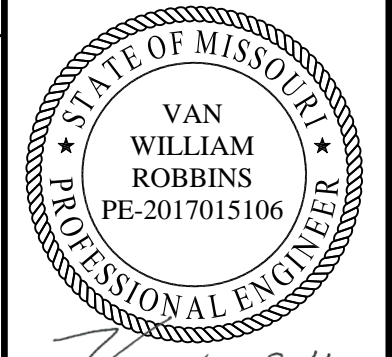


MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

I-70 WB OVER BENTON  
SEC/SUR 3 TWP 49N RGE 33W

Note:  
See Civil Package 2: Early Grading for project reference points and project coordinate points.



Van W. Robbins  
06-03-25

DATE PREPARED  
06/02/2025

ROUTE	STATE
I - 70	MO
DISTRICT	SHEET NO.
BR	B05-01

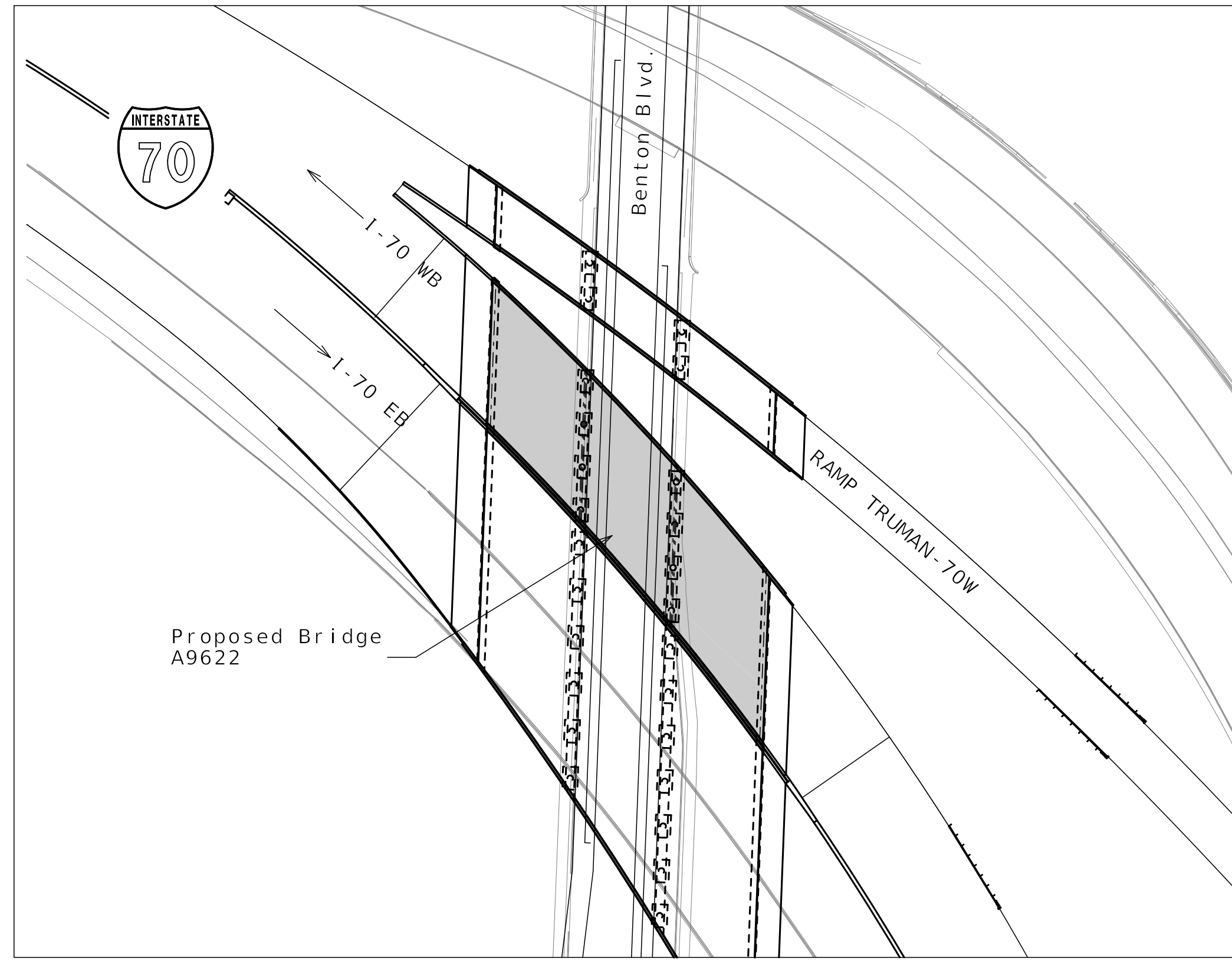
COUNTY  
JACKSON

JOB NO.  
J411486D

CONTRACT ID.  
240807-C01

PROJECT NO.

BRIDGE NO.  
A9622



LOCATION SKETCH



INDEX OF DRAWINGS

- B05-01 Title Sheet and Index
- B05-02 General Plan and Elevation
- B05-03 General Notes
- B05-04 Substructure Layout
- B05-05 Details of End Bent No. 1
- B05-06 Details of End Bent No. 1
- B05-07 Details of End Bent No. 1
- B05-08 Vertical Drain at End Bents
- B05-09 Details of Intermediate Bent No. 2
- B05-10 Details of Intermediate Bent No. 2
- B05-11 Details of Intermediate Bent No. 3
- B05-12 Details of Intermediate Bent No. 3
- B05-13 Details of End Bent No. 4
- B05-14 Details of End Bent No. 4
- B05-15 Details of End Bent No. 4
- B05-16 As-Built Pile Data
- B05-17 Boring Logs
- B05-18 Boring Logs
- B05-19 Boring Logs
- B05-20 Boring Logs
- B05-21 Boring Logs
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- B05-24 Boring Logs
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- B05-28 Boring Logs
- B05-29 Boring Logs

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE  
KANSAS CITY, MO 64105-1310  
CERTIFICATE OF AUTHORITY  
NO. 001270

Released For Construction  
Not to Scale  
Revision: 0.0  
Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst

BRIDGE: ROUTE I-70 WB OVER BENTON BLVD.

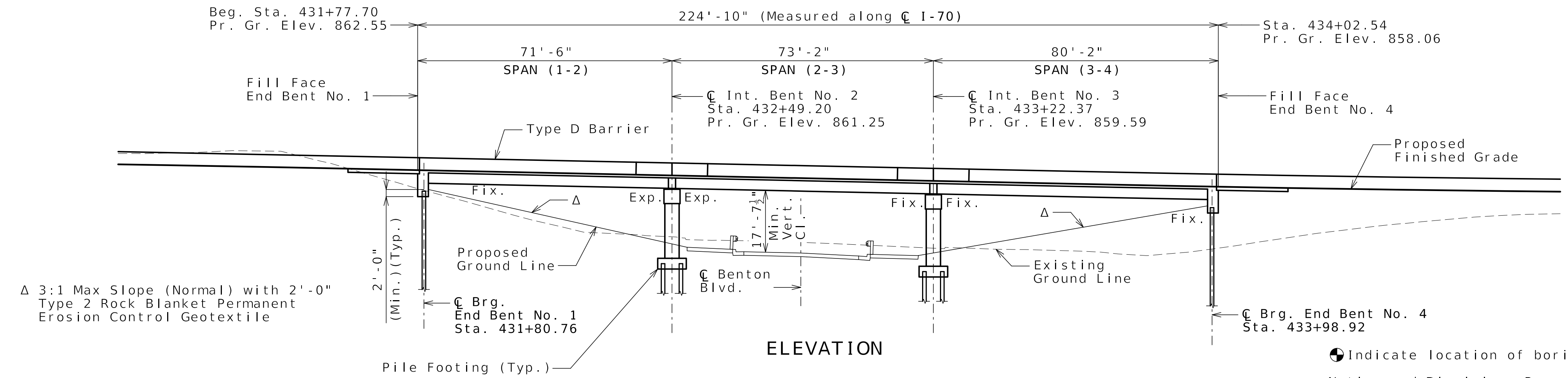
ROUTE I-70 WB FROM ROUTE 40 TO ROUTE I-670  
ABOUT 3.0 MILES WEST OF ROUTE 40  
BEGINNING STATION 431+77.70

Detailed FEB 2025  
Checked MAR 2025

Note: This drawing is not to scale. Follow dimensions.

Sheet No. B05-01 of B05-29

(71.5'-73.2'-80.2') Prestressed Concrete NU Girder Spans



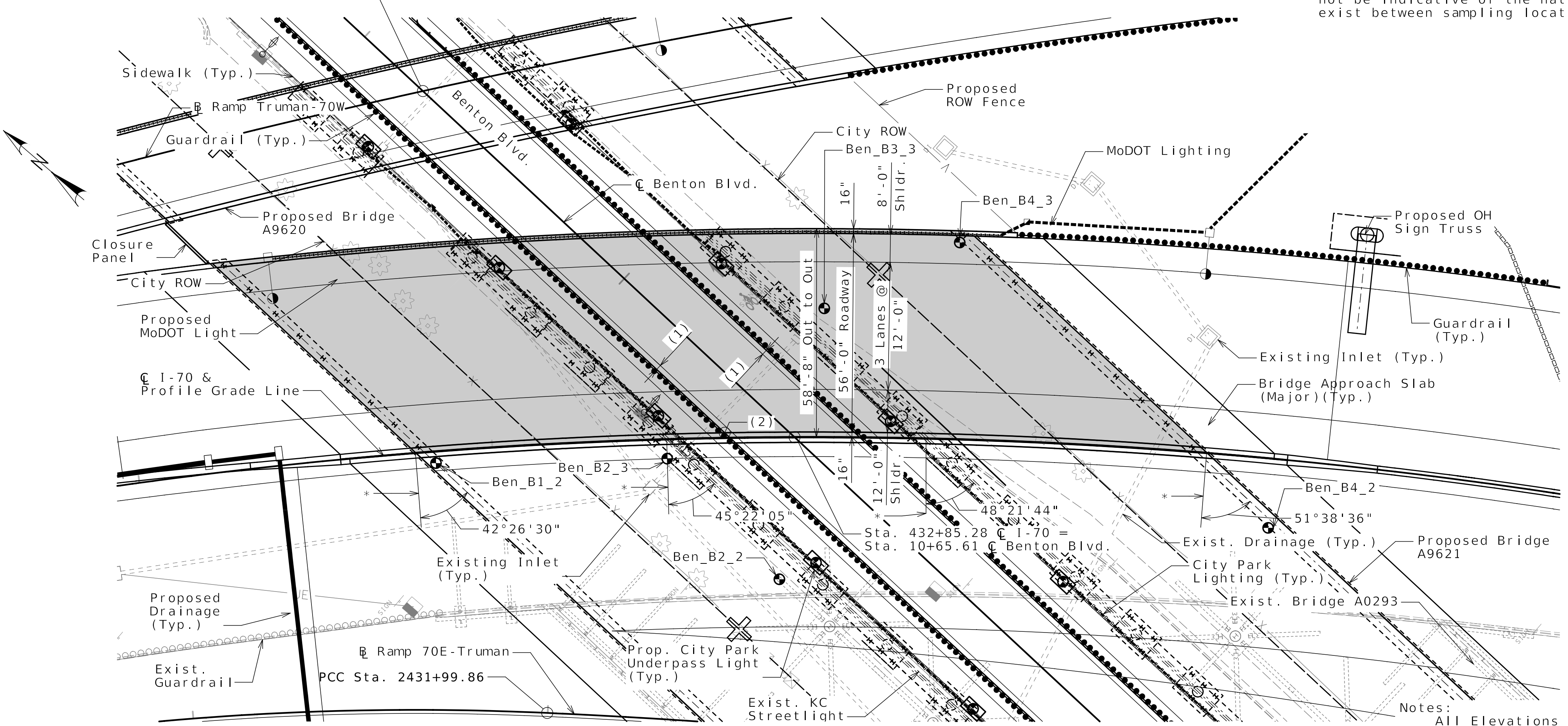
PROFILE GRADE PROFILE GRADE

Δ 3:1 Max Slope (Normal) with 2'-0" Type 2 Rock Blanket Permanent Erosion Control Geotextile

⊕ Indicate location of borings.

**Notice and Disclaimer Regarding Boring Log Data**  
The locations of all subsurface borings performed by the design-build team for this structure are shown on the plan sheets for this structure. The logs for all locations indicated are provided on Sheets No. B05-17 thru B05-29. Laboratory test results, rock core photographs and other information obtained at these borings are available in the corresponding Foundation Recommendations Memo prepared by HNTB. By the nature of the exploration process, the information gathered at these borings represents only a small fraction of the total volume of material at the Site. Interpolation between data samples may not be indicative of the nature and extent of the variations that actually exist between sampling locations.

Sta. 1432+17.53 @ Ramp Truman-70W = Sta. 9+22.42 @ Benton Blvd.



**CURVE DATA**

CURVE I-70  
 PI = 431+29.21  
 PC = 420+97.79  
 PT = 438+75.65  
 Δ = 72°45'36.2" (RT)  
 D = 4°5'33.2"  
 L = 1,777.86'  
 T = 1,031.42'  
 R = 1,400.00'

Minimum Horizontal Clearance to edge of proposed lane:  
(1) 1'-6"

(2) Point of minimum vertical clearance.  
Sta. 432+65.37, 1.69' Lt., C I-70

\*Radial line to C I-70.

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Not to Scale  
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Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst

**Notes:**  
All Elevations are based on NAVD88 datum unless otherwise noted.  
All dimensions are horizontal.  
All Bents are parallel.  
Existing Bridge A0293 to be removed in accordance with Sec. 216.  
Existing structures & foundations shown may not represent what is left in place after removal.  
For footing elevations, see Sheets No. B05-09 and B05-11.  
See Civil Package 4: Local Streets 1 for Benton Ave. typical section and underpass lighting details.

**GENERAL PLAN AND ELEVATION**



Van W. Robbins  
06-03-25

DATE PREPARED: 06/02/2025

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	B05-02
COUNTY	
JACKSON	
JOB NO.	
J411486D	
CONTRACT ID.	
240807-C01	
PROJECT NO.	

BRIDGE NO. A9622

DATE	DESCRIPTION
06/02/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE  
715 KIRK DRIVE KANSAS CITY, MO 64105-1310  
CERTIFICATE OF AUTHORITY NO. 001270

General Note:  
For additional bridge details not shown, see A9622 (I-70 WB Over Benton) Superstructure Package.

Design Specifications:  
2020 AASHTO LRFD Bridge Design Specifications (9th Ed.) and 2023 AASHTO Guide Specifications for LRFD Seismic Bridge Design (3rd Edition)  
Seismic Design Category = A (Nonseismic)  
Design earthquake response spectral acceleration coefficient at 1.0 second period,  $S_{p1}=0.15$   
Acceleration Coefficient (effective peak ground acceleration coefficient),  $A_s = N/A$

Design Loading:  
Vehicular = HL-93  
Future Wearing Surface = 35 lb/sf  
Earth - 120 lb/cf  
Equivalent Fluid Pressure - 45 lb/cf  
Superstructure: Simply-Supported, non-composite for dead load. Continuous composite for live load.

Design Unit Stresses:  
Class B Concrete (End Bents below Const. Jt.)  $f'c = 3,000$  psi  
Class B-1 Concrete (Intermediate Bents)  $f'c = 4,000$  psi  
Class B-2 Concrete (End Bents above construction joint)  $f'c = 4,000$  psi  
Reinforcing Steel (ASTM A615 Grade 60)  $f_y = 60,000$  psi  
Structural HP Steel Pile (ASTM A709 Grade 50)  $f_y = 50,000$  psi

Neoprene Pads:  
Neoprene Bearing Pads shall be 60 durometer and shall be in accordance with Sec 716.

Joint Filler:  
All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:  
Minimum clearance to reinforcing steel shall be 1-1/2", unless otherwise shown.

All reinforcing in End Bents No. 1 and 4 and Intermediate Bents No. 2 & 3 shall be epoxy coated. Reinforcing in the Intermediate Bents No. 2 & 3 pile cap footings shall be uncoated.

Minimum clearance between galvanized piles and uncoated (plain) reinforcing steel including bar supports shall be 1 1/4". Nylon, PVC, or polyethylene spacers shall be used to maintain clearance. Nylon cable ties shall be used to bind the spacers to the reinforcement.

Concrete Protective Coatings:  
Concrete and masonry protective coating shall be applied to concrete column and end bent wingwall exposed areas in accordance with Sec 711.

Sacrificial graffiti protective coating shall be applied to concrete column and end bent wingwall exposed areas in accordance with Sec 711.

Miscellaneous:  
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work U.N.O.

Abbreviations:  
E.F. denotes Each Face  
N.F. denotes Near Face  
F.F. denotes Far face  
U.N.O. denotes Unless Noted Otherwise

Foundation Data					
Type	Design Data	Bent Number			
		1	2	3	4
Load Bearing Pile	Pile Type and Size	HP 12x53	HP 12x74	HP 12x74	HP 12x53
	Number	ea 9	24	24	10
	Approximate Length Per Each (1)	ft 108	85	84	102
	Pile Point Reinforcement	ea All	All	All	All
	Min. Galvanized Penetration (Elev.)	ft 833	820	818	830
	Minimum Tip Penetration (Elev.)	ft ---	---	---	---
	Criteria for Min. Tip Penetration	---	---	---	---
	Pile Driving Verification Method	DF	DF	DF	DF
	Resistance Factor	0.40	0.40	0.40	0.40
	Minimum Nominal Axial Compressive Resistance	kip 530	585	585	533

(1) Pile length is maximum estimated for bent and includes embedment into concrete. Adjust as needed for bottom of concrete variations at each bent.

Load Bearing Piles:  
Minimum Nominal Axial Compressive Resistance = Maximum Factored Loads/Resistance Factor  
HP piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702. When pile refusal on rock occurs, as approved by the engineer, the minimum nominal axial compressive resistance is verified and no additional pile driving verification method is required.  
All piles shall be galvanized down to the minimum galvanized penetration (elevation).  
Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.  
The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles. Deviations in penetration less than 5 feet of minimum will be considered acceptable provided the contractor makes the necessary corrections to ensure the minimum penetration is achieved on subsequent piles.  
DF=FHWA-modified Gates Dynamic Pile Formula

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Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst

Detailed FEB 2025  
Checked MAR 2025

Note: This drawing is not to scale. Follow dimensions.

Sheet No. B05-03 of B05-29

GENERAL NOTES



*Van W. Robbins*  
06-03-25

DATE PREPARED  
06/02/2025

ROUTE STATE  
I - 70 MO

DISTRICT SHEET NO.  
BR B05-03

COUNTY  
JACKSON

JOB NO.  
J411486D

CONTRACT ID.  
240807-C01

PROJECT NO.

BRIDGE NO.  
A9622

DATE	DESCRIPTION
06/02/25	REV 0 - REF SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE  
KANSAS CITY, MO 64105-1310  
CERTIFICATE OF AUTHORITY  
NO. 001270



Gina D. Horner  
06/03/25

DATE PREPARED  
06/02/2025

ROUTE STATE  
I-70 MO

DISTRICT SHEET NO.  
BR B05-04

COUNTY  
JACKSON

JOB NO.  
J411486D

CONTRACT ID.  
240807-C01

PROJECT NO.

BRIDGE NO.  
A9622

DESCRIPTION

REV 0 - RFC SUBMITTAL

DATE

06/02/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

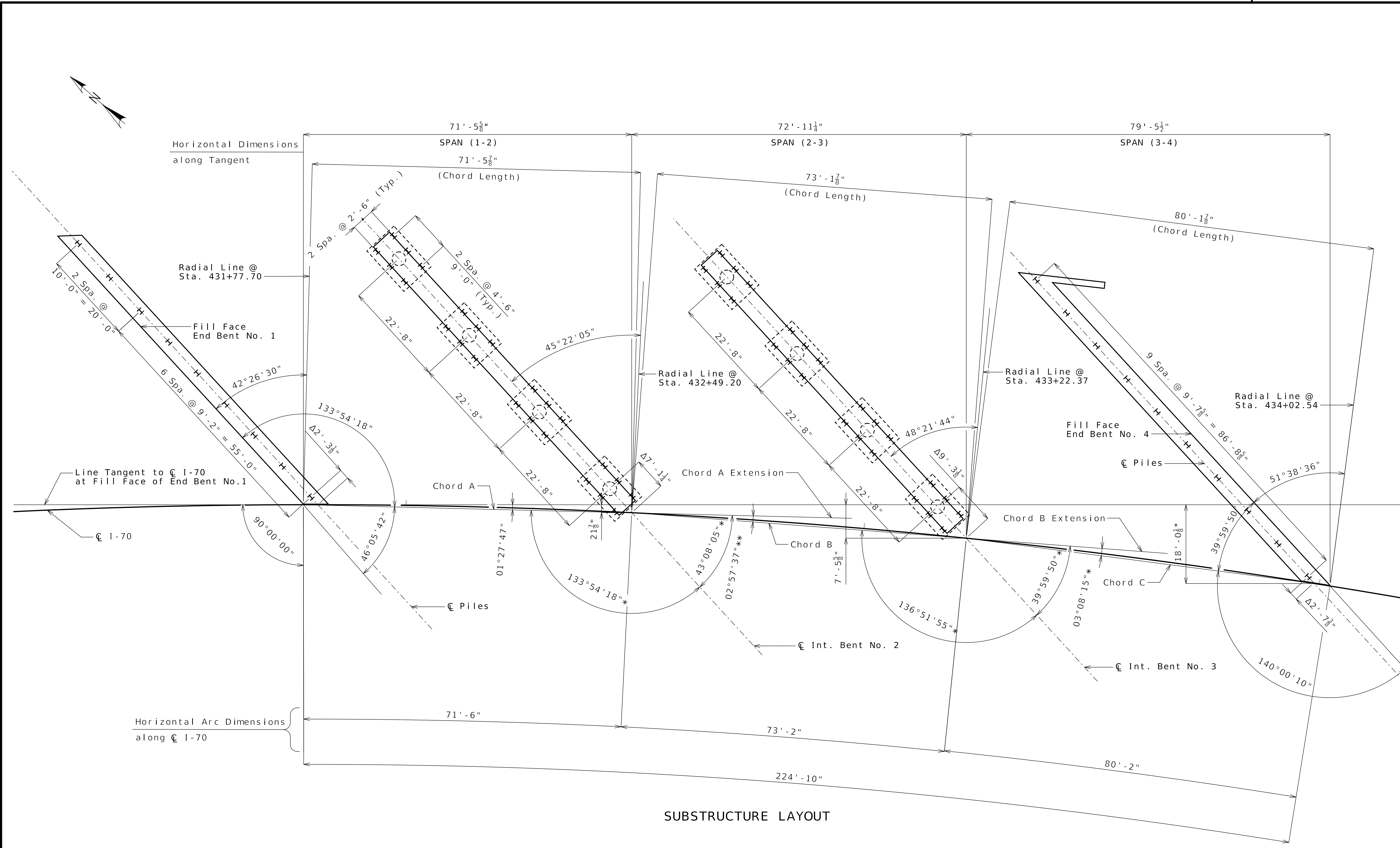
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CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE KANSAS CITY, MO 64105-1310

CERTIFICATE OF AUTHORITY NO. 001270

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SUBSTRUCTURE LAYOUT

SUBSTRUCTURE LAYOUT

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Not to Scale  
Revision: 0.0  
Date: 06/09/2025  
Package: BRD-06-WB70-Benton-Subst

Notes:  
All stations are given along C I-70.  
All dimensions are horizontal.  
\* Angle between C Bent and chord.  
\*\* Angle between extended chord and chord.  
Δ Measured to C I-70.

Detailed FEB 2025  
Checked MAR 2025

Note: This drawing is not to scale. Follow dimensions.

Sheet No. B05-04 of B05-29



Gina D. Horner  
06/03/25

DATE PREPARED  
06/02/2025

ROUTE STATE  
I-70 MO

DISTRICT SHEET NO.  
BR B05-05

COUNTY  
JACKSON

JOB NO.  
J411486D

CONTRACT ID.  
240807-C01

PROJECT NO.

BRIDGE NO.  
A9622

DESCRIPTION  
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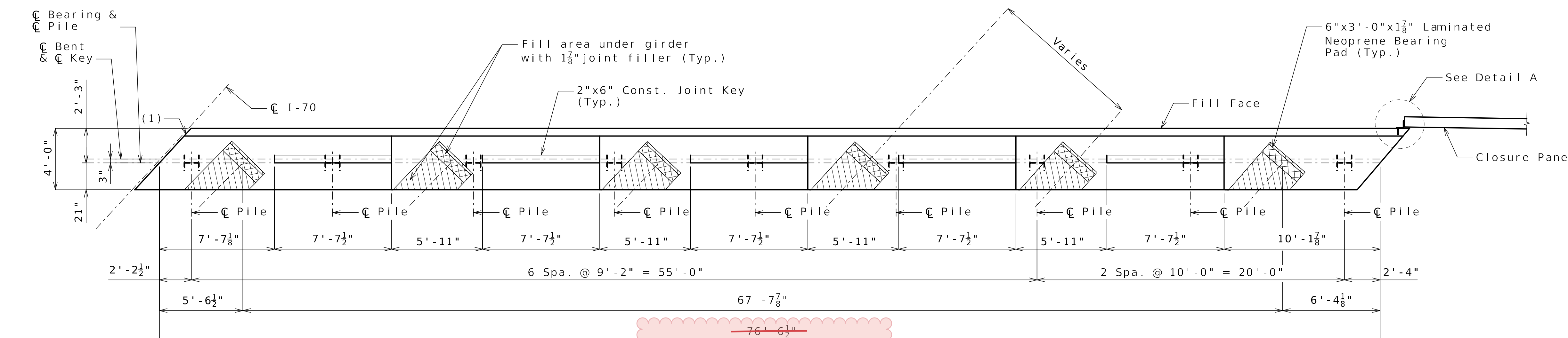
DATE  
06/02/25

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105 WEST CAPITOL JEFFERSON CITY, MO 65102

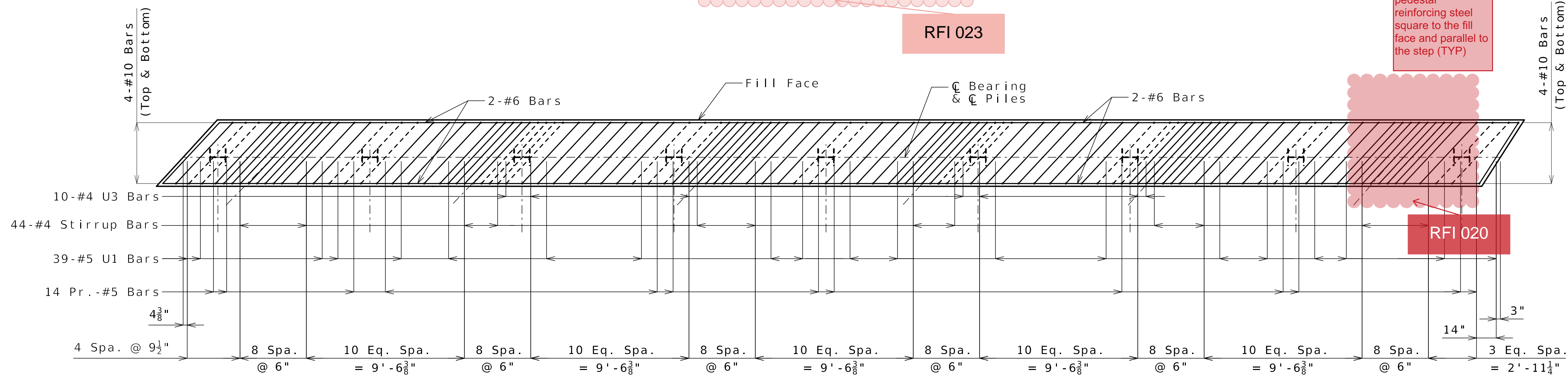
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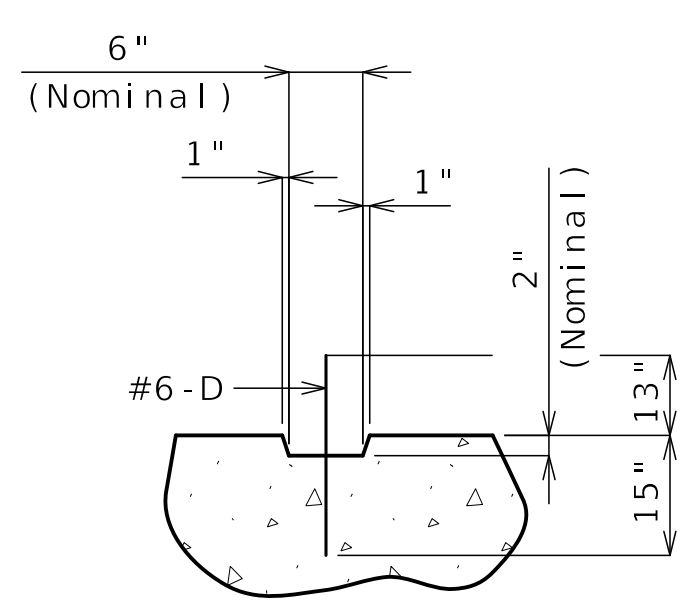
(1) Adjacent A9621 (I-70 EB Over Benton) end bent not shown. 1" joint filler required between adjacent concrete faces.

