MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY
WRIGHT COUNTY

DESIGN DESIGNATION

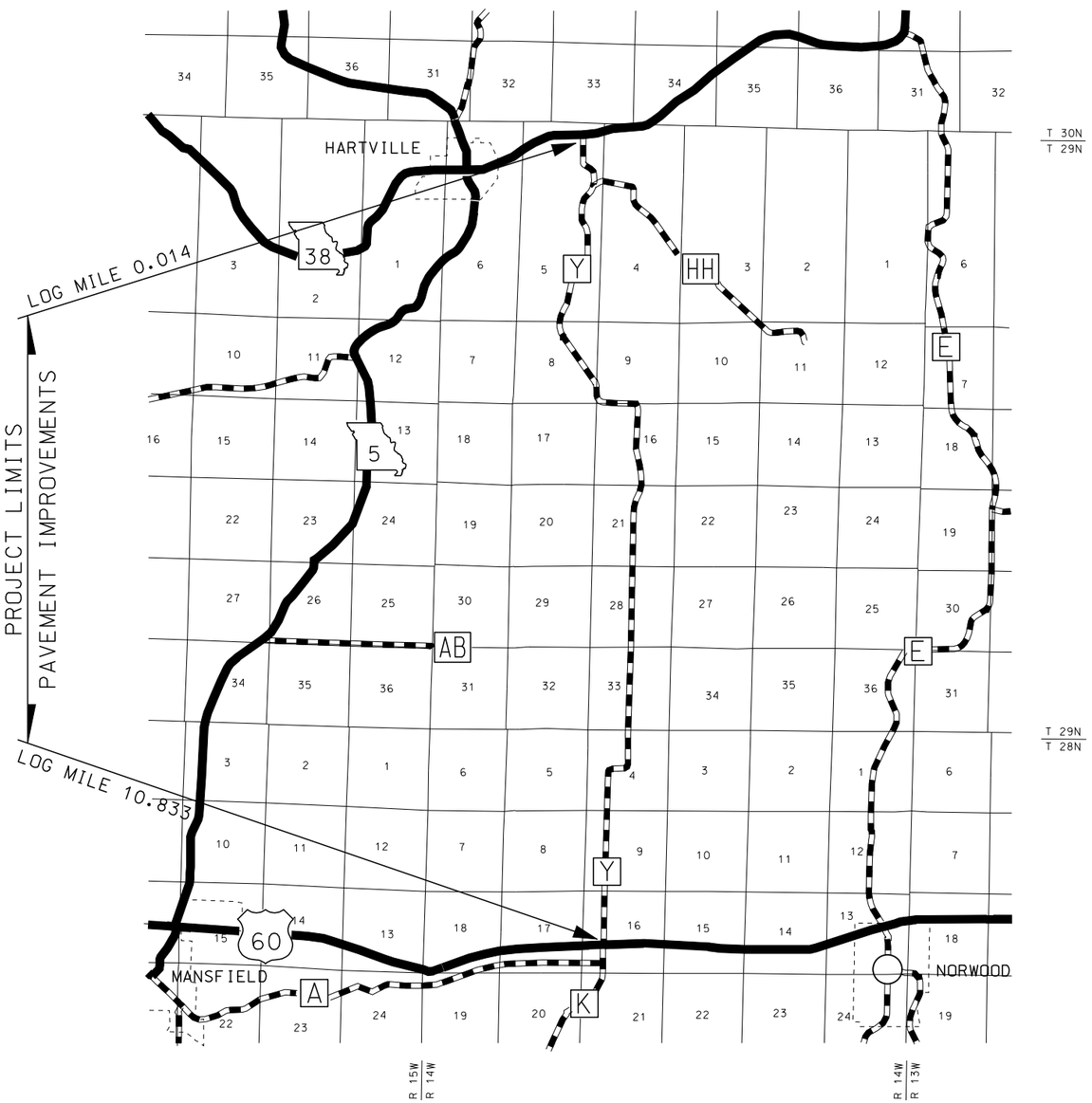
A.A.D.T. - 2017 = 905
A.A.D.T. - 2027 = 950
D.H.V. = 8%
T = 11%
V = 55 M.P.H.

FUNCTIONAL CLASSIFICATION - MAJOR COLLECTOR

CONVENTIONAL SYMBOLS
(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	FO	FO
OVERHEAD TELEPHONE		
UNDERGROUND TELEPHONE	T	T
OVERHEAD POWER		
UNDERGROUND POWER	P	P
GAS	G	G
WATER	W	W
MANHOLE	SAN	
FIRE HYDRANT	HYD	
WATER VALVE	WV	
WATER METER	WM	
DROP INLET	DI	
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL	PED	
FENCE		
CHAIN LINK	V	
WOVEN WIRE	X	
GATE POST		
BENCHMARK	BM	

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES



INDEX OF SHEETS

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LENGTH OF PROJECT

BEGINNING OF PROJECT	LM 0.014	
END OF PROJECT	LM 10.833	
APPARENT LENGTH	10.819	MILES
EQUATIONS AND EXCEPTIONS:		
TOTAL CORRECTIONS	0	FEET
NET LENGTH OF PROJECT	10.819	MILES
STATE LENGTH	10.819	MILES

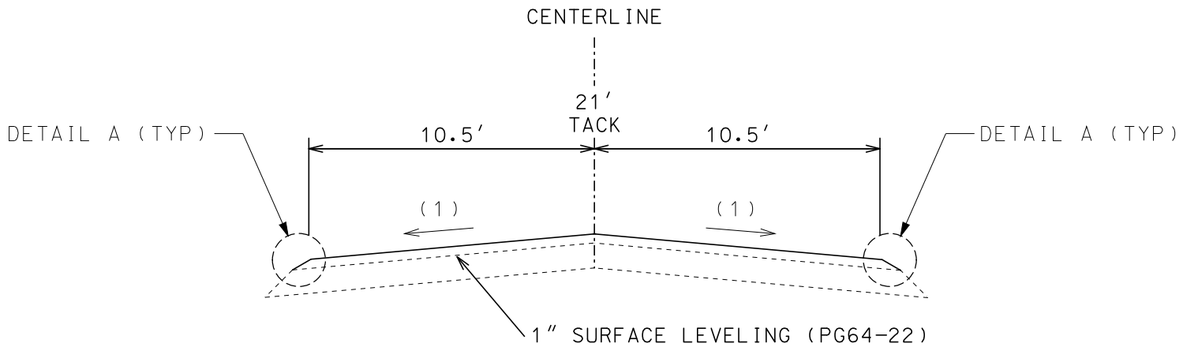
STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/26/2016
ROUTE: Y
STATE: MO
DISTRICT: SE
SHEET NO.: 1
COUNTY: WRIGHT
JOB NO.: J9S3163
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)

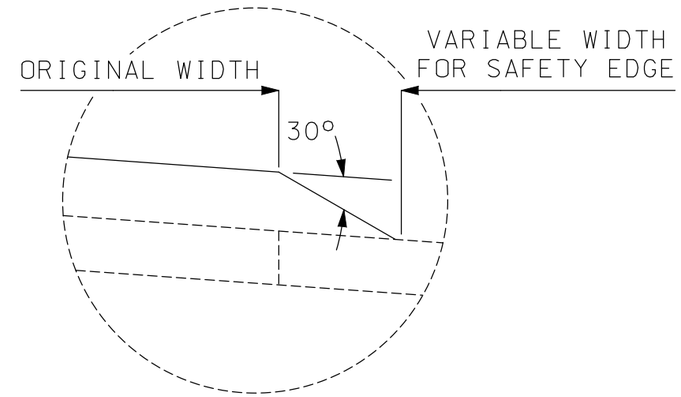
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



TYPICAL SECTION
ROUTE Y

LOG MILE 0.014 TO LOG MILE 10.833

(1) MATCH EXISTING CROSS SLOPE
(MIN. 1% AS DIRECTED BY THE ENGINEER)



DETAIL A
SAFETY EDGE

NOT TO SCALE FOLLOW DIMENSTIONS

TYPICAL SECTION
SHEET 1 OF 1

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER
PE-2003015056
PROFESSIONAL ENGINEER

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DATE PREPARED	
8/26/2016	
ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
SE	2
COUNTY	
WRIGHT	
JOB NO.	
J9S3163	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

PLANT MIX BITUMINOUS PAVEMENT AND TACK

LOCATION	LOG MILE	LOG MILE	TRAVELWAY WIDTH (FT)	BITUMINOUS PAVEMENT 1" SURFACE LEVELING PG 64-22 2.037 TONS/CY (TONS)	TACK COAT 0.08 GAL/SY (GAL)	TEMP SURFACING (CY)
ROUTE Y	0.014	10.833	21	7542.0	10663	
ROUTE HH	0.656		VARIES	36.7	52	
74 ENTRANCES - AVG WIDTH 30'	0.014	10.833		27.9	39	50
			SUB-TOTAL	7606.6	10754	50
SAFETY EDGE				51.8	147	
RUTTING AND IRREGULARITIES - 50 TONS/MI				541.0		
			TOTAL:	8199.4	10901	50
				USE	10900	

MOBILIZATION

1 LUMP SUM

PAVEMENT MARKING

LOG MILE	LOG MILE	LOCATION	ACRYLIC WATERBORNE PAINT 4" WHITE (L.F.)	ACRYLIC WATERBORNE PAINT 4" SOLID YELLOW (L.F.)	ACRYLIC WATERBORNE PAINT 4" INT. YELLOW (L.F.)	REMARKS
0.014	0.299	ROUTE Y	3010	3010		NO PASSING - NB & SB
0.299	0.425		1330	665	170	NO PASSING NB, PASSING SB
0.430	0.477		496	496		NO PASSING - NB & SB
0.477	0.597		1268	634	160	PASSING NB, NO PASSING SB
0.597	1.445		8954	8954		NO PASSING - NB & SB
1.445	1.630		1954	977	240	NO PASSING NB, PASSING SB
1.630	1.720		950		120	PASSING - NB & SB
1.720	1.881		1700	850	210	PASSING NB, NO PASSING SB
1.881	3.687		19072	19072		NO PASSING - NB & SB
3.687	3.810		1298	649	160	NO PASSING NB, PASSING SB
3.810	3.850		422	422		NO PASSING - NB & SB
3.850	3.981		1384	692	170	PASSING NB, NO PASSING SB
3.981	4.620		6748	6748		NO PASSING - NB & SB
4.620	4.741		1278	639	160	NO PASSING NB, PASSING SB
4.741	7.080		24700	24700		NO PASSING - NB & SB
7.080	7.241		1700	850	210	NO PASSING NB, PASSING SB
7.241	7.265		254		30	PASSING - NB & SB
7.264	7.436		1816	908	230	PASSING NB, NO PASSING SB
7.436	8.810		14510	14510		NO PASSING - NB & SB
8.810	8.990		1900	950	240	NO PASSING NB, PASSING SB
8.990	9.289		3158		390	PASSING - NB & SB
9.289	9.464		1848	924	230	PASSING NB, NO PASSING SB
9.464	9.840		3970	3970		NO PASSING - NB & SB
9.840	10.006		1752	876	220	NO PASSING NB, PASSING SB
10.006	10.097		960		120	PASSING - NB & SB
10.097	10.268		1806	903	230	PASSING NB, NO PASSING SB
10.267	10.423		1648	1648		NO PASSING - NB & SB
10.423	10.589		1752	876	220	NO PASSING NB, PASSING SB
10.589	10.819		2428		300	PASSING - NB & SB
10.819	10.833		148	74	20	PASSING NB, NO PASSING SB
0.015	0.034	ROUTE HH		150		NO PASSING - EB & WB
TOTALS			114214	95147	3830	

PAVEMENT MARKING LOCATIONS AND QUANTITIES ARE APPROXIMATE.
PAVEMENT MARKINGS TO BE LOCATED IN ACCORDANCE WITH PAVEMENT MARKING LOG JSP

MODIFIED COLD MILLING (DEPTH TRANSITIONS)

LOCATION	LOG MILE	LOG MILE	AREA (SY)
ROUTE Y (END OF PROJECT)	10.814	10.833	233
ROUTE HH	0.656		23
10 PAVED ENTRANCES - AVG WIDTH 30'	VARIES		67
		TOTAL:	323

TEMPORARY RAISED PAVEMENT MARKERS

LOG MILE	LOG MILE	QUANTITY TYPE 2 YELLOW EACH	QUANTITY TYPE 2 WHITE EACH
0.014	10.833	1430	2860
	TOTAL	1430✳	2860✳

✳ - NO DIRECT PAY FOR TEMPORARY RAISED PAVEMENT MARKERS
SEE STD. 620.10 FOR TEMPORARY PAVEMENT MARKING REQUIREMENTS
TO BE REMOVED BY CONTRACTOR AFTER FINAL STRIPING

SUMMARY SHEET
SHEET 1 OF 2

STATE OF MISSOURI
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NUMBER PE-2003015056
PROFESSIONAL ENGINEER
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DATE PREPARED 8/26/2016
ROUTE Y | STATE MO
DISTRICT SE | SHEET NO. 3
COUNTY WRIGHT
JOB NO. J9S3163
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION

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

EFFECTIVE: 04-01-2016

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
WARNING SIGNS							
W01-1L	48X48	16.00					TURN (SYMBOL LEFT ARROW)
W01-1R	48X48	16.00					TURN (SYMBOL RIGHT ARROW)
W01-2L	48X48	16.00					CURVE (SYMBOL LEFT ARROW)
W01-2R	48X48	16.00					CURVE (SYMBOL RIGHT ARROW)
W01-3L	48X48	16.00					REVERSE TURN (SYMBOL LEFT ARROW)
W01-3R	48X48	16.00					REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4L	48X48	16.00					REVERSE CURVE (SYMBOL LEFT ARROW)
W01-4R	48X48	16.00					REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4bL	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-4bR	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-4cL	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-4cR	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-6	60X30	12.50					HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.00					HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-7	60X30	12.50					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.00					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-8	18X24	3.00					CHEVRON (SYMBOL)
W01-8a	30X36	7.50					CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
W03-1	48X48	16.00					STOP AHEAD (SYMBOL)
W03-2	48X48	16.00					YIELD AHEAD (SYMBOL)
W03-3	48X48	16.00					SIGNAL AHEAD (SYMBOL)
W03-4	48X48	16.00					BE PREPARED TO STOP
W03-5	48X48	16.00					SPEED LIMIT AHEAD
W04-1L	48X48	16.00					MERGE (SYMBOL FROM LEFT)
W04-1R	48X48	16.00					MERGE (SYMBOL FROM RIGHT)
W05-1	48X48	16.00					ROAD/BRIDGE/RAMP NARROWS
W05-3	48X48	16.00					ONE LANE BRIDGE
W05-5	48X48	16.00					NARROW LANES
W06-1	48X48	16.00					DIVIDED HIGHWAY (SYMBOL)
W06-2	48X48	16.00					DIVIDED HIGHWAY END (SYMBOL)
W06-3	48X48	16.00					TWO WAY TRAFFIC (SYMBOL)
W07-3a	30X24	5.00					NEXT XX MILES (PLAQUE)
W08-1	48X48	16.00	4	64			BUMP
W08-2	48X48	16.00					DIP
W08-3	48X48	16.00					PAVEMENT ENDS
W08-4	48X48	16.00					SOFT SHOULDER
W08-5	48X48	16.00					SLIPPERY WHEN WET (SYMBOL)
W08-6	48X48	16.00					TRUCK CROSSING WITH FLAGS
W08-6c	48X48	16.00					TRUCK ENTRANCE
W08-7	36X36	9.00					LOOSE GRAVEL
W08-9	48X48	16.00					LOW SHOULDER
W08-11	48X48	16.00	22	352			UNEVEN LANES
W08-12	48X48	16.00	14	224			NO CENTER LINE
W10-1	42 RND.	9.62					RAILROAD CROSSING
W012-1	24X24	4.00					DOUBLE DOWN ARROW (SYMBOL)
W012-2	48X48	16.00					LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00					LOW CLEARANCE (PLAQUE)
W012-2a	84X24	14.00					OVERHEAD LOW CLEARANCE (FEET AND INCHES)
W08-15	48X48	16.00	4	64			GROOVED PAVEMENT
W08-15p	30X24	5.00	4	20			MOTORCYCLE (PLAQUE)
W08-17	48X48	16.00					SHOULDER DROP-OFF (SYMBOL)
W08-17p	30X24	5.00					SHOULDER DROP-OFF (PLAQUE)
SPECIAL	120X60	50.00					LOW CLEARANCE XX FT XX IN XX MILES AHEAD
SPECIAL	120X60	50.00					WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
W013-1	30X30	6.25					ADVISORY SPEED (PLAQUE)
W016-2	30X24	5.00					XXX FEET (PLAQUE)
W016-3	30X24	5.00					X MILE (PLAQUE)
W020-1	48X48	16.00	14	224			ROAD/BRIDGE/RAMP WORK AHEAD
W020-2	48X48	16.00					DETOUR AHEAD
W020-3	48X48	16.00					ROAD CLOSED AHEAD
W020-4	48X48	16.00	6	96			ONE LANE ROAD AHEAD
W020-5	48X48	16.00					RIGHT/CENTER/LEFT LANE CLOSED AHEAD
W020-5a	48X48	16.00					2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
W020-6a	48X48	16.00					RIGHT/CENTER/LEFT LANE CLOSED
W020-7a	48X48	16.00	4	64			FLAGGER (SYMBOL) WITH FLAGS
W021-2	36X36	9.00					FRESH OIL
W021-5b	48X48	16.00					SHOULDER WORK AHEAD
W022-1	48X48	16.00					BLASTING ZONE AHEAD
W022-2	42X36	10.50					TURN OFF 2-WAY RADIO AND PHONE
W022-3	42X36	10.50					END BLASTING ZONE
W022-6e	21X15	2.19	4	8.8			WET PAINT (ARROW PIVOTS)
GUIDE SIGNS							
SPECIAL	36X36	9.00					FRESH OIL/LOOSE GRAVEL
E05-1	36X48	12.00					GORE EXIT
E05-2	48X36	12.00					EXIT OPEN
E05-2a	48X36	12.00					EXIT CLOSED
G020-1	60X24	10.00	2	20			ROAD WORK NEXT 10 MILES
G020-2	48X24	8.00	2	16			END ROAD WORK
G020-4	36X18	4.50	1	4.5			PILOT CAR FOLLOW ME
SPECIAL	42X30	8.75	8	70			PLEASE WAIT FOR PILOT CAR
G020-5aP	36X24	6.00					WORK ZONE (PLAQUE)
M04-8a	24X18	3.00					END DETOUR
M04-9L	48X36	12.00					DETOUR (LEFT ARROW)
M04-9R	48X36	12.00					DETOUR (RIGHT ARROW)
M04-10L	48X18	6.00					DETOUR (ARROW LEFT)
M04-10R	48X18	6.00					DETOUR (ARROW RIGHT)
REGULATORY SIGNS							
R1-1	48X48	13.25					STOP
R1-2	48 TRI.	6.93					YIELD
R1-2a	36X36	9.00					TO ONCOMING TRAFFIC (PLAQUE)
R1-3	20X9	1.25					X-WAY (PLAQUE)
R2-1	36X48	12.00					SPEED LIMIT XX (4-45, 4-55)
R3-1	48X48	16.00					NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00					NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00					NO TURNS
R3-4	48X48	16.00					NO U-TURN (SYMBOL)
R3-7L	30X30	6.25					LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25					RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00					DO NOT PASS
R4-2	36X48	12.00					PASS WITH CARE
R4-7aL	36X48	12.00					KEEP LEFT (HORIZONTAL ARROW)
R4-7a	36X48	12.00					KEEP RIGHT (HORIZONTAL ARROW)
R5-1	30X30	6.25					DO NOT ENTER
R5-1a	36X24	6.00					WRONG WAY
R6-1L	48X18	6.00					ONE WAY ARROW (LEFT)
R6-1R	48X18	6.00					ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00					ONE WAY (LEFT)
R6-2R	24X30	5.00					ONE WAY (RIGHT)
R10-6	24X36	6.00					STOP HERE ON RED (45° ARROW)
R11-2	48X30	10.00					ROAD CLOSED
R11-3a	60X30	12.50					ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50					ROAD CLOSED TO THRU TRAFFIC
S4-4	36X15	3.75					WHEN FLASHING
CONST-3A	60X48	20.00					FINE SIGN
CONST-3X	56X12	4.67					SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS							
SPECIAL	36X48	12.00					POINT OF PRESENCE
SPECIAL	96X48	32.00					POINT OF PRESENCE
CONST-7-48	48X24	8.00	2	16			RATE OUR WORK ZONE
CONST-7-72	72X36	18.00					RATE OUR WORK ZONE
616-10.05 CONSTRUCTION SIGNS TOTAL				1243			
616-10.10 RELOCATED SIGNS TOTAL							

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR (8 SAND BARRELS)
6122009		IMPACT ATTENUATOR (9 SAND BARRELS)
6122010		IMPACT ATTENUATOR (10 SAND BARRELS)
6122012		IMPACT ATTENUATOR (12 SAND BARRELS)
6122014		IMPACT ATTENUATOR (14 SAND BARRELS)
6122017		IMPACT ATTENUATOR (17 SAND BARRELS)
6122019		IMPACT ATTENUATOR (19 SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR (RELOCATION)
6123000A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
6161007		SPEED LIMIT AND STROBE LIGHT ASSEMBLY
6161008	2	ADVANCED WARNING RAIL SYSTEM
6161009	6	FLAG ASSEMBLY
6161020		CHANNELIZER (DRUM-LIKE)
6161022		CHANNELIZER (CONES)
6161024		CHANNELIZER (TRIM LINE) WITH LIGHT
6161025	25	CHANNELIZER (TRIM LINE)
6161026		CHANNELIZER (VERTICAL PANEL)
6161027		CHANNELIZER (VERTICAL PANEL) WITH LIGHT
6161028		CHANNELIZER
6161030		TYPE III MOVEABLE BARRICADE
6161031		TYPE III MOVEABLE BARRICADE WITH LIGHT
6161033		DIRECTION INDICATOR BARRICADE
6161034		DIRECTION INDICATOR BARRICADE, WITH LIGHT
6161040		FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161051		WARNING LIGHT, TYPE A
6161052		WARNING LIGHT, TYPE B
6161053		WARNING LIGHT, TYPE C
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN WITHOUT COMMUNICATION INTERFACE, CONTRACTOR FURNISHED/RETAINED
6161099		CHANGEABLE MESSAGE SIGN WITH COMMUNICATION INTERFACE, CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6173600D		CONTRACTOR FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER
6173602B		CONTRACTOR FURNISHED/COMMISSION RETAINED TEMPORARY TRAFFIC BARRIER
6174000A		TEMPORARY TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		COMMISSION FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER
6177000B		COMMISSION FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER HEIGHT TRANSITION
9019400		TEMPORARY LIGHTING
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

SUMMARY SHEET
2 OF 2

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

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DATE PREPARED 8/26/2016

ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: WRIGHT
JOB NO.: J9S3163
CONTRACT ID.
PROJECT NO.
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DATE	DESCRIPTION

