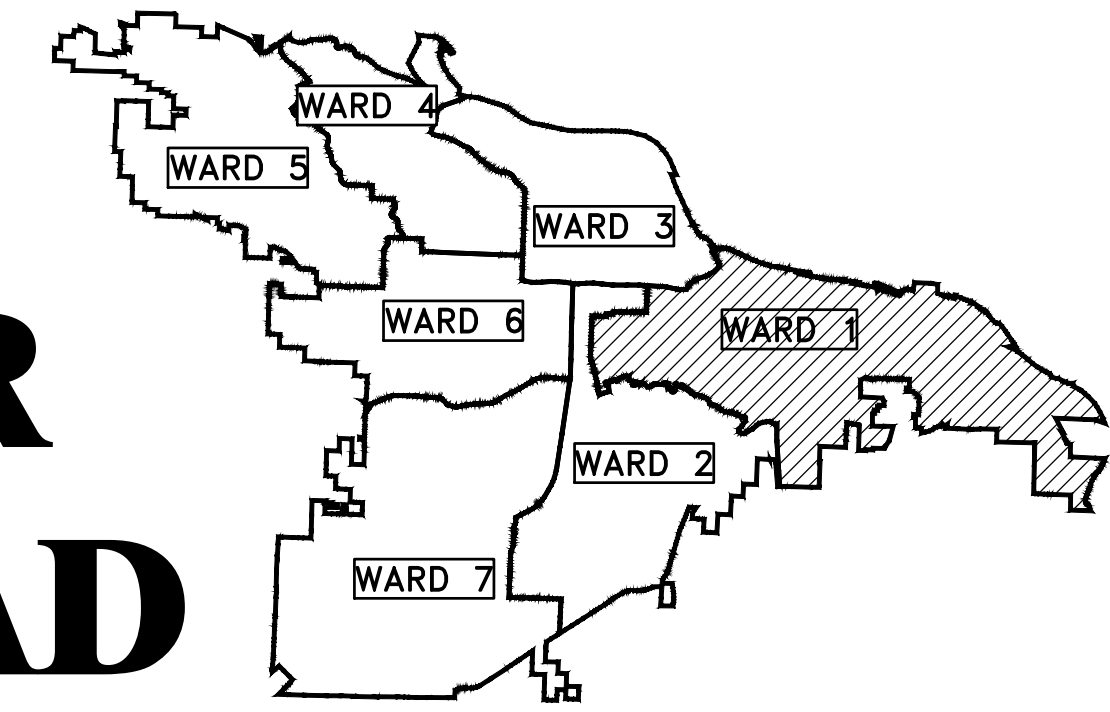
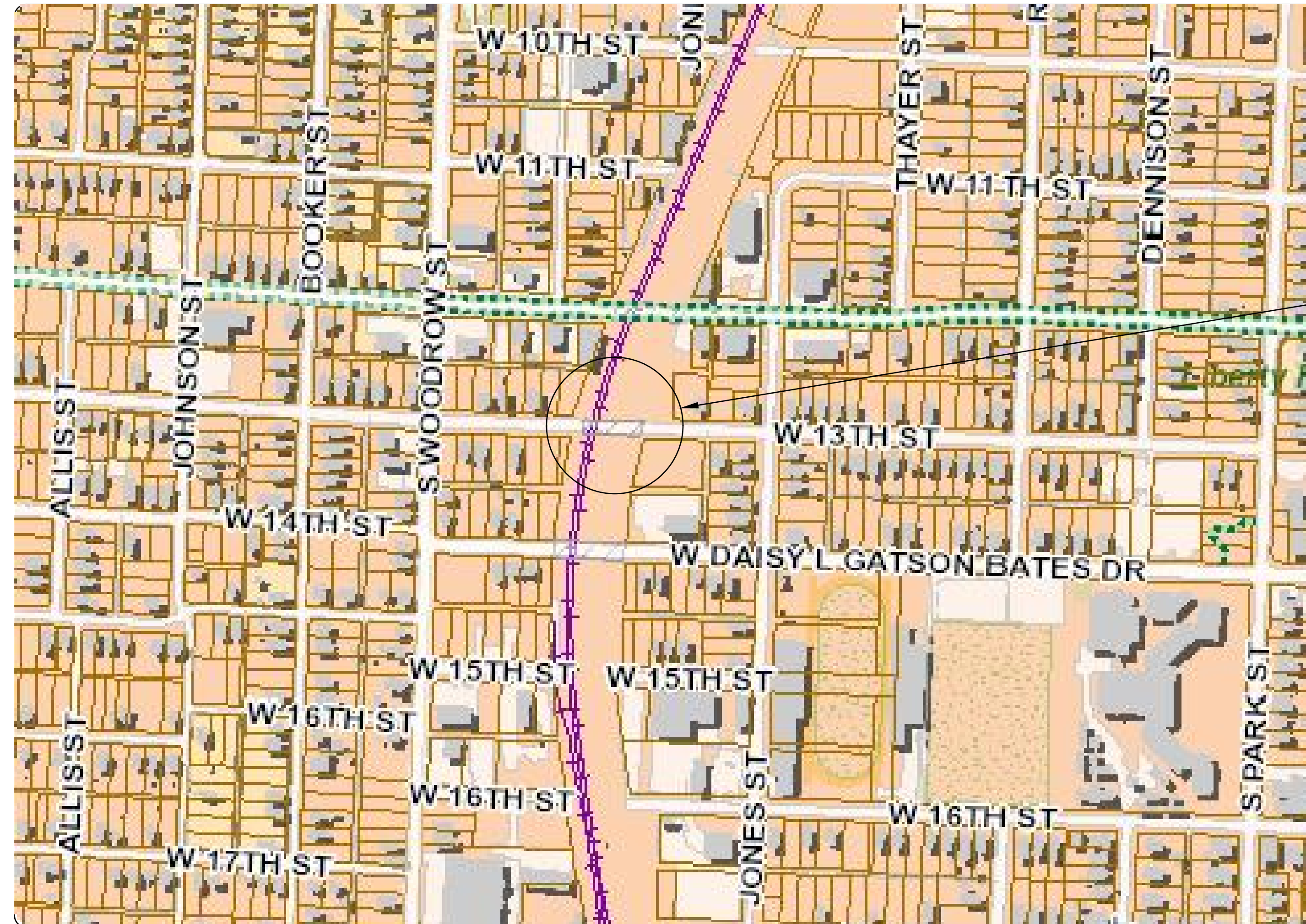


# CLR PROJECT #1-17-ST-56B 13TH STREET BRIDGE REPAIR OVER UNION PACIFIC RAILROAD LITTLE ROCK, AR



PROJECT LOCATION - WARD 1

SHEET NO.	TITLE
S1	COVER SHEET
S2	QUANTITIES & GENERAL NOTES
S3	BRIDGE LAYOUT
S4	BORING LOGS
S5	BORING LOGS
S6	TYPICAL SECTIONS
S7	REINFORCED CONCRETE SLAB DETAILS
S8	REINFORCED CONCRETE SLAB DETAILS
S9	REINFORCED CONCRETE SLAB DETAILS
S10	EXPANSION JOINT DETAILS
S11	APPROACH GUTTER DETAILS
S12	END BENT 1 DETAILS
S13	MISCELLANEOUS DETAILS
S14	MAINTENANCE OF TRAFFIC

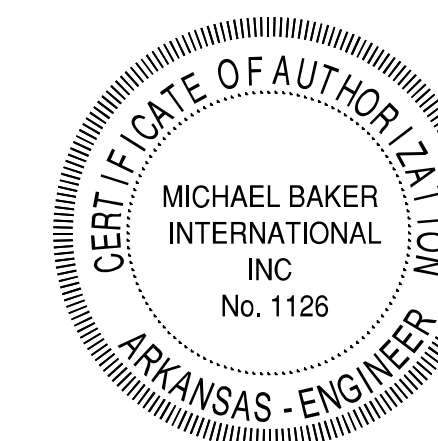


PROJECT LOCATION



**2019-2021  
BOND PROGRAM**

DEPARTMENT OF PUBLIC WORKS  
CIVIL ENGINEERING  
701 WEST MARKHAM STREET  
LITTLE ROCK, ARKANSAS 72201



Know what's below.  
Call before you dig.

**Michael Baker**  
**INTERNATIONAL**  
1400 W. MARKHAM ST., SUITE 204  
LITTLE ROCK, AR 72201  
501-907-6223

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS  
13TH. ST. BRIDGE REPAIR  
COVER SHEET

DEPARTMENT OF PUBLIC WORKS  
CIVIL ENGINEERING  
701 W. MARKHAM  
LITTLE ROCK, ARKANSAS 72201



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SCR  
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SCR  
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SFH  
DATE  
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N.T.S.  
PROJECT NO.  
CLR #1-17-ST-56B  
SHEET NO.  
S1

**GENERAL NOTES**

**CONSTRUCTION SPECIFICATIONS:**

CITY OF LITTLE ROCK CONTRACT CONDITIONS AND SPECIFICATIONS (NOVEMBER 2015)

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2014 EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS NOTED OTHERWISE IN THE PLANS, SECTION AND SUBSECTION NUMBERS REFER TO THE CONSTRUCTION SPECIFICATIONS.

**DESIGN SPECIFICATIONS: (FOR NEW WORK)**

STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (17TH EDITION - 2002)  
LIVE LOADING: HS20

**MATERIALS AND STRENGTHS:**

CLASS S(AE) CONCRETE  $f'c = 4,000$  PSI  
REINFORCING STEEL (AASHTO M31 OR M322, TYPE A, GR. 60)  $fy = 60,000$  PSI  
STRUCTURAL STEEL (AASHTO M270, GR. 50)  $Fy = 50,000$  PSI

**SHOP DRAWINGS & REQUEST FOR SUBSTITUTIONS:**

ALL SHOP DRAWINGS, MILL TEST REPORTS, AND REQUEST FOR SUBSTITUTIONS SHALL BE SENT TO THE SEALING ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

**CONCRETE:**

CONCRETE SHALL BE POURED IN THE DRY AND ALL EXPOSED CORNERS TO BE CHAMFERED  $\frac{3}{4}$ " UNLESS OTHERWISE NOTED. ALL CONCRETE SHALL BE CLASS S(AE) WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH  $f'c = 4,000$  PSI.

THE CONCRETE BETWEEN CURBS SHALL BE GIVEN A TINED FINISH IN ACCORDANCE WITH SUBSECTION 802.19 FOR CLASS 5 TINED BRIDGE ROADWAY SURFACE FINISH. SIDEWALKS AND CURBS SHALL BE GIVEN A CLASS 6 BROOMED FINISH.

**REINFORCING STEEL:**

ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M31 OR M322, TYPE A GR. 60 AND SHALL BE EPOXY COATED. MILL TEST REPORTS SHALL BE SUBMITTED FOR REINFORCING STEEL. THE REINFORCING STEEL IS TO BE ACCURATELY LOCATED IN THE FORMS AND FIRMLY HELD IN PLACE BY STEEL WIRE SUPPORTS, SUFFICIENT IN NUMBER AND SIZE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION. THE WIRE SUPPORTS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM "EPOXY COATED REINFORCING STEEL (GRADE 60)." ANY DAMAGE TO EPOXY COATING DURING FABRICATION, SHIPPING, INSTALLATION, FIELD CUTTING OR BENDING SHALL BE REPAIRED IN ACCORDANCE WITH SUBSECTION 804.05.

**STRUCTURAL STEEL:**

ALL STRUCTURAL STEEL SHALL BE AASHTO M270, GRADE 50 AND SHALL BE PAID FOR AS "STRUCTURAL STEEL IN BEAM SPANS (M270, GR. 50)" UNLESS OTHERWISE NOTED.

DRAWINGS SHOW GENERAL FEATURES OF DESIGN ONLY. SHOP DRAWINGS SHALL BE MADE IN ACCORDANCE WITH THE SPECIFICATIONS, SUBMITTED AND APPROVAL SECURED BEFORE FABRICATION IS BEGUN.

REQUESTS FOR SUBSTITUTION OF STRUCTURAL STEEL WITH SHAPES OF GREATER SIZE MUST BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL. STEEL OF EQUAL OR GREATER STRENGTHS WILL BE ACCEPTED ONLY WHEN SHOWN ON THE APPROVED SHOP DRAWINGS. PAYMENT WILL BE BASED ON THE SHAPES SHOWN IN THE PLANS, AND NO ADDITIONAL COMPENSATION WILL BE MADE FOR ANY ADJUSTMENTS DUE TO SUBSTITUTIONS.

ALL WELDING THAT IS TO BE DONE DURING FABRICATION OF STRUCTURAL STEEL, INCLUDING TEMPORARY WELDS, SHALL BE DETAILED ON THE SHOP DRAWINGS AND SUBMITTED FOR APPROVAL. IF ADDITIONAL WELDS ARE REQUIRED, WHETHER PERMANENT OR TEMPORARY, A FORMAL REQUEST WITH DETAILED DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

THERE ARE NO EXISTING BRIDGE PLANS AVAILABLE. ALL DIMENSIONS AND DATA USED FOR NEW DETAILS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION TO ENSURE COMPATIBILITY OF NEW WORK WITH THE EXISTING STRUCTURE.

**SILICONE JOINT SEALANT:**

THE NEW SILICONE JOINT SEALANT SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH SUBSECTIONS 809.02(c) AND 809.03(c).

**MODIFICATION OF EXISTING BRIDGE STRUCTURES:**

THE COST OF ALL LABOR, MATERIALS, AND INCIDENTALS TO MODIFY EXISTING EXPANSION JOINTS AT ABUTMENT NO. 1 SHALL BE INCLUDED IN ITEM "MODIFICATION OF EXISTING BRIDGE STRUCTURES (BRIDGE NO.1)". THIS INCLUDES SAW CUTTING, REMOVING PORTION OF EXISTING CONCRETE AT ABUTMENT BACKWALLS AND END OF SPAN NO. 1 FOR JOINTS AT BRIDGE END, AND CLEANING EXISTING REINFORCING TO REMAIN. ALL WORK SHALL BE IN ACCORDANCE WITH SECTION 821.

**EXISTING UTILITIES:**

THERE IS A POSSIBILITY THAT UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION. AN ATTEMPT HAS BEEN MADE TO LOCATE THESE UTILITIES ON THE PLANS. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THE PLANS, AND THE LOCATION OF THE UTILITIES MAY VARY FROM THE APPROXIMATE LOCATION SHOWN ON THE PLANS. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE UTILITIES INVOLVED AND MAKE ARRANGEMENTS FOR THE LOCATION OF THE UTILITY ON THE GROUND. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY.

ARKANSAS STATE LAW, THE UNDERGROUND FACILITIES DAMAGE PREVENTION ACT, REQUIRES TWO WORKING DAYS ADVANCE NOTIFICATION THROUGH THE ARKANSAS ONE-CALL SYSTEM CENTER BEFORE EXCAVATING USING MECHANIZED EQUIPMENT OR EXPLOSIVES (EXCEPT IN THE CASE OF AN EMERGENCY). THE ONE-CALL SYSTEM PHONE NUMBER IS 1-800-482-8998. THE CONTRACTOR IS ADVISED THAT THERE IS A SEVERE PENALTY FOR NOT MAKING THIS CALL. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE ARKANSAS ONE-CALL SYSTEM; THEREFORE, THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITIES AS WELL AS THE SYSTEM.

**UNION PACIFIC RAILROAD CONTACT**

DOUGLAS WOODS, MANAGER OF INDUSTRY & PUBLIC PROJECTS  
PHONE: (281) 350-7609 (OFFICE)  
(832) 493-4556 (CELL)  
DGWOODS@UP.COM  
24125 OLD ALDINE WESTFIELD RD.  
SPRING, TX 77373

**RAILROAD NOTES:**

THE CONTRACTOR SHALL NOT OCCUPY ANY PORTION OF THE RAILROAD CLEARANCE ENVELOPE.

ALL BRIDGE REPAIR OPERATIONS SHALL BE COORDINATED WITH THE CITY OF LITTLE ROCK AND UNION PACIFIC RAILROAD AND APPROVAL SECURED PRIOR TO BEGINNING WORK.

THE CONTRACTOR SHALL USE RAILROAD FLAGMEN DURING ALL BRIDGE REPAIR OPERATIONS, AS WELL AS ANYTIME THE CONTRACTOR IS WORKING ON OR ABOVE THE RAILROAD RIGHT-OF-WAY.

WORK WITHIN 25' OF TRACK AND/OR OVER TRACK AND/OR WITH POTENTIAL TO FOUL WILL REQUIRE RAILROAD FLAGGING.