PLAN OF BEAM  
RFI 023

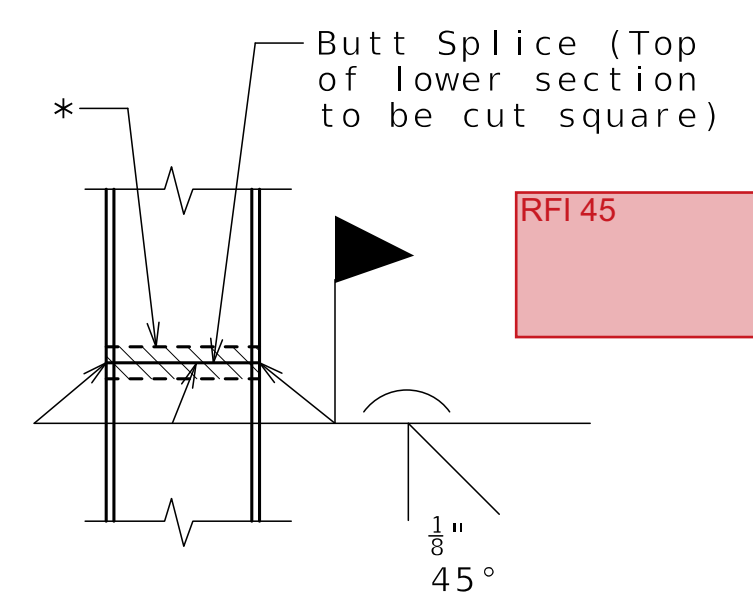
Place the beam pedestal reinforcing steel square to the fill face and parallel to the step (TYP)



PLAN OF BEAM SHOWING REINFORCING (Key and steps not shown for clarity)

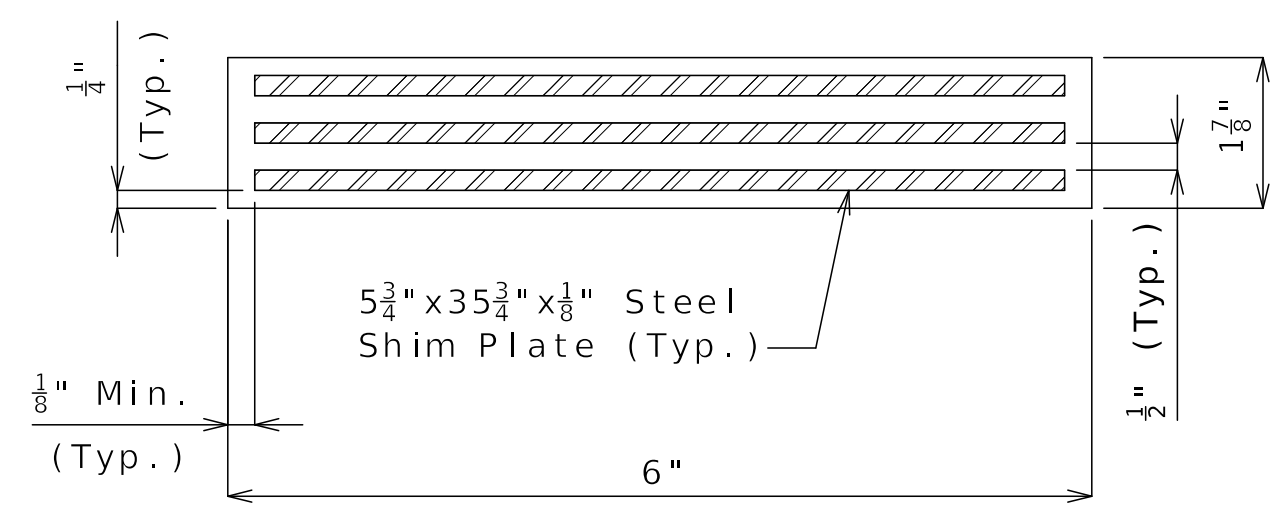


SECTION THRU KEY



STEEL PILE SPLICE (If required)

\* Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD  
6 Required per Bent

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Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst

Notes:  
Work this sheet with Sheets No. B05-06 and B05-07.  
For Detail A, see Sheet No. B05-07.  
All U bars and pairs of vertical bars shall be placed along skew.  
Reinforcing steel shall be shifted to clear piles. U-bars shall clear piles by at least 1 1/2".  
For details of bridge approach slab, see A9622 (I-70 WB Over Benton) Superstructure Package.  
For angle of girders relative to Bent and Closure Panel details, see A9622 (I-70 WB Over Benton) Superstructure Package.

DETAILS OF END BENT NO. 1



Gina D. Horner  
06/03/25

DATE PREPARED  
06/02/2025

ROUTE STATE  
I-70 MO

DISTRICT SHEET NO.  
BR B05-06

COUNTY  
JACKSON

JOB NO.  
J411486D

CONTRACT ID.  
240807-C01

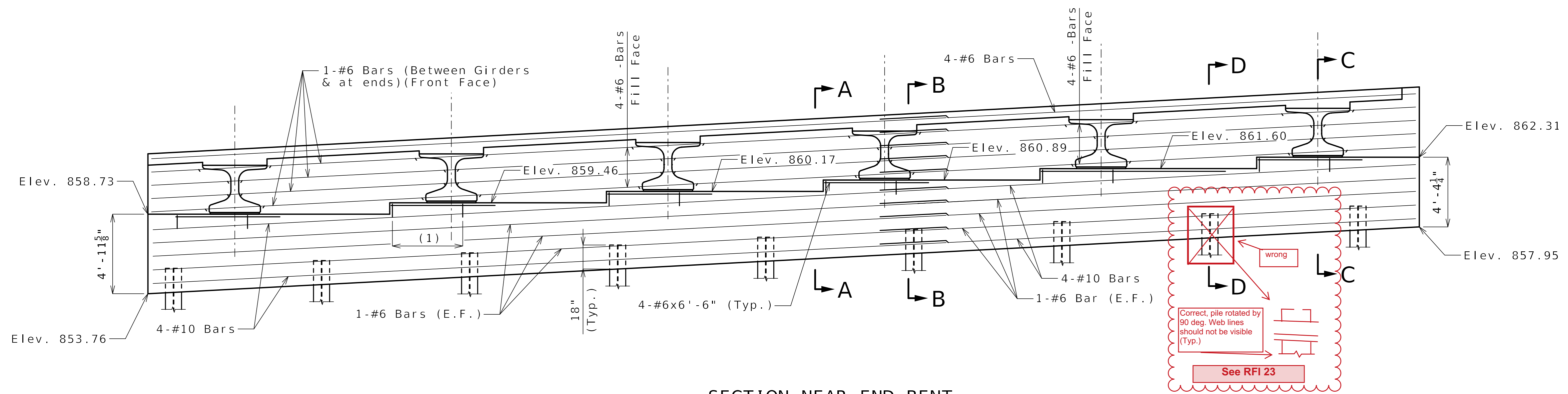
PROJECT NO.

BRIDGE NO.  
A9622

DATE	DESCRIPTION
06/02/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
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105 WEST CAPITOL JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

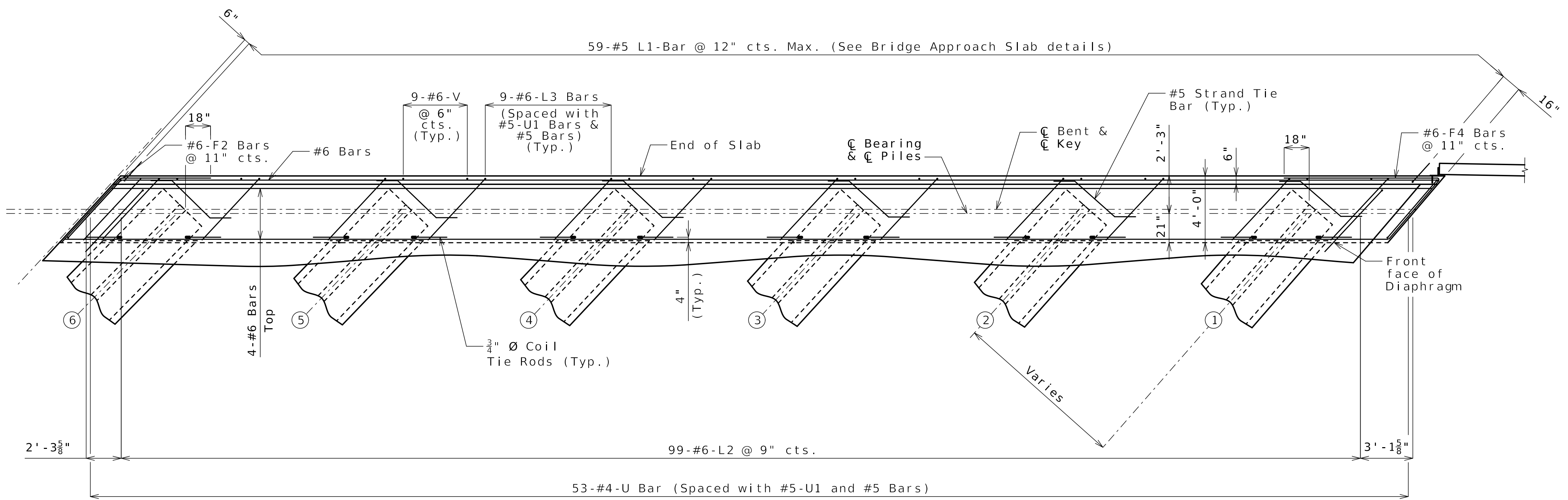
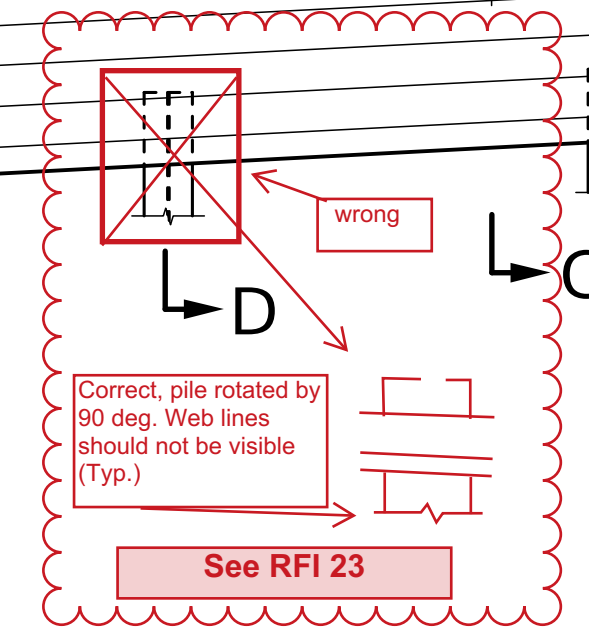
CLARKSON RADMACHER JOINT VENTURE  
715 KIRK DRIVE KANSAS CITY, MO 64105-1310  
CERTIFICATE OF AUTHORITY NO. 001270  
HNTB



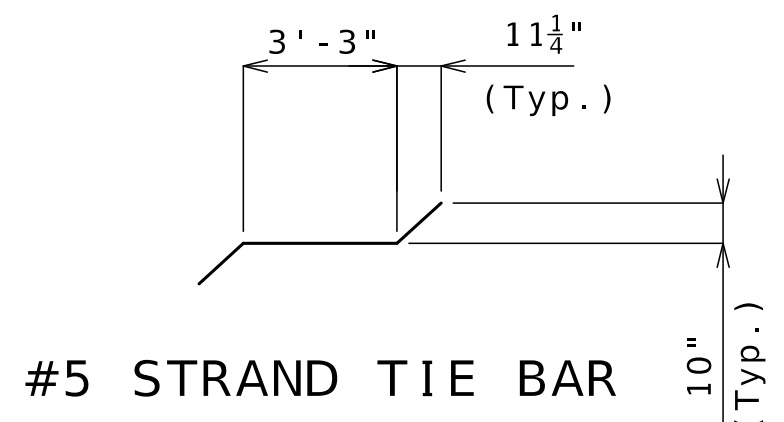
SECTION NEAR END BENT  
(Looking Back Station)

(1) 9-#4-U4 Bars @ 6" Spa. under girders (Typ.)

Notes:  
Lap Splice for #6 bars = 4'-3" (Min.)  
Lap Splice for #10 bars = 7'-2" (Min.)



PART PLAN



Note: This drawing is not to scale. Follow dimensions.

Released For Construction  
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Revision: 0.0  
Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst

Sheet No. B05-06 of B05-29

General Note:  
Work this sheet with Sheets No. B05-05 and B05-06. For Sections A-A, B-B, C-C, and D-D Sheet No. B05-07. For location of coil tie rods, see A9622 (I-70 WB Over Benton) Superstructure Package.

(X) Denotes girder number  
Strands at end of the girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.

The #6-F bars shall be bent in the field to clear girders.

DETAILS OF END BENT NO. 1



Gina D. Horner  
06/03/25

DATE PREPARED  
06/02/2025

ROUTE STATE  
1-70 MO

DISTRICT SHEET NO.  
BR B05-07

COUNTY  
JACKSON

JOB NO.  
J411486D

CONTRACT ID.  
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PROJECT NO.

BRIDGE NO.  
A9622

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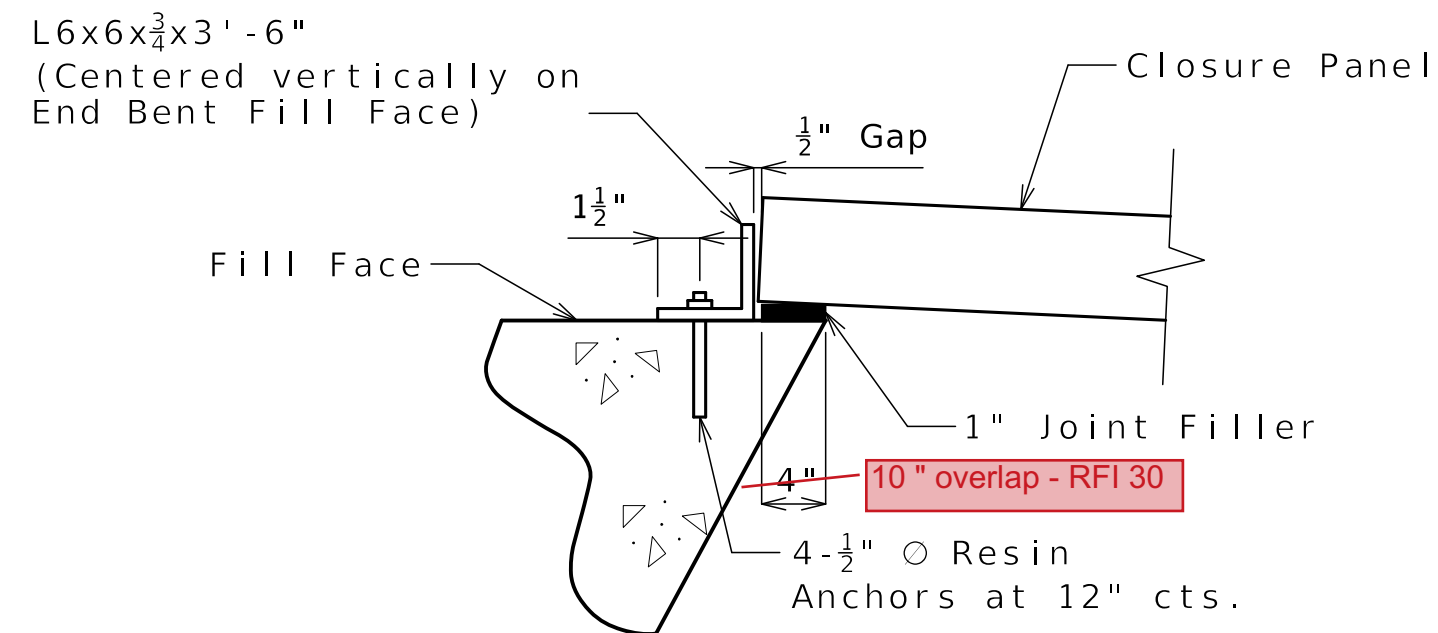
DATE  
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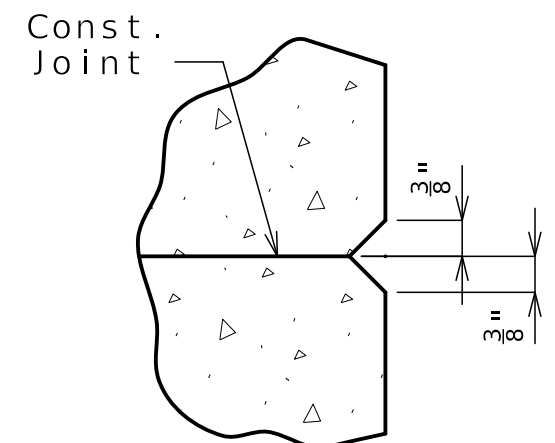
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105 WEST CAPITOL  
JEFFERSON CITY, MO 65102

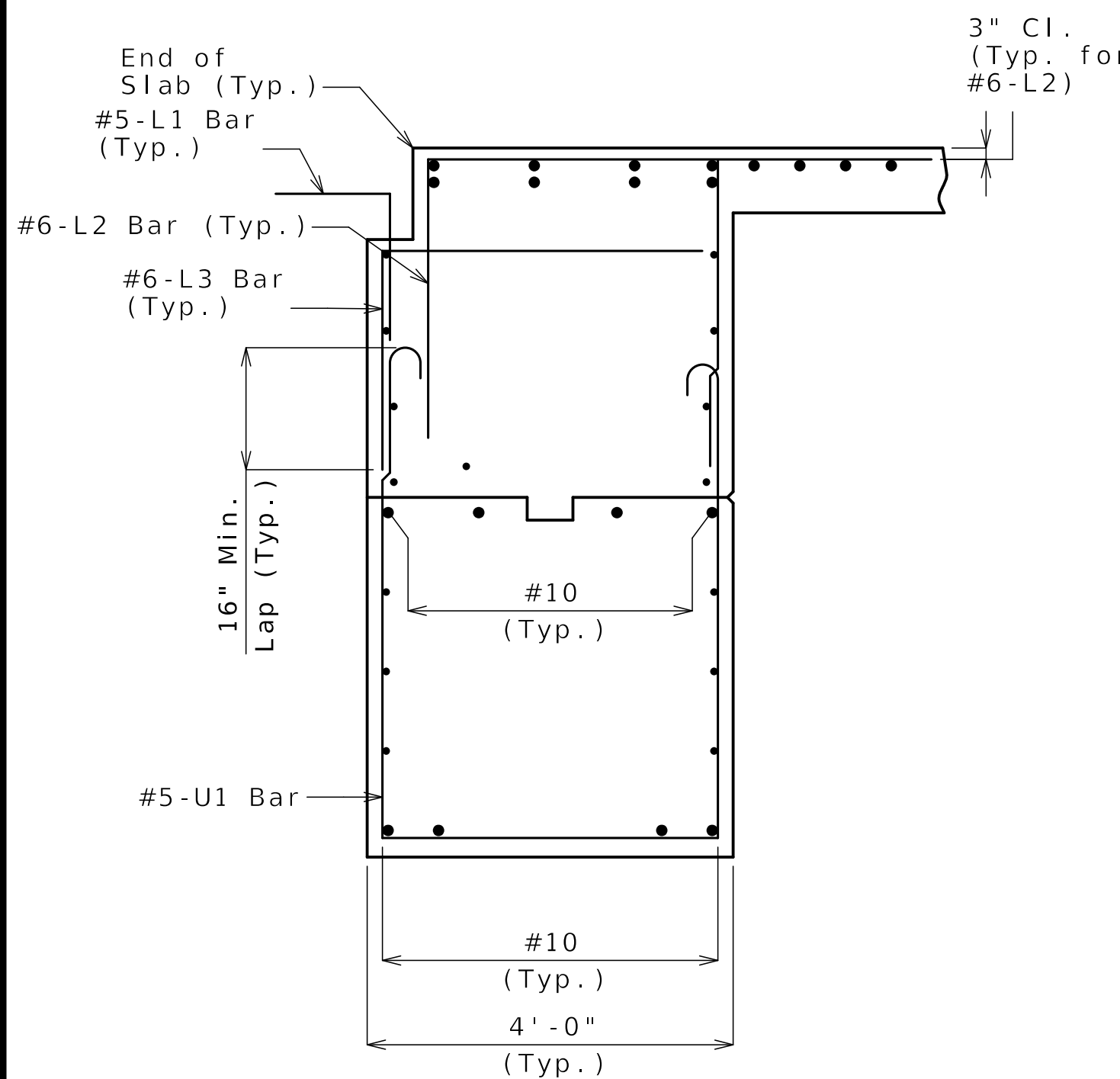
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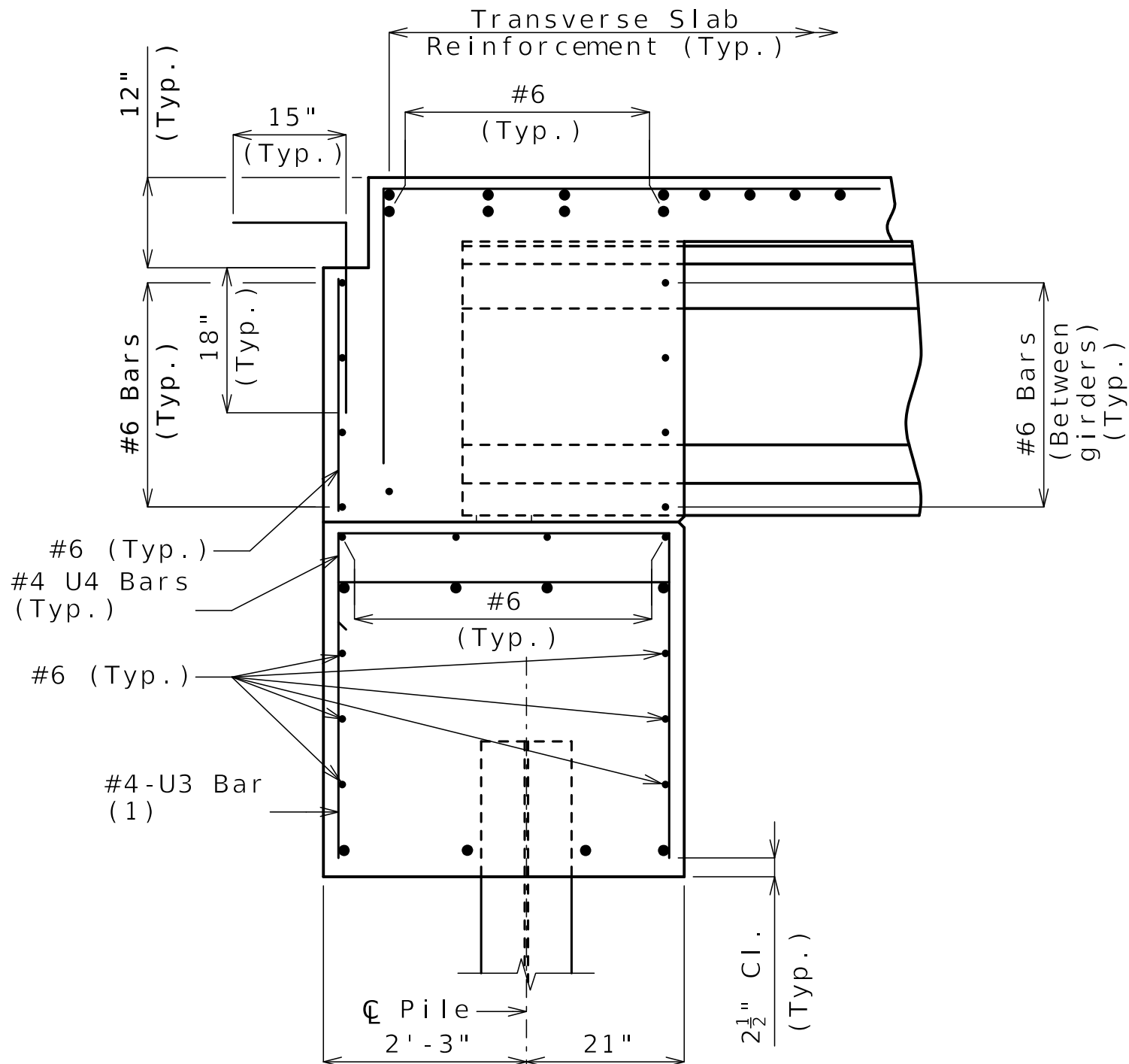
DETAIL A



