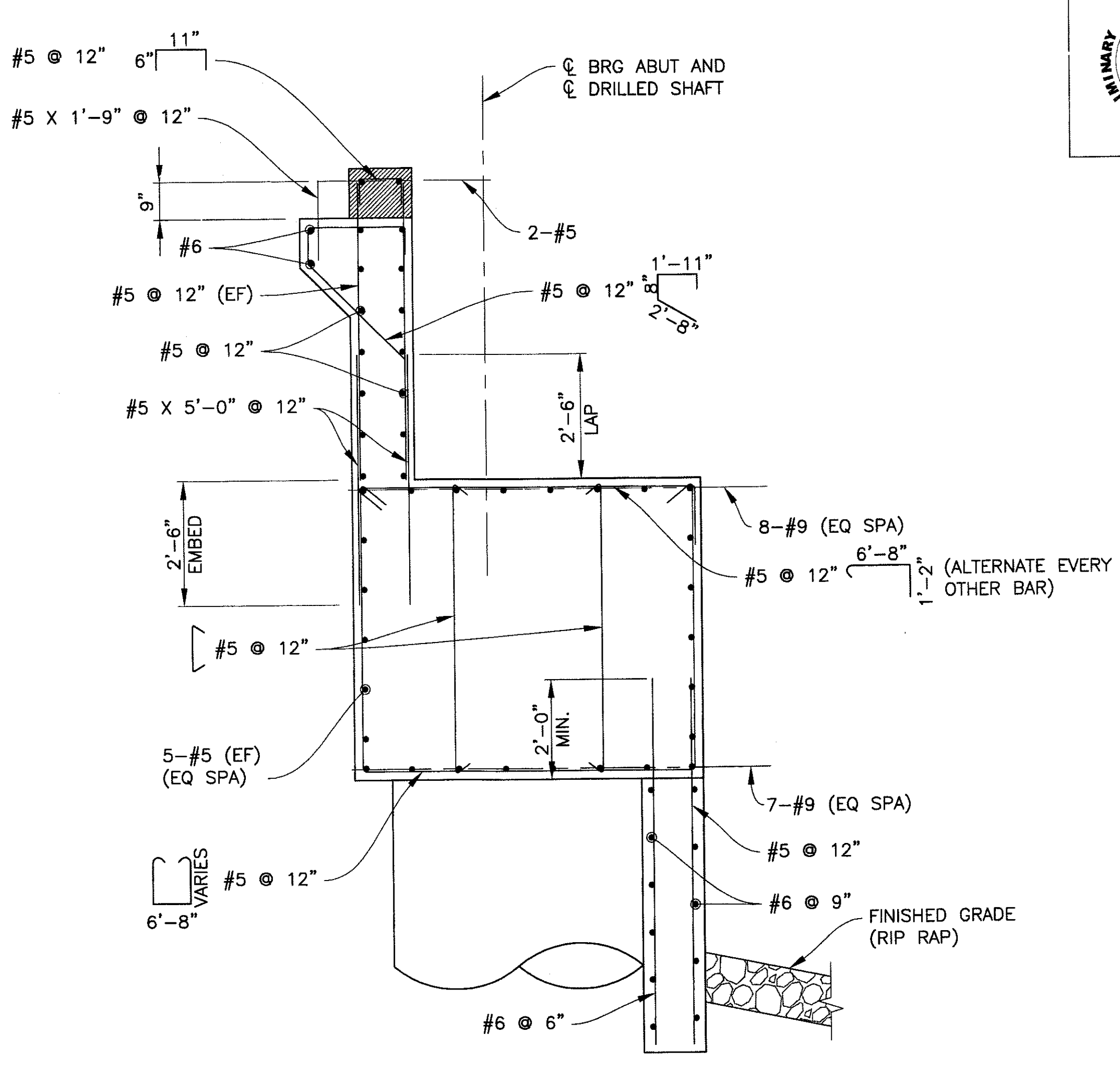
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	143	352

PREMIER	
ENGINEERING CORPORATION	
6437 W. CHANDLER BLVD., SUITE 1	
CHANDLER, AZ 85226; 480-829-6000	
DES: BAG	DR: JRR
CK: SEO	DATE: 12/09

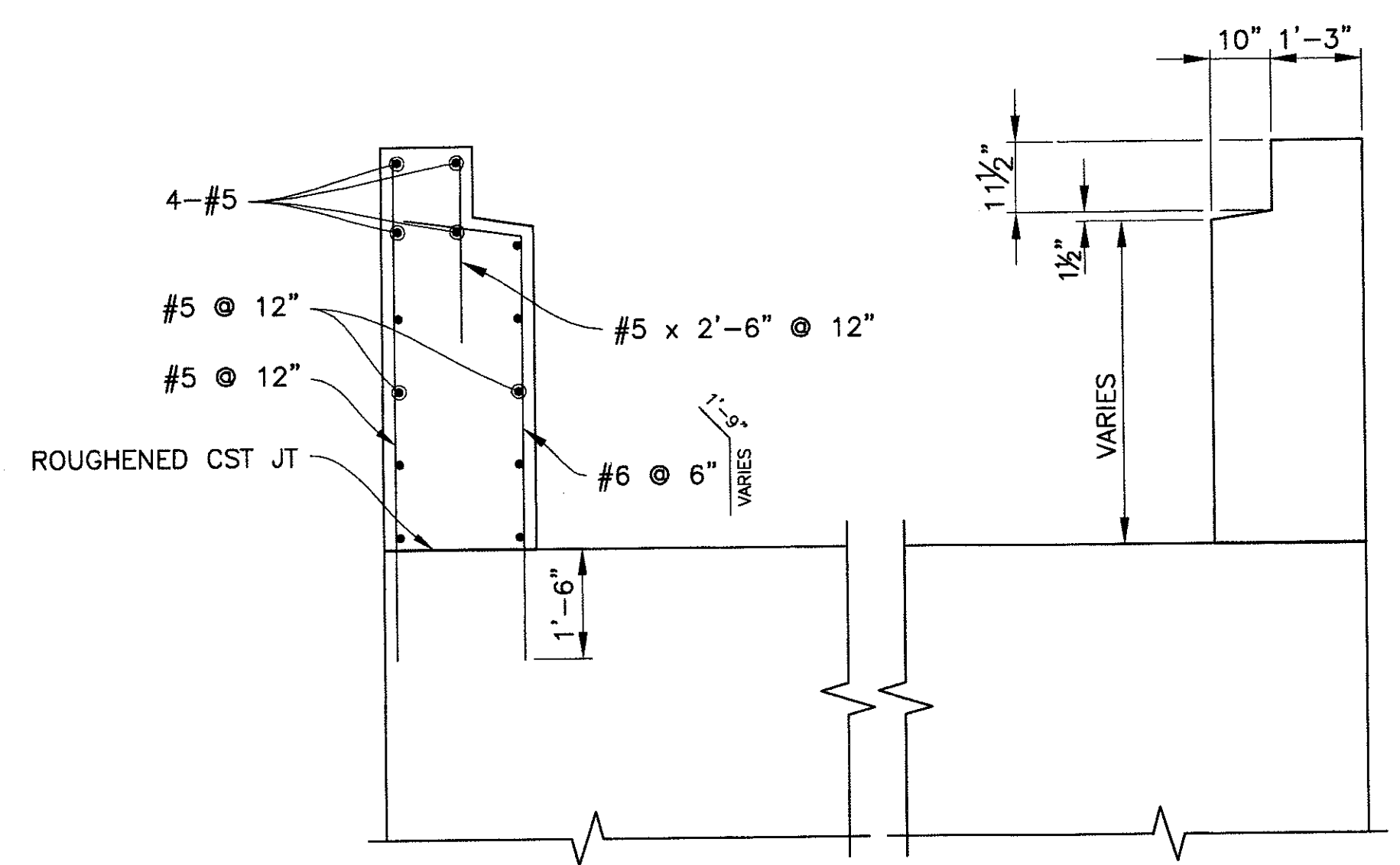
REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION



TYPICAL SECTION
Scale: 1/2" = 1'-0"



TYPICAL SECTION
(SHOWING REINFORCING)
Scale: 1/2" = 1'-0"



ABUTMENT SHEAR BLOCK DETAIL
Scale: 1/2" = 1'-0"

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

ABUTMENT DETAILS 1

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	143	352
DWG NO: S-1.09			143	352

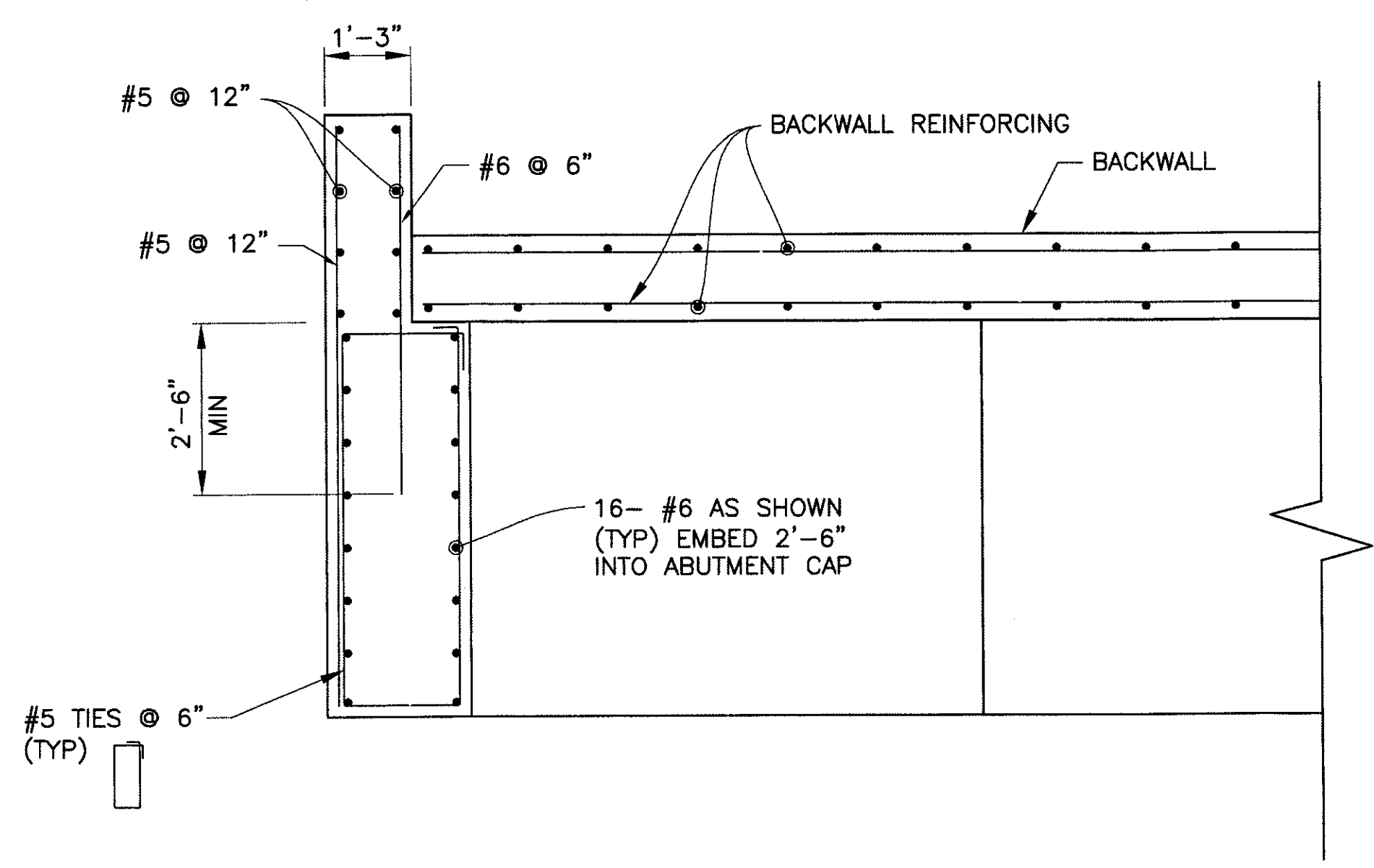
Two working days before you dig,
CALL FOR THE BLUE STAKES
(602) 263-1100
Blue Stake Center

P:\200805\GAD\GAD\Civil\Sheets\Structures\10 Apache Abutment.dwg -- plotted by James Rojas at 12/21/2009 8:55:55 AM
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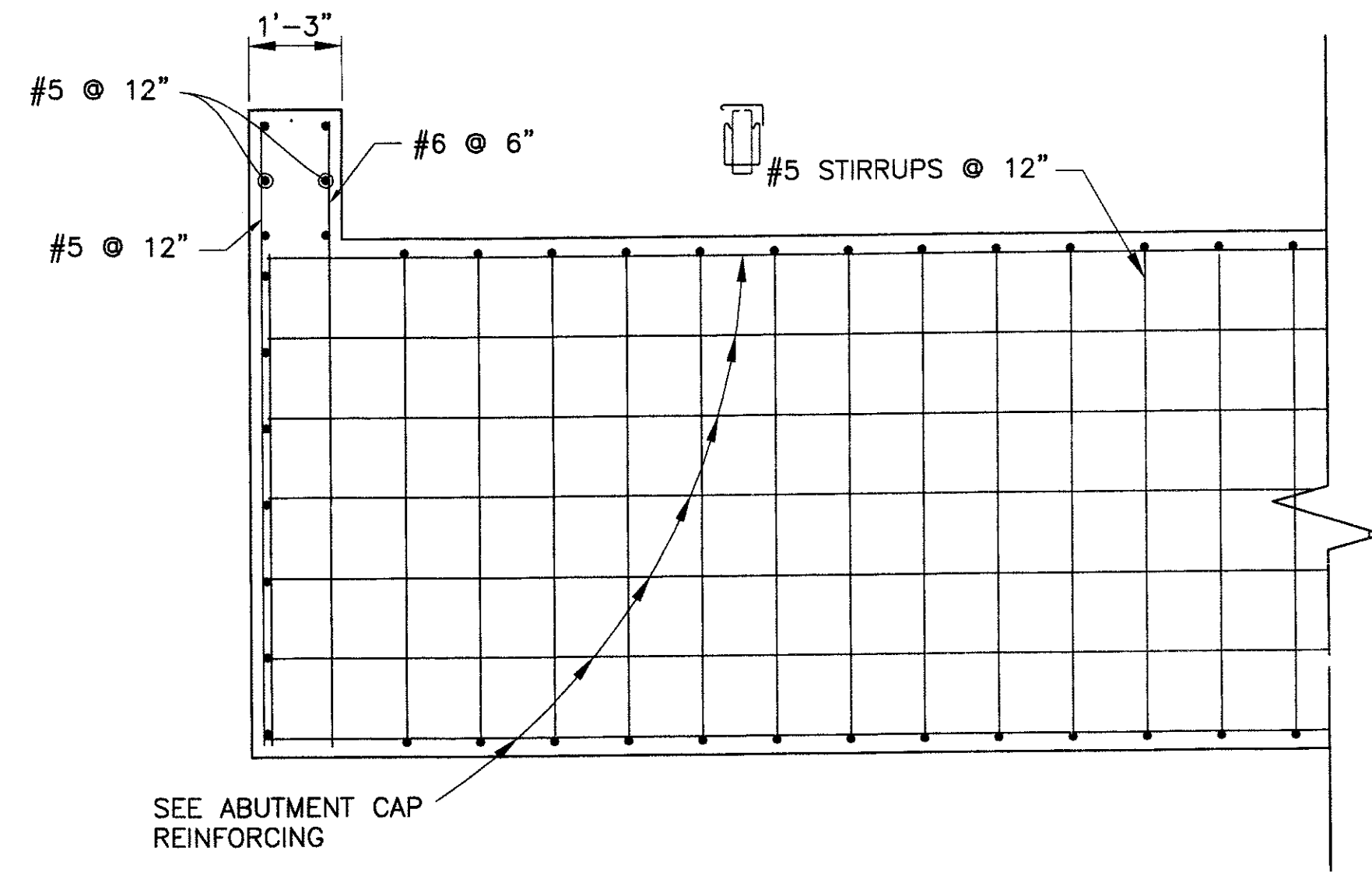
PRELIMINARY - NOT FOR CONSTRUCTION
90%

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	144	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-8000				
DES: BAG	DR: JRR	CK: SEO	DATE: 12/09	CONSULTING ENGINEER

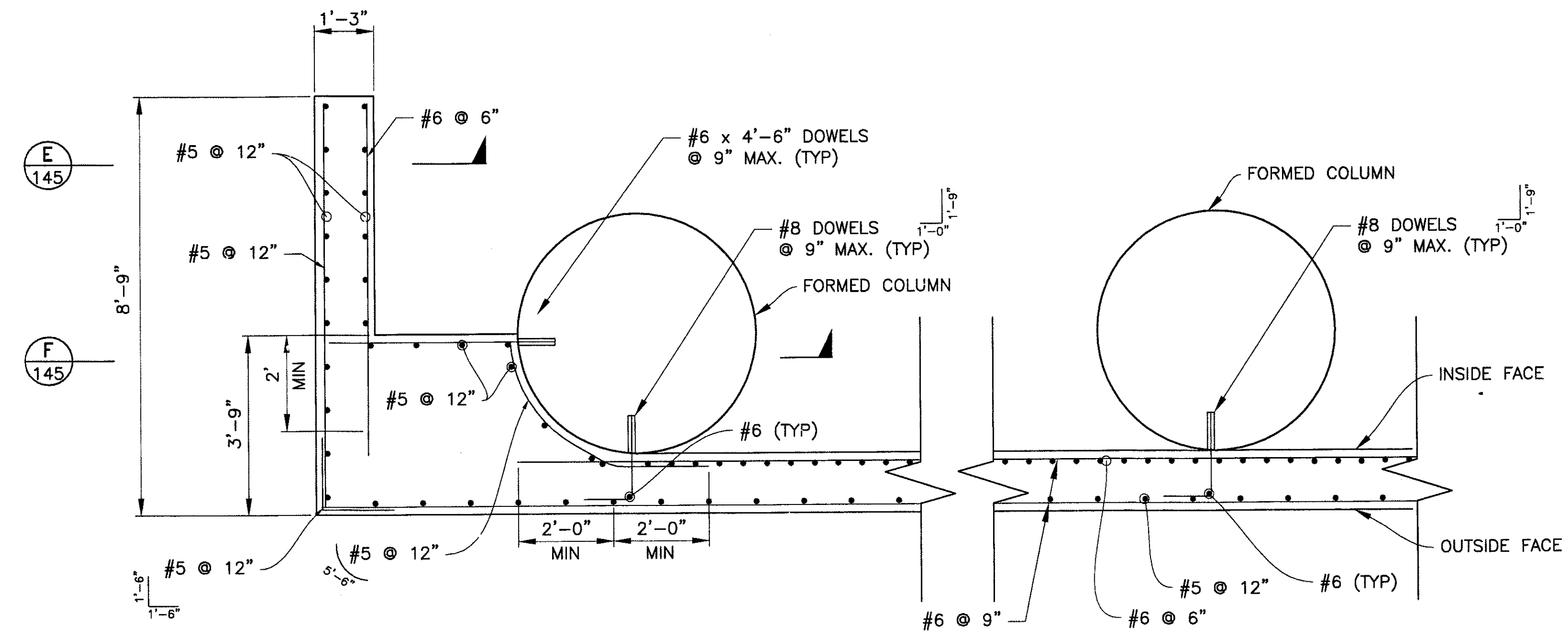
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



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



SECTION C-C
Scale: 1/2" = 1'-0"



SECTION D-D
Scale: 1/2" = 1'-0"

SPLICE NOTES

SPLICE IN HORIZONTAL REINFORCEMENT IN CURTAIN WALL SHALL BE LOCATED AS FOLLOW:
 INSIDE FACE : MID-SPAN
 OUTSIDE FACE : @ COLUMN
 #5 BARS : 1'-6"
 #6 BARS : 2'-0"

DOWEL NOTES:

DRILL 1" DIA. HOLE 7 INCHES DEEP INTO COLUMN FOR #6 DOWELS. EPOXY DOWEL IN HOLE WITH EPOXY ADHESIVE. EPOXY ANCHORAGE SHALL DEVELOP A PULL OUT STRENGTH OF 14 KIPS.
 DRILL 1 1/2" DIA. HOLE 9 INCHES DEEP INTO COLUMN FOR #8 DOWELS. EPOXY DOWEL IN HOLE WITH EPOXY ADHESIVE. EPOXY ANCHORAGE SHALL DEVELOP A PULL OUT STRENGTH OF 25 KIPS.

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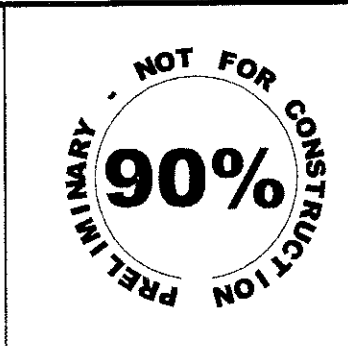
ABUTMENT DETAILS 2
 CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
 APACHE WASH BRIDGE
 ST85100293**

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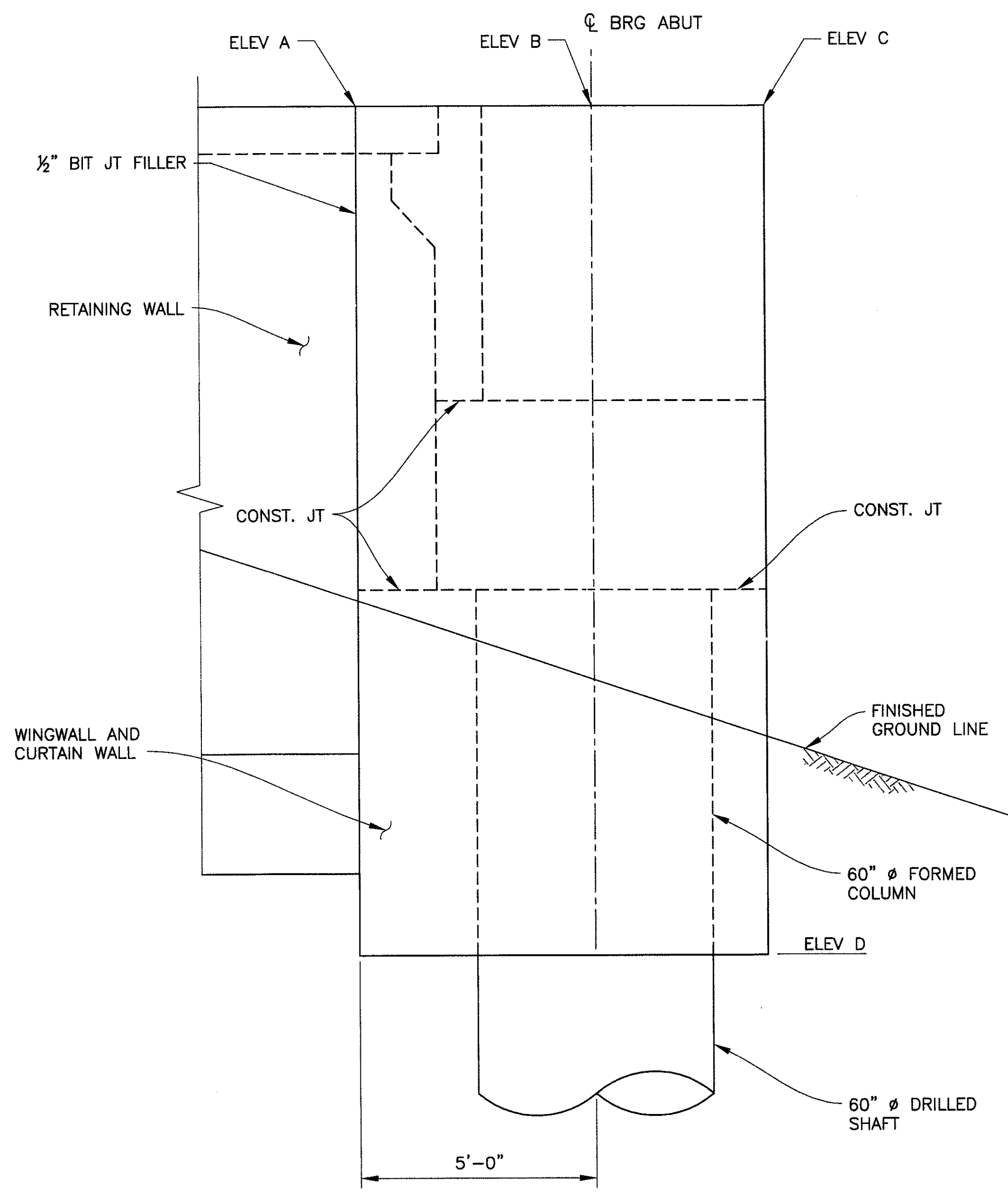
DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	144	352
DWG NO: S-1.10			144	352

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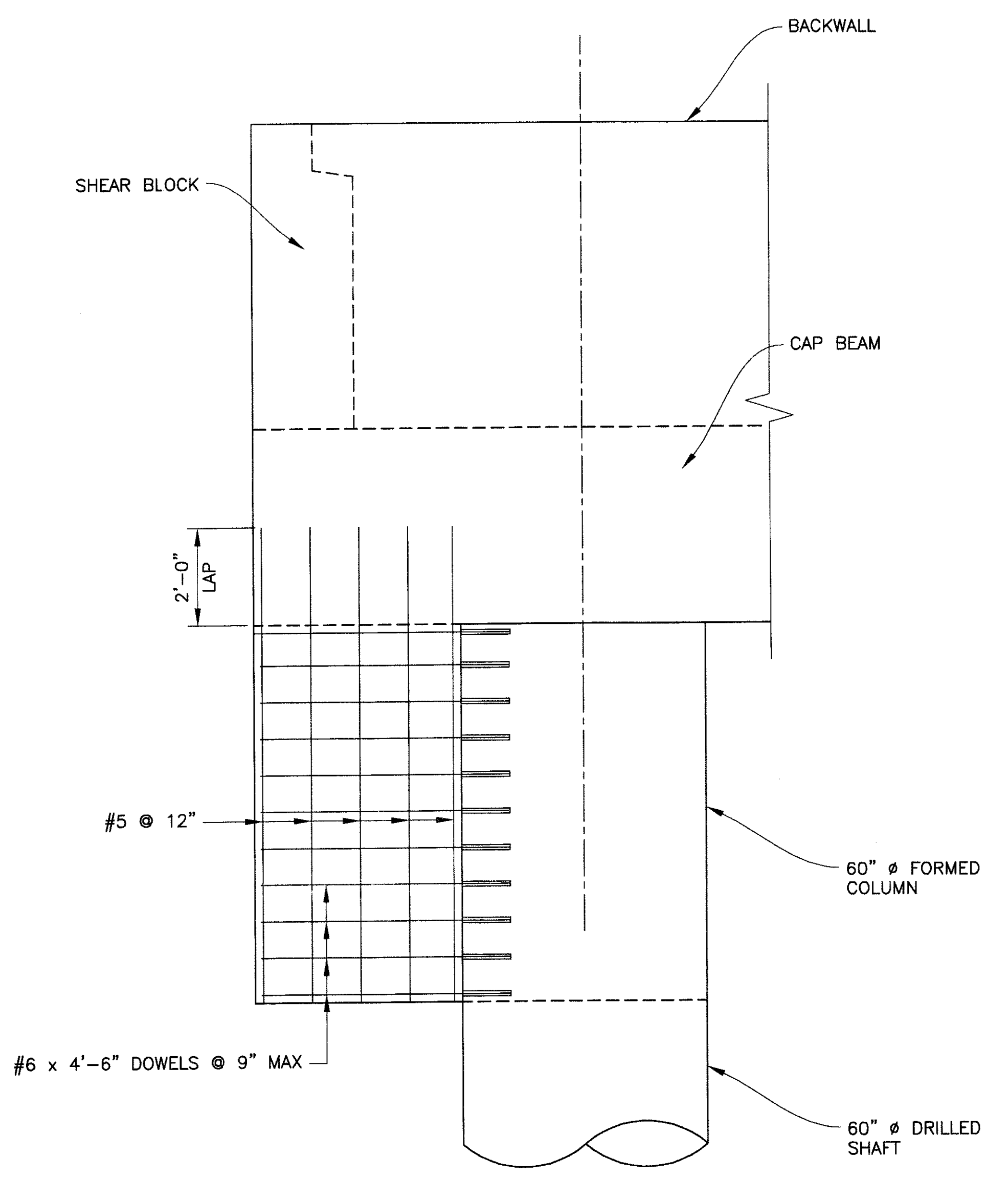
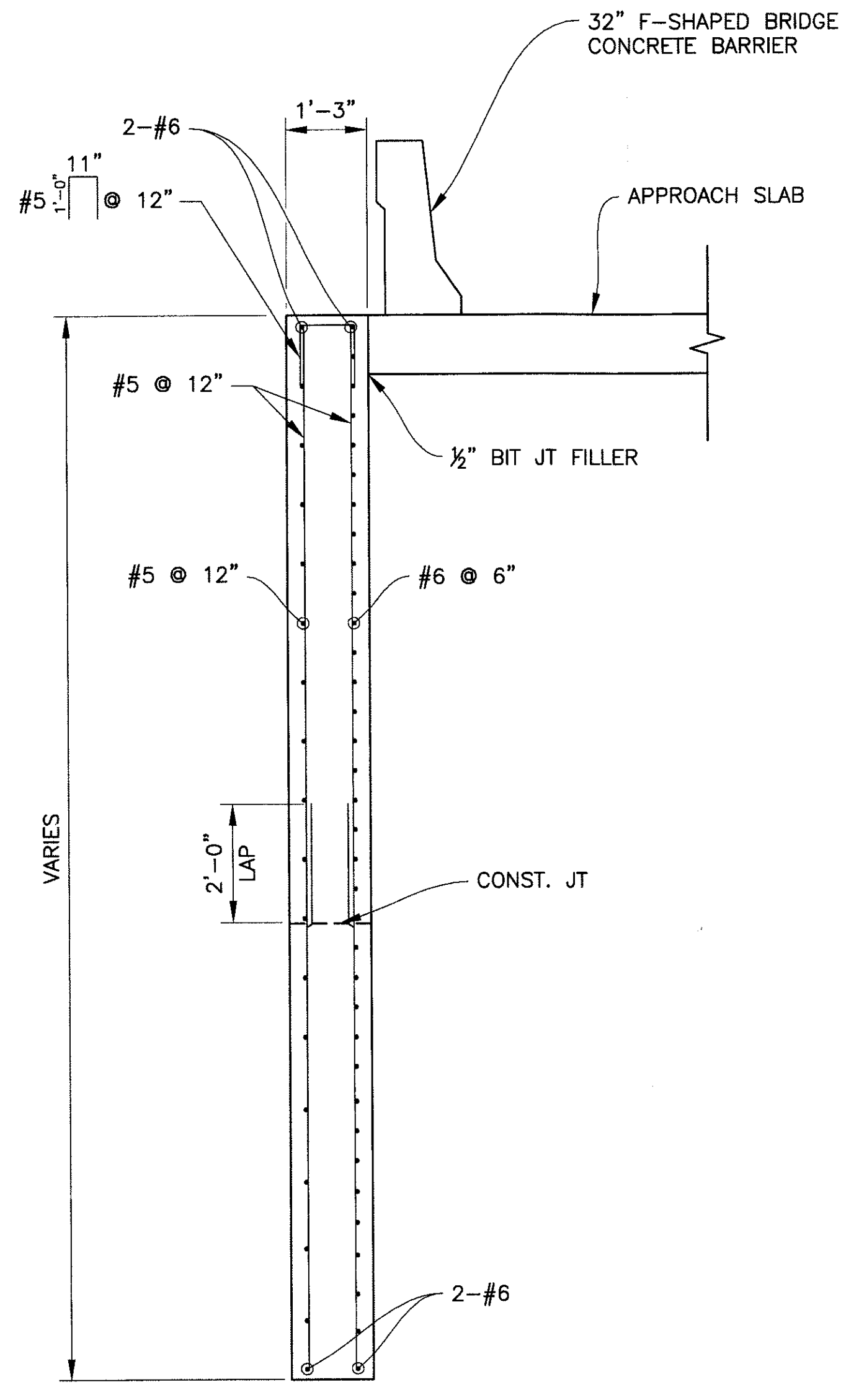


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	145	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				
DES: BAG		DR: JRR		DATE: 12/09
			CK: SEO	

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



WINGWALL SCHEDULE					
LOCATION	WALL	ELEV A	ELEV B	ELEV C	ELEV D
ABUT 1	NORTH	1704.74	1704.77	1704.78	1687.80
	SOUTH	1706.10	1706.12	1706.14	1687.80
ABUT 2	NORTH	1706.14	1706.12	1706.11	1690.66
	SOUTH	1707.50	1707.48	1707.46	1690.66



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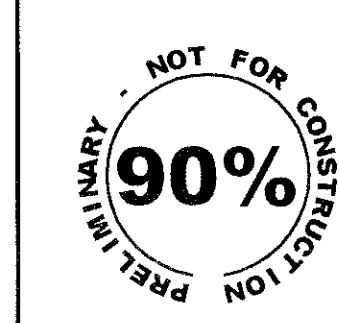
WINGWALL DETAILS

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	145	352
DWG NO: S-1.11				

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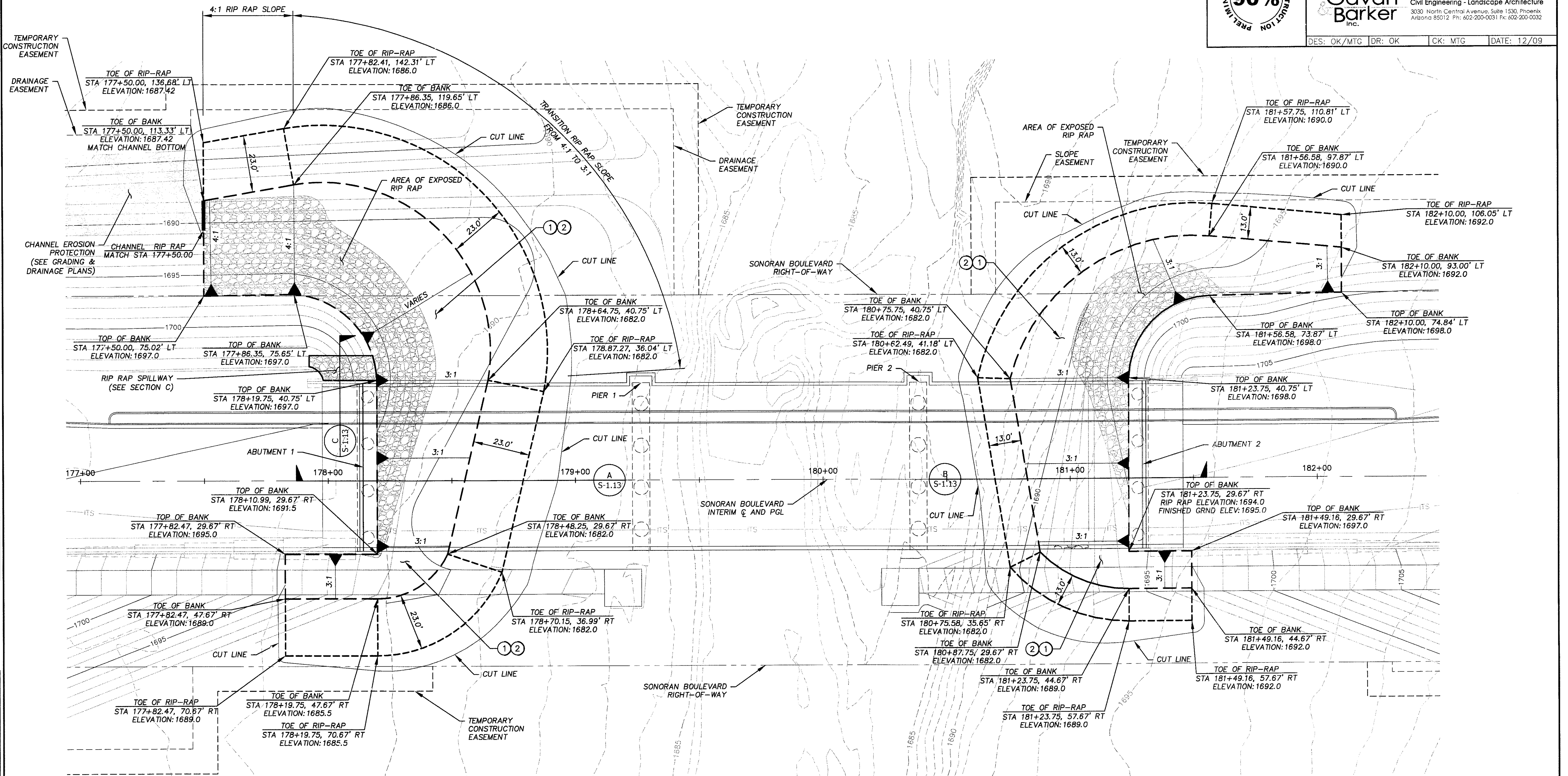


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	146	352

Gavan Barker Inc. Civil Engineering - Landscape Architecture
 3030 North Central Avenue, Suite 1530, Phoenix, Arizona 85012 Ph: 602-200-0031 Fx: 602-200-0032

DES: OK/MTG DR: OK CK: MTG DATE: 12/09

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV. BY	CHK. BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV. BY	CHK. BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV. BY	CHK. BY	DATE



ROCK RIP RAP GRADATION

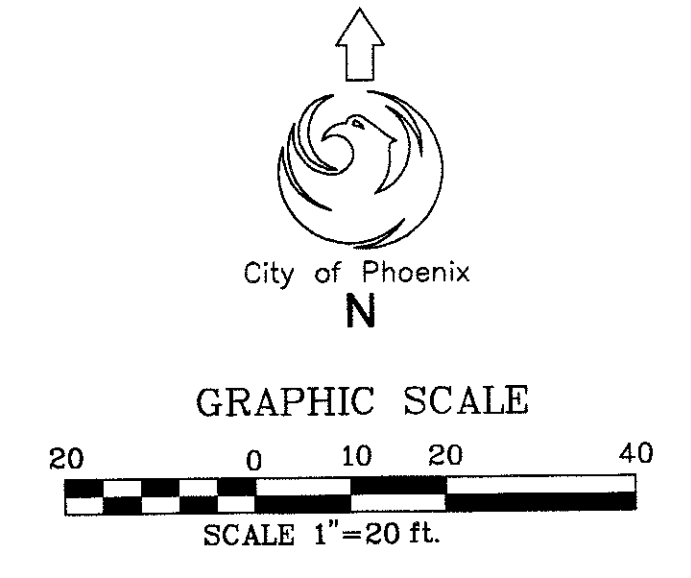
STONE SIZE	PERCENT OF GRADATION SMALLER THAN
18"	100
15"	85
12"	50
6"	15

GRAVEL BEDDING GRADATION

SIEVE SIZE	PERCENT BY WEIGHT PASSING SIEVE
3"	90-100
3/4"	20-90
#4	0-20
#200	0-3

CONSTRUCTION NOTES

NO.	DESCRIPTION	UNIT	QTY.
1	Install Rock Rip Rap, D ₅₀ = 12" (See Table this Sheet for Gradation and See Sections on DWG. No. S-1.13 for Thickness)	CY	2566
2	Install Gravel Bedding for Rip Rap (See Table this Sheet for Gradation and See Sections on DWG. No. S-1.13 for Thickness)	CY	339



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EROSION CONTROL PLAN
CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT
SONORAN BOULEVARD
 10th STREET TO 26th STREET
APACHE WASH BRIDGE
 ST85100293

DR: OK	DES: OK/MTG	CK: MTG	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	146	352

DWG No. S-1.12

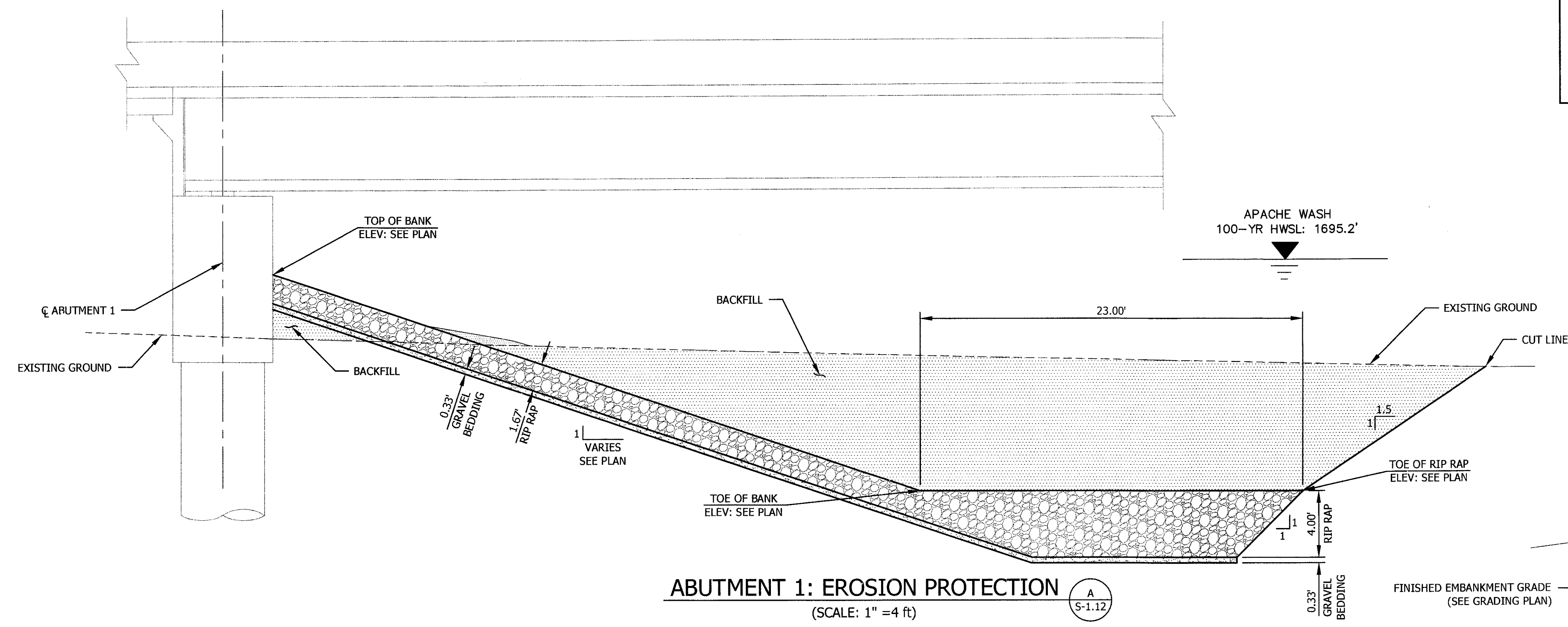
PRELIMINARY - NOT FOR CONSTRUCTION
90%

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	147	352

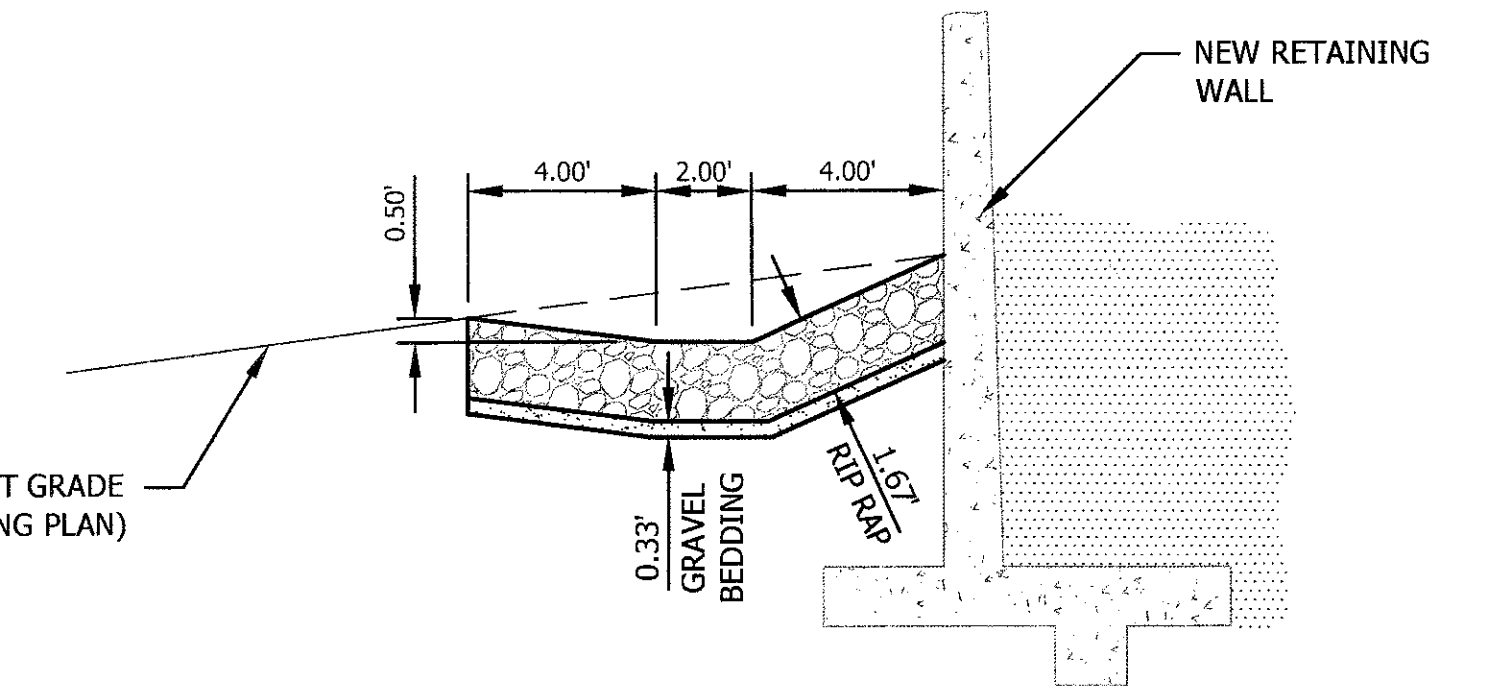
Gavan Barker Inc. Civil Engineering - Landscape Architecture
3030 North Central Avenue, Suite 1530, Phoenix, Arizona 85012 Ph: 602-200-0031 Fax: 602-200-0032

DES: OK/MTG DR: OK CK: MTG DATE: 12/09

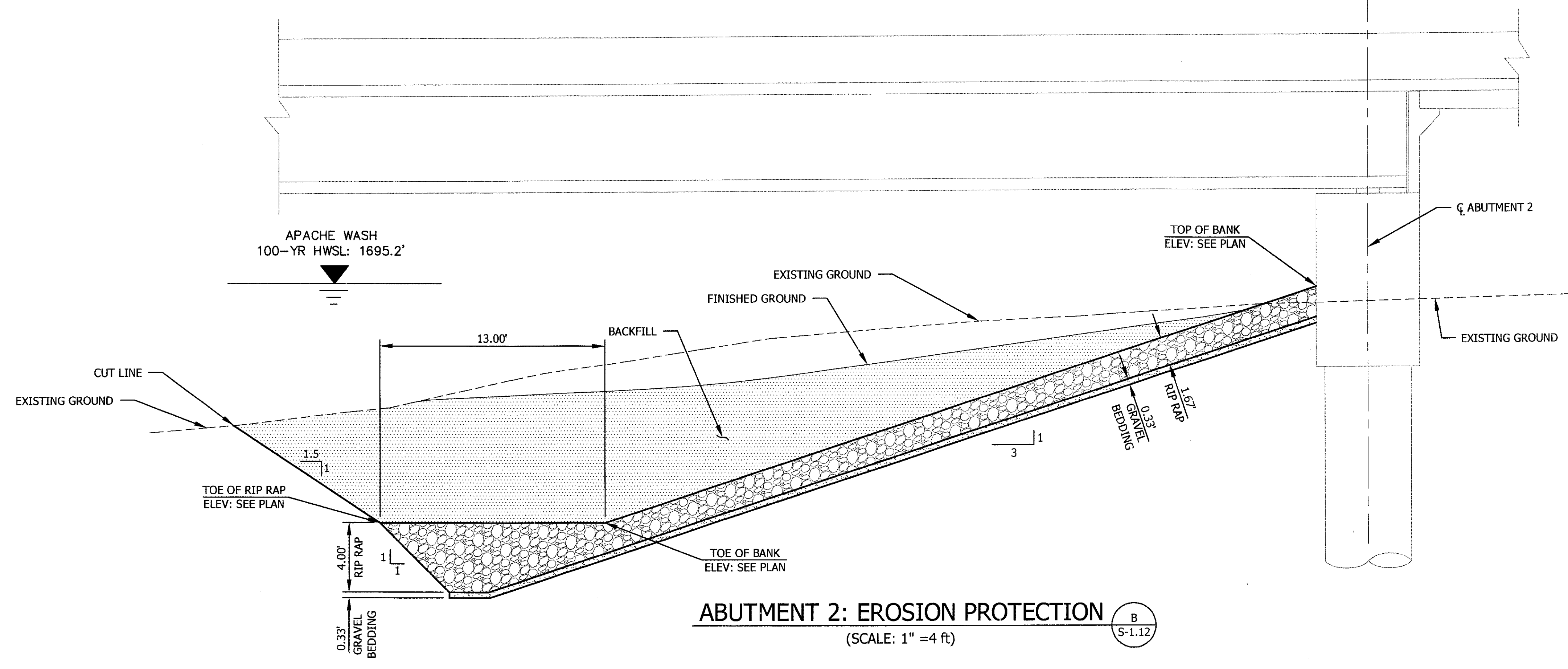
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHKD BY	DATE
NO.				
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHKD BY	DATE
NO.				
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHKD BY	DATE
NO.				



ABUTMENT 1: EROSION PROTECTION (SCALE: 1" = 4 ft) A S-1.12



ABUTMENT 1: RIP RAP SPILLWAY (SCALE: 1" = 4 ft) C S-1.12



ABUTMENT 2: EROSION PROTECTION (SCALE: 1" = 4 ft) B S-1.12

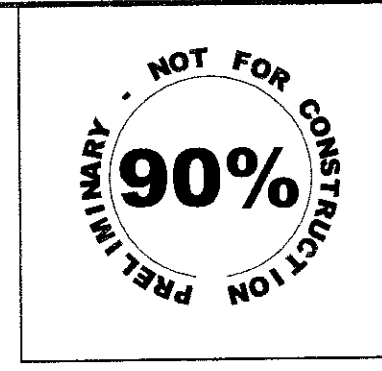
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

EROSION CONTROL DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
SONORAN BOULEVARD
10th STREET TO 26th STREET
APACHE WASH BRIDGE
ST85100293

Two working signs before per day. Call 1-800-386-2863
263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

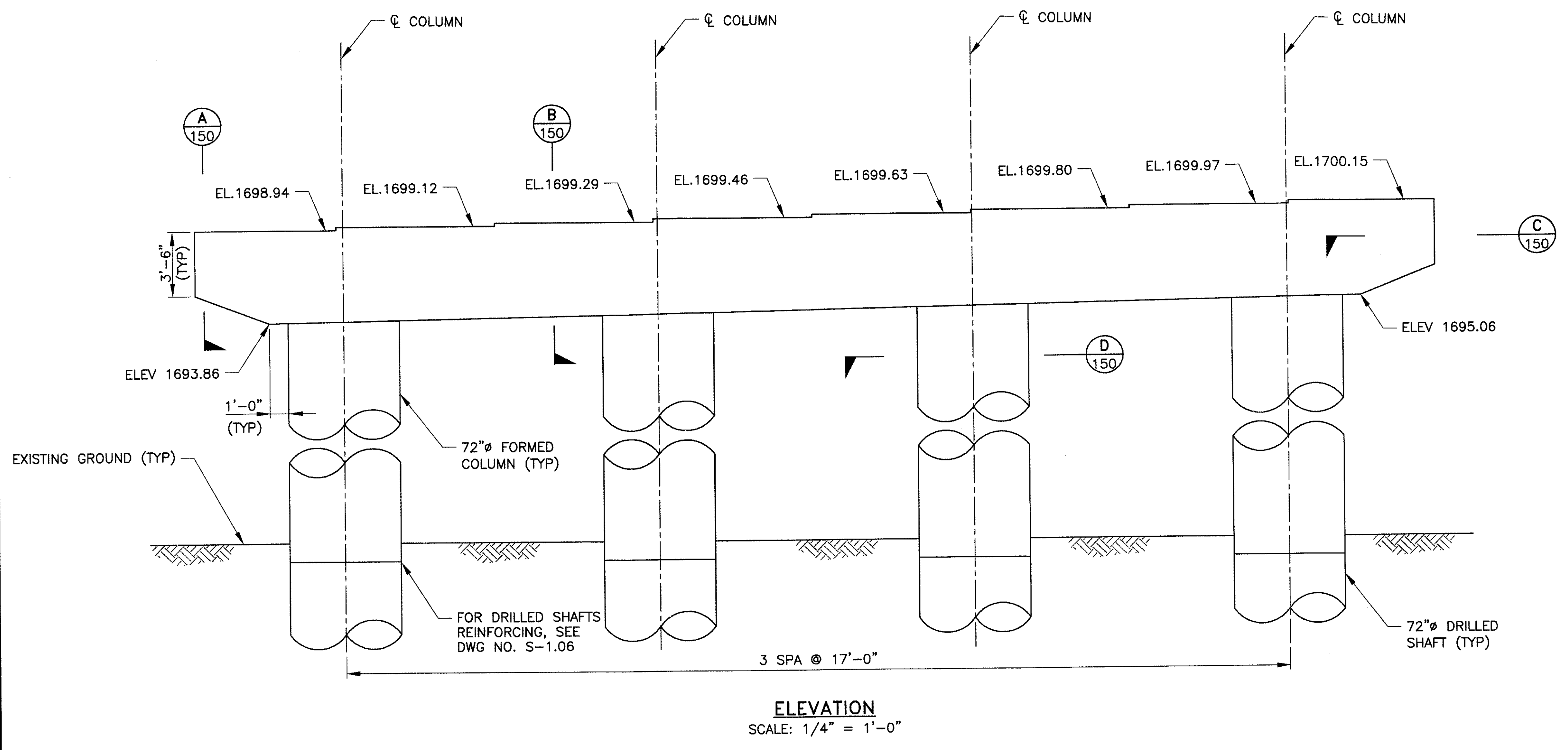
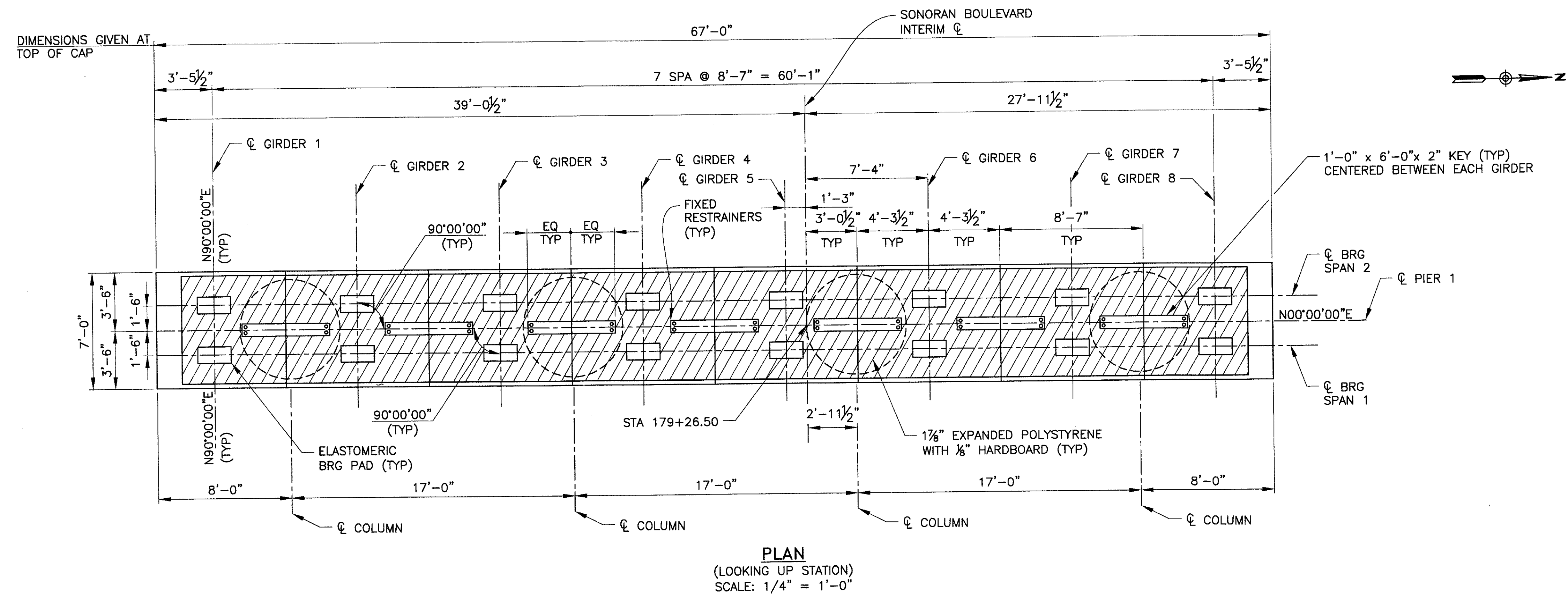
DR: OK	DES: OK/MTG	CK: MTG	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	147	352

DWG No. S-1.13



F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	148	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-8000				
DES: RMD	DR: JRR	CK: SEO	DATE: 12/09	

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				



"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

PIER 1 PLAN AND ELEVATION

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

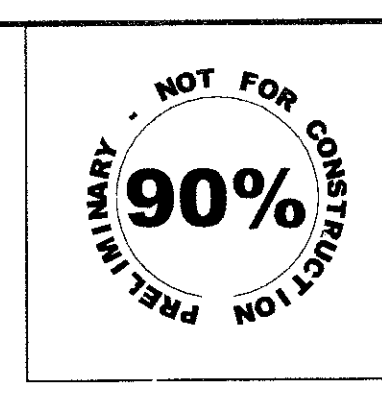
SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	148	352

DWG NO: S-1.14

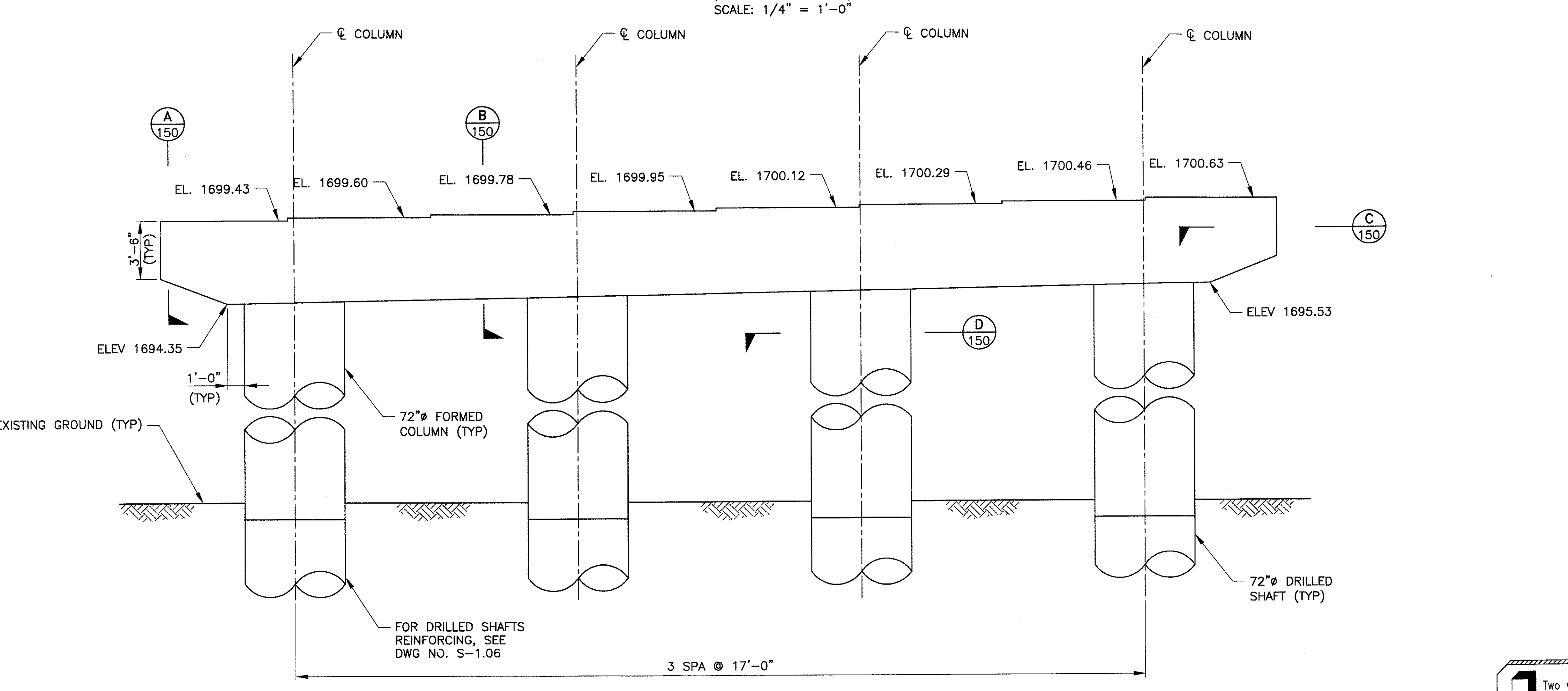
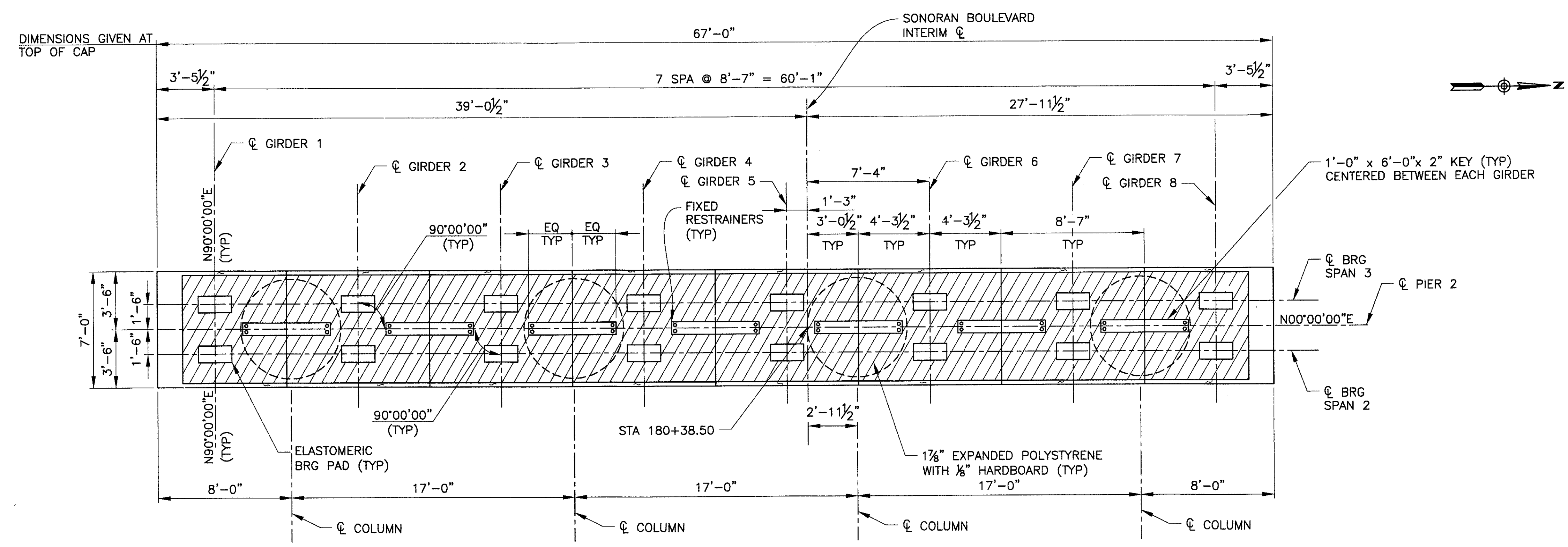
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plotted by James Rojas at 12/21/2009 8:56:19 AM
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F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	149	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226 480-829-6000				
DES: RMD	DR: JRR	CK: SEO	DATE: 12/09	

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



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PIER 2 PLAN AND ELEVATION

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

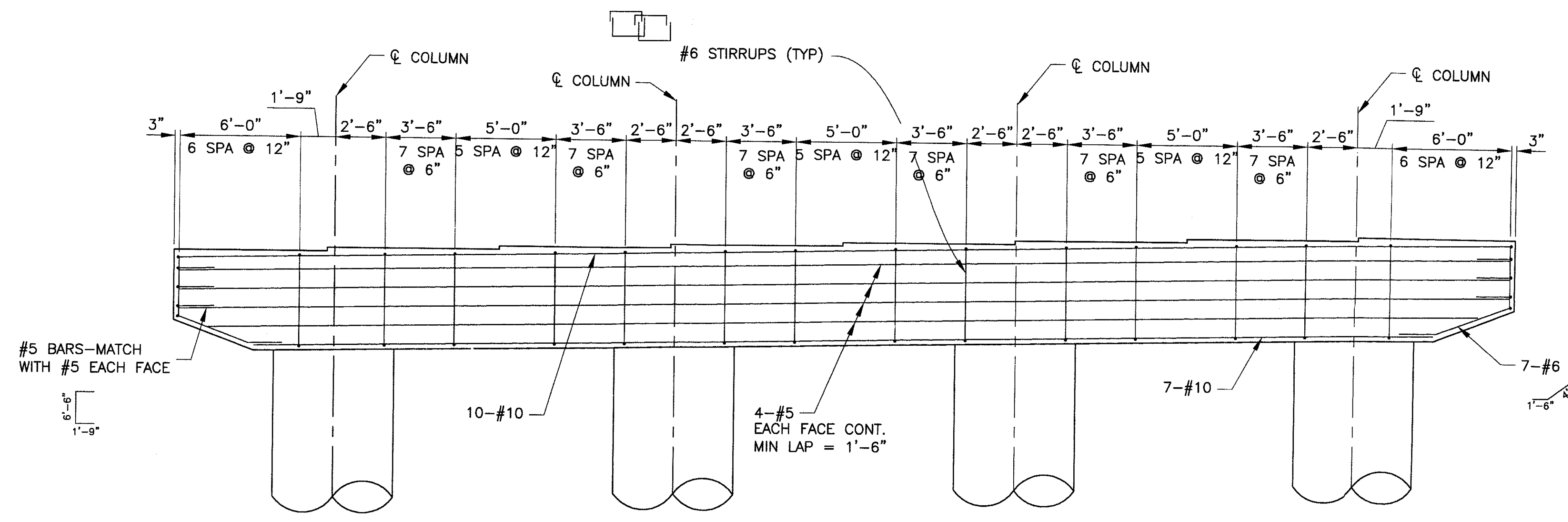
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DATE: 12/09	DATE: 12/09	DATE: 12/09	149	352

DWG NO: S-1.15

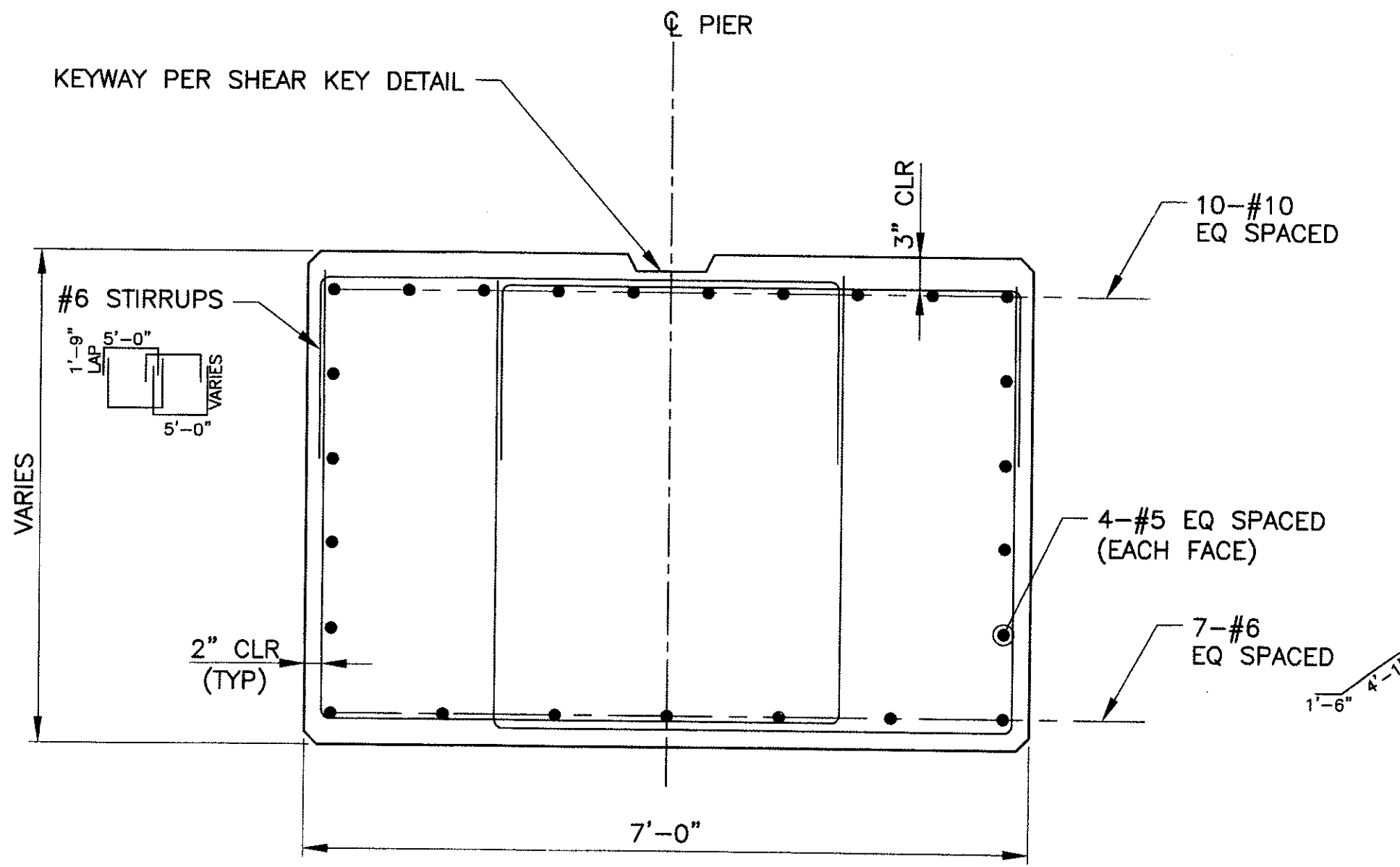
Two working days before you dig,
CALL FOR THE BLUE STAKES
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Blue Stake Center

F:\200805\CADD\Civil\Sheets\Structures\14-Apache Pier2 plan & elevation.dwg - plotted by James Roger at 12/21/2009 9:59:25 AM

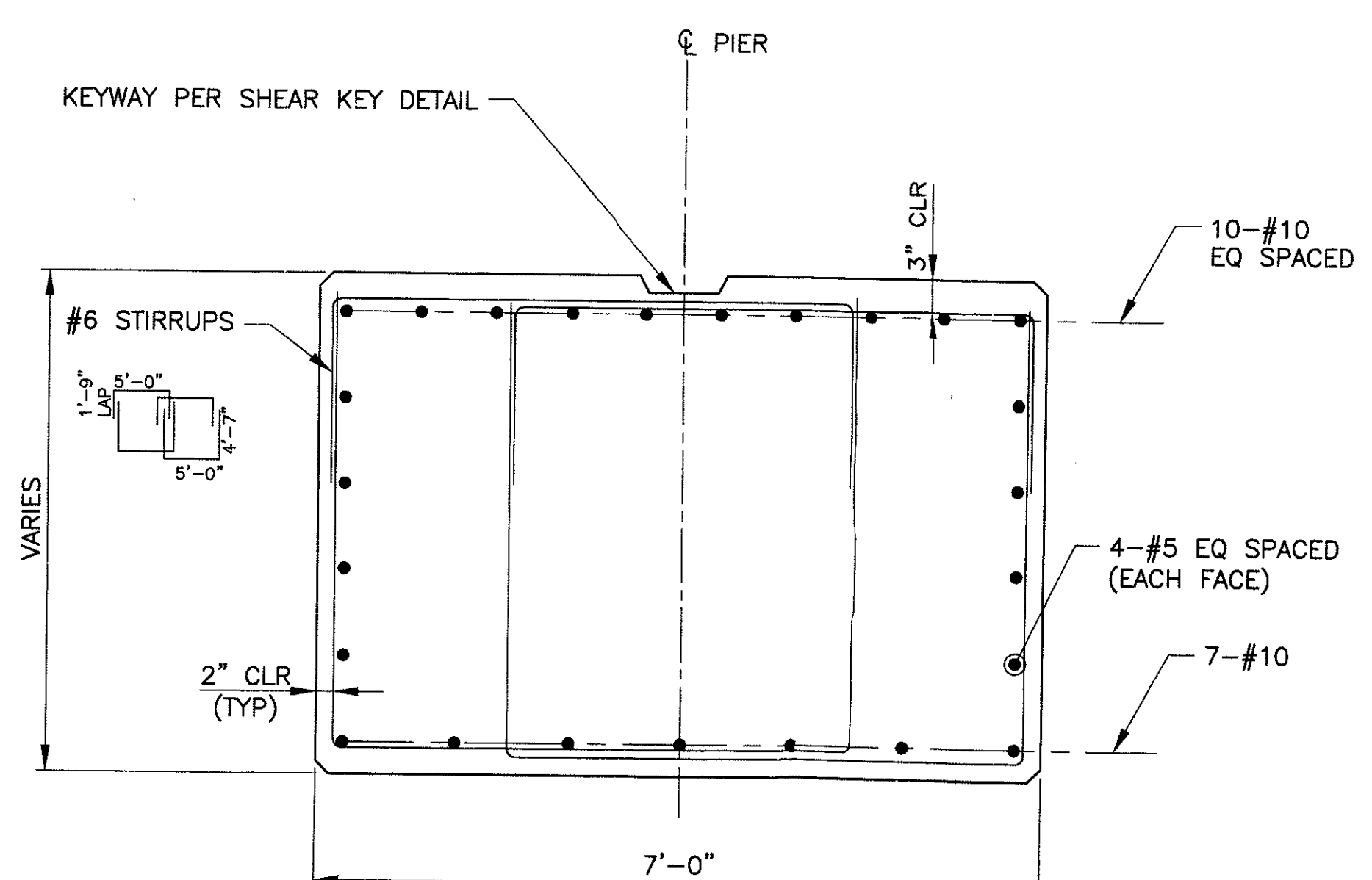
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REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHKD BY	DATE



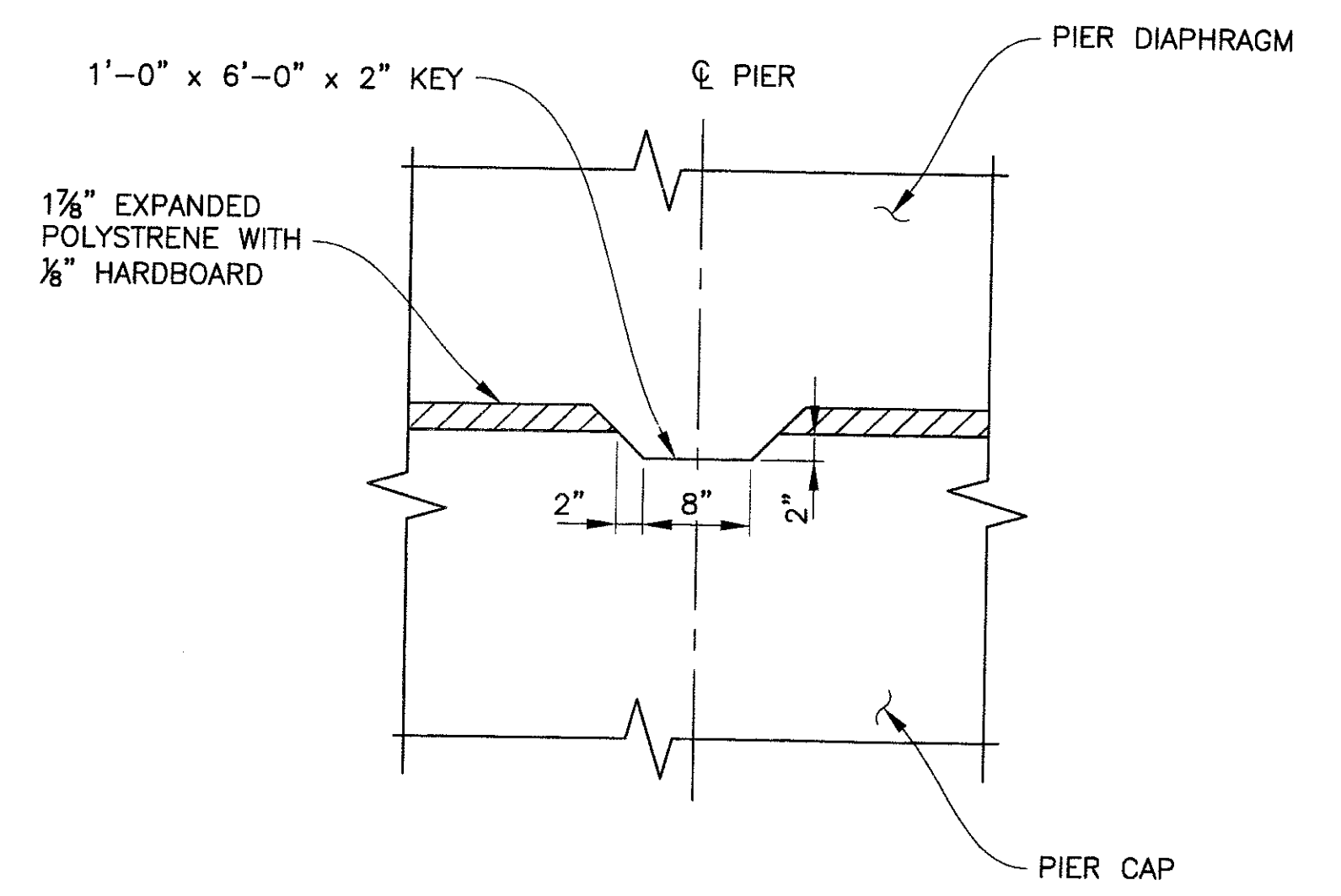
PIER SECTION
SCALE: 1/4" = 1'-0"



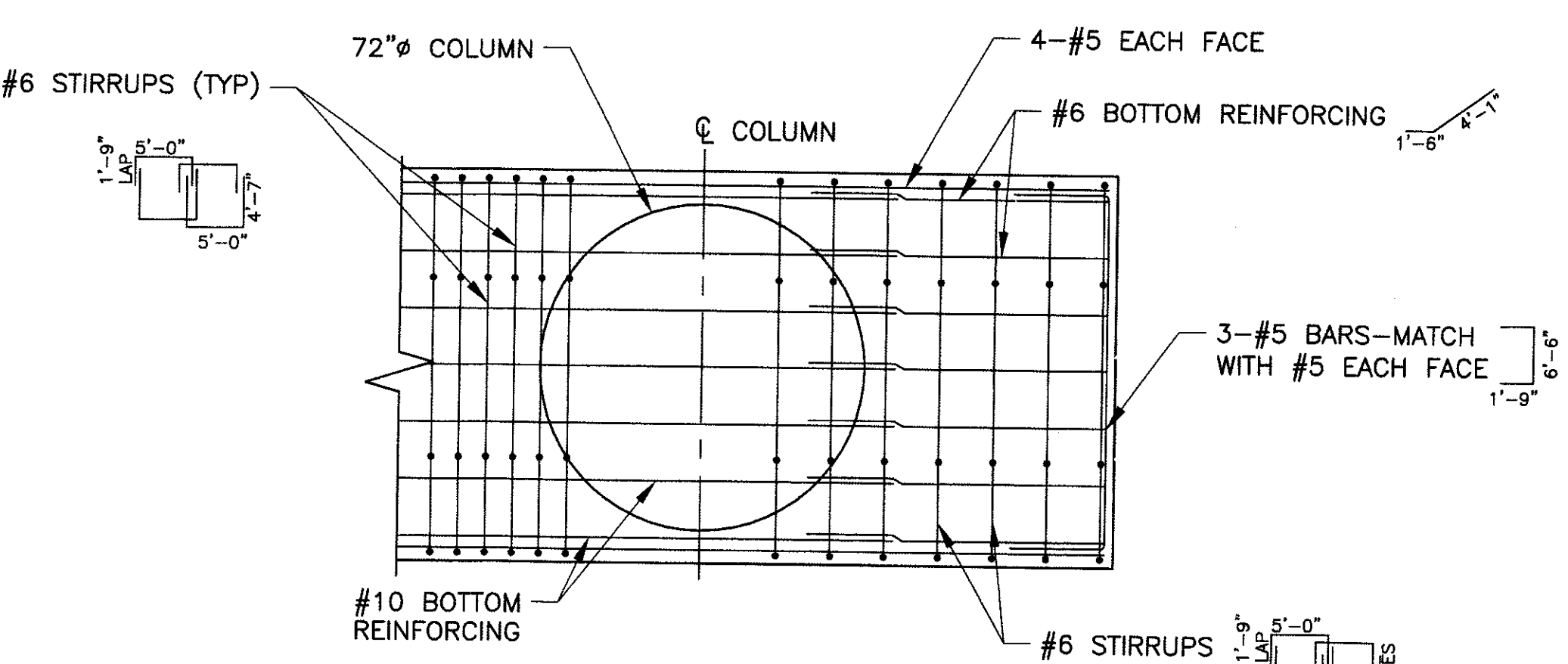
SECTION A-A
SCALE: 3/4" = 1'-0"



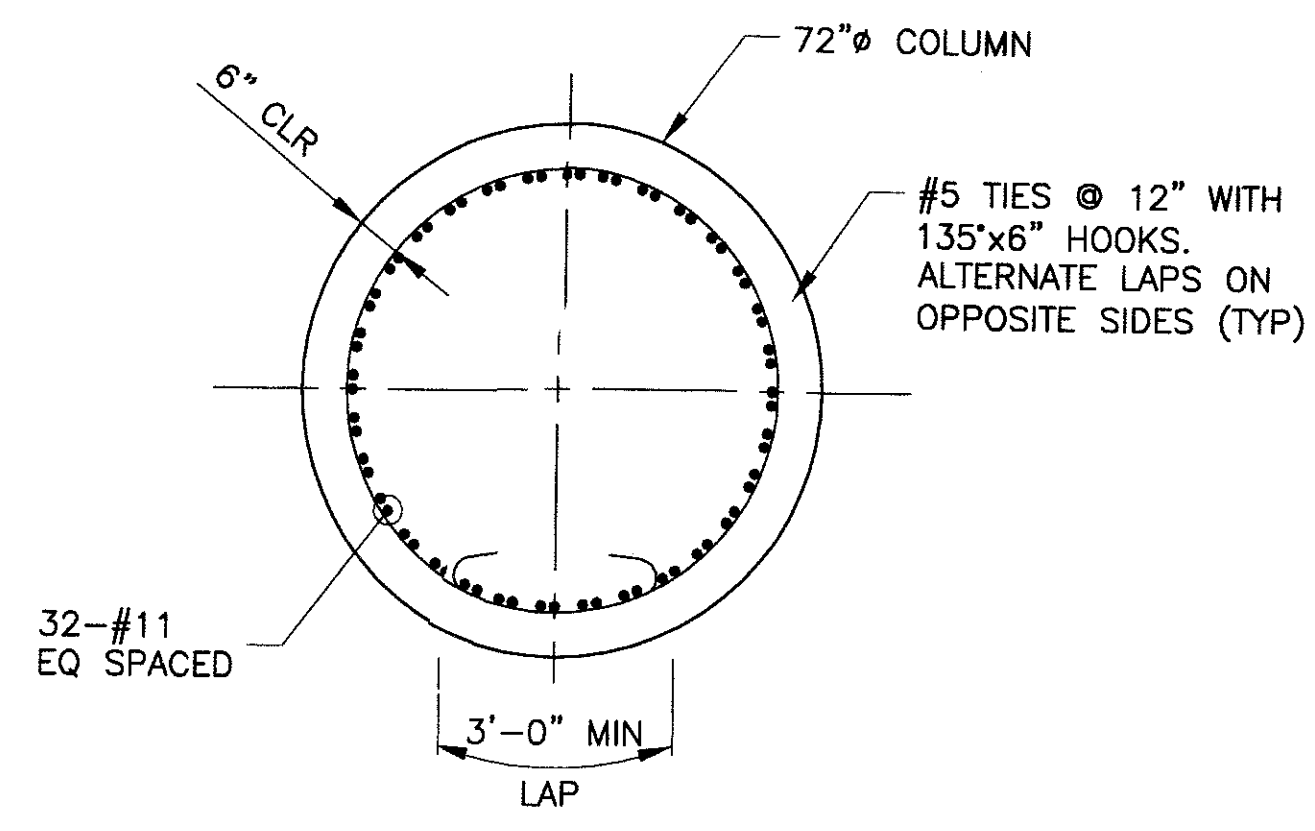
SECTION B-B
SCALE: 3/4" = 1'-0"



SHEAR KEY DETAIL
SCALE: 1/4" = 1'-0"



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



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

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	150	352
PREMIER ENGINEERING CORPORATION 5437 N. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-929-6000					
DES: BAG		DR: JRR		CONSULTING ENGINEER CK: SEO DATE: 12/09	

SPLICE NOTES

1. THE #10 TOP BARS SHALL BE LAP SPLICED ONLY AT THE CENTER OF THE SPANS BETWEEN THE COLUMNS. LAP SPLICES OF ADJACENT BARS SHALL BE ALTERNATED AMONG THE SPAN LOCATIONS. LAP SPLICE LENGTH = 3'-0"
2. THE #10 BOTTOM BARS SHALL BE CONTINUOUS WITH NO LAPS.

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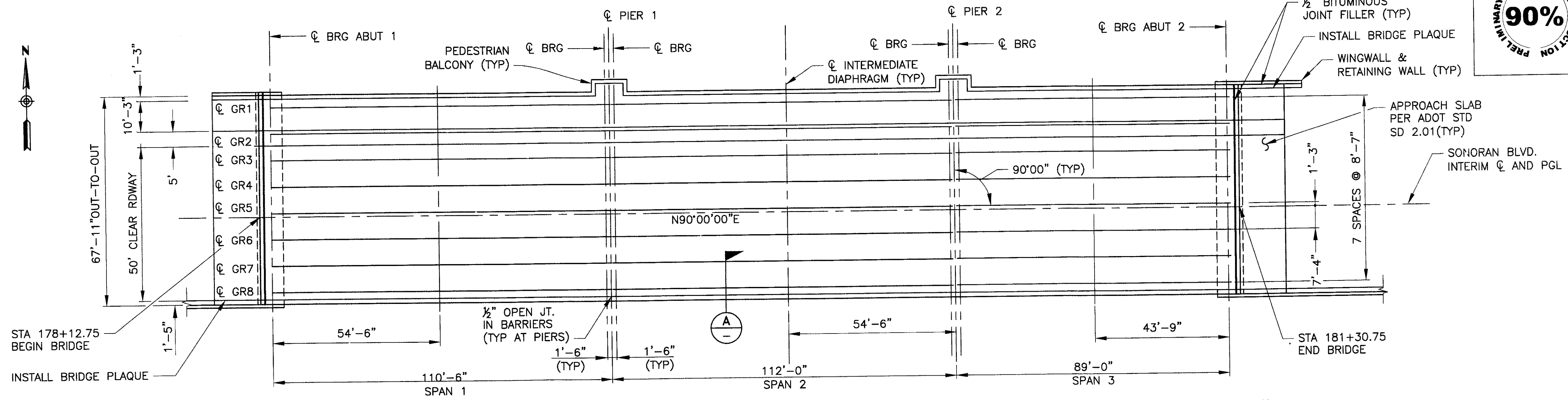
PIER DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293**

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	150	352
DWG NO: S-1.16			PD	

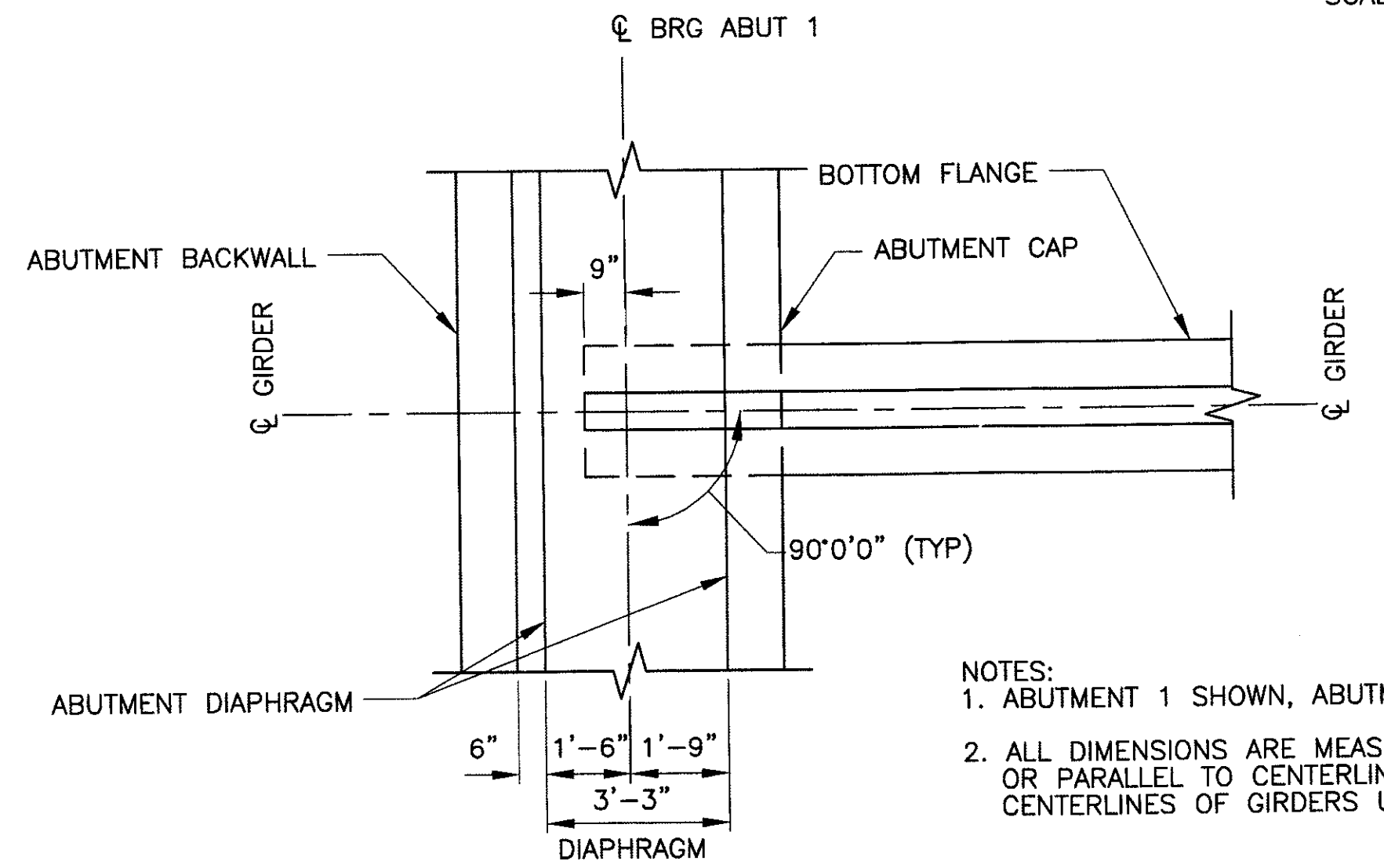
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REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



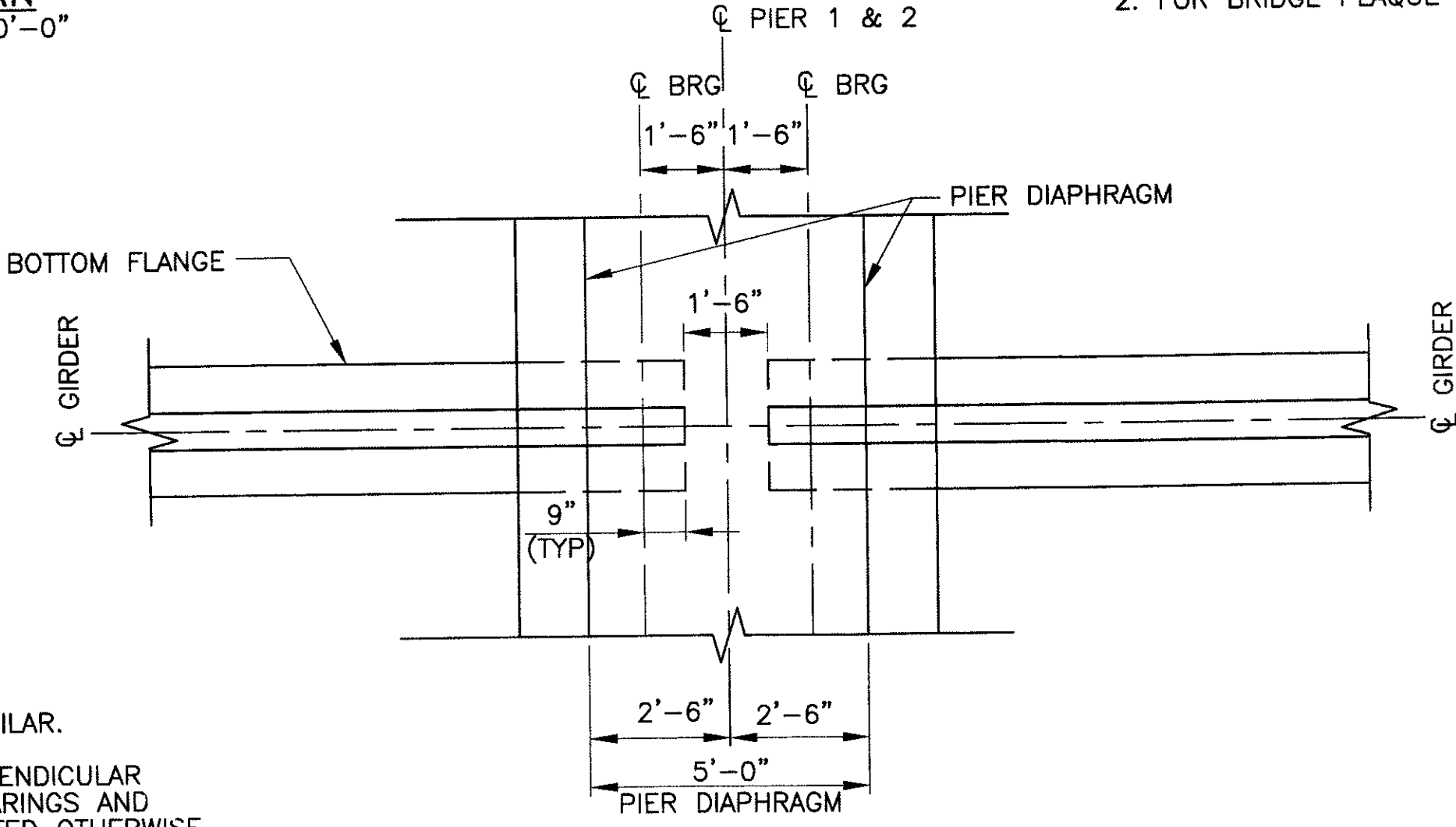
DECK PLAN
SCALE: 1" = 20'-0"

- NOTES:
 1. INTERMEDIATE DIAPHRAGM AT MID-LENGTH OF GIRDERS.
 2. FOR BRIDGE PLAQUE DETAILS, SEE DWG NO. S-1.32

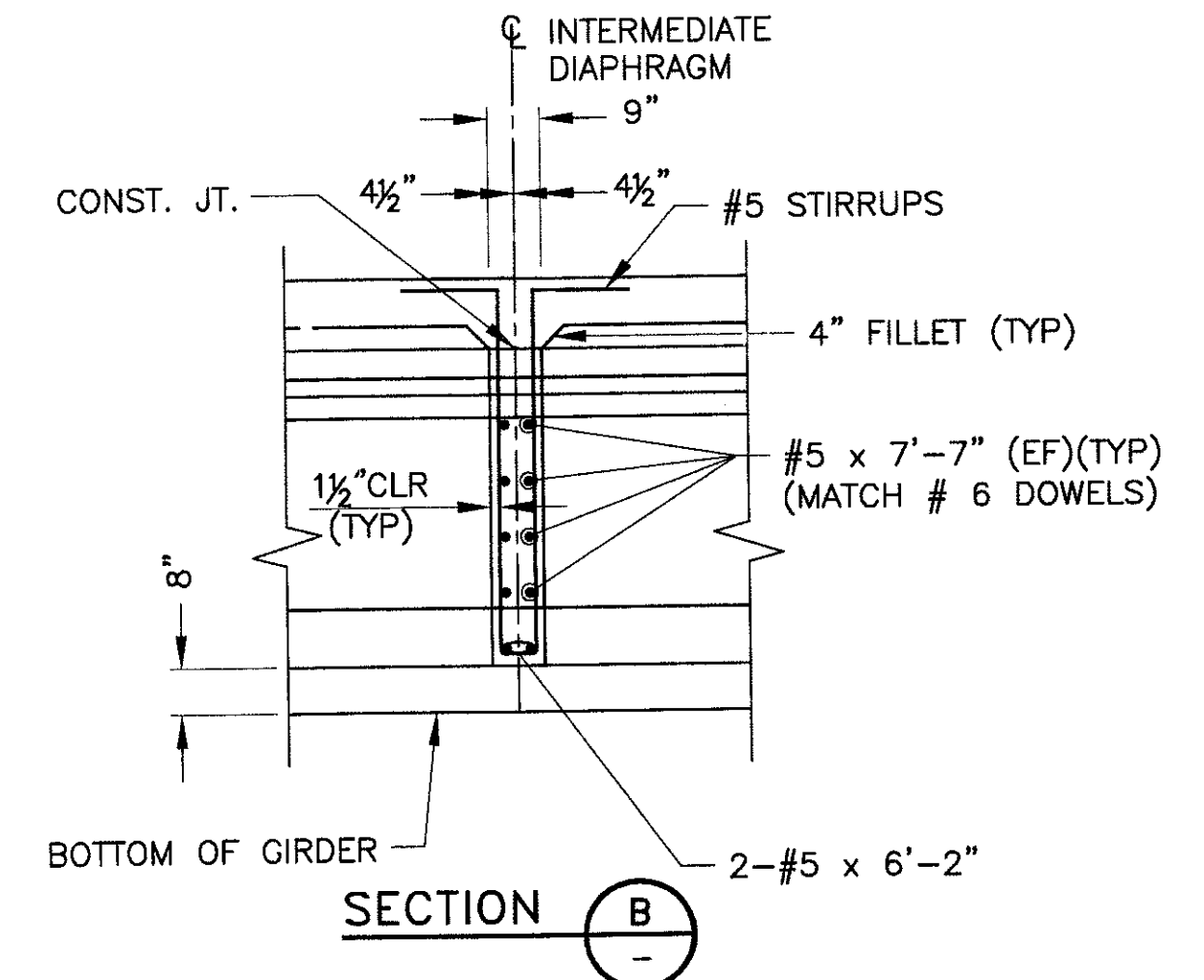


DETAIL 1
SCALE: 3/8" = 1'-0"

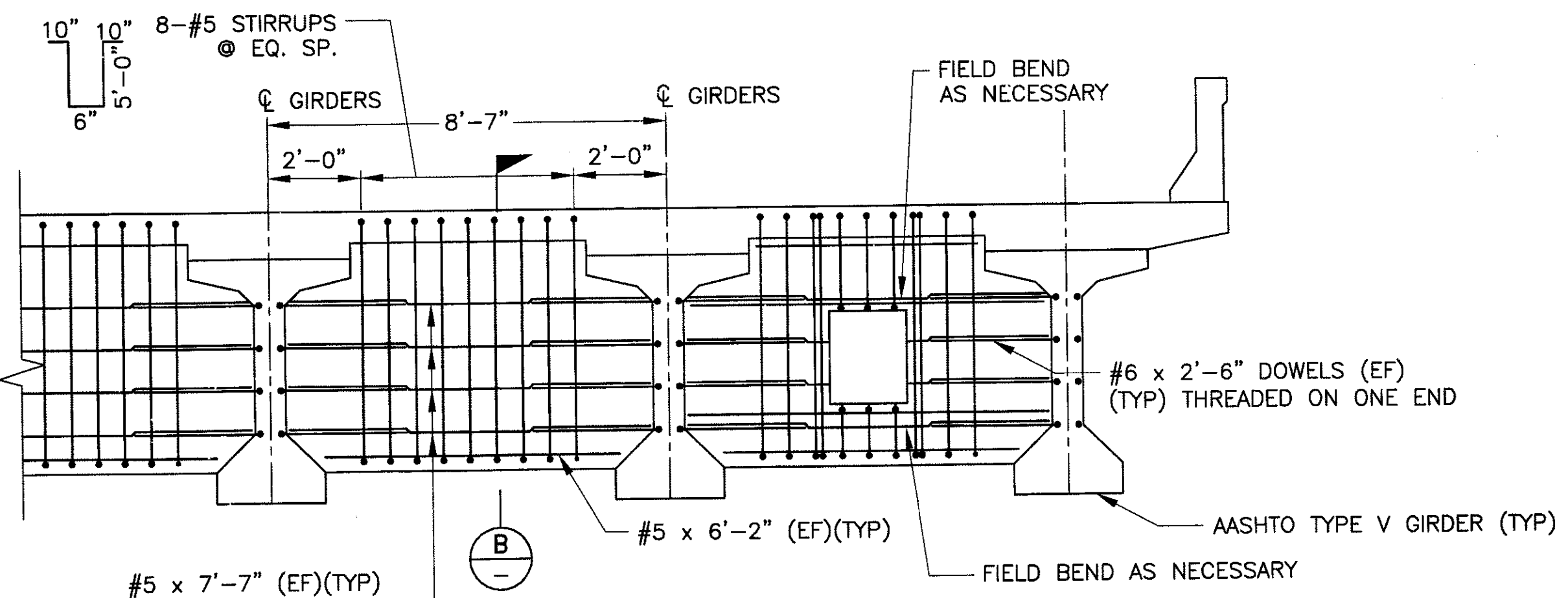
- NOTES:
 1. ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR.
 2. ALL DIMENSIONS ARE MEASURED PERPENDICULAR OR PARALLEL TO CENTERLINES OF BEARINGS AND CENTERLINES OF GIRDERS UNLESS NOTED OTHERWISE.



DETAIL 2
SCALE: 3/8" = 1'-0"



SECTION B



SECTION A

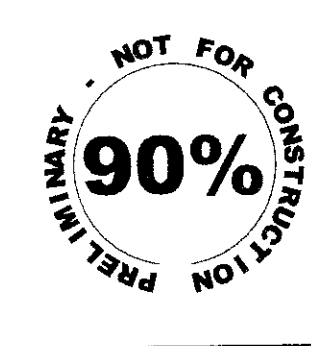
INTERMEDIATE DIAPHRAGM DETAILS
SCALE: 3/8" = 1'-0"

NOTE: FOR BLOCKOUT REINFORCEMENT DETAIL SEE SECTION C ON DWG NO. S-1.26

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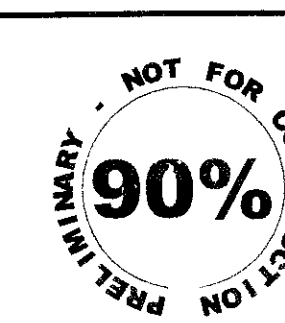
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

DECK PLAN AND DETAILS					
CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT					
SONORAN BOULEVARD APACHE WASH BRIDGE ST85100293					
DR:JRR	DES:RMD	CK:SEO	SHEET NO:	TOTAL SHEETS	
DATE: 12/09	DATE: 12/09	DATE: 12/09	151	352	
DWG NO: S-1.17			151	352	



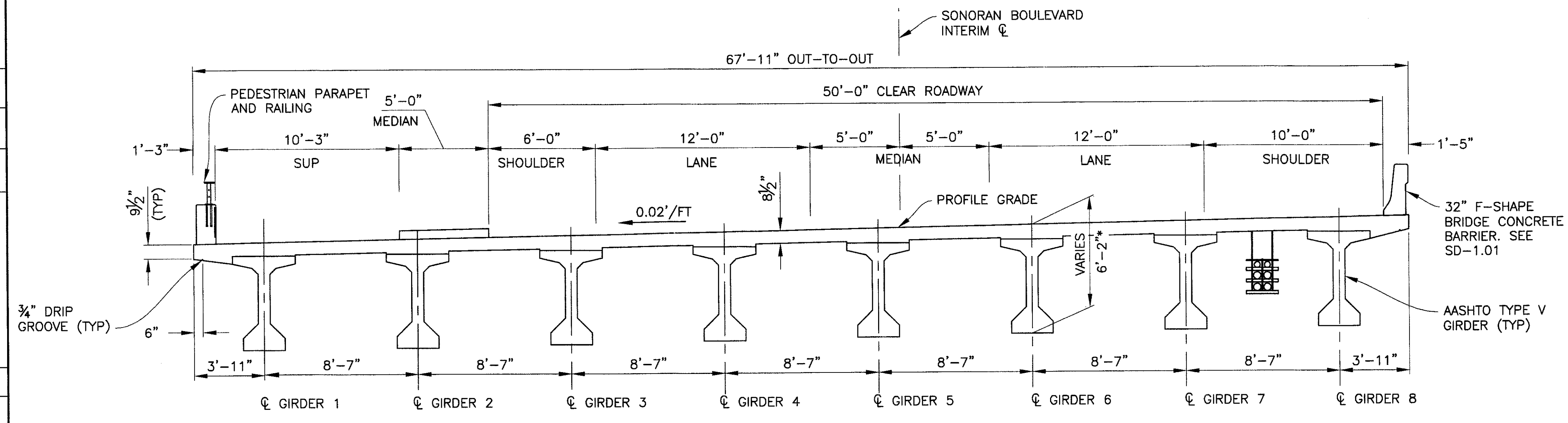
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	151	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				
DES: RMD			DR: JRR	CK: SEO
DATE: 12/09			CONSULTING ENGINEER	

P:\2008\002\GADD\civil\Sheets\Structure\15-Apache deck plan and details.dwg - plotted by James Rojas at 12/21/2009 5:56:41 AM



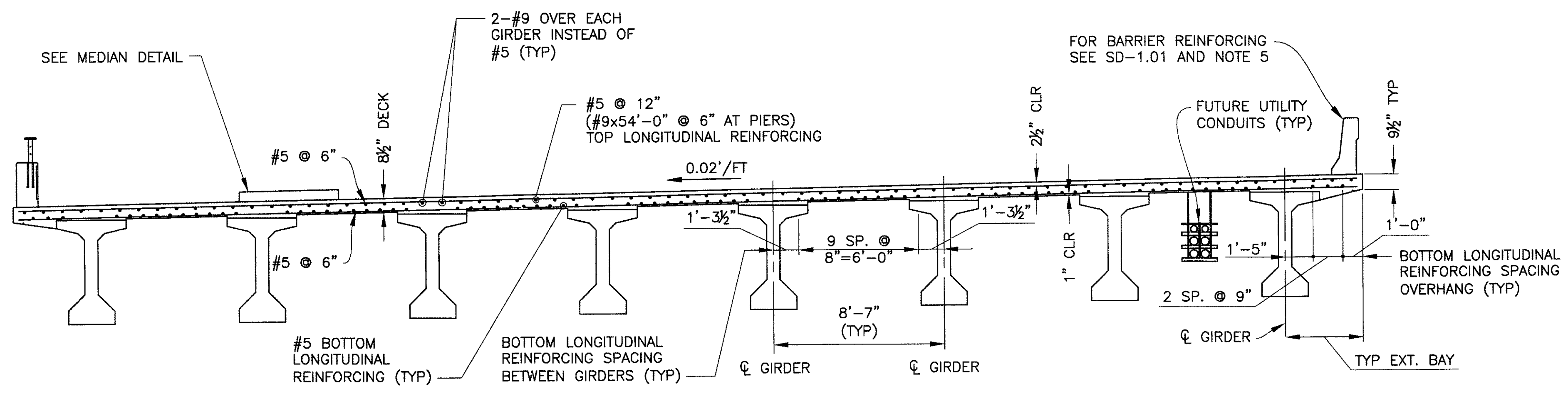
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	152	352
PREMIER				
ENGINEERING CORPORATION 6437 N. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6500				
DES: RMD		DR: JRR	CK: SEO	DATE: 12/09
			CONSULTING ENGINEER	

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REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

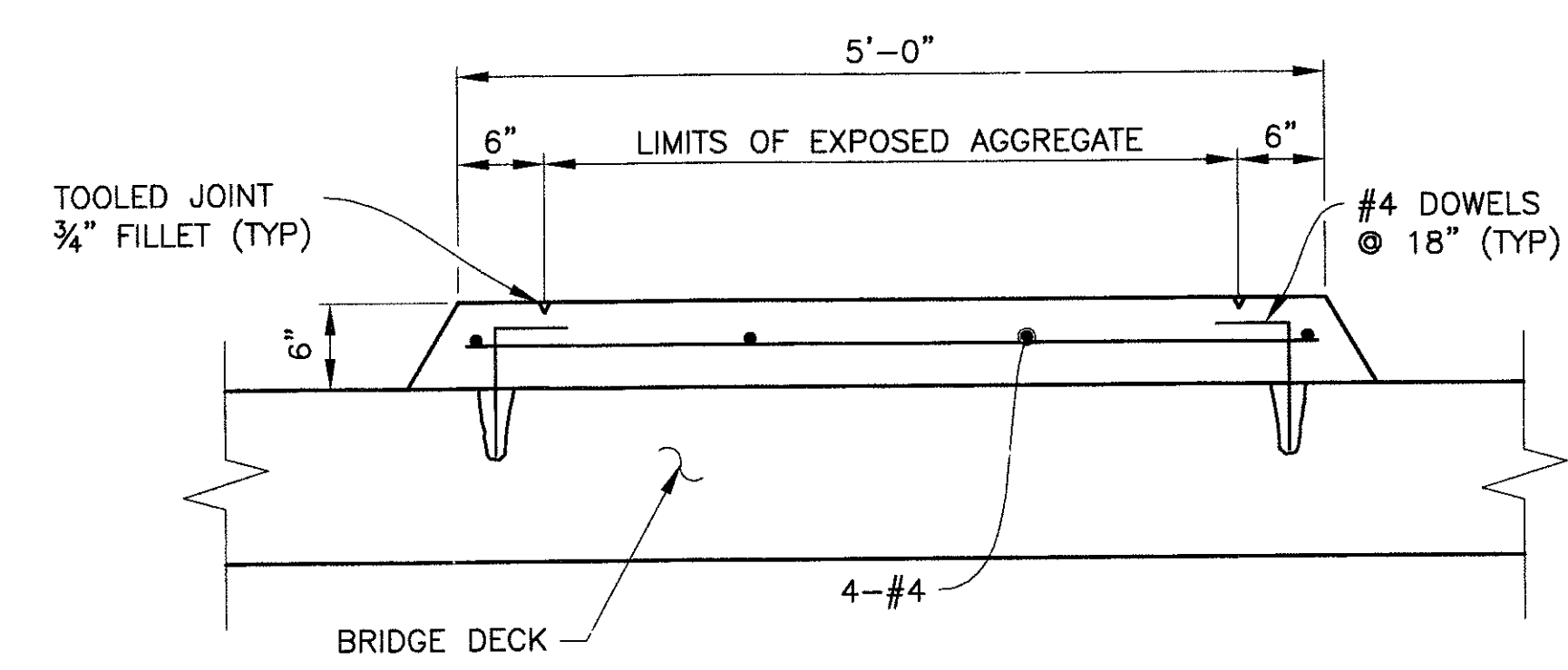


TYPICAL SECTION
LOOKING UP STATION
SCALE: 3"=1'-0"

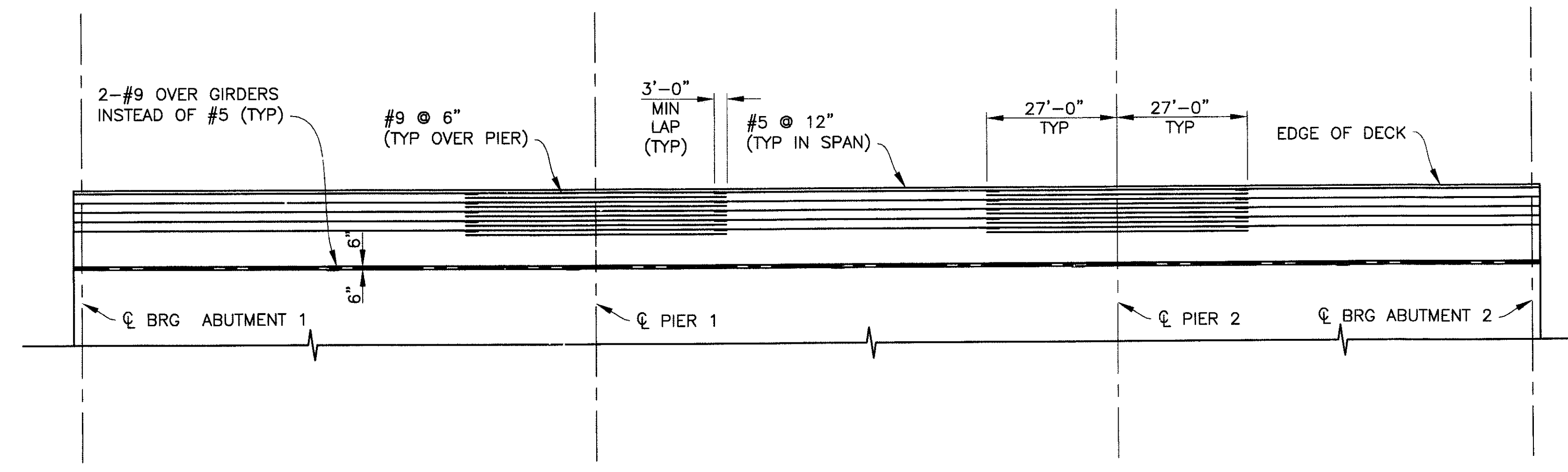
* AT CL BRG.



SECTION-TYPICAL DECK REINFORCING
LOOKING UP STATION
SCALE: 3"=1'-0"



MEDIAN DETAIL
SCALE: 1"=1'-0"



PARTIAL DECK TOP LONGITUDINAL REINFORCING PLAN
N.T.S.

- NOTES:**
- SEE DIAPHRAGM DETAIL DRAWINGS AND DECK PLANS FOR ADDITIONAL INFORMATION.
 - STAY IN PLACE FORMS NOT ALLOWED
- DECK REINFORCING NOTES:**
- ALL CONTINUOUS HORIZONTAL BARS IN DECK, DIAPHRAGMS AND BARRIERS, EXCLUDING TRANSVERSE BARS IN DECK SLAB MAY BE SPLICED WHERE REQUIRED WITH MINIMUM LAP LENGTH AS SPECIFIED:
#4 BARS-1'-10" #5 BARS-2'-4"
#6 BARS-2'-10" #7 BARS-3'-7"
#8 BARS-4'-7"
 - TRANSVERSE DECK REINFORCING SPLICES WHERE REQUIRED SHALL BE:
BOTTOM BARS: 3'-0" MINIMUM LAP AT CENTERLINE OF GIRDER.
TOP BARS: 3'-0" MINIMUM LAP AT CENTERLINE OF INTERIOR BAY.
 - BARS SHALL NOT BE SPLICED WITHIN THE REQUIRED LAP LENGTH OF THE ADJACENT BARS.
 - SEE PARTIAL DECK TOP LONGITUDINAL REINFORCING PLAN AT PIERS FOR SPLICE LOCATIONS OF TOP #9 AND #5 LONGITUDINAL BARS.
 - SIZE AND SPACING OF BARRIER BARS CAST INTO DECK SLAB VARY AT OPEN JOINTS. SEE SD-1.01 FOR DETAILS.
 - TRANSVERSE DECK REINFORCEMENT SHALL BE PLACED PARALLEL TO ABUTMENTS AND PIERS.

- NOTES:**
- CONCRETE CLASS "S" f'c= 4000 psi
 - EXPOSED AGGREGATE PER MAG STANDARD SPECIFICATIONS SECTION 343, TYPE A-NON PEDESTRIAN USE.
 - INTERGRAL COLOR CONCRETE - DAVID COLOR = MESQUITE

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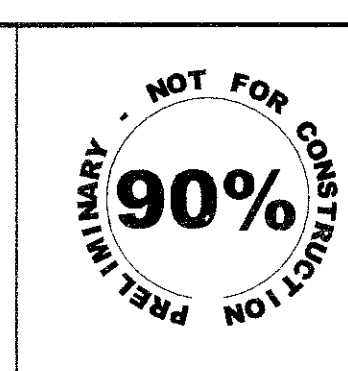
TYPICAL DECK & REINFORCING
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293**

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DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	152	352
DWG NO: S-1.18				

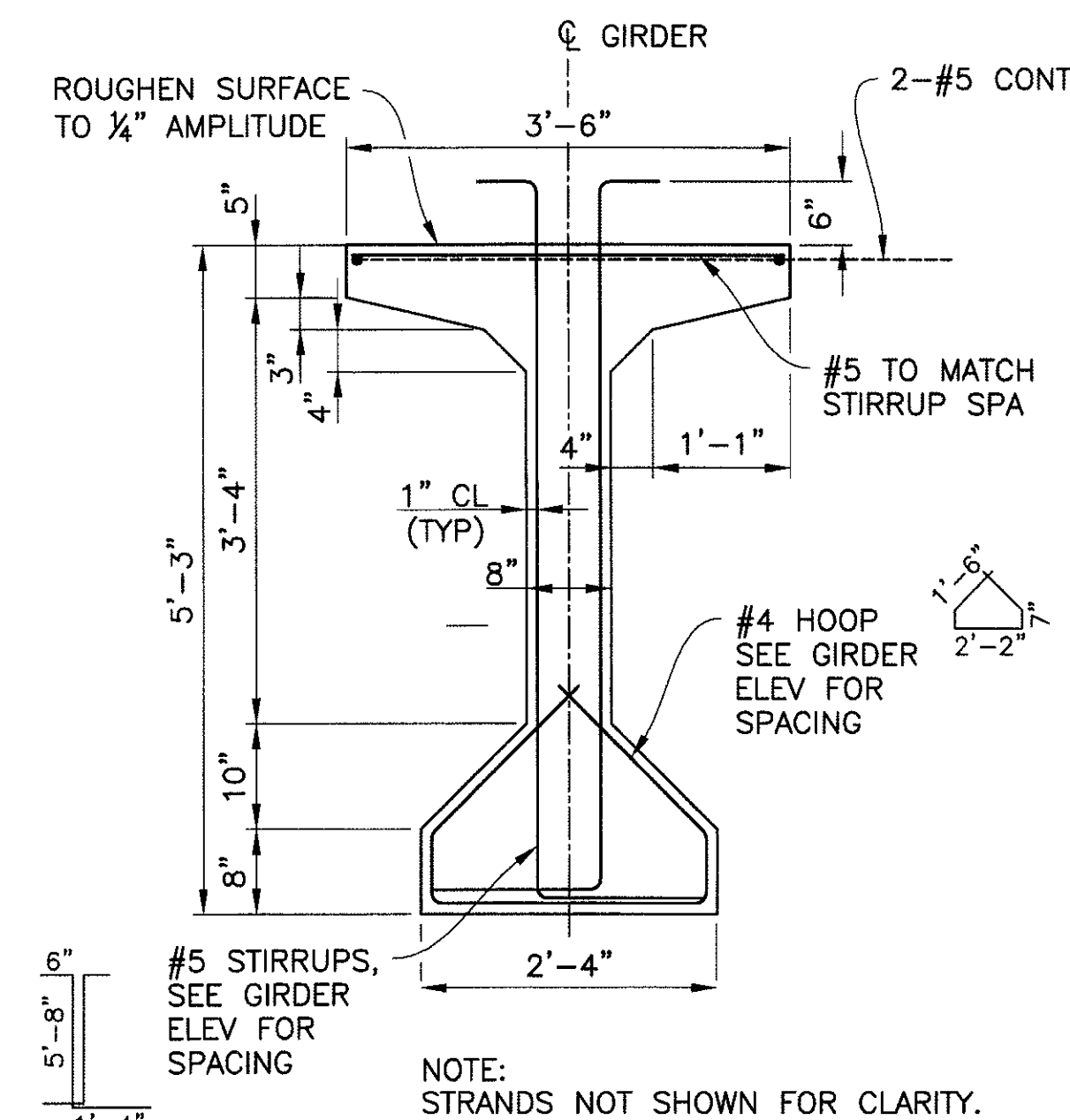
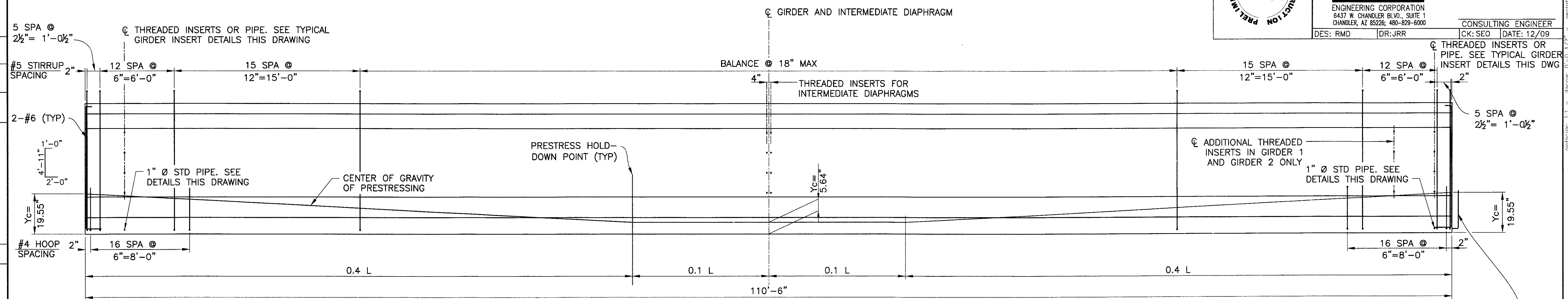
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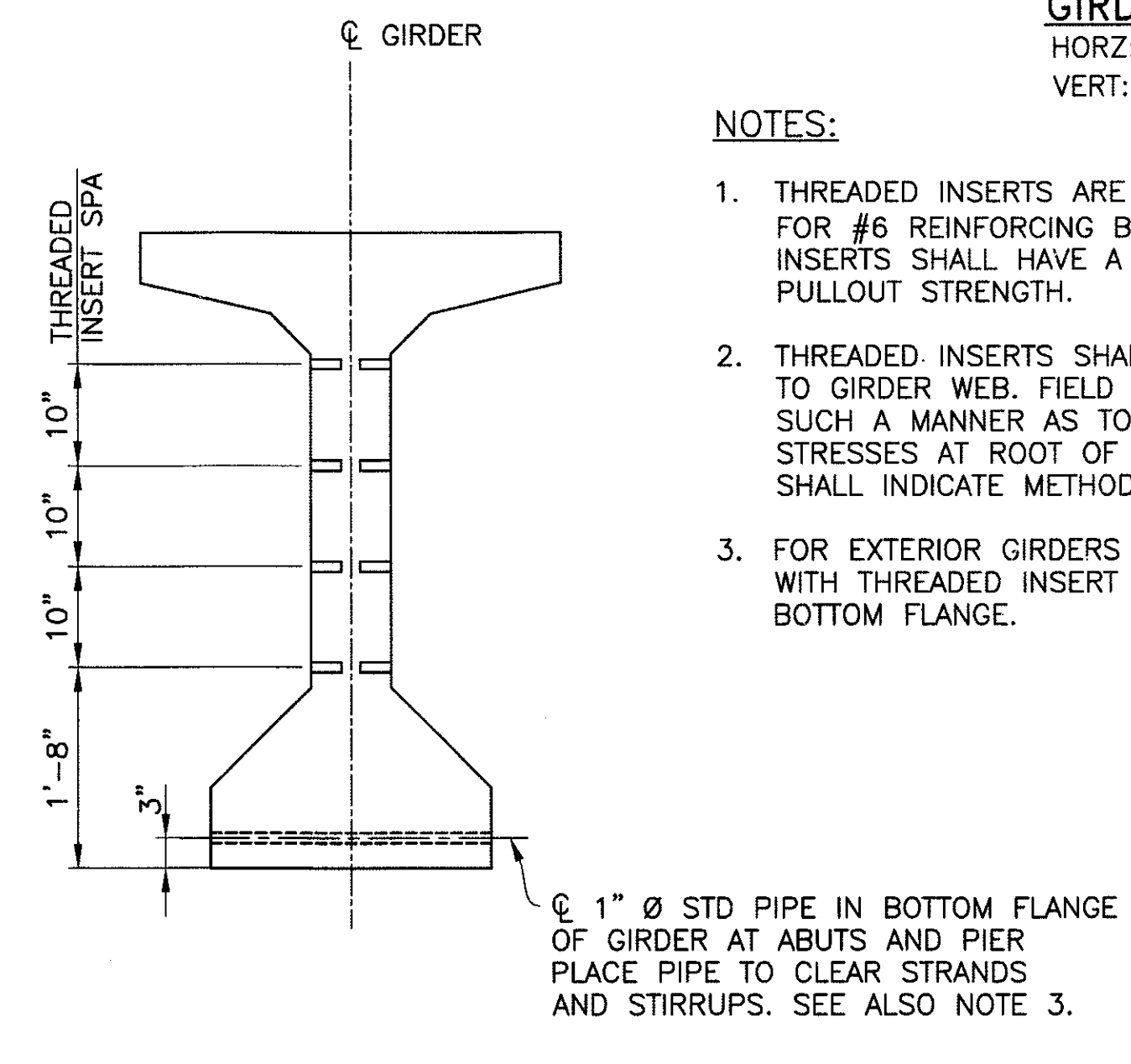
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	153	352

PREMIER	
ENGINEERING CORPORATION	CONSULTING ENGINEER
6437 W. CHANDLER BLVD., SUITE 1	CHANDLER, AZ 85226, 480-829-6000
DES: RMD	DR: JRR
CK: SEO	DATE: 12/09

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NO.				
NO.				
NO.				
NO.				

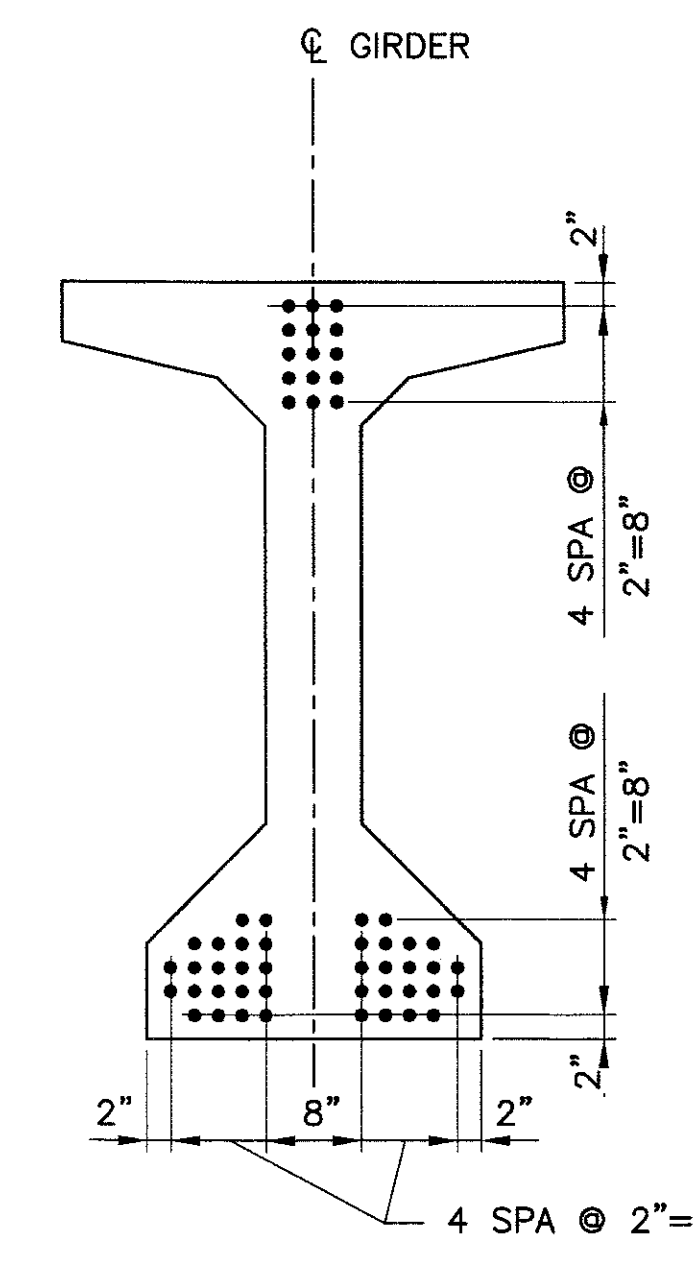


AASHTO TYPE V GIRDERS
SCALE: 3/4" = 1'-0"

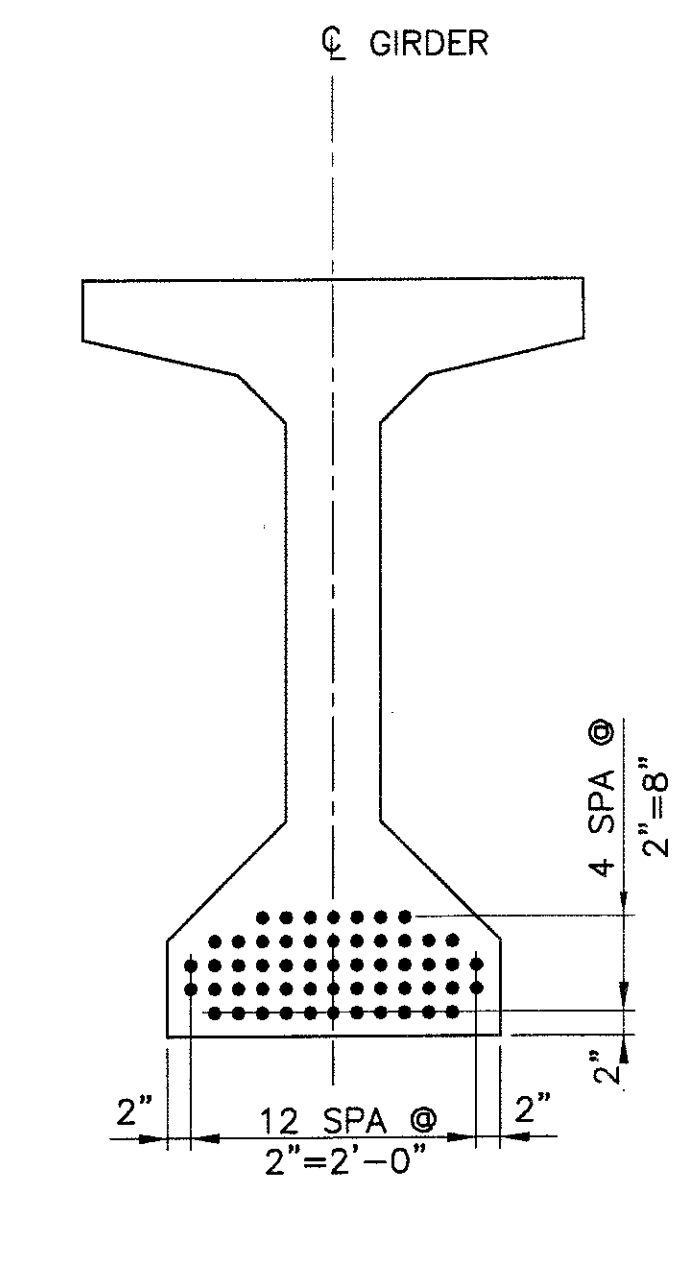


TYPICAL GIRDER INSERT DETAIL
SCALE: 3/4" = 1'-0"

- NOTES:**
1. THREADED INSERTS ARE FERRULE LOOP INSERTS FOR #6 REINFORCING BARS THREADED ON END. INSERTS SHALL HAVE A 10,800 LBS WORKING PULLOUT STRENGTH.
 2. THREADED INSERTS SHALL BE PLACED NORMAL TO GIRDER WEB. FIELD BEND INSERTED BARS IN SUCH A MANNER AS TO PREVENT BENDING STRESSES AT ROOT OF THREADS. SHOP DRAWINGS SHALL INDICATE METHOD OF BENDING.
 3. FOR EXTERIOR GIRDERS AT PIER, REPLACE PIPE WITH THREADED INSERT ON INTERIOR FACE OF BOTTOM FLANGE.



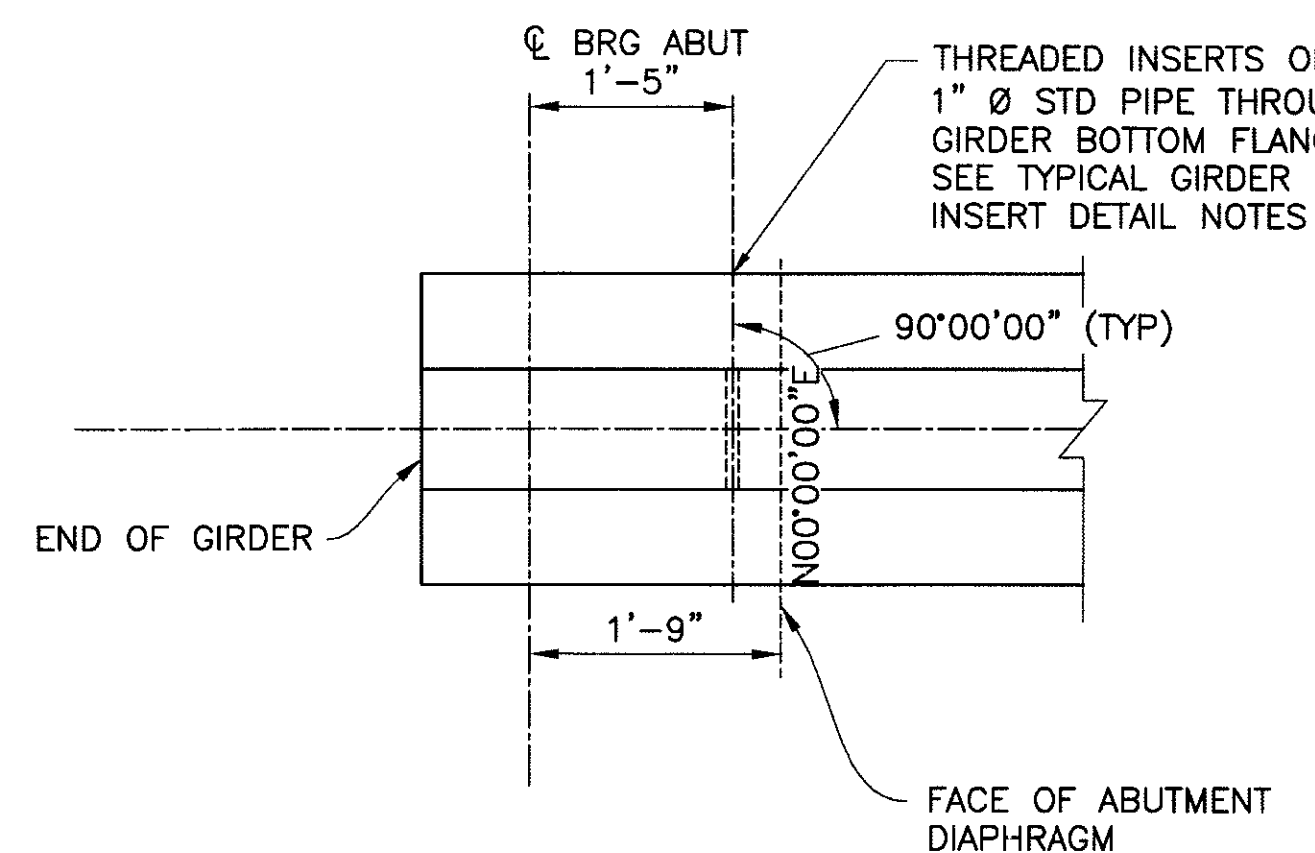
AT ENDS



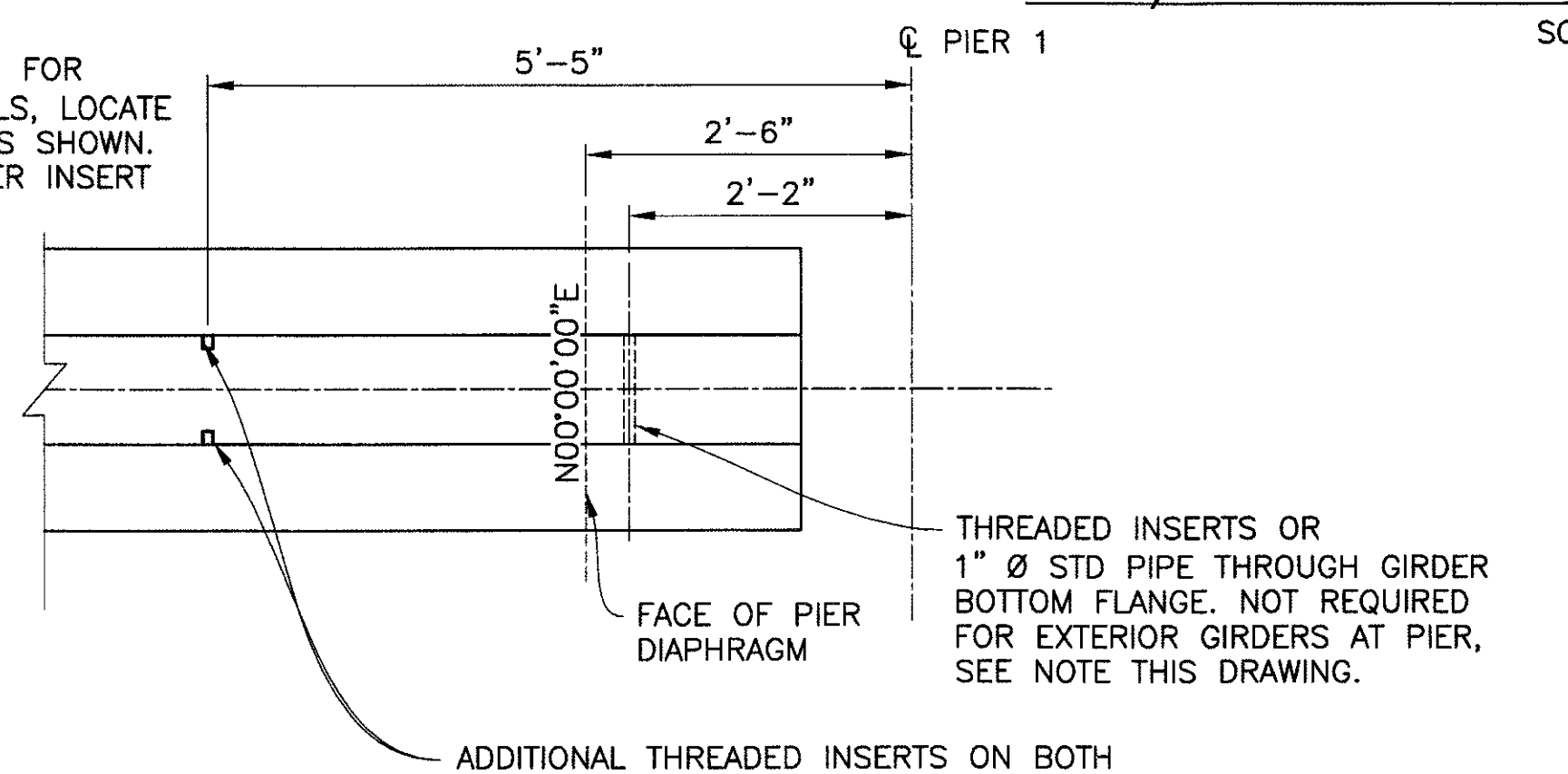
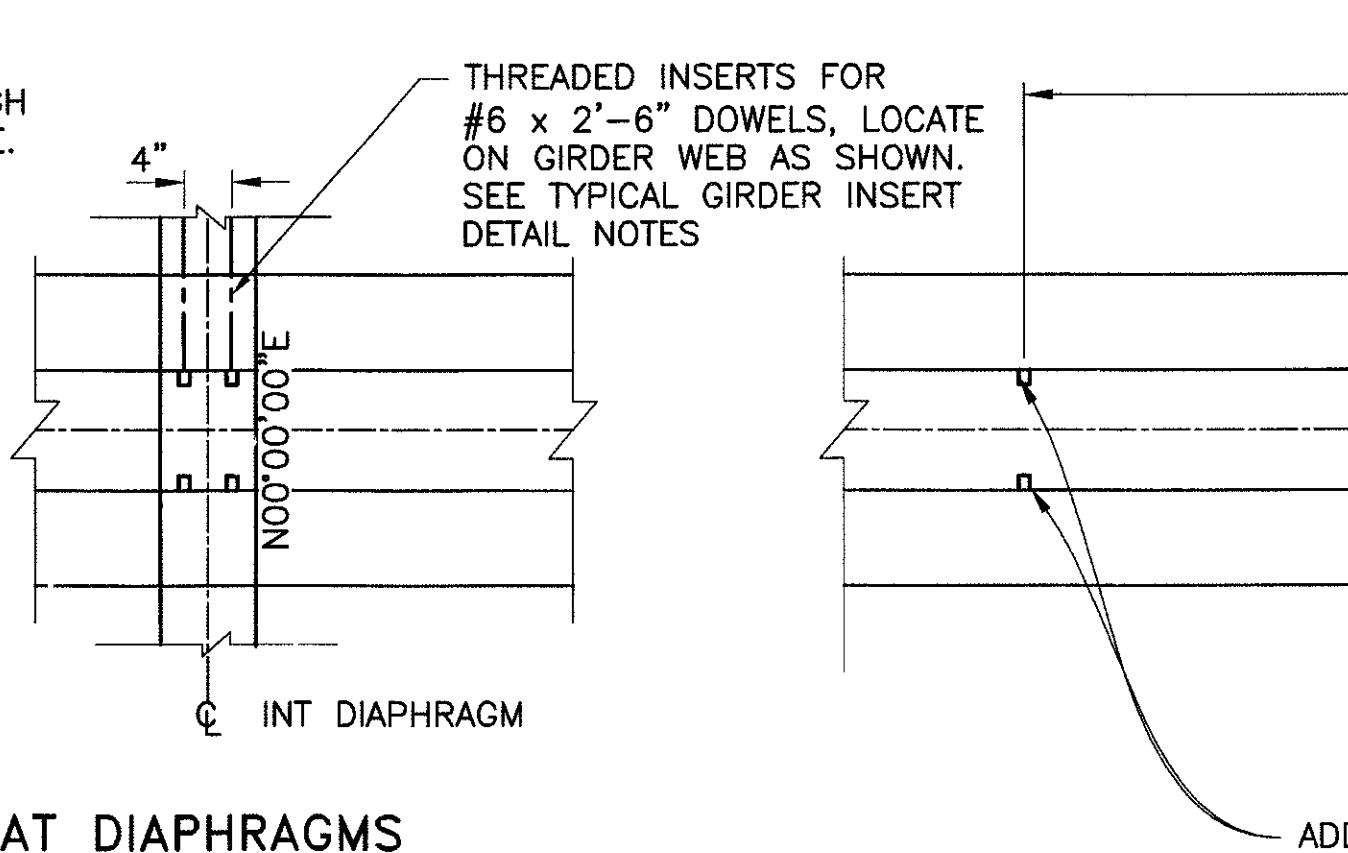
MIDSPAN

- GIRDER NOTES:**
1. SEE GENERAL NOTES ON DWG S-1.02.
 2. $P_i=1704.0$ KIPS. INITIAL TENSION BEFORE LOSSES
 $P_w=1367.9$ KIPS. WORKING FORCE REMAINING AFTER ALL LOSSES.
 $f'_{ci}=5000$ PSI MINIMUM STRENGTH AT TRANSFER.
 $f'_c=5500$ PSI MINIMUM STRENGTH AT 28 DAYS.
 3. ALL LOW-RELAXATION STRANDS SHALL BE STRESSED TO 0.75 f'_s
 4. ALL GIRDERS SHALL BE PRESTRESSED BY THE PRETENSIONING METHOD ONLY
 5. USE OF MASKED STRANDS WILL NOT BE ALLOWED
 6. Y_c =DISTANCE TO CENTER OF GRAVITY OF PRESTRESSING MEASURED FROM BOTTOM OF GIRDER

STRAND PATTERN
55-1/2" DIAMETER 7 WIRE LOW RELAXATION (STRANDS)
SCALE: 3/4" = 1'-0"



AT DIAPHRAGMS
TYPICAL GIRDER INSERT PLAN
SCALE: 3/4" = 1'-0"



AT PIER 1
ADDITIONAL THREADED INSERTS ON BOTH FACES OF GIRDER 1 AND EXTERIOR FACE OF GIRDER 2 FOR PEDESTRIAN BALCONY

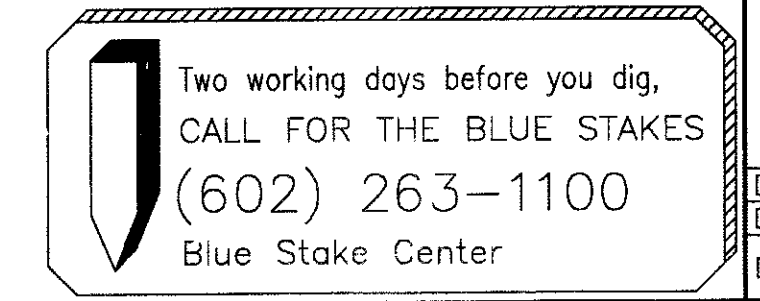
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GIRDER DETAILS SPAN 1

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09		
DWG NO: S-1.19			153	352

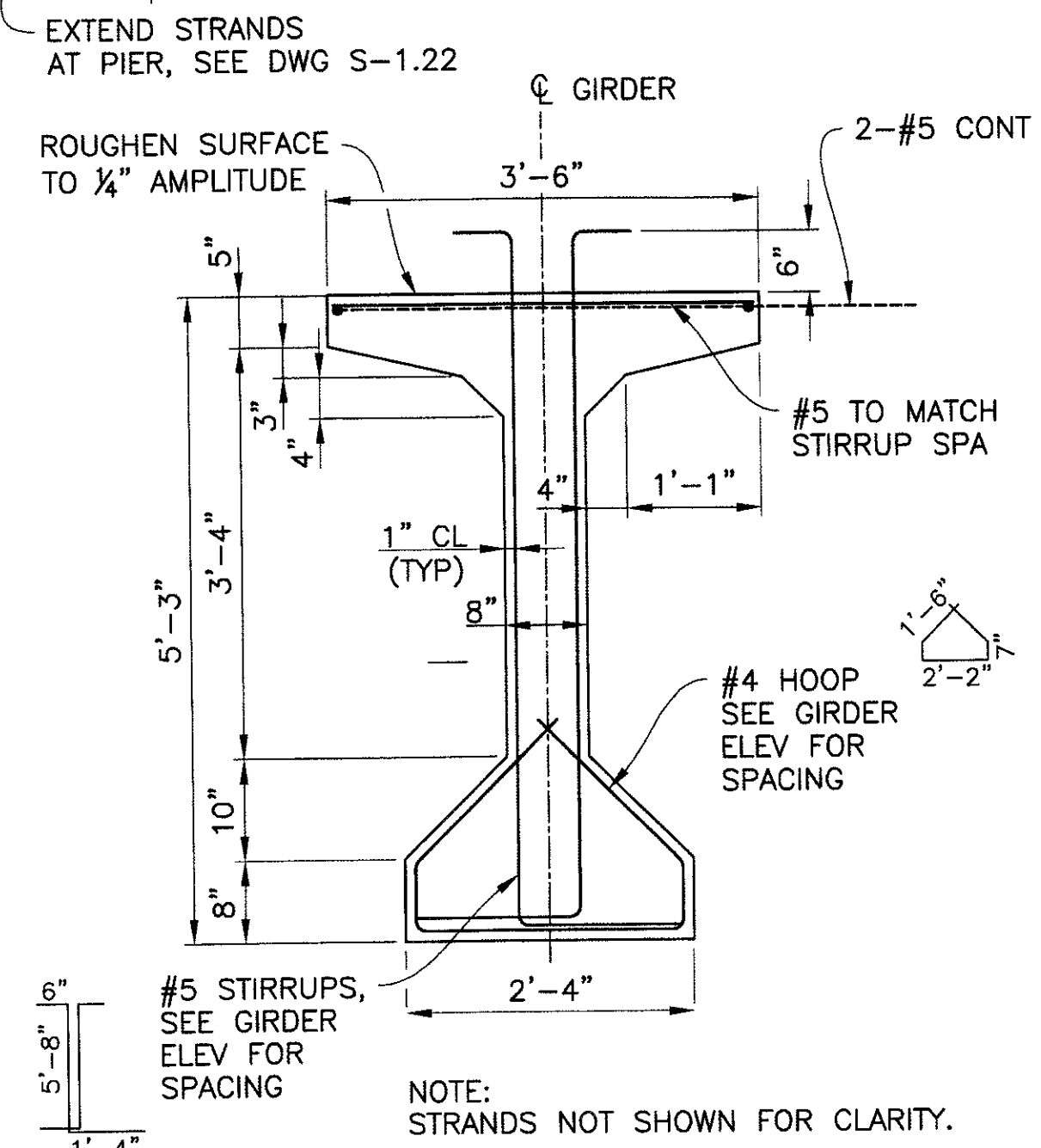
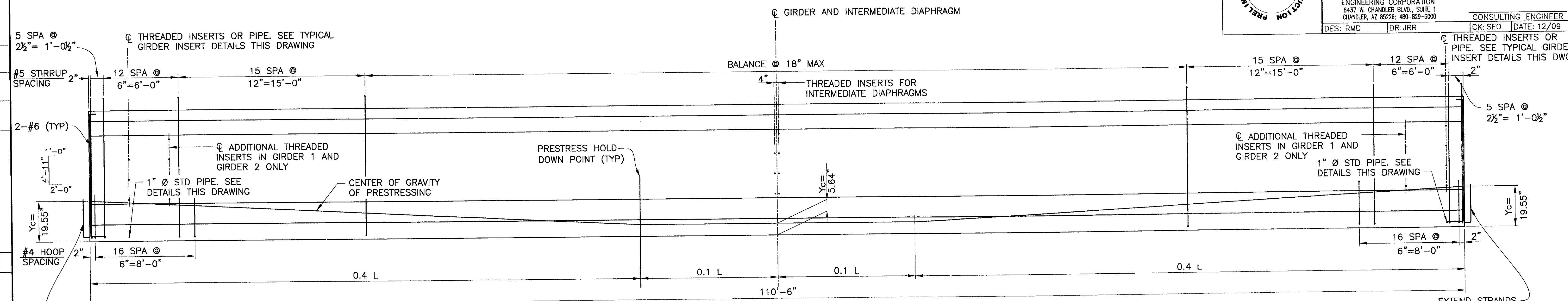


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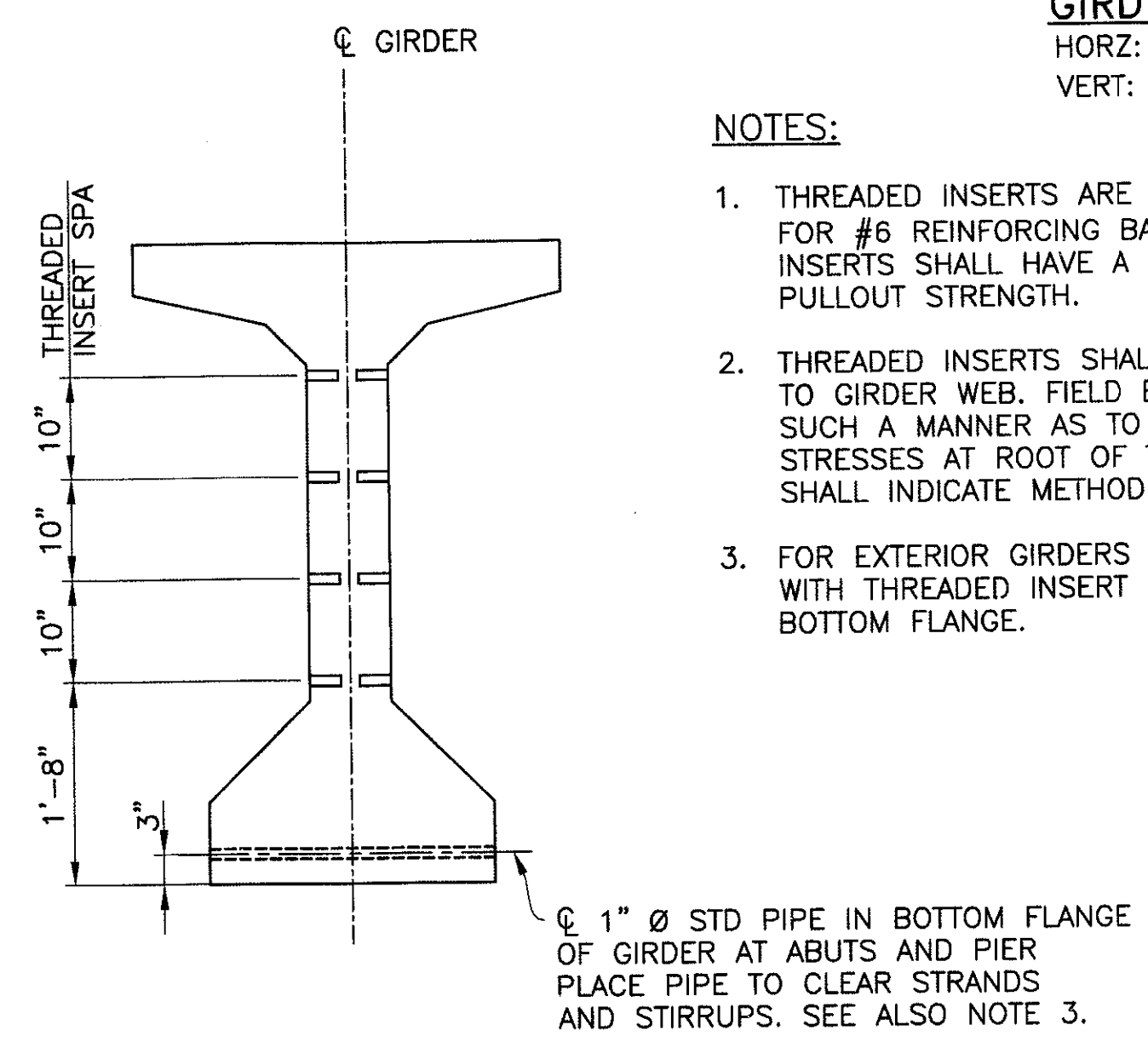
90%
PRELIMINARY - NOT FOR CONSTRUCTION

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9	ARIZ.	ST85100293	154	352
PREMIER ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000		CONSULTING ENGINEER DES: RMD DR: JRR CK: SEO DATE: 12/09		

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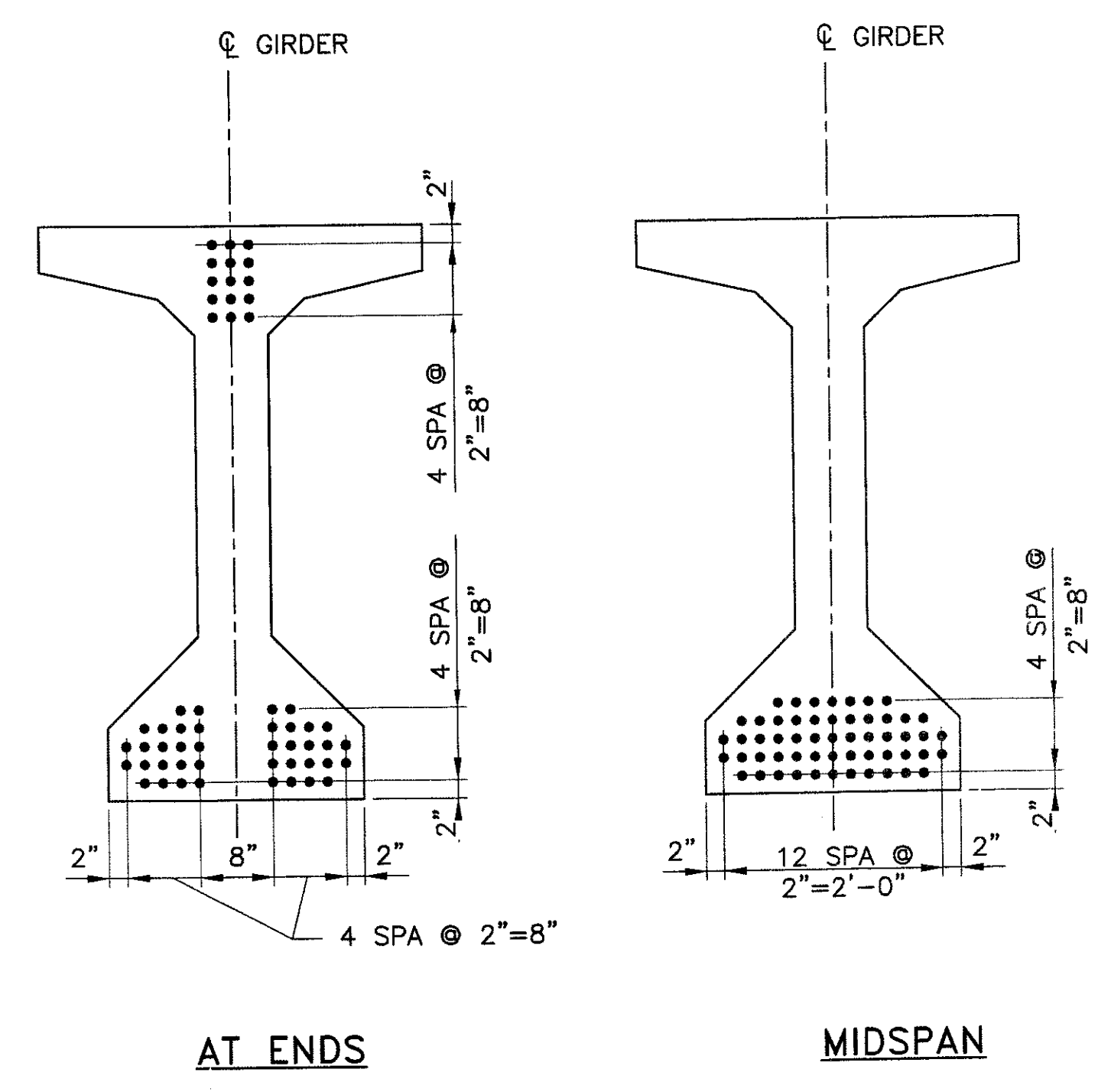
AASHTO TYPE V GIRDER
SCALE: 3/4" = 1'-0"



TYPICAL GIRDER INSERT DETAIL
SCALE: 3/4" = 1'-0"

NOTES:

1. THREADED INSERTS ARE FERRULE LOOP INSERTS FOR #6 REINFORCING BARS THREADED ON END. INSERTS SHALL HAVE A 10,800 lbs WORKING PULLOUT STRENGTH.
2. THREADED INSERTS SHALL BE PLACED NORMAL TO GIRDER WEB. FIELD BEND INSERTED BARS IN SUCH A MANNER AS TO PREVENT BENDING STRESSES AT ROOT OF THREADS. SHOP DRAWINGS SHALL INDICATE METHOD OF BENDING.
3. FOR EXTERIOR GIRDERS AT PIER, REPLACE PIPE WITH THREADED INSERT ON INTERIOR FACE OF BOTTOM FLANGE.

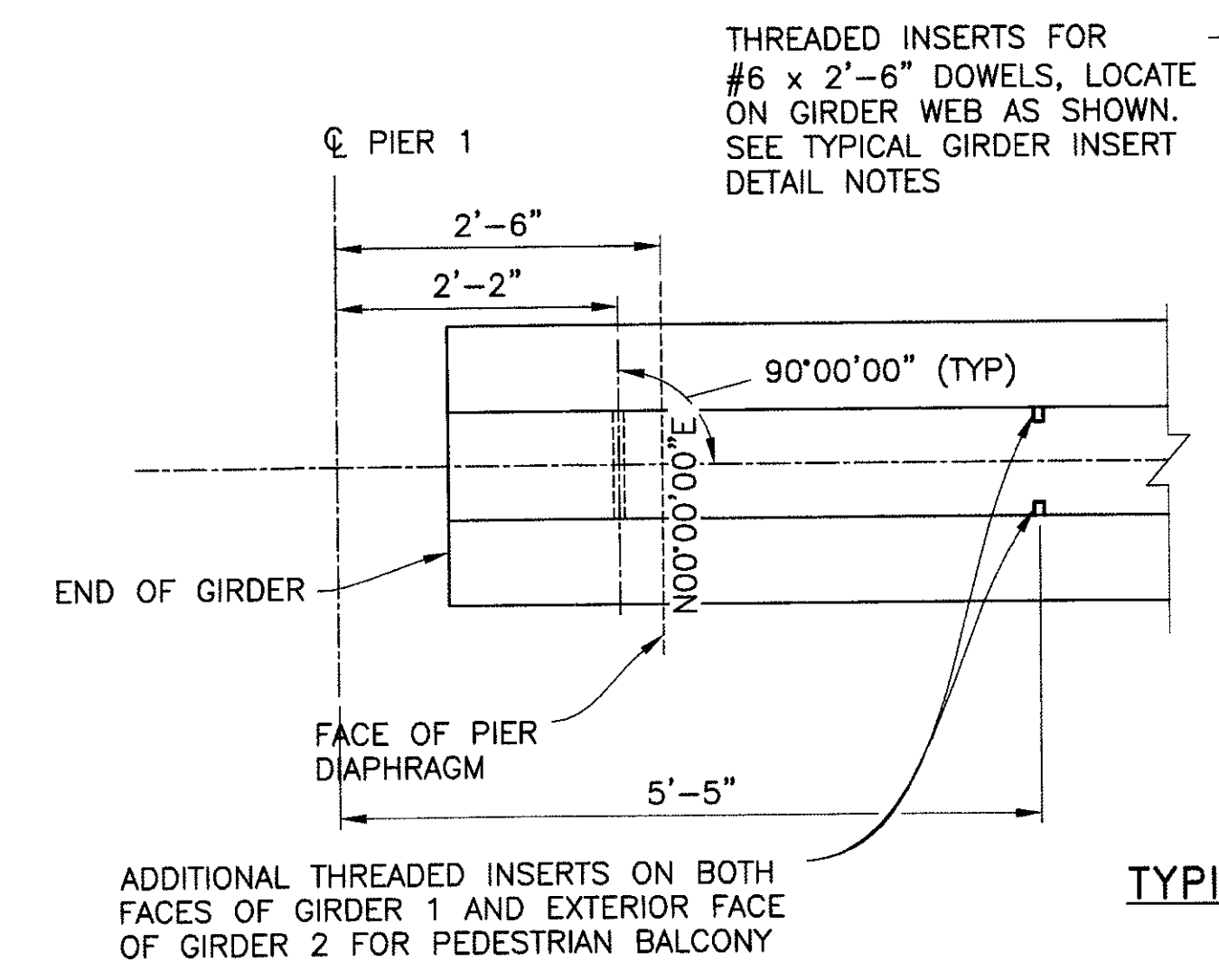


STRAND PATTERN

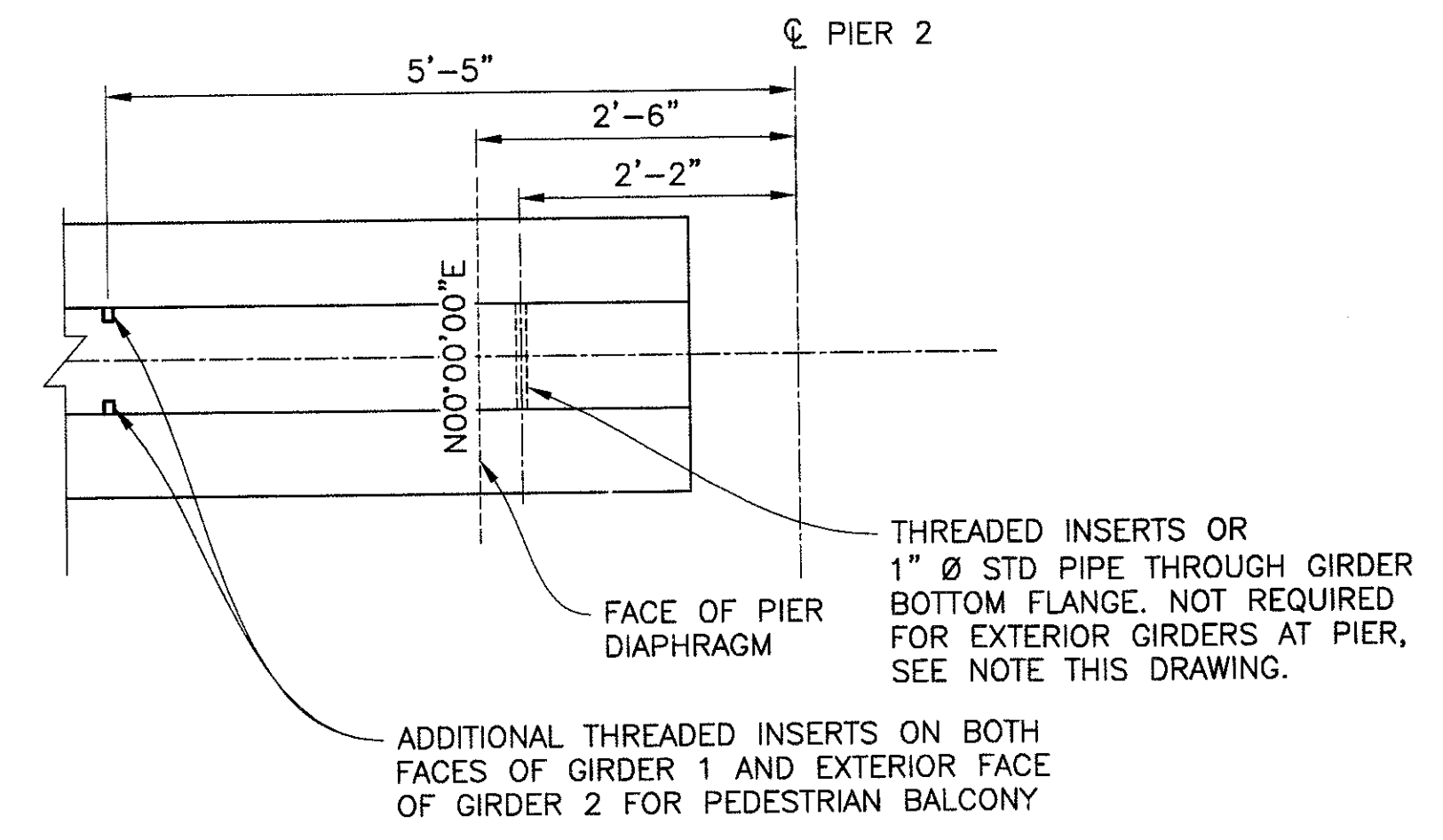
55-1/2" DIAMETER 7 WIRE LOW RELAXATION (STRANDS)
SCALE: 3/4" = 1'-0"

GIRDER NOTES:

1. SEE GENERAL NOTES ON DWG S-1.02.
2. PI=1704.0 KIPS. INITIAL TENSION BEFORE LOSSES
PW=1367.9 KIPS. WORKING FORCE REMAINING AFTER ALL LOSSES.
f'ci = 5000 PSI MINIMUM STRENGTH AT TRANSFER.
f'c = 5500 PSI MINIMUM STRENGTH AT 28 DAYS.
3. ALL LOW-RELAXATION STRANDS SHALL BE STRESSED TO 0.75 fs
4. ALL GIRDERS SHALL BE PRESTRESSED BY THE PRETENSIONING METHOD ONLY
5. USE OF MASKED STRANDS WILL NOT BE ALLOWED
6. Yc=DISTANCE TO CENTER OF GRAVITY OF PRESTRESSING MEASURED FROM BOTTOM OF GIRDER



AT DIAPHRAGMS
TYPICAL GIRDER INSERT PLAN
SCALE: 3/4" = 1'-0"



AT DIAPHRAGMS
TYPICAL GIRDER INSERT PLAN
SCALE: 3/4" = 1'-0"

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GIRDER DETAILS SPAN 2

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	154	352

DWG NO: S-1.20

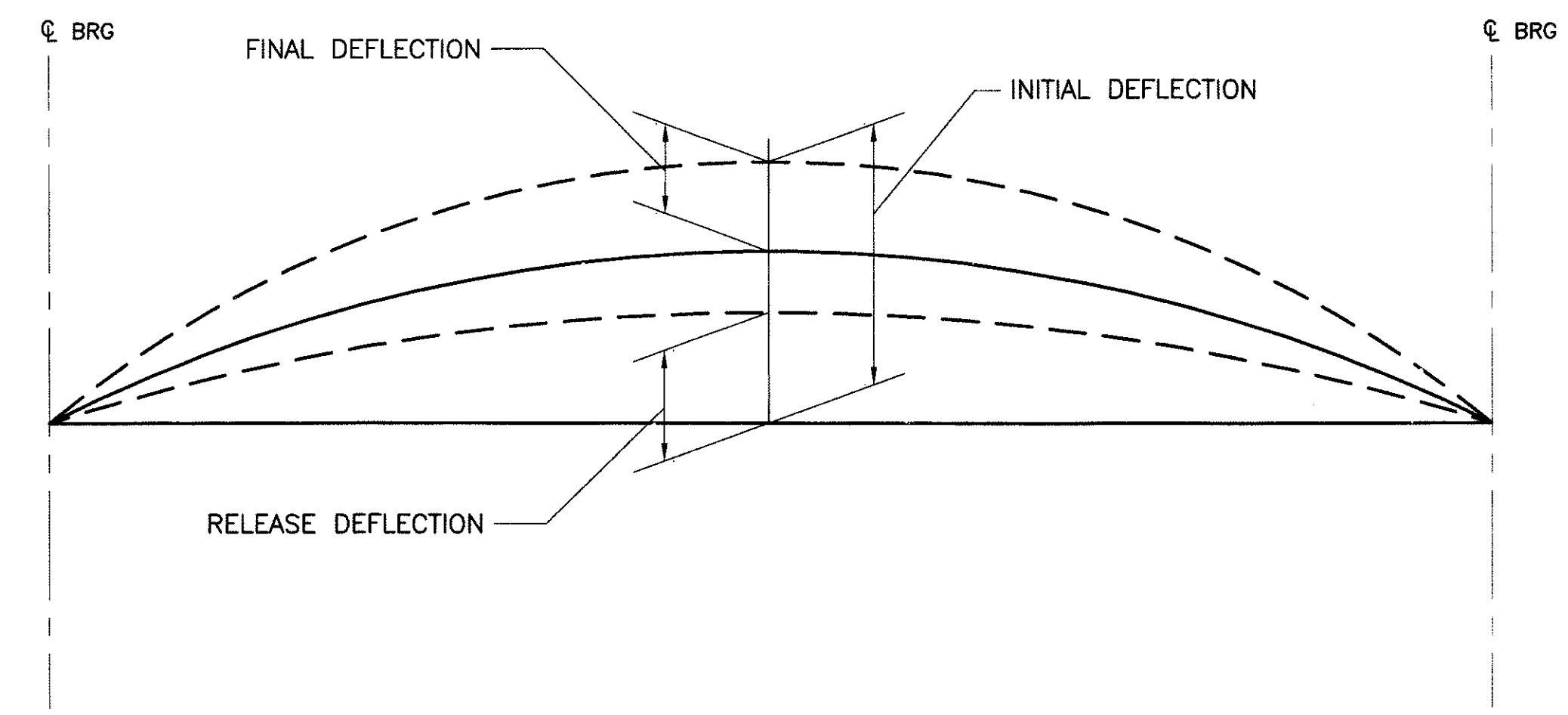
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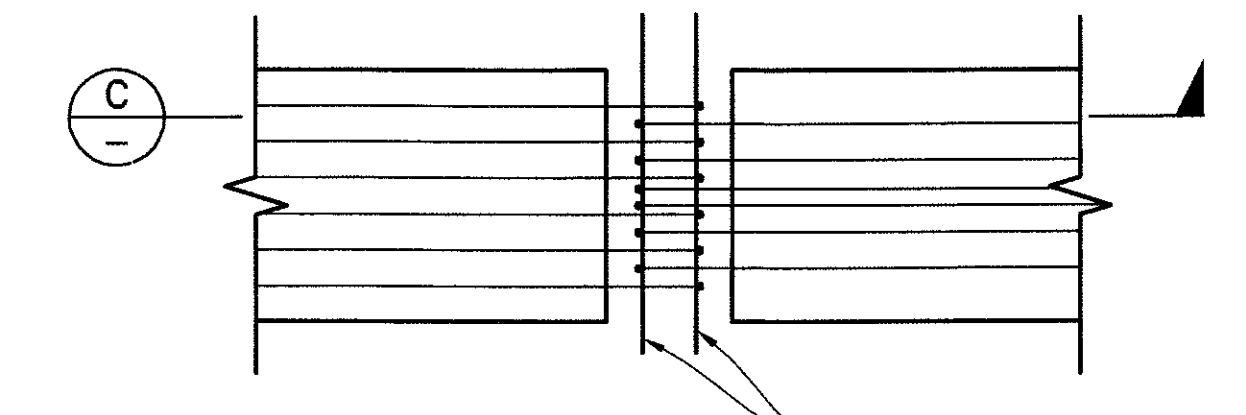


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	156	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226 480-229-5300				
DES: RMD	DR: JRR	CK: SEO	DATE: 12/09	

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



DEFLECTION DIAGRAM
N.T.S.

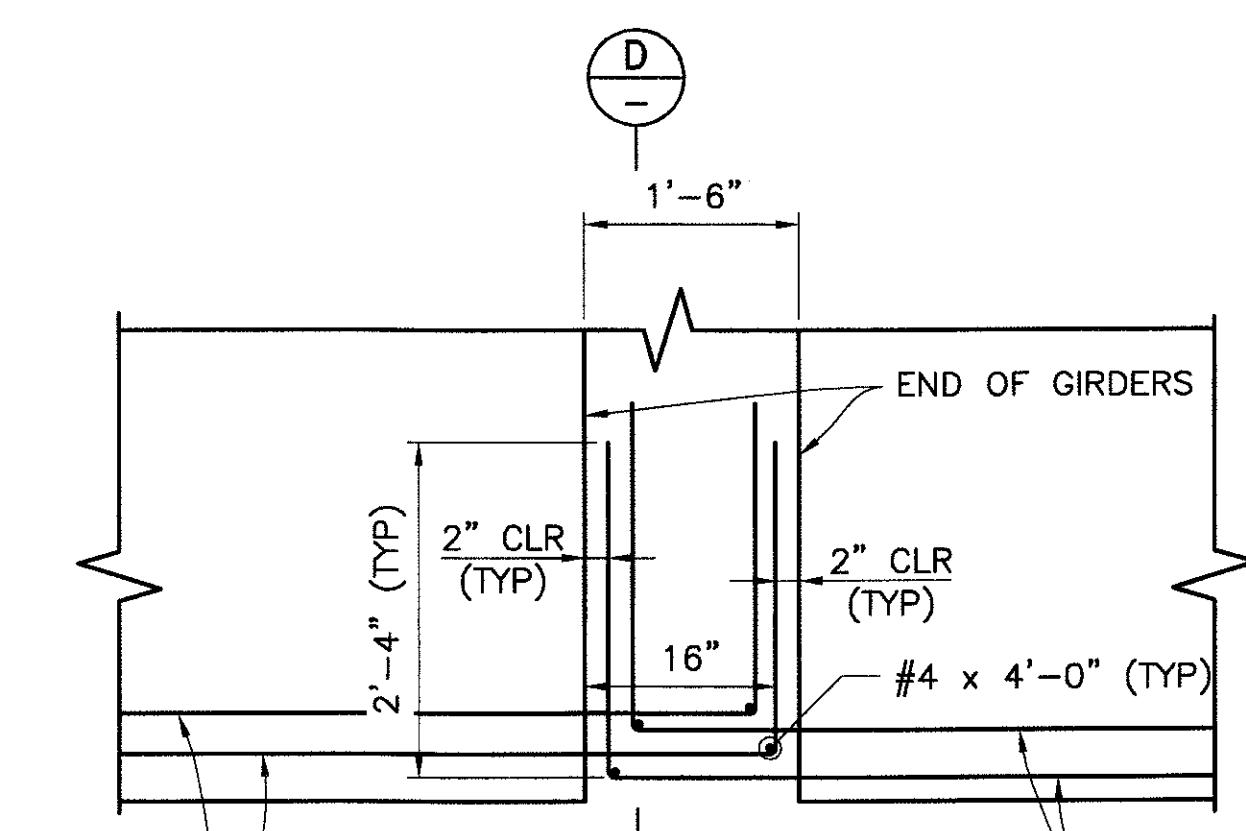


TYPICAL END OF GIRDER PLAN AT PIER
N.T.S.