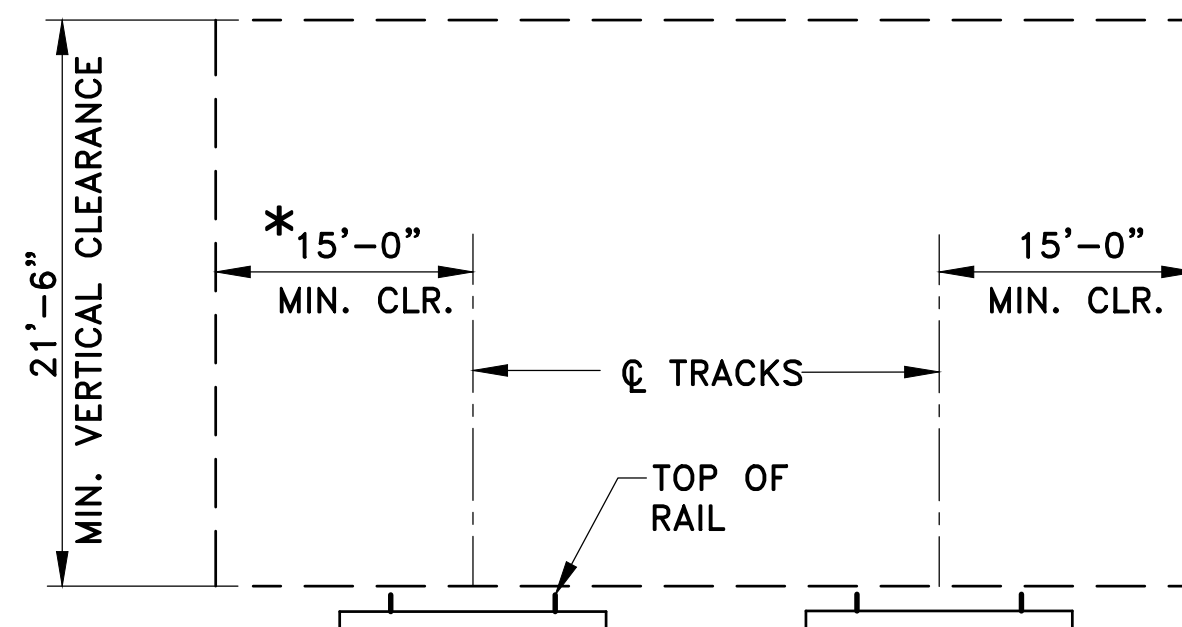
ALL EQUIPMENT, MATERIALS, AND PERSONNEL SHALL REMAIN OUTSIDE THE MINIMUM CLEARANCE ENVELOPE.

PER RAILROAD REQUIREMENTS, ALL PERSONNEL MUST CLEAR THE AREA WITHIN 25' OF THE TRACK CENTERLINE AND SECURE ALL EQUIPMENT WHEN A TRAIN PASSES THE WORK SITE.

NO EQUIPMENT OR OUTRIGGERS SHALL BE SUPPORTED ON THE TRACK OR TIES UNDER LOAD AT ANY TIME.

RYAN WRIGHT, PUBLIC PROJECT MANAGER, BENESCH & CO., SHALL BE CONTACTED FOR PRE-CONSTRUCTION MEETING.  
rwright@benesch.com, DIRECT: 312-819-9766, MOBILE: 479-222-5279

CLR PROJECT #1-17-ST-56B			
13th ST. BRIDGE REPAIR			
SEPTEMBER 2021			
ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY
2.01	SITE PREPARATION	L.S.	1
2.02	CLEARING TREES	ACRE	0.10
1.01	AGGREGATE BASE COURSE	TON	20
5.01	TACK COAT	GAL.	30
6.01	ACHM SURFACE COURSE	TON	70
8.01	CONCRETE CURB AND GUTTER (UPRIGHT, MATCH EXISTING)	L.F.	25
9.04	CONCRETE SIDEWALK (4" THICK)	S.F.	610
24.18	DISTURBED AREA STABILIZATION - SEED & MULCH	ACRE	0
27.10	COLD MILLING ASPHALT PAVEMENT	S.Y.	420
601	MOBILIZATION	L.S.	1
603	MAINTENANCE OF TRAFFIC	L.S.	1
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	C.Y.	390
802	CLASS S(AE) CONCRETE - BRIDGE	C.Y.	106
803	CLASS 1 PROTECTIVE SURFACE TREATMENT	GAL.	4
804	EPOXY COATED REINFORCING STEEL (GRADE 60)	LB.	16,500
807	STRUCTURAL STEEL IN BEAM SPANS (M270, GRADE 50)	LB.	770
809	SILICONE JOINT SEALANT	L.F.	44
821	MODIFICATION OF EXISTING BRIDGE STRUCTURE	L.S.	1
SP	INSURANCE, CONSTRUCTION AND FLAGGING ON RAILROAD PROPERTY	L.S.	1



RAILROAD CLEARANCE DIAGRAM  
(DIMENSIONS ARE PERPENDICULAR TO TRACK)

\*HORIZONTAL CLEARANCE TO THE WEST MAY BE CONTROLLED BY AVAILABLE DISTANCE TO BENT 1 FOOTING. CONTRACTOR SHALL FIELD VERIFY EXISTING HORIZONTAL CLEARANCE TO EXISTING BENT 1 FOOTING.

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS  
13TH ST. BRIDGE REPAIR  
QUANTITIES AND GENERAL NOTES

DEPARTMENT OF PUBLIC WORKS  
CIVIL ENGINEERING  
701 W. MARKHAM  
LITTLE ROCK, ARKANSAS 72201

STEPHEN F. HARRIS  
LICENSED PROFESSIONAL ENGINEER  
No. 14501  
9/28/2021

DRAWN BY  
SCR  
DESIGNED  
SCR  
CHECKED  
SFH  
DATE  
12/2020  
SCALE  
NONE  
PROJECT NO.  
CLR #1-17-ST-56B  
SHEET NO.  
S2

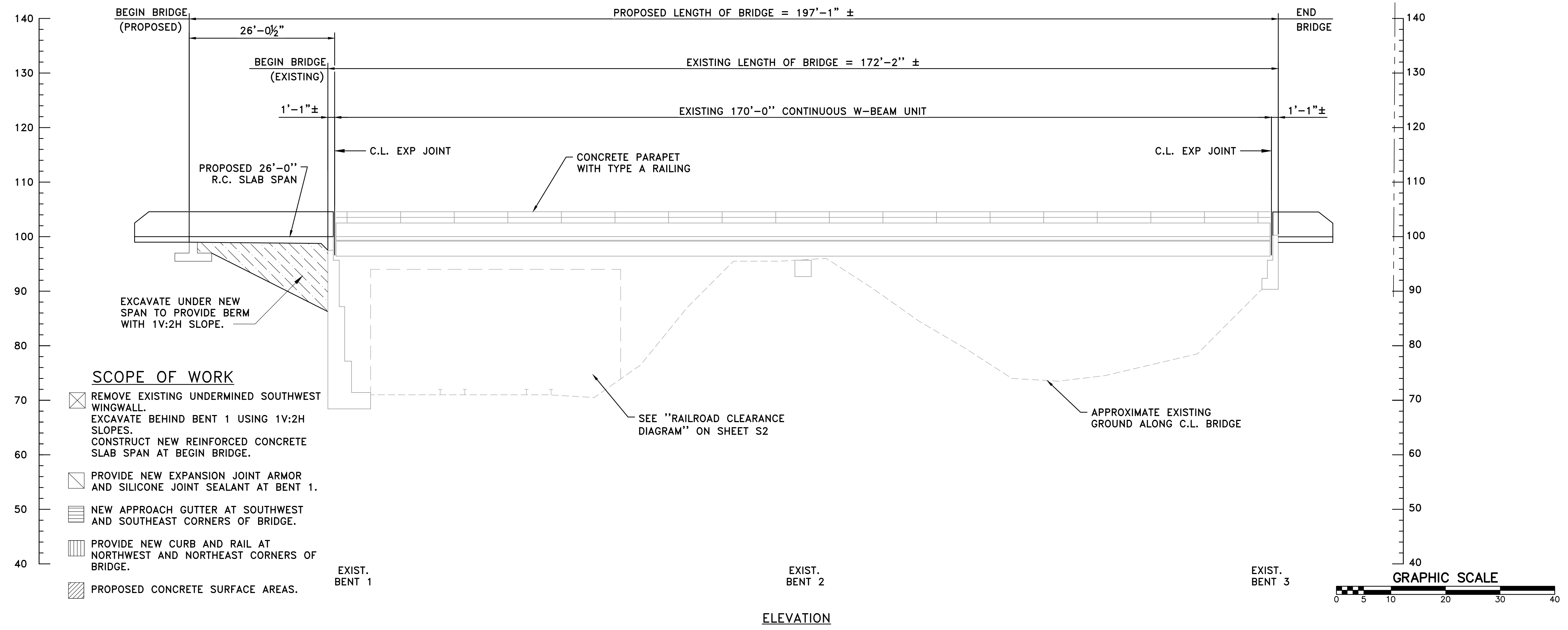
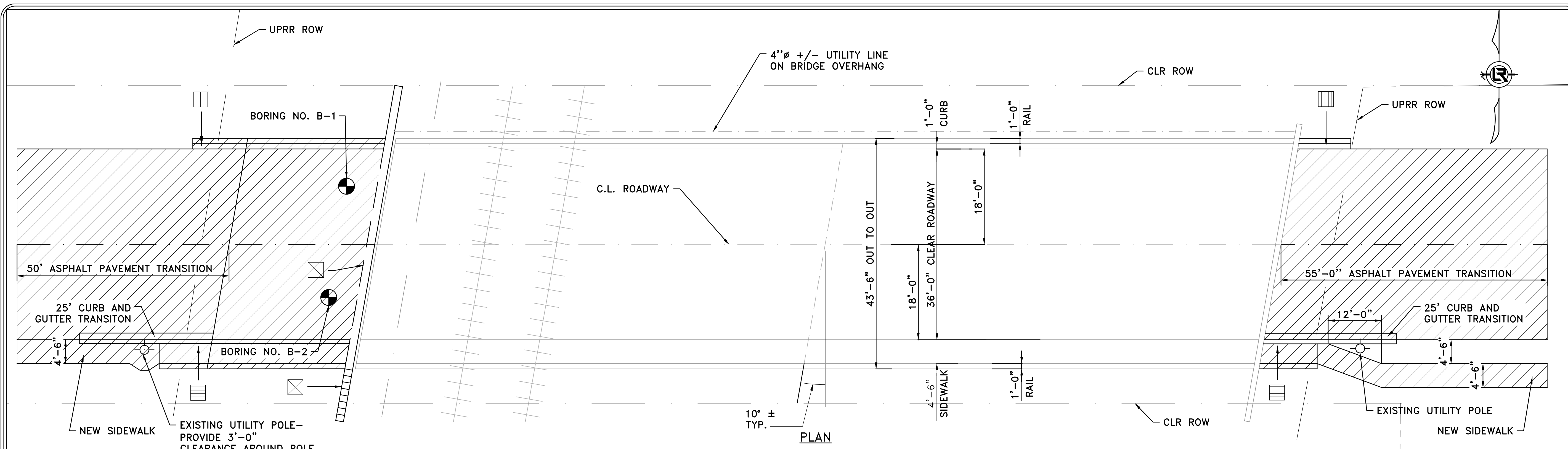
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS  
 13TH ST. BRIDGE REPAIR  
 BRIDGE LAYOUT

DEPARTMENT OF PUBLIC WORKS  
 CIVIL ENGINEERING  
 701 W. MARKHAM  
 LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS  
 LICENSED PROFESSIONAL ENGINEER  
 No. 14501  
 STEPHEN F. HARPER  
 9/28/2021

DRAWN BY  
 KDH  
 DESIGNED  
 SCR  
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 SFH  
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 SCALE  
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 PROJECT NO.  
 CLR #1-17-ST-56B  
 SHEET NO.  
 S3



- SCOPE OF WORK**
- ☒ REMOVE EXISTING UNDERMINED SOUTHWEST WINGWALL. EXCAVATE BEHIND BENT 1 USING 1V:2H SLOPES. CONSTRUCT NEW REINFORCED CONCRETE SLAB SPAN AT BEGIN BRIDGE.
  - ▨ PROVIDE NEW EXPANSION JOINT ARMOR AND SILICONE JOINT SEALANT AT BENT 1.
  - ▨ NEW APPROACH GUTTER AT SOUTHWEST AND SOUTHEAST CORNERS OF BRIDGE.
  - ▨ PROVIDE NEW CURB AND RAIL AT NORTHWEST AND NORTHEAST CORNERS OF BRIDGE.
  - ▨ PROPOSED CONCRETE SURFACE AREAS.

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS  
13TH ST. BRIDGE REPAIR  
BORING LOGS

DEPARTMENT OF PUBLIC WORKS  
CIVIL ENGINEERING  
701 W. MARKHAM  
LITTLE ROCK, ARKANSAS 72201

ARIZONA  
L. J. HARRIS  
LICENSED PROFESSIONAL ENGINEER  
No. 14501  
STEPHEN F. HARRIS  
9/28/2021

DRAWN BY  
KDH  
DESIGNED  
-  
CHECKED  
SFH  
DATE  
12/2020  
SCALE  
N.T.S  
PROJECT NO.  
CLR #1-17-ST-56B  
SHEET NO.  
S4

BORING LOG NO. B-1 <span style="float: right;">Page 1 of 2</span>									
PROJECT: 13th Street Railroad Bridge					CLIENT: Michael Baker International, LLC Little Rock, Arkansas				
SITE: 13th Street Little Rock, Arkansas									
GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	
	See Exploration Plan Latitude: 34.7389° Longitude: -92.3044°							LL-PL-PI	PERCENT FINES
DEPTH 	FILL - CLAYEY SAND (SC), brown and reddish-brown								
	5-3-3 N=6	9							
	3-2-4 N=6	12					38-15-23	44	
	3-3-4 N=7	14							
	3-3-4 N=7	16							
	4-2-4 N=6	21					23-18-5	75	
SILTY CLAY WITH SAND (CL-ML), gray, medium stiff									
CLAYEY SHALE, reddish-brown and gray, soft rock									
HIGHLY WEATHERED SHALE, gray and reddish-brown, soft rock									
HIGHLY WEATHERED SHALE, gray and reddish-brown, soft rock									
HIGHLY WEATHERED SHALE, gray and reddish-brown, soft rock									
Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic									
Advancement Method: 0 to 30 feet: Solid-stem auger			See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).			Notes:			
Abandonment Method: Boring backfilled with Auger Cuttings Surface capped with concrete			See Supporting Information for explanation of symbols and abbreviations.						
WATER LEVEL OBSERVATIONS No free water observed						Boring Started: 03-06-2019		Boring Completed: 03-06-2019	
						Drill Rig: CME 679		Driller: JB	
						Project No.: 35185101			


THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35185101\_13TH STREET RR BR GPJ\_MODEL LAYER GPJ\_3/18/19

BORING LOG NO. B-1 <span style="float: right;">Page 2 of 2</span>									
PROJECT: 13th Street Railroad Bridge					CLIENT: Michael Baker International, LLC Little Rock, Arkansas				
SITE: 13th Street Little Rock, Arkansas									
GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	
	See Exploration Plan Latitude: 34.7389° Longitude: -92.3044°							LL-PL-PI	PERCENT FINES
DEPTH 	HIGHLY WEATHERED SHALE, gray and reddish-brown, soft rock <i>(continued)</i>								
	15-15-16 N=31	30							
Boring Terminated at 30 Feet									
Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic									
Advancement Method: 0 to 30 feet: Solid-stem auger			See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).			Notes:			
Abandonment Method: Boring backfilled with Auger Cuttings Surface capped with concrete			See Supporting Information for explanation of symbols and abbreviations.						
WATER LEVEL OBSERVATIONS No free water observed						Boring Started: 03-06-2019		Boring Completed: 03-06-2019	
						Drill Rig: CME 679		Driller: JB	
						Project No.: 35185101			

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35185101\_13TH STREET RR BR GPJ\_MODEL LAYER GPJ\_3/18/19

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS  
13TH ST. BRIDGE REPAIR  
BORING LOGS

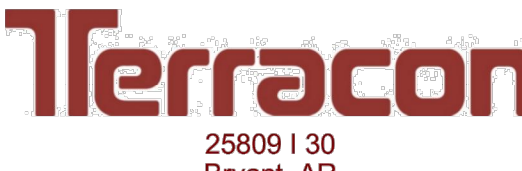
  
 DEPARTMENT OF PUBLIC WORKS  
 CIVIL ENGINEERING  
 701 W. MARKHAM  
 LITTLE ROCK, ARKANSAS 72201

  
 9/28/2021

DRAWN BY  
 KDH  
 DESIGNED  
 -  
 CHECKED  
 SFH  
 DATE  
 12/2020  
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 N.T.S.  
 PROJECT NO.  
 CLR #1-17-ST-56B  
 SHEET NO.  
 S5

