DESIGN DESIGNATION

A.A.D.T. - 2025 = 6,500
A.A.D.T. - 2035 = 9,000
D.H.V. = 900
T = 4.5%
V = 55 M.P.H.

FUNCTIONAL CLASSIFICATION- MINOR ARTERIAL

TEMPORARY EASEMENT TO BE ACQURIED

CONVENTIONAL SYMBOLS
(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	-FO-
OVERHEAD CABLE TV	-OTV-	-OTV-
UNDERGROUND CABLE TV	-UTV-	-UTV-
OVERHEAD TELEPHONE	-OT-	-OT-
UNDERGROUND TELEPHONE	-UT-	-UT-
OVERHEAD POWER	-OE-	-OE-
UNDERGROUND POWER	-UE-	-UE-
SANITARY SEWER	-S-	-S-
STORM SEWER	-SS-	-SS-
GAS	-G-	-G-
WATER	-W-	-W-
MANHOLE	SAN	
FIRE HYDRANT	HYD	
WATER VALVE	WV	
WATER METER	WM	
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL	PED	
FENCE		
CHAIN LINK	-V-	
WOVEN WIRE	-X-	
GATE POST		
BENCHMARK	BM	

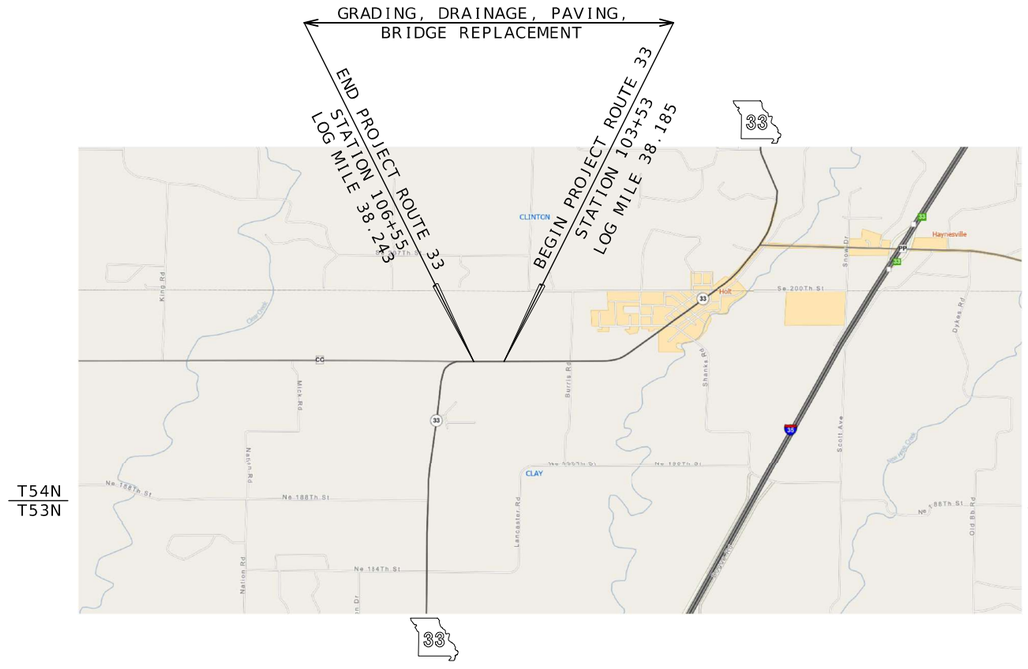
NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED

STATE HIGHWAY
RIGHT OF WAY PLANS
CLAY COUNTY

KEY MAP
LOCATION OF CLAY COUNTY



NOT TO SCALE

THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS-IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION. IT IS, THEREFORE, THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE, LOCATION AND STATUS OF ANY FACILITY. SUCH VERIFICATION INCLUDES DIRECT CONTACT WITH THE LISTED UTILITIES.

INDEX OF SHEETS

LENGTH OF PROJECT

BEGINNING OF PROJECT	STA. 103+53
END OF PROJECT	STA. 106+55
APPARENT LENGTH	302 FEET
EQUATIONS AND EXCEPTIONS:	
TOTAL CORRECTIONS	00 FEET
NET LENGTH OF PROJECT	302 FEET
STATE LENGTH	0.06 MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	0.21 ACRES

STATE OF MISSOURI
BENJAMIN STEPHEN MCCABE SR. NUMBER PE-2003015005
PROFESSIONAL ENGINEER
03/19/2025 12:10:40 PM
BENJAMIN STEPHEN MCCABE SR - CIVIL
MO-PE-2003015005

DATE PREPARED: 3/19/2025
ROUTE: 33 | STATE: MO
DISTRICT: KC | SHEET NO.: 1
COUNTY: CLAY
JOB NO.: JKU0449
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9662

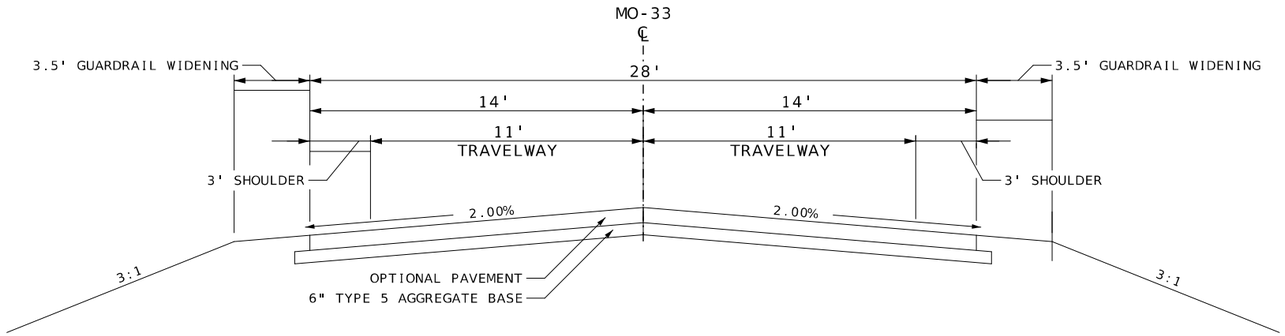
DESCRIPTION	DATE

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

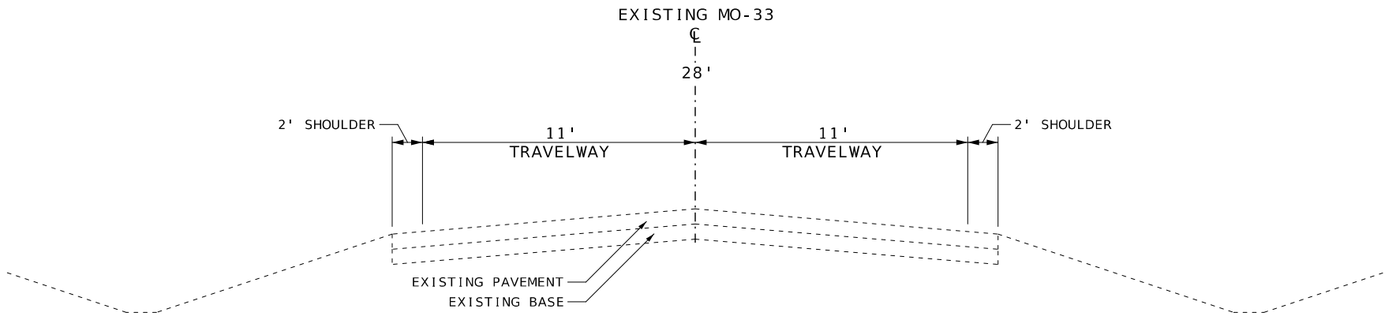
OPTIONAL PAVEMENT

9.5" HMA:
2" BP-1 w/ PG 58-28H
OVER 2" BP-1 w/ PG58-28H
OVER 5.5" BB w/ PG64-22
OVER 6" TYPE 5 AGGREGATE

8.5" JPCP WIDENED SLAB
OVER 6" TYPE 5 AGGREGATE



CROSS SECTIONS BASED ON CONCRETE PAVEMENT



ESTIMATE FACTORS - FOR INFORMATION PURPOSES ONLY	
BP-1 w/ PG 58-28H	1.984 TONS/CY
BB w/ PG64-22	1.997 TONS/CY

ROADWAY TYPICAL SECTIONS
SHEET 1 OF 1

STATE OF MISSOURI
BENJAMIN STEPHEN MCCABE SR.
NUMBER PE-2003015005
PROFESSIONAL ENGINEER
03/19/2025 12:14:12 PM
BENJAMIN STEPHEN MCCABE SR - CIVIL
MO-PE-2003015005

DATE PREPARED
3/19/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
KC	2

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9662

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

OPTIONAL PAVEMENT

STATION BEGIN	STATION END	LENGTH (FT)	WIDTH (FT)	LOCATION	TYPE 5 AGGREGATE FOR BASE (6") (SY)	OPTIONAL PVM'T (SY)	GRAVEL (A) FOR ENTRANCE (SY)	REMARKS
103+53	104+52.17	99.2	28	MO-33	308.6	308.6		
104+52.17	104+62.14	10.0	14.3	MO-33	15.9	15.9		AVERAGE WIDTH
105+27.80	105+39.53	11.7	15.6	MO-33	20.3	20.3		AVERAGE WIDTH
105+39.53	106+55	115.5	28	MO-33	359.3	359.3		
105+87	105+87	14	10	MO-33 LT			15.6	FIELD ENTRANCE
				PAY TOTAL	704.0	704.0	16.0	

REMOVAL OF IMPROVEMENT QUANTITIES

STATION BEGIN	STATION END	LOCATION	ITEM	QUANTITIY AND UNITS
103+53	106+55	MO-33	PAVEMENT	702.1 SQ YD
103+53.00	103+53.00	MO-33	FULL DEPTH SAW CUTS	
104+13.13	104+83.16	MO-33 LT	GUARDRAIL	70.00 LF
104+14.12	104+83.99	MO-33 RT	GUARDRAIL	70.00 LF
105+06.40	105+64.00	MO-33 LT	GUARDRAIL	58.00 LF
105+07.22	105+77.82	MO-33 RT	GUARDRAIL	71.00 LF
105+20.87	105+80.95	MO-33 LT	FENCE	60.00 LF
105+72.56	106+02.26	MO-33 LT	36" ENTRANCE PIPE	30.00 LF
106+55.00	106+55.00	MO-33	FULL DEPTH SAW CUTS	
			PAY TOTAL	1 LUMP SUM

GUARDRAIL QUANTITIES

LOCATION	MGS GUARDRAIL (LF)	TYPE A CRASHWORTHY END TERMINAL (MASH) (EA)	MGS-BRIDGE APPROACH TRANSITION SECTION (MASH) (EA)	TYPE C CRASHWORTHY END TERMINAL (MASH) (EA)	CRASH CUSHION CONCRETE PAD 8 IN. NON-REINF. (SY)	REMARKS
NW QUADRANT OF BRIDGE A9662	62.5	1	1			
SW QUADRANT OF BRIDGE A9662				1	9.3	
NE QUADRANT OF BRIDGE A9662	12.5	1	1			
SE QUADRANT OF BRIDGE A9662	12.5	1	1			
PAY TOTAL	88.0	3	3	1	9.3	

MOBILIZATION
1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING AND STAKING
1 LUMP SUM

EARTHWORK

STATION BEGIN	STATION END	LOCATION	CLASS A EXCAVATION (CY)	COMPACTING EMBANKMENT (CY)	EMBANKMENT IN PLACE (CY)	EXCESS (CY)	REMARKS
103+53	104+78.02	MO-33	20.57	166.89	146.32		BEGIN PROJ. TO EAST ABUT.
105+11.82	106+55	MO-33	21.39	262.26	240.87		WEST ABUT. TO END PROJ.
104+78.02	105+11.82	MO-33	33.18	4.97		28.21	STREAM GRADING FROM EAST ABUT. TO WEST ABUT.
		PAY TOTAL	75.0	434.0	359.0		

SEEDING AND EROSION CONTROL BLANKET

STATION BEGIN	STATION END	SEEDING WARM SEASON MIXTURE (ACRE)	EROSION CONTROL BLANKET TYPE 3B (SY)	REMARKS
103+53	106+55	0.14	704.79	
	PAY TOTAL	0.2	705.0	

TEMPORARY EROSION CONTROL

LOCATIONS	SILT FENCE (LF)	ALTERNATE DITCH CHECK (LF)	SEDIMENT REMOVAL (CY)	TYPE C BERM (LF)	REMARKS
NE QUADRANT OF BRIDGE	124.6	10.0	3.0		
SE QUADRANT OF BRIDGE	121.6	20.0	3.0		
NW QUADRANT OF BRIDGE	140.4		1.0		
SW QUADRANT OF BRIDGE	83.1	20.0	3.0		
EAST BRIDGE ABUTMENT				63	
WEST BRIDGE ABUTMENT				67	
PAY TOTAL	470.0	50.0	10.0	130.0	

RUMBLE STRIP QUANTITIES

STATION BEGIN	STATION END	LOCATION	LENGTH (LF)	*CENTERLINE RUMBLE STRIP (STA)	*EDGELINE RUMBLE STRIP (STA)	REMARKS
103+53	104+57.25	MO-33 CL	104.25	1.0		
103+53	104+62.34	MO-33 RT	109.34		1.1	
103+53	104+52.17	MO-33 LT	99.17		1.0	
105+32.53	106+55	MO-33 CL	122.47	1.2		
105+37.74	106+55	MO-33 RT	117.26		1.2	
105+39.53	106+55	MO-33 LT	115.47		1.2	
			TOTAL	2.2	4.5	
			PAY TOTAL	6.7		

*RUMBLE STRIPS SHALL BE PAID FOR UNDER ESTIMATE NUMBER 6269909

ROCK BLANKET

LOCATIONS	DEPTH (LF)	AREA (SQ FT)	FURNISHING TYPE 2 ROCK BLANKET (CY)	PLACING TYPE 2 ROCK BLANKET (CY)	PERM. EROSION CONTROL GEOTEXTILE (SY)	REMARKS
NORTH OF BRIDGE A9662	2	620.8	45.99	45.99	68.98	
UNDER BRIDGE A9662	2	838.4	62.10	62.10	93.16	
SOUTH OF BRIDGE A9662	2	790.5	58.56	58.56	87.83	
		PAY TOTAL	167.0	167.0	250.0	

DRAINAGE

STATION BEGIN	STATION END	LOCATION	CLASS III EXCAVATION (CY)	36" PIPE GROUP B (LF)	36" FLARED END SECTION (EACH)	36" SAFETY SLOPE FLARED END SECTION (EACH)	REMARKS
		MO-33 LT	112.7	95	1	1	
		PAY TOTAL	113.0	95	1	1	

PAVEMENT MARKING QUANTITIES

STATION BEGIN	STATION END	LOCATION	LENGTH (FT)	4" WHITE STANDARD WATERBORNE PVMT MARKING PAINT TYPE P BEADS (LF)	4" YELLOW STANDARD WATERBORNE PVMT MARKING PAINT TYPE P BEADS (LF)	REMARKS
103+53	106+55	MO 33	302	604.0	604.0	TWO WHITE EDGELINES, DOUBLE SOLID YELLOW CENTERLINE
			PAY TOTAL	604.0	604.0	

SUMMARY OF QUANTITIES
SHEET 1 OF 1

STATE OF MISSOURI
BENJAMIN STEPHEN MCCABE SR. NUMBER PE-2003015005
PROFESSIONAL ENGINEER
03/19/2025 12:17:16 PM
BENJAMIN STEPHEN MCCABE SR- CIVIL
MO-PE-2003015005

DATE PREPARED 3/19/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
KC	3

COUNTY CLAY

JOB NO. JKU0449

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9662

DESCRIPTION | DATE

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

ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT

STA. 104+94.86 ℄ PROPOSED RT 33
BUILD BRIDGE A9662
30' COMPOSITE GALVANIZED STEEL WIDE FLANGE BEAM SPAN
28' ROADWAY, ∠20° R.A.
D25 = 1,160 C.F.S.