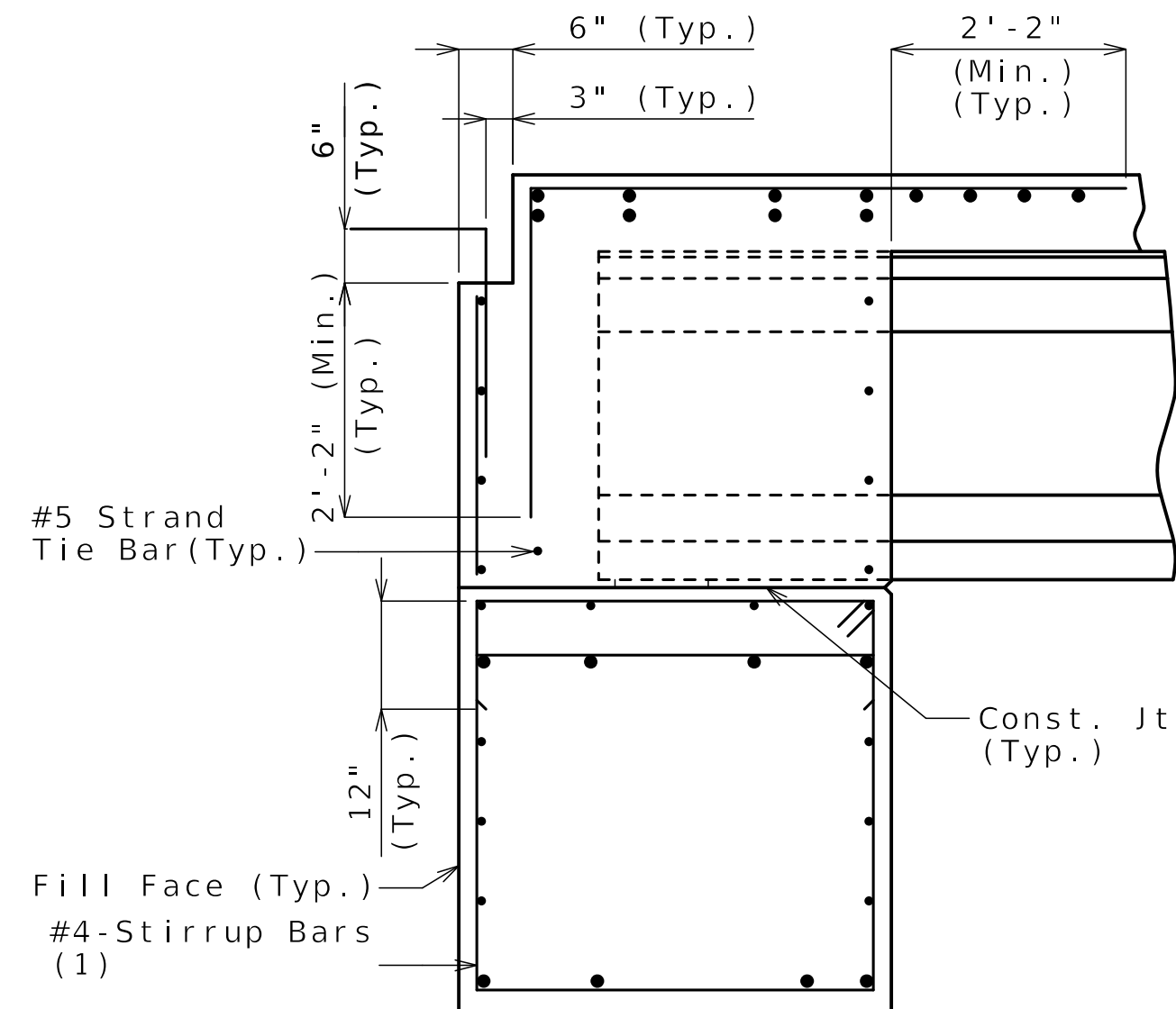
CHAMFER DETAIL



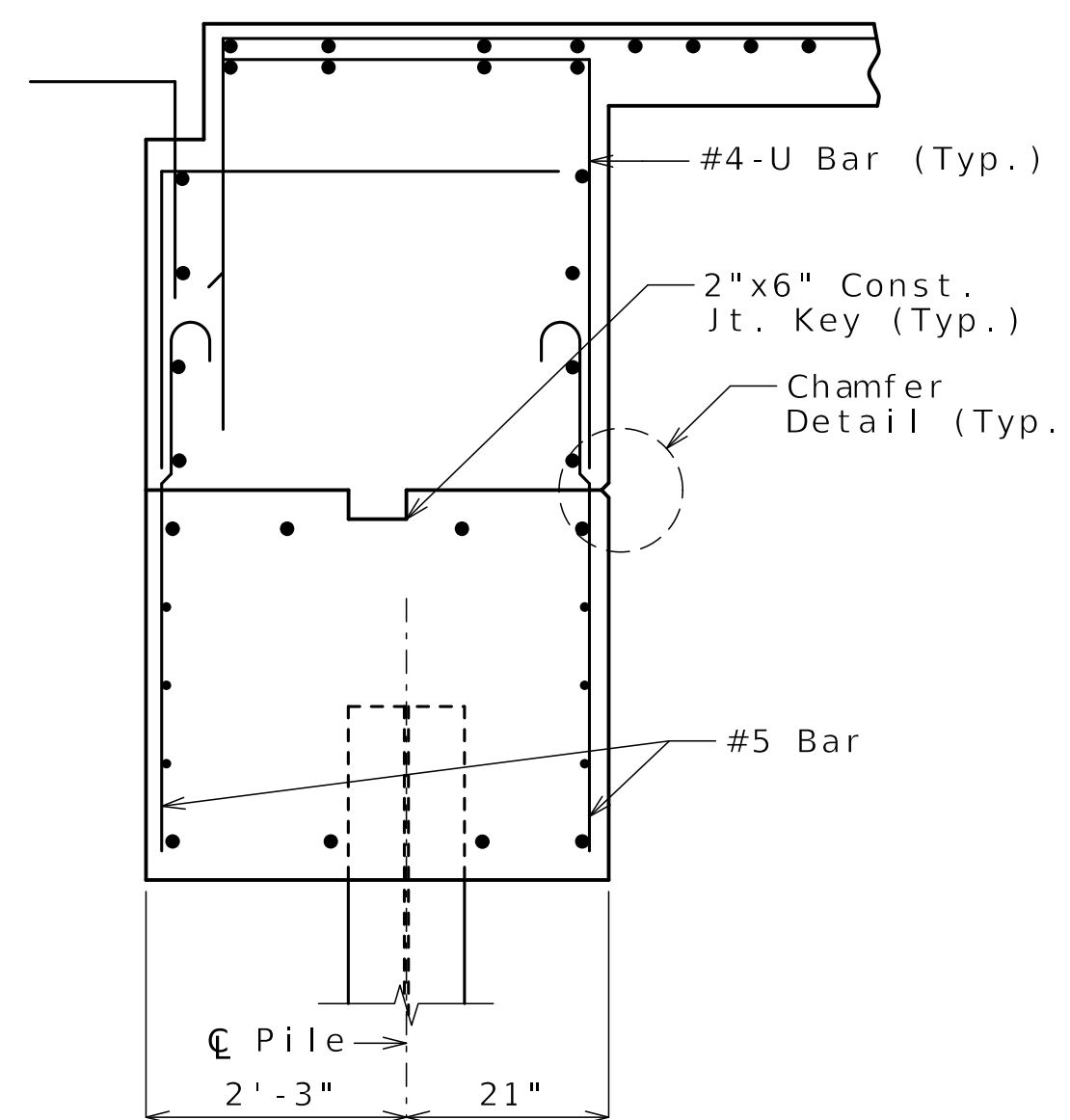
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

(1) U3 & #4 stirrup bar vertical leg = 3'-11"

General Notes:  
Work this sheet with Sheets No. B05-05 and B05-06.  
For location of Detail A, see Sheet No. B05-05.  
For location of Sections A-A, B-B, C-C, and D-D, see Sheet No. B05-06.  
For reinforcement of the Type D Barrier, see A9622 (I-70 WB Over Benton) Superstructure Package.  
Steel angle shall be ASTM A709, Grade 36 Steel angle shall be galvanized in accordance with ASTM A123 and Sec. 1081.  
The contractor shall use one of the qualified resin anchor systems in accordance with Sec. 1039.  
The minimum embedment depth in concrete for the resin anchor systems shall be that required to meet the minimum ultimate pullout strength in accordance with Sec. 1039 but shall not be less than 5".

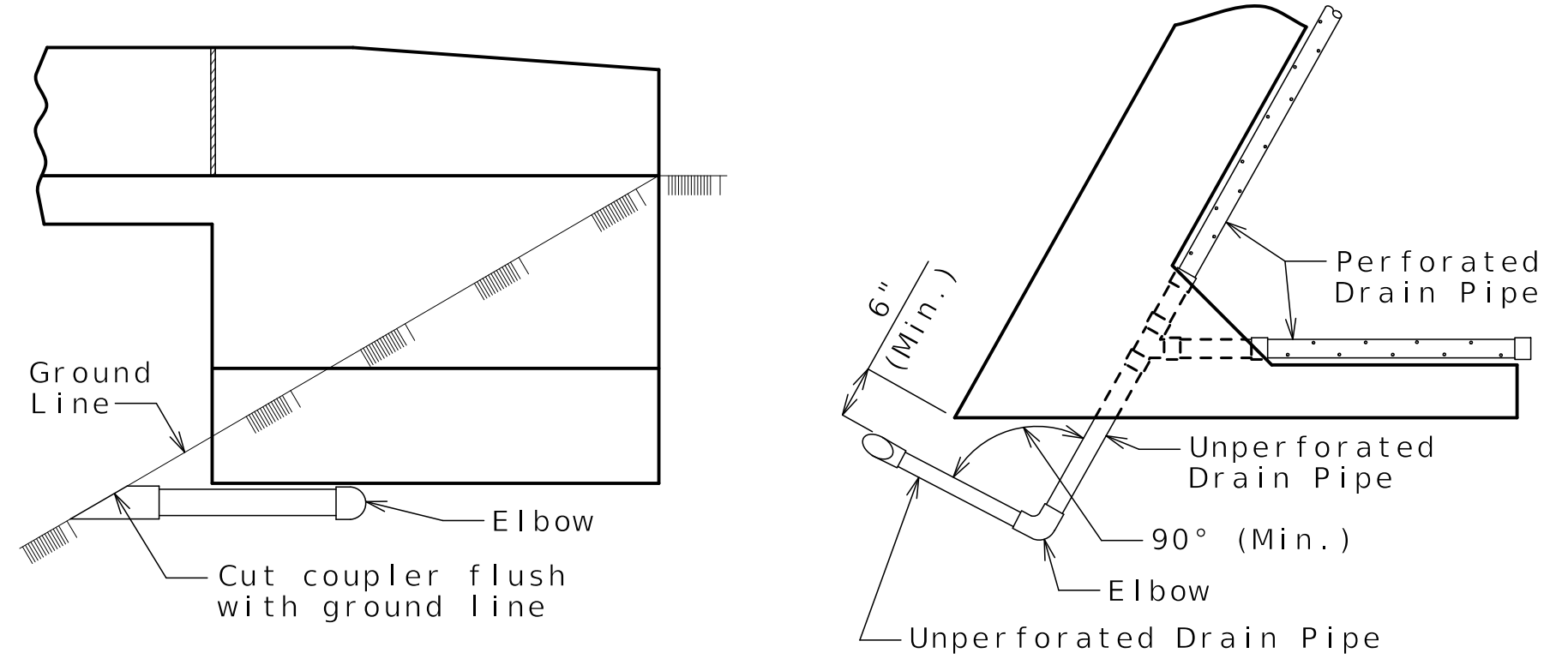
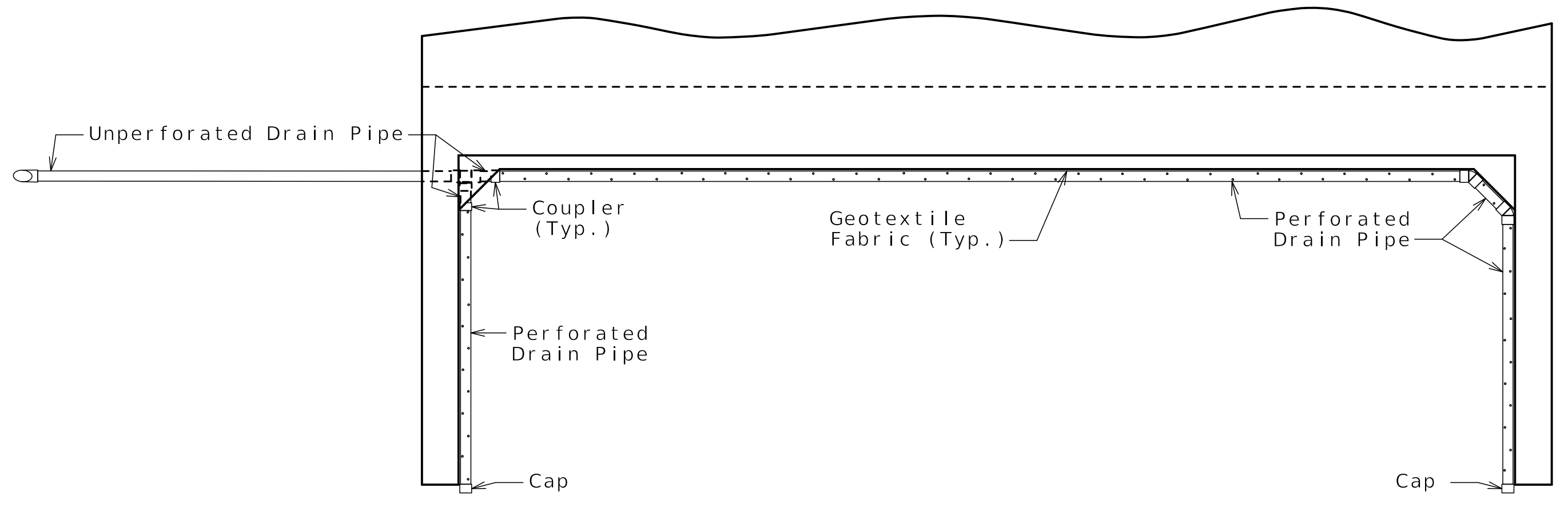
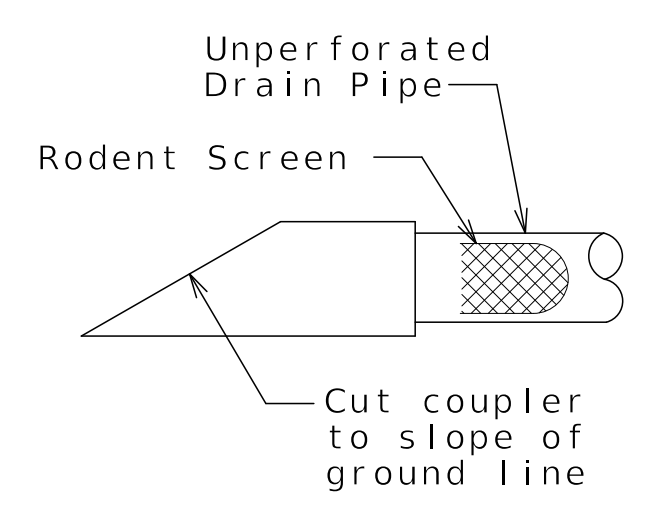
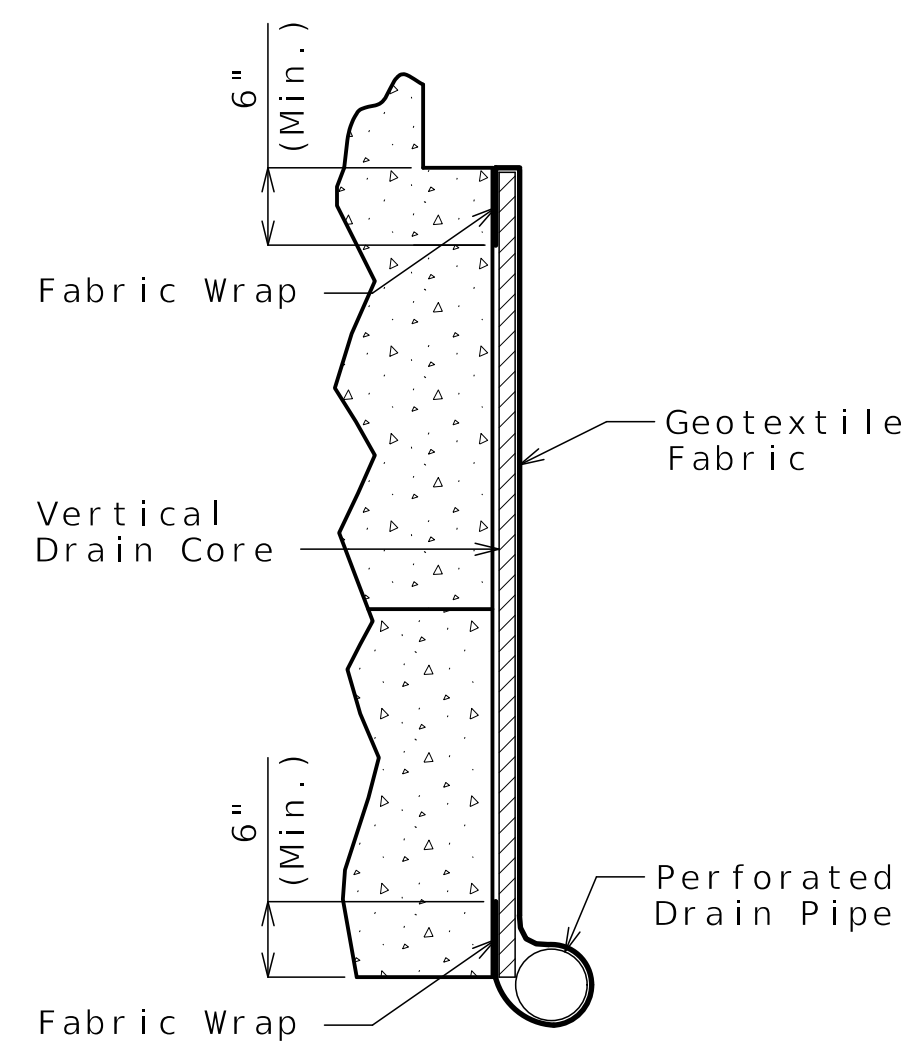
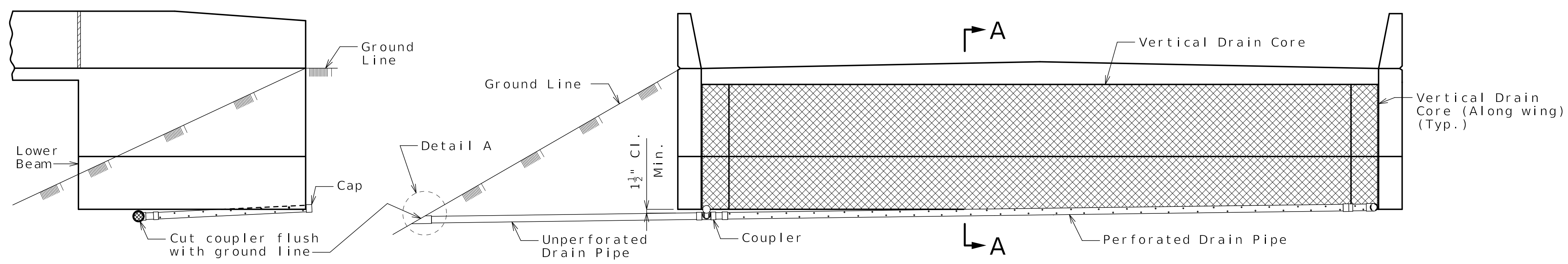
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Not to Scale  
Revision: 0.0  
Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst

DETAILS OF END BENT NO. 1



715 KIRK DRIVE  
KANSAS CITY, MO 64105-1310  
CERTIFICATE OF AUTHORITY  
NO. 001270





**OPTIONAL TURNED DRAIN**  
(Use only when straight drain is not practical.)

**General Notes:**

Details shown are illustrative and not necessarily representative of one or both end bents on this bridge. Construction phasing and bridge geometry will require utilizing a combination of the details shown to construct a vertical drain system that maintains positive flow out and away from the end bents.

Square end bent shown, skewed end bent similar.

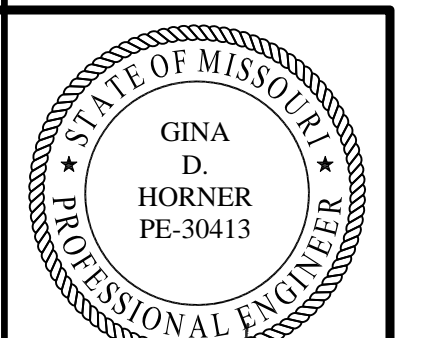
All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

**VERTICAL DRAIN AT END BENTS**



Gina D. Horner  
06/03/25

DATE PREPARED 06/02/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B05-08
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO.  
A9622

DATE	DESCRIPTION
06/02/25	REV 0 - RFC SUBMITTAL

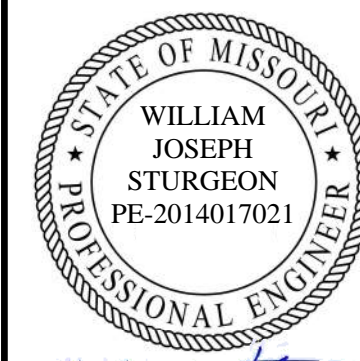
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE  
KANSAS CITY, MO 64105-1310  
CERTIFICATE OF AUTHORITY  
NO. 001270

**Released For Construction**  
Not to Scale  
Revision: 0.0  
Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst



6/3/2025

DATE PREPARED  
06/02/2025

ROUTE 1-70 STATE MO

DISTRICT BR SHEET NO. B05-09

COUNTY JACKSON

JOB NO. J411486D

CONTRACT ID. 240807-C01

PROJECT NO.

BRIDGE NO. A9622

DESCRIPTION

REV 0 - RFC SUBMITTAL

DATE 06/02/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

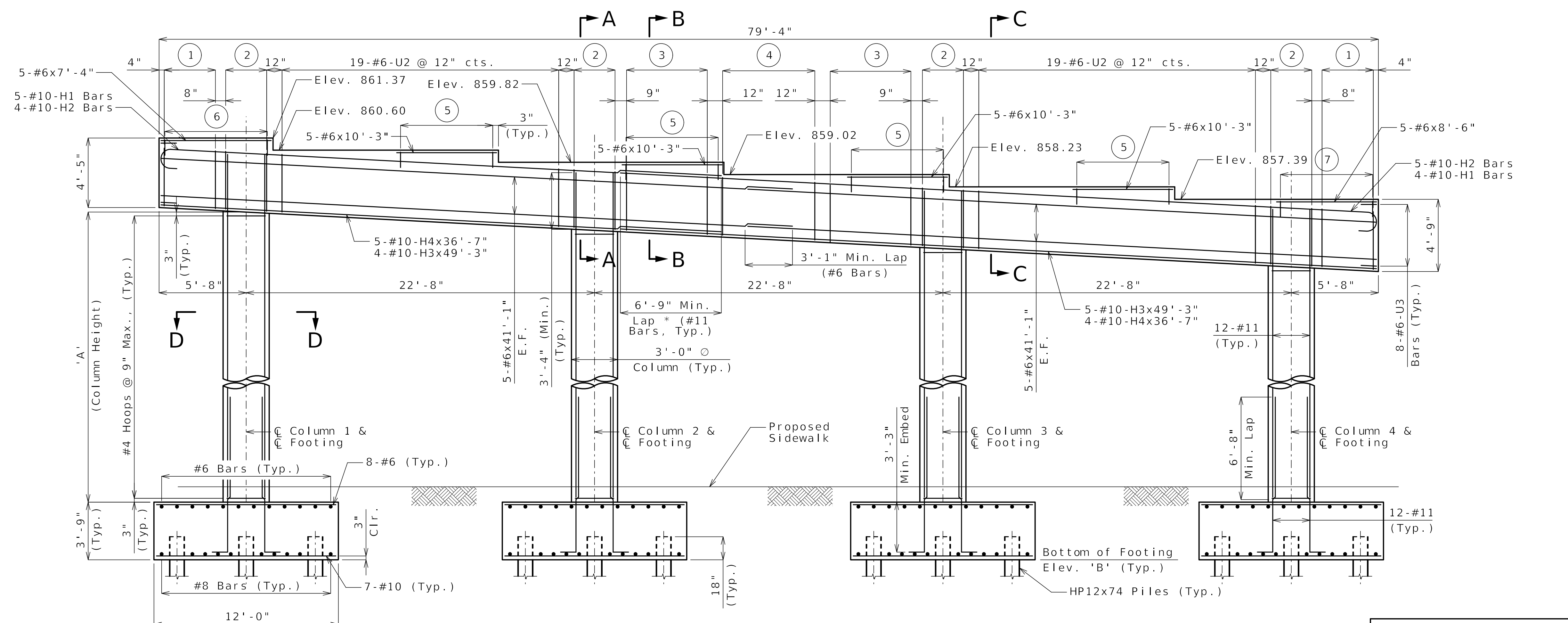
MoDOT

CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE KANSAS CITY, MO 64105-1310

CERTIFICATE OF AUTHORITY NO. 001270

HNTB

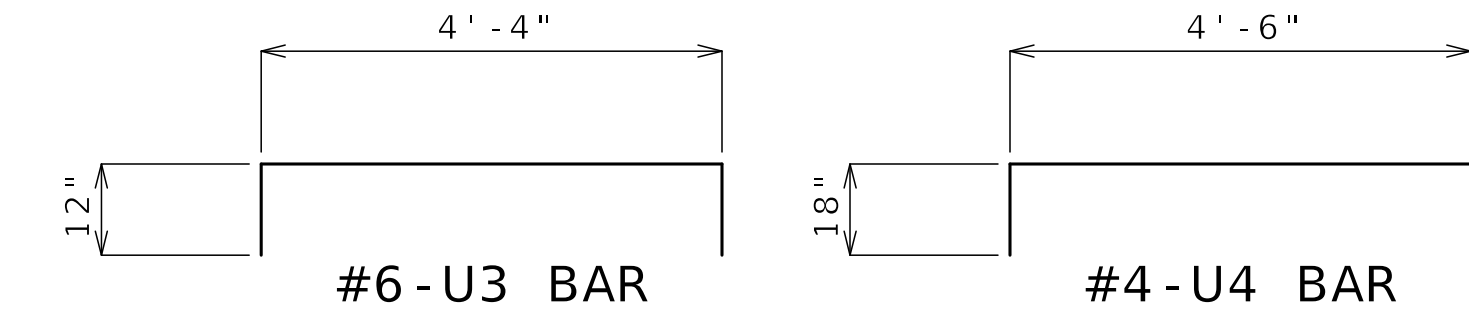


Column Number	"A"	"B"
1	14'-9 $\frac{1}{2}$ "	838.10
2	14'-9 $\frac{1}{8}$ "	836.90
3	14'-7 $\frac{5}{8}$ "	835.80
4	14'-6"	834.70

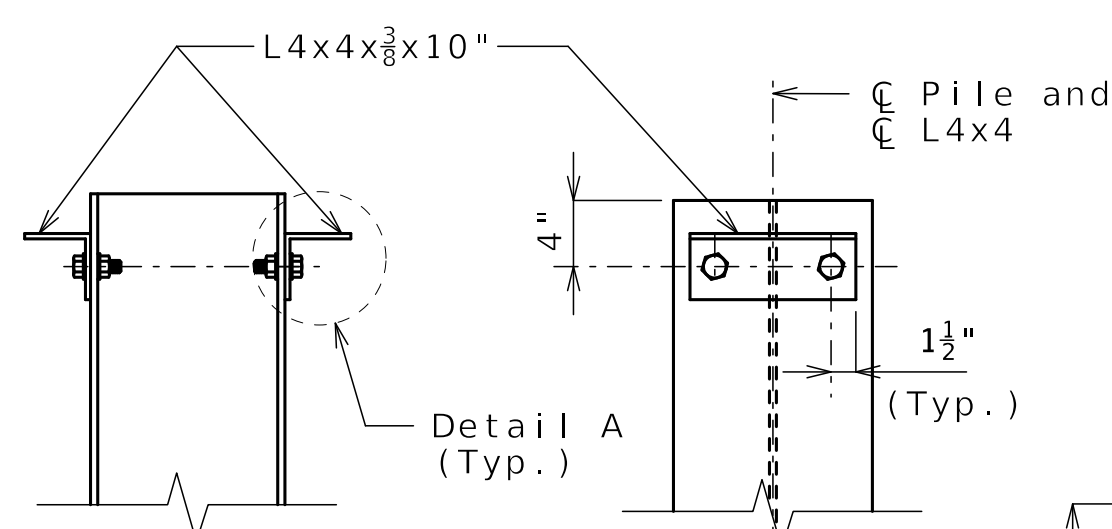
- ① 6-#6-U2 @ 8" cts.
- ② 3-#6-U1 @ 16" cts.
- ③ 8 Sets of 1-#6-U2 & 2-#6 Tie Bars @ 9" cts.
- ④ 7-#6-U2 @ 12" cts.
- ⑤ 21-#4-U4 @ 6" Spa.
- ⑥ 15-#4-U4 @ 6" Spa.
- ⑦ 17-#4-U4 @ 6" Spa.

36'-7" (#11-H1)  
49'-3" (#11-H2)

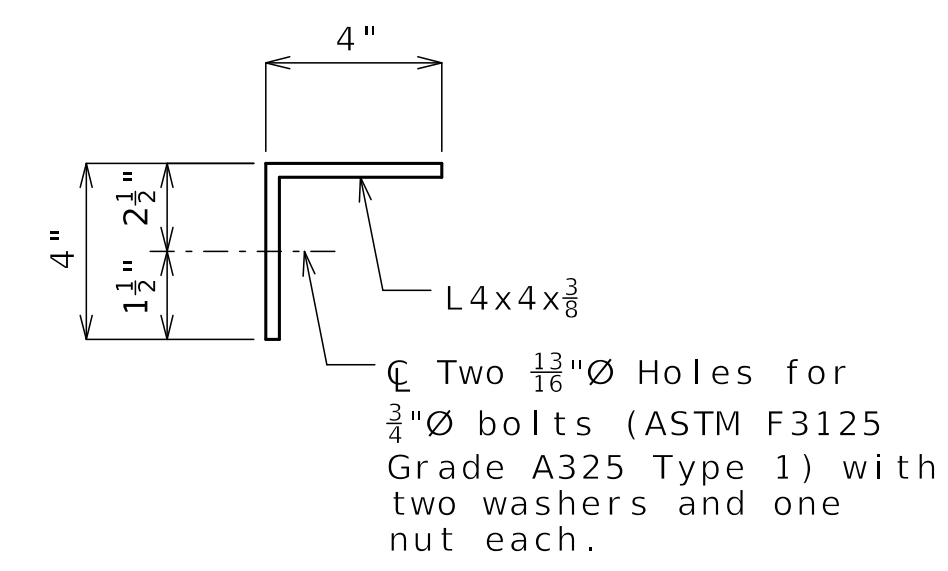
#11-H1 & #11-H2



Notes:  
 \* Alternate location of lap splices between adjacent bars about centerline of bent. Alternate lap splice location not shown.  
 Prior to placing concrete for columns, position of vertical reinforcement shall be verified so as to provide clearance for capbeam reinforcement as applicable.  
 Work this sheet with Sheet No. B05-10.  
 For location of footings, see Sheet No. B05-04.  
 For Sections A-A thru D-D, see Sheet No. B05-10.  
 For Steel Pile Splice detail, see Sheet No. B05-05.