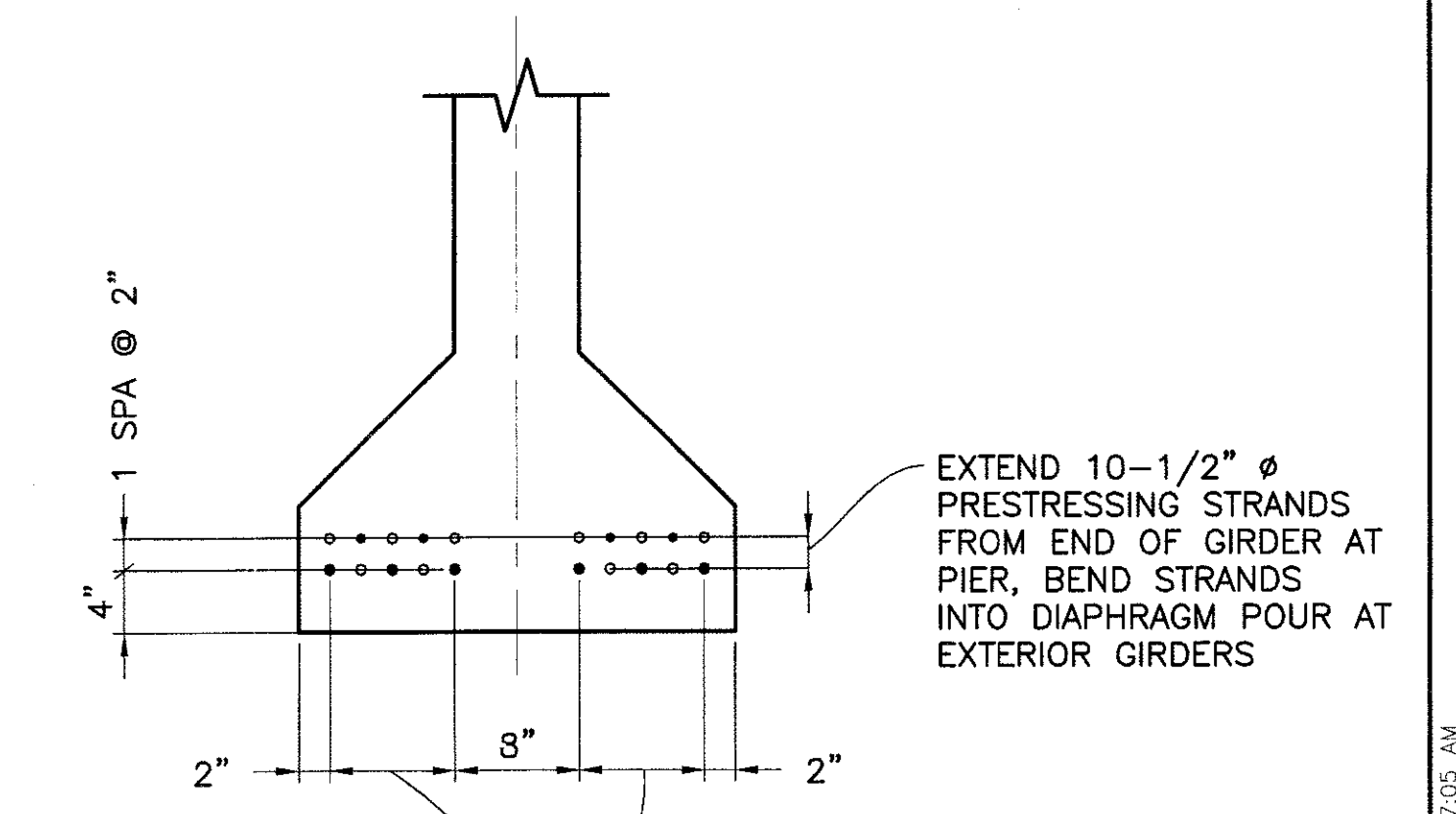
SPAN 1 DEFLECTIONS (ft)									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
RELEASE (POSITIVE IS UPWARD)	0.065	0.114	0.149	0.167	0.175	0.167	0.149	0.114	0.103
INITIAL (POSITIVE IS UPWARD)	0.114	0.202	0.262	0.295	0.308	0.295	0.262	0.202	0.114
FINAL GIRDERS 1 & 8 (POSITIVE IS DOWNWARD)	0.088	0.165	0.225	0.264	0.276	0.264	0.226	0.167	0.090
FINAL GIRDERS 2 - 7 (POSITIVE IS DOWNWARD)	0.085	0.160	0.218	0.255	0.267	0.255	0.219	0.162	0.086

SPAN 2 DEFLECTIONS (ft)									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
RELEASE (POSITIVE IS UPWARD)	0.065	0.114	0.149	0.167	0.175	0.167	0.149	0.114	0.065
INITIAL (POSITIVE IS UPWARD)	0.114	0.202	0.262	0.295	0.308	0.295	0.262	0.202	0.114
FINAL GIRDERS 1 & 8 (POSITIVE IS DOWNWARD)	0.099	0.185	0.248	0.291	0.305	0.291	0.250	0.187	0.098
FINAL GIRDERS 2 - 7 (POSITIVE IS DOWNWARD)	0.096	0.180	0.242	0.283	0.298	0.283	0.244	0.183	0.096

SPAN 3 DEFLECTIONS (ft)									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
RELEASE (POSITIVE IS UPWARD)	0.030	0.054	0.070	0.080	0.084	0.080	0.070	0.054	0.030
INITIAL (POSITIVE IS UPWARD)	0.054	0.095	0.125	0.141	0.148	0.141	0.125	0.095	0.054
FINAL GIRDERS 1 & 8 (POSITIVE IS DOWNWARD)	0.043	0.081	0.107	0.124	0.129	0.122	0.104	0.061	0.040
FINAL GIRDERS 2 - 7 (POSITIVE IS DOWNWARD)	0.043	0.079	0.106	0.122	0.128	0.121	0.103	0.075	0.040



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



SECTION D
SCALE: 1"=1'-0"

GIRDER STRAND EXTENSION LEGEND

- (o) EXTENDED STRANDS
- (●) EXTENDED STRANDS FOR OPPOSITE GIRDER

DEFLECTION NOTES:

- RELEASE DEFLECTION EQUALS THE DEFLECTION THAT THE PRESTRESSED GIRDER UNDERGOES AT THE TIME OF STRAND RELEASE. THE RELEASE DEFLECTION INCLUDES THE DEAD LOAD OF THE GIRDER AND THE RELEASE PRESTRESSING FORCE (INCLUDING THE EFFECTS OF ELASTIC SHORTENING).
- INITIAL DEFLECTION EQUALS THE DEFLECTION THE PRESTRESSED GIRDER UNDERGOES AT THE TIME OF ERECTION PRIOR TO THE DIAPHRAGM OR DECK POURS. THE INITIAL DEFLECTION INCLUDES THE DEFLECTION DUE TO THE DEAD LOAD OF THE GIRDER, THE INITIAL PRESTRESSING AND THE EFFECTS OF CREEP UP TO THE TIME OF ERECTION (ASSUMED AT 60 DAYS AFTER RELEASE).
- FINAL DEFLECTION EQUALS THE DEFLECTION DUE TO THE DEAD LOAD OF THE DECK SLAB, DIAPHRAGMS, AND BARRIERS AND THE EFFECTS OF LONG TERM CREEP ON THE COMPOSITE GIRDERS.

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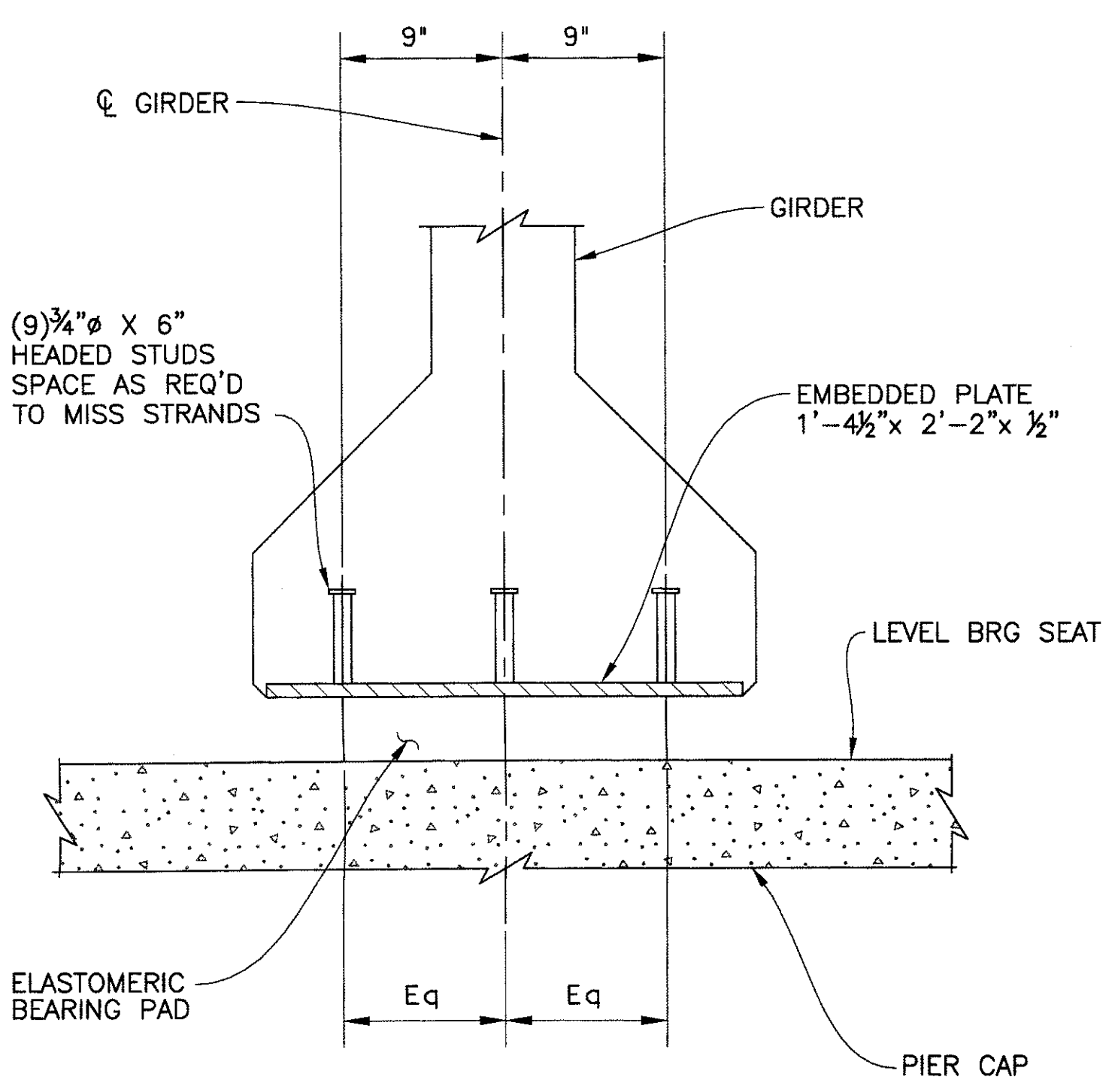
GIRDER DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293**

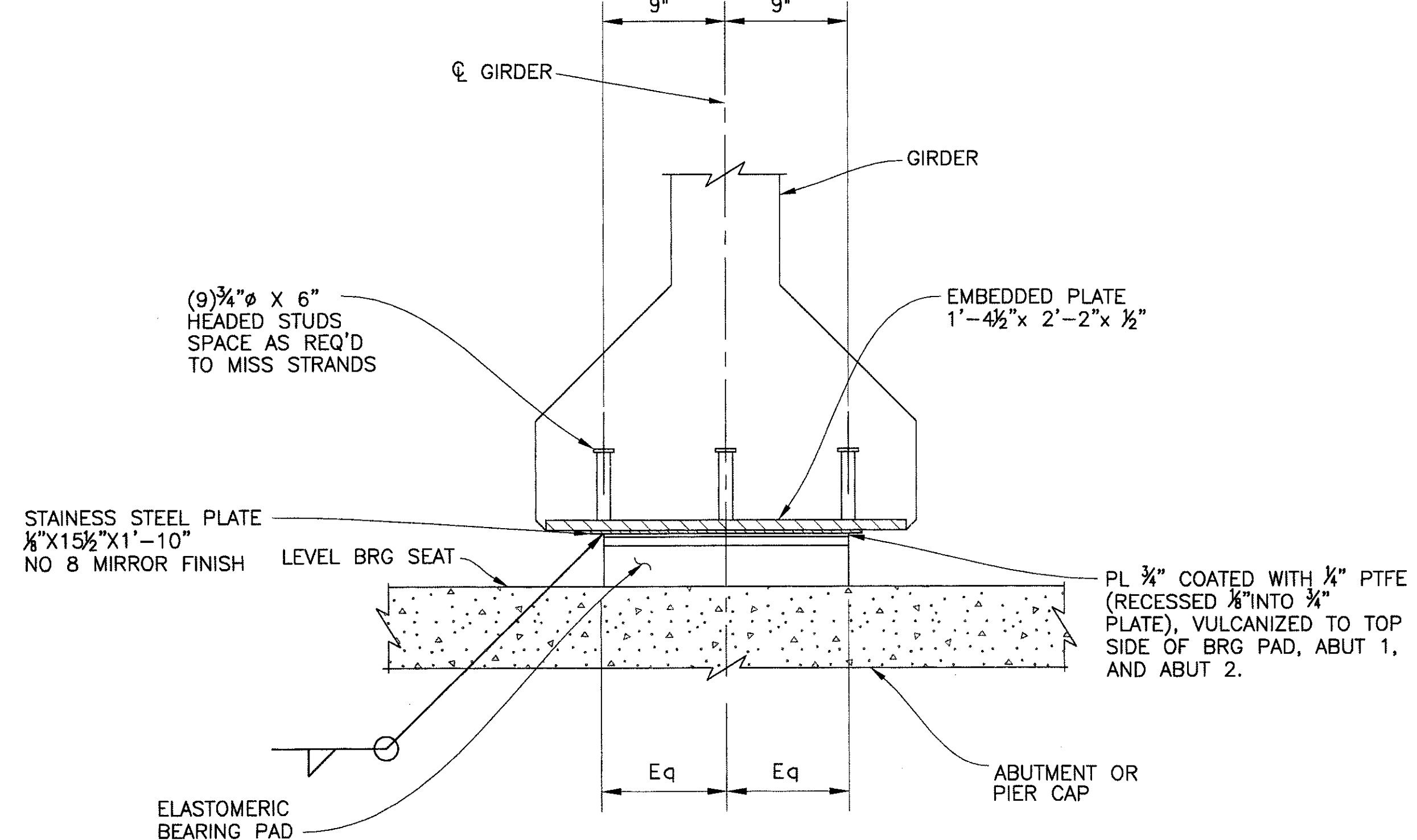
DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	156	352
DWG NO: S-1.22				

P:\2009005\CADD\Civil\Sheets\Structures\21-Apache girder.dwg - plotted by James Rojas at 12/21/2009 8:57:05 AM

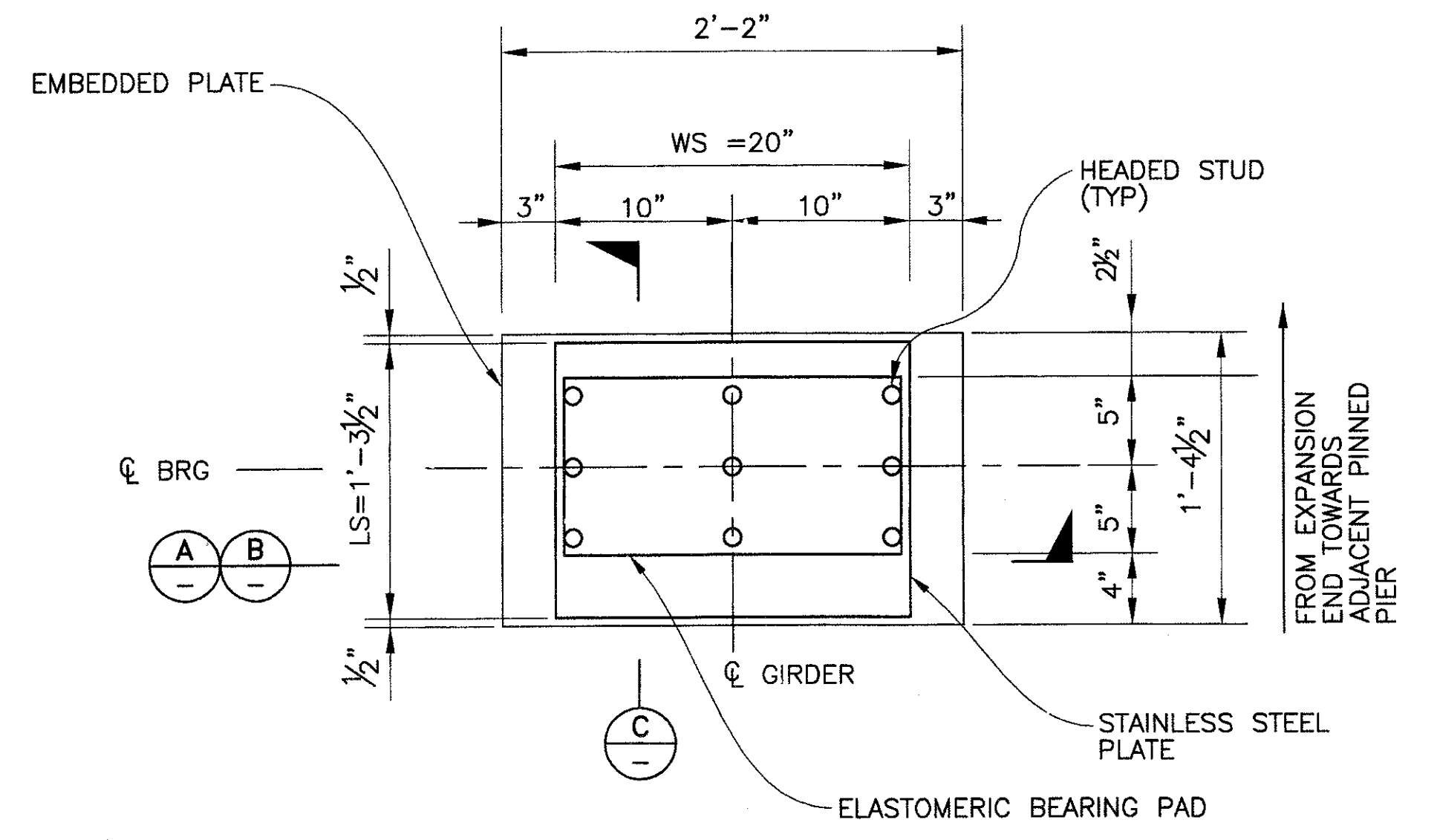
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



SECTION WITHOUT SLIDING SURFACE (A)
SCALE: 1 1/2" = 1'-0"



SECTION WITH SLIDING SURFACE (B)
SCALE: 1 1/2" = 1'-0"

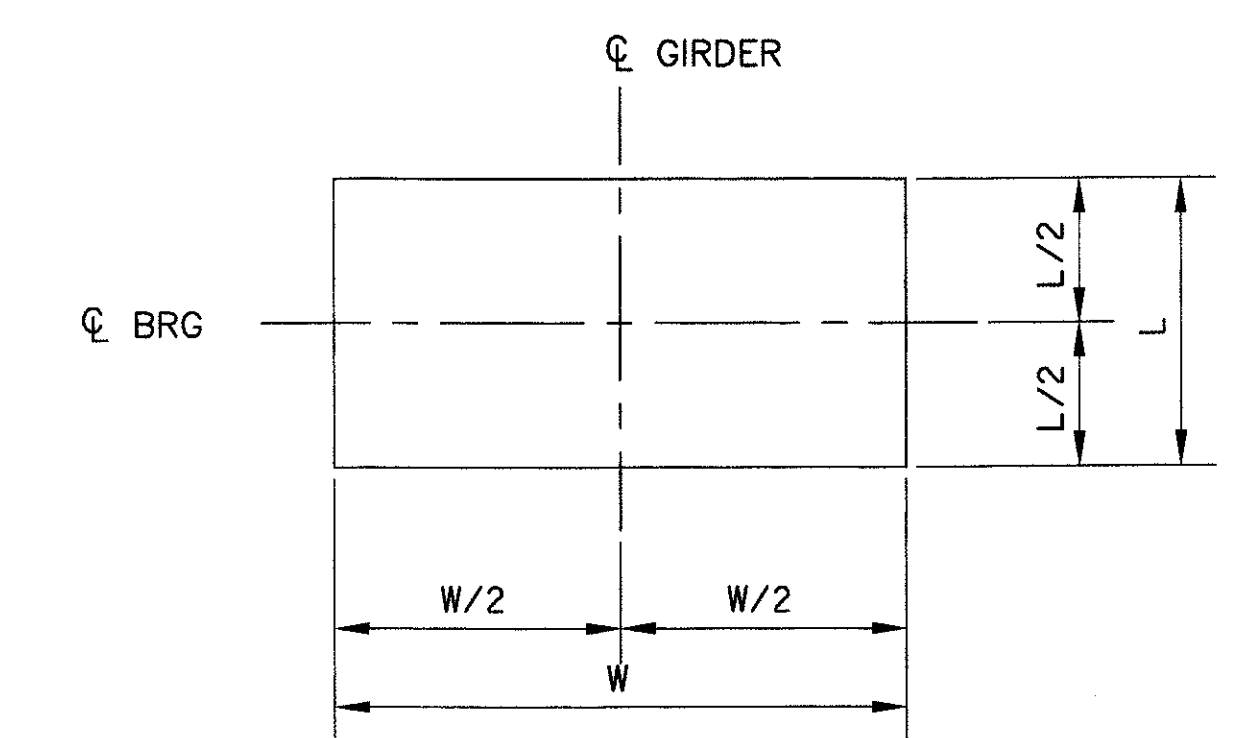


PLAN (C)
SCALE: 1 1/2" = 1'-0"

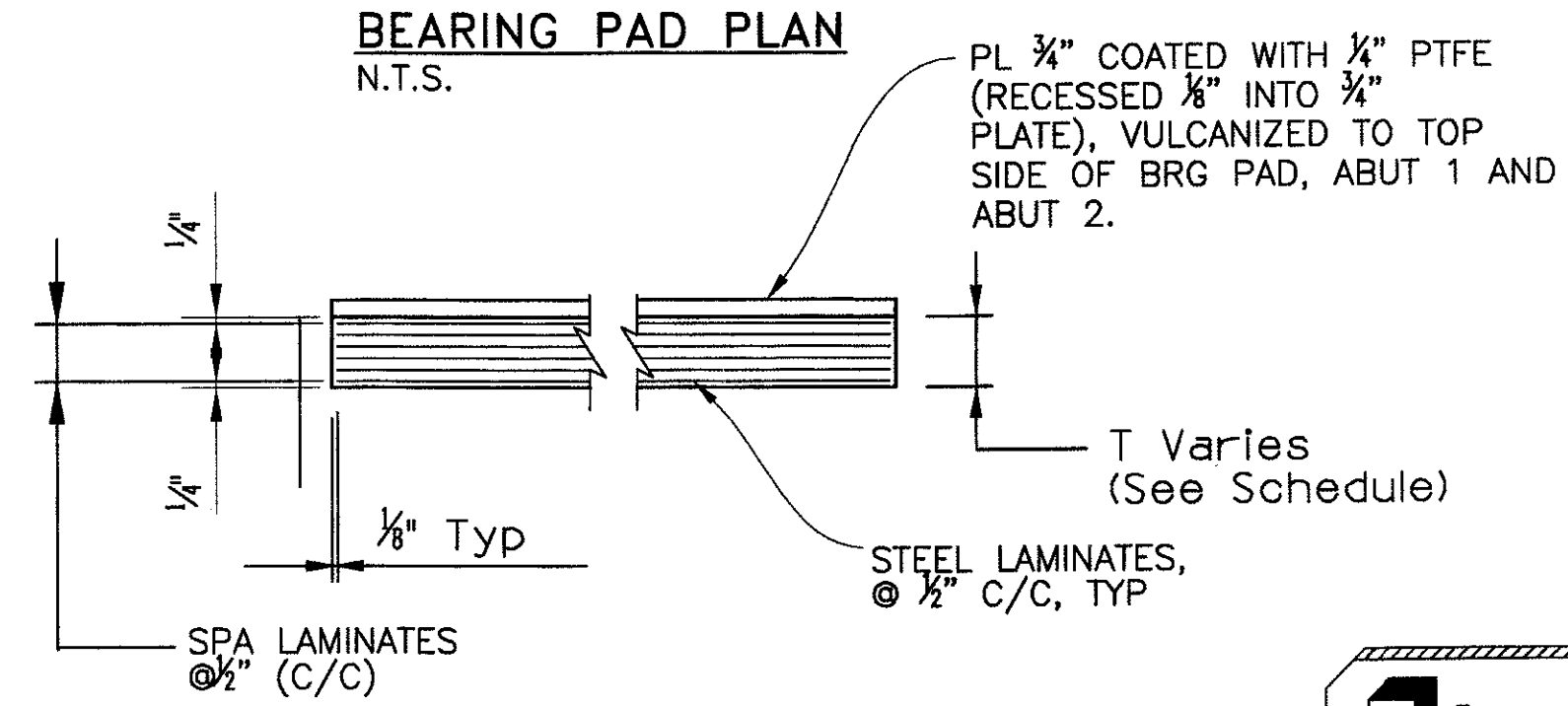
NOTES:

- BEARING PAD DESIGN PARAMETERS
 DESIGN LOAD SEE SCHEDULE
 DESIGN METHOD A
 LOW TEMPERATURE ZONE A
 ELASTOMER GRADE 0
 HARDNESS 55 (SHORE A)
 SHEAR MODULUS 130 PSI (@72°F)
- ELASTOMERIC BEARING PAD SHALL BE STEEL LAMINATED NEOPRENE PADS. STEEL LAMINATES SHALL BE 14-GA ROLLED MILD STEEL PER ASTM A1011, GRADE 36.
- EMBEDDED PLATES SHALL BE PER ASTM A588 OR ASTM A242. ALL EXPOSED STEEL SURFACES SHALL BE PAINTED WITH ONE SHOP COAT OF AN APPROVED INORGANIC ZINC PRIMER. DO NOT PAINT PRIOR TO COMPLETION OF WELDING.
- THE STAINLESS STEEL PLATE SHALL CONFORM TO ASTM A240, TYPE 304 WITH A SURFACE FINISH NOT LESS THAN NO.8 MIRROR FINISH.
- THE POLYTETRAFLUORETHYLENE (PTFE) SHALL CONFORM TO ASTM D4894. THE MINIMUM COEFFICIENT OF FRICTION SHALL BE 0.07 AT 1000 PSI BEARING PRESSURE AT 68°F.
- HEADED STUDS SHALL BE PER ASTM A108 AND SHALL BE WELDED PER AWS D1.5.
- BEARING PADS SHALL CONFORM TO THE ADOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

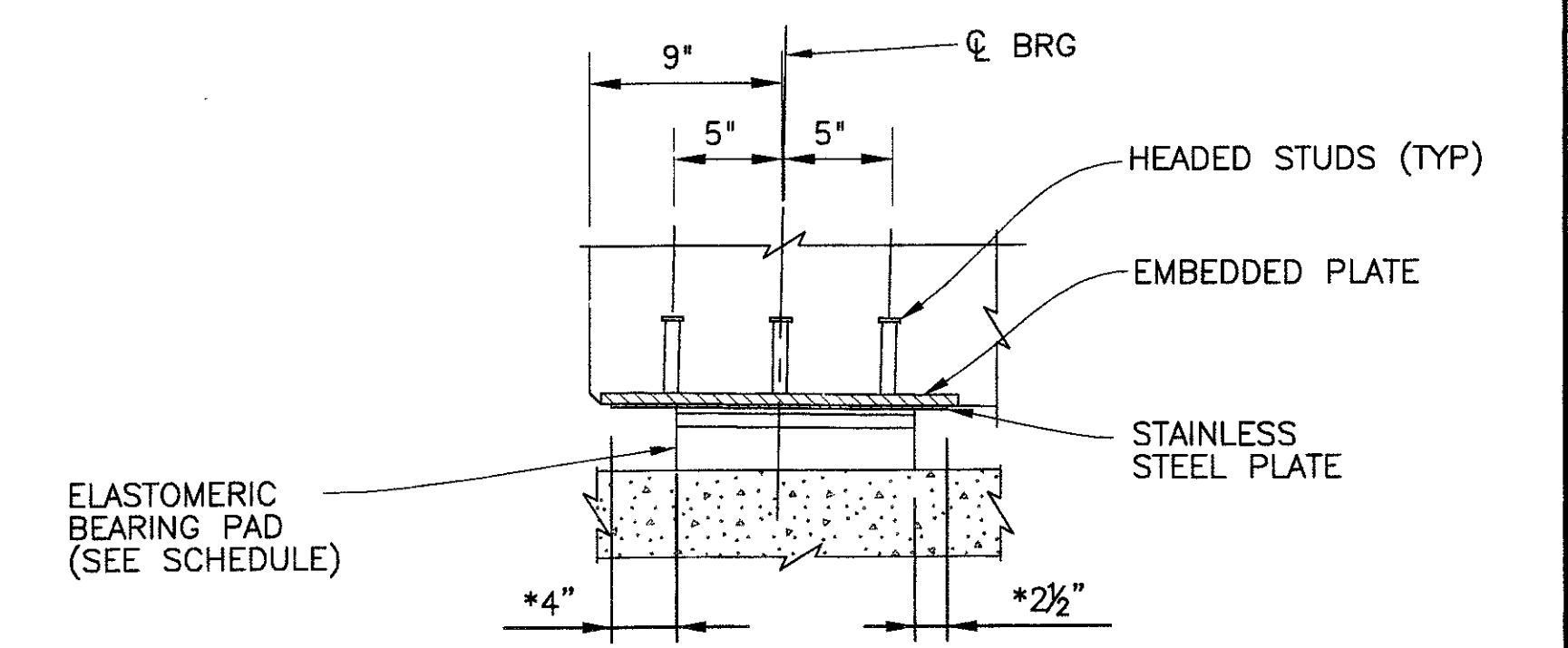
LOCATION	ABUT / PIER	SPAN	EXP. OR PINNED	DESIGN LOAD (KIPS)	L (IN)	W (IN)	T (IN)	NO. STEEL LAYERS	IS PTFE REQ'D	STAINLESS STEEL PLATE	
										LS (IN)	WS (IN)
A1	1	E	F	209	10	24	3	6	YES	15.5	20
P1	1	P	P	228	10	24	2	4	NO	N/A	N/A
P1	2	P	P	222	10	24	2	4	NO	N/A	N/A
P2	2	P	P	218	10	24	2	4	NO	N/A	N/A
P2	3	P	P	195	10	24	2	4	NO	N/A	N/A
A2	3	E	F	179	10	24	3	6	YES	15.5	20



BEARING PAD PLAN (N.T.S.)



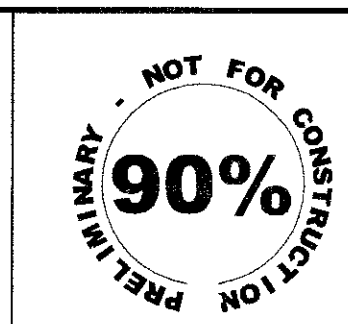
BEARING PAD SECTION
SCALE: 1 1/2" = 1'-0"



SLIDE BEARING SECTION (C)
SCALE: 1 1/2" = 1'-0"

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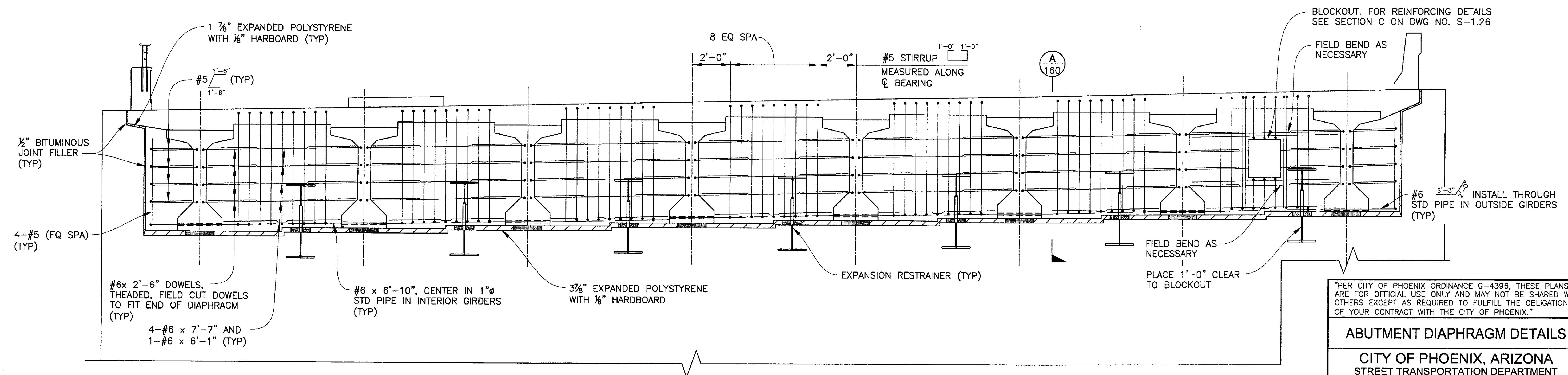
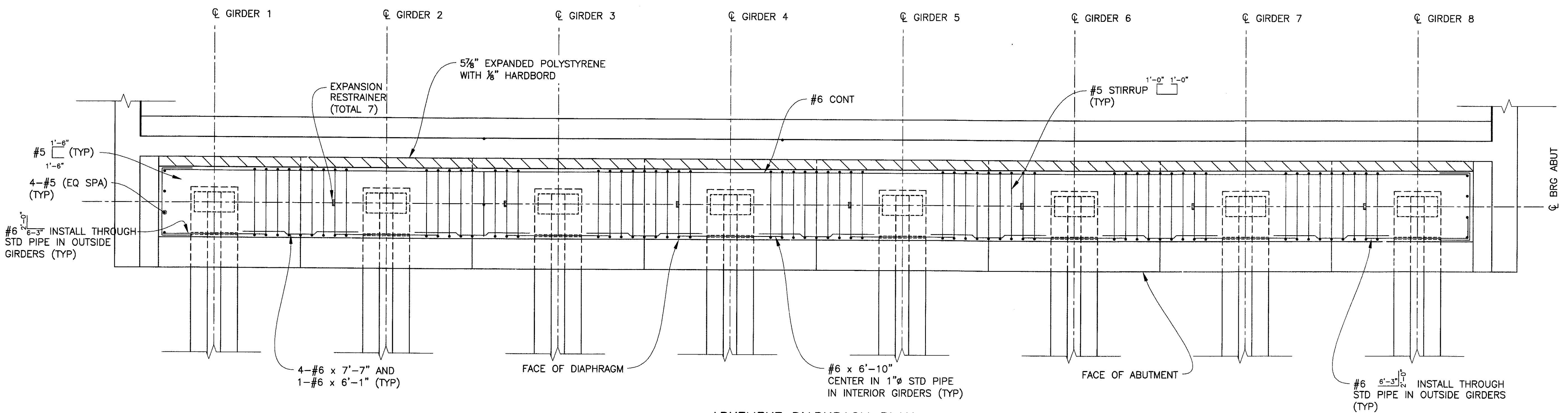
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."
BEARING PAD DETAILS
CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT
SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293
 DR: JRR DES: RMD CK: SEO SHEET TOTAL
 DATE: 12/09 DATE: 12/09 DATE: 12/09 NO: SHEETS
 DWG NO: S-1.23 157 352



F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	158	352
DES: RMD		DR: JRR	CK: SEO	DATE: 12/09

PREMIER
ENGINEERING CORPORATION
6437 W. CHANDLER BLVD., SUITE 1
CHANDLER, AZ 85226; 480-829-6000
CONSULTING ENGINEER

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

ABUTMENT DIAPHRAGM DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
**SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293**

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DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	158	352
DWG NO: S-1.24			158	352

PL: 20080033\0000\Civil\Sheets\Structural\122- Apache Abutments.dwg -- plotted by James Rojas at 12/21/2009 8:57:15 AM
 plotscale: 1:1 -- title: 0:0000 --

PRELIMINARY - NOT FOR CONSTRUCTION
90%

F.H.W.A. REGION 9	STATE ARIZ.	PROJ. NO. ST85100293	NO. 159	TOTAL 352
DES: RMD		DR: JRR	CK: SEO	DATE: 12/09
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				
CONSULTING ENGINEER				

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

4-#5 (MATCH INSERT LOCATIONS AND PLACE 2" CLR FROM END OF PIER DIAPHRAGM)

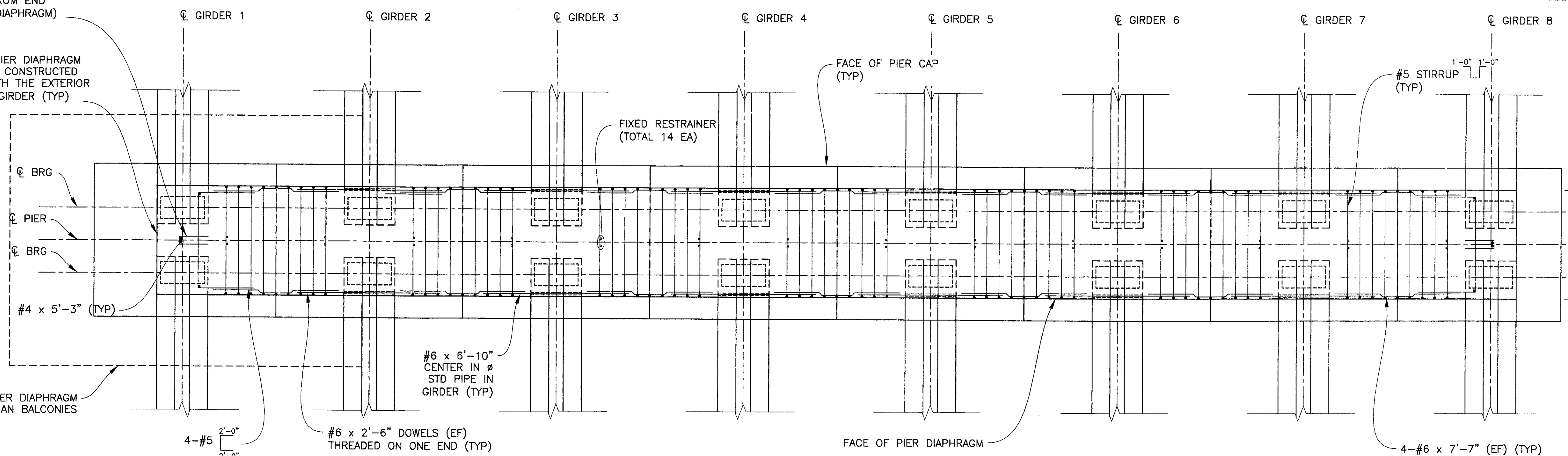
END OF PIER DIAPHRAGM SHALL BE CONSTRUCTED FLUSH WITH THE EXTERIOR FACE OF GIRDER (TYP)

MODIFIED PIER DIAPHRAGM AT PEDESTRIAN BALCONIES

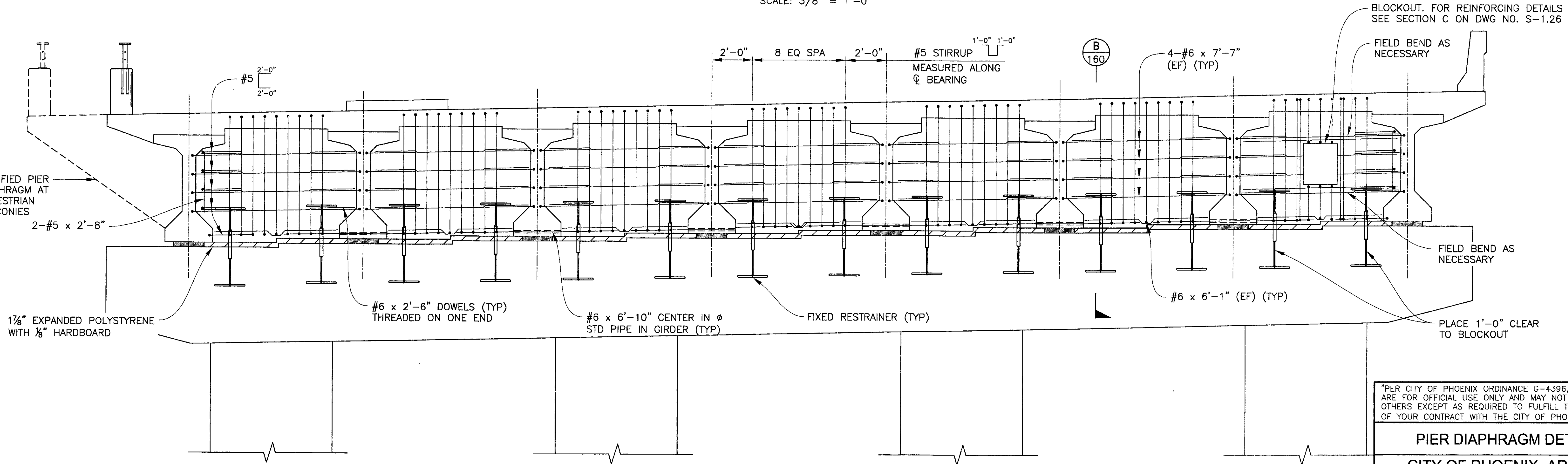
MODIFIED PIER DIAPHRAGM AT PEDESTRIAN BALCONIES

1 1/4" EXPANDED POLYSTYRENE WITH 1/8" HARDBOARD

NOTE:
SEE PEDESTRIAN BALCONY DETAILS FOR PIER DIAPHRAGM MODIFICATION DETAILS.



PIER DIAPHRAGM PLAN
SCALE: 3/8" = 1'-0"



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

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

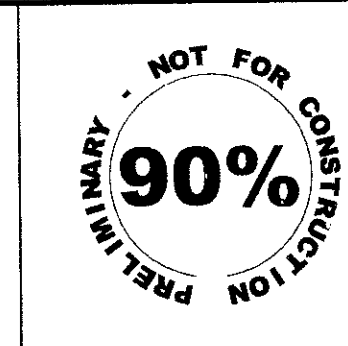
PIER DIAPHRAGM DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
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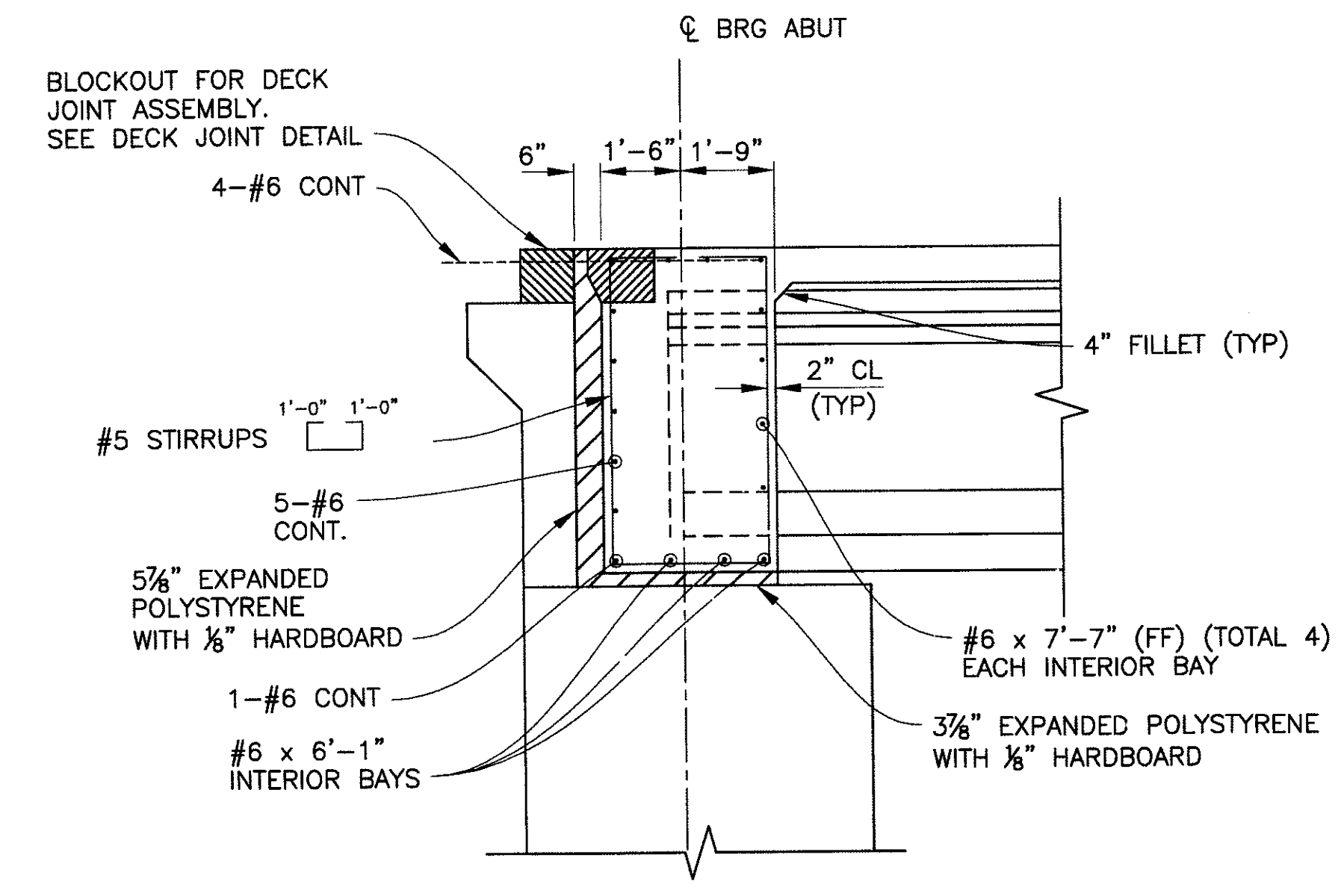
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DATE: 12/09	DATE: 12/09	DATE: 12/09	159	352
DWG NO: S-1.25			159	352

P:\200805\000\000\Sheets\Structures\125-Apache Pier Diaphragm.dwg - plotted by James Rojas at 12/21/2009 8:57:20 AM



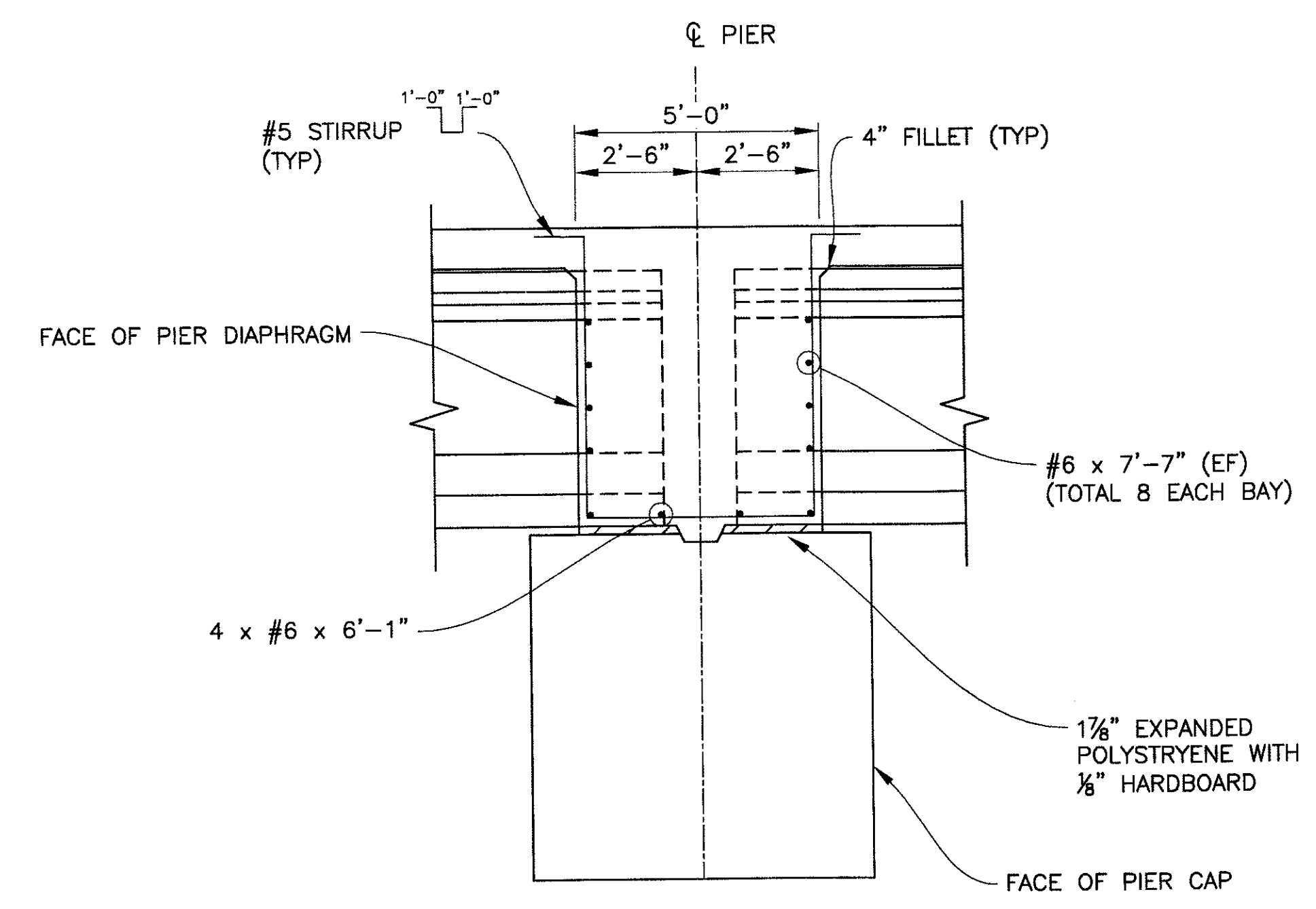
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	160	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				
			CONSULTING ENGINEER	
DES: RMD	DR: JRR	CK: SEO	DATE: 12/09	

REVISION BY CITY OF PHOENIX	REV BY	CHK BY	DATE
DESCRIPTION			
NO.			
REVISION BY CITY OF PHOENIX	REV BY	CHK BY	DATE
DESCRIPTION			
NO.			
REVISION BY CITY OF PHOENIX	REV BY	CHK BY	DATE
DESCRIPTION			
NO.			



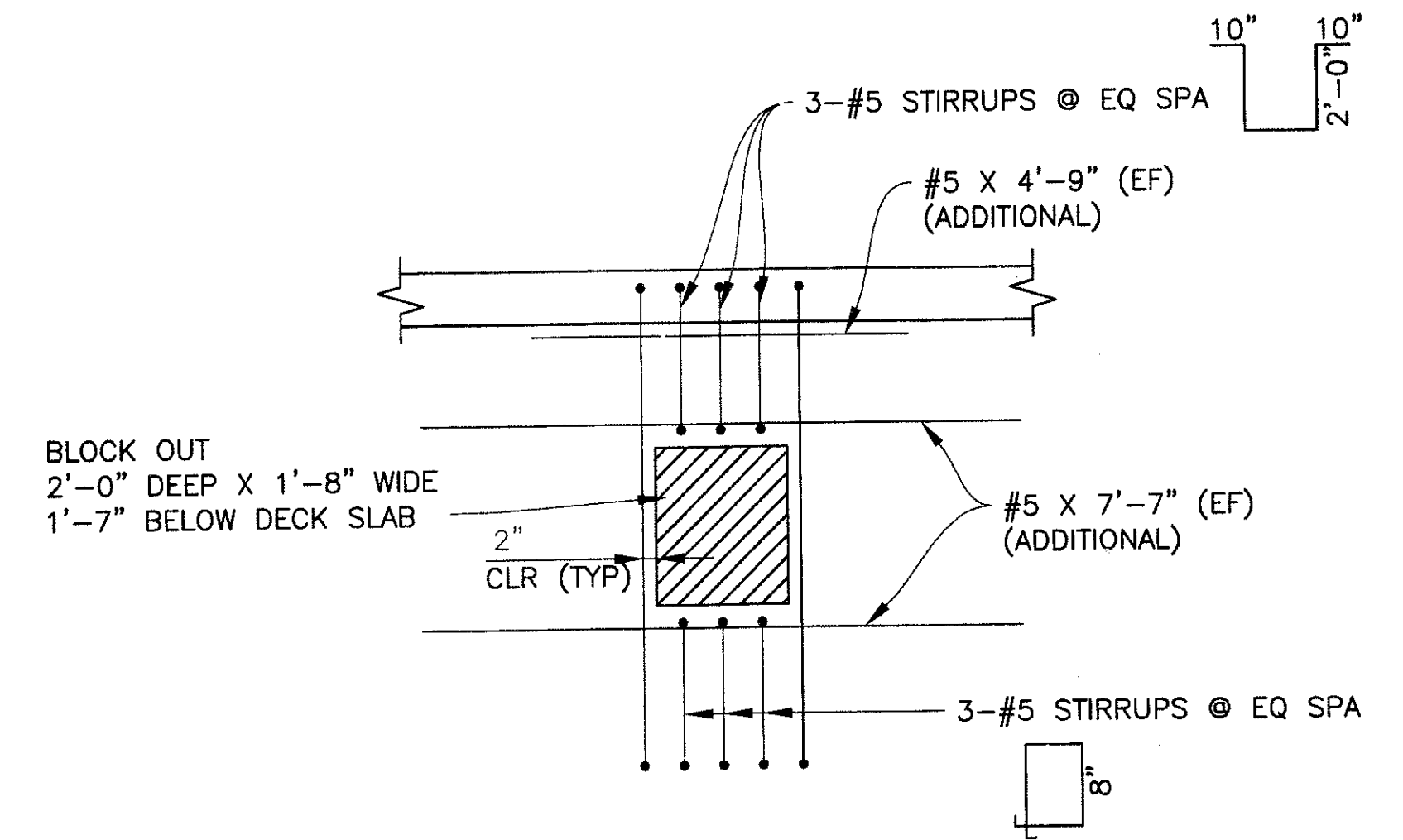
NOTE:
EXPANSION RESTRAINER
NOT SHOWN FOR CLARITY

SECTION A
SCALE: 3/8"=1'-0"
158

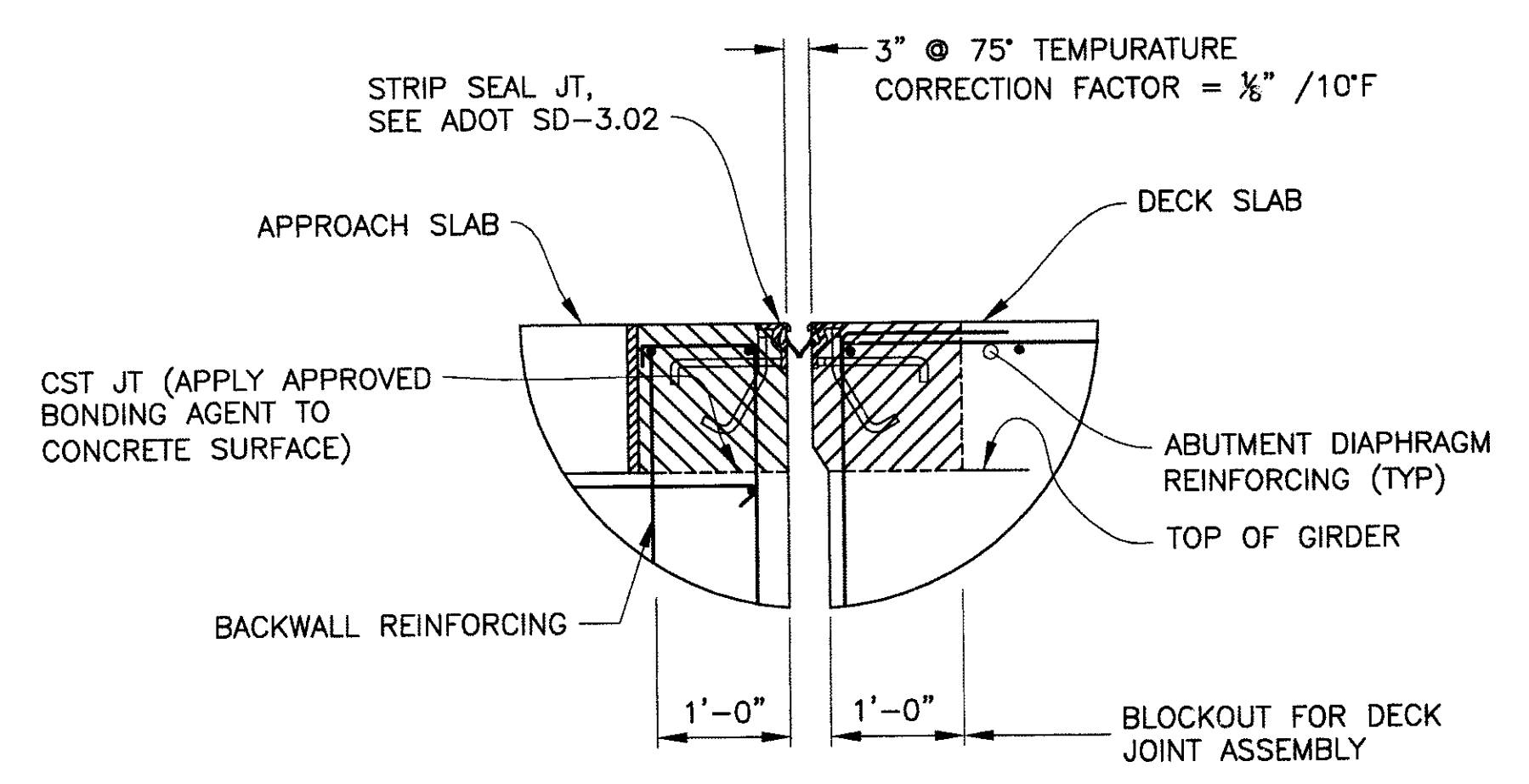


NOTES:
1. FIXED RESTRAINER NOT SHOWN FOR CLARITY.
2. SEE PEDESTRIAN BALCONY DETAILS FOR PIER DIAPHRAGM MODIFICATION DETAILS AT PEDESTRIAN BALCONIES.

SECTION B
SCALE: 3/8"=1'-0"
159



REINFORCEMENT AT BLOCK OUT
SCALE: N.T.S.
C 151 C 158 C 159



DECK JOINT DETAIL
N.T.S.

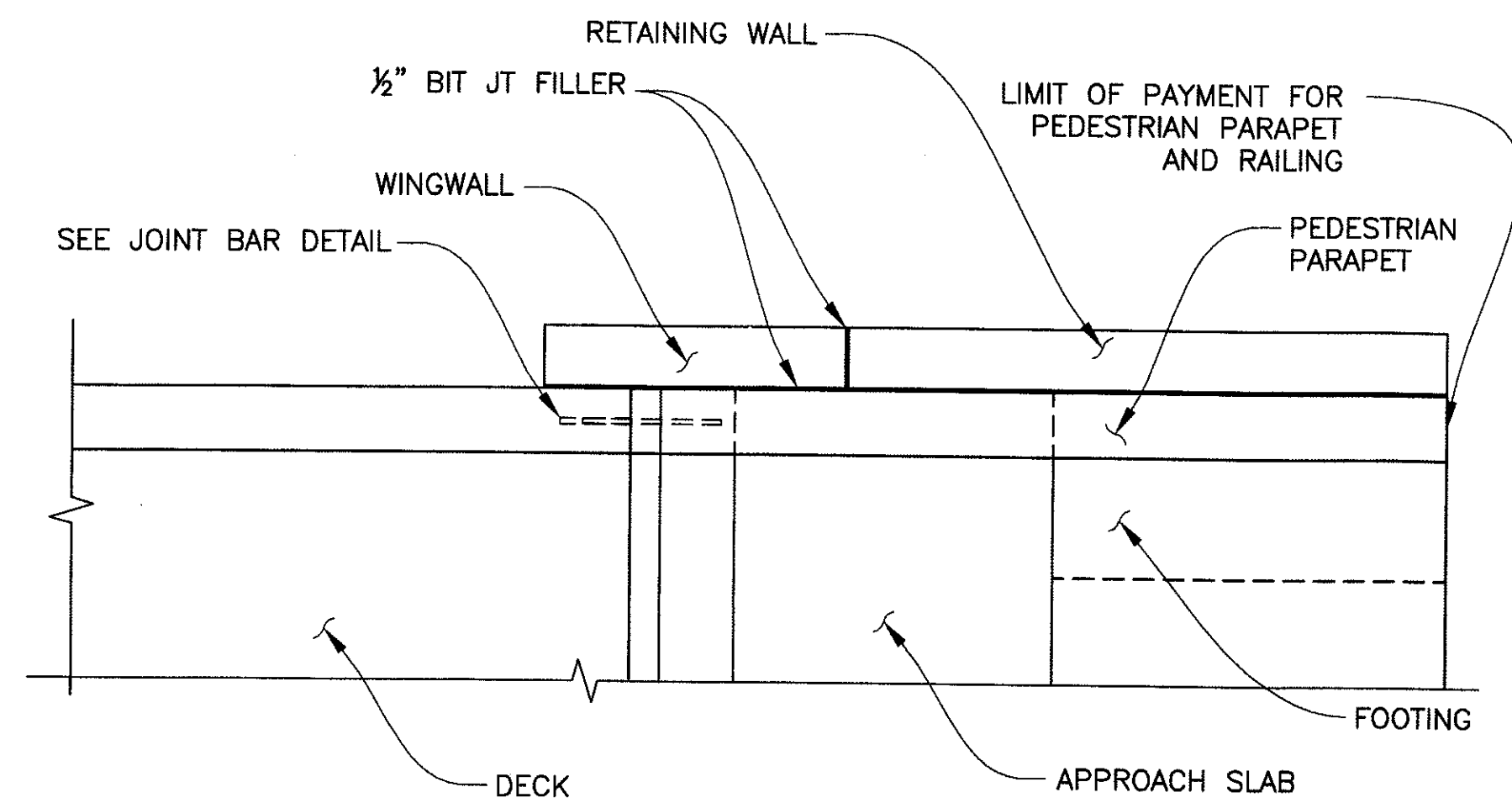
NOTE:
THE CONTRACTOR SHALL TAKE DUE CARE IN THE PLACEMENT OF THE CONCRETE UNDER THE JOINT ANGLES TO ENSURE THAT PROPER CONSOLIDATION IS ACHIEVED. AFTER PLACEMENT, THE ENGINEER SHALL INSPECT THE JOINT VOIDS BY SOUNDING THE ANGLES WITH A HAMMER. ALL VOIDS SHALL BE REPAIRED BY THE CONTRACTOR BY EPOXY INJECTION.

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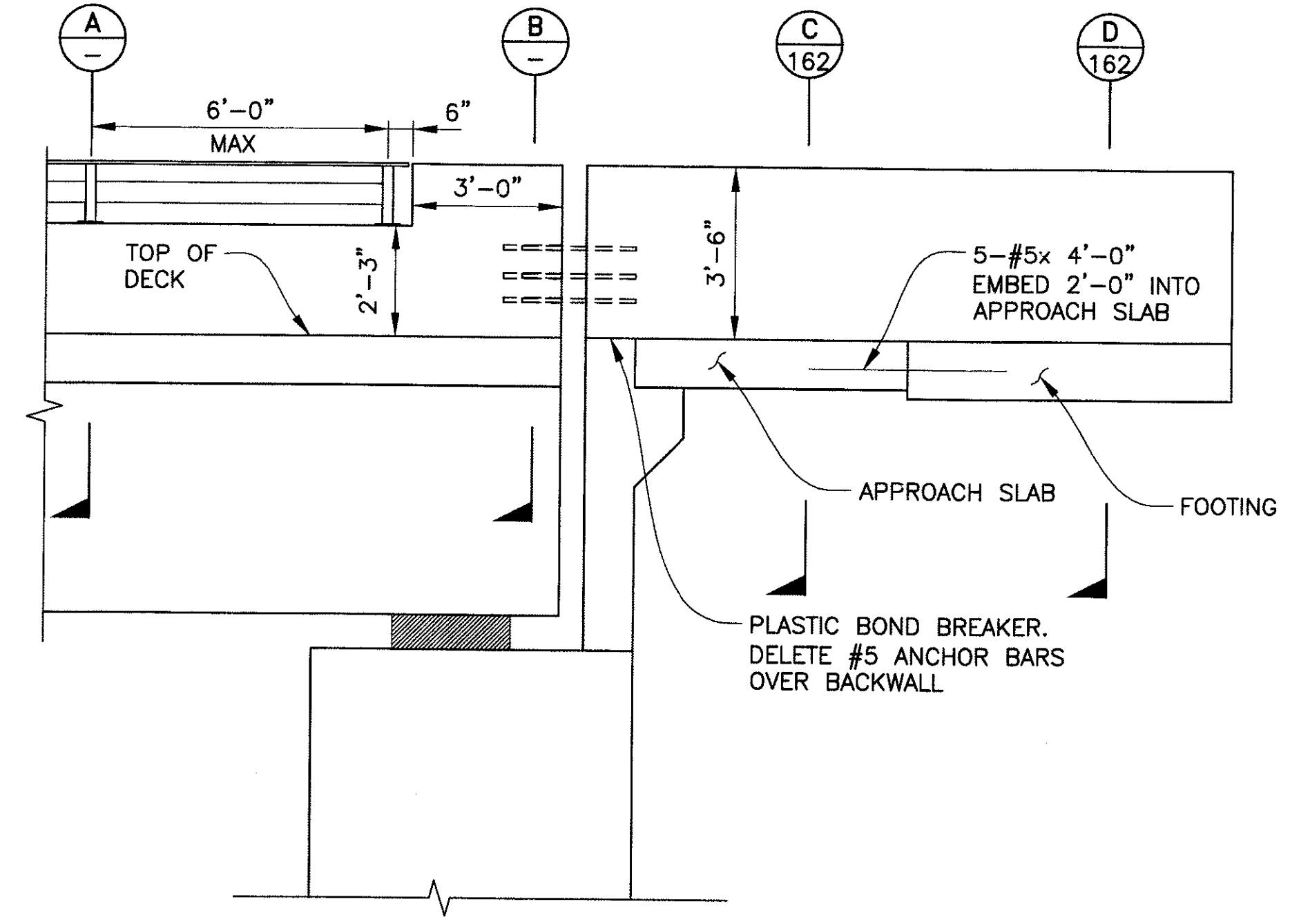
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."				
DIAPHRAGM SECTIONS				
CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT				
SONORAN BOULEVARD APACHE WASH BRIDGE ST85100293				
DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	160	352
DWG NO: S-1.26			160	352

P:\200805\CADD\Civil\Sheets\Structures\124-Apache diaphragm sections.dwg - plotted by James Rojas at 12/21/2009 8:57:26 AM

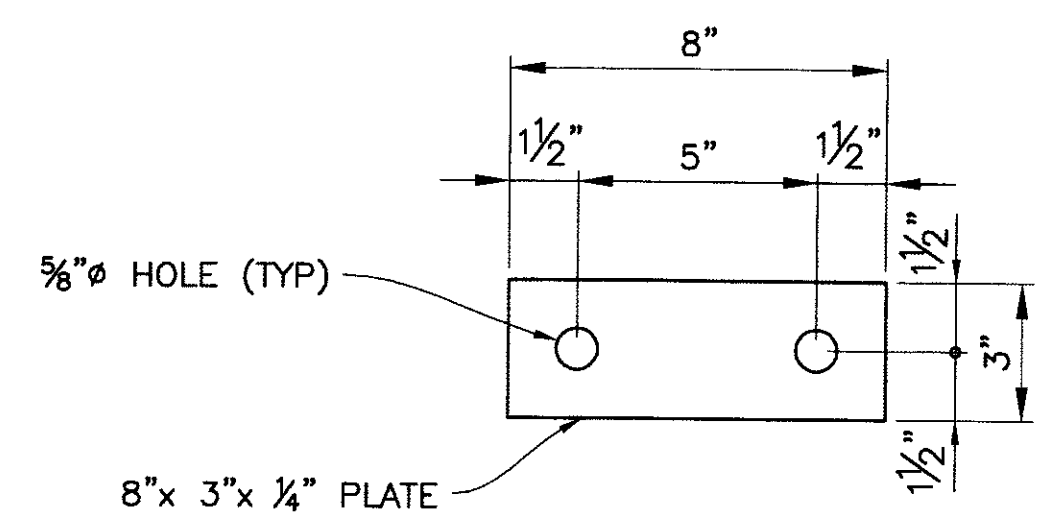
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



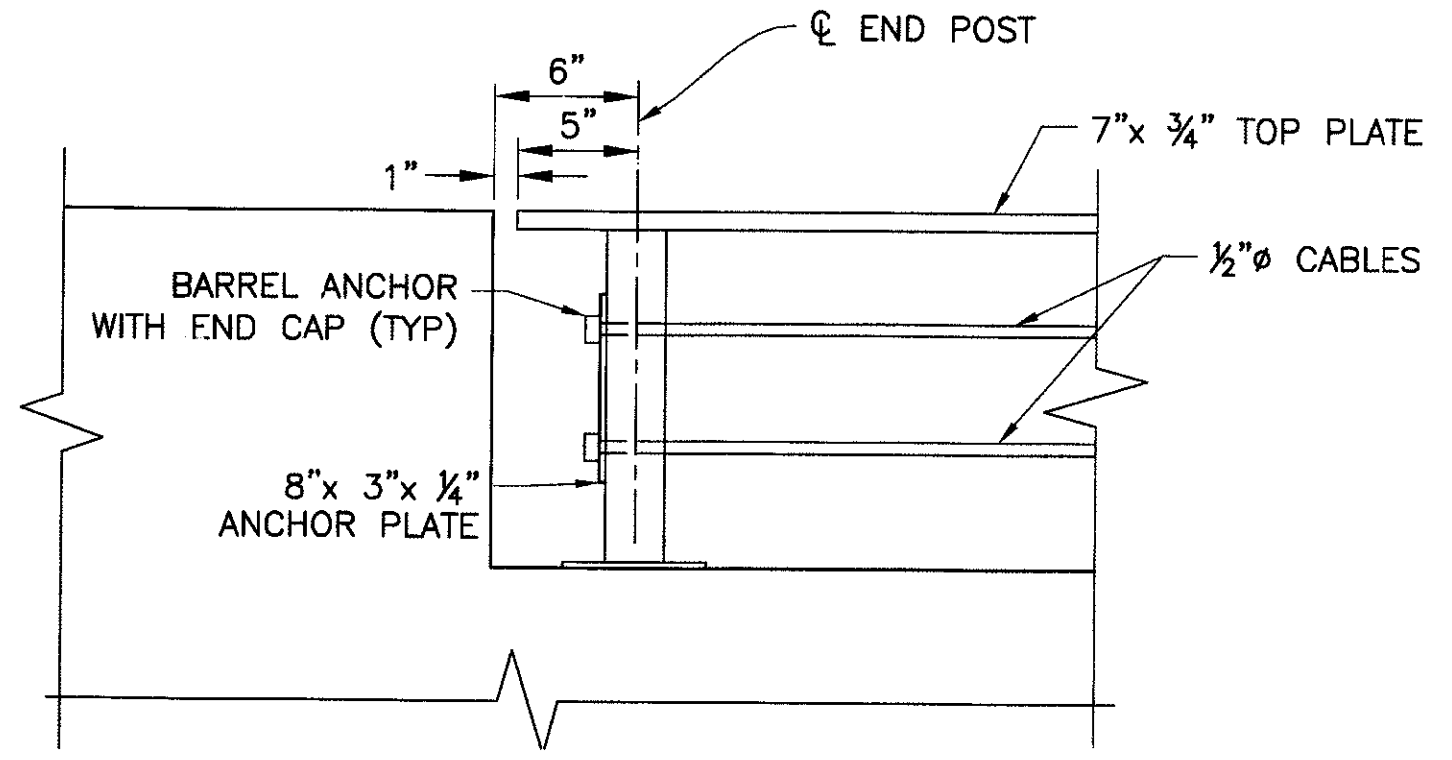
PLAN
SCALE: 3/8" = 1'-0"



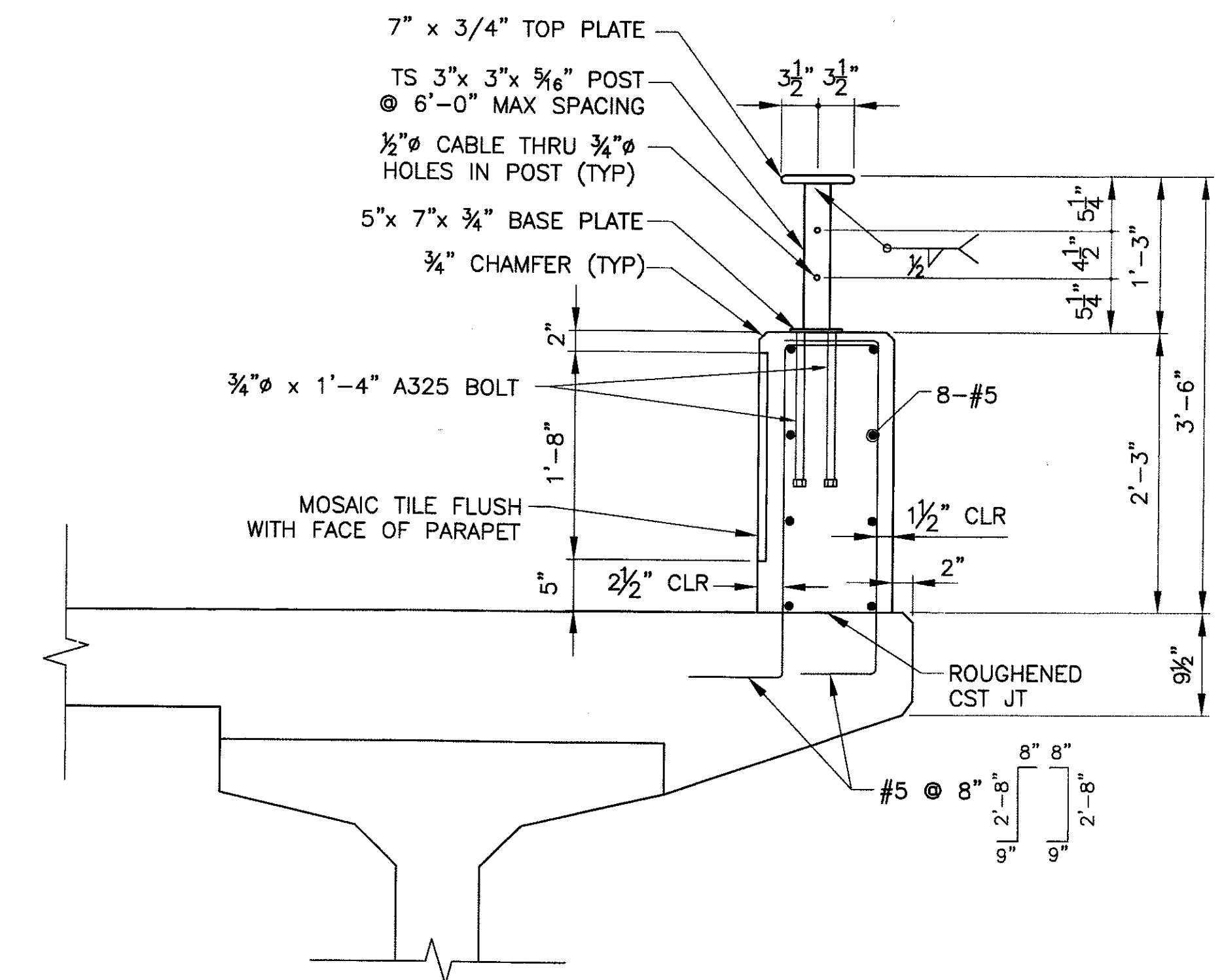
ELEVATION
SCALE: 3/8" = 1'-0"



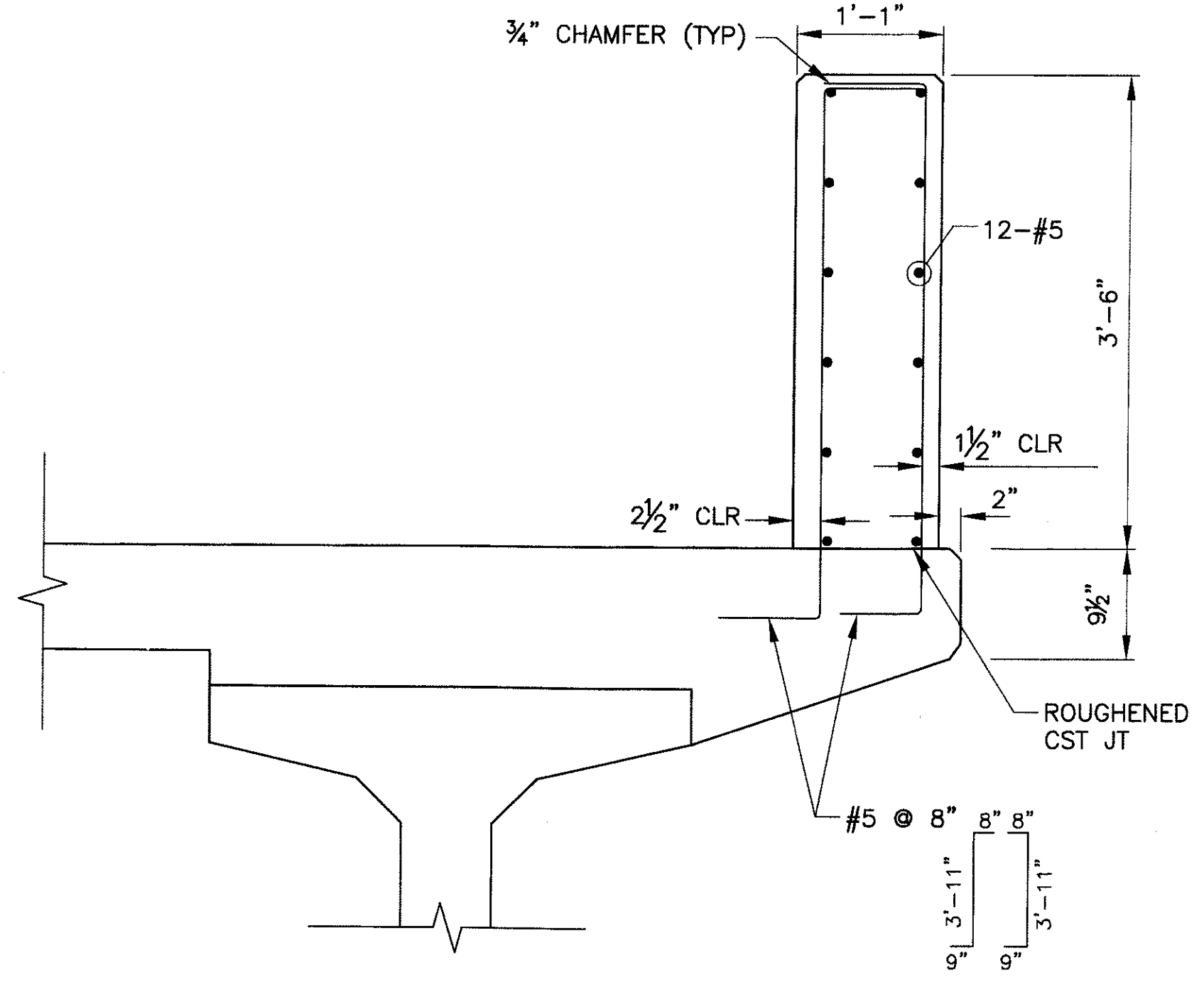
ANCHOR PLATE DETAIL
SCALE: 3" = 1'-0"



END POST DETAIL
SCALE: 1 1/2" = 1'-0"

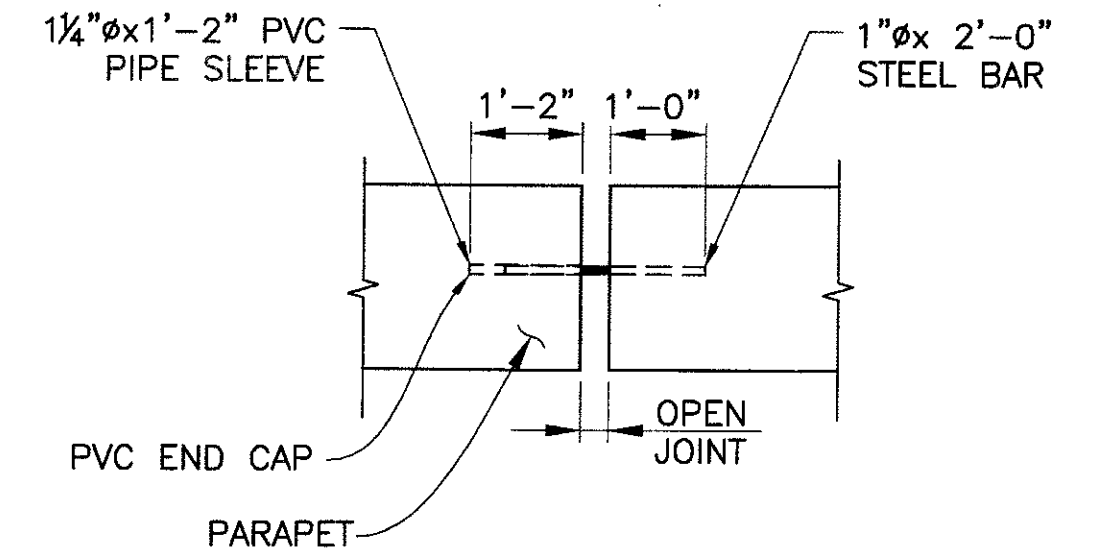


SECTION A-A
SCALE: 1" = 1'-0"



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

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	161	352
PREMIER					
ENGINEERING CORPORATION 8437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-629-6000					
DES: BAG	DR: JRR	CK: SEO	DATE: 12/09		



JOINT BAR DETAIL
SCALE: 1/2" = 1'-0"

- NOTES:**
- SEE DWG NO. S-1.32 FOR BRIDGE PLAQUE DETAILS.
 - STRUCTURAL TUBING (TS) SHALL BE ASTM A500 GRADE B. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE NOTED.
 - PEDESTRIAN PARAPET SHALL HAVE 1/2" BITUMINOUS JOINT FILLER IN OPEN JOINTS AT THE CENTERLINE OF EACH PIER. SEE OPEN JOINT AT PIER DETAIL.
 - THE EDGES OF THE 7"x 3/4" TOP PLATE SHALL BE ROUNDED ON THE TOP AND BOTTOM WITH A 3/8" RADIUS TO FORM A SMOOTH ROUNDED EDGE.
 - THE CABLES SHALL BE GALVANIZED 1/2" 7 WIRE LOW RELAXATION STRANDS.
 - THE CABLES SHALL BE PRETENSIONED TO 6,500 POUNDS PER CABLE AND ANCHORED TO THE END POSTS USING BARREL ANCHORS WITH END CAPS.
 - THE ANCHOR BOLTS SHALL BE 3/4" A325 BOLTS.
 - SEE DWG NO. S-1.28 FOR PARAPET FOOTING DETAIL.

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PEDESTRIAN PARAPET AND RAILING DETAILS 1
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD APACHE WASH BRIDGE
ST85100293

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DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 10/09	DATE: 10/09	DATE: 10/09	161	352
DWG NO: S-1.27				

P:\200805\CAD\Civil\Sheet\Structures\127-Apache Parapet and railing.dwg - plotted by James Rojas at 12/21/2009 8:57:31 AM

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F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	162	352
DES: BAG		DR: JRR	CK: SEO	DATE: 12/09

PREMIER
ENGINEERING CORPORATION
6437 W. CHANDLER BLVD., SUITE 1
CHANDLER, AZ 85226; 480-829-6000
CONSULTING ENGINEER

REVISION BY CITY OF PHOENIX

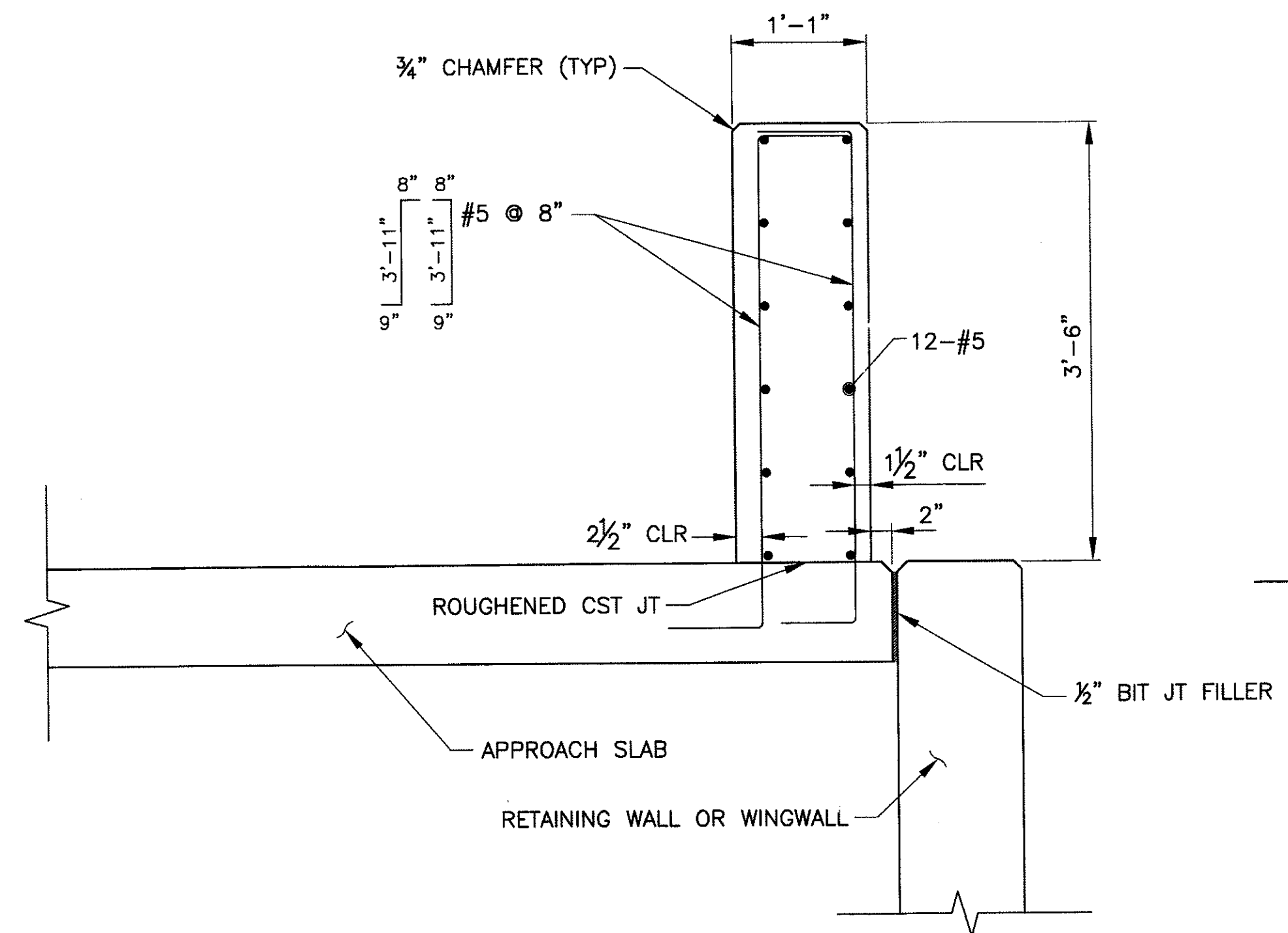
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REVISION BY CITY OF PHOENIX

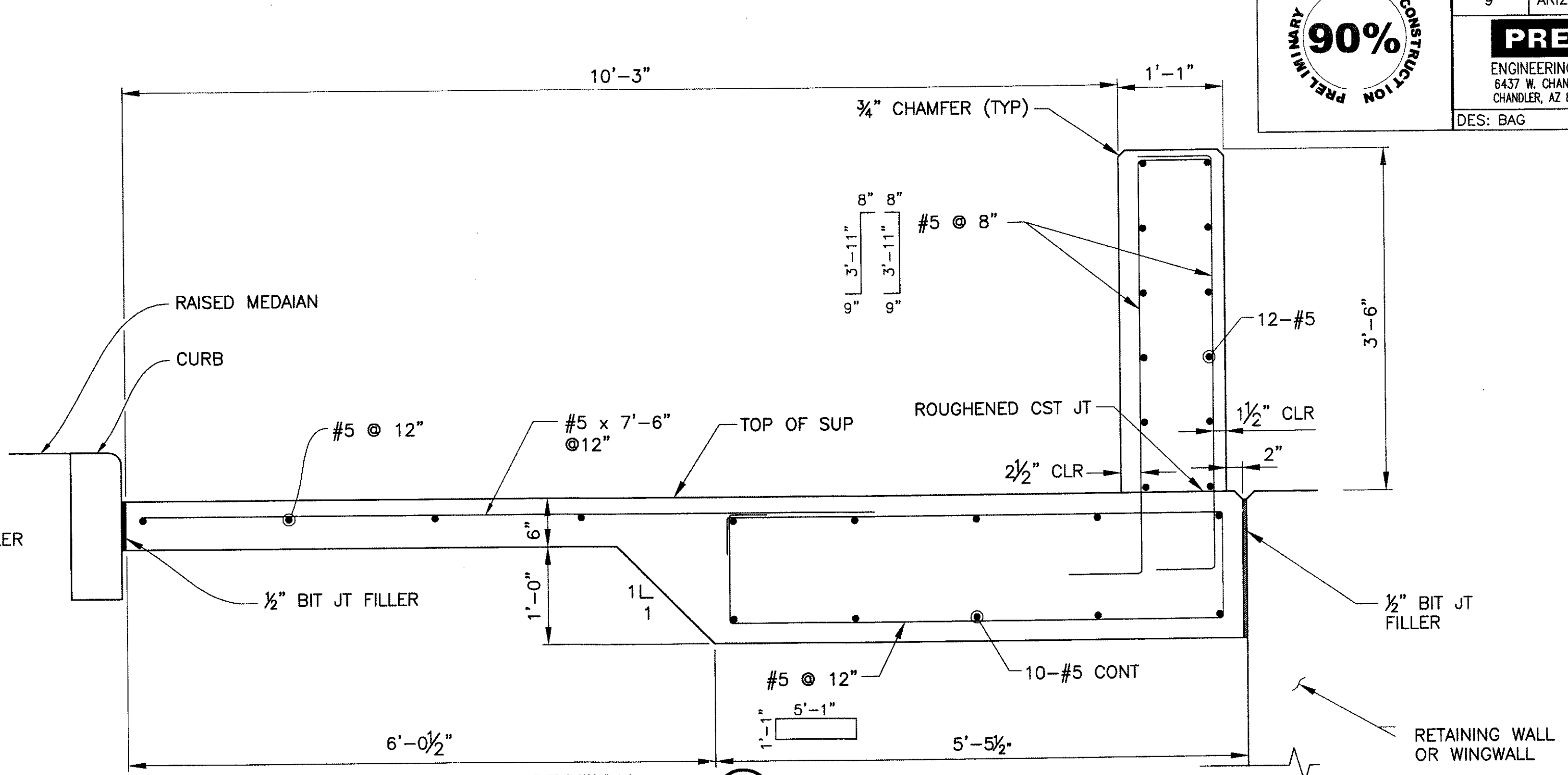
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REVISION BY CITY OF PHOENIX

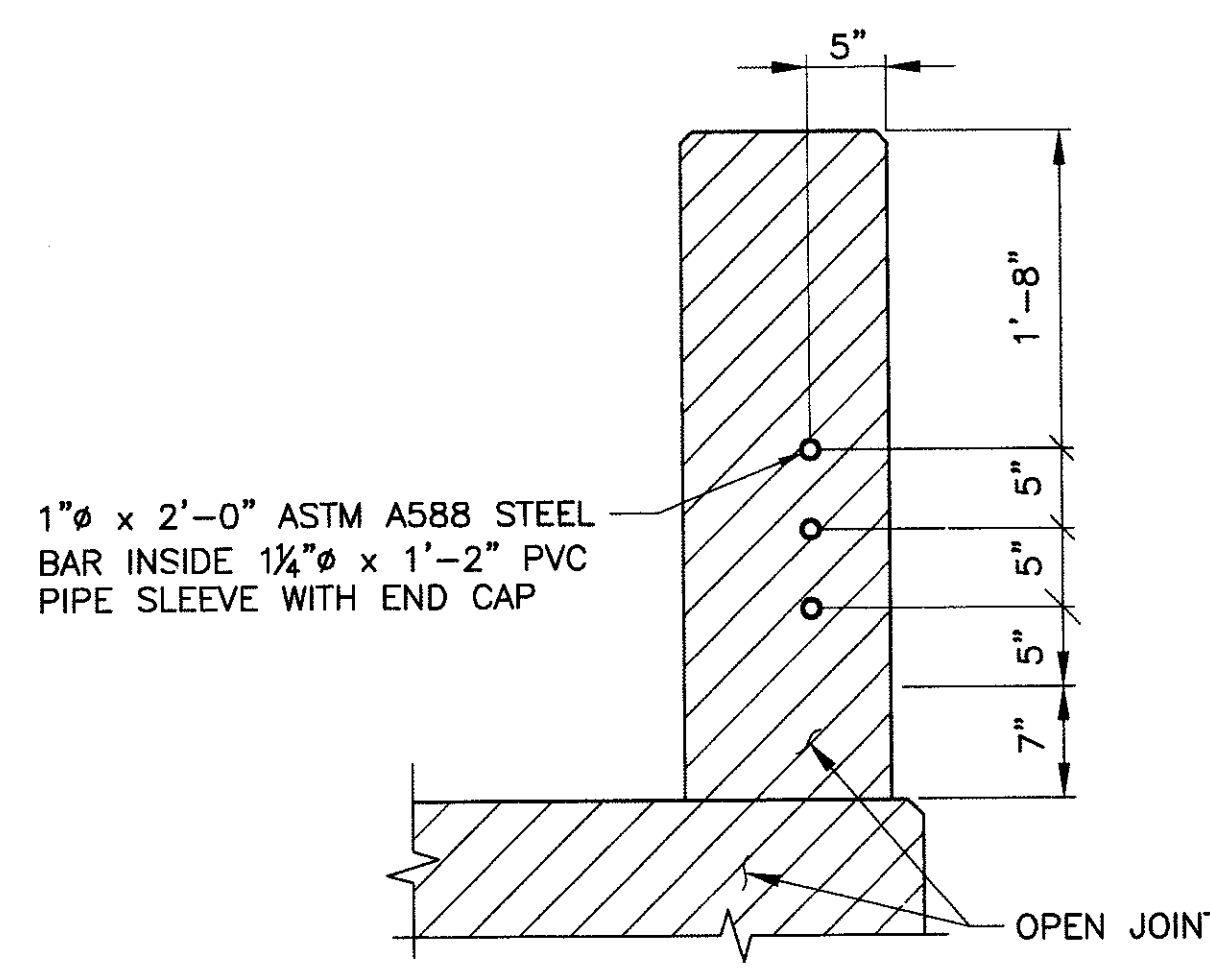
NO.	DESCRIPTION	REV BY	CHK BY	DATE



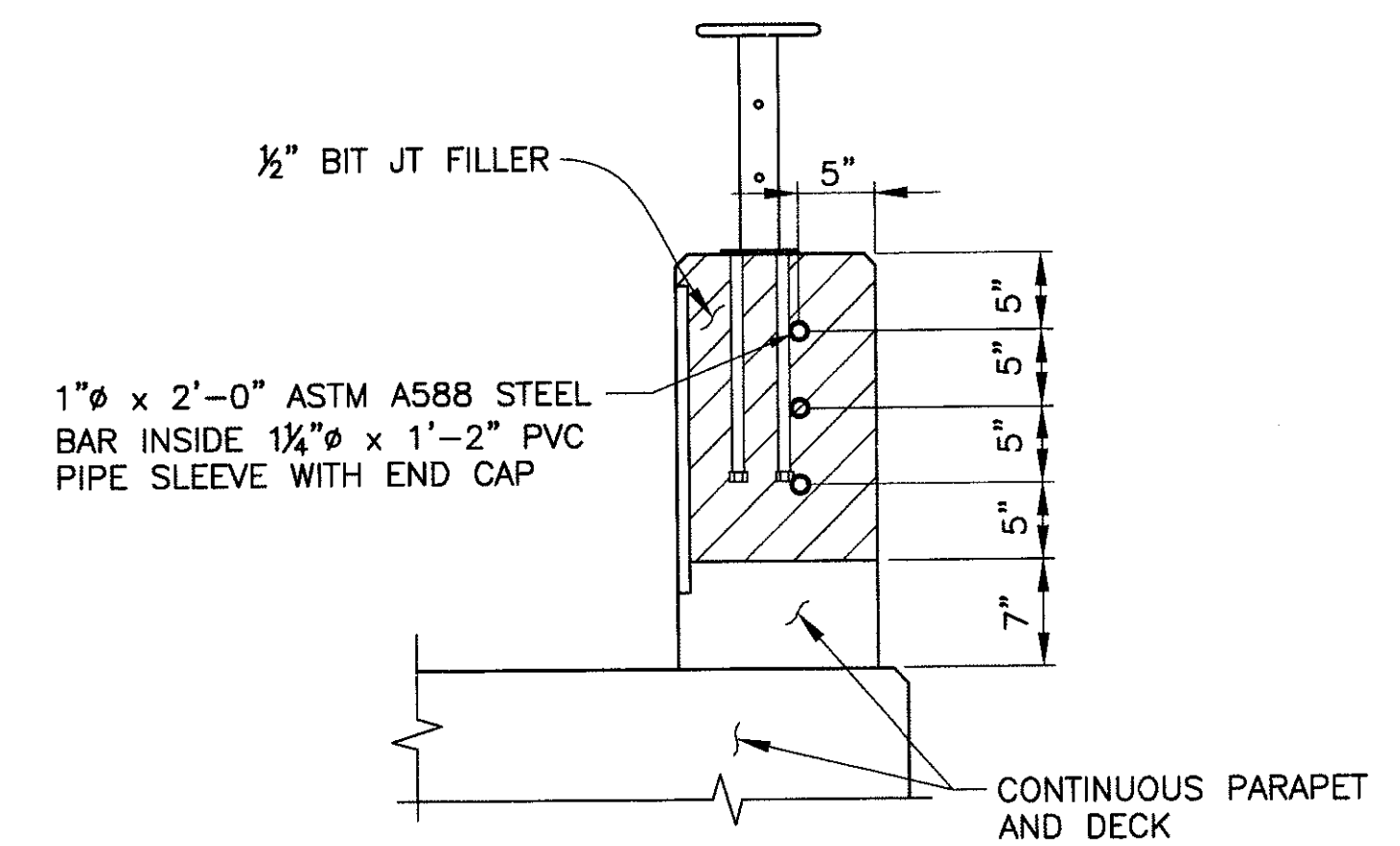
SECTION C
SCALE: 1" = 1'-0"



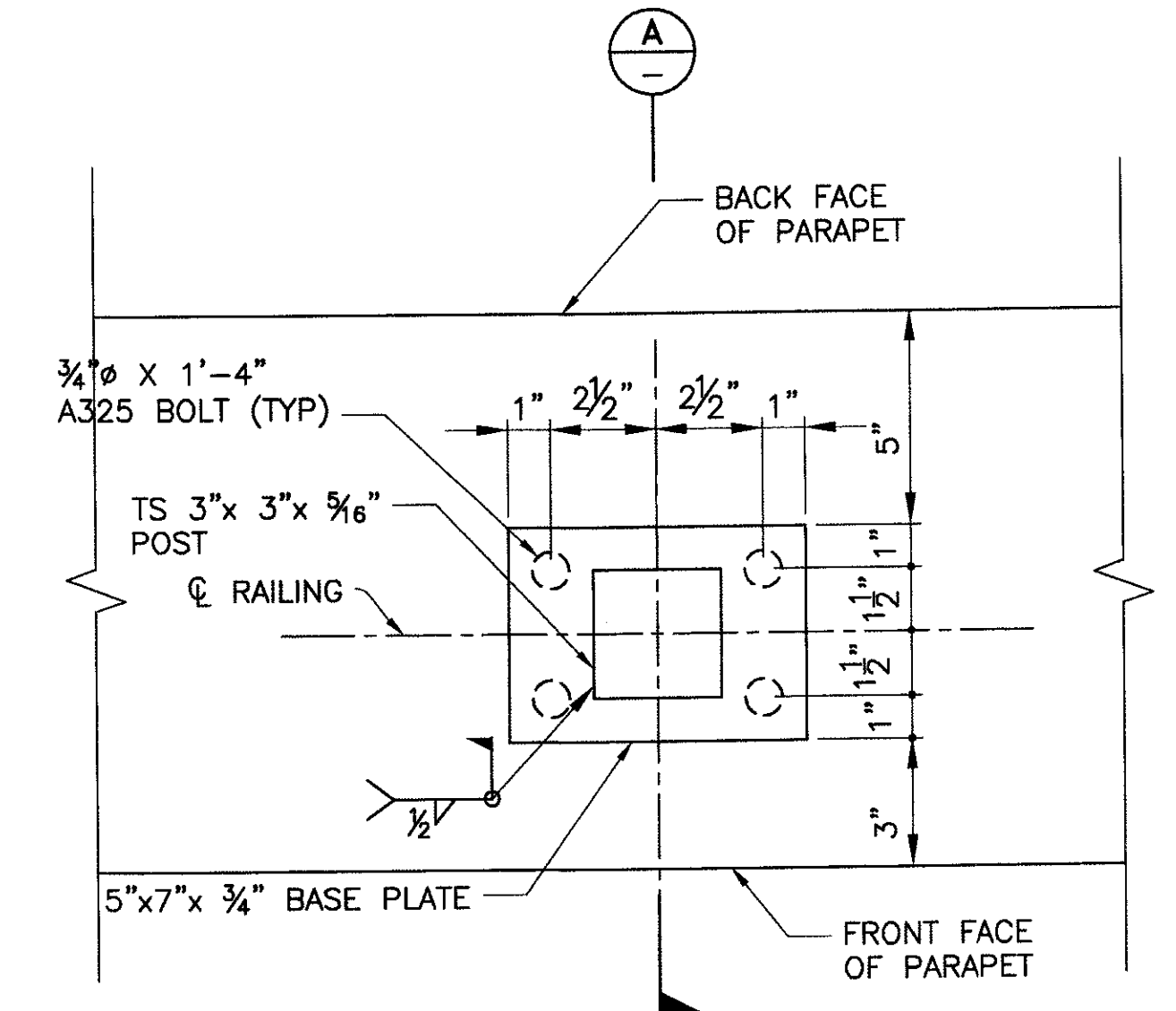
SECTION D
SCALE: 1" = 1'-0"



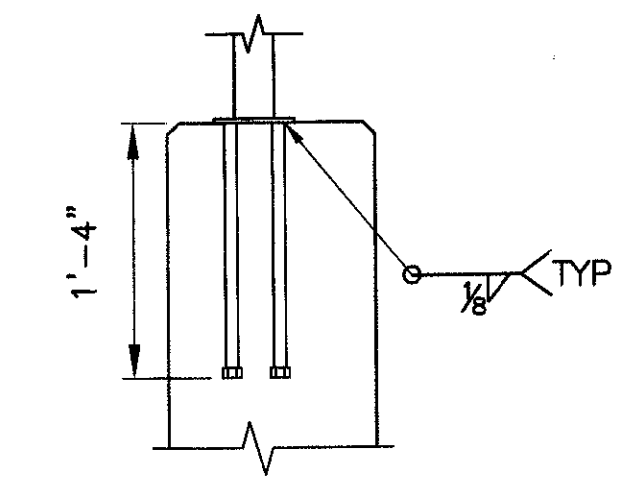
OPEN JOINT AT EXPANSION JOINTS
SCALE: 1" = 1'-0"



OPEN JOINT AT PIERS
SCALE: 1" = 1'-0"



BASE PLATE DETAIL
SCALE: 3" = 1'-0"



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

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

PEDESTRIAN PARAPET AND RAILING DETAILS 2
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293**

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(602) 263-1100
Blue Stake Center

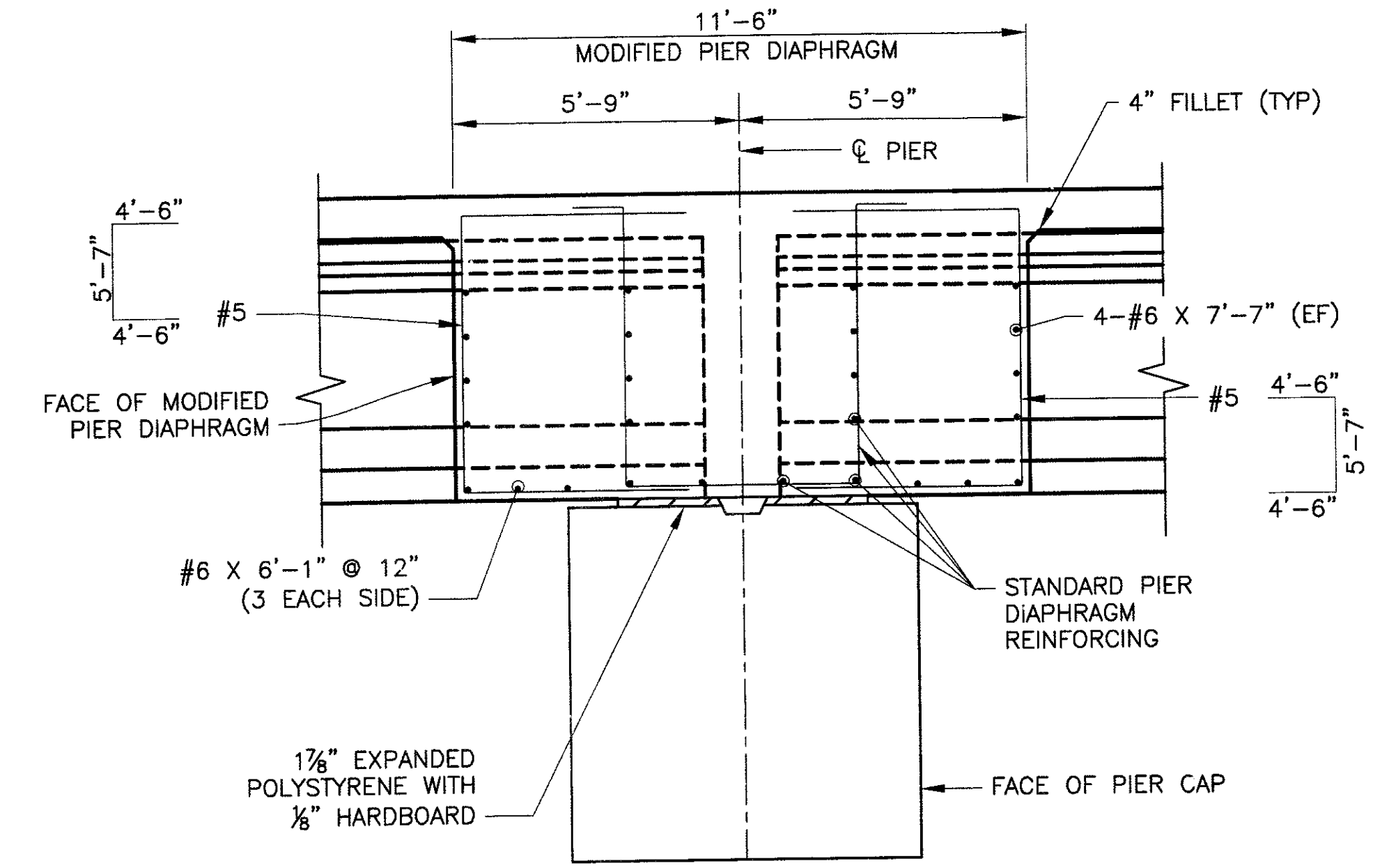
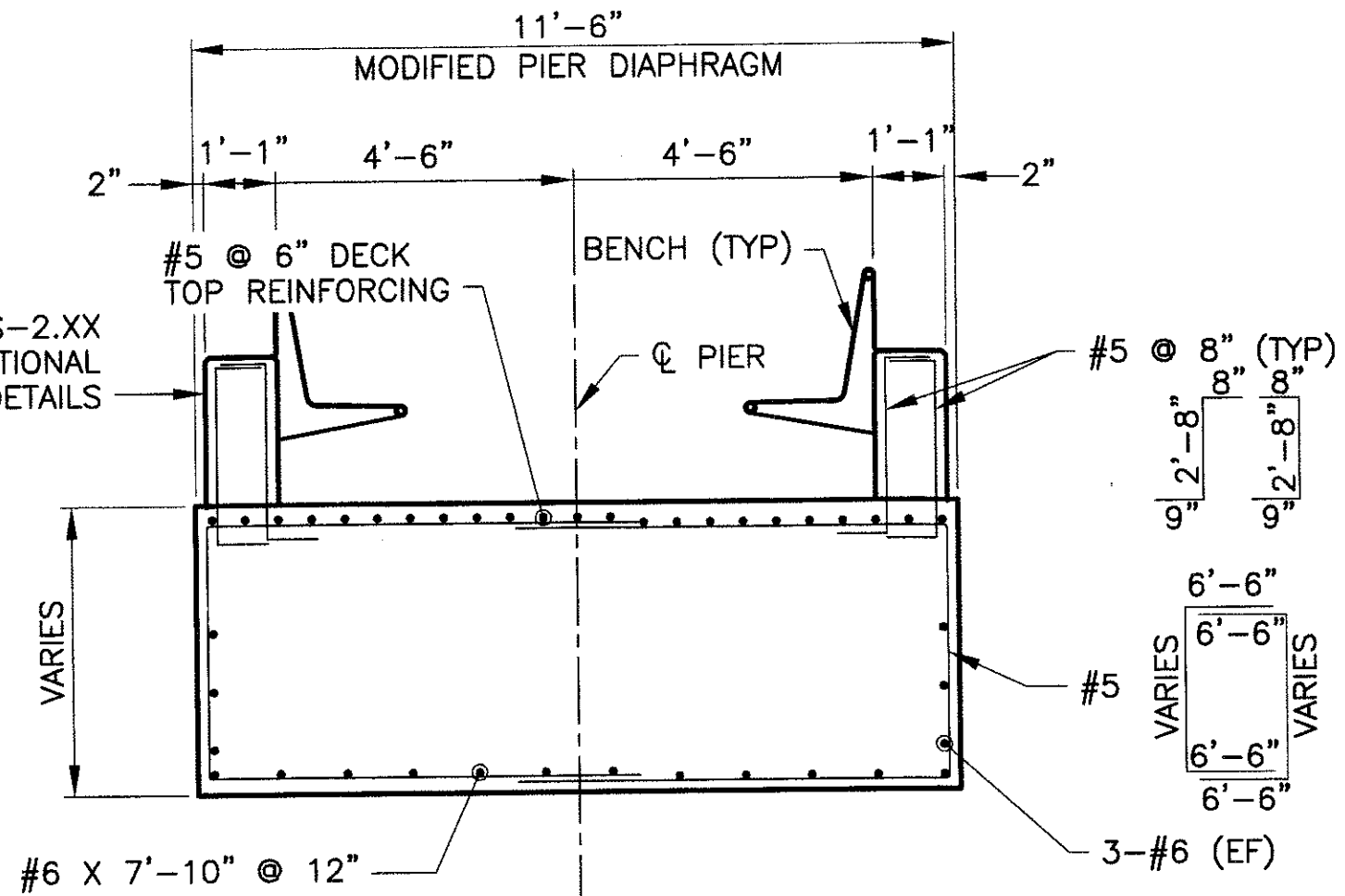
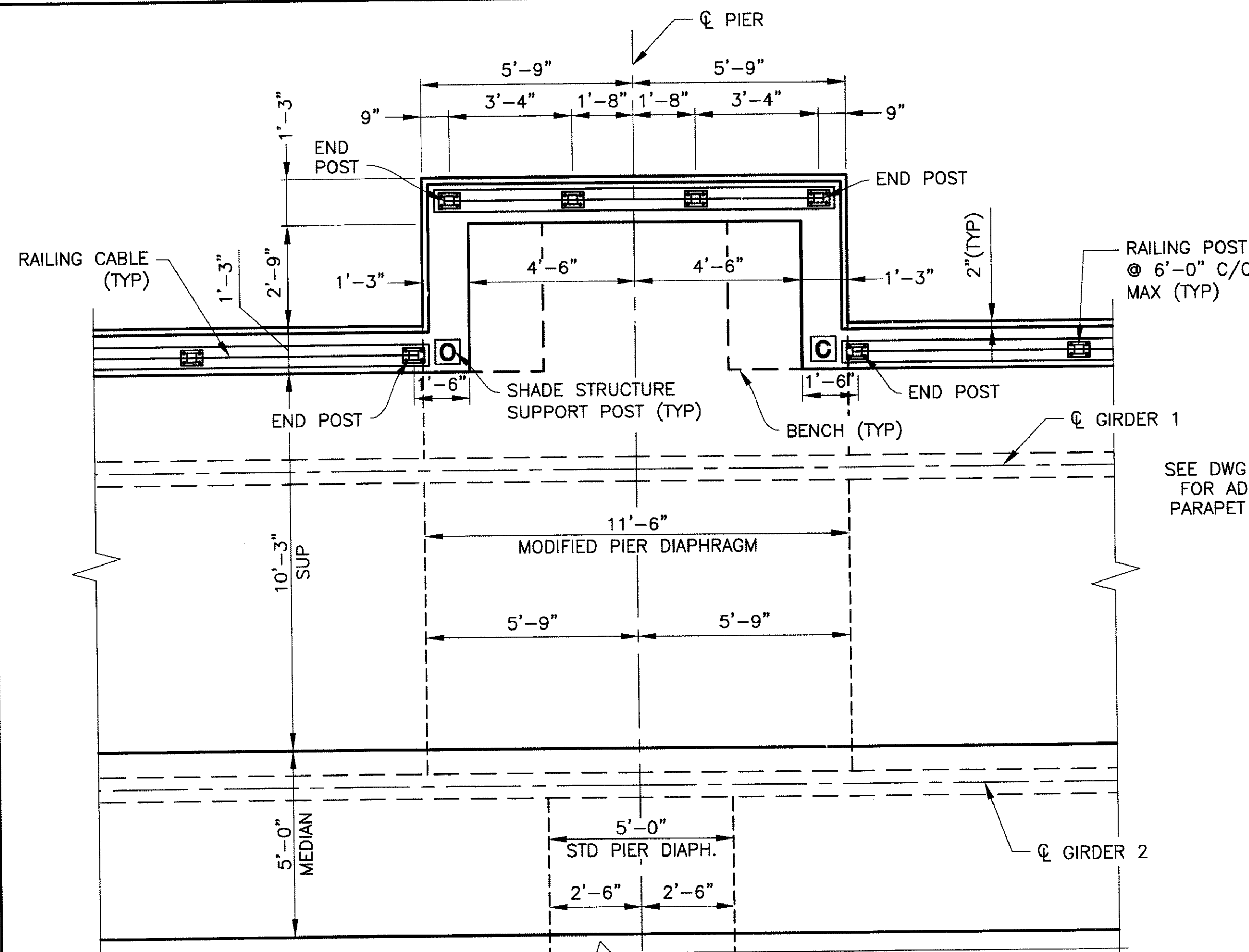
DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	162	352
DWG NO: S-1.28		BRD		

P:\20080505\CAD\Drawings\Structures\128-Apache Ped Parapet and Railing.dwg - plotted by James Rojas at 12/21/2009 8:57:41 AM
 plot scale: 1" = 1'-0"

PRELIMINARY - NOT FOR CONSTRUCTION
90%

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	163	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-8000				
DES: BAG		DR: ESG	CK: SEO	DATE: 12/09
CONSULTING ENGINEER				

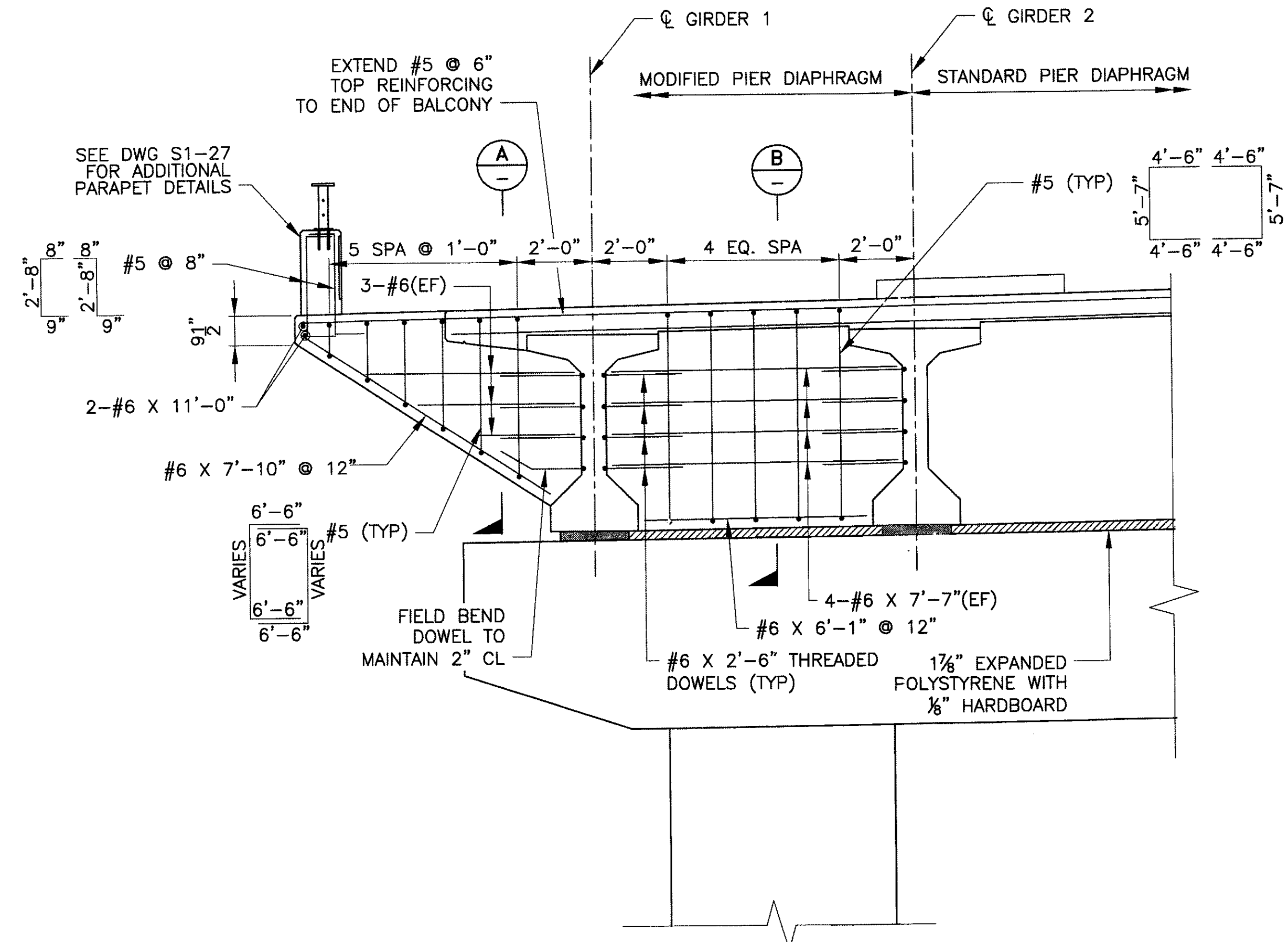
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV. BY	CHK. BY	DATE
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				



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

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

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



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

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PEDESTRIAN BALCONY DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
**SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293**

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DR: ESG	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 10/09	DATE: 10/09	DATE: 10/09	NO:	
DWG NO: S-1.29			163	352

P:\200805\005\CAD\Civil\Sheets\Structures\129-Apache Pedestrian Balcony Details.dwg - plotted by James Rojas at 12/21/2009 8:57:50 AM

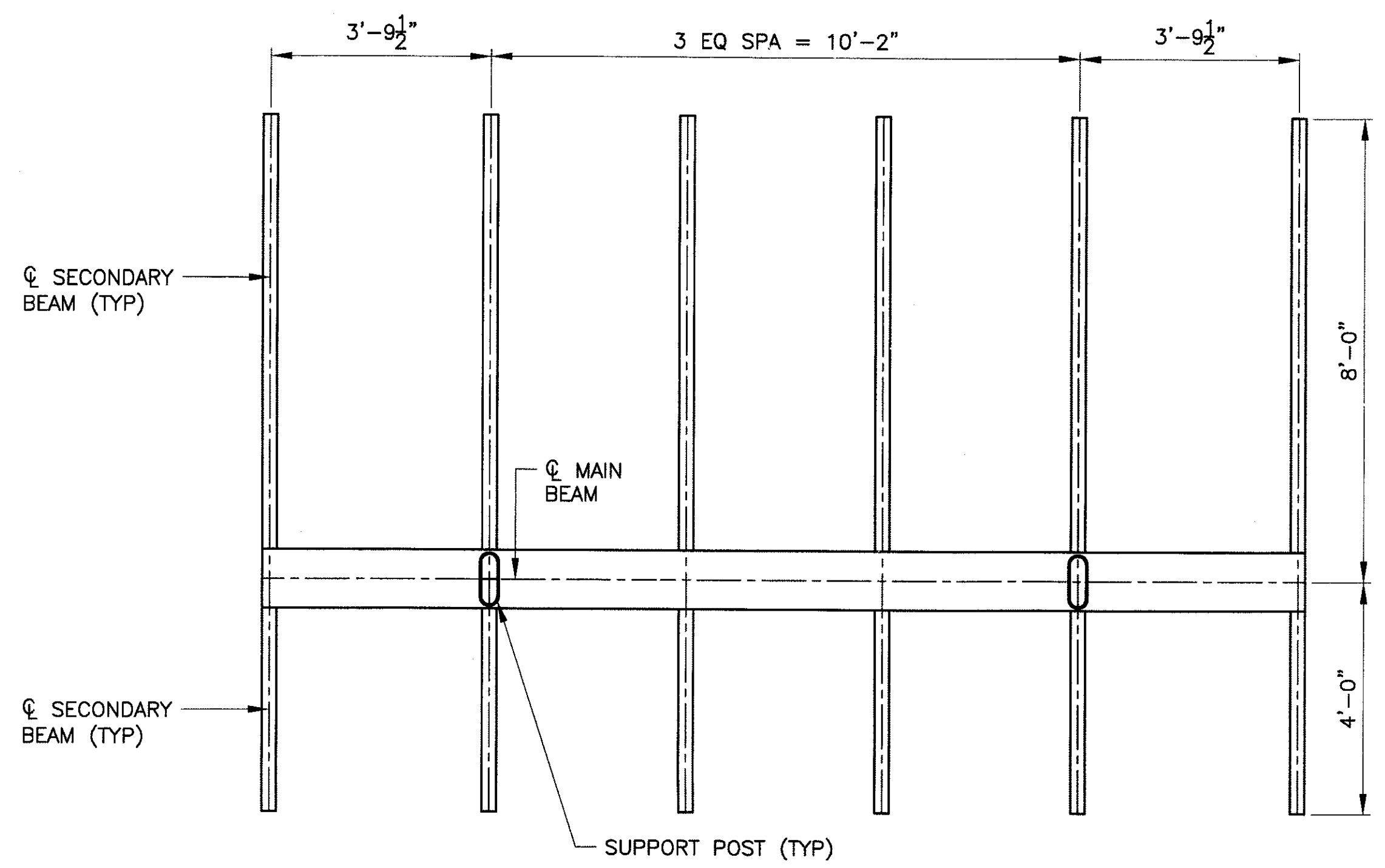
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	164	352

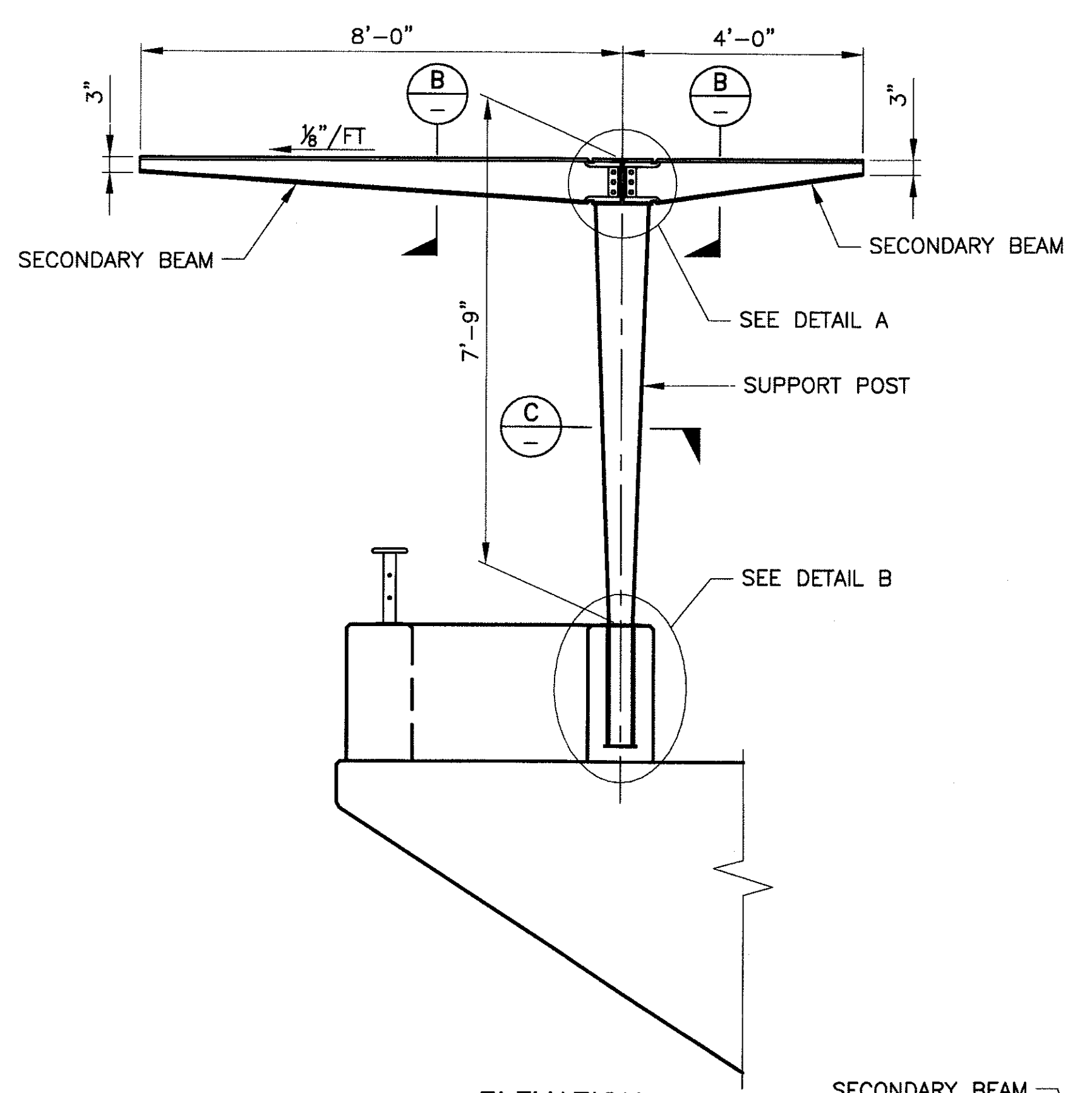
PREMIER
ENGINEERING CORPORATION
6437 W. CHANDLER BLVD., SUITE 1
CHANDLER, AZ 85226; 480-829-8000

DES: BAG DR: ESG CK: SEO DATE: 12/09

CONSULTING ENGINEER



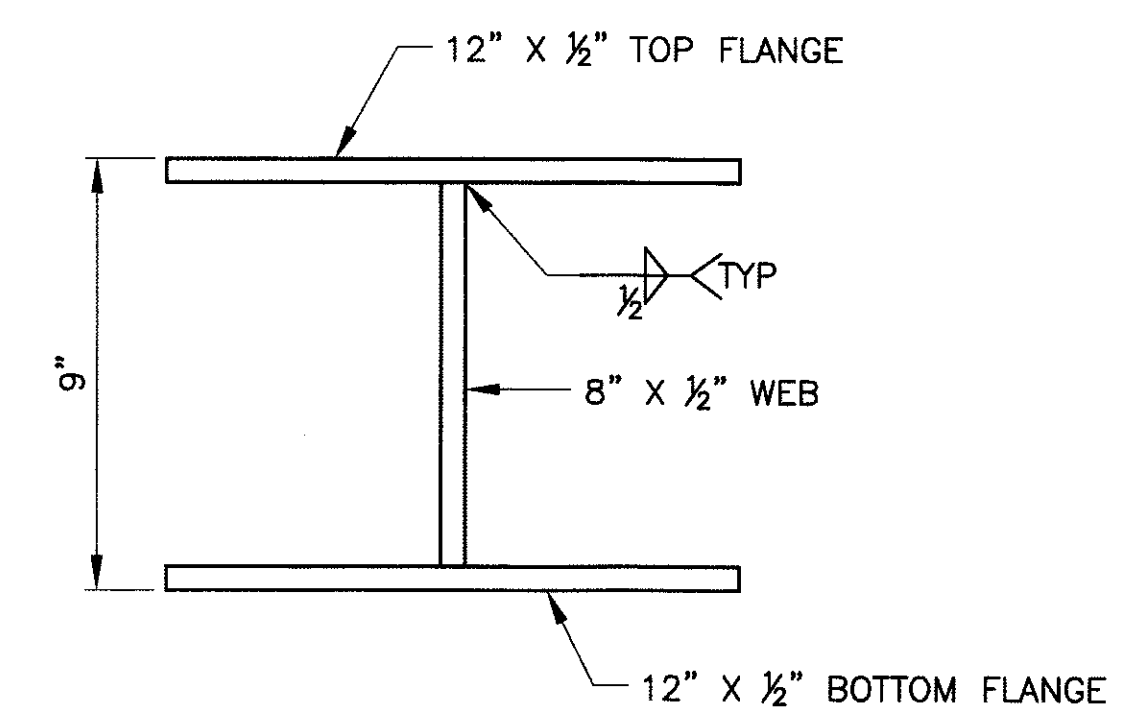
FRAMING PLAN
SCALE: 1/2" = 1'-0"



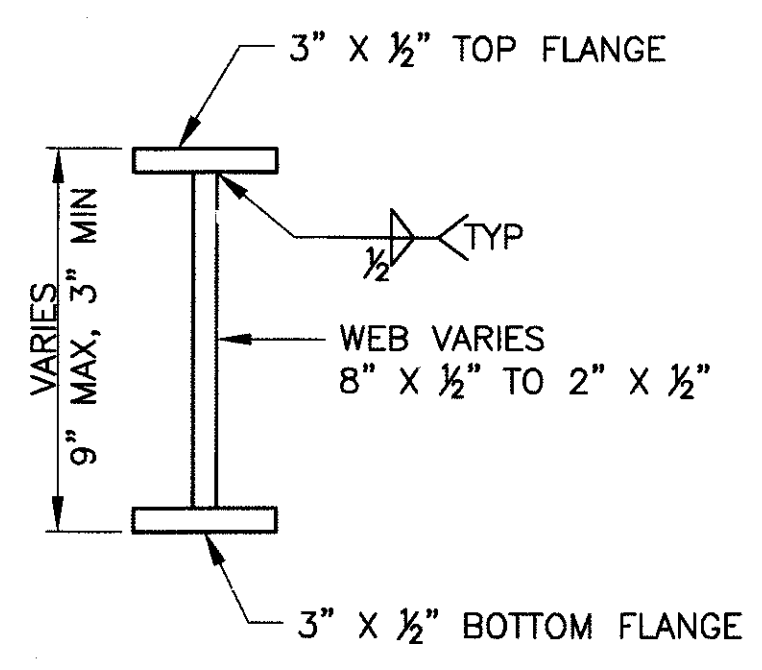
ELEVATION
SCALE: 1/2" = 1'-0"

NOTE:

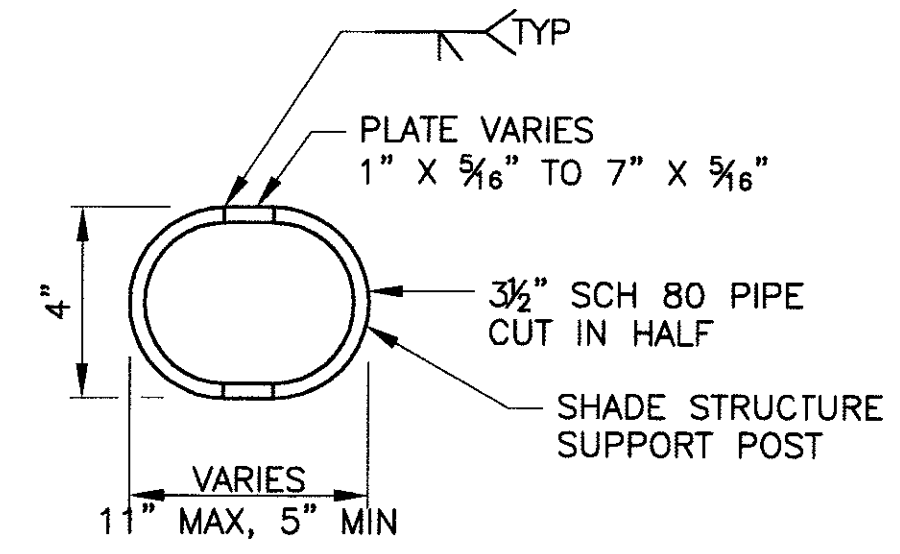
1. STRUCTURAL STEEL FOR MAIN BEAMS, SUPPORT POSTS, EMBEDDED SLEEVES, AND ALL ASSOCIATED CONNECTION PLATES SHALL CONFORM TO ASTM A709, GRADE 50. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36
2. ALL CONNECTION BOLTS SHALL BE 3/4" Ø A325 BOLTS.



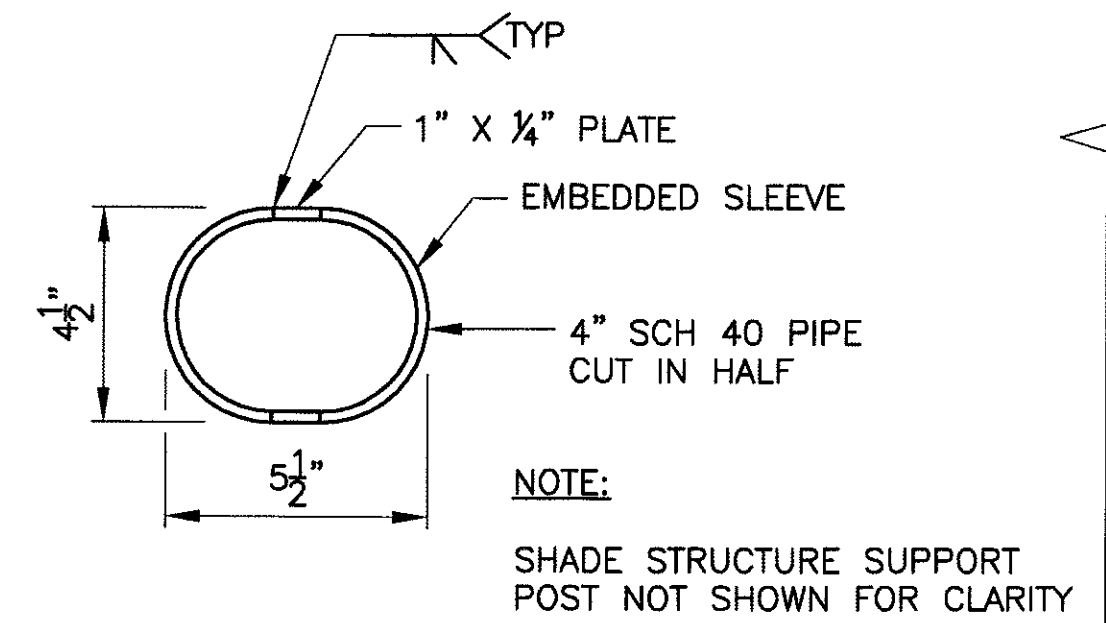
MAIN BEAM-SECTION A
SCALE: 3" = 1'-0"



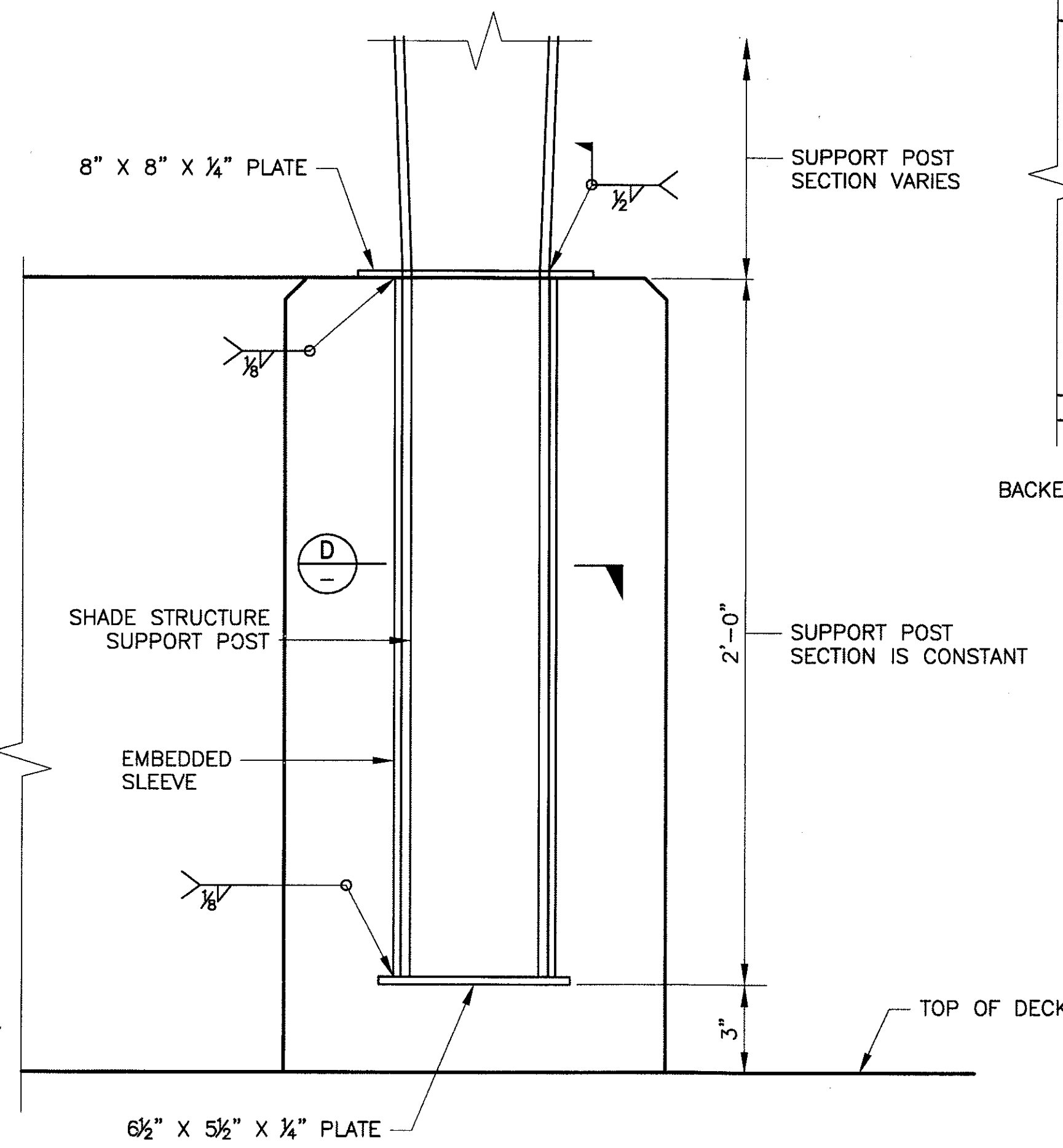
SECONDARY BEAM-SECTION B
SCALE: 3" = 1'-0"



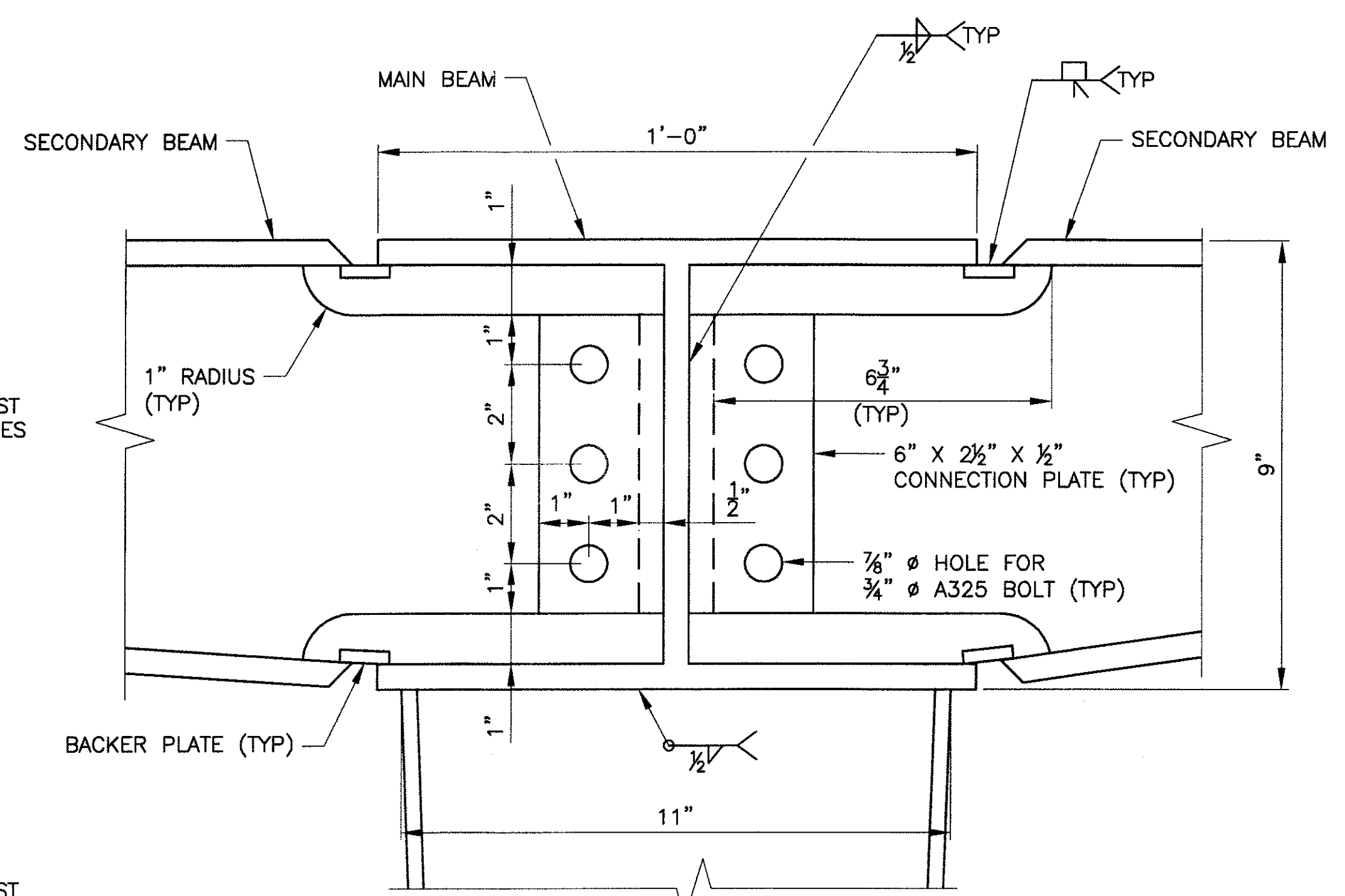
SUPPORT POST-SECTION C
SCALE: 3" = 1'-0"



EMBEDDED SLEEVE-SECTION D
SCALE: 3" = 1'-0"



DETAIL B
SCALE: 3" = 1'-0"



DETAIL A
SCALE: 5" = 1'-0"

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SHADE STRUCTURE DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
APACHE WASH BRIDGE**
ST85100293

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Blue Stake Center

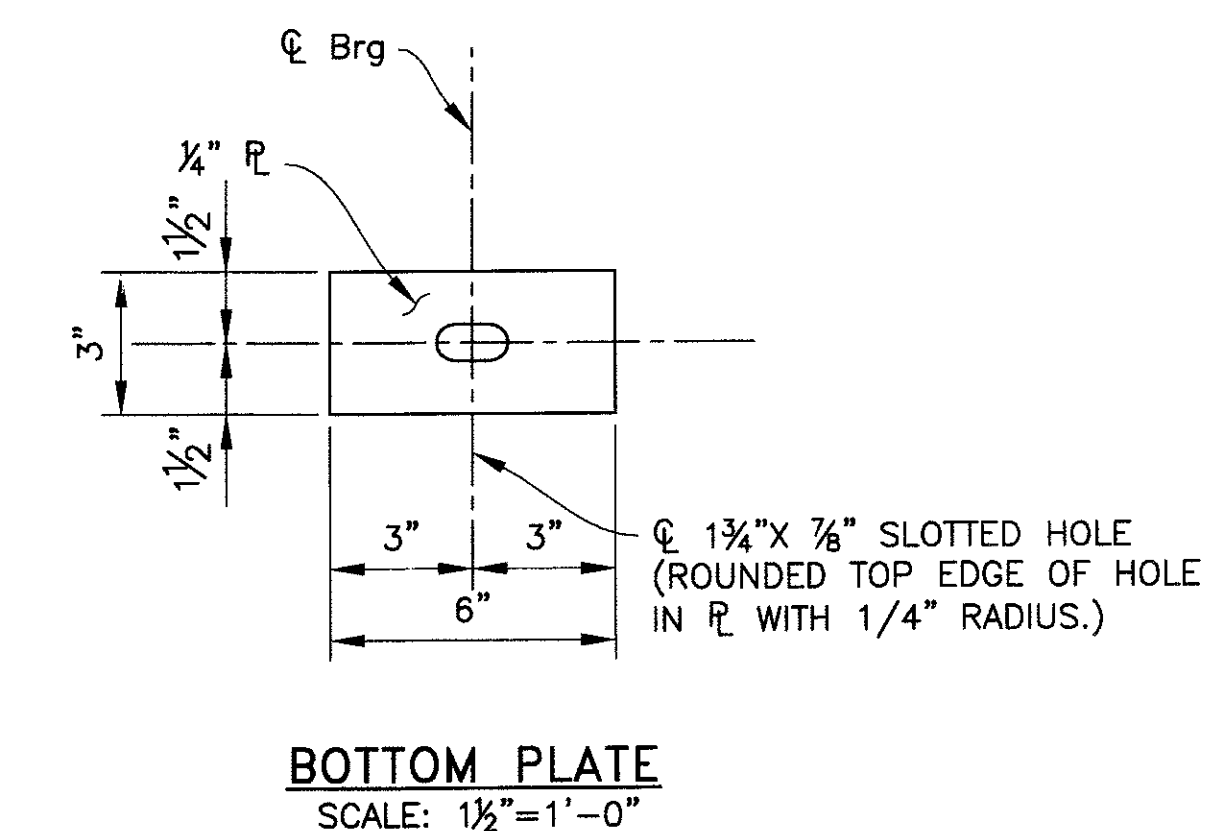
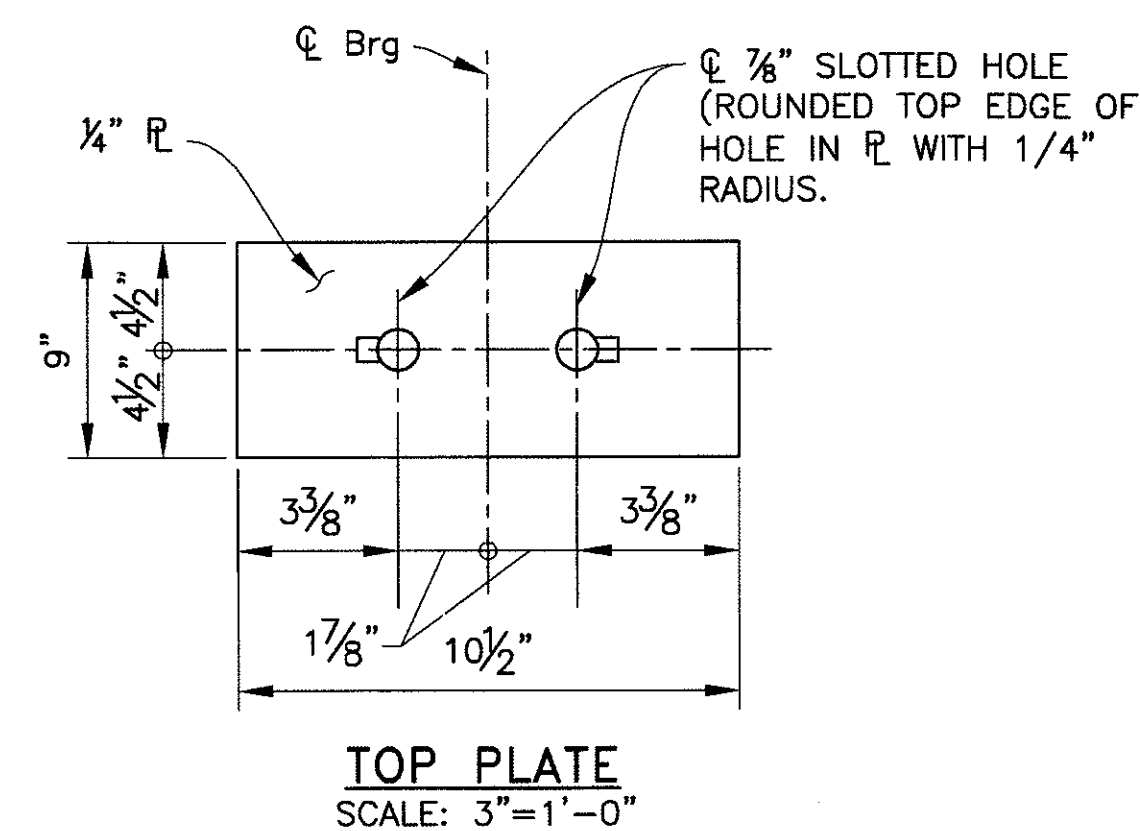
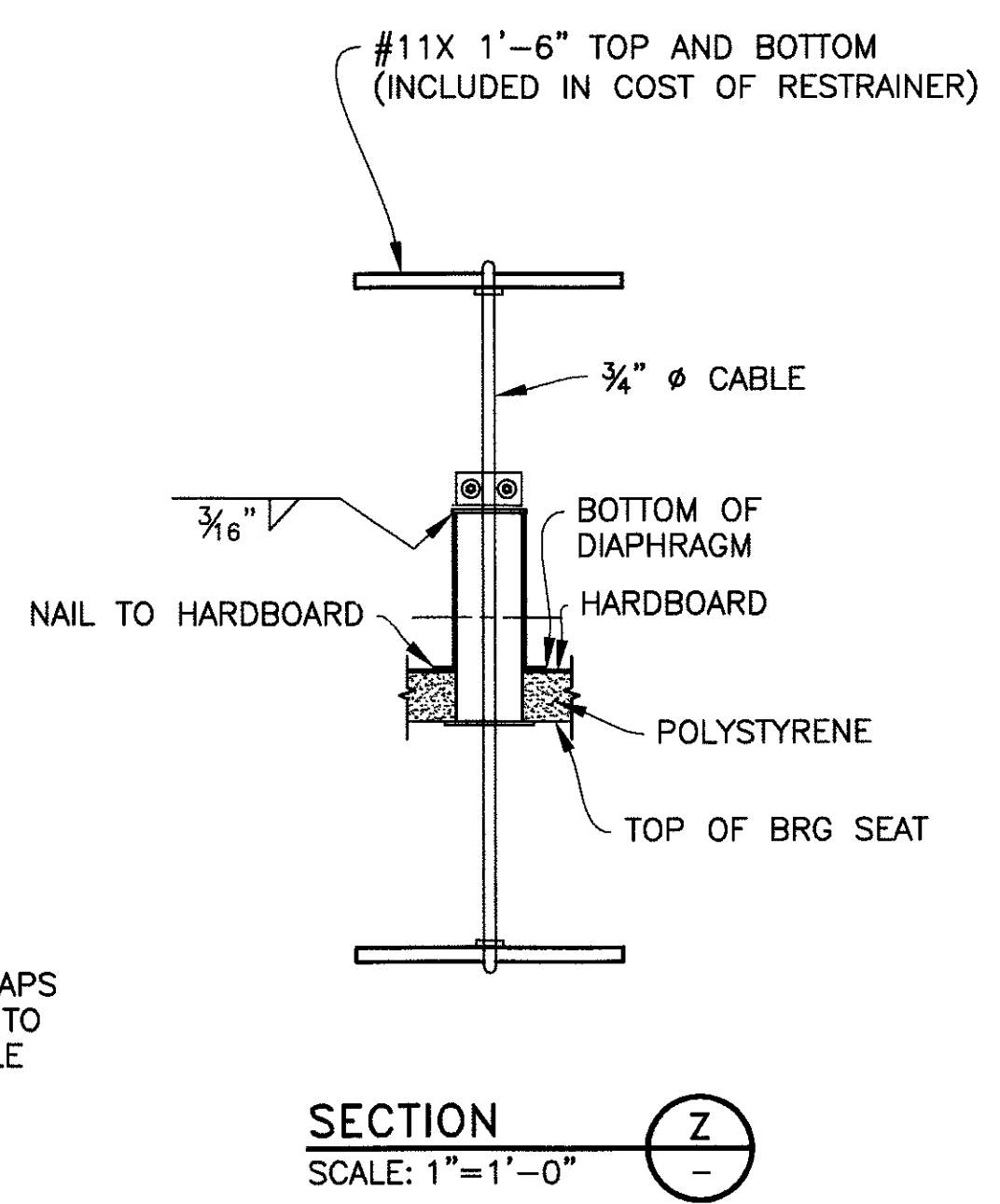
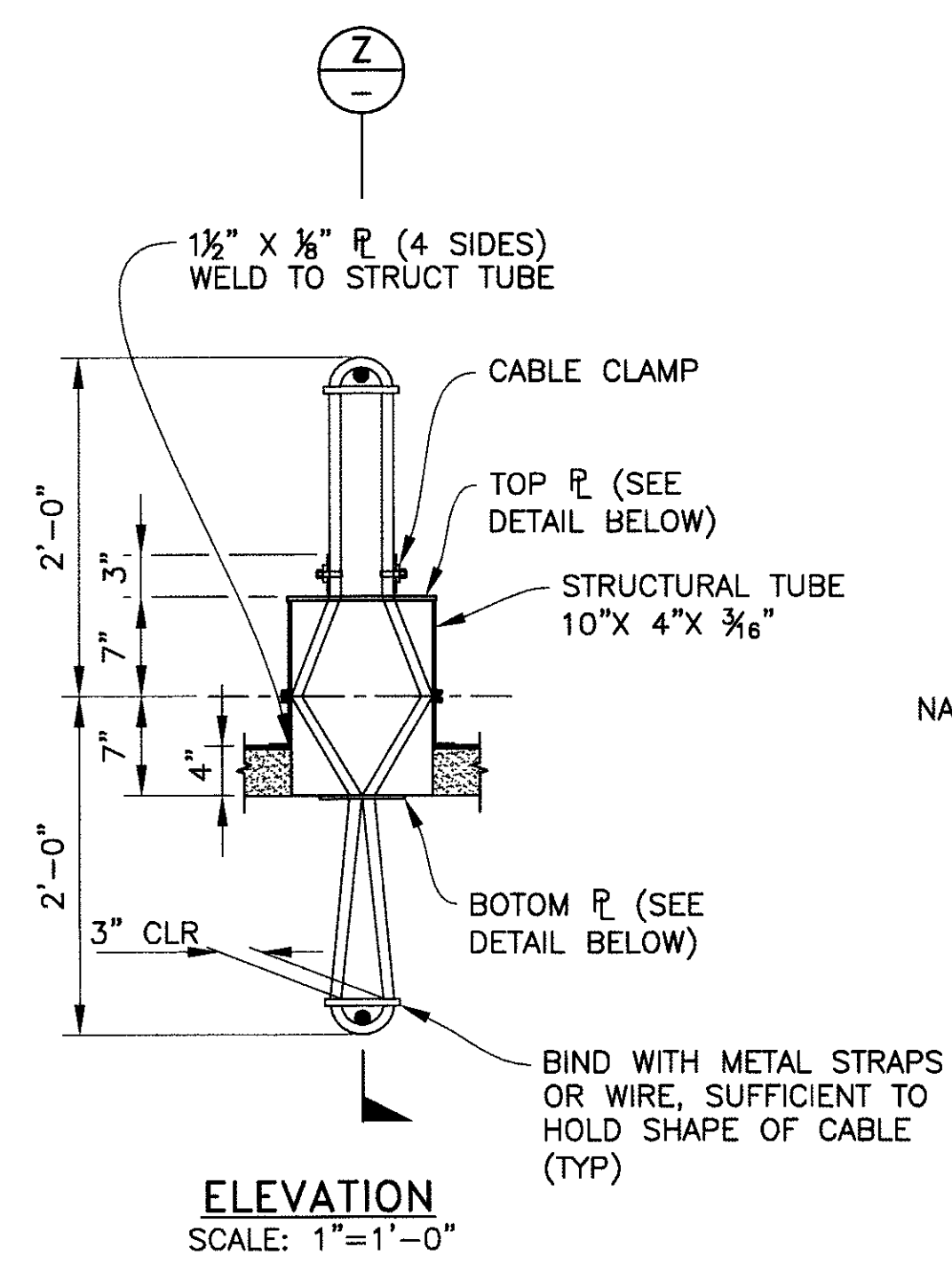
DR: ESG	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 10/09	DATE: 10/09	DATE: 10/09	164	352

DWG NO: S-1.30

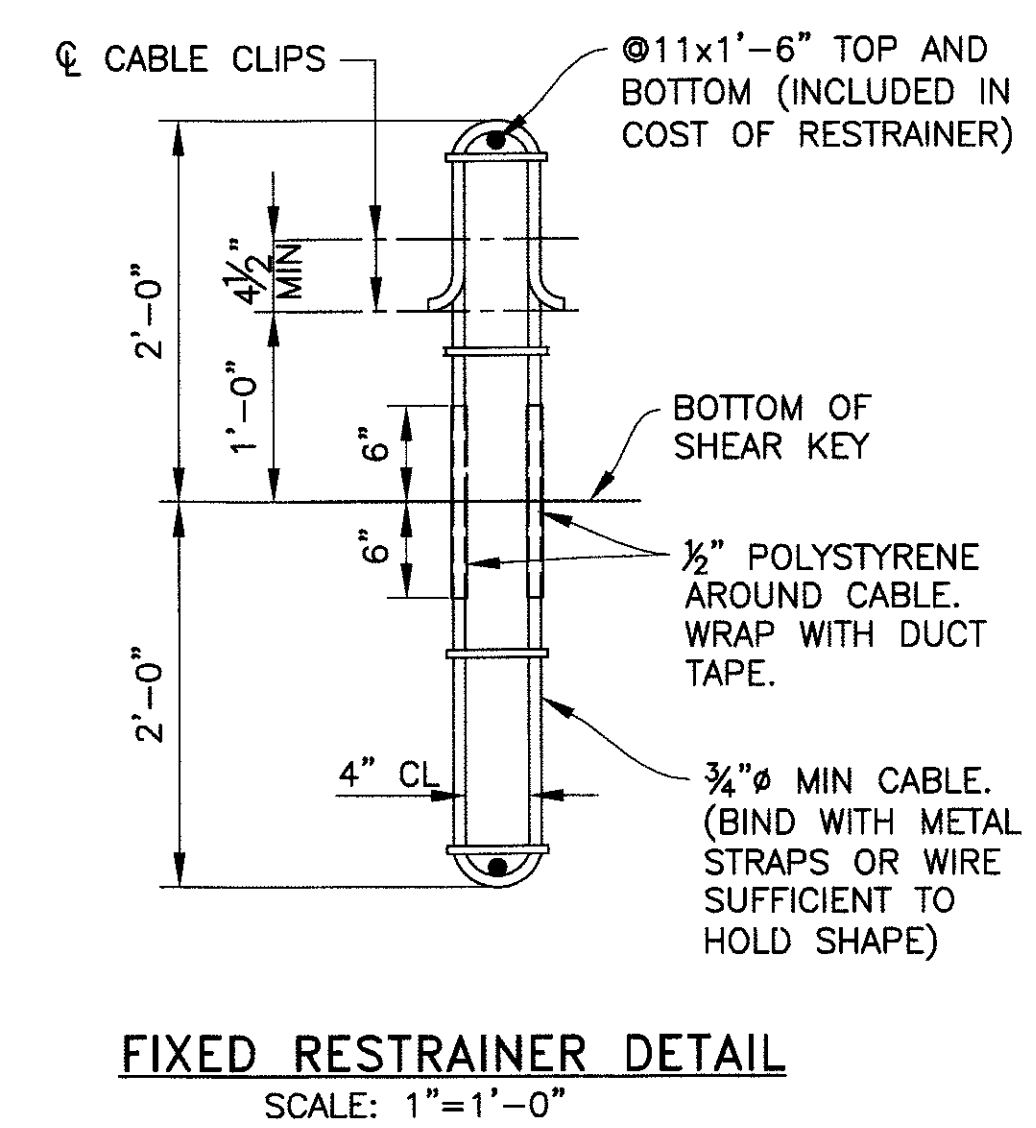
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PRELIMINARY NOT FOR CONSTRUCTION 90%

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	165	352
PREMIER				
ENGINEERING CORPORATION				
6437 W. CHANDLER BLVD., SUITE 1				
CHANDLER, AZ 85226; 480-829-8000				
DES: BAG	DR: JRR	CK: SEO	DATE: 12/09	



EXPANSION RESTRAINER DETAILS



FIXED RESTRAINER DETAIL
SCALE: 1"=1'-0"

REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

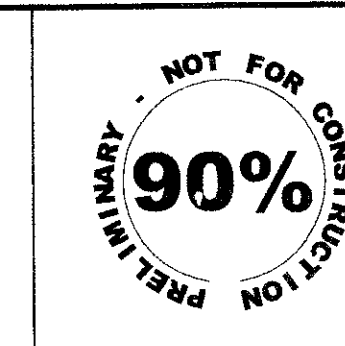
MISCELLANEOUS DETAILS 1
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

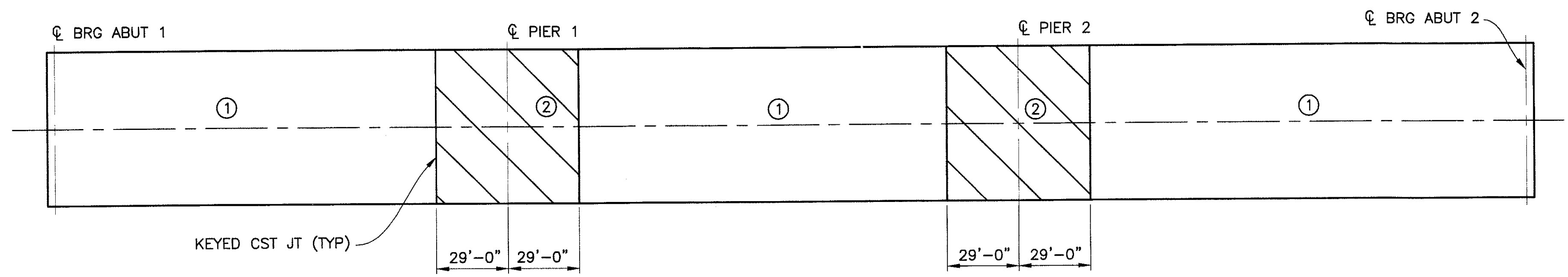
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Blue Stake Center

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	165	352
DWG NO: S-1.31				

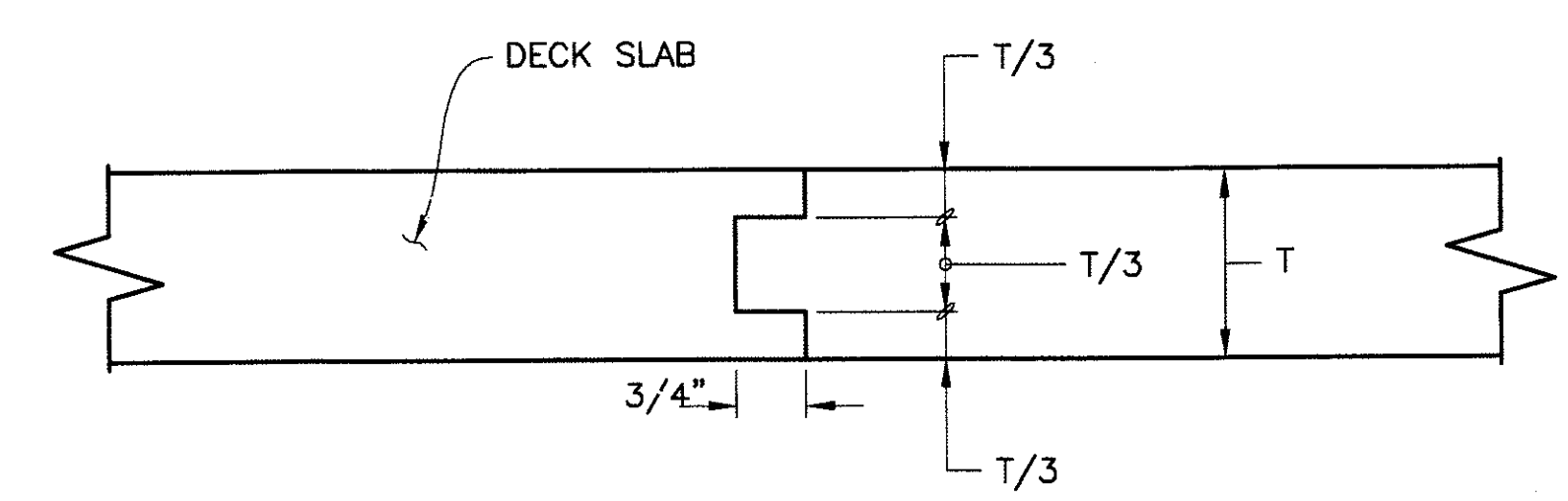
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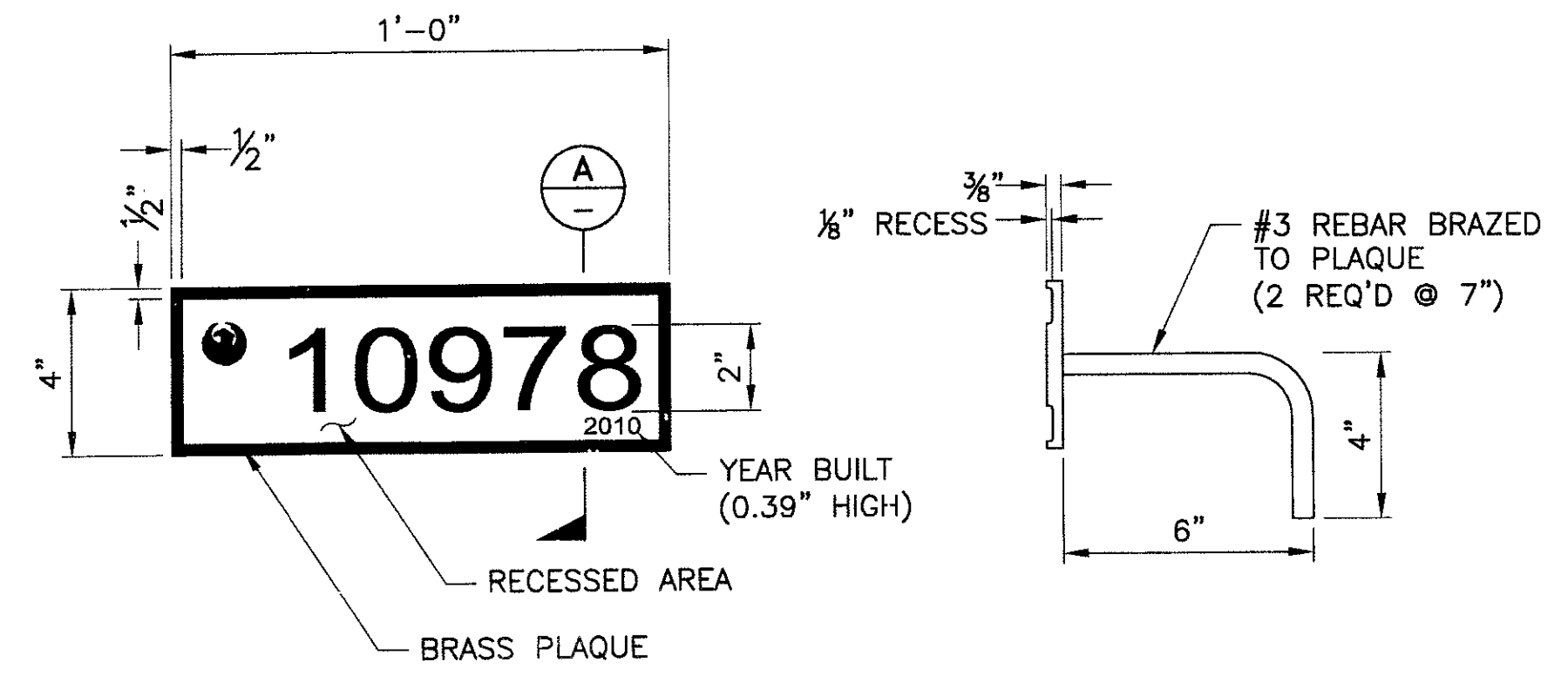
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	166	352
PREMIER				
ENGINEERING CORPORATION				
6437 W. CHANDLER BLVD., SUITE 1				
CHANDLER, AZ 85226; 480-829-6000				
DES: BAG		DR: JRR		DATE: 12/09
			CK: SEO	



DECK POURING SEQUENCE
SCALE: N.T.S.



KEYED CONSTRUCTION JOINT DETAIL
SCALE: N.T.S.

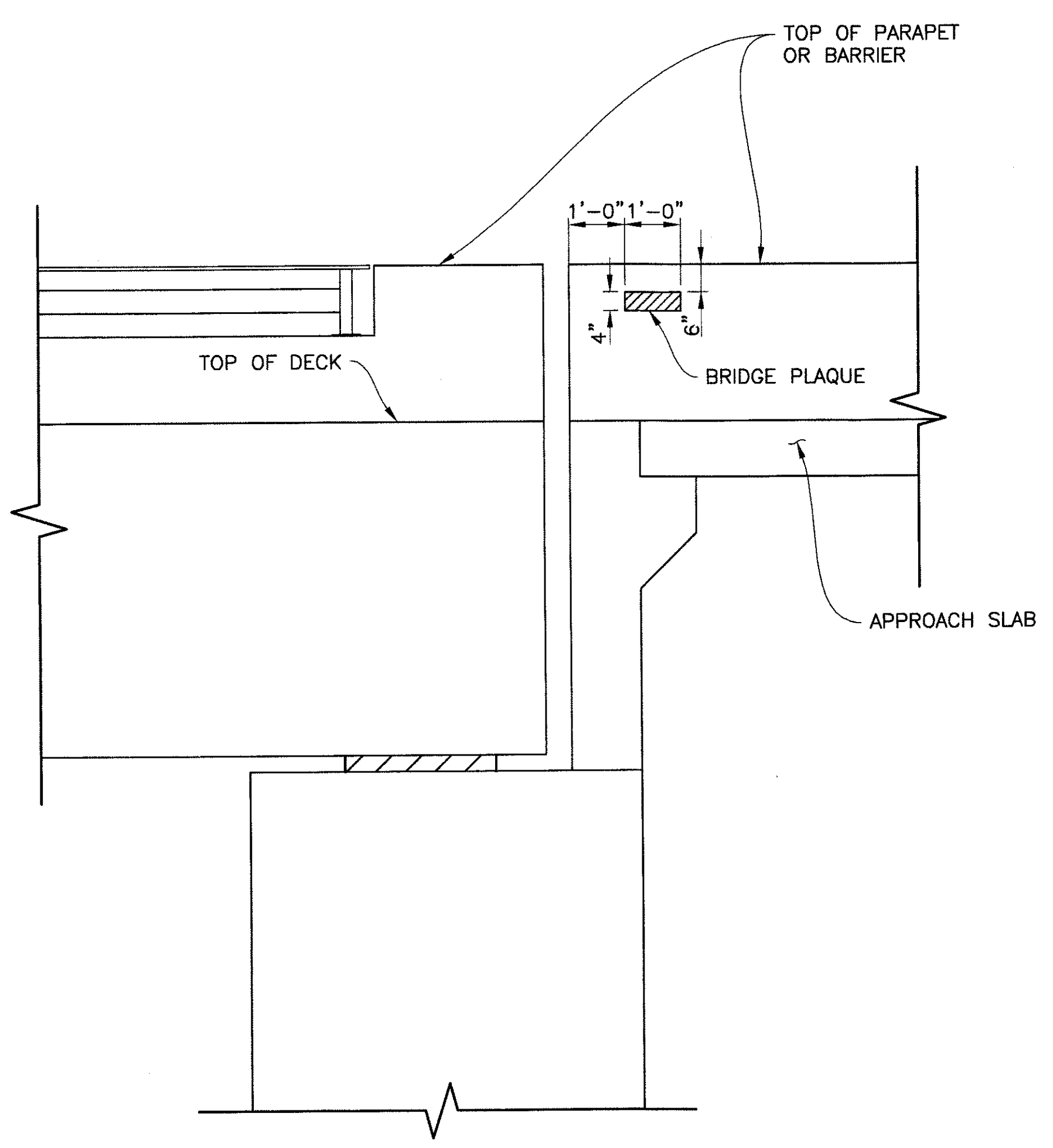


BRIDGE PLAQUE DETAIL
SCALE: 3" = 1'-0"

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

DECK PLACING NOTES

- NUMBERS ① & ② INDICATE PLACING SEQUENCE OF DECK CONCRETE. POUR ② SECTION A MINIMUM OF 12 HOURS AFTER ADJACENT ① SECTIONS HAVE BEEN PLACED.
- INTERMEDIATE DIAPHRAGMS AND ABUTMENT DIAPHRAGMS MAY BE PLACED PRIOR TO OR CONCURRENT WITH THE DECK PLACEMENT.
- PIER DIAPHRAGM SHALL BE POURED CONCURRENT WITH THE DECK PLACEMENT.
- SECTIONS ① & ② MAY BE PLACED CONSECUTIVELY BUT ONLY IN THE DIRECTION FROM ① TO ② AND A MINIMUM OF 12 HOURS AFTER THE ADJACENT ① SECTIONS HAVE BEEN PLACED.
- THE CONTRACTOR SHALL SUBMIT A DECK PLACEMENT SCHEDULE TO THE ENGINEER FOR APPROVAL PRIOR TO PLACING CONCRETE.
- EXPANSION JOINT CLOSURE SHALL NOT BE PLACED UNTIL ADJACENT SECTIONS ARE COMPLETED.



BRIDGE PLAQUE LOCATION ELEVATION
SCALE: 1/2" = 1'-0"

NOTES:

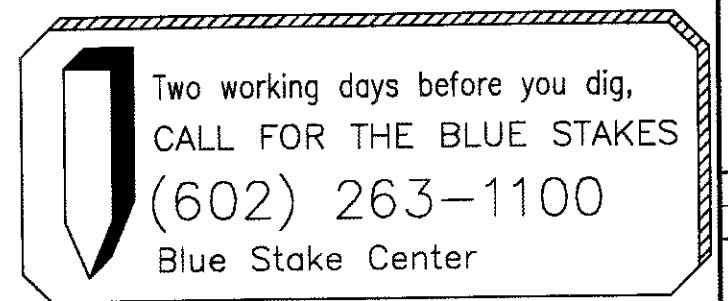
- FOR LOCATION OF PLAQUES, SEE DWG NO. S-1.16.
- THE BRASS PLATE USED FOR THE PLAQUE SHALL CONFORM TO ASTM B121.
- THE FONT USED FOR THE PLAQUE SHALL BE ARIAL.
- INSTALL PLAQUE PRIOR TO POURING CONCRETE, FLUSH WITH THE FINISHED FRONT FACE OF BARRIER.
- THE COST OF THE PLAQUES SHALL BE INCIDENTAL THO THE CONCRETE BARRIER ITEMS.

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MISCELLANEOUS DETAILS 2

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293



DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	166	352
DWG NO: S-1.32				

REVISION BY CITY OF PHOENIX

REVISION BY CITY OF PHOENIX

REVISION BY CITY OF PHOENIX

NO.

