

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

STATE OF MISSOURI

VAN WILLIAM ROBBINS

PE-2017015106

PROFESSIONAL ENGINEER

Van W. Robb

08-08-25

DATE PREPARED

08/08/2025

ROUTE

1 - 70

DISTRICT

BR

STATE

MO

SHEET NO.

B07-01

COUNTY

JACKSON

JOB NO.

J411486D

CONTRACT ID.

240807-C01

PROJECT NO.

BRIDGE NO.

A9624

DATE	DESCRIPTION	REV 0 - RFC SUBMITTAL				
		REV 0 - RFC SUBMITTAL				
08/08/25						

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



LOCATION SKETCH

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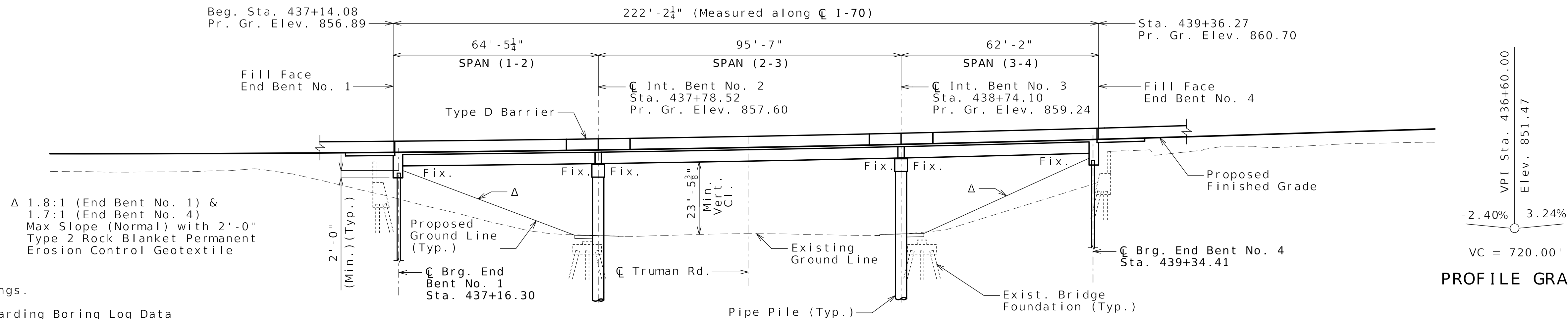
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Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

BRIDGE: ROUTE 1-70 WB OVER TRUMAN ROAD

ROUTE 1-70 WB FROM ROUTE 40 TO ROUTE 1-670
ABOUT 2.9 MILES WEST OF ROUTE 40
BEGINNING STATION 437+14.08

(64.4'-95.6'-62.2') Prestressed Concrete NU Girder Spans



ELEVATION

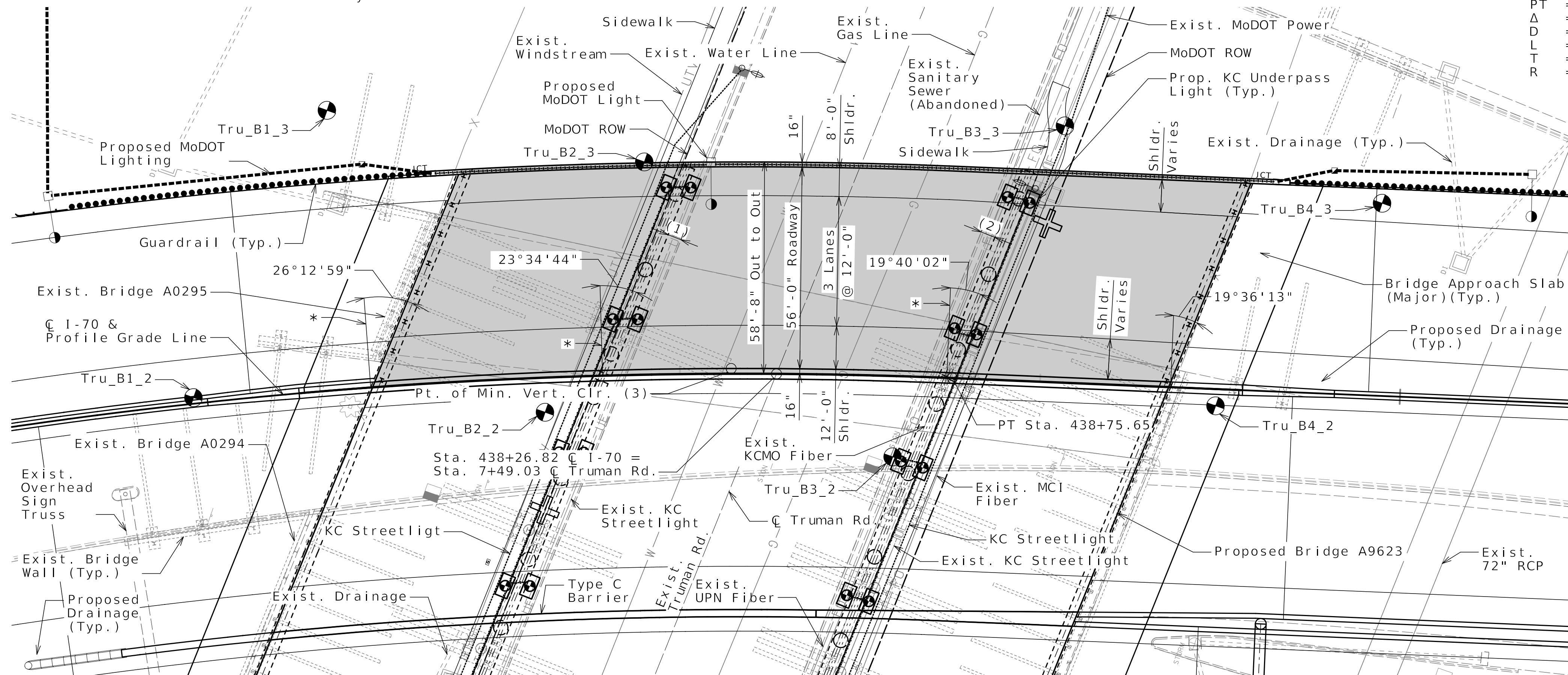
CURVE DATA

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'

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. B07-18 thru B07-37. Laboratory test results, rock core photographs and other information obtained at these boring 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.



* Radial line to C I-70.

Minimum Horizontal Clearance
to edge of existing lane:

- (1) 3'-9 3/4"
(2) 4'-1 1/4"

(3) Sta. 438+14.41, 1.29' Lt., C I-70

PLAN

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Notes:

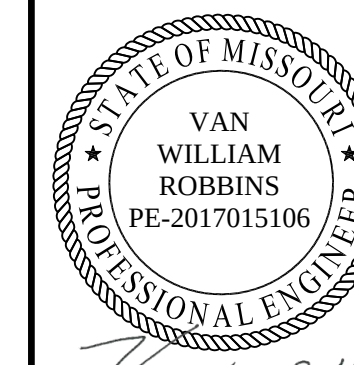
All Elevations are based on NAVD88 datum unless otherwise noted.
 All dimensions are horizontal.
 All Bents are parallel.
 Existing Bridges A0294 and A0295 to be removed in accordance with Sec. 216. Existing structures & foundations shown may not represent what is left in place after removal.
 For pipe pile tip elevations, See Sheets No. B07-09 and B07-11.
 See Civil Package 6: I-70 Mainline for Truman Road typical section details.
 See Civil Package 6: I-70 Mainline for under bridge KC Streetlight attachment details.

GENERAL PLAN AND ELEVATION

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-02 of B07-37



Van W. Robbins
08-08-25

DATE PREPARED
08/08/2025

ROUTE
I-70

STATE
MO

DISTRICT
BR

SHEET NO.
B07-02

COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9624

DESCRIPTION	DATE
REV 0 - RFC SUBMITTAL	08/08/25

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

General Notes:
For additional bridge details not shown, see A9624 (I-70 WB Over Truman)
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, $S_{p1} \leq 0.15$
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 Capbeam and Pipe Pile Fill) 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) fy = 60,000 psi
Structural HP Steel Pile (ASTM A709 Grade 50) fy = 50,000 psi
Welded or Seamless steel shell (pipe) for pile (ASTM A252 Grade 3) fy = 45,000 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.

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

Sacrificial graffiti protective coating shall be applied to 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 12x74	PP Varies(2)	PP Varies(2)	HP 12x74
	Number	ea 8	3	3	8
	Approximate Length Per Each (1)	ft 115	110	111	110
	Pile Point Reinforcement	ea ALL	ALL	ALL	ALL
	Min. Galvanized Penetration (Elev.)	ft 814	810	810	814
	Minimum Tip Penetration (Elev.)	ft ---	---	---	---
	Criteria for Min. Tip Penetration	---	---	---	---
	Pile Driving Verification Method	DT	DT	DT	DT
	Resistance Factor	0.65	0.65	0.65	0.65
	Minimum Nominal Axial Compressive Resistance	kip 315	1725	1725	301

- (1) Pile length is maximum estimated for each bent and includes
embedment into concrete at the end bents. Adjust as needed
for bottom of concrete variations at each bent.
- (2) Pipe pile size shall be 48"Ø x $\frac{7}{8}$ " or 48"Ø x $\frac{3}{4}$ " with transitions
as shown on Sheets No. B07-09 and B07-11.

Load Bearing Piles:
Minimum Nominal Axial Compressive Resistance =
Maximum Factored Loads/Resistance Factor
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.
DT=Dynamic Testing

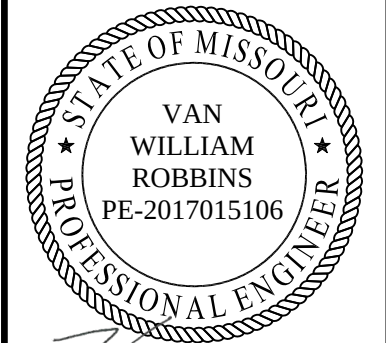
Debris and rubble was observed during geotechnical
boring operations down to elevation 811 at
Intermediate Bents 2 & 3. Additionally, utilities to
remain are present in the Truman Road area. Prebore
is recommended for Intermediate Bents No. 2 and 3 pipe
piles. During pile driving operations, sand shall be
placed in annular space around the pile in the prebored
hole. Level of sand should be maintained at or near
ground line during pile driving.

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Detailed MAR 2025
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Note: This drawing is not to scale. Follow dimensions.

Sheet No. B07-03 of B07-37



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DATE PREPARED
08/08/2025

ROUTE STATE
I - 70 MO

DISTRICT SHEET NO.
BR B07-03

COUNTY
JACKSON

JOB NO.
J4 I1486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9624

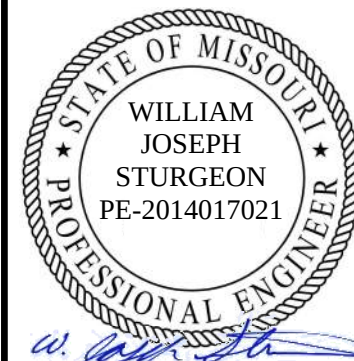
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08/08/25						

MISSOURI HIGHWAYS AND TRANSPORTATION
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105 WEST CAPITOL
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1-888-ASK-MODOT (1-888-275-6636)

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

GENERAL NOTES



8/8/2025

DATE PREPARED

08/08/2025

ROUTE STATE

I-70 MO

DISTRICT SHEET NO.

BR B07-04

COUNTY

JACKSON

JOB NO.

J411486D

CONTRACT ID.

240807-C01

PROJECT NO.

BRIDGE NO.

A9624

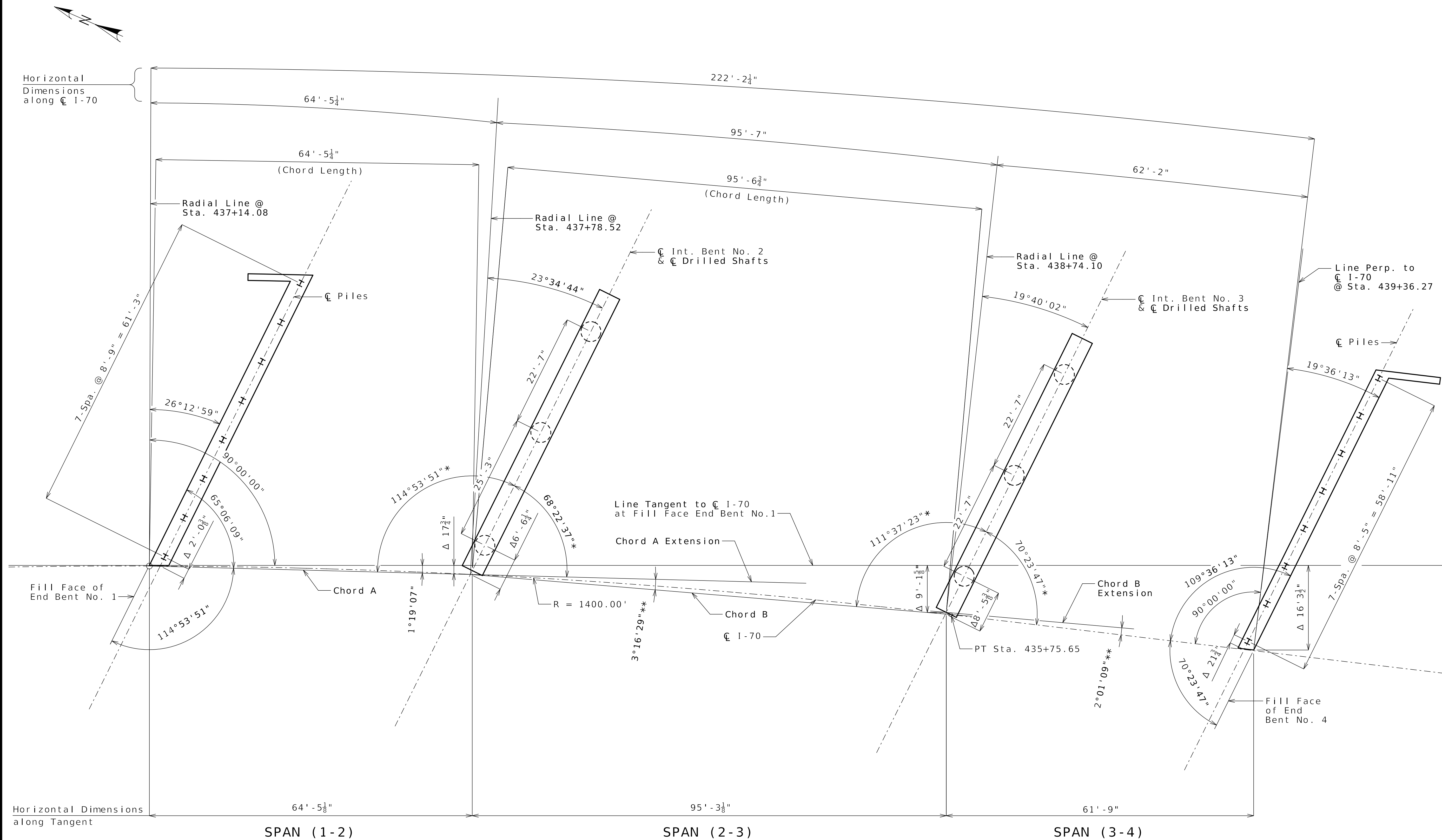
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JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

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



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Sheet No. B07-04 of B07-37

SUBSTRUCTURE LAYOUT

08/08/25

DATE PREPARED
08/08/2025

ROUTE	STATE
I - 70	MO

DISTRICT	SHEET NO.
BB	B07-05

BR	207 35
COUNTY	
LACKSON	

JACKSON
JOB NO.
1411486D

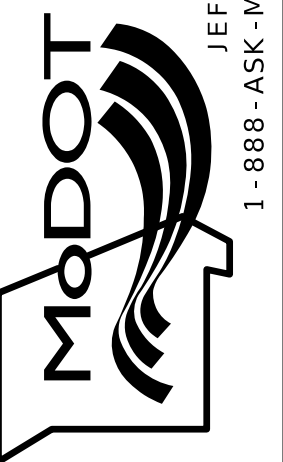
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240807-C01
PROJECT NO.

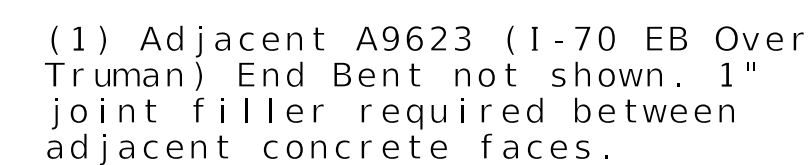
BRIDGE NO.

A9624						

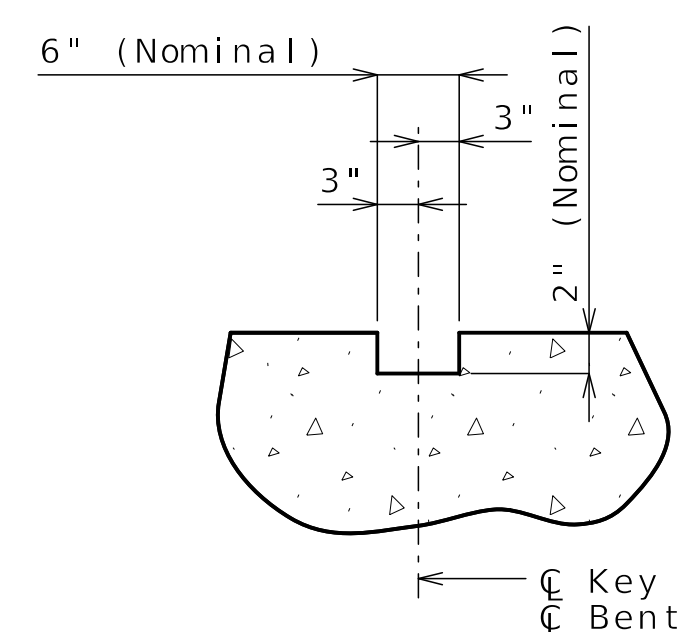
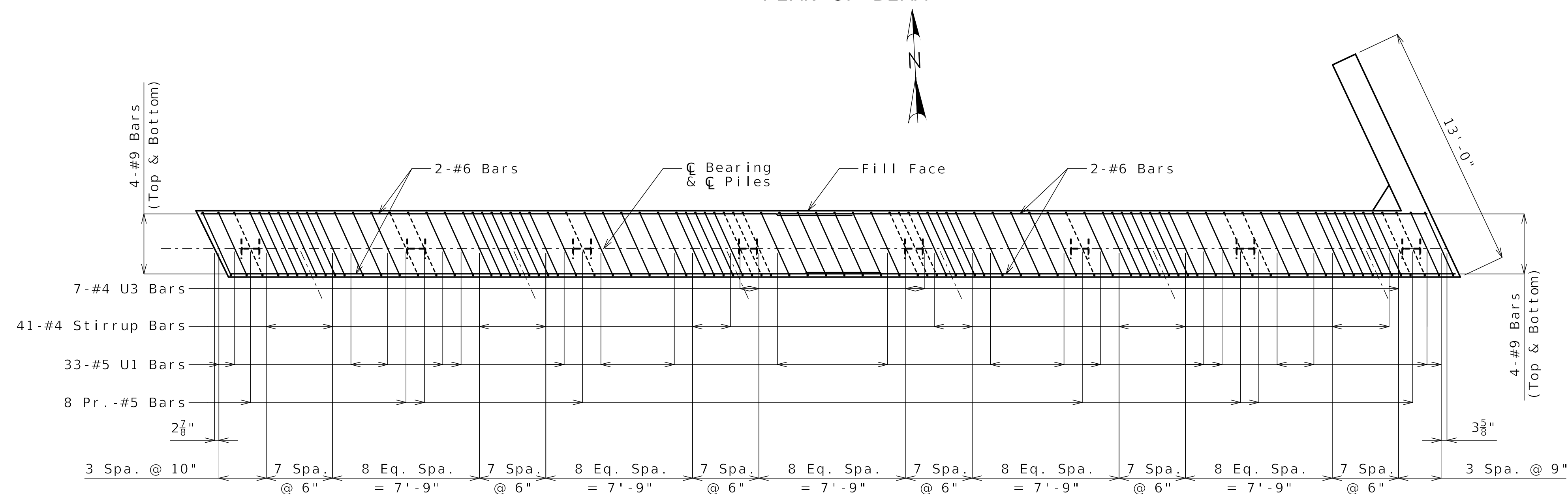
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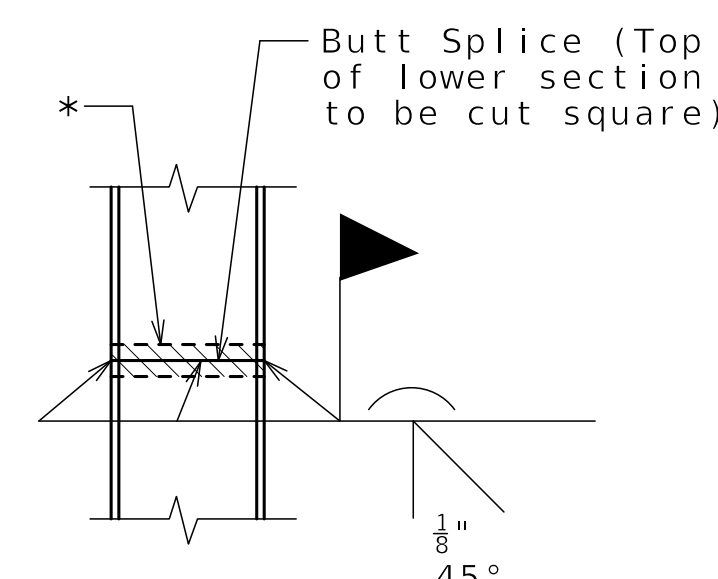
KANSAS CITY, MO 64105-1310
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PLAN OF BEAM

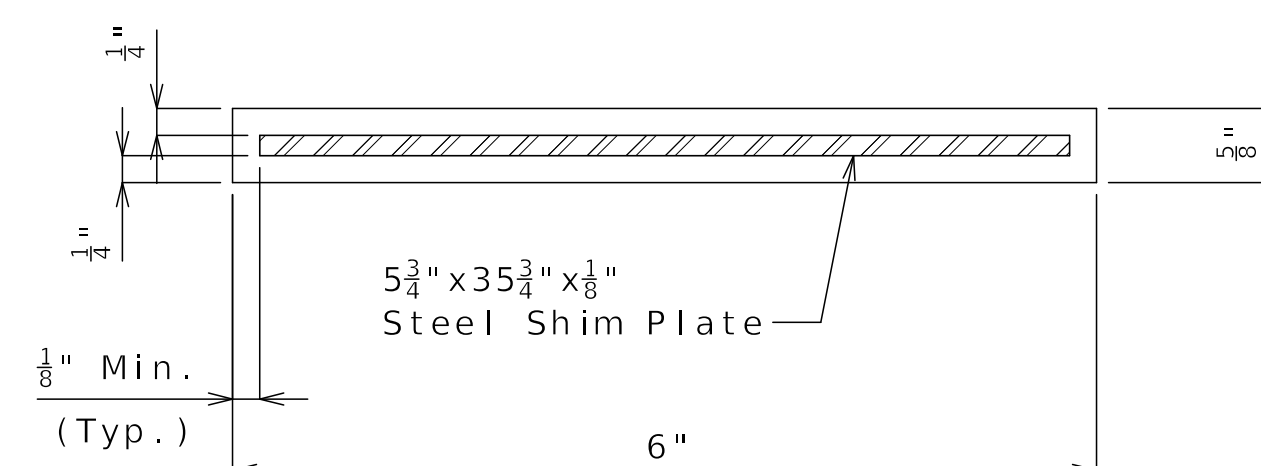


SECTION THRU KEY



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

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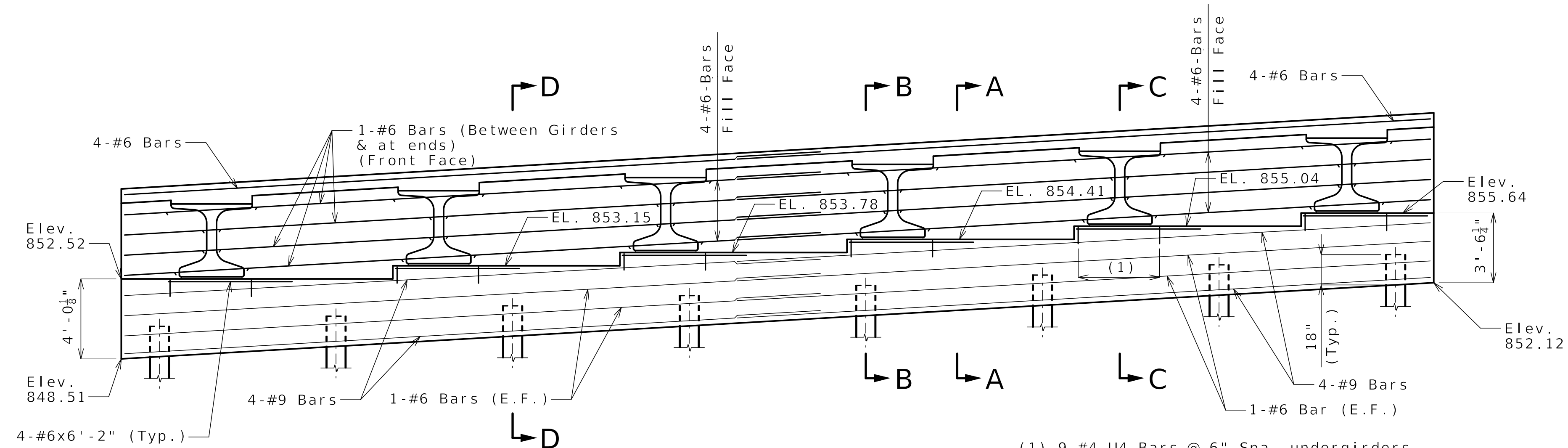
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

Notes:

Notes:
Work this sheet with Sheets No. B07-06 and B07-07.
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 1½".

For details of bridge approach slab and for angle girders relative to C Bent, see A9624 (I-70 WB Over Truman) Superstructure Package.