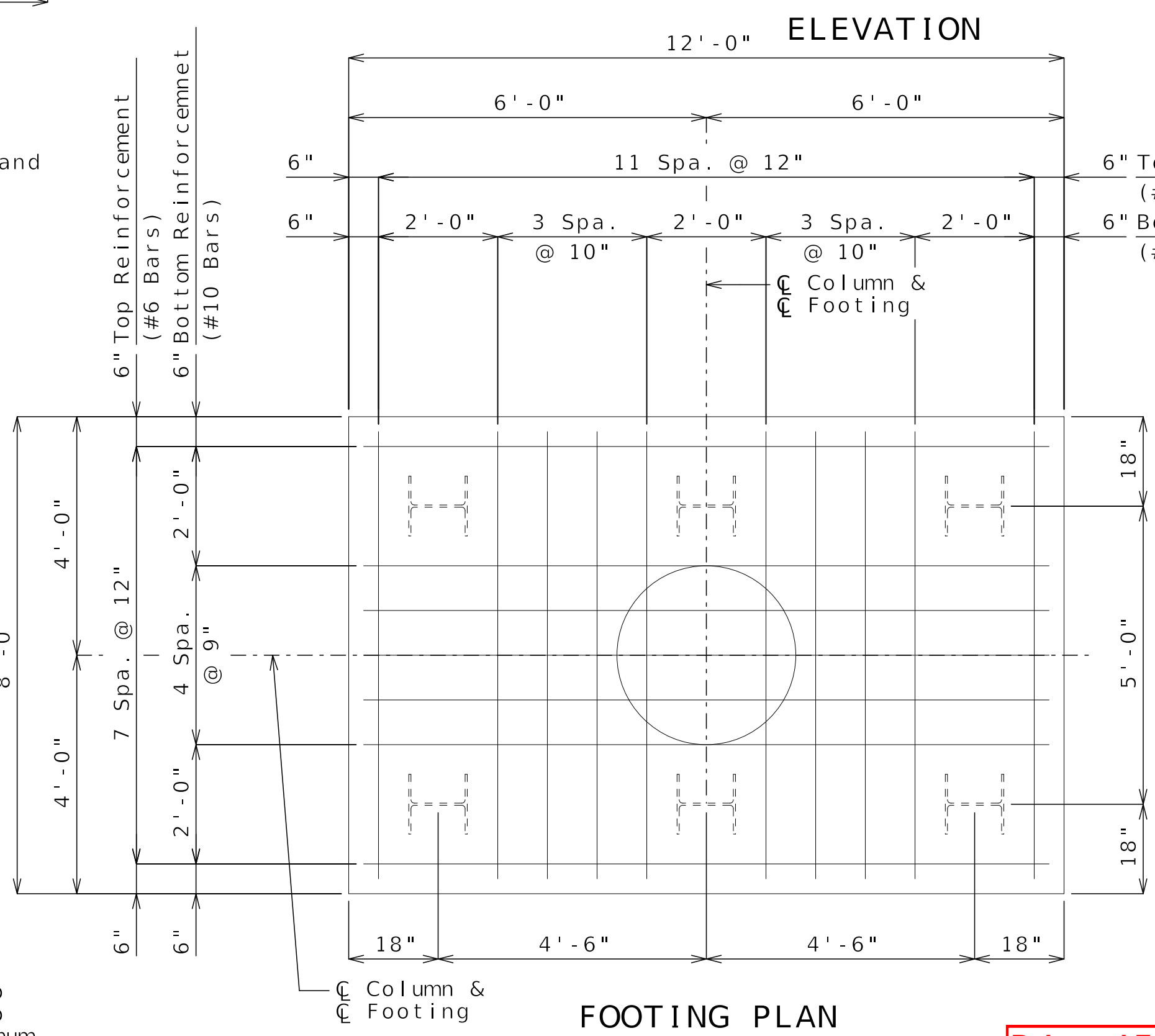


DETAILS OF HP PILE ANCHORS



DETAIL A

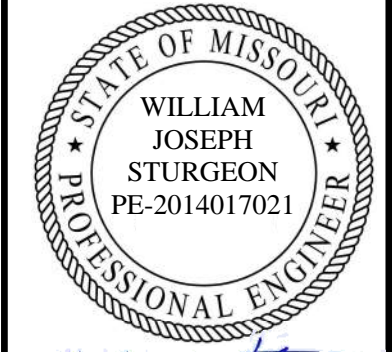
Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.



FOOTING PLAN

Released For Construction  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

DETAILS OF INTERMEDIATE BENT NO. 2



6/3/2025

DATE PREPARED  
06/02/2025

ROUTE STATE  
I-70 MO

DISTRICT SHEET NO.  
BR B05-10

COUNTY  
JACKSON

JOB NO.  
J411486D

CONTRACT ID.  
240807-C01

PROJECT NO.

BRIDGE NO.  
A9622

DESCRIPTION

REV 0 - RFC SUBMITTAL

DATE

06/02/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

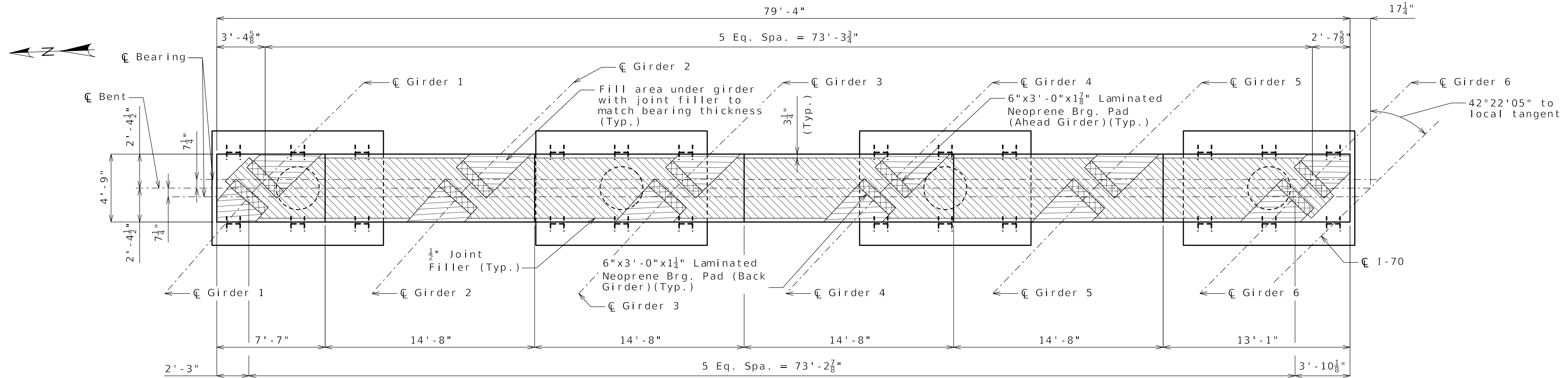
MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

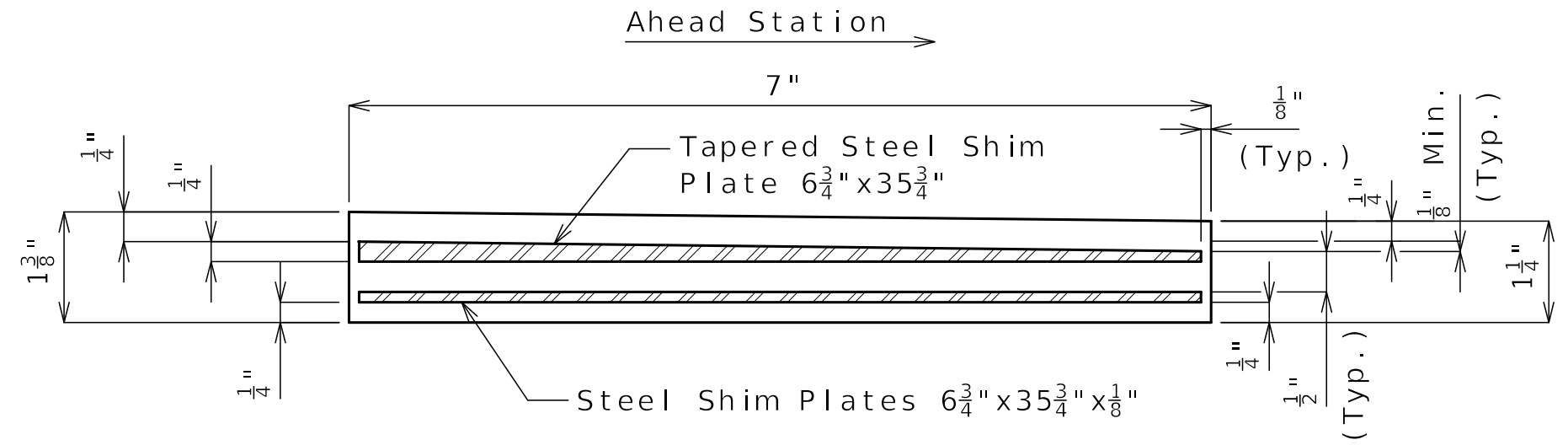
1-888-ASK-MODOT (1-888-275-6636)

CERTIFICATE OF AUTHORITY NO. 001270

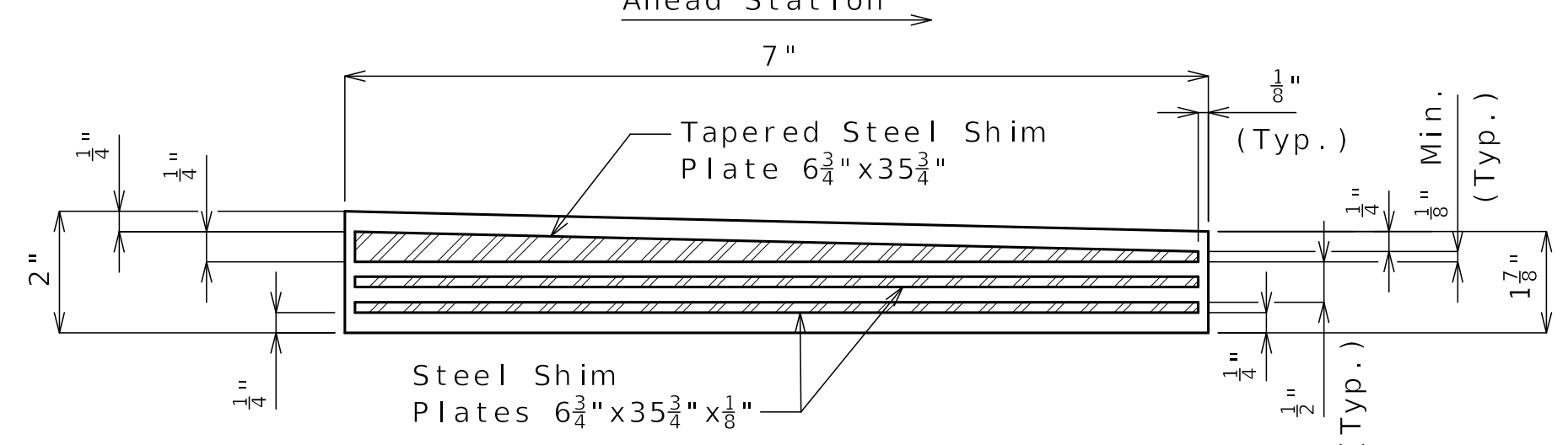
HNTB



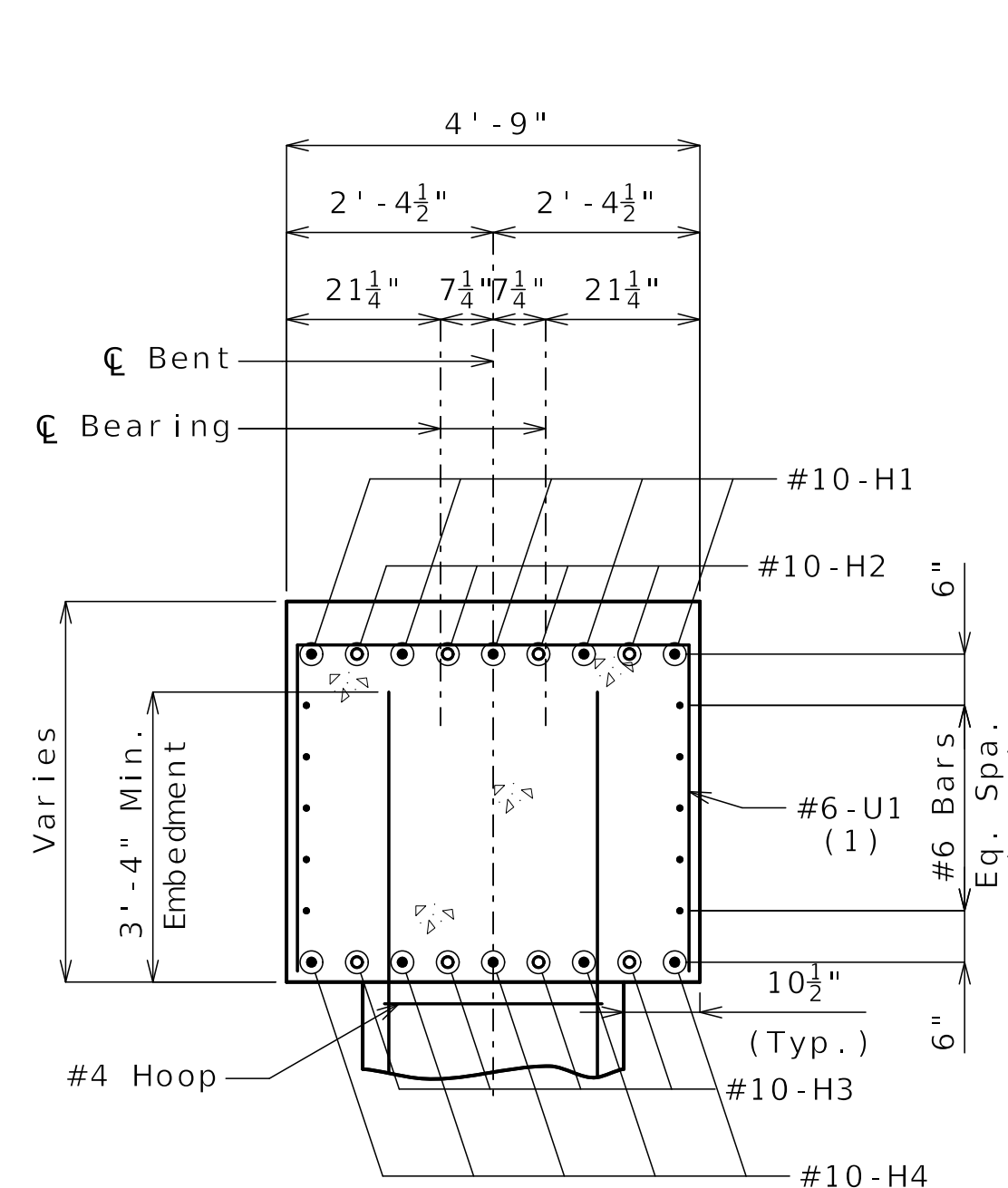
PLAN OF CAPBEAM



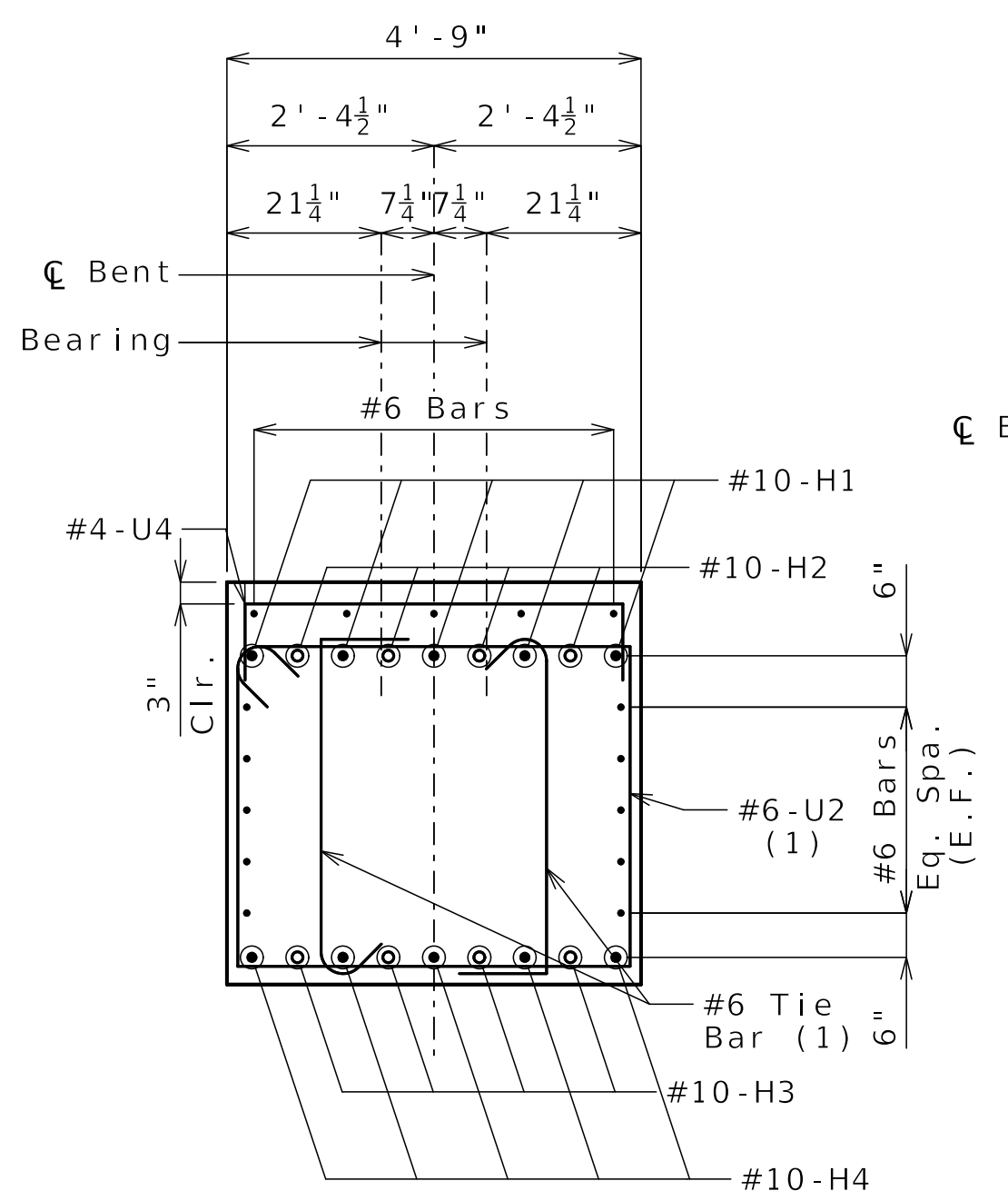
TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD (TAPERED)  
Bent 2 Back-6 Required



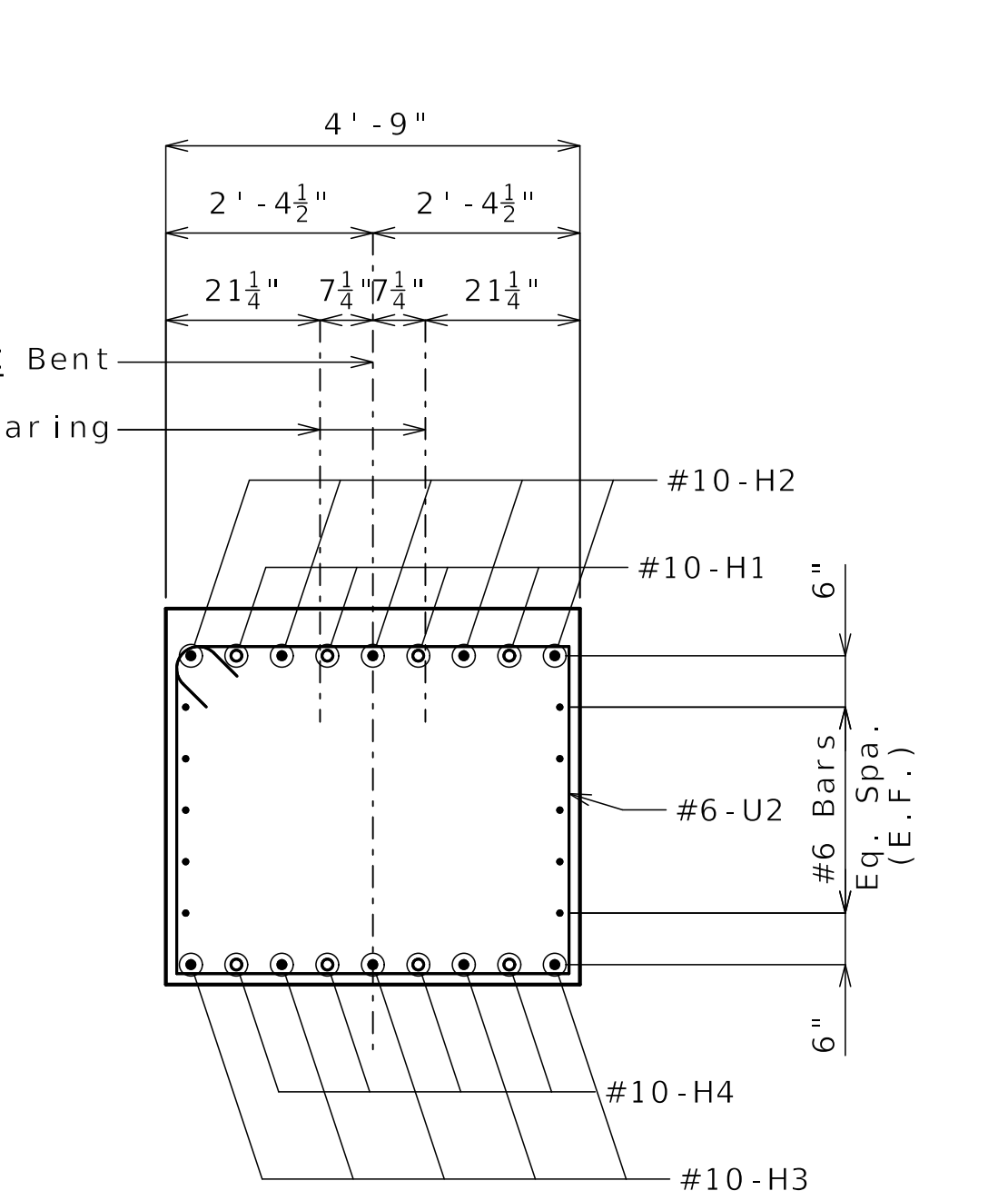
TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD (TAPERED)  
Bent 2 Ahead-6 Required



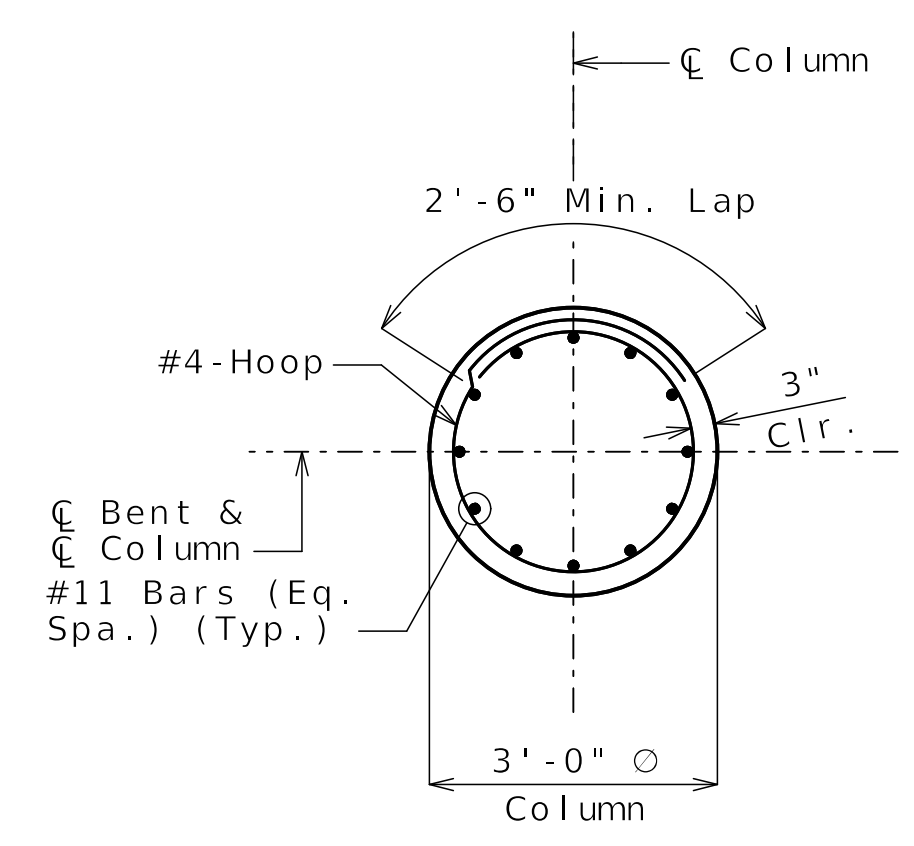
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

Notes:  
Work this sheet with Sheet No. B05-09.  
For angle of girders relative to  $\bar{C}$  Bent, see A9622 (I-70 WB Over Benton) Superstructure Package.  
For additional joint filler layout details, see concrete diaphragm details sheet in A9622 (I-70 WB Over Benton) Superstructure Package.  
For steps 2 inches or more, use 2 1/2" x 1/2" inch joint filler up vertical face.

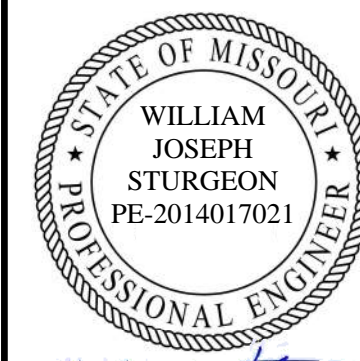
DETAILS OF INTERMEDIATE BENT NO. 2

Released For Construction  
Not to Scale  
Revision: 0.0  
Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst

Detailed FEB 2025  
Checked MAR 2025

Note: This drawing is not to scale. Follow dimensions.

Sheet No. B05-10 of B05-29



6/3/2025

DATE PREPARED  
06/02/2025

ROUTE  
1-70 STATE  
MO

DISTRICT  
BR SHEET NO.  
B05-11

COUNTY  
JACKSON

JOB NO.  
J411486D

CONTRACT ID.  
240807-C01

PROJECT NO.