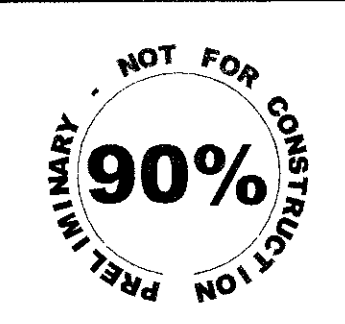
DESCRIPTION

REV BY

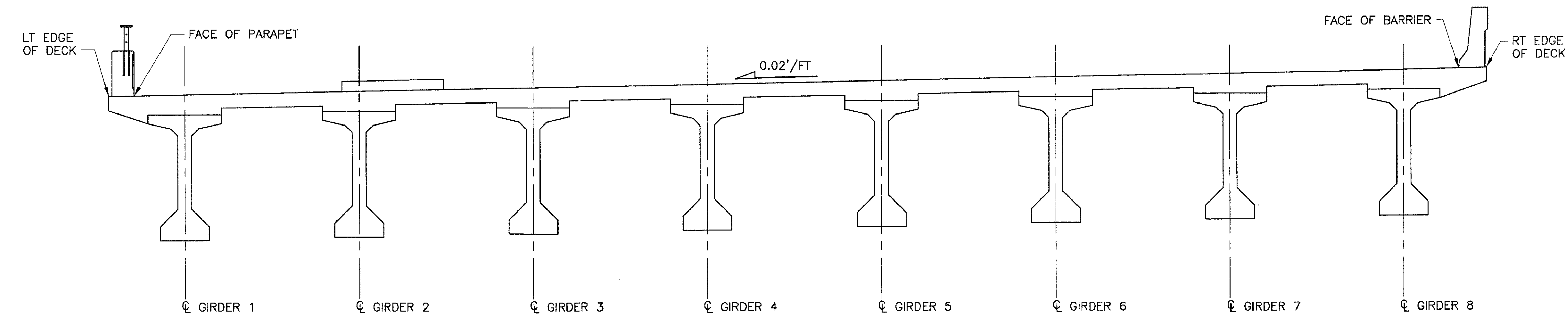
CKD BY

DATE

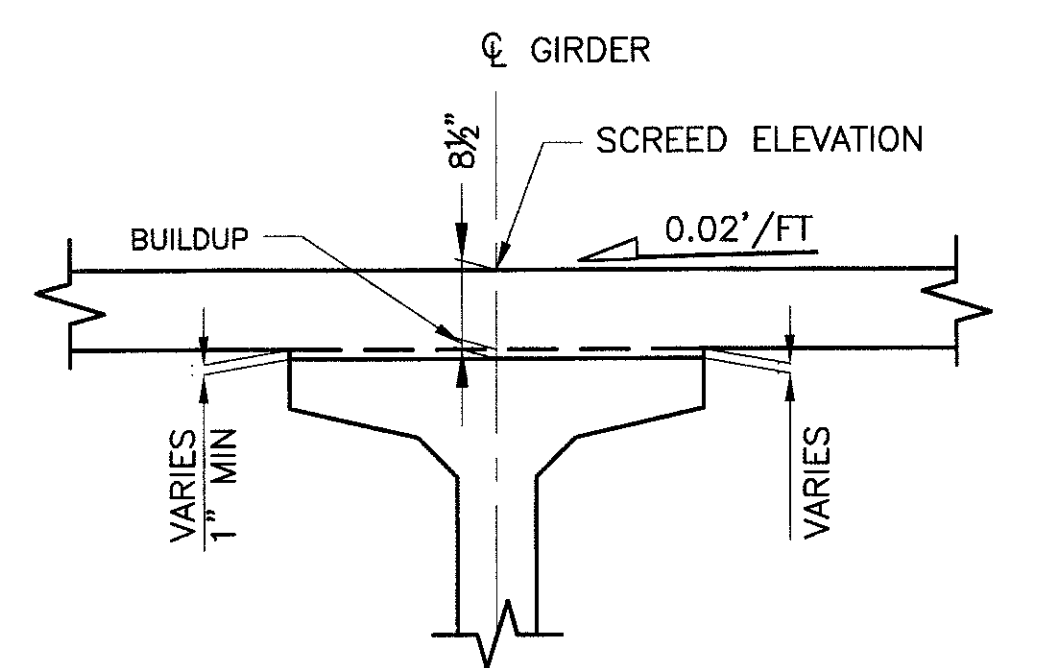
P:\20090035\CAD00\CWA\Sheets\Structures\125-APACHE_MISC_DETAILS.dwg - plotted by James Rojas at 12/21/2009 8:56:11 AM



F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	167	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-8000				
DES: RMD	DR: JRR	CK: SEO	DATE: 12/09	



DECK CROSS SECTION
(LOOKING UP STATION)
SCALE: N.T.S.



SCREED ELEVATION SECTION
SCALE: N.T.S.

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				

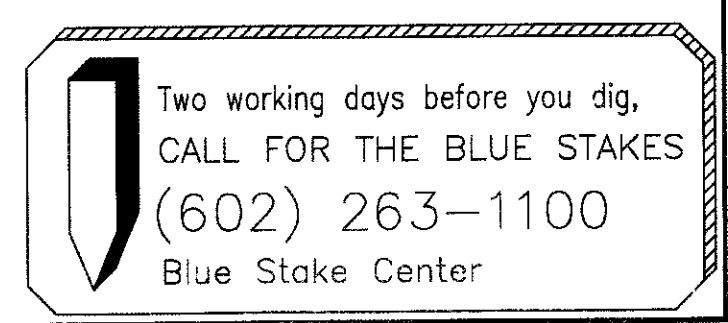
STRUCTURE SCREED ELEVATIONS (SPAN 1)												
LOCATION	CL BRG ABUT 1	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	CL BRG SPAN 1	CL PIER 1
LT EDGE OF DECK	1704.77	1704.90	1705.03	1705.13	1705.22	1705.28	1705.31	1705.32	1705.31	1705.28	1705.24	1705.25
FACE OF PARAPET	1704.79	1704.93	1705.05	1705.16	1705.24	1705.30	1705.34	1705.35	1705.34	1705.31	1705.27	1705.27
GIRDER 1	1704.84	1704.98	1705.10	1705.21	1705.30	1705.36	1705.39	1705.40	1705.39	1705.36	1705.32	-
GIRDER 2	1705.02	1705.15	1705.27	1705.38	1705.46	1705.52	1705.56	1705.57	1705.56	1705.53	1705.49	-
GIRDER 3	1705.19	1705.32	1705.44	1705.55	1705.63	1705.69	1705.73	1705.74	1705.73	1705.70	1705.66	-
GIRDER 4	1705.36	1705.49	1705.61	1705.72	1705.80	1705.86	1705.90	1705.91	1705.90	1705.87	1705.83	-
GIRDER 5	1705.53	1705.66	1705.79	1705.89	1705.98	1706.04	1706.07	1706.08	1706.07	1706.04	1706.01	-
GIRDER 6	1705.70	1705.83	1705.96	1706.06	1706.15	1706.21	1706.24	1706.25	1706.24	1706.22	1706.18	-
GIRDER 7	1705.87	1706.01	1706.13	1706.23	1706.32	1706.38	1706.41	1706.43	1706.42	1706.39	1706.35	-
GIRDER 8	1706.05	1706.18	1706.31	1706.41	1706.50	1706.56	1706.59	1706.60	1706.59	1706.56	1706.52	-
FACE OF BARRIER	1706.10	1706.23	1706.36	1706.46	1706.55	1706.61	1706.64	1706.65	1706.64	1706.61	1706.57	1706.58
RT EDGE OF DECK	1706.12	1706.26	1706.38	1706.49	1706.58	1706.64	1706.67	1706.68	1706.67	1706.64	1706.60	1706.61

STRUCTURE SCREED ELEVATIONS (SPAN 2)													
LOCATION	CL PIER 1	CL BRG SPAN 2	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	CL BRG SPAN 2	CL PIER 2
LT EDGE OF DECK	1705.25	1705.25	1705.40	1705.53	1705.64	1705.73	1705.80	1705.83	1705.84	1705.82	1705.78	1705.73	1705.73
FACE OF PARAPET	1705.27	1705.28	1705.43	1705.56	1705.67	1705.76	1705.82	1705.85	1705.86	1705.85	1705.80	1705.75	1705.76
GIRDER 1	-	1705.33	1705.48	1705.61	1705.72	1705.81	1705.87	1705.91	1705.91	1705.90	1705.86	1705.81	-
GIRDER 2	-	1705.50	1705.65	1705.78	1705.89	1705.98	1706.04	1706.07	1706.08	1706.07	1706.03	1705.98	-
GIRDER 3	-	1705.68	1705.82	1705.95	1706.06	1706.15	1706.21	1706.24	1706.25	1706.24	1706.20	1706.15	-
GIRDER 4	-	1705.85	1705.99	1706.12	1706.23	1706.32	1706.38	1706.41	1706.42	1706.41	1706.37	1706.32	-
GIRDER 5	-	1706.02	1706.16	1706.29	1706.40	1706.49	1706.55	1706.59	1706.59	1706.58	1706.54	1706.49	-
GIRDER 6	-	1706.19	1706.33	1706.47	1706.57	1706.66	1706.73	1706.76	1706.77	1706.75	1706.71	1706.67	-
GIRDER 7	-	1706.36	1706.51	1706.64	1706.75	1706.83	1706.90	1706.93	1706.94	1706.92	1706.89	1706.84	-
GIRDER 8	-	1706.53	1706.68	1706.81	1706.92	1707.01	1707.08	1707.11	1707.12	1707.10	1707.06	1707.01	-
FACE OF BARRIER	1706.58	1706.58	1706.73	1706.86	1706.97	1707.06	1707.13	1707.16	1707.17	1707.15	1707.11	1707.06	1707.06
RT EDGE OF DECK	1706.61	1706.61	1706.76	1706.89	1707.00	1707.09	1707.15	1707.19	1707.19	1707.18	1707.14	1707.09	1707.09

STRUCTURE SCREED ELEVATIONS (SPAN 3)												
LOCATION	CL PIER 2	CL BRG SPAN 3	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	CL BRG ABUT 2
LT EDGE OF DECK	1705.73	1705.74	1705.82	1705.90	1705.96	1706.02	1706.06	1706.09	1706.11	1706.11	1706.12	1706.12
FACE OF PARAPET	1705.76	1705.77	1705.85	1705.92	1705.99	1706.04	1706.09	1706.12	1706.14	1706.13	1706.15	1706.15
GIRDER 1	-	1705.82	1705.90	1705.98	1706.04	1706.10	1706.14	1706.17	1706.19	1706.19	1706.20	1706.20
GIRDER 2	-	1705.99	1706.07	1706.15	1706.21	1706.27	1706.31	1706.34	1706.36	1706.37	1706.37	1706.37
GIRDER 3	-	1706.16	1706.24	1706.32	1706.38	1706.44	1706.48	1706.51	1706.53	1706.54	1706.55	1706.54
GIRDER 4	-	1706.33	1706.42	1706.49	1706.56	1706.61	1706.65	1706.68	1706.70	1706.71	1706.72	1706.72
GIRDER 5	-	1706.51	1706.59	1706.66	1706.73	1706.78	1706.83	1706.86	1706.88	1706.89	1706.89	1706.89
GIRDER 6	-	1706.68	1706.76	1706.83	1706.90	1706.95	1707.00	1707.03	1707.05	1707.06	1707.06	1707.06
GIRDER 7	-	1706.85	1706.93	1707.01	1707.07	1707.12	1707.17	1707.20	1707.22	1707.23	1707.23	1707.23
GIRDER 8	-	1707.02	1707.10	1707.18	1707.24	1707.30	1707.34	1707.37	1707.39	1707.39	1707.40	1707.40
FACE OF BARRIER	1707.06	1707.07	1707.15	1707.23	1707.29	1707.35	1707.39	1707.42	1707.44	1707.44	1707.45	1707.45
RT EDGE OF DECK	1707.09	1707.10	1707.18	1707.26	1707.32	1707.38	1707.42	1707.45	1707.47	1707.47	1707.48	1707.48

SCREED ELEVATION NOTES:

- RELEASE AND INITIAL DEFLECTIONS SHALL BE MEASURED AT MIDSPAN FOR EACH GIRDER AND THE DATA PROVIDED TO THE BRIDGE ENGINEER FOR EVALUATION.
- THE TOP OF THE ERECTED GIRDER ELEVATION SHALL BE MEASURED IN THE FIELD FOR THE DETERMINATION OF THE BUILD-UP, AND THE INFORMATION PROVIDED TO ENGINEER FOR EVALUATION.
- THE SCREED ELEVATION INCLUDES THE ALLOWANCE FOR THE DEFLECTION DUE TO THE DEAD LOAD OF THE CONCRETE DECK SLAB, DIAPHRAGMS, BARRIERS AND THE EFFECT OF LONG TERM CREEP.
- SCREED ELEVATIONS SHALL BE USED IN SETTING SCREEDS. ADJUSTMENTS TO THE SCREED ELEVATIONS, IF NECESSARY, WILL BE DETERMINED BY THE BRIDGE ENGINEER AFTER REVIEWING THE TOP OF ERECTED GIRDER ELEVATIONS. DO NOT USE FINISHED GRADE ELEVATIONS FOR SETTING SCREEDS.



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SCREED ELEVATIONS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293**

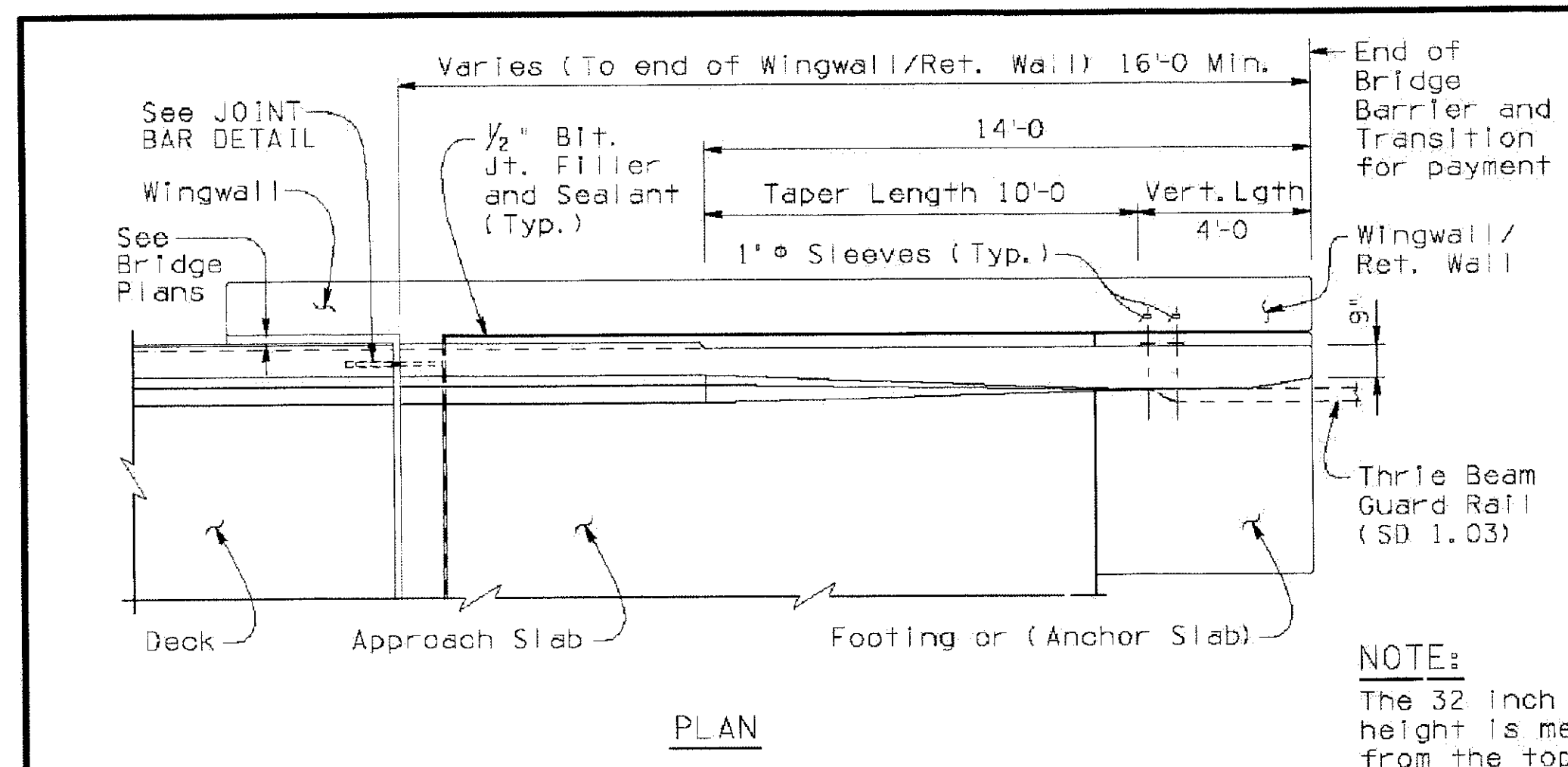
DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	167	352

DWG NO: S-1.33

F:\2008005\CADD\Civil\Sheets\Structures\127-Apache screead elevations - plotted by James Rojas at 12/21/2009 8:38:14 AM plotscale: 1:1 - Inscale: 1:00 - portscale: PREMIER.CTB

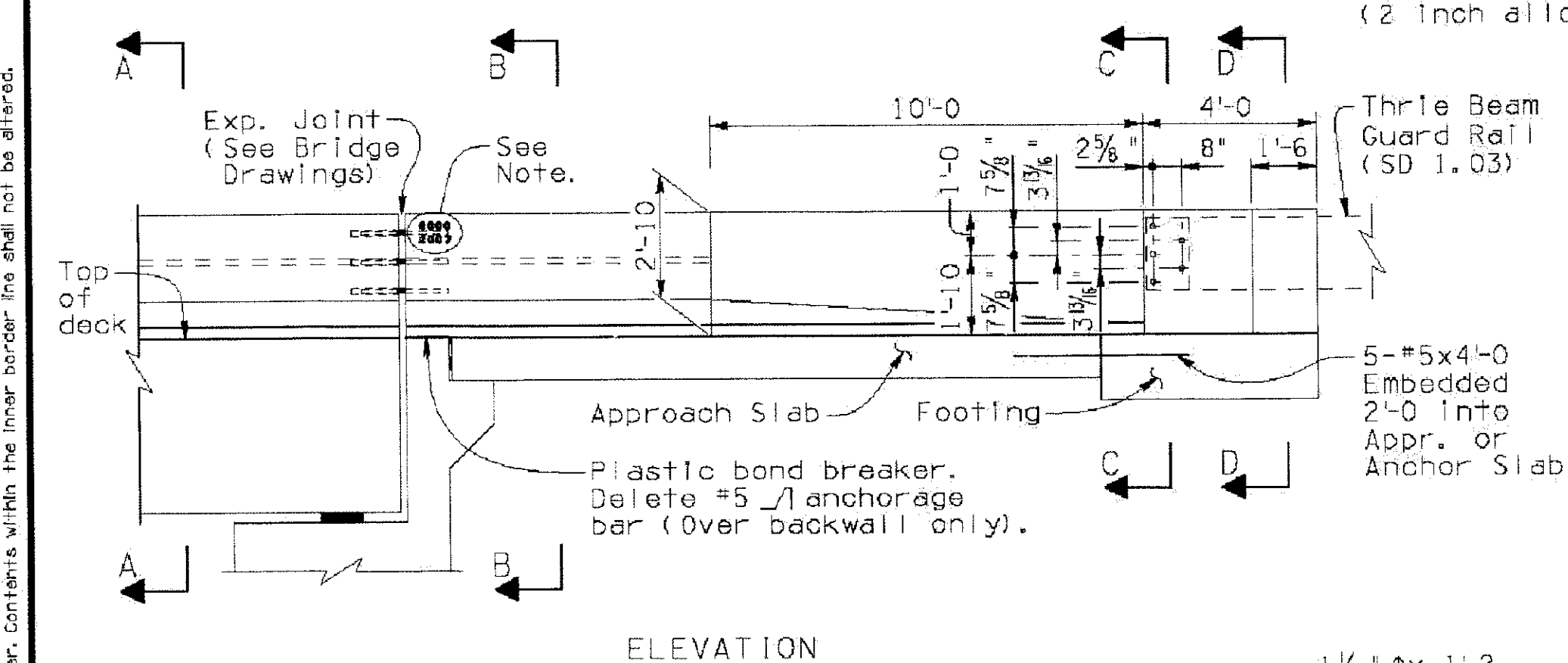
REVISION BY CITY OF PHOENIX		NO.	DESCRIPTION	REV BY	CHK BY	DATE

Note to Designer: The information presented in this standard detail has been prepared in accordance with recognized engineering practices and is for general use. It should not be used for specific applications without competent professional examination and verification of its applicability and adaptability by a licensed professional engineer, architect, or other qualified person.

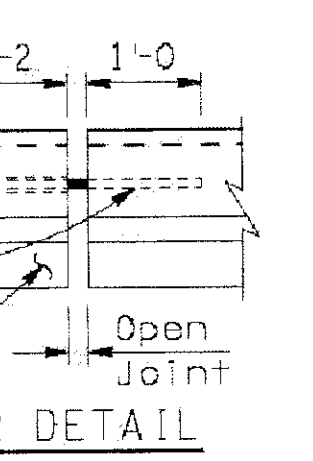


PLAN

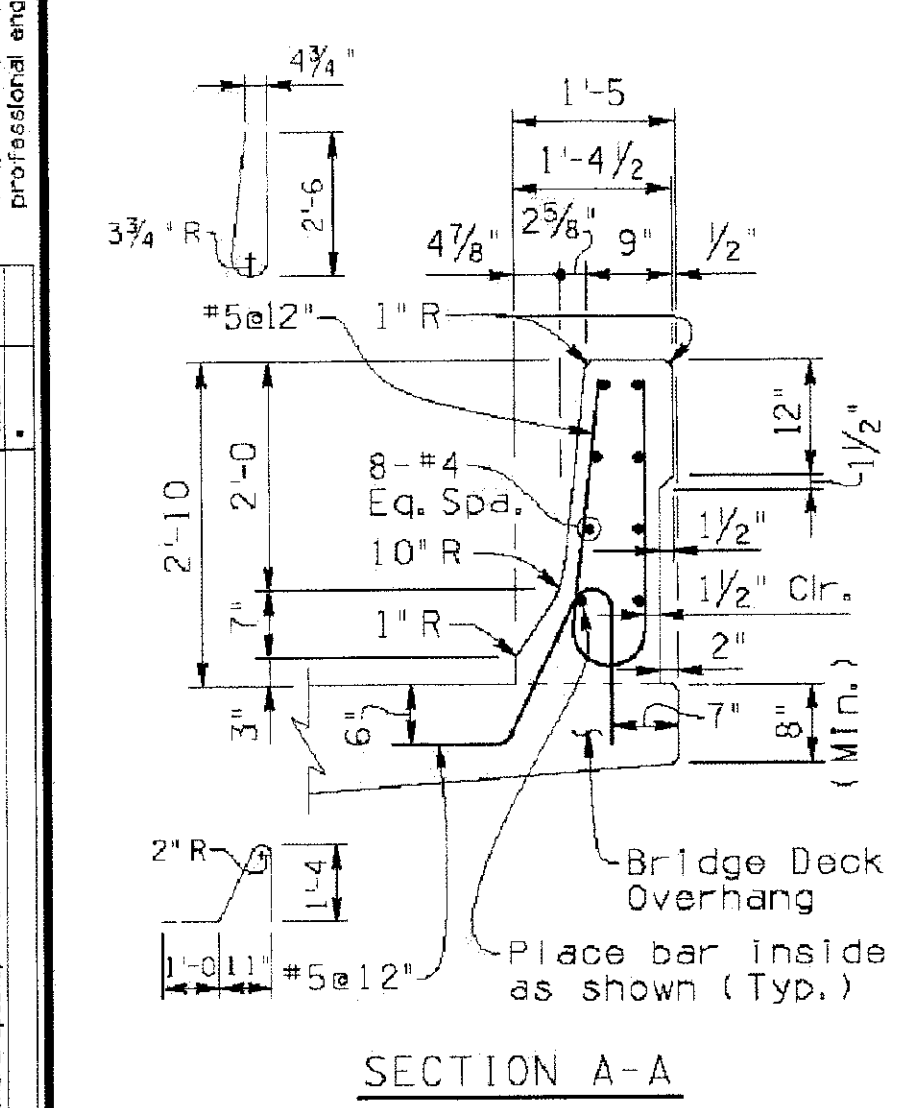
NOTE:
The 32 inch barrier height is measured from the top of the (future) wearing surface (2 inch allowance).



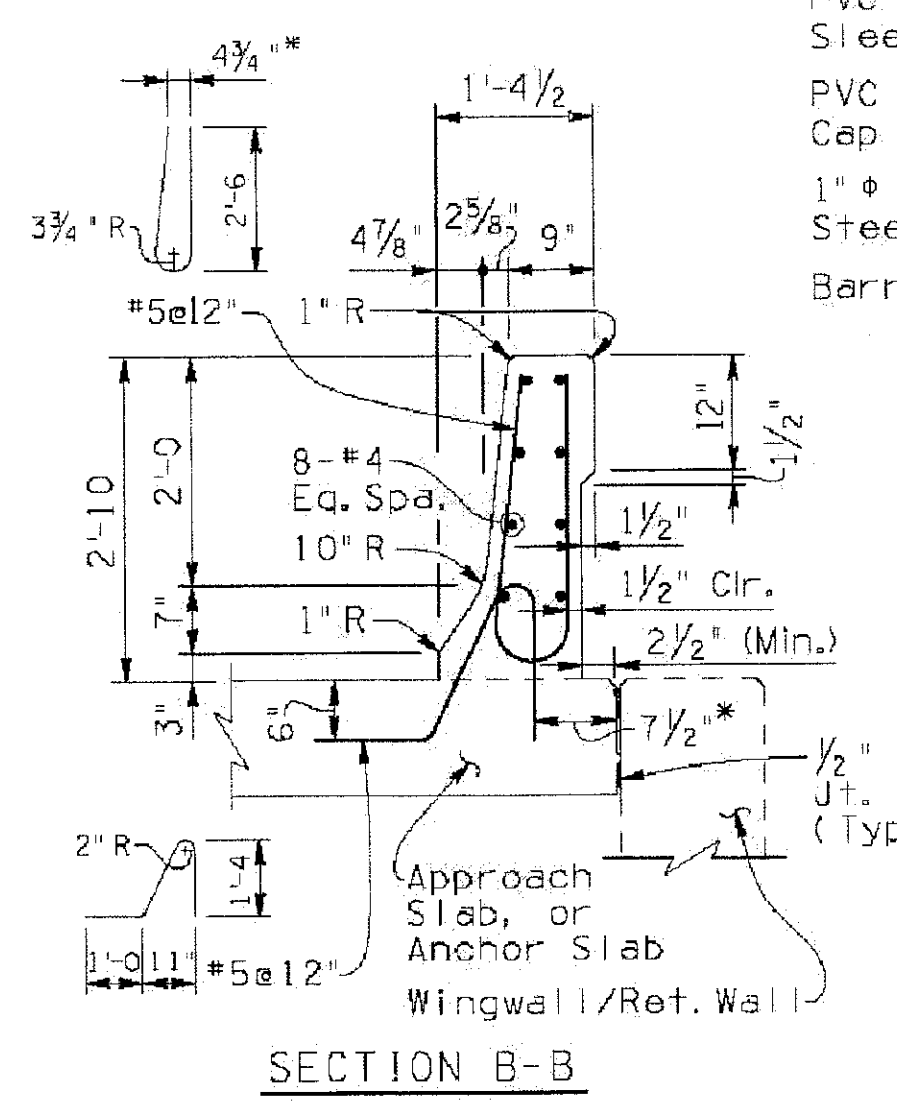
ELEVATION



JOINT BAR DETAIL

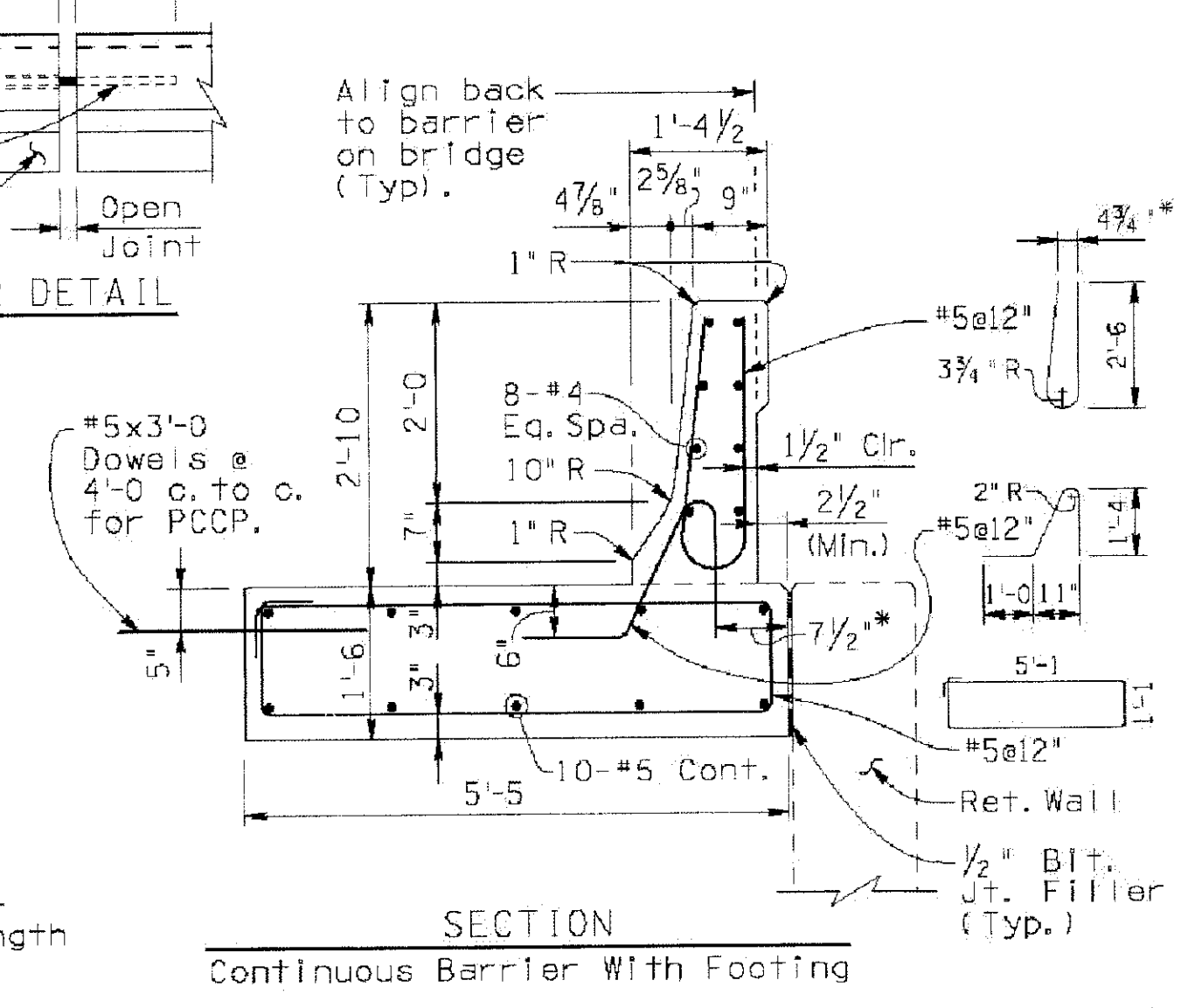


SECTION A-A



SECTION B-B

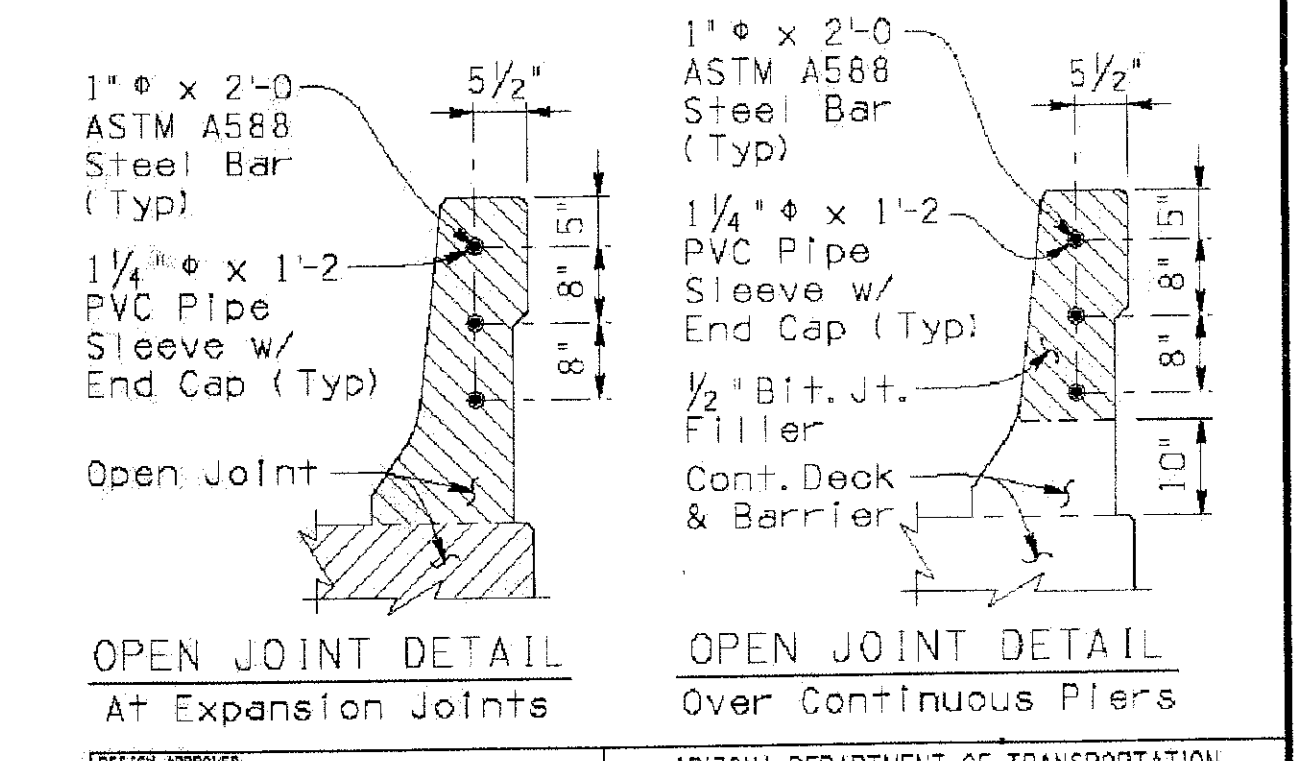
*Varies at taper length



SECTION C-C

SECTION D-D

GENERAL NOTES:
 Construction Specification - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, latest Edition.
 Design Specifications - AASHTO LRFD Bridge Design Specifications, 4th Edition 2007.
 This barrier has been successfully crash tested and is structurally evaluated as meeting the requirements of NCHRP Report 350 Test Level 4.
 All Concrete shall be Class "S" (f'c = 4000 psi).
 Reinforcing steel shall conform to ASTM Specification A615. All reinforcing shall be furnished as Grade 60. All reinforcing shall be epoxy coated at locations above EL. 4000 ft.
 All bends and hooks shall meet the requirements of AASHTO LRFD Article 5.10. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.
 All reinforcing steel shall have 2 inch clear cover unless noted otherwise.
 Concrete barriers on continuous superstructures shall have 1/2" bituminous joint filler in open joints over piers. See bridge drawings for details.
 Embed 1/2", Bridge Number and Year Built, using 1 1/2" w x 2" h number impressions in concrete, located as shown at the approach end of the outside lane.
 Anchorage bars are included in the pay item for barrier (Item No. 6011130).
 Omit bridge barrier transition when concrete barrier is continuous beyond bridge.
 Dimensions shall not be scaled from drawings.
 Item No. 6011130 F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (32")
 Measure: Linear Foot



OPEN JOINT DETAIL At Expansion Joints

OPEN JOINT DETAIL Over Continuous Piers

DESIGN APPROVED <i>Shafiq H. Hasan</i>	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION BRIDGE GROUP STRUCTURE DETAIL
APPROVED FOR DISTRIBUTION <i>Jason A. Nelson</i>	F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (32") NOMINAL
ROUTE	PROJECT NO.
LOCATION	SHEET NO.

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F-SHAPED BRIDGE CONCRETE BARRIER AND TRANSITION (32") NOMINAL
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	168	352

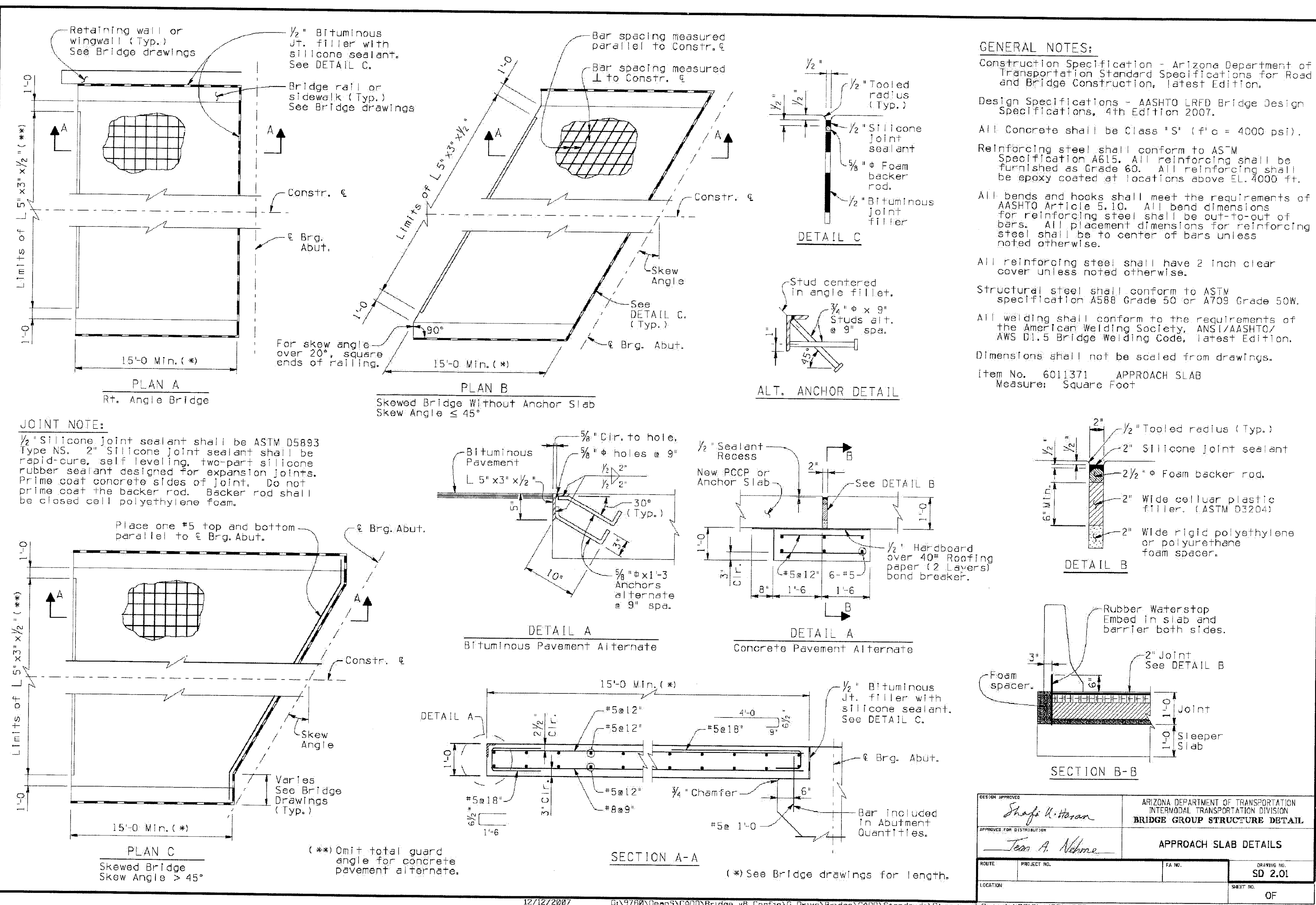
DWG NO: S-1.34

PRELIMINARY
90%
NOT FOR CONSTRUCTION

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	169	352
PREMIER				
ENGINEERING CORPORATION 8437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				
DES: RMD		DR: JRR		CK: SEO
		DATE: 12/09		

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				
NO.				

Note to Designer:
The information presented in the standard detail has been prepared in accordance with recognized engineering practice and is intended to provide a guide for the design of similar structures. It is the responsibility of the designer to verify the applicability and suitability of a standard detail for a particular project and to consult with the appropriate professional engineer, contractor, or other qualified professional engineer. Concerns within the linear border line shall not be altered.



DESIGN APPROVED	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION BRIDGE GROUP STRUCTURE DETAIL
APPROVED FOR DISTRIBUTION	APPROACH SLAB DETAILS
ROUTE	PROJECT NO.
LOCATION	FA NO.
	DRAWING NO. SD 2.01
	SHEET NO. OF

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

APPROACH SLAB DETAILS

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
APACHE WASH BRIDGE
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	169	352

DWG NO: S-1.35

**SONORAN BOULEVARD
MARICOPA COUNTY
15TH AVE TO 10TH ST**

NOT FOR CONSTRUCTION
PRELIMINARY
90%

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	171	352

PREMIER

ENGINEERING CORPORATION
6437 W CHAMBER BLVD, SUITE 1
CHANDLER, AZ 85226; 480-829-6000

DES: BAG DR: JRR CK: SEO DATE: 12/09

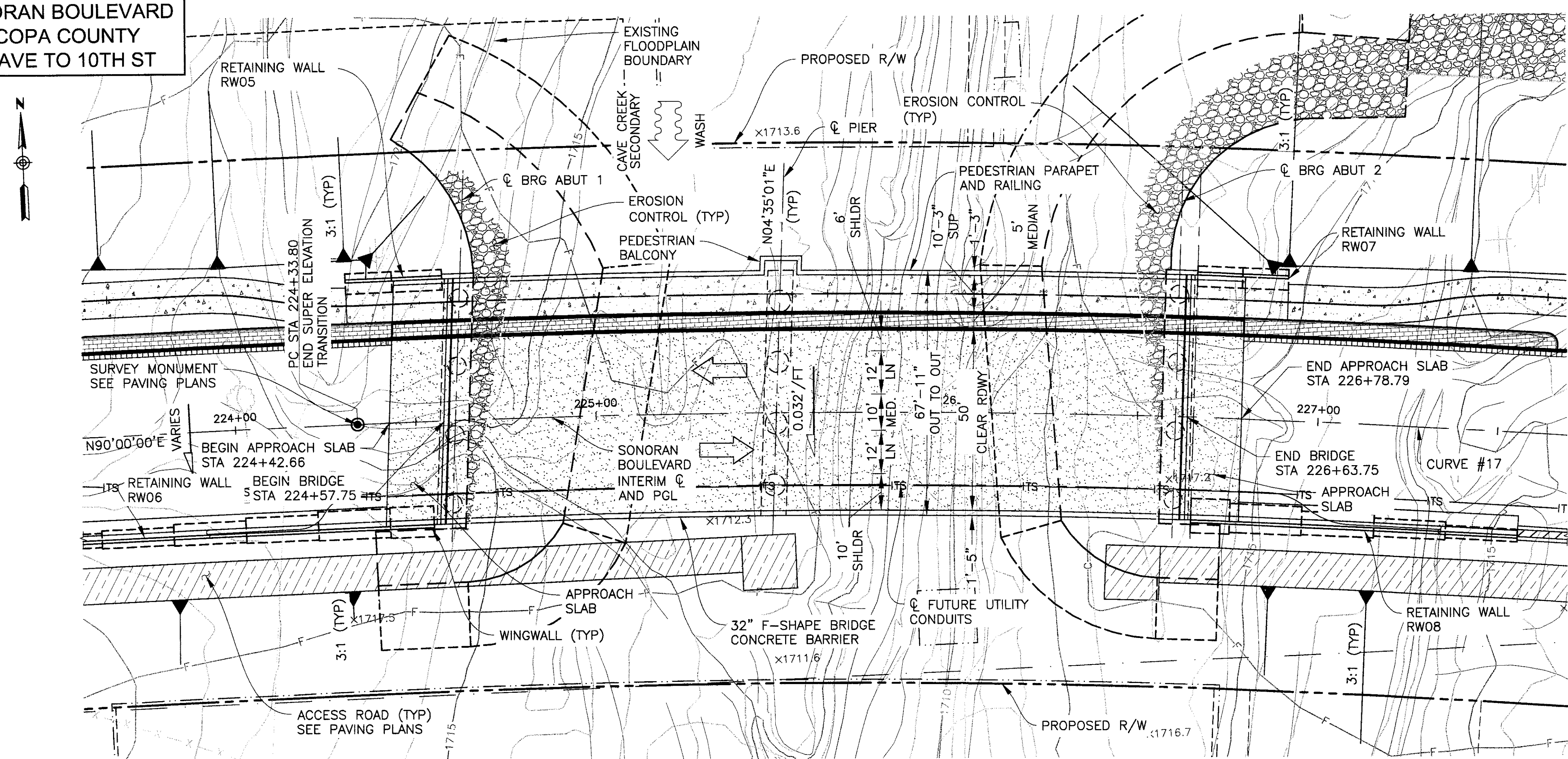
CONSULTING ENGINEER

INDEX OF DRAWINGS

DRAWING NO.	DRAWING TITLE
S-2.01	GENERAL PLAN AND ELEVATION
S-2.02	GENERAL NOTES & TYPICAL SECTION
S-2.03	QUANTITIES
S-2.04	EXCAVATION AND BACKFILL
S-2.05	FOUNDATION PLAN
S-2.06	DRILLED SHAFT DETAILS
S-2.07	ABUTMENT 1 PLAN AND ELEVATION
S-2.08	ABUTMENT 2 PLAN AND ELEVATION
S-2.09	ABUTMENT DETAILS 1
S-2.10	ABUTMENT DETAILS 2
S-2.11	WINGWALL DETAILS
S-2.12	EROSION CONTROL PLAN
S-2.13	EROSION CONTROL DETAILS
S-2.14	PIER PLAN AND ELEVATION
S-2.15	PIER DETAILS
S-2.16	DECK PLAN AND DETAILS
S-2.17	TYPICAL DECK & REINFORCING
S-2.18	GIRDER DETAILS SPAN 1
S-2.19	GIRDER DETAILS SPAN 2
S-2.20	GIRDER DETAILS
S-2.21	BEARING PAD DETAILS
S-2.22	ABUTMENT DIAPHRAGM DETAILS
S-2.23	PIER DIAPHRAGM DETAILS
S-2.24	DIAPHRAGM SECTIONS
S-2.25	PEDESTRIAN PARAPET AND RAILING DETAILS 1
S-2.26	PEDESTRIAN PARAPET AND RAILING DETAILS 2
S-2.27	PEDESTRIAN BALCONY DETAILS
S-2.28	SHADE STRUCTURE DETAILS
S-2.29	MISCELLANEOUS DETAILS 1
S-2.30	MISCELLANEOUS DETAILS 2
S-2.31	SCREED ELEVATIONS
S-2.32	F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (32") NOMINAL APPROACH SLAB DETAILS
S-2.33	DECK JOINT ASSEMBLY STRIP SEAL

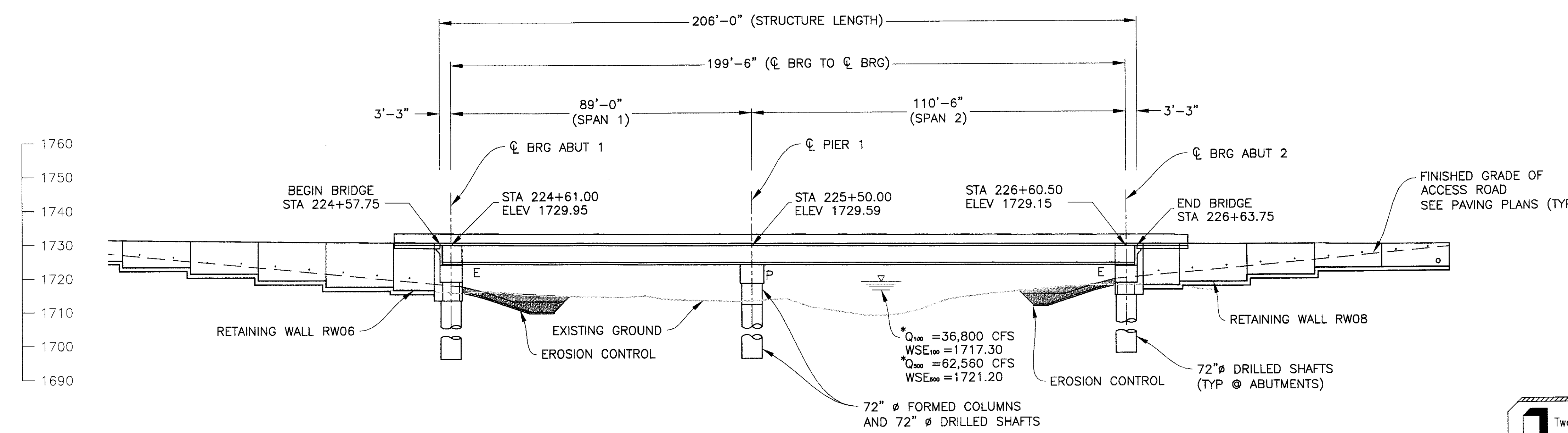
NOTE:
1. STATIONING DIMENSIONS, AND ELEVATIONS ARE GIVEN ALONG SONORAN BOULEVARD INTERIM C

NO.	DESCRIPTION	REV BY	CHK BY	DATE



PLAN
SCALE: 1"=20'
NEW 2 SPAN PRECAST PRESTRESSED
CONCRETE AASHTO TYPE V GIRDER BRIDGE
SKEW 3'08"58" RT
1' CONTOUR INTERVAL

CURVE #17
PC=224+33.80
PI=229+90.65
PT=235+33.80
Δ=22°00'00"
D=02°00'00"
R=2864.789
T=556.859'
L=1100.00'



ELEVATION
SCALE: 1"=20'

* NOTE:
COMBINED FLOW FOR PRIMARY
AND SECONDARY CHANNELS.

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GENERAL PLAN AND ELEVATION

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	171	352

DWG NO: S-2.01

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P:\2008005\0200\CAVE\CWA\Structures\201-CC_Secndary Plan and Elevation.dwg plotted by James Rojas at 12/21/2009 8:58:45 AM

GENERAL NOTES

DESIGN SPECIFICATIONS

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CUSTOMARY US UNITS, FOURTH EDITION, 2007 AND REVISIONS TO DATE.

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION AND REVISIONS TO DATE.

CONSTRUCTION SPECIFICATIONS

MARICOPA ASSOCIATION OF GOVERNMENTS (MAG), UNIFORM STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION AND REVISION DATE.

CITY OF PHOENIX SUPPLEMENT TO MAG UNIFORM STANDARD SPECIFICATIONS.

ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2008 EDITION. APPLICABLE WHEN REFERENCED IN THESE PLANS AND AREAS NOT COVERED BY MAG SPECIFICATION.

MAG SPECIFICATIONS SHALL TAKE PRECEDENCE OVER ADOT SPECIFICATIONS, UNLESS NOTED OTHERWISE.

DESIGN LOADINGS

LIVE LOAD, HL-93 (LRFD)

DEAD LOAD INCLUDES ALLOWANCES OF 25 PSF FOR FUTURE WEARING SURFACE.

THE SUPERSTRUCTURE IS DESIGNED AS A COMPOSITE SECTION WITH THE TOP 1/2" OF SLAB THICKNESS REMOVED FROM THE DESIGN SECTION PROPERTIES TO ACCOUNT FOR GRINDING, GROOVING & WEARING.

SEISMIC PERFORMANCE ZONE I (ACCELERATION COEFFICIENT OF 0.04).

DESIGN MAXIMUM SCOUR 27'-9"

RATING

RATING FACTORS ARE BASED ON LRFR METHODOLOGY AND HL-93 LOADING

INVENTORY1.33
OPERATING2.01

CONCRETE STRESSES

DECK, DIAPHRAGMS, MEDIAN f'c = 4500 psi - CLASS S
MEDIAN f'c = 4000 psi - CLASS S
ABUTMENTS, PIERS, COLUMNS f'c = 3500 psi - CLASS S
GIRDERS f'c = VARIES - SEE GIRDER SHTS
DRILLED SHAFTS f'c = 3500 psi - CLASS S
OTHER CONCRETE f'c = 3000 psi - CLASS S

REINFORCING STEEL SHALL CONFORM TO ASTM A615 EXCEPT WHERE ASTM A706 IS SPECIFIED FOR WELDABILITY. ALL REINFORCING STEEL SHALL BE FURNISHED AS GRADE 60.

PRESTRESSING STEEL SHALL CONFORM TO ASTM A416 GRADE 270 LOW RELAXATION 7-WIRE STRAND.

ALL BENDS AND HOOKS SHALL MEET THE REQUIREMENTS OF AASHTO LRFD SECTION 5.10.2. ALL BEND DIMENSIONS FOR REINFORCING STEEL SHALL BE OUT-TO-OUT OF BARS. ALL PLACEMENT DIMENSIONS FOR REINFORCING STEEL SHALL BE CENTER OF BARS UNLESS NOTED OTHERWISE.

ALL REINFORCING STEEL SHALL HAVE 2 INCH CLEAR COVER, UNLESS NOTED OTHERWISE.

CHAMFER ALL EXPOSED CORNERS 3/4" UNLESS NOTED OTHERWISE.

BRIDGE BARRIERS SHALL NOT BE CAST BY THE SLIP-FORM METHOD.

ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY BRIDGE WELDING CODE D1.5-2002, UNLESS NOTED OTHERWISE.

ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A36, UNLESS NOTED OTHERWISE.

DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.

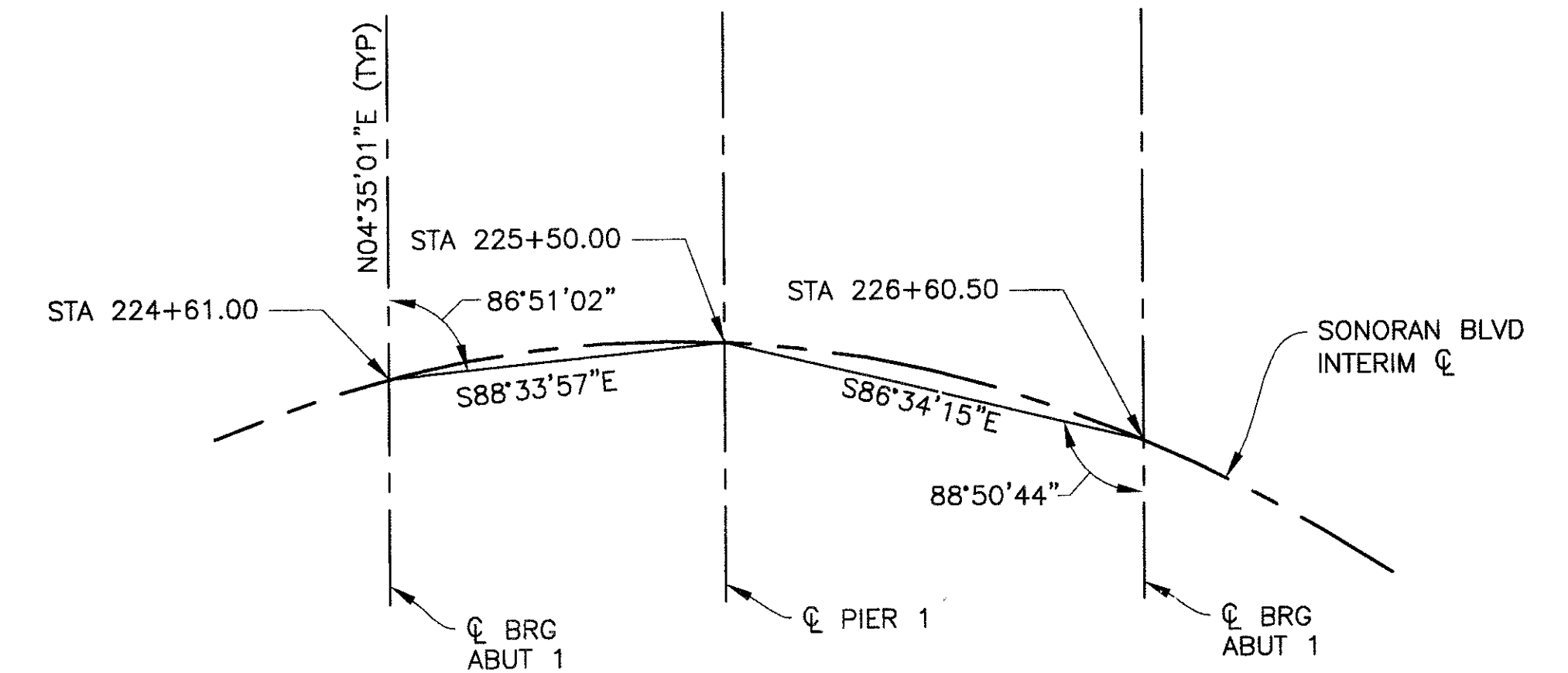
STRUCTURE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATION AND THE SPECIAL PROVISIONS.

LEGEND:

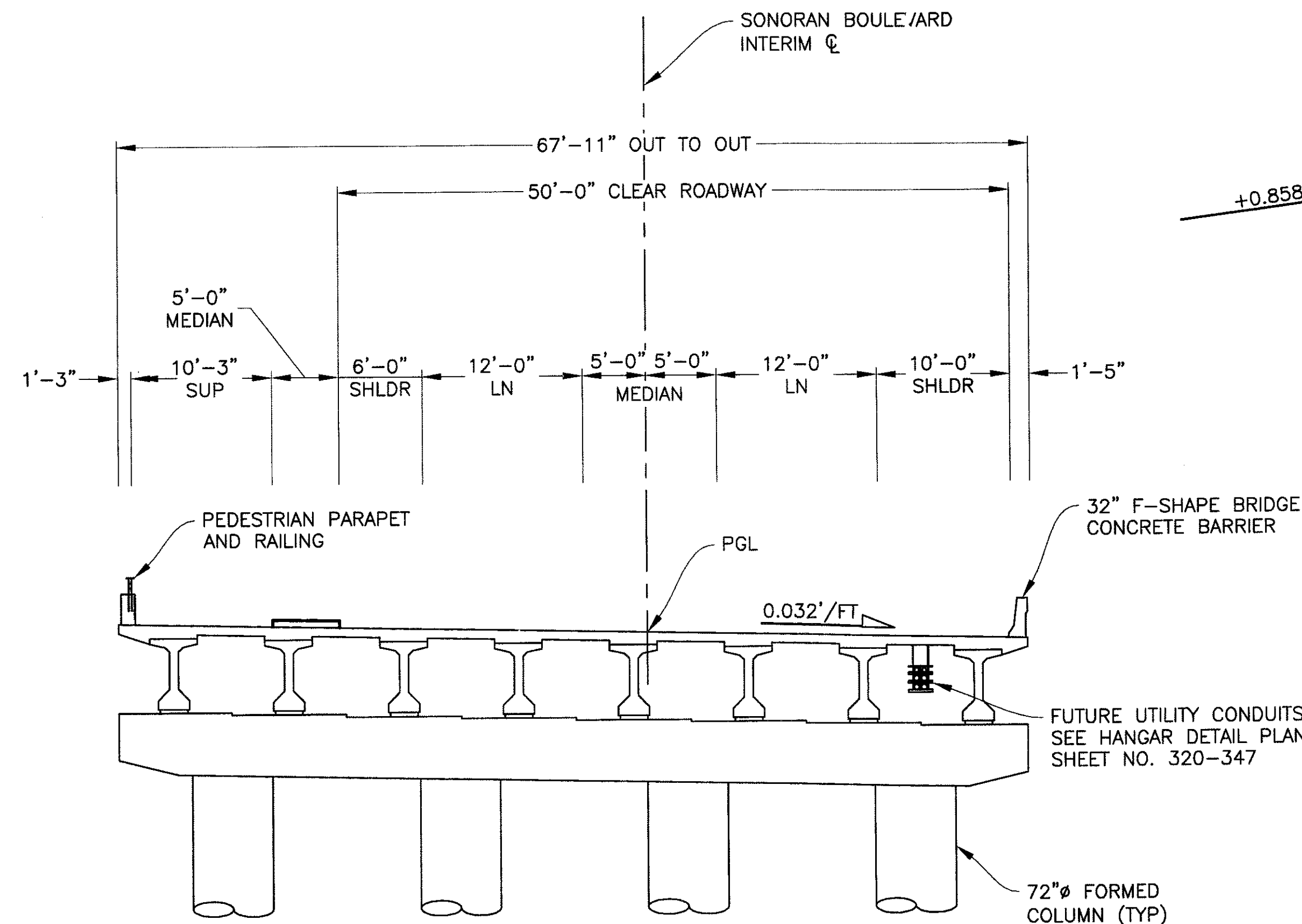
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 TITLE/DETAIL MARKER
- SECTION LETTER
 SECTION MARKER
- ELEVATION LETTER
 ELEVATION MARKER

ABBREVIATIONS

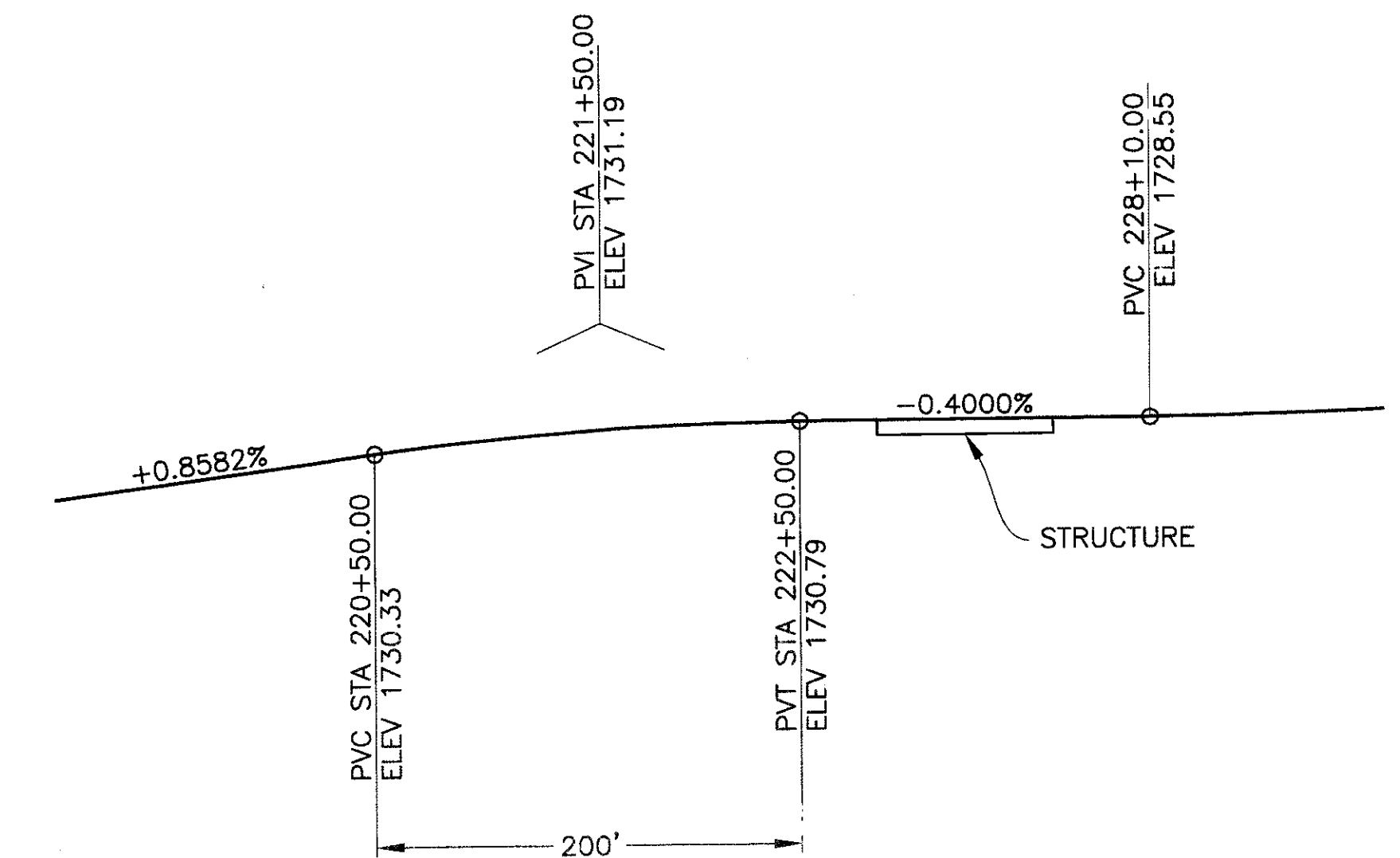
<ul style="list-style-type: none"> Ⓞ AT AB ANCHOR BOLT ABUT ABUTMENT ADD'L ADDITIONAL APPROX APPROXIMATE B/B BACK-TO-BACK BIT BITUMINOUS BM BEAM BOTT BOTTOM BRG BRIDGE BTWN BETWEEN Ⓞ CENTERLINE CIP CAST-IN-PLACE C CENTER CY CUBIC YARDS CLR CLEAR COL COLUMN CONC CONCRETE CONT CONTINUOUS CST CONSTRUCTION DIAG DIAGONAL DIA, Ⓞ DIAMETER DIAPH DIAPHRAGM DTL DETAIL DWG DRAWING EA EACH EB EAST BOUND EF EACH FACE ELEV ELEVATION EMBED EMBEDMENT EQ EQUAL EW EACH WAY EXIST EXISTING EXP,E EXPANSION EXT EXTERIOR F FIXED FIN FINISHED FLR FLOOR FTG FOOTING GA GAUGE GALV GALVANIZED GR GRADE HS HIGH STRENGTH HK HOOK HORIZ HORIZONTAL ID INSIDE DIAMETER INT INTERIOR JT JOINT LBS POUNDS LF LINEAR FOOT LN LANE LS LUMP SUM 	<ul style="list-style-type: none"> LT LONGIT MAX MAXIMUM MI MILES MIN MINIMUM MISC MISCELLANEOUS MOD MODIFIED NB NORTH BOUND NIC NOT IN CONTRACT NO,# NUMBER NTS NOT TO SCALE OC ON CENTER OD OUTSIDE DIAMETER OPNG OPENING P PINNED PGL PROFILE GRADE LINE PLATE PSI POUNDS PER SQUARE INCH PVC POLYVINYL CHLORIDE PED PEDESTRIAN R RADIUS R/W RIGHT OF WAY RDWY ROADWAY REINF REINFORCEMENT REQ'D REQUIRED RET RETAINING RT RIGHT SB SOUTH BOUND SCHED SCHEDULE SECT SECTION SF SQUARE FOOT SHLDR SHOULDER SHT SHEET SIM SIMILAR SPA SPACE SPECS SPECIFICATION STA STATION STD STANDARD STL STEEL STR STRUCTURAL SWLK SIDEWALK SY SQUARE YARD SYM SYMMETRICAL TOW TOP OF WALL TEMP TEMPORARY TRANS TRANSITION TYP TYPICAL VERT VERTICAL W/ WITH WB WEST BOUND WSE WATER SURFACE ELEVATION
---	---



REFERENCE CHORD DETAIL
NTS



TYPICAL SECTION
SCALE: 1/8"=1'-0"



PROFILE GRADE
SONORAN BLVD INTERIM C
NTS

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GENERAL NOTES & TYPICAL SECTION

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

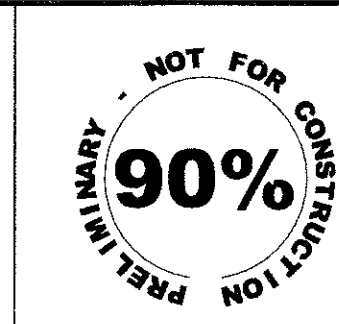
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DATE: 12/09	DATE: 12/09	DATE:12/09	172	352

DWG NO: S-2.02

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P:\2008000A\CAD\03\City\Sheets\Structure\2002-CC Secondary General Notes & Typ Section.dwg - plotted by James Rojas at 12/21/2009 8:38:49 AM
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F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	173	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-8000				
DES: BAG			DR: JRR	
			CK: SEO	
DATE: 12/09				

ITEM	STRUCTURE EXCAVATION	STRUCTURE BACKFILL	CONCRETE			REINFORCING STEEL	AASHTO GIRDER TYPE V	72" Ø DRILLED SHAFT	32" F-SHAPE BRIDGE CONCRETE BARRIER	PEDESTRIAN PARAPET AND RAILING
			CLASS S (f'c=3500 psi)	CLASS S (f'c=4000 psi)	CLASS S (f'c=4500 psi)					
			CY	CY	CY					
ABUTMENT 1	140	85	167			20,555		353		
ABUTMENT 2	120	85	167			19,320		354		
PIER 1			147			21,215		338		
SUPERSTRUCTURE				14	580	126,565	1,596		432	261
TOTAL	260	170	481	14	580	187,655	1,596	1,045	432	261
AS BUILT										

APPROACH SLABS..... 2,038 SF
 DECK JOINT ASSEMBLIES (STRIP SEAL)..... 131 LF
 ELASTOMERIC BEARING PADS..... 32 EA
 UTILITY HANGERS AND CONDUITS..... 212 LF

REVISION BY CITY OF PHOENIX

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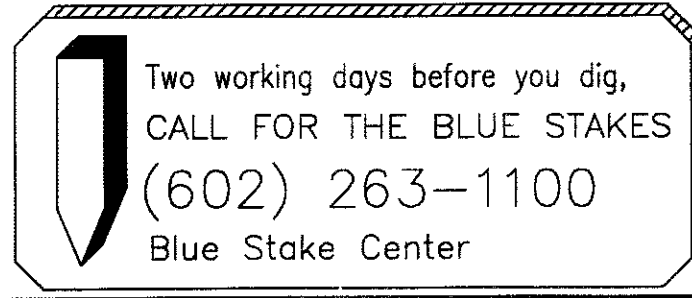
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QUANTITIES
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293**



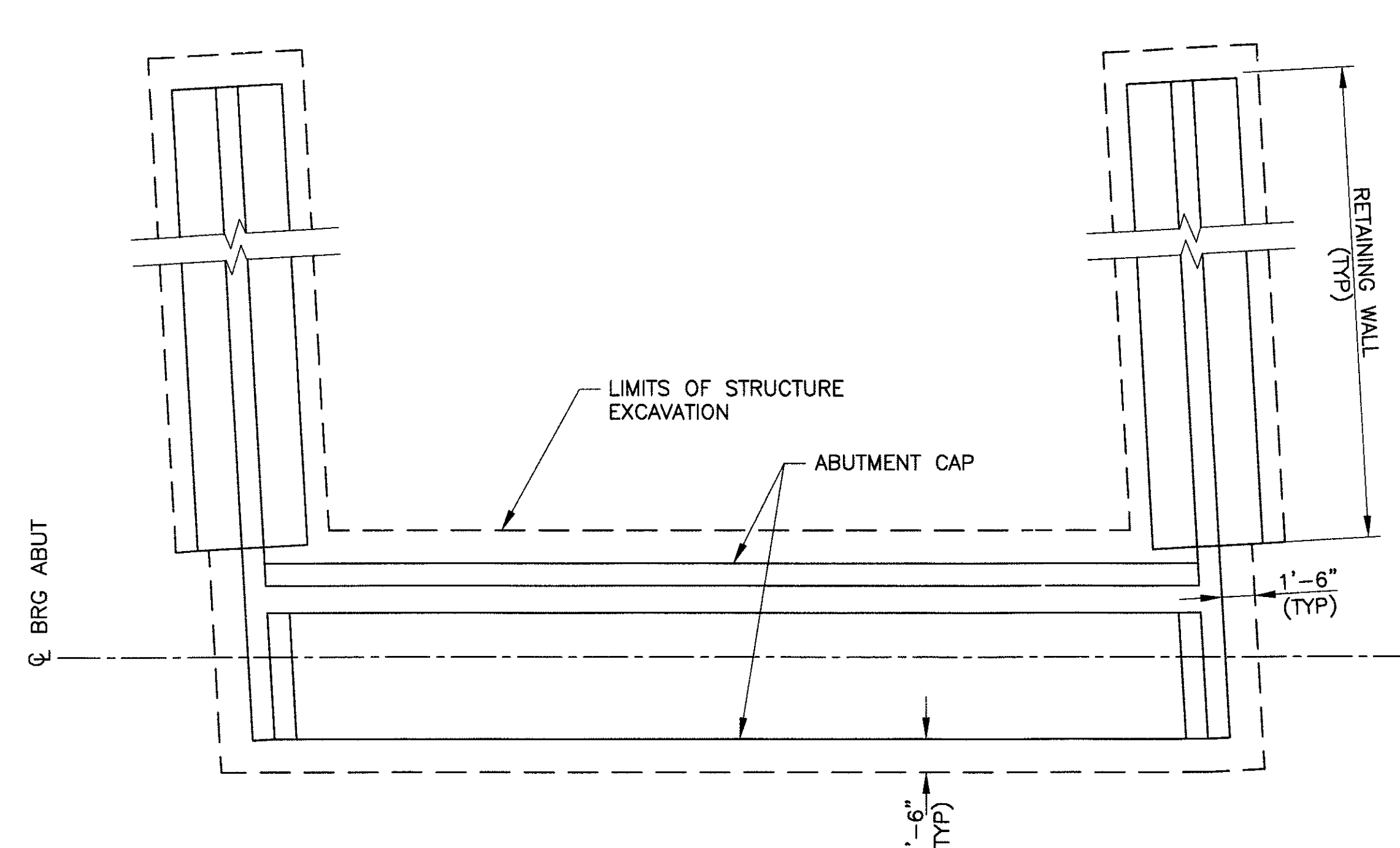
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DATE: 12/09	DATE: 12/09	DATE: 12/09	173	352
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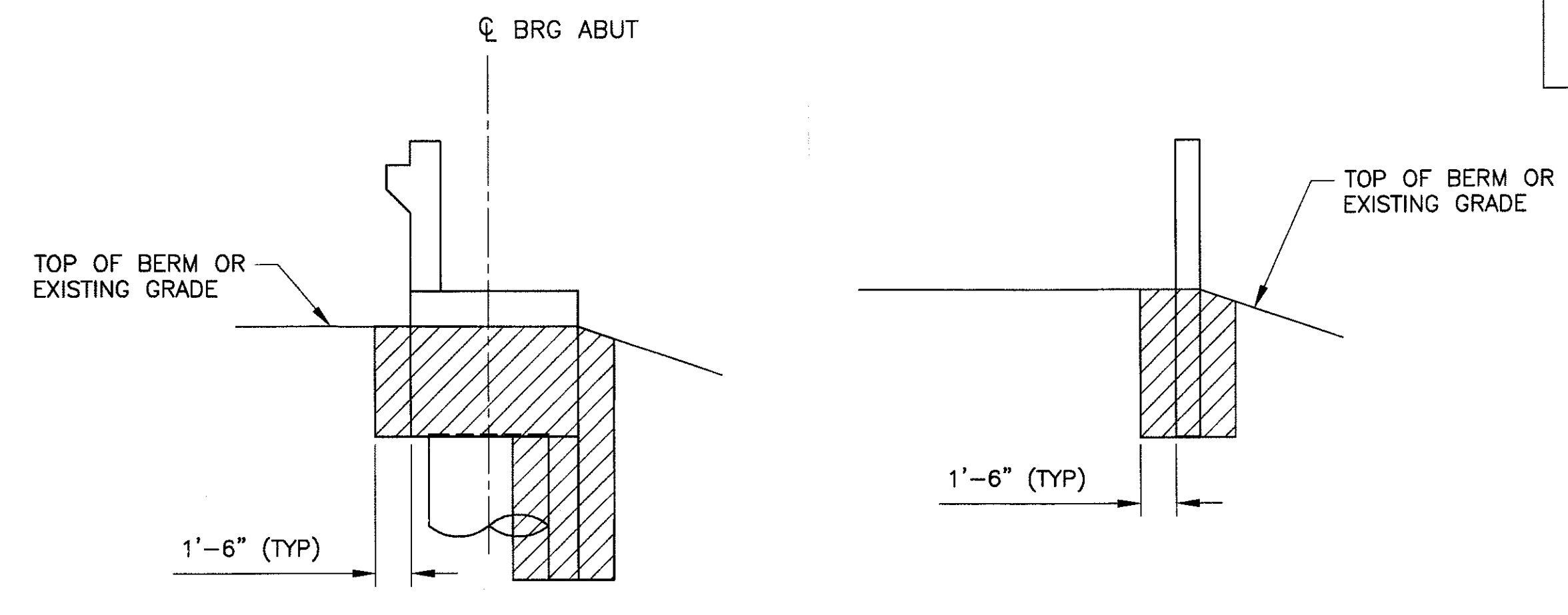
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90%
NOT FOR CONSTRUCTION

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	174	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				
DES: BAG			CONSULTING ENGINEER	
DR: JRR		CK: SEO		DATE: 12/09

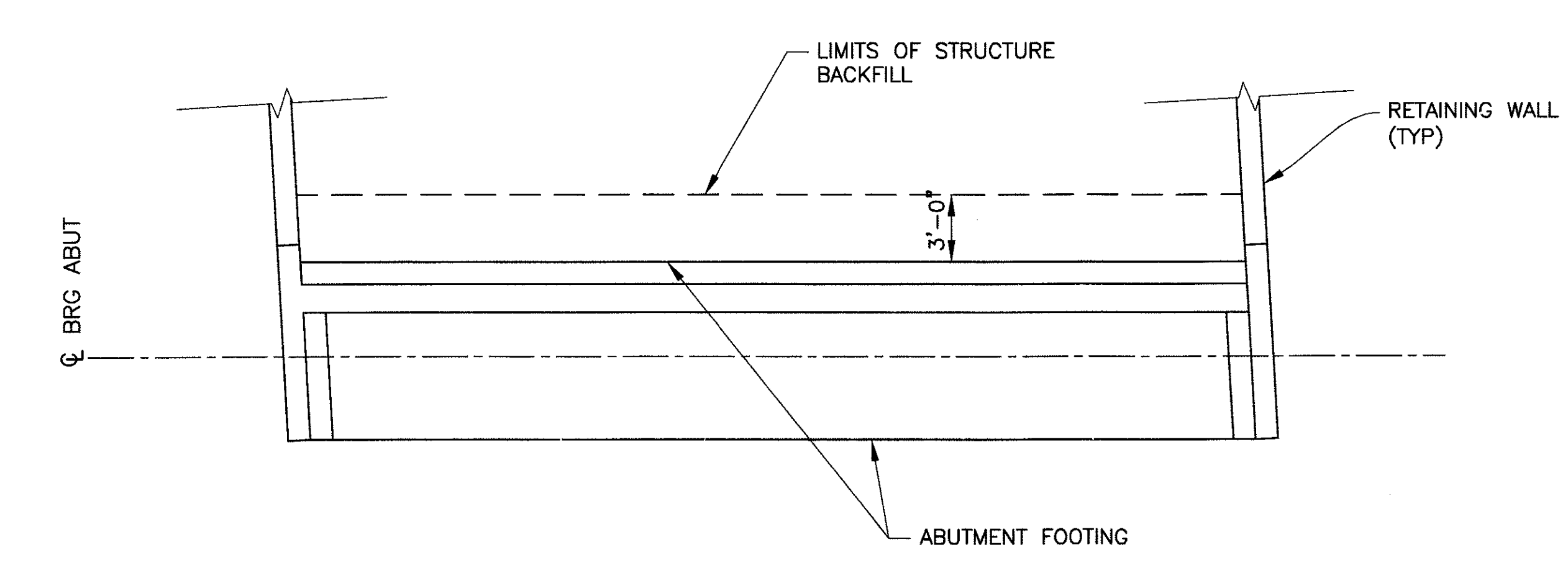
REVISION BY CITY OF PHOENIX	REV BY	CHK BY	DATE
DESCRIPTION			
NO.			
REVISION BY CITY OF PHOENIX	REV BY	CHK BY	DATE
DESCRIPTION			
NO.			
REVISION BY CITY OF PHOENIX	REV BY	CHK BY	DATE
DESCRIPTION			
NO.			



PLAN OF STRUCTURE EXCAVATION AT ABUTMENTS
ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR
SCALE: 3/16" = 1'-0"

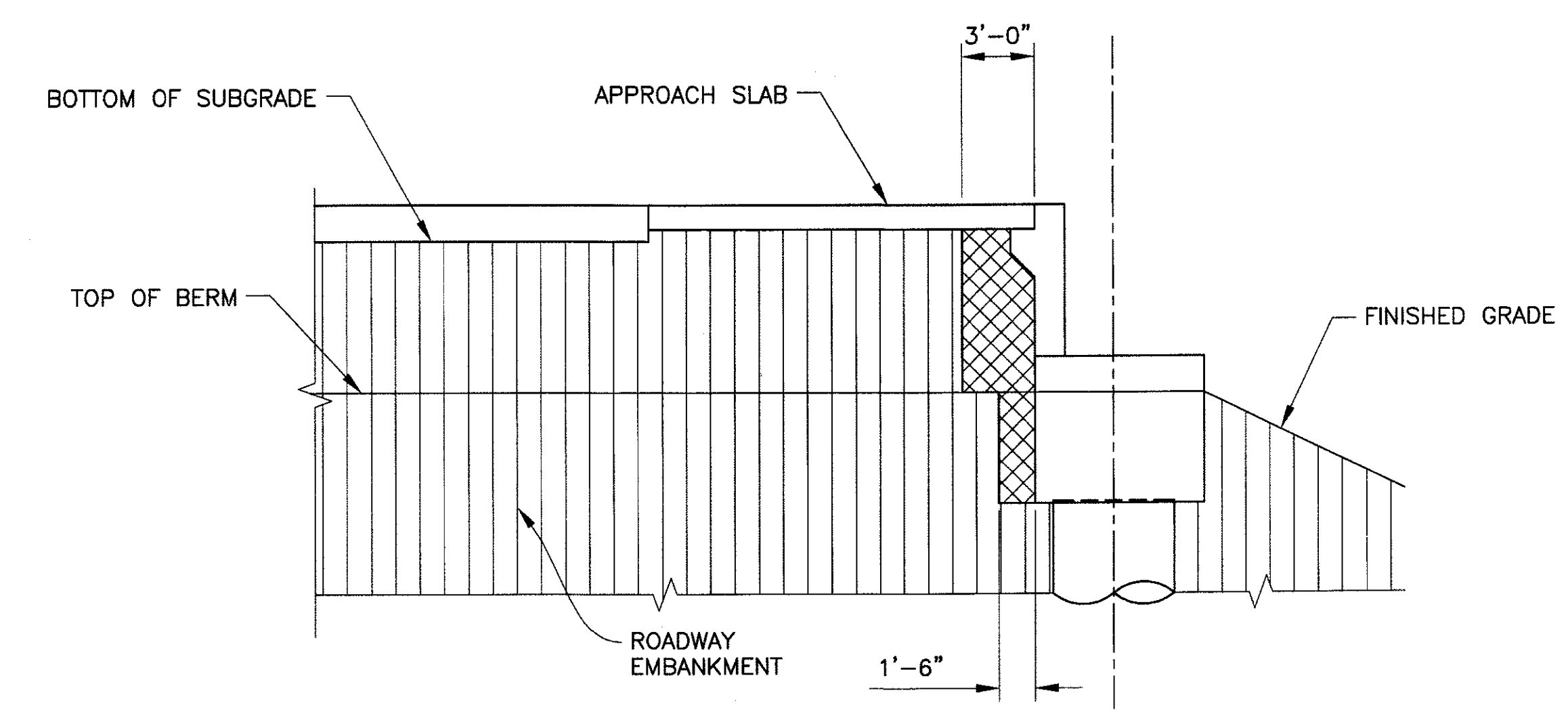


STRUCTURE EXCAVATION PAYMENT LIMITS
SCALE: 3/16" = 1'-0"



PLAN OF STRUCTURE BACKFILL AT ABUTMENTS
ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR
SCALE: 3/16" = 1'-0"

- LEGEND**
- INDICATES STRUCTURE EXCAVATION
 - INDICATES STRUCTURE BACKFILL
 - ROADWAY EMBANKMENT



STRUCTURE BACKFILL PAYMENT LIMITS
SCALE: 3/16" = 1'-0"

Two working days before you dig,
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(602) 263-1100
Blue Stake Center

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

EXCAVATION AND BACKFILL
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293**

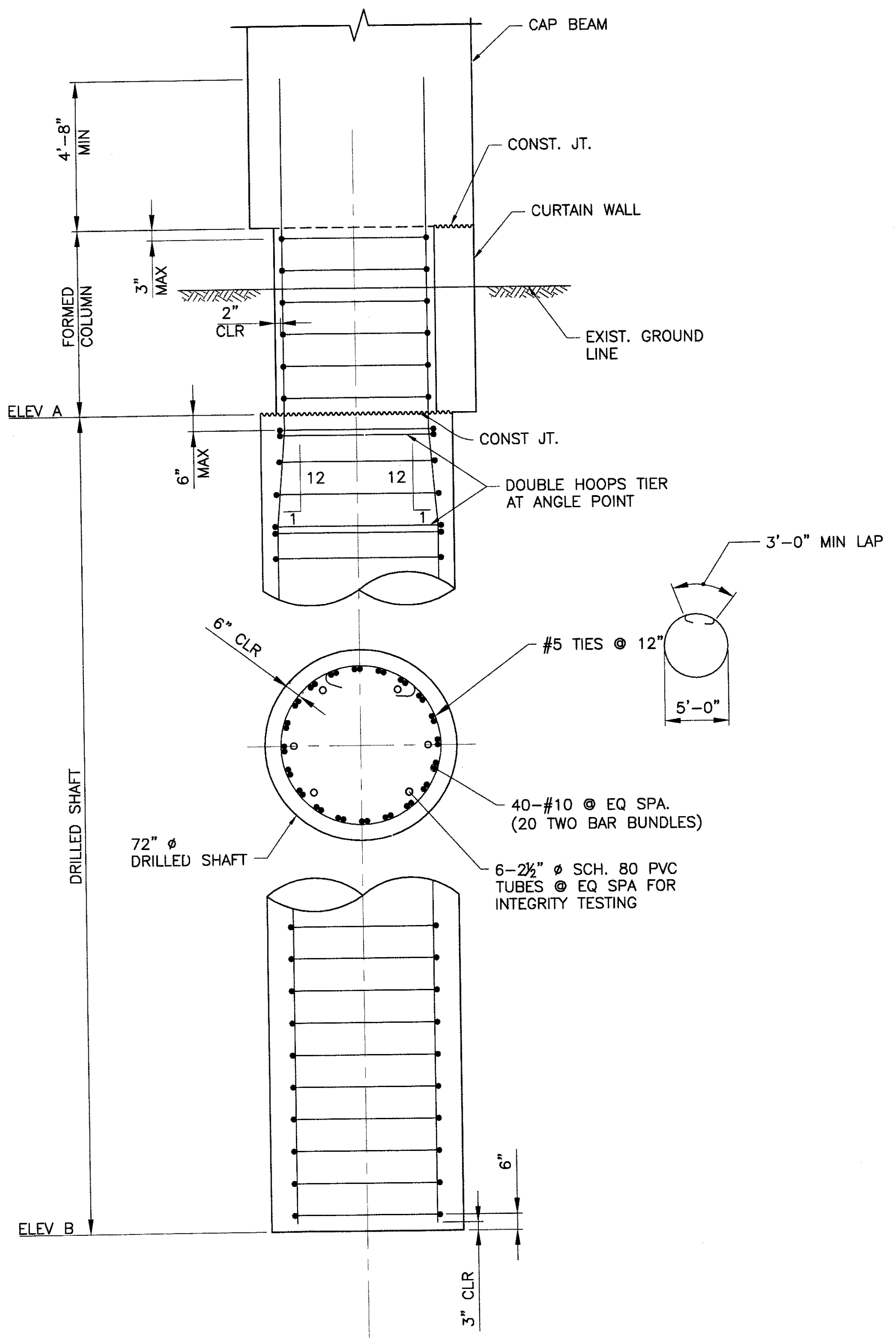
DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	174	352
DWG NO: S-2.04				

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PRELIMINARY 90% NOT FOR CONSTRUCTION

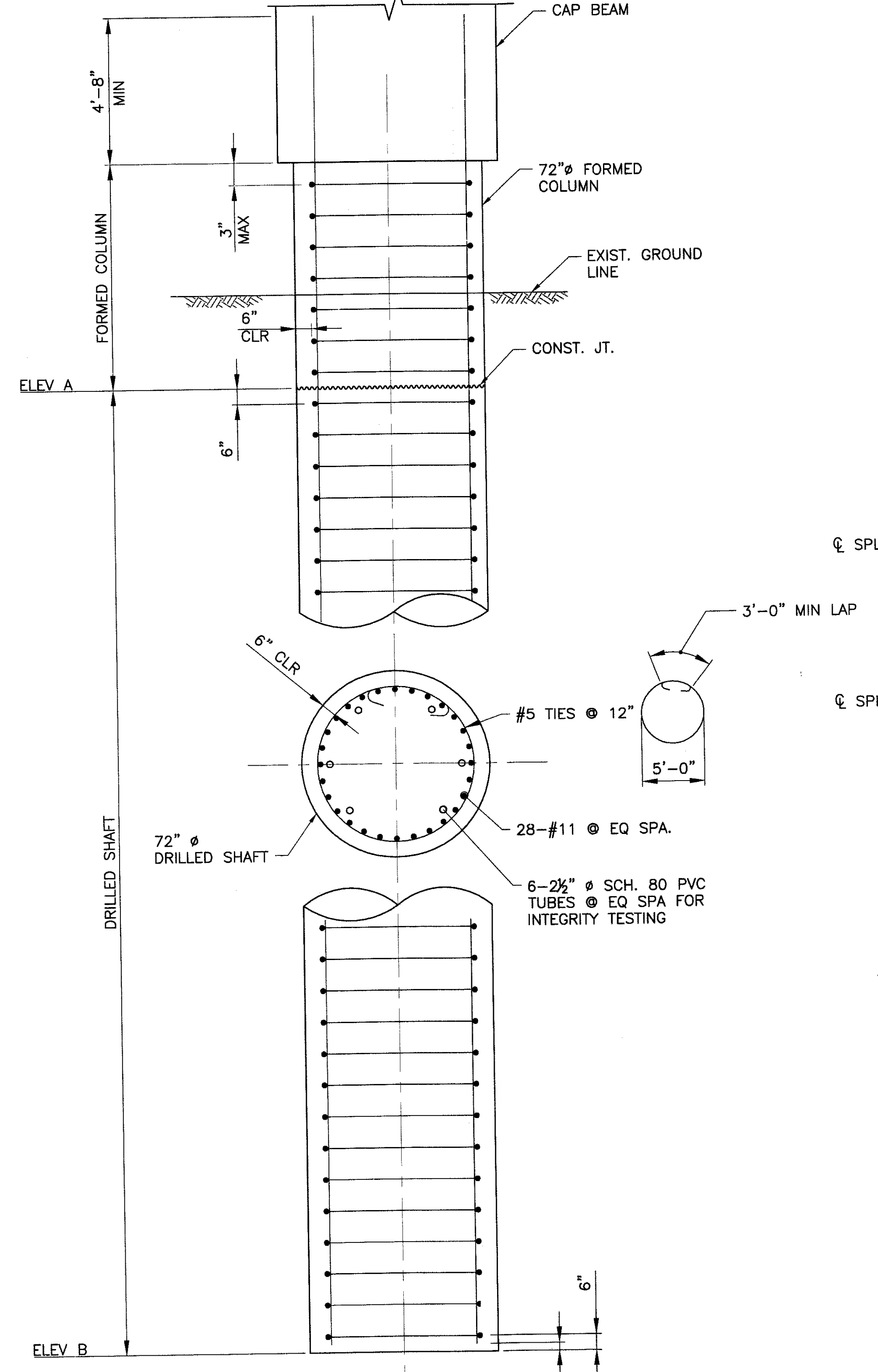
F.H.W.A. REGION 9	STATE ARIZ.	PROJ. NO. ST85100293	NO. 176	TOTAL 352
PREMIER ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000		CONSULTING ENGINEER DES: BAG DR: JRR CK: SEO DATE: 12/09		

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

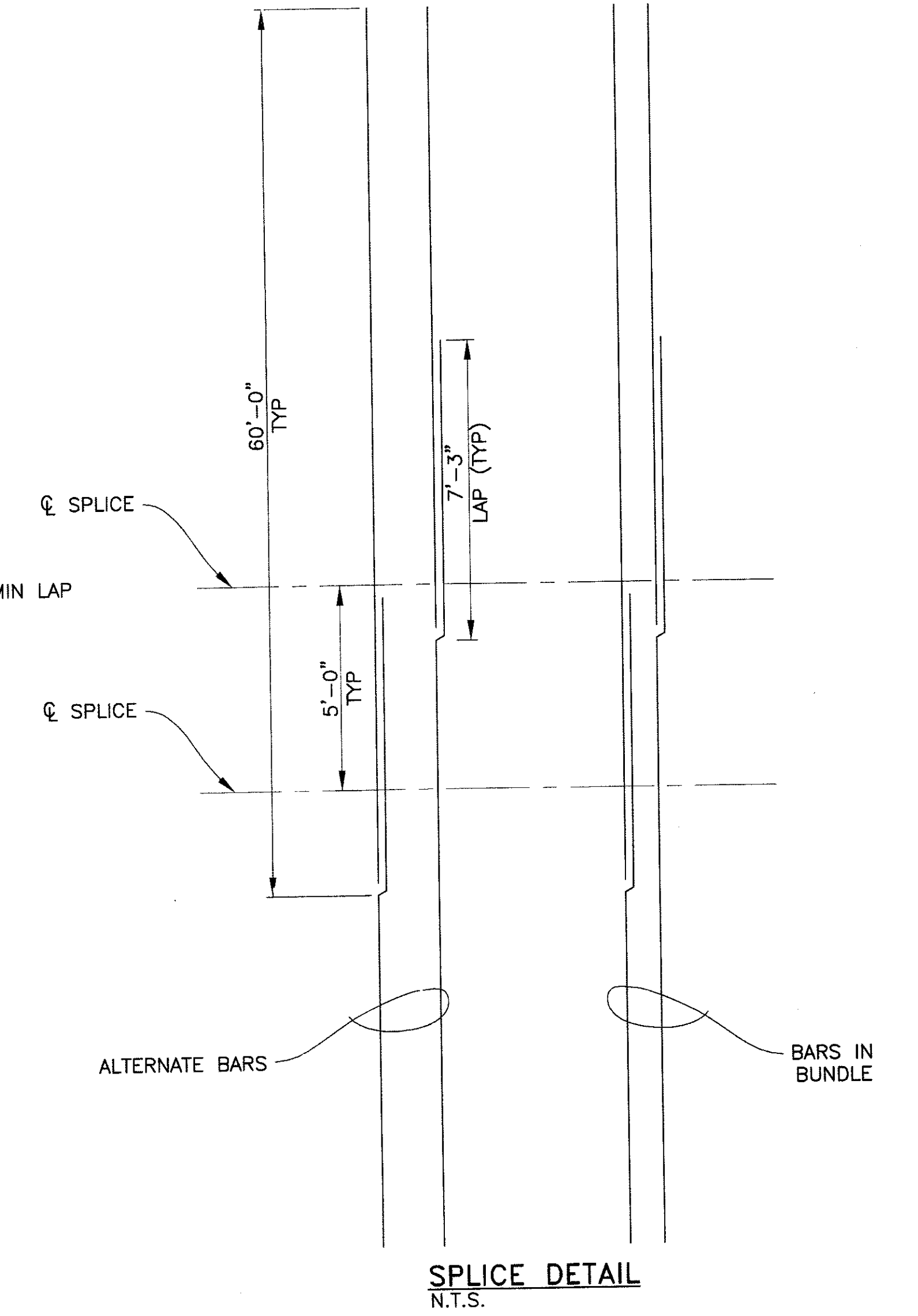


DRILLED SHAFT AT ABUTMENT #1 AND #2
SCALE = 3/8" = 1'-0"

DRILLED SHAFT ELEVATIONS		
	ELEVATION A	ELEVATION B
ABUTMENT 1	1713.22	1625.00
ABUTMENT 2	1713.41	1625.00
PIER	1706.50	1622.00



DRILLED SHAFT AT PIER
SCALE = 3/8" = 1'-0"



SPLICE DETAIL
N.T.S.

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Blue Stake Center

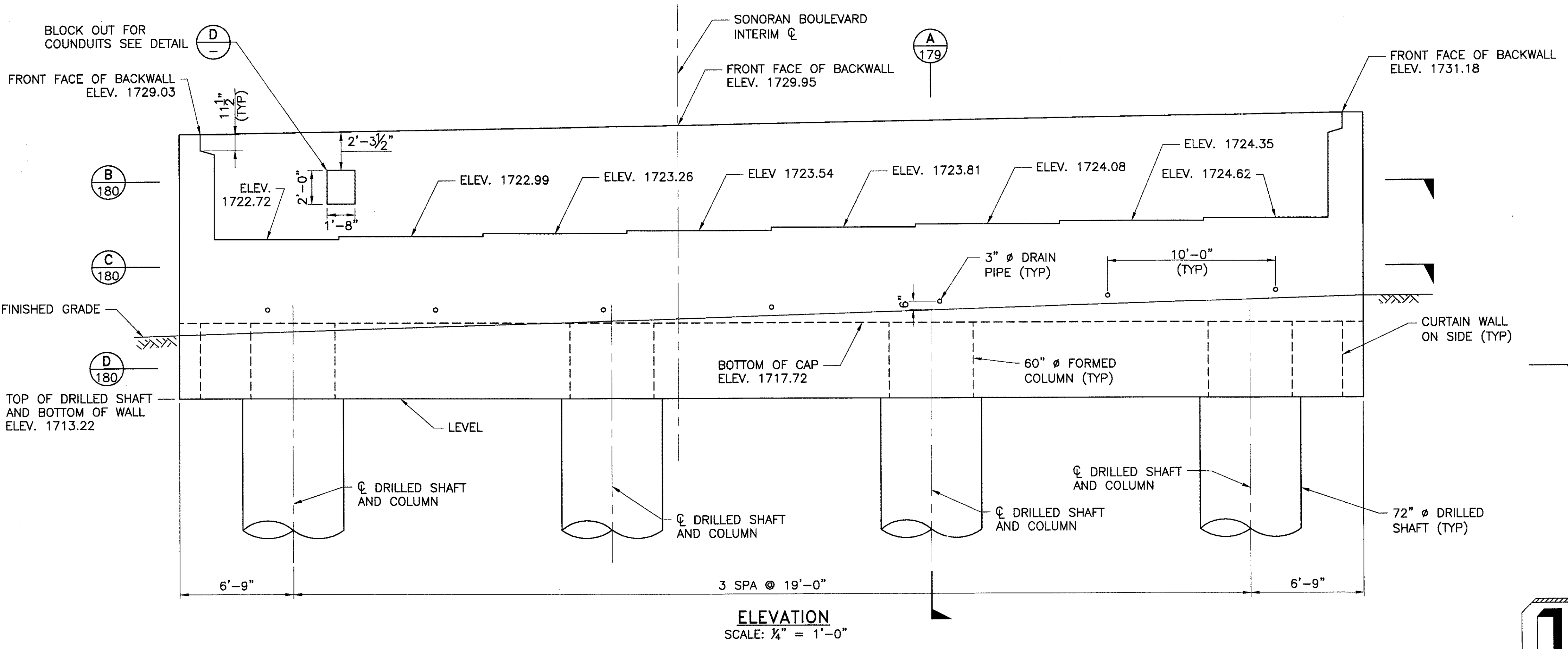
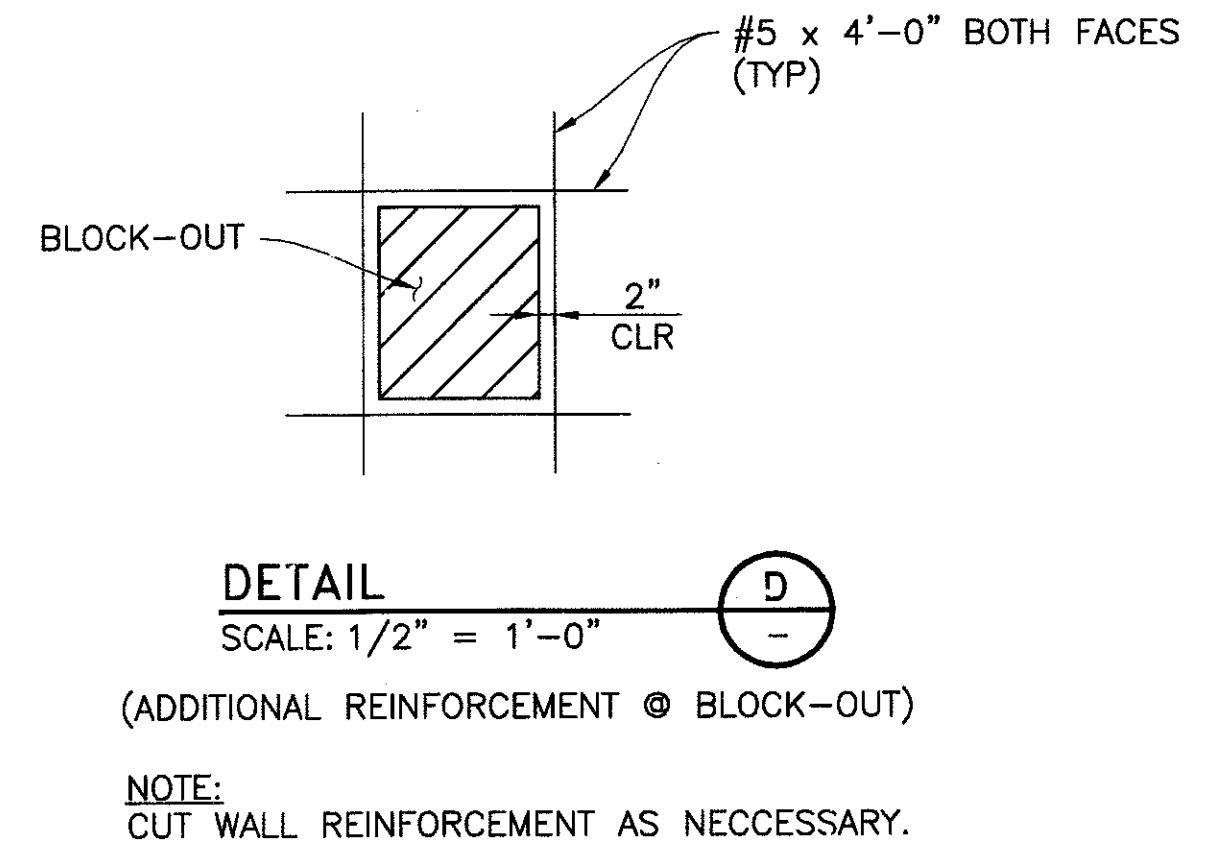
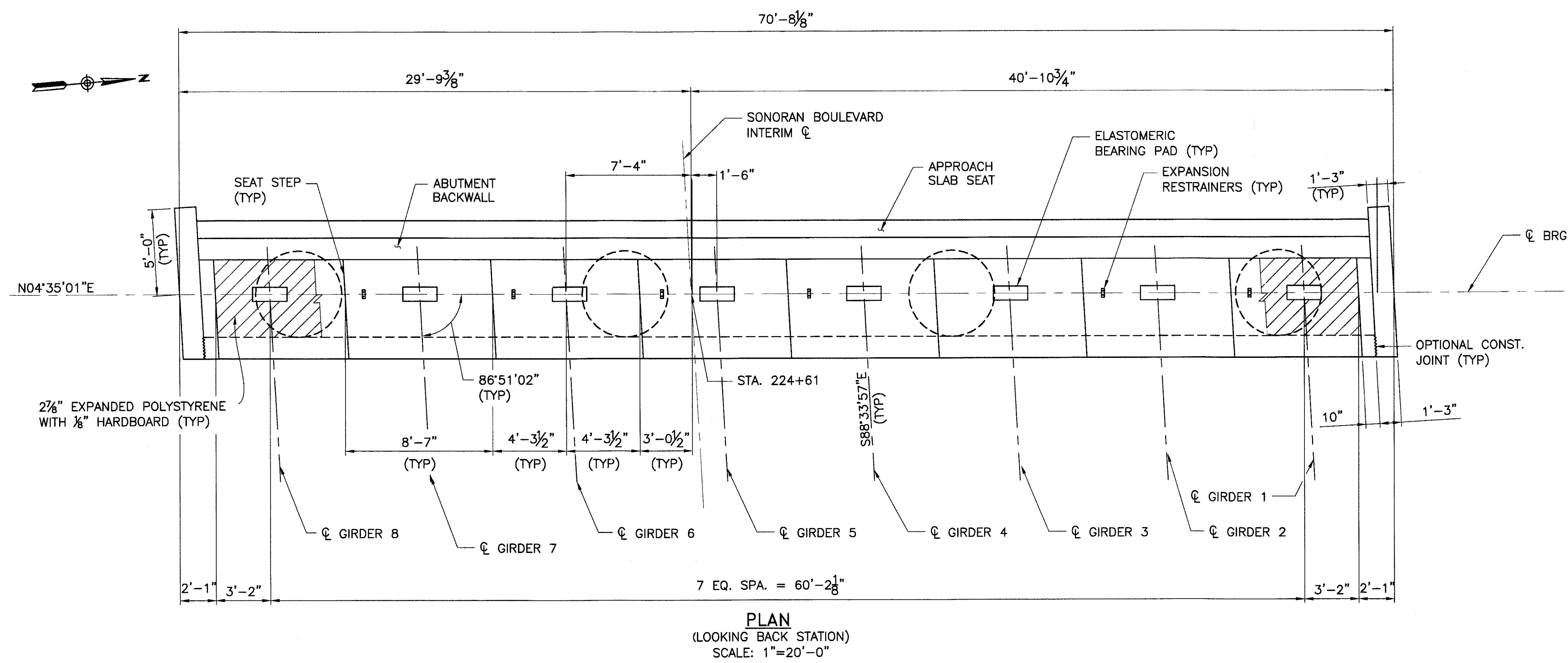
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

DRILLED SHAFT DETAILS				
CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT				
SONORAN BOULEVARD CAVE CREEK SECONDARY ST85100293				
DR: JRR DATE: 12/09	DES: BAG DATE: 12/09	CK: SEO DATE: 12/09	SHEET NO: 176	TOTAL SHEETS 352
DWG NO: S-2.06			PD	

P:\200805\000\Civil\Sheets\Structures\208-cc\Secondary\Drilled Shaft details.dwg - plotted by James Rogas at 12/21/2009 8:59:15 AM
 penname: PREMIER.CTB
 scale: 1.0000

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	177	352
PREMIER ENGINEERING CORPORATION 8437 N. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000 CONSULTING ENGINEER					
DES: BAG	DR: JRR	CK: SEO	DATE: 09/09		

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE



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ABUTMENT 1 PLAN & ELEVATION

CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

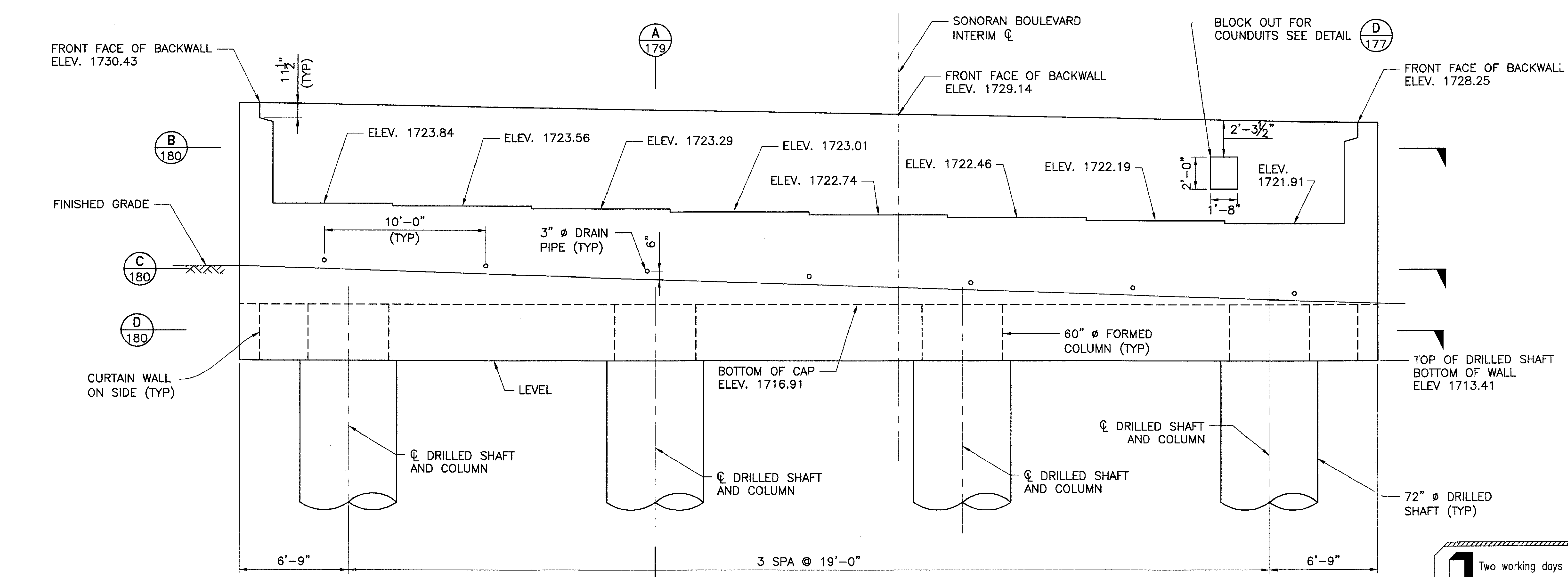
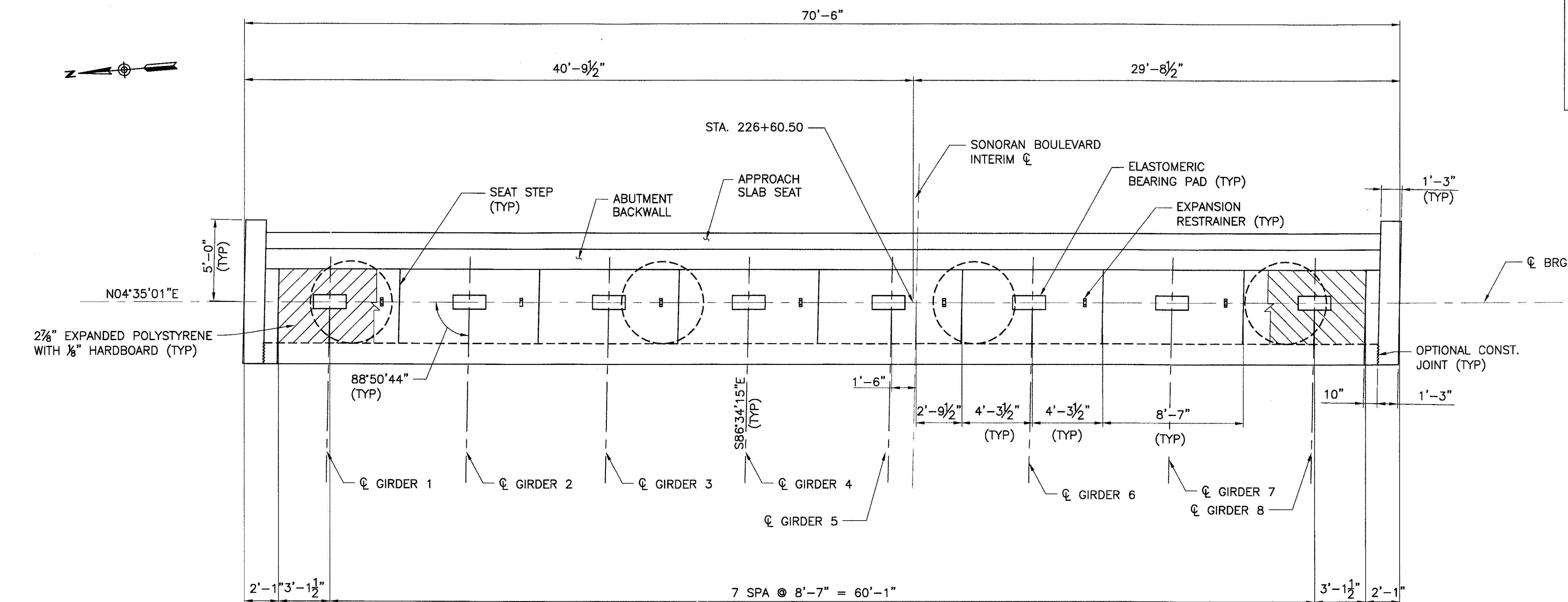
**SONORAN BOULEVARD
 CAVE CREEK SECONDARY
 ST85100293**

DR: JRR	DES: BAG	CK: SEO	SHEET	TOTAL
DATE: 12/09	DATE: 12/09	DATE: 12/09	NO:	SHEETS
			177	352

DWG NO: S-2.07

P:\2008\005\CAD\Civil\Sheets\Structures\208-Cc Secondary Abutment 1 Plan and Elevation.dwg - plotted by James Rojas at 12/21/2009 8:59:20 AM

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

ABUTMENT 2 PLAN & ELEVATION
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

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 CALL FOR THE BLUE STAKES
 (602) 263-1100
 Blue Stake Center

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	178	352
DWG NO: S-2.08				

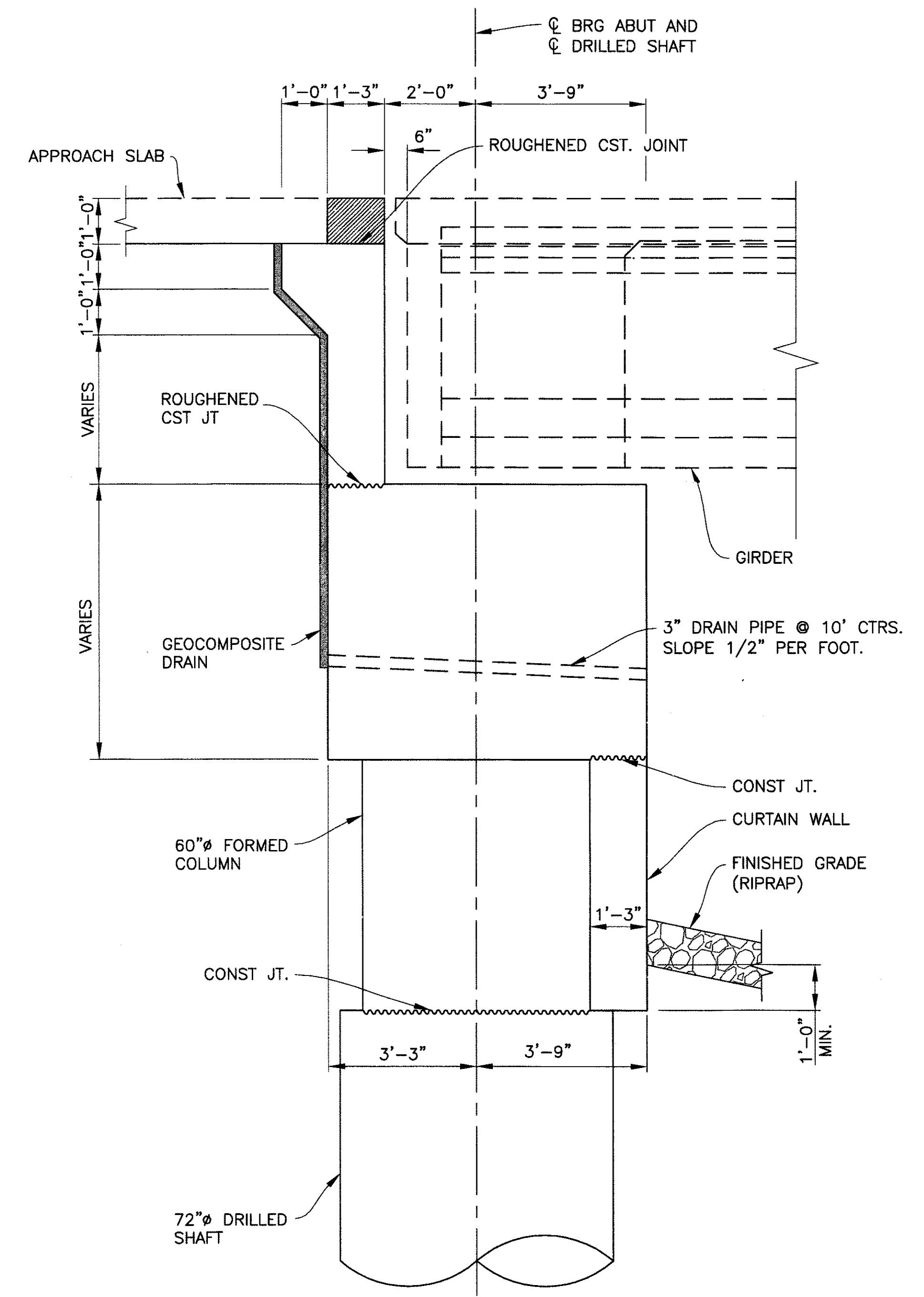
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 Plot Scale: 1" = 20'-0"

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 NO. DESCRIPTION REV BY (SGD) BY DATE
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 NO. DESCRIPTION REV BY (SGD) BY DATE

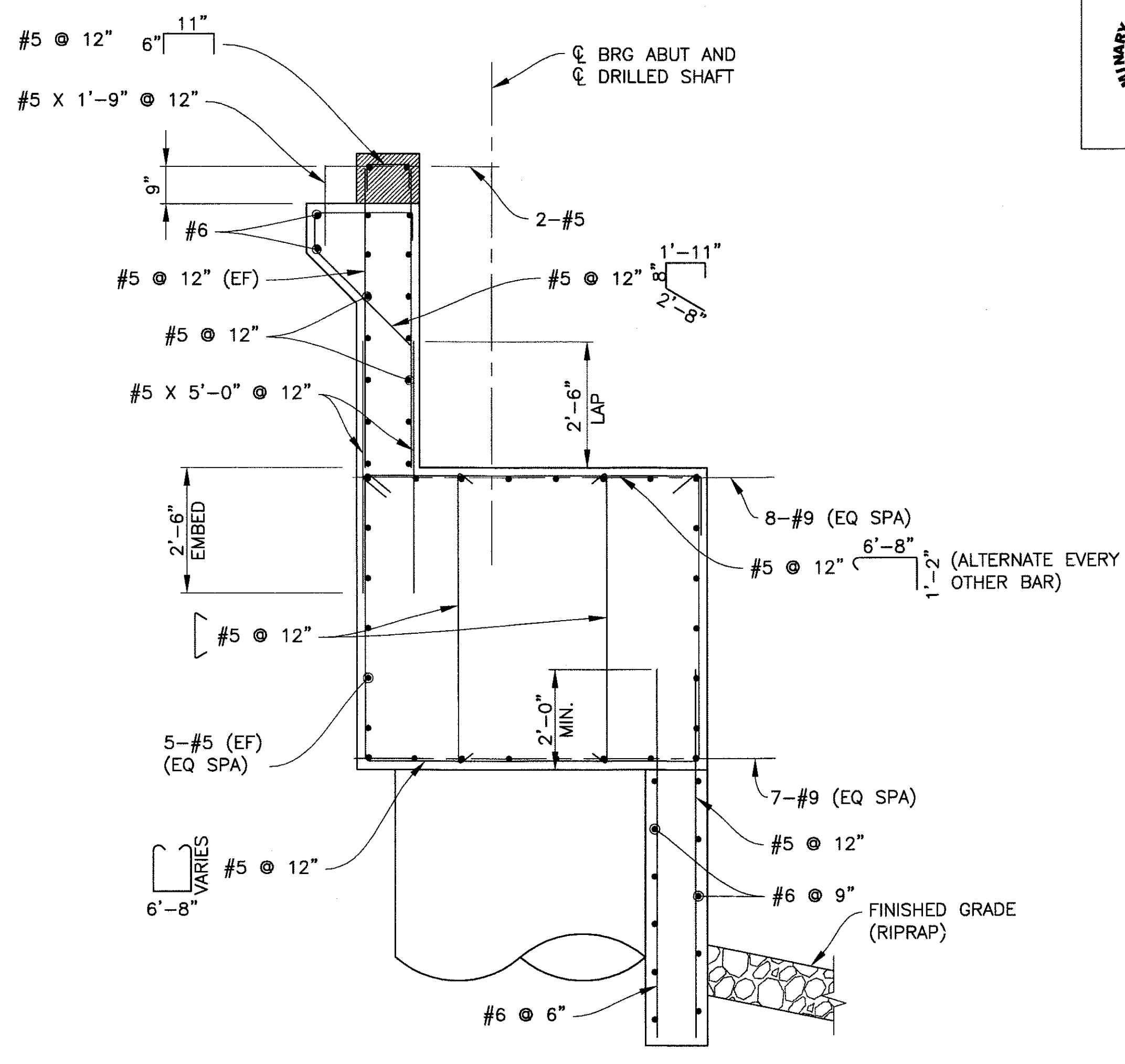
PRELIMINARY - NOT FOR CONSTRUCTION
90%
 PRELIMINARY

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	179	352

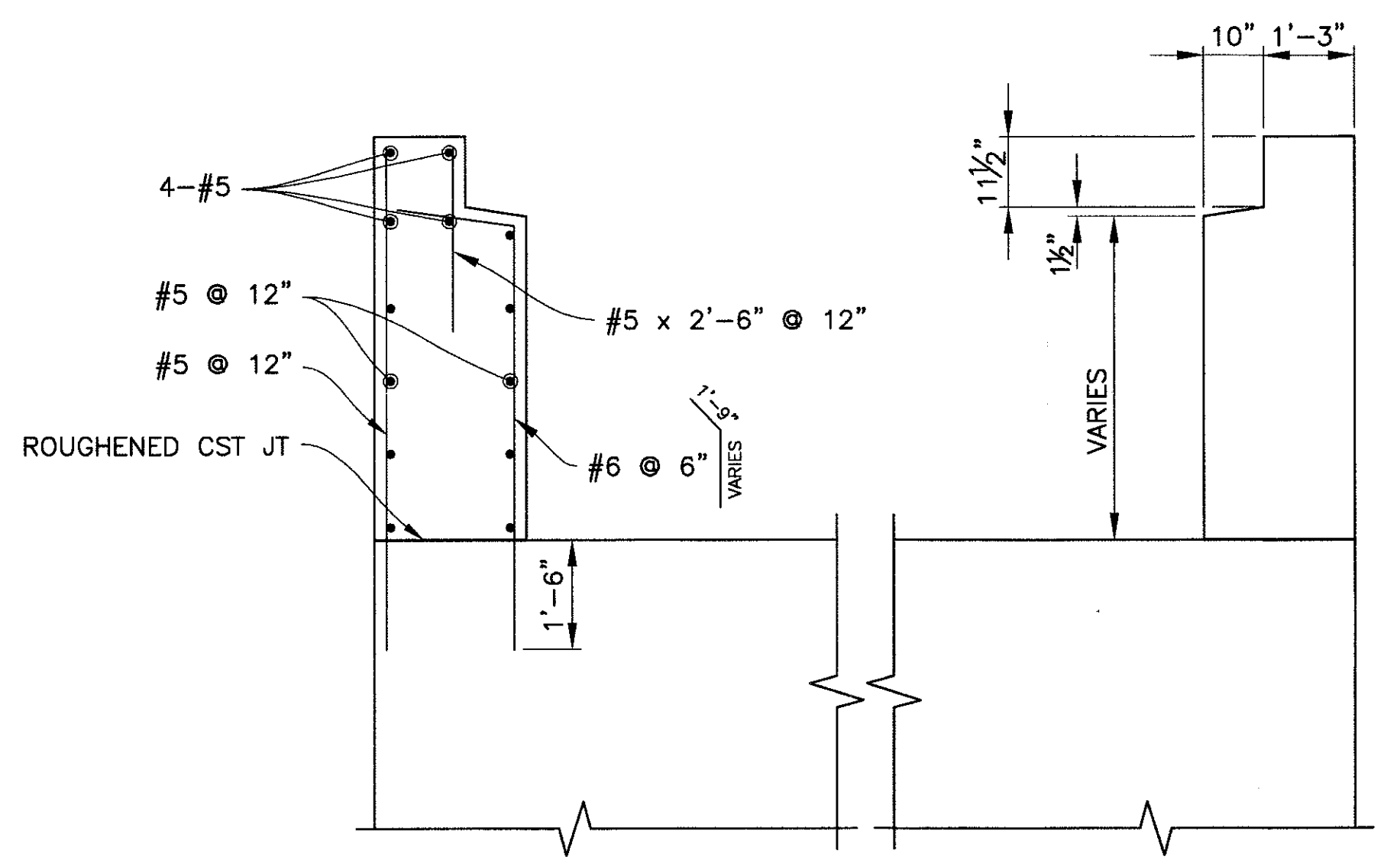
PREMIER
 ENGINEERING CORPORATION
 6437 W. CHANDLER BLVD., SUITE 1
 CHANDLER, AZ 85226 480-829-6000
 DES: BAG DR: JRR CK: SEO DATE: 12/09
 CONSULTING ENGINEER



TYPICAL SECTION
 Scale: 1/2" = 1'-0"
 177 178



TYPICAL SECTION
 (SHOWING REINFORCING)
 Scale: 1/2" = 1'-0"
 177 178



ABUTMENT SHEAR BLOCK DETAIL
 Scale: 1/2" = 1'-0"

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 OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

ABUTMENT DETAILS 1
 CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
 CAVE CREEK SECONDARY
 ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	179	352

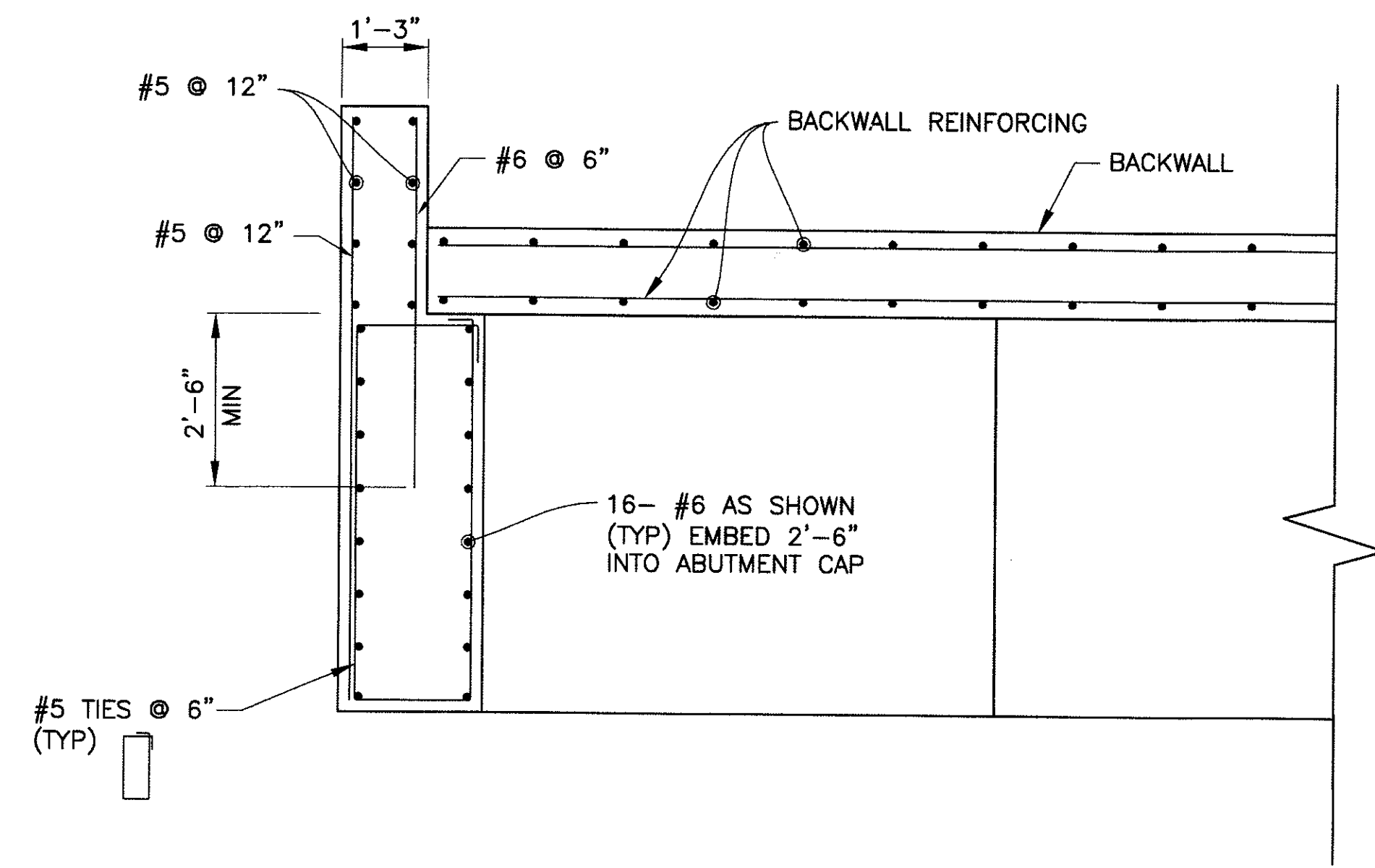
DWG NO: S-2.09

Plot scale: 1" = 10'00' - printed by James Rojas at 12/21/2009 8:59:30 AM
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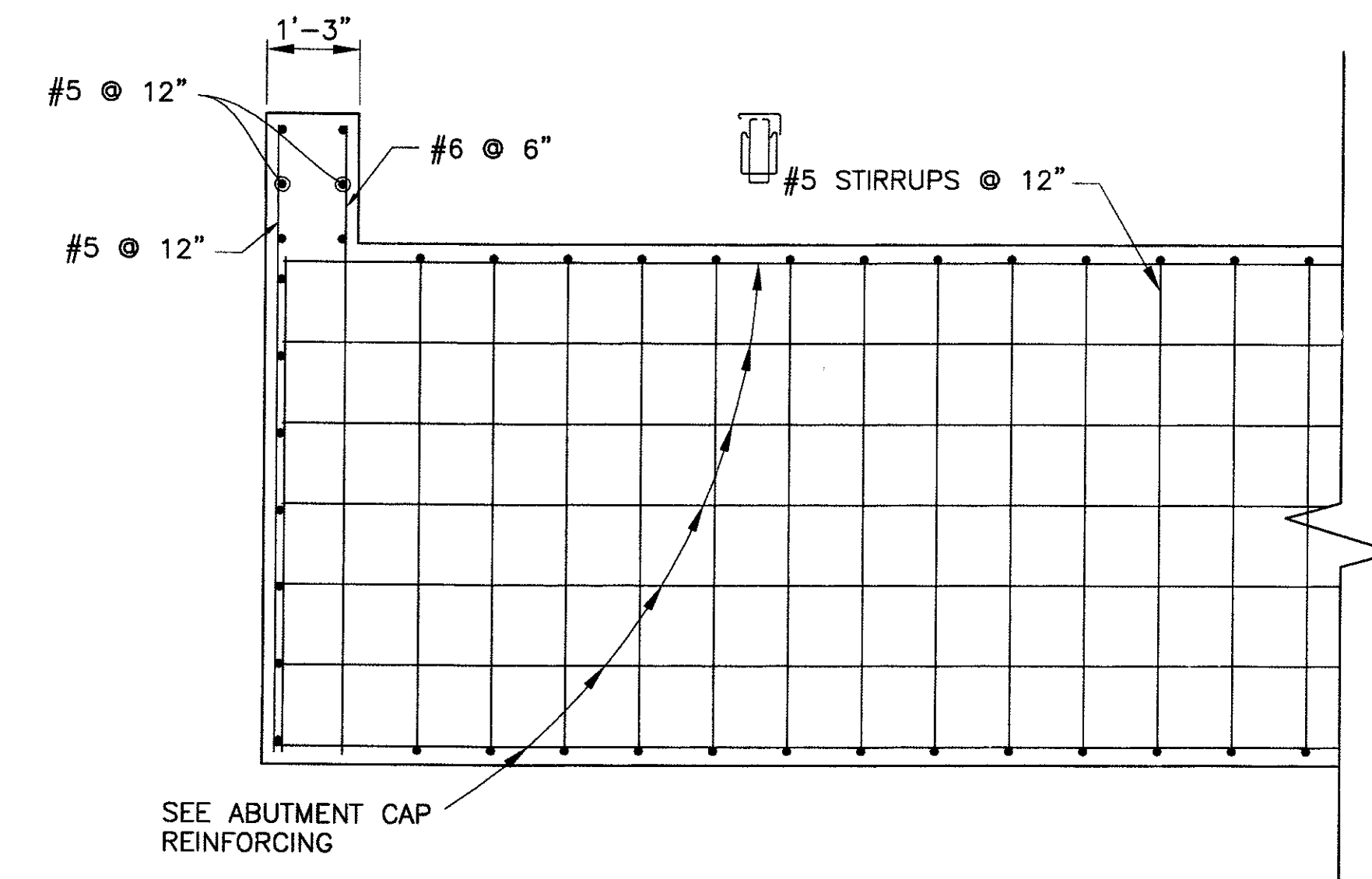
F.H.W.A. REGION 9	STATE ARIZ.	PROJ. NO. ST85100293	NO. 180	TOTAL 352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				
DES: BAG			CONSULTING ENGINEER DR: JRR	
			CK: SEO DATE: 12/09	

90%
PRELIMINARY - NOT FOR CONSTRUCTION

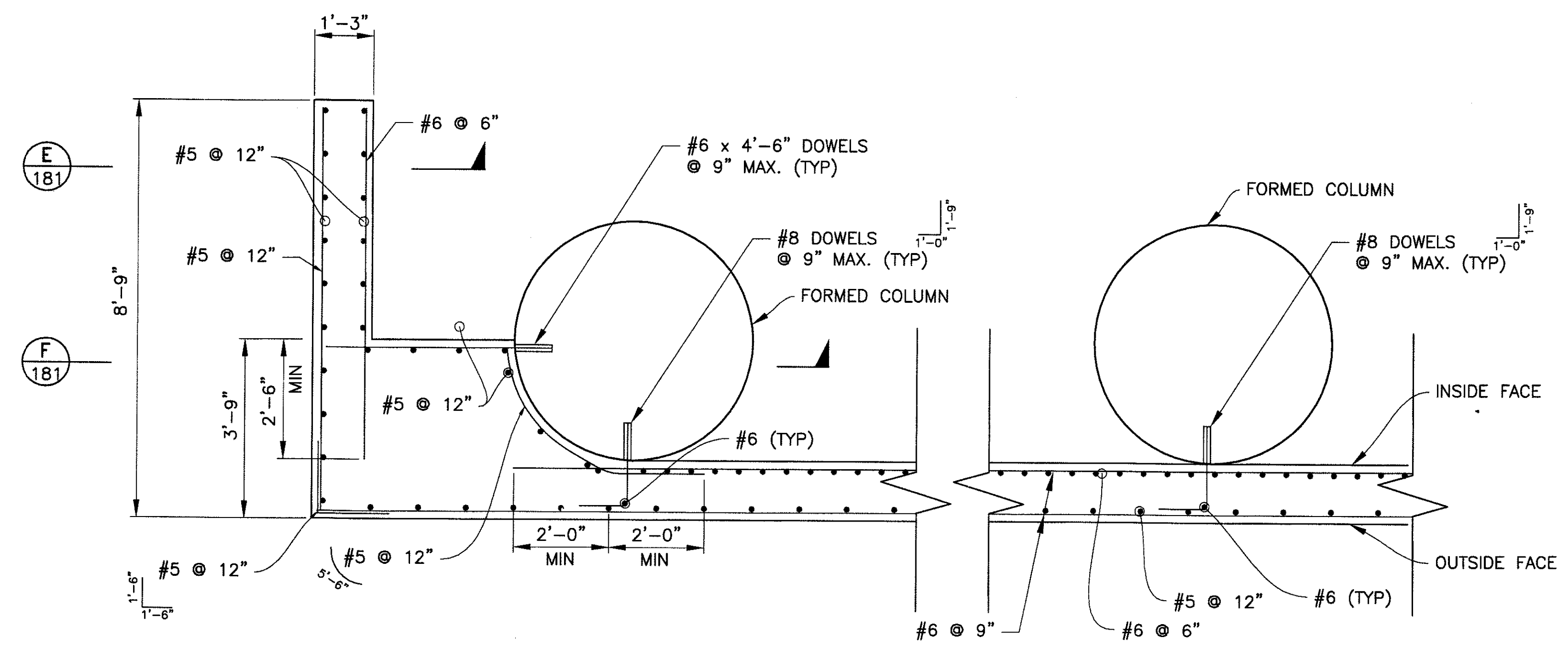
REVISION BY CITY OF PHOENIX	REV BY	CKD BY	DATE
DESCRIPTION			
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REVISION BY CITY OF PHOENIX	REV BY	CKD BY	DATE
DESCRIPTION			
NO.			
REVISION BY CITY OF PHOENIX	REV BY	CKD BY	DATE
DESCRIPTION			
NO.			



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



SECTION C-C
Scale: 1/2" = 1'-0"



SECTION D-D
Scale: 1/2" = 1'-0"

SPLICE NOTES

- SPLICE IN HORIZONTAL REINFORCEMENT IN CURTAIN WALL SHALL BE LOCATED AS FOLLOWS:
- INSIDE FACE : MID-SPAN
 - OUTSIDE FACE : @ COLUMN
 - #5 BARS : 1'-6"
 - #6 BARS : 2'-0"

DOWEL NOTES:

- DRILL 1" DIA. HOLE 7 INCHES DEEP INTO COLUMN FOR #6 DOWELS. EPOXY DOWEL IN HOLE WITH EPOXY ADHESIVE. EPOXY ANCHORAGE SHALL DEVELOP A PULL OUT STRENGTH OF 14 KIPS.
- DRILL 1 1/4" DIA. HOLE 9 INCHES DEEP INTO COLUMN FOR #8 DOWELS. EPOXY DOWEL IN HOLE WITH EPOXY ADHESIVE. EPOXY ANCHORAGE SHALL DEVELOP A PULL OUT STRENGTH OF 25 KIPS.

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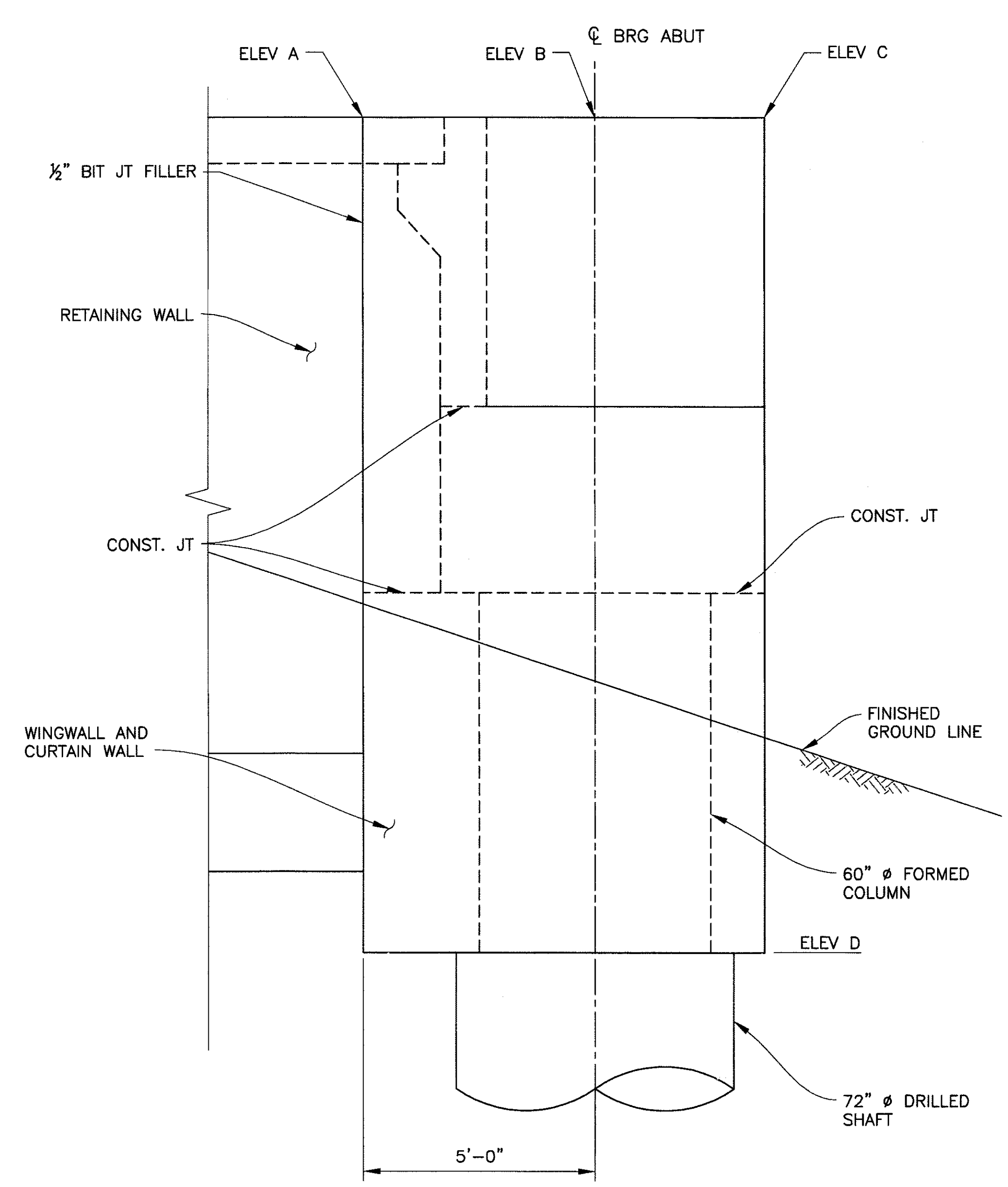
ABUTMENT DETAILS 2
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

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DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	180	352
DWG NO: S-2.10			180	352

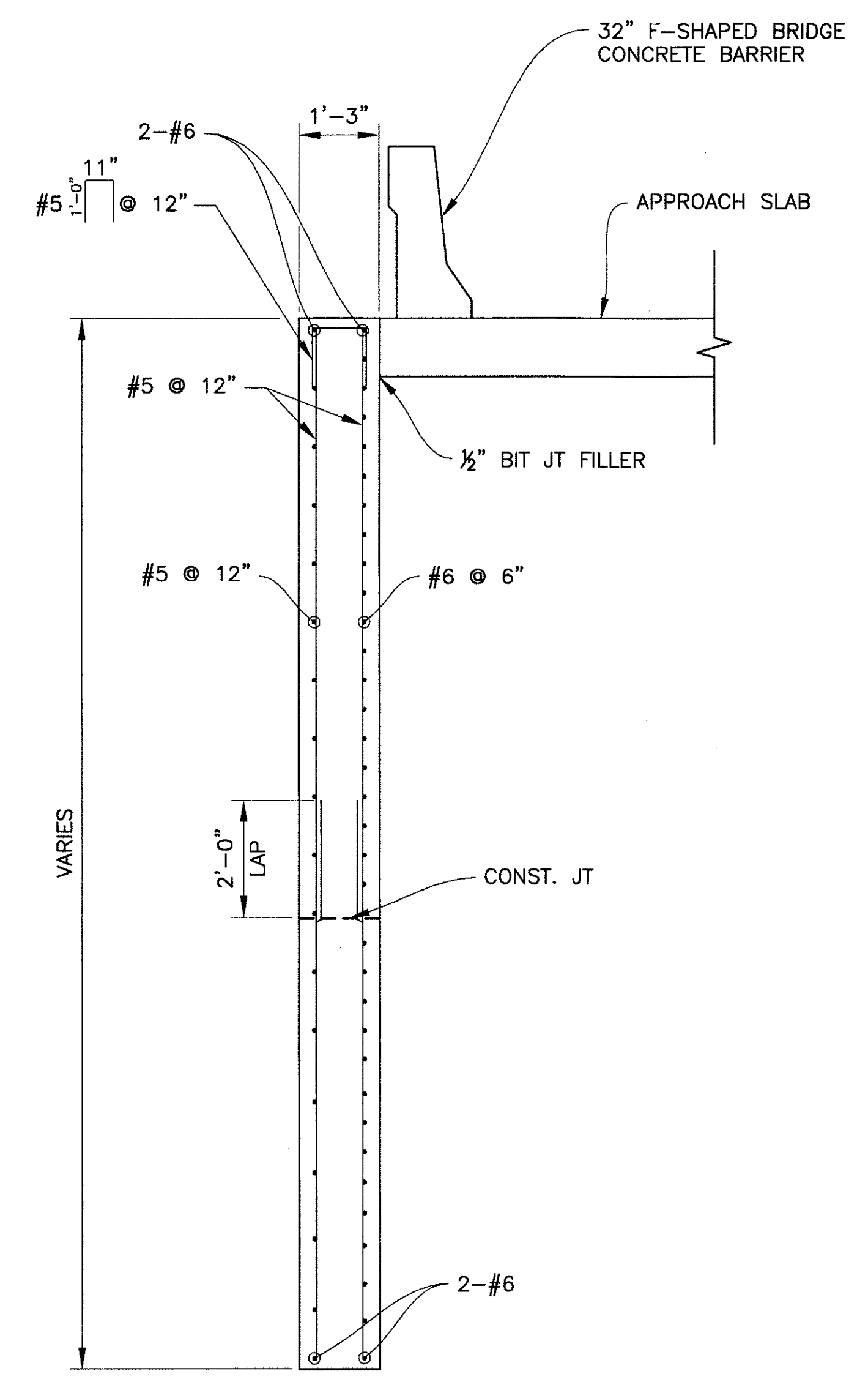
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REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

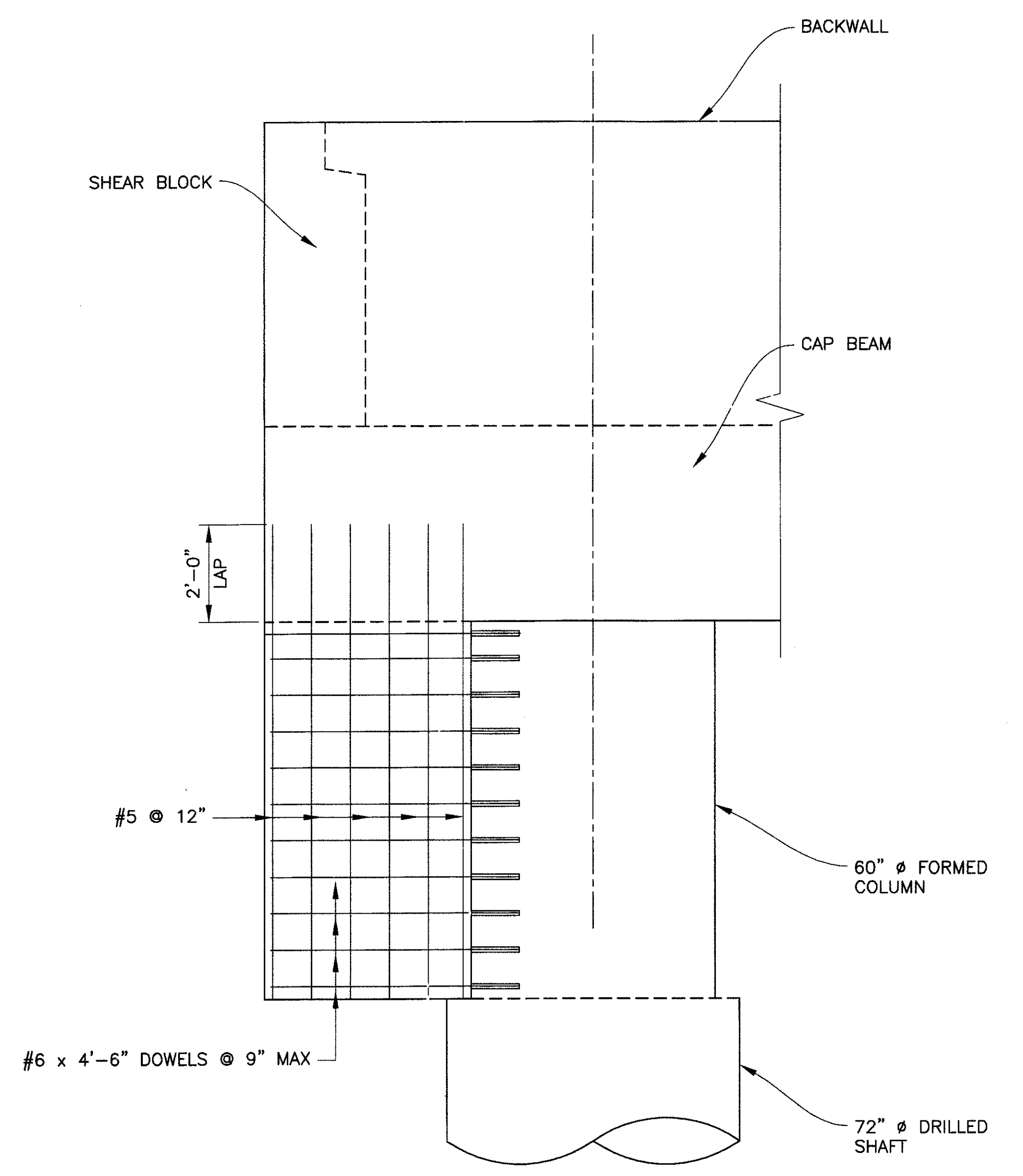


TYPICAL WALL SECTION
SCALE: 1/2" = 1'-0"

WINGWALL SCHEDULE					
LOCATION	WALL	ELEV A	ELEV B	ELEV C	ELEV D
ABUT 1	NORTH	1731.22	1731.20	1731.18	1713.22
	SOUTH	1729.06	1729.04	1729.03	1713.22
ABUT 2	NORTH	1730.39	1730.41	1730.43	1713.41
	SOUTH	1728.22	1728.24	1728.25	1713.41



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



SECTION F
(CURTAIN WALL REINFORCING)
SCALE: 1/2" = 1'-0"

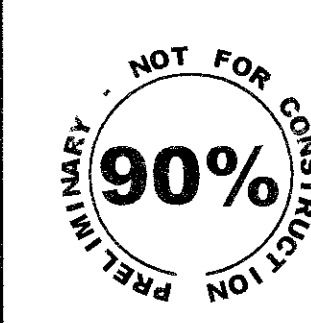
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WINGWALL DETAILS
 CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT
 SONORAN BOULEVARD
 CAVE CREEK SECONDARY
 ST85100293

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DR:JRR	DES:BAG	CK:SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	181	352
DWG NO: S-2.11				

P:\20080805\CADD\Civil\Sheets\Structures\211-CC_Secordary Wingwall details.dwg - plotted by James Rojas at 12/21/2009 8:59:40 AM

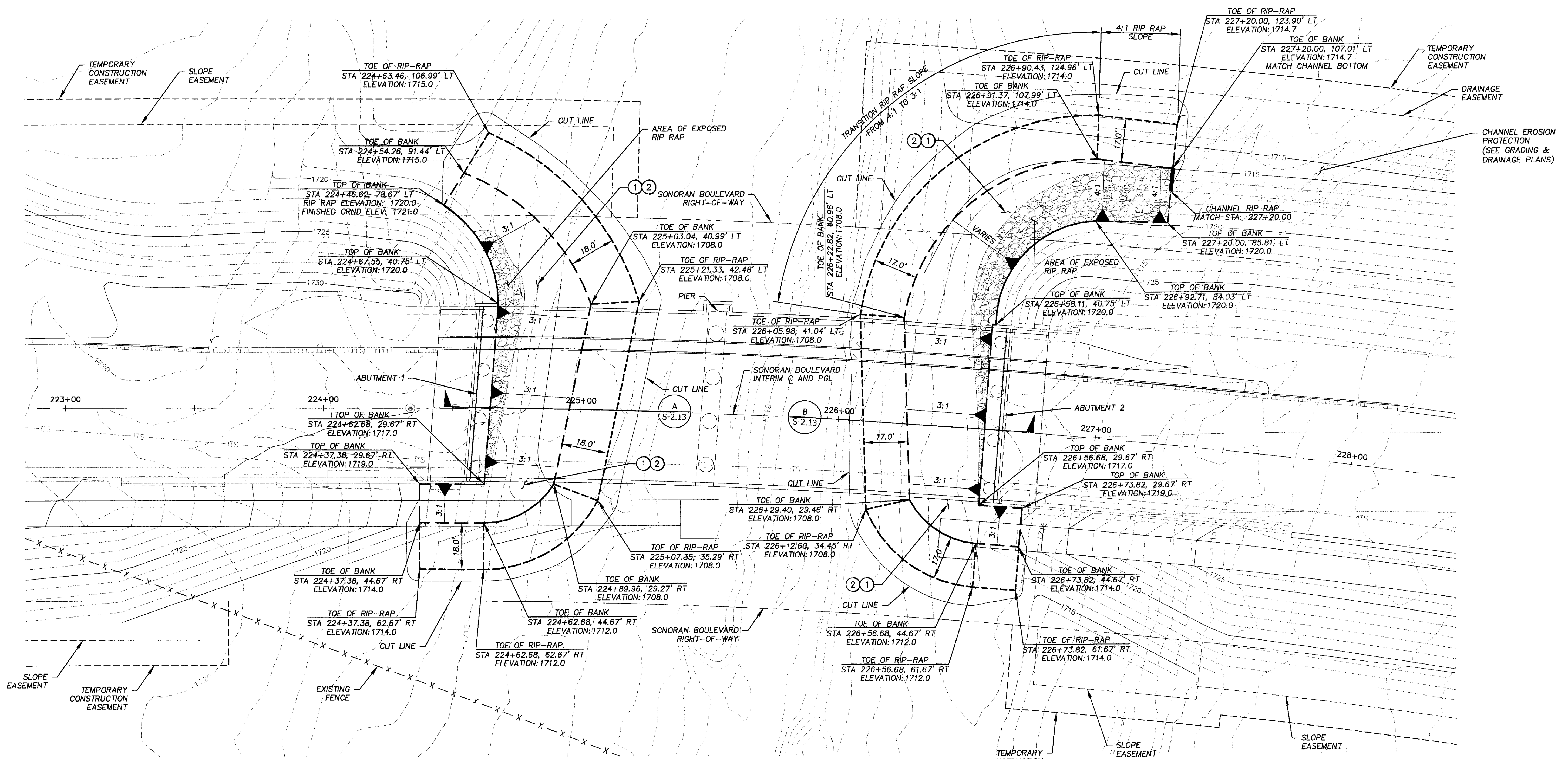


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	182	352

Gavan & Barker Inc.
Civil Engineering - Landscape Architecture
3030 North Central Avenue, Suite 1530, Phoenix, Arizona 85012 Ph: 602-200-0031 Fax: 602-200-0032

DES: OK/MTG DR: OK CK: MTG DATE: 12/09

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REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV. BY	CHK. BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV. BY	CHK. BY	DATE



ROCK RIP RAP GRADATION

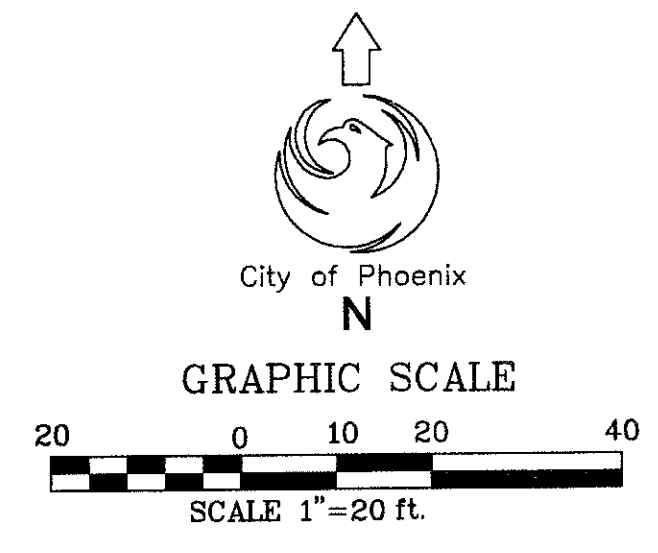
STONE SIZE	PERCENT OF GRADATION SMALLER THAN
24"	100
20"	85
16"	50
8"	15

GRAVEL BEDDING GRADATION

SIEVE SIZE	PERCENT BY WEIGHT PASSING SIEVE
3"	90-100
3/4"	20-90
#4	0-20
#200	0-3

CONSTRUCTION NOTES

NO.	DESCRIPTION	UNIT	QTY.
①	Install Rock Rip Rap, D ₅₀ = 16" (See Table this Sheet for Gradation and See Sections on DWG. No. S-2.13 for Thickness)	CY	1958
②	Install Gravel Bedding for Rip Rap (See Table this Sheet for Gradation and See Sections on DWG. No. S-2.13 for Thickness)	CY	316



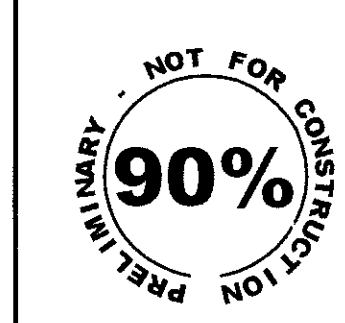
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

EROSION CONTROL PLAN
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
SONORAN BOULEVARD
10th STREET TO 26th STREET
CAVE CREEK SECONDARY
ST85100293

DR: OK	DES: OK/MTG	CK: MTG	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	182	352

DWG No. S-2.12

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263-1100
1-800-STAKE-IT (OUTSIDE MARICOPA COUNTY)

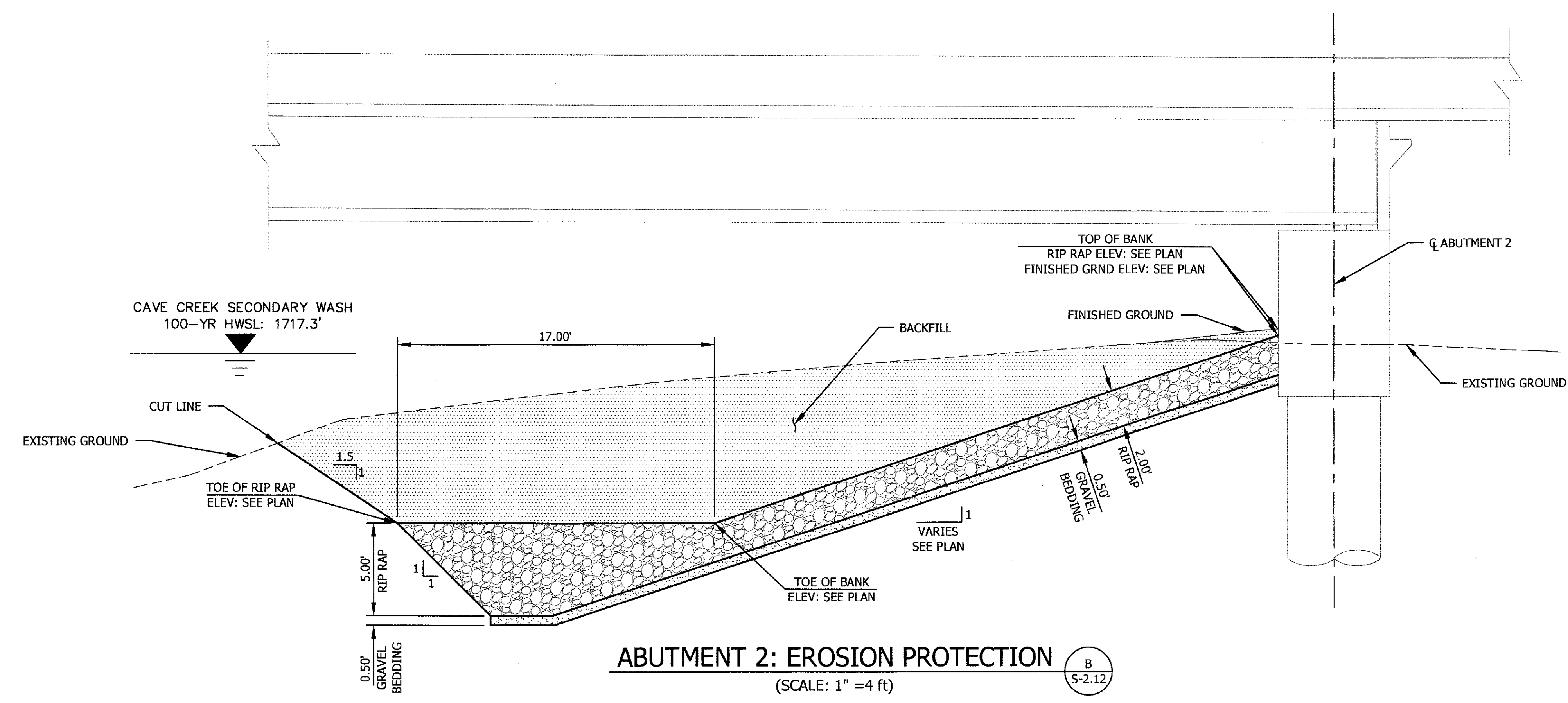
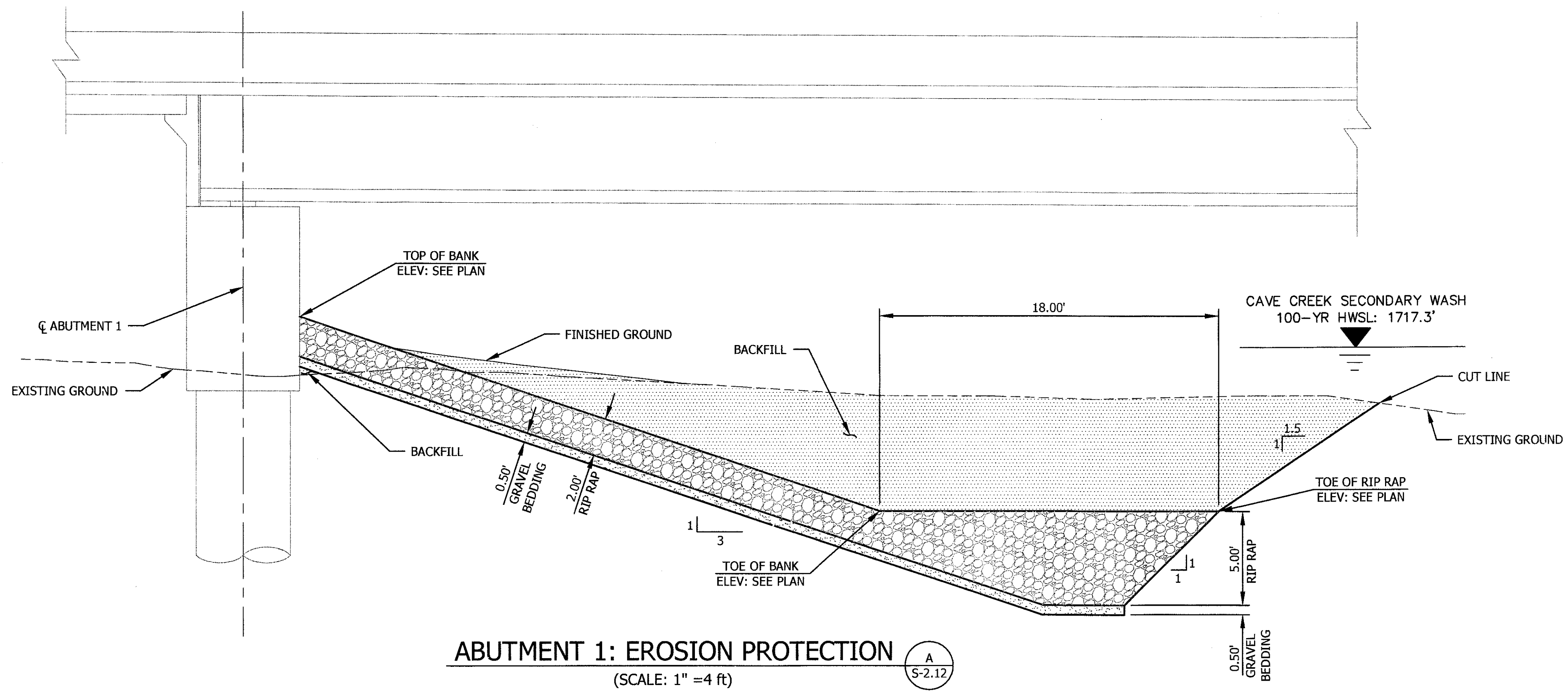


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	183	352

Gavan & Barker Inc. Civil Engineering - Landscape Architecture
 3030 North Central Avenue, Suite 1530, Phoenix, Arizona 85012 Ph: 602-200-0031 Fx: 602-200-0032

DES: OK/MTG DR: OK CK: MTG DATE: 12/09

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



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EROSION CONTROL DETAILS

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
10th STREET TO 26th STREET
CAVE CREEK SECONDARY
ST85100293

DR: OK	DES: OK/MTG	CK: MTG	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	183	352

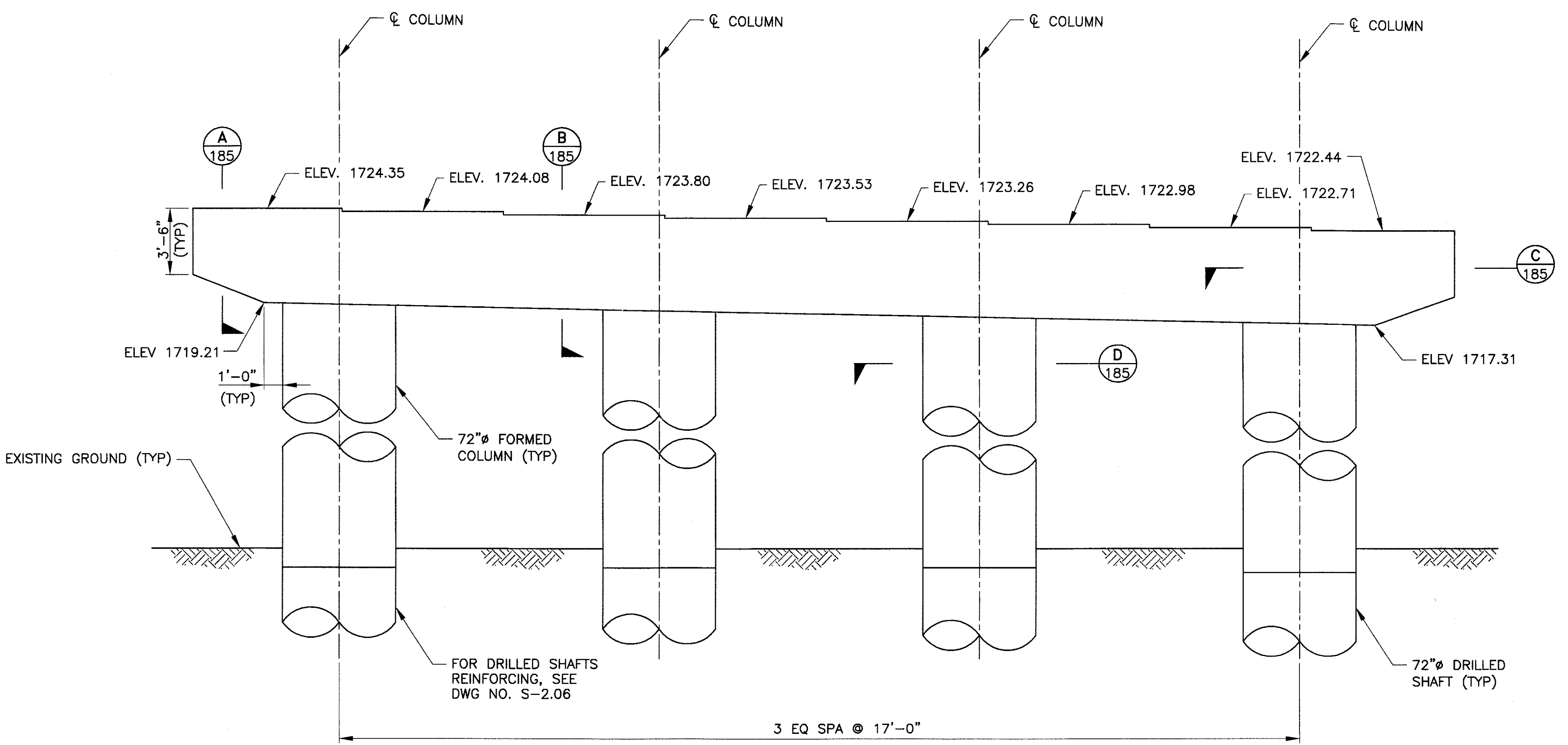
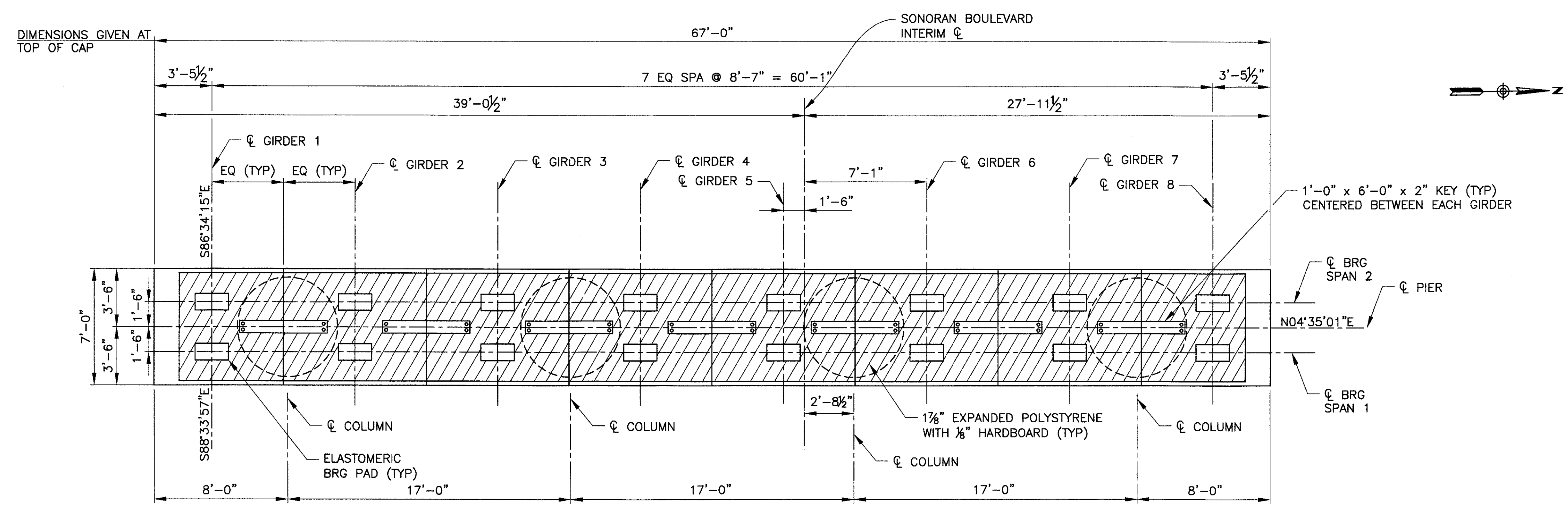
DWG No. S-2.13



PRELIMINARY
90%
 NOT FOR CONSTRUCTION

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	184	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226, 480-829-6000				
DES: BAG		DR: JRR		CK: SEO DATE: 12/09
			CONSULTING ENGINEER	

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



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PIER PLAN AND ELEVATION

CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

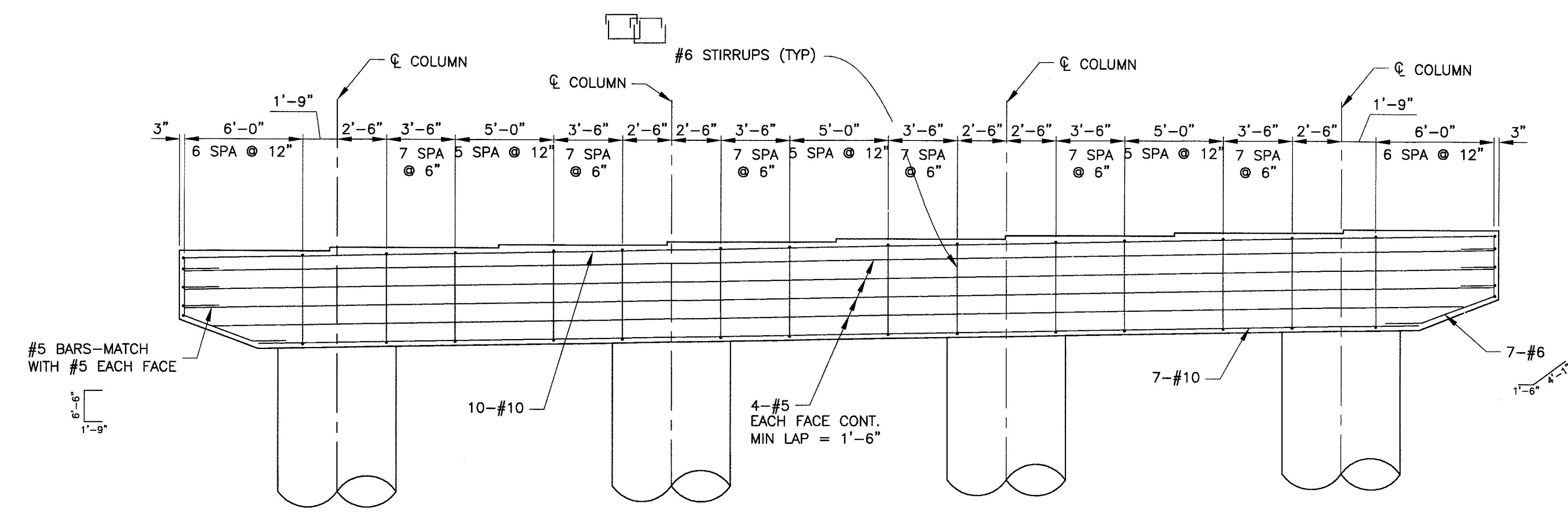
SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	184	352

DWG NO: S-2.14

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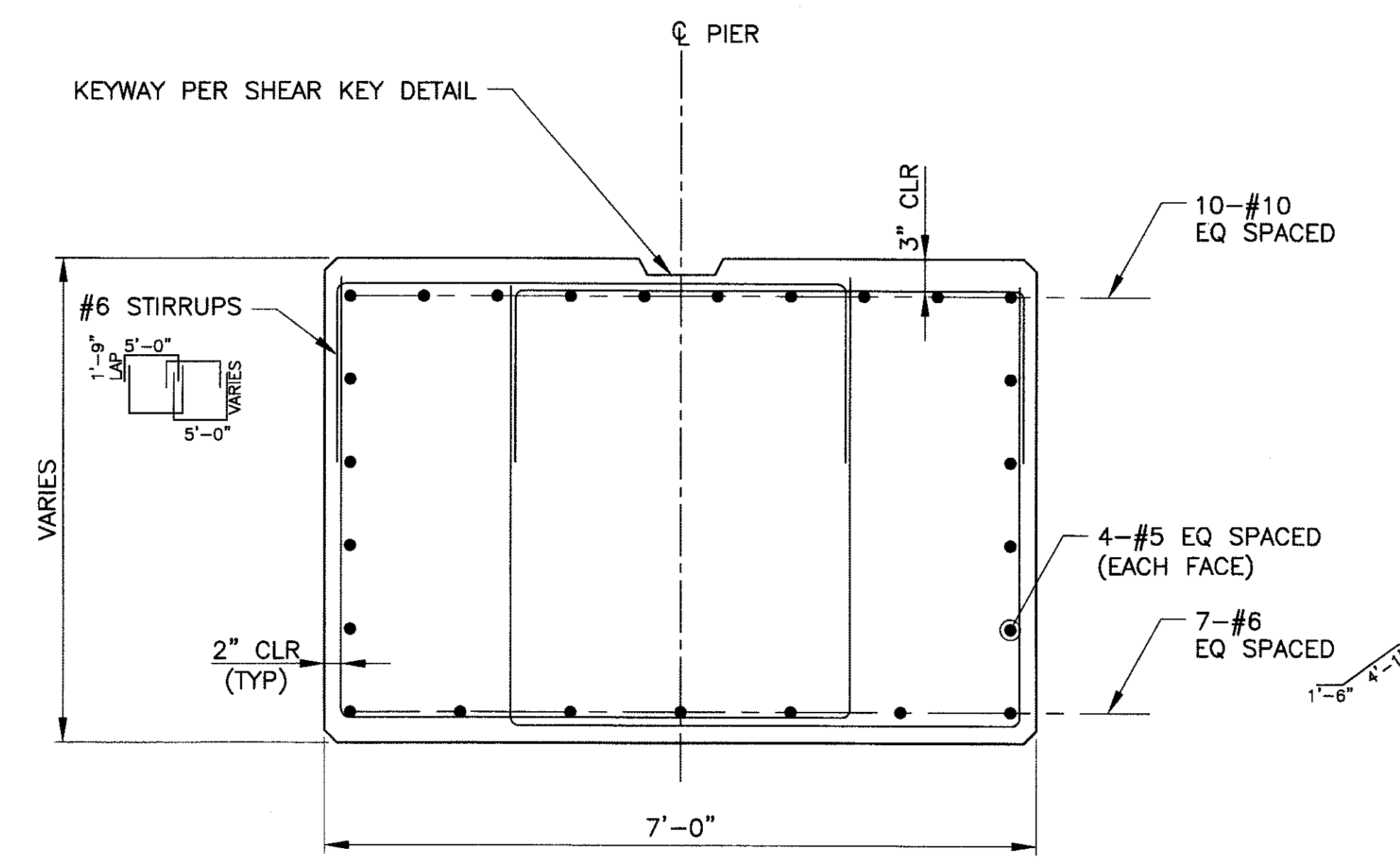
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



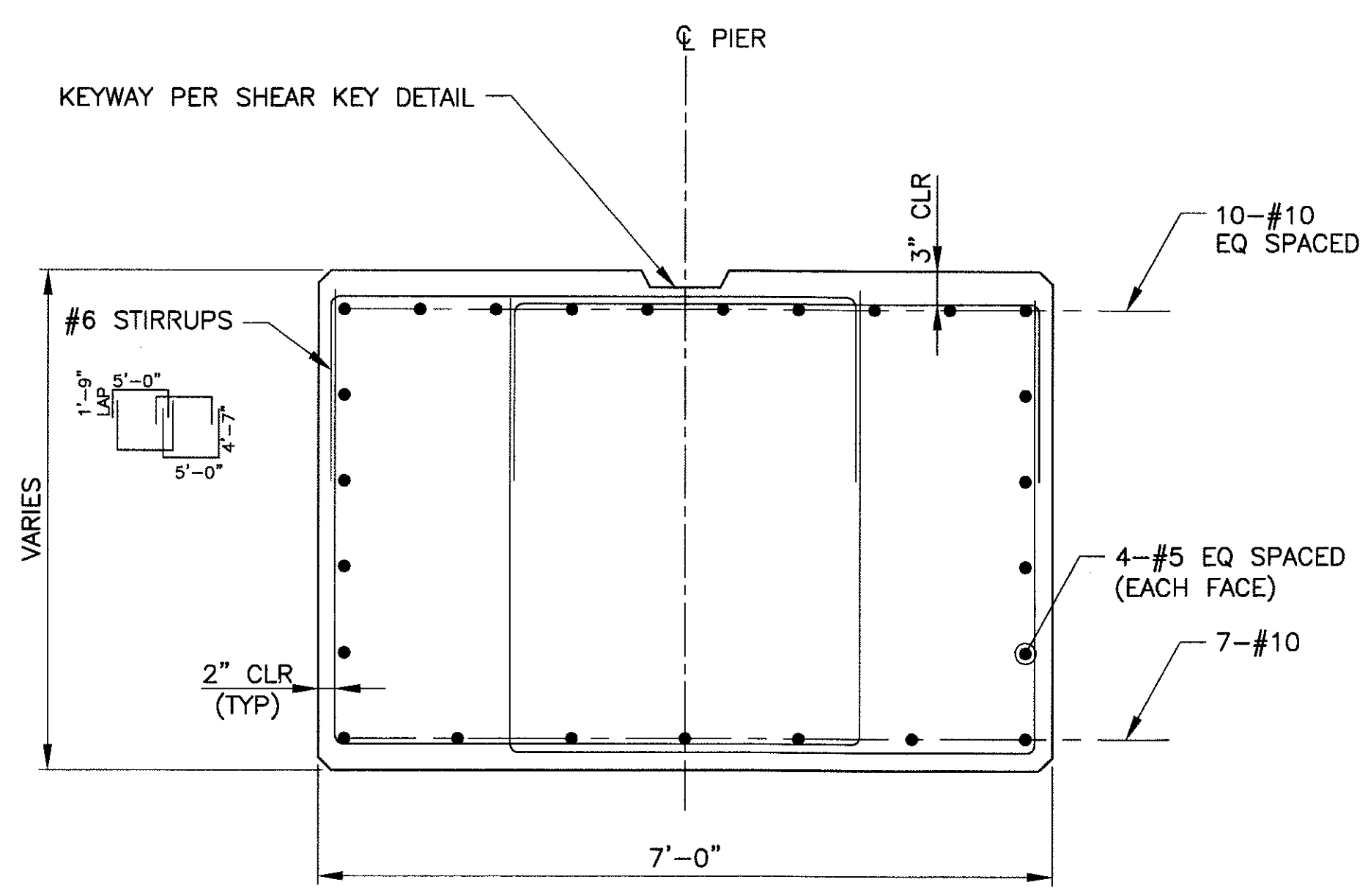
PIER SECTION
SCALE: 1/4" = 1'-0"

SPLICE NOTES

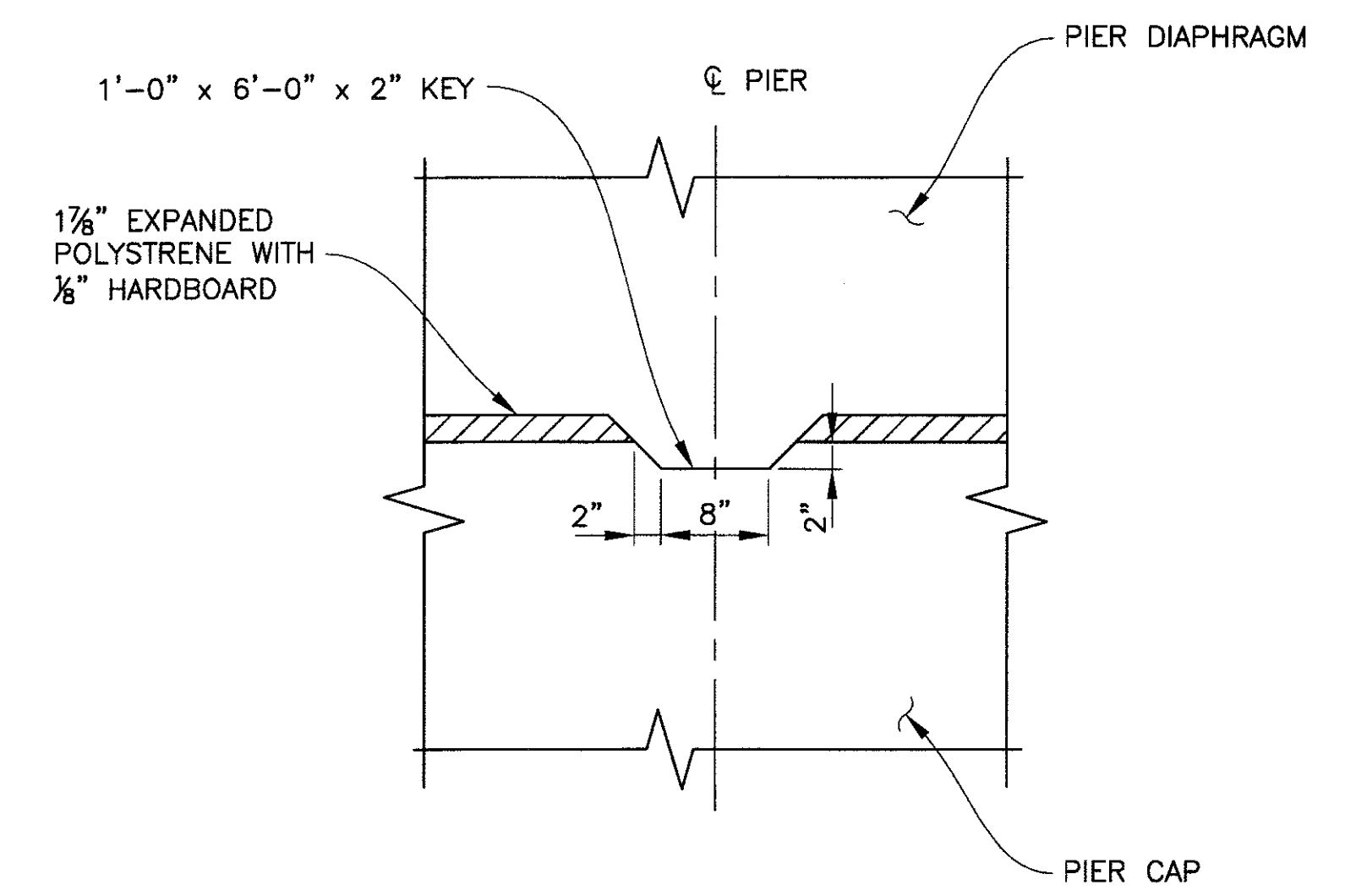
1. THE #10 TOP BARS SHALL BE LAP SPLICED ONLY AT THE CENTER OF THE SPANS BETWEEN THE COLUMNS. LAP SPLICES OF ADJACENT BARS SHALL BE ALTERNATED AMONG THE SPAN LOCATIONS. LAP SPLICE LENGTH = 3'-0"
2. THE #10 BOTTOM BARS SHALL BE CONTINUOUS WITH NO LAPS.



