

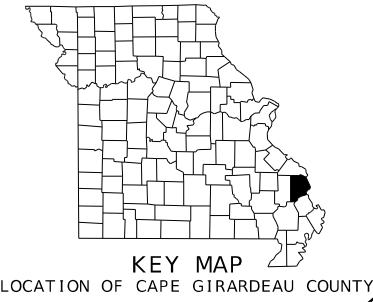
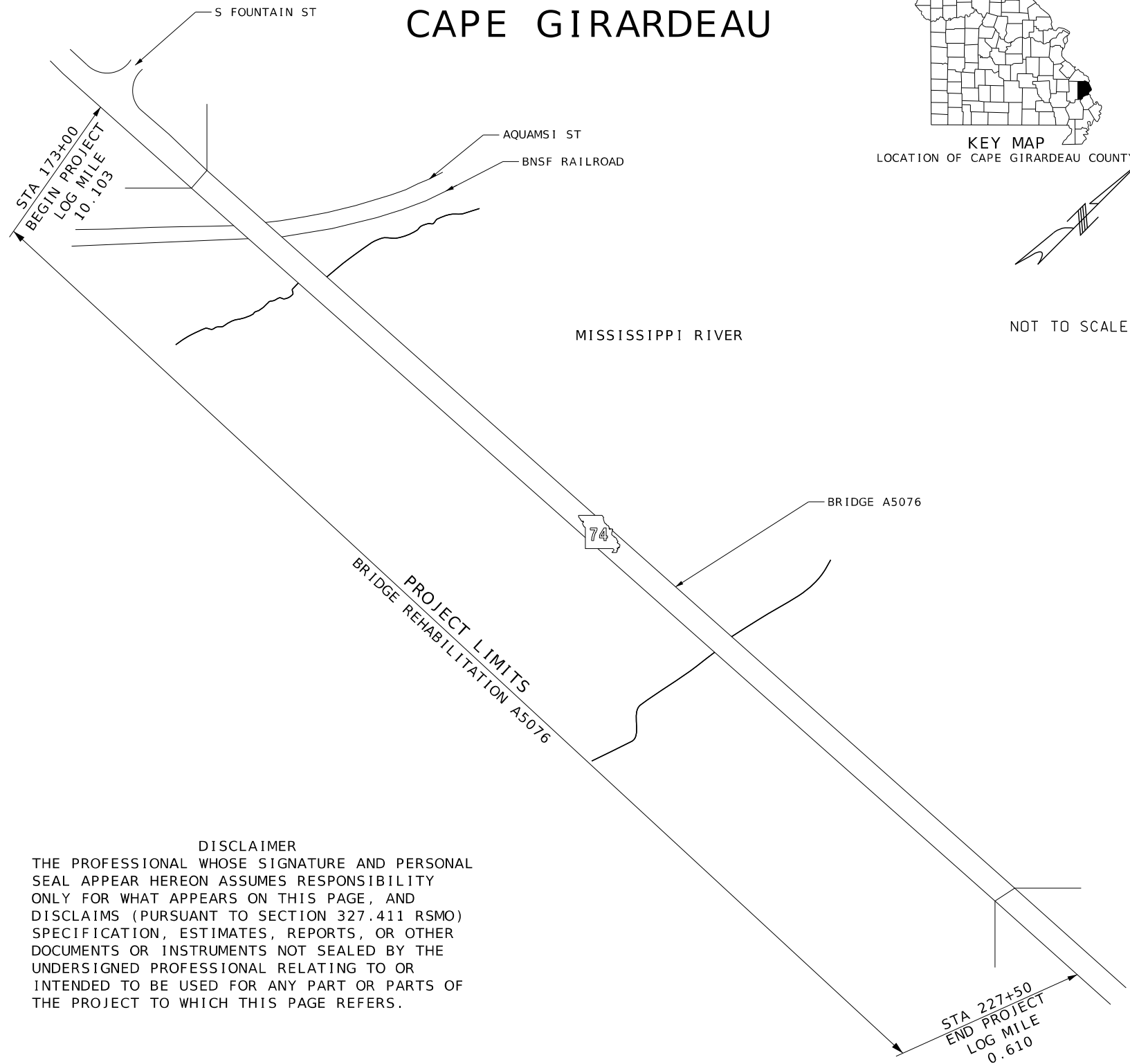
DESIGN DESIGNATION

A.A.D.T. - 2021 = 10578
 A.A.D.T. - 2041 = 20627
 D.H.V. = 10%
 T = 12%
 V = 45 M.P.H.
 D = 30%

FUNCTIONAL CLASSIFICATION-FREEWAY & EXPRESSWAY

**NO NEW RIGHT OF WAY
 TO BE ACQUIRED**

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION CONSTRUCTION PLANS FOR PROPOSED STATE HIGHWAY CAPE GIRARDEAU



NOT TO SCALE

**CONVENTIONAL SYMBOLS
 (USED IN PLANS)**

	EXISTING	NEW
BUILDINGS AND STRUCTURES	[Symbol]	[Symbol]
GUARD RAIL	[Symbol]	[Symbol]
GUARD CABLE	[Symbol]	[Symbol]
CONCRETE RIGHT-OF-WAY MARKER	[Symbol]	[Symbol]
STEEL RIGHT-OF-WAY MARKER	[Symbol]	[Symbol]
LOCATION SURVEY MARKER	[Symbol]	[Symbol]
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	[Symbol]	[Symbol]
FIRE HYDRANT	[Symbol]	[Symbol]
WATER VALVE	[Symbol]	[Symbol]
WATER METER	[Symbol]	[Symbol]
DROP INLET	[Symbol]	[Symbol]
DITCH BLOCK	[Symbol]	[Symbol]
GROUND MOUNTED SIGN	[Symbol]	[Symbol]
LIGHT POLE	[Symbol]	[Symbol]
H-FRAME POWER POLE	[Symbol]	[Symbol]
TELEPHONE PEDESTAL	[Symbol]	[Symbol]
FENCE		
CHAIN LINK	[Symbol]	[Symbol]
WOVEN WIRE	[Symbol]	[Symbol]
GATE POST	[Symbol]	[Symbol]
BENCHMARK	[Symbol]	[Symbol]

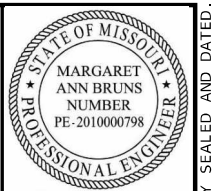
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NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (1 SHEETS)	2
QUANTITIES (QU) (2 SHEETS)	3
PLAN-PROFILE (PP)	4
TRAFFIC CONTROL SHEETS (TC)	5-21
PAVEMENT MARKING (PM)	22-26
BRIDGE DRAWINGS (B)	
A5076	1-22



DATE PREPARED
 10/6/2024

ROUTE 74 STATE MO
 DISTRICT SE SHEET NO. 1

COUNTY
 CAPE GIRARDEAU
 JOB NO.
 J9P3308
 CONTRACT ID.

PROJECT NO.
 BRIDGE NO.

DESCRIPTION	DATE

BEGINNING OF PROJECT	STA. 173+00
END OF PROJECT	STA. 227+50
APPARENT LENGTH	5450 FEET

EQUATIONS AND EXCEPTIONS:

TOTAL CORRECTIONS	0 FEET
NET LENGTH OF PROJECT	5450 FEET
STATE LENGTH	1.032 MILES

FOR INFORMATION ONLY
 ESTIMATED DISTURBED ACRES 0.1 ACRES

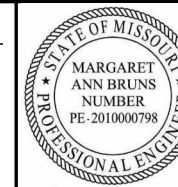
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

EFK Moen
 Civil Engineering Design
 13523 Barrett Parkway Dr
 Suite 250
 St. Louis, MO 63021
 Phone 314-394-3100
 Fax 314-394-3199
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Margaret Ann Bruns - Civil
MO PE-2010000798

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10/6/2024

ROUTE STATE
74 MO

DISTRICT SHEET NO.
SE 2

COUNTY

CAPE GIRARDEAU

JOB NO.

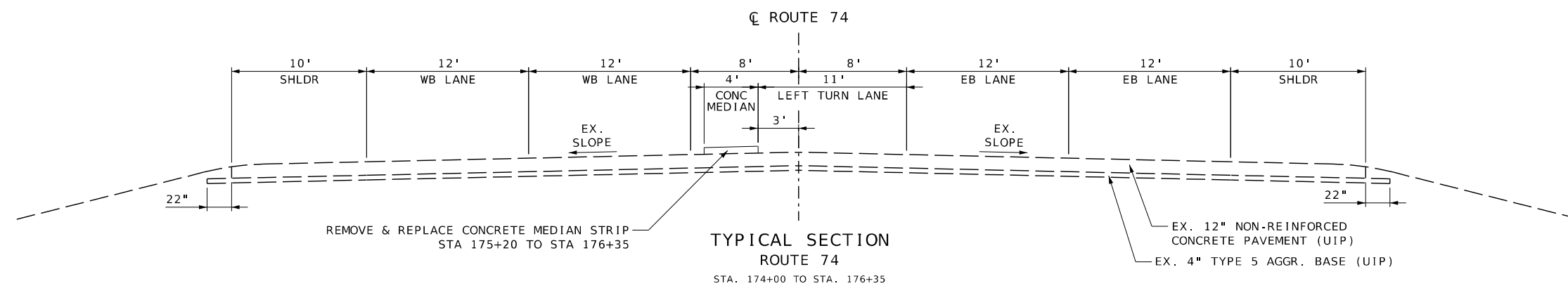
J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION



TYPICAL SECTION
ROUTE 74
SHEET 1 OF 1

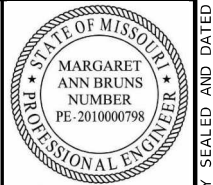
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 10/24/2024

ROUTE 74 STATE MO
 DISTRICT SE SHEET NO. 3

COUNTY
 CAPE GIRARDEAU
 JOB NO.
 J9P3308
 CONTRACT ID.

PROJECT NO.
 BRIDGE NO.

REMOVAL OF IMPROVEMENTS								
SHEET NO	STA	STA	LOC	ROADWAY	LF	SY	EA	DESCRIPTIONS
4	175+20		CL	RTE 74	4.0			SAWCUT
4	176+35		CL	RTE 74			1	SIGNS, POST
4	175+20	176+50	CL	RTE 74		47.6		CONCRETE MEDIAN STRIP
4	222+49.0	226+66.1	LT	RTE 74	425.0			GUARDRAIL/END ANCHOR/BRIDGE TRANS.
4	222+04.9	226+51.5	RT	RTE 74	450.0			GUARDRAIL/END ANCHOR/BRIDGE TRANS.
4	222+36.9		CL	RTE 74			1	C.E.T. BARRIER
22	165+50		LT	RTE 74			1	SIGN, POST, & FOUNDATION (*55)
22	180+0		LT	RTE 74			1	SIGN, POST, & FOUNDATION (HISTORIC DOWNTOWN)
					PAY TOTAL			1 LUMP SUM

RAILROAD PLAN SUBMITTAL 1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING & STAKING 1 LUMP SUM

MOBILIZATION 1 LUMP SUM

PERMANENT PAVEMENT MARKING											
PVMT MARKING SHEET NO	ROADWAY	STA	STA	HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT TYPE L BEADS		PREFORMED THERMOPLASTIC PAVEMENT MARKING					REMARKS
				6 INCH YELLOW	6 INCH WHITE	WHITE WORD "ONLY"	WHITE ARROW RT/LT	6 INCH WHITE	24 INCH YELLOW	STOP BAR 24 INCH WHITE	
				L.F.	L.F.	EA.	EA.	L.F.	L.F.	L.F.	
1	RTE 74	161+00	188+00	2744	4013		3	168		58	
1	RTE 74	161+00	188+00		704						INTERMITTENT
1	RTE 74				177						ISLANDS AT FOUNTAIN ST
2	RTE 74	188+00	215+00	5400	5400						
2	RTE 74	188+00	215+00		1350						INTERMITTENT
3	RTE 74	215+00	242+00	7128	5101	2	2		893		
3	RTE 74	215+00	242+00		1219						INTERMITTENT
SUBTOTAL				15272	17964	2	5	168	893	58	
PAY TOTAL				15272	17964	2	5	168	893	58	

CONCRETE MEDIAN						
SHEET NO	ROADWAY	STA	STA	LOC	6-IN CONCRETE MEDIAN STRIP SY	REMARKS
4	RTE 74	175+20.0	176+35.0	LT	48	
SUBTOTAL					48	
PAY TOTAL					48	

TEMPORARY PAVEMENT MARKING							
PLAN SHEET	STAGE	ROADWAY	LOC	TEMPORARY PAVEMENT MARKING PAINT 4-INCH	PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL (SYMBOL)	REMARKS
				L.F.	L.F.	EA.	
6-10	EB-STG 1	RTE 74	LT&RT	19,665	24,121	7	
11-14	WB-STG 2	RTE 74	LT&RT	20,242	8,677		RESTORE EXIST CONDITIONS BTW STA 167+32 & STA 170+91
					20,264		POST CONSTRUCTION REMOVE STAGE 2 TEMP STRIPING
SUBTOTAL				39,907	53,062	7	
PAY TOTAL				39,907	53,062	7	

BARRIER & GUARDRAIL										
SHEET NO	ROADWAY	STA	STA	LOC	MGS BRIDGE APPROACH TRANSITION (REGULAR/NO CURB)	MGS GUARDRAIL	MASH TYPE A CRASHWORTHY END TERMINAL	MASH TYPE C CRASHWORTHY END TERMINAL	MGS END ANCHOR	REMARKS
					EA.	L.F.	EA.	EA.	EA.	
4	RTE 74	178+85	180+32	CL						
4	RTE 74	222+28.0	226+66.6	LT	1	350	1			
4	RTE 74	222+36.9		CL				1		
4	RTE 74	222+04.9	226+54.04	RT	1	400			1	
SUBTOTAL					2	750	1	1	1	
PAY TOTAL					2	750	1	1	1	

SUMMARY OF QUANTITIES
 SHEET 1 OF 2

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 MoDOT
 105 WEST CAPITOL JEFFERSON CITY, MO 65102
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Table with columns: SIGN, SIZE, AREA, QTY, TOTAL AREA, QTY RELOC, TOTAL RELOC, SIGN NUM., DESCRIPTION. Includes sections for Warning Signs, Guide Signs, Regulatory Signs, and Miscellaneous Signs.

Table with columns: SIGN, SIZE, AREA, QTY, TOTAL, QTY RELOC, TOTAL RELOC, SIGN NUM., DESCRIPTION. Includes sections for Guide Signs, Regulatory Signs, and Miscellaneous Signs.

Table with columns: ITEM NUMBER, TOTAL QTY, DESCRIPTION. Lists various sign items and their quantities.

* NO DIRECT PAYMENT SHALL BE MADE TO RELOCATE OR COVER/UNCOVER EXISTING OR TCP SIGNS OR TO RELOCATE OTHER TCP DEVICES.

NOTES: 1. CMS LOCATIONS TO BE APPROVED BY THE ENGINEERS. 2. EXIST. SIGNS SHALL NOT BE REMOVED UNTIL NEW SIGNS HAVE BEEN INSTALLED, UNLESS APPROVED BY THE ENGINEER.

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SUMMARY OF QUANTITIES SHEET 2 OF 2

DESCRIPTION

DATE

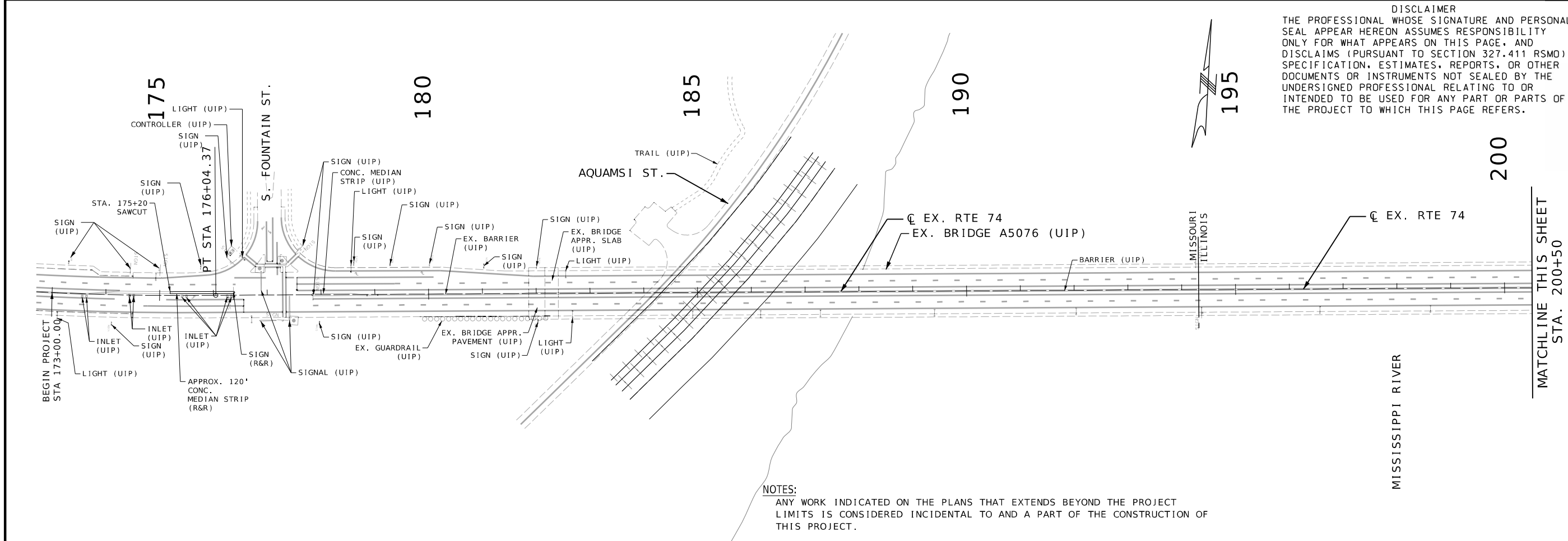
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



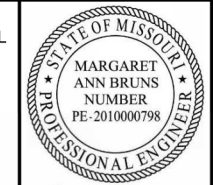
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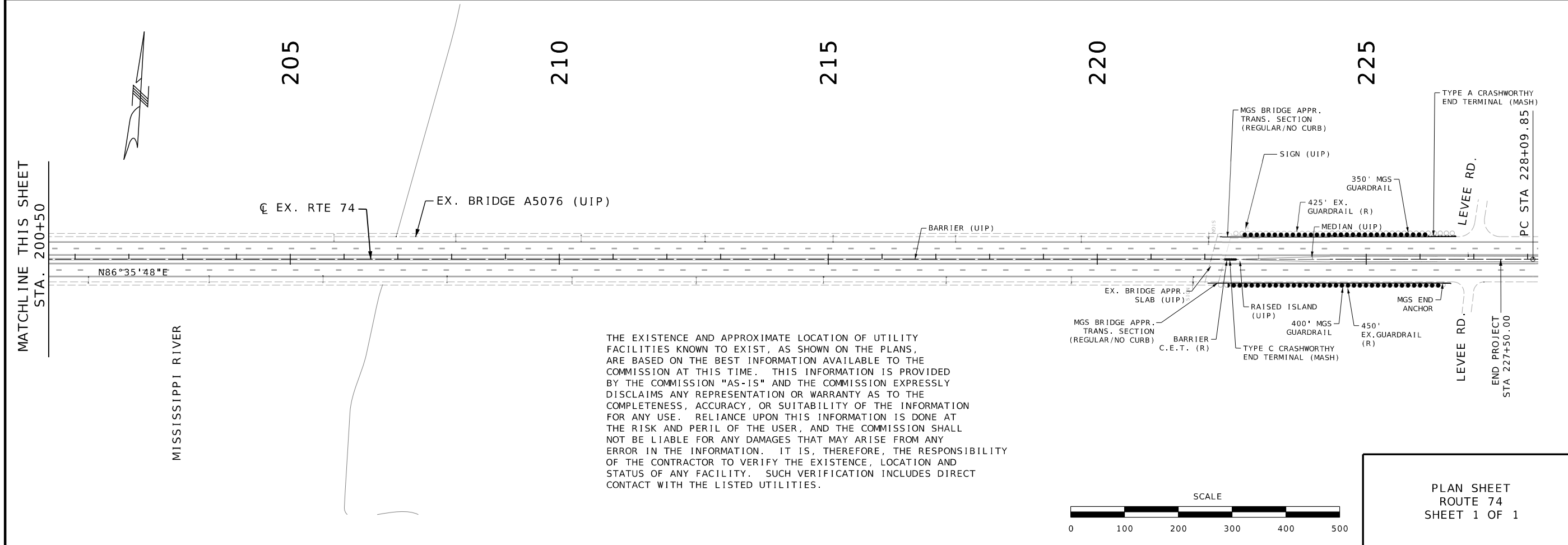
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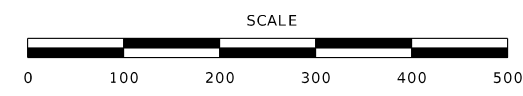
DATE PREPARED 10/6/2024	
ROUTE 74	STATE MO
DISTRICT SE	SHEET NO. 4
COUNTY CAPE GIRARDEAU	
JOB NO. J9P3308	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

NOTES:
 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.



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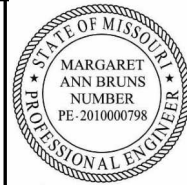
PLAN SHEET
 ROUTE 74
 SHEET 1 OF 1

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
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 MO PE-2010000798

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ROUTE 74 STATE MO

DISTRICT SE SHEET NO. 5

COUNTY

CAPE GIRARDEAU

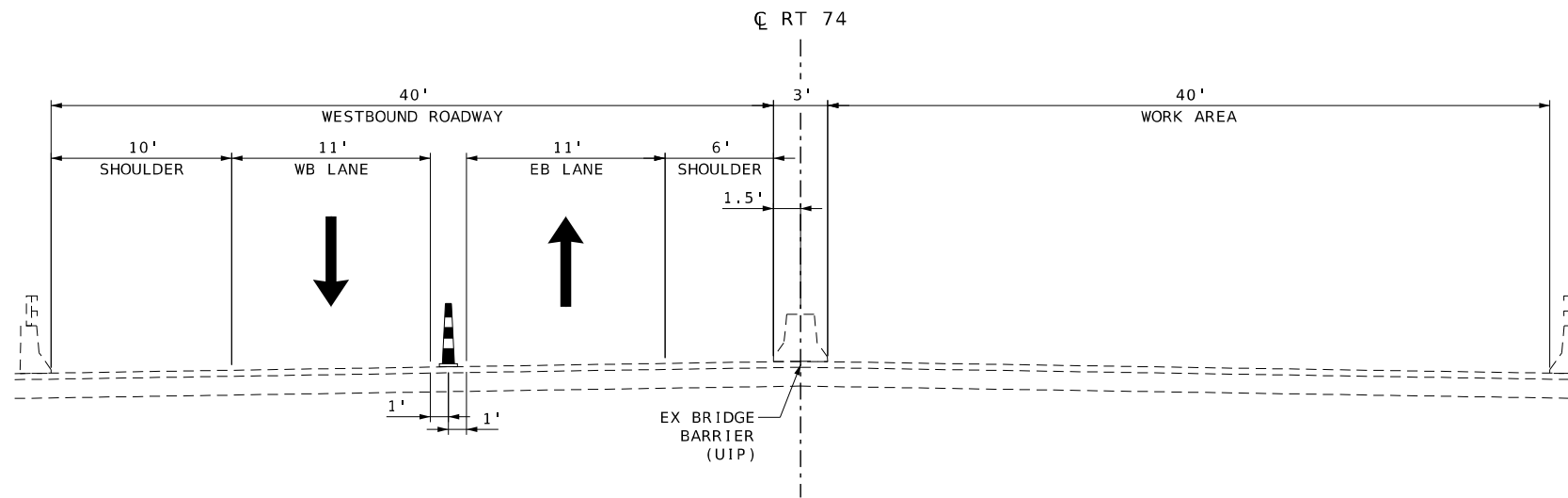
JOB NO.

J9P3308

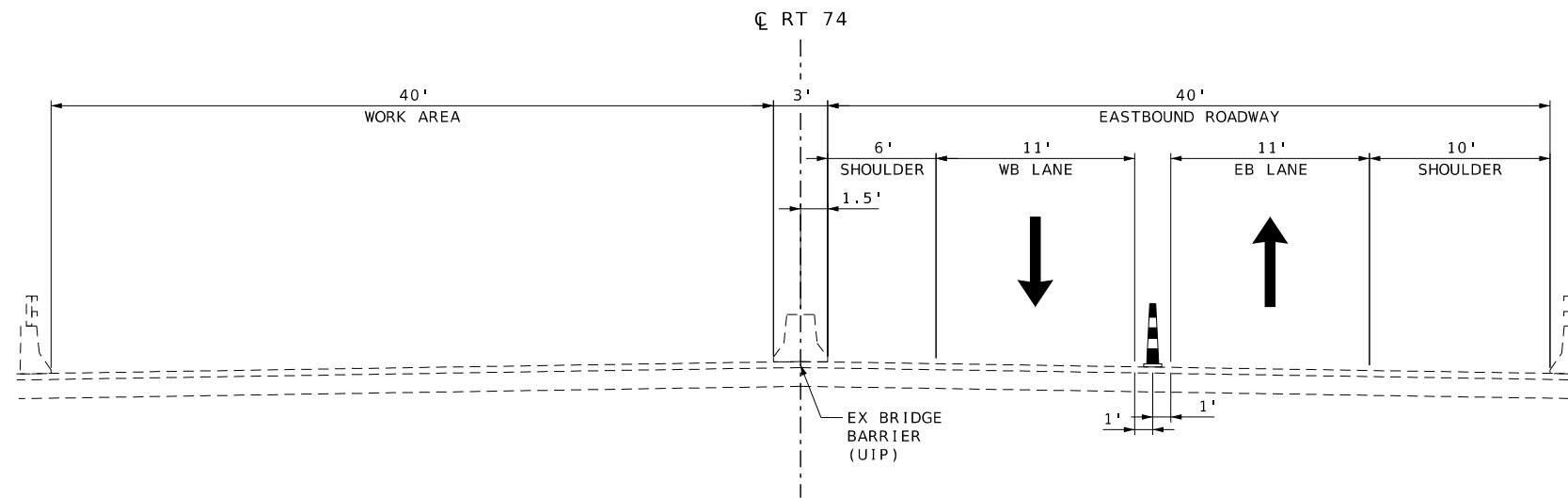
CONTRACT ID.

PROJECT NO.

BRIDGE NO.




STAGE 1
 EASTBOUND CLOSURE
 ROUTE 74
 BILL EMERSON BRIDGE



STAGE 2
 WESTBOUND CLOSURE
 ROUTE 74
 BILL EMERSON BRIDGE

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



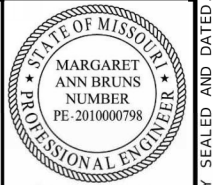
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TRAFFIC CONTROL
 TYPICAL SECTION
 STAGING
 SHEET 1 OF 17

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ROUTE 74 MO
 DISTRICT SE SHEET NO. 6

COUNTY
 CAPE GIRARDEAU
 JOB NO.
 J9P3308
 CONTRACT ID.

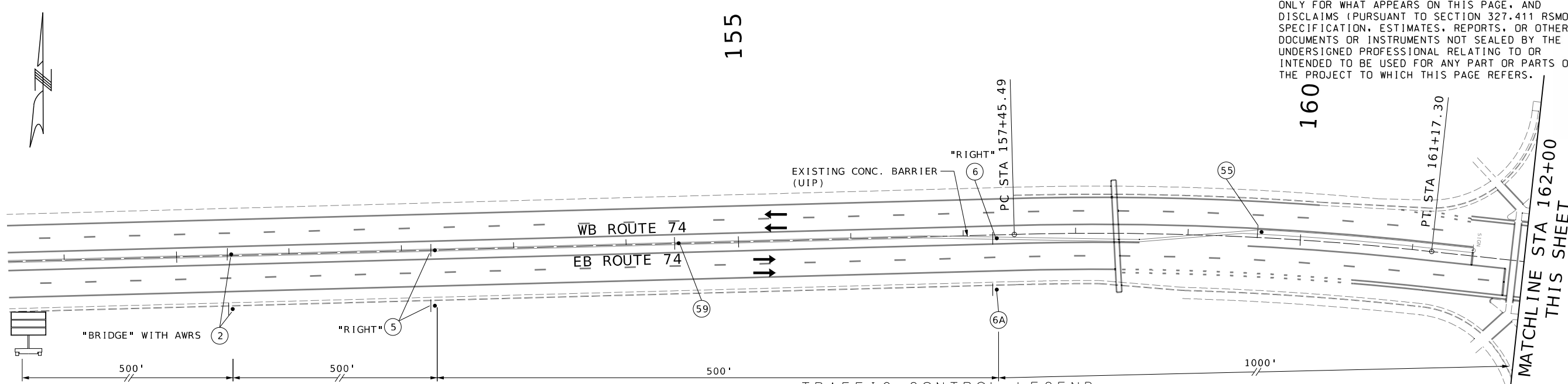
PROJECT NO.
 BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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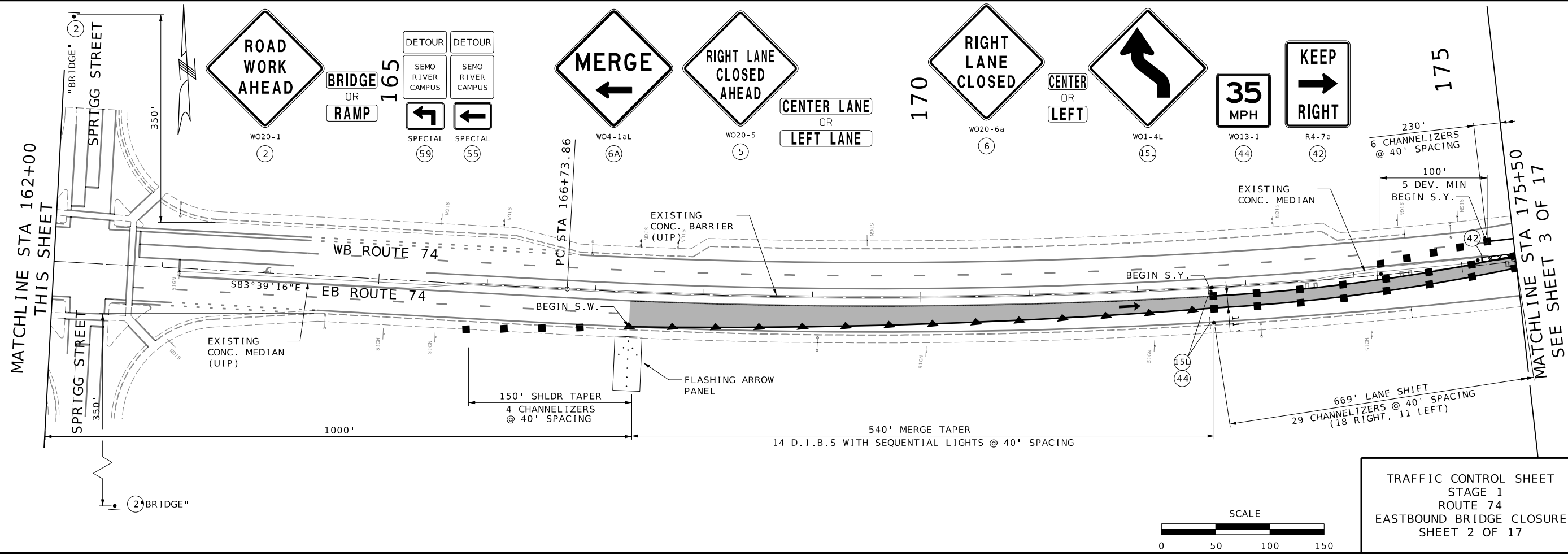


GENERAL TRAFFIC CONTROL NOTES:

ANY EXISTING SIGN THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.
 PLACEMENT OF TRAFFIC CONTROL SIGNS ARE APPROXIMATE AND MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
 CMS MESSAGES AND LOCATIONS AS APPROVED BY ENGINEER.

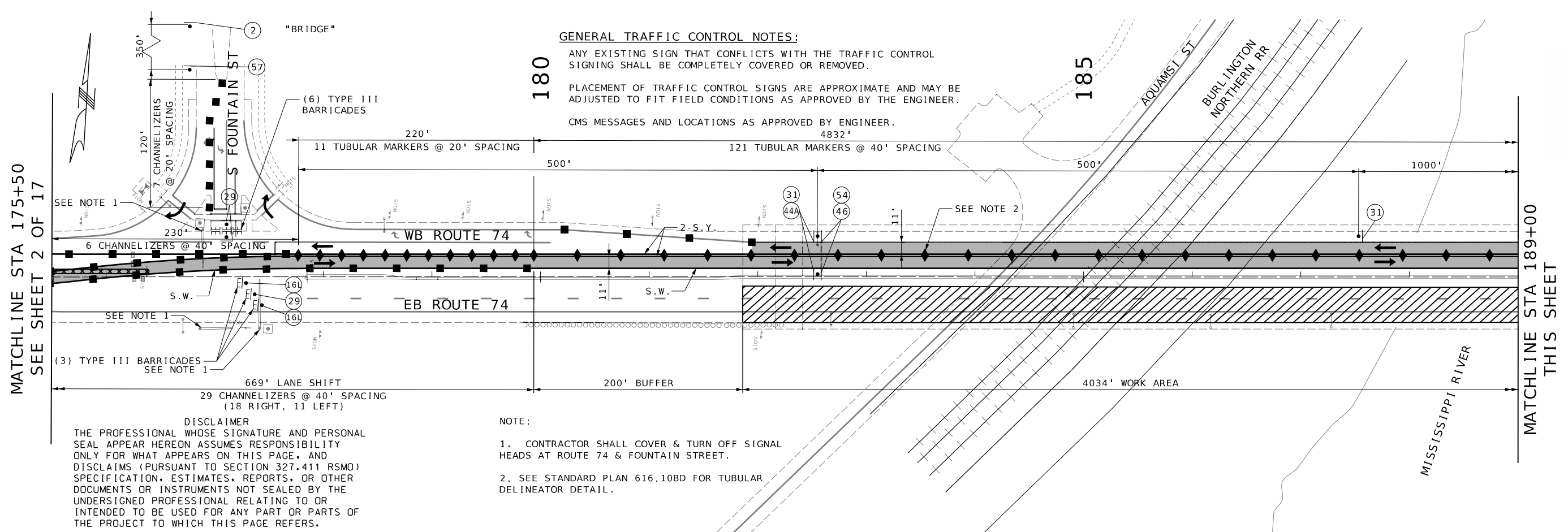
TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- TUBULAR MARKER
- CHANNELIZER
- BARRICADE
- WORK AREA
- REMOVED PRIOR TO STAGE WORK
- CHANGEABLE MESSAGE BOARD
- FLASHING ARROW PANEL
- ADVANCED WARNING RAIL SYSTEM
- LEFT SIDE OF ROAD
- RIGHT SIDE OF ROAD



TRAFFIC CONTROL SHEET
 STAGE 1
 ROUTE 74
 EASTBOUND BRIDGE CLOSURE
 SHEET 2 OF 17

MATCHLINE STA 175+50
SEE SHEET 2 OF 17



DATE PREPARED
10/6/2024

ROUTE 74 STATE MO
DISTRICT SE SHEET NO. 7

COUNTY
CAPE GIRARDEAU

JOB NO.
J9P3308

CONTRACT ID.

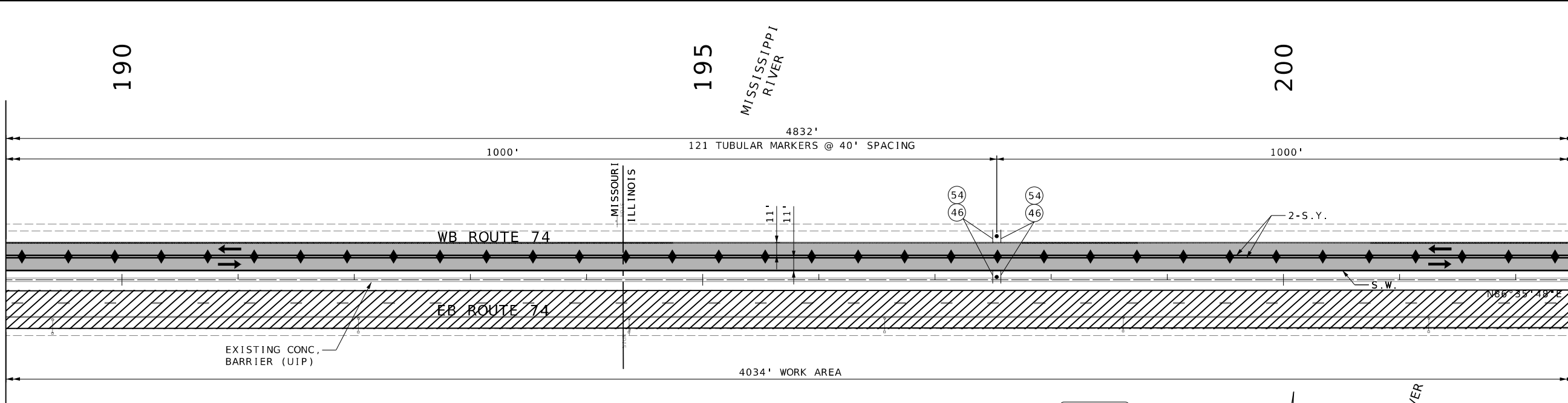
PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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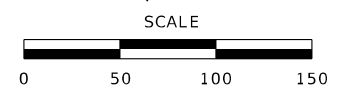
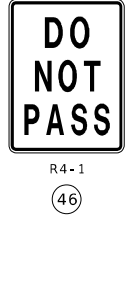
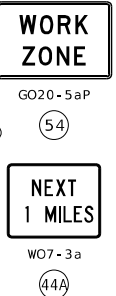
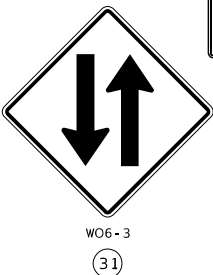
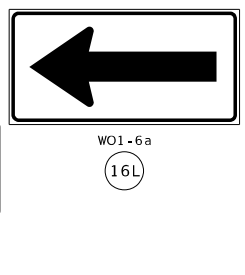
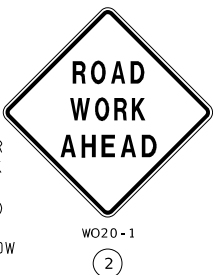
MATCHLINE STA 189+00
THIS SHEET



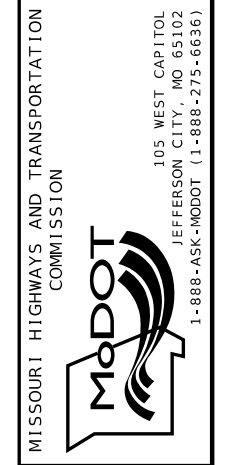
MATCHLINE STA 202+50
SEE SHEET 4 OF 17

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- ▲ DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- ◆ TUBULAR MARKER
- CHANNELIZER
- E BARRICADE
- ▨ WORK AREA
- ▩ REMOVED PRIOR TO STAGE WORK
- ▧ CHANGEABLE MESSAGE BOARD
- ⬇ FLASHING ARROW PANEL



TRAFFIC CONTROL SHEET
 STAGE 1
 ROUTE 74
 EASTBOUND BRIDGE CLOSURE
 SHEET 3 OF 17



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MATCHLINE STA 202+50
SEE SHEET 3 OF 17

MATCHLINE STA 216+00
THIS SHEET

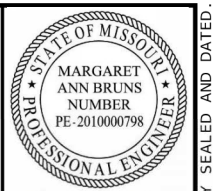
MATCHLINE STA 216+00
THIS SHEET

MATCHLINE STA 229+50
SEE SHEET 5 OF 17

GENERAL TRAFFIC CONTROL NOTES:
 ANY EXISTING SIGN THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.
 PLACEMENT OF TRAFFIC CONTROL SIGNS ARE APPROXIMATE AND MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
 CMS MESSAGES AND LOCATIONS AS APPROVED BY ENGINEER.