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105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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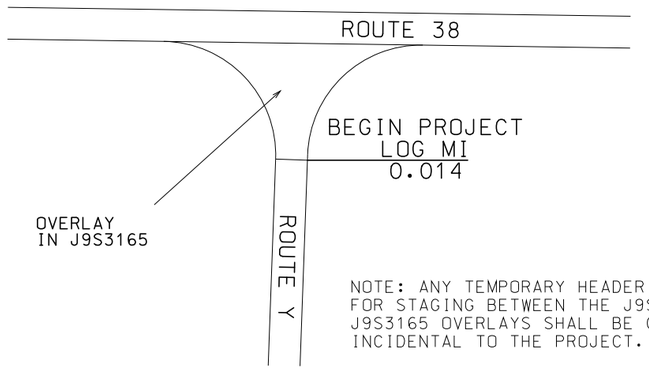
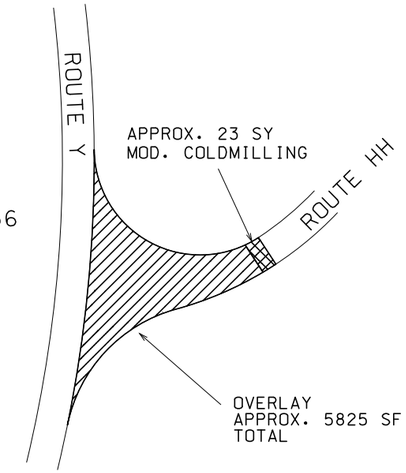
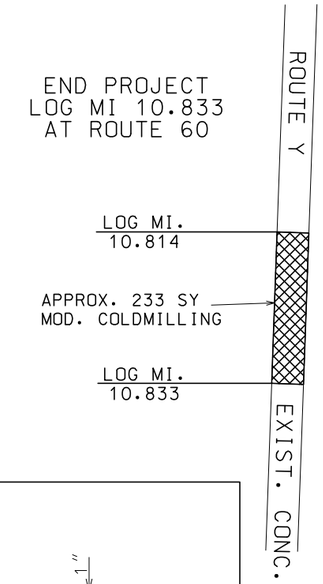


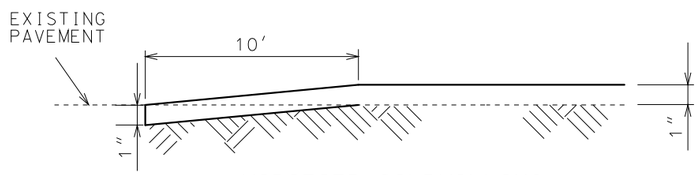
NOTE: ANY TEMPORARY HEADER NECESSARY FOR STAGING BETWEEN THE J9S3163 AND J9S3165 OVERLAYS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

SCALE

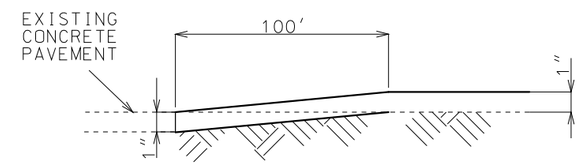
0 50 100 150





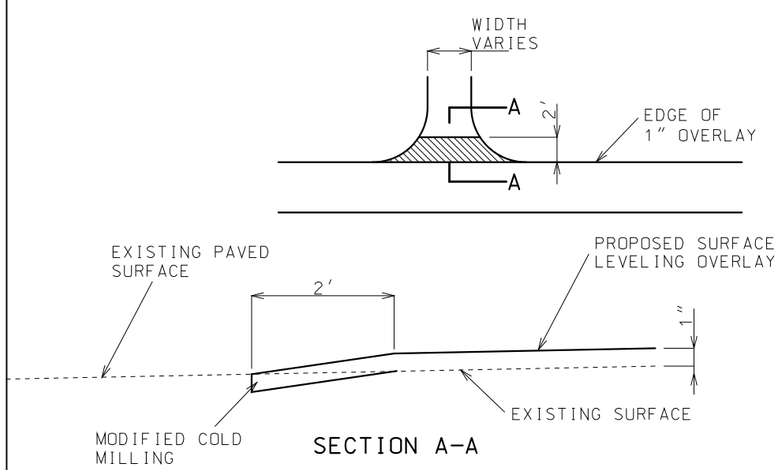


MODIFIED COLDMILLING
(DEPTH TRANSITIONS)
ROUTE HH

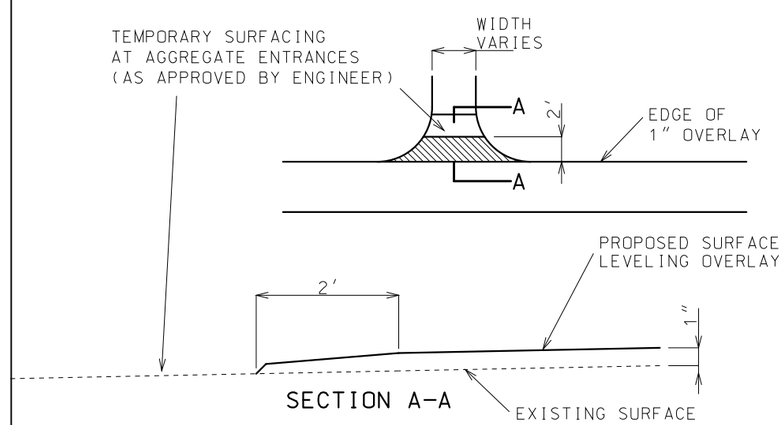


MODIFIED COLDMILLING (DEPTH TRANSITIONS)

END OF PROJECT JUST NORTH OF
ROUTE 60 INTERCHANGE



TYPICAL EXISTING PAVED
PRIVATE AND COMMERCIAL ENTRANCES



TYPICAL EXISTING AGGREGATE
PRIVATE, COMMERCIAL, AND COUNTY ROAD ENTRANCES

SPECIAL SHEET
SHEET 1 OF 1

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER
PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

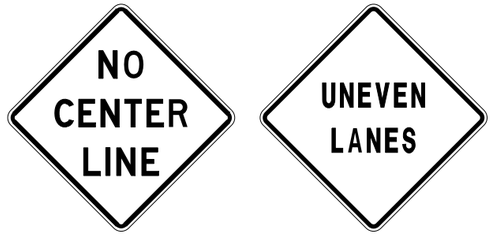
DATE PREPARED	
8/26/2016	
ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
SE	4
COUNTY	
WRIGHT	
JOB NO.	
J9S3163	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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



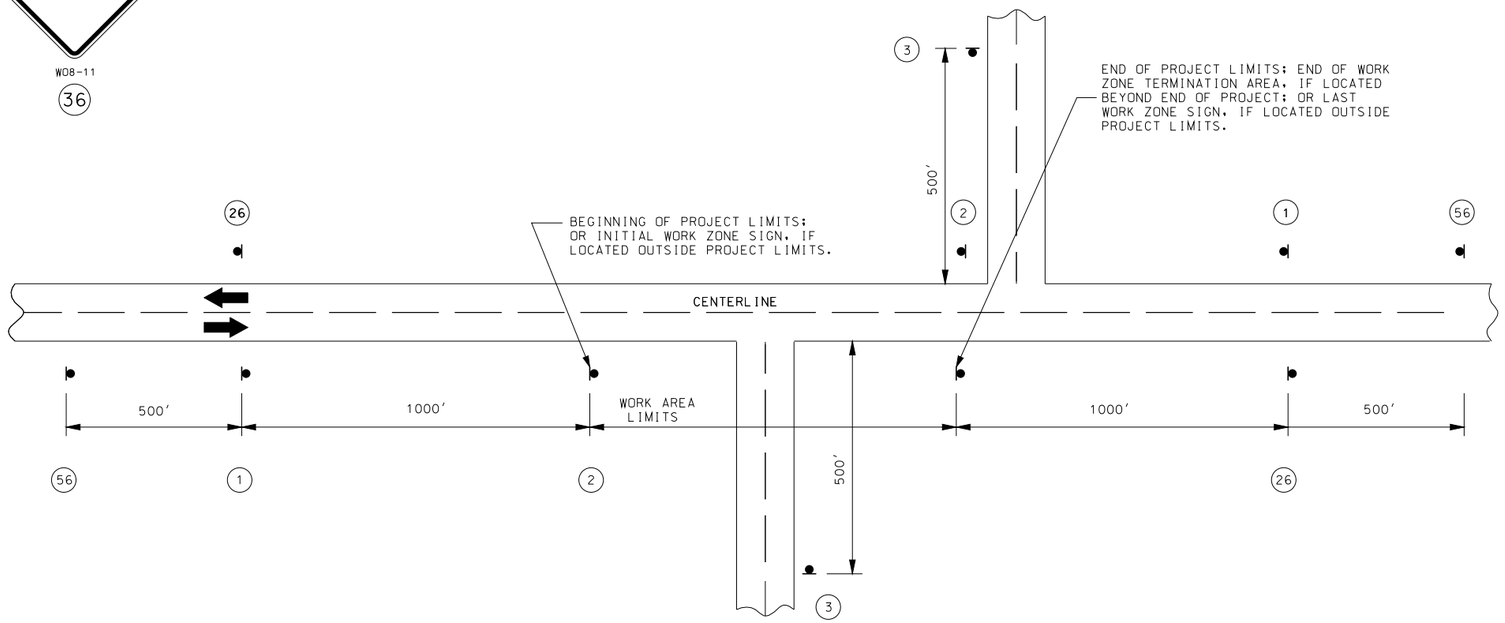
W08-12

35

W08-11

36

SIGNS 35 AND 36 SHALL BE PLACED IN ACCORDANCE WITH STD PLAN 620.10



NOTES:

SIGN 1 IS ONLY USED ON PROJECT LENGTHS 2 MILES OR GREATER.

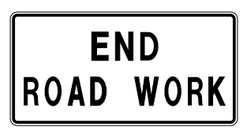
SIGN 26 MAY BE USED ON PROJECTS LESS THAN 2 MILES.

PROVIDE SIGNS IN EACH DIRECTION ON TWO-WAY HIGHWAY.

DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

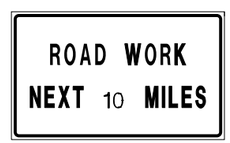
CONST-7-48

56



G020-2

26



G020-1

1

W020-1

2

W020-1

3

W08-1

90

W08-15

W08-15P

91

SIGNS 90 AND 91 SHALL BE PLACED AT DIRECTION OF THE ENGINEER

TRAFFIC CONTROL
SHEET 1 OF 3

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER
PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/26/2016	
ROUTE: Y	STATE: MO
DISTRICT: SE	SHEET NO.: 5
COUNTY: WRIGHT	
JOB NO.: J9S3163	
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)

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

REV.

W020-1

(2)

G020-4

(53)

G020-4a

(58)

24" X 12"

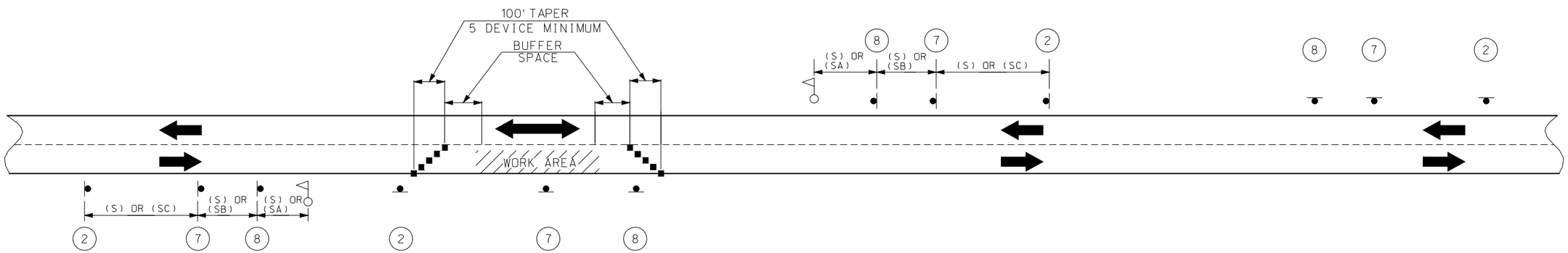
(55) B

W020-4

(7)

W020-7a

(8)



SIGN SETS 1 AND 3 ARE ACTIVE AND (I.E., SIGNS FACE ONCOMING TRAFFIC).

SIGN SETS 2 AND 4 ARE INACTIVE (I.E., SIGNS DO NOT FACE EITHER DIRECTION OF TRAFFIC) WHEN THE RESURFACING OPERATION IS LOCATED BETWEEN SIGN SETS 1 AND 3.

WHEN SIGN SETS 2 AND 4 ARE ACTIVE, SIGN SETS 1 AND 3 BECOME INACTIVE AND ARE ADVANCED TO BECOME SETS 2 AND 4 WITH SIGN LEGENDS TURNED AWAY FROM BOTH DIRECTIONS OF TRAFFIC. WHEN THE RESURFACING OPERATION ADVANCES TO BETWEEN SIGN SETS 2 AND 4, SIGN SETS 2 AND 4 BECOME ACTIVE (I.E., NEW SIGN SETS 1 AND 3) AND SIGN SETS 1 AND 3 ADVANCED IN THE DIRECTION OF THE OPERATION (I.E., NEW SIGN SETS 2 AND 4).

PILOT CAR:
SIGN 55B SHALL BE MAGNETIC WITH ORANGE BACKGROUND AND 3.5" BLOCK LETTERING, AND SHALL BE PLACED ON EACH SIDE OF ALL PILOT VEHICLES. SIGN SHEETING SHALL COMPLY WITH SEC 616. NO DIRECT PAYMENT WILL BE MADE FOR SIGN 55B.

NOTES:

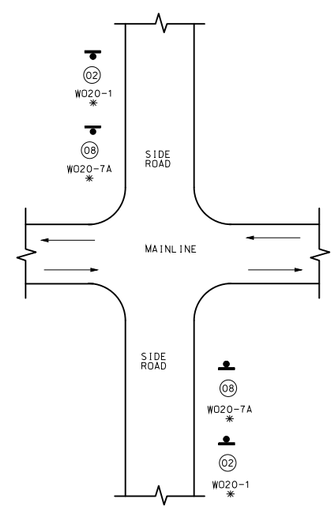
DAYLIGHT FLAGGING OPERATIONS ONLY.

CHANNELIZING DEVICES LOCATED DOWNSTREAM OF THE ONE-LANE, TWO-WAY TAPER ARE OPTIONAL. THESE DEVICES SHOULD BE ELIMINATED WHEN THEIR USE WILL REDUCE THE USABLE LANE WIDTH, INCLUDING ANY ACCEPTABLE SHOULDERS, TO LESS THAN 10' OR WILL SIGNIFICANTLY AFFECT THE RESURFACING OPERATION.

FLAG ASSEMBLIES FOR SIGNS WILL BE PAID FOR AS EACH PER SIGN, EXCEPT FOR SIGN W020-7 WHICH IS SUBSIDIARY TO THE SIGN.

■ - CHANNELIZERS

- FLAGGER



ADDITIONAL FLAGGERS FOR SIDE ROADS

✳ USE SIGNS AS SPECIFIED IN ADDITIONAL FLAGGER JOB SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

SIGN SPACING FOR ADVANCE SIGN SERIES (2) (3)		
SPEED (1) MPH	NON-DIVIDED HIGHWAYS	DIVIDED HIGHWAYS
0 - 35	200	200
40 - 45	350	500
50 - 55	500	1000
60 - 70	SA - 1000 FT. SB - 1500 FT. AND SC - 2640 FT.	

NOTES:

DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.

(1) POSTED SPEED LIMIT PRIOR TO ROAD WORK.

(2) SPACING BETWEEN SIGNS, BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER OR SIGNED CONDITION.

(3) SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.

TRAFFIC CONTROL
SHEET 2 OF 3

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/26/2016
ROUTE	Y
STATE	MO
DISTRICT	SE
SHEET NO.	6
COUNTY	WRIGHT
JOB NO.	J9S3163
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION

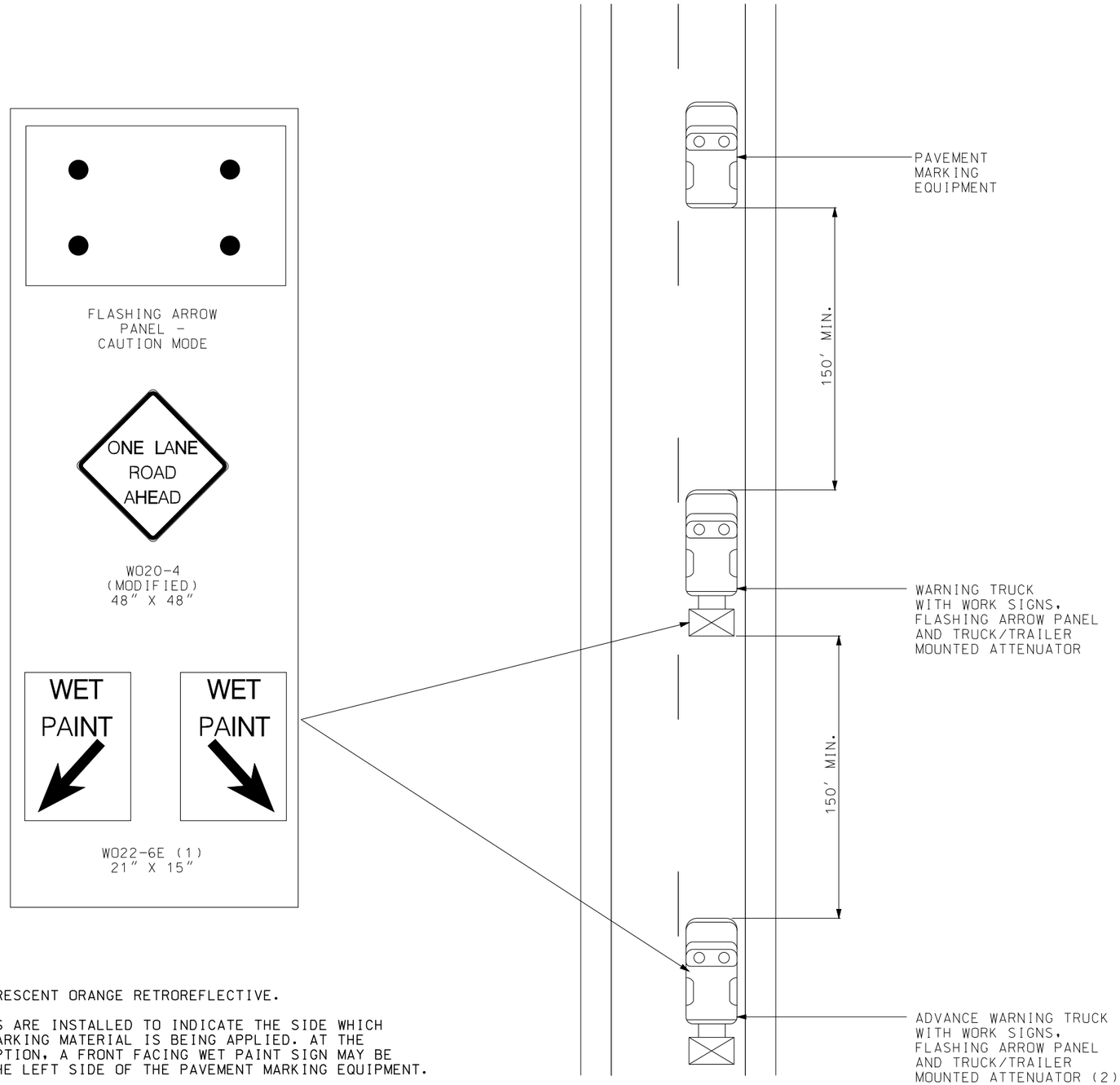
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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

REV.



NOTES:

ALL SIGNS HAVE FLUORESCENT ORANGE RETROREFLECTIVE.

(1) WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE 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.

CENTERLINE/EDGELINE STRIPING ON TWO-LANE HIGHWAYS

TRAFFIC CONTROL
SHEET 3 OF 3

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/26/2016	
ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
SE	7
COUNTY	
WRIGHT	
JOB NO.	
J9S3163	
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)

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

REV.

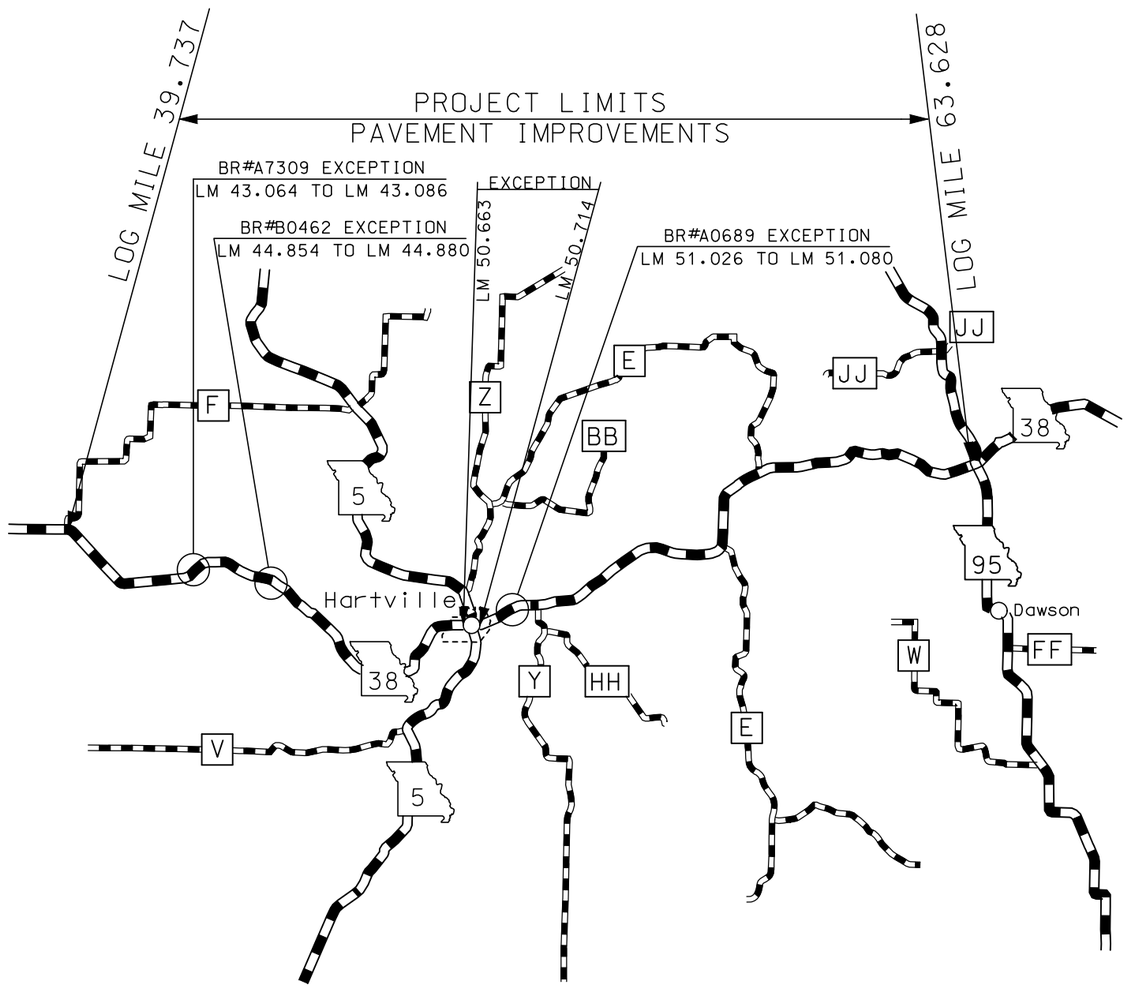
DESIGN DESIGNATION

A.A.D.T - 2027 = 1438

V = 55 M.P.H

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY

WRIGHT COUNTY



INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET ----------	1
TYPICAL SECTIONS (TS) (1 SHEET)--	2
QUANTITIES (QU) (4 SHEETS)--------	3
SPECIAL SHEET (SS)----------	4-6
TRAFFIC CONTROL SHEETS (TC)--------	7-11
BRIDGE SHEETS (A1272)--------	1-12

LENGTH OF PROJECT

BEGINNING OF PROJECT	LM 39.737	
END OF PROJECT	LM 63.628	
APPARENT LENGTH	23.891	MILES
EQUATIONS AND EXCEPTIONS:		
BR#A7309 EXCEPTION	-0.022	MILES
BR#B0462 EXCEPTION	-0.026	MILES
EXCEPTION	-0.051	MILES
BR#A0689 EXCEPTION	-0.054	MILES
TOTAL CORRECTIONS	-0.153	MILES
NET LENGTH OF PROJECT	23.738	MILES
STATE LENGTH	23.738	MILES

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
10/27/2016	
ROUTE 38	STATE MO
DISTRICT SE	SHEET NO. 1
COUNTY WRIGHT	
JOB NO. J9S3165	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

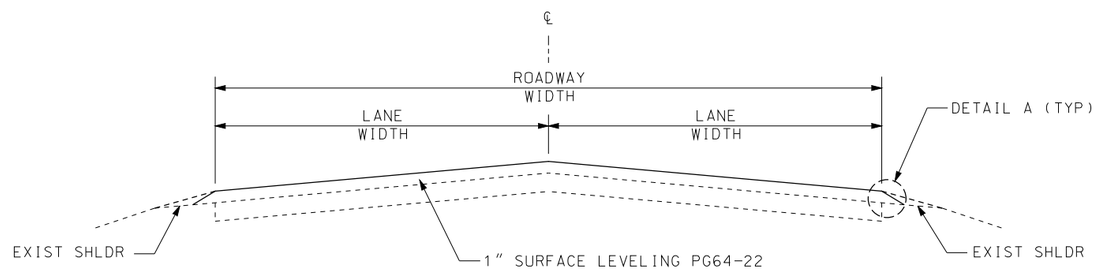
DATE	DESCRIPTION

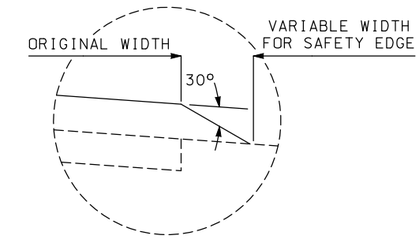
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

REV.