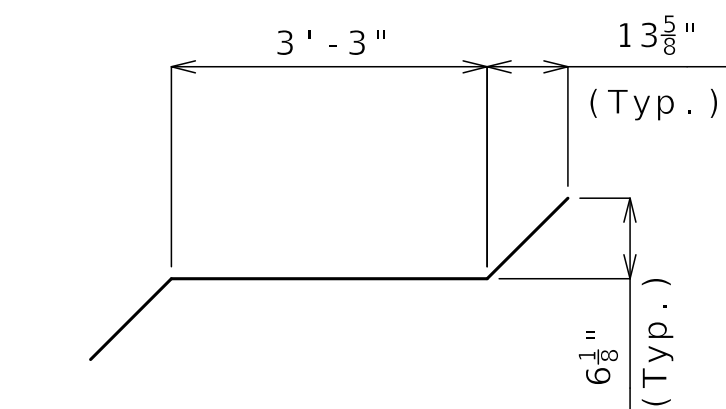
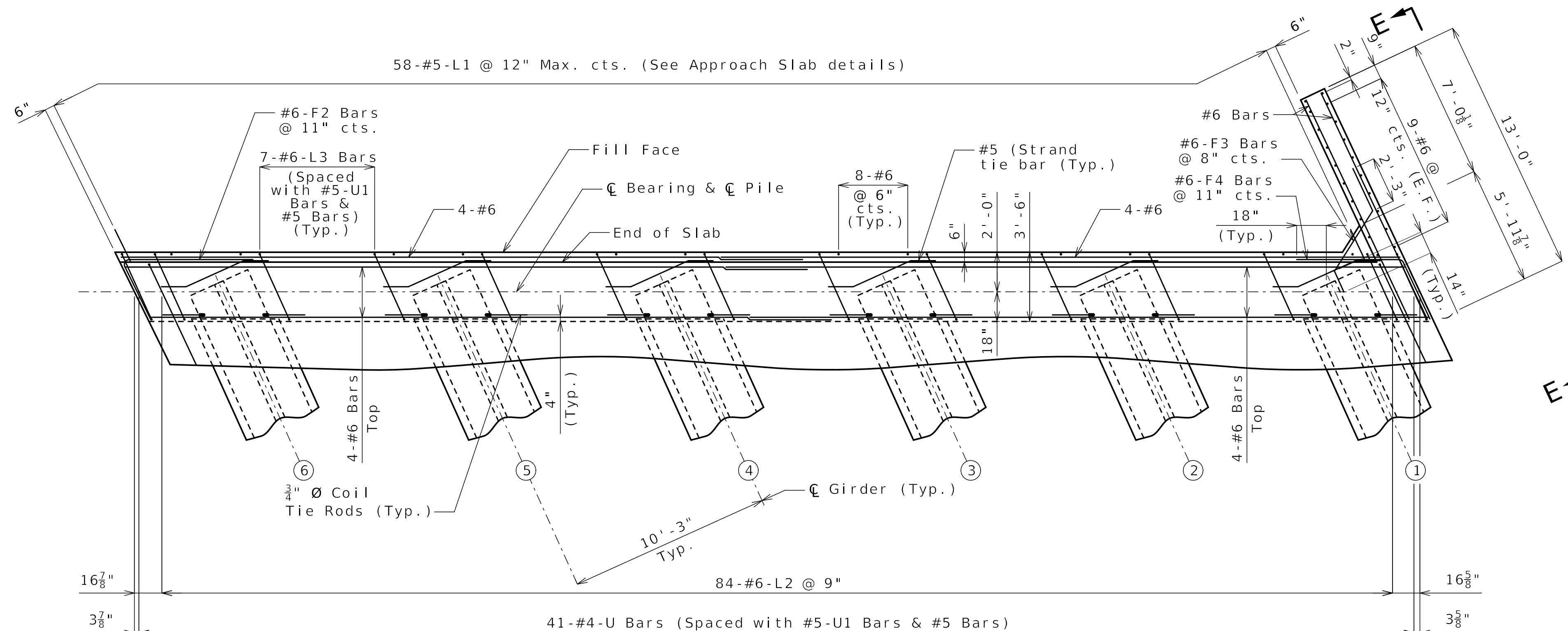
DETAILS OF END BENT NO. 1



SECTION NEAR END BENT

(1) 9-#4-U4 Bars @ 6" Spa. undergirders. Bars shall be placed normal to $\bar{C}$ Bent and parallel to beam step. (Typ.)

Notes:
Lap Splice for #6 bars = 4'-3" (Min.)
Lap Splice for #9 bars = 6'-5" (Min.)



#5 STRAND TIE BAR

General Notes:
Work this sheet with Sheets No. B07-06 and B07-07.
For Sections A-A, B-B, C-C and D-D and Elevation E-E, see Sheet No. B07-07.
For location of coil tie rods, see A9624 (I-70 WB Over Truman) Superstructure Package.
Strands at end of 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.

(X) Denotes girder number

DETAILS OF END BENT NO. 1

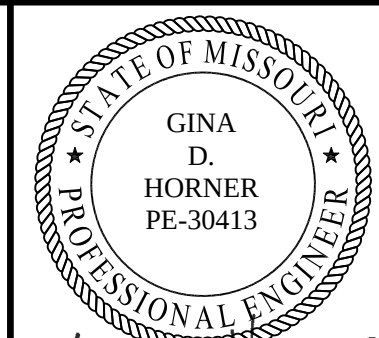
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Checked APR 2025

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Sheet No. B07-06 of B07-37



Gina D. Horner
08/08/25

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ROUTE 1-70 STATE MO

DISTRICT BR SHEET NO. B07-06

COUNTY JACKSON

JOB NO. J411486D

CONTRACT ID. 240807-C01

PROJECT NO.

BRIDGE NO. A9624

DESCRIPTION

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

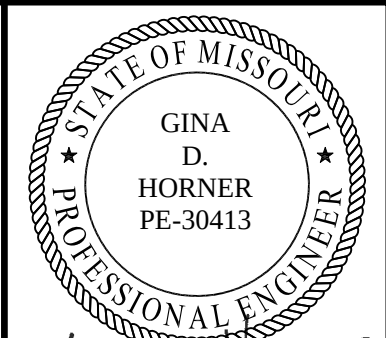
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CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE KANSAS CITY, MO 64105-1310

CERTIFICATE OF AUTHORITY NO. 001270

HNTB



Gina D. Horner
08/08/25

DATE PREPARED
08/08/2025

ROUTE 1-70 STATE MO

DISTRICT BR SHEET NO. B07-07

COUNTY JACKSON

JOB NO. J411486D

CONTRACT ID. 240807-C01

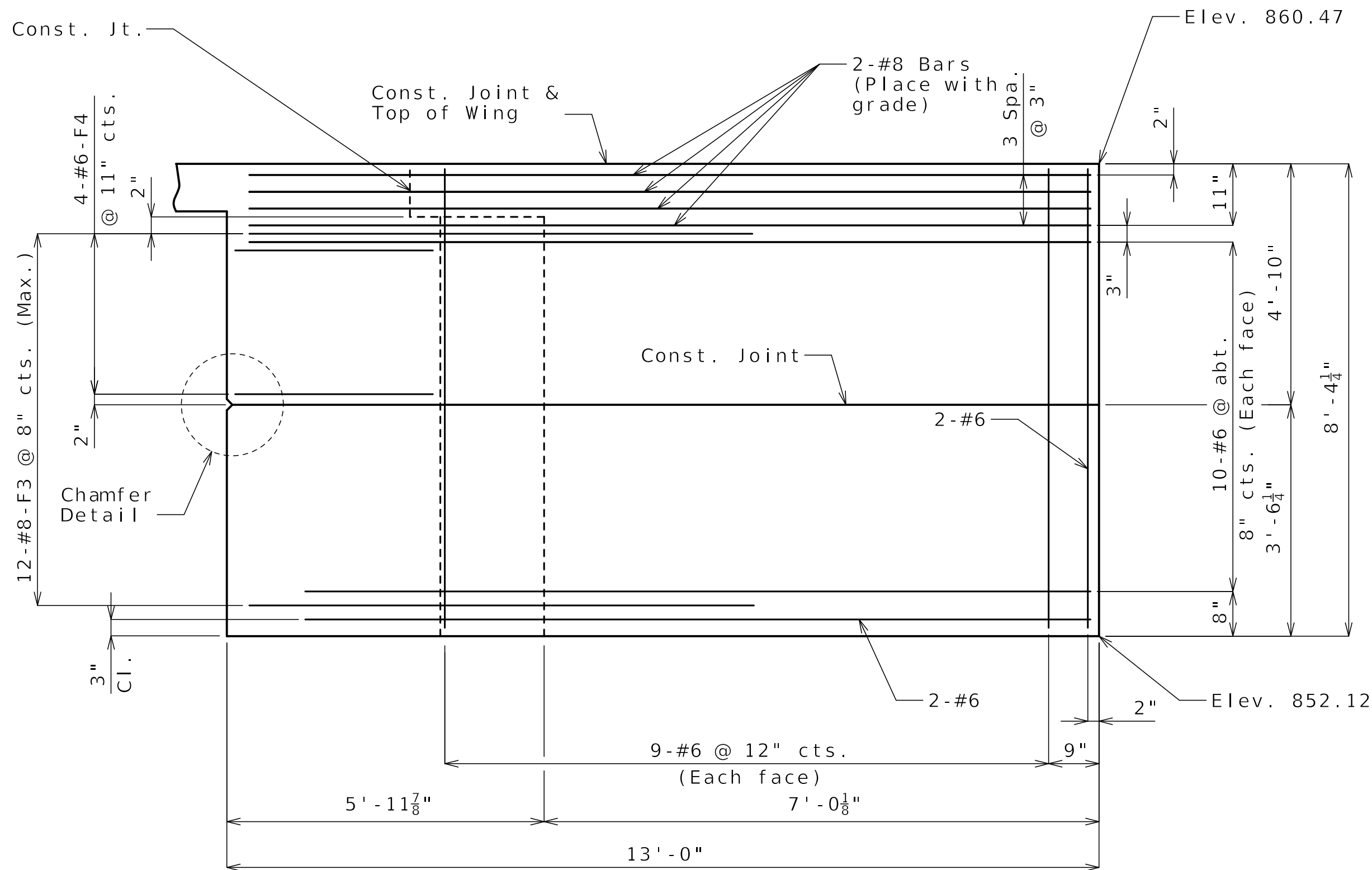
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BRIDGE NO. A9624

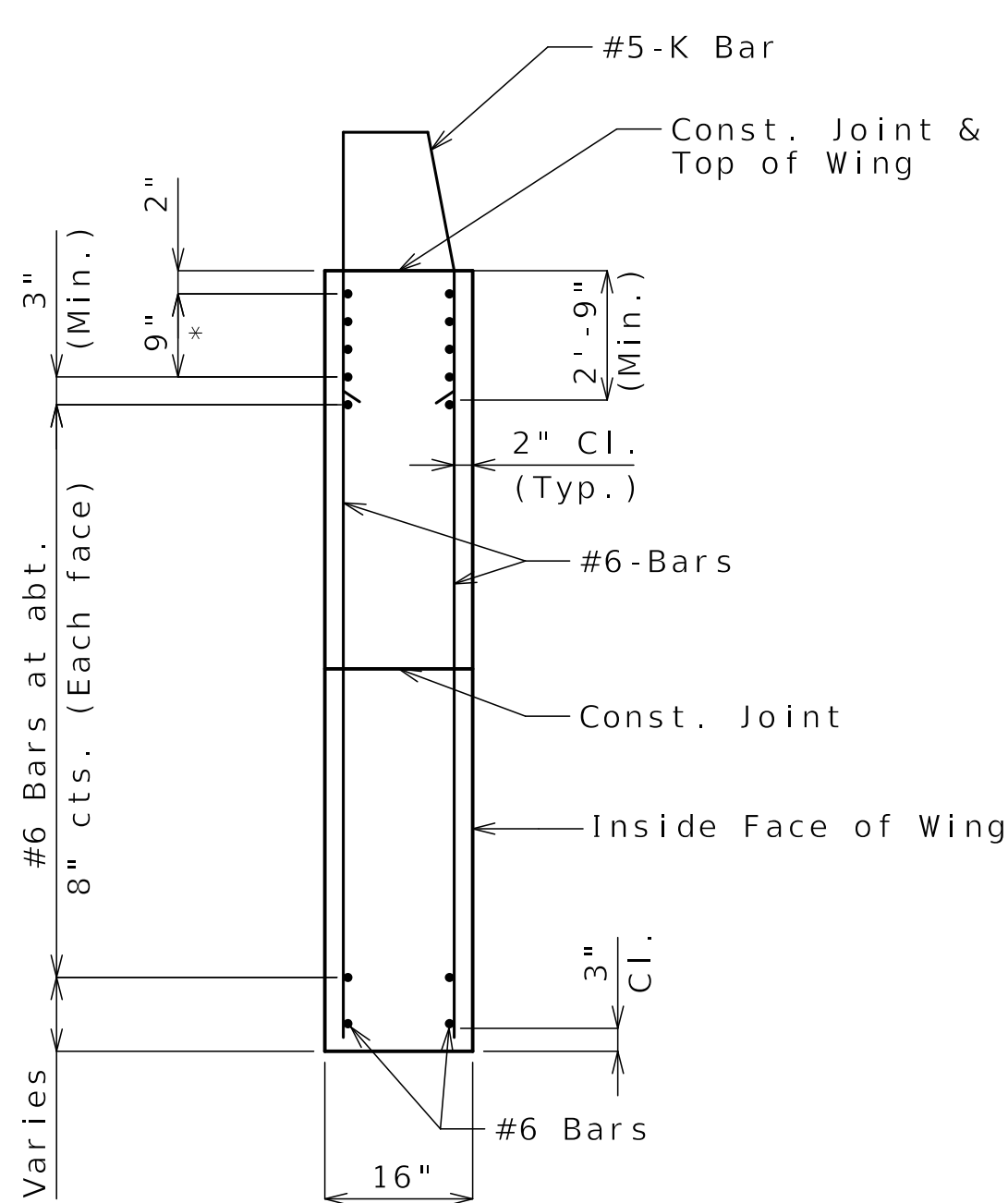
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JOINT VENTURE
715 KIRK DRIVE
KANSAS CITY, MO 64105-1310
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NO. 001270

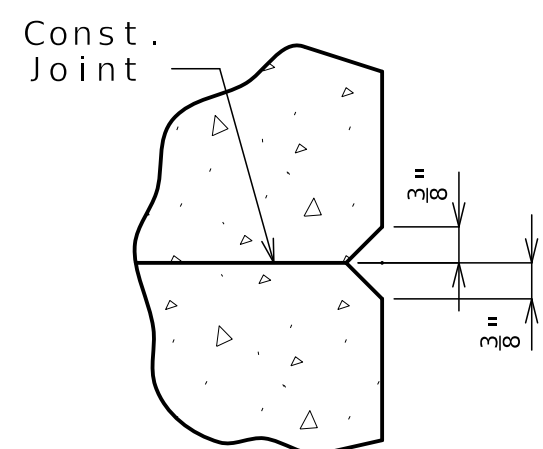


ELEVATION E-E

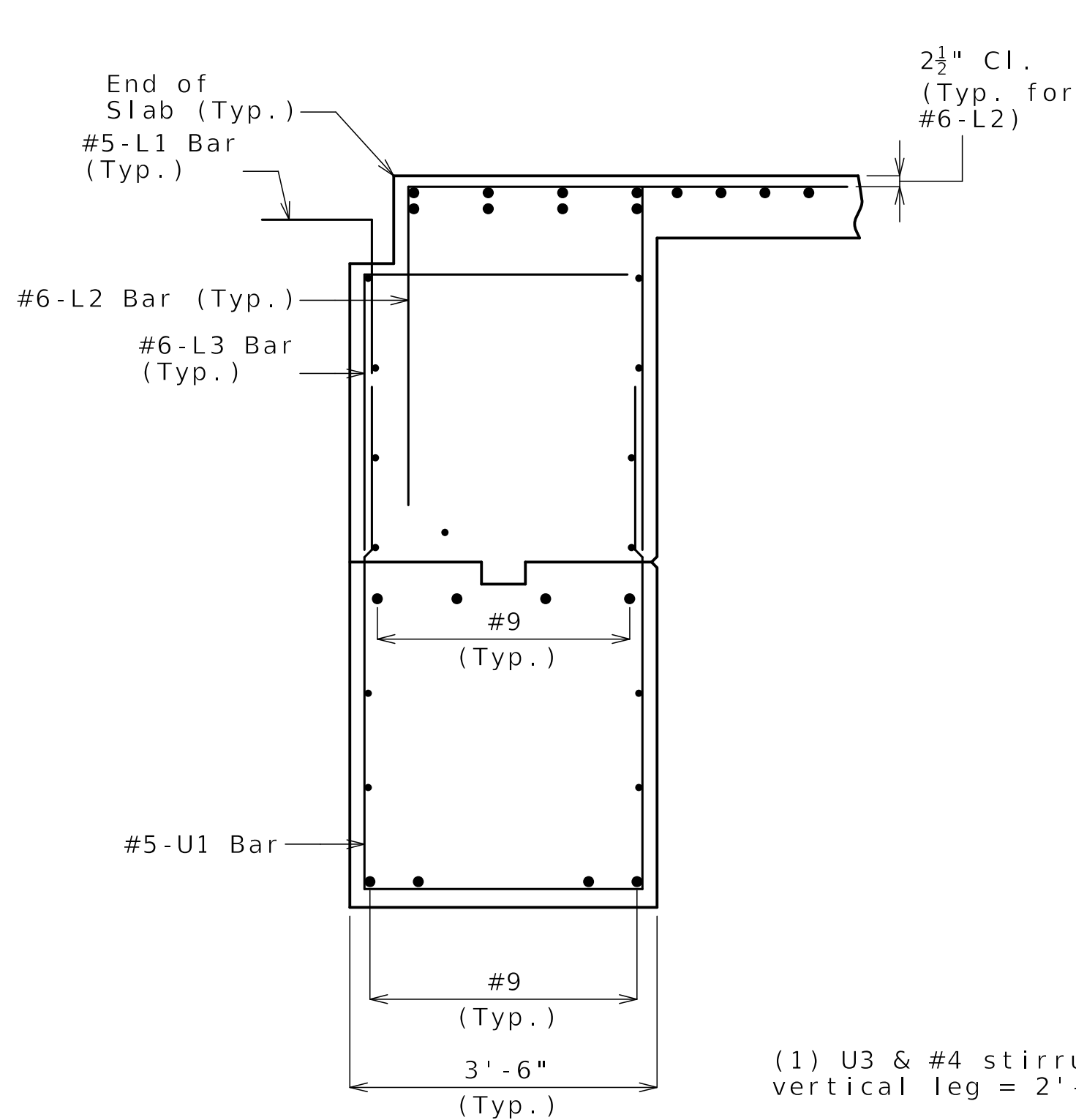


TYPICAL SECTION THRU WING

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



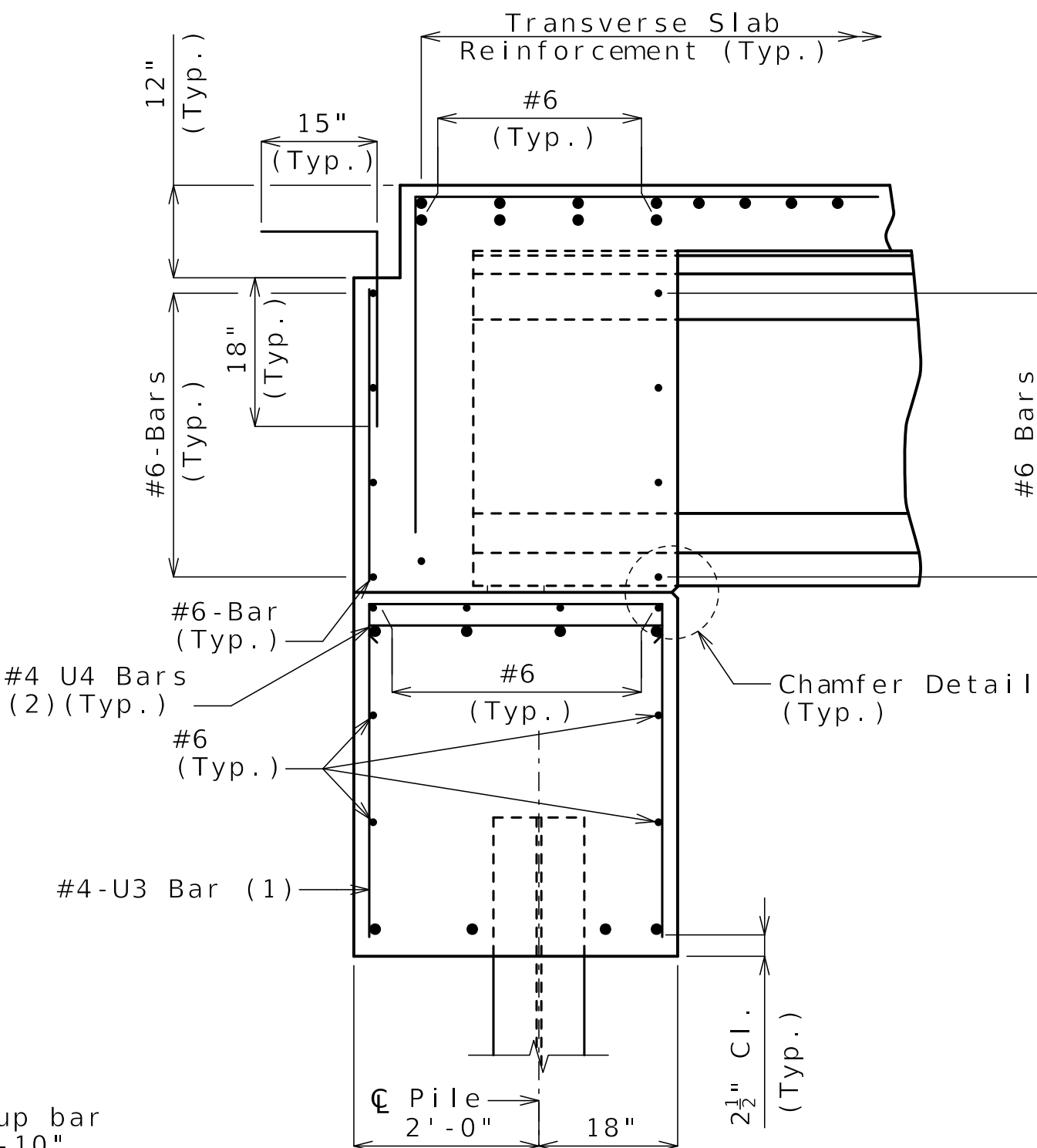
CHAMFER DETAIL



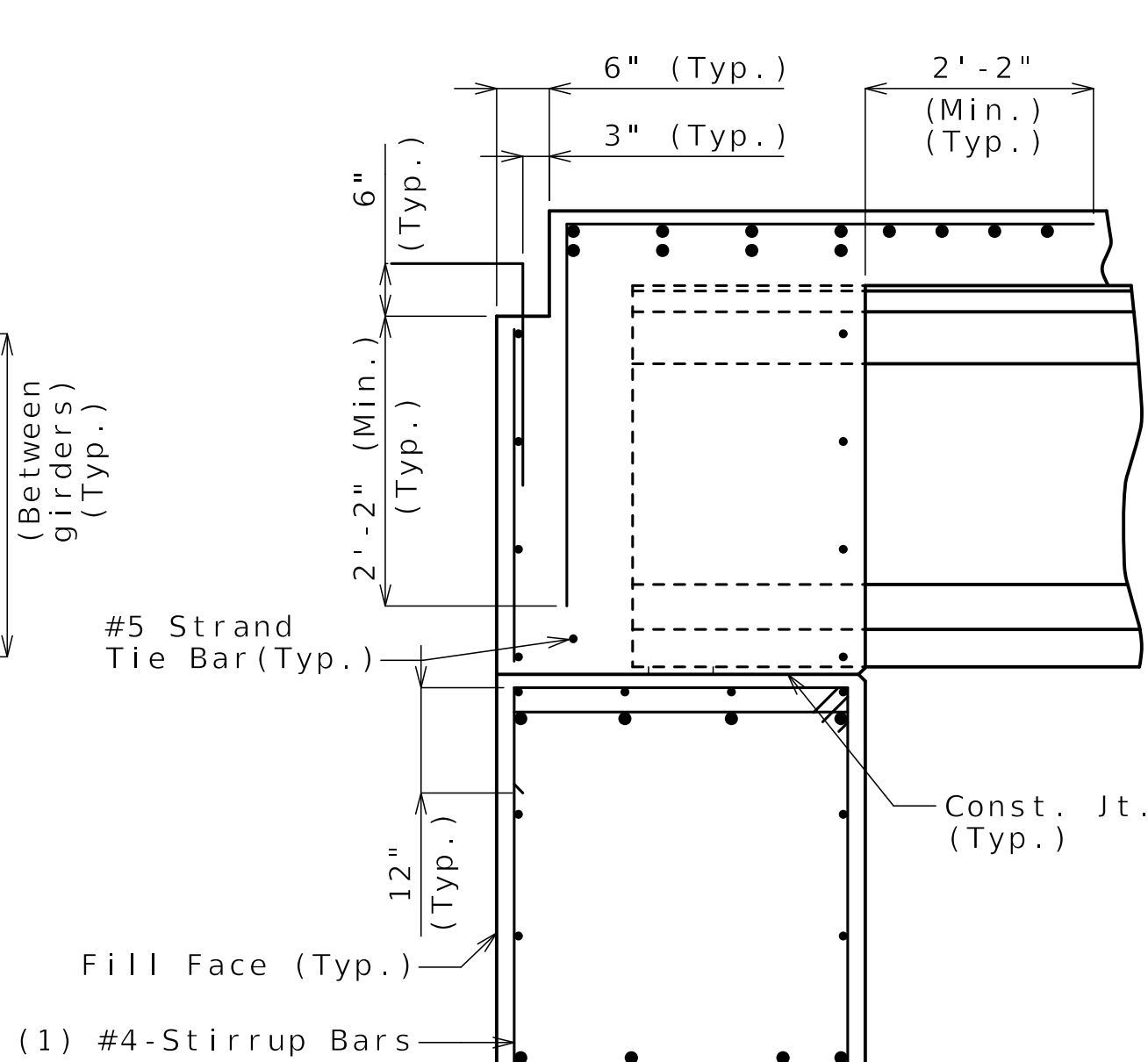
SECTION A-A

(1) U3 & #4 stirrup bar
vertical leg = 2'-10"