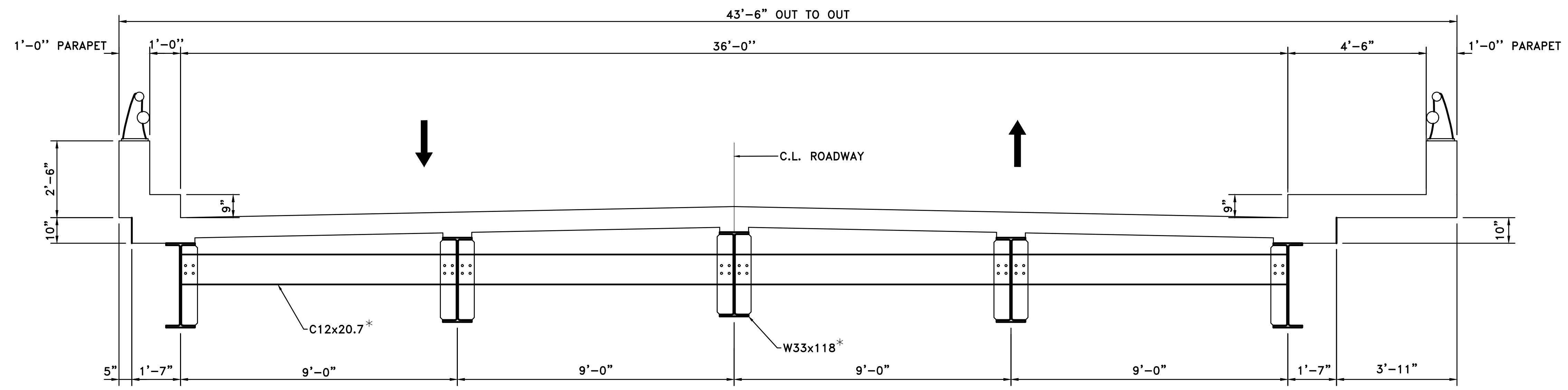
## BORING LOG NO. B-2

Page 1 of 1

<b>PROJECT:</b> 13th Street Railroad Bridge		<b>CLIENT:</b> Michael Baker International, LLC Little Rock, Arkansas							
<b>SITE:</b> 13th Street Little Rock, Arkansas									
GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 34.7389° Longitude: -92.304°	DEPTH (ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	DEPTH	5	X	X	8-7-4 N=11	3			26
FILL - CLAYEY SAND (SC), reddish-brown, gray and brown	5	X	X	3-2-3 N=5	9				
	5	X	X	3-3-4 N=7	16				
	5	X	X	3-3-5 N=8	16		40-13-27		47
	10	X	X	2-2-3 N=5	18				
LEAN CLAY (CL), with rock fragments, brown and gray, hard	13.5	X	X	17-25-14 N=39	11				
	15.0	Boring Terminated at 15 Feet							
Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic									
Advancement Method: 0 to 15 feet: Solid-stem auger		See <a href="#">Exploration and Testing Procedures</a> for a description of field and laboratory procedures used and additional data (if any).			Notes:				
Abandonment Method: Boring backfilled with Auger Cuttings Surface capped with concrete		See <a href="#">Supporting Information</a> for explanation of symbols and abbreviations.							
<b>WATER LEVEL OBSERVATIONS</b> No free water observed		 25809 I 30 Bryant, AR		Boring Started: 03-06-2019		Boring Completed: 03-06-2019			
				Drill Rig: CME 679		Driller: JB			
				Project No.: 35185101					

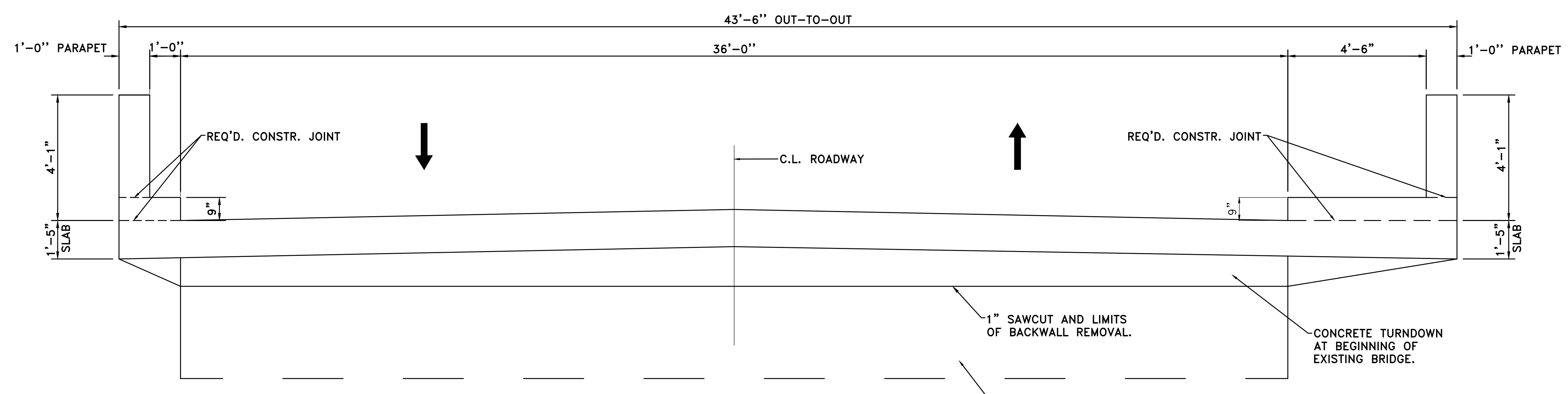
THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_35185101\_13TH STREET RR BR.GPJ\_MODEL.LAYER.GPJ\_3/18/19

REVISIONS	DATE



\*BASED ON FIELD MEASUREMENTS.  
NO ORIGINAL CONSTRUCTION  
PLANS AVAILABLE.

**EXISTING TYPICAL SECTION**  
(LOOKING FORWARD)



**PROPOSED TYPICAL SECTION - R.C. SLAB**  
(LOOKING FORWARD)

CITY OF LITTLE ROCK, ARKANSAS  
13TH. ST. BRIDGE REPAIR  
TYPICAL SECTIONS

DEPARTMENT OF PUBLIC WORKS  
CIVIL ENGINEERING  
701 W. MARKHAM  
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS  
LICENSED PROFESSIONAL ENGINEER  
No. 14501  
STEPHEN F. HARPER  
9/28/2021

<b>DRAWN BY</b> KDH
<b>DESIGNED</b> SCR
<b>CHECKED</b> SFH
<b>DATE</b> 12/2020
<b>SCALE</b> N.T.S.
<b>PROJECT NO.</b> CLR #1-17-ST-56B
<b>SHEET NO.</b> 56

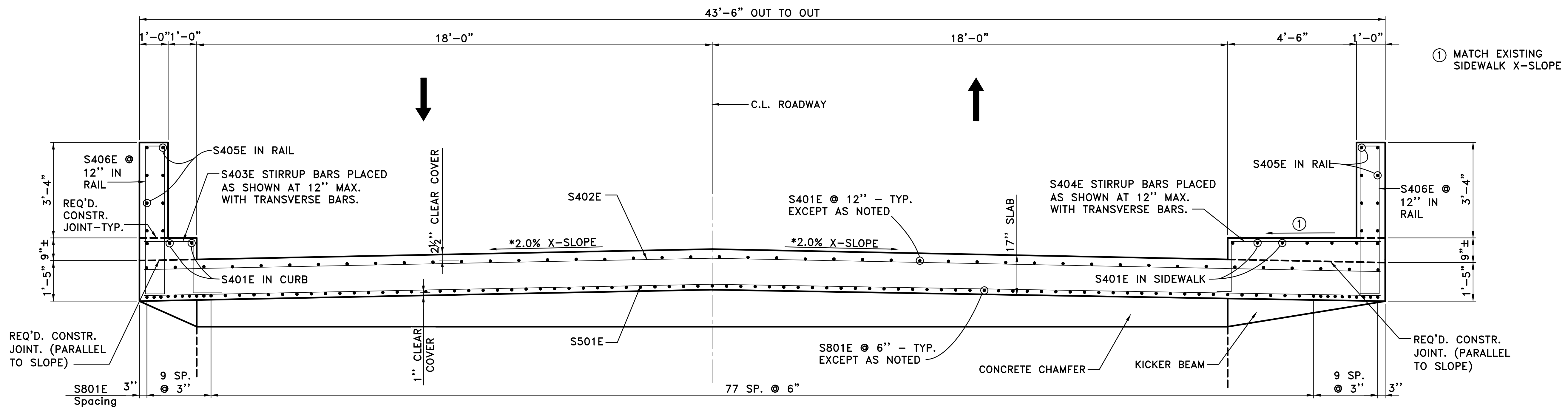
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS  
 13TH ST. BRIDGE REPAIR  
 REINFORCED CONCRETE SLAB DETAILS

DEPARTMENT OF PUBLIC WORKS  
 CIVIL ENGINEERING  
 701 W. MARKHAM  
 LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS  
 LICENSED PROFESSIONAL ENGINEER  
 No. 14501  
 STEPHEN F. HARPER  
 9/28/2021

DRAWN BY  
 KDH  
 DESIGNED  
 SCR  
 CHECKED  
 SFH  
 DATE  
 12/2020  
 SCALE  
 AS NOTED  
 PROJECT NO.  
 CLR #1-17-ST-56B  
 SHEET NO.  
 S7



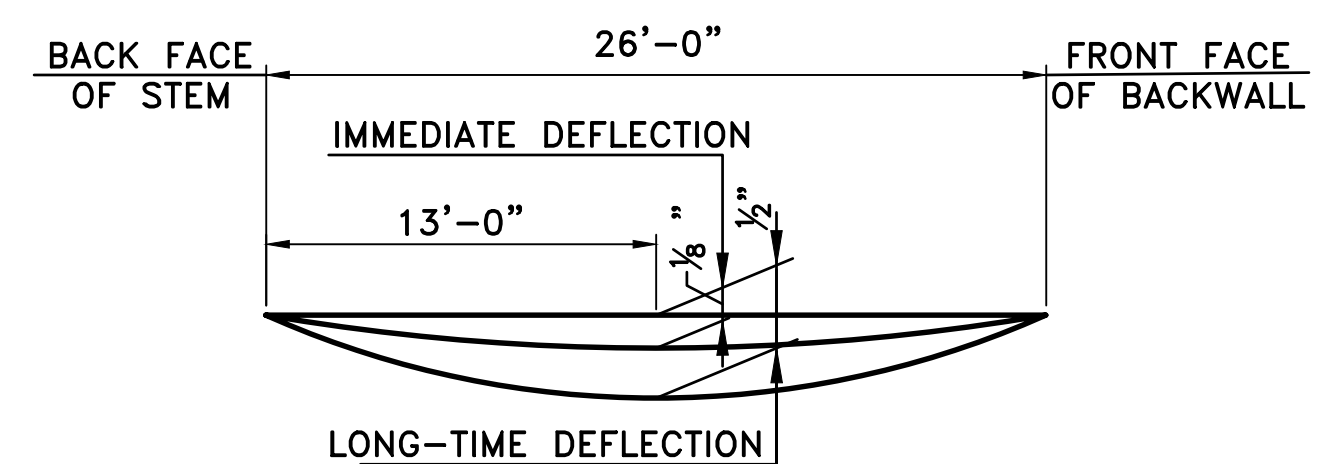
TYPICAL SECTION THRU ROADWAY  
 1/2" = 1'-0"

FOR "CONCRETE CHAMFER AND KICKER BEAM DETAIL", SEE SHEET NO. S9.

\*THERE ARE NO EXISTING BRIDGE PLANS AVAILABLE. ALL DIMENSIONS AND DATA USED FOR NEW DETAILS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION TO ENSURE COMPATIBILITY OF NEW WORK WITH THE EXISTING STRUCTURE.

BAR LIST - SLAB & FOOTING

MARK	NO.	REQ'D.	LENGTH	P.D.	BENDING DIAGRAMS
S401E	54	25'-8"	STR.		
S402E	26	43'-10"	STR.		
S403E	26	4'-4"	2"		
S404E	26	7'-10"	2"		
S405E	32	12'-8"	STR.		
S406E	54	12'-0"	2"		
S501E	78	43'-10"	STR.		
S502E	176	6'-4"	STR.		
S503E	45	11'-6"	2 1/2"		
S504E	2	39'-10"	STR.		
S505E-S508E	1 EACH	4'-0" TO 6'-2"	2 1/2"		
S509E	72	3'-8"	STR.		
S510E-S520E	1 EACH	4'-0" TO 6'-5"	2 1/2"		
S521E	2	4'-11"	3 3/4"		
S522E	2	8'-2"	3 3/4"		
S523E	6	6'-7"	2 1/2"		
S801E	96	25'-8"	STR.		
S1001E	2	46'-8"	10"		



DEFLECTIONS SHOWN ARE FROM A CHORD FROM BACK FACE OF STEM TO FRONT FACE OF BACKWALL. VERTICAL ALIGNMENT CORRECTIONS ARE NOT INCLUDED. TOLERANCE +1/4" FOR CAMBER AND VERTICAL ALIGNMENT.

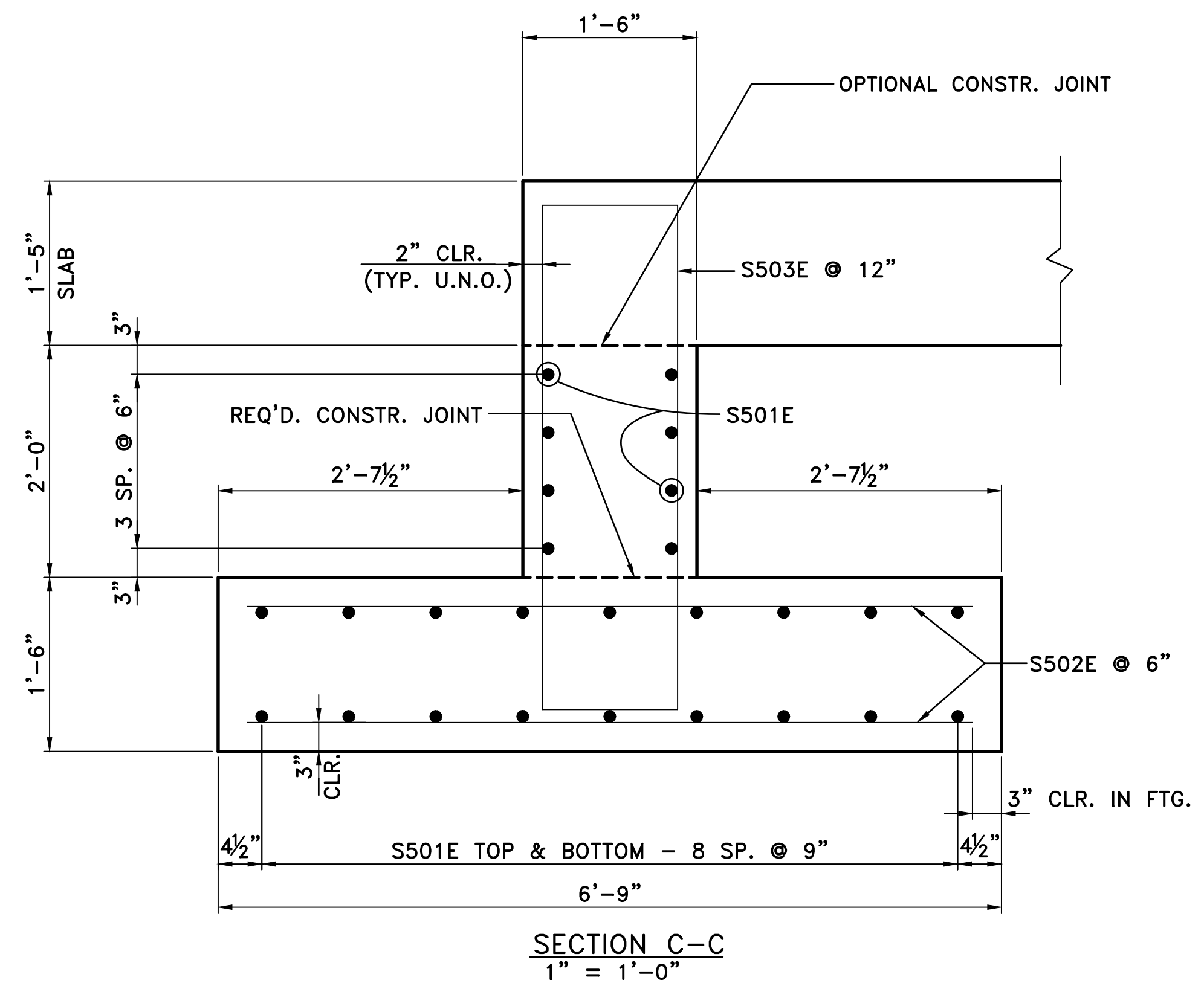
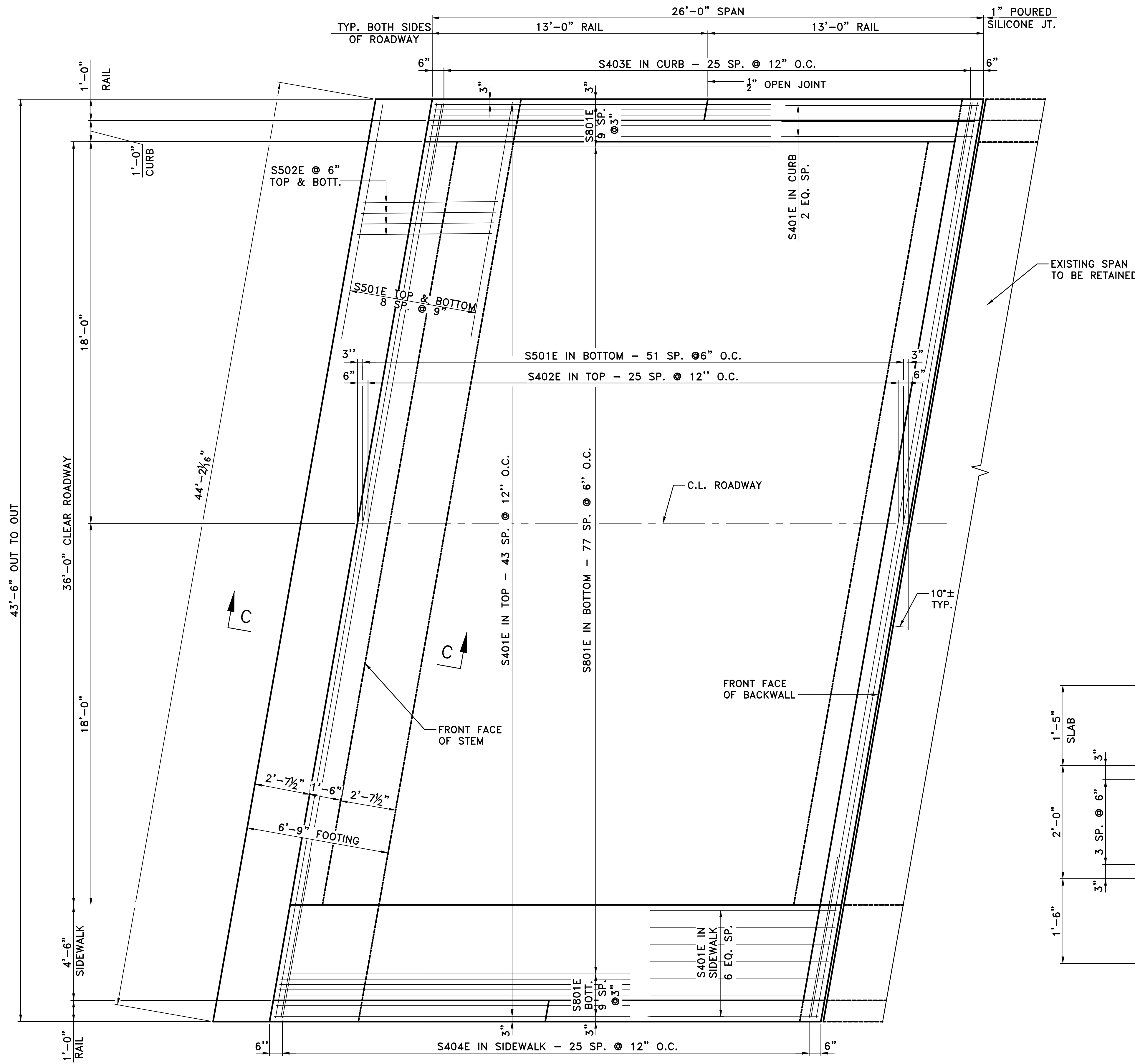
DEAD LOAD DEFLECTION DIAGRAM  
 NO SCALE

