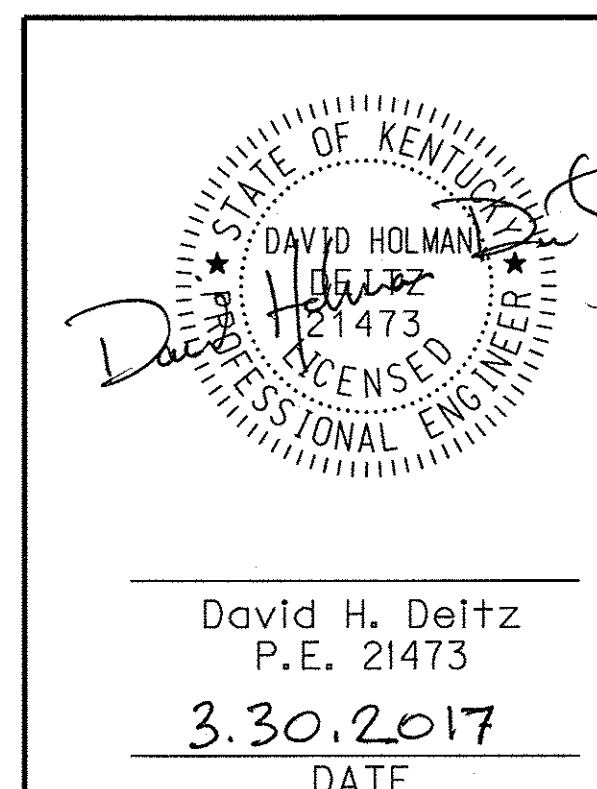


SHEET LOCATION: TIT

Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS	
COUNTY PIKE	
ROUTE US 460	CROSSING POND CREEK
<i>TITLE SHEET</i>	
PREPARED BY <i>PALMER ENGINEERING CO.</i>	SHEET NO. <i>S01</i> DRAWING NO. <i>27242</i>

ITEM NUMBER
12-263.63



STRUCTURAL STEEL NOTES

HIGH STRENGTH BOLT CONNECTORS:

Unless otherwise specified on the plans, all bolted connections shall be ASTM A325 1 inch diameter high strength bolts, nuts, and washers. Open holes shall be 1 1/16" diameter. Type 3 bolts suitable for use with weathering steel shall be used as described in AASHTO M164. All high strength bolted field connections are to be installed using "Direct Tension Indicators" (DTI's) in accordance with the Standard Specifications and ASTM F959. All DTI's shall be mechanically zinc coated with baked epoxy applied over the zinc coating. Installation details of the DTI's shall be shown on the shop plans.

MATERIALS:

ASTM or AASHTO Specifications as designated below shall govern the materials furnished.

MATERIAL	ASTM/AASHTO
Structural Steel	M-270 GRADE 36 (MISC. COMPONENTS)
Pintles and Stud shear connectors	UNS G 1015 M-169
High strength bolts, nuts and washers	M-164 TYPE 3
High strength low alloy structural steel	M-270 GRADE 50W (GIRDERS, CROSSFRAMES, FINGER DAMS & BRG. ASSEMBLIES)
Sheet lead and Pig lead	B29-79
Anchor Bolts	F1554 GRADE 55

All flange and web material, including splice plates, in longitudinal plate girders designated CVN shall meet the longitudinal charpy V-Notch toughness test applicable to Zone 2 in accordance with the following:

M270 Grade 50W - (up to 2" thickness)	25 ft.-lbs. at 40 Deg. F.
M270 Grade 50W - (over 2" to 4" thickness)	30 ft.-lbs. at 40 Deg. F.

Sampling and testing procedures shall be in accordance with AASHTO T243, current edition, utilizing (H) frequency testing. When plate thickness exceeds 1 1/2", frequency of testing shall be (P).

PAYMENT FOR STRUCTURAL STEEL:

The Lump Sum Bid for structural steel shall be full payment for all structural steel, bolts, washers, cast iron, lead plates, molten lead, welding and welding materials, floor drains, paint and all labor and materials necessary to erect the steel in accordance with the Plans and Specifications. The approximate weight of structural steel shown in the estimate of quantities does not include overrun or weld material.

MILL TEST REPORTS:

Notarized mill test reports shall be furnished in triplicate to the department, showing that all materials used in the structural steel conform to the requirements of the Specifications.

WELDING PROCEDURE:

Qualification tests of all welding procedures shall be completed by the contractor and approved by the engineer prior to the final approval of the shop drawings and welding procedure and the start of fabrication.

WELDING SPECIFICATIONS:

All welding and welding materials except for reinforcement, shall conform to "Joint Specification ANSI/AASHTO/AWS D1.5-2010 Bridge Welding Code". Modification and additions as stated on the plans and Special Provision 4, current edition, shall supersede the Joint Specifications.

FABRICATION AND ERECTION:

Since it is important that the finished structure weather to a uniform dark russet color, special precautions must be taken to assure that all exposed surfaces are kept free of grease, dirt, concrete stains, paint, or other foreign substances. Care should be taken to avoid gouges, scratches, and dents. The use of acids to remove scale and stains in the field will not be permitted. No element of the structure shall be painted unless otherwise noted. It is mandatory that all exposed surfaces in the complete structure be free of any type of shop markings of identification. Scale discoloration produced by welding shall be removed. Any foreign material which adheres to the steel that would inhibit formation of the oxide film shall be removed as soon as practical.

SUBSTRUCTURE PROTECTION:

The contractor shall protect the substructure from staining during construction. Any concrete staining will be removed prior to applying any masonry coating. The cost of protecting the substructures shall be included in the lump sum bid for structural steel.

SHEAR CONNECTORS:

The minimum length of studs is 8". Provide the necessary length to penetrate at least 2" above bottom of slab.

The "Lump Sum Bid" for shear connectors shall be full payment for all shear connectors, welding and welding material, and materials necessary to field weld or shop weld the shear connectors in place according to the Plans and Specifications.

If the Contractor wishes to use other than the stud shear connectors shown on the plans, the proposed arrangement shall be submitted for approval with the shop plans.

Studs shall be welded in accordance with AWS Specifications.

PROHIBITED FIELD WELDING:

Except as shown on the plans, no welding of any nature shall be performed on the load carrying members of the bridge without the written consent of the Director, Division of Structural Design, and then only in the manner and at the location designated in the authorization.

CAMBER:

Web plates shall be cut to provide for the camber of the girder. Provide for possible warpage due to extra heat in top flange by virtue of shear connectors. Girders which do not conform to plan camber and grade in the erected position shall be considered as requiring, at no additional cost to the state, either an adjustment in depth of the concrete slab haunch over the steel supporting members or a reworking of the girder camber to meet the plan grade and slab thickness. However, in no case shall the shear connectors be allowed to penetrate the slab less than 2".

BLAST CLEANING:

Upon completion of all fabrication operations in the shop, and before shipment to the project site, all weathering steel members and surfaces shall be blast cleaned to Commercial Blast Cleaned surface condition according to SSPC-SP 6. Prior to the start of any blast cleaning, all oil, grease, cutting fluids, or other foreign matter shall be removed from the surfaces of the steel by solvent cleaning according to SSPC-SP 1.

PAINT:

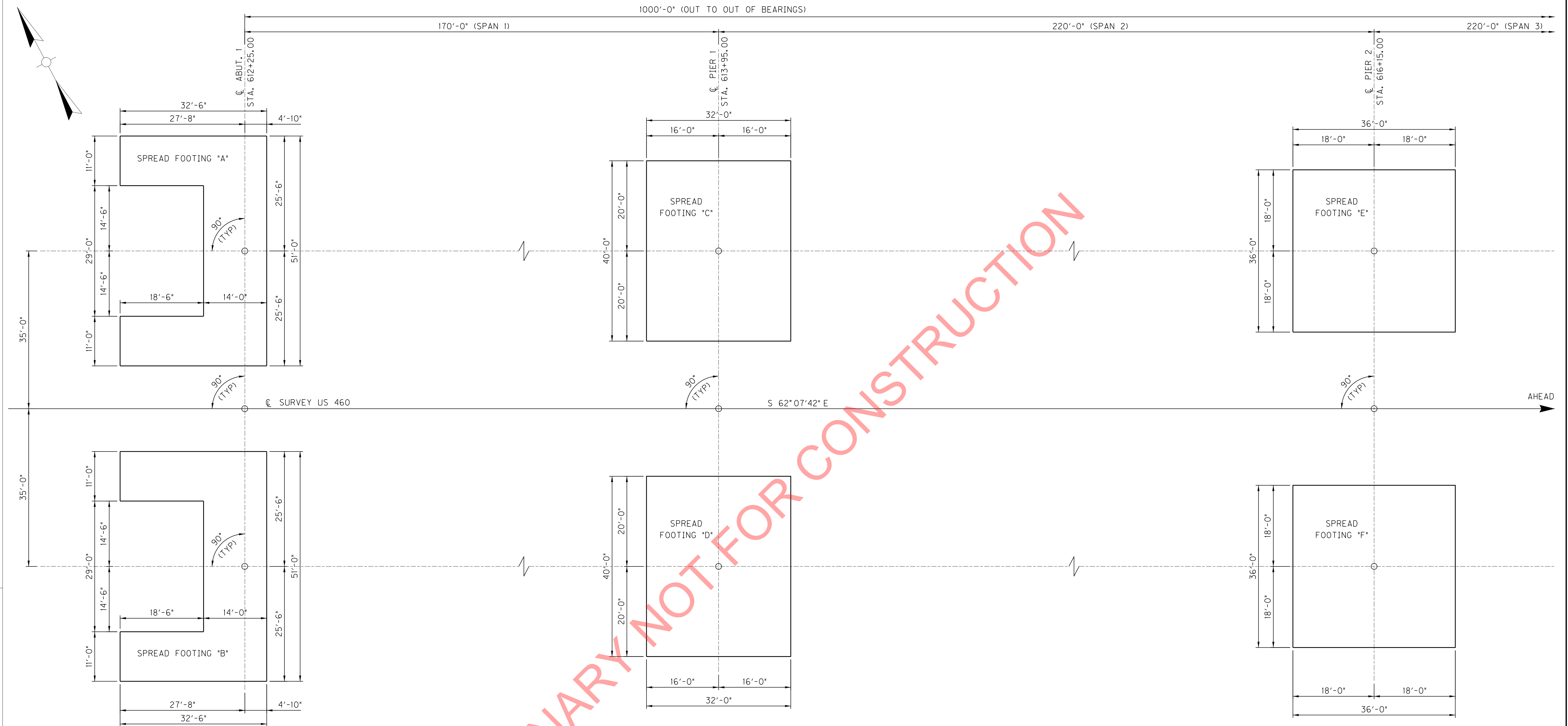
Paint the exposed top flange, web, and bottom flange of the fascia side of the exterior girders in accordance with the specifications except as follows: Use only a single epoxy shop coat, do not use the zinc-rich primer coat. Include the exposed surface of the fascia side of the exterior girder splice plates. Do not coat any faying surface of the splice connections. Apply the top coat to the fascia side of the bolt assemblies of the splice connections. Field clean each installed bolt to the satisfaction of the engineer prior to applying the coating system. The final color is to be pigmented to match the long term weathering steel patina. Include all costs associated with painting in the lump sum bid for Structural Steel.

FINGER JOINTS:

The unit price bid for finger joints shall include all labor and materials necessary to install the finger joints and drain troughs. Shop plans will be required for the finger joints.

ITEM NUMBER
12-263.63

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: D.H. DEITZ		C.M. GREENWELL	
DETAILED BY: J.A. ROSE		D.H. DEITZ	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
STRUCTURAL STEEL NOTES			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S03 DRAWING NO. 27242



SPREAD FOOTING RECORD

FOOTING	PLAN FOOTING ELEVATION	AS-BUILT FTG. ELEVATION
A	1160.00	
B	1160.00	
C	1026.00	
D	1026.00	
E	855.50	
F	855.50	

NOTE: AFTER ALL FOUNDATIONS HAVE BEEN PLACED, THE PROJECT
RESIDENT ENGINEER SHALL RECORD THE BOTTOM OF FOOTING
ELEVATION "AS BUILT" AND SHALL SUBMIT ONE COPY OF THIS SHEET
WITH THIS DATA TO:

DIRECTOR, DIVISION OF STRUCTURAL DESIGN
TRANSPORTATION CABINET OFFICE BLDG., 3RD FLOOR
200 MERO STREET
FRANKFORT, KY 40622

THE ALLOWABLE CAPACITY IS 16 KSF FOR EB & WB ABUTMENT 1, ABUTMENT 2, PIER 1 & PIER 4

THE ALLOWABLE CAPACITY IS 30 KSF FOR EB & WB PIER 2 AND PIER 3

EB & WB ABUTMENT 1 & ABUTMENT 2 FOOTINGS ARE DESIGNED FOR A MAXIMUM SERVICE
PRESSURE OF 6.22 KSF.

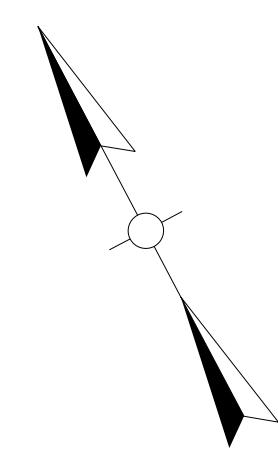
EB & WB PIER 1 & PIER 4 FOOTINGS ARE DESIGNED FOR A MAXIMUM SERVICE PRESSURE OF 10.20 KSF

EB & WB PIER 2 & PIER 3 FOOTINGS ARE DESIGNED FOR A MAXIMUM SERVICE PRESSURE OF 15.81 KSF

SEE SHT. S07 FOR ADDITIONAL FOUNDATION NOTES

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: R.M. DAMON		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
<i>FOUNDATION LAYOUT</i>			
PREPARED BY <i>PALMER ENGINEERING CO.</i>			SHEET NO. S06 DRAWING NO. 27242

ITEM NUMBER
12-263.63



SOLID ROCK EXCAVATION WILL BE REQUIRED FOR INSTALLATION OF SPREAD FOOTINGS AT THIS STRUCTURE.

FOOTINGS SHALL BE EMBEDDED A MINIMUM OF 2 FEET INTO UNWEATHERED BEDROCK. ALL FOOTING EXCAVATIONS IN BEDROCK SHALL BE CUT NEAT SO THAT NO FORMING OR BACKFILLING IS NECESSARY IN THE CONSTRUCTION OF THE FOOTINGS. FOOTINGS LOCATED IN ROCK, CONCRETE AND STEEL SHOULD BE PLACED DIRECTLY AGAINST THE CUT ROCK FACES.

THE BEDROCK AT THIS LOCATION MAY BE SUSCEPTIBLE TO WEATHERING AND SOFTENING IN THE PRESENCE OF WATER. WATER MUST BE KEPT OUT OF THE FOOTING EXCAVATIONS. THE FOOTING STEEL AND CONCRETE SHOULD BE PLACED THE SAME DAY AS OR AS SOON AS PRACTICAL AFTER THE FOOTING EXCAVATION IS MADE. IF THE BEDROCK BECOMES SOFTENED AT BEARING ELEVATION, THE SOFTENED MATERIAL SHOULD BE UNDERCUT TO UNWEATHERED MATERIAL PRIOR TO PLACING THE CONCRETE.

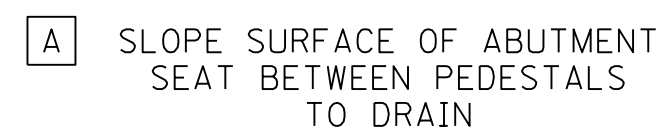
THE PIER 2 FOOTING MAY BE RAISED IF COMPETENT UNWEATHERED BEDROCK IS ENCOUNTERED AT A HIGHER ELEVATION WITH WRITTEN APPROVAL OF THE GEOTECHNICAL ENGINEER AFTER EVALUATION OF EXISTING CONDITIONS. REGARDLESS OF FINAL ELEVATION, CONDITIONS SHALL MEET THE REQUIREMENTS OF THE CONSTRUCTION ACCESS BID ITEM AND SHALL NOT BE RAISED ABOVE AN ELEVATION OF 870.

THE PIER 3 FOOTING ELEVATION SHALL NOT BE RAISED REGARDLESS OF SITE CONDITIONS.

PIER 4 FOOTINGS MAY BE LOWERED AS NECESSARY TO MEET THE REQUIREMENTS OF THE CONSTRUCTION ACCESS BID ITEM BASED ON FIELD CONDITIONS. IF LOWERED, THE FINAL FOOTING ELEVATION SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. COLUMN DOWEL BARS PROVIDE ADDITIONAL LENGTH TO ALLOW THE FOOTING TO BE LOWERED UP TO 5 FEET AND STILL MEET MINIMUM LAP SPLICE REQUIREMENTS.

ITEM NUMBER
12-263.63

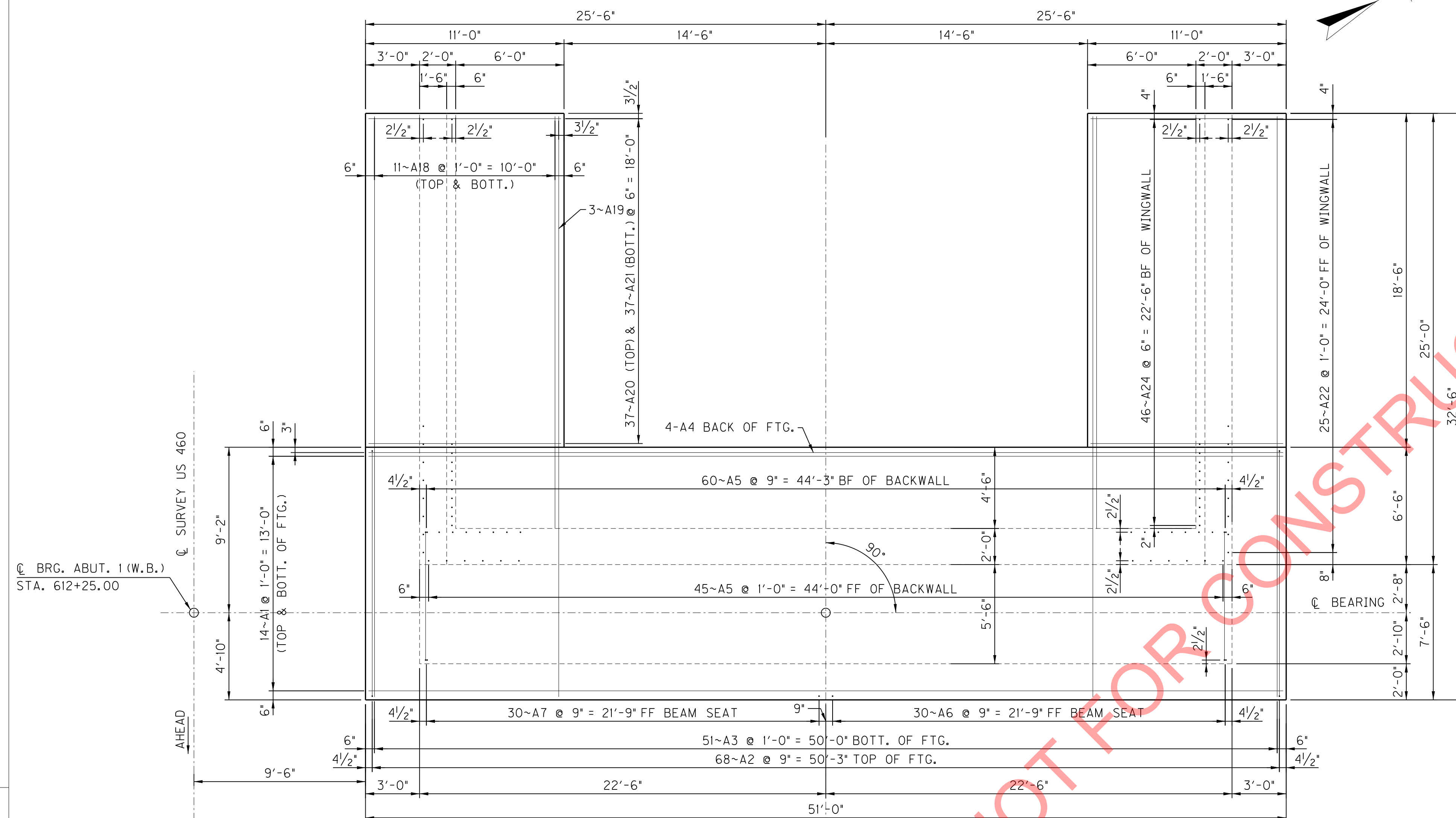
REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: R.M. DAMON		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
<i>FOUNDATION LAYOUT</i>			
PREPARED BY <i>PALMER ENGINEERING CO.</i>			SHEET NO. S07 DRAWING NO. 27242



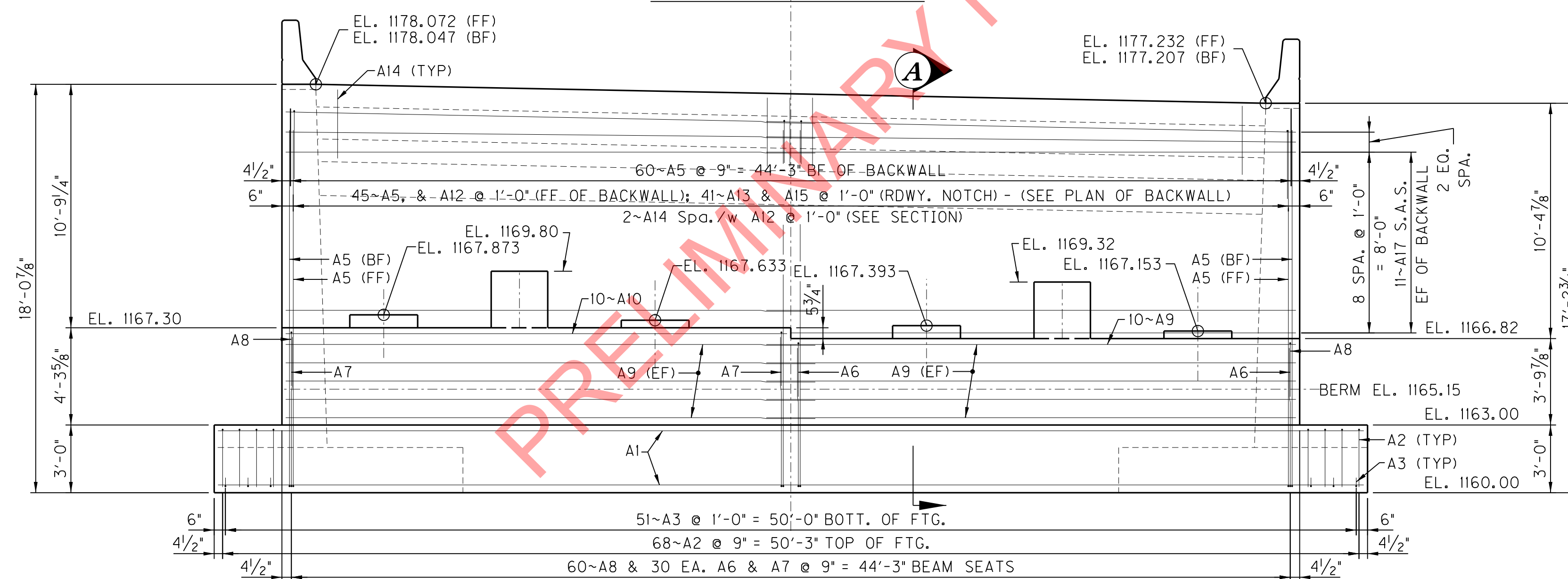
NOTE: FOR PEDESTAL AND SHEAR BLOCK DETAILS SEE SHEET S14
PEDESTALS AND SHEAR BLOCKS ARE CLASS "A" CONCRETE.
FOR BACKFILL DETAILS SEE SHEET S10.

#5 BAR - 2'-11"
#6 BAR - 3'-6"
#7 BAR - 4'-8"
#8 BAR - 6'-2"

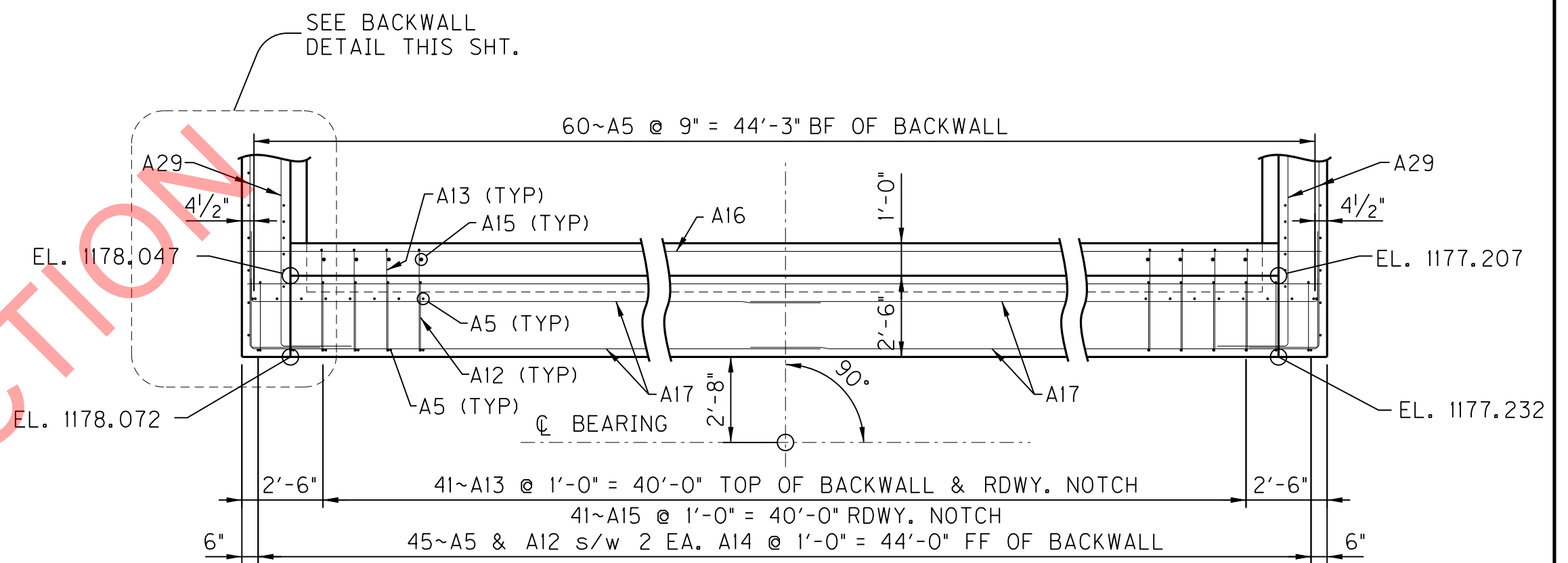
REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: A.C. THOMAS		C.M. GREENWELL	
DETAILED BY: J.A. ROSE		A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
ABUTMENT 1 - WESTBOUND			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S08 DRAWING NO. 27242



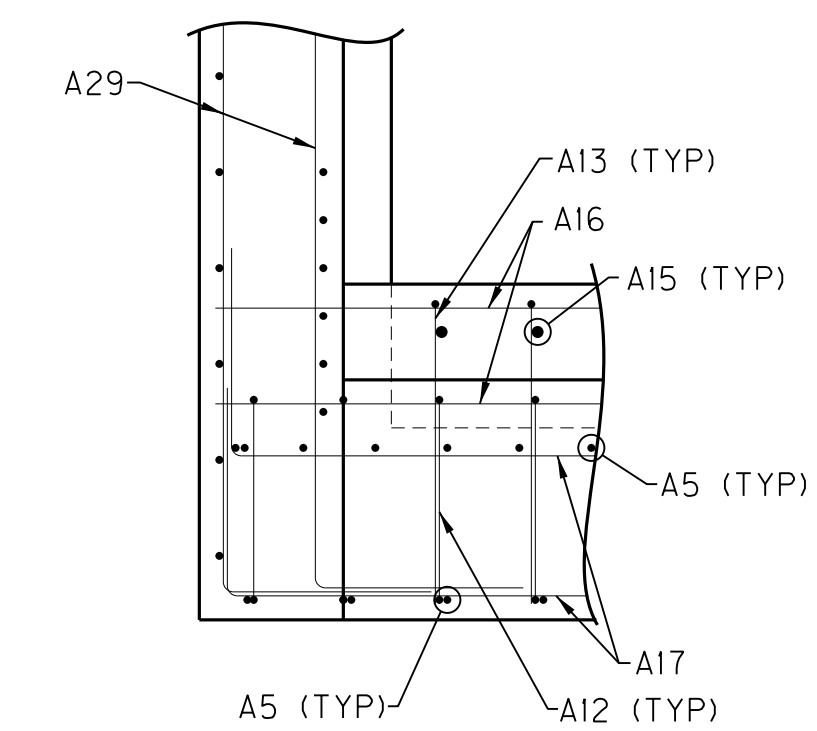
PLAN OF FOOTING



ELEVATION



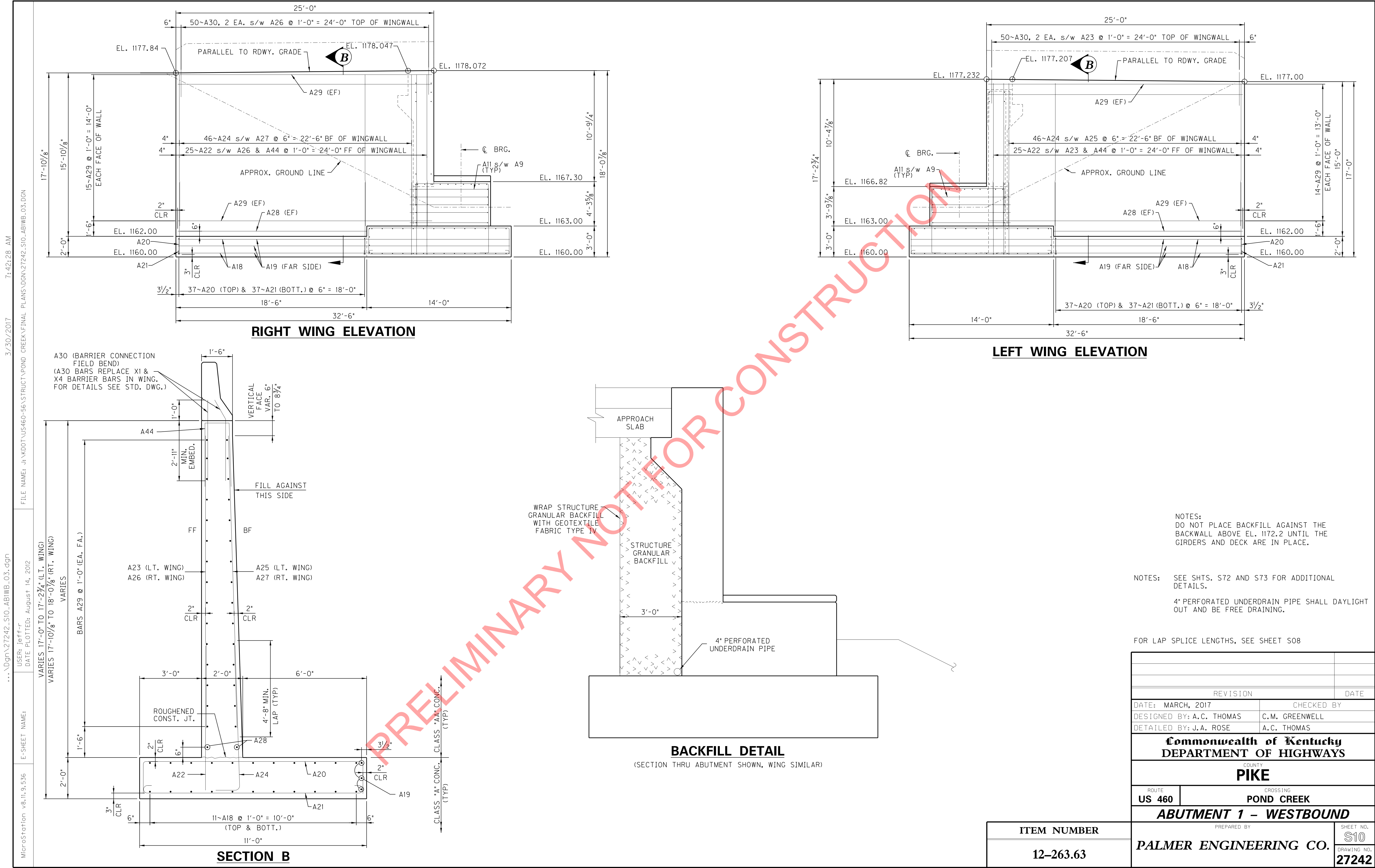
PLAN OF BACKWALL

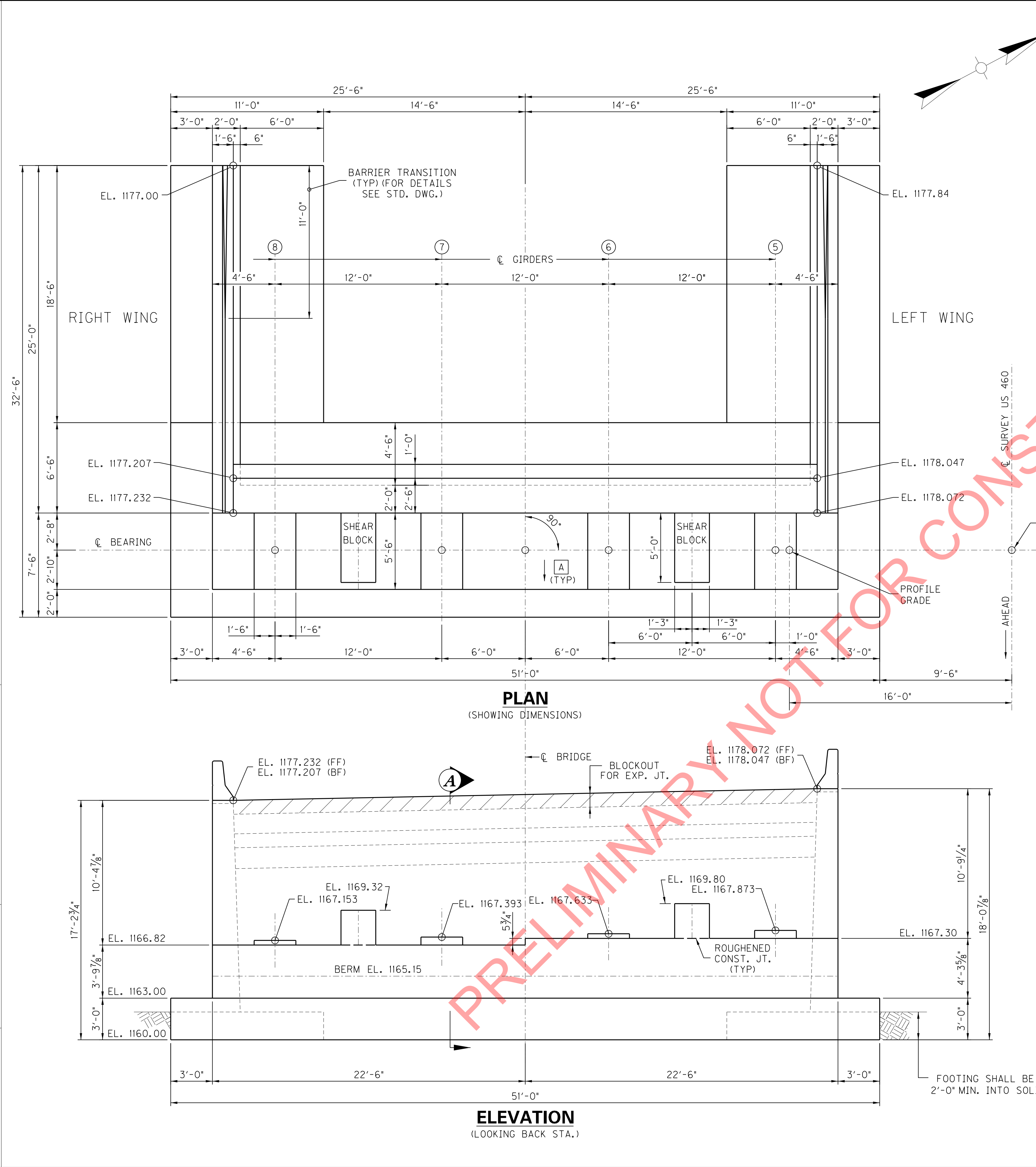


BACKWALL DETAIL

FOR LAP SPLICE LENGTHS, SEE SHEET S08

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: A.C. THOMAS		C.M. GREENWELL	
DETAILED BY: J.A. ROSE		A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
ABUTMENT 1 – WESTBOUND			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S09 DRAWING NO. 27242





NOT FOR CONSTRUCTION

BRG. ABUT. 1 (E.B.)
STA. 612+25.00

PLAN
(SHOWING DIMENSIONS)

ELEVATION
(LOOKING BACK STA.)

SECTION A

NOTES:
DO NOT PLACE BACKFILL AGAINST THE BACKWALL ABOVE EL. 1172.2 UNTIL THE GIRDERS AND DECK ARE IN PLACE.

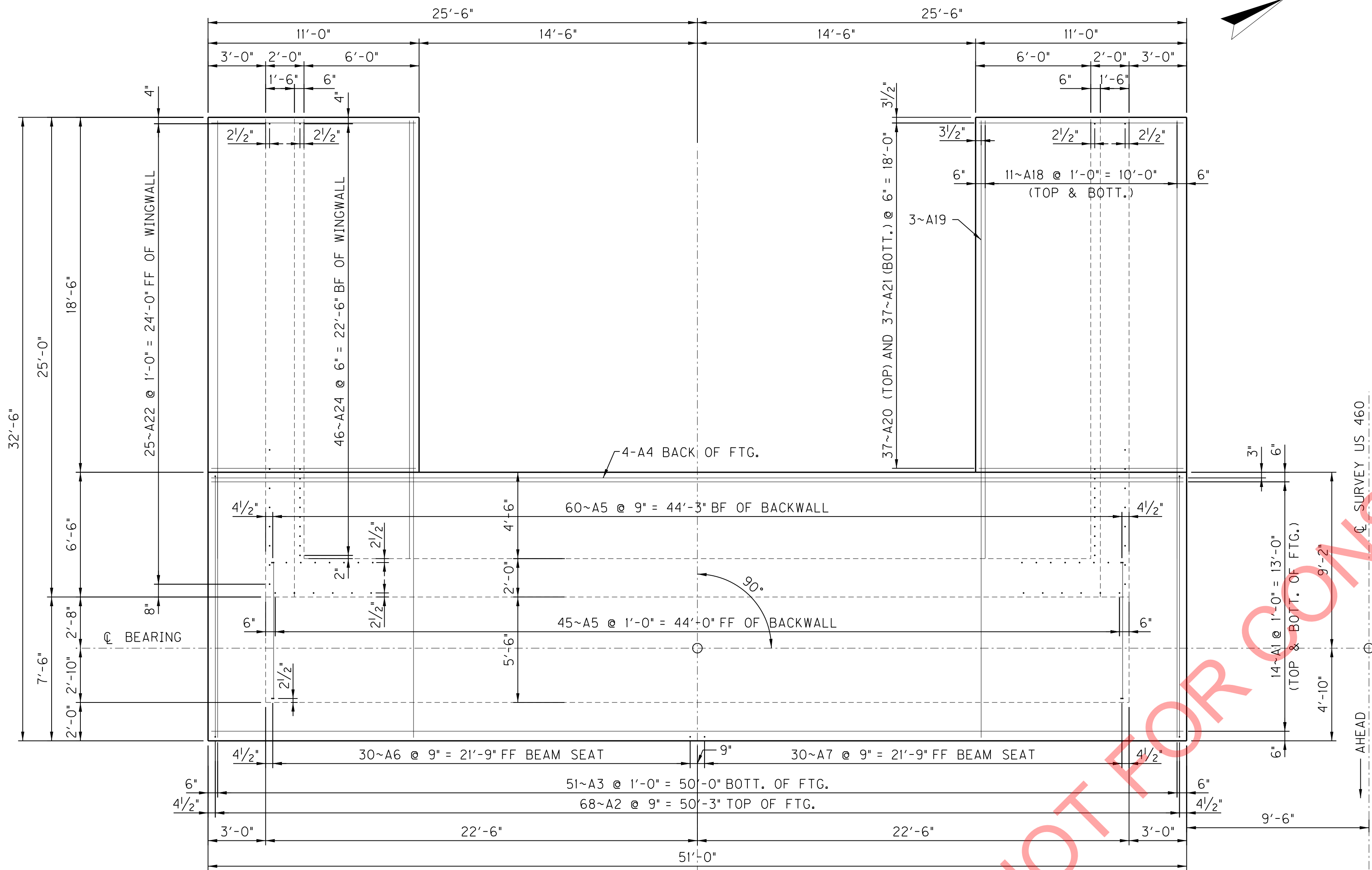
MINIMUM LAP SPLICES
#5 BAR - 2'-11"
#6 BAR - 3'-6"
#7 BAR - 4'-8"
#8 BAR - 6'-2"

NOTE: FOR PEDESTAL AND SHEAR BLOCK DETAILS SEE SHEET S14
PEDESTALS AND SHEAR BLOCKS ARE CLASS "A" CONCRETE.
FOR BACKFILL DETAILS SEE SHEET S13.

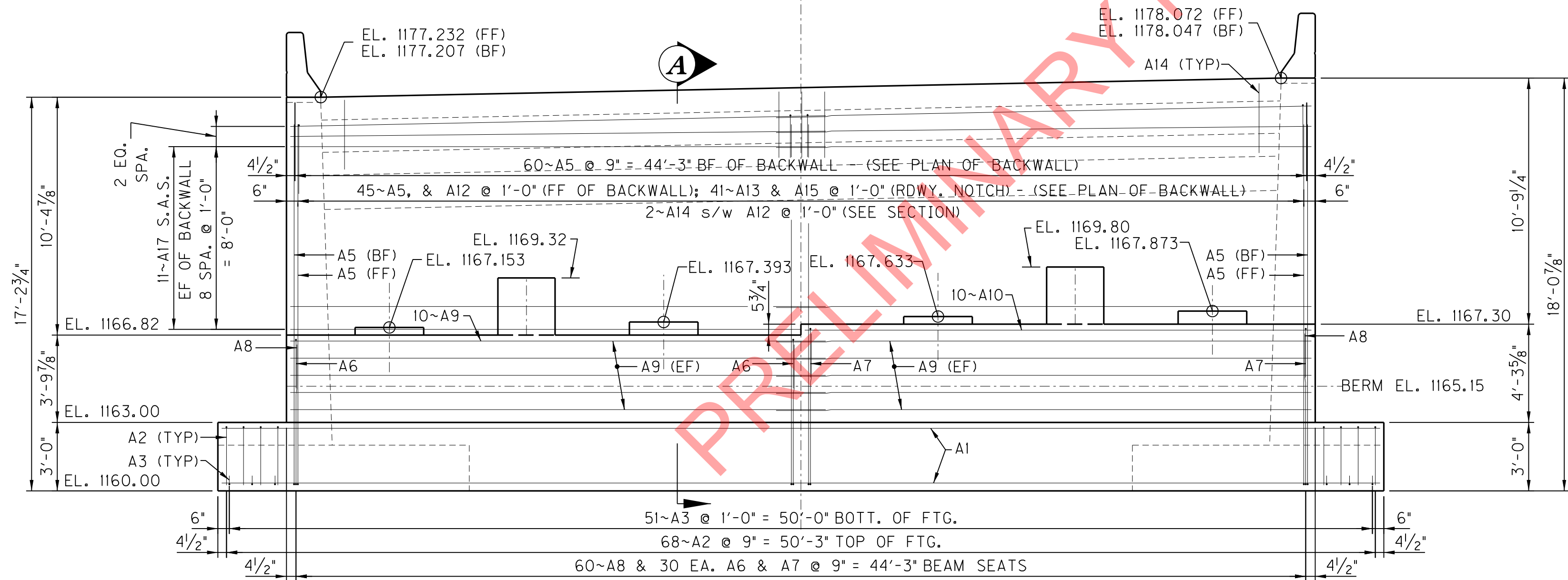
REVISION	DATE
DATE: MARCH, 2017	CHECKED BY:
DESIGNED BY: A.C. THOMAS	C.M. GREENWELL
DETAILED BY: J.A. ROSE	A.C. THOMAS

Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS	
COUNTY	
PIKE	
ROUTE	CROSSING
US 460	POND CREEK
ABUTMENT 1 - EASTBOUND	
ITEM NUMBER	PREPARED BY
12-263.63	PALMER ENGINEERING CO.

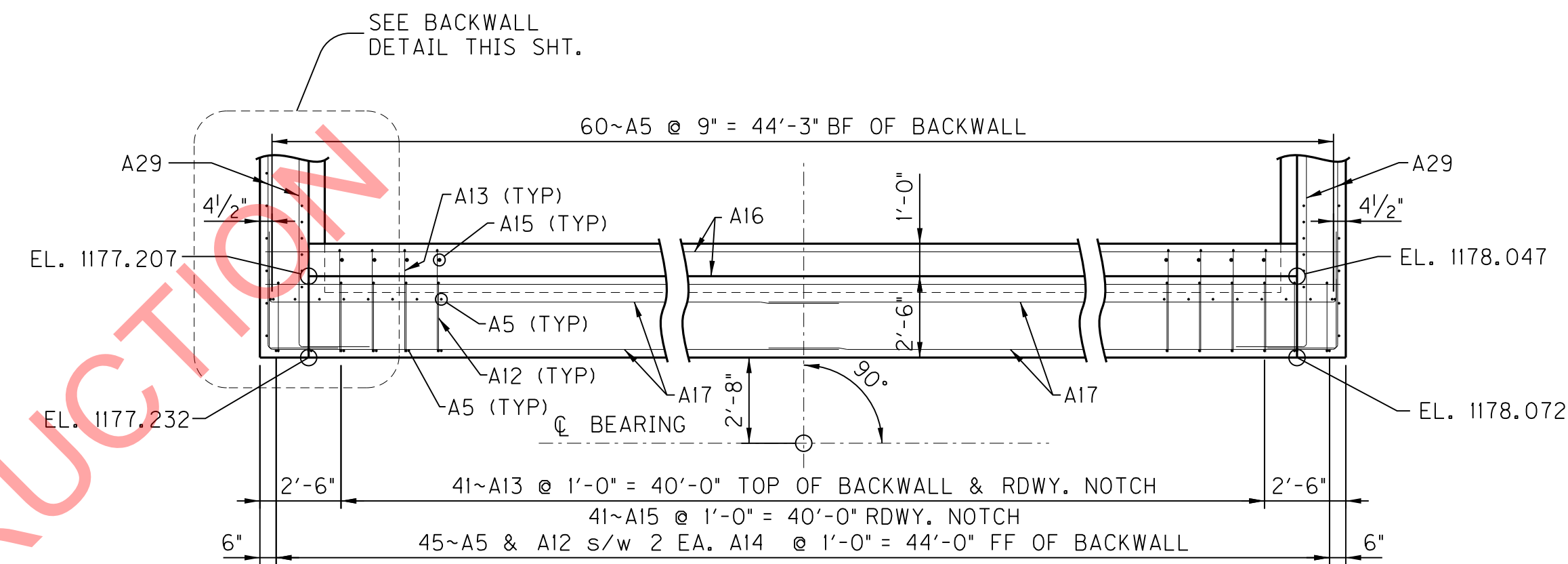
SHEET NO.	DRAWING NO.
S11	27242



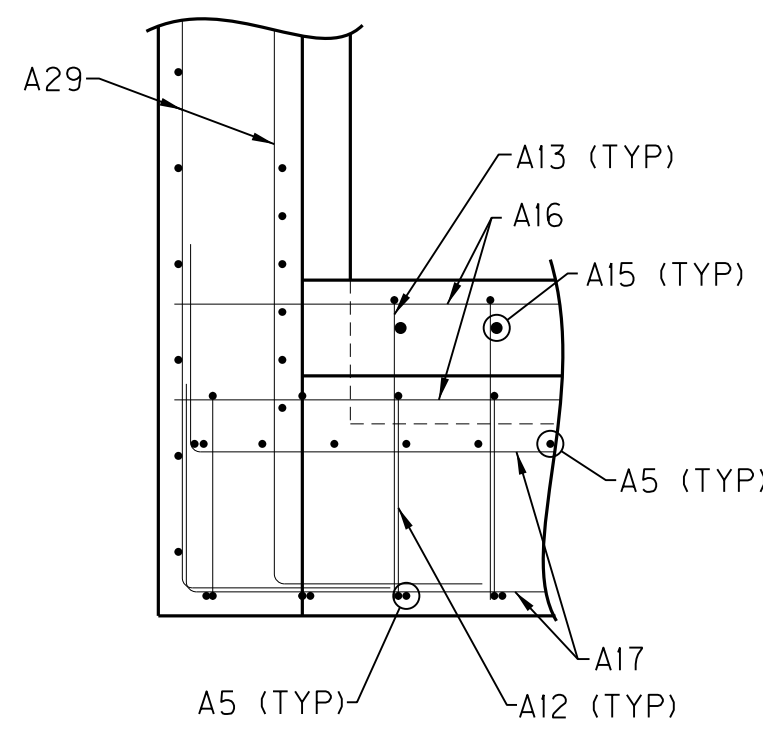
PLAN OF FOOTING



ELEVATION



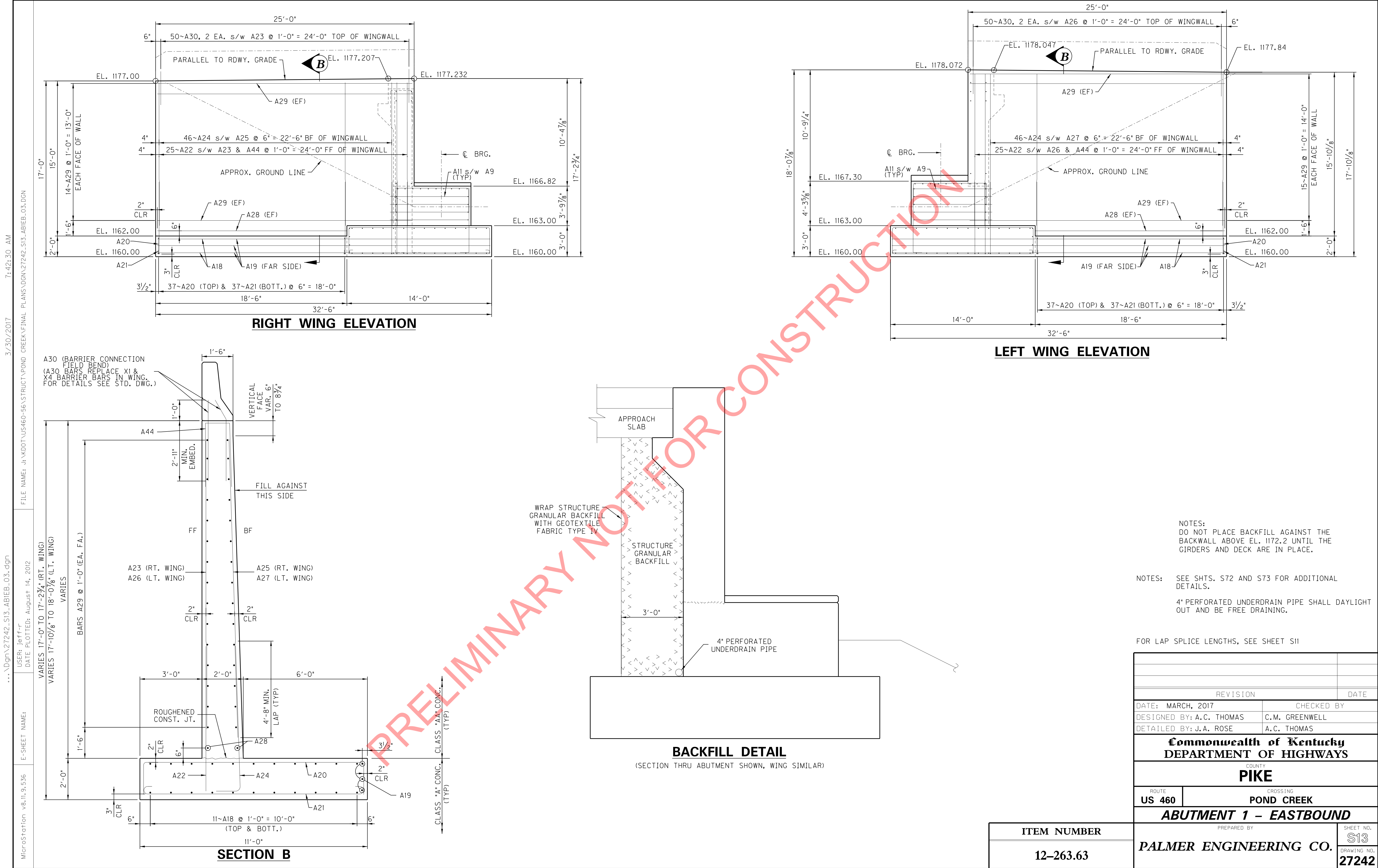
PLAN OF BACKWALL

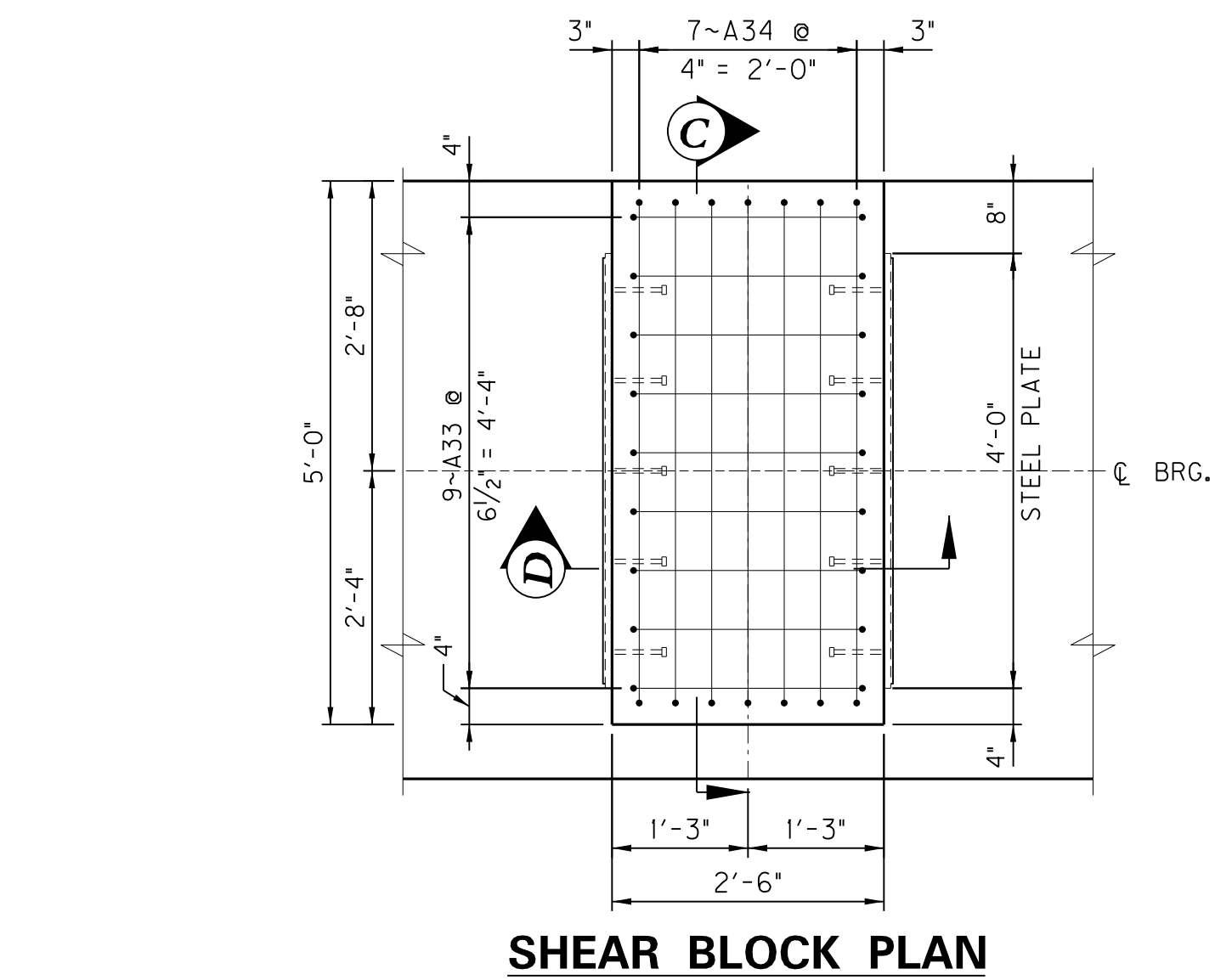


BACKWALL DETAIL

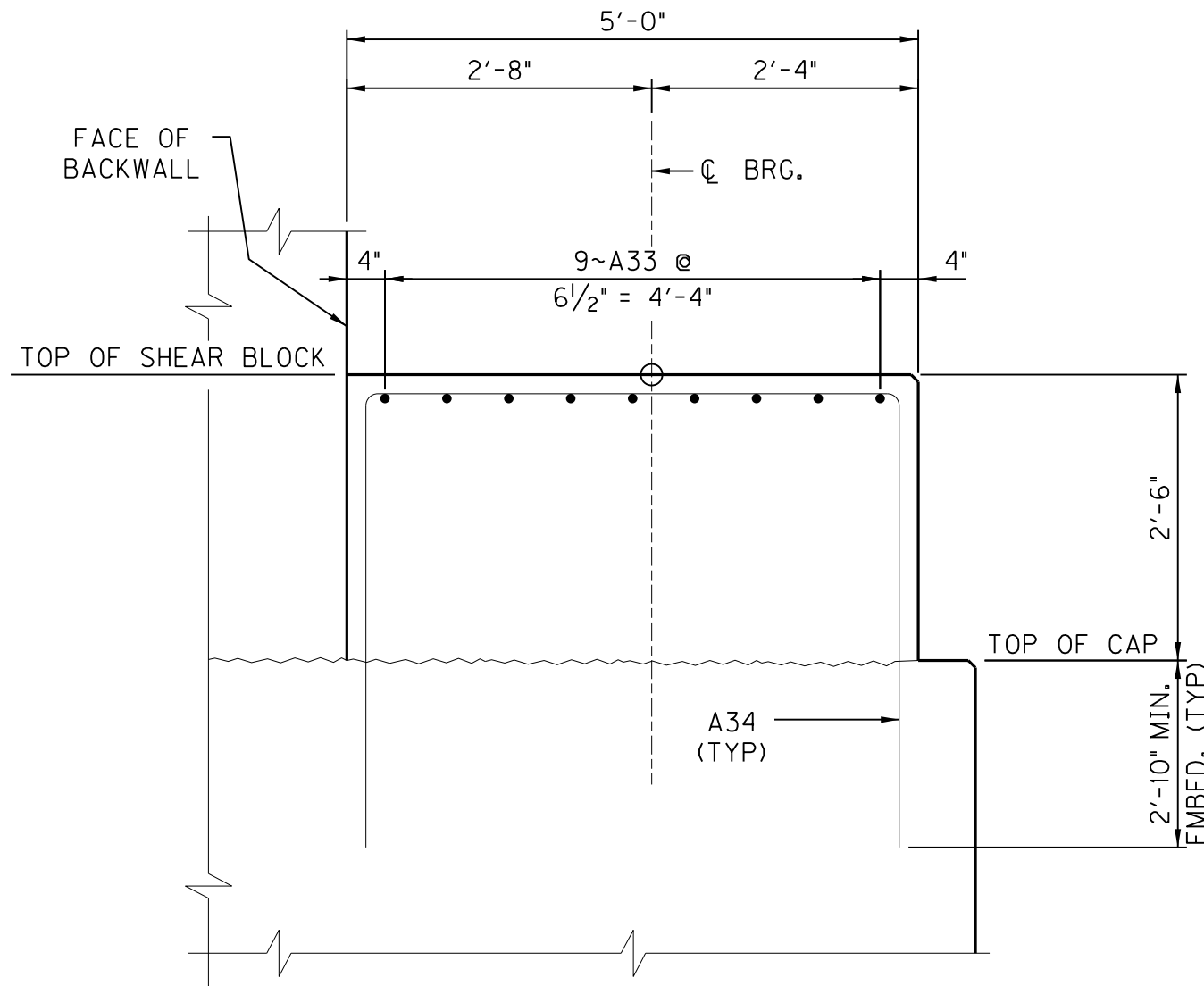
FOR LAP SPLICE LENGTHS, SEE SHEET S11

REVISION		DATE
DATE: MARCH, 2017	CHECKED BY	
DESIGNED BY: A.C. THOMAS	C.M. GREENWELL	
DETAILED BY: J.A. ROSE	A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
<i>ABUTMENT 1 – EASTBOUND</i>		
PREPARED BY		SHEET NO. S12
<i>PALMER ENGINEERING CO.</i>		DRAWING NO. 27242



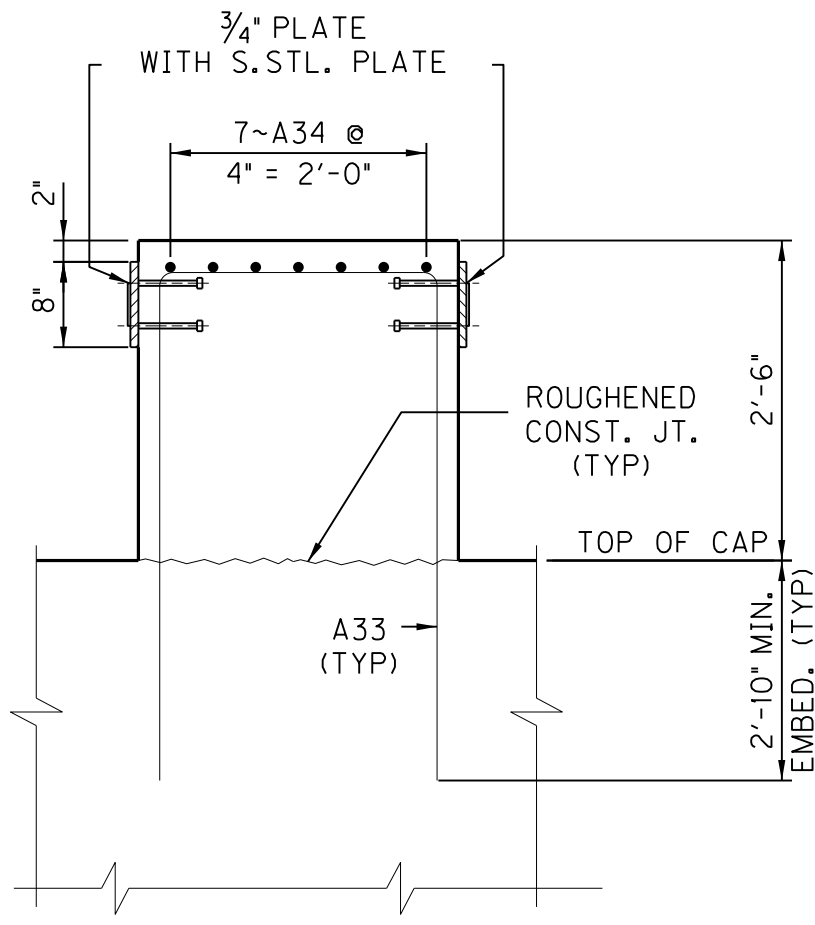


SHEAR BLOCK PLAN



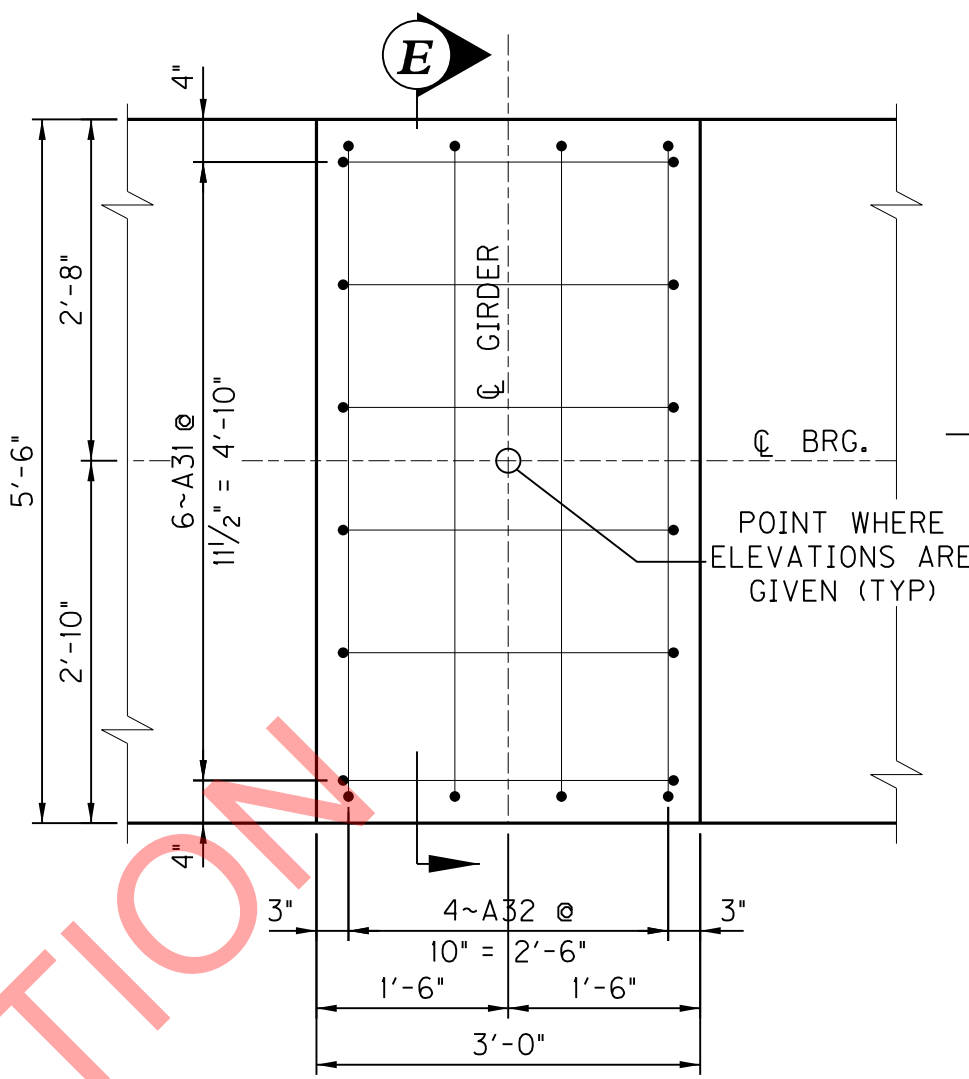
SECTION "C"

TYPICAL SHEAR BLOCK DETAILS



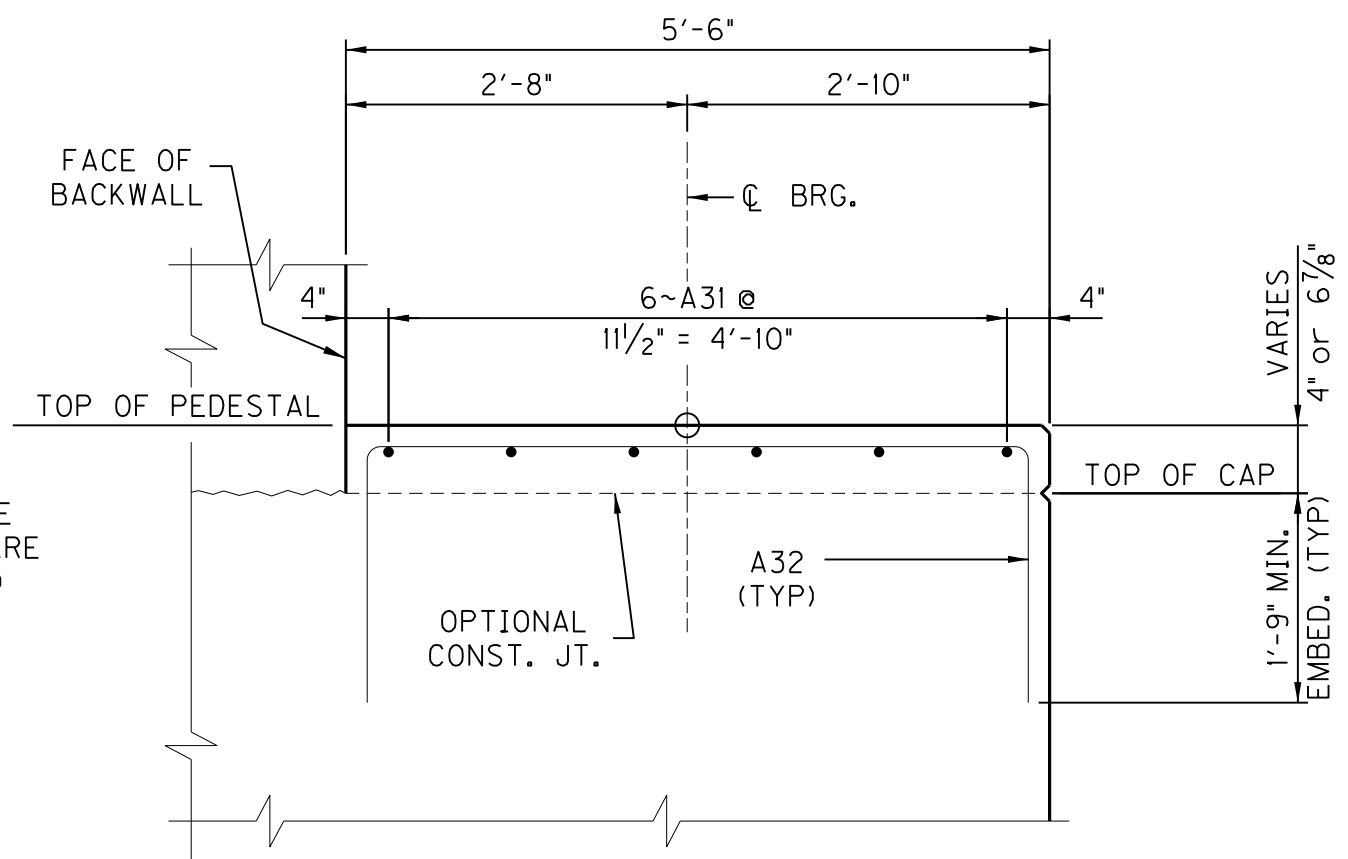
SECTION "D"

- NOTES:
1. STAINLESS STEEL SHALL BE ASTM A167 OR ASTM A264, TYPE 304. SLIDING CONTACT SURFACES SHALL HAVE AN ANSI 125 OR BETTER FINISH AFTER FABRICATION. THE STAINLESS STEEL SHALL HAVE A MINIMUM THICKNESS OF 1/8". SPOT WELDS SHALL BE UNIFORMLY SPACED THROUGHOUT THE BEARING AREA. SEAL WELDS SHALL BE CONTINUOUS FOR THE ENTIRE PERIMETER OF THE STAINLESS STEEL SHEET.
 2. PTFE: POLYTETRAFLUORETHYLENE SLIDING SURFACES SHALL COMPLY WITH SECTION 14, OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE PTFE PAD SHALL BE FACTORY BONDED OR MECHANICALLY FASTENED TO THE PLATES ACCORDING TO MANUFACTURERS RECOMMENDATION. UNCONFINED, UNFILLED SHEETS SHALL NOT BE USED.
 3. STAINLESS STEEL PLATES AND PTFE SHEETS SHALL BE INCIDENTAL TO STRUCTURAL STEEL.