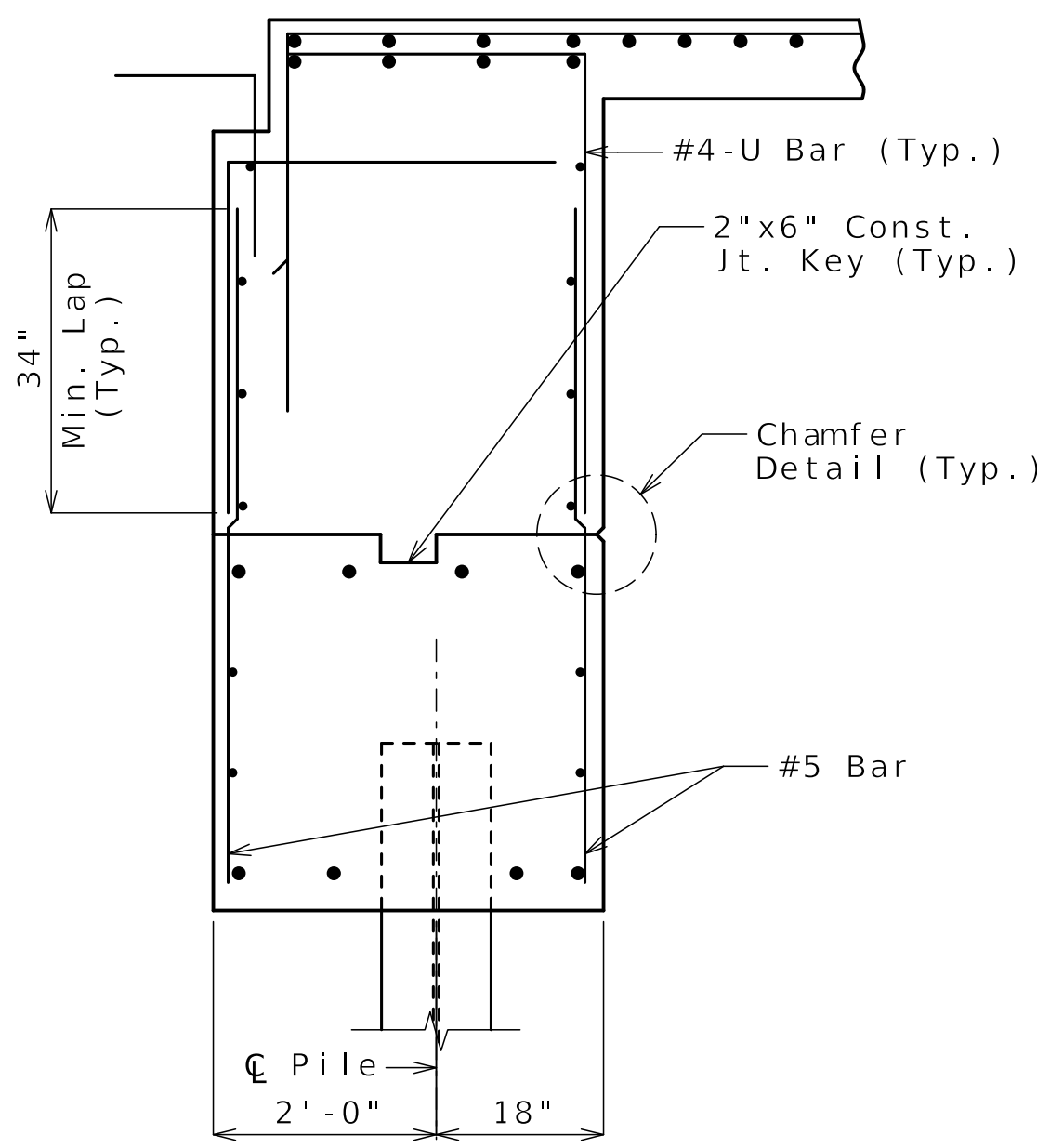
(2) Bars shall be placed
normal to C Bent and
parallel to beam step.



SECTION B-B



SECTION C-C



SECTION D-D

General Notes:
Work this sheet with Sheets No. B07-05
and B07-06.
For location of Sections A-A, B-B, C-C, D-D
and Elevation E-E, see Sheet No. B07-06.
For reinforcement of the Type D Barrier, see
A9624 (I-70 WB Over Truman) Superstructure
Package.

DETAILS OF END BENT NO. 1

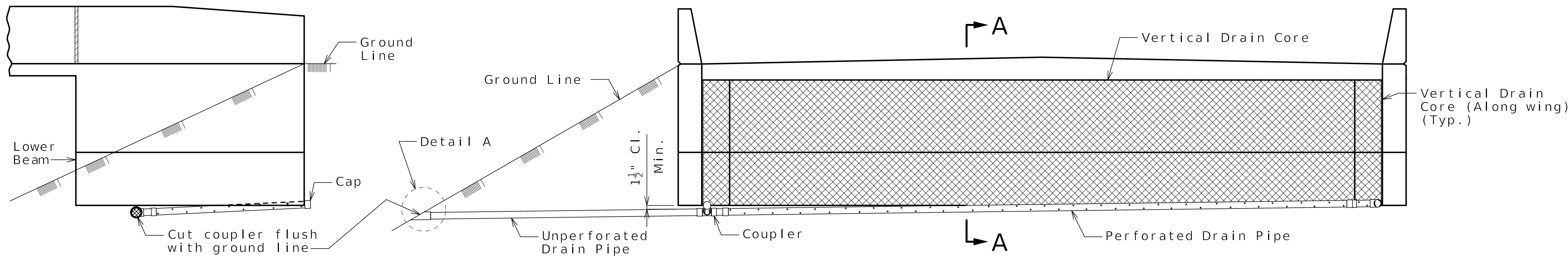
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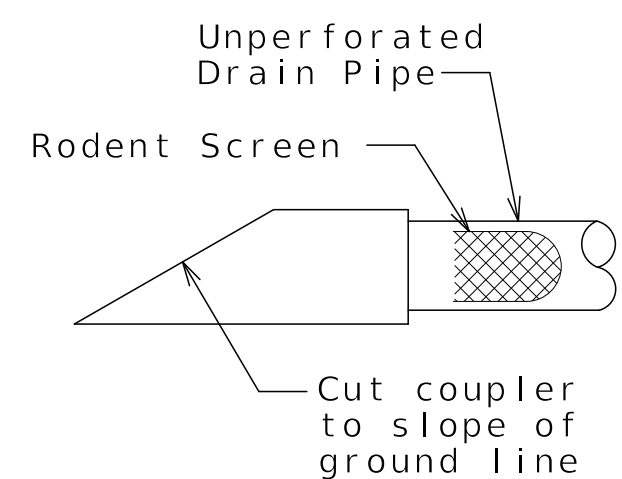
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Sheet No. B07-07 of B07-37

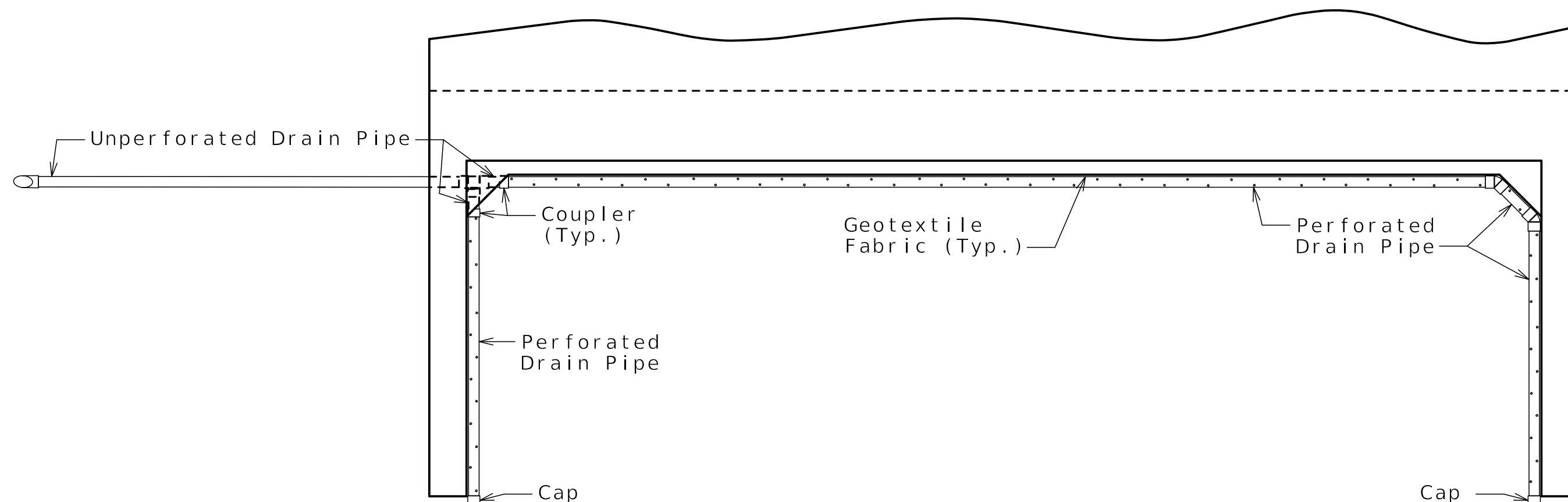


ELEVATION OF WING

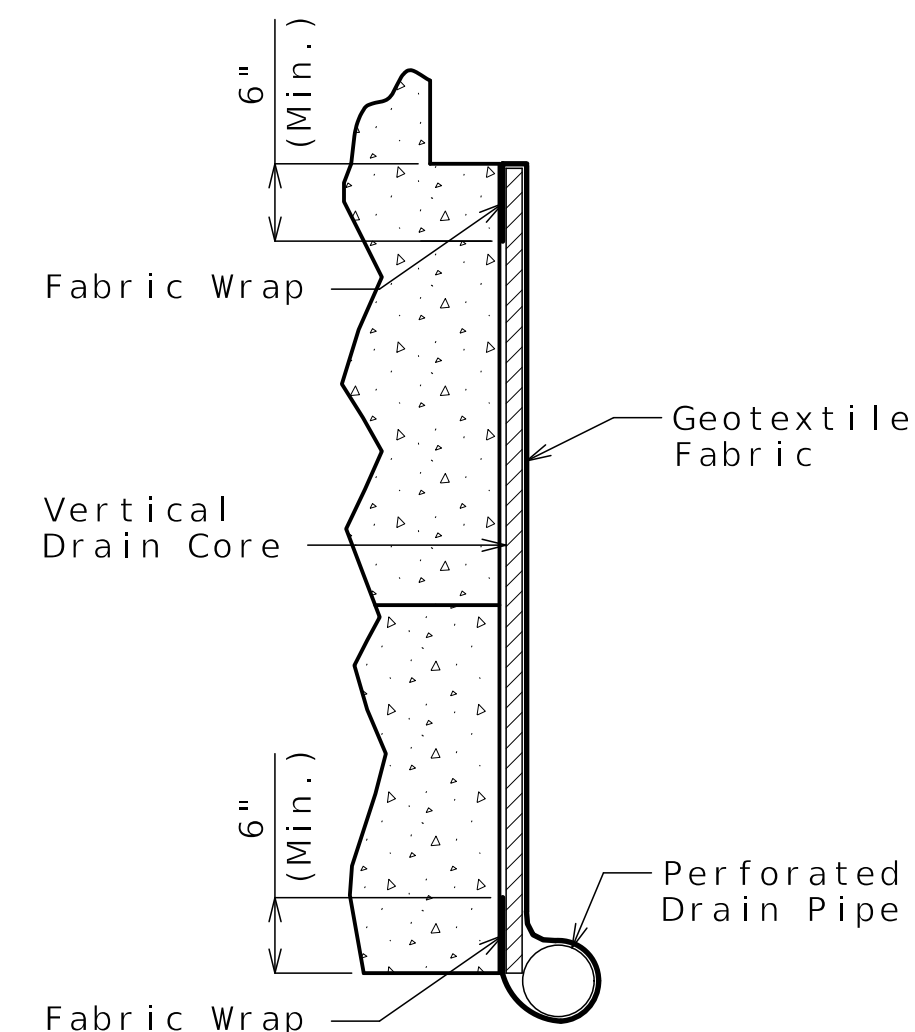
ELEVATION OF END BENT



DETAIL A



PLAN OF END BENT



PART SECTION A-A
(Section thru wing similar)

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.

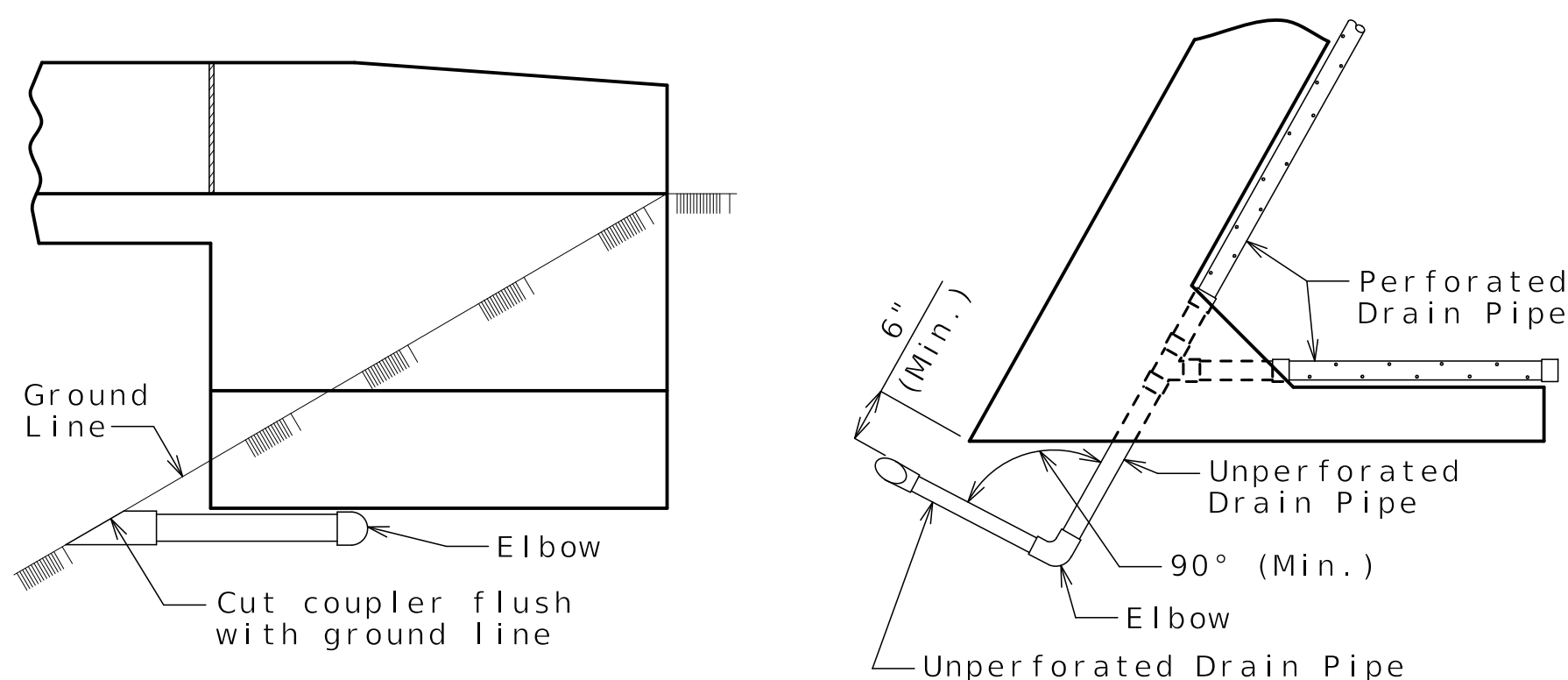
Square end bent shown, skewed end bent similar.

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.



ELEVATION OF WING

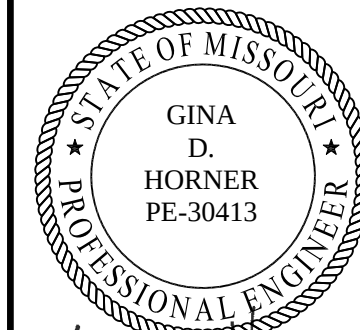
PART PLAN

OPTIONAL TURNED DRAIN

(Use only when straight drain is not practical.)

Released For Construction
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Revision: 0.0
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VERTICAL DRAIN AT END BENTS



Gina D. Horner

08/08/25

DATE PREPARED

08/08/2025

ROUTE STATE

I-70 MO

DISTRICT SHEET NO.

BR B07-08

COUNTY

JACKSON

JOB NO.

J4I1486D

CONTRACT ID.

240807-C01

PROJECT NO.

BRIDGE NO.

A9624

DESCRIPTION

REV 0 - RFC SUBMITTAL

DATE

08/08/25

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

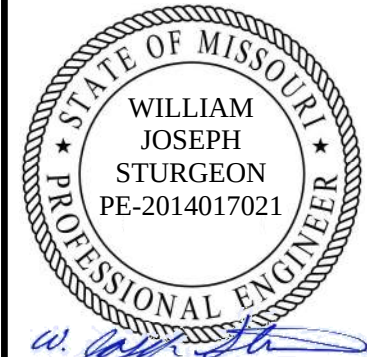
715 KIRK DRIVE

KANSAS CITY, MO 64105-1310

CERTIFICATE OF AUTHORITY

NO. 001270

HNTB



DATE PREPARED 08/08/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B07-09
COUNTY JACKSON	
JOB NO. J4I1486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO. A9624

DESCRIPTION	DATE
REV 0 - RFC SUBMITTAL	08/08/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

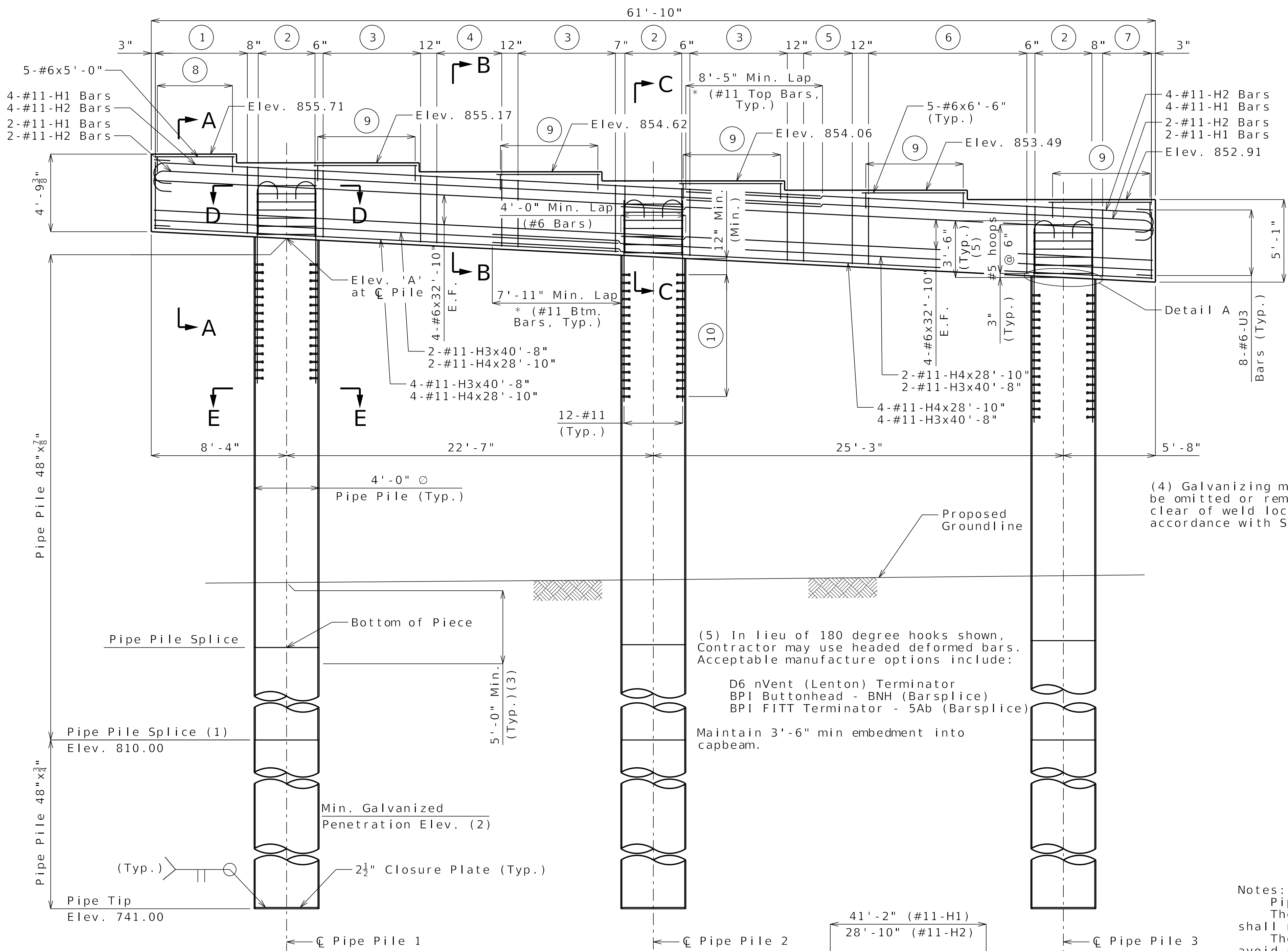
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

CLARKSON RADMACHER JOINT VENTURE

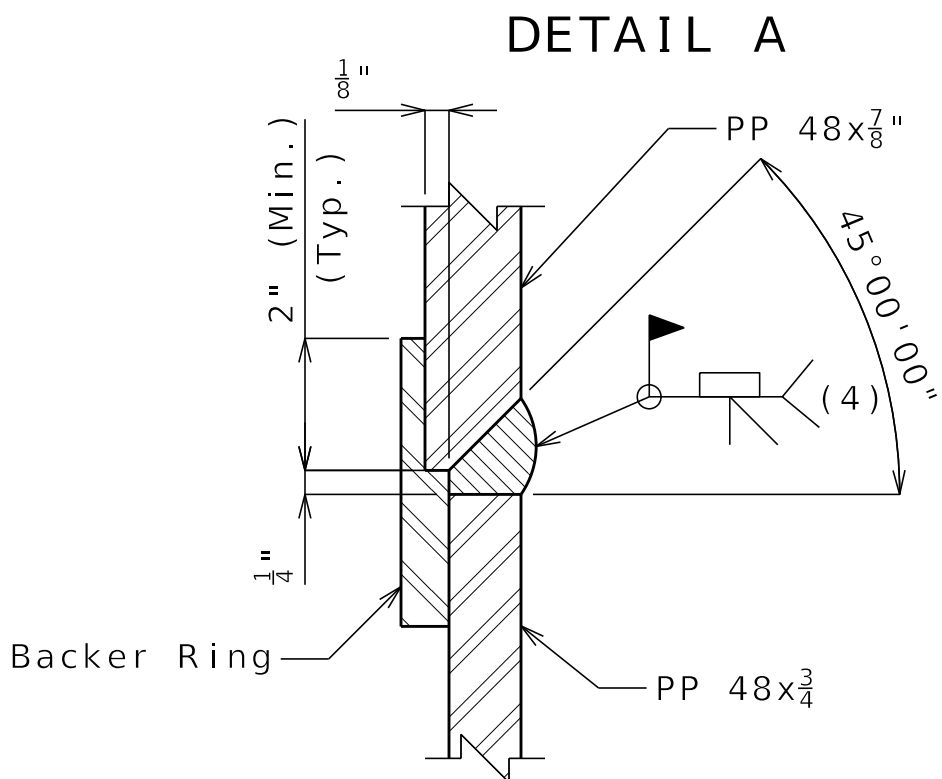
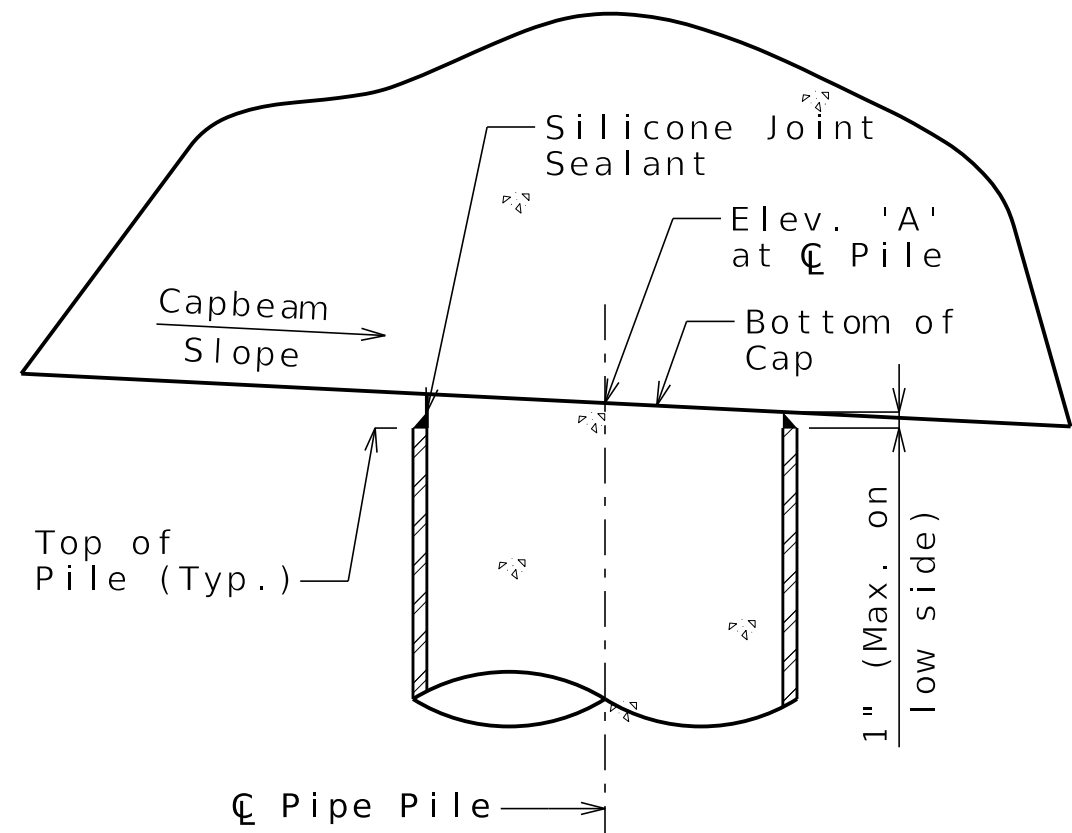
715 KIRK DRIVE
KANSAS CITY, MO 64105-1310
CERTIFICATE OF AUTHORITY
NO. 001270

HNTB



- (1) Elevation of pipe pile wall thickness transition is the maximum allowed. Depth below ground line of the transition can be increased (the elevation decreased) for constructability.
- (2) See Foundation Data Table on Sheet No. B07-03.
- (3) Concrete shall be placed within pipe pile from bottom of capbeam to 5'-0" minimum below ground line. Fill pipe pile with loose dry sand below this elevation.