GENERAL NOTES

ALL CONCRETE SHALL BE CLASS "S(AE)" WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH  $f'_c = 4,000$  PSI. CONCRETE SHALL BE POURED IN THE DRY AND ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.

ALL REINFORCING STEEL SHALL BE EPOXY COATED AND CONFORM TO AASHTO M31 OR M322, GRADE 60 (YIELD STRENGTH = 60,000 PSI.).

NOTES:  
 DIMENSIONS OF BARS ARE OUT-TO-OUT.  
 ALL BARS DESIGNATED WITH AN "E" SUFFIX ARE TO EPOXY COATED.



REINFORCING PLAN  
 3/8" = 1'-0"

REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS  
 13TH ST. BRIDGE REPAIR  
 REINFORCED CONCRETE SLAB DETAILS

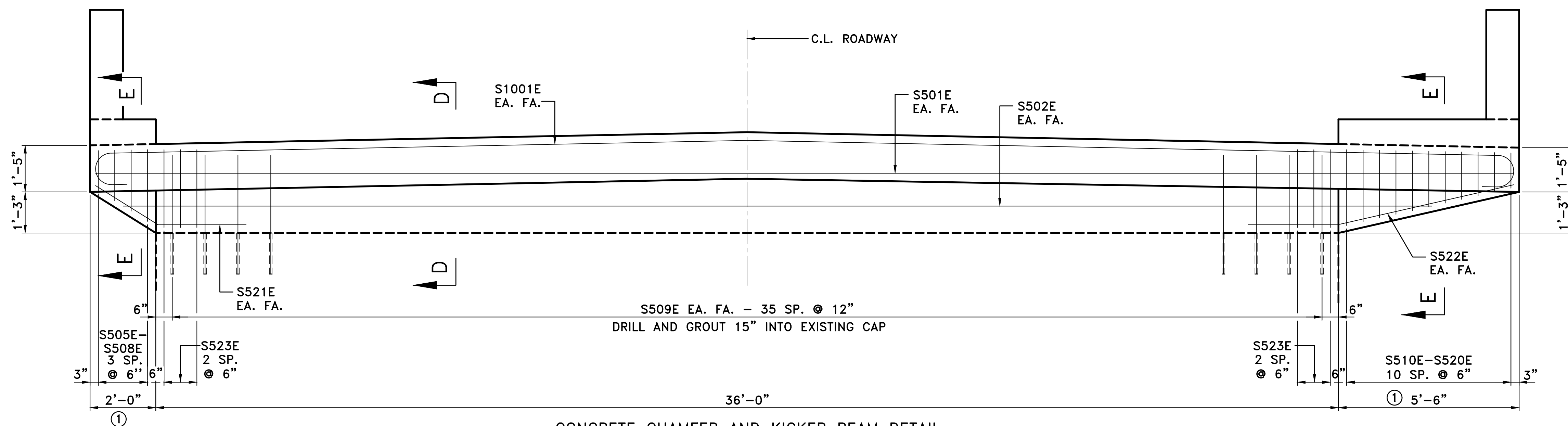
DEPARTMENT OF PUBLIC WORKS  
 CIVIL ENGINEERING  
 701 W. MARKHAM  
 LITTLE ROCK, ARKANSAS 72201

LICENSED PROFESSIONAL ENGINEER  
 No. 14501  
 STEPHEN F. HARPER  
 9/28/2021

DRAWN BY  
 KDH  
 DESIGNED  
 SCR  
 CHECKED  
 SFH  
 DATE  
 12/2020  
 SCALE  
 AS NOTED  
 PROJECT NO.  
 CLR #1-17-ST-56B  
 SHEET NO.  
 58



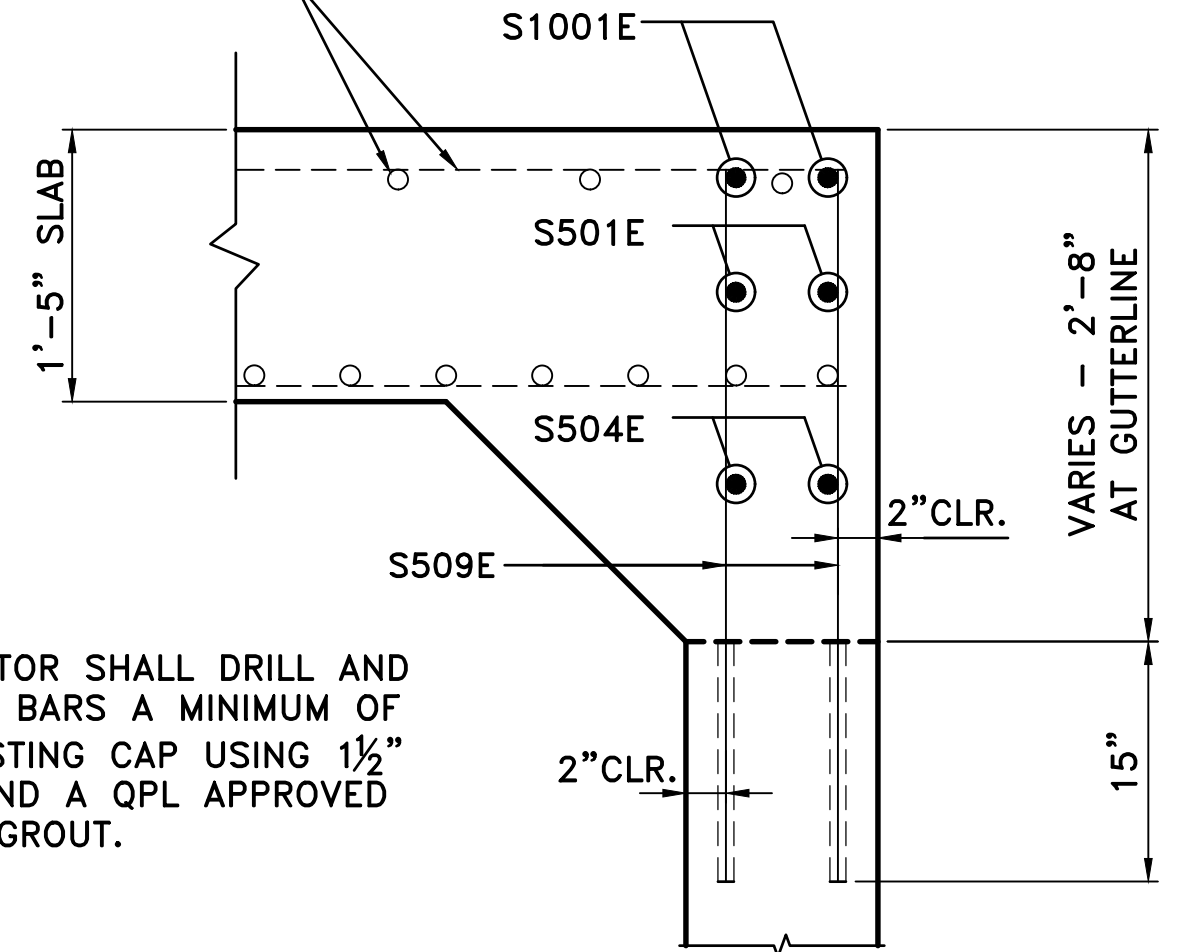
REVISIONS	DATE



**CONCRETE CHAMFER AND KICKER BEAM DETAIL**  
 $\frac{1}{2}'' = 1'-0''$

① THE CONTRACTOR SHALL FIELD-VERIFY CANTILEVER DIMENSIONS PRIOR TO CONSTRUCTION.

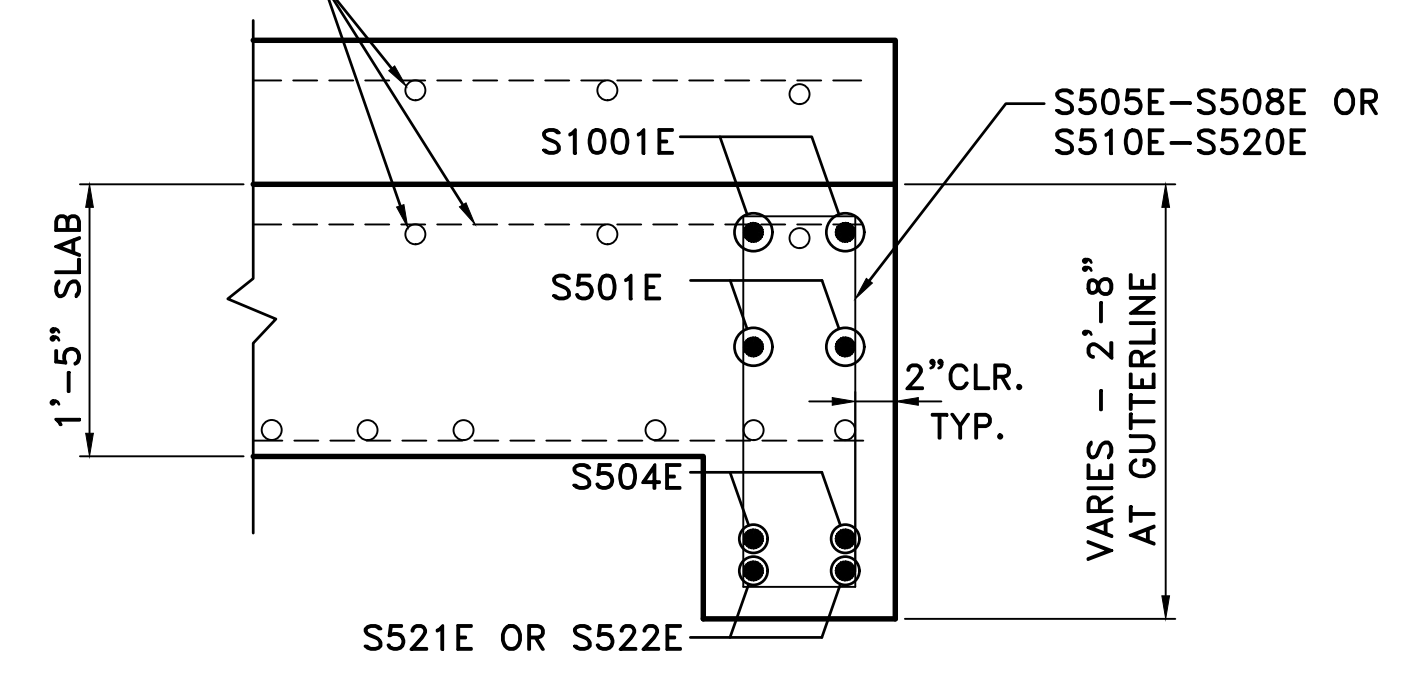
REINFORCING STEEL AS SHOWN IN TYPICAL SECTION THRU ROADWAY



**SECTION D-D**  
 $1'' = 1'-0''$

THE CONTRACTOR SHALL DRILL AND GROUT S509E BARS A MINIMUM OF 15" INTO EXISTING CAP USING  $\frac{1}{2}''$  DIA. HOLES AND A QPL APPROVED NON-SHRINK GROUT.

REINFORCING STEEL AS SHOWN IN TYPICAL SECTION THRU ROADWAY



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

CITY OF LITTLE ROCK, ARKANSAS  
 13TH ST. BRIDGE REPAIR  
 REINFORCED CONCRETE SLAB DETAILS

DEPARTMENT OF PUBLIC WORKS  
 CIVIL ENGINEERING  
 701 W. MARKHAM  
 LITTLE ROCK, ARKANSAS 72201

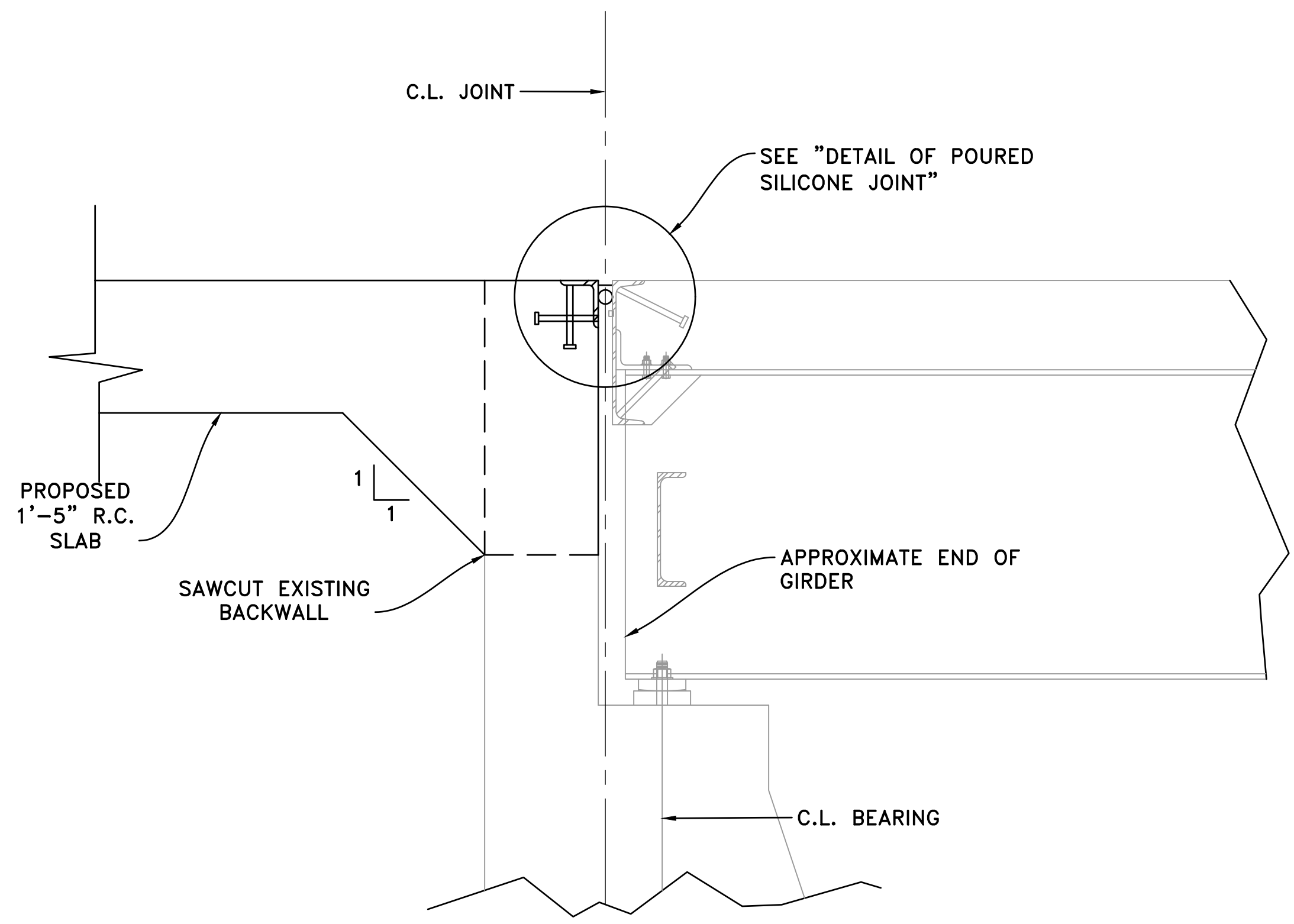
STATE OF ARKANSAS  
 LICENSED PROFESSIONAL ENGINEER  
 No. 14501  
 STEPHEN F. HARPER  
 9/28/2021