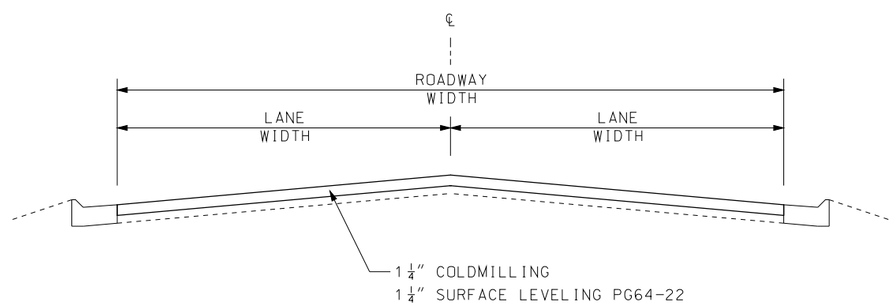
DETAIL A
SAFETY EDGE

ROADWAY WIDTHS		
BEGIN LM	END LM	AVG FT
39.737	39.775	20.00
39.775	43.064	22.00
43.086	44.854	22.00
44.880	50.360	22.00
50.360	50.663	28.00
50.714	50.877	28.00
50.877	51.026	22.00
51.080	63.604	22.00
63.604	63.628	VAR

NO SUPER ELEVATION CORRECTION SHALL BE DONE
MATCH EXISTING CROSS-SLOPE

SECTION ON TANGENT
TYPICAL SECTION RTE 38

LM 39.737 TO LM 39.775
LM 39.775 TO LM 43.064
LM 43.086 TO LM 44.854
LM 44.880 TO LM 50.360
LM 50.877 TO LM 51.026
LM 51.080 TO LM 63.604
LM 63.604 TO LM 63.628



SECTION ON TANGENT
TYPICAL SECTION RTE 38

LM 50.360 TO LM 50.663
LM 50.714 TO LM 50.877

NOT TO SCALE FOLLOW DIMENSIONS

TYPICAL SECTION
SHEET 1 OF 1

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 10/27/2016
ROUTE 38 | STATE MO
DISTRICT SE | SHEET NO. 2
COUNTY WRIGHT
JOB NO. J9S3165
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION

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

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

MOBILIZATION - LUMP SUM 1

REMOVAL OF IMPROVEMENTS - LUMP SUM				
LM	LM	LOC	DESCRIPTION	REMARKS
43.064		LT & RT	50' CRASHWORTHY END TERMINALS	EAST END BRIDGE A7309
43.064		LT & RT	50' CRASHWORTHY END TERMINALS	WEST END BRIDGE A7309
44.854		LT & RT	50' CRASHWORTHY END TERMINALS	EAST END BRIDGE B0462
44.854		LT & RT	50' CRASHWORTHY END TERMINALS	WEST END BRIDGE B0462
51.026		LT & RT	50' CRASHWORTHY END TERMINALS	EAST END BRIDGE A0689
51.026		LT & RT	50' CRASHWORTHY END TERMINALS	WEST END BRIDGE A0689
51.641		LT & RT	4 OBJECT MARKERS	BRIDGE A1272
52.840	52.874	LT & RT	6 OBJECT MARKERS	BRIDGE S0099
55.909	55.943	LT & RT	4 OBJECT MARKERS	BRIDGE R0578
58.677	58.711	LT & RT	4 OBJECT MARKERS	BRIDGE A2360
60.712	60.746	LT & RT	4 OBJECT MARKERS	BRIDGE A1812

PAVEMENT								
LM	LM	LOC	AVG WIDTH FT	THICK IN	SURFACE LEVELING 2.034 TON/CY TON	TACK 0.08 GAL/SY GAL	TEMPORARY SURFACING TON	REMARKS
39.737	39.775	RTE 38	20.00	1	25.2	36		
39.775	43.064	RTE 38	22.00	1	2398.4	3396		WEST END OF BRIDGE A7309
43.086	44.854	RTE 38	22.00	1	1289.0	1825		EAST END OF BRIDGE A7309 TO WEST END OF BRIDGE B0462
44.880	50.360	RTE 38	22.00	1	3996.5	5659		EAST END OF BRIDGE B0462 TO CITY LIMIT
50.360	50.663	RTE 38	28.00	1.25	351.5	398		CITY LIMIT
50.714	50.877	RTE 38	28.00	1.25	189.1	214		CITY LIMIT
50.877	51.026	RTE 38	22.00	1	108.7	154		CITY LIMIT TO WEST END OF BRIDGE A0689
51.080	63.604	RTE 38	22.00	1	9133.0	12932		EAST END OF BRIDGE A0689
63.604	63.628	RTE 38	VAR	1	64.2	91		RTE 38 & RTE 95 INTERSECTION
39.775		RTE 38	VAR	1	22.6	32		RTE F INTERSECTION(RT)
39.775		RTE 38	VAR	1	27.6	39		RTE F INTERSECTION(LT)
52.242		RTE 38	VAR	1	27.3	39		RTE Y INTERSECTION
56.679		RTE 38	VAR	1	28.3	40		RTE E N INTERSECTION
58.666		RTE 38	VAR	1	22.0	31		RTE E S INTERSECTION
39.737	63.628	RTE 38	VAR	1	342.9	485		SAFETY EDGE
39.737 TO 50.360		RTE 38	VAR	1	2.6	4		4 PAVED PRIVATE AND COMMERCIAL ENTRANCES
39.737 TO 50.360		RTE 38	VAR	1	21.2	30		3 PAVED CITY STREETS AND COUNTY ROADS
39.737 TO 50.360		RTE 38	VAR	1	51.6	73	25	NON-PAVED PRIVATE/COMMERCIAL/COUNTY ROADS
50.877 TO 63.628		RTE 38	VAR	1	4.3	6		6 PAVED PRIVATE AND COMMERCIAL ENTRANCES
50.877 TO 63.628		RTE 38	VAR	1	6.0	9		1 PAVED COUNTY ROAD
50.877 TO 63.628		RTE 38	VAR	1	63.2	89	25	NON-PAVED PRIVATE/COMMERCIAL/COUNTY ROADS
100 TONS/MILE FOR IRREGULARITIES		RTE 38	VAR	1	2373.8			
				TOTAL	20549.0	25590	50	
SEE SPECIAL SHEETS FOR MILLING AND ENTRANCE DETAIL								

GUARDRAIL									
		MGS				SHAPING SLOPES CLASS III		BIT FOG SEAL	
LM	LOC	BRIDGE APPR TRANS SECT (MINOR ROUTE) EA	6' POST GUARDRAIL LF	ADJUSTING GUARDRAIL LF	MASH CRASHWORTHY END TERMINAL EA	TON	100 LF	0.25 GAL/SY GAL	REMARKS
43.064	LT & RT	2			2	65	2.25	29.0	EAST END BRIDGE A7309
43.064	LT & RT	2			2	65	2.25	29.0	WEST END BRIDGE A7309
44.854	LT & RT		25		2	65	1.75	29.0	EAST END BRIDGE B0462(UIP BRIDGE ANCHOR SECTIONS)
44.854	LT & RT		25		2	65	1.75	29.0	WEST END BRIDGE B0462(UIP BRIDGE ANCHOR SECTIONS)
51.026	LT			300	1	65	0.75	29.0	EAST END BRIDGE A0689
51.026	LT & RT			600	2	65	1.50	29.0	WEST END BRIDGE A0689
51.641	RT	2	87.5		2	65	3.13	29.0	EAST END BRIDGE A1272
51.641	LT	2	87.5		2	65	3.13	29.0	WEST END BRIDGE A1272
	TOTAL	8	225	900	15	*	17	240	
*ESTIMATE QUANTITY FOR INFORMATIONAL PURPOSES ONLY									

SUMMARY SHEET
SHEET 1 OF 4

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 10/27/2016
ROUTE 38 | STATE MO
DISTRICT SE | SHEET NO. 3
COUNTY WRIGHT
JOB NO. J9S3165
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

STEEL BAR DAM			
LM	LOC	EACH	REMARKS
51.641	RTE 38	2	EAST AND WEST END OF BRIDGE A1272
58.685	RTE 38	1	EAST END OF BRIDGE A2360
60.720	RTE 38	2	EAST AND WEST END OF BRIDGE A1812
	TOTAL	5	

TYPE III OBJECT MARKERS						
				FLAT SHEET	U CHANNEL	
				FLUORESCENT	POST	
LM	LOC	NO.	SIZE	SF	LF	REMARKS
52.848	LT	1	1' x 3'	3.0	11.00	WEST END OF BRIDGE S0099(POST@11')
52.848	RT	1	1' x 3'	3.0	11.00	WEST END OF BRIDGE S0099(POST@11')
52.866	LT	1	1' x 3'	3.0	11.00	EAST END OF BRIDGE S0099(POST@11')
52.866	RT	1	1' x 3'	3.0	11.00	EAST END OF BRIDGE S0099(POST@11')
55.917	LT	1	1' x 3'	3.0	11.00	WEST END OF BRIDGE R0578(POST@11')
55.917	RT	1	1' x 3'	3.0	11.00	WEST END OF BRIDGE R0578(POST@11')
55.935	LT	1	1' x 3'	3.0	11.00	EAST END OF BRIDGE R0578(POST@11')
55.935	RT	1	1' x 3'	3.0	11.00	EAST END OF BRIDGE R0578(POST@11')
58.685	LT	1	1' x 3'	3.0	11.00	WEST END OF BRIDGE A2360(POST@11')
58.685	RT	1	1' x 3'	3.0	11.00	WEST END OF BRIDGE A2360(POST@11')
58.703	LT	1	1' x 3'	3.0	11.00	EAST END OF BRIDGE A2360(POST@11')
58.703	RT	1	1' x 3'	3.0	11.00	EAST END OF BRIDGE A2360(POST@11')
60.720	LT	1	1' x 3'	3.0	11.00	WEST END OF BRIDGE A1812(POST@11')
60.720	RT	1	1' x 3'	3.0	11.00	WEST END OF BRIDGE A1812(POST@11')
60.738	LT	1	1' x 3'	3.0	11.00	EAST END OF BRIDGE A1812(POST@11')
60.738	RT	1	1' x 3'	3.0	11.00	EAST END OF BRIDGE A1812(POST@11')
	TOTAL			48	176	

COLDMILLING							
LOG MILE	LOG MILE	LOCATION	LENGTH (FT)	WIDTH (FT)	MODIFIED COLDMILLING FOR DEPTH TRANSITIONS (SQYD)	COLDMILLING < 3" (SQYD)	REMARKS
39.737	39.756	RTE 38	100.0	20	222.2		BEGIN JOB
43.045	43.064	RTE 38	100.0	22	244.4		WEST END OF BRIDGE A7309
43.086	43.105	RTE 38	100.0	22	244.4		EAST END OF BRIDGE A7309
44.835	44.854	RTE 38	100.0	22	244.4		WEST END OF BRIDGE B0462
44.880	44.899	RTE 38	100.0	22	244.4		EAST END OF BRIDGE B0462
50.341	50.360	RTE 38	100.0	22	244.4		CITY LIMIT
50.877	50.896	RTE 38	100.0	22	244.4		CITY LIMIT
51.007	51.026	RTE 38	100.0	22	244.4		WEST END OF BRIDGE A0689
51.080	51.099	RTE 38	100.0	22	244.4		EAST END OF BRIDGE A0689
63.595	63.604	RTE 38	50.0	22	122.2		
50.360	50.663	RTE 38	1599.8	28		4977.3	CITY LIMIT
50.714	50.877	RTE 38	860.6	28		2677.5	CITY LIMIT
63.604	63.628	RTE 38	126.7	VAR		1135.6	RTE 38 & RTE 95 INTERSECTION
39.775		RTE 38	25.0	VAR	150.0		RTE F INTERSECTION(RT, LT)
56.679		RTE 38	25.0	VAR	75.0		RTE E N INTERSECTION
58.666		RTE 38	25.0	VAR	75.0		RTE E S INTERSECTION
39.737 TO 50.360		RTE 38	2.0	VAR	46.9		4 PRIVATE AND COMMERCIAL ENTRANCES
39.737 TO 50.360		RTE 38	10.0	VAR	374.4		3 PAVED CITY STREETS AND COUNTY ROADS
50.877 TO 63.628		RTE 38	2.0	VAR	75.8		6 PRIVATE AND COMMERCIAL ENTRANCES
50.877 TO 63.628		RTE 38	10.0	VAR	106.7		1 COUNTY ROAD
				TOTAL	3203.4	8790.4	
				USE	3203	8790	

LOG MILES ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY ENGINEER.

SUMMARY SHEET
SHEET 2 OF 4

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 10/28/2016

ROUTE	STATE
38	MO
DISTRICT	SHEET NO.
SE	3

COUNTY WRIGHT

JOB NO. J9S3165

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

PAVEMENT MARKING											
			WATERBORNE				PREFORMED SHORT TERM MARKING TAPE				
LOG MILE	LOG MILE	LOCATION	4" SOLID WHITE (LF)	4" INT YELLOW (LF)	4" SOLID YELLOW (LF)	4" DOUBLE SOLID YELLOW (LF)	4" SOLID WHITE (LF)	4" DOUBLE SOLID YELLOW (LF)	24" WHITE (LF)	REMOVALS (LF)	REMARKS
39.737	50.360	RTE 38	112178.9	14022.4	56089.4						
50.877	63.628	RTE 38	134650.6	16831.3							
39.737	40.250	RTE 38				5417.3					NO PASSING
40.250	40.761	RTE 38		674.5	2698.1						NO PASSING WB
40.761	40.813	RTE 38		68.6							PASSING
40.813	41.373	RTE 38		739.2	2956.8						NO PASSING EB
41.373	42.434	RTE 38				11204.2					NO PASSING
42.434	42.521	RTE 38		114.8	459.4						NO PASSING WB
42.521	42.600	RTE 38				834.2					NO PASSING
42.600	42.698	RTE 38		129.4	517.4						NO PASSING EB
42.698	44.146	RTE 38				15290.9					NO PASSING
44.146	44.250	RTE 38		137.3	549.1						NO PASSING WB
44.250	44.266	RTE 38		21.1							PASSING
44.266	44.420	RTE 38		203.3	813.1						NO PASSING EB
44.420	44.528	RTE 38		142.6	570.2						NO PASSING WB
44.528	44.589	RTE 38				644.2					NO PASSING
44.589	44.691	RTE 38		134.6	538.6						NO PASSING EB
44.691	46.182	RTE 38				15745.0					NO PASSING
46.182	46.303	RTE 38		159.7	638.9						NO PASSING WB
46.303	46.360	RTE 38				601.9					NO PASSING
46.360	46.471	RTE 38		146.5	586.1						NO PASSING EB
46.471	47.994	RTE 38				16082.9					NO PASSING
47.994	48.071	RTE 38		101.6	406.6						NO PASSING EB
48.071	49.370	RTE 38				13717.4					NO PASSING
49.370	49.520	RTE 38		198.0	792.0						NO PASSING WB
49.520	49.622	RTE 38		134.6							PASSING
49.622	49.796	RTE 38		229.7	918.7						NO PASSING EB
49.796	52.842	RTE 38				32165.8					NO PASSING
52.939	53.126	RTE 38				1974.7					NO PASSING
53.126	53.272	RTE 38		192.7	770.9						NO PASSING WB
53.272	53.335	RTE 38				665.3					NO PASSING
53.335	53.494	RTE 38		209.9	839.5						NO PASSING EB
53.494	55.741	RTE 38				23728.3					NO PASSING
55.741	55.923	RTE 38		240.2	961.0						NO PASSING WB
55.923	56.045	RTE 38		161.0							PASSING
56.045	56.216	RTE 38		225.7	902.9						NO PASSING EB
56.216	56.712	RTE 38				5237.8					NO PASSING
56.712	56.830	RTE 38		155.8	623.0						NO PASSING WB
56.830	56.895	RTE 38				686.4					NO PASSING
56.895	57.021	RTE 38		166.3	665.3						NO PASSING EB
57.021	57.083	RTE 38				654.7					NO PASSING
57.083	57.252	RTE 38		223.1	892.3						NO PASSING WB
57.252	57.503	RTE 38		331.3							PASSING
57.503	57.685	RTE 38		240.2	961.0						NO PASSING EB
57.685	58.312	RTE 38				6621.1					NO PASSING
58.312	58.501	RTE 38		249.5	997.9						NO PASSING WB
58.501	58.681	RTE 38		237.6							PASSING
58.681	58.724	RTE 38		56.8	227.0						NO PASSING WB
58.724	58.900	RTE 38		232.3	929.3						NO PASSING EB
58.900	63.628	RTE 38				49927.7					NO PASSING
							1926.0	4000.0	22.0	2626.0	SHEET 10
		TOTAL	246829.5	37111.6	77304.5	201199.8	1926	4000	22	2626	
		USE	246830		315616		1926	4000	22	2626	

LOG MILES ARE APPROXIMATE.
EXACT LOCATIONS TO BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH THE PAVEMENT MARKING LOG JSP.

SUMMARY SHEET
SHEET 3 OF 4

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 10/3/2016
ROUTE 38 | STATE MO
DISTRICT SE | SHEET NO. 3
COUNTY WRIGHT
JOB NO. J9S3165
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)

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

EFFECTIVE: 06-08-2016

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
WARNING SIGNS							
W01-1L	48X48	16.00					TURN (SYMBOL LEFT ARROW)
W01-1R	48X48	16.00					TURN (SYMBOL RIGHT ARROW)
W01-2L	48X48	16.00					CURVE (SYMBOL LEFT ARROW)
W01-2R	48X48	16.00					CURVE (SYMBOL RIGHT ARROW)
W01-3L	48X48	16.00					REVERSE TURN (SYMBOL LEFT ARROW)
W01-3R	48X48	16.00					REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4L	48X48	16.00					REVERSE CURVE (SYMBOL LEFT ARROW)
W01-4R	48X48	16.00	1	16			REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4bL	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-4bR	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-4cL	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-4cR	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-6	60X30	12.50					HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.00					HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-7	60X30	12.50					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.00					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-8	18X24	3.00					CHEVRON (SYMBOL)
W01-8a	30X36	7.50					CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
W03-1	48X48	16.00					STOP AHEAD (SYMBOL)
W03-2	48X48	16.00					YIELD AHEAD (SYMBOL)
W03-3	48X48	16.00	2	32			SIGNAL AHEAD (SYMBOL)
W03-4	48X48	16.00	7	112			BE PREPARED TO STOP
W03-5	48X48	16.00					SPEED LIMIT AHEAD
W04-1L	48X48	16.00					MERGE (SYMBOL FROM LEFT)
W04-1aL	48X48	16.00					MERGE (LEFT ARROW AT LANE DROP)
W04-1R	48X48	16.00					MERGE (SYMBOL FROM RIGHT)
W04-1aR	48X48	16.00					MERGE (RIGHT ARROW AT LANE DROP)
W05-1	48X48	16.00					ROAD/BRIDGE/RAMP NARROWS
W05-3	48X48	16.00					ONE LANE BRIDGE
W05-5	48X48	16.00	1	16			NARROW LANES
W06-1	48X48	16.00					DIVIDED HIGHWAY (SYMBOL)
W06-2	48X48	16.00					DIVIDED HIGHWAY END (SYMBOL)
W06-3	48X48	16.00					TWO WAY TRAFFIC (SYMBOL)
W07-3a	30X24	5.00					NEXT XX MILES (PLAQUE)
W08-1	48X48	16.00	10	160			BUMP
W08-2	48X48	16.00					DIP
W08-3	48X48	16.00					PAVEMENT ENDS
W08-4	48X48	16.00					SOFT SHOULDER
W08-5	48X48	16.00					SLIPPERY WHEN WET (SYMBOL)
W08-6	48X48	16.00					TRUCK CROSSING WITH FLAGS
W08-6c	48X48	16.00					TRUCK ENTRANCE
W08-7	36X36	9.00					LOOSE GRAVEL
W08-9	48X48	16.00					LOW SHOULDER
W08-11	48X48	16.00	11	176			UNEVEN LANES
W08-12	48X48	16.00	12	192			NO CENTER LINE
W10-1	42 RND.	9.62					RAILROAD CROSSING
W012-1	24X24	4.00					DOUBLE DOWN ARROW (SYMBOL)
W012-2	48X48	16.00					LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00					LOW CLEARANCE (PLAQUE)
W012-2a	84X24	14.00					OVERHEAD LOW CLEARANCE (FEET AND INCHES)
W08-15	48X48	16.00	10	160			GROOVED PAVEMENT
W08-15p	30X24	5.00	10	50			MOTORCYCLE (PLAQUE)
W08-17	48X48	16.00					SHOULDER DROP-OFF (SYMBOL)
W08-17p	30X24	5.00					SHOULDER DROP-OFF (PLAQUE)
SPECIAL	120X60	50.00					LOW CLEARANCE XX FT XX IN XX MILES AHEAD
SPECIAL	120X60	50.00					WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
W013-1	30X30	6.25					ADVISORY SPEED (PLAQUE)
W016-2	30X24	5.00					XXX FEET (PLAQUE)
W016-3	30X24	5.00					X MILE (PLAQUE)
W020-1	48X48	16.00	14	224			ROAD/BRIDGE/RAMP WORK AHEAD
W020-2	48X48	16.00					DETOUR AHEAD
W020-3	48X48	16.00					ROAD CLOSED AHEAD
W020-4	48X48	16.00	8	128			ONE LANE ROAD AHEAD
W020-5	48X48	16.00					RIGHT/CENTER/LEFT LANE CLOSED AHEAD
W020-5a	48X48	16.00					2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
W020-6a	48X48	16.00					RIGHT/CENTER/LEFT LANE CLOSED
W020-7a	48X48	16.00	9	144			FLAGGER (SYMBOL) WITH FLAGS
W021-2	36X36	9.00					FRESH OIL
W021-5	48X48	16.00	2	32			SHOULDER WORK AHEAD
W022-1	48X48	16.00					BLASTING ZONE AHEAD
W022-2	42X36	10.50					TURN OFF 2-WAY RADIO AND PHONE
W022-3	42X36	10.50					END BLASTING ZONE
W022-6e	21X15	2.19	4	8.76			WET PAINT (ARROW PIVOTS)
GUIDE SIGNS							
SPECIAL	36X36	9.00					FRESH OIL/LOOSE GRAVEL
E05-1	36X48	12.00					GORE EXIT
E05-2	48X36	12.00					EXIT OPEN
E05-2a	48X36	12.00					EXIT CLOSED
G020-1	60X24	10.00	2	20			ROAD WORK NEXT 24 MILES
G020-2	48X24	8.00	2	16			END ROAD WORK
G020-4	36X18	4.50	1	4.5			PILOT CAR FOLLOW ME
G020-4a	42X30	8.75	5	43.75			PLEASE WAIT FOR PILOT CAR
G020-5aP	36X24	6.00	2	12			WORK ZONE (PLAQUE)
M04-8a	24X18	3.00					END DETOUR
M04-9L	48X36	12.00					DETOUR (LEFT ARROW)
M04-9R	48X36	12.00					DETOUR (RIGHT ARROW)
M04-10L	48X18	6.00					DETOUR (ARROW LEFT)
M04-10R	48X18	6.00					DETOUR (ARROW RIGHT)
REGULATORY SIGNS							
R1-1	48X48	13.25					STOP
R1-2	48 TRI.	6.93					YIELD
R1-2a	36X36	9.00					TO ONCOMING TRAFFIC (PLAQUE)
R1-3	20X9	1.25					X-WAY (PLAQUE)
R2-1	36X48	12.00	4	48			SPEED LIMIT 2-45, 2-55
R3-1	48X48	16.00					NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00					NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00					NO TURNS
R3-4	48X48	16.00					NO U-TURN (SYMBOL)
R3-7L	30X30	6.25					LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25					RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00					DO NOT PASS
R4-2	36X48	12.00					PASS WITH CARE
R4-7aL	36X48	12.00					KEEP LEFT (HORIZONTAL ARROW)
R4-7a	36X48	12.00					KEEP RIGHT (HORIZONTAL ARROW)
R5-1	30X30	6.25					DO NOT ENTER
R5-1a	36X24	6.00					WRONG WAY
R6-1L	48X18	6.00					ONE WAY ARROW (LEFT)
R6-1R	48X18	6.00					ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00					ONE WAY (LEFT)
R6-2R	24X30	5.00					ONE WAY (RIGHT)
R10-6	24X36	6.00	2	12			STOP HERE ON RED (45° ARROW)
R11-2	48X30	10.00					ROAD CLOSED
R11-3a	60X30	12.50					ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50					ROAD CLOSED TO THRU TRAFFIC
S4-4	36X15	3.75					WHEN FLASHING
CONST-3A	60X48	20.00					FINE SIGN
CONST-3X	56X12	4.67					SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS							
SPECIAL	36X48	12.00					POINT OF PRESENCE
SPECIAL	96X48	32.00					POINT OF PRESENCE
CONST-7-48	48X24	8.00	2	16			RATE OUR WORK ZONE
CONST-7-72	72X36	18.00					RATE OUR WORK ZONE
616-10.05 CONSTRUCTION SIGNS TOTAL				1623			
616-10.10 RELOCATED SIGNS TOTAL							