TABLE OF VARIABLES	
Pile Number	'A'
1	850.52
2	849.38
3	848.11



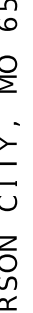
PIPE PILE SPLICE DETAIL

- 7 Sets of 1-#6-U2 & 2-#6 Tie Bars @ 12" Max cts. = 5'-8"
- 4 Sets of 1-#6-U1 & 2-#6 Hook Bars @ 14" cts.
- 9 Sets of 1-#6-U2 & 2-#6 Tie Bars @ 9" cts.
- 5-#6-U2 @ 12" cts.
- 4-#6-U2 @ 12" cts.
- 14 Sets of 1-#6-U2 & 2-#6 Tie Bars @ 9" cts.
- 4 Sets of 1-#6-U2 & 2-#6 Tie Bars @ 12" cts.
- 10-#4-U4 @ 6" Spa.
- 13-#4-U4 @ 6" Spa.
- 16 sets of 12-7/8" O x5" Welded Shear Connectors Spa. @ abt. 6" cts. = 7'-7"

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

Notes:
Pipe pile shall be closed end.
The minimum wall thickness of any spot or local area of any type shall not be more than 12.5% under the specified nominal wall thickness. The contractor shall determine the pile wall thickness required to avoid damage from all driving activities, but wall thickness shall not be less than the minimum specified.
Closure plate shall not project beyond the outside diameter of the pipe pile. Satisfactory weldments may be made by beveling tip end of pipe or by use of inside backing rings. In either case, proper gaps shall be used to obtain weld penetration full thickness of pipe.
Splices for pipe pile shall be made watertight and to the full strength of the pipe above and below the splice to permit hard driving without damage. Pipe damaged during driving shall be replaced. Pipe sections used for splicing shall be at least 5 feet in length. At the contractor's option, the hooks of vertical bars embedded in the capbeam may be oriented inward or outward as needed to avoid conflict with cap beam reinforcement.
* Alternate location of lap splices between adjacent bars about centerline of bent. Alternate lap splice location not shown.
Work this sheet with Sheet No. B07-04.
For location of pipe piles, see Sheet B07-04.
Shear connectors shall be in accordance with Sec. 712, 1037, and 1080
For pile point reinforcement details, see Sheet No. B07-13.

DETAILS OF INTERMEDIATE BENT NO. 2



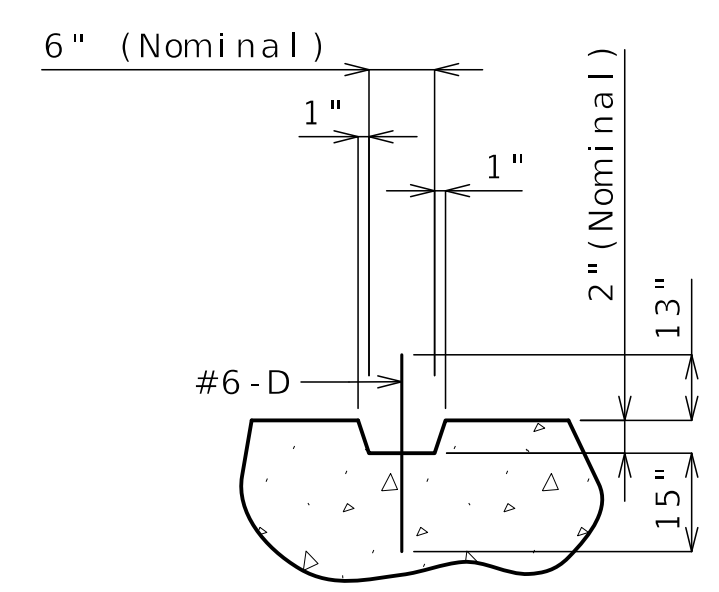
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

MoDOT

105 WEST CAPITAL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-235-6363)

HN **CLARKSON**
RADMACHER
 JOINT VENTURE

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

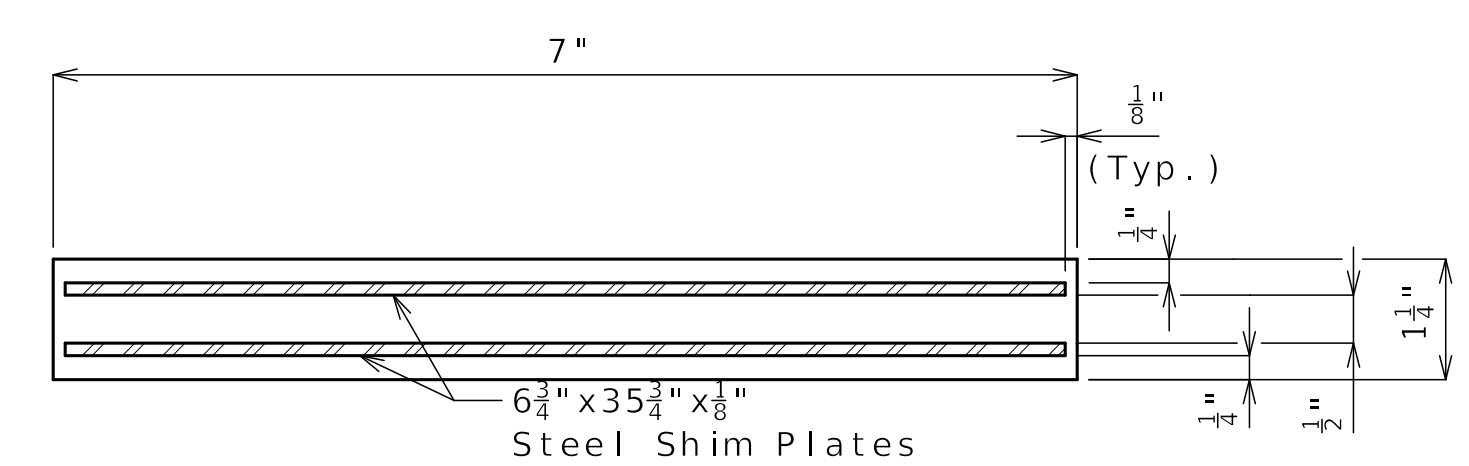


SECTION THRU KEY



SECTION D-D

(Cap Reinforcing not shown for clarity)



12 Required

Notes:

Work this sheet with Sheet No. B07-09.

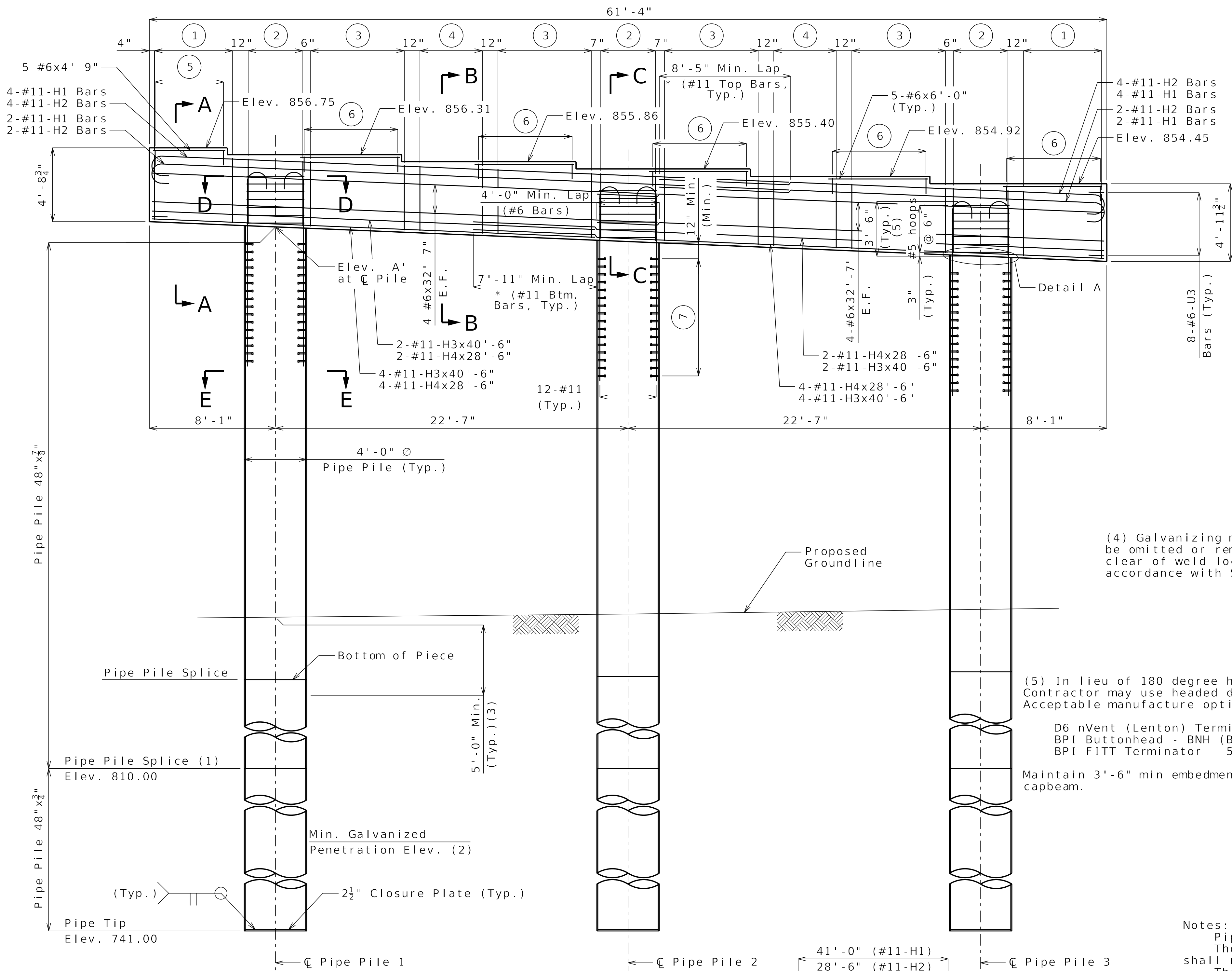
For angle of girders relative to C Bent, see A9624 (I-70 WB Over Truman) Superstructure Package.

For additional joint filler layout details, see concrete diaphragm details sheet in A9624 (I-70 WB Over Truman) Superstructure Package.

For steps 2 inches or more, use 2¼x½ inch joint filler up vertical face.

Hoop splices shall be staggered around the column at 90 degree intervals.

B_A9624_B07-10_J4I1486D.dgn 9:55:19 AM 8/8/2025



- (1) Elevation of pipe pile wall thickness transition is the maximum allowed. Depth below ground line of the transition can be increased (the elevation decreased) for constructability.
- (2) See Foundation Data Table on Sheet No. B07-03.
- (3) Concrete shall be placed within pipe pile from bottom of capbeam to 5'-0" minimum below ground line. Fill pipe pile with loose dry sand below this elevation.

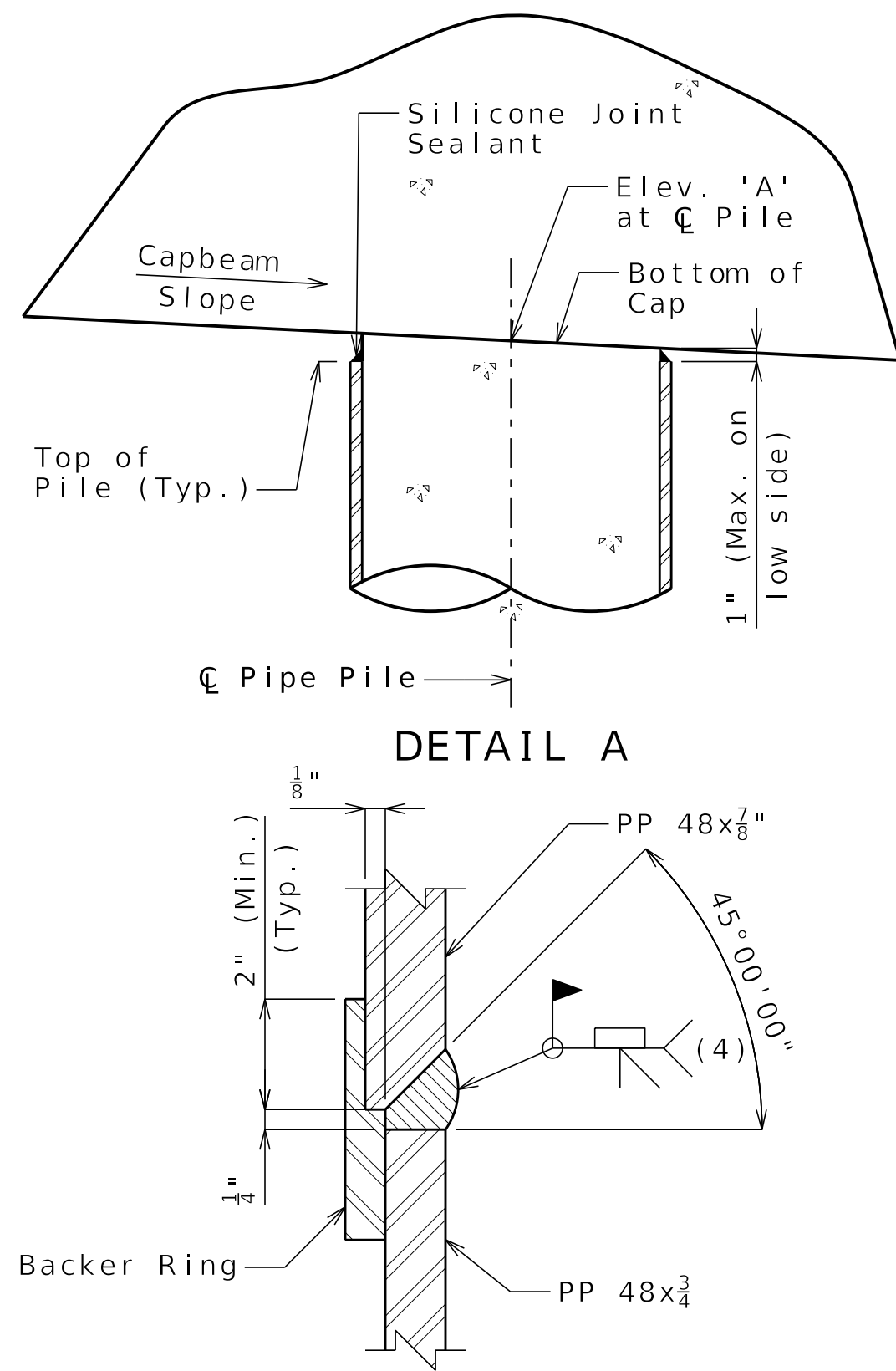
TABLE OF VARIABLES	
Pile Number	'A'
1	851.68
2	850.74
3	849.81

ELEVATION
(Beam keys not shown for clarity)

#11-H1 & #11-H2

#6-U3 BAR

#4-U4 BAR



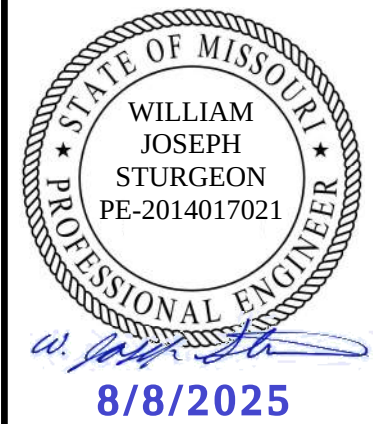
PIPE PILE SPLICE DETAIL

- 6 Sets of 1-#6-U2 & 2-#6 Tie Bars @ 12" cts.
- 4 Sets of 1-#6-U1 & 2-#6 Hook Bars @ 14" cts.
- 9 Sets of 1-#6-U2 & 2-#6 Tie Bars @ 9" cts.
- 5-#6-U2 @ 12" cts.
- 10-#4-U4 @ 6" Spa.
- 12-#4-U4 @ 6" Spa.
- 16 sets of 12-7/8" x 5" Welded Shear Connectors Spa. @ abt. 6" cts. = 7'-7"

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

Notes:
Pipe pile shall be closed end.
The minimum wall thickness of any spot or local area of any type shall not be more than 12.5% under the specified nominal wall thickness.
The contractor shall determine the pile wall thickness required to avoid damage from all driving activities, but wall thickness shall not be less than the minimum specified.
Closure plate shall not project beyond the outside diameter of the pipe pile. Satisfactory weldments may be made by beveling tip end of pipe or by use of inside backing rings. In either case, proper gaps shall be used to obtain weld penetration full thickness of pipe.
Splices for pipe pile shall be made watertight and to the full strength of the pipe above and below the splice to permit hard driving without damage. Pipe damaged during driving shall be replaced.
Pipe sections used for splicing shall be at least 5 feet in length.
At the contractor's option, the hooks of vertical bars embedded in the capbeam may be oriented inward or outward as needed to avoid conflict with cap beam reinforcement.
For location of pipe piles, see Sheet B07-04.
* Alternate location of lap splices between adjacent bars about centerline of bent. Alternate lap splice location not shown.
Work this sheet with Sheet No. B07-12.
Shear connectors shall be in accordance with Sec. 712, 1037, and 1080.
For pile point reinforcement details, see Sheet No. B07-13.

DETAILS OF INTERMEDIATE BENT NO. 3



DATE PREPARED 08/08/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B07-11
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO. A9624

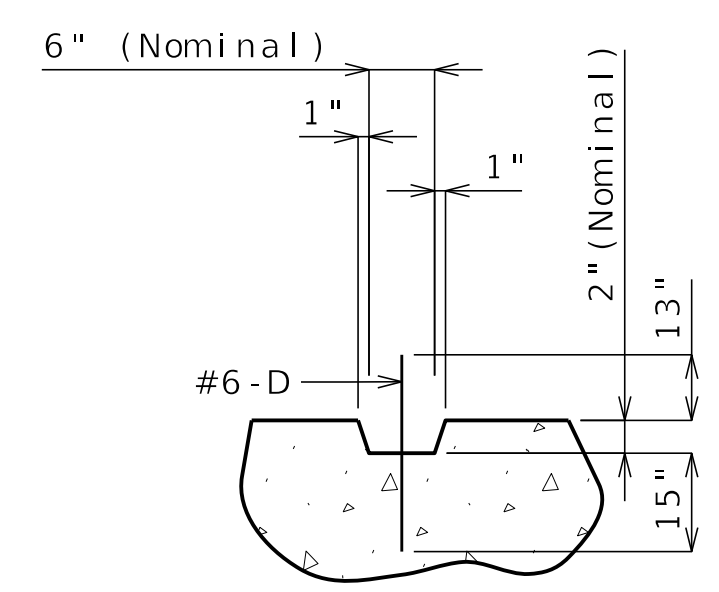
DESCRIPTION	DATE
REV 0 - RFC SUBMITTAL	08/08/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)
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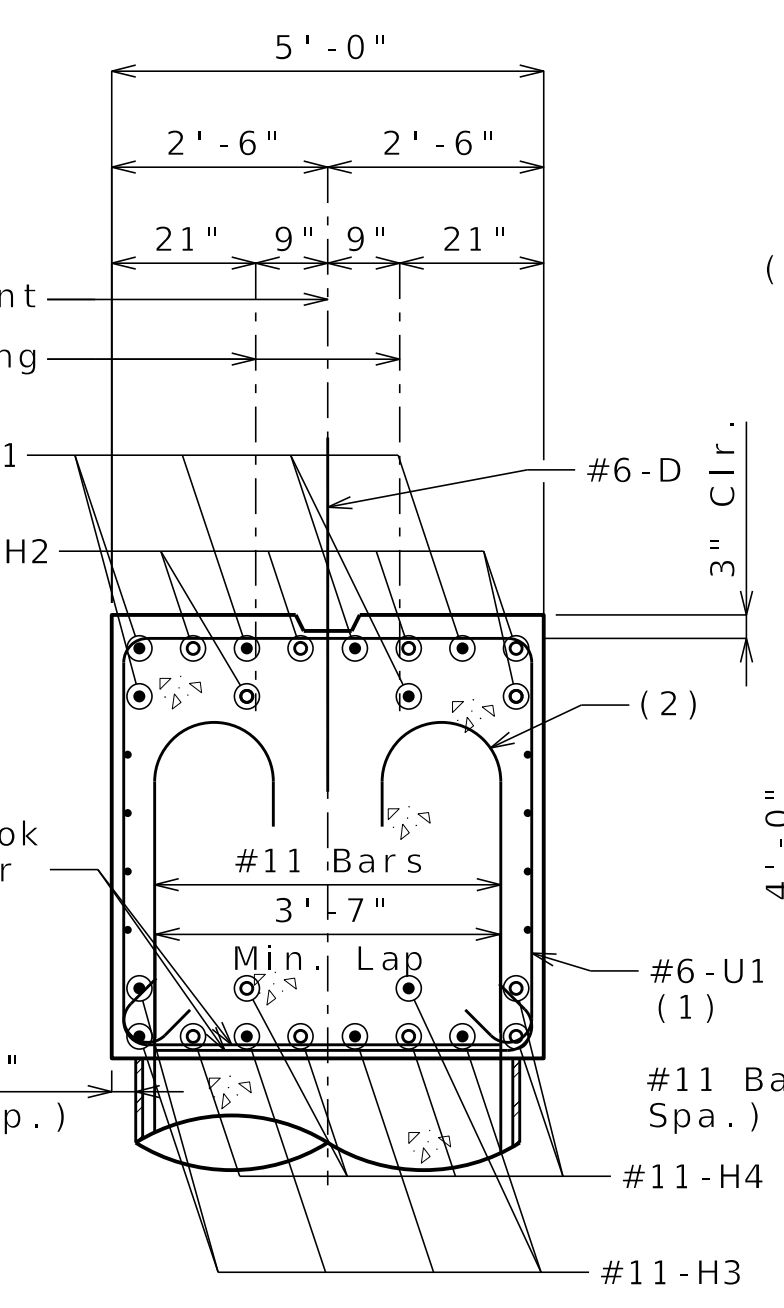
CLARKSON RADMACHER JOINT VENTURE	715 KIRK DRIVE KANSAS CITY, MO 64105-1310 CERTIFICATE OF AUTHORITY NO. 001270
HNTB	

HN **CLARKSON**
RADMACHER
 JOINT VENTURE

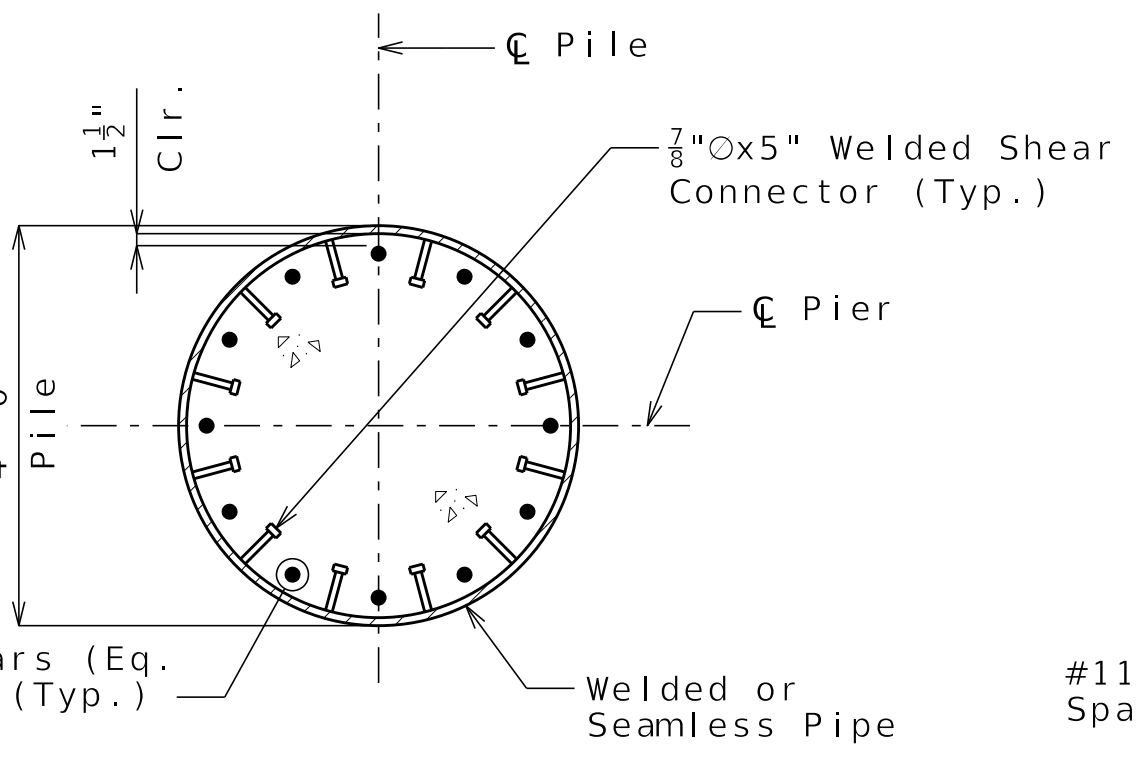
715 KIRK DRIVE
 KANSAS CITY, MO 64105-1310
 CERTIFICATE OF AUTHORITY
 NO. 001270