NOTE:
 SEE STANDARD PLAN 616.10BD FOR TUBULAR DELINEATOR DETAIL.

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



DATE PREPARED
10/6/2024
 ROUTE 74 STATE MO
 DISTRICT SE SHEET NO. 8

COUNTY
CAPE GIRARDEAU
 JOB NO.
J9P3308
 CONTRACT ID.

PROJECT NO.
 BRIDGE NO.

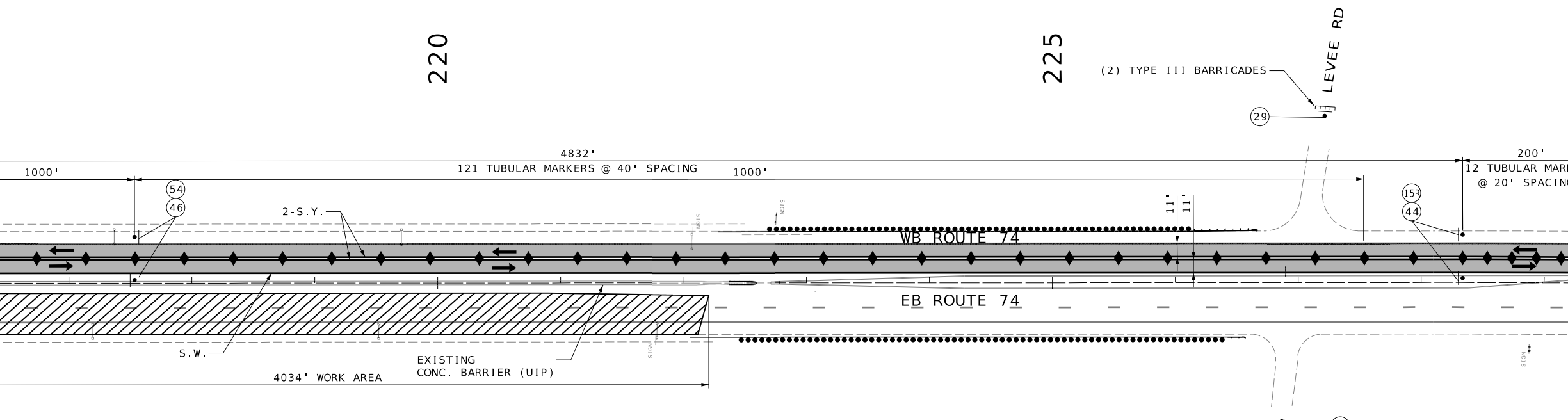
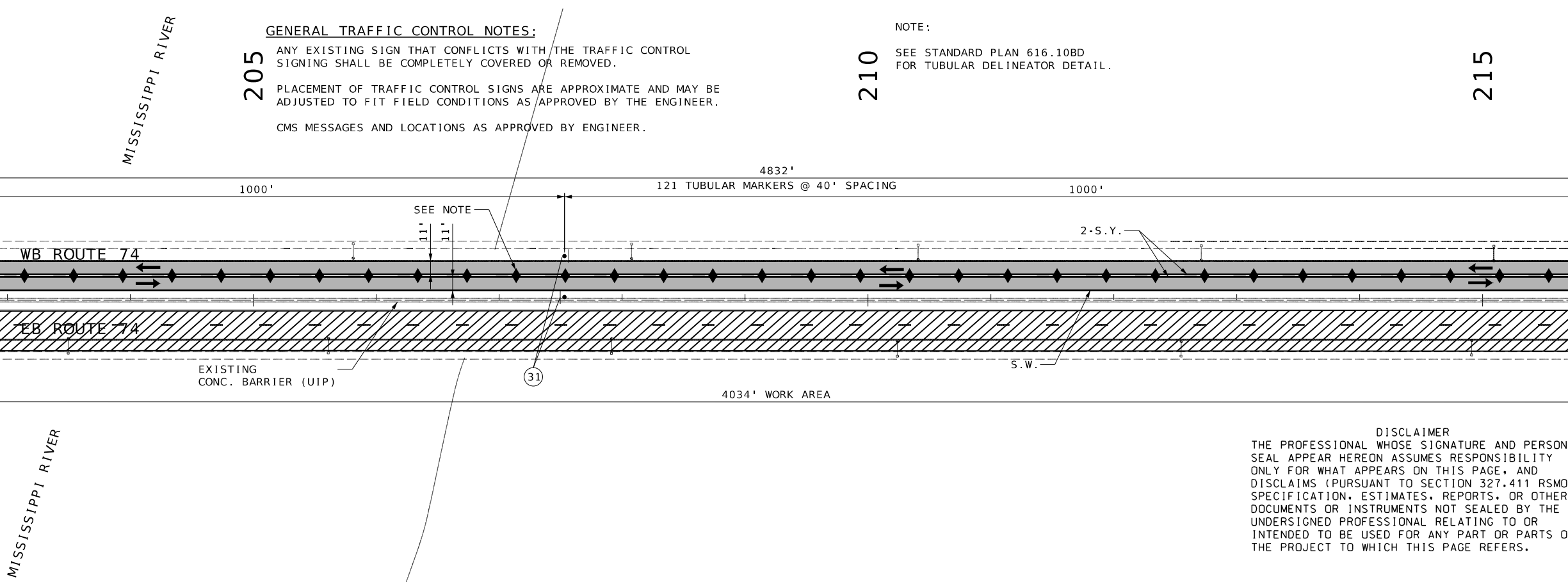
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

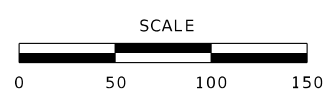
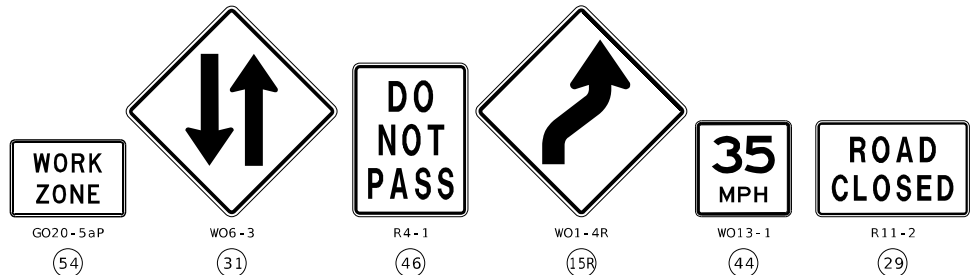
EFK Moen
 Civil Engineering Design
 13523 Barrett Parkway Dr
 Suite 250
 St. Louis, MO 63021
 Phone 314-394-3100
 Fax 314-394-3199
 Missouri Certificate of Authority: 001578

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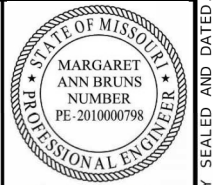
TRAFFIC CONTROL LEGEND

• SIGN (SINGLE SIDED)	□ BARRICADE
• SIGN (DOUBLE SIDED)	▨ WORK AREA
▲ DIRECTIONAL INDICATOR BARRICADES (D.I.B.)	□ CHANGEABLE MESSAGE BOARD
◆ TUBULAR MARKER	□ FLASHING ARROW PANEL
■ CHANNELIZER	



TRAFFIC CONTROL SHEET
 STAGE 1
 ROUTE 74
 EASTBOUND BRIDGE CLOSURE
 SHEET 4 OF 17

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DATE PREPARED
 10/6/2024

ROUTE 74 STATE MO
 DISTRICT SE SHEET NO. 9

COUNTY
 CAPE GIRARDEAU
 JOB NO.
 J9P3308
 CONTRACT ID.

PROJECT NO.
 BRIDGE NO.

DATE	DESCRIPTION

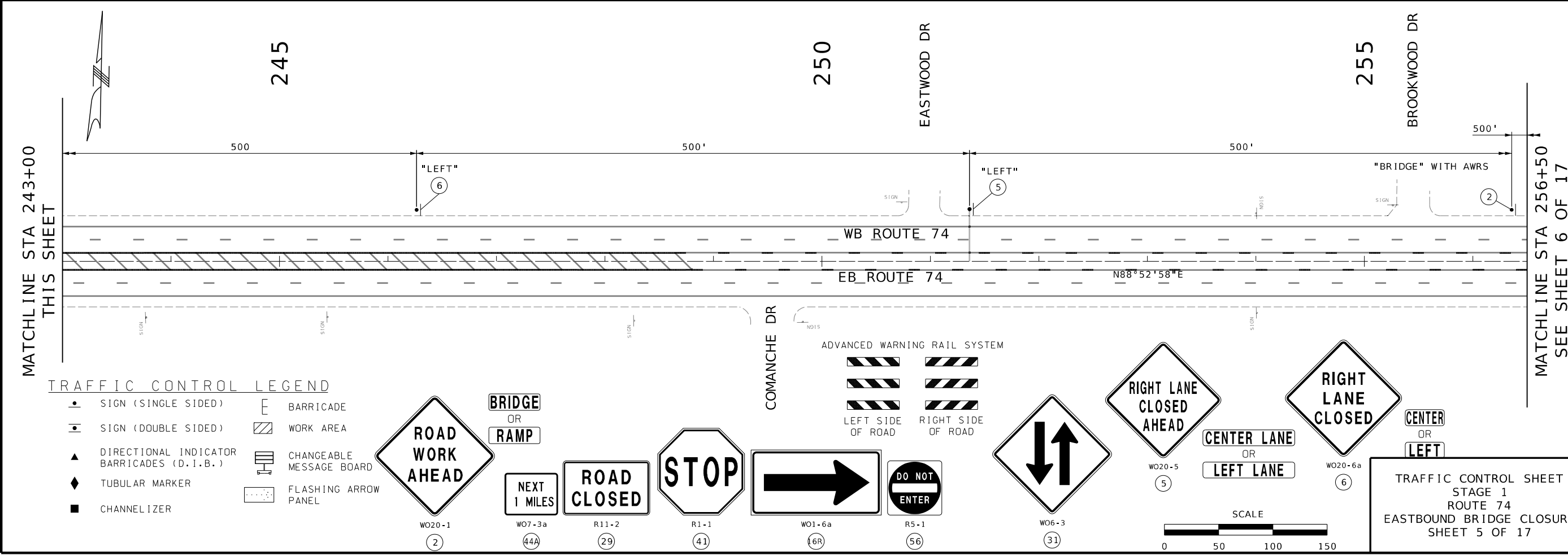
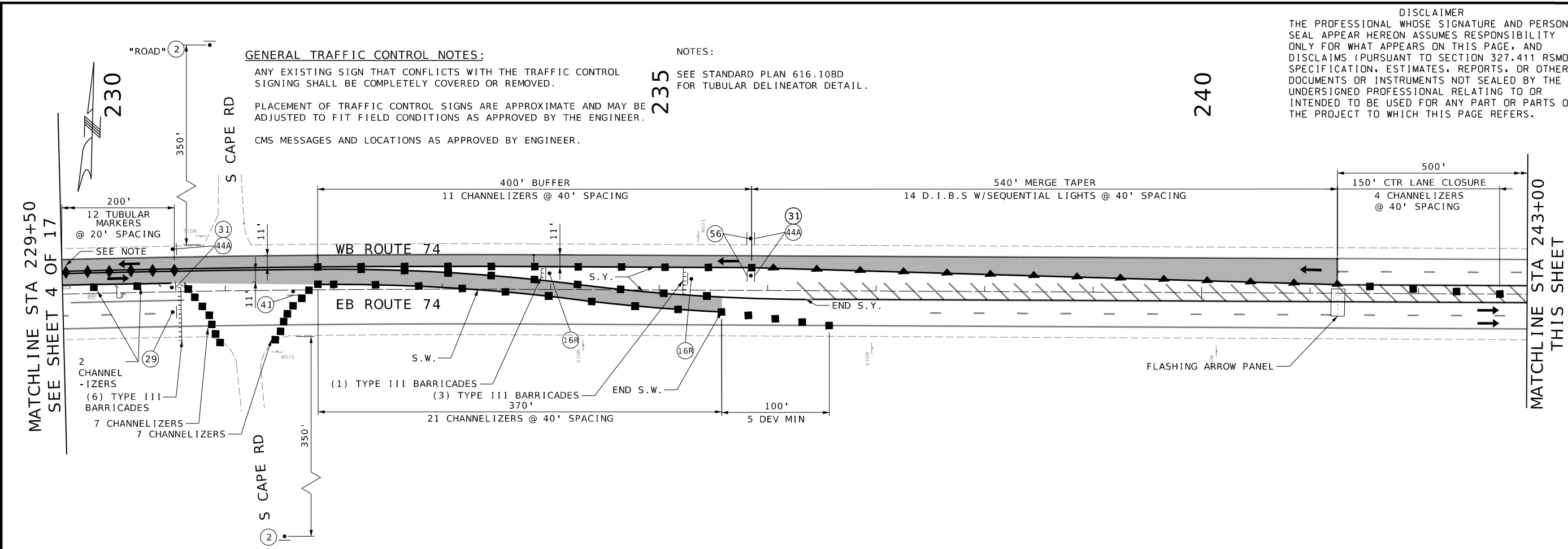
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

EFK Moen
 Civil Engineering Design
 13523 Barrett Parkway Dr Phone 314-394-3100
 Suite 250 St. Louis, MO 63021 Fax 314-394-3199
 Missouri Certificate of Authority: 001578

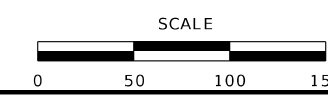
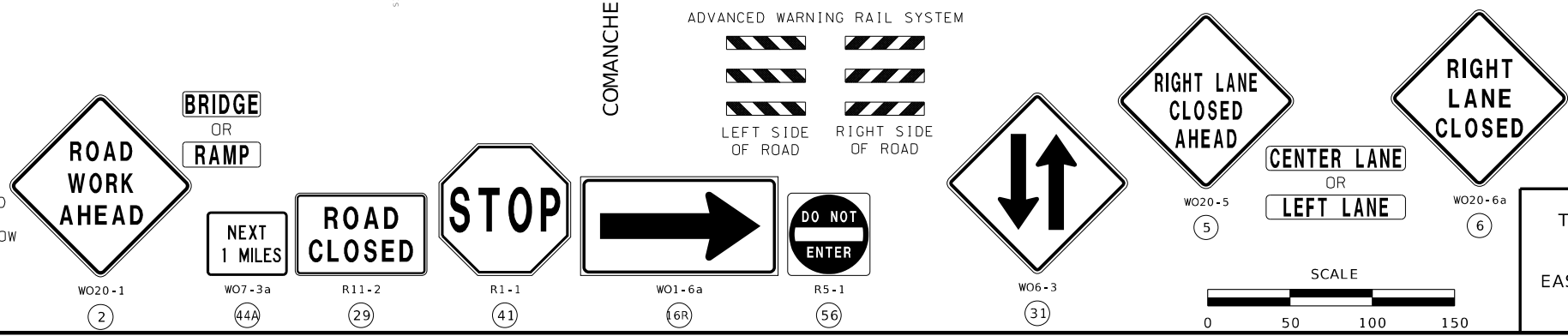
GENERAL TRAFFIC CONTROL NOTES:
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 CMS MESSAGES AND LOCATIONS AS APPROVED BY ENGINEER.

NOTES:
 SEE STANDARD PLAN 616.10BD FOR TUBULAR DELINEATOR DETAIL.



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- ▲ DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- ◆ TUBULAR MARKER
- CHANNELIZER
- E BARRICADE
- ▨ WORK AREA
- ▩ CHANGEABLE MESSAGE BOARD
- ⬢ FLASHING ARROW PANEL



TRAFFIC CONTROL SHEET
 STAGE 1
 ROUTE 74
 EASTBOUND BRIDGE CLOSURE
 SHEET 5 OF 17

MATCHLINE STA 256+50
SEE SHEET 5 OF 17

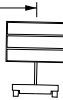


260

VIRGINIA DR

265

500'



SIGN

SIGN

WB ROUTE 74

EB ROUTE 74

IROQUOIS ST

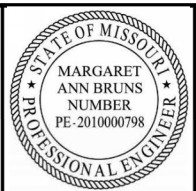
TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- ◐ SIGN (DOUBLE SIDED)
- ▲ DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- ◆ TUBULAR MARKER
- CHANNELIZER
- BARRICADE
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DATE PREPARED
10/6/2024

ROUTE 74 STATE MO
DISTRICT SE SHEET NO. 10

COUNTY
CAPE GIRARDEAU
JOB NO.
J9P3308

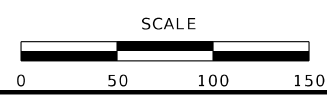
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

EFK Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578



TRAFFIC CONTROL SHEET
STAGE 1
ROUTE 74
EASTBOUND BRIDGE CLOSURE
SHEET 6 OF 17

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

GENERAL TRAFFIC CONTROL NOTES:

ANY EXISTING SIGN THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.

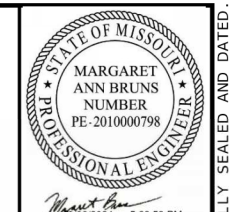
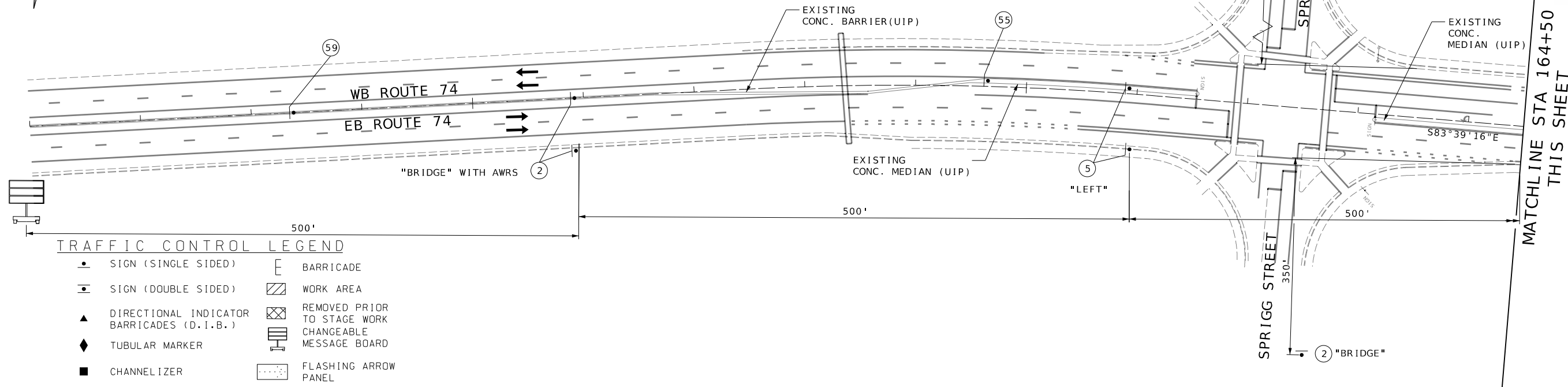
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155

160



DATE PREPARED	
10/6/2024	
ROUTE	STATE
74	MO
DISTRICT	SHEET NO.
SE	11
COUNTY	
CAPE GIRARDEAU	
JOB NO.	
J9P3308	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

165

NOTES:

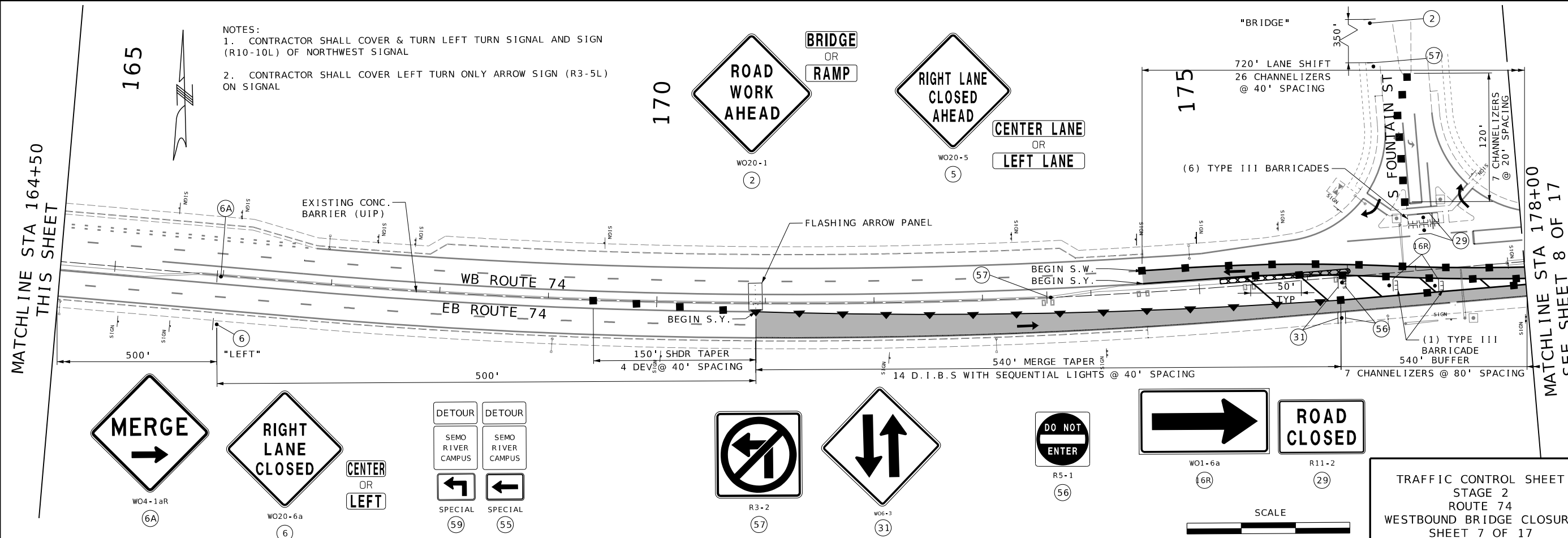
- CONTRACTOR SHALL COVER & TURN LEFT TURN SIGNAL AND SIGN (R10-10L) OF NORTHWEST SIGNAL
- CONTRACTOR SHALL COVER LEFT TURN ONLY ARROW SIGN (R3-5L) ON SIGNAL

170

175

MATCHLINE STA 164+50
THIS SHEET

MATCHLINE STA 178+00
SEE SHEET 8 OF 17



MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

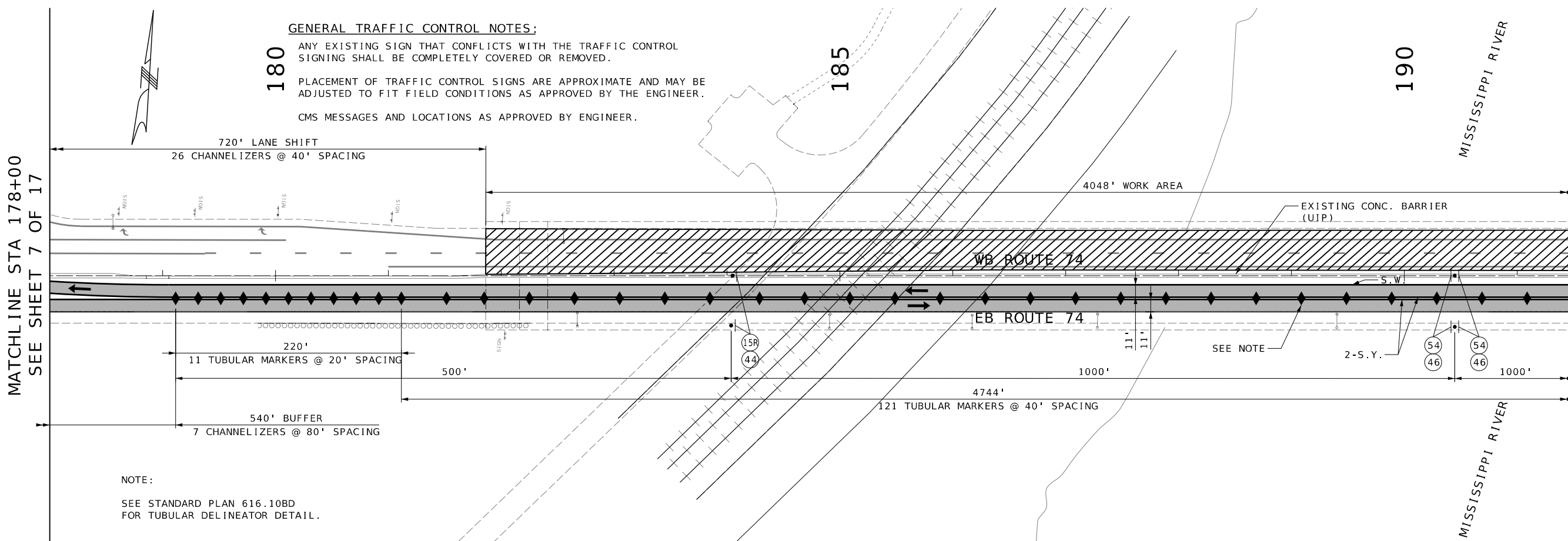
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MATCHLINE STA 178+00
SEE SHEET 7 OF 17

GENERAL TRAFFIC CONTROL NOTES:
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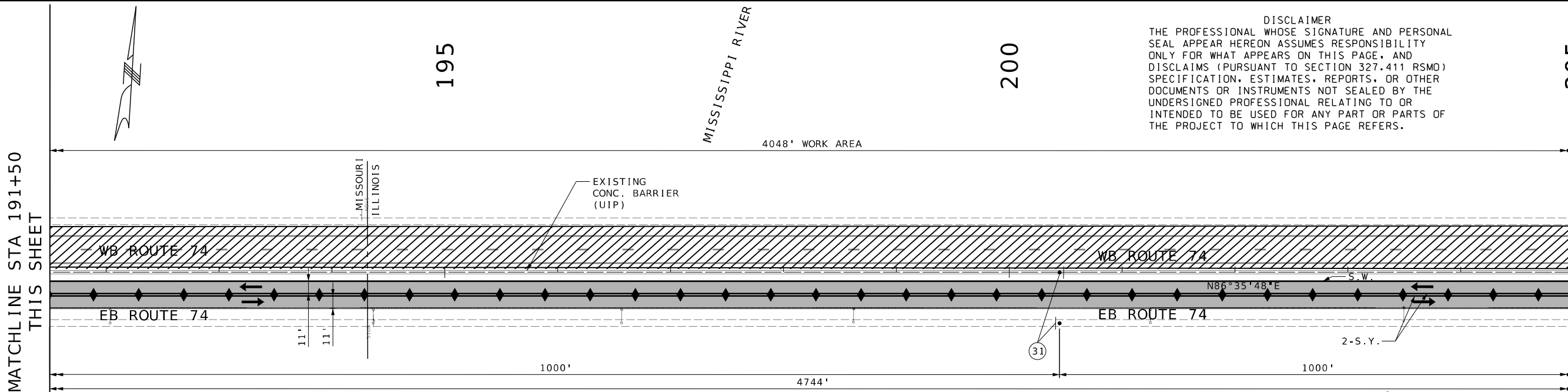


NOTE:
SEE STANDARD PLAN 616.10BD FOR TUBULAR DELINEATOR DETAIL.

MATCHLINE STA 191+50
THIS SHEET

MATCHLINE STA 191+50
THIS SHEET

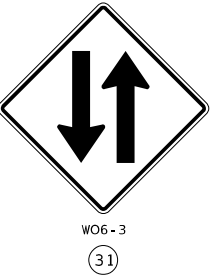
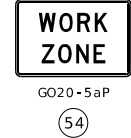
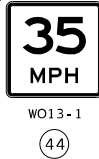
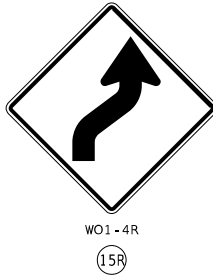
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MATCHLINE STA 205+00
SEE SHEET 9 OF 17

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- ◻ SIGN (DOUBLE SIDED)
- ▲ DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- ◆ TUBULAR MARKER
- CHANNELIZER
- ▭ BARRICADE
- ▨ WORK AREA
- ▧ CHANGEABLE MESSAGE BOARD
- ⬇ FLASHING ARROW PANEL

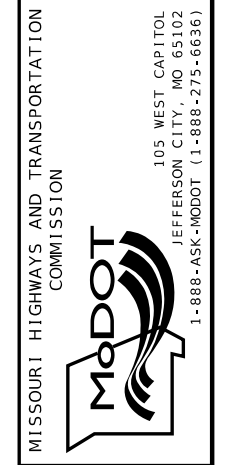


TRAFFIC CONTROL SHEET
 STAGE 2
 ROUTE 74
 WESTBOUND BRIDGE CLOSURE
 SHEET 8 OF 17



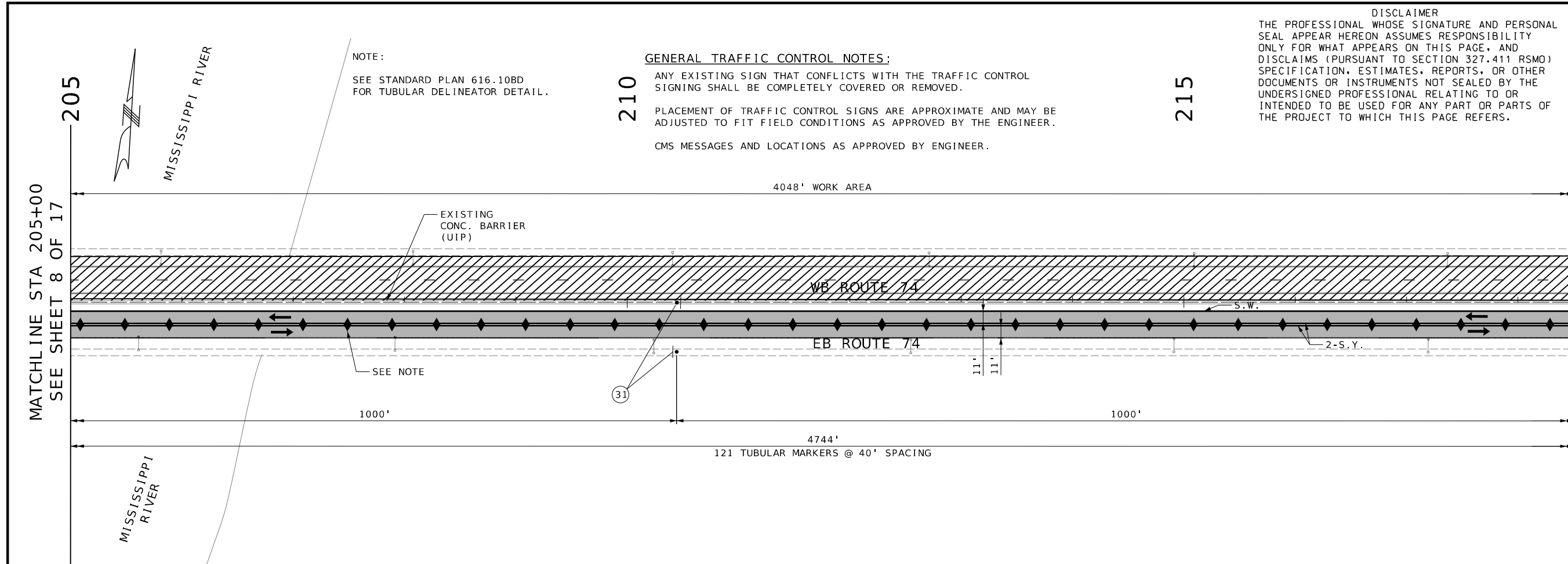
DATE PREPARED
10/6/2024
 ROUTE 74 STATE MO
 DISTRICT SE SHEET NO. 12
 COUNTY CAPE GIRARDEAU
 JOB NO. J9P3308
 CONTRACT ID.
 PROJECT NO.
 BRIDGE NO.

DATE	DESCRIPTION



EFK Moen
 Civil Engineering Design
 13523 Barrett Parkway Dr
 Suite 250
 St. Louis, MO 63021
 Phone 314-394-3100
 Fax 314-394-3199
 Missouri Certificate of Authority: 001578

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NOTE:
SEE STANDARD PLAN 616.10BD
FOR TUBULAR DELINEATOR DETAIL.

GENERAL TRAFFIC CONTROL NOTES:
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10/6/2024

ROUTE 74	STATE MO
DISTRICT SE	SHEET NO. 13

COUNTY
CAPE GIRARDEAU

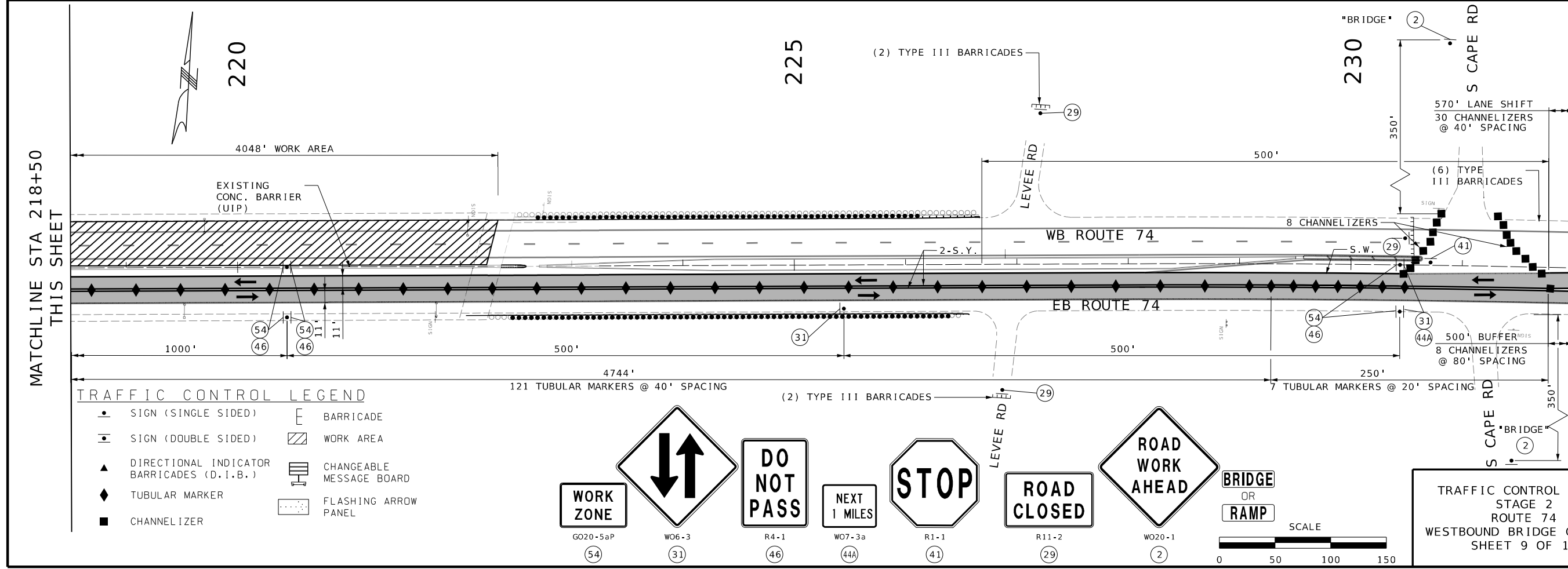
JOB NO.
J9P3308

CONTRACT ID.

PROJECT NO.

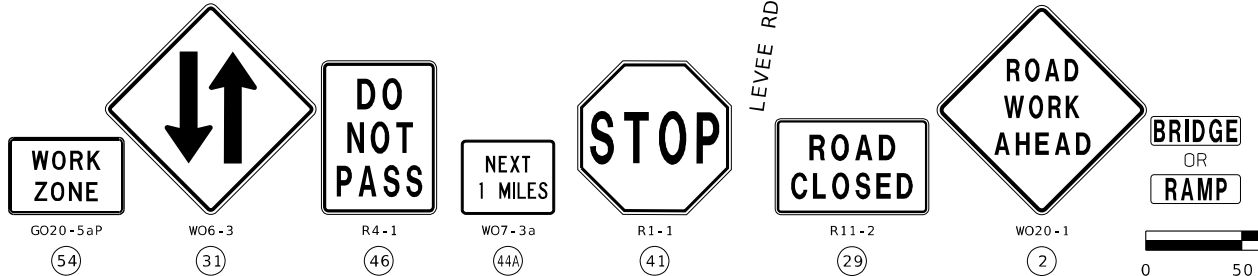
BRIDGE NO.