BRIDGE NO.  
A9622

DESCRIPTION

REV 0 - RFC SUBMITTAL

DATE

06/02/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

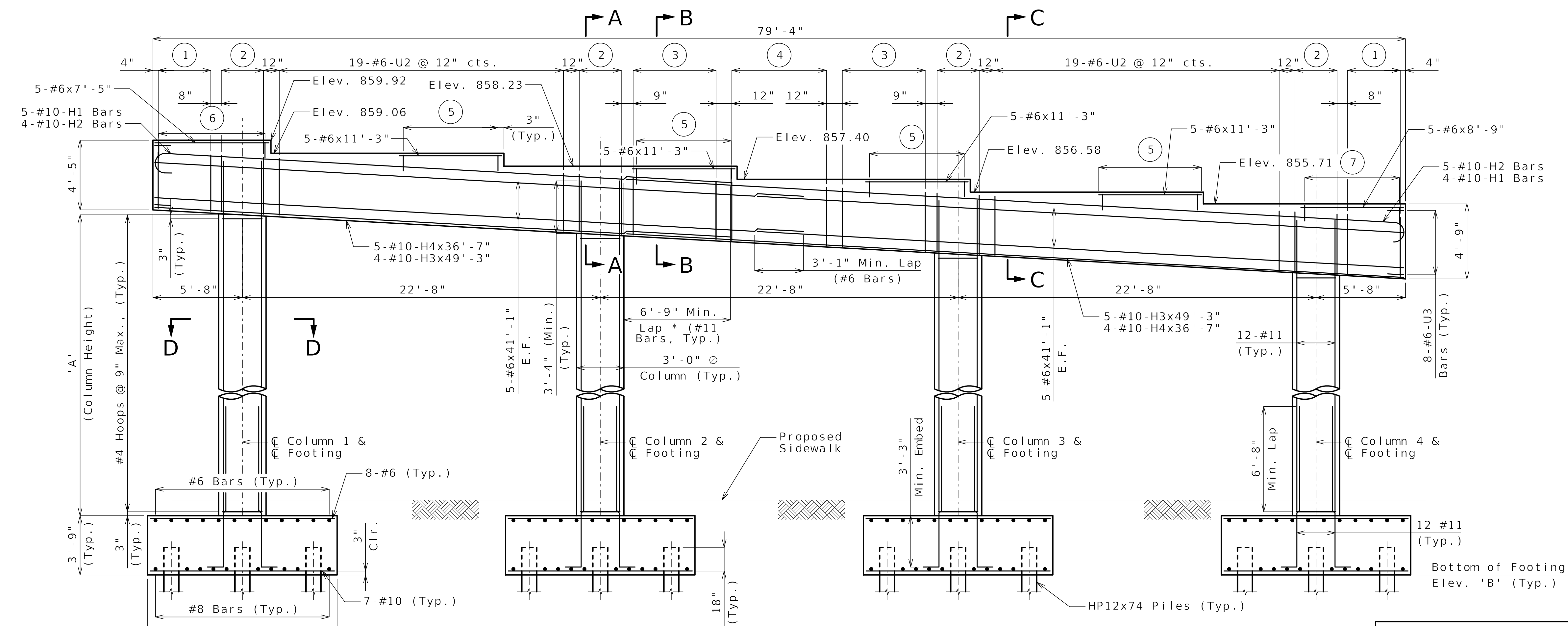
MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

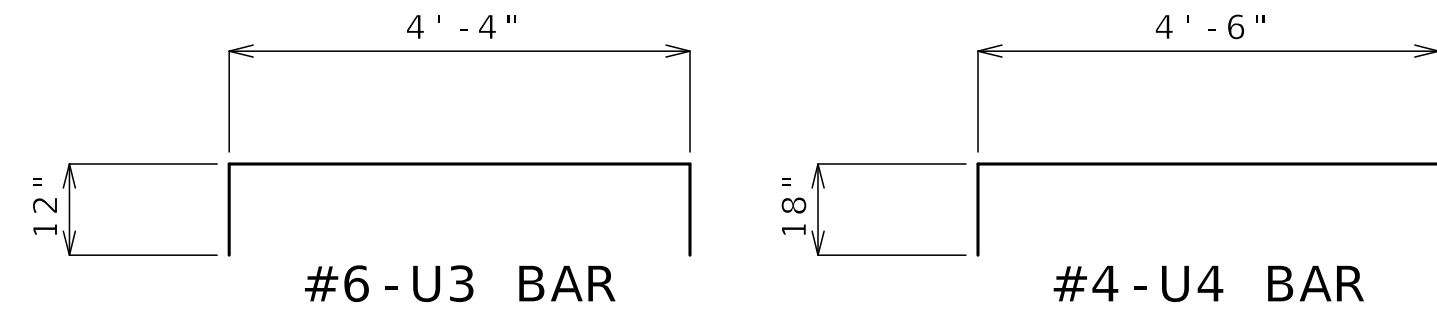
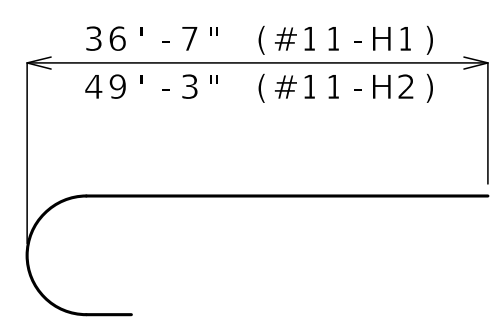
CERTIFICATE OF AUTHORITY NO. 001270

HNTB



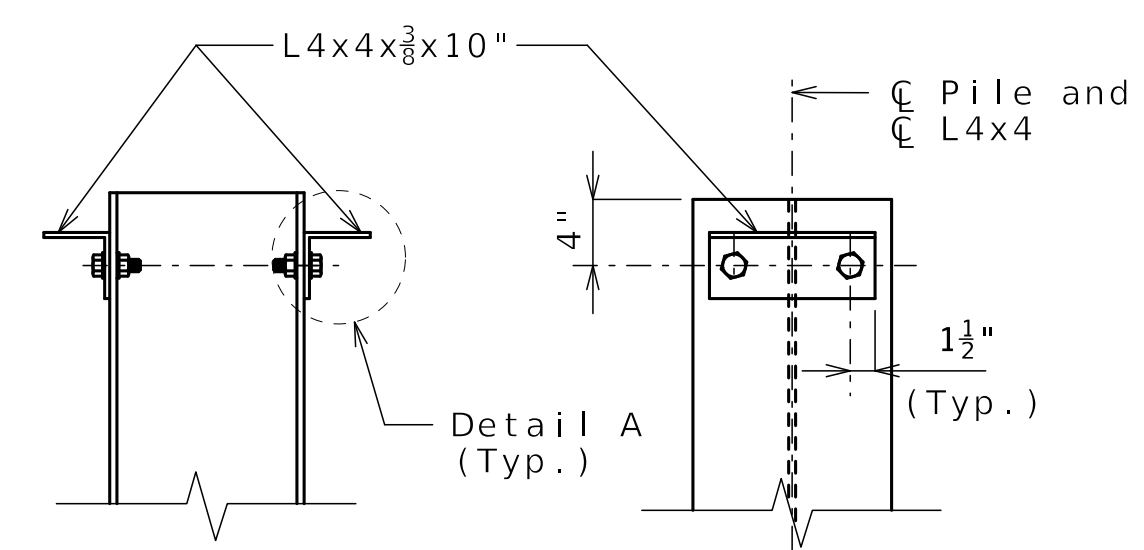
Column Number	"A"	"B"
1	15' - 11 <sup>1</sup> / <sub>8</sub> "	835.50
2	15' - 8 <sup>1</sup> / <sub>8</sub> "	834.40
3	15' - 7 <sup>1</sup> / <sub>8</sub> "	833.20
4	15' - 5 <sup>1</sup> / <sub>8</sub> "	832.10

- ① 6-#6-U2 @ 8" cts.
- ② 3-#6-U1 @ 16" cts.
- ③ 8 Sets of 1-#6-U2 & 2-#6 Tie Bars @ 9" cts.
- ④ 7-#6-U2 @ 12" cts.
- ⑤ 23-#4-U4 @ 6" Spa.
- ⑥ 15-#4-U4 @ 6" Spa.
- ⑦ 18-#4-U4 @ 6" Spa.

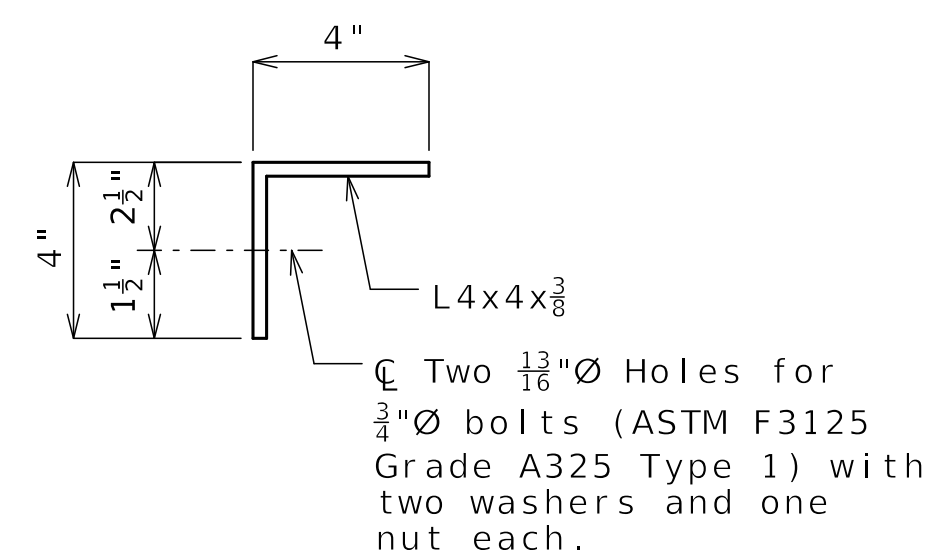


**Released For Construction**  
Not to Scale  
Revision: 0.0  
Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst

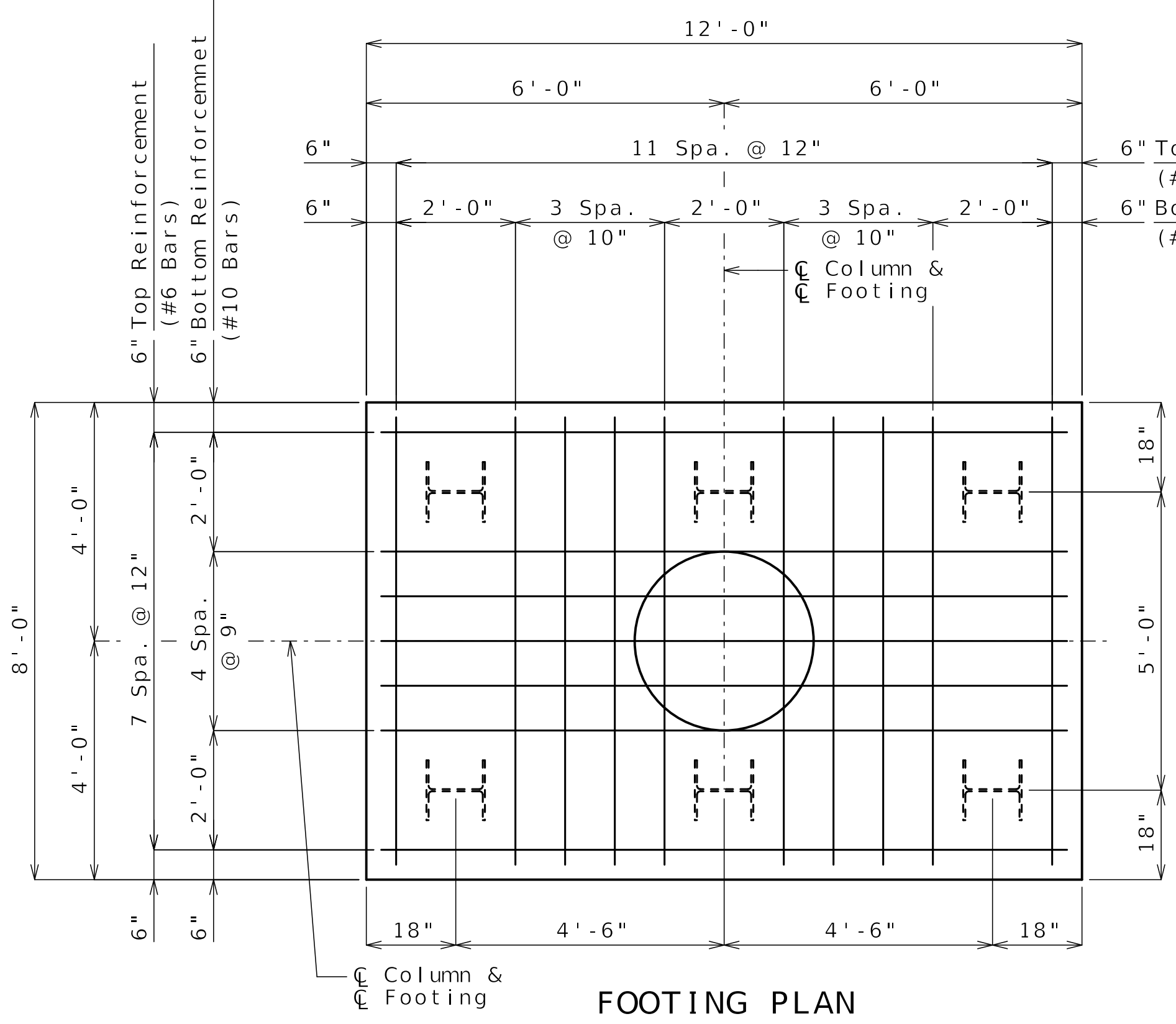
Notes:  
\* Alternate location of lap splices between adjacent bars about centerline of bent. Alternate lap splice location not shown.  
Prior to placing concrete for columns, position of vertical reinforcement shall be verified so as to provide clearance for capbeam reinforcement as applicable.  
Work this sheet with Sheet No. B05-12.  
For location of footings, see Sheet No. B05-04.  
For Sections A-A thru D-D, see Sheet No. B05-12.  
For Steel Pile Splice detail, see Sheet No. B05-05.

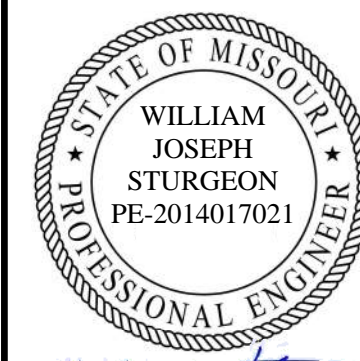


DETAILS OF HP PILE ANCHORS



Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.





6/3/2025

DATE PREPARED  
06/02/2025

ROUTE STATE  
1-70 MO

DISTRICT SHEET NO.  
BR B05-12

COUNTY  
JACKSON

JOB NO.  
J411486D

CONTRACT ID.  
240807-C01

PROJECT NO.

BRIDGE NO.  
A9622

DESCRIPTION  
REV 0 - RFC SUBMITTAL

DATE  
06/02/25

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

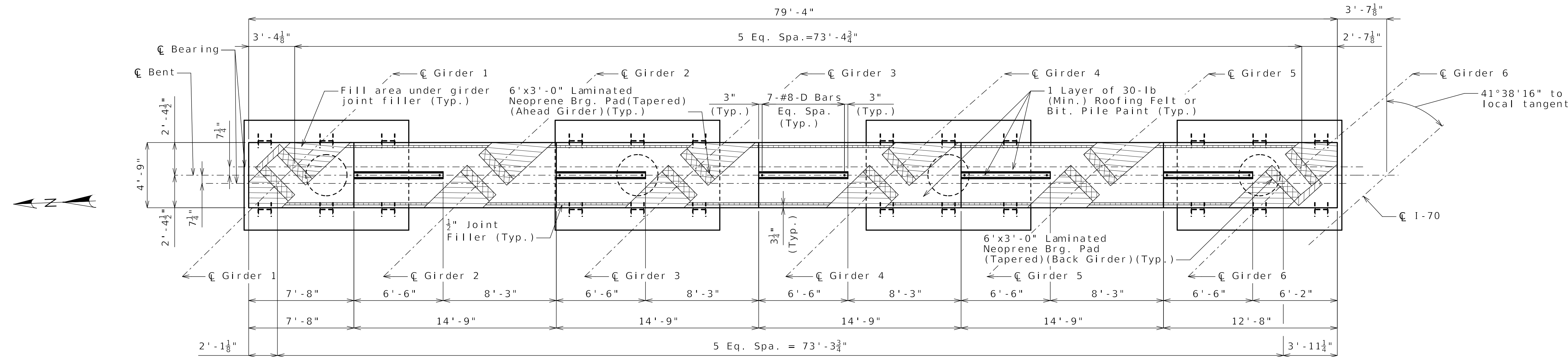
MoDOT

CLARKSON  
RADMACHER  
JOINT VENTURE

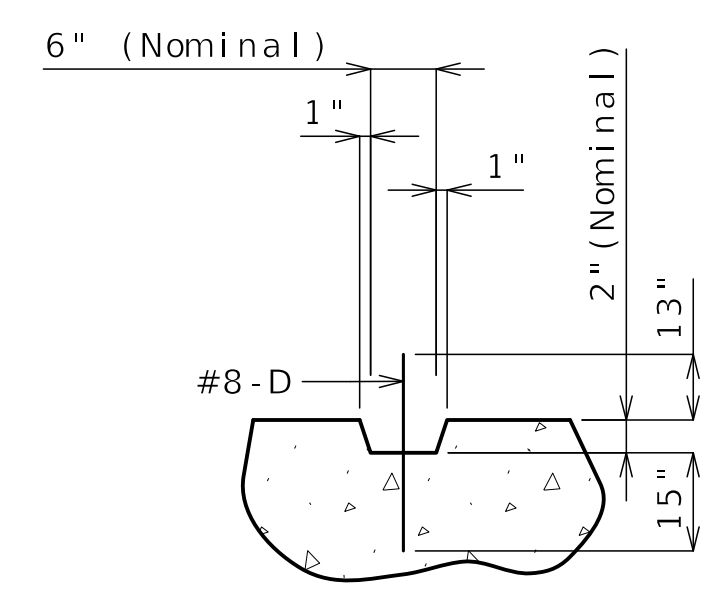
715 KIRK DRIVE  
KANSAS CITY, MO 64105-1310

CERTIFICATE OF AUTHORITY  
NO. 001270

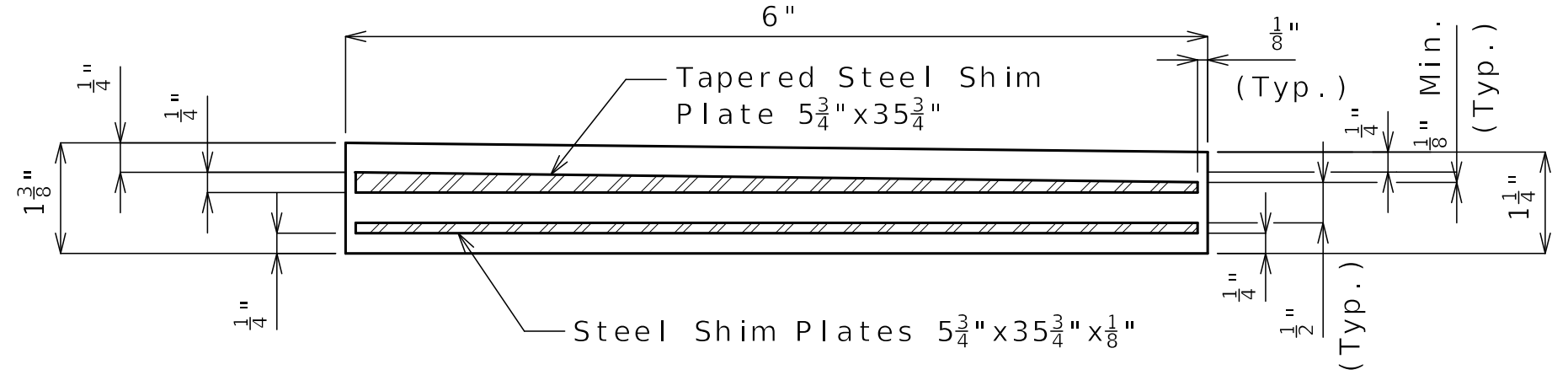
HNTB



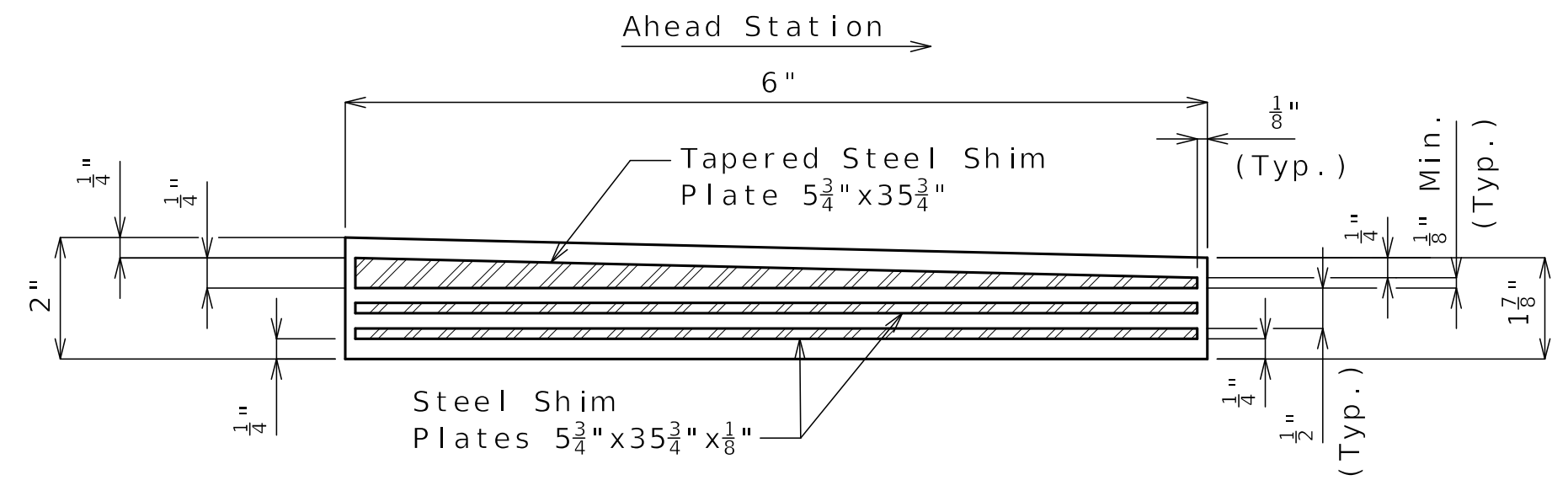
PLAN OF CAPBEAM



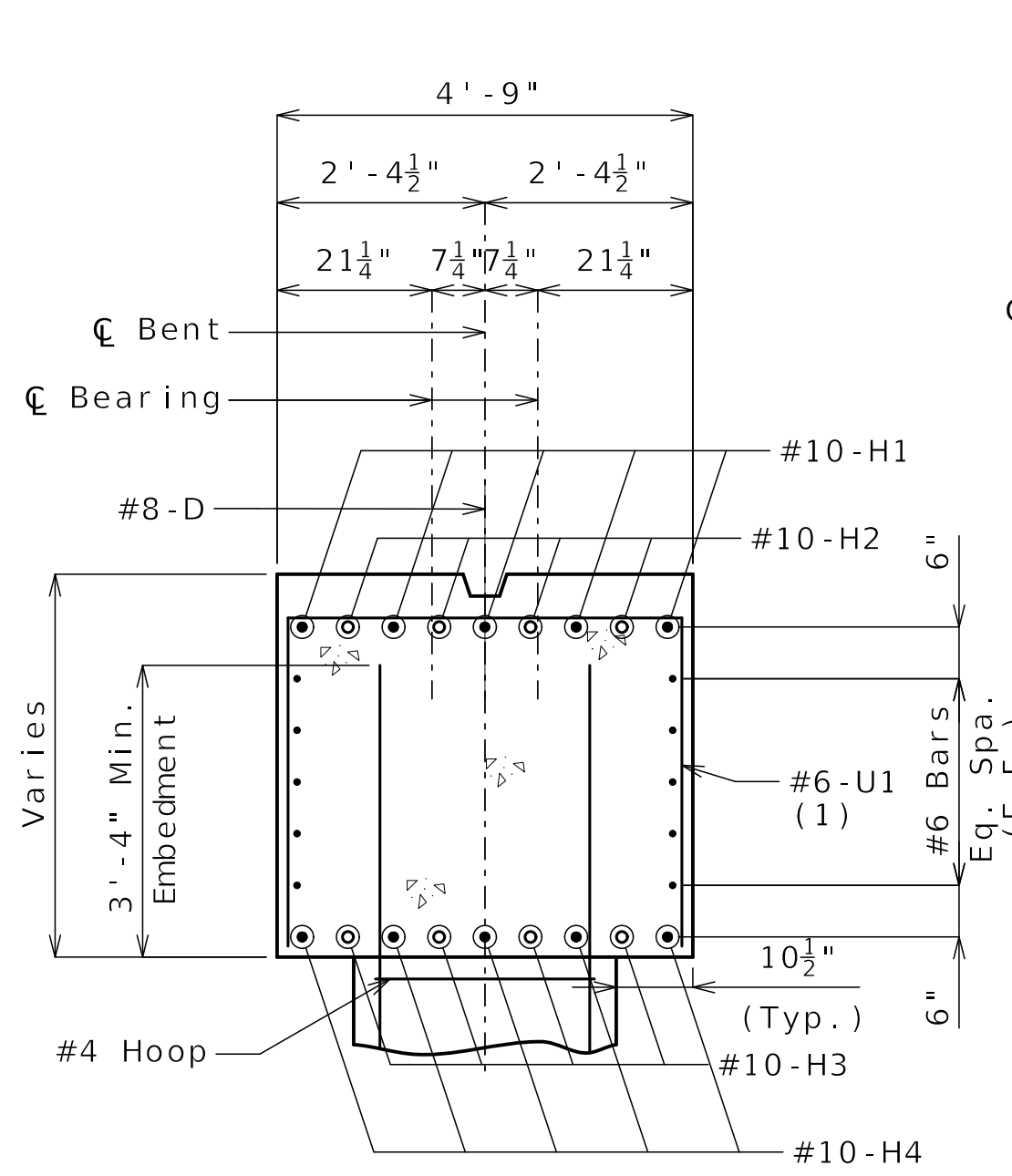
SECTION THRU KEY



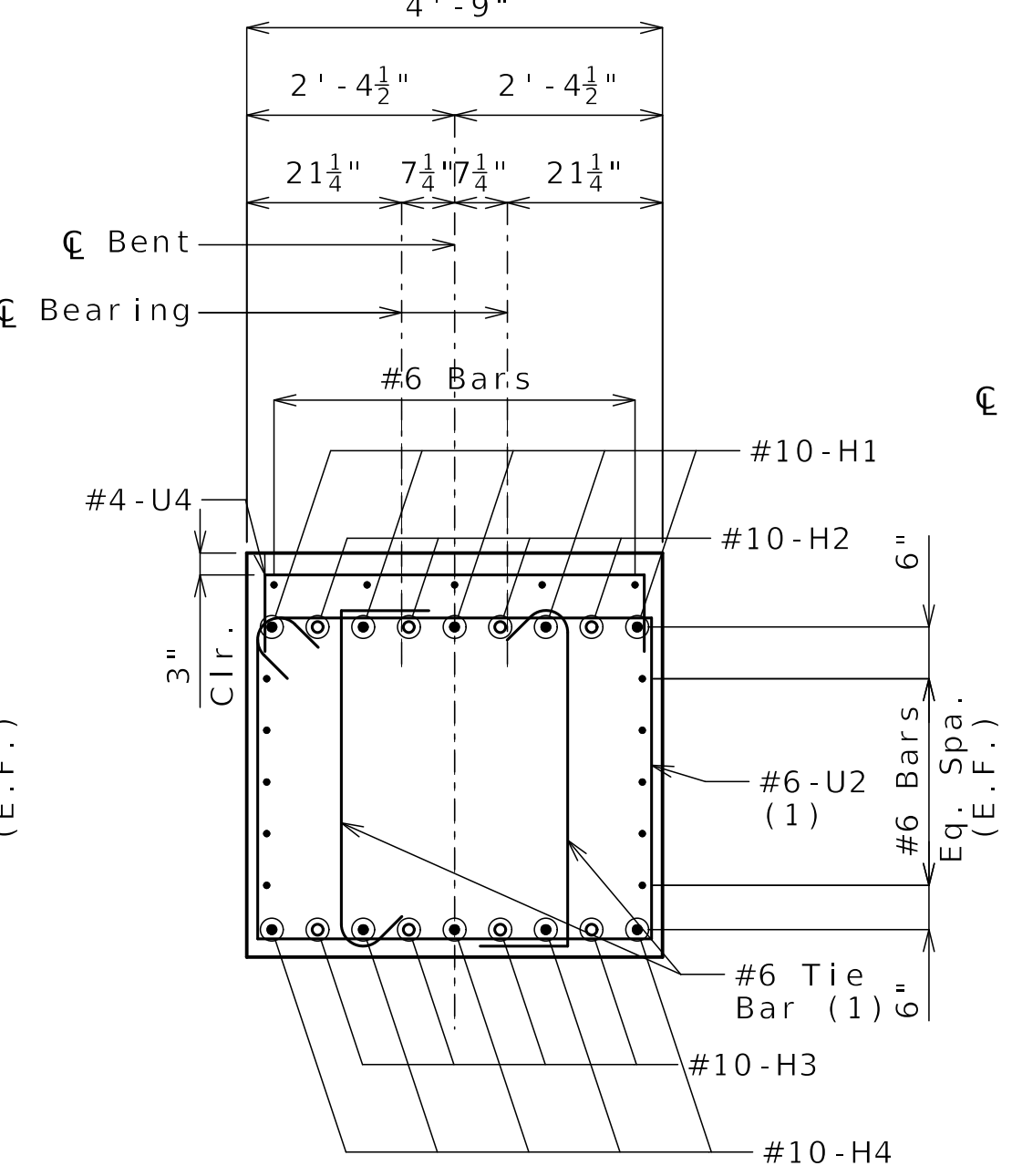
TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD (TAPERED)  
Bent 3 Back-6 Required



TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD (TAPERED)  
Bent 3 Ahead-6 Required

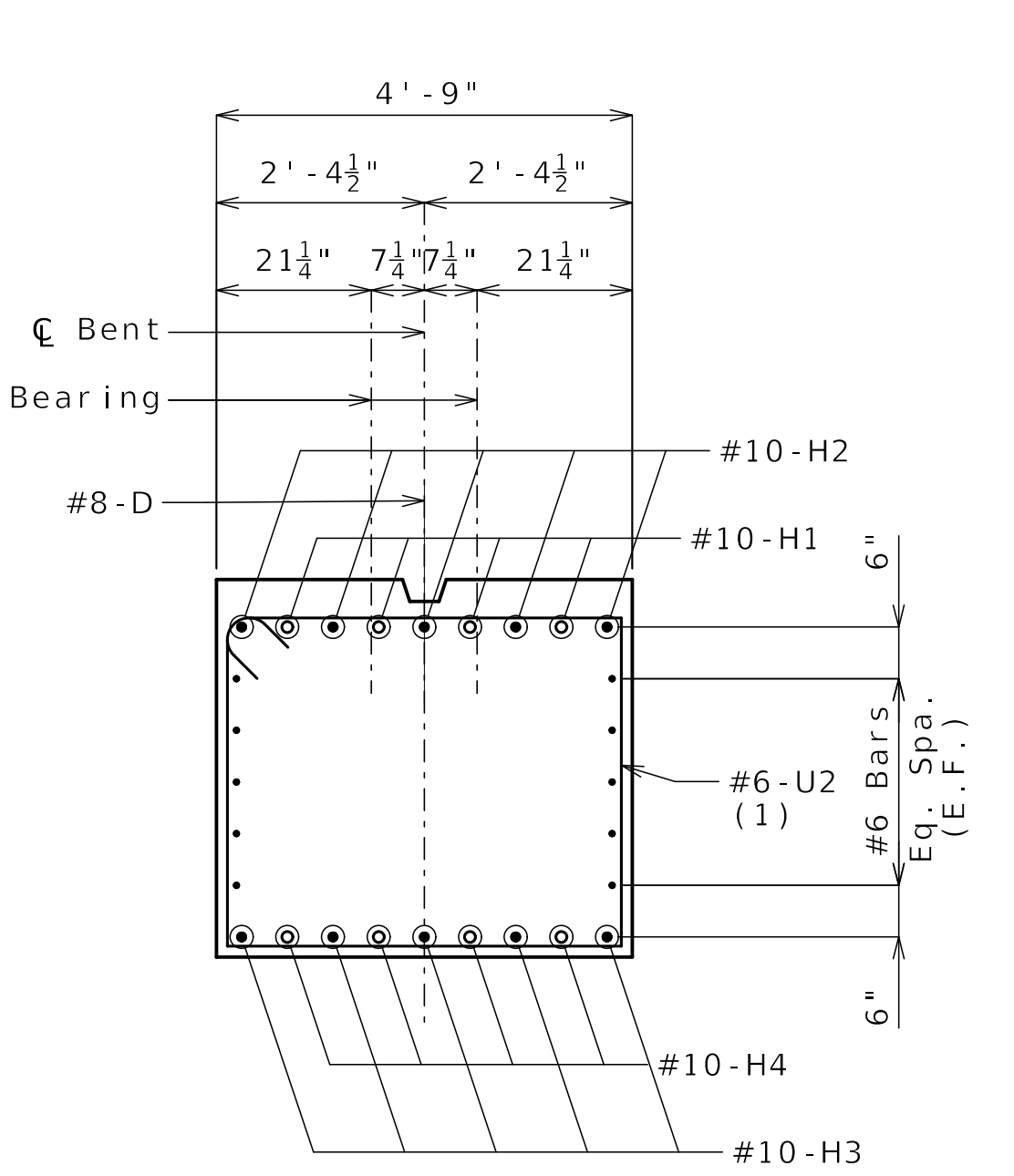


SECTION A-A

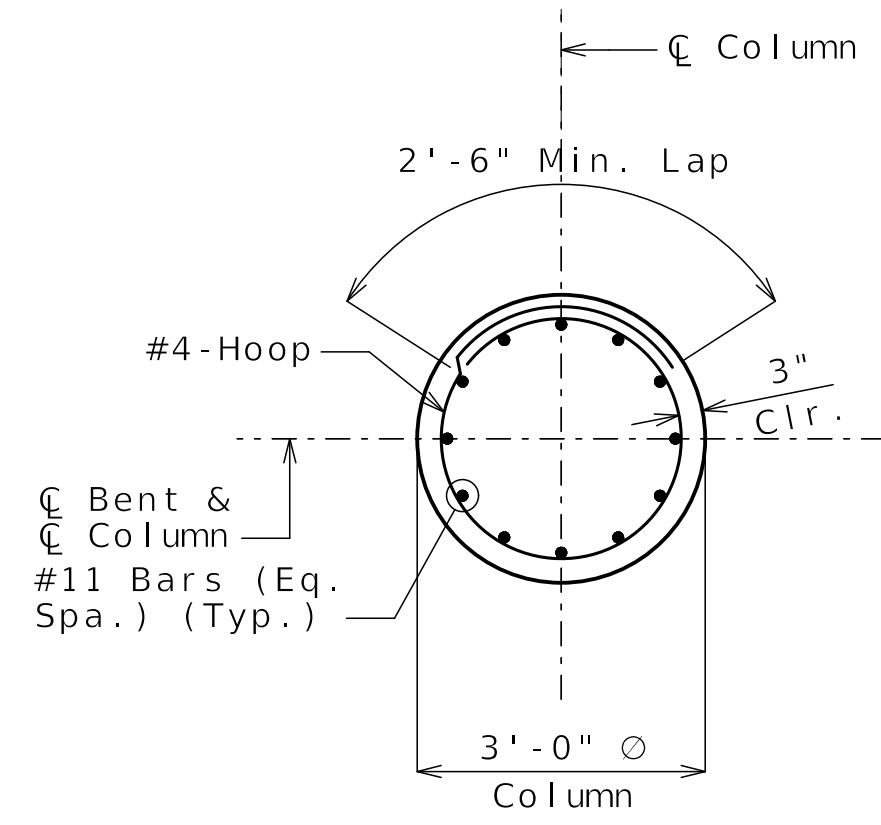


SECTION B-B

(1)U1, U2, and #6 Tie Bar vertical leg = 3'-7 1/2"



SECTION C-C



SECTION D-D

Notes:  
Work this sheet with Sheets No. B05-11.  
For angle of girders relative to Bent, see A9622 (I-70 WB Over Benton) Superstructure Package.  
For additional joint filler layout details, see concrete diaphragm details sheet in A9622 (I-70 WB Over Benton) Superstructure Package.  
For steps 2 inches or more, use 2 1/4" x 1/2" joint filler up vertical face.

DETAILS OF INTERMEDIATE BENT NO. 3

Released For Construction  
Not to Scale  
Revision: 0.0  
Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst

(1) Adjacent A9621 (I-70 EB Over Benton) end bent not shown. 1" joint filler required between adjacent concrete faces.



Gina D. Horner  
06/03/25

DATE PREPARED  
06/02/2025

ROUTE STATE  
I-70 MO  
DISTRICT SHEET NO.  
BR B05-13

COUNTY  
JACKSON

JOB NO.  
J411486D

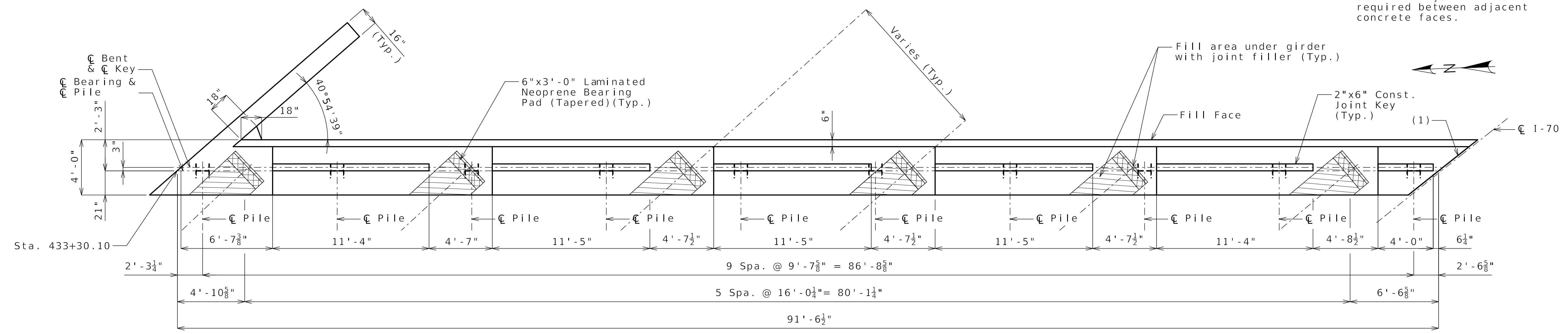
CONTRACT ID.  
240807-C01

PROJECT NO.  
BRIDGE NO.  
A9622

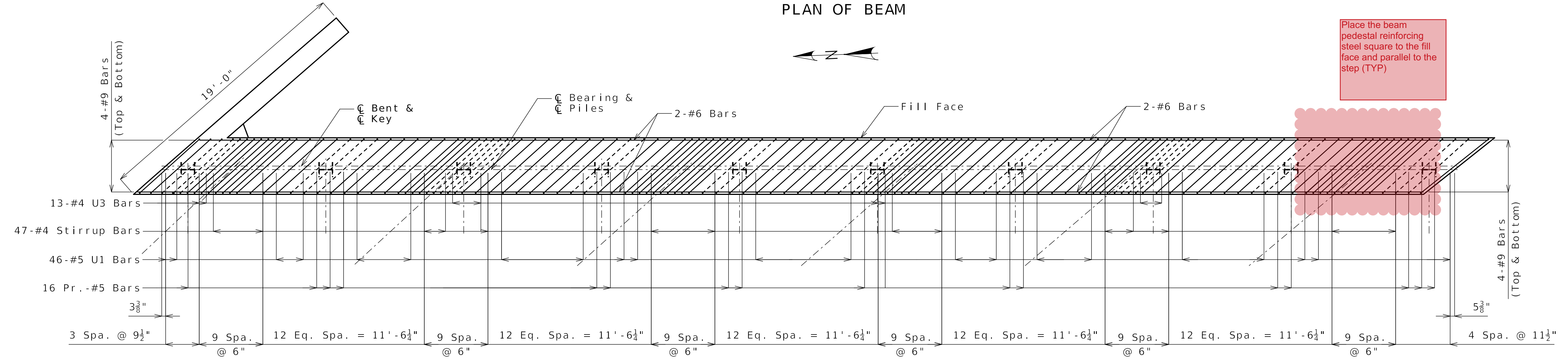
DESCRIPTION	DATE
REV 0 - RFC SUBMITTAL	06/02/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
MoDOT  
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

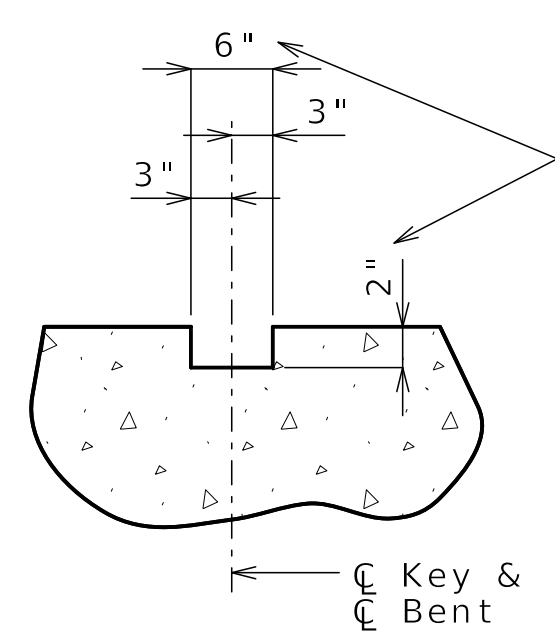
CLARKSON RADMACHER JOINT VENTURE  
715 KIRK DRIVE  
KANSAS CITY, MO 64105-1310  
CERTIFICATE OF AUTHORITY  
NO. 001270  
HNTB



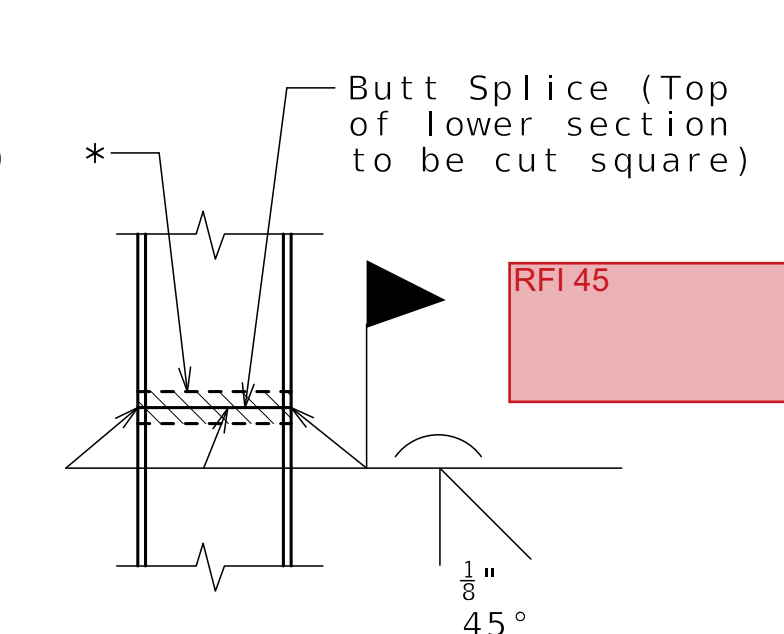
PLAN OF BEAM



PLAN OF BEAM SHOWING REINFORCING  
(Key and steps not shown for clarity.)

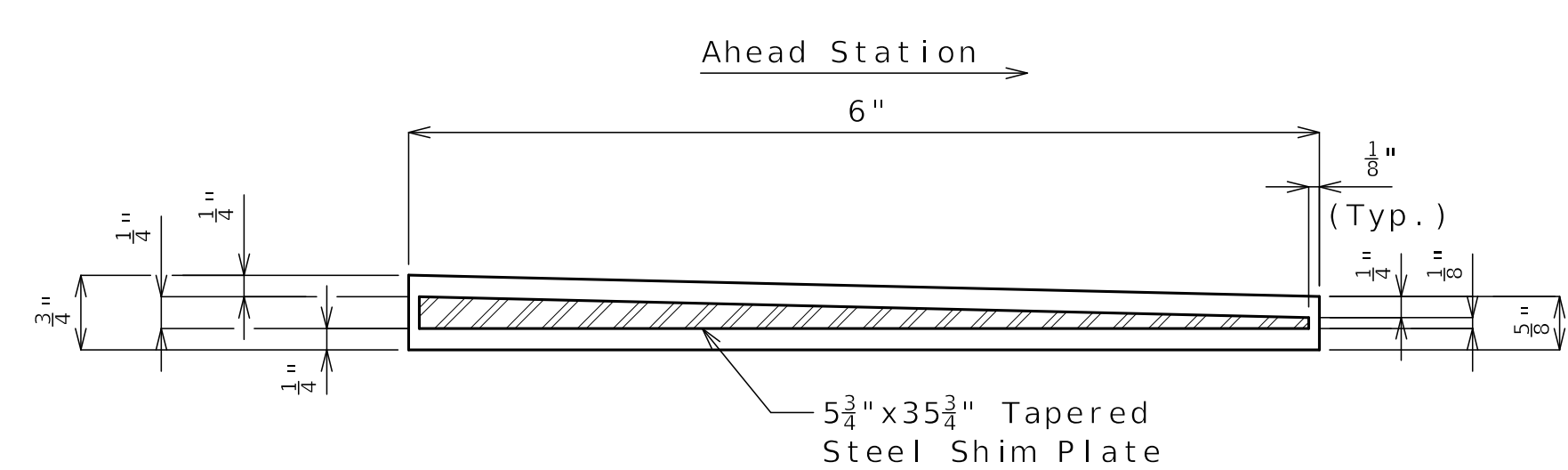


SECTION THRU KEY



STEEL PILE SPLICE  
(If required)

\* Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD (TAPERED)

6 Required

Released For Construction  
Not to Scale  
Revision: 0.0  
Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst

Notes:  
Work this sheet with Sheets No. B05-14 and B05-15.  
All U bars and pairs of vertical bars shall be placed along skew.  
Reinforcing steel shall be shifted to clear piles. U-bars shall clear piles by at least 1 1/2".  
For details of bridge approach slab, see A9622 (I-70 WB Over Benton) Superstructure Package.  
For angle of girders relative to C Bent, see A9622 (I-70 WB Over Benton) Superstructure Package.

DETAILS OF END BENT NO. 4



Gina D. Horner

06/03/25

DATE PREPARED

06/02/2025

ROUTE 1-70 STATE MO

DISTRICT BR SHEET NO. B05-14

COUNTY JACKSON

JOB NO. J411486D

CONTRACT ID. 240807-C01

PROJECT NO.

BRIDGE NO. A9622

DESCRIPTION

REV 0 - RFC SUBMITTAL

DATE 06/02/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

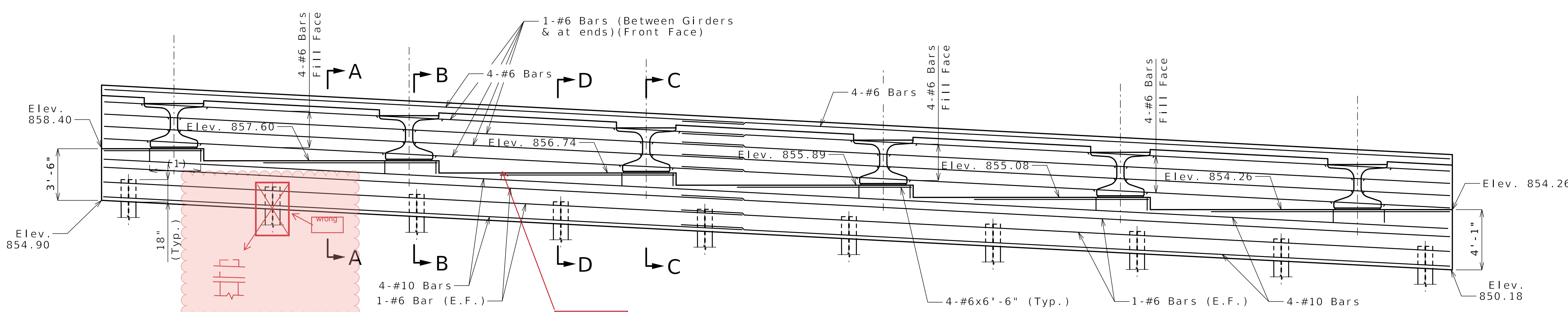
MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

CERTIFICATE OF AUTHORITY NO. 001270

HNTB

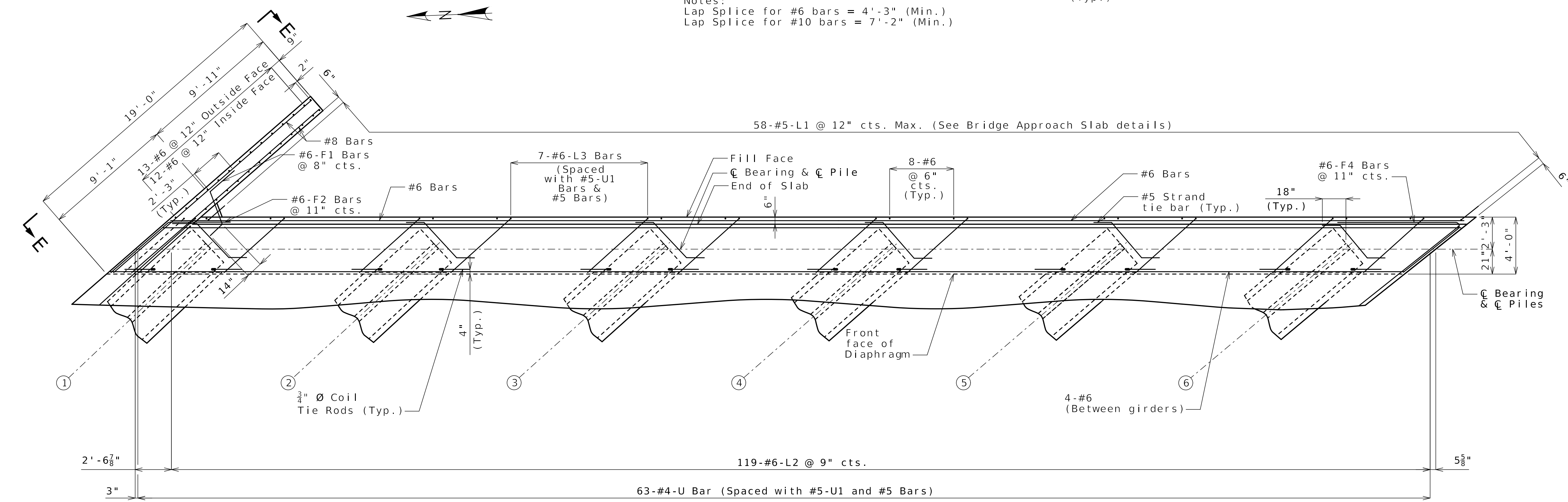


SECTION NEAR END BENT

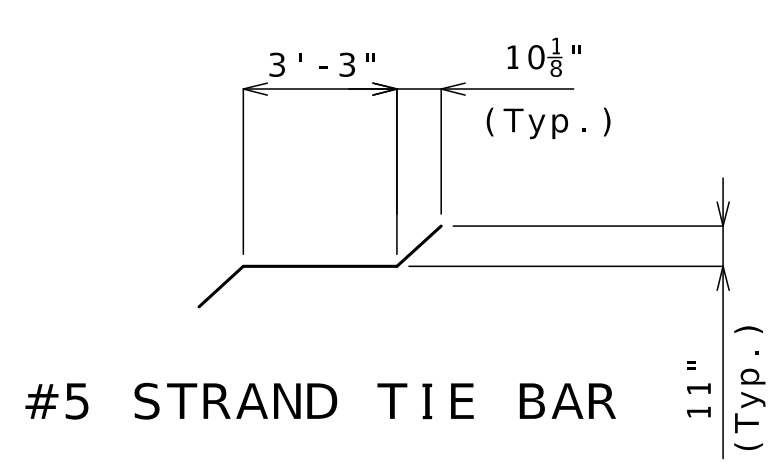
Notes:  
Lap Splice for #6 bars = 4'-3" (Min.)  
Lap Splice for #10 bars = 7'-2" (Min.)

(1) 10-#4-U4 Bars @ 6" Spa. undergirders (Typ.)

Grade mod for clearance - RFI 51



PART PLAN



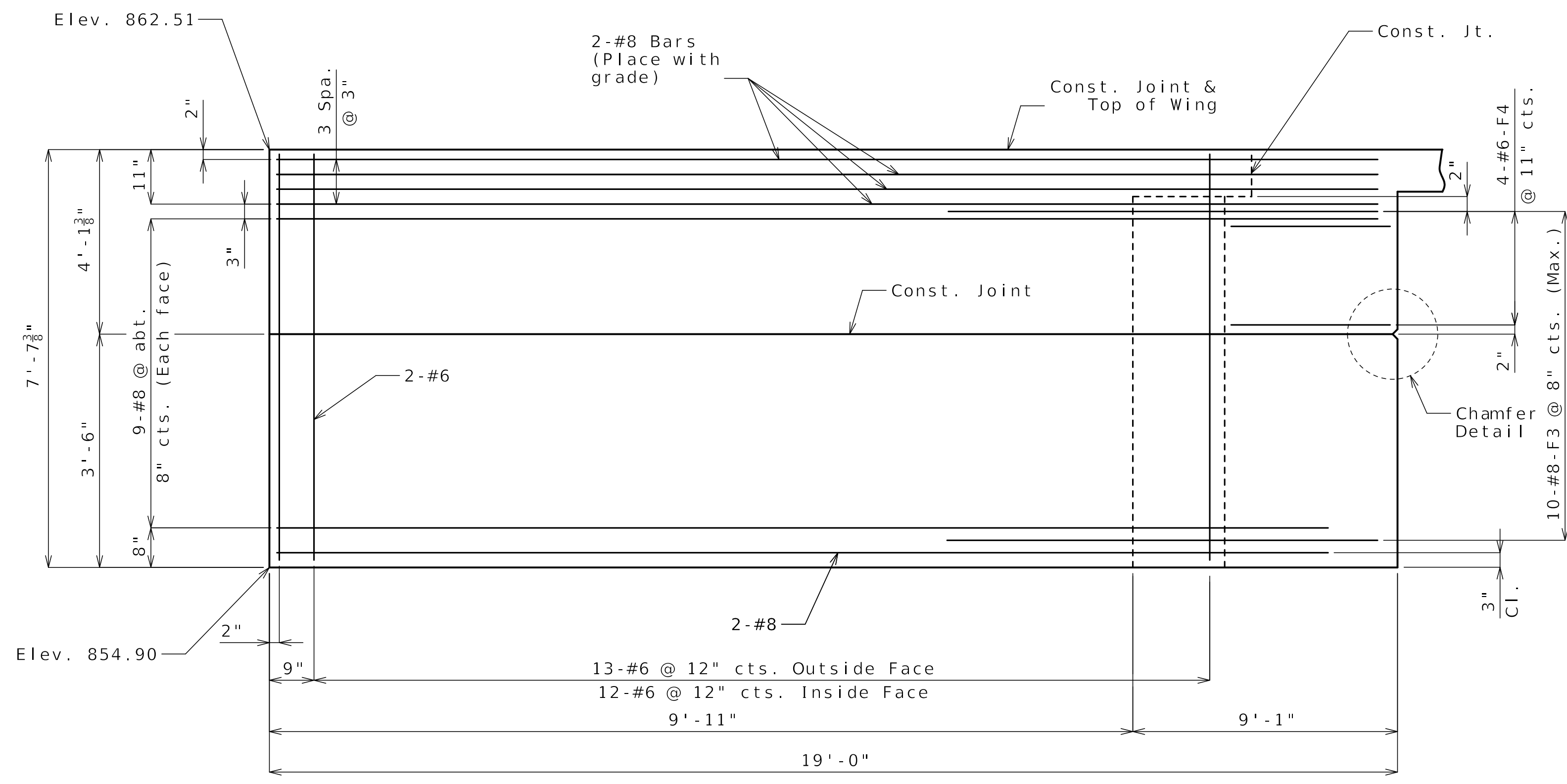
#5 STRAND TIE BAR

General Notes:  
Work this sheet with Sheets No. B05-13 and B05-15.  
For Sections A-A, B-B, C-C and D-D and Elevation E-E, see Sheet No. B05-15.