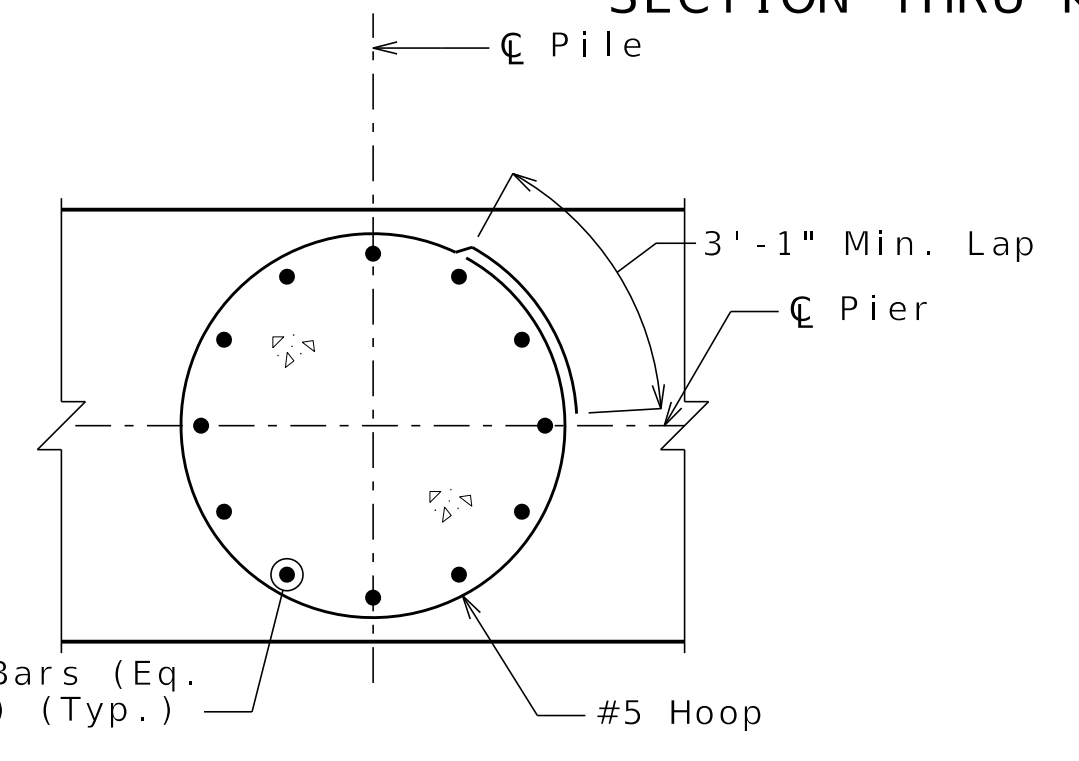
SECTION THRU KEY



SECTION C-C

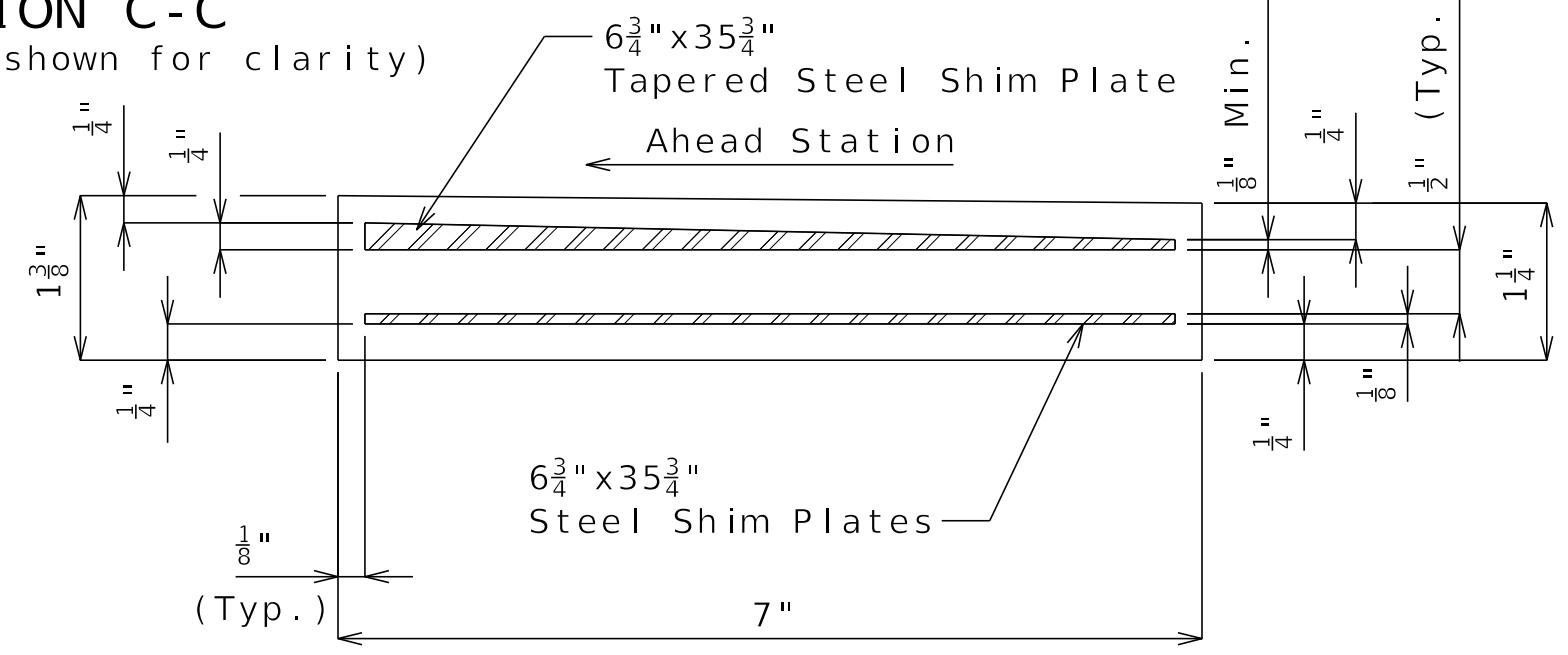


SECTION E - E



SECTION D-D

(Cap Reinforcing not shown for clarity)



TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD (TAPERED)

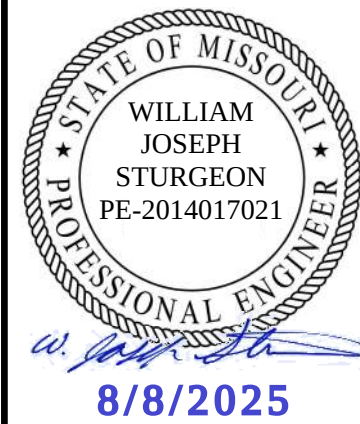
12 Required per Bent

Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

DETAILS OF INTERMEDIATE BENT NO. 3

Notes:

- Work this sheet with Sheet No. B07-11.
- For angle of girders relative to $\angle$ Bent, see A9624 (1-70 WB Over Truman) Superstructure Package.
- For additional joint filler layout details, see concrete diaphragm details sheet in A9624 (1-70 WB Over Truman) Superstructure Package.
- For steps 2 inches or more, use $2\frac{1}{4} \times \frac{1}{2}$ inch joint filler up vertical face.
- Hoop splices shall be staggered around the column at 90 degree intervals.



DATE PREPARED 08/08/2025	
ROUTE I - 70	STATE MO
DISTRICT BR	SHEET NO. B07 - 13
COUNTY JACKSON	
JOB NO. J4 I 1486D	
CONTRACT ID. 240807 - C01	
PROJECT NO.	
BRIDGE NO. A9624	

DESCRIPTION	DATE
REV 0 - RFC SUBMITTAL	08/08/25

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

Notes:

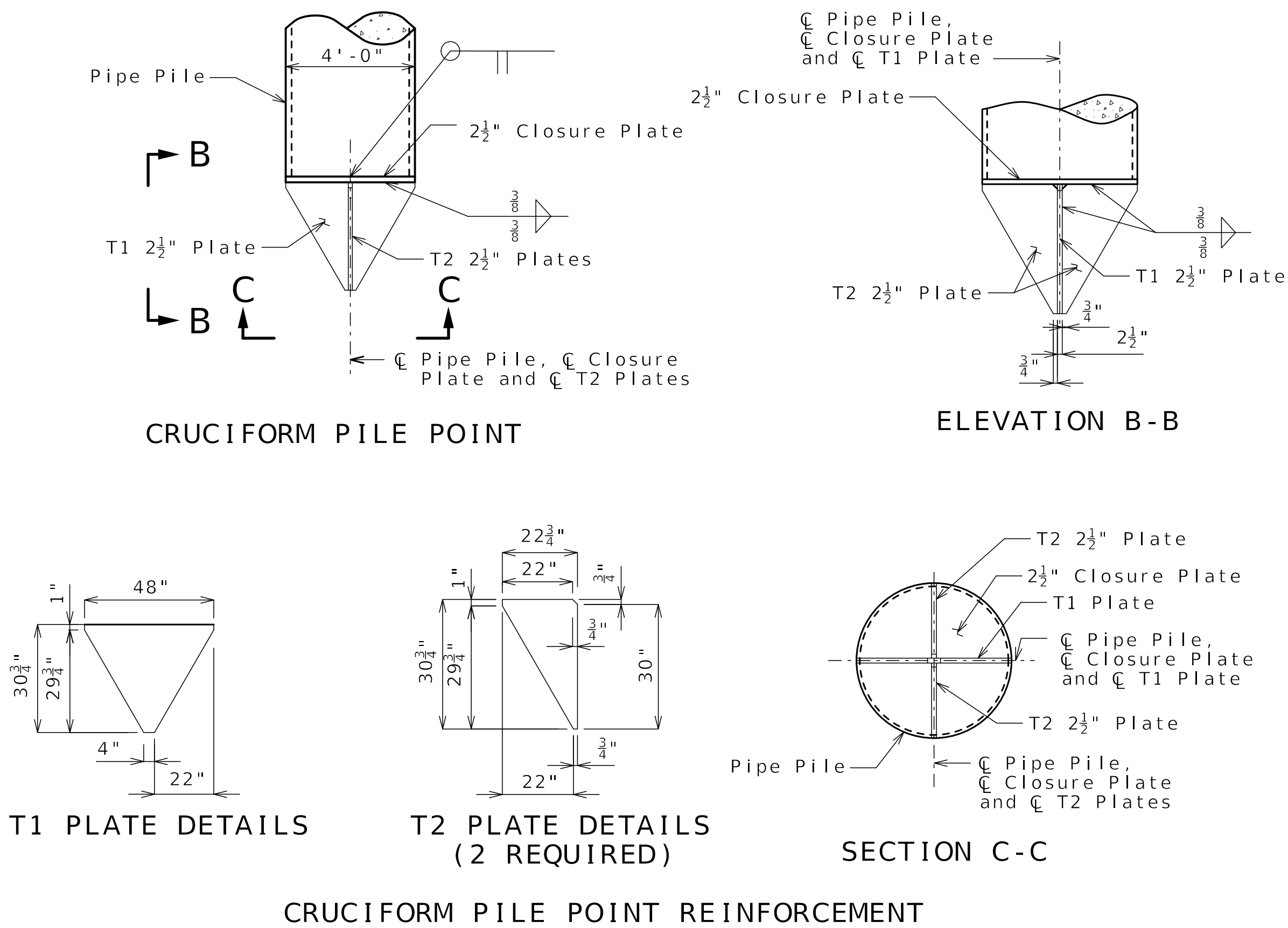
Shop drawings are not required for pile point reinforcement.

Steel for Closure plate and cruciform pile point reinforcement shall be ASTM A709 Grade 50.

Steel casting for conical pile point reinforcement shall be ASTM A27 Grade 65-35.

Splices of pipe pile shall be made watertight and to the full strength of the pipe above and below the splice to permit hard driving without damage. Pipe sections used for splicing shall be at least 5 feet in length.

(1) If the conical pile point is not pre-beveled, place a $\frac{3}{8}$ " bevel at 40 degress on the pipe.



Released For Construction
Not to Scale

Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

PIPE PILE POINT DETAILS



Gina D. Horner

08/08/25

DATE PREPARED

08/08/2025

ROUTE 1-70 STATE MO

DISTRICT BR SHEET NO. B07-14

COUNTY JACKSON

JOB NO. J411486D

CONTRACT ID. 240807-C01

PROJECT NO.

BRIDGE NO. A9624

DESCRIPTION

REV 0 - RFC SUBMITTAL

DATE 08/08/25

DATE 08/08/25

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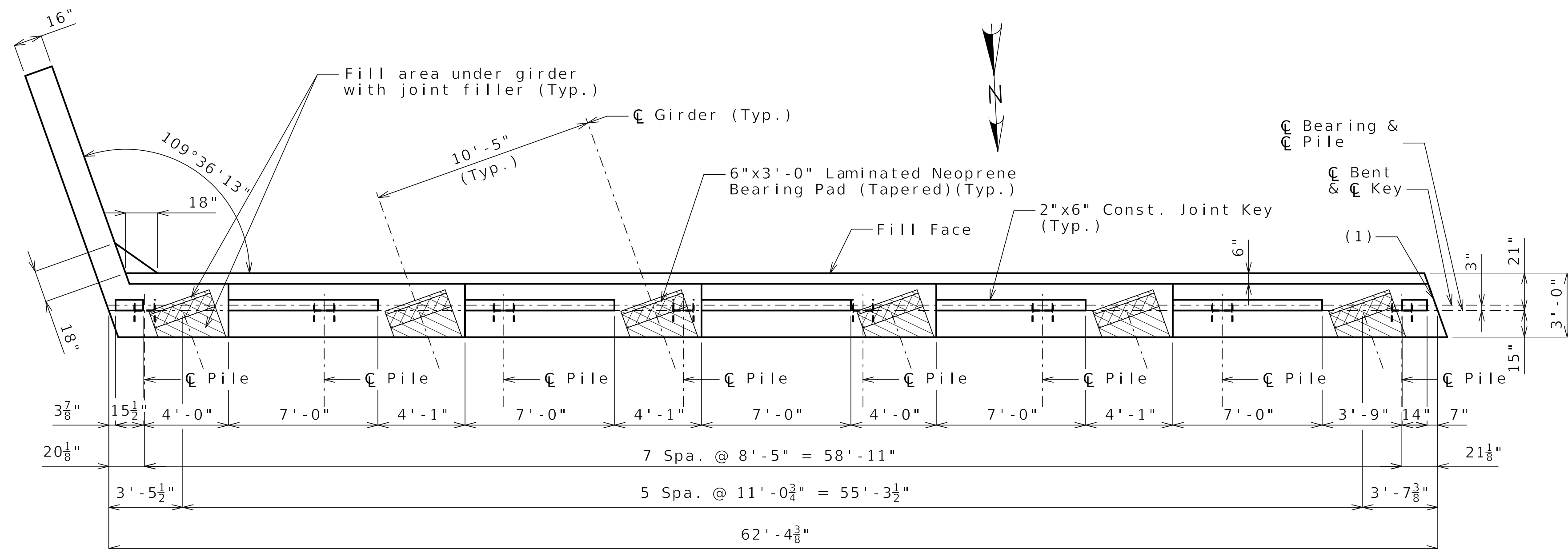
DATE 08/08/25

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DATE 08/08/25

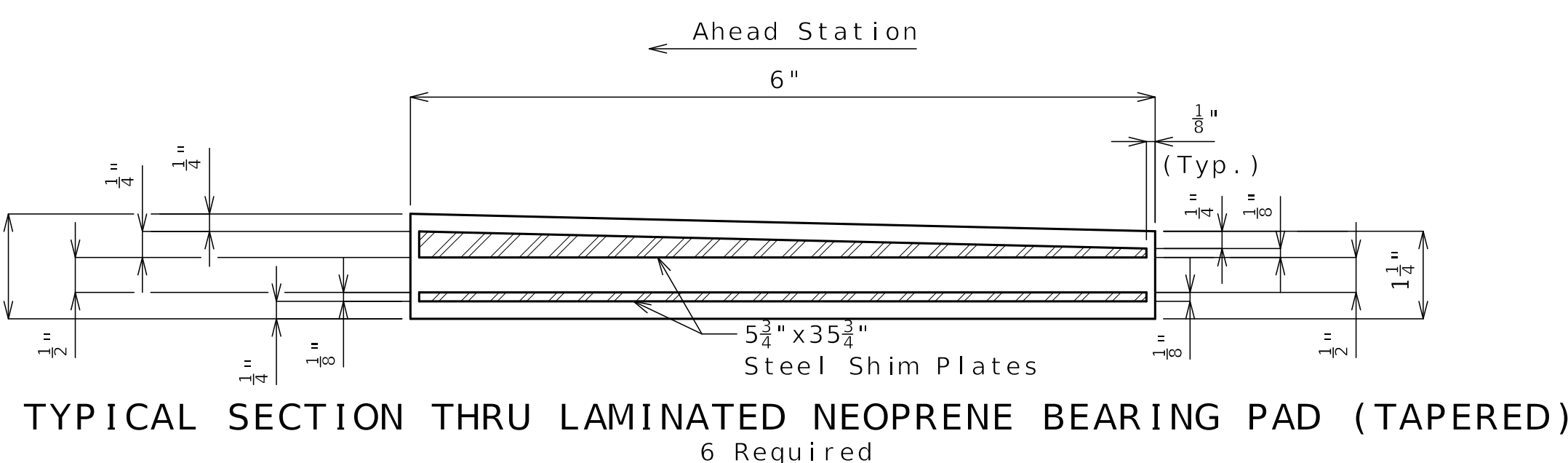
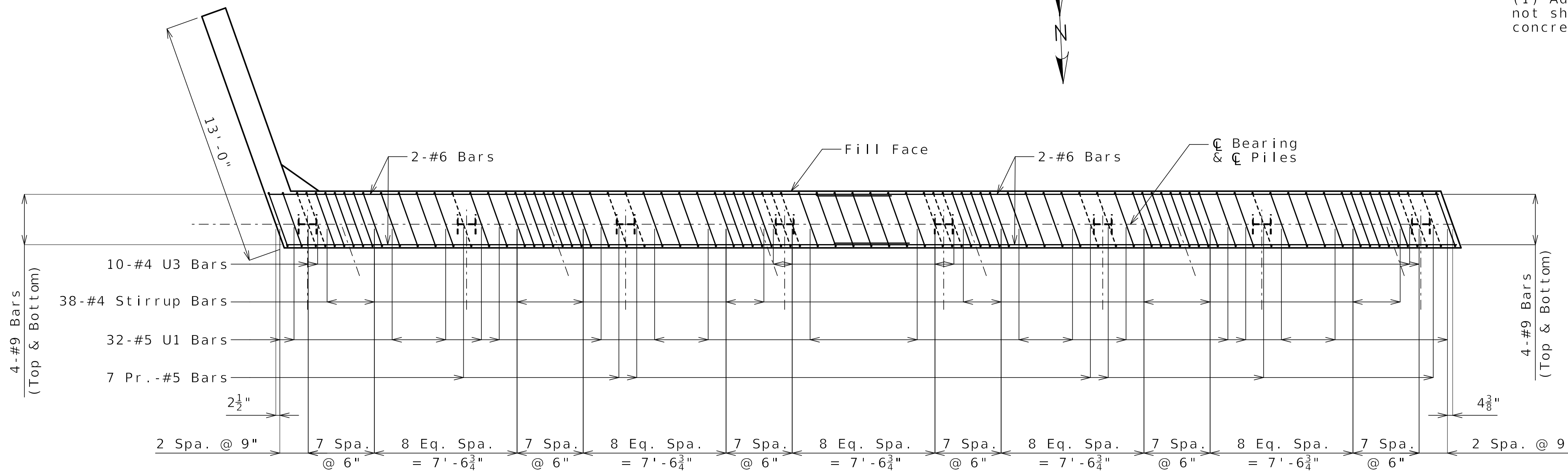
DATE 08/08/25

DATE 08/08/25



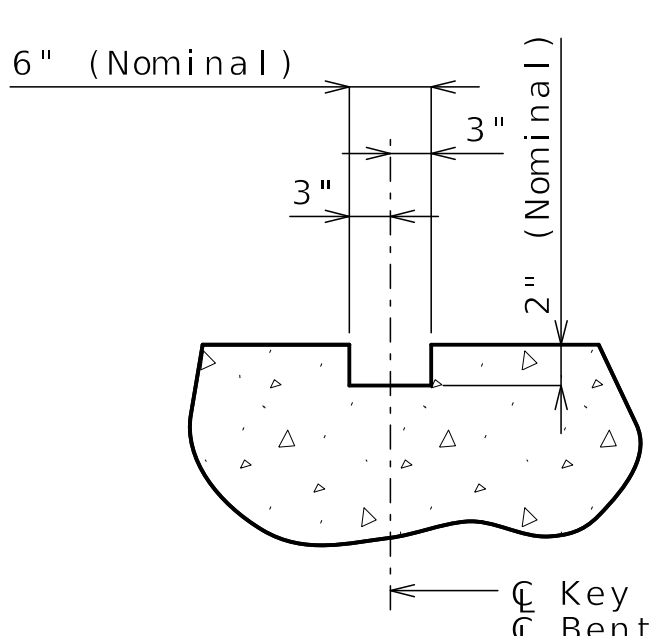
PLAN OF BEAM

(1) Adjacent A9623 (I-70 EB Over Truman) End Bent not shown. 1" joint filler required between adjacent concrete faces.

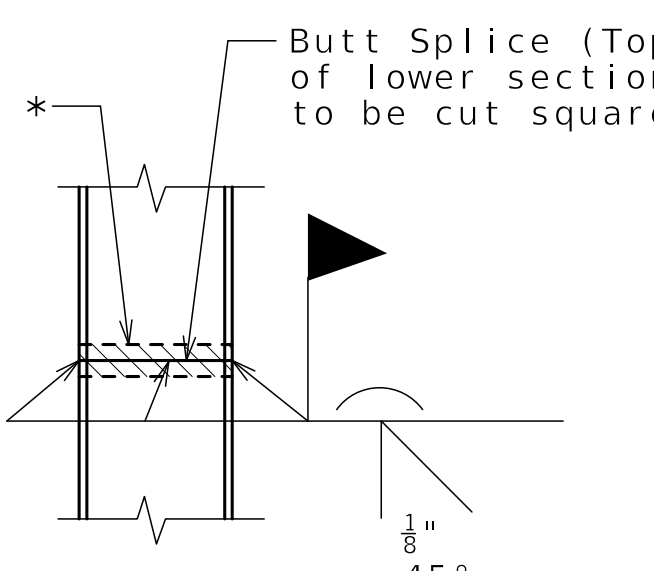


TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD (TAPERED)

6 Required



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.

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

Notes:
Work this sheet with Sheets No. B07-15 and B07-16.
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\"/>

DETAILS OF END BENT NO. 4

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-14 of B07-37



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





Gina D. Horner

08/08/25

DATE PREPARED

08/08/2025

ROUTE STATE

I-70 MO

DISTRICT SHEET NO.

BR B07-15

COUNTY

JACKSON

JOB NO.

J411486D

CONTRACT ID.

240807-C01

PROJECT NO.

BRIDGE NO.