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR (8 SAND BARRELS)
6122009		IMPACT ATTENUATOR (9 SAND BARRELS)
6122010		IMPACT ATTENUATOR (10 SAND BARRELS)
6122012		IMPACT ATTENUATOR (12 SAND BARRELS)
6122014		IMPACT ATTENUATOR (14 SAND BARRELS)
6122017		IMPACT ATTENUATOR (17 SAND BARRELS)
6122019		IMPACT ATTENUATOR (19 SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR (RELOCATION)
6123000A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
6161007		SPEED LIMIT AND STROBE LIGHT ASSEMBLY
6161008	2	ADVANCED WARNING RAIL SYSTEM
6161009	6	FLAG ASSEMBLY
6161020		CHANNELIZER (DRUM-LIKE)
6161022		CHANNELIZER (CONES)
6161024		CHANNELIZER (TRIM LINE) WITH LIGHT
6161025	70	CHANNELIZER (TRIM LINE)
6161026		CHANNELIZER (VERTICAL PANEL)
6161027		CHANNELIZER (VERTICAL PANEL) WITH LIGHT
6161028		CHANNELIZER
6161030		TYPE III MOVEABLE BARRICADE
6161031		TYPE III MOVEABLE BARRICADE WITH LIGHT
6161033		DIRECTION INDICATOR BARRICADE
6161034		DIRECTION INDICATOR BARRICADE, WITH LIGHT
6161040		FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161051		WARNING LIGHT, TYPE A
6161052		WARNING LIGHT, TYPE B
6161053		WARNING LIGHT, TYPE C
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN WITHOUT COMMUNICATION INTERFACE, CONTRACTOR FURNISHED/RETAINED
6161099		CHANGEABLE MESSAGE SIGN WITH COMMUNICATION INTERFACE, CONTRACTOR FURNISHED/RETAINED
6162000A	1	WORK ZONE TRAFFIC SIGNAL SYSTEM
6173600D		CONTRACTOR FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER
6173602B		CONTRACTOR FURNISHED/COMMISSION RETAINED TEMPORARY TRAFFIC BARRIER
6174000A		TEMPORARY TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		COMMISSION FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER
6177000B		COMMISSION FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER HEIGHT TRANSITION
9019400		TEMPORARY LIGHTING
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

SUMMARY SHEET
SHEET 4 OF 4

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

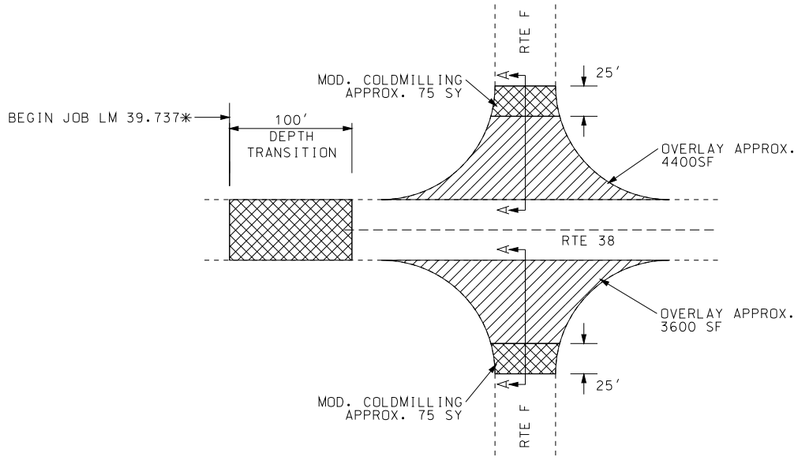
DATE PREPARED 10/3/2016
ROUTE 38 | STATE MO
DISTRICT SE | SHEET NO. 3
COUNTY WRIGHT
JOB NO. J9S3165
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

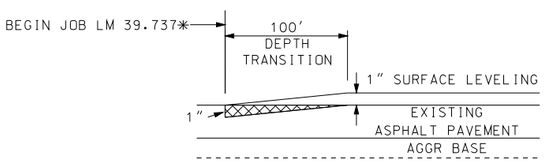
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

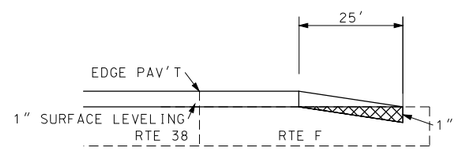
BEGIN PROJECT



PLAN VIEW AT RTE 38 AND RTE F

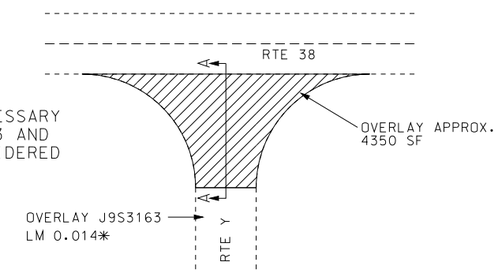


TYPICAL
RTE 38

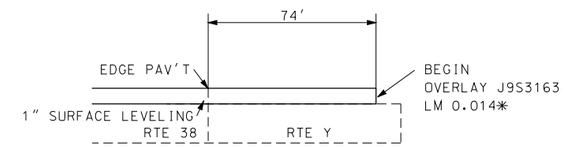


TYPICAL
SECTION A-A

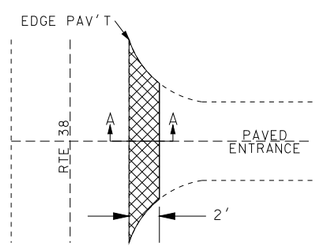
NOTE: ANY TEMPORARY HEADER NECESSARY FOR STAGING BETWEEN THE J9S3163 AND J9S3165 OVERLAYS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.



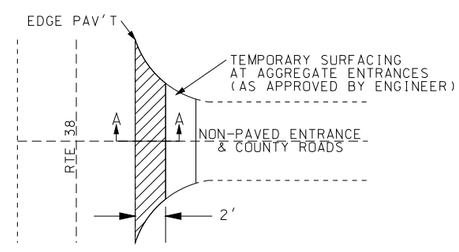
PLAN VIEW AT RTE 38 AND RTE Y



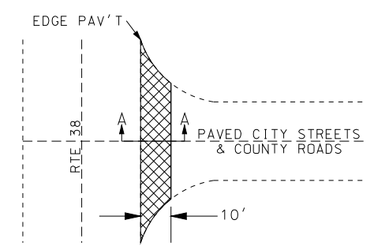
TYPICAL
SECTION A-A



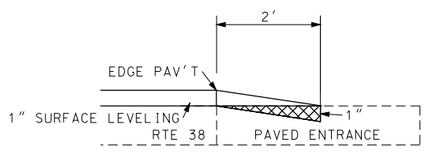
PLAN VIEW FOR PAVED
PRIVATE AND COMMERCIAL ENTRANCES



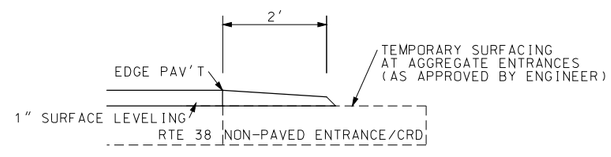
PLAN VIEW FOR NON-PAVED
PRIVATE AND COMMERCIAL ENTRANCES
AND COUNTY ROADS



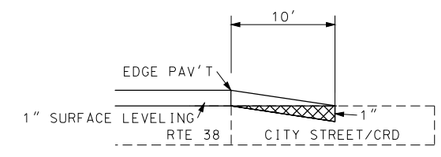
PLAN VIEW FOR PAVED
CITY STREETS AND COUNTY ROADS



TYPICAL
SECTION A-A



TYPICAL
SECTION A-A



TYPICAL
SECTION A-A

COLDMILLING

*LOG MILE LOCATIONS APPROXIMATE
ADJUST AS DIRECTED BY ENGINEER
TO FIT FIELD CONDITIONS.

SPECIAL SHEET
SHEET 1 OF 3
DRAWING NOT TO SCALE

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

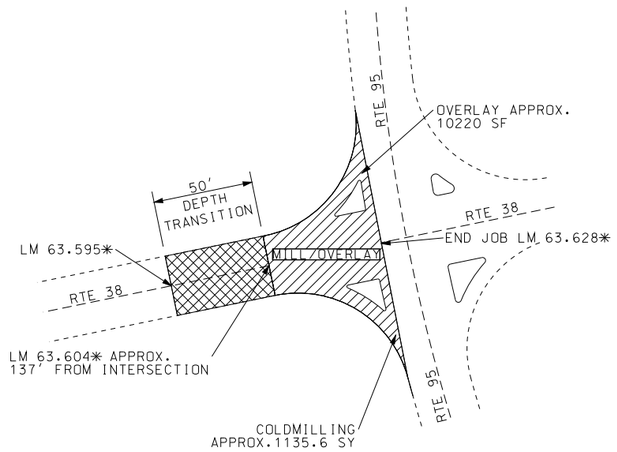
DATE PREPARED	
10/3/2016	
ROUTE 38	STATE MO
DISTRICT SE	SHEET NO. 4
COUNTY WRIGHT	
JOB NO. J9S3165	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

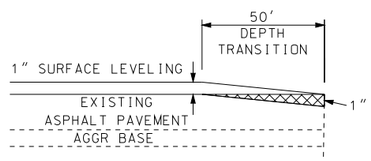
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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

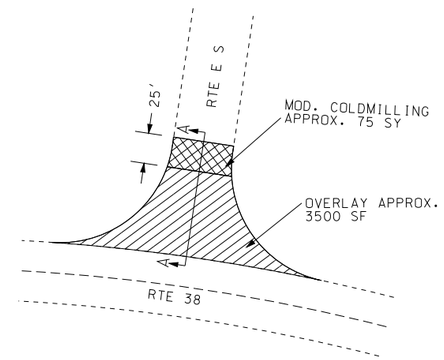
END PROJECT

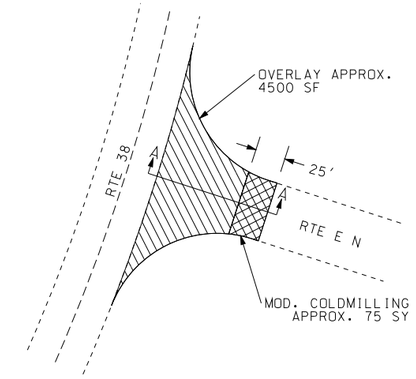


PLAN VIEW AT RTE 38 AND RTE 95

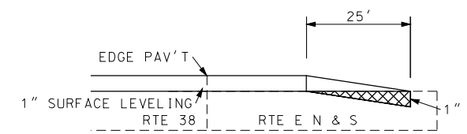


TYPICAL
RTE 38

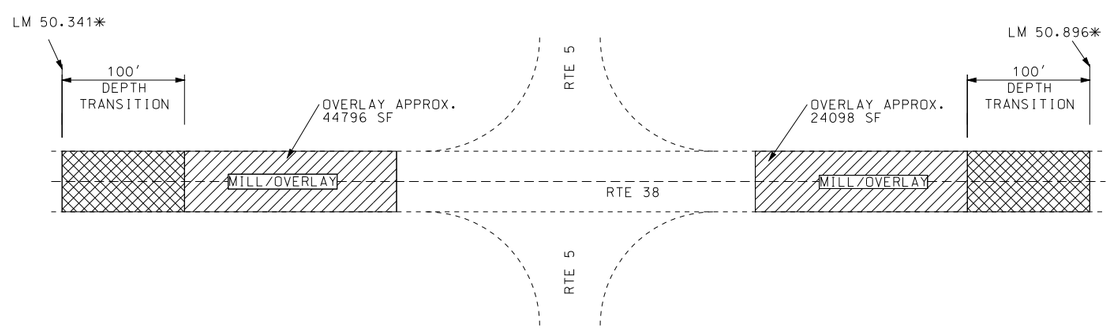




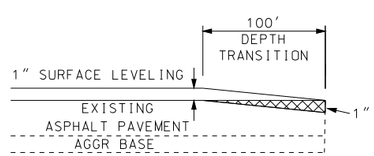
PLAN VIEW AT RTE 38 AND RTE E N & S



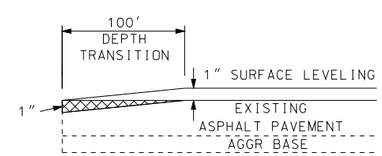
TYPICAL
SECTION A-A



PLAN VIEW AT RTE 38 AND RTE 5



TYPICAL
RTE 38



TYPICAL
RTE 38

COLDMILLING

*LOG MILE LOCATIONS APPROXIMATE
ADJUST AS DIRECTED BY ENGINEER
TO FIT FIELD CONDITIONS.

SPECIAL SHEET
SHEET 2 OF 3
DRAWING NOT TO SCALE

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER
PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

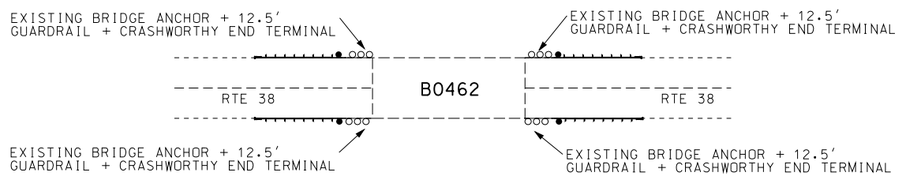
DATE PREPARED	
10/3/2016	
ROUTE 38	STATE MO
DISTRICT SE	SHEET NO. 5
COUNTY WRIGHT	
JOB NO. J9S3165	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

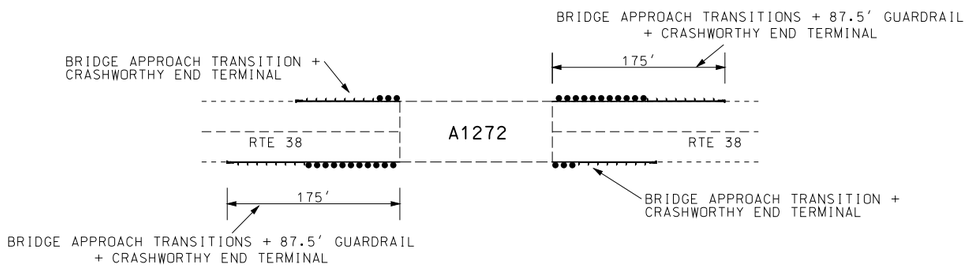
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

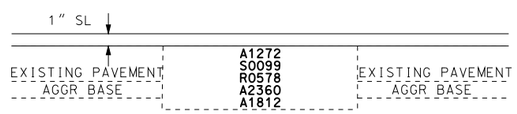
BRIDGES



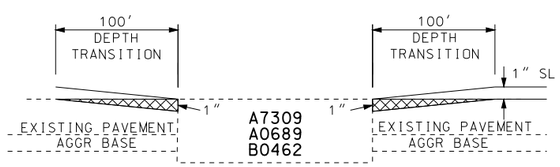
PLAN VIEW



PLAN VIEW



TYPICAL AT BRIDGES WITH OVERLAY

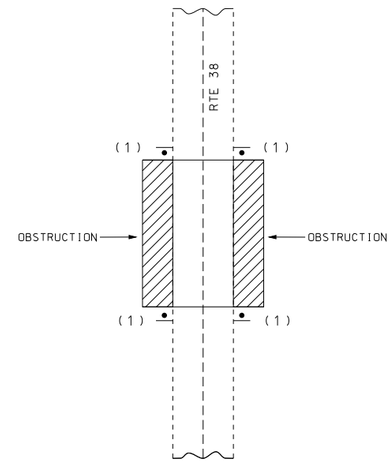


TYPICAL AT BRIDGES WITHOUT OVERLAY

COLDMILLING

*LOG MILE LOCATIONS APPROXIMATE
ADJUST AS DIRECTED BY ENGINEER
TO FIT FIELD CONDITIONS.

TYPE 3 OBJECT MARKERS



(1) PLACE AS NEAR THE OBSTRUCTION AS POSSIBBLE.AND THE EDGE
OF THE OBJECT MARKER THAT IS CLOSEST TO THE ROAD SHALL
BE INSTALLED IN LINE WITH THE CLOSEST EDGE OF THE OBSTRUCTION.

SPECIAL SHEET
SHEET 3 OF 3
DRAWING NOT TO SCALE

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
10/27/2016	
ROUTE 38	STATE MO
DISTRICT SE	SHEET NO. 6
COUNTY WRIGHT	
JOB NO. J9S3165	
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)

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

W020-1

2a

SIGNS 35 AND 36 SHALL BE PLACED IN ACCORDANCE WITH STD PLAN 620.10

W08-12

35

W08-11

36

W08-1

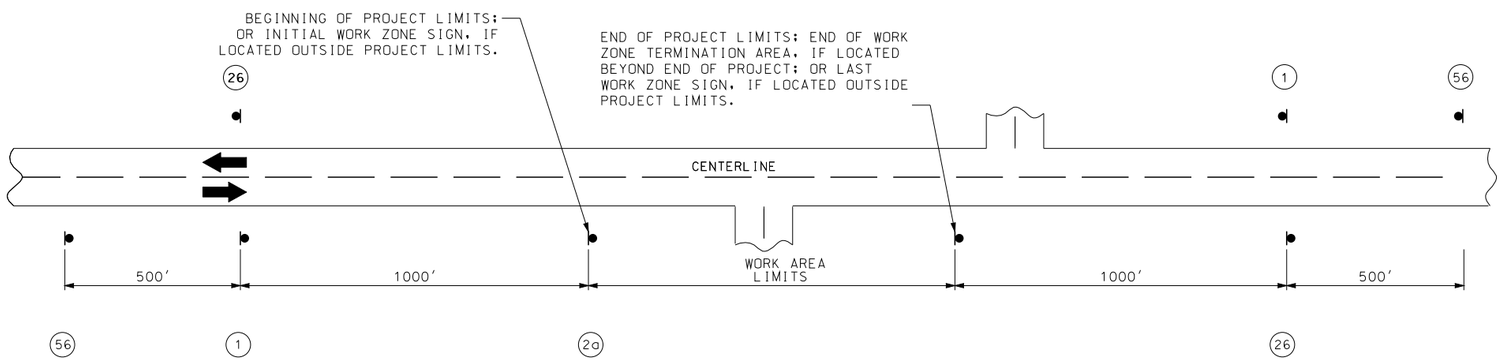
90

W08-15

W08-15P

91

SIGNS 90 AND 91 SHALL BE PLACED AT DIRECTION OF THE ENGINEER



NOTES:

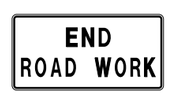
SIGN 1 AND 26 ARE ONLY USED ON PROJECT LENGTHS 2 MILES OR GREATER.

PROVIDE SIGNS IN EACH DIRECTION ON TWO-WAY HIGHWAY.

DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

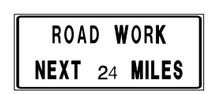
CONST-7-48

56



G020-2

26



G020-1

1

TRAFFIC CONTROL
SHEET 1 OF 5

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
10/3/2016	
ROUTE 38	STATE MO
DISTRICT SE	SHEET NO. 7
COUNTY WRIGHT	
JOB NO. J9S3165	
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)

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

REV.

W020-1

(2b)

W020-4

(7)

W020-7a

(8)

G020-4

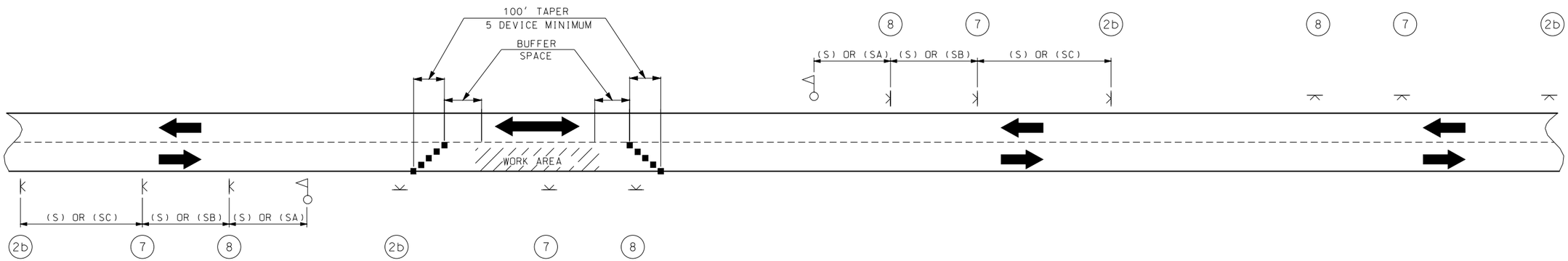
(53)

G020-4a

(58)

24" X 12"

(55B)



SET 1	SET 2	SET 3	SET 4
ACTIVE	INACTIVE	ACTIVE	INACTIVE

SIGN SETS 1 AND 3 ARE ACTIVE AND (I.E., SIGNS FACE ONCOMING TRAFFIC).