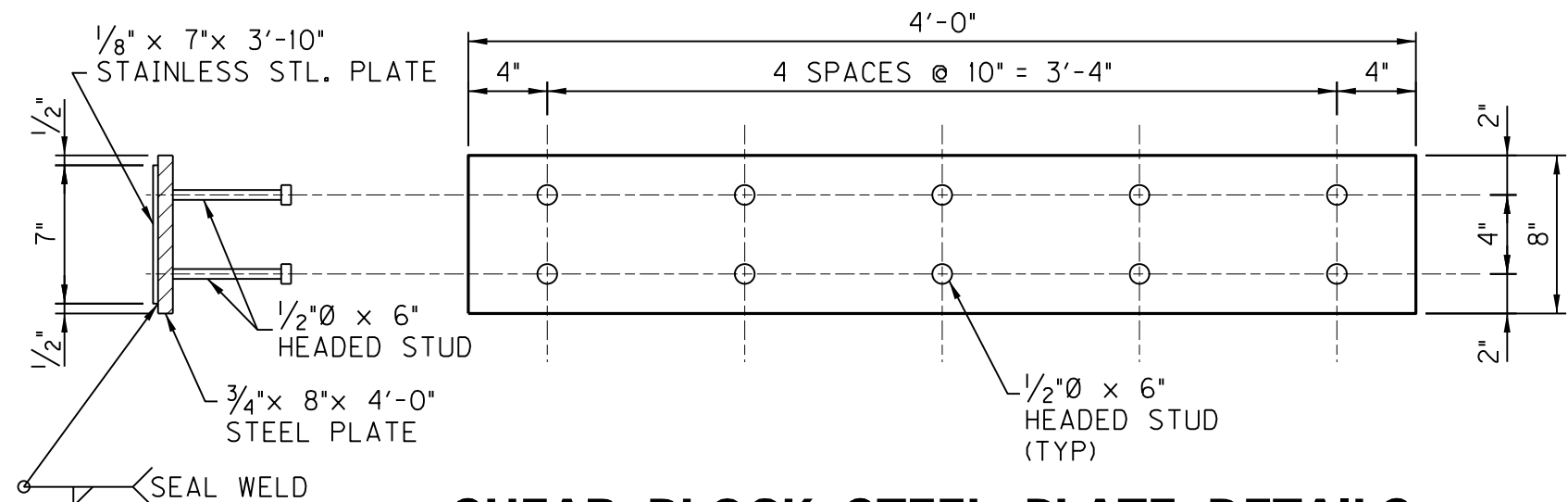


PLAN

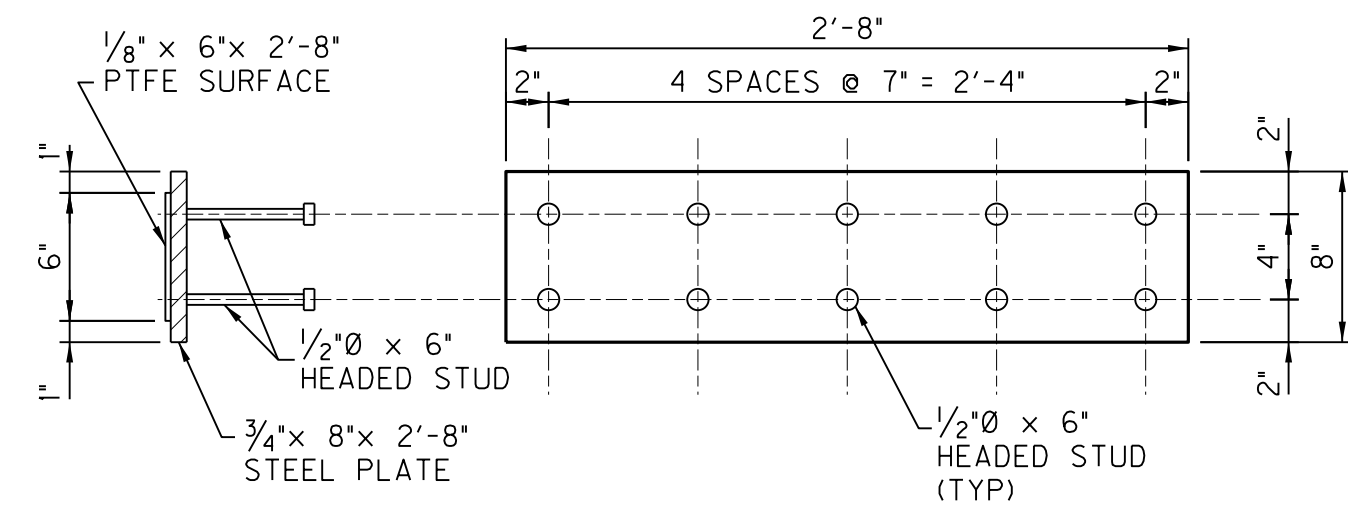
TYPICAL PEDESTAL DETAILS



SECTION "E"



SHEAR BLOCK STEEL PLATE DETAILS

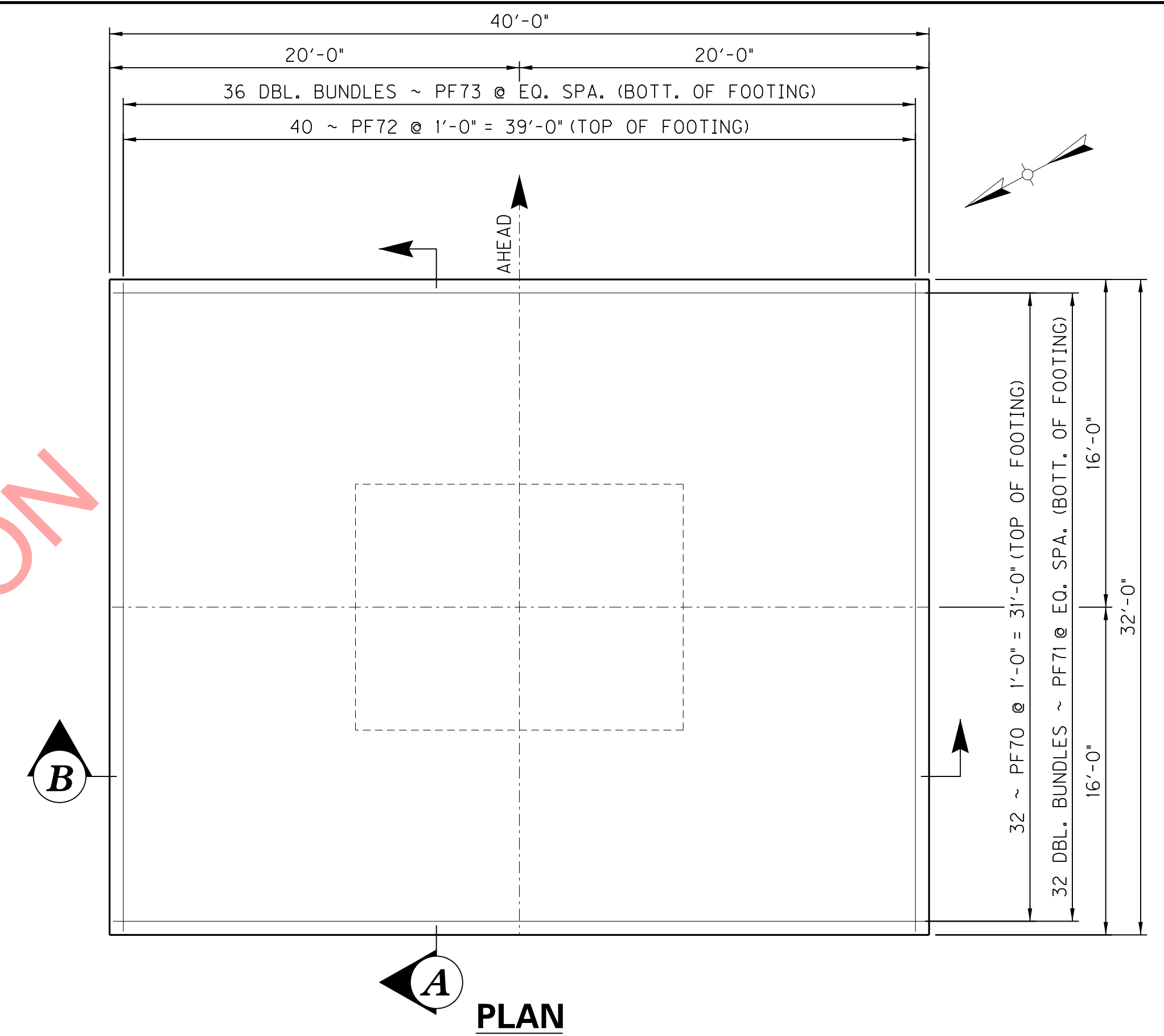
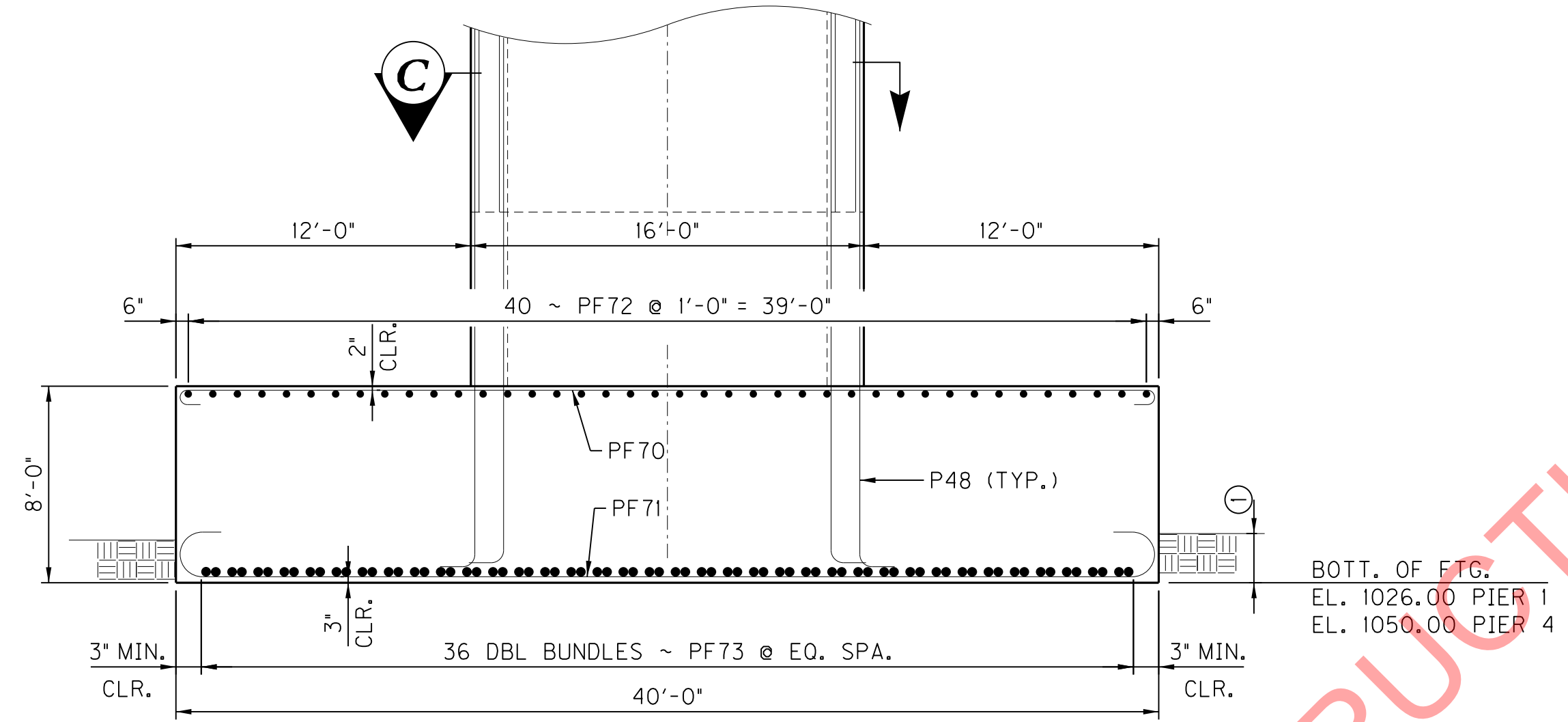
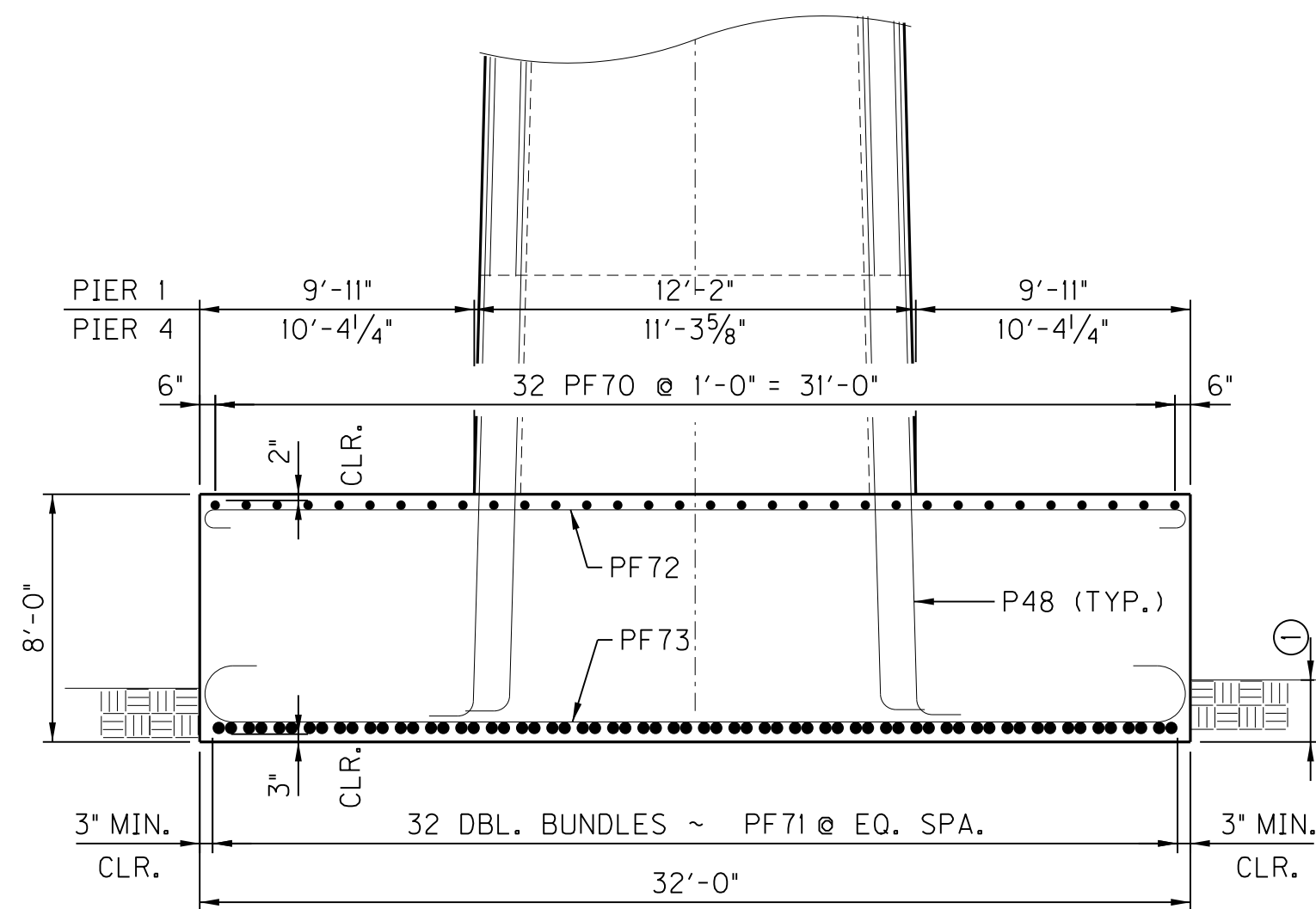


DIAPHRAGM STEEL PLATE DETAILS

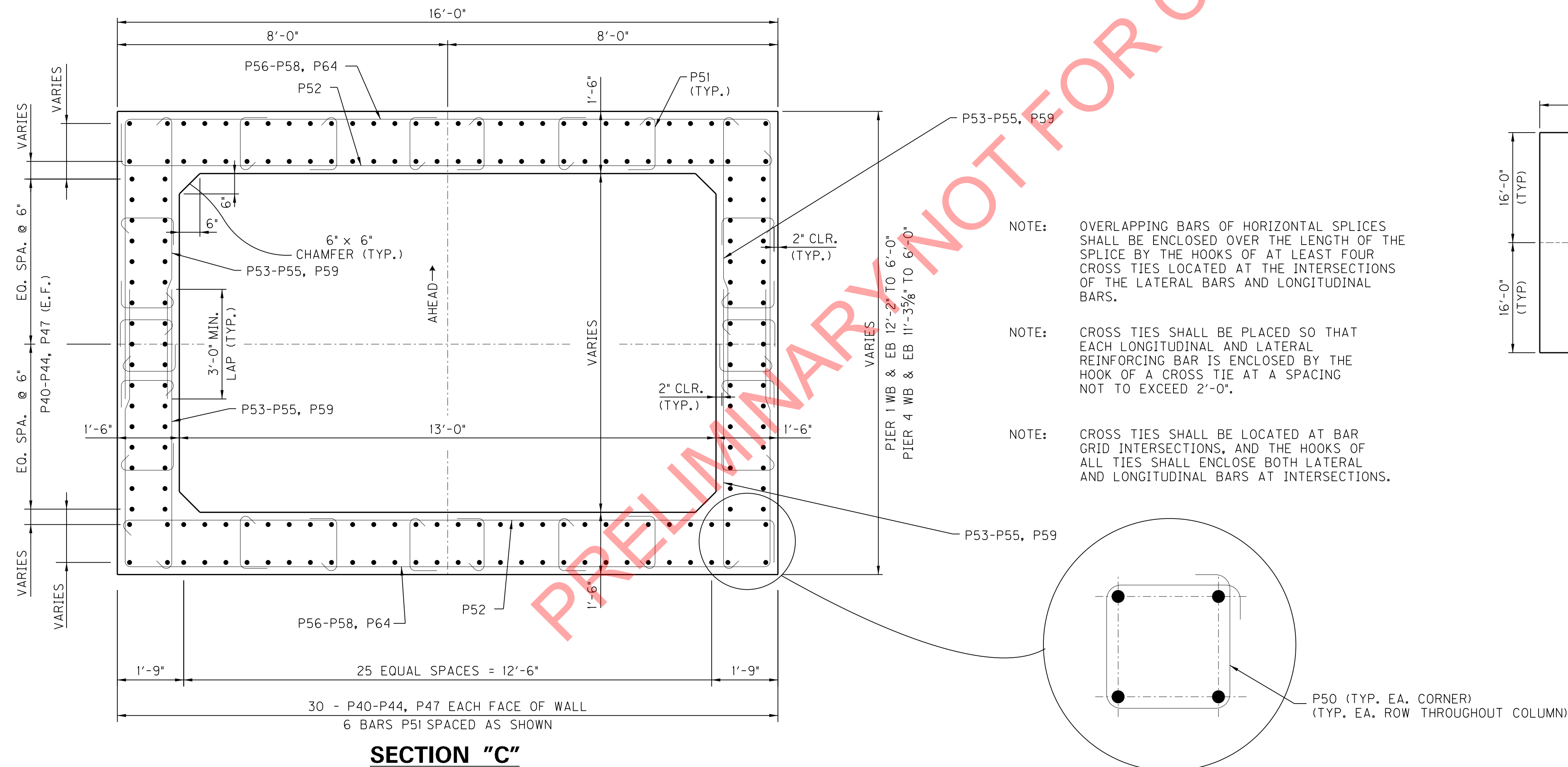
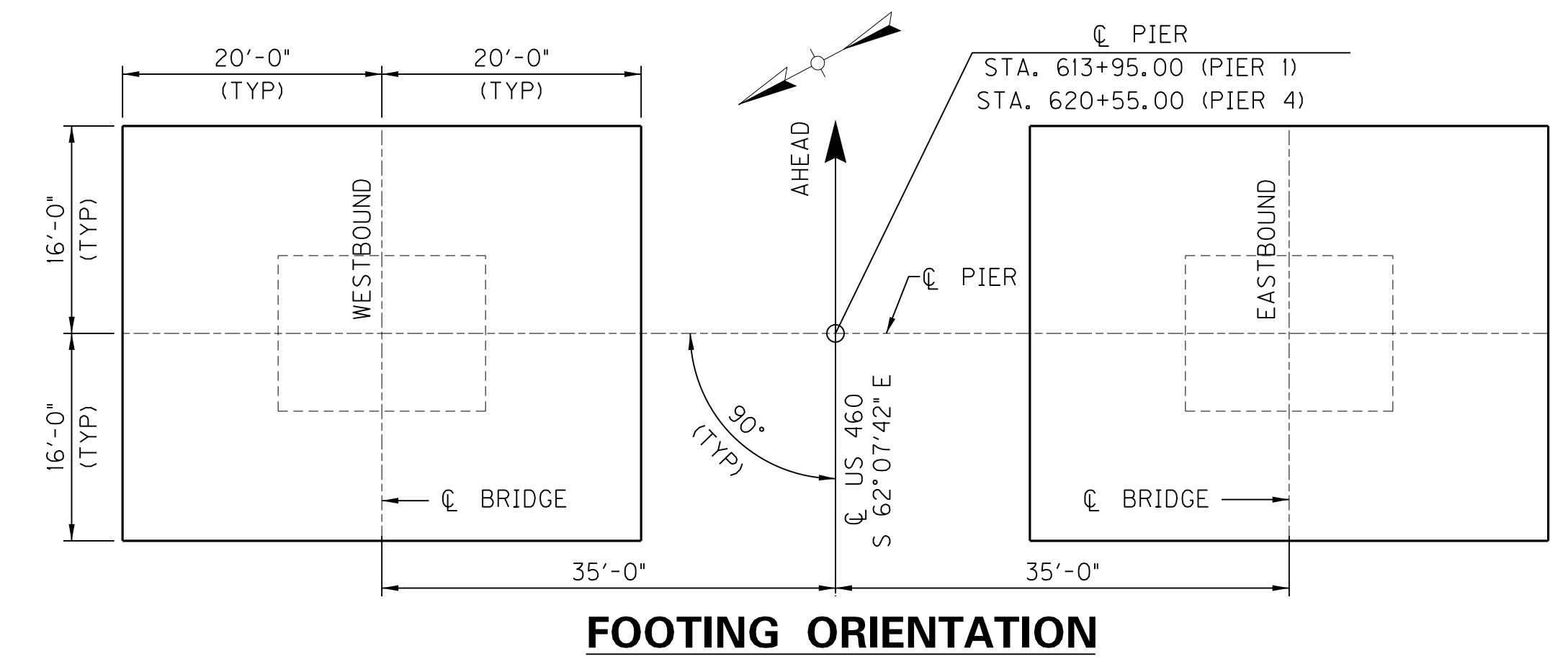
DIAPHRAGM AND SHEAR BLOCK SLIDE PLATES

REVISION		DATE
DATE: MARCH, 2017	CHECKED BY	
DESIGNED BY: A.C. THOMAS	C.M. GREENWELL	
DETAILED BY: J.A. ROSE	A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
ABUTMENT DETAILS		
PREPARED BY		SHEET NO. S14
PALMER ENGINEERING CO.		DRAWING NO. 27242

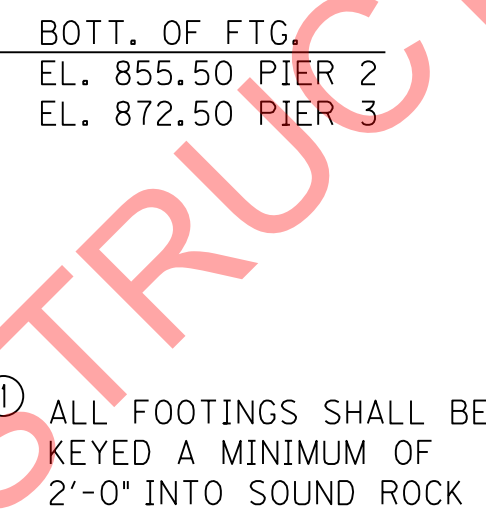
ITEM NUMBER
12-263.63



PIER 4 FOOTINGS MAY BE LOWERED AS NECESSARY TO MEET THE REQUIREMENTS OF THE CONSTRUCTION ACCESS BID ITEM BASED ON FIELD CONDITIONS. IF LOWERED, THE FINAL FOOTING ELEVATION SHALL BE APPROVED BY THE ENGINEER. COLUMN DOWEL BARS PROVIDE ADDITIONAL LENGTH TO ALLOW THE FOOTING TO BE LOWERED UP TO 5 FEET AND STILL MEET MINIMUM LAP SPLICE REQUIREMENTS.



REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: R.M. DAMON		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		R.M. DAMON	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
FOOTING - PIERS 1 & 4			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S15 DRAWING NO. 27242



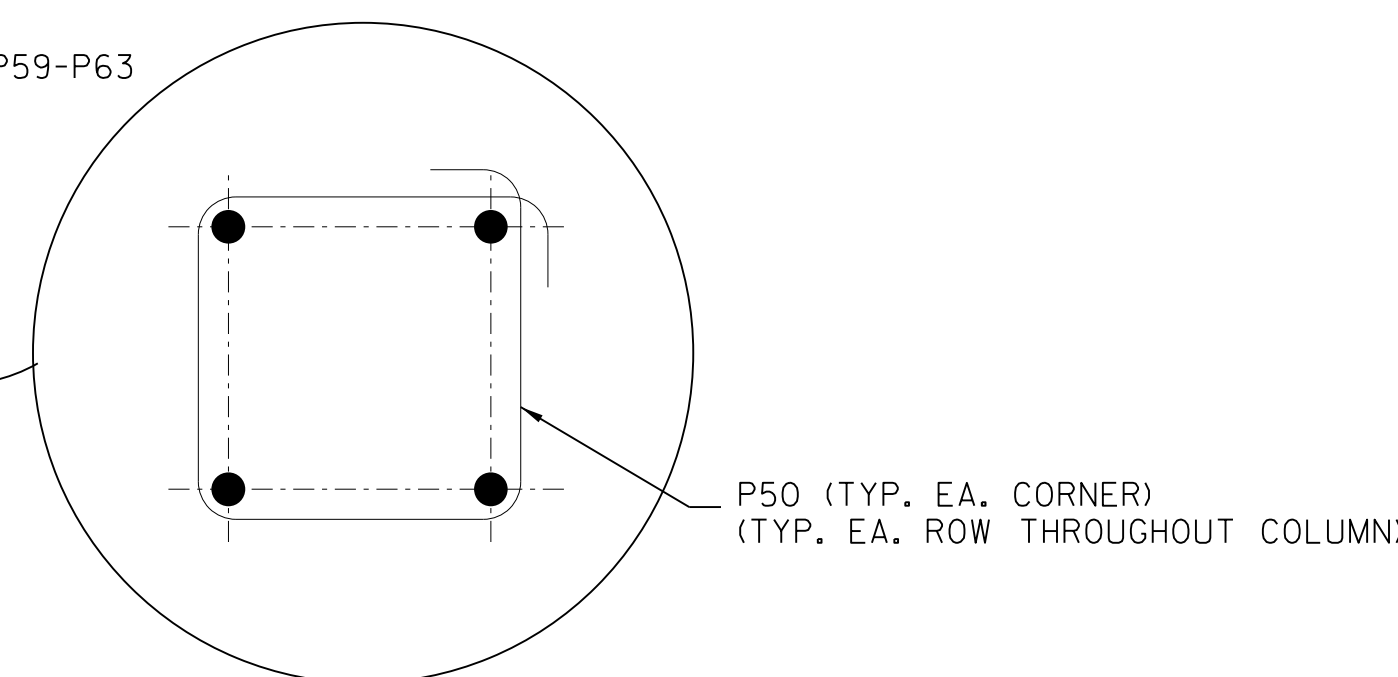
PIER 2 WB & EB 20'-9 1/2" TO 6'-0"

PIER 3 WB & EB 20'-0 3/4" TO 6'-0"

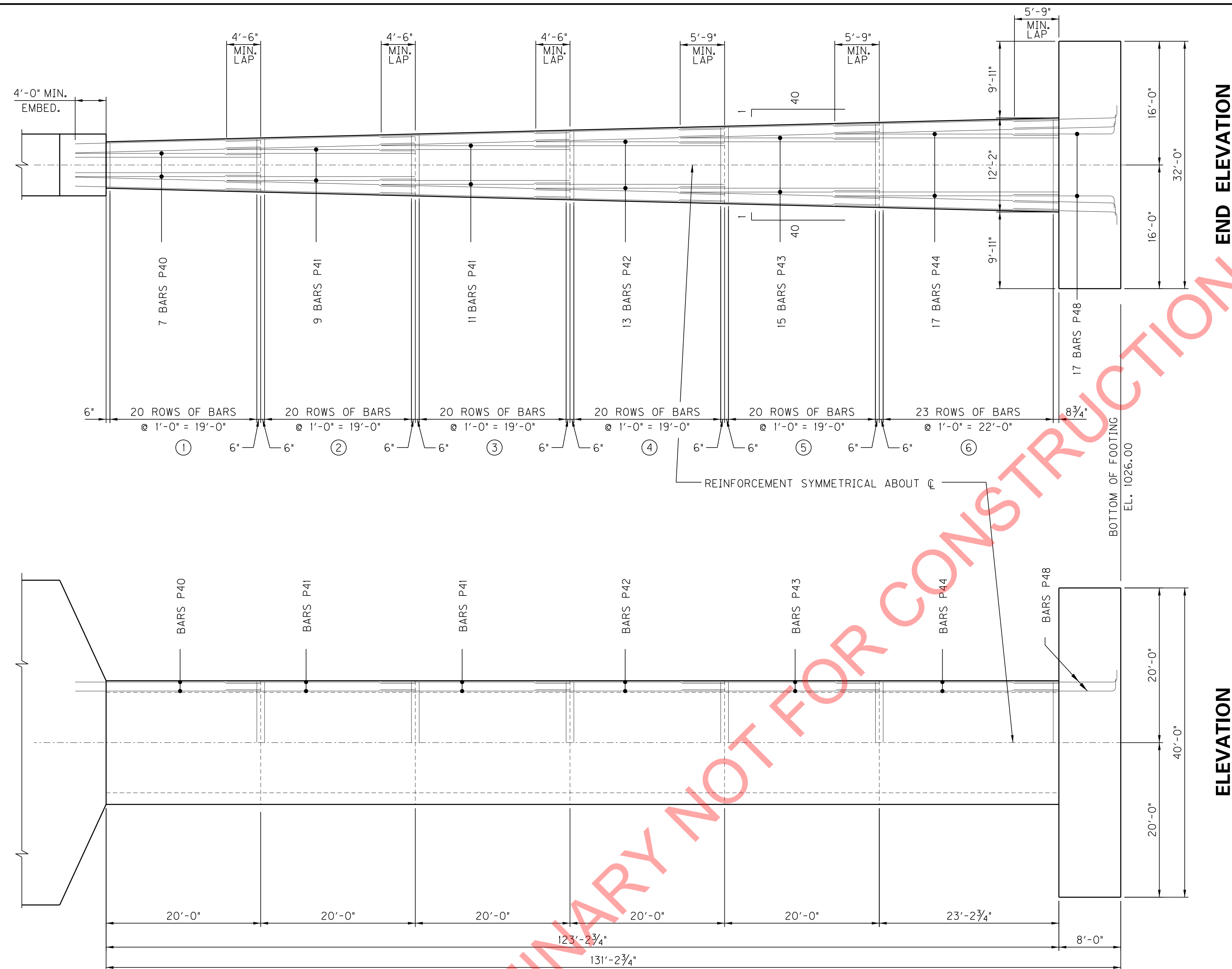
NOTE: OVERLAPPING BARS OF HORIZONTAL SPLICES SHALL BE ENCLOSED OVER THE LENGTH OF THE SPLICE BY THE HOOKS OF AT LEAST FOUR CROSS TIES LOCATED AT THE INTERSECTIONS OF THE LATERAL BARS AND LONGITUDINAL BARS.

NOTE: CROSS TIES SHALL BE PLACED SO THAT EACH LONGITUDINAL AND LATERAL REINFORCING BAR IS ENCLOSED BY THE HOOK OF A CROSS TIE AT A SPACING NOT TO EXCEED 2'-0".

NOTE: CROSS TIES SHALL BE LOCATED AT BAR GRID INTERSECTIONS, AND THE HOOKS OF ALL TIES SHALL ENCLOSE BOTH LATERAL AND LONGITUDINAL BARS AT INTERSECTIONS.



REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: A.C. THOMAS		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
FOOTING - PIERS 2 & 3			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S16 DRAWING NO. 27242

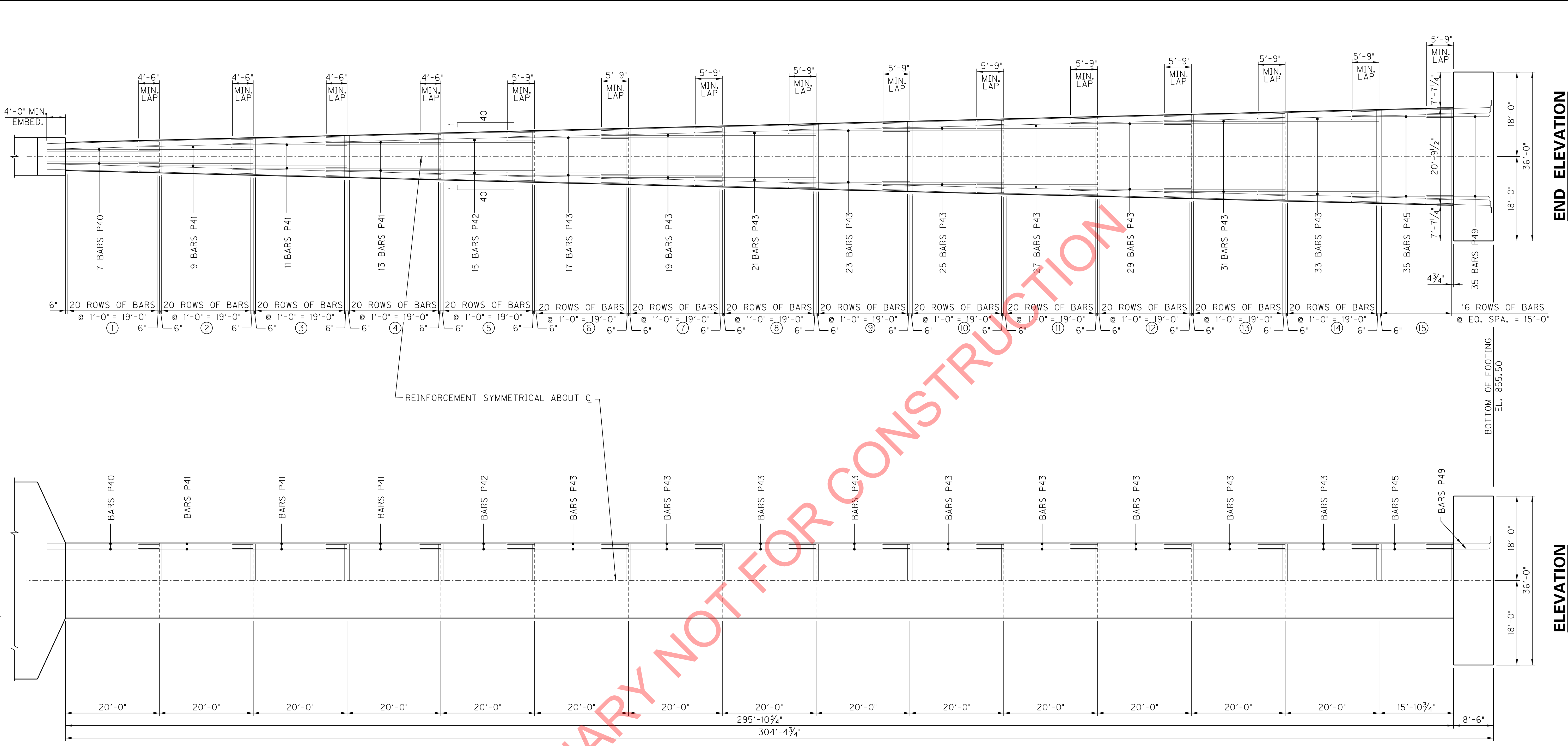


- ① EACH ROW CONSISTS OF:
4-P53, 2-P52, 2-P56, 20-P51, 4-P50
- ② EACH ROW CONSISTS OF:
4-P53, 2-P52, 2-P56, 20-P51, 4-P50
- ③ EACH ROW CONSISTS OF:
4-P54, 2-P52, 2-P57, 20-P51, 4-P50
- ④ EACH ROW CONSISTS OF:
4-P54, 2-P52, 2-P57, 24-P51, 4-P50
- ⑤ EACH ROW CONSISTS OF:
4-P55, 2-P52, 2-P58, 24-P51, 4-P50
- ⑥ EACH ROW CONSISTS OF:
4-P59, 2-P52, 2-P64, 24-P51, 4-P50

SEE SHT. S15 FOR COLUMN CROSS SECTION

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: R.M. DAMON		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		R.M. DAMON	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
<i>COLUMN - PIER 1 WB & EB</i>			
PREPARED BY <i>PALMER ENGINEERING CO.</i>			SHEET NO. S17 DRAWING NO. 27242

ITEM NUMBER
12-263.63



- ① EACH ROW CONSISTS OF:
4-P53, 2-P52, 2-P56, 20-P51, 4-P50
- ② EACH ROW CONSISTS OF:
4-P53, 2-P52, 2-P56, 20-P51, 4-P50
- ③ EACH ROW CONSISTS OF:
4-P54, 2-P52, 2-P57, 20-P51, 4-P50
- ④ EACH ROW CONSISTS OF:
4-P54, 2-P52, 2-P57, 24-P51, 4-P50

- ⑤ EACH ROW CONSISTS OF:
4-P55, 2-P52, 2-P58, 24-P51, 4-P50
- ⑥ EACH ROW CONSISTS OF:
4-P55, 2-P52, 2-P58, 24-P51, 4-P50
- ⑦ EACH ROW CONSISTS OF:
4-P59, 2-P52, 2-P64, 28-P51, 4-P50
- ⑧ EACH ROW CONSISTS OF:
4-P59, 2-P52, 2-P64, 28-P51, 4-P50

- ⑨ EACH ROW CONSISTS OF:
4-P60, 2-P52, 2-P65, 28-P51, 4-P50
- ⑩ EACH ROW CONSISTS OF:
4-P60, 2-P52, 2-P65, 32-P51, 4-P50
- ⑪ EACH ROW CONSISTS OF:
4-P61, 2-P52, 2-P66, 32-P51, 4-P50
- ⑫ EACH ROW CONSISTS OF:
4-P61, 2-P52, 2-P66, 32-P51, 4-P50

- ⑬ EACH ROW CONSISTS OF:
4-P62, 2-P52, 2-P67, 36-P51, 4-P50
- ⑭ EACH ROW CONSISTS OF:
4-P62, 2-P52, 2-P67, 36-P51, 4-P50
- ⑮ EACH ROW CONSISTS OF:
4-P63, 2-P52, 2-P68, 36-P51, 4-P50

SEE SHT. S16 FOR COLUMN CROSS SECTION

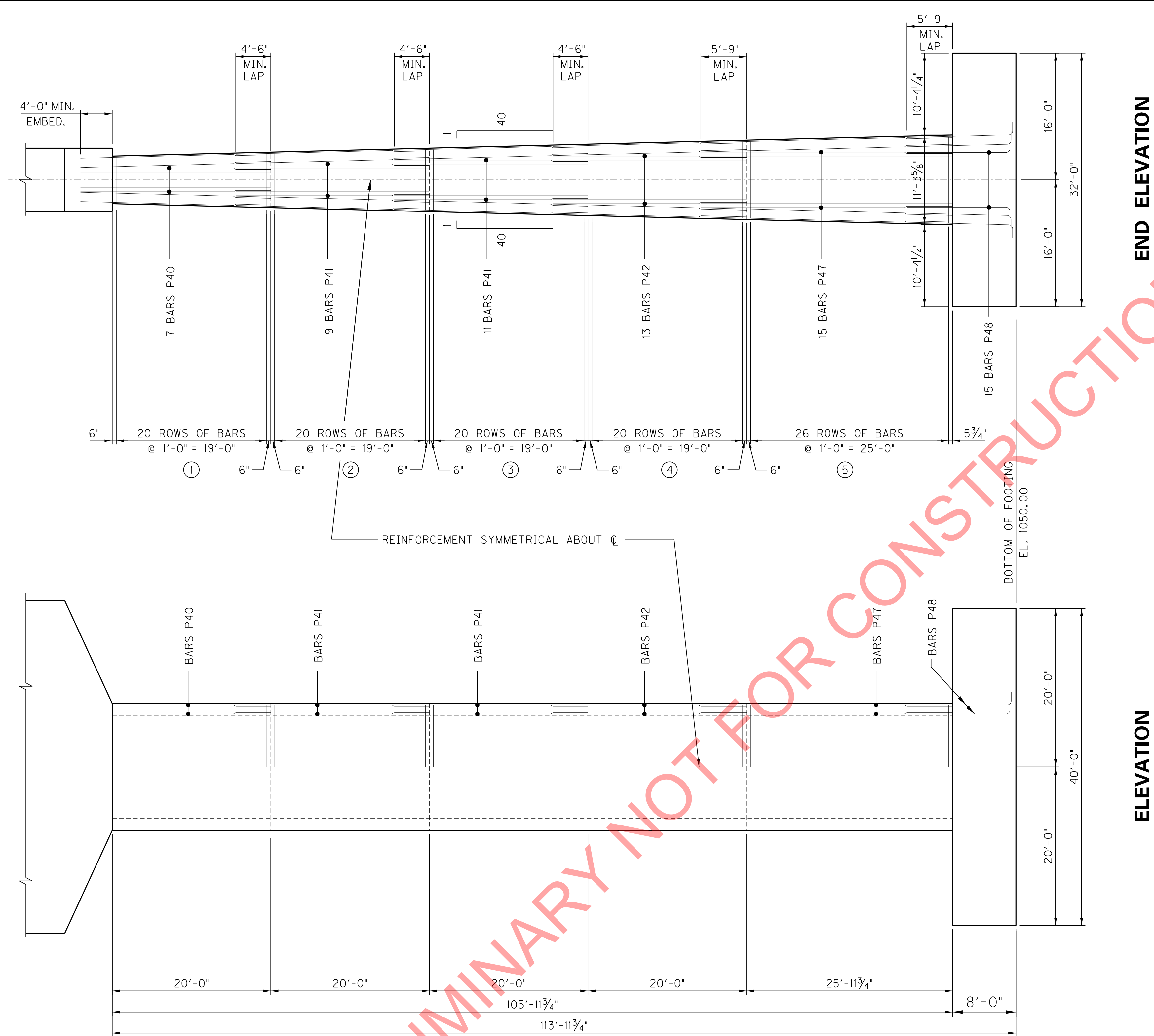
REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: A.C. THOMAS		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY			
PIKE			
ROUTE		CROSSING	
US 460		POND CREEK	
<i>COLUMN – PIER 2 WB & EB</i>			
PREPARED BY			SHEET NO.
<i>PALMER ENGINEERING CO.</i>			S18
			DRAWING NO.
			27242

ITEM NUMBER
12-263.63



REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: A.C. THOMAS		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
<i>COLUMN – PIER 3 WB & EB</i>			
PREPARED BY <i>PALMER ENGINEERING CO.</i>			SHEET NO. S19 DRAWING NO. 27242

ITEM NUMBER
12-263.63



- ① EACH ROW CONSISTS OF:
4-P53, 2-P52, 2-P56, 20-P51, 4-P50

② EACH ROW CONSISTS OF:
4-P53, 2-P52, 2-P56, 20-P51, 4-P50

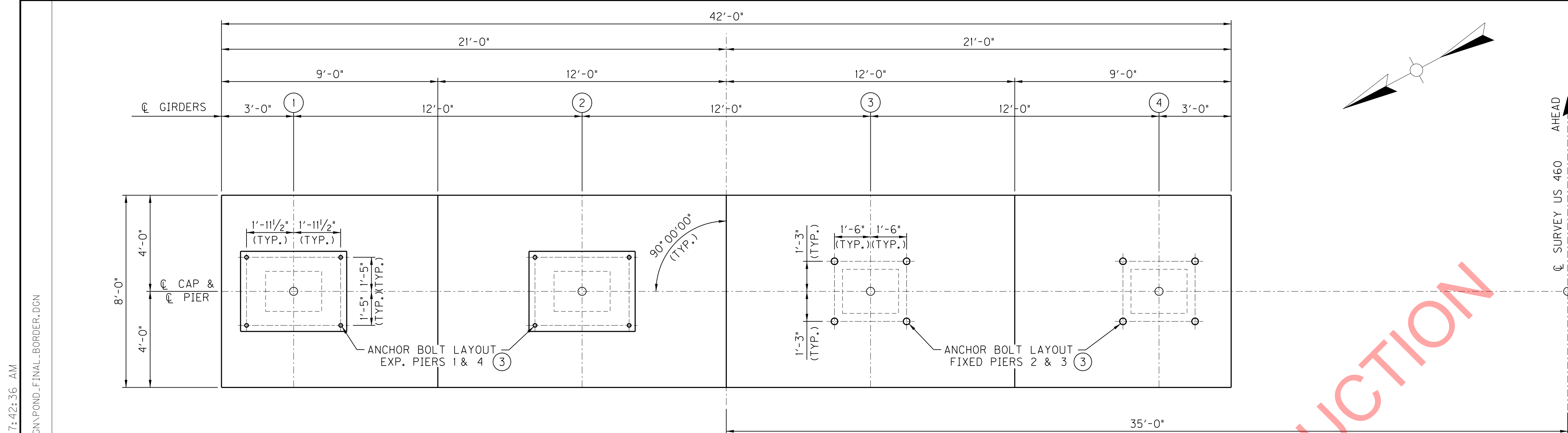
③ EACH ROW CONSISTS OF:
4-P54, 2-P52, 2-P57, 20-P51, 4-P50

④ EACH ROW CONSISTS OF:
4-P54, 2-P52, 2-P57, 24-P51, 4-P50
- ⑤ EACH ROW CONSISTS OF:
4-P55, 2-P52, 2-P58, 24-P51, 4-P50

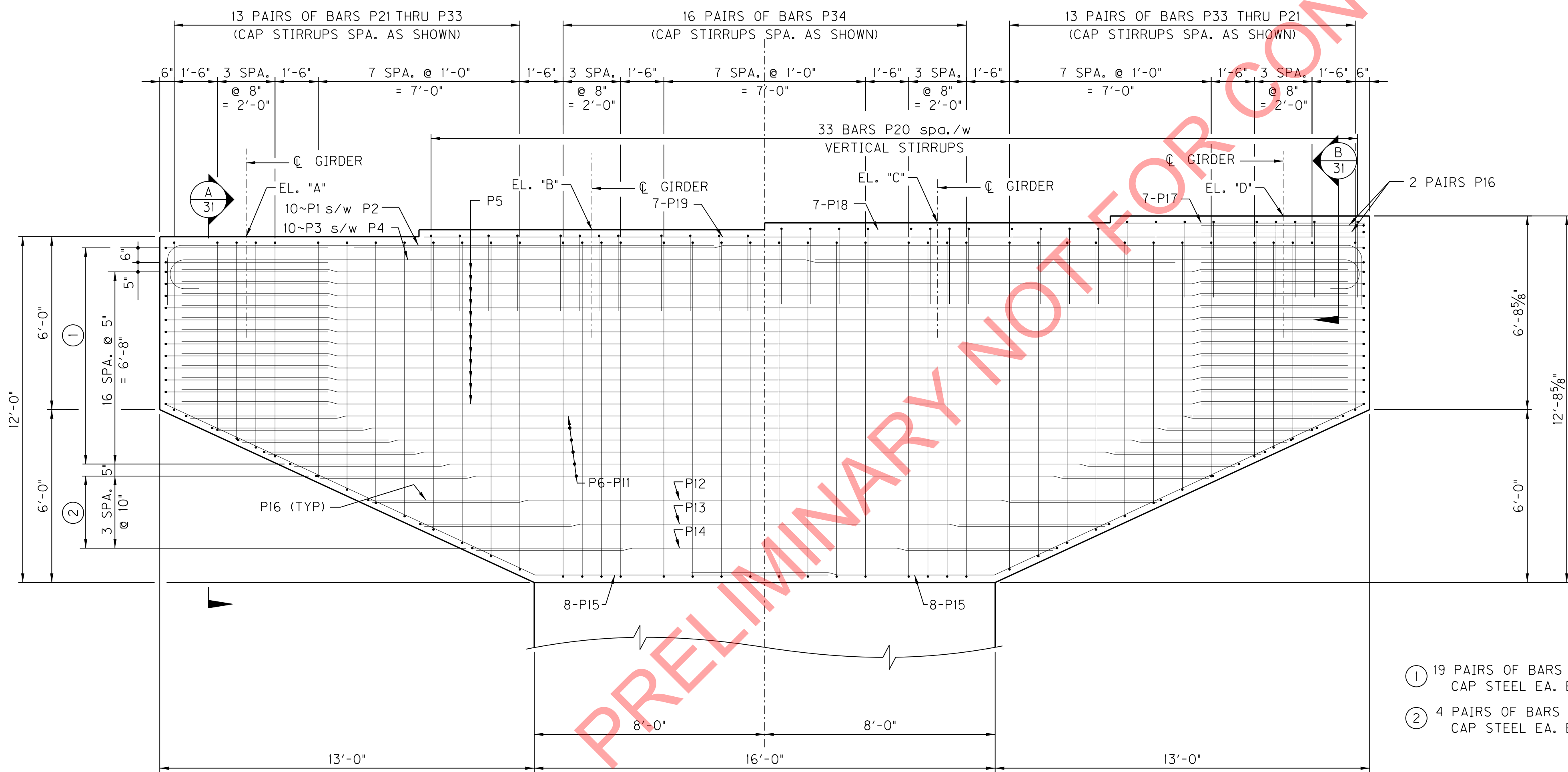
SEE SHT. S15 FOR COLUMN CROSS SECTION

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: R.M. DAMON		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		R. M. DAMON	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
<i>COLUMN – PIER 4 WB & EB</i>			
PREPARED BY		SHEET NO. S20	
<i>PALMER ENGINEERING CO.</i>		DRAWING NO. 27242	

ITEM NUMBER
12-263.63



PLAN OF CAP



ELEVATION
(LOOKING AHEAD)

- ① 19 PAIRS OF BARS P16 spa./w HORIZ. CAP STEEL EA. END OF PIER CAP
- ② 4 PAIRS OF BARS P16 spa./w HORIZ. CAP STEEL EA. END OF PIER CAP

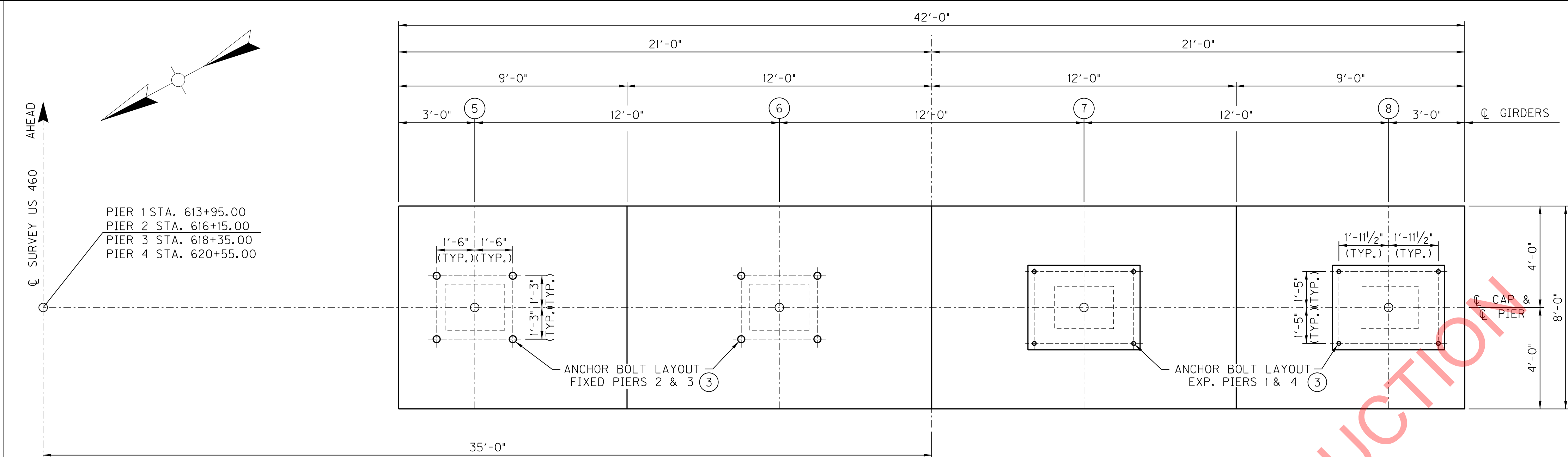
MINIMUM LAP SPLICE
#7 BAR = 4'-10"
#11 BAR = 12'-6"

③ CONTRACTOR SHALL TAKE MEASURES TO AVOID DAMAGING PIER CAP REINFORCEMENT DURING ANCHOR BOLT INSTALLATION, SEE BEARING ASSEMBLY SHEETS S32 & S33 FOR ADDITIONAL DETAILS.

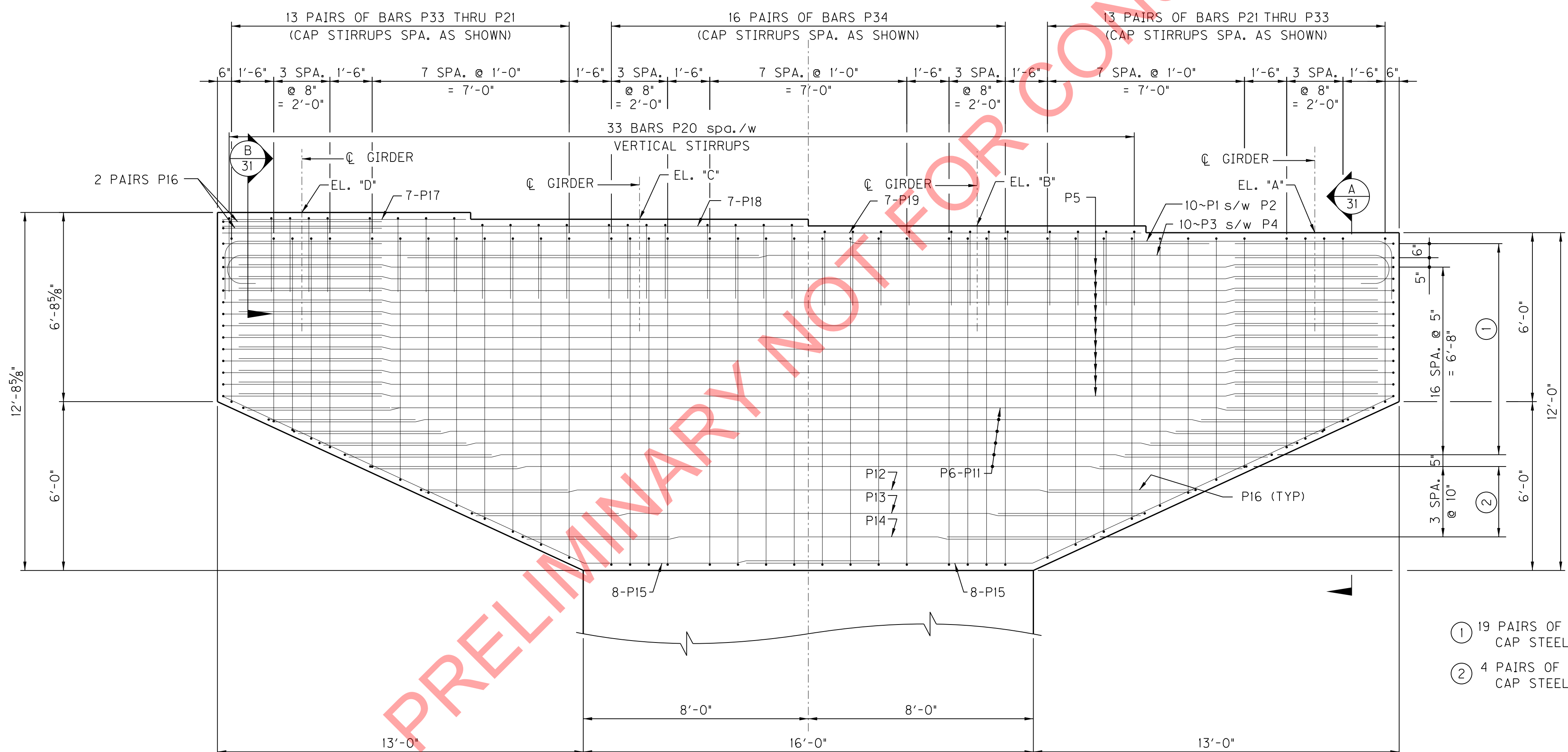
BEAM SEAT ELEVATIONS				
LOCATION	EL. "A"	EL. "B"	EL. "C"	EL. "D"
PIER 1 W.B.	1169.231	1169.471	1169.711	1169.951
PIER 2 W.B.	1171.899	1172.139	1172.379	1172.619
PIER 3 W.B.	1174.150	1174.390	1174.630	1174.870
PIER 4 W.B.	1175.985	1176.225	1176.465	1176.705

REVISION		DATE
DATE: MARCH, 2017	CHECKED BY	
DESIGNED BY: J.N. MCNUTT	L.A. CARLISLE	
DETAILED BY: J.A. ROSE	J.N. MCNUTT	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY		
PIKE		
ROUTE	CROSSING	
US 460	POND CREEK	
W.B. PIER CAP DETAILS		
PREPARED BY		SHEET NO.
PALMER ENGINEERING CO.		S21
		DRAWING NO.
		27242

ITEM NUMBER
12-263.63



PLAN OF CAP



ELEVATION
(LOOKING AHEAD)

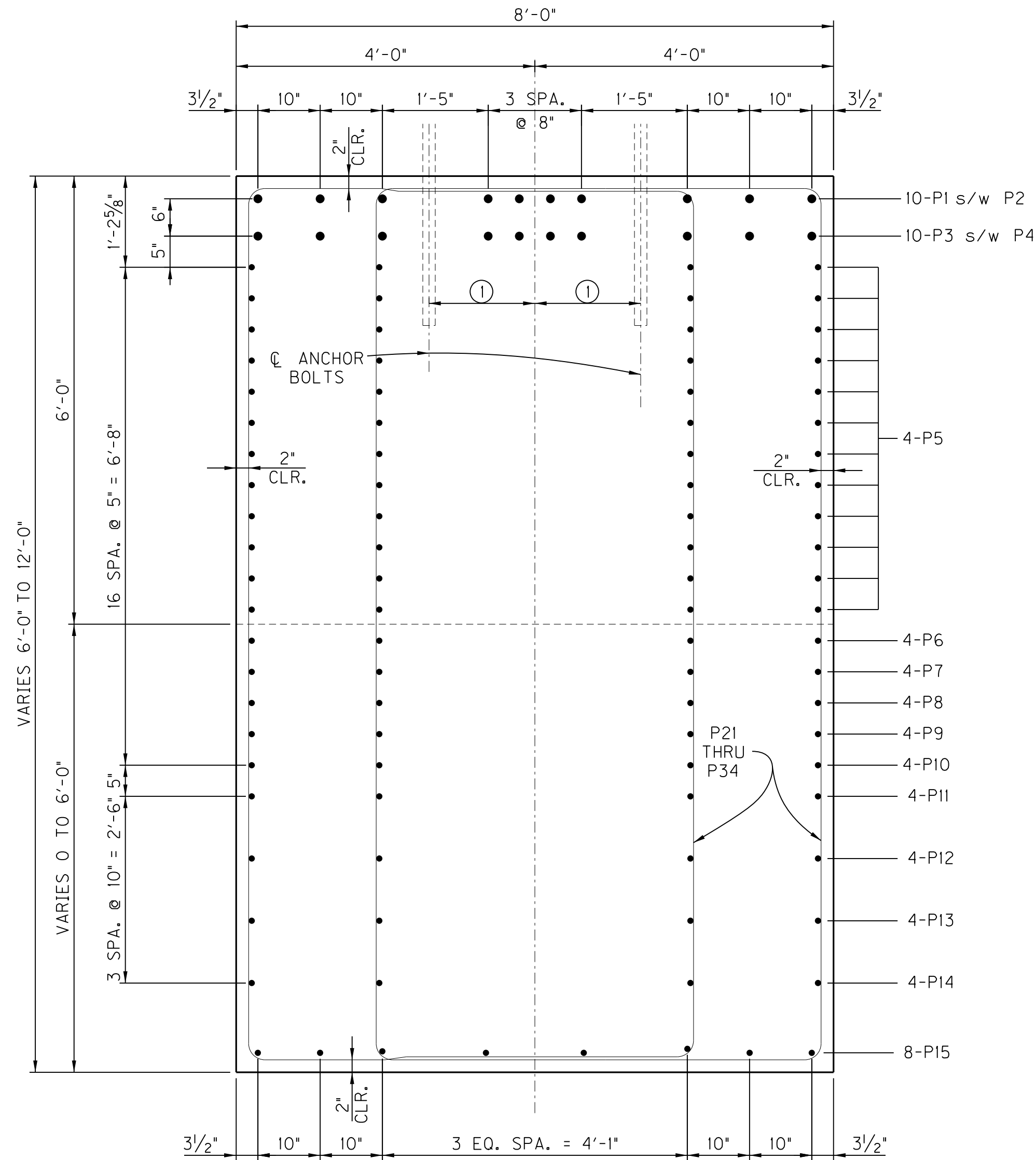
3 CONTRACTOR SHALL TAKE MEASURES TO AVOID DAMAGING PIER CAP REINFORCEMENT DURING ANCHOR BOLT INSTALLATION, SEE BEARING ASSEMBLY SHEETS S32 & S33 FOR ADDITIONAL DETAILS.

BEAM SEAT ELEVATIONS				
LOCATION	EL. "A"	EL. "B"	EL. "C"	EL. "D"
PIER 1 E.B.	1169.231	1169.471	1169.711	1169.951
PIER 2 E.B.	1171.899	1172.139	1172.379	1172.619
PIER 3 E.B.	1174.150	1174.390	1174.630	1174.870
PIER 4 E.B.	1175.985	1176.225	1176.465	1176.705

REVISION		DATE
DATE: MARCH, 2017		CHECKED BY
DESIGNED BY: J.N. MCNUTT		L.A. CARLISLE
DETAILED BY: J.A. ROSE		J.N. MCNUTT
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
<i>E.B. PIER CAP DETAILS</i>		
PREPARED BY		SHEET NO. S22
<i>PALMER ENGINEERING CO.</i>		DRAWING NO. 27242

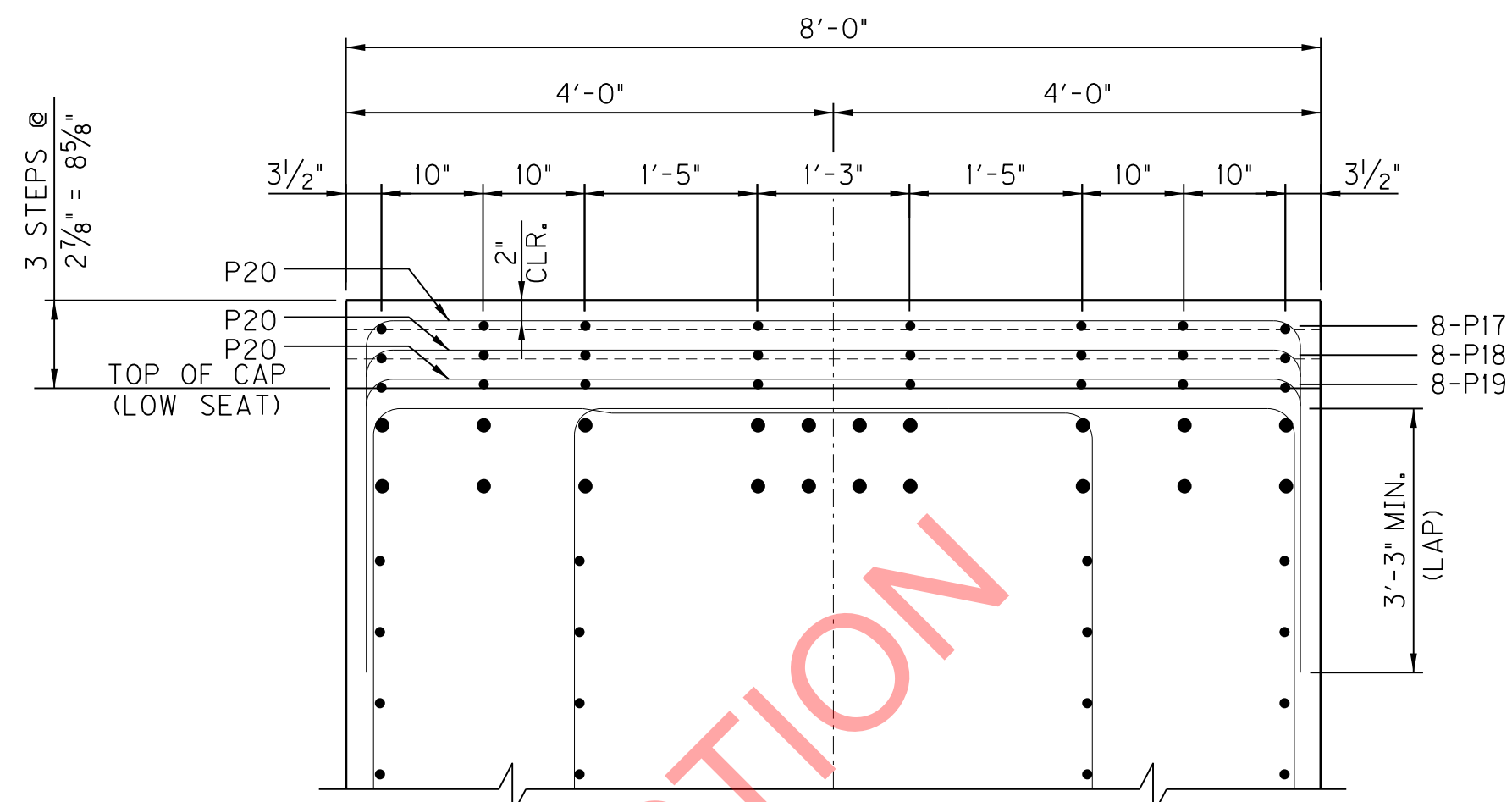
MINIMUM LAP SPLICE
#7 BAR = 4'-10"
#11 BAR = 12'-6"

ITEM NUMBER
12-263.63



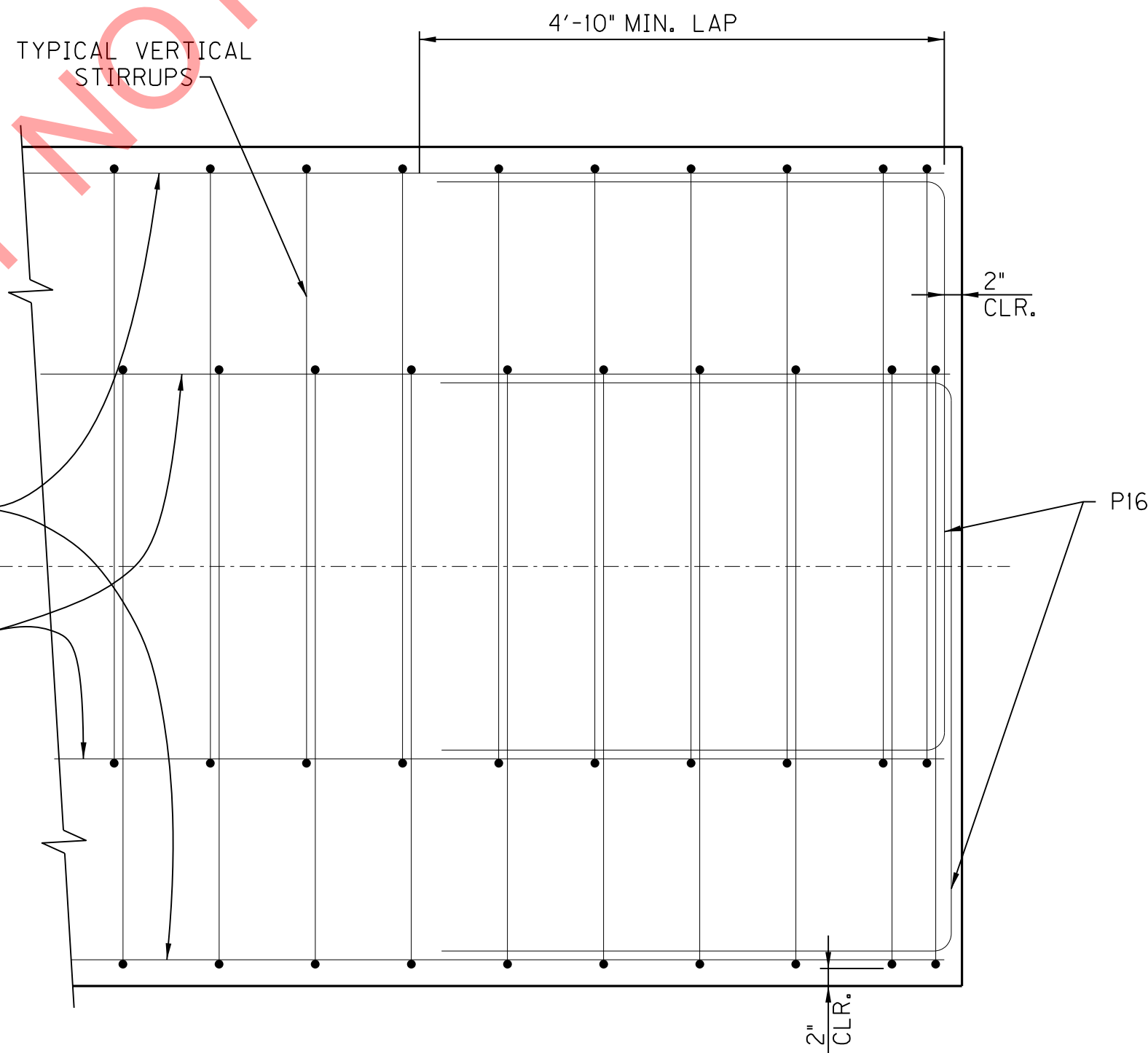
SECTION "A"

① ANCHOR BOLT LOCATION VARIES.
FOR DETAILS AND NOTES, SEE
SHEETS S31 thru S33.