A9624

DESCRIPTION

REV 0 - RFC SUBMITTAL

DATE

08/08/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

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

MODOT

CLARKSON RADMACHER JOINT VENTURE

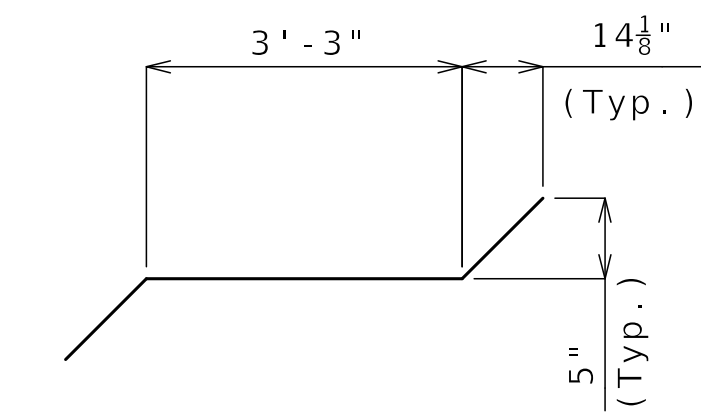
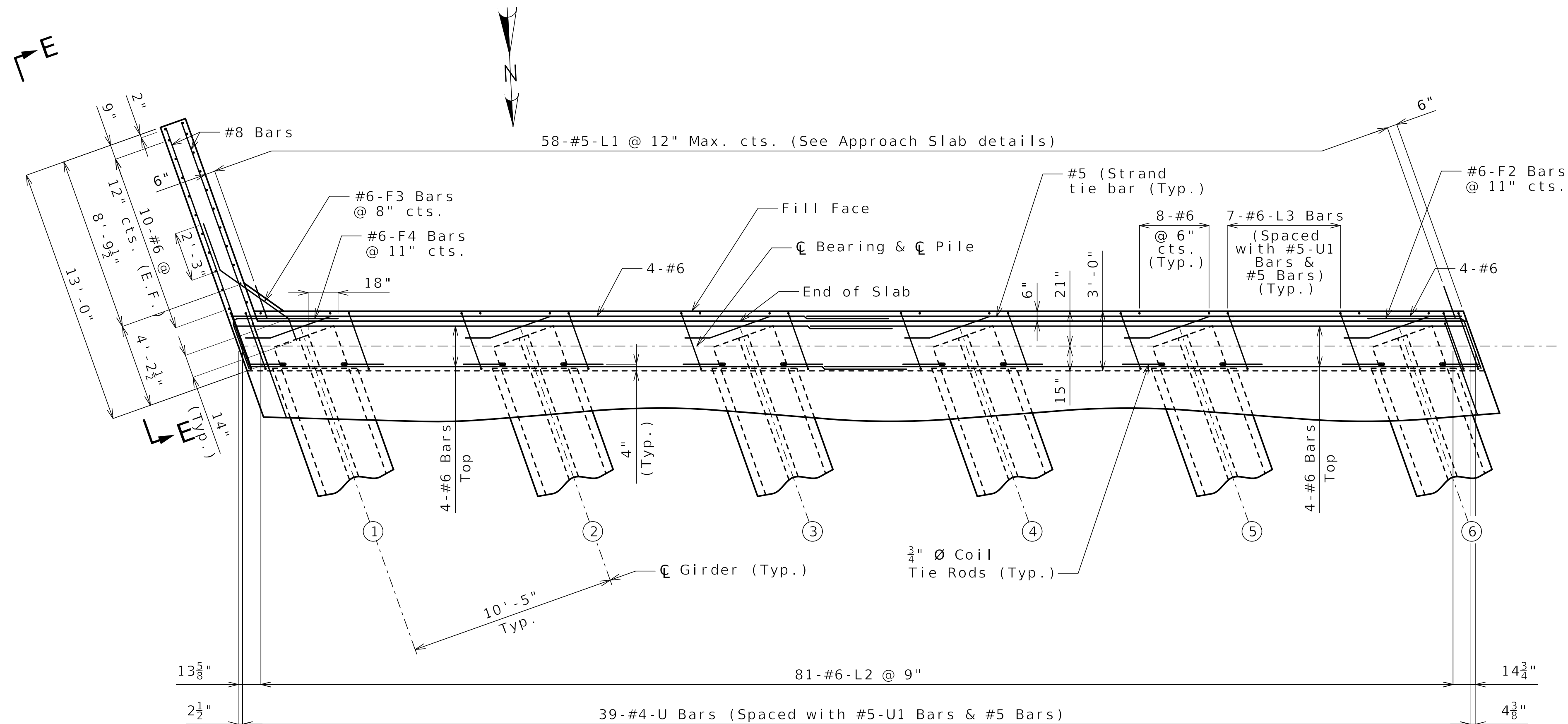
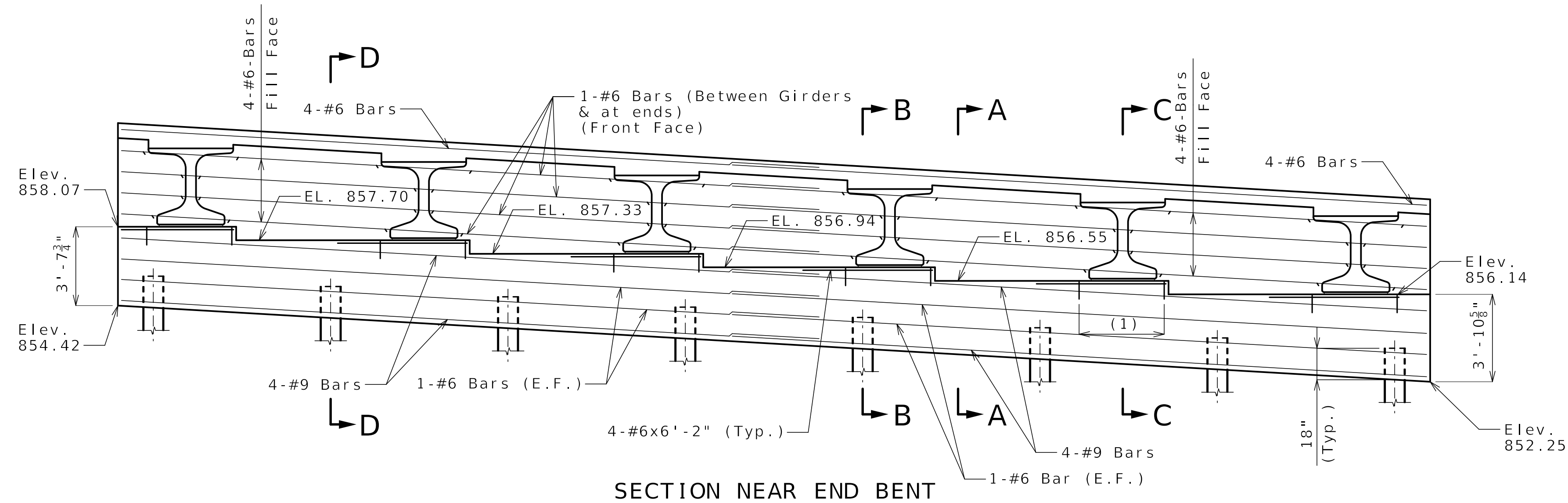
715 KIRK DRIVE

KANSAS CITY, MO 64105-1310

CERTIFICATE OF AUTHORITY

NO. 001270

HNTB



General Notes:

Work this sheet with Sheets No. B07-14 and B07-16.

For Sections A-A, B-B, C-C and D-D and Elevation E-E, see Sheet No. B07-16.

For location of coil tie rods, see A9624 (I-70 WB Over Truman) Superstructure Package.

Strands at end of 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.

(X) Denotes girder number

DETAILS OF END BENT NO. 4

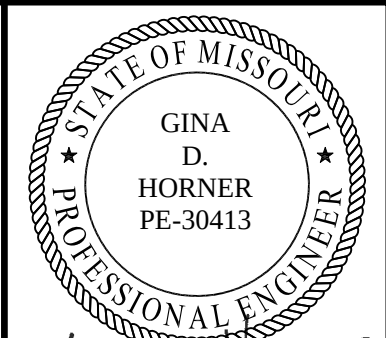
Released For Construction
Not to Scale

Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-15 of B07-37



Gina D. Horner
08/08/25

DATE PREPARED
08/08/2025

ROUTE 1-70 STATE MO

DISTRICT BR SHEET NO. B07-16

COUNTY JACKSON

JOB NO. J411486D

CONTRACT ID. 240807-C01

PROJECT NO.

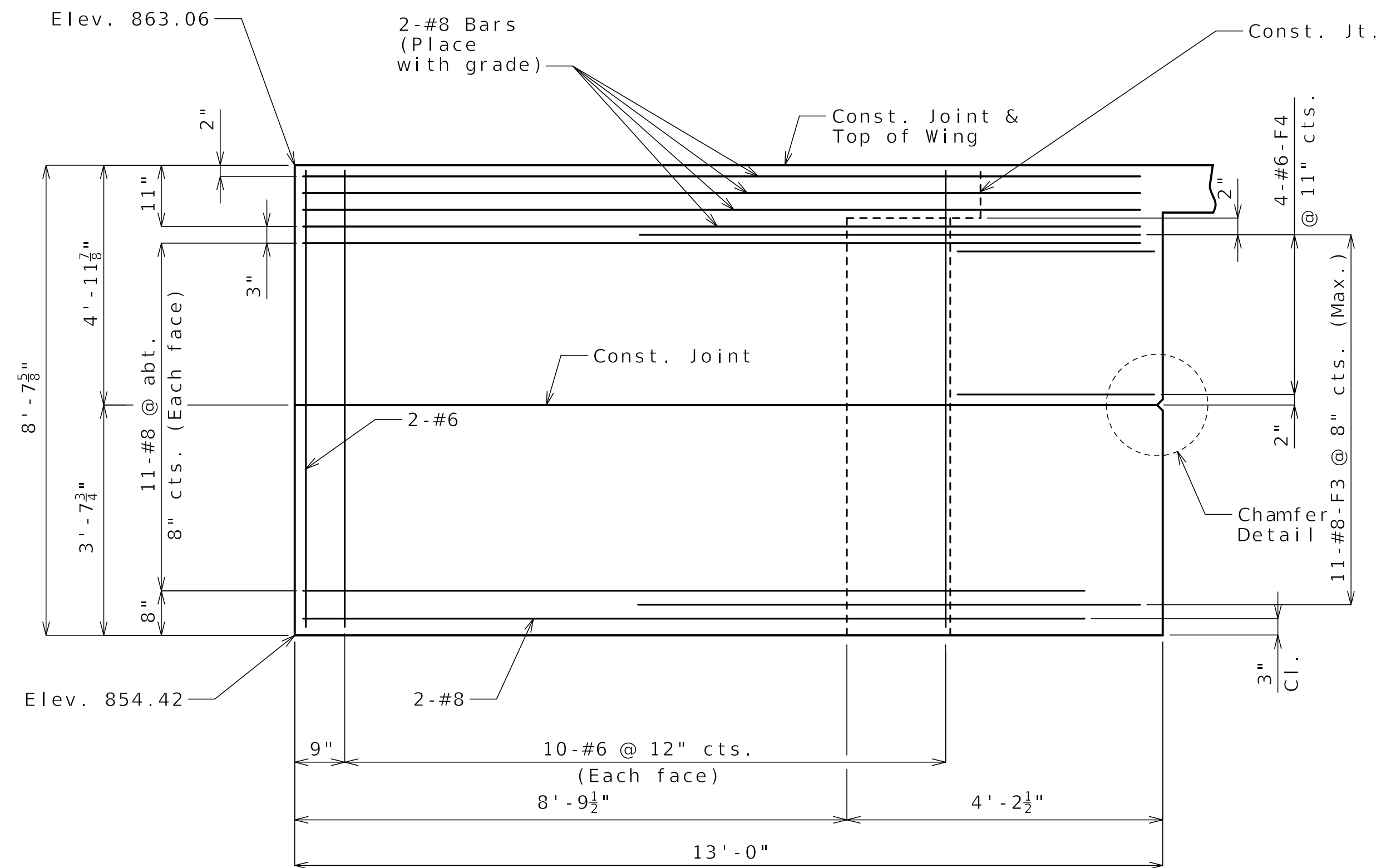
BRIDGE NO. A9624

DATE	DESCRIPTION
08/08/25	REV 0 - RFC SUBMITTAL

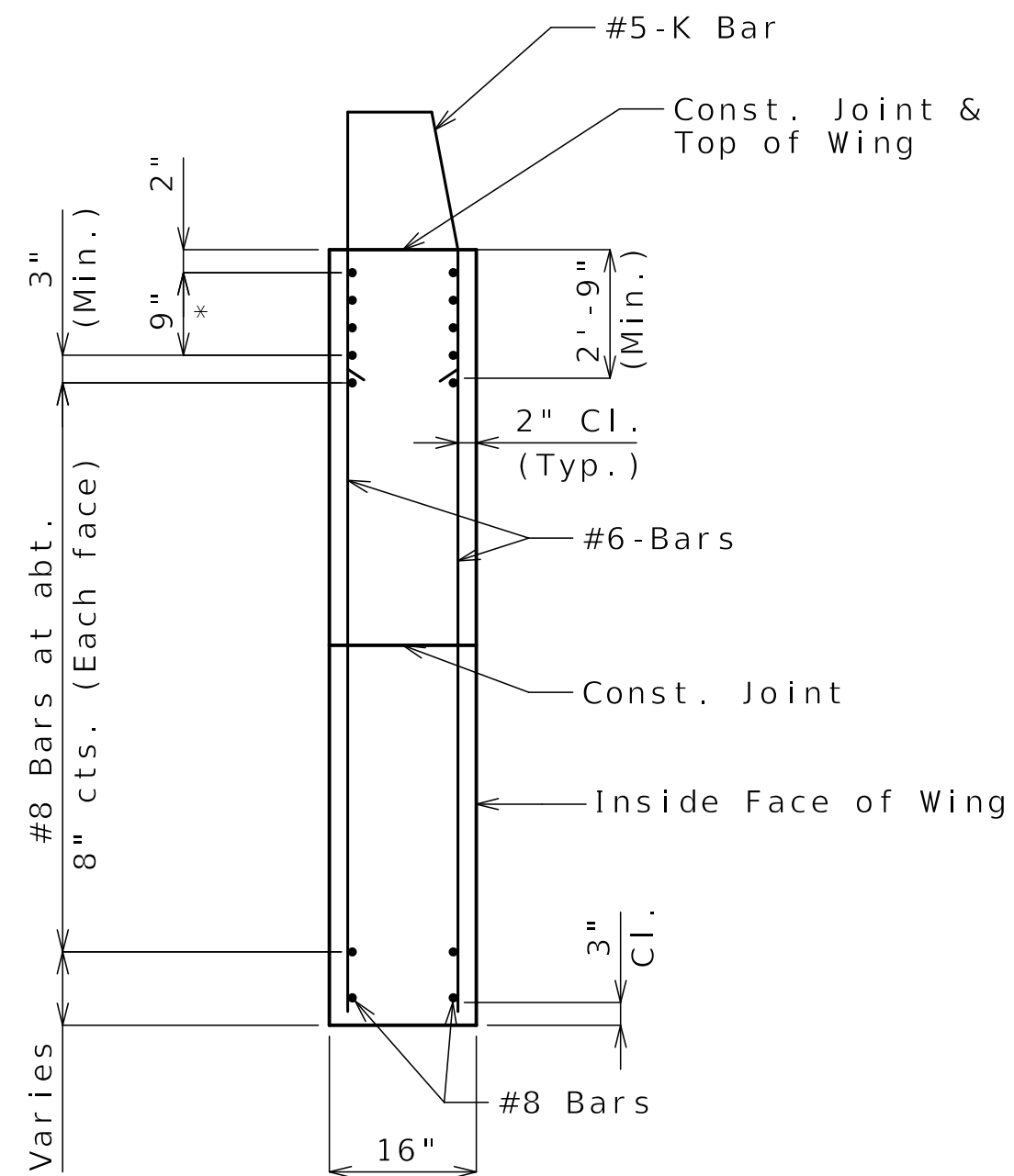
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

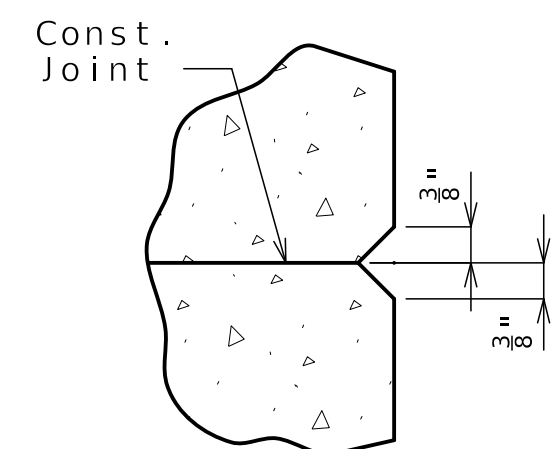


ELEVATION E-E

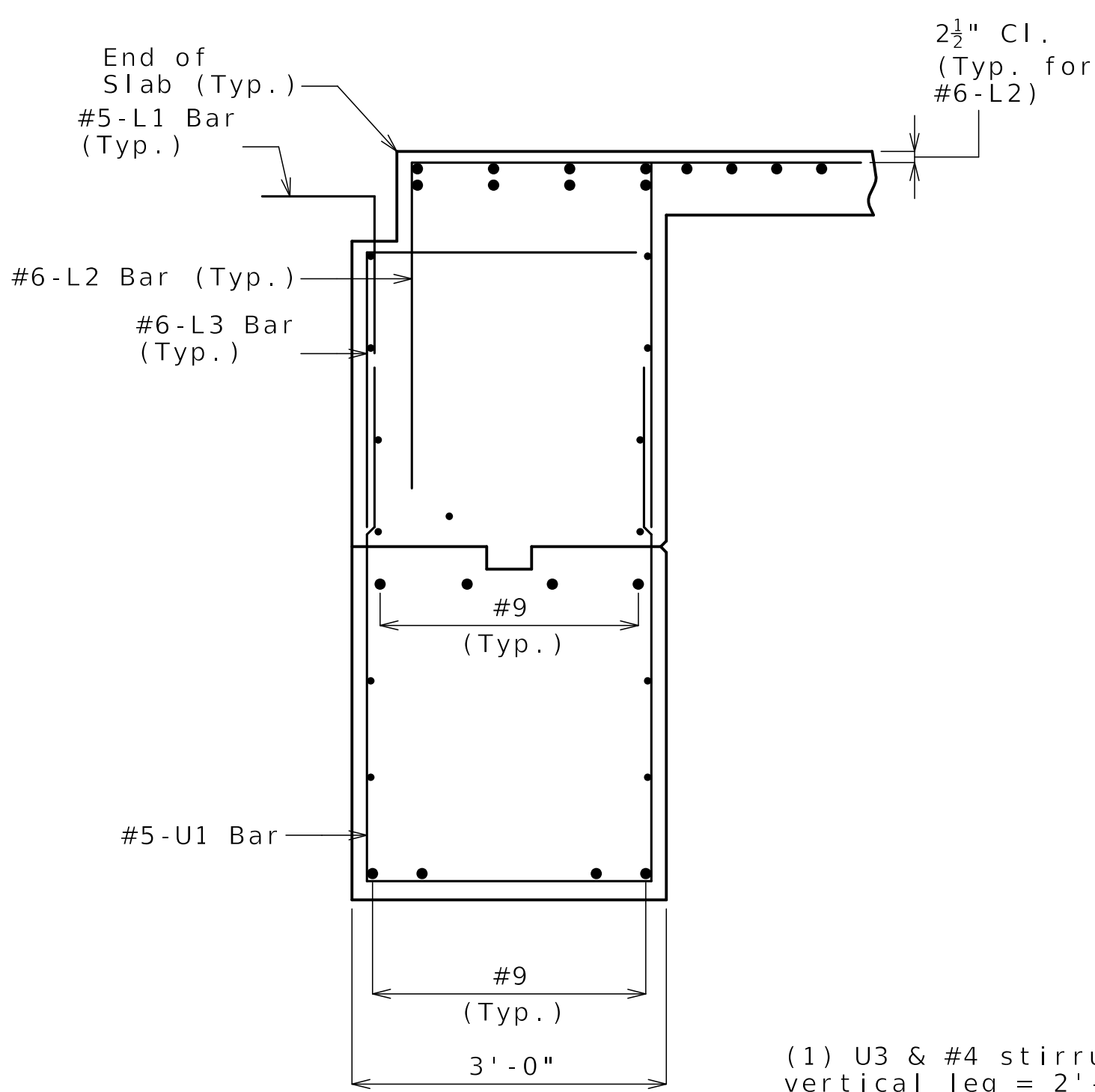


TYPICAL SECTION THRU WING

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

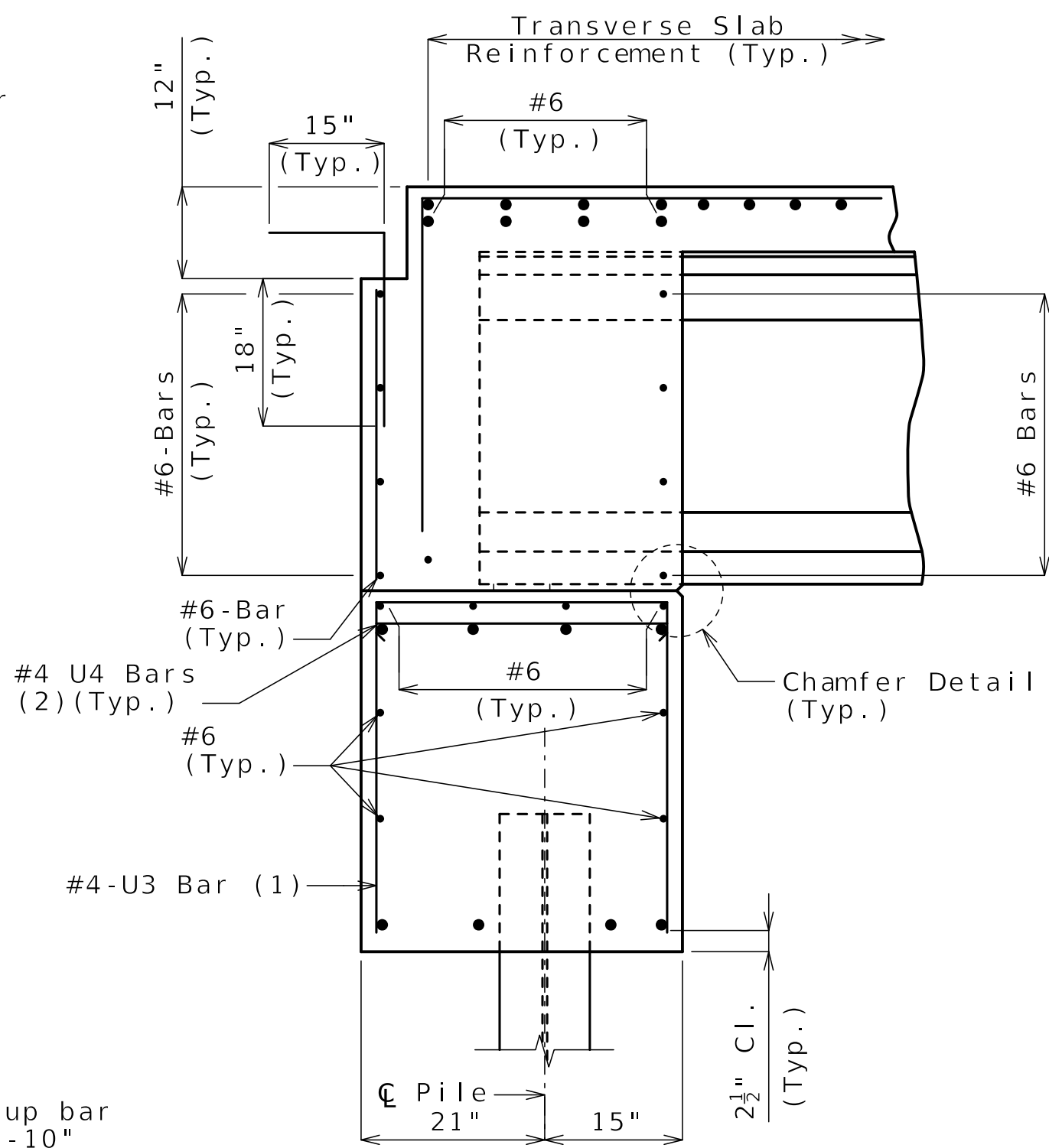


CHAMFER DETAIL

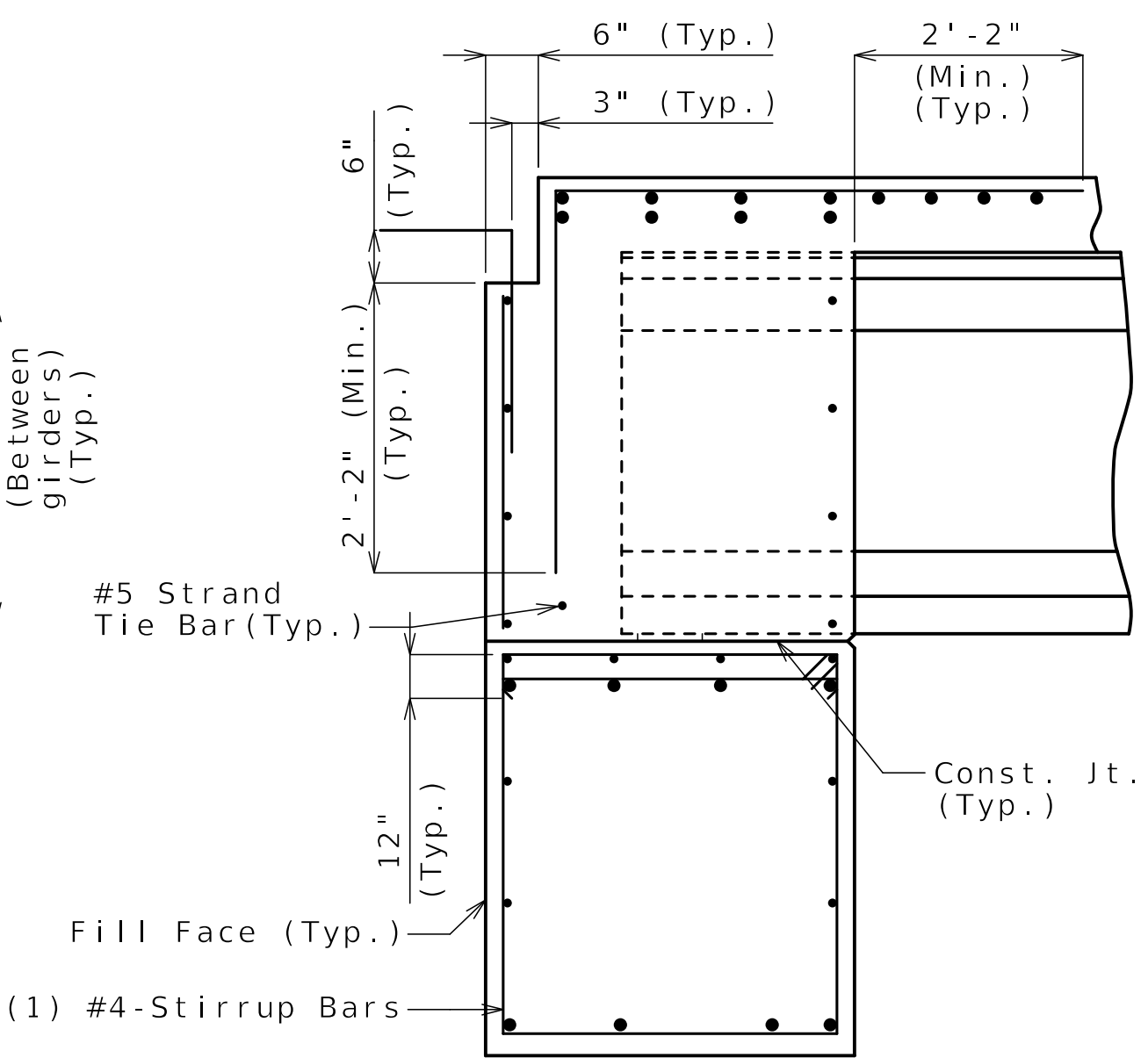


SECTION A-A

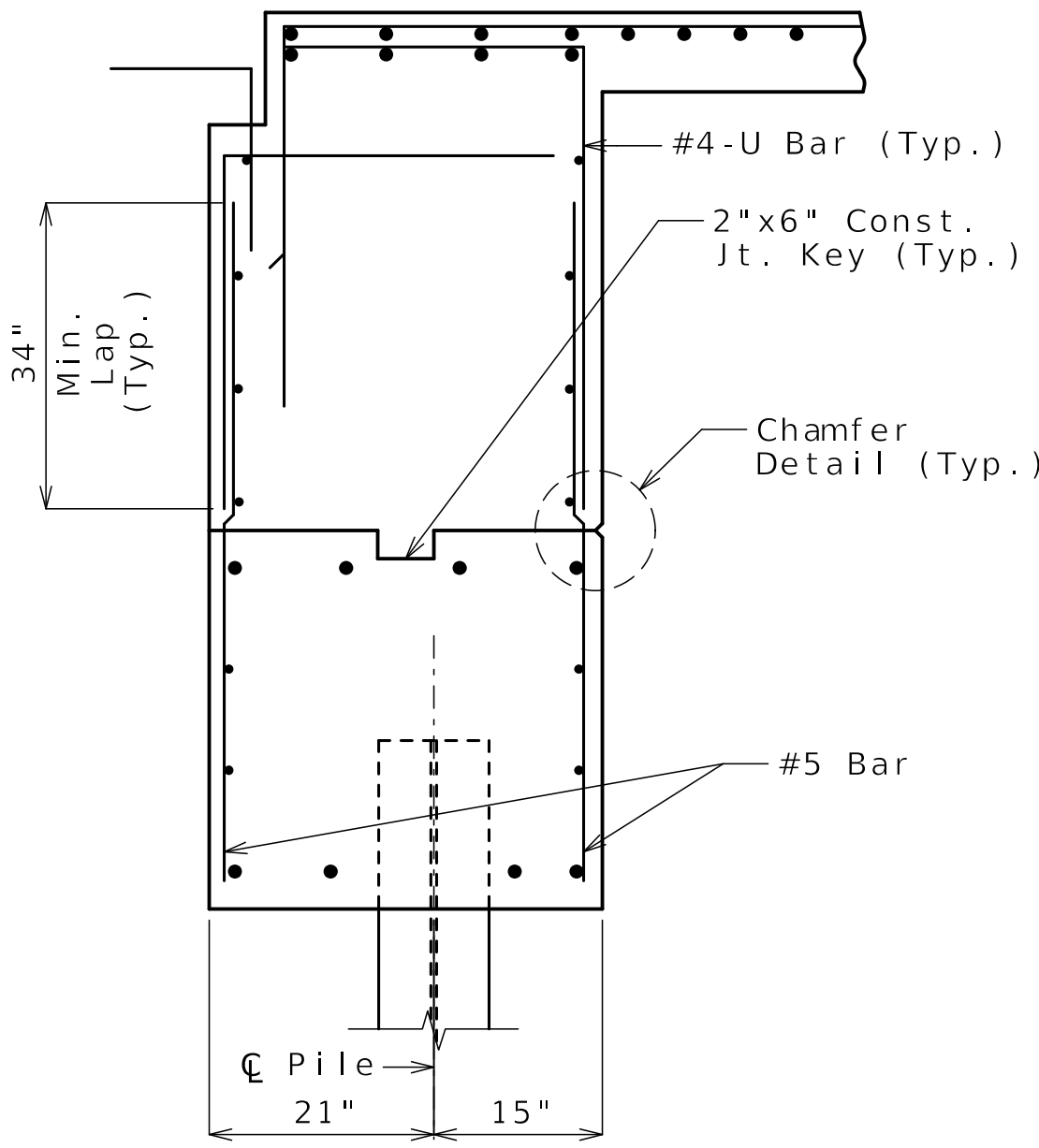
(1) U3 & #4 stirrup bar
vertical leg = 2'-10"
(2) Bars shall be placed normal
to ϕ Bent and parallel to beam
step.