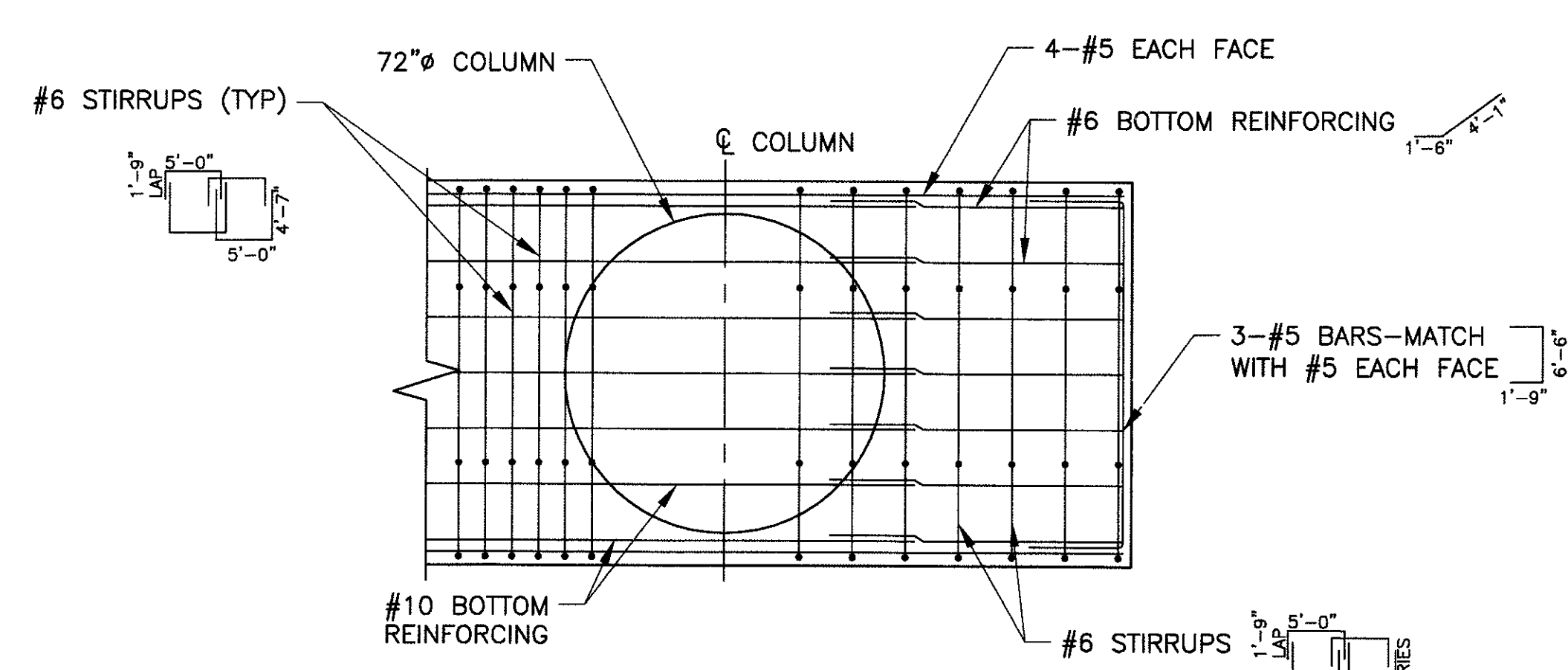
SECTION A
SCALE: 3/4" = 1'-0"



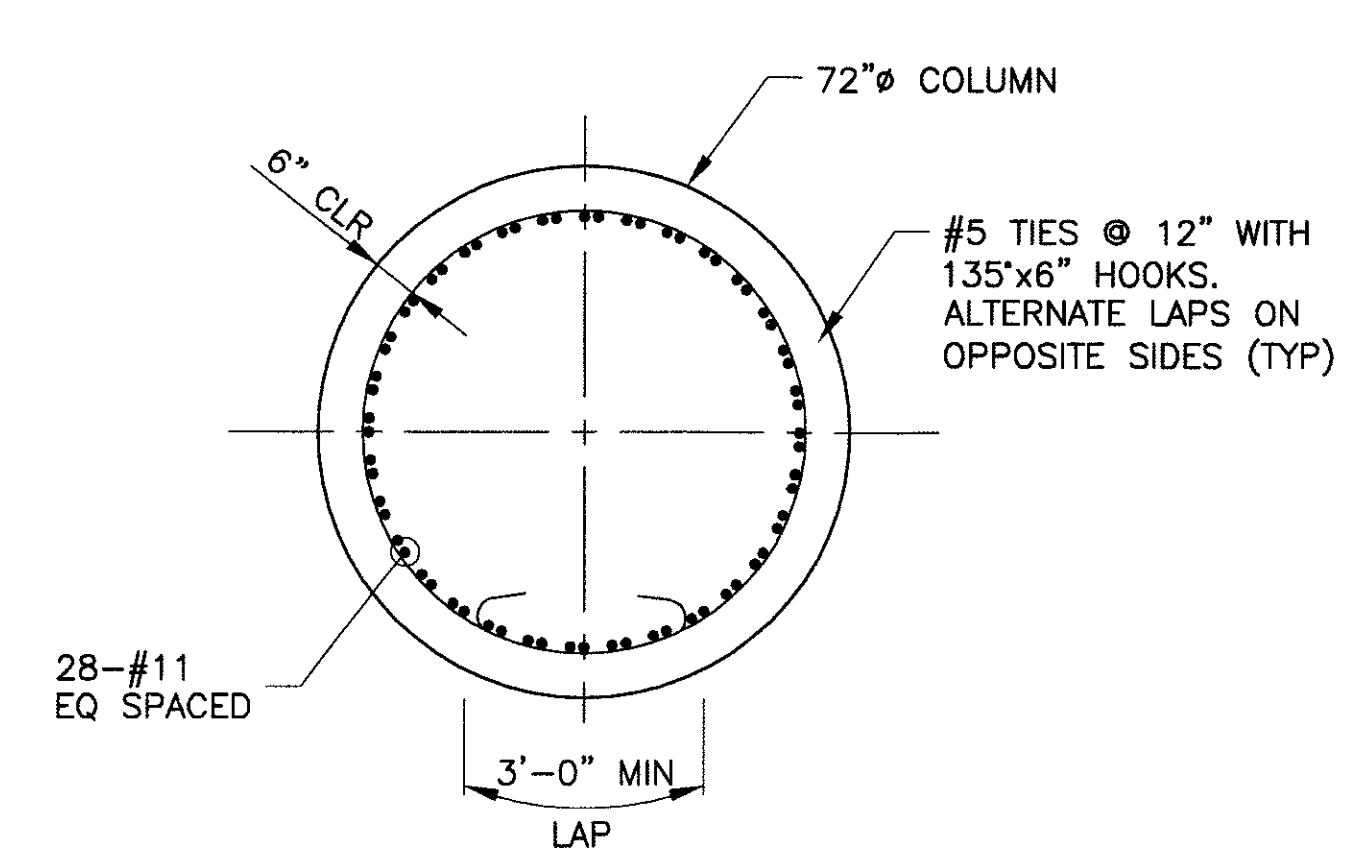
SECTION B
SCALE: 3/4" = 1'-0"



SHEAR KEY DETAIL
SCALE: 1/4" = 1'-0"



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



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

Two working days before you dig,
CALL FOR THE BLUE STAKES
(602) 263-1100
Blue Stake Center

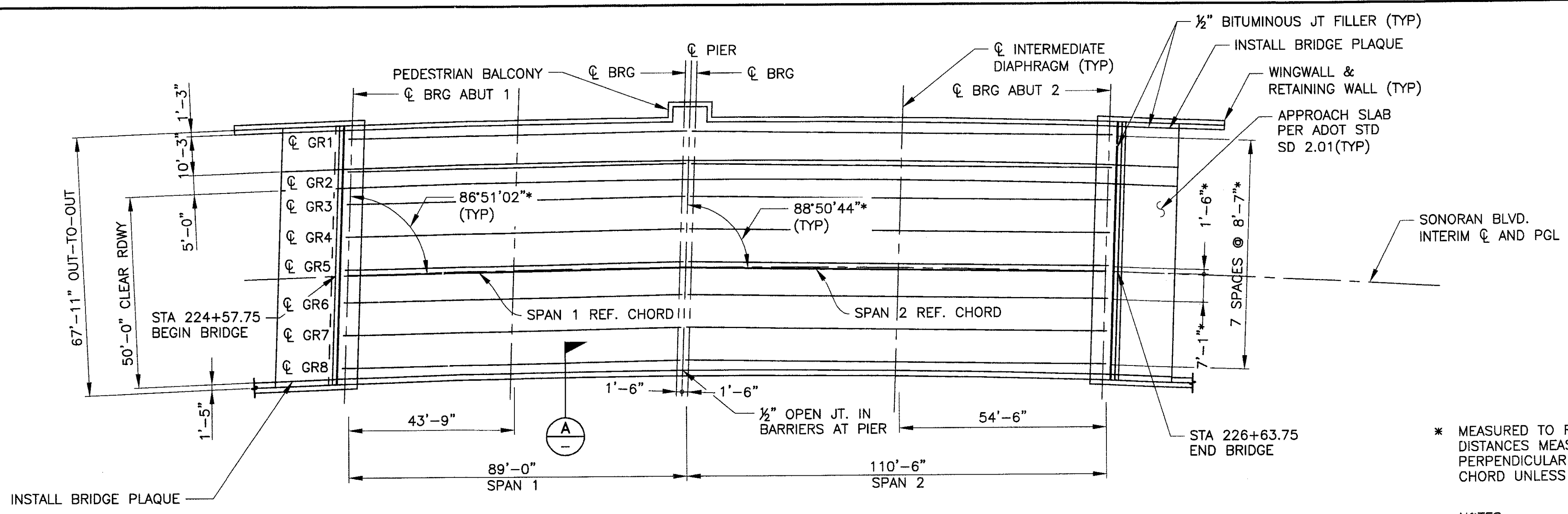
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

PIER DETAILS				
CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT				
SONORAN BOULEVARD CAVE CREEK SECONDARY ST85100293				
DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	185	352
DWG NO: S-2.15			185	352

P:\200805\CAD\Civil\Sheets\Structures\215-CC Secondary pier Details.dwg - plotted by James Rojas at 12/21/2009 9:00:02 AM
 plotscale: 1:1 - isoclip: 1,0000 - penmode: PREVIEWCTB



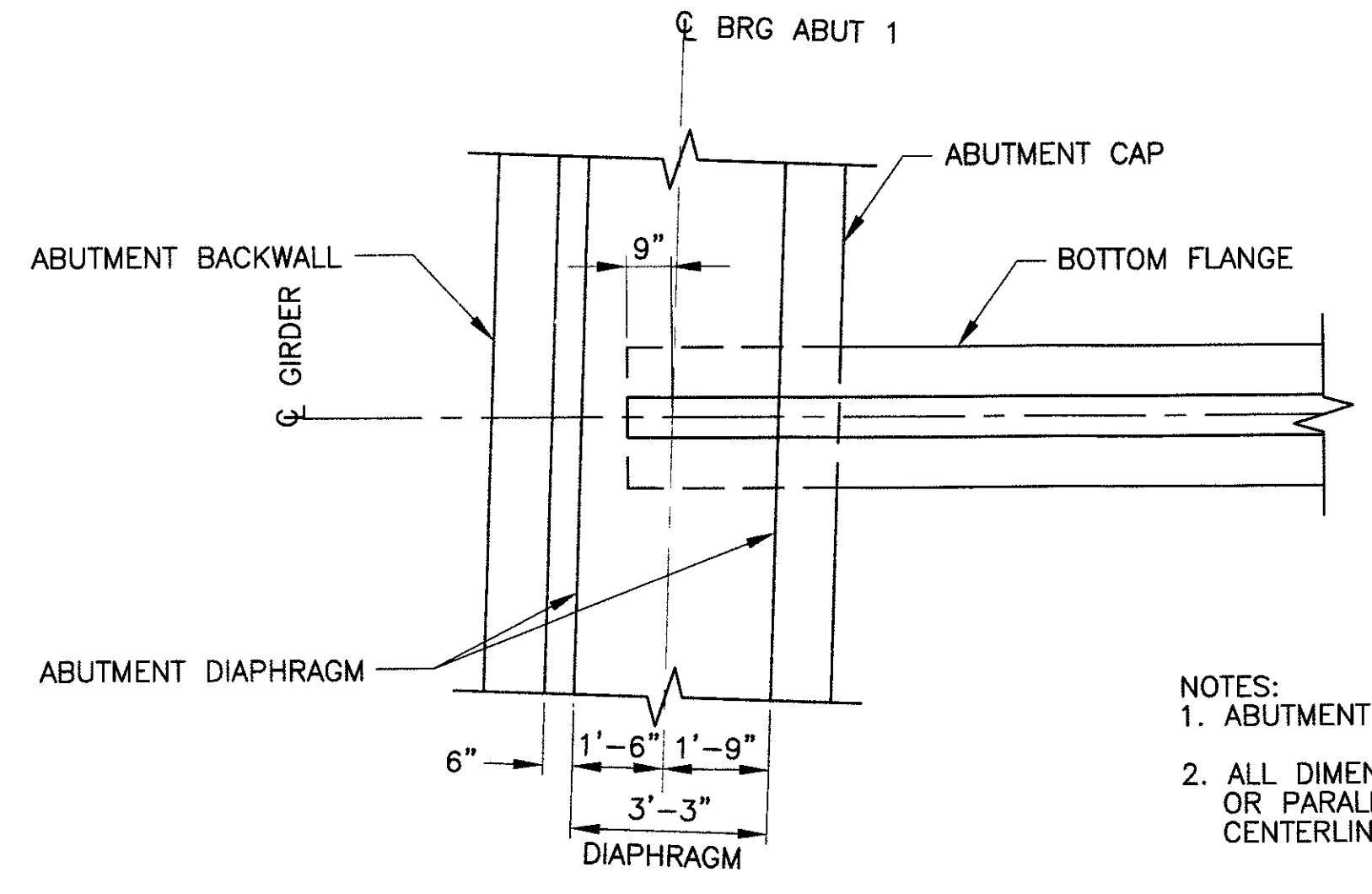
	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	186	352
<p align="center">PREMIER</p> <p align="center">ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226-4888-8500</p>					
DES: BAG			DR: JRR		CK: SEO DATE: 12/09



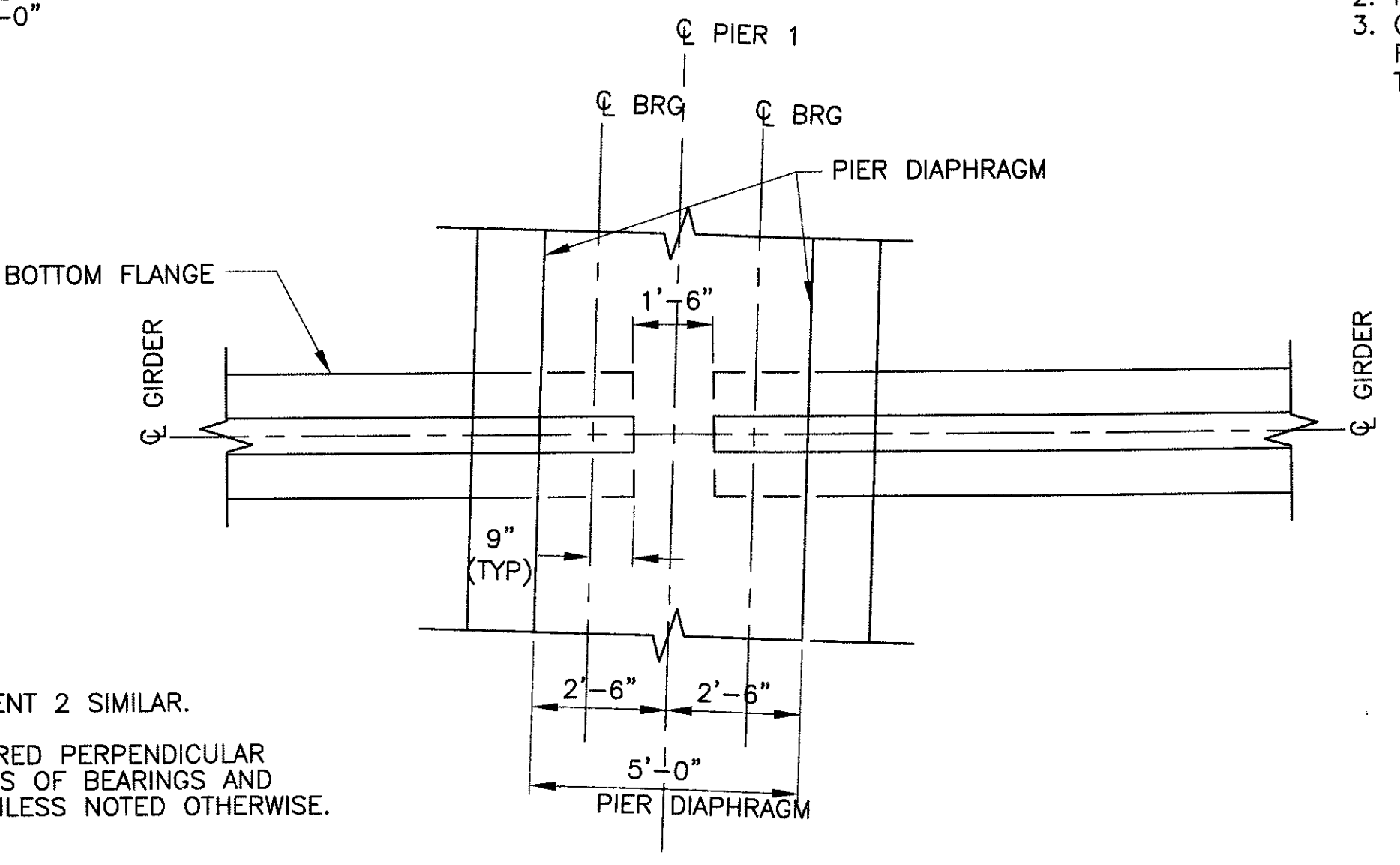
* MEASURED TO REFERENCE CHORD. DISTANCES MEASURED ALONG OR PERPENDICULAR TO REFERENCE CHORD UNLESS NOTED OTHERWISE.

NOTES:
 1. INTERMEDIATE DIAPHRAGM AT MID-LENGTH OF GIRDERS.
 2. FOR BRIDGE PLAQUE DETAILS, SEE DWG NO. S-2.30
 3. GIRDERS IN SPAN 1 ARE PARALLEL TO THE SPAN 1 REFERENCE CHORD. GIRDERS IN SPAN 2 ARE PARALLEL TO THE SPAN 2 REFERENCE CHORD.

DECK PLAN
SCALE: 1" = 20'-0"

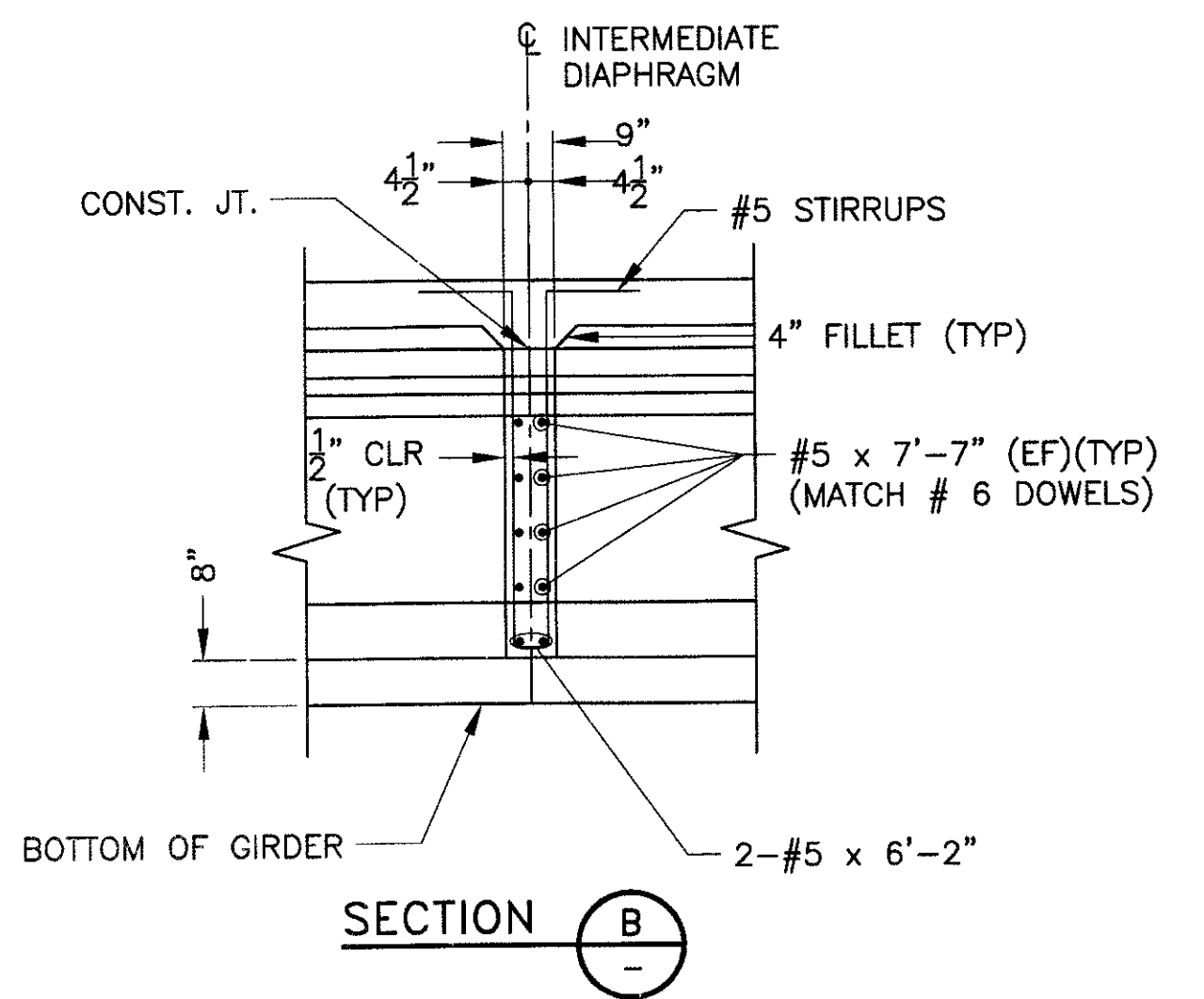


DETAIL 1
SCALE: 3/8" = 1'-0"

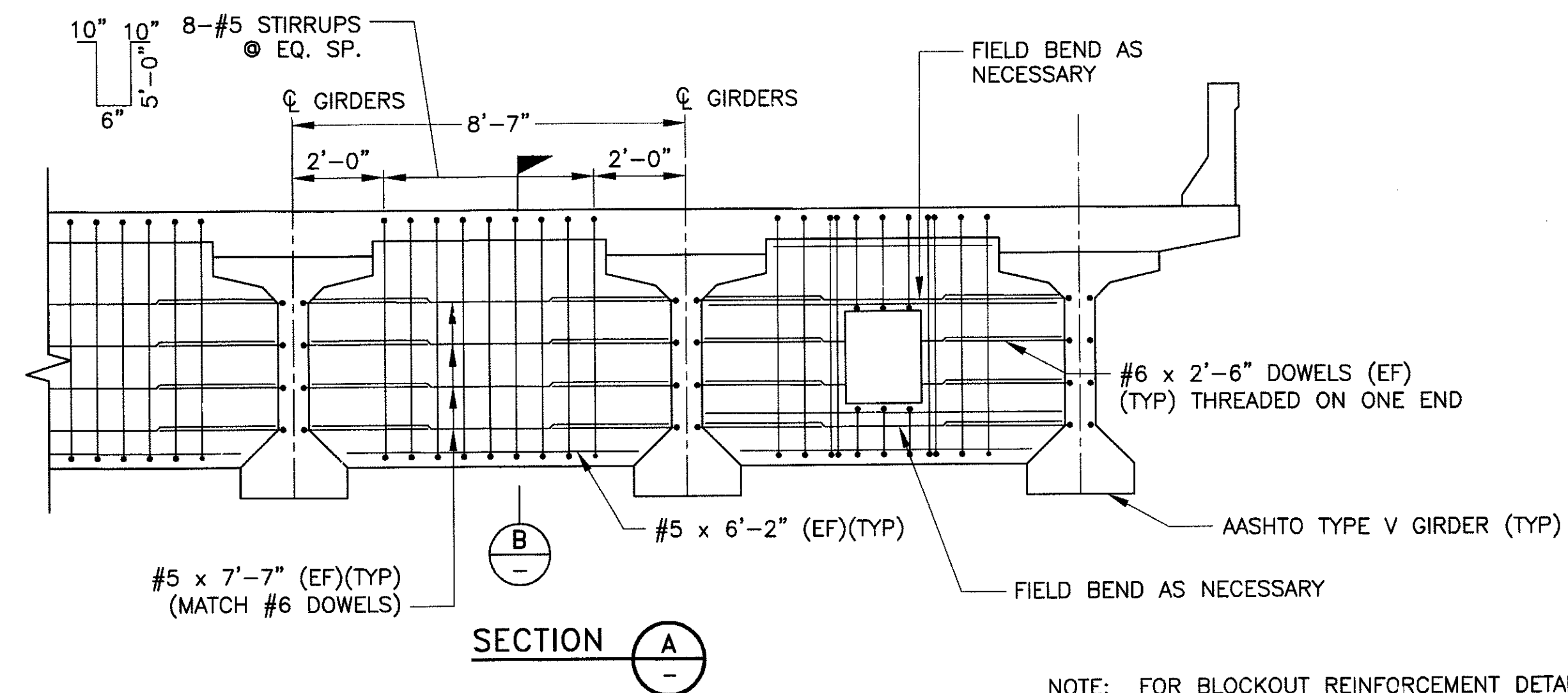


DETAIL 2
SCALE: 3/8" = 1'-0"

NOTES:
 1. ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR.
 2. ALL DIMENSIONS ARE MEASURED PERPENDICULAR OR PARALLEL TO CENTERLINES OF BEARINGS AND CENTERLINES OF GIRDERS UNLESS NOTED OTHERWISE.



SECTION B



SECTION A

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

NOTE: FOR BLOCKOUT REINFORCEMENT DETAIL SEE SECTION C ON DWG NO. S-2.24

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DECK PLAN AND DETAILS

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

DR:ESN	DES:BAG	CK:SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	186	352

DWG NO: S-2.16

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Blue Stake Center

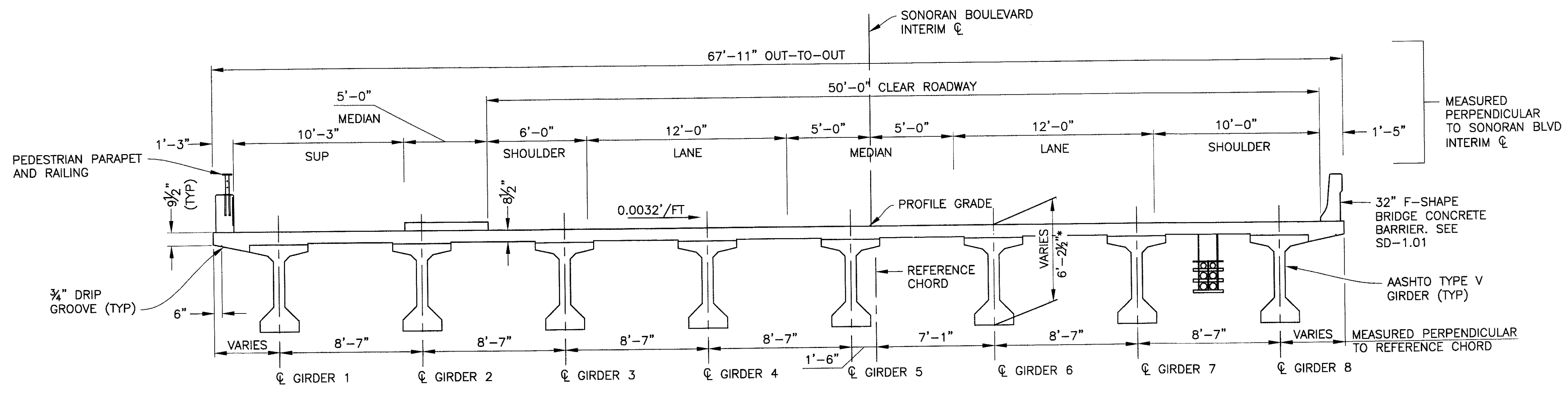
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

P:\2008003\CADD\Sheets\Structures\215-CC Secondary deck plan dtd.dwg - plotted by James Rojas at 12/21/2009 9:00:11 AM
 plotscale: 1:1 - tacofix: 1:0000 - penmode: PREMIER-CTB

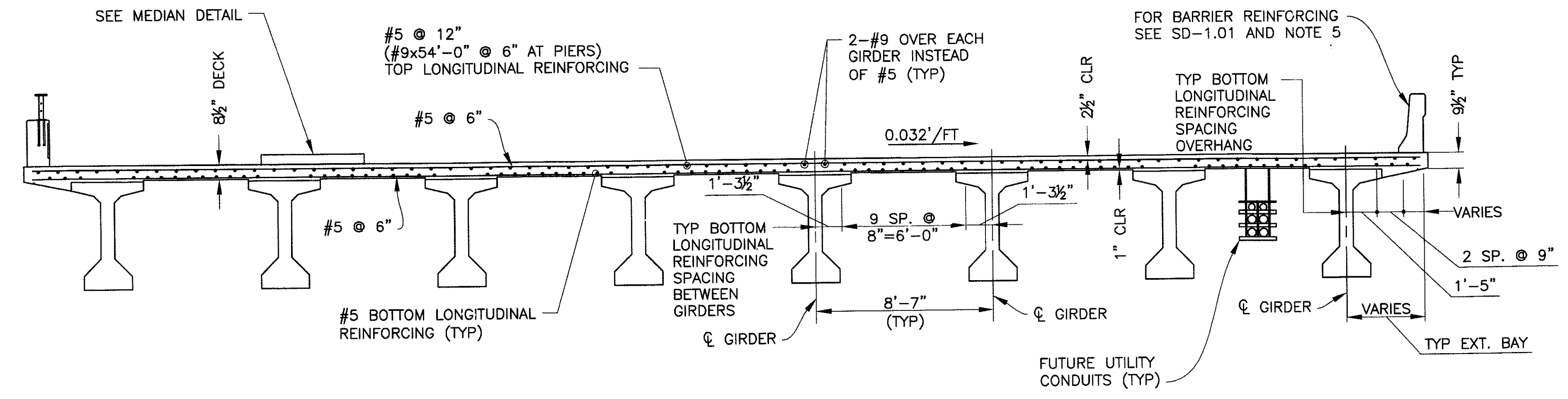
PRELIMINARY - NOT FOR CONSTRUCTION
90%

F.H.W.A. REGION 9	STATE ARIZ.	PROJ. NO. ST85100293	NO. 187	TOTAL 352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-5000				
DES: BAG		DR: JRR	CK: SEO	DATE: 12/09

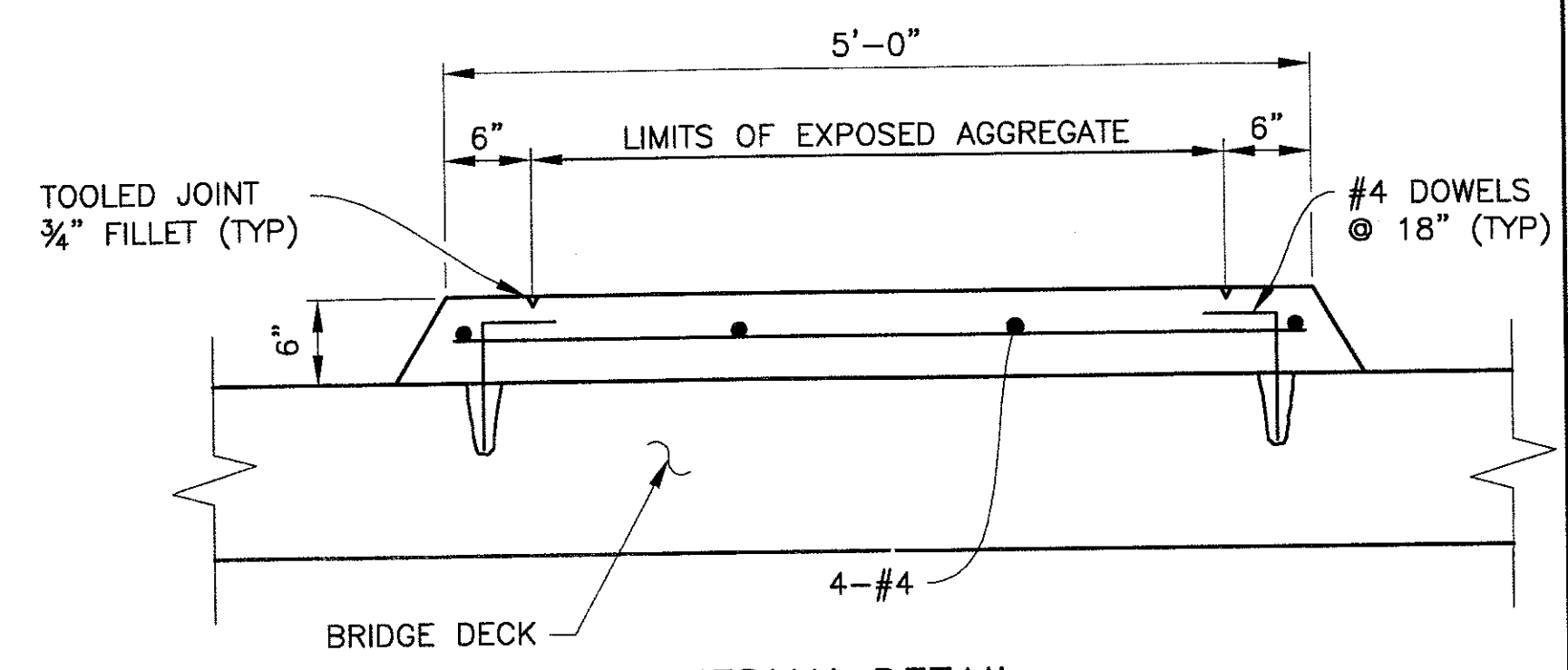
- NOTES:**
- SEE DIAPHRAGM DETAIL DRAWINGS AND DECK PLANS FOR ADDITIONAL INFORMATION.
 - STAY IN PLACE FORMS NOT ALLOWED
- DECK REINFORCING NOTES:**
- ALL CONTINUOUS HORIZONTAL BARS IN DECK, DIAPHRAGMS AND BARRIERS, EXCLUDING TRANSVERSE BARS IN DECK SLAB MAY BE SPICED WHERE REQUIRED WITH MINIMUM LAP LENGTH AS SPECIFIED:
 #4 BARS - 1'-10"
 #6 BARS - 2'-10"
 #8 BARS - 4'-7"
 #5 BARS - 2'-4"
 #7 BARS - 3'-7"
 - TRANSVERSE DECK REINFORCING SPLICES WHERE REQUIRED SHALL BE:
 BOTTOM BARS: 3'-0" MINIMUM LAP AT CENTERLINE OF GIRDER.
 TOP BARS: 3'-0" MINIMUM LAP AT CENTERLINE OF INTERIOR BAY.
 - BARS SHALL NOT BE SPICED WITHIN THE REQUIRED LAP LENGTH OF THE ADJACENT BARS.
 - SEE PARTIAL DECK TOP LONGITUDINAL REINFORCING PLAN AT PIERS FOR SPLICE LOCATIONS OF TOP #9 AND #5 LONGITUDINAL BARS.
 - SIZE AND SPACING OF BARRIER BARS CAST INTO DECK SLAB VARY AT OPEN JOINTS. SEE STD SD-1.01 FOR DETAILS.
 - TRANSVERSE DECK REINFORCEMENT SHALL BE PLACED PARALLEL TO ABUTMENTS AND PIERS.



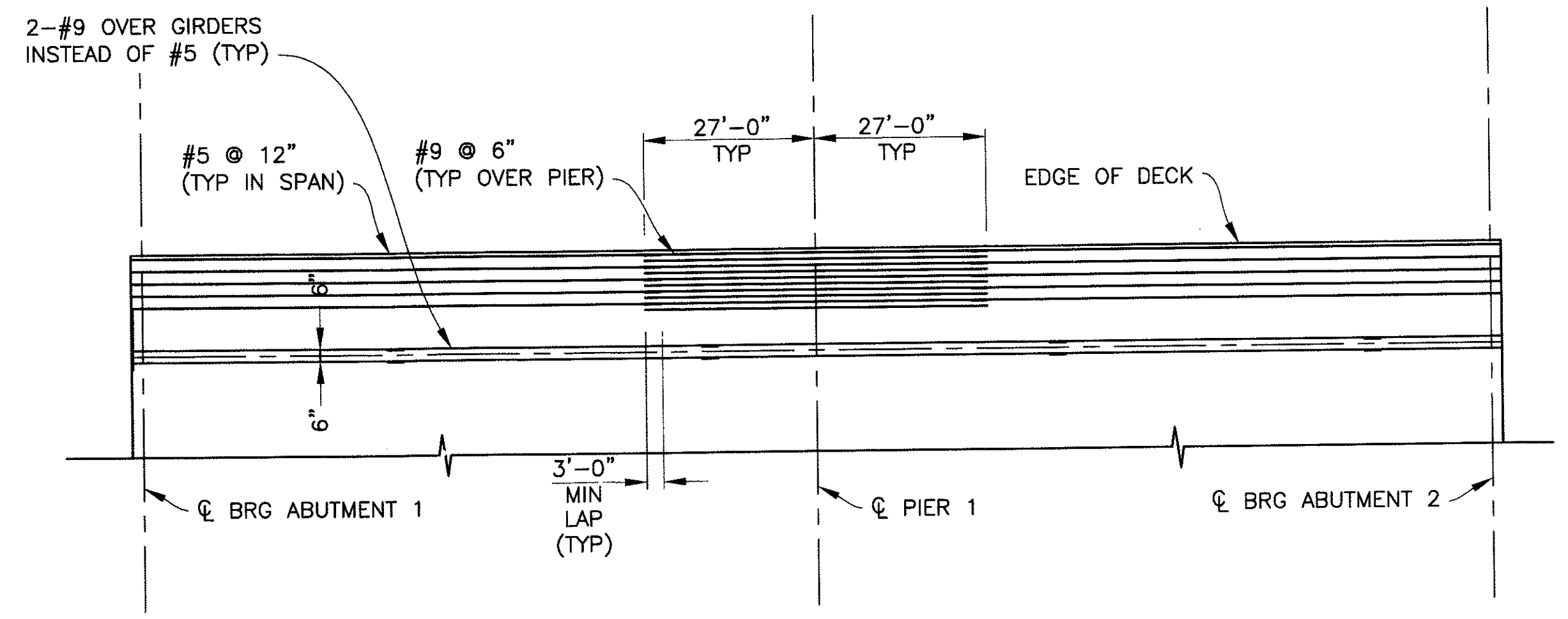
TYPICAL SECTION
 LOOKING UP STATION
 SCALE: 3"=1'-0"



SECTION-TYPICAL DECK REINFORCING
 LOOKING UP STATION
 SCALE: 3"=1'-0"



MEDIAN DETAIL
 SCALE: 1"=1'-0"



PARTIAL DECK TOP LONGITUDINAL REINFORCING PLAN
 SCALE: 1"=1'-0"

- NOTES:**
- CONCRETE CLASS "S" f'c = 4000 psi
 - EXPOSED AGGREGATE PER MAG STANDARD SPECIFICATIONS SECTION 343, TYPE A-NON PEDESTRIAN USE.
 - INTERGRAL COLOR CONCRETE - DAVID COLOR = MESQUITE

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TYPICAL DECK & REINFORCING
 CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
 CAVE CREEK SECONDARY
 ST85100293**

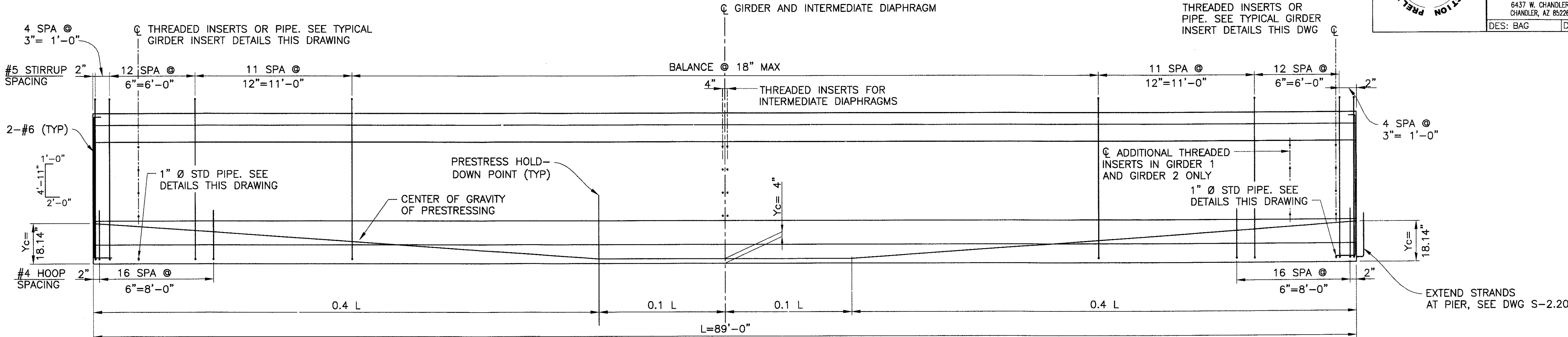
Two working days before you dig,
 CALL FOR THE BLUE STAKES
 (602) 263-1100
 Blue Stake Center

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	187	352
DWG NO: S-2.17				

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE

P:\2008005\CAD09\Civil\Sheets\Structures\21B-CC_Secondary.syd doc & reinforcement.dwg - plotted by James Rojas at 12/21/2009 9:03:19 AM

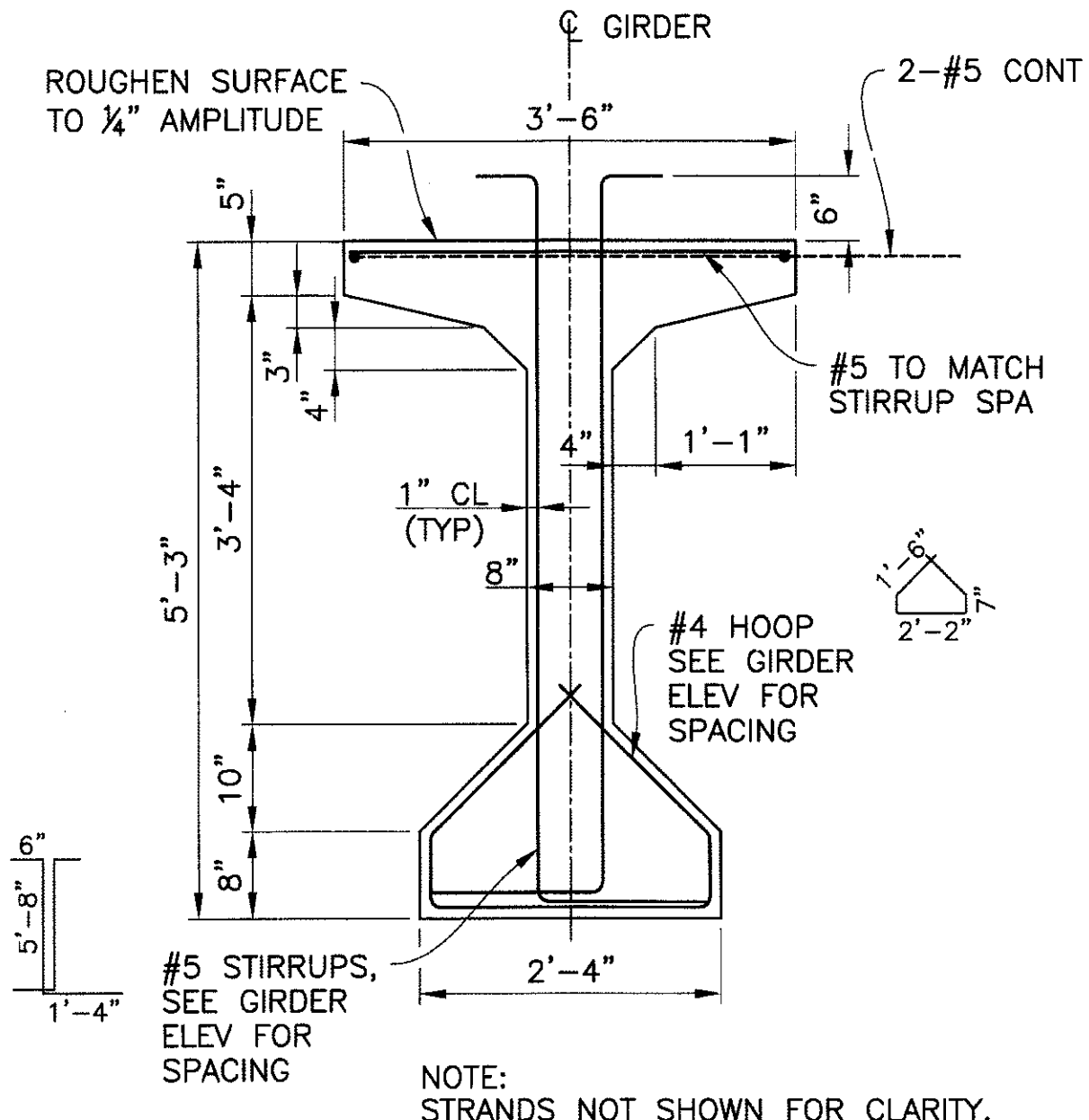
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



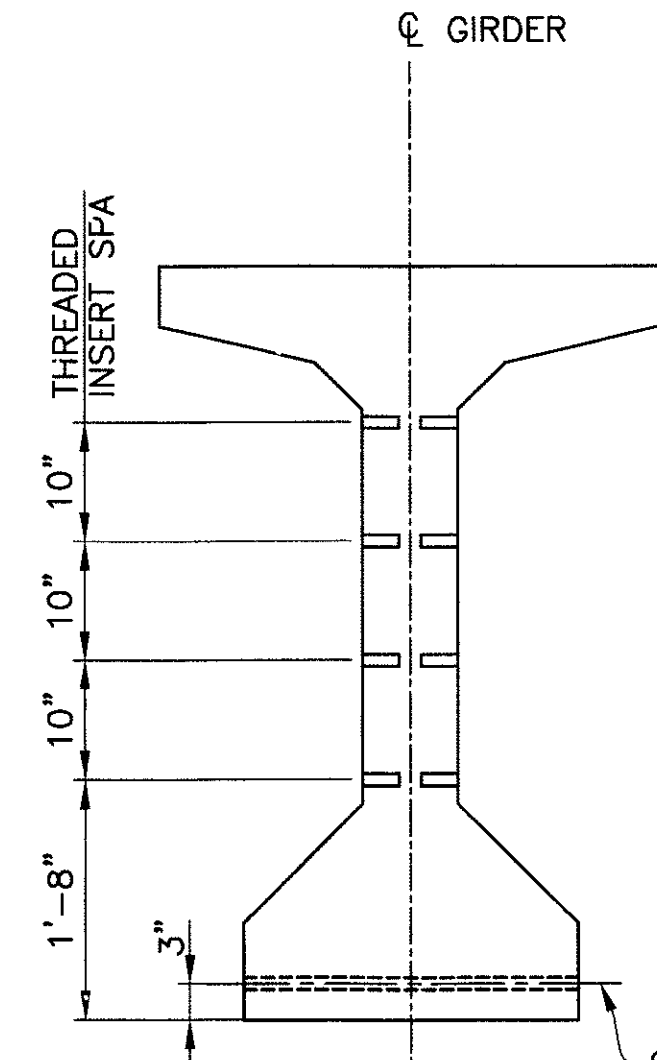
GIRDER ELEVATION
 HORZ: 3/4" = 1'-0"
 VERT: 1/2" = 1'-0"

NOTES:

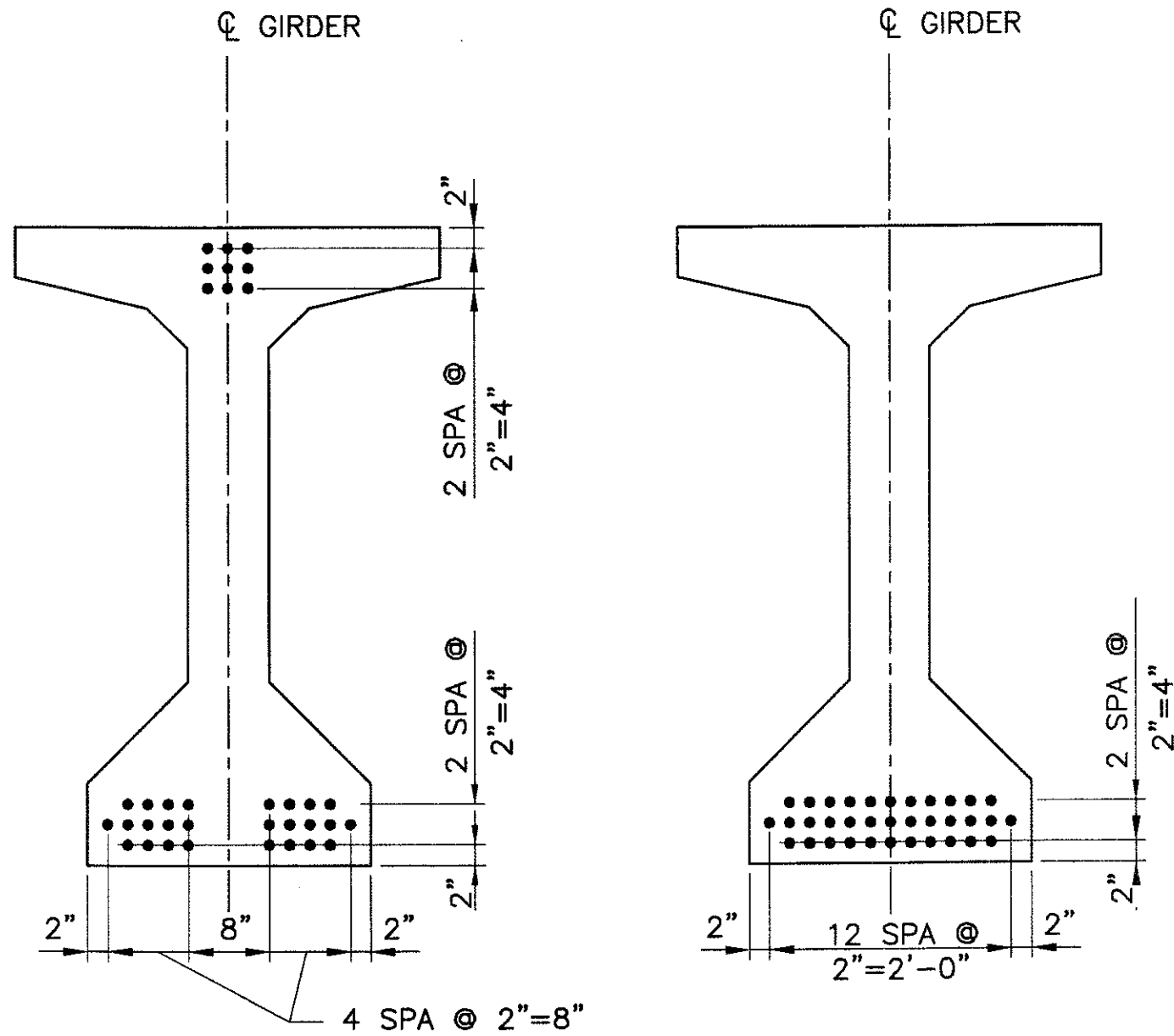
1. THREADED INSERTS ARE FERRULE LOOP INSERTS FOR #6 REINFORCING BARS THREADED ON END. INSERTS SHALL HAVE A 10,800 LBS WORKING PULLOUT STRENGTH.
2. THREADED INSERTS SHALL BE PLACED NORMAL TO GIRDER WEB. FIELD BEND INSERTED BARS IN SUCH A MANNER AS TO PREVENT BENDING STRESSES AT ROOT OF THREADS. SHOP DRAWINGS SHALL INDICATE METHOD OF BENDING.
3. FOR EXTERIOR GIRDERS AT PIER, REPLACE PIPE WITH THREADED INSERT ON INTERIOR FACE OF BOTTOM FLANGE.



AASHTO TYPE V GIRDERS
 SCALE: 3/4" = 1'-0"



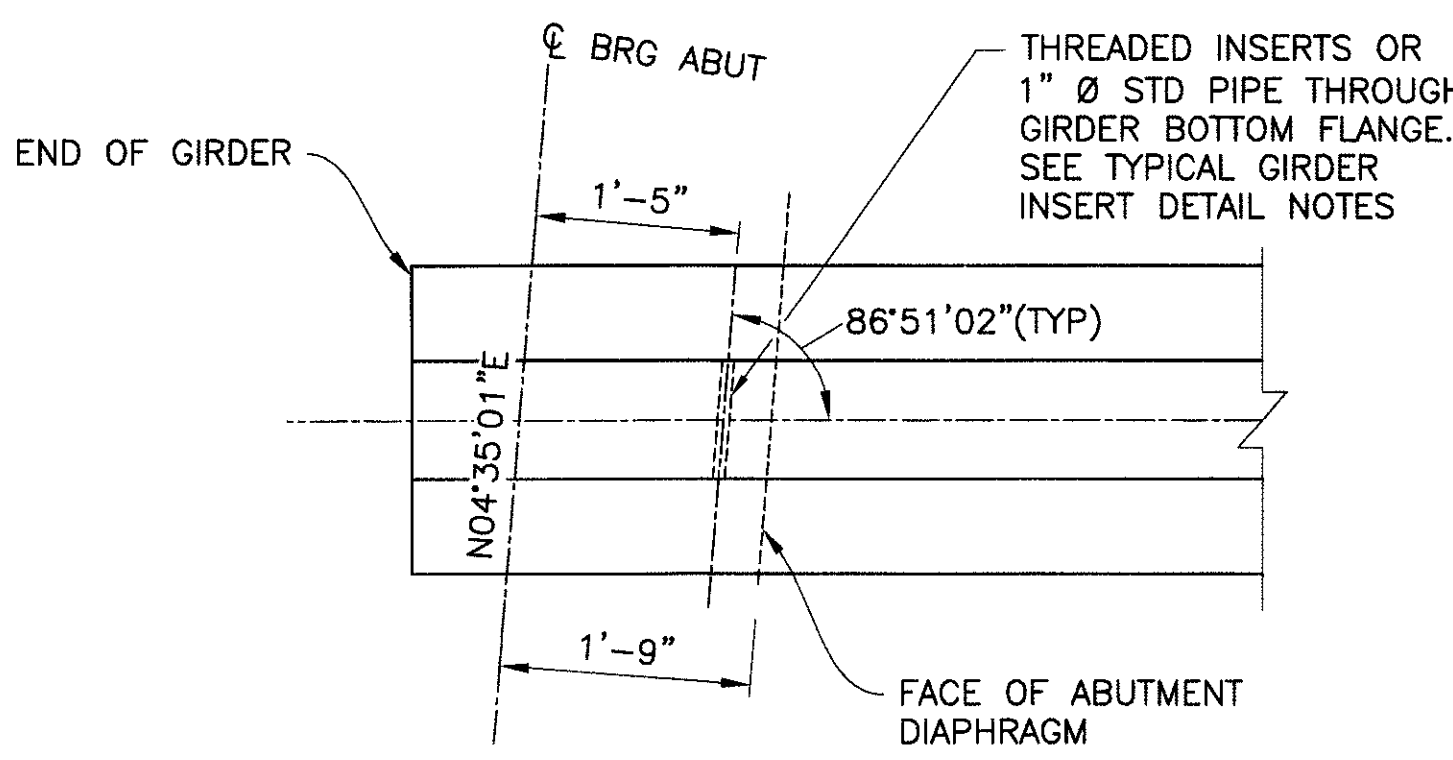
TYPICAL GIRDER INSERT DETAIL
 SCALE: 3/4" = 1'-0"



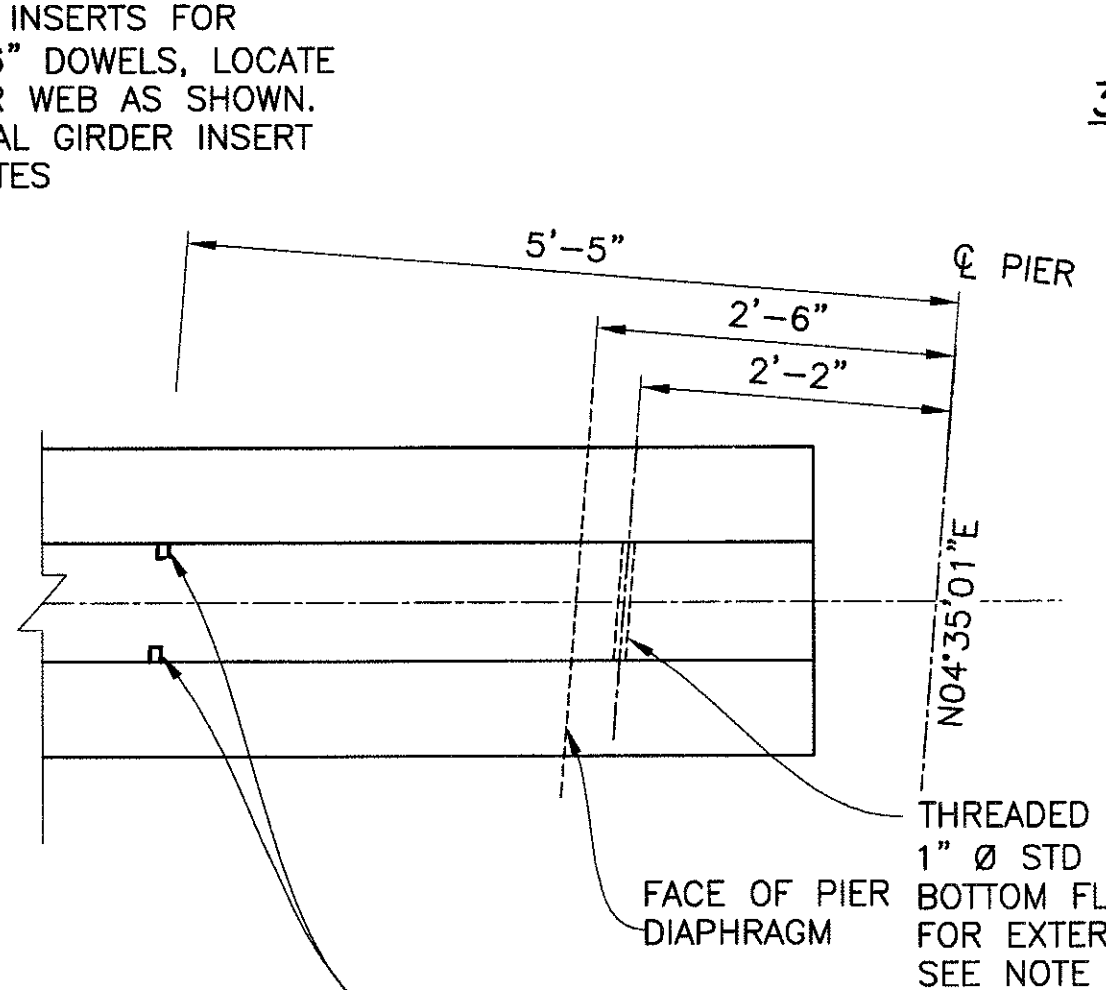
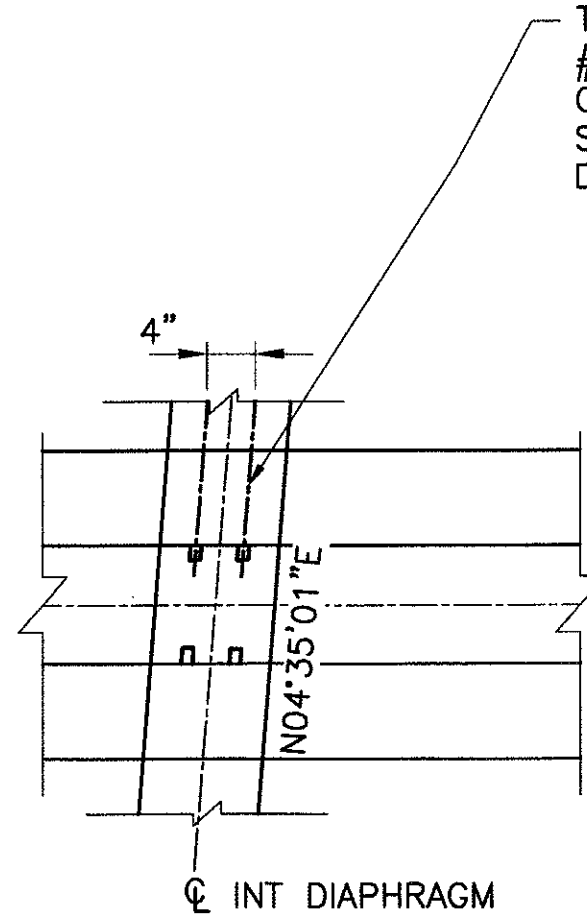
STRAND PATTERN
35-1/2" DIAMETER 7 WIRE LOW RELAXATION (STRANDS)
 SCALE: 3/4" = 1'-0"

GIRDER NOTES:

1. SEE GENERAL NOTES ON DWG S-2.02
2. $P_i=1084.4$ KIPS. INITIAL TENSION BEFORE LOSSES
 $P_w=893.7$ KIPS. WORKING FORCE REMAINING AFTER ALL LOSSES.
 $f'_{ci} = 4000$ PSI MINIMUM STRENGTH AT TRANSFER.
 $f'_c = 5000$ PSI MINIMUM STRENGTH AT 28 DAYS.
3. ALL LOW-RELAXATION STRANDS SHALL BE STRESSED TO 0.75 f_s
4. ALL GIRDERS SHALL BE PRESTRESSED BY THE PRETENSIONING METHOD ONLY
5. USE OF MASKED STRANDS WILL NOT BE ALLOWED
6. Y_c =DISTANCE TO CENTER OF GRAVITY OF PRESTRESSING MEASURED FROM BOTTOM OF GIRDER



TYPICAL GIRDER INSERT PLAN
 SCALE: 3/4" = 1'-0"



ADDITIONAL THREADED INSERTS ON BOTH FACES OF GIRDER 1 AND EXTERIOR FACE OF GIRDER 2 FOR PEDESTRIAN BALCONY

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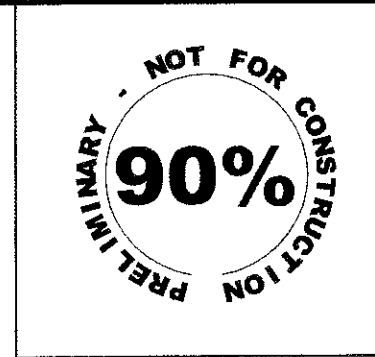
GIRDER DETAILS SPAN 1

CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
 CAVE CREEK SECONDARY
 ST85100293**

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	188	352
DWG NO: S-2.18			188	352

P:\200803\0400\civil\Sheets\Structure\317-CC secondary girder.dwg - plotted by James Rojas at 12/21/2009 9:00:24 AM
 Project: 11 - Incode: 0-50000 - Part: 01 - Date: 12/09



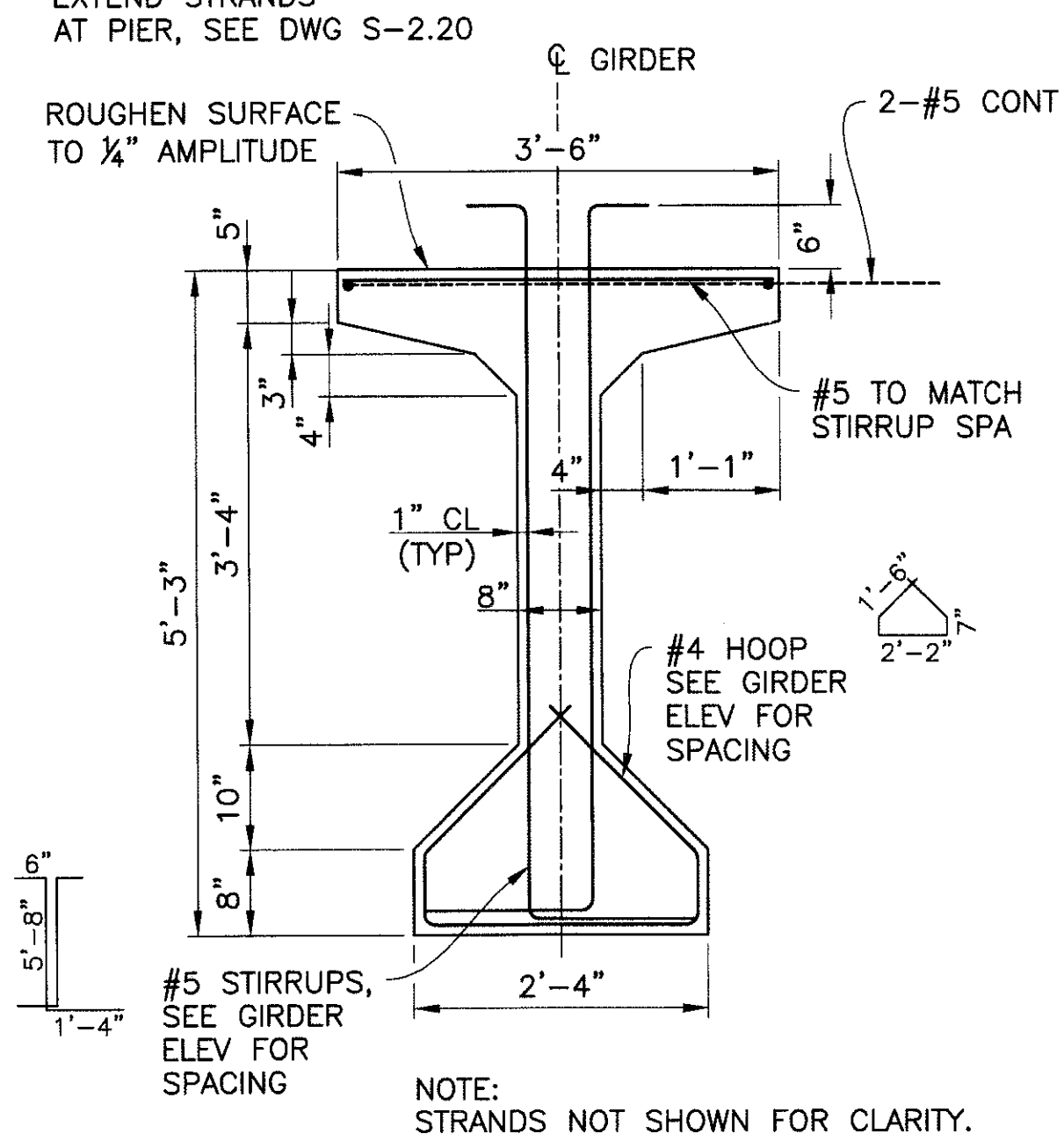
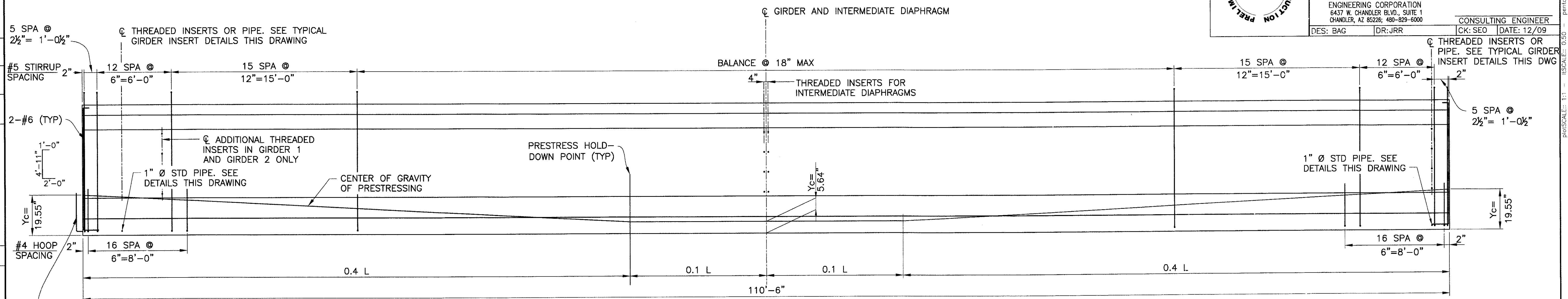
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	189	352

PREMIER
ENGINEERING CORPORATION
6437 W. CHANDLER BLVD., SUITE 1
CHANDLER, AZ 85226; 480-829-6000

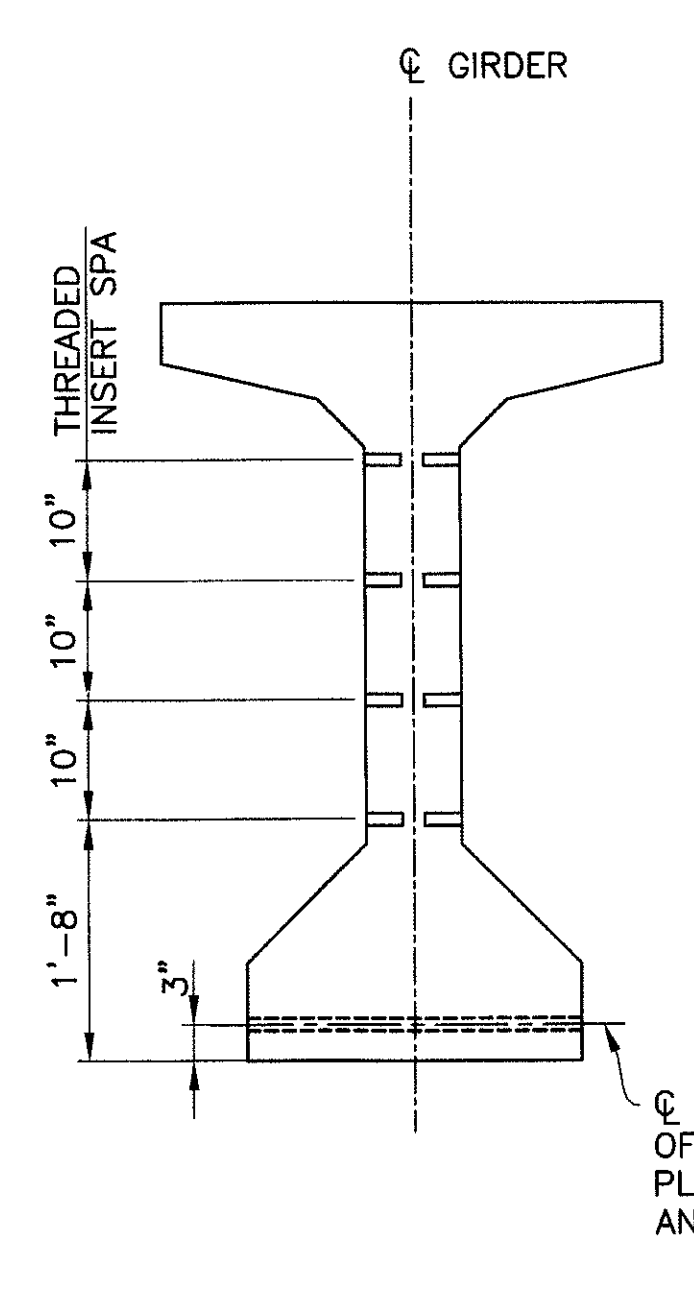
CONSULTING ENGINEER
CK: SEO DATE: 12/09

DES: BAG DR: JRR

REVISION BY	DESCRIPTION	NO.	DATE



AASHTO TYPE V GIRDER
SCALE: 3/4" = 1'-0"

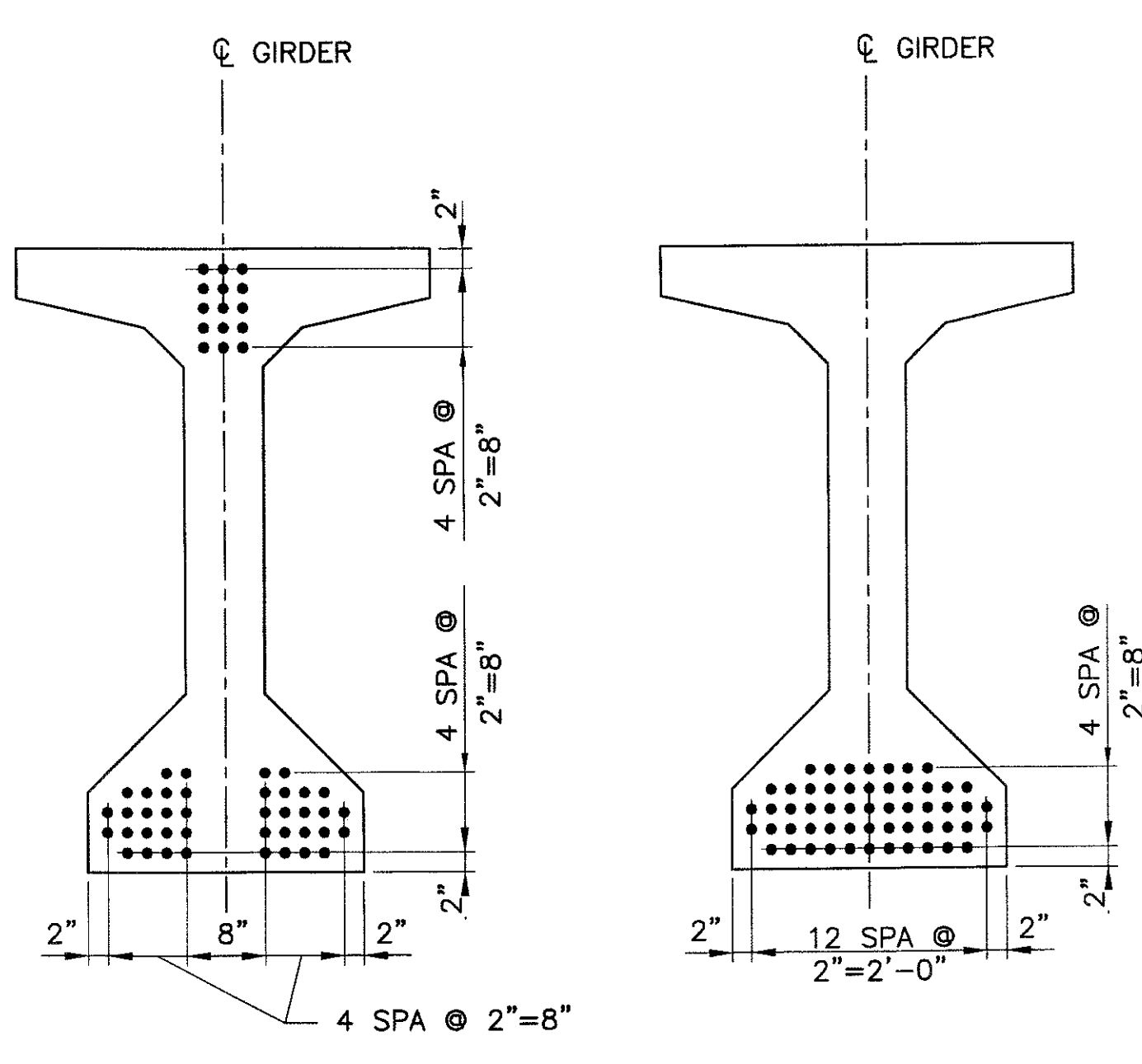


TYPICAL GIRDER INSERT DETAIL
SCALE: 3/4" = 1'-0"

GIRDER ELEVATION
HORZ: 1/4" = 1'-0"
VERT: 1/2" = 1'-0"

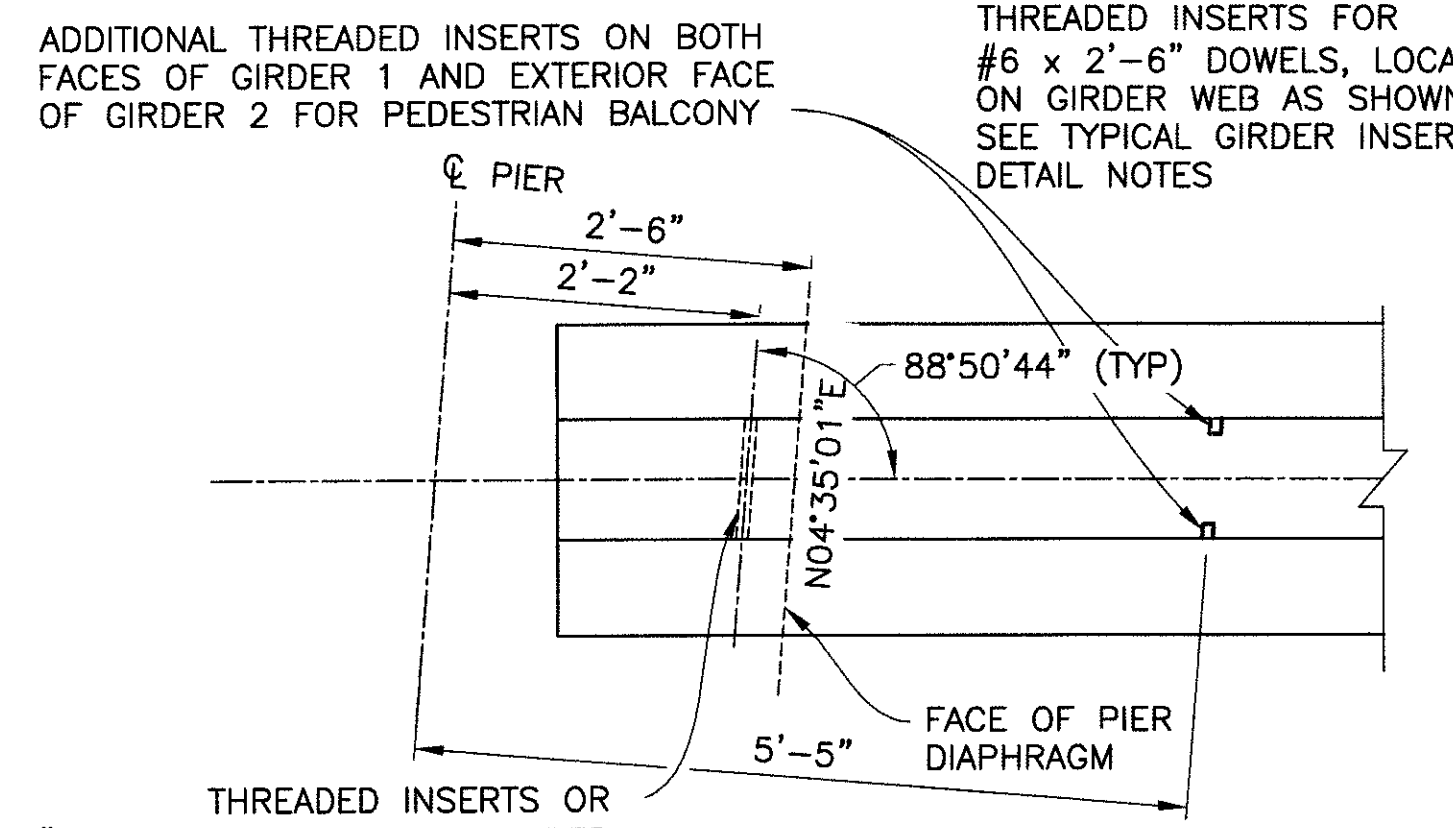
NOTES:

1. THREADED INSERTS ARE FERRULE LOOP INSERTS FOR #6 REINFORCING BARS THREADED ON END. INSERTS SHALL HAVE A 10,800 lbs WORKING PULLOUT STRENGTH.
2. THREADED INSERTS SHALL BE PLACED NORMAL TO GIRDER WEB. FIELD BEND INSERTED BARS IN SUCH A MANNER AS TO PREVENT BENDING STRESSES AT ROOT OF THREADS. SHOP DRAWINGS SHALL INDICATE METHOD OF BENDING.
3. FOR EXTERIOR GIRDERS AT PIER, REPLACE PIPE WITH THREADED INSERT ON INTERIOR FACE OF BOTTOM FLANGE.



GIRDER NOTES:

1. SEE GENERAL NOTES ON DWG S-2.02
2. Pi=1704.0 KIPS. INITIAL TENSION BEFORE LOSSES.
PW=1367.9 KIPS. WORKING FORCE REMAINING AFTER ALL LOSSES.
f'ci = 5000 PSI MINIMUM STRENGTH AT TRANSFER.
f'c = 5500 PSI MINIMUM STRENGTH AT 28 DAYS.
3. ALL LOW-RELAXATION STRANDS SHALL BE STRESSED TO 0.75 f's
4. ALL GIRDERS SHALL BE PRESTRESSED BY THE PRETENSIONING METHOD ONLY.
5. USE OF MASKED STRANDS WILL NOT BE ALLOWED.
6. Yc=DISTANCE TO CENTER OF GRAVITY OF PRESTRESSING MEASURED FROM BOTTOM OF GIRDER.



AT DIAPHRAGMS
TYPICAL GIRDER INSERT PLAN
SCALE: 3/4" = 1'-0"

STRAND PATTERN
55-1/2" DIAMETER 7 WIRE LOW RELAXATION (STRANDS)
SCALE: 3/4" = 1'-0"

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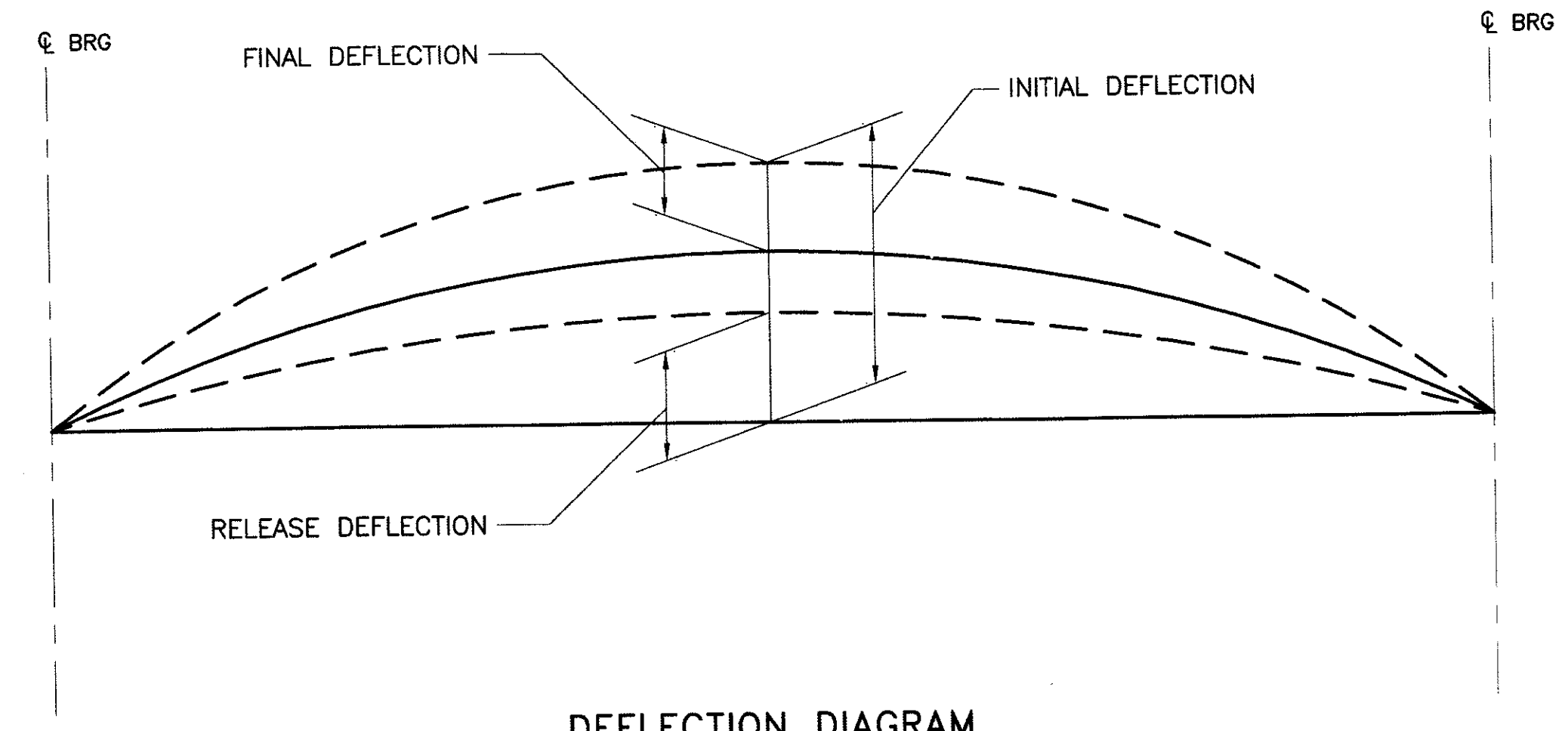
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

GIRDER DETAILS SPAN 2
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	189	352
DWG NO: S-2.19				

P:\2008005\CADD\Civil\Sheets\Structure\21B-CC secondary girder.dwg spon 2.dwg - plotted by James Rojas at 12/21/2009 9:00:28 AM

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



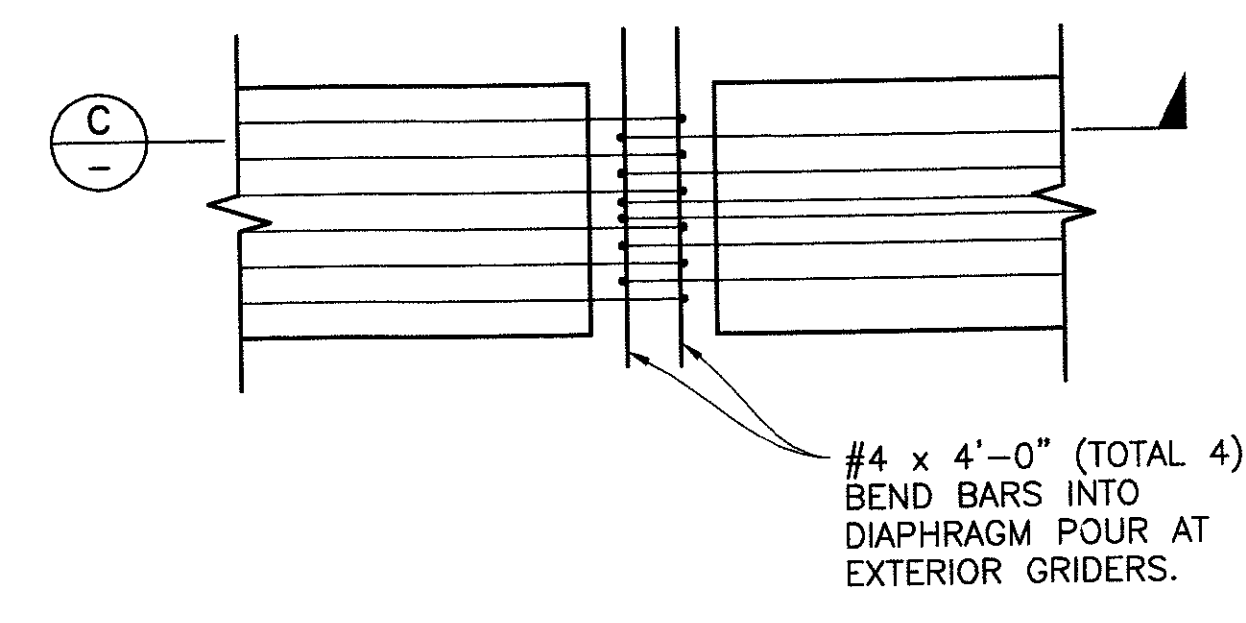
DEFLECTION DIAGRAM
N.T.S.

	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
RELEASE (POSITIVE IS UPWARD)	0.034	0.060	0.078	0.088	0.092	0.088	0.078	0.060	0.034
INITIAL (POSITIVE IS UPWARD)	0.059	0.105	0.138	0.156	0.163	0.156	0.138	0.105	0.059
FINAL GIRDERS 1 & 8 (POSITIVE IS DOWNWARD)	0.041	0.078	0.105	0.123	0.130	0.125	0.108	0.082	0.044
FINAL GIRDERS 2 - 7 (POSITIVE IS DOWNWARD)	0.040	0.075	0.102	0.119	0.126	0.121	0.104	0.079	0.043

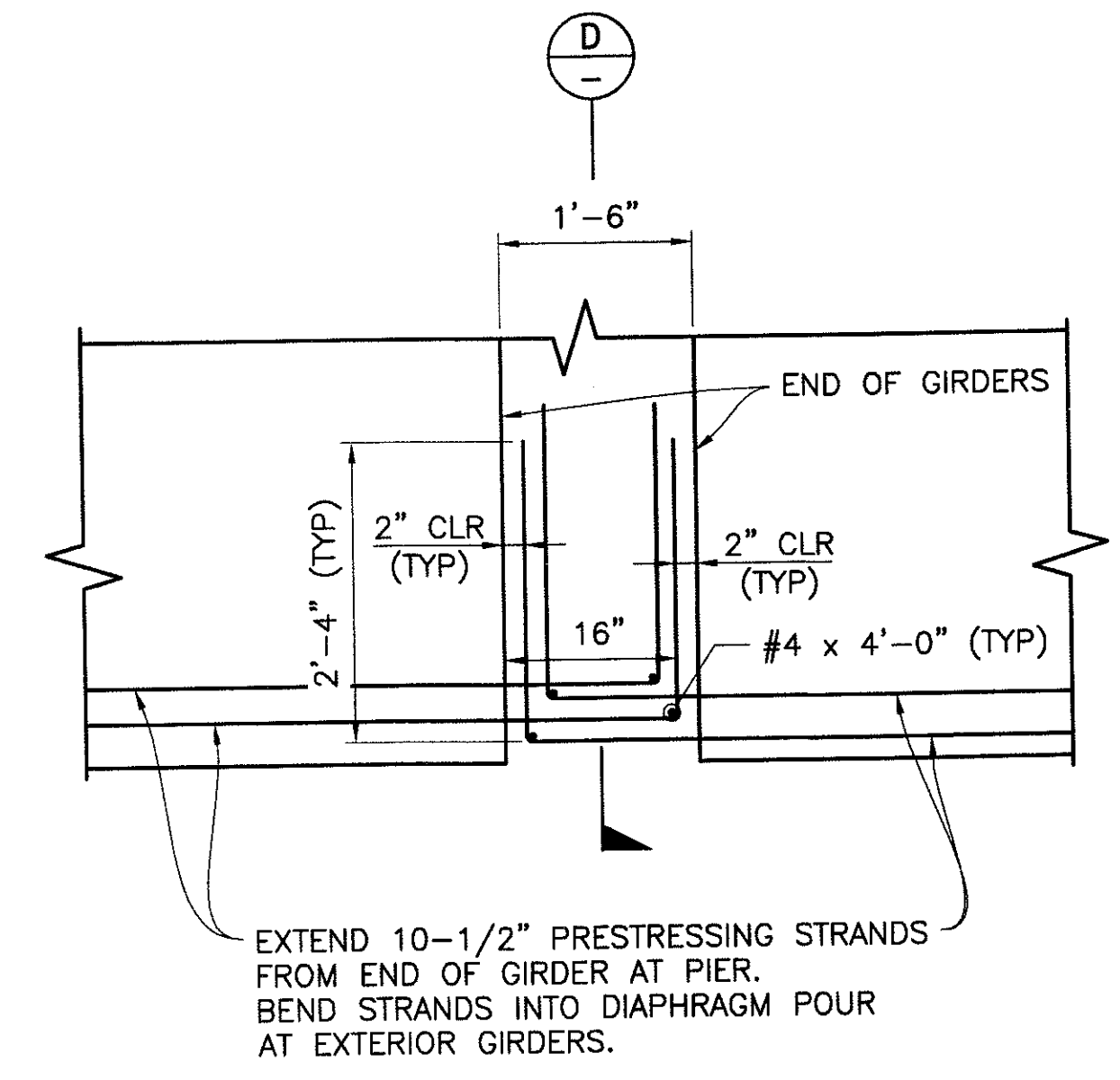
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
RELEASE (POSITIVE IS UPWARD)	0.065	0.114	0.149	0.167	0.175	0.167	0.149	0.114	0.065
INITIAL (POSITIVE IS UPWARD)	0.114	0.202	0.262	0.295	0.308	0.295	0.262	0.202	0.114
FINAL GIRDERS 1 & 8 (POSITIVE IS DOWNWARD)	0.103	0.190	0.253	0.294	0.304	0.292	0.250	0.185	0.101
FINAL GIRDERS 2 - 7 (POSITIVE IS DOWNWARD)	0.099	0.183	0.244	0.283	0.293	0.281	0.240	0.178	0.097

DEFLECTION NOTES:

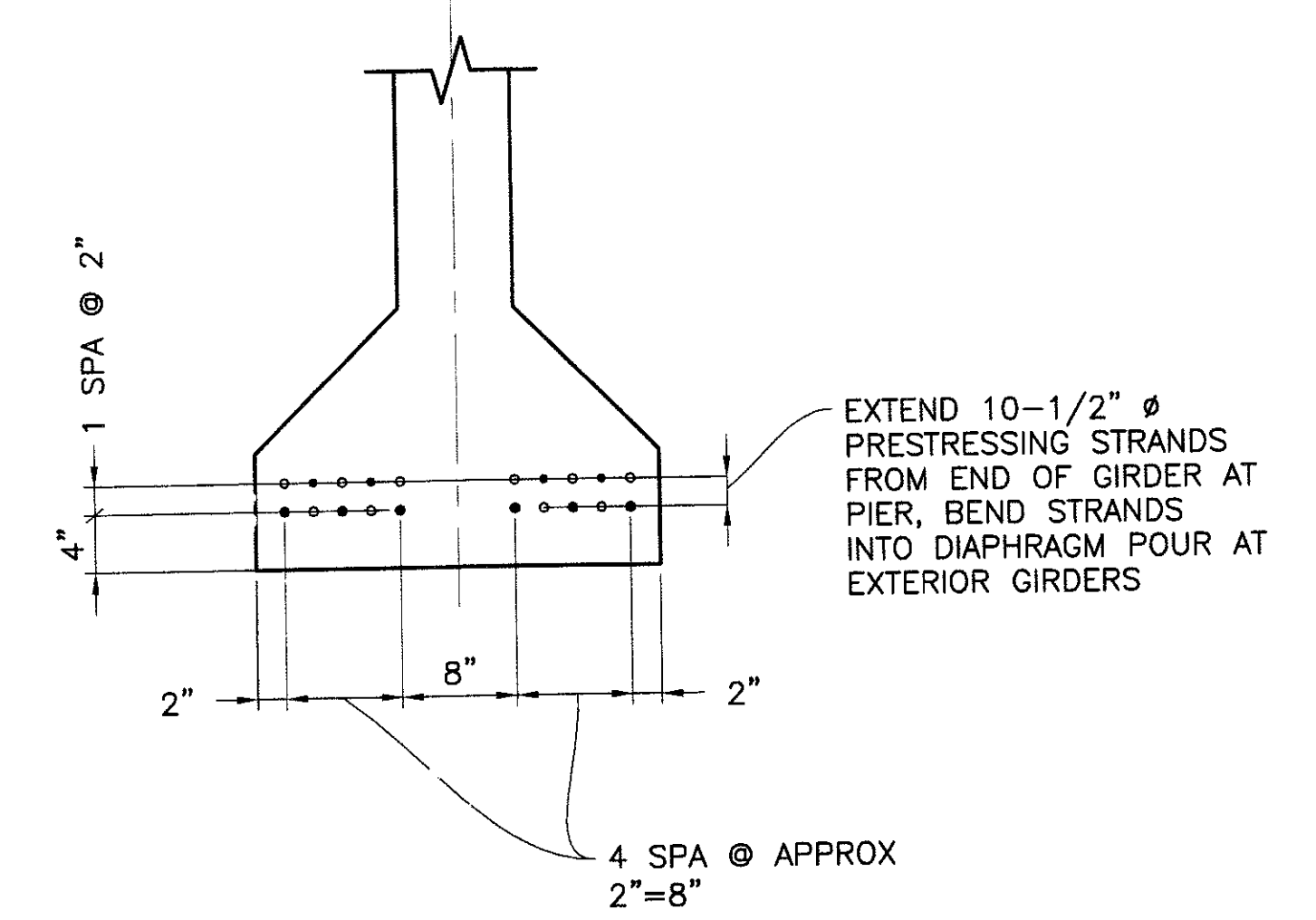
- RELEASE DEFLECTION EQUALS THE DEFLECTION THAT THE PRESTRESSED GIRDER UNDERGOES AT THE TIME OF STRAND RELEASE. THE RELEASE DEFLECTION INCLUDES THE DEAD LOAD OF THE GIRDER AND THE RELEASE PRESTRESSING FORCE (INCLUDING THE EFFECTS OF ELASTIC SHORTENING).
- INITIAL DEFLECTION EQUALS THE DEFLECTION THE PRESTRESSED GIRDER UNDERGOES AT THE TIME OF ERECTION PRIOR TO THE DIAPHRAGM OR DECK POURS. THE INITIAL DEFLECTION INCLUDES THE DEFLECTION DUE TO THE DEAD LOAD OF THE GIRDER, THE INITIAL PRESTRESSING AND THE EFFECTS OF CREEP UP TO THE TIME OF ERECTION (ASSUMED AT 60 DAYS AFTER RELEASE).
- FINAL DEFLECTION EQUALS THE DEFLECTION DUE TO THE DEAD LOAD OF THE DECK SLAB, DIAPHRAGMS, AND BARRIERS AND THE EFFECTS OF LONG TERM CREEP ON THE COMPOSITE GIRDERS.



TYPICAL END OF GIRDER PLAN AT PIER
N.T.S.



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



SECTION D
SCALE: 1"=1'-0"

GIRDER STRAND EXTENSION LEGEND

- (o) EXTENDED STRANDS
- (●) EXTENDED STRANDS FOR OPPOSITE GIRDER

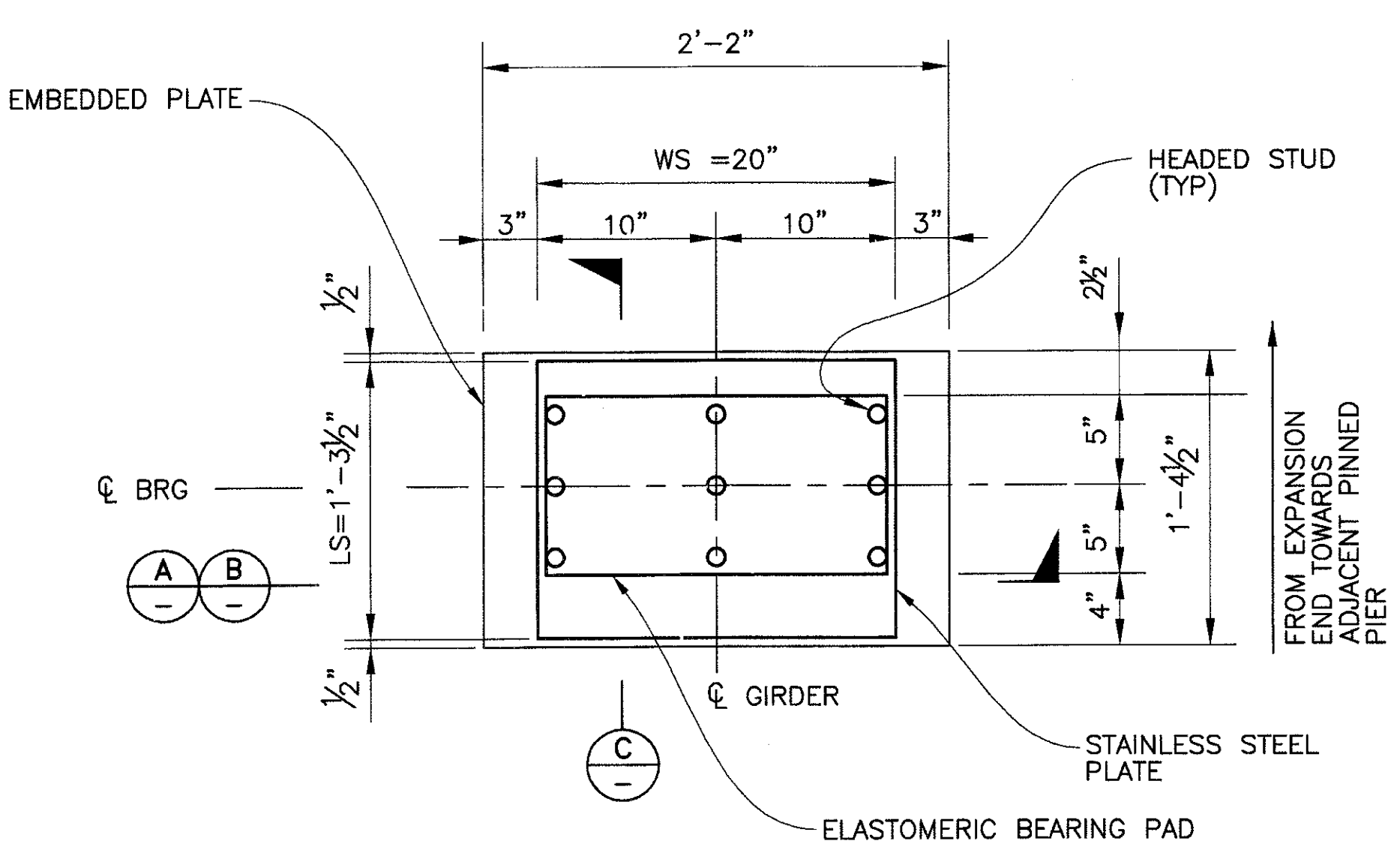
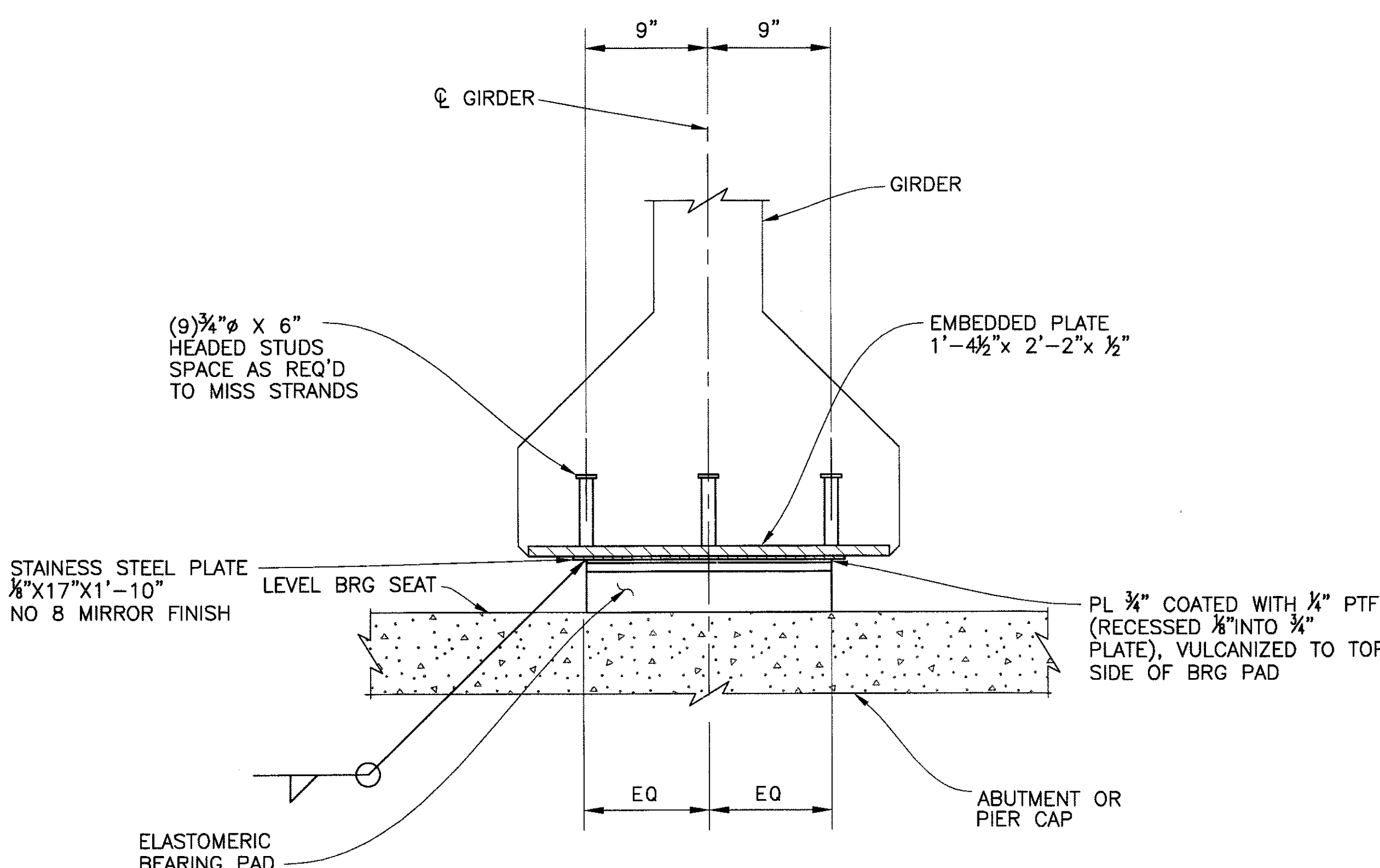
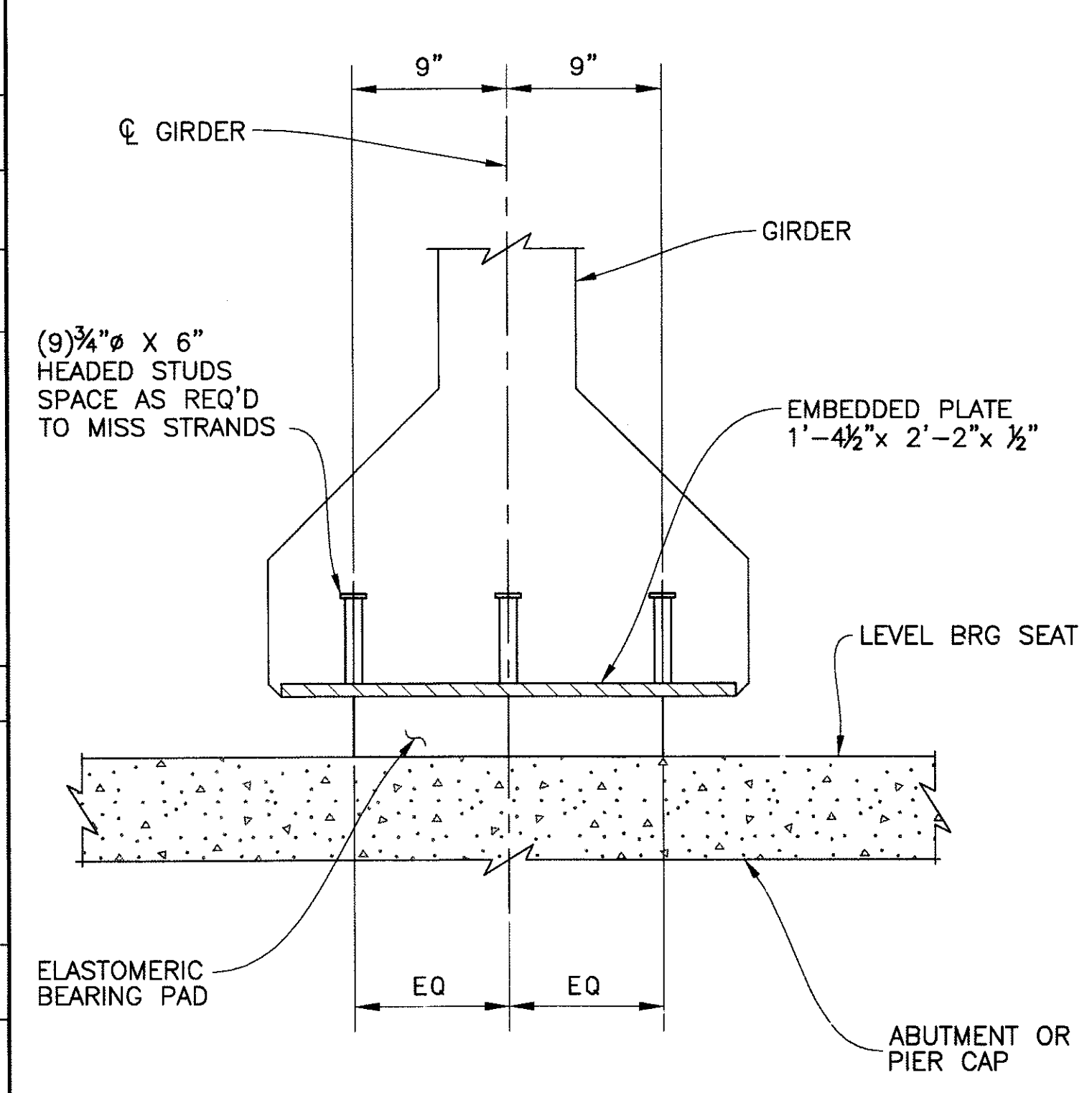
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

GIRDER DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

Two working days before you dig,
CALL FOR THE BLUE STAKES
(602) 263-1100
Blue Stake Center

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	190	352
DWG NO: S-2.20				

P:\20080205\CADD\CWA\Sheets\Structures\219-CC Secondary girder.dwg - plotted by James Rogers at 12/21/2009 9:00:36 AM



SECTION WITHOUT SLIDING SURFACE (A)
SCALE: 1/2" = 1'-0"

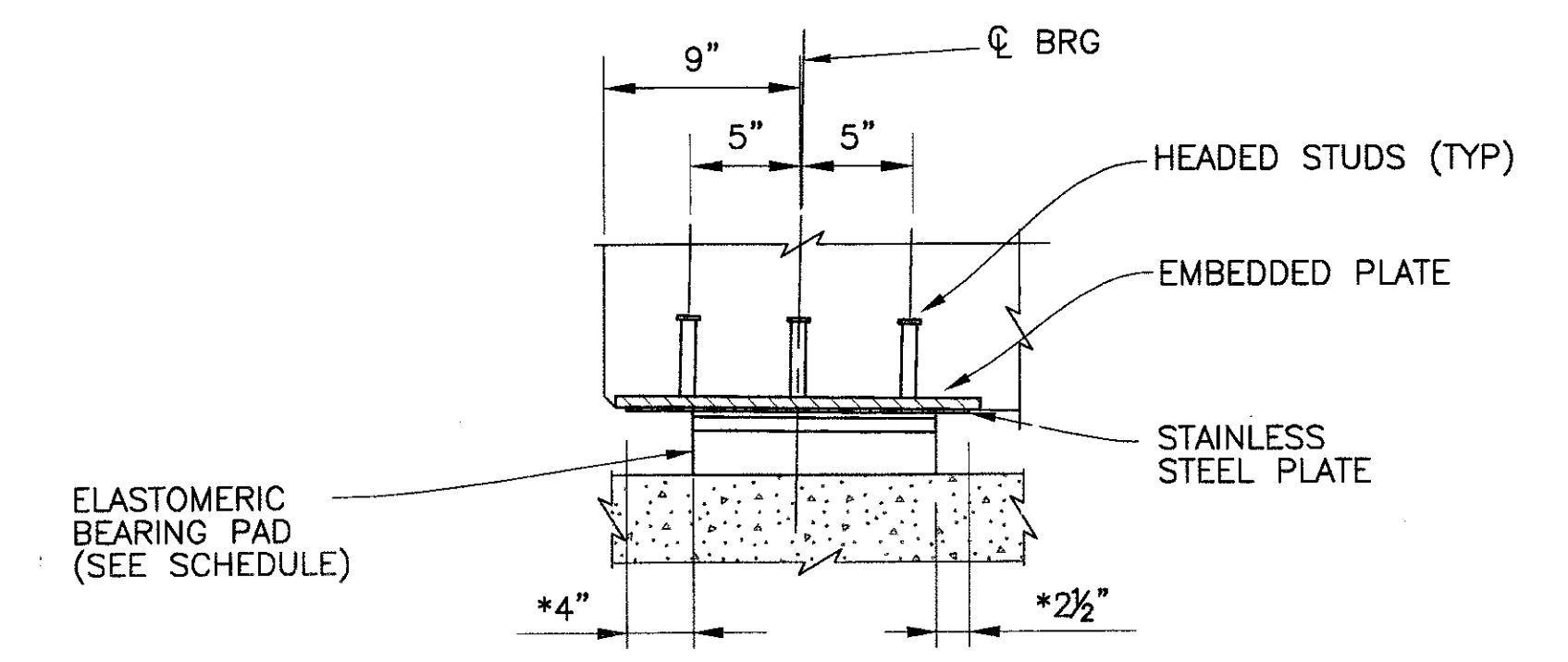
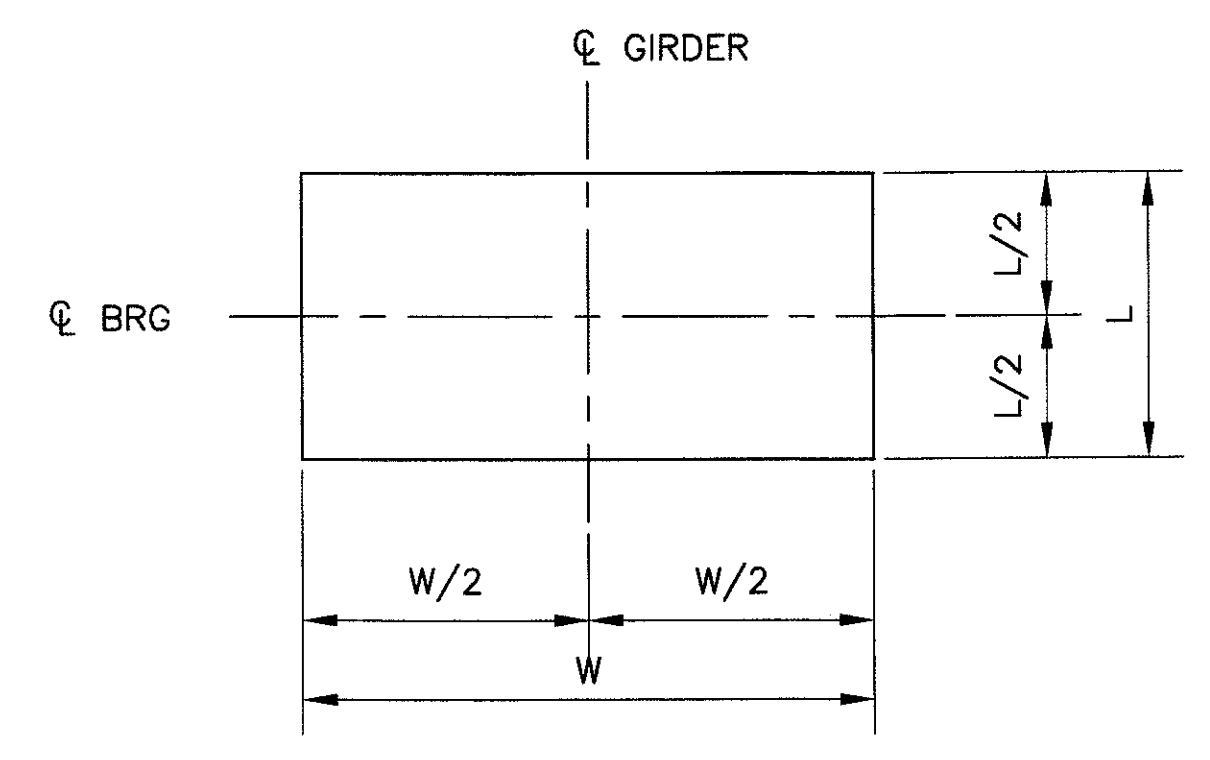
SECTION WITH SLIDING SURFACE (B)
SCALE: 1/2" = 1'-0"

PLAN (C)
SCALE: 1/2" = 1'-0"

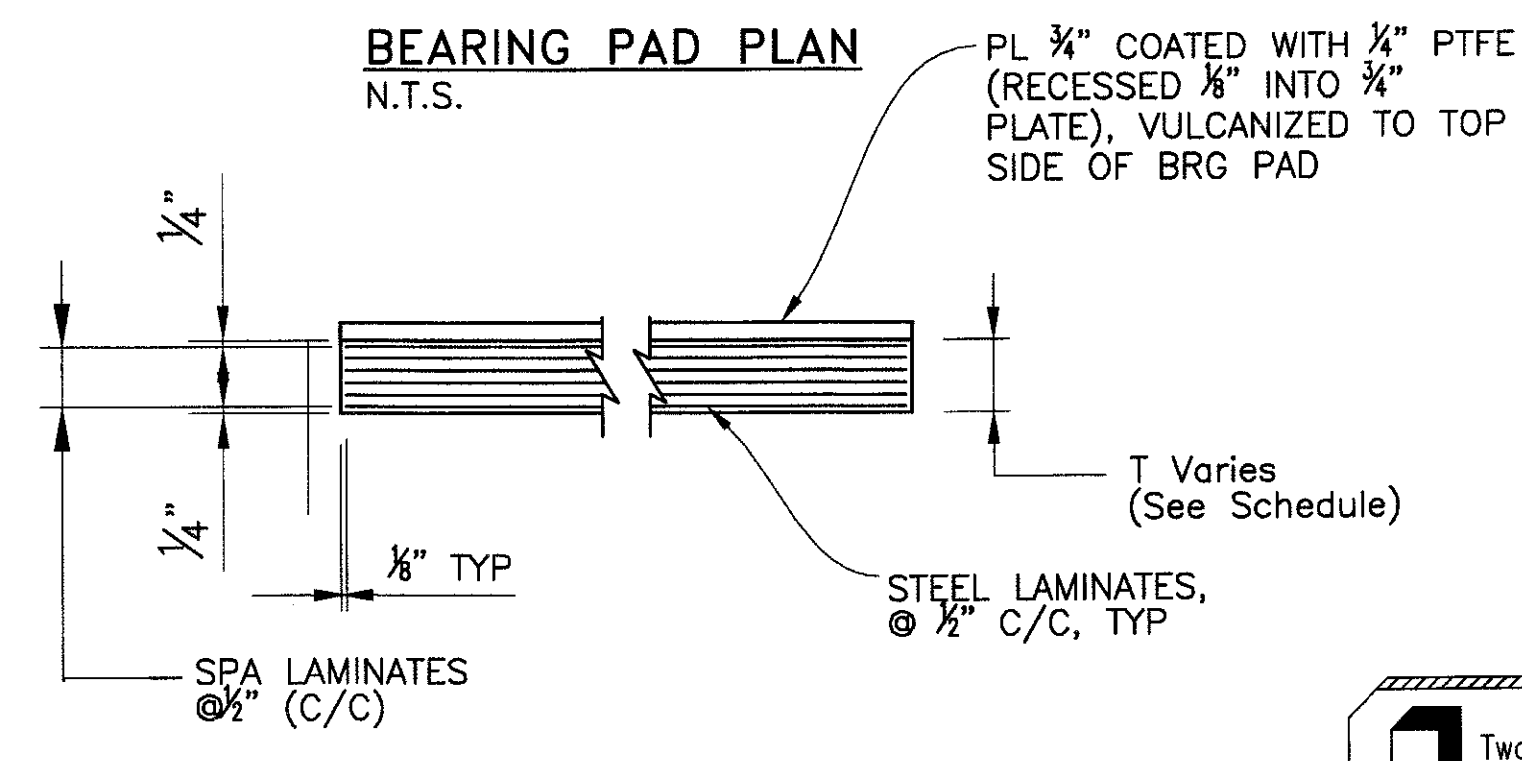
NOTES:

- BEARING PAD DESIGN PARAMETERS
DESIGN LOAD SEE SCHEDULE
DESIGN METHOD A
LOW TEMPERATURE ZONE A
ELASTOMER GRADE 0
HARDNESS 55 (SHORE A)
SHEAR MODULUS 130 PSI (@72°F)
- ELASTOMERIC BEARING PAD SHALL BE STEEL LAMINATED NEOPRENE PADS. STEEL LAMINATES SHALL BE 14-GA ROLLED MILD STEEL PER ASTM A1011, GRADE 36.
- EMBEDDED PLATES SHALL BE PER ASTM A588 OR ASTM A242. ALL EXPOSED STEEL SURFACES SHALL BE PAINTED WITH ONE SHOP COAT OF AN APPROVED INORGANIC ZINC PRIMER. DO NOT PAINT PRIOR TO COMPLETION OF WELDING.
- THE STAINLESS STEEL PLATE SHALL CONFORM TO ASTM A240, TYPE 304 WITH A SURFACE FINISH NOT LESS THAN NO.8 MIRROR FINISH.
- THE POLYTETRAFLUORETHYLENE (PTFE) SHALL CONFORM TO ASTM D4894. THE MINIMUM COEFFICIENT OF FRICTION SHALL BE 0.07 AT 1000 PSI BEARING PRESSURE AT 68°F.
- HEADED STUDS SHALL BE PER ASTM A108 AND SHALL BE WELDED PER AWS D1.5.
- BEARING PADS SHALL CONFORM TO THE ADOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

BEARING PAD SCHEDULE										
LOCATION		EXP. OR PINNED	DESIGN LOAD (KIPS)	L (IN)	W (IN)	T (IN)	NO. STEEL LAYERS	IS PTFE REQ'D	STAINLESS STEEL PLATE	
ABUT / PIER	SPAN								LS (IN)	WS (IN)
A1	1	E	183	10	24	3	6	NO	N/A	N/A
P1	1	P	183	10	24	2	4	NO	N/A	N/A
P1	2	P	215	10	24	2	4	NO	N/A	N/A
A2	2	E	215	10	24	3	6	NO	N/A	N/A



* EDGE DISTANCE AT MEAN TEMPERATURE OF 75°F. TEMPERATURE CORRECTION = 1/6"/10°F



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Blue Stake Center

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BEARING PAD DETAILS

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	191	352

DWG NO: S-2.21

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHKD BY	DATE

P:\20080825\CADD\GMA\Sheets\Structural\221-CC secondary bearing pad details.dwg - plotted by James Rojas on 12/21/2009 9:00:36 AM
 plotdate: 12/21/2009 9:00:36 AM
 scale: 1/2" = 1'-0"

PRELIMINARY - NOT FOR CONSTRUCTION
90%

F.H.W.A. REGION 9	STATE ARIZ.	PROJ. NO. ST85100293	NO. 192	TOTAL 352
PREMIER ENGINEERING CORPORATION 8437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226 480-829-6000			CONSULTING ENGINEER DES: BAG DR: JRR CK: SEO DATE: 12/09	

REVISION BY CITY OF PHOENIX

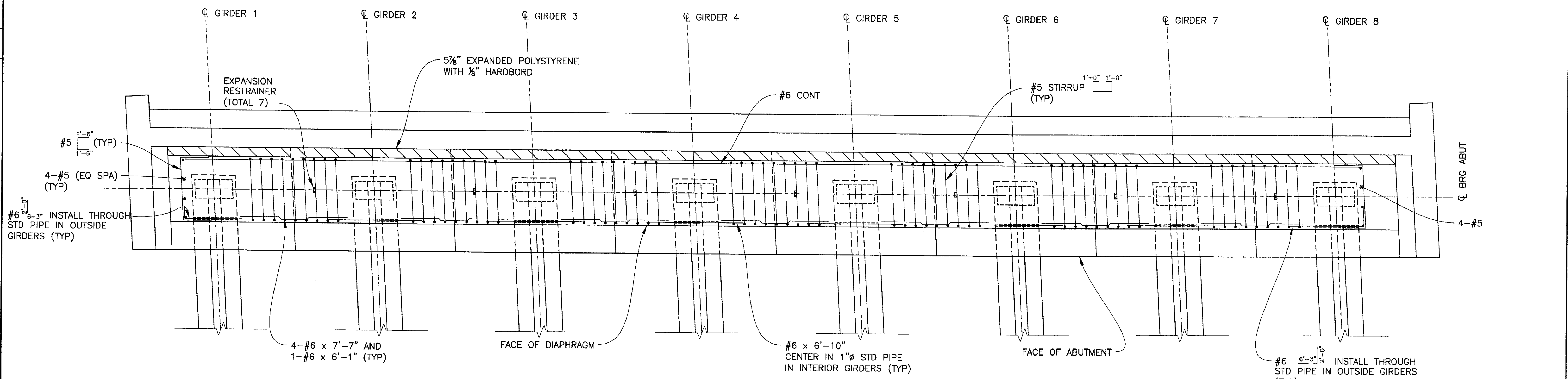
NO.	DESCRIPTION	REV BY	CHK BY	DATE

REVISION BY CITY OF PHOENIX

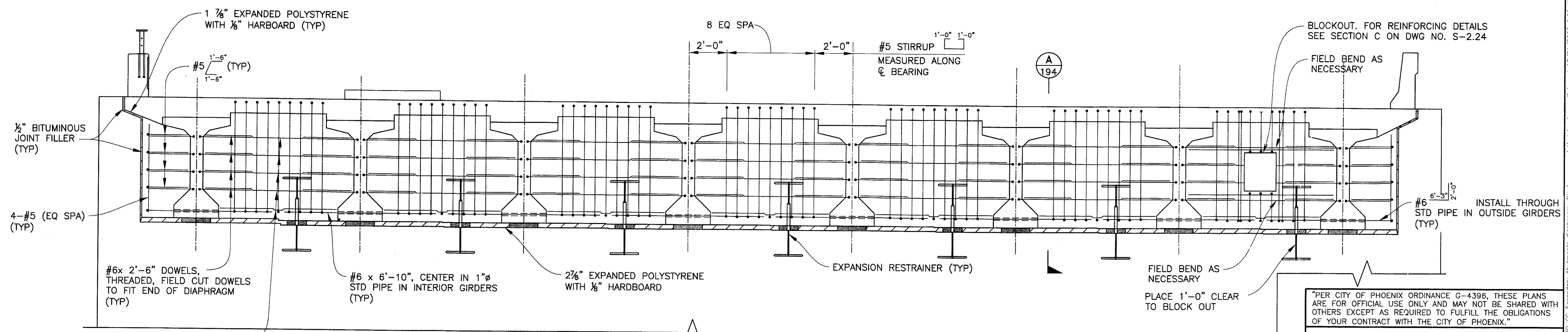
NO.	DESCRIPTION	REV BY	CHK BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CHK BY	DATE



ABUTMENT DIAPHRAGM PLAN
 SCALE: 3/8" = 1'-0"



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

"PER CITY OF PHOENIX ORDINANCE C-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

ABUTMENT DIAPHRAGM DETAILS

CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
 CAVE CREEK SECONDARY
 ST85100293**

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 Blue Stake Center

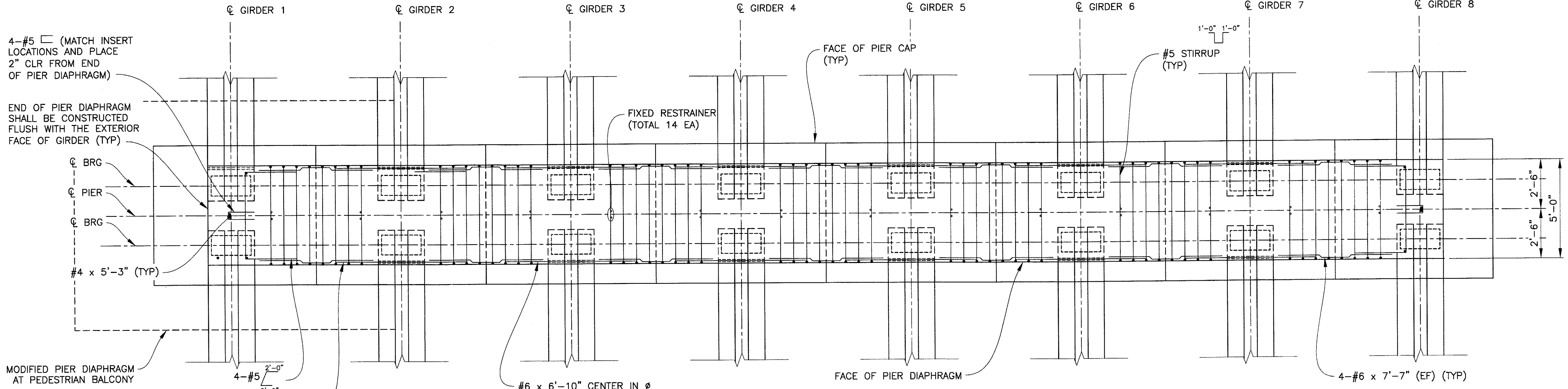
DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	192	352
DWG NO: S-2.22			192	352

P:\2009000\CADD\Civil\Sheets\Structures\220-CC Secondary Abutments\diaphragm.dwg - plotted by James Rojas at 12/21/2009 8:00:45 AM

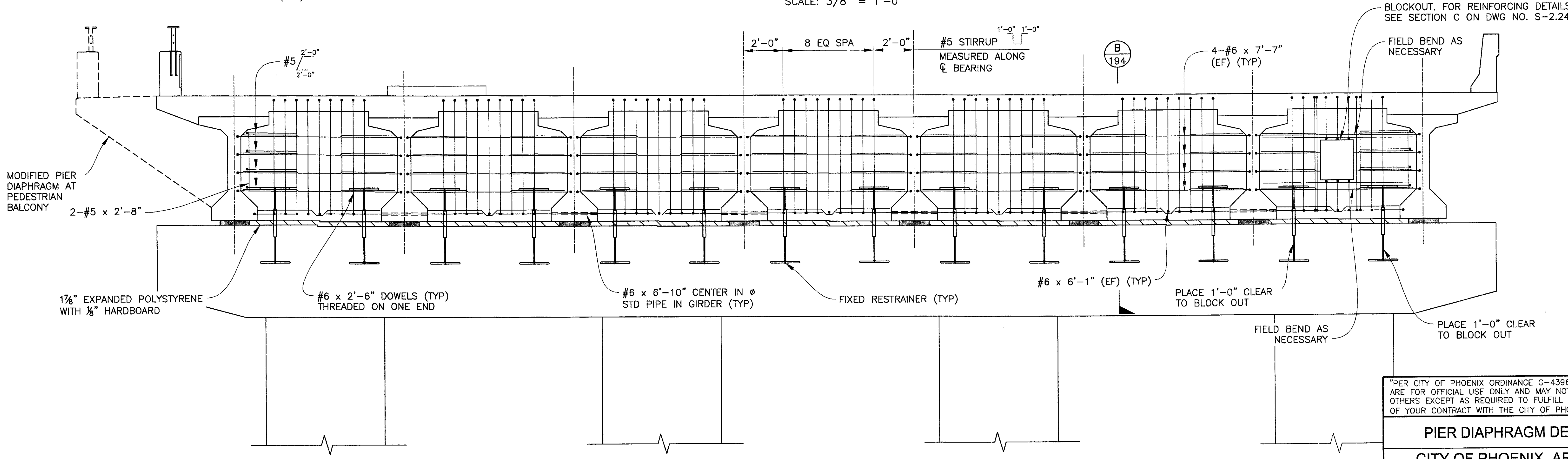
PRELIMINARY - NOT FOR CONSTRUCTION
90%

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	193	352
PREMIER				
ENGINEERING CORPORATION				
6437 W. CHANDLER BLVD., SUITE 1				
CHANDLER, AZ 85226; 480-829-6000				
			CONSULTING ENGINEER	
DES: BAG	DR: JRR	CK: SEO	DATE: 12/09	

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



PIER DIAPHRAGM PLAN
SCALE: 3/8" = 1'-0"



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

NOTE:
SEE PEDESTRIAN BALCONY DETAILS FOR
PIER DIAPHRAGM MODIFICATION DETAILS.

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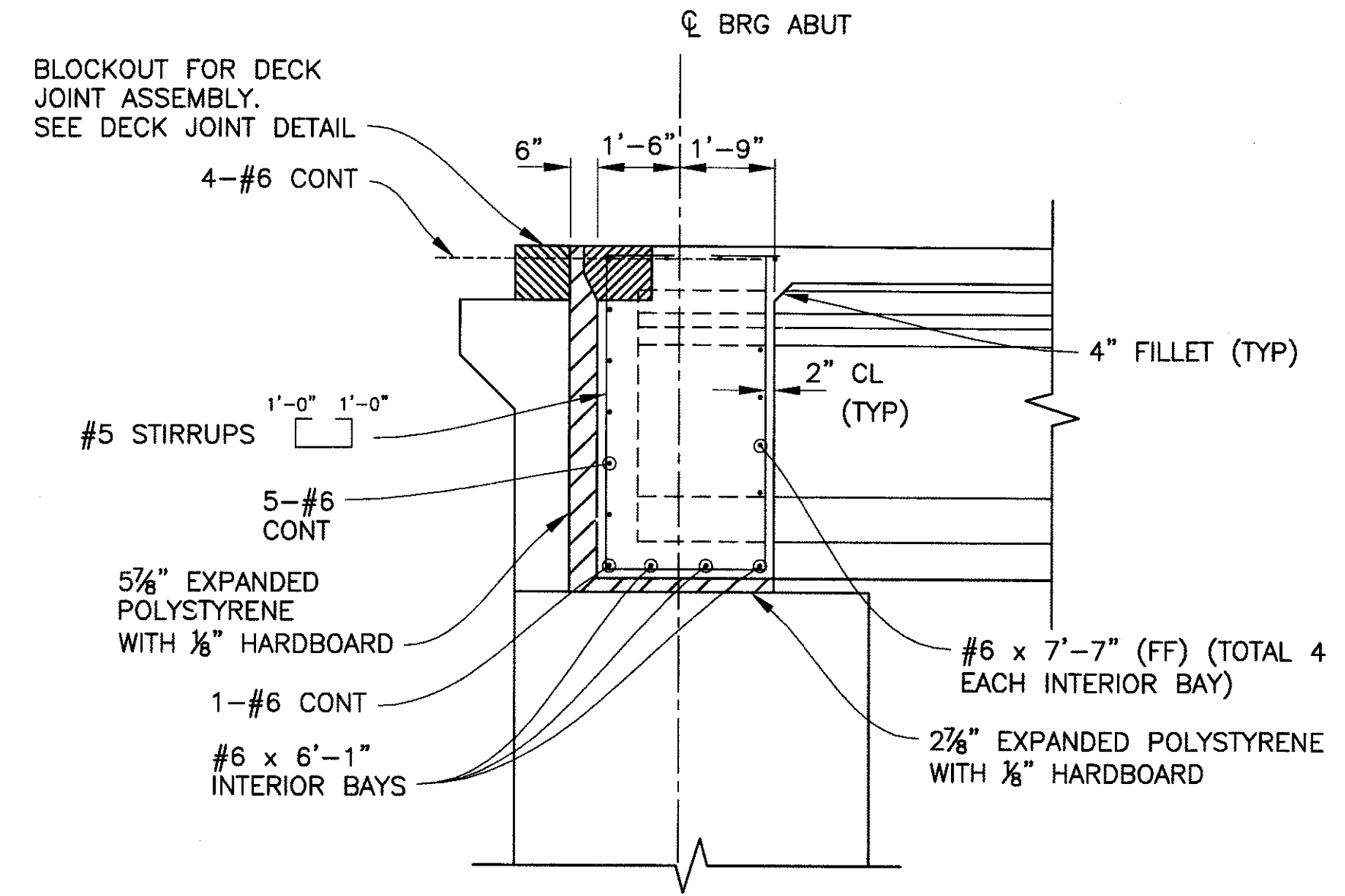
PIER DIAPHRAGM DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
**SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293**

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DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	193	352
DWG NO: S-2.23				

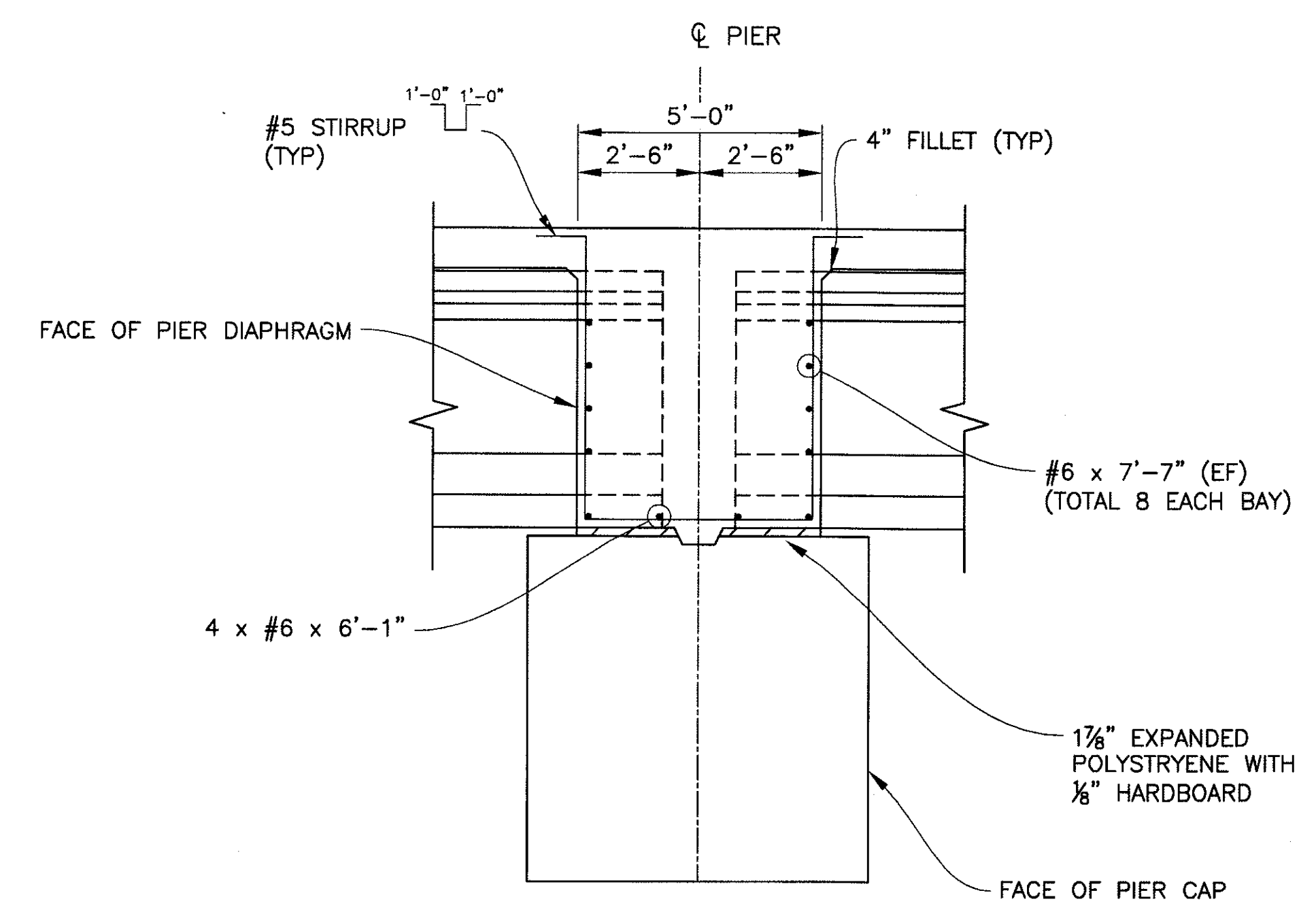
P:\2008005\CAVE CREEK\Structures\221-CC Secondary Pier Diaphragm.dwg - plotted by James Rojas at 12/21/2009 9:00:50 AM
 P:\2008005\CAVE CREEK\Structures\221-CC Secondary Pier Diaphragm.dwg - plotted by James Rojas at 12/21/2009 9:00:50 AM

REVISION BY CITY OF PHOENIX	REVISION BY CITY OF PHOENIX
DESCRIPTION	DESCRIPTION
NO.	NO.
REV BY	REV BY
CHK BY	CHK BY
DATE	DATE



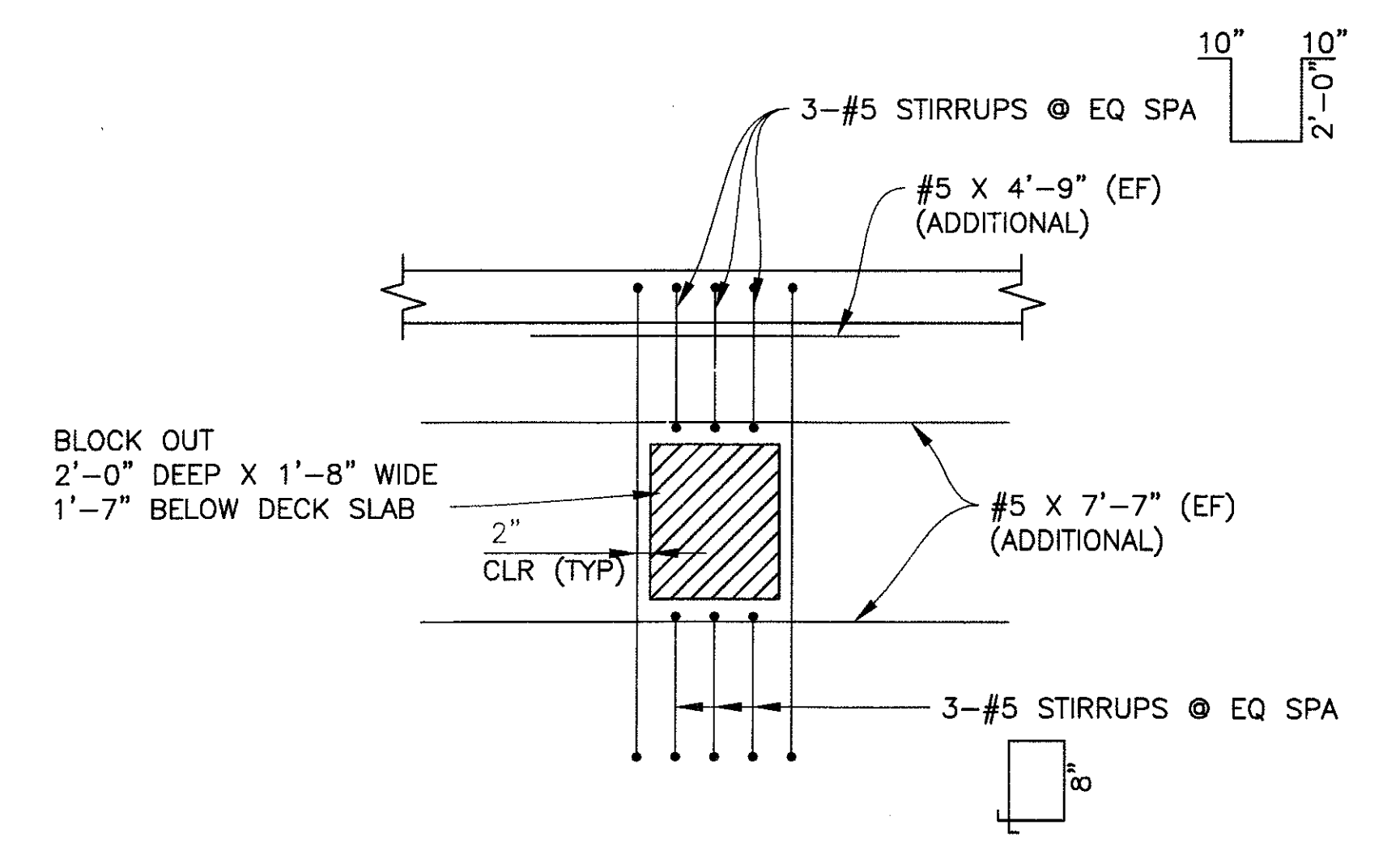
NOTE:
EXPANSION RESTRAINER
NOT SHOWN FOR CLARITY

SECTION A
SCALE: 3/8"=1'-0" 192

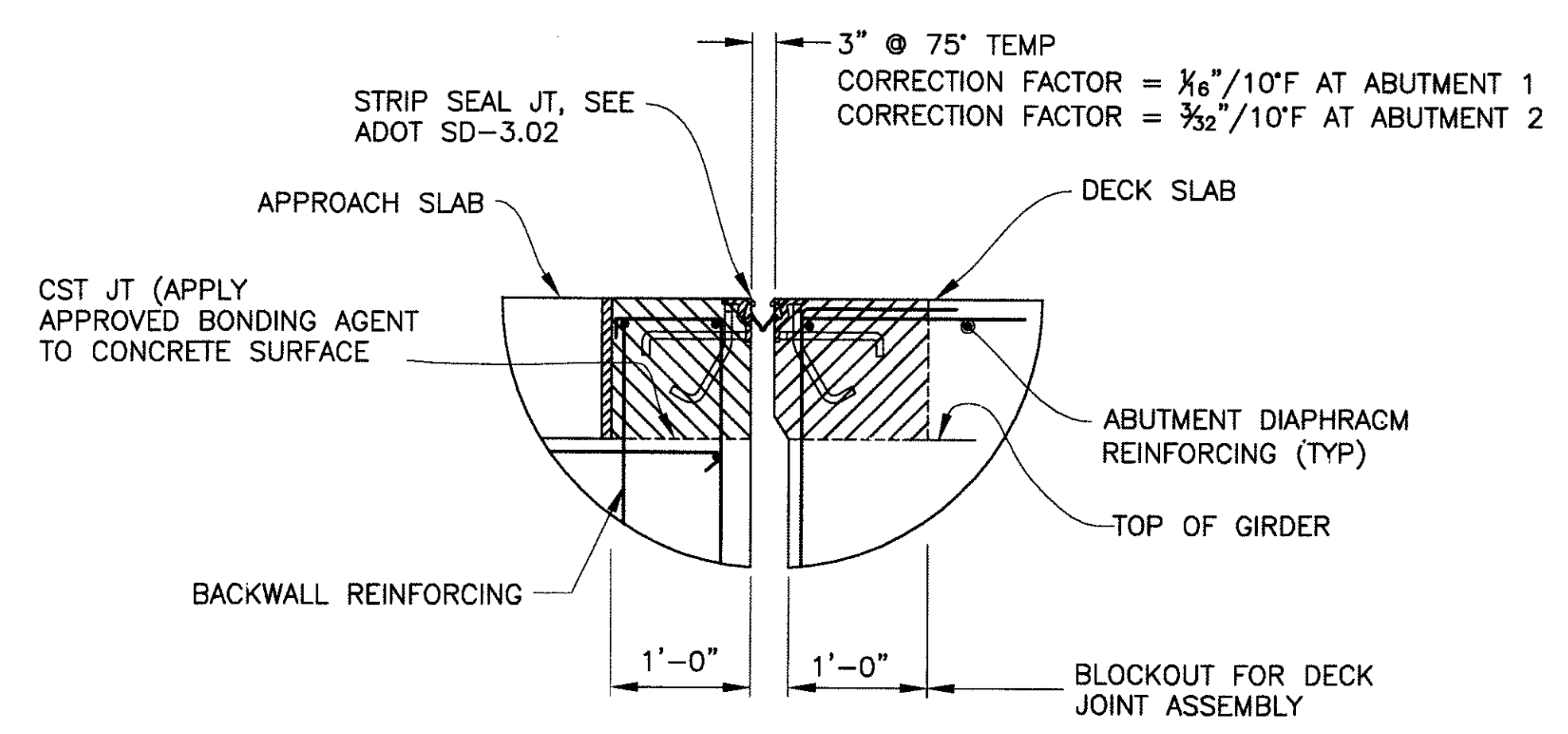


NOTES:
1. FIXED RESTRAINER NOT SHOWN FOR CLARITY.
2. SEE PEDESTRIAN BALCONY DETAILS FOR PIER DIAPHRAGM MODIFICATION DETAILS AT PEDESTRIAN BALCONY.

SECTION B
SCALE: 3/8"=1'-0" 193



REINFORCEMENT AT BLOCK OUT
SCALE: N.T.S. 186 192 193



DECK JOINT DETAIL
SCALE: N.T.S.

NOTE:
THE CONTRACTOR SHALL TAKE DUE CARE IN THE PLACEMENT OF THE CONCRETE UNDER THE JOINT ANGLES TO ENSURE THAT PROPER CONSOLIDATION IS ACHIEVED. AFTER PLACEMENT, THE ENGINEER SHALL INSPECT THE JOINT VOIDS BY SOUNDING THE ANGLES WITH A HAMMER. ALL VOIDS SHALL BE REPAIRED BY THE CONTRACTOR BY EPOXY INJECTION.

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DIAPHRAGM SECTIONS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

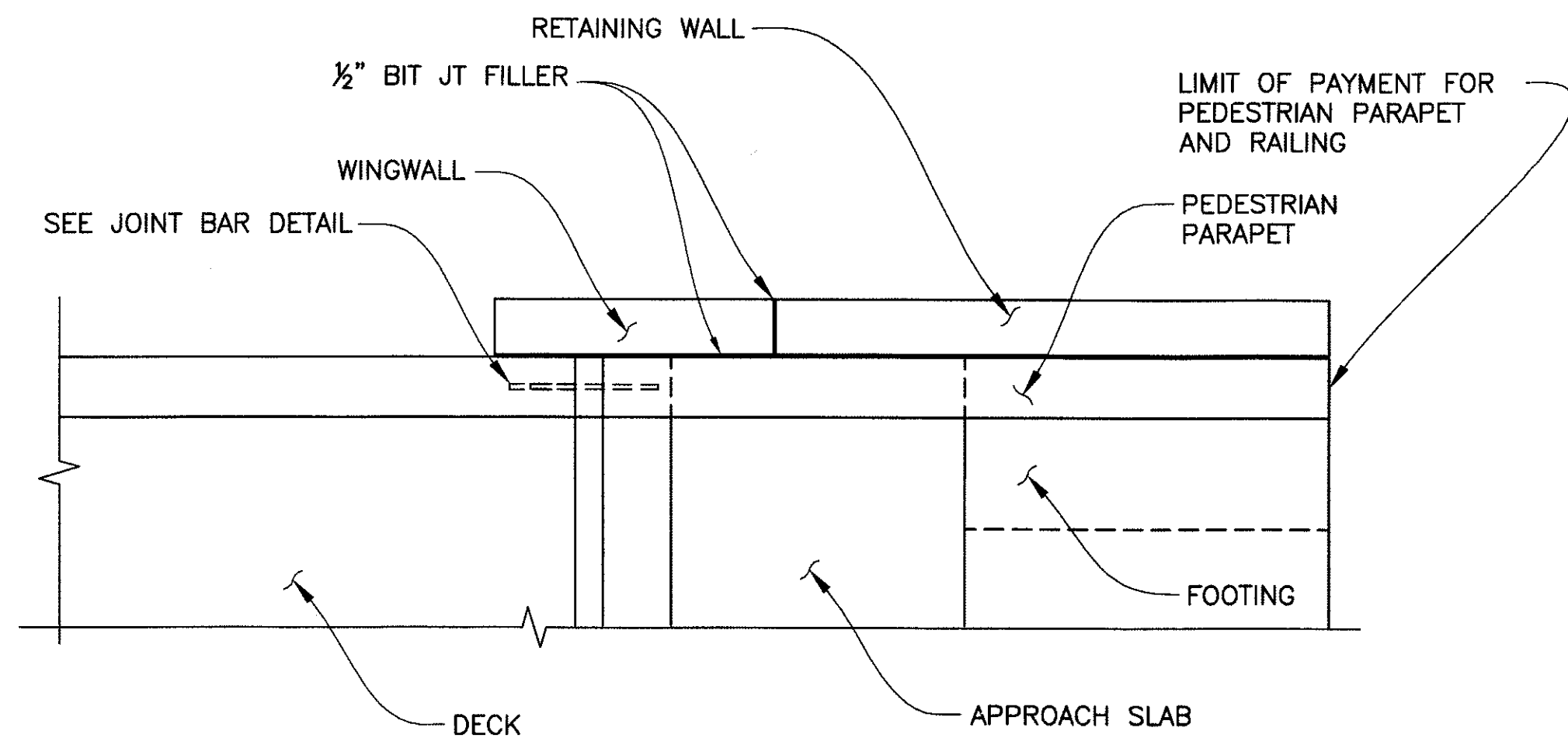
SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	194	352

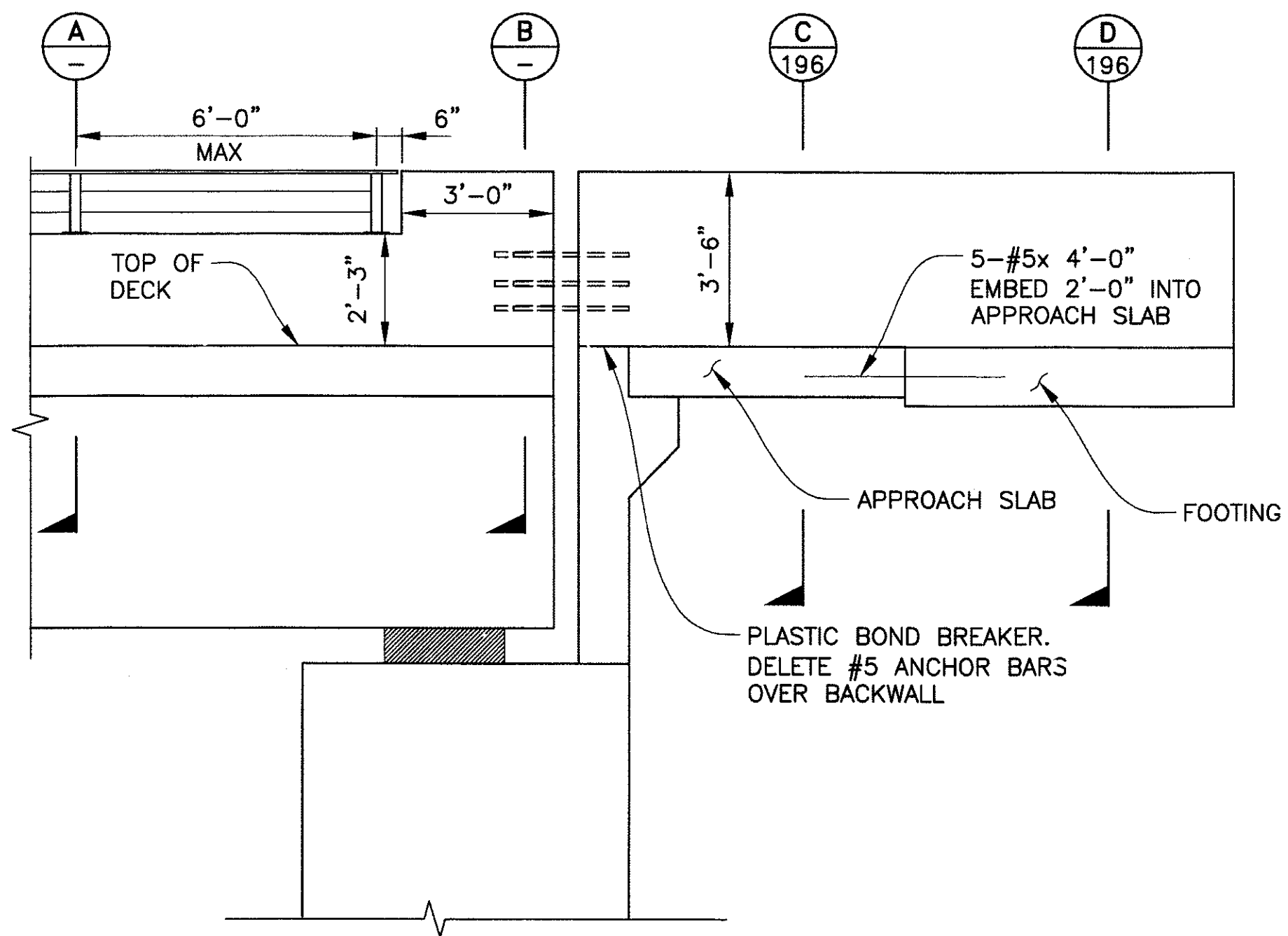
DWG NO: S-2.24

P:\2008\05\CA003\CA003\Structures\222-CC_Secondary diaphragm sections.dwg - plotted by James Rojas at 12/21/2009 09:05:59 AM

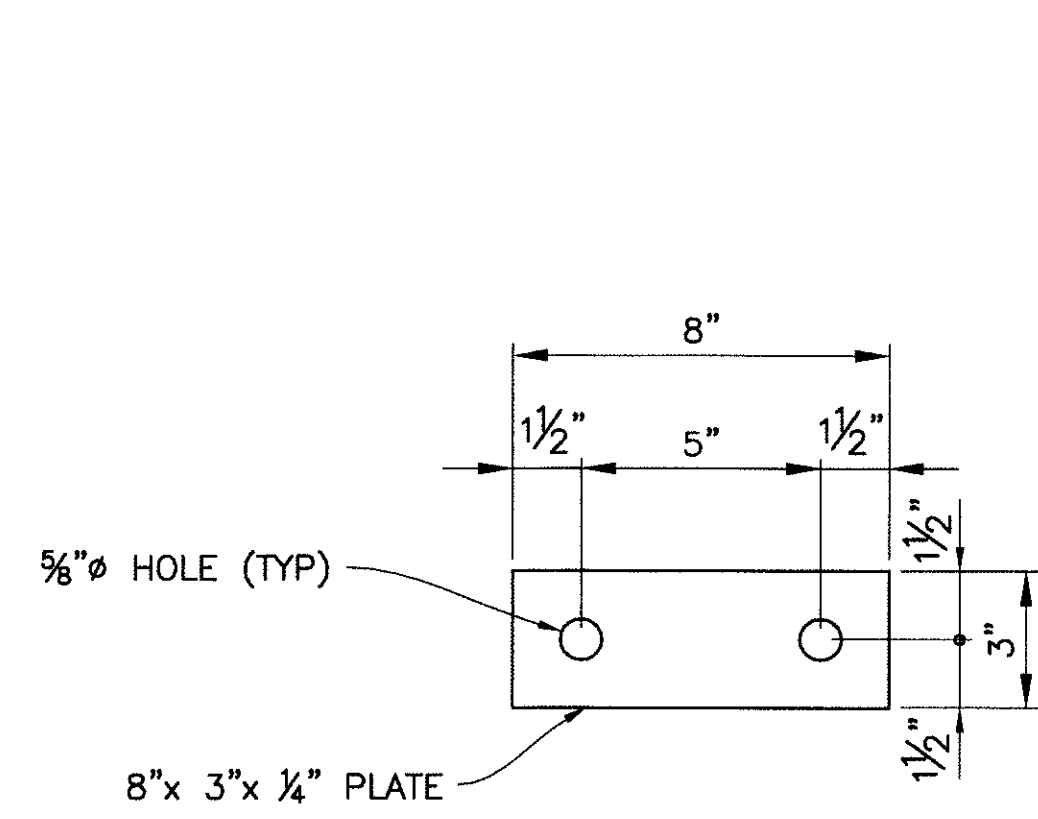
REVISION BY CITY OF PHOENIX	REV BY	CHK BY	DATE
DESCRIPTION			
NO.			
REVISION BY CITY OF PHOENIX	REV BY	CHK BY	DATE
DESCRIPTION			
NO.			
REVISION BY CITY OF PHOENIX	REV BY	CHK BY	DATE
DESCRIPTION			
NO.			



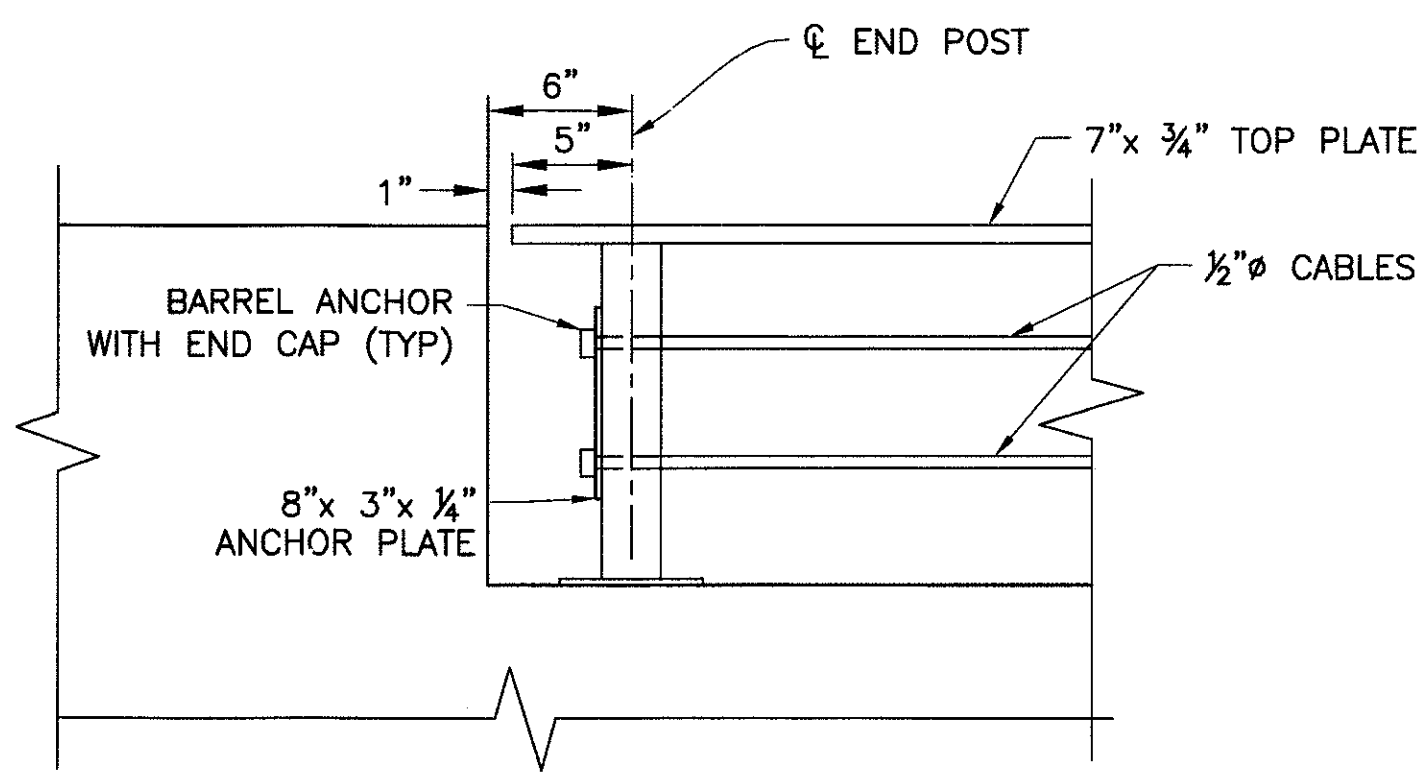
PLAN
SCALE: 3/8" = 1'-0"



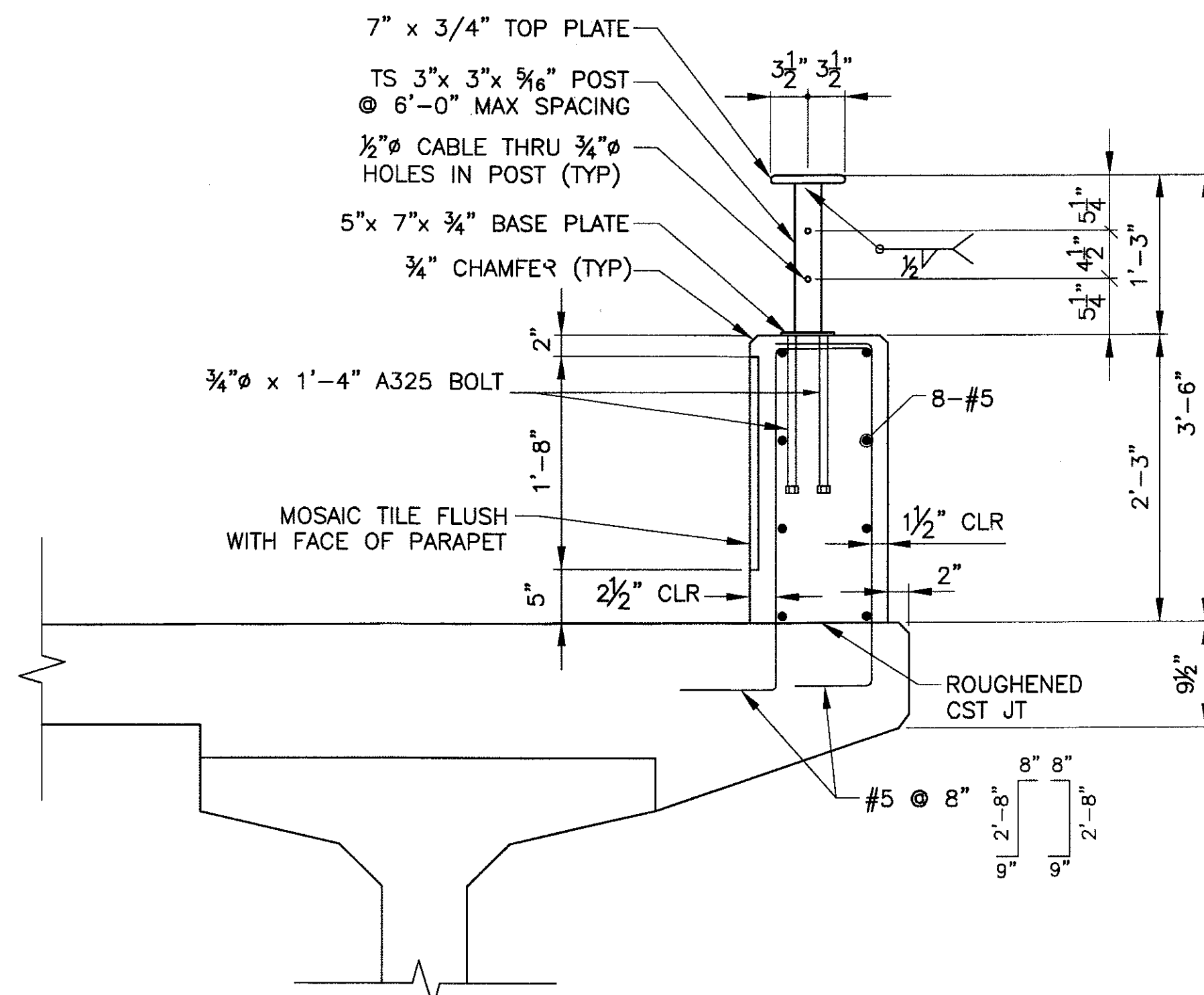
ELEVATION
SCALE: 3/8" = 1'-0"



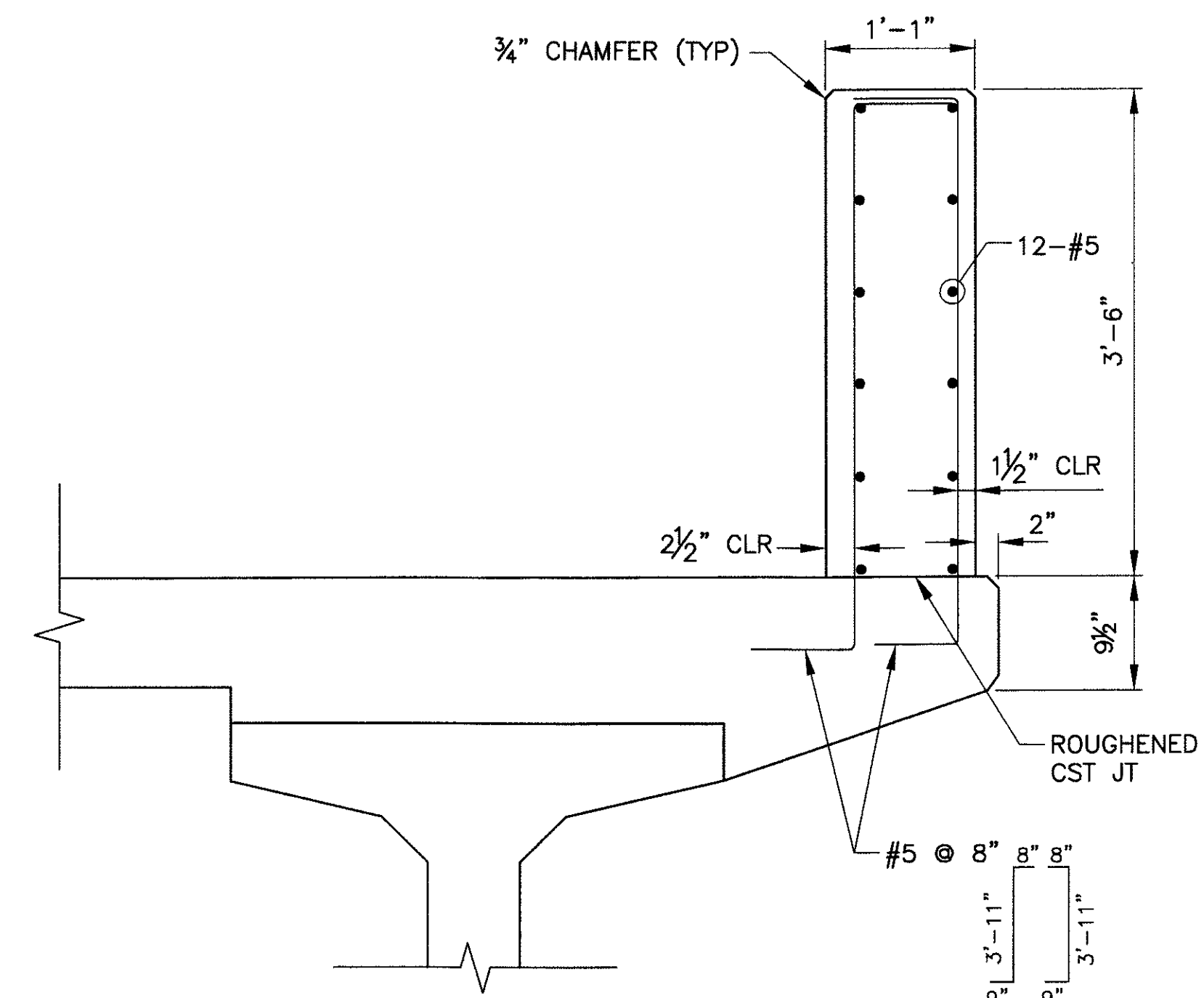
ANCHOR PLATE DETAIL
SCALE: 3" = 1'-0"



END POST DETAIL
SCALE: 1 1/2" = 1'-0"

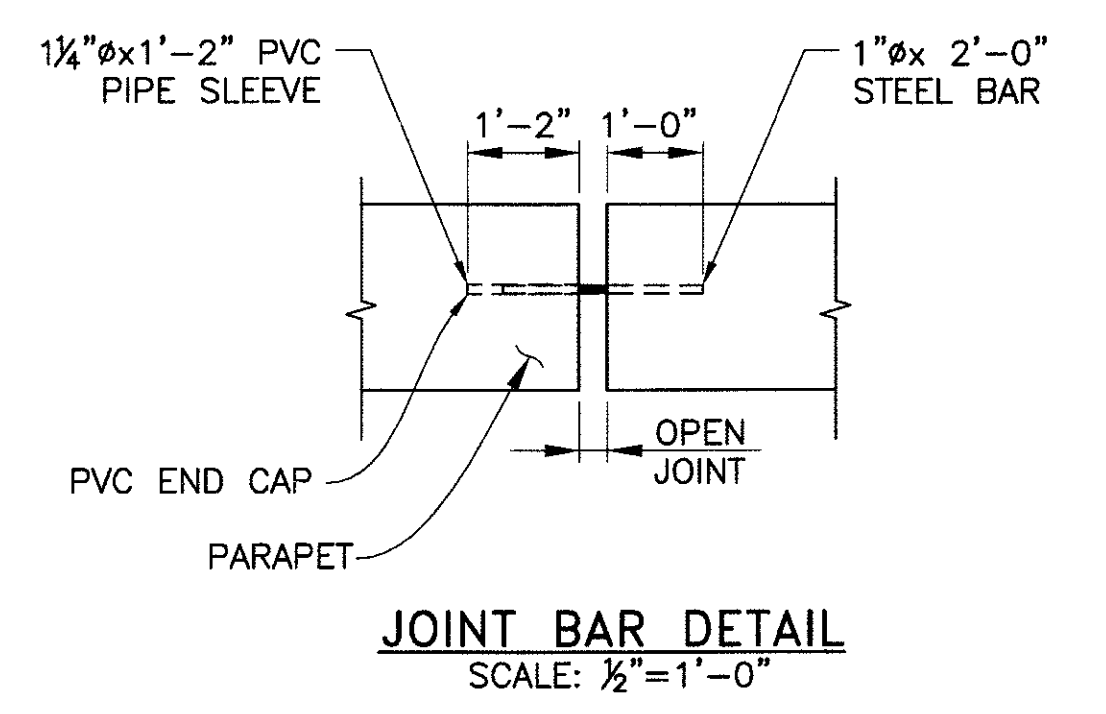


SECTION A-A
SCALE: 1" = 1'-0"



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

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	195	352
PREMIER					
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226-4882-828-6000					
DES: BAG		DR: JRR		CK: SEO	DATE: 12/09
CONSULTING ENGINEER					



JOINT BAR DETAIL
SCALE: 1/2" = 1'-0"

- NOTES:**
- SEE DWG NO. S-2.30 FOR BRIDGE PLAQUE DETAILS.
 - STRUCTURAL TUBING (TS) SHALL BE ASTM A500 GRADE B. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE NOTED.
 - PEDESTRIAN PARAPET SHALL HAVE 1/2" BITUMINOUS JOINT FILLER IN OPEN JOINTS AT THE CENTERLINE OF EACH PIER. SEE OPEN JOINT AT PIER DETAIL.
 - THE EDGES OF THE 7"x 3/4" TOP PLATE SHALL BE ROUNDED ON THE TOP AND BOTTOM WITH A 3/8" RADIUS TO FORM A SMOOTH ROUNDED EDGE.
 - THE CABLES SHALL BE GALVANIZED 1/2" 7 WIRE LOW RELAXATION STRANDS.
 - THE CABLES SHALL BE PRETENSIONED TO 6,500 POUNDS PER CABLE AND ANCHORED TO THE END POSTS USING BARREL ANCHORS WITH END CAPS.
 - THE ANCHOR BOLTS SHALL BE 3/4" A325 BOLTS.
 - SEE DWG NO. S-2.26 FOR PARAPET FOOTING DETAIL.