DATE	DESCRIPTION



TRAFFIC CONTROL LEGEND

• SIGN (SINGLE SIDED)	□ BARRICADE
• SIGN (DOUBLE SIDED)	▨ WORK AREA
▲ DIRECTIONAL INDICATOR BARRICADES (D.I.B.)	▩ CHANGEABLE MESSAGE BOARD
◆ TUBULAR MARKER	⋯ FLASHING ARROW PANEL
■ CHANNELIZER	



TRAFFIC CONTROL SHEET
 STAGE 2
 ROUTE 74
 WESTBOUND BRIDGE CLOSURE
 SHEET 9 OF 17

MATCHLINE STA 218+50
THIS SHEET

MATCHLINE STA 232+00
SEE SHEET 10 OF 17

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

EFK Moen
 Civil Engineering Design
 13523 Barrett Parkway Dr
 Suite 250
 St. Louis, MO 63021
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 Fax 314-394-3199
 Missouri Certificate of Authority: 001578

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MATCHLINE STA 232+00
SEE SHEET 9 OF 17

MATCHLINE STA 245+50
THIS SHEET

235

240

245

GENERAL TRAFFIC CONTROL NOTES:

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DATE PREPARED
10/6/2024

ROUTE 74 STATE MO
DISTRICT SE SHEET NO. 14

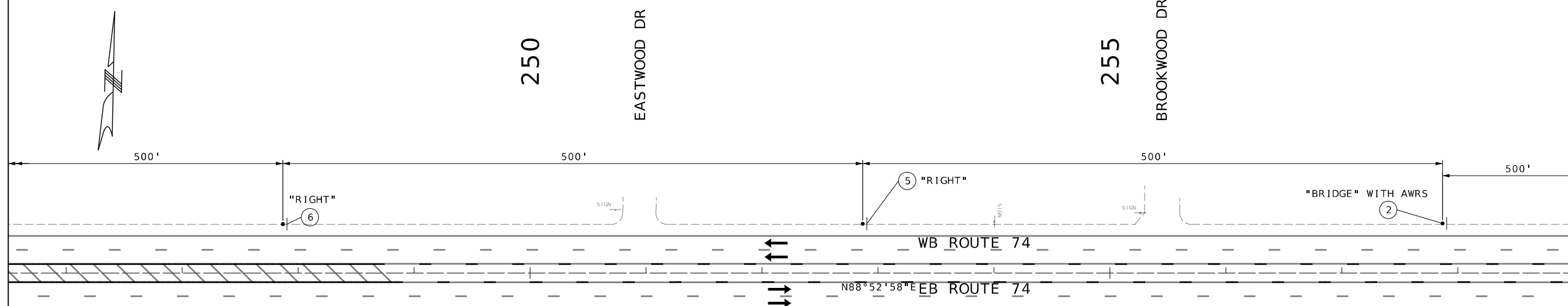
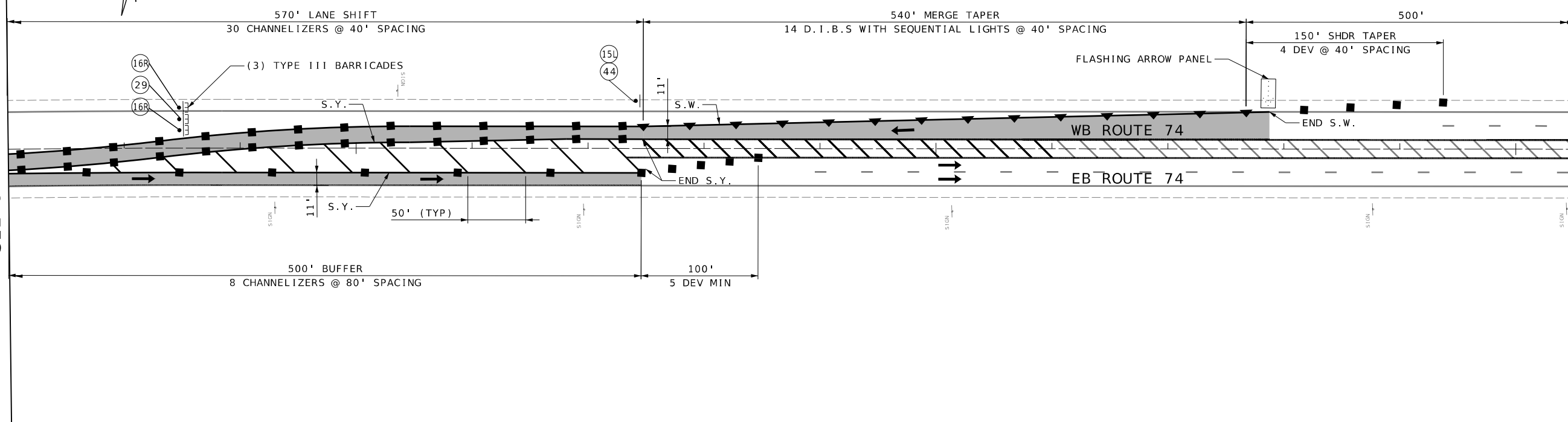
COUNTY
CAPE GIRARDEAU
JOB NO.
J9P3308
CONTRACT ID.

PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION

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

EFK Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- ◻ SIGN (DOUBLE SIDED)
- ▲ DIRECTIONAL INDICATOR BARRICADES (D.I.B.)
- ◆ TUBULAR MARKER
- CHANNELIZER
- E BARRICADE
- ▨ WORK AREA
- ▩ CHANGEABLE MESSAGE BOARD
- ◻ FLASHING ARROW PANEL

W01-6a
 R11-2
 W01-4L
 W013-1
 W020-5
 W020-6a
 W020-1
 W020-1
 W020-1

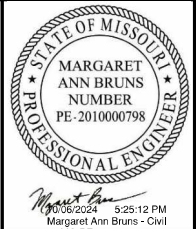
TRAFFIC CONTROL SHEET
STAGE 2
ROUTE 74
WESTBOUND BRIDGE CLOSURE
SHEET 10 OF 17

SCALE
0 50 100 150

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

SIGNS IN NARROW MEDIANS

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DATE PREPARED
10/6/2024

ROUTE 74	STATE MO
DISTRICT SE	SHEET NO. 15

COUNTY
CAPE GIRARDEAU

JOB NO.
J9P3308

CONTRACT ID.

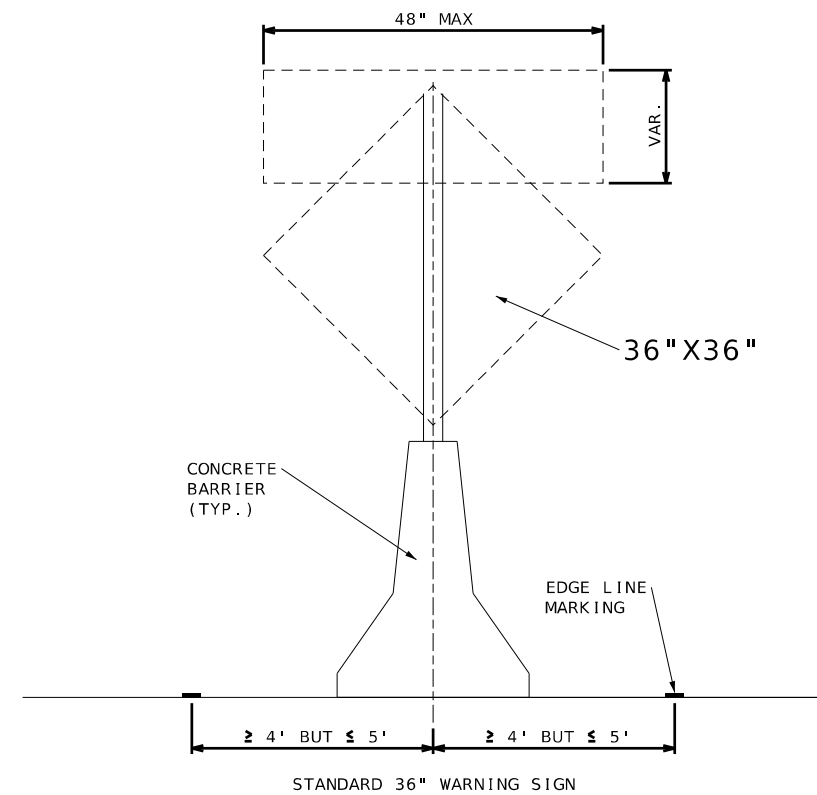
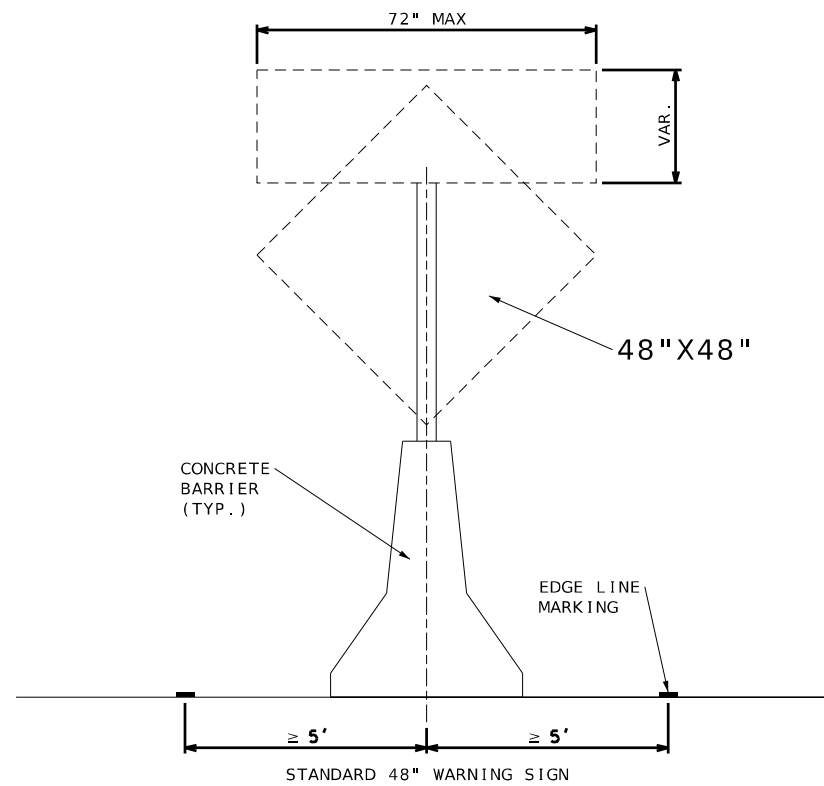
PROJECT NO.

BRIDGE NO.

NOTES:

48" X 48" DIAMOND-SHAPED WARNING SIGNS SHALL BE USED WHENEVER POSSIBLE. RECTANGULAR SIGNS SHALL NOT BE USED IN LIEU OF DIAMOND-SHAPED WARNING SIGNS.

WHERE MODIFIED SIGNS ARE USED, THE LAYOUTS OF THE SIGNS SHALL BE SHOWN ON THE PLANS.



DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

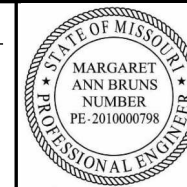
EFK Moen
 Civil Engineering Design
 13523 Barrett Parkway Dr
 Suite 250
 St. Louis, MO 63021
 Phone 314-394-3100
 Fax 314-394-3199
 Missouri Certificate of Authority: 001578

TRAFFIC CONTROL
 SHEET 11 OF 17

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BEGIN/END OF PROJECT SIGNING

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Margaret Ann Bruns
 10/6/2024 5:25:40 PM
 Margaret Ann Bruns - Civil
 MO PE-2010000798

DATE PREPARED
 10/6/2024

ROUTE 74 STATE MO

DISTRICT SE SHEET NO. 16

COUNTY CAPE GIRARDEAU

JOB NO. J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

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

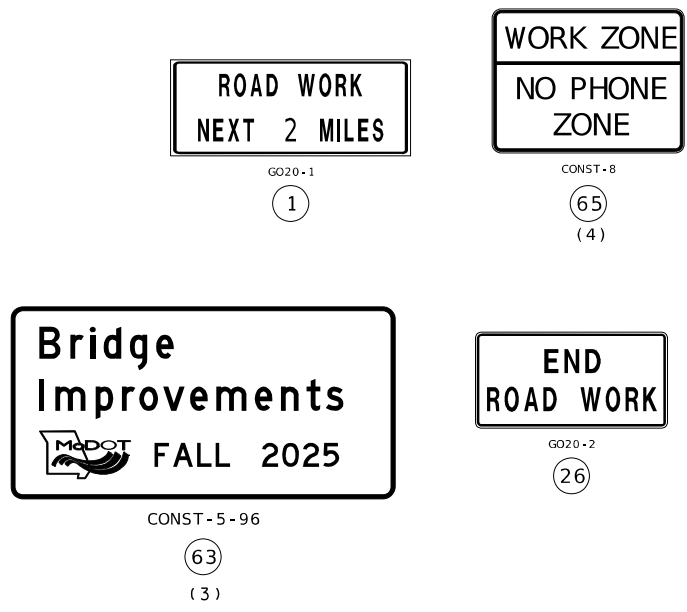
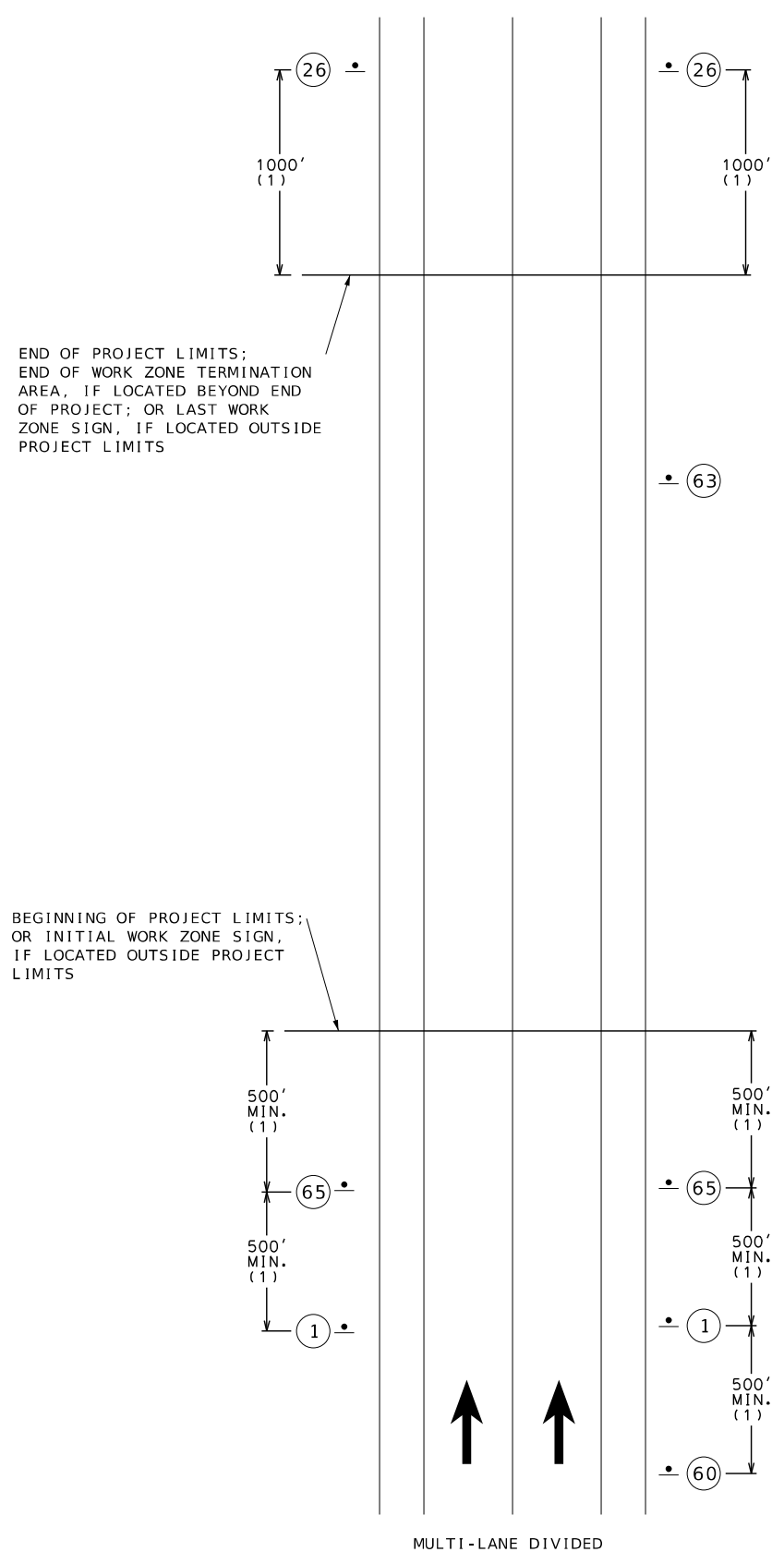
13523 Barrett Parkway Dr Suite 250 St. Louis, MO 63021

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TRAFFIC CONTROL SHEET 12 OF 17

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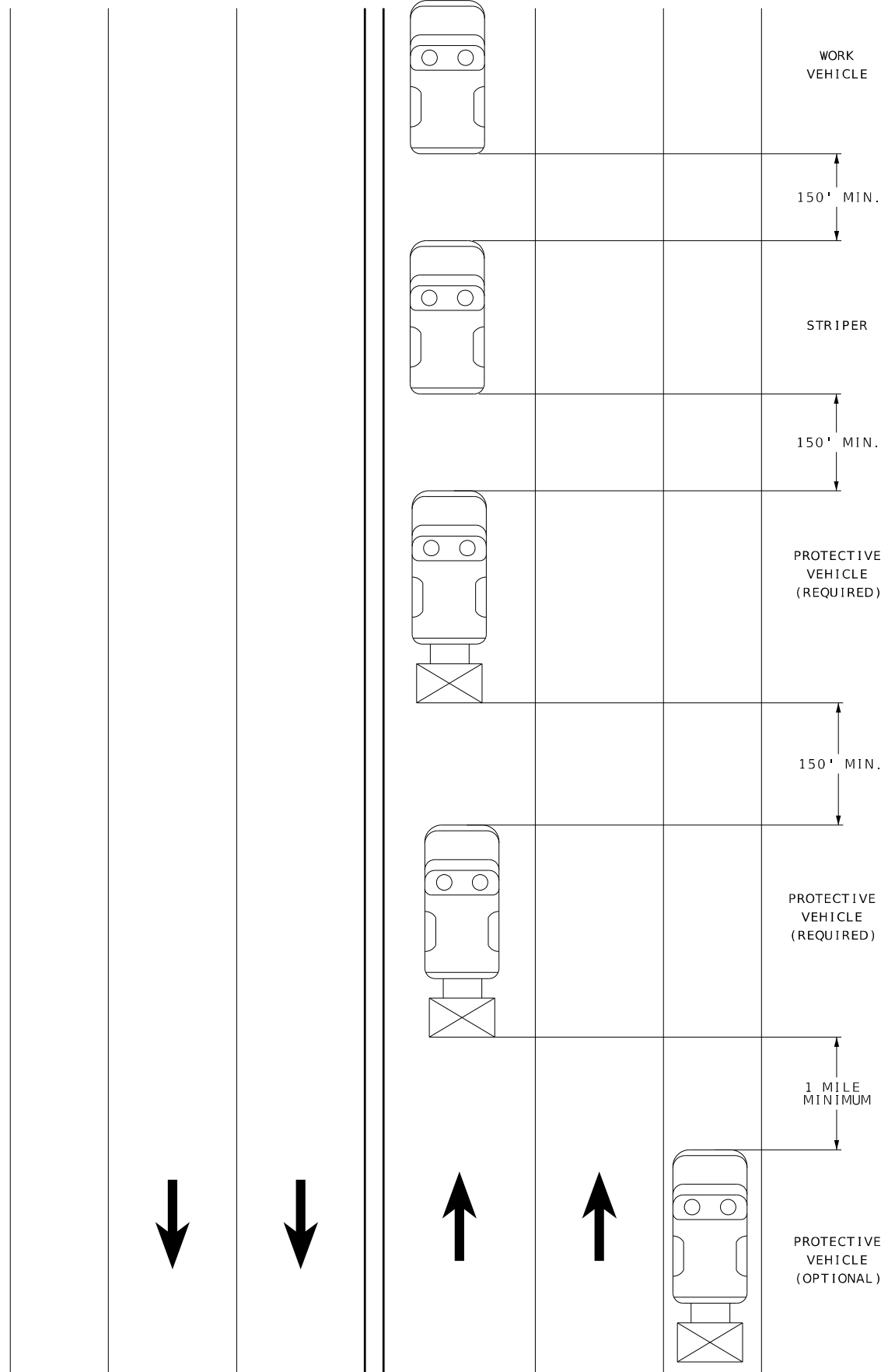
NOTES:

- OTHER SIGNS SUCH AS DETOUR OR ALTERNATE ROUTE SIGNING MAY BE USED OUTSIDE THE PROJECT LIMITS.
- ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.
- (1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED.
- (2) CONST-5-96 SIGN IS PLACED IN A VISIBLE AREA WITHIN THE PROJECT LIMITS PROVIDED ITS PLACEMENT DOES NOT DISRUPT A SEQUENCE OF SIGNS. IF A VISIBLE LOCATION WITHIN THE PROJECT IS NOT AVAILABLE, THE SIGN MAY BE PLACED 500 FEET BEFORE SIGN CONST-7-72.
- (3) THE "WORK ZONE NO PHONE ZONE" SIGN IS PLACED A MINIMUM OF 500 FEET BEFORE THE ROAD WORK AHEAD SIGN.

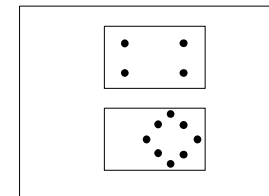
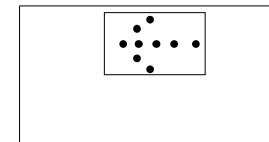
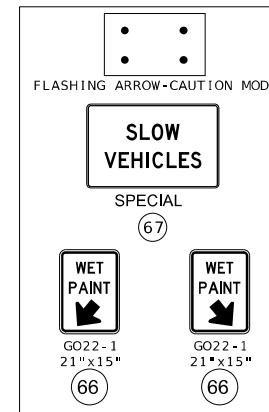
NOT TO SCALE

TRAFFIC CONTROL
 SHEET 12 OF 17

STRIPING OPERATION ON UNDIVIDED MULTI-LANES



NOT TO SCALE



NOTES:

ALL SIGNS SHALL HAVE TYPE 3 FLUORESCENT ORANGE RETROREFLECTIVE SHEETING.

(1) WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE IN WHICH THE PAVEMENT MARKING MATERIAL IS BEING APPLIED. AT THE CONTRACTOR'S OPTION, A FRONT FACING WET PAINT SIGN MAY BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT MARKING EQUIPMENT.

(2) ADVANCE WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL OR SPACING SHOWN, WHICHEVER IS GREATER.

PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY, ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

FLASHING ARROW PANELS SHALL, AT A MINIMUM, BE TYPE B, WITH A SIZE OF 60 X 30 INCHES.

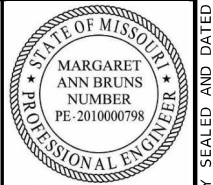
THE STRIPING OPERATION SHALL BE COMPLETED UNDER A LANE CLOSURE.

THE CONTRACTOR IS RESPONSIBLE FOR COMPLETELY COVERING OR REMOVING EXISTING SIGNING, PAVEMENT MARKINGS, OR SIGNALS THAT CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL.

TRAFFIC CONTROL LEGEND

-  FLASHING ARROW PANEL
-  TRUCK MOUNTED ATTENUATOR

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ROUTE 74	STATE MO
DISTRICT SE	SHEET NO. 17

COUNTY
CAPE GIRARDEAU

JOB NO.
J9P3308


CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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

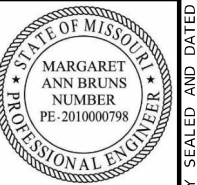
EFK Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
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TRAFFIC CONTROL
SHEET 13 OF 17

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STATIONARY LANE CLOSURE ON A DIVIDED MULTI-LANE HIGHWAY

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ROUTE 74 STATE MO

DISTRICT SE SHEET NO. 18

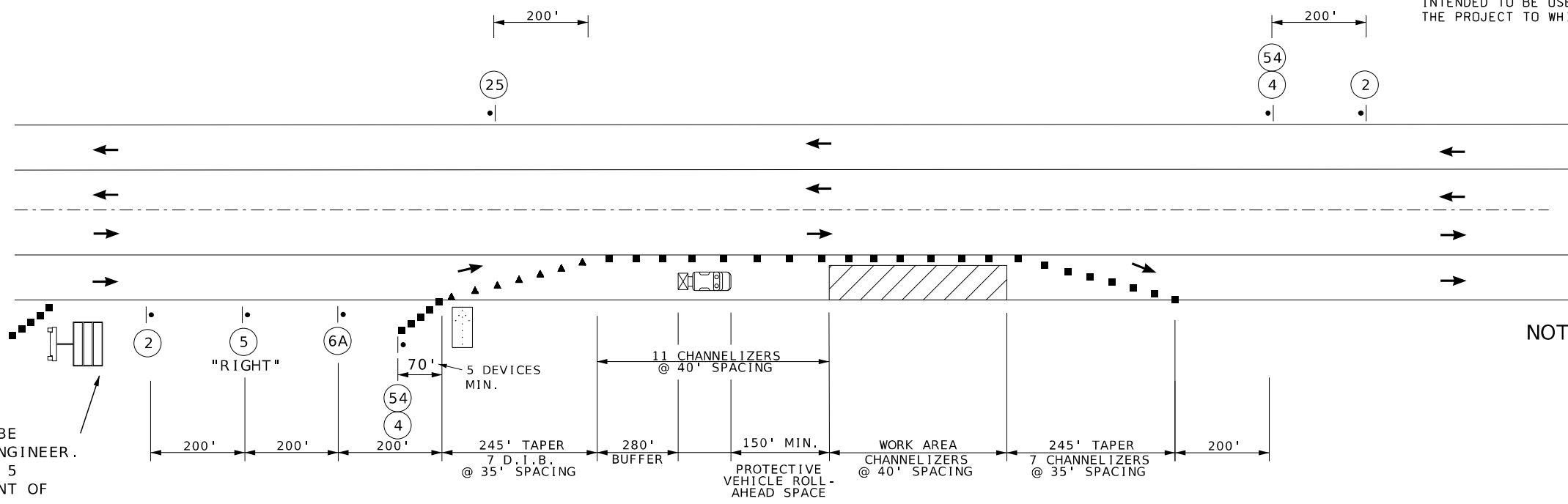
COUNTY
 CAPE GIRARDEAU

JOB NO.
 J9P3308

CONTRACT ID.

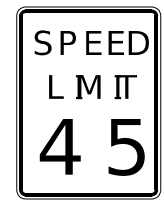
PROJECT NO.

BRIDGE NO.

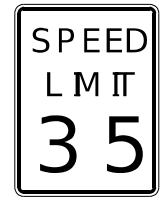


NOT TO SCALE

LOCATION OF CMS TO BE DETERMINED BY THE ENGINEER. EACH CMS SHALL HAVE 5 CHANNELIZERS IN FRONT OF IT.



WO20-1
 (2)



R2-1
 (4)

WO4-1aL
 (6A)

WO20-5
 (5)

R2-1
 (25)

- NOTES:
- SIGN SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR COMPLETELY COVERING OR REMOVING ALL EXISTING SIGNING, PAVEMENT MARKINGS, OR SIGNALS THAT CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL.
 - NO DIRECT PAYMENT WILL BE MADE FOR RELOCATING, COVERING, UNCOVERING, OR REMOVING OF TCP SIGNS.
 - LANE WIDTHS SHALL BE A MINIMUM OF 10'.
 - THE CONTRACTOR SHALL MAINTAIN ACCESS TO ENTRANCES.
 - CHANNELIZER LENGTHS MAY BE REDUCED AT INTERSECTIONS OR OTHER SPOTS TO DISCOURAGE TRAFFIC ENCROACHMENT.
 - FLASHING ARROW PANEL ON PROTECTIVE VEHICLE SHALL BE OPERATED IN CAUTION MODE. THE PROTECTIVE VEHICLE SHALL HAVE HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ACTIVATED FOR THE DURATION OF THE WORK ZONE.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZERS (TRIMLINE)
- WORK AREA
- DIRECTIONAL INDICATOR BARRICADE
- FLASHING ARROW PANEL
- PROTECTIVE VEHICLE WITH FLASHING ARROW PANEL AND OPTIONAL TMA
- CHANGEABLE MESSAGE SIGN

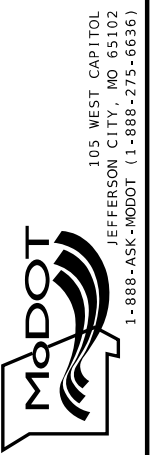
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TRAFFIC CONTROL SHEET 14 OF 17

DESCRIPTION

DATE

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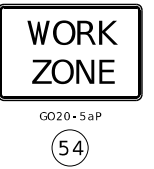
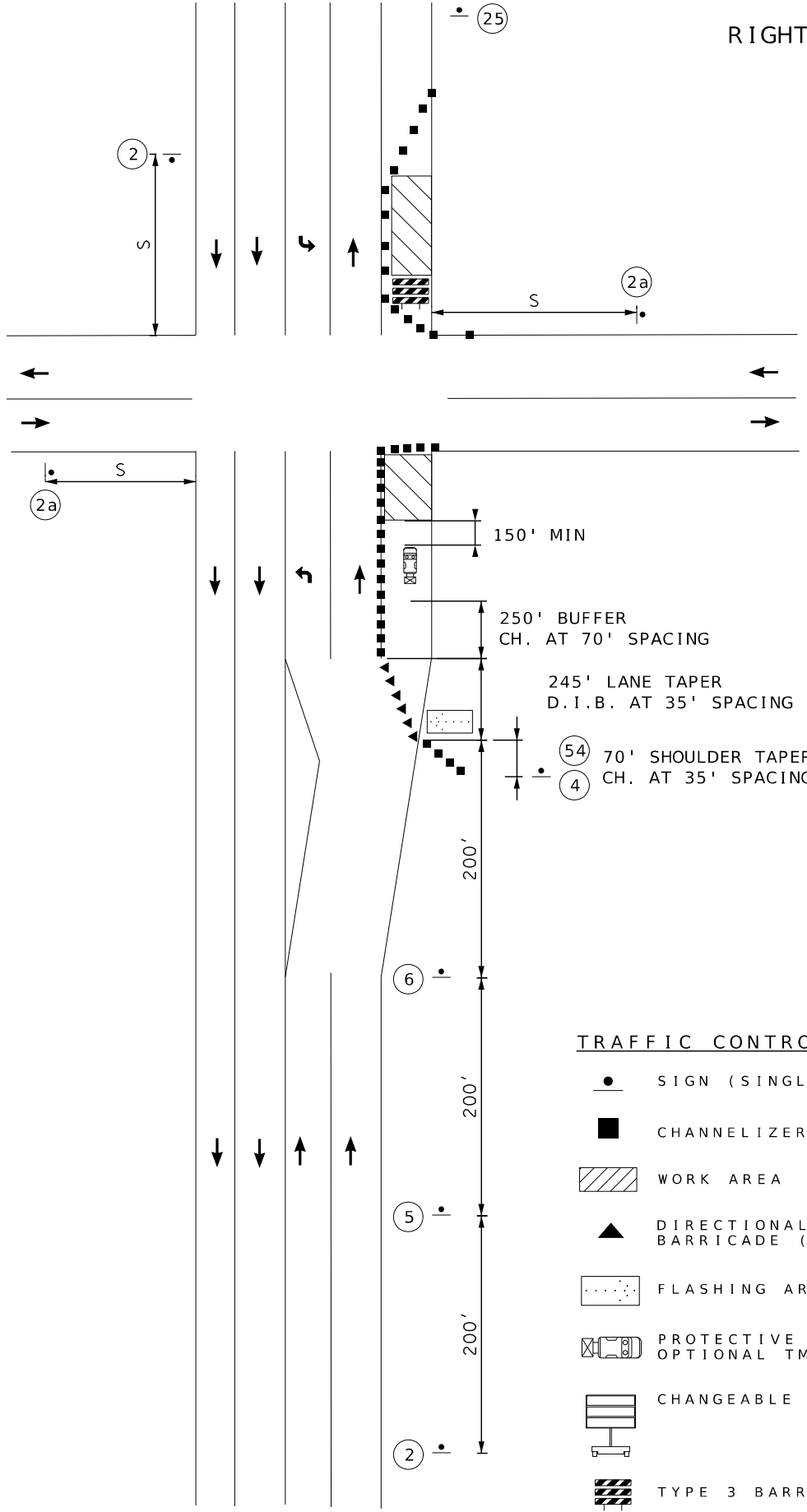
RIGHT LANE CLOSURE AT INTERSECTION WORK ON NEAR OR FAR SIDE

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MO-PE-2010000798

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COUNTY CAPE GIRARDEAU	
JOB NO. J9P3308	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	



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NOT TO SCALE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

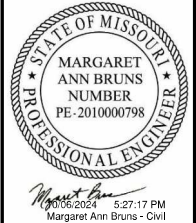


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SIDE ROADS ENTERING WORK ZONES

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 74 MO

DISTRICT SHEET NO.
 SE 20

COUNTY
 CAPE GIRARDEAU

JOB NO.
 J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

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

MoDOT logo

EFK Moen Civil Engineering Design

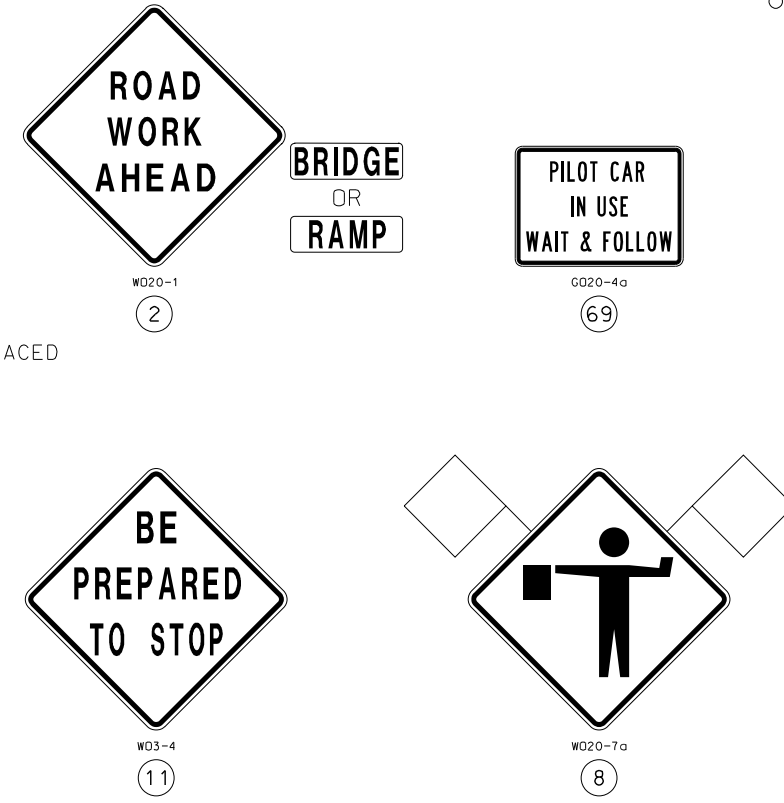
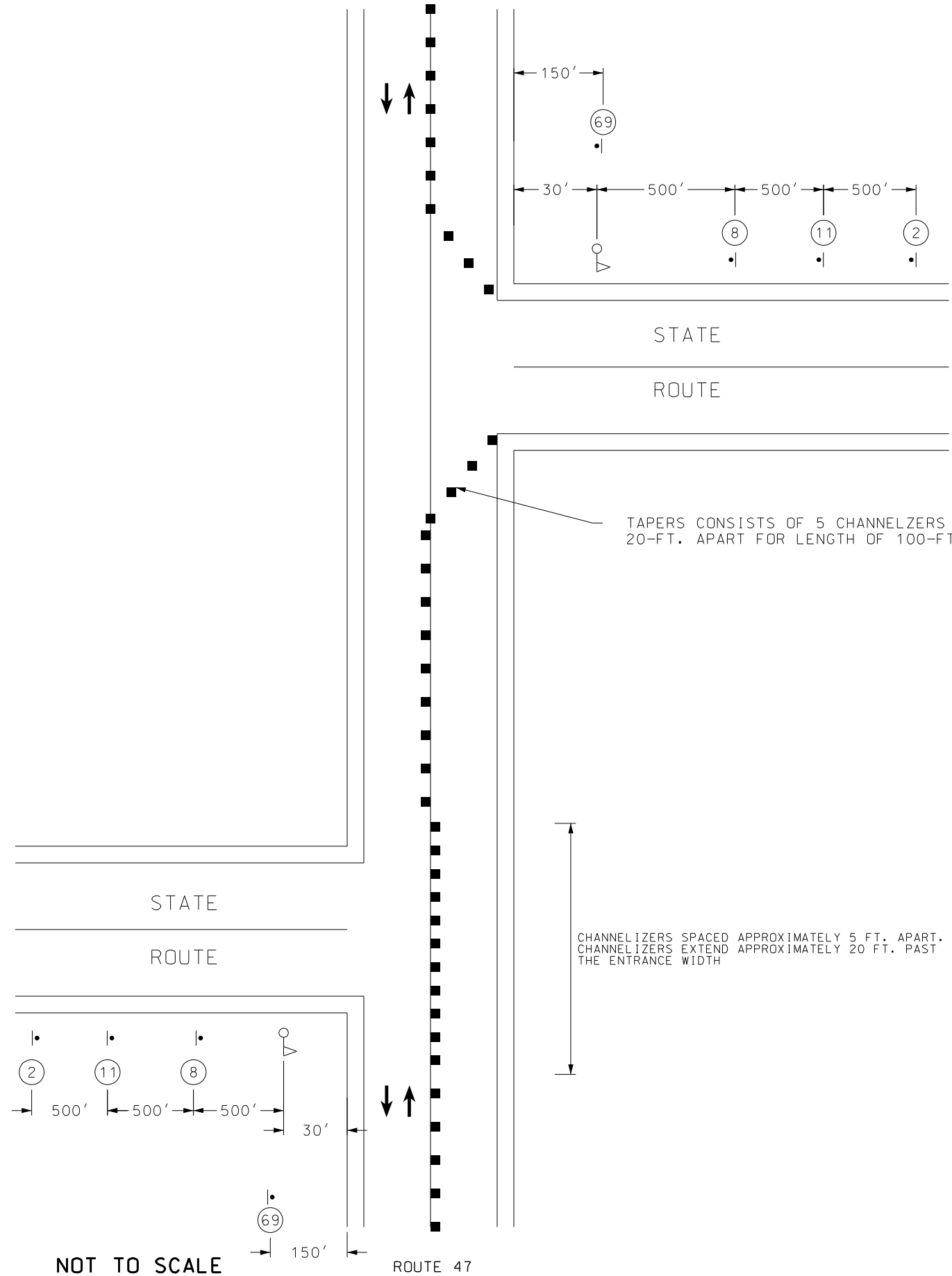
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TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- FLAGGER



TAPERS CONSISTS OF 5 CHANNELIZERS SPACED 20-FT. APART FOR LENGTH OF 100-FT.

CHANNELIZERS SPACED APPROXIMATELY 5 FT. APART. CHANNELIZERS EXTEND APPROXIMATELY 20 FT. PAST THE ENTRANCE WIDTH

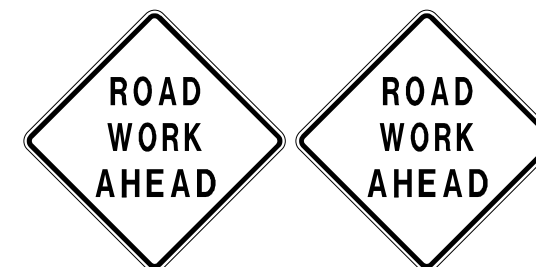
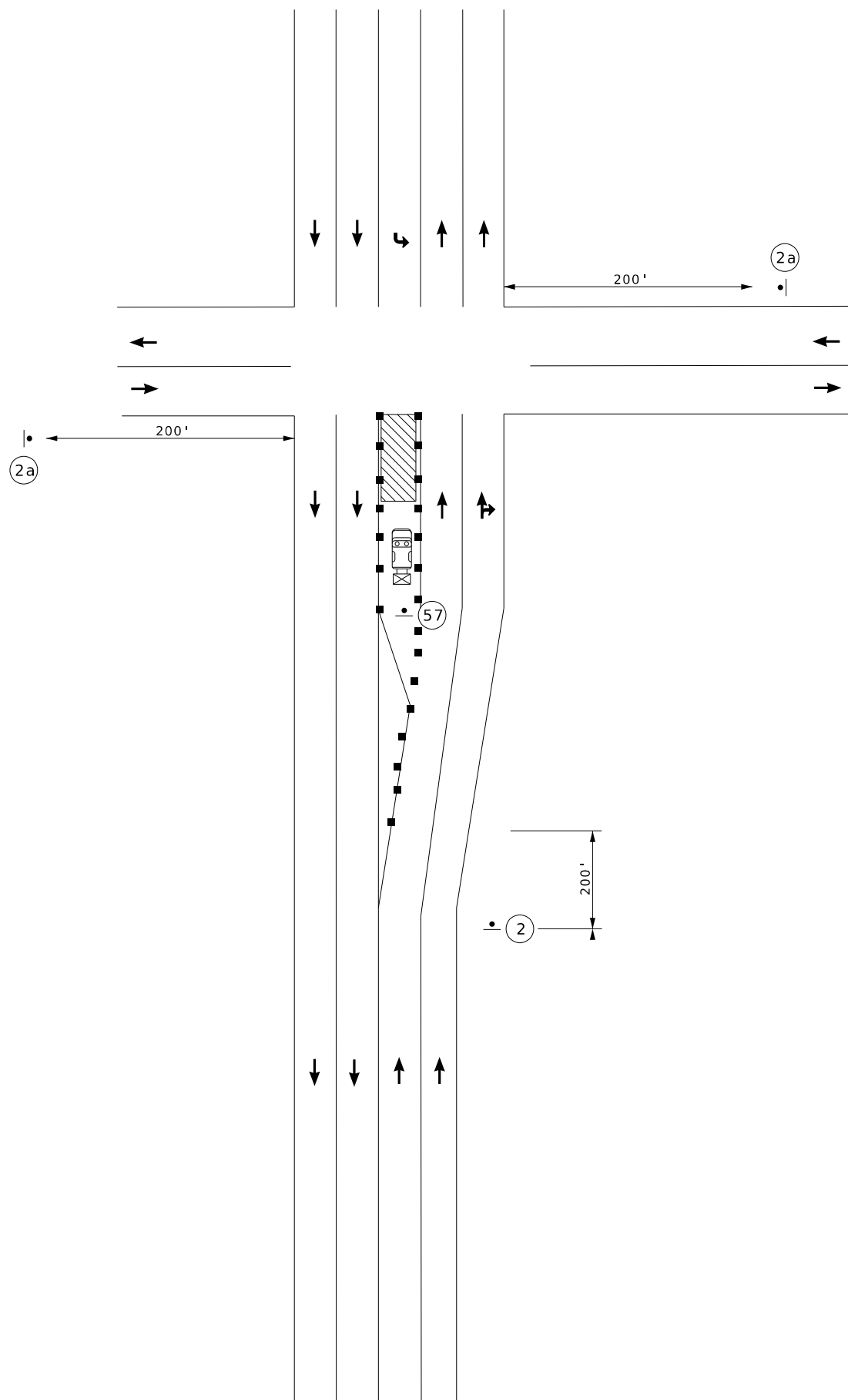
NOTES:
 TRAFFIC ENTERING A WORK ZONE FROM SIDE ROADS SHOULD BE GUIDED THROUGH THE PROJECT, TA-10G PROVIDES IDEAS AND GUIDANCE FOR SIDE ROAD ENTERING.
 AS WITH ANY WORK ZONE, TRAFFIC VOLUME AND NUMBER OF ENTRANCES MAY EFFECT THE AMOUNT OF GUIDANCE FOR THE TRAVELING PUBLIC.
 ADDITIONAL WARNING SIGNS SHALL BE ERECTED AT EACH INTERSECTION WITH ANOTHER STATE HIGHWAY WITHIN THE WORK ZONE. GUIDANCE MAY RANGE FROM A ROAD WORK AHEAD SIGN, A FLAGGER, AT THE INTERSECTION, OR USE OF A PILOT CAR.
 UPON THE DISCRETION OF THE ENGINEER, ADDITIONAL WARNING SIGNS MAY BE ERECTED AT OTHER INTERSECTIONS WITHIN THE WORK ZONE.

NOT TO SCALE

ROUTE 47

TRAFFIC CONTROL SHEET 16 OF 17

TURN LANE CLOSURE AT INTERSECTION



WO20-1

2



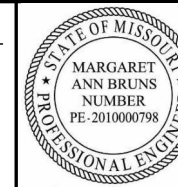
R3-2

57

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZERS (TRIMLINE)
- ▨ WORK AREA
- ▲ DIRECTIONAL INDICATOR BARRICADE
- ⋯ FLASHING ARROW PANEL
- 🚚 PROTECTIVE VEHICLE WITH FAP AND OPTIONAL TMA

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ROUTE 74 STATE MO

DISTRICT SE SHEET NO. 21

COUNTY CAPE GIRARDEAU

JOB NO. J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

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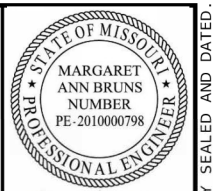
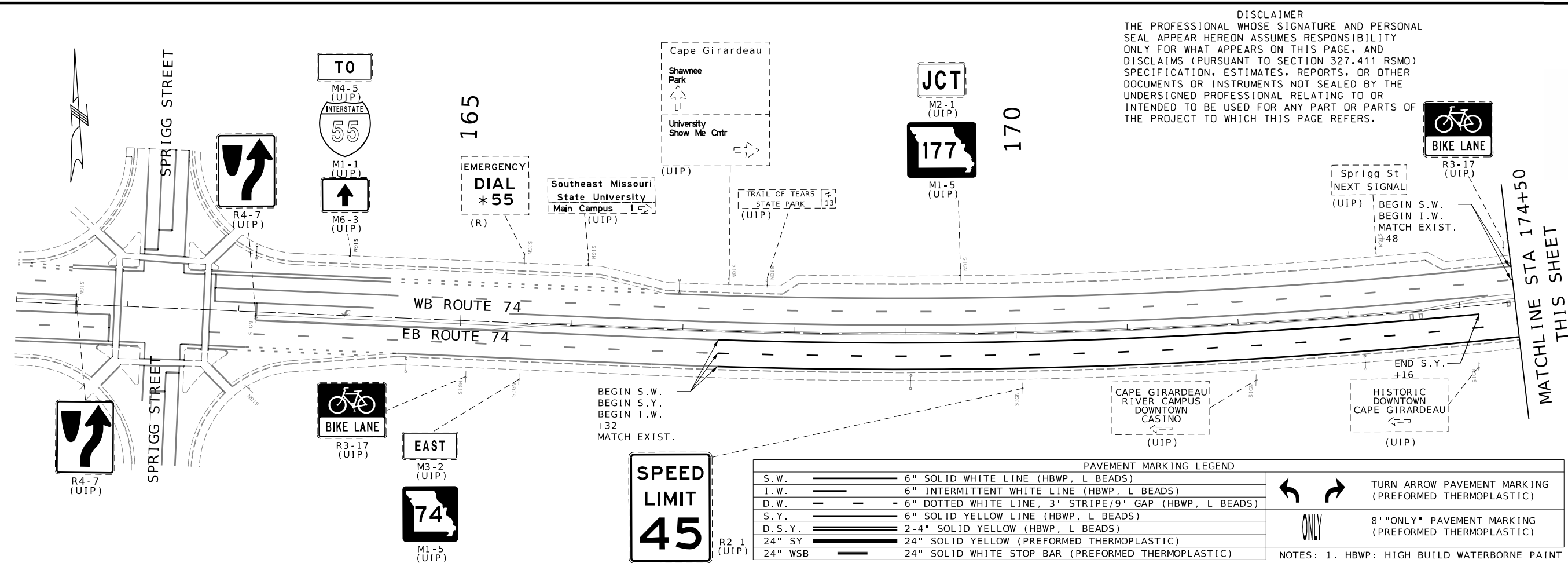
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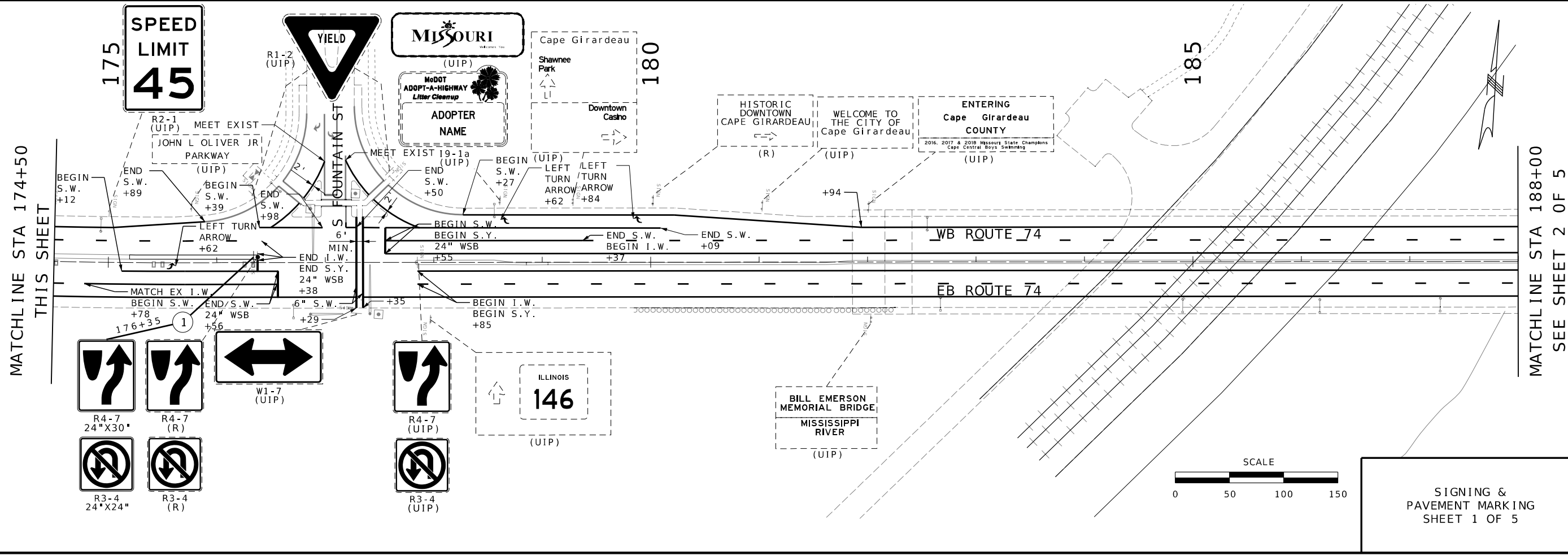
TRAFFIC CONTROL SHEET 17 OF 17

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COUNTY CAPE GIRARDEAU	
JOB NO. J9P3308	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	



DATE	DESCRIPTION

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Civil Engineering Design
13523 Barrett Parkway Dr
St. Louis, MO 63021
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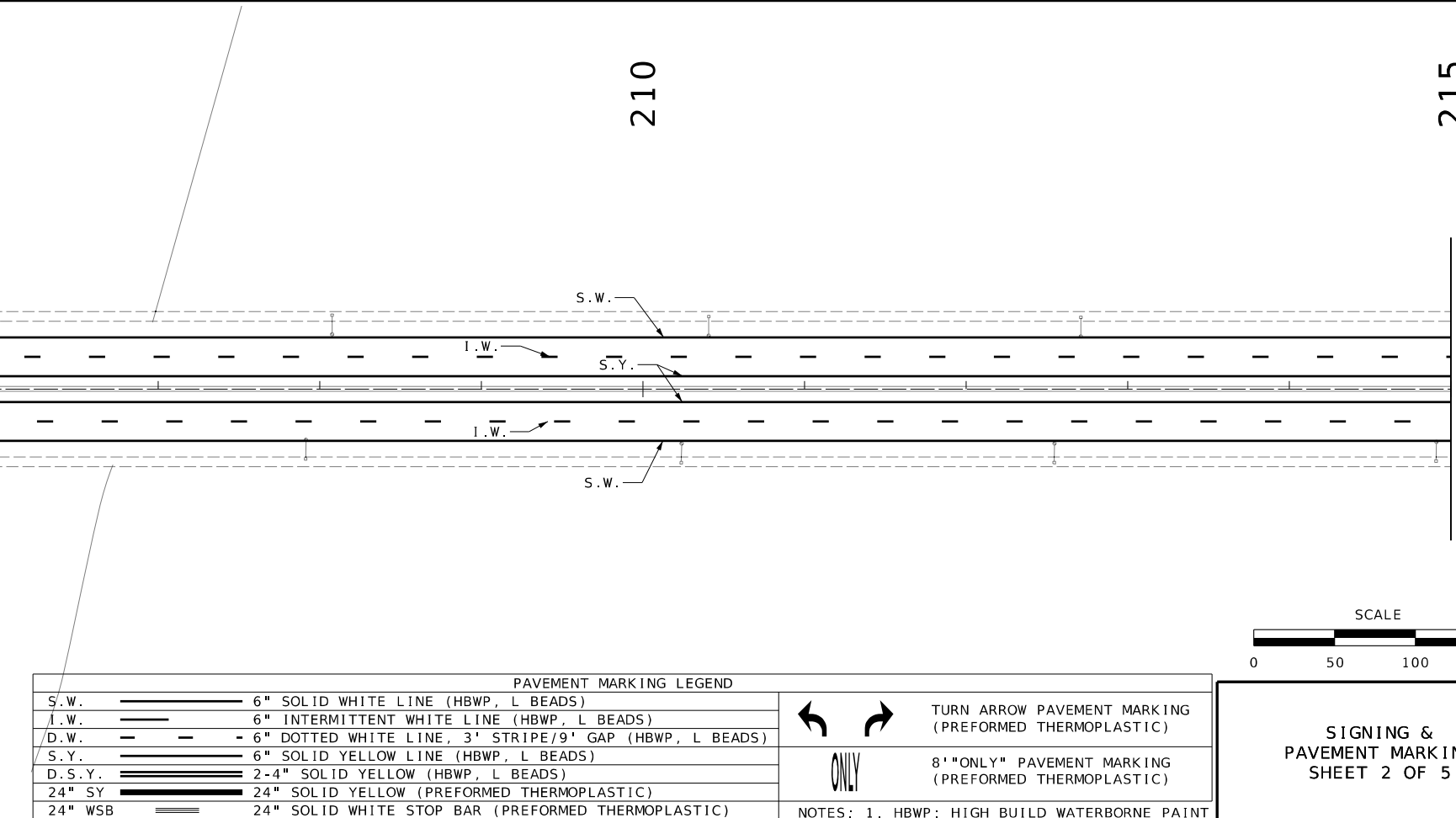
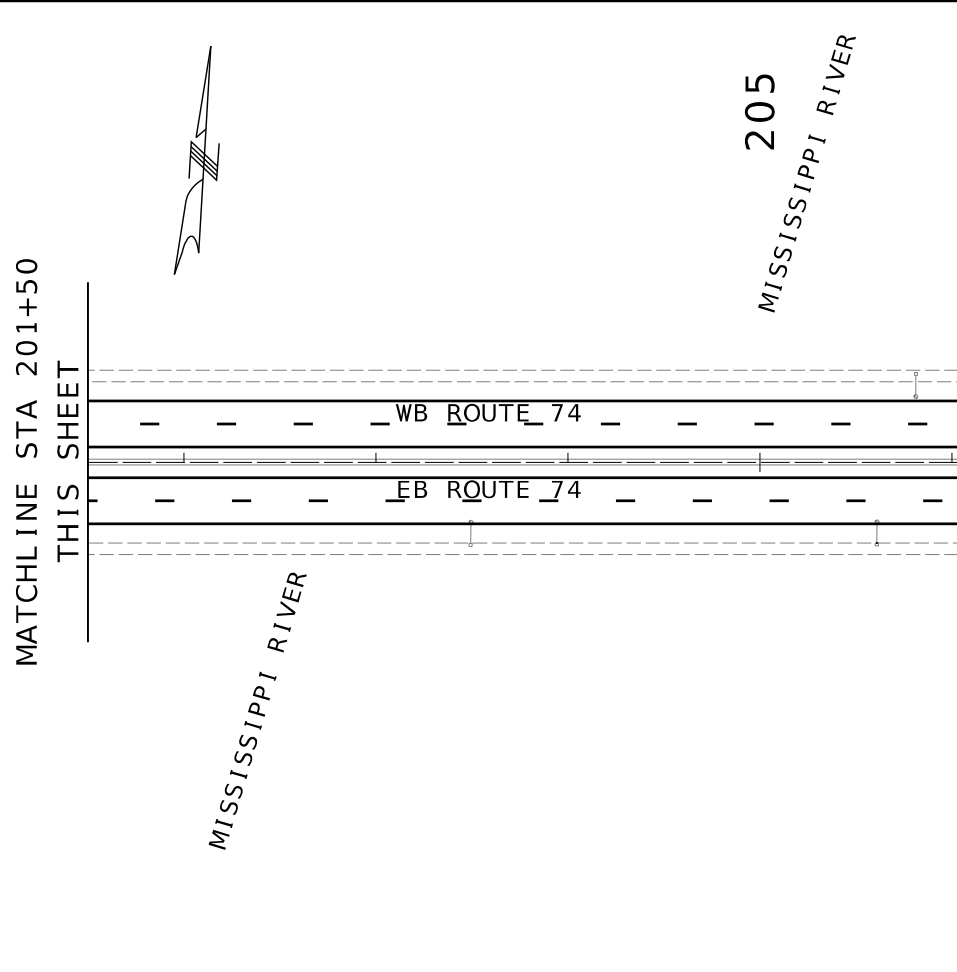
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SEE SHEET 1 OF 5

MATCHLINE STA 201+50
THIS SHEET

190

195

200



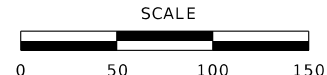
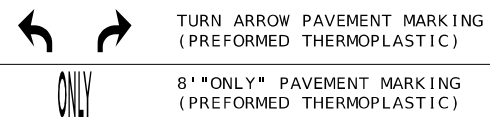
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THIS SHEET

MATCHLINE STA 215+00
SEE SHEET 3 OF 5

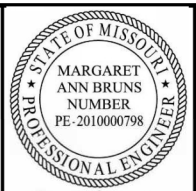
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PAVEMENT MARKING LEGEND	
S.W.	6" SOLID WHITE LINE (HBWP, L BEADS)
I.W.	6" INTERMITTENT WHITE LINE (HBWP, L BEADS)
D.W.	6" DOTTED WHITE LINE, 3' STRIPE/9' GAP (HBWP, L BEADS)
S.Y.	6" SOLID YELLOW LINE (HBWP, L BEADS)
D.S.Y.	2-4" SOLID YELLOW (HBWP, L BEADS)
24" SY	24" SOLID YELLOW (PREFORMED THERMOPLASTIC)
24" WSB	24" SOLID WHITE STOP BAR (PREFORMED THERMOPLASTIC)



SIGNING & PAVEMENT MARKING
SHEET 2 OF 5



DATE PREPARED
10/6/2024

ROUTE 74 STATE MO
DISTRICT SE SHEET NO. 24

COUNTY
CAPE GIRARDEAU
JOB NO.
J9P3308
CONTRACT ID.

PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION

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

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ROUTE STATE
74 MO

DISTRICT SHEET NO.
SE 24

COUNTY
CAPE GIRARDEAU

JOB NO.
J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE

DESCRIPTION

DATE

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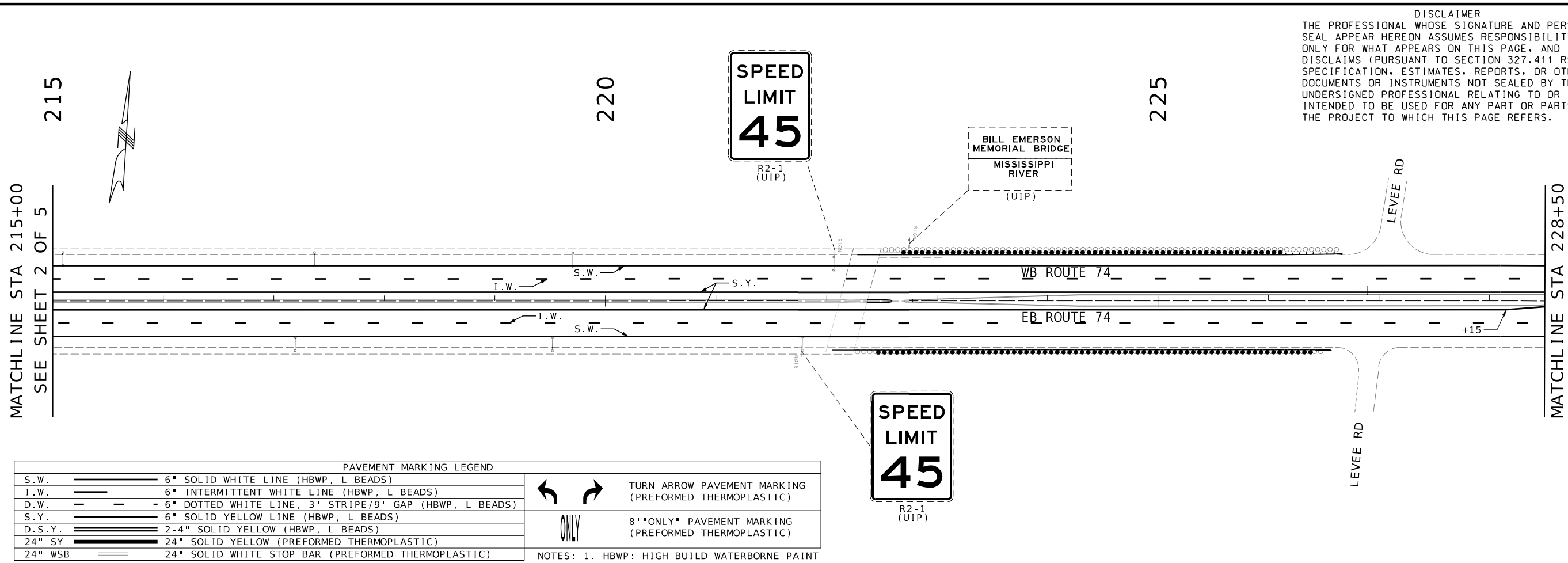
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DATE

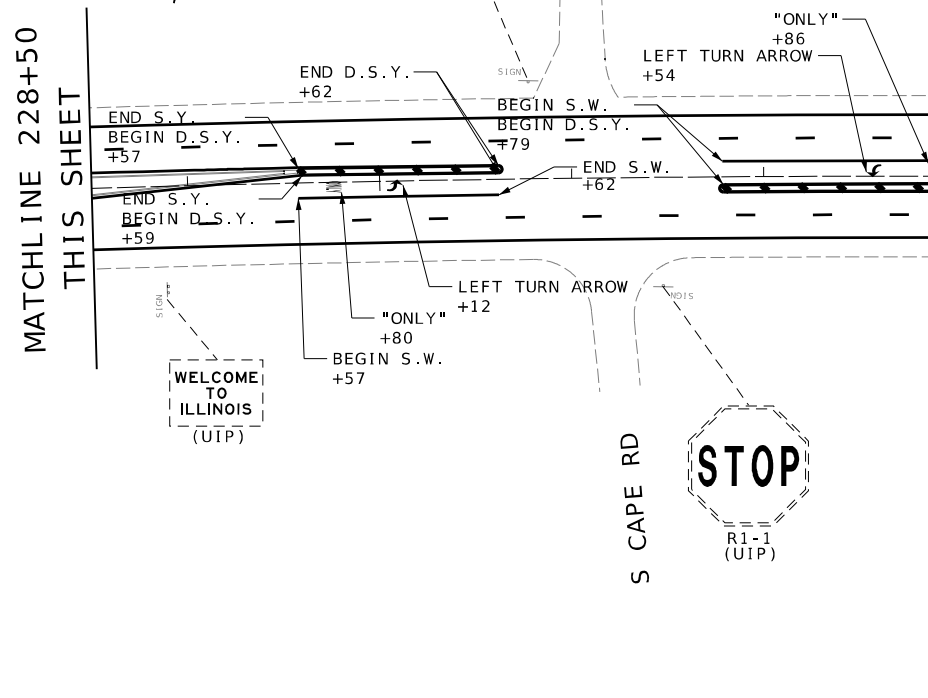
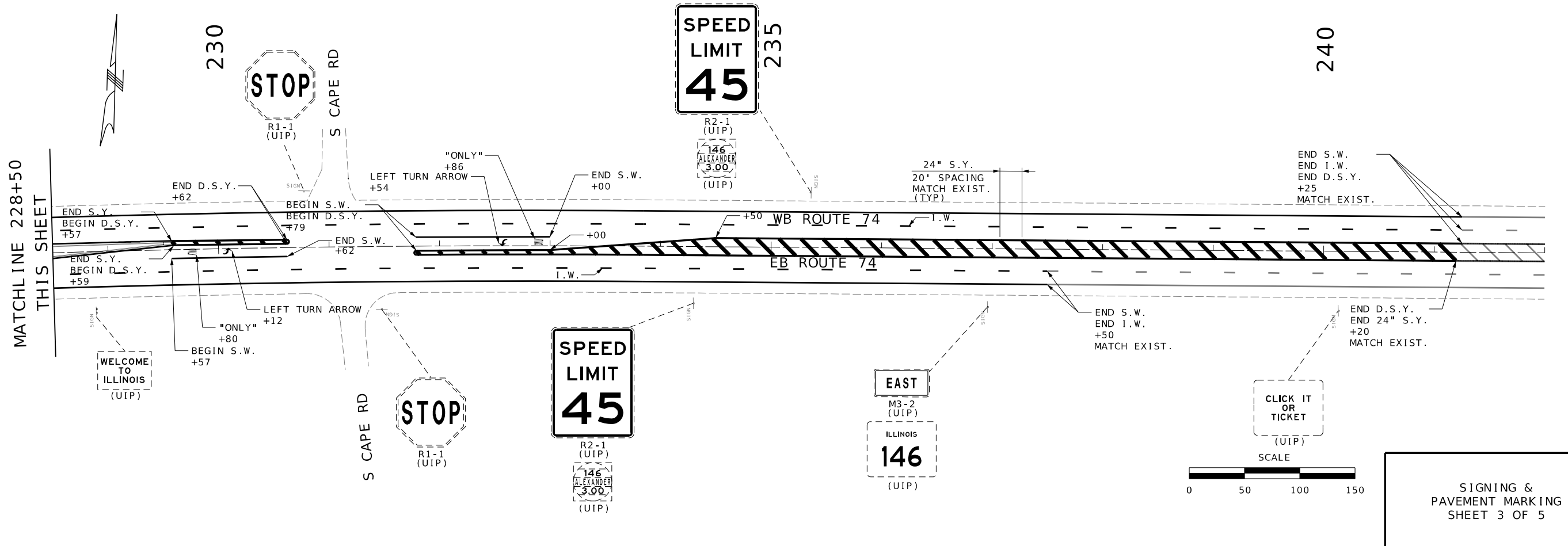
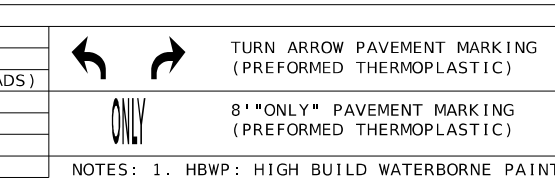
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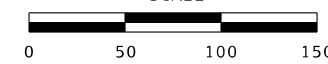


PAVEMENT MARKING LEGEND

S.W.	6" SOLID WHITE LINE (HBWP, L BEADS)
I.W.	6" INTERMITTENT WHITE LINE (HBWP, L BEADS)
D.W.	6" DOTTED WHITE LINE, 3' STRIPE/9' GAP (HBWP, L BEADS)
S.Y.	6" SOLID YELLOW LINE (HBWP, L BEADS)
D.S.Y.	2-4" SOLID YELLOW (HBWP, L BEADS)
24" SY	24" SOLID YELLOW (PREFORMED THERMOPLASTIC)
24" WSB	24" SOLID WHITE STOP BAR (PREFORMED THERMOPLASTIC)



SIGNING & PAVEMENT MARKING
SHEET 3 OF 5

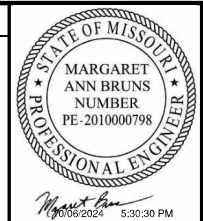


MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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SIGNS						CONCRETE FOOTINGS EMBEDDED		STRUCTURAL STEEL POSTS *					PIPE POSTS *				BACKING BARS **			U-CHANNEL POST	PERFORATED SQUARE STEEL TUBE											REMARKS AND OTHER REQUIRED ITEMS					
902 SIGNAL SIGNS TABULATED ON D-37A SHEET						ITEM NO. 9031010 CY	POST DES. NO.	POST NO. 1	POST NO. 2	POST NO. 3	LBS PER FT	TOTAL ITEM NO. 9031210 LBS	PIPE SIZE IN.	POST NO. 1	POST NO. 2	LBS PER FT	TOTAL ITEM NO. 9031220 LBS	2" X 1/4" BARS @ 2.55 LBS PER FT			ITEM NO. 9031250A LF	2 IN. POST			2.5 IN. POST			BREAK-AWAY ASSEMBLY ITEM NO. 9031241									
SIGN NO.	SIGN SIZE	STATION	HORZ CLEAR IF NOT STD	LOCATION	SIGN DTL. SHT. NO.													NO.	LGTH	TOTAL		NO.	LGTH	TOTAL	POST NO. 1	POST NO. 2	TOTAL		DRIVEN 12-GA. ITEM NO. 9031271A EA	DRIVEN 7-GA. ITEM NO. 9031273A EA	CONCRETE 7-GA. ITEM NO. 9031274 EA	POST NO. 1	POST NO. 2	TOTAL	2.25" INSERT (6 FT) ITEM NO. 9031272A EA	DRIVEN 7-GA. ITEM NO. 9031281A EA	CONCRETE 7-GA. ITEM NO. 9031285 EA
1	ASSY	176+35		RTE 74-CL															14																		
SUBTOTAL																				14																	
TOTAL																				14																	



DATE PREPARED
10/6/2024

ROUTE
74

STATE
MO

DISTRICT
SE

SHEET NO.
25

COUNTY
CAPE GIRARDEAU

JOB NO.
J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102
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* BREAKAWAY ASSEMBLY IS INCIDENTAL FOR STRUCTURAL STEEL AND PIPE POSTS.
** BACKING BARS ARE TOTALED WITH STRUCTURAL STEEL OR PIPE POSTS.

POST DES. NO.	NOM. SIZE	POST			DIA.	FOOTING																					
		WEIGHT		STUB LENGTH		LEVEL GROUND				6:1 GRADE				4:1 GRADE				3:1 OR 2:1 GRADE									
		LBS/FT	LBS/IN			DEPTH	C.Y.	DEPTH	C.Y.	DEPTH	C.Y.	DEPTH	C.Y.	DEPTH	C.Y.	DEPTH	C.Y.										
1	W6	9.0	0.75	3'-0"	15*	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17														
2	W6	15.0	1.25	4'-0"	24*	4'-0"	0.47	4'-2"	0.50	4'-3"	0.51	4'-6"	0.54														
3	W8	18.0	1.50	4'-6"	28*	4'-6"	0.71	4'-8"	0.73	4'-9"	0.74	5'-0"	0.78														
4	W10	22.0	1.83	5'-0"	36*	5'-0"	1.31	5'-2"	1.36	5'-3"	1.39	5'-6"	1.45														
5	W10	26.0	2.17	5'-0"	36*	5'-0"	1.31	5'-3"	1.37	5'-5"	1.43	5'-9"	1.52														
6	W12	35.0	2.92	5'-6"	36*	5'-6"	1.44	5'-9"	1.52	5'-11"	1.56	6'-3"	1.65														

NOM. SIZE (IN.)	WEIGHT		STUB LENGTH	FOOTING		CONCRETE C.Y.
	LBS/FT	LBS/IN		DIA.	DEPTH	
2 1/2	5.79	0.48	4'- 3/4"	12*	4-6"	0.13
3	7.58	0.63	4'- 3/4"	12*	4-6"	0.13
4	10.79	0.90	5'- 3/4"	18*	5-6"	0.36

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D-29

SIGNING SHEET
SHEET 4 OF 5

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STANDARD SIGN ASSEMBLIES														SIGN SUMMARY											
SIGN NUMBER	STATION	LOCATION	TYPE											STANDARD SIGN OR SPECIAL SIGN NUMBER	SIGN DETAIL SHEET NO.	NO. EACH	SIZE, TYPE & SQUARE FEET								
			SIGN DESCRIPTION, SIZES & NUMBER OF EACH														SIZE	FLAT SHEET SH ITEM NO.	FLAT SHEET FLUORESCENT SHF * ITEM NO.	STRUCTURAL ST ITEM NO.	STRUCTURAL FLUORESCENT STF * ITEM NO.				
1	176+35	RTE 74-CL	1	1											R4-7	1	24X30	5							
															R3-4	1	24X24	4							
TOTAL																				9					

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* ORANGE, YELLOW & YELLOW/GREEN



DATE PREPARED
10/6/2024

ROUTE STATE
74 MO

DISTRICT SHEET NO.
SE 26

COUNTY JOB NO.
CAPE GIRARDEAU J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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

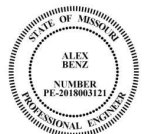
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D-30
SIGNING SHEET
SHEET 5 OF 5

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

U.I.P. AND REHABILITATE EXISTING (468'-1150'-468') CABLE STAYED
 (170')(4 @ 170')(3 @ 170') CONTINUOUS COMPOSITE PLATE GIRDER SPANS (SKEW: VARIES)

SEC/SUR 2199 TWP 30N RGE 14E



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 MO PE-2018003121

Index of Sheets	
Sheet No.	Sheet Title
1	Title Sheet and Index of Sheets
2	General Notes and Quantities
3	Substructure Repairs
4	Miscellaneous Repairs
5	Stay Cable Repairs
6	Stay Cable Repairs
7	Superstructure Repairs
8	Bearing Removal
9	Bearing Details
10	Bearing and Shock Transmission Notes
11	Polyester Polymer Concrete Wearing Surface Details
12	Polyester Polymer Concrete Wearing Surface at Construction Joints
13	Approach Slab Repair Details
14	Modular Joint Repair at Bent No. 4
15	Expansion Joint Removal at Bent No. 15
16	Expansion Joint Replacement at Bent No. 15
17	Barrier Details at WB Bent No. 15
18	Median Barrier Details at WB Bent No. 15
19	Median Barrier Details at EB Bent No. 15
20	Barrier Details at EB Bent No. 15
21	Bending Diagrams and Reinforcing Steel Totals
22	Bill of Reinforcing Steel

DATE PREPARED
10/1/2024

ROUTE 74 STATE MO

DISTRICT BR SHEET NO. 1

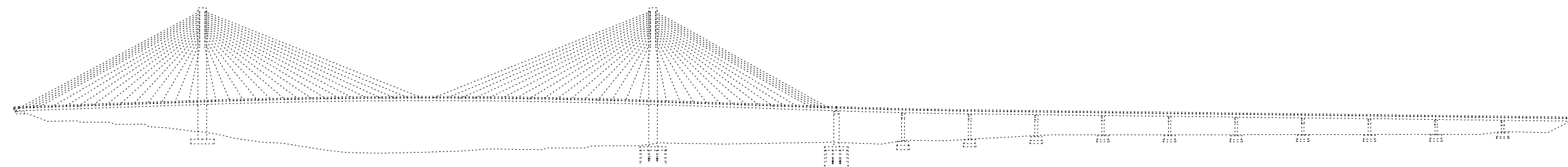
COUNTY CAPE GIRARDEAU

JOB NO. J9P3308

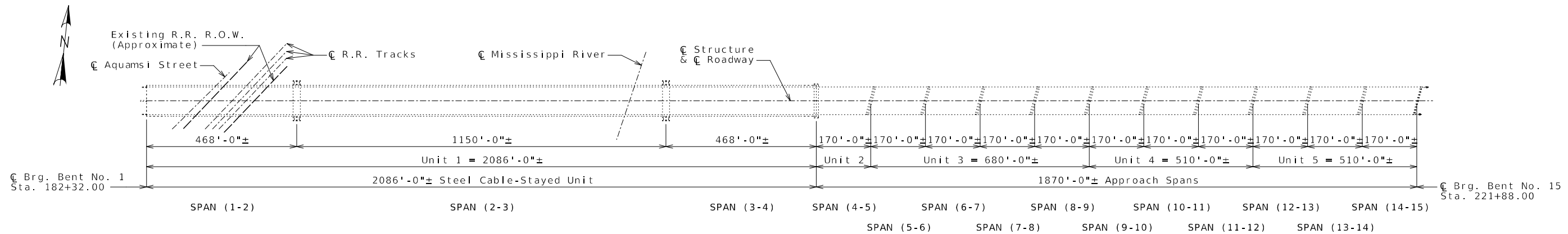
CONTRACT ID.

PROJECT NO.

BRIDGE NO. A50763



GENERAL ELEVATION



PLAN

BRIDGE: ROUTE 74 OVER MISSISSIPPI RIVER

ROUTE 74 FROM ROUTE 1-55 TO 1L ROUTE 3
 ABOUT 3.0 MILES EAST OF ROUTE 1-55

BEGINNING STATION 182+23.00± (MATCH EXISTING)

Designed Apr. 2024
 Detailed Apr. 2024
 Checked Apr. 2024

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

Sheet No. 1 of 22

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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REV.

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
 Seismic Performance Category = C
 Acceleration Coefficient = 0.36g
 Bridge Deck Rating = 6

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)

Design Loading:

HS20-44 Modified (1993)
 Military 24,000 lb Tandem Axle (1993)

Design Unit Stresses:

Class B-1 Concrete (Barrier) $f'c = 4,000$ psi
 Reinforcing Steel (Grade 60) $f_y = 60,000$ psi
 Structural Steel (ASTM A709 Grade 50) $f_y = 50,000$ psi

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:

Traffic to be maintained on structure during construction. See roadway plans for traffic control.

Miscellaneous:

Roadway surfacing adjacent to bridge ends shall match new bridge wearing surface (roadway item).

All concrete repairs shall be in accordance with Sec 704, unless otherwise noted.

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

Contractor shall verify all dimensions in field before finalizing the shop drawings.

In order to maintain grade and a minimum thickness of wearing surface as shown on plans it may be necessary to use additional quantities of wearing surface at various locations through the structure. The cost of furnishing and installing the wearing surface will be considered completed covered in the contract unit price, including all additional labor, materials or equipment for variations in thickness of wearing surface.

Bars bonded in existing concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, existing bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Structural Steel Protective Coating:

Protective Coating: System G in accordance with Sec 1080.

Coating Limits: All existing structural steel 10 feet from end of girders at Bents No. 1, 4, 5, 9, 12, & 15 shall be recoated. Within these limits, items to be recoated shall include girders, floor beams, stiffeners and miscellaneous structural steel items. Additionally, all web extension and fin plate anchorages shall be recoated.

Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1080 and Sec 1081 for Recoating of Structural Steel (System G) with inorganic zinc primer. The cost of surface preparation will be considered completely covered by the contract unit price per sq. foot for Surface Preparation for Recoating Structural Steel.

Prime Coat: The cost of the prime coat will be considered completely covered by the contract unit price per sq. foot for Field Application of Inorganic Zinc Primer.

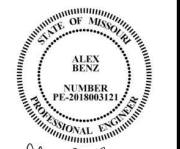
Field Coats: The color of the field coats near the bents shall be Brown (Federal Standard #30045) and the field coats of web extension and fin plate anchorages shall be Gray (Federal Standard #26373). The cost of the intermediate field coat will be considered completely covered by the contract unit price per sq. foot for Intermediate Field Coat (System G). The cost of the finish field coat will be considered completely covered by the contract unit price per sq. foot for Finish Field Coat (System G).

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.

Estimated Quantities

Item	Unit	Total
Removal of Concrete Wearing Surface	sq. foot	193,303
Removal of Existing Expansion Joint & Adjacent Concrete	linear foot	83
Removal of Existing Bearings	each	4
Remove and Replace Barrier	linear foot	31
Furnish Polyester Polymer Concrete Wearing Surface	cu. yard	1,979
Place Polyester Polymer Concrete Wearing Surface	sq. yard	21,479
Penetrating Concrete Sealer	sq. yard	489
Sealer for PPC Wearing Surface	linear foot	12,682
Substructure Repair (Unformed)	sq. foot	800
Epoxy Pressure Injecting	linear foot	1,800
Replace Conduit and Junction Boxes	lump sum	1
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Surface Preparation for Recoating Structural Steel	sq. foot	24,400
Field Application of Inorganic Zinc Primer	sq. foot	24,400
Intermediate Field Coat (System G)	sq. foot	24,400
Finish Field Coat (System G)	sq. foot	24,400
Repair Restraint Cable Sheath	lump sum	1
Reset Cable Ties	lump sum	1
Remove and Replace Modular Joint Hold Down Springs	each	11
Remove and Replace Modular Joint Control Springs	each	96
Remove and Replace Tower Inspection Hatch Door Hinges	each	2
Remove and Replace Shock Transmission Unit	each	1
Repair Cable Protective Sheathing	linear foot	20
HLMR Bearing	each	4
Modular Expansion Joint System	linear foot	83
Remove and Replace Modular Joint Seal	linear foot	80
Clean Expansion Joint	linear foot	329
Navigation Lighting System	lump sum	1
Bridge Lighting	lump sum	1



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ROUTE 74 STATE MO
 DISTRICT BR SHEET NO. 2

COUNTY CAPE GIRARDEAU
 JOB NO. J9P3308

CONTRACT ID.

PROJECT NO.

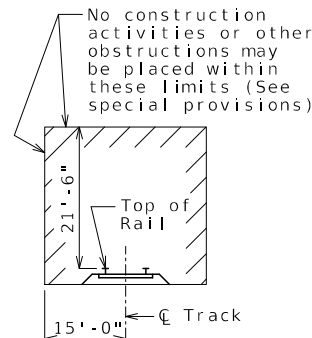
BRIDGE NO. A50763

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

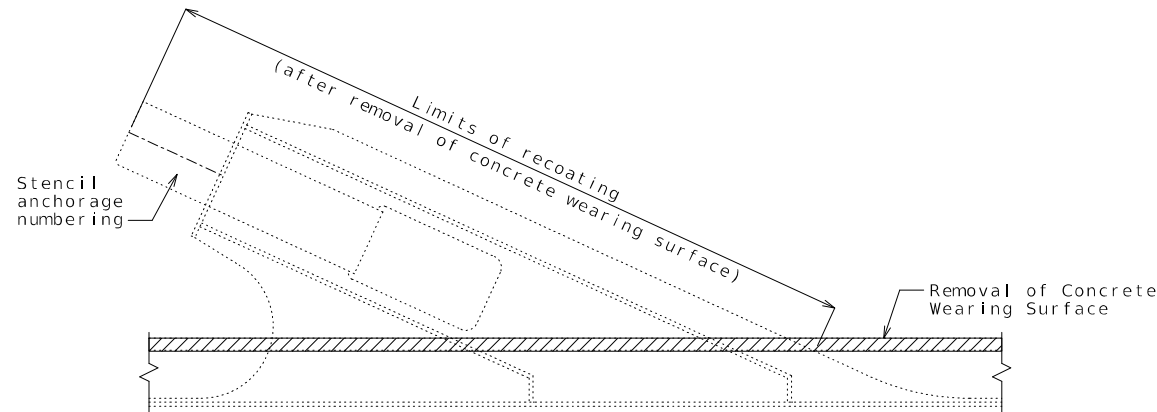
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MINIMUM CONSTRUCTION CLEARANCES

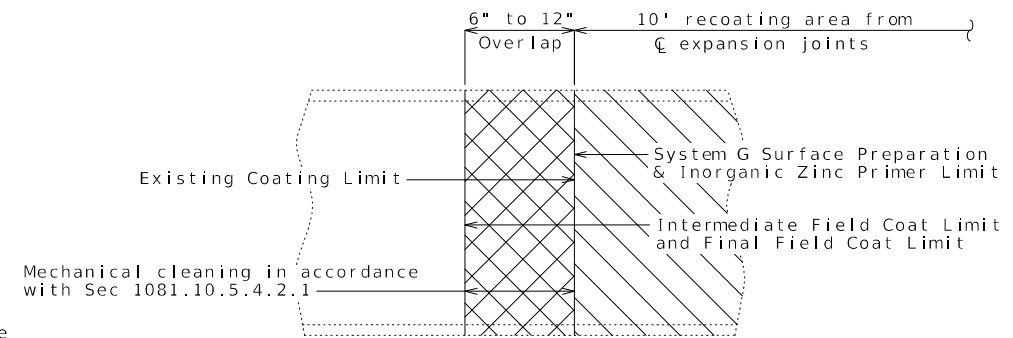
(Normal to railroad)
 (Not to scale)



PART ELEVATION SHOWING LIMITS OF ANCHORAGE FIN RECOATING
 (128 Locations)

Notes:
 Recoating to occur after existing concrete wearing surface is removed and prior to new PPC overlay installation.

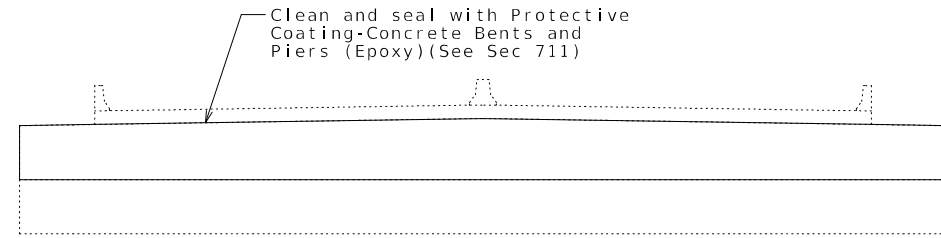
Anchorage number to be stenciled onto roadway side of assembly with 10" high black lettering. See Sheet No. 5 for anchorage numbering.



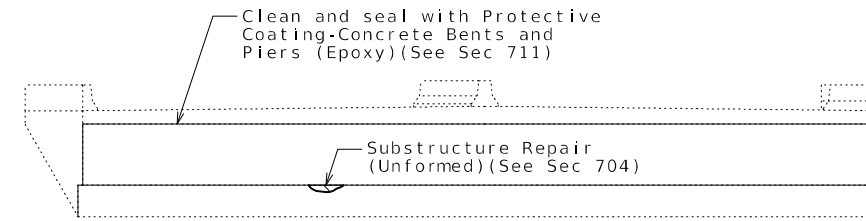
PART ELEVATION SHOWING LIMITS OF PAINT OVERLAP
 (Vertical or horizontal paint limit. Horizontal limit shown)

Limits of Paint Overlap: System G shall overlap the existing coating between 6 inches and 12 inches in order to achieve maximum coverage at the paint limit of each complete system near the expansion and contraction areas. The final field coating shall be masked to provide crisp, straight lines and to prevent overspray beyond the overlap required.

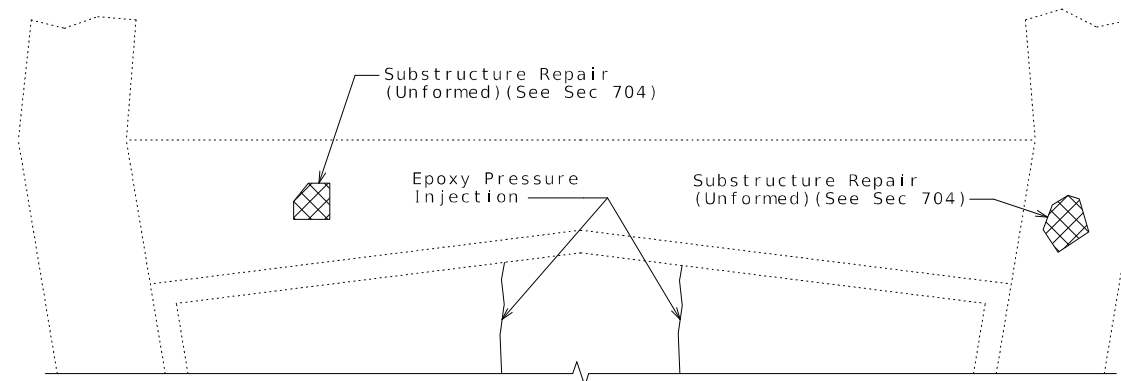
GENERAL NOTES AND QUANTITIES



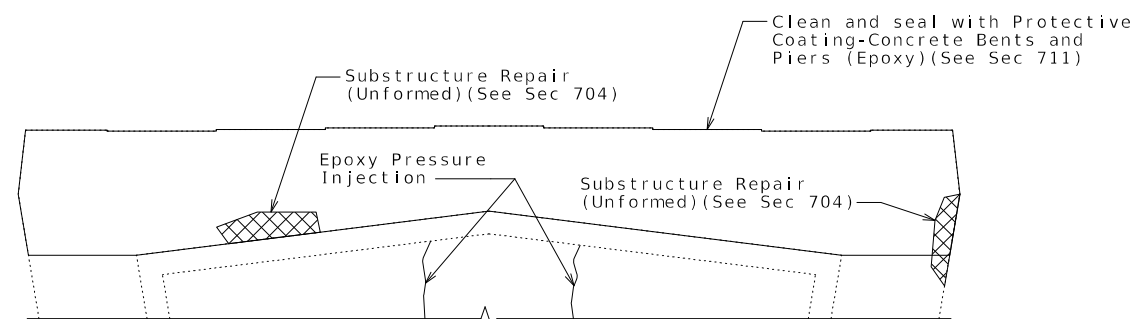
DETAIL SHOWING SUBSTRUCTURE REPAIR AT END BENT NO. 1



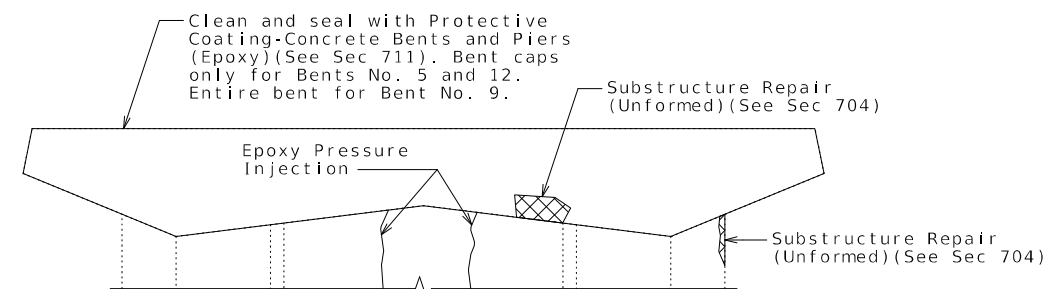
DETAIL SHOWING SUBSTRUCTURE REPAIR AT END BENT NO. 15



DETAIL SHOWING SUBSTRUCTURE REPAIR AT INTERMEDIATE BENTS NO. 2 & 3



DETAIL SHOWING SUBSTRUCTURE REPAIR AT INTERMEDIATE BENT NO. 4



DETAIL SHOWING SUBSTRUCTURE REPAIR AT INTERMEDIATE BENTS NO. 5-14



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DATE PREPARED	10/1/2024
ROUTE	74
STATE	MO
DISTRICT	BR
SHEET NO.	3
COUNTY	CAPE GIRARDEAU
JOB NO.	J9P3308
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	A50763

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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SUBSTRUCTURE REPAIRS

Detailed Apr. 2024
Checked Apr. 2024

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

Sheet No. 3 of 22

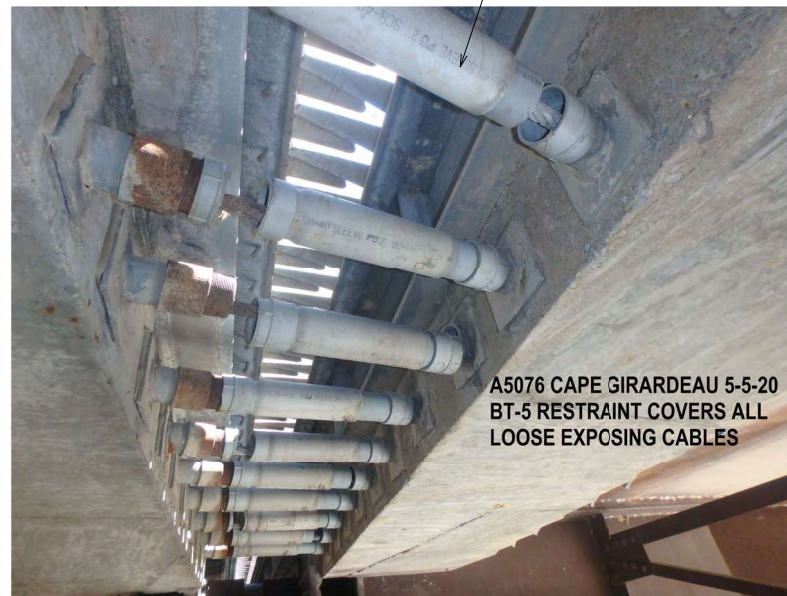
Replace corroded conduit (estimated 10 feet) and conduit junction boxes (estimated 3 each) below all expansion joints



A5076 Cape Girardeau 4-26-22
Utility service boxes with advanced section loss at bt 12

CONDUIT REPAIRS AT EXPANSION JOINTS
(Bents No. 1, 4, 5, 9, 12 and 15)

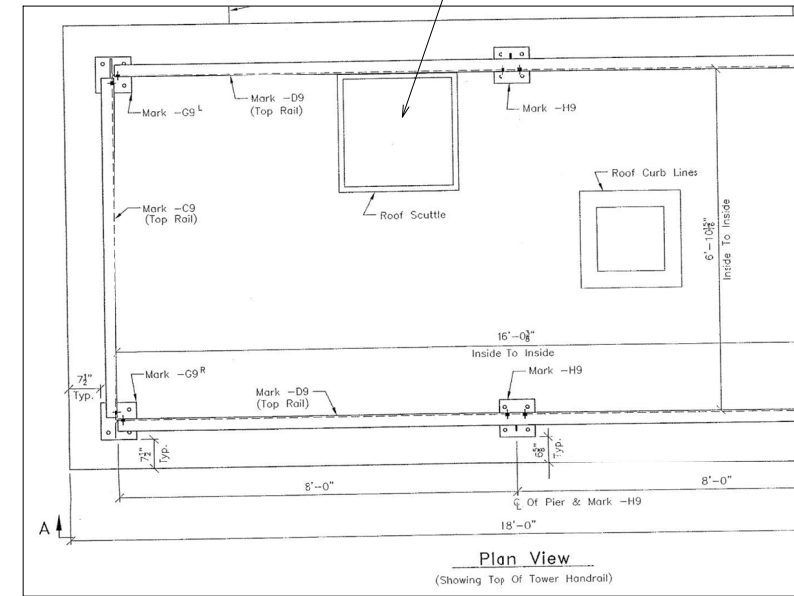
Remove all sleeves and epoxy coat cables (36 locations)



A5076 CAPE GIRARDEAU 5-5-20
BT-5 RESTRAINT COVERS ALL LOOSE EXPOSING CABLES

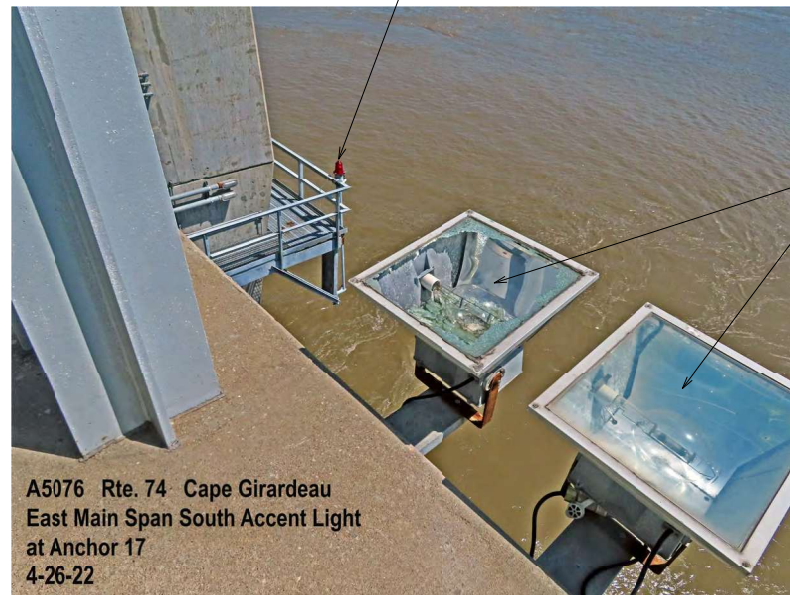
RESTRAINER CABLE SHEATH REPAIRS AT BENT NO. 5

Replace hinges on tower inspection hatch door with heavy duty hinges with stainless steel pins



NORTH TOWER INSPECTION HATCH AT BENT NO. 2

Replace red navigation lighting system (4 locations) (See special provisions)



A5076 Rte. 74 Cape Girardeau
East Main Span South Accent Light
at Anchor 17
4-26-22

LIGHT STYLE NO. 1

Replace all aesthetic light fixtures (140 locations) (See special provisions)



A5076 Rte. 74 Cape Girardeau
West Main Span North Accent Light
at Anchor #25
4-27-22

LIGHT STYLE NO. 2

MISCELLANEOUS REPAIRS

Detailed Apr. 2024
Checked Apr. 2024

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

Sheet No. 4 of 22



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DATE PREPARED
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ROUTE 74 STATE MO
DISTRICT BR SHEET NO. 4
COUNTY CAPE GIRARDEAU
JOB NO. J9P3308
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A50763

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

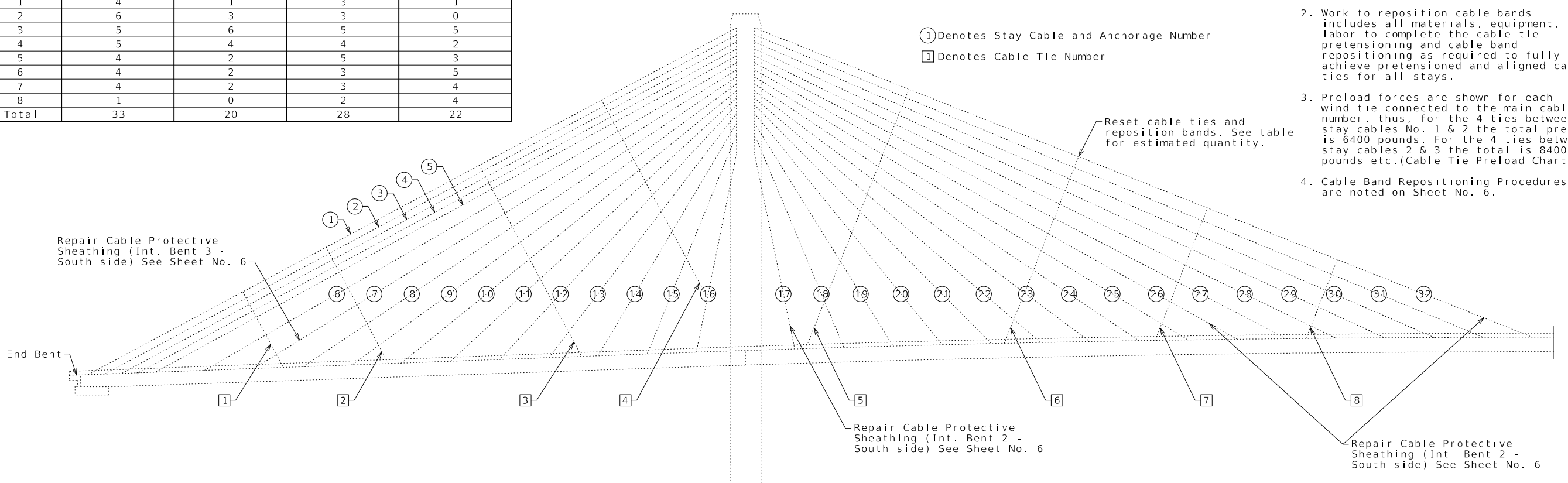
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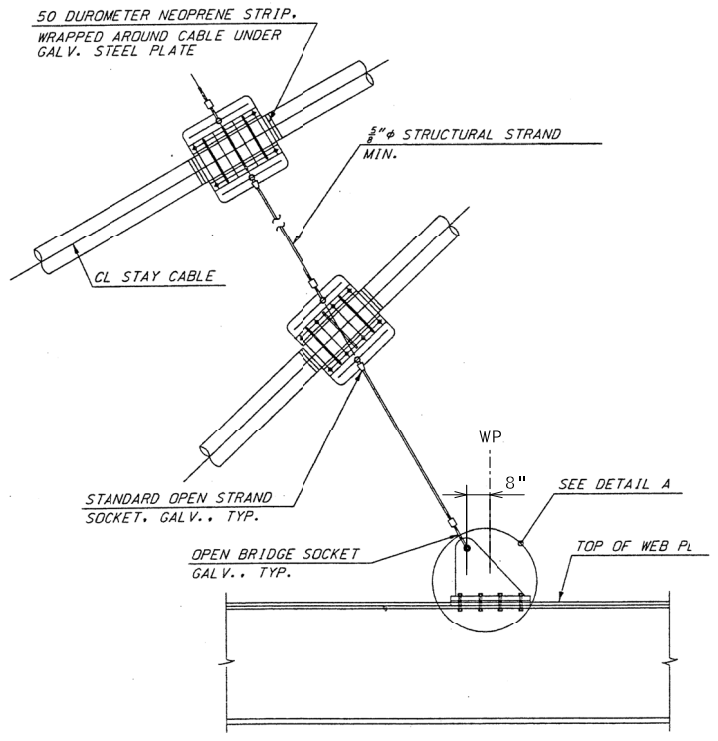
Cable Tie Number	Int. Bent 2 North Cables	Int. Bent 2 South Cables	Int. Bent 3 North Cables	Int. Bent 3 South Cables
1	4	1	3	1
2	6	3	3	0
3	5	6	5	5
4	5	4	4	2
5	4	2	5	3
6	4	2	3	5
7	4	2	3	4
8	1	0	2	4
Total	33	20	28	22

- Notes:
- Reproduced from Rebid Cable Tie Detail Sheets B127A and B127B.
 - Work to reposition cable bands includes all materials, equipment, and labor to complete the cable tie pretensioning and cable band repositioning as required to fully achieve pretensioned and aligned cable ties for all stays.
 - Preload forces are shown for each wind tie connected to the main cable number. thus, for the 4 ties between stay cables No. 1 & 2 the total preload is 6400 pounds. For the 4 ties between stay cables 2 & 3 the total is 8400 pounds etc. (Cable Tie Preload Chart).
 - Cable Band Repositioning Procedures are noted on Sheet No. 6.

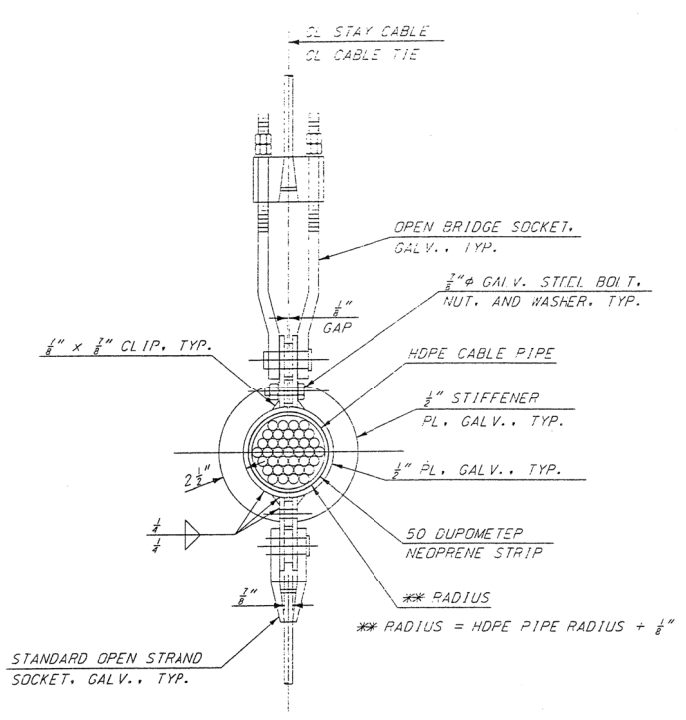


ELEVATION
(Looking North)
(Int. Bent No. 2 Shown, Int. Bent No. 3 Mirrored)

- Cable Tie Pretensioning Procedure:
- ASTM A586 Structural Strand Information:
Dia. = 5/8"; Lbs/ft=0.82; Metallic Area = 0.234 sq. in.; Min. Breaking Strength Class C Outer Wires = 22.8 tons; E = 24,000,000 psi
 - Working normal to Stays 1 or 32, locate position of cable bands on other stays along a straight line to the cable tie deck anchorage work point. (Detail A, Sheet No. 6)
 - Identify cable bands requiring repositioning. Refer to table for an estimate of cable bands requiring repositioning.
 - Starting with Stay 1 or 32, at the uppermost cable tie nearest pylon for those cable ties requiring cable band repositioning, loosen open bridge socket end to remove cable pretension, working sequentially towards the bridge deck anchorage point.
 - Adjust cable bands per the Cable Band Repositioning Procedure so that cable ties are in straight alignment.
 - Repeating in the same order as the detensioning, pretension cable ties from the top stay to the deck to the preload listed in the Cable Tie Preload Table.
 - Measurement of the tensile preload should be performed by measuring strain induced in the cable using a static axial clip-on extensometer and data acquisition system. An extensometer with an 8-inch gauge length and meeting or exceeding the requirements for Class B-1 extensometer per ASTM E83 shall be used. The measurement system should be capable of collecting strain data continuously (at a frequency of 1Hz or faster) and displaying tensile preload values with a minimum accuracy of ±400 lbf. Caution should be exercised to ensure no slip between extensometer and the stay cable tie occurs during tensioning; the use of hot-melt adhesive may be necessary.
 - For those cable ties where existing alignment does not require cable band repositioning, adjust cable tie pretension to meet value in table.



CABLE TIE DETAIL
(Note 1)



DETAIL WITH OPEN BRIDGE SOCKET
(Note 1)

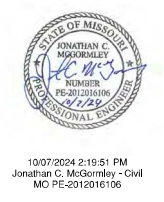
MAIN CABLE NUMBER	PRELOAD FORCE PER WIND TIE (POUNDS)
1	1600
2	2100
3	2100
4	3100
5	3500
6	3900
7	4400
8	5000
9	5400
10	5900
11	6600
12	7200
13	7900
14	8900
15	10000
16	11000
17	—
18	9800
19	8800
20	7800
21	6900
22	6000
23	5400
24	4800
25	4300
26	3800
27	3400
28	2900
29	2500
30	2200
31	1800
32	1400

STAY CABLE REPAIRS

Detailed Apr. 2024
Checked Apr. 2024

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

Sheet No. 5 of 22



DATE PREPARED	10/1/2024	
ROUTE	74	STATE MO
DISTRICT	BR	SHEET NO. 5
COUNTY	CAPE GIRARDEAU	
JOB NO.	J9P3308	
CONTRACT ID.		
PROJECT NO.		
BRIDGE NO.	A50763	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS

Wise, Janney, Elstner Associates, Inc.
330 Pfingsten Road
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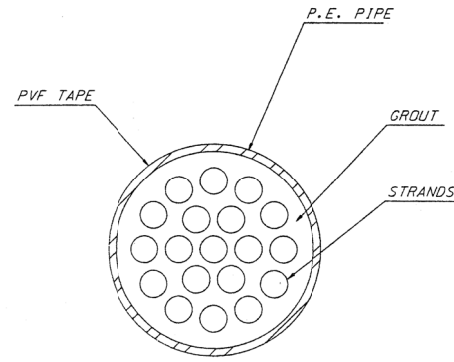
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No. 001448
Exp. 12/31/24

Stay Cable Sheathing Repair Procedure:

1. Inspect each stay's outer covering to identify damage limits.
2. Loosen neoprene boot and stainless steel bands and slide out of the way.
3. In the opposite direction of the lay of the wrap, unwrap tape along full length of the wrapped section.
4. Inspect exposed HDPE surface for damage. Report damage to HDPE to the engineer.
5. Clean HDPE pipe per the tape manufacturer's instructions.
6. Install new self-adhesive polyvinyl fluoride (PVF) tape with color to match existing.
7. Spiral-wrap tape to match existing overlap, taking care to start and end at cut lines.
8. At stay diameter changes to be wrapped. First install 8 mil polyester film tape with fiberglass reinforcement to wrap the cable 6 wraps each end of transition. Clean and cover polyester tape with PVF tape matching existing spiral pattern.

Cable Band Repositioning Procedure (As shown on Sheet No. 5):

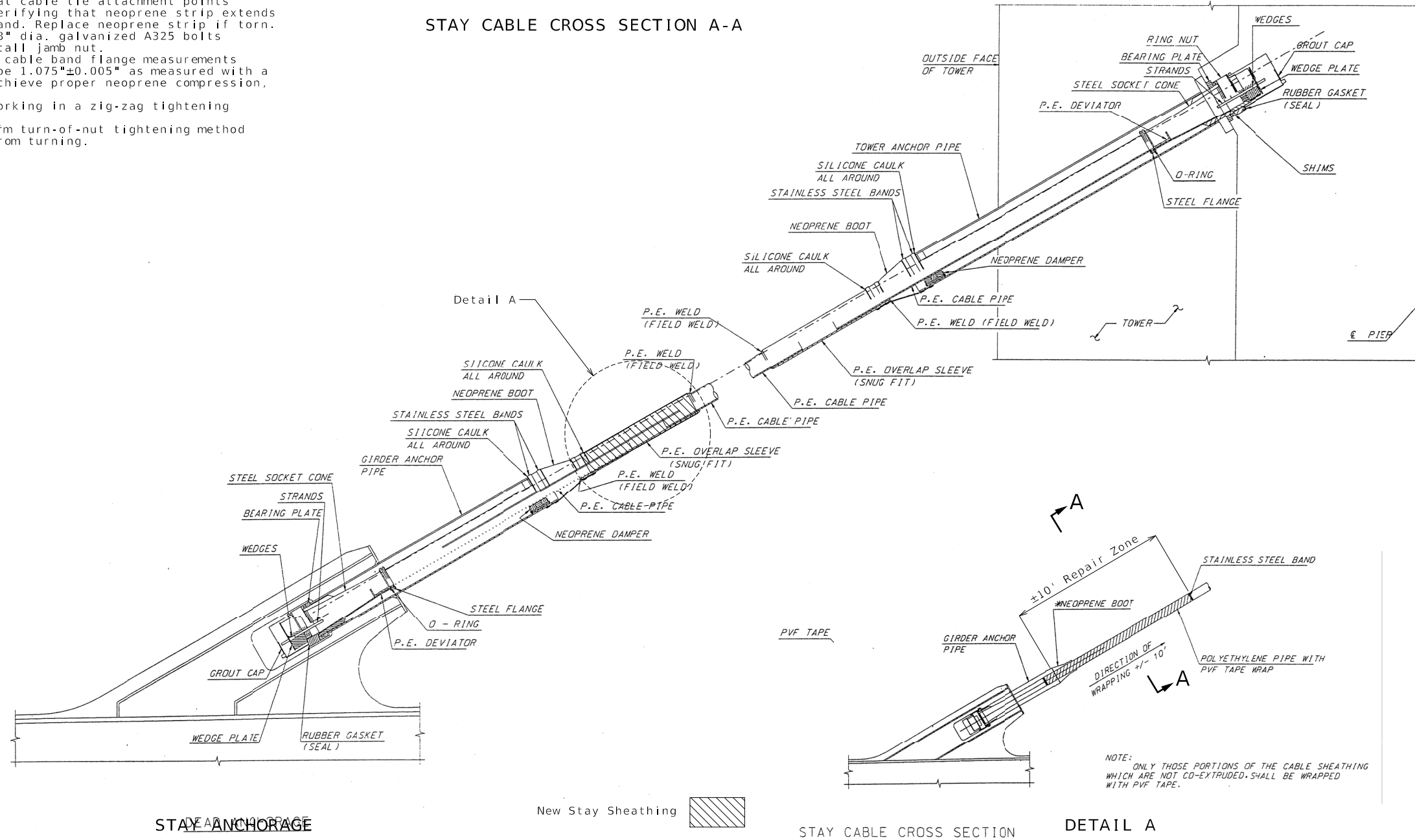
1. Loosen cable band bolts to permit repositioning of steel band and neoprene strip.
2. Scuff surface to be underneath neoprene pad with 60 grit sandpaper to remove sheen from HDPE surface.
3. Reposition cable band so that cable tie attachment points are correctly positioned, verifying that neoprene strip extends equally from both ends of band. Replace neoprene strip if torn.
4. Verify that existing (8) 7/8" dia. galvanized A325 bolts have adequate length to install jamb nut.
5. The average of 4 out-to-out cable band flange measurements after torquing bolts shall be $1.075 \pm 0.005"$ as measured with a caliper. Adjust torque to achieve proper neoprene compression, if necessary.
6. Torque nuts to 100 ft-lbs working in a zig-zag tightening pattern across the band.
7. Install jamb nuts and perform turn-of-nut tightening method holding the full-size nut from turning.



STAY CABLE CROSS SECTION A-A

Notes:

1. Reproduced from Rebid Cable Tie Details Sheets B127A and B127B.
2. Work to repair stay cable sheathing includes all materials, equipment, and labor to fully complete the repairs.
3. P.E. denotes Polyethylene.
4. Stay Cable anchorage and assembly as shown are schematic.



Detailed Apr. 2024
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Note: This drawing is not to scale. Follow dimensions.