SECTION B-B



SECTION C-C



SECTION D-D

General Notes:
Work this sheet with Sheets No. B07-14
and B07-15.
For location of Sections A-A, B-B, C-C, D-D
and Elevation E-E, see Sheet No. B07-15.
For reinforcement of the Type D Barrier, see
A9624 (I-70 WB Over Truman) Superstructure
Package.

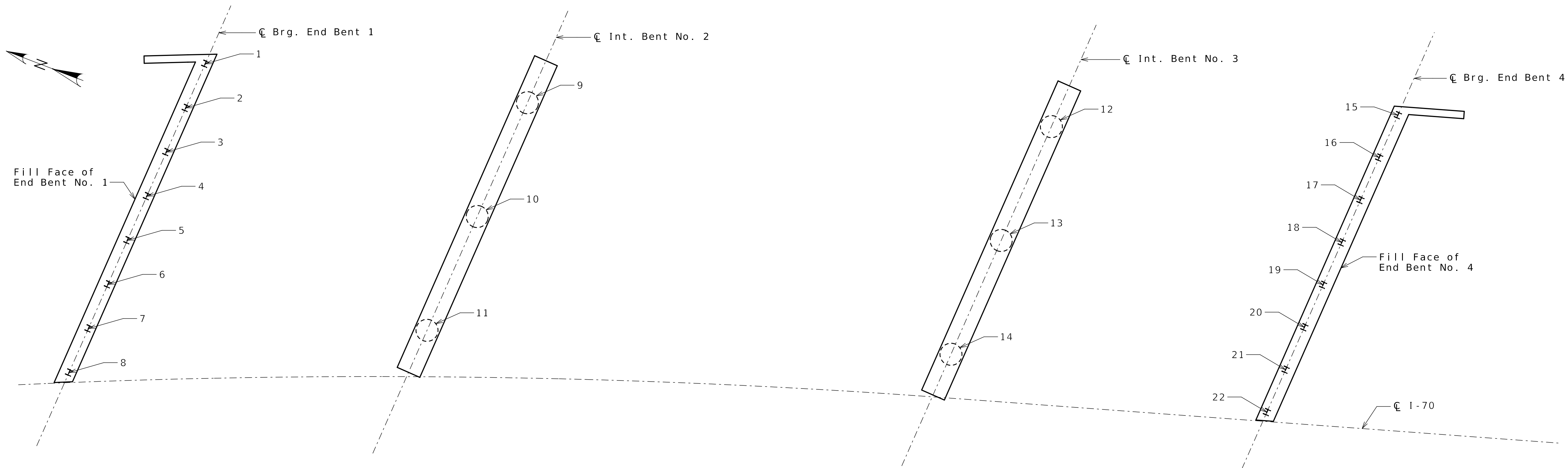
DETAILS OF END BENT NO. 4

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-16 of B07-37



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

As-Built Pile Data					
Pile No.	Length in Place (ft)	PDA Nominal Axial Compressive Resistance (kips)	PDA End of Drive Blow Count (blows/in.)	Actual End of Drive Blow Count (blows/in.)	Remarks
1					End Bent No. 1
2					
3					
4					
5					
6					
7					
8					
9					Intermediate Bent No. 2
10					
11					
12					Intermediate Bent No. 3
13					
14					
15					End Bent No. 4
16					
17					
18					
19					
20					
21					
22					

Note:
Indicate in remarks column:
A. Pile type and grade.
B. Batter
C. Driven to practical refusal
D. PDA test pile
E. Minimum tip elevation controlled
(Use when actual blow count is less than PDA blow count due to minimum tip elevation requirement. A plus sign (+) shall be placed after the PDA nominal axial compressive resistance value indicating actual value is higher than PDA value.)

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

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

AS-BUILT PILE DATA



Gina D. Horner
08/08/25

DATE PREPARED
08/08/2025

ROUTE
I-70

STATE
MO

DISTRICT
BR

SHEET NO.
B07-17

COUNTY
JACKSON

JOB NO.
J4I1486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9624

DESCRIPTION	REV	DATE
REV 0 - RFC SUBMITTAL		

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



SOIL BORING NUMBER: Tru_B1_2

Page 1 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066306.2 / 2776516.1
DRILLING FIRM PPI
DRILLER Eric P.
DATE STARTED 11/15/2024
LOGGED BY Zachary Boyd
DATE COMPLETED 11/20/2024
SURFACE ELEVATION 850.3'
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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-PI)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
3.5 ft			J-1	6	7-11-8 (19)	33		2.0								FILL, dark brown, stiff, moist, lean clay, organics, some gravel
8.5 ft			J-2	12	3-9-9 (18)	67		3.0		9.5	840.8	44-21-23	14.2			
13.5 ft			J-3	10	15-9-11 (20)	56		3.0								FILL, dark gray to brown, stiff to very stiff, moist, lean clay, organics, some gravel
18.5 ft			U-1	23		96		1.5					29.6			- 2" concrete seam at 14.3'
23.5 ft			J-4	14	2-4-6 (10)	78		1.0		18.5	831.8	39-19-20	20.4	105.2	2.91	Brown to gray, firm to stiff, moist, LEAN CLAY (CL), some organics, iron staining
28.5 ft			U-2	24		100		1.0								
33.5 ft			J-5	18	1-3-4 (7)	100		0.5								- becomes reddish brown to gray at 33.5'



SOIL BORING NUMBER: Tru_B1_2

Page 2 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066306.2 / 2776516.1
DRILLING FIRM PPI
DRILLER Eric P.
DATE STARTED 11/15/2024
LOGGED BY Zachary Boyd
DATE COMPLETED 11/20/2024
SURFACE ELEVATION 850.3'
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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-PI)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
38.5 ft			J-6	18	1-1-2 (3)	100		<0.5		38.5	811.8					Brown to gray, firm to stiff, moist, LEAN CLAY (CL), some organics, iron staining
43.5 ft			U-3	23		96		0.5								Reddish brown, soft, moist, LEAN CLAY (CL), some organics
48.5 ft			J-7	18	2-3-5 (8)	100		0.5				35-16-19	26.4	98.4	0.637	
53.5 ft			J-8	18	1-2-5 (7)	100		0.5		53.5	796.8					Gray to reddish brown, soft, moist, FAT CLAY (CH), with some organics
58.5 ft			U-4	24		100		1.0				60-18-42	26.9	98.4	1.84	
68.5 ft			J-9	18	1-4-4 (8)	100		1.5								- becomes stiff to firm at 68.5'

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

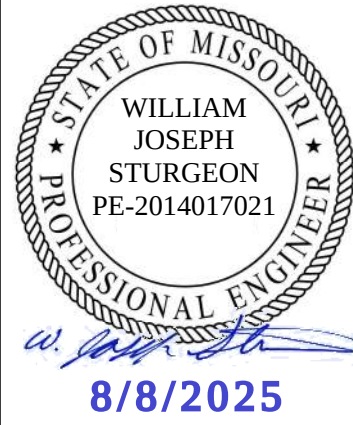
Notes:
For locations of borings, see Sheet No. B07-02 and Geotechnical Report.

BORING LOGS

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-18 of B07-37



DATE PREPARED 08/08/2025	
ROUTE 1 - 70	STATE MO
DISTRICT BR	SHEET NO. B07 - 18
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	
BRIDGE NO. A9624	

DATE	REV	DESCRIPTION	
		0	1
08/08/25			

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

[illegible]

Notes:
For locations of borings, see Sheet No. B07-02
and Geotechnical Report.

BORING LOGS



SOIL BORING NUMBER: Tru_B1_2

Page 5 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066306.2 / 2776516.1
DRILLING FIRM PPI
DRILLER Eric P.
DATE STARTED 11/15/2024
LOGGED BY Zachary Boyd
DATE COMPLETED 11/20/2024
SURFACE ELEVATION 850.3'
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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
										After Drilling (ft):	N/A					
										After __ Hours (ft):	N/A					
145										Brown to tan, very dense, moist, WELL-GRADED SAND (SW)						
150	48.5 ft	X	J-17	0	21-21-25 (46)	0				150.0	700.3					Bottom of Boring at 150'
155										Boring backfilled with bentonite chips and cuttings 11/20/2024						
160																
165																
170																



SOIL BORING NUMBER: Tru_B1_3

Page 1 of 5

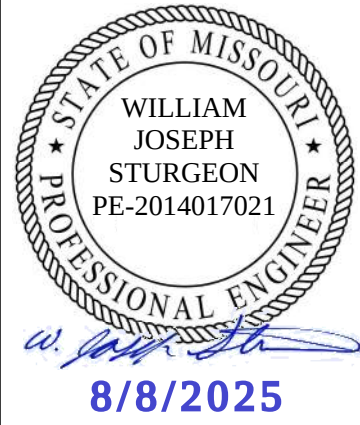
PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066297.4 / 2776603.6
DRILLING FIRM PPI
DRILLER Eric P.
DATE STARTED 11/20/2024
LOGGED BY Zachary Boyd
DATE COMPLETED 11/21/2024
SURFACE ELEVATION 848.8'
RIG TYPE CME-550
METHOD Auger, Mud Rotary, NQ Core
TOOLING 4-1/2" Continuous Flight Auger, 3-3/4" 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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
										After Drilling (ft):	N/A					
										After __ Hours (ft):	N/A					
5	3.5 ft	X	J-1	14	4-3-4 (7)	78		1.0				47-20-27	21.6			FILL, dark reddish brown, stiff, moist, fat clay, some organics
10	8.5 ft	X	J-2	9	4-7-9 (16)	50		2.0		8.5	840.3					Dark brown to gray, stiff to very stiff, moist, LEAN CLAY (CL)
15	13.5 ft	X	J-3	10	4-9-15 (24)	56		2.5								- becomes very stiff at 13.5'
20	18.5 ft		U-1	24		100		1.5				40-19-21	21.3	105.5	3.26	
25	23.5 ft	X	J-4	18	1-2-3 (5)	100		0.5		23.5	825.3					Reddish brown, soft, moist, LEAN CLAY (CL), iron staining
30	28.5 ft		U-2	20		83		0.5				45-18-27	22.1	105.2	2.5	
	33.5 ft	X	J-5	17	2-4-5 (9)	94		1.0								- becomes gray to brown at 33.5'

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

Notes:
For locations of borings, see Sheet No. B07-02 and Geotechnical Report.

BORING LOGS



DATE PREPARED 08/08/2025	
ROUTE 1 - 70	STATE MO
DISTRICT BR	SHEET NO. B07 - 20
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807 - C01	
PROJECT NO.	
BRIDGE NO. A9624	

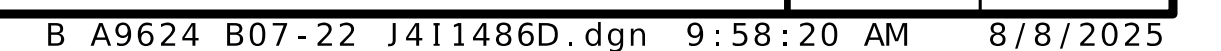
DATE	DESCRIPTION
08/08/25	REV 0 - RFC SUBMITTAL

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



[illegible]

Notes:
For locations of borings, see Sheet No. B07-02
and Geotechnical Report.

BORING LOGS



SOIL BORING NUMBER: Tru_B2_2

Page 1 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066212.7 / 2776544.3
DRILLING FIRM PPI
DRILLER Ray A.
DATE STARTED 12/02/2024
LOGGED BY Trent Shepherd
DATE COMPLETED 12/03/2024
SURFACE ELEVATION 830.7'
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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
																FILL, brown, soft, moist, LEAN CLAY
										3.0	827.7					FILL, CONCRETE RUBBLE
5	4.5 ft		J-1	5	50/5" (5")	100				5.0	825.7					FILL, brown, soft, moist, SILTY LEAN CLAY
10	9.5 ft		J-2	7	2-2-3 (5)	39	<0.5					45-24-21	28.1			
15	13 ft		U-1	24		100	0.75			13.0	817.7					Brown to gray, firm, moist, LEAN CLAY (CL)
20	18 ft		J-3	18	1-1-2 (3)	100	0.75					37-19-18	24.9	100.3	1.12	
25	23 ft		U-2	24		100	0.75						27.4			
30	28 ft		J-4	18	2-3-2 (5)	100	0.5			28.0	802.7					Brown, soft, moist, LEAN CLAY with SILT (CL-ML)
35	33 ft		U-3	24		100	<0.5					28-21-7	28.5	96.3	0.596	



SOIL BORING NUMBER: Tru_B2_2

Page 2 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066212.7 / 2776544.3
DRILLING FIRM PPI
DRILLER Ray A.
DATE STARTED 12/02/2024
LOGGED BY Trent Shepherd
DATE COMPLETED 12/03/2024
SURFACE ELEVATION 830.7'
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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
35	34 ft		U-3	24		100		<0.5				28-21-7	28.5	96.3	0.596	Brown, soft, moist, LEAN CLAY with SILT (CL-ML)
40	38 ft		J-5	18	2-3-2 (5)	100	1.0			38.0	792.7					Brown, firm, moist, LEAN CLAY with SILT (CL-ML), with trace iron and chert
45	43 ft		U-4	24		100	2.0			- becomes stiff at 43'		31-24-7	31.2	93.0	0.873	
50	48 ft		J-6	18	3-3-4 (7)	100	2.0									
55	53 ft		J-7	18	x-1-3 (4)	100	0.5			53.0	777.7					Brown, soft, moist, FAT CLAY (CH)
60	58 ft		J-8	18	4-3-5 (8)	100	2.0			58.0	772.7					Brown, stiff, moist, SANDY LEAN CLAY (CL)
65												41-23-18	28.9			

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

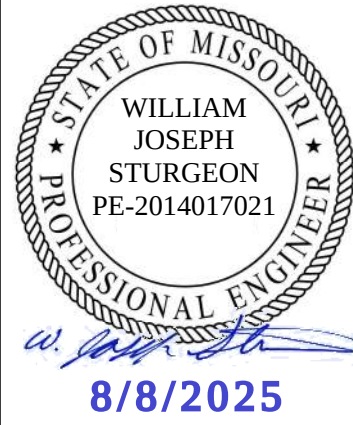
Notes:
For locations of borings, see Sheet No. B07-02 and Geotechnical Report.

BORING LOGS

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-23 of B07-37



DATE PREPARED 08/08/2025
ROUTE 1 - 70
STATE MO
DISTRICT BR
SHEET NO. B07 - 23
COUNTY JACKSON
JOB NO. J411486D
CONTRACT ID. 240807-C01
PROJECT NO.
BRIDGE NO. A9624

DATE	REV	0	-	RFC	SUBMITTAL	DESCRIPTION
08/08/25						

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





SOIL BORING NUMBER: Tru_B2_2

Page 3 of 5

PROJECT Improve I 70 KC Design Build NORTHING/EASTING 1066212.7 / 2776544.3
DRILLING FIRM PPI DRILLER Ray A. DATE STARTED 12/02/2024
LOGGED BY Trent Shepherd DATE COMPLETED 12/03/2024
SURFACE ELEVATION 830.7' 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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
68 ft		X	J-9	18	5-4-5 (9)	100		1.5								Dark brown, firm, moist, CLAYEY SILT with (CL-ML), with organics as shells, organic odor
70																- % passing 200 = 89.7% at 68'
75																
78 ft		X	J-10	18	5-7-10 (17)	100		2.0		78.0	752.7					Blue-gray, stiff, moist, LEAN CLAY with SILT (CL-ML), with organics as shells
80																
85																
88 ft		X	J-11	12	2-4-9 (13)	67				88.0	742.7					- 6" sand layer at 87.5'
90										89.0	741.7					Gray, soft, moist, FAT CLAY (CH)
																Brown to tan, medium dense, moist, fine to coarse grained, WELL-GRADED SAND (SW), with some limestone fragments
95																
98 ft		X	J-12	12	27-39-49 (88)	67				98.0	732.7					Brown to tan, very dense, moist, fine grained, WELL-GRADED SAND (SW), with some clay
100													16.1			



SOIL BORING NUMBER: Tru_B2_2

Page 4 of 5

PROJECT Improve I 70 KC Design Build NORTHING/EASTING 1066212.7 / 2776544.3
DRILLING FIRM PPI DRILLER Ray A. DATE STARTED 12/02/2024
LOGGED BY Trent Shepherd DATE COMPLETED 12/03/2024
SURFACE ELEVATION 830.7' 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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
105																Brown to tan, very dense, moist, fine grained, WELL-GRADED SAND (SW), with some clay
108 ft		X	J-13	15	15-17-18 (35)	83				108.0	722.7					Brown to tan, medium dense, moist, fine to coarse grained, GRAVELLY SAND (SW-GW), with coarse gravel
110																
115																
118 ft		X	J-14	9	7-10-10 (20)	50				118.0	712.7					Brown to tan, medium dense, moist, fine grained, WELL-GRADED SAND (SW)
120																
125																
128 ft		X	J-15	11	10-12-12 (24)	61										
130																
135																

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

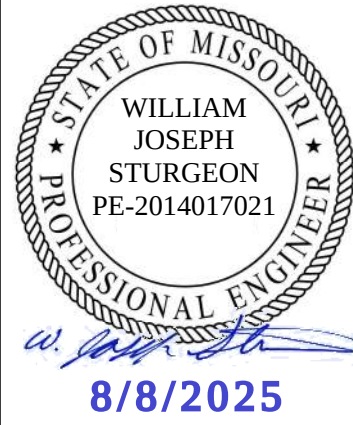
Notes:
For locations of borings, see Sheet No. B07-02 and Geotechnical Report.

BORING LOGS

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-24 of B07-37



DATE PREPARED 08/08/2025	
ROUTE 1 - 70	STATE MO
DISTRICT BR	SHEET NO. B07 - 24
COUNTY JACKSON	
JOB NO. J4I1486D	
CONTRACT ID. 240807 - C01	
PROJECT NO.	
BRIDGE NO. A9624	

DATE	DESCRIPTION
08/08/25	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: Tru_B2_2

Page 5 of 5

PROJECT Improve I 70 KC Design Build NORTHING/EASTING 1066212.7 / 2776544.3
DRILLING FIRM PPI DRILLER Ray A. DATE STARTED 12/02/2024
LOGGED BY Trent Shepherd DATE COMPLETED 12/03/2024
SURFACE ELEVATION 830.7' 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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
	138 ft															
		X	J-16	15	10-20-24 (44)	83										
140																
145																
	148 ft															
		X	J-17	18	8-15-13 (28)	100										
150																
155																
160																
165																



SOIL BORING NUMBER: Tru_B2_3

Page 1 of 5

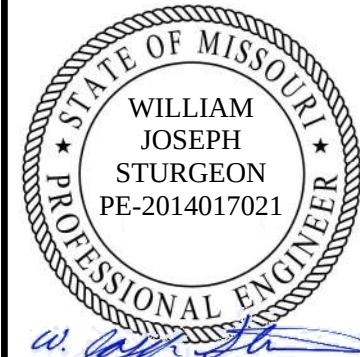
PROJECT Improve I 70 KC Design Build NORTHING/EASTING 1066209.5 / 2776619.0
DRILLING FIRM PPI DRILLER Ray A. DATE STARTED 11/26/2024
LOGGED BY Trent Shepherd DATE COMPLETED 11/27/2024
SURFACE ELEVATION 829.4' RIG TYPE CME-55
METHOD Auger, Mud Rotary, NQ Core TOOLING 4-1/4" Hollow Stem Auger, 3-3/4" Rotary 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				Visual Classification and Remarks
										During Drilling (ft):	10	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
	4.5 ft		J-1	7	2-2-3 (5)	39		0.5								
5		X														
	9.5 ft		J-2	11	16-3-3 (6)	61										
10		X														
	12.8 ft		U-1					1.0								
15																
	17.8 ft		J-3	18	x-2-3 (5)	100		0.75								
20		X														
	22.8 ft		U-2	24		100		0.75								
25																
	27.8 ft		J-4	18	x-2-3 (5)	100		<0.5								
30		X														
	32.8 ft															

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

Notes:
For locations of borings, see Sheet No. B07-02 and Geotechnical Report.

BORING LOGS



8/8/2025

DATE PREPARED 08/08/2025	
ROUTE 1 - 70	STATE MO
DISTRICT BR	SHEET NO. B07 - 25
COUNTY JACKSON	
JOB NO. J4I1486D	
CONTRACT ID. 240807 - C01	
PROJECT NO.	

BRIDGE NO.
A9624

DATE	DESCRIPTION	REV	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
08/08/25	REV 0 - RFC SUBMITTAL																					

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



SOIL BORING NUMBER: Tru_B2_3

Page 2 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066209.5 / 2776619.0
DRILLING FIRM PPI
DRILLER Ray A.
DATE STARTED 11/26/2024
LOGGED BY Trent Shepherd
DATE COMPLETED 11/27/2024
SURFACE ELEVATION 829.4'
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				Visual Classification and Remarks
										During Drilling (ft):		Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
	33 ft		U-3	24		100		<0.5		10	▽					Brown, soft, wet, LEAN CLAY with SILT (CL-ML)
35										After Drilling (ft):	N/A	28-23-5	26.2	99.8	0.632	
	37.8 ft		J-5	18	4-3-4 (7)	100		3.0		After __ Hours (ft):	N/A					37.8 791.6 Tan to brown, very stiff, wet, SANDY LEAN CLAY (CL), with shaley structure
40																
	42.8 ft		U-4	24		100		2.0				49-16-33	24.8	101.8	1.57	42.8 786.6 Tan, stiff, wet, GRAVELLY LEAN CLAY (GC), with smooth gravel
45																
	47.8 ft		J-6	18	3-4-4 (8)	100		1.75								47.8 781.6 Brown, stiff, wet, LEAN CLAY with SILT (CL-ML)
50																
	52.8 ft		J-7	18	3-3-3 (6)	100		1.0				43-22-21	29.2			
55																
	57.8 ft		J-8	18	1-2-3 (5)	100		1.25								
60																
65																



SOIL BORING NUMBER: Tru_B2_3

Page 3 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066209.5 / 2776619.0
DRILLING FIRM PPI
DRILLER Ray A.
DATE STARTED 11/26/2024
LOGGED BY Trent Shepherd
DATE COMPLETED 11/27/2024
SURFACE ELEVATION 829.4'
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				Visual Classification and Remarks
										During Drilling (ft):		Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
	67.8 ft		J-9	18	3-3-4 (7)	100		1.25		10	▽					Brown, stiff, wet, LEAN CLAY with SILT (CL-ML)
70										After Drilling (ft):	N/A					67.8 761.6 Dark brown, stiff, moist, SILT (ML), with organics as shells, organic odor
										After __ Hours (ft):	N/A					
75																
	77.8 ft		J-10	18	5-5-6 (11)	100		2.0								77.8 751.6 Blue-gray, stiff, moist, LEAN CLAY with SILT (CL-ML), organics as shells, organic odor
80																
	87.8 ft		J-11	12	18-24-27 (51)	67										87.8 741.6 Tan, medium dense, wet, fine to coarse grained, WELL-GRADED SAND (SW), with some gray clay
90																
95																
	97.8 ft		J-12	15	29-35-33 (68)	63										97.8 731.6 Tan, dense, wet, fine grained and medium grained, WELL-GRADED SAND (SW)

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

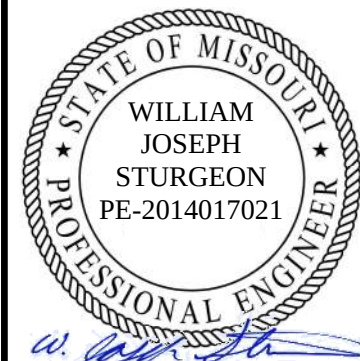
Notes:
For locations of borings, see Sheet No. B07-02 and Geotechnical Report.