SECTION "B"

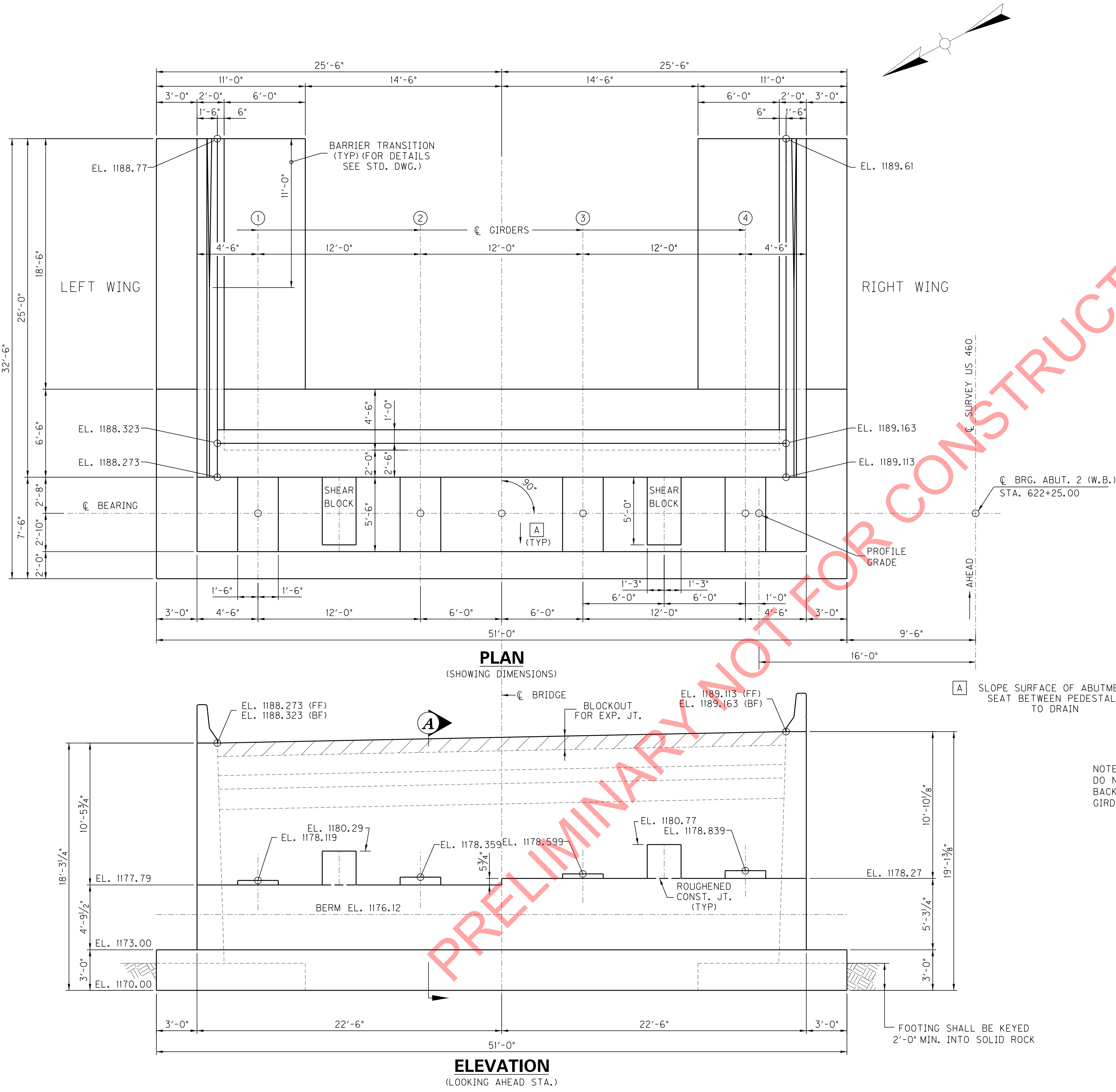
(SHOWING ADDITIONAL REINF. IN STEPS)



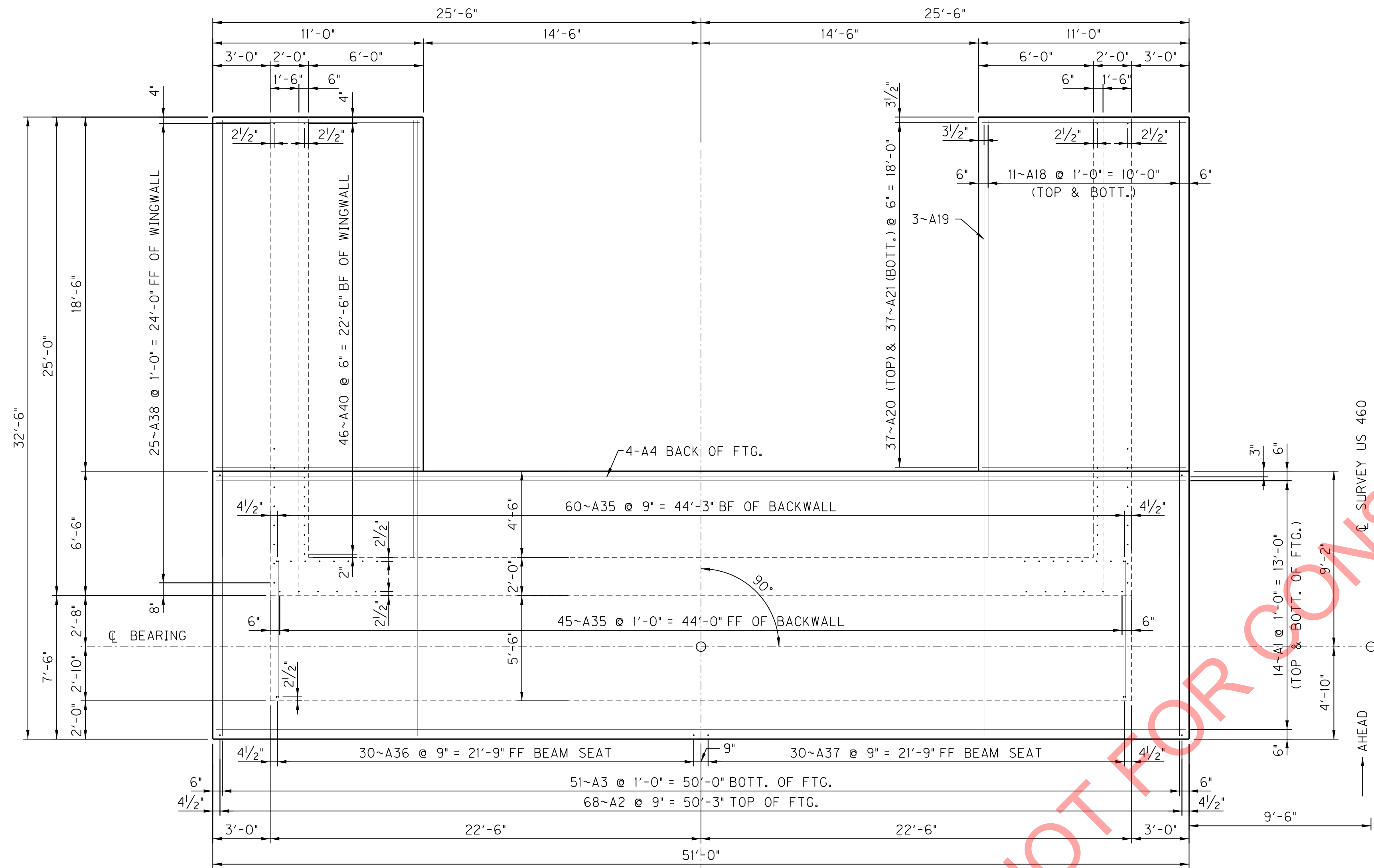
PARTIAL PLAN - END OF CAP

(SHOWING STIRRUPS AT END OF CAP)

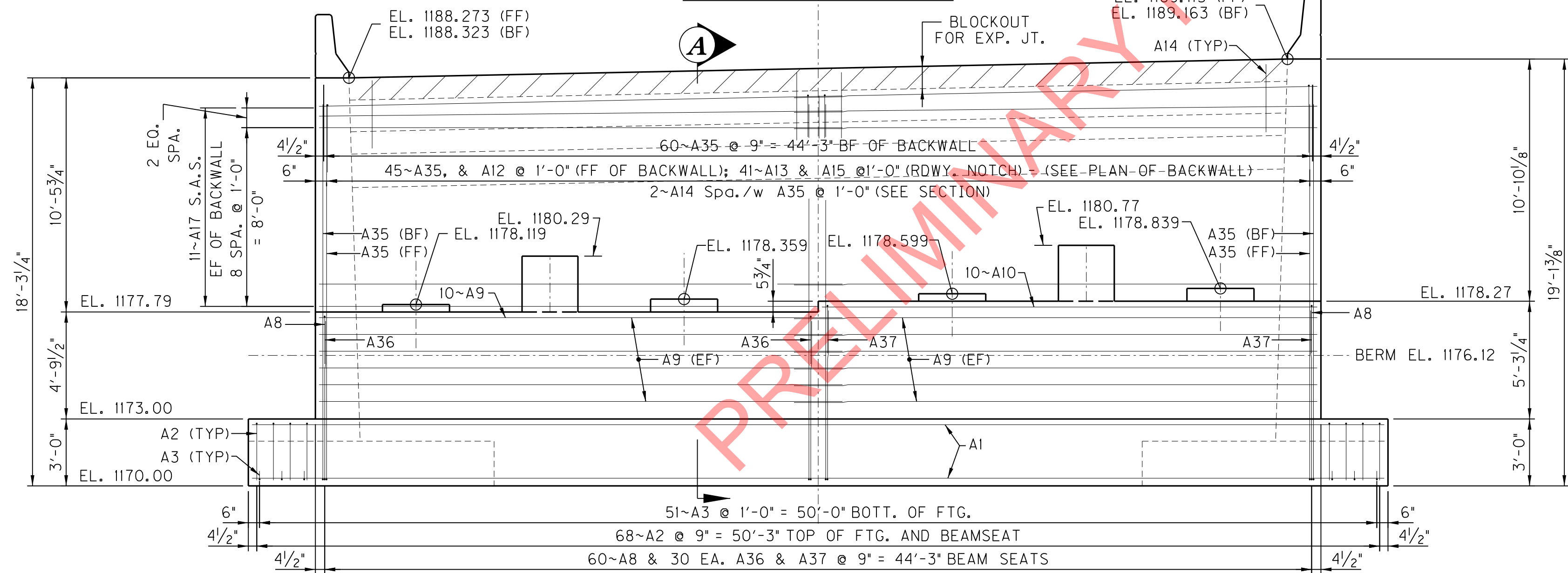
REVISION		DATE
DATE: MARCH, 2017	CHECKED BY	
DESIGNED BY: J.N. MCNUTT	L.A. CARLISLE	
DETAILED BY: J.A. ROSE	J.N. MCNUTT	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
PIER CAP DETAILS		
PREPARED BY PALMER ENGINEERING CO.		SHEET NO. S23 DRAWING NO. 27242



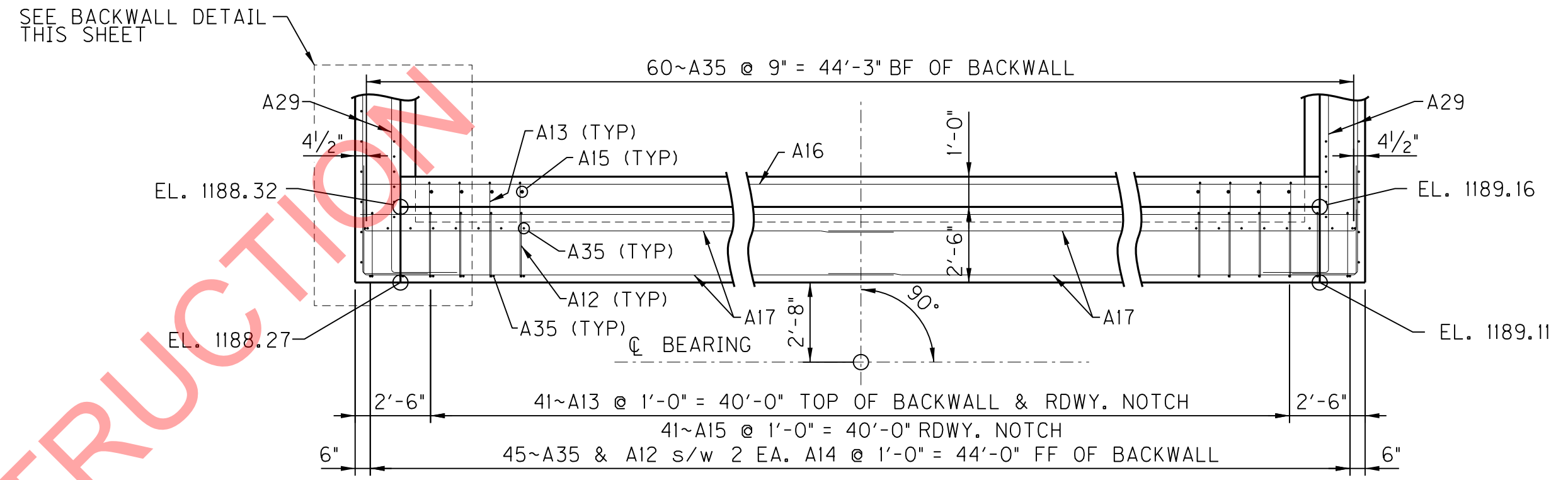
<u>MINIMUM LAP SPLICES</u>		REVISION	DATE
#5 BAR - 2'-11"		DATE: MARCH, 2017	CHECKED BY
#6 BAR - 3'-6"		DESIGNED BY: A.C. THOMAS	C.M. GREENWELL
#7 BAR - 4'-8"		DETAILED BY: J.A. ROSE	L.M. SALLEE
#8 BAR - 6'-2"			
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY			
PIKE			
ROUTE		CROSSING	
US 460		POND CREEK	
ABUTMENT 2 – WESTBOUND			
ITEM NUMBER		PREPARED BY	
12–263.63		PALMER ENGINEERING CO.	
		SHEET NO. S24	
		DRAWING NO. 27242	



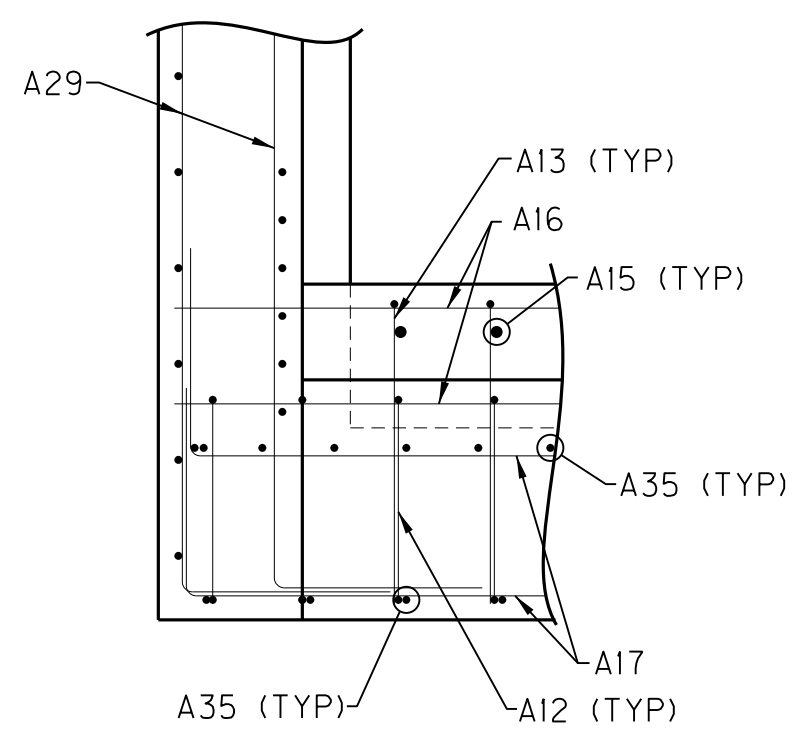
PLAN OF FOOTING



ELEVATION



PLAN OF BACKWALL

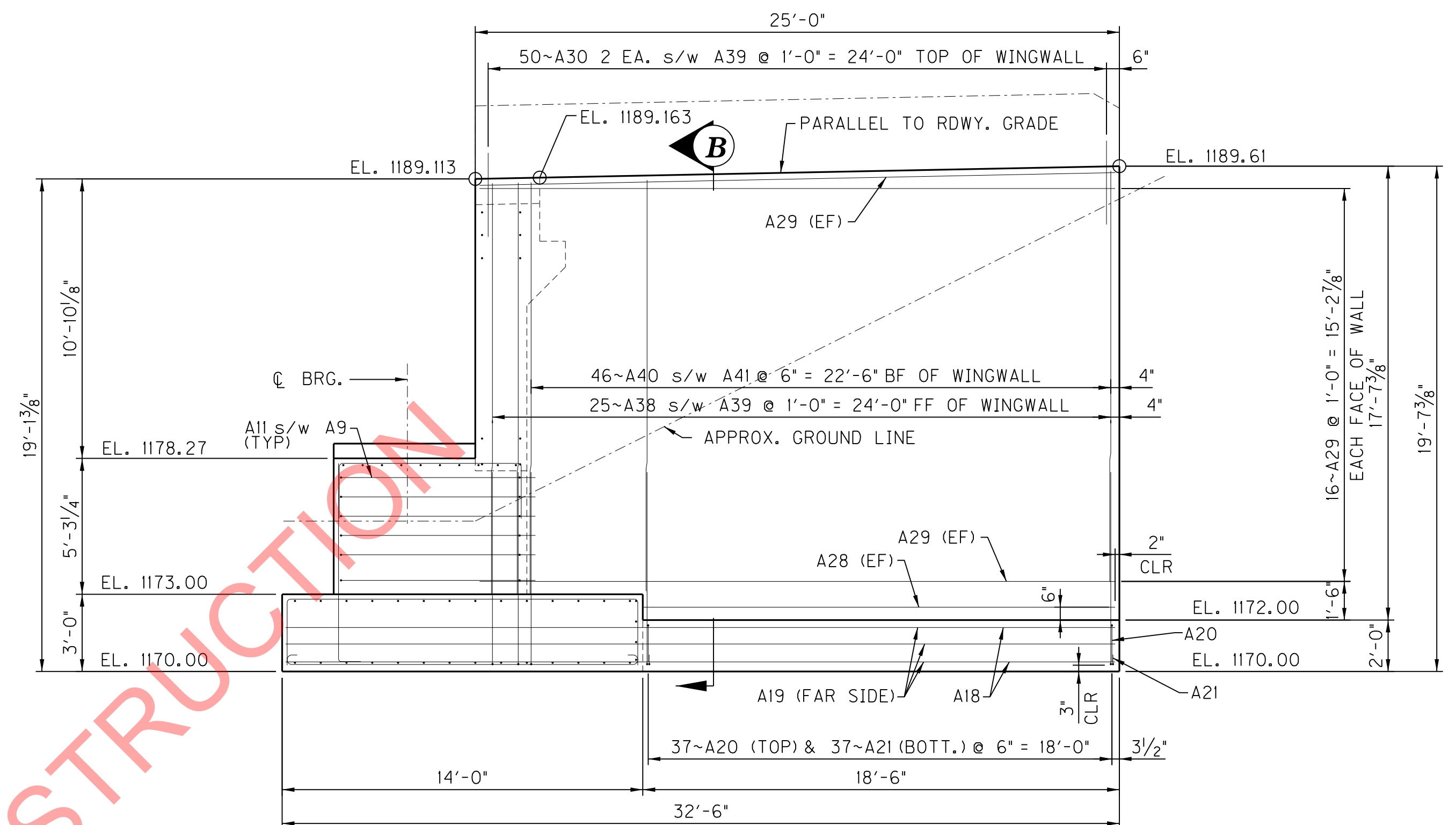


BACKWALL DETAIL

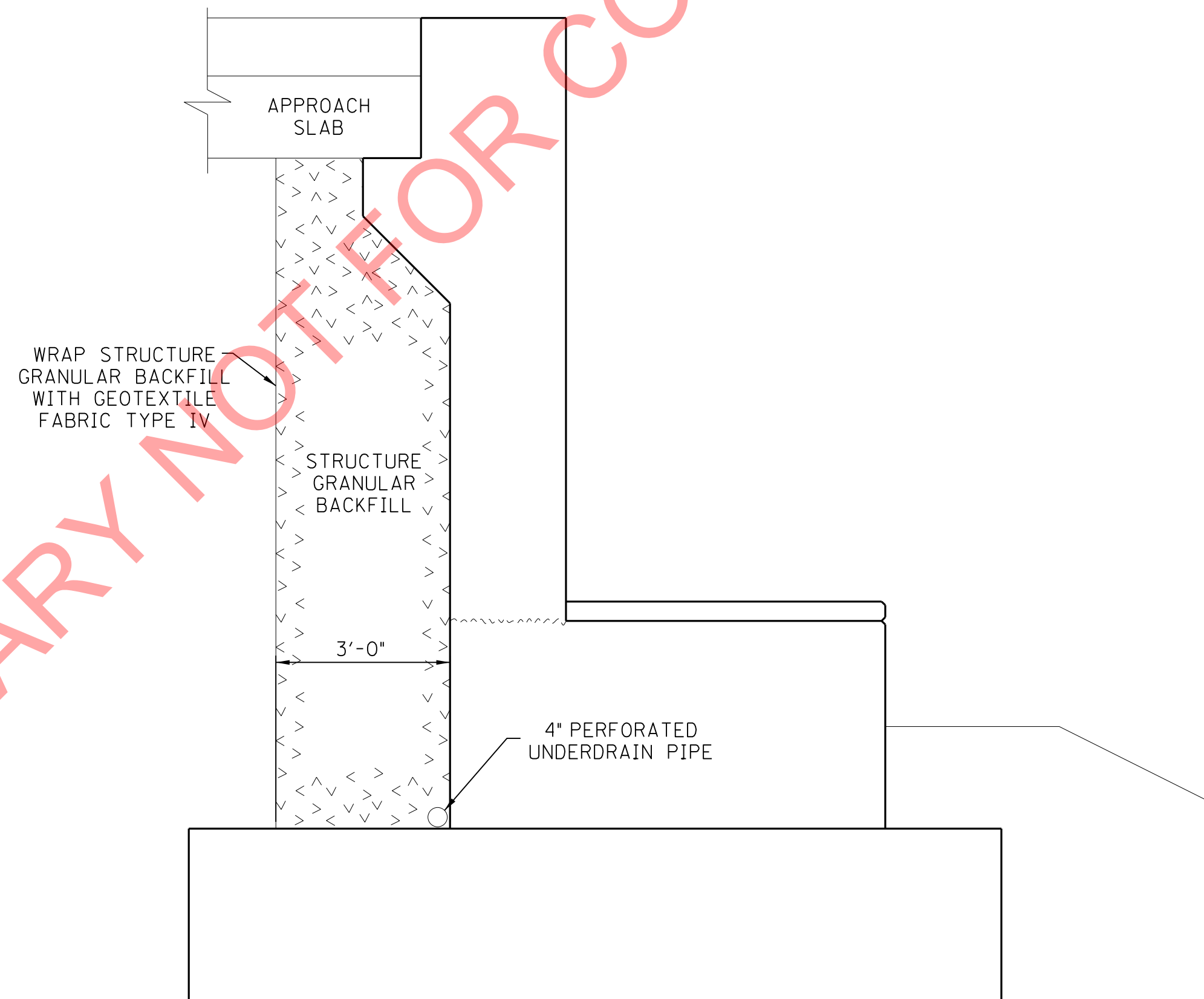
FOR LAP SPLICE LENGTHS, SEE SHEET S24

REVISION		DATE
DATE: MARCH, 2017	CHECKED BY	
DESIGNED BY: A.C. THOMAS.	C.M. GREENWELL	
DETAILED BY: J.A. ROSE	L.M. SALLEE	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
ABUTMENT 2 – WESTBOUND		
PREPARED BY		SHEET NO. S25
PALMER ENGINEERING CO.		DRAWING NO. 27242

ITEM NUMBER
12-263.63



RIGHT WING ELEVATION

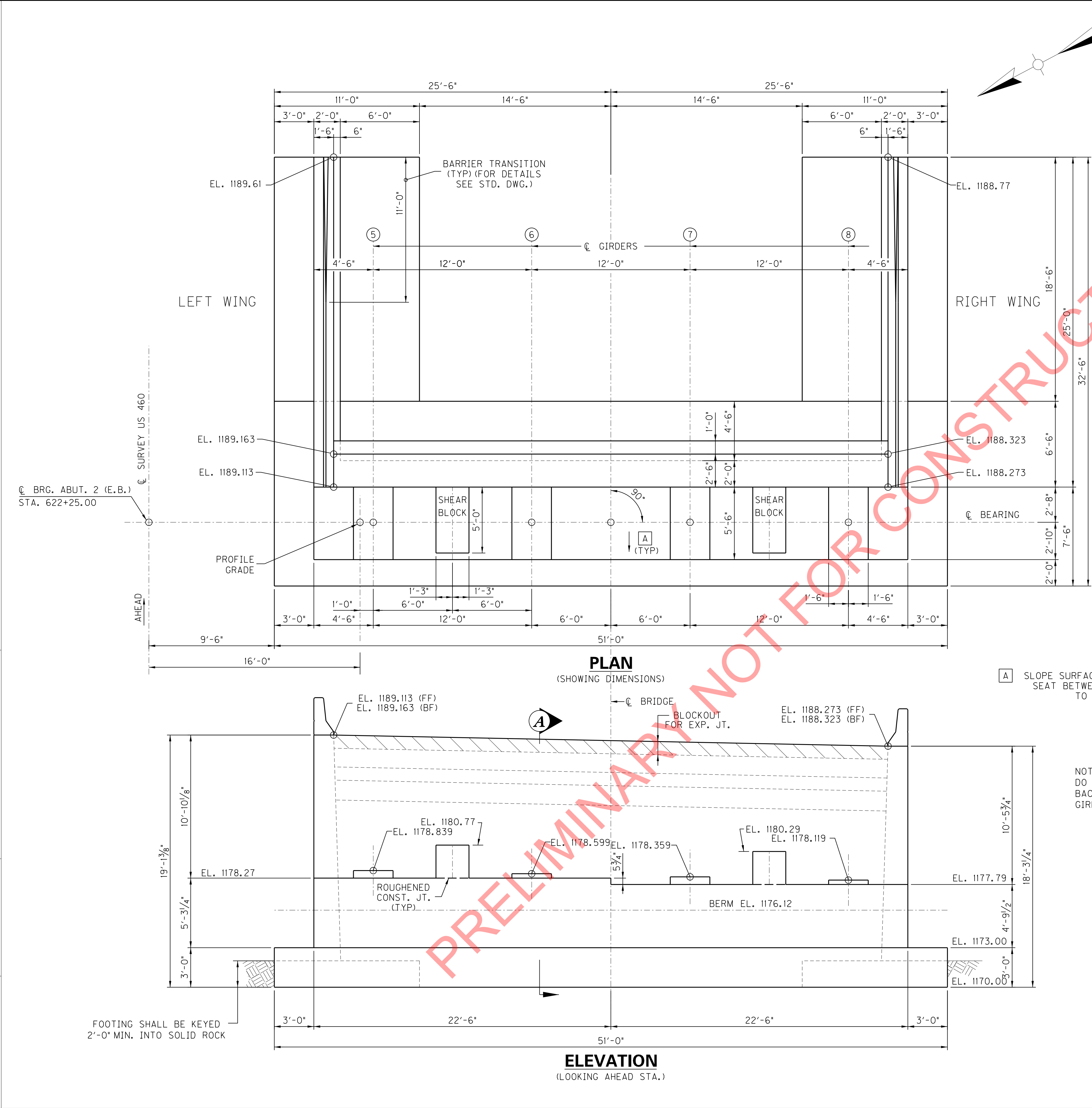


(SECTION THRU ABUTMENT SHOWN, WING SIMILAR)

FOR LAP SPLICE LENGTHS, SEE SHEET S24

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: A.C. THOMAS		C.M. GREENWELL	
DETAILED BY: J.A. ROSE		L.M. SALLEE	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
ABUTMENT 2 – WESTBOUND			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S26 DRAWING NO. 27242

12-263.63



[A] SLOPE SURFACE OF ABUTMENT SEAT BETWEEN PEDESTALS TO DRAIN

NOTES:
DO NOT PLACE BACKFILL AGAINST THE BACKWALL ABOVE EL. 1183.3 UNTIL THE GIRDERS AND DECK ARE IN PLACE.

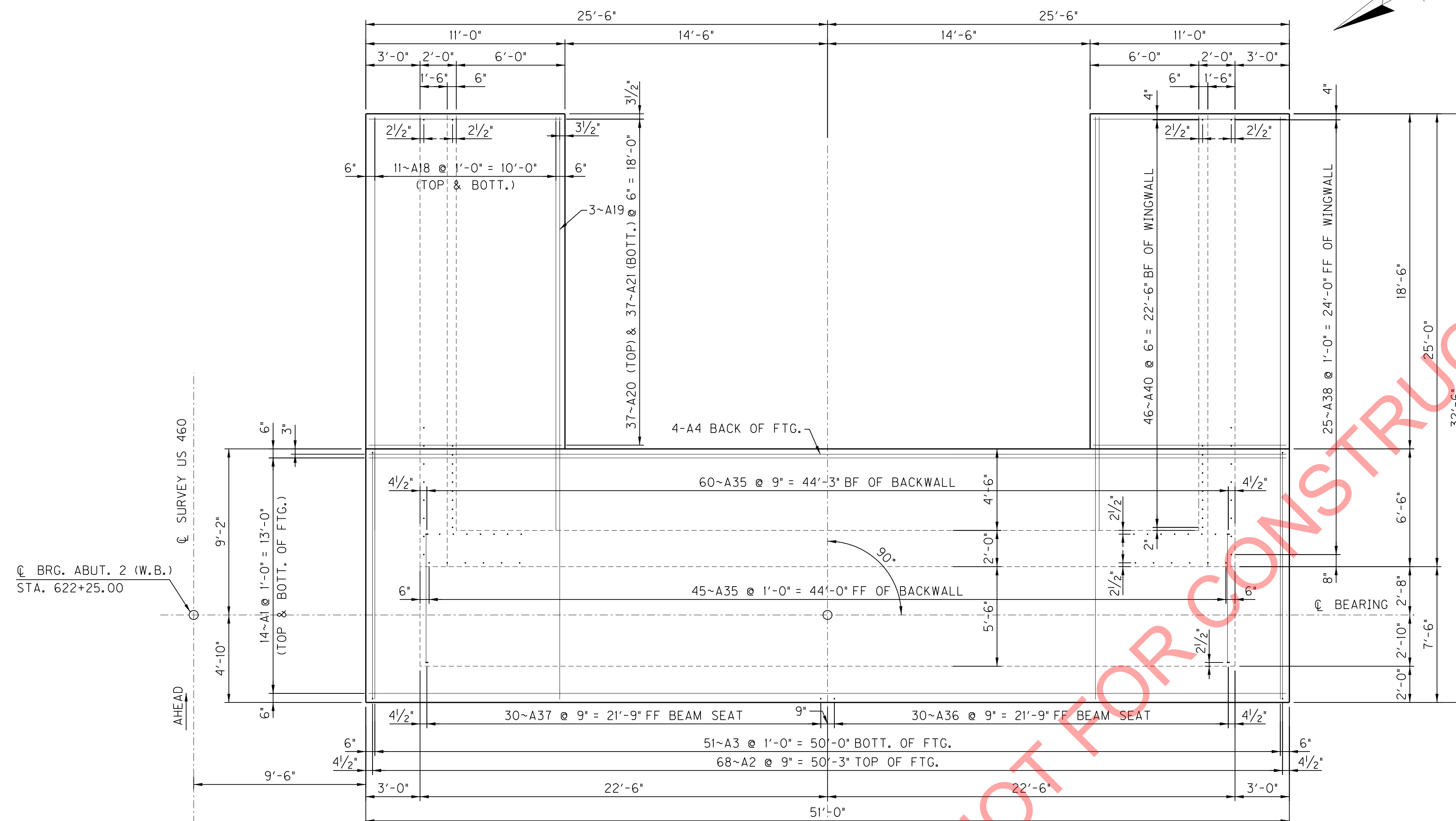
SECTION A

NOTE: FOR PEDESTAL AND SHEAR BLOCK DETAILS SEE SHEET S14
PEDESTALS AND SHEAR BLOCKS ARE CLASS "A" CONCRETE.
FOR BACKFILL DETAILS SEE SHEET S29.

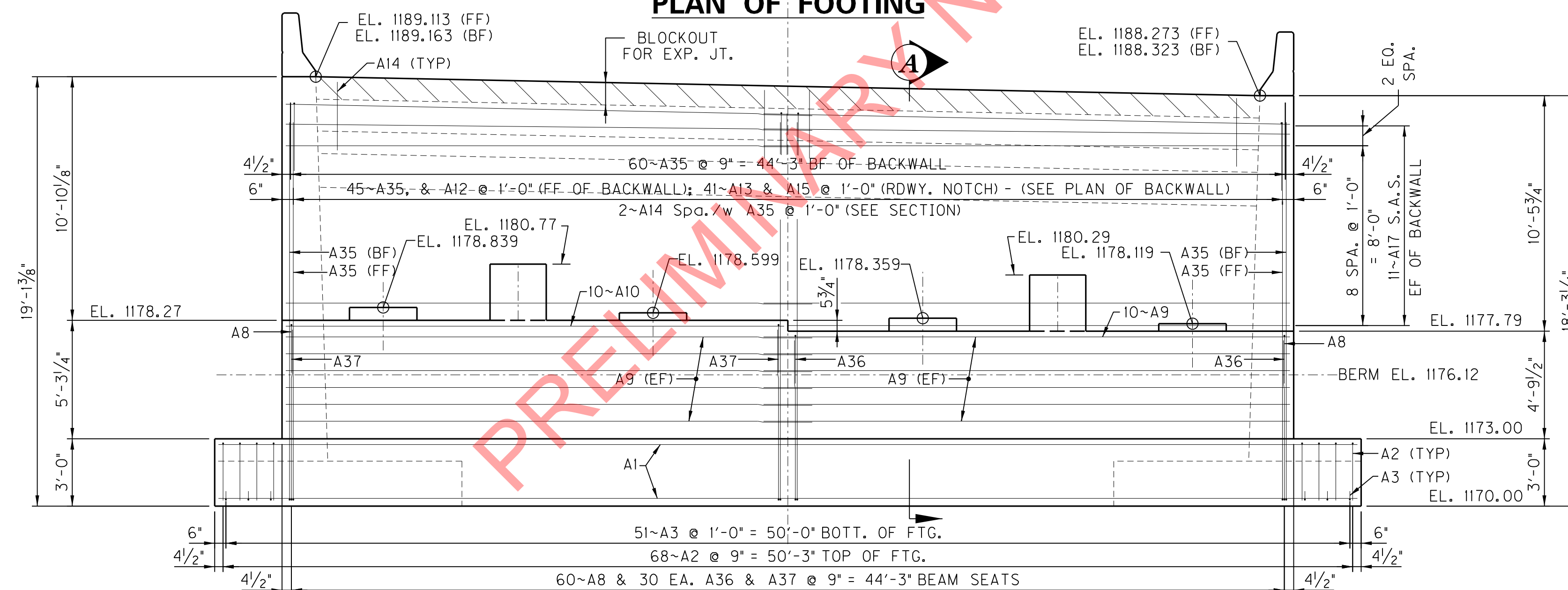
- MINIMUM LAP SPLICES
- #5 BAR - 2'-11"
 - #6 BAR - 3'-6"
 - #7 BAR - 4'-8"
 - #8 BAR - 6'-2"

ITEM NUMBER
12-263.63

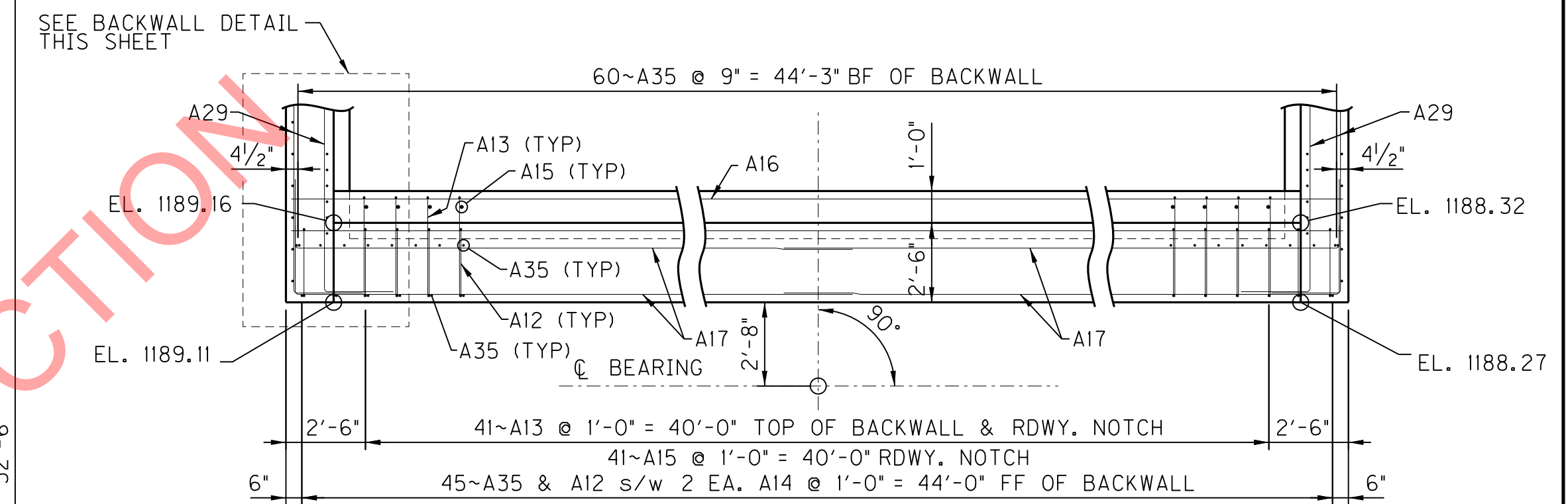
REVISION		DATE
DATE: MARCH, 2017	CHECKED BY	
DESIGNED BY: A.C. THOMAS	C.M. GREENWELL	
DETAILED BY: J.A. ROSE	L.M. SALLEE	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY		
PIKE		
ROUTE	CROSSING	
US 460	POND CREEK	
ABUTMENT 2 – EASTBOUND		
PREPARED BY		SHEET NO.
PALMER ENGINEERING CO.		S27
		DRAWING NO.
		27242



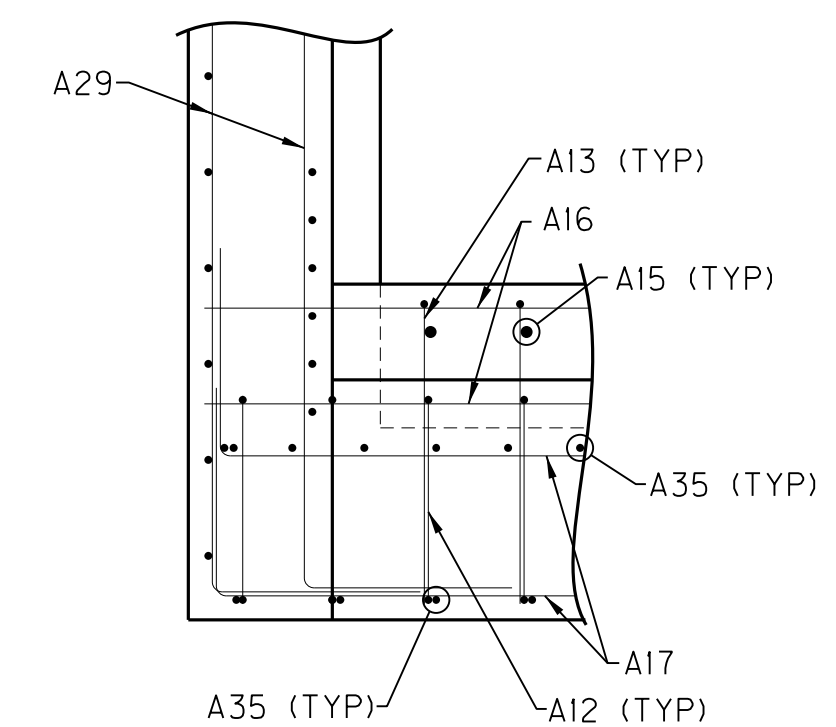
PLAN OF FOOTING



ELEVATION



PLAN OF BACKWALL



BACKWALL DETAIL

FOR LAP SPLICE LENGTHS, SEE SHEET S27

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: A.C. THOMAS		C.M. GREENWELL	
DETAILED BY: J.A. ROSE		L.M. SALLEE	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
<i>ABUTMENT 2 – EASTBOUND</i>			
PREPARED BY <i>PALMER ENGINEERING CO.</i>			SHEET NO. <i>S28</i> DRAWING NO. 27242

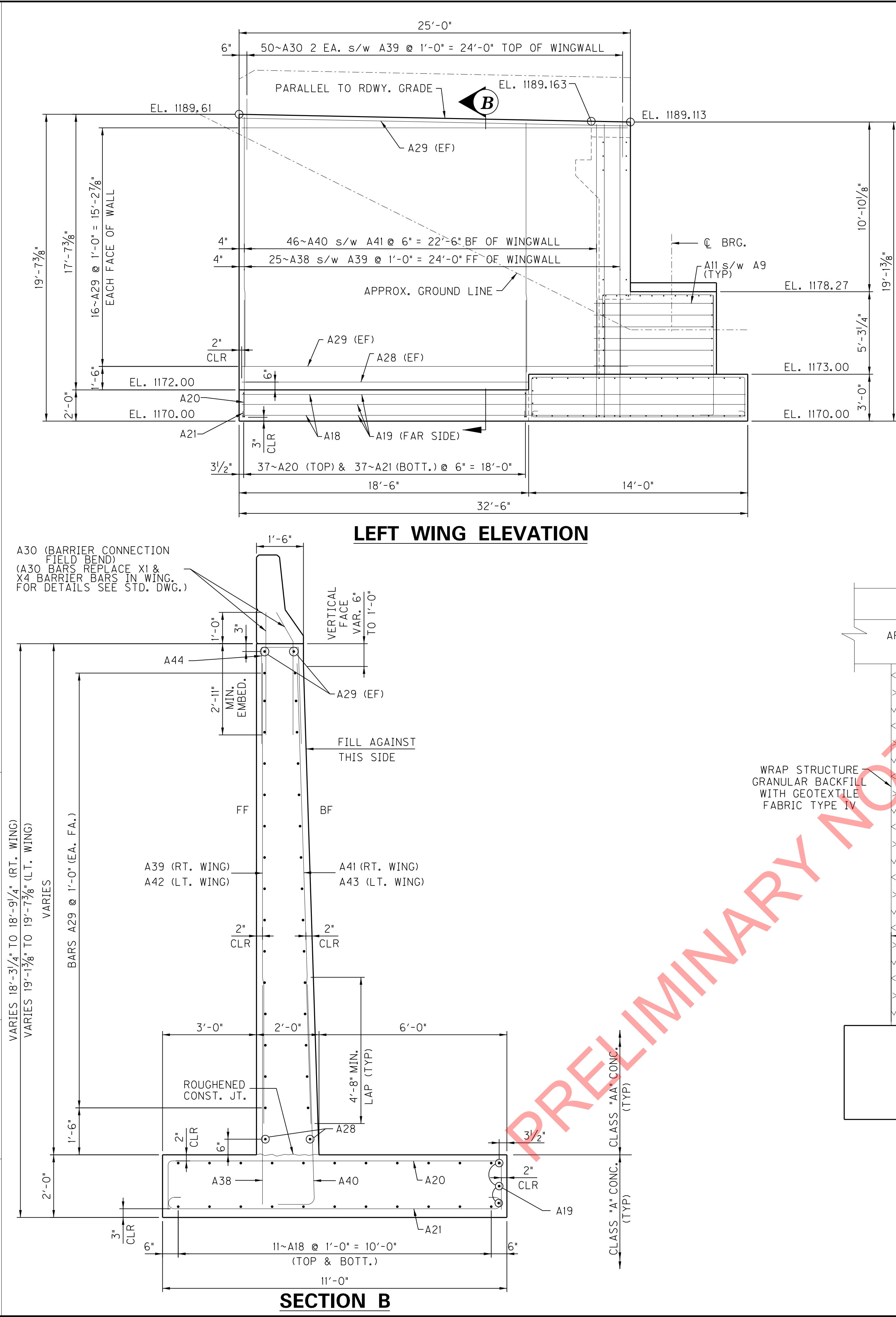




PLATE LOCATION	DIM "A"	DIM "B"
ABUT. 1	1 $\frac{3}{8}$ "	1 $\frac{9}{16}$ "
ABUT. 2	1 $\frac{5}{16}$ "	1 $\frac{11}{16}$ "

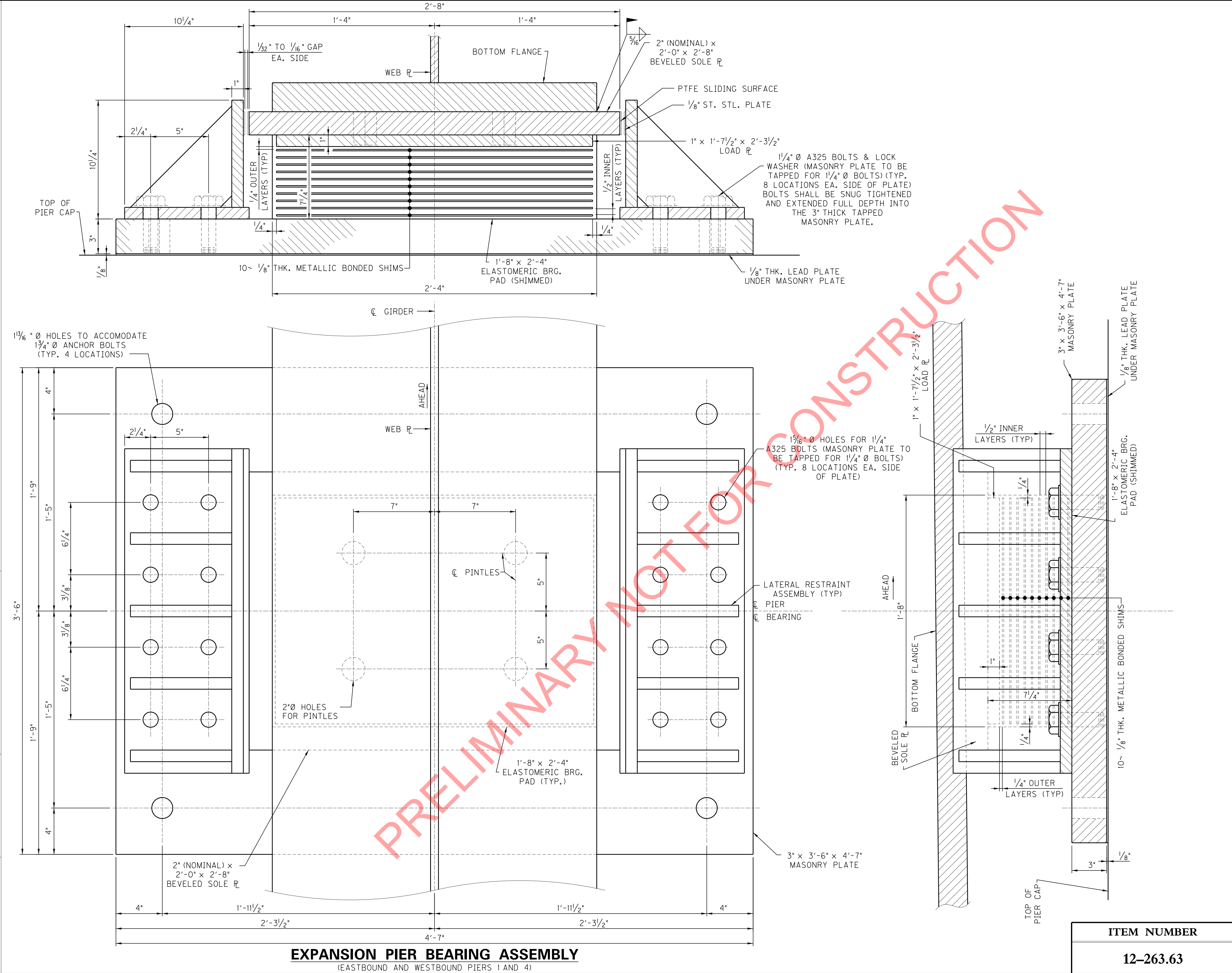


FOR BEARING GENERAL NOTES SEE SHEET S32.

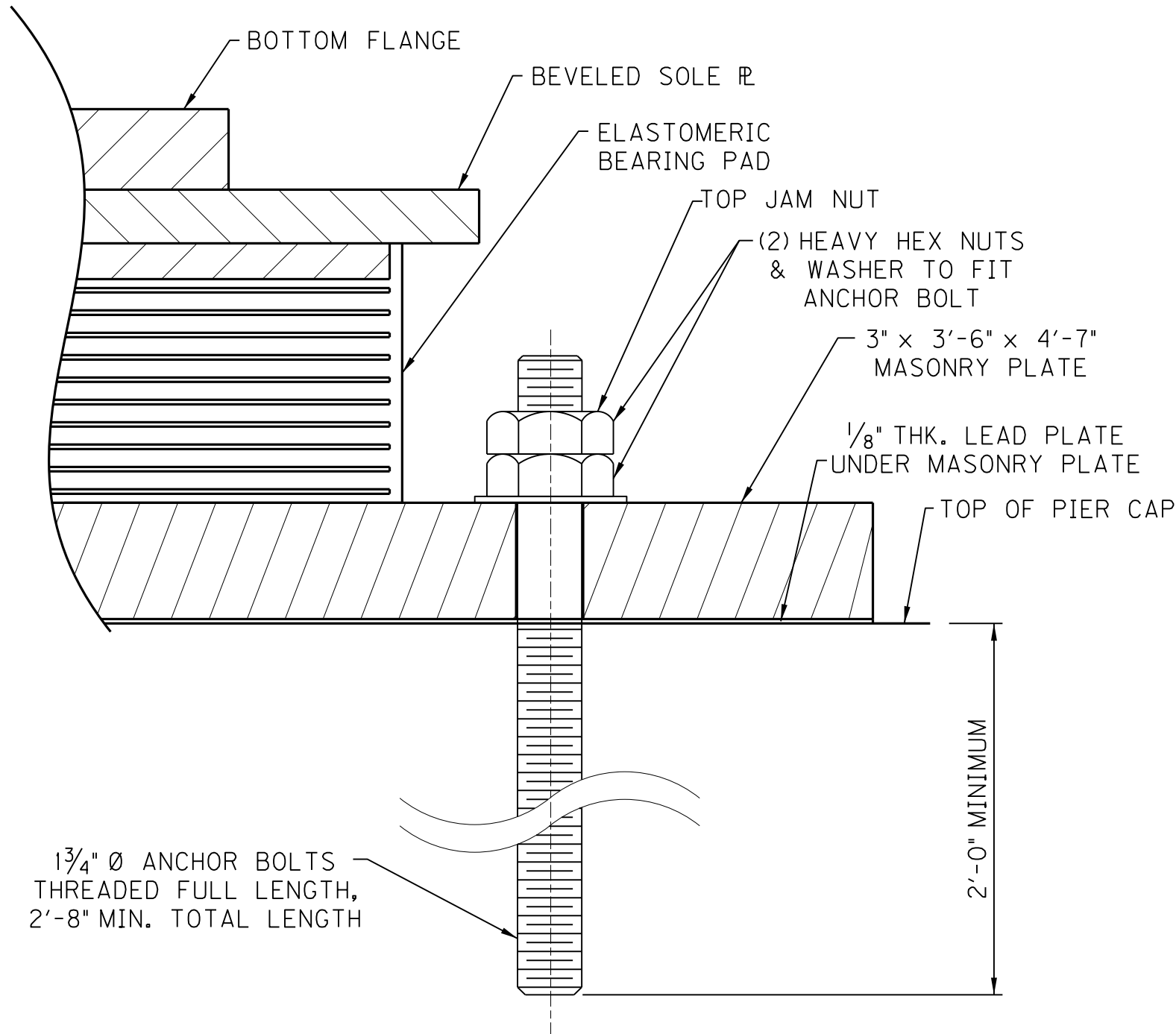
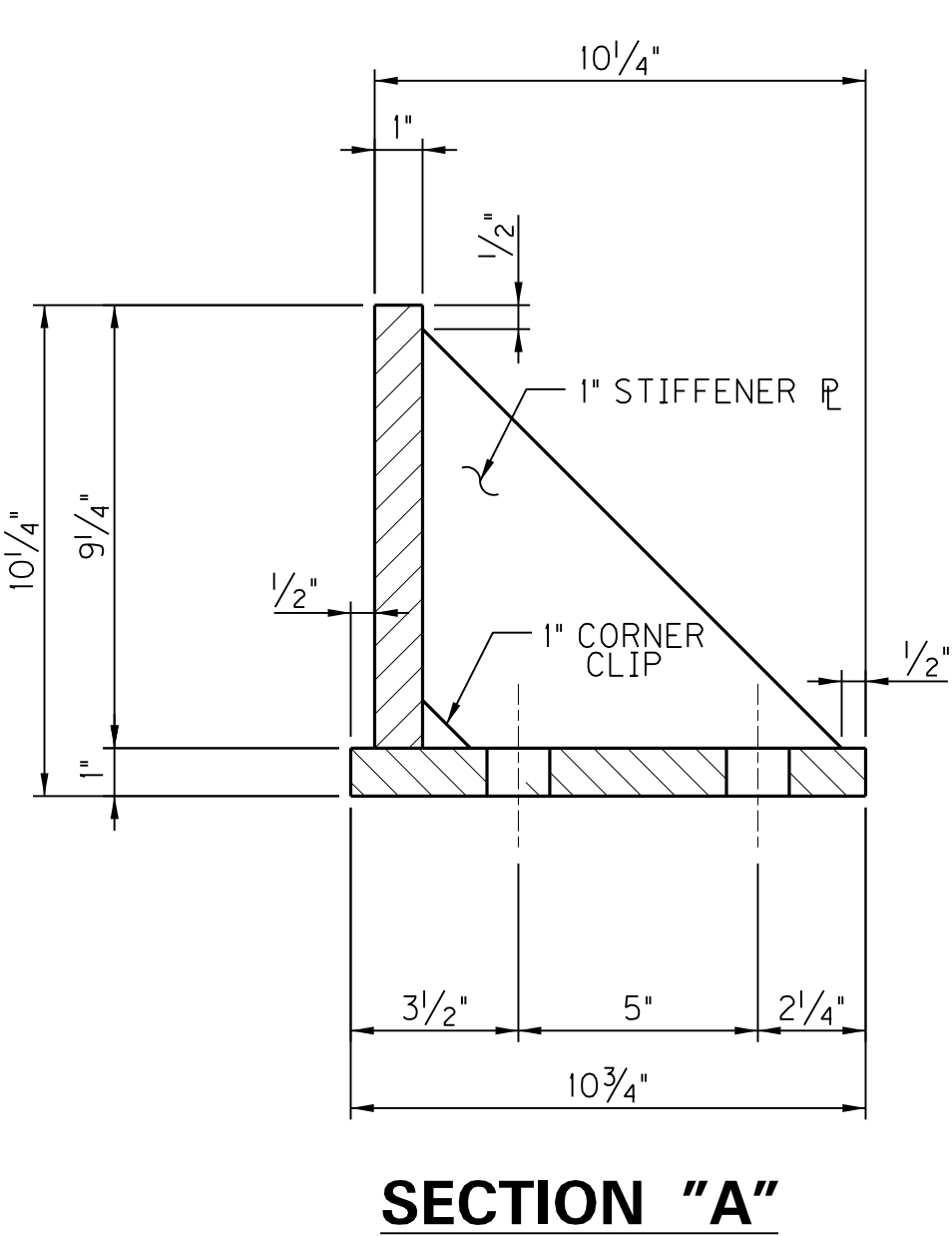
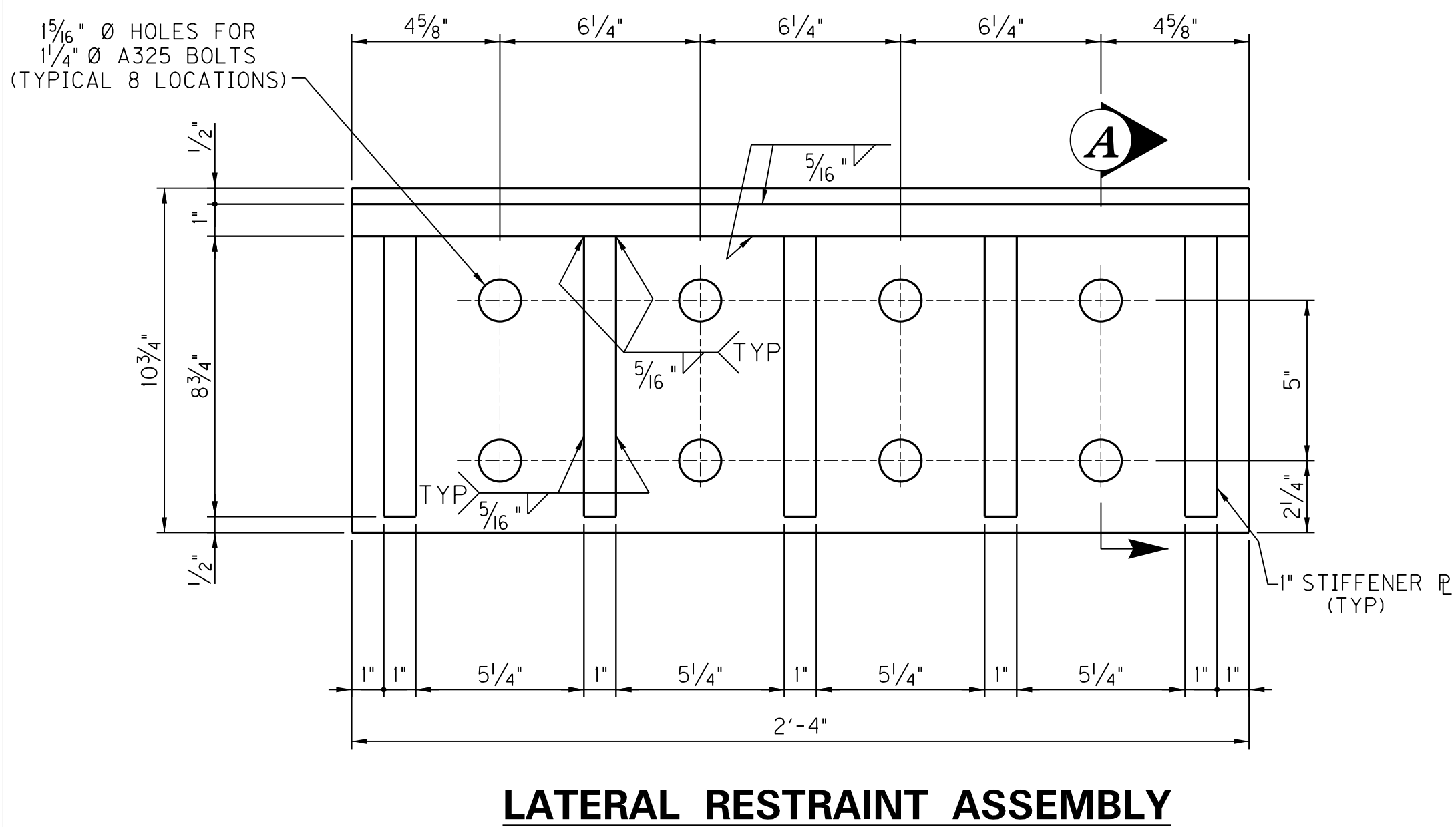


ITEM NUMBER
12-263.63

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: B. T. DRECKMAN		L. A. CARLISLE	
DETAILED BY: J. A. ROSE		B. T. DRECKMAN	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
BEARINGS – ABUTMENTS			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S30 DRAWING NO. 27242

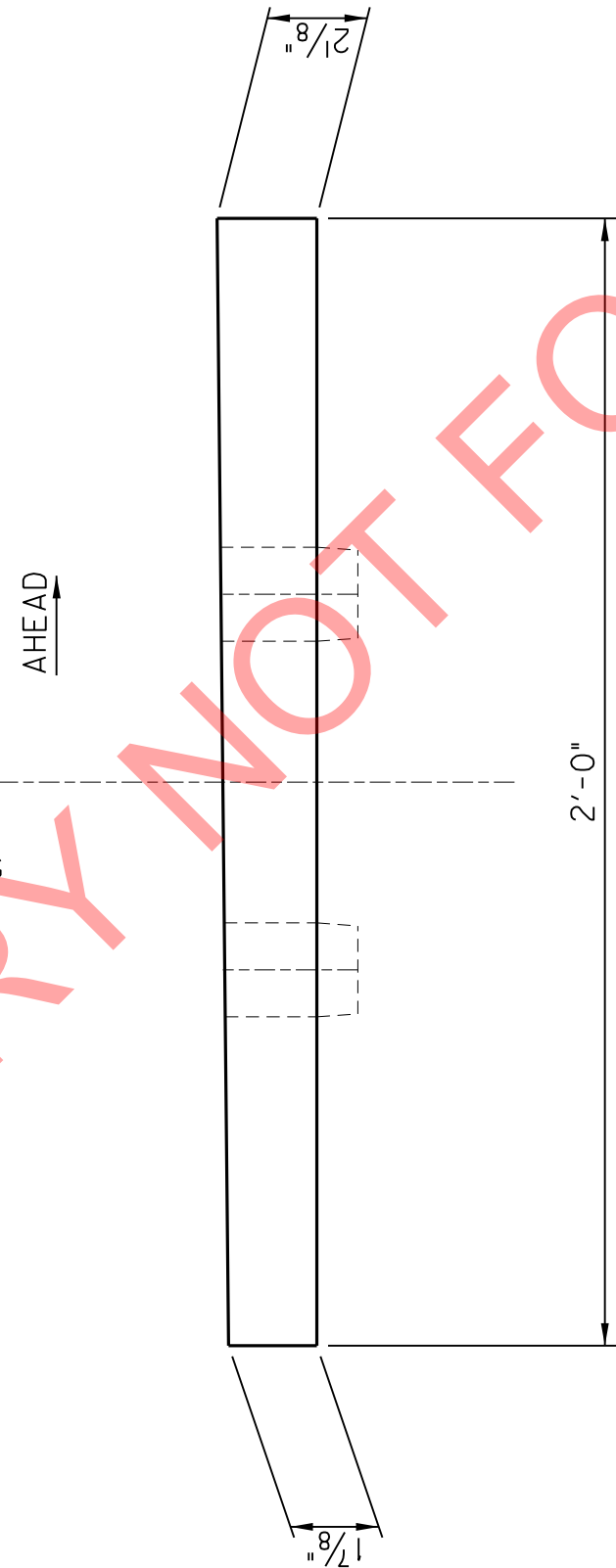
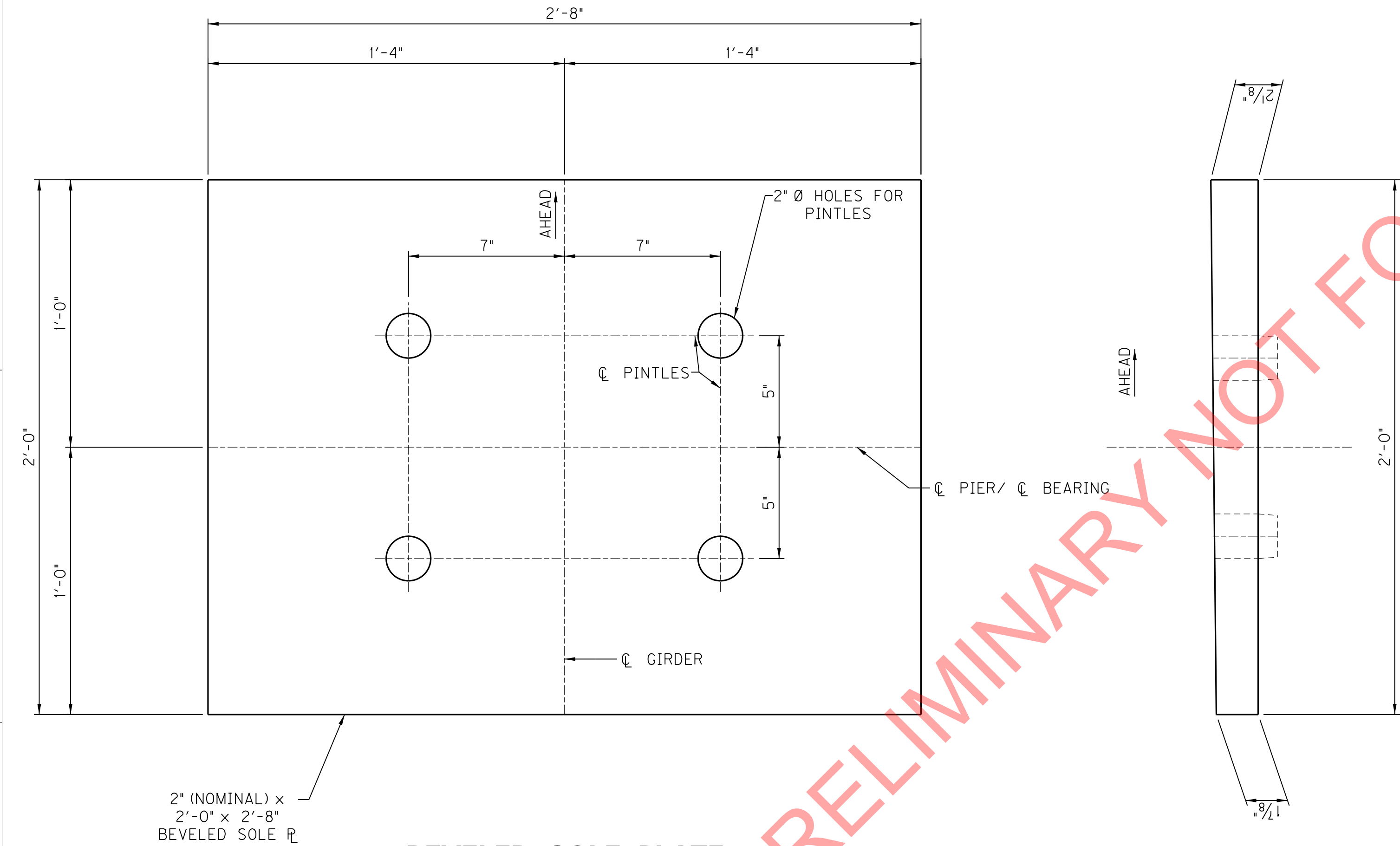


FOR BEARING GENERAL NOTES SEE SHEET S32.	
FOR ADDITIONAL PTFE AND STAINLESS STEEL NOTES SEE SHEET S14.	
FOR BEVELED SOLE PLATE DETAILS SEE SHEET S32.	
FOR PINTLE DETAILS SEE SHEET S33.	
FOR LATERAL RESTRAINT DETAILS SEE SHEET S32.	
FOR ANCHOR BOLT ASSEMBLY DETAIL SEE SHEET S32.	



ANCHOR BOLT ASSEMBLY DETAIL

INSTALLATION NOTES:
CONTRACTOR SHALL TAKE MEASURES TO AVOID DAMAGING
PIER CAP REINFORCEMENT DURING ANCHOR BOLT INSTALLATION.

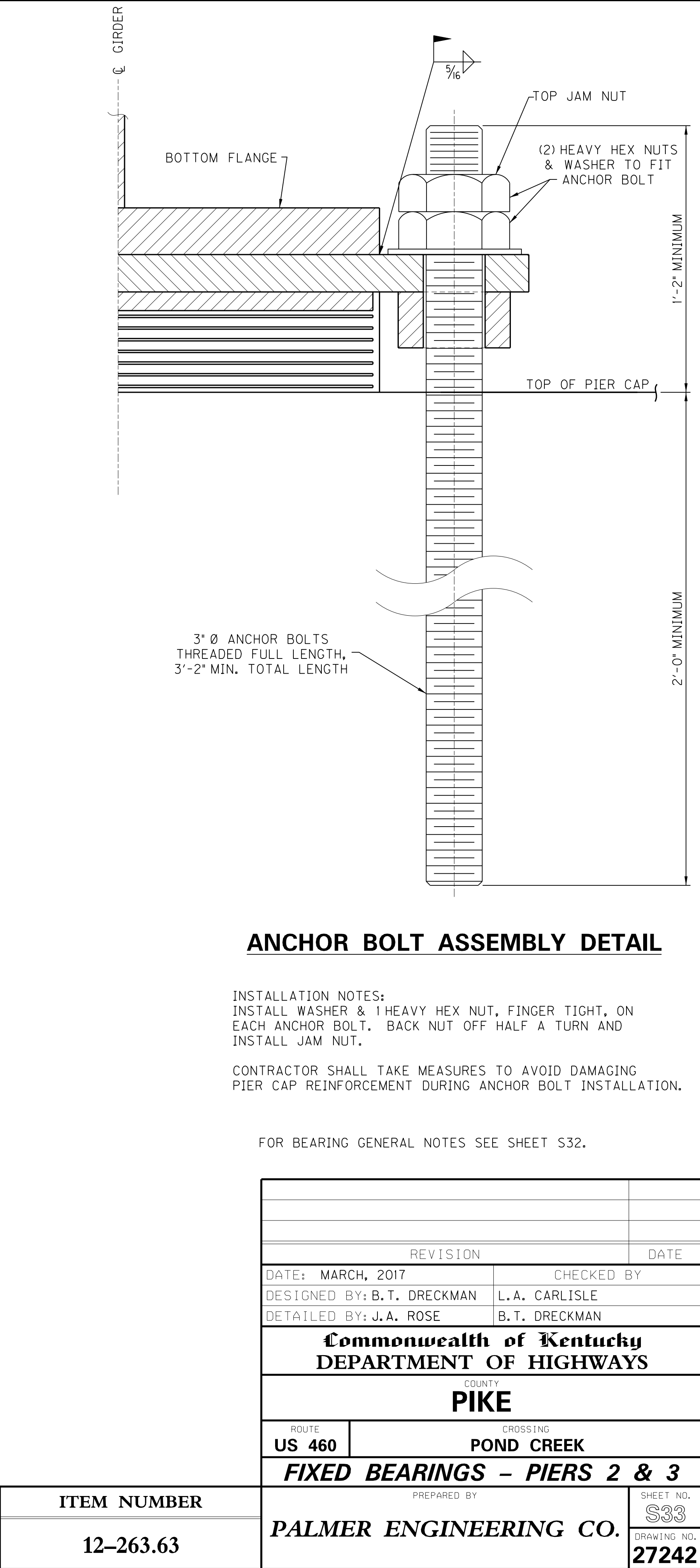
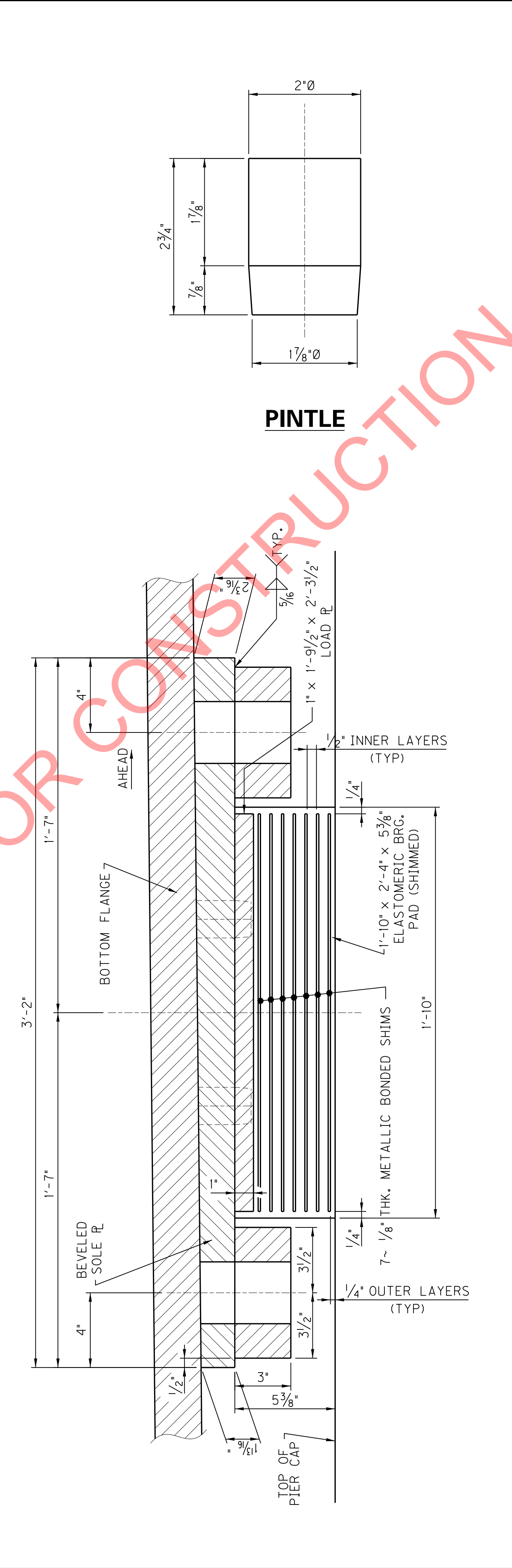
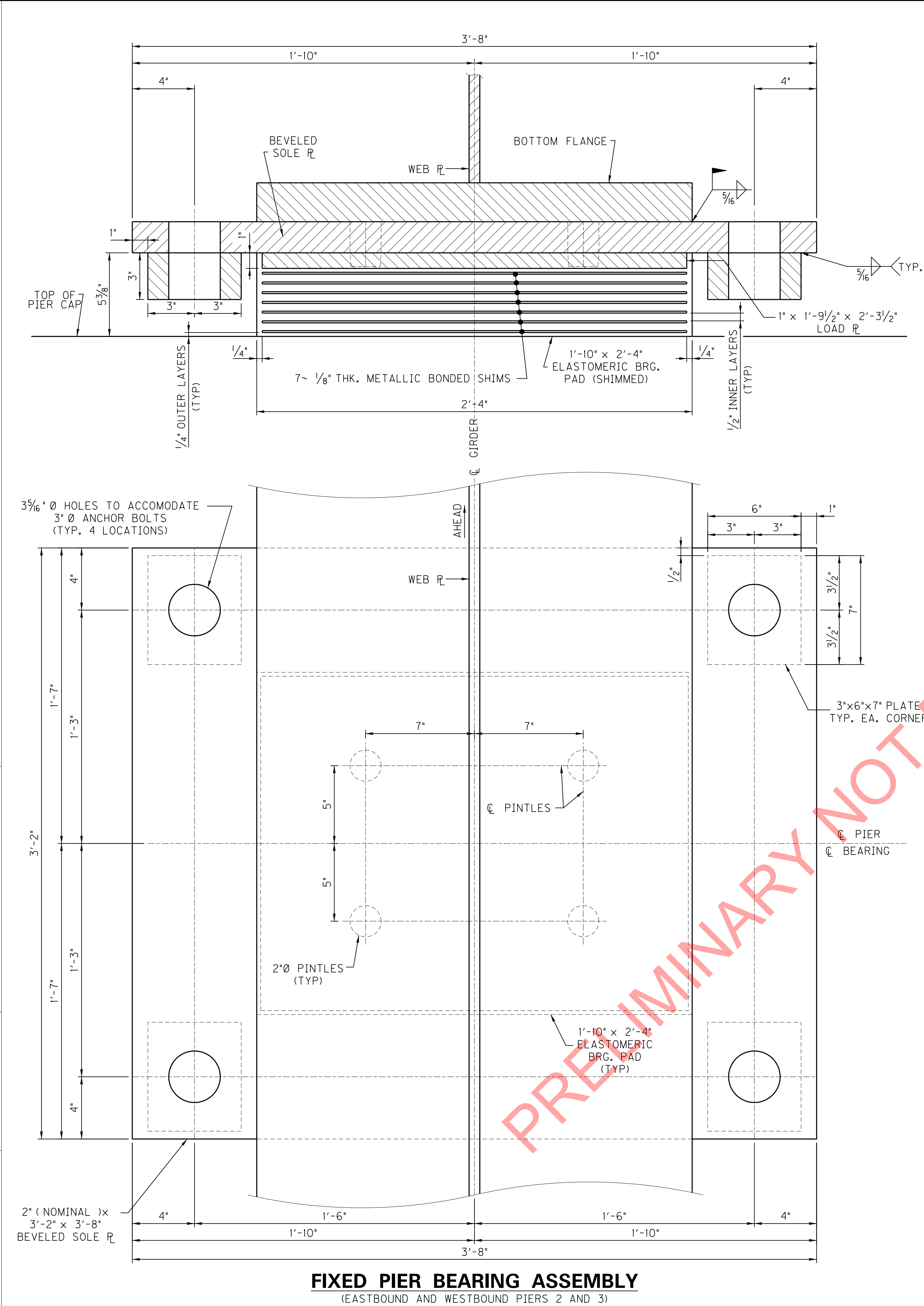


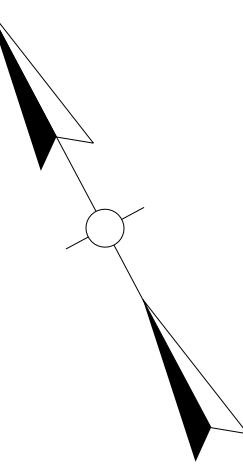
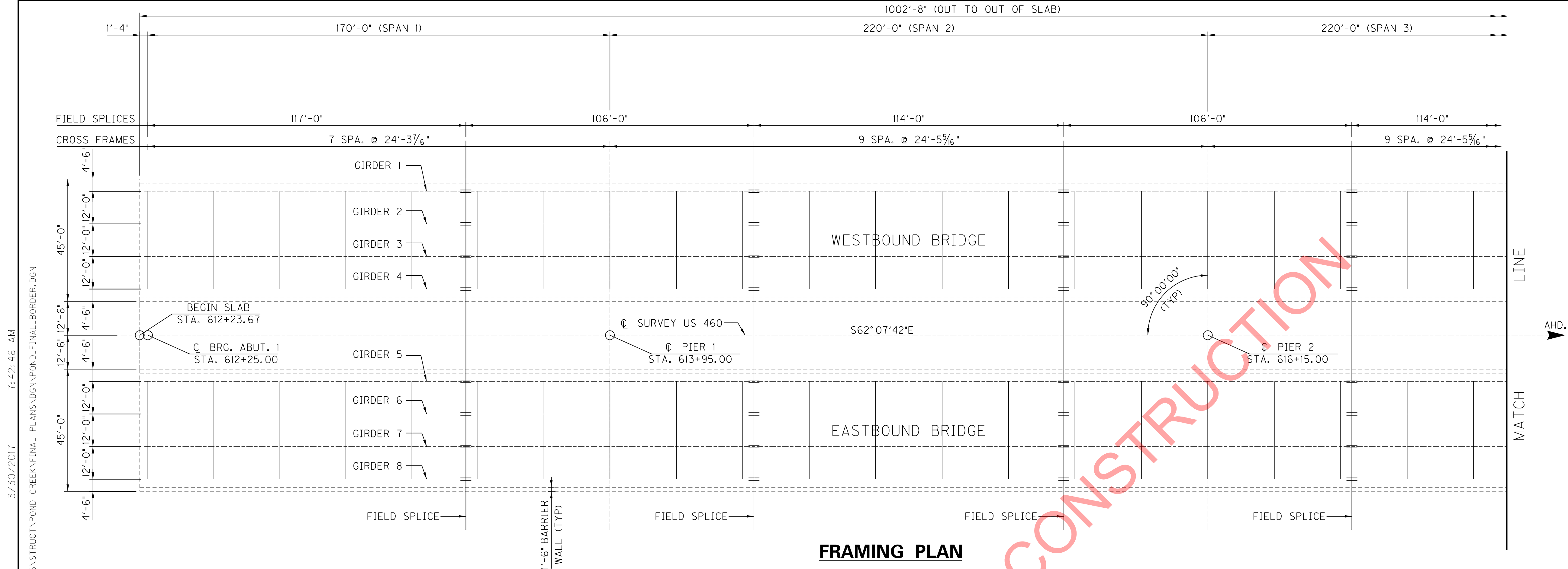
GENERAL NOTES FOR BEARING PADS

- ELASTOMERIC BEARINGS SHALL CONFORM TO AASHTO BRIDGE DESIGN SPECIFICATIONS WITH A SHEAR MODULUS OF 95 PSI AND A MINIMUM LOW-TEMPERATURE ELASTOMER GRADE OF 3.
- METALLIC SHIM MATERIAL SHALL BE ASTM A1101, GRADE 36.
- STEEL REINFORCED ELASTOMERIC BEARING PADS SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENT CORRESPONDING TO DESIGN METHOD "B".
- 1" THICK LOAD PLATE SHALL BE M270, GRADE 50W AND SHALL BE VULCANIZED INTO TOP OF BEARING PADS. LOAD PLATE PLAN DIMENSIONS ARE VARIABLE. REFER TO INDIVIDUAL BEARING SHEETS FOR PLAN DIMENSIONS.
- EXTREME CARE SHALL BE TAKEN TO ENSURE BEVELED SOLE PLATES ARE INSTALLED IN THEIR CORRECT LOCATIONS AND IN CORRECT DIRECTIONS.