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PEDESTRIAN PARAPET AND RAILING DETAILS 1

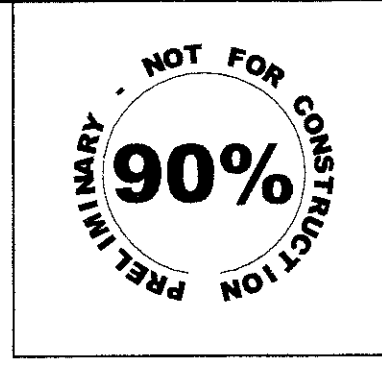
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

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Blue Stake Center

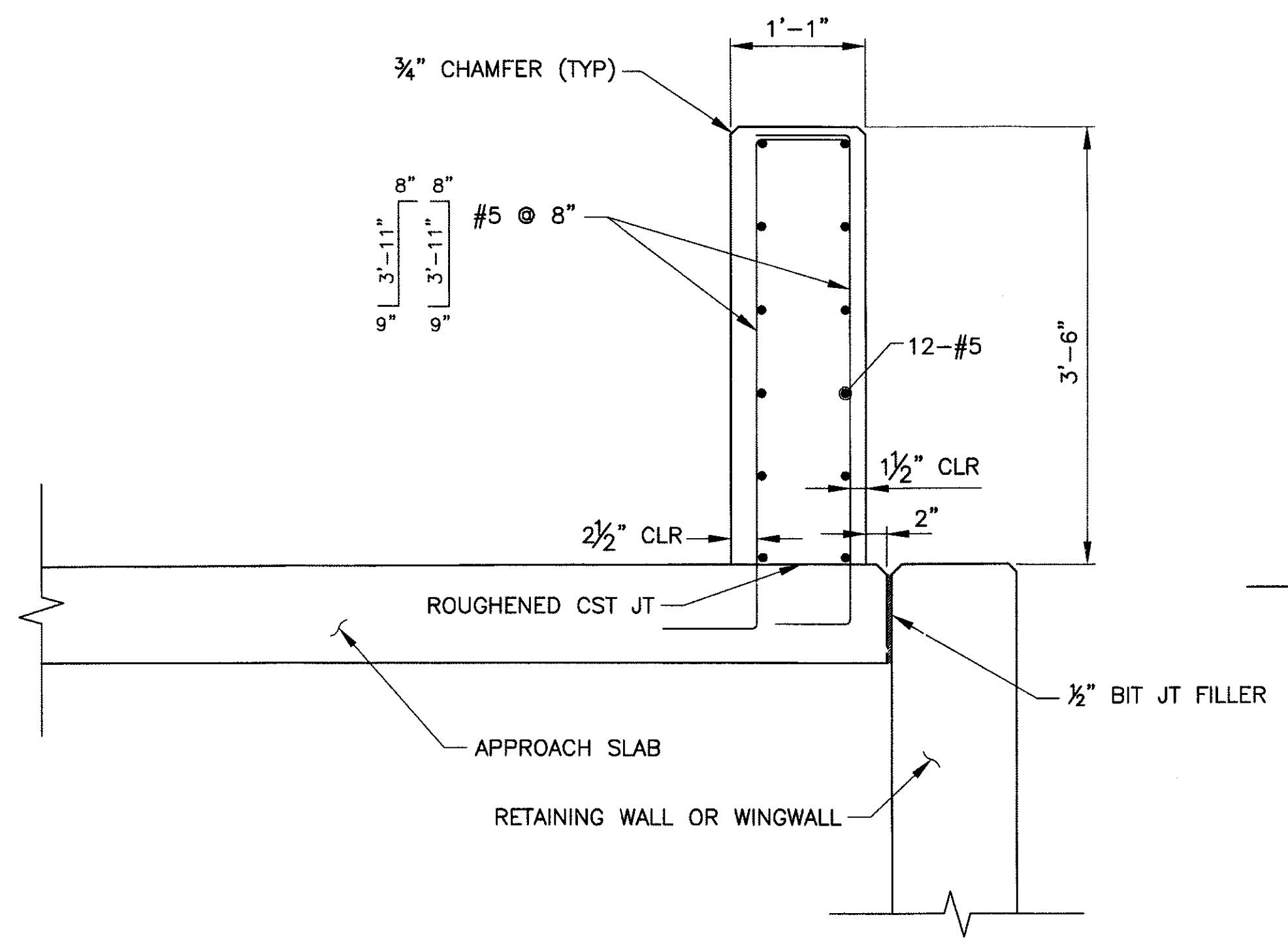
DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	195	352
DWG NO: S-2.25				

P:\200805\CAOV\Sheet\Structures\25-cc secondary ped parapet and railing.dwg - plotted by James Rojas at 12/21/2009 9:01:02 AM

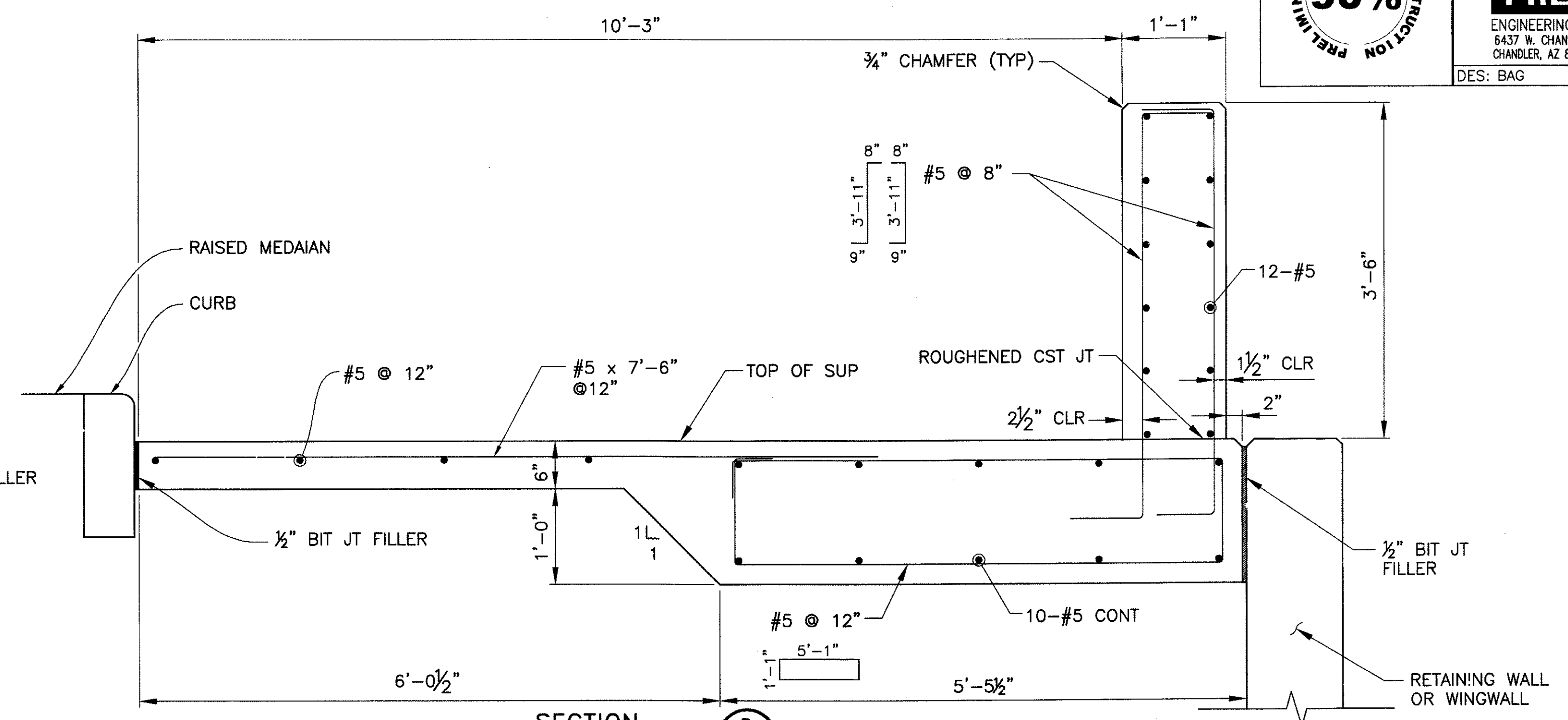


F.H.W.A. REGION 9	STATE ARIZ.	PROJ. NO. ST85100293	NO. 196	TOTAL 352
PREMIER				
ENGINEERING CORPORATION 8437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				
DES: BAG	DR: JRR	CK: SEO	DATE: 12/09	

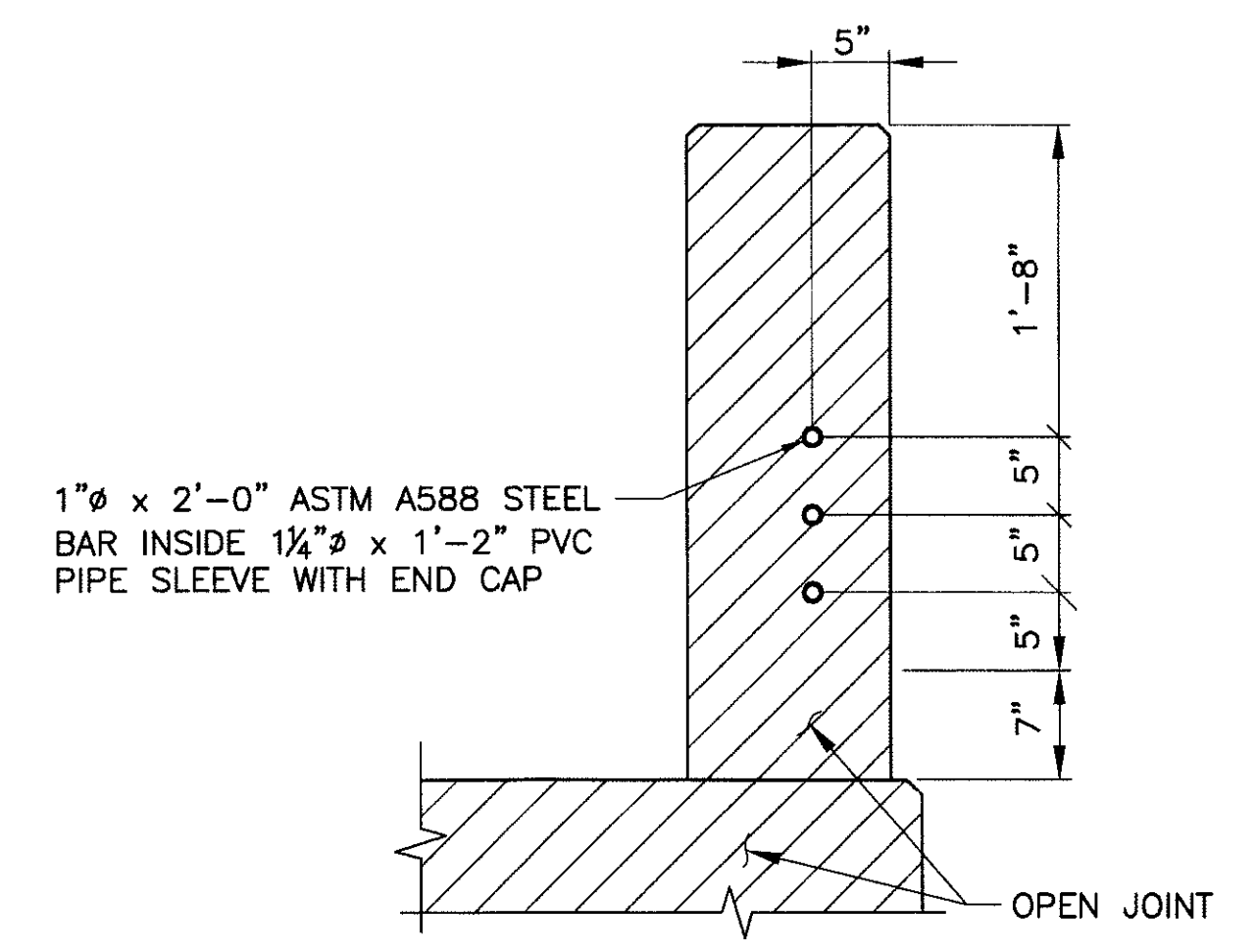
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



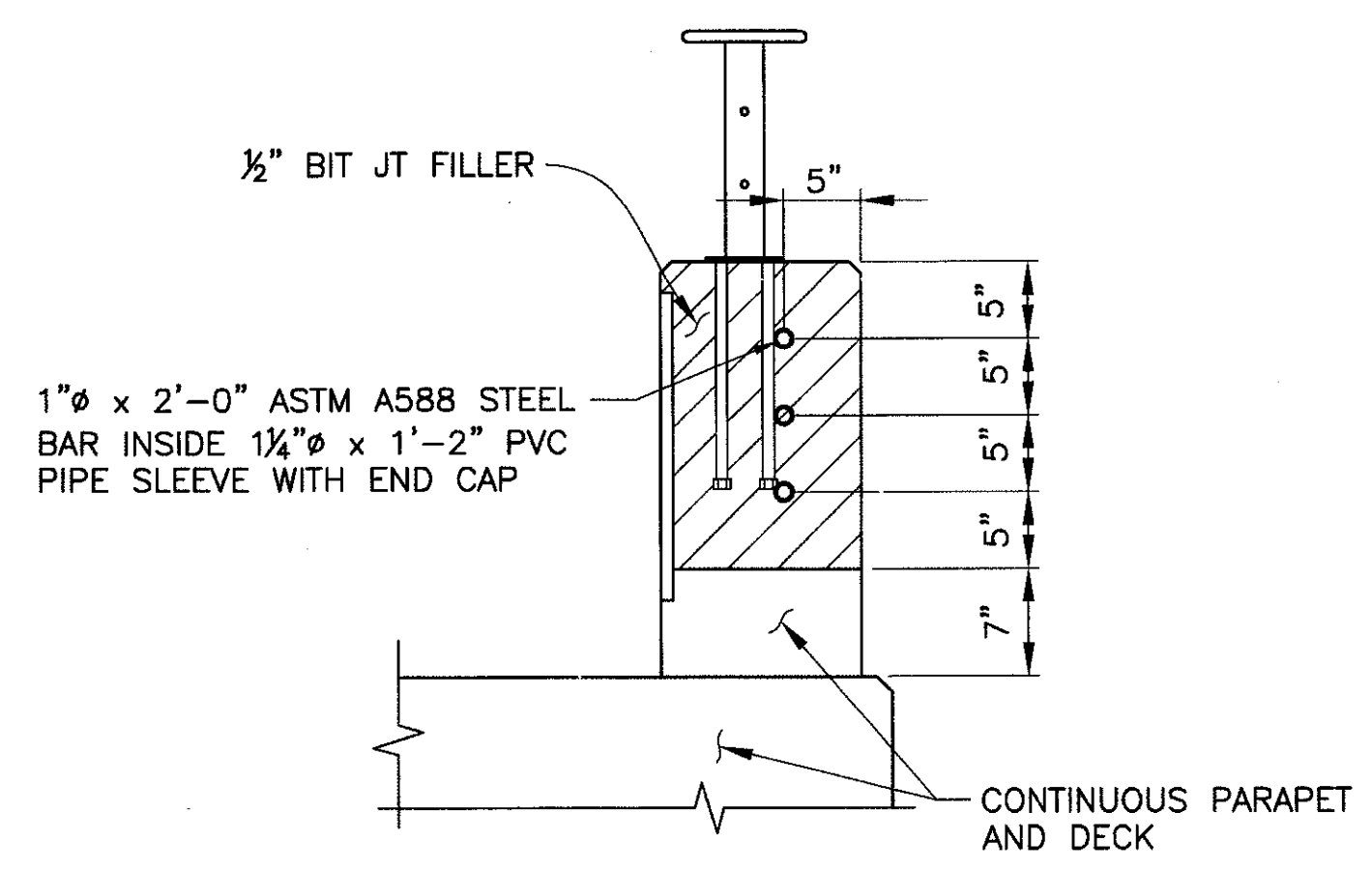
SECTION C
SCALE: 1" = 1'-0"



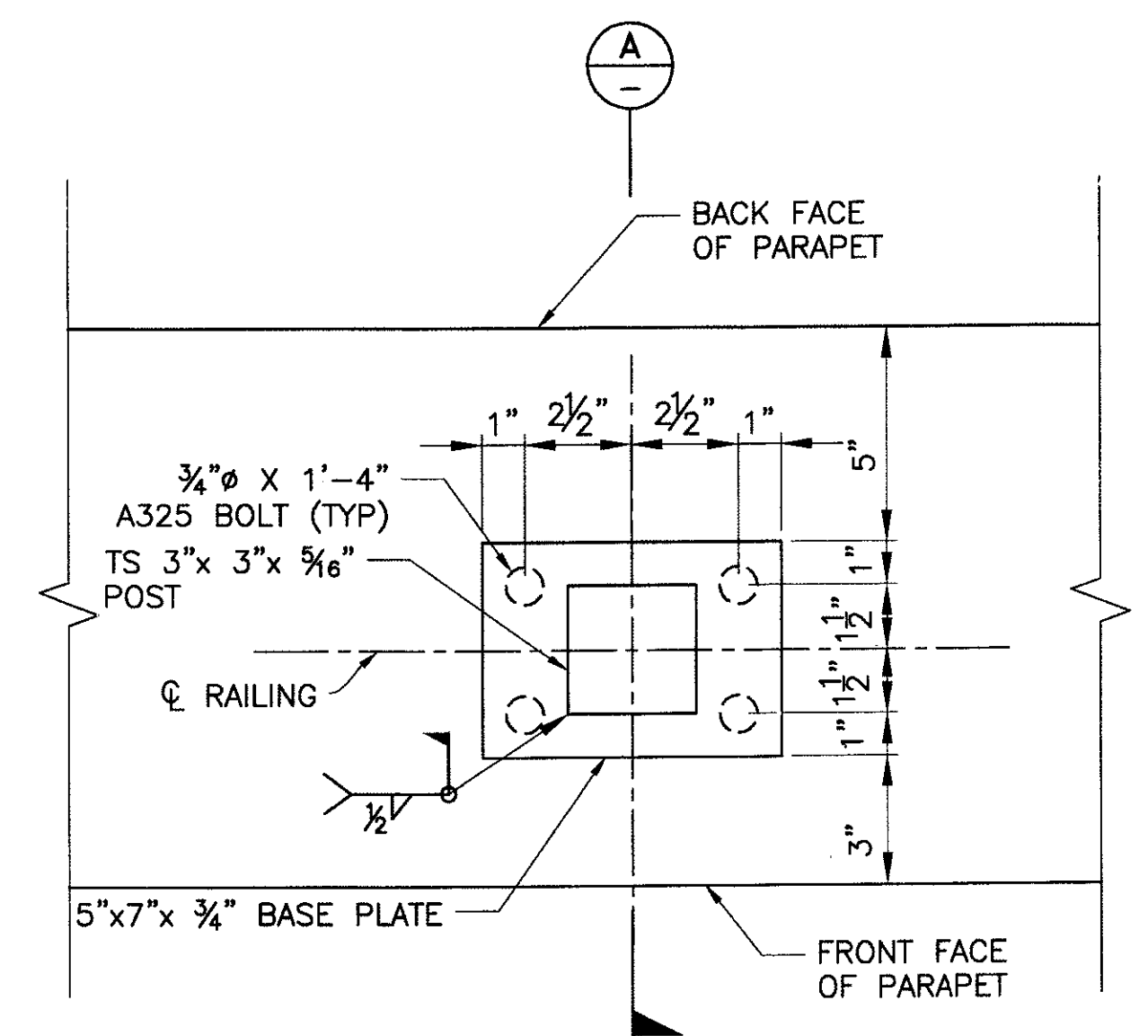
SECTION D
SCALE: 1" = 1'-0"



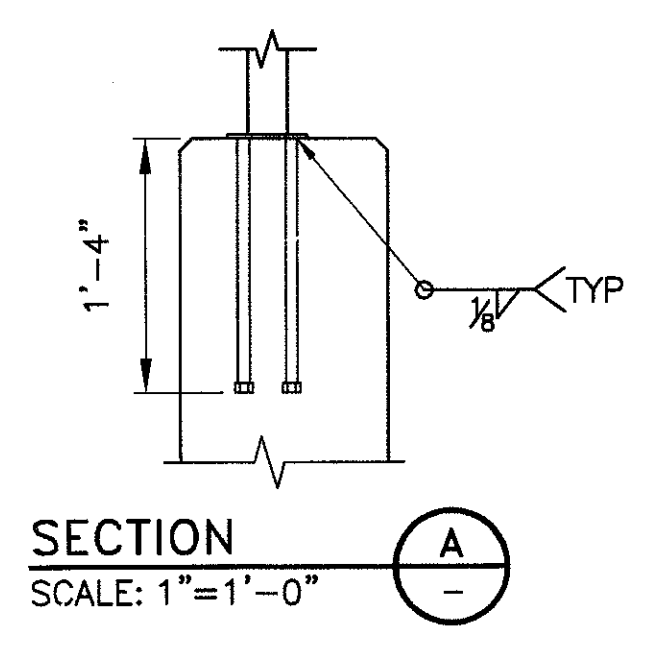
OPEN JOINT AT EXPANSION JOINTS
SCALE: 1" = 1'-0"



OPEN JOINT AT PIERS
SCALE: 1" = 1'-0"



BASE PLATE DETAIL
SCALE: 3" = 1'-0"



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

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Blue Stake Center

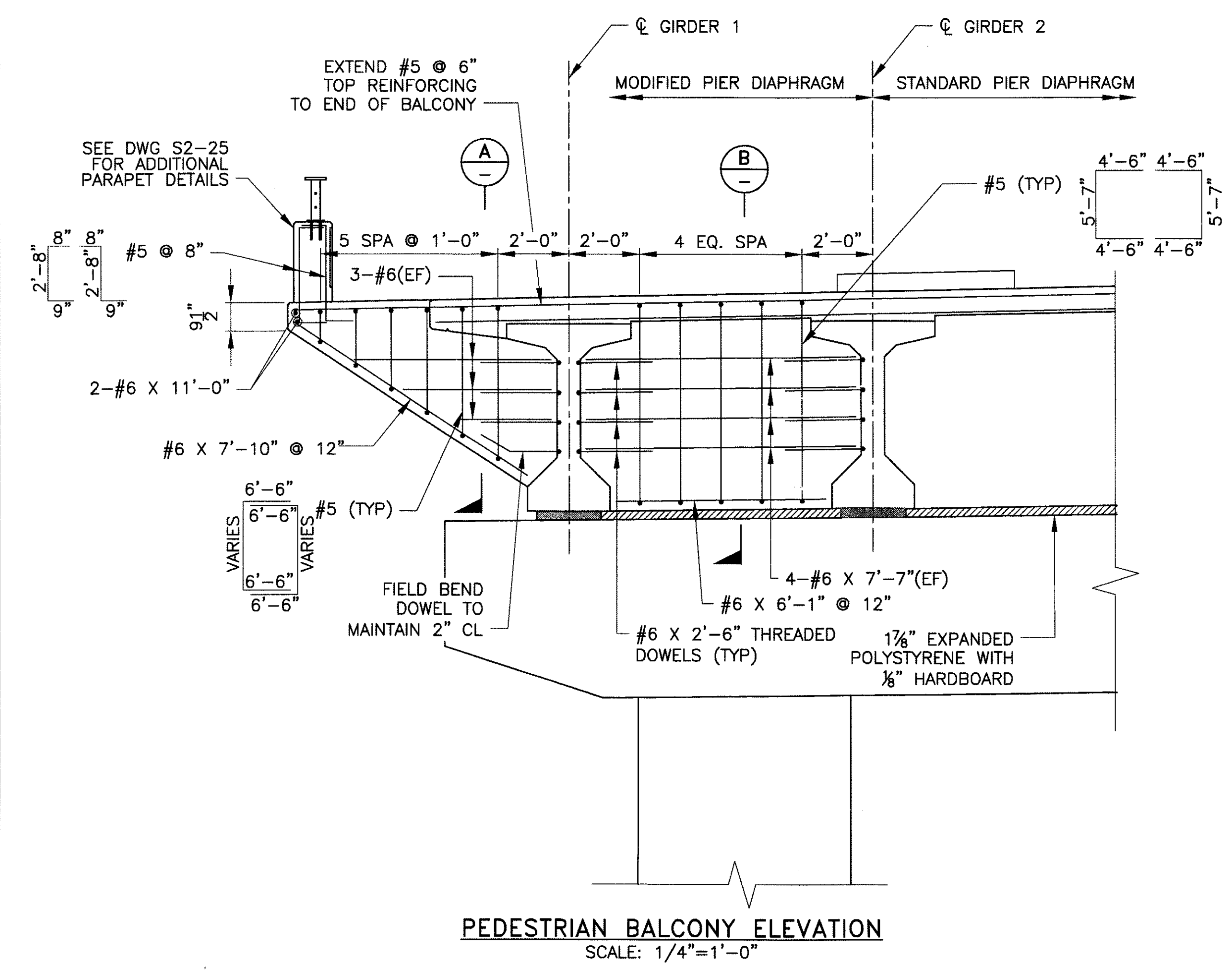
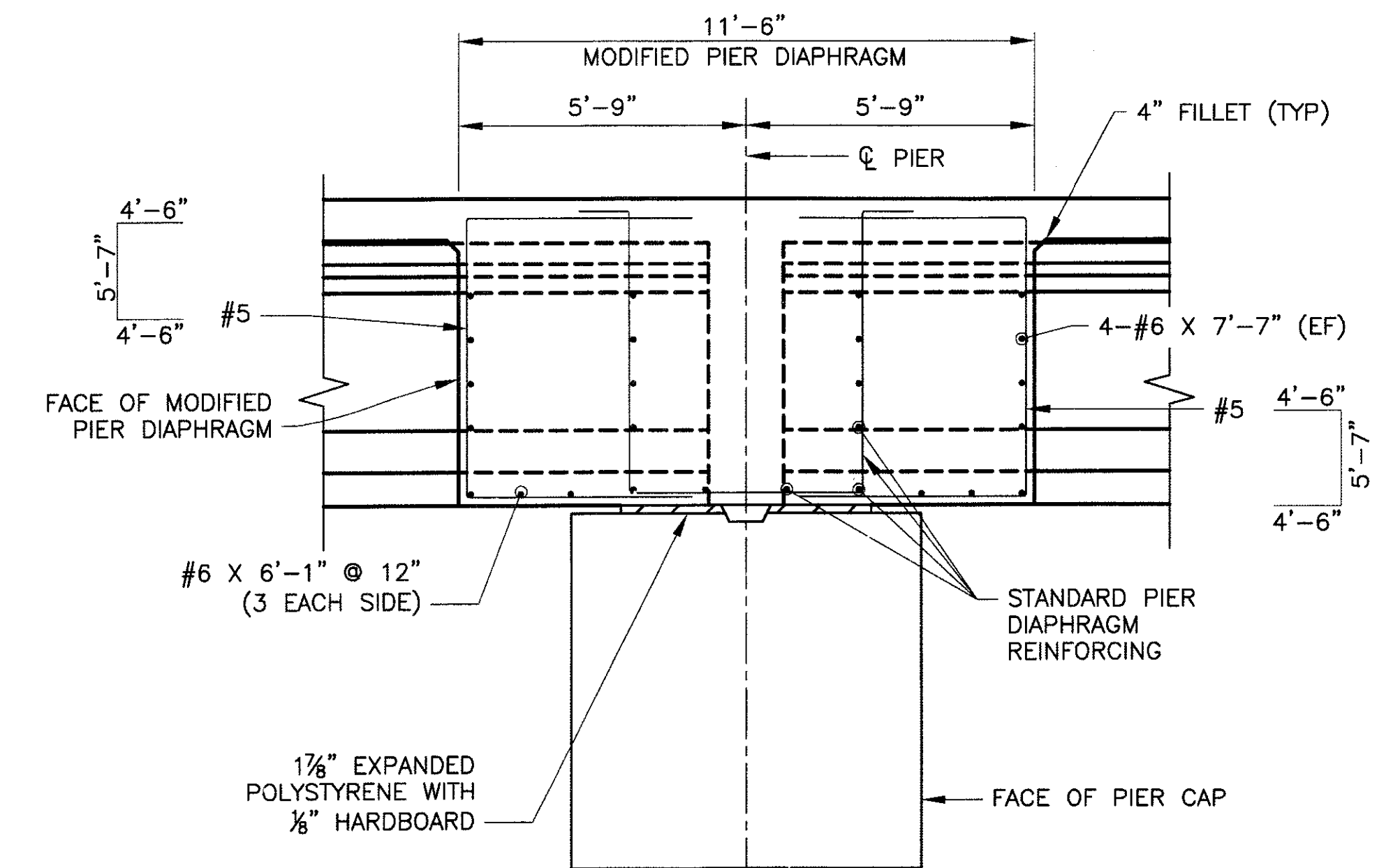
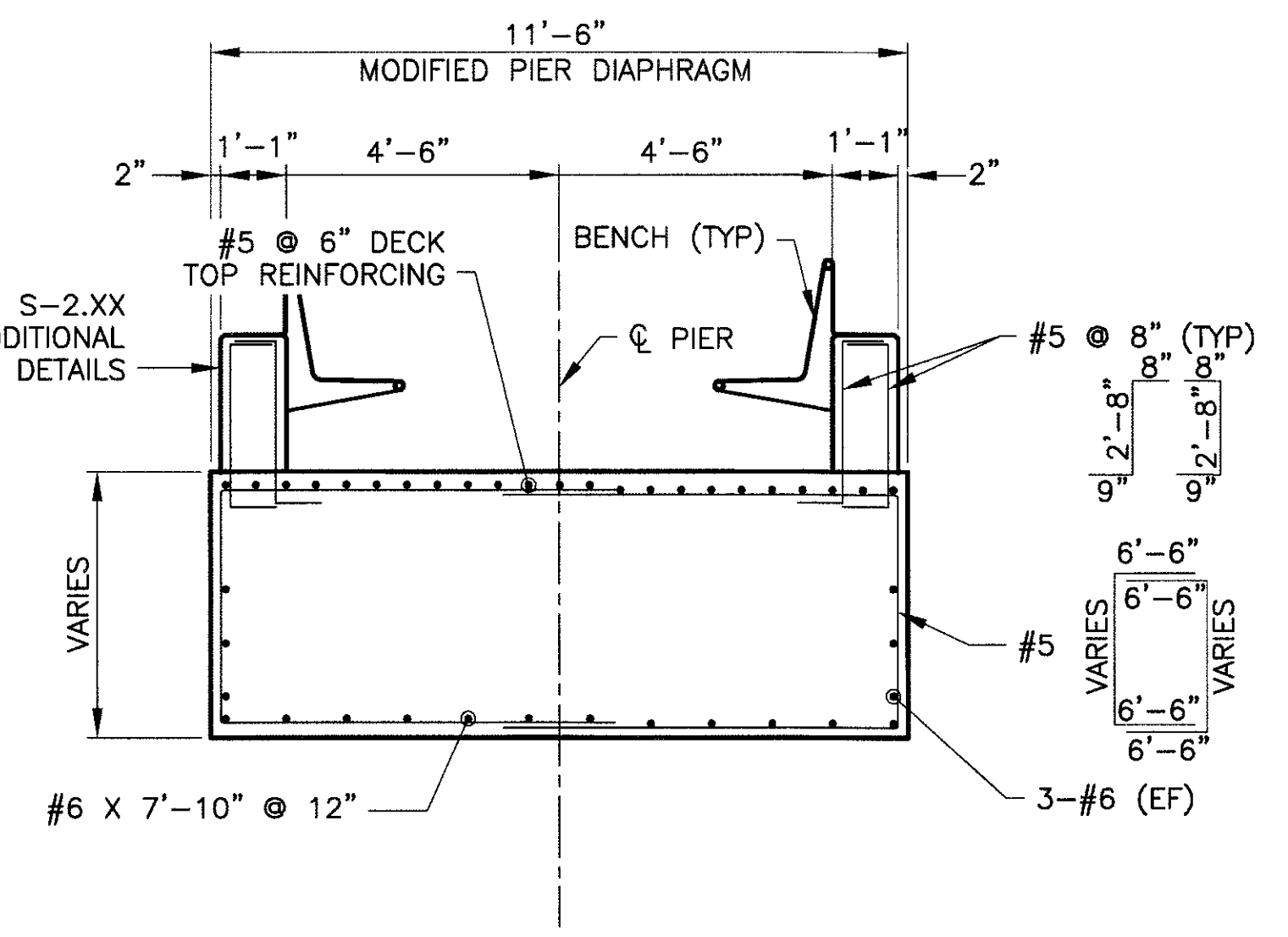
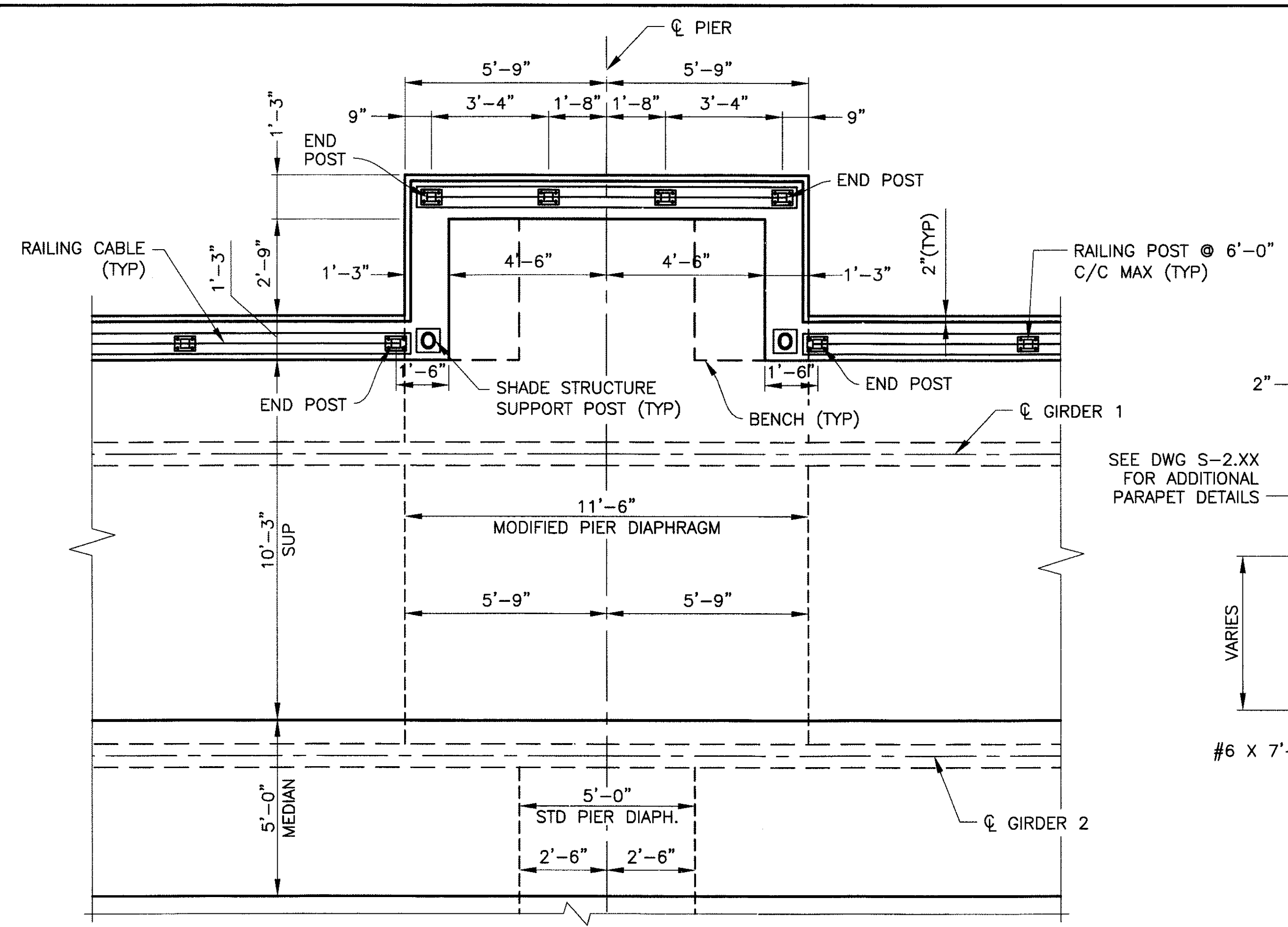
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

PEDESTRIAN PARAPET AND RAILING DETAILS 2
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293**

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	196	352
DWG NO: S-2.26			196	352

plot scale: 1" = 1'-0" - Issue: 0-5000 - part file: PREMIER.CTB - plotted by James Rojas at 12/21/2009 9:01:11 AM



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PEDESTRIAN BALCONY DETAILS

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

DR: ESG	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 10/09	DATE: 10/09	DATE: 10/09	197	352
DWC NO: S-2.27				

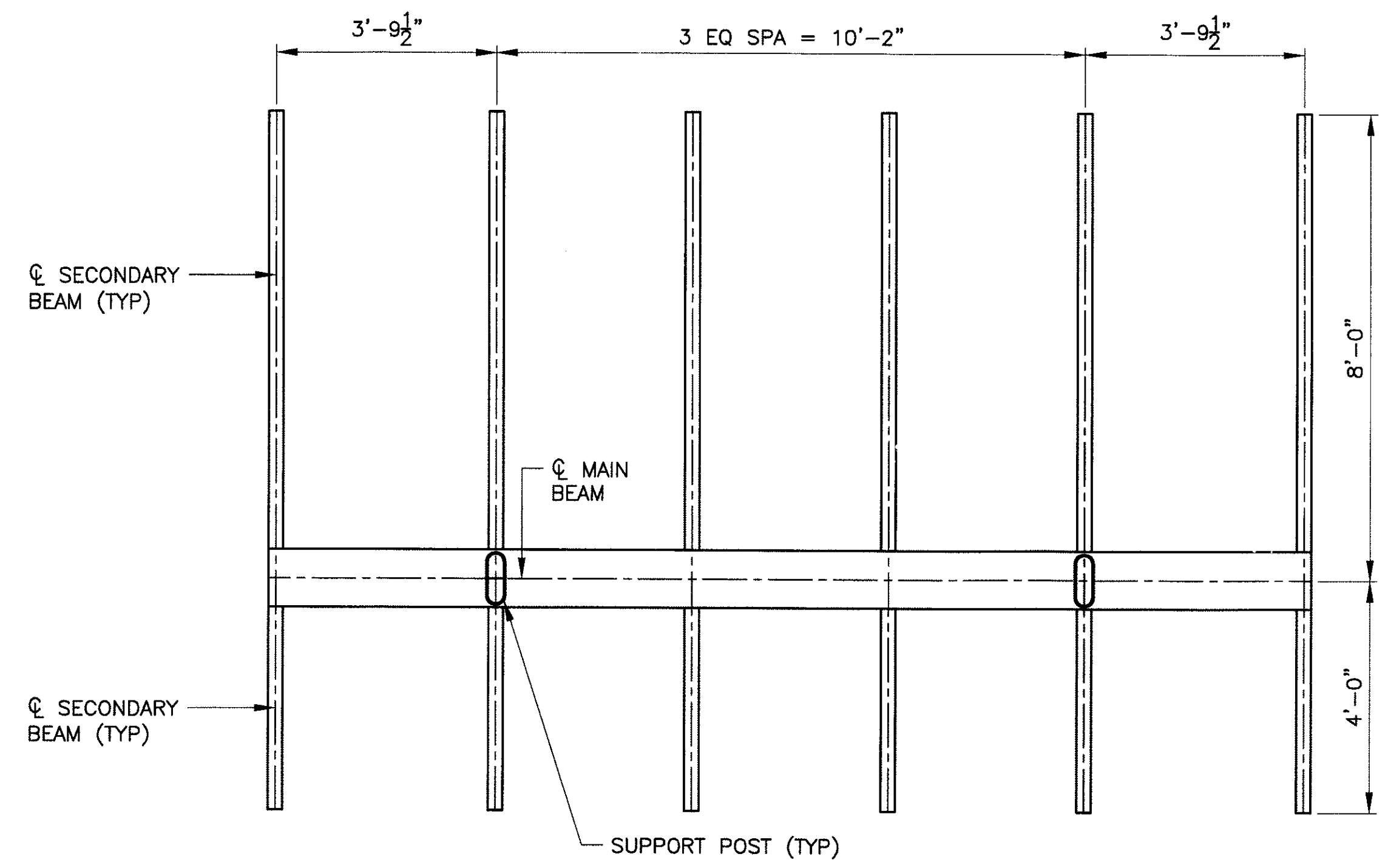
Two working days before you dig,
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REVISION BY CITY OF PHOENIX

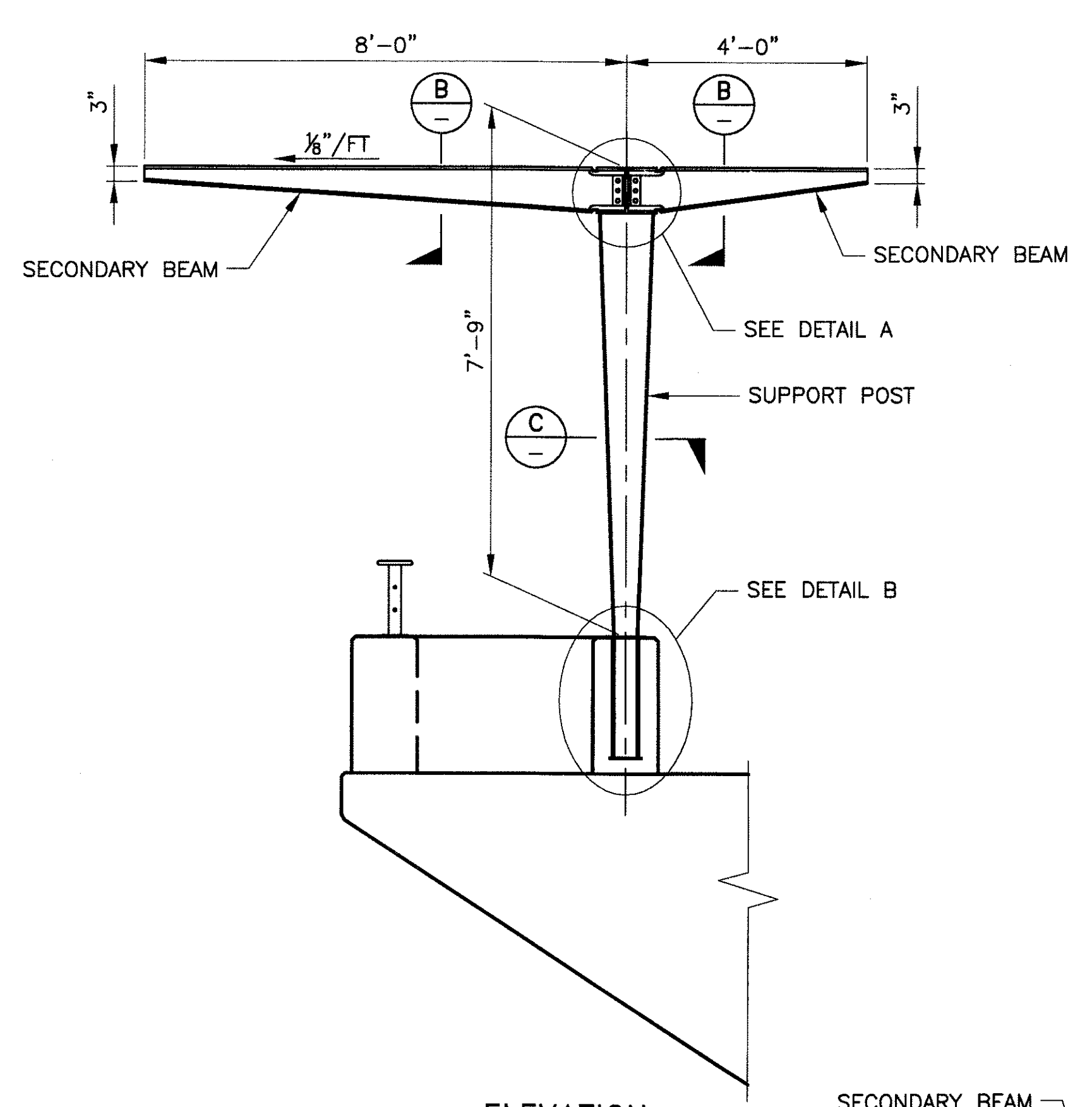
NO.	DESCRIPTION	REV BY	CHK BY	DATE

P:\2008005\CADD\Civil\Sheets\Structures\228-CC Secondary\Pedestrian Balcony Details.dwg - plotted by James Rojas at 12/21/2009 9:01:20 AM
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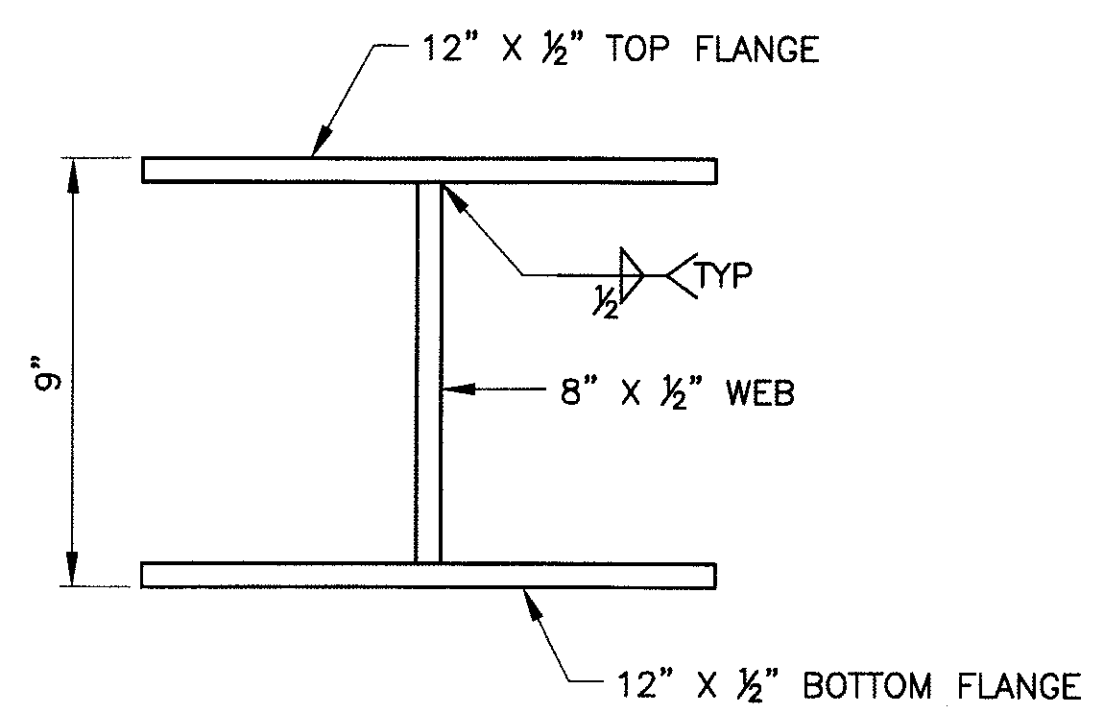
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



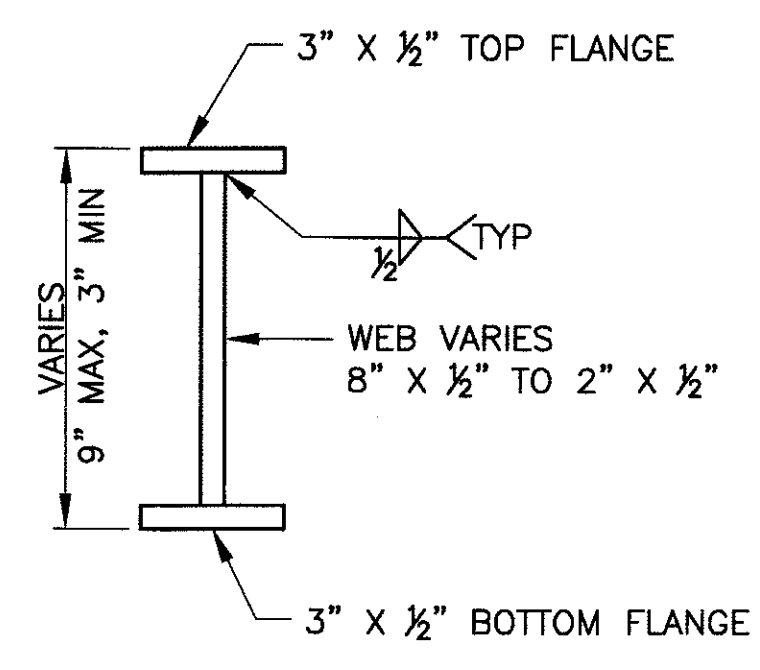
FRAMING PLAN
SCALE: 1/2"=1'-0"



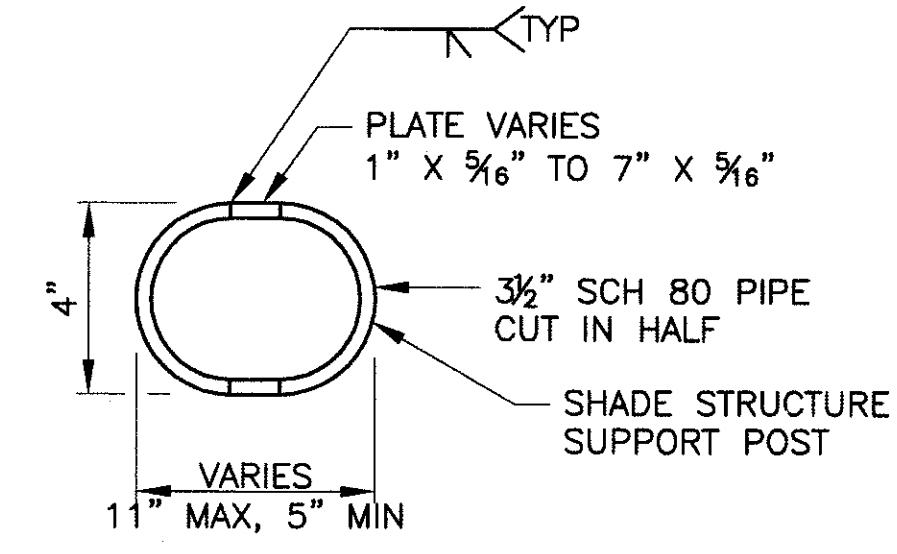
ELEVATION
SCALE: 1/2"=1'-0"



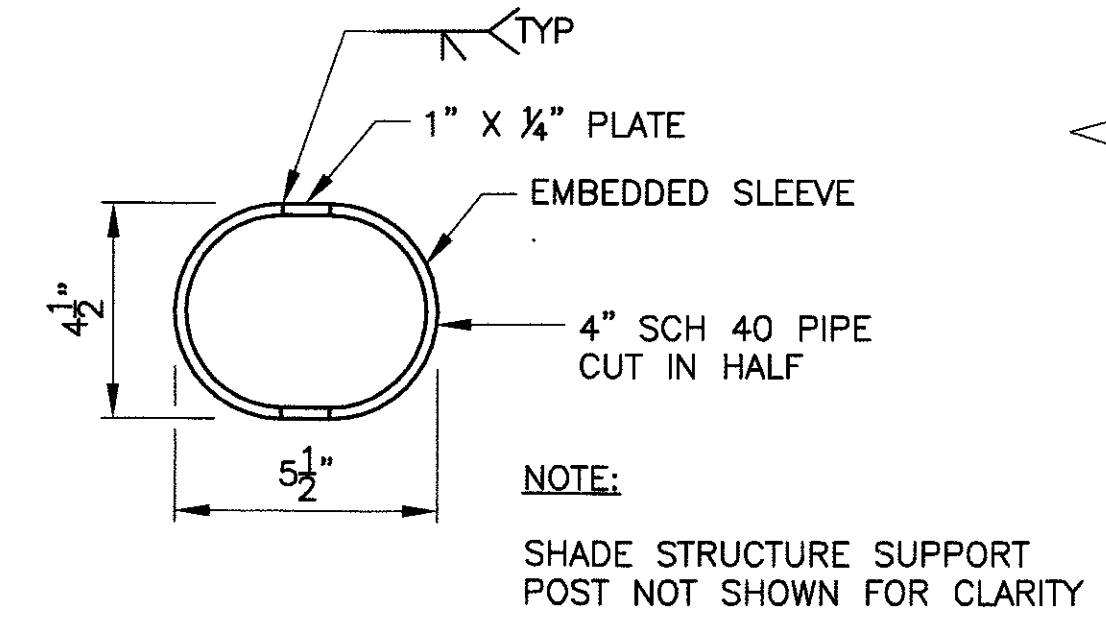
MAIN BEAM-SECTION (A)
SCALE: 3" = 1'-0"



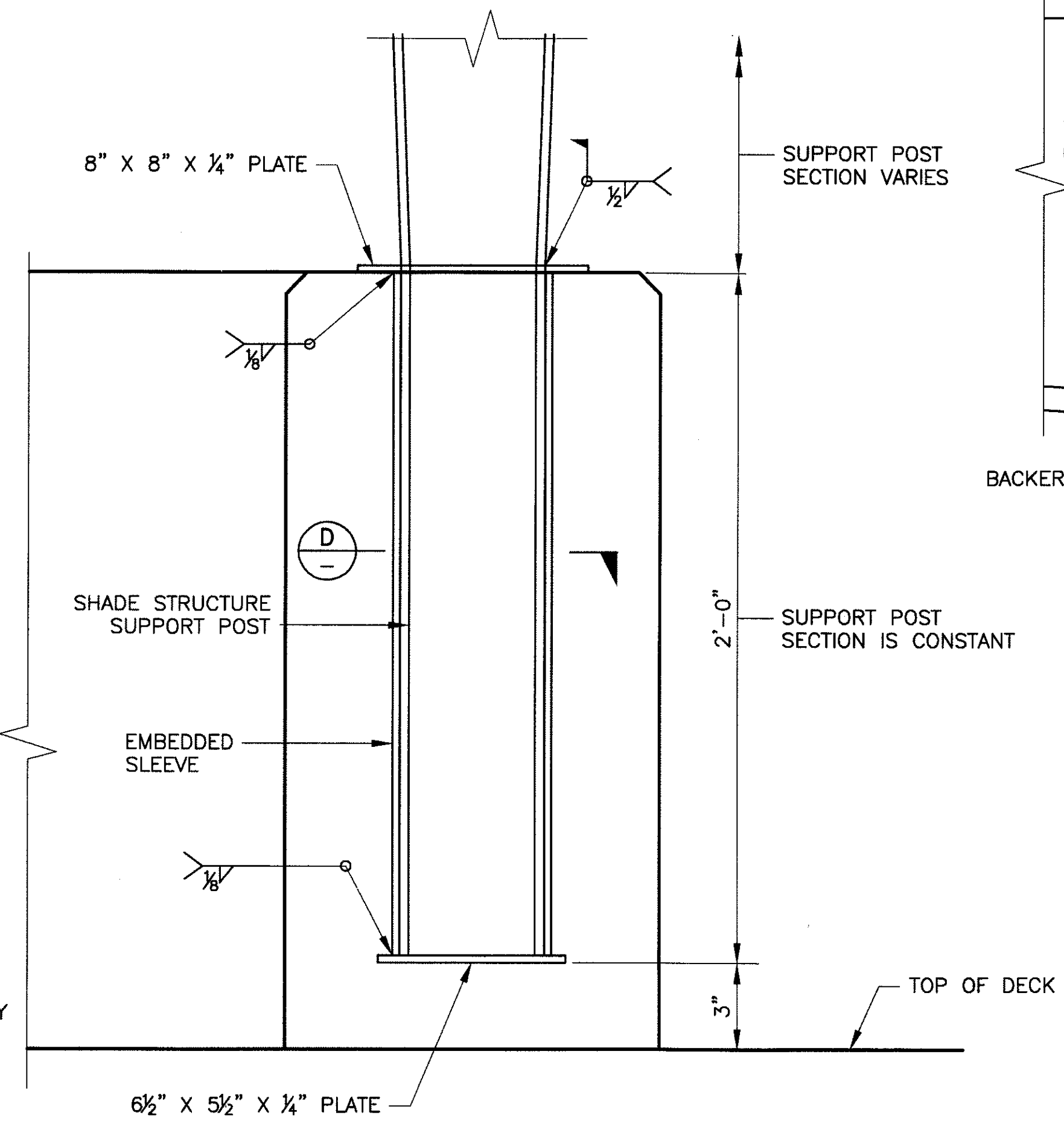
SECONDARY BEAM-SECTION (B)
SCALE: 3" = 1'-0"



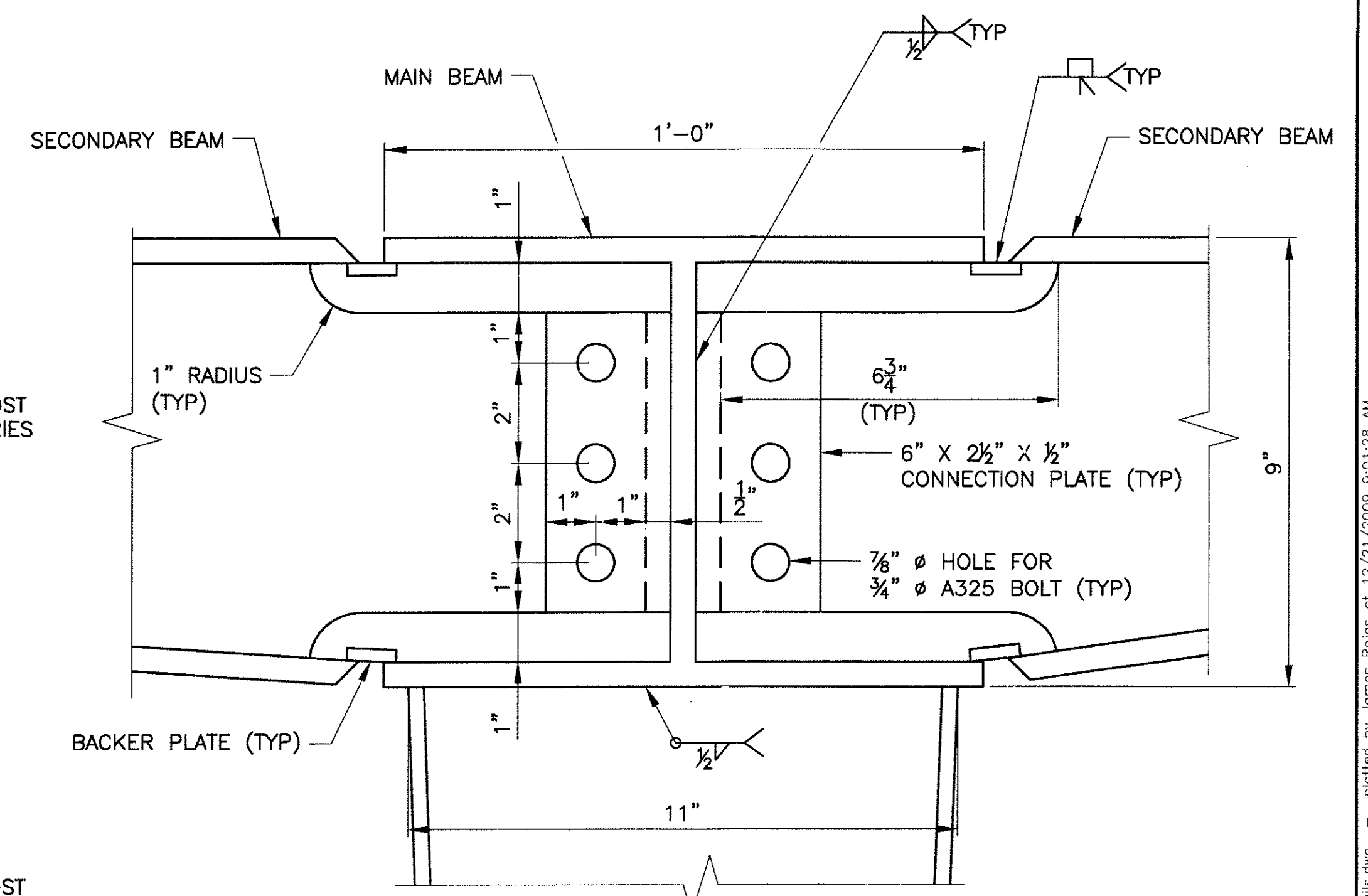
SUPPORT POST-SECTION (C)
SCALE: 3" = 1'-0"



EMBEDDED SLEEVE-SECTION (D)
SCALE: 3" = 1'-0"



DETAIL B
SCALE: 3"=1'-0"



DETAIL A
SCALE: 5"=1'-0"

PREMIER
ENGINEERING CORPORATION
6437 W. CHANDLER BLVD., SUITE 1
CHANDLER, AZ 85226; 480-929-6000

CONSULTING ENGINEER
DES: BAG DR:ESG CK:SEO DATE: 12/09

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	198	352

- NOTE:**
- STRUCTURAL STEEL FOR MAIN BEAMS, SUPPORT POSTS, EMBEDDED SLEEVES, AND ALL ASSOCIATED CONNECTION PLATES SHALL CONFORM TO ASTM A709, GRADE 50. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36
 - ALL CONNECTION BOLTS SHALL BE 3/4" Ø A325 BOLTS.

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SHADE STRUCTURE DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

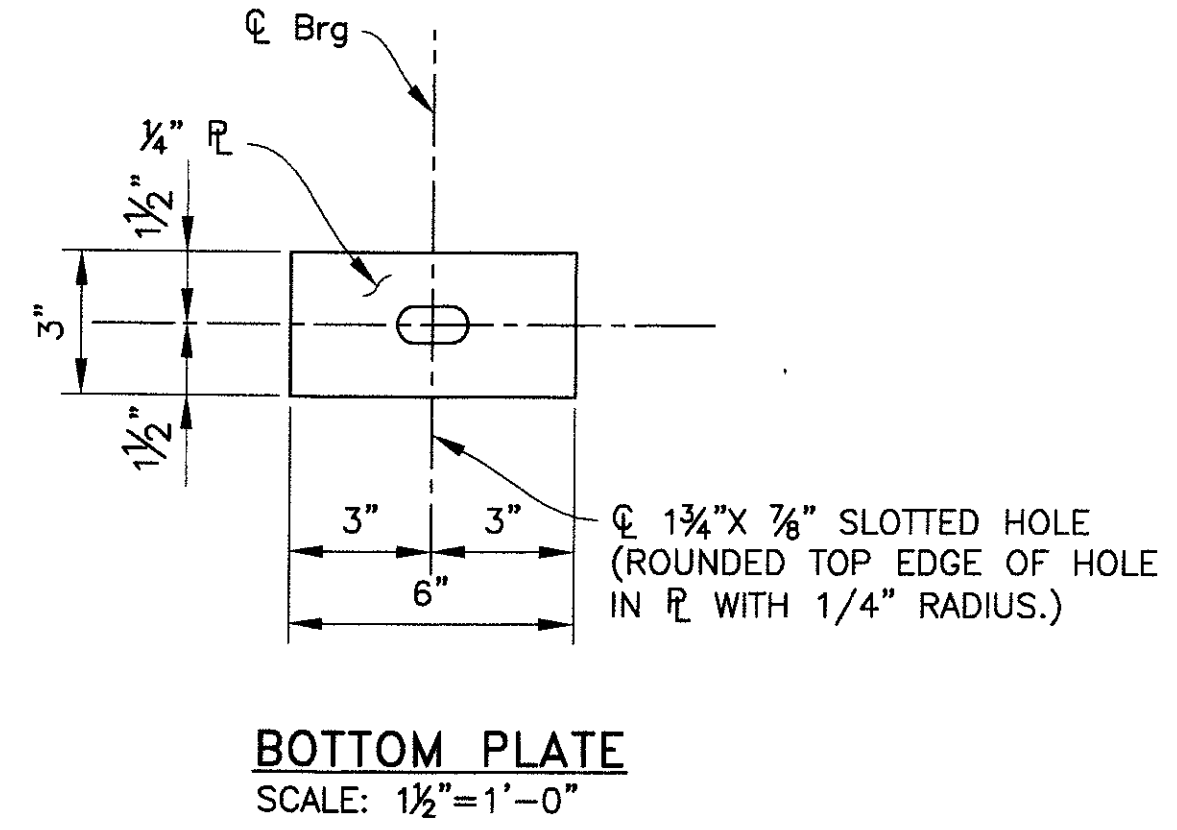
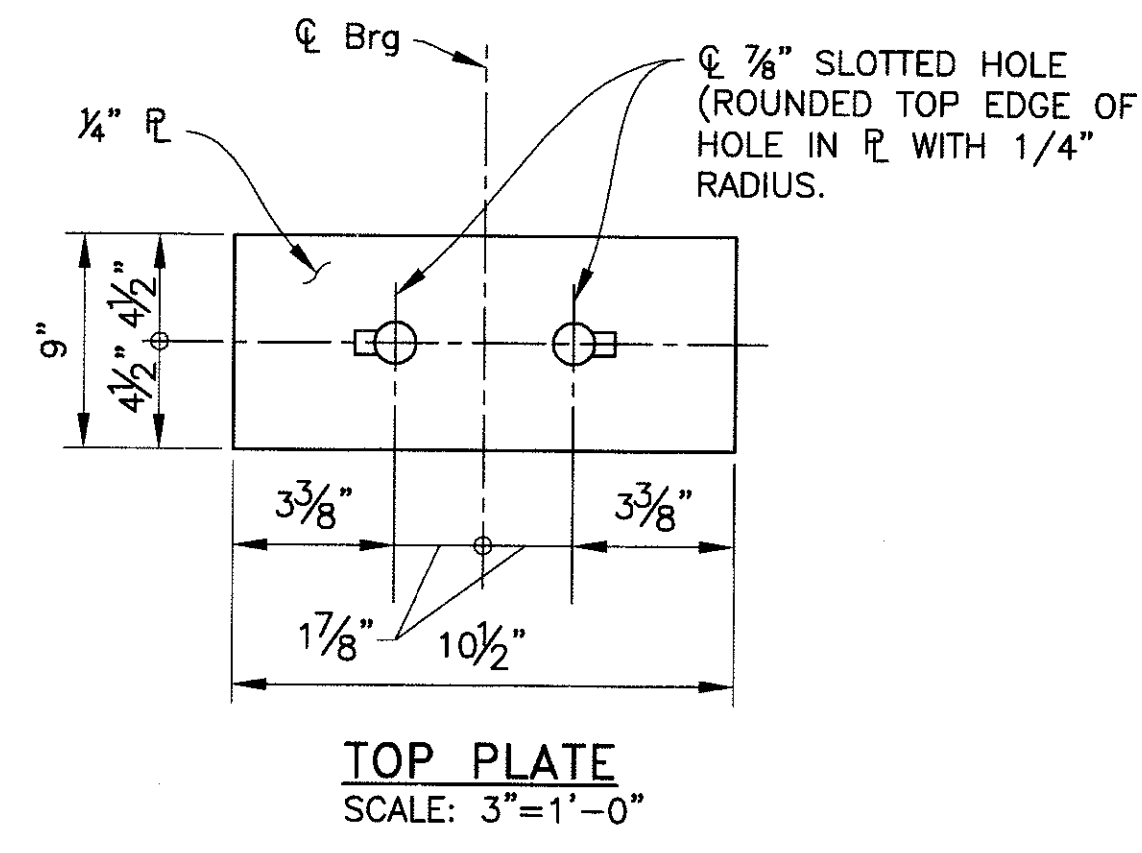
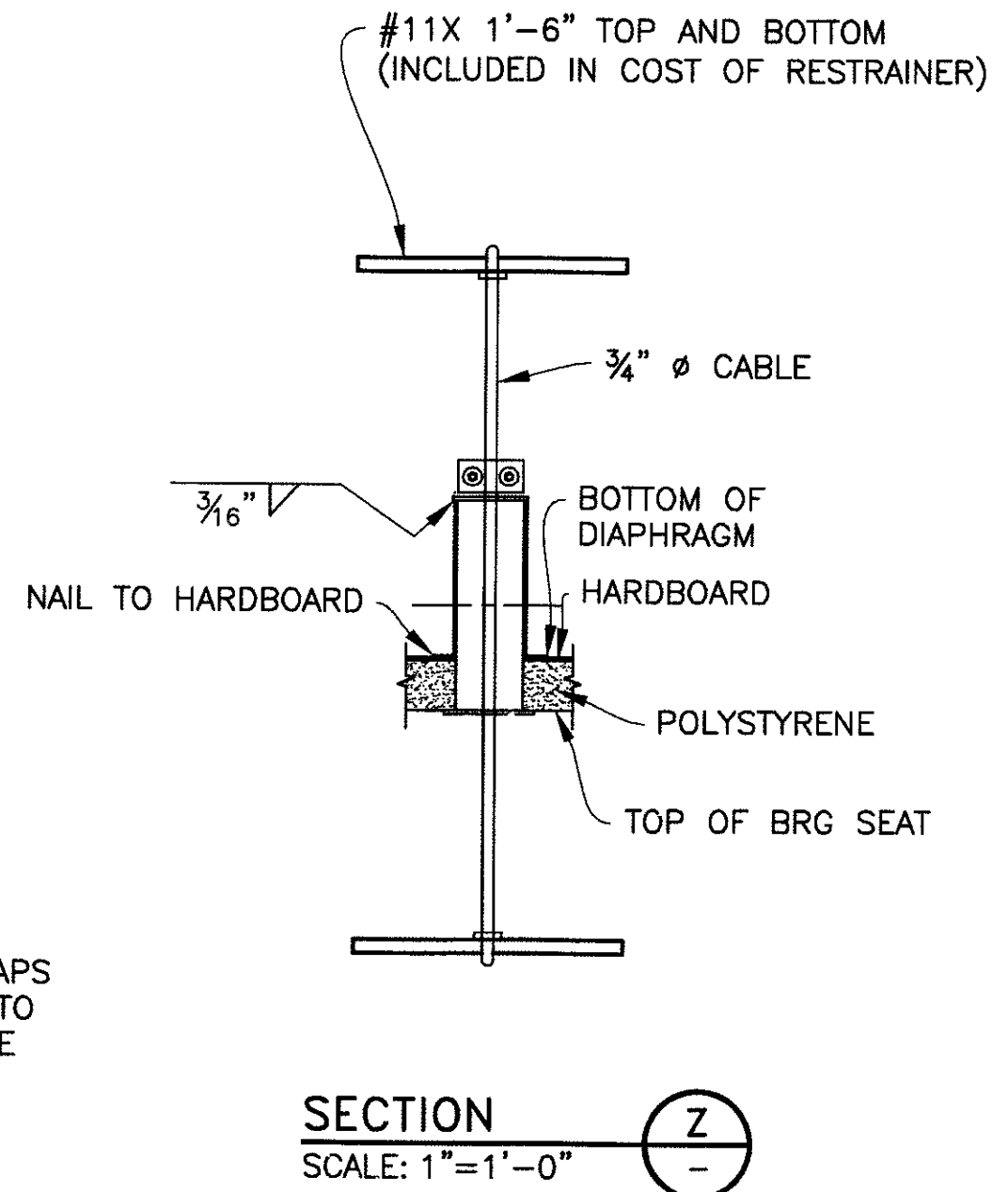
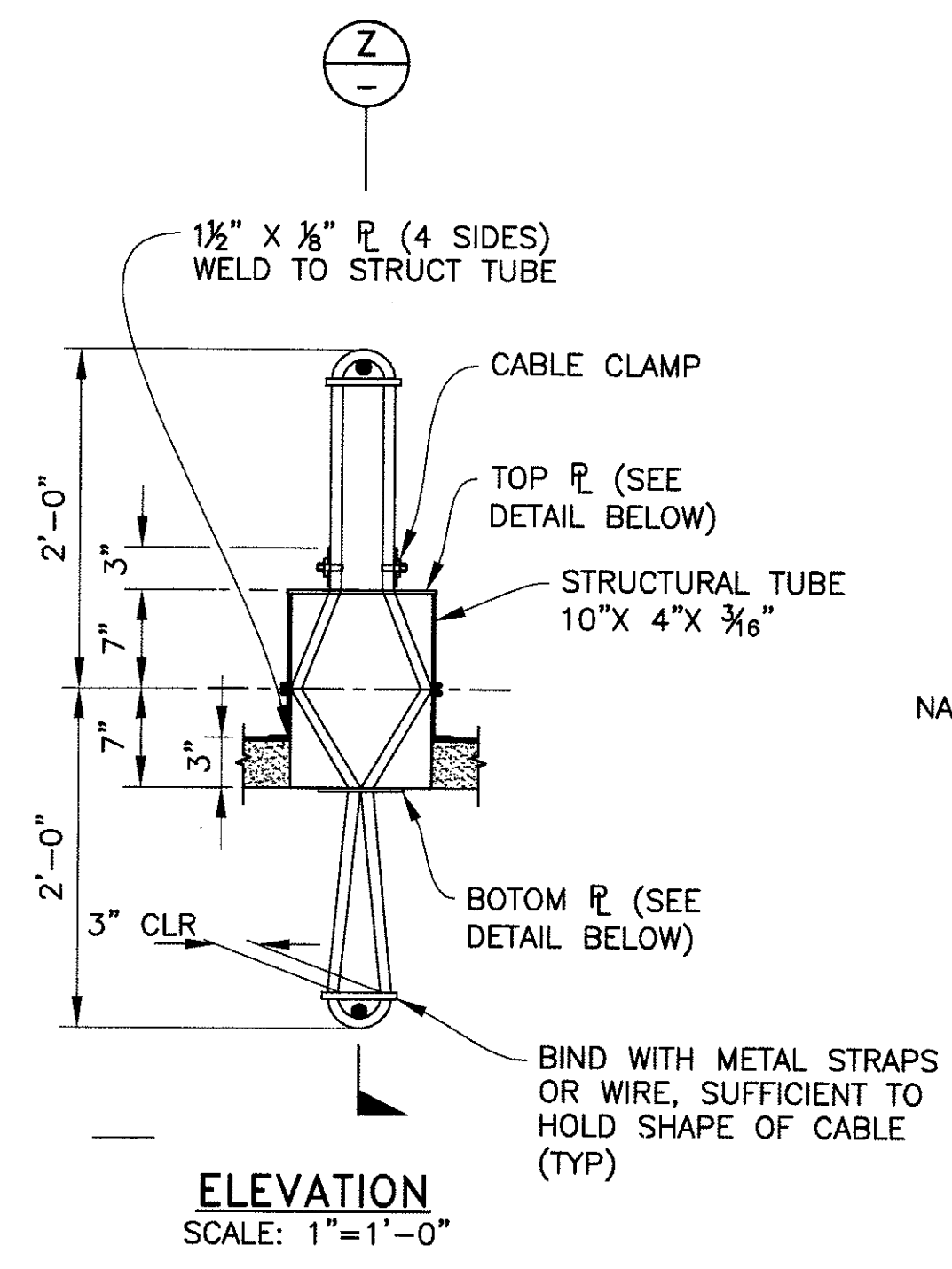
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DR:ESG	DES:BAG	CK:SFO	SHEET NO:	TOTAL SHEETS
DATE: 10/09	DATE: 10/09	DATE:10/09	198	352
DWG NO: S-2.28			198	352

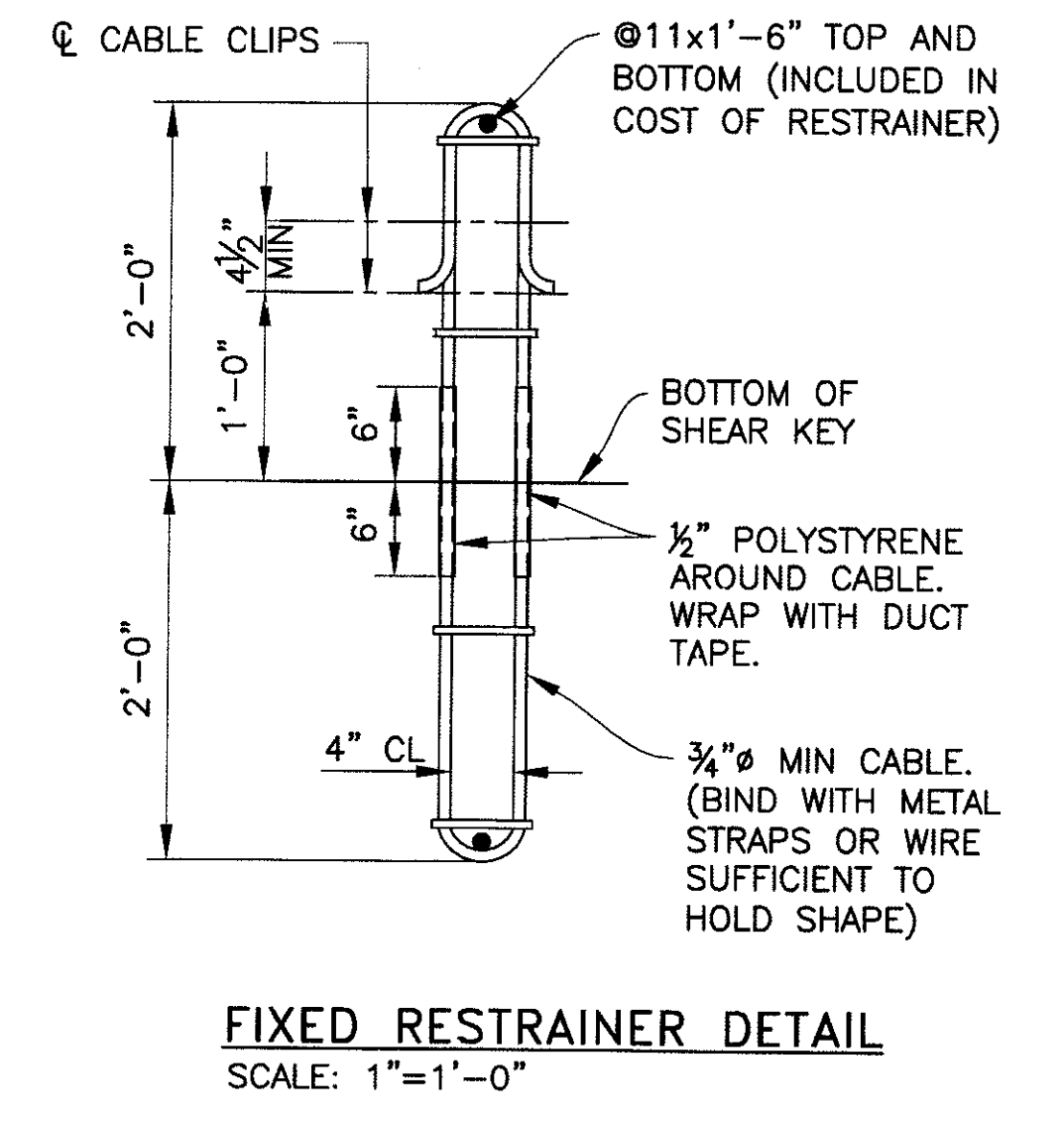
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NOT FOR CONSTRUCTION
90%
PRELIMINARY

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



EXPANSION RESTRAINER DETAILS



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MISCELLANEOUS DETAILS 1
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

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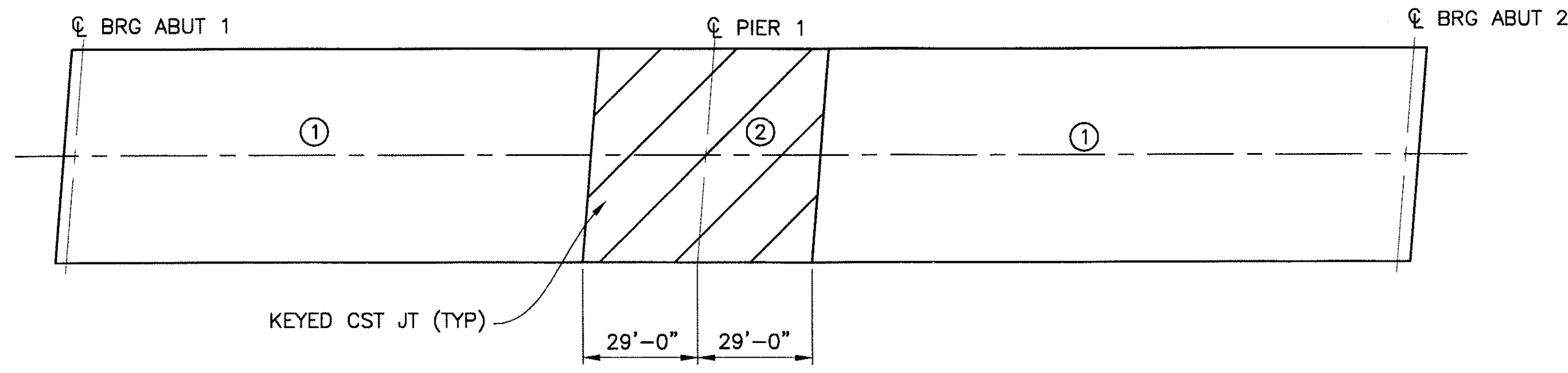
DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
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DWG NO: S-2.29			199	352

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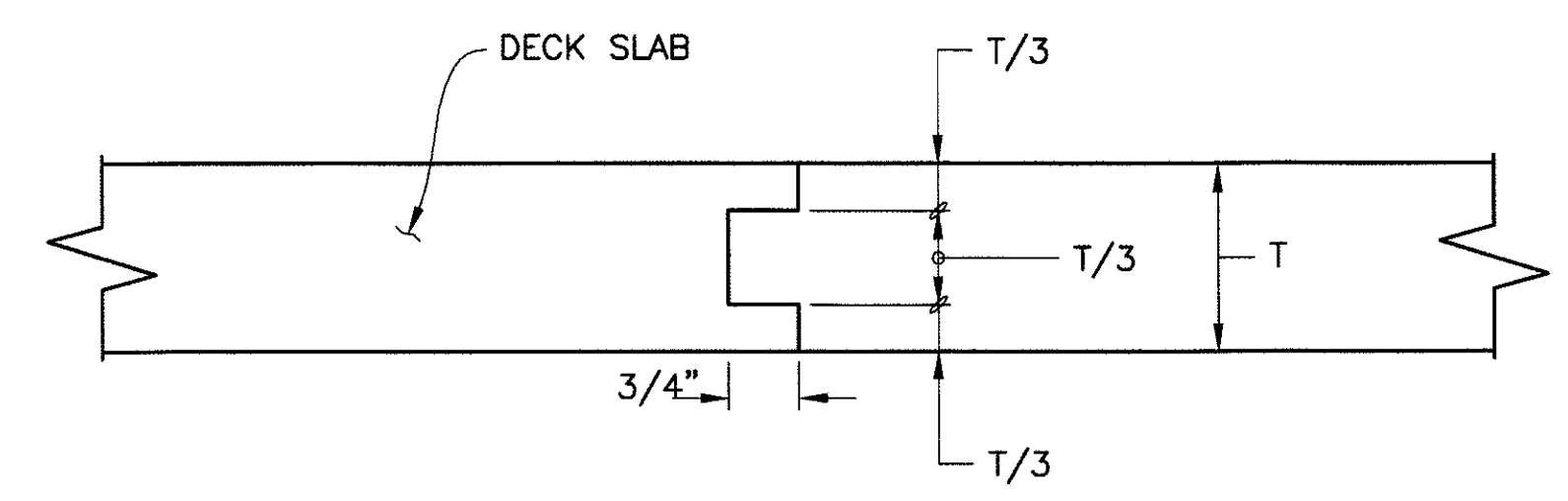
PRELIMINARY - NOT FOR CONSTRUCTION
90%

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	200	352
PREMIER				
ENGINEERING CORPORATION 8437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226-4800-829-6000				
DES: BAG		DR: JRR		CONSULTING ENGINEER
			CK: SEO	DATE: 12/09

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REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



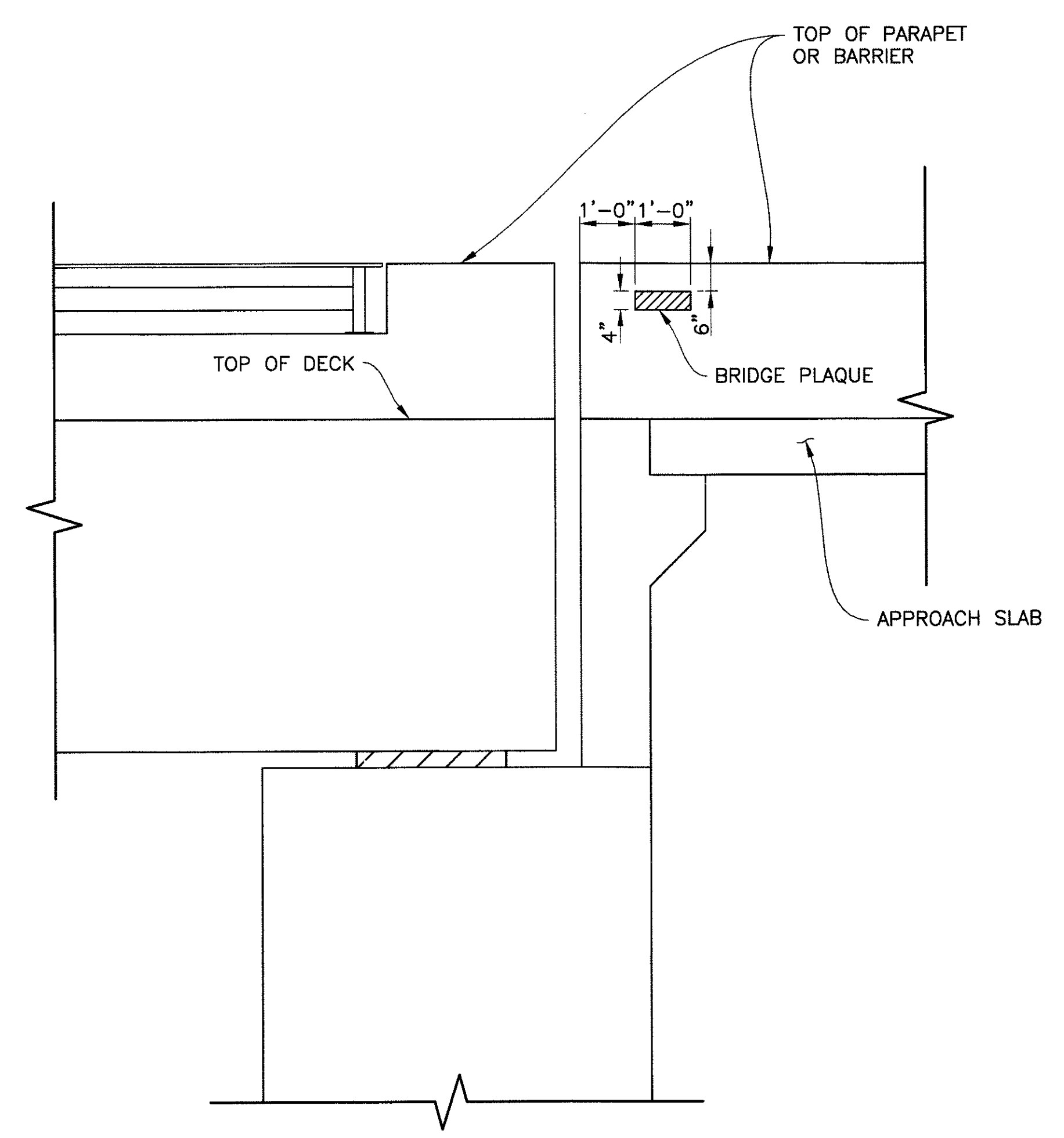
DECK POURING SEQUENCE
N.T.S.



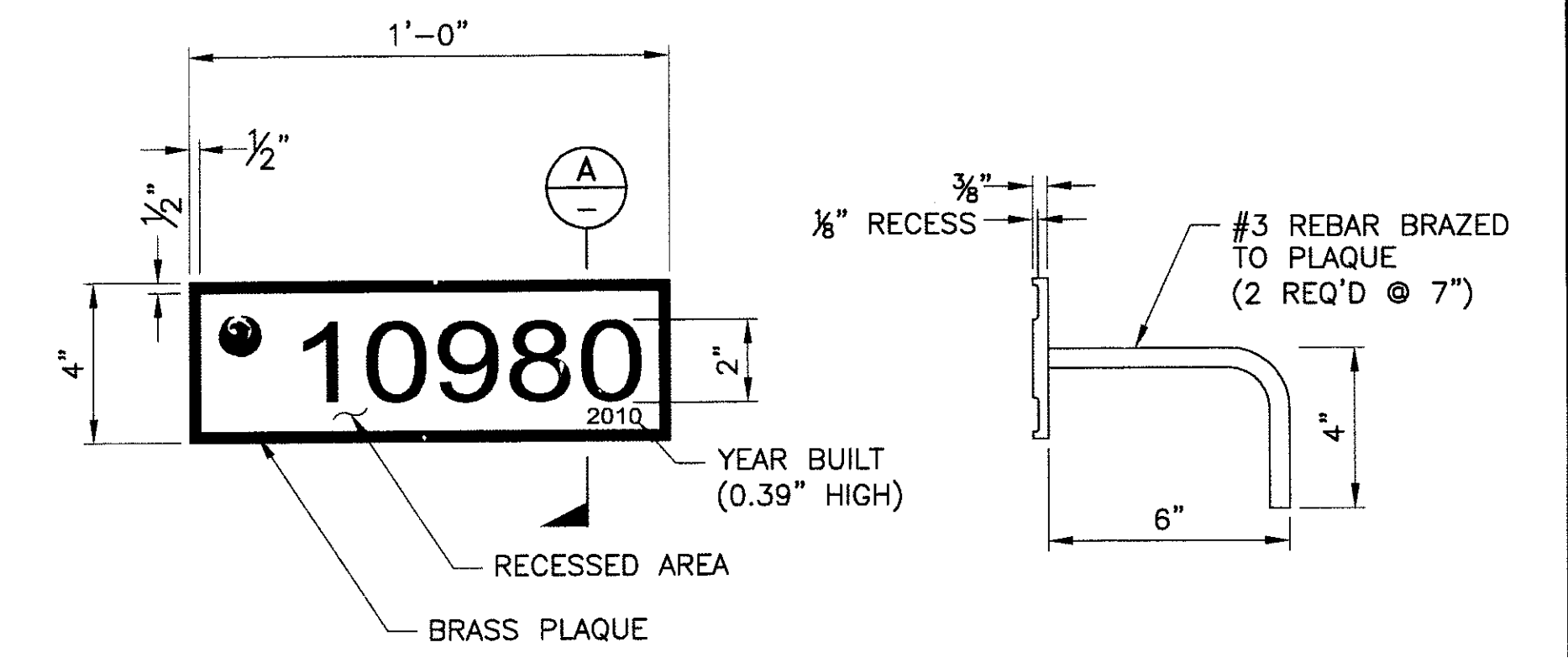
KEYED CONSTRUCTION JOINT DETAIL
N.T.S.

DECK PLACING NOTES

- NUMBERS ① & ② INDICATE PLACING SEQUENCE OF DECK CONCRETE. POUR ② SECTION A MINIMUM OF 12 HOURS AFTER ADJACENT ① SECTIONS HAVE BEEN PLACED.
- INTERMEDIATE DIAPHRAGMS AND ABUTMENT DIAPHRAGMS MAY BE PLACED PRIOR TO OR CONCURRENT WITH THE DECK PLACEMENT.
- PIER DIAPHRAGM SHALL BE POURED CONCURRENT WITH THE DECK PLACEMENT.
- SECTIONS ① & ② MAY BE PLACED CONSECUTIVELY BUT ONLY IN THE DIRECTION FROM ① TO ② AND A MINIMUM OF 12 HOURS AFTER THE ADJACENT ① SECTIONS HAVE BEEN PLACED.
- THE CONTRACTOR SHALL SUBMIT A DECK PLACEMENT SCHEDULE TO THE ENGINEER FOR APPROVAL PRIOR TO PLACING CONCRETE.
- EXPANSION JOINT CLOSURE SHALL NOT BE PLACED UNTIL ADJACENT SECTIONS ARE COMPLETED.



BRIDGE PLAQUE LOCATION ELEVATION
SCALE: 1/2" = 1'-0"



BRIDGE PLAQUE DETAIL
SCALE: 3" = 1'-0"

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

NOTES:

- FOR LOCATION OF PLAQUES, SEE DWG NO. S-2.15.
- THE BRASS PLATE USED FOR THE PLAQUE SHALL CONFORM TO ASTM B121.
- THE FONT USED FOR THE PLAQUE SHALL BE ARIAL.
- INSTALL PLAQUE PRIOR TO POURING CONCRETE, FLUSH WITH THE FINISHED FRONT FACE OF BARRIER.
- THE COST OF THE PLAQUES SHALL BE INCIDENTAL THO THE CONCRETE BARRIER ITEMS.

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MISCELLANEOUS DETAILS 2

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STREET TRANSPORTATION DEPARTMENT

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ST85100293

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DATE: 12/09	DATE: 12/09	DATE: 12/09	200	352
DWG NO: S-2.30				

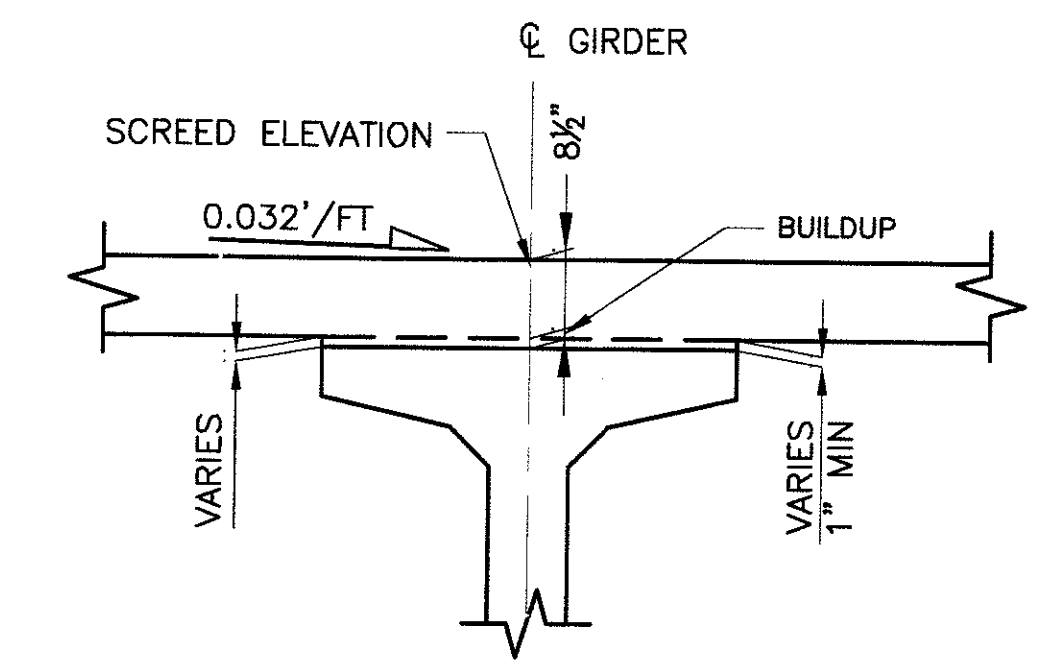
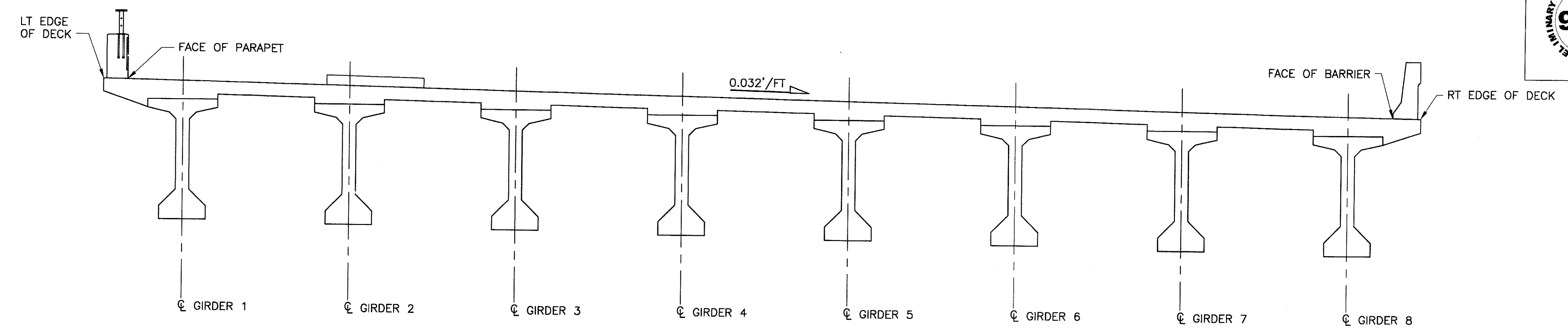
F:\2008055\CADD\Civil\Sheets\Structures\24-CC Secondary misc dtls.dwg - plotted by James Rojas at 12/21/2009 9:01:41 AM

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9	ARIZ.	ST85100293	201	352

PREMIER ENGINEERING CORPORATION
 6437 W. CHANDLER BLVD., SUITE 1
 CHANDLER, AZ 85226; 480-829-8000

CONSULTING ENGINEER
 DES: BAG DR: JRR CK: SEO DATE: 12/09



DECK CROSSING SECTION
(LOOKING UP STATION)
N.T.S.

SCREED ELEVATION SECTION
N.T.S.

REVISION BY CITY OF PHOENIX	REVISION BY CITY OF PHOENIX
DESCRIPTION	DESCRIPTION
REV BY	REV BY
CHKD BY	CHKD BY
DATE	DATE
NO.	NO.

LOCATION	CL BRG ABUT 1	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	CL BRG SPAN 1	CL PIER 1
LT EDGE OF DECK	1731.20	1731.21	1731.21	1731.20	1731.18	1731.16	1731.12	1731.07	1731.00	1730.93	1730.85	1730.85
FACE OF PARAPET	1731.15	1731.16	1731.16	1731.15	1731.14	1731.11	1731.07	1731.02	1730.96	1730.88	1730.81	1730.80
GIRDER 1	1731.08	1731.08	1731.08	1731.07	1731.06	1731.03	1730.99	1730.94	1730.88	1730.81	1730.74	-
GIRDER 2	1730.81	1730.81	1730.81	1730.80	1730.78	1730.75	1730.71	1730.66	1730.61	1730.54	1730.46	-
GIRDER 3	1730.54	1730.54	1730.54	1730.53	1730.51	1730.48	1730.44	1730.39	1730.33	1730.26	1730.19	-
GIRDER 4	1730.27	1730.27	1730.26	1730.25	1730.23	1730.21	1730.17	1730.12	1730.06	1729.99	1729.92	-
GIRDER 5	1729.99	1729.99	1729.99	1729.98	1729.96	1729.93	1729.89	1729.84	1729.79	1729.72	1729.64	-
GIRDER 6	1729.72	1729.72	1729.72	1729.71	1729.69	1729.66	1729.62	1729.57	1729.51	1729.44	1729.37	-
GIRDER 7	1729.45	1729.45	1729.45	1729.44	1729.42	1729.39	1729.35	1729.30	1729.24	1729.17	1729.10	-
GIRDER 8	1729.18	1729.18	1729.18	1729.17	1729.15	1729.12	1729.08	1729.03	1728.97	1728.90	1728.82	-
FACE OF BARRIER	1729.09	1729.10	1729.10	1729.09	1729.07	1729.04	1729.00	1728.95	1728.89	1728.82	1728.74	1728.73
RT EDGE OF DECK	1729.04	1729.05	1729.05	1729.04	1729.03	1729.00	1728.96	1728.91	1728.84	1728.77	1728.69	1728.69

LOCATION	CL PIER 1	CL BRG SPAN 2	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	CL BRG ABUT 2
LT EDGE OF DECK	1730.85	1730.84	1730.90	1730.95	1730.97	1730.96	1730.95	1730.88	1730.79	1730.68	1730.56	1730.41
FACE OF PARAPET	1730.80	1730.79	1730.85	1730.90	1730.92	1730.92	1730.88	1730.83	1730.74	1730.63	1730.51	1730.36
GIRDER 1	-	1730.72	1730.78	1730.82	1730.83	1730.83	1730.80	1730.74	1730.66	1730.56	1730.43	1730.29
GIRDER 2	-	1730.45	1730.50	1730.54	1730.55	1730.55	1730.51	1730.46	1730.38	1730.27	1730.15	1730.02
GIRDER 3	-	1730.18	1730.23	1730.26	1730.28	1730.27	1730.24	1730.18	1730.10	1730.00	1729.88	1729.75
GIRDER 4	-	1729.90	1729.95	1729.99	1730.00	1730.00	1729.96	1729.91	1729.83	1729.72	1729.61	1729.47
GIRDER 5	-	1729.63	1729.68	1729.72	1729.73	1729.72	1729.69	1729.64	1729.55	1729.45	1729.33	1729.20
GIRDER 6	-	1729.36	1729.41	1729.44	1729.46	1729.45	1729.42	1729.36	1729.28	1729.18	1729.06	1728.92
GIRDER 7	-	1729.08	1729.13	1729.17	1729.18	1729.18	1729.14	1729.09	1729.00	1728.90	1728.78	1728.65
GIRDER 8	-	1728.81	1728.86	1728.90	1728.92	1728.91	1728.88	1728.82	1728.74	1728.63	1728.51	1728.37
FACE OF BARRIER	1728.73	1728.72	1728.78	1728.83	1728.85	1728.84	1728.81	1728.75	1728.67	1728.56	1728.43	1728.28
RT EDGE OF DECK	1728.69	1728.68	1728.74	1728.78	1728.80	1728.80	1728.76	1728.71	1728.62	1728.51	1728.38	1728.24

SCREED ELEVATION NOTES:

1. RELEASE AND INITIAL DEFLECTIONS SHALL BE MEASURED AT MIDSPAN FOR EACH GIRDER AND THE DATA PROVIDED TO THE BRIDGE ENGINEER FOR EVALUATION.
2. THE TOP OF THE ERECTED GIRDER ELEVATION SHALL BE MEASURED IN THE FIELD FOR THE DETERMINATION OF THE BUILD-UP, AND THE INFORMATION PROVIDED TO ENGINEER FOR EVALUATION.
3. THE SCREED ELEVATION INCLUDES THE ALLOWANCE FOR THE DEFLECTION DUE TO THE DEAD LOAD OF THE CONCRETE DECK SLAB, DIAPHRAGMS, BARRIERS AND THE EFFECT OF LONG TERM CREEP.
4. SCREED ELEVATIONS SHALL BE USED IN SETTING SCREEDS. ADJUSTMENTS TO THE SCREED ELEVATIONS, IF NECESSARY, WILL BE DETERMINED BY THE BRIDGE ENGINEER AFTER REVIEWING THE TOP OF ERECTED GIRDER ELEVATIONS. DO NOT USE FINISHED GRADE ELEVATIONS FOR SETTING SCREEDS.

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SCREED ELEVATIONS
 CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
 CAVE CREEK SECONDARY
 ST85100293**

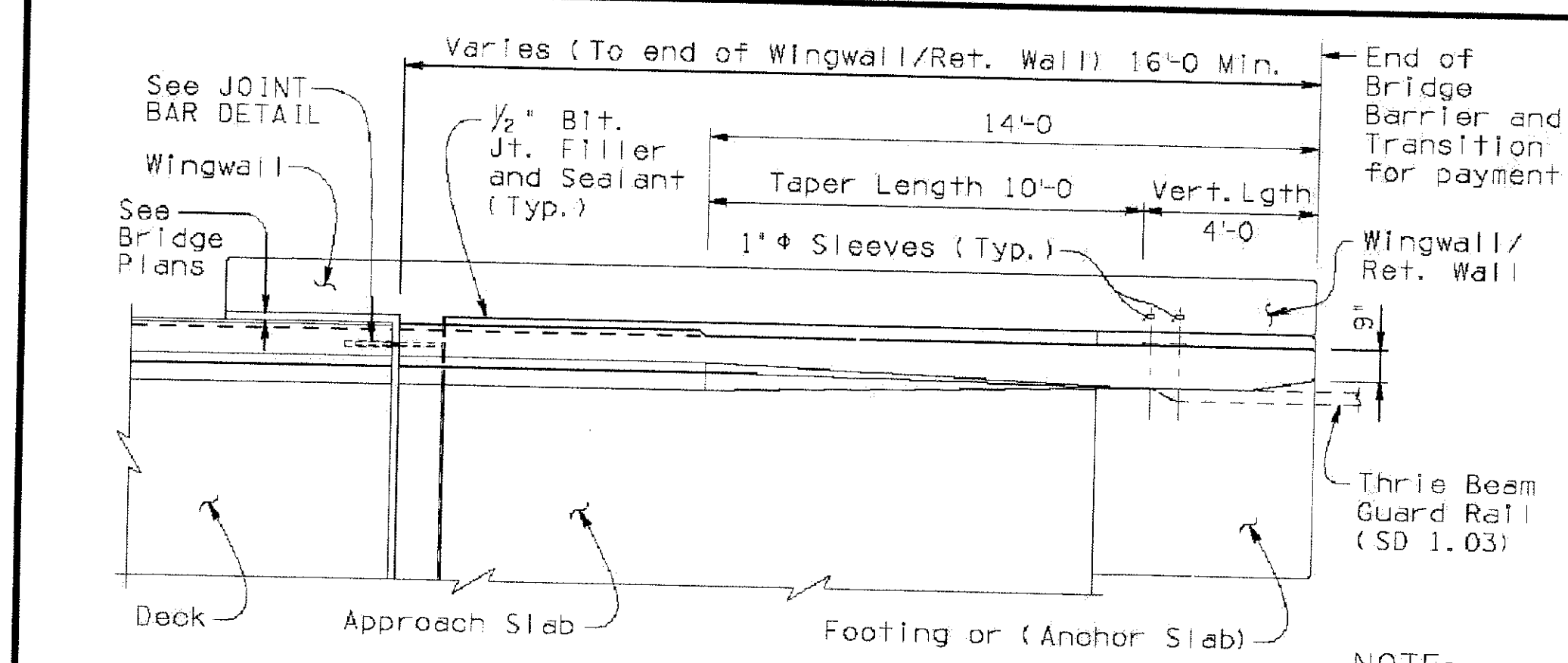
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DATE: 12/09	DATE: 12/09	DATE: 12/09	201
DWG NO: S-2.31			TOTAL SHEETS: 352

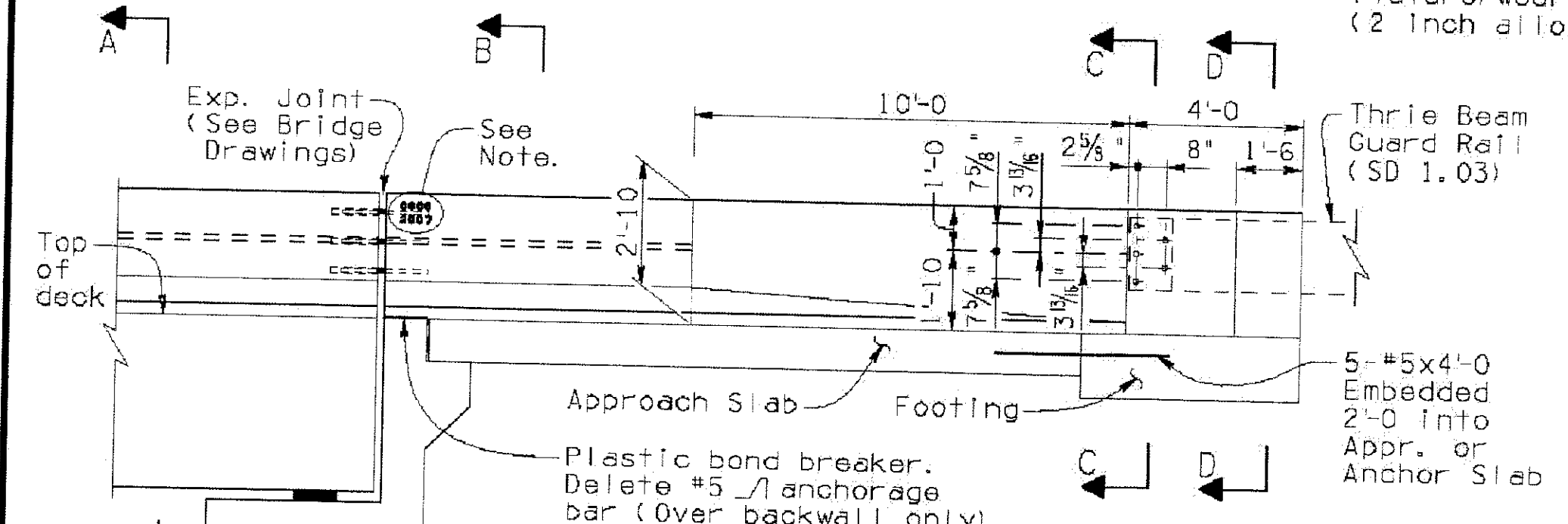
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	9	ARIZ.	ST85100293	202	352
PREMIER					
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226-4800-623-8000					
DES: BAG		DR: JRR		CK: SEO	DATE: 12/09

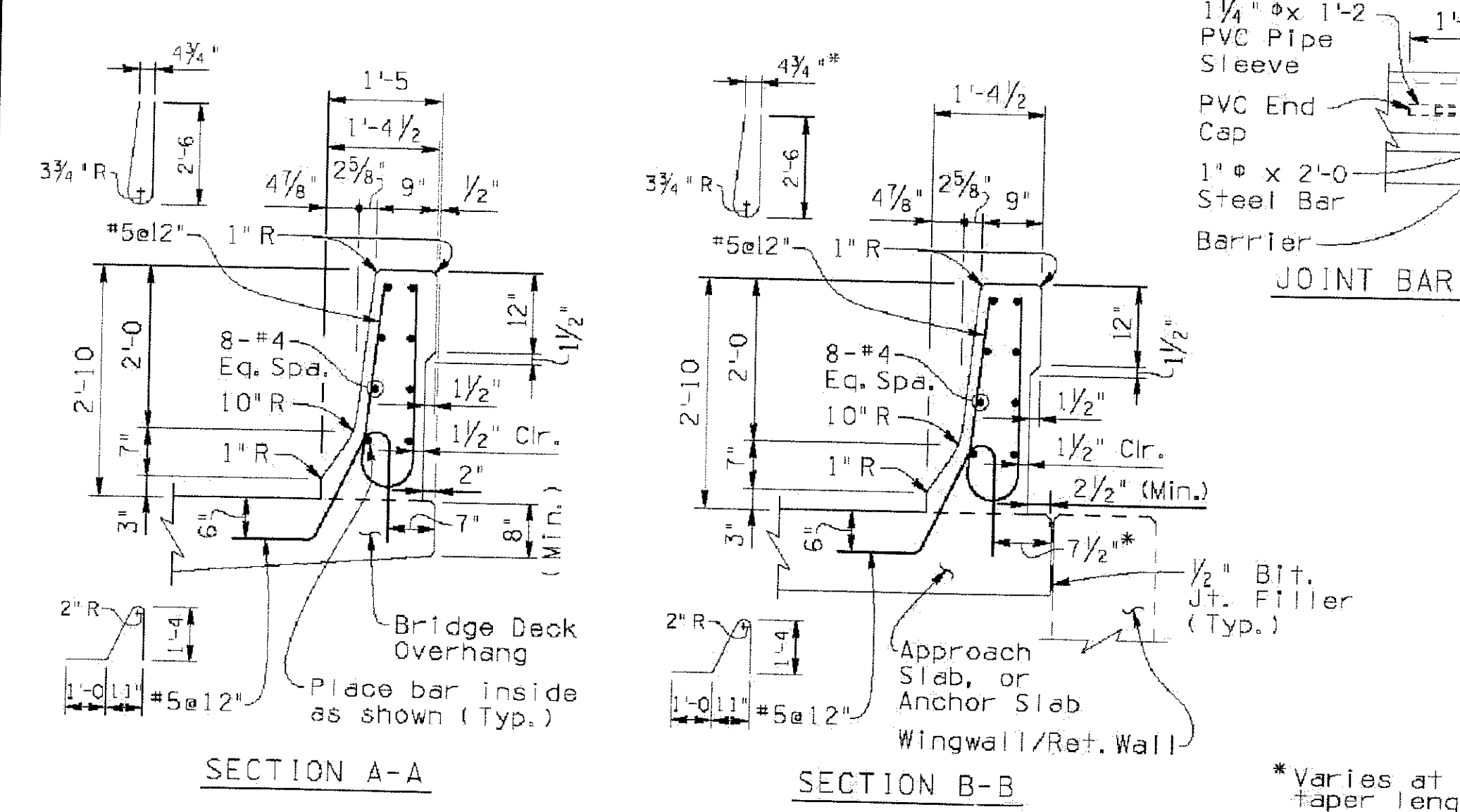
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NO.	DESCRIPTION



PLAN

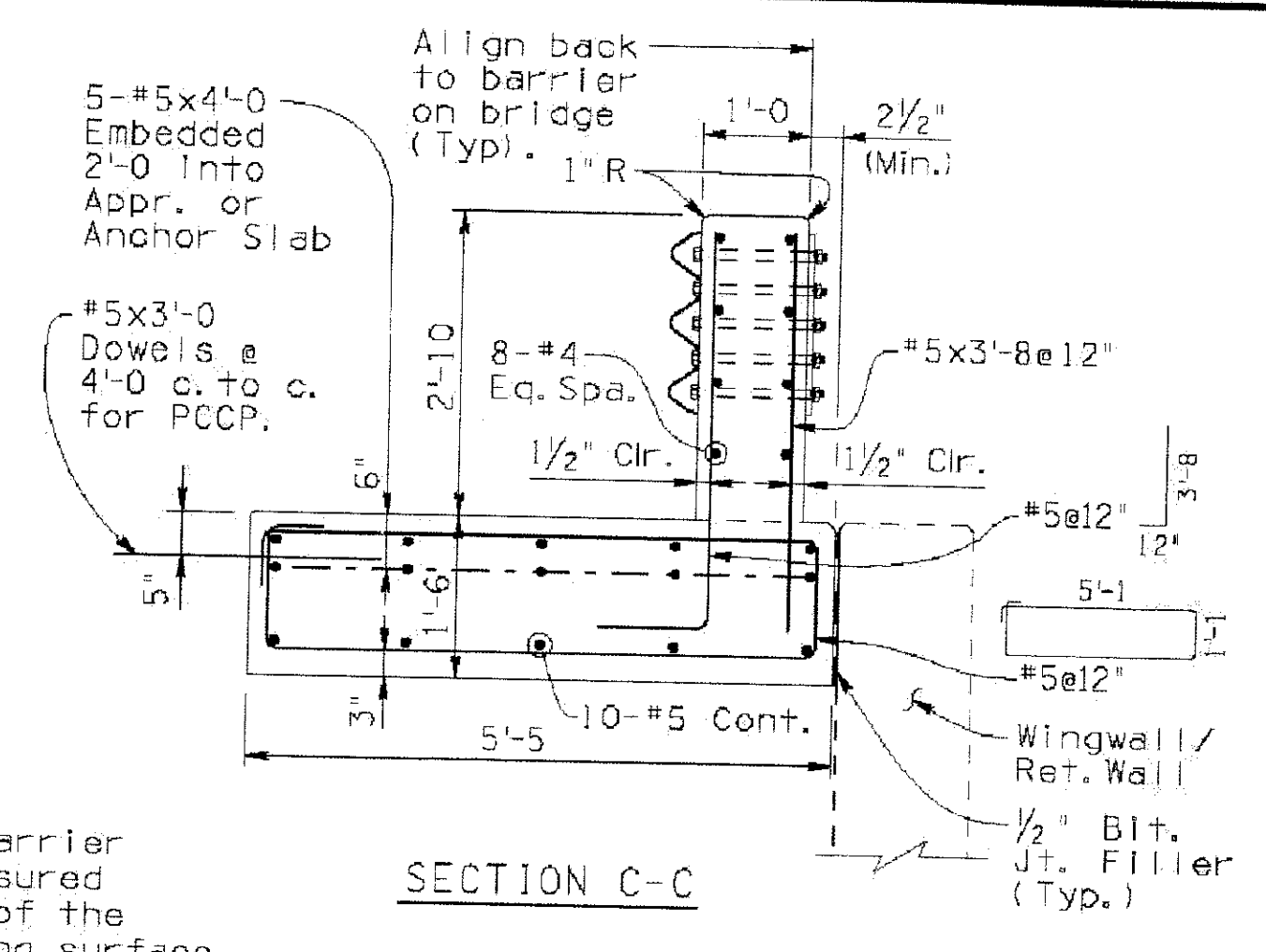


ELEVATION

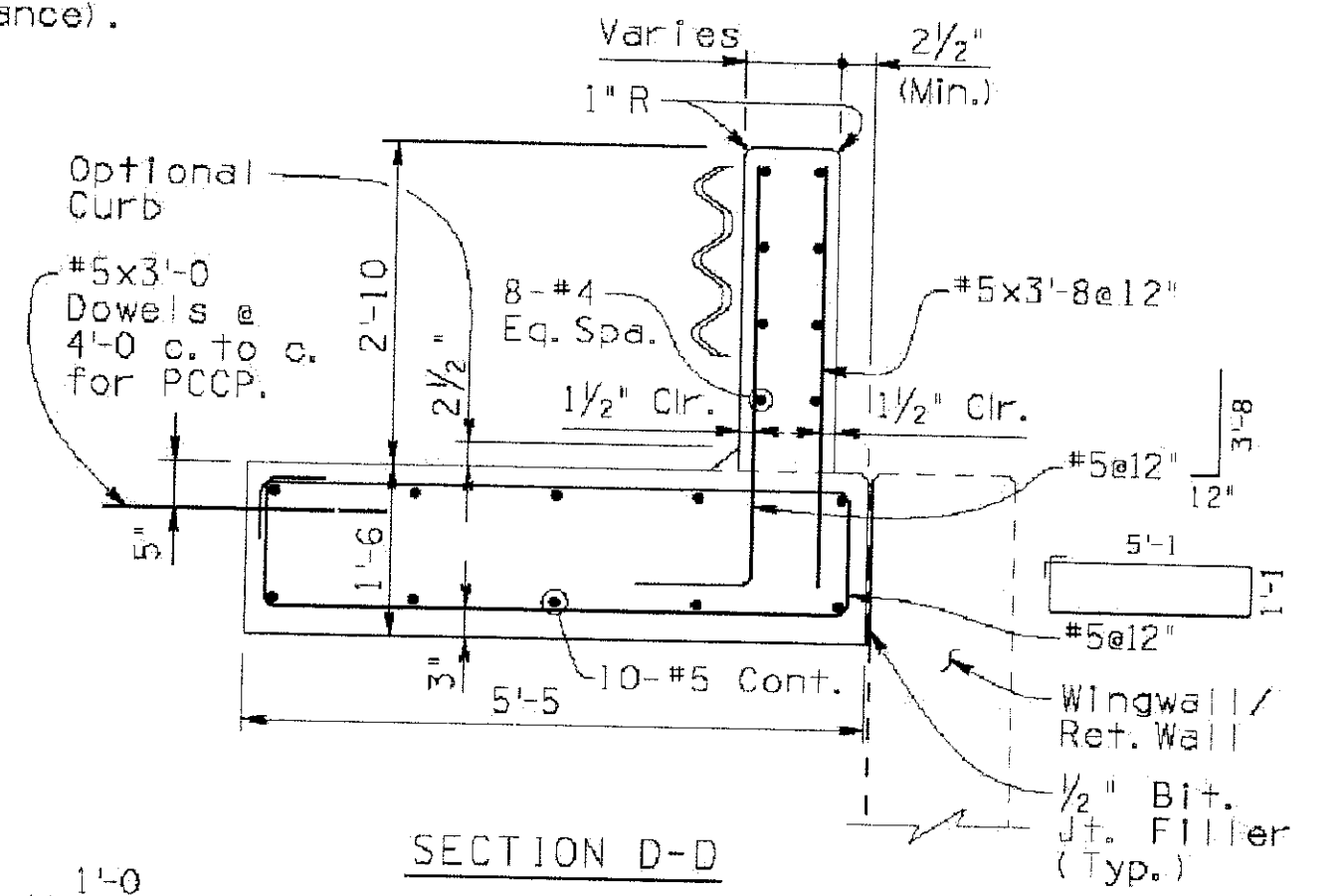


SECTION A-A

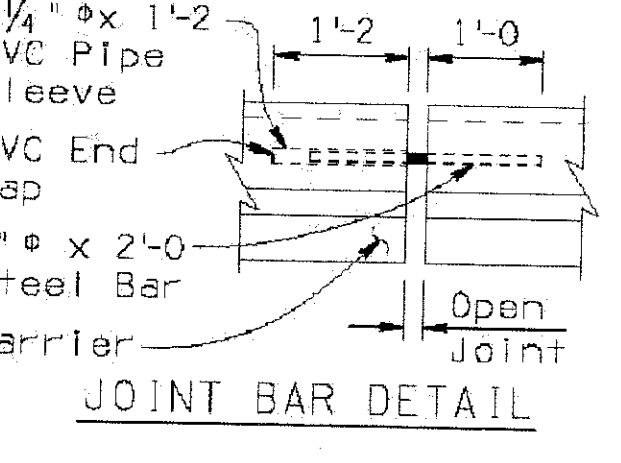
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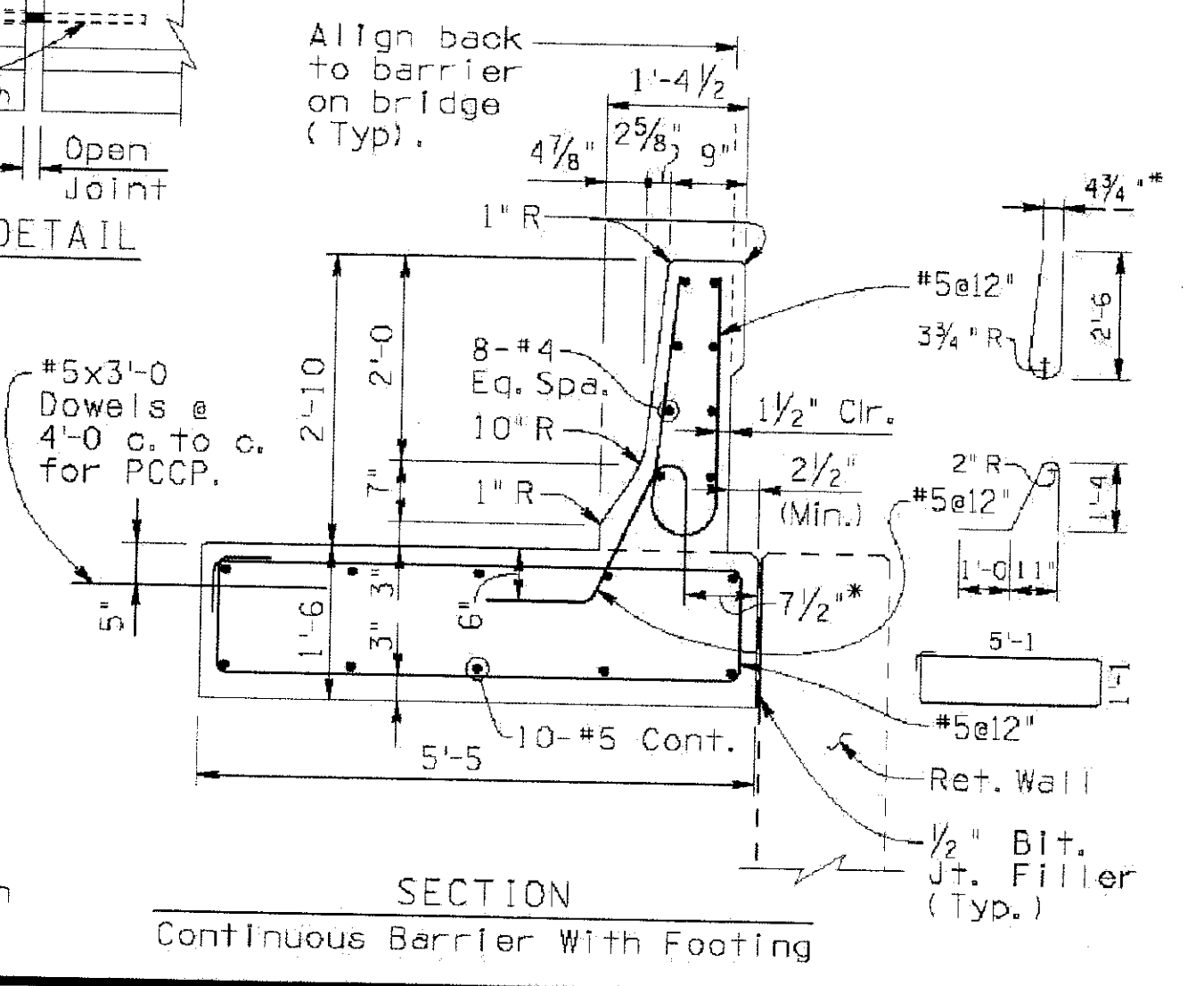
SECTION C-C



SECTION D-D

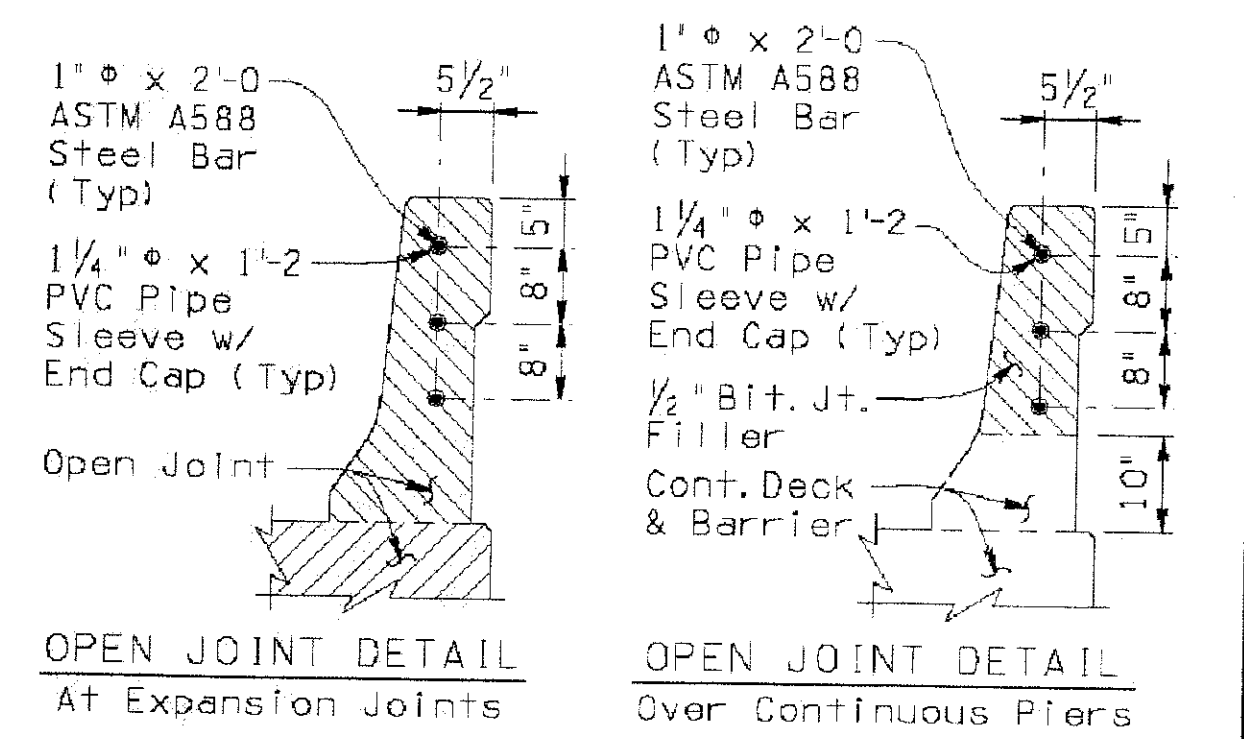


JOINT BAR DETAIL



SECTION Continuous Barrier With Footing

GENERAL NOTES:
 Construction Specification - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, latest Edition.
 Design Specifications - AASHTO LRFD Bridge Design Specifications, 4th Edition 2007.
 This barrier has been successfully crash tested and is structurally evaluated as meeting the requirements of NCHRP Report 350 Test Level 4.
 All Concrete shall be Class "S" ($f'c = 4000$ psi).
 Reinforcing steel shall conform to ASTM Specification A615. All reinforcing shall be furnished as Grade 60. All reinforcing shall be epoxy coated at locations above EL. 4000 ft.
 All bends and hooks shall meet the requirements of AASHTO LRFD Article 5.10. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.
 All reinforcing steel shall have 2 inch clear cover unless noted otherwise.
 Concrete barriers on continuous superstructures shall have 1/2" bituminous joint filler in open joints over piers. See bridge drawings for details.
 Imbed 1/2" Bit. Number and Year Built, using 1/2" w x 2" h number impressions in concrete, located as shown at the approach end of the outside lane.
 Anchorage bars are included in the pay item for barrier (Item No. 6011130).
 Omit bridge barrier transition when concrete barrier is continuous beyond bridge.
 Dimensions shall not be scaled from drawings.
 Item No. 6011130 F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (32")
 Measure: Linear Foot



OPEN JOINT DETAIL At Expansion Joints

OPEN JOINT DETAIL Over Continuous Piers

DESIGN APPROVED	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION
APPROVED FOR DISTRIBUTION	BRIDGE GROUP STRUCTURE DETAIL
PROJECT NO.	F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (32") NOMINAL
LOCATION	SD 1.01
DRAWING NO.	OF

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F-SHAPED BRIDGE CONCRETE BARRIER AND TRANSITION (32") NOMINAL
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

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CAVE CREEK SECONDARY
ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	202	352
DWG NO: S-2.32				

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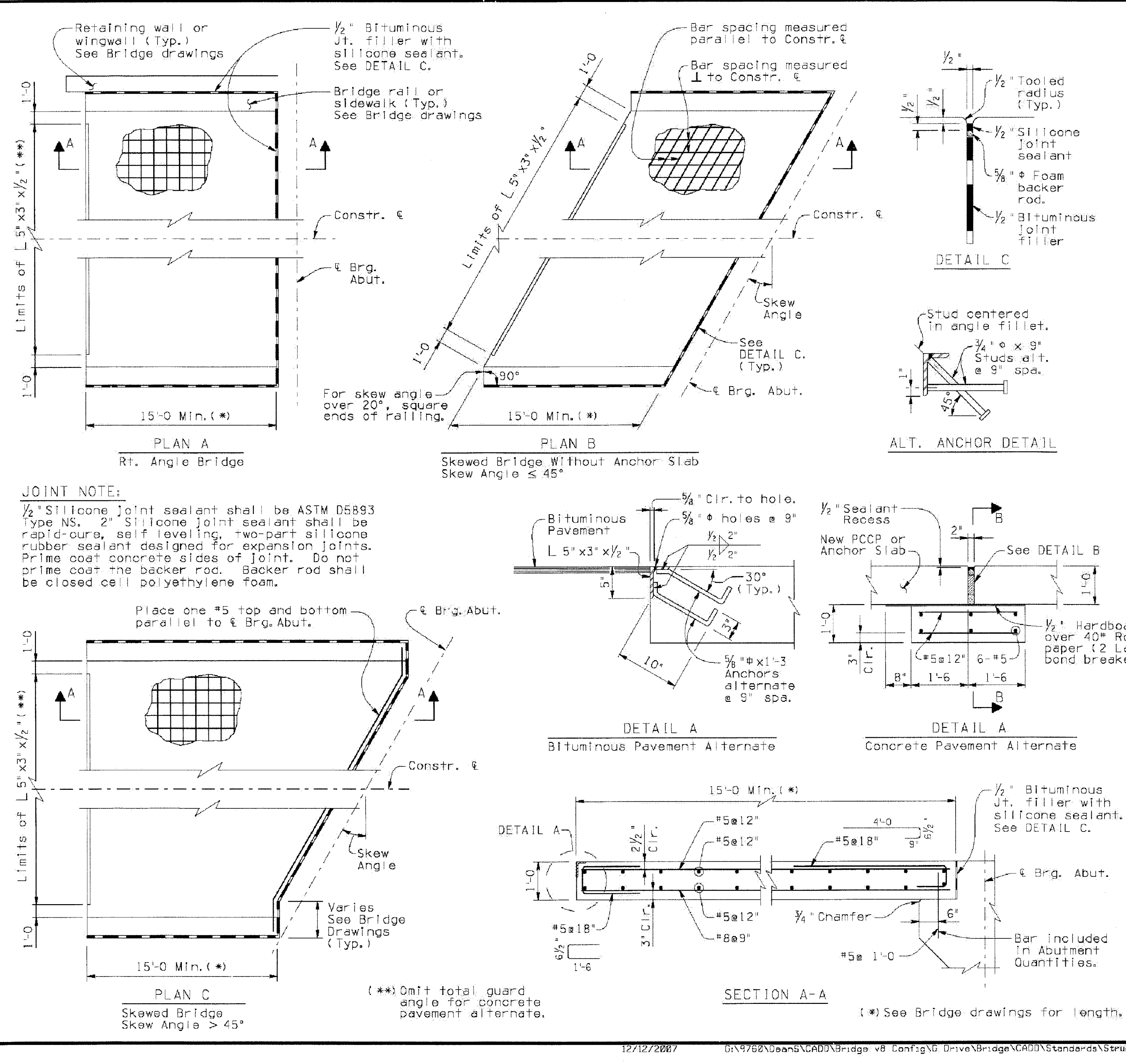
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NO.	DESCRIPTION			

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NO.	DESCRIPTION			

Note to Designer: Items in this schedule that have been completed in accordance with respective engineering professional seal are for general use. It cannot be used for specific application without a separate examination and verification of its applicability and applicability by a licensed professional engineer. Contents within this border shall not be altered.



JOINT NOTE:
1/2" Silicone joint sealant shall be ASTM D5893 Type NS. 2" Silicone joint sealant shall be rapid-cure, self leveling, two-part silicone rubber sealant designed for expansion joints. Prime coat concrete sides of joint. Do not prime coat the backer rod. Backer rod shall be closed cell polyethylene foam.

Place one #5 top and bottom parallel to ϵ Brg. Abut.
Constr. ϵ

1/2" Bituminous Jt. filler with silicone sealant. See DETAIL C.
Bar spacing measured parallel to Constr. ϵ
Bar spacing measured \perp to Constr. ϵ
Skew Angle
See DETAIL C. (Typ.)
1/2" Tooled radius (Typ.)
1/2" Silicone joint sealant
5/8" ϕ Foam backer rod.
1/2" Bituminous joint filler
Stud centered in angle fillet.
3/4" ϕ x 9" Studs alt. @ 9" spd.
1/2" Sealtant Recess
New PCCP or Anchor Slab
See DETAIL B
1/2" Hardboard over 40# Roofing paper (2 Layers) bond breaker.
2" Wide rigid polyethylene or polyurethane foam spacer.
2" Joint See DETAIL B
Joint
1'-0" Sleeper Slab

DETAIL A
Bituminous Pavement Alternate
Concrete Pavement Alternate

1/2" Bituminous Jt. filler with silicone sealant. See DETAIL C.
Bar included in Abutment Quantities.
15'-0" Min. (*)
#5 ϕ 12"
#5 ϕ 18"
#8 ϕ 9"
#5 ϕ 12"
#5 ϕ 12"
#5 ϕ 12"
#5 ϕ 12"
#5 ϕ 12"
#5 ϕ 12"
3" Cir.
1'-6"

SECTION A-A
Bituminous Pavement Alternate
Concrete Pavement Alternate

GENERAL NOTES:
Construction Specification - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.
Design Specifications - AASHTO LRFD Bridge Design Specifications, 4th Edition 2007.
All Concrete shall be Class 'S' (f'c = 4000 psi).
Reinforcing steel shall conform to ASTM Specification A615. All reinforcing shall be furnished as Grade 60. All reinforcing shall be epoxy coated at locations above EL. 4000 ft.
All bends and hooks shall meet the requirements of AASHTO Article 5.10. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.
All reinforcing steel shall have 2 inch clear cover unless noted otherwise.
Structural steel shall conform to ASTM specification A588 Grade 50 or A709 Grade 50W.
All welding shall conform to the requirements of the American Welding Society, ANSI/AASHTO/AWS D1.5 Bridge Welding Code, Latest Edition.
Dimensions shall not be scaled from drawings.
Item No. 601371 APPROACH SLAB
Measure: Square Foot

DESIGN APPROVED <i>Shafiq H. Hasan</i>		ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION BRIDGE GROUP STRUCTURE DETAIL	
APPROVED FOR DISTRIBUTION <i>Tean A. Nehme</i>		APPROACH SLAB DETAILS	
ROUTE	PROJECT NO.	FA NO.	DRAWING NO. SD 2.01
LOCATION			SHEET NO. OF

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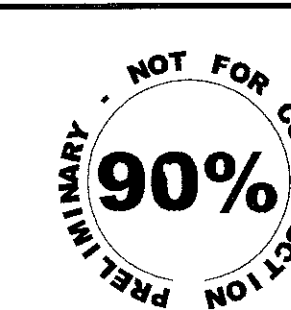
APPROACH SLAB DETAILS

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK SECONDARY
ST85100293

 DR: JRR DES: BAG CK: SEO SHEET NO: 203 TOTAL SHEETS: 352
 DATE: 12/09 DATE: 12/09 DATE: 12/09
 DWG NO: S-2.33

12/12/2007 6:\9762\0005\CADD\B-bridge v8 Conf\glo Drive\Brdge\CADD\Standards\Structural Details\0712\sd201.1207.dgn



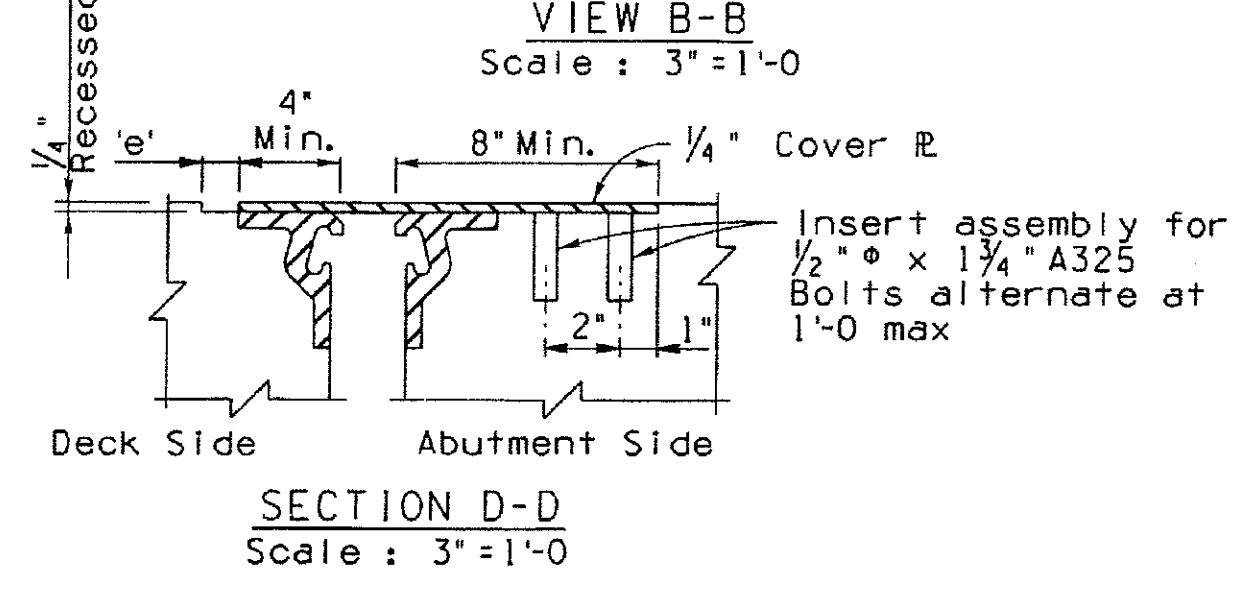
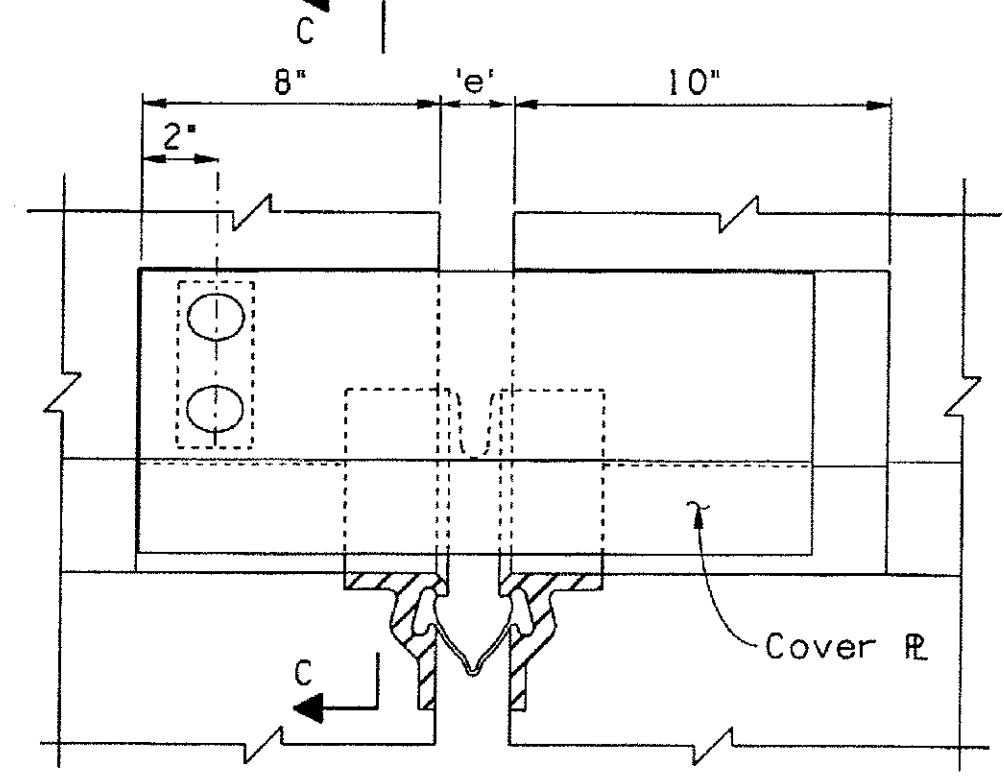
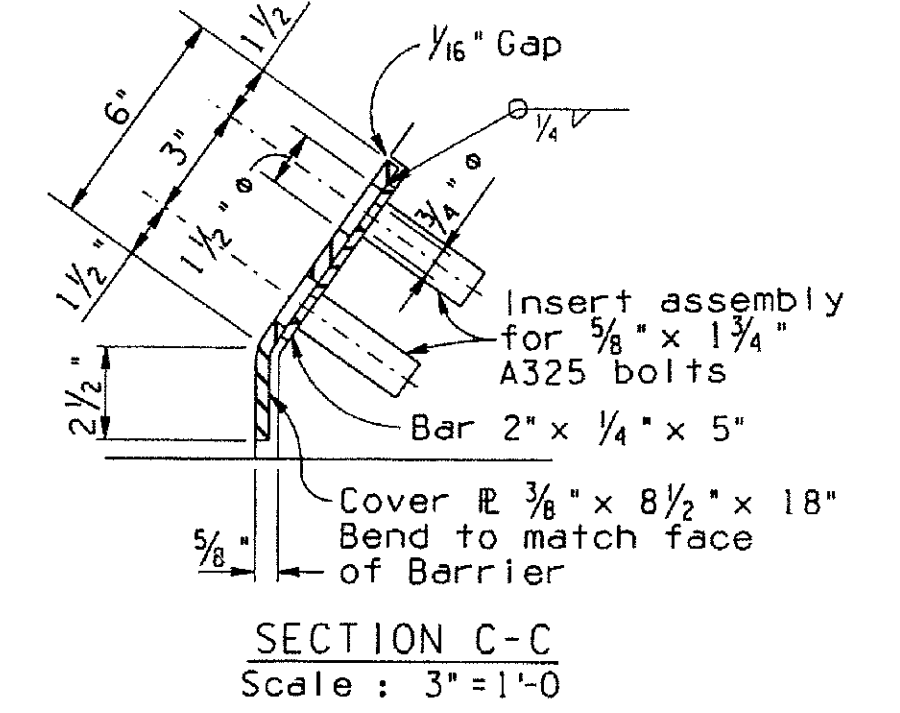
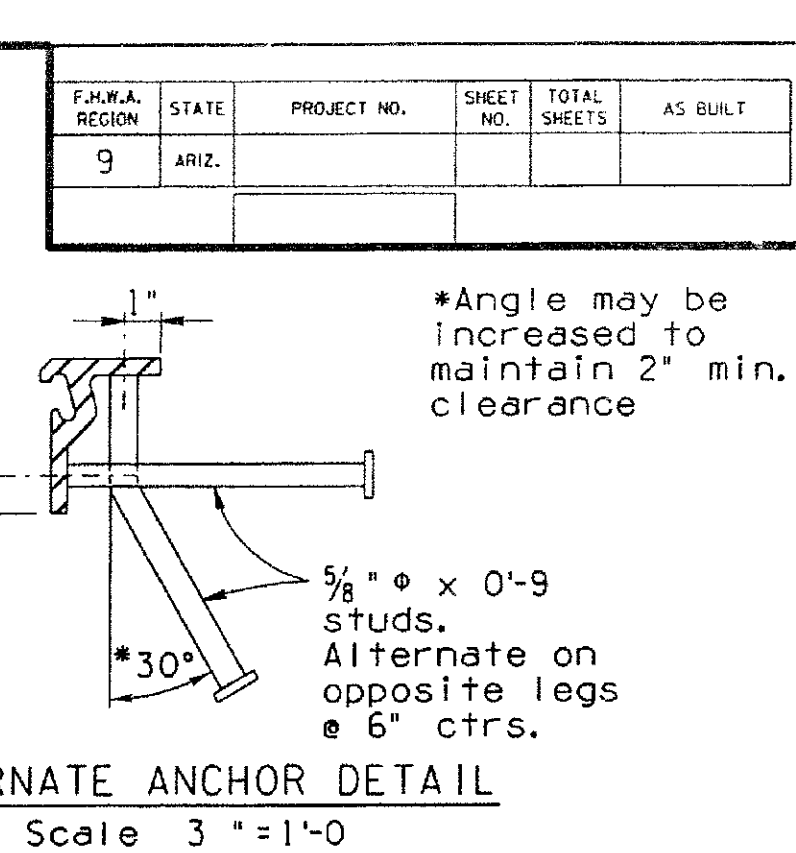
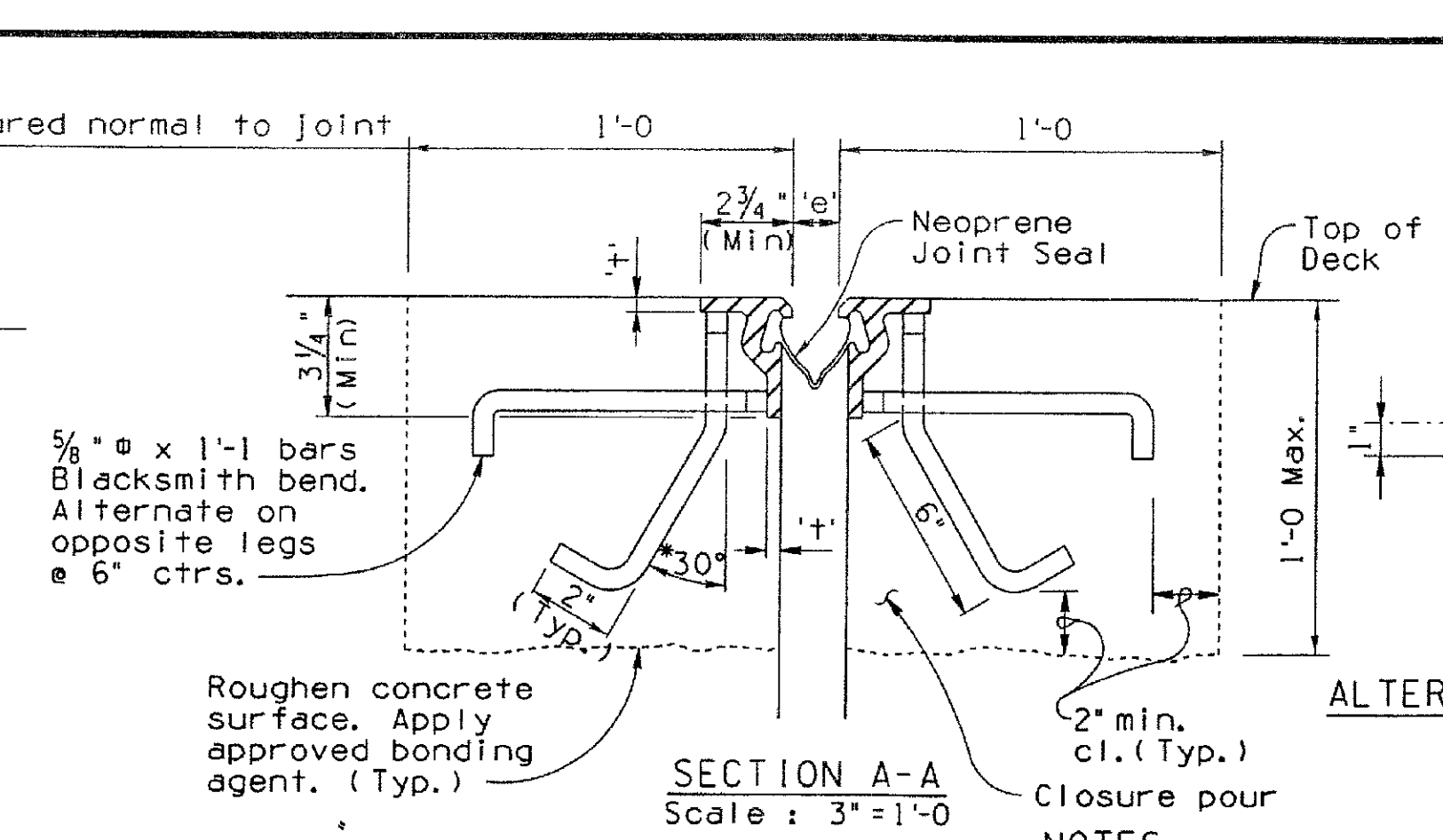
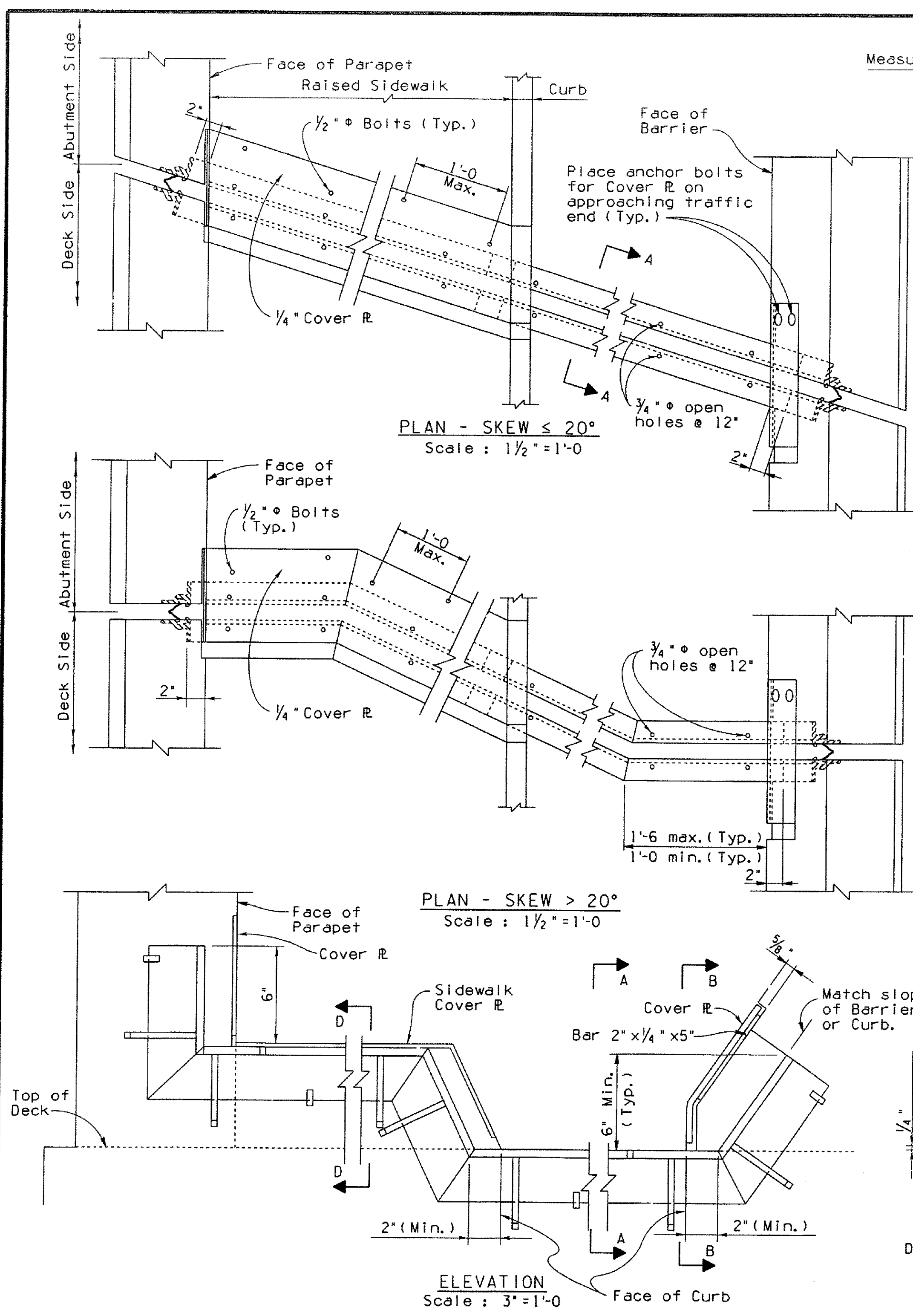
F.H.W.A. REGION	STATE	PROJECT NO.	NO.	TOTAL
9	ARIZ.	ST85100293	204	352

PREMIER
ENGINEERING CORPORATION
6437 W. CHANDLER BLVD., SUITE 1
CHANDLER, AZ 85226 480-829-8000

DES: BAG	DR: JRR	CK: SEO	DATE: 12/09
CONSULTING ENGINEER			

REVISION BY CITY OF PHOENIX		REVISION BY CITY OF PHOENIX		REVISION BY CITY OF PHOENIX		REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION

Note to Designer:
The information presented in this Standard Detail has been prepared in accordance with recognized engineering principles and is for general use. It should not be used for specific application without competent professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the inner border line shall not be altered.



NOTES :

The Strip Seal Joint may be used only for movement ratings of 4 inches or less.

The 'e' value may require recalculation and Movement Rating increased to accommodate minimum installation opening prior to approval of the shop drawings.

Retainer rails may be of A36 or A588 extrusions. Minimum weight per foot = 8.5 Lbs. Minimum thickness, 't' = 3/8 inches. Rails shall be supplied in the maximum length practical consistent with normal manufactured length of the rail. Rail splices when required shall be field welded per DETAIL E.

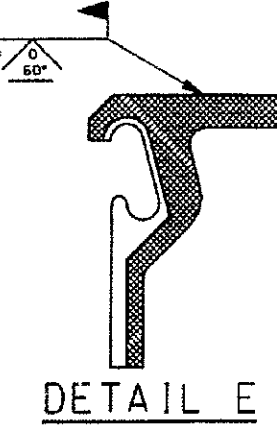
The neoprene seal shall be supplied continuous full length without splices.

Unless noted otherwise extrusions using A36 steel and all plates shall be painted. Surfaces in contact with concrete and recess area for strip seal shall not be painted. A588 extrusions and plates need not be painted.

Joint seal assembly to be used in conjunction with closure pour. (See bridge drawings for limits). Closure pour shall not be placed until final deck surface is within the tolerance specified.

Sidewalk cover plates shall be 1/4" thick galvanized steel with non-slip (deformed) surface. Details may vary from those shown here and shall be shown on the shop drawings.

Item No. 6011345, Deck Joint Assembly (Strip Seal Joint) Measurement: LF.



DESIGN APPROVED <i>Shafiq U. Hasan</i>	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION BRIDGE GROUP STRUCTURE DETAIL
APPROVED FOR DISTRIBUTION <i>J. Daniel Davis</i>	DECK JOINT ASSEMBLY STRIP SEAL
ROUTE	LOCATION
	DRAWING NO. SD 3.02
TRACS NO.	<u> </u> OF <u> </u>

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

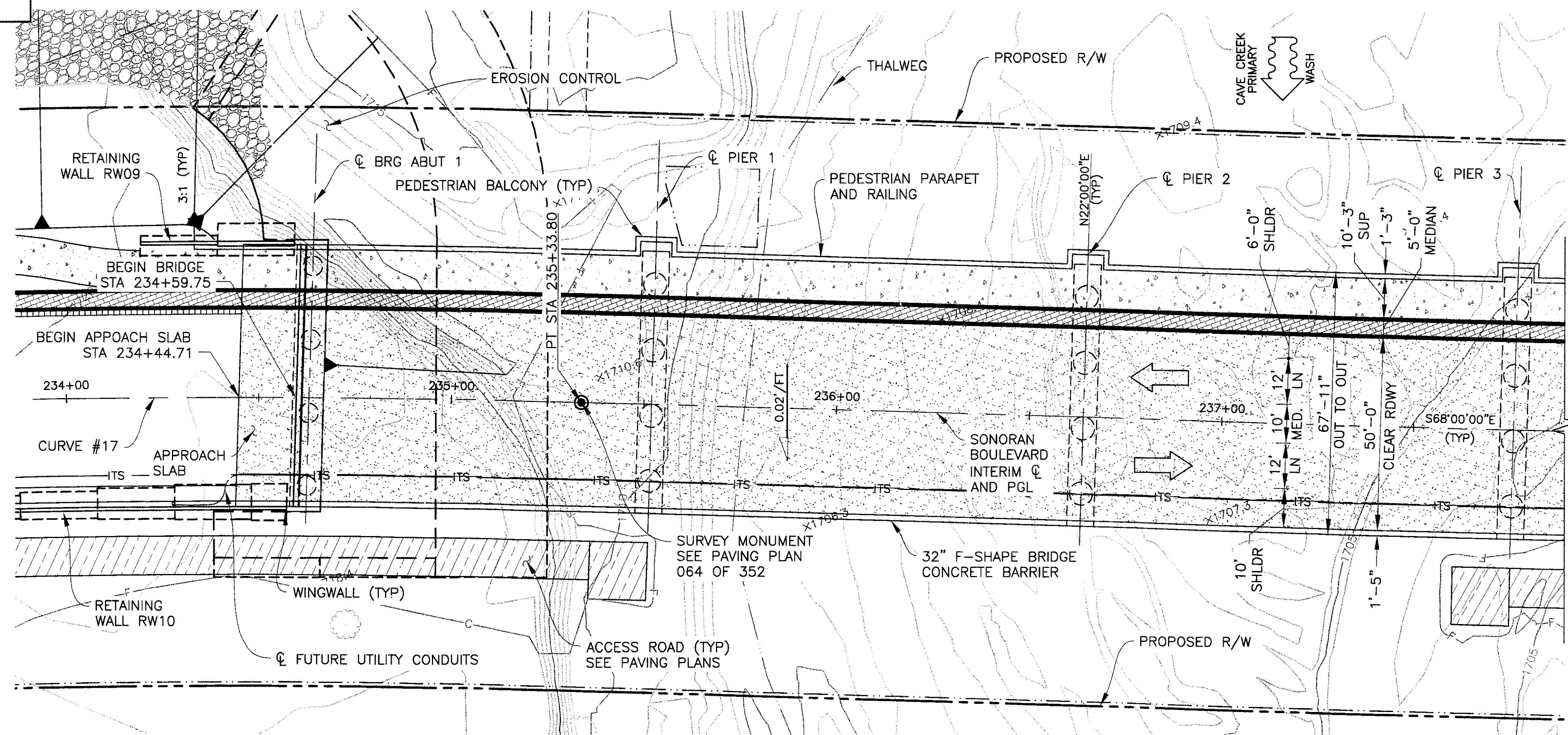
DECK JOINT ASSEMBLY STRIP SEAL	
CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT	
SONORAN BOULEVARD CAVE CREEK SECONDARY ST85100293	
DR:JRR	DES: BAG
DATE: 12/09	DATE: 12/09
DWG NO: S-2.34	CK: SEO
	DATE: 12/09
SHEET NO: 204	TOTAL SHEETS: 352

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Blue Stake Center

SONORAN BOULEVARD
MARICOPA COUNTY
10TH ST TO 26TH ST

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	205	352
<p>PREMIER ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226 480-829-6000 CONSULTING ENGINEER</p>					
DES: RMD		DR: JRR		CK: SEO	DATE: 12/09

REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION



PLAN
SCALE: 1"=20'

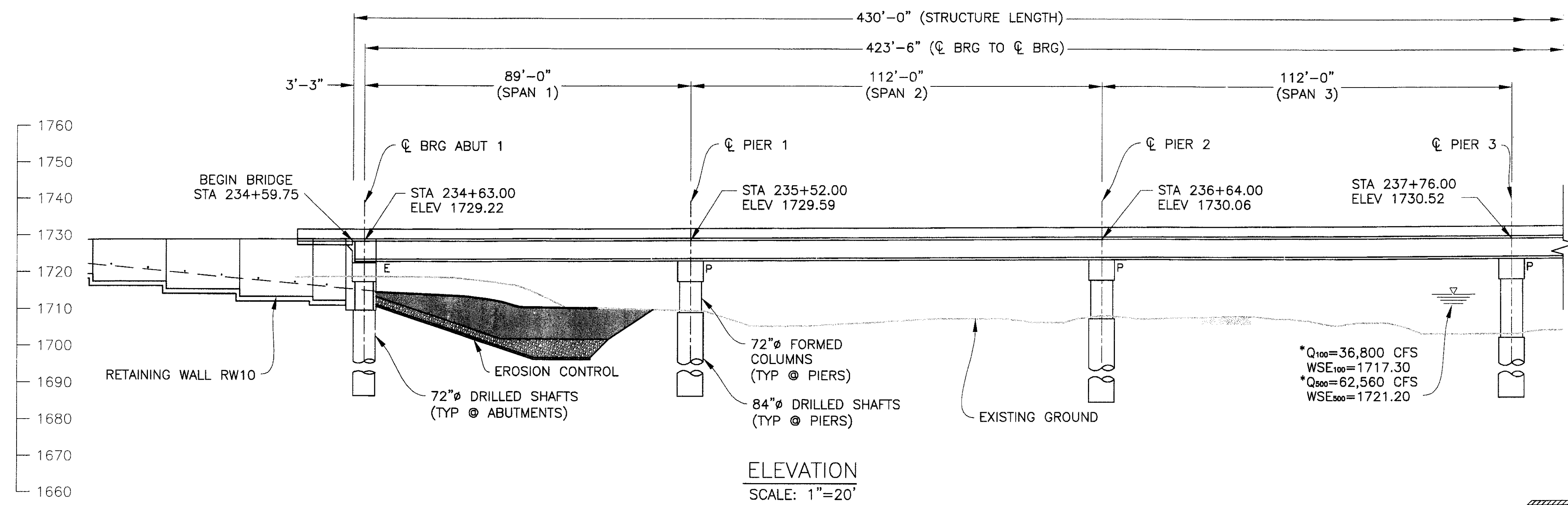
NEW 4 SPAN PRECAST PRESTRESSED CONCRETE AASHTO TYPE V GIRDER BRIDGE
SKEW 0°33'43" RT (ABUTMENT 1), 0° (OTHER SUPPORTS)
1' CONTOUR INTERVAL

INDEX OF DRAWINGS

DRAWING NO.	DRAWING TITLE
S-3.01	GENERAL PLAN AND ELEVATION 1
S-3.02	GENERAL PLAN AND ELEVATION 2
S-3.03	GENERAL NOTES & TYPICAL SECTION QUANTITIES
S-3.04	EXCAVATION AND BACKFILL
S-3.05	FOUNDATION PLAN
S-3.06	DRILLED SHAFT DETAILS
S-3.07	ABUTMENT 1 PLAN AND ELEVATION
S-3.08	ABUTMENT 2 PLAN AND ELEVATION
S-3.09	ABUTMENT DETAILS 1
S-3.10	ABUTMENT DETAILS 2
S-3.11	WINGWALL DETAILS
S-3.12	EROSION CONTROL PLAN
S-3.13	EROSION CONTROL DETAILS
S-3.14	PIER 1 PLAN AND ELEVATION
S-3.15	PIER 2 PLAN AND ELEVATION
S-3.16	PIER 3 PLAN AND ELEVATION
S-3.17	PIER DETAILS
S-3.18	DECK PLAN AND DETAILS
S-3.19	TYPICAL DECK & REINFORCING
S-3.20	GIRDER DETAILS SPAN 1
S-3.21	GIRDER DETAILS SPAN 2
S-3.22	GIRDER DETAILS SPAN 3
S-3.23	GIRDER DETAILS SPAN 4
S-3.24	GIRDER DETAILS
S-3.25	BEARING PAD DETAILS
S-3.26	ABUTMENT DIAPHRAGM DETAILS
S-3.27	PIER DIAPHRAGM DETAILS
S-3.28	DIAPHRAGM SECTIONS
S-3.29	PEDESTRIAN PARAPET AND RAILING DETAILS 1
S-3.30	PEDESTRIAN PARAPET AND RAILING DETAILS 2
S-3.31	PEDESTRIAN BALCONY DETAILS
S-3.32	SHADE STRUCTURE DETAILS
S-3.33	MISCELLANEOUS DETAILS 1
S-3.34	MISCELLANEOUS DETAILS 2
S-3.35	SCREED ELEVATIONS
S-3.36	F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (32") NOMINAL
S-3.37	APPROACH SLAB DETAILS
S-3.38	DECK JOINT ASSEMBLY STRIP SEAL
S-3.39	

NOTES
1. STATIONING DIMENSIONS, AND ELEVATIONS ARE GIVEN ALONG SONORAN BOULEVARD INTERIM CL

CURVE #17
PC=224+33.80
PI=229+90.65
PT=235+33.80
Δ=22'00"00"
D=02'00"00"
R=2864.789
T=556.859'
L=1100.00'



ELEVATION
SCALE: 1"=20'

* NOTE:
COMBINED FLOW FOR PRIMARY
AND SECONDARY CHANNELS

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Blue Stake Center

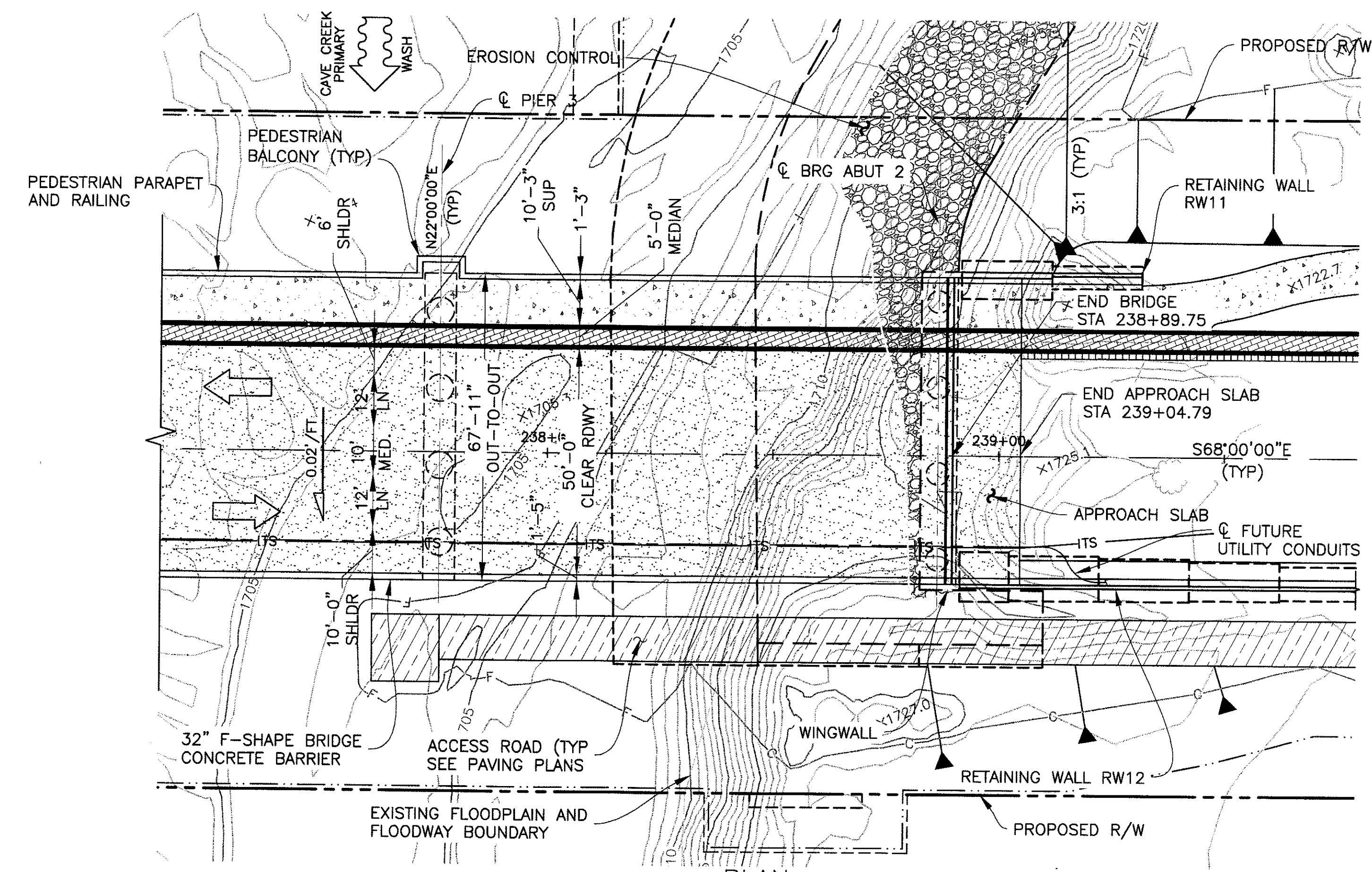
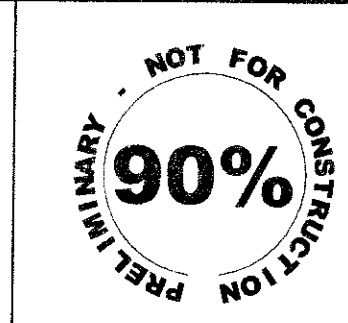
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

GENERAL PLAN AND ELEVATION 1	
CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT	
SONORAN BOULEVARD CAVE CREEK PRIMARY ST85100293	
DR: JRR DATE: 12/09	DES: RMD DATE: 12/09
CK: SEO DATE: 12/09	SHEET NO: 205
TOTAL SHEETS: 352	
DWG NO: S-3.01	

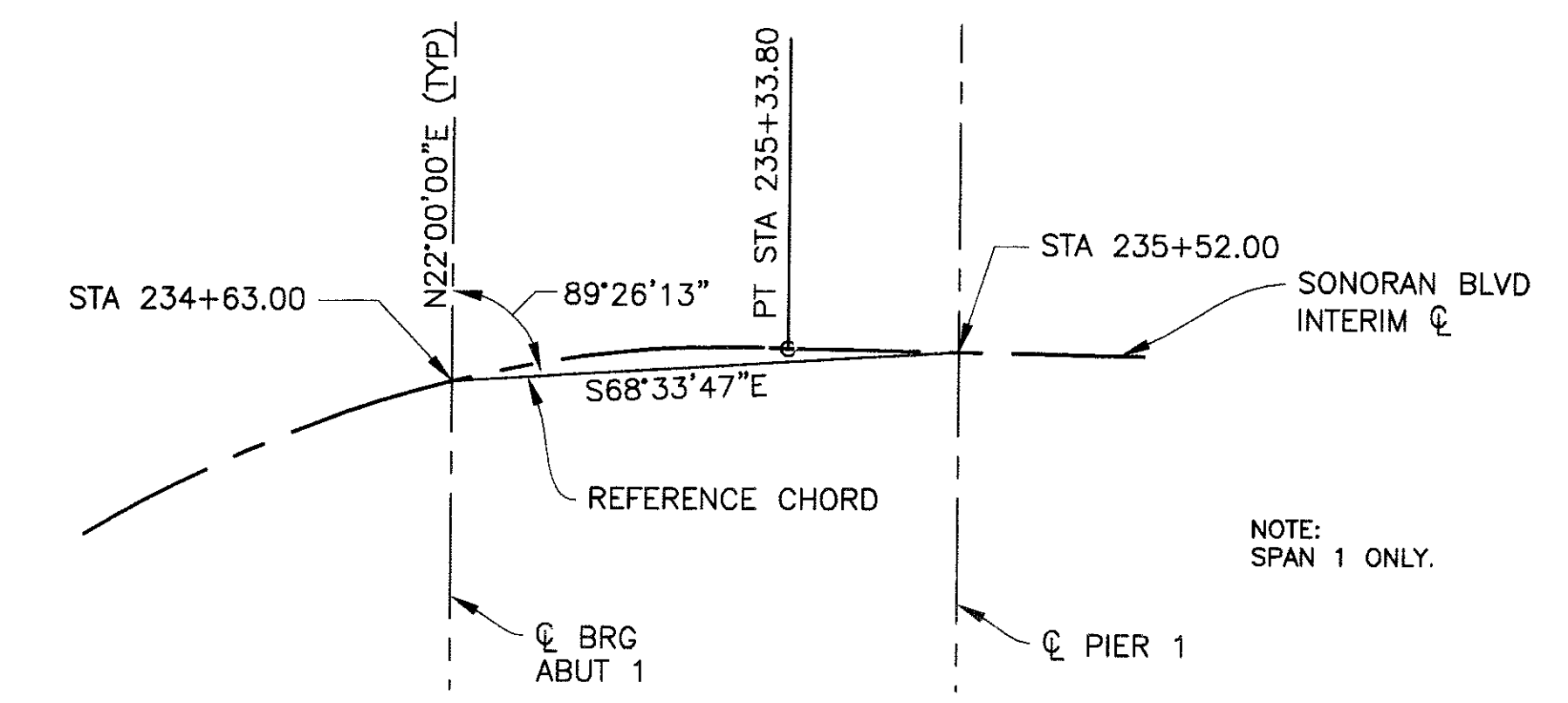
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PREMIER
 ENGINEERING CORPORATION
 6437 W. CHANDLER BLVD., SUITE 1
 CHANDLER, AZ 85226 480-339-8000
 CONSULTING ENGINEER
 DES: RMD DR: JRR CK: SEO DATE: 12/09

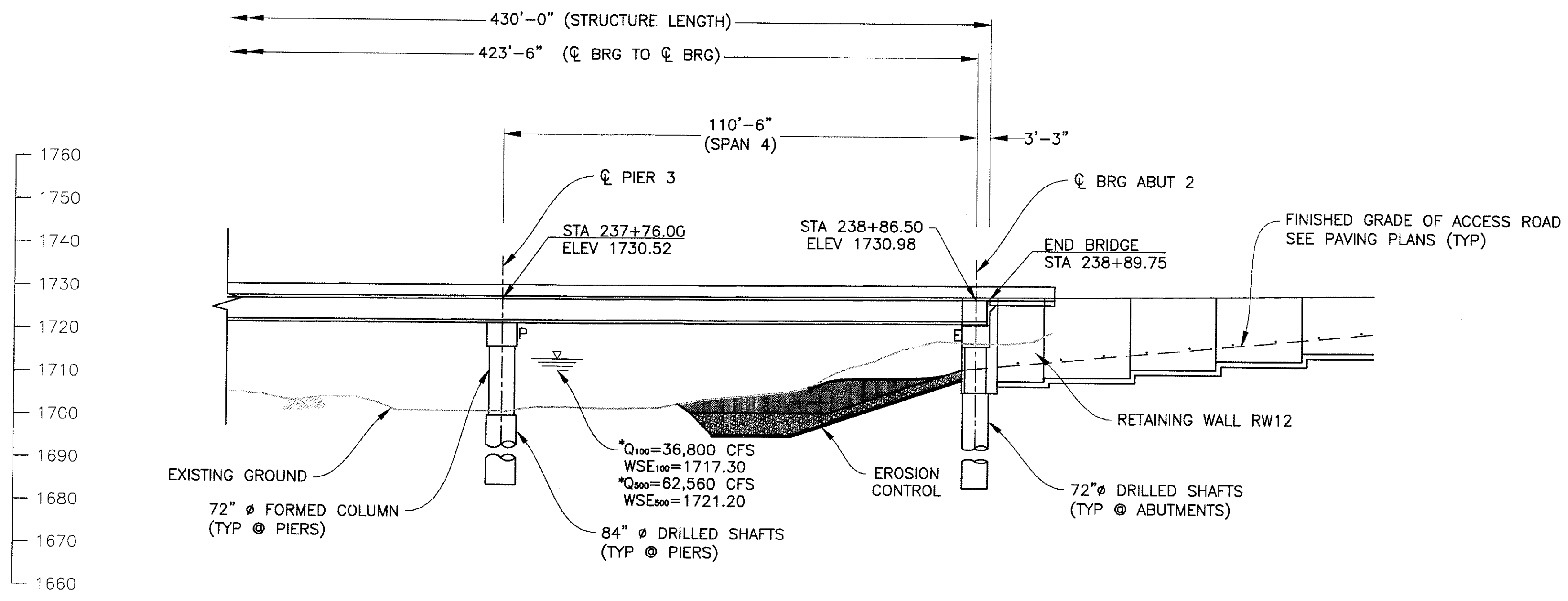
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	206	352



NEW 4 SPAN PRECAST PRESTRESSED CONCRETE AASHTO TYPE V GIRDER BRIDGE
 SKEW 0°33'43" RT (ABUTMENT 1), 0° (OTHER SUPPORTS)
 1' CONTOUR INTERVAL



REFERENCE CHORD
 NTS

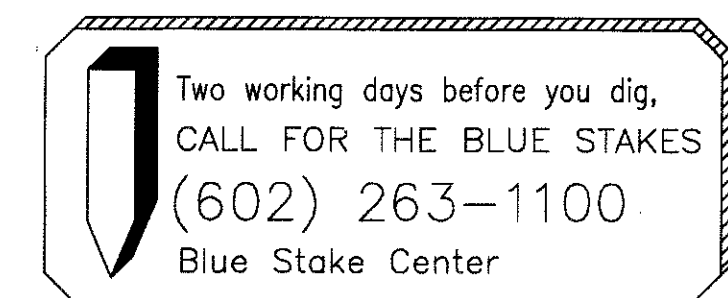


* NOTE:
 COMBINED FLOW FOR PRIMARY
 AND SECONDARY CHANNELS

"PER CITY OF PHOENIX ORDINANCE C-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

GENERAL PLAN AND ELEVATION 2
 CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
 CAVE CREEK PRIMARY
 ST85100293**



DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	206	352
DWG NO: S-3.02				

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

P:\2008005\CADD\Sheets\Structures\302-CC Primary_Plan and Elev(2).dwg - plotted by James Rojas at 12/21/2009 9:02:28 AM

GENERAL NOTES

DESIGN SPECIFICATIONS

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CUSTOMARY US UNITS, FOURTH EDITION, 2007 AND REVISIONS TO DATE.