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 S9

REVISIONS	DATE

SILICONE JOINT DATA

BRIDGE LOCATION	BENT NO.	"A" JOINT WIDTH PERPENDICULAR TO JOINT 24 HOUR AVERAGE TEMPERATURE OF:*			"D"
		40° F	60° F	80° F	
13TH ST. BRIDGE OVER UPRR	1	1 1/8"	1"	7/8"	5"



SECTION THRU JOINT AT EXIST. BENT 1

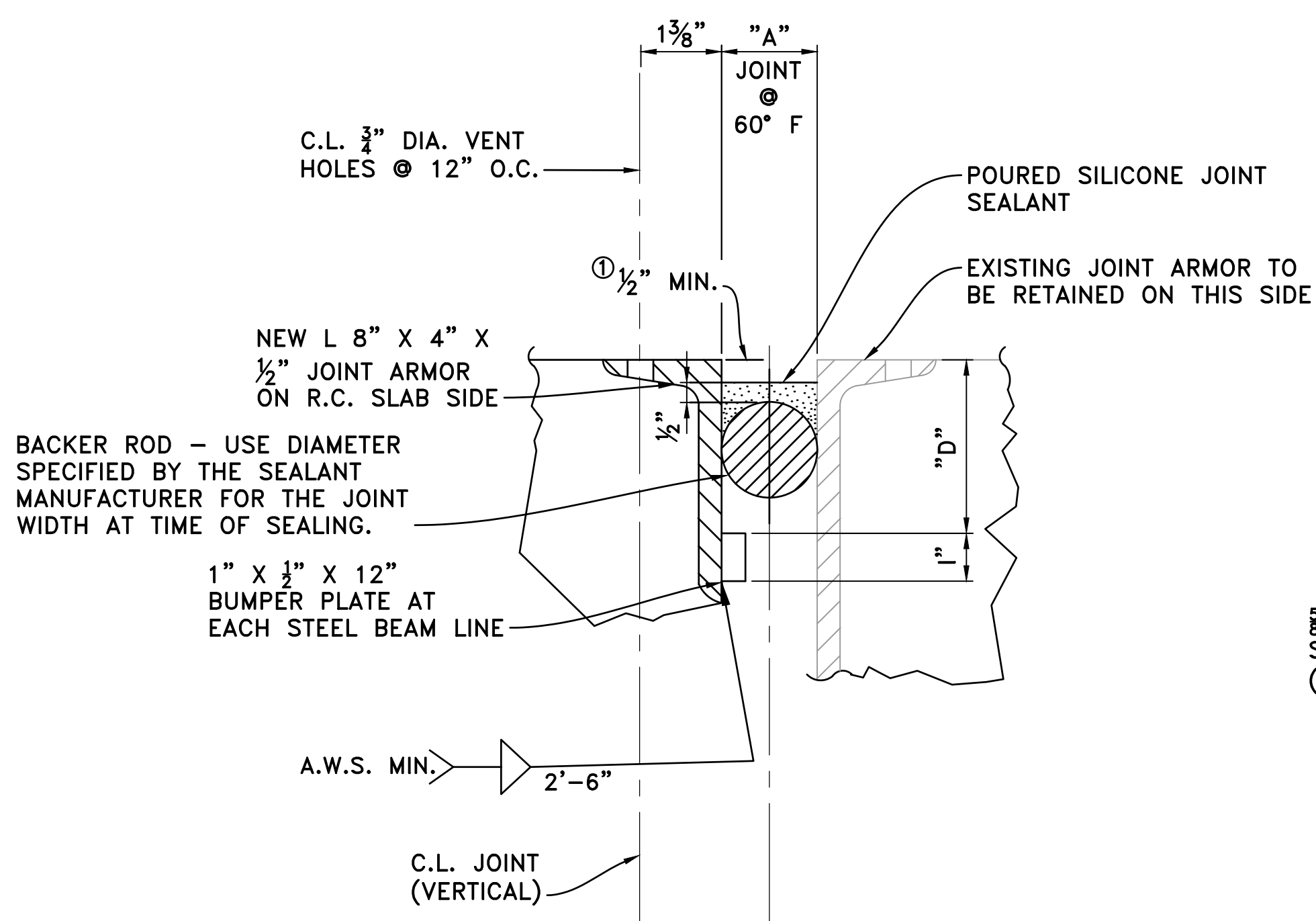
① RECESS DEPTH AS RECOMMENDED BY THE SEALANT MANUFACTURER

\*THE TEMPERATURE USED TO SET THE JOINT OPENING SHALL BE THE APPROXIMATE AVERAGE AIR TEMPERATURE DURING THE 24 HOUR PERIOD IMMEDIATELY BEFORE THE NEW SLAB IS CAST. THE ENGINEER SHALL ESTABLISH THE TEMPERATURE. INTERPOLATION OF THE TABLE MAY BE NECESSARY.

NOTES:  
THE TEMPERATURE LIMITATIONS RECOMMENDED BY THE SEALANT MANUFACTURER SHALL BE OBSERVED. THE SEALANT SHALL BE INSTALLED ONLY WHEN THE AVERAGE 24 HOUR AIR TEMPERATURE IS BETWEEN 40° AND 80° F.

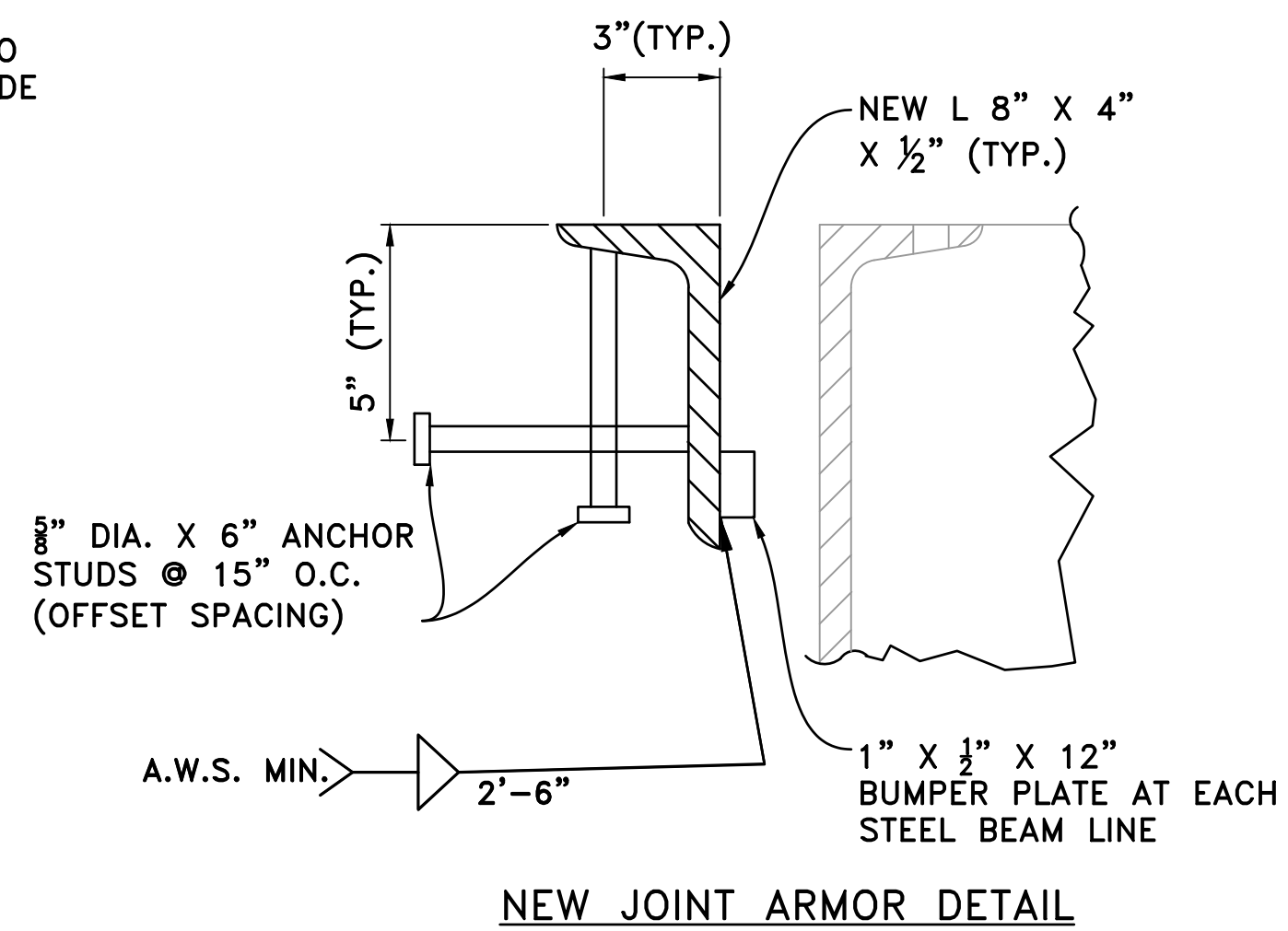
USE AN APPROPRIATELY SIZED BACKER ROD AT THE DEPTH SHOWN IN THE MANUFACTURER'S LITERATURE BASED ON THE JOINT WIDTH AT THE TIME OF SEALING. UNLESS OTHERWISE NOTED, DO NOT INSTALL MORE BACKER ROD THAN CAN BE SEALED IN THE SAME DAY.

THE CONTRACTOR SHALL VERIFY SEPARATION OF THE BACKER ROD FOR THE JOINT MATERIAL AFTER THE JOINT MATERIAL HAS SET.

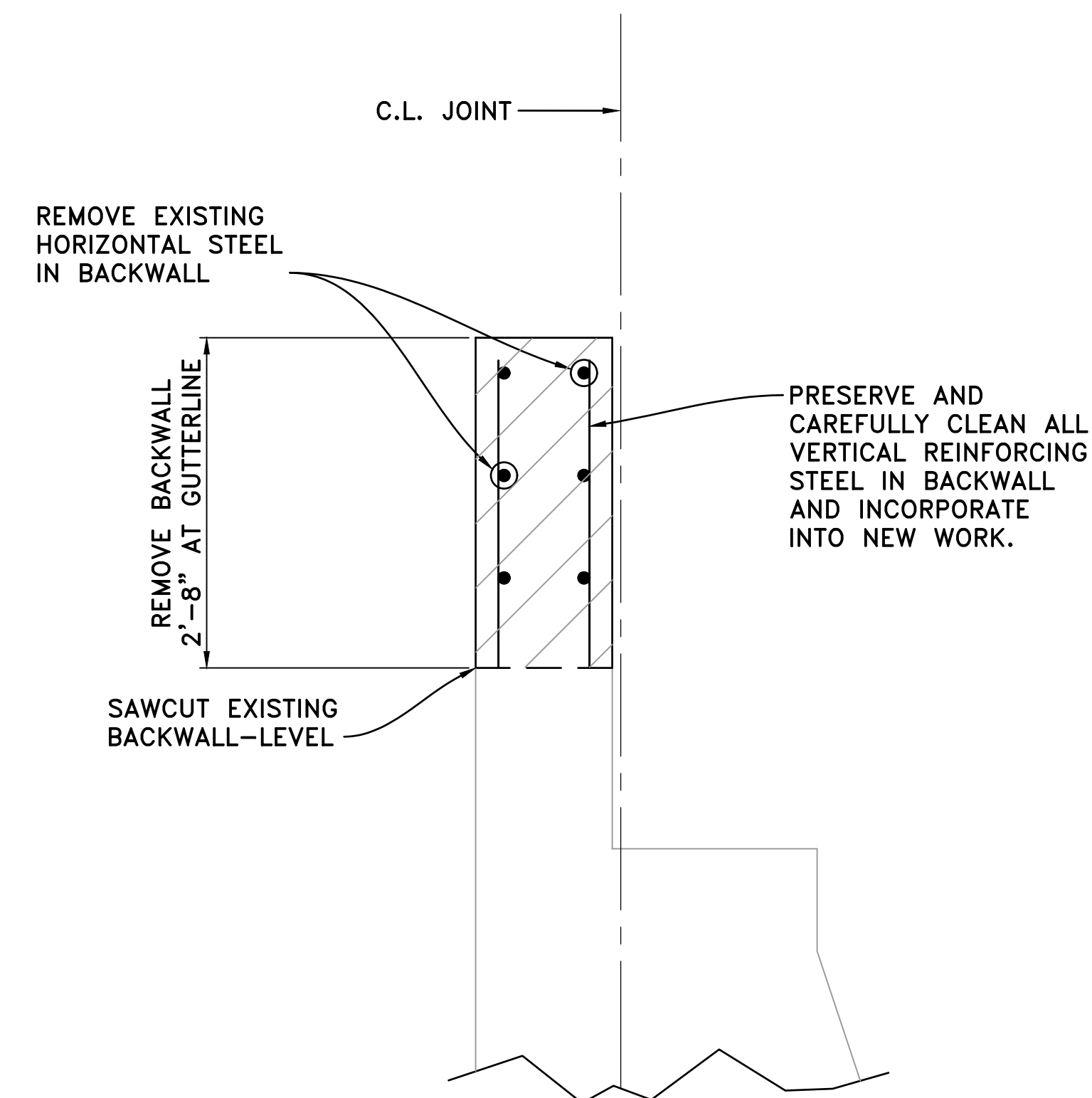


DETAIL OF POURED SILICONE JOINT

NOTE: CONCRETE SHALL BE HAND PACKED UNDER THE JOINT ARMOR IN THE NEW R.C. SLAB SPAN. FOR JOINT ARMOR DETAIL, SEE "NEW JOINT ARMOR DETAIL"



NEW JOINT ARMOR DETAIL



REMOVAL DETAILS

CITY OF LITTLE ROCK, ARKANSAS  
13TH ST. BRIDGE REPAIR  
EXPANSION JOINT DETAILS

DEPARTMENT OF PUBLIC WORKS  
CIVIL ENGINEERING  
701 W. MARKHAM  
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS  
LICENSED PROFESSIONAL ENGINEER  
No. 14501  
STEPHEN F. HARPER  
9/28/2021

DRAWN BY JPC  
DESIGNED SCR  
CHECKED SFH  
DATE 12/2020  
SCALE N.T.S  
PROJECT NO. CLR#1-17-ST-56B  
SHEET NO. S10

THERE ARE NO EXISTING BRIDGE PLANS AVAILABLE. ALL DIMENSIONS AND DATA USED FOR NEW DETAILS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION TO ENSURE COMPATIBILITY OF NEW WORK WITH THE EXISTING STRUCTURE.