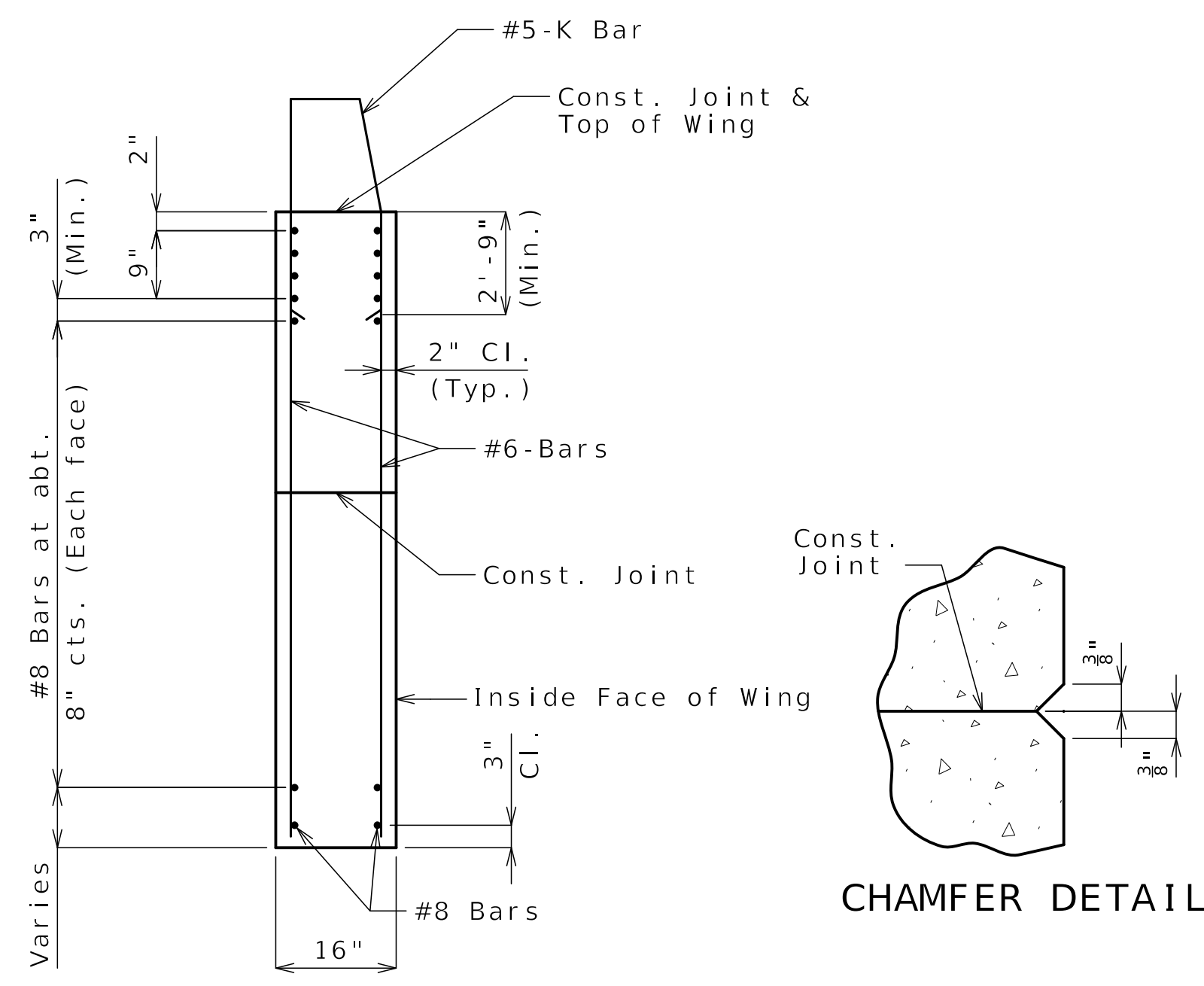
① Denotes girder number  
For location of coil tie rods, see Sheet A9622 (I-70 WB Over Benton) Superstructure Package.  
Strands at end of the girders shall be field bent or, if necessary, cut in field to maintain 1 1/2"-inch minimum clearance to fill face of end bent.  
The #6-F bars shall be bent in the field to clear girders.

DETAILS OF END BENT NO. 4

Released For Construction  
Not to Scale  
Revision: 0.0  
Date: 06/09/2025  
Package: BRD-05-WB70-Benton-Subst

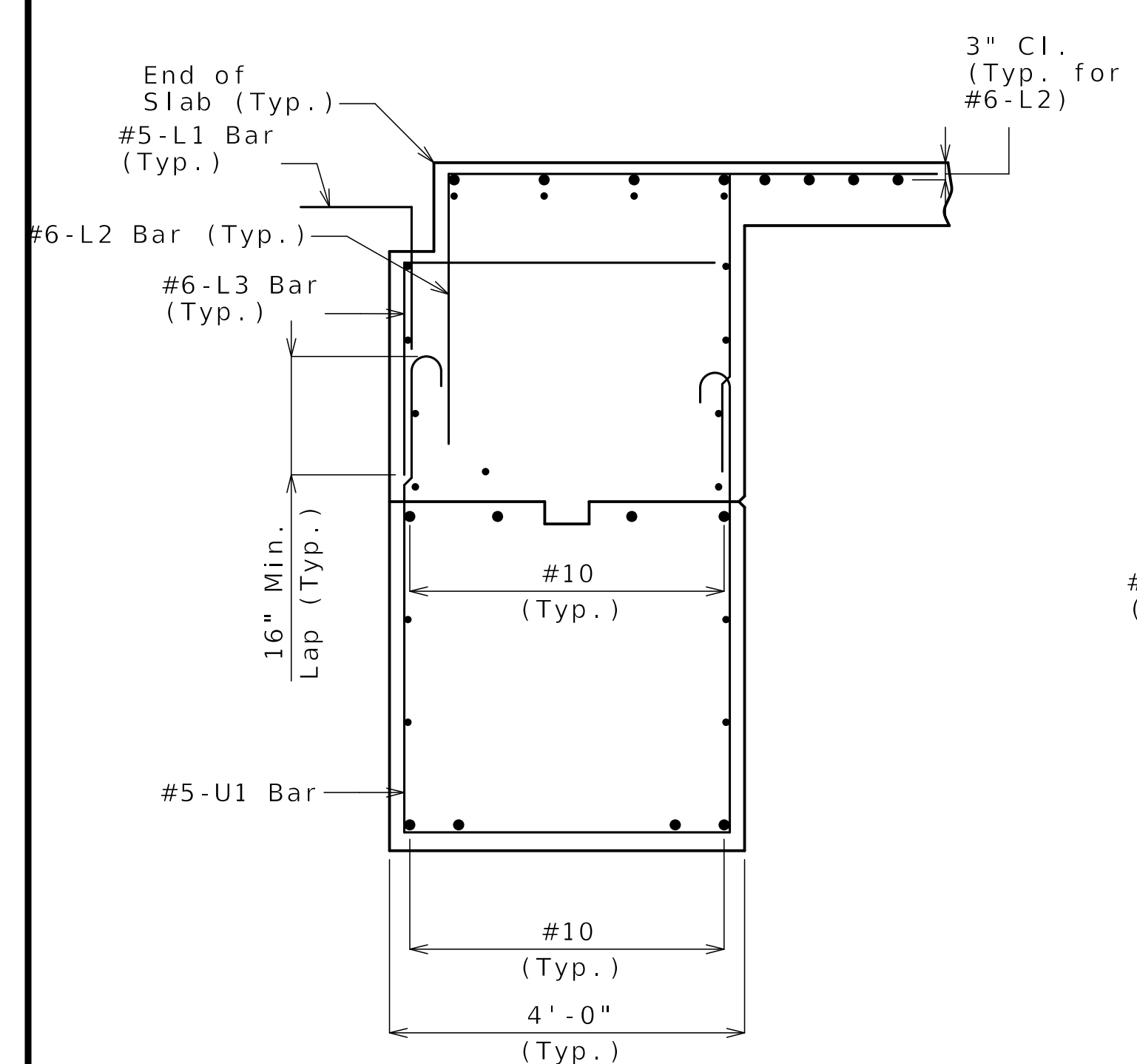
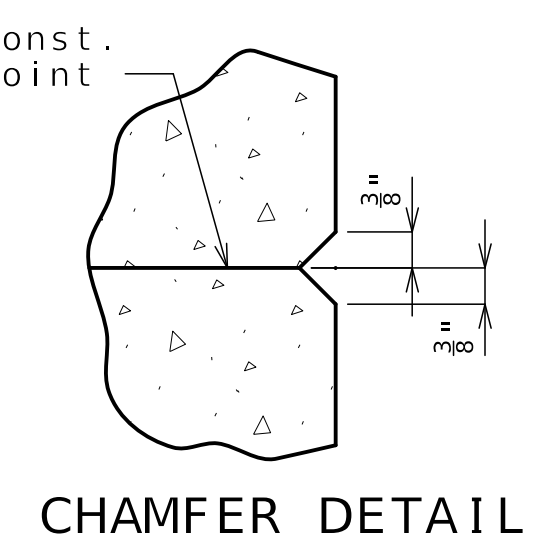


ELEVATION E-E  
North Wingwall

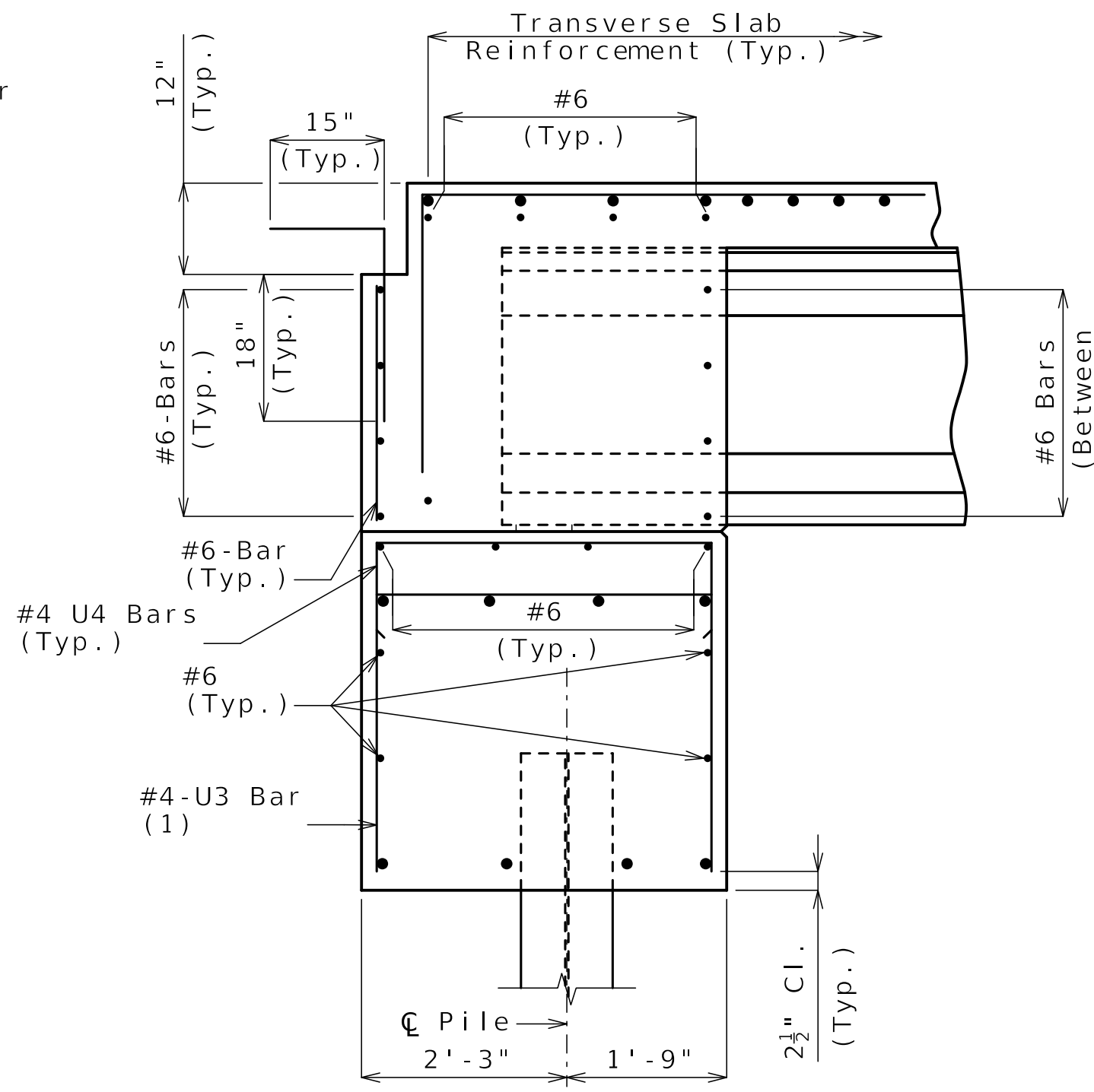


TYPICAL SECTION THRU WING

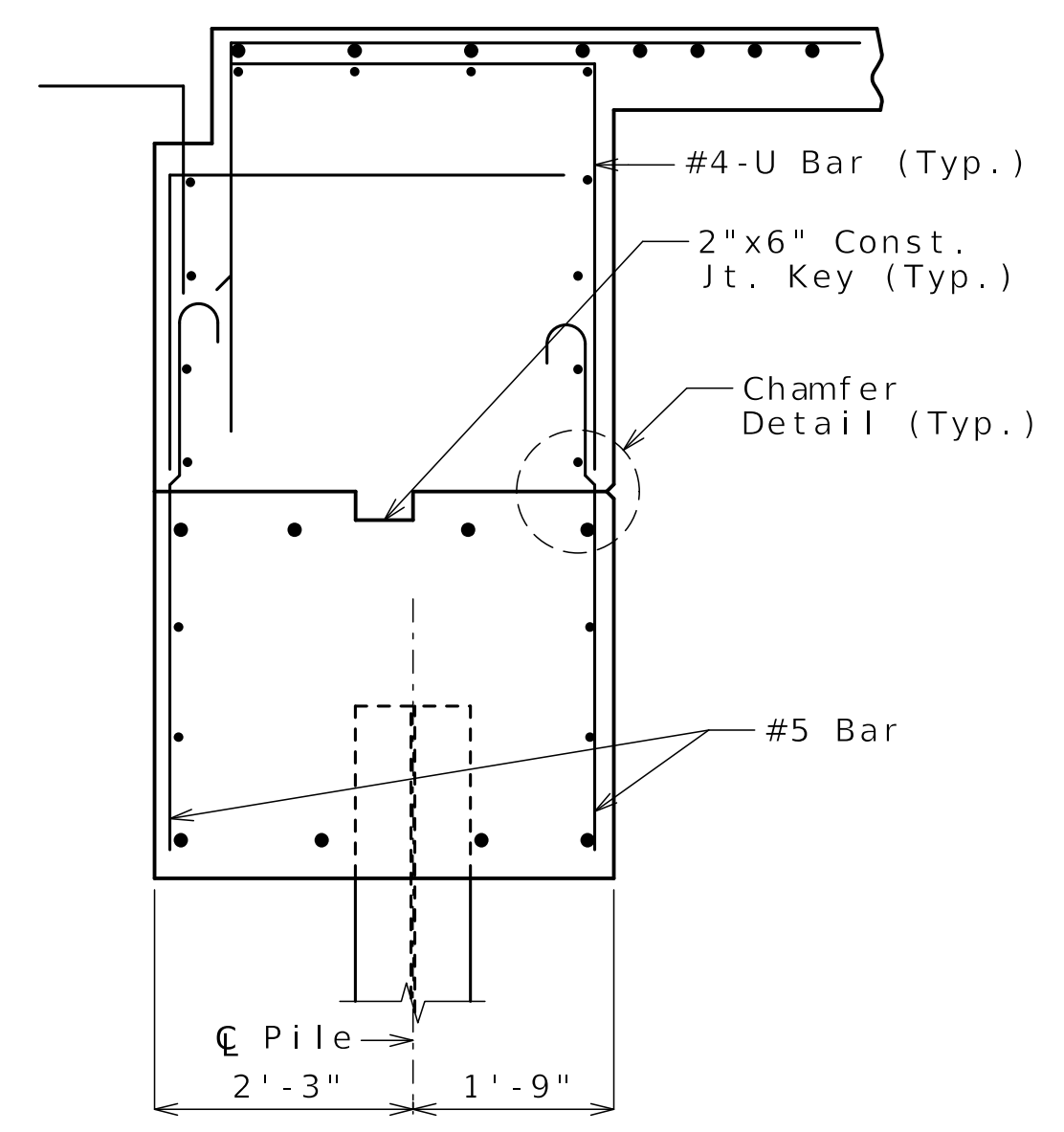
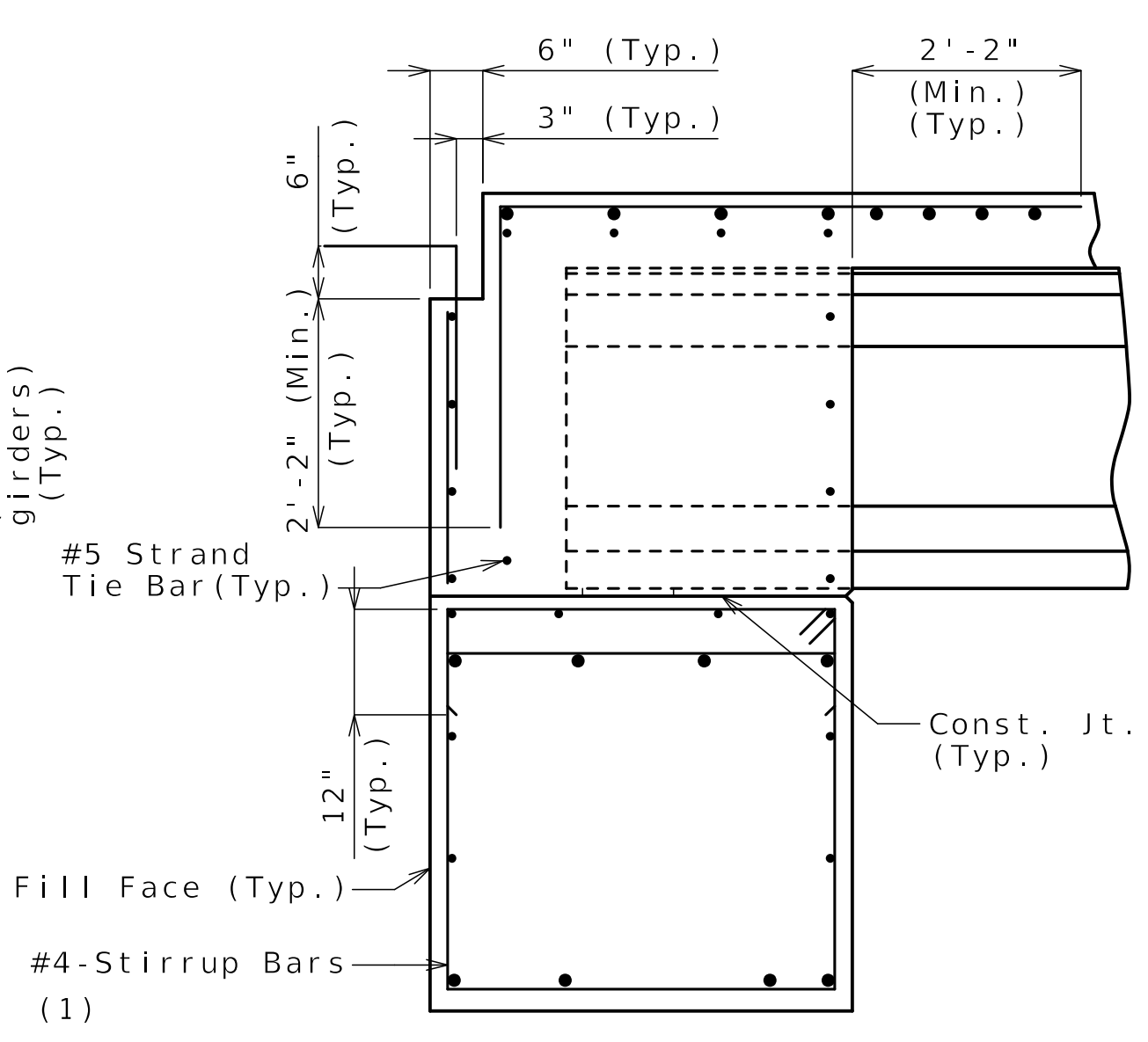
\*#8 Bars at 3" cts. (Each face) (Place with grade)  
 See Elevation E-E for number of bars



SECTION A-A



SECTION B-B



(1) U3 & #4 stirrup bar vertical leg = 3'-1"

General Notes:  
 Work this sheet with Sheets No. B05-13 and B05-14.  
 For location of Sections A-A, B-B, C-C, D-D and Elevation E-E, see Sheet No. B05-14.  
 For reinforcement of the Type D Barrier, see Sheet A9622 (I-70 WB Over Benton) Superstructure Package.


DETAILS OF END BENT NO. 4

Released For Construction  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

Detailed FEB 2025  
 Checked MAR 2025

Note: This drawing is not to scale. Follow dimensions.

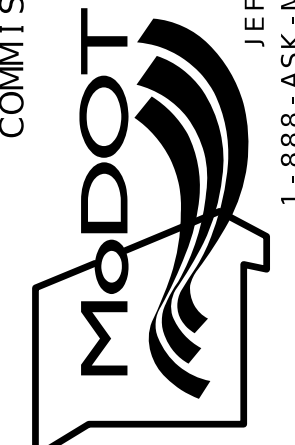
Sheet No. B05-15 of B05-29



Gina D. Horner  
 06/03/25  
 DATE PREPARED  
 06/02/2025  
 ROUTE 1-70 STATE MO  
 DISTRICT BR SHEET NO. B05-15  
 COUNTY JACKSON  
 JOB NO. J411486D  
 CONTRACT ID. 240807-C01  
 PROJECT NO.  
 BRIDGE NO. A9622


DATE	DESCRIPTION
06/02/25	REV 0 - RFC SUBMITTAL

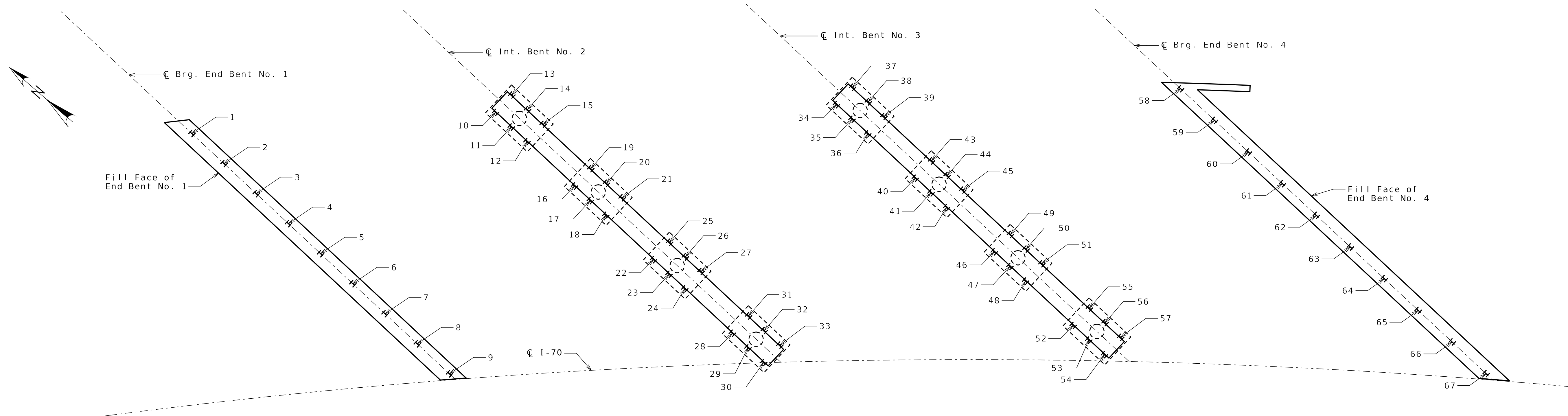
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE  
 715 KIRK DRIVE KANSAS CITY, MO 64105-1310  
 CERTIFICATE OF AUTHORITY NO. 001270





PART PLAN SHOWING PILE NUMBERING FOR RECORDING AS-BUILT PILE DATA

As-Built Pile Data			
Pile No.	Length in Place (ft.)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 1			
1			
2			
3			
4			
5			
6			
7			
8			
9			
End Bent No. 4			
58			
59			
60			
61			
62			
63			
64			
65			
66			
67			

Note:  
 Indicate in remarks column:  
 A. Pile type and grade.  
 B. Batter  
 C. Driven to practical refusal

As-Built Pile Data			
Pile No.	Length in Place (ft.)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
Intermediate Bent No. 2			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			

As-Built Pile Data			
Pile No.	Length in Place (ft.)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
Intermediate Bent No. 3			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			

Note: This sheet to be completed by design-builder.

**Released For Construction**  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

**AS-BUILT PILE DATA**

**GINA D. HORNER**  
 PE-30413  
 PROFESSIONAL ENGINEER

*Gina D. Horner*  
 06/03/25  
 DATE PREPARED

06/02/2025

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	B05-16

COUNTY  
**JACKSON**

JOB NO.  
**J411486D**

CONTRACT ID.  
**240807-C01**

PROJECT NO.

BRIDGE NO.  
**A9622**

DATE	DESCRIPTION
06/02/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

**CLARKSON RADMACHER**  
 JOINT VENTURE

715 KIRK DRIVE  
 KANSAS CITY, MO 64105-1310  
 CERTIFICATE OF AUTHORITY  
 NO. 001270



SOIL BORING NUMBER: Ben\_B1\_1

Page 1 of 3

PROJECT Improve I 70 KC Design Build      NORTHING/EASTING 1066539.7 / 2776200.1  
 DRILLING FIRM PPI      DRILLER Ray A.      DATE STARTED 11/21/2024  
 LOGGED BY Trent Shepherd      DATE COMPLETED 11/21/2024  
 SURFACE ELEVATION 845.3'      RIG TYPE CME-55  
 METHOD Mud Rotary/NQ Core      TOOLING 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab			
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)
										Visual Classification and Remarks					
										FILL, brown, very stiff, moist, LEAN CLAY (CL), with organics					
5	5 ft	X	J-1	14	4-5-6 (11)	78		4.0			48-22-26	18.7			
10	9.5 ft	X	J-2	18	2-3-2 (5)	100		1.0		9.5			835.8		
										Brown, firm, moist, LEAN CLAY with SILT (CL-ML), with organics					
										13.0			832.3		
15	13 ft		U-1	24		100		1.5		Brown to gray, firm, moist, LEAN CLAY (CL)					
										41-23-18	26.2	99.6	1.56		
20	18 ft	X	J-3	18	2-2-4 (6)	100		0.75		18.0			827.3		
										Brown, soft, wet, FAT CLAY (CH)					
25	23 ft		U-2	24		100		0.75			36-17-19	22.9	102.8	1.44	
30	28 ft	X	J-4	18	2-3-3 (6)	100		0.75		28.0			817.3		
										Brown, firm, moist, LEAN CLAY (CL)					
35	33 ft		U-3	24		100		3.0		33.0			812.3		
										Tan, very stiff, moist, LEAN CLAY with SILT (CL-ML)					
										32-17-15	20.6				



SOIL BORING NUMBER: Ben\_B1\_1

Page 2 of 3

PROJECT Improve I 70 KC Design Build      NORTHING/EASTING 1066539.7 / 2776200.1  
 DRILLING FIRM PPI      DRILLER Ray A.      DATE STARTED 11/21/2024  
 LOGGED BY Trent Shepherd      DATE COMPLETED 11/21/2024  
 SURFACE ELEVATION 845.3'      RIG TYPE CME-55  
 METHOD Mud Rotary/NQ Core      TOOLING 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab			
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)
										Visual Classification and Remarks					
										Tan, very stiff, moist, LEAN CLAY with SILT (CL-ML)					
40	38 ft	X	J-5	18	3-3-5 (8)	100		2.5							
45	43 ft	X	J-6	18	4-9-8 (17)	100		3.0		43.0			802.3		
										Reddish brown, very stiff, moist, LEAN TO FAT CLAY (CL-CH)					
50	48 ft		U-4	24		100		1.5		- becomes stiff at 48'					
55	53 ft	X	J-7	18	2-5-5 (10)	100		2.5		53.0			792.3		
										Brown, very stiff, moist, LEAN CLAY (CL), with shaley structure					
60	58 ft	X	J-8	18	3-4-4 (8)	100		1.5		- becomes stiff at 58'					
65															
70	68 ft	X	J-9	18	4-4-6 (10)	100		2.5		68.0			777.3		
										Brown, very stiff, moist, LEAN CLAY with SILT (CL-ML), with trace sand					
										36-19-17	23.8				

Released For Construction  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

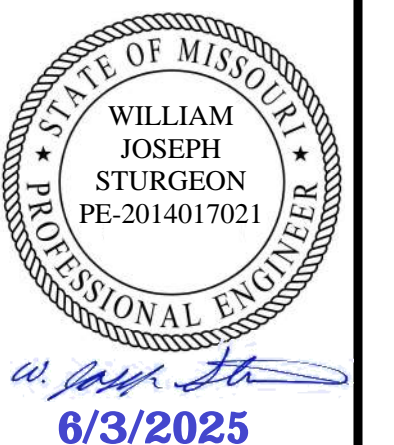
Notes:  
 For locations of borings, see Sheet No. B05-02 and Geotechnical Report.