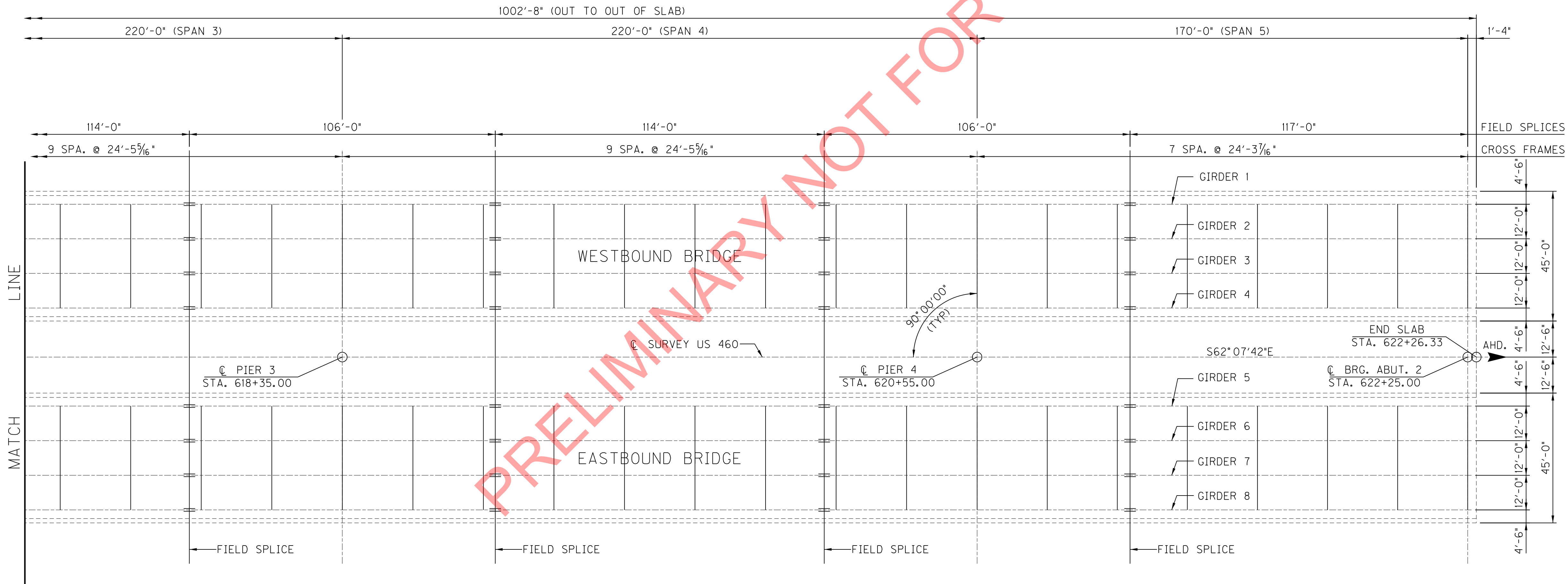
FOR PINTLE DETAILS SEE SHEET S33.

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: B.T. DRECKMAN		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		B.T. DRECKMAN	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460		CROSSING POND CREEK	
EXP. BEARINGS – PIERS 1 & 4			
PREPARED BY		SHEET NO. S32	
PALMER ENGINEERING CO.		DRAWING NO. 27242	





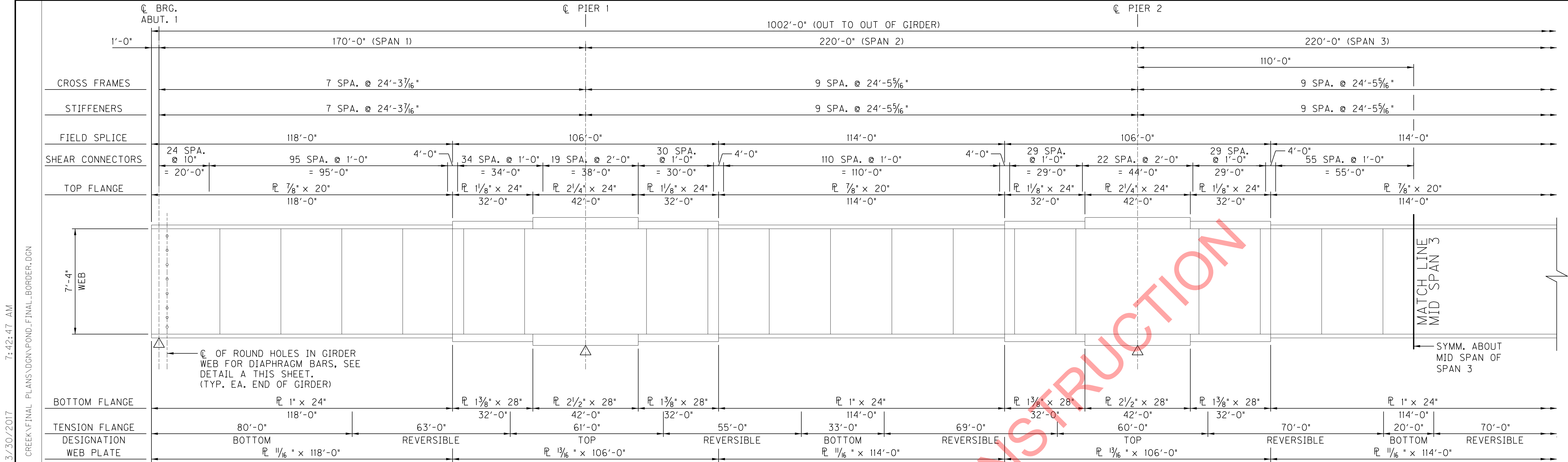
SEE SHEET S02 FOR STRUCTURAL STEEL
ERECTION PLAN REQUIREMENTS.
CONTRACTOR SHALL RECIEVE PLAN APPROVAL
PRIOR TO BEGINNING GIRDER ERECTION.



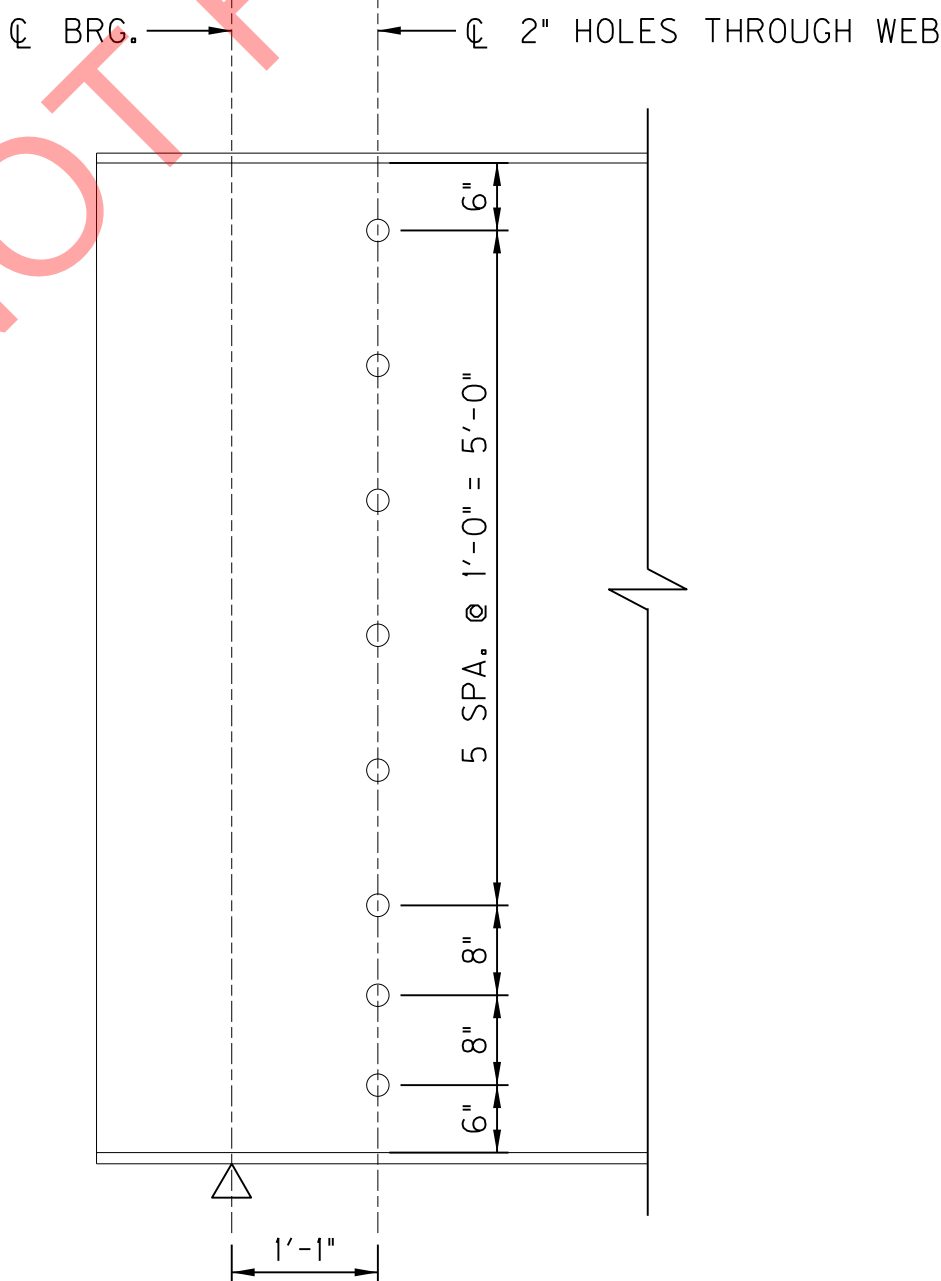
FRAMING PLAN

ITEM NUMBER
12-263.63

REVISION		DATE
DATE: MARCH, 2017	CHECKED BY	
DESIGNED BY: A.C. THOMAS	C.M. GREENWELL	
DETAILED BY: J.A. ROSE	A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
FRAMING PLAN		
PREPARED BY PALMER ENGINEERING CO.		SHEET NO. S34 DRAWING NO. 27242



GIRDER ELEVATION



DETAIL A

NOTES:

BEARING AND JACKING STIFFENERS NOT SHOWN.
SEE SHEET S39 FOR DETAILS.

ALL FLANGES, WEB MATERIAL AND SPLICE PLATES
(EXCLUDING FILL PLATES) SHALL MEET THE CHARPY
V-NOTCH TOUGHNESS TEST AND SHALL BE AASHTO
M270 GRADE 50W STEEL. SEE STRUCTURAL STEEL NOTES.

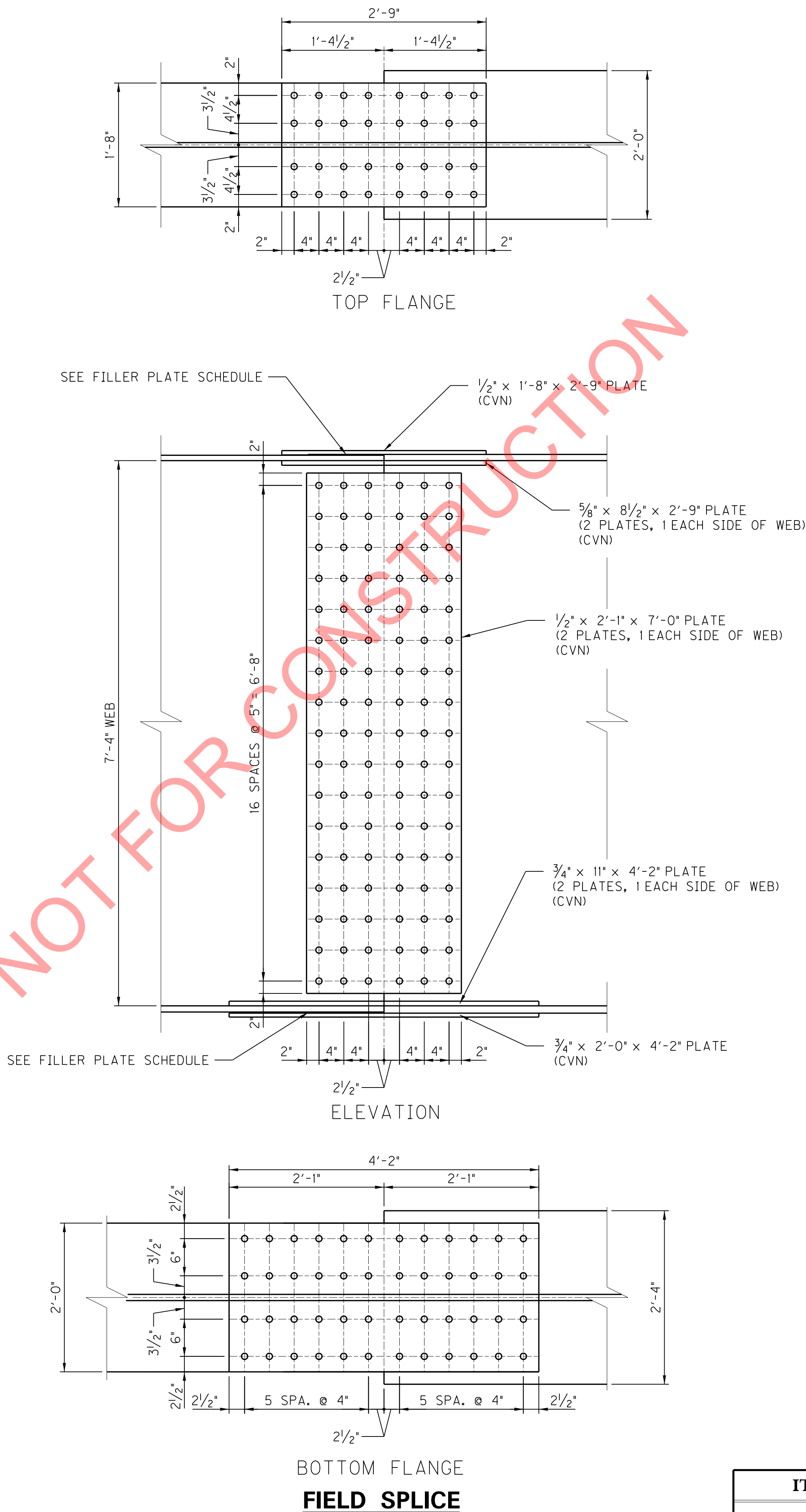
FOR STEEL CROSSFRAME DETAILS SEE SHEET S40.

FOR FIELD SPLICE DETAILS, SEE SHEET S36.

FOR SHEAR STUD CONNECTOR AND WELD DETAILS, SEE SHEET S38.

FOR INTERMEDIATE STIFFENER DETAILS SEE SHEET S39.

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: A.C. THOMAS		C.M. GREENWELL	
DETAILED BY: J.A. ROSE		A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
<i>GIRDER ELEVATION</i>			
PREPARED BY <i>PALMER ENGINEERING CO.</i>			SHEET NO. S35
			DRAWING NO. 27242



- NOTE:
1. SLIP CRITICAL CONNECTION SLIP COEFFICIENT - 0.50. BOLT THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANES. USE HEAVY HEX NUTS AND DIRECT TENSION INDICATOR WASHERS.
 2. ALL PARTS OF EACH SPLICE SHALL BE COMPLETELY ASSEMBLED TAKING INTO ACCOUNT THEIR RELATIVE POSITION IN THE FINISHED STRUCTURE DUE TO GRADE, CAMBER, AND CURVATURE. SECTIONS SHALL BE MATCH MARKED WHILE SO ASSEMBLED.
 3. ALL SPLICE PLATES INCLUDING FILLER PLATES SHALL BE M270, GRADE 50W STEEL.
 4. PLATES DESIGNATED (CVN) SHALL MEET MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN STRUCTURAL STEEL NOTES.

FILLER PLATE SCHEDULE	
TOP FLANGE	1/4"x1'-8"x1'-4 1/2"
BOTTOM FLANGE	3/8"x2'-0"x2'-1"

REVISION		DATE
DATE: MARCH, 2017		CHECKED BY
DESIGNED BY: B.T. DRECKMAN		C.M. GREENWELL
DETAILED BY: J.A. ROSE		B.T. DRECKMAN
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
GIRDER SPLICE		
PREPARED BY		SHEET NO. S36
PALMER ENGINEERING CO.		DRAWING NO. 27242

ITEM NUMBER
12-263.63

ITEM	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05	1.10	1.15	1.20
STEEL DEAD LOAD	0	1/8	5/16	7/16	1/2	5/8	11/16	11/16	3/4	11/16	11/16	5/8	9/16	7/16	3/8	1/4	3/16	1/8	1/16	0	0	0	1/16	3/16	5/16
NON-COMPOSITE DEAD LOAD	0	1/2	15/16	1 5/16	1 11/16	1 15/16	2 3/16	2 5/16	2 3/8	2 1/4	2 3/16	1 15/16	1 11/16	1 7/16	1 1/8	13/16	9/16	5/16	1/8	1/16	0	1/8	5/16	5/8	1 1/8
COMPOSITE DEAD LOAD	0	1/16	1/16	1/8	1/8	3/16	3/16	3/16	3/16	3/16	3/16	3/16	1/8	1/8	1/8	1/16	1/16	0	0	0	0	0	1/16	1/16	1/8
TOTAL DEAD LOAD	0	11/16	1 5/16	1 7/8	2 3/8	2 3/4	3 1/16	3 3/16	3 5/16	3 3/16	3 1/16	2 3/4	2 7/16	2	1 5/8	1 3/16	13/16	1/2	3/16	1/16	0	1/8	7/16	7/8	1 1/2

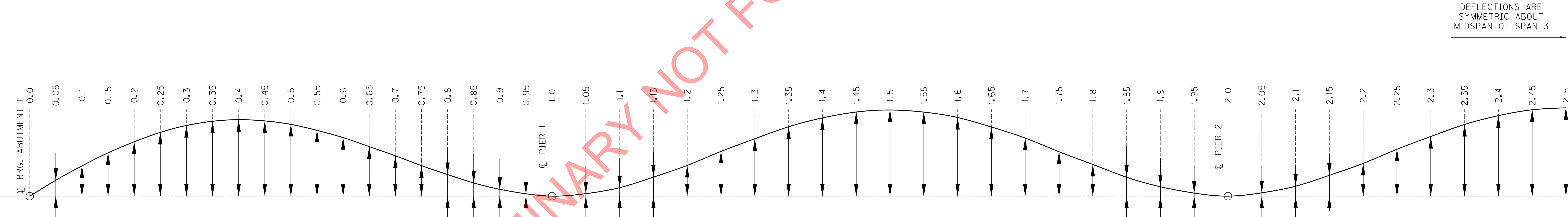
ITEM	1.25	1.30	1.35	1.40	1.45	1.50	1.55	1.60	1.65	1.70	1.75	1.80	1.85	1.90	1.95	2.00	2.05	2.10	2.15	2.20	2.25	2.30	2.35	2.40	2.45	2.50
STEEL DEAD LOAD	7/16	9/16	11/16	13/16	13/16	7/8	13/16	13/16	11/16	9/16	7/16	5/16	3/16	1/16	0	0	1/16	1/8	3/16	3/8	1/2	5/8	3/4	13/16	7/8	7/8
NON-COMPOSITE DEAD LOAD	1 1/2	2	2 3/8	2 11/16	2 7/8	2 15/16	2 13/16	2 11/16	2 5/16	1 15/16	1 1/2	1 1/16	5/8	5/16	1/8	0	1/8	5/16	11/16	1 1/8	1 9/16	2	2 7/16	2 3/4	2 15/16	3
COMPOSITE DEAD LOAD	1/8	3/16	1/4	1/4	1/4	1/4	1/4	1/4	1/4	3/16	1/8	1/8	1/16	1/16	0	0	0	1/16	1/16	1/8	1/8	3/16	3/16	1/4	1/4	1/4
TOTAL DEAD LOAD	2 1/8	2 13/16	3 1/4	3 3/4	3 15/16	4 1/8	3 15/16	3 11/16	3 1/4	2 3/4	2 1/8	1 1/2	15/16	7/16	1/8	0	3/16	1/2	15/16	1 9/16	2 3/16	2 13/16	3 3/8	3 13/16	4 1/16	4 1/8

DEFLECTIONS – GIRDERS 1, 4, 5 & 8

ITEM	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.05	1.10	1.15	1.20
STEEL DEAD LOAD	0	1/8	5/16	7/16	1/2	5/8	11/16	11/16	3/4	11/16	11/16	5/8	9/16	7/16	3/8	5/16	3/16	1/8	1/16	0	0	0	1/16	3/16	5/16
NON-COMPOSITE DEAD LOAD	0	1/2	15/16	1 3/8	1 3/4	2	2 1/4	2 5/16	2 3/8	2 5/16	2 3/16	2	1 3/4	1 7/16	1 3/16	7/8	9/16	5/16	1/8	1/16	0	1/8	5/16	11/16	1 1/8
COMPOSITE DEAD LOAD	0	1/16	1/16	1/8	1/8	3/16	3/16	3/16	3/16	3/16	3/16	3/16	1/8	1/8	1/8	1/16	1/16	0	0	0	0	0	1/16	1/16	1/8
TOTAL DEAD LOAD	0	11/16	1 5/16	1 7/8	2 3/8	2 3/4	3 1/8	3 1/4	3 5/16	3 3/16	3 1/16	2 3/4	2 7/16	2	1 5/8	1 3/16	13/16	1/2	3/16	1/16	0	1/8	7/16	15/16	1 9/16

ITEM	1.25	1.30	1.35	1.40	1.45	1.50	1.55	1.60	1.65	1.70	1.75	1.80	1.85	1.90	1.95	2.00	2.05	2.10	2.15	2.20	2.25	2.30	2.35	2.40	2.45	2.50
STEEL DEAD LOAD	7/16	9/16	11/16	13/16	7/8	7/8	7/8	13/16	11/16	9/16	7/16	5/16	3/16	1/16	0	0	1/16	1/8	3/16	3/8	1/2	5/8	3/4	13/16	7/8	15/16
NON-COMPOSITE DEAD LOAD	1 9/16	2 1/16	2 3/8	2 3/4	2 7/8	3	2 7/8	2 11/16	2 3/8	2	1 1/2	1 1/16	11/16	5/16	1/8	0	1/8	5/16	11/16	1 1/8	1 9/16	2 1/16	2 7/16	2 3/4	2 15/16	3
COMPOSITE DEAD LOAD	1/8	3/16	1/4	1/4	1/4	1/4	1/4	1/4	1/4	3/16	1/8	1/8	1/16	1/16	0	0	0	0	1/16	1/8	1/8	3/16	3/16	1/4	1/4	1/4
TOTAL DEAD LOAD	2 1/8	2 13/16	3 5/16	3 13/16	4	4 1/8	4	3 3/4	3 5/16	2 3/4	2 1/8	1 1/2	15/16	7/16	1/8	0	3/16	1/2	15/16	1 9/16	2 3/16	2 7/8	3 3/8	3 13/16	4 1/8	4 3/16

DEFLECTIONS – GIRDERS 2, 3, 6 & 7

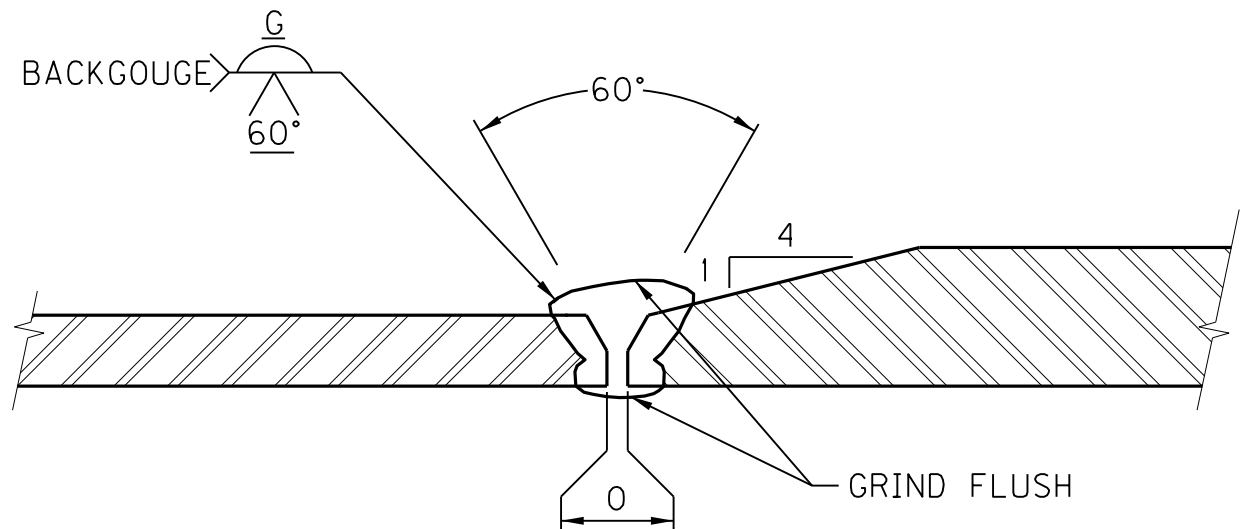


CAMBER DIAGRAM

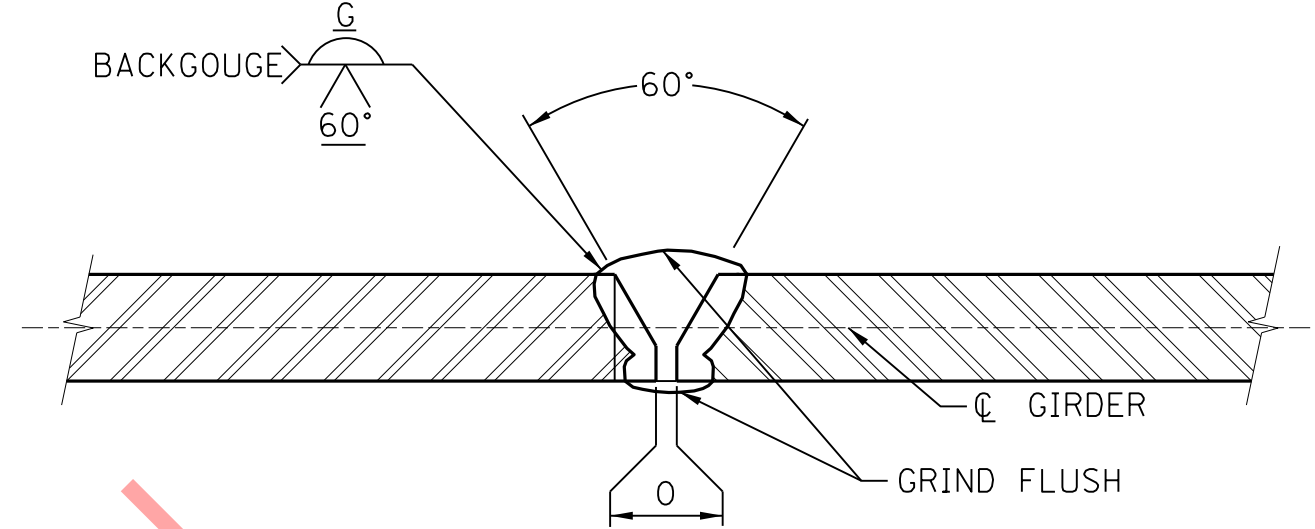
REVISION		DATE
DATE: MARCH, 2017		CHECKED BY
DESIGNED BY: A.C. THOMAS		L.A. CARLISLE
DETAILED BY: J.A. ROSE		L.A. CARLISLE
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
GIRDER CAMBER		
PREPARED BY		
PALMER ENGINEERING CO.		
SHEET NO. S37		DRAWING NO. 27242

- 1 NON-COMPOSITE DEAD LOAD INCLUDES THE DEAD WEIGHT OF SLAB AND HAUNCHES.
- 2 COMPOSITE DEAD LOAD INCLUDES THE DEAD WEIGHT OF THE BARRIERS.
CAMBER DEFLECTIONS DO NOT INCLUDE COMPOSITE EFFECTS DUE TO POURING SEQUENCE.

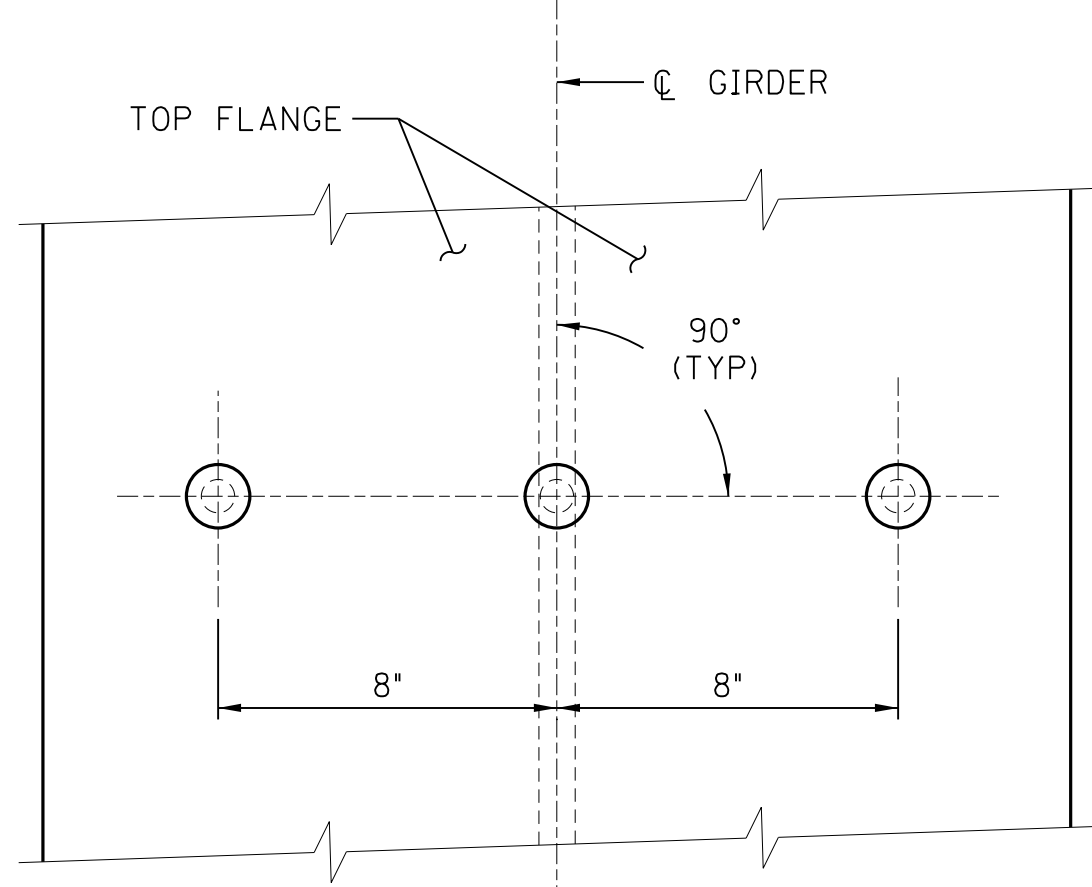
ITEM NUMBER
12–263.63



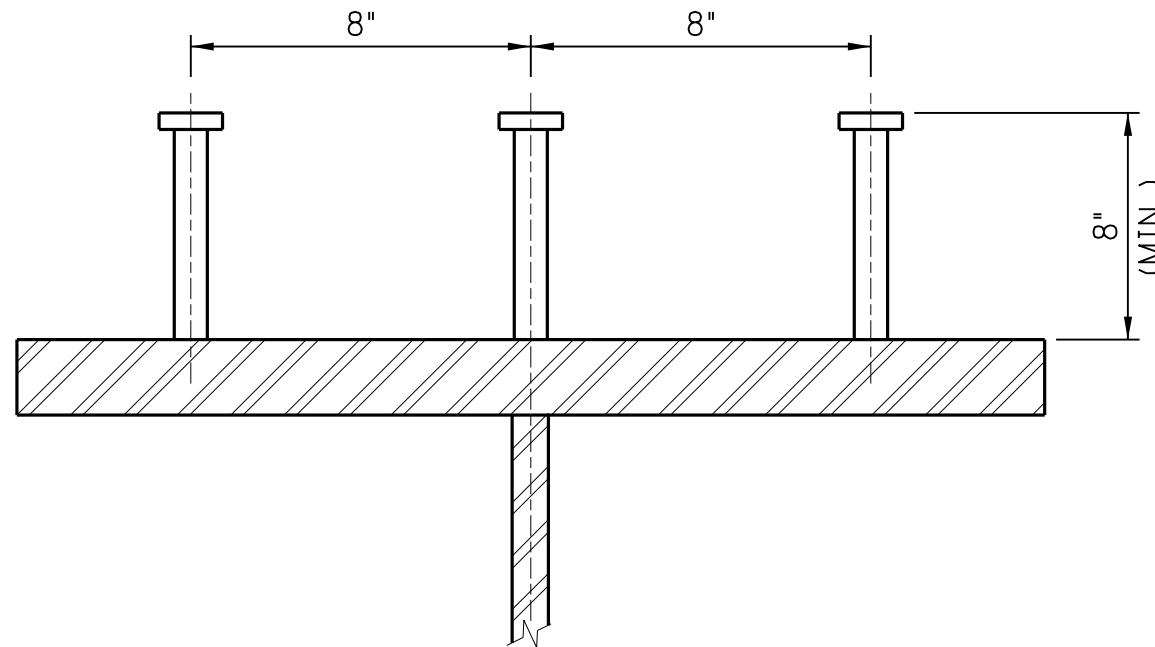
FLANGE BUTT WELD IF $R \leq 2"$
(SHOP FLANGE SPLICE)



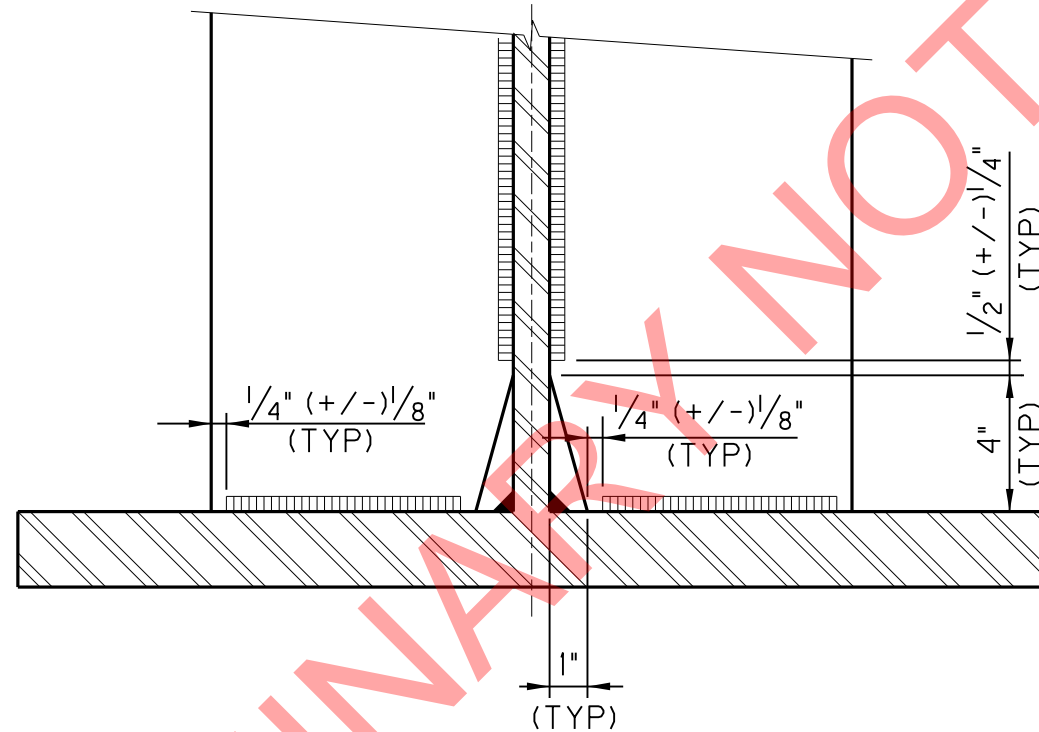
WEB BUTT WELD
(SHOP WEB SPLICE)



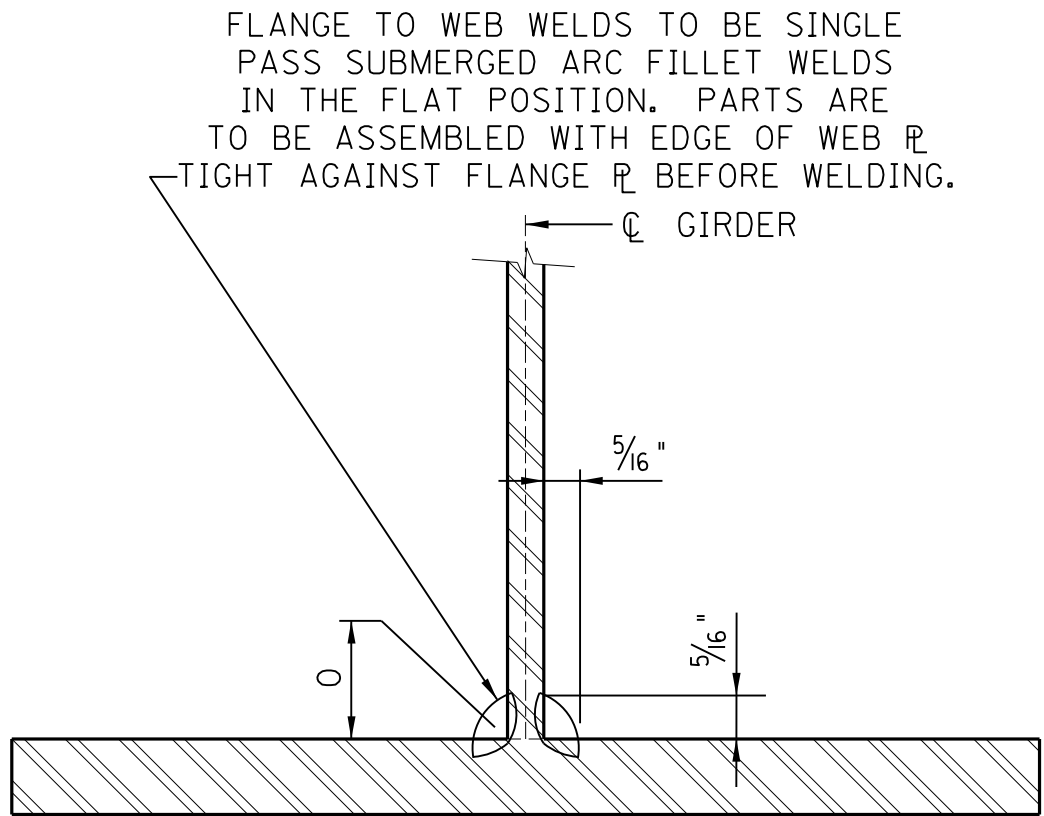
$\frac{7}{8}" \varnothing$ SHEAR STUDS WELDED TO TOP FLANGE, 3 PER ROW.
(SEE GIRDER ELEVATION FOR ROW SPACING)



SHEAR CONNECTOR STUDS
USE $\frac{7}{8}" \varnothing$ GRANULAR OR SOLID FLUX FILLED



**TERMINATION OF WELDS FOR
STIFFENERS AND GUSSET PLATES**
(AT WEB STIFFENERS, CROSS FRAMES,
AND ABUTMENTS)



FLANGE TO WEB WELD

NOTES

1. ALL SHOP SPLICES IN FLANGE OR WEB PLATES SHALL BE MADE PRIOR TO WELDING FLANGE PLATES TO WEB PLATES.
2. BUTT WELDS SHALL BE GROUND FLUSH ON BOTH SIDES. ALL GRINDING SHALL BE PARALLEL TO THE DIRECTION OF STRESS.
3. WEB SPLICES SHALL BE MINIMUM OF 6" CLEAR OF SHOP FLANGE SPLICES, CROSS FRAME CONNECTIONS, BEARING STIFFENER PLATES, JACKING STIFFENER PLATES, AND INTERMEDIATE STIFFENER PLATES.
4. SEE GENERAL NOTES FOR MORE SHEAR CONNECTOR STUD REQUIREMENTS.

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: A.C. THOMAS		C.M. GREENWELL	
DETAILED BY: J.A. ROSE		A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
STRUCTURAL STEEL DETAILS			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S38
			DRAWING NO. 27242

ITEM NUMBER

12-263.63

PREPARED BY

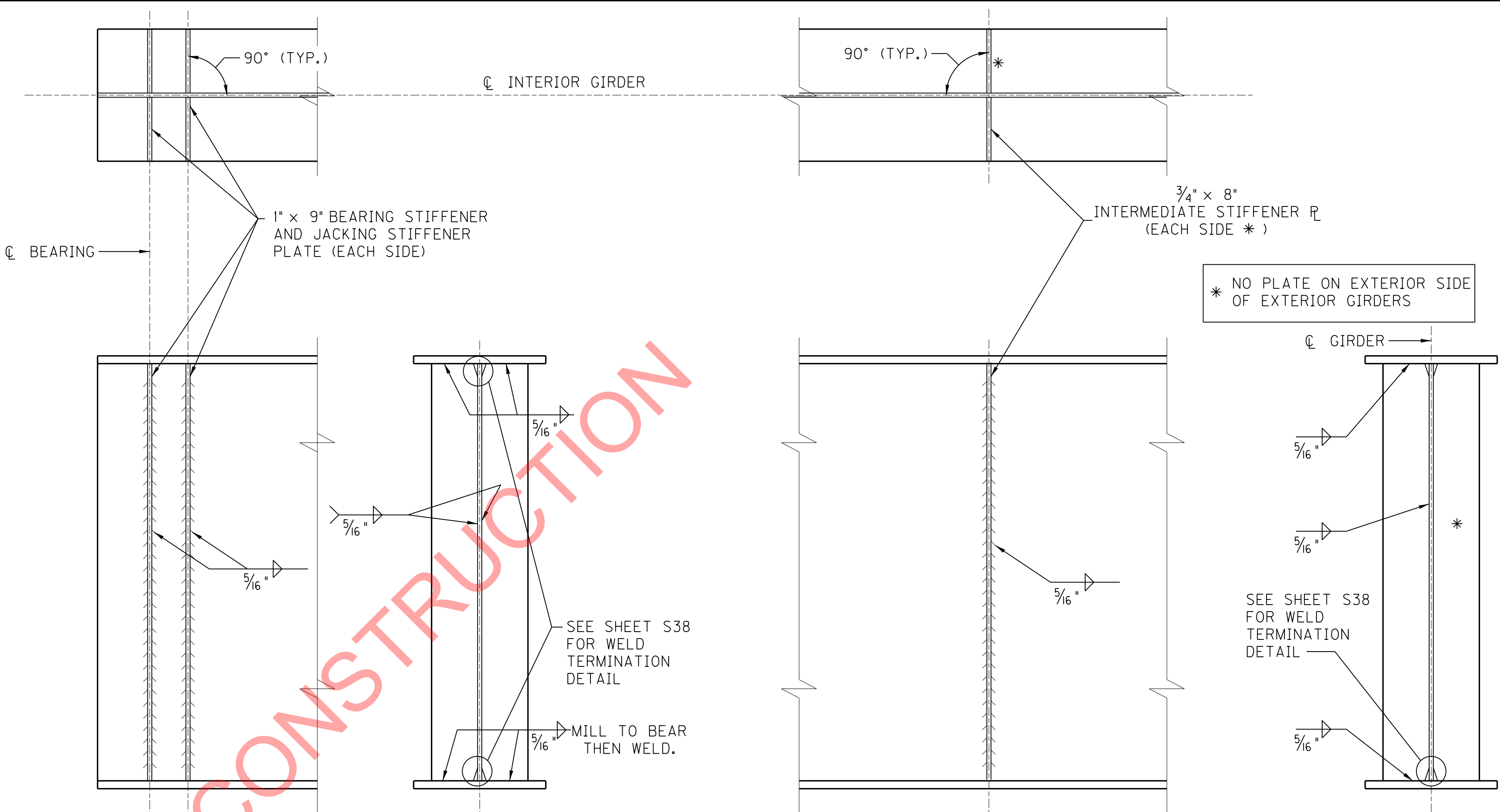
PALMER ENGINEERING CO.

SHEET NO.

S38

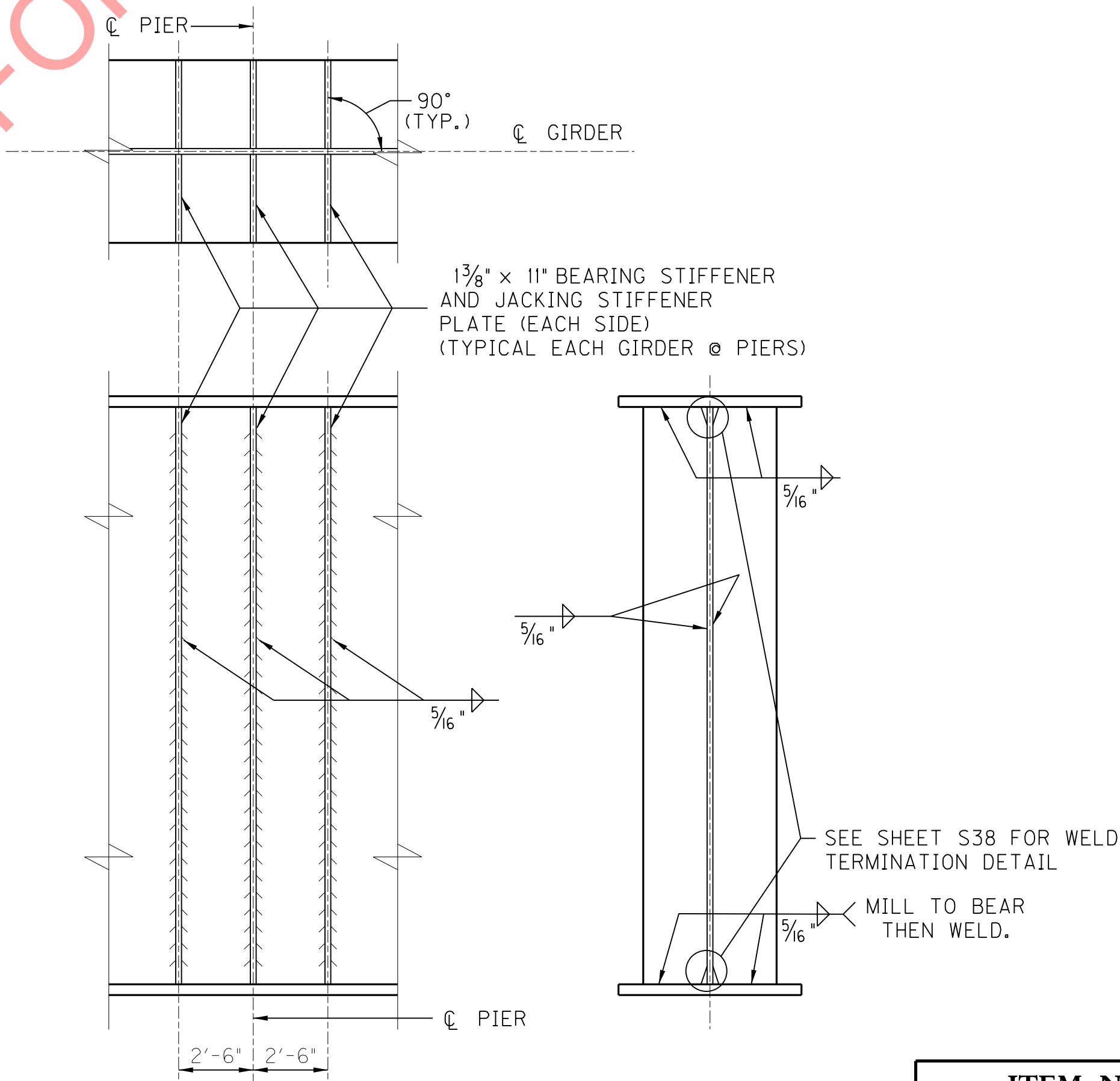
DRAWING NO.

27242



ABUTMENT BEARING AND JACKING STIFFENER

INTERMEDIATE STIFFENER



PIER BEARING AND JACKING STIFFENER

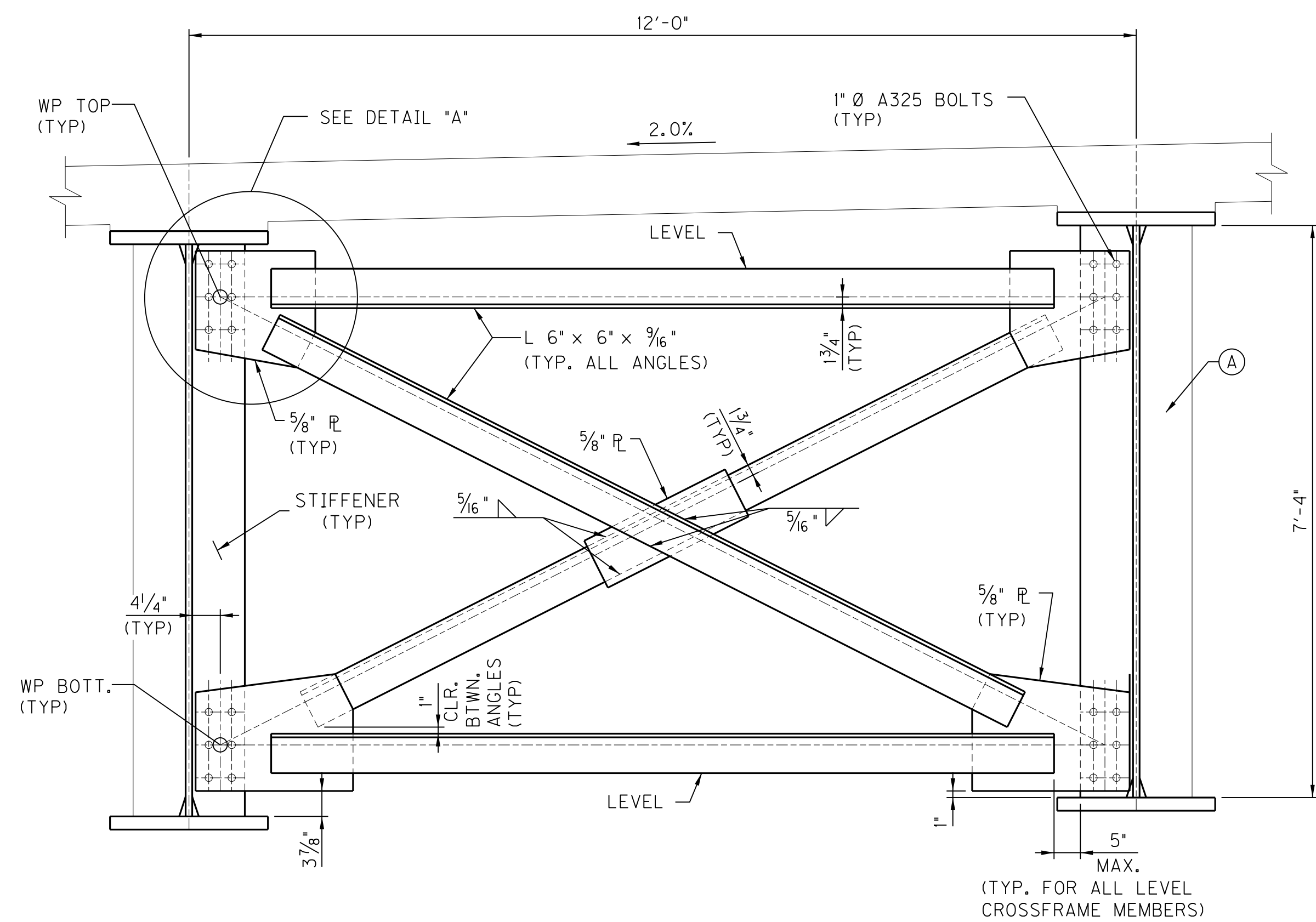
NOTES:

INTERMEDIATE STIFFENERS AT CROSSFRAME LOCATIONS SHALL BE WELDED TO TOP AND BOTTOM FLANGES.

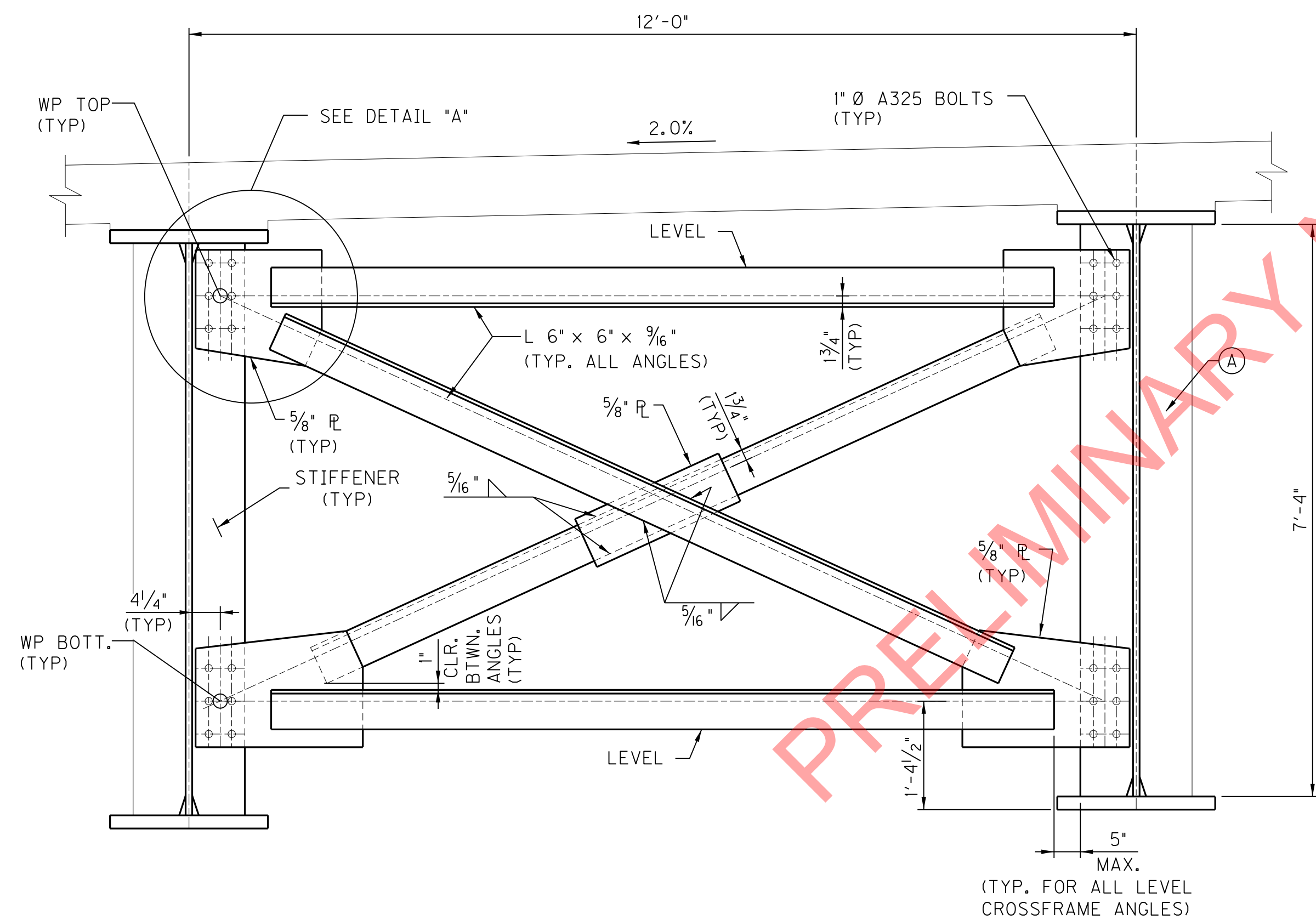
ENDS OF WEB AND ALL BEARING STIFFENERS ARE TO BE VERTICAL IN THE FINAL ERECTED POSITION. INTERMEDIATE STIFFENERS ARE TO BE NORMAL TO THE FLANGE.

REVISION		DATE
DATE: MARCH, 2017	CHECKED BY	
DESIGNED BY: A.C. THOMAS	C.M. GREENWELL	
DETAILED BY: J.A. ROSE	A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
STRUCTURAL STEEL DETAILS		
PREPARED BY		SHEET NO. S39
PALMER ENGINEERING CO.		DRAWING NO. 27242

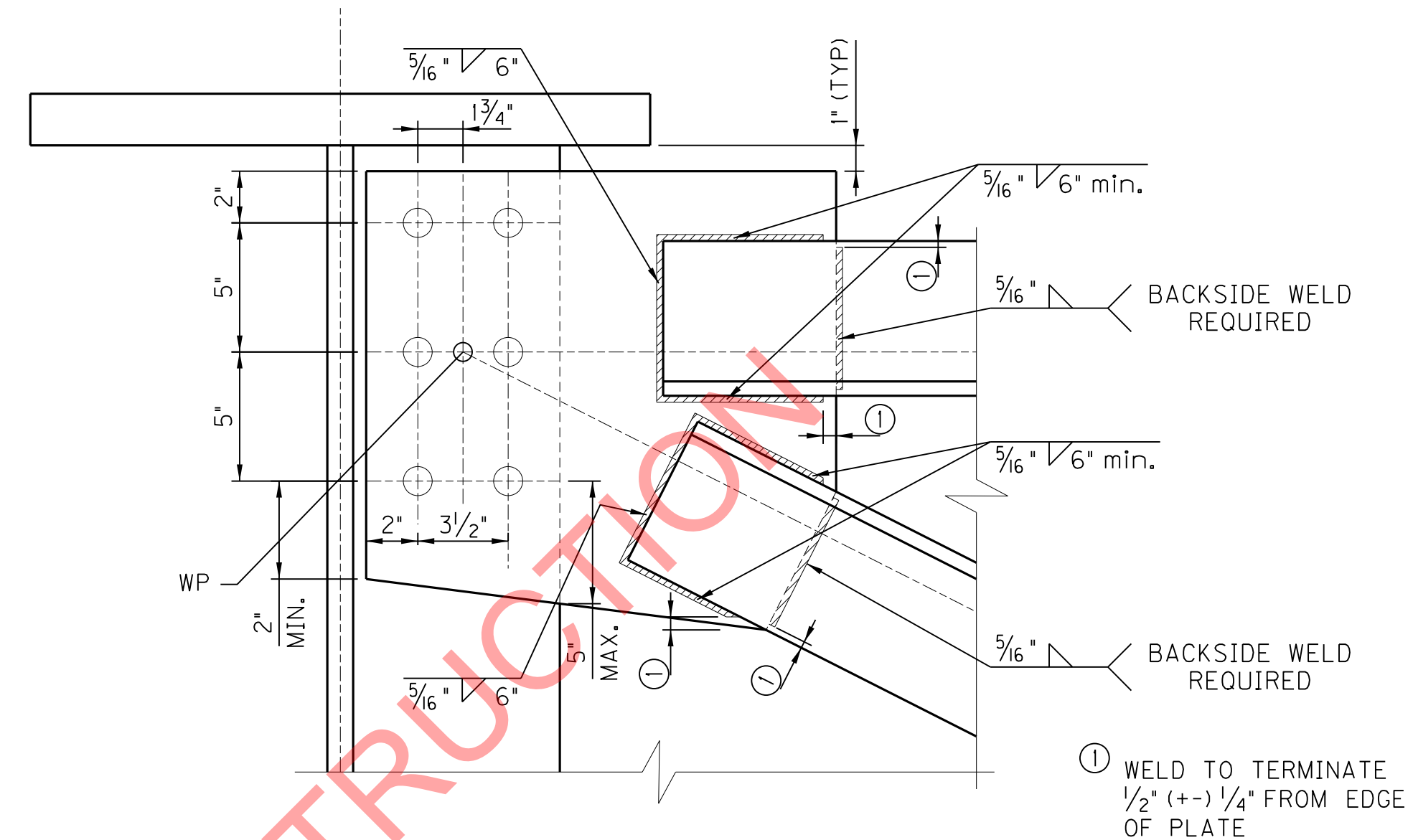
ITEM NUMBER
12-263.63



INTERMEDIATE AND PIER CROSSFRAME DETAIL



ABUTMENT CROSSFRAME DETAIL



DETAIL "A"

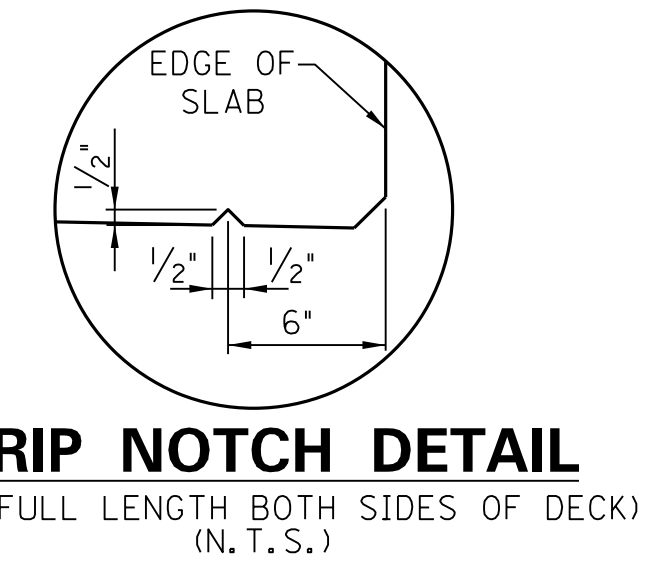
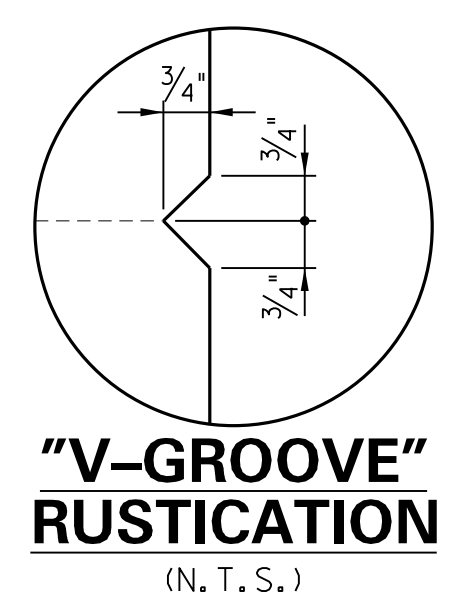
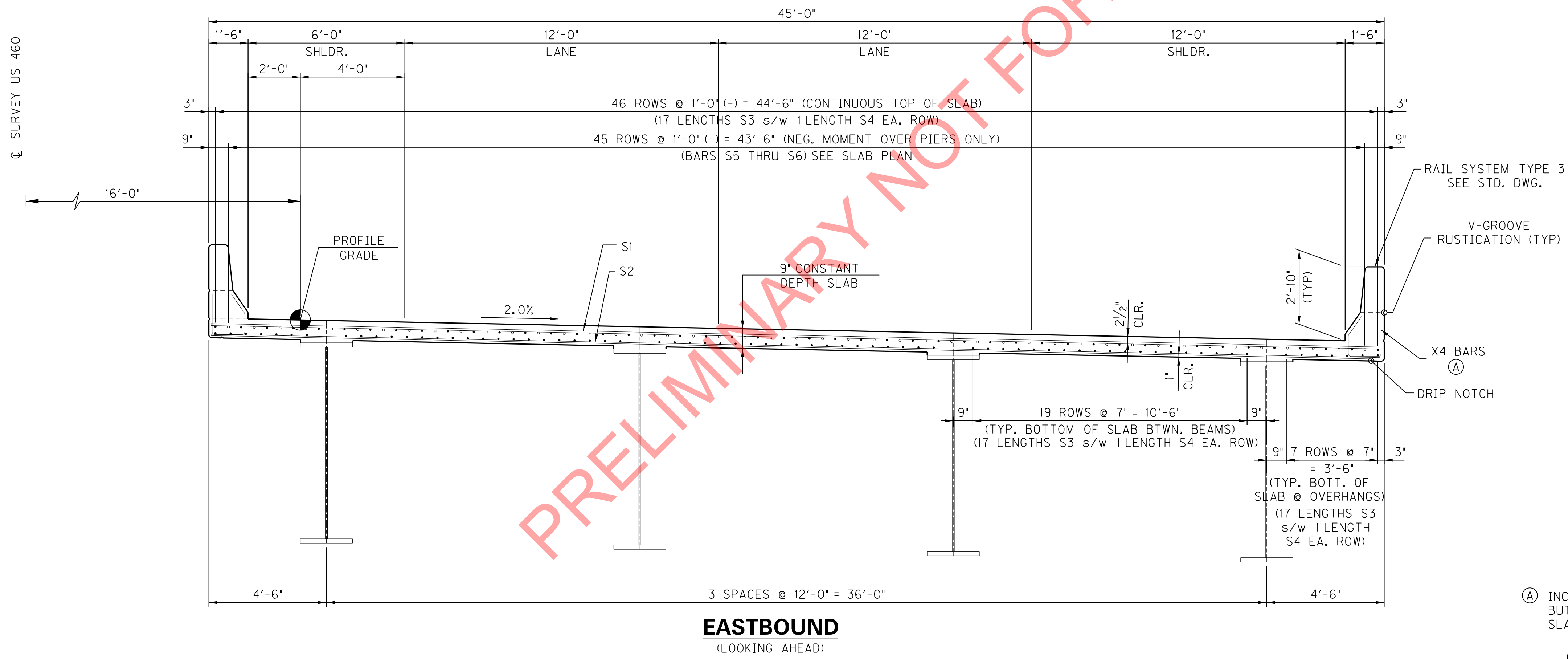
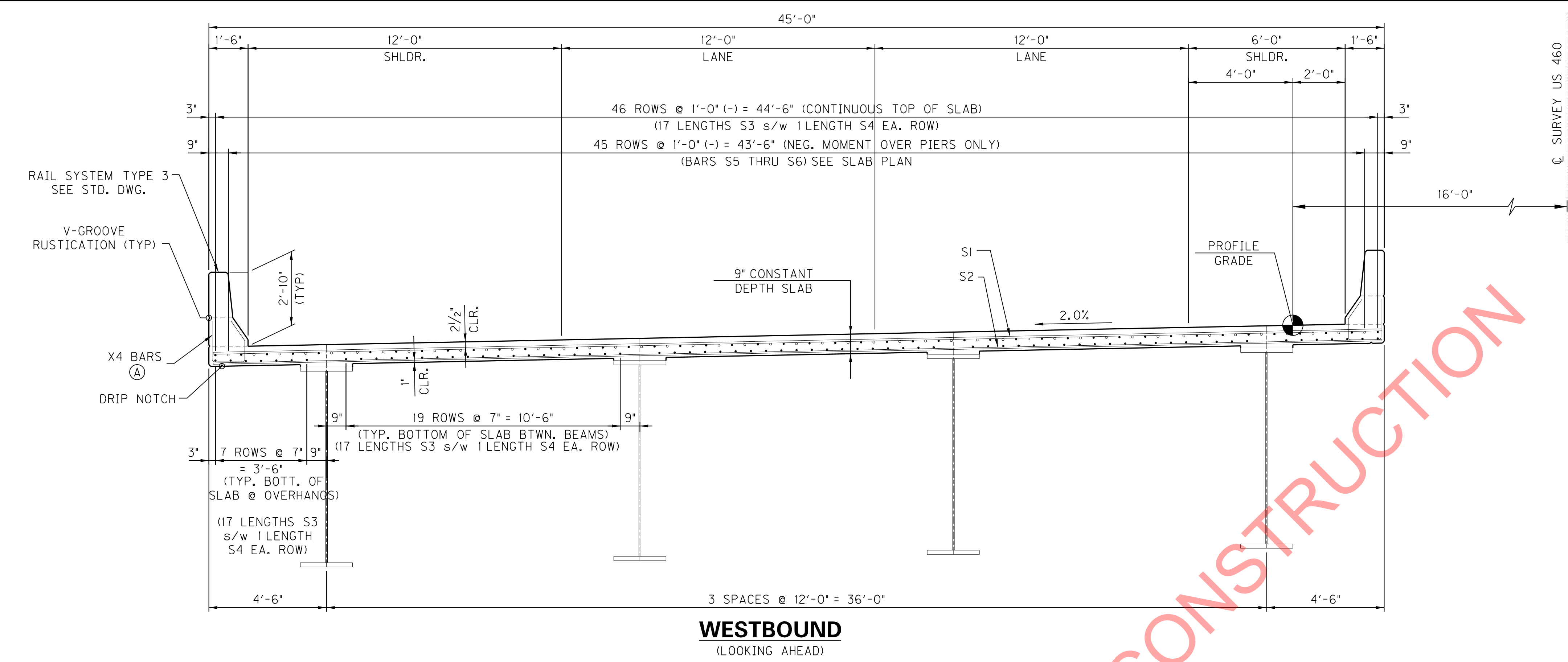
TYPICAL WELD AND BOLT DETAIL FOR CROSSFRAME CONNECTIONS

NOTE:

SLIP CRITICAL CONNECTION SLIP COEFFICIENT - 0.50. BOLT
THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANES.
USE HEAVY HEX NUTS AND DIRECT TENSION INDICATOR
WASHERS.