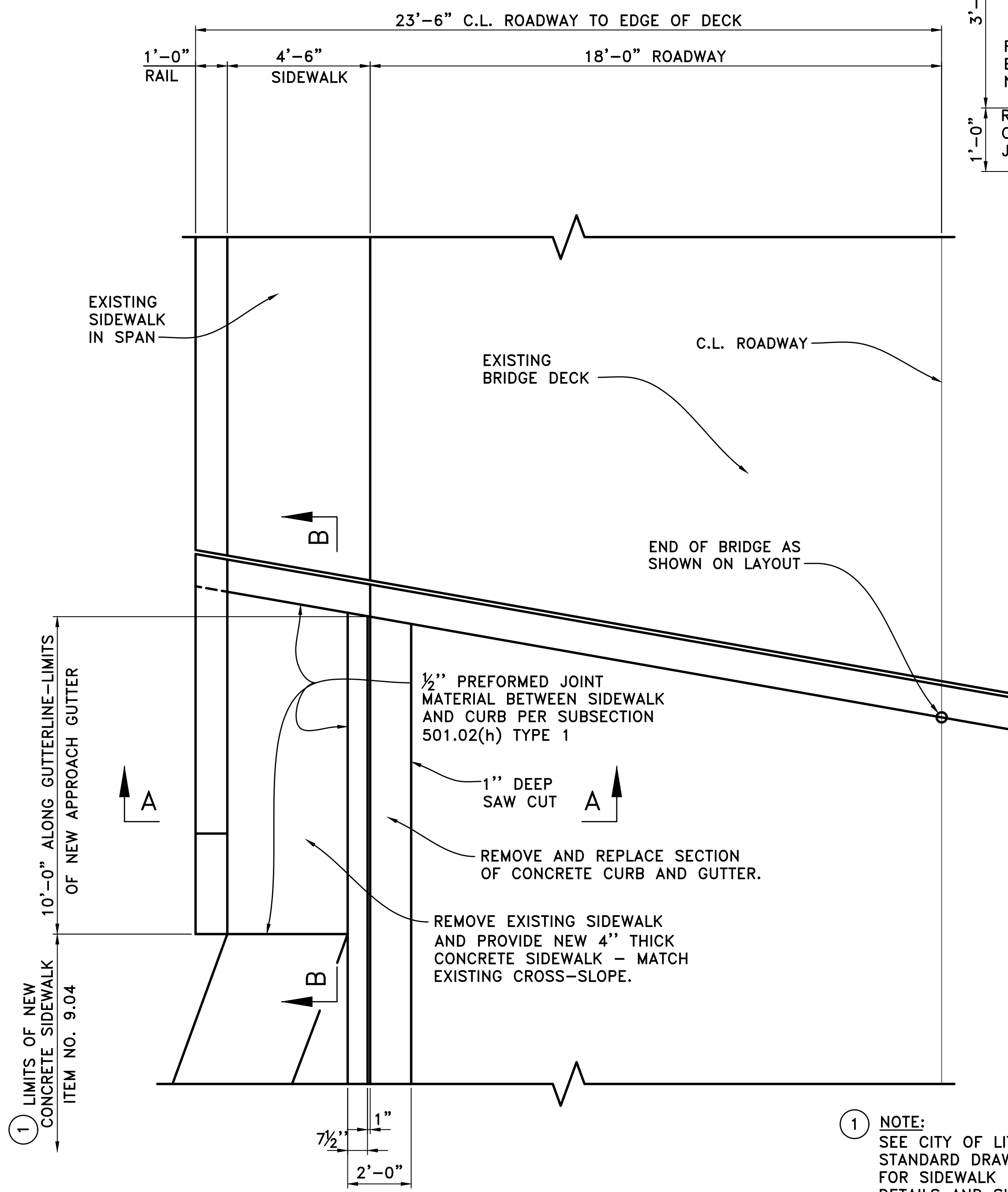
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS  
13TH ST. BRIDGE REPAIR  
APPROACH GUTTER DETAILS

DEPARTMENT OF PUBLIC WORKS  
CIVIL ENGINEERING  
701 W. MARKHAM  
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS  
LICENSED PROFESSIONAL ENGINEER  
No. 14501  
STEPHEN F. HANFORD  
9/28/2021

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CLR #1-17-ST-56B  
SHEET NO.  
S11



1) NOTE:  
SEE CITY OF LITTLE ROCK STANDARD DRAWING PW-41 FOR SIDEWALK NOTES AND DETAILS AND SUBGRADE COMPACTION REQUIREMENTS.

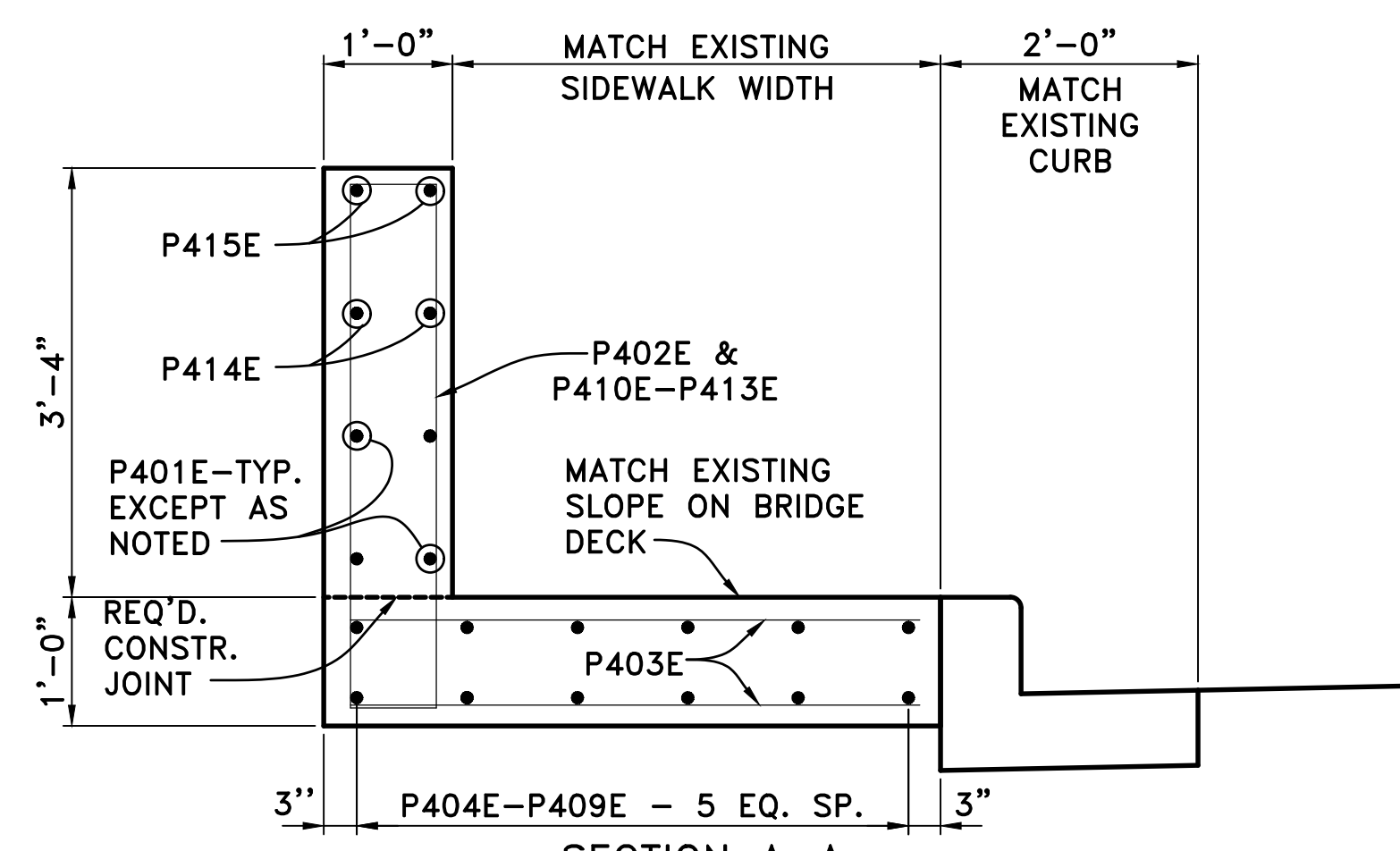


TABLE OF VARIABLES

MARK	SOUTHEAST CORNER	SOUTHWEST CORNER
P401E	11'-5"	11'-3"
P404E-P409E	9'-10" TO 10'-6"	9'-7" TO 10'-3"
P414E	10'-5"	10'-2"
P415E	11'-10"	11'-7"

BAR LIST - PER APPROACH GUTTER

MARK	NO.	REQ'D.	LENGTH	P.D.
P401E	4	SEE TABLE	STR.	
P402E	8	9'-8"	2"	
P403E	24	4'-5"	STR.	
P404E-P409E	2 EACH	SEE TABLE	STR.	
P410E-P413E	1 EACH	6'-8" TO 9'-6"	2"	
P414E	2	SEE TABLE	STR.	
P415E	2	SEE TABLE	2"	
P416E	1	7'-8"	2"	

8" 8" 4'-0" 4'-0" 2'-6" TO 3'-11" 4 1/2" TYP. 4 1/2" TYP.

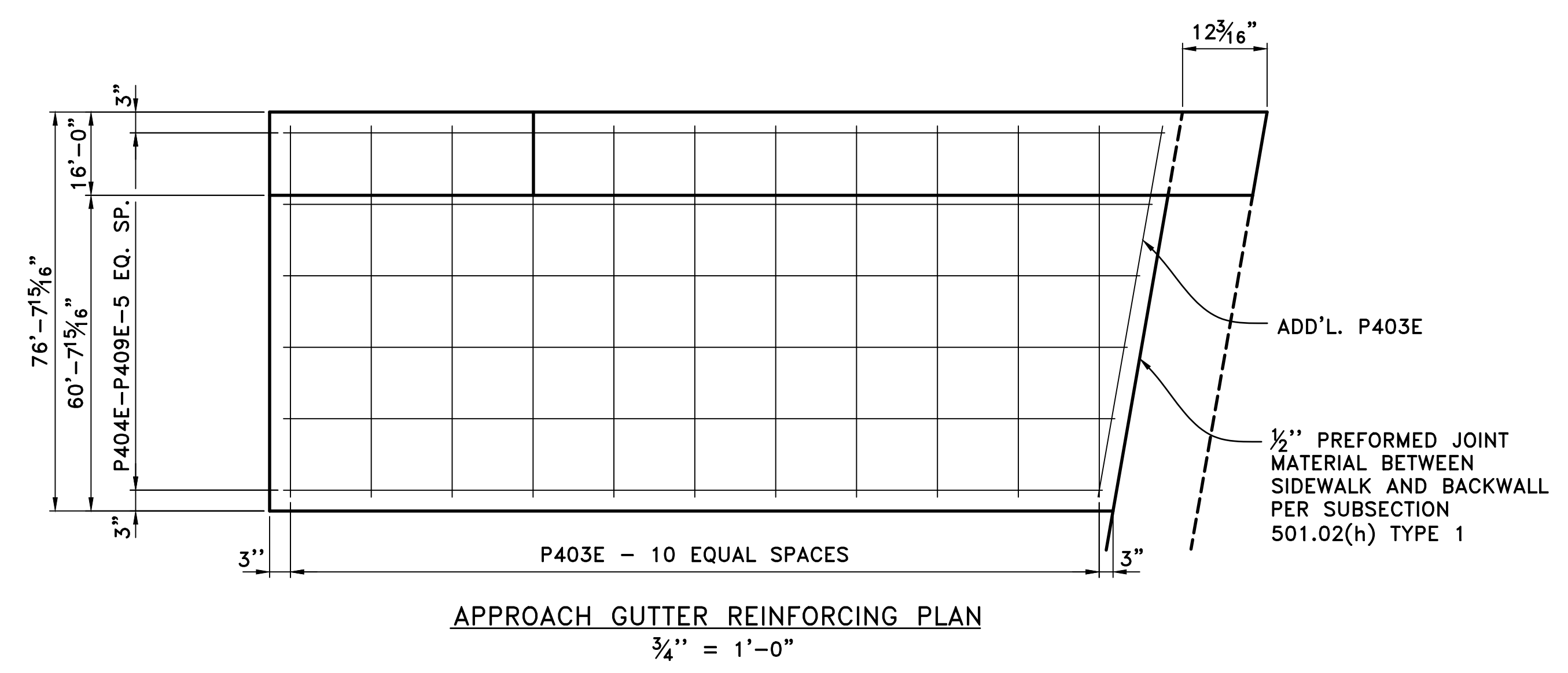
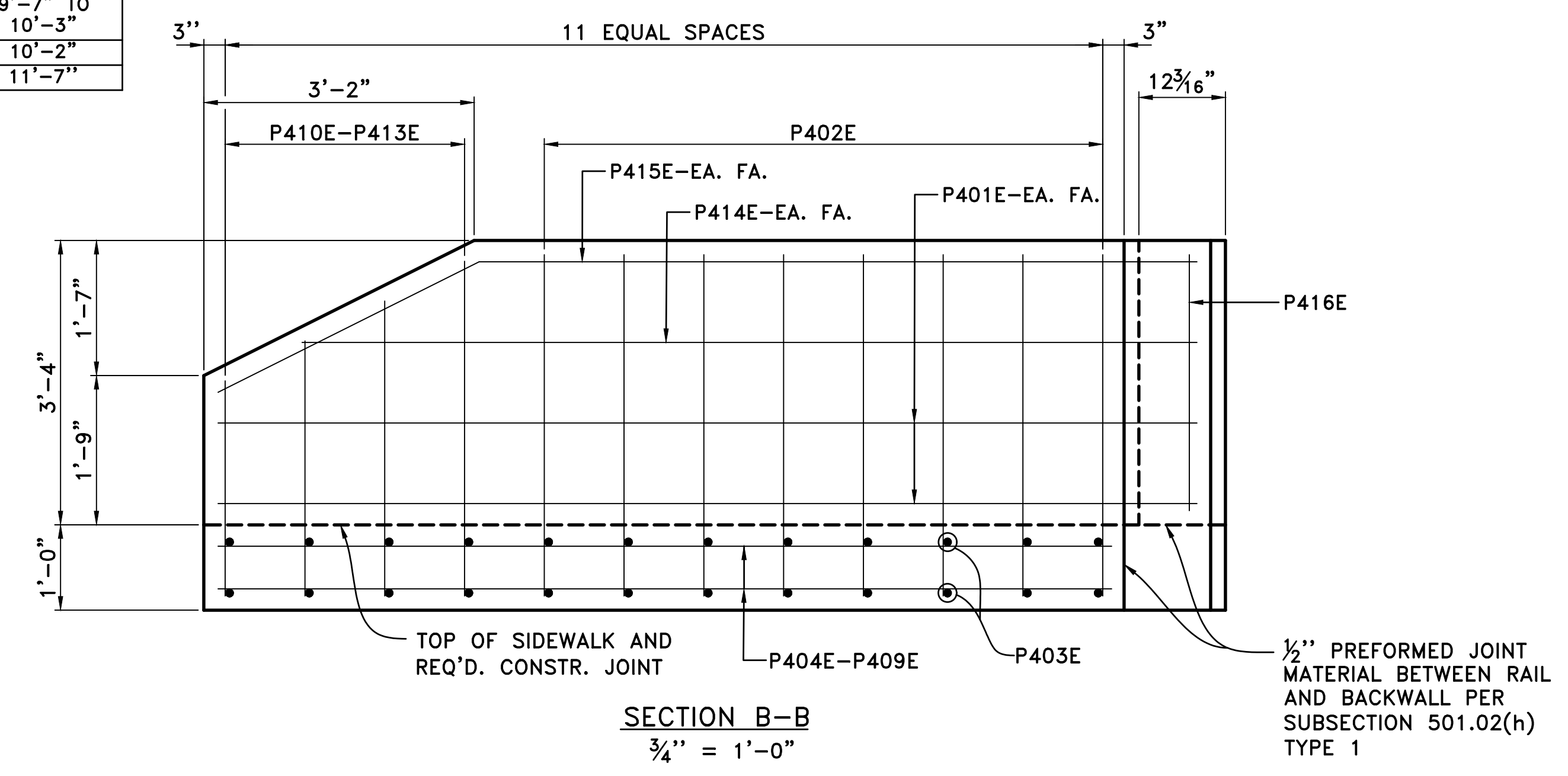
3'-5" 8'-5" SE CORNER 8'-2" SW CORNER 1 2 P415E 4 1/2" TYP. 8" 3'-0" P416E

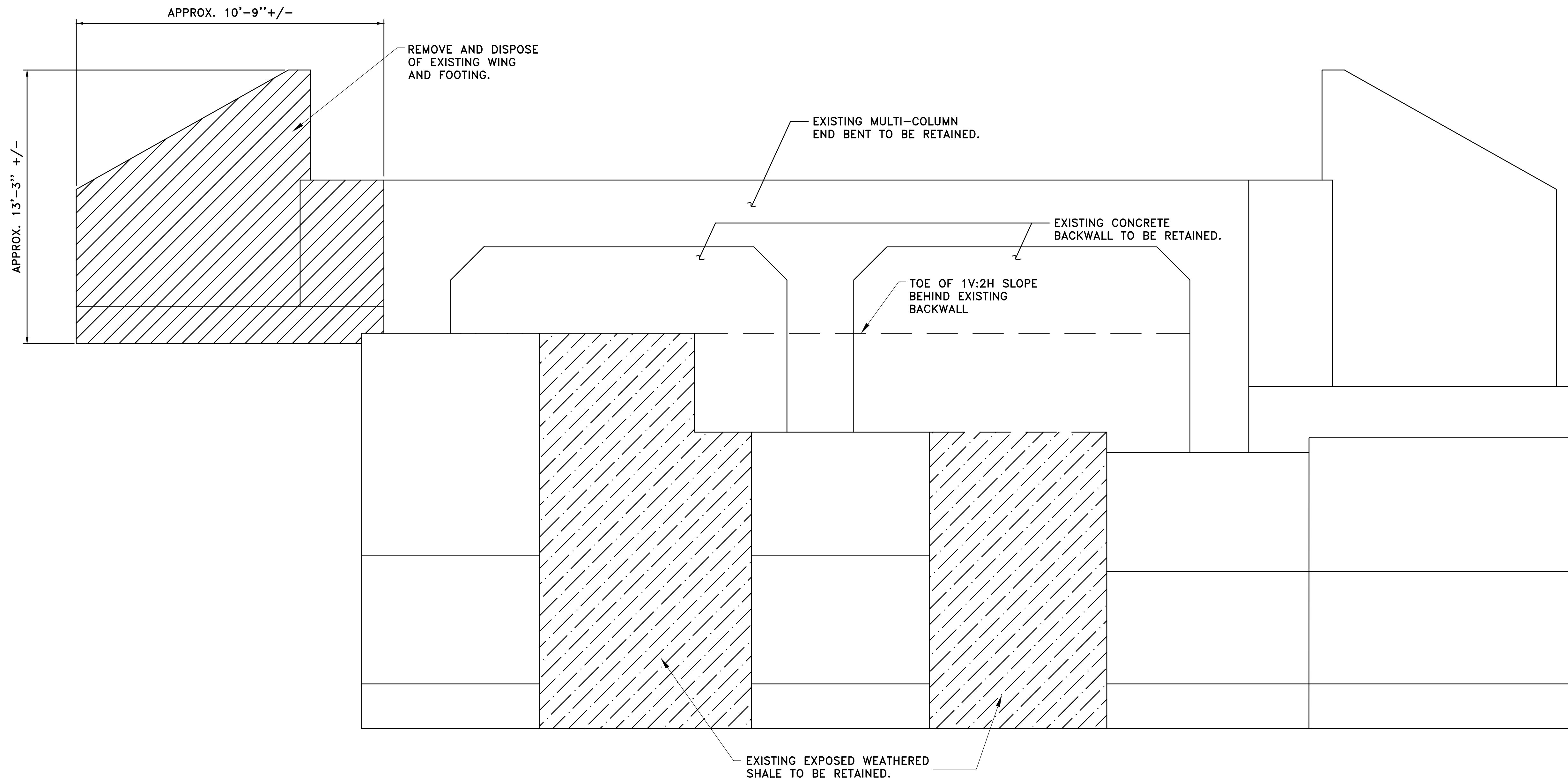
GENERAL NOTES

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**BENT 1 ELEVATION**  
LOOKING BACK

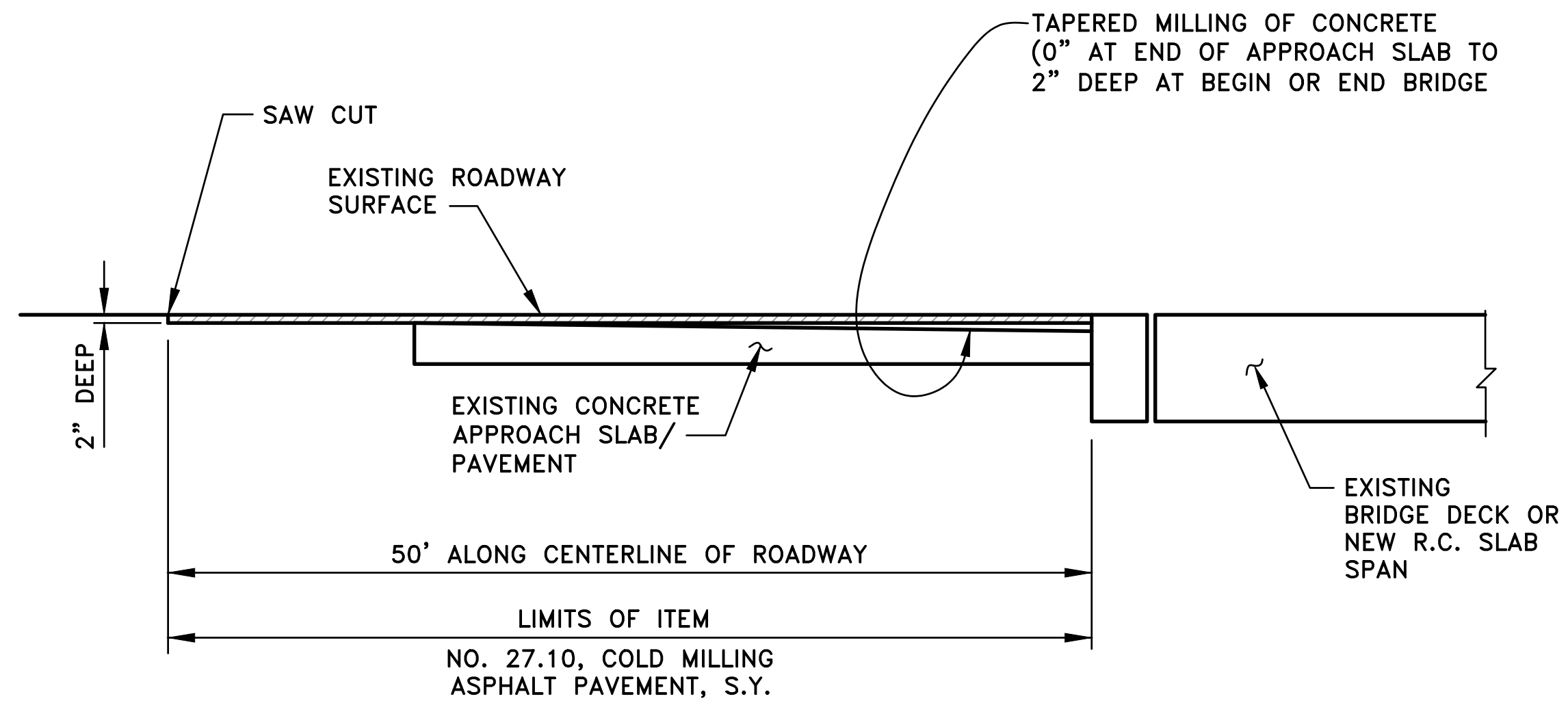
REVISIONS	DATE

CITY OF LITTLE ROCK, ARKANSAS  
13TH ST. BRIDGE REPAIR  
END BENT 1 DETAILS

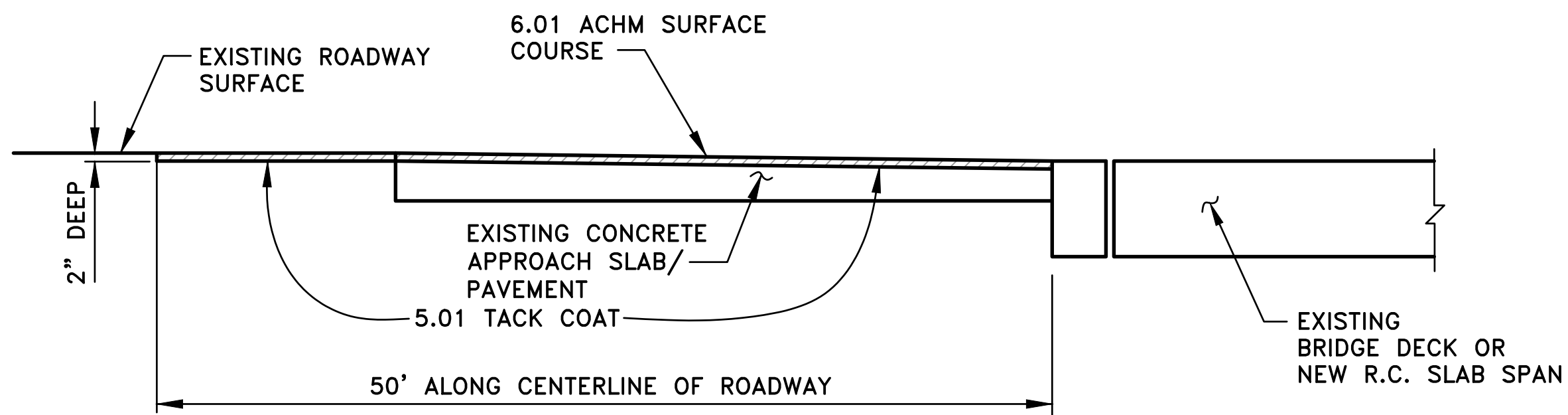
DEPARTMENT OF PUBLIC WORKS  
CIVIL ENGINEERING  
701 W. MARKHAM  
LITTLE ROCK, ARKANSAS 72201

STATE OF ARKANSAS  
LICENSED PROFESSIONAL ENGINEER  
No. 14501  
STEPHEN F. HARPER  
9/28/2021

<b>DRAWN BY</b>	KDH
<b>DESIGNED</b>	SCR
<b>CHECKED</b>	SFH
<b>DATE</b>	12/2020
<b>SCALE</b>	N.T.S.
<b>PROJECT NO.</b>	CLR #1-17-ST-56B
<b>SHEET NO.</b>	S12



**STEP 1: ASPHALT REMOVAL AT BRIDGE ENDS**



**STEP 2: SURFACE COURSE APPLICATION AT BRIDGE ENDS  
ASPHALT TRANSITION DETAILS**

**TABLE OF VARIABLES**

MARK	NORTHWEST CORNER	NORTHEAST CORNER
P417E	10'-10"	10'-6"
P420E	10'-0"	9'-5"
P421E	9'-10"	9'-7"
P422E	9'-8"	9'-9"
P427E	9'-10"	9'-6"
P428E	11'-2"	10'-10"

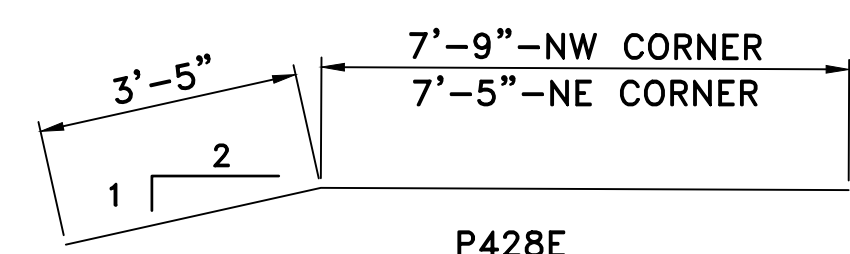
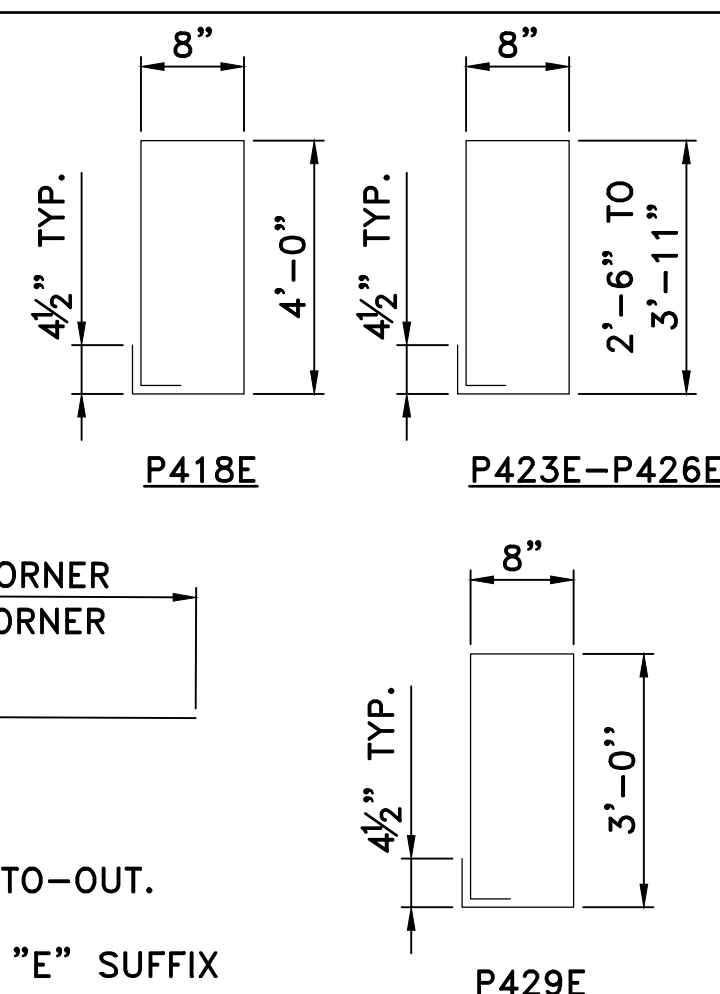
**GENERAL NOTES**

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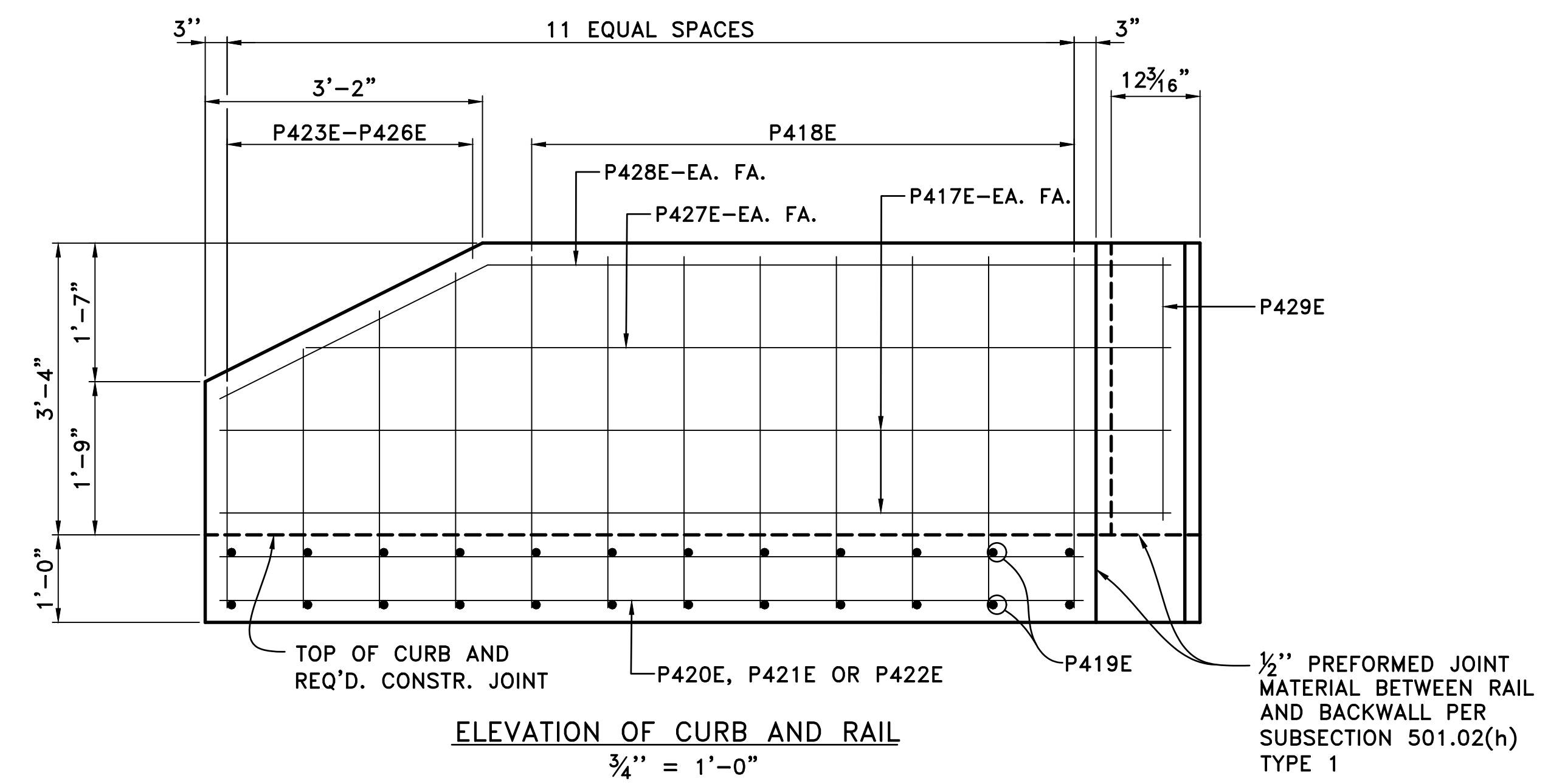
ALL REINFORCING STEEL SHALL BE EPOXY COATED AND CONFORM TO AASHTO M31 OR M322, GRADE 60 (YIELD STRENGTH = 60,000 PSI.).