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION AND REVISIONS TO DATE.

CONSTRUCTION SPECIFICATIONS

MARICOPA ASSOCIATION OF GOVERNMENTS (MAG), UNIFORM STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION AND REVISION DATE.

CITY OF PHOENIX SUPPLEMENT TO MAG UNIFORM STANDARD SPECIFICATIONS.

ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2008 EDITION. APPLICABLE WHEN REFERENCED IN THESE PLANS AND AREAS NOT COVERED BY MAG SPECIFICATION.

MAG SPECIFICATIONS SHALL TAKE PRECEDENCE OVER ADOT SPECIFICATIONS, UNLESS NOTED OTHERWISE.

DESIGN LOADINGS

LIVE LOAD, HL-93 (LRFD)

DEAD LOAD INCLUDES ALLOWANCES OF 25 PSF FOR FUTURE WEARING SURFACE.

THE SUPERSTRUCTURE IS DESIGNED AS A COMPOSITE SECTION WITH THE TOP 2" OF SLAB THICKNESS REMOVED FROM THE DESIGN SECTION PROPERTIES TO ACCOUNT FOR GRINDING, GROOVING & WEARING.

SEISMIC PERFORMANCE ZONE I (ACCELERATION COEFFICIENT OF 0.04).

DESIGN MAXIMUM SCOUR 38'-6"

RATING

RATING FACTORS ARE BASED ON LRFR METHODOLOGY AND HL-93 LOADING.

INVENTORY1.33
OPERATING2.01

CONCRETE STRESSES

DECK, DIAPHRAGMS..... f'c = 4500 psi - CLASS S
MEDIAN..... f'c = 4000 psi - CLASS S
ABUTMENTS, PIERS, COLUMNS f'c = 3500 psi - CLASS S
GIRDERS f'c = VARIES - SEE GIRDER SHTS
DRILLED SHAFTS f'c = 3500 psi - CLASS S
CONCRETE f'c = 3000 psi - CLASS S

REINFORCING STEEL SHALL CONFORM TO ASTM A615 EXCEPT WHERE ASTM A706 IS SPECIFIED FOR WELDABILITY. ALL REINFORCING STEEL SHALL BE FURNISHED AS GRADE 60.

PRESTRESSING STEEL SHALL CONFORM TO ASTM A416 GRADE 270 LOW RELAXATION 7-WIRE STRAND.

ALL BENDS AND HOOKS SHALL MEET THE REQUIREMENTS OF AASHTO LRFD SECTION 5.10.2. ALL BEND DIMENSIONS FOR REINFORCING STEEL SHALL BE OUT-TO-OUT OF BARS. ALL PLACEMENT DIMENSIONS FOR REINFORCING STEEL SHALL BE CENTER OF BARS UNLESS NOTED OTHERWISE.

ALL REINFORCING STEEL SHALL HAVE 2 INCH CLEAR COVER, UNLESS NOTED OTHERWISE.

CHAMFER ALL EXPOSED CORNERS 3/4" UNLESS NOTED OTHERWISE.

BRIDGE BARRIERS SHALL NOT BE CAST BY THE SLIP-FORM METHOD.

ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY BRIDGE WELDING CODE D1.5-2002, UNLESS NOTED OTHERWISE.

ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A36, UNLESS NOTED OTHERWISE.

DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.

STRUCTURE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATION AND THE SPECIAL PROVISIONS.

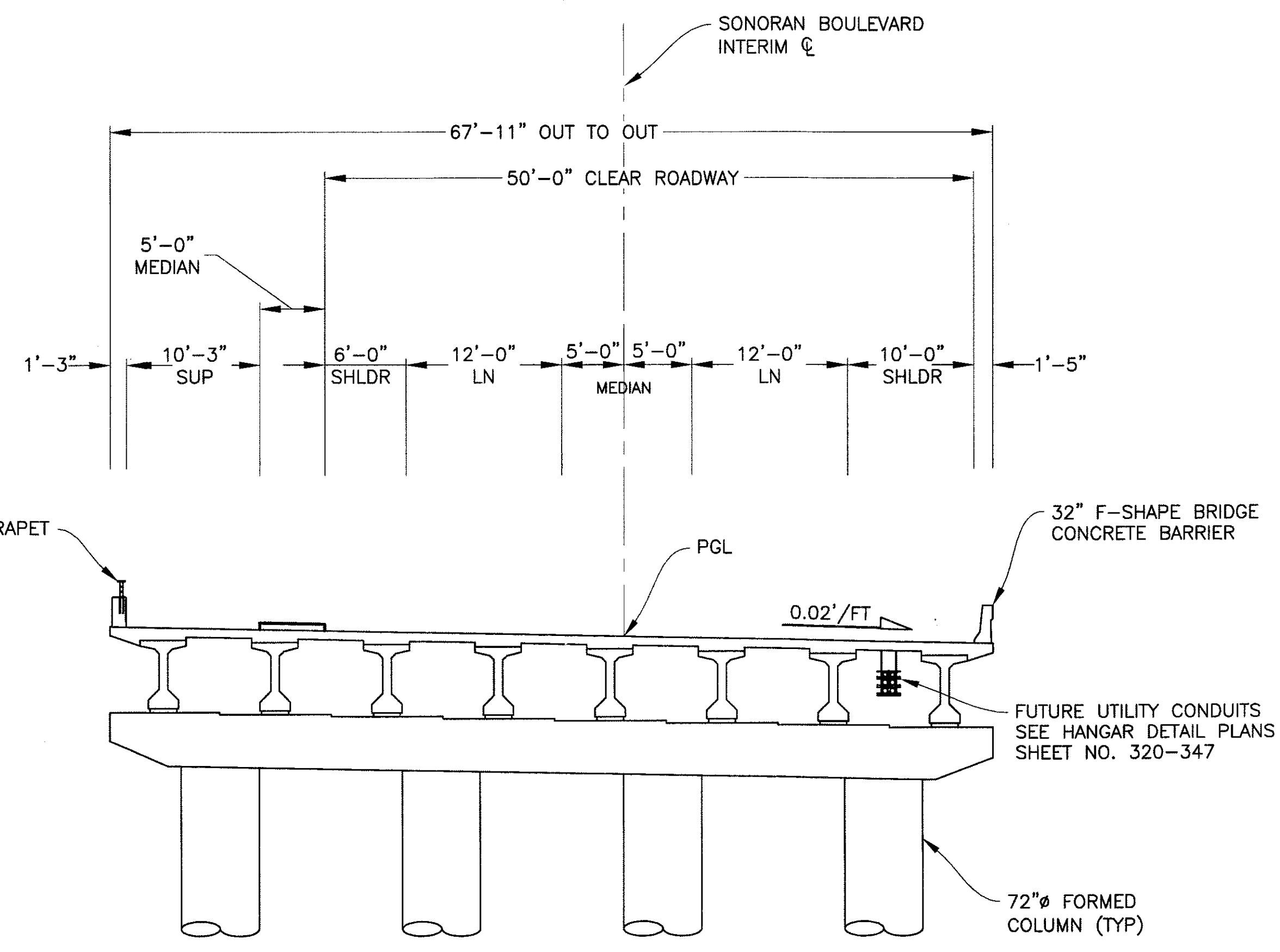
ABBREVIATIONS

@	ANCHOR BOLT	LT	LONGIT
AB	ABUTMENT	MAX	MAXIMUM
ADD'L	ADDITIONAL	MI	MILES
APPROX	APPROXIMATE	MIN	MINIMUM
B/B	BACK-TO-BACK	MISC	MISCELLANEOUS
BIT	BITUMINOUS	MOD	MODIFIED
BM	BEAM	NB	NORTH BOUND
BOTT	BOTTOM	NIC	NOT IN CONTRACT
BRG	BEARING	NO.#	NUMBER
BTWN	BETWEEN	NTS	NOT TO SCALE
CL	CENTERLINE	OC	ON CENTER
CIP	CAST-IN-PLACE	OD	OUTSIDE DIAMETER
C	CENTER	OPNG	OPENING
CLR	CLEAR YARDS	P	PINNED
COL	COLUMN	PGL	PROFILE GRADE LINE
CONC	CONCRETE	R	PLATE
CONT	CONTINUOUS	PSI	POUNDS PER SQUARE INCH
CST	CONSTRUCTION	PVC	POLYVINYL CHLORIDE
DIAG	DIAGONAL	PED	PEDESTRIAN
DIA.Ø	DIAMETER	R	RADIUS
DIAPH	DIAPHRAGM	R/W	RIGHT OF WAY
DTL	DETAIL	RDWY	ROADWAY
DWG	DRAWING	REINF	REINFORCEMENT
EA	EACH	REQ'D	REQUIRED
EB	EAST BOUND	RET	RETAINING
EF	EACH FACE	RT	RIGHT
ELEV	ELEVATION	SB	SOUTH BOUND
EMBED	EMBEDMENT	SCHED	SCHEDULE
EQ	EQUAL	SECT	SECTION
EW	EACH WAY	SF	SQUARE FOOT
EXIST	EXISTING	SHLDR	SHOULDER
EXP.E	EXPANSION	SHT	SHEET
EXT	EXTERIOR	SIM	SIMILAR
F	FIXED	SPA	SPACE
FIN	FINISHED	SPECS	SPECIFICATION
FLR	FLOOR	STA	STATION
FTG	FOOTING	STD	STANDARD
GA	GAUGE	STL	STEEL
GALV	GALVANIZED	STR	STRUCTURAL
GR	GRADE	SWLK	SIDEWALK
HS	HIGH STRENGTH	SY	SQUARE YARD
HK	HOOK	SYM	SYMMETRICAL
HORIZ	HORIZONTAL	TOW	TOP OF WALL
ID	INSIDE DIAMETER	TEMP	TEMPORARY
INT	INTERIOR	TRANS	TRANSITION
JT	JOINT	TYP	TYPICAL
LBS	POUNDS	VERT	VERTICAL
LF	LINEAR FOOT	W	WITH
LN	LANE	WB	WEST BOUND
LS	LUMP SUM	WSE	WATER SURFACE ELEVATION

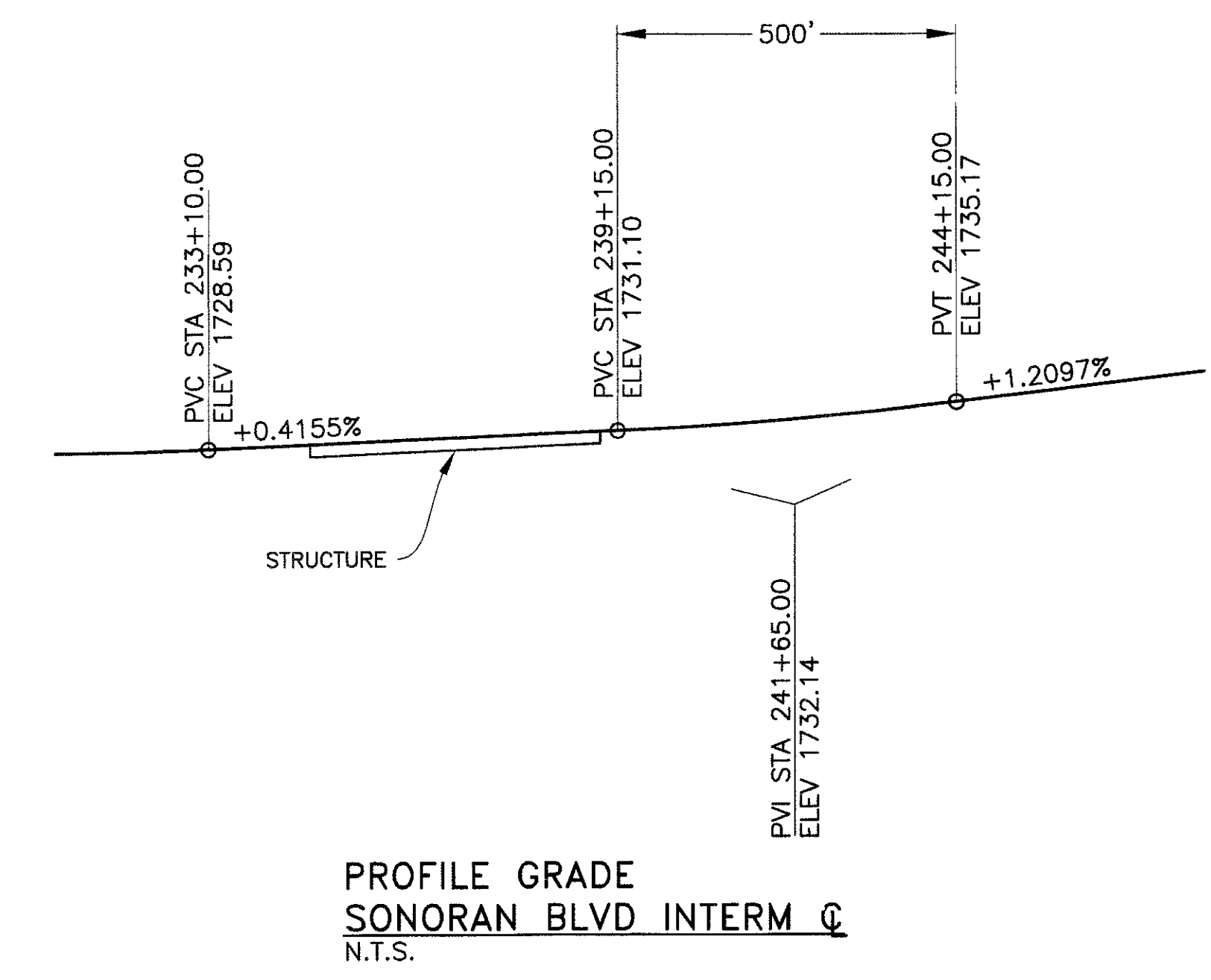
	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	207	352
PREMIER					
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-8000					
DES: RMD	DR: JRR	CK: SEO	DATE: 12/09	CONSULTING ENGINEER	

LEGEND:

TITLE/DETAIL MARKER		DETAIL NUMBER
		DRAWING NUMBER
SECTION MARKER		SECTION LETTER
		DRAWING NUMBER
ELEVATION MARKER		ELEVATION LETTER
		DRAWING NUMBER



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



PROFILE GRADE
SONORAN BLVD INTERM
N.T.S.

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GENERAL NOTES & TYPICAL SECTION
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	207	352
DWG NO: S-3.03				

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

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F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	208	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6090				
DES: RMD		DR: JRR		DATE: 12/09
			CK: SEO	

ITEM	STRUCTURE EXCAVATION	STRUCTURE BACKFILL	CONCRETE			REINFORCING STEEL	AASHTO GIRDER TYPE V	72" Ø DRILLED SHAFT	84" Ø DRILLED SHAFT	32" F-SHAPE BRIDGE CONCRETE BARRIER	PEDESTRIAN PARAPET AND RAILING
			CLASS S (f'c=3500 psi)	CLASS S (f'c=4000 psi)	CLASS S (f'c=4500 psi)						
			CY	CY	CY						
ABUTMENT 1	165	85	197			27,610		394			
ABUTMENT 2	215	90	221			31,140		387			
PIER 1			161			32,440					
PIER 2			163			32,995			380		
PIER 3			165			33,495			380		
SUPERSTRUCTURE				26	1,197	280,785	3,364			753	513
TOTAL	380	175	907	26	1,197	438,465	3,364	781	1,140	753	513
AS BUILT											

APPROACH SLABS..... 2,038 SF
 DECK JOINT ASSEMBLIES (STRIP SEAL)..... 131 LF
 ELASTOMERIC BEARING PADS..... 64 EA
 UTILITY HANGERS AND CONDUITS..... 436 LF

REVISION BY CITY OF PHOENIX

NO.

REVISION BY CITY OF PHOENIX

NO.

REVISION BY CITY OF PHOENIX

NO.

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QUANTITIES

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

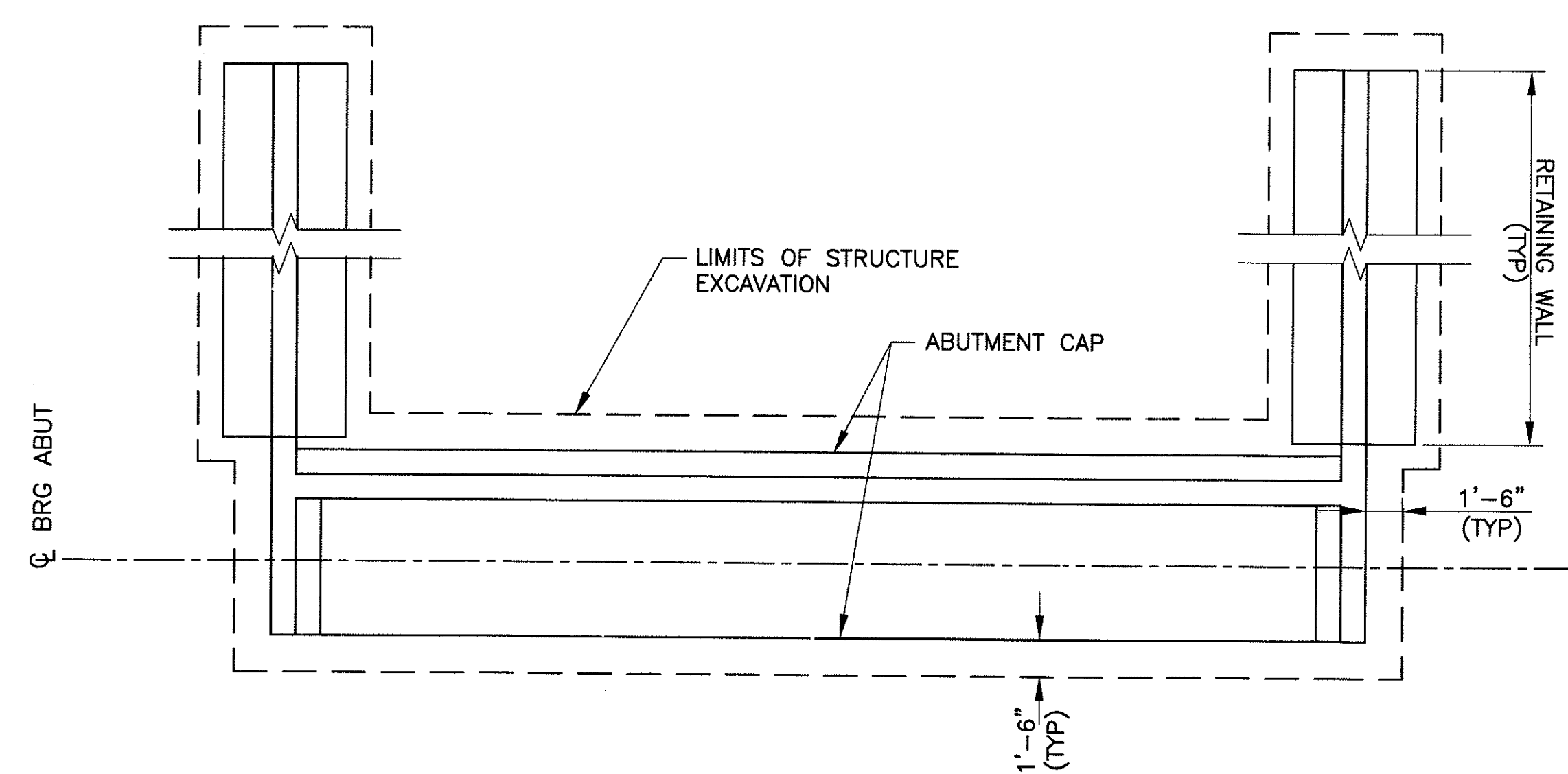
Two working days before you dig,
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DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	208	352
DWG NO: S-3.04				

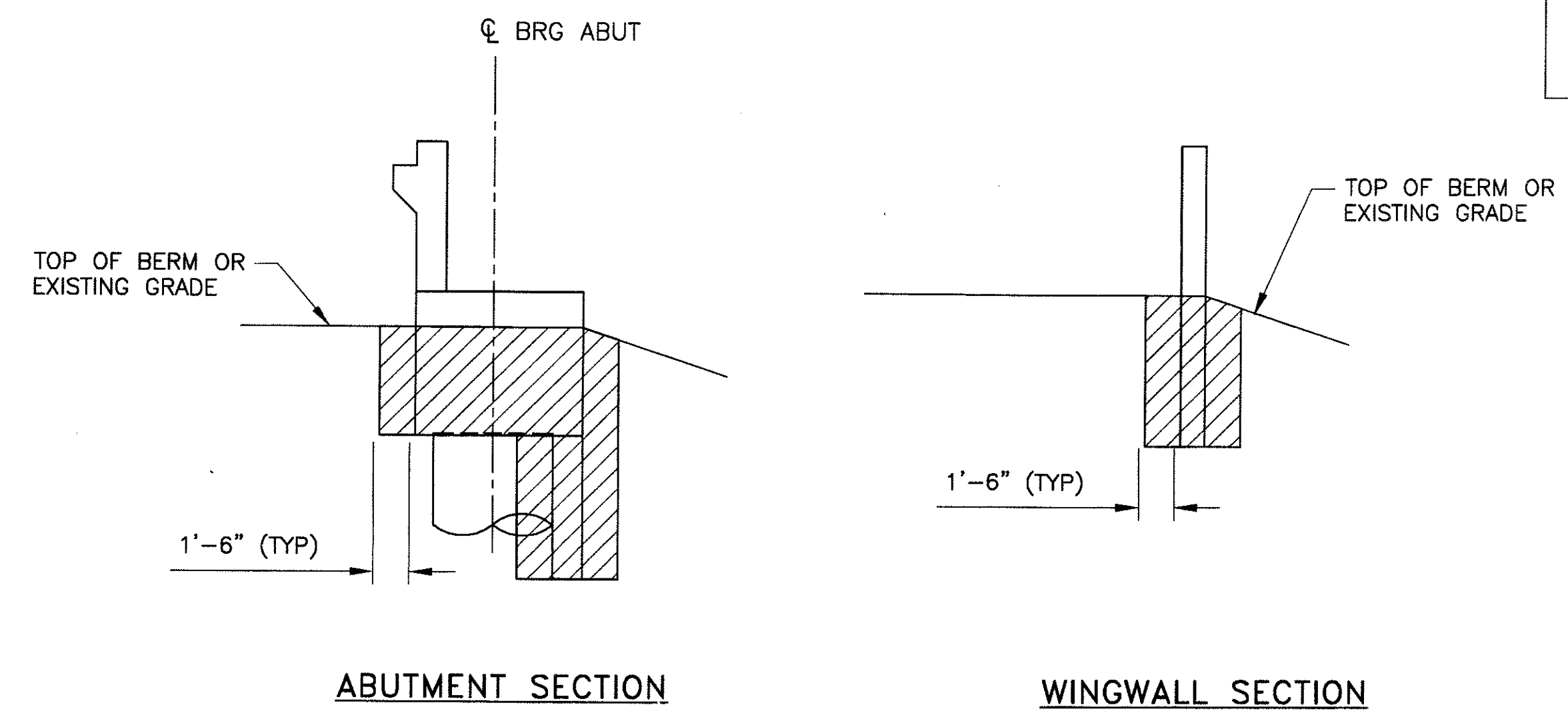
PRELIMINARY - NOT FOR CONSTRUCTION
90%

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	209	352
DES: BAG		DR: JRR	CK: SEO	DATE: 12/09
PREMIER				
ENGINEERING CORPORATION 8437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-8000				
CONSULTING ENGINEER				

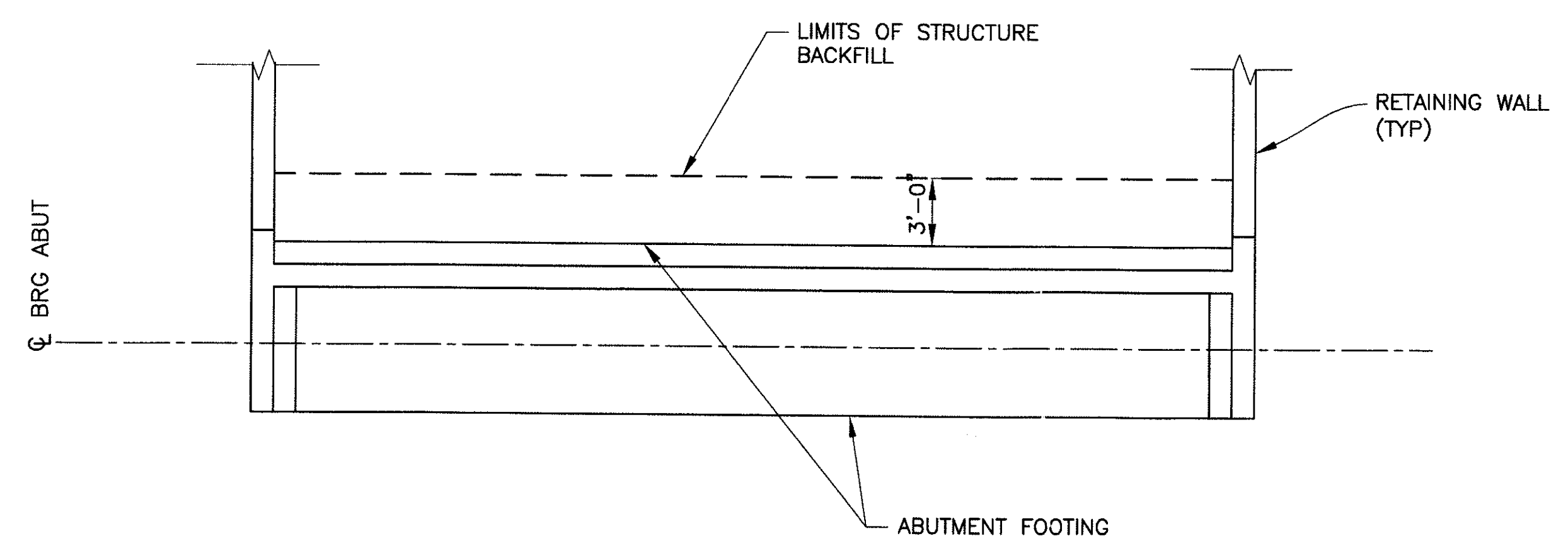
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NO.			



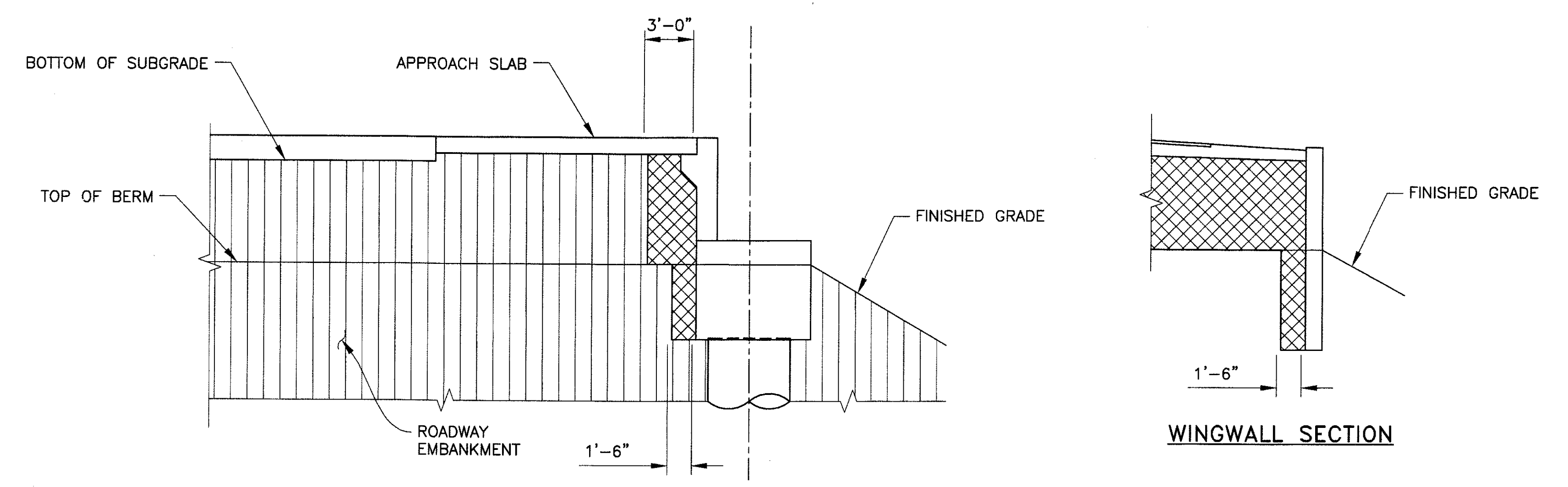
PLAN OF STRUCTURE EXCAVATION AT ABUTMENTS
 ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR
 SCALE: 3/16" = 1'-0"



STRUCTURE EXCAVATION PAYMENT LIMITS
 SCALE: 3/16" = 1'-0"



PLAN OF STRUCTURE BACKFILL AT ABUTMENTS
 ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR
 SCALE: 3/16" = 1'-0"



ABUTMENT SECTION

STRUCTURE BACKFILL PAYMENT LIMITS
 SCALE: 3/16" = 1'-0"

LEGEND

- INDICATES STRUCTURE EXCAVATION
- INDICATES STRUCTURE BACKFILL
- ROADWAY EMBANKMENT

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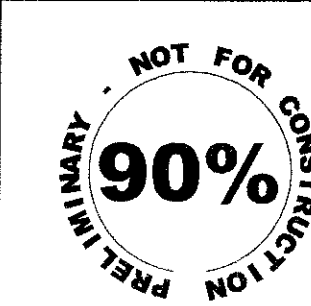
EXCAVATION AND BACKFILL

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	209	352
DWG NO: S-3.05				

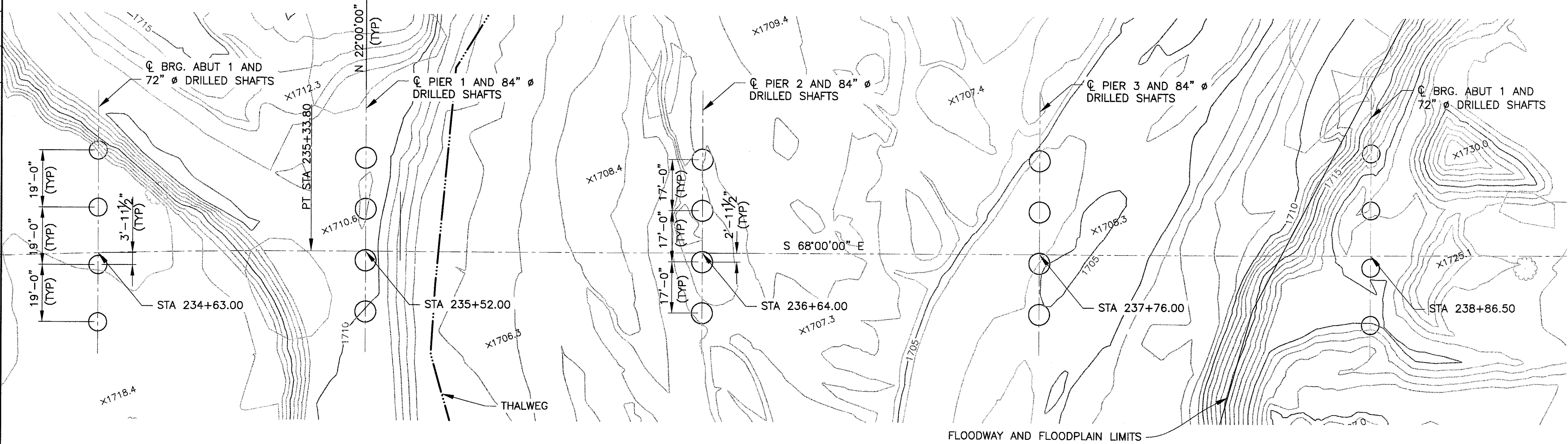
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 PlotScale: 1:1 - Scale: 0.2500 - penColor: PREMIER.CPL



F.H.W.A. REGION 9	STATE ARIZ.	PROJ. NO. ST85100293	NO. 210	TOTAL 352
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PREMIER ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000			CONSULTING ENGINEER	
DES: RMD	DR: JRR	CK: SEO	DATE: 12/09	

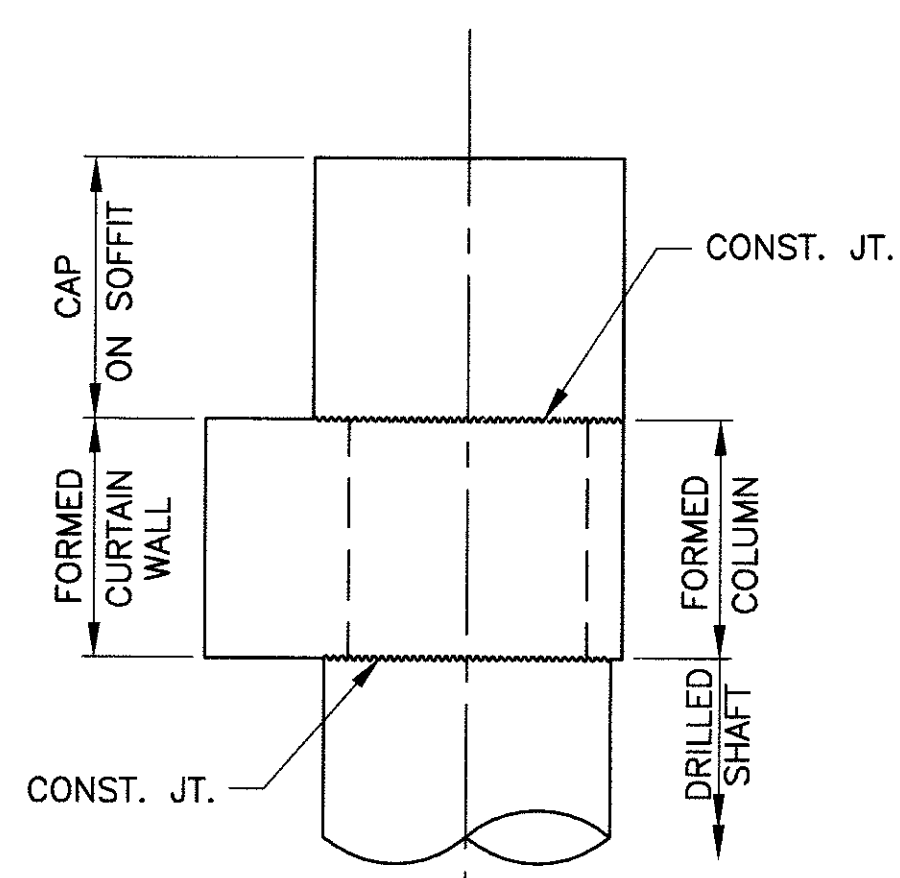
REVISION BY CITY OF PHOENIX		NO.	DESCRIPTION	REV. BY	CHK. BY	DATE
REVISION BY CITY OF PHOENIX		NO.	DESCRIPTION	REV. BY	CHK. BY	DATE
REVISION BY CITY OF PHOENIX		NO.	DESCRIPTION	REV. BY	CHK. BY	DATE
REVISION BY CITY OF PHOENIX		NO.	DESCRIPTION	REV. BY	CHK. BY	DATE



FOUNDATION PLAN
SCALE: 1"=20'-0"

DRILLED SHAFT NOTES:

- DESIGN LOADS
ABUTMENTS..... 858 KIPS (EXTREME EVENT LIMIT STATE)
PIERS 1564 KIPS (STRENGTH LIMIT STATE)
- NO NEW SHAFT DRILLING IS PERMITTED WITHIN 4 SHAFT DIAMETERS MEASURED CENTER TO CENTER UNTIL 48 HOURS AFTER THE CONCRETING OF THE DRILLED SHAFT
- IF SLURRY ASSISTED DRILLING IS REQUIRED, PROVIDE 6-2 1/2" DIA. SCHEDULE 80 RIGID PVC PIPES SPACED EQUALLY AS SHOWN TO ALLOW INSPECTION OF THE DRILLED SHAFT FOUNDATIONS BY MEANS OF GAMMA RAY LOGGING DEVICE. SECURELY TIE THE PIPE TO THE INSIDE OF THE REINFORCING CAGE AND EXTEND FROM THE BOTTOM OF THE REINFORCING CAGE TO 12" ABOVE THE TOP OF DRILLED SHAFTS WITH CAPS AT EACH END.
- THE LENGTH OF DRILLED SHAFT IS BASED ON A COMBINATION OF END BEARING AND SIDE FRICTION RESISTANCE OF THE SHAFT LENGTH BELOW THE MAXIMUM ANTICIPATED SCOUR DEPTH, AND IS THE MINIMUM LENGTH REQUIRED.



DRILLED SHAFTS - COLUMNS - WALLS
PAYMENT LIMIT
SCALE: 1/4"=1'-0"

CONSTRUCTION SEQUENCE FOR ABUTMENT:

THE FOLLOWING CONSTRUCTION SEQUENCE IS SPECIFIED FOR THE CONSTRUCTION OF ABUTMENT DRILLED SHAFTS, COLUMNS, CURTAIN WALL AND CAP BEAM. SEE DRILLED SHAFT-COLUMN-WALL PAYMENT LIMIT.

- STEP 1: DRILLED SHAFT: CONSTRUCT DRILLED SHAFTS AS SHOWN ON PLANS UP TO THE CONSTRUCTION JOINT BETWEEN DRILLED SHAFTS AND FORMED COLUMNS PORTION OF ABUTMENT FOUNDATION.
- STEP 2: FORMED COLUMN: USE FORMS TO CONSTRUCT COLUMNS FROM THE CONSTRUCTION JOINT TO THE BOTTOM OF ABUTMENT CAP.
- STEP 3: CURTAIN WALLS: PLACE DOWELS IN THE COLUMNS AS SHOWN IN PLANS. USE FORMS TO CONSTRUCT CURTAIN WALLS. WALLS SHALL BE BUILT UP TO THE BOTTOM OF ABUTMENT CAP BEAM.
- STEP 4: BACKFILL: PLACE BACKFILL UP TO THE BOTTOM OF CAP BEAM AND COMPACT AS PER SPECIFICATION.
- STEP 5: ABUTMENT CAP: CONSTRUCT CAP BEAM ON SOFFIT.

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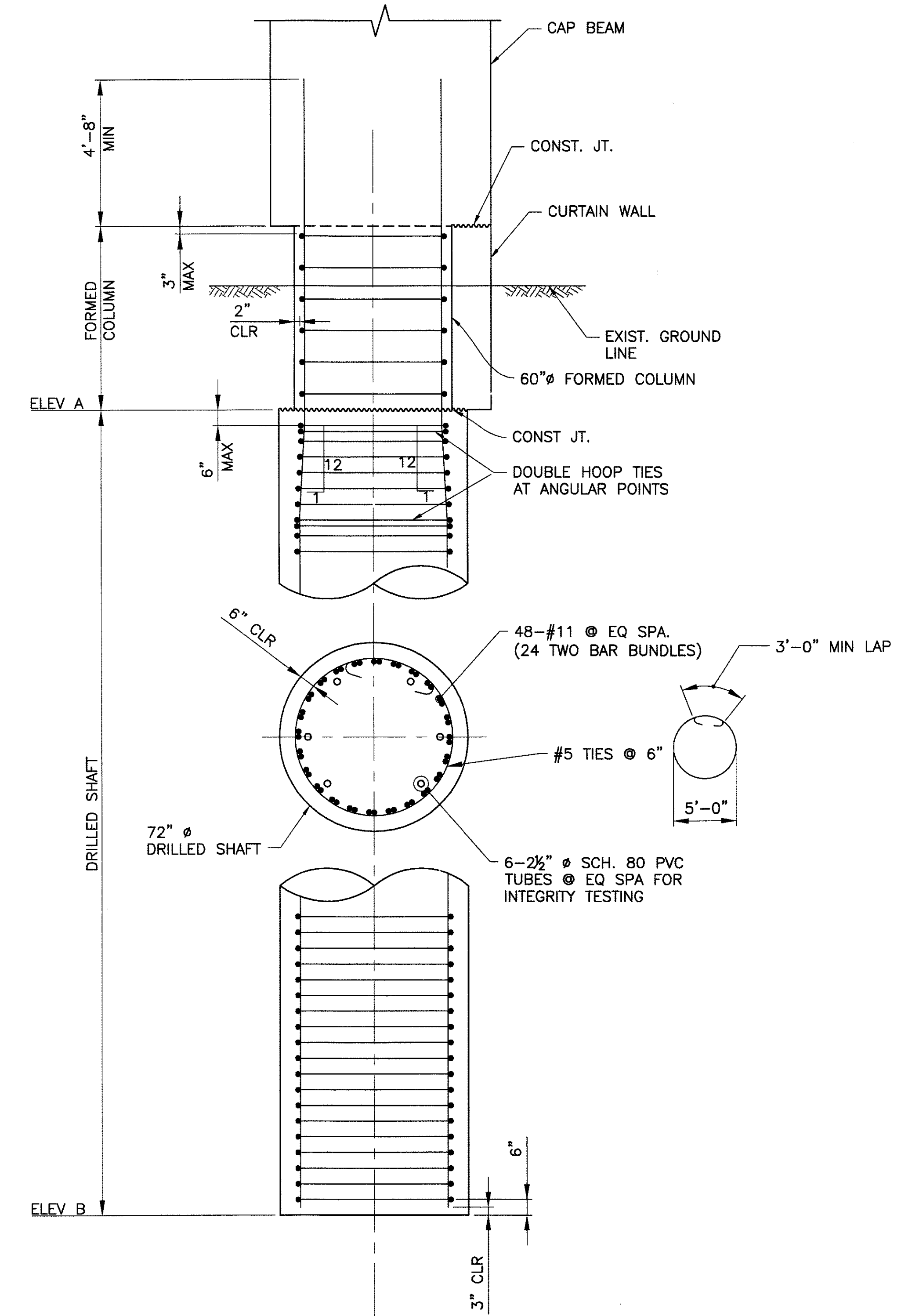
FOUNDATION PLAN
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

Two working days before you dig,
CALL FOR THE BLUE STAKES
(602) 263-1100
Blue Stake Center

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	210	352
DWG NO: S-3.06				

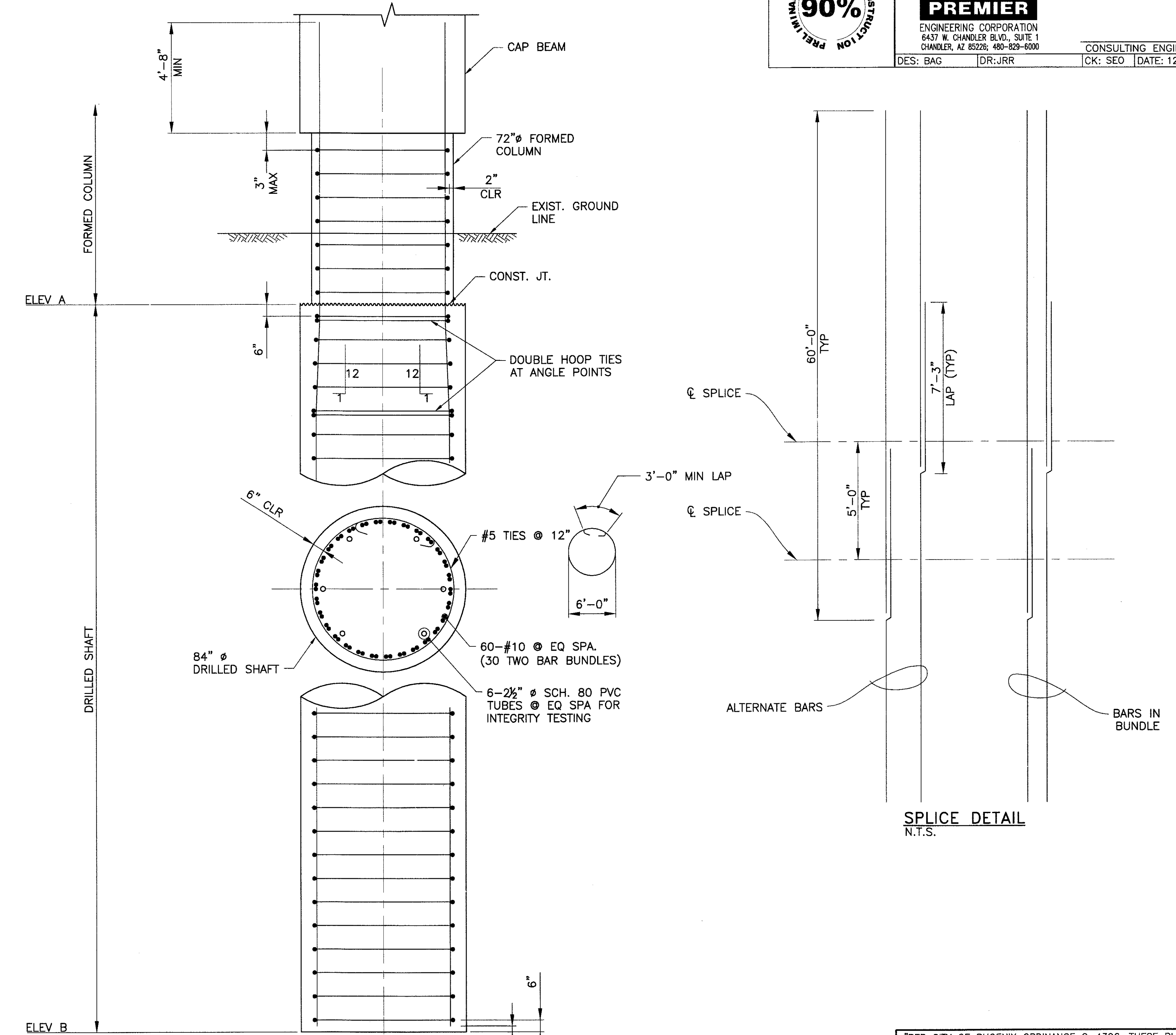
P:\2008055\CADD\Sheeta\Structure\05-CC Primary Foundation - Plans.dwg - plotted by James Rojas at 12/21/2009 9:02:55 AM

REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION



DRILLED SHAFT AT ABUTMENT #1 AND #2
SCALE = 3/8" = 1'-0"

DRILLED SHAFT ELEVATIONS		
	ELEVATION A	ELEVATION B
ABUTMENT 1	1710.44	1612.00
ABUTMENT 2	1708.70	1612.00
PIER 1	1703.00	1608.00
PIER 2	1703.00	1608.00
PIER 3	1703.00	1608.00



DRILLED SHAFT AT PIER
SCALE = 3/8" = 1'-0"

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DRILLED SHAFT DETAILS

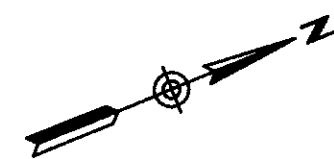
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293**

DR: JRR	DES: BAG	CK: SEO	SHEET NO.	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	211	352
DWG NO: S-3.07			211	352

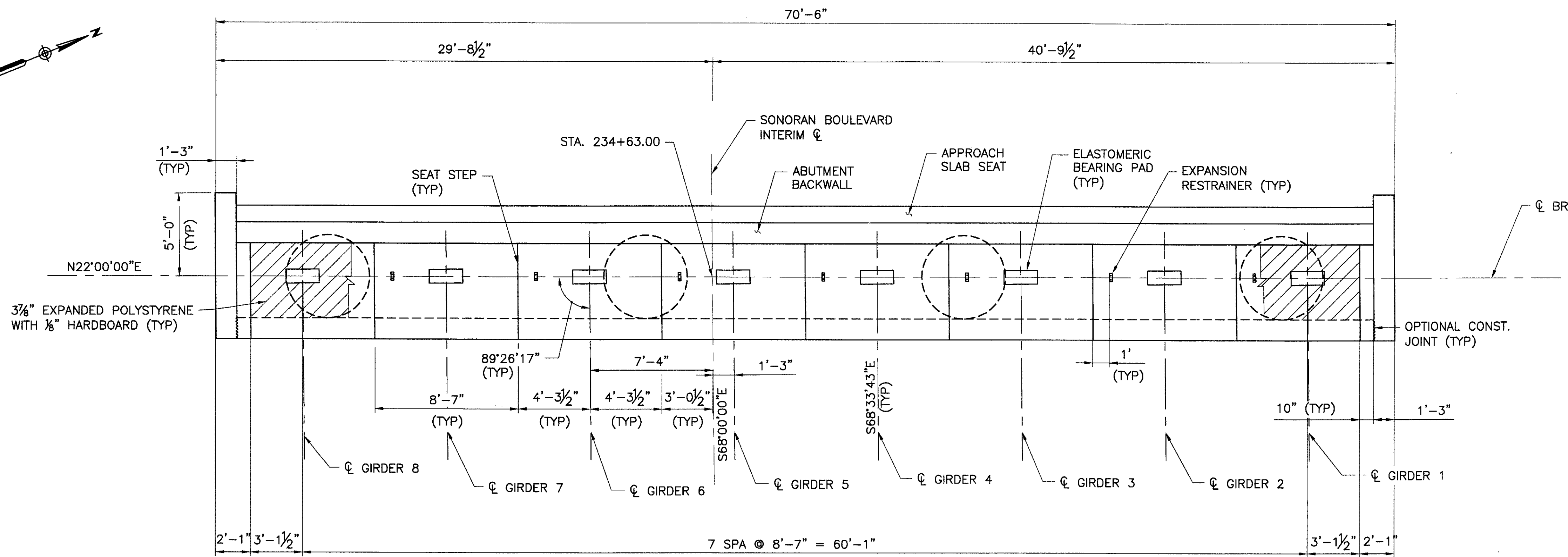
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P:\2008025\CADD\Civil\Sheets\Structures\307-CC Primary Drilled Shaft details.dwg - plotted by James Rojas at 12/21/2009 9:03:00 AM - plotdate: 11 - license: 1.0000 - penable: PREMIERCIB

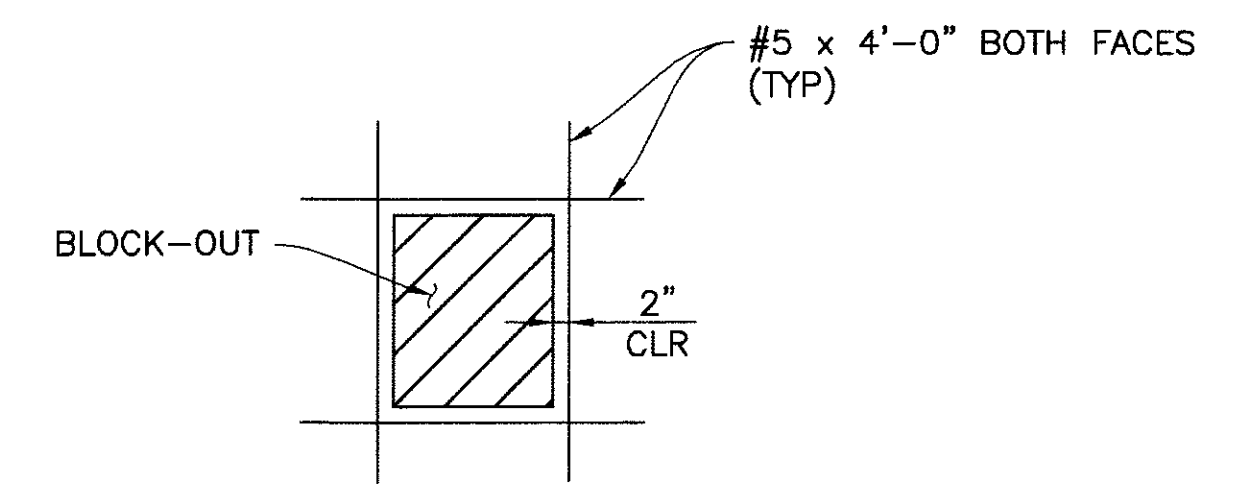


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	212	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				
DES: RMD		DR: JRR		CONSULTING ENGINEER CK: SEO DATE: 12/09

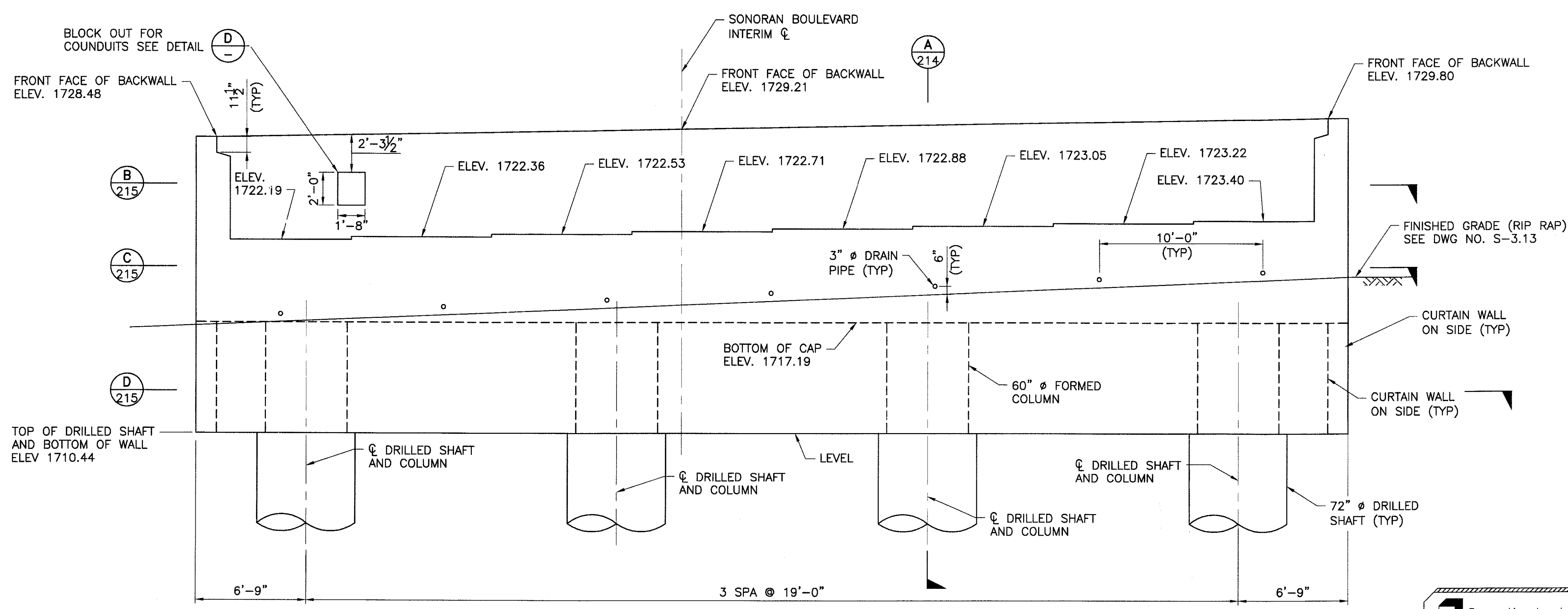
PRELIMINARY 90% NOT FOR CONSTRUCTION



NOTE:
ALL DIMENSIONS MEASURED ALONG
CL BRG. EXCEPT AS NOTED



(ADDITIONAL REINFORCEMENT @ BLOCK-OUT)
NOTE:
CUT WALL REINFORCEMENT AS NECESSARY.



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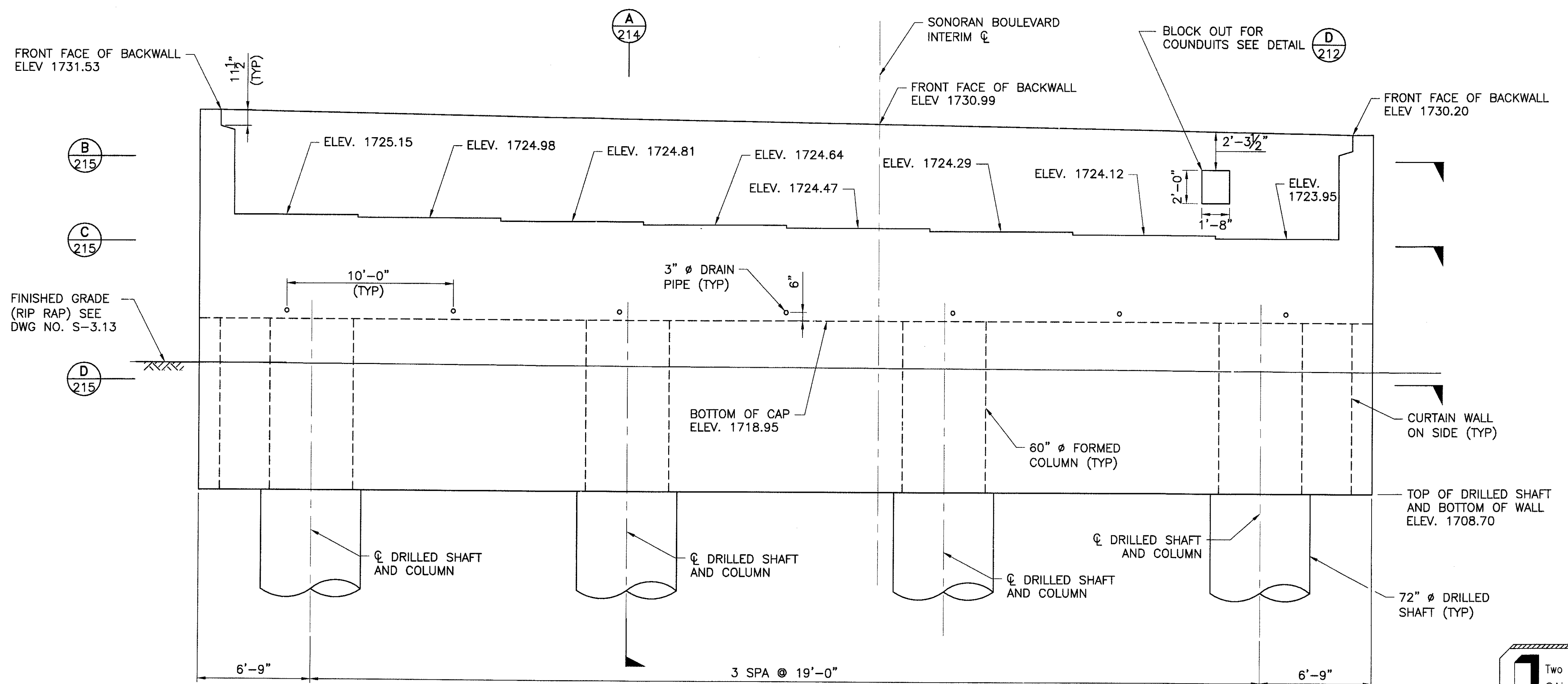
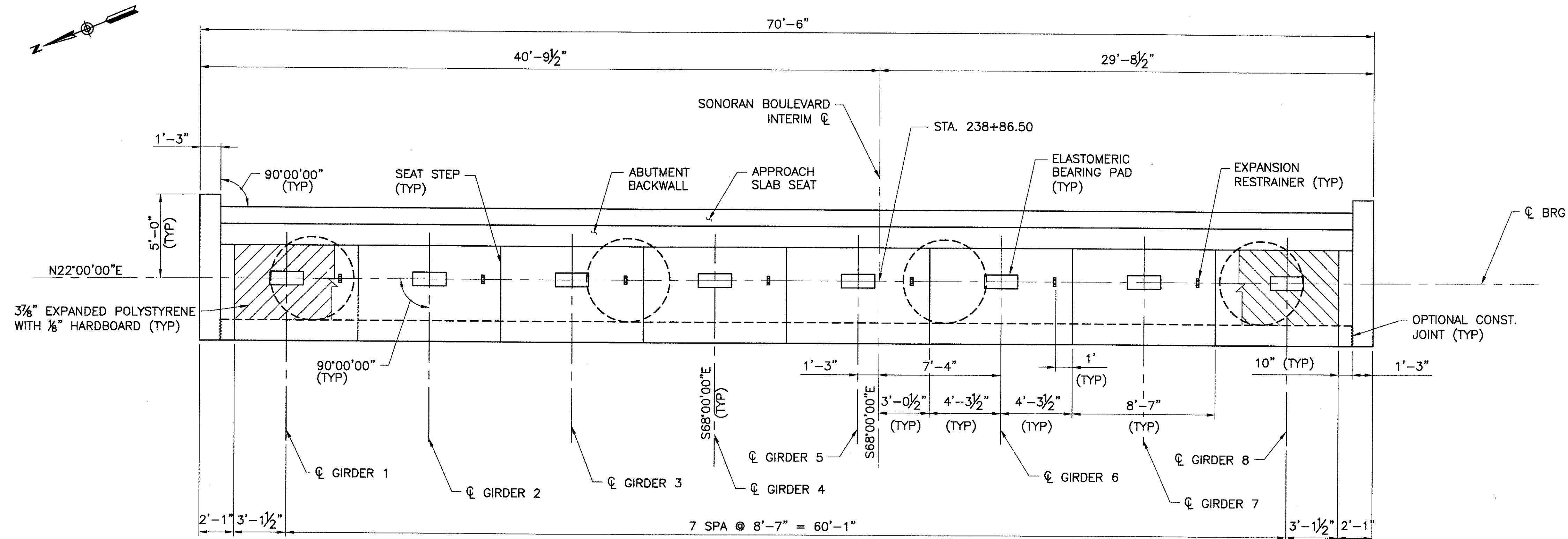
ABUTMENT 1 PLAN & ELEVATION
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	212	352
DWG NO: S-3.08				

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

P:\2008005\CAD\Drawings\Structures\307-CC Primary Abutment 1 Plan and Elevation.dwg - plotted by James Rojas at 12/21/2009 9:03:05 AM
 PROJECT: 131 - Tucson 9-1 - Interstate 9-1 - PREMIER



REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

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ABUTMENT 2 PLAN & ELEVATION

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

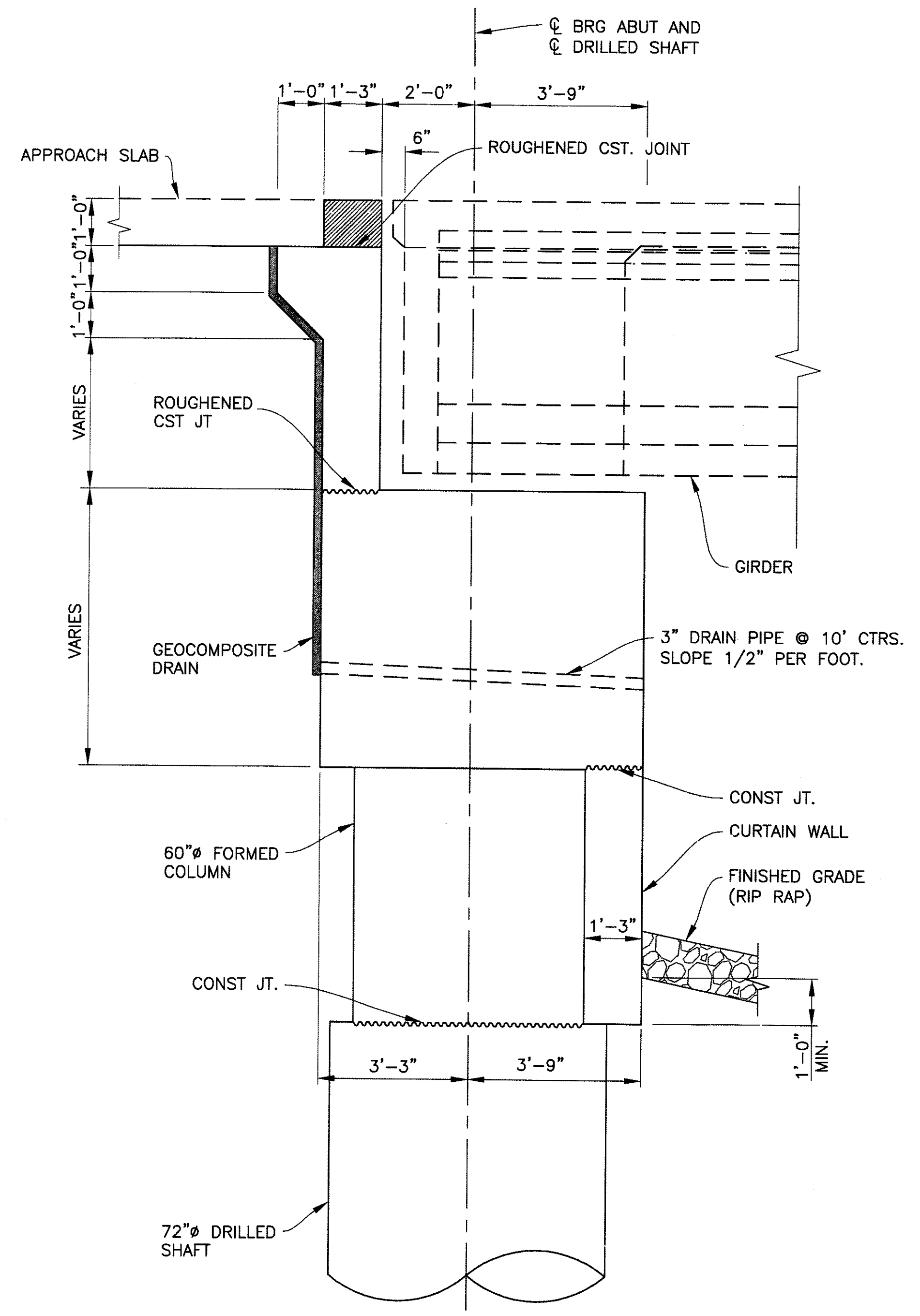
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DATE: 12/09	DATE: 12/09	DATE: 12/09	213	352

DWG NO: S-3.09

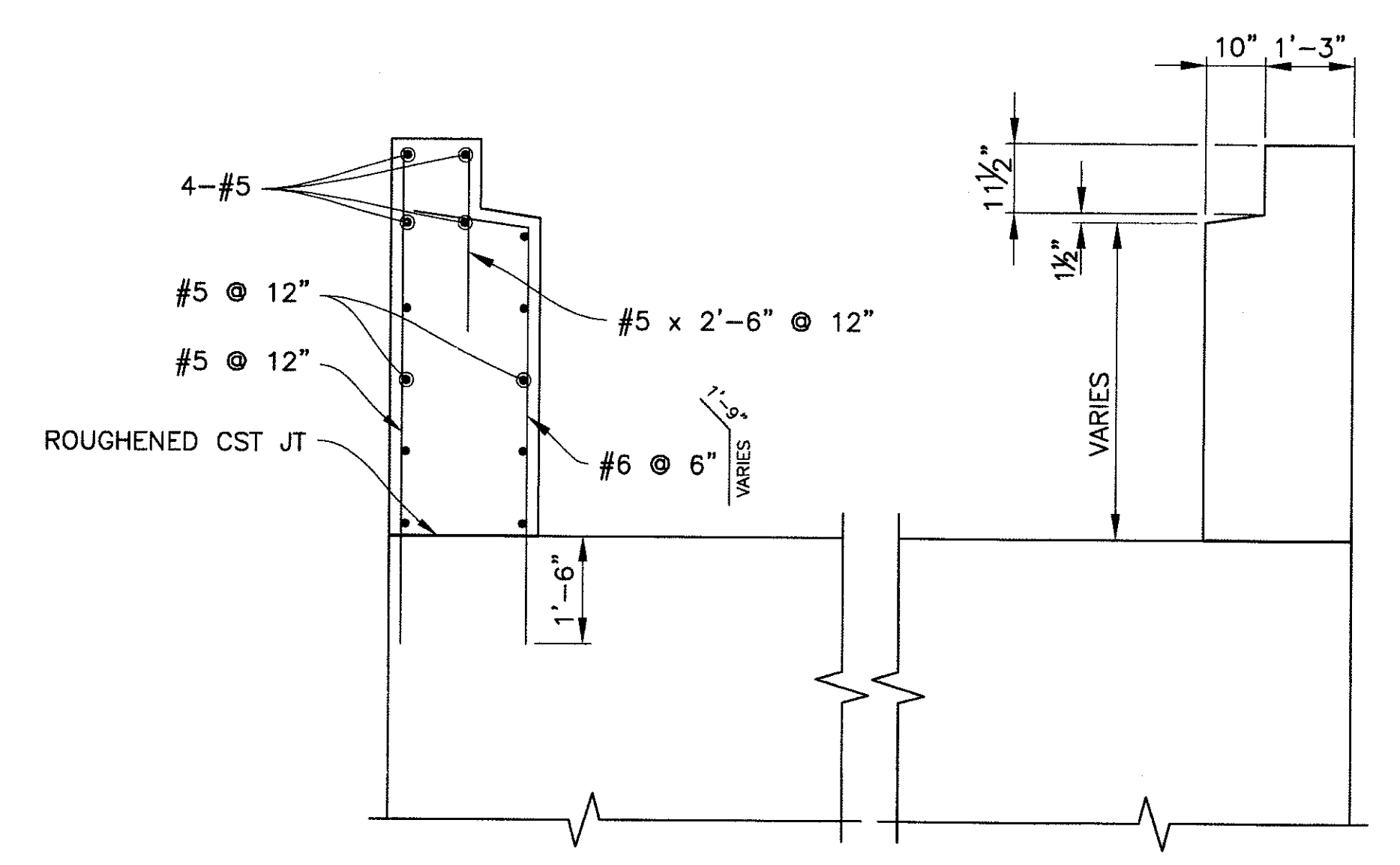
Two working days before you dig,
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P:\2008\005\CADD\Civil\Sheets\Structures\308-CC Primary Abutment 2 Plan and Elevation.dwg - plotted by James Rojas at 12/21/2009 8:03:10 AM

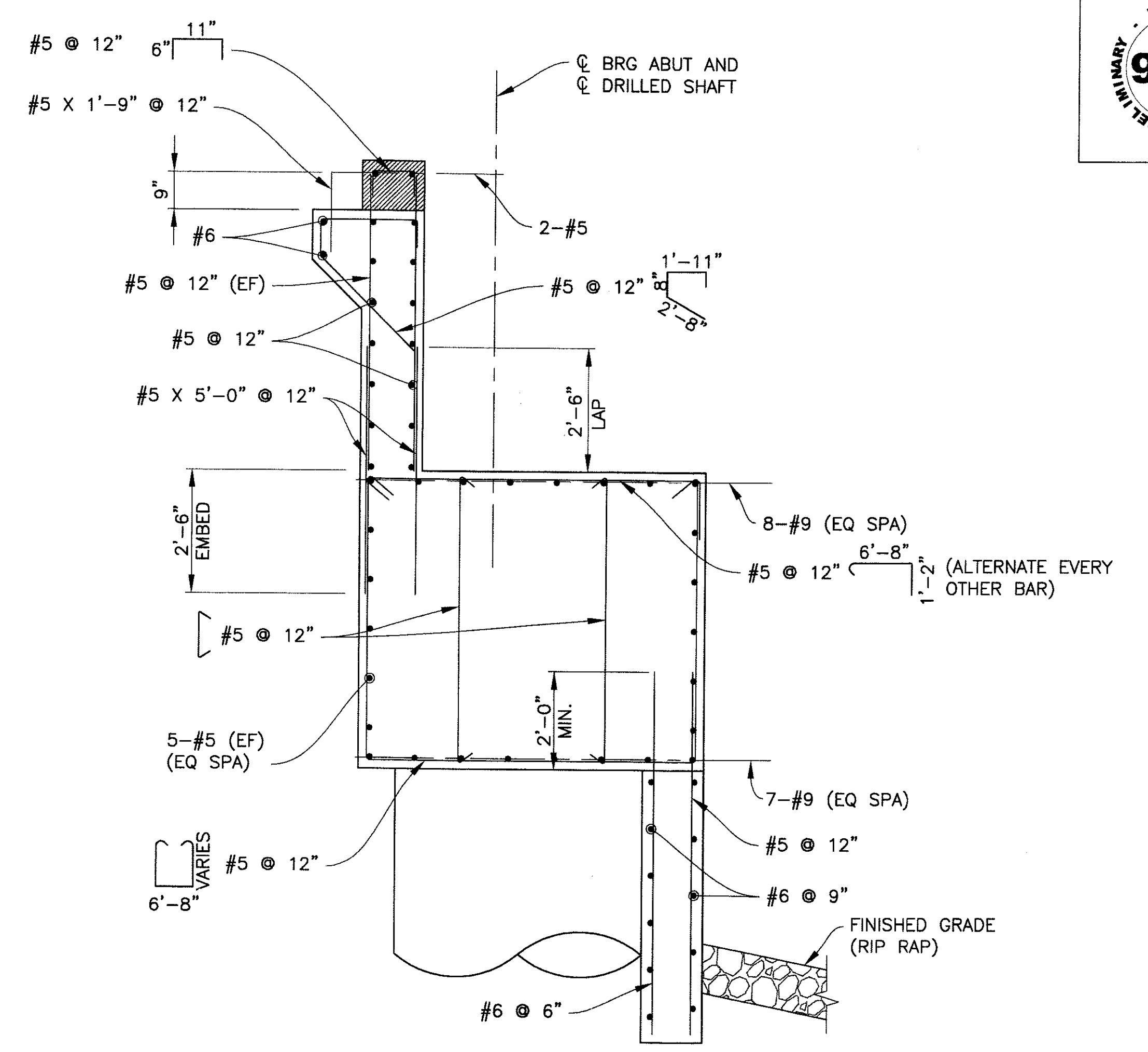
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NO.	DESCRIPTION			
REVISION BY CITY OF PHOENIX		REV BY	CHK BY	DATE
NO.	DESCRIPTION			
REVISION BY CITY OF PHOENIX		REV BY	CHK BY	DATE
NO.	DESCRIPTION			



TYPICAL SECTION
Scale: 1/2" = 1'-0"



ABUTMENT SHEAR BLOCK DETAIL
Scale: 1/2" = 1'-0"



TYPICAL SECTION
(SHOWING REINFORCING)
Scale: 1/2" = 1'-0"

PRELIMINARY NOT FOR CONSTRUCTION 90%

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	214	352

PREMIER

ENGINEERING CORPORATION
8437 W. CHANDLER BLVD., SUITE 1
CHANDLER, AZ 85226; 480-829-6000

CONSULTING ENGINEER
DES: BAG DR: JRR CK: SEO DATE: 12/09

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ABUTMENT DETAILS 1

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

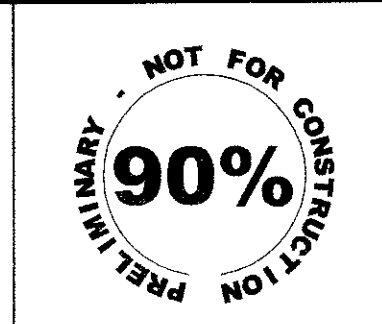
SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	NO: 214	352

DWG NO: S-3.10

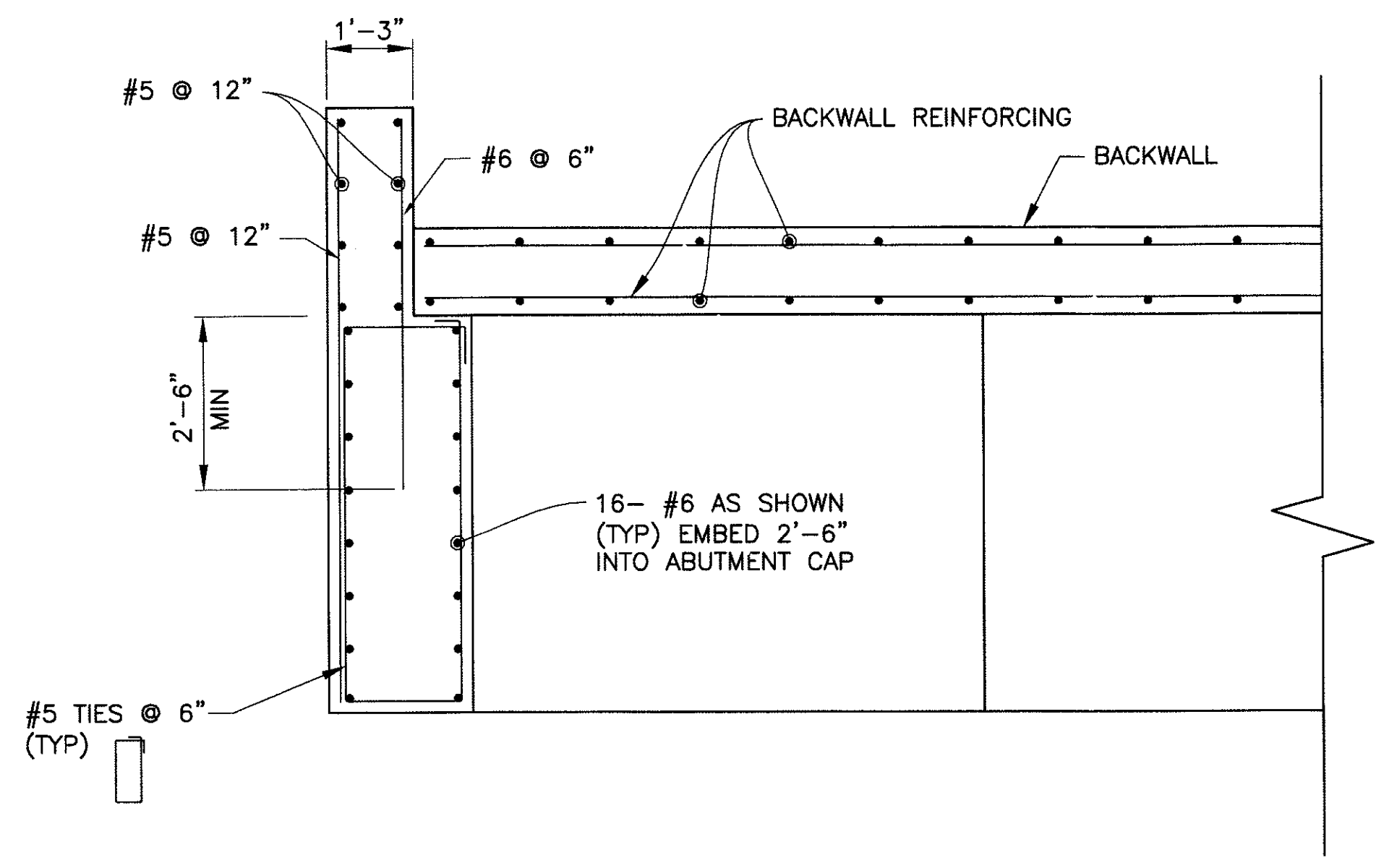
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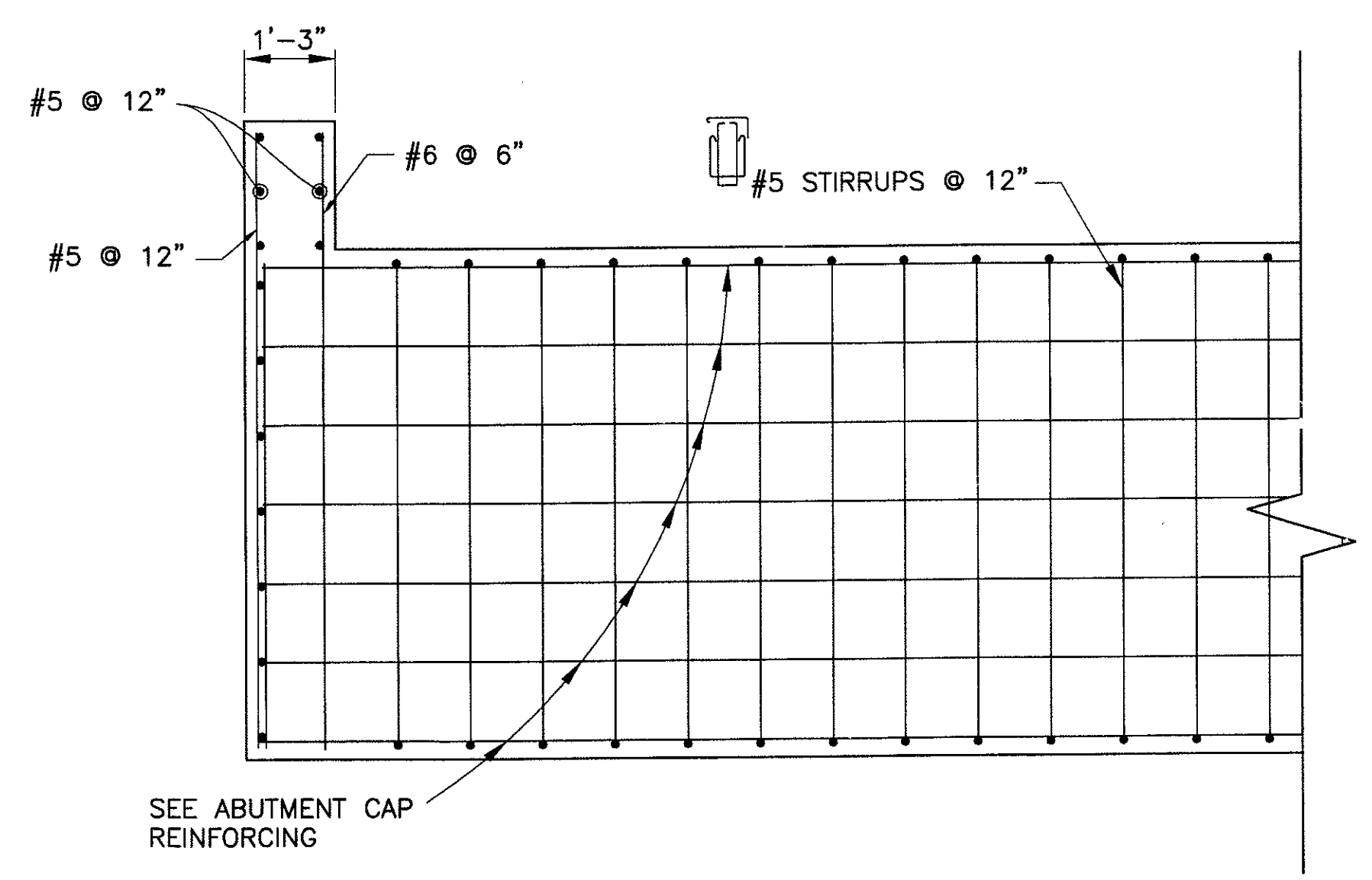


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	215	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226, 480-823-5000				
DES: BAG	DR: JRR	CK: SEO	DATE: 12/09	

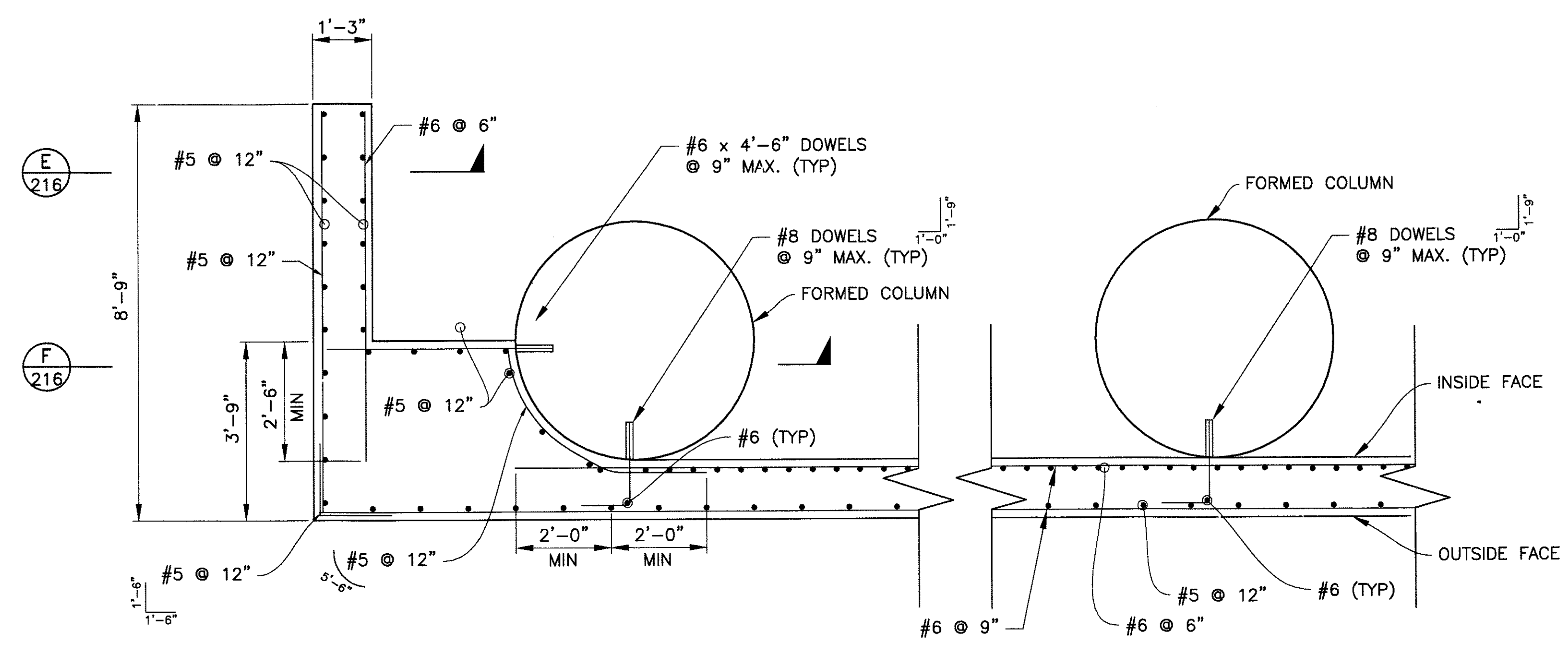
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



SECTION
Scale: 1/2" = 1'-0"
B 212 B 213



SECTION
Scale: 1/2" = 1'-0"
C 212 C 213



SECTION
Scale: 1/2" = 1'-0"
D 212 D 213

SPLICE NOTES

SPLICE IN HORIZONTAL REINFORCEMENT IN CURTAIN WALL SHALL BE LOCATED AS FOLLOW:

- INSIDE FACE : MID-SPAN
- OUTSIDE FACE : @ COLUMN
- #5 BARS : 1'-6"
- #6 BARS : 2'-0"

DOWEL NOTES:

DRILL 1" DIA. HOLE 7 INCHES DEEP INTO COLUMN FOR #6 DOWELS. EPOXY DOWEL IN HOLE WITH EPOXY ADHESIVE. EPOXY ANCHORAGE SHALL DEVELOP A PULL OUT STRENGTH OF 14 KIPS.

DRILL 1 1/4" DIA. HOLE 9 INCHES DEEP INTO COLUMN FOR #8 DOWELS. EPOXY DOWEL IN HOLE WITH EPOXY ADHESIVE. EPOXY ANCHORAGE SHALL DEVELOP A PULL OUT STRENGTH OF 25 KIPS.

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ABUTMENT DETAILS 2

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

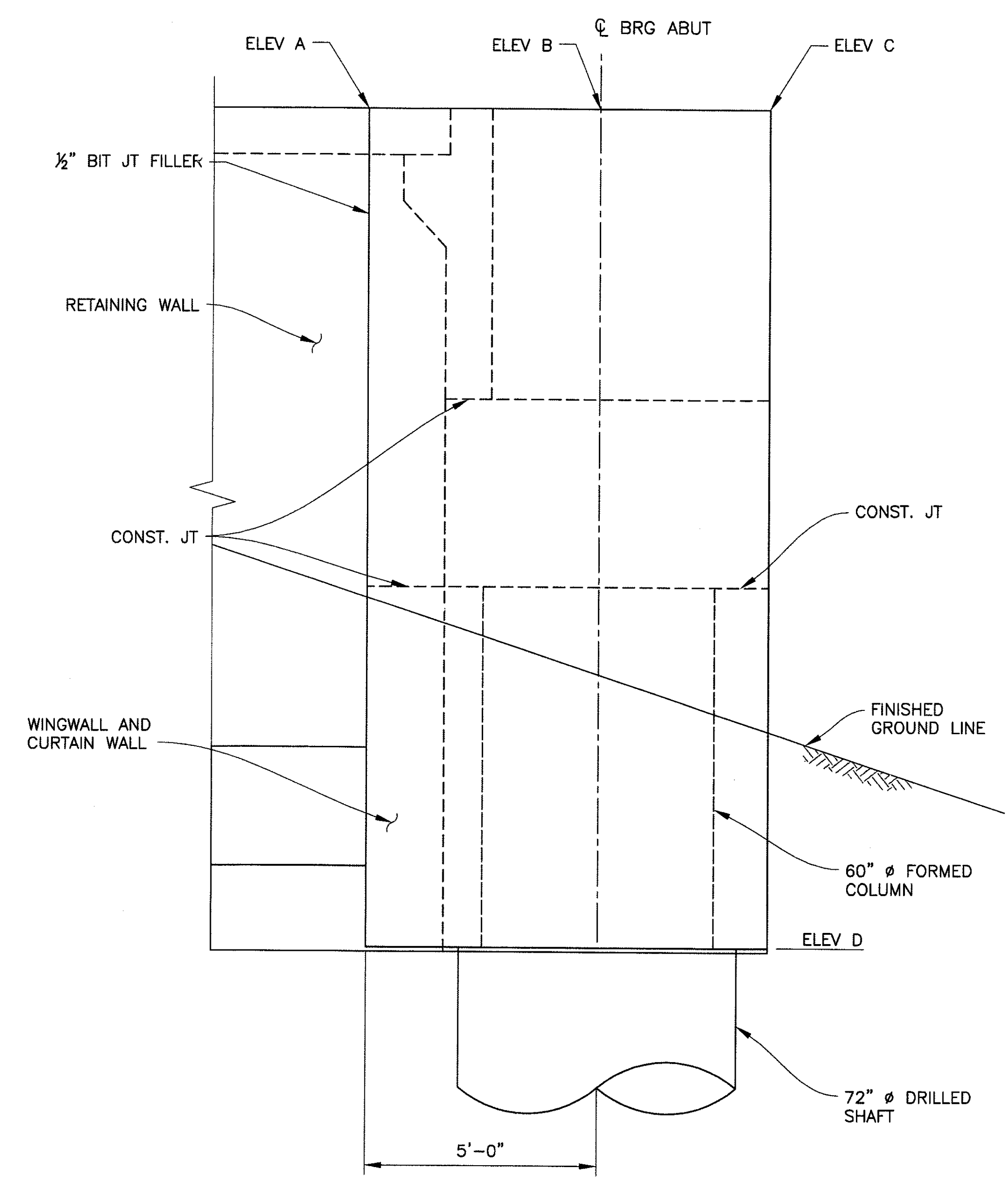
SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

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Blue Stake Center

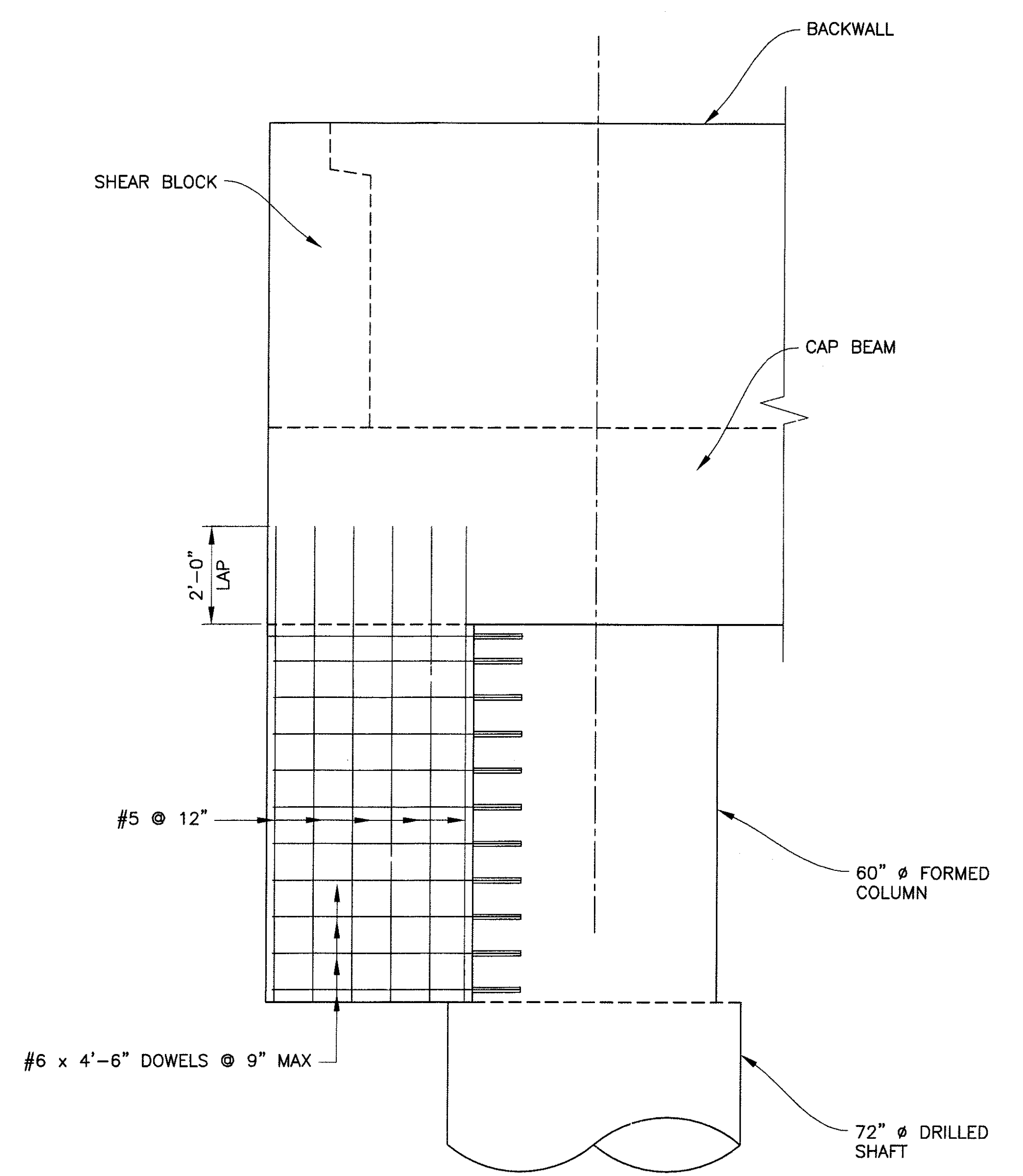
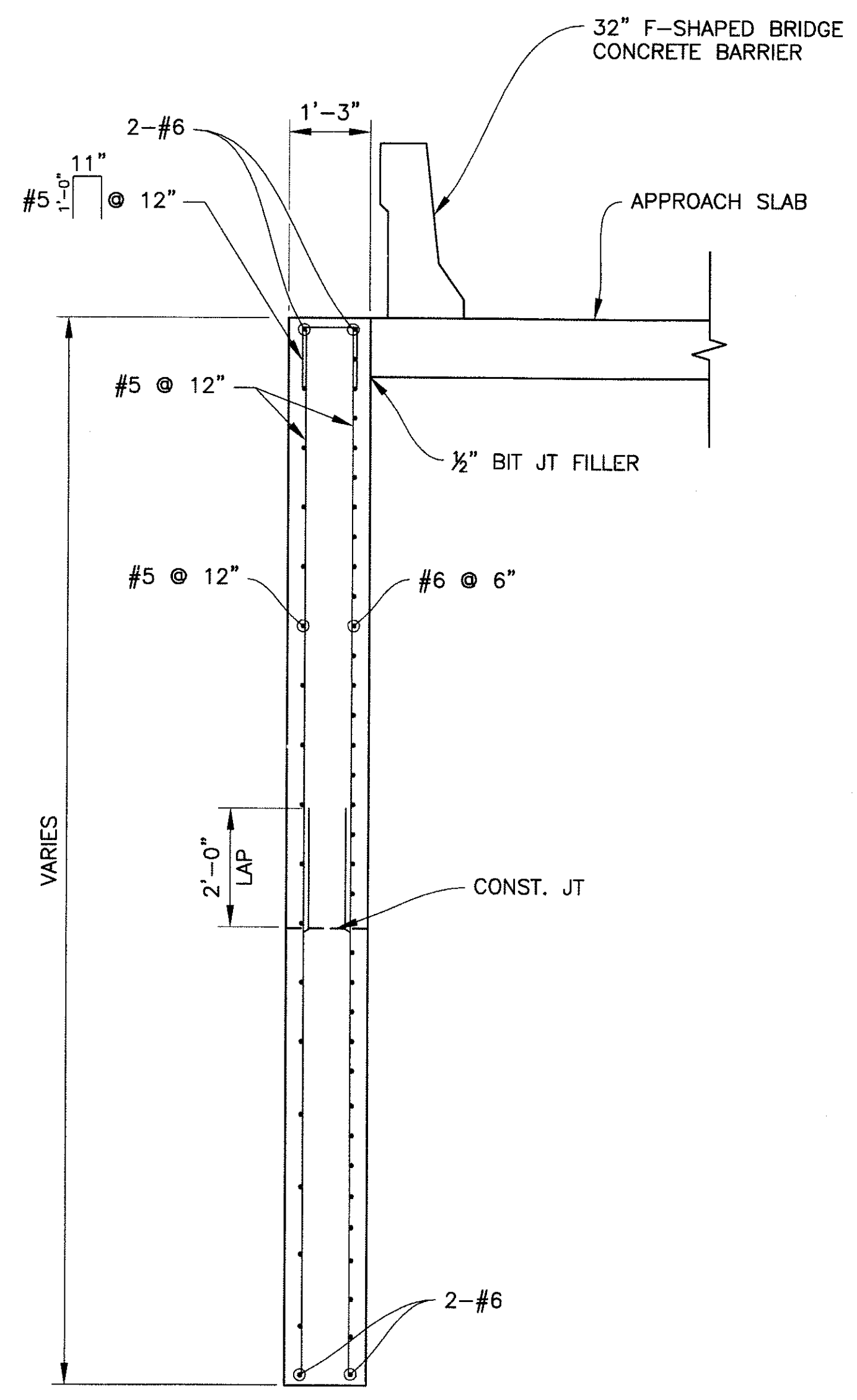
DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	215	352
DWG NO: S-3.11				

platecode: 1:1 - Issue: 1.0000 - penable: PREMIER.DWG - plotted by James Rojas at 12/21/2009 9:03:20 AM

REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION
REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION
REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION
REVISION BY CITY OF PHOENIX	
NO.	DESCRIPTION



WINGWALL SCHEDULE					
LOCATION	WALL	ELEV A	ELEV B	ELEV C	ELEV D
ABUT 1	NORTH	1729.79	1729.81	1729.83	1710.44
	SOUTH	1728.47	1728.49	1728.51	1710.44
ABUT 2	NORTH	1731.54	1731.52	1731.50	1708.70
	SOUTH	1730.21	1730.19	1730.17	1708.70



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WINGWALL DETAILS

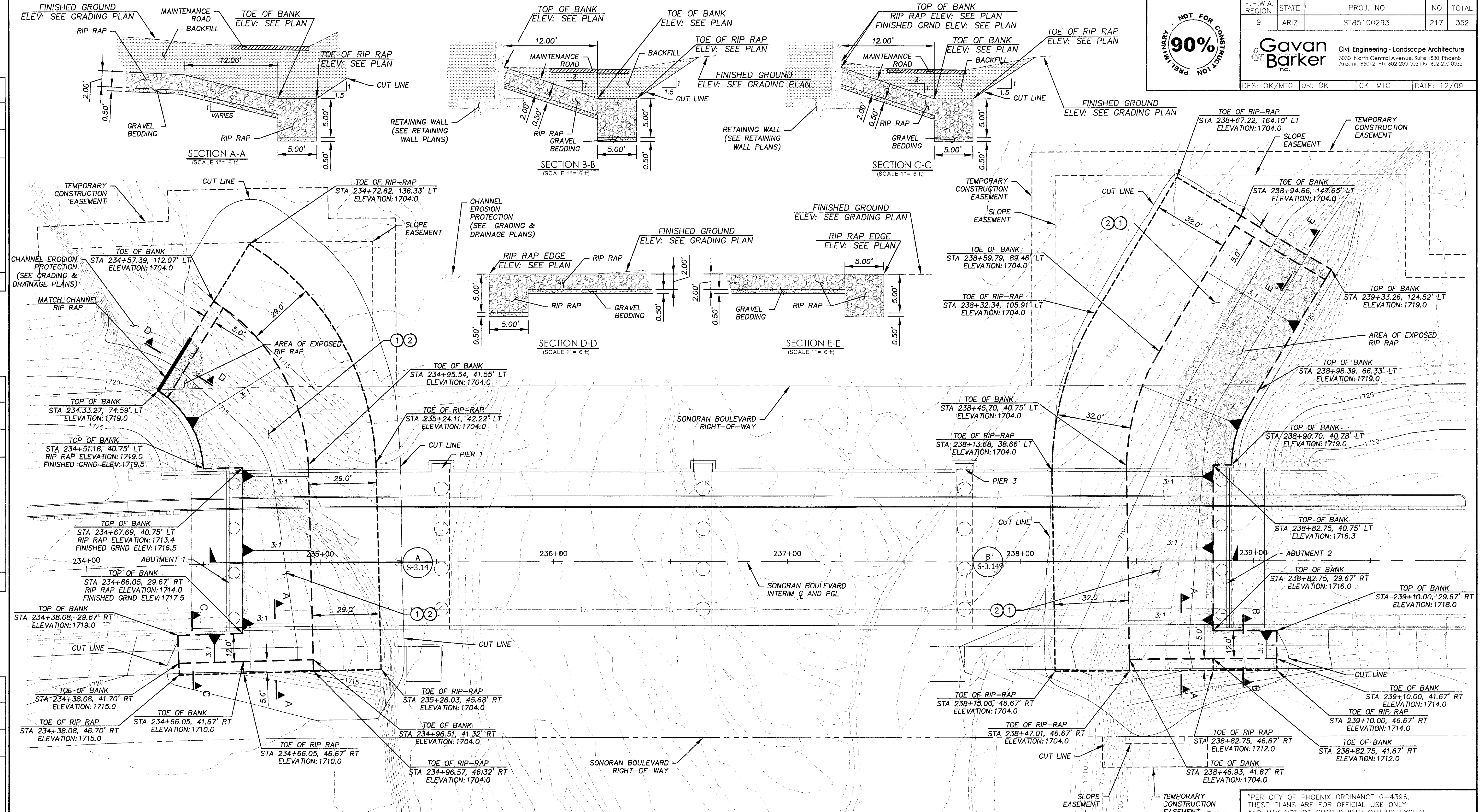
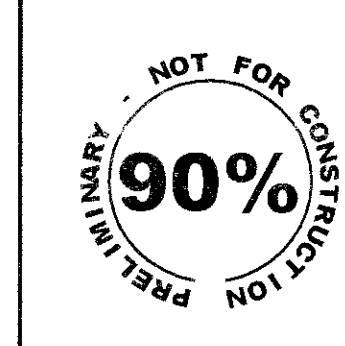
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293**

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	216	352

DWG NO: S-3.12

P:\2008\005\CADD\Civil\Sheets\Structures\312-CC Primary Wingwall details.dwg - plotted by James Rojas at 12/21/2009 9:03:25 AM
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ROCK RIP RAP GRADATION

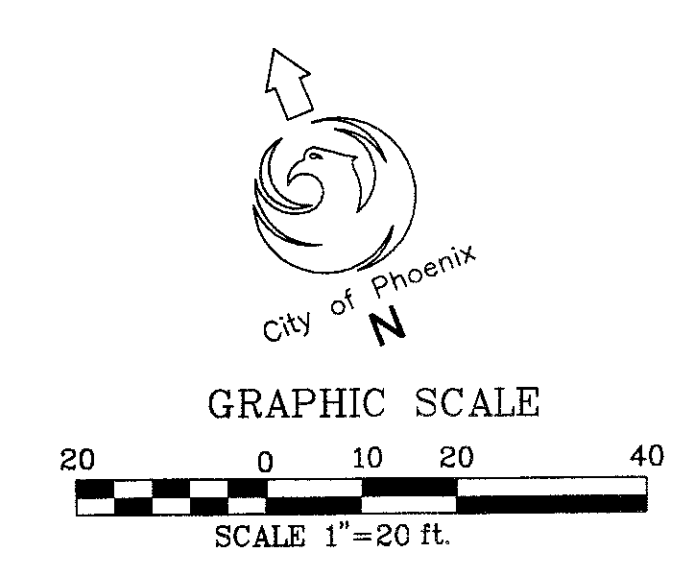
STONE SIZE	PERCENT OF GRADATION SMALLER THAN
24"	100
20"	85
16"	50
8"	15

GRAVEL BEDDING GRADATION

SIEVE SIZE	PERCENT BY WEIGHT PASSING SIEVE
3"	90-100
3/4"	20-90
#4	0-20
#200	0-3

CONSTRUCTION NOTES

NO.	DESCRIPTION	UNIT	QTY.
1	Install Rock Rip Rap, D ₅₀ = 16" (See Table this Sheet for Gradation and See Sections on DWG. No. S-3.14 for Thickness)	CY	3138
2	Install Gravel Bedding for Rip Rap (See Table this Sheet for Gradation and See Sections on DWG. No. S-3.14 for Thickness)	CY	473



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EROSION CONTROL PLAN

CITY OF PHOENIX, ARIZONA

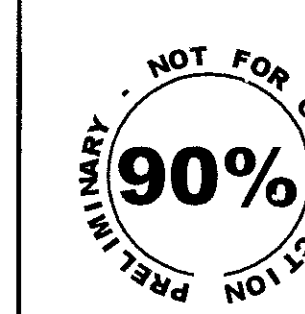
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
 10th STREET TO 26th STREET
CAVE CREEK PRIMARY
 ST85100293

DR: OK	DES: OK/MTG	CK: MTG	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	217	352

DWG No. S-3.13

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

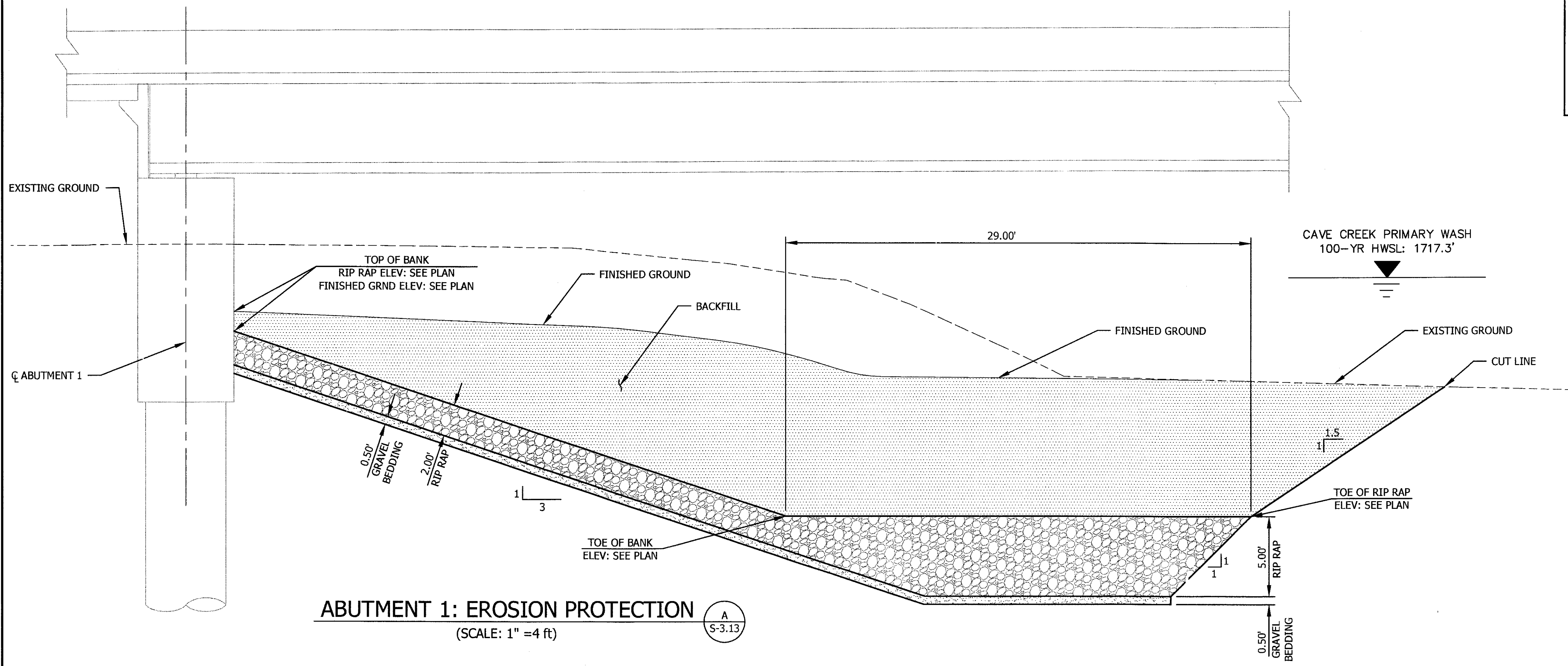


F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	218	352

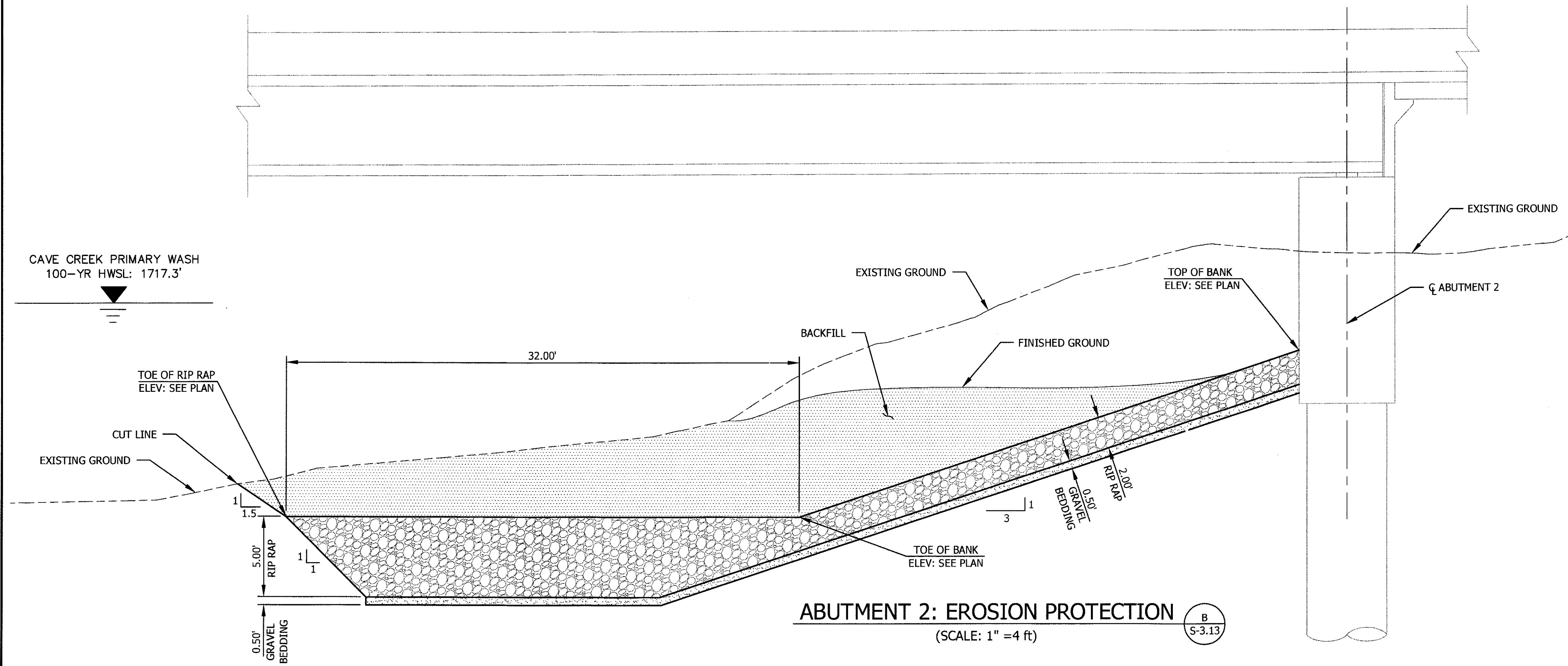
Gavan Barker inc. Civil Engineering - Landscape Architecture
 3030 North Central Avenue, Suite 1530, Phoenix, Arizona 85012 Ph: 602-200-0031 Fx: 602-200-0032

DES: OK/MTG DR: OK CK: MTG DATE: 12/09

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE



ABUTMENT 1: EROSION PROTECTION
 (SCALE: 1" = 4 ft) A
S-3.13



ABUTMENT 2: EROSION PROTECTION
 (SCALE: 1" = 4 ft) B
S-3.13

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

EROSION CONTROL DETAIL

CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

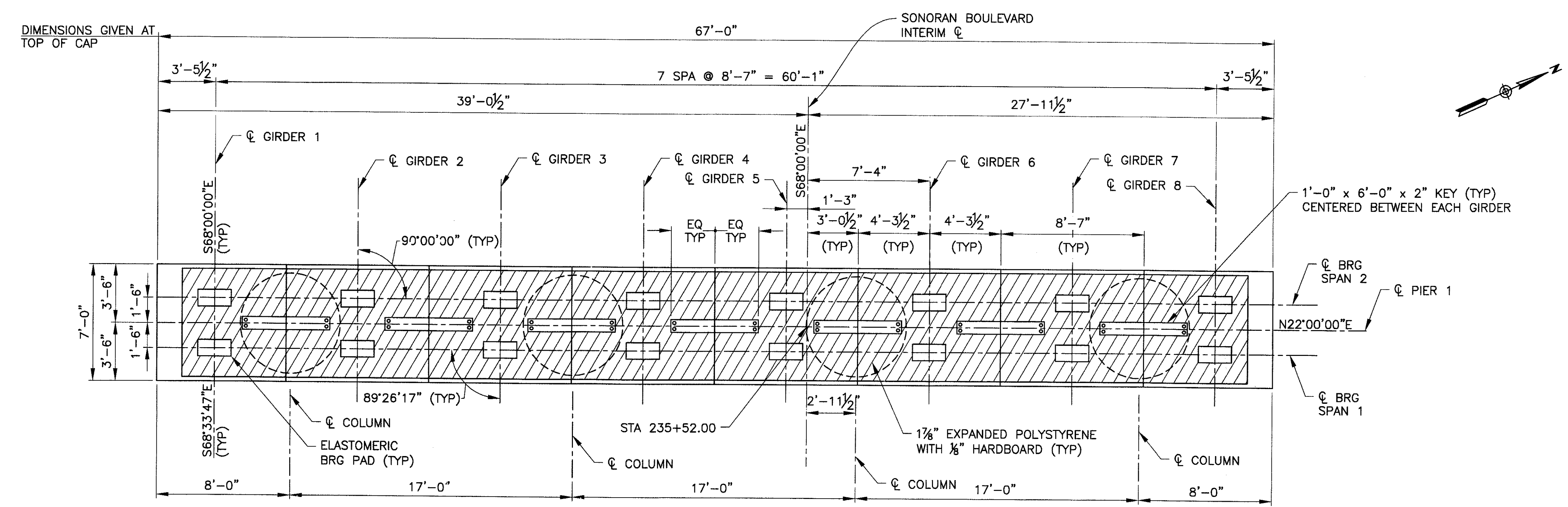
SONORAN BOULEVARD
 10th STREET TO 26th STREET
 CAVE CREEK PRIMARY
 ST85100293

DR: OK	DES: OK/MTG	CK: MTG	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	218	352

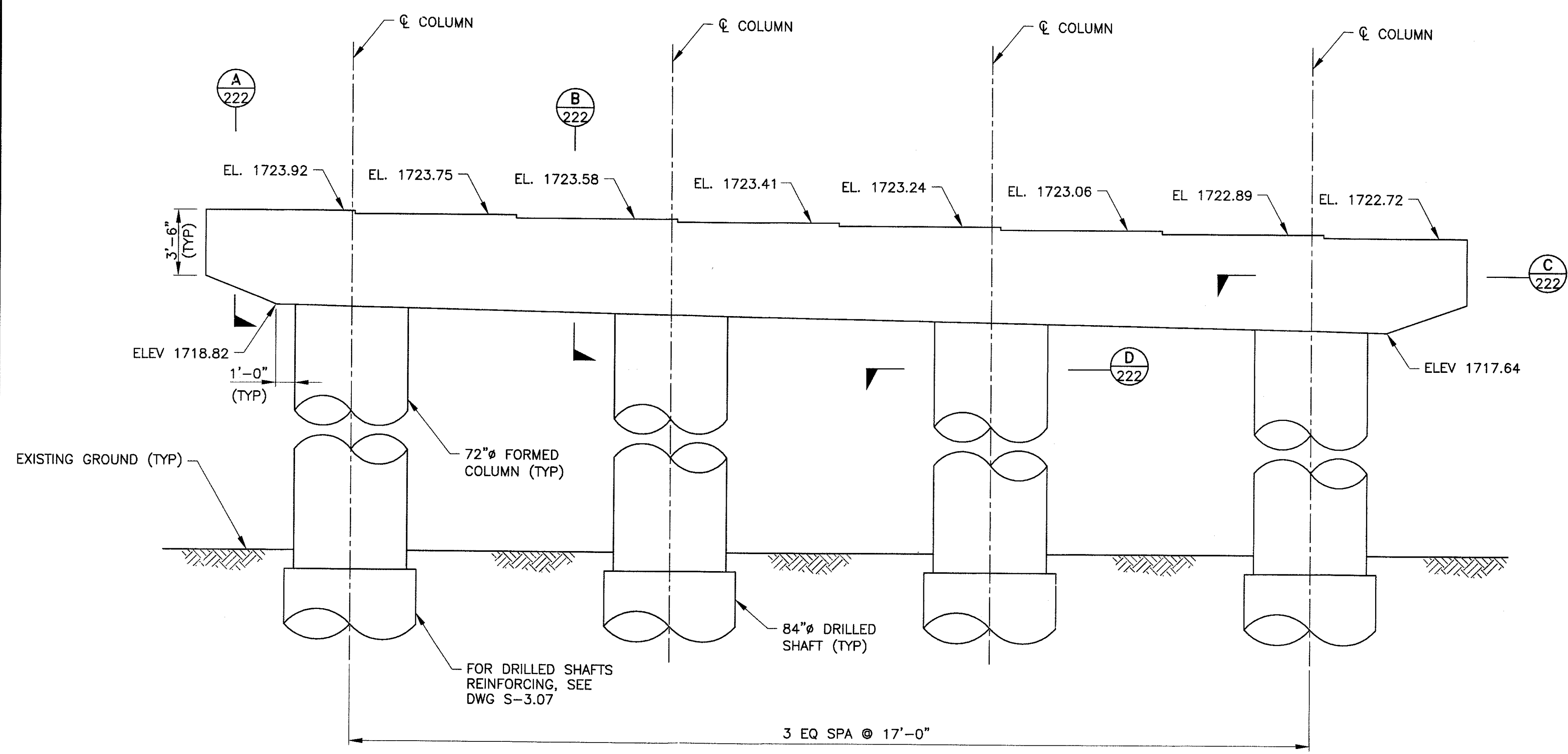
DWG No. S-3.14



REVISION BY CITY OF PHOENIX	REV. BY	CHKD BY	DATE
NO.	DESCRIPTION		



PLAN
 (LOOKING UP STATION)
 SCALE: 1/4" = 1'-0"



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

Two working days before you dig,
 CALL FOR THE BLUE STAKES
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 Blue Stake Center

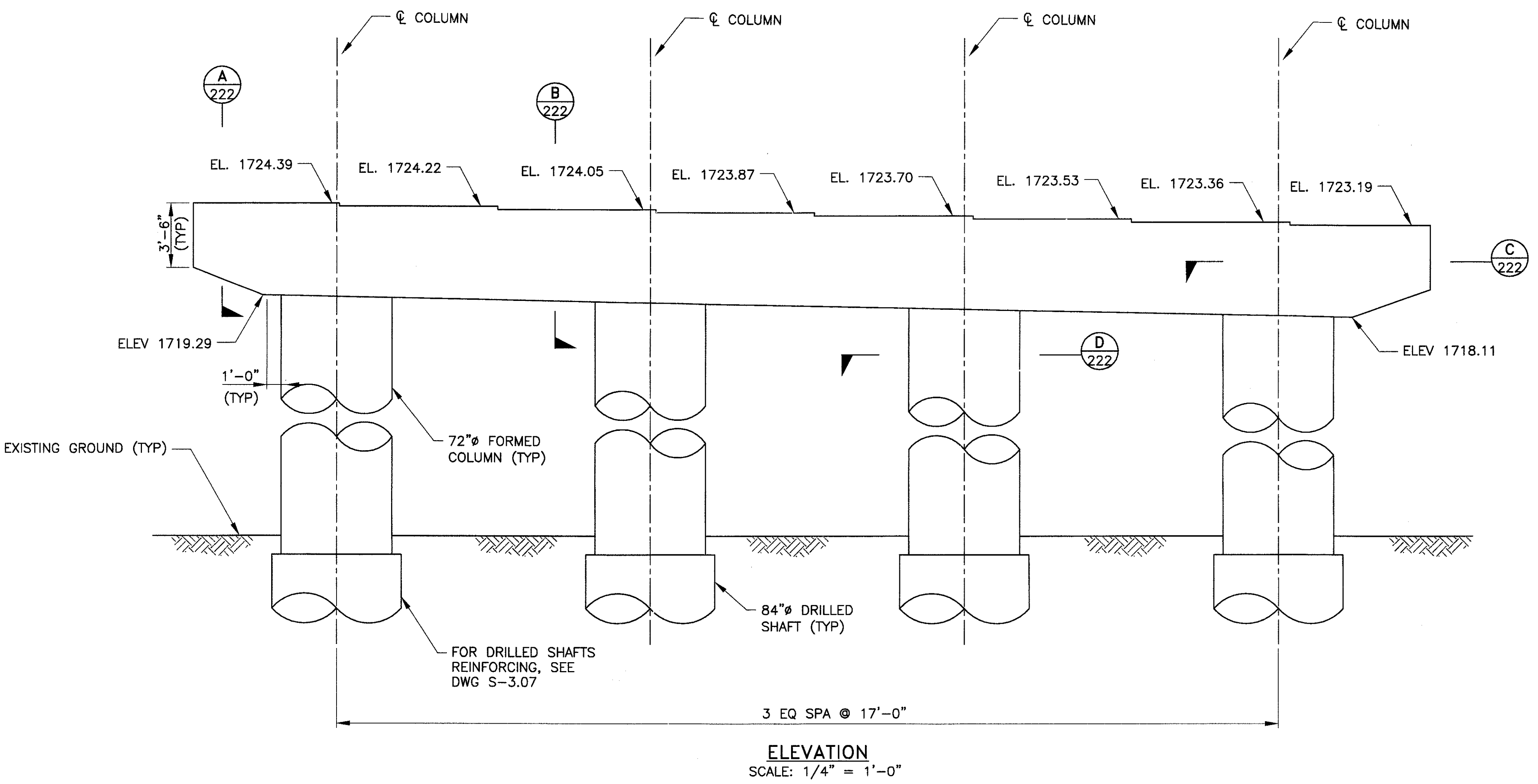
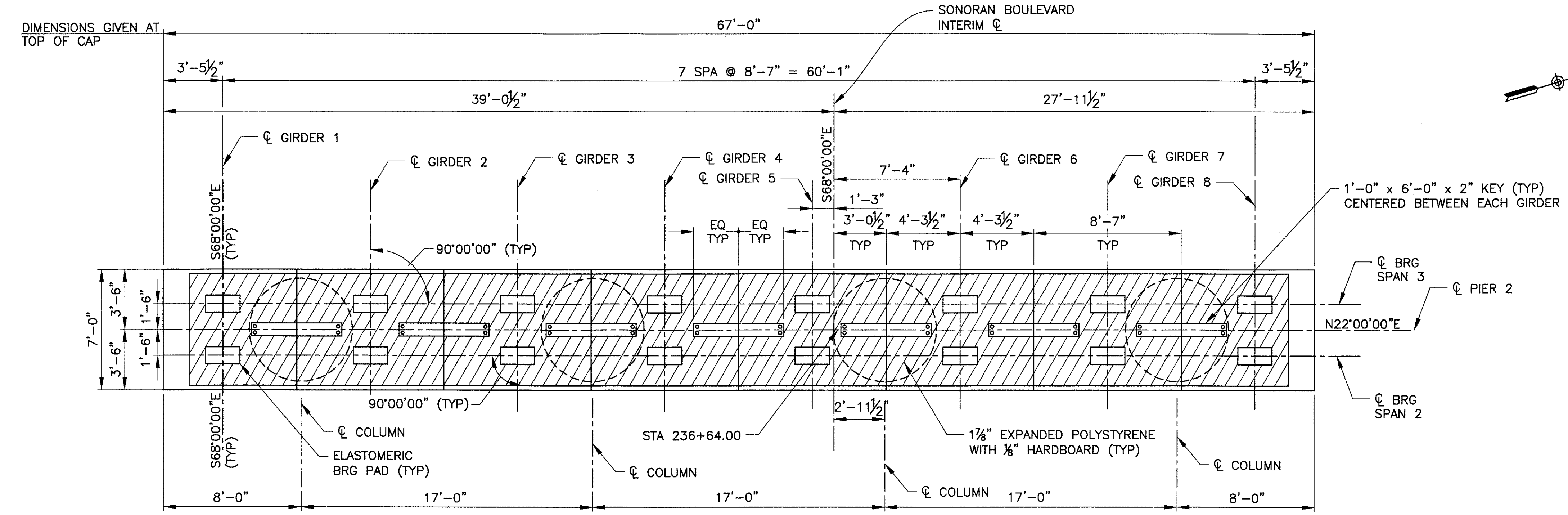
PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX.

PIER 1 PLAN AND ELEVATION
 CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT
**SONORAN BOULEVARD
 CAVE CREEK PRIMARY
 ST85100293**

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	219	352

DWG NO: S-3.15

P:\200805\CADD\Civil\Sheets\Structure\314-CC primary pier1 plan & elevation.dwg - plotted by James Rojas at 12/21/2009 9:03:39 AM



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PIER 2 PLAN AND ELEVATION

CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

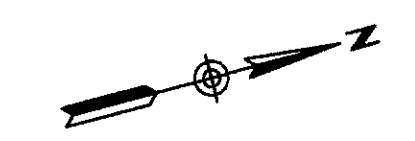
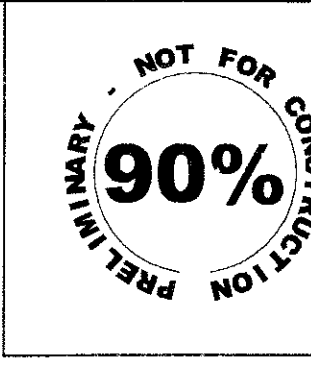
SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	220	352

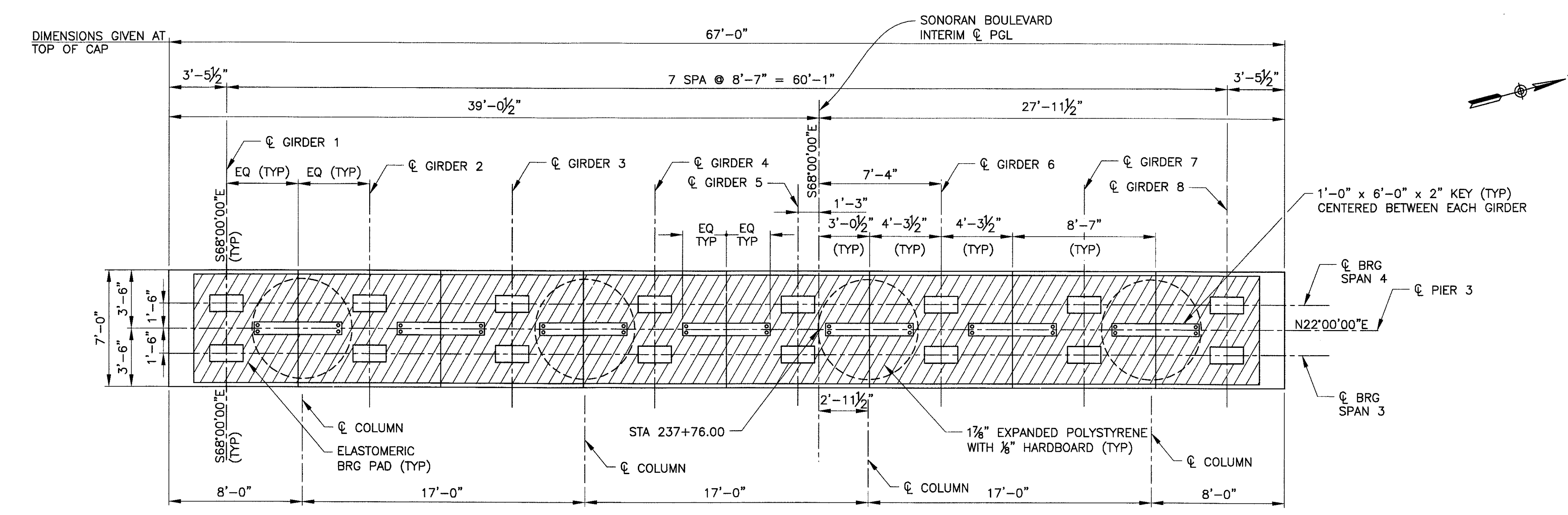
DWG NO: S-3.16

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

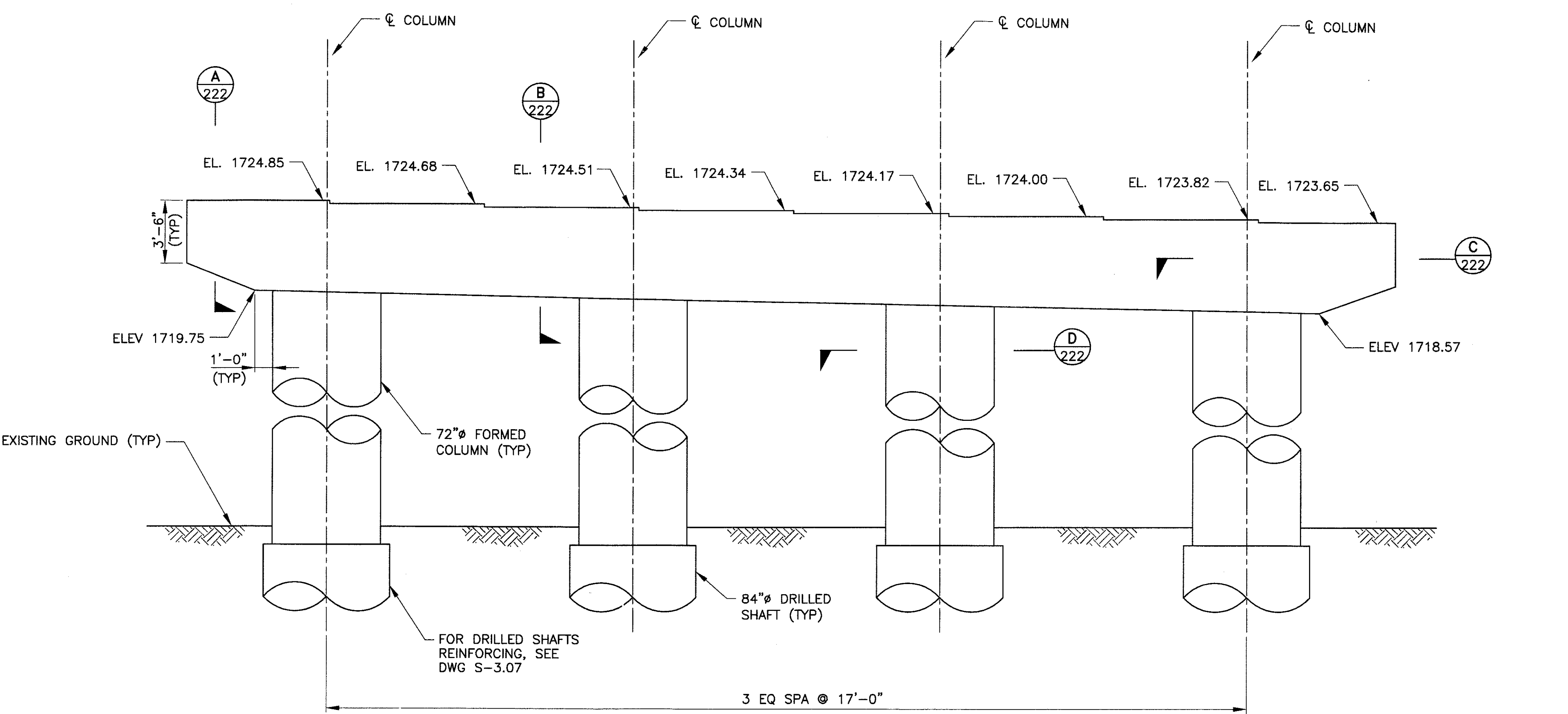
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REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



PLAN
(LOOKING UP STATION)
SCALE: 1/4" = 1'-0"



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

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

PIER 3 PLAN AND ELEVATION
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

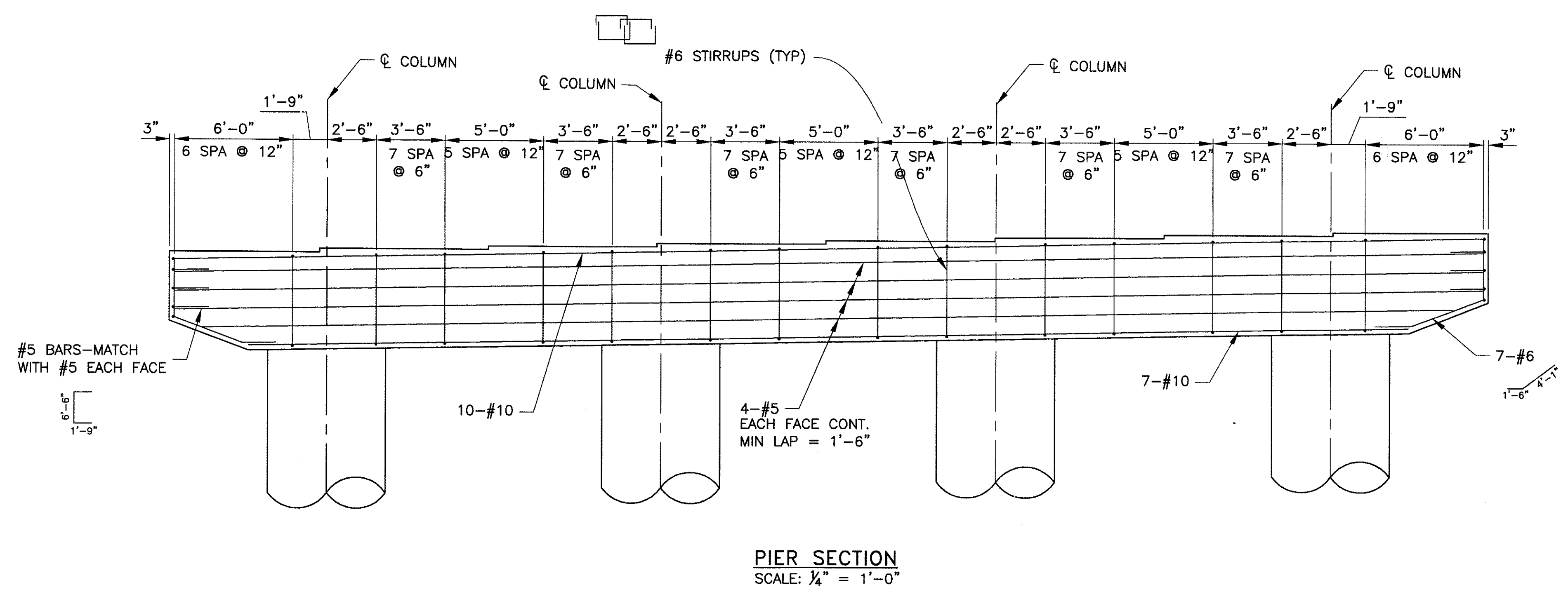
SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

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Blue Stake Center

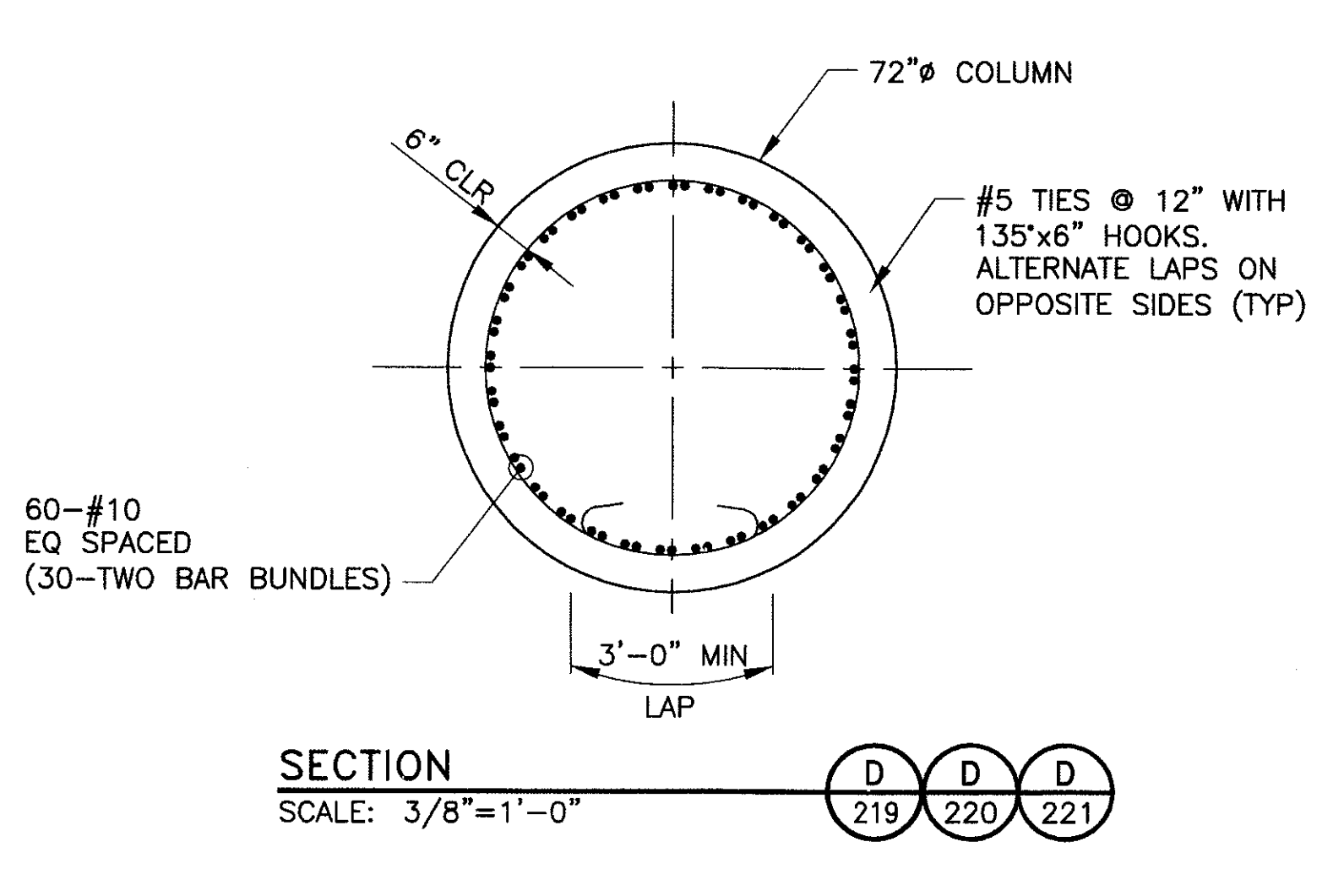
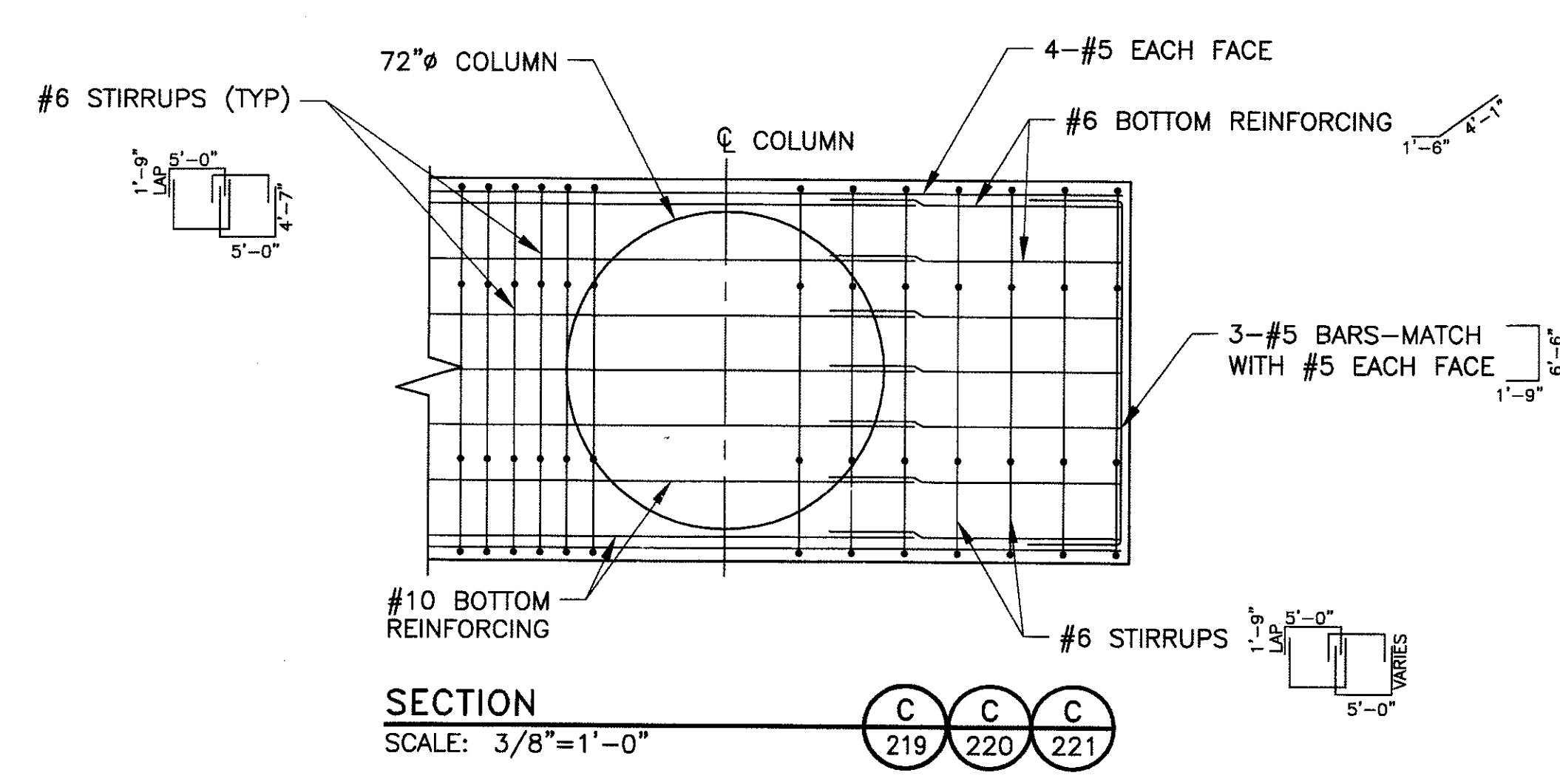
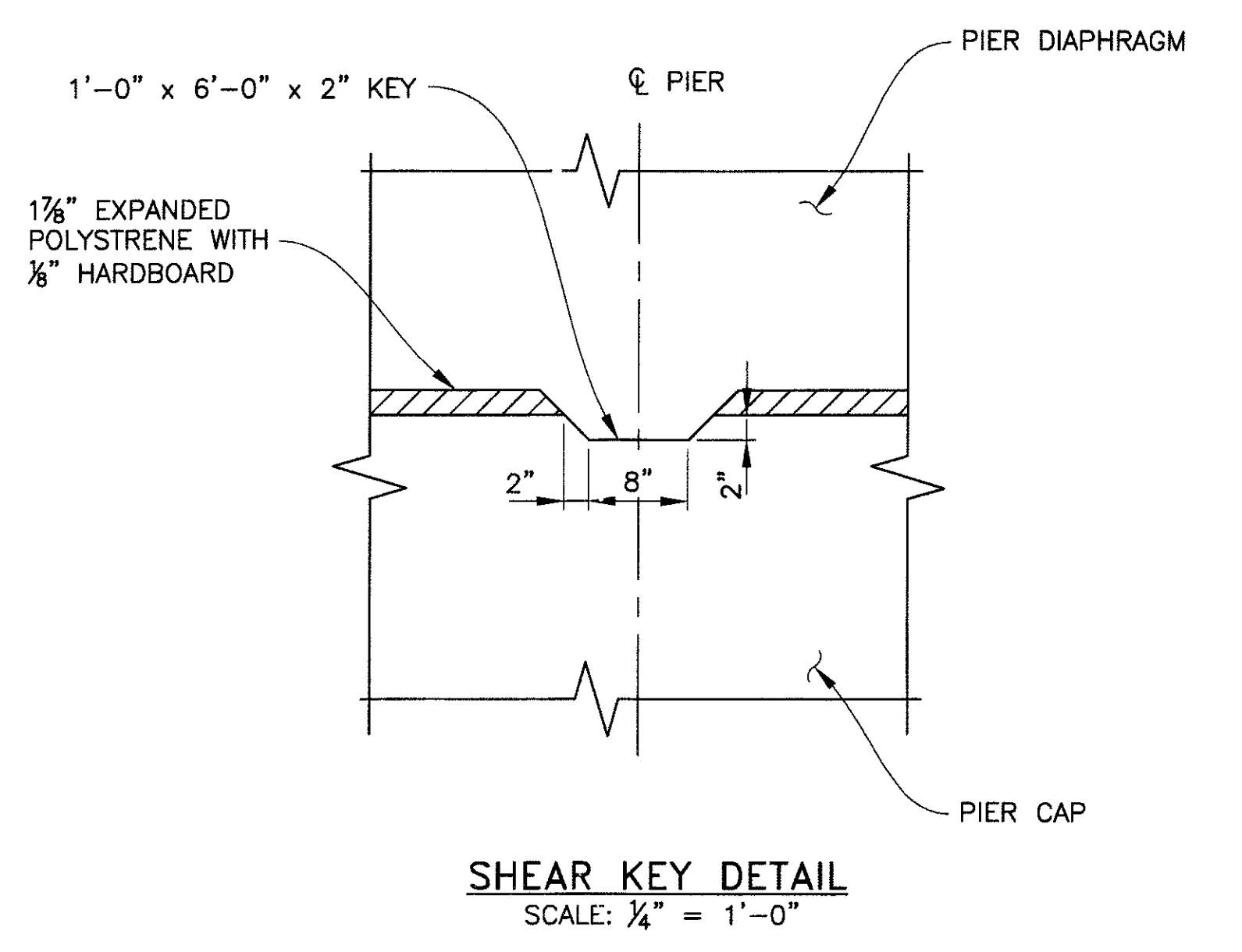
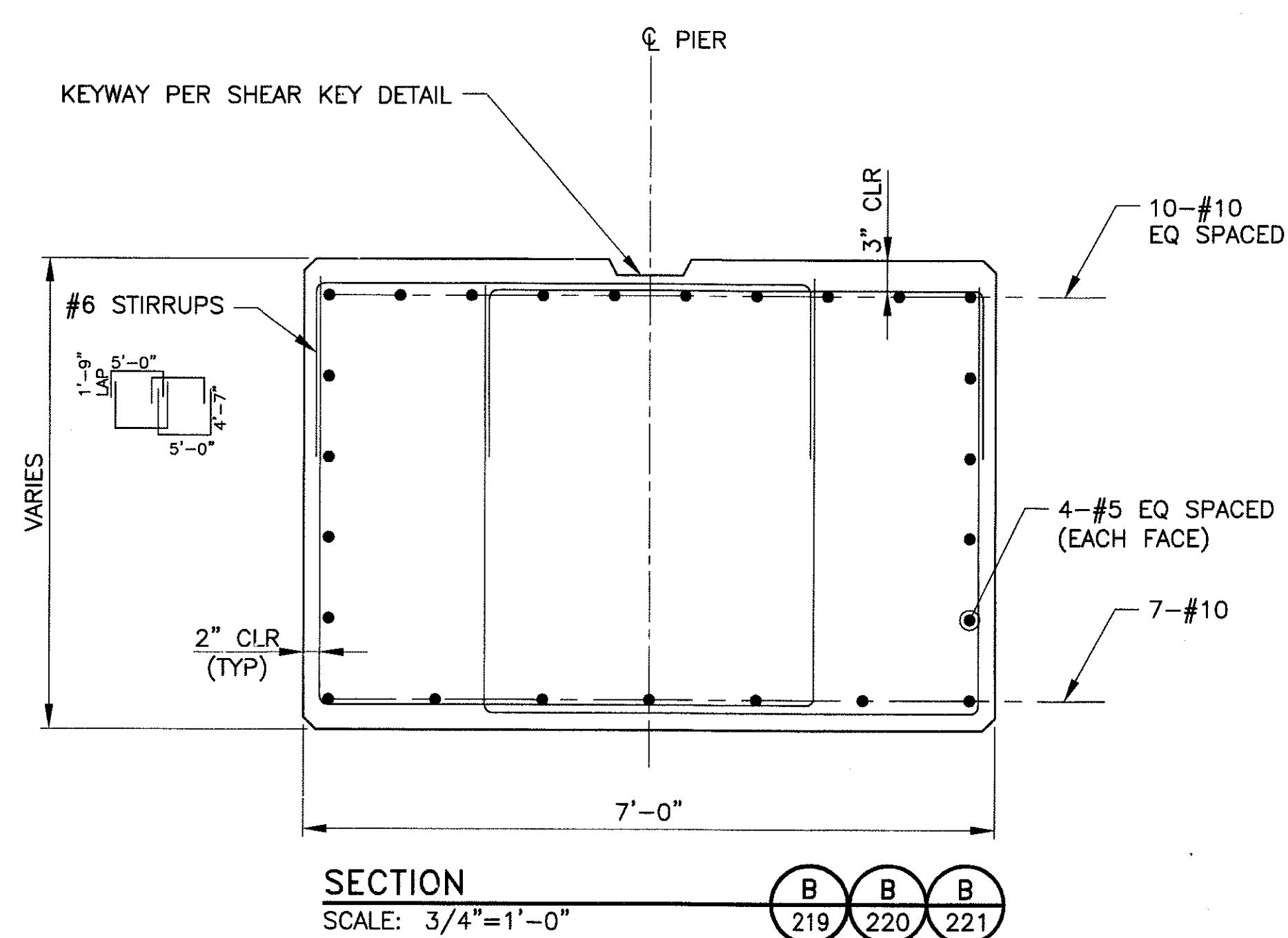
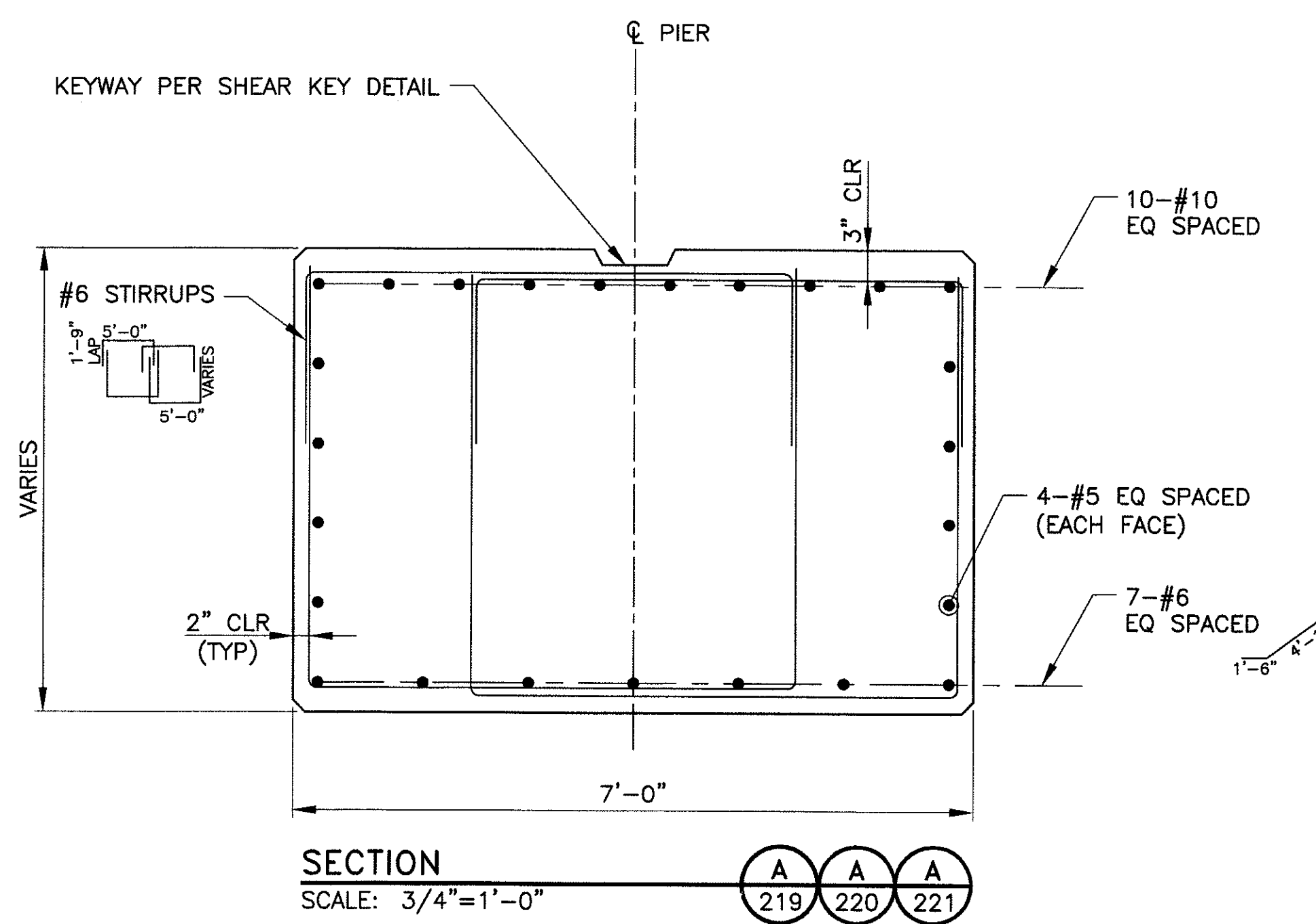
DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS:
DATE: 12/09	DATE: 12/09	DATE: 12/09	221	352
DWG NO: S-3.17				

P:\2008000\CA00\CAD\Sheet\Structure\317-Cc Primary pier 3 plan & elevation.dwg - plotted by James Rojas on 12/21/2009 9:03:49 AM

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV. BY	CHK. BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV. BY	CHK. BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV. BY	CHK. BY	DATE



- SPLICE NOTES**
1. THE #10 TOP BARS SHALL BE LAP SPICED ONLY AT THE CENTER OF THE SPANS BETWEEN THE COLUMNS. LAP SPICES OF ADJACENT BARS SHALL BE ALTERNATED AMONG THE SPAN LOCATIONS. LAP SPLICE LENGTH = 3'-0"
 2. THE #10 BOTTOM BARS SHALL BE CONTINUOUS WITH NO LAPS.



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PIER DETAILS

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

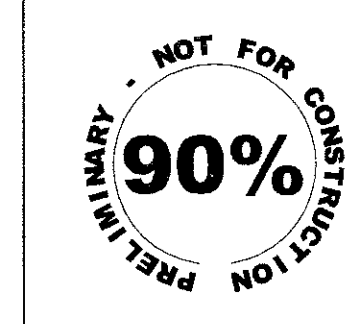
SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

DR: JRR	DES: BAG	CK: SEO	PD
DATE: 12/09	DATE: 12/09	DATE: 12/09	SHEET NO.
DWG NO: S-3.18			TOTAL SHEETS

222 352

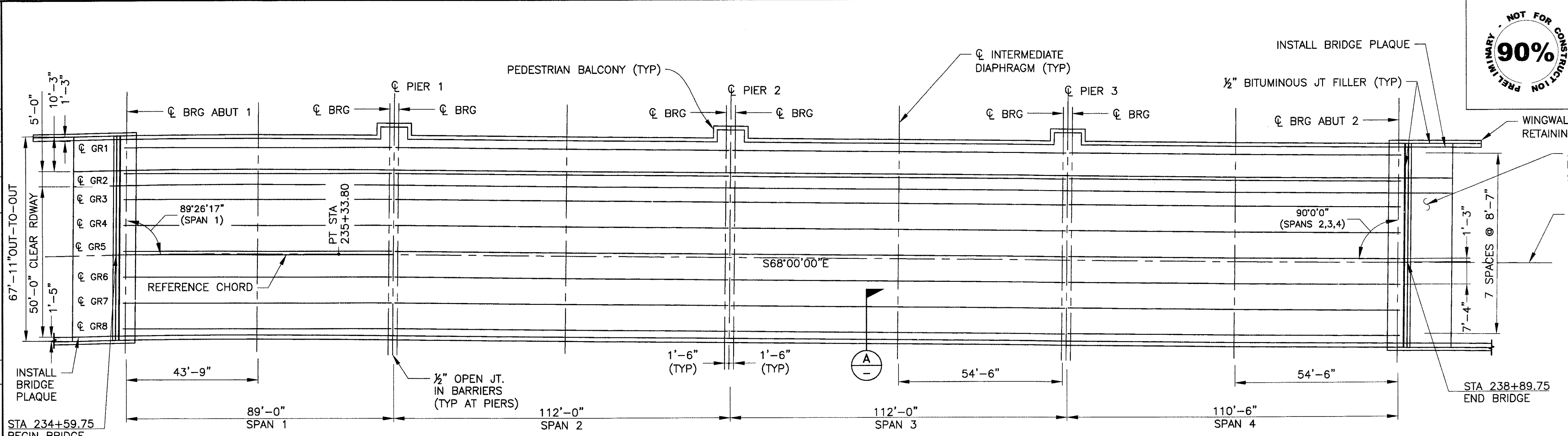
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P:\2008025\CADD\Civil\Sheets\Structures\318-CC Primary Pier Details.dwg - plotted by James Ropes at 12/21/2009 9:03:57 AM

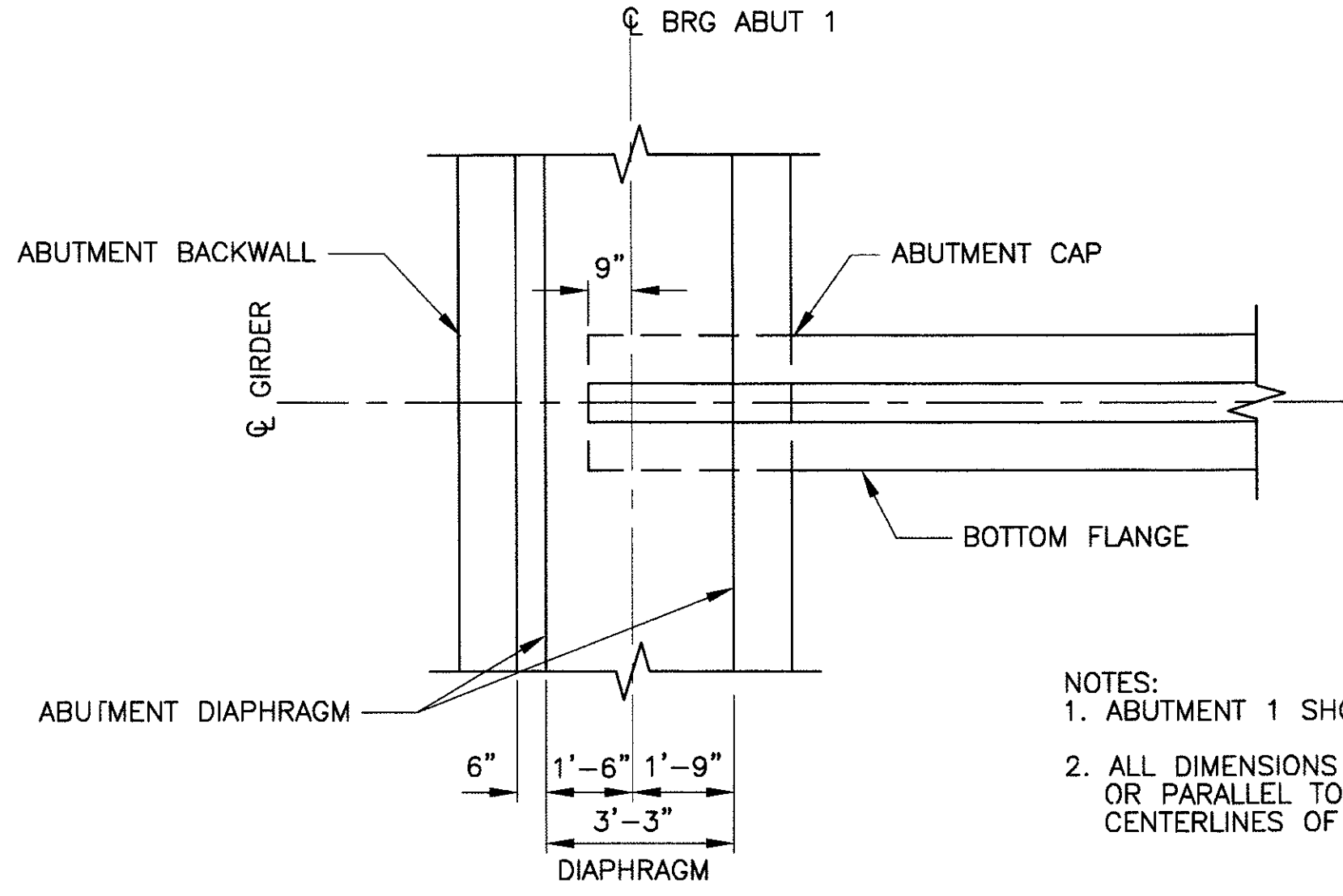


F.H.W.A. REGION 9	STATE ARIZ.	PROJ. NO. ST85100293	NO. 223	TOTAL 352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-8000				
DES: RMD		DR: JRR	CK: SEO	DATE: 12/09
CONSULTING ENGINEER				

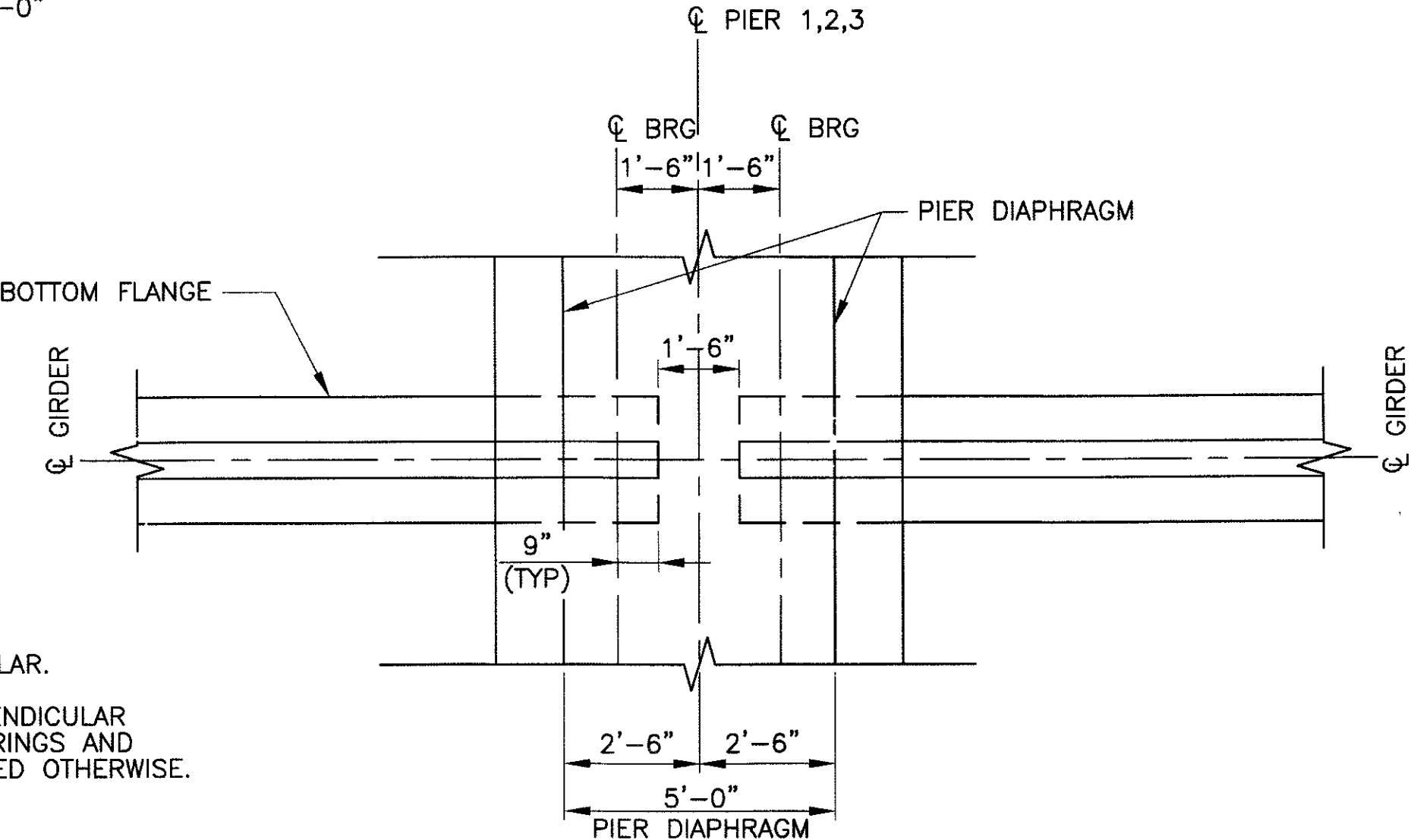
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CRD BY	DATE



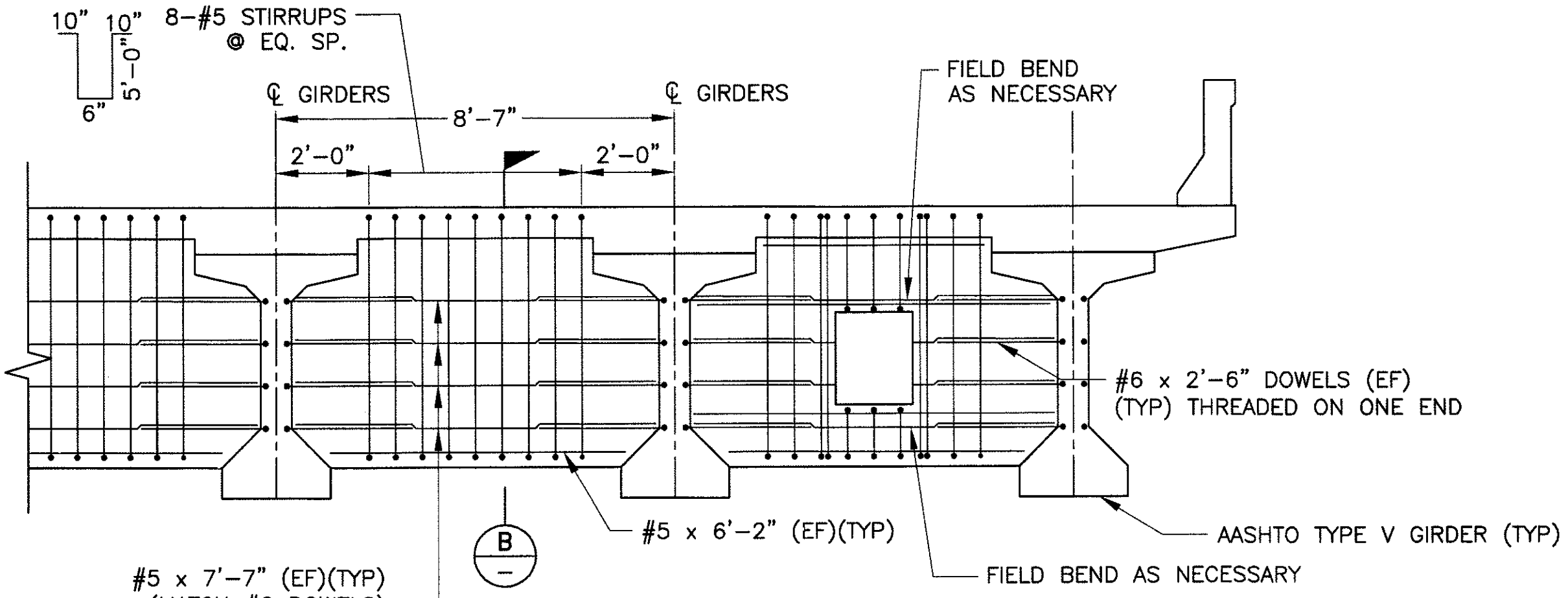
DECK PLAN
SCALE: 1"=20'-0"



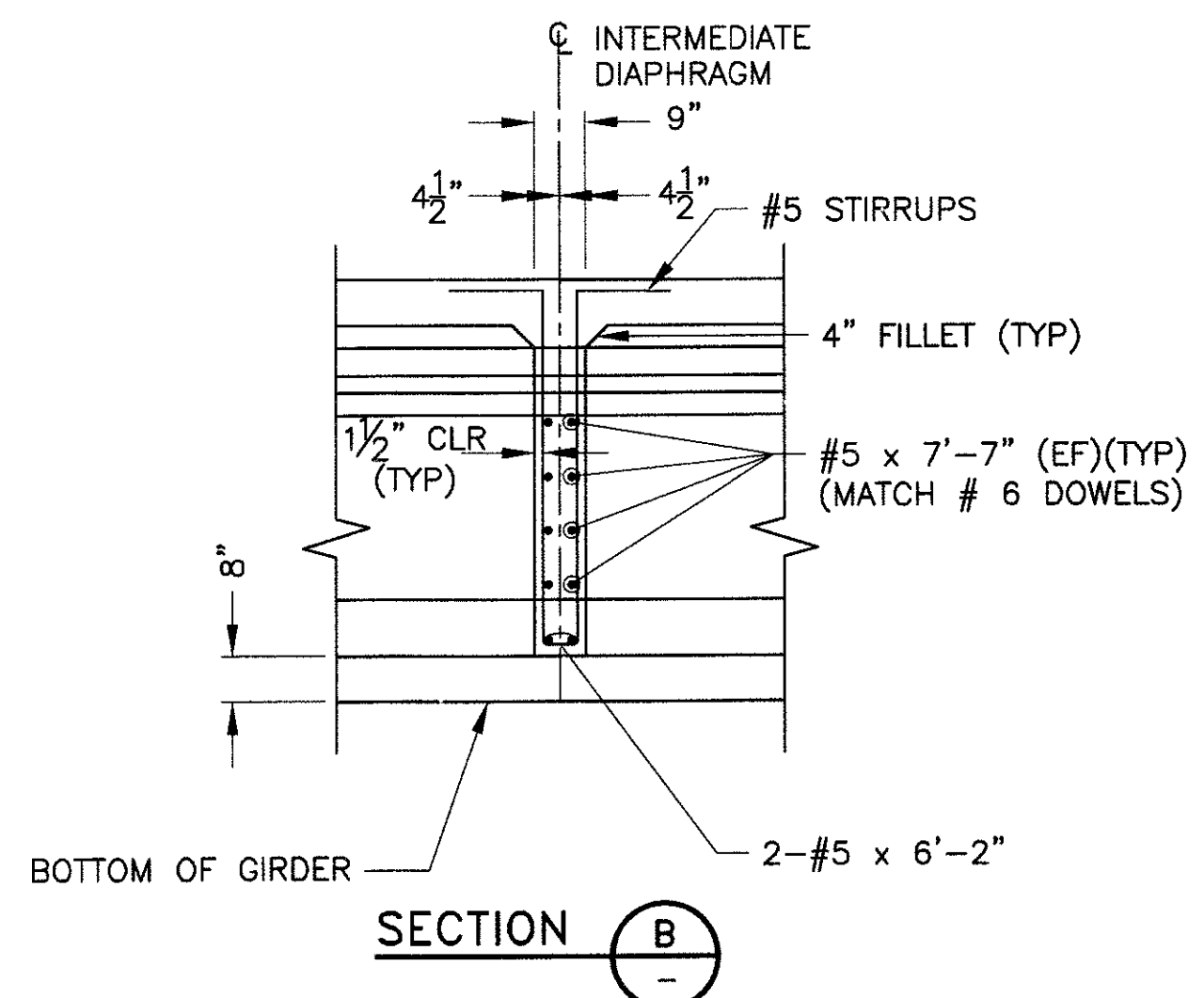
DETAIL 1
SCALE: 3/8"=1'-0"



DETAIL 2
SCALE: 3/8"=1'-0"



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



SECTION B

- NOTES:
- INTERMEDIATE DIAPHRAGM AT MID-LENGTH OF GIRDERS.
 - DISTANCES AND ANGLES MEASURED PERPENDICULAR TO REFERENCE CHORD IN SPAN 1.
 - GIRDERS IN SPAN 1 ARE PARALLEL TO THE REFERENCE CHORD.
 - FOR BRIDGE PLAQUE DETAILS, SEE DWG NO. S-3.35

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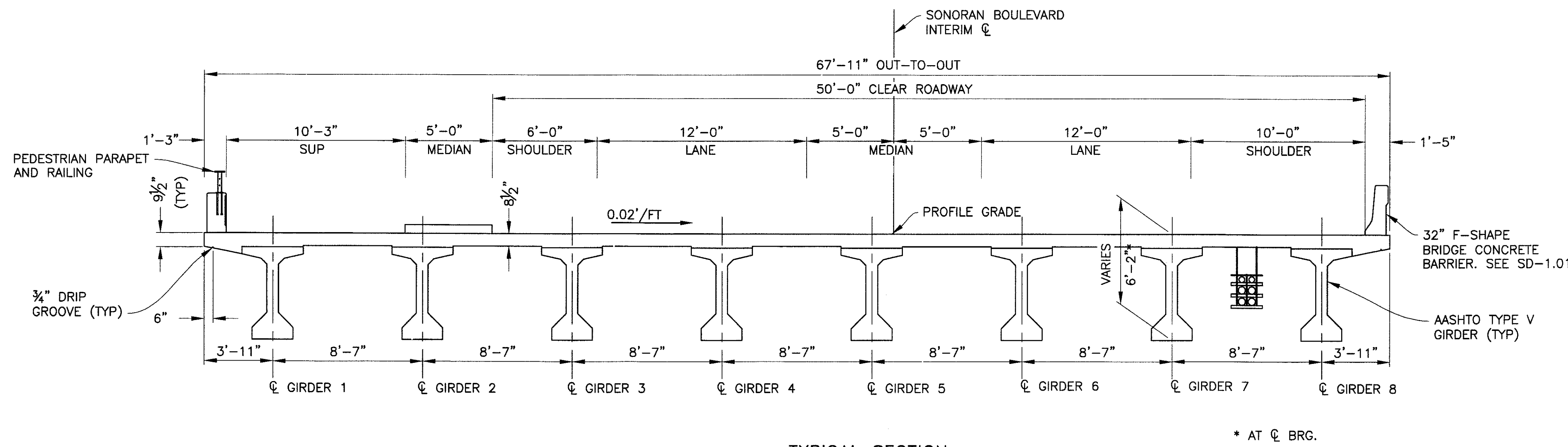
TYPICAL DECK PLAN AND DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

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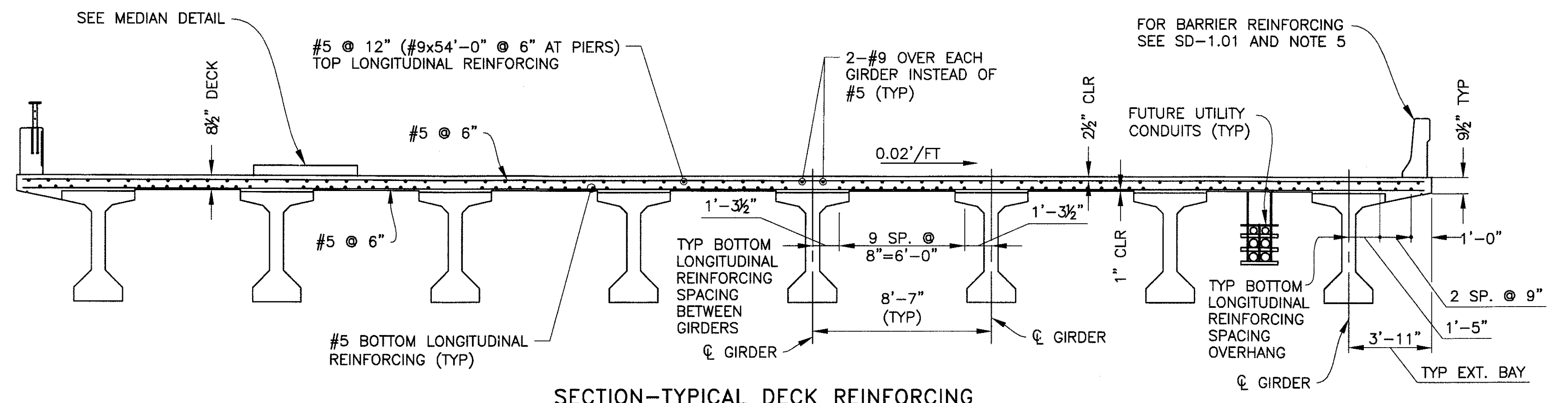
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DATE: 12/09	DATE: 12/09	DATE: 12/09	223	352
DWG NO: S-3.19				

P:\20080029\2008\Drawings\Sheets\Structure\319-CC_Primary_deck_plan & details.dwg - plotted by James Rojas at 12/21/2009 9:04:05 AM
 Plot Scale: 1:1 - Isocore: 1:0000 - Plot Date: 12/21/2009 9:04:05 AM

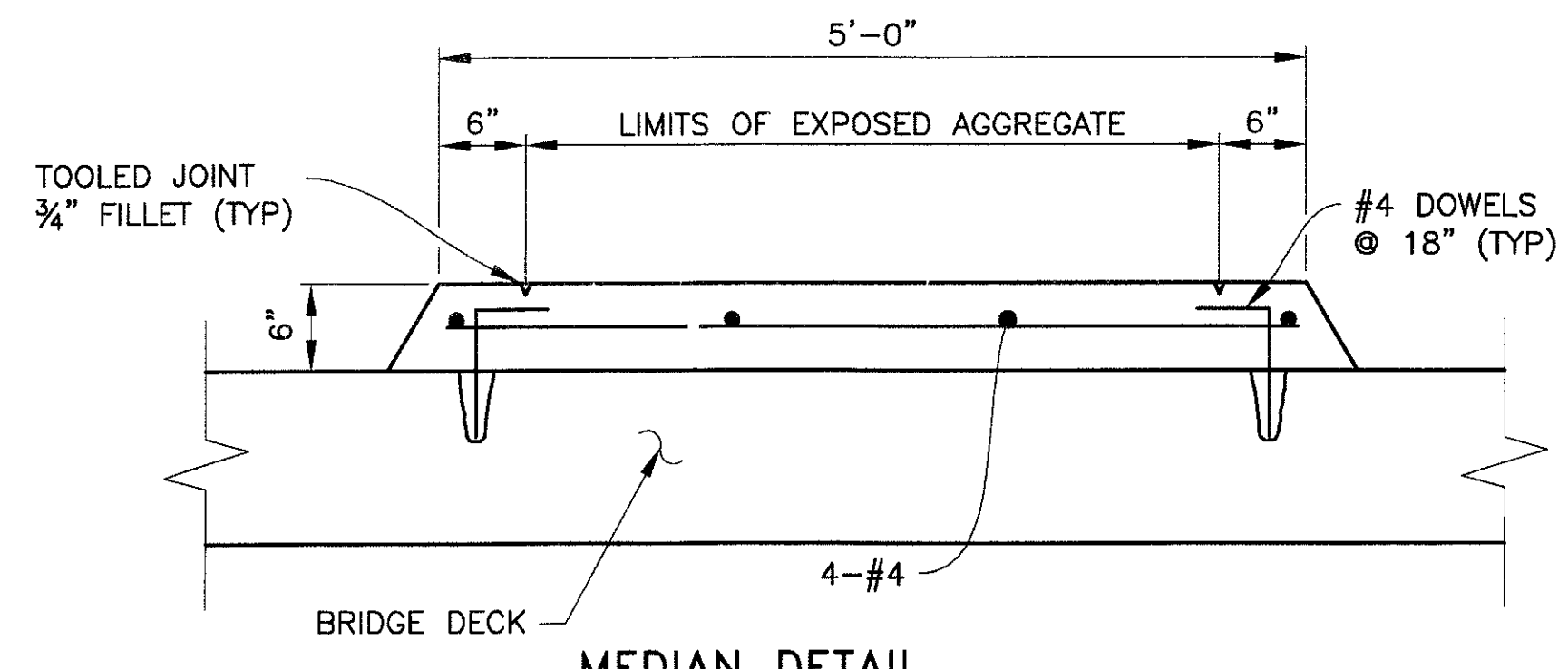


TYPICAL SECTION
LOOKING UP STATION
SCALE: 3"=1'-0"

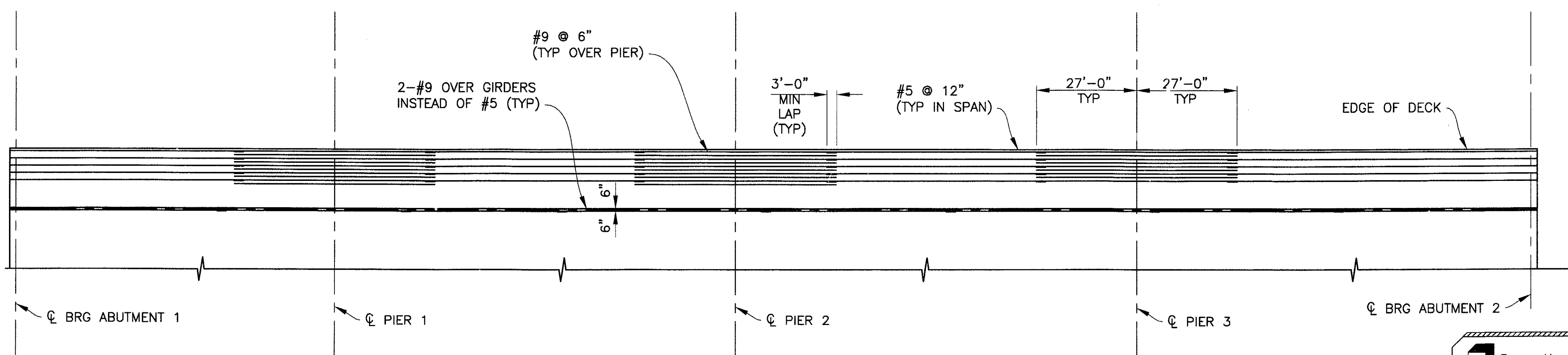
- NOTES:**
- SEE DIAPHRAGM DETAIL DRAWINGS AND DECK PLANS FOR ADDITIONAL INFORMATION.
 - STAY-IN-PLACE FORMS NOT ALLOWED
- DECK REINFORCING NOTES:**
- ALL CONTINUOUS HORIZONTAL BARS IN DECK, DIAPHRAGMS AND BARRIERS, EXCLUDING TRANSVERSE BARS IN DECK SLAB MAY BE SPliced WHERE REQUIRED WITH MINIMUM LAP LENGTH AS SPECIFIED:
 #4 BARS-1'-10" #5 BARS-2'-4"
 #6 BARS-2'-10" #7 BARS-3'-7"
 #8 BARS-4'-7"
 - TRANSVERSE DECK REINFORCING SPLICES WHERE REQUIRED SHALL BE: BOTTOM BARS: 3'-0" MINIMUM LAP AT CENTERLINE OF GIRDER. TOP BARS: 3'-0" MINIMUM LAP AT CENTERLINE OF INTERIOR BAY.
 - BARS SHALL NOT BE SPliced WITHIN THE REQUIRED LAP LENGTH OF THE ADJACENT BARS.
 - SEE PARTIAL DECK TOP LONGITUDINAL REINFORCING PLAN AT PIERS FOR SPLICE LOCATIONS OF TOP #9 AND #5 LONGITUDINAL BARS.
 - SIZE AND SPACING OF BARRIER BARS CAST INTO DECK SLAB VARY AT OPEN JOINTS. SEE SD-1.01 FOR DETAILS.
 - TRANSVERSE DECK REINFORCEMENT SHALL BE PLACED PARALLEL TO ABUTMENTS AND PIERS.



SECTION-TYPICAL DECK REINFORCING
LOOKING UP STATION
SCALE: 3"=1'-0"



MEDIAN DETAIL
SCALE: 1"=1'-0"



PARTIAL DECK TOP LONGITUDINAL REINFORCING PLAN
SCALE: 1"=1'-0"

- NOTES:**
- CONCRETE CLASS "S" f'c= 4000 psi
 - EXPOSED AGGREGATE PER MAG STANDARD SPECIFICATIONS SECTION 343, TYPE A-NON PEDESTRIAN USE.
 - INTERGRAL COLOR CONCRETE - DAVID COLOR= MESQUITE

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TYPICAL DECK & REINFORCING
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293**

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DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	224	352
DWG NO: S-3.20				

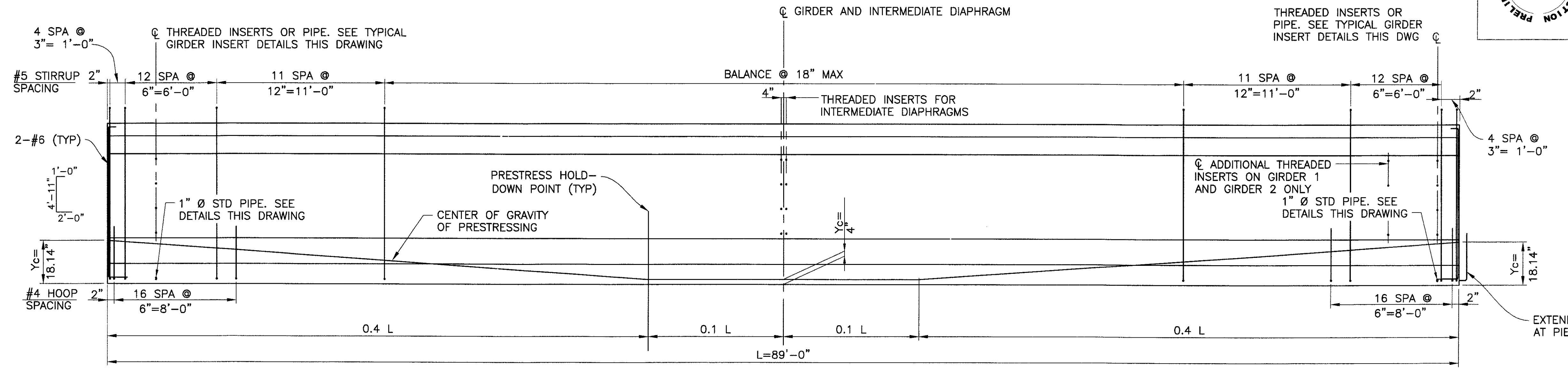
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

P:\200805\CAD\Civil\Sheet\Structures\320-cc Primary deck & reinforcing.dwg - plotted by James Rojas at 12/21/2009 9:04:09 AM
 PROJECT: 11 - Recode: 1.0000 - PARTIAL DECK & REINFORCING

PRELIMINARY
90%
NOT FOR CONSTRUCTION

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	225	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226, 480-829-6000				
CONSULTING ENGINEER				
DES: RMD	DR: JRR	CK: SEO	DATE: 12/09	

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				
NO.				
NO.				
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NO.				

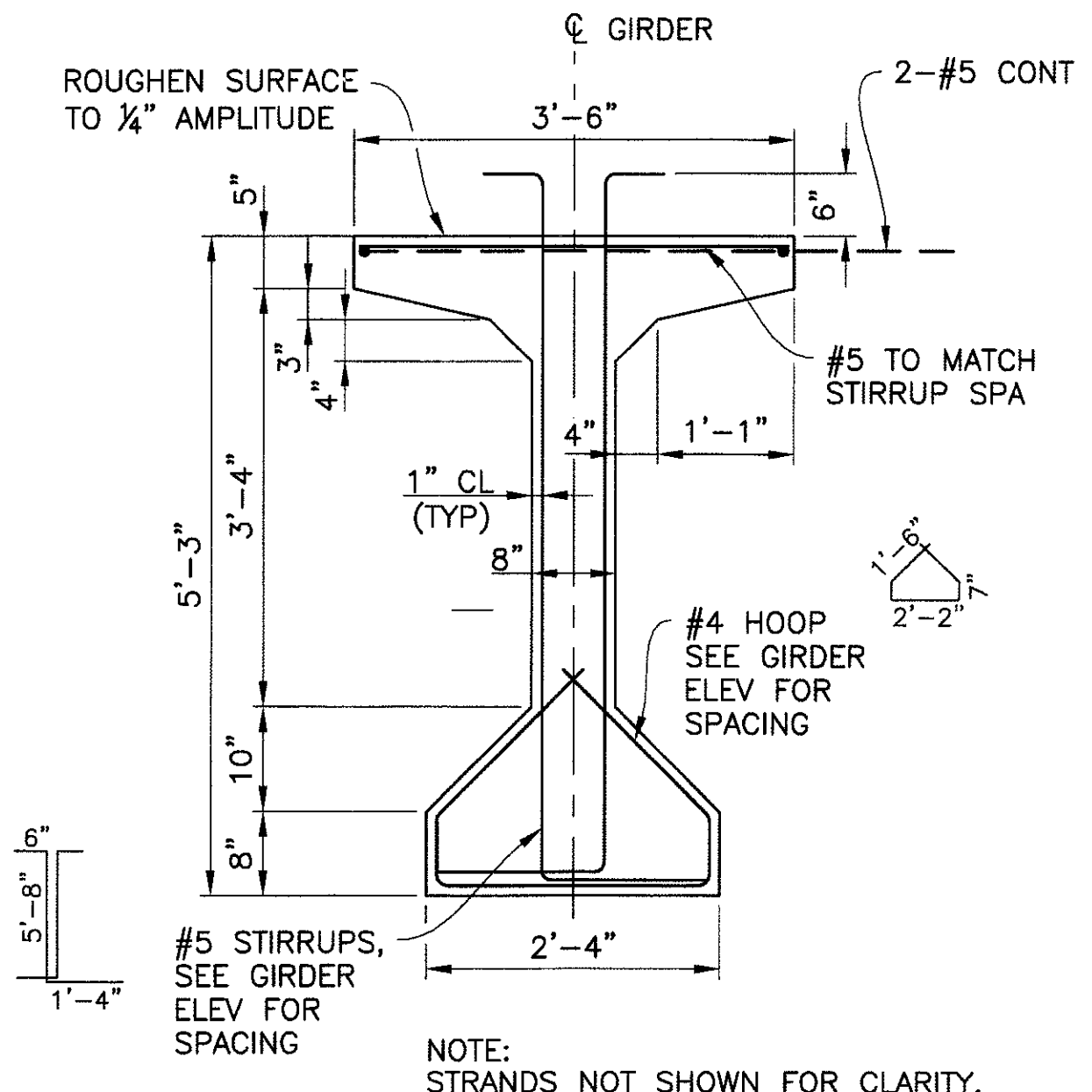


GIRDER ELEVATION

HORZ: 1/4" = 1'-0"
VERT: 1/2" = 1'-0"

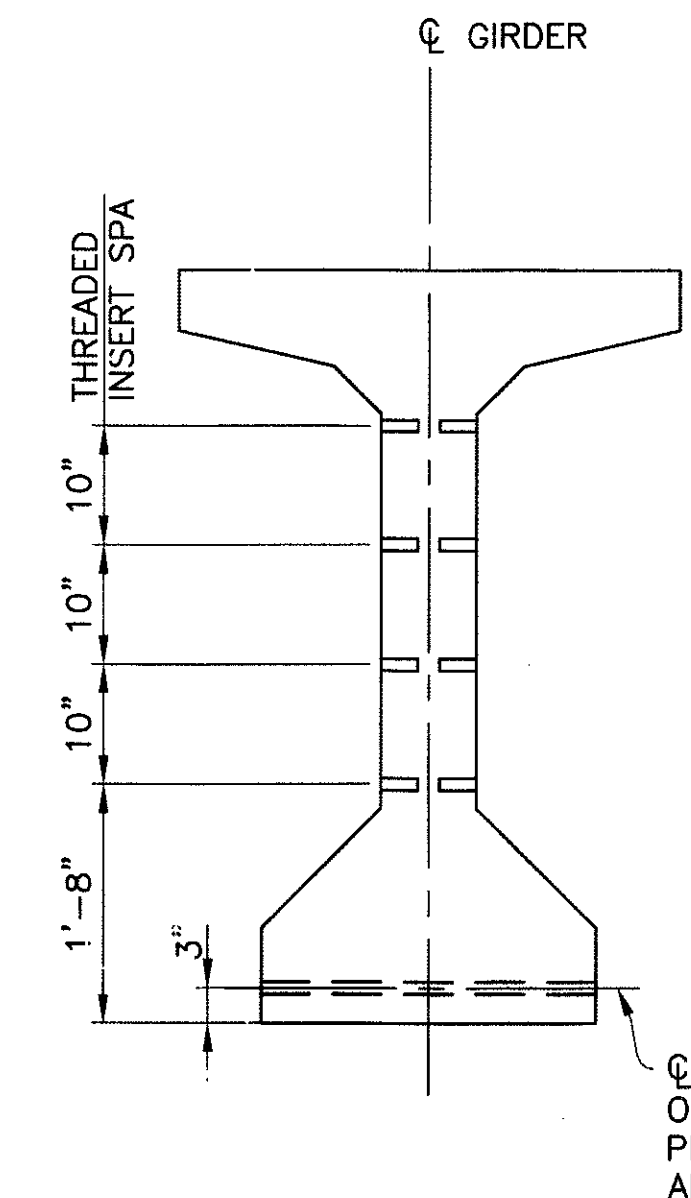
NOTES:

1. THREADED INSERTS ARE FERRULE LOOP INSERTS FOR #6 REINFORCING BARS THREADED ON END. INSERTS SHALL HAVE A 10,800 lbs WORKING PULLOUT STRENGTH.
2. THREADED INSERTS SHALL BE PLACED NORMAL TO GIRDER WEB. FIELD BEND INSERTED BARS IN SUCH A MANNER AS TO PREVENT BENDING STRESSES AT ROOT OF THREADS. SHOP DRAWINGS SHALL INDICATE METHOD OF BENDING.
3. FOR EXTERIOR GIRDERS AT PIER, REPLACE PIPE WITH THREADED INSERT ON INTERIOR FACE OF BOTTOM FLANGE.



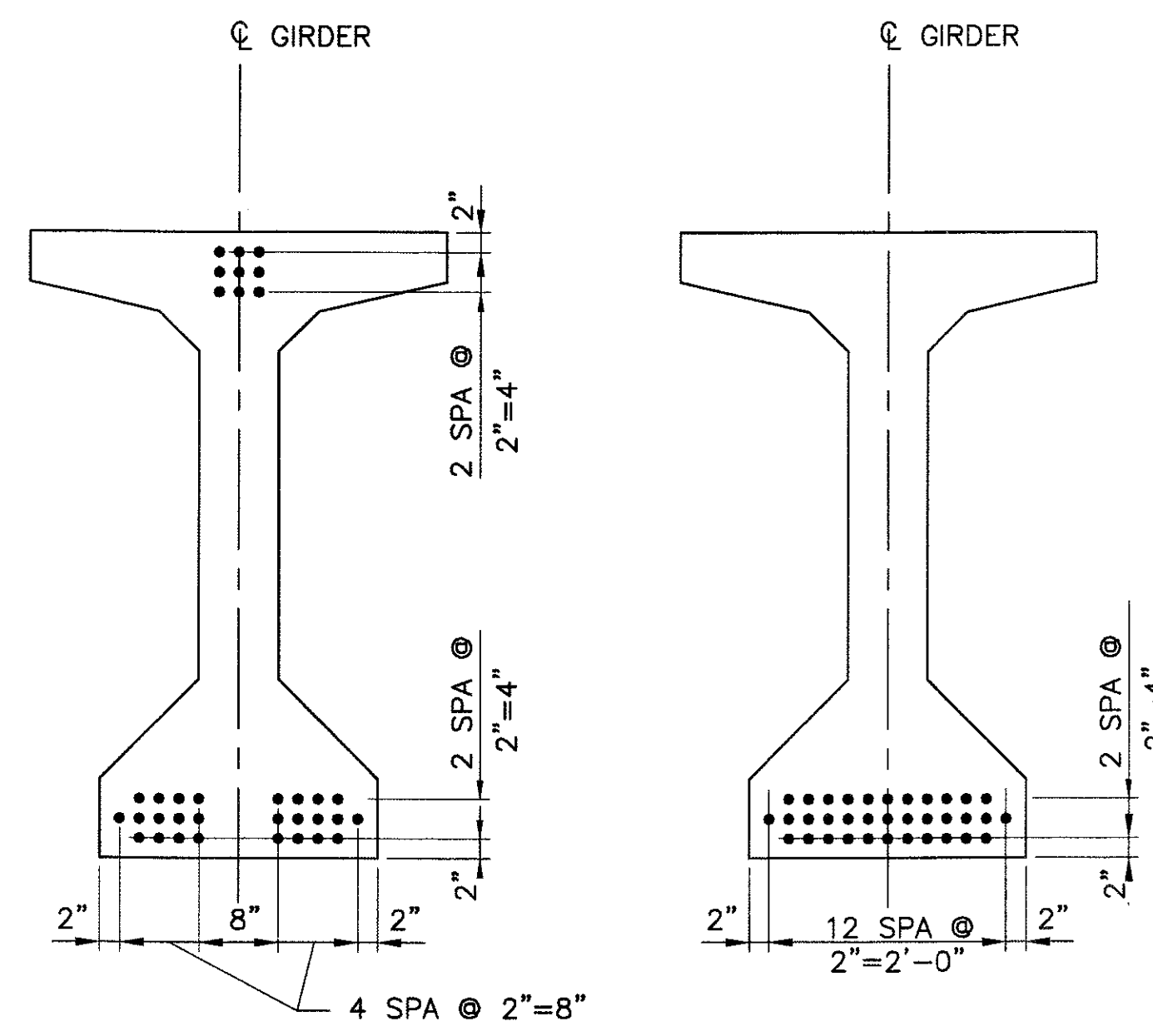
AASHTO TYPE V GIRDERS

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



TYPICAL GIRDER INSERT DETAIL

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



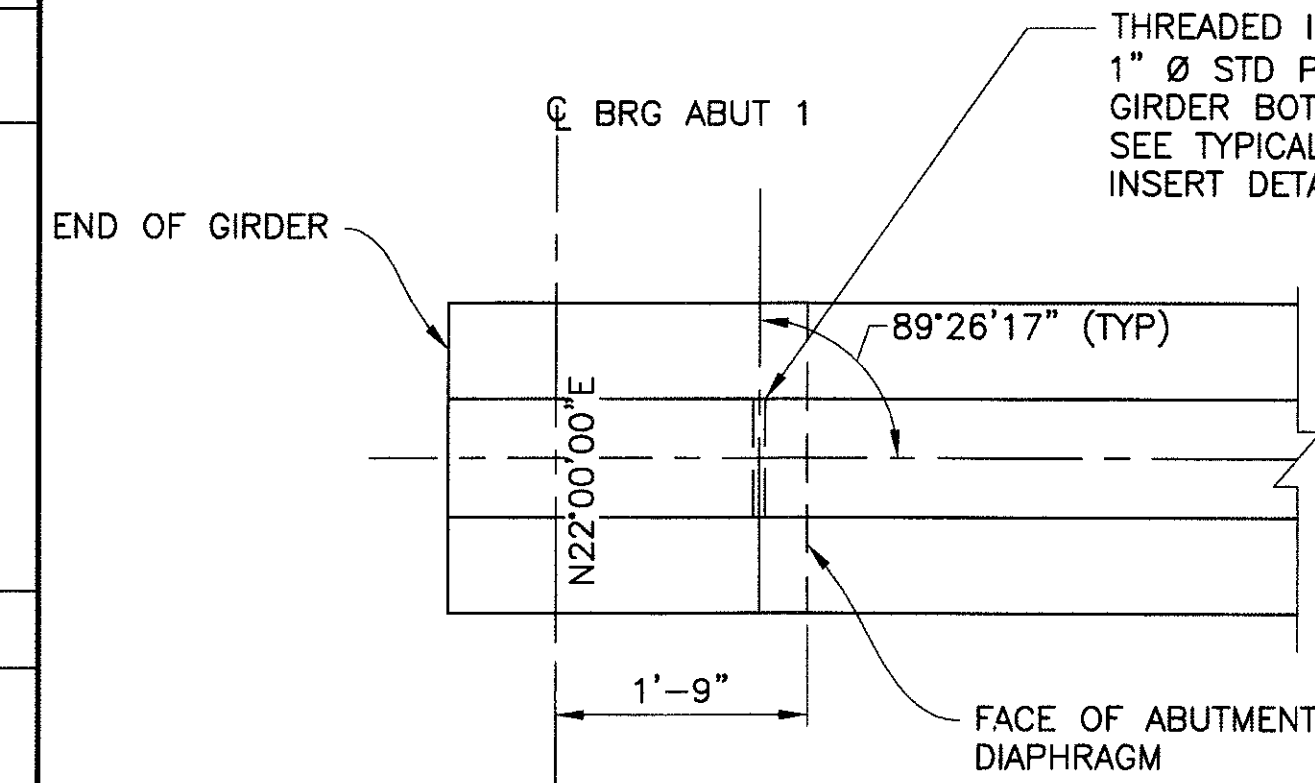
AT ENDS

MIDSPAN

STRAND PATTERN
35-1/2" DIAMETER 7 WIRE LOW RELAXATION (STRANDS)
SCALE: 3/4" = 1'-0"

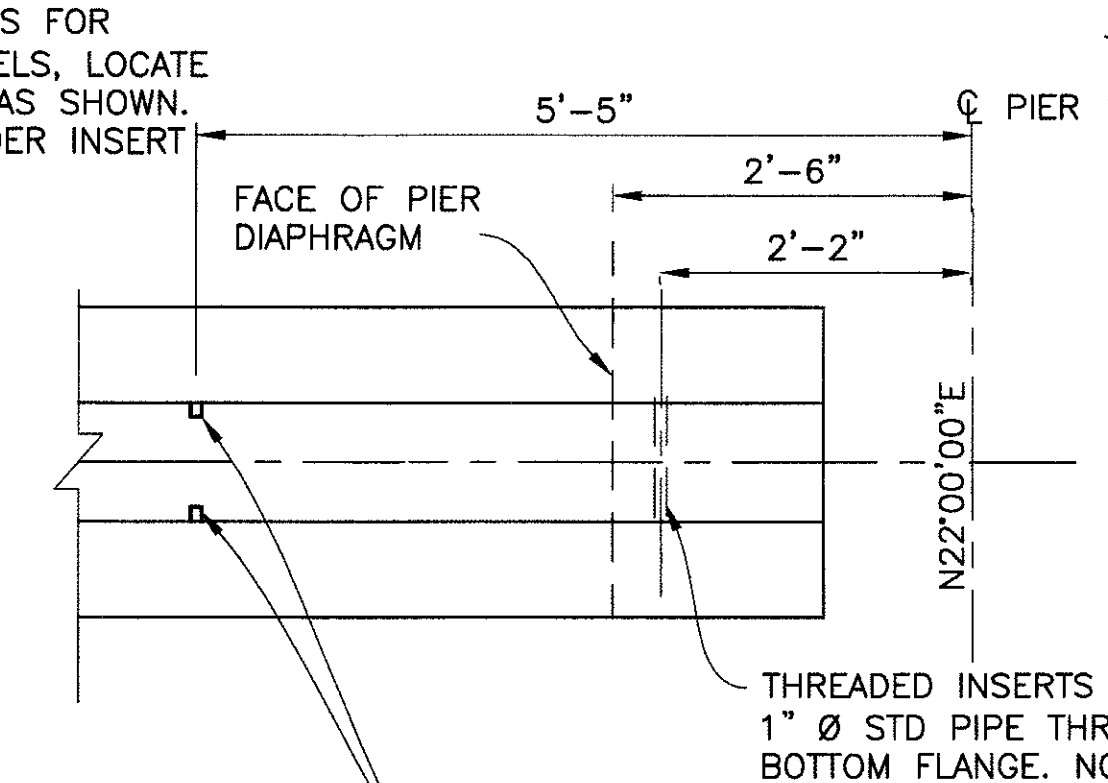
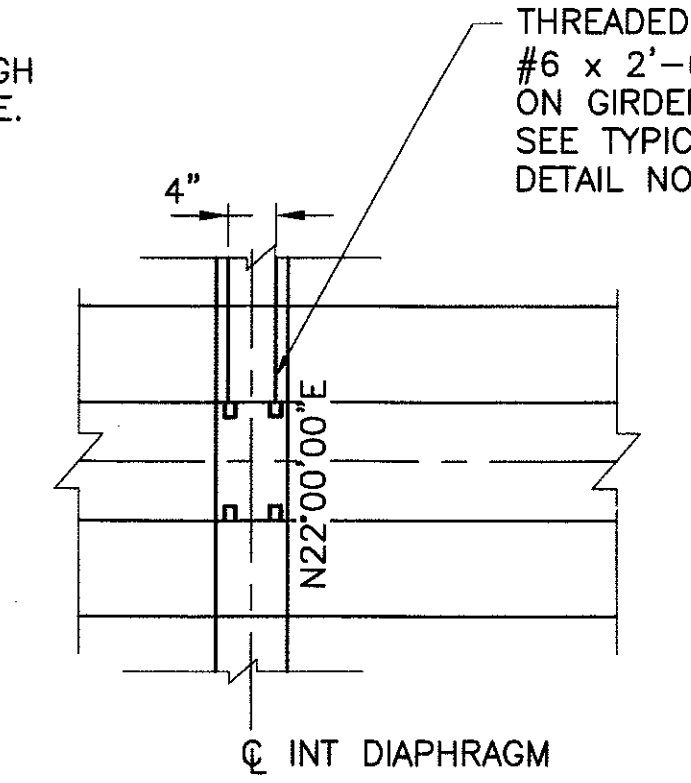
GIRDER NOTES:

1. SEE GENERAL NOTES ON DWG S-3.03
2. $P_i = 1084.4$ KIPS. INITIAL TENSION BEFORE LOSSES.
 $P_w = 893.7$ KIPS. WORKING FORCE REMAINING AFTER ALL LOSSES.
 $f'_{ci} = 4000$ PSI MINIMUM STRENGTH AT TRANSFER.
 $f'_{c} = 5000$ PSI MINIMUM STRENGTH AT 28 DAYS.
3. ALL LOW-RELAXATION STRANDS SHALL BE STRESSED TO 0.75 f_s
4. ALL GIRDERS SHALL BE PRESTRESSED BY THE PRETENSIONING METHOD ONLY.
5. USE OF MASKED STRANDS WILL NOT BE ALLOWED.
6. Y_c = DISTANCE TO CENTER OF GRAVITY OF PRESTRESSING MEASURED FROM BOTTOM OF GIRDER.



AT DIAPHRAGMS
TYPICAL GIRDER INSERT PLAN

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



ADDITIONAL THREADED INSERTS ON BOTH FACES OF GIRDER 1 AND EXTERIOR FACE OF GIRDER 2 FOR PEDESTRIAN BALCONY

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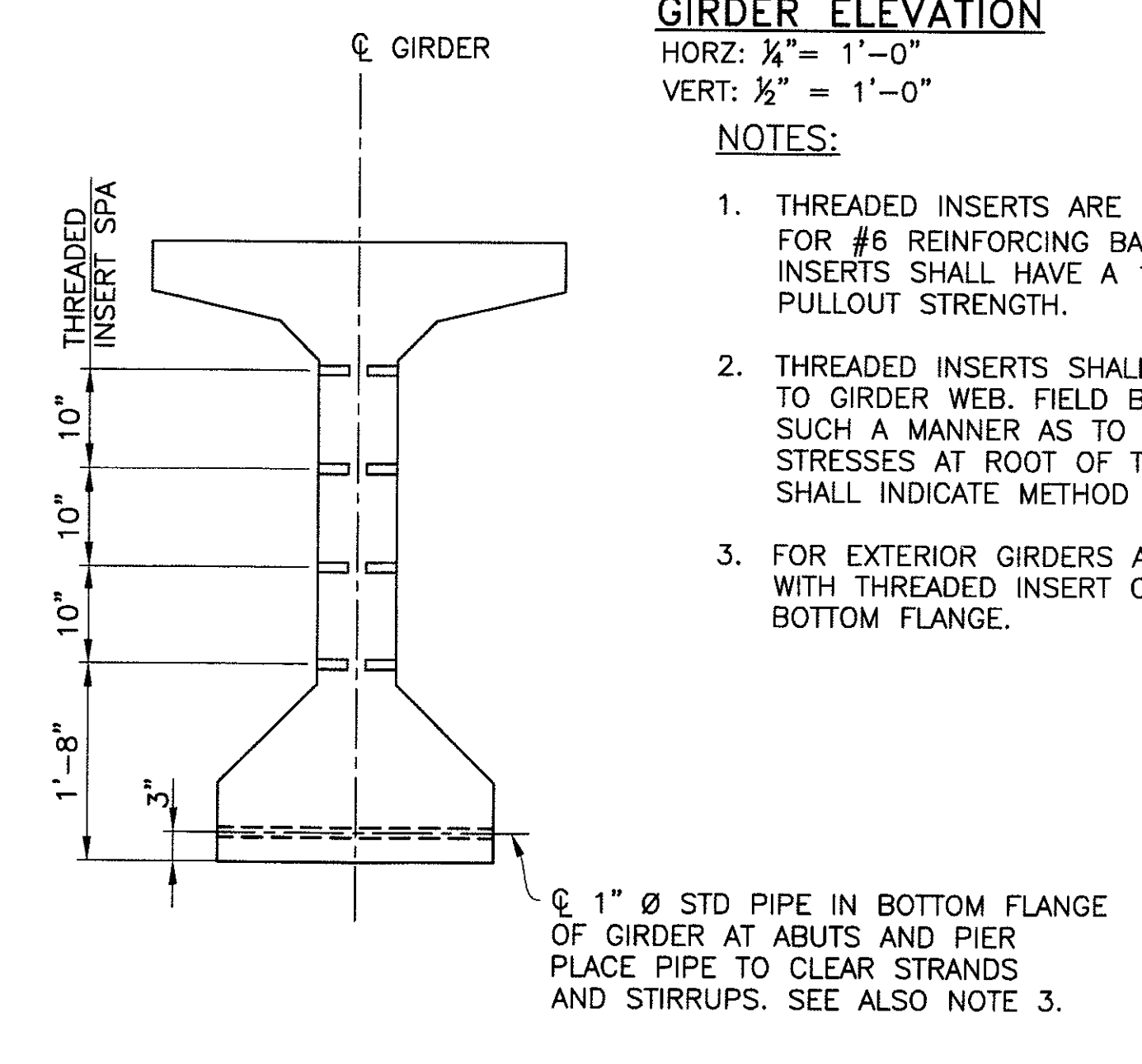
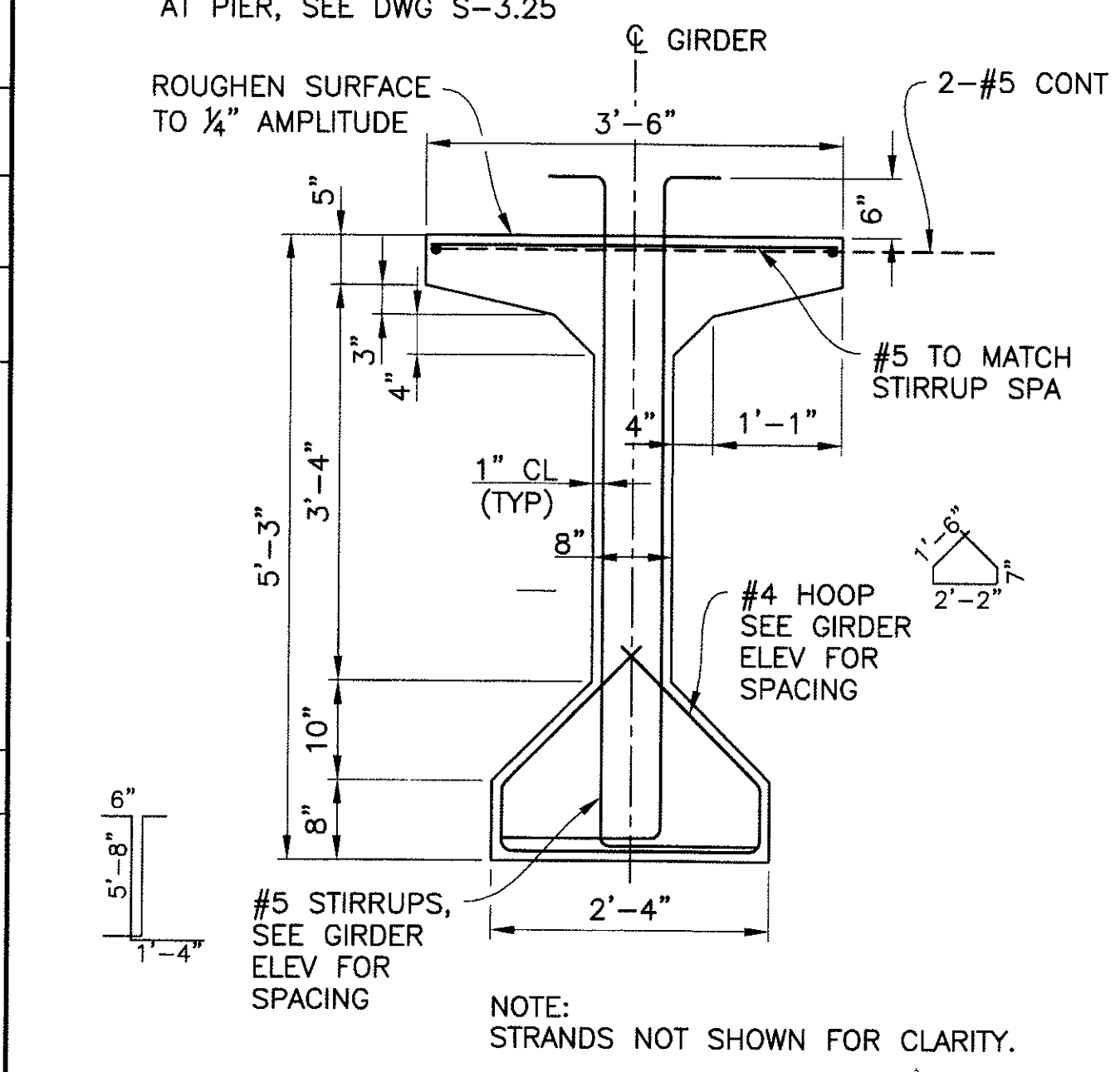
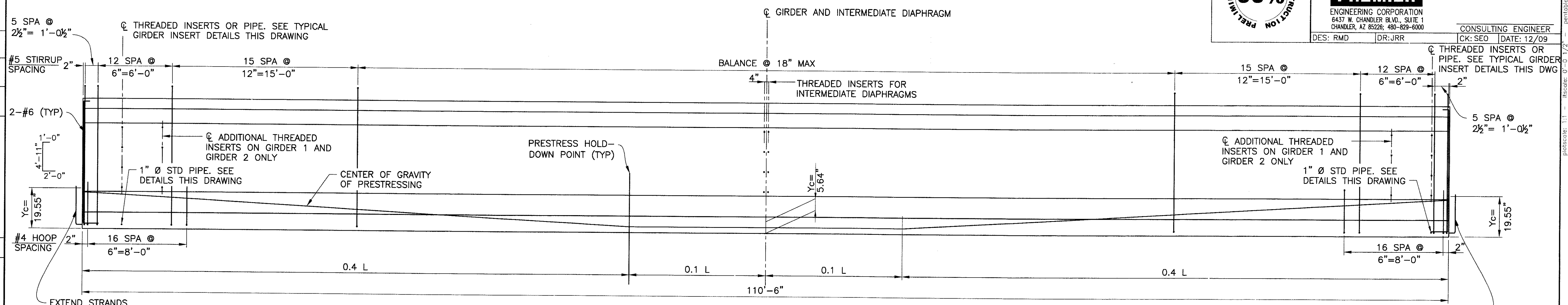
GIRDER DETAILS SPAN 1

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	225	352
SCALE: S-3.21			225	352

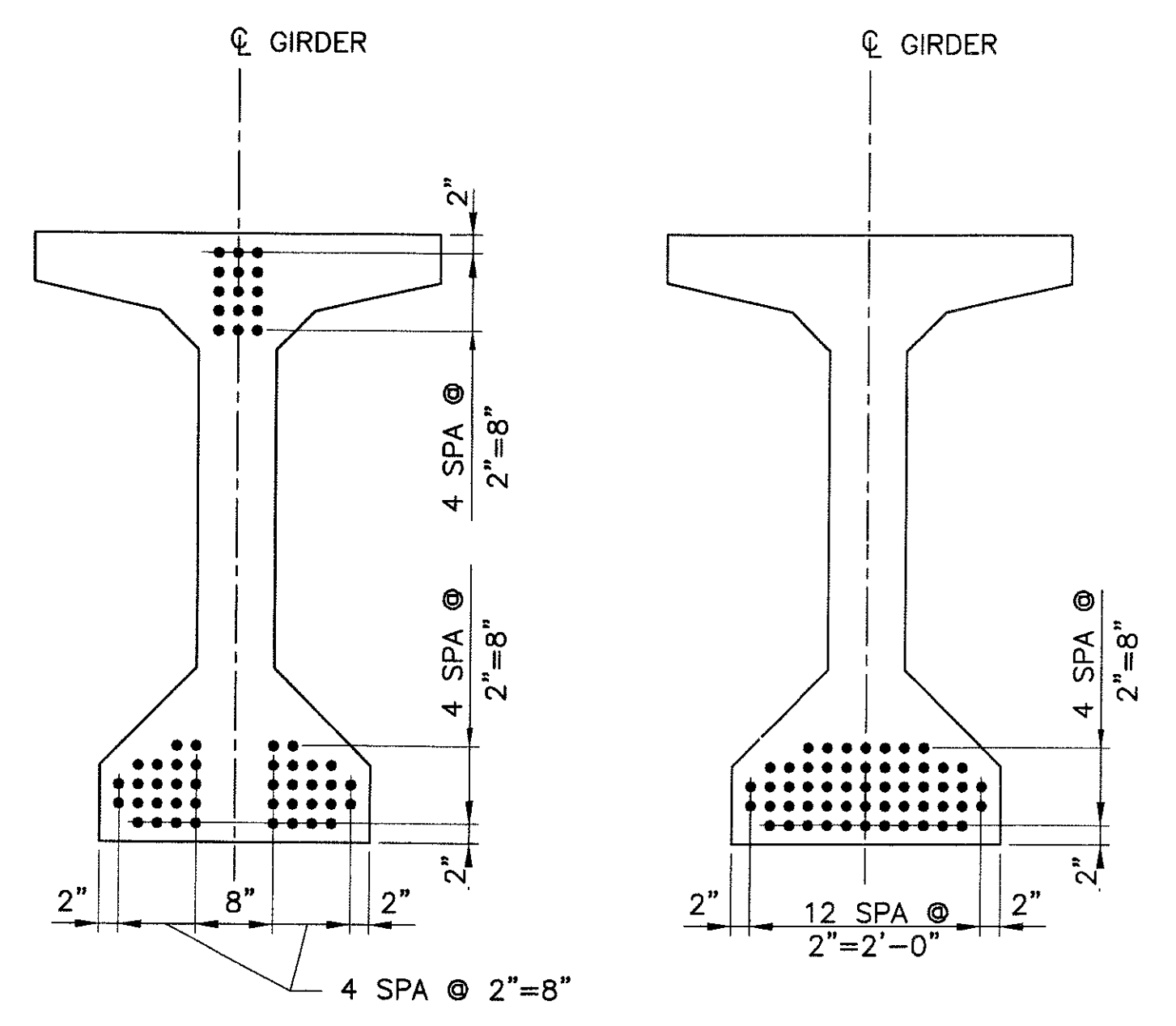
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GIRDER ELEVATION
 HORZ: 3/4" = 1'-0"
 VERT: 1/2" = 1'-0"

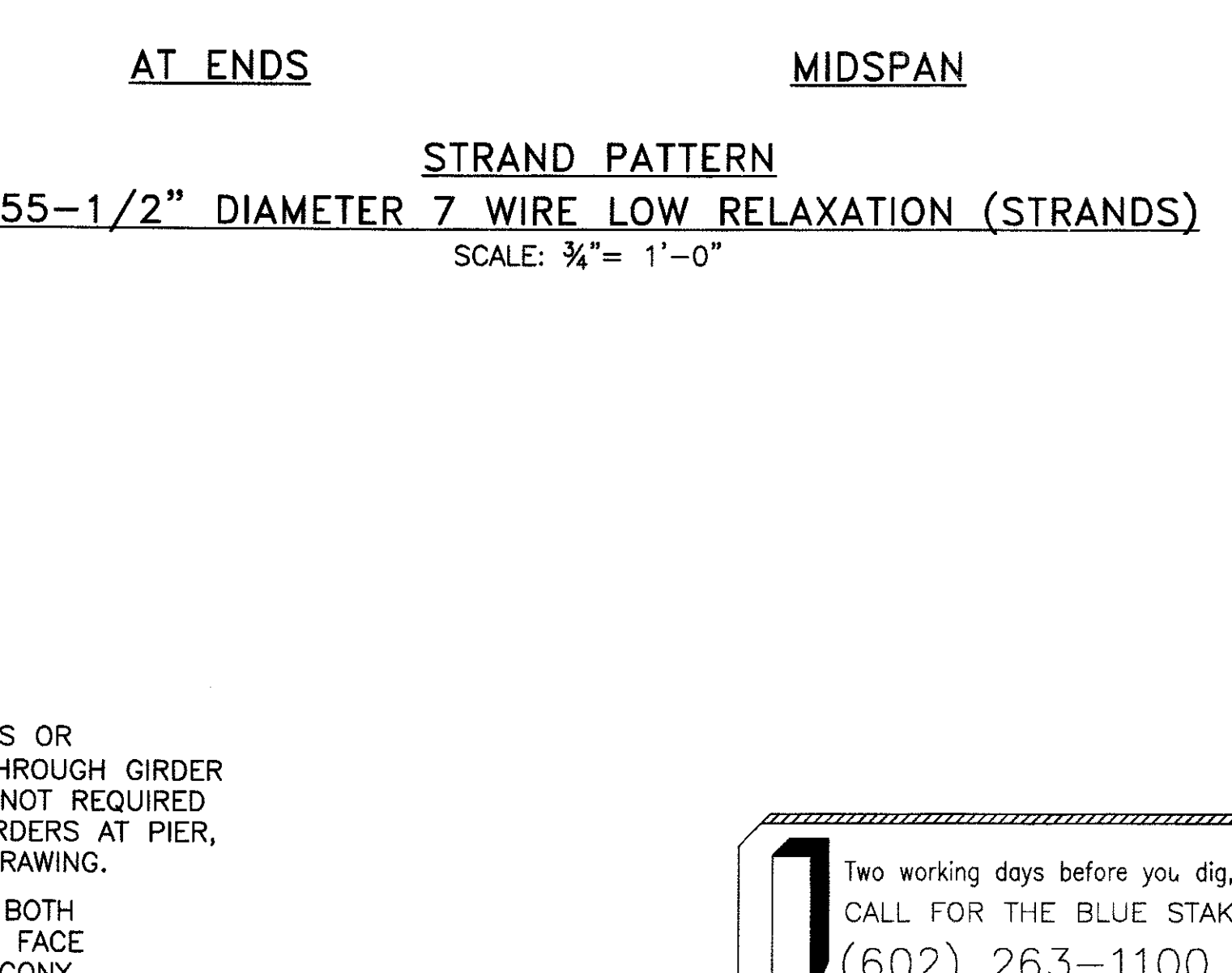
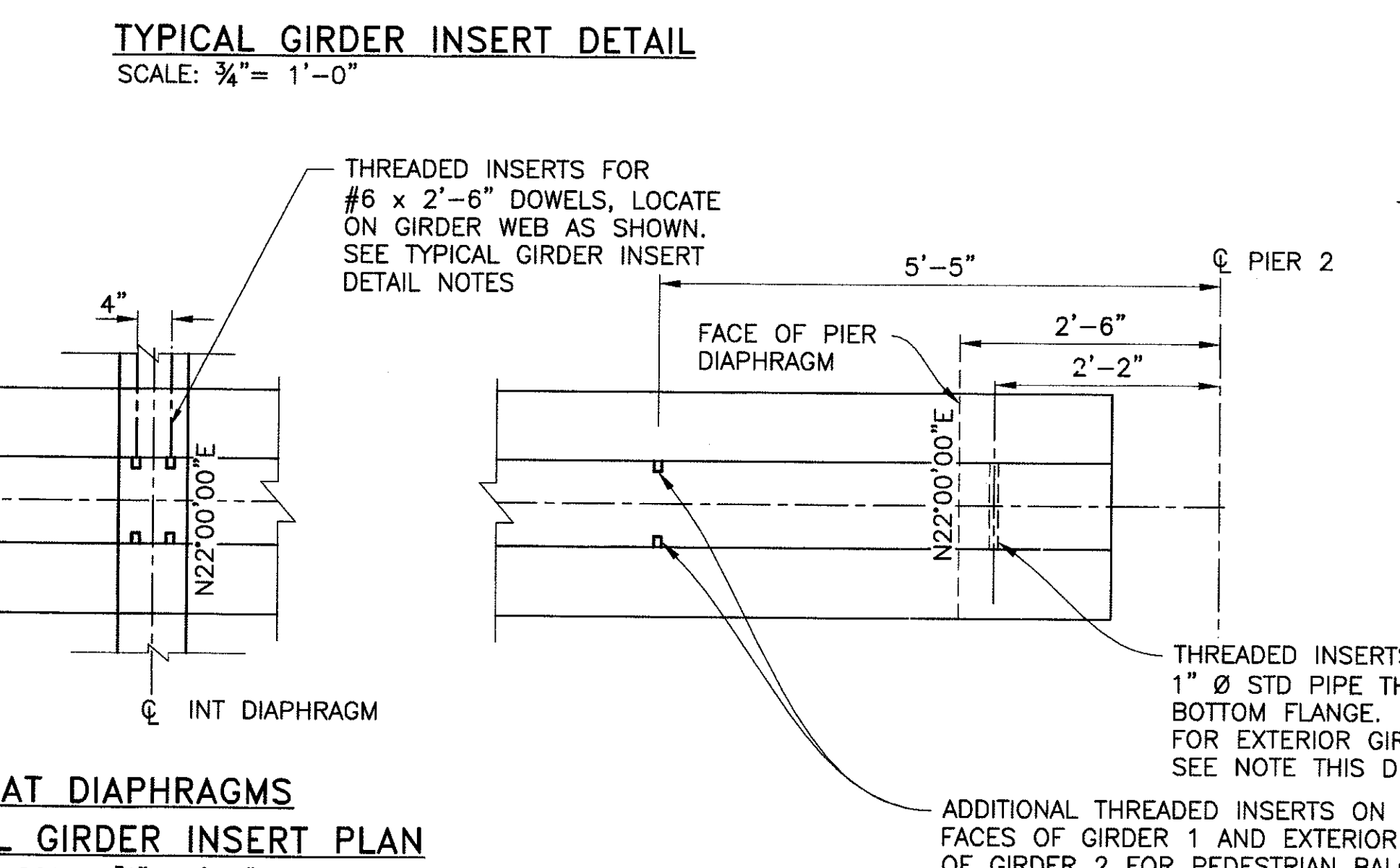
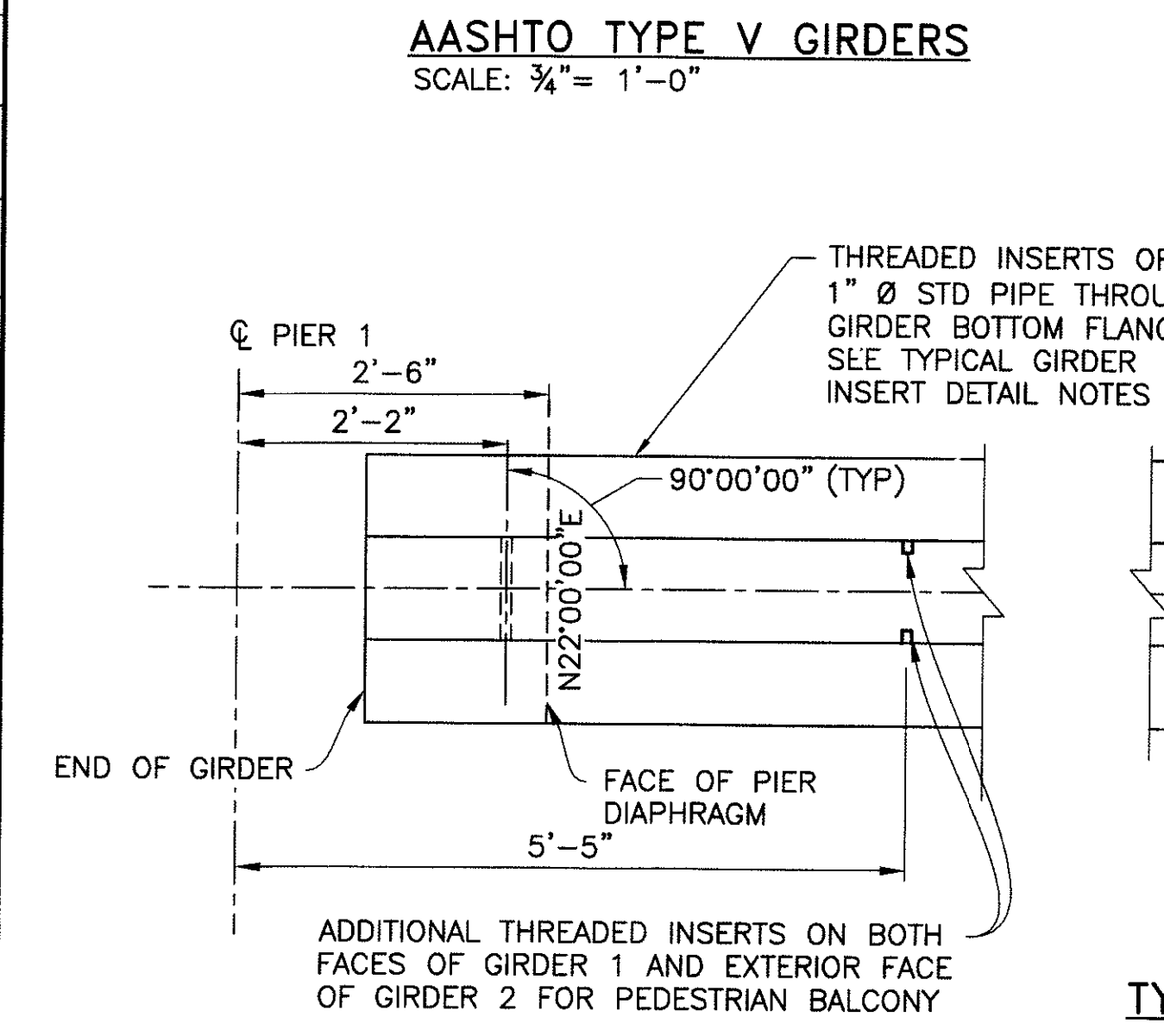
NOTES:

1. THREADED INSERTS ARE FERRULE LOOP INSERTS FOR #6 REINFORCING BARS THREADED ON END. INSERTS SHALL HAVE A 10,800 lbs WORKING PULLOUT STRENGTH.
2. THREADED INSERTS SHALL BE PLACED NORMAL TO GIRDER WEB. FIELD BEND INSERTED BARS IN SUCH A MANNER AS TO PREVENT BENDING STRESSES AT ROOT OF THREADS. SHOP DRAWINGS SHALL INDICATE METHOD OF BENDING.
3. FOR EXTERIOR GIRDERS AT PIER, REPLACE PIPE WITH THREADED INSERT ON INTERIOR FACE OF BOTTOM FLANGE.



GIRDER NOTES:

1. SEE GENERAL NOTES ON DWG S-3.03
2. $P_i = 1704.0$ KIPS. INITIAL TENSION BEFORE LOSSES.
 $P_w = 1367.9$ KIPS. WORKING FORCE REMAINING AFTER ALL LOSSES.
 $f_{ci} = 5000$ PSI MINIMUM STRENGTH AT TRANSFER.
 $f_c = 5500$ PSI MINIMUM STRENGTH AT 28 DAYS.
3. ALL LOW-RELAXATION STRANDS SHALL BE STRESSED TO 0.75 f_s
4. ALL GIRDERS SHALL BE PRESTRESSED BY THE PRETENSIONING METHOD ONLY.
5. USE OF MASKED STRANDS WILL NOT BE ALLOWED.
6. Y_c = DISTANCE TO CENTER OF GRAVITY OF PRESTRESSING MEASURED FROM BOTTOM OF GIRDER.



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GIRDER DETAILS SPAN 2
CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK PRIMARY
 ST85100293

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DR: JRR	DES: RMD	CK: SEO	SHEET	TOTAL
DATE: 12/09	DATE: 12/09	DATE: 12/09	NO.	SHEETS
DWG NO: S-3.22			226	352

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE

PRELIMINARY
90%
NOT FOR CONSTRUCTION

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	227	352

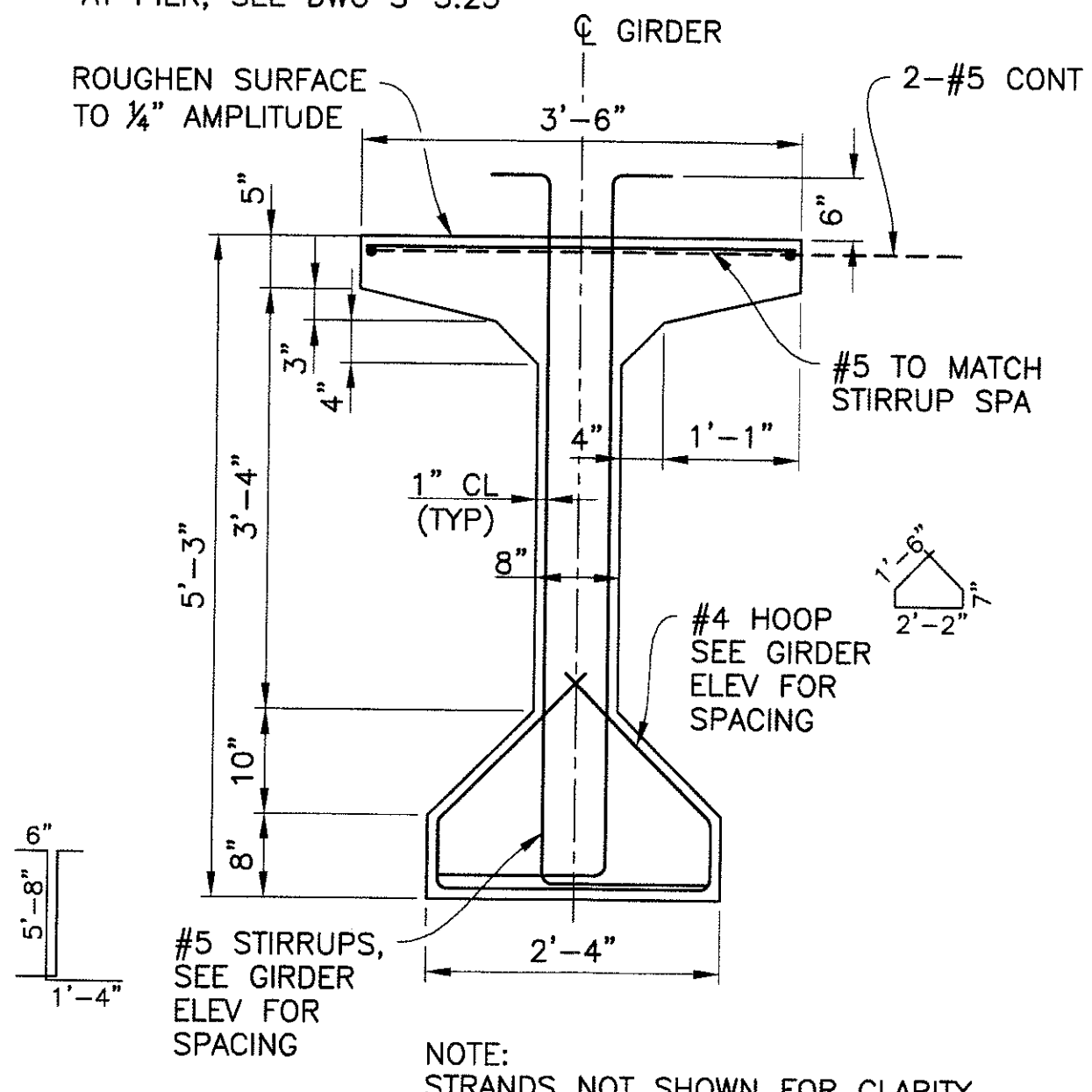
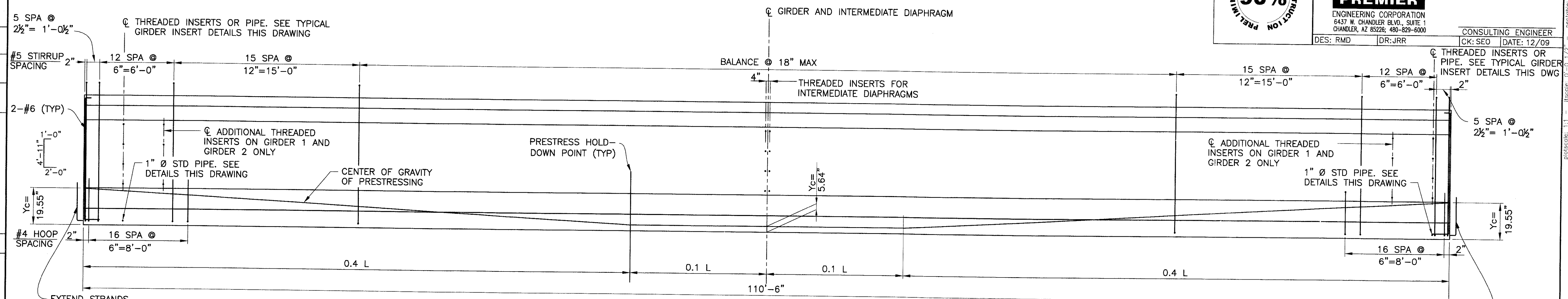
PREMIER
ENGINEERING CORPORATION
6437 W. CHANDLER BLVD., SUITE 1
CHANDLER, AZ 85226; 480-829-6000

CONSULTING ENGINEER
DES: RMD DR: JRR CK: SEO DATE: 12/09

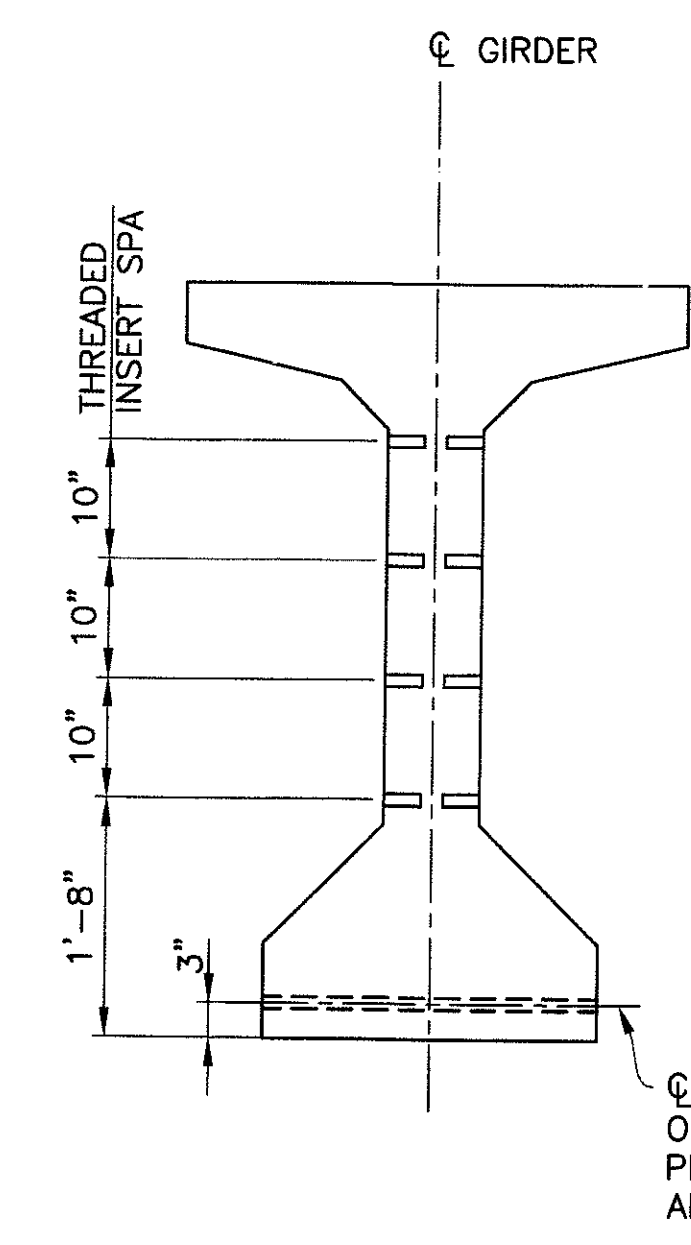
REVISION BY CITY OF PHOENIX
NO. DESCRIPTION REV BY CND BY DATE

REVISION BY CITY OF PHOENIX
NO. DESCRIPTION REV BY CND BY DATE

REVISION BY CITY OF PHOENIX
NO. DESCRIPTION REV BY CND BY DATE



AASHTO TYPE V GIRDERS
SCALE: 3/4" = 1'-0"



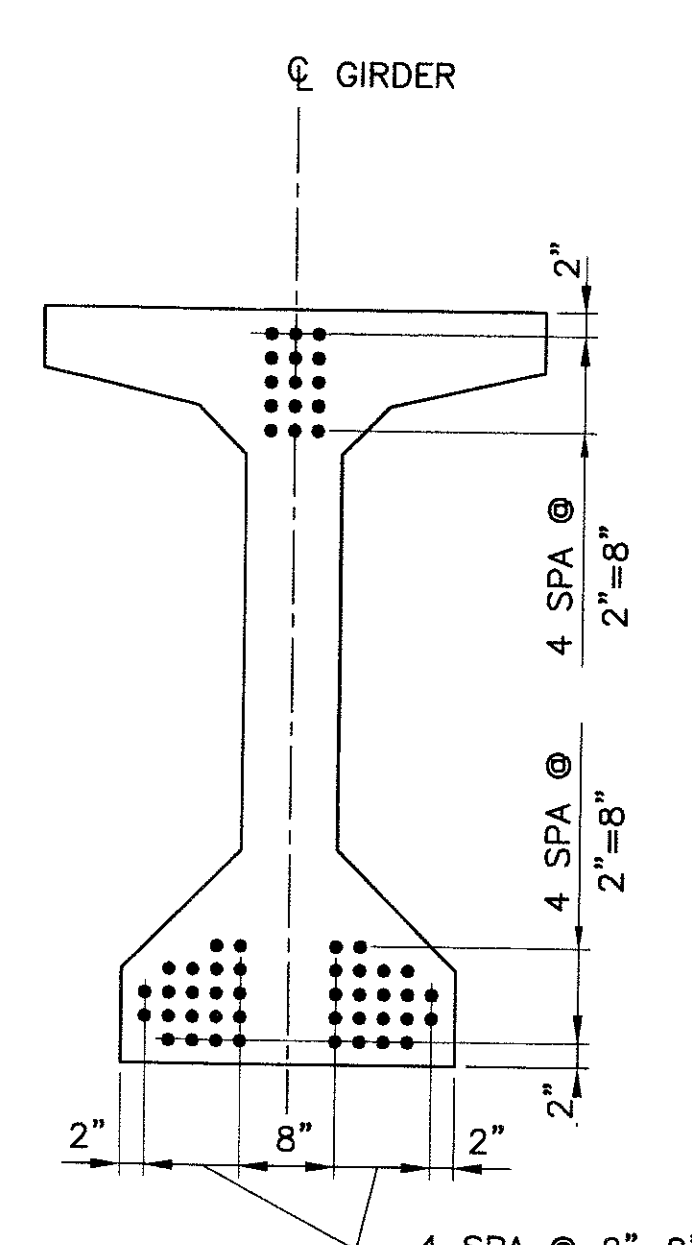
TYPICAL GIRDER INSERT DETAIL
SCALE: 3/4" = 1'-0"

GIRDER ELEVATION

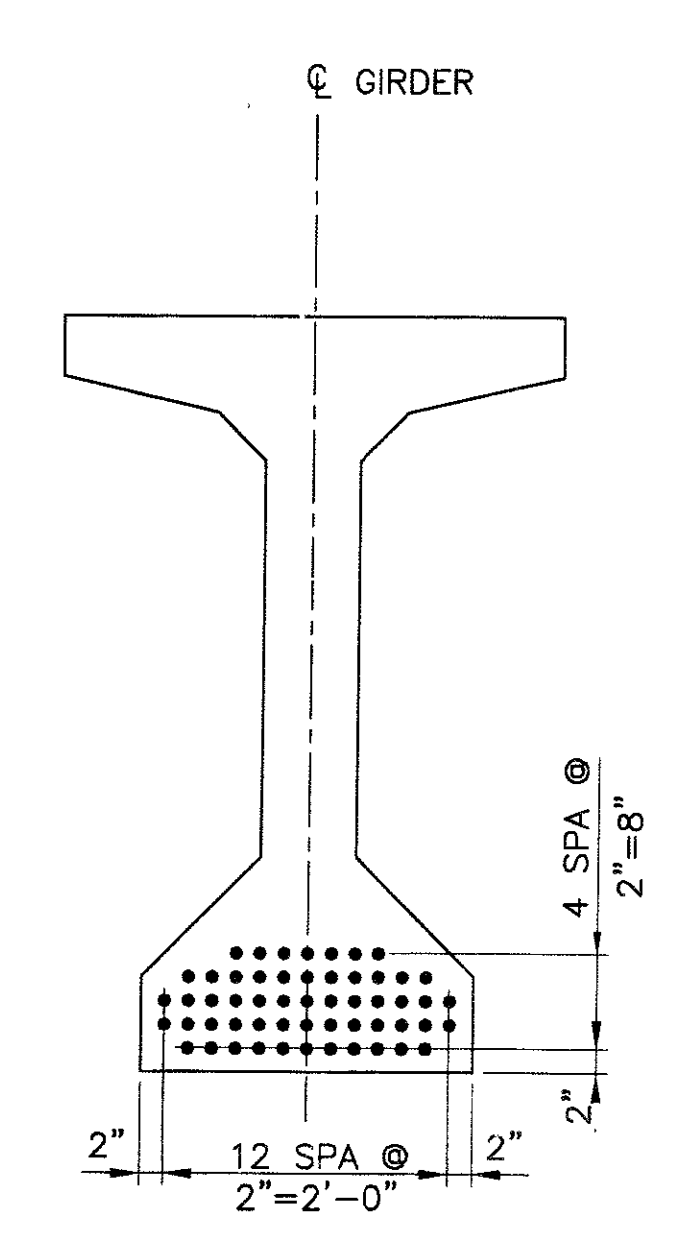
HORZ: 3/4" = 1'-0"
VERT: 1/2" = 1'-0"

NOTES:

1. THREADED INSERTS ARE FERRULE LOOP INSERTS FOR #6 REINFORCING BARS THREADED ON END. INSERTS SHALL HAVE A 10,800 lbs WORKING PULLOUT STRENGTH.
2. THREADED INSERTS SHALL BE PLACED NORMAL TO GIRDER WEB. FIELD BEND INSERTED BARS IN SUCH A MANNER AS TO PREVENT BENDING STRESSES AT ROOT OF THREADS. SHOP DRAWINGS SHALL INDICATE METHOD OF BENDING.
3. FOR EXTERIOR GIRDERS AT PIER, REPLACE PIPE WITH THREADED INSERT ON INTERIOR FACE OF BOTTOM FLANGE.



AT ENDS

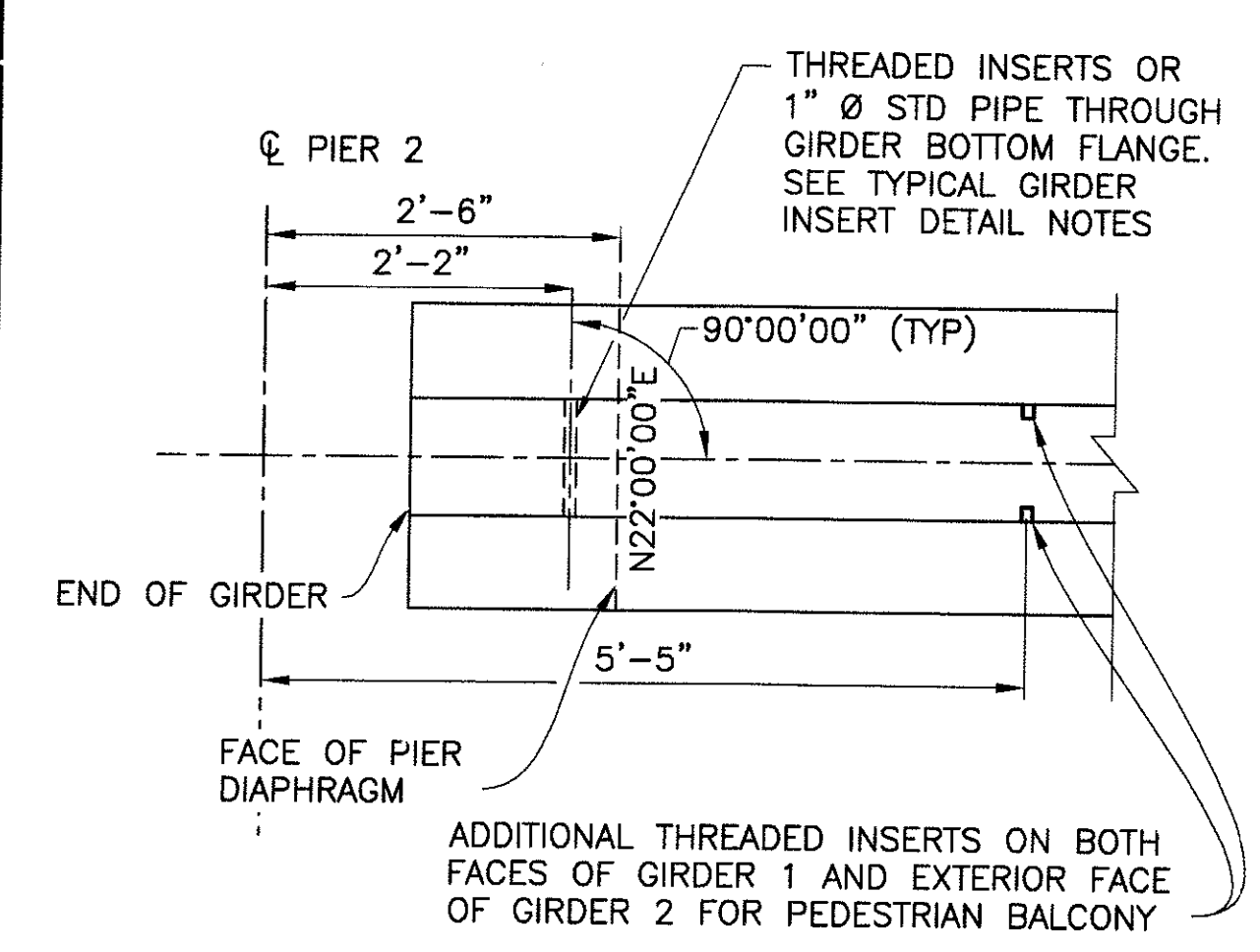


MIDSPAN

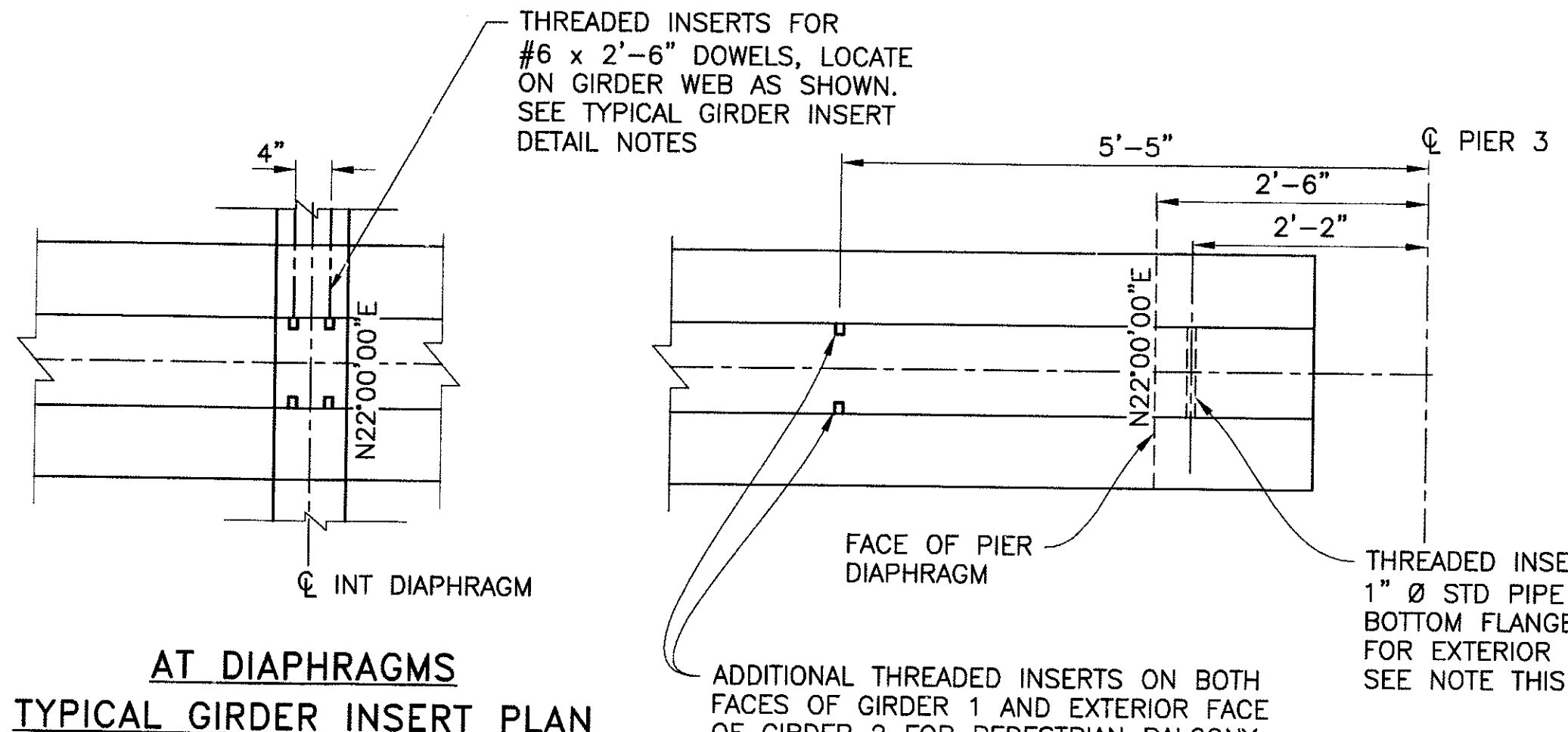
STRAND PATTERN
55-1/2" DIAMETER 7 WIRE LOW RELAXATION (STRANDS)
SCALE: 3/4" = 1'-0"

GIRDER NOTES:

1. SEE GENERAL NOTES ON DWG S-3.03
2. $P_i = 1704.0$ KIPS. INITIAL TENSION BEFORE LOSSES.
 $P_w = 1367.9$ KIPS. WORKING FORCE REMAINING AFTER ALL LOSSES.
 $f'_{ci} = 5000$ PSI MINIMUM STRENGTH AT TRANSFER.
 $f'_c = 5500$ PSI MINIMUM STRENGTH AT 28 DAYS.
3. ALL LOW-RELAXATION STRANDS SHALL BE STRESSED TO $0.75 f'_s$
4. ALL GIRDERS SHALL BE PRESTRESSED BY THE PRETENSIONING METHOD ONLY.
5. USE OF MASKED STRANDS WILL NOT BE ALLOWED.
6. Y_c = DISTANCE TO CENTER OF GRAVITY OF PRESTRESSING MEASURED FROM BOTTOM OF GIRDER.



AT DIAPHRAGMS
TYPICAL GIRDER INSERT PLAN
SCALE: 3/4" = 1'-0"



Two working days before you dig.
CALL FOR THE BLUE STAKES
(602) 263-1100
Blue Stake Center

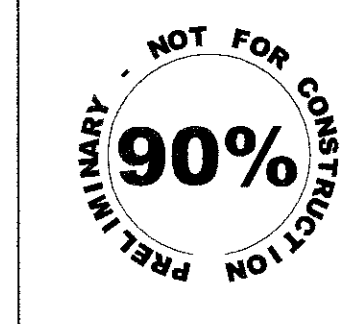
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

GIRDER DETAILS SPAN 3
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293**

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	227	352
DWG NO: S-3.23				

F:\2008005\CADD\Civil\Sheets\Structures\323-CC Primary girder dets span 3.dwg - plotted by James Rojas at 12/21/2009 9:04:24 AM penname: PREMIERCTB

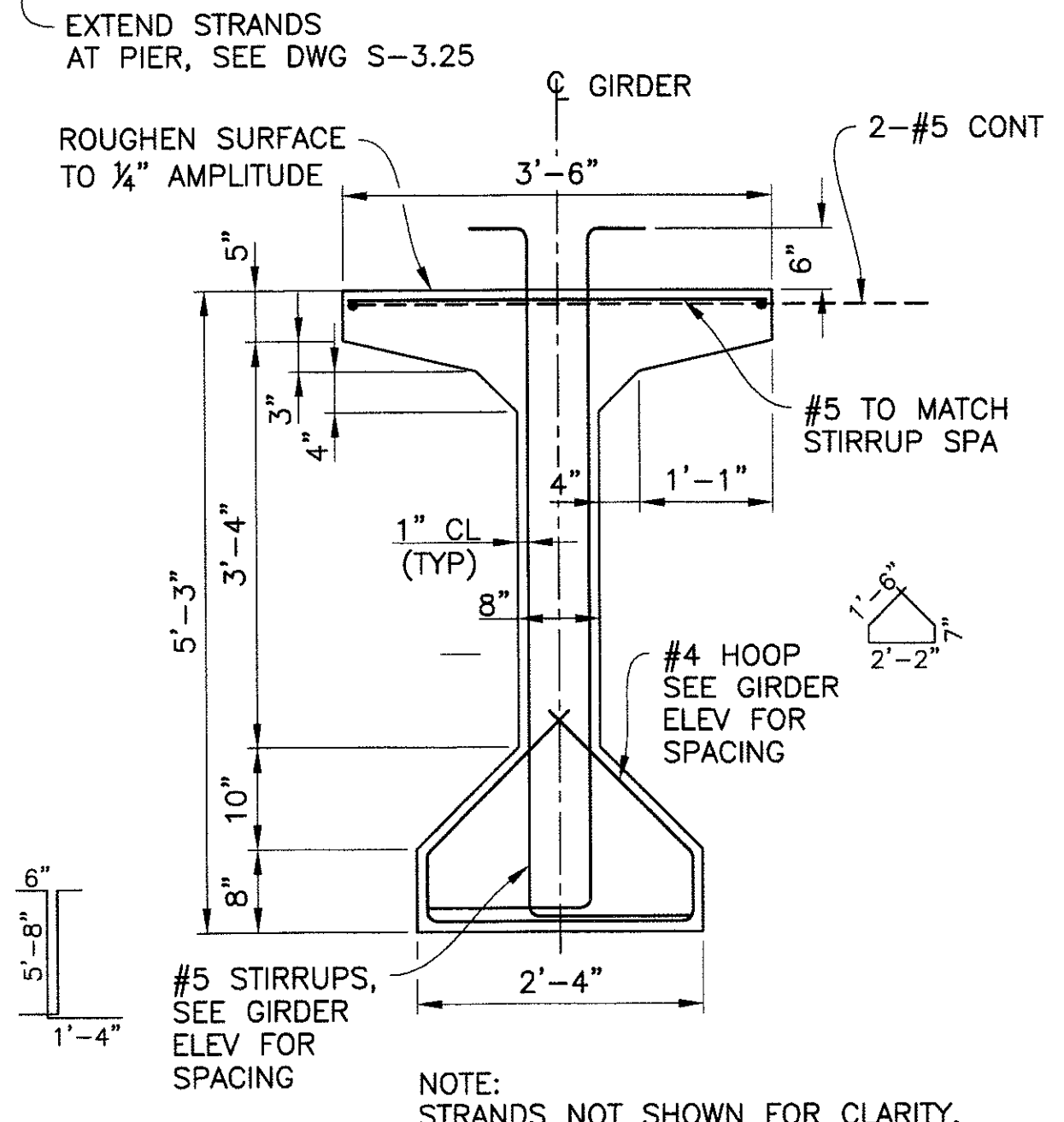
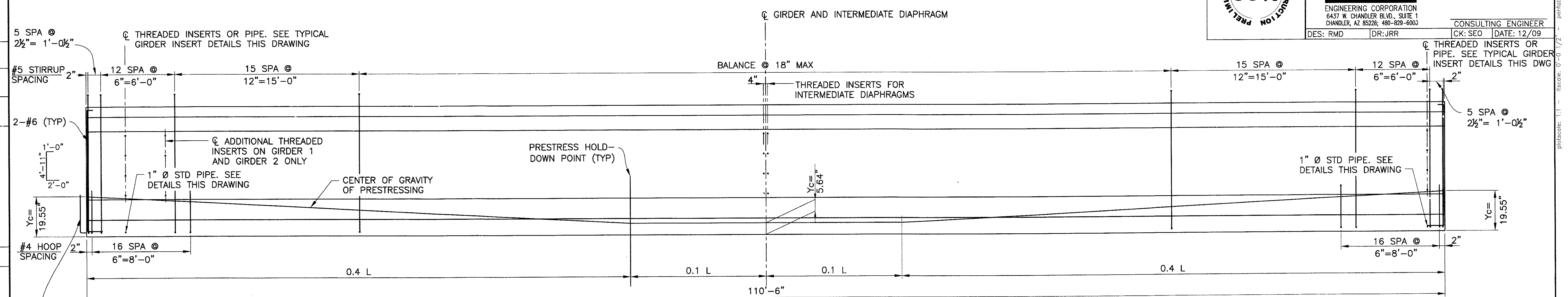


F.H.W.A. REGION 9	STATE ARIZ.	PROJ. NO. ST85100293	NO. 228	TOTAL 352
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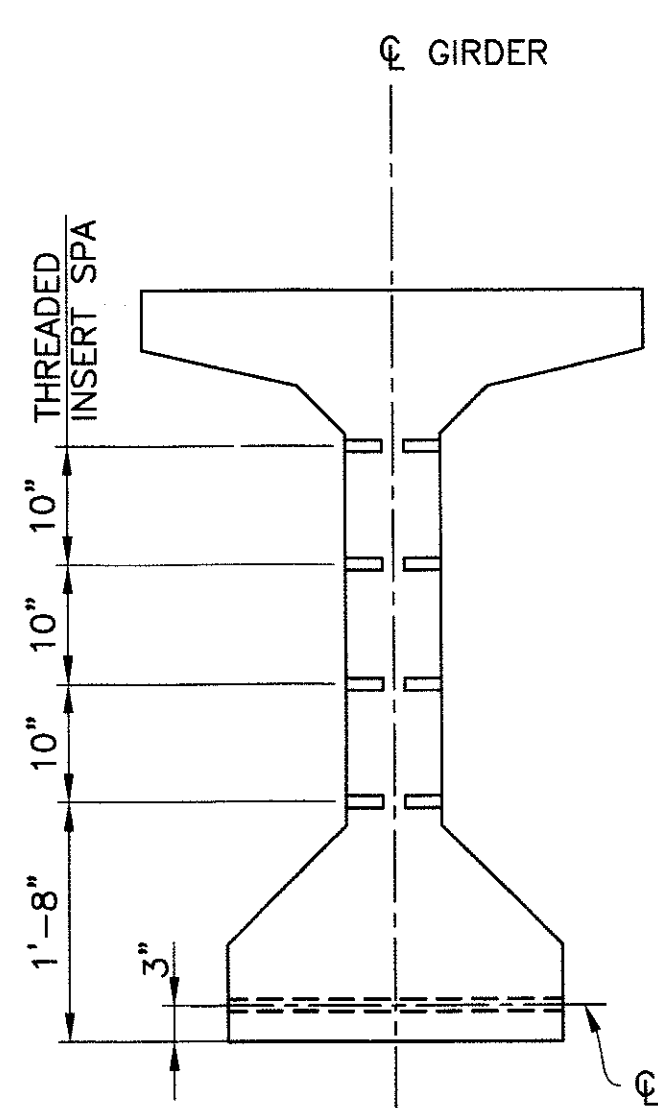
PREMIER
ENGINEERING CORPORATION
6437 W. CHANDLER BLVD., SUITE 1
CHANDLER, AZ 85226 480-829-6003

CONSULTING ENGINEER
CK: SEO DATE: 12/09
DES: RMD DR: JRR

NO.	DESCRIPTION	REV BY	CHK BY	DATE



AASHTO TYPE V GIRDER
SCALE: 3/4"=1'-0"

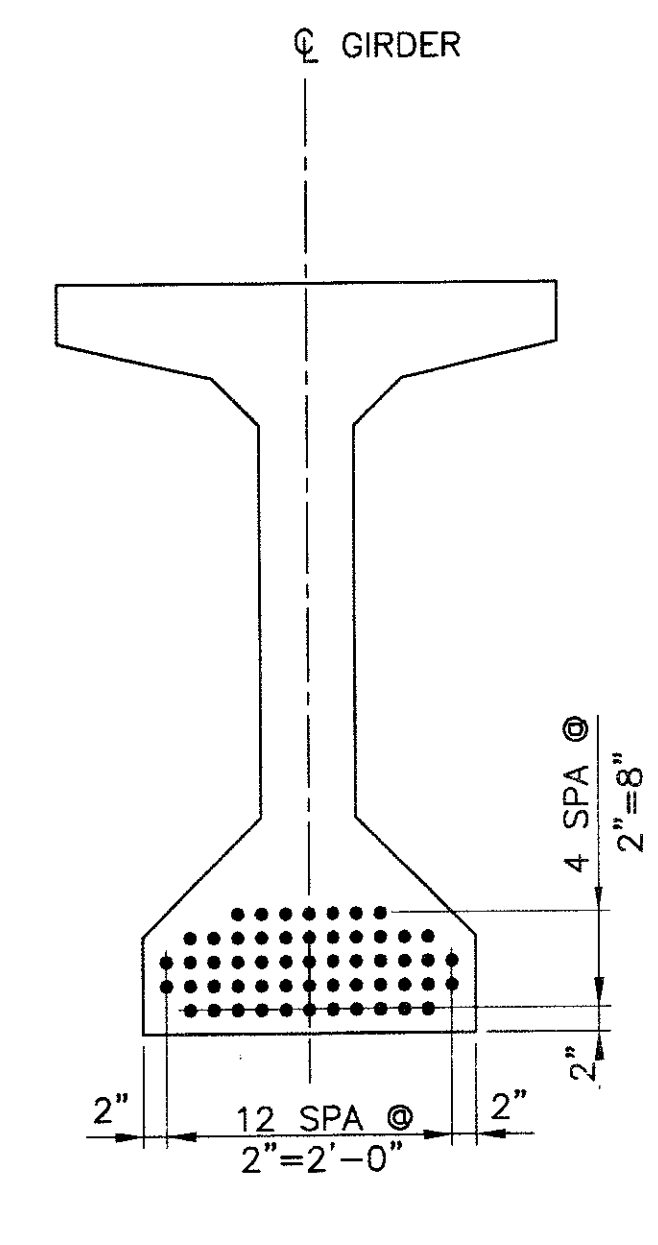
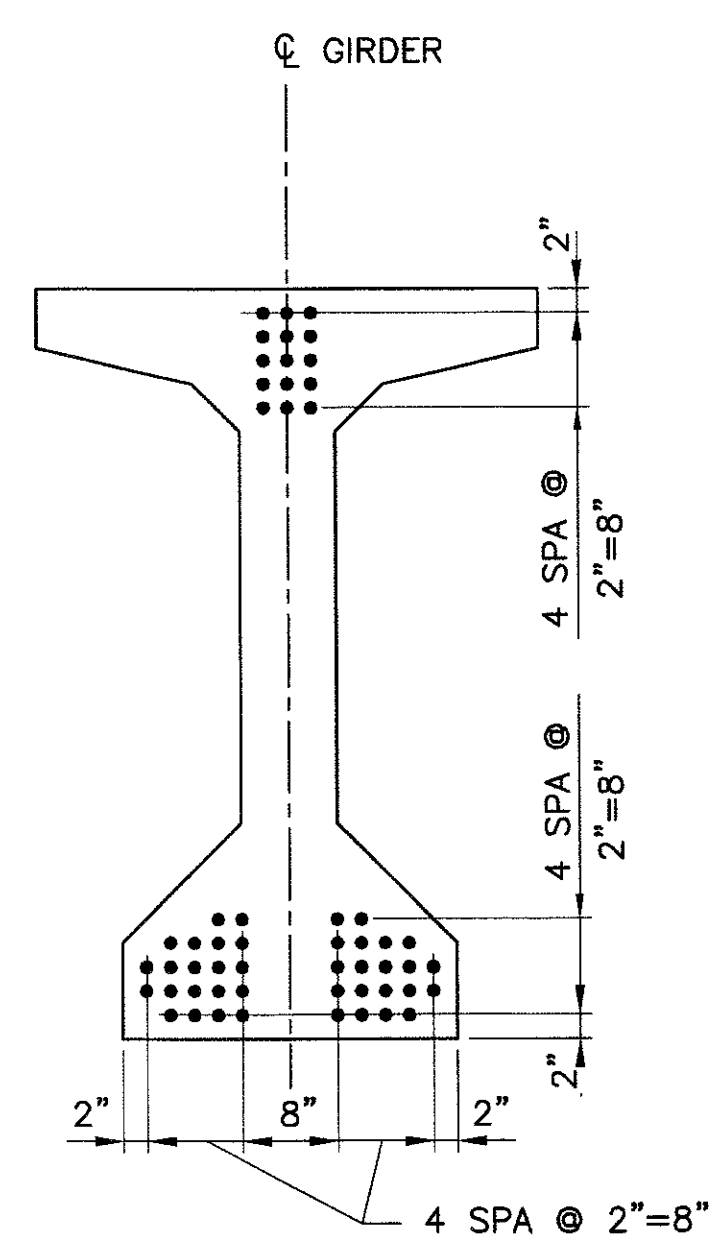


TYPICAL GIRDER INSERT DETAIL
SCALE: 3/4"=1'-0"

GIRDER ELEVATION
HORZ: 3/4"=1'-0"
VERT: 1/2"=1'-0"

NOTES:

1. THREADED INSERTS ARE FERRULE LOOP INSERTS FOR #6 REINFORCING BARS THREADED ON END. INSERTS SHALL HAVE A 10,800 lbs WORKING PULLOUT STRENGTH.
2. THREADED INSERTS SHALL BE PLACED NORMAL TO GIRDER WEB. FIELD BEND INSERTED BARS IN SUCH A MANNER AS TO PREVENT BENDING STRESSES AT ROOT OF THREADS. SHOP DRAWINGS SHALL INDICATE METHOD OF BENDING.
3. FOR EXTERIOR GIRDERS AT PIER, REPLACE PIPE WITH THREADED INSERT ON INTERIOR FACE OF BOTTOM FLANGE.

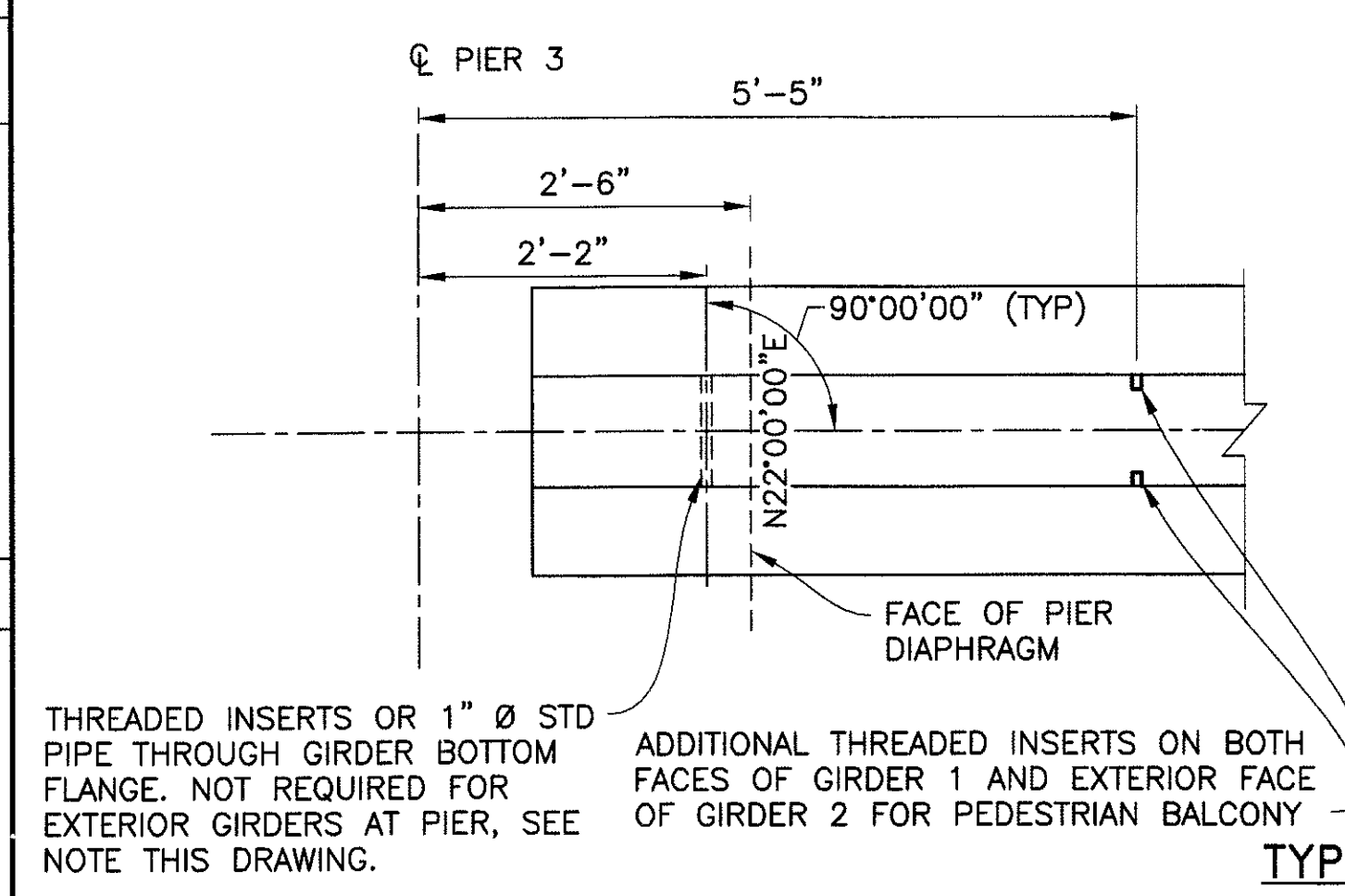


AT ENDS **MIDSPAN**

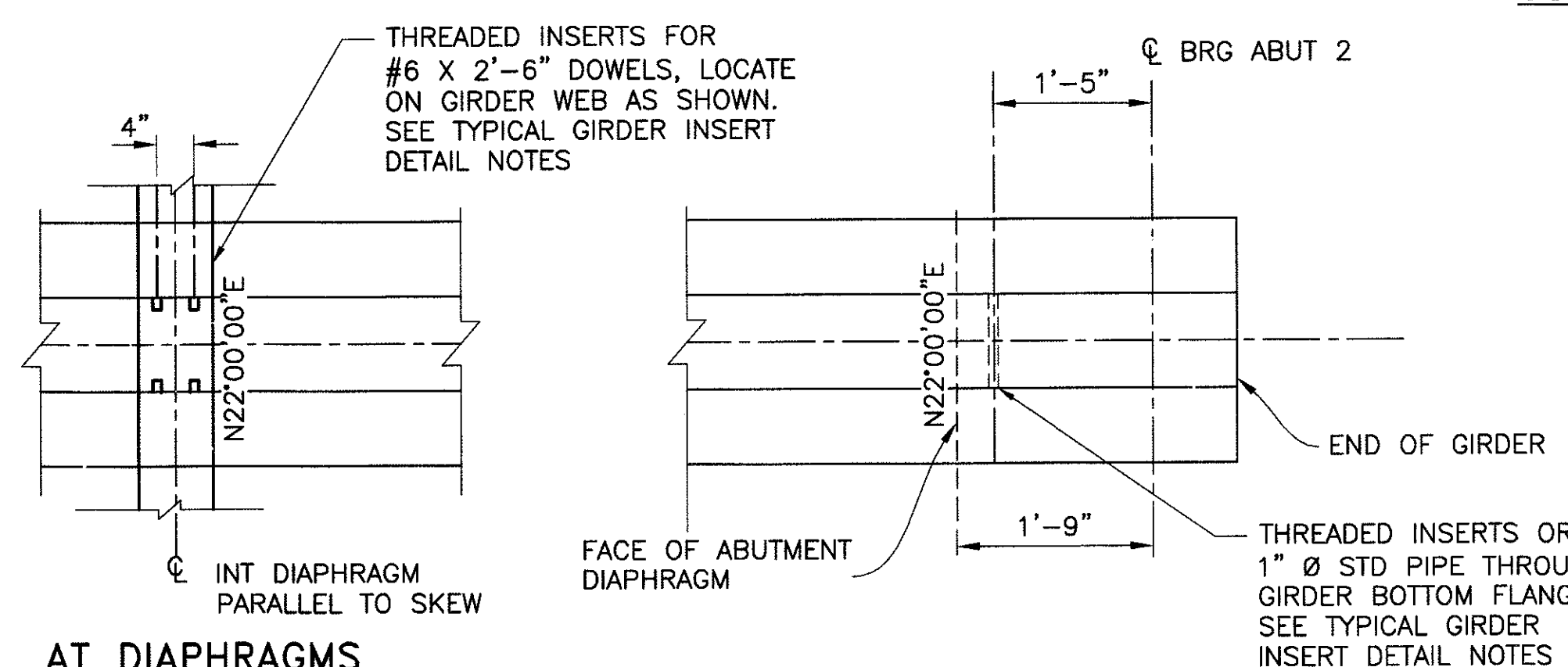
STRAND PATTERN
55-1/2" DIAMETER 7 WIRE LOW RELAXATION (STRANDS)
SCALE: 3/4"=1'-0"

GIRDER NOTES:

1. SEE GENERAL NOTES ON DWG S-3.03
2. Pi=1704.0 KIPS. INITIAL TENSION BEFORE LOSSES
PW=1367.9 KIPS. WORKING FORCE REMAINING AFTER ALL LOSSES.
f'ci = 5000 PSI MINIMUM STRENGTH AT TRANSFER.
f'c = 5500 PSI MINIMUM STRENGTH AT 28 DAYS.
3. ALL LOW-RELAXATION STRANDS SHALL BE STRESSED TO 0.75 f's
4. ALL GIRDERS SHALL BE PRESTRESSED BY THE PRETENSIONING METHOD ONLY
5. USE OF MASKED STRANDS WILL NOT BE ALLOWED
6. Yc=DISTANCE TO CENTER OF GRAVITY OF PRESTRESSING MEASURED FROM BOTTOM OF GIRDER



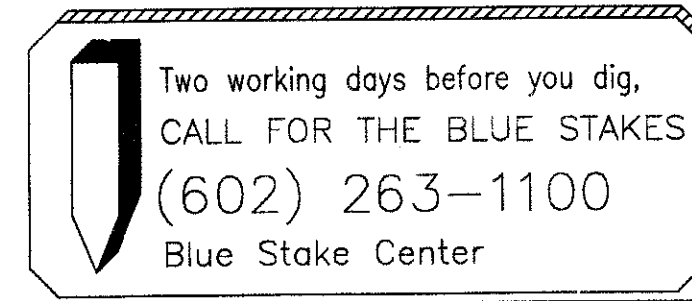
AT DIAPHRAGMS
TYPICAL GIRDER INSERT PLAN
SCALE: 3/4"=1'-0"



AT DIAPHRAGMS
TYPICAL GIRDER INSERT PLAN
SCALE: 3/4"=1'-0"

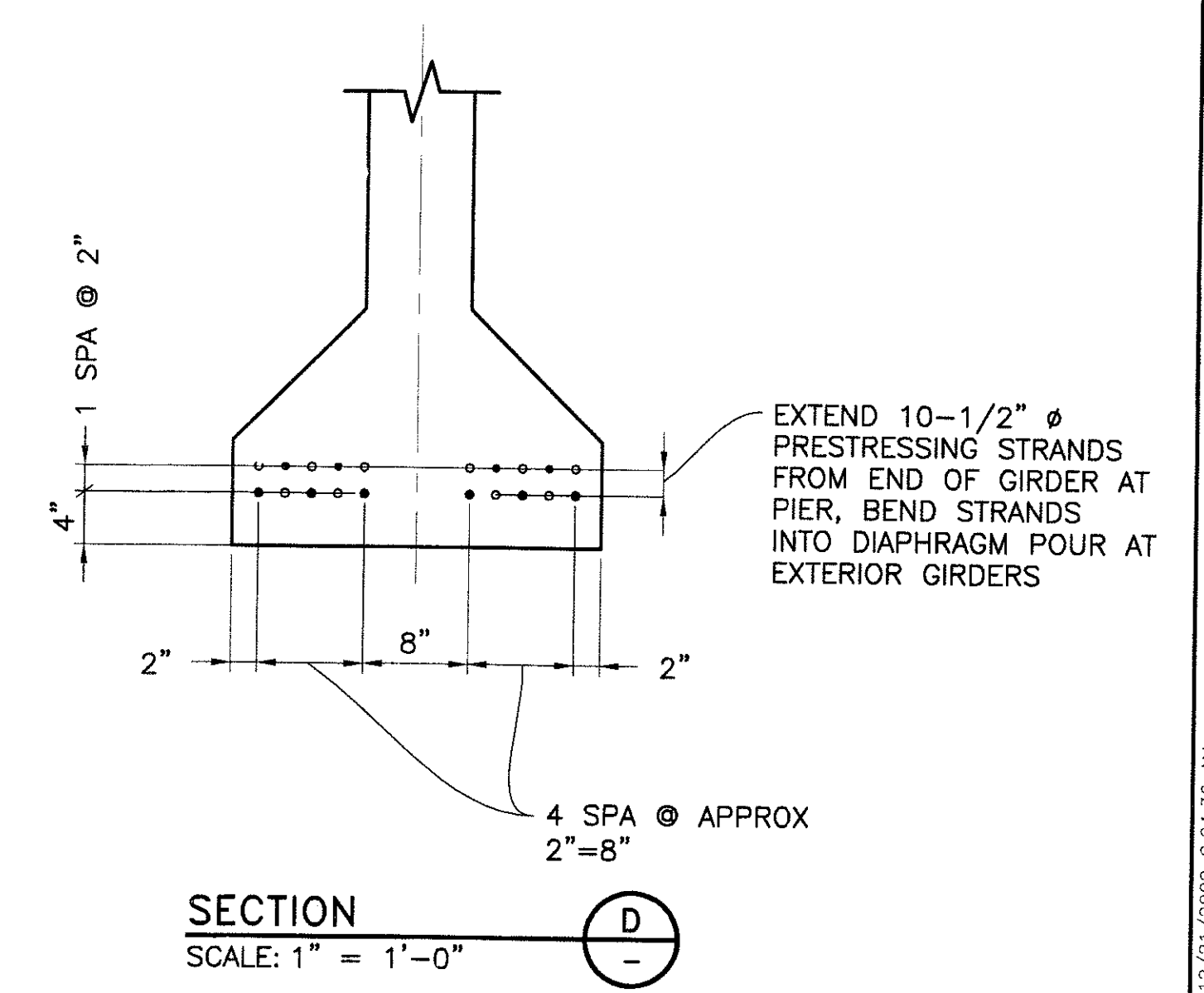
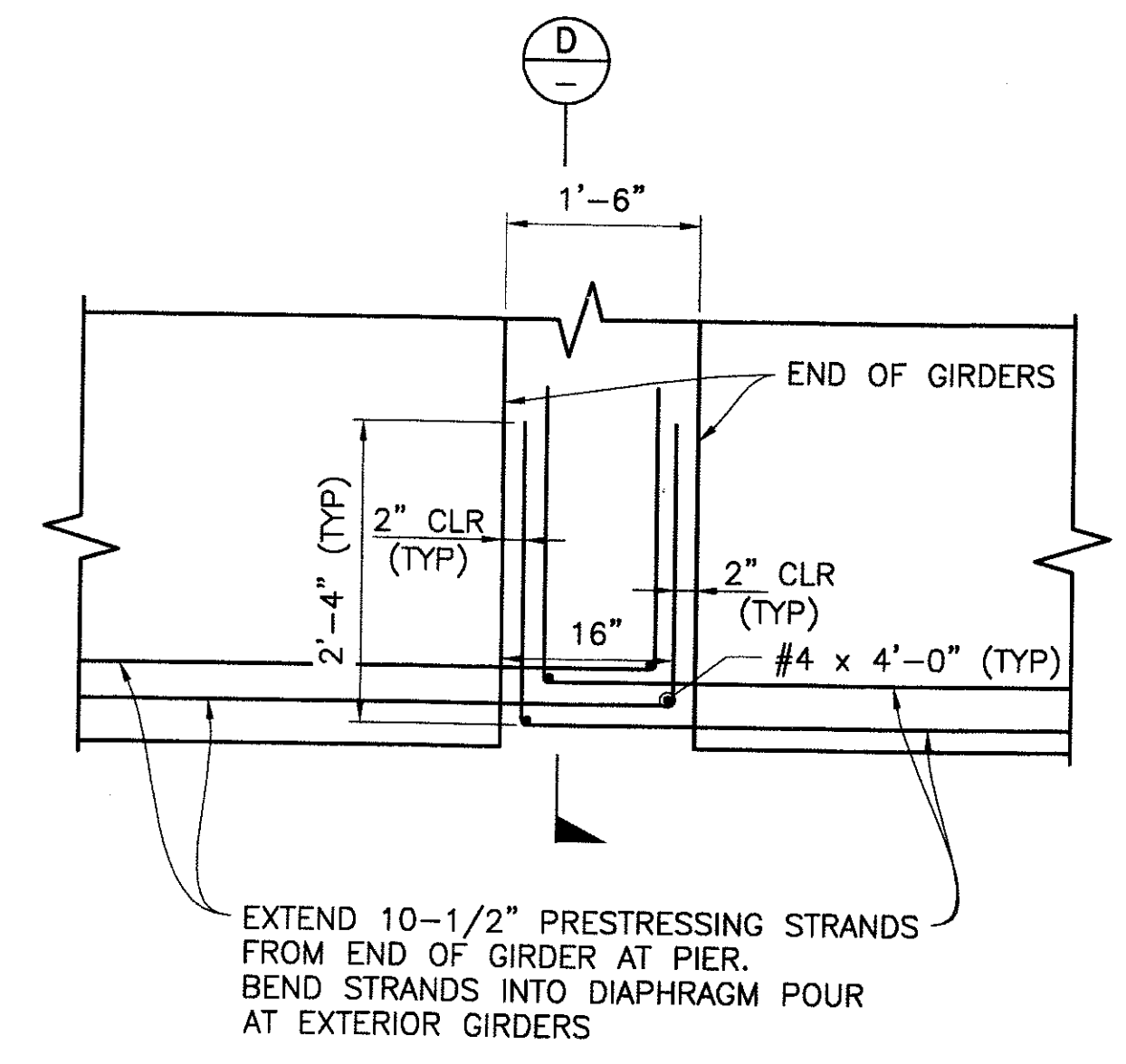
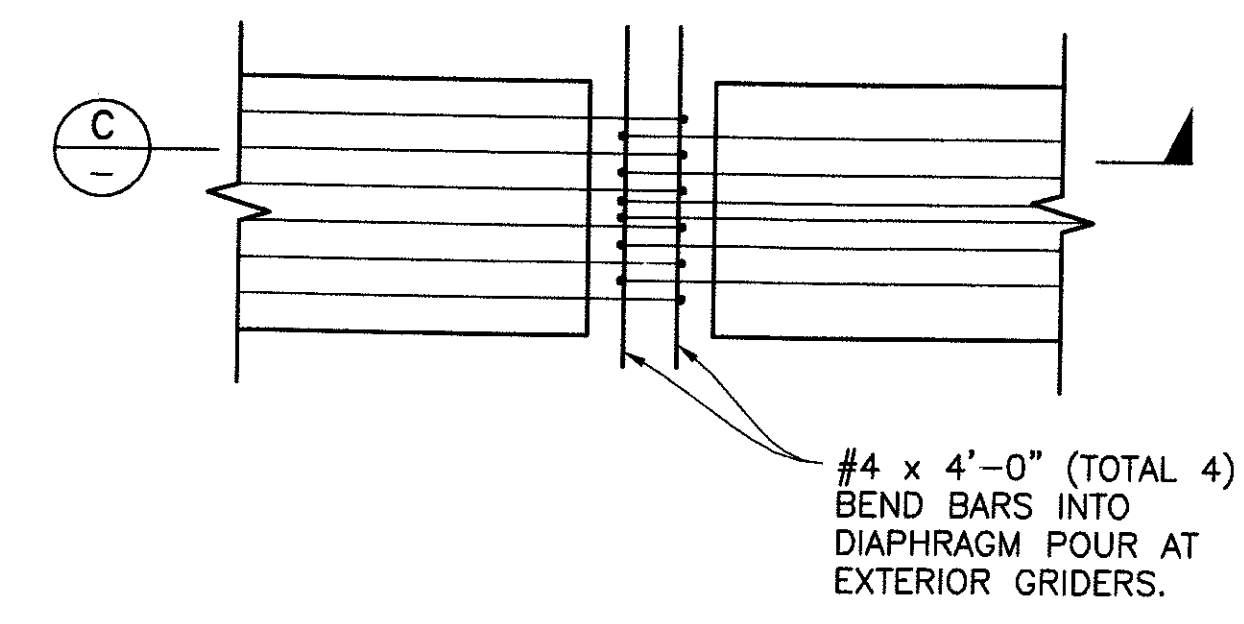
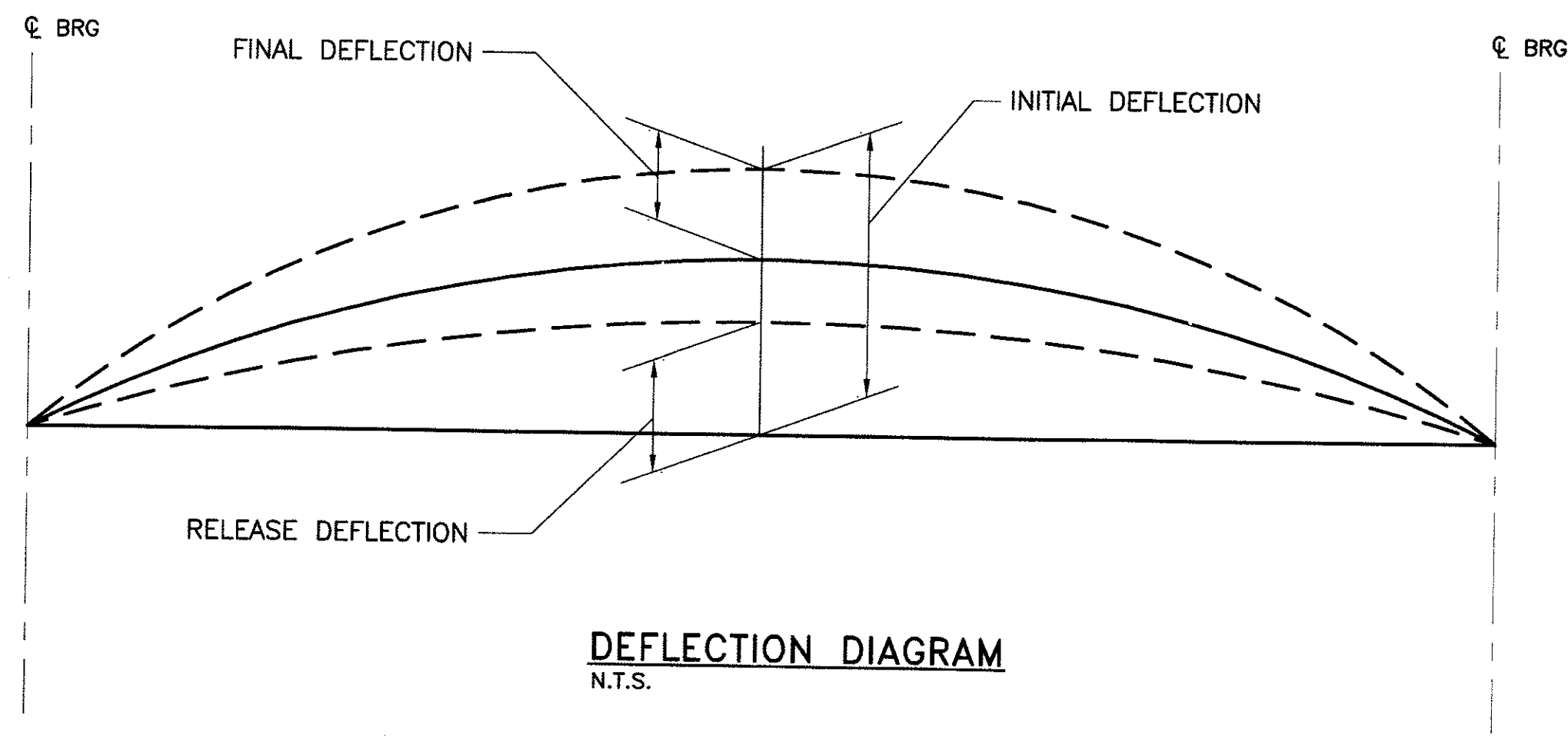
"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

GIRDER DETAILS SPAN 4				
CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPARTMENT				
SONORAN BOULEVARD CAVE CREEK PRIMARY ST85100293				
DR: JRR	DES: RMD	CK: SEO	SHEET NO: 228	TOTAL SHEETS: 352
DATE: 12/09	DATE: 12/09	DATE: 12/09		
SCALE: S-3.24				



plotdate: 11 - 11:53:00 AM 12/21/2009 9:04:29 AM

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	229	352
PREMIER ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-8000					
DES: RMD		DR: JRR		CK: SEO DATE: 12/09	



SPAN 1 DEFLECTIONS (ft)									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
RELEASE (POSITIVE IS UPWARD)	0.030	0.054	0.070	0.080	0.134	0.080	0.070	0.054	0.030
INITIAL (POSITIVE IS UPWARD)	0.054	0.095	0.125	0.141	0.148	0.141	0.125	0.095	0.054
FINAL GIRDERS 1 & 8 (POSITIVE IS DOWNWARD)	0.040	0.077	0.104	0.122	0.129	0.123	0.106	0.080	0.043
FINAL GIRDERS 2 - 7 (POSITIVE IS DOWNWARD)	0.040	0.075	0.103	0.121	0.128	0.122	0.106	0.078	0.043

SPAN 2 DEFLECTIONS (ft)									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
RELEASE (POSITIVE IS UPWARD)	0.065	0.114	0.149	0.167	0.175	0.167	0.149	0.114	0.065
INITIAL (POSITIVE IS UPWARD)	0.114	0.202	0.262	0.295	0.308	0.295	0.262	0.202	0.114
FINAL GIRDERS 1 & 8 (POSITIVE IS DOWNWARD)	0.105	0.194	0.256	0.296	0.308	0.290	0.247	0.182	0.094
FINAL GIRDERS 2 - 7 (POSITIVE IS DOWNWARD)	0.103	0.190	0.250	0.289	0.301	0.283	0.241	0.177	0.091

SPAN 3 DEFLECTIONS (ft)									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
RELEASE (POSITIVE IS UPWARD)	0.065	0.114	0.149	0.167	0.175	0.167	0.149	0.114	0.065
INITIAL (POSITIVE IS UPWARD)	0.114	0.202	0.262	0.295	0.308	0.295	0.262	0.202	0.114
FINAL GIRDERS 1 & 8 (POSITIVE IS DOWNWARD)	0.096	0.180	0.240	0.280	0.293	0.277	0.237	0.175	0.091
FINAL GIRDERS 2 - 7 (POSITIVE IS DOWNWARD)	0.093	0.174	0.232	0.271	0.284	0.268	0.230	0.170	0.087

SPAN 4 DEFLECTIONS (ft)									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
RELEASE (POSITIVE IS UPWARD)	0.065	0.114	0.149	0.167	0.175	0.167	0.149	0.114	0.065
INITIAL (POSITIVE IS UPWARD)	0.114	0.202	0.262	0.295	0.308	0.295	0.262	0.202	0.114
FINAL GIRDERS 1 & 8 (POSITIVE IS DOWNWARD)	0.096	0.180	0.241	0.280	0.291	0.280	0.240	0.178	0.097
FINAL GIRDERS 2 - 7 (POSITIVE IS DOWNWARD)	0.093	0.174	0.233	0.271	0.282	0.271	0.233	0.172	0.094

- DEFLECTION NOTES:**
- RELEASE DEFLECTION EQUALS THE DEFLECTION THAT THE PRESTRESSED GIRDER UNDERGOES AT THE TIME OF STRAND RELEASE. THE RELEASE DEFLECTION INCLUDES THE DEAD LOAD OF THE GIRDER AND THE RELEASE PRESTRESSING FORCE (INCLUDING THE EFFECTS OF ELASTIC SHORTENING).
 - INITIAL DEFLECTION EQUALS THE DEFLECTION THE PRESTRESSED GIRDER UNDERGOES AT THE TIME OF ERECTION PRIOR TO THE DIAPHRAGM OR DECK POURS. THE INITIAL DEFLECTION INCLUDES THE DEFLECTION DUE TO THE DEAD LOAD OF THE GIRDER, THE INITIAL PRESTRESSING AND THE EFFECTS OF CREEP UP TO THE TIME OF ERECTION (ASSUMED AT 60 DAYS AFTER RELEASE).
 - FINAL DEFLECTION EQUALS THE DEFLECTION DUE TO THE DEAD LOAD OF THE DECK SLAB, DIAPHRAGMS, AND BARRIERS AND THE EFFECTS OF LONG TERM CREEP ON THE COMPOSITE GIRDERS.

Two working days before you dig,
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(602) 263-1100
Blue Stake Center

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

GIRDER DETAILS

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

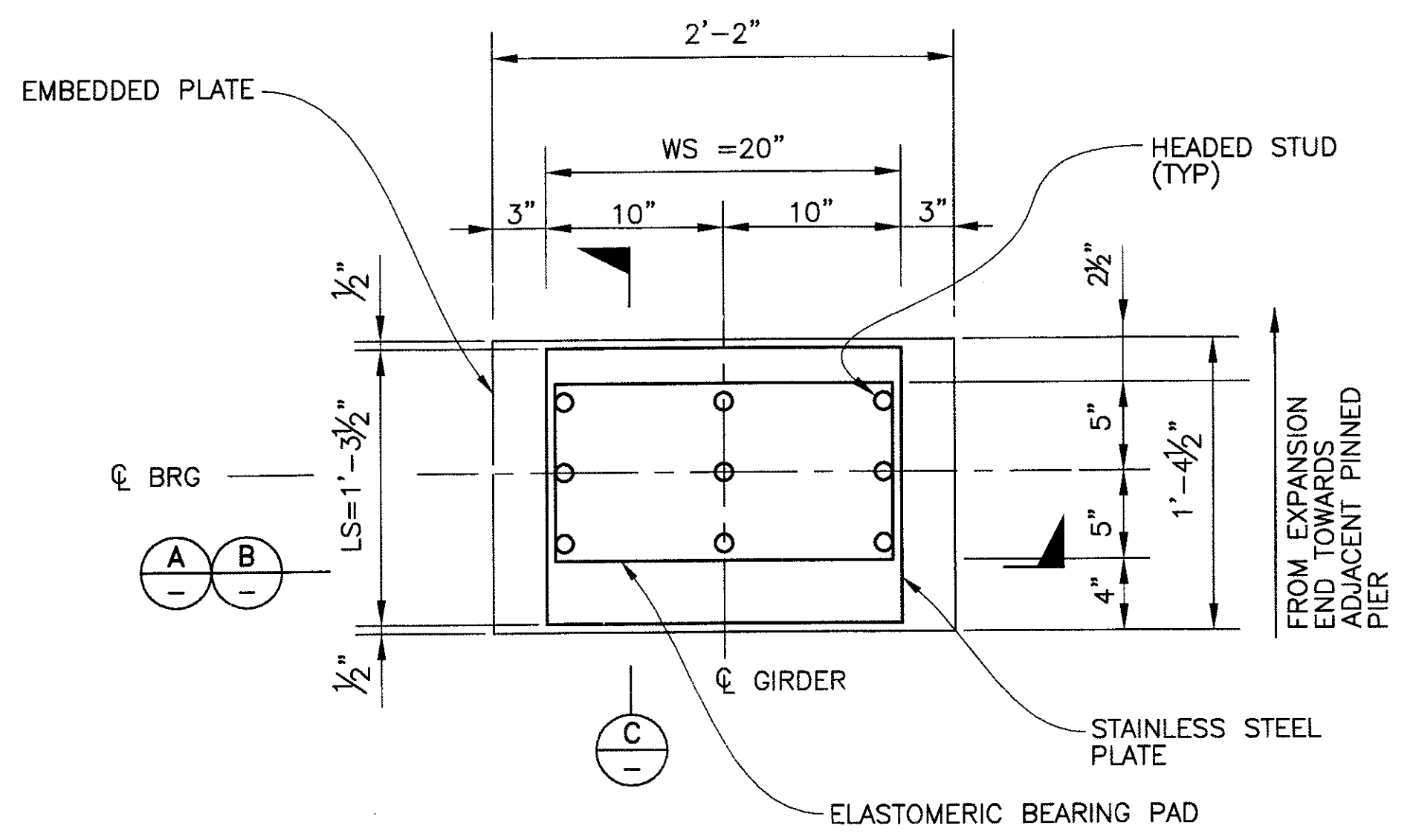
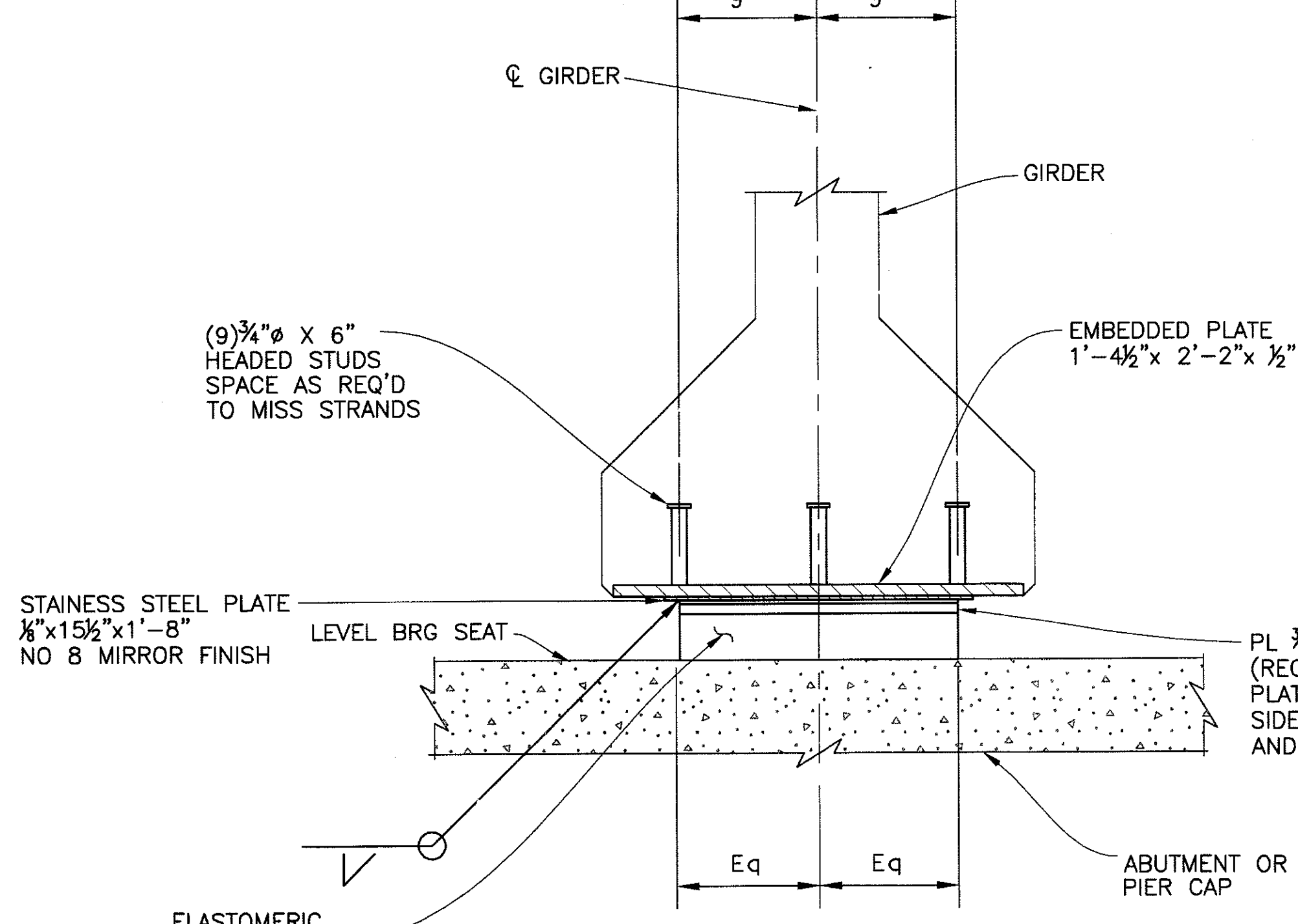
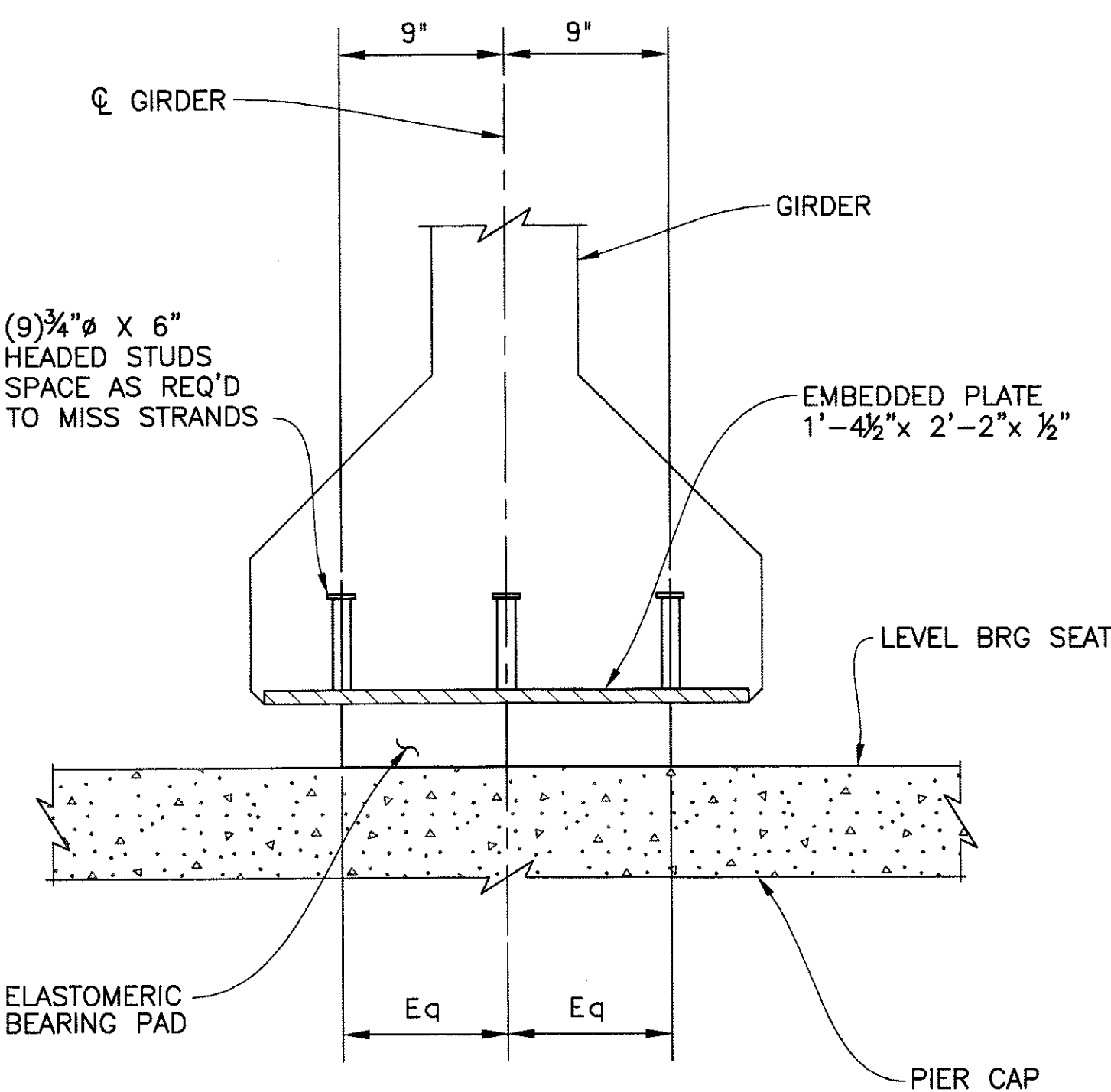
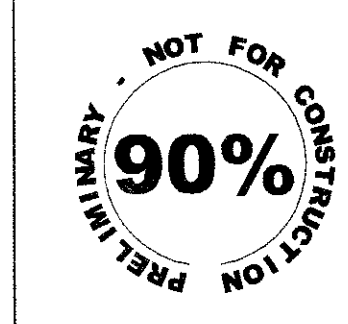
SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	229	352

DWG NO: S-3.25

REVISION BY CITY OF PHOENIX
NO. DESCRIPTION REV BY (CKD BY) DATE

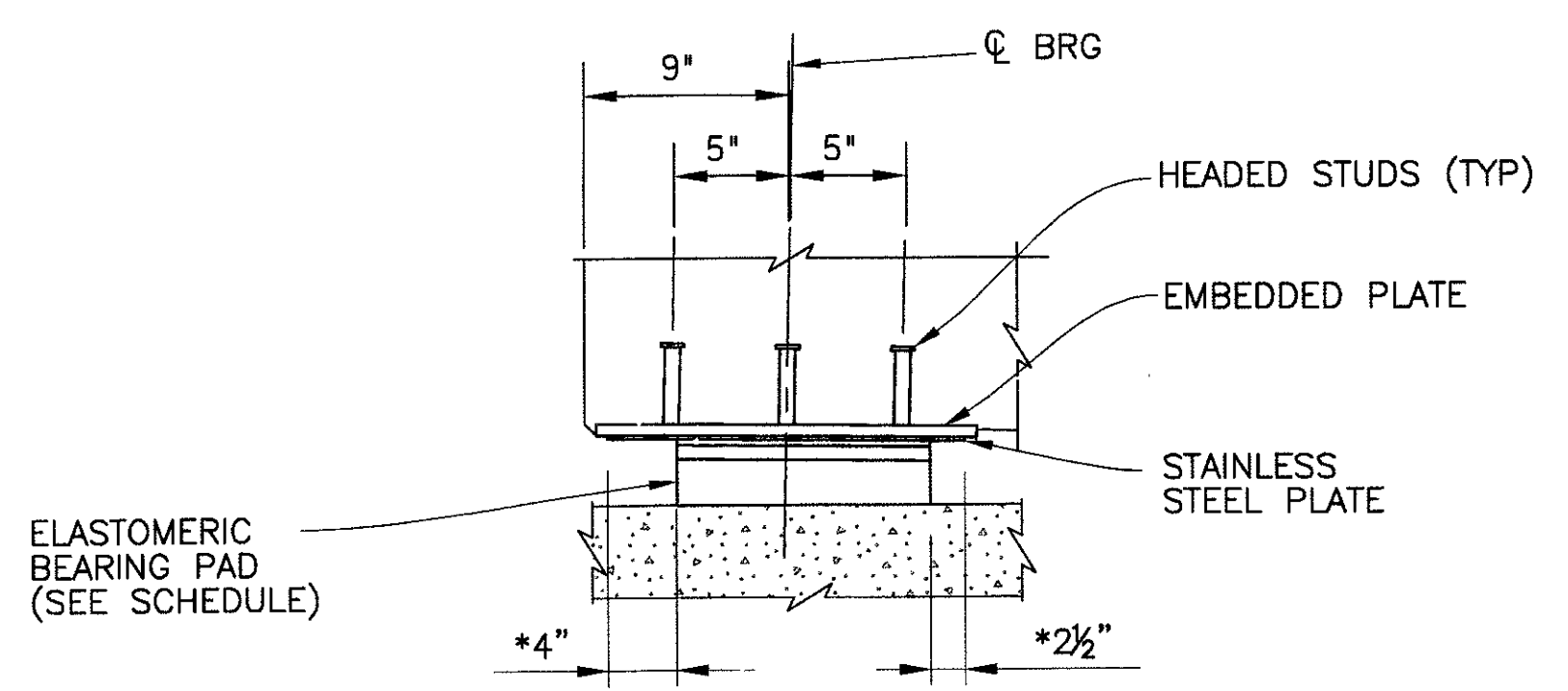
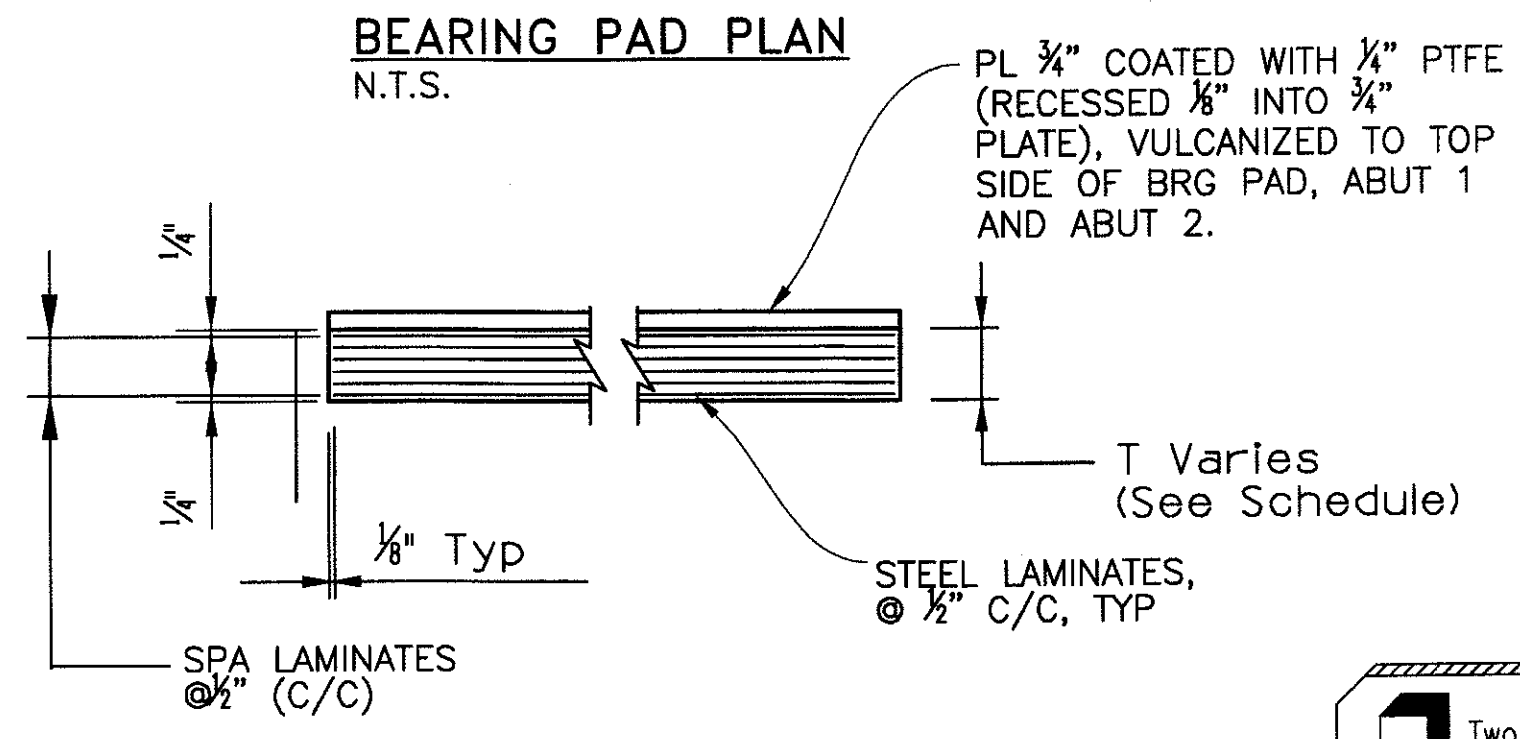
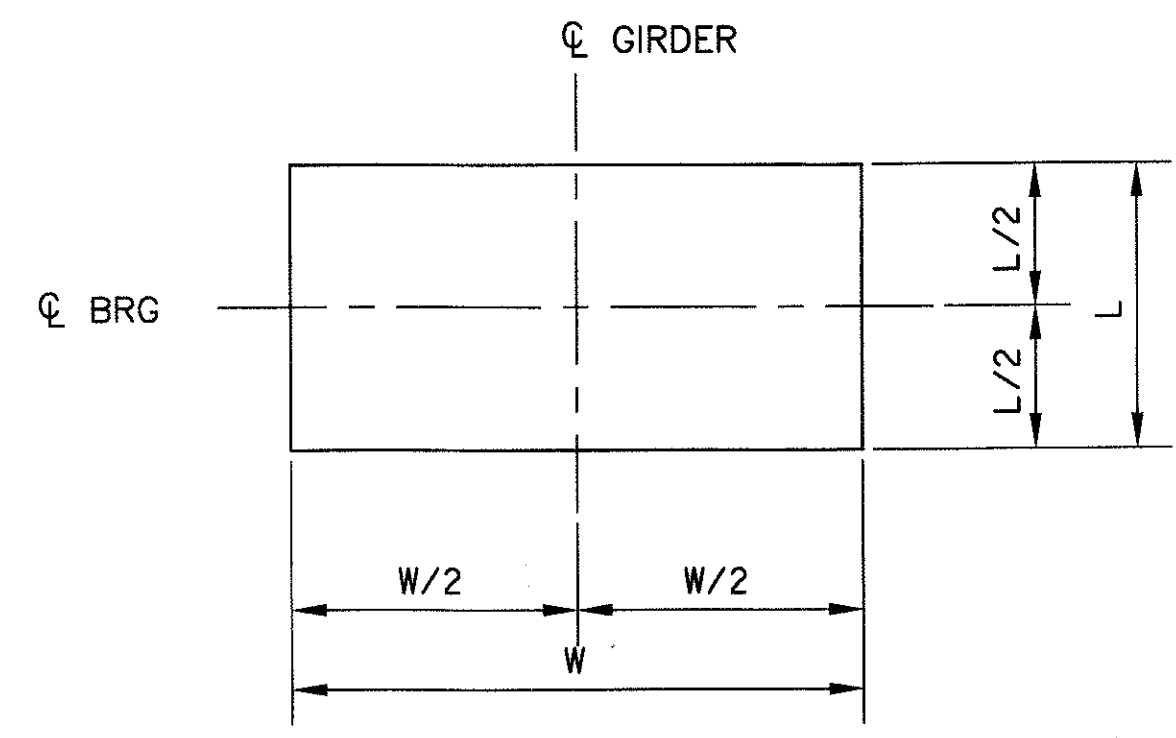
P:\20080905\CAD\Civil\Sheets\Structures\325 - CC - Primary girder.dwg - plotted by James Rojas at 12/21/2009 9:04:36 AM



NOTES:

- BEARING PAD DESIGN PARAMETERS
 DESIGN LOAD SEE SCHEDULE
 DESIGN METHOD A
 LOW TEMPERATURE ZONE A
 ELASTOMER GRADE 0
 HARDNESS 55 (SHORE A)
 SHEAR MODULUS 130 PSI (@72°F)
- ELASTOMERIC BEARING PAD SHALL BE STEEL LAMINATED NEOPRENE PADS. STEEL LAMINATES SHALL BE 14-GA ROLLED MILD STEEL PER ASTM A1011, GRADE 36.
- EMBEDDED PLATES SHALL BE PER ASTM A588 OR ASTM A242. ALL EXPOSED STEEL SURFACES SHALL BE PAINTED WITH ONE SHOP COAT OF AN APPROVED INORGANIC ZINC PRIMER. DO NOT PAINT PRIOR TO COMPLETION OF WELDING.
- THE STAINLESS STEEL PLATE SHALL CONFORM TO ASTM A240, TYPE 304 WITH A SURFACE FINISH NOT LESS THAN NO.8 MIRROR FINISH.
- THE POLYTETRAFLUORETHYLENE (PTFE) SHALL CONFORM TO ASTM D4894. THE MINIMUM COEFFICIENT OF FRICTION SHALL BE 0.07 AT 1000 PSI BEARING PRESSURE AT 68°F.
- HEADED STUDS SHALL BE PER ASTM A108 AND SHALL BE WELDED PER AWS D1.5.
- BEARING PADS SHALL CONFORM TO THE ADOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

BEARING PAD SCHEDULE										
LOCATION		EXP. OR PINNED	DESIGN LOAD (KIPS)	L (IN)	W (IN)	T (IN)	NO. STEEL LAYERS	IS PTFE REQ'D	STAINLESS STEEL PLATE	
ABUT / PIER	SPAN								LS (IN)	WS (IN)
A1	1	E	174	10	24	3	6	YES	15.5	20
P1	1	P	195	10	24	2	4	NO	N/A	N/A
P1	2	P	220	10	24	2	4	NO	N/A	N/A
P2	2	P	220	10	24	2	4	NO	N/A	N/A
P2	3	P	220	10	24	2	4	NO	N/A	N/A
P3	3	P	222	10	24	2	4	NO	N/A	N/A
P3	4	P	228	10	24	2	4	NO	N/A	N/A
A2	4	E	209	10	24	3	6	YES	15.5	20



* EDGE DISTANCE AT MEAN TEMPERATURE OF 75°F. TEMPERATURE CORRECTION = 1/16"/10°F

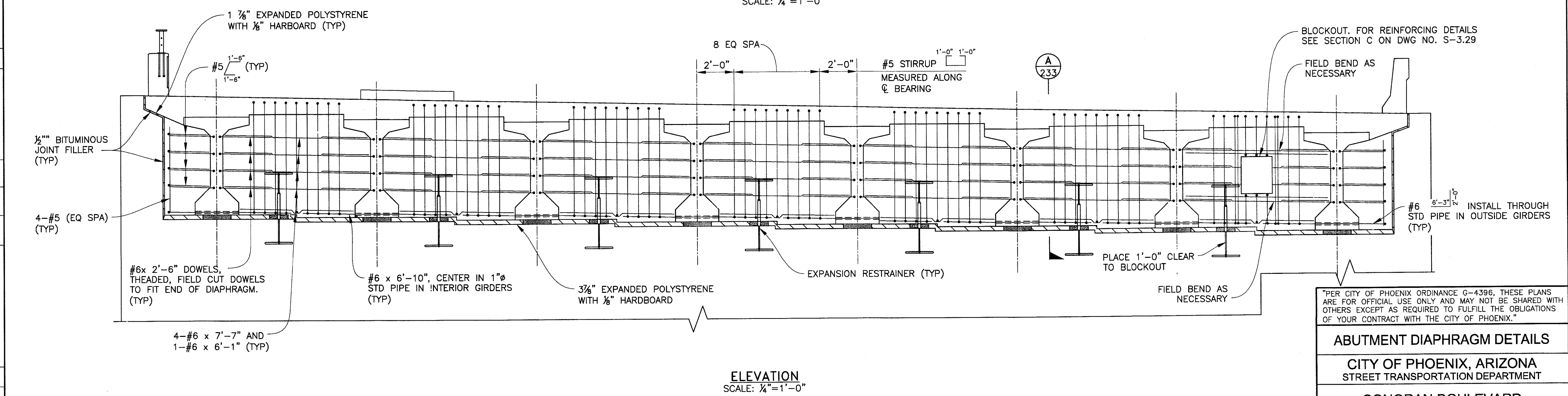
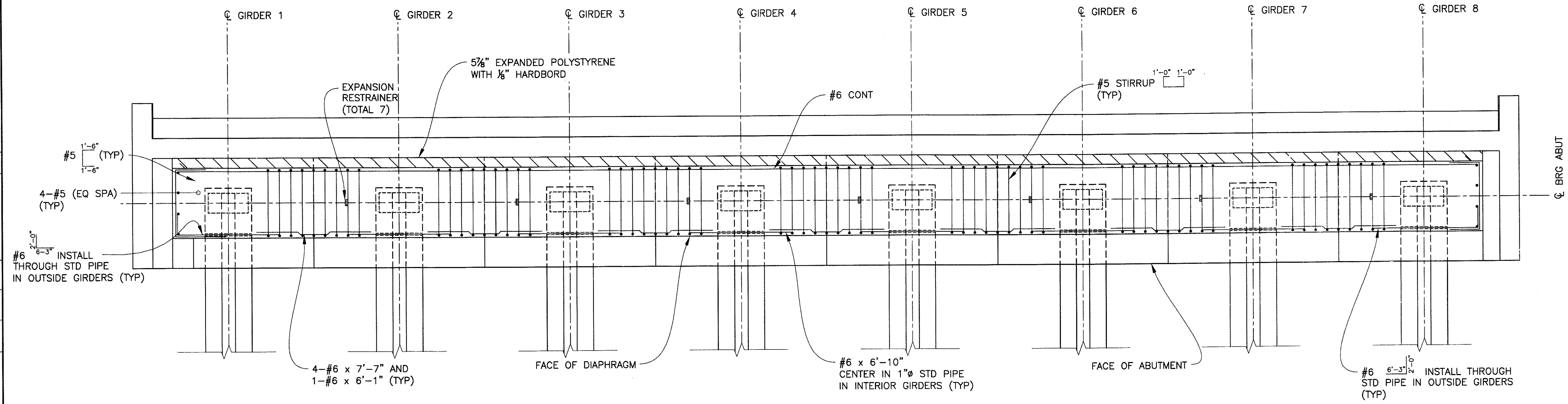
Two working days before you dig,
CALL FOR THE BLUE STAKES
(602) 263-1100
Blue Stake Center

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."
BEARING PAD DETAILS
 CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT
**SONORAN BOULEVARD
 CAVE CREEK PRIMARY
 ST85100293**
 DR: JRR DES: RMD CK: SEO SHEET NO: 230 TOTAL SHEETS: 352
 DATE: 12/09 DATE: 12/09 DATE: 12/09
 DWG NO: S-3.26

REVISION BY CITY OF PHOENIX
 NO. DESCRIPTION REV BY (CHK BY) DATE
 NO. DESCRIPTION REV BY (CHK BY) DATE
 NO. DESCRIPTION REV BY (CHK BY) DATE
 NO. DESCRIPTION REV BY (CHK BY) DATE

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	231	352
PREMIER					
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226 480-829-9000					
DES: RMD			DR: JRR		DATE: 12/09
			CK: SEO		

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV. BY	CHK. BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV. BY	CHK. BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV. BY	CHK. BY	DATE



"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

ABUTMENT DIAPHRAGM DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293**

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	231	352
DWG NO: S-3.27				

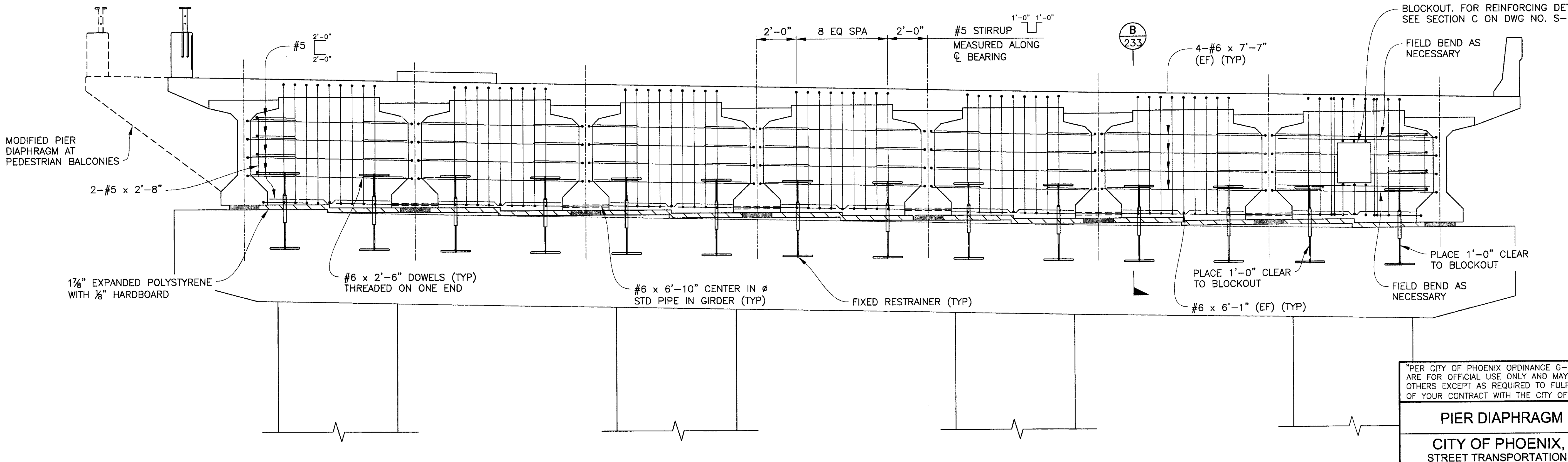
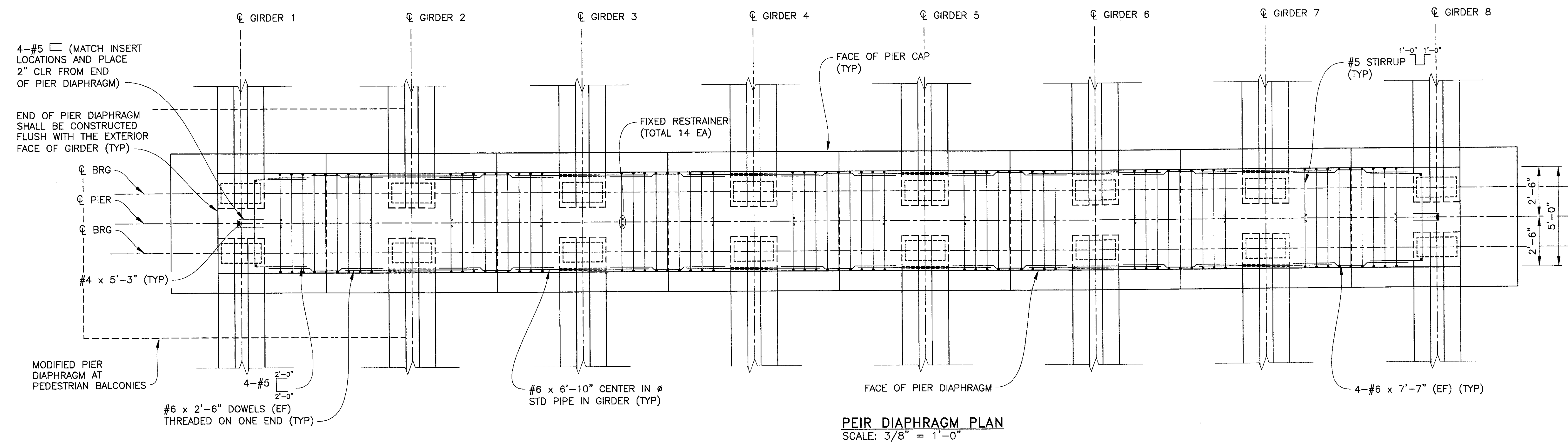
Two working days before you dig,
CALL FOR THE BLUE STAKES
(602) 263-1100
Blue Stake Center

P:\20080003\CA00\CA00\Sheets\Structures\326-CC-Primary Abutments\diaphragm.dwg - plotted by James Rojas at 12/21/2009 9:01:44 AM
 penrib: 05000 - penrib: PREMIER/DTB

**SONORAN BOULEVARD
MARICOPA COUNTY
10TH ST TO 26TH ST**

	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	232	352
PREMIER					
ENGINEERING CORPORATION 6437 N. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000					
DES: RMD		DR: JRR		CK: SEO	DATE: 12/09

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



NOTE:
SEE PEDESTRIAN BALCONY DETAILS FOR
PIER DIAPHRAGM MODIFICATION DETAILS.

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

PIER DIAPHRAGM DETAILS

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

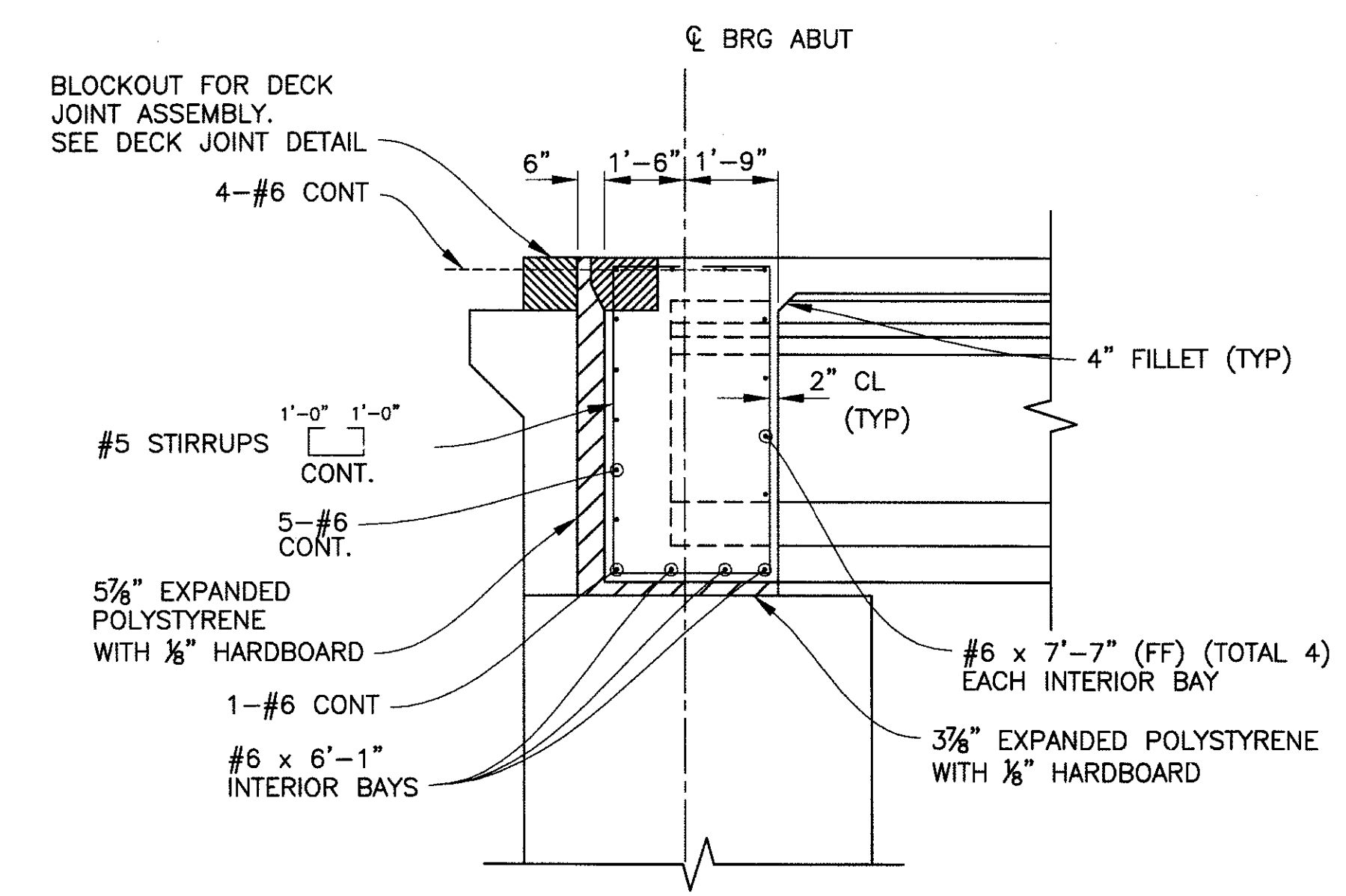
SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	232	352
DWG NO: S-3.28				

P:\2008005\CADD\Civil\Sheets\Structures\1327-CC Primary Pier Diaphragm.dwg - plotted by James Rojas at 12/21/2009 9:04:49 AM
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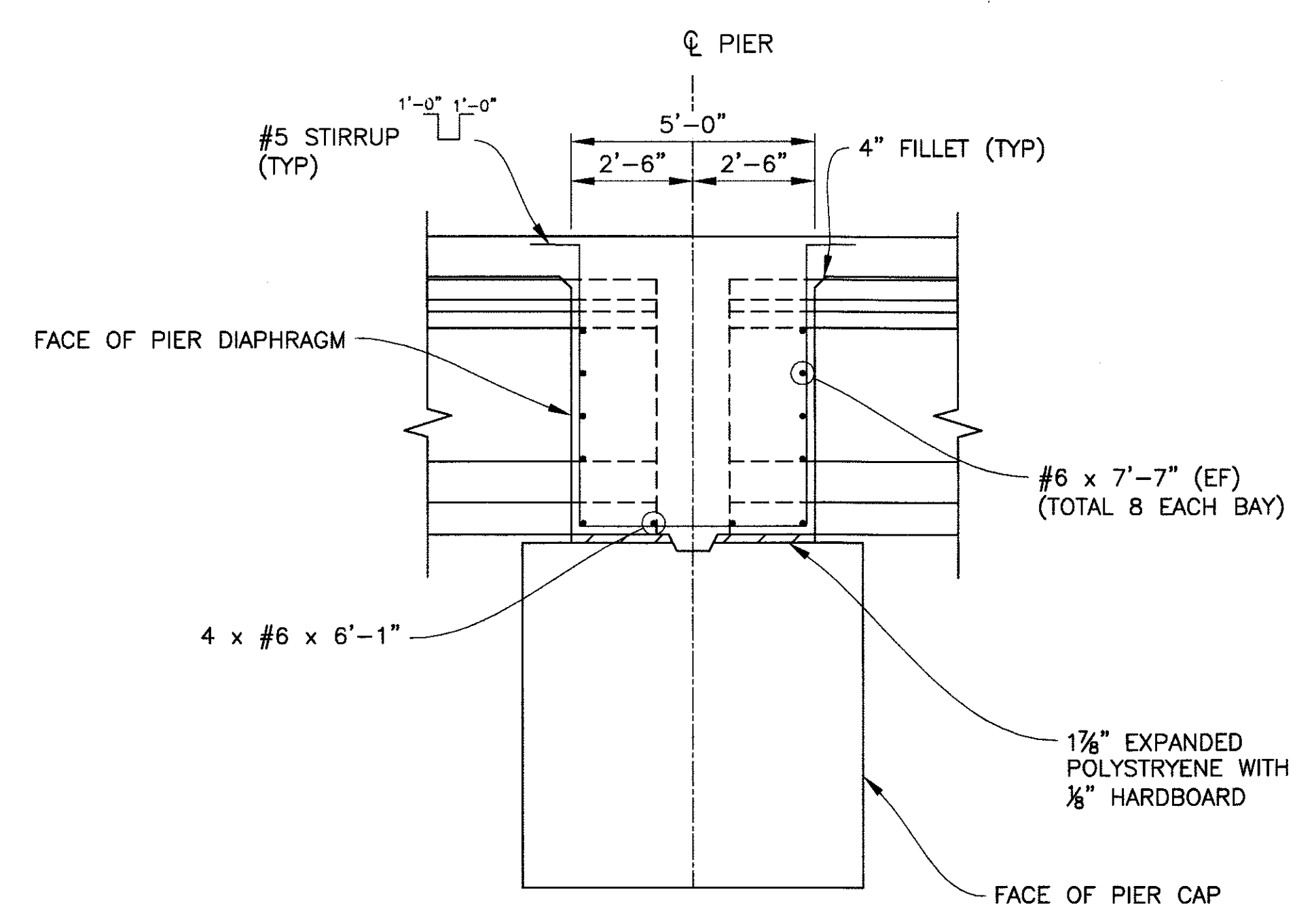
	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	233	352
PREMIER					
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000					
DES: RMD			DR: JRR		CONSULTING ENGINEER
			CK: SEO		DATE: 12/09

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE



NOTE:
EXPANSION RESTRAINER
NOT SHOWN FOR CLARITY

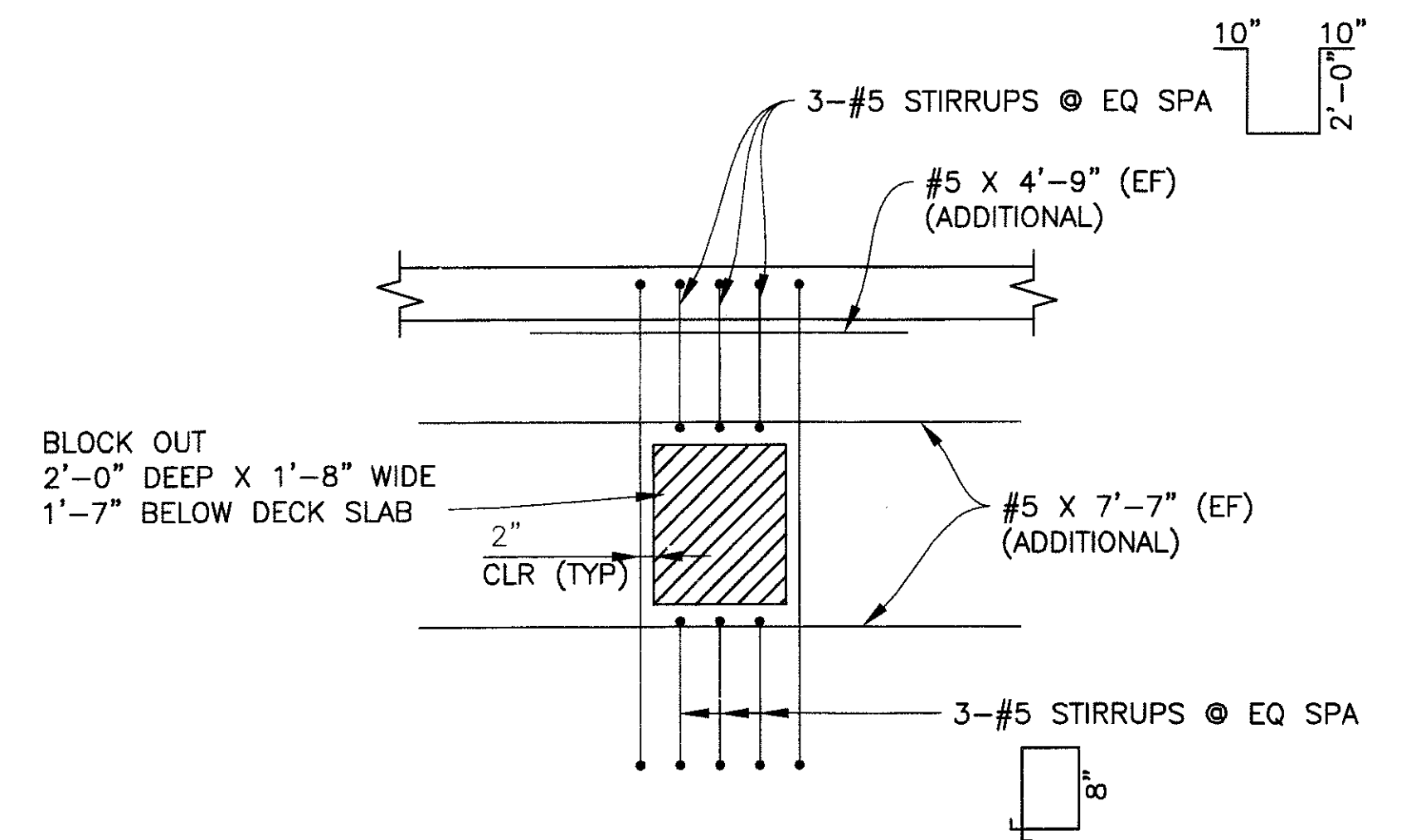
SECTION A
SCALE: 3/8"=1'-0"
231



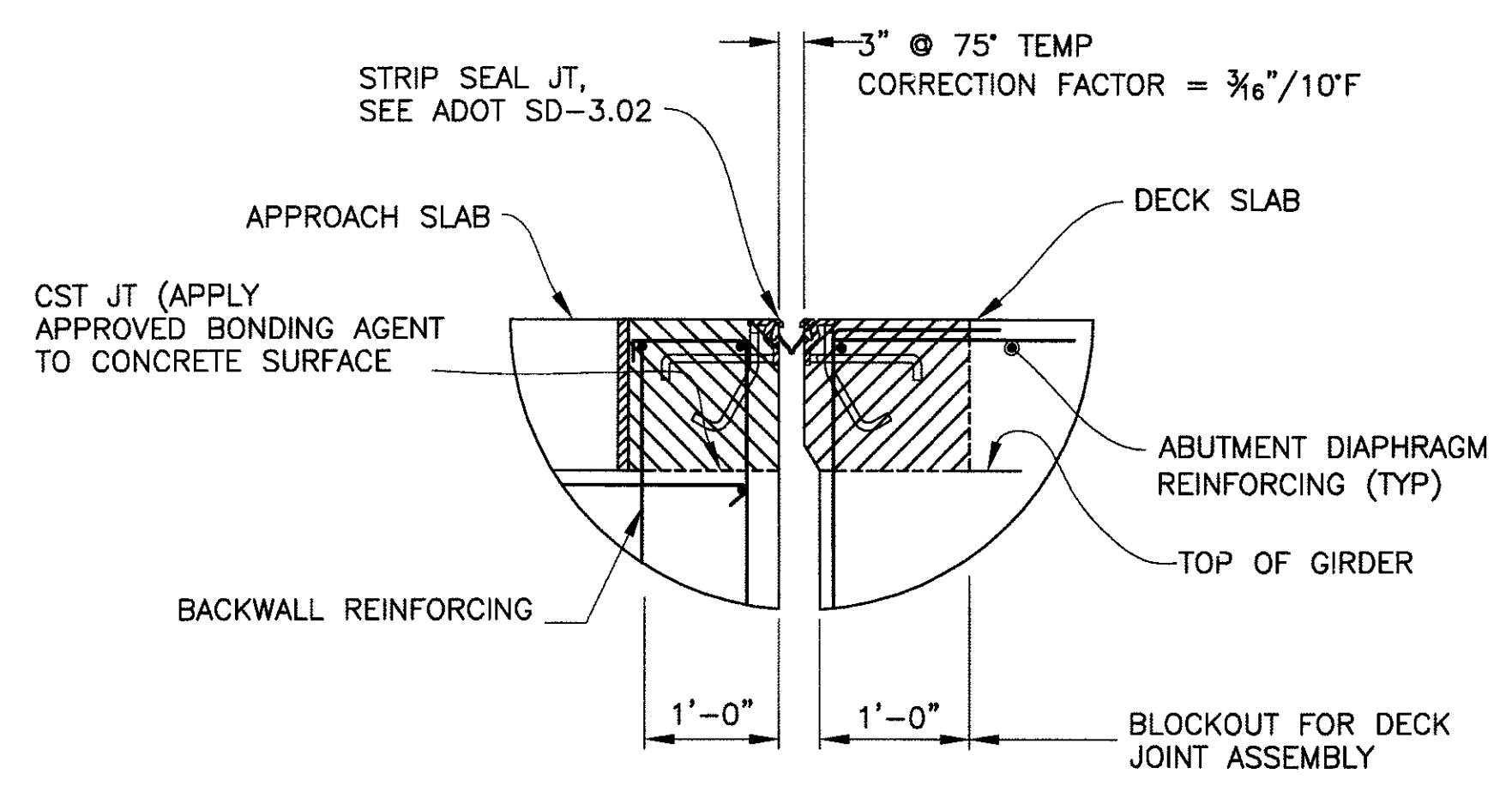
SECTION B
SCALE: 3/8"=1'-0"
232

NOTES:
1. FIXED RESTRAINER NOT SHOWN FOR CLARITY.
2. SEE PEDESTRIAN BALCONY DETAILS FOR PIER DIAPHRAGM MODIFICATION DETAILS AT PEDESTRIAN BALCONIES

NOTE:
THE CONTRACTOR SHALL TAKE DUE CARE IN THE PLACEMENT OF THE CONCRETE UNDER THE JOINT ANGLES TO ENSURE THAT PROPER CONSOLIDATION IS ACHIEVED. AFTER PLACEMENT, THE ENGINEER SHALL INSPECT THE JOINT VOIDS BY SOUNDING THE ANGLES WITH A HAMMER. ALL VOIDS SHALL BE REPAIRED BY THE CONTRACTOR BY EPOXY INJECTION.