(A) NO PLATE ON EXTERIOR SIDE
OF EXTERIOR GIRDERS @
INTERMEDIATE CROSS FRAMES

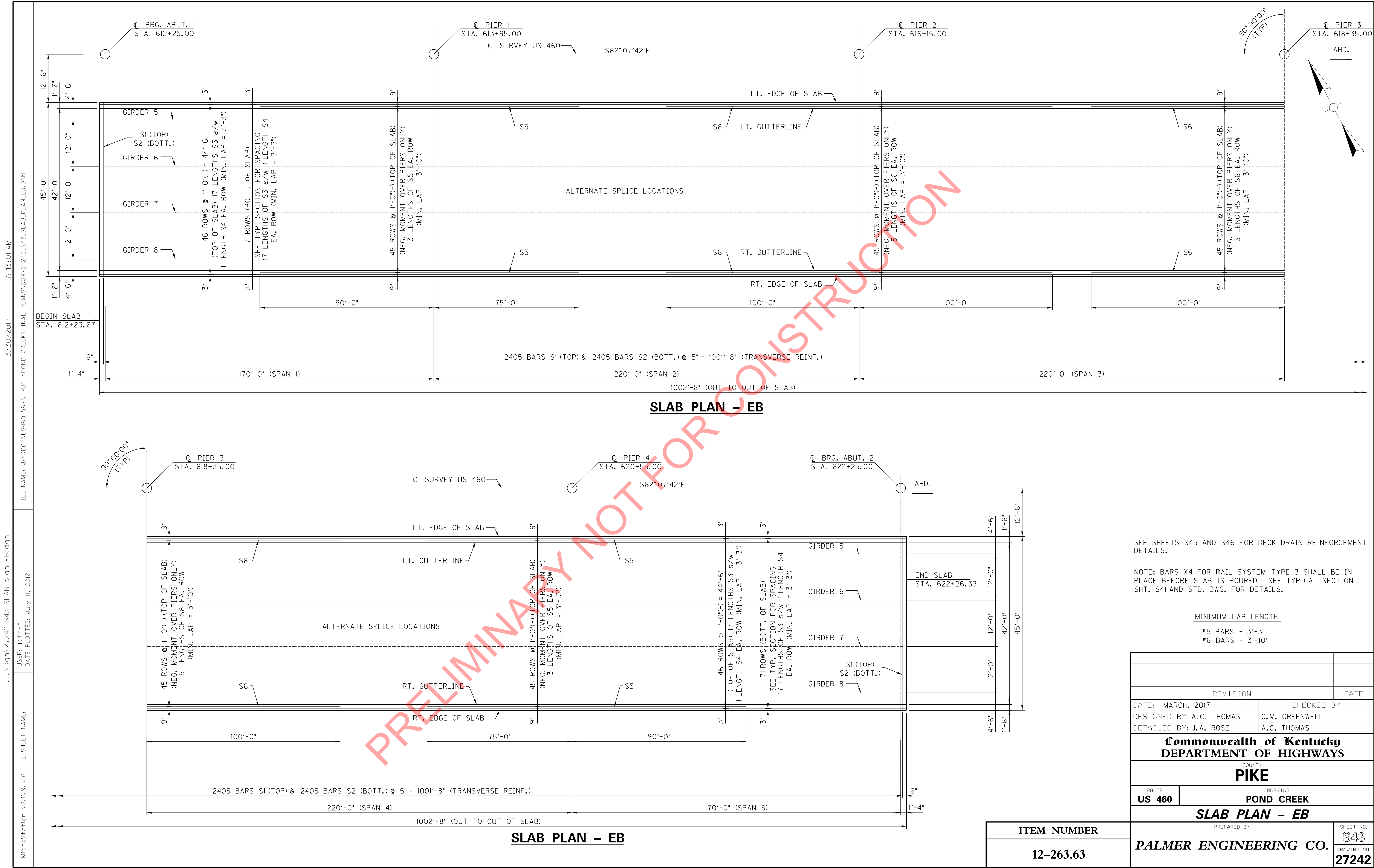
REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: B.T. DRECKMAN		C.M. GREENWELL	
DETAILED BY: J.A. ROSE		B.T. DRECKMAN	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
STRUCTURAL STEEL DETAILS			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S40 DRAWING NO. 27242

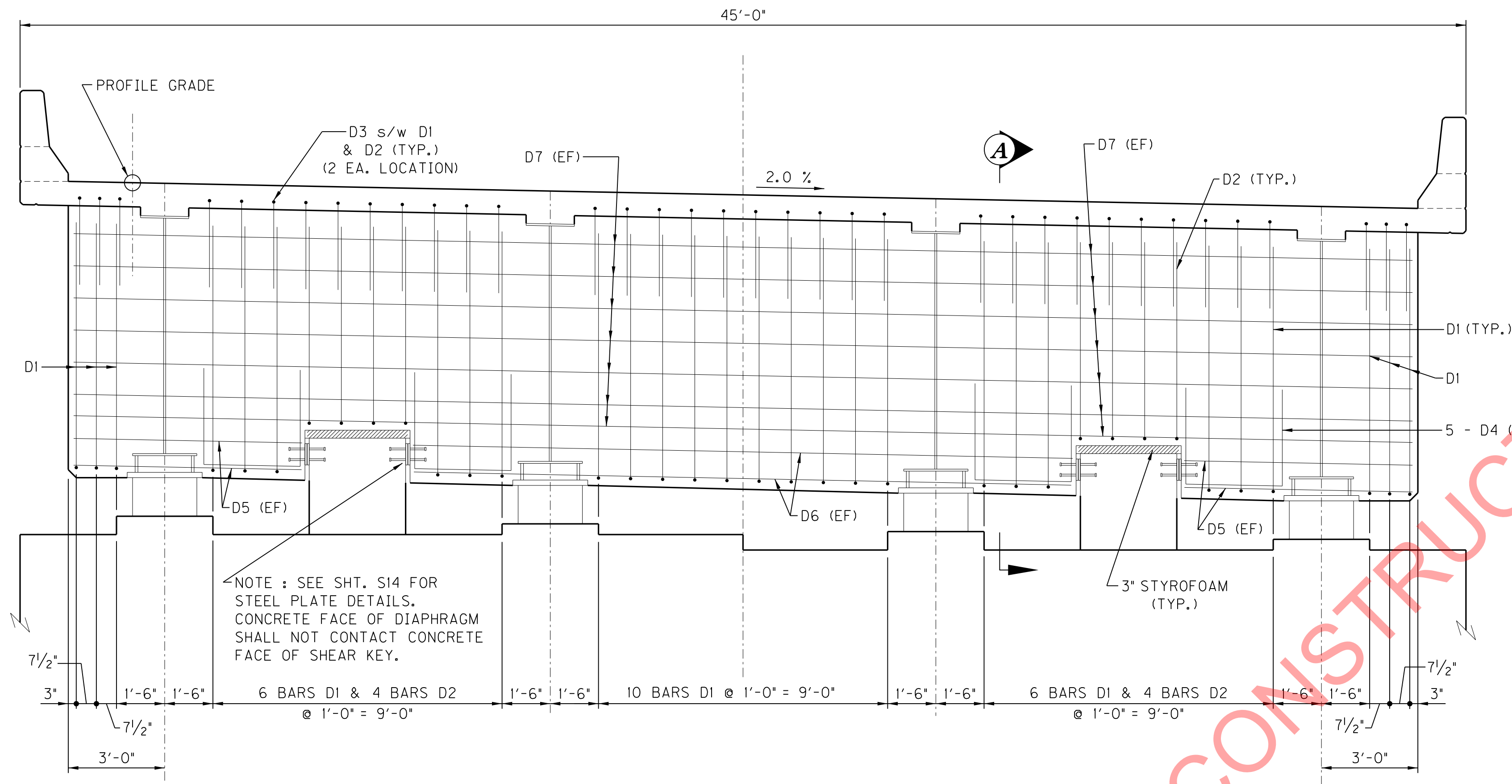


(A) INCLUDED IN RAIL SYSTEM TYPE 3, BUT SHALL BE IN PLACE BEFORE DECK SLAB IS POURED.

ITEM NUMBER
12-263.63

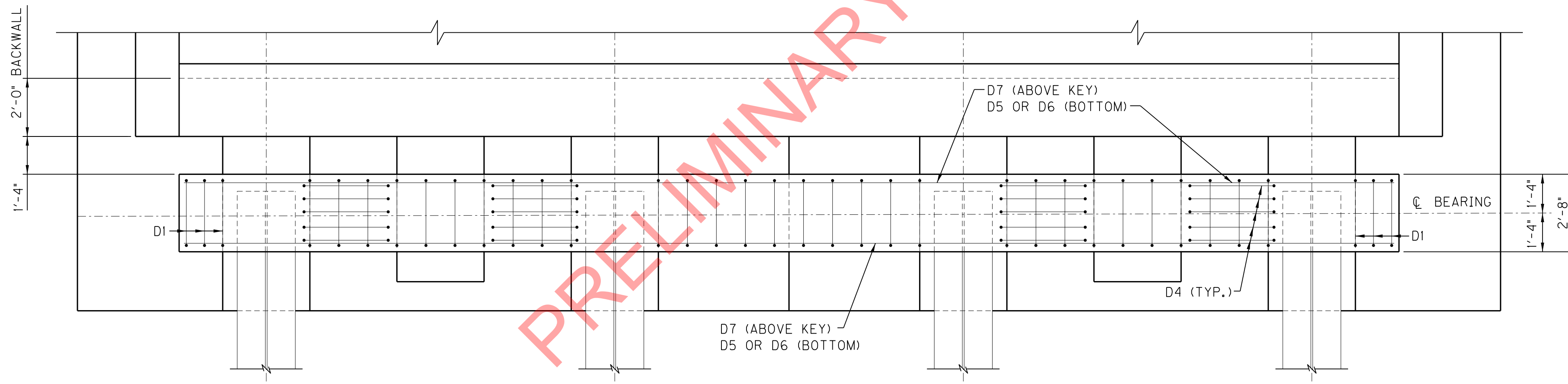
REVISION	
DATE	
DATE: MARCH, 2017	
CHECKED BY	
DESIGNED BY: A.C. THOMAS	
C.M. GREENWELL	
DETAILED BY: J.A. ROSE	
A.C. THOMAS	
Commonwealth of Kentucky	
DEPARTMENT OF HIGHWAYS	
COUNTY	
PIKE	
ROUTE	CROSSING
US 460	POND CREEK
TYPICAL DECK SECTIONS	
PREPARED BY	
PALMER ENGINEERING CO.	
SHEET NO.	
S41	
DRAWING NO.	
27242	



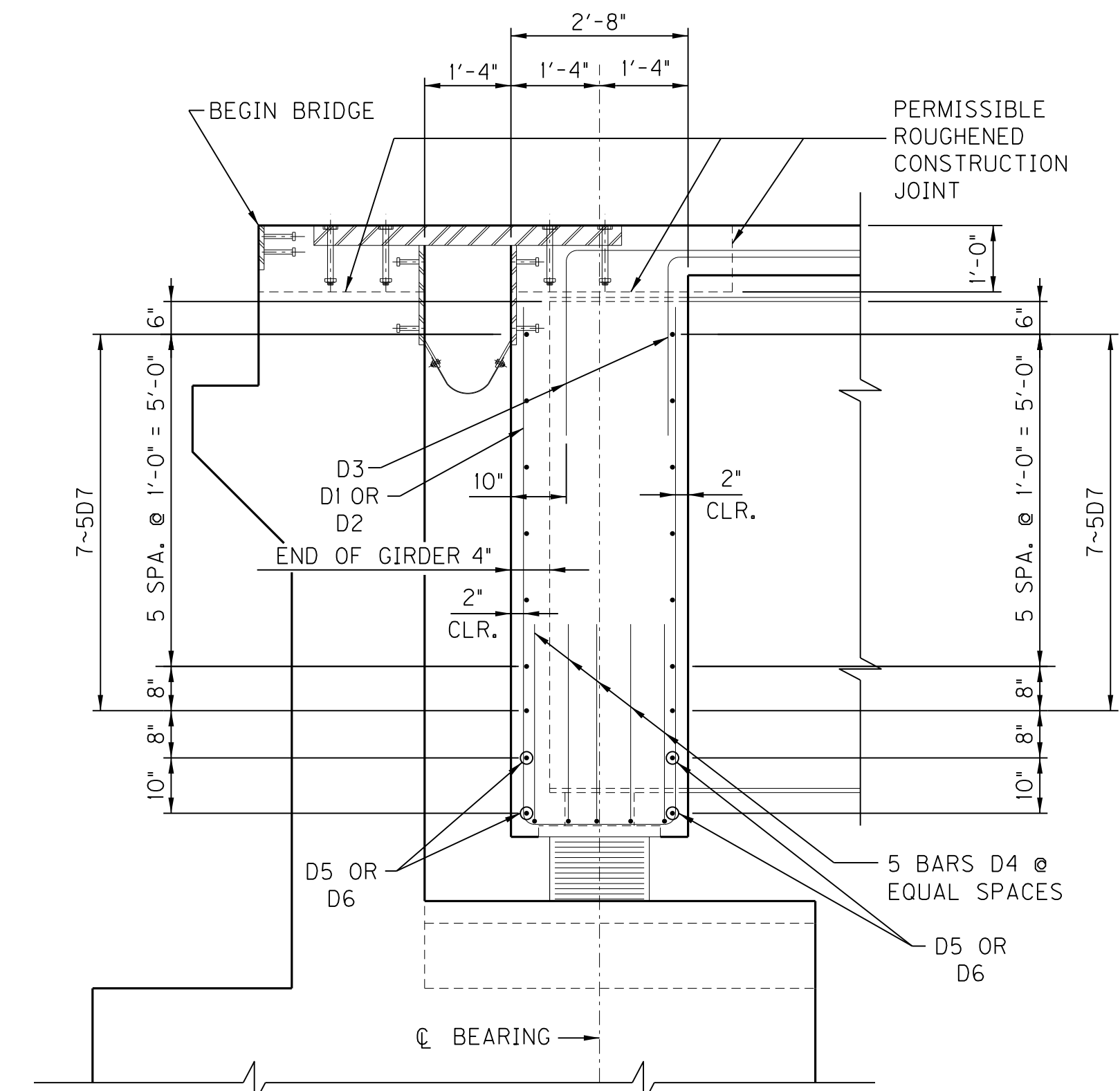


ELEVATION

NOTE: ABUTMENT CROSSFRAMES, TO BE CAST-IN CONCRETE DIAPHRAGM, NOT SHOWN FOR CLARITY.

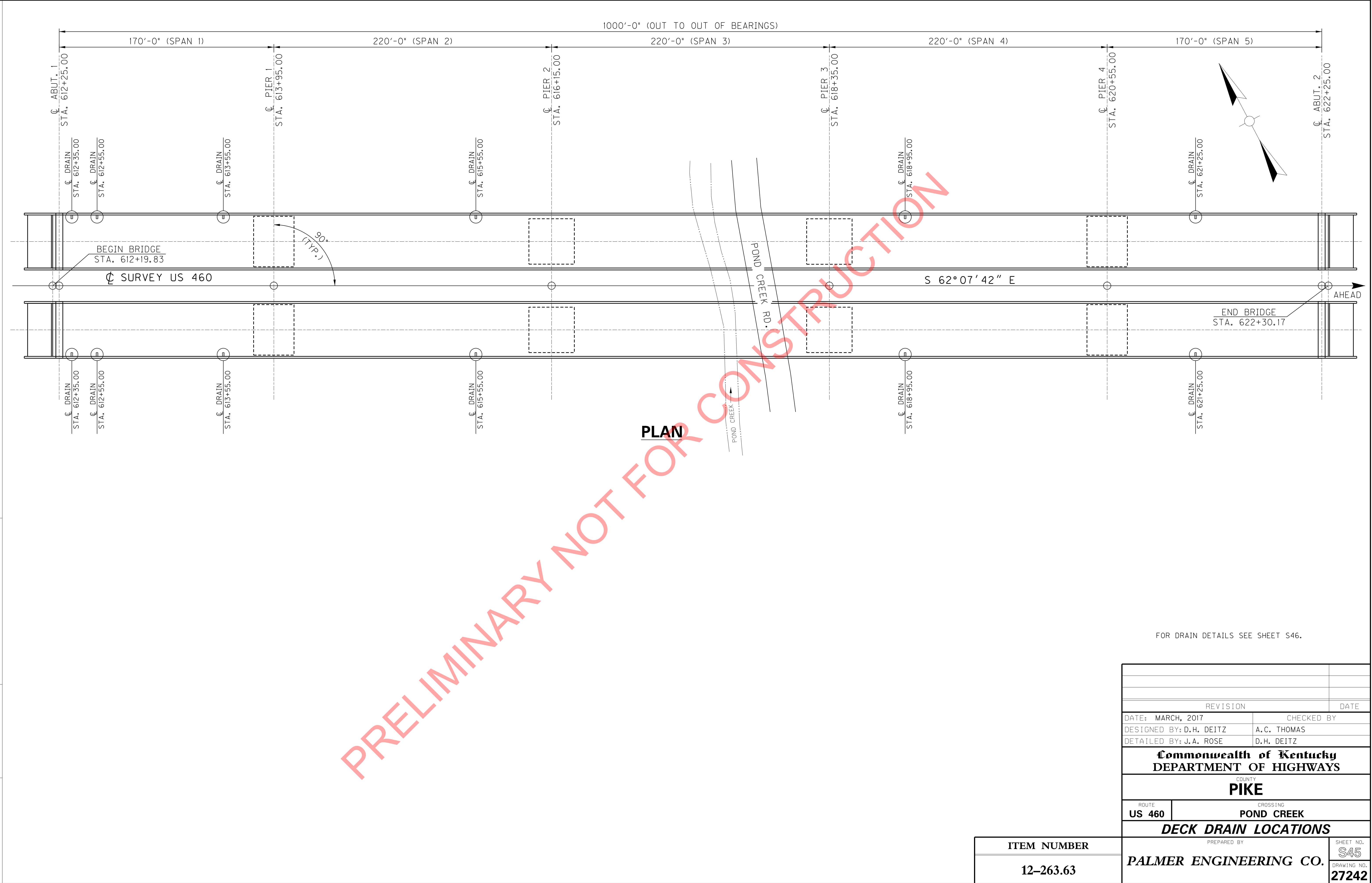


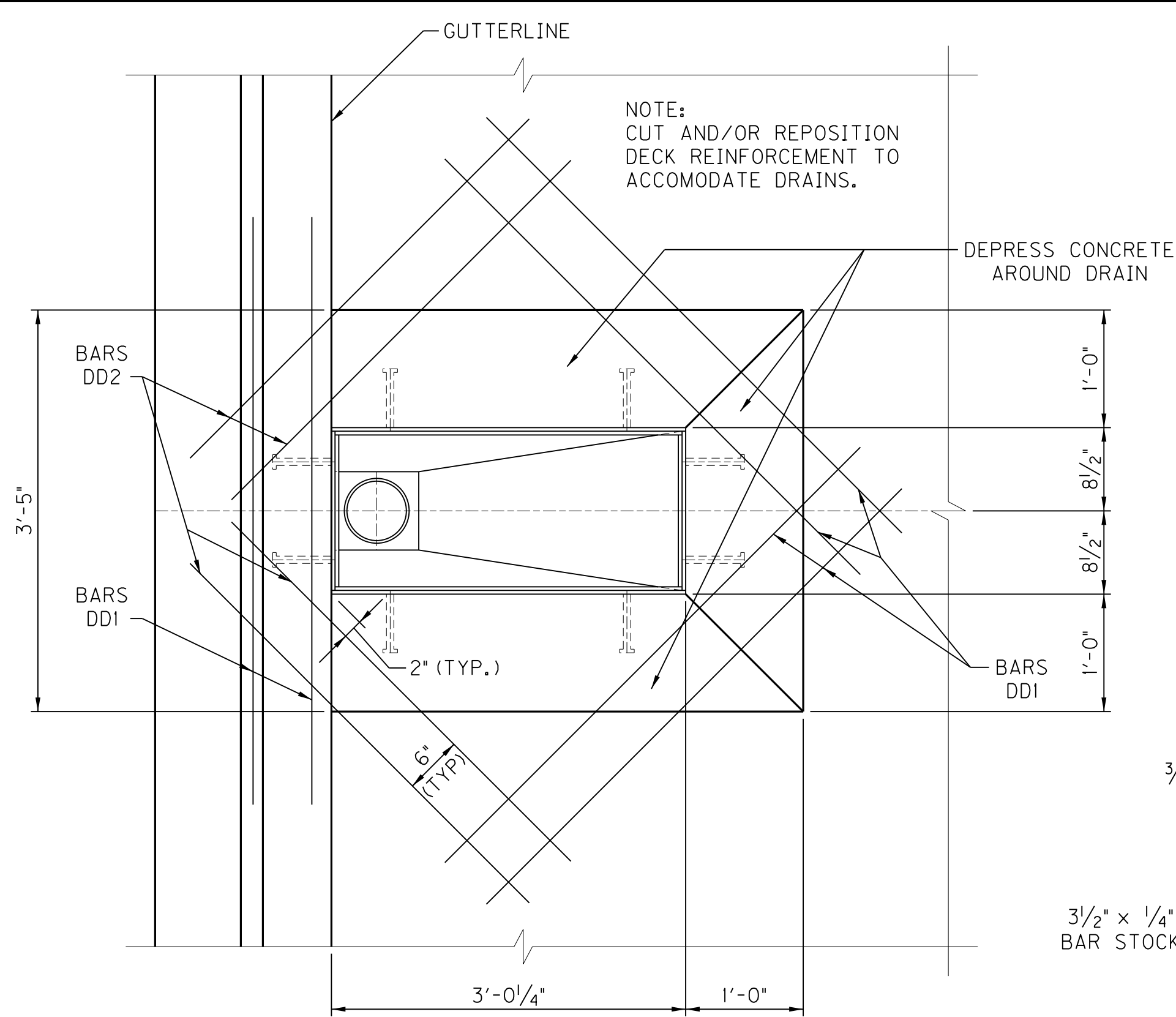
PLAN



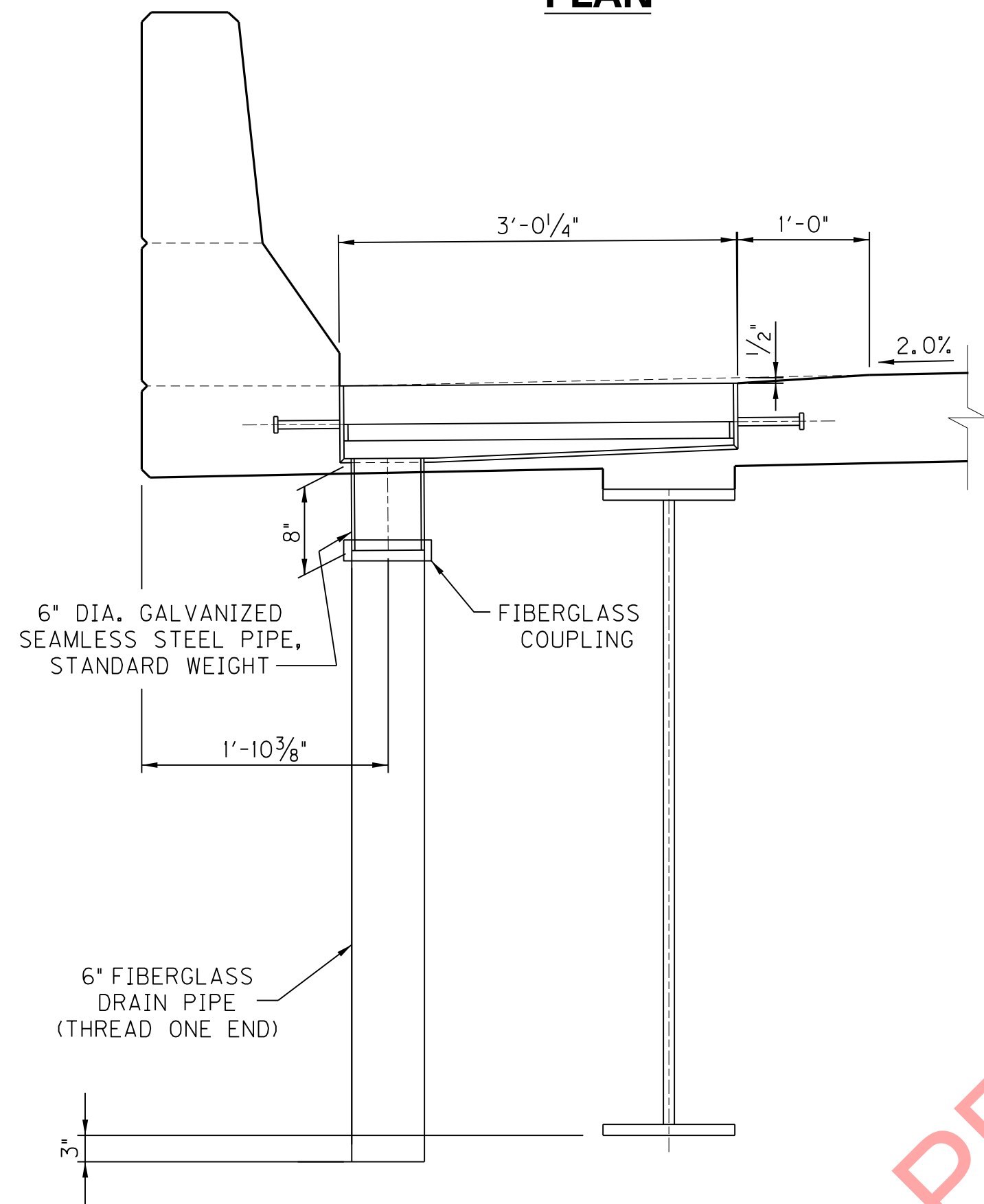
**SECTION "A"
THRU DIAPHRAGM**

REVISION		DATE
DATE: MARCH, 2017	CHECKED BY	
DESIGNED BY: A.C. THOMAS	C.M. GREENWELL	
DETAILED BY: J.A. ROSE	A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
END DIAPHRAGM AT ABUTMENTS		
PREPARED BY PALMER ENGINEERING CO.		SHEET NO. S44 DRAWING NO. 27242

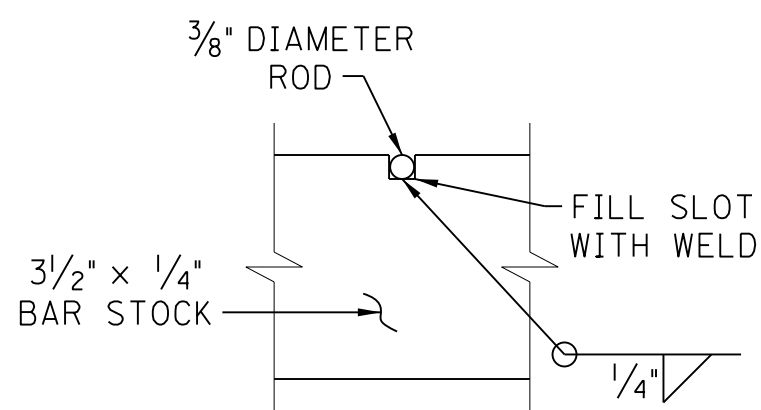




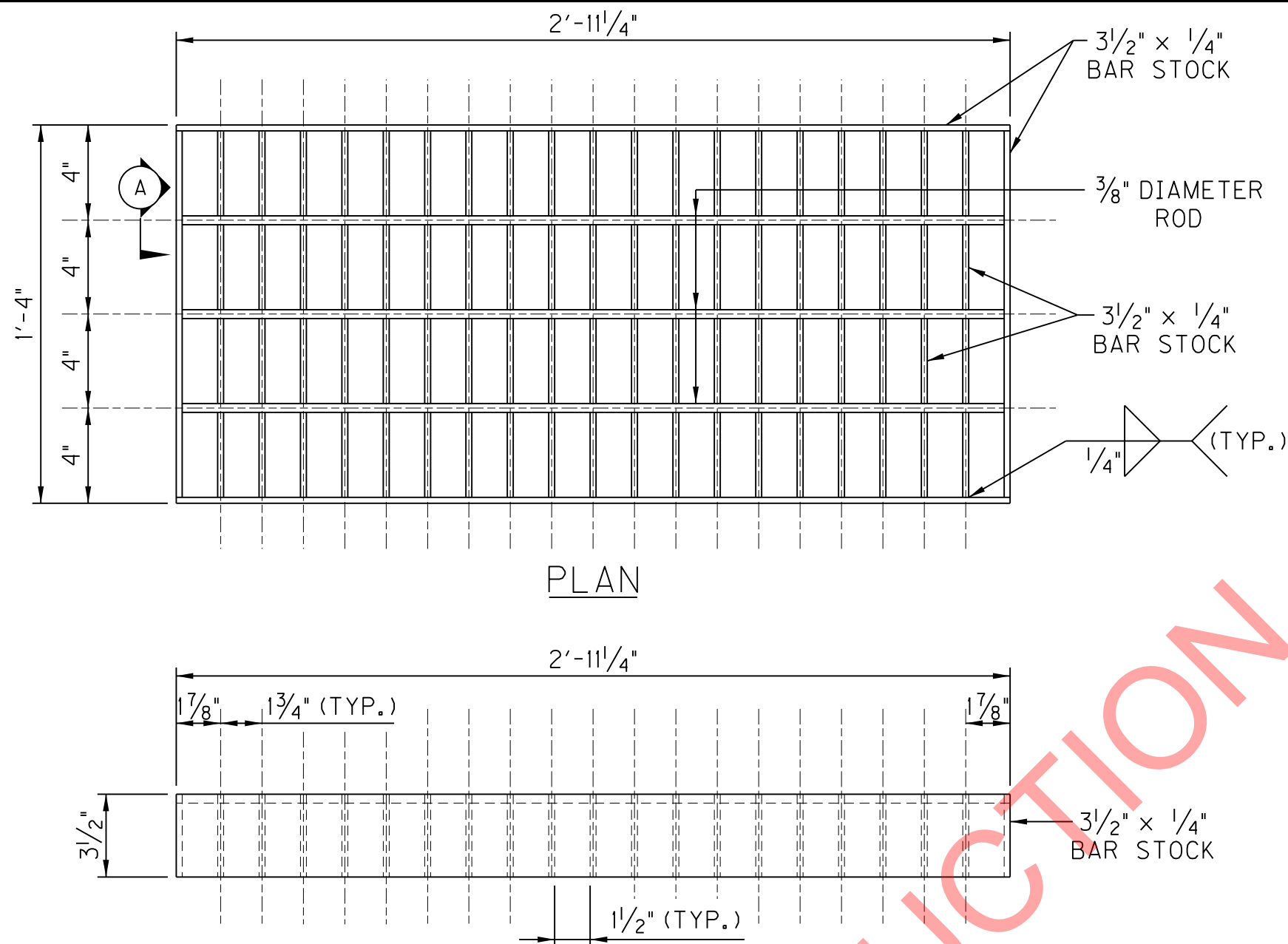
PLAN



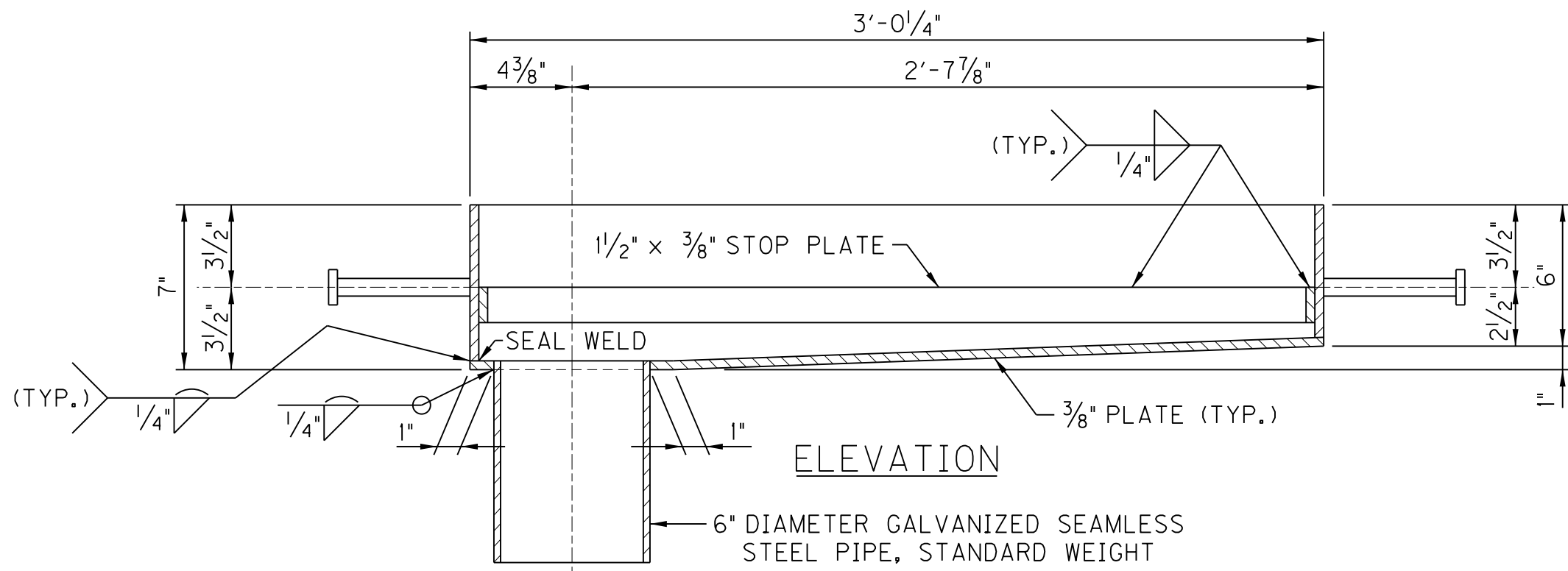
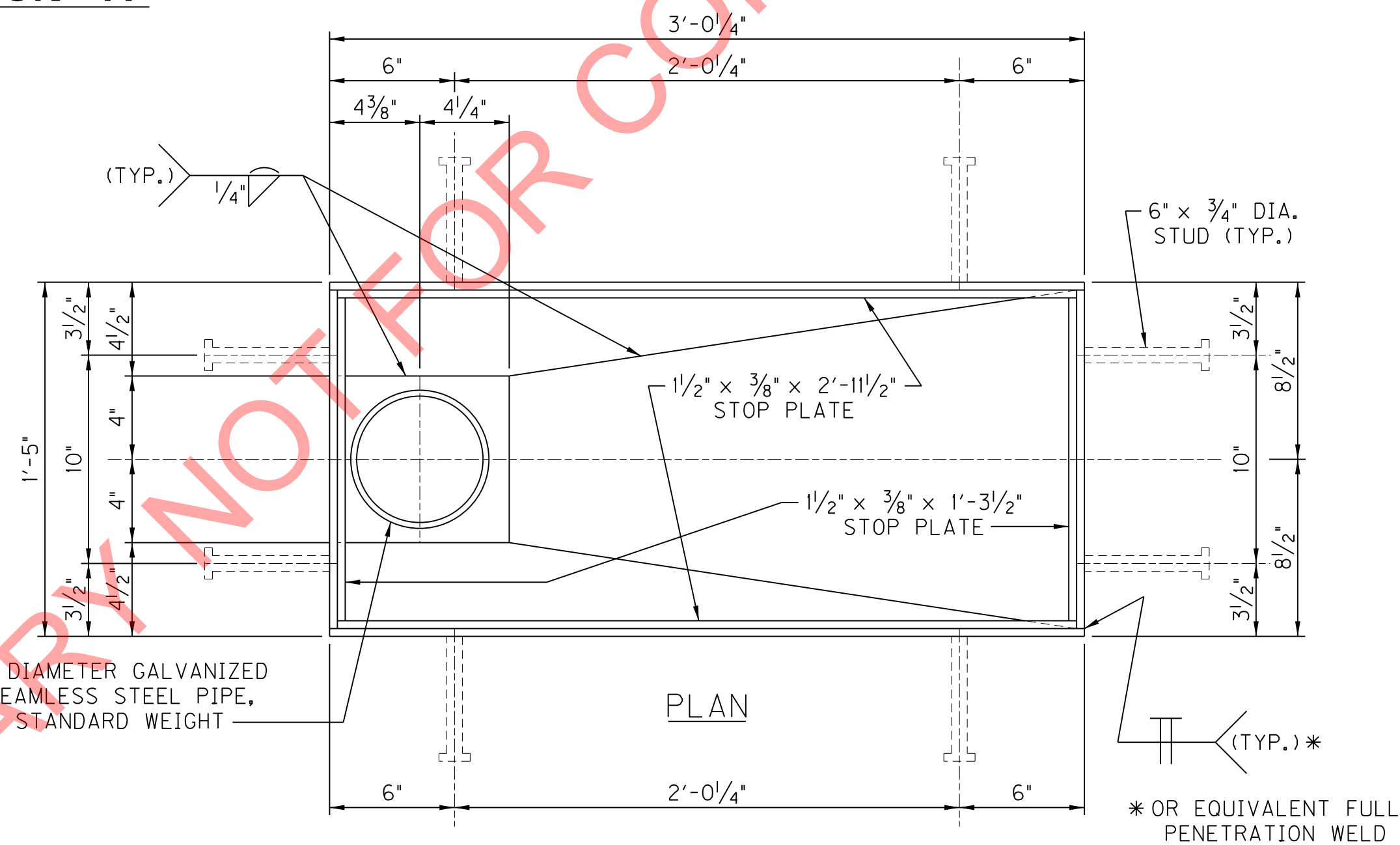
ELEVATION



SECTION "A"



GRATE DETAIL

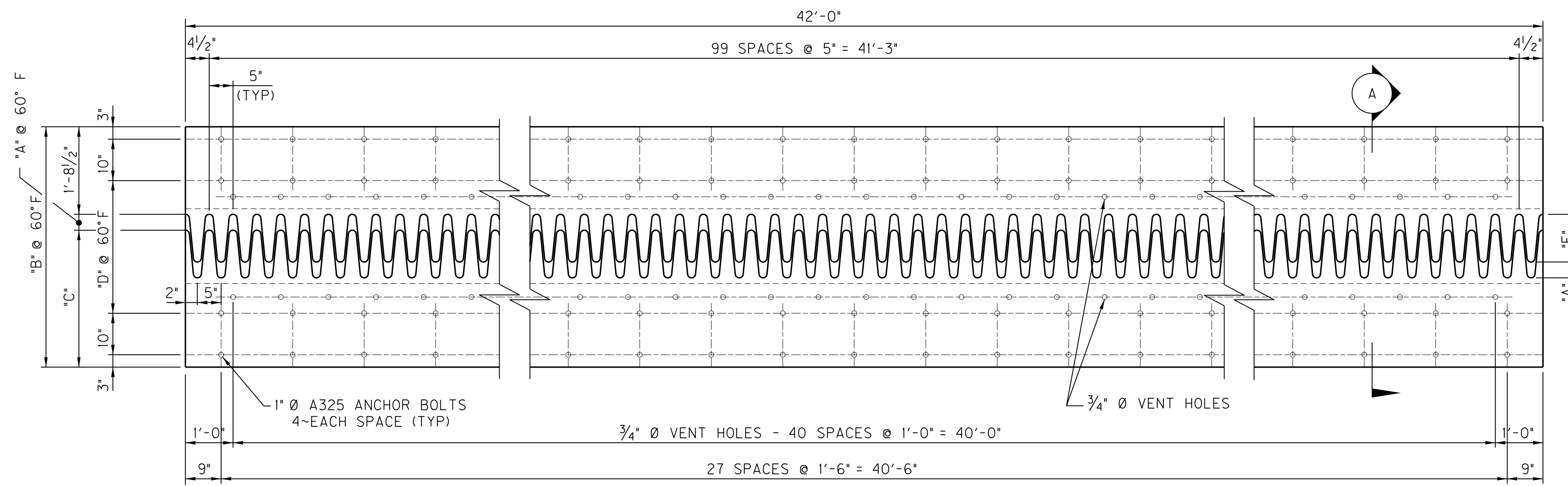


SCUPPER DETAIL

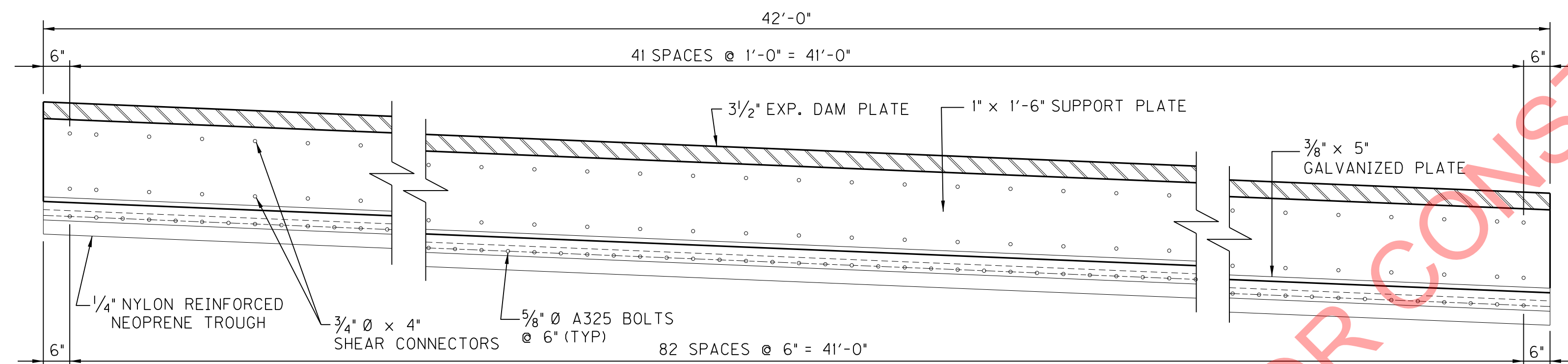
NOTES:

1. WELDED CONSTRUCTION: USE AASHTO M270, GRADE 36 STRUCTURAL STEEL
2. TACK WELD ALL FOUR CORNERS OF GRATE TO SCUPPER FRAME
3. GALVANIZE ALL MATERIALS IN ACCORDANCE WITH AASHTO M111 AFTER FABRICATION
4. REPAIR ALL DAMAGED GALVANIZED OR FIELD WELDED SURFACES BY CLEANING AND APPLYING TWO COATS OF COLD GALVANIZING PAINT

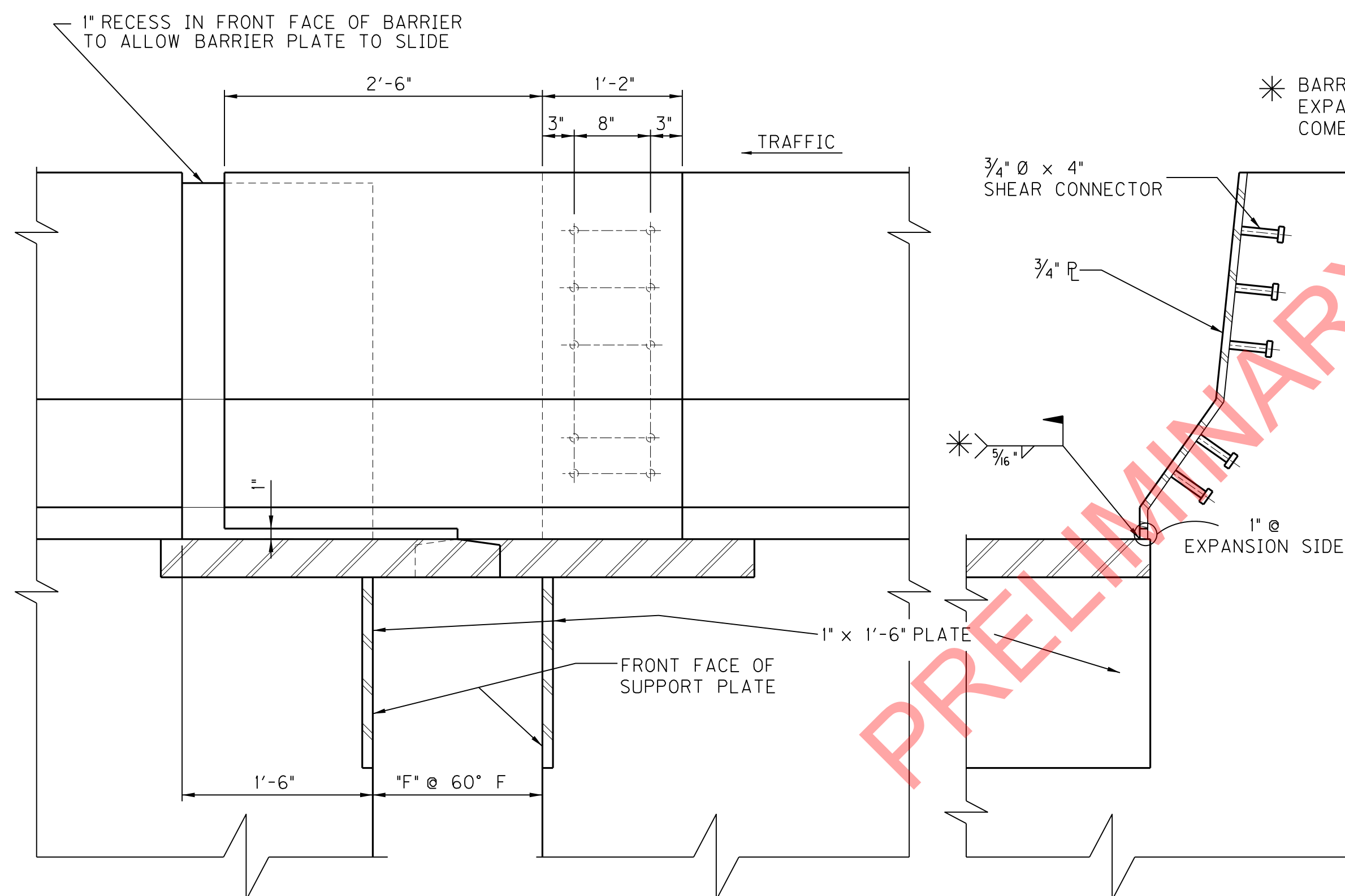
REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: D.H. DEITZ		A.C. THOMAS	
DETAILED BY: J.A. ROSE		D.H. DEITZ	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY			
PIKE			
ROUTE	CROSSING		
US 460	POND CREEK		
DECK DRAINS			
PREPARED BY			SHEET NO.
PALMER ENGINEERING CO.			S46
			DRAWING NO.
			27242



EXPANSION DAM ASSEMBLY – PLAN



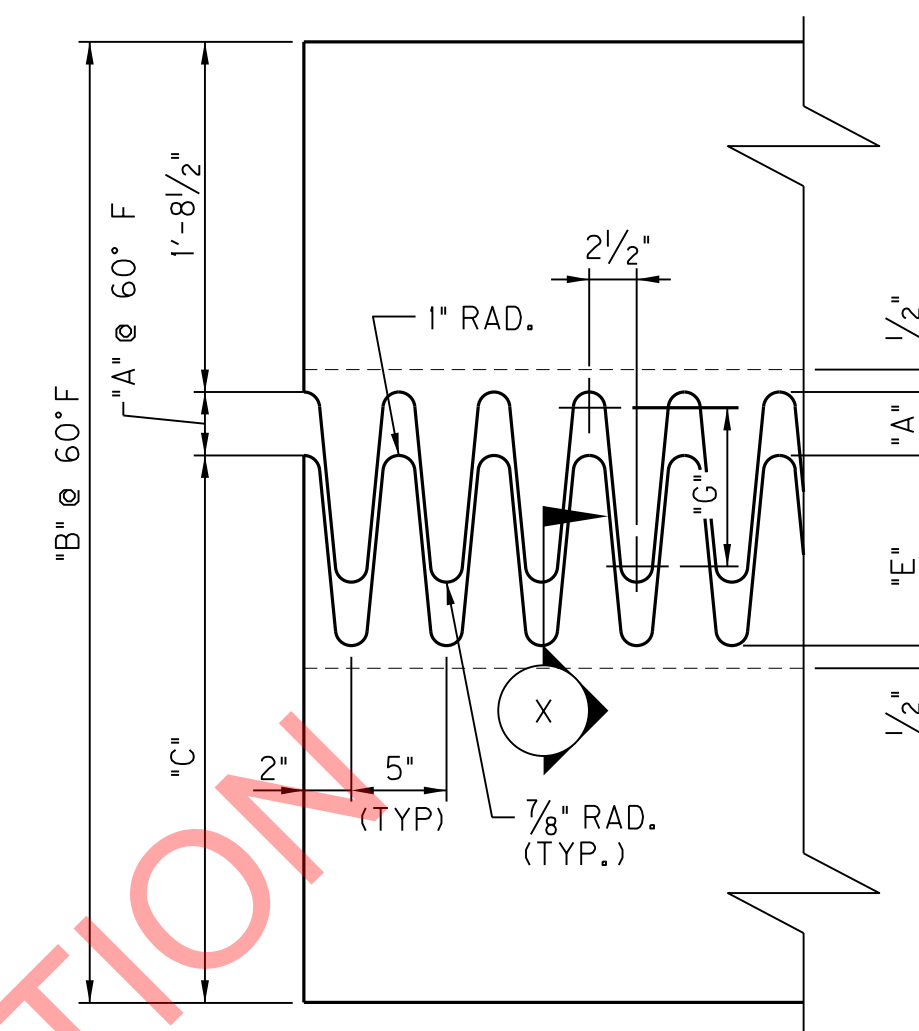
ELEVATION THRU DRAIN TROUGH



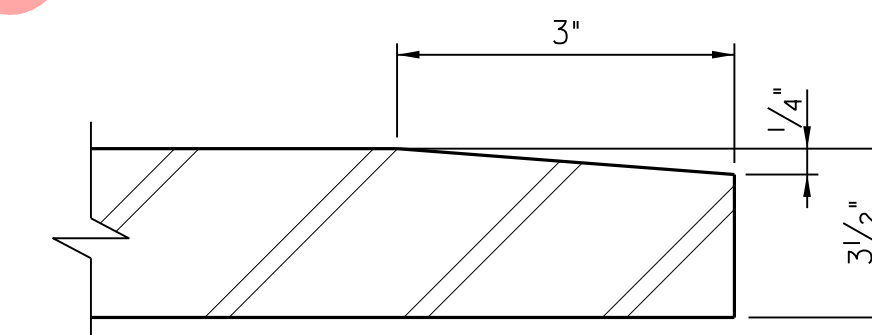
ELEVATION

SECTION

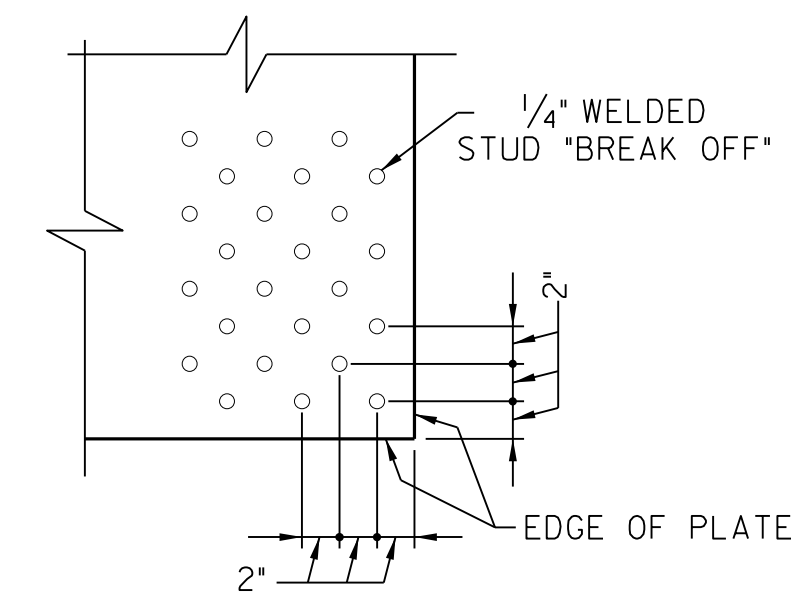
BARRIER SLIDE PLATE



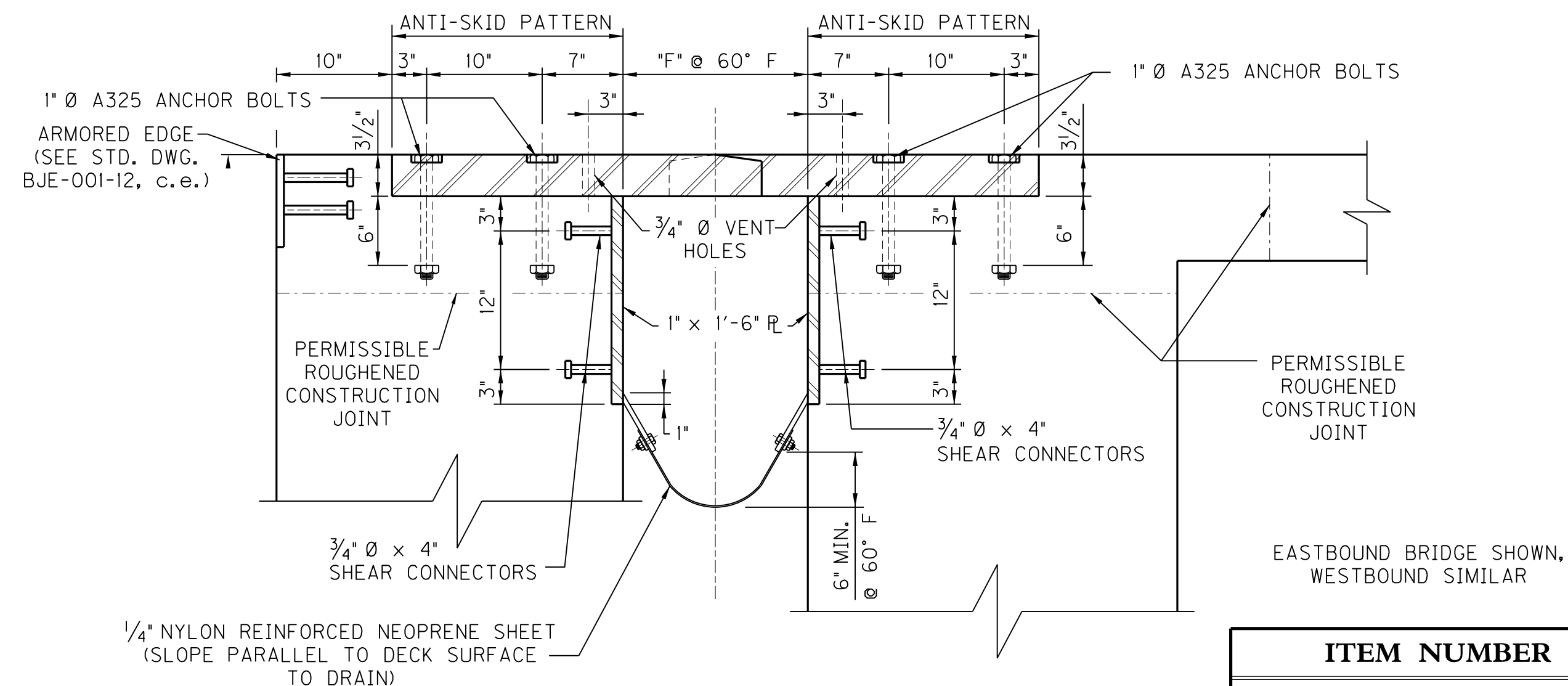
TOOTH PLATE DETAIL



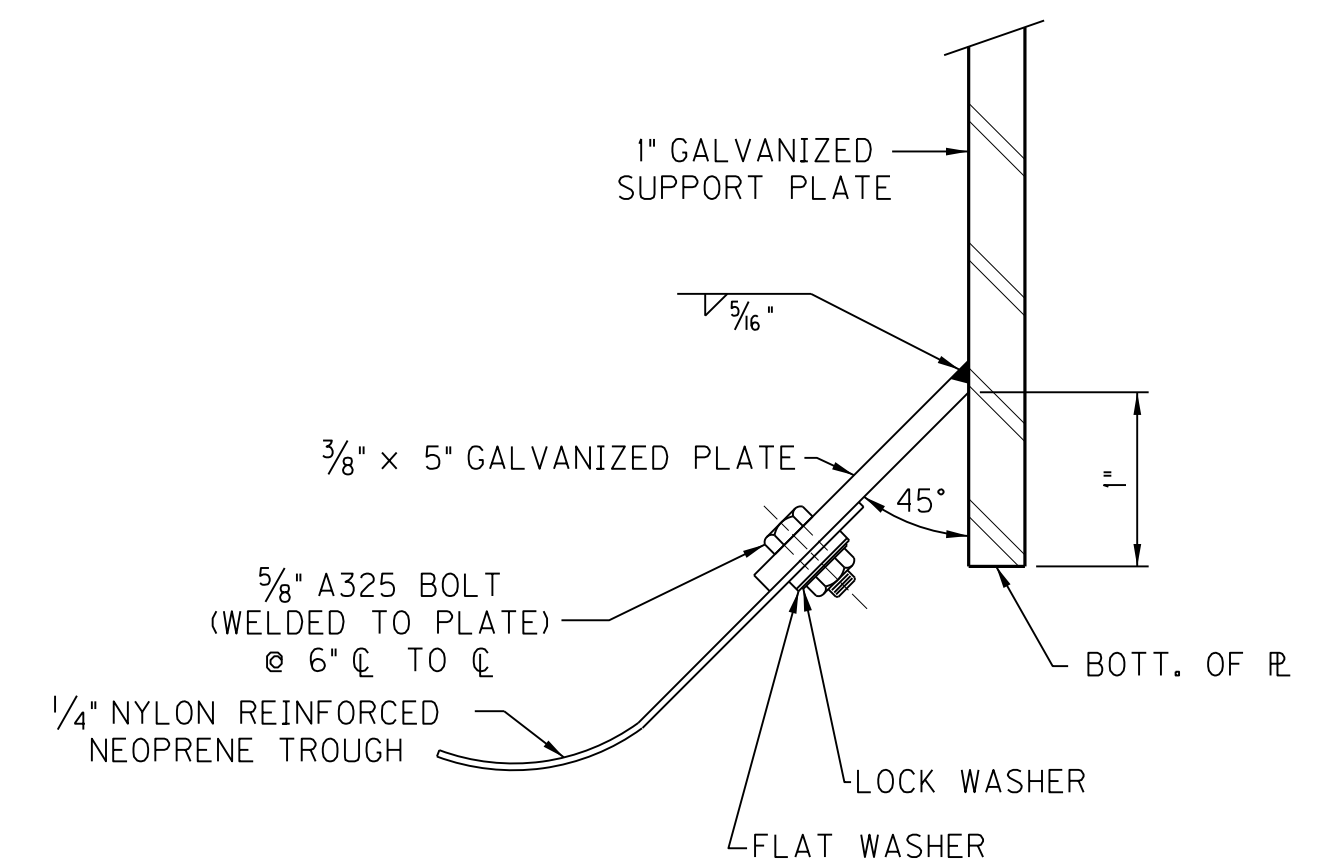
SECTION X



ANTI-SKID PATTERN



EXPANSION DAM ASSEMBLY – SECTION "A"



NEOPRENE TROUGH CONNECTION

TABLE OF DIMENSIONS

	A	B	C	D	E	F	G
ABUT. 1 & ABUT. 2	4'¼"	4'-8"	2'-7¼"	2'-6"	10¾"	1'-4"	8⅞"

NOTES

THE EXPANSION DAM SHALL BE ERECTED TO MATCH
THE ROADWAY GRADE AND CROSS SLOPE.

THE FABRICATOR SHALL PROVIDE A TABLE SHOWING THE JOINT OPENING FOR TEMPERATURES BETWEEN 0°F TO +120°F IN INTERVALS OF 10° ON THE SHOP DRAWINGS.

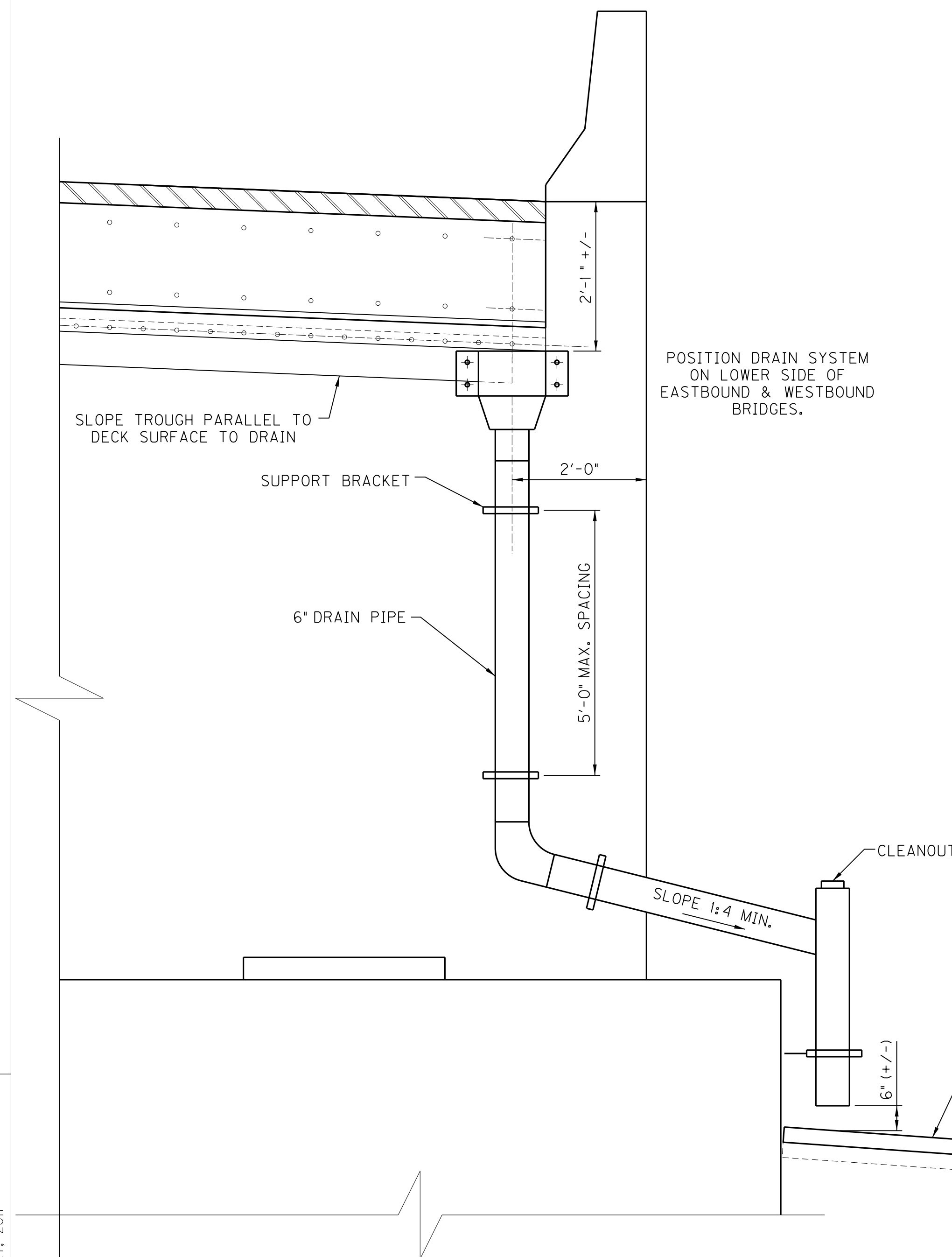
THE FABRICATOR SHALL PROVIDE A DETAIL OF THE SHIPPING AND ERECTION ATTACHMENTS TO THE DAM ON THE SHOP DRAWINGS.

PLACE CONCRETE UNDER THE DAM AND VIBRATE UNTIL
THE CONCRETE IS FORCED THRU THE $\frac{3}{4}$ " DIA. VENT HOLES.
STRIKE OFF EXCESS CONCRETE.

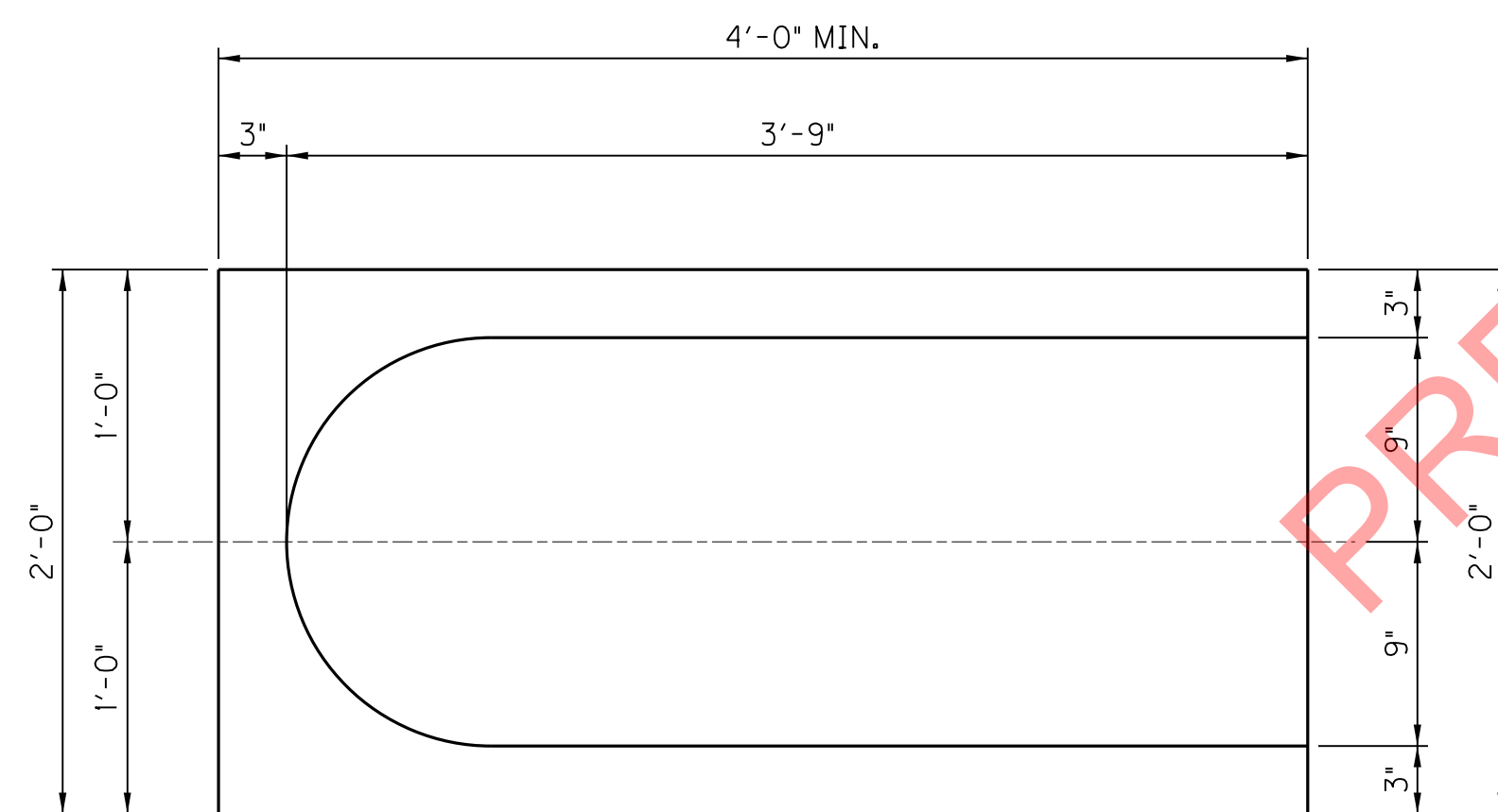
NEOPRENE TROUGH SHALL BE CUT 6" SHORT ON THE LOWER
END TO DRAIN INTO COLLECTION BOX.

EXPANSION DAMS SHALL BE GALVANIZED.

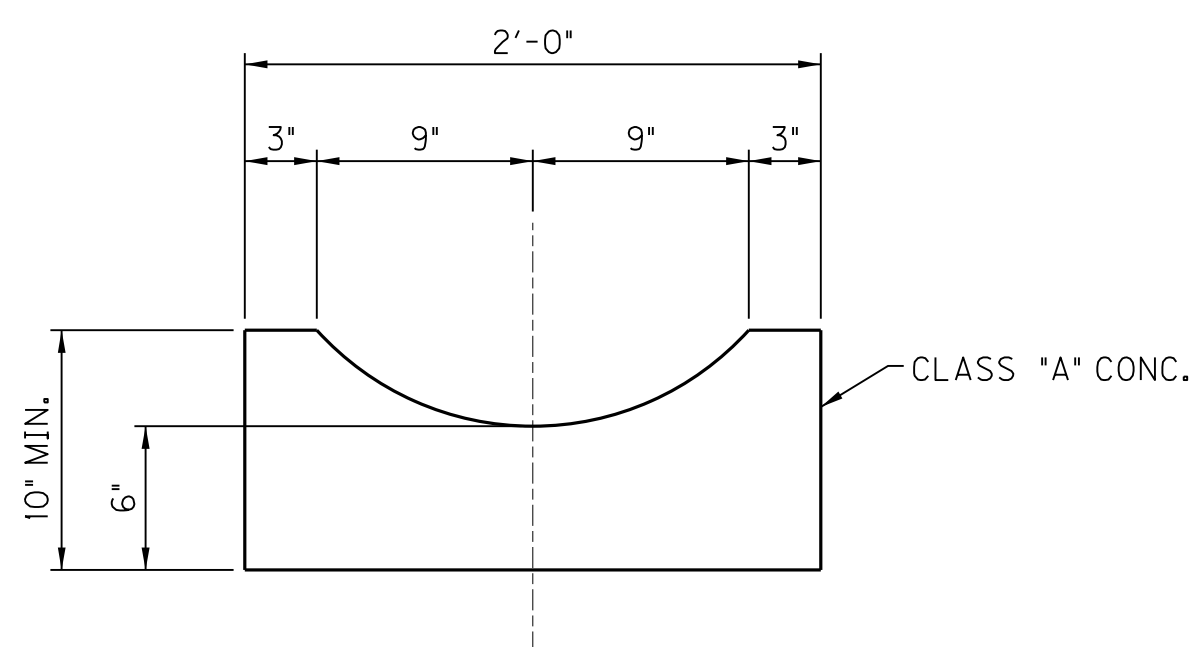
REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: C.M. GREENWELL		B.T. DRECKMAN	
DETAILED BY: J.A. ROSE		C.M. GREENWELL	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
<i>FINGER DAM DETAILS</i>			
PREPARED BY <i>PALMER ENGINEERING CO.</i>			SHEET NO. S47 DRAWING NO. 27242



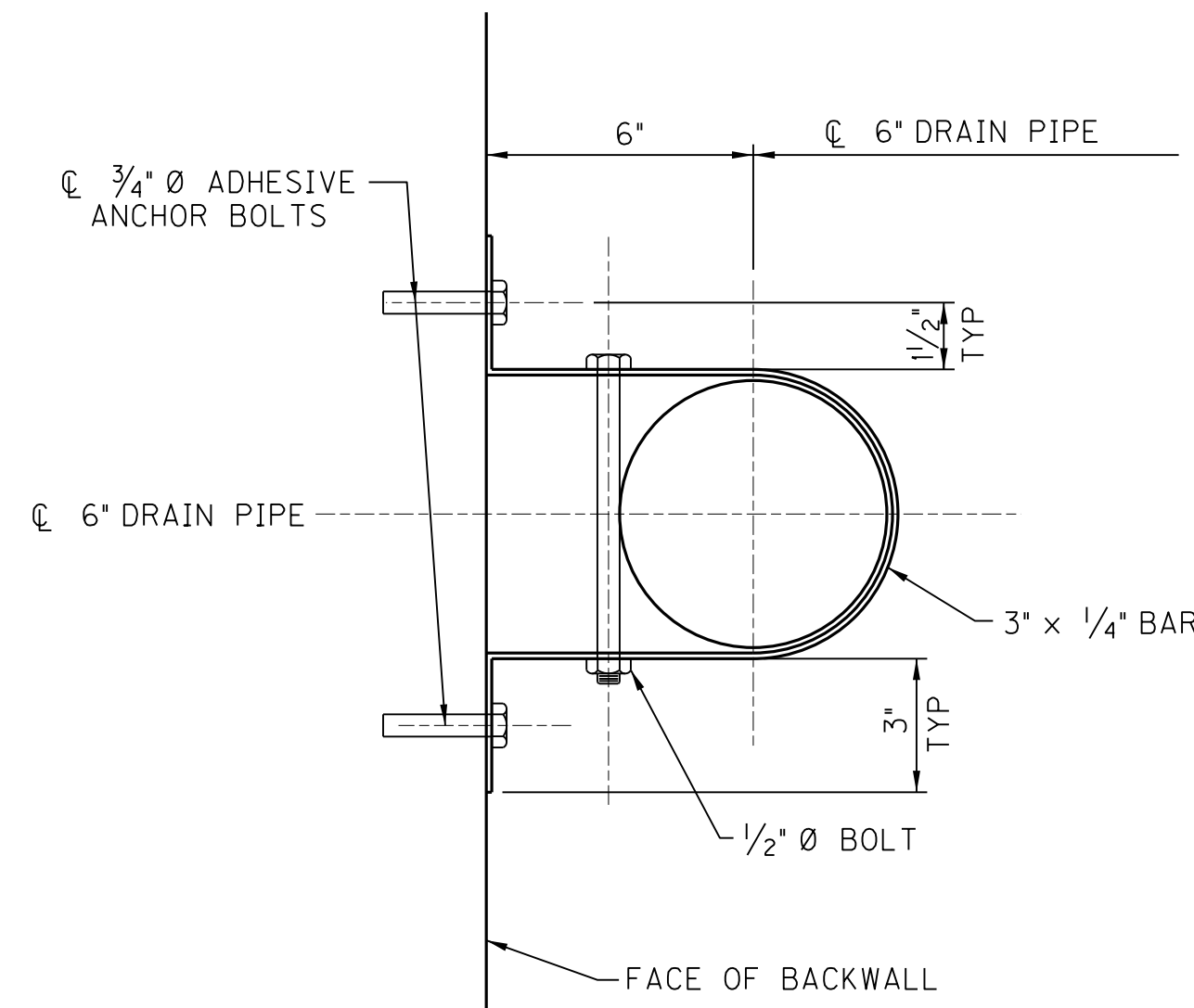
FINGER DAM DRAIN SYSTEM



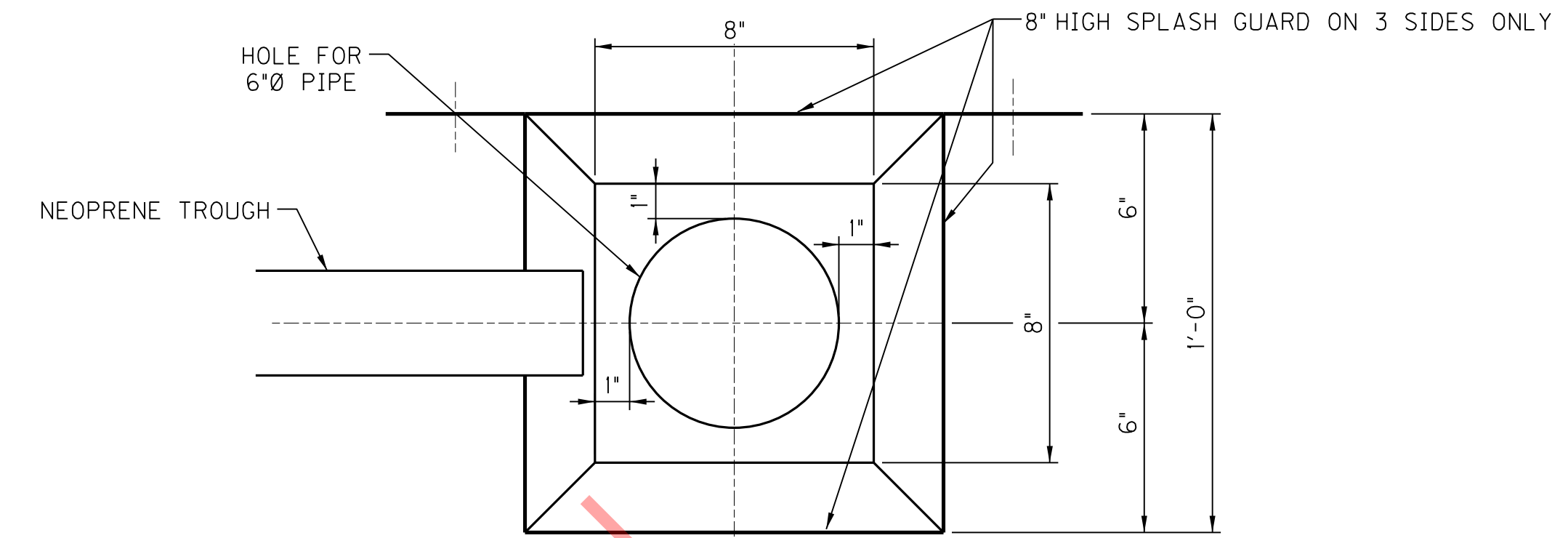
SPLASH BLOCK – PLAN



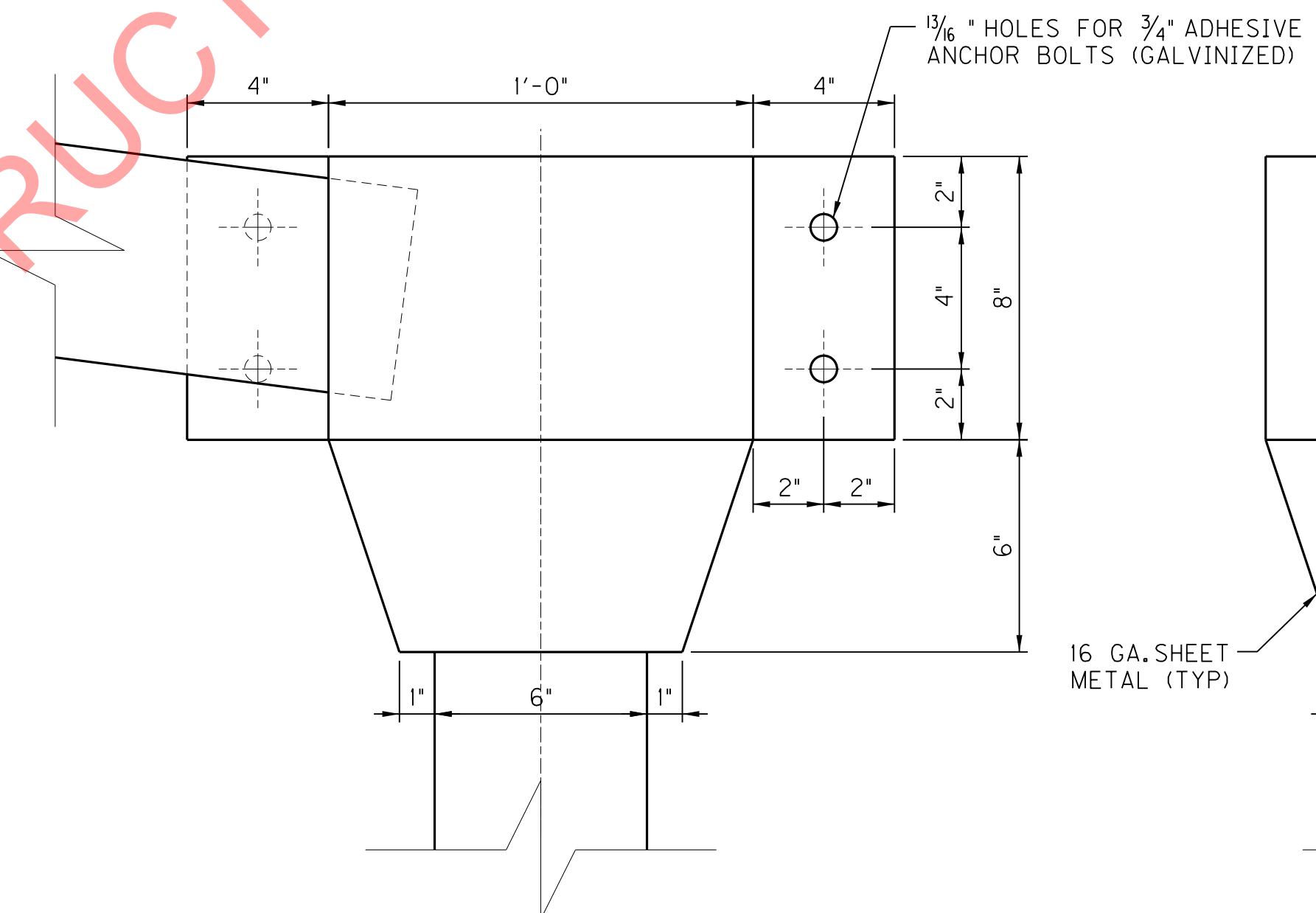
SECTION THRU SPLASH BLOCK



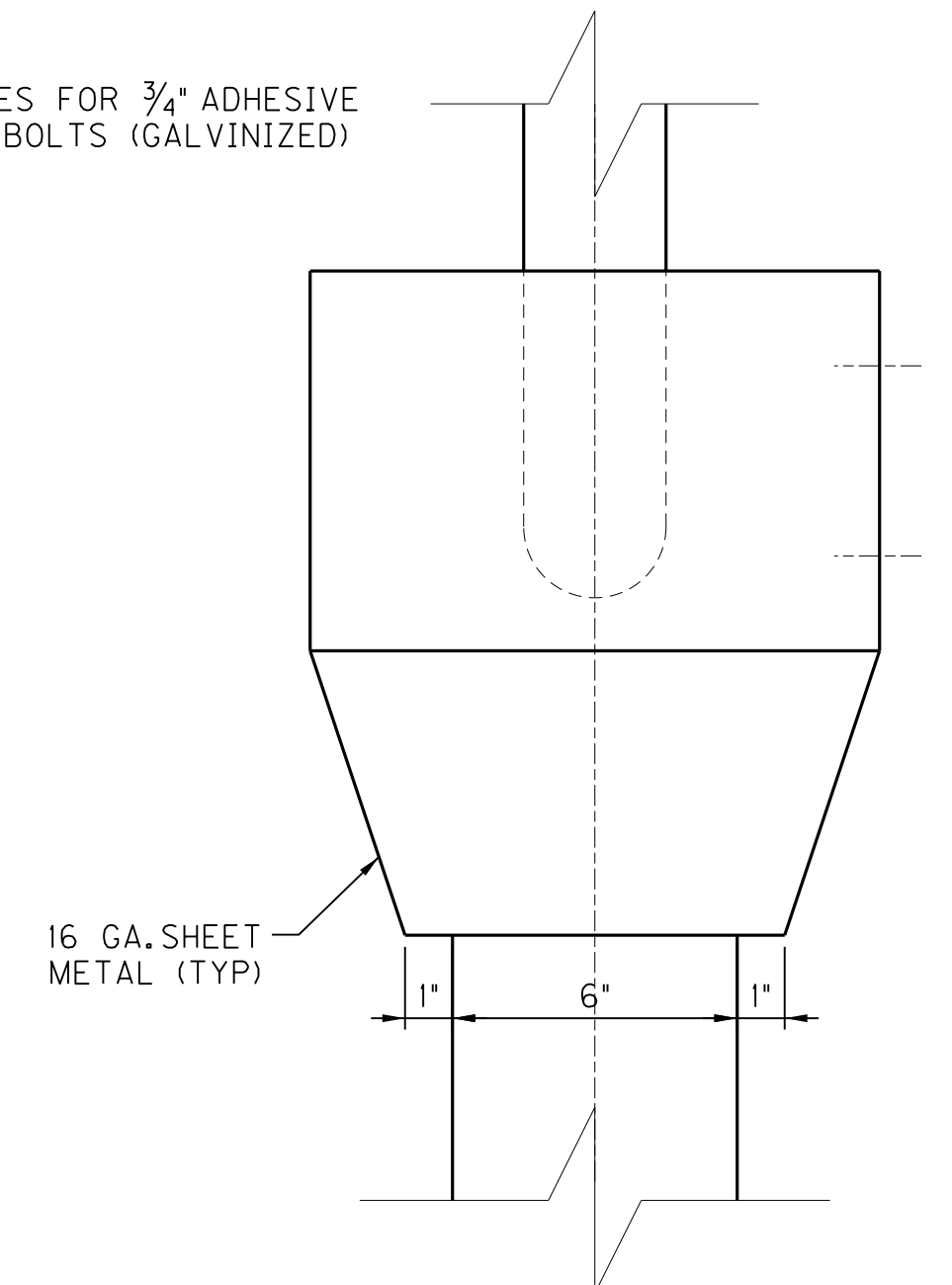
PIPE SUPPORT BRACKET – PLAN



PLAN – DRAIN BOX



ELEVATION



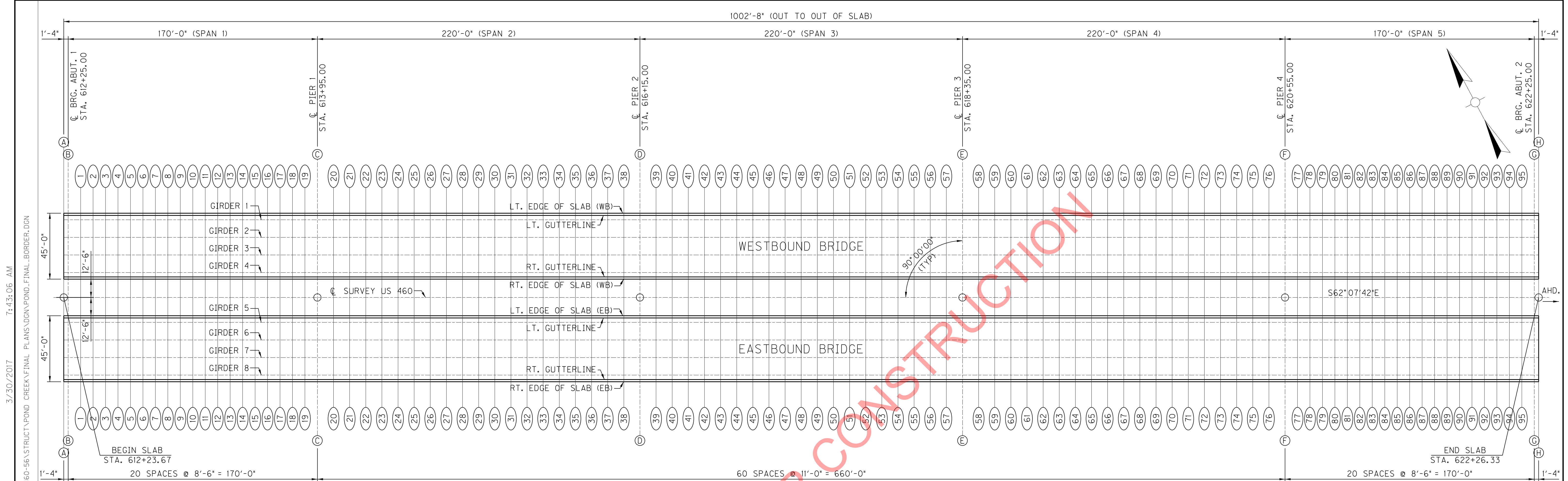
SIDE ELEVATION

NOTES

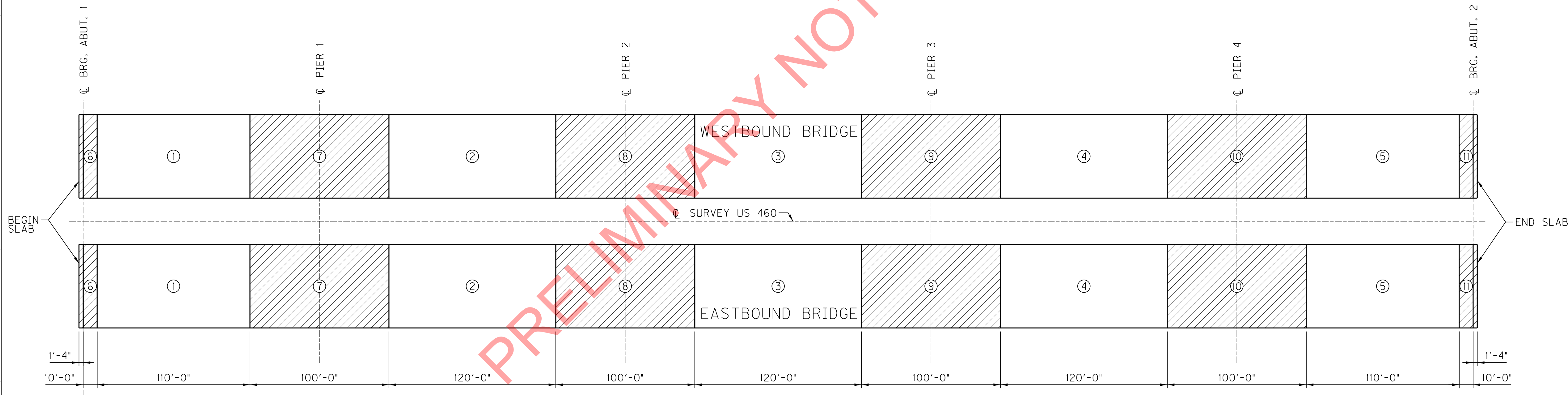
1. PAYMENT FOR THE DRAIN BOX, PIPING, SUPPORTS, AND SPLASH BLOCK SHALL BE CONSIDERED INCIDENTAL TO THE FINGER JOINTS.
2. ALL MATERIALS FOR DRAINAGE SHALL BE GALVANIZED AND PAINTED AFTER FABRICATION.
3. THE SPLASH BLOCK SHALL BE CONSTRUCTED TO MATCH THE FINISHED GROUND LINE.

ITEM NUMBER
12-263.63

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: D. H. DEITZ		B. T. DRECKMAN	
DETAILED BY: J. A. ROSE		B. T. DRECKMAN	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
FINGER DAM DETAILS			
PREPARED BY			SHEET NO.
PALMER ENGINEERING CO.			S48
			DRAWING NO. 27242



CONSTRUCTION ELEVATION GRID



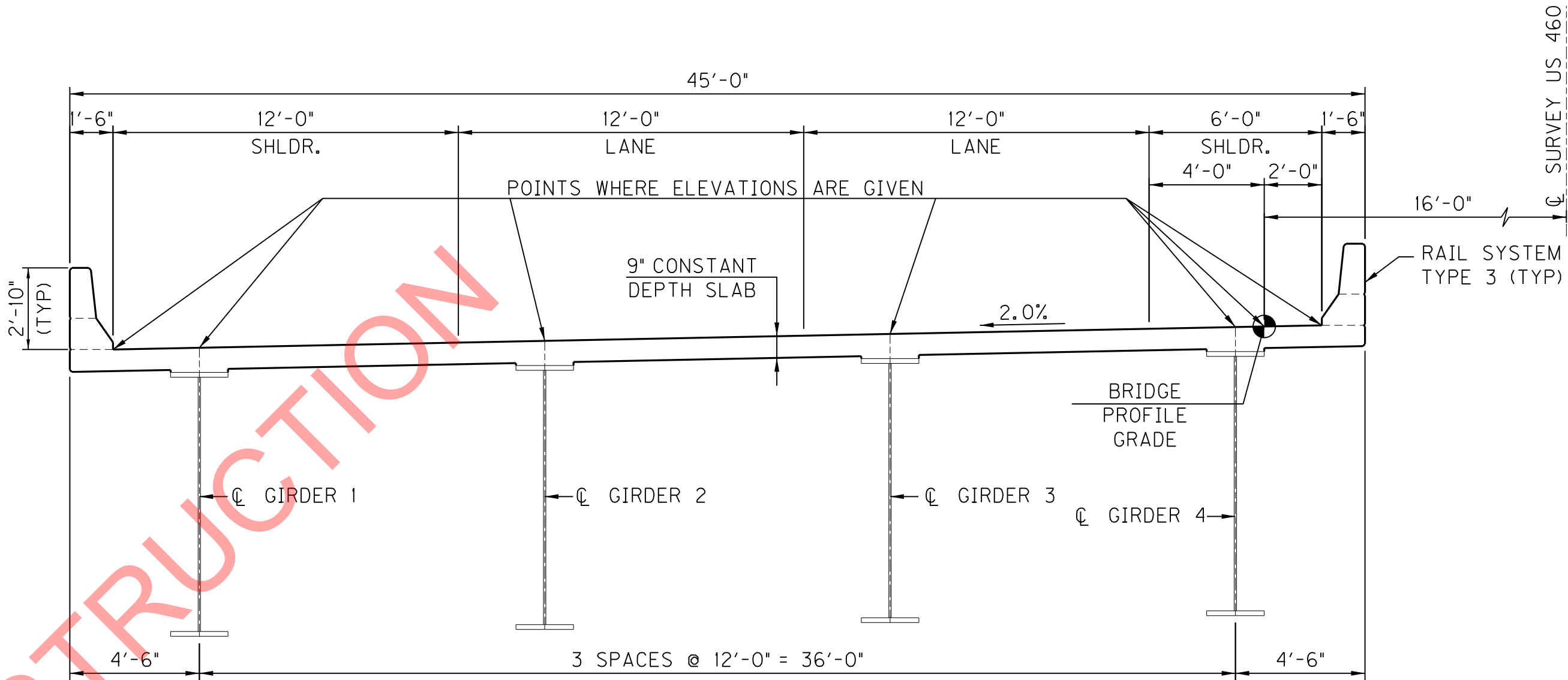
- NOTE:
- ALL CONCRETE SHALL BE PLACED IN SEQUENTIAL ORDER OUTLINED ABOVE.
 - NO CHANGES TO THE POURING SEQUENCE SHALL BE MADE WITHOUT THE ENGINEERS APPROVAL.

SLAB POURING SEQUENCE

ITEM NUMBER
12-263.63

REVISION		DATE
DATE: MARCH, 2017	CHECKED BY	
DESIGNED BY: A.C. THOMAS	C.M. GREENWELL	
DETAILED BY: J.A. ROSE	A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
CONSTRUCTION ELEVATIONS		
PREPARED BY PALMER ENGINEERING CO.		SHEET NO. S49 DRAWING NO. 27242

TABLE OF ELEVATIONS – WESTBOUND															
LINE	LEFT GUTTER LINE	GIRDER #1			GIRDER #2			GIRDER #3			GIRDER #4			BRIDGE PROFILE GRADE POINT	RIGHT GUTTER LINE
		CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"		
A - A	1177.246	1177.306			1177.546			1177.786			1178.026			1178.046	1178.086
B - B	1177.260	1177.320			1177.560			1177.800			1178.040			1178.060	1178.100
C - C	1178.994	1179.054			1179.294			1179.534			1179.774			1179.794	1179.834
D - D	1181.238	1181.298			1181.538			1181.778			1182.018			1182.038	1182.078
E - E	1183.482	1183.542			1183.782			1184.022			1184.262			1184.282	1184.322
F - F	1185.726	1185.786			1186.026			1186.266			1186.506			1186.526	1186.566
G - G	1188.215	1188.275			1188.515			1188.755			1188.995			1189.015	1189.055
H - H	1188.242	1188.302			1188.542			1188.782			1189.022			1189.042	1189.082
1 - 1	1177.391	1177.451			1177.692			1177.932			1178.171			1178.191	1178.231
2 - 2	1177.519	1177.579			1177.820			1178.060			1178.299			1178.319	1178.359
3 - 3	1177.641	1177.701			1177.942			1178.182			1178.421			1178.441	1178.481
4 - 4	1177.762	1177.822			1178.064			1178.304			1178.542			1178.562	1178.602
5 - 5	1177.871	1177.931			1178.173			1178.413			1178.651			1178.671	1178.711
6 - 6	1177.980	1178.040			1178.282			1178.522			1178.760			1178.780	1178.820
7 - 7	1178.074	1178.134			1178.377			1178.617			1178.854			1178.874	1178.914
8 - 8	1178.167	1178.227			1178.470			1178.710			1178.947			1178.967	1179.007
9 - 9	1178.246	1178.306			1178.549			1178.789			1179.026			1179.046	1179.086
10 - 10	1178.325	1178.385			1178.627			1178.867			1179.105			1179.125	1179.165
11 - 11	1178.390	1178.450			1178.693			1178.933			1179.170			1179.190	1179.230
12 - 12	1178.456	1178.516			1178.758			1178.998			1179.236			1179.256	1179.296
13 - 13	1178.515	1178.575			1178.817			1179.057			1179.295			1179.315	1179.355
14 - 14	1178.577	1178.637			1178.879			1179.119			1179.357			1179.377	1179.417
15 - 15	1178.636	1178.696			1178.938			1179.178			1179.416			1179.436	1179.476
16 - 16	1178.699	1178.759			1179.000			1179.240			1179.479			1179.499	1179.539
17 - 17	1178.764	1178.824			1179.064			1179.304			1179.544			1179.564	1179.604
18 - 18	1178.834	1178.894			1179.134			1179.374			1179.614			1179.634	1179.674
19 - 19	1178.910	1178.970			1179.210			1179.450			1179.690			1179.710	1179.750
20 - 20	1179.116	1179.176			1179.416			1179.656			1179.896			1179.916	1179.956
21 - 21	1179.248	1179.308			1179.549			1179.789			1180.028			1180.048	1180.088
22 - 22	1179.390	1179.450			1179.691			1179.931			1180.170			1180.190	1180.230
23 - 23	1179.544	1179.604			1179.845			1180.085			1180.324			1180.344	1180.384
24 - 24	1179.694	1179.754			1179.996			1180.236			1180.474			1180.494	1180.534
25 - 25	1179.851	1179.911			1180.153			1180.393			1180.631			1180.651	1180.691
26 - 26	1179.994	1180.054			1180.297			1180.537			1180.774			1180.794	1180.834
27 - 27	1180.139	1180.199			1180.441			1180.681			1180.919			1180.939	1180.979
28 - 28	1180.264	1180.324			1180.566			1180.806			1181.044			1181.064	1181.104
29 - 29	1180.386	1180.446			1180.689			1180.929			1181.166			1181.186	1181.226
30 - 30	1180.488	1180.548			1180.790			1181.030			1181.268			1181.288	1181.328
31 - 31	1180.585	1180.645			1180.888			1181.128			1181.365			1181.385	1181.425
32 - 32	1180.665	1180.725			1180.968			1181.208			1181.445			1181.465	1181.505
33 - 33	1180.744	1180.804			1181.047			1181.287			1181.524			1181.544	1181.584
34 - 34	1180.814	1180.874			1181.116			1181.356			1181.594			1181.614	1181.654
35 - 35	1180.887	1180.947			1181.188			1181.428			1181.667			1181.687	1181.727
36 - 36	1180.961	1181.021			1181.262			1181.502			1181.741			1181.761	1181.801
37 - 37	1181.043	1181.103			1181.343			1181.583			1181.823			1181.843	1181.883
38 - 38	1181.135	1181.195			1181.435			1181.675			1181.915			1181.935	1181.975
39 - 39	1181.360	1181.420			1181.661			1181.901			1182.140			1182.160	1182.200
40 - 40	1181.493	1181.553			1181.793			1182.033			1182.273			1182.293	1182.333
41 - 41	1181.635	1181.695			1181.937			1182.177			1182.415			1182.435	1182.475
42 - 42	1181.788	1181.848			1182.089			1182.329			1182.568			1182.588	1182.628
43 - 43	1181.940	1182.000			1182.242			1182.482			1182.720			1182.740	1182.780
44 - 44	1182.095	1182.155			1182.397			1182.637			1182.875			1182.895	1182.935
45 - 45	1182.242	1182.302			1182.545			1182.785			1183.022			1183.042	1183.082
46 - 46	1182.383	1182.443			1182.686			1182.926			1183.163			1183.183	1183.223
47 - 47	1182.513	1182.573			1182.816			1183.056			1183.293			1183.313	1183.353
48 - 48	1182.631	1182.691			1182.934			1183.174			1183.411			1183.431	1183.471
49 - 49	1182.738	1182.798			1183.041			1183.281			1183.518			1183.538	1183.578
50 - 50	1182.832	1182.892			1183.134			1183.374			1183.612			1183.632	1183.672
51 - 51	1182.916	1182.976			1183.218			1183.458			1183.696			1183.716	1183.756
52 - 52	1182.993	1183.053			1183.295			1183.535			1183.773			1183.793	1183.833
53 - 53	1183.062	1183.122			1183.364			1183.604			1183.842			1183.862	1183.902
54 - 54	1183.134	1183.194			1183.436			1183.676			1183.914			1183.934	1183.974
55 - 55	1183.206	1183.266			1183.507			1183.747			1183.986			1184.006	1184.046
56 - 56	1183.288	1183.348			1183.588			1183.828			1184.068			1184.088	1184.128
57 - 57	1183.380	1183.440			1183.680			1183.920			1184.160			1184.180	1184.220
58 - 58	1183.603	1183.663			1183.903			1184.143			1184.383			1184.403	1184.443
59 - 59	1183.735	1183.795			1184.036			1184.276			1184.515			1184.535	1184.575



TYPICAL SECTION – WESTBOUND BRIDGE

NOTES FOR ELEVATIONS TAKEN ON WELDED STEEL PLATE GIRDERS
TAKE ELEVATIONS ON TOP OF BEAM AT POINTS INDICATED BY THE GRID LAYOUT. THE BEAM ELEVATIONS ARE TO BE READ TO THREE DECIMALS, AND ENTERED IN TABLES UNDER 'TOP OF GIRDER' ELEVATIONS.

COMPUTE DIMENSION "X" AS FOLLOWS:

"CONSTRUCTION ELEVATION" MINUS "TOP OF GIRDER" ELEVATION EQUALS DIMENSION "X". CONSTRUCTION ELEVATIONS INCLUDE CAMBER DUE TO WEIGHT OF CONCRETE SLAB AND BARRIER. MEASURING OF DIMENSION "X" GIVES THE FINAL CHECK ON BEAM TOLERANCES FOR CAMBER, BEAM DAMAGE, AND ERRORS IN ERECTION THAT PRODUCE REVERSE CAMBERS, SAGS, AND UNSIGHTLY FASCIA BEAMS.

FOR SETTING TEMPLATES, MEASURE DIMENSION "X" ABOVE TOP OF BEAMS FOR TOP OF TEMPLATE. DO NOT SET TEMPLATE BY ELEVATIONS.

TEMPORARY SUPPORTS OR SHORING WILL NOT BE PERMITTED UNDER THE GIRDERS WHEN POURING THE CONCRETE FLOOR SLAB OR WHEN TAKING "TOP OF GIRDER" ELEVATIONS.

CONSTRUCT BARRIER TO ROADWAY GRADE. DO NOT ADD CAMBER TO BARRIER.

NOTE: ELEVATIONS SHOWN ARE BASED OFF THE BRIDGE GRADE POINT AS SHOWN IN THE PROFILE GRADE DETAIL ON SHEET S05. THE CORRECTION BETWEEN ROADWAY AND BRIDGE PROFILE GRADES IS ALREADY INCLUDED.

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: L.M. SALLEE		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		L.A. CARLISLE	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
CONSTRUCTION ELEVATONS – WB			
ITEM NUMBER		PREPARED BY	
12-263.63		PALMER ENGINEERING CO.	
		SHEET NO. S50	
		DRAWING NO. 27242	

MicroStation v8.11.9.536

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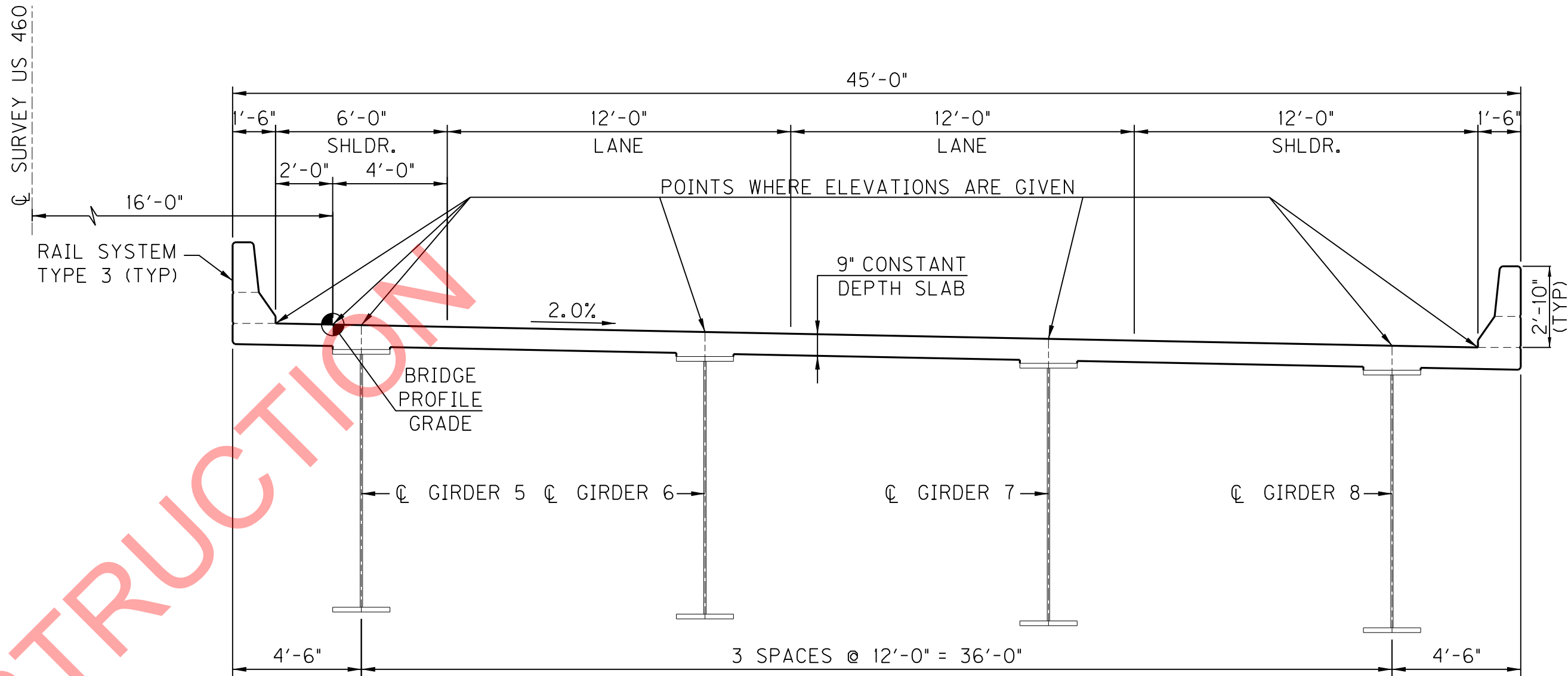
LINE	LEFT GUTTER LINE	GIRDER #1			GIRDER #2			GIRDER #3			GIRDER #4			BRIDGE PROFILE GRADE POINT	RIGHT GUTTER LINE
		CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"		
60 - 60	1183.878	1183.938			1184.179			1184.419			1184.658			1184.678	1184.718
61 - 61	1184.028	1184.088			1184.330			1184.570			1184.808			1184.828	1184.868
62 - 62	1184.180	1184.240			1184.482			1184.722			1184.960			1184.980	1185.020
63 - 63	1184.335	1184.395			1184.637			1184.877			1185.115			1185.135	1185.175
64 - 64	1184.480	1184.540			1184.783			1185.023			1185.260			1185.280	1185.320
65 - 65	1184.624	1184.684			1184.927			1185.167			1185.404			1185.424	1185.464
66 - 66	1184.751	1184.811			1185.054			1185.294			1185.531			1185.551	1185.591
67 - 67	1184.874	1184.934			1185.177			1185.417			1185.654			1185.674	1185.714
68 - 68	1184.976	1185.036			1185.279			1185.519			1185.756			1185.776	1185.816
69 - 69	1185.075	1185.135			1185.378			1185.618			1185.855			1185.875	1185.915
70 - 70	1185.155	1185.215			1185.458			1185.698			1185.935			1185.955	1185.995
71 - 71	1185.236	1185.296			1185.539			1185.779			1186.016			1186.036	1186.076
72 - 72	1185.304	1185.364			1185.606			1185.846			1186.084			1186.104	1186.144
73 - 73	1185.378	1185.438			1185.679			1185.919			1186.158			1186.178	1186.218
74 - 74	1185.449	1185.509			1185.750			1185.990			1186.229			1186.249	1186.289
75 - 75	1185.532	1185.592			1185.832			1186.072			1186.312			1186.332	1186.372
76 - 76	1185.624	1185.684			1185.924			1186.164			1186.404			1186.424	1186.464
77 - 77	1185.816	1185.876			1186.116			1186.356			1186.596			1186.616	1186.656
78 - 78	1185.912	1185.972			1186.213			1186.453			1186.692			1186.712	1186.752
79 - 79	1186.037	1186.097			1186.338			1186.578			1186.817			1186.837	1186.877
80 - 80	1186.151	1186.211			1186.452			1186.692			1186.931			1186.951	1186.991
81 - 81	1186.272	1186.332			1186.573			1186.813			1187.052			1187.072	1187.112
82 - 82	1186.401	1186.461			1186.703			1186.943			1187.181			1187.201	1187.241
83 - 83	1186.532	1186.592			1186.834			1187.074			1187.312			1187.332	1187.372
84 - 84	1186.670	1186.730			1186.973			1187.213			1187.450			1187.470	1187.510
85 - 85	1186.807	1186.867			1187.110			1187.350			1187.587			1187.607	1187.647
86 - 86	1186.949	1187.009			1187.251			1187.491			1187.729			1187.749	1187.789
87 - 87	1187.082	1187.142			1187.385			1187.625			1187.862			1187.882	1187.922
88 - 88	1187.220	1187.280			1187.522			1187.762			1188.000			1188.020	1188.060
89 - 89	1187.348	1187.408			1187.650			1187.890			1188.128			1188.148	1188.188
90 - 90	1187.479	1187.539			1187.782			1188.022			1188.259			1188.279	1188.319
91 - 91	1187.601	1187.661			1187.904			1188.144			1188.381			1188.401	1188.441
92 - 92	1187.728	1187.788			1188.030			1188.270			1188.508			1188.528	1188.568
93 - 93	1187.847	1187.907			1188.149			1188.389			1188.627			1188.647	1188.687
94 - 94	1187.970	1188.030			1188.272			1188.512			1188.750			1188.770	1188.810
95 - 95	1188.092	1188.152			1188.392			1188.632			1188.872			1188.892	1188.932

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: L.M. SALLEE		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		L.A. CARLISLE	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE	CROSSING		
US 460	POND CREEK		
CONSTRUCTION ELEVATIONS – WB			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S51 DRAWING NO. 27242

FOR DECK SECTION & NOTES SEE SHEET S50.

ITEM NUMBER
12-263.63

TABLE OF ELEVATIONS – EASTBOUND															
LINE	LEFT GUTTER LINE	BRIDGE PROFILE GRADE POINT	GIRDER #5			GIRDER #6			GIRDER #7			GIRDER #8			RIGHT GUTTER LINE
			CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	
A – A	1178.086	1178.046	1178.026			1177.786			1177.546			1177.306			1177.246
B – B	1178.100	1178.060	1178.040			1177.800			1177.560			1177.320			1177.260
C – C	1179.834	1179.774	1179.774			1179.534			1179.294			1179.054			1178.994
D – D	1182.078	1182.038	1182.018			1181.778			1181.538			1181.298			1181.238
E – E	1184.322	1184.282	1184.262			1184.022			1183.782			1183.542			1183.482
F – F	1186.566	1186.526	1186.506			1186.266			1185.026			1185.786			1185.726
G – G	1189.055	1189.015	1188.995			1188.755			1188.515			1188.275			1188.215
H – H	1189.082	1189.042	1189.022			1188.782			1188.542			1188.302			1188.242
1 – 1	1178.231	1178.191	1178.171			1177.932			1177.692			1177.451			1177.391
2 – 2	1178.359	1178.319	1178.299			1178.060			1177.820			1177.579			1177.519
3 – 3	1178.481	1178.441	1178.421			1178.182			1177.942			1177.701			1177.641
4 – 4	1178.602	1178.562	1178.542			1178.304			1177.822			1177.822			1177.762
5 – 5	1178.711	1178.671	1178.651			1178.413			1178.173			1177.931			1177.871
6 – 6	1178.820	1178.780	1178.760			1178.522			1178.282			1178.040			1177.980
7 – 7	1178.914	1178.874	1178.854			1178.617			1178.377			1178.134			1178.074
8 – 8	1179.007	1178.967	1178.947			1178.710			1178.470			1178.227			1178.167
9 – 9	1179.086	1179.046	1179.026			1178.789			1178.549			1178.306			1178.246
10 – 10	1179.165	1179.125	1179.105			1178.867			1178.627			1178.385			1178.325
11 – 11	1179.230	1179.190	1179.170			1178.933			1178.693			1178.450			1178.390
12 – 12	1179.296	1179.256	1179.236			1178.998			1178.758			1178.516			1178.456
13 – 13	1179.355	1179.315	1179.295			1179.057			1178.817			1178.575			1178.515
14 – 14	1179.417	1179.377	1179.357			1179.119			1178.879			1178.637			1178.577
15 – 15	1179.476	1179.436	1179.416			1179.178			1178.938			1178.696			1178.636
16 – 16	1179.539	1179.499	1179.479			1179.240			1179.000			1178.759			1178.699
17 – 17	1179.604	1179.564	1179.544			1179.304			1179.064			1178.824			1178.764
18 – 18	1179.674	1179.634	1179.614			1179.374			1179.134			1178.894			1178.834
19 – 19	1179.750	1179.710	1179.690			1179.450			1179.210			1178.970			1178.910
20 – 20	1179.956	1179.916	1179.896			1179.656			1179.416			1179.176			1179.116
21 – 21	1180.088	1180.048	1180.028			1179.789			1179.549			1179.308			1179.248
22 – 22	1180.230	1180.190	1180.170			1179.931			1179.691			1179.450			1179.390
23 – 23	1180.384	1180.344	1180.324			1180.085			1179.845			1179.604			1179.544
24 – 24	1180.534	1180.494	1180.474			1180.236			1179.996			1179.754			1179.694
25 – 25	1180.691	1180.651	1180.631			1180.393			1180.153			1179.911			1179.851
26 – 26	1180.834	1180.794	1180.774			1180.537			1180.297			1180.054			1179.994
27 – 27	1180.979	1180.939	1180.919			1180.681			1180.441			1180.199			1180.139
28 – 28	1181.104	1181.064	1181.044			1180.806			1180.566			1180.324			1180.264
29 – 29	1181.226	1181.186	1181.166			1180.929			1180.689			1180.446			1180.386
30 – 30	1181.328	1181.288	1181.268			1181.030			1180.790			1180.548			1180.488
31 – 31	1181.425	1181.385	1181.365			1181.128			1180.888			1180.645			1180.585
32 – 32	1181.505	1181.465	1181.445			1181.208			1180.968			1180.725			1180.665
33 – 33	1181.584	1181.544	1181.524			1181.287			1180.047			1180.804			1180.744
34 – 34	1181.654	1181.614	1181.594			1181.356			1181.116			1180.874			1180.814
35 – 35	1181.727	1181.687	1181.667			1181.428			1181.188			1180.947			1180.887
36 – 36	1181.801	1181.761	1181.741			1181.502			1181.262			1181.021			1180.961
37 – 37	1181.883	1181.843	1181.823			1181.583			1181.343			1181.103			1181.043
38 – 38	1181.975	1181.935	1181.915			1181.675			1181.435			1181.195			1181.135
39 – 39	1182.200	1182.160	1182.140			1181.901			1181.661			1181.420			1181.360
40 – 40	1182.333	1182.293	1182.273			1182.033			1181.793			1181.553			1181.493
41 – 41	1182.475	1182.435	1182.415			1182.177			1181.937			1181.695			1181.635
42 – 42	1182.628	1182.588	1182.568			1182.329			1182.089			1181.848			1181.788
43 – 43	1182.780	1182.740	1182.720			1182.482			1182.242			1182.000			1181.940
44 – 44	1182.935	1182.895	1182.875			1182.637			1182.397			1182.155			1182.095
45 – 45	1183.082	1183.042	1183.022			1182.785			1182.545			1182.302			1182.242
46 – 46	1183.223	1183.183	1183.163			1182.926			1182.686			1182.443			1182.383
47 – 47	1183.353	1183.313	1183.293			1183.056			1182.816			1182.573			1182.513
48 – 48	1183.471	1183.431	1183.411			1183.174			1182.934			1182.691			1182.631
49 – 49	1183.578	1183.538	1183.518			1183.281			1183.041			1182.798			1182.738
50 – 50	1183.672	1183.632	1183.612			1183.374			1183.134			1182.892			1182.832
51 – 51	1183.756	1183.716	1183.696			1183.458			1183.218			1182.976			1182.916
52 – 52	1183.833	1183.793	1183.773			1183.535			1183.295			1183.053			1182.993
53 – 53	1183.902	1183.862	1183.842			1183.604			1183.364			1183.122			1183.062
54 – 54	1183.974	1183.934	1183.914			1183.676			1183.436			1183.194			1183.134
55 – 55	1184.046	1184.006	1183.986			1183.747			1183.507			1183.266			1183.206
56 – 56	1184.128	1184.088	1184.068			1183.828			1183.588			1183.348			1183.288
57 – 57	1184.220	1184.180	1184.160			1183.920			1183.680			1183.440			1183.380
58 – 58	1184.443	1184.403	1184.383			1184.143			1183.903			1183.663			1183.603
59 – 59	1184.575	1184.535	1184.515			1184.276			1184.036			1183.795			1183.735



TYPICAL SECTION – EASTBOUND BRIDGE

NOTE: ELEVATIONS SHOWN ARE BASED OFF THE BRIDGE GRADE POINT AS SHOWN IN THE PROFILE GRADE DETAIL ON SHEET S05. THE CORRECTION BETWEEN ROADWAY AND BRIDGE PROFILE GRADES IS ALREADY INCLUDED.

FOR NOTES SEE SHEET S50.

ITEM NUMBER
12–263.63

REVISION		DATE
DATE: MARCH, 2017		CHECKED BY
DESIGNED BY: L.M. SALLEE		L.A. CARLISLE
DETAILED BY: J.A. ROSE		L.A. CARLISLE
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
CONSTRUCTION ELEVATONS – EB		
PREPARED BY		SHEET NO. S52
PALMER ENGINEERING CO.		DRAWING NO. 27242

7:43:10 AM

3/30/2017

... \Dgn\27242-S53-CE5.dgn

MicroStation v8.11.9.536

FILE NAME: J:\KD0T\US460-56\STRUCT\POND CREEK\FINAL PLANS\DG\N\POND_FINAL_BORDER.DGN

USER: jeff-r
DATE PLOTTED: July 27, 2011

E-SHEET NAME:

USER: jeff-r
DATE PLOTTED: July 27, 2011

TABLE OF ELEVATIONS - EASTBOUND (CONTINUED)

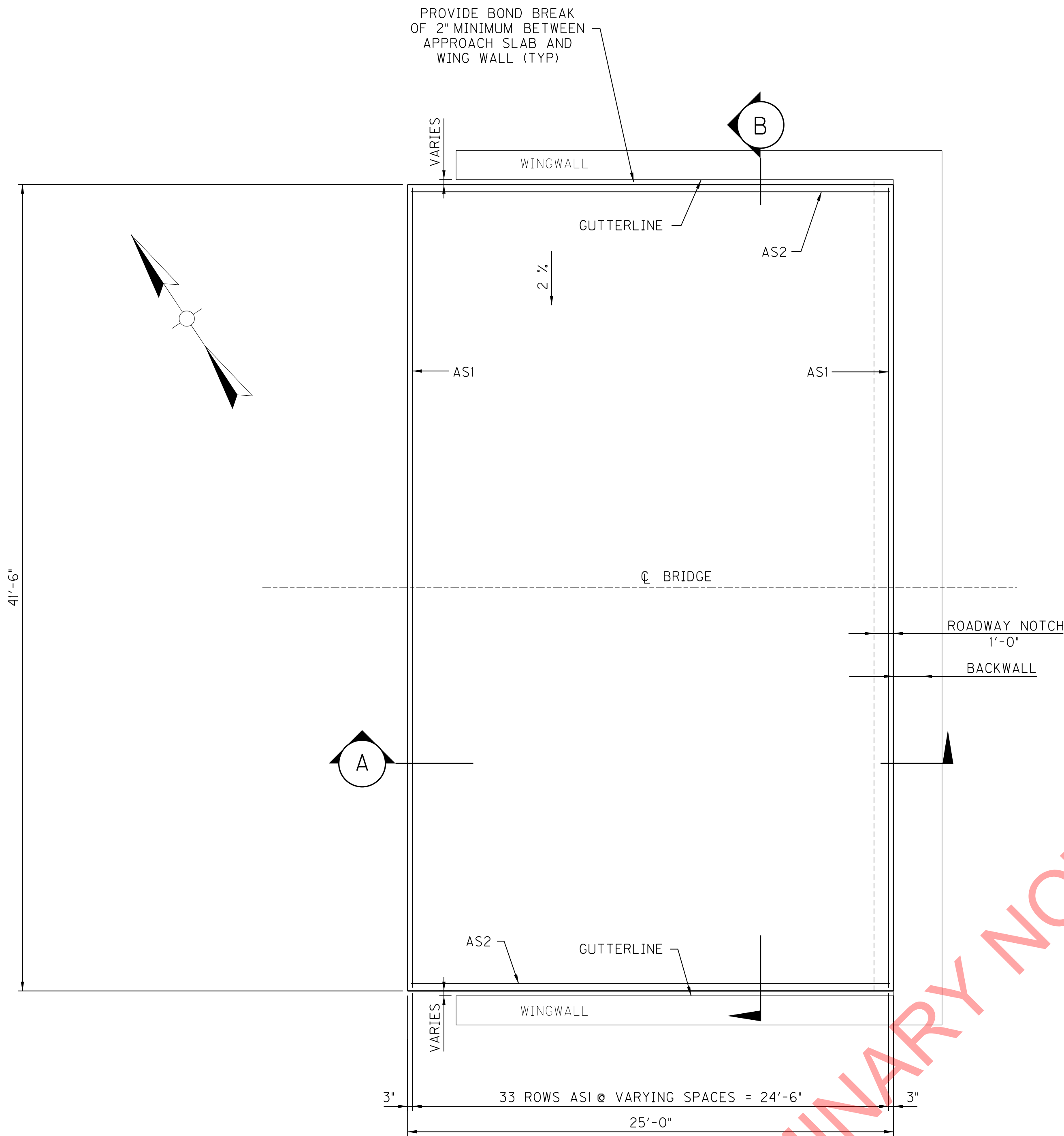
LINE	LEFT GUTTER LINE	BRIDGE PROFILE GRADE POINT	GIRDER #5			GIRDER #6			GIRDER #7			GIRDER #8			RIGHT GUTTER LINE
			CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	
60 - 60	1184.718	1184.678	1184.658			1184.419			1184.179			1183.938			1183.878
61 - 61	1184.868	1184.828	1184.808			1184.570			1184.330			1184.088			1184.028
62 - 62	1185.020	1184.980	1184.960			1184.722			1184.482			1184.240			1184.180
63 - 63	1185.175	1185.135	1185.115			1184.877			1184.637			1184.395			1184.335
64 - 64	1185.320	1185.280	1185.260			1185.023			1184.783			1184.540			1184.480
65 - 65	1185.464	1185.424	1185.404			1185.167			1184.927			1184.684			1184.624
66 - 66	1185.591	1185.551	1185.531			1185.294			1185.054			1184.811			1184.751
67 - 67	1185.714	1185.674	1185.654			1185.417			1185.177			1184.934			1184.874
68 - 68	1185.816	1185.776	1185.756			1185.519			1185.279			1185.036			1184.976
69 - 69	1185.915	1185.875	1185.855			1185.618			1185.378			1185.135			1185.075
70 - 70	1185.995	1185.955	1185.935			1185.698			1185.458			1185.215			1185.155
71 - 71	1186.076	1186.036	1186.016			1185.779			1185.539			1185.296			1185.236
72 - 72	1186.144	1186.104	1186.084			1185.846			1185.606			1185.364			1185.304
73 - 73	1186.218	1186.178	1186.158			1185.919			1185.679			1185.438			1185.378
74 - 74	1186.289	1186.249	1186.229			1185.990			1185.750			1185.509			1185.449
75 - 75	1186.372	1186.332	1186.312			1186.072			1185.832			1185.592			1185.532
76 - 76	1186.464	1186.424	1186.404			1186.164			1185.924			1185.684			1185.624
77 - 77	1186.656	1186.616	1186.596			1186.356			1186.116			1185.876			1185.816
78 - 78	1186.752	1186.712	1186.692			1186.453			1186.213			1185.972			1185.912
79 - 79	1186.877	1186.837	1186.817			1186.578			1186.338			1186.097			1186.037
80 - 80	1186.991	1186.951	1186.931			1186.692			1186.452			1186.211			1186.151
81 - 81	1187.112	1187.072	1187.052			1186.813			1186.573			1186.332			1186.272
82 - 82	1187.241	1187.201	1187.181			1186.943			1186.703			1186.461			1186.401
83 - 83	1187.372	1187.332	1187.312			1187.074			1186.834			1186.592			1186.532
84 - 84	1187.510	1187.470	1187.450			1187.213			1186.973			1186.730			1186.670
85 - 85	1187.647	1187.607	1187.587			1187.350			1187.110			1186.867			1186.807
86 - 86	1187.789	1187.749	1187.729			1187.491			1187.251			1187.009			1186.949
87 - 87	1187.922	1187.882	1187.862			1187.625			1187.385			1187.142			1187.082
88 - 88	1188.060	1188.020	1188.000			1187.762			1187.522			1187.280			1187.220
89 - 89	1188.188	1188.148	1188.128			1187.890			1187.650			1187.408			1187.348
90 - 90	1188.319	1188.279	1188.259			1188.022			1187.782			1187.539			1187.479
91 - 91	1188.441	1188.401	1188.381			1188.144			1187.904			1187.661			1187.601
92 - 92	1188.568	1188.528	1188.508			1188.270			1188.030			1187.788			1187.728
93 - 93	1188.687	1188.647	1188.627			1188.389			1188.149			1187.907			1187.847
94 - 94	1188.810	1188.770	1188.750			1188.512			1188.272			1188.030			1187.970
95 - 95	1188.932	1188.892	1188.872			1188.632			1188.392			1188.152			1188.092

[illegible]

FOR DECK SECTION SEE SHEET S52.
FOR NOTES SEE SHEET S50.

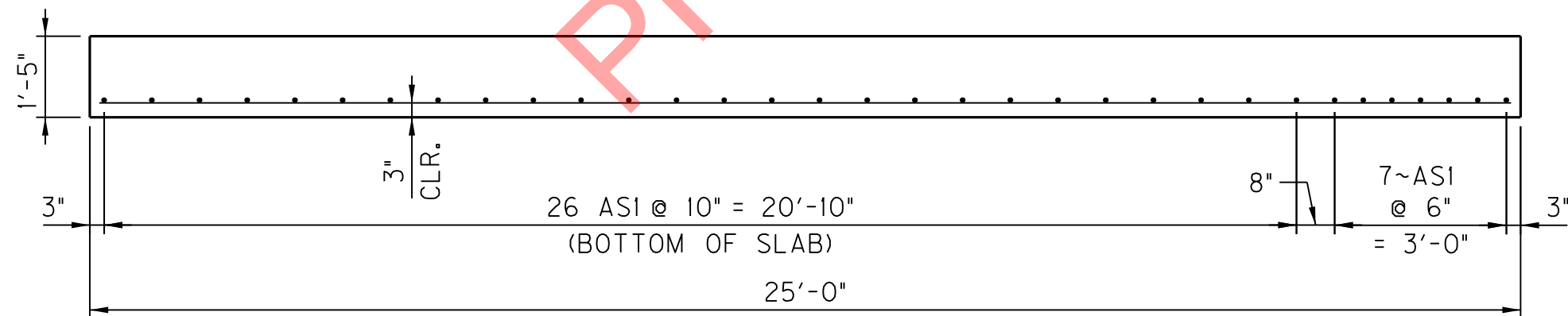
FOR NOTES SEE SHEET S50.

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: L.M. SALLEE		L.A. CARLISLE	
DETAILED BY: J.A. ROSE		L.A. CARLISLE	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
CONSTRUCTION ELEVATIONS – EB			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S53 DRAWING NO. 27242

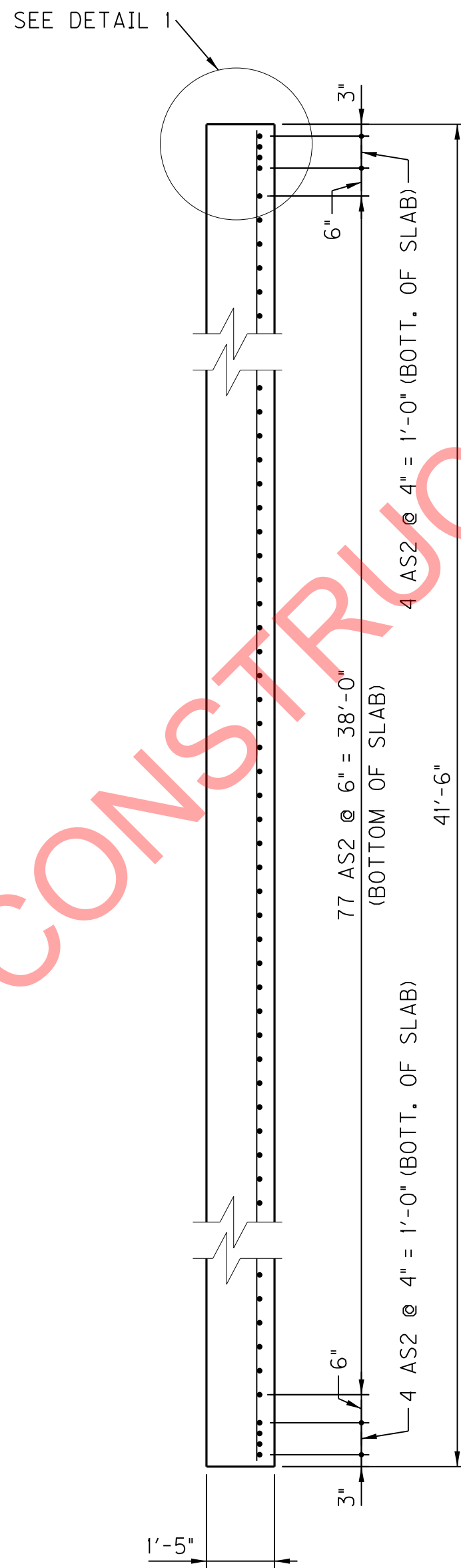


PLAN

TYPICAL APPROACH SLAB, E.B. ABUT. 1 SHOWN
OTHER APPROACH SLABS SIMILAR

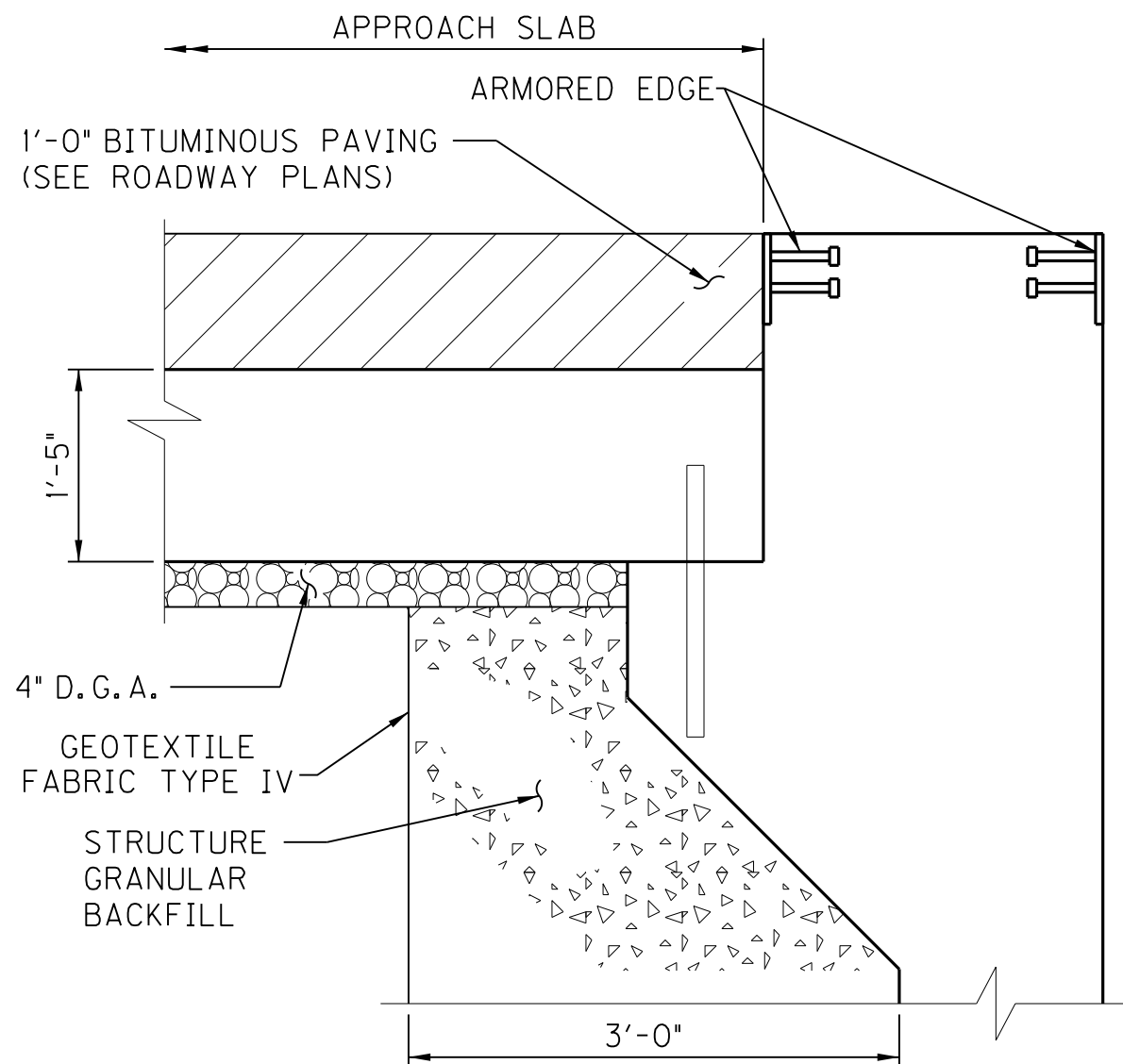


SECTION "A"



DETAIL 1

SECTION "B"



TYPICAL SECTION SHOWING JUNCTION OF APPROACH SLAB WITH BRIDGE BACKWALL

APPROACH SLAB REINFORCEMENT									
MARK	TYPE	NUMBER	SIZE	LENGTH	LOCATION	a	b	c	d
AS1(E)	STR.	33	#5	41'-3"	APPROACH SLAB				
AS2(E)	STR.	85	#8	24'-9"	APPROACH SLAB				

REINFORCEMENT SHOWN FOR ONE SLAB, 4 SLABS REQUIRED

ESTIMATE OF QUANTITIES

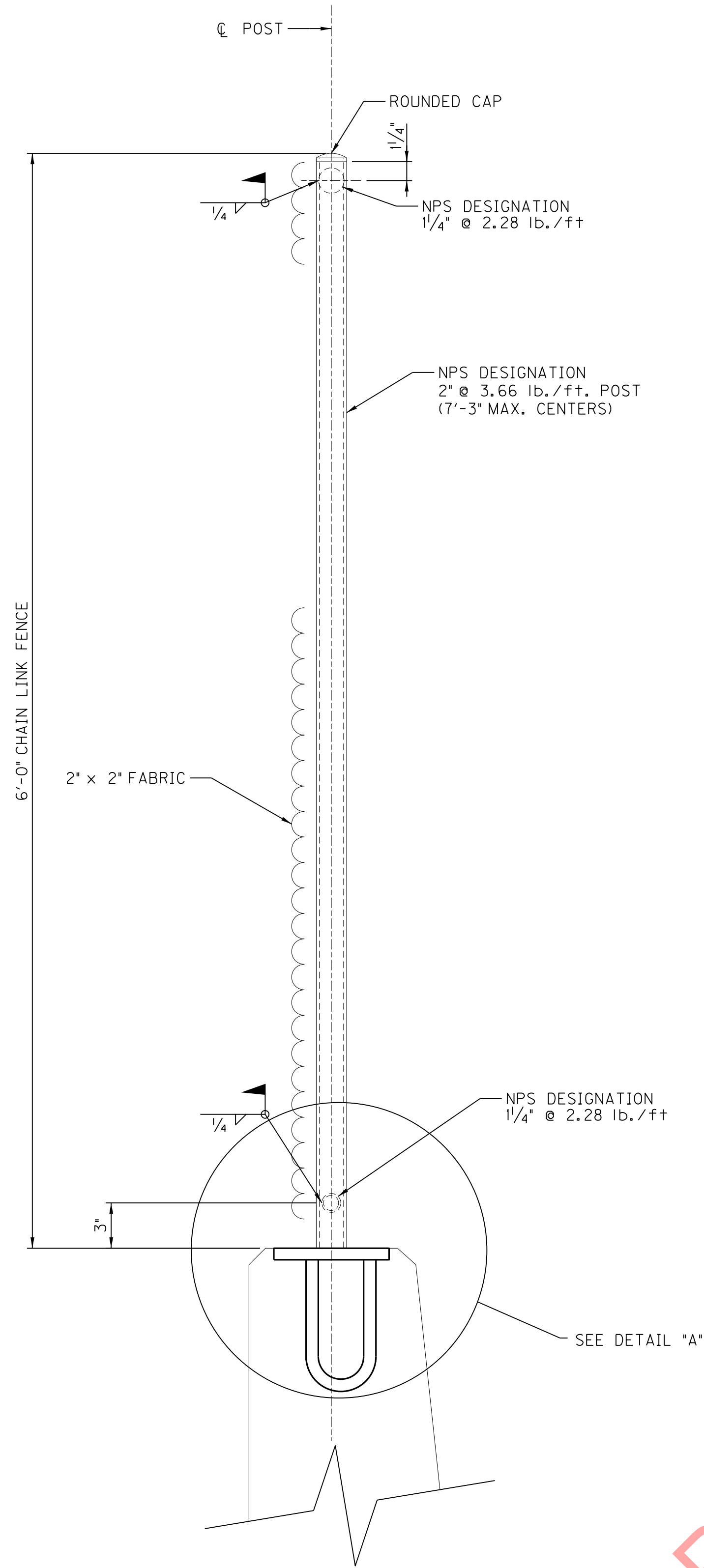
	EACH	UNIT
CLASS "AA" CONCRETE	55	YD ³
EPOXY COATED REINFORCEMENT	7,037	lbs.

NOTE: ESTIMATE OF QUANTITIES IS FOR INFORMATION ONLY.

GENERAL NOTES

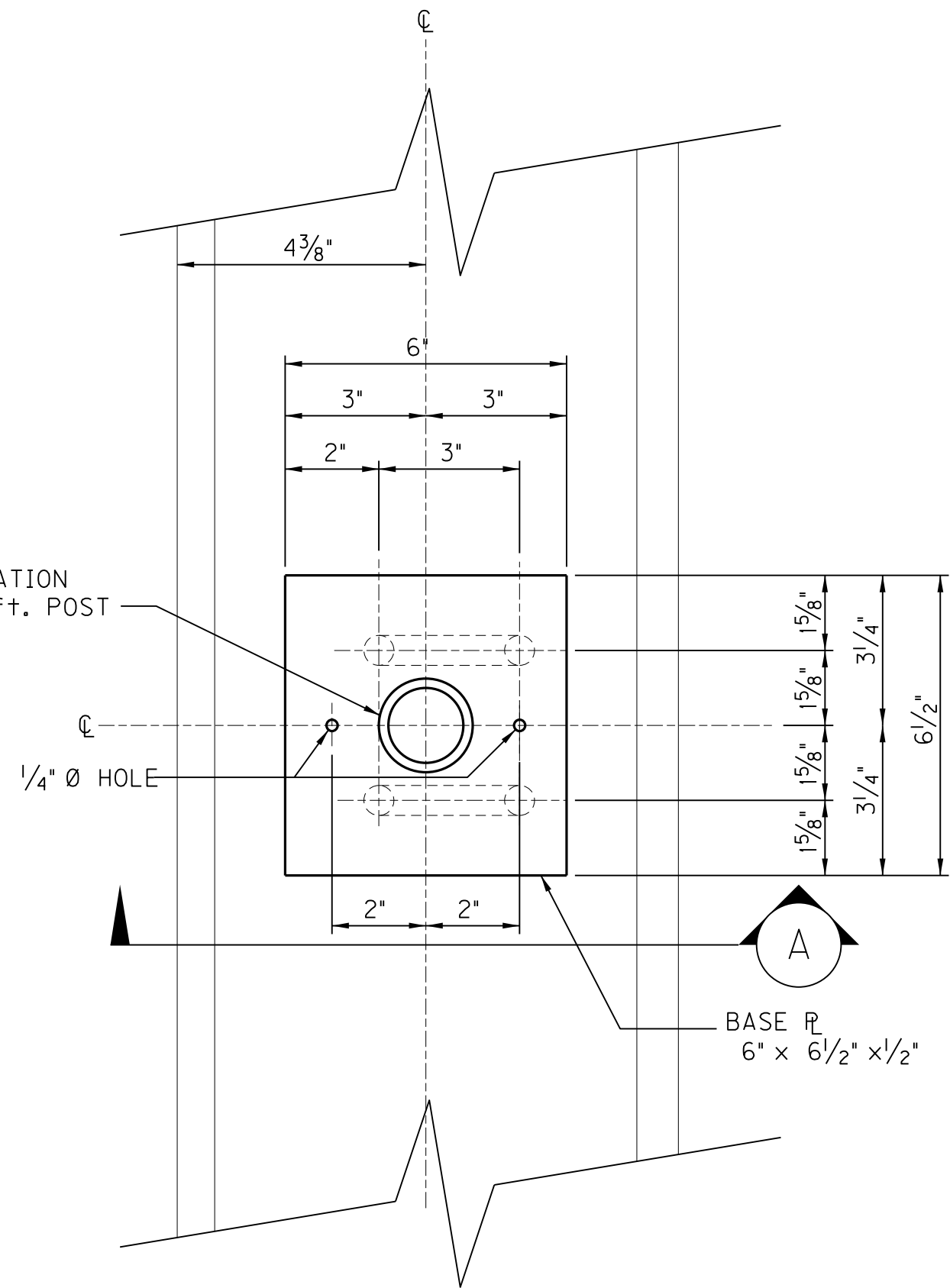
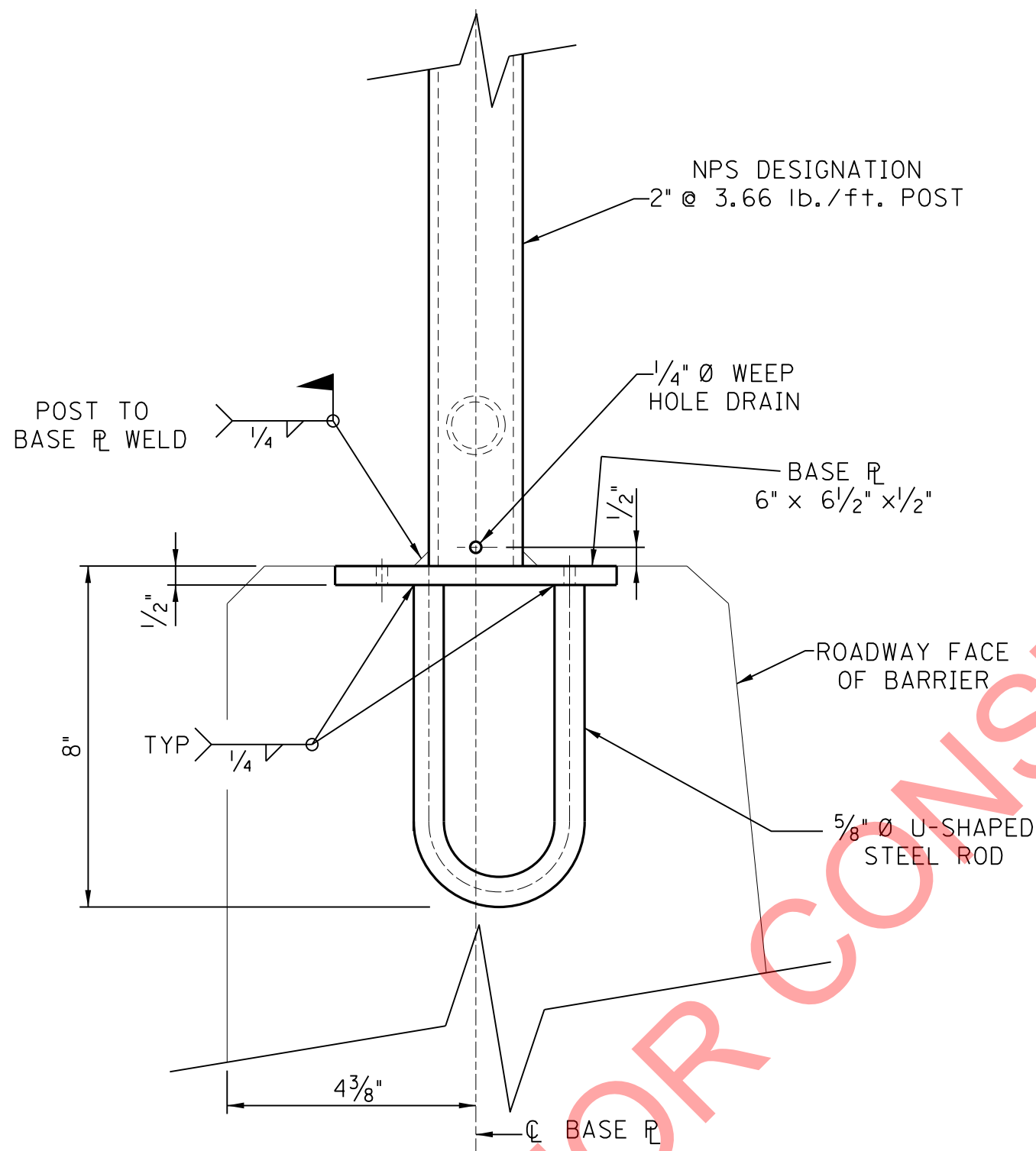
- CONCRETE
CONCRETE SHALL BE CLASS "AA"
- REINFORCEMENT
ALL REBAR REINFORCEMENT SHALL BE GRADE 60 AND EPOXY COATED.
- SEE STD. DWG. FOR ADDITIONAL INFORMATION.

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: A.C. THOMAS		D.H. DEITZ	
DETAILED BY: J.A. ROSE		A.C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
APPROACH SLABS			
PREPARED BY		SHEET NO. S54	
PALMER ENGINEERING CO.		DRAWING NO. 27242	



POST SECTION

(6'-0" CHAIN LINK FENCE)



SPECIFICATIONS: UNLESS OTHERWISE NOTED, VINYL COAT ALL MATERIALS USED IN THE FABRICATION OF THE FENCE IN ACCORDANCE WITH AASHTO LRFD CONSTRUCTION SPECIFICATIONS, CURRENT EDITION.

POST AND LINE RAILS: ENSURE FENCE POSTS AND LINE RAILS ARE 2"Ø @ 3.66 LBS/FT., ASTM A618, GRADE 2.

CHAIN LINK FABRIC: USE POLYVINYL CHLORIDE (PVC) COATED STEEL FENCE TYPE IV FOR THIS PROJECT WITH THE COLOR OF COATING TO BE DARK GREEN WITH THE SIZE OF FENCE BEING IN ACCORDANCE WITH SECTION 817 OF THE SPECIFICATIONS. TIE THE FABRIC TO THE POSTS AND RAILS AT 2 FT. CENTERS (MAXIMUM).

ANCHOR PLATES: ENSURE ANCHOR PLATES CONFORM TO ASTM A36 OR SAE SPECIFICATION M 1020 AND GALVANIZED IN ACCORDANCE WITH ASTM A153. APPLY A VINYL FINISH COAT ON ALL EXPOSED SURFACES OF THE ANCHOR PLATES AFTER THE POSTS ARE IN PLACE.

DAMAGE COATING: AFTER THE INSTALLATION OF THE CHAIN LINK FABRIC, CLEAN ANY DAMAGED AREAS OF ANY OF THE FENCE COMPONENTS BY WASHING WITH MINERAL SPIRIT SOLVENT SUFFICIENT TO REMOVE ANY CONTAMINANTS. AFTER CLEANING, APPLY A VINYL WASHING PRIMER TO THE SURFACES WITH DRY FILM THICKNESS OF 0.3 MIL TO 0.5 MIL BEFORE THE FINAL VINYL FINISH COAT IS APPLIED.

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY: D.H. DEITZ		C.M. GREENWELL	
DETAILED BY: J.A. ROSE		D.H. DEITZ	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460		CROSSING POND CREEK	
CHAIN LINK FENCE DETAILS			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S55
			DRAWING NO. 27242

ITEM NUMBER
12-263.63

3/30/20177:43:12 AM

FILE NAME: J:\KDOT\US460-56\STRUCT\POD CREEK FINAL PLANS\DONPOND_FINAL_BORDER.dgn

... \27242_S56_Abutment_Bor_Bill.dgn

USER: jeffr

DATE PLOTTED: July 27, 2011

E-SHEET NAME:

MicroStation v8.11.9.536

BILL OF REINFORCEMENT – ABUTMENT 1

MARK	TYPE	NUMBER		SIZE	LENGTH	LOCATION	a	b	c	d	e
		EB	WB								
A1	STR.	28	28	# 5	50'-8"	FOOTING					
A2	2	68	68	# 5	18'-10"	FOOTING	2'-7"	13'-8"			
A3	1	51	51	# 5	14'-11"	FOOTING	13'-3"	10"	5"	13'-8"	
A4	STR.	4	4	# 7	50'-8"	FOOTING					
A5(E)	5	105	105	# 5	16'-7"	FTG./BACKWALL	15'-9"	10"			
A6(E)	5	30	30	# 5	7'-1"	FTG./BEAM SEAT	6'-3"	10"			
A7(E)	5	30	30	# 5	7'-7"	FTG./BEAM SEAT	6'-9"	10"			
A8(S)(E)	2	60	60	# 5	14'-4"	BEAM SEAT	3'-7"	7'-2"			
A9(E)	STR.	28	28	# 5	24'-0"	BEAM SEAT					
A10(E)	STR.	10	10	# 5	22'-2"	BEAM SEAT					
A11(E)	5	9	9	# 5	10'-1"	BEAM SEAT	7'-2"	2'-11"			
A12(S)(E)	5	45	45	# 5	5'-4"	BACKWALL	4'-2"	1'-2"			
A13(S)(E)	15	41	41	# 5	8'-5"	ROADWAY NOTCH	3'-2"	9"	4'-5¾"	3'-2"	
A14(S)(E)	5	90	90	# 5	7'-4"	BACKWALL	6'-2"	1'-2"			
A15(E)	STR.	41	41	# 11	2'-0"	ROADWAY NOTCH					
A16(E)	STR.	10	10	# 5	44'-8"	ROADWAY NOTCH					
A17(E)	5	44	44	# 5	26'-11"	BACKWALL	24'-0"	2'-11"			
A18	STR.	44	44	# 5	23'-0"	WING FTG.					
A19	STR.	6	6	# 8	32'-0"	WING FTG.					
A20	2	74	74	# 6	13'-10"	WING FTG.	1'-7"	10'-8"			
A21	1	74	74	# 5	11'-11"	WING FTG.	10'-3"	10"	5"	10'-8"	
A22(E)	STR.	50	50	# 5	8'-7"	WING WALL					
A23(E)	STR.	25	25	# 5	13'-8"	WING WALL					
A24(E)	25	92	92	# 7	9'-9"	WING WALL	1'-2"	8'-7"	8'-7"	3/4"	
A25(E)	STR.	46	46	# 7	13'-8"	WING WALL					
A26(E)	STR.	25	25	# 5	14'-6"	WING WALL					
A27(E)	STR.	46	46	# 7	14'-6"	WING WALL					
A28(E)	STR.	4	4	# 5	18'-3"	WING WALL					
A29(E)	5	58	58	# 5	27'-6"	WING WALL	24'-7"	2'-11"			
A30(E)	STR.	100	100	# 5	4'-3"	WING WALL					
A31(S)(E)	2	24	24	# 5	7'-2"	PEDESTALS	2'-3"	2'-8"			
A32(S)(E)	2	16	16	# 5	9'-8"	PEDESTALS	2'-3"	5'-2"			
A33(S)(E)	2	18	18	# 6	12'-8"	SHEAR BLOCK	5'-3"	2'-2"			
A34(S)(E)	2	14	14	# 6	15'-2"	SHEAR BLOCK	5'-3"	4'-8"			
A44(E)	2	50	50	# 5	7'-4"	WING WALL	3'-1"	1'-2"			

NOTE : REINFORCING BARS DESIGNATED WITH SUFFIX (E) IN PLANS SHALL BE EPOXY COATED IN ACCORDANCE WITH THE SPECIFICATIONS.

REINFORCING BARS DESIGNATED WITH THE SUFFIX (S) IN PLANS ARE STIRRUP BARS.

BILL OF REINFORCEMENT – ABUTMENT 2

MARK	TYPE	NUMBER		SIZE	LENGTH	LOCATION	a	b	c	d	e
		EB	WB								
A1	STR.	28	28	# 5	50'-8"	FOOTING					
A2	2	68	68	# 5	18'-10"	FOOTING	2'-7"	13'-8"			
A3	1	51	51	# 5	14'-11"	FOOTING	13'-3"	10"	5"	13'-8"	
A4	STR.	4	4	# 7	50'-8"	FOOTING					
A5-A7						NOT USED					
A8(S)(E)	2	60	60	# 5	14'-4"	BEAM SEAT	3'-7"	7'-2"			
A9(E)	STR.	32	32	# 5	24'-0"	BEAM SEAT					
A10(E)	STR.	10	10	# 5	22'-2"	BEAM SEAT					
A11(E)	5	11	11	# 5	10'-1"	BEAM SEAT	7'-2"	2'-11"			
A12(S)(E)	5	45	45	# 5	5'-4"	BACKWALL	4'-2"	1'-2"			
A13(S)(E)	15	41	41	# 5	8'-5"	ROADWAY NOTCH	3'-2"	9"	4'-5¾"	3'-2"	
A14(S)(E)	5	90	90	# 5	7'-4"	BACKWALL	6'-2"	1'-2"			
A15(E)	STR.	41	41	# 11	2'-0"	ROADWAY NOTCH					
A16(E)	STR.	10	10	# 5	44'-8"	ROADWAY NOTCH					
A17(E)	5	44	44	# 5	26'-11"	BACKWALL	24'-0"	2'-11"			
A18	STR.	44	44	# 5	23'-0"	WING FTG.					
A19	STR.	6	6	# 8	32'-0"	WING FTG.					
A20	2	74	74	# 6	13'-10"	WING FTG.	1'-7"	10'-8"			
A21	1	74	74	# 5	11'-11"	WING FTG.	10'-3"	10"	5"	10'-8"	
A22-A27						NOT USED					
A28(E)	STR.	4	4	# 5	18'-3"	WING WALL					
A29(E)	5	66	66	# 5	27'-6"	WING WALL	24'-7"	2'-11"			
A30(E)	STR.	100	100	# 5	4'-3"	WING WALL					
A31(S)(E)	2	24	24	# 5	7'-2"	PEDESTALS	2'-3"	2'-8"			
A32(S)(E)	2	16	16	# 5	9'-8"	PEDESTALS	2'-3"	5'-2"			
A33(S)(E)	2	18	18	# 6	12'-8"	SHEAR BLOCK	5'-3"	2'-2"			
A34(S)(E)	2	14	14	# 6	15'-2"	SHEAR BLOCK	5'-3"	4'-8"			
A35(E)	5	105	105	# 5	17'-7"	FTG./BACKWALL	16'-9"	10"			
A36(E)	5	30	30	# 5	8'-1"	FTG./BEAM SEAT	7'-3"	10"			
A37(E)	5	30	30	# 5	8'-7"	FTG./BEAM SEAT	7'-9"	10"			
A38(E)	STR.	50	50	# 5	9'-0"	WING WALL					
A39(E)	STR.	25	25	# 5	15'-9"	WING WALL					
A40(E)	25	92	92	# 7	10'-2"	WING WALL	1'-2"	9'-0"	9'-0"	3/2"	
A41(E)	STR.	46	46	# 7	15'-9"	WING WALL					
A42(E)	STR.	25	25	# 5	14'-11"	WING WALL					
A43(E)	STR.	46	46	# 7	14'-11"	WING WALL					
A44(E)	2	50	50	# 5	7'-4"	WING WALL	3'-1"	1'-2"			

TYPE 1

TYPE 2

TYPE 5

TYPE 15

TYPE 25

ITEM NUMBER

12-263.63

REVISION

DATE

DATE: MARCH, 2017

DESIGNED BY: A.C. THOMAS

DETAILED BY: J.A. ROSE

CHECKED BY

C.M. GREENWELL

A.C. THOMAS

Commonwealth of Kentucky

DEPARTMENT OF HIGHWAYS

COUNTY

PIKE

ROUTE

US 460

CROSSING

POND CREEK

BILL OF REINF.-ABUTMENTS

PREPARED BY

PALMER ENGINEERING CO.

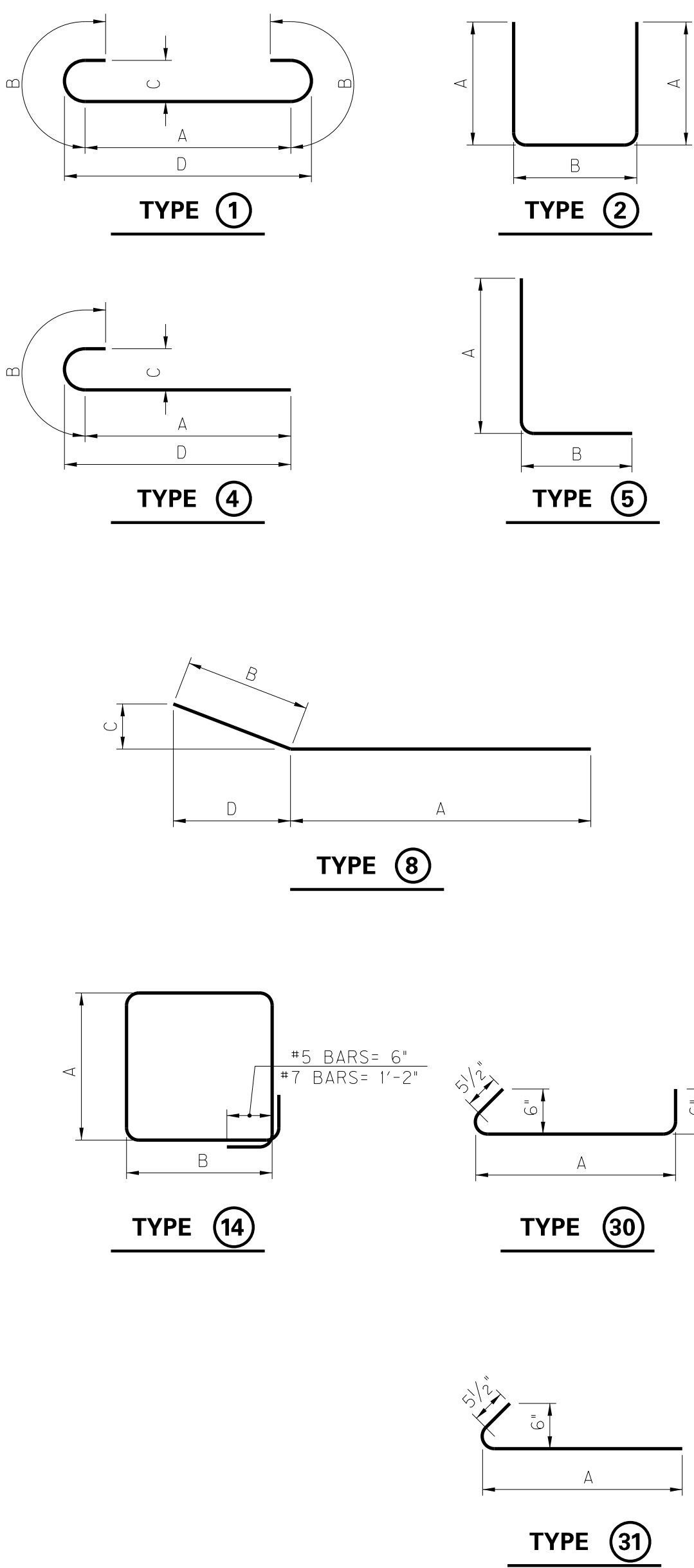
SHEET NO.

S56

DRAWING NO.

27242

PIER 1										
MARK	TYPE	NUMBER		SIZE	LENGTH	LOCATION	A	B	C	D
		WB	EB							
P1	5	10	10	# 11	21'-0"	CAP	19'-0"	2'-0"		
P2	5	10	10	# 11	37'-2"	CAP	35'-2"	2'-0"		
P3	4	10	10	# 11	20'-10"	CAP	18'-4 ⁵ / ₈ "	2'-5"	1'-2 ³ / ₄ "	19'-0"
P4	4	10	10	# 11	37'-0"	CAP	34'-6 ⁵ / ₈ "	2'-5"	1'-2 ³ / ₄ "	35'-2"
P5	STR.	48	48	# 7	41'-6"	CAP				
P6	STR.	4	4	# 7	39'-10"	CAP				
P7	STR.	4	4	# 7	38'-1"	CAP				
P8	STR.	4	4	# 7	36'-3"	CAP				
P9	STR.	4	4	# 7	34'-6"	CAP				
P10	STR.	4	4	# 7	32'-8"	CAP				
P11	STR.	4	4	# 7	30'-10"	CAP				
P12	STR.	4	4	# 7	27'-3"	CAP				
P13	STR.	4	4	# 7	23'-6"	CAP				
P14	STR.	4	4	# 7	20'-0"	CAP				
P15	8	16	16	# 7	24'-5"	CAP	10'-3"	14'-2"	5'-11 ¹ / ₄ "	12'-10 ³ / ₈ "
P16	2	96	96	# 7	15'-10"	CAP	5'-0"	5'-7 ¹ / ₄ "		
P17	STR.	8	8	# 7	8'-8"	CAP				
P18	STR.	8	8	# 7	20'-8"	CAP				
P19	STR.	8	8	# 7	32'-8"	CAP				
P20(S)	2	33	33	# 7	15'-8"	CAP	4'-0"	7'-8"		
P21(S)	14	4	4	# 7	26'-1"	CAP STIRRUPS	5'-10 ¹ / ₂ "	6'-0"		
P22(S)	14	4	4	# 7	27'-6"	CAP STIRRUPS	6'-6 ³ / ₄ "	6'-0"		
P23(S)	14	4	4	# 7	28'-1"	CAP STIRRUPS	6'-10 ¹ / ₂ "	6'-0"		
P24(S)	14	4	4	# 7	28'-9"	CAP STIRRUPS	7'-2 ¹ / ₄ "	6'-0"		
P25(S)	14	4	4	# 7	29'-4"	CAP STIRRUPS	7'-6"	6'-0"		
P26(S)	14	4	4	# 7	30'-9"	CAP STIRRUPS	8'-2 ¹ / ₄ "	6'-0"		
P27(S)	14	4	4	# 7	31'-8"	CAP STIRRUPS	8'-7 ³ / ₄ "	6'-0"		
P28(S)	14	4	4	# 7	32'-7"	CAP STIRRUPS	9'-1 ¹ / ₄ "	6'-0"		
P29(S)	14	4	4	# 7	33'-6"	CAP STIRRUPS	9'-6 ³ / ₄ "	6'-0"		
P30(S)	14	4	4	# 7	34'-5"	CAP STIRRUPS	10'-0 ¹ / ₂ "	6'-0"		
P31(S)	14	4	4	# 7	35'-4"	CAP STIRRUPS	10'-6"	6'-0"		
P32(S)	14	4	4	# 7	36'-3"	CAP STIRRUPS	10'-11 ¹ / ₂ "	6'-0"		
P33(S)	14	4	4	# 7	37'-2"	CAP STIRRUPS	11'-5"	6'-0"		
P34(S)	14	32	32	# 7	37'-8"	CAP STIRRUPS	11'-8"	6'-0"		
P40	STR.	148	148	# 8	24'-0"	COLUMN				
P41	STR.	320	320	# 8	24'-6"	COLUMN				
P42	STR.	172	172	# 9	24'-6"	COLUMN				
P43	STR.	180	180	# 9	25'-10"	COLUMN				
P44	STR.	188	188	# 9	29'-1"	COLUMN				
P45						NOT USED				
P46						NOT USED				
P47						NOT USED				
P48	5	188	188	# 9	20'-1"	COLUMN	18'-6"	1'-7"		
P49						NOT USED				
P50(S)	14	492	492	# 5	5'-8"	COLUMN	1'-2"	1'-2"		
P51(S)	30	2712	2712	# 5	2'-2"	COLUMN	1'-2"			
P52(S)	30	246	246	# 5	16'-8"	COLUMN	15'-8"			
P53(S)	31	160	160	# 5	5'-10"	COLUMN	5'-4"			
P54(S)	31	160	160	# 5	6'-10"	COLUMN	6'-4"			
P55(S)	31	80	80	# 5	7'-10"	COLUMN	7'-4"			
P56(S)	2	80	80	# 5	26'-3"	COLUMN	5'-4"	15'-7"		
P57(S)	2	80	80	# 5	28'-3"	COLUMN	6'-4"	15'-7"		
P58(S)	2	40	40	# 5	30'-3"	COLUMN	7'-4"	15'-7"		
P59(S)	31	92	92	# 5	8'-10"	COLUMN	8'-4"			
P60(S)						NOT USED				
P61(S)						NOT USED				
P62(S)						NOT USED				
P63(S)						NOT USED				
P64(S)	2	46	46	# 5	32'-3"	COLUMN	8'-4"	15'-7"		
PF 70	1	32	32	# 7	42'-0"	FOOTING	39'-1"	1'-5 ¹ / ₂ "	7"	39'-8"
PF 71	1	64	64	# 14	44'-11"	FOOTING	37'-8 ¹ / ₄ "	3'-7 ¹ / ₂ "	1'-9 ³ / ₄ "	39'-6"
PF 72	1	40	40	# 7	34'-0"	FOOTING	31'-1"	1'-5 ¹ / ₂ "	7"	31'-8"
PF 73	1	72	72	# 14	36'-11"	FOOTING	29'-8 ¹ / ₄ "	3'-7 ¹ / ₂ "	1'-9 ³ / ₄ "	31'-6"



REVISION	DATE
DATE: MARCH, 2017	CHECKED BY
DESIGNED BY: R.M. DAMON	L.A. CARLISLE
DETAILED BY: J.A. ROSE	R.M. DAMON

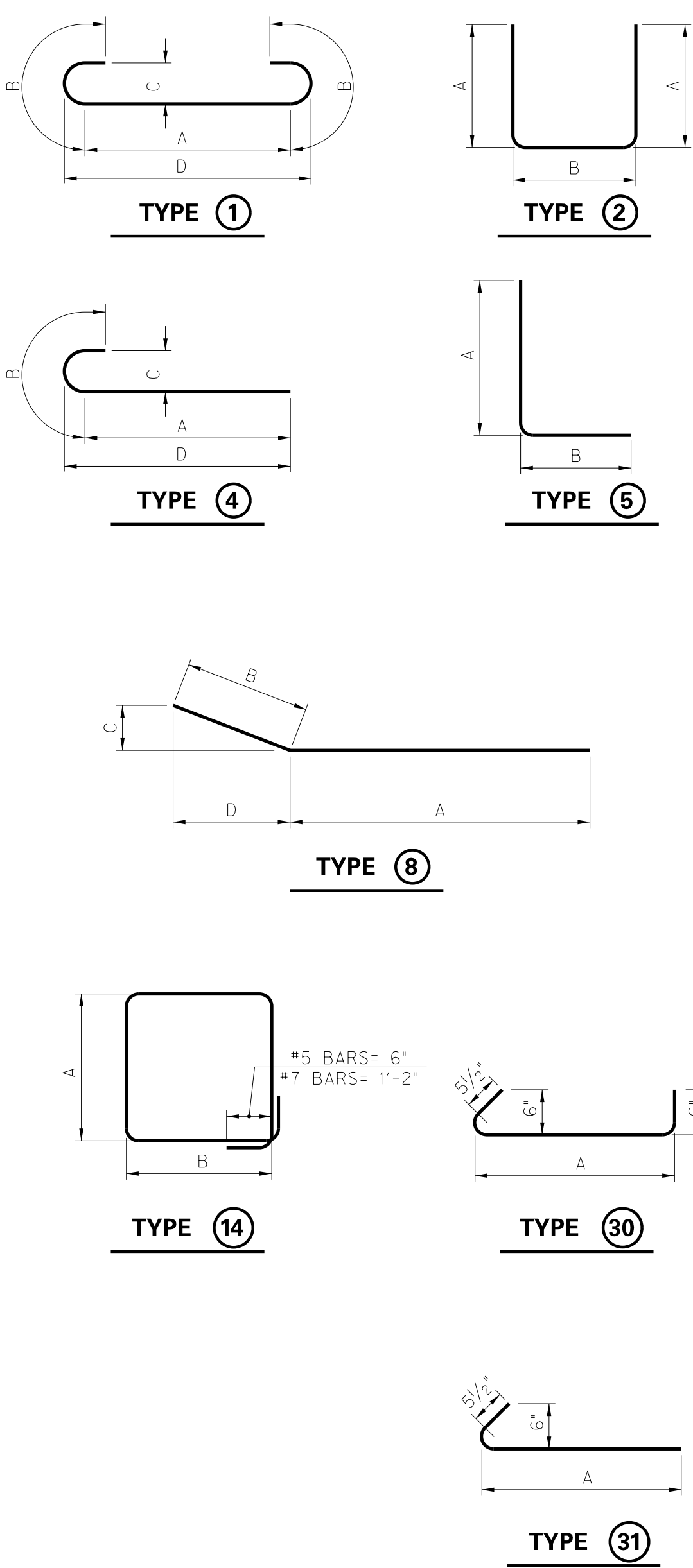
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS	
COUNTY PIKE	
ROUTE US 460	CROSSING POND CREEK
PIER 1 WB & EB - BILL OF REINFORCEMENT	
PREPARED BY	SHEET NO. S57
PALMER ENGINEERING CO.	DRAWING NO. 27242

ITEM NUMBER
12-263.63

NOTE : REINFORCING BARS DESIGNATED WITH SUFFIX (E) IN PLANS SHALL BE EPOXY COATED IN ACCORDANCE WITH THE SPECIFICATIONS.

REINFORCING BARS DESIGNATED WITH THE SUFFIX (S) IN PLANS ARE STIRRUP BARS.

PIER 2										
MARK	TYPE	NUMBER		SIZE	LENGTH	LOCATION	A	B	C	D
		WB	EB							
P1	5	10	10	# 11	21'-0"	CAP	19'-0"	2'-0"		
P2	5	10	10	# 11	37'-2"	CAP	35'-2"	2'-0"		
P3	4	10	10	# 11	20'-10"	CAP	18'-4 ⁵ / ₈ "	2'-5"	1'-2 ³ / ₄ "	19'-0"
P4	4	10	10	# 11	37'-0"	CAP	34'-6 ⁵ / ₈ "	2'-5"	1'-2 ³ / ₄ "	35'-2"
P5	STR.	48	48	# 7	41'-6"	CAP				
P6	STR.	4	4	# 7	39'-10"	CAP				
P7	STR.	4	4	# 7	38'-1"	CAP				
P8	STR.	4	4	# 7	36'-3"	CAP				
P9	STR.	4	4	# 7	34'-6"	CAP				
P10	STR.	4	4	# 7	32'-8"	CAP				
P11	STR.	4	4	# 7	30'-10"	CAP				
P12	STR.	4	4	# 7	27'-3"	CAP				
P13	STR.	4	4	# 7	23'-6"	CAP				
P14	STR.	4	4	# 7	20'-0"	CAP				
P15	8	16	16	# 7	24'-5"	CAP	10'-3"	14'-2"	5'-11 ¹ / ₄ "	12'-10 ³ / ₈ "
P16	2	96	96	# 7	15'-10"	CAP	5'-0"	5'-7 ¹ / ₄ "		
P17	STR.	8	8	# 7	8'-8"	CAP				
P18	STR.	8	8	# 7	20'-8"	CAP				
P19	STR.	8	8	# 7	32'-8"	CAP				
P20	2	33	33	# 7	15'-8"	CAP	4'-0"	7'-8"		
P21(S)	14	4	4	# 7	26'-1"	CAP STIRRUPS	5'-10 ¹ / ₂ "	6'-0"		
P22(S)	14	4	4	# 7	27'-6"	CAP STIRRUPS	6'-6 ³ / ₄ "	6'-0"		
P23(S)	14	4	4	# 7	28'-1"	CAP STIRRUPS	6'-10 ¹ / ₂ "	6'-0"		
P24(S)	14	4	4	# 7	28'-9"	CAP STIRRUPS	7'-2 ¹ / ₄ "	6'-0"		
P25(S)	14	4	4	# 7	29'-4"	CAP STIRRUPS	7'-6"	6'-0"		
P26(S)	14	4	4	# 7	30'-9"	CAP STIRRUPS	8'-2 ¹ / ₄ "	6'-0"		
P27(S)	14	4	4	# 7	31'-8"	CAP STIRRUPS	8'-7 ³ / ₄ "	6'-0"		
P28(S)	14	4	4	# 7	32'-7"	CAP STIRRUPS	9'-1 ¹ / ₄ "	6'-0"		
P29(S)	14	4	4	# 7	33'-6"	CAP STIRRUPS	9'-6 ³ / ₄ "	6'-0"		
P30(S)	14	4	4	# 7	34'-5"	CAP STIRRUPS	10'-0 ¹ / ₂ "	6'-0"		
P31(S)	14	4	4	# 7	35'-4"	CAP STIRRUPS	10'-6"	6'-0"		
P32(S)	14	4	4	# 7	36'-3"	CAP STIRRUPS	10'-11 ¹ / ₂ "	6'-0"		
P33(S)	14	4	4	# 7	37'-2"	CAP STIRRUPS	11'-5"	6'-0"		
P34(S)	14	32	32	# 7	37'-8"	CAP STIRRUPS	11'-8"	6'-0"		
P40	STR.	148	148	# 8	24'-0"	COLUMN				
P41	STR.	492	492	# 8	24'-6"	COLUMN				
P42	STR.	180	180	# 9	24'-6"	COLUMN				
P43	STR.	1980	1980	# 9	25'-10"	COLUMN				
P44						NOT USED				
P45	STR.	260	260	# 9	22'-0"	COLUMN				
P46						NOT USED				
P47						NOT USED				
P48						NOT USED				
P49	5	260	260	# 9	18'-7"	COLUMN	17'-0"	1'-7"		
P50(S)	14	1184	1184	# 5	5'-8"	COLUMN	1'-2"	1'-2"		
P51(S)	30	8256	8256	# 5	2'-2"	COLUMN	1'-2"			
P52(S)	30	592	592	# 5	16'-8"	COLUMN	15'-8"			
P53(S)	31	160	160	# 5	5'-10"	COLUMN	5'-4"			
P54(S)	31	160	160	# 5	6'-10"	COLUMN	6'-4"			
P55(S)	31	160	160	# 5	7'-10"	COLUMN	7'-4"			
P56(S)	2	80	80	# 5	26'-3"	COLUMN	5'-4"	15'-7"		
P57(S)	2	80	80	# 5	28'-3"	COLUMN	6'-4"	15'-7"		
P58(S)	2	80	80	# 5	30'-3"	COLUMN	7'-4"	15'-7"		
P59(S)	31	160	160	# 5	8'-10"	COLUMN	8'-4"			
P60(S)	31	160	160	# 5	9'-10"	COLUMN	9'-4"			
P61(S)	31	160	160	# 5	10'-10"	COLUMN	10'-4"			
P62(S)	31	160	160	# 5	11'-10"	COLUMN	11'-4"			
P63(S)	31	64	64	# 5	12'-10"	COLUMN	12'-4"			
P64(S)	2	80	80	# 5	32'-3"	COLUMN	8'-4"	15'-7"		
P65(S)	2	80	80	# 5	34'-3"	COLUMN	9'-4"	15'-7"		
P66(S)	2	80	80	# 5	36'-3"	COLUMN	10'-4"	15'-7"		
P67(S)	2	80	80	# 5	38'-3"	COLUMN	11'-4"	15'-7"		
P68(S)	2	32	32	# 5	40'-3"	COLUMN	12'-4"	15'-7"		
PF74	1	74	74	# 7	37'-10"	FOOTING	34'-11"	1'-5 ¹ / ₂ "	7"	35'-6"
PF75	1	144	144	# 14	40'-11"	FOOTING	33'-8 ¹ / ₄ "	3'-7 ¹ / ₂ "	1'-9 ³ / ₄ "	35'-6"



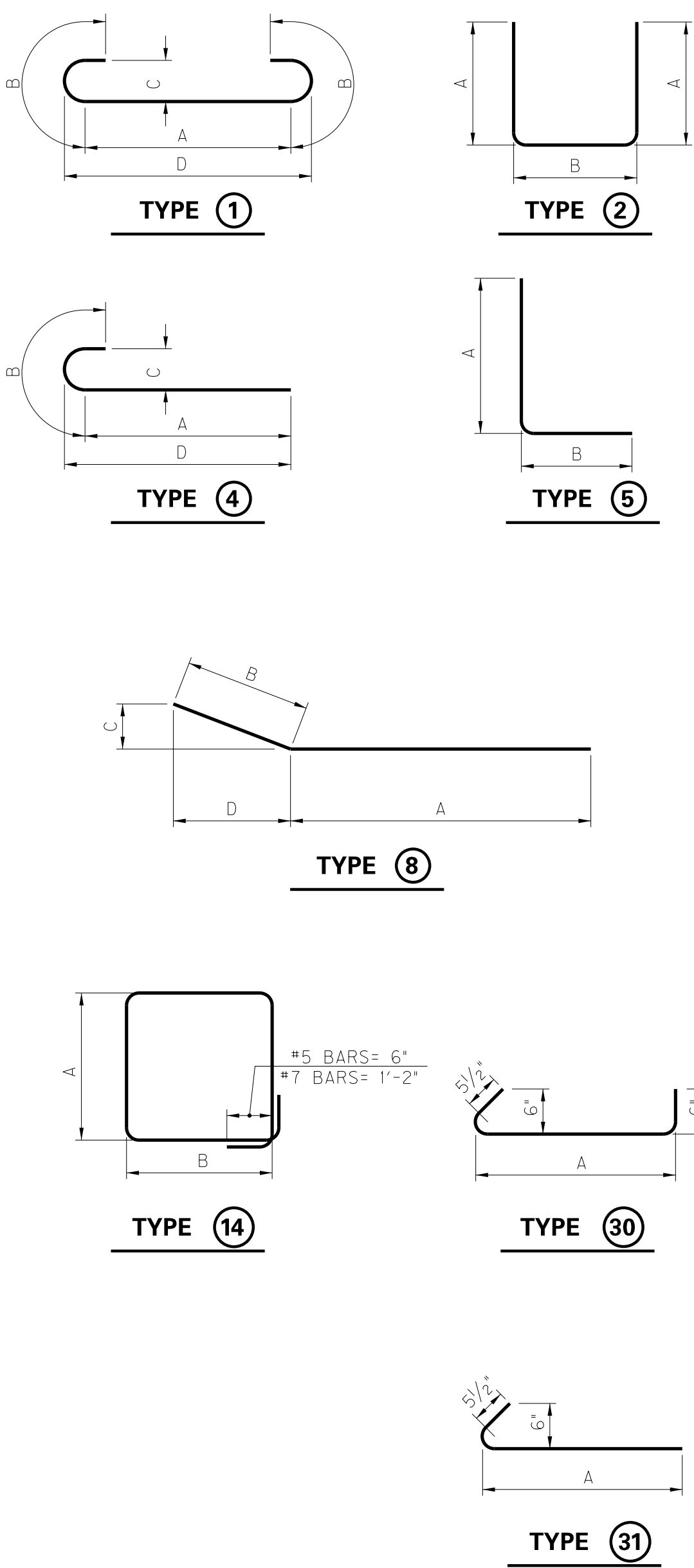
REVISION		DATE
DATE: MARCH, 2017	CHECKED BY	
DESIGNED BY: A.C. THOMAS	L. A. CARLISLE	
DETAILED BY: J. A. ROSE	A. C. THOMAS	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY PIKE		
ROUTE US 460	CROSSING POND CREEK	
<i>PIER 2 WB & EB - BILL OF REINFORCEMENT</i>		
PREPARED BY		SHEET NO. S58
<i>PALMER ENGINEERING CO.</i>		DRAWING NO. 27242

ITEM NUMBER
12-263.63

NOTE : REINFORCING BARS DESIGNATED WITH SUFFIX (E) IN PLANS SHALL BE EPOXY COATED IN ACCORDANCE WITH THE SPECIFICATIONS.

REINFORCING BARS DESIGNATED WITH THE SUFFIX (S) IN PLANS ARE STIRRUP BARS.

PIER 3										
MARK	TYPE	NUMBER		SIZE	LENGTH	LOCATION	A	B	C	D
		WB	EB							
P1	5	10	10	# 11	21'-0"	CAP	19'-0"	2'-0"		
P2	5	10	10	# 11	37'-2"	CAP	35'-2"	2'-0"		
P3	4	10	10	# 11	20'-10"	CAP	18'-4 ⁵ / ₈ "	2'-5"	1'-2 ³ / ₄ "	19'-0"
P4	4	10	10	# 11	37'-0"	CAP	34'-6 ⁵ / ₈ "	2'-5"	1'-2 ³ / ₄ "	35'-2"
P5	STR.	48	48	# 7	41'-6"	CAP				
P6	STR.	4	4	# 7	39'-10"	CAP				
P7	STR.	4	4	# 7	38'-1"	CAP				
P8	STR.	4	4	# 7	36'-3"	CAP				
P9	STR.	4	4	# 7	34'-6"	CAP				
P10	STR.	4	4	# 7	32'-8"	CAP				
P11	STR.	4	4	# 7	30'-10"	CAP				
P12	STR.	4	4	# 7	27'-3"	CAP				
P13	STR.	4	4	# 7	23'-6"	CAP				
P14	STR.	4	4	# 7	20'-0"	CAP				
P15	8	16	16	# 7	24'-5"	CAP	10'-3"	14'-2"	5'-11 ¹ / ₄ "	12'-10 ³ / ₈ "
P16	2	96	96	# 7	15'-10"	CAP	5'-0"	5'-7 ¹ / ₄ "		
P17	STR.	8	8	# 7	8'-8"	CAP				
P18	STR.	8	8	# 7	20'-8"	CAP				
P19	STR.	8	8	# 7	32'-8"	CAP				
P20	2	33	33	# 7	15'-8"	CAP	4'-0"	7'-8"		
P21(S)	14	4	4	# 7	26'-1"	CAP STIRRUPS	5'-10 ¹ / ₂ "	6'-0"		
P22(S)	14	4	4	# 7	27'-6"	CAP STIRRUPS	6'-6 ³ / ₄ "	6'-0"		
P23(S)	14	4	4	# 7	28'-1"	CAP STIRRUPS	6'-10 ¹ / ₂ "	6'-0"		
P24(S)	14	4	4	# 7	28'-9"	CAP STIRRUPS	7'-2 ¹ / ₄ "	6'-0"		
P25(S)	14	4	4	# 7	29'-4"	CAP STIRRUPS	7'-6"	6'-0"		
P26(S)	14	4	4	# 7	30'-9"	CAP STIRRUPS	8'-2 ¹ / ₄ "	6'-0"		
P27(S)	14	4	4	# 7	31'-8"	CAP STIRRUPS	8'-7 ³ / ₄ "	6'-0"		
P28(S)	14	4	4	# 7	32'-7"	CAP STIRRUPS	9'-1 ¹ / ₄ "	6'-0"		
P29(S)	14	4	4	# 7	33'-6"	CAP STIRRUPS	9'-6 ³ / ₄ "	6'-0"		
P30(S)	14	4	4	# 7	34'-5"	CAP STIRRUPS	10'-0 ¹ / ₂ "	6'-0"		
P31(S)	14	4	4	# 7	35'-4"	CAP STIRRUPS	10'-6"	6'-0"		
P32(S)	14	4	4	# 7	36'-3"	CAP STIRRUPS	10'-11 ¹ / ₂ "	6'-0"		
P33(S)	14	4	4	# 7	37'-2"	CAP STIRRUPS	11'-5"	6'-0"		
P34(S)	14	32	32	# 7	37'-8"	CAP STIRRUPS	11'-8"	6'-0"		
P40	STR.	148	148	# 8	24'-0"	COLUMN				
P41	STR.	492	492	# 8	24'-6"	COLUMN				
P42	STR.	180	180	# 9	24'-6"	COLUMN				
P43	STR.	1728	1728	# 9	25'-10"	COLUMN				
P44						NOT USED				
P45						NOT USED				
P46	STR.	252	252	# 9	27'-0"	COLUMN				
P47						NOT USED				
P48						NOT USED				
P49	5	252	252	# 9	18'-7"	COLUMN	17'-0"	1'-7"		
P50(S)	14	1124	1124	# 5	5'-8"	COLUMN	1'-2"	1'-2"		
P51(S)	30	7716	7716	# 5	2'-2"	COLUMN	1'-2"			
P52(S)	30	562	562	# 5	16'-8"	COLUMN	15'-8"			
P53(S)	31	160	160	# 5	5'-10"	COLUMN	5'-4"			
P54(S)	31	160	160	# 5	6'-10"	COLUMN	6'-4"			
P55(S)	31	160	160	# 5	7'-10"	COLUMN	7'-4"			
P56(S)	2	80	80	# 5	26'-3"	COLUMN	5'-4"	15'-7"		
P57(S)	2	80	80	# 5	28'-3"	COLUMN	6'-4"	15'-7"		
P58(S)	2	80	80	# 5	30'-3"	COLUMN	7'-4"	15'-7"		
P59(S)	31	160	160	# 5	8'-10"	COLUMN	8'-4"			
P60(S)	31	160	160	# 5	9'-10"	COLUMN	9'-4"			
P61(S)	31	160	160	# 5	10'-10"	COLUMN	10'-4"			
P62(S)	31	164	164	# 5	11'-10"	COLUMN	11'-4"			
P63(S)						NOT USED				
P64(S)	2	80	80	# 5	32'-3"	COLUMN	8'-4"	15'-7"		
P65(S)	2	80	80	# 5	34'-3"	COLUMN	9'-4"	15'-7"		
P66(S)	2	80	80	# 5	36'-3"	COLUMN	10'-4"	15'-7"		
P67(S)	2	82	82	# 5	38'-3"	COLUMN	11'-4"	15'-7"		
PF74	1	74	74	# 7	37'-10"	FOOTING	34'-11"	1'-5 ¹ / ₂ "	7"	35'-6"
PF75	1	144	144	# 14	40'-11"	FOOTING	33'-8 ¹ / ₄ "	3'-7 ¹ / ₂ "	1'-9 ³ / ₄ "	35'-6"

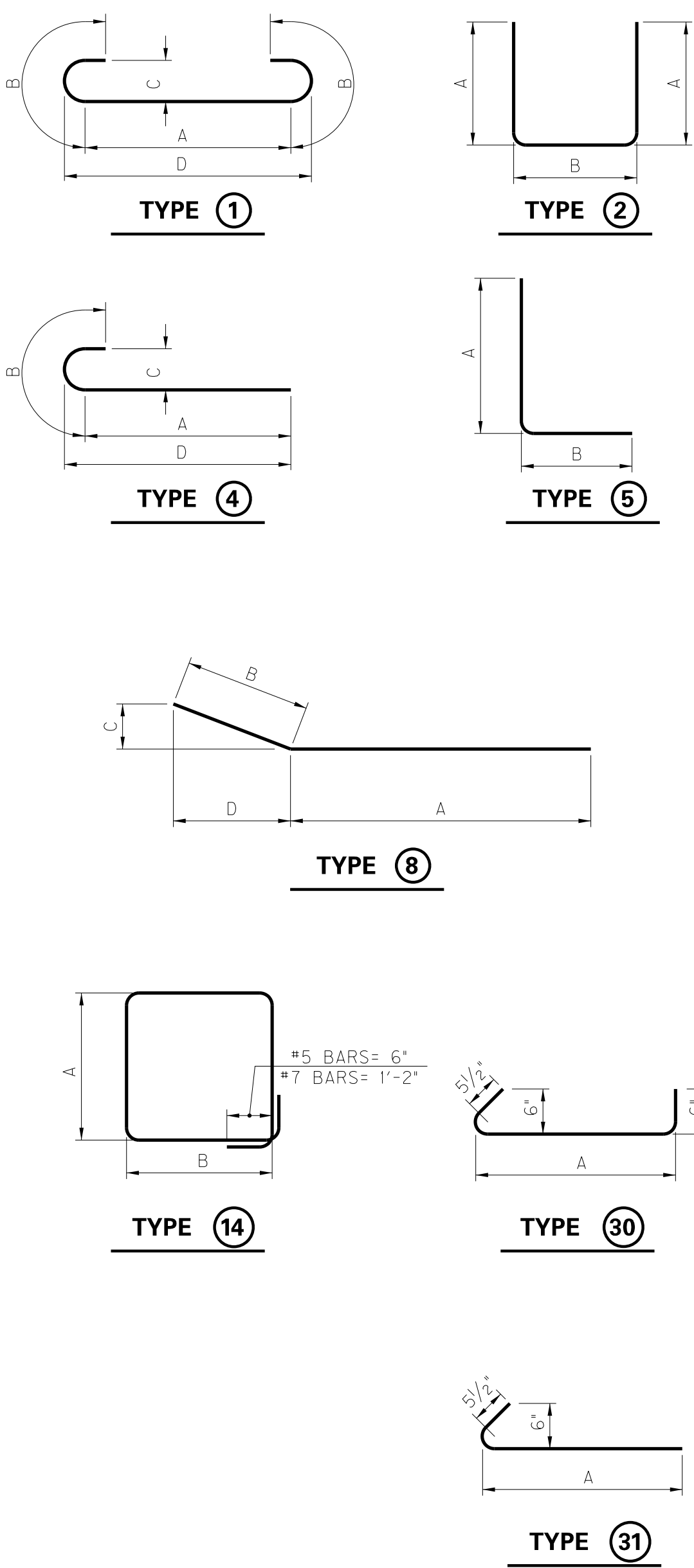


NOTE : REINFORCING BARS DESIGNATED WITH SUFFIX (E) IN PLANS SHALL BE EPOXY COATED IN ACCORDANCE WITH THE SPECIFICATIONS.

REINFORCING BARS DESIGNATED WITH THE SUFFIX (S) IN PLANS ARE STIRRUP BARS.

ITEM NUMBER	PREPARED BY	SHEET NO.
12-263.63	PALMER ENGINEERING CO.	S59
		DRAWING NO. 27242

PIER 4										
MARK	TYPE	NUMBER		SIZE	LENGTH	LOCATION	A	B	C	D
		WB	EB							
P1	5	10	10	# 11	21'-0"	CAP	19'-0"	2'-0"		
P2	5	10	10	# 11	37'-2"	CAP	35'-2"	2'-0"		
P3	4	10	10	# 11	20'-10"	CAP	18'-4 ⁵ / ₈ "	2'-5"	1'-2 ³ / ₄ "	19'-0"
P4	4	10	10	# 11	37'-0"	CAP	34'-6 ⁵ / ₈ "	2'-5"	1'-2 ³ / ₄ "	35'-2"
P5	STR.	48	48	# 7	41'-6"	CAP				
P6	STR.	4	4	# 7	39'-10"	CAP				
P7	STR.	4	4	# 7	38'-1"	CAP				
P8	STR.	4	4	# 7	36'-3"	CAP				
P9	STR.	4	4	# 7	34'-6"	CAP				
P10	STR.	4	4	# 7	32'-8"	CAP				
P11	STR.	4	4	# 7	30'-10"	CAP				
P12	STR.	4	4	# 7	27'-3"	CAP				
P13	STR.	4	4	# 7	23'-6"	CAP				
P14	STR.	4	4	# 7	20'-0"	CAP				
P15	8	16	16	# 7	24'-5"	CAP	10'-3"	14'-2"	5'-11 ¹ / ₄ "	12'-10 ³ / ₈ "
P16	2	96	96	# 7	15'-10"	CAP	5'-0"	5'-7 ¹ / ₄ "		
P17	STR.	8	8	# 7	8'-8"	CAP				
P18	STR.	8	8	# 7	20'-8"	CAP				
P19	STR.	8	8	# 7	32'-8"	CAP				
P20	2	33	33	# 7	15'-8"	CAP	4'-0"	7'-8"		
P21(S)	14	4	4	# 7	26'-1"	CAP STIRRUPS	5'-10 ¹ / ₂ "	6'-0"		
P22(S)	14	4	4	# 7	27'-6"	CAP STIRRUPS	6'-6 ³ / ₄ "	6'-0"		
P23(S)	14	4	4	# 7	28'-1"	CAP STIRRUPS	6'-10 ¹ / ₂ "	6'-0"		
P24(S)	14	4	4	# 7	28'-9"	CAP STIRRUPS	7'-2 ¹ / ₄ "	6'-0"		
P25(S)	14	4	4	# 7	29'-4"	CAP STIRRUPS	7'-6"	6'-0"		
P26(S)	14	4	4	# 7	30'-9"	CAP STIRRUPS	8'-2 ¹ / ₄ "	6'-0"		
P27(S)	14	4	4	# 7	31'-8"	CAP STIRRUPS	8'-7 ³ / ₄ "	6'-0"		
P28(S)	14	4	4	# 7	32'-7"	CAP STIRRUPS	9'-1 ¹ / ₄ "	6'-0"		
P29(S)	14	4	4	# 7	33'-6"	CAP STIRRUPS	9'-6 ³ / ₄ "	6'-0"		
P30(S)	14	4	4	# 7	34'-5"	CAP STIRRUPS	10'-0 ¹ / ₂ "	6'-0"		
P31(S)	14	4	4	# 7	35'-4"	CAP STIRRUPS	10'-6"	6'-0"		
P32(S)	14	4	4	# 7	36'-3"	CAP STIRRUPS	10'-11 ¹ / ₂ "	6'-0"		
P33(S)	14	4	4	# 7	37'-2"	CAP STIRRUPS	11'-5"	6'-0"		
P34(S)	14	32	32	# 7	37'-8"	CAP STIRRUPS	11'-8"	6'-0"		
P40	STR.	148	148	# 8	24'-0"	COLUMN				
P41	STR.	320	320	# 8	24'-6"	COLUMN				
P42	STR.	172	172	# 9	24'-6"	COLUMN				
P43						NOT USED				
P44						NOT USED				
P45						NOT USED				
P46						NOT USED				
P47	STR.	180	180	# 9	31'-9"	COLUMN				
P48	5	180	180	# 9	20'-1"	COLUMN	18"-6"	1'-7"		
P49						NOT USED				
P50(S)	14	424	424	# 5	5'-8"	COLUMN	1'-2"	1'-2"		
P51(S)	30	2304	2304	# 5	2'-2"	COLUMN	1'-2"			
P52(S)	30	212	212	# 5	16'-8"	COLUMN	15'-8"			
P53(S)	31	160	160	# 5	5'-10"	COLUMN	5'-4"			
P54(S)	31	160	160	# 5	6'-10"	COLUMN	6'-4"			
P55(S)	31	104	104	# 5	7'-10"	COLUMN	7'-4"			
P56(S)	2	80	80	# 5	26'-3"	COLUMN	5'-4"	15'-7"		
P57(S)	2	80	80	# 5	28'-3"	COLUMN	6'-4"	15'-7"		
P58(S)	2	52	52	# 5	30'-3"	COLUMN	7'-4"	15'-7"		
PF 70	1	32	32	# 7	42'-0"	FOOTING	39'-1"	1'-5 ¹ / ₂ "	7"	39'-8"
PF 71	1	64	64	# 14	44'-11"	FOOTING	37'-8 ¹ / ₄ "	3'-7 ¹ / ₂ "	1'-9 ³ / ₄ "	39'-6"
PF 72	1	40	40	# 7	34'-0"	FOOTING	31'-1"	1'-5 ¹ / ₂ "	7"	31'-8"
PF 73	1	72	72	# 14	36'-11"	FOOTING	29'-8 ¹ / ₄ "	3'-7 ¹ / ₂ "	1'-9 ³ / ₄ "	31'-6"



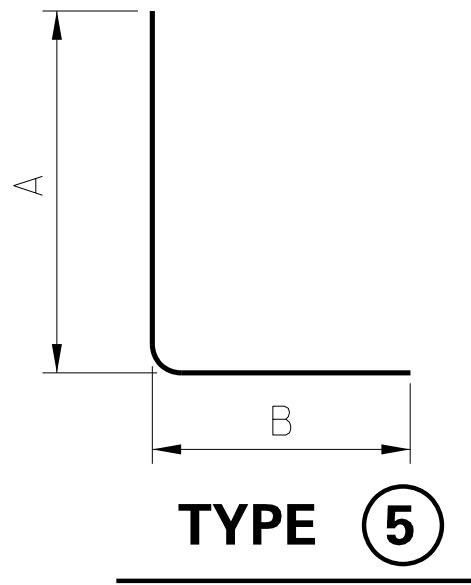
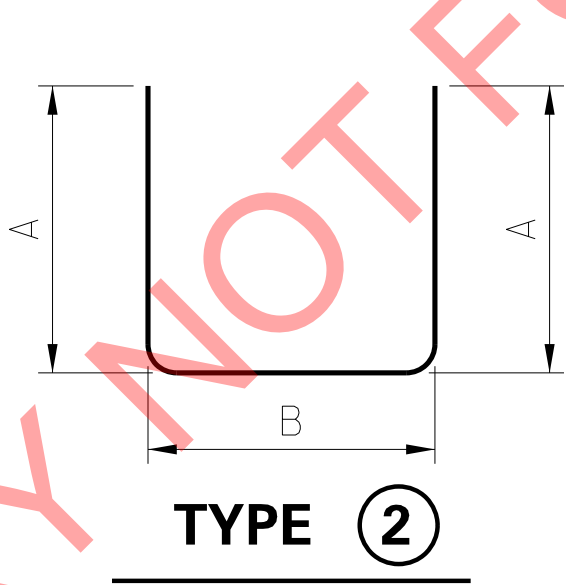
NOTE : REINFORCING BARS DESIGNATED WITH SUFFIX (E) IN PLANS SHALL BE EPOXY COATED IN ACCORDANCE WITH THE SPECIFICATIONS.

REINFORCING BARS DESIGNATED WITH THE SUFFIX (S) IN PLANS ARE STIRRUP BARS.

ITEM NUMBER	PREPARED BY	SHEET NO.
12-263.63	PALMER ENGINEERING CO.	S60
		DRAWING NO. 27242

WB SLAB BILL OF REINFORCEMENT									
MARK	TYPE	NUMBER	SIZE	LENGTH	LOCATION	A	B	C	D
S1(E)	STR.	2405	# 6	44'-8"	TOP SLAB TRANS.				
S2(E)	STR.	2405	# 5	44'-8"	BOTT. SLAB TRANS.				
S3(E)	STR.	1989	# 5	60'-0"	SLAB LONG.				
S4(E)	STR.	117	# 5	40'-0"	SLAB LONG.				
S5(E)	STR.	270	# 6	57'-8"	SLAB NEG. MOMENT				
S6(E)	STR.	450	# 6	43'-1"	SLAB NEG. MOMENT				
DD1(E)	STR.	36	# 6	5'-0"	DECK DRAIN				
DD2(E)	STR.	24	# 6	4'-1"	DECK DRAIN				

WB END ABUTMENT DIAPHRAGM BILL OF REINFORCEMENT									
MARK	TYPE	NUMBER	SIZE	LENGTH	LOCATION	A	B	C	D
D1(E)	2	56	# 5	17'-4"	2~END ABUT. DIAPH.	7'-6"	2'-4"		
D2(E)	2	16	# 5	14'-4"	2~END ABUT. DIAPH.	6'-0"	2'-4"		
D3(E)	5	144	# 5	6'-8"	2~END ABUT. DIAPH.	3'-4"	3'-4"		
D4(E)	2	40	# 5	9'-0"	2~END ABUT. DIAPH.	3'-0"	3'-0"		
D5(E)	STR.	16	# 5	7'-2"	2~END ABUT. DIAPH.				
D6(E)	STR.	8	# 5	20'-8"	2~END ABUT. DIAPH.				
D7(E)	STR.	28	# 5	41'-8"	2~END ABUT. DIAPH.				



EB SLAB BILL OF REINFORCEMENT									
MARK	TYPE	NUMBER	SIZE	LENGTH	LOCATION	A	B	C	D
S1(E)	STR.	2405	# 6	44'-8"	TOP SLAB TRANS.				
S2(E)	STR.	2405	# 5	44'-8"	BOTT. SLAB TRANS.				
S3(E)	STR.	1989	# 5	60'-0"	SLAB LONG.				
S4(E)	STR.	117	# 5	40'-0"	SLAB LONG.				
S5(E)	STR.	270	# 6	57'-8"	SLAB NEG. MOMENT				
S6(E)	STR.	450	# 6	43'-1"	SLAB NEG. MOMENT				
DD1(E)	STR.	36	# 6	5'-0"	DECK DRAIN				
DD2(E)	STR.	24	# 6	4'-1"	DECK DRAIN				

EB END ABUTMENT DIAPHRAGM BILL OF REINFORCEMENT									
MARK	TYPE	NUMBER	SIZE	LENGTH	LOCATION	A	B	C	D
D1(E)	2	56	# 5	17'-4"	2~END ABUT. DIAPH.	7'-6"	2'-4"		
D2(E)	2	16	# 5	14'-4"	2~END ABUT. DIAPH.	6'-0"	2'-4"		
D3(E)	5	144	# 5	6'-8"	2~END ABUT. DIAPH.	3'-4"	3'-4"		
D4(E)	2	40	# 5	9'-0"	2~END ABUT. DIAPH.	3'-0"	3'-0"		
D5(E)	STR.	16	# 5	7'-2"	2~END ABUT. DIAPH.				
D6(E)	STR.	8	# 5	20'-8"	2~END ABUT. DIAPH.				
D7(E)	STR.	28	# 5	41'-8"	2~END ABUT. DIAPH.				

NOTE : REINFORCING BARS DESIGNATED WITH SUFFIX (E) IN PLANS SHALL BE EPOXY COATED IN ACCORDANCE WITH THE SPECIFICATIONS.

REINFORCING BARS DESIGNATED WITH THE SUFFIX (S) IN PLANS ARE STIRRUP BARS.

REVISION

DATE

DATE: MARCH, 2017

CHECKED BY

DESIGNED BY: A.C. THOMAS

C.M. GREENWELL

DETAILED BY: J.A. ROSE

A.C. THOMAS

Commonwealth of Kentucky

DEPARTMENT OF HIGHWAYS

COUNTY

PIKE

ROUTE

US 460

CROSSING

POND CREEK

SUPERSTRUCTURE – BILL OF REINFORCEMENT

PREPARED BY

PALMER ENGINEERING CO.

SHEET NO.

S61

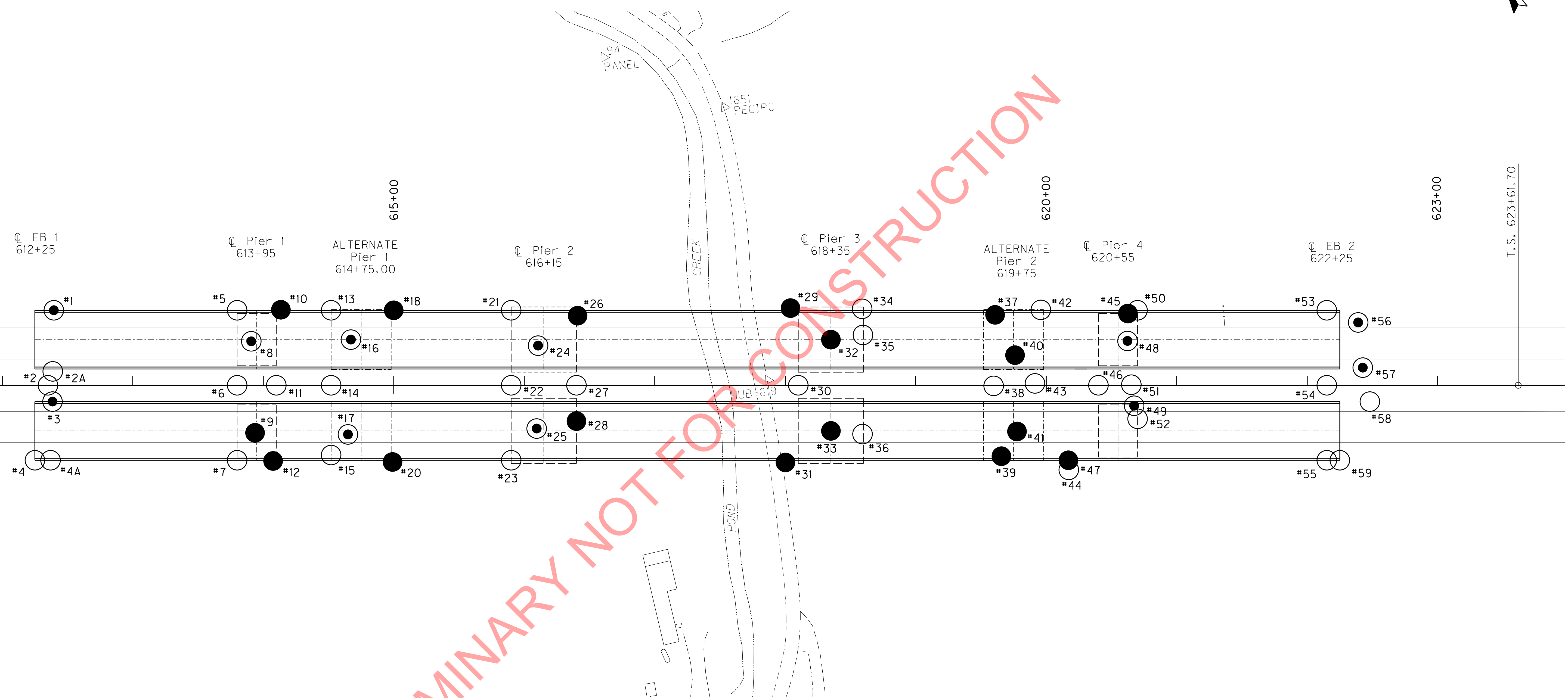
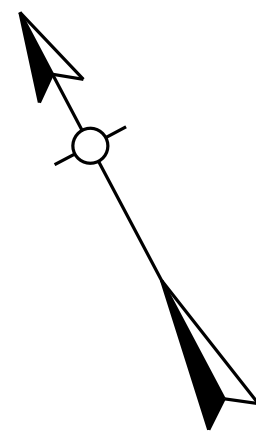
DRAWING NO.

27242

ITEM NUMBER
12-263.63

SUBSURFACE DATA

Plan Scale 1" = 40'



FILE NAME: J:\KDOT\US460-56\STRUCT\POND CREEK FINAL PLANS\DON\POND_FINAL_BORDER.DGN
3/30/2017 7:43:17 AM

USER: jeff-r
DATE PLOTTED: July 27, 2011

E-SHEET NAME:

MicroStation v8.11.9.536

SA-016-12

ITEM NUMBER

12-263.63

SHEET 1 OF 10

DATE:	02-APRIL-2012	CHECKED BY:	
DESIGNED BY:			
DETAILED BY:	R. BAILEY	D. GREER	

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
PIKE

ROUTE	CROSSING
US 460	Bridge over Pond Creek

SUBSURFACE DATA

PREPARED BY
Division of Materials

GEOTECHNICAL BRANCH

SHEET NO.

S62

DRAWING NO.