STA 104+95.27 ℄ EXISTING MO-33
REMOVE EXISTING CULVERT
22' ROADWAY, ∠0°

SCALE
0 20 40 60

BUILD GUARDRAIL
NW QUADRANT
1 MGS BR. APPR. TRANS.
62.5' MGS GUARDRAIL
1 TYPE A CET (MASH)

PLACE TYPE 2 ROCK BLANKET
W/ GEOTEXTILE FABRIC

SHAPE TO DRAIN

BUILD GUARDRAIL
NE QUADRANT
1 MGS BR. APPR. TRANS.
12.5' MGS GUARDRAIL
1 TYPE A CET (MASH)

+32.53 END APP. SLAB
+29.02
28.86'
+18.07
28.93'
+07.70
24.99'
+71.07
24.93'
+57.25 BEG. APP. SLAB

EX. R/W
S.L.
SIGN
T RISER

℄ CONSTRUCTION BASELINE
N89°52'51"W
S89°40'06"W
S89°47'45"W

POT STA 107+53.00
POT STA 102+68.00
POT STA 102+10.00

BUILD 36" X 95' GROUPIB PIPE
BUILD 1 - 36" FES
BUILD 1 - 36" SSFES
REMOVE EX. 36" PIPE
SSFES
FENCE (DND)
FENCE (R)
STA 105+20.87 TO 105+80.95
+18.42
29.07'
+60.94
29.08'
FES
SP. DT.
EX. R/W
TEMP. CONSTRUCTION EASEMENT
EX. PERM. UTIL. EASEMENT
SHAPE TO DRAIN

END PROJECT STA. 106+55
BEGIN PROJECT STA. 103+53

105
104

STA 105+87
FIELD ENTRANCE
BLD. 14' X 10' GRAVEL
4% EXIST. GRADE
6% NEW GRADE

BUILD TYPE C CET (MASH)
SW QUADRANT
TYPE C CRASH CUSHION
CONCRETE PAD 21' X 4'

APPROACH SLAB
(SEE BR. PLANS
FOR DETAILS)

BUILD GUARDRAIL
SE QUADRANT
1 MGS BR. APPR. TRANS.
12.5' MGS GUARDRAIL
1 TYPE A CET (MASH)

REMOVE EX. PAVEMENT AND
BUILD OPTIONAL PAVEMENT
103+53 TO 104+57.25 &
105+32.53 TO 106+55
(SEE TS SHEET FOR DETAILS?)

PLAN SHEET
SHEET 1 OF 1

STATE OF MISSOURI
BENJAMIN STEPHEN MCCABE SR.
NUMBER PE-2003015005
PROFESSIONAL ENGINEER
03/19/2025 12:17:53 PM
BENJAMIN STEPHEN MCCABE SR- CIVIL
MO-PE-2003015005

DATE PREPARED
3/19/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
KC	4

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

PROJECT NO.

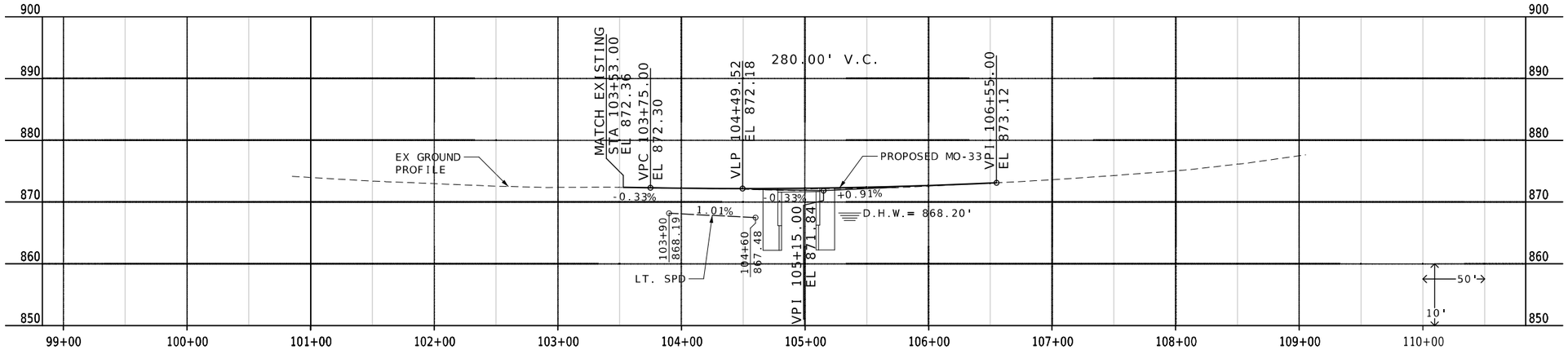
BRIDGE NO.
A9662

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

PROFILE MO-33



PROFILE
SHEET 1 OF 1

STATE OF MISSOURI
BENJAMIN STEPHEN MCCABE SR. NUMBER PE-2003015005
PROFESSIONAL ENGINEER
03/19/2025 12:18:44 PM
BENJAMIN STEPHEN MCCABE SR - CIVIL
MO-PE-2003015005

DATE PREPARED
3/19/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
KC	5

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9662

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

EAST ¼ COR. SEC. 34 T54N R31W
N - 1195088.1700 E - 2828643.6350
DOC #: 600-36536 FOUND BRASS CAP

STA. 103+53
BEG. OF PROJECT

SEC. 34 EAST ¼ CORNER
1096.75'
N86°46'21"W

℄ EXISTING MO-33

CENTER SEC. 34 T54N R31W
N - 1195097.2110 E - 2825962.9920
DOC #: 600-36536 3/8" IRON BAR

STA. 106+55
END. OF PROJECT

1281.99'
N89°20'52"W

℄ EXISTING MO-33

SEC. 34 CENTER

SCALE
0 20 40 60

SW ¼ NE ¼ SEC 34, T54N, R31W

SE ¼ NE ¼ SEC 34, T54N, R31W

¼ ¼ SECTION LINE

EX. R/W

PROP. BR. NO. A9662

T RISER

℄ EXISTING MO-33

N89°52'51"W

S89°40'06"W

¼ SECTION LINE

S89°47'45"W

S89°46'21"W

BUILD 36" X 95' GROUP B PIPE
BUILD 1 - 36" FES
GUILD 1 - 36" SSFES

REMOVE EX. 36" PIPE

POT STA 107+53.00

POT STA 102+68.00

POT STA 101+20.00

Fence (DND)

END PROJECT
STA. 106+55

POT STA 105+87

Gas line marker

N89°46'22"E

EX. R/W

FENCE (R)
STA 105+20.87 TO 105+80.95

N89°57'03"E

TEMP. CONSTRUCTION EASEMENT

BEGIN PROJECT
STA. 103+53

EX. PERM. UTIL. EASEMENT

+97
30'-46.45

+53
30'-46.90

105

104

STA 105+87
FIELD ENTRANCE
BLD. 14' X 10' GRAVEL
4% EXIST. GRADE
6% NEW GRADE

NW ¼ SE ¼ SEC 34, T54N, R31W

NE ¼ SE ¼ SEC 34, T54N, R31W

① WISE BILLY JIM TRUSTEE
BNW IRREVOCABLE TRUST
24.72 AC REMAINING
0.06 AC (2407 SQ. FT.) TEMP. EASEMENT

¼ ¼ SECTION LINE

Right of Way limits for this project extend from Station 104+53 to Station 105+97, a distance of .03 miles.

Any work indicated on the plans that extends beyond project limits is considered incidental to and a part of the construction of this project.

All bearings based on Modified State Plane, Western Zone

RIGHT OF WAY
SHEET 1 OF 1

STATE OF MISSOURI
BENJAMIN STEPHEN MCCABE SR. NUMBER PE-2003015005
PROFESSIONAL ENGINEER

Benjamin Stephen McCabe Sr
03/19/2025 12:19:14 PM
BENJAMIN STEPHEN MCCABE SR - CIVIL
MO-PE-2003015005

DATE PREPARED
3/19/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
KC	6

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9662

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

ALL PROJECT COORDINATES HAVE BEEN PROJECTED FROM THE MISSOURI STATE PLANE COORDINATE (SPC) SYSTEM OF 1983 USING AN AVERAGE PROJECT PROJECTION (GRID TO GROUND) FACTOR. TO GET BACK TO STATE PLANE COORDINATES MULTIPY THE PROJECT COORDINATES BY THE AVERAGE GRID FACTOR AS SHOWN IN THE "REFERENCE CONTROL INFORMATION" PORTION OF THIS TABLE.

PROJECT COORDINATE INFORMATION

COORDINATE SYSTEM	MODIFIED STATE PLANE (GROUND)
HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88
GEOID MODEL	GEOID18
ELEVATIONS DETERMINED BY	DIFFERENTIAL LEVELING
PROJECT PROJECTION FACTOR	1.00009948

REFERENCE CONTROL INFORMATION

COORDINATE SYSTEM	MO COORDINATE SYSTEM OF 1983
CONTROL STATION	MO GEOGRAPHIC REFERENCE SYSTEM
DESIGNATION	CL-61
CORS_ID	XX
PID	DL6231
LATITUDE	39°26'53.90943"
LONGITUDE	94°22'27.22136"
NORTHING (M)	364225.0810
EASTING (M)	860825.4400
ZONE	WEST
PROJECT AVERAGE GRID FACTOR	0.99990053

EXAMPLE OF PROJECT COORDINATE TO S.P.C.

PROJECT NORTHING X AVERAGE GRID FACTOR
= STATE PLANE NORTHING
PROJECT EASTING X AVERAGE GRID FACTOR
= STATE PLANE EASTING

EXAMPLE: CONTROL POINT #1B
N 1195102.056 X 1.00009948 = N 1195220.945
E 2827363.049 X 1.00009948 = E 2827644.315

LINEAR UNIT CONVERSION

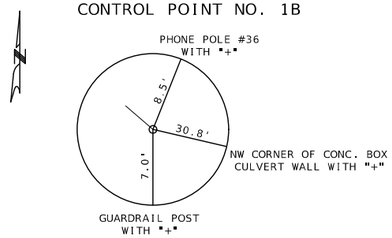
1 METER = 3.280833333 US SURVEY FEET (USFT)

COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND) NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	DESCRIPTION	GPK POINT ID
PROJECT CONTROL POINTS								
	105+36.77	MO-33	18.97' RT	1195102.056	2827363.049	869.58'	5/8" BAR WITH PINK MODOT CAP	CP# 1B
	108+50.07	MO-33	15.91' LT	1195066.936	2827049.886	874.66'	5/8" BAR WITH PINK MODOT CAP	CP# 2B
	101+59.59	MO-33	26.37' LT	1195058.216	2827740.402	869.96'	5/8" BAR WITH PINK MODOT CAP	CP# 3B
ALIGNMENTS								
SURVEY CENTERLINE								
	100+84.32	MO-33	0.00'	1195084.882	2827815.572	874.17'	BEG. OF SURVEY	
	103+53	MO-33	0.00'	1195083.815	2827546.894	872.37'	BEG. OF PROJECT	
	106+55	MO-33	0.00'	1195082.616	2827244.896	873.10'	END OF PROJECT	
	109+05.20	MO-33	0.00'	1195081.623	2826994.698	877.64'	END OF SURVEY	
CONSTRUCTION CENTERLINE								
	100+85.11	MO-33	0.45' RT	1195085.328	2827814.777	874.16'	BEG. OF CONST. CL	
	102+10.00	MO-33	0.41' RT	1195084.794	2827689.891	872.89'	PI	
	102+68.00	MO-33	0.43' RT	1195084.587	2827631.891	872.48'	PI	
	103+53.00	MO-33	0.28' RT	1195084.095	2827546.892	872.38'	BEG. OF PROJECT	
	105+06.69	MO-33	0.00'	1195083.205	2827393.206	872.25'	PI	
	106+55.00	MO-33	0.90' RT	1195083.514	2827244.896	873.12'	END OF PROJECT	
	107+53.00	MO-33	1.49' RT	1195083.718	2827146.891	874.34'	PI	
	109+05.13	MO-33	1.45' RT	1195083.069	2826994.761	877.65'	END OF CONST. CL	

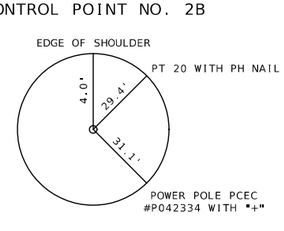
REFERENCE POINTS:

CONTROL POINT NO. 1B



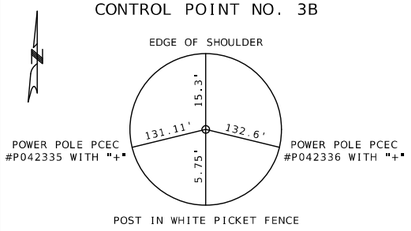
5/8" BAR WITH PINK MODOT CAP
N: 1195102.056
E: 2827363.049
STA.: 105+36.77
OFF: 18.97' RT
ELEV.: 869.58'

CONTROL POINT NO. 2B



5/8" BAR WITH PINK MODOT CAP
N: 1195066.936
E: 2827049.886
STA.: 108+50.07
OFF: 15.91' LT
ELEV.: 874.66'

CONTROL POINT NO. 3B



5/8" BAR WITH PINK MODOT CAP
N: 1195058.216
E: 2827740.402
STA.: 101+59.59
OFF: 26.37' LT
ELEV.: 869.96'

COORDINATE POINT AND REFERENCE POINT SHEET
SHEET 1 OF 1

STATE OF MISSOURI
BENJAMIN STEPHEN MCCABE SR.
NUMBER PE-2003015005
PROFESSIONAL ENGINEER

03/19/2025 12:19:48 PM
BENJAMIN STEPHEN MCCABE SR - CIVIL
MO-PE-2003015005

DATE PREPARED
3/19/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
KC	7

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

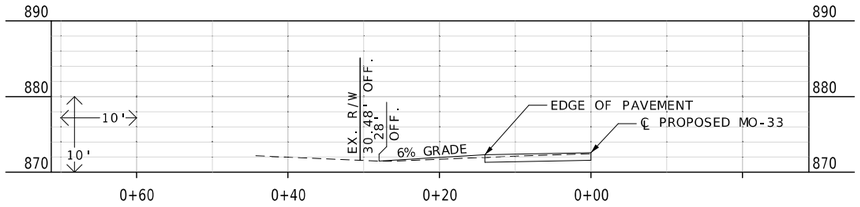
PROJECT NO.

BRIDGE NO.
A9662

DESCRIPTION

DATE

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



ENTRANCE STA. 105+87 LT.

STATE OF MISSOURI
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PROFESSIONAL ENGINEER

Benjamin Stephen McCabe Sr
03/19/2025 12:20:18 PM
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ROUTE	STATE
33	MO

DISTRICT	SHEET NO.
KC	8

COUNTY
CLAY

JOB NO.
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DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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JEFFERSON CITY, MO 65102
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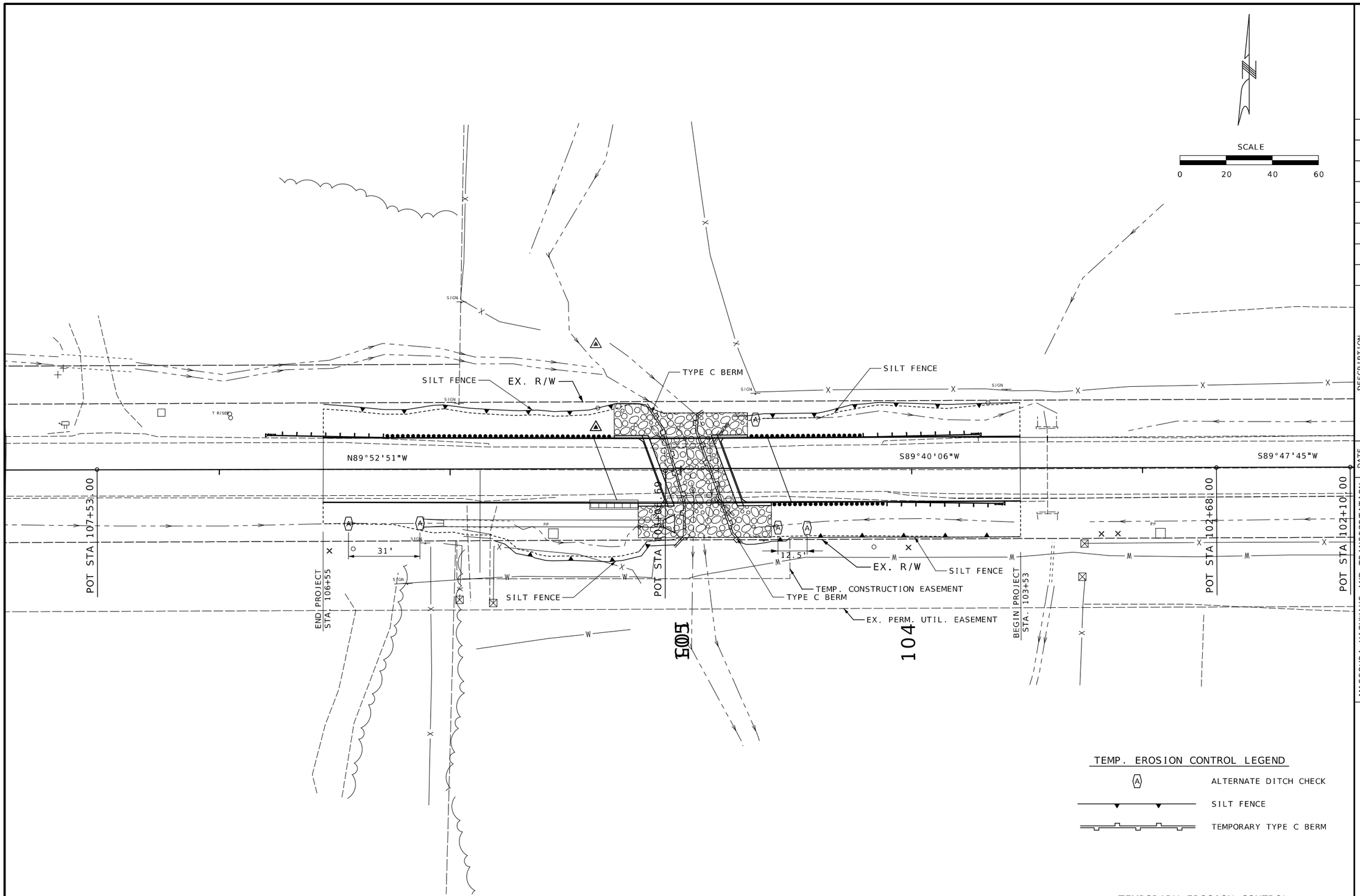

TEMP. EROSION CONTROL LEGEND

- (A) ALTERNATE DITCH CHECK
- SILT FENCE
- TEMPORARY TYPE C BERM

TEMPORARY EROSION CONTROL
SHEET 1 OF 1

STATE OF MISSOURI
BENJAMIN STEPHEN MCCABE SR. NUMBER PE-2003015005 PROFESSIONAL ENGINEER

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ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
KC	9

COUNTY
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NW QUADRANT
PLACE SEED & TYPE 3B ECB
AT ALL DISTURBED AREA

NE QUADRANT
PLACE SEED & TYPE 3B ECB
AT ALL DISTURBED AREA

SW QUADRANT
PLACE SEED & TYPE 3B ECB
AT ALL DISTURBED AREA

SE QUADRANT
PLACE SEED & TYPE 3B ECB
AT ALL DISTURBED AREA

EX. R/W

EX. EOP

PROP EOP

TRISER

SIGN

N89°52'51"W

S89°40'06"W

S89°47'45"W

4" TYPE P
DOUBLE SOLID YELLOW

4" TYPE P
SOLID WHITE

POT STA 107+53.00

POT STA 105+69.00

POT STA 102+68.00

POT STA 102+10.00

END PROJECT
STA. 106+55

BEGIN PROJECT
STA. 103+53

TEMP. CONSTRUCTION EASEMENT

EX. PERM. UTIL. EASEMENT

105

SCALE
0 20 40 60

PERM. EROSION CONTROL LEGEND

SEED & TYPE 3 ECB

PERMANENT EROSION CONTROL AND
PAVEMENT MARKING
SHEET 1 OF 1

STATE OF MISSOURI
BENJAMIN STEPHEN MCCABE SR. NUMBER PE-2003015005
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ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
KC	10

COUNTY
CLAY

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CONTRACT ID.

PROJECT NO.

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DESCRIPTION

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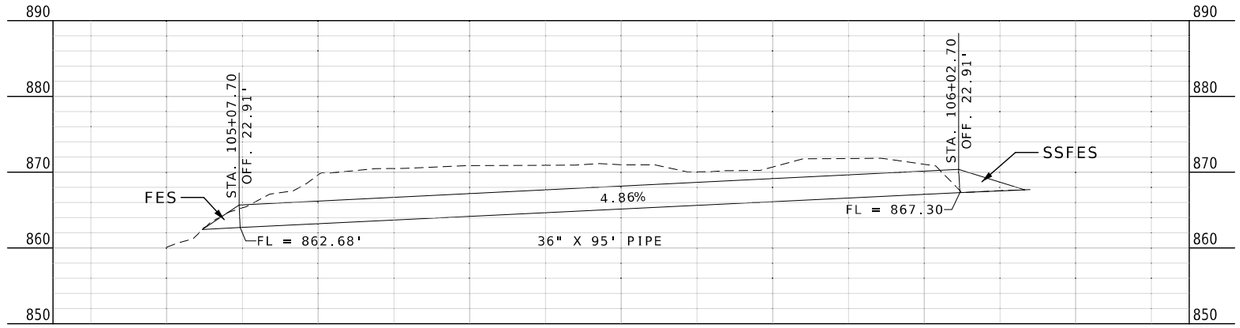

CULVERT SECTION

STA. 105+07.70 TO STA. 106+02.70
BUILD 36" X 95' GROUP B PIPE
CLASS III EXC. = 113 CY
BUILD 1- 36" FES
BUILD 1- 36" SSFES

CULVERT SECTION
SHEET 1 OF 1

STATE OF MISSOURI
BENJAMIN STEPHEN MCCABE SR. NUMBER PE-2003015005
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03/19/2025 12:21:57 PM
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DATE PREPARED
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ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
KC	11

COUNTY
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DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
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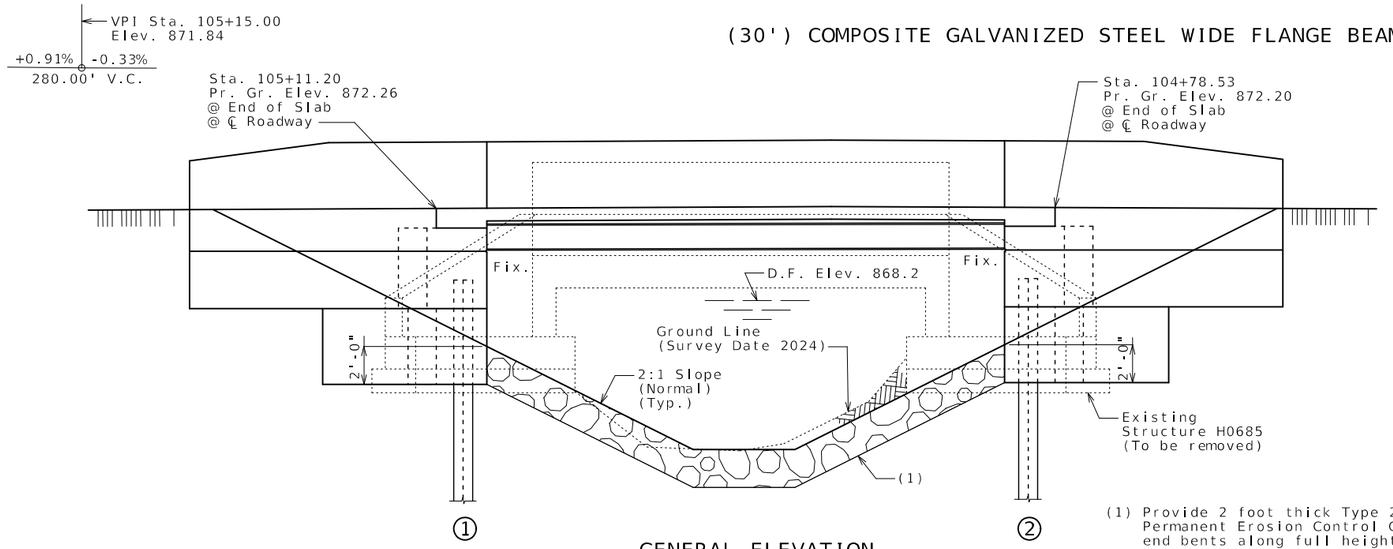
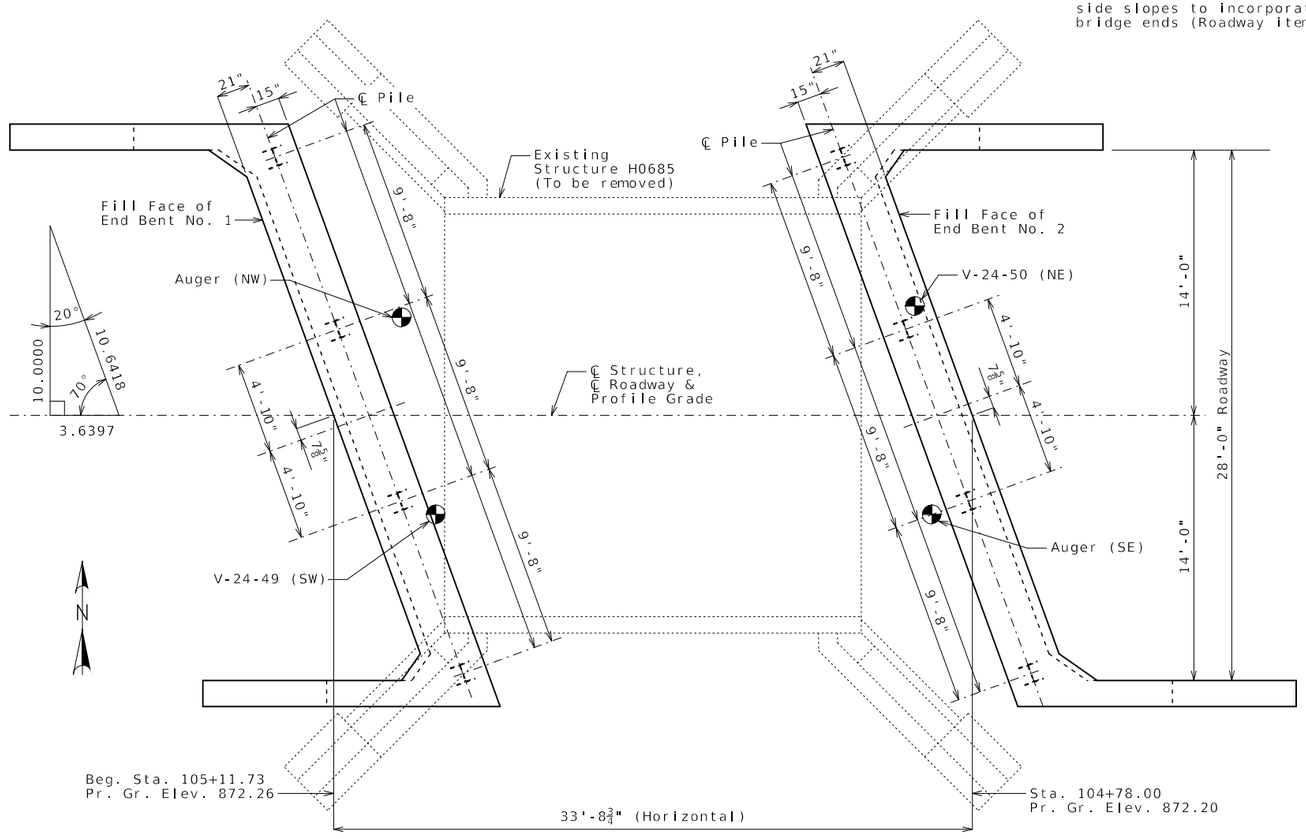
SEC/SUR 34 TWP 54N RGE 31W

(30') COMPOSITE GALVANIZED STEEL WIDE FLANGE BEAM SPAN

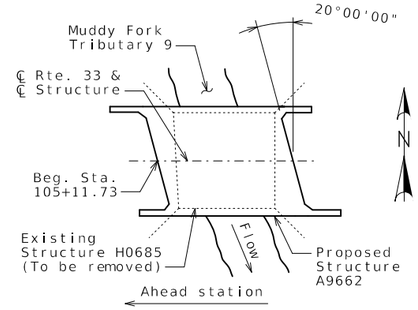


GENERAL ELEVATION

(1) Provide 2 foot thick Type 2 Rock Blanket with Permanent Erosion Control Geotextile at both end bents along full height of spill slopes. Blanket with geotextile shall extend across entire channel and around wings, extending up side slopes to incorporate with drainage at bridge ends (Roadway item).



PLAN



LOCATION SKETCH

Hydrologic Data
Drainage Area = 1.5 mi^2
Design Flood Frequency = 25 years
Design Flood Discharge = 1,160 cfs
Design Flood (D.F.) Elevation = 868.2
Base Flood (100-year)
Base Flood Elevation = 869.6
Base Flood Discharge = 1,640 cfs
Estimated Backwater = 0.6 ft
Average Velocity thru Opening = 8.4 ft/s
Freeboard (50-year)
Freeboard = 1.1 ft
Roadway Overtopping
Overtopping Flood Discharge = N/A
Overtopping Flood Frequency = >500 years
500-year Flood Elevation = 871.1

Note:

Roadway fill shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheet(s) No. 17 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

B.M. 5/8" REBAR WITH MODOT CAP 355'± WEST OF PROJECT CULVERT
NORTHING = 1195066.9360; EASTING = 2827049.8860

BRIDGE: ROUTE 33 OVER MUDDY FORK TRIBUTARY 9

ROUTE 33 FROM ROUTE CC TO ROUTE PP
ABOUT 0.2 MILE EAST OF ROUTE CC
BEGINNING STATION 105+11.73

Designed Jan. 2025
Detailed Jan. 2025
Checked Feb. 2025

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

STATE OF MISSOURI
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NUMBER PE-2013000591
PROFESSIONAL ENGINEER
Ted Koester
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TED S. KOESTER - CIVIL
MO-PE-2013000591

DATE PREPARED 3/7/2025
ROUTE 33 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY CLAY
JOB NO. JKU0449
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9662

DESCRIPTION | DATE

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

General Notes:

Design Specifications:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
Seismic Design Category = A

Design Loading:

Vehicular = HL-93
Future Wearing Surface = 35 lb/sf
Earth = 120 lb/cf
Equivalent Fluid Pressure = 45 lb/cf (min.)

Design Unit Stresses:

Class B Concrete (Substructure)	f'c = 3,000 psi
Class B-2 Concrete (Superstructure, except Barrier)	f'c = 4,000 psi
Class B-1 Concrete (Barrier)	f'c = 4,000 psi
Reinforcing Steel (ASTM A615 Grade 60)	fy = 60,000 psi
Structural Steel (ASTM A709 Grade 50)	fy = 50,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50)	fy = 50,000 psi

Neoprene Pads:

Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

Fabricated Steel Connections:

Field connections shall be made with 3/4-inch diameter ASTM F3125 Grade A325 Type 1 bolts and 13/16-inch diameter holes, except as noted.

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.

Traffic Handling:

Structure to be closed during construction. Traffic to be maintained on other routes. See roadway plans for traffic control.

Concrete Protective Coating:

Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on the bridge plans and in accordance with Sec 711.

Miscellaneous:

Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

Estimated Quantities

Item		Substr.	Superstr.	Total
Class 1 Excavation	cu. yard	100		100
Removal of Bridges (H0685)	lump sum			1
Bridge Approach Slab (Minor)	sq. yard		125	125
Galvanized Structural Steel Piles (12 in.)	linear foot	520		520
Pile Point Reinforcement	each	8		8
Class B Concrete (Substructure)	cu. yard	60.2		60.2
Slab on Steel	sq. yard		111	111
Type D Barrier	linear foot		115	115
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum			1
Fabricated Structural Low Alloy Steel (I-Beam) A709, Grade 50	pound		12,490	12,490
Galvanizing Structural Steel	lump sum			1
Vertical Drain at End Bents	each			2
Plain Neoprene Bearing Pad	each		8	8

Foundation Data

Type	Design Data		Bent Number 1	Bent Number 2
Load Bearing Pile	Pile Type and Size		HP 12x53	HP 12x53
	Number	ea	4	4
	Approximate Length Per Each	ft	65	65
	Pile Point Reinforcement	ea	All	All
	Min. Galvanized Penetration (Elev.)	ft	Full length	Full length
	Pile Driving Verification Method		DF	DF
	Resistance Factor		0.4	0.4
	Minimum Nominal Axial Compressive Resistance	kip	380	380

DF = FHWA-modified Gates Dynamic Pile Formula

$$\text{Minimum Nominal Axial Compressive Resistance} = \frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$$

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.

HP piles are inticipated 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.

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 the minimum will be considered acceptable provided the contractor makes the necessary corrections to ensure the minimum penetration is achieved on subsequent piles.

Estimated Quantities for Slab on Steel

Item		Total
Class B-2 Concrete	cu. yard	42
Reinforcing Steel (Bridges)	pound	2010
Reinforcing Steel (Epoxy Coated)	pound	15,200

The table of Estimated Quantities for Slab on Steel represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab. Payment for conventional forms and all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

Slab shall be cast-in-place with conventional forms or stay-in-place corrugated steel forms. Precast prestressed panels will not be permitted.

All concrete between the upper construction joint and top of beam in the end bents is included in the Estimated Quantities for Slab on Steel.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Steel.

All concrete in the pile encasement and beam at end bents is included in the estimated quantity for Class B Concrete (Substructure).

Specification, materials, zinc coating process and construction practice for galvanizing structural steel shall be in accordance with ASTM A1094/A1094M-18.

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NUMBER PE-2013000591
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MO-PE-2013000591

DATE PREPARED
3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	2

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

PROJECT NO.

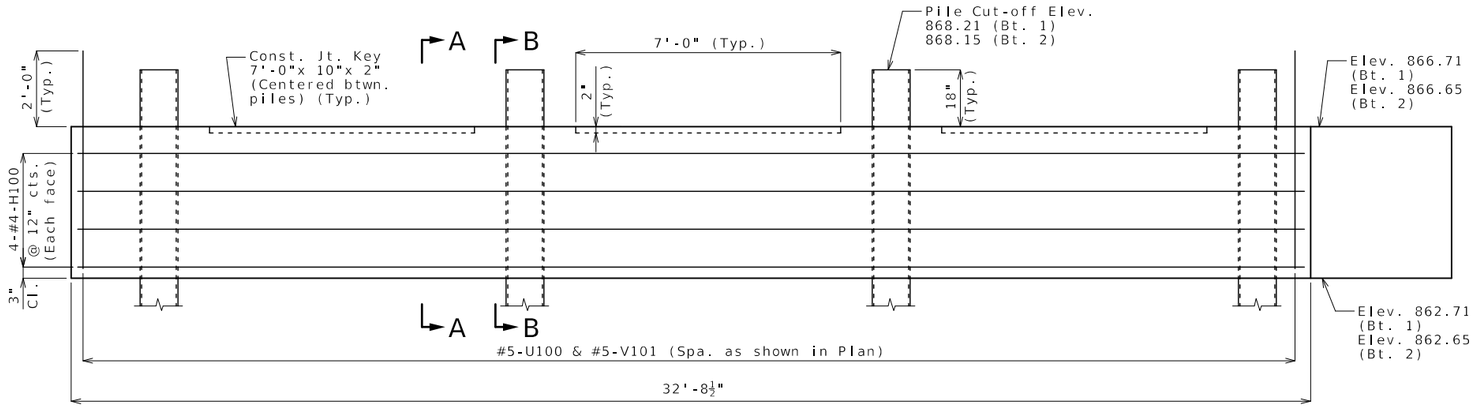
BRIDGE NO.
A9662

DESCRIPTION | DATE

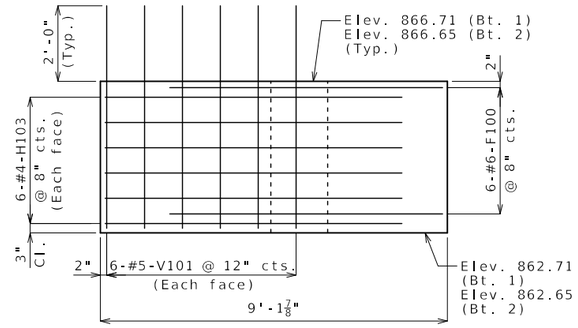
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Detailed Jan. 2025
Checked Feb. 2025

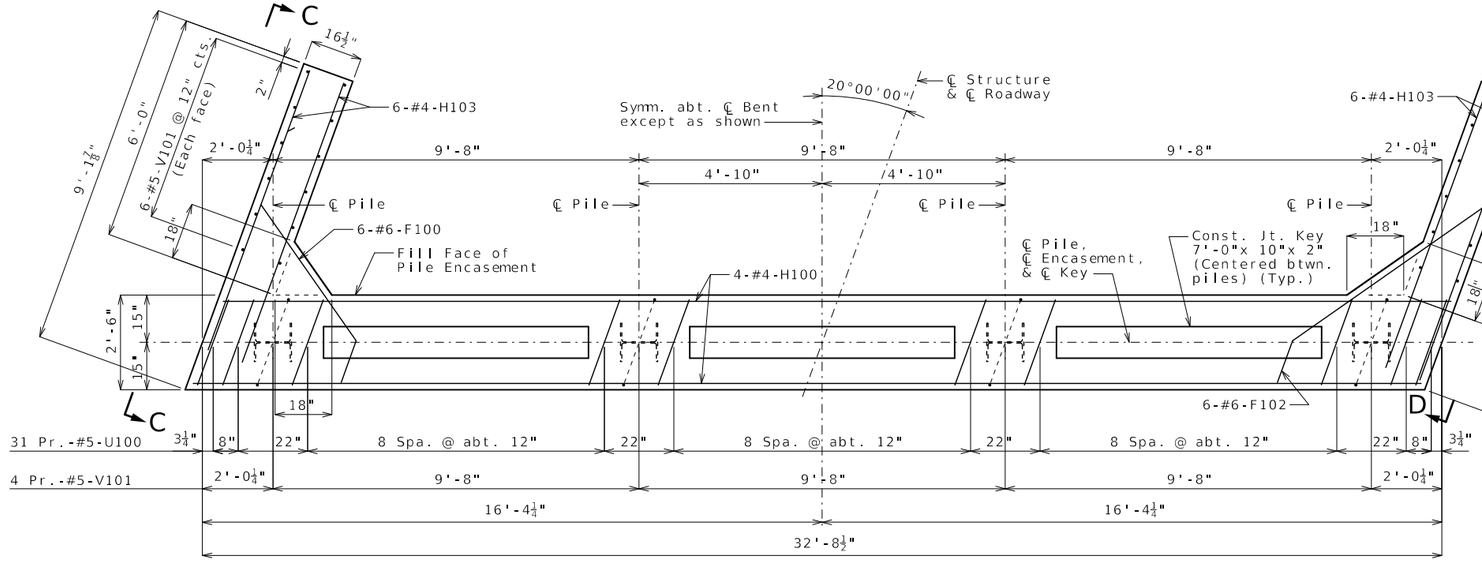
Note: This drawing is not to scale. Follow dimensions.



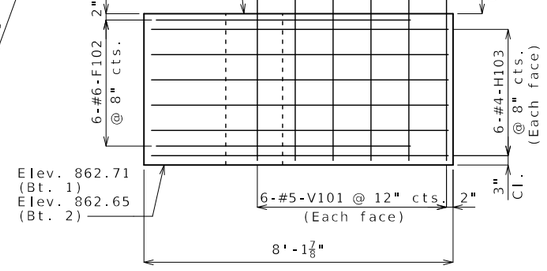
ELEVATION



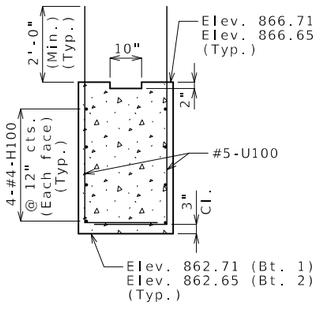
ELEVATION C-C



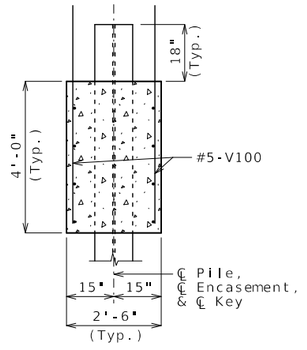
PLAN OF PILE ENCASEMENT



ELEVATION D-D



SECTION A-A



SECTION B-B

Notes:

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

All reinforcement in the pile encasement is included in the estimated quantities for Slab on Steel.

PILE ENCASEMENT AT END BENTS NO. 1 & 2

Detailed Jan. 2025
Checked Feb. 2025

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

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3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
CLAY

JOB NO.
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CONTRACT ID.

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DESCRIPTION

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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JEFFERSON CITY, MO 65102
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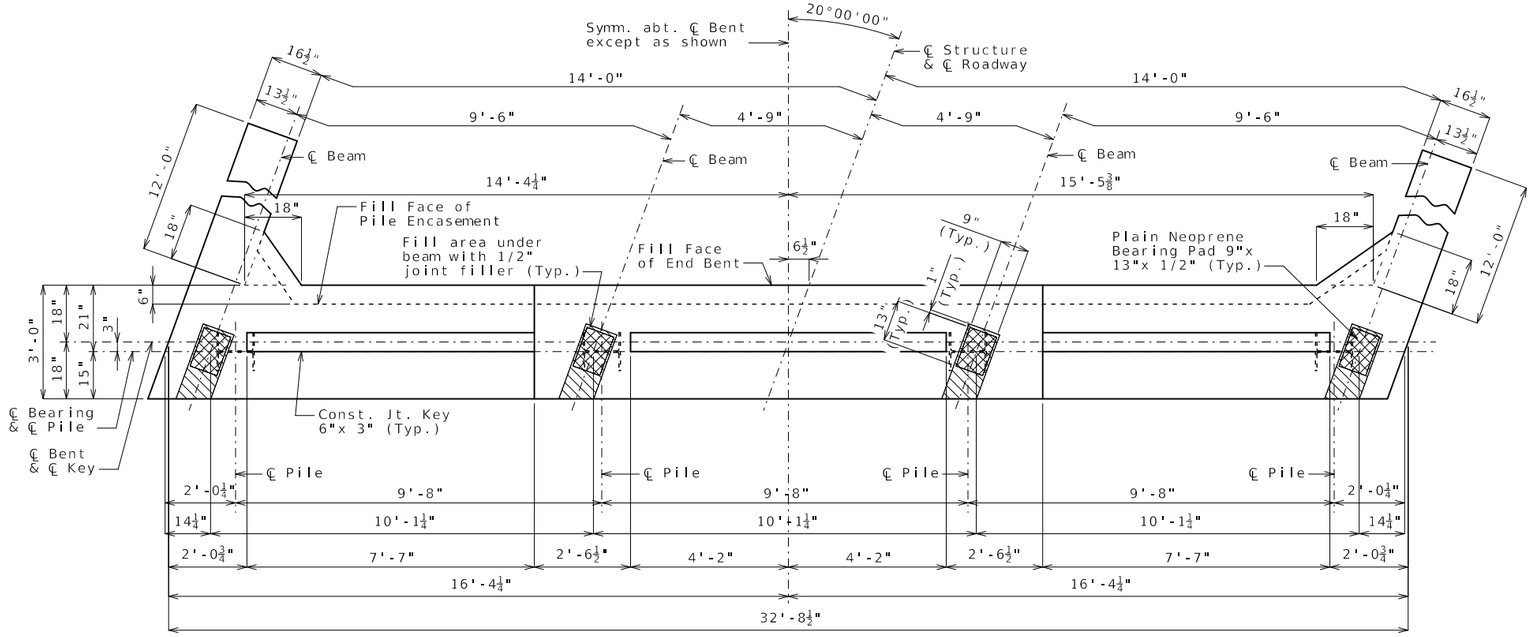
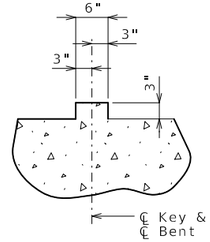


PLAN OF BEAM



SECTION THRU KEY

Notes:

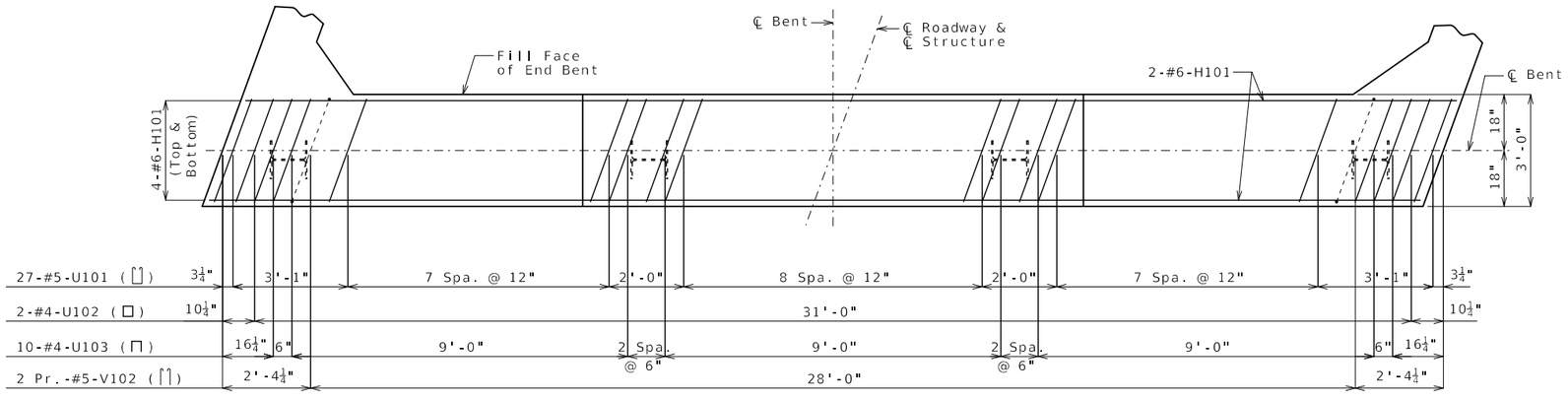
Work this sheet with Sheets No. 5 & 6.

For details of pile encasement, see Sheet No. 3.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

For details of vertical drain at end bents, see Sheet No. 7.



PLAN OF BEAM SHOWING REINFORCEMENT
(Keys not shown for clarity.)

Substructure Quantity Table

Item		Bent No. 1	Bent No. 2
Class 1 Excavation	cu. yard	50	50
Galvanized Structural Steel Piles (12 in.)	linear foot	260	260
Pile Point Reinforcement	each	4	4
Class B Concrete (Substructure)	cu. yard	30.1	30.1

These quantities are included in the Estimated Quantities table on Sheet No. 2.

END BENTS NO. 1 & 2

Detailed Jan. 2025
Checked Feb. 2025

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

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ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	4

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
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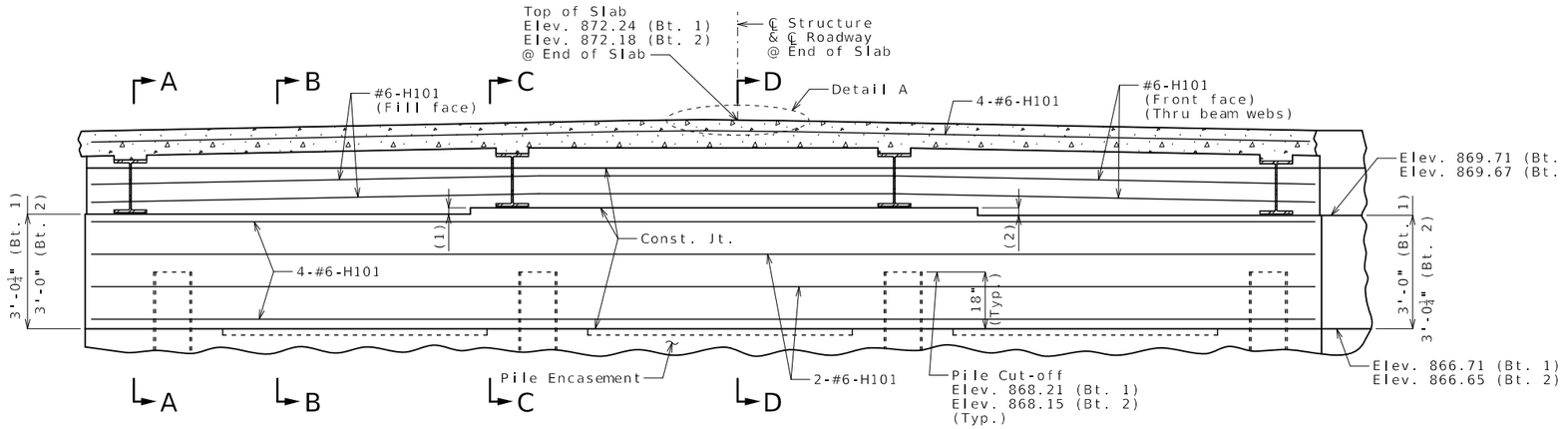
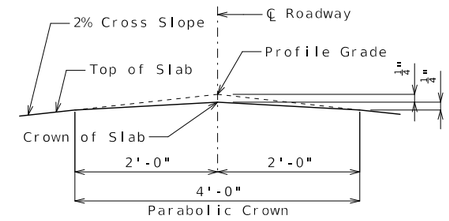
DESCRIPTION	DATE

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



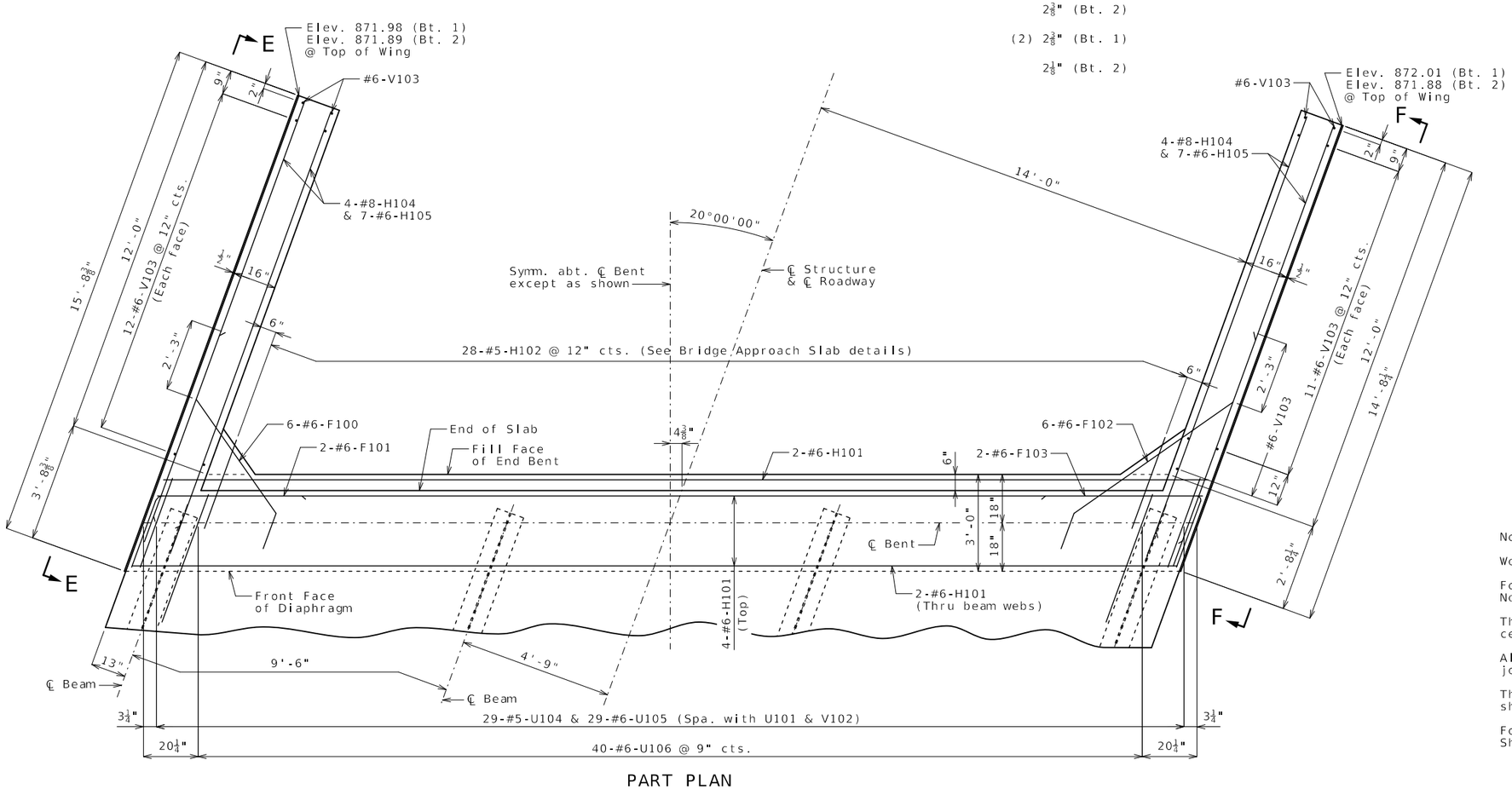
SECTION NEAR END BENT

Pile encasement reinforcement and beam keys not shown for clarity.



DETAIL A

(1) 2⅛" (Bt. 1)
2⅜" (Bt. 2)
(2) 2⅜" (Bt. 1)
2⅛" (Bt. 2)



PART PLAN

Notes:

Work this sheet with Sheets No. 4 & 6.

For details of Pile Encasement, see Sheet No. 3.

The U bars shall be placed parallel to centerline of roadway.

All concrete above the upper construction joint in end bent shall be Class B-2.

The H bars at the inside face of the wing shall be bent in field to clear beams.

For details of Bridge Approach Slab, see Sheet No. 13.

END BENTS NO. 1 & 2

Detailed Jan. 2025
Checked Feb. 2025

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PROFESSIONAL ENGINEER
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03/07/2025 10:41:58 AM
TED S. KOESTER - CIVIL
MO-PE-2013000591

DATE PREPARED
3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	5

COUNTY
CLAY

JOB NO.
JKU0449

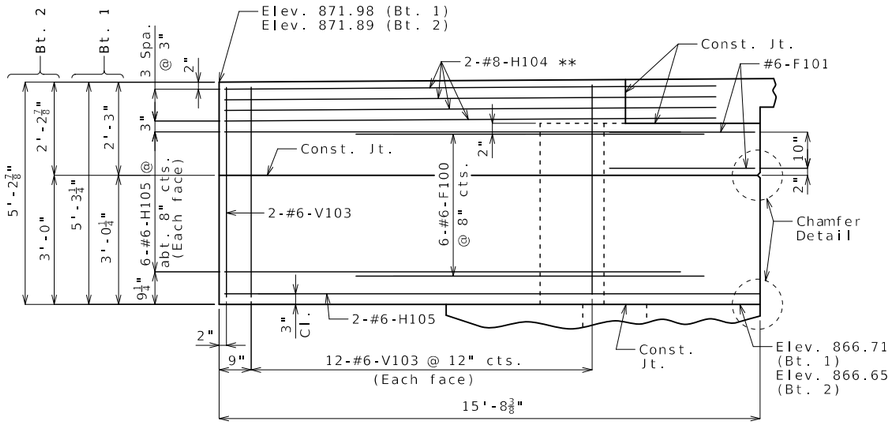
CONTRACT ID.

PROJECT NO.

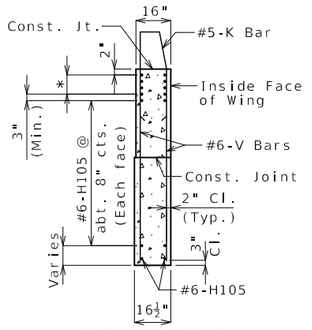
BRIDGE NO.
A9662

DESCRIPTION	DATE

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



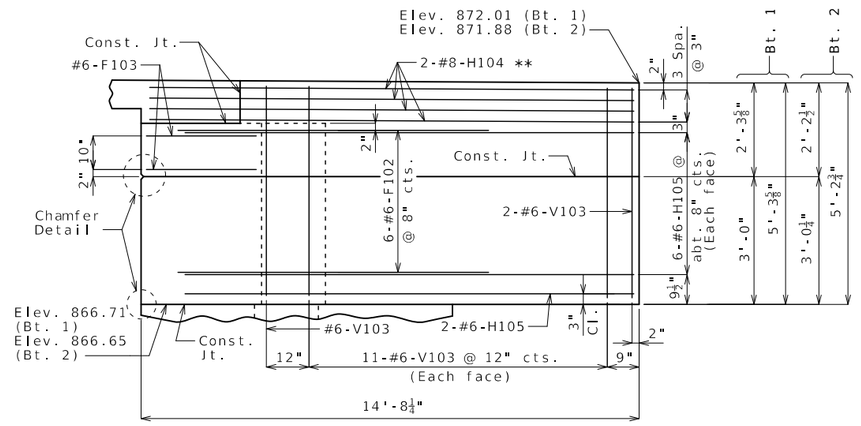
ELEVATION E-E



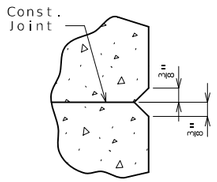
TYPICAL SECTION THRU WING

* #8-H Bars at 3" cts. (Each face)(Place with grade)

** Place with grade.



ELEVATION F-F



CHAMFER DETAIL

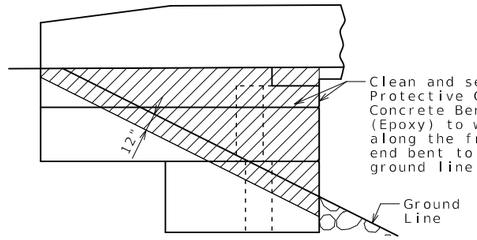
Notes:

Work this sheet with Sheets No. 4 & 5.

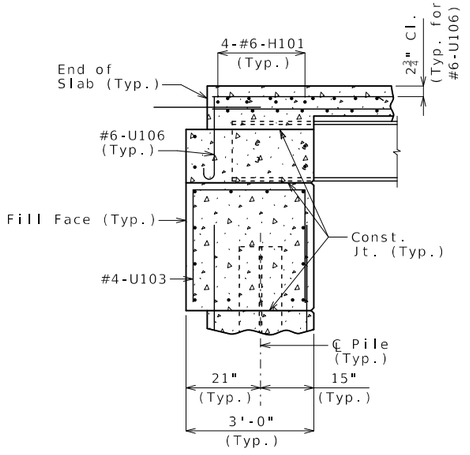
For details of Pile Encasement, see Sheet No. 3.

The H bars at the inside face of the wing shall be bent in field to clear beams.

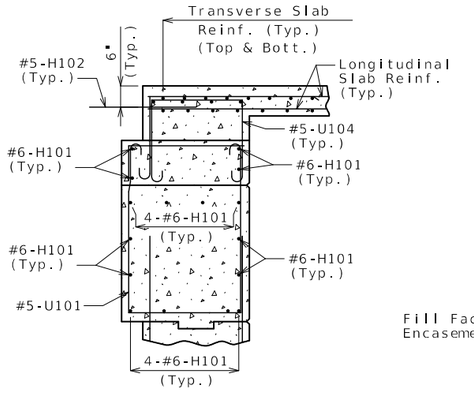
For reinforcement of the barrier, see Sheet No. 12.



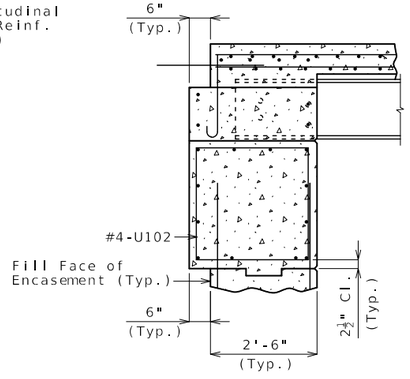
PART ELEVATION OF END BENT SHOWING CONCRETE PROTECTIVE COATING



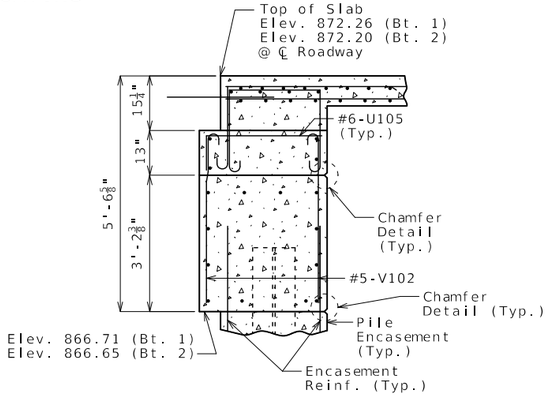
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

END BENTS NO. 1 & 2

Detailed Jan. 2025
Checked Feb. 2025

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

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3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	6

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

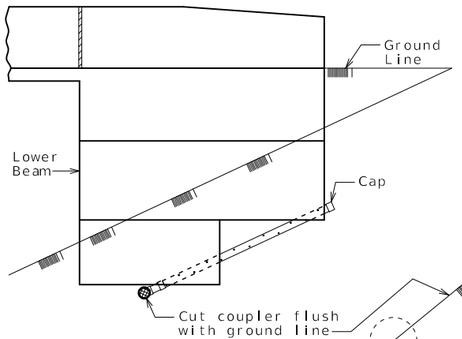
PROJECT NO.

BRIDGE NO.
A9662

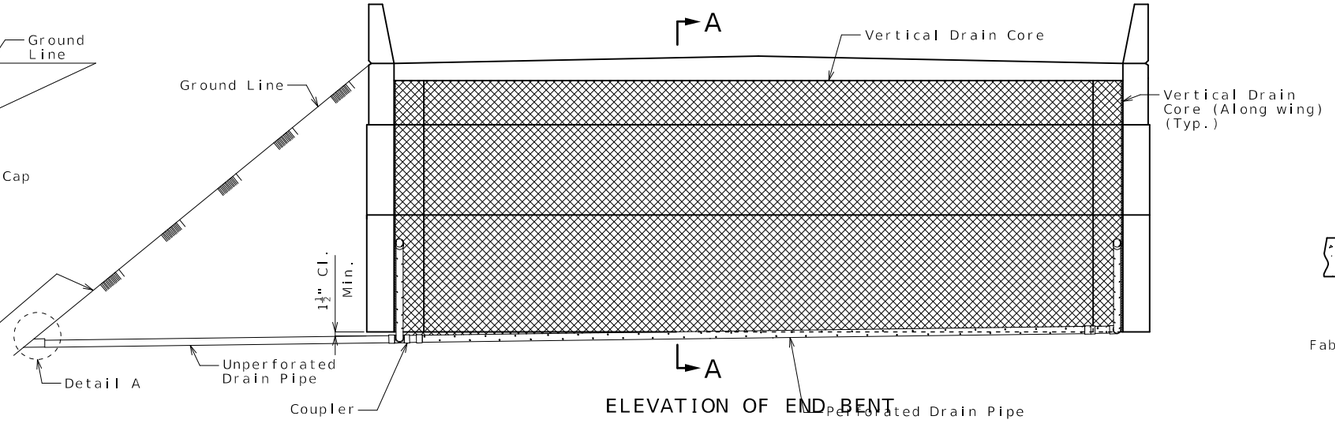
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

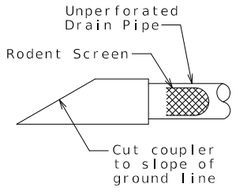
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



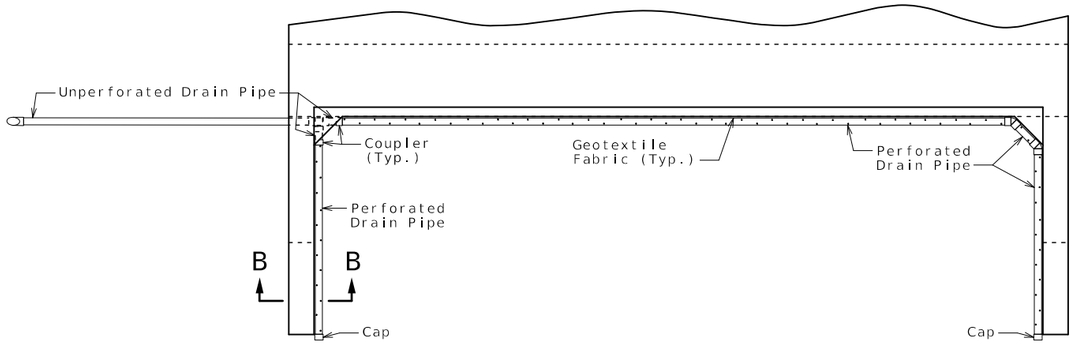
ELEVATION OF WING



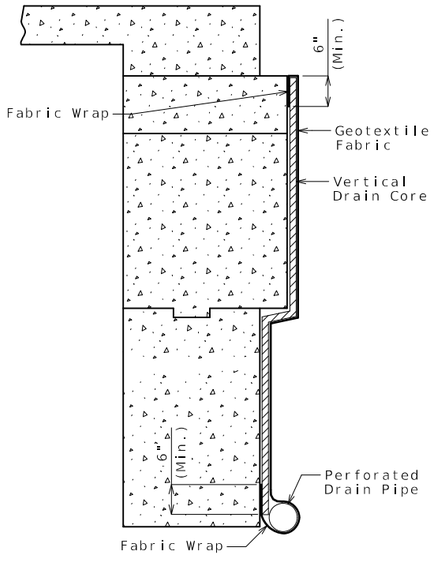
ELEVATION OF END BENT



DETAIL A



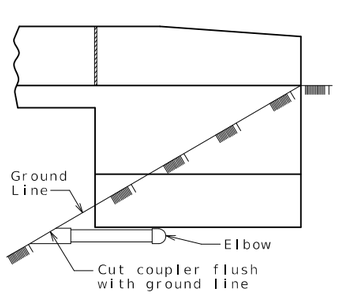
PLAN OF END BENT



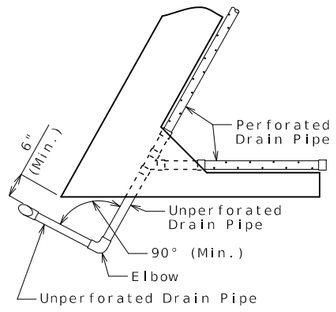
SECTION A-A

* Coarse aggregate full length of pile encasement (See Standard Specification 206.4.9)

Cost of coarse aggregate is included in the contract unit price for Vertical Drain at End Bent.

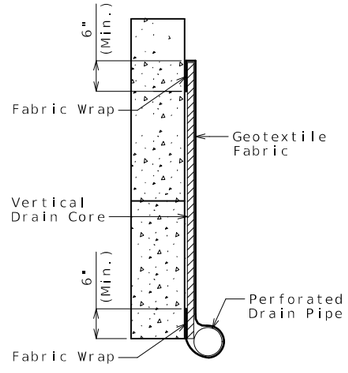


ELEVATION OF WING



PART PLAN

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



SECTION B-B
(WING)

General Notes:

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

(Squared end bent shown, skewed end bent similar)

STATE OF MISSOURI
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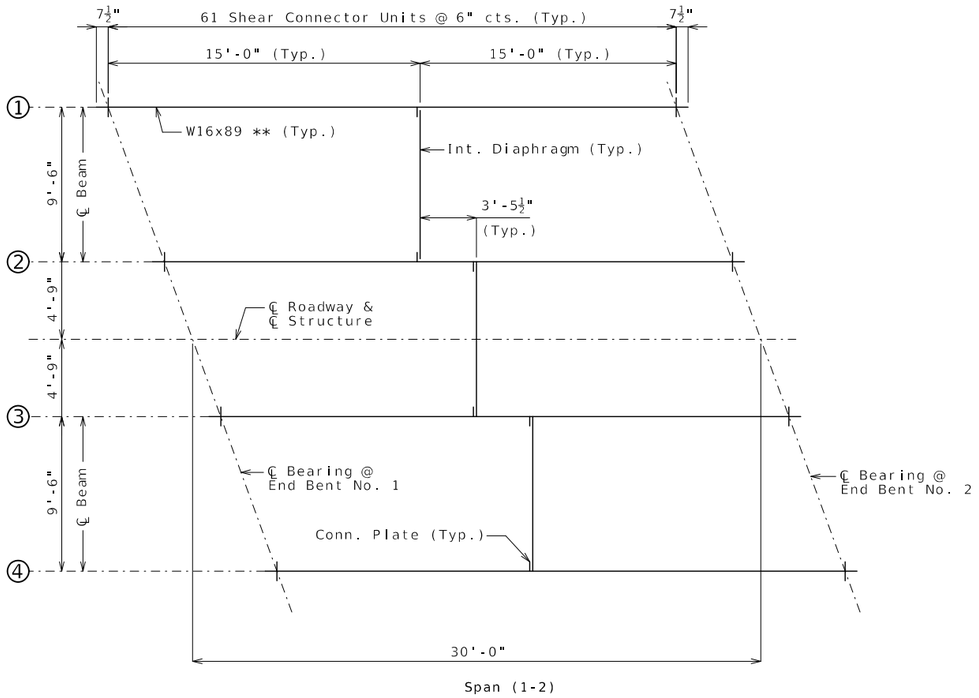
MO-PE-2013000591

DATE PREPARED: 3/7/2025
ROUTE: 33 | STATE: MO
DISTRICT: BR | SHEET NO.: 7
COUNTY: CLAY
JOB NO.: JKU0449
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9662

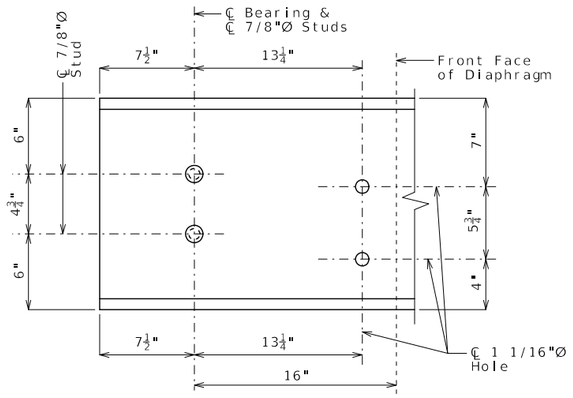
DESCRIPTION | DATE

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



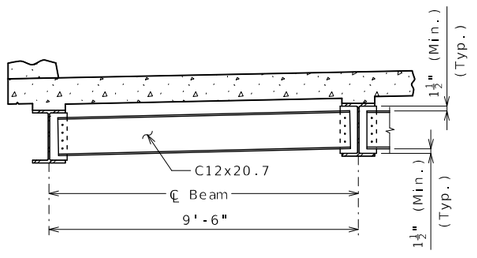
PLAN OF STRUCTURAL STEEL

** Notch toughness is required for all wide flange beams.

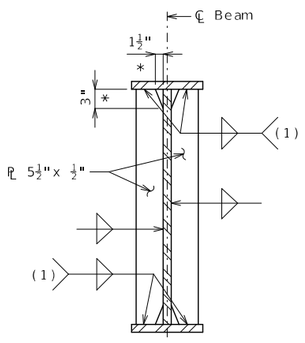


SECTION AT END OF BEAM

(End Bent No. 1 shown; End Bent No. 2 similar)



TYPICAL PART SECTION SHOWING INTERMEDIATE DIAPHRAGMS

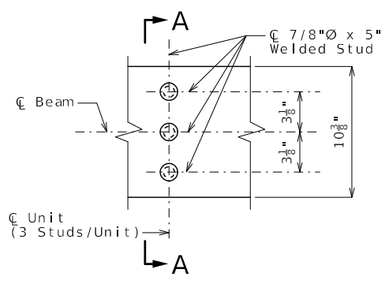


INTERMEDIATE DIAPHRAGM
CONNECTION PLATE

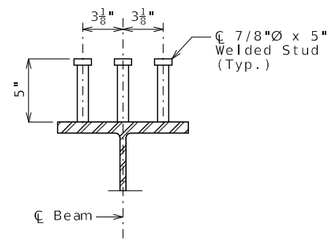
WELDING DETAILS

(1) Tight fit

* Typical for all intermediate diaphragm connection plates.



PLAN



SECTION A-A

DETAILS OF SHEAR CONNECTORS

Weight of 717 pounds of shear connectors is included in the weight of Fabricated Structural Low Alloy Steel (I-Beam).

Shear connectors shall be in accordance with Sec 712, 1037, and 1080.

Notes:

Fabricated structural steel shall be ASTM A709 Grade 50, except as noted.

Longitudinal dimensions are horizontal from centerline bearing to centerline bearing.

At the contractor's option, holes in the diaphragm plate of non slab bearing diaphragms may be made 3/16" larger than the nominal diameter of the bolt. A hardened washer shall be used under the bolt head and nut when this option is used. Holes in the girder diaphragm connection plate or transverse web stiffener shall be standard size.

STEEL DETAILS

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MO-PE-2013000591

DATE PREPARED
3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	8

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9662

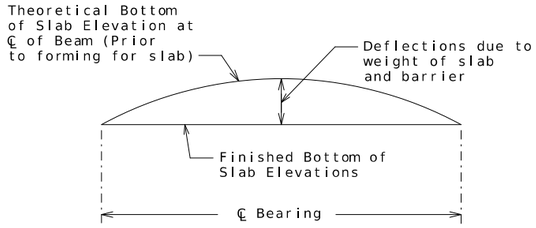
DESCRIPTION	DATE

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

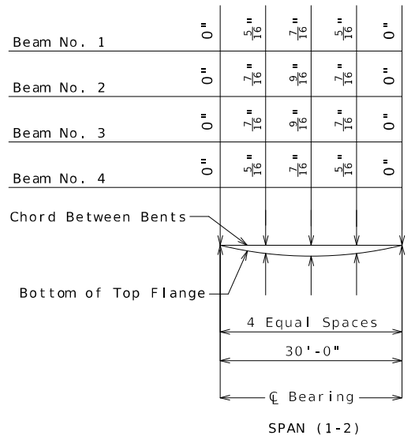
Theoretical Bottom of Slab Elevations at Centerline of Beam (Prior to forming for slab)

Beam Number	Span (1-2) (30'-0" ℄ Brg. - ℄ Brg.)				
	℄ Brg.	.25	.50	.75	℄ Brg.
1	871.29	871.30	871.29	871.27	871.24
2	871.49	871.51	871.50	871.48	871.44
3	871.50	871.50	871.49	871.47	871.44
4	871.32	871.32	871.31	871.29	871.26

Elevations are based on a constant slab thickness of 8" and include allowance for theoretical dead load deflections due to weight of slab.



TYPICAL SLAB ELEVATIONS DIAGRAM

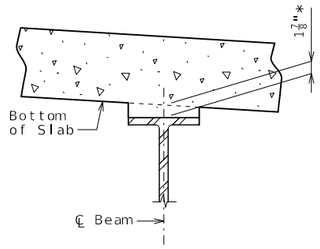


SPAN (1-2)

DEAD LOAD DEFLECTION

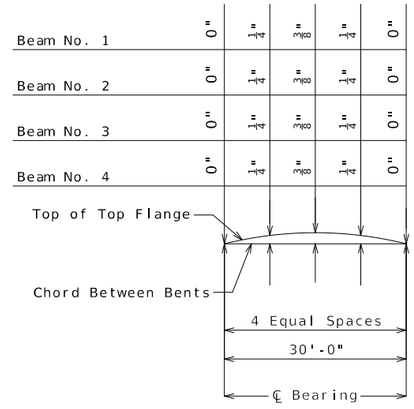
9% of dead load deflection is due to the weight of structural steel.

Dead load deflection includes weight of structural steel, concrete slab, and barrier.



THEORETICAL SLAB HAUNCH

* Dimension (bottom of slab to top of beam) may vary if dead load deflection due to the weight of structural steel is more or less than the 9% shown. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.



SPAN (1-2)

BEAM CAMBER DIAGRAM

Camber includes allowance for vertical curve, and dead load deflection due to concrete slab, barrier, and structural steel.

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DATE PREPARED 3/7/2025

ROUTE 33 | STATE MO

DISTRICT BR | SHEET NO. 9

COUNTY CLAY

JOB NO. JKU0449

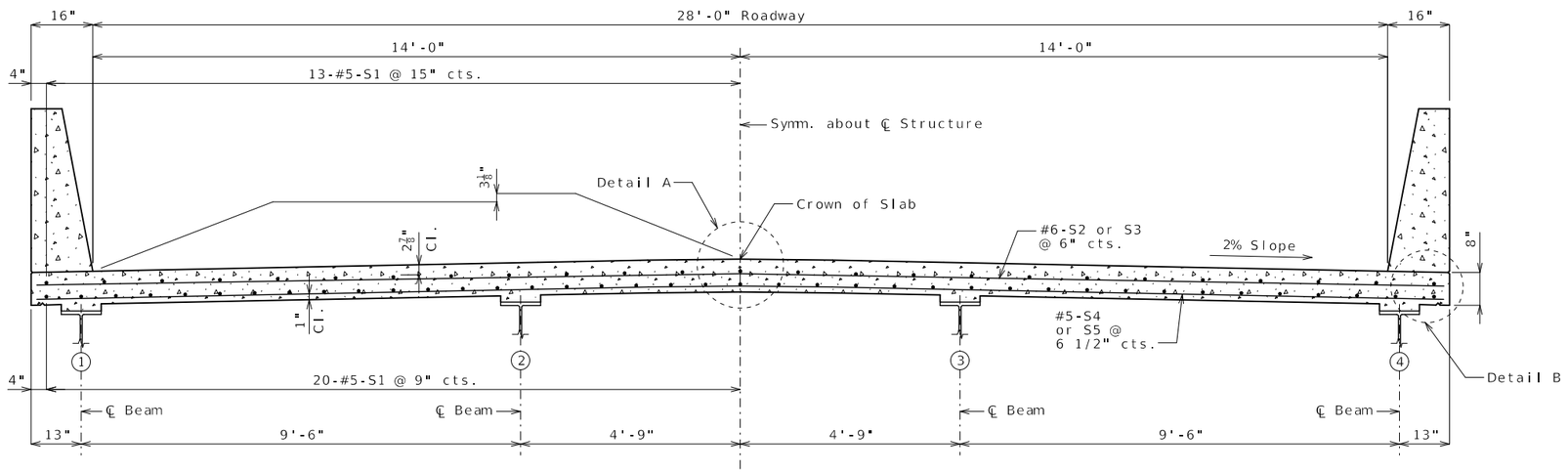
CONTRACT ID.

PROJECT NO.

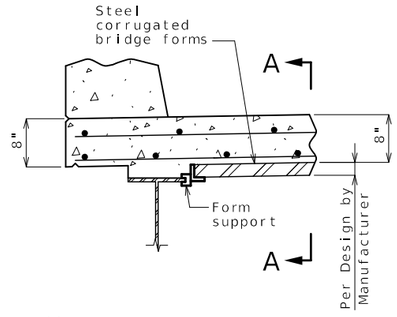
BRIDGE NO. A9662

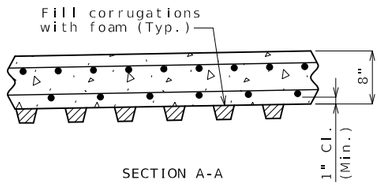
DESCRIPTION | DATE

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



SECTION THRU SLAB





SECTION A-A

OPTIONAL STAY-IN-PLACE FORM DETAILS

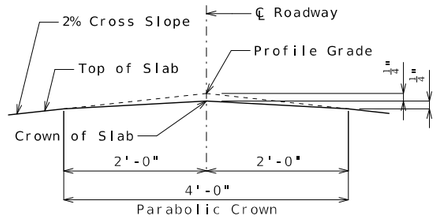
Stay-In-Place Forms:

Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.

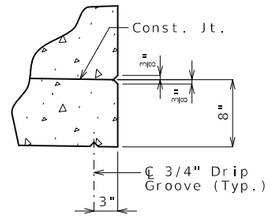
Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

Form sheets shall not rest directly on the top of beam flanges. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the flange. Drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080 and 712. Certified field welders will not be required for welding of the form supports.

The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for false work and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for beam loading.



DETAIL A



DETAIL B

Notes:

For reinforcement of barrier not shown, see Sheet No. 11.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunch Detail, see Sheet No. 9.

SLAB DETAILS

Detailed Jan. 2025
Checked Feb. 2025

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

STATE OF MISSOURI
TED S. KOESTER
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02/07/2025 10:43:53 AM
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DATE PREPARED: 3/7/2025
ROUTE: 33 | STATE: MO
DISTRICT: BR | SHEET NO.: 10
COUNTY: CLAY
JOB NO.: JKU0449
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9662

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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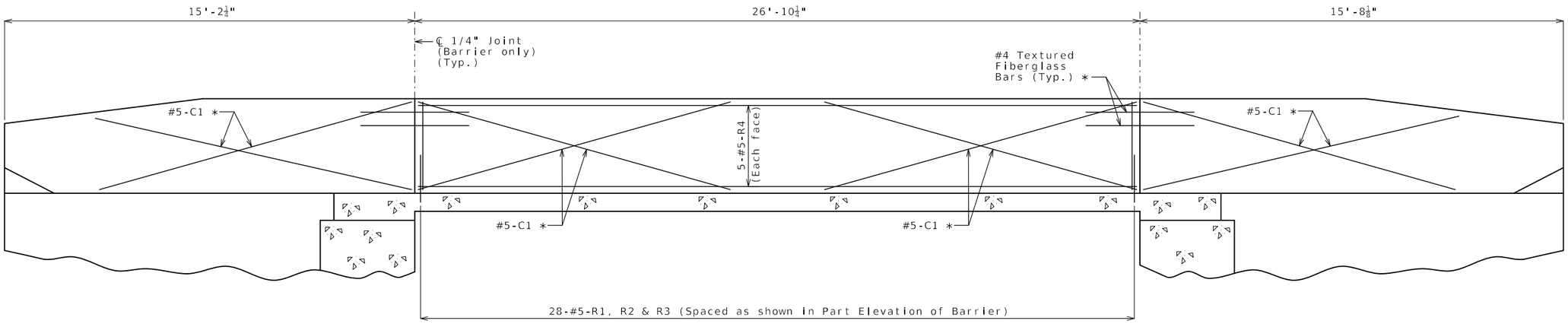
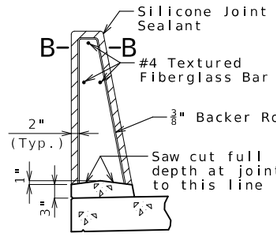


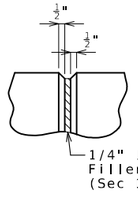
(Span 1-2)

ELEVATION OF BARRIER

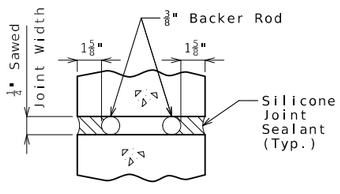
(Left barrier shown, right barrier similar)
Longitudinal dimensions are horizontal.



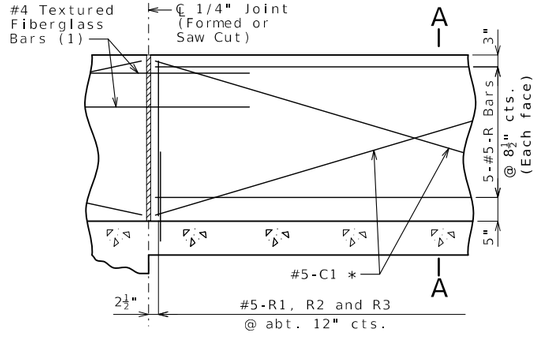
SECTION THRU
SAW CUT JOINT



PART ELEVATION
AT FORMED JOINT

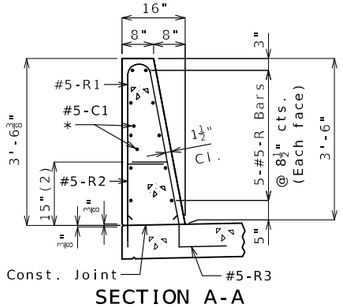


SECTION B-B



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint, slip-formed option only

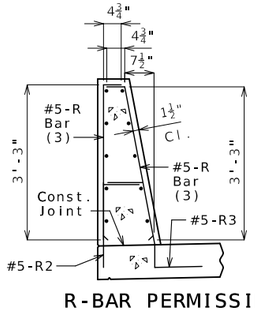


SECTION A-A

Use a minimum lap of 3'-1" for #5 horizontal barrier bars.

The cross-sectional area above the slab is 3.52 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

General Notes:

* Slip-formed option only.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type D Barrier per linear foot.

Concrete in barrier shall be Class B-1.

Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish

TYPE D BARRIER

Detailed Jan. 2025
Checked Feb. 2025

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

STATE OF MISSOURI
TED S. KOESTER
NUMBER PE-2013000591
PROFESSIONAL ENGINEER
Ted Koester
03/07/2025 10:44:20 AM
TED S. KOESTER - CIVIL
MO-PE-2013000591

DATE PREPARED
3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	11

COUNTY
CLAY

JOB NO.
JKU0449

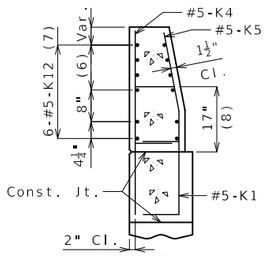
CONTRACT ID.

PROJECT NO.

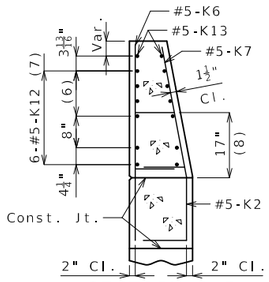
BRIDGE NO.
A9662

DESCRIPTION	DATE

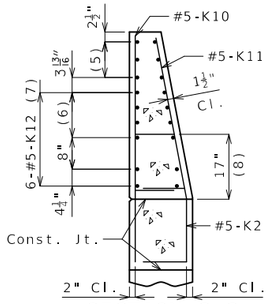
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



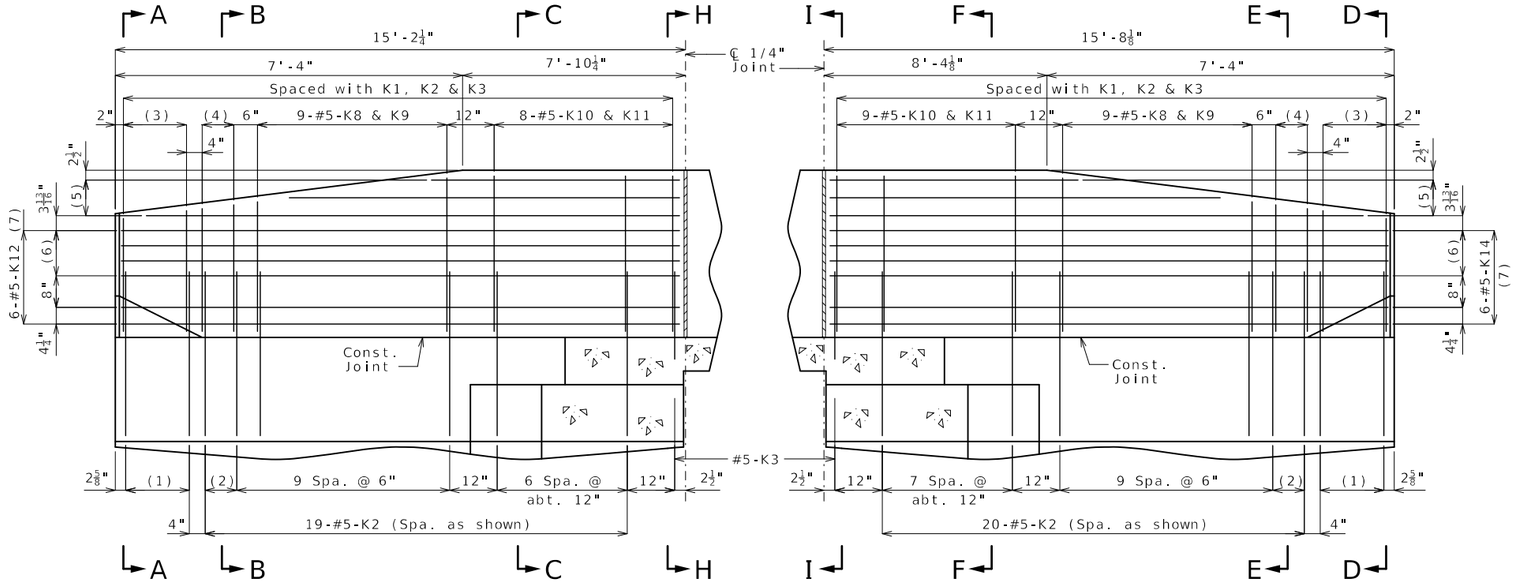
SECTION A-A



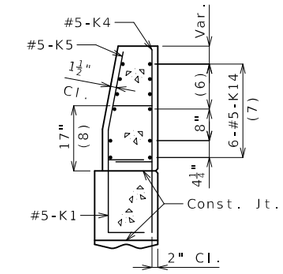
SECTION B-B



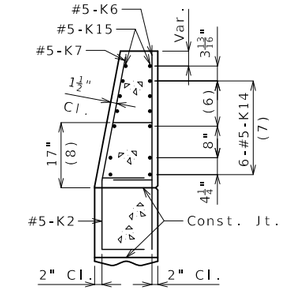
SECTION C-C



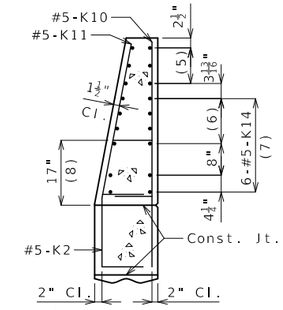
PART ELEVATION



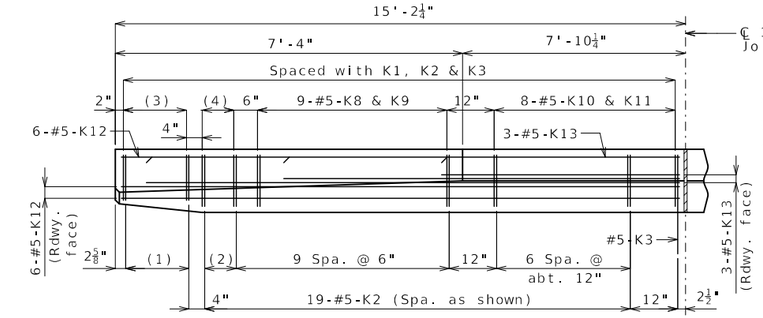
SECTION D-D



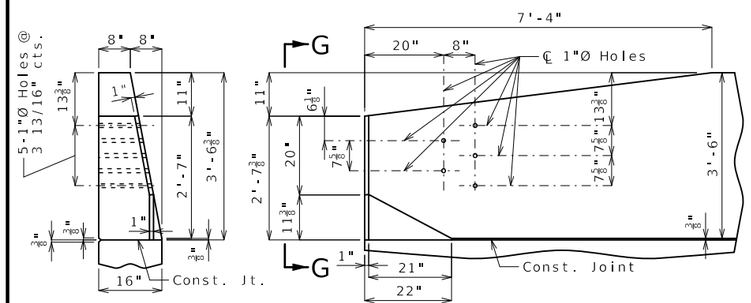
SECTION E-E



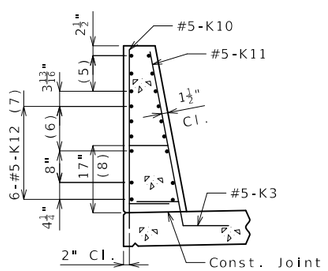
SECTION F-F



PART PLAN



ELEVATION G-G ELEVATION



SECTION H-H

(1) 5-#5-K1 @ 4" cts.

(2) 2 spaces @ 4"

(3) 5-#5-K4 & K5

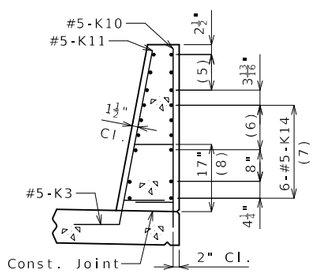
(4) 3-#5-K6 & K7

(5) 3-#5-K13 or K15 @ 4½" cts., each face

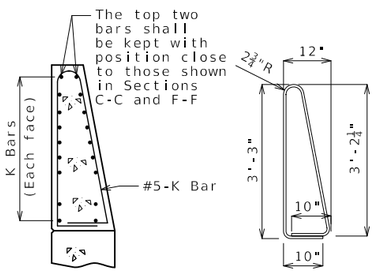
(6) 3 spaces @ 3 13/16"

(7) Spaced as shown, each face

(8) To top of bar



SECTION I-I

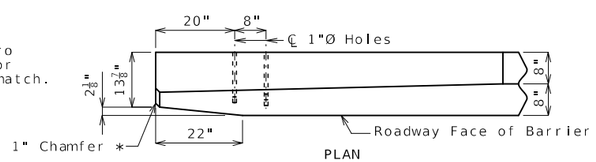


K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE

(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.



PLAN

* Transition to zero at Type A curb for gutter lines to match.

DETAILS OF GUARD RAIL ATTACHMENT

General Notes:

Reinforcing Steel:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.

TYPE D BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

Detailed Jan. 2025
Checked Feb. 2025

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STATE OF MISSOURI
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03/07/2025 10:44:40 AM
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

DATE PREPARED 3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	12

COUNTY: CLAY

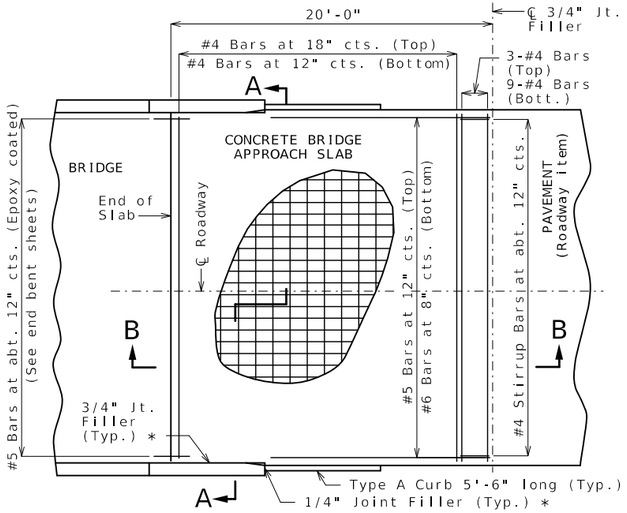
JOB NO.: JKU0449

CONTRACT ID.:

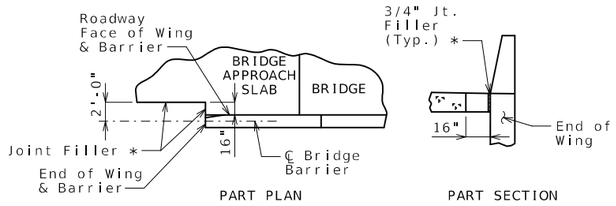
PROJECT NO.:

BRIDGE NO.: A9662

DESCRIPTION	DATE



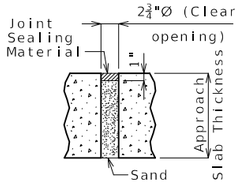
PART PLAN OF SQUARED STRUCTURE
(Skewed structure similar)



PART PLAN PART SECTION

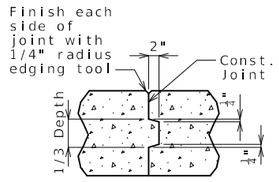
DETAILS OF BRIDGE APPROACH SLAB AT SOUTHWEST CORNER

At southwest corner only, notch out edge of bridge approach slab at end of wing to enable installation of 4'-0" wide concrete pad for Type C End Terminal.

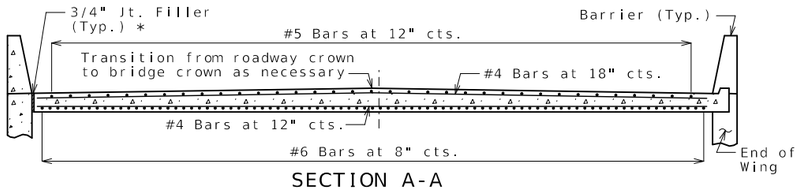


UNDERSEAL ACCESS HOLE DETAIL

(If required)

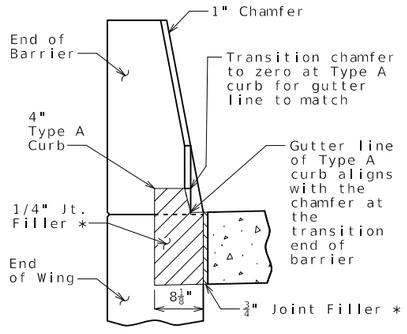


CONSTRUCTION JOINT DETAIL

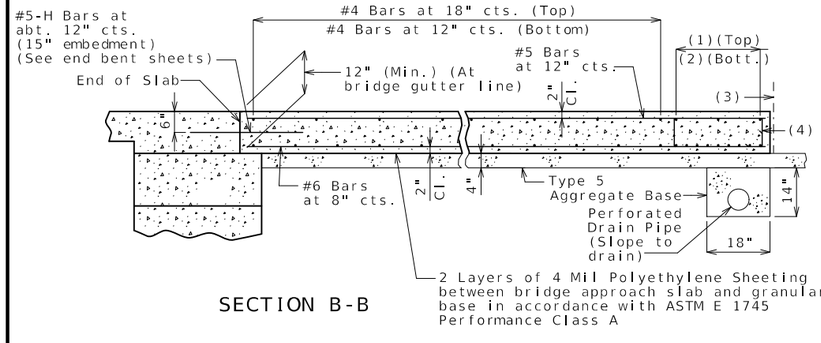


SECTION A-A

With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



SECTION BETWEEN CURB AND BARRIER



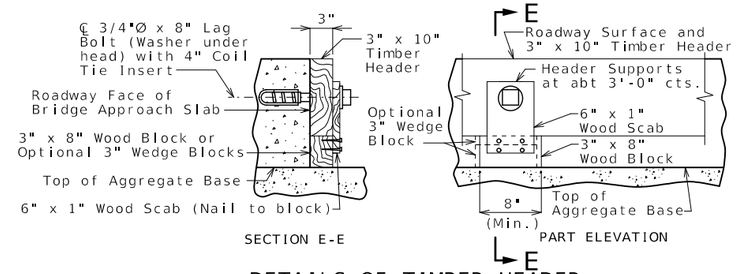
SECTION B-B

(1) 3-#4 Bars

(2) 9-#4 Bars

(3) ℄ 3/4" Jt. Filler

(4) #4 Stirrup Bars at abt. 12" cts.; 2'-0"x 8" (Min.) out to out; Actual length = 5'-10" (Min.); 90° stirrup hook at bottom; Stirrup height (8") and actual length vary due to crown.



SECTION E-E PART ELEVATION

DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

General Notes:

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

All concrete for the bridge approach slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Longitudinal construction joints in bridge approach slab shall be aligned with longitudinal construction joints in bridge slab.

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

The reinforcing steel in the bridge approach slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 23 inches for #4 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec 710.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

Payment for furnishing all materials, labor and excavation necessary to construct the concrete bridge approach slab, including the timber header, underdrain, Type 5 aggregate base, joint filler, and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) per square yard.

See Missouri Standard Plan 609.00 for details of Type A curb.

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

* Seal joint between vertical face of approach slab and wing with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

STATE OF MISSOURI
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DATE PREPARED
3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	13

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9662

DESCRIPTION	DATE

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

Detailed Jan. 2025
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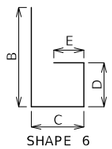
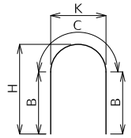
BRIDGE APPROACH SLAB (MINOR)

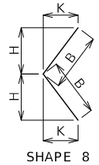
Note: This drawing is not to scale. Follow dimensions.



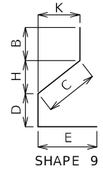
SHAPE 6
or 6S



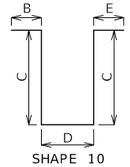
SHAPE 7



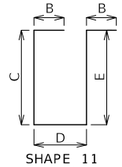
SHAPE 8
or 8S



SHAPE 9
or 9S



SHAPE 10
or 10S



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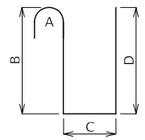
or 11S



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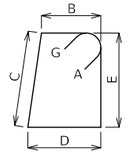

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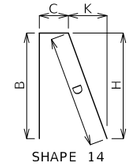

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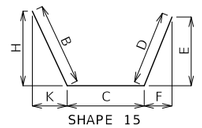

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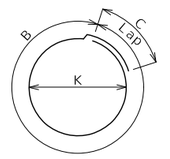

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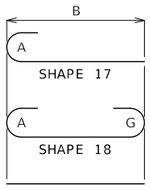
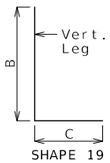


SHAPE 17
SHAPE 18
SHAPE 20



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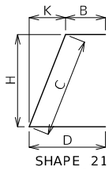

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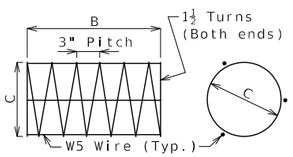

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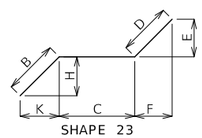

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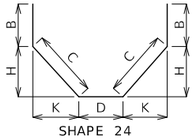

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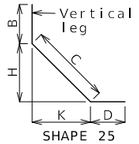

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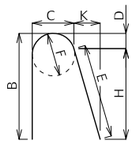

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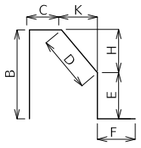

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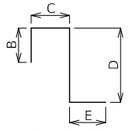

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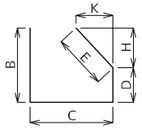

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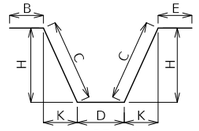

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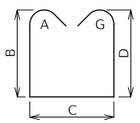

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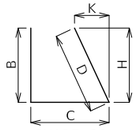

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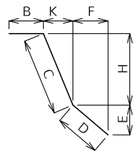
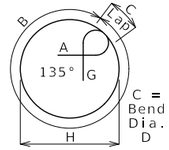
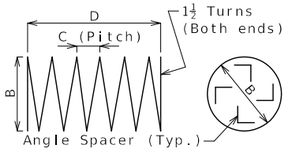


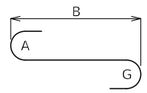
SHAPE 33
or 33S



SHAPE 34S



SHAPE 35 (1)

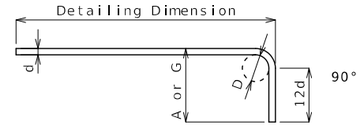


SHAPE 36

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9⅜"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¾"	28½"

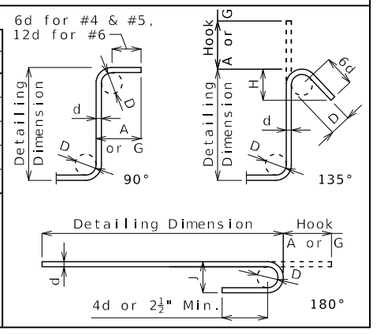


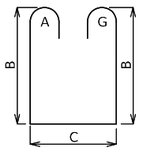
Stirrup Pin Bend Shapes (S)

Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅝"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

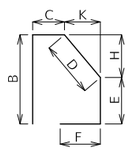
Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.





SHAPE 37S



SHAPE 38S

BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)

	Size	Substructure		Superstructure				Entire Bridge	
				Slab					
		Plain	Epoxy	Plain	Epoxy	Barrier	Slip Form	Plain	Epoxy
By Size	W5	0	0	0	0	0	0	0	0
	4	0	0	597	139	0	0	597	139
	5	0	0	1,413	5,288	3,959	200	1,413	9,447
	6	0	0	0	8,533	0	0	0	8,533
	7	0	0	0	0	0	0	0	0
	8	0	0	0	1,239	0	0	0	1,239
	9	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0
By Type		0	0	2,010	15,199	3,959	200	2,010	19,358

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed Jan. 2025
Checked Feb. 2025

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

STATE OF MISSOURI
TED S. KOESTER
NUMBER PE-2013000591
PROFESSIONAL ENGINEER
02/07/2025 10:45:19 AM
TED S. KOESTER - CIVIL
MO-PE-2013000591

DATE PREPARED
3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	14

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9662

DESCRIPTION	DATE

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

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.	Nom. Length ft in.	Actual Length ft in.	Weight lb
		Superstructure													
		End Bents 1 & 2													
12	6 F100	WING BRACE	E	23S		2 3.00	4 4.00	14.00	11.50	8.00	22.00	15.50	7 9	7 8	138
4	6 F101	DIAPHRAGM	E	23S		2 4.75	4 7.00				2 3.00	10.00	7	6 9	41
12	6 F102	WING BRACE	E	23S		2 3.00	6 1.00	14.00	8.00	11.50	15.50	22.00	9 6	9 5	170
4	6 F103	DIAPHRAGM	E	21S			2 4.75	5 0.00			2 3.00	10.00	7 5	7 4	44
16	4 H100	ENCASEMENT		20		32 5.00							32 5	32 5	346
40	6 H101	BEAM/DIAPH	E	20		32 5.00							32 5	32 5	1,948
56	5 H102	DIAPHRAGM	E	20		2 6.00							2 6	2 6	146
48	4 H103	ENCASEMENT		20		7 10.00							7 10	7 10	251
32	8 H104	WING	E	20		14 6.00							14 6	14 6	1,239
56	6 H105	WING	E	20		13 8.00							13 8	13 8	1,150
124	5 U100	ENCASEMENT		19S		5 9.00	2 3.00						8 0	7 11	1,024
54	5 U101	BEAM	E	37S		3 11.00	2 11.00						11 9	11 6	648
4	4 U102	BEAM	E	13S		2 11.00	2 8.00	2 11.00	2 8.00				11 11	11 8	31
20	4 U103	BEAM	E	10S			2 8.00	2 11.00					8 3	8 1	108
58	5 U104	DIAPHRAGM	E	37S		21.00	2 4.75						6 11	6 8	403
58	6 U105	DIAPHRAGM	E	19S		12.00	4 9.00						5 9	5 7	486
80	6 U106	DIAPHRAGM	E	12		23.00	4 9.00						7 4	7 2	861
64	5 V101	ENCASEMENT		20		5 10.00							5 10	5 10	389
8	5 V102	BEAM	E	17		3 11.00							4 6	4 6	38
102	6 V103	WING	E	20		4 10.00							4 10	4 10	740
		Slab													
64	5 S1	SLAB	E	20		32 4.00							32 4	32 4	2,158
43	6 S2	SLAB	E	20		30 5.00							30 5	30 5	1,964
42	6 S3	SLAB	E	20	2	29 5.00							29 5	29 5	
		Incr. = 16.500"				2 0.00							2	2	991
40	5 S4	SLAB	E	20		30 5.00							30 5	30 5	1,269
38	5 S5	SLAB	E	20	2	29 2.00							29 2	29 2	
		Incr. = 17.875"				2 5.00							2 5	2 5	626
		Barrier													
		Type D													
20	5 K1	BARRIER	E	27S		3 8.00	9.25	5.25	3 2.75		5.25	1.00	8 1	7 11	165
78	5 K2	BARRIER	E	38S		3 6.00	9.25	14.50	2 3.50	10.00	14.25	2.75	8 7	8 4	678
4	5 K3	BARRIER	E	27S		22.50	9.25	14.50	7.75	12.00	14.25	2.75	5 6	5 2	22
20	5 K4	BARRIER	E	19S	4	2 4.25	10.00						3 2	3 1	
		Incr. = 0.500"				2 6.25	10.00						3 4	3 3	66
20	5 K5	BARRIER	E	38S	4			18.50	9.50	8.25	18.00	4.00	3	2 10	
		Incr. = 0.750"						20.50	9.50	8.25	20.00	4.50	3 2	3 1	62
12	5 K6	BARRIER	E	19S		2 6.75	10.00						3 5	3 3	41
12	5 K7	BARRIER	E	21S			10.00	10.00			2 6.00	6.25	3 6	3 4	42
36	5 K8	BARRIER	E	19S	4	2 8.50	10.00						3 7	3 5	
		Incr. = 0.750"				3 2.50	10.00						4 1	3 11	138
36	5 K9	BARRIER	E	21S	4		10.00	10.00			2 7.75	6.75	3 8	3 6	
		Incr. = 0.750"					10.00	10.00			3 1.75	7.75	4 2	4	141
34	5 K10	BARRIER	E	19S		3 3.00	10.00						4 1	4	142
34	5 K11	BARRIER	E	21S			3 3.00	10.00			3 2.25	7.75	4 1	4	142
24	5 K12	BARRIER	E	20		14 11.00							14 11	14 11	373
12	5 K13	BARRIER	E	20	4	14 2.00							14 2	14 2	
		Incr. = 36.000"				8 2.00							8 2	8 2	140
24	5 K14	BARRIER	E	20		15 5.00							15 5	15 5	386
12	5 K15	BARRIER	E	20	4	14 8.00							14 8	14 8	
		Incr. = 36.000"				8 8.00							8 8	8 8	146
56	5 R1	BARRIER	E	26		3 3.00	5.50	2.25	3 1.25	5.50	3 0.75	6.75	7	6 9	394
56	5 R2	BARRIER	E	19S		20.00	9.50						2 6	2 4	136
56	5 R3	BARRIER	E	27S			9.50	15.25	4.50	12.00	15.00	3.00	3 5	3 3	190
20	5 R4	BARRIER	E	20		26 7.00							26 7	26 7	555
		Slip-Form													
16	5 C1	SLIP FORM	E	20		12 0.00							12	12	200

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.	Nom. Length ft in.	Actual Length ft in.	Weight lb

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

For bending diagrams and steel reinforcing totals, see Sheet No. 14.

All bars shall be Grade 60.

Codes: C = Required coatings, where E = Epoxy Coated and G = Galvanized.

SH = Required shape, see bending diagrams.

V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.

Detailed Jan. 2025
Checked Feb. 2025

BILL OF REINFORCING STEEL

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

STATE OF MISSOURI
TED S. KOESTER
NUMBER PE-2013000591
PROFESSIONAL ENGINEER
Ted Koester
03/07/2025 10:45:41 AM
TED S. KOESTER - CIVIL
MO-PE-2013000591

DATE PREPARED
3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	15

COUNTY
CLAY

JOB NO.
JKU0449

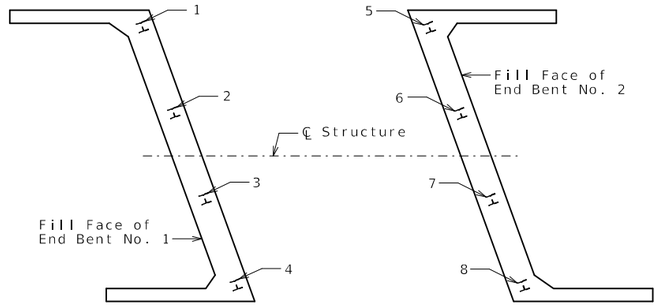
CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9662

DESCRIPTION	DATE

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



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			

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 2
5			
6			
7			
8			

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

This sheet to be completed by MoDOT construction personnel.

Detailed Jan. 2025
Checked Feb. 2025

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

STATE OF MISSOURI
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NUMBER PE-2013000591
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TED S. KOESTER - CIVIL
MO-PE-2013000591

DATE PREPARED
3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	16

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9662

DESCRIPTION	DATE

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

Modot

SUBSURFACE DIAGRAM

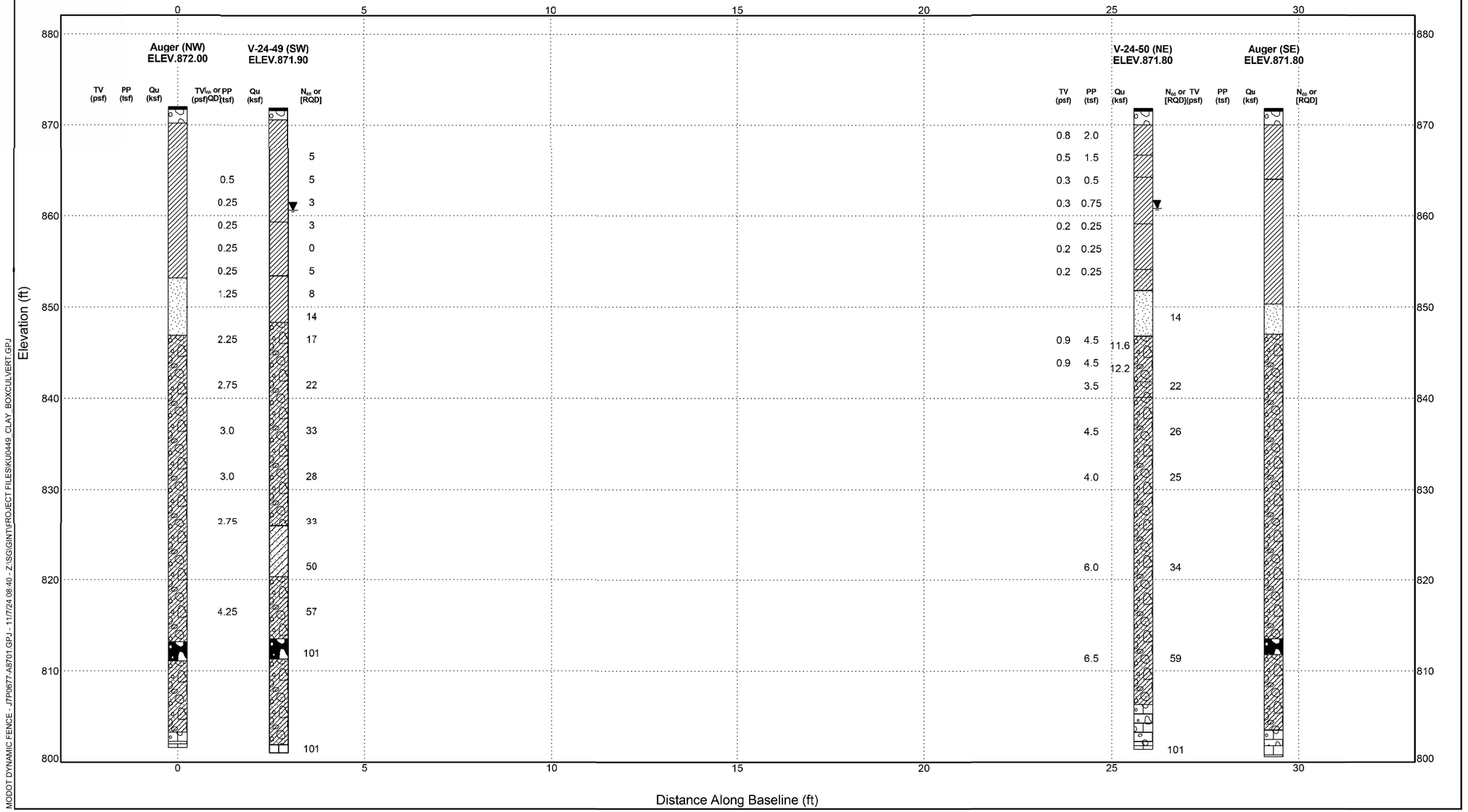
PROJECT NAME Box Culvert

PROJECT LOCATION

CLIENT

PROJECT NUMBER Ku0449

- Asphalt
- USCS Poorly-graded Sand
- Highly Weathered Limestone
- USCS Low Plasticity Sandy Clay
- USCS Poorly-graded Gravel
- Glacial Till
- Limestone
- USCS Low Plasticity Clay
- Boulders and cobbles
- USCS Clayey Sand



MODOT DYNAMIC FENCE - J7P0677-A8701.GPJ - 11/7/24 08:40 - Z:\SIGIN1\PROJECT FILES\KU0449_CLAY_BOXCULVERT.GPJ

BORING DATA

Note: For locations of borings, see Sheet No. 1.

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

Detailed Jan. 2025
Checked Feb. 2025

STATE OF MISSOURI
TED S. KOESTER
NUMBER PE-2013000591
PROFESSIONAL ENGINEER
Ted Koester
03/07/2025 10:46:24 AM
TED S. KOESTER - CIVIL
MO-PE-2013000591

DATE PREPARED
3/7/2025

ROUTE	STATE
33	MO
DISTRICT	SHEET NO.
BR	17

COUNTY
CLAY

JOB NO.
JKU0449

CONTRACT ID.

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A9662

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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