REINFORCEMENT AT BLOCK OUT
SCALE: N.T.S.
C 223 C 231 C 232



DECK JOINT DETAIL
N.T.S.

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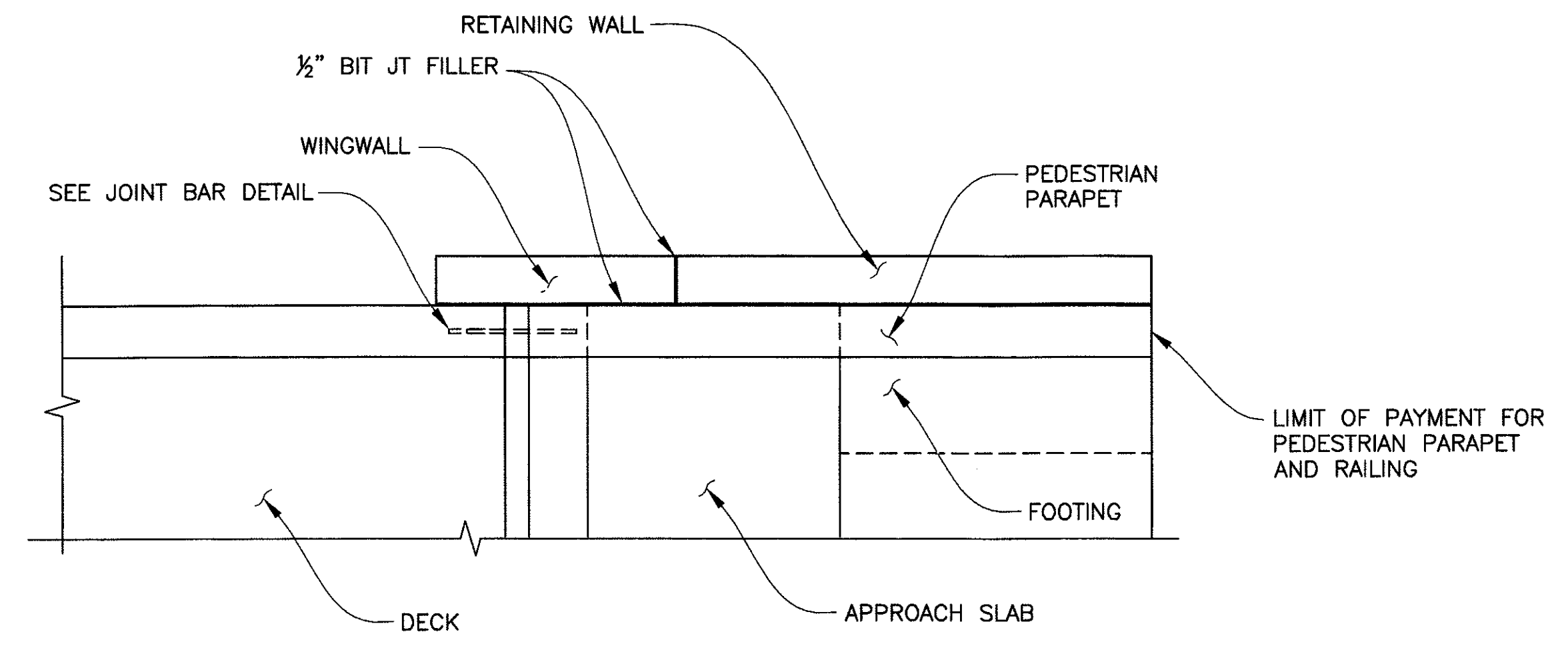
DIAPHRAGM SECTIONS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

**SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293**

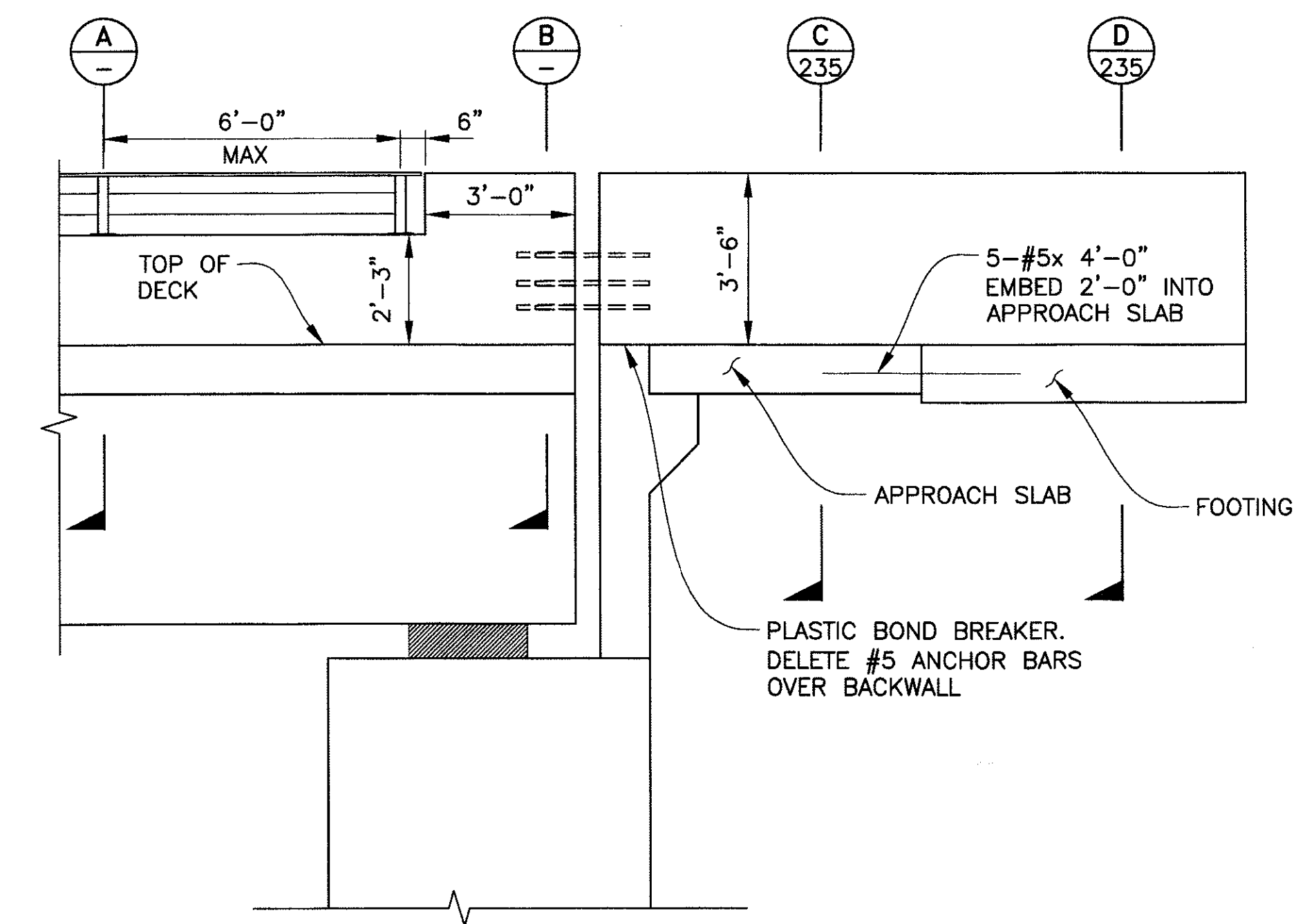
DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	233	352
DWG NO: S-3.29				

P:\2008005\CAD\Drawings\Structures\328-CC Primary Diaphragm sections.dwg - plotted by James Rojas on 12/21/2009 9:04:35 AM
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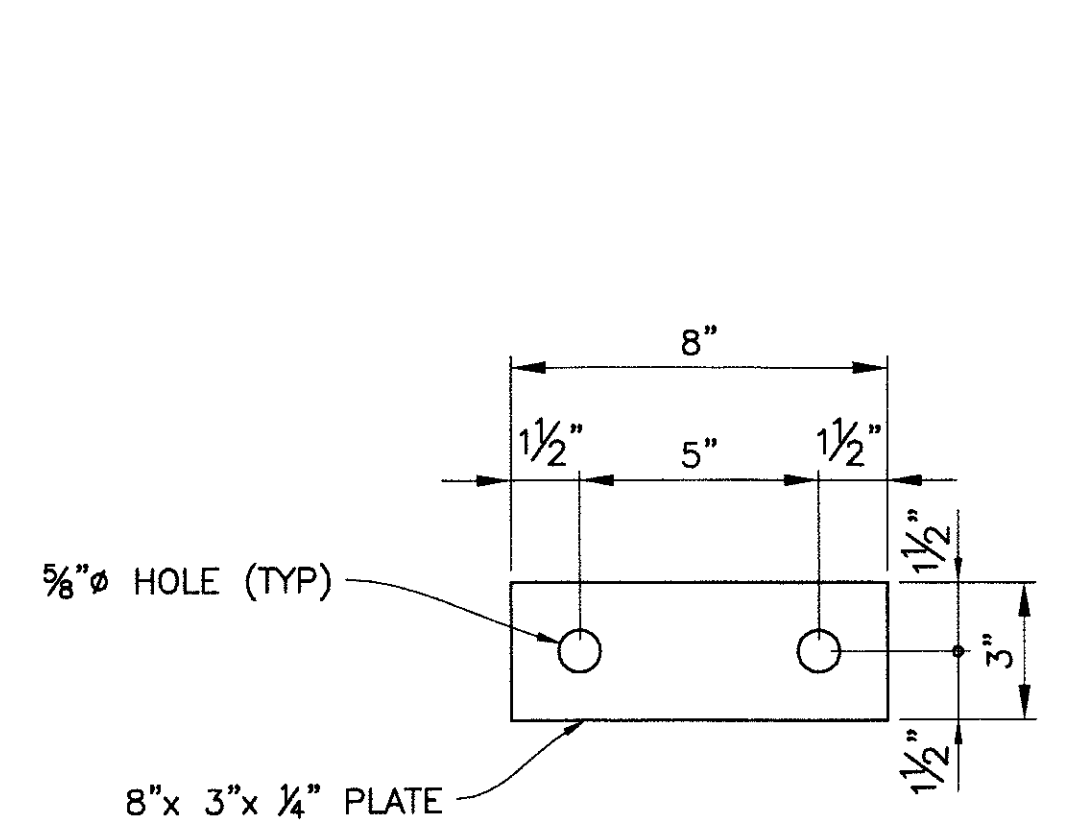
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE
REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



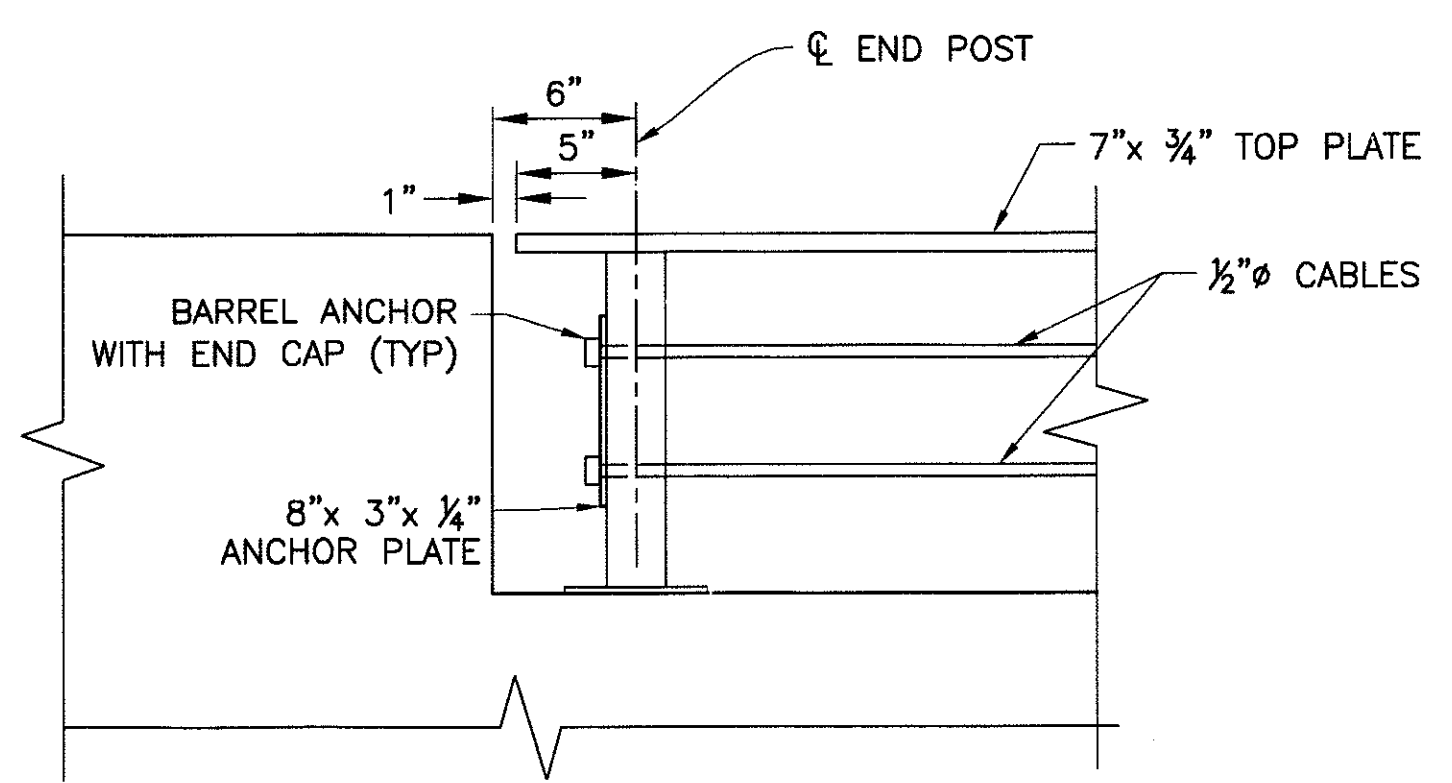
PLAN
SCALE: 3/8" = 1'-0"



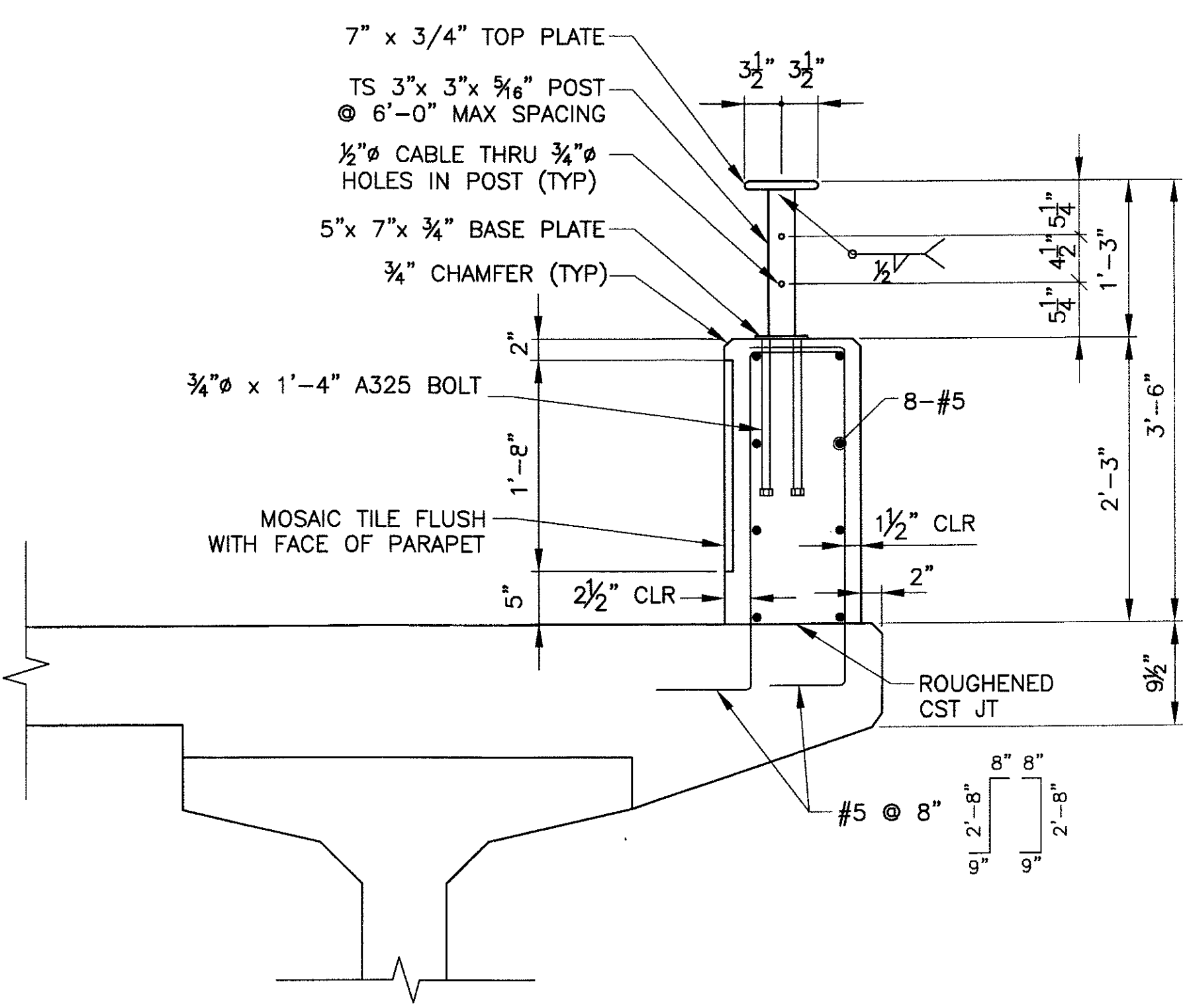
ELEVATION
SCALE: 3/8" = 1'-0"



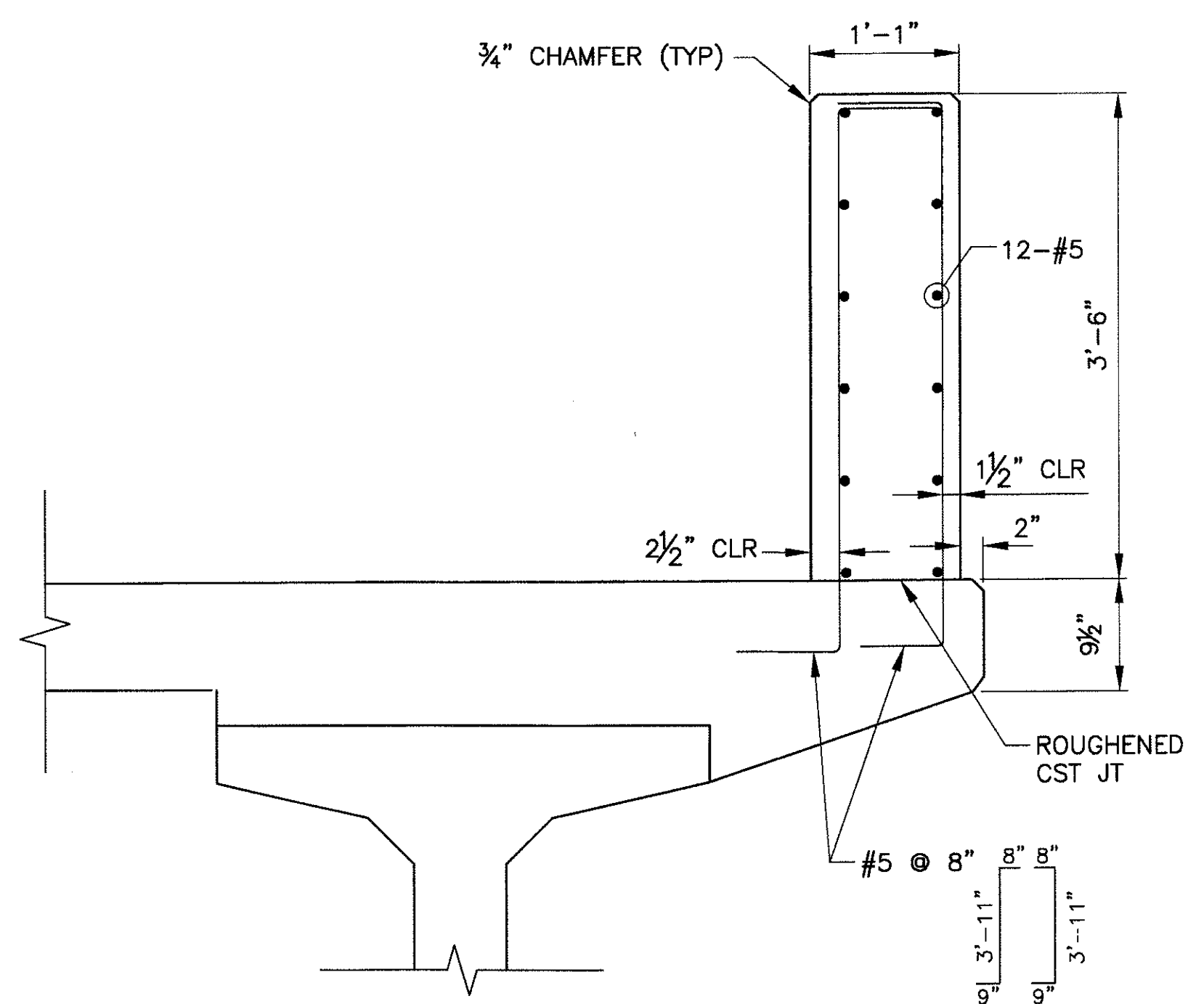
ANCHOR PLATE DETAIL
SCALE: 3" = 1'-0"



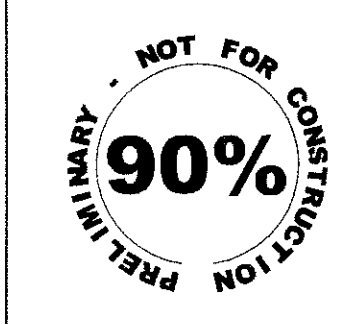
END POST DETAIL
SCALE: 1 1/2" = 1'-0"



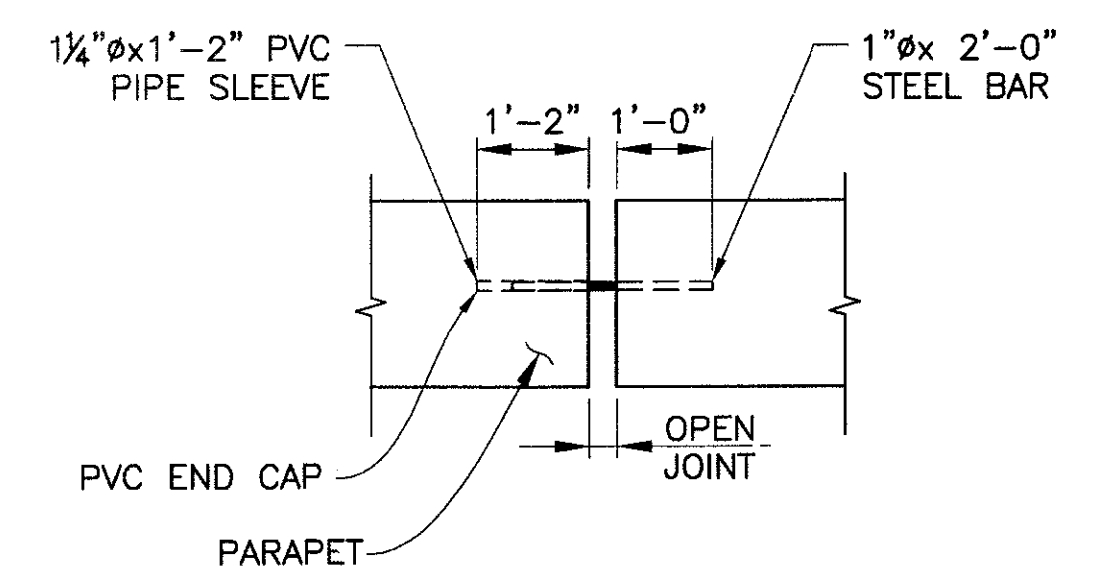
SECTION A-A
SCALE: 1" = 1'-0"



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



F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	234	352
PREMIER				
ENGINEERING CORPORATION				
8437 W. CHANDLER BLVD., SUITE 1				
CHANDLER, AZ 85226 480-829-6000				
DES: BAG	DR: JRR	CK: SEO	DATE: 12/09	CONSULTING ENGINEER



JOINT BAR DETAIL
SCALE: 1/2" = 1'-0"

- NOTES:**
- SEE DWG NO. S-3.35 FOR BRIDGE PLAQUE DETAILS.
 - STRUCTURAL TUBING (TS) SHALL BE ASTM A500 GRADE B. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE NOTED.
 - PEDESTRIAN PARAPET SHALL HAVE 1/2" BITUMINOUS JOINT FILLER IN OPEN JOINTS AT THE CENTERLINE OF EACH PIER. SEE OPEN JOINT AT PIER DETAIL.
 - THE EDGES OF THE 7"x 3/4" TOP PLATE SHALL BE ROUNDED ON THE TOP AND BOTTOM WITH A 3/8" RADIUS TO FORM A SMOOTH ROUNDED EDGE.
 - THE CABLES SHALL BE GALVANIZED 1/2" 7 WIRE LOW RELAXATION STRANDS.
 - THE CABLES SHALL BE PRETENSIONED TO 6,500 POUNDS PER CABLE AND ANCHORED TO THE END POSTS USING BARREL ANCHORS WITH END CAPS.
 - THE ANCHOR BOLTS SHALL BE 3/4" A325 BOLTS.
 - SEE DWG NO. S-3.31 FOR PARAPET FOOTING DETAIL.

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PEDESTRIAN PARAPET AND RAILING DETAILS 1
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

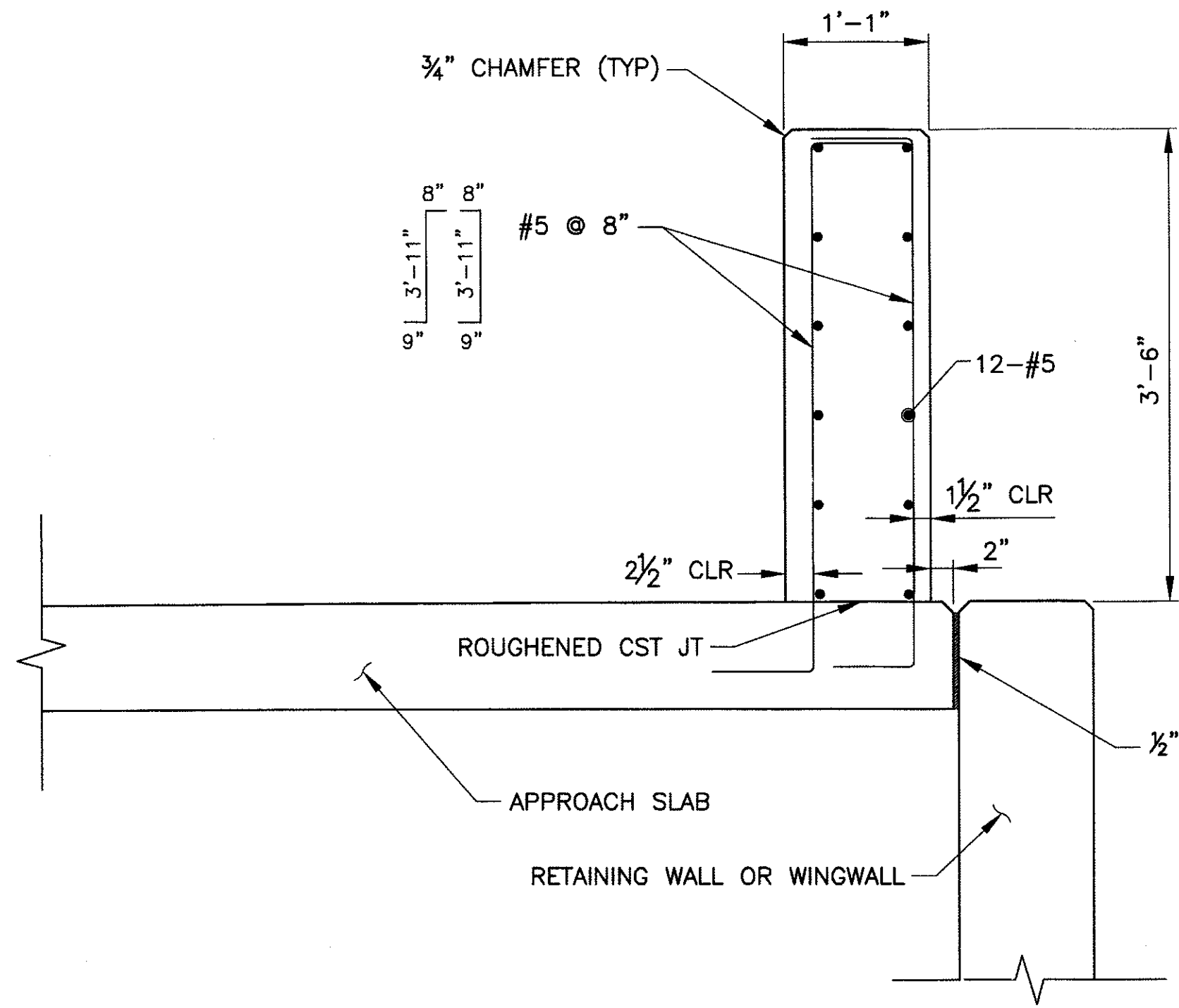
SONORAN BOULEVARD CAVE CREEK PRIMARY
ST85100293

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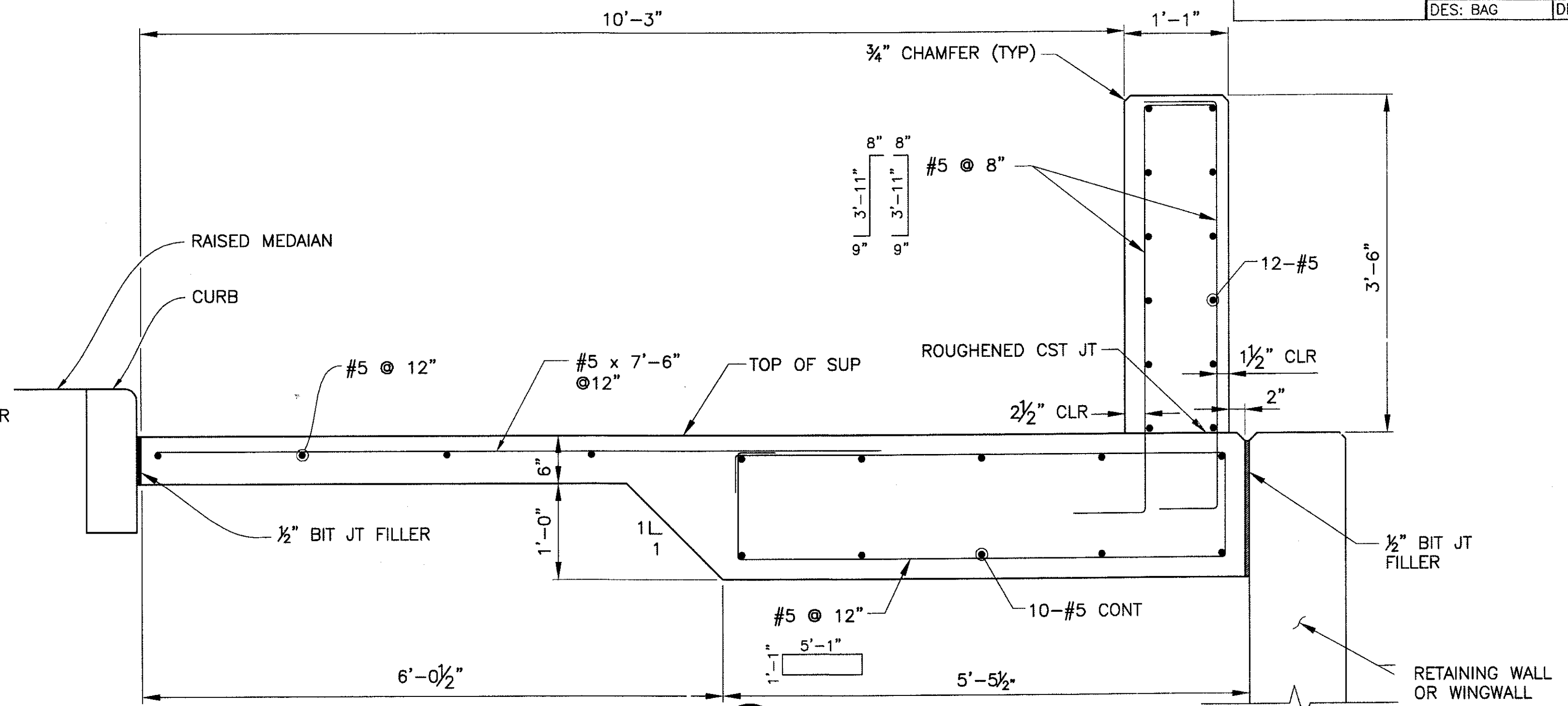
DR: JRR	DES: BAG	CK: SEO	SHEET NO.	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	234	352
DWG NO: S-3.30				

P:\2008005\CAD\Civil\Sheets\Structures\330-CC Primary and parapet and railing.dwg - plotted by James Rojas at 12/21/2009 9:05:01 AM

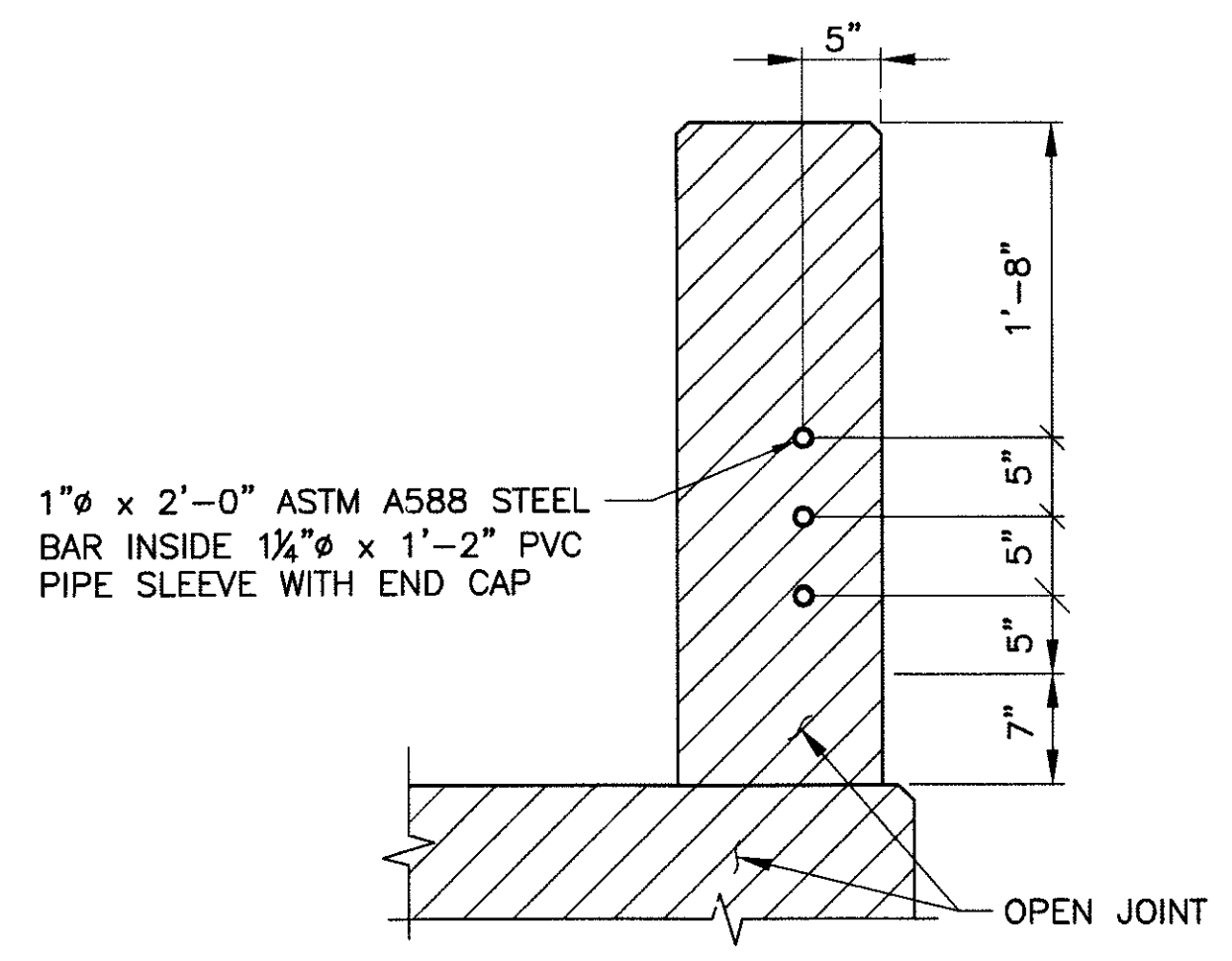
NO.	DESCRIPTION	REV BY	CHK BY	DATE



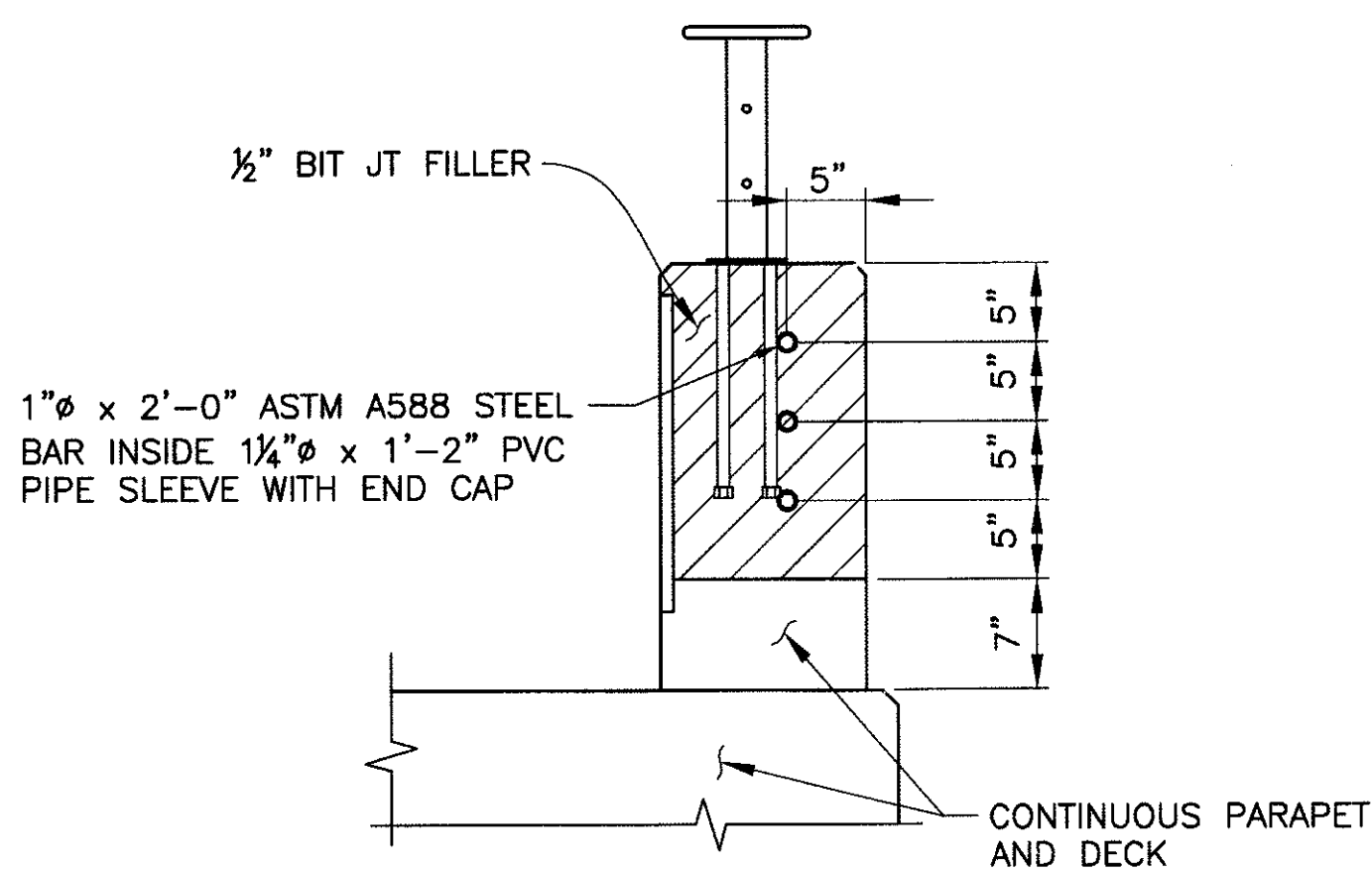
SECTION C
SCALE: 1"=1'-0"



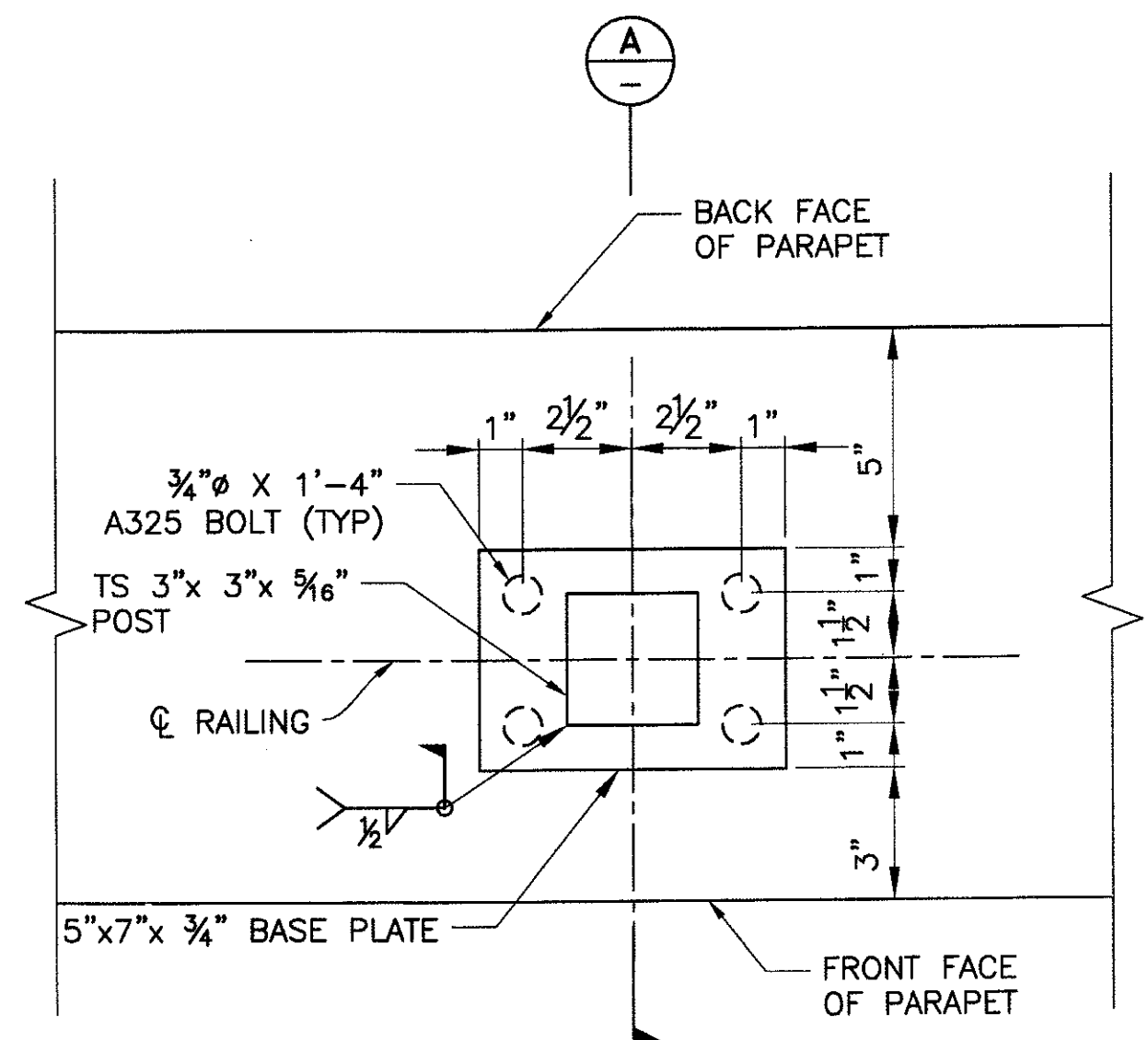
SECTION D
SCALE: 1"=1'-0"



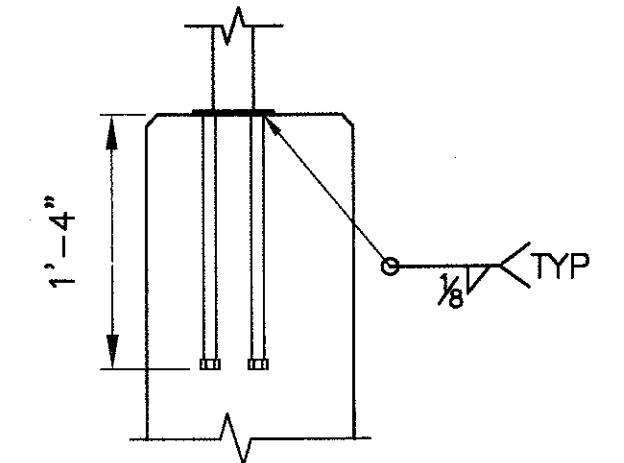
OPEN JOINT AT EXPANSION JOINTS
SCALE: 1" = 1'-0"



OPEN JOINT AT PIERS
SCALE: 1" = 1'-0"



BASE PLATE DETAIL
SCALE: 3" = 1'-0"



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

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PEDESTRIAN PARAPET AND RAILING DETAILS 2
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD CAVE CREEK PRIMARY
ST85100293

DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	235	352

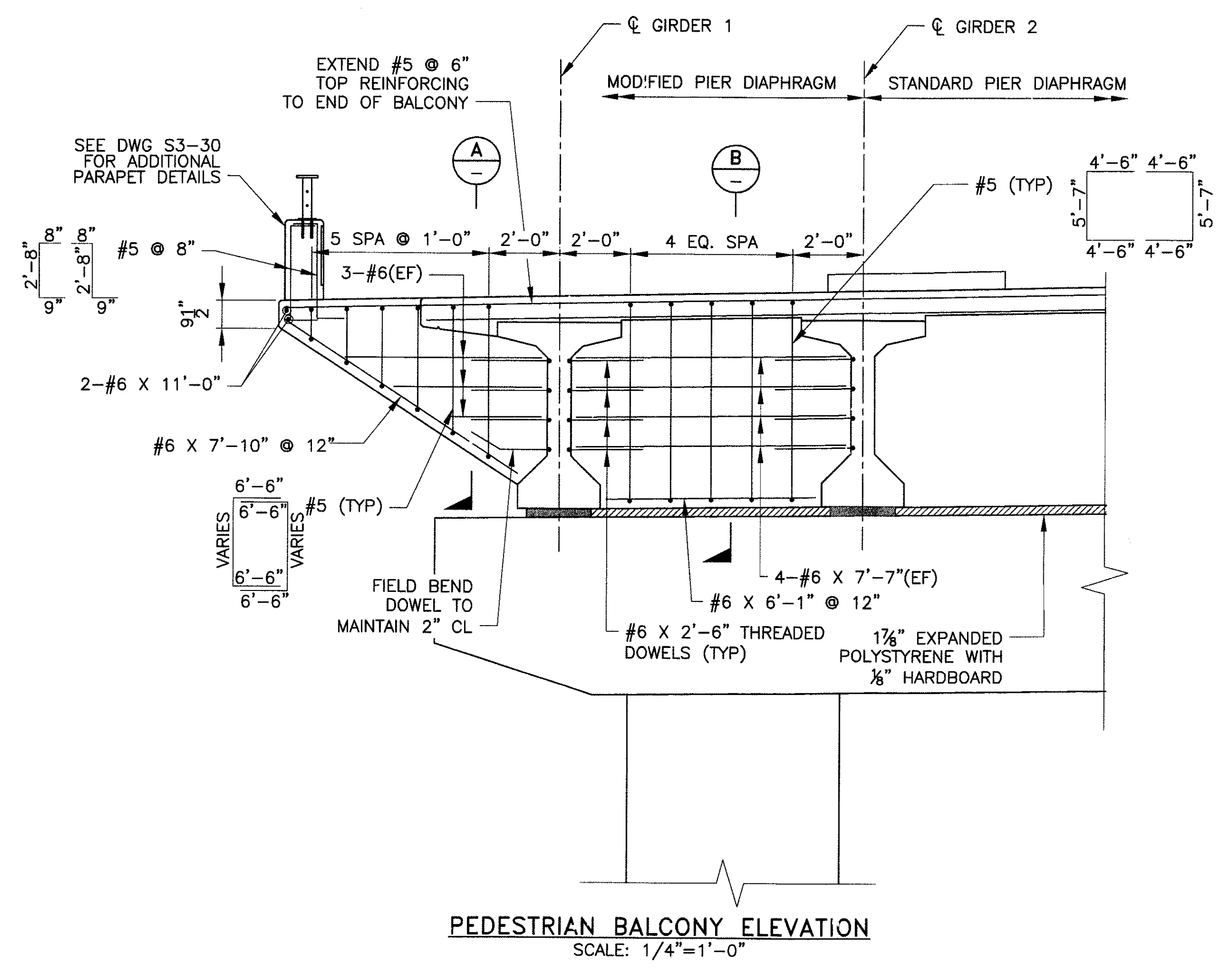
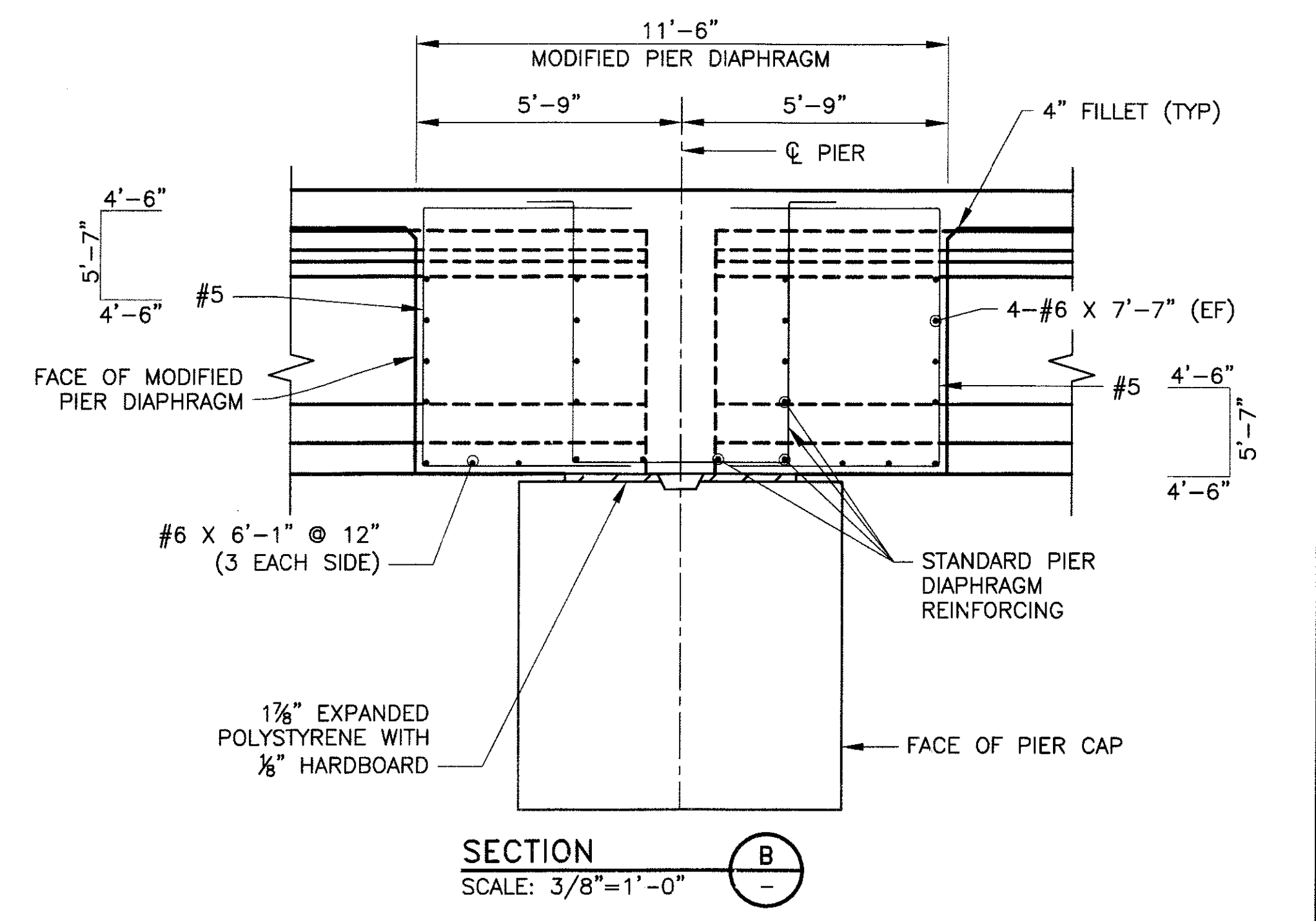
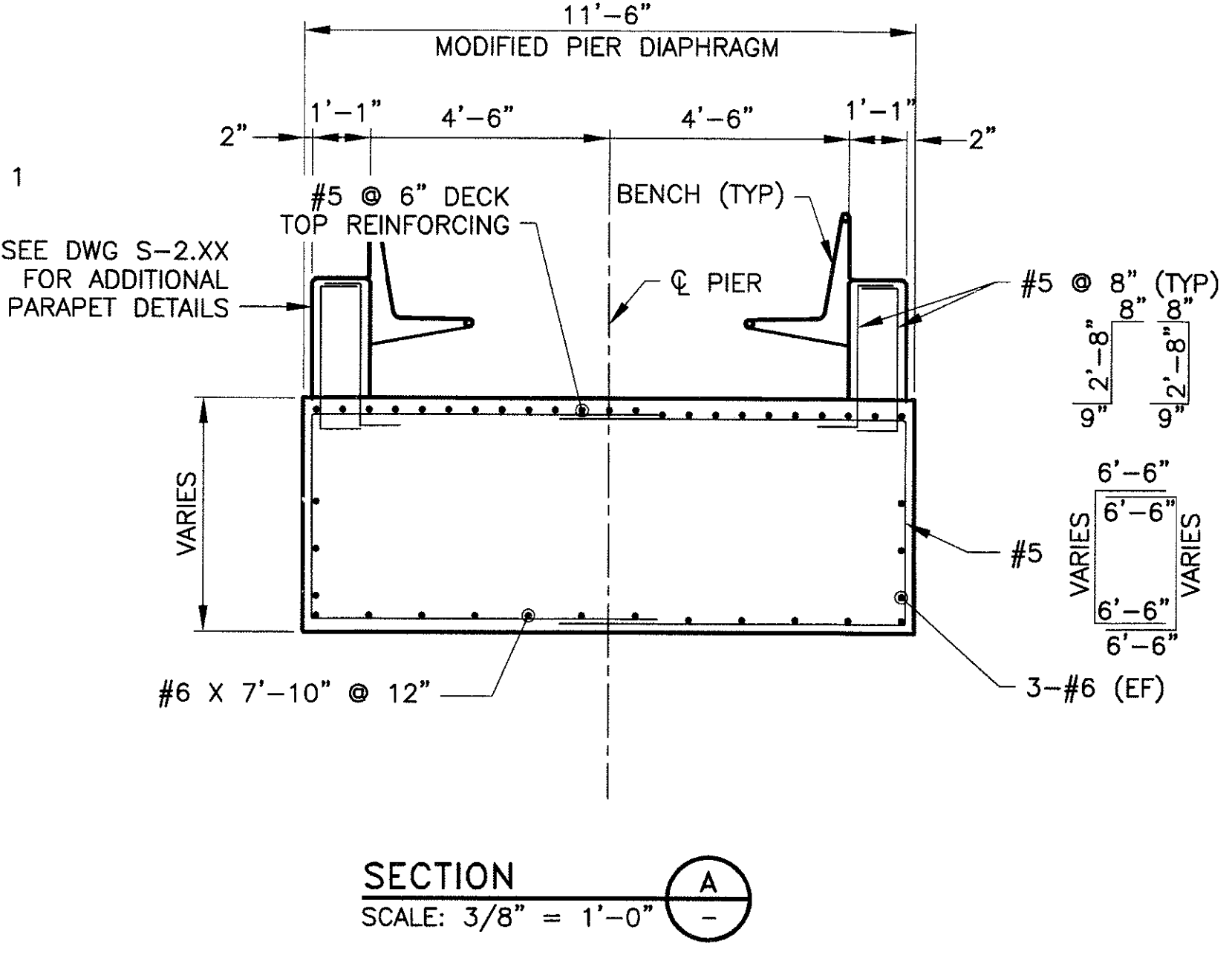
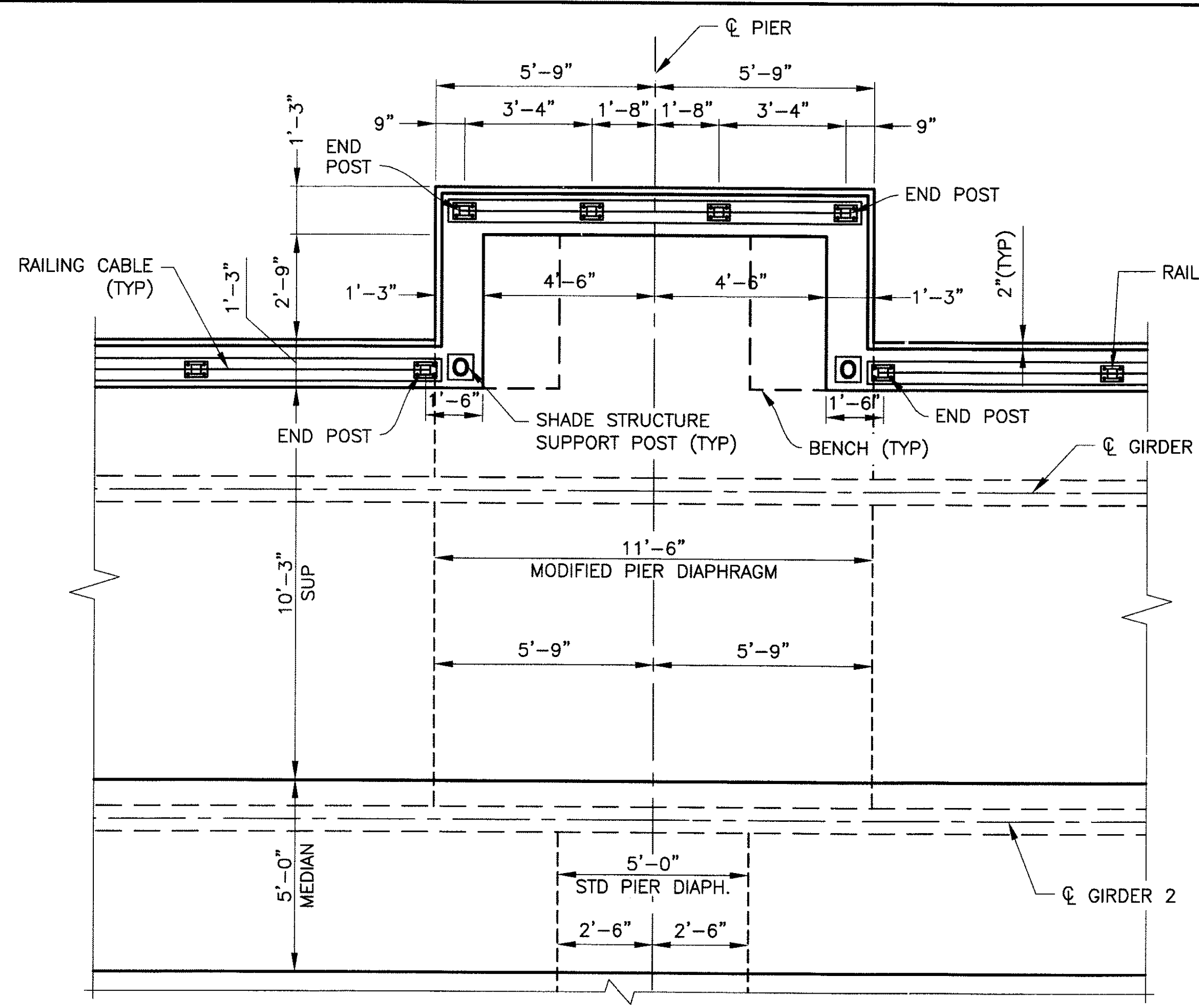
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PRELIMINARY

F.H.W.A. REGION: 9	STATE: ARIZ.	PROJ. NO.: ST85100293	NO.: 235	TOTAL: 352
PREMIER ENGINEERING CORPORATION 6437 W CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000 DES: BAG DR: JRR CK: SEO DATE: 12/09				

P:\2009\2009\CD\GWA\Sheets\Structure\33-C-Parapet and railing.dwg - plotted by James Rojas at 12/21/2009 9:05:12 AM - Plot Scale: 1:1 - Record: 0.5000 - Pen Color: PREMIER.CPL

REVISION BY CITY OF PHOENIX	NO.	DESCRIPTION	REV BY	CHK BY	DATE



	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	236	352
PREMIER					
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000					
DES: BAG			DR: ESG		CONSULTING ENGINEER
DATE: 10/09			DATE: 10/09		DATE: 12/09

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

PEDESTRIAN BALCONY DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
**SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293**

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DR: ESG	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 10/09	DATE: 10/09	DATE: 10/09	236	352
DWG NO: S-3.32			236	352

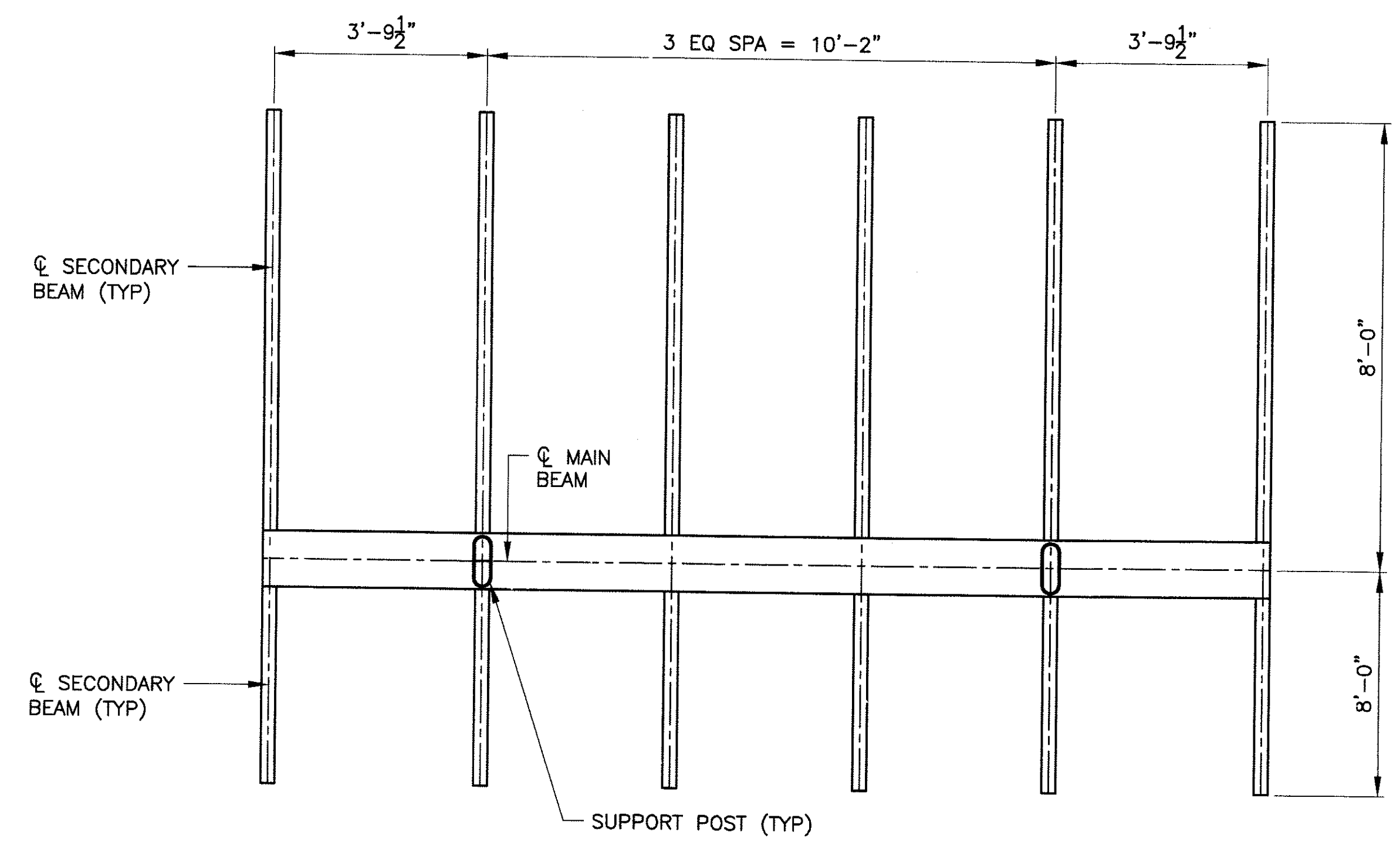
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 plotdate: 12/21/2009 9:05:20 AM

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	237	352

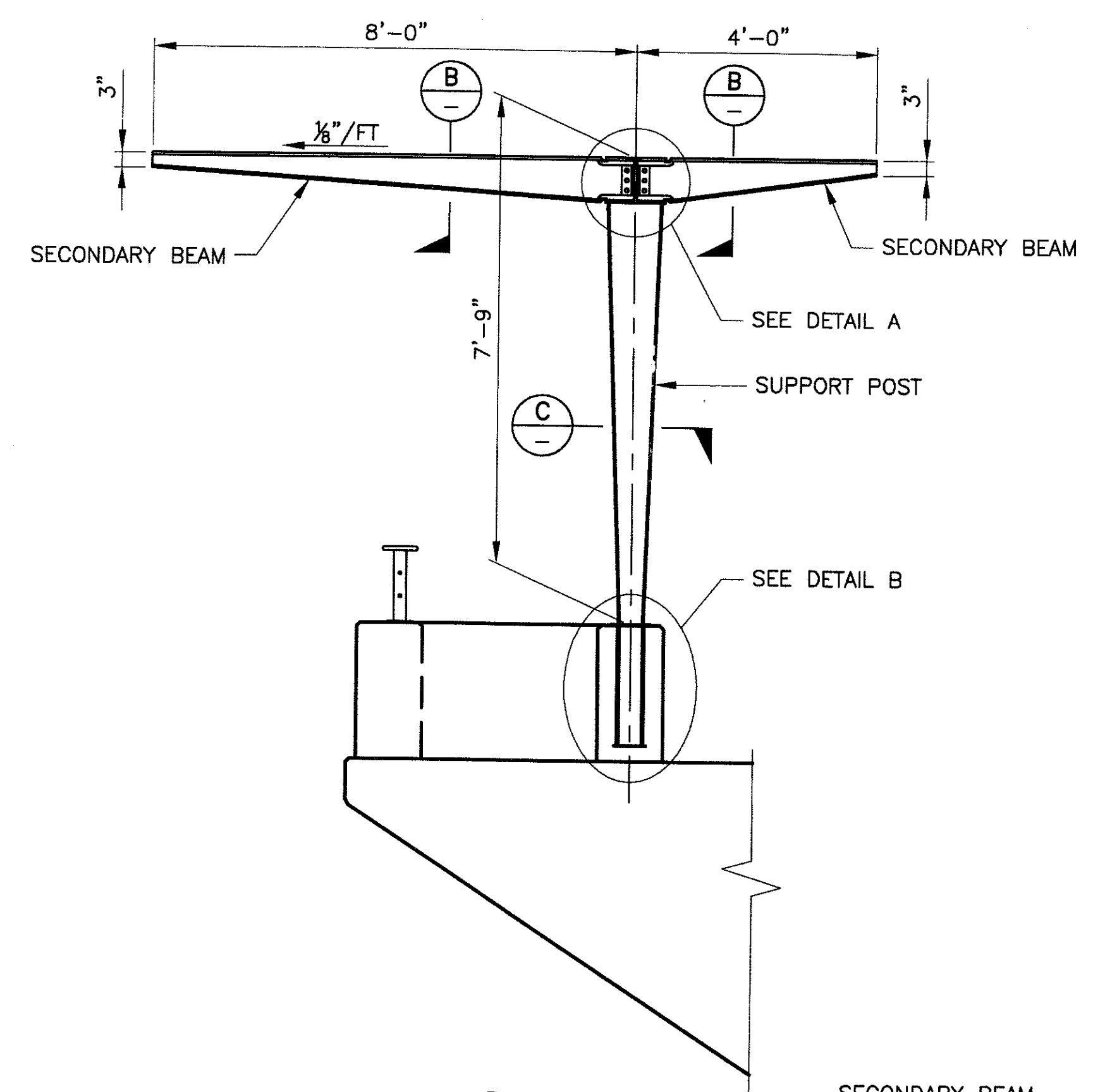
PREMIER
ENGINEERING CORPORATION
6437 W. CHANDLER BLVD., SUITE 1
CHANDLER, AZ 85226; 480-819-8000

DES: BAG DR: ESG CK: SEO DATE: 12/09

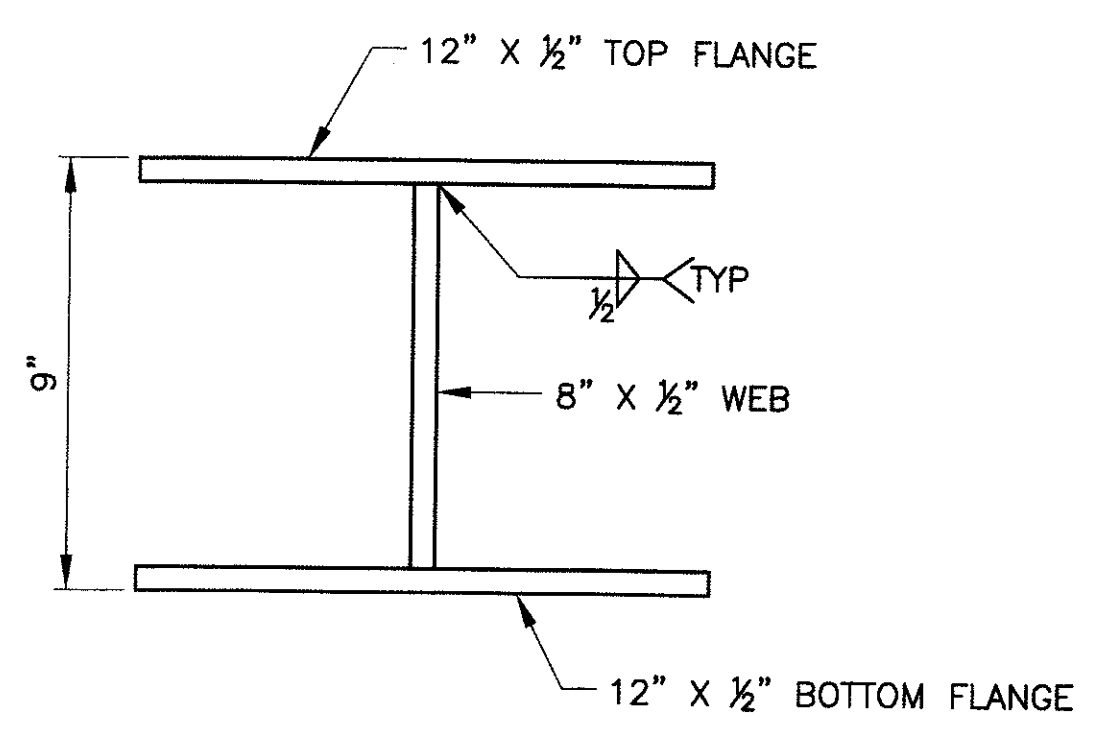
- NOTE:**
- STRUCTURAL STEEL FOR MAIN BEAMS, SUPPORT POSTS, EMBEDDED SLEEVES, AND ALL ASSOCIATED CONNECTION PLATES SHALL CONFORM TO ASTM A709, GRADE 50. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36
 - ALL CONNECTION BOLTS SHALL BE 3/4" Ø A325 BOLTS.



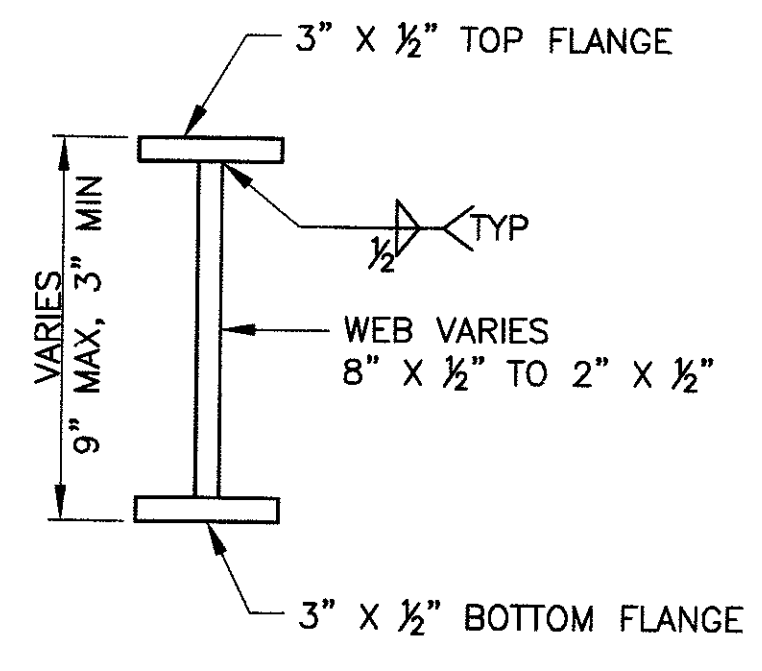
FRAMING PLAN
SCALE: 1/2"=1'-0"



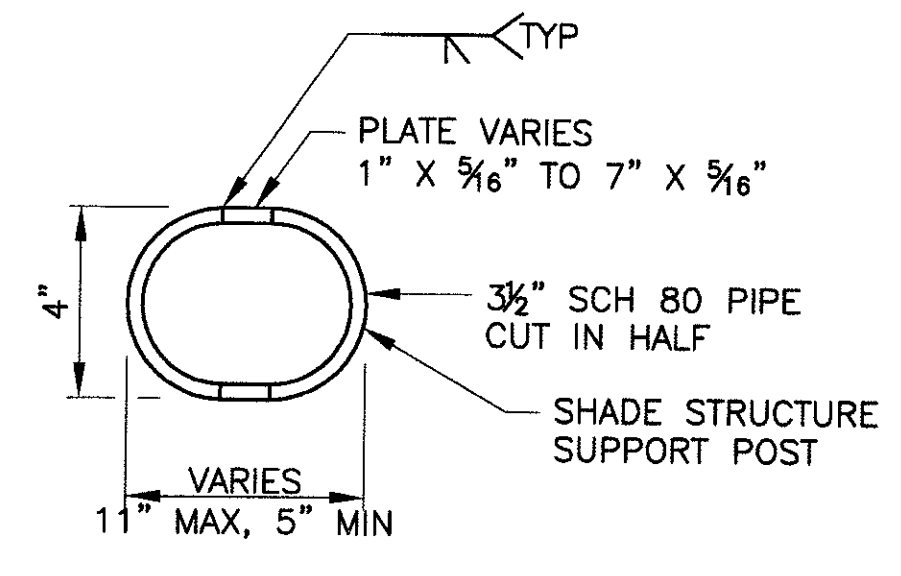
ELEVATION
SCALE: 1/2"=1'-0"



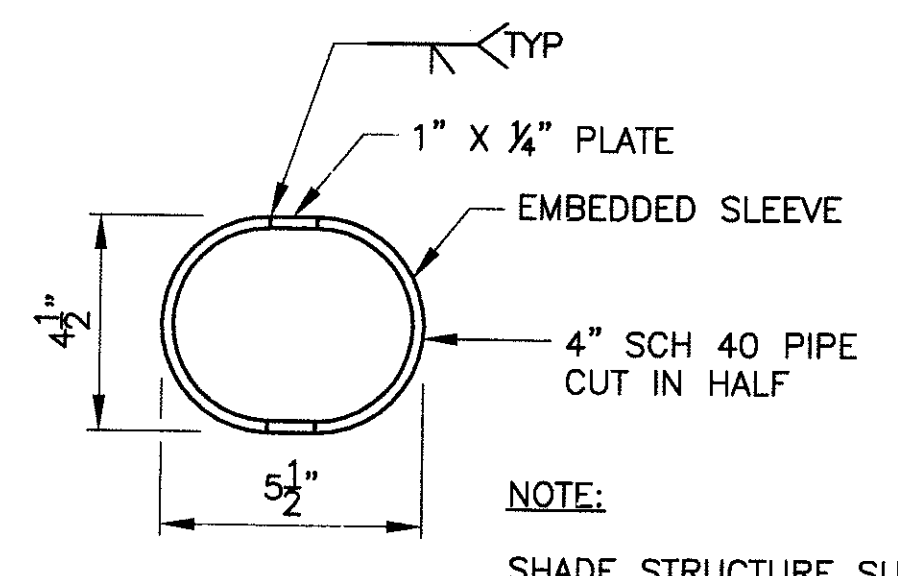
MAIN BEAM-SECTION A
SCALE: 3"=1'-0"



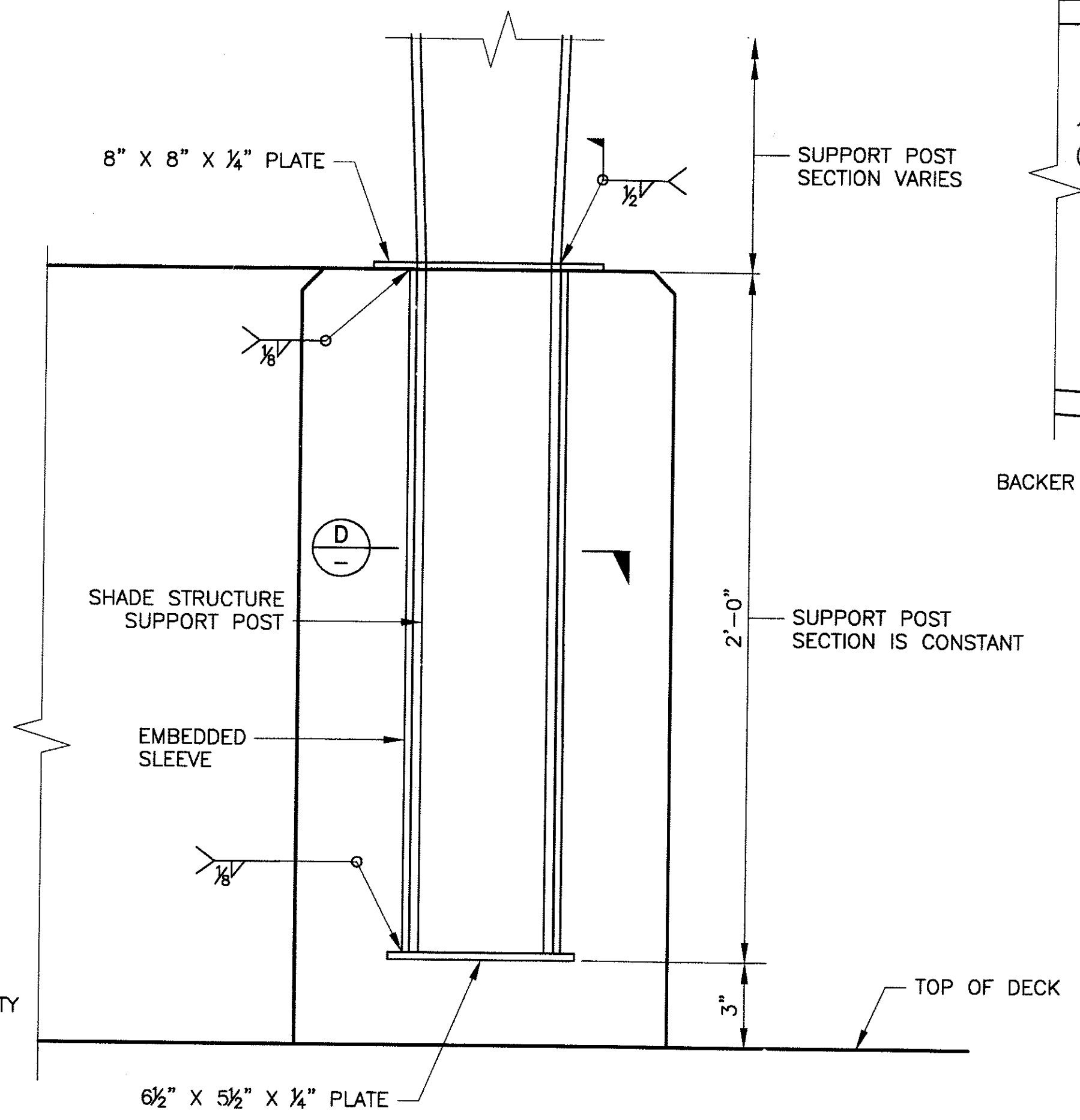
SECONDARY BEAM-SECTION B
SCALE: 3"=1'-0"



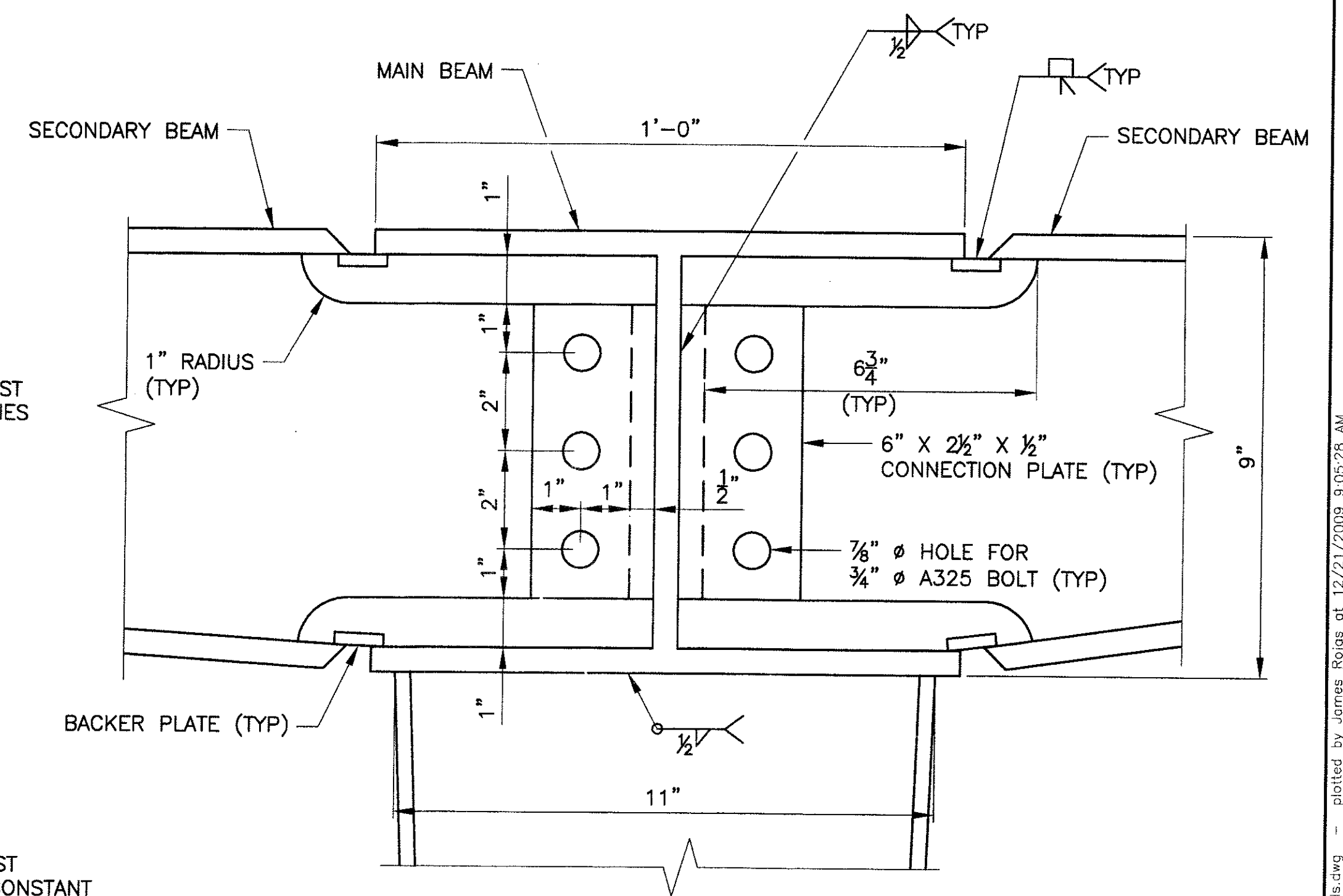
SUPPORT POST-SECTION C
SCALE: 3"=1'-0"



EMBEDDED SLEEVE-SECTION D
SCALE: 3"=1'-0"



DETAIL B
SCALE: 3"=1'-0"



DETAIL A
SCALE: 5"=1'-0"

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SHADE STRUCTURE DETAILS
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT
SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

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DR: ESG	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 10/09	DATE: 10/09	DATE: 10/09	237	352

DWG NO: S-3.33

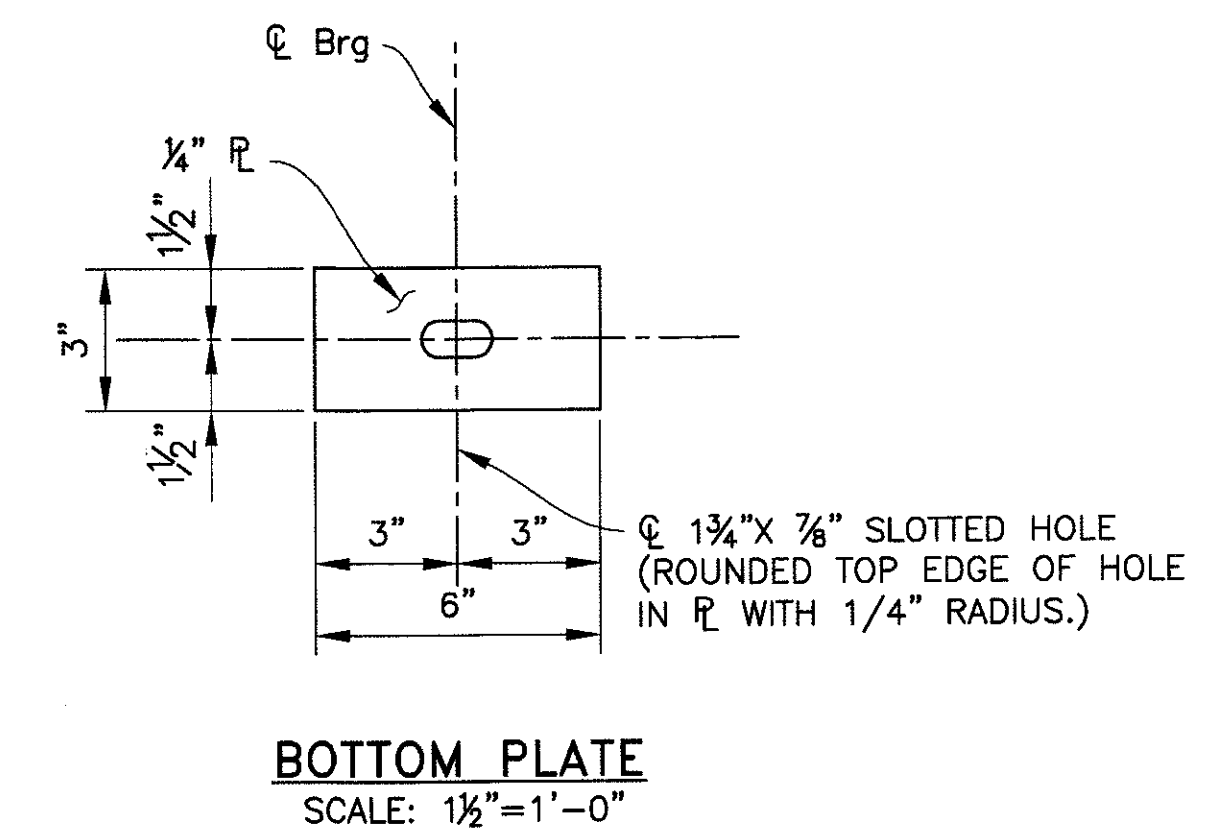
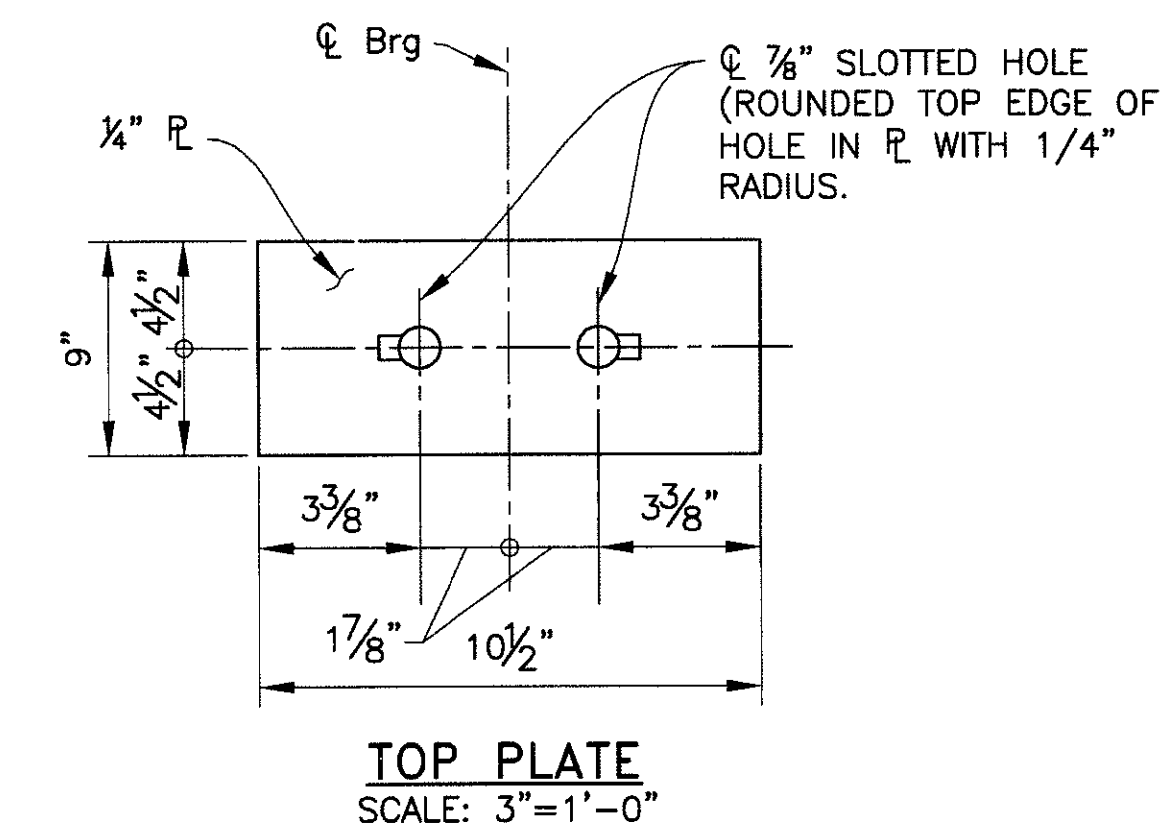
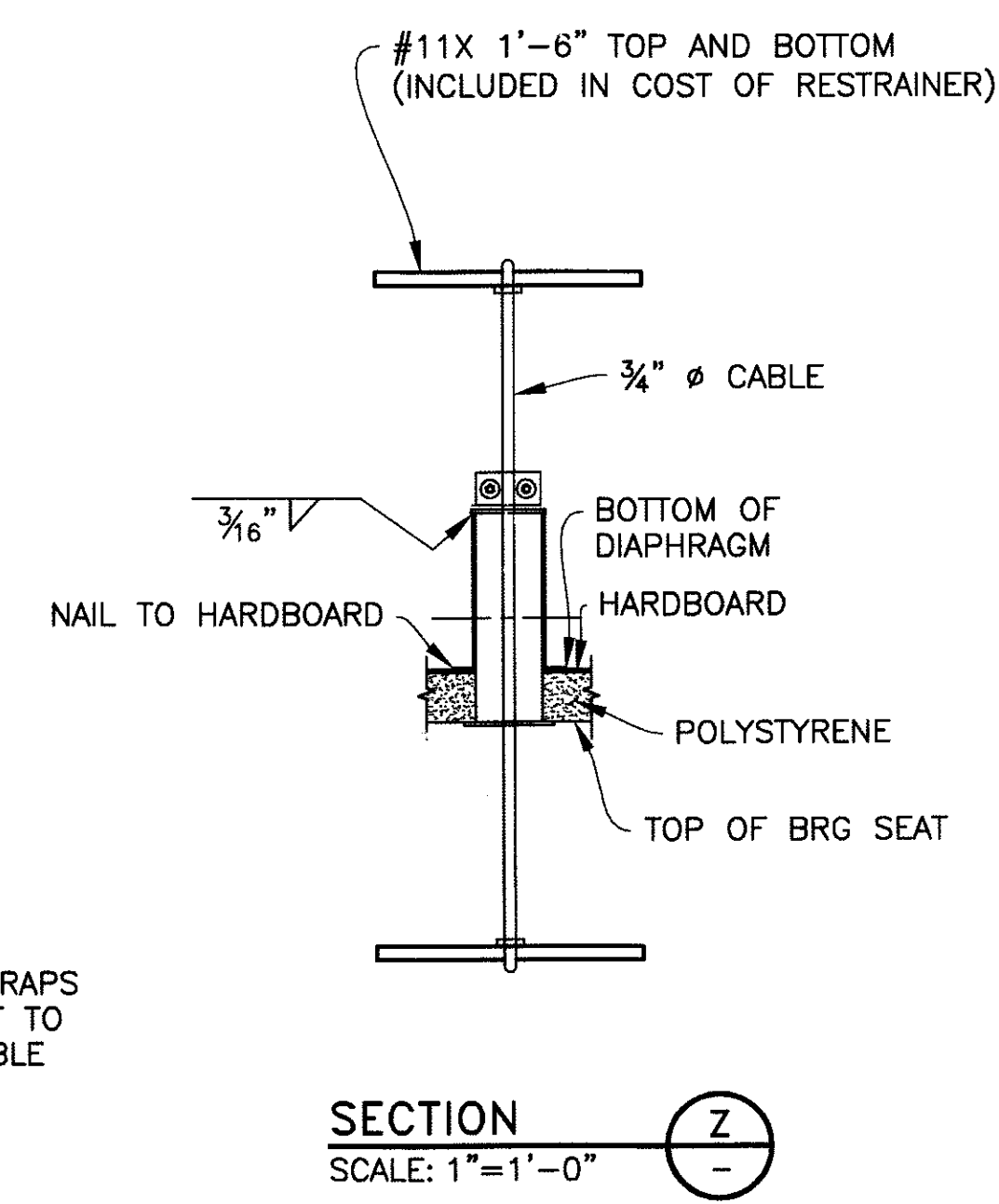
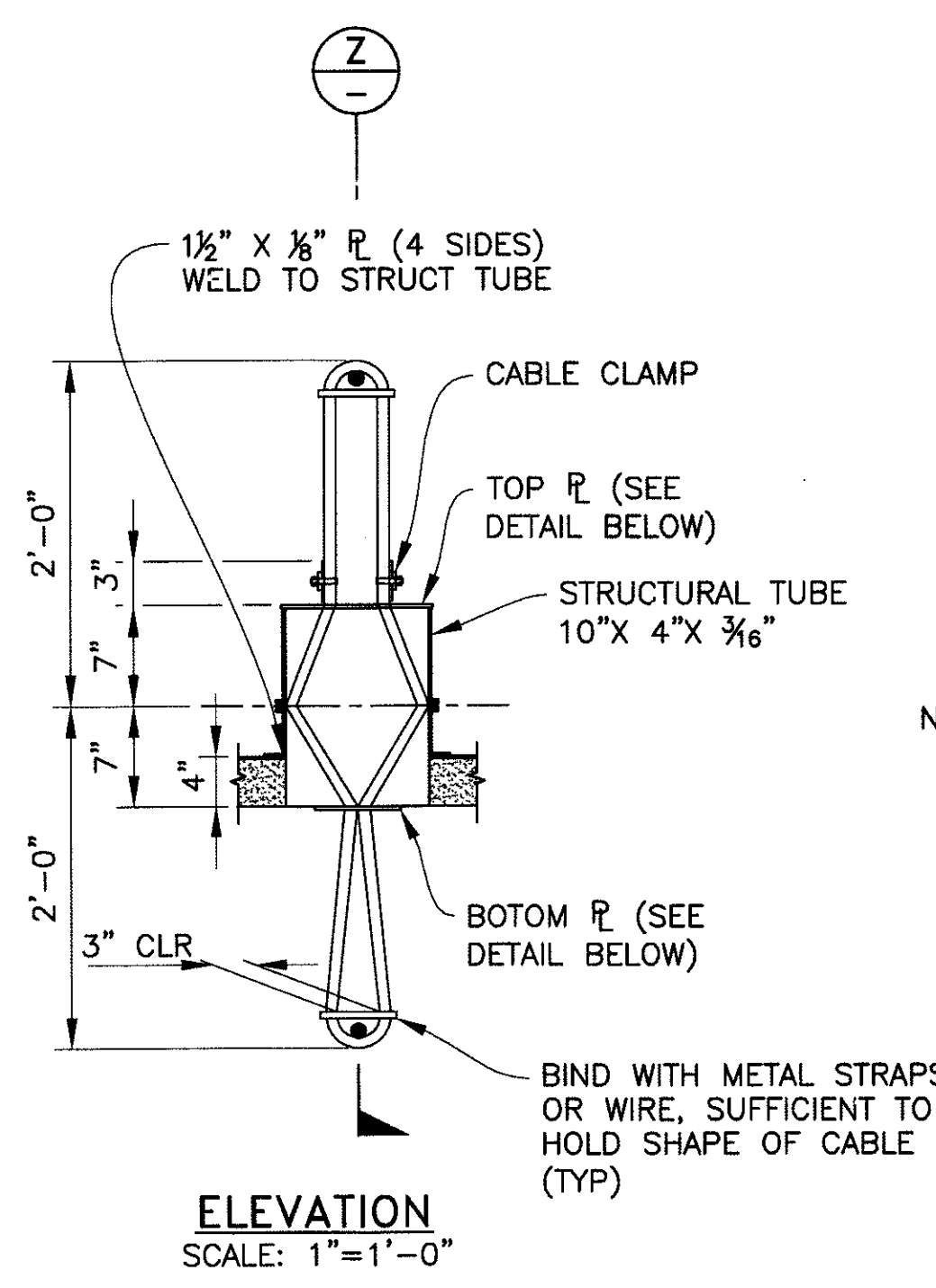
REVISION BY CITY OF PHOENIX	DESCRIPTION	NO.	REV BY	CHK BY	DATE

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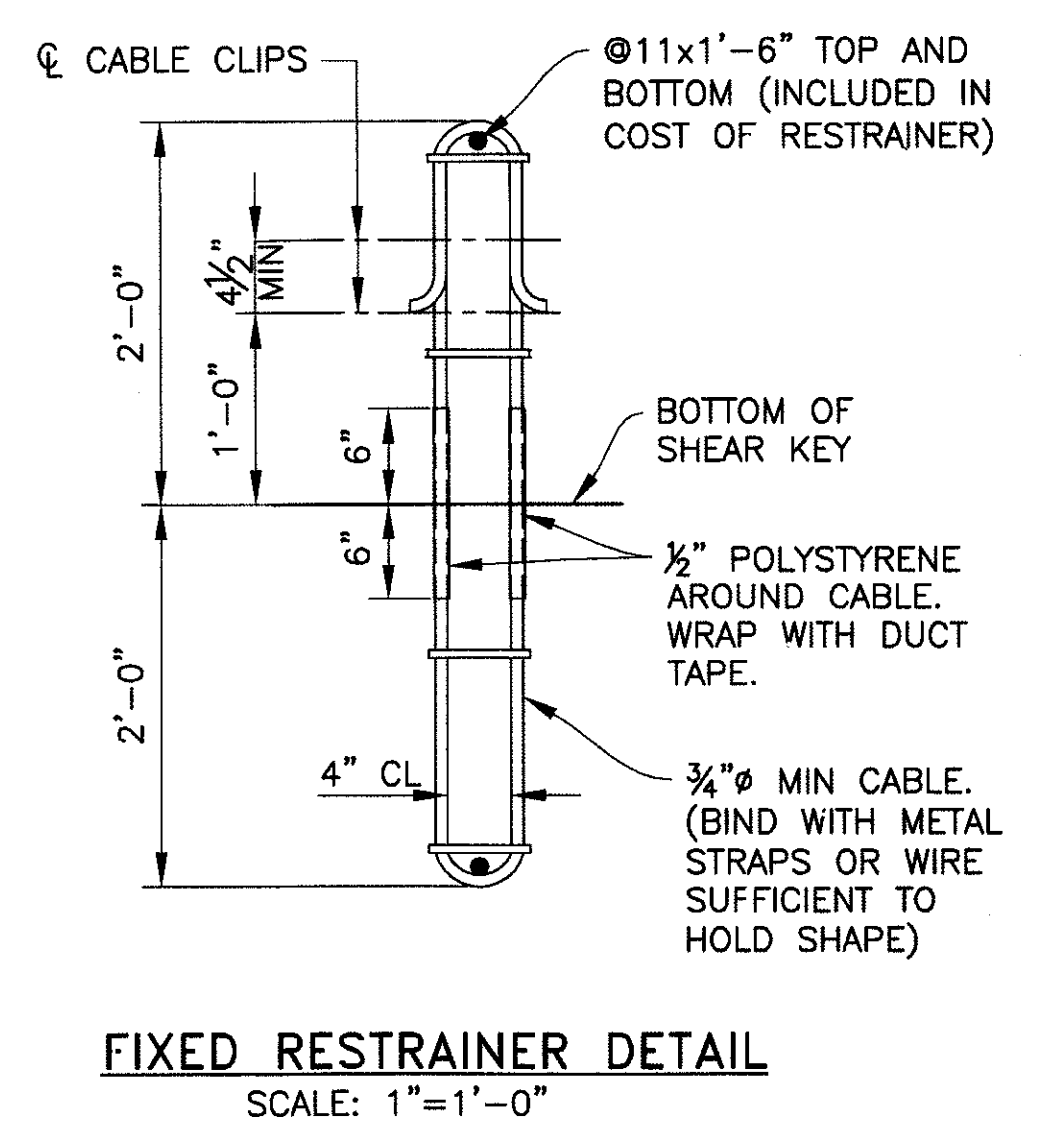
PRELIMINARY - NOT FOR CONSTRUCTION
90%

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
9	ARIZ.	ST85100293	238	352
PREMIER				
ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000				
DES: BAG			DR: JRR	CK: SEO
			DATE: 12/09	DATE: 12/09

REVISION BY CITY OF PHOENIX	REV BY	CHKD BY	DATE
DESCRIPTION			
NO.			
REVISION BY CITY OF PHOENIX	REV BY	CHKD BY	DATE
DESCRIPTION			
NO.			
REVISION BY CITY OF PHOENIX	REV BY	CHKD BY	DATE
DESCRIPTION			
NO.			



EXPANSION RESTRAINER DETAILS



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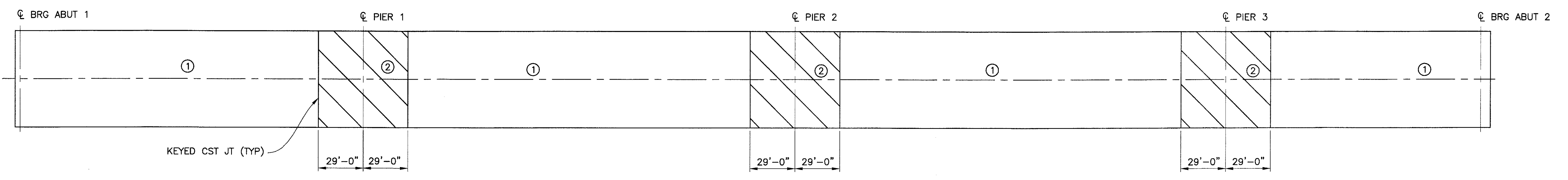
MISCELLANEOUS DETAILS 1
CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

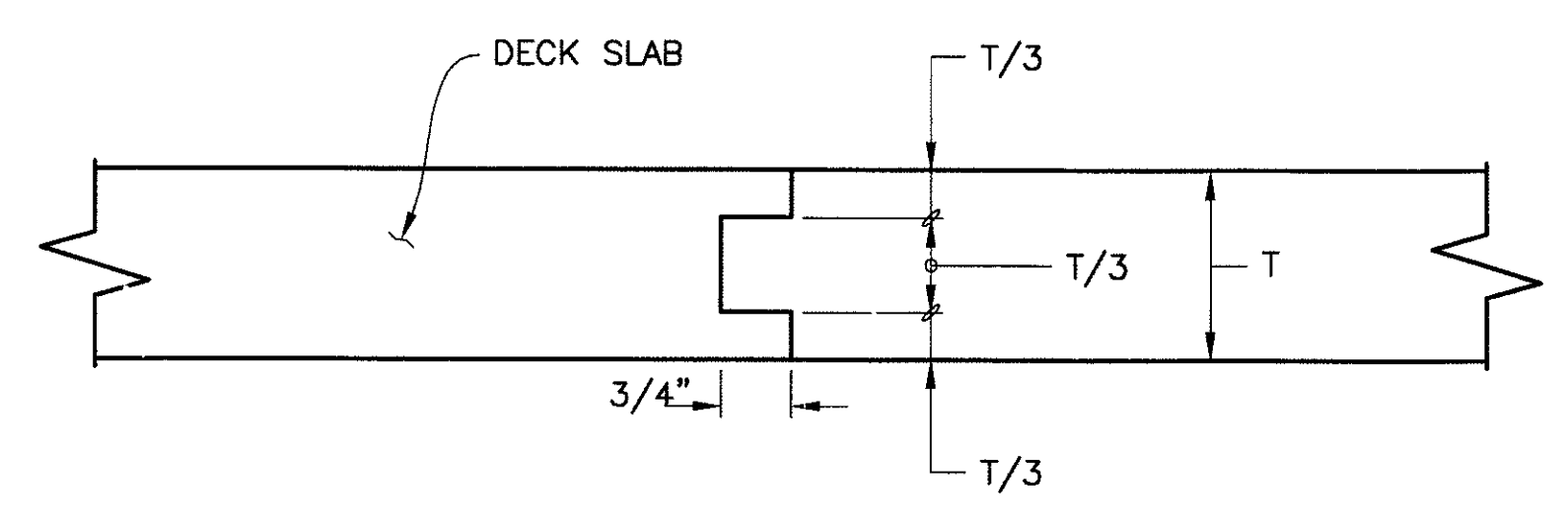
Two working days before you dig,
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 Blue Stake Center

DR: JRR	DES: BAG	CK: SEO	SHEET	TOTAL
DATE: 12/09	DATE: 12/09	DATE: 12/09	NO:	SHEETS
DWG NO: S-3.34			238	352

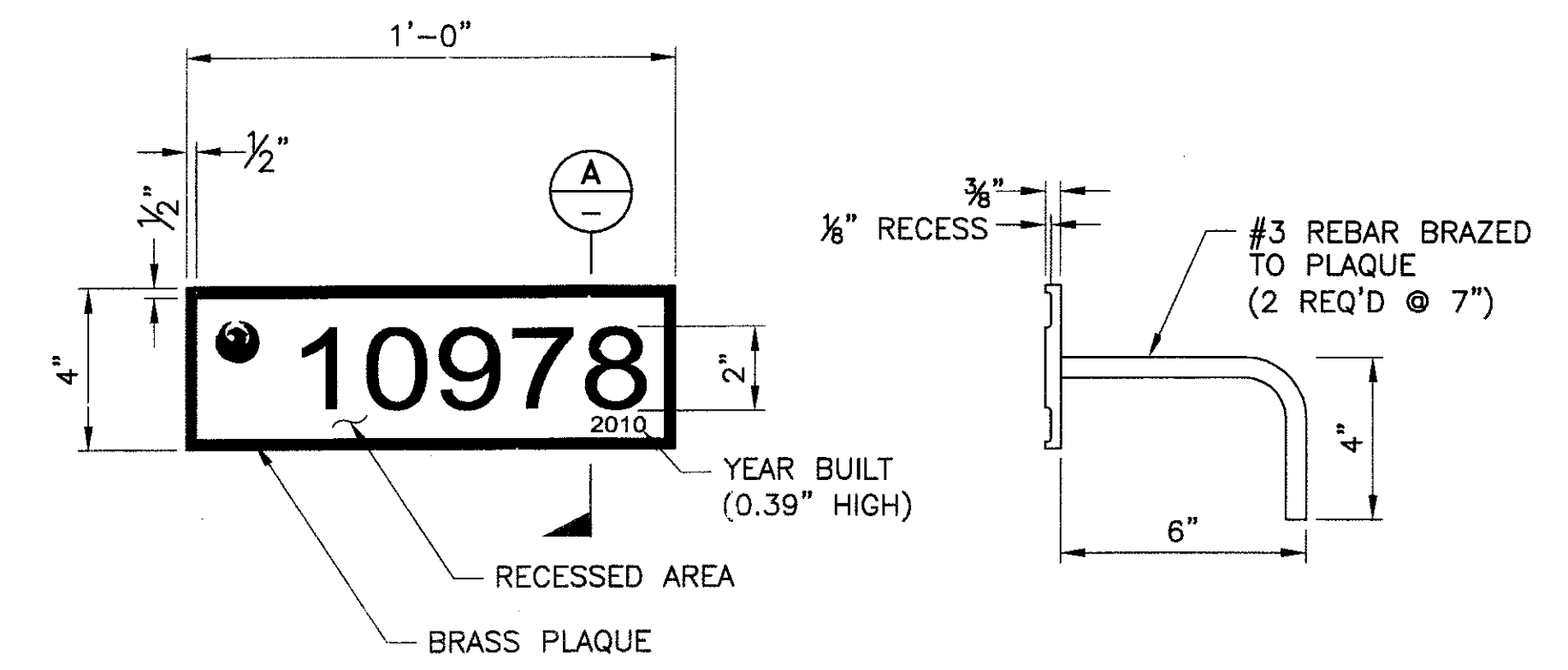
P:\20080805\CADD\Civil\Structures\Structures\332-CC Primary wingwell and misc details.dwg - plotted by James Rojas at 12/21/2009 9:05:36 AM
 plotdate: 1:1 - scale: 0:3000



DECK POURING SEQUENCE
N.T.S.



KEYED CONSTRUCTION JOINT DETAIL
N.T.S.

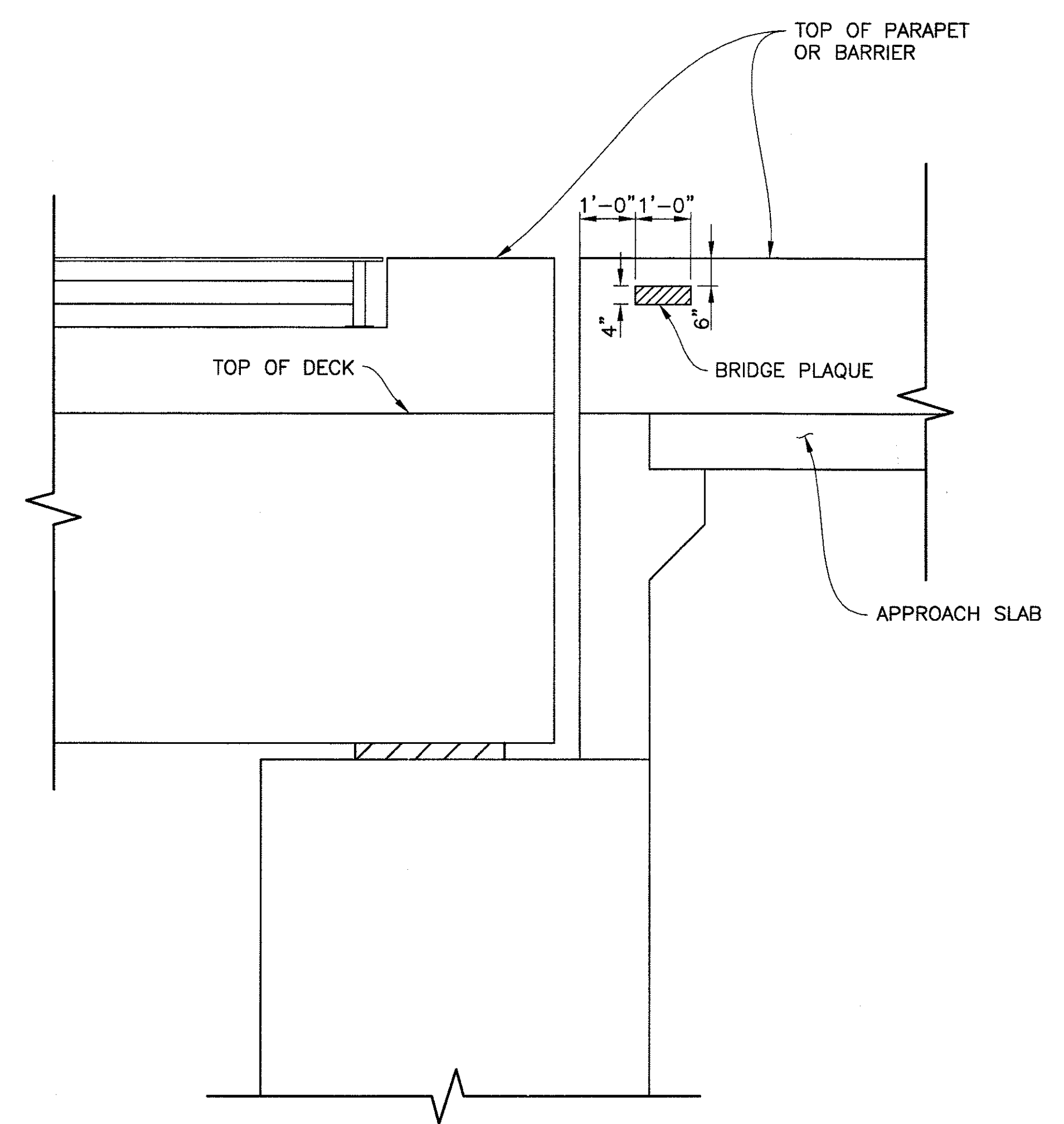


BRIDGE PLAQUE DETAIL
SCALE: 3" = 1'-0"

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

DECK PLACING NOTES

- NUMBERS ① & ② INDICATE PLACING SEQUENCE OF DECK CONCRETE. POUR ② SECTION A MINIMUM OF 12 HOURS AFTER ADJACENT ① SECTIONS HAVE BEEN PLACED.
- INTERMEDIATE DIAPHRAGMS AND ABUTMENT DIAPHRAGMS MAY BE PLACED PRIOR TO OR CONCURRENT WITH THE DECK PLACEMENT.
- PIER DIAPHRAGM SHALL BE POURED CONCURRENT WITH THE DECK PLACEMENT.
- SECTIONS ① & ② MAY BE PLACED CONSECUTIVELY BUT ONLY IN THE DIRECTION FROM ① TO ② AND A MINIMUM OF 12 HOURS AFTER THE ADJACENT ① SECTIONS HAVE BEEN PLACED.
- THE CONTRACTOR SHALL SUBMIT A DECK PLACEMENT SCHEDULE TO THE ENGINEER FOR APPROVAL PRIOR TO PLACING CONCRETE.
- EXPANSION JOINT CLOSURE SHALL NOT BE PLACED UNTIL ADJACENT SECTIONS ARE COMPLETED.



BRIDGE PLAQUE LOCATION ELEVATION
SCALE: 1/2" = 1'-0"

NOTES:

- FOR LOCATION OF PLAQUES, SEE DWG NO. S-3.19.
- THE BRASS PLATE USED FOR THE PLAQUE SHALL CONFORM TO ASTM B121.
- THE FONT USED FOR THE PLAQUE SHALL BE ARIAL.
- INSTALL PLAQUE PRIOR TO POURING CONCRETE, FLUSH WITH THE FINISHED FRONT FACE OF BARRIER.
- THE COST OF THE PLAQUES SHALL BE INCIDENTAL THO THE CONCRETE BARRIER ITEMS.

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MISCELLANEOUS DETAILS 2

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

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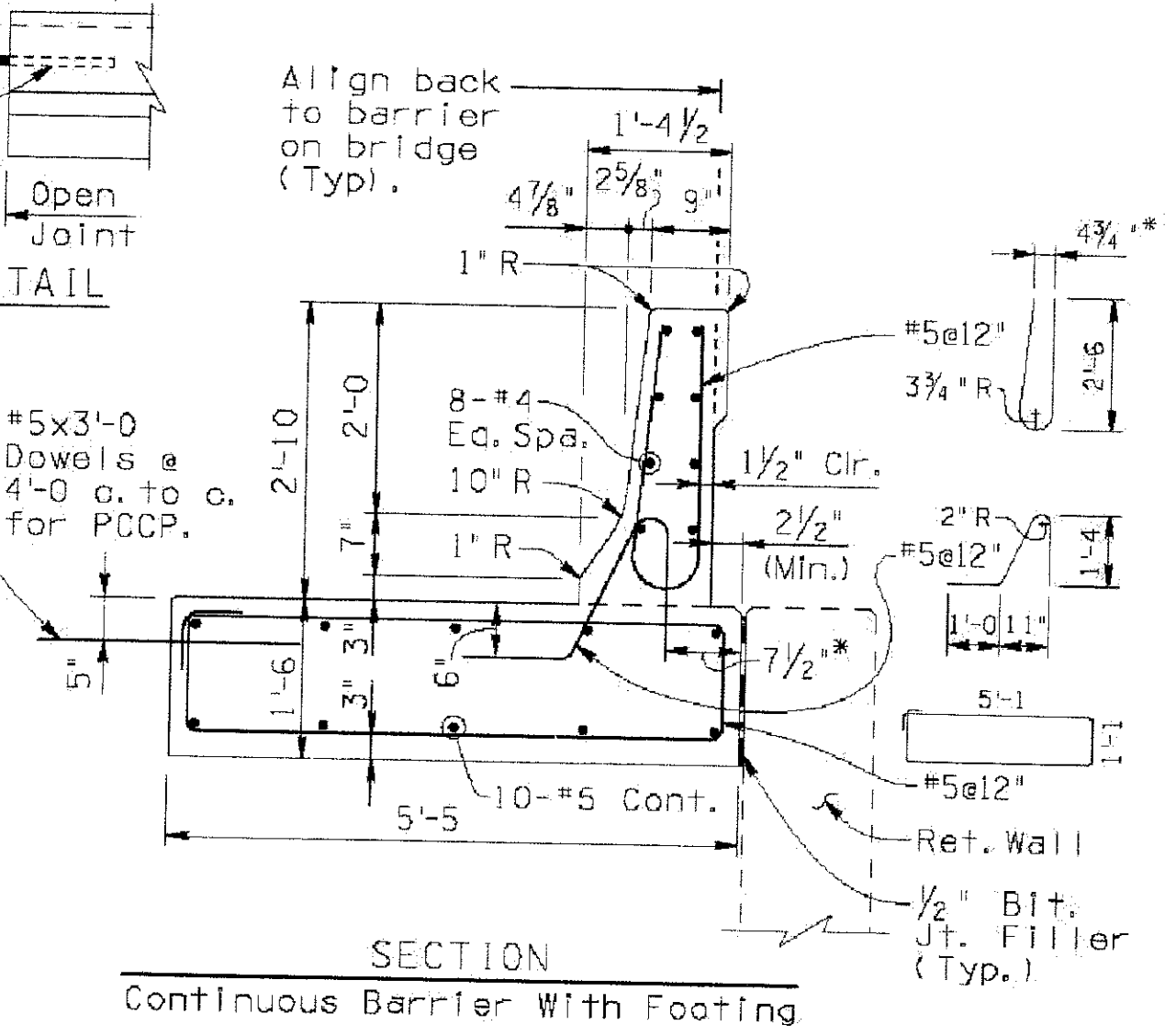
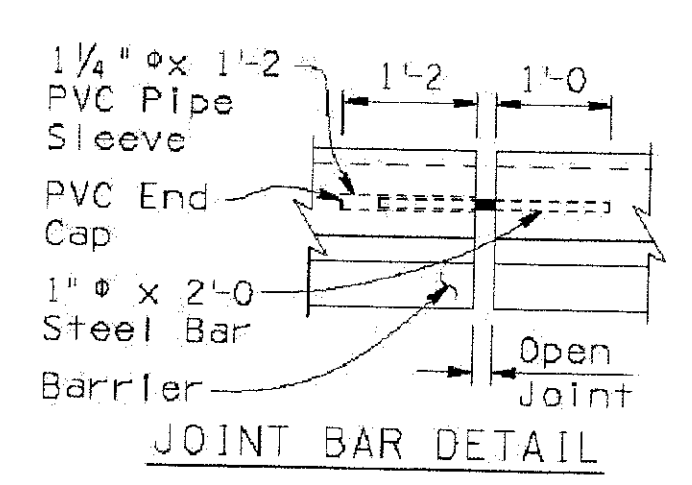
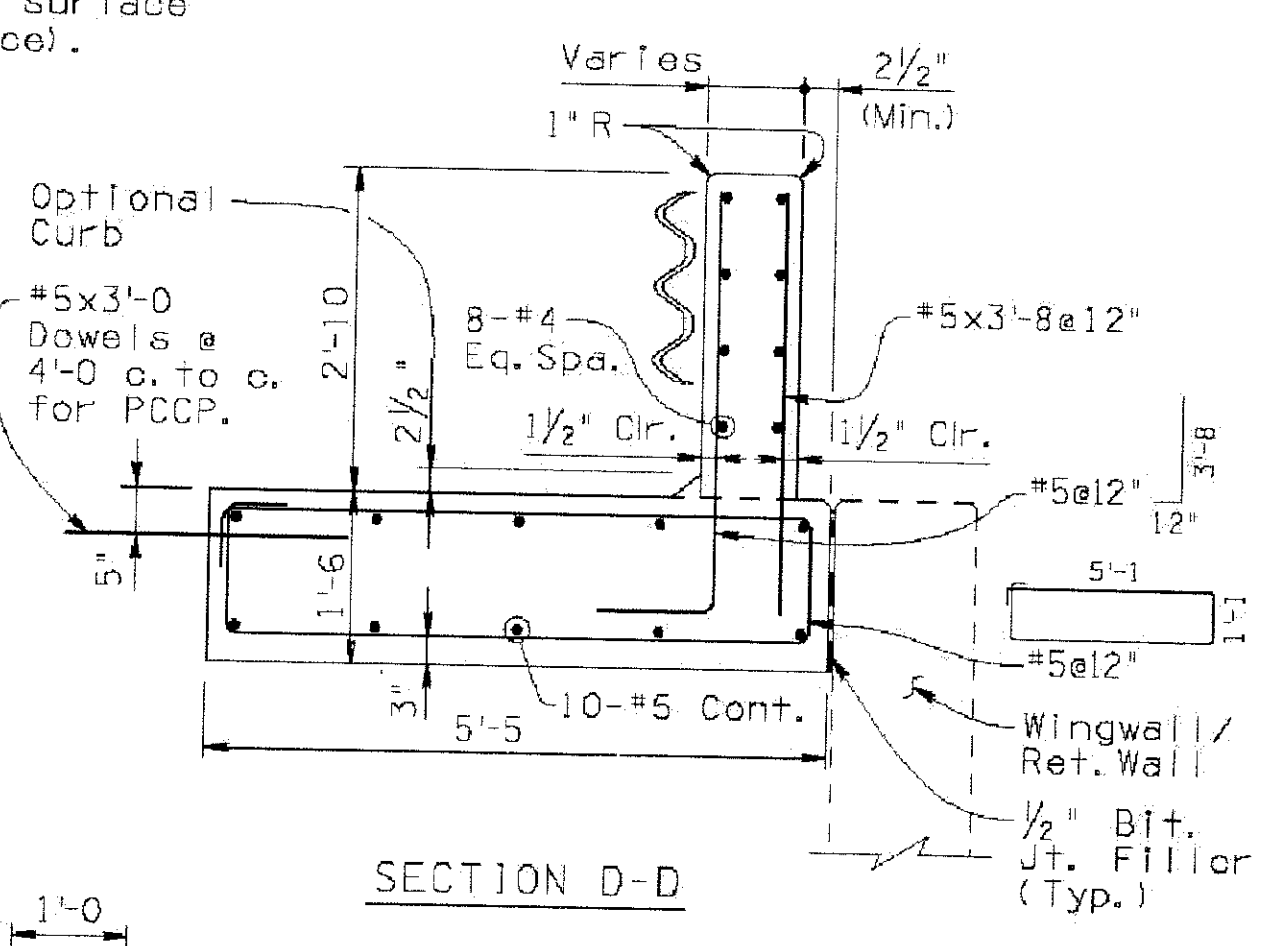
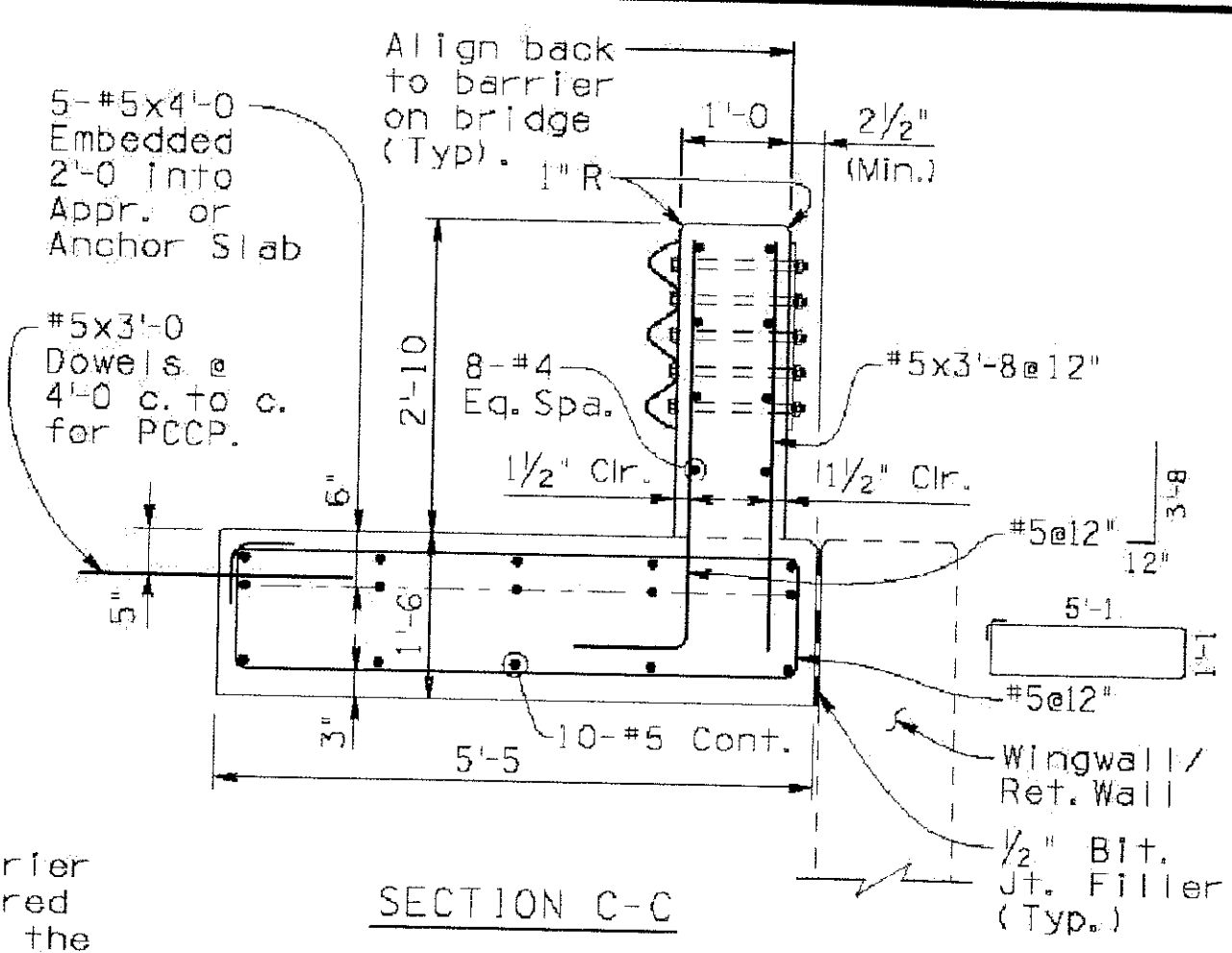
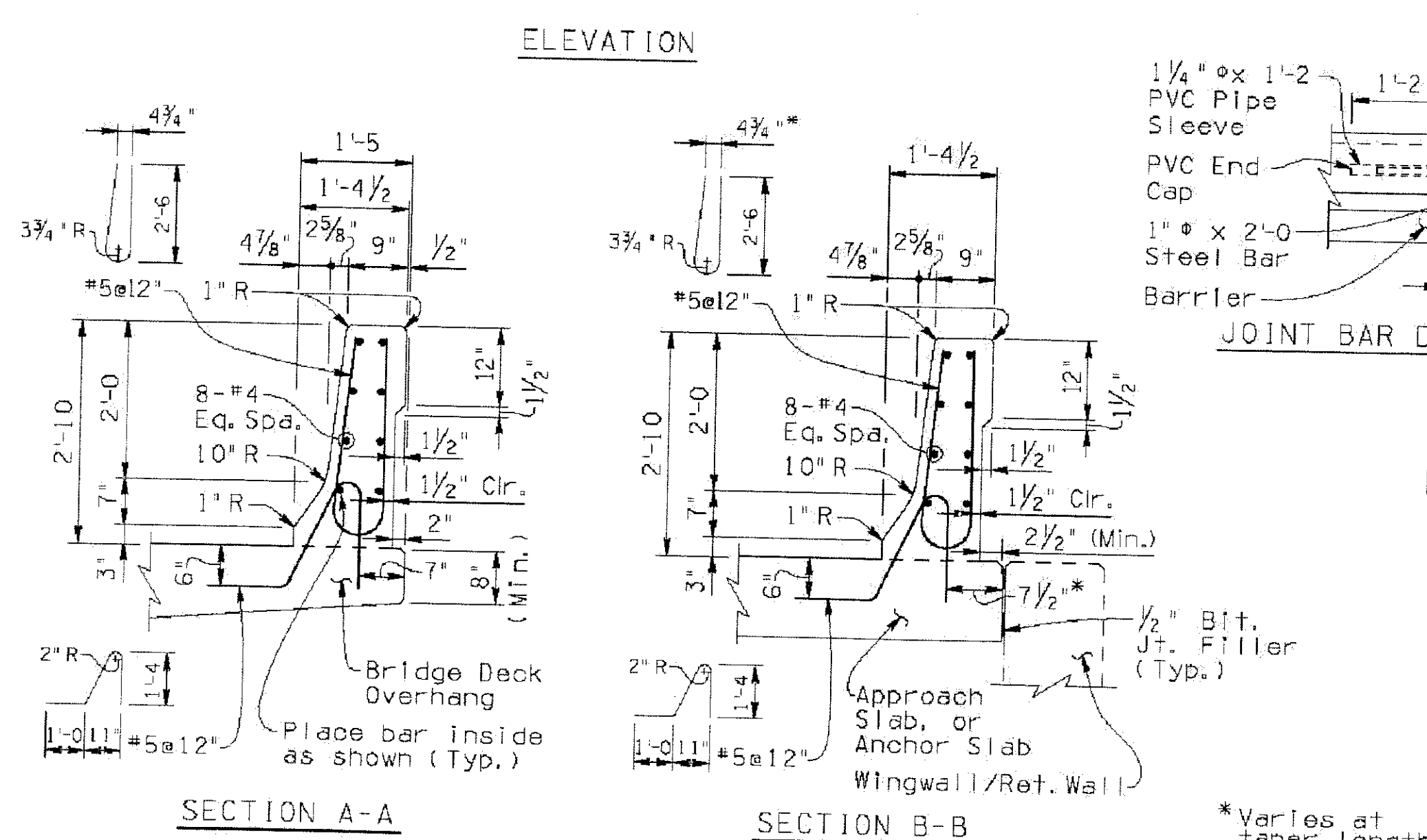
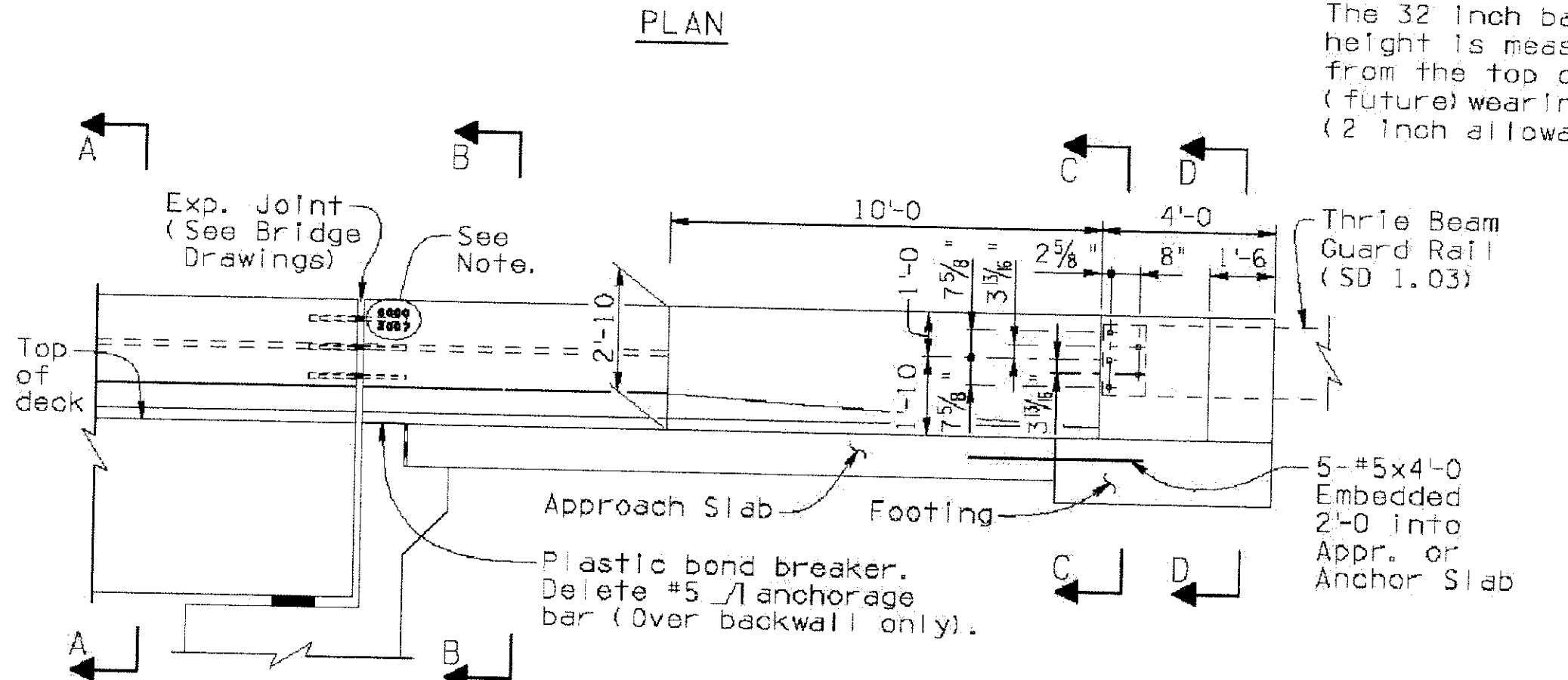
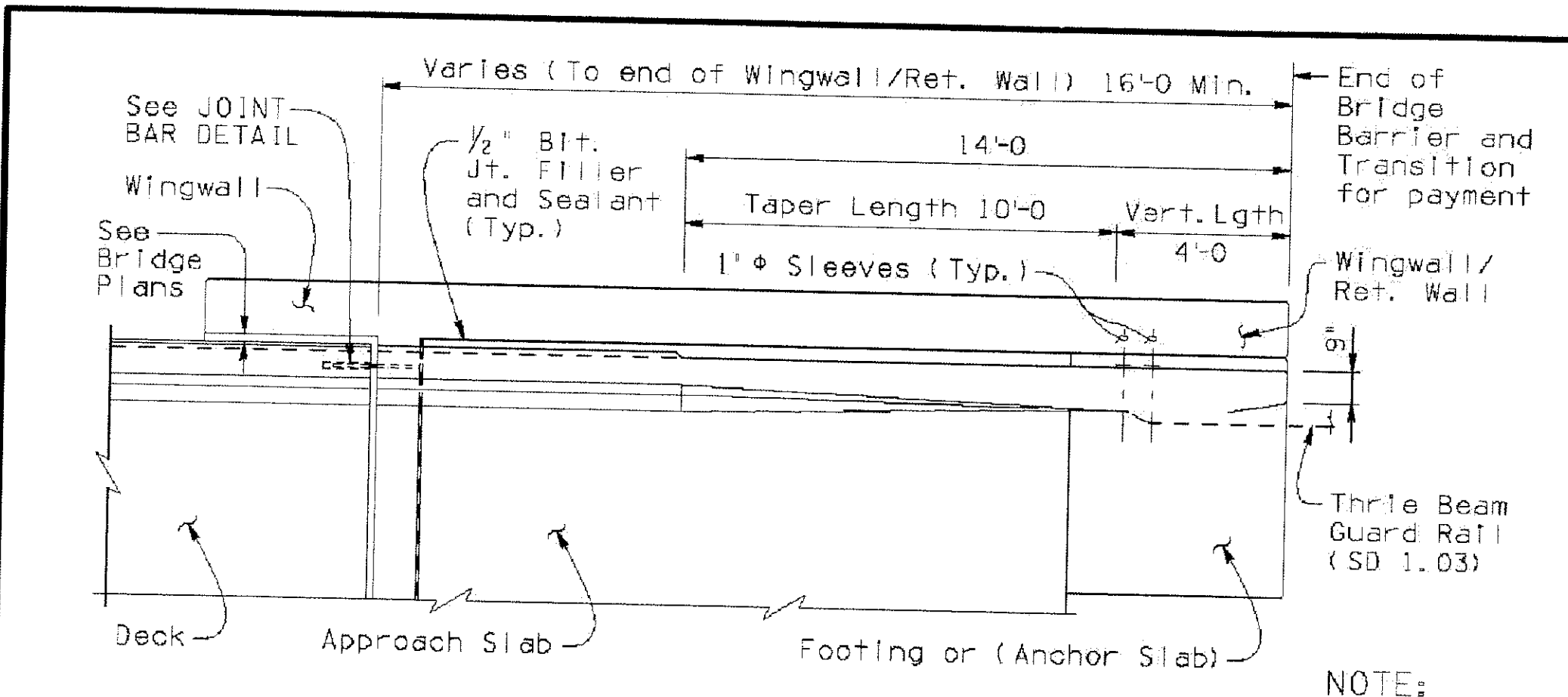
DR: JRR	DES: BAG	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	239	352
DWG NO: S-3.35				

REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
NO.				
REVISION BY CITY OF PHOENIX	DESCRIPTION	REV BY	CHK BY	DATE
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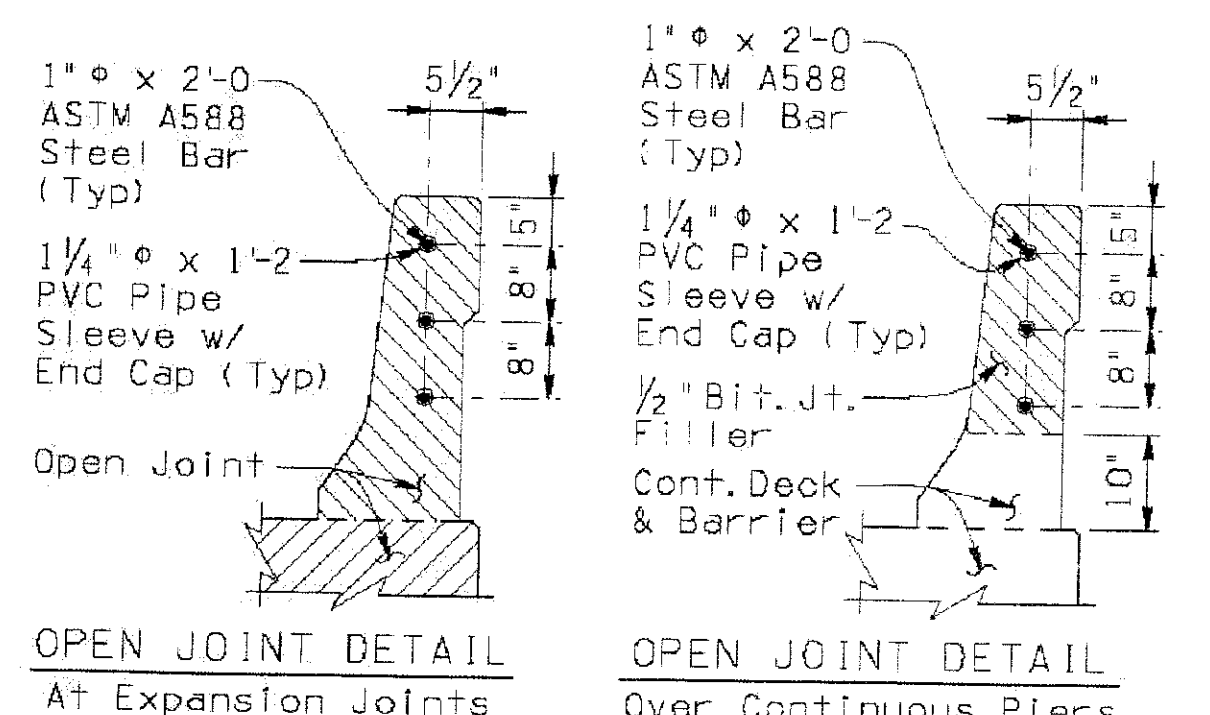
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	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST85100293	241	352
PREMIER ENGINEERING CORPORATION 6437 W. CHANDLER BLVD., SUITE 1 CHANDLER, AZ 85226; 480-829-6000 DES: RMD DR: JRR CK: SEO DATE: 12/09 CONSULTING ENGINEER					

NO.	DESCRIPTION	REV BY	CHK BY	DATE



GENERAL NOTES:
 Construction Specification - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.
 Design Specifications - AASHTO LRFD Bridge Design Specifications, 4th Edition 2007.
 This barrier has been successfully crash tested and is structurally evaluated as meeting the requirements of NCHRP Report 350 Test Level 4.
 All Concrete shall be Class 'S' (f'c = 4000 psi).
 Reinforcing steel shall conform to ASTM Specification A615. All reinforcing shall be furnished as Grade 60. All reinforcing shall be epoxy coated at locations above EL. 4000 ft.
 All bends and hooks shall meet the requirements of AASHTO LRFD Article 5.10. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.
 All reinforcing steel shall have 2 inch clear cover unless noted otherwise.
 Concrete barriers on continuous superstructures shall have 1/2" bituminous joint filler in open joints over piers. See bridge drawings for details.
 Embed 1/2", Bridge Number and Year Built, using 1 1/2" x 2" number impressions in concrete, located as shown at the approach end of the outside lane.
 Anchorage bars are included in the pay item for barrier (Item No. 6011130).
 Omit bridge barrier transition when concrete barrier is continuous beyond bridge.
 Dimensions shall not be scaled from drawings.
 Item No. 6011130 F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (32")
 Measure: Linear Foot



DESIGNED BY SHEFIK H. HASAN APPROVED FOR DISTRIBUTION JUAN A. NEHOME ROUTE PROJECT NO. PA NO. DRAWING NO. SD 1.01 LOCATION SHEET NO. OF	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION BRIDGE GROUP STRUCTURE DETAIL F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (32") NOMINAL
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F-SHAPED BRIDGE CONCRETE BARRIER AND TRANSITION (32") NOMINAL

CITY OF PHOENIX, ARIZONA
 STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
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DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	241	352
DWG NO: S-3.37			PD	

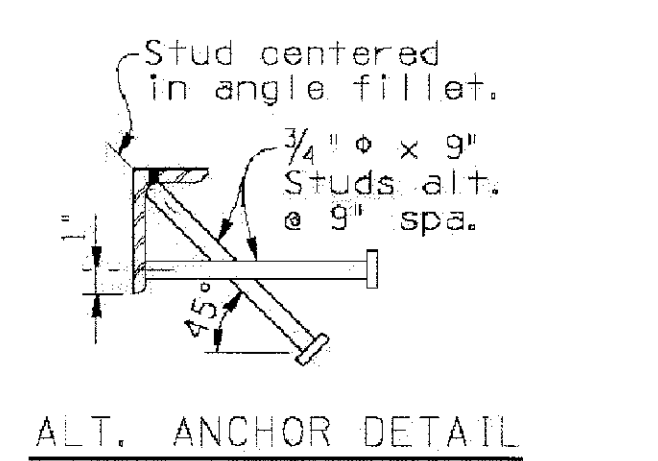
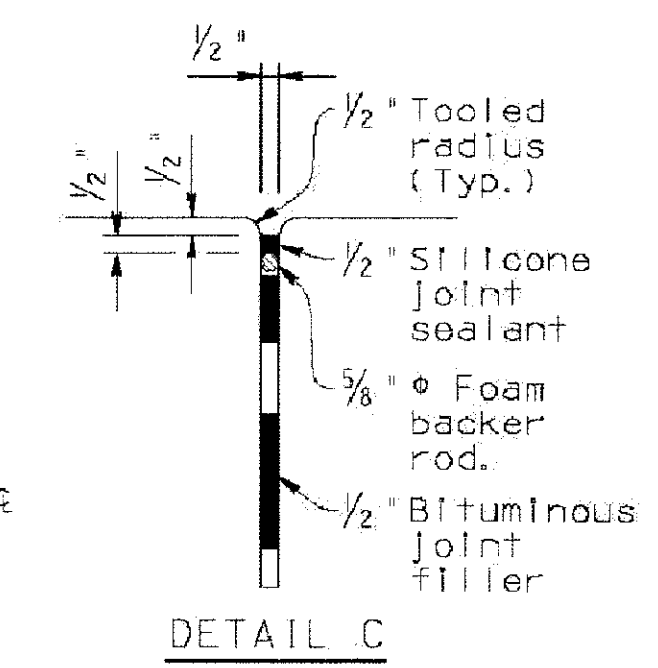
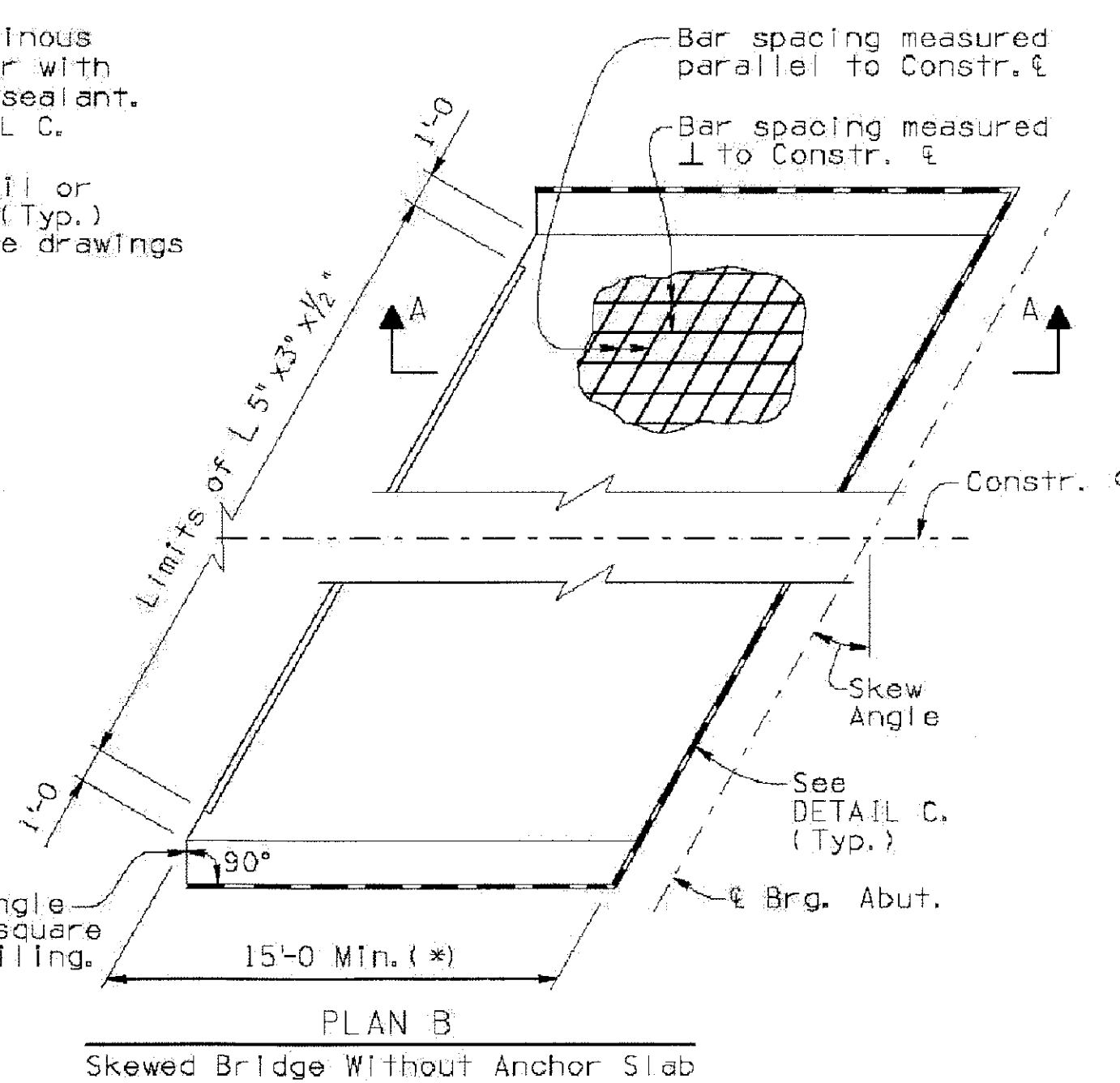
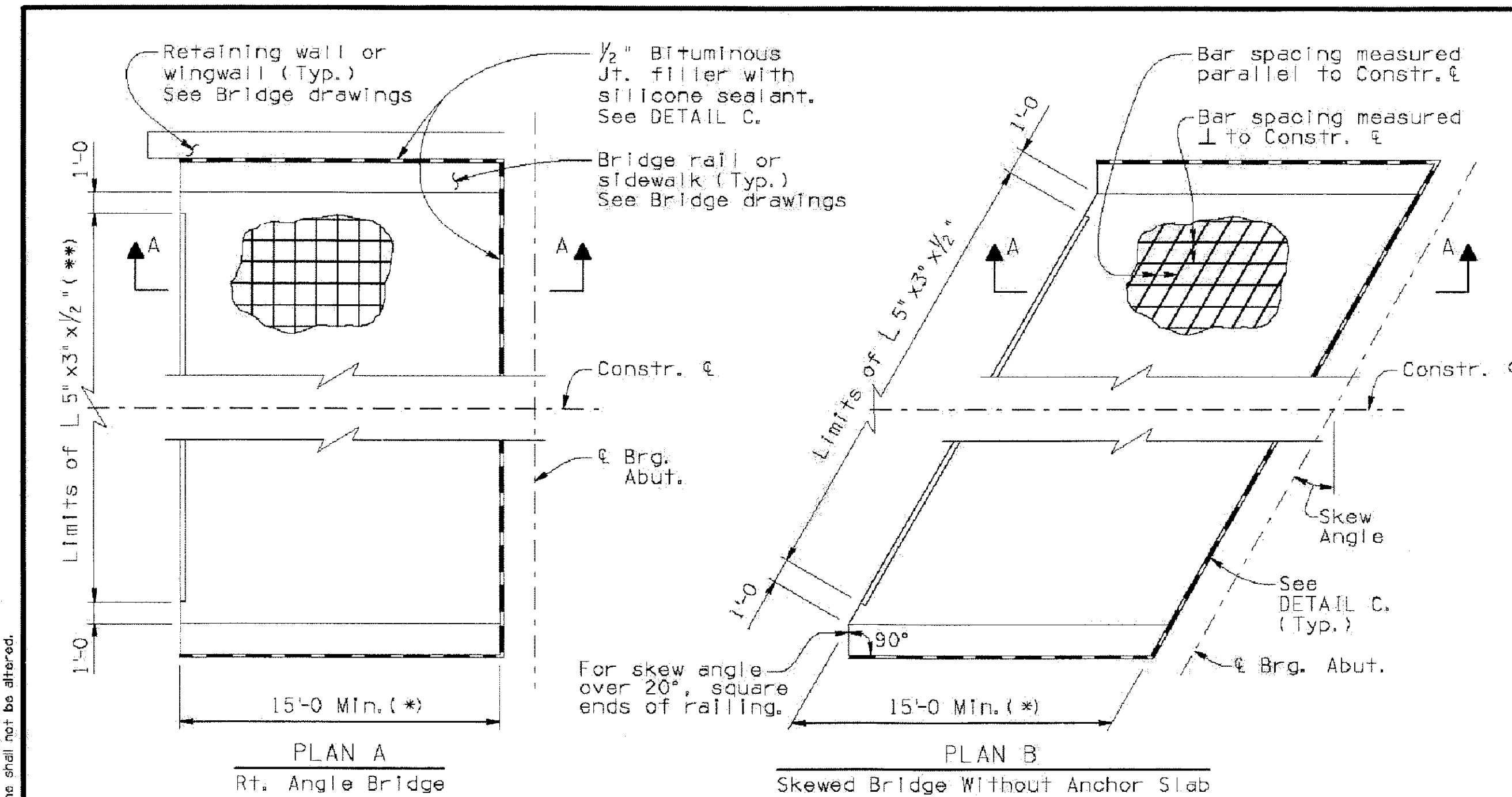
Two working days before you dig,
 CALL FOR THE BLUE STAKES
(602) 263-1100
 Blue Stake Center

Note to Designer:
 The information presented in this Standard Detail has been prepared in accordance with recognized engineering principles and is for general use. It should not be used for any specific project without the professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the linear border line shall not be altered.

REV.	DATE	DESCRIPTION OF REVISIONS

REVISION BY CITY OF PHOENIX		NO.	DATE	DESCRIPTION
REVISION BY CITY OF PHOENIX		NO.	DATE	DESCRIPTION
REVISION BY CITY OF PHOENIX		NO.	DATE	DESCRIPTION
REVISION BY CITY OF PHOENIX		NO.	DATE	DESCRIPTION

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GENERAL NOTES:

Construction Specification - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, latest Edition.

Design Specifications - AASHTO LRFD Bridge Design Specifications, 4th Edition 2007.

All concrete shall be Class 'S' ($f'_c = 4000$ psi).

Reinforcing steel shall conform to ASTM Specification A615. All reinforcing shall be furnished as Grade 60. All reinforcing shall be epoxy coated at locations above EL. 4000 ft.

All bands and hooks shall meet the requirements of AASHTO Article 5.10. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover unless noted otherwise.

Structural steel shall conform to ASTM specification A588 Grade 50 or A709 Grade 50W.

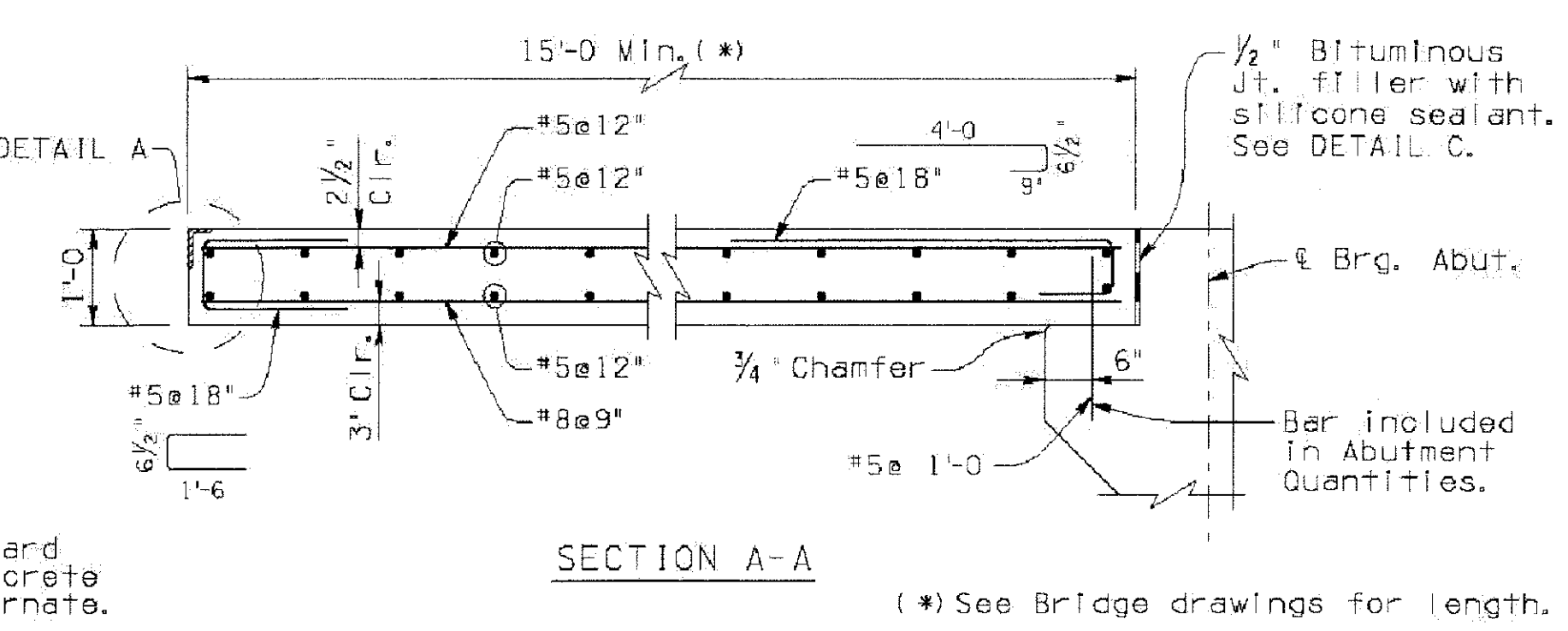
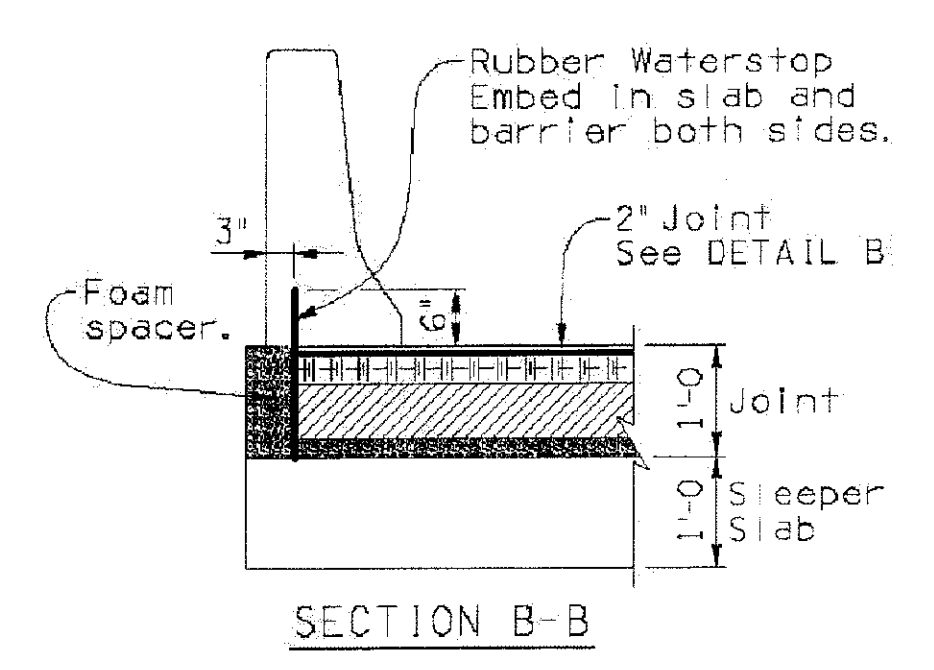
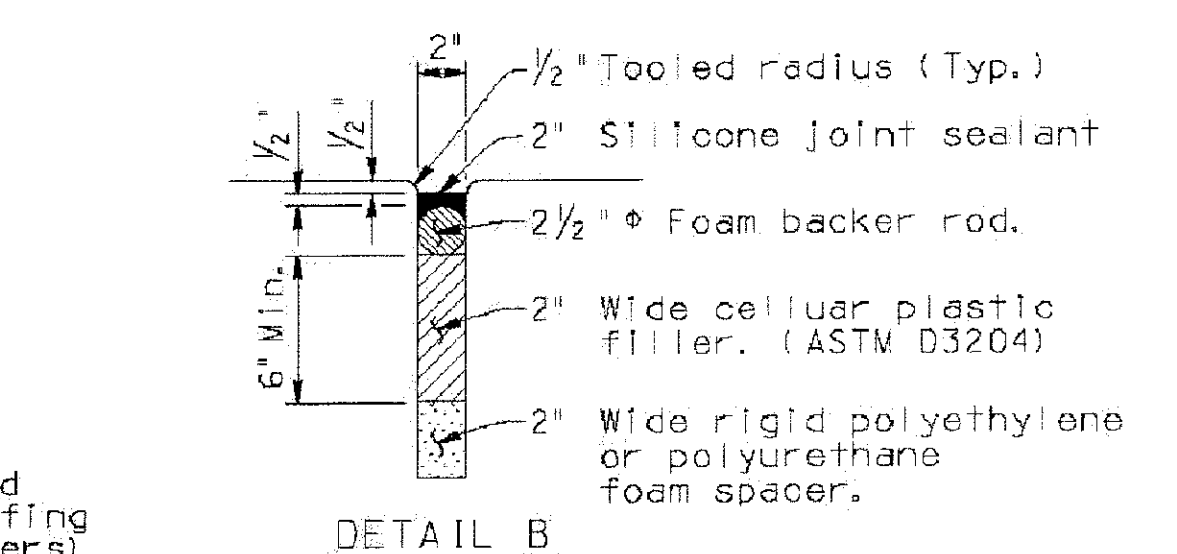
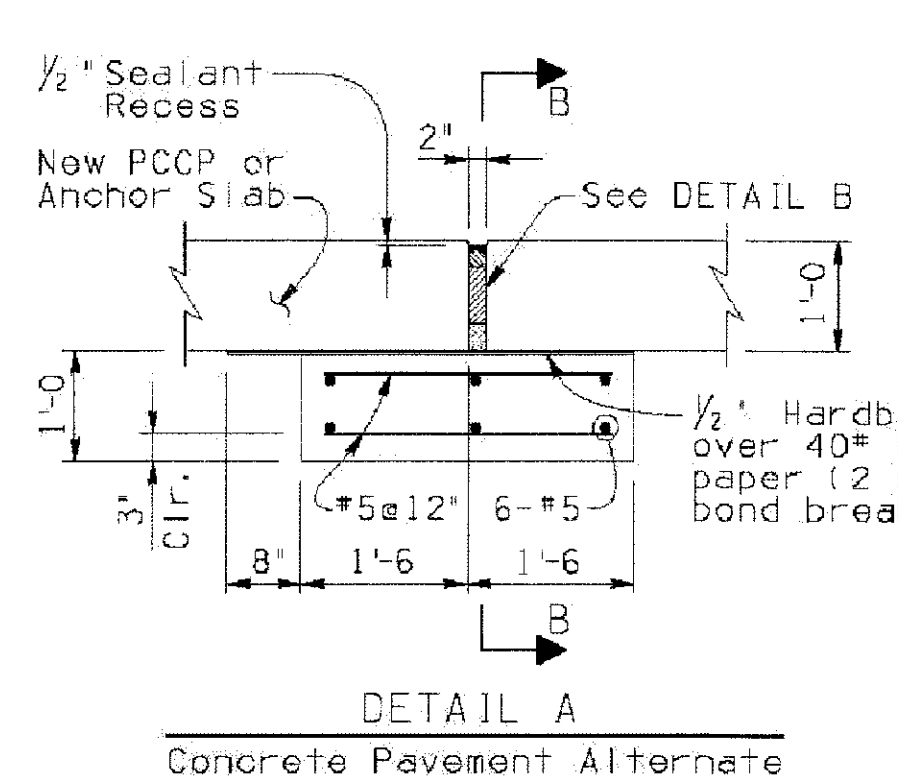
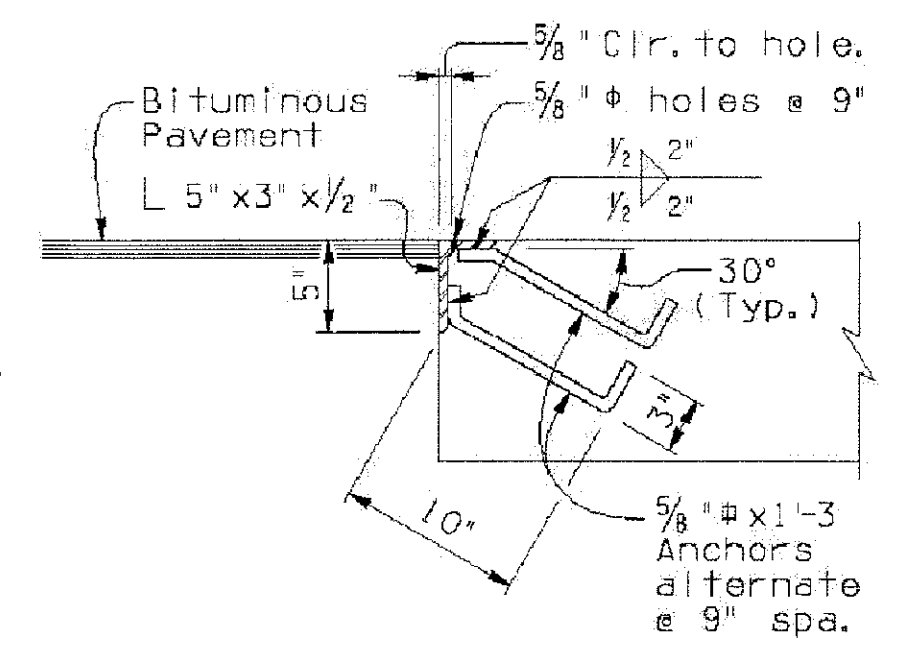
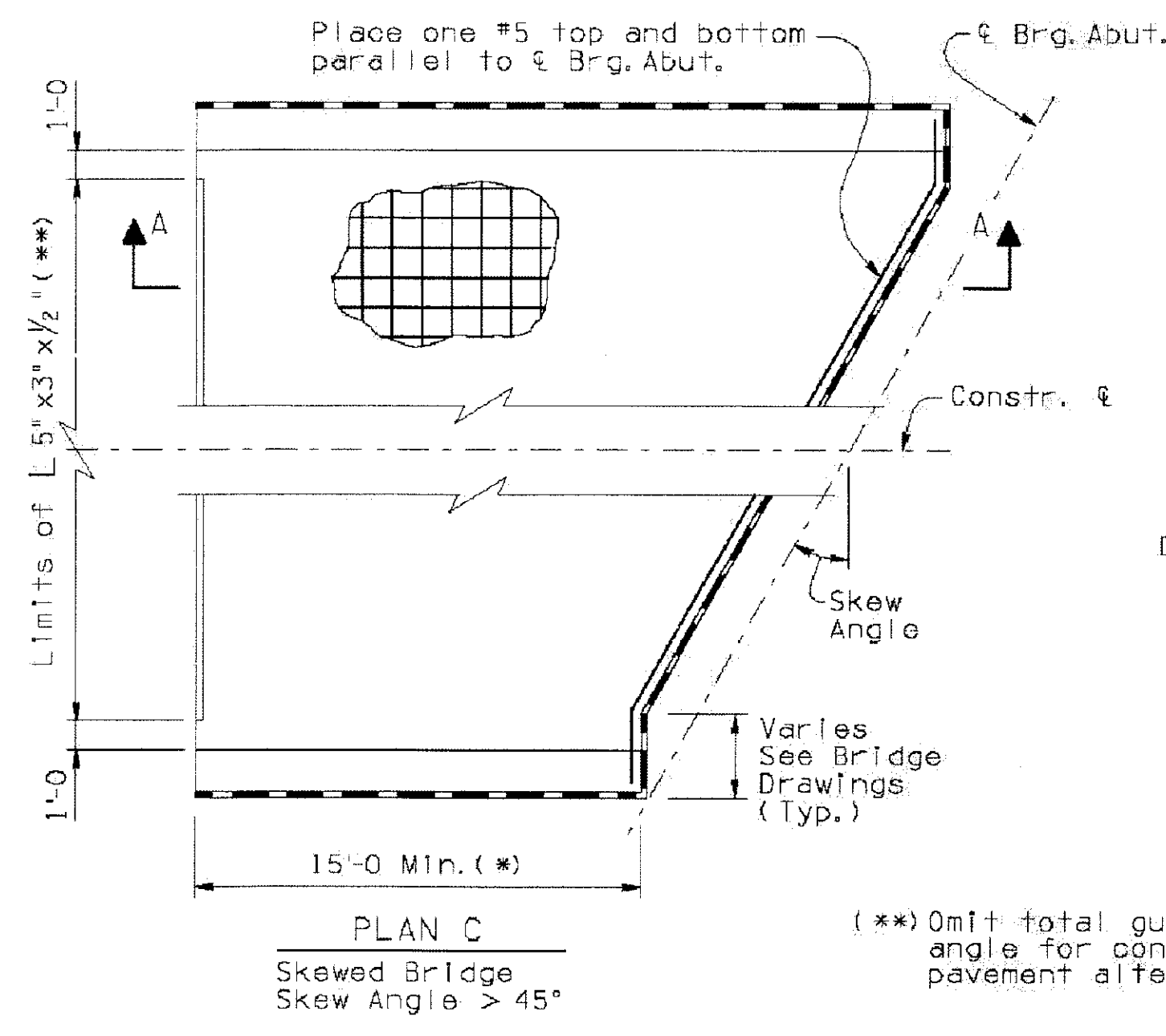
All welding shall conform to the requirements of the American Welding Society, ANSI/AASHTO/AWS D1.5 Bridge Welding Code, latest Edition.

Dimensions shall not be scaled from drawings.

Item No. 6011371 APPROACH SLAB
Measure: Square Foot

JOINT NOTE:

1/2" Silicone joint sealant shall be ASTM D5893 Type NS. 2" Silicone joint sealant shall be rapid-cure, self leveling, two-part silicone rubber sealant designed for expansion joints. Prime coat concrete sides of joint. Do not prime coat the backer rod. Backer rod shall be closed cell polyethylene foam.



DESIGN APPROVES <i>Shafiq H. Hossain</i>	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION BRIDGE GROUP STRUCTURE DETAIL
APPROVED FOR DISTRIBUTION <i>Tam A. Nabine</i>	APPROACH SLAB DETAILS
PROJECT NO.	DATE: 12/09
LOCATION:	DATE: 12/09
PROJECT NO.	DATE: 12/09
PROJECT NO.	DATE: 12/09

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APPROACH SLAB DETAILS

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293

DR: JRR	DES: RMD	CK: SEO	SHEET NO:	TOTAL SHEETS
DATE: 12/09	DATE: 12/09	DATE: 12/09	242	352

DWG NO: S-3.38

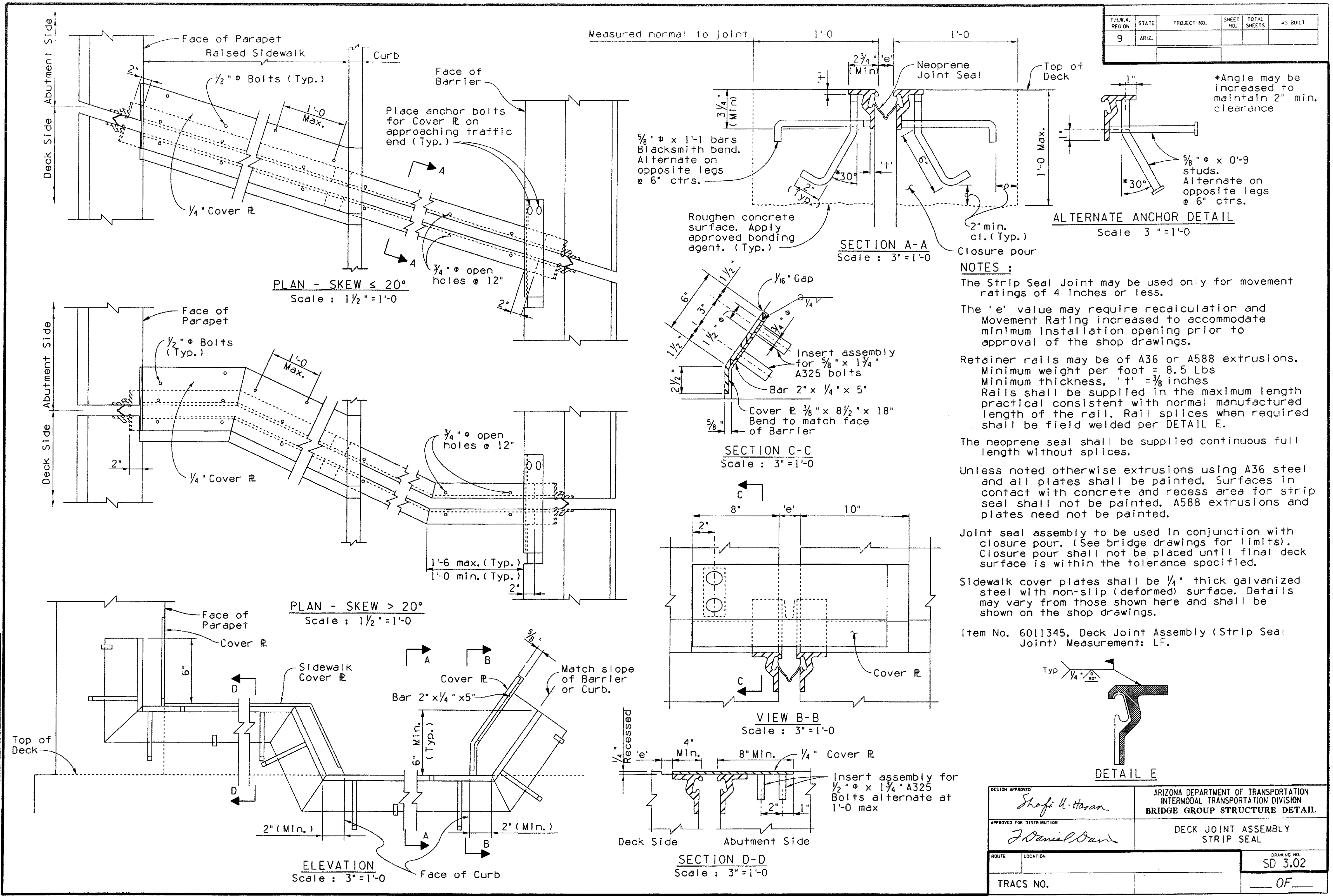
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Note to Designer: All details in this Standard Detail have been prepared in accordance with recognized engineering practices and standards for general use. It should not be used for design of critical components without the professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the inner border line shall not be altered.

NO.	DESCRIPTION OF REVISIONS	REV BY	CHK BY	DATE



DESIGN APPROVED <i>Shafi H. Hasan</i>	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION BRIDGE GROUP STRUCTURE DETAIL
APPROVED FOR DISTRIBUTION <i>J. Daniel Davis</i>	DECK JOINT ASSEMBLY STRIP SEAL
ROUTE	LOCATION
TRACS NO.	DRAWING NO. SD 3.02
	OF

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**DECK JOINT ASSEMBLY
STRIP SEAL**

**CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT**

**SONORAN BOULEVARD
CAVE CREEK PRIMARY
ST85100293**

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