SIGN SETS 2 AND 4 ARE INACTIVE (I.E., SIGNS DO NOT FACE EITHER DIRECTION OF TRAFFIC) WHEN THE RESURFACING OPERATION IS LOCATED BETWEEN SIGN SETS 1 AND 3.

WHEN SIGN SETS 2 AND 4 ARE ACTIVE, SIGN SETS 1 AND 3 BECOME INACTIVE AND ARE ADVANCED TO BECOME SETS 2 AND 4 WITH SIGN LEGENDS TURNED AWAY FROM BOTH DIRECTIONS OF TRAFFIC. WHEN THE RESURFACING OPERATION ADVANCES TO BETWEEN SIGN SETS 2 AND 4, SIGN SETS 2 AND 4 BECOME ACTIVE (I.E., NEW SIGN SETS 1 AND 3) AND SIGN SETS 1 AND 3 ADVANCED IN THE DIRECTION OF THE OPERATION (I.E., NEW SIGN SETS 2 AND 4).

■ - CHANNELIZERS

- FLAGGER

NOTES:

DAYLIGHT FLAGGING OPERATIONS ONLY.

CHANNELIZING DEVICES LOCATED DOWNSTREAM OF THE ONE-LANE, TWO-WAY TAPER ARE OPTIONAL. THESE DEVICES SHOULD BE ELIMINATED WHEN THEIR USE WILL REDUCE THE USABLE LANE WIDTH, INCLUDING ANY ACCEPTABLE SHOULDERS, TO LESS THAN 10' OR WILL SIGNIFICANTLY AFFECT THE RESURFACING OPERATION.

FLAG ASSEMBLIES FOR SIGNS WILL BE PAID FOR AS EACH PER SIGN, EXCEPT FOR SIGN W020-7 WHICH IS SUBSIDIARY TO THE SIGN.

SPEED	SIGN SPACING (FT.) (1)	
PERMANENT POSTED (MPH)	NON-DIVIDED HIGHWAYS (S)	DIVIDED HIGHWAYS (S)
0-35	200	200
40-45	350	500
50-55	500	1000
60-70	1000	(SA)-1000 (SB)-1500 (SC)-2640

NOTES:

(1) SPACING BETWEEN SIGNS, BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER OR SIGNED CONDITION.

SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.

NOTES:
SIGN 55B SHALL BE MAGNETIC WITH ORANGE BACKGROUND AND 3.5" BLOCK LETTERING, AND SHALL BE PLACED ON EACH SIDE OF ALL PILOT VEHICLES. SIGN SHEETING SHALL COMPLY WITH SEC 616. NO DIRECT PAYMENT WILL BE MADE FOR SIGN 55B.

TRAFFIC CONTROL
SHEET 2 OF 5

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 10/3/2016

ROUTE	STATE
38	MO
DISTRICT	SHEET NO.
SE	8

COUNTY WRIGHT

JOB NO. J9S3165

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)

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

REV.

SPEED	SIGN SPACING (FT.)	
PERMANENT POSTED (MPH)	NON-DIVIDED HIGHWAYS (S)	DIVIDED HIGHWAYS (S)
0-35	200	200
40-45	350	500
50-55	500	1000
60-70	1000	(SA)-1000 (SB)-1500 (SC)-2640

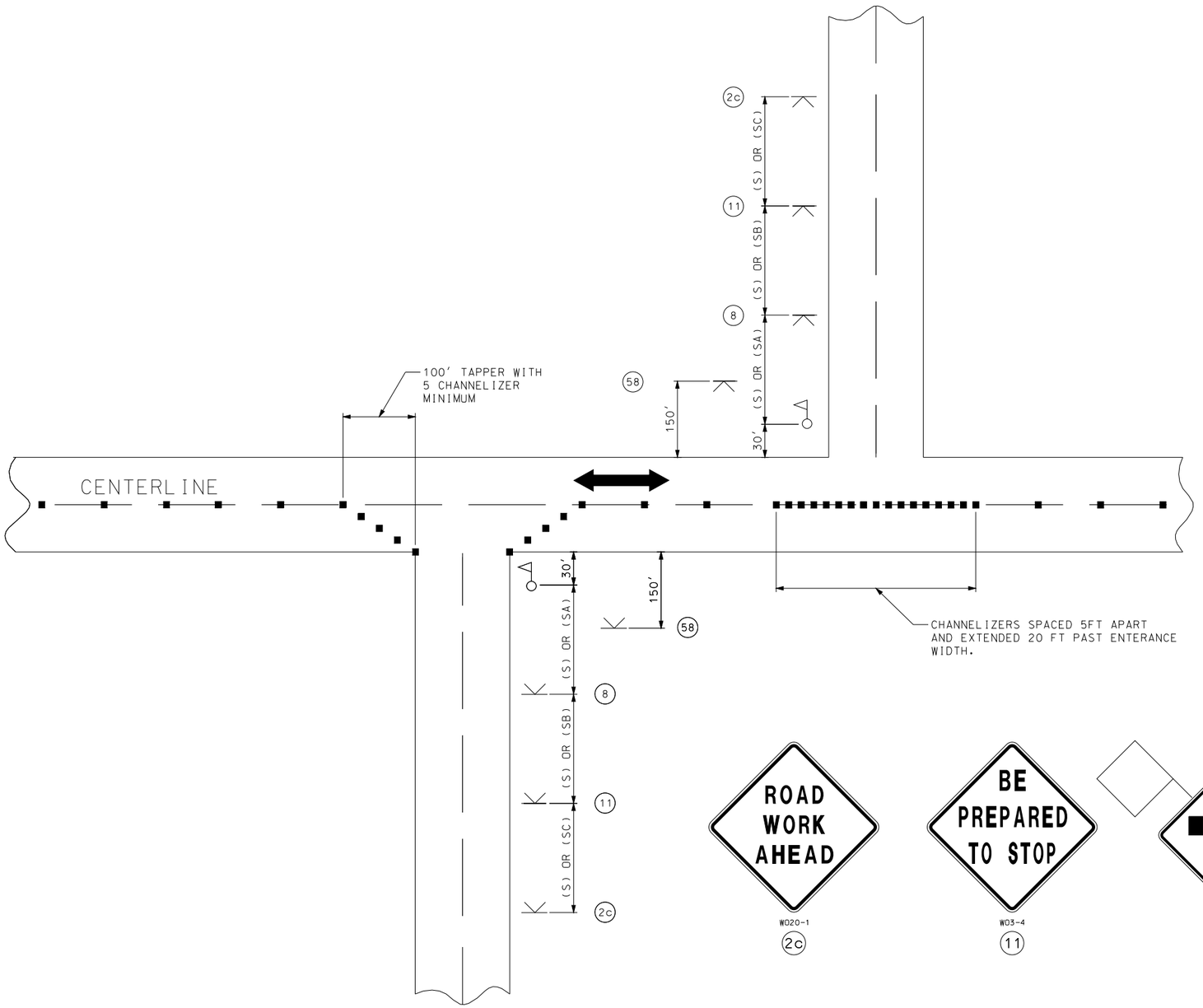
DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

NOTES:
WARNING SIGNS SHALL BE ERECTED AT EACH INTERSECTION WITH ANOTHER STATE HIGHWAY WITHIN THE WORK ZONE.

ADDITIONAL WARNING SIGNS SHALL BE ERECTED AT OTHER INTERSECTIONS WITHIN THE WORK ZONE, AS DIRECTED BY THE ENGINEER.

■ - CHANNELIZERS

- FLAGGER



SIGN 58, SHALL BE PLACED AT ALL SIDE ROADS WHEN IN USE DURING OPERATION.

SIDE ROADS ENTERING WORK ZONES

TRAFFIC CONTROL
SHEET 3 OF 5

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

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DATE PREPARED 10/3/2016

ROUTE	STATE
38	MO
DISTRICT	SHEET NO.
SE	9

COUNTY WRIGHT

JOB NO. J9S3165

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)

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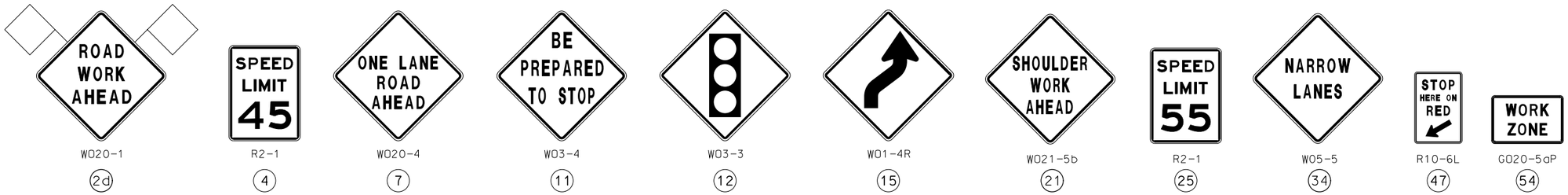
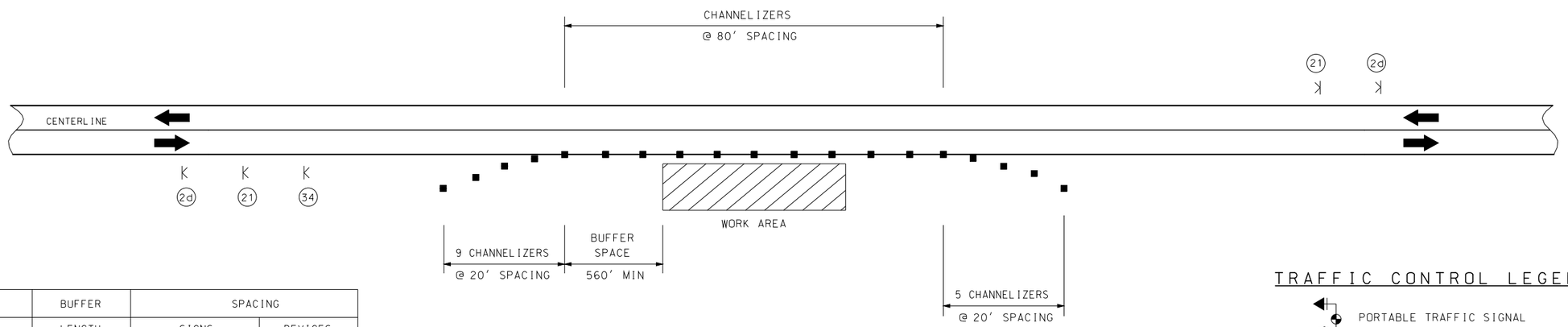
REV.





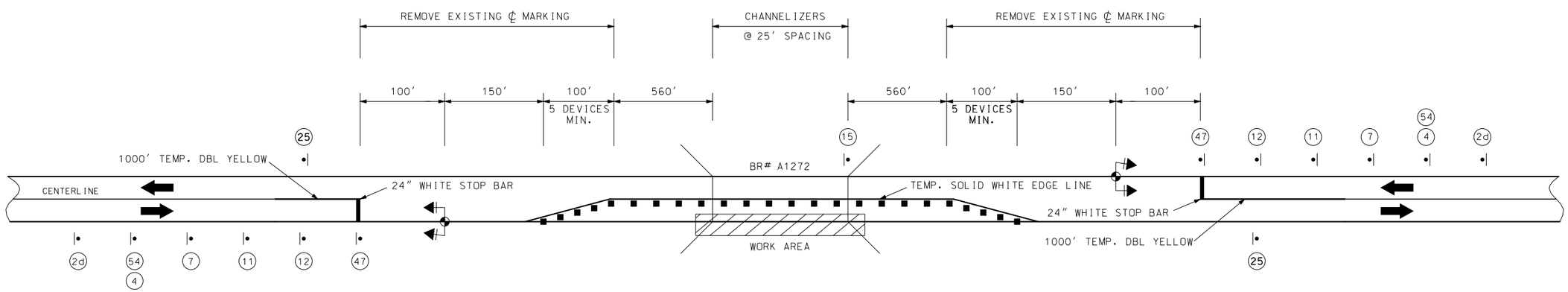
	BUFFER	SPACING	
SPEED (4) (MPH)	LENGTH (FT)	SIGNS (FT)	DEVICES (FT)
0 - 35	280	200	40
40 - 45	400	350	80
50 - 55	560	500	80

(4) POSTED SPEED LIMIT PRIOR TO ROAD WORK.

WORK ZONE FOR SHOULDER WORK

TRAFFIC CONTROL LEGEND

- PORTABLE TRAFFIC SIGNAL
- SIGN (SINGLE SIDED)
- CHANNELIZER



WORK ZONE FOR TRAFFIC SIGNALS

NOTES:

DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

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

NO PAYMENT WILL BE MADE FOR RELOCATION OF CONSTRUCTION SIGNS.

SIGNAL TIMING SHALL BE ESTABLISHED BY THE ENGINEER.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

TRAFFIC CONTROL
SHEET 4 OF 5

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 10/3/2016

ROUTE	STATE
38	MO
DISTRICT	SHEET NO.
SE	10

COUNTY WRIGHT

JOB NO. J9S3165

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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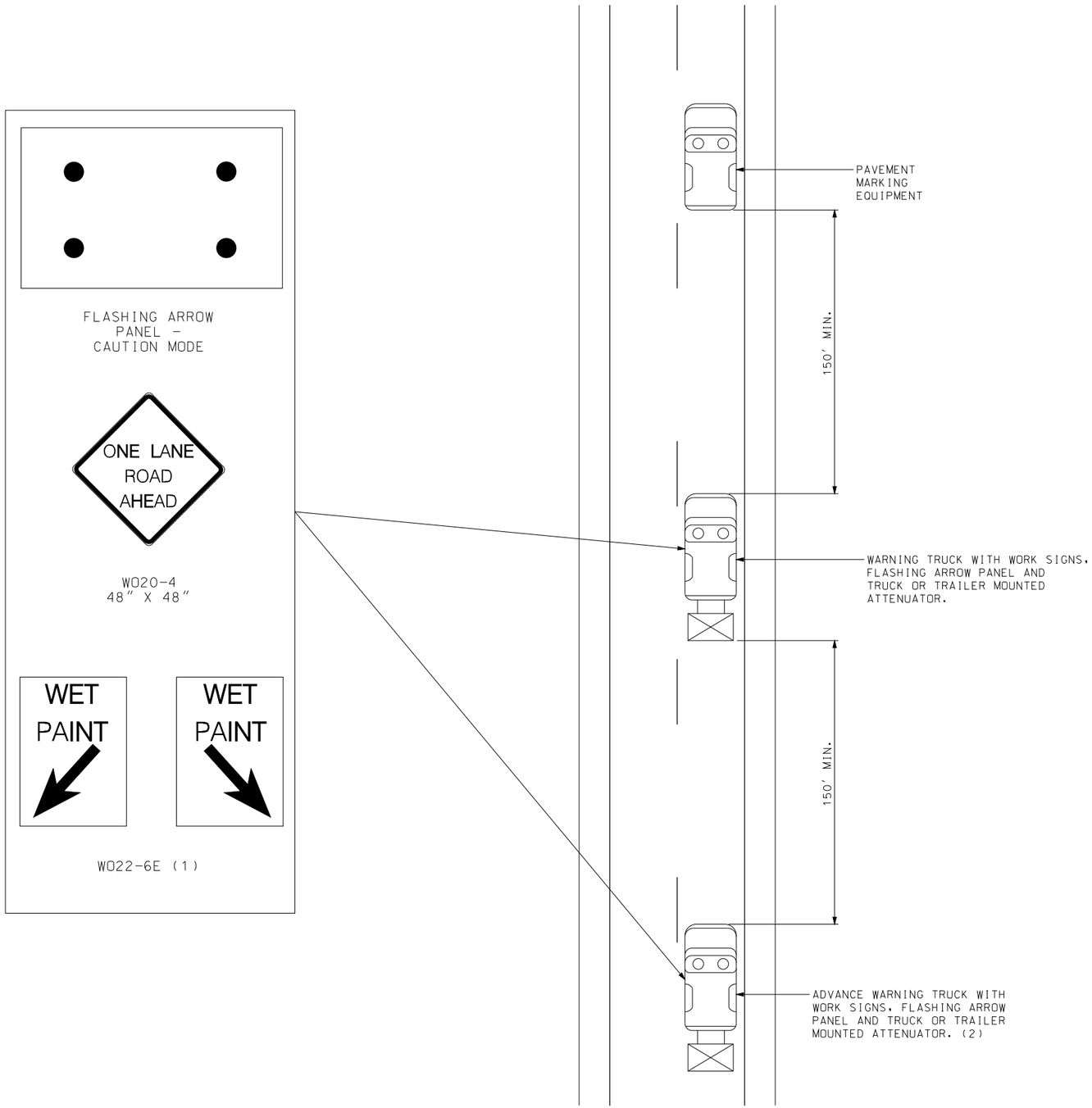
REV.



NOTES:
UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCK EQUIPPED WITH PROPER WARNING DEVICES.

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 STROPE LIGHTS.

(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.

CENTERLINE/EDGELINE STRIPING ON TWO-LANE HIGHWAYS

TRAFFIC CONTROL
SHEET 5 OF 5

STATE OF MISSOURI
JASON MICHAEL WILLIAMS
NUMBER PE-2003015056
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	10/3/2016
ROUTE	38
STATE	MO
DISTRICT	SE
SHEET NO.	11
COUNTY	WRIGHT
JOB NO.	J9S3165
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

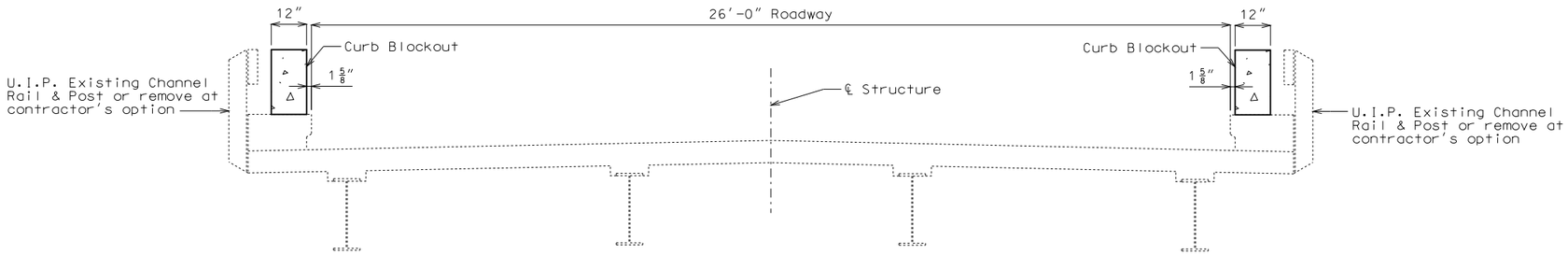
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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

REV.

SEC/SUR 5 TWP 29N RGE 14W

U.I.P. AND REHAB. EXISTING (44'- 56'- 56'- 44') (56'- 90'- 56') CONTINUOUS COMPOSITE I-BEAM SPANS



SECTION THRU SLAB

System A
(950 Req'd.)

DETAILS OF RESIN ANCHOR SYSTEM

* Manufacturer's recommended embedment length (5" Min.)

GENERAL NOTES:

Design Specifications:
2002 AASHTO LFD (17th Ed.) Standard Specifications

Design Unit Stresses:
Class B-1 Concrete f'c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

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

All curb blockout steel shall be epoxy coated.

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

Resin Anchors:
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

The minimum embedment depth in concrete with f'c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5".

An epoxy coated #6 Grade 60 reinforcing bar shall be substituted for the 3/4"Ø threaded rod.

Cost of furnishing and installing the resin anchor system complete in place will be considered completely covered by the contract unit price for Curb Blockout.

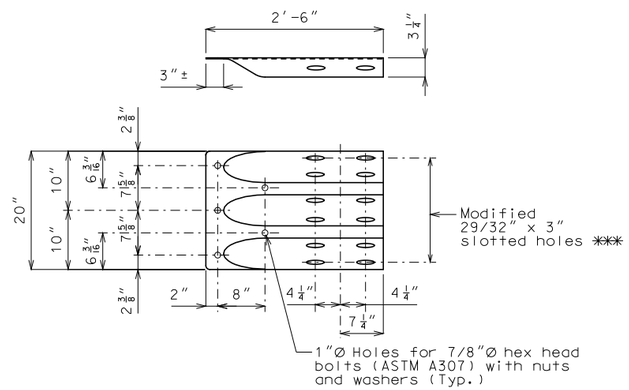
Any drilled holes into curb outlets shall be closed with tape, etc. so as to contain the resin material.

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

All exposed edges of curb blockout shall have either a 1/2" radius or a 3/8" bevel unless otherwise shown.

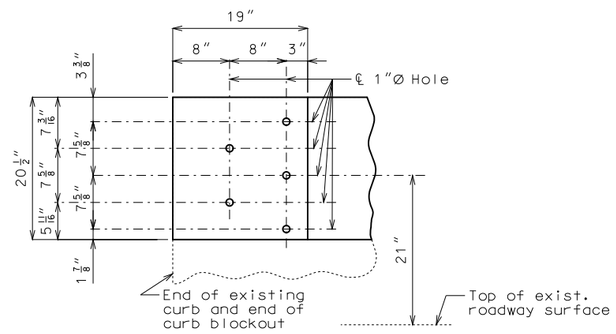
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new material.



*** Tighten bolts, back off 1/2 turn and burr threads. Allow for sliding between Modified Bridge Anchor Section (Thrie Beam) and Curb Blockout.

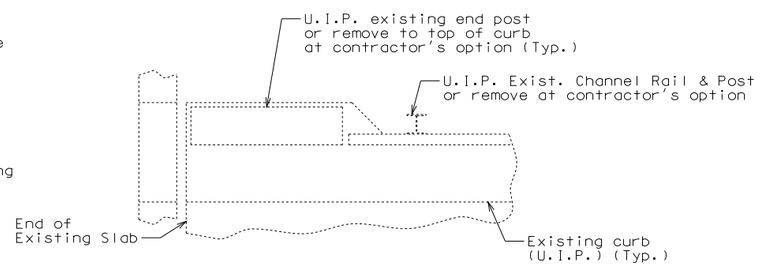
MODIFIED TERMINAL CONNECTION AT END BENTS (ROADWAY ITEM) (4 Req'd.)



PART ELEVATION SHOWING BRIDGE ANCHOR SECTION ATTACHMENT

Note:

Grind top of existing curb concrete to the minimum extent necessary to attach the guardrail shoe flush with the curb blockout. Backfill the ground concrete recess with silicone sealant to drain.



PART PLAN SHOWING OPTIONAL CONCRETE END POST REMOVAL

Note:
The cost of concrete removal as shown will be considered completely covered by the contract unit price for Curb Blockout. Vertical end post reinforcement to be cut off one inch below concrete removal surface and the resulting holes shall be filled with an approved qualified special mortar.