STAY CABLE REPAIRS

Sheet No. 6 of 22



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DATE PREPARED
10/1/2024

ROUTE 74 STATE MO

DISTRICT BR SHEET NO. 6

COUNTY
CAPE GIRARDEAU

JOB NO.
J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A50763

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

 105 WEST CAPITOL JEFFERSON CITY, MO 65102
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ENGINEERS ARCHITECTS MATERIALS SCIENTISTS

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ROUTE 74 STATE MO

DISTRICT BR SHEET NO. 7

COUNTY

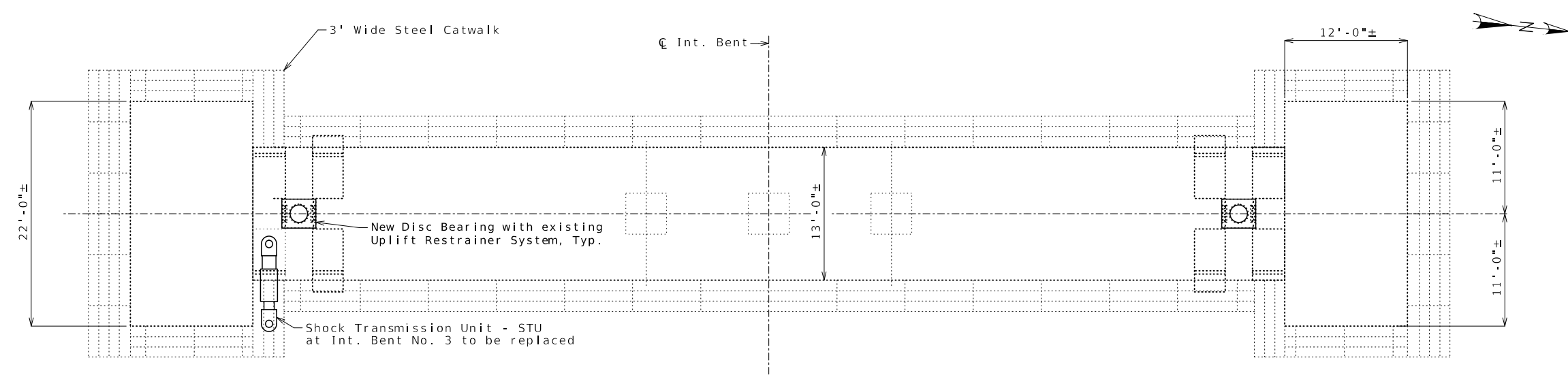
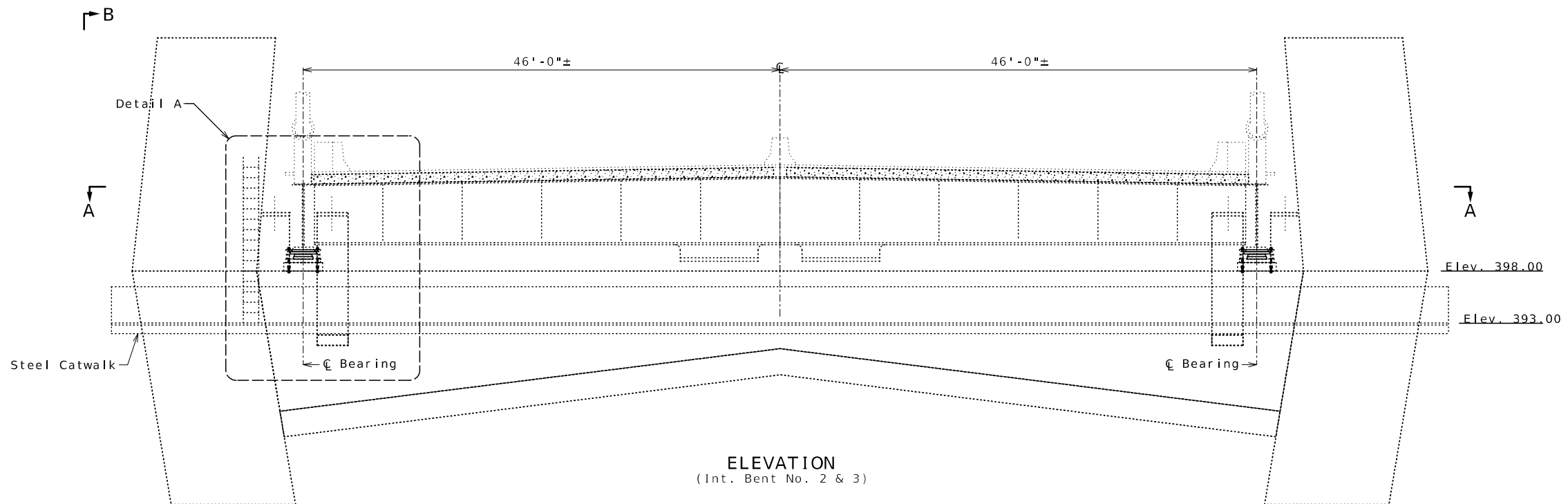
CAPE GIRARDEAU

JOB NO.
J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A50763



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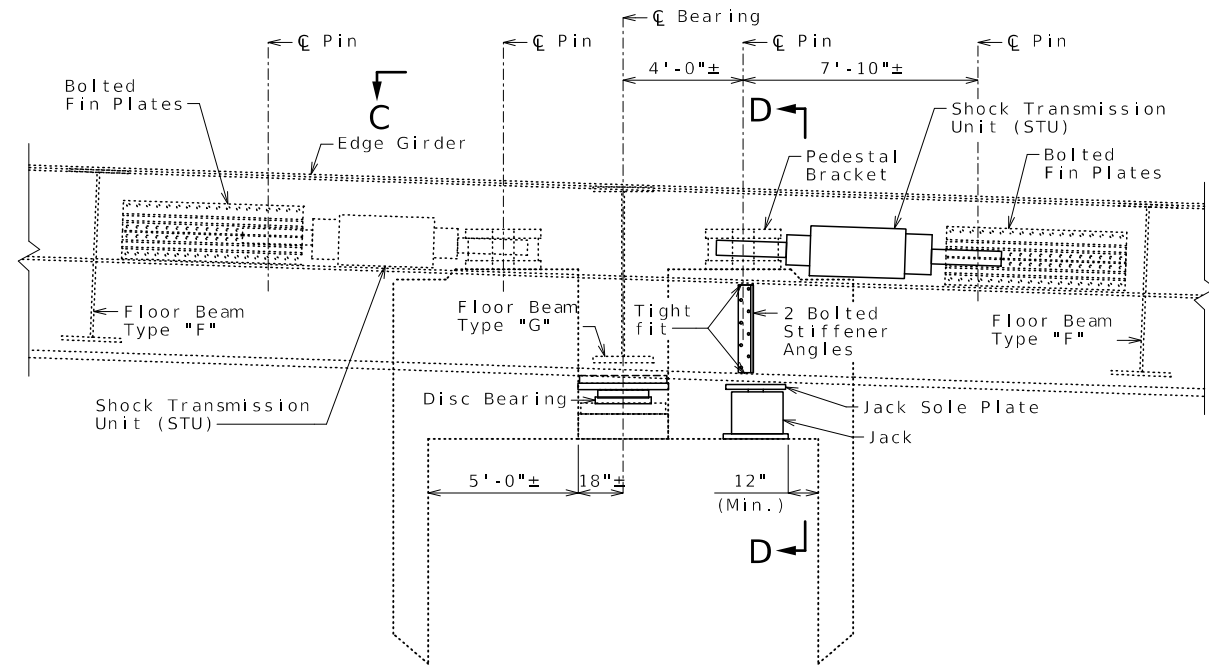
SUPERSTRUCTURE REPAIRS

For Detail A and Section B-B, see Sheet No. 8.

Detailed Apr. 2024
Checked Apr. 2024

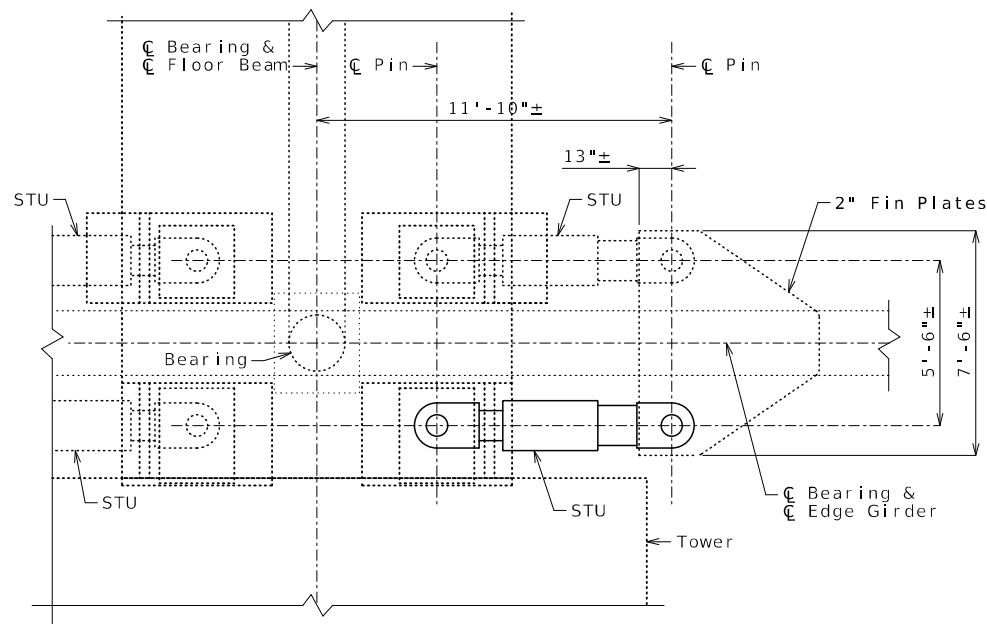
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 22



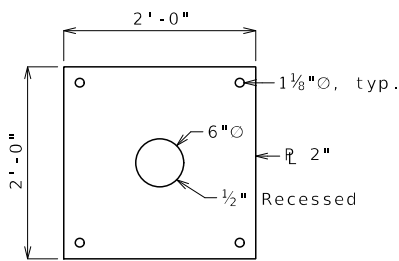
SECTION B-B
Int. Bent No. 3 shown

- Shock Transmission Unit Notes (For Information Only):
- 1500 kip STU #675N-15979-01
 - 1500 kip Pedestal Bracket Taylor Device #67EE-15931-01
 - Mounting Pin, 17-4 PH Stainless Steel per AMS 5643, Condition H925, Fy = 155,000 psi, Fu = 175,000 psi
 - For additional STU Replacement Notes, see Sheet No. 10.
 - Weight of STU = 5,500 lbs

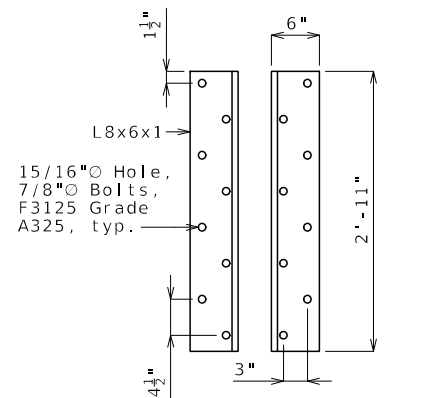


SECTION C-C
Int. Bent No. 3 shown

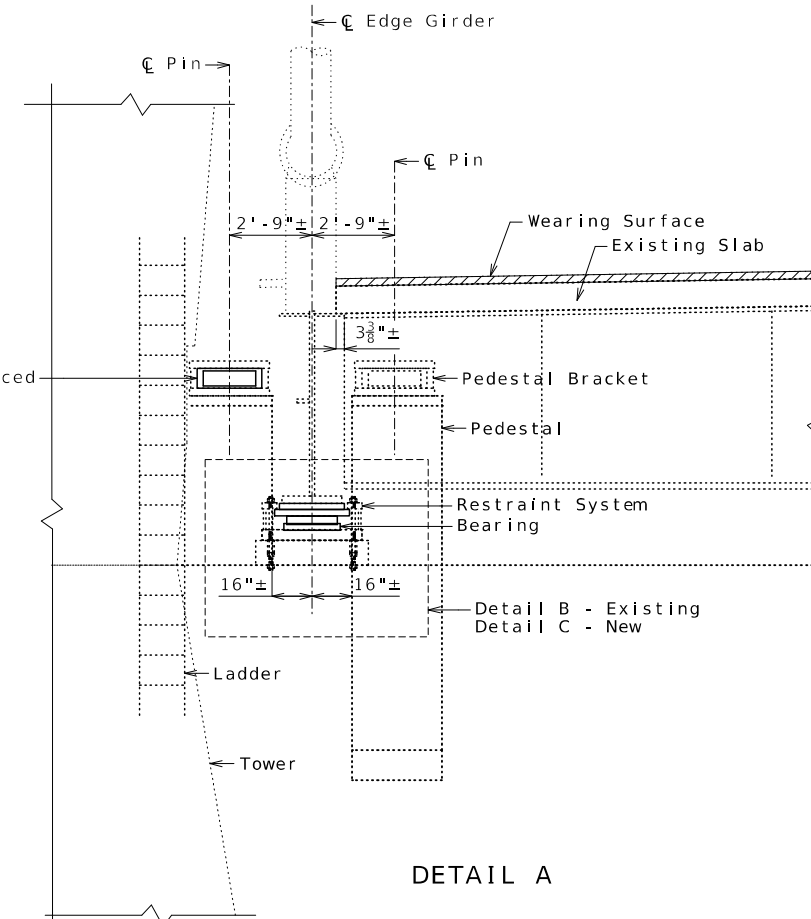
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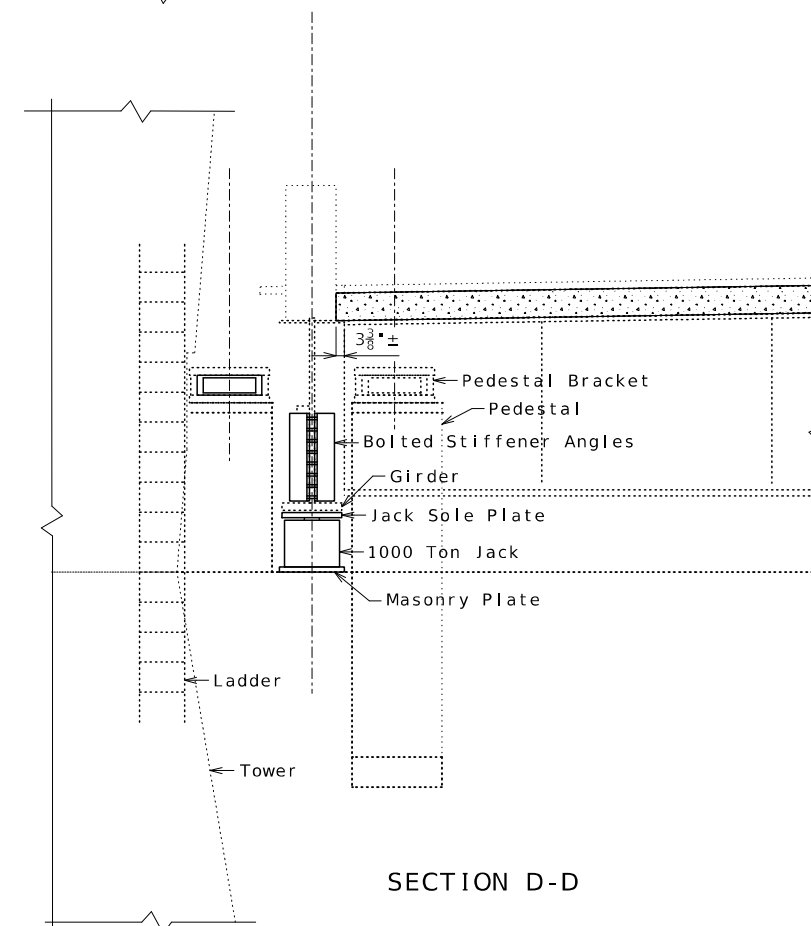
JACK SOLE PLATE



BOLTED STIFFENER ANGLE



DETAIL A



SECTION D-D

BEARING REMOVAL



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ROUTE 74 STATE MO

DISTRICT BR SHEET NO. 8

COUNTY

CAPE GIRARDEAU

JOB NO.

J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A50763

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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10/1/2024

ROUTE 74 STATE MO

DISTRICT BR SHEET NO. 9

COUNTY
CAPE GIRARDEAU

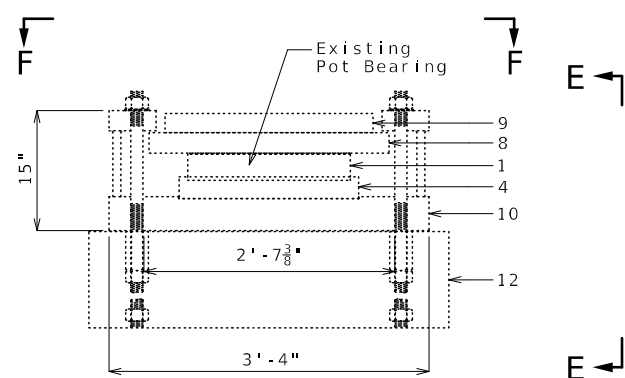
JOB NO.
J9P3308

CONTRACT ID.

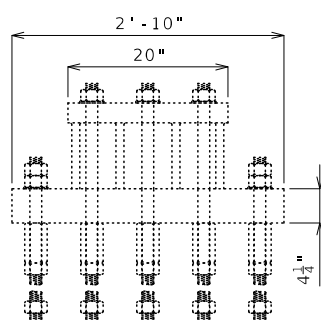
PROJECT NO.

BRIDGE NO.
A50763

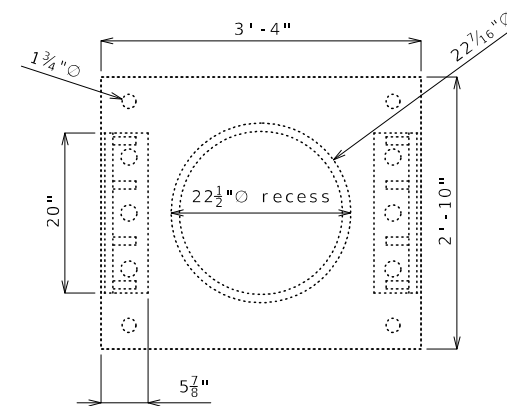
Existing Pot Bearing		
1	Piston Plate	3.282"x 20.345"Ø
2	Rubber Disc	1.325"x 20.325"Ø
3	Brass Ring	0.093"x 0.325"x 20.325" OD
4	Pot Plate	2.725"x 22.4375"Ø
5	Sealant	4.25"x 34"x 40"
6	TFE	0.125"x 20.125"Ø
7	Stainless Steel	16 ga.x 22.625"x 36.125"
8	Slide Plate	2.545"x 30"x 36.25"
9	Sole Plate	1.845" to 3"x 26"x 35"(beveled)
10	Masonry Plate	4.25"x 34"x 40"
11	Neoprene Pad	0.125"x 34"x 40"
12	Concrete Base	12"x 36"x 45"



DETAIL B - EXISTING POT BEARING

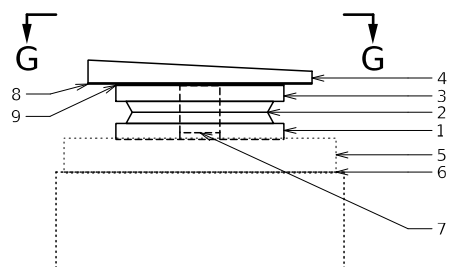


SECTION E-E



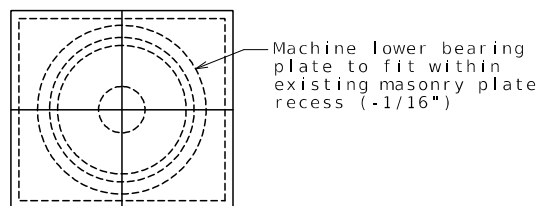
SECTION F-F

New Disc Bearing (See Special Provisions)		
1	Lower Bearing Plate	Per bearing design
2	Urethane Disc	Per bearing design
3	Upper Bearing Disc	Per bearing design
4	Sole Plate	2.75" to 3.25"
5	Exist. Masonry Plate	4.25"x 34"x 40"
6	Exist. Neoprene Pad	0.125"x 34"x 40"
7	Shear Resisting Mech.	Per bearing design
8	Stainless Steel	Per bearing design
9	PTFE	Per bearing design

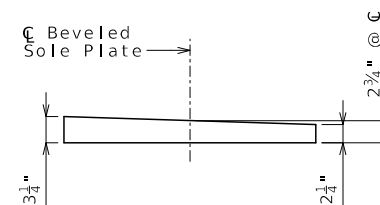


DETAIL C - NEW DISC BEARING

Bearing Design Information							
Location	Vertical Capacity Downward	Vertical Capacity Upward	Lateral Capacity Req'd.	Min. Rotation (Radians)	Movement Longitudinal (Total)	Movement Transverse (Total)	No. Req'd.
Bents No. 2 & 3	1,100 (k)	550 (k)	0	0.007	±14"	±1/2"	4



SECTION G-G



BEVELED SOLE PLATE DETAIL

BEARING DETAILS

Sheet No. 9 of 22

Detailed Apr. 2024
Checked Apr. 2024

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

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

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

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS

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Bearing Removal Notes:

- 1. The contractor shall submit a jacking procedure for approval prior to completing the bearing replacement work.
2. This work shall include removal of the existing pot bearings at Int. Bents No. 2 and 3. Existing bearing masonry plates, anchor rods and restrainer bolts are to remain.
3. Removed components shall be properly disposed of in accordance with Section 202.2 of the MoDOT Standard Specifications for Highway Construction.

Bearing Installation Notes:

- 1. This work shall include installation of new HLMR disc bearings at Int. Bents No. 2 and 3, including new upper and lower bearing plates, urethane disc with shear resisting mechanism, and sole plate. See Job Special Provisions for additional information.
2. Painted portions of the existing edge girder or floorbeam members damaged during bearing removal and installation, shall be cleaned, and painted per Section 1081.10.6 of the MoDOT Standard Specifications for Highway Construction, and then painted with the other new components.
3. Bearings delivered to the bridge site shall be stored under cover on a platform above the ground surface. Bearings shall be protected at all times from damage. When placed, bearings shall be dry, clean, and free from dirt, oil, grease, or other foreign substances.
4. Bearing devices shall not be disassembled unless otherwise permitted by the engineer or manufacturer.
5. Bearings shall be installed with consideration for structure and ambient temperatures in accordance with the manufacturer's installation procedures to accommodate such conditions. Any deviations in excess of the allowed tolerances by the manufacturer shall be corrected.
6. Bearing assemblies shall be handled by their bottom surfaces only, unless specially designed lifting brackets are used. Do not lift bearings by their tops, sides and/or shipping bonds. Lifting brackets shall be approved by the bearing supplier prior to use.
7. Caution shall be taken to ensure that the steel temperature directly adjacent to the polyether urethane rotational element does not exceed 225°F. The polyether urethane disc must not be exposed to direct flame or sparks.
8. The temperature of the steel adjacent to elastomeric components shall be kept below 250°F.
9. When bearing installation is complete, existing anchor/restraining rods and hardened washers shall be coated with a minimum of two coats of inorganic zinc primer to provide a total dry film thickness of 4 mils minimum, 6 mils maximum, or galvanized in accordance with Sec 1081.
10. The sole plate shall be connected to the bottom flange of edge girder as previously connected while the lower bearing plate shall be sized and machined 1/16-inch in diameter less than the top recess of the existing masonry plate.
11. After installation of the bearings, any uncoated or damaged surfaces of the masonry and sole plates shall be prepared in accordance with the specifications and field-coated with inorganic zinc primer to provide a total dry film thickness of 4 mils minimum, 6 mils maximum.
12. After installation of the bearings and field-applied prime coats, the surfaces of the sole plates shall be field-coated with the intermediate and finish coat.

General Edge Girder Jacking Notes:

- 1. The suggested temporary jacking details and procedures shown in the plans are conceptual in nature and are shown only to illustrate the scope of the work for bidding purposes.
2. The contractor is responsible for designing, fabricating, installing the jacking system that ultimately will be used, and jacking the structure. Contractor shall field-verify all critical dimensions before ordering bearing and designing support system. Modifications to the bearings in the field will not be permitted.
3. The responsibility for the design and construction to jack the edge girder shall rest solely with the contractor. The design shall ensure that all applicable dead loads, any contributed live load if required including impact from staged traffic, any longitudinal bridge movements, and any construction loads are appropriately supported. Design for seismic loading is not required.
4. Forces provided for information only and must be verified by the engineer responsible for jacking operations.
Jacking Design Loads (Unfactored)
Dead Load 380 kips
Maximum Live Load + Impact 85 kips
Maximum Total Vertical Load 465 kips
Specified Maximum Bearing Design Service Load
5. Submit the jacking procedures, working drawings, and all calculations to the engineer for approval at least 30 days before intended jacking. All calculations and shop drawings shall be signed and sealed by a licensed professional engineer registered in the State of Missouri.
6. Submit certifications for all jack and hydraulic gauge calibrations and testing to the engineer for review and approval prior to installation. Provide a jack gage pressure to load calibration sheet to the engineer.
7. Edge girder shall not be raised by more than 3/8 inch to enable removal of existing bearing from 1/4-inch recess in masonry plate. Any damage caused by the contractor's operations shall be repaired at the contractor's expense as approved by the engineer. When not actively jacking, the edge beam shall be supported on the jack's locking collars.
8. All elements associated with jacking the structure for bearing replacement includes all materials, equipment, and labor to fully complete the work. All structural steel used in the jacking operations shall follow Section 1080 Structural Steel Fabrication of the MoDOT Standard Specifications for Highway Construction.

Shock Transmission Unit (STU) Replacement:

- 1. The work shall include the removal and replacement of an identical STU as shown on the plans, and will include all labor, equipment, materials required to complete the work.
2. Order replacement STU and have on-site before removing existing STU. (See Special Provisions)
3. Submit a lifting procedure to the engineer for approval that demonstrates how the existing STU will be removed and the new STU installed.
4. All calculations and working drawings to be signed and sealed by a licensed professional engineer registered in the State of Missouri.
5. With STU temporarily supported, remove two connecting pins at existing pedestal bracket and bolted fin plates taking care not to damage pin surfaces.
6. Inspect pin surfaces for wear. Clean pins for re-installation.
7. Install replacement STU and existing pins.
8. Contractor to restore existing coating damaged during the STU replacement and to coat the new STU to match the existing.

Jacking Procedure:

- 1. Working at one intermediate bent, install all temporary bolted stiffeners on both edge girders.
2. Install jacks and associated masonry plates, tapered shim plates, and sole plates below the edge girder bottom flange. Provide a lateral load path for the design loads from the girder bottom flange to the concrete intermediate bent using temporary bolts, bridge clamps, and/or concrete anchors.
3. Complete the installation and testing of the jacking system per the working drawings.
4. Remove the nuts and restrainer bar from the bearing restrainer system. Clean and save for reuse.
5. Remove the fillet weld attaching existing sole plate to edge girder bottom flange by grinding. Flame-cutting or air-arc gouging is not permitted. Take care not to damage girder bottom flange.
6. Inspect the structure to verify that nothing will impede the vertical movement of the superstructure when lifted.
7. Jack both the north and south edge girders simultaneously such that jack stroke is approximately equal but does not differ by more than 1/8 inch.
8. Use mechanical displacement gauges (accurate to 0.01 inches) to monitor vertical movements of bridge members at the jack(s). Record gauge readings before, during and after the operations to relieve and reinstate the load. Record all gauge readings in the presence of the engineer.
9. Remove the existing bearing by lifting it out of the recessed masonry plate. Partial disassembly of the bearing is acceptable.
10. Complete the surface preparation of the edge girder bottom flange by removing all remaining weld and grinding smooth. Clean and prepare the recessed portion of the masonry plate.
11. Install new HLMR disk bearing. Adjust for thermal conditions per manufacturer's instructions.
12. Lower edge girder on to the sole plate until all load is removed from jacks.
13. Complete new weld of sole plate to girder bottom flange using approved welding procedure and without damaging new bearing.
14. Clean and paint the structure in accordance with Section 1080.



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DATE PREPARED
10/1/2024

ROUTE 74 STATE MO

DISTRICT BR SHEET NO. 10

COUNTY
CAPE GIRARDEAU

JOB NO.
J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A50763

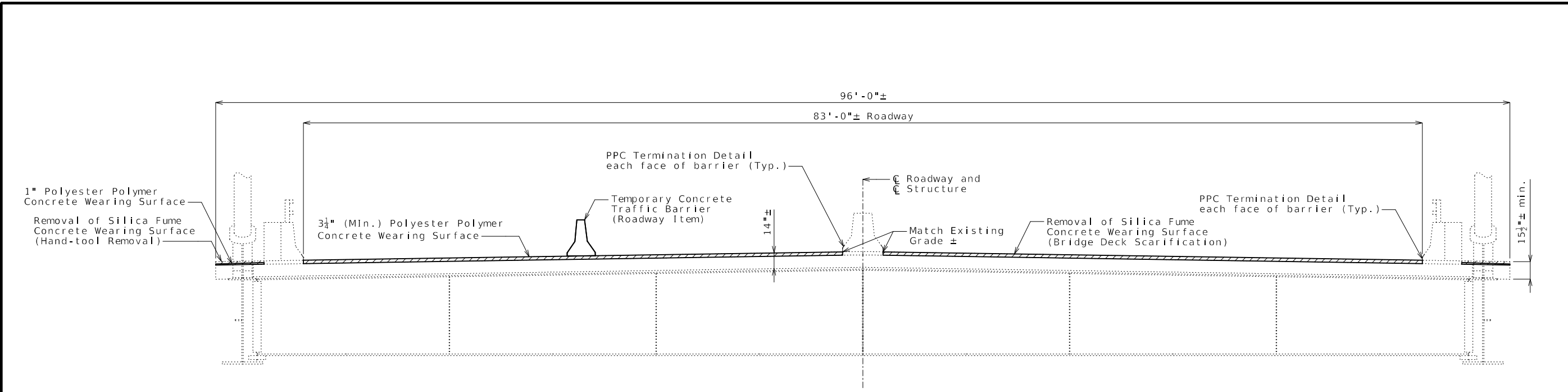
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION logo and address: 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-273-6636)

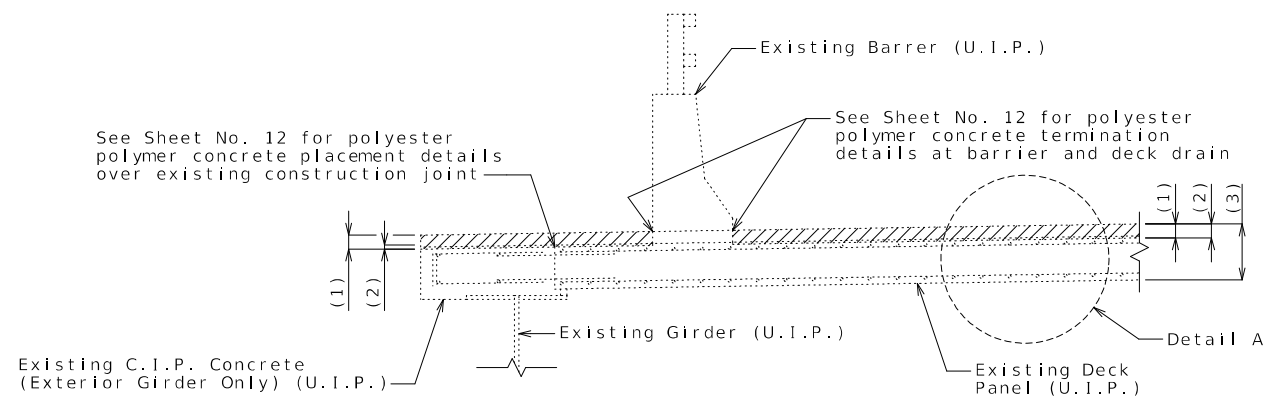
WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS logo and contact info: Wis, Janney, Elstner Associates, Inc. 330 Pflingstein Road Northbrook, Illinois 60062 847.272.7400 tel | 847.291.9599 fax www.wje.com

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BEARING AND SHOCK TRANSMISSION UNIT NOTES



TYPICAL SECTION THRU EXISTING DECK
(UNIT 1)

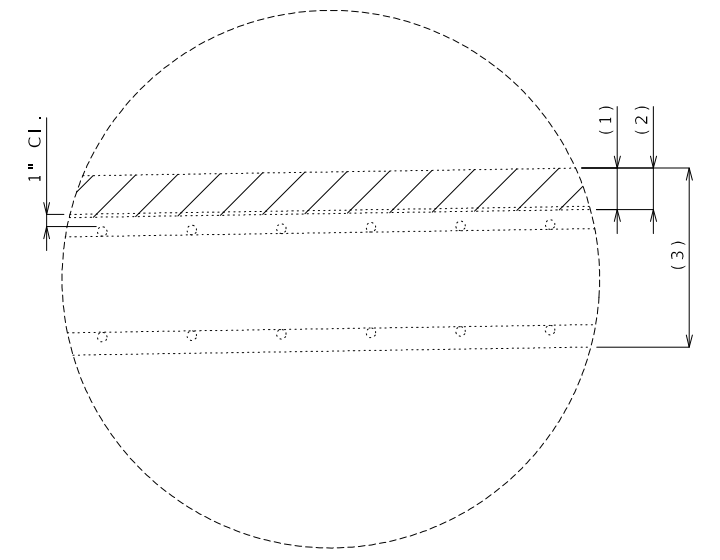


WEARING SURFACE REPLACEMENT

- (1) Removal of existing 3"± silica fume concrete wearing surface plus 1/4"± of existing deck. Contractor shall use caution to avoid damaging reinforcement bars in existing deck panels.
- (2) Polyester polymer concrete wearing surface: 1" minimum on overhang, 3/4" minimum on roadway
- (3) Original depth of deck and wearing surface

Note: Maintain original grade with deck sloping towards drains and overhang sloping away from barrier.

Furnish PPC Material volumetric quantity is based on plan dimensions shown on this sheet. (See special provisions)

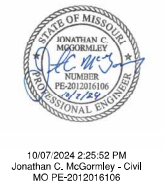


DETAIL A

POLYESTER POLYMER CONCRETE WEARING SURFACE DETAILS

Detailed Apr. 2024
Checked Apr. 2024

Note: This drawing is not to scale. Follow dimensions. Sheet No. 11 of 22



DATE PREPARED 10/1/2024	
ROUTE 74	STATE MO
DISTRICT BR	SHEET NO. 11
COUNTY CAPE GIRARDEAU	
JOB NO. J9P3308	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A50763	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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ROUTE 74 STATE MO

DISTRICT BR SHEET NO. 12

COUNTY
CAPE GIRARDEAU

JOB NO.
J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A50763

DESCRIPTION

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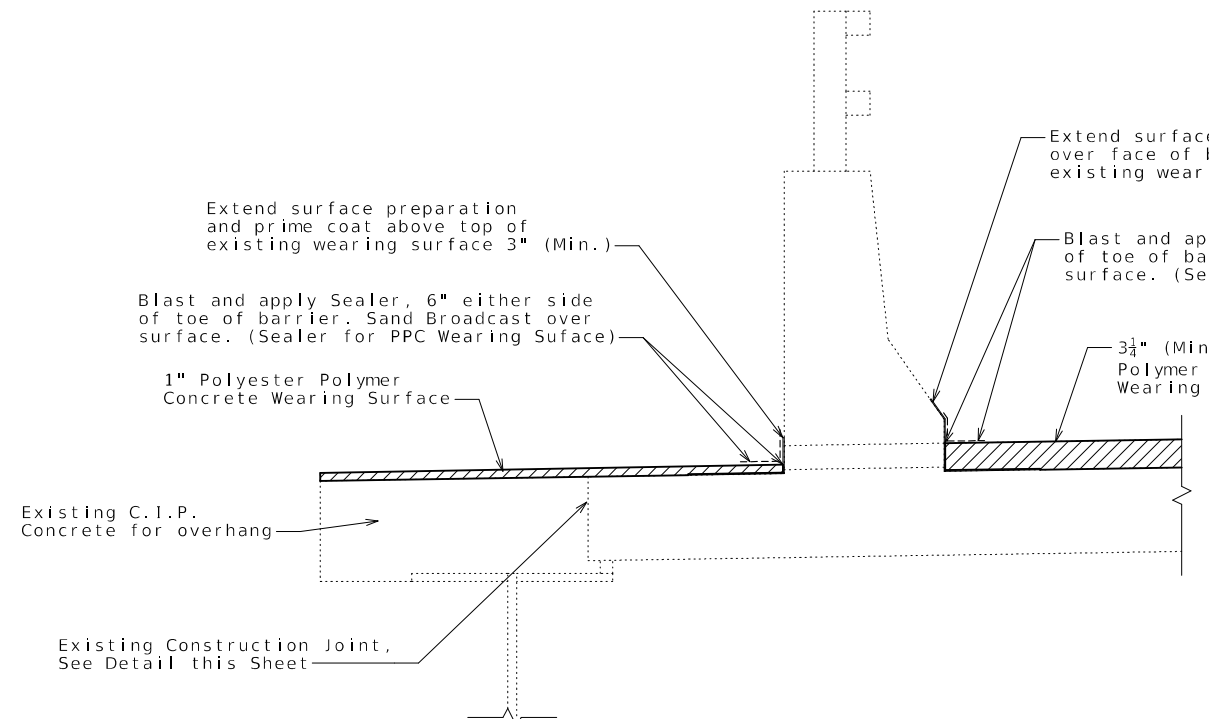
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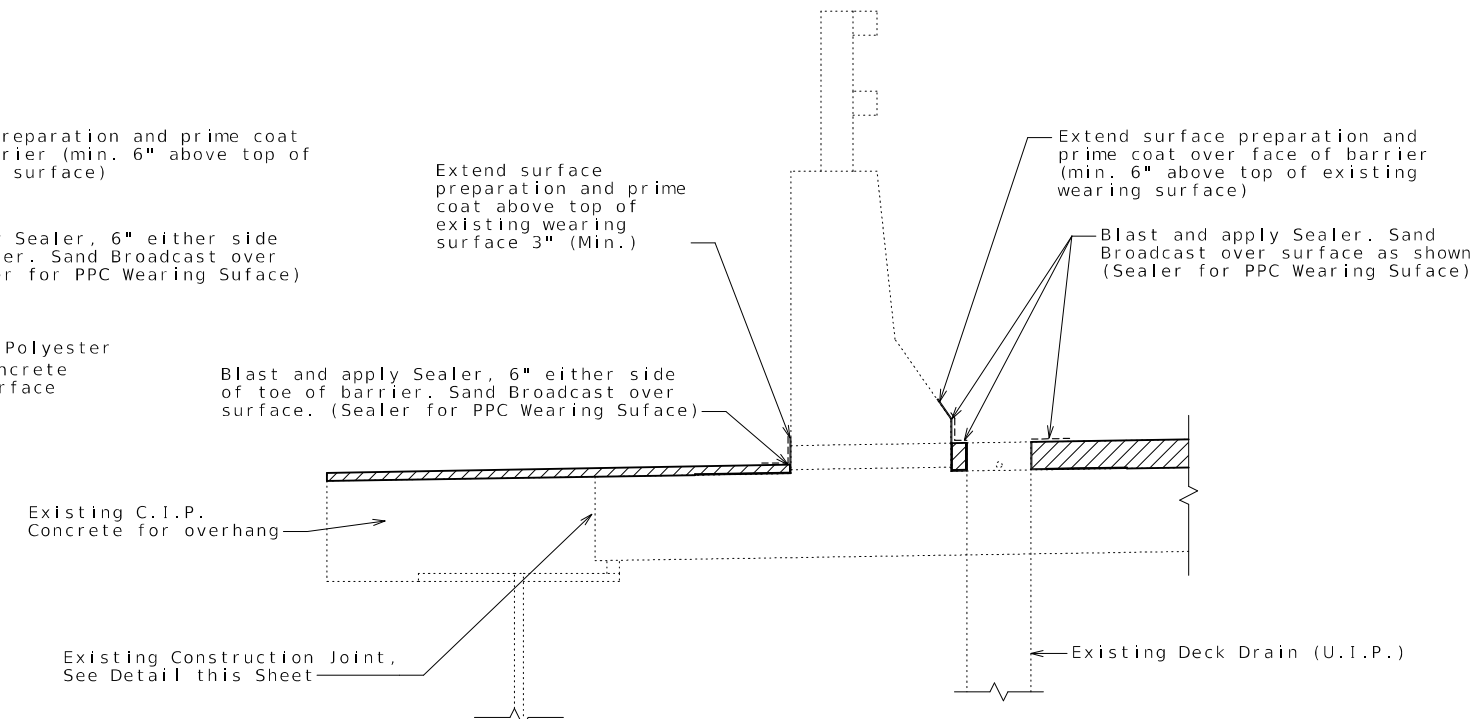
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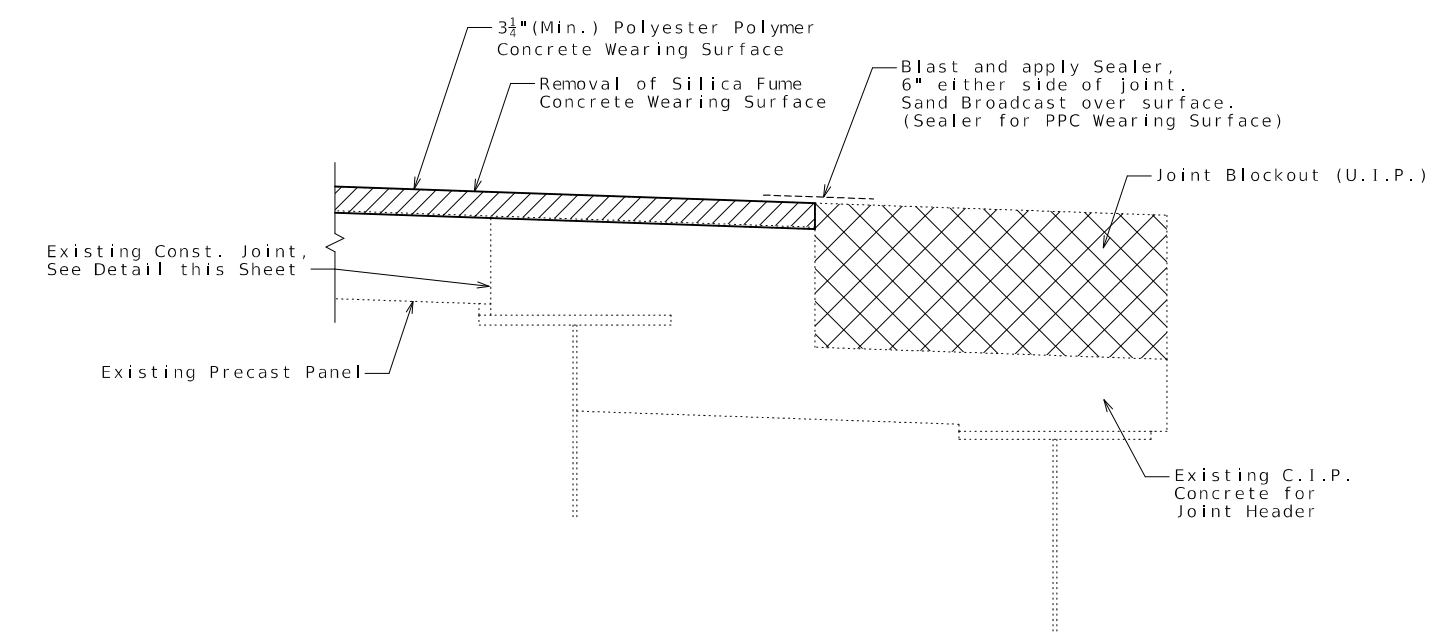
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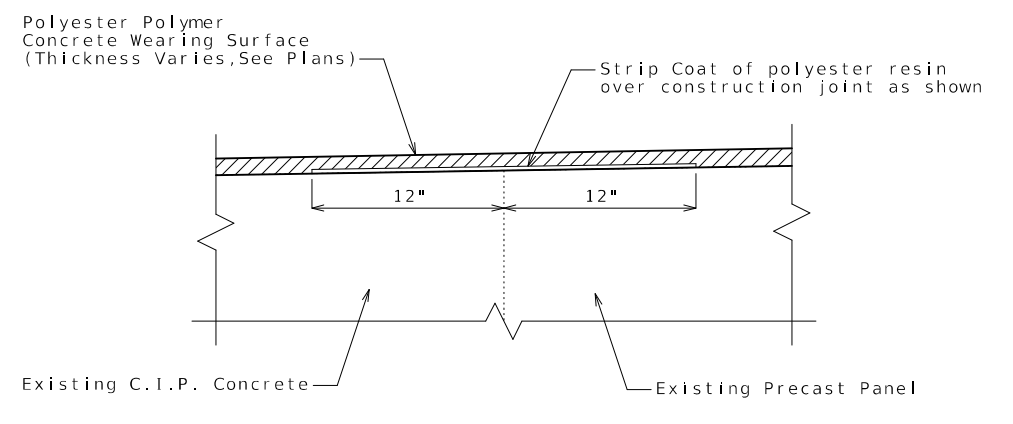
POLYESTER POLYMER CONCRETE TERMINATION AT BARRIER



POLYESTER POLYMER CONCRETE TERMINATION NEAR DECK DRAIN



POLYESTER POLYMER CONCRETE TERMINATION AT EXPANSION JOINTS



POLYESTER POLYMER CONCRETE OVER EXISTING CONSTRUCTION JOINT

POLYESTER POLYMER CONCRETE WEARING SURFACE DETAILS AT CONSTRUCTION JOINTS

Note: This drawing is not to scale. Follow dimensions. Sheet No. 12 of 22

Detailed Apr. 2024
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
MoDOT
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

ENGINEERS ARCHITECTS MATERIALS SCIENTISTS
WJE
Wis, Janney, Elstner Associates, Inc.
330 Pfingsten Road
Northbrook, Illinois 60062
847.272.7400 tel | 847.291.9599 fax
www.wje.com
Certificate of Authority
No. 001448
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ROUTE STATE
 74 MO

DISTRICT SHEET NO.
 BR 13

COUNTY

CAPE GIRARDEAU

JOB NO.

J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

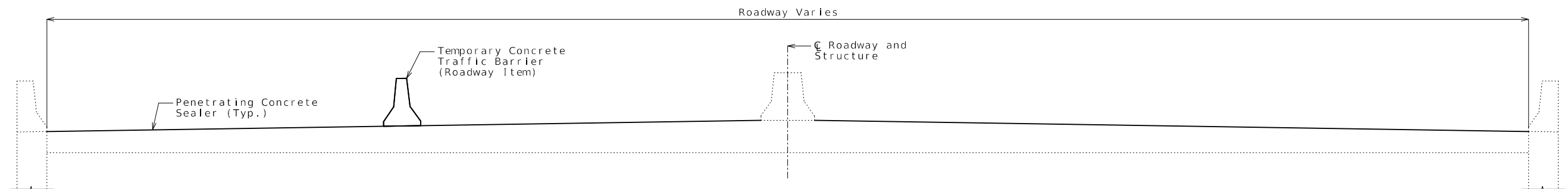
A50763

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION
 COMMISSION

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

EFK Moen
 Civil Engineering Design
 13523 Barrett Parkway Dr
 Suite 250
 St. Louis, MO 63021
 Phone 314-394-3100
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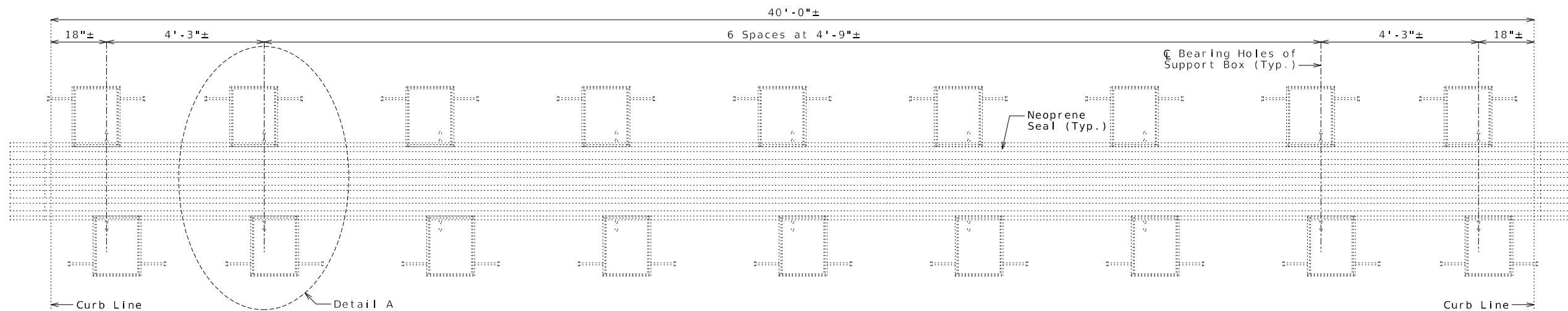
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APPROACH SLAB REPAIR DETAILS

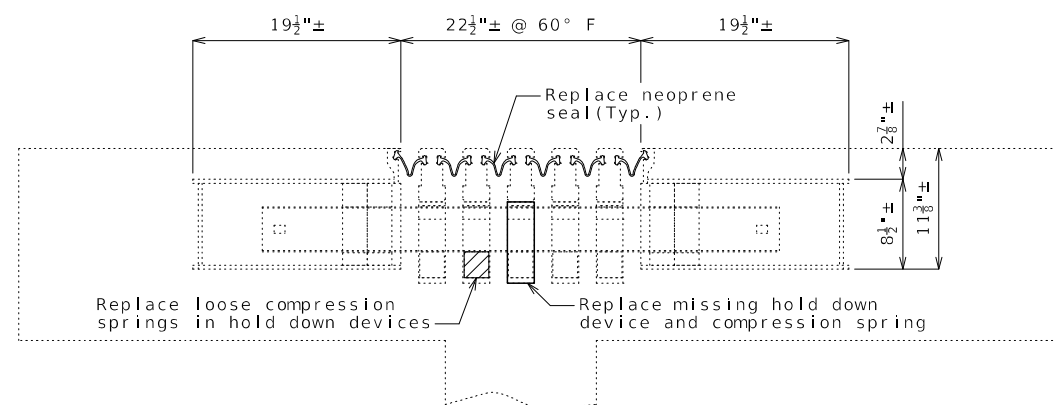
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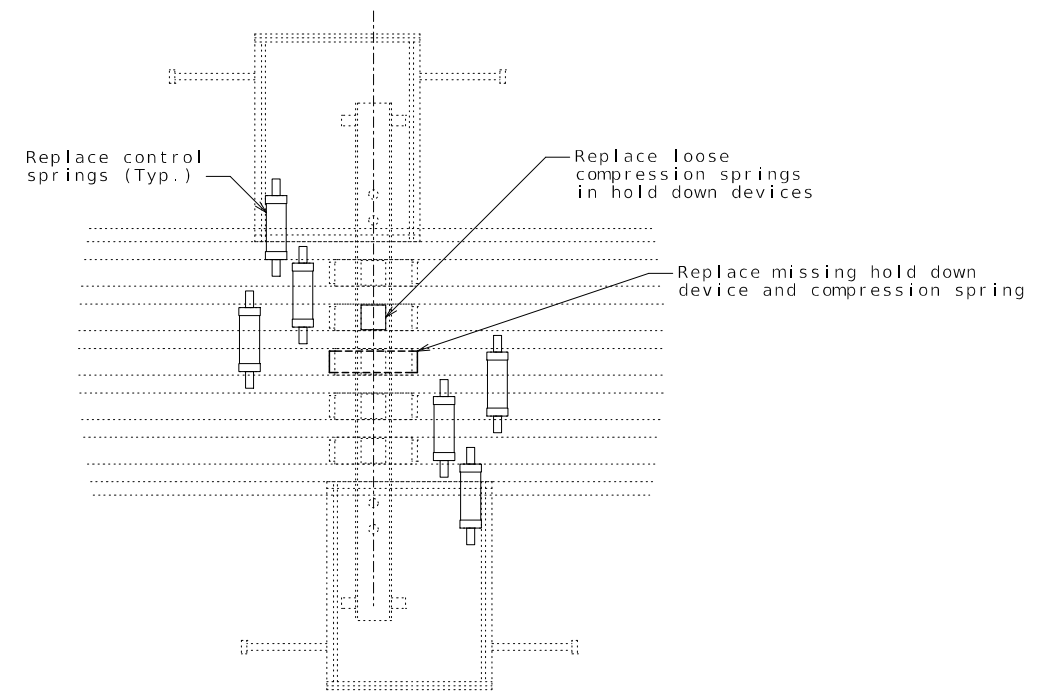
Sheet No. 13 of 22



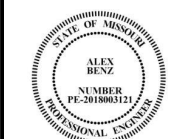
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SECTION THRU JOINT



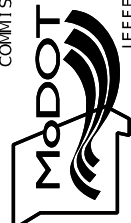
DETAIL A



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DATE PREPARED 10/1/2024	
ROUTE 74	STATE MO
DISTRICT BR	SHEET NO. 14
COUNTY CAPE GIRARDEAU	
JOB NO. J9P3308	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A50763	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

 105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
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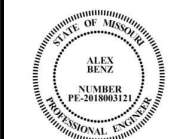
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MODULAR JOINT REPAIR AT BENT NO. 4

Detailed Apr. 2024
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Sheet No. 14 of 22



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ROUTE 74 STATE MO
 DISTRICT BR SHEET NO. 15

COUNTY
 CAPE GIRARDEAU
 JOB NO.
 J9P3308
 CONTRACT ID.

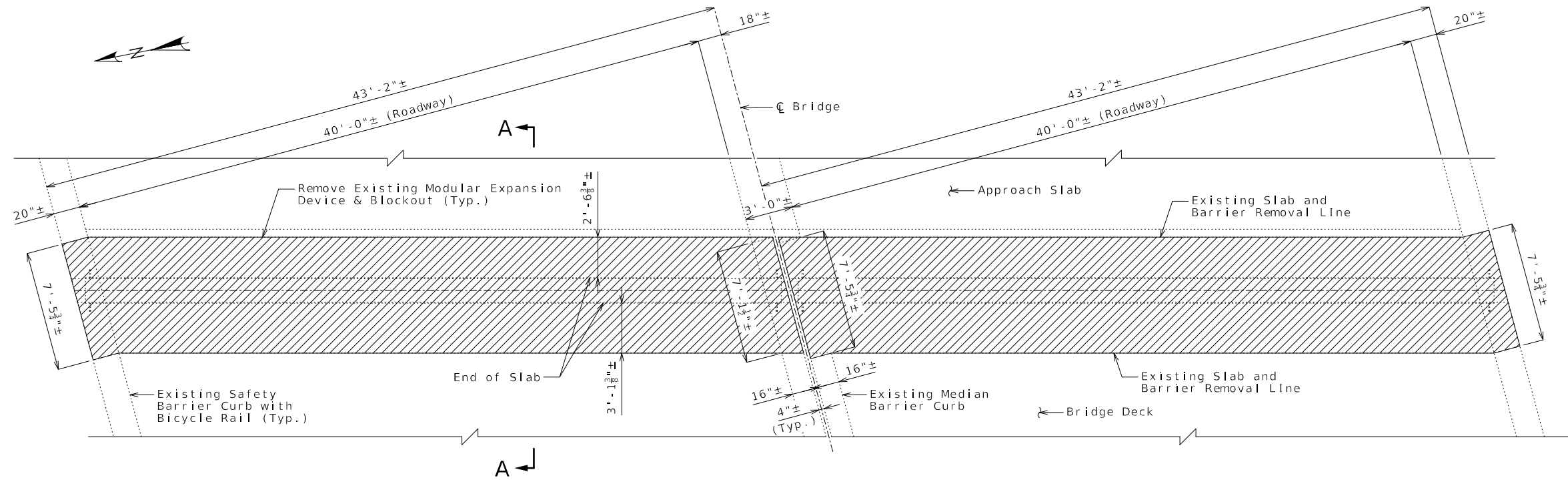
PROJECT NO.
 BRIDGE NO.
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DESCRIPTION	DATE

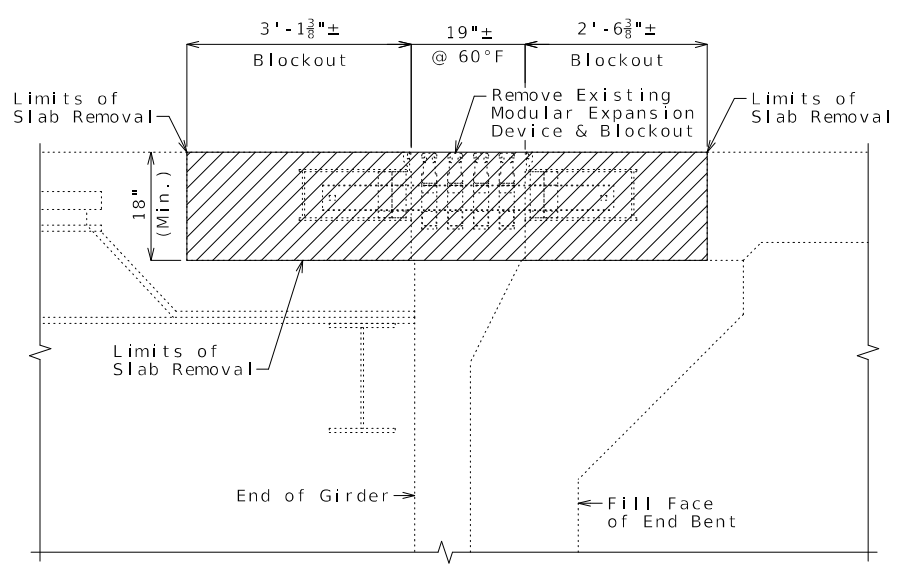
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

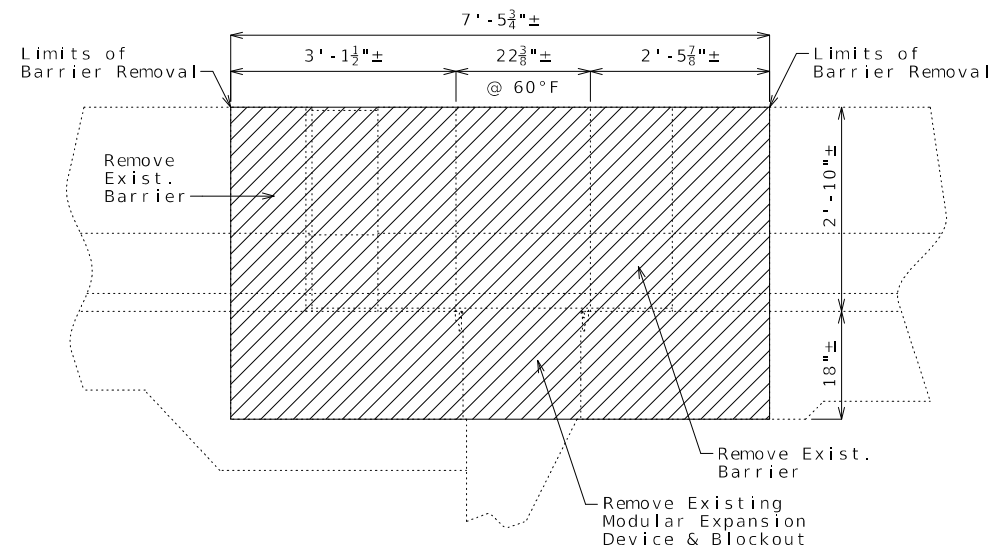
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PARTIAL PLAN AT END BENT NO. 15



SECTION A-A



PART ELEVATION OF BARRIER REMOVAL AT WESTBOUND BARRIER
 Eastbound and median barriers similar

EXPANSION JOINT REMOVAL AT BENT NO. 15

Detailed Apr. 2024
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Note: This drawing is not to scale. Follow dimensions.

Sheet No. 15 of 22



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ROUTE 74 STATE MO

DISTRICT BR SHEET NO. 16

COUNTY
 CAPE GIRARDEAU

JOB NO.
 J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
 A50763

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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105 WEST CAPITOL

JEFFERSON CITY, MO 65102

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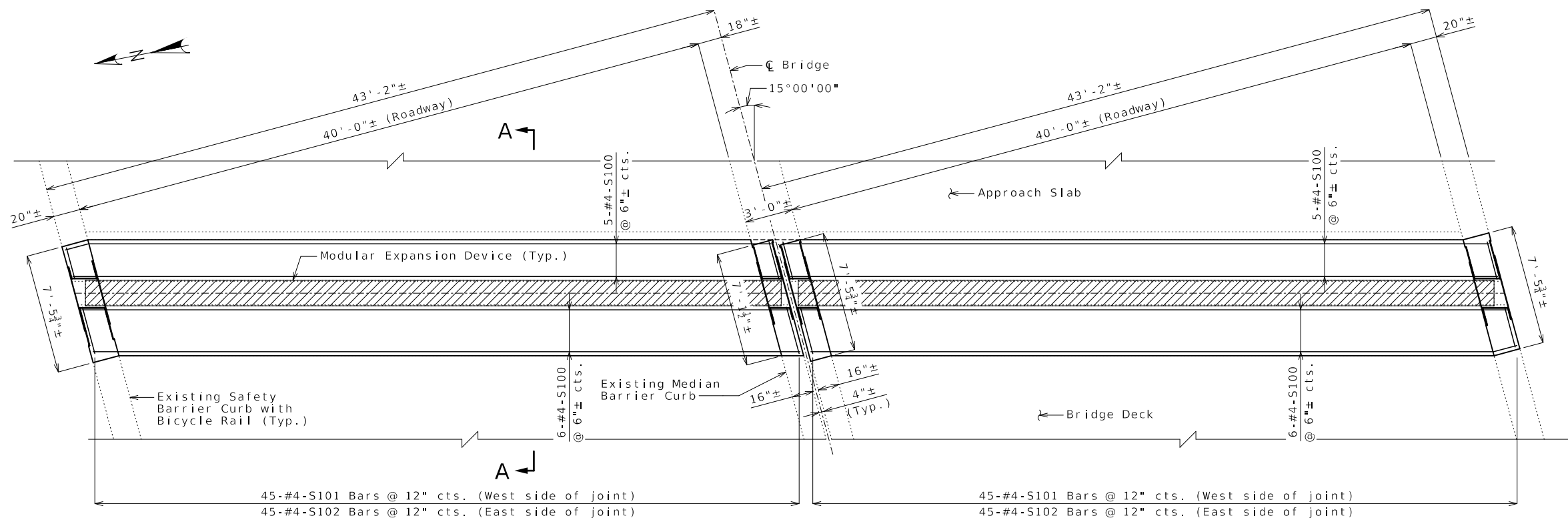
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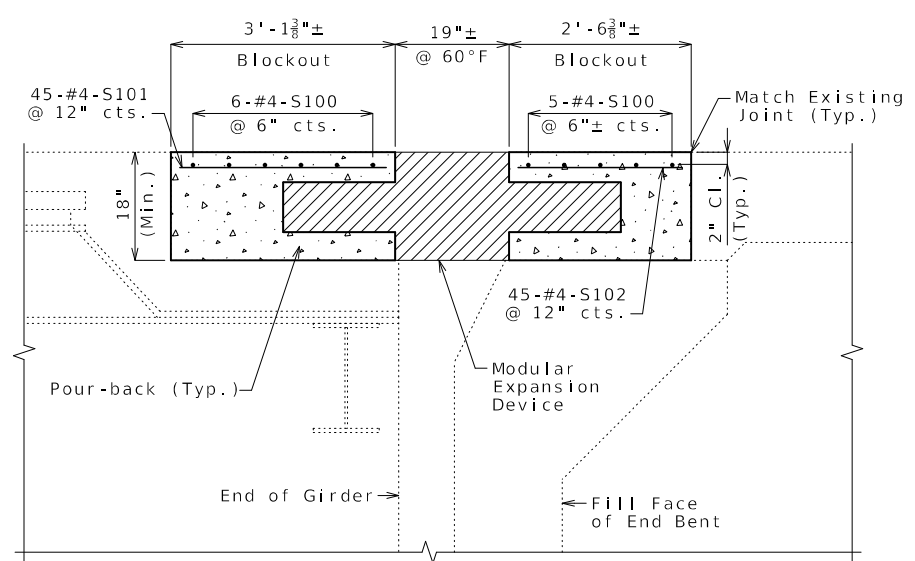
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PARTIAL PLAN AT END BENT NO. 15



SECTION A-A

Notes:
 Reinforcing steel protruding into blockouts not shown for clarity.
 Quantity of #4-S bars shown for one modular expansion device.
 There are two modular expansion devices.

Notes:
 Contractor shall coordinate rebar details at expansion joint breakout to avoid interference with expansion joint device.
 The modular expansion device shall accommodate a total movement of 17".
 For additional requirements for the Modular Expansion Device, see Job Special Provision.
 For Barrier Details and Barrier Cover Plate Details, see Sheets No. 17-20.
 The concrete in the pour-backs around the expansion device shall be silica fume concrete with f'c = 6,000 psi.
 The modular expansion devices including concrete and reinforcing steel in the pour-backs shall be considered completely covered by the contract unit price for Modular Expansion Joint System.

EXPANSION JOINT REPLACEMENT AT BENT NO. 15

Detailed Apr. 2024
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Note: This drawing is not to scale. Follow dimensions. Sheet No. 16 of 22



Alex Benz
 MEMBER
 PE-2018003121
 PROFESSIONAL ENGINEER

DATE PREPARED
 10/1/2024
 ROUTE
 74 STATE
 MO
 DISTRICT SHEET NO.
 BR 17
 COUNTY
 CAPE GIRARDEAU
 JOB NO.
 J9P3308
 CONTRACT ID.

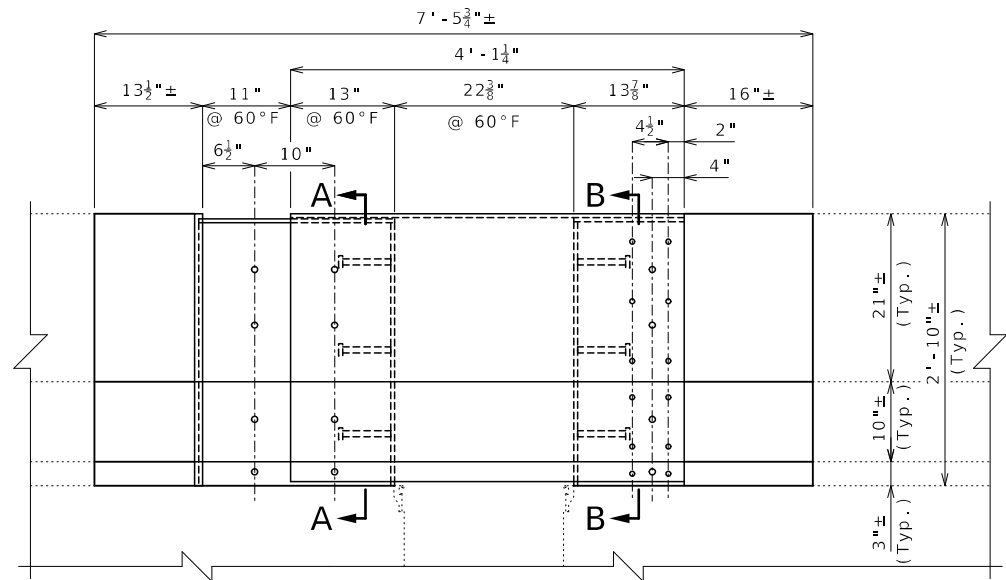
PROJECT NO.
 BRIDGE NO.
 A50763

DATE	DESCRIPTION

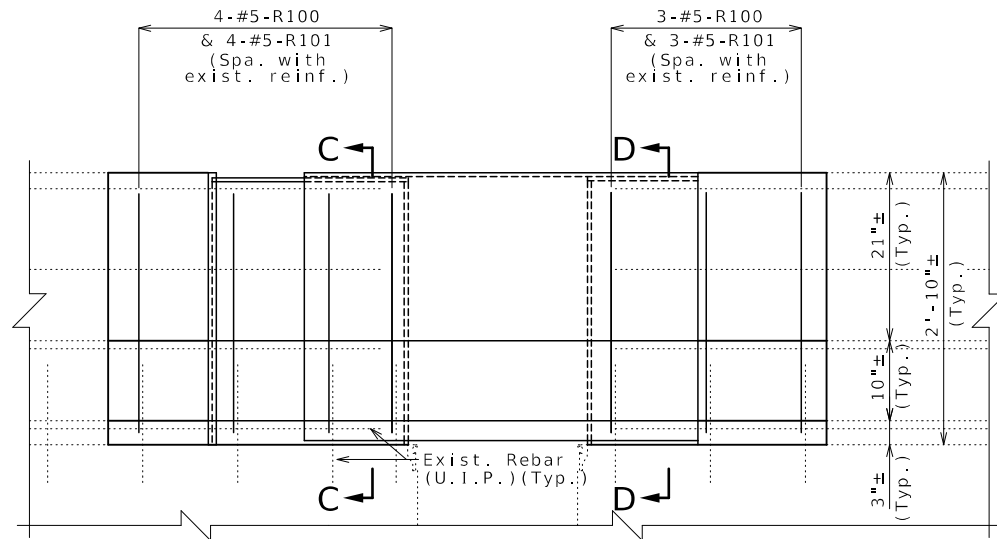
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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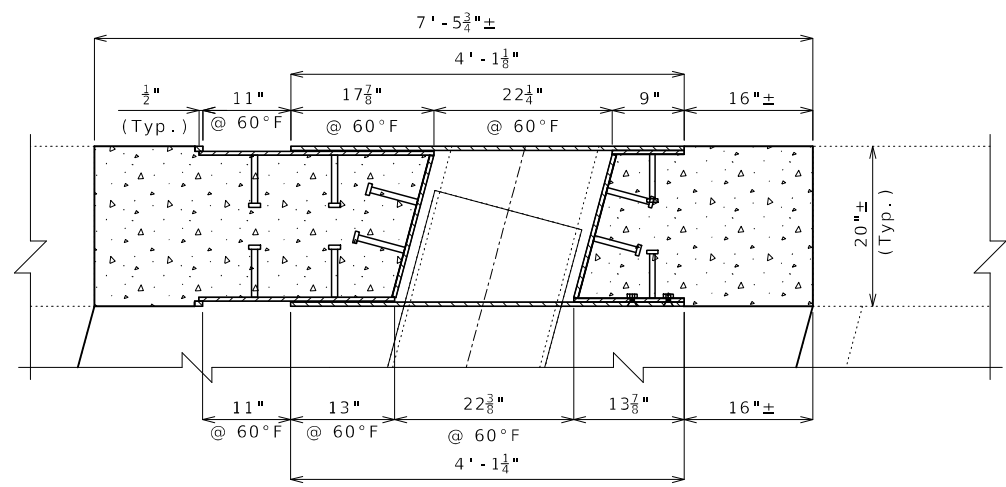
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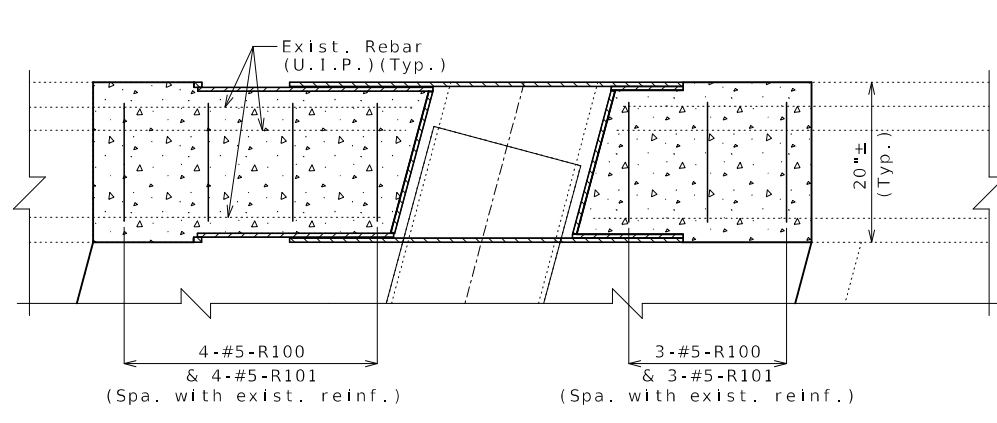
ELEVATION VIEW
 (Rebar not shown for clarity)



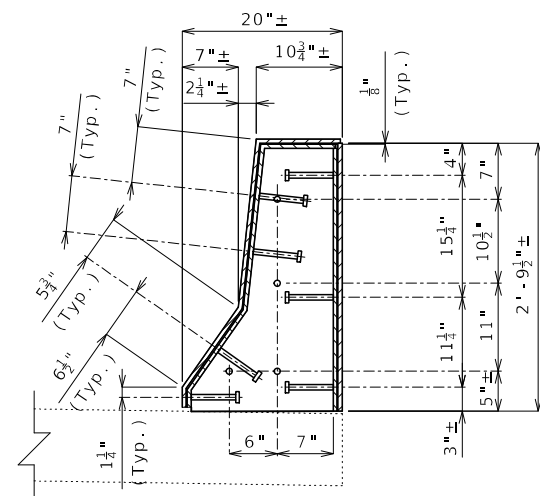
ELEVATION VIEW
 (Anchor Studs and Tack Welds not shown for clarity)



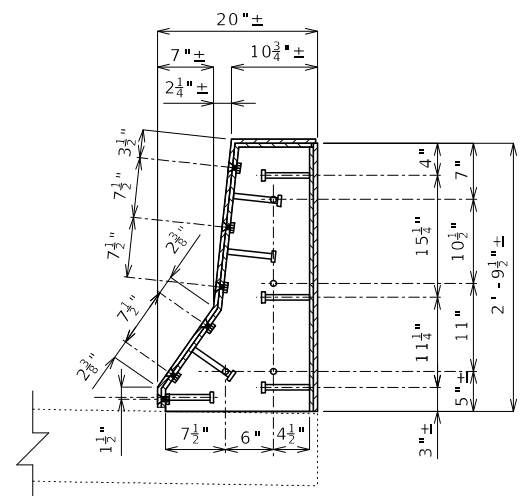
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 (Rebar not shown for clarity)



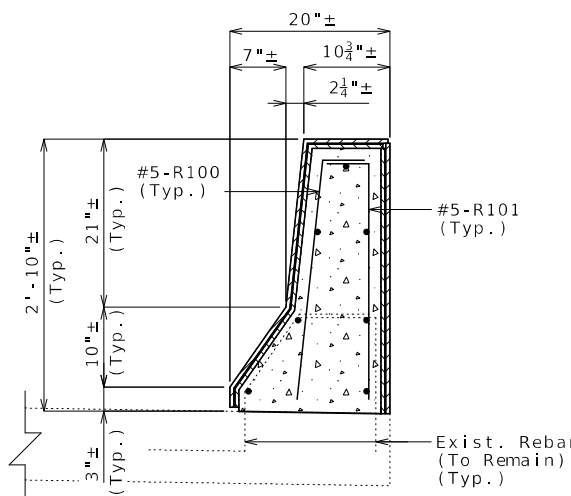
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 (Anchor Studs and Tack Welds not shown for clarity)



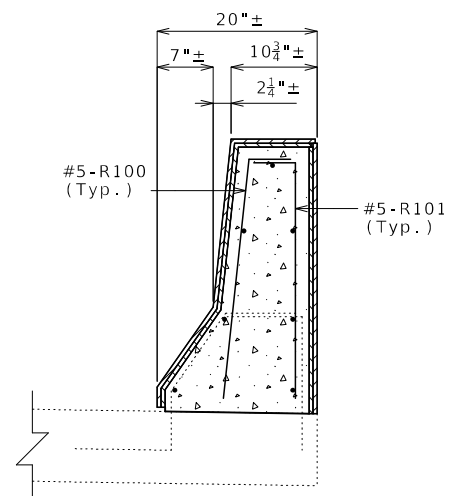
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

Notes:
 Top of barrier shall be built parallel to grade.
 All exposed edge 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 Remove and Replace Barrier per linear foot.
 Concrete in the barrier shall be Class B-1.
 Measurement of barrier is to the nearest linear foot, measured along the outside top of slab from removal line to removal line.
 Structural Steel shall conform with ASTM A709, Grade 36. Contractor shall provide expansion device and plates at End Bent No. 15.
 All bars and plates shall be galvanized per ASTM A123 after welding.
 Bolts shall be galvanized as per ASTM A123.
 Bicycle rail (not shown for clarity) shall be removed and reinstalled, only within barrier replacement section, as needed.

BARRIER DETAILS AT WB BENT NO. 15

Detailed Apr. 2024
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Note: This drawing is not to scale. Follow dimensions. Sheet No. 17 of 22



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ROUTE 74	STATE MO
DISTRICT BR	SHEET NO. 18

COUNTY
 CAPE GIRARDEAU
 JOB NO.
 J9P3308
 CONTRACT ID.

PROJECT NO.

BRIDGE NO.
 A50763

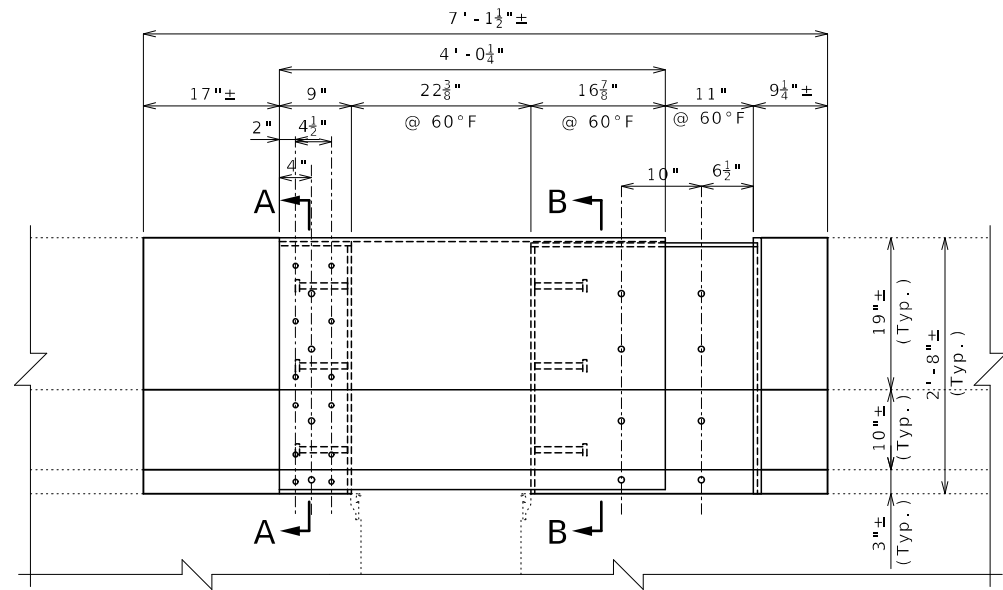
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION
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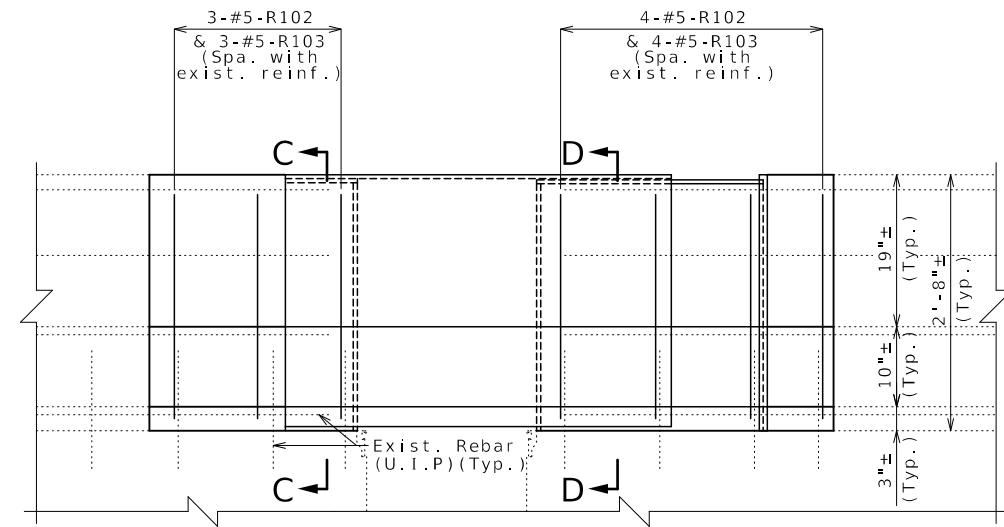
 105 WEST CAPITOL
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 Civil Engineering Design
 13523 Barrett Parkway Dr
 Suite 250
 St. Louis, MO 63021
 Phone 314-394-3100
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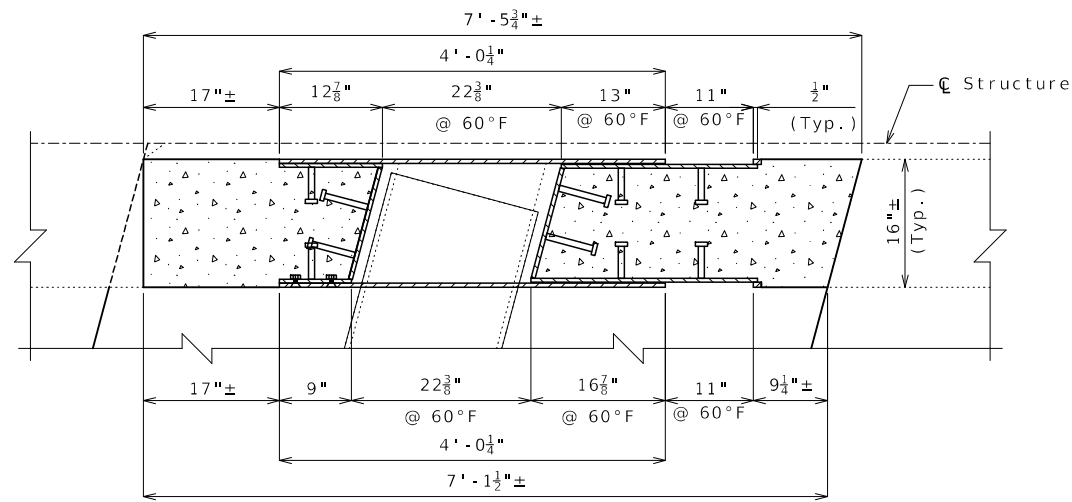
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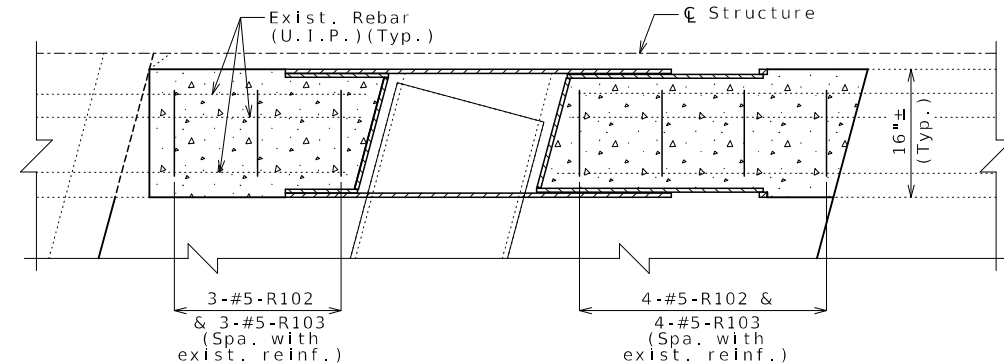
ELEVATION VIEW
 (Rebar not shown for clarity)



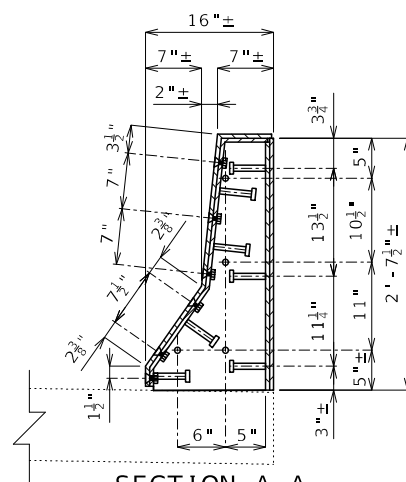
ELEVATION VIEW
 (Anchor Studs and Tack Welds not shown for clarity)



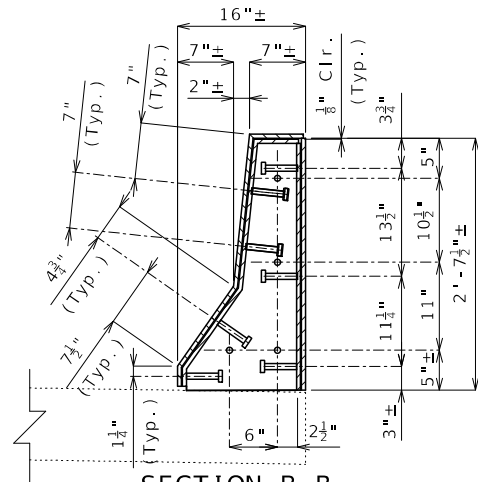
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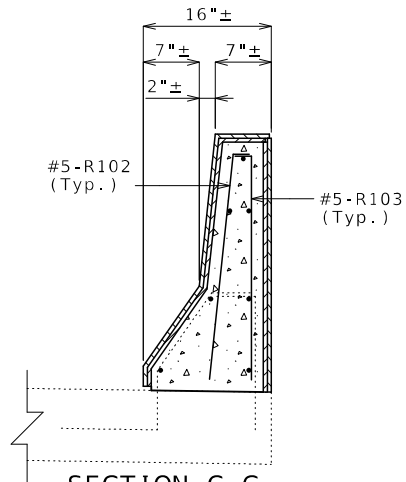
PARTIAL PLAN
 (Anchor Studs and Tack Welds not shown for clarity)



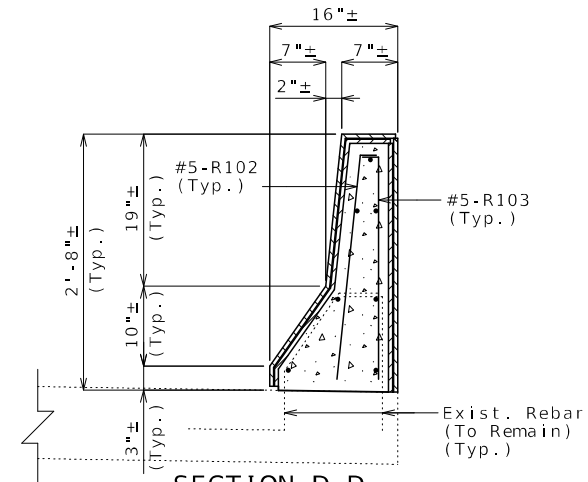
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

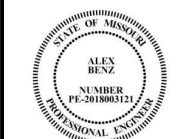
Notes:
 Top of barrier shall be built parallel to grade.
 All exposed edge of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.
 Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Remove and Replace Barrier per linear foot.
 Concrete in the barrier shall be Class B-1.
 Measurement of barrier is to the nearest linear foot, measured along the outside top of slab from removal line to removal line.
 Structural Steel shall conform with ASTM A709, Grade 36. Contractor shall provide expansion device and plates at End Bent 15.
 All bars and plates shall be galvanized per ASTM A123 after welding.
 Bolts shall be galvanized as per ASTM A123.

MEDIAN BARRIER DETAILS AT WB BENT NO. 15

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

Sheet No. 18 of 22

Detailed Apr. 2024
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 DISTRICT BR SHEET NO. 19
 COUNTY CAPE GIRARDEAU
 JOB NO. J9P3308
 CONTRACT ID.

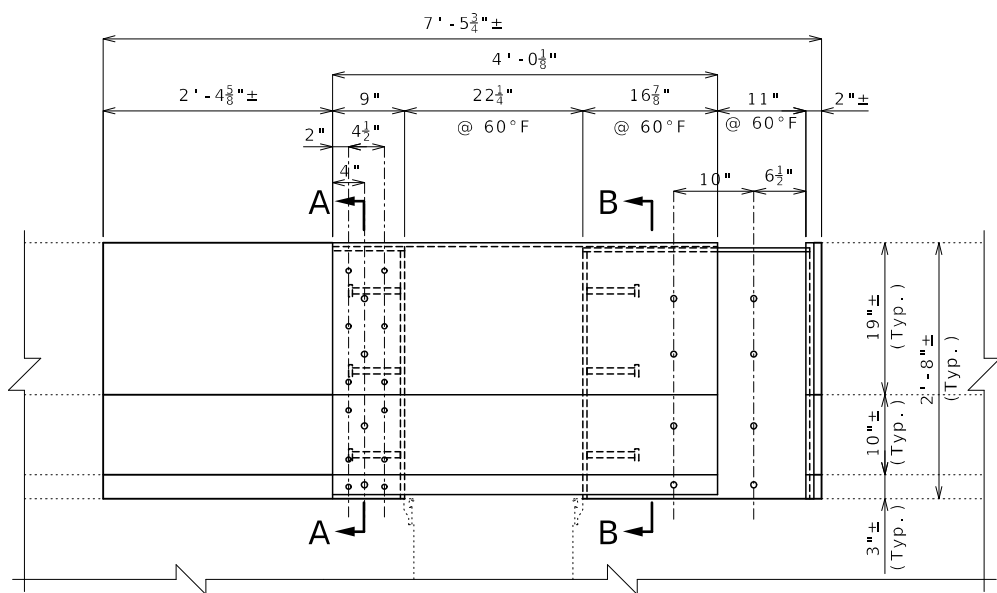
PROJECT NO.
 BRIDGE NO. A50763

DATE	DESCRIPTION

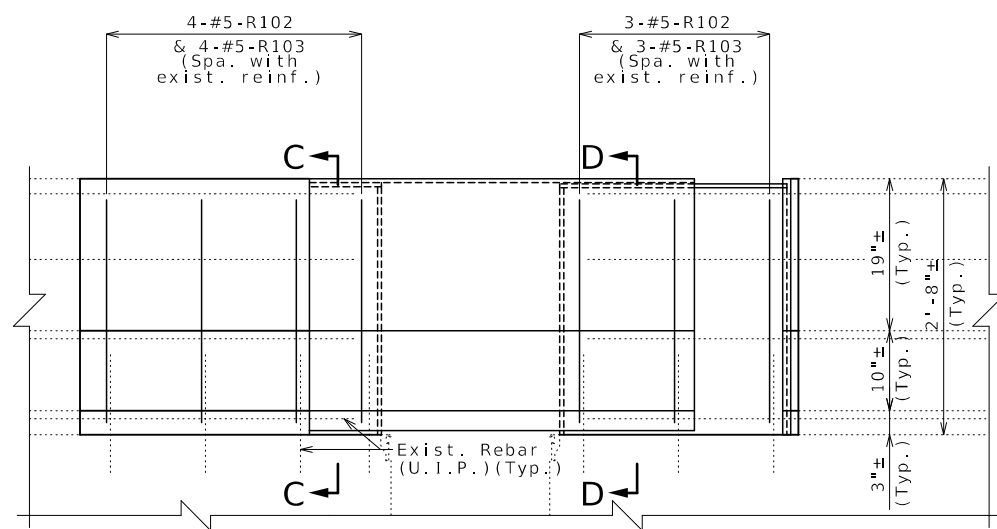
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

 105 WEST CAPITOL
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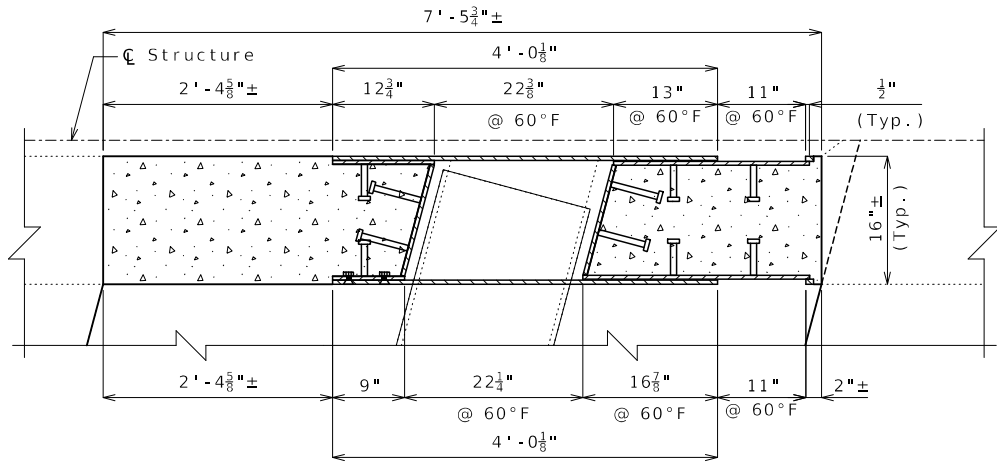
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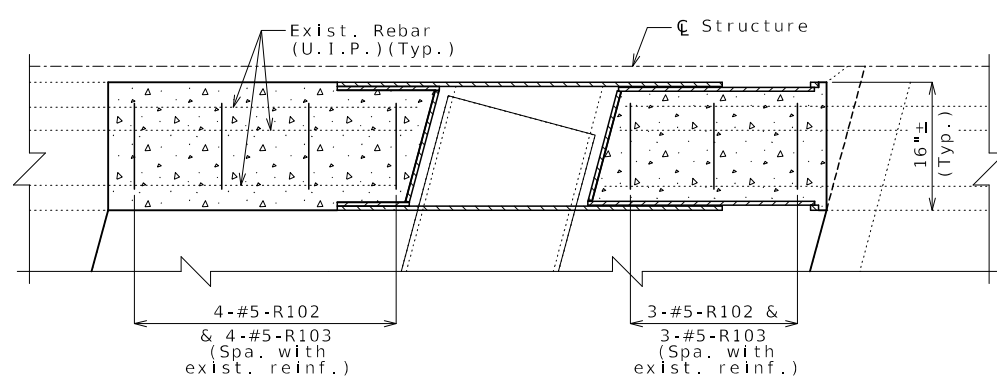
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 (Rebar not shown for clarity)



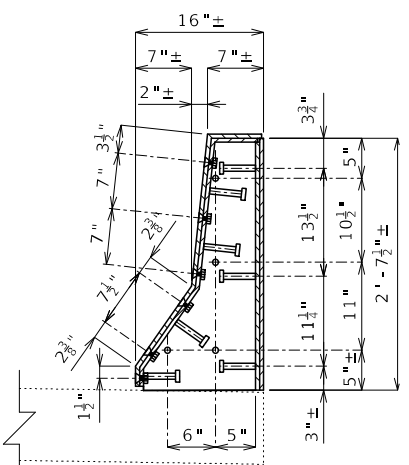
ELEVATION VIEW
 (Anchor Studs and Tack Welds not shown for clarity)



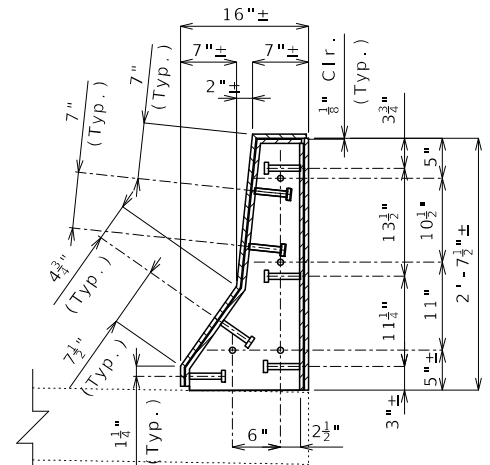
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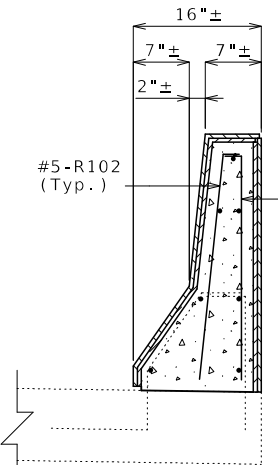
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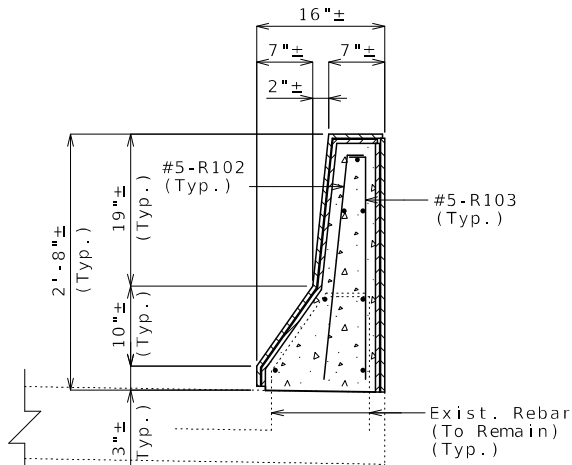
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

Notes:
 Top of barrier shall be built parallel to grade.
 All exposed edge of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.
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 All bars and plates shall be galvanized per ASTM A123 after welding.
 Bolts shall be galvanized as per ASTM A123.

MEDIAN BARRIER DETAILS AT EB BENT NO. 15

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Note: This drawing is not to scale. Follow dimensions. Sheet No. 19 of 22



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ROUTE 74 STATE MO

DISTRICT BR SHEET NO. 20

COUNTY CAPE GIRARDEAU

JOB NO. J9P3308

CONTRACT ID.

PROJECT NO.

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DESCRIPTION

DATE

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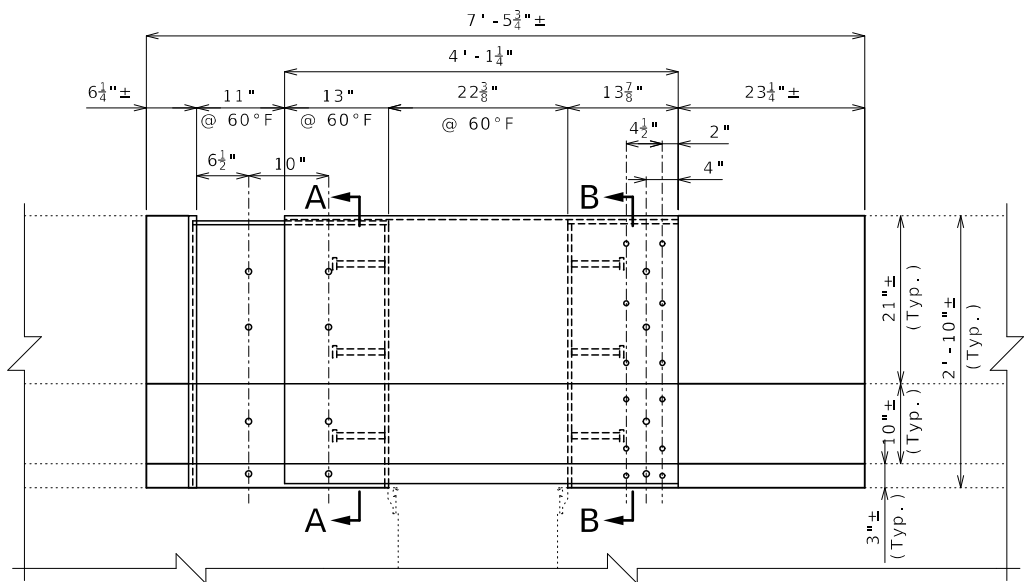
Civil Engineering Design

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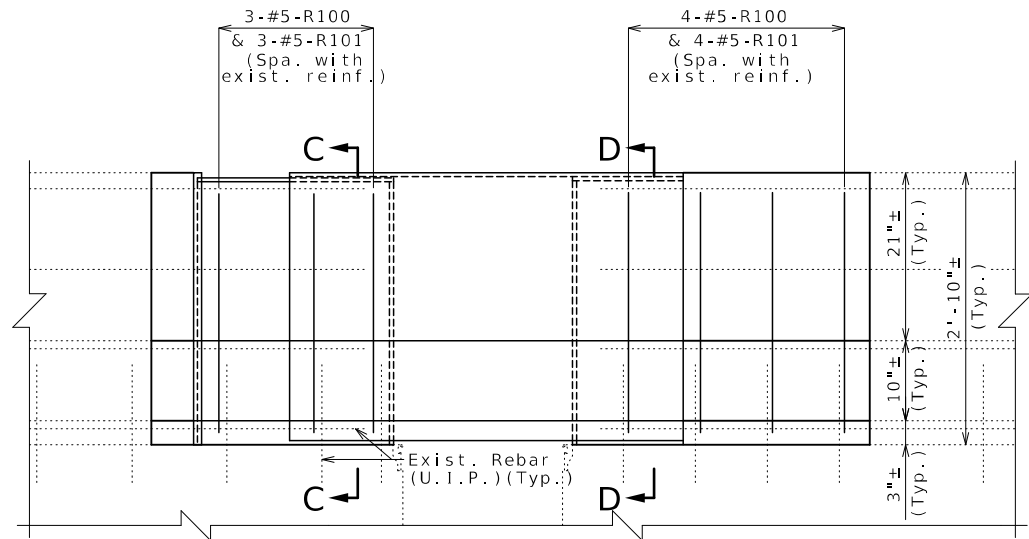
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St. Louis, MO 63021

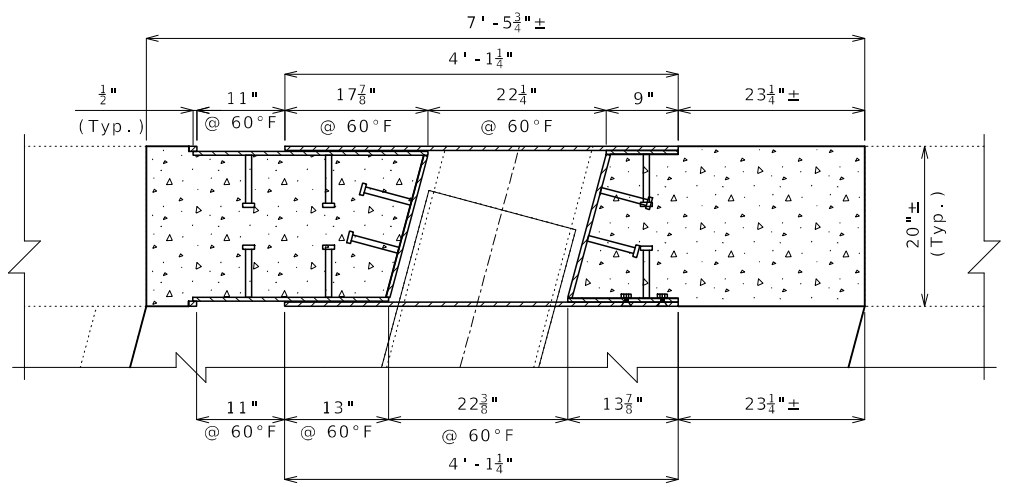
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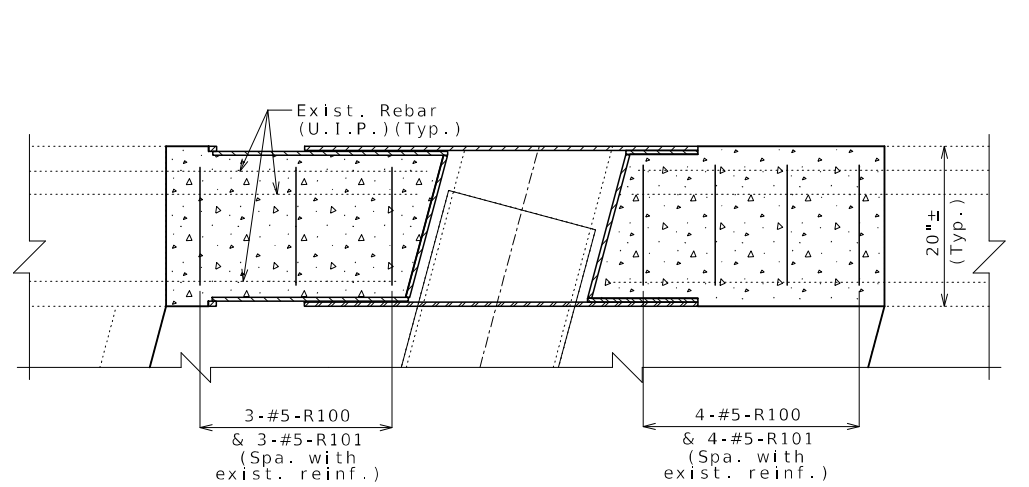
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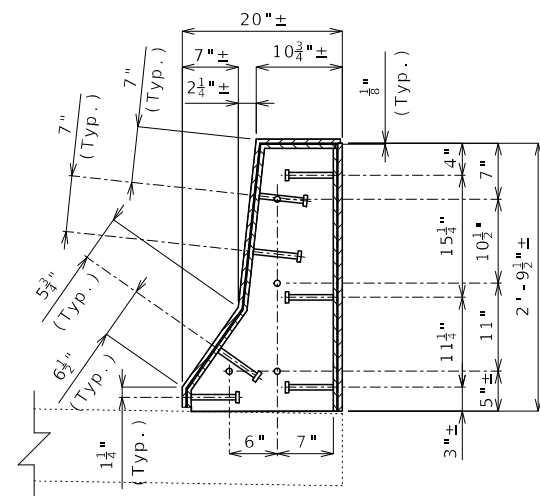
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 (Anchor Studs and Tack Welds not shown for clarity)



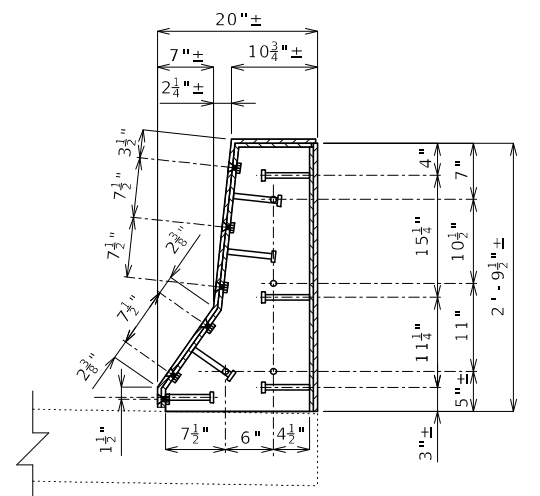
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 (Rebar not shown for clarity)



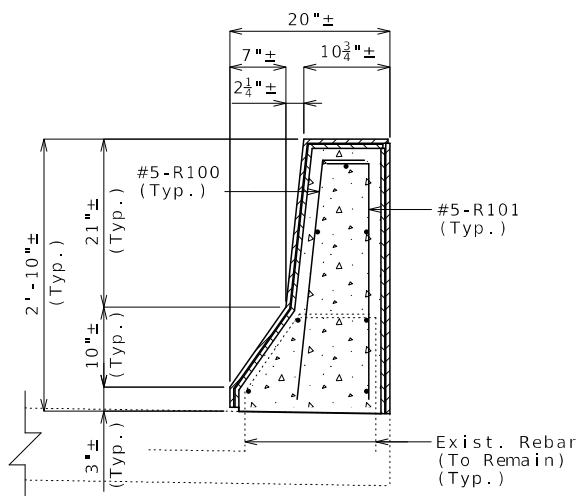
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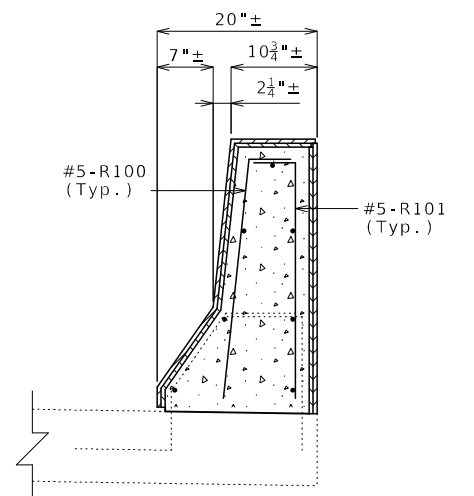
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

Notes:
 Top of barrier shall be built parallel to grade.

All exposed edge 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 Remove and Replace Barrier per linear foot.

Concrete in the barrier shall be Class B-1.

Measurement of barrier is to the nearest linear foot, measured along the outside top of slab from removal line to removal line.

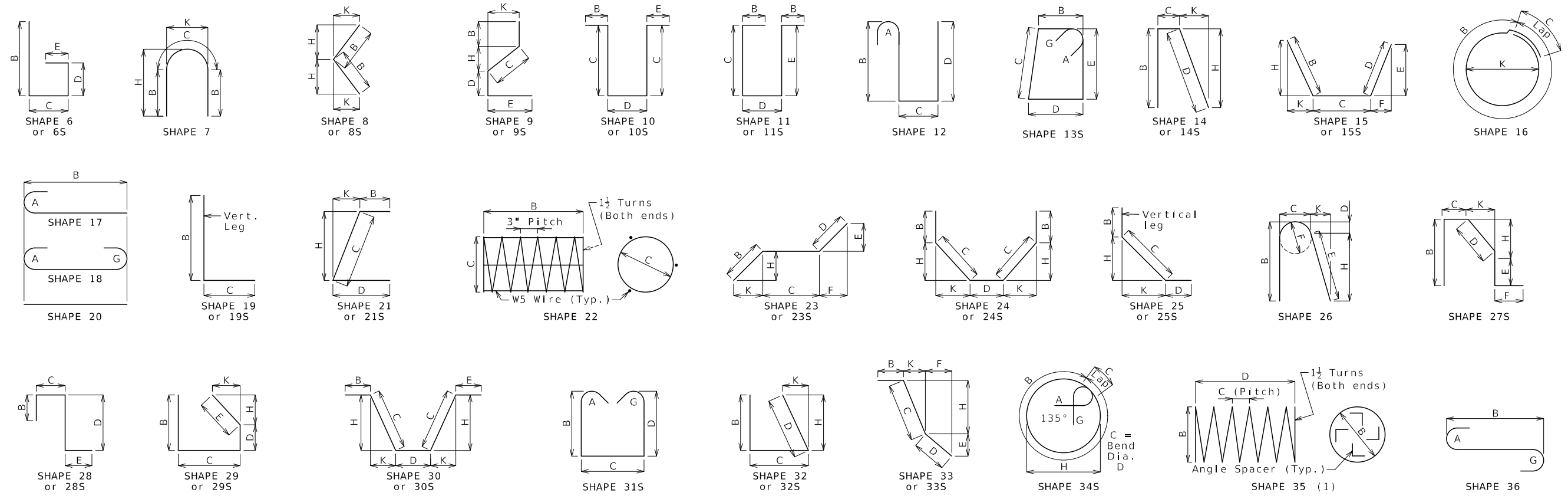
Structural Steel shall conform with ASTM A709, Grade 36. Contractor shall provide expansion device and plates at End Bent No. 15.

All bars and plates shall be galvanized per ASTM A123 after welding.

Bolts shall be galvanized as per ASTM A123.

Bicycle rail (not shown for clarity) shall be removed and reinstalled, only within barrier replacement section, as needed.

BARRIER DETAILS AT EB BENT NO. 15

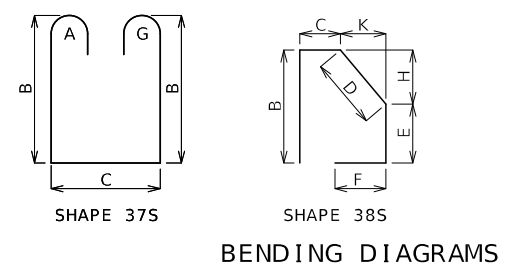


Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes						
Size	Case	D	A or G		J	
			90°	180°	180°	180°
#4	1	3"	8"	6"	4"	
#5	1	3 3/4"	10"	7"	5"	
#6	1	4 1/2"	12"	8 1/4"	6"	
#7	2	5 1/4"	14"	9 3/4"	7"	
	3	7"	15"	11 1/2"	8 3/4"	
#8	2	6"	16"	11"	8"	
	3	8"	17"	13 1/4"	10"	
#9	1	9 1/2"	19 1/2"	15 1/2"	11 3/4"	
#10	1	10 3/4"	22"	17 1/2"	13 1/4"	
#11	1	12"	24 1/2"	19 1/2"	14 7/8"	
#14	1	18 1/4"	31 1/4"	27 1/2"	21 5/8"	
#18	1	24"	41 1/2"	36 1/4"	28 1/2"	

Stirrup Pin Bend Shapes (S)						
Size	Case	D	A or G		H	
			90°	135°	180°	135°
#4	2	2"	4 1/2"	4 1/2"	5"	2 5/8"
	3	3"	5"	5 1/4"	6"	3"
#5	2	2 1/2"	5 3/4"	5 3/4"	5 3/4"	3 3/8"
	3	3 3/4"	6 1/4"	6 1/4"	7"	3 3/8"
#6	1	4 1/2"	12"	7 3/4"	8 1/4"	4 3/8"

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.



All dimensions are out to out. (1) Shall be a deformed or plain spiral bar or wire.

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

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

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	
	Plain	Epoxy	Slab		Barrier	Slip Form	Plain	Epoxy
W5	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	954	156	0	0	1110
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
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	0	954	156	0	0	1110

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

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed Apr. 2024
 Checked Apr. 2024

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

Sheet No. 21 of 22



Alex C. Benz
 10/01/2024 3:39:19 PM
 Alex Benz - Civil
 MO PE-2018003121

DATE PREPARED: 10/1/2024
 ROUTE: 74 STATE: MO
 DISTRICT: BR SHEET NO.: 21
 COUNTY: CAPE GIRARDEAU
 JOB NO.: J9P3308
 CONTRACT ID.:
 PROJECT NO.:
 BRIDGE NO.: A50763

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

EFK Moen
 Civil Engineering Design
 13523 Barrett Parkway Dr
 Suite 250
 St. Louis, MO 63021
 Phone 314-394-3100
 Fax 314-394-3199
 Missouri Certificate of Authority: 001578

Table with columns: No. Req., Size/Mark, Location, Codes (C, SH, V), Dimensions (B, C, D, E, F, H, K), Nom. Length, Actual Length, Weight. Contains 10 rows of data for various steel reinforcement items.

Table with columns: No. Req., Size/Mark, Location, Codes (C, SH, V), Dimensions (B, C, D, E, F, H, K), Nom. Length, Actual Length, Weight. This table is currently empty.

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. 21.

Detailed Apr. 2024
Checked Apr. 2024

All bars shall be Grade 60.

BILL OF REINFORCING STEEL

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

Sheet No. 22 of 22

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.



Alex C. Benz
10/01/2024 3:39:28 PM
Alex Benz - Civil
MO PE-2018003121

DATE PREPARED
10/1/2024

ROUTE 74 STATE MO

DISTRICT BR SHEET NO. 22

COUNTY
CAPE GIRARDEAU

JOB NO.
J9P3308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A50763

Table with columns: DATE, DESCRIPTION. Multiple empty rows.

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