BORING LOGS

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-26 of B07-37

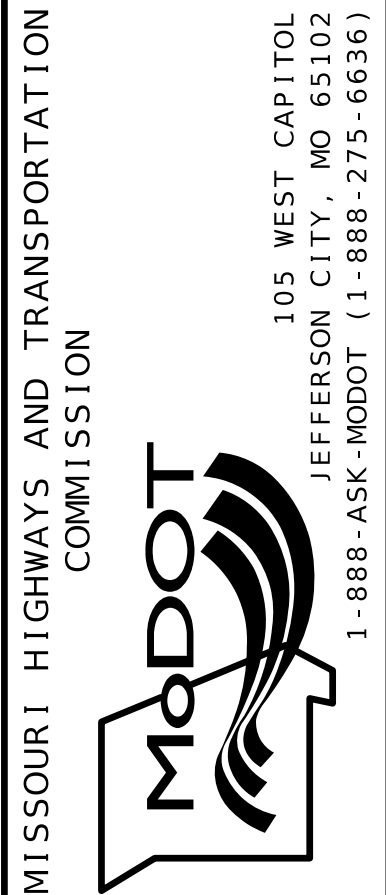


8/8/2025

DATE PREPARED 08/08/2025	
ROUTE I - 70	STATE MO
DISTRICT BR	SHEET NO. B07 - 26
COUNTY JACKSON	
JOB NO. J4I1486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO.
A9624

DATE	REV	0	- R/C	SUBMITTAL	DESCRIPTION
08/08/25					





SOIL BORING NUMBER: Tru_B2_3

Page 4 of 5

PROJECT Improve I 70 KC Design Build NORTHING/EASTING 1066209.5 / 2776619.0
DRILLING FIRM PPI DRILLER Ray A. DATE STARTED 11/26/2024
LOGGED BY Trent Shepherd DATE COMPLETED 11/27/2024
SURFACE ELEVATION 829.4' 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				Visual Classification and Remarks
										During Drilling (ft):		Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
100	99 ft		J-12	15	29-35-33 (68)	83										Tan, dense, wet, fine grained and medium grained, WELL-GRADED SAND (SW)
105																
107.8 ft		X	J-13	14	23-30-28 (58)	78				107.8						Tan and brown, wet, fine grained and medium grained, WELL-GRADED SAND (SW), 2" chert layer, some/trace fine gravel
110													12.5			
115																
117.8 ft		X	J-14	11	8-10-12 (22)	61				117.8						Tan, medium dense, wet, fine grained, WELL-GRADED SAND (SW)
120																
125																
127.8 ft		X	J-15	14	17-24-27 (51)	78				127.8						Tan and brown, dense, wet, fine grained and medium grained, WELL-GRADED SAND (SW)
130																



SOIL BORING NUMBER: Tru_B2_3

Page 5 of 5

PROJECT Improve I 70 KC Design Build NORTHING/EASTING 1066209.5 / 2776619.0
DRILLING FIRM PPI DRILLER Ray A. DATE STARTED 11/26/2024
LOGGED BY Trent Shepherd DATE COMPLETED 11/27/2024
SURFACE ELEVATION 829.4' 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				Visual Classification and Remarks
										During Drilling (ft):		Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
135																Tan and brown, dense, wet, fine grained and medium grained, WELL-GRADED SAND (SW)
137.8 ft		X	J-16	14	9-14-22 (36)	78				137.8						Tan, medium dense, wet, fine grained, WELL-GRADED SAND (SW)
140										138.7						Brownish gray, stiff to very stiff, SILT (ML)
										139.3						Bottom of Boring at 139.3'
145																Boring backfilled with cuttings 11/27/2024
150																
155																
160																

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

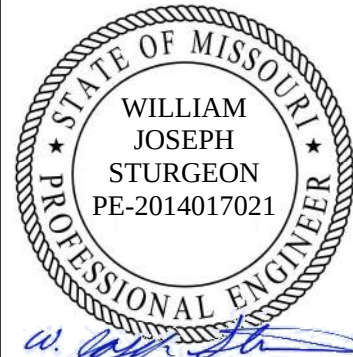
Notes:
For locations of borings, see Sheet No. B07-02 and Geotechnical Report.

BORING LOGS

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-27 of B07-37



8/8/2025

DATE PREPARED
08/08/2025
ROUTE
1 - 70
STATE
MO
DISTRICT
BR
SHEET NO.
B07 - 27
COUNTY
JACKSON
JOB NO.
J411486D
CONTRACT ID.
240807 - C01
PROJECT NO.

BRIDGE NO.
A9624

DATE	DESCRIPTION
08/08/25	REV 0 - RFC SUBMITTAL

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



SOIL BORING NUMBER: Tru_B3_2

Page 1 of 5

PROJECT Improve I 70 KC Design Build NORTHING/EASTING 1066117.5 / 2776564.3
DRILLING FIRM PPI DRILLER Ray A. DATE STARTED 12/11/2024
LOGGED BY Trent Shepherd DATE COMPLETED 12/16/2024
SURFACE ELEVATION 830* 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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
																FILL, dark brown, soft, dry, SILTY LEAN CLAY, grass at surface
										2.5	827.5					
4	4 ft	X	J-1	4	3-4-4 (8)	22										FILL, red brick and concrete rubble
5																- 12" thick concrete obstruction at 3'
9	9 ft															
10	10 ft	X	U-1	0												- fill becomes red brick rubble at 9'
		X	J-2	10	30-2-2 (4)	56										
13	13 ft	X	J-3	18	1-1-2 (3)	100		0.5		13.0	817					FILL, dark brown, soft, moist, FAT CLAY, with trace organics and red brick
18	18 ft											63-20-43	31.8			
20	20 ft	X	U-2	24		100		0.5		18.0	812					Gray, soft, moist, LEAN CLAY (CL), with trace silt
23	23 ft	X	J-4	15	1-1-2 (3)	83		<0.5				33-19-14	22.7	103.20	1.81	
28	28 ft															
		X	U-3	24		100		0.75		28.0	802					Gray, firm, moist, LEAN CLAY with SILT (CL-ML)
35	35.0											36-21-15	29.5	85.40	0.679	- split spoon attempted, no recovery due to brick rubble stuck in catcher at 33'
										795						

* Survey not possible due to boring location. Coordinates estimated from visual inspection. Elevation estimated from contour map.



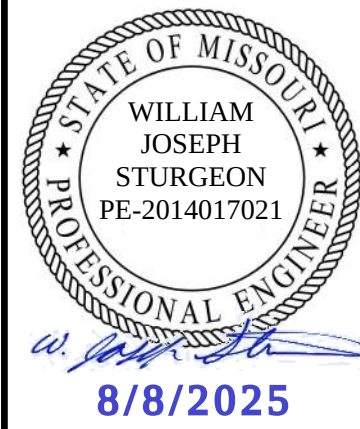
SOIL BORING NUMBER: Tru_B3_2

Page 2 of 5

PROJECT Improve I 70 KC Design Build NORTHING/EASTING 1066117.5 / 2776564.3
DRILLING FIRM PPI DRILLER Ray A. DATE STARTED 12/11/2024
LOGGED BY Trent Shepherd DATE COMPLETED 12/16/2024
SURFACE ELEVATION 830* 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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
35	35 ft	X	J-5	18	2-3-4 (7)	100		1.5								Brown, stiff to firm, moist, FAT CLAY (CH)
38	38 ft	X	J-6	16	1-1-2 (3)	89		0.75				64-27-37	33.1			
43	43 ft	X	J-7	18	3-4-5 (9)	100		1.5								
48	48 ft	X	J-8	18	2-3-5 (8)	100				48.0	782					Brown, stiff to firm, moist, LEAN CLAY with SILT (CL-ML)
58	58 ft	X	J-9	18	4-4-6 (10)	100		1.5				39-16-23	25.1			
68	68 ft	X	J-10	12	1-1-3 (4)	67		0.75				32-18-14	27.3			

* Survey not possible due to boring location. Coordinates estimated from visual inspection. Elevation estimated from contour map.



DATE PREPARED 08/08/2025	
ROUTE 1 - 70	STATE MO
DISTRICT BR	SHEET NO. B07 - 28
COUNTY JACKSON	
JOB NO. J4 I 1486D	
CONTRACT ID. 240807 - C01	
PROJECT NO.	
BRIDGE NO. A9624	

DATE	DESCRIPTION
08/08/25	REV 0 - RFC SUBMITTAL

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

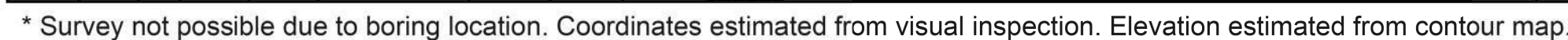
715 KIRK DRIVE
KANSAS CITY, MO 64105-1310
CERTIFICATE OF AUTHORITY
NO. 001270

HNTB

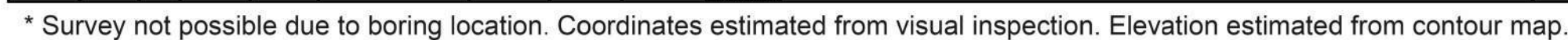
Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

Notes:
For locations of borings, see Sheet No. B07-02 and Geotechnical Report.

BORING LOGS



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



Notes:
For locations of borings, see Sheet No. B07-02
and Geotechnical Report.

Sheet No. B07-29 of B07-37



SOIL BORING NUMBER: Tru_B3_2

Page 5 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066117.5 / 2776564.3
DRILLING FIRM PPI
DRILLER Ray A.
DATE STARTED 12/11/2024
LOGGED BY Trent Shepherd
DATE COMPLETED 12/16/2024
SURFACE ELEVATION 830' *
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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
145																Gray, dense, moist, fine grained, SILTY SAND (SM), bagged separately
148 ft			J-18	18	20-20-21 (41)	100										
150										149.5	680.5					Bottom of Boring at 149.5'
																Boring backfilled with cuttings 12/16/2024
155																
160																
165																
170																

* Survey not possible due to boring location. Coordinates estimated from visual inspection. Elevation estimated from contour map.



SOIL BORING NUMBER: Tru_B3_3

Page 1 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066102.5 / 2776666.8
DRILLING FIRM PPI
DRILLER Ray A.
DATE STARTED 12/10/2024
LOGGED BY Trent Shepherd
DATE COMPLETED 12/11/2024
SURFACE ELEVATION 829.8'
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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
5	4 ft		J-1		4-5-6 (11)			2.0								
10	9 ft		U-1	18		75		0.5		9.0	820.8					Brown, soft, moist, LEAN CLAY with SILT (CL-ML)
15	13 ft		J-2	18	1-1-1 (2)	100		0.5		13.0	816.8					Brown, soft, moist, FAT CLAY (CH)
20	18 ft		U-2	24		100		2.5		18.0	811.8					Brown to gray, very stiff, moist, LEAN CLAY with SILT (CL-ML)
25	23 ft		J-3	18	1-2-3 (5)	100		0.5		23.0	806.8					Blue-gray, soft, moist, FAT CLAY (CH)
30	28 ft		U-3	24		100		0.5				52-19-33	38.2	87.8	0.954	
	33 ft		J-4	18	1-1-2 (3)	100		0.5								- becomes silty at 33'

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

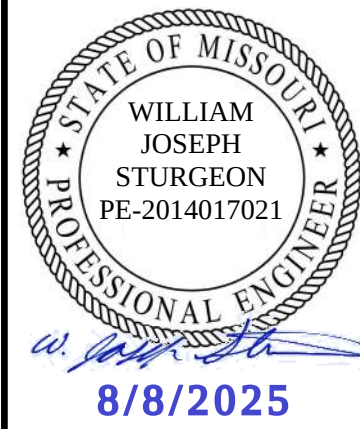
Notes:
For locations of borings, see Sheet No. B07-02 and Geotechnical Report.

BORING LOGS

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-30 of B07-37



DATE PREPARED 08/08/2025	
ROUTE 1 - 70	STATE MO
DISTRICT BR	SHEET NO. B07 - 30
COUNTY JACKSON	
JOB NO. J4I1486D	
CONTRACT ID. 240807 - C01	
PROJECT NO.	
BRIDGE NO. A9624	

DATE	DESCRIPTION
08/08/25	REV 0 - RFC SUBMITTAL

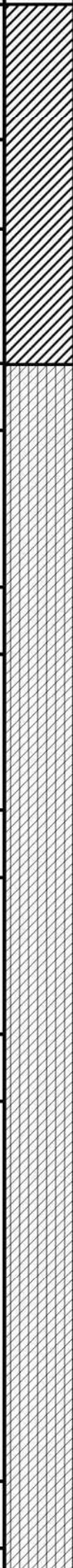
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



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-P)	Moisture Content (%)	Dry Density (pcf)	UCS (tsf)
Visual Classification and Remarks															
38 ft			U-4	24		100		0.5		Blue-gray, soft, moist, FAT CLAY (CH)					
43 ft		X	J-5	18	3-3-3 (6)	100	1.5	43.0 786.8							
48 ft		X	J-6	17	4-4-6 (10)	94	0.75	Blue-gray, stiff, moist, LEAN CLAY with SILT (CL-ML)							
53 ft		X	J-7	18	3-4-6 (10)	100	2.0	53.0 776.8							
58 ft		X	J-8	14	2-3-4 (7)	78	1.25	Brown, stiff, moist, LEAN CLAY with SILT (CL-ML), with trace iron							
68 ft		X	J-9	18	3-4-5 (9)	100	1.0			- becomes firm at 68'					



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					
75										Brown, stiff, moist, LEAN CLAY with SILT (CL-ML), with trace iron					
78 ft		X	J-10	18	4-6-8 (14)	100		1.5		78.0	751.8				
80										Blue-gray, stiff, moist, LEAN CLAY with SILT (CL-ML), with organics as shells					
										83.5	746.3				
85										Tan to brown, dense, wet, coarse grained, WELL-GRADED SAND (SW), with some gravel					
88 ft		X	J-11	15	15-23-22 (45)	83				- 2' thick limestone boulder at 93'					
90															
95															
98 ft		X	J-12	12	12-18-20 (38)	67				98.0	731.8				
100										Brown, dense, wet, coarse grained, WELL-GRADED SAND (SW), with coarse, sub-rounded gravel					

Notes:
For locations of borings, see Sheet No. B07-02
and Geotechnical Report.

BORING LOGS



SOIL BORING NUMBER: Tru_B3_3

Page 4 of 5

PROJECT Improve I 70 KC Design Build NORTHING/EASTING 1066102.5 / 2776666.8
DRILLING FIRM PPI DRILLER Ray A. DATE STARTED 12/10/2024
LOGGED BY Trent Shepherd DATE COMPLETED 12/11/2024
SURFACE ELEVATION 829.8' 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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
108 ft			J-13	6	16-21-19 (40)	33										- 6" thick limestone boulder 108.0 721.8
110																Brown, dense, wet, fine to coarse grained, WELL-GRADED SAND (SW), with some gravel
115																
118 ft			J-14	11	22-23-16 (39)	61										- trace gravel from 118-119' 119.0 710.8
120																Gray, dense, wet, fine grained, WELL-GRADED SAND (SW)
125																
128 ft			J-15	7	16-22-25 (47)	39										- brown sand lens from 128-128.1' 128.1 701.7
130																Gray, dense, moist, fine grained, SILTY SAND (SM)
135																
138 ft			J-16	16	15-25-31 (56)	89										- becomes very dense at 138'



SOIL BORING NUMBER: Tru_B3_3

Page 5 of 5

PROJECT Improve I 70 KC Design Build NORTHING/EASTING 1066102.5 / 2776666.8
DRILLING FIRM PPI DRILLER Ray A. DATE STARTED 12/10/2024
LOGGED BY Trent Shepherd DATE COMPLETED 12/11/2024
SURFACE ELEVATION 829.8' 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				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
145																Gray, dense, moist, fine grained, SILTY SAND (SM)
148 ft			J-17	14	12-22-23 (45)	78										148.0 681.8
150																Brown, dense, wet, fine to coarse grained, WELL-GRADED SAND (SW) 149.5 680.3
155																Bottom of Boring at 149.5'
160																Boring backfilled with grout 12/11/2024
165																
170																

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

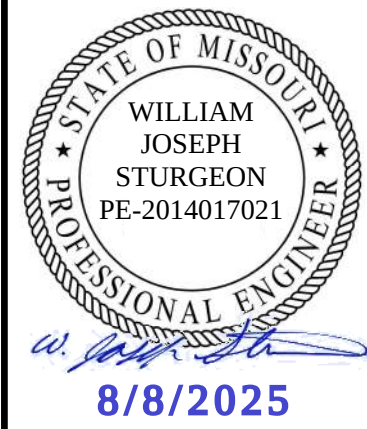
Notes:
For locations of borings, see Sheet No. B07-02 and Geotechnical Report.

BORING LOGS

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-32 of B07-37



DATE PREPARED 08/08/2025	
ROUTE 1 - 70	STATE MO
DISTRICT BR	SHEET NO. B07 - 32
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	
BRIDGE NO. A9624	

DATE	DESCRIPTION	REV	0	-	REF	SUBMITTAL
08/08/25						

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



SOIL BORING NUMBER: Tru_B4_2

Page 1 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066037.5 / 2776607.1
DRILLING FIRM PPI
DRILLER Eric P.
DATE STARTED 11/26/2024
LOGGED BY Zachary Boyd
DATE COMPLETED 12/03/2024
SURFACE ELEVATION 856.6'
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)
										Visual Classification and Remarks					
										1.0	855.6				
										FILL, brown, very stiff, moist, LEAN CLAY with GRAVEL, organics					
3.5		X	J-1	12	6-8-20 (28)	67		2.0							
8.5		X	J-2	14	3-5-5 (10)	78		2.0		- becomes dark brown and stiff at 8.5'					
13.5			U-1	21		88		3.0		14.0	842.6				
										FILL, dark gray to brown, stiff to very stiff, moist, LEAN CLAY, organics					
18.5		X	J-3	14	3-8-8 (16)	78		2.0							
23.5		X	J-4	13	5-6-11 (17)	72		2.0		- becomes dark reddish brown at 23.5'					
28.5		X	J-5	16	12-10-9 (19)	89		2.0		27.5	829.1				
										FILL, dark gray, stiff to very stiff, moist, fat clay with gravel					
33.5			U-2	24		100		0.5		- becomes soft at 33.5'					
												41-19-22	27.6	96.5	0.96



SOIL BORING NUMBER: Tru_B4_2

Page 2 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066037.5 / 2776607.1
DRILLING FIRM PPI
DRILLER Eric P.
DATE STARTED 11/26/2024
LOGGED BY Zachary Boyd
DATE COMPLETED 12/03/2024
SURFACE ELEVATION 856.6'
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)
										Visual Classification and Remarks					
35			U-2	24		100		0.5		FILL, dark gray, stiff to very stiff, moist, fat clay with gravel					
38.5		X	J-6	18	WOH-WOH-1 (1)	100		0.5		37.5	819.1				
43.5			U-3	21		88		0.5		Brown to gray, soft to firm, moist, LEAN CLAY (CL)					
48.5			J-7	16	1-1-2 (3)	89		0.5		48.5	808.1				
53.5		X	J-8	18	WOH-1-1 (2)	100		<0.5		Dark gray, soft, moist, LEAN CLAY (CL), iron staining					
58.5			U-4	24		100		0.5							
63.5															
68.5		X	J-9	14	2-4-6 (10)	78		1.0		- becomes light gray, firm to stiff at 68.5'					
												41-19-22	27.6	96.5	0.96

Released For Construction
Not to Scale
Revision: 0.0
Date: 08/11/2025
Package: BRD-07-WB70-Truman-Sub

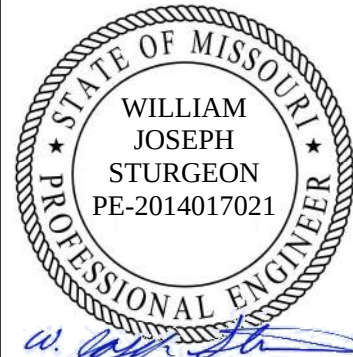
Notes:
For locations of borings, see Sheet No. B07-02 and Geotechnical Report.

BORING LOGS

Detailed MAR 2025
Checked APR 2025

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

Sheet No. B07-33 of B07-37



8/8/2025

DATE PREPARED 08/08/2025
ROUTE 1 - 70
STATE MO
DISTRICT BR
SHEET NO. B07 - 33
COUNTY JACKSON
JOB NO. J411486D
CONTRACT ID. 240807-C01
PROJECT NO.

BRIDGE NO. A9624

DATE	DESCRIPTION	REV	0	- RFC	SUBMITTAL
08/08/25					

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





SOIL BORING NUMBER: Tru_B4_2

Page 3 of 5

PROJECT Improve I 70 KC Design Build
NORTHING/EASTING 1066037.5 / 2776607.1
DRILLING FIRM PPI
DRILLER Eric P.
DATE STARTED 11/26/2024
LOGGED BY Zachary Boyd
DATE COMPLETED 12/03/2024
SURFACE ELEVATION 856.6'
RIG TYPE CME-550
METHOD Auger/Mud Rotary/NQ Core
TOOLING 4-1/2" Continuous Flight Auger, 3-3/4" Rotary Drill

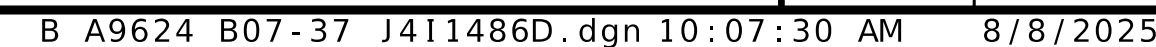
Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab				Visual Classification and Remarks
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-P)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)	
										After Drilling (ft):	N/A					
										After __ Hours (ft):	N/A					

[illegible]

HNTB										SOIL BORING NUMBER: Tru_B4_3									
										Page 1 of 5									
PROJECT Improve I 70 KC Design Build										NORTHING/EASTING 1066012.3 / 2776675.4									
DRILLING FIRM PPI DRILLER Eric P.										DATE STARTED 11/25/2024									
LOGGED BY Zachary Boyd										DATE COMPLETED 11/26/2024									
SURFACE ELEVATION 856.6'										RIG TYPE CME-550									
METHOD Auger, Mud Rotary, NQ Core										TOOLING 4-1/2" Continuous Flight Auger, 3-3/4" Rotary Drill									
									Groundwater Data				Lab						
Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	During Drilling (ft):		Atterberg Limits (LL-PL-Pi)		Moisture Content (%)		Dry Density (pcf)		UCS (tsf)	
										After Drilling (ft):									
										After __ Hours (ft):		N/A							
										Visual Classification and Remarks									
										FILL, dark brown, very stiff, moist, LEAN CLAY, with organics									
3.5 ft		X	J-1	5	5-8-8 (16)	28		>4.5											
8.5 ft		X	J-2	14	5-8-10 (18)	78		1.5		- becomes stiff at 8.5'				19.9					
13.5 ft			U-1	20		83		3.0		- becomes very stiff with gravel at 13.5'				41-21-20		20.0		109.1	
18.5 ft		X	J-3	15	4-6-9 (15)	83		3.0		19.5 837.1									
23.5 ft		X	J-4	16	3-6-8 (14)	89		2.0		FILL, dark gray to brown, stiff to very stiff, moist, lean clay, organics, iron staining									
28.5 ft		X	J-5	1	50/6" (6")	17		>4.5		- 6" gravel piece at 28.5'				39-20-19		23.9			
33.5 ft			U-2	24		100		1.0		33.5 823.1									
										FILL, brown to gray, firm to stiff, moist, fat clay with gravel, organics				43-20-23		25.2		99.9	

Notes:
For locations of borings, see Sheet No. B07-02
and Geotechnical Report.

BORING LOGS



HNTB						SOIL BORING NUMBER: Tru_B4_3																				
						Page 5 of 5																				
PROJECT Improve I 70 KC Design Build						NORTHING/EASTING 1066012.3 / 2776675.4																				
DRILLING FIRM PPI						DRILLER Eric P.		DATE STARTED 11/25/2024																		
LOGGED BY Zachary Boyd						DATE COMPLETED 11/26/2024																				
SURFACE ELEVATION 856.6'						RIG TYPE CME-550																				
METHOD Auger, Mud Rotary, NQ Core						TOOLING 4-1/2" Continuous Flight Auger, 3-3/4" Rotary Drill																				
									Groundwater Data			Lab														
									During Drilling (ft):		N/A		Atterberg Limits (LL-PL-Pi)		Moisture Content (%)		Dry Density (PCF)		UCS (tsf)							
									After Drilling (ft):		N/A															
									After __ Hours (ft):		N/A															
									Visual Classification and Remarks									Atterberg Limits (LL-PL-Pi)		Moisture Content (%)		Dry Density (PCF)		UCS (tsf)		
									Reddish brown to tan, dense to very dense, WELL-GRADED SAND with GRAVEL (SW), cobble gravel and coarse sand																	
									150.0									706.6								
									Bottom of Boring at 150'																	
									Boring backfilled with cuttings 11/26/2024																	

Depth (ft)

Depth of Sample

Sample Type

Sample ID

Recovery Length (in)

Blow Counts
(N-Value)

% Recovery

RQD (%)

Pocket Pen (tsf)

Graphic Log

145

48.5 ft

X

J-17

12

22-25-24
(49)

67

150

155

160

165

170

Notes:
For locations of borings, see Sheet No. B07-02
and Geotechnical Report.

BORING LOGS