27242

SUBSURFACE DATA

END BENT ONE

APPROXIMATE ROADWAY GRADE ELEV. = 1173.76

Profile Scale:
Vertical 1" = 10'
Horizontal not to scale

Hole No.
Station
Offset
Elev.
(Sea level
datum)

1
612+39.50
57.50 ft. Lt.
1172.80

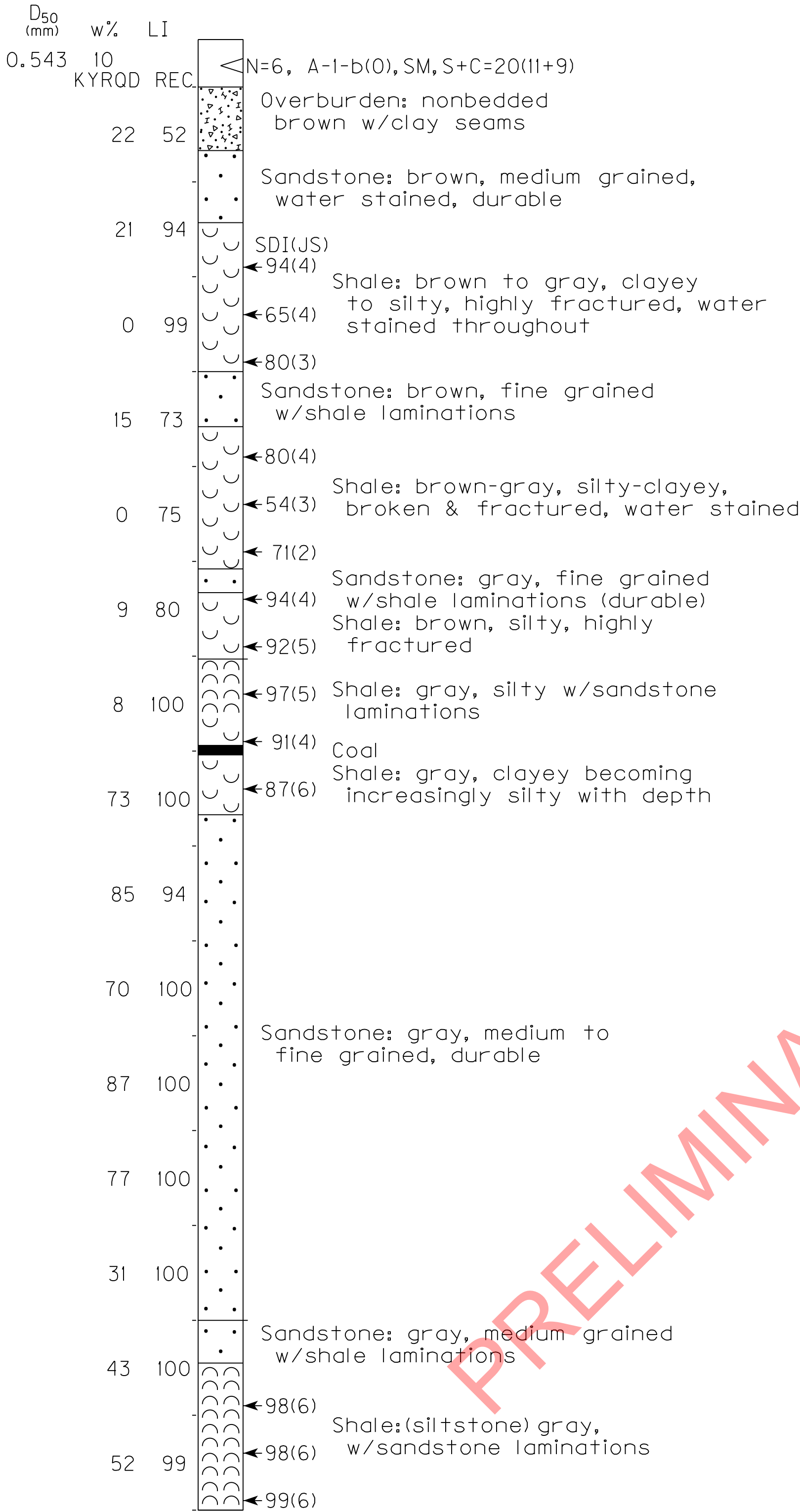
2A
612+38.67
2.66 ft. Lt.
1169.29

2
612+35.00
0
1169.20

3
612+38.50
12.50 ft. Rt.
1171.00

4
612+25.00
57.50 ft. Rt.
1179.47
ROD
SOUNDING

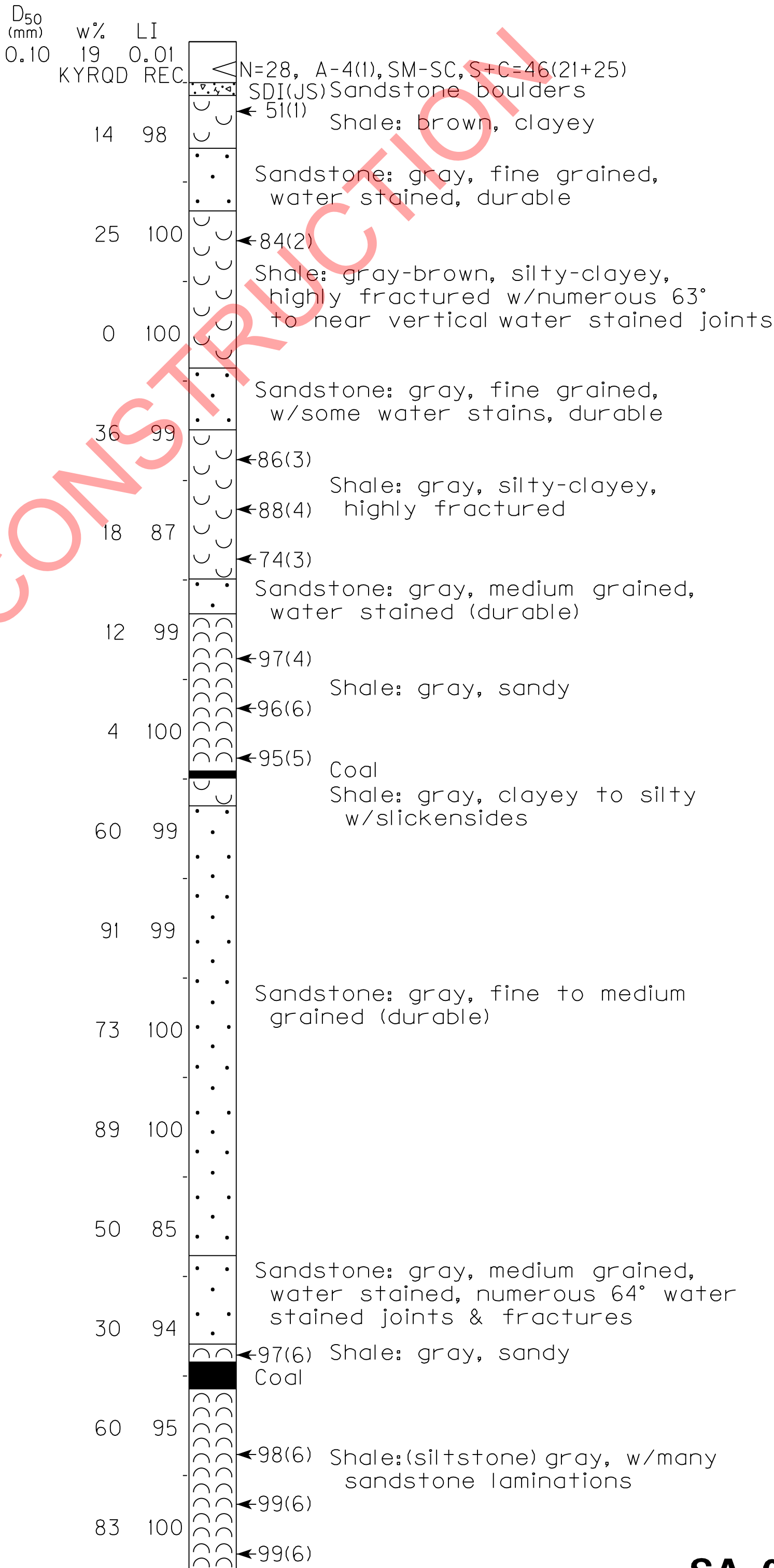
4A
612+37.00
57.50 ft. Rt.
1166.70



Top of rock elev.= 1161.10
Base of weathered rock elev.= 1160.80

R
(1165.79)

R
(1165.70)



Top of rock elev.= 1165.60
Base of weathered rock elev.= 1159.30

R
(1178.00)

R
(1163.70)

DATE: 02-APRIL-2012
DESIGNED BY:
CHECKED BY:
DETAILED BY: R. BAILEY D. GREER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY

PIKE

ROUTE CROSSING
US 460 Bridge over Pond Creek

SUBSURFACE DATA

PREPARED BY
Division of Materials

GEOTECHNICAL BRANCH

SHEET NO.
S63

DRAWING NO.
27242

SA-016-12

ITEM NUMBER

12-263.63

The Presumptive Factored Bearing Resistance at the Service Limit State is
24 ksf for Spread Footings on Competent Unweathered Bedrock

SHEET 2 OF 10

SUBSURFACE DATA
PIER ONE

Profile Scale:
Vertical 1" = 10'
Horizontal not to scale

Hole No.
Station
Offset
Elev.
(Sea level
datum)

5
613+80.00
57.50 ft. Lt.
1066.40
ROD
SOUNDING

6
613+80.00
0
1066.10
ROD
SOUNDING

7
613+80.00
57.50 ft. Rt.
1065.40
ROD
SOUNDING

8
613+90.81
33.77 ft. Lt.
1055.12

9
613+93.70
36.44 ft. Rt.
1055.04

R
(1066.20)

R
(1064.60)

R
(1061.40)

D₅₀
(mm)

w% LI

0.179 13 -0.77
0.131 15 -0.75
KYRQD REC

N=5, A=4(0), SM=SC, S+C=41(25+16)
A=4(0), SM=SC, S+C=44(26+18)

34 100 Sandstone: brown, medium
grained (durable)

8 93 Sandstone: gray, medium
grained (durable)

17 100 Coal Shale: gray, clayey
SDI(JS)Shale: gray, sandy, broken
←96(6) & fractured, water stained
throughout

64 100 Sandstone: gray, fine grained
w/shale laminations (durable)

←96(4)

←95(5)

69 97 Shale:(siltstone) gray

←92(6)

91 100

88 100 Sandstone: gray, medium
grained (durable)

80 100

Sandstone: gray, medium
grained w/coal spars (durable)

←98(6)

Shale:(siltstone) gray

←98(6)

90 100

←98(5)

Top of rock elev.= 1050.22

Base of weathered rock elev.= 1048.22

KYRQD REC

42 92

Cored Overburden

64 100 Sandstone: brown to gray,
medium to fine grained,
w/water stains (durable)

19 93 Sandstone: gray, silty w/shale
laminations (durable)

SDI(JS)Shale: gray, silty w/sandstone
←99(6) laminations

←95(5) Shale: gray, clayey to sandy

5 100 ←95(4) Shale: brown, sandy, broken,
water stained throughout
←94(4) w/78" to near vertical joints

14 86 Shale:(siltstone) gray, w/sandstone
←92(6) laminations

70 96 Sandstone: gray, fine grained (durable)
0.8' coal w/shale partings
Sandstone: gray, fine to medium
grained (durable)

99 100

100 100 Sandstone: fine to medium
grained (durable)

87 100

←96(6)

73 100 ←97(6)

←97(6) Shale:(siltstone) gray

68 100

←99(6)

Top of rock elev.= 1054.60

Base of weathered rock elev.= 1054.00

Datum

The Presumptive Factored Bearing Resistance at the Service Limit State is
16 ksf for Spread Footings on Competent Unweathered Bedrock

DATE:	02-APRIL-2012	CHECKED BY:	
DESIGNED BY:			
DETAILED BY:	R. BAILEY	D. GREER	

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY

PIKE

ROUTE	CROSSING
US 460	Bridge over Pond Creek

SUBSURFACE DATA

PREPARED BY	SHEET NO.
Division of Materials	S64
GEOTECHNICAL BRANCH	DRAWING NO.
	27242

SA-016-12

ITEM NUMBER

12-263.63

SHEET 3 OF 10

SUBSURFACE DATA
PIER ONE

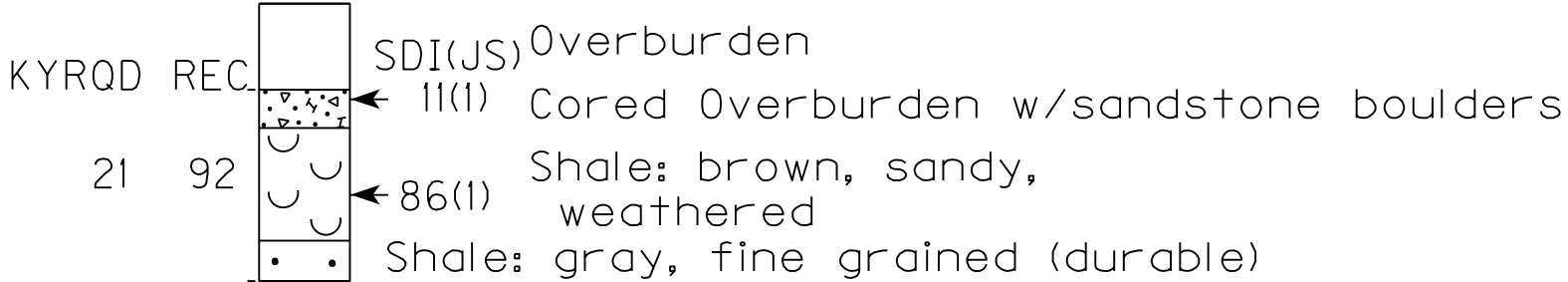
Profile Scale:
Vertical 1" = 10'
Horizontal not to scale

Hole No.
Station
Offset
Elev.
(Sea level
datum)

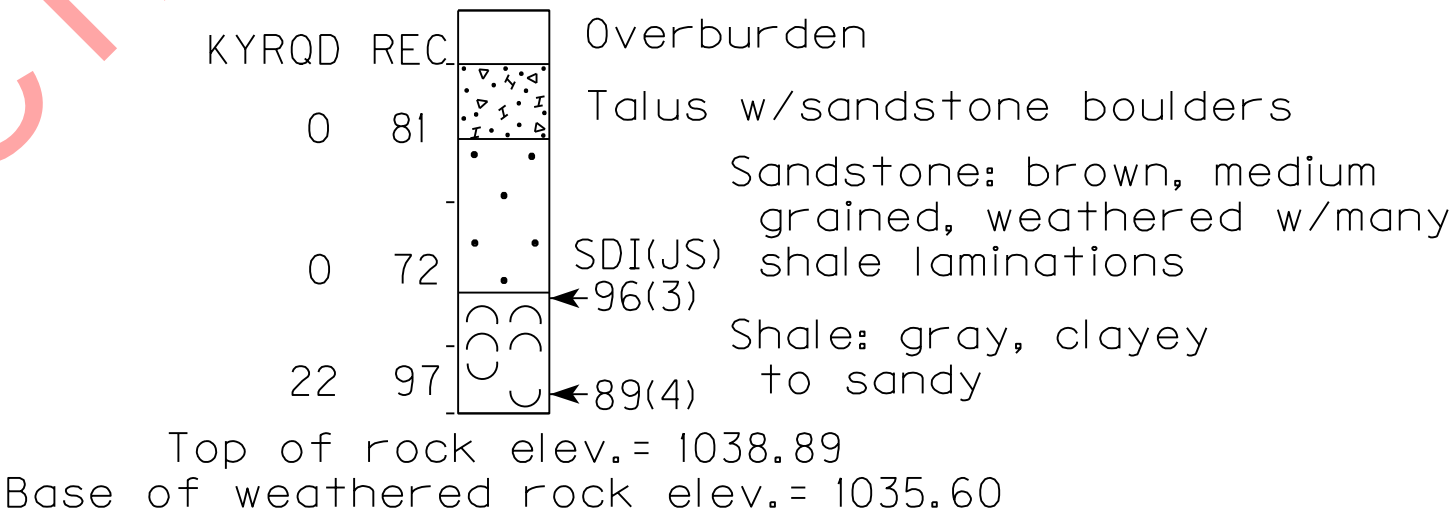
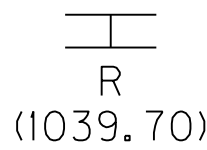
10
614+13.50
57.90 ft. Lt.
1036.63

11
614+10.00
0
1041.40
ROD
SOUNDING

12
614+07.53
58.05 ft. Rt.
1045.59



Top of rock elev.= 1030.13
Base of weathered rock elev.= 1024.23



PRELIMINARY NOT FOR CONSTRUCTION

The Presumptive Factored Bearing Resistance at the Service Limit State is
16 ksf for Spread Footings on Competent Unweathered Bedrock

DATE:	02-APRIL-2012	CHECKED BY:	
DESIGNED BY:			
DETAILED BY:	R. BAILEY	D. GREER	

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
PIKE

ROUTE	CROSSING
US 460	Bridge over Pond Creek

SUBSURFACE DATA

PREPARED BY
Division of Materials

GEOTECHNICAL BRANCH

SHEET NO.
S65

DRAWING NO.
27242

SA-016-12

ITEM NUMBER

12-263.63

SHEET 4 OF 10

SUBSURFACE DATA
ALTERNATE PIER ONE

Profile Scale:
Vertical 1" = 10'
Horizontal not to scale

Hole No.
Station
Offset
Elev.
(Sea level
datum)

13
614+52.00
57.50 ft. Lt.
1011.60
ROD
SOUNDING

14
614+52.00
0
1012.30
ROD
SOUNDING

15
614+52.00
53.50 ft. Rt.
1015.40
ROD
SOUNDING

16
614+67.15
35.10 ft. Lt.
996.76

17
614+64.90
37.68 ft. Rt.
1003.92

18
614+99.95
57.52 ft. Lt.
975.72

20
614+99.06
58.81 ft. Rt.
981.08

R
(1011.10)

R
(1011.80)

R
(1012.70)

KYRQD REC. N=50/0

0 98

76 100

53 100

42 100

33 100

41 100

52 100

42 100

57 100

89 100

69 100

11 100

41 100

81 100

63 100

Sandstone: gray, medium
grained w/intermittent
water stains (durable)

SDI(JS)

98(4)

97(4)

98(5)

98(5)

98(6)

98(4)

92(4)

95(4)

Shale: gray, silty to
sandy w/sandstone
laminations

Sandstone: gray, fine to
medium grained w/shale
laminations, intermittent
water stains (durable)

Shale: gray, silty

Shale: gray, sandy to
silty

Coal seam

Shale: gray, silty

Sandstone: gray, medium
grained w/shale
laminations (durable)

Top of rock elev.= 994.50
Base of weathered rock elev.= 993.20

KYRQD REC. N=50/0

78 100

86 100

64 100

52 100

19 90

59 100

46 93

66 100

69 100

93 100

62 100

19 99

43 99

84 100

Sandstone: gray, medium
grained w/water stains
(durable)

SDI(JS)

97(6)

98(5)

98(6)

97(6)

97(6)

99(5)

94(5)

93(4)

98(6)

Shale: gray, w/sandstone
laminations

Sandstone: gray, fine grained
w/shale laminations (durable)

Sandstone: gray, medium grained
(durable)

Shale: (siltstone) gray

Shale: gray, silty

Shale: gray, w/sandstone
laminations

Shale: gray, sandy

Sandstone: gray, medium grained
w/coal spars (durable)

Top of rock elev.= 1001.22
No weathered rock

KYRQD REC.

0 54

0 86

16 100

Overburden

Talus w/sandstone
boulders

SDI(JS) Shale: brown, broken
& fractured, 72°
water stained joints
throughout

92(3) Shale: gray, silty
to sandy

97(5) Shale: gray, silty
to sandy

Top of rock elev.= 966.30
Base of weathered rock elev.= 957.70

KYRQD REC.

12 100

48 100

Overburden

SDI(JS) Talus

89(3) Shale: brown, sandy,
weathered

95(6) Shale: gray, silty

99(5) w/sandstone laminations

Top of rock elev.= 971.78
Base of weathered rock elev.= 966.58

SA-016-12

ITEM NUMBER

12-263.63

DATE: 02-APRIL-2012
DESIGNED BY:
CHECKED BY:
DETAILED BY: R. BAILEY D. GREER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY

PIKE

ROUTE CROSSING
US 460 Bridge over Pond Creek

SUBSURFACE DATA

PREPARED BY
Division of Materials

GEOTECHNICAL BRANCH

SHEET NO.
S66

DRAWING NO.
27242

SHEET 5 OF 10

SUBSURFACE DATA
PIER TWO

Profile Scale:
Vertical 1" = 10'
Horizontal not to scale

Hole No.
Station
Offset
Elev.
(Sea level
datum)

21
615+90.00
57.50 ft. Lt.
908.50

22
615+90.00
0
914.80

23
615+90.00
57.50 ft. Rt.
922.00

24
616+10.60
30.39 ft. Lt.
895.10

25
616+09.52
33.18 ft. Rt.
905.11

26
616+40.88
53.33 ft. Lt.
877.46

27
616+40.92
3.80 ft. Rt.
883.05

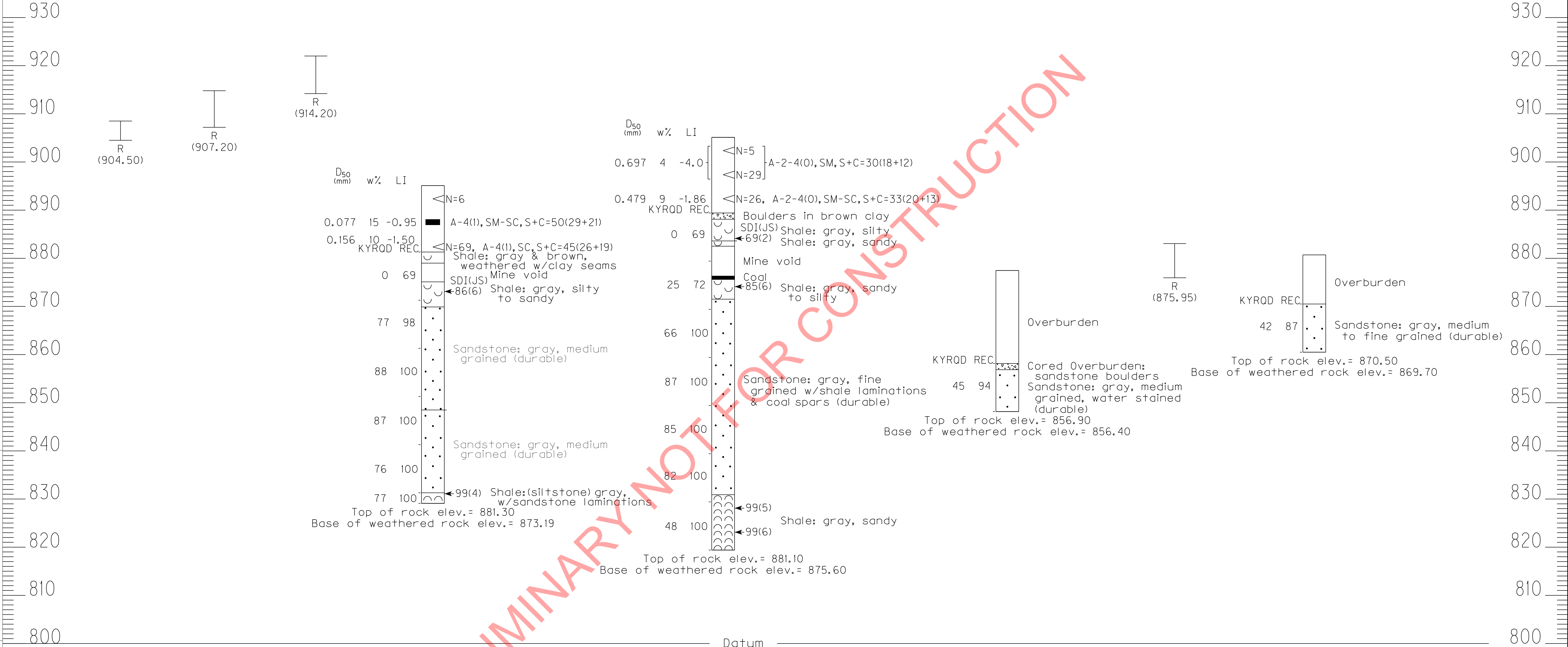
28
616+40.00
27.50 ft. Rt.
880.70

FILE NAME: J:\KDOT\US460-56\STRUCT\POND CREEK FINAL PLANS\KDOT\POND_FINAL_BORDER.DGN
3/30/2017 7:43:21 AM

USER: jeff-r
DATE PLOTTED: July 27, 2011

E-SHEET NAME:

MicroStation v8.11.9.536



The Presumptive Factored Bearing Resistance at the Service Limit State is
30 ksf for Spread Footings on Competent Unweathered Bedrock

DATE:	02-APRIL-2012	CHECKED BY:	
DESIGNED BY:			
DETAILED BY:	R. BAILEY	D. GREER	

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
PIKE

ROUTE	CROSSING
US 460	Bridge over Pond Creek

SUBSURFACE DATA

PREPARED BY
Division of Materials

GEOTECHNICAL BRANCH

SHEET NO.
S67

DRAWING NO.
27242

SA-016-12

ITEM NUMBER

12-263.63

SHEET 6 OF 10

SUBSURFACE DATA
PIER THREE

Profile Scale:
Vertical 1" = 10'
Horizontal not to scale

Hole No.
Station
Offset
Elev.
(Sea level
datum)

29
618+04.05
59.15 ft. Lt.
894.67

30
618+10.00
C
895.50
ROD
SOUNDING

31
618+00.17
59.19 ft. Rt.
878.99

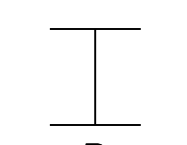
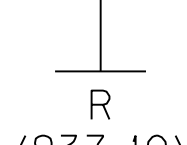
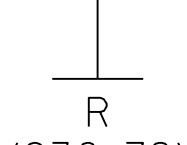
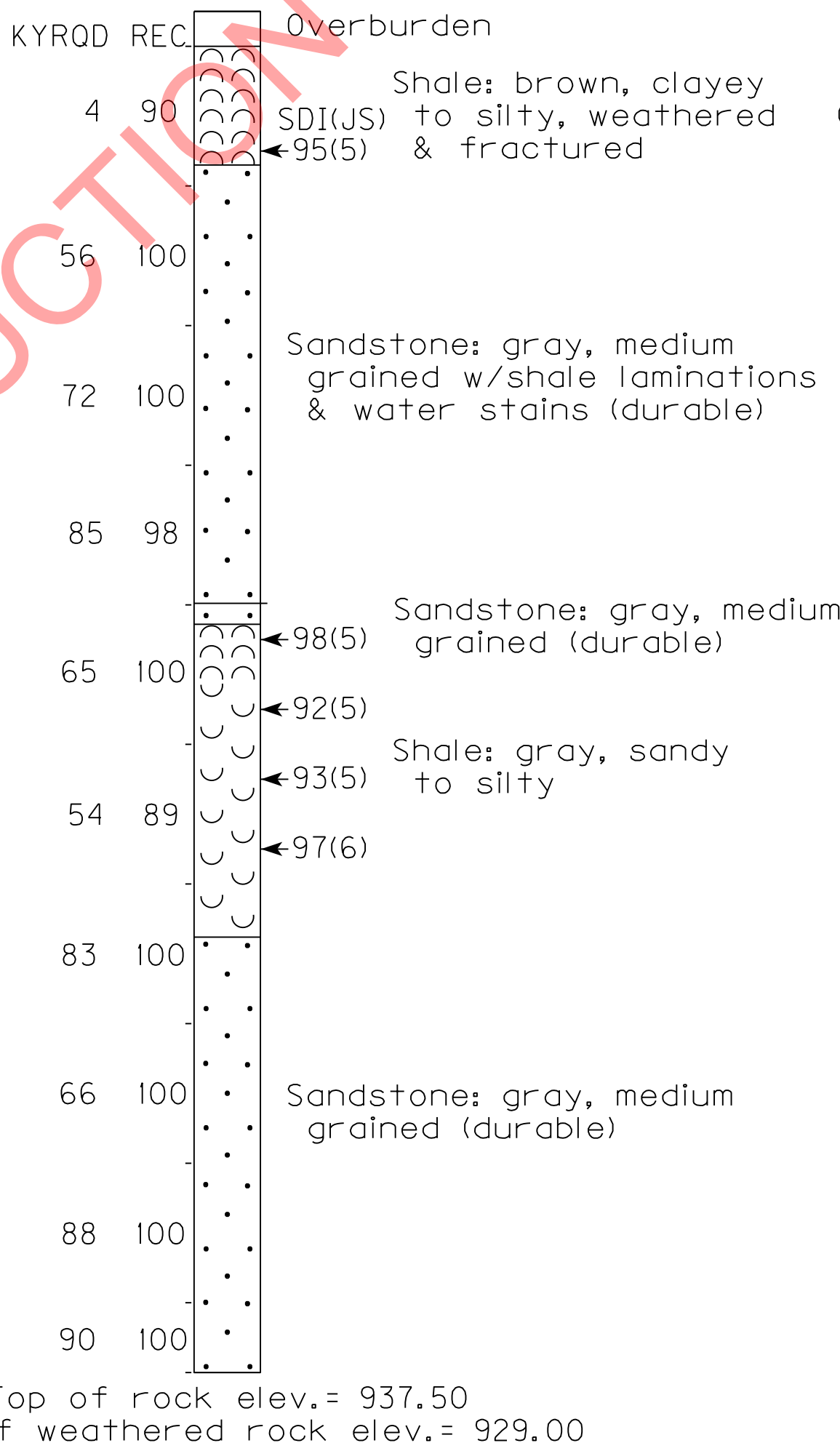
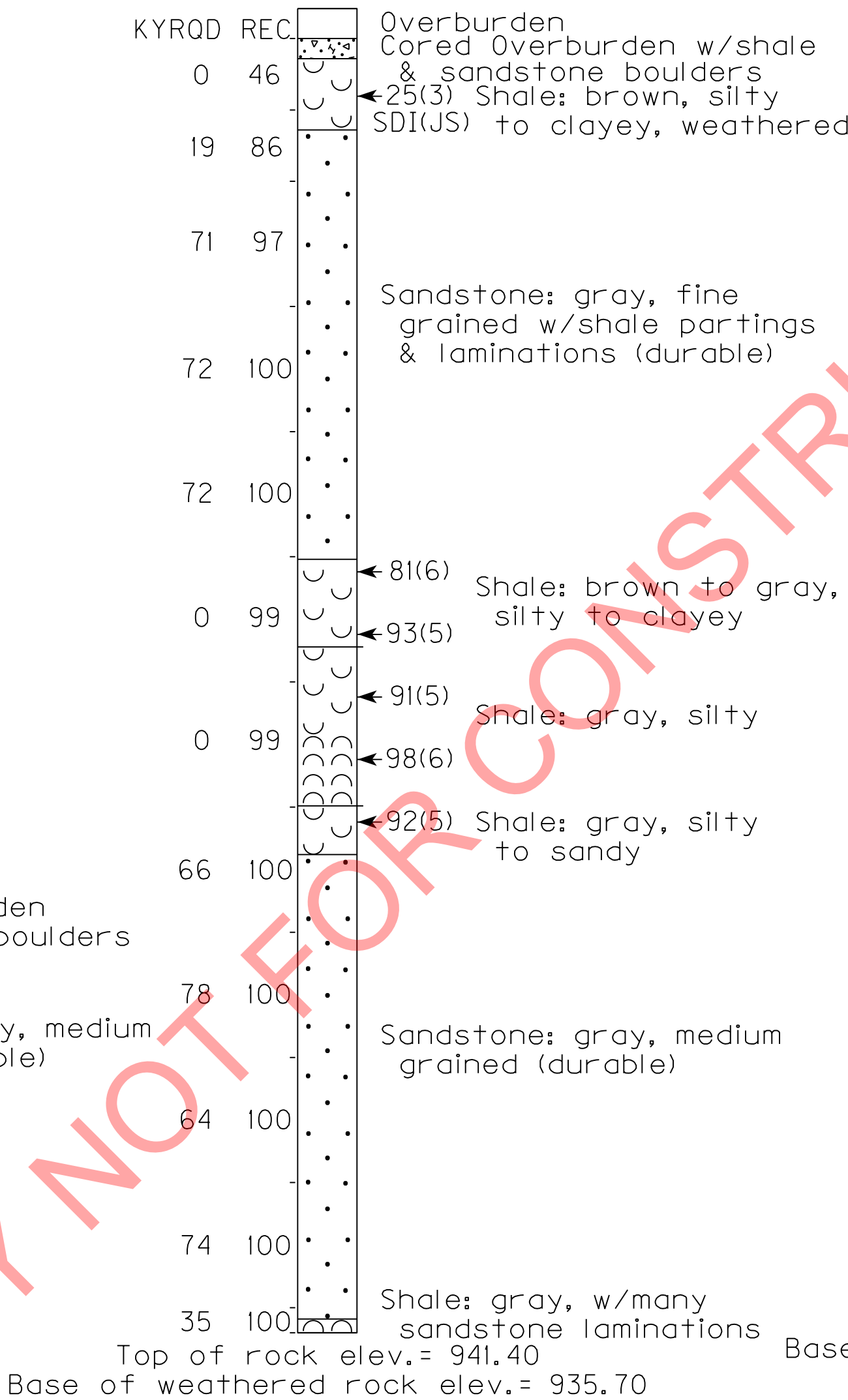
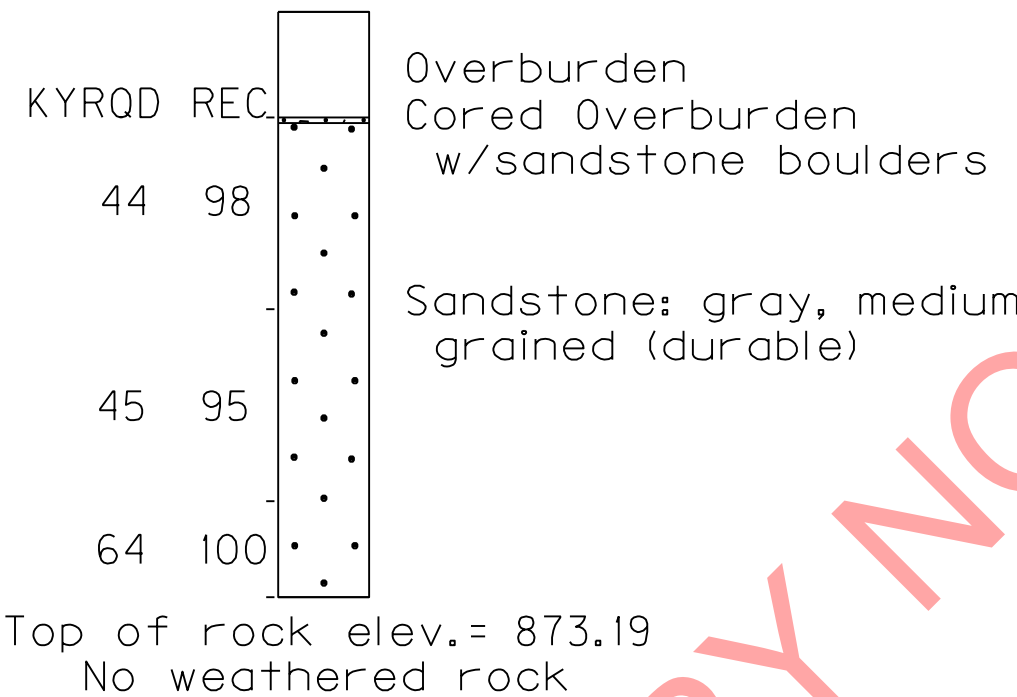
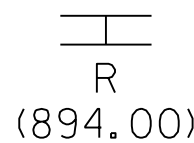
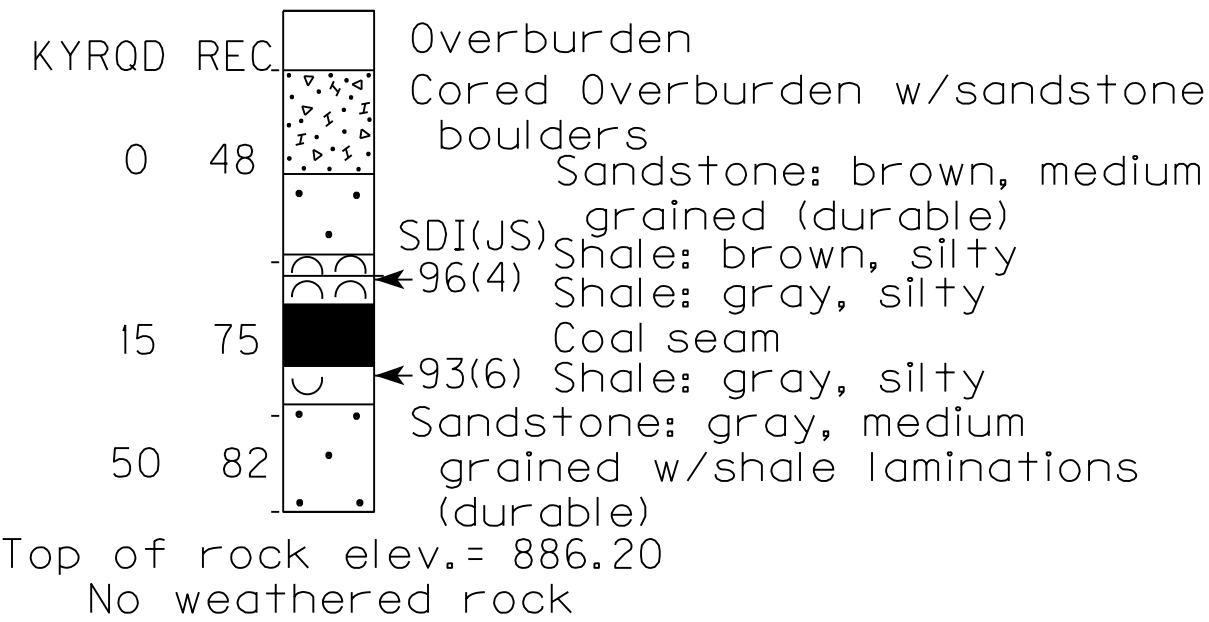
32
618+35.00
35.00 ft. Lt.
945.40

33
618+35.00
35.00 ft. Rt.
940.00

34
618+58.98
58.61 ft. Lt.
940.92

35
618+59.56
38.56 ft. Lt.
941.10
ROD
SOUNDING

36
618+59.24
37.43 ft. Rt.
939.31



The Presumptive Factored Bearing Resistance at the Service Limit State is
30 ksf for Spread Footings on Competent Unweathered Bedrock

DATE:	02-APRIL-2012	CHECKED BY:
DESIGNED BY:		
DETAILED BY:	R. BAILEY	D. GREER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
PIKE

ROUTE	CROSSING
US 460	Bridge over Pond Creek

SUBSURFACE DATA

PREPARED BY
Division of Materials

GEOTECHNICAL BRANCH

SHEET NO.
S68

DRAWING NO.
27242

SA-016-12

ITEM NUMBER

12-263.63

SHEET 7 OF 10

SUBSURFACE DATA
ALTERNATE PIER TWO

Profile Scale:
Vertical 1" = 10'
Horizontal not to scale

Hole No.
Station
Offset
Elev.
(Sea level
datum)

37
619+60.85
53.98 ft. Lt.
1017.16

38
619+59.74
0.46 ft. Rt.
1016.49

39
619+65.65
54.39 ft. Rt.
1012.34

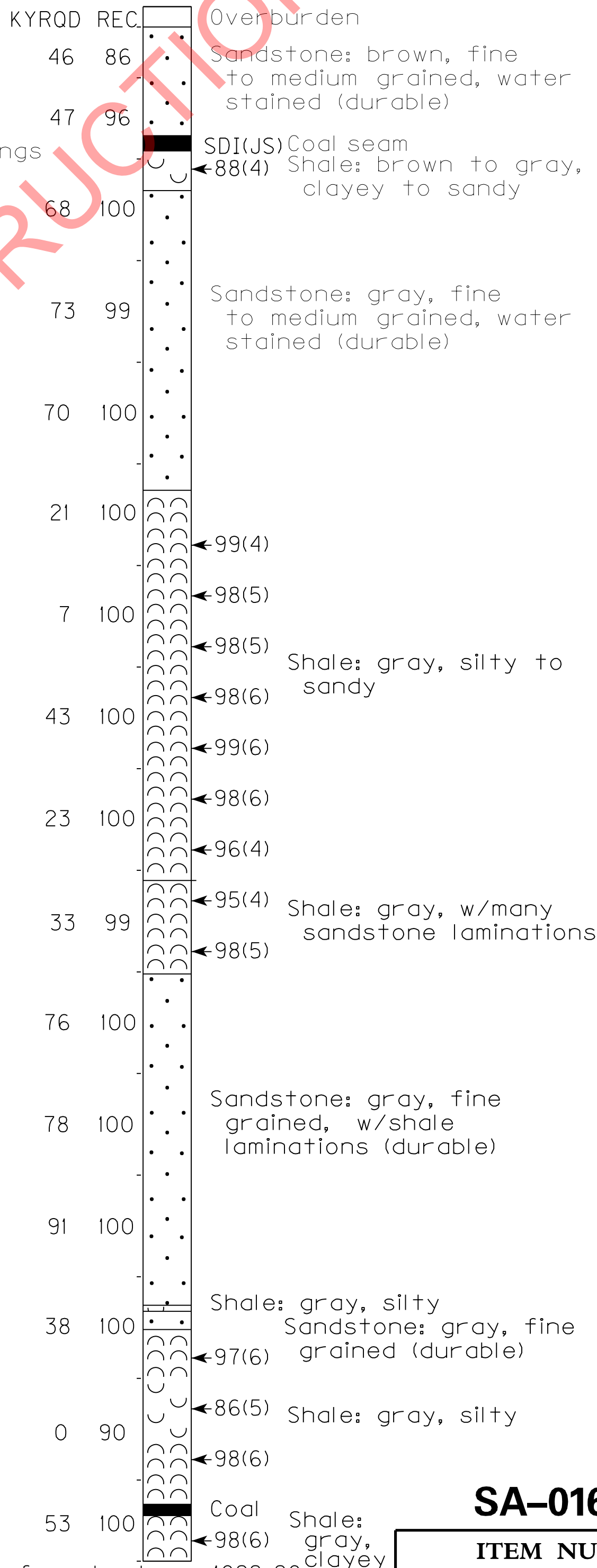
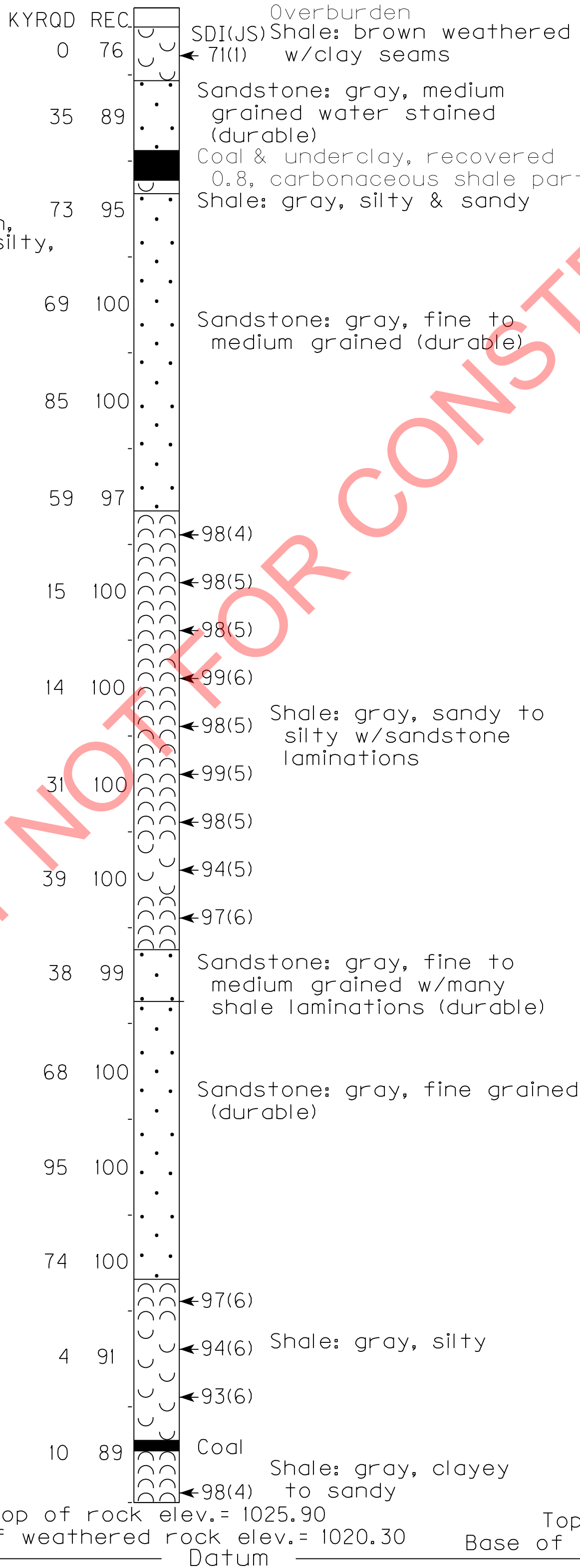
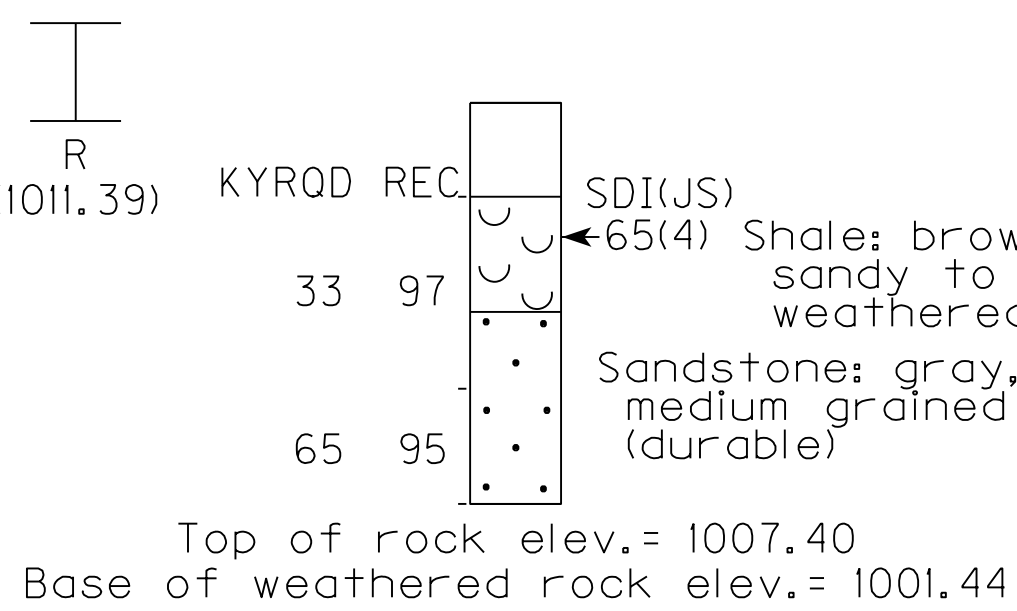
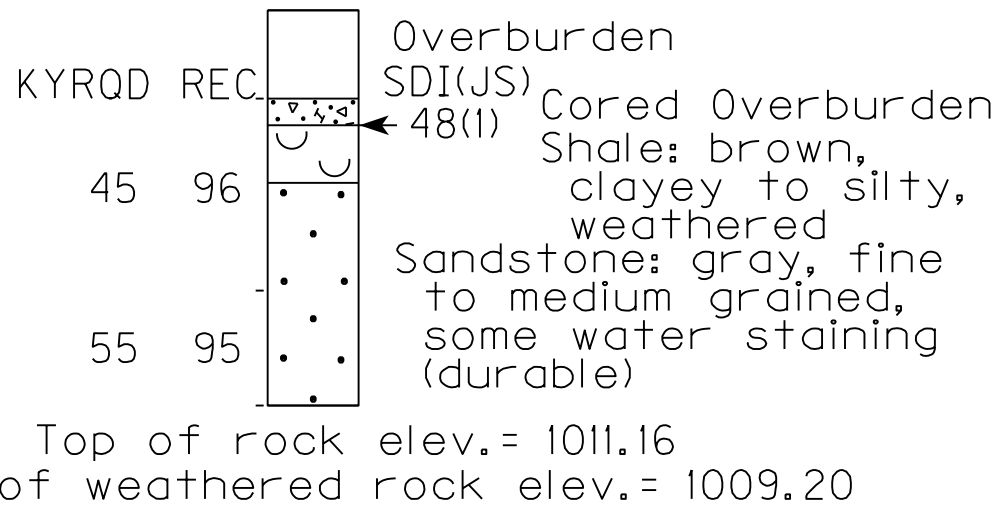
40
619+76.10
23.08 ft. Lt.
1027.87

41
619+77.60
35.41 ft. Rt.
1024.23

42
619+95.89
57.80 ft. Lt.
1039.47

43
619+91.93
1.41 ft. Lt.
1036.86

44
620+17.31
64.85 ft. Rt.
1033.70
ROD
SOUNDING



SA-016-12

ITEM NUMBER

12-263.63

DATE: 02-APRIL-2012	CHECKED BY:
DESIGNED BY:	
DETAILED BY: R. BAILEY	D. GREER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY
PIKE

ROUTE US 460	CROSSING Bridge over Pond Creek
-----------------	------------------------------------

SUBSURFACE DATA

PREPARED BY
Division of Materials

GEOTECHNICAL BRANCH

SHEET NO.
S69

DRAWING NO.
27242

FILE NAME: J:\KDOT\US460-56\STRUCT\POD CREEK FINAL PLANS\KDOT\FINAL_BORDER.DGN
USER: jeffr
DATE PLOTTED: July 27, 2011
E-SHEET NAME:
MicroStation v8.11.9.536

3/30/2017 7:43:23 AM

PRELIMINARY NOT FOR CONSTRUCTION

SUBSURFACE DATA
PIER FOUR

Profile Scale:
Vertical 1" = 10'
Horizontal not to scale

Hole No.
Station
Offset
Elev.
(Sea level
datum)

45
620+62.63
55.01 ft. Lt.
1090.36

46
620+40.00
C
1077.90
ROD
SOUNDING

47
620+17.00
57.50 ft. Rt.
1044.10

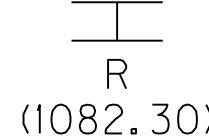
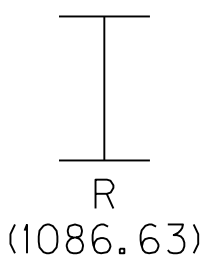
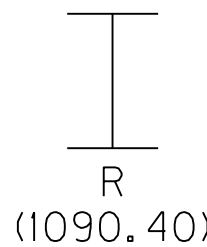
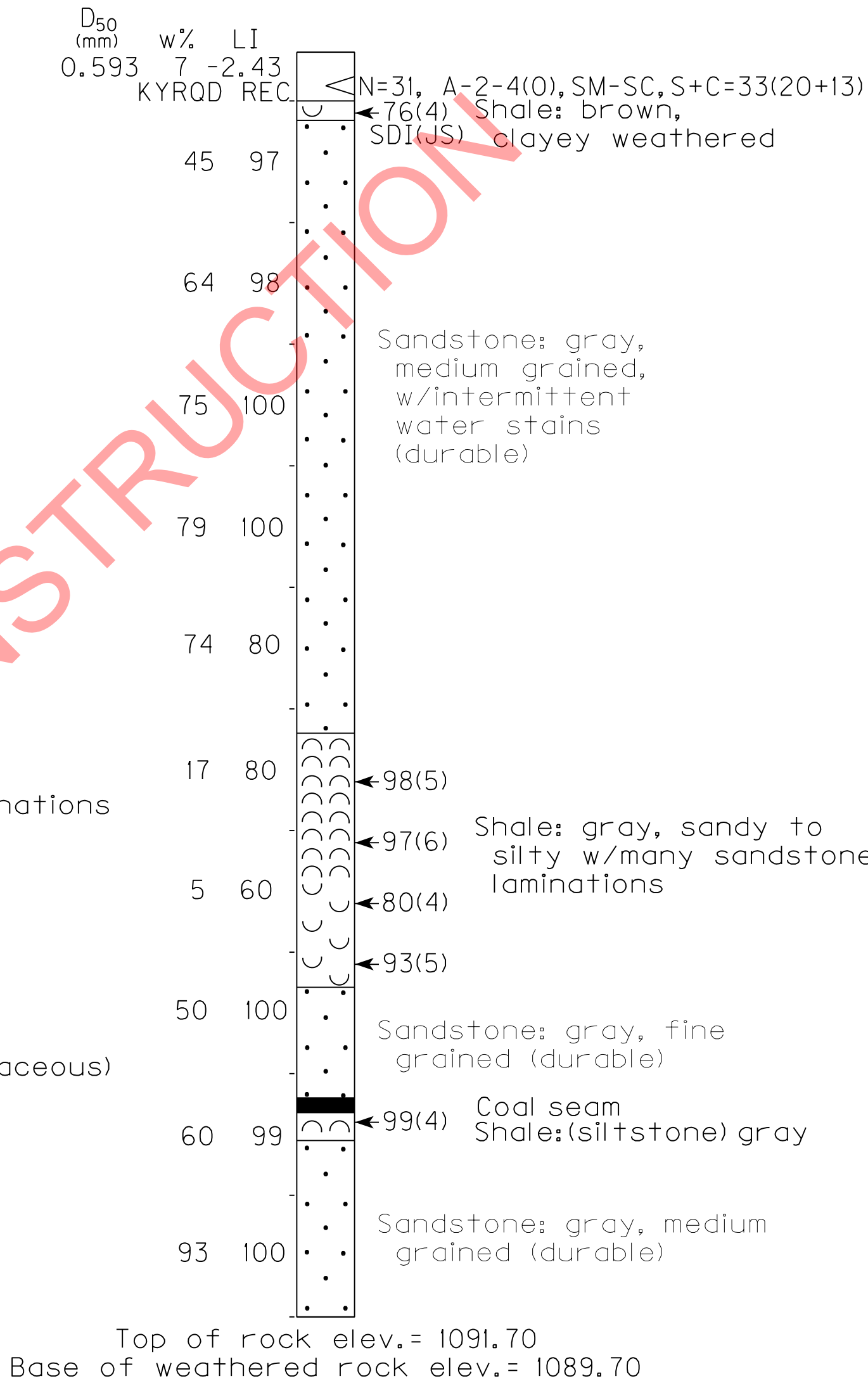
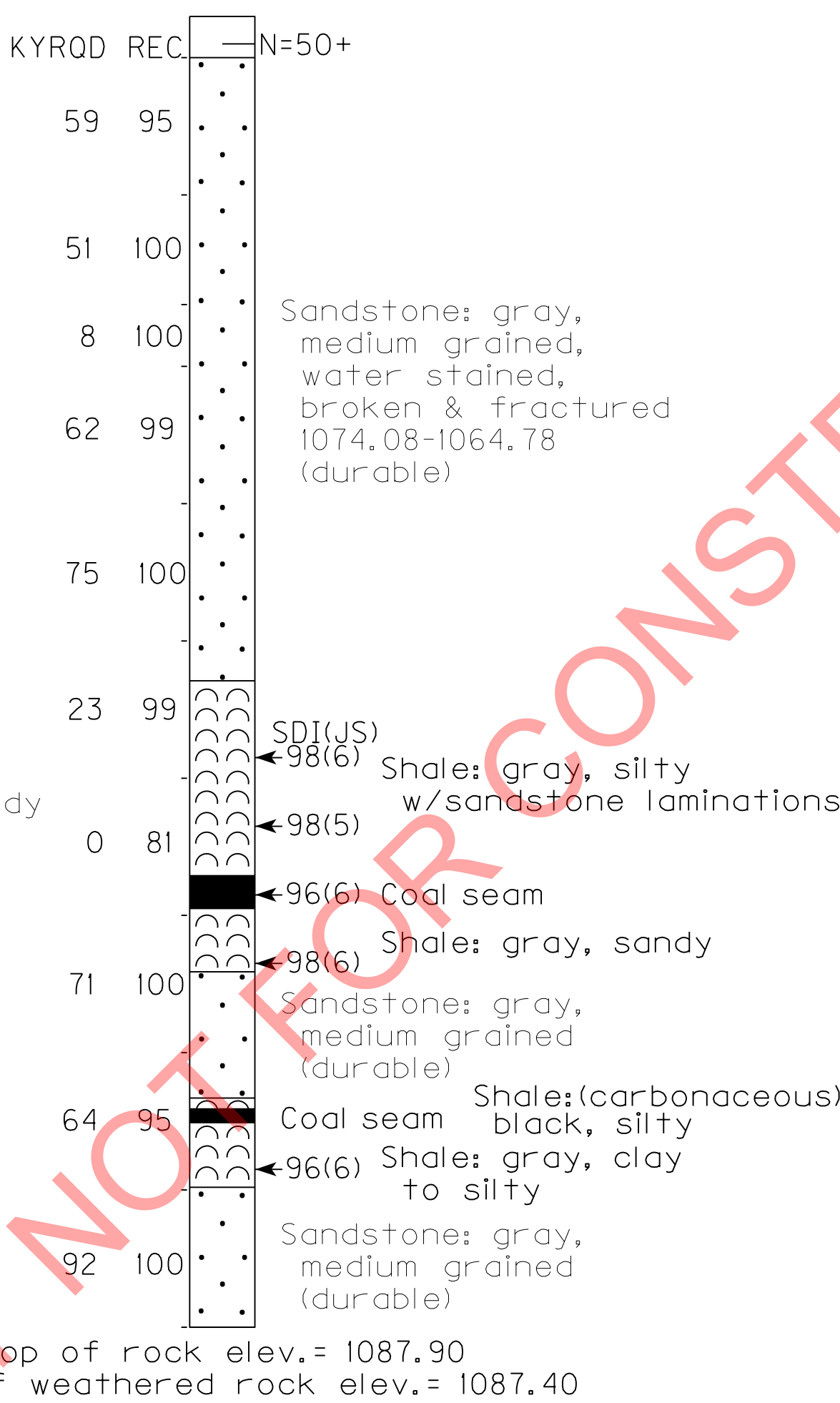
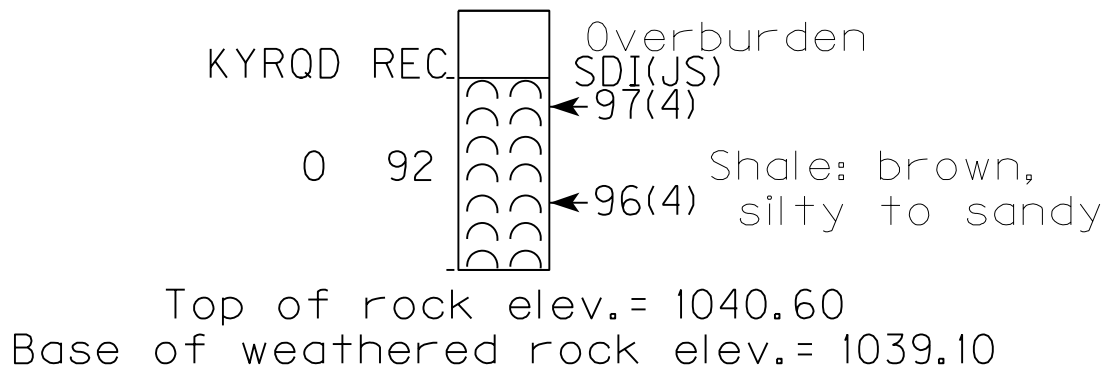
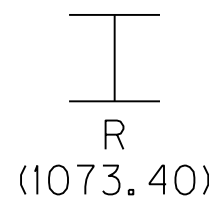
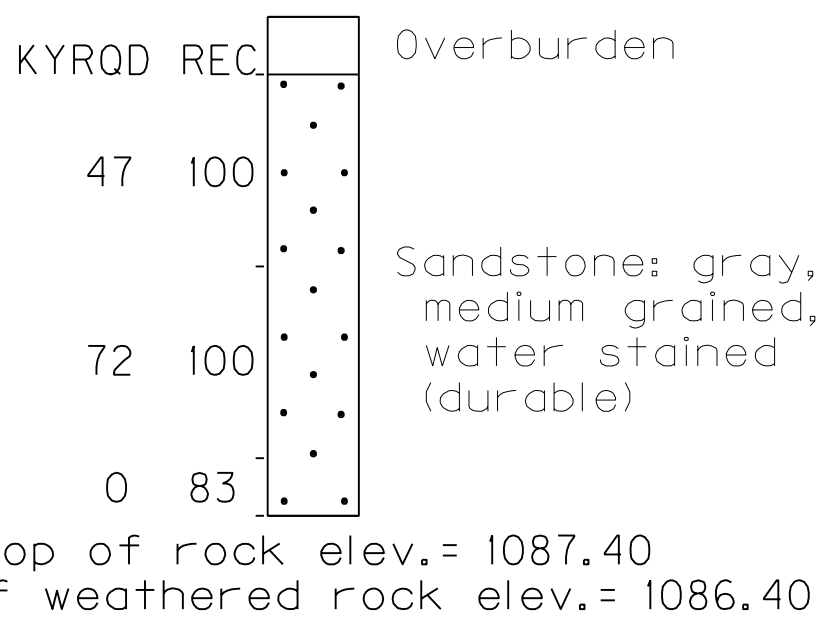
48
620+62.30
33.96 ft. Lt.
1090.98

49
620+67.38
15.69 ft. Rt.
1095.74

50
620+70.00
57.50 ft. Lt.
1097.40

51
620+65.24
0.42 ft. Lt.
1094.13

52
620+70.00
25.70 ft. Rt.
1084.30
ROD
SOUNDING



The Presumptive Factored Bearing Resistance at the Service Limit State is
16 ksf for Spread Footings on Competent Unweathered Bedrock

DATE:	02-APRIL-2012	CHECKED BY:	
DESIGNED BY:			
DETAILED BY:	R. BAILEY	D. GREER	

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
PIKE

ROUTE	CROSSING
US 460	Bridge over Pond Creek

SUBSURFACE DATA

PREPARED BY
Division of Materials

GEOTECHNICAL BRANCH

SHEET NO.
S70

DRAWING NO.
27242

SA-016-12

ITEM NUMBER

12-263.63

SHEET 9 OF 10

SUBSURFACE DATA

END BENT TWO

Profile Scale:
Vertical 1" = 10'
Horizontal not to scale

APPROXIMATE ROADWAY GRADE ELEV. = 1188.78

Hole No.
Station
Offset
Elev.
(Sea level
datum)

53
622+15.00
57.50 ft. Lt.
1213.40
ROD
SOUNDING

54
622+15.00
1206.00
ROD
SOUNDING

55
622+15.00
57.50 ft. Rt.
1178.00
ROD
SOUNDING

56
622+36.09
48.17 ft. Lt.
1222.10

57
622+42.58
13.52 ft. Lt.
1222.56

58
622+48.00
12.50 ft. Rt.
1222.07

59
622+25.00
57.50 ft. Rt.
1184.80
ROD
SOUNDING

D₅₀
(mm)
0.01

w%
12

LI
-1.44

KYRQD REC

N=17, A-4(8), ML, S+C=78(51+27)
93(5) Shale: brown, sandy
SDI(JS)

50 98

79 99

79 100

37 83

23 52

0 68

23 100

3 100

13 100

0 100

18 99

0 100

22 100

65 100

74 100

73 100

40 100

Sandstone: gray, medium
grained, water stained
(durable)

Shale: gray, clayey
to silty

Sandstone: gray, medium
grained (durable)

Shale: gray, sandy
to silty

Sandstone: gray, medium to
fine grained (durable)

Shale: gray, clayey
to silty

Sandstone: gray, medium
grained, water stained
(durable)

Shale: gray, silty to clayey
w/sandstone laminations

Shale: gray, silty to
sandy

Sandstone: gray, medium
to fine grained (durable)

Sandstone: gray, medium
grained w/coal spars (durable)

D₅₀
(mm)
0.007

w%
7

LI
-1.78

KYRQD REC

N=17, A-6(10), ML, S+C=83(51+32)
88(3) Shale: brown, clayey
SDI(JS)

31 98

80 100

81 100

31 96

59 100

34 100

18 92

4 100

4 100

21 100

0 100

0 99

9 96

49 100

45 100

38 98

40 100

Sandstone: gray, medium
grained, intermittent water
stains (durable)

Sandstone: brown, medium to coarse
grained, water stained w/coal spars (durable)

Shale: brown, clayey
Sandstone: brown, coarse
grained, water stained (durable)
Shale: brown, clayey

Sandstone: brown, medium to
fine grained (durable)

Shale: gray, silty to clayey

Shale: gray, silty to clayey

Sandstone: brown, medium
grained, broken & fractured
throughout

Shale: gray, clayey to silty

Sandstone: gray, fine grained
w/shale laminations (durable)

Shale: gray, silty to clayey

Shale: gray, silty to clayey

Shale: gray, silty to clayey

Shale: gray, silty to clayey

Shale: gray, silty to clayey

Sandstone: gray, fine to medium
grained, w/intermittent water stains
(durable), broken & fractured
1063.70-1056.46

The Presumptive Factored Bearing Resistance
at the Service Limit State is 16 ksf for
Spread Footings on Competent Unweathered Bedrock

Top of rock elev.= 1217.80
Base of weathered rock elev.= 1215.60

Top of rock elev.= 1218.50
Base of weathered rock elev.= 1214.60

Datum

SHEET 10 OF 10

SA-016-12

ITEM NUMBER

12-263.63

DATE: 02-APRIL-2012
DESIGNED BY:
CHECKED BY:
DETAILED BY: R. BAILEY
D. GREER

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY

PIKE

ROUTE CROSSING
US 460 Bridge over Pond Creek

SUBSURFACE DATA

PREPARED BY
Division of Materials

GEOTECHNICAL BRANCH

SHEET NO.

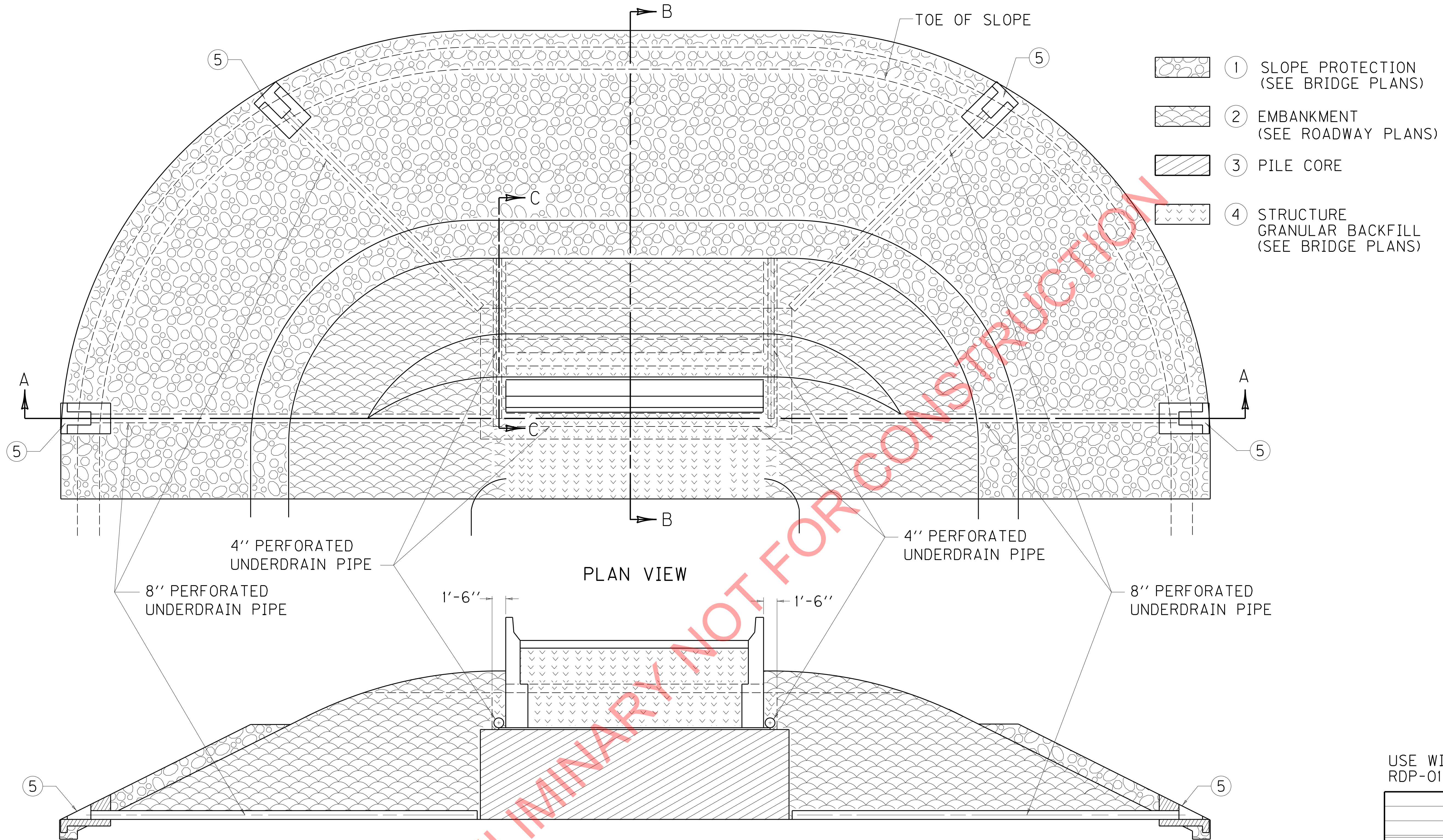
S71

DRAWING NO.

27242

FILE NAME: J:\KDOT\US460-56\STRUCT\POND CREEK FINAL PLANS\DON POND_FINAL_BORDER.DGN
DATE PLOTTED: July 27, 2011
USER: jeff-r
E-SHEET NAME: MicroStation v8.11.9.536

3/30/2017 7:43:25 AM



~ NOTES ~

SECTION A-A

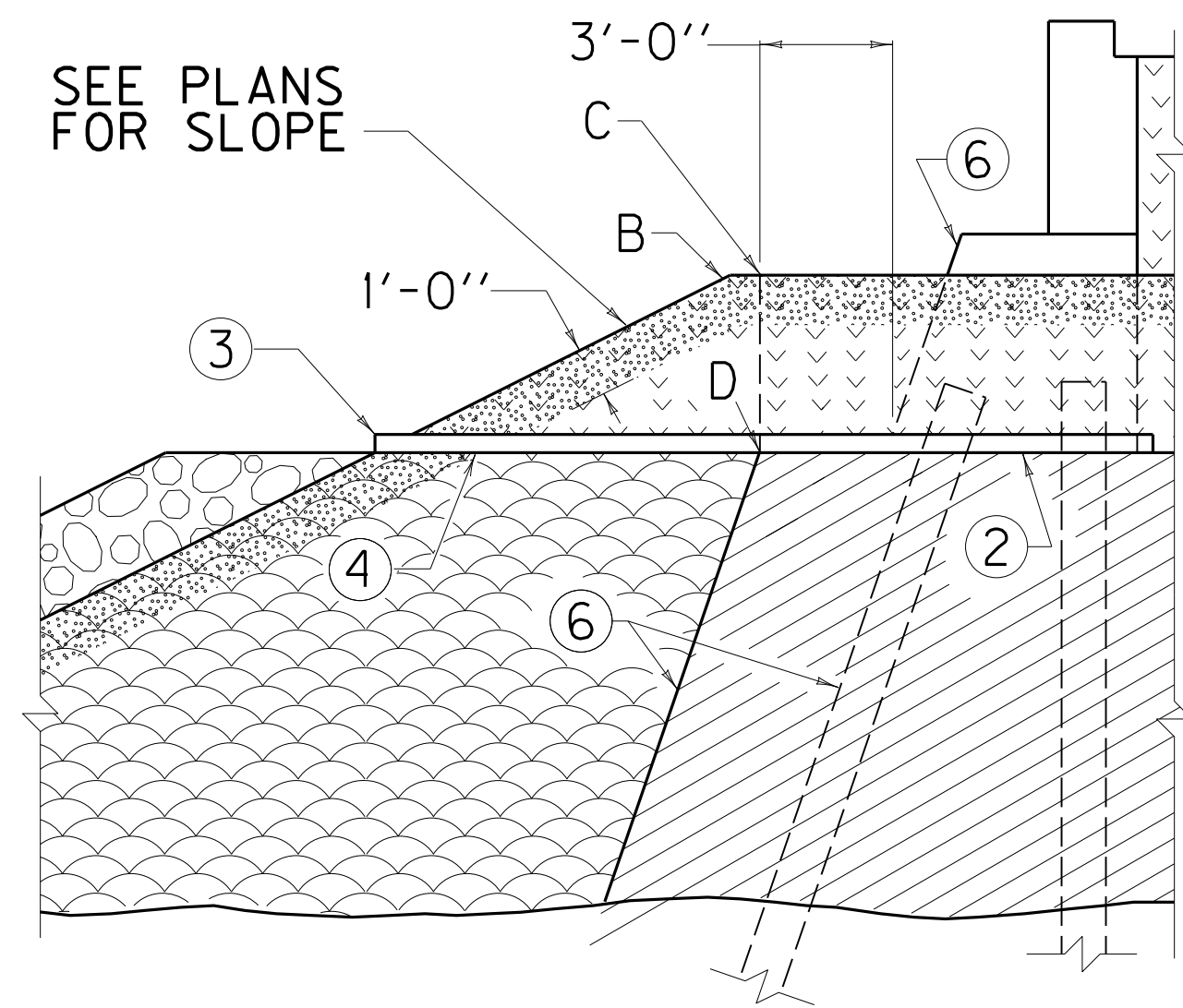
THE PURPOSE OF THIS DRAWING AND CUR. SEPIA 010 IS TO DEFINE THE LIMITS OF THE FOUR MATERIALS SHOWN. FOR SIMPLICITY PURPOSES, AN END-BENT ON A ZERO DEGREE SKEW IS SHOWN. THE SAME PRINCIPLES WOULD APPLY FOR MORE VARIED STRUCTURES.

- 1 SLOPE PROTECTION REQUIRED WHEN AND AS NOTED ON THE PLANS.
- 2 GRANULAR OR ROCK EMBANKMENT REQUIRED WHEN AND AS NOTED ON THE PLANS.
- 3 PILE CORE IN ACCORDANCE WITH SPECIAL PROVISION NO. 69.
- 4 STRUCTURE GRANULAR BACKFILL REQUIRED AT ALL TIMES.
- 5 FOR HEADWALL CONSTRUCTION SEE CUR. STD. DWG RDP-010. (SEE ROADWAY PLANS)

USE WITH CUR. STD. DWG.
RDP-010, SEPIA 010

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY:			
DETAILED BY: J.A. ROSE			
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460		CROSSING POND CREEK	
TREATMENT OF EMBANKMENTS			
PREPARED BY			SHEET NO. S72
PALMER ENGINEERING CO.			DRAWING NO. 27242

ITEM NUMBER
12-263.63



SECTION C-C

SLOPE PROTECTION
AS SPECIFIED

ORIGINAL GROUND

SEE PLANS
FOR SLOPE

SECTION B-B

⑫ GEOTEXTILE FABRIC, TYPE IV
PLACE AND COMPACT IN MAXIMUM
1' LOOSE LIFT THICKNESS

⑧ H/2
(MIN. 50')

H ⑦

8" PERFORATED
UNDERDRAIN
PIPE

LEGEND

- SLOPE PROTECTION
(SEE BRIDGE PLANS)
- PILE CORE
- STRUCTURE GRANULAR
BACKFILL
- EMBANKMENT

BID ITEMS AND UNIT TO BID
GRANULAR EMBANKMENT CUYD
STRUCTURE GRANULAR BACKFILL CUYD

CONSTRUCTION SEQUENCE "A"

1. CONSTRUCT EMBANKMENT TO SLOPES A, B, F, AND G SUCH THAT NO UNCOMPACTED OR LOOSE MATERIAL SHALL REMAIN.
2. EXCAVATE FOR END-BENT TO C, D, E, AND F.
3. INSTALL PILES (OR OTHER FOUNDATION).
4. PLACE 2" MORTAR BED OR ANY CLASS CONCRETE.
5. CONSTRUCT CONCRETE END-BENT.
6. INSTALL 4" PERFORATED UNDERDRAIN PIPE AND BACKFILL.
7. BACKFILL TO C, D, E, F, G, Z, AND J WITH COMPACTED STRUCTURE GRANULAR BACKFILL.

① CONSTRUCTION SEQUENCE "B"

1. CONSTRUCT EMBANKMENT TO TEMPORARY SLOPE ④.
2. INSTALL PILES (OR OTHER FOUNDATION).
3. PLACE 2" MORTAR BED OR ANY CLASS CONCRETE.
4. CONSTRUCT CONCRETE END-BENT.
5. INSTALL 4" PERFORATED UNDERDRAIN PIPE AND BACKFILL.
6. BACKFILL TO FINISHED GRADE IN ACCORDANCE WITH SPECIAL PROVISION NO. 69.

~ NOTES ~

- ① CONSTRUCTION SEQUENCE "B" IS A PERMITTED ALTERNATE ONLY WHEN GRANULAR OR ROCK EMBANKMENT IS UTILIZED.
- ② 2" MORTAR BED OR ANY CLASS CONCRETE.
- ③ 4" PERFORATED UNDERDRAIN PIPE WRAPPED WITH GEOTEXTILE FABRIC FOR DRAINING THE EXCAVATED TRENCH AND STRUCTURE GRANULAR BACKFILL.
- ④ ACCEPTABLE ALTERNATES FOR TEMPORARY SLOPE (CONSTRUCTION SEQUENCE "B").
5. SHADED PORTIONS AND REPRESENT LIMITS OF NON-ERODIBLE GRANULAR EMBANKMENT IN ACCORDANCE WITH SPECIAL PROVISION NO. 69.
- ⑥ SLOPES ARE EQUAL.
- ⑦ "H" = EMBANKMENT HEIGHT MEASURED FROM SUBGRADE ELEVATION AT POINT ⑦ TO THE LOWEST ELEVATION AT THE TOE OF THE SLOPE.
- ⑧ LIMITS OF EMBANKMENT CONSTRUCTION (H/2 OR 50' MIN.) REQUIRING 2' MAXIMUM LIFT THICKNESS FOR GRANULAR OR ROCK EMBANKMENTS.
9. SEE CURRENT SPECIAL PROVISION NO. 69 FOR CONSTRUCTION AND MATERIAL REQUIREMENTS, METHOD OF MEASUREMENT AND BASIS OF PAYMENT.
10. STRUCTURE GRANULAR BACKFILL PLACED AS A COMPLETE SEPARATE OPERATION AFTER CONSTRUCTION OF ALL OTHER EMBANKMENT.
11. NO INDIVIDUAL FRAGMENTS LARGER THAN 4 INCHES IN ANY DIMENSION PERMITTED WITHIN 3'-0" OF THE STRUCTURE.
- ⑫ PLACE GEOTEXTILE FABRIC, TYPE IV PRIOR TO PLACING STRUCTURE GRANULAR BACKFILL AND AGGREGATE BASE COURSE.

USE WITH SEPIA 009

REVISION		DATE	
DATE: MARCH, 2017		CHECKED BY	
DESIGNED BY:			
DETAILED BY: J.A. ROSE			
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY PIKE			
ROUTE US 460	CROSSING POND CREEK		
TREATMENT OF EMBANKMENTS			
PREPARED BY PALMER ENGINEERING CO.			SHEET NO. S73
			DRAWING NO. 27242