BORING LOGS

Detailed FEB 2025  
 Checked MAR 2025

Note: This drawing is not to scale. Follow dimensions.

Sheet No. B05-17 of B05-29



DATE PREPARED	06/02/2025
ROUTE	1 - 70
STATE	MO
DISTRICT	BR
SHEET NO.	B05 - 17
COUNTY	JACKSON
JOB NO.	J411486D
CONTRACT ID.	240807 - C01
PROJECT NO.	
BRIDGE NO.	A9622

DATE	DESCRIPTION
06/02/25 <td>REV 0 - RFC SUBMITTAL</td>	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE  
 KANSAS CITY, MO 64105-1310  
 CERTIFICATE OF AUTHORITY  
 NO. 001270





**SOIL BORING NUMBER: Ben\_B1\_2**

Page 2 of 4

PROJECT Improve I 70 KC Design Build      NORTHING/EASTING 1066693.0 / 2776236.1  
 DRILLING FIRM PPI      DRILLER Josh Starkey      DATE STARTED 12/02/2024  
 LOGGED BY Cameron Dupont      DATE COMPLETED 12/04/2024  
 SURFACE ELEVATION 857.5'      RIG TYPE CME-55LC  
 METHOD Auger, Mud Rotary, NQ Core      TOOLING 4-1/2" Continuous Flight Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab								
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)					
38 ft		J-7	18	3-5-6 (11)	100			1.0												
40																				
42.5 ft		J-8	18	3-4-6 (10)	100			2.5												
45																				
47.5 ft		J-9	18	2-4-5 (9)	100			1.5												
50																				
52.5 ft		J-10	18	5-6-8 (14)	100			3.0		52.5	805									
55																				
57.5 ft		J-11	18	4-5-9 (14)	100			2.5												
60																				
65																				
67.5 ft		J-12	18	13-16-22 (38)	100			3.0												
70																				

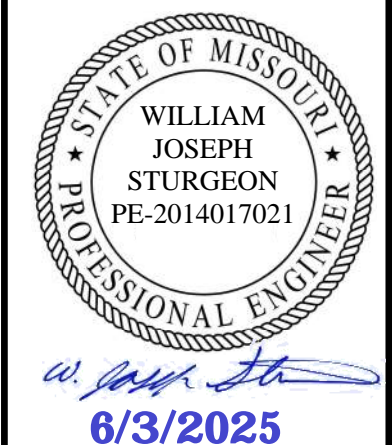


**SOIL BORING NUMBER: Ben\_B1\_2**

Page 3 of 4

PROJECT Improve I 70 KC Design Build      NORTHING/EASTING 1066693.0 / 2776236.1  
 DRILLING FIRM PPI      DRILLER Josh Starkey      DATE STARTED 12/02/2024  
 LOGGED BY Cameron Dupont      DATE COMPLETED 12/04/2024  
 SURFACE ELEVATION 857.5'      RIG TYPE CME-55LC  
 METHOD Auger, Mud Rotary, NQ Core      TOOLING 4-1/2" Continuous Flight Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab								
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)					
77.5 ft		J-13	17	11-13-14 (27)	94			1.0												
80																				
85										82.8	774.7									
86 ft		J-14	12	25-14-12 (26)	67			0.5												
90																				
95																				
96 ft		J-15	13	9-10-11 (21)	72					96.0	761.5									
100																				
103.5 ft		C-1	14.5			97	97													
104.75 ft		C-2	60			100	100													
109.75 ft		C-3	60			100	93													



DATE PREPARED	06/02/2025
ROUTE	1 - 70
STATE	MO
DISTRICT	BR
SHEET NO.	B05 - 19
COUNTY	JACKSON
JOB NO.	J411486D
CONTRACT ID.	240807 - C01
PROJECT NO.	
BRIDGE NO.	A9622

DATE	DESCRIPTION
06/02/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE  
715 KIRK DRIVE KANSAS CITY, MO 64105-1310  
CERTIFICATE OF AUTHORITY NO. 001270

**Released For Construction**  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

Notes:  
 For locations of borings, see Sheet No. B05-02 and Geotechnical Report.

**BORING LOGS**





SOIL BORING NUMBER: Ben\_B2\_2

Page 2 of 3

PROJECT Improve I 70 KC Design Build      NORTHING/EASTING 1066599.4 / 2776274.6  
 DRILLING FIRM PPI      DRILLER Ray A.      DATE STARTED 11/15/2024  
 LOGGED BY Alex Wen      DATE COMPLETED 11/19/2024  
 SURFACE ELEVATION 841.4'      RIG TYPE CME-55  
 METHOD Auger/Mud Rotary/NQ Core      TOOLING 4-1/4" Hollow Stem Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab					
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)		
37.5		J-6	14	x-x-4 (4)	78			0.25		38.5	802.9						
40																	
42.5		U-3	21			88		1.5				39-14-25	20.9	1071	2.01		
45																	
47.5		J-7	18	3-5-6 (11)	100			1.5									
50																	
52.5		J-8	18	3-4-5 (9)	100			1.0									
55																	
57.5		J-9	11	4-5-6 (11)	61							37-22-15	30.5				
60																	
65																	
67.5		J-10	18	6-8-11 (19)	100			2.25									
70																	
										71.4	770						



SOIL BORING NUMBER: Ben\_B2\_2

Page 3 of 3

PROJECT Improve I 70 KC Design Build      NORTHING/EASTING 1066599.4 / 2776274.6  
 DRILLING FIRM PPI      DRILLER Ray A.      DATE STARTED 11/15/2024  
 LOGGED BY Alex Wen      DATE COMPLETED 11/19/2024  
 SURFACE ELEVATION 841.4'      RIG TYPE CME-55  
 METHOD Auger/Mud Rotary/NQ Core      TOOLING 4-1/4" Hollow Stem Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab					
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)		
77.5		J-11	12	4-6-7 (13)	67							26-16-10	17.8				
80																	
85		C-1	46			100	83			85.8	755.6		0.1	168.4	1433		
90		C-2	57			95	95										
95		C-3	0			0	0			95.0	746.4						
100																	
105																	
110																	

Released For Construction  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

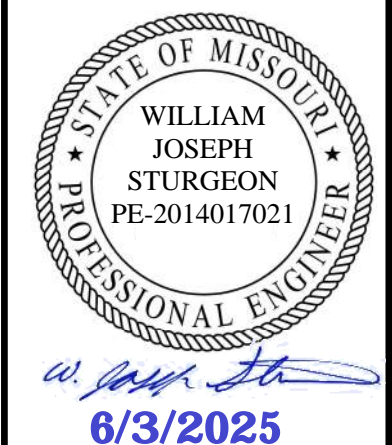
Notes:  
 For locations of borings, see Sheet No. B05-02 and Geotechnical Report.

BORING LOGS

Detailed FEB 2025  
 Checked MAR 2025

Note: This drawing is not to scale. Follow dimensions.

Sheet No. B05-21 of B05-29



DATE PREPARED	06/02/2025
ROUTE	1 - 70
STATE	MO
DISTRICT	BR
SHEET NO.	B05 - 21
COUNTY	JACKSON
JOB NO.	J411486D
CONTRACT ID.	240807 - C01
PROJECT NO.	
BRIDGE NO.	A9622

DATE	DESCRIPTION
06/02/25 <td>REV 0 - RFC SUBMITTAL</td>	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE  
 KANSAS CITY, MO 64105-1310  
 CERTIFICATE OF AUTHORITY NO. 001270



SOIL BORING NUMBER: Ben\_B2\_3

Page 1 of 3

PROJECT Improve I 70 KC Design Build  
 DRILLING FIRM PPI DRILLER Ray A.  
 LOGGED BY Trent Shepherd  
 SURFACE ELEVATION 843.9'  
 METHOD Auger/Mud Rotary/NQ Core

NORTHING/EASTING 1066646.0 / 2776277.8  
 DATE STARTED 11/20/2024  
 DATE COMPLETED 11/20/2024  
 RIG TYPE CME-55  
 TOOLING 4-1/4" Hollow Stem Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab			
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)
										Visual Classification and Remarks					
										FILL, brown, stiff, moist, LEAN CLAY (CL), with grass at surface					
5	5 ft	X	J-1	13	3-4-3 (7)	72		2.5			32-18-14	21.0			
10	10 ft	X	J-2	18	3-4-4 (8)	100		3.5		- Mud Rotary started at 10' 10.0 833.9					
13	13 ft		U-1	24		100		0.5		Brown to grayish brown, very stiff, moist, LEAN CLAY (CL), with organics 13.0 830.9					
15			J-3	18	WOH-WOH-WOH	100		<0.5		34-22-12	33.1	87.2	0.505		
20	18 ft	X	J-3	18		100		<0.5		- becomes wet at 18'					
23	23 ft	X	J-4	18	2-2-3 (5)	100		<0.5							
25			J-4	18		100		<0.5			31.3				
28	28 ft		U-2	24		100		4.5		28.0 815.9					
30			J-5	18	3-3-4 (7)	100		3.0		30-21-9	22.9	98.4	1.25		
35	33 ft	X	J-5	18		100		3.0							



SOIL BORING NUMBER: Ben\_B2\_3

Page 2 of 3

PROJECT Improve I 70 KC Design Build  
 DRILLING FIRM PPI DRILLER Ray A.  
 LOGGED BY Trent Shepherd  
 SURFACE ELEVATION 843.9'  
 METHOD Auger/Mud Rotary/NQ Core

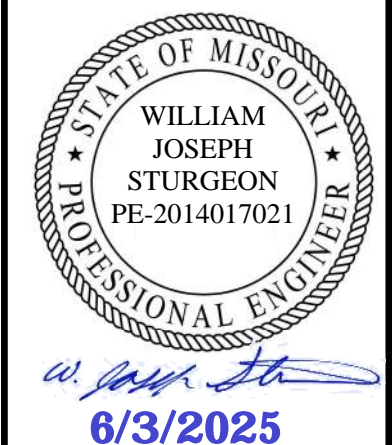
NORTHING/EASTING 1066646.0 / 2776277.8  
 DATE STARTED 11/20/2024  
 DATE COMPLETED 11/20/2024  
 RIG TYPE CME-55  
 TOOLING 4-1/4" Hollow Stem Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab			
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)
										Visual Classification and Remarks					
38	38 ft	X	J-6	18	3-5-8 (13)	100		4.5		Brown to gray, very stiff, moist, LEAN CLAY with SILT (CL-ML) 38.0 805.9					
40										Brown, very stiff, moist, LEAN CLAY with SILT (CL-ML)					
43	43 ft		U-3	24		100		3.0		44.0	799.9	35-15-20	18.9		
45										Brown, soft, moist, LEAN CLAY (CL)					
48	48 ft	X	J-7	18	3-3-6 (9)	100		2.5		48.0 795.9					
50										Brown, stiff, moist, LEAN CLAY with SILT (CL-ML)					
53	53 ft	X	J-8	18	3-5-6 (11)	100		2.0					23.1		
55															
58	58 ft	X	J-9	18	2-4-5 (9)	100		2.0				36-23-13	23.7		
60															
65															
67.3	67.3									776.7					
70	68 ft	X	J-10	18	10-7-9 (16)	100				Brown, medium dense, wet, fine to coarse grained, WELL-GRADED SAND with CLAY (SW-SC)					
													24.7		

Released For Construction  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

Notes:  
 For locations of borings, see Sheet No. B05-02 and Geotechnical Report.

BORING LOGS



DATE PREPARED 06/02/2025

ROUTE 1-70	STATE MO
DISTRICT BR	SHEET NO. B05-22
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	
BRIDGE NO. A9622	

DATE	DESCRIPTION
06/02/25 <td>REV 0 - RFC SUBMITTAL</td>	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE  
 KANSAS CITY, MO 64105-1310  
 CERTIFICATE OF AUTHORITY NO. 001270



SOIL BORING NUMBER: Ben\_B2\_3

Page 3 of 3

PROJECT Improve I 70 KC Design Build      NORTHING/EASTING 1066646.0 / 2776277.8  
 DRILLING FIRM PPI      DRILLER Ray A.      DATE STARTED 11/20/2024  
 LOGGED BY Trent Shepherd      DATE COMPLETED 11/20/2024  
 SURFACE ELEVATION 843.9'      RIG TYPE CME-55  
 METHOD Auger/Mud Rotary/NQ Core      TOOLING 4-1/4" Hollow Stem Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab					
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-PI)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)		
78 ft			J-11	12	8-9-8 (16)	67				78.0	765.9						
80 ft																	
85 ft																	
88 ft			J-12	9	9-50/3" (50/3")	100				88.0	755.9						
88.75 ft			C-1	17		100	88										
90.1 ft			C-2	60		100	97										
95.1 ft			C-3	43		98	75										
98.8 ft										98.8	745.2						
100 ft										Bottom of Boring at 98.75'							
105 ft										Boring backfilled with cuttings 11/20/2024							
110 ft																	



SOIL BORING NUMBER: Ben\_B3\_1

Page 1 of 3

PROJECT Improve I 70 KC Design Build      NORTHING/EASTING 1066426.1 / 2776344.2  
 DRILLING FIRM PPI      DRILLER Ray A.      DATE STARTED 12/05/2024  
 LOGGED BY Trent Shepherd      DATE COMPLETED 12/06/2024  
 SURFACE ELEVATION 834.7'      RIG TYPE CME-55  
 METHOD Auger/Water Rotary/NQ Core      TOOLING 4-1/4" Hollow Stem Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab					
										During Drilling (ft):	18	Atterberg Limits (LL-PL-PI)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)		
4.5 ft			J-1	11	3-3-4 (7)	61		0.75									
9.5 ft			U-1	24		100		0.5		10.0	824.7						
13 ft			J-2	18	WOH-WOH-WOH	100		<0.5									
18 ft			U-2	24		100		<0.5									
23 ft			J-3	18	1-2-3 (5)	100		0.5		23.0	811.7						
28 ft			U-3	24		100		<0.5		28.0	806.7						
33 ft			J-4	18	1-2-2 (4)	100		0.75									



6/3/2025

DATE PREPARED  
06/02/2025

ROUTE 1-70      STATE MO

DISTRICT BR      SHEET NO. B05-23

COUNTY JACKSON

JOB NO. J411486D

CONTRACT ID. 240807-C01

PROJECT NO. A9622

BRIDGE NO. A9622

DATE	DESCRIPTION
06/02/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE  
 715 KIRK DRIVE KANSAS CITY, MO 64105-1310  
 CERTIFICATE OF AUTHORITY NO. 001270



Released For Construction  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

Notes:  
 For locations of borings, see Sheet No. B05-02 and Geotechnical Report.

BORING LOGS



**SOIL BORING NUMBER: Ben\_B3\_1**

Page 2 of 3

**PROJECT** Improve I 70 KC Design Build **NORTHING/EASTING** 1066426.1 / 2776344.2  
**DRILLING FIRM** PPI **DRILLER** Ray A. **DATE STARTED** 12/05/2024  
**LOGGED BY** Trent Shepherd **DATE COMPLETED** 12/06/2024  
**SURFACE ELEVATION** 834.7' **RIG TYPE** CME-55  
**METHOD** Auger/Water Rotary/NQ Core **TOOLING** 4-1/4" Hollow Stem Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab						
										During Drilling (ft):	After Drilling (ft):	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)			
38				24		100		2.0		18	14.3							
40			U-4							38.0	796.7	47-18-29	20.4	1071	3.09			
43			J-5	18	1-3-4 (7)	100		1.0		43.0	791.7							
45																		
48			U-5	24		100		1.5										
53			J-6	18	x-3-4 (7)	100		1.25										
58			J-7	18	4-4-4 (8)	100		1.75		58.0	776.7	41-16-25	28.7					
68			J-8	18	4-4-4 (8)	100		2.5		68.0	766.7							

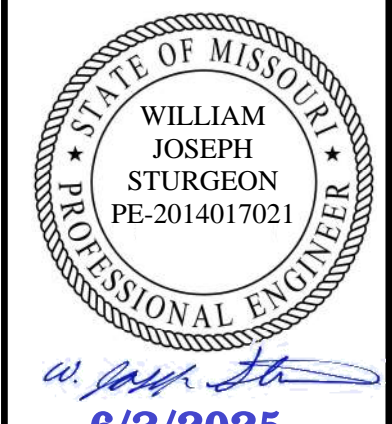


**SOIL BORING NUMBER: Ben\_B3\_1**

Page 3 of 3

**PROJECT** Improve I 70 KC Design Build **NORTHING/EASTING** 1066426.1 / 2776344.2  
**DRILLING FIRM** PPI **DRILLER** Ray A. **DATE STARTED** 12/05/2024  
**LOGGED BY** Trent Shepherd **DATE COMPLETED** 12/06/2024  
**SURFACE ELEVATION** 834.7' **RIG TYPE** CME-55  
**METHOD** Auger/Water Rotary/NQ Core **TOOLING** 4-1/4" Hollow Stem Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab						
										During Drilling (ft):	After Drilling (ft):	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)			
78			J-9	15	7-10-14 (24)	83				77.8	756.9							
80			J-10	0	50/0"						753.7							
81			C-1	39		100	100											
85			C-2	60		100	97											
90			C-3	21		100	100											
91.8										91.8	742.9							
95																		
110																		



DATE PREPARED 06/02/2025  
 ROUTE 1-70 STATE MO  
 DISTRICT BR SHEET NO. B05-24  
 COUNTY JACKSON  
 JOB NO. J411486D  
 CONTRACT ID. 240807-C01  
 PROJECT NO.  
 BRIDGE NO. A9622

DATE	DESCRIPTION
06/02/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)



**Released For Construction**  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

Notes:  
 For locations of borings, see Sheet No. B05-02 and Geotechnical Report.

**BORING LOGS**





**SOIL BORING NUMBER: Ben\_B3\_3**

Page 3 of 3

PROJECT Improve I 70 KC Design Build      NORTHING/EASTING 1066641.0 / 2776342.6  
 DRILLING FIRM PPI      DRILLER Josh Starkey      DATE STARTED 11/12/2024  
 LOGGED BY Cameron Dupont      DATE COMPLETED 11/13/2024  
 SURFACE ELEVATION 843.2'      RIG TYPE CME-55LC  
 METHOD Hollow Stem Auger      TOOLING 4-1/4" Hollow Stem Auger

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab							
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)				
78.3																			
80			J-12	18	5-3-4 (7)	100													
85																			
87.9			C-1	31		97	88			87.8	755.4								
90.5			C-2	60		100	100					0.1	166.9	147.9					
95.5			C-3	28		100	79												
97.9										97.9	745.3								
100										Bottom of Boring at 97.9'									
105										Boring backfilled with cuttings 11/13/2024									
110																			

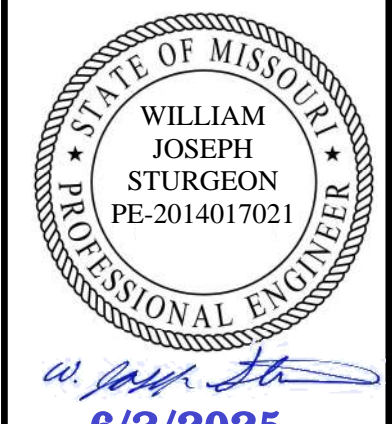


**SOIL BORING NUMBER: Ben\_B4\_2**

Page 1 of 3

PROJECT Improve I 70 KC DB Project [0]      NORTHING/EASTING 1066500.4 / 2776375.3  
 DRILLING FIRM PPI      DRILLER Eric P.      DATE STARTED 11/06/2024  
 LOGGED BY Zachary Boyd      DATE COMPLETED 11/07/2024  
 SURFACE ELEVATION 842.9'      RIG TYPE CME-550  
 METHOD Auger, Mud Rotary, NQ Core      TOOLING 4-1/2" Continuous Flight Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab							
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)				
3			U-1	6		25		>4.5											
5																			
8			J-1	13	1-1-2 (3)	72		0.5		8.0	834.9								
10																			
13			J-2	18	1-1-1 (2)	100		<0.5											
15																			
18			U-2	24		100		<0.5											
20																			
23			J-3	17	2-2-4 (6)	94		0.5											
25																			
28			J-4	8	4-4-6 (10)	44		0.5		29.0	813.9								
30																			
33			U-3	21		88													
35																			



DATE PREPARED 06/02/2025  
 ROUTE I-70 STATE MO  
 DISTRICT BR SHEET NO. B05-26  
 COUNTY JACKSON  
 JOB NO. J411486D  
 CONTRACT ID. 240807-C01  
 PROJECT NO.  
 BRIDGE NO. A9622

DATE	DESCRIPTION
06/02/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)



**Released For Construction**  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

Notes:  
 For locations of borings, see Sheet No. B05-02 and Geotechnical Report.

**BORING LOGS**



**SOIL BORING NUMBER: Ben\_B4\_2**

Page 2 of 3

**PROJECT** Improve I 70 KC DB Project [0]      **NORTHING/EASTING** 1066500.4 / 2776375.3  
**DRILLING FIRM** PPI      **DRILLER** Eric P.      **DATE STARTED** 11/06/2024  
**LOGGED BY** Zachary Boyd      **DATE COMPLETED** 11/07/2024  
**SURFACE ELEVATION** 842.9'      **RIG TYPE** CME-550  
**METHOD** Auger, Mud Rotary, NQ Core      **TOOLING** 4-1/2" Continuous Flight Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab					
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)		
38		J-5	18	3-5-7 (12)	100			1.5	[Hatched Pattern]	Visual Classification and Remarks							
40										Reddish light brown, soft to firm, moist, FAT CLAY (CH), iron stained							
										- light brown, becomes firm at 38'							
43		J-6	18	6-6-7 (13)	100			1.5		- becomes reddish brown at 43'							
45																	
48		J-4	24		100			<0.5		- with gravel at 48'		64-22-42	46.3				
50																	
53		J-7	18	2-4-5 (9)	100			1.5					24.5				
55																	
58		J-8	18	3-4-5 (9)	100			1.0	58.0	784.9							
60									Light brown to gray, moist, FAT CLAY with SAND (CH), iron stained			26.3					
65																	
68		J-9	18	3-6-8 (14)	100			1.0	68.0	774.9							
70									Dark gray to brown, stiff, moist, FAT CLAY (CH), iron stained			29.8					



**SOIL BORING NUMBER: Ben\_B4\_2**

Page 3 of 3

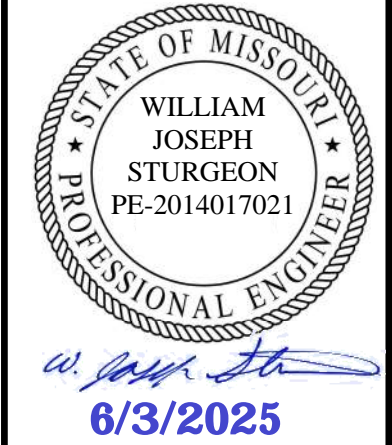
**PROJECT** Improve I 70 KC DB Project [0]      **NORTHING/EASTING** 1066500.4 / 2776375.3  
**DRILLING FIRM** PPI      **DRILLER** Eric P.      **DATE STARTED** 11/06/2024  
**LOGGED BY** Zachary Boyd      **DATE COMPLETED** 11/07/2024  
**SURFACE ELEVATION** 842.9'      **RIG TYPE** CME-550  
**METHOD** Auger, Mud Rotary, NQ Core      **TOOLING** 4-1/2" Continuous Flight Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab					
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)		
78		J-10	18	3-6-9 (15)	100			1.0	[Hatched Pattern]	Visual Classification and Remarks							
80										Dark gray to brown, stiff, moist, FAT CLAY (CH), iron stained							
										- with sand, well-graded at 78'							
85																	
87.5		C-1	36		92	41				87.5	755.4						
90		C-2	60		100	83				Limestone, weathered, light gray, hard, fractured, slightly vuggy, joint fractures							
95		C-3	60		100	82											
95.8											- 1.5" clay seam at 99.8'						
100										100.8	742.1						
105									Bottom of Boring at 100.8'								
110									Boring backfilled with grout 11/7/2024								

**Released For Construction**  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

Notes:  
 For locations of borings, see Sheet No. B05-02 and Geotechnical Report.

**BORING LOGS**



DATE PREPARED 06/02/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B05-27
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO.  
A9622

DATE	DESCRIPTION
06/02/25 <td>REV 0 - RFC SUBMITTAL</td>	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

**CLARKSON RADMACHER**  
 JOINT VENTURE

715 KIRK DRIVE  
 KANSAS CITY, MO 64105-1310  
 CERTIFICATE OF AUTHORITY  
 NO. 001270





**SOIL BORING NUMBER: Ben\_B4\_3**

Page 3 of 3

PROJECT Improve I 70 KC Design Build      NORTHING/EASTING 1066619.7 / 2776379.5  
 DRILLING FIRM PPI      DRILLER Ray A.      DATE STARTED 11/11/2024  
 LOGGED BY Alex Wen      DATE COMPLETED 11/12/2024  
 SURFACE ELEVATION 840.6'      RIG TYPE CME-55  
 METHOD Auger/Mud Rotary/INQ Core      TOOLING 4-1/4" Hollow Stem Auger, 3-3/4" Rotary Drill

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab							
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)				
78 ft																			
80			J-12	12	7-8-10 (18)	67													
85	85 ft		C-1	56		93	75			84.8	755.9								
90	90 ft		C-2	60		100	75					0.5	164.2	1137					
95										95.0	745.6								
100										Bottom of Boring at 95'									
105										Boring backfilled with cuttings 10/12/2024									
110																			



6/3/2025

DATE PREPARED  
06/02/2025

ROUTE 1-70      STATE MO  
 DISTRICT BR      SHEET NO. B05-29

COUNTY JACKSON

JOB NO. J411486D

CONTRACT ID. 240807-C01

PROJECT NO.

BRIDGE NO. A9622

DATE	DESCRIPTION
06/02/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE KANSAS CITY, MO 64105-1310  
 CERTIFICATE OF AUTHORITY NO. 001270

**Released For Construction**  
 Not to Scale  
 Revision: 0.0  
 Date: 06/09/2025  
 Package: BRD-05-WB70-Benton-Subst

Notes:  
 For locations of borings, see Sheet No. B05-02 and Geotechnical Report.

**BORING LOGS**