Estimated Quantities		
Item		Total
** Curb Blockout	linear foot	808

** Curb Blockout shall be cast-in-place option or slip-form option.

REPAIRS TO BRIDGE:
ROUTE 38 OVER LICK FORK GASCONADE RIVER

ROUTE 38 FROM ROUTE 5 TO ROUTE Y
ABOUT 1.0 MILE EAST OF ROUTE 5
BEG. STA. 48+87.00± (Match Existing)

STD. 606.22
STD. 617.10

Detailed Sep. 2016
Checked Sep. 2016

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

STATE OF MISSOURI
BRYAN A. HARTNAGEL
NUMBER PE-2002024473
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2016
ROUTE 38 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY WRIGHT
JOB NO. J9S3165
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A12721

DESCRIPTION
DATE

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

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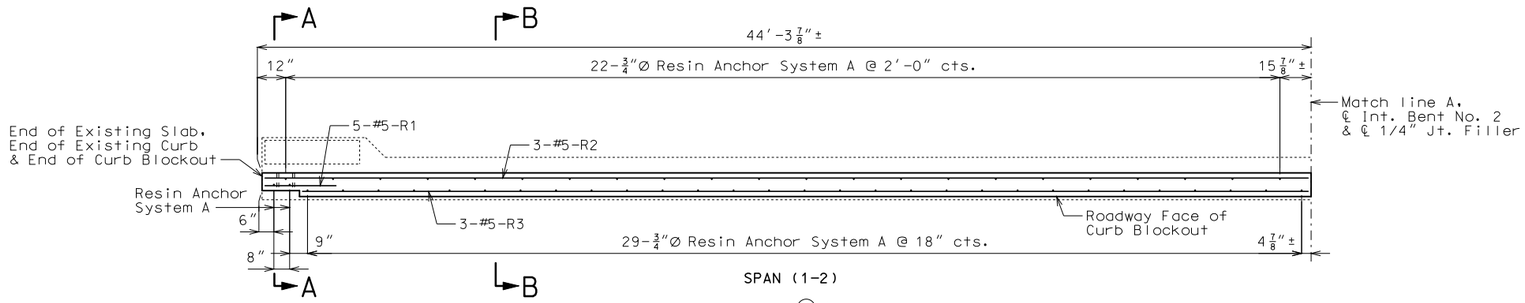
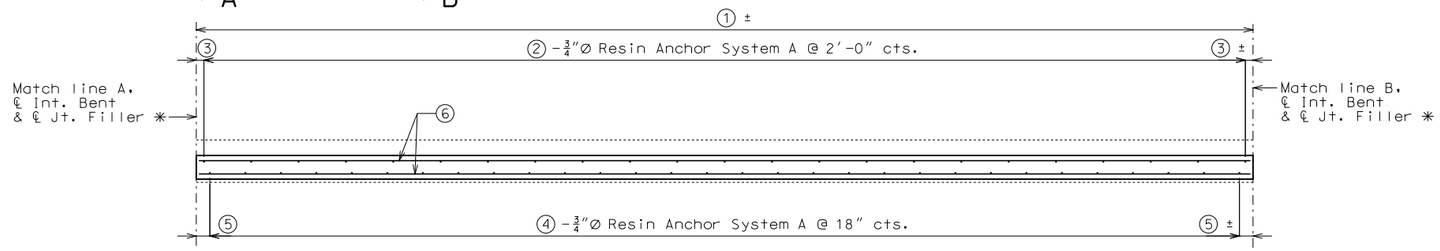


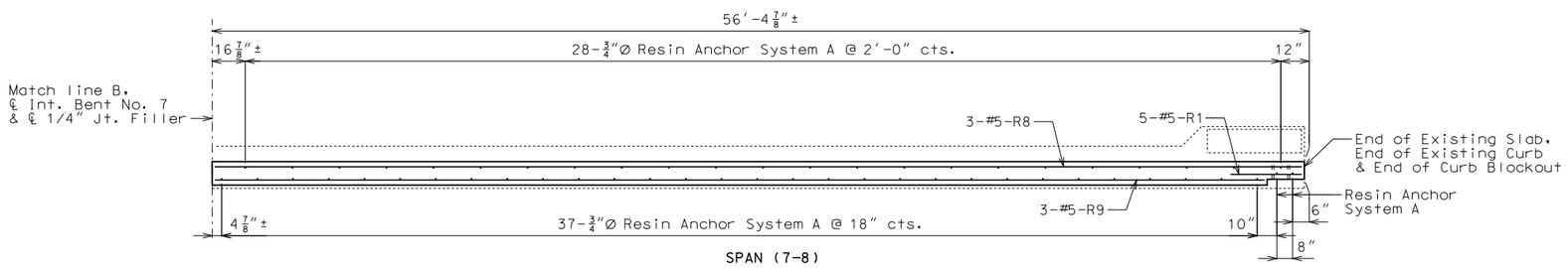
SPAN (1-2)



SPANS (2-3), (3-4), (4-5), (5-6) & (6-7)

Span					
	(2-3)	(3-4)	(4-5)	(5-6)	(6-7)
①	56′-0″	56′-0″	44′-7 3/4″	56′-5 3/4″	90′-0″
②	28	28	23	29	45
③	12″	12″	3 7/8″	2 7/8″	12″
④	37	37	30	38	60
⑤	12″	12″	6 7/8″	5 7/8″	9″
⑥	3-#5-R4	3-#5-R4	3-#5-R5	3-#5-R6	3 pr.-#5-R7

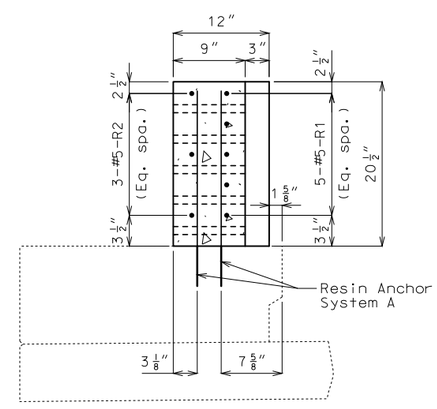
✳ 1″ joint filler at Int. Bent No. 5; 1/4″ joint filler at all other int. bents.



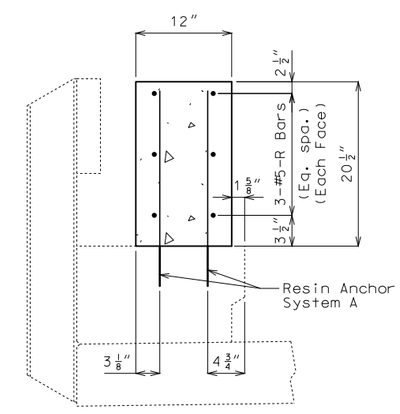
SPAN (7-8)

PLAN OF LEFT CURB BLOCKOUT SHOWING REINFORCEMENT AND RESIN ANCHOR SYSTEMS

(Left barrier curb shown, right barrier curb similar)



SECTION A-A



SECTION B-B

Notes:

Longitudinal dimensions shown are taken parallel to grade.

Use a min. lap of 3′-1″ for #5 horizontal curb blockout bars.

All exposed edges of curb blockout shall have either a 1/2″ radius or a 3/8″ bevel, unless otherwise noted.

The cost of optional channel and end post removal, concrete, reinforcing steel, resin anchor systems and any other work incidental to the curb blockouts, complete in place, will be considered completely covered by the contract unit price for Curb Blockout.

Measurement of curb blockout is to the nearest linear foot for each structure, measured along the inside edge of curb from end of slab to end of slab.

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

Detailed Sep. 2016
Checked Sep. 2016

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

STATE OF MISSOURI
BRYAN A. HARTNAGEL
NUMBER PE-2002024473
PROFESSIONAL ENGINEER
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DATE PREPARED 9/28/2016

ROUTE	STATE
38	MO
DISTRICT	SHEET NO.
BR	2

COUNTY WRIGHT
JOB NO. J9S3165
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A12721

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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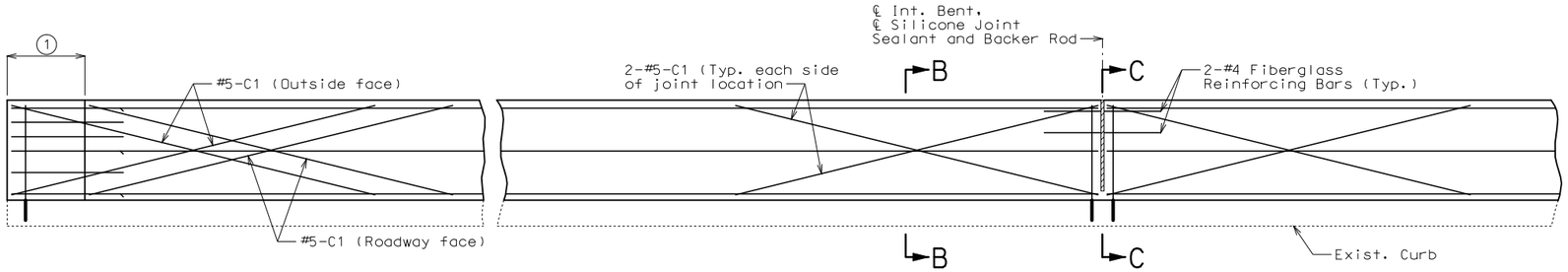
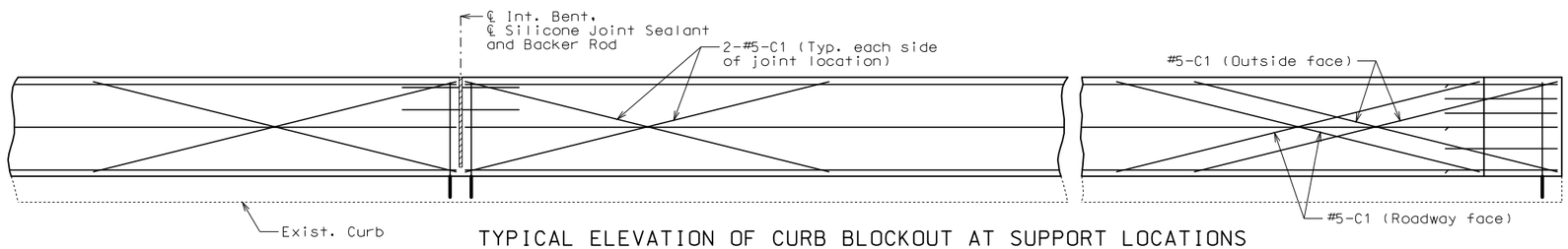
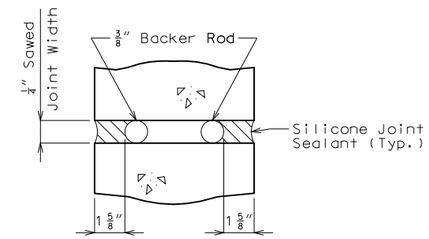


1 Concrete recess at end of bridge for rail attachment (Typ.)

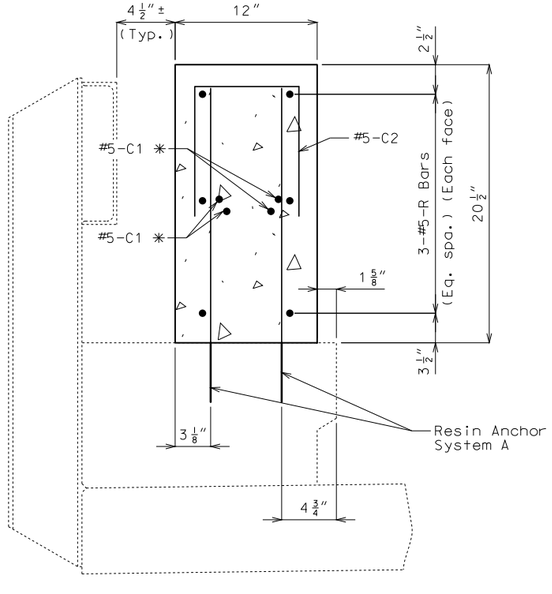


TYPICAL ELEVATION OF CURB BLOCKOUT AT SUPPORT LOCATIONS

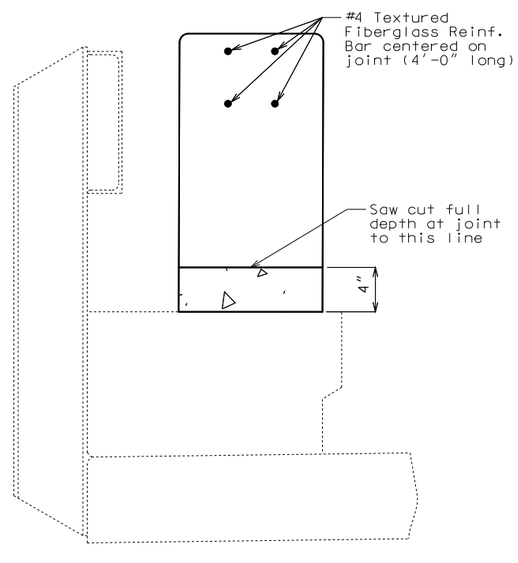
Note:
Channel rail, rail posts and existing concrete end posts shall be removed if necessary for slip forming. Removal cost will be considered completely covered by the contract unit price for Curb Blockout.



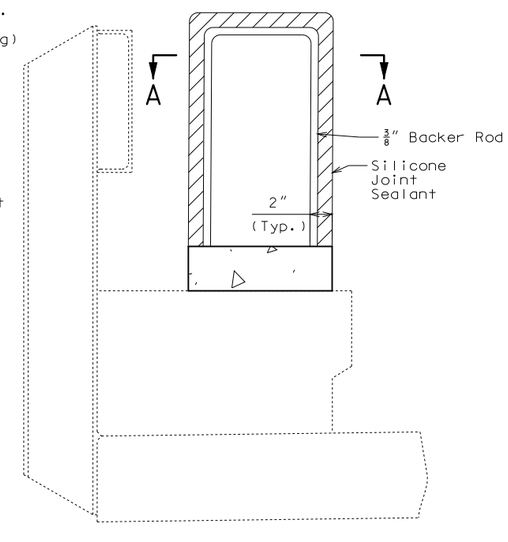
SECTION A-A



SECTION B-B



SECTION C-C



SECTION THRU JOINT

✱ Each side of joint location.

Note:
C2 bars spaced with resin anchor systems in roadway face of curb blockout.

General Notes:

Top of Curb Blockout shall be built parallel to grade with Curb Blockout joints (except at end bents) normal to grade.

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

The cost of concrete, reinforcing steel, resin anchor systems and any other work incidental to the curb blockouts, complete in place, will be considered completely covered by the contract unit price for Curb Blockout.

Concrete in the Curb Blockout shall be Class B-1.

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

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

Joint sealant and backer rods shall be used on all slip-form Curb Blockouts instead of joint filler and shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-form option, all sides of the Curb Blockout shall have a vertically broomed finish and the blockout top shall have a transversely broomed finish.

C bars (slip-form option only) shall be used in addition to cast-in-place conventional forming reinforcement for curb blockout.

Cost of silicone joint sealant and backer rod, complete in place, will be considered completely covered by the contract unit price for Curb Blockout.

OPTIONAL SLIP-FORM CURB BLOCKOUT

Detailed Sep. 2016
Checked Sep. 2016

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

STATE OF MISSOURI
BRYAN A. HARTNAGEL
NUMBER
PE-2002024473
PROFESSIONAL ENGINEER
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DATE PREPARED	
9/28/2016	
ROUTE 38	STATE MO
DISTRICT BR	SHEET NO. 3
COUNTY WRIGHT	
JOB NO. J9S3165	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A12721	

DATE	DESCRIPTION

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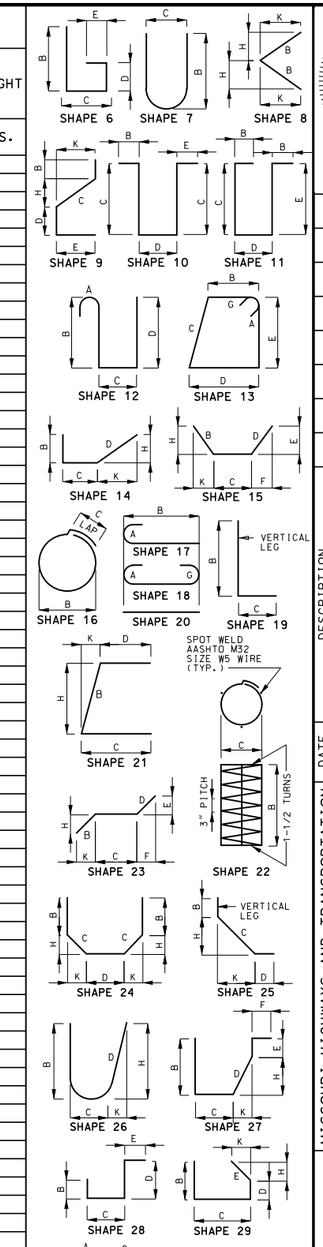
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.
			CURB																
			BLOCKOUT																
20	5	R1	BLOCKOUT	E	20					3 0.000							3 0	3 0	63
6	5	R2	BLOCKOUT	E	20					44 0.000							44 0	44 0	275
6	5	R3	BLOCKOUT	E	20					42 5.000							42 5	42 5	265
24	5	R4	BLOCKOUT	E	20					55 9.000							55 9	55 9	1396
12	5	R5	BLOCKOUT	E	20					44 4.000							44 4	44 4	555
12	5	R6	BLOCKOUT	E	20					56 2.000							56 2	56 2	703
24	5	R7	BLOCKOUT	E	20					46 5.000							46 5	46 5	1162
6	5	R8	BLOCKOUT	E	20					56 1.000							56 1	56 1	351
6	5	R9	BLOCKOUT	E	20					54 6.000							54 6	54 6	341
			SLIP FORM																
			OPTION																
112	5	C1	SLIP FORM	E	20					10 0.000							10 0	10 0	1168
536	5	C2	SLIP FORM	E	10	S					12.000	9.000					2 9	2 7	1444
			TOTALS																
	5			E															7723
			TOTAL																0
			TOTAL	E															7723
			Slab on																
			Girder																
	5			E															5111
			TOTAL																5111
			Slip Form																
			Option																
	5			E															2612
			TOTAL																2612

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.



STATE OF MISSOURI
BRYAN A. HARTNAGEL
NUMBER PE-2002024473
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	9/28/2016
ROUTE	38
STATE	MO
DISTRICT	BR
SHEET NO.	4
COUNTY	WRIGHT
JOB NO.	J9S3165
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	A12721

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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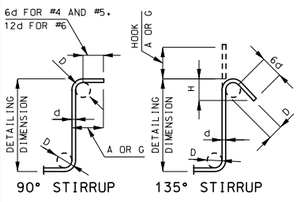
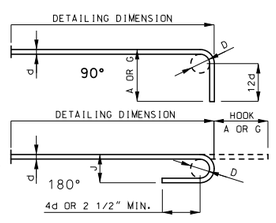


STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	
		HOOK A OR G	HOOK A OR G	APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

NOTE: UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS				
BAR SIZE	D (IN.)	ALL GRADES		
		180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	2'-0"
#14	18 1/4"	2'-3"	21 3/4"	2'-7"

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
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 (GRADE 60) FY = 60,000 PSI.

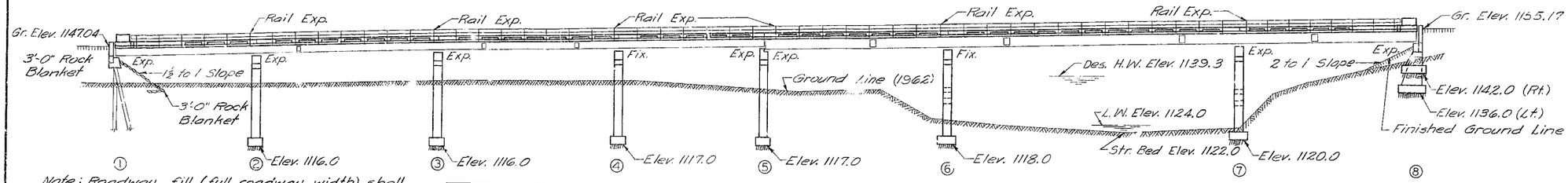
Detailed Sep. 2016
Checked Sep. 2016

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

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	5	

(44'-56'-56'-44') (56'-90'-56') Cont. I-Beam Spans (Composite)
+ 2.0 % Grade



GENERAL ELEVATION

Note: Roadway fill (full roadway width) shall be placed up to elevation of bottom of concrete beam in front of and not less than 25'-0" in back of End Bent No. 1 before steel piles are driven.

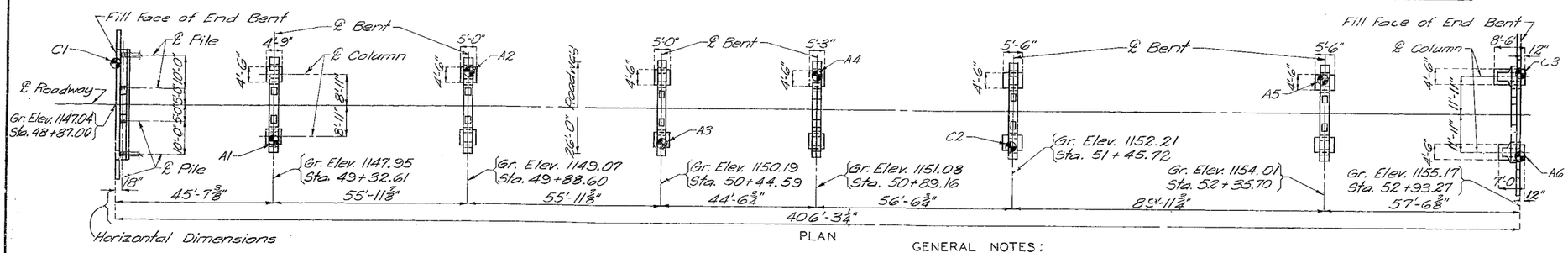
Remove old roadway fill and bridge approach fill to natural ground line within limits of new structure on West side of channel.

FOOTING DATA								
Bent No.	2	3	4	5	6	7	8 (Lt.)	8 (Rt.)
Foundation Material	Rock	Rock	Rock	Rock	Rock	Rock	Rock	Rock
Design Bearing Tons/Sq. Ft.	6.1	5.9	5.0	4.4	7.8	7.8	4.0	3.0
See Standard Specification 50.4.2								

Note: In no case shall footings of Bent No. 7 be placed higher than elevation shown.

PILE DATA (BENT NO 1)	
Pile Type & Size	10BP42
Number	4
Approximate Length Ft.	30
Plan Bearing Tons	37
Min. Required Bearing Tons	25
Hammer	Power
See Standard Specification 52.2.6	

Note: All pile shall be driven to practical refusal on or into solid rock or other point bearing material at not less than the Plan Bearing shown, unless excessive splicing is required to obtain Plan Bearing, in which case the engineer will authorize a lesser bearing, but in no case less than the Minimum Required Bearing.



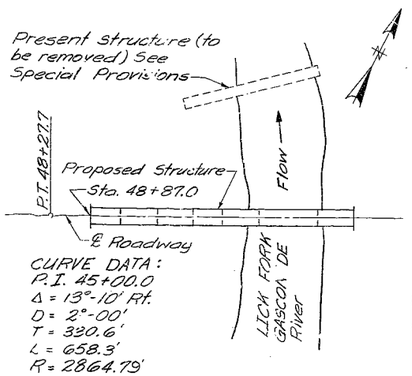
PLAN

Note: For log of soundings see sheet No. 2 of 12.
✪ indicates location of soundings on "PLAN".

GENERAL NOTES:

Design Specifications A.A.S.H.O. - 1961
Loading H15-44 (15#/sq. ft. Future Wearing Surface)
Structural Steel (A.S.T.M. A36-62T) Stress 20,000 psi.
Reinforcing Steel Stress 20,000 psi.
Concrete, Class B Stress 1,200 psi.
Concrete, Class B1 Stress 1,600 psi.
Superstructure concrete shall be Class B1.
Substructure concrete shall be Class B or Class B1 except payment will be on the basis of Class B.
Fabricated structural steel shall be A.S.T.M. A36-62T except as noted. Payment will be made as Fabricated Structural Carbon Steel.
See Standard Specification 55.3.13 for qualification of welding operators.
Field connections, High Strength Bolts ¾", holes 13/16" except as noted.
Paint: shop, none; field, none by contractor except as noted in Standard Specification 55.4.10.2.
Where joint filler is specified on the plans it shall conform to Standard Specification 157.2.5.
Superstructure deck to be surface sealed. (See special provisions)

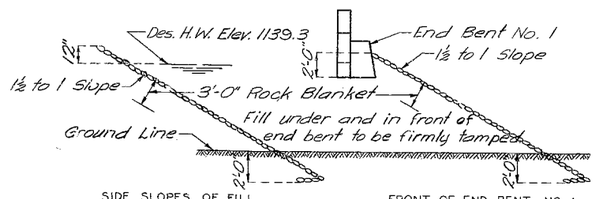
All dimensions to reinforcing steel are to ℄ bar except where clear distance from face of concrete is indicated.
Piling shall be A.S.T.M. A36-62T.



CURVE DATA:
P.I. 45+00.0
Δ = 13°-10' Rt.
D = 2°-00'
T = 320.6'
L = 658.3'
R = 2864.79'

Drainage Area:
112 Sq. Mi.
(Lt Hilly)

LOCATION SKETCH



SIDE SLOPES OF FILL — FRONT OF END BENT NO. 1

Note: 3'-0" Rock Blanket shall be placed on fill at Bent No. 1 as shown in sketches.
See Road Plans for Quantities.

ROCK BLANKET SKETCHES

ESTIMATED QUANTITIES				
Item		Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu. Yds.	230		230
Class 2 Excavation for Structures	Cu. Yds.	206		206
Steel Piles in Place (10")	Lin. Ft.	108		108
Steel Pile Cut-offs (10")	Lin. Ft.	12		12
Class B Concrete	Cu. Yds.	188.9		188.9
Class B1 Concrete	Cu. Yds.		304.5	304.5
Reinforcing Steel	Lbs.	27,270	86,250	113,520
Fabricated Structural Carbon Steel	Lbs.		240,010	240,010

Note: Excavation for Structures made above Elev. 1125.0 will be paid for as Class 1.
Excavation for Structures made below Elev. 1125.0 will be paid for as Class 2.
Class 1 Excavation for Structures will be computed from the original ground line (1962) or from the lower limits of roadway excavation, whichever is lower regardless of the sequence of operations and the method of removal.
No payment for excavation will be allowed at End Bent No. 1.
Weight of bolts (steel to steel) is included in weight of fabricated structural steel on the basis of the following weights per 100 bolts. ⅝" 40#, ¾" 65#, ⅞" 95#, 1" 135#.

B.M. #5- Elev. 1132.41, N.I.S. 30" Elm. 75' Rt., Sta. 51+35

BRIDGE OVER LICK FORK GASCONADE RIVER
STATE ROAD FROM HARTVILLE NORTHEAST
ABOUT 12.0 MILES N.E. OF MANSFIELD
PROJECT NO. S-502(8) SB(38) **STA.** 48+87.0

WRIGHT **COUNTY**

DESIGNED May 1963 BY Jeng
DETAILED Aug. 1963 BY Bradley
CHECKED Sept. 1963 BY Rhodes

SUBMITTED BY D. D. Jenkins BRIDGE ENGINEER DATE 9/27/63
APPROVED BY H. E. Smith CHIEF ENGINEER DATE 9/27/63

STD. 54.00
A-1272

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

Sheet No. 1 of 12.

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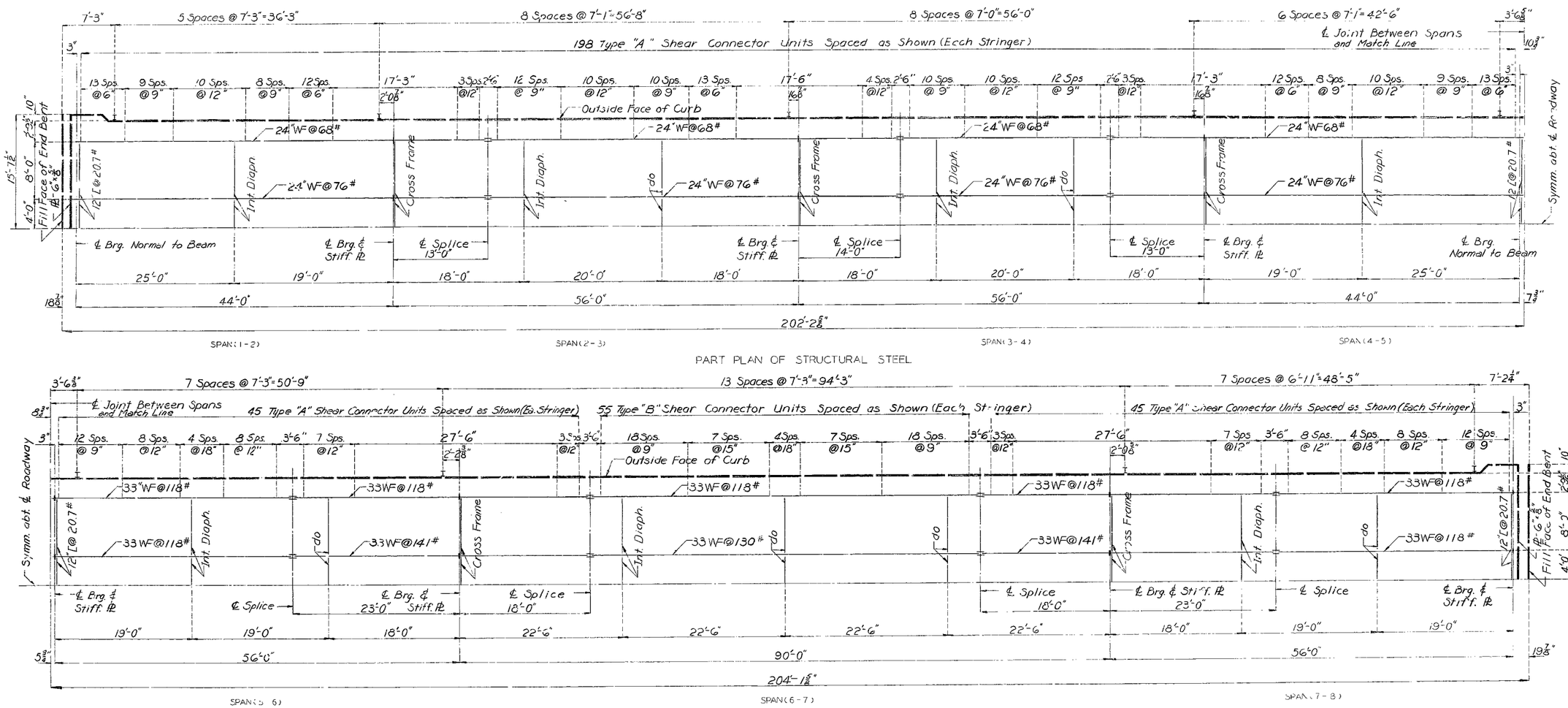
Note: Longitudinal dimensions shown are taken parallel to grade at crown of roadway.

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	10	



PART PLAN OF STRUCTURAL STEEL

PART PLAN OF STRUCTURAL STEEL

BRIDGE OVER LICK FORK GASCONADE RIVER

STATE ROAD FROM HARTVILLE NORTHEAST

ABOUT 12.0 MILES N.E. OF MANSFIELD

PROJECT NO. S-502(8,5B(38) **STA.** 48+87.0

WRIGHT **COUNTY**

Drawn JUL. 1963 by JENG
Checked Sept. 1963 by Rhodes

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

Sheet No. 6 of 12

A-1272

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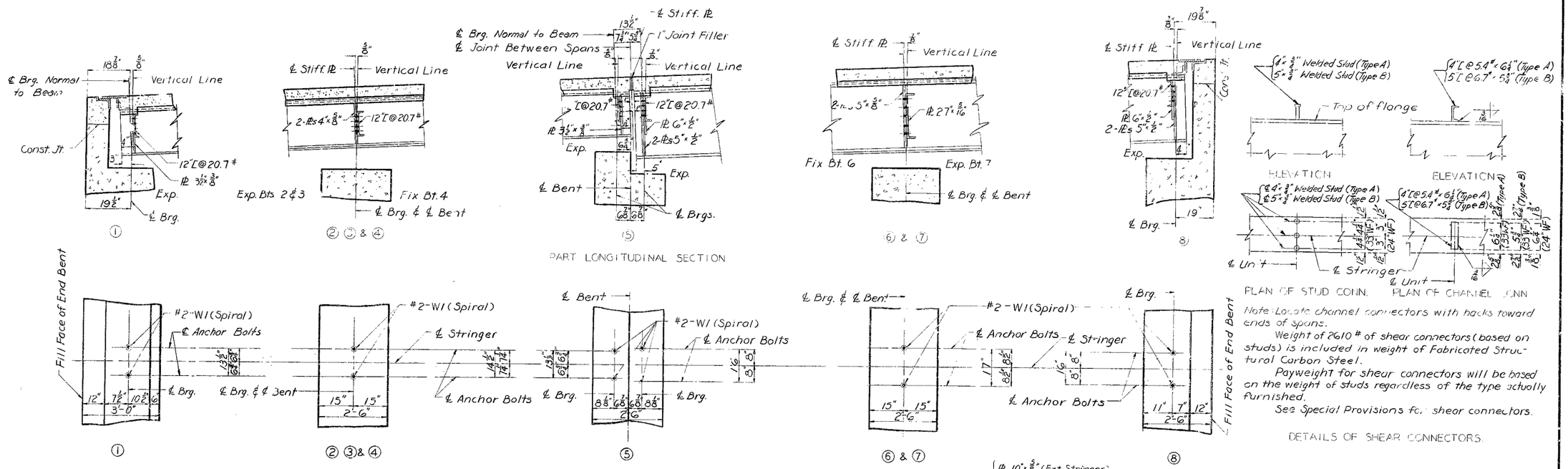
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED AID PRO. NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
5	MO.		19	11	



	"A"	"B"	"C"	"D"	"E"	"F" Spcs	"G"	"H"	"J"
33"WF@118# to 118#	1/2"	2'-6 1/2"	–	–	–	4	1/2"	–	2'-0 1/2"
33"WF@118# to 141#	1/2"	2'-6 1/2"	1/4"	7/16"	15"	4	1/2"	12"	2'-0 1/2"
33"WF@130# to 141#	1/2"	2'-6 1/2"	12Ga.	3/8"	15"	4	1/2"	15"	2'-6 1/2"

BRIDGE OVER LICK FORK GASCONADE RIVER

STATE ROAD FROM HARTVILLE NORTHEAST

ABOUT 12.0 MILES N.E. OF MANSFIELD

PROJECT NO. S-502 (8) SB (38) **STA.** 48+87.0

WRIGHT **COUNTY**

Drawn JUL 1963 **by** JENG

Checked Sept. 1963 **by** Rhodes

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

Sheet No. 7 **of** 12

A-1272

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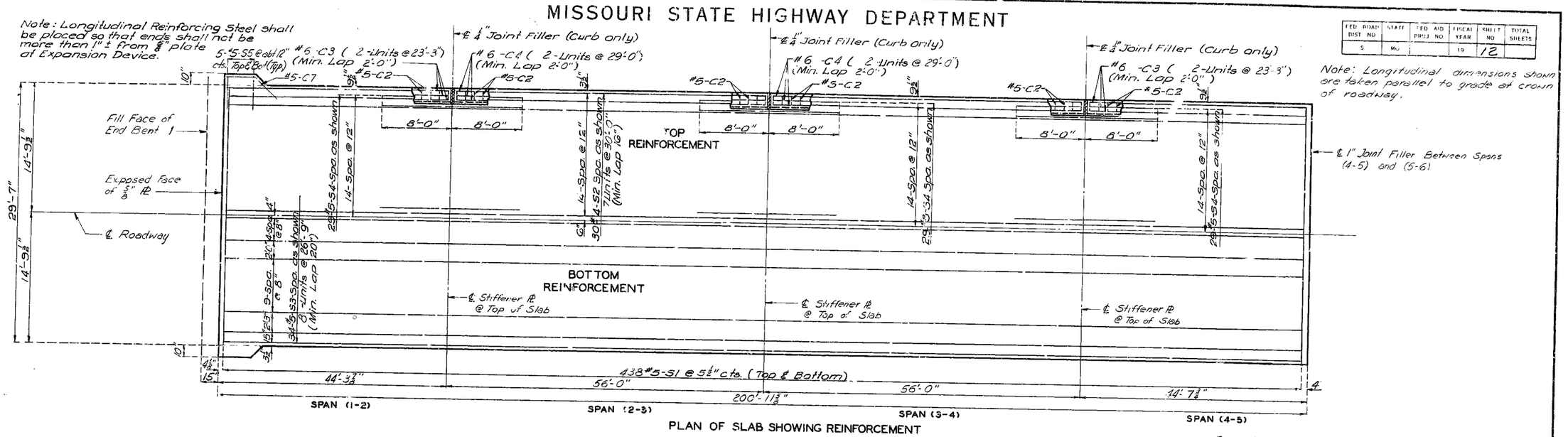
MISSOURI STATE HIGHWAY DEPARTMENT

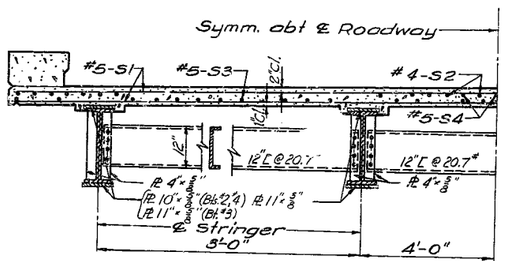
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	12	

Note: Longitudinal Reinforcing Steel shall be placed so that ends shall not be more than 1" ± from ⅜" plate at Expansion Device.

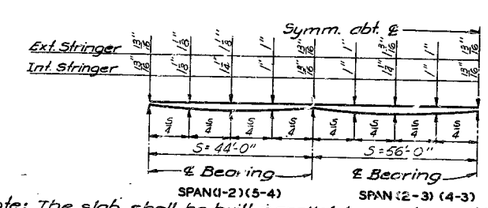
Note: Longitudinal dimensions shown are taken parallel to grade at crown of roadway.



PLAN OF SLAB SHOWING REINFORCEMENT

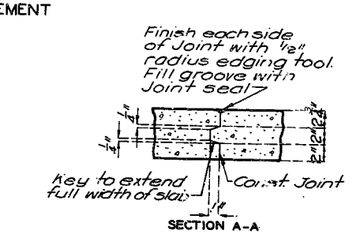


HALF SECTION AT INT. BENTS

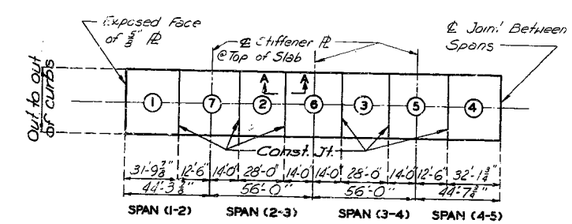


Note: The slab shall be built parallel to grade and to a minimum thickness of 6¾". Dead load deflection (17% due to weight of structural steel) and vertical curve (if any) shall be taken care of by haunching to the top of stringers by the dimensions shown. The additional concrete (flange, flange plates, splice plates, etc. excluded) is included in Estimated Quantities.

SLAE HAUNCHING DIAGRAM



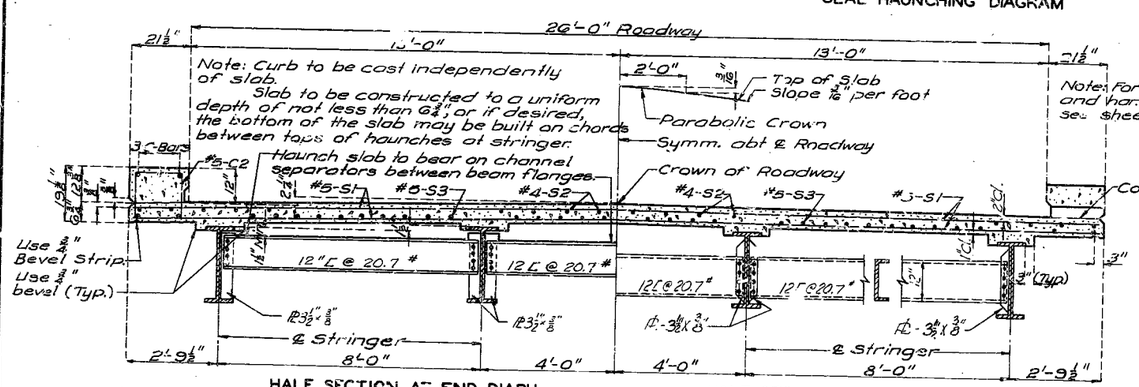
SECTION A-A



	Sequence of Pours						
	Direction						
Basic Sequence	1	2	3	4	5	6	7
	Either Direction						
Alternate "A" Pours	1		7+2		6+3		5+4
	End Bt. to 7		1 to 6		2 to 5		3 to Bt #5
Alternate "B" Pours	1+7+2			6+3			5+4
	End Bt. to 6			2 to 5			3 to Bent #5
Alternate "C" Pours	1+7+2				6+3+5+4		
	End Bent to 6				2 to Bent #5		
Alternate "D" Pours	1+7+2+6+3+5+4						
	End Bent to Bent #5						

Note: The contractor shall observe the basic pouring sequence unless he can demonstrate to the satisfaction of the engineer that he is equipped to pour and satisfactorily finish the roadway slabs at a rate of not less than 25 cubic yards per hour and can maintain this rate through out the alternate pour he elects to use.

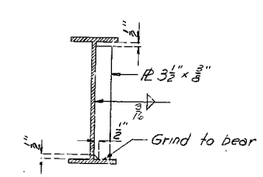
SLAB POURING SEQUENCE



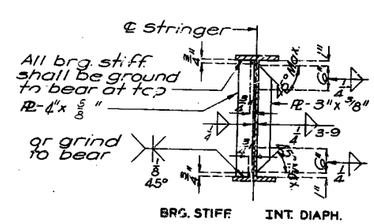
HALF SECTION AT END DIAPH.

HALF SECTION NEAR INT. DIAPH.

Note: For details of curb and handrail not shown see sheet No. 12 of 12.



CONNECTION PLATE WELDING DETAILS



WELDING DETAILS

Sheet No. 8 of 12

BRIDGE OVER LICK FORK GASCONADE RIVER

STATE ROAD FROM HARTVILLE NORTHEAST

ABOUT 12.0 MILES N.E. OF MANSFIELD

PROJECT NO. S-502 (8) SB (38) STA. 48 + 87.0

WRIGHT COUNTY

A-1272

Drawn Aug. 1963 by Bryniarski
Checked Sept. 1963 by Rhodes

No.	Date	Revised
1	3	
2	6	
4	1	
4	26	
4	1	
Nov.	1962	

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

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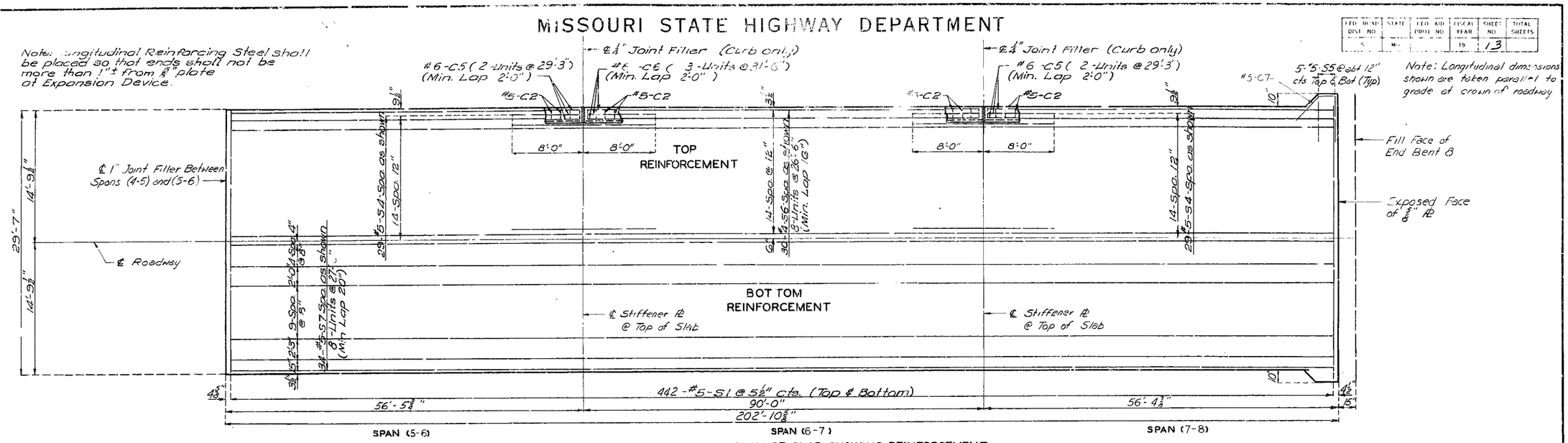
MISSOURI STATE HIGHWAY DEPARTMENT

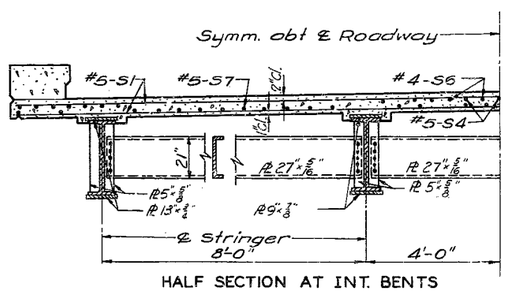
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	13	

Note: Longitudinal Reinforcing Steel shall be placed so that ends shall not be more than 1" ± from ⅝" plate at Expansion Device.

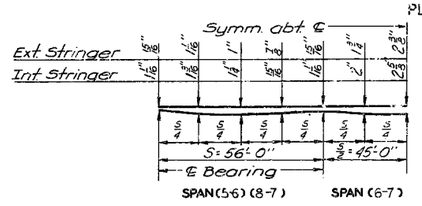
Note: Longitudinal dimensions shown are taken parallel to grade at crown of roadway



PLAN OF SLAB SHOWING REINFORCEMENT

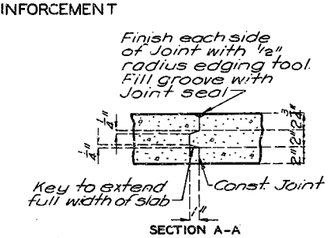


HALF SECTION AT INT. BENTS

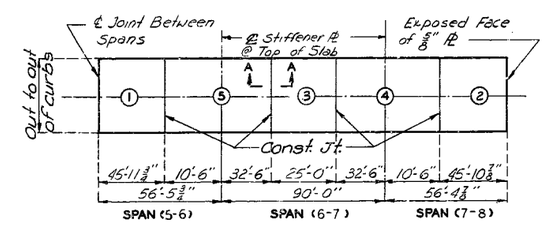


Note: The slab shall be built parallel to grade and to a minimum thickness of 6¾". Dead load deflection (13% due to weight of structural steel) and vertical curve (if any) shall be taken care of by haunching to the top of stringer by the dimensions shown. The additional concrete (flange, flange plates, splice plates, etc. excluded) is included in Estimated Quantities.

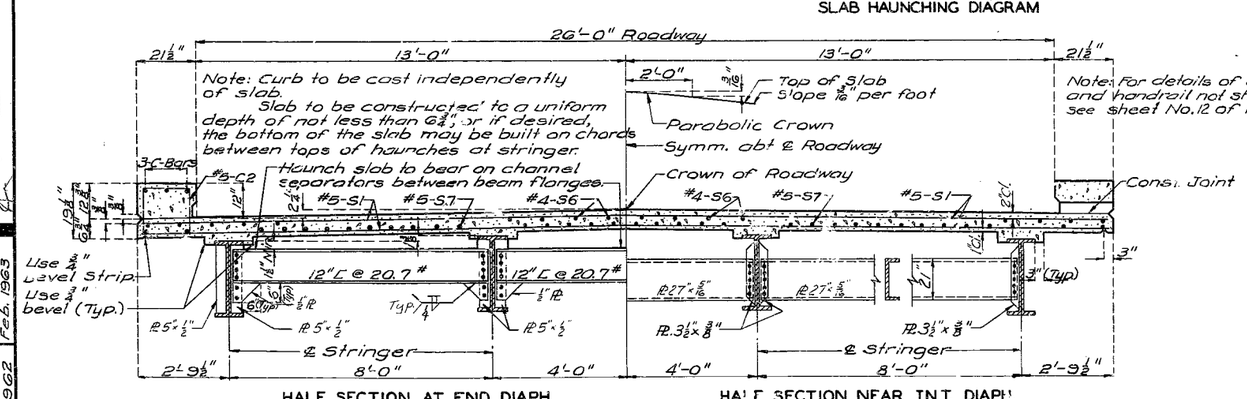
SLAB HAUNCHING DIAGRAM



SECTION A-A



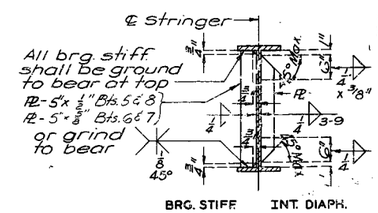
	Sequence of Pours				
	Direction				
Basic Sequence	1	2	3	4	5
	Either Direction				
Alternate "A" Pours	1	2	3+4		5
	Bt. #5 to 5	4 to End Bt.	5 to 2		1 to 3



HALF SECTION AT END DIAPH.

HALF SECTION NEAR INT. DIAPH.

Note: For details of curb and handrail not shown see sheet No. 12 of 12.



WELDING DETAILS

Note: The contractor shall observe the basic pouring sequence unless he can demonstrate to the satisfaction of the engineer that he is equipped to pour and satisfactorily finish the roadway slabs at a rate of not less than 30 cubic yards per hour and can maintain this rate through out the alternate pour.

SLAB POURING SEQUENCE

BRIDGE OVER LICK FORK GASCONADE RIVER

STATE ROAD FROM HARTVILLE NORTHEAST

ABOUT 12.0 MILES N.E. OF MANSFIELD

PROJECT NO. S-502 (8) SB (38) STA. 48+87.0

WRIGHT COUNTY

A-1272

No.	Revised
41.26.1.1	Feb. 1963
Nov. 1962	

Drawn Aug. 1963 by Bryniarski
Checked Sept. 1963 by Rhodes

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

Sheet No. 9 of 12

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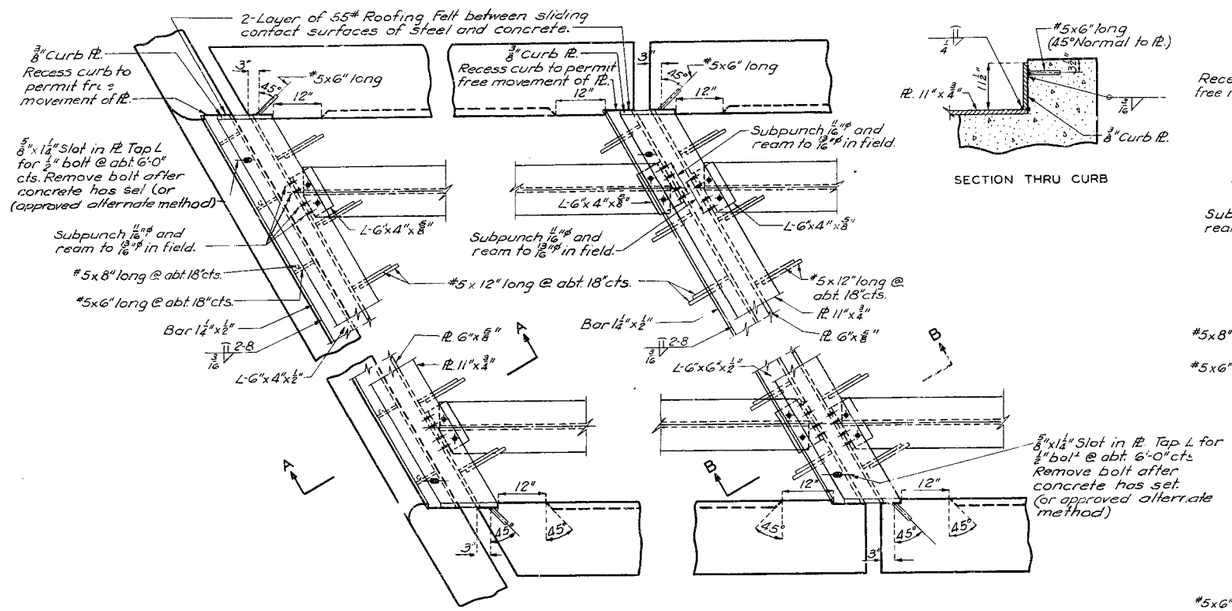
MISSOURI STATE HIGHWAY DEPARTMENT

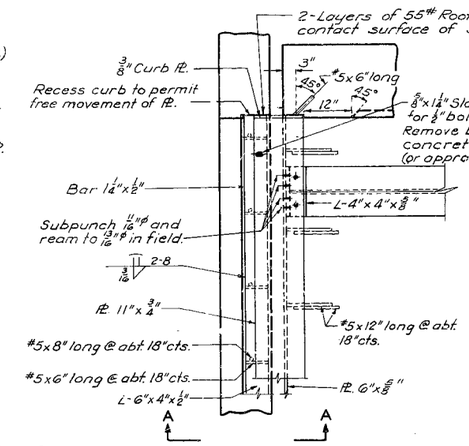
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
5	MO.		19	15	



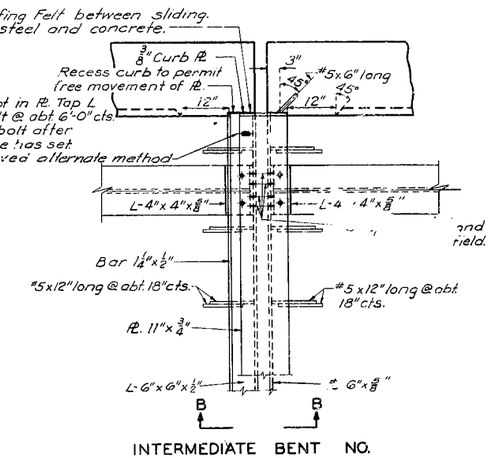
END BENT NO.

INTERMEDIATE BENT NO.

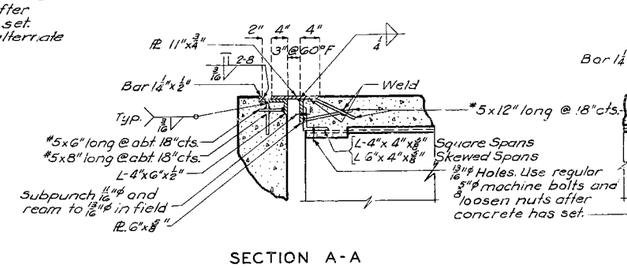
SECTION THRU CURB



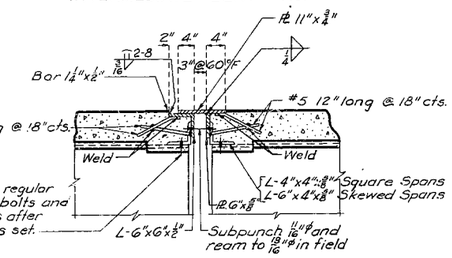
END BENTS NO. 1 & 8



INTERMEDIATE BENT NO.

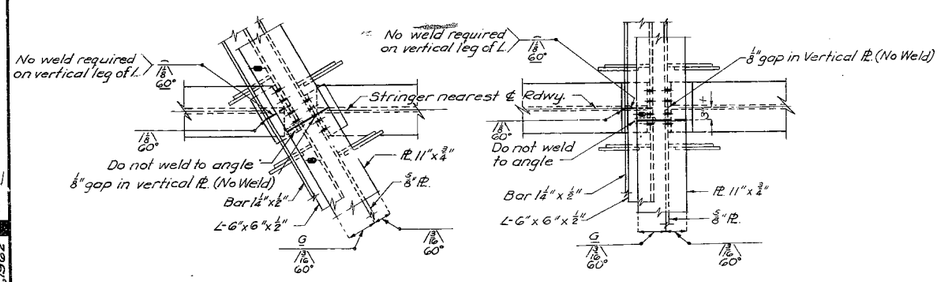


SECTION A-A

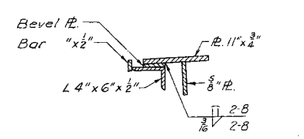


SECTION B-B

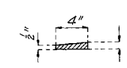
Note: See Longitudinal Section sheet No. 7 of 12 for orientation of expansion device. Details shown are for Right Advance Skew, Left Advance Details are similar.



PERMISSIBLE FIELD SPLICE AT INT. BENT
(End Bent Similar)



SECTION THRU EXPANSION DEVICE



BEVEL PLATE

DETAILS OF BEVEL PLATE AT BENT NO.

GENERAL NOTES:

Expansion Device shall be fabricated in one section except that when the length is over 40 foot splicing is permissible. The expansion device shall be bent to conform to crown and grade of roadway.

#5 Bars shall be structural grade. Approved stud welded anchors may be used in lieu of #5 bars shown.

Bevel plates shall be used at end bents when the grade of the slab at the expansion device is 3.0% or more.

BRIDGE OVER LICK FORK GASCONADE RIVER

STATE ROAD FROM HARTVILLE NORTHEAST

ABOUT 12.0 MILES N.E. OF MANSFIELD

PROJECT NO. S-502 (8) SB(38) STA. 48+87.0

WRIGHT **COUNTY**

DETAILS OF PLATE EXPANSION DEVICE

Drawn Aug 1963 by Bryniarski
Checked Sep. 1963 by Rhodes

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

Sheet No. 11 of 12

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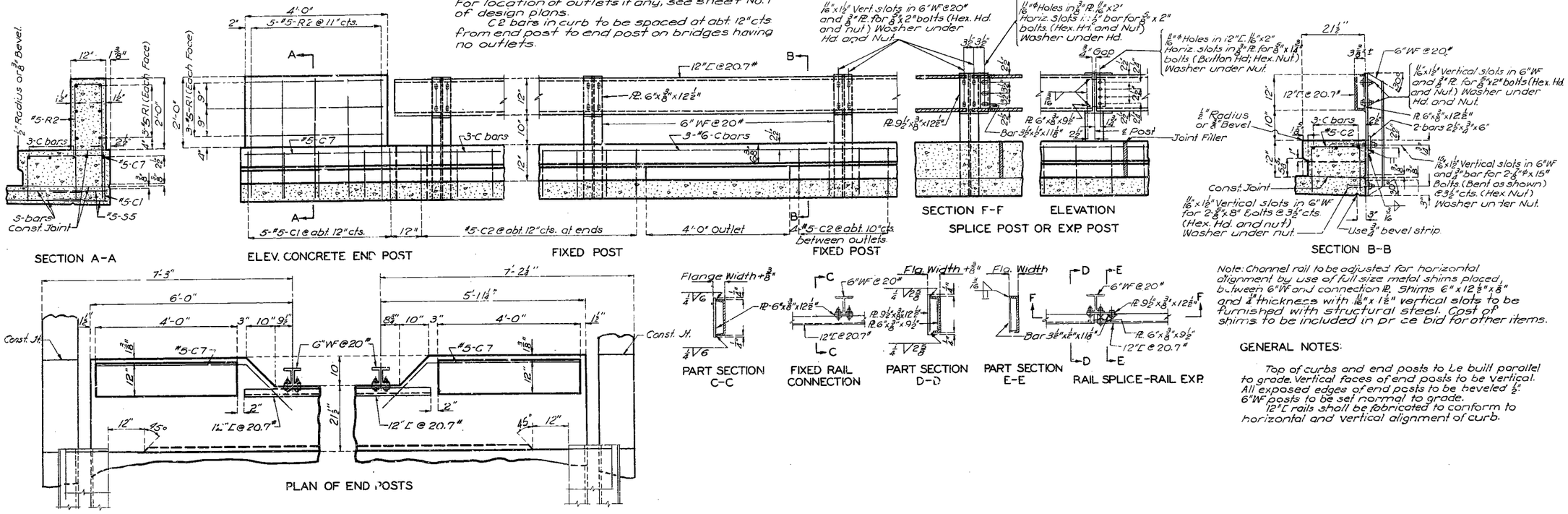
Less than 200' of Exp.	Revised	Nov. 28, 1962
No. 4.4	Jan. 1962	

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	16	

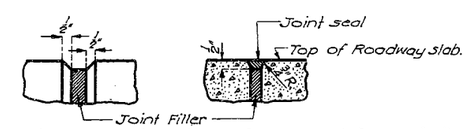
Note: Outlets to be centered between rail posts. For location of outlets if any, see sheet No. 1 of design plans.
C2 bars in curb to be spaced at abt. 12" cts from end post to end post on bridges having no outlets.



Note: Channel rail to be adjusted for horizontal alignment by use of full size metal shims placed between 6"WF and connection Pl. Shims 6" x 12 1/2" x 1/8" and 1/4" thickness with 11/16" x 1 1/2" vertical slots to be furnished with structural steel. Cost of shims to be included in pr ce bid for other items.

GENERAL NOTES:

Top of curbs and end posts to be built parallel to grade. Vertical faces of end posts to be vertical. All exposed edges of end posts to be beveled 1/2". 6"WF posts to be set normal to grade. 12"[rails shall be fabricated to conform to horizontal and vertical alignment of curb.



Note: Use bevel as shown for exposed faces of all filled joints except at top surface of roadway slab. Use edging tool with 3/4" radius at top surface of roadway slab each side of joint and fill flush with joint seal as shown.

DETAILS OF BEVEL FOR FILLED JOINTS

BRIDGE OVER LICK FORK GASCONADE RIVER

STATE ROAD FROM HARTVILLE NORTHEAST

ABOUT 12.0 MILES N.E. OF MANSFIELD

PROJECT NO. 5-502(8)SB(38) **STA.** 48+87.0

WRIGHT **COUNTY**

170

No. 1.2	Revised
May 1962	Jan. 1963

Drawn Aug 1963 by Bryniarski
Checked Sept 1963 by Rhodes

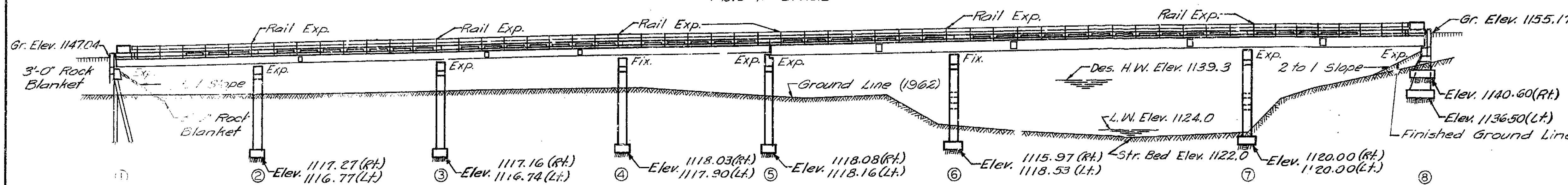
Note: This drawing is not to scale. Follow dimensions.

FOR INFORMATION ONLY **A12721, Sht. 12**

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	5	

(44'-56'-56'-44') (56'-90'-56') Cont. I-Beam Spans (Composite)
+2.0 % Grade



Note: Roadway fill (full roadway width) placed up to elevation of bottom of concrete beam in front of and not less than 25'-0" in back of End Bent No. 1 before steel piles driven.
Remove old roadway fill and bridge approach fill to natural ground line within limits of new structure on West side of channel.

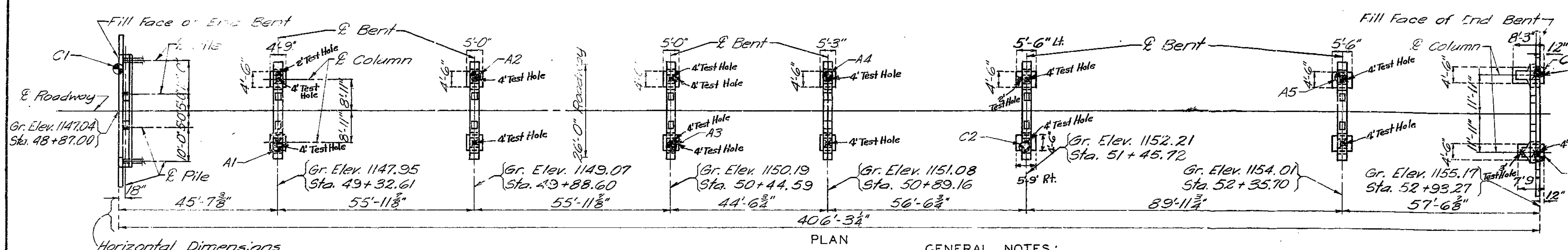
FOOTING DATA								
Bent No.	2	3	4	5	6	7	8 (Lt.)	8 (Rt.)
Foundation Material	Rock	Rock	Rock	Rock	Rock	Rock	Rock	Rock
Design Bearing Tons/Sq. Ft.	6.1	5.9	5.0	4.4	7.8	7.8	4.0	3.0
See Standard Specification 50.4.2								

Note: In no case ... footings of Bent No. 7 be placed higher than elevation shown.

PILE DATA (BENT NO. 1)	
Pile Type & Size	10BP42
Number	4
Approximate Length Ft.	30
Plan Bearing Tons	37
Min. Required Bearing Tons	25
Hammer	Power
See Standard Specification 52.2.6	

Note: All pile driven to practical refusal on or into solid rock or other point bearing material at not less than the Plan Bearing shown.

GENERAL ELEVATION



Note: For log of soundings see sheet No. 2 of 12. ⊕ indicates location of soundings on "PLAN".
"⊠" indicates location of test hole. Depth as indicated on "PLAN."

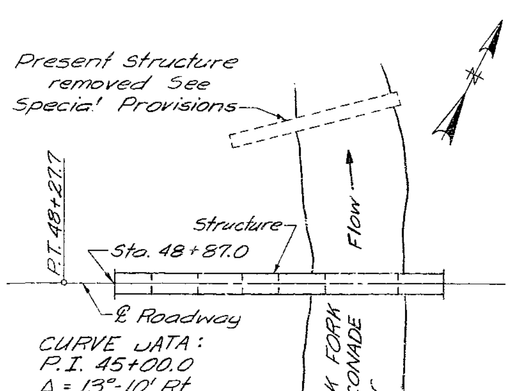
PLAN

GENERAL NOTES:

Design Specifications A.A.S.H.O. - 1961
Loading H15-44 (15#/sq. ft. Future Wearing Surface)
Structural Steel (A.S.T.M. A36-62.T) Stress 20,000 psi.
Reinforcing Steel Stress 20,000 psi.
Concrete, Class B Stress 1,200 psi.
Concrete, Class B1 Stress 1,600 psi.
Superstructure concrete Class .31.
Substructure concrete Class B or Class B1 except payment on the basis of Class B.
Fabricated structural steel A.S.T.M. A36-62T except as noted.
Payment made as Fabricated Structural Carbon Steel.
See Standard Specification 55.3.13 for qualification of welding operators.
Field connections, High Strength Bolts ¾", holes 13/16" except as noted.
Paint: shop, none; Field, none by contractor except as noted in Standard Specification 55.4.10.2.
Where joint filler is specified on the plans it conform to Standard Specification 157.2.5.
Superstructure deck to be surface sealed. (See special provisions)

All dimensions to reinforcing steel are to ℄ bar except where clear distance from face of concrete is indicated.
Piling A.S.T.M. A36-62T.

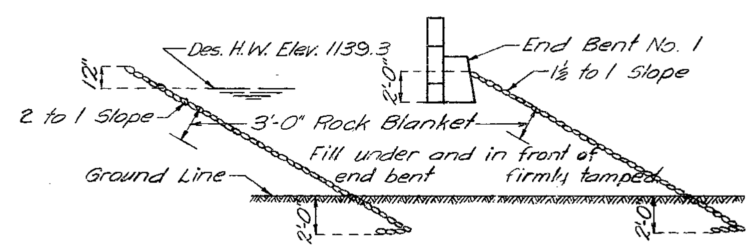
B.M.#5-A Elev. 1147.88 - "X" On No. Wing Bent 1.



CURVE DATA:
P.I. 45+00.0
Δ = 13°-10' Rt.
D = 2°-00'
T = 330.6'
L = 658.3'
R = 2864.79'

Drainage Area:
112 Sq. Mi.
(Lt. Hilly)

LOCATION SKETCH



SIDE SLOPES OF FILL FRONT OF END BENT NO. 1

Note: 3'-0" Rock Blanket placed on fill at Bent No. 1 as shown in sketches.
See Road Plans for Quantities.

ROCK BLANKET SKETCHES

QUANTITIES				
Item		Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu.Yds.	234.5		234.5
Class 2 Excavation for Structures	Cu.Yds.	189.0		189.0
Steel Piles in Place (10BP42)	Lin. Ft.	102		22
Steel Pile Cut-offs (10BP42)	Lin. Ft.	18		18
Class B Concrete	Cu. Yds.	188.2		188.2
Class B1 Concrete	Cu. Yds.		304.5	304.5
Reinforcing Steel	Lbs.	27270	86252	113520
Fabricated Structural Carbon Steel	Lbs.		239310	239310
Foundation Test Holes	Lin. Ft.	71		71
Class 1 Excavation Below Plan Elev.	Cu. Yds.	4.0		4.0
Class 2 Excavation Below Plan Elev.	Cu. Yds.	5.0		5.0

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

Note: Excavation for Structures made above Elev. 1125.0 paid for as Class 1.
Excavation for Structures made below Elev. 1125.0 paid for as Class 2.
Class 1 Excavation for Structures computed from the original ground line (1962) or from the lower limits of roadway excavation, whichever is lower regardless of the sequence of operations and the method of removal.
No payment for excavation allowed at End Bent No. 1.
Weight of bolts (steel to steel) is included in weight of Fabricated Structural Steel on the basis of the following weights per 100 bolts. ⅝" 40#, ¾" 65#, ⅞" 95#, 1" 135#.

Sheet No. 1A of 4

BRIDGE OVER LICK FORK GASCONADE RIVER

STATE ROAD FROM HARTVILLE NORTHEAST
ABOUT 12.0 MILES N.E. OF MANSFIELD
PROJECT NO. S-502(8) SB(38) STA. 48+87.0
WRIGHT COUNTY

SUBMITTED BY ______ BRIDGE ENGINEER DATE ______
APPROVED BY ______ CHIEF ENGINEER DATE ______

DESIGNED May 1963 BY Jeng
DETAILED Aug. 1963 BY Bradley
CHECKED Sept 1963 BY Rhodes

STD. 54.00
A-1272

FINAL PLANS

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