**BAR LIST - PER CURB AND RAIL**

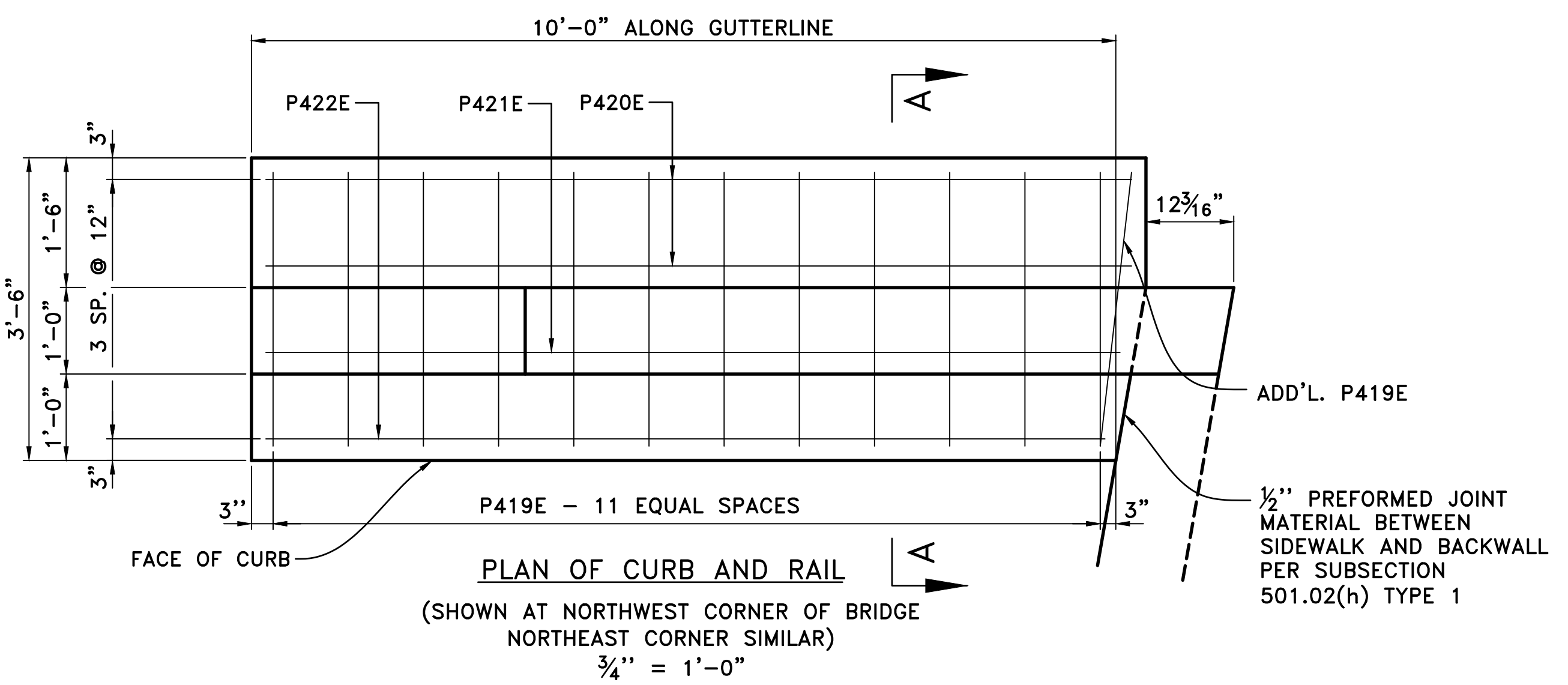
MARK	NO. REQ'D.	LENGTH	P.D.
P417E	4	SEE TABLE	STR.
P418E	8	9'-8"	2"
P419E	26	3'-2"	STR.
P420E	4	SEE TABLE	STR.
P421E	2	SEE TABLE	STR.
P422E	2	SEE TABLE	STR.
P423E-P426E	1 EACH	6'-8" TO 9'-6"	2"
P427E	2	SEE TABLE	STR.
P428E	2	SEE TABLE	2"
P429E	1	7'-8"	2"



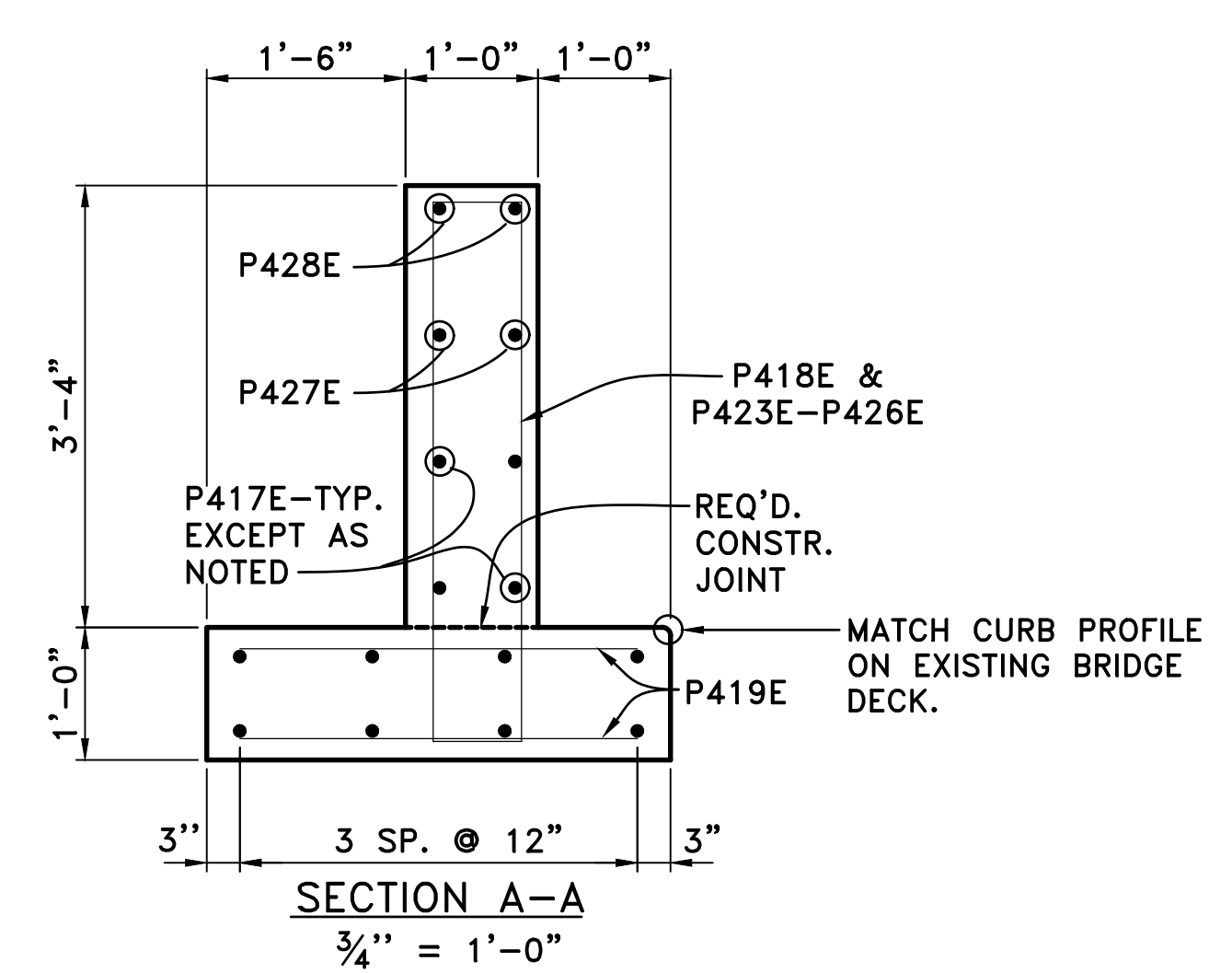
NOTES:  
DIMENSIONS OF BARS ARE OUT-TO-OUT.  
ALL BARS DESIGNATED WITH AN "E" SUFFIX ARE TO EPOXY COATED.



**ELEVATION OF CURB AND RAIL**  
 $\frac{3}{4}$ " = 1'-0"



**PLAN OF CURB AND RAIL**  
(SHOWN AT NORTHWEST CORNER OF BRIDGE  
NORTHEAST CORNER SIMILAR)  
 $\frac{3}{4}$ " = 1'-0"



**SECTION A-A**  
 $\frac{3}{4}$ " = 1'-0"

REVISIONS	DATE

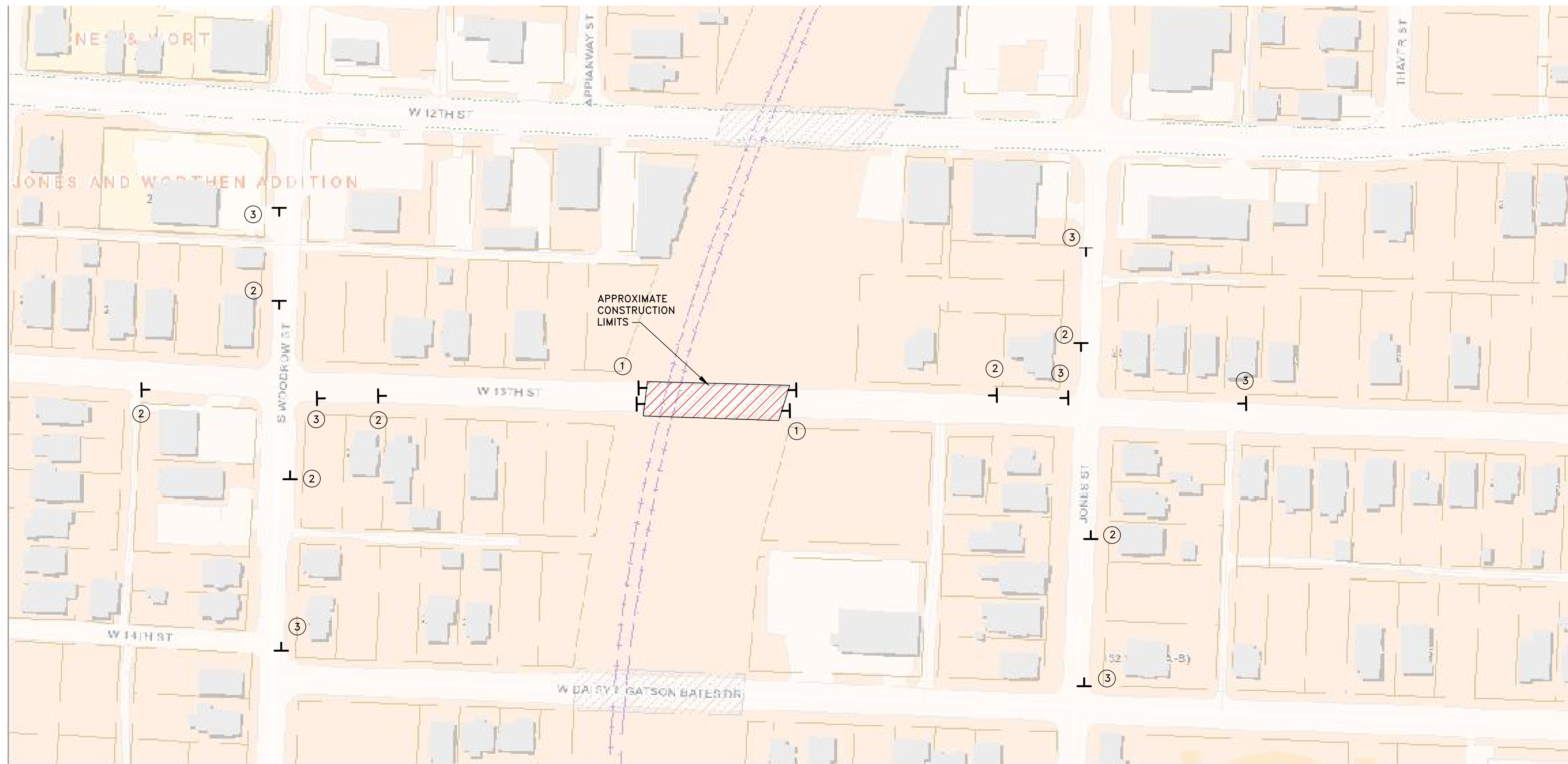
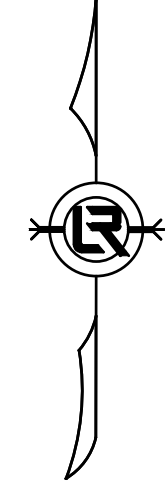
CITY OF LITTLE ROCK, ARKANSAS  
13TH ST. BRIDGE REPAIR  
MISCELLANEOUS DETAILS

DEPARTMENT OF PUBLIC WORKS  
CIVIL ENGINEERING  
701 W. MARKHAM  
LITTLE ROCK, ARKANSAS 72201

STEPHEN F. HARPER  
LICENSED PROFESSIONAL ENGINEER  
No. 14501  
9/28/2021

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SHEET NO.  
S13

REVISIONS	DATE



CITY OF LITTLE ROCK, ARKANSAS  
 13TH. ST. BRIDGE REPAIR  
 MAINTENANCE OF TRAFFIC

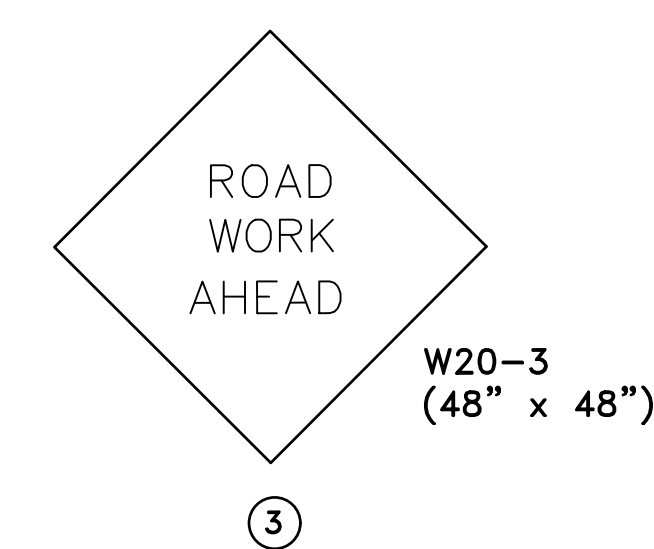
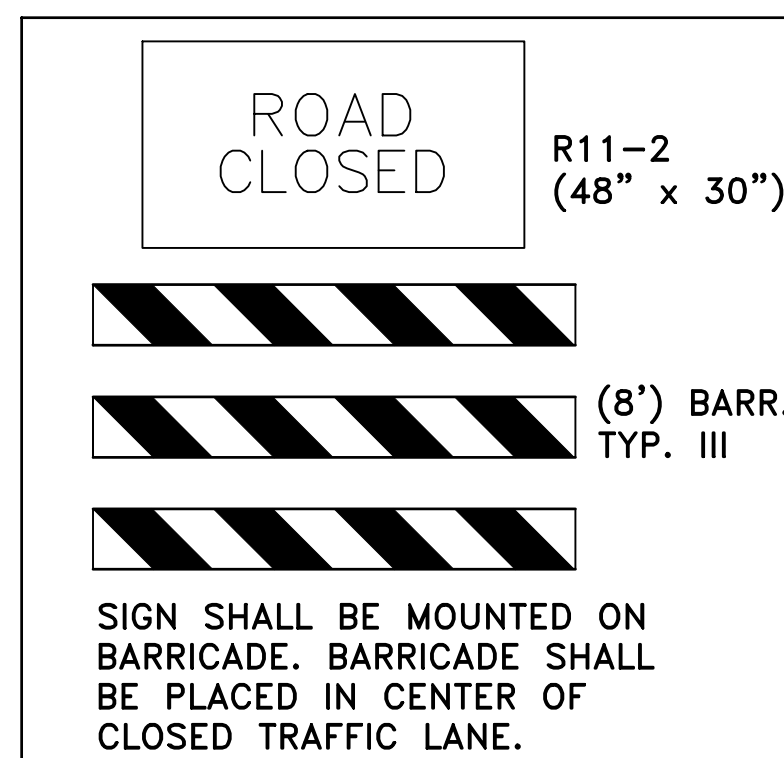
DEPARTMENT OF PUBLIC WORKS  
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STATE OF ARKANSAS  
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 CLR #1-17-ST-56B  
 SHEET NO.  
 S14

**MAINTENANCE OF TRAFFIC NOTES:**

1. THE 13th. BRIDGE (UNION PACIFIC RAILROAD OVERPASS) SHALL BE CLOSED TO ALL THRU VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE LIFE OF THE CONSTRUCTION PROJECT. (LOCAL TRAFFIC ONLY)
2. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL TRAFFIC CONTROL DEVICES.
3. ALL TRAFFIC CONTROL DEVICES SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION).
4. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO ENSURE THAT PEDESTRIANS DO NOT ENTER WORK AREAS AND THAT OPEN CONSTRUCTION IS PROTECTED.
5. THE CONTRACTOR SHALL STRICTLY COORDINATE THE BRIDGE CLOSURE WITH THE CITY OF LITTLE ROCK.



①

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③