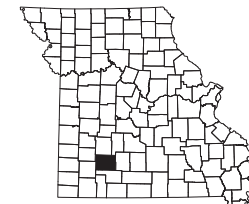


DESIGN DESIGNATION

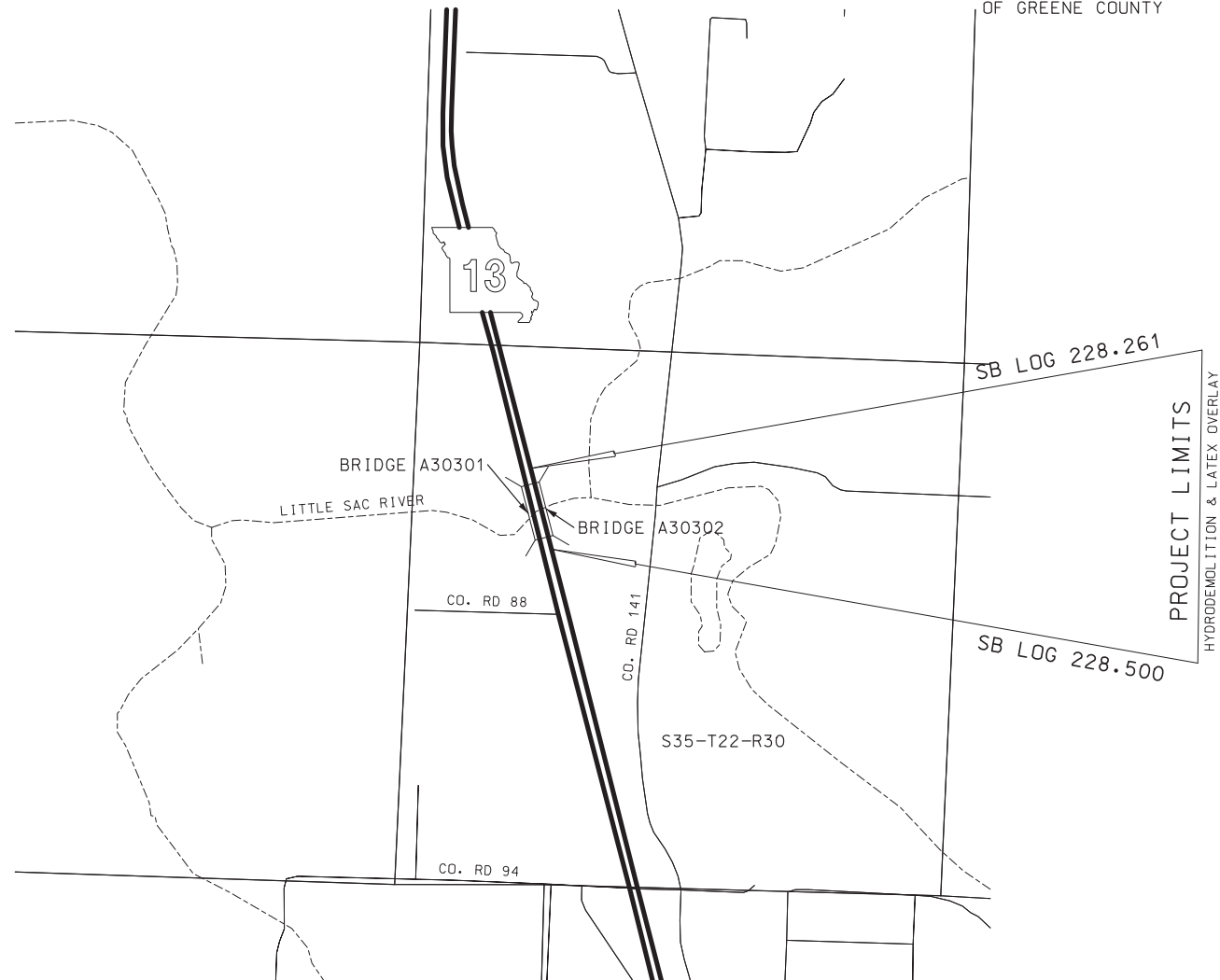
A.A.D.T. - 2018 = 25,968
 T = 9.4%
 V = 65 M.P.H.
 FUNCTIONAL CLASSIFICATION- FREEWAY

NO NEW R/W REQUIRED

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY
PRELIMINARY PLANS
GREENE COUNTY



MAP SHOWING LOCATION OF GREENE COUNTY



NOT TO SCALE

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

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET -----	1
TYPICAL SECTIONS (TS) (2 SHEETS)---	2
QUANTITIES (QU) (2 SHEETS)-----	3
PLAN-PROFILE (PP)-----	-
RIGHT OF WAY (RW)-----	-
REFERENCE POINTS (RP)-----	-
COORDINATE POINTS (CP)-----	-
SPECIAL SHEETS (SS)-----	4-6
TRAFFIC CONTROL SHEETS (TC)-----	7-9
EROSION CONTROL SHEETS (EC)-----	-
LIGHTING (LT)-----	-
SIGNALS (SG)-----	-
SIGNING (SN)-----	-
PAVEMENT MARKING (PM)-----	-
CULVERT SECTIONS (CS)-----	-
BRIDGE DRAWINGS (B)	
A3030-----	XX-XX
A####-----	-
A####-----	-
A####-----	-
CROSS SECTIONS (XS)-----	-



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/30/2019

ROUTE 13 STATE MO

DISTRICT SW SHEET NO. 1

COUNTY GREENE

JOB NO. J8P3067B

CONTRACT TO.

PROJECT NO.

BRIDGE NO. A3030

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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

LENGTH OF PROJECT

BEGINNING OF PROJECT	LOG MILE	228.261
END OF PROJECT	LOG MILE	228.500
APPARENT LENGTH		1261.92 FEET
EQUATIONS AND EXCEPTIONS:		NONE

TOTAL CORRECTIONS	0.00 FEET
NET LENGTH OF PROJECT	1716.00 FEET
STATE LENGTH	0.239 MILES

CONVENTIONAL SYMBOLS
(USED IN PLANS)

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

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

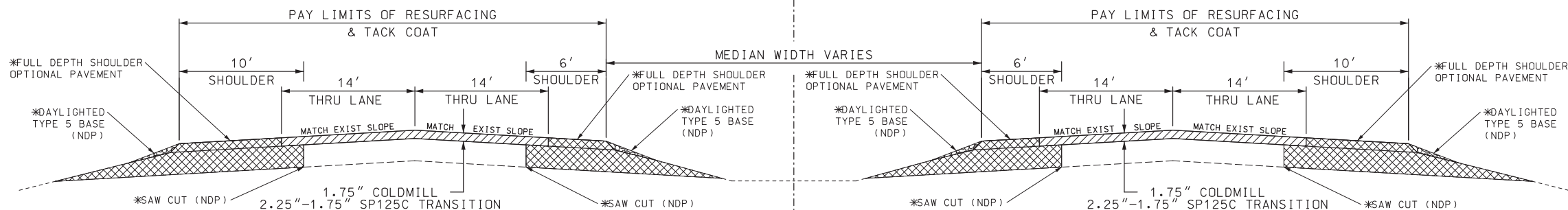
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

OPTIONAL PAVEMENT	
OPTION A	OPTION B
1.75" BP-1 6.25" BITUMINOUS BASE 4" TYPE 5 BASE	8" CONCRETE PAVEMENT 4" TYPE 5 BASE

SEE TYPICAL SECTION SHEET 2 OF 2

*NOTE: SAW CUT, DAYLIGHTED TYPE 5 BASE, AND OPTIONAL SHOULDER PAVEMENT LOG MILES
 SB: 228.261 TO 228.356
 SB: 228.405 TO 228.500
 NB: 62.140 TO 62.235
 NB: 62.283 TO 62.378

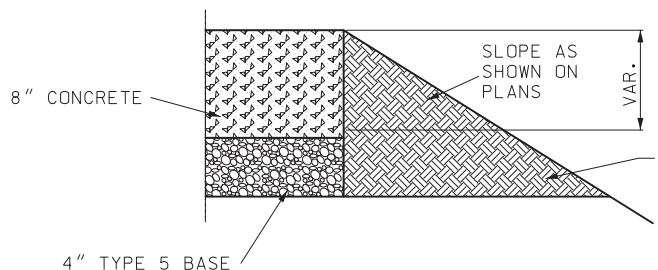
ASPHALT FACTORS		
	COMBINED FACTOR	% AC
SP125	1.975 TONS/CY	5.2
BP-1 (OPTION)	1.985 TONS/CY	5.1
BIT. BASE (OPTION)	1.995 TONS/CY	4.7
TACK COAT		0.10 GAL/SY



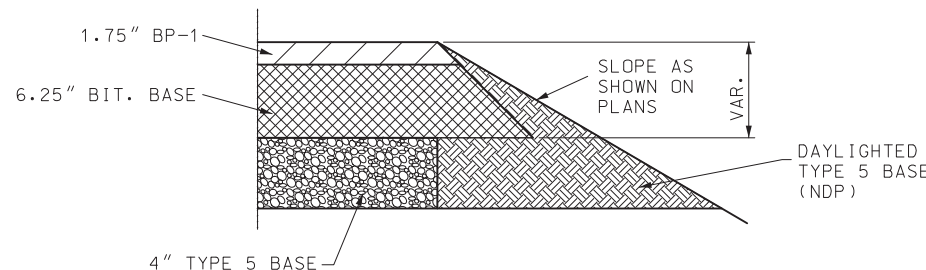
ROUTE 13

LOG MILE 228.328 TO LOG MILE 228.337
 LOG MILE 228.424 TO LOG MILE 228.433

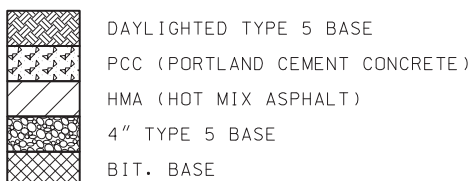
SURFACE PLACEMENT - ONE PASS PER LANE
 NO S.E. CORRECTION



OPTION B
PCC PAVEMENT



OPTION A
HMA PAVEMENT



GENERAL NOTE:

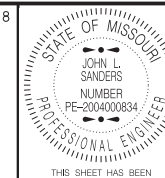
DAYLIGHTED TYPE 5 BASE WILL BE NO DIRECT PAY.

THE QUANTITY FOR ADDITIONAL BASE MATERIAL RESULTING FROM THE VARIABLE THICKNESS, MATERIAL OR CONSTRUCTION METHOD OF TYPE A2 OR A3 SHOULDER WILL BE CONSIDERED INCIDENTAL.

NOT TO SCALE

DAYLIGHTED TYPE 5 BASE

TYPICAL SECTIONS
SHEET 2 OF 2



DATE PREPARED	12/30/2019
ROUTE	13
STATE	MO
DISTRICT	SW
SHEET NO.	2
COUNTY	GREENE
JOB NO.	J8P3067B
CONTRACT TO:	
PROJECT NO.	
BRIDGE NO.	A3030

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

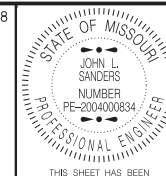
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

OPTIONAL PAVEMENT	
OPTION A	OPTION B
1.75" BP-1 6.25" BITUMINOUS BASE 4" TYPE 5 BASE	8" CONCRETE PAVEMENT 4" TYPE 5 BASE

SEE TYPICAL SECTION SHEET 2 OF 2

*NOTE: SAW CUT, DAYLIGHTED TYPE 5 BASE, AND OPTIONAL SHOULDER PAVEMENT LOG MILES
 SB: 228.261 TO 228.356
 SB: 228.405 TO 228.500
 NB: 62.140 TO 62.235
 NB: 62.283 TO 62.378

ASPHALT FACTORS		
	COMBINED FACTOR	% AC
SP125	1.975 TONS/CY	5.2
BP-1 (OPTION)	1.985 TONS/CY	5.1
BIT. BASE (OPTION)	1.995 TONS/CY	4.7
TACK COAT		0.10 GAL/SY



DATE PREPARED
12/30/2019

ROUTE 13 STATE MO

DISTRICT SW SHEET NO. 2

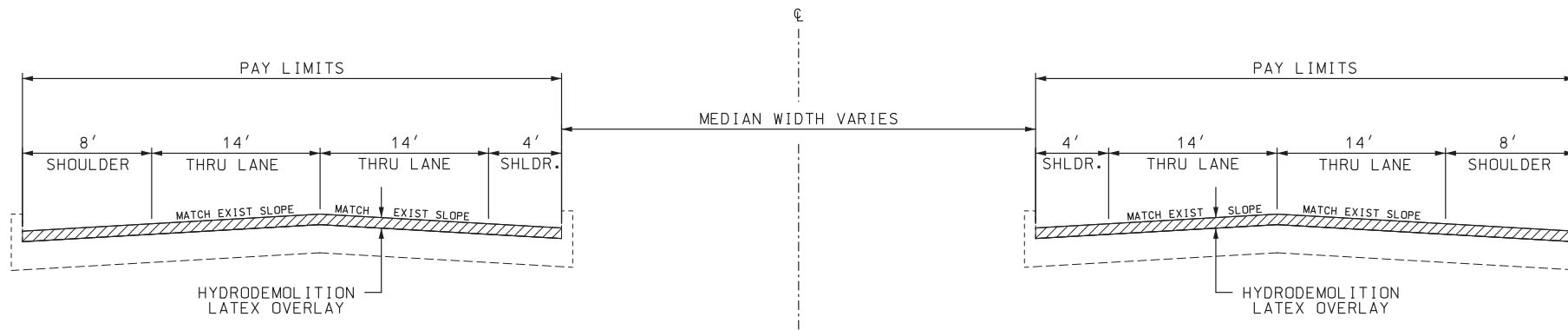
COUNTY GREENE

JOB NO. J8P3067B

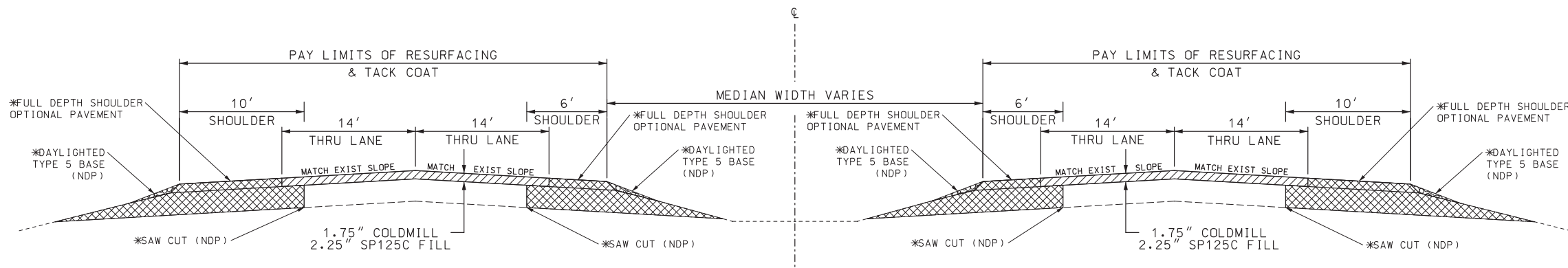
CONTRACT TO.

PROJECT NO.

BRIDGE NO. A3030



ROUTE 13
LOG MILE 228.356 TO LOG MILE 228.405



ROUTE 13
LOG MILE 228.337 TO LOG MILE 228.356
LOG MILE 228.405 TO LOG MILE 228.424

SURFACE PLACEMENT - ONE PASS PER LANE
NO S.E. CORRECTION

NOT TO SCALE

TYPICAL SECTIONS
SHEET 1 OF 2

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.

PAVING QUANTITIES										
LOG	LOG	LOCATION	AREA		VOLUME	ASPHALT (SP125C)	TACK COAT	OPTIONAL PAVEMENT	4" TYPE 5	REMARKS
			SY	IN		1.975 TONS/CY	0.10 GAL/SY		AGGREGATE BASE	
62.216	62.235	NB	444.4	2.25	27.78	54.87	44.4			COLDMILLING
62.283	62.302	NB	444.4	2.25	27.78	54.87	44.4			COLDMILLING
228.337	228.356	SB	444.4	2.25	27.78	54.87	44.4			COLDMILLING
228.405	228.424	SB	444.4	2.25	27.78	54.87	44.4			COLDMILLING
62.207	62.216	NB	222.2	2.00	12.34	24.37	22.2			TRANSITION
62.302	62.311	NB	222.2	2.00	12.34	24.37	22.2			TRANSITION
228.328	228.337	SB	222.2	2.00	12.34	24.37	22.2			TRANSITION
228.424	228.433	SB	222.2	2.00	12.34	24.37	22.2			TRANSITION
228.261	228.356	SB	888.9					888.9	888.9	SHOULDER
228.405	228.500	SB	888.9					888.9	888.9	SHOULDER
62.140	62.235	NB	888.9					888.9	888.9	SHOULDER
62.283	62.378	NB	888.9					888.9	888.9	SHOULDER
TOTAL						316.96	266.4	3555.6	3555.6	
USE						317.0	267	3556	3556	

RUMBLE STRIPS				
LOG	LOG	LOCATION	RUMBLES	
			STA	REMARKS
228.261	228.356	SB	5.00	
228.405	228.500	SB	5.00	
62.140	62.235	NB	5.00	
62.283	62.378	NB	5.00	
TOTAL			20.00	
USE			20.0	

STRIPING/PAVEMENT MARKING						
LOG	LOG	LOCATION	6" WATERBORNE	6" WATERBORNE	6" WATERBORNE	REMARKS
			INTERMITTENT WHITE STRIPE	SOLID WHITE STRIPE	SOLID YELLOW STRIPE	
			LF	LF	LF	
228.328	228.433	SB €	138.6			
228.261	228.500	SB RT		1261.9		
228.261	228.500	SB LT			1261.9	
62.207	62.312	NB €	138.6			
62.140	62.378	NB RT		1261.9		
62.140	62.378	NB LT			1261.9	
TOTALS			277.2	2523.8	2523.8	
USE			2801	2524		

LINEAR GRADING CLASS II				
LOG	LOG	LOCATION	LINEAR GRADING	
			STA	REMARKS
228.261	228.356	SB	5.00	
228.405	228.500	SB	5.00	
62.140	62.235	NB	5.00	
62.283	62.378	NB	5.00	
TOTAL			20.00	
USE			20.0	

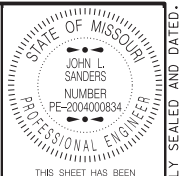
REMOVAL OF IMPROVEMENTS					
LOG	LOG	LOCATION	DESCRIPTION	QTY	REMARKS
228.261	228.356	SB RT	SAW CUT	500 LF	FOR FULL DEPTH SHOULDER
228.261	228.356	SB LT	SAW CUT	500 LF	FOR FULL DEPTH SHOULDER
228.405	228.500	SB RT	SAW CUT	500 LF	FOR FULL DEPTH SHOULDER
228.405	228.500	SB LT	SAW CUT	500 LF	FOR FULL DEPTH SHOULDER
62.140	62.235	NB RT	SAW CUT	500 LF	FOR FULL DEPTH SHOULDER
62.140	62.235	NB LT	SAW CUT	500 LF	FOR FULL DEPTH SHOULDER
62.283	62.378	NB RT	SAW CUT	500 LF	FOR FULL DEPTH SHOULDER
62.283	62.378	NB LT	SAW CUT	500 LF	FOR FULL DEPTH SHOULDER
TOTAL				1 LUMP SUM	

CONTRACTOR FURNISHED SURVEYING AND STAKING
1 LUMP SUM

MOBILIZATION
1 LUMP SUM

MISCELLANEOUS COLDMILLING						
LOG	LOG	LOCATION	WIDTH		AREA	REMARKS
			LF	LF		
62.207	62.235	NB	28	150	466.7	THRU LANES
62.283	62.312	NB	28	150	466.7	THRU LANES
228.328	228.356	SB	28	150	466.7	THRU LANES
228.405	228.433	SB	28	150	466.7	THRU LANES
62.207	62.235	NB	12	150	200.0	DEPTH WILL DEPEND ON SHOULDER PAVEMENT SELECTED
62.283	62.312	NB	12	150	200.0	DEPTH WILL DEPEND ON SHOULDER PAVEMENT SELECTED
228.328	228.356	SB	12	150	200.0	DEPTH WILL DEPEND ON SHOULDER PAVEMENT SELECTED
228.405	228.433	SB	12	150	200.0	DEPTH WILL DEPEND ON SHOULDER PAVEMENT SELECTED
TOTAL					2666.8	
USE					2667	

SUMMARY OF QUANTITIES
SHEET 1 OF 2



DATE PREPARED
12/30/2019

ROUTE 13 STATE MO

DISTRICT SW SHEET NO. 3

COUNTY GREENE

JOB NO. J8P3067B

CONTRACT TO.

PROJECT NO.

BRIDGE NO. A3030

DESCRIPTION	DATE



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

Table with columns: SIGN, SIZE, AREA, QTY, TOTAL AREA, QTY RELOC, TOTAL RELOC, SIGN NUM., DESCRIPTION

Table with columns: SIGN, SIZE, AREA, QTY, TOTAL AREA, QTY RELOC, TOTAL RELOC, SIGN NUM., DESCRIPTION

Table with columns: ITEM NUMBER, TOTAL QTY, DESCRIPTION

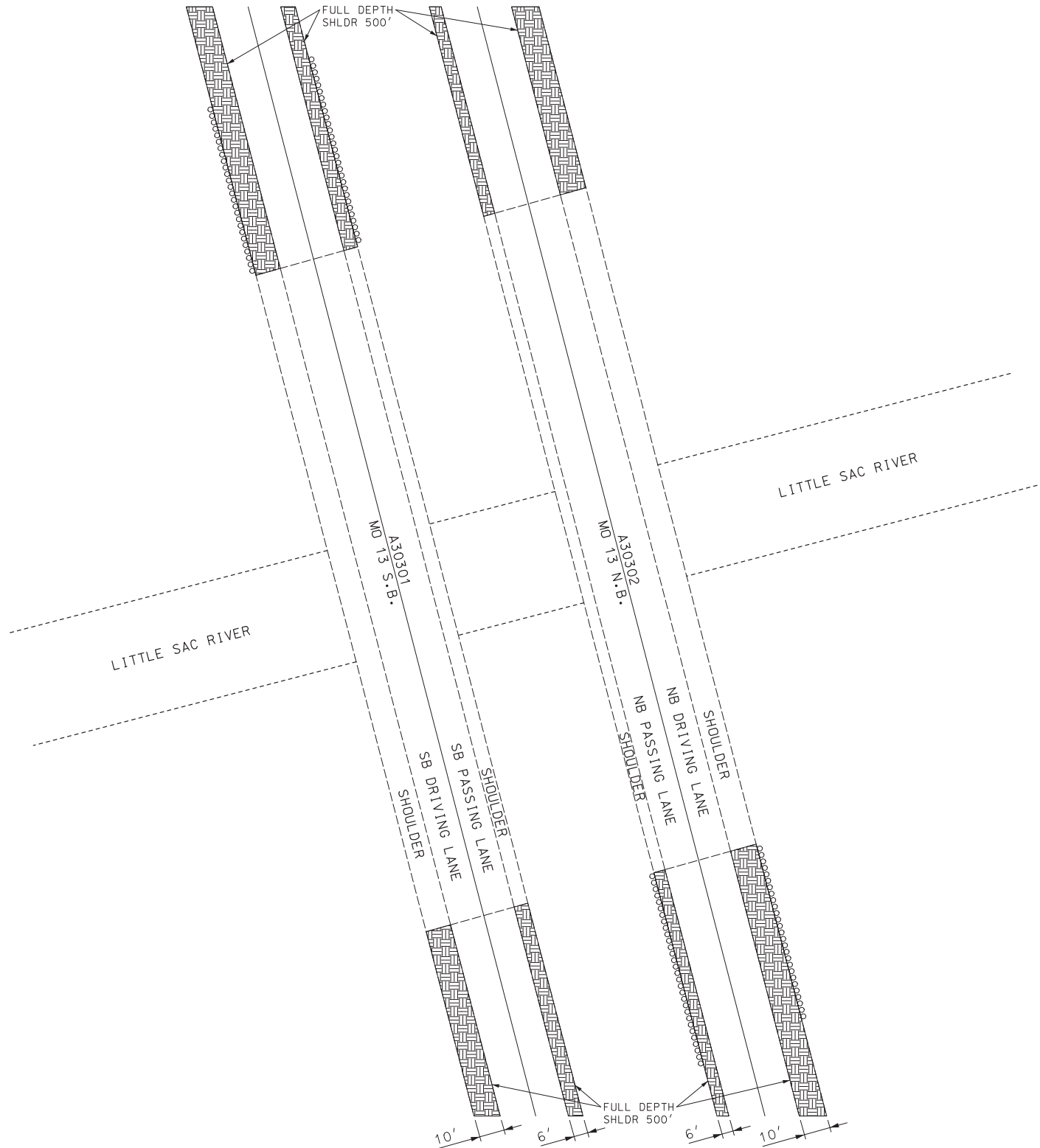
Professional Engineer seal for John L. Sanders, Missouri. Includes project details: DATE PREPARED 12/30/2019, ROUTE 13, STATE MO, DISTRICT SW, COUNTY GREENE, JOB NO. J8P3067B, CONTRACT ID.

SUMMARY OF QUANTITIES SHEET 2 OF 2

D-2BS

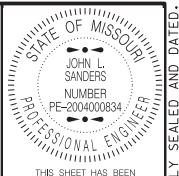
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

PRE-STAGE 1: FULL DEPTH SHOULDER



NOT TO SCALE

SPECIAL SHEET
1 OF 3



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/30/2019

ROUTE 13 STATE MO

DISTRICT SW SHEET NO. 4

COUNTY GREENE

JOB NO. J8P3067B

CONTRACT TO.

PROJECT NO.

BRIDGE NO. A3030

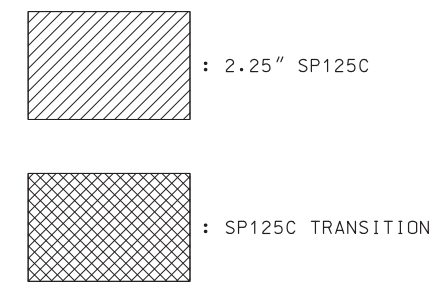
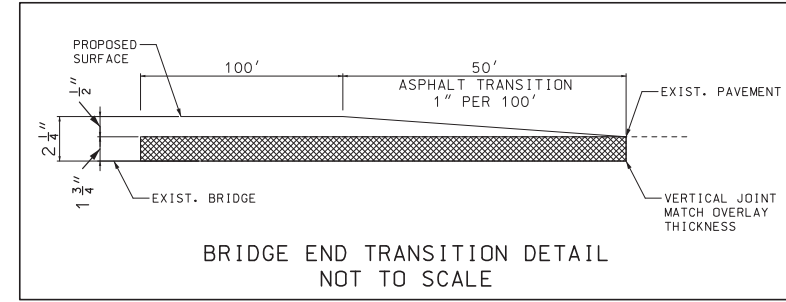
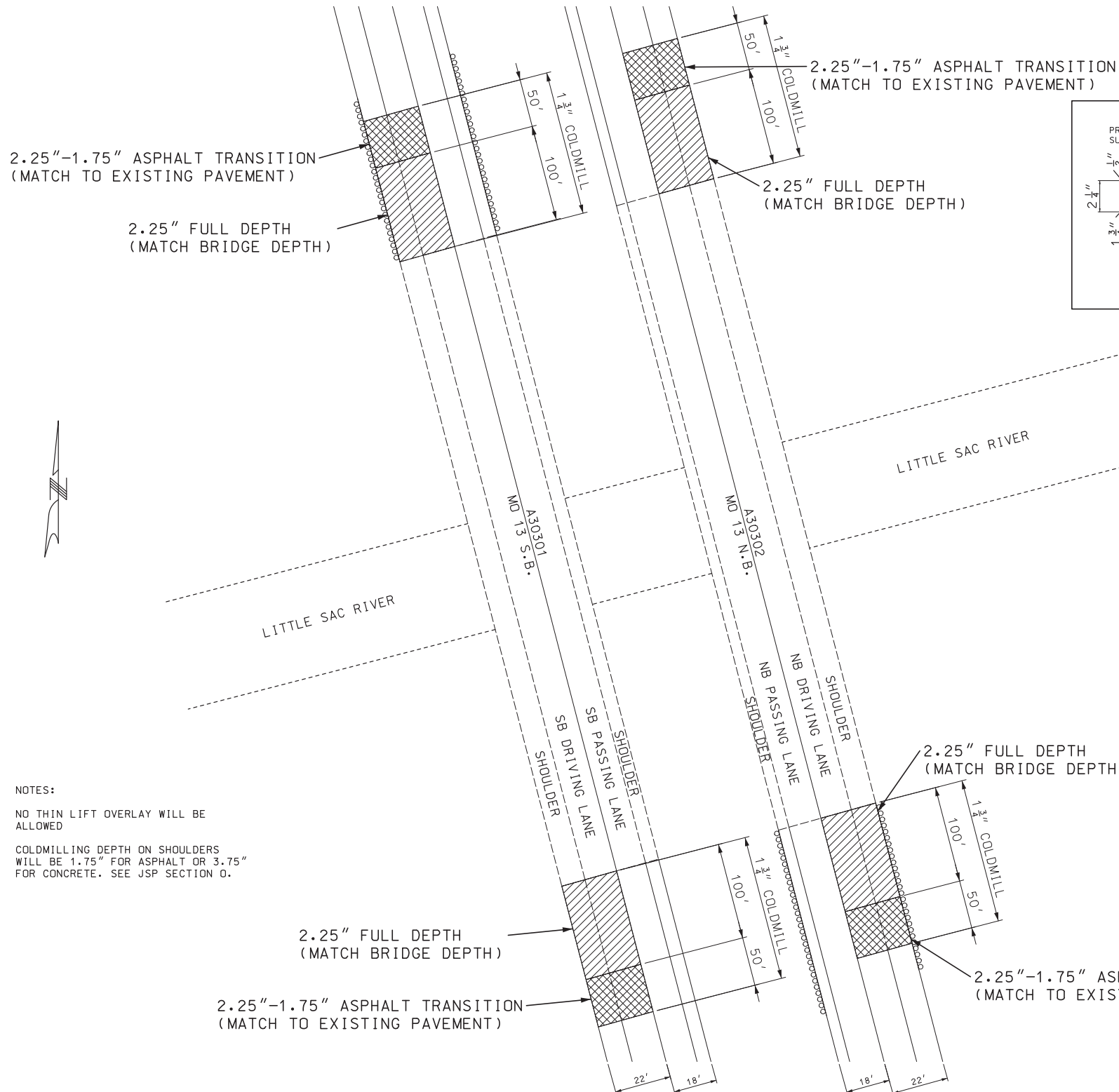
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

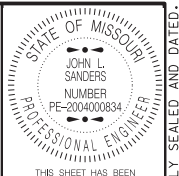
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STAGE 1: OUTSIDE LANES



NOTES:
 NO THIN LIFT OVERLAY WILL BE ALLOWED
 COLDMILLING DEPTH ON SHOULDERS WILL BE 1.75" FOR ASPHALT OR 3.75" FOR CONCRETE. SEE JSP SECTION O.

NOT TO SCALE
 SPECIAL SHEET
 2 OF 3



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/30/2019

ROUTE: 13 STATE: MO

DISTRICT: SW SHEET NO.: 5

COUNTY: GREENE

JOB NO.: J8P3067B

CONTRACT TO:

PROJECT NO.:

BRIDGE NO.: A3030

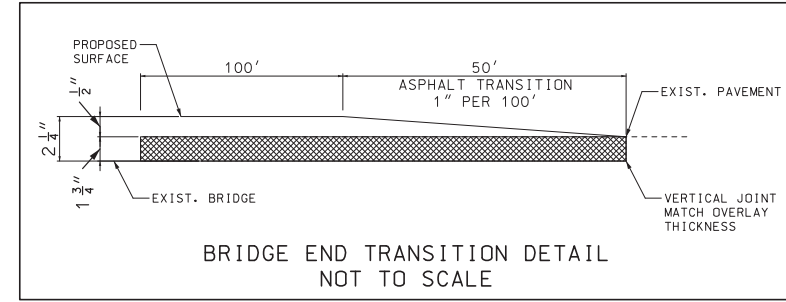
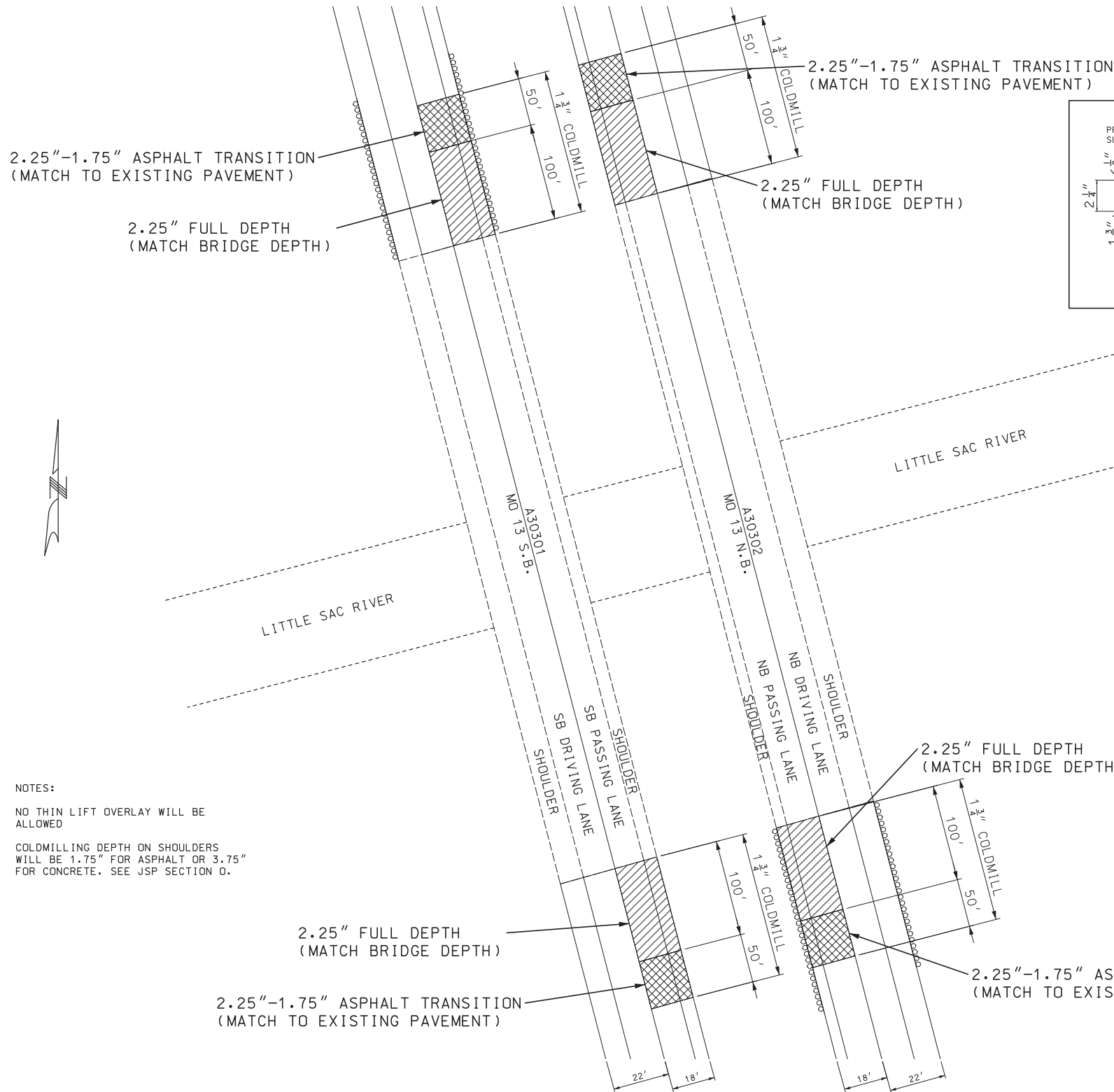
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

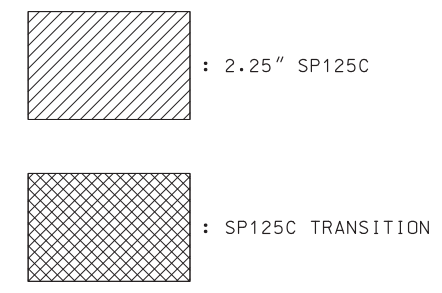
105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

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

STAGE 2: INSIDE LANES

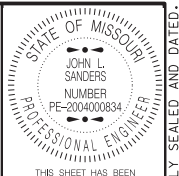


BRIDGE END TRANSITION DETAIL
NOT TO SCALE



NOTES:
NO THIN LIFT OVERLAY WILL BE ALLOWED
COLDMILLING DEPTH ON SHOULDERS WILL BE 1.75" FOR ASPHALT OR 3.75" FOR CONCRETE. SEE JSP SECTION O.

NOT TO SCALE
SPECIAL SHEET
3 OF 3



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/30/2019

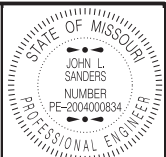
ROUTE	STATE
13	MO
DISTRICT	SHEET NO.
SW	6
COUNTY	
GREENE	
JOB NO.	
J8P3067B	
CONTRACT TO.	
PROJECT NO.	
BRIDGE NO.	
A3030	

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.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/30/2019

ROUTE 13 STATE MO
DISTRICT SW SHEET NO. 7

COUNTY GREENE
JOB NO. J8P3067B
CONTRACT ID.

PROJECT NO.

BRIDGE NO. A3030

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

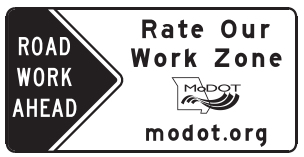
TRAFFIC CONTROL
SHEET 1 OF 3

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



CONST-5-96
96X48

(22)



CONST-7-72
72X36

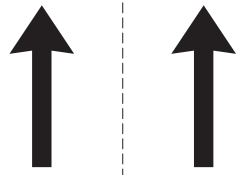
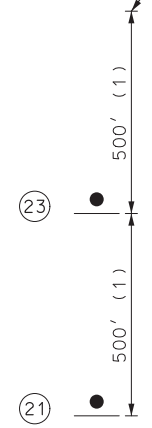
(21)



CONST-8

(23)

BEGINNING OF PROJECT LIMITS;
OR INITIAL WORK ZONE SIGN IF
LOCATED OUTSIDE PROJECT LIMITS



- NOTES:
ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED
- (1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED
- (2) SIGN 21 IS PLACED 500 FEET BEFORE THE BEGINNING OF PROJECT LIMITS OR THE ROAD WORK AHEAD SIGN OR ROAD WORK NEXT 1 MILES SIGN. IF USED, WHEN THESE SIGNS ARE LOCATED OUTSIDE THE PROJECT LIMITS.
- (3) SIGN 22 IS PLACED IN A VISIBLE AREA WITHIN THE PROJECT LIMITS PROVIDED ITS PLACEMENT DOES NOT DISRUPT A SEQUENCE OF SIGNS. IF A VISIBLE LOCATION WITHIN THE PROJECT IS NOT AVAILABLE, THE SIGN MAY BE PLACED 500 FEET BEFORE SIGN 21
- (4) SIGN 24 IS PLACED A MINIMUM OF 500 FEET BEFORE THE ROAD WORK AHEAD SIGN

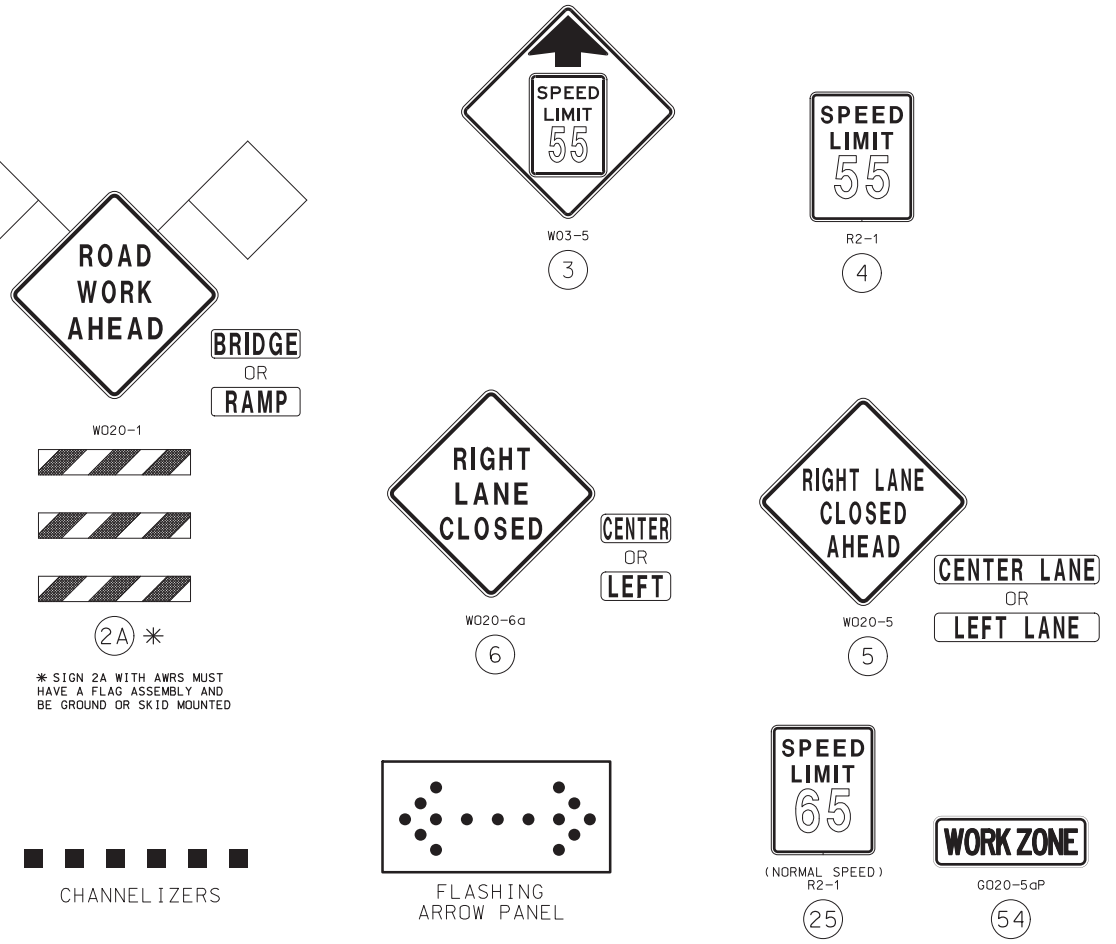
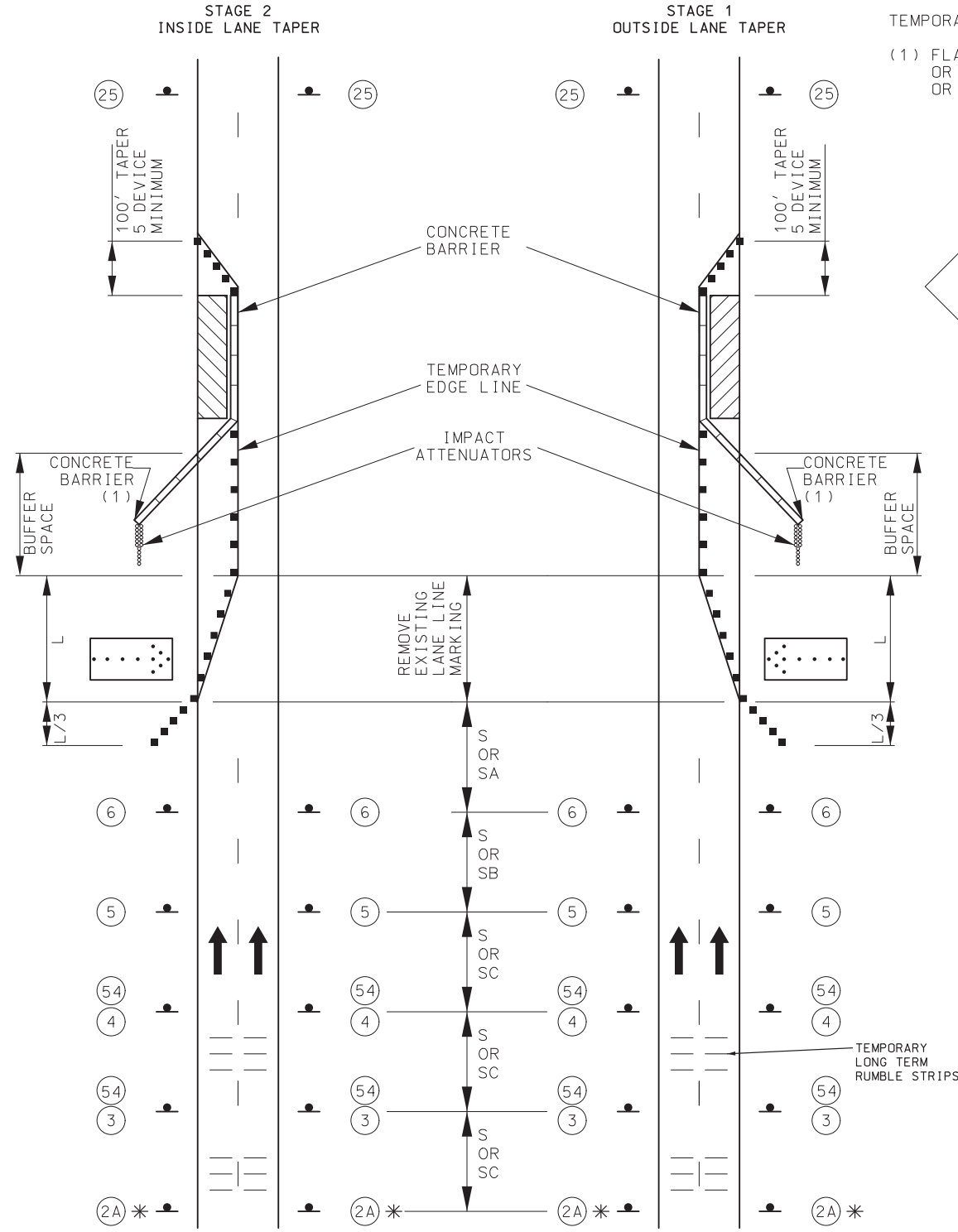
BEGINNING OF PROJECT
N.B. & S.B.

NOT TO SCALE

LANE CLOSURE TWO-LANE DIVIDED HIGHWAY WITH BARRIER (N.B. OR S.B.)

NOTES:
 SEE FIGURE 616.0.5, SHEET 2 OF 2, FOR A LANE CLOSURE WITH WIDTH RESTRICTION.
 REMOVE AND/OR MODIFY ANY EXISTING PAVEMENT MARKING AS NEEDED.
 TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURES.

(1) FLARE BARRIER TO EXTEND BEYOND CLEAR ZONE
 OR FLARE BARRIER TO EDGE LINE
 OR USE APPROVED END TREATMENT



SPEED	SIGN SPACING (FT)		TAPER LENGTH (FT)		OPT. BUFFER LENGTH (FT)	CHANNELIZER SPACING (FT)	
	UNDIVIDED (S)	DIVIDED (S)	SHLDR (T1)	LANE (T2)		TAPERS	BUFFER/WORK AREAS
0-35	-	200	70	245	250	35	50
40	-	500	90	320	305	40	100
45	-	500	150	540	360	45	100
50-55	-	1000	185	660	495	50	100
60-70	SA-1000, SB-1500, AND SC-2640		235	840	730	60	100

ROADWAY TYPE	SIGN HEIGHT	MAX. WORK ZONE LENGTH (L)
URBAN	1' PORTABLE 7' POST	1 MILE
RURAL DIVIDED	1' PORTABLE 7' POST	2 MILES

NOT TO SCALE
 TRAFFIC CONTROL SHEET 2 OF 3

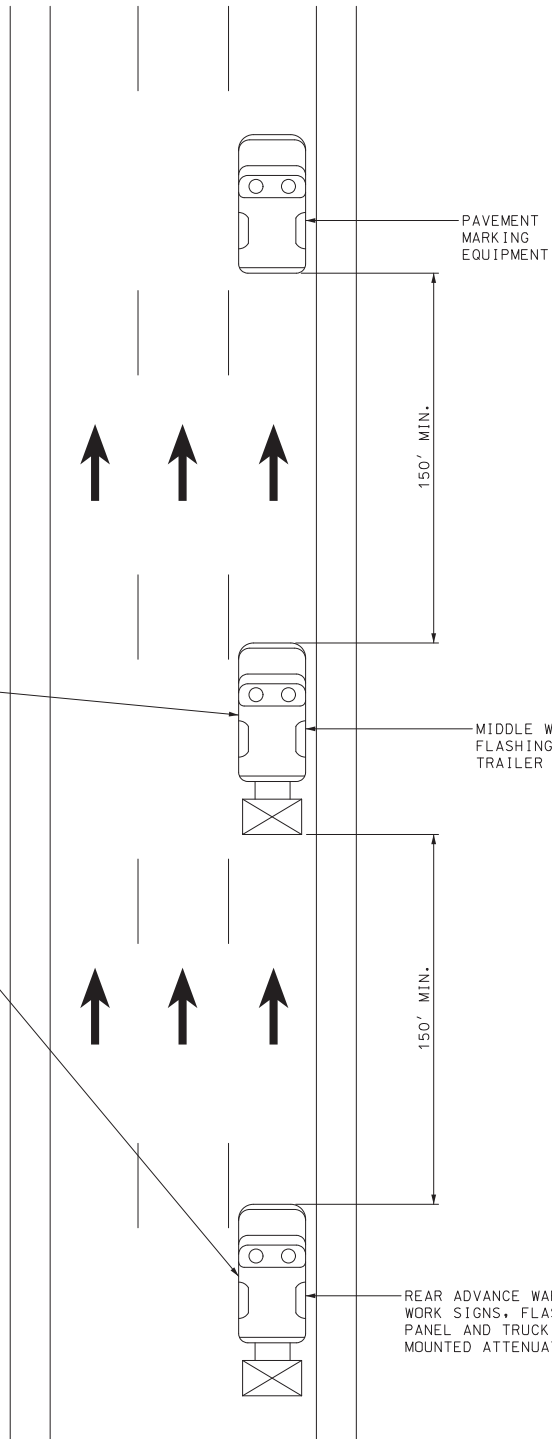
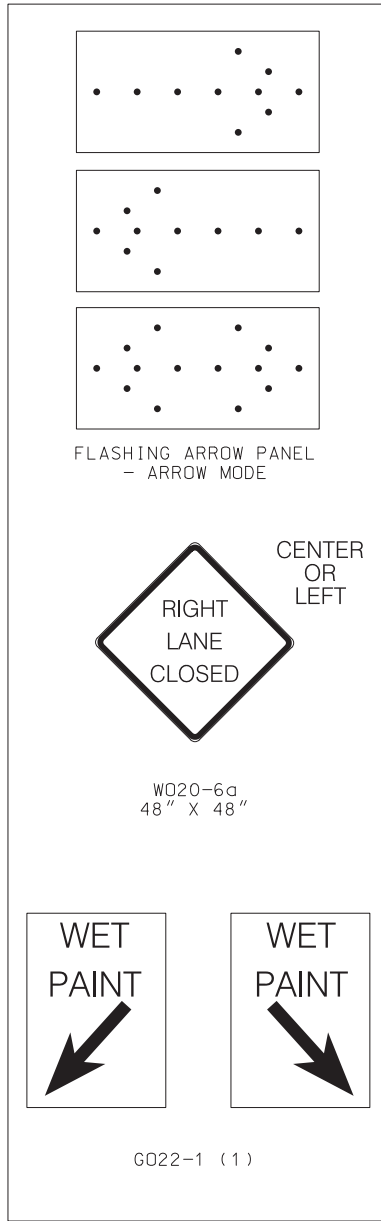
STATE OF MISSOURI
 JOHN L. SANDERS
 NUMBER PE-2004000834
 PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/30/2019	
ROUTE 13	STATE MO
DISTRICT SW	SHEET NO. 8
COUNTY GREENE	
JOB NO. J8P3067B	
CONTRACT TO.	
PROJECT NO.	
BRIDGE NO. A3030	
DESCRIPTION	DATE
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)

MISSOURI DOT
 MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



NOTES:
UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS 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 STROBE LIGHTS.

FLASHING ARROW PANELS AND SIGNS SHALL BE INCIDENTAL TO TRUCK MOUNTED ATTENUATORS, WHEREVER USED. NO ADDITIONAL PAYMENT SHALL BE MADE.

(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) REAR ADVANCE WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL, OR VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE, OR SPACING SHOWN.

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

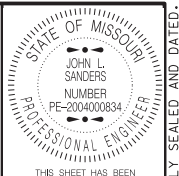
VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBTSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

A FLASHING ARROW BOARD SHALL BE USED WHEN A FREEWAY LANE IS CLOSED. WHEN MORE THAN ONE LANE CLOSED, A SEPARATE FLASHING ARROW PANEL BOARD SHALL BE USED FOR EACH CLOSED LANE.

CENTERLINE AND/OR LANE LINE STRIPING ON MULTI-LANE UNDIVIDED HIGHWAYS

NOT TO SCALE

TRAFFIC CONTROL
SHEET 3 OF 3



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DATE PREPARED
12/30/2019

ROUTE 13 STATE MO

DISTRICT SW SHEET NO. 9

COUNTY GREENE

JOB NO. J8P3067B

CONTRACT ID.

PROJECT NO.

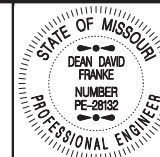
BRIDGE NO. A3030

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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DATE PREPARED
1/7/2020

ROUTE 13 STATE MO

DISTRICT BR SHEET NO. 2

COUNTY GREENE

JOB NO. J8P3067B

CONTRACT ID.

PROJECT NO.

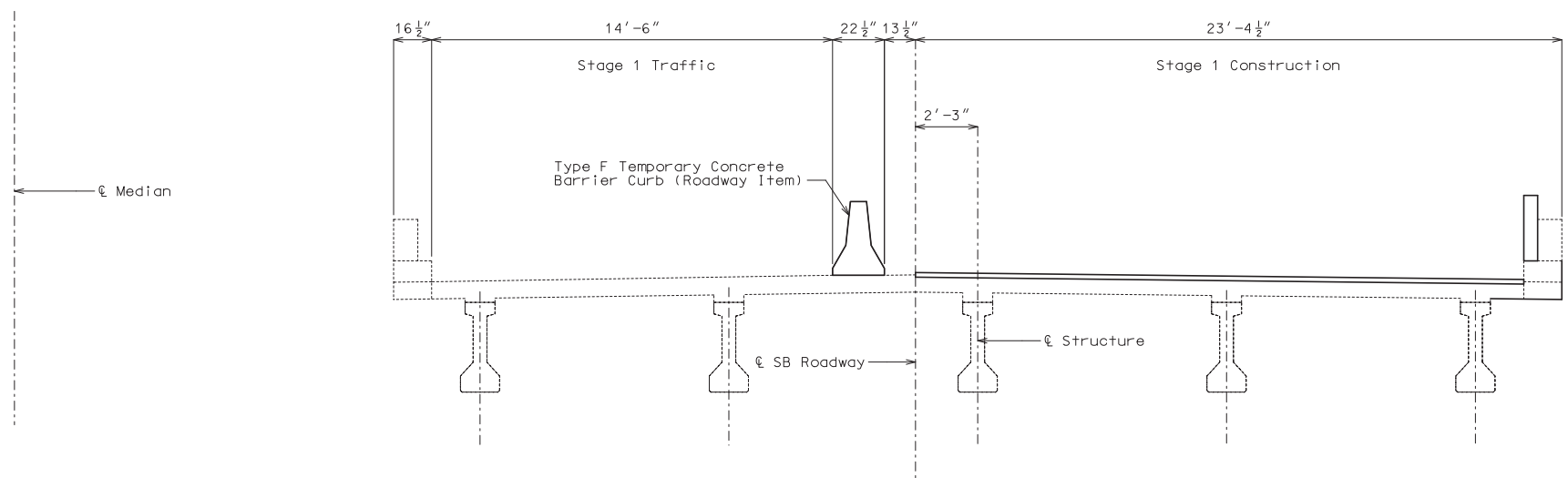
BRIDGE NO. A30303

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

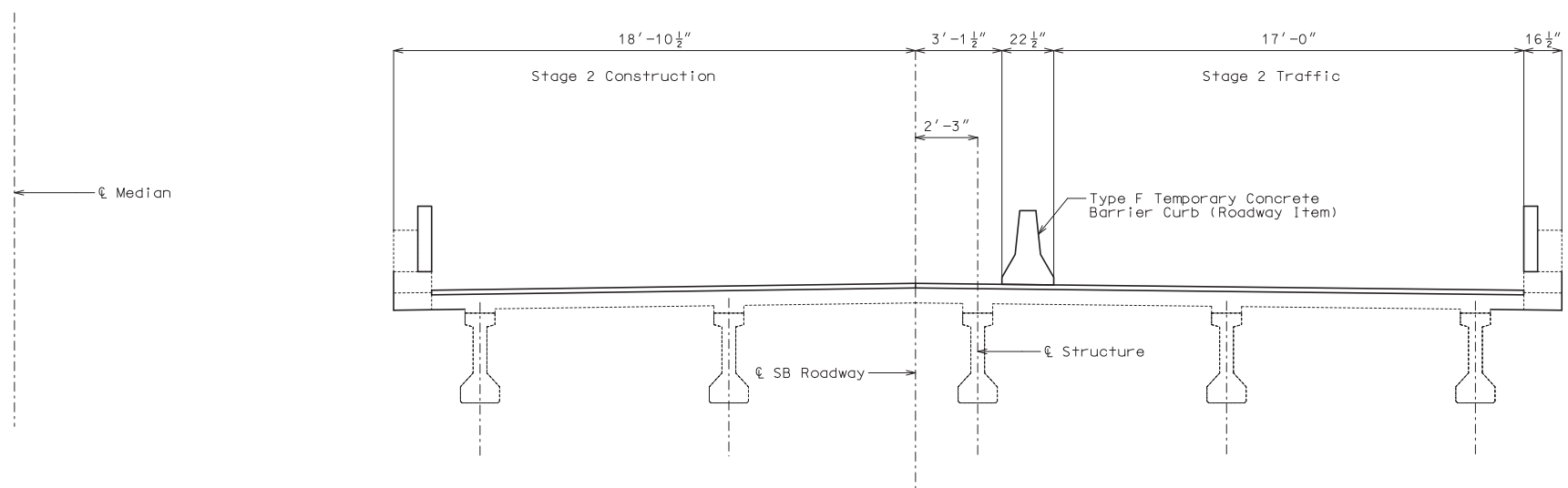
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JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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STAGE 1

Temporary barrier shall be attached to bridge by tie down straps during stage 1 construction.



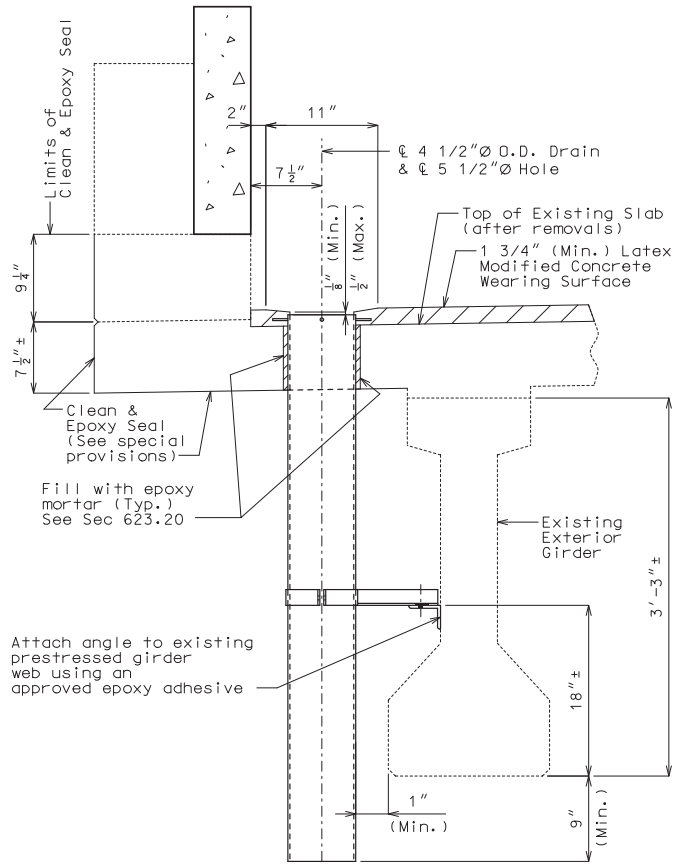
STAGE 2

Temporary barrier shall not be attached to bridge during stage 2 construction.

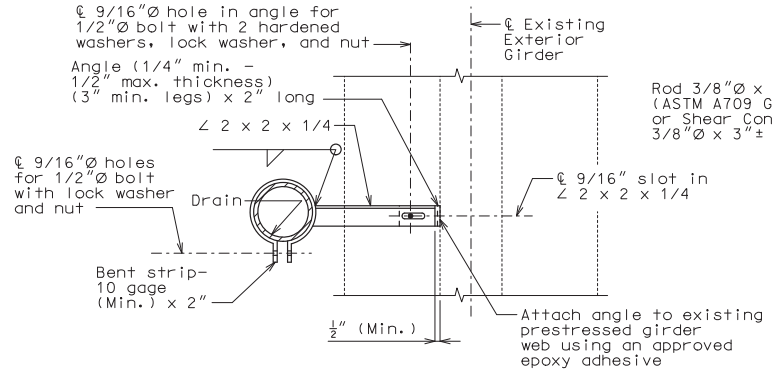
Detailed Aug. 2019
Checked Aug. 2019

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

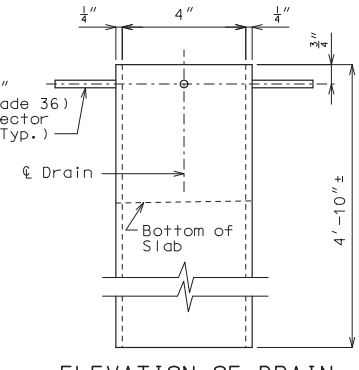
Sheet No. 2 of 7



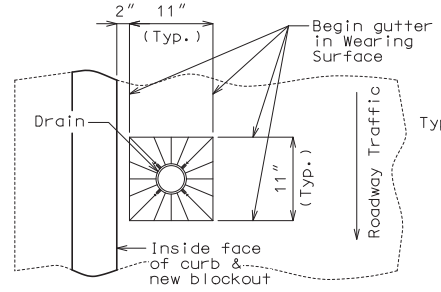
PART SECTION NEAR DRAIN



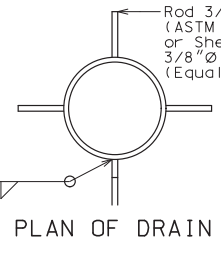
PART SECTION SHOWING BRACKET ASSEMBLY



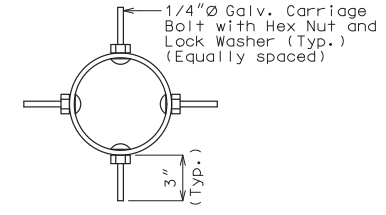
ELEVATION OF DRAIN



PART PLAN OF SLAB AT DRAIN

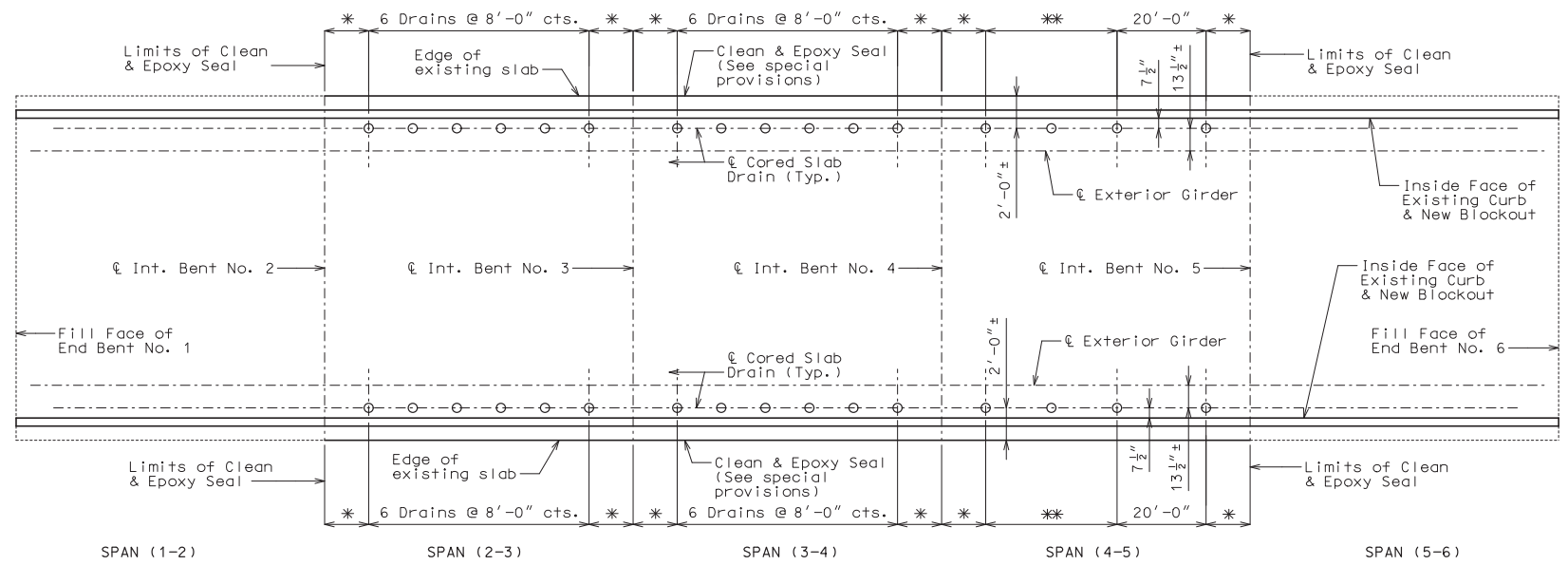


PLAN OF DRAIN



PLAN OF OPTIONAL FRP DRAIN

* 8'-0" ±
** 3 Drains @ 10'-0" cts.



PLAN SHOWING CORED SLAB DRAIN LOCATIONS

CORED SLAB DRAINS

General Notes:

Contractor shall have the option to construct either steel or Fiberglass Reinforced Polymer (FRP) slab drains. All drains shall be of same type.
Slab drain bracket assembly shall be ASTM A709 Grade 36 steel.
The bracket assembly shall be galvanized in accordance with ASTM A123.
All bolts, hardened washers, lock washers and nuts shall be galvanized in accordance with ASTM A153.

Shop drawings will not be required for the slab drains and the bracket assembly.

Cost of cored slab drains, complete in place, will be considered completely covered by the contract unit price for Cored Slab Drain per each.

Holes for slab drains shall be cored. Percussion drilling will not be permitted.

Slab drain locations may be shifted the minimum extent necessary to avoid slab reinforcement.

Cored slab drains shall be placed vertically.

For details of plugging existing curb outlets, see Sheet No. 14.

Notes for Steel Drain:

Slab drains may be fabricated from 1/4" structural steel pipe ASTM A500 or A501.

The drains shall be galvanized in accordance with ASTM A123.

Drains shall be inserted through slab such that damage to galvanized coating is minimized.

Notes for Optional FRP Drain:

Drains shall be machine filament-wound thermosetting resin pipe meeting the requirements of ASTM D2996 with the following exceptions:

Minimum reinforced wall thickness shall be 1/4 inch.

The resin used shall be ultraviolet (UV) resistant and/or have UV inhibitors mixed throughout. Drains may have an exterior coating for additional UV resistance. Care shall be taken to avoid damage to exterior coating during installation.

The color of the slab drain shall be Gray (Federal Standard #26373). The color shall be uniform throughout the resin and any coating used.

The combination of materials used in the manufacture of the drains shall be tested for UV resistance in accordance with ASTM D4329 Cycle A. The representative material shall withstand at least 500 hours of testing with only minor discoloration and without any physical deterioration. The contractor shall furnish the results of the required ultraviolet testing prior to acceptance of the slab drains.

At the contractor's option, drains may be field cut. The method of cutting FRP slab drain shall be as recommended by the manufacturer to ensure a smooth, chip free cut.

No additional payment will be made for this substitution.



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DATE PREPARED: 1/7/2020

ROUTE	STATE
13	MO
DISTRICT	SHEET NO.
BR	3

COUNTY: GREENE
JOB NO.: J8P3067B
CONTRACT TO:

PROJECT NO.:
BRIDGE NO.: A30303

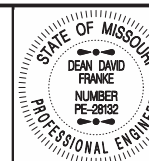
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



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DATE PREPARED
1/7/2020

ROUTE 13 STATE MO

DISTRICT BR SHEET NO. 4

COUNTY GREENE

JOB NO. J8P3067B

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A30303

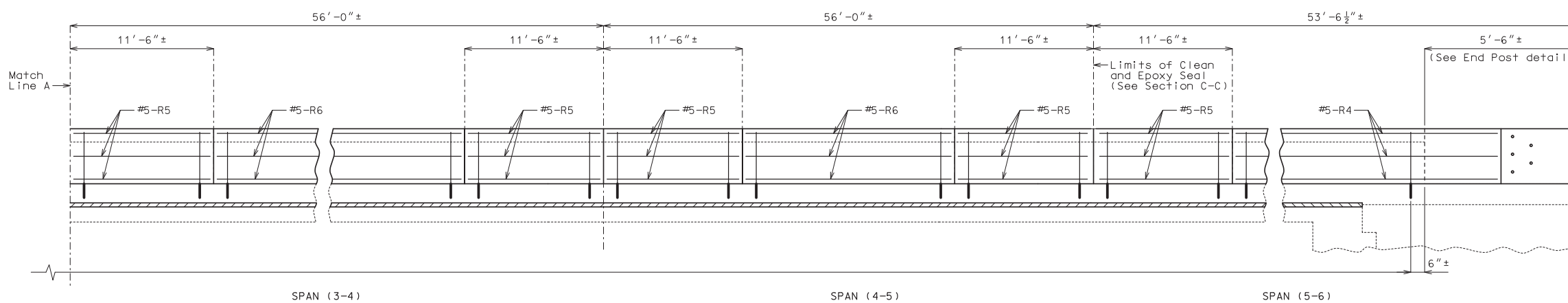
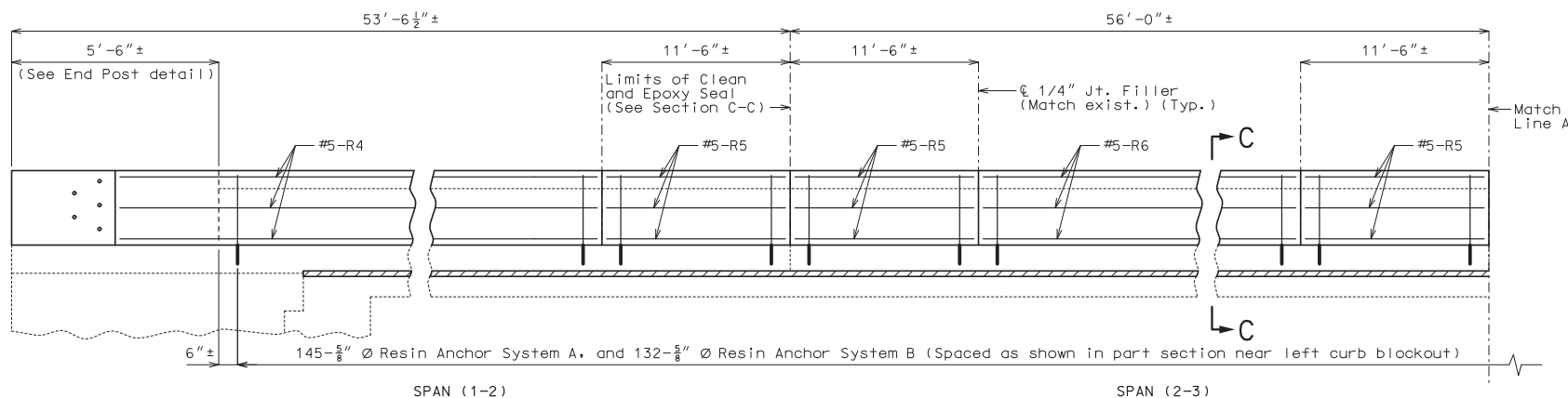
DESCRIPTION	DATE

DESCRIPTION	DATE

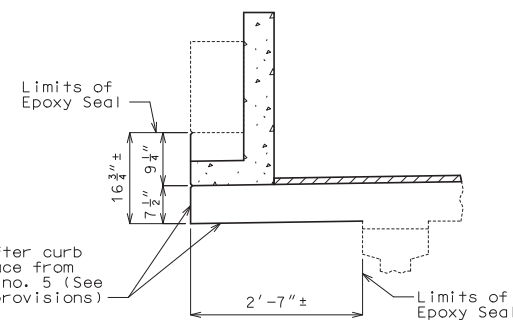
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SECTION NEAR LEFT CURB BLOCKOUT
(Right curb blockout similar)
Bridge rail and plugging of curb outlets not shown for clarity.



Clean and epoxy seal after curb outlet plugs are in place from C bent no. 2 to C bent no. 5 (See Sheet No. 3 & special provisions)

SECTION C-C

Notes:
Work this sheet with Sheets No. 5 & 6.
Longitudinal dimensions shown are taken parallel to grade at top of parapet.
For details of End Post, see Sheet No. 6.

CURB BLOCKOUT

Detailed July 2019
Checked Aug. 2019

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

Sheet No. 4 of 7



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
1/7/2020

ROUTE 13 STATE MO
DISTRICT BR SHEET NO. 5

COUNTY GREENE
JOB NO. J8P3067B

CONTRACT TO.

PROJECT NO.

BRIDGE NO. A30303

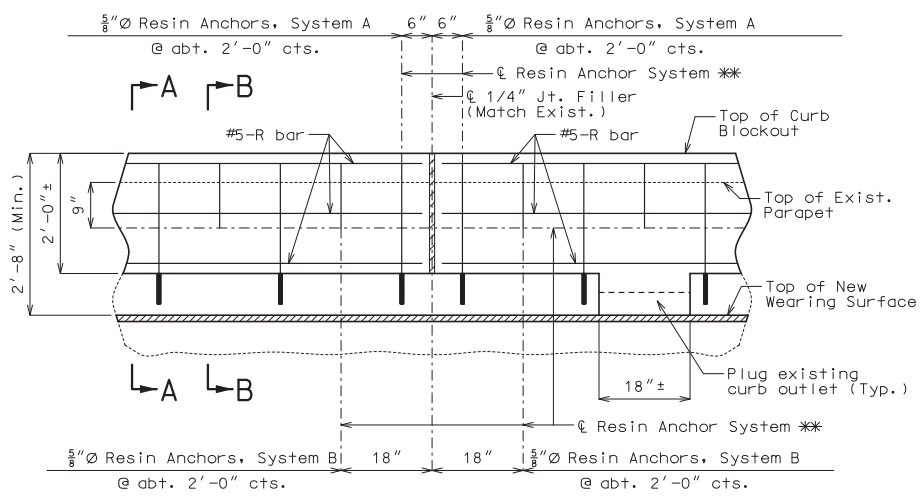
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

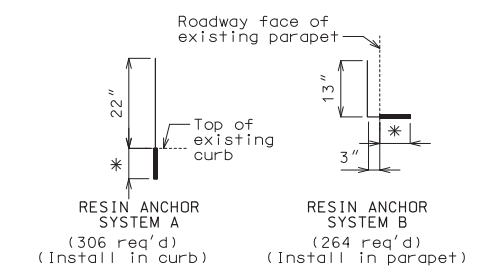
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



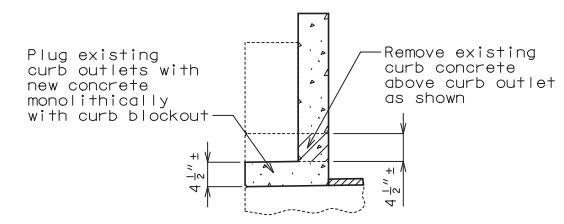
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



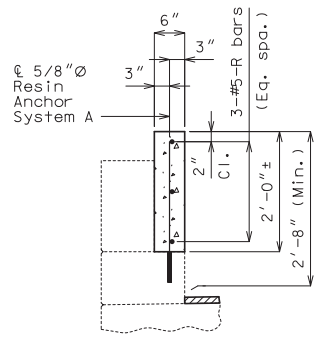
PART SECTION NEAR LEFT CURB BLOCKOUT



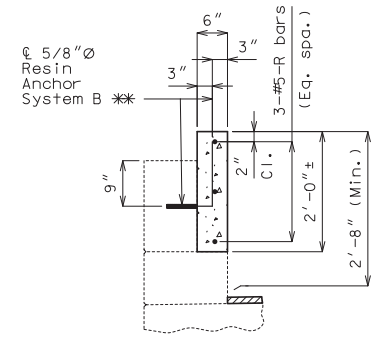
RESIN ANCHOR SYSTEM A (306 req'd) (Install in curb)
RESIN ANCHOR SYSTEM B (264 req'd) (Install in parapet)
* Use manufacturer's recommended embedment length. (5" minimum embedment)



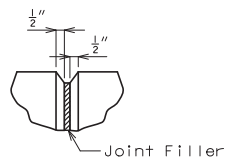
TYPICAL SECTION AT CURB OUTLET
Curb blockout reinforcement not shown for clarity.



SECTION A-A



SECTION B-B



FILLED JOINT DETAIL

CURB BLOCKOUT

Notes:

Work this sheet with Sheets No. 4 & 6.

Concrete in curb blockout shall be Class B-1 with $f'c = 4000$ psi.

Measurement of curb blockout is to the nearest linear foot, measured at the top outside edge of parapet from end of post to end of post.

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

Payment for concrete, reinforcing steel, resin anchor systems, and any other work incidental to the curb blockout, complete in place, will be included in the contract unit price for Curb Blockout per linear foot.

Cost of any concrete curb or parapet repair will be included in the contract unit price for Curb Blockout.

All reinforcement shall be epoxy coated.

** Shift resin anchors where necessary to clear existing anchor bolts for bridge rail, miss curb outlets (if present) and clear existing reinforcement.

Concrete traffic barrier delineators shall be placed on top of the curb blockout similarly as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Curb Blockout.

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 #5 Grade 60 reinforcing bar shall be substituted for the 5/8" diameter threaded rod.

Cost of labor and materials required to plug existing curb outlets will be considered completely covered by the contract unit price for Curb Blockout.



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DATE PREPARED
1/7/2020

ROUTE 13 STATE MO
DISTRICT BR SHEET NO. 6

COUNTY GREENE
JOB NO. J8P3067B
CONTRACT TO.

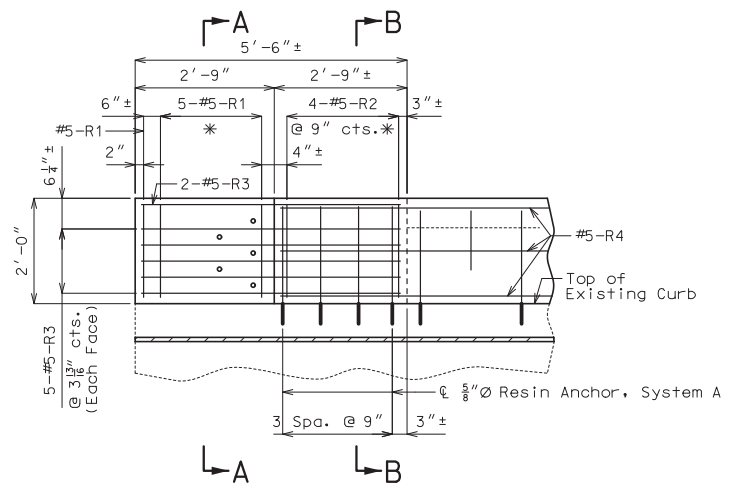
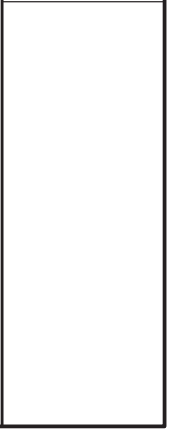
PROJECT NO.

BRIDGE NO. A30303

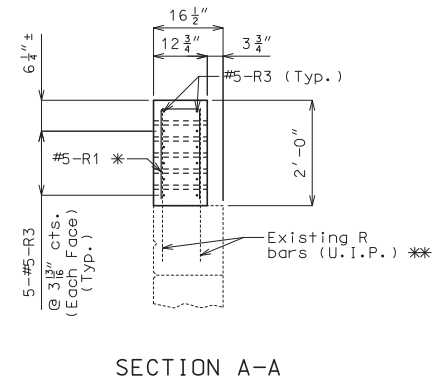
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



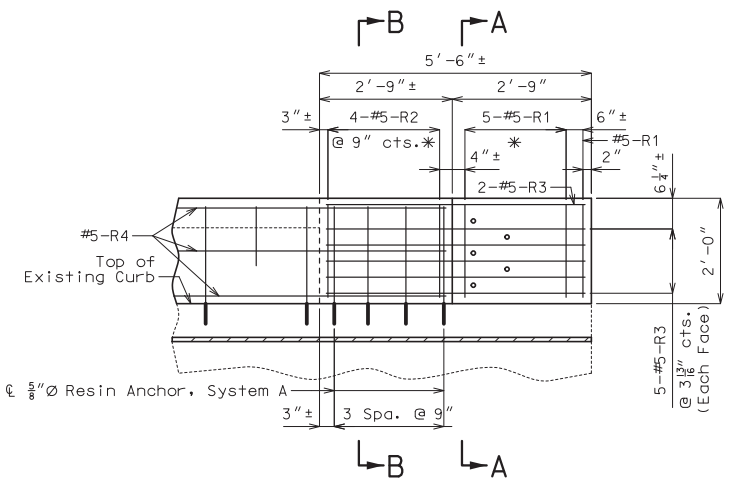
ELEVATION SHOWING LEFT END POST
Existing R bars (U.I.P.) not shown for clarity.



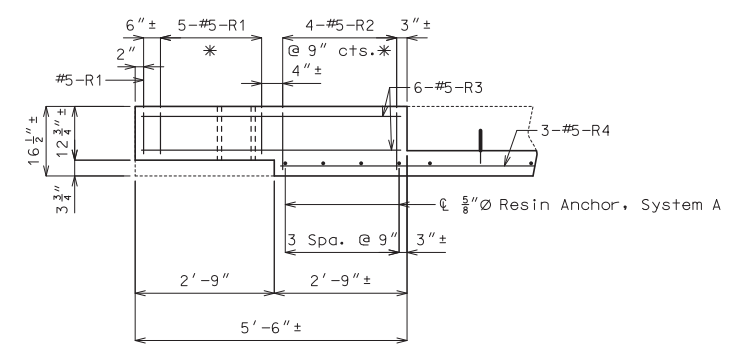
SECTION A-A

** At the discretion of the engineer, additional resin anchors may be used at roadway face of end post if existing R bars have deteriorated.

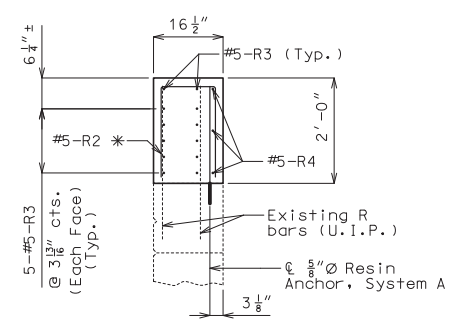
* Spaced with existing R bars. Shift new R bars as required to miss 1"Ø holes. Bend existing R bars as required to miss 1"Ø holes.



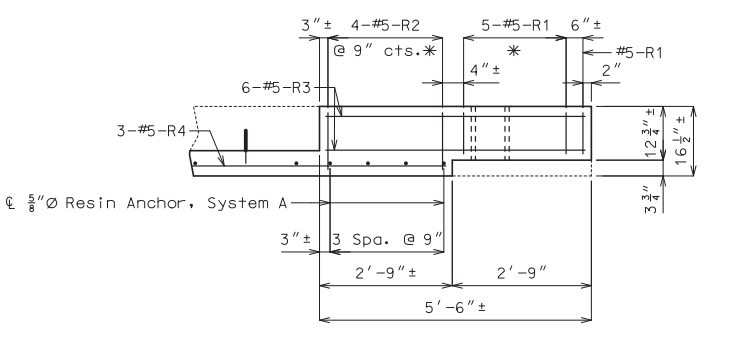
ELEVATION SHOWING RIGHT END POST
Existing R bars (U.I.P.) not shown for clarity.



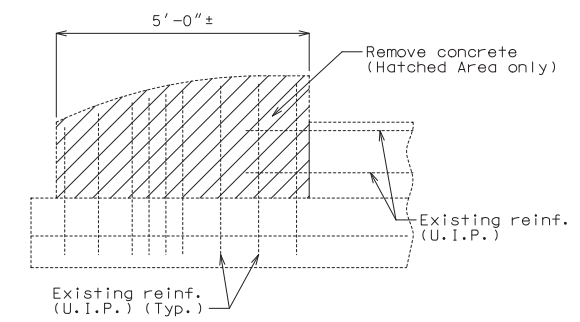
PLAN SHOWING LEFT END POST
Existing R bars (U.I.P.) not shown for clarity.



SECTION B-B



PLAN SHOWING RIGHT END POST
Existing R bars (U.I.P.) not shown for clarity.



PART ELEVATION SHOWING END POST
CONCRETE REMOVAL

Notes:

Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout.

Cut existing R bars to clear top of new end post by at least 1 1/2".

Notes:

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

Payment for concrete, reinforcing steel, resin anchor systems, and any other work incidental to the curb blockout, complete in place, will be included in the contract unit price for Curb Blockout per linear foot.

Cost of any concrete curb or parapet repair will be included in the contract unit price for Curb Blockout.

All reinforcement shall be epoxy coated.

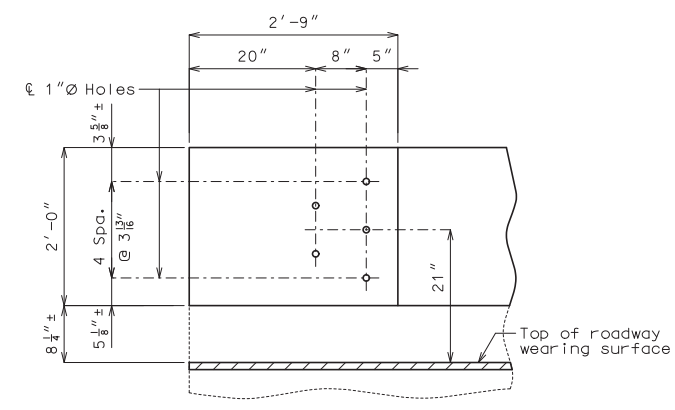
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

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 #5 Grade 60 reinforcing bar shall be substituted for the 5/8"Ø threaded rod.

For details of Resin Anchors, System A, see Sheet No. 5.

16 required Resin Anchors, System A, are included in the resin anchor quantity on Sheet No. 5.



DETAILS OF GUARD RAIL
ATTACHMENT

DETAILS OF END POST AT END BENTS NO. 1 & 6

Detailed Aug. 2019
Checked Aug. 2019

Note: This drawing is not to scale. Follow dimensions. Sheet No. 6 of 7

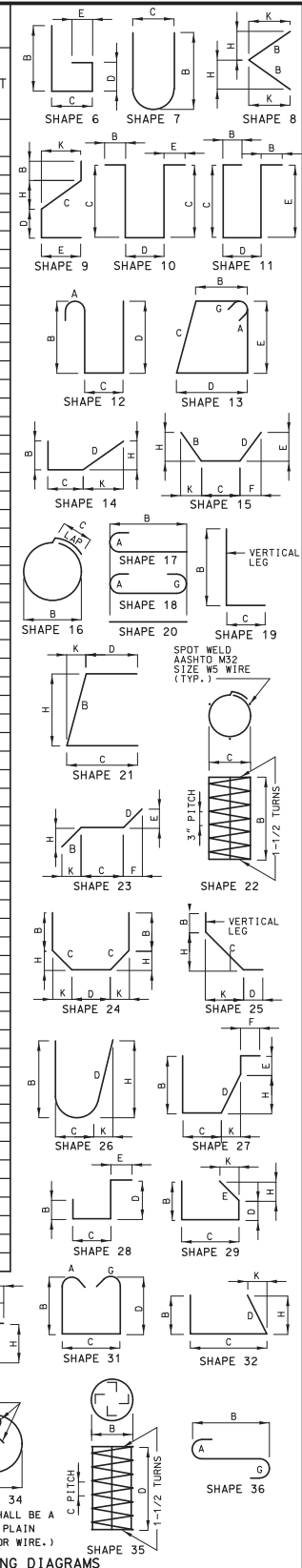
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

BILL OF REINFORCING STEEL

Table with columns for NO. REC'D., MARK NO., LOCATION, DIMENSIONS (B, C, D, E, F, H, K), NOMINAL LENGTH, ACTUAL LENGTH, and WEIGHT. Includes rows for BLOCKOUT and TOTALS.

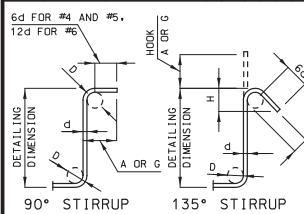
BILL OF REINFORCING STEEL

Table with columns for NO. REC'D., MARK NO., LOCATION, DIMENSIONS (B, C, D, E, F, H, K), NOMINAL LENGTH, ACTUAL LENGTH, and WEIGHT. Includes rows for BLOCKOUT and TOTALS.

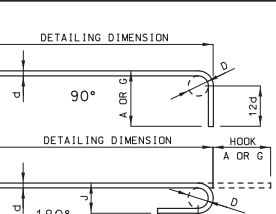


THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY. DATE PREPARED 1/7/2020. ROUTE 13 STATE MO DISTRICT BR SHEET NO. 7 COUNTY GREENE JOB NO. J8P3067B CONTRACT TO. PROJECT NO. BRIDGE NO. A30303

DESCRIPTION DATE

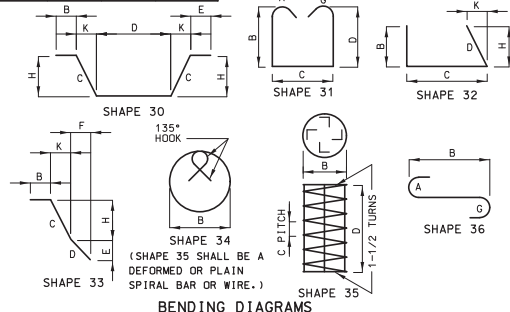


STIRRUP HOOK DIMENSIONS table for GRADES 40 - 50 - 60 KSI. Columns for BAR SIZE, HOOK A OR G, and APPROX. H.



END HOOK DIMENSIONS table for ALL GRADES. Columns for BAR SIZE, 180° HOOKS A OR G, J, and 90° HOOKS A OR G.

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.



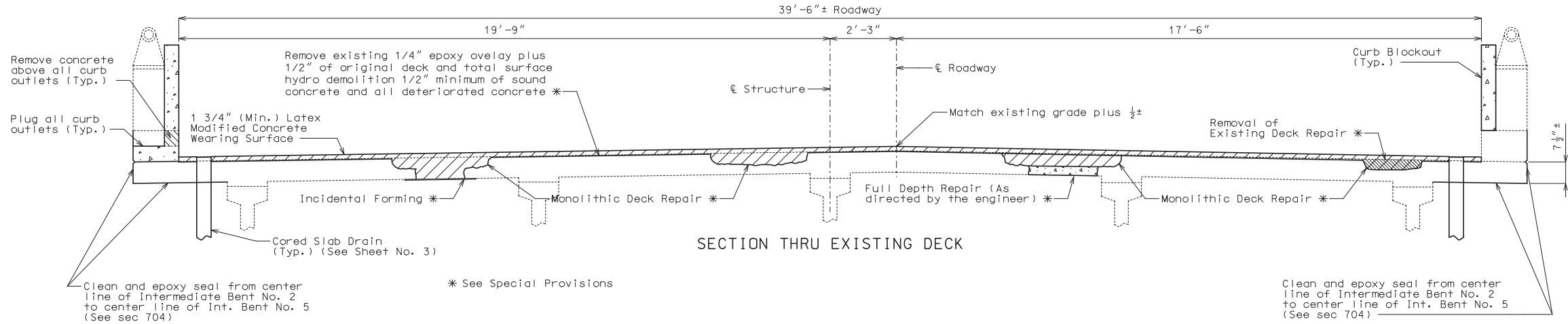
Detailed Aug. 2019 Checked Aug. 2019

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

Sheet No. 7 of 7

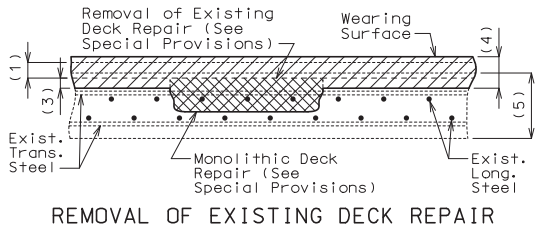
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

U.I.P. AND REHABILITATE EXISTING (44'-56'-56'-56'-44') PRESTRESSED CONCRETE I-GIRDER SPANS (SKEW: SQUARE)

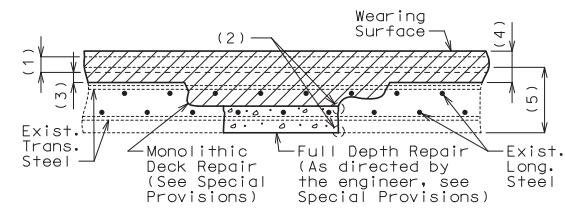


SECTION THRU EXISTING DECK

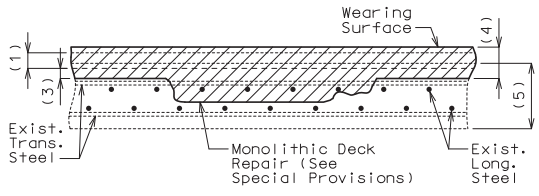
* See Special Provisions



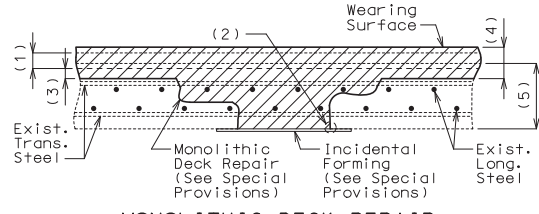
REMOVAL OF EXISTING DECK REPAIR



MONOLITHIC DECK REPAIR REQUIRING FULL DEPTH REPAIR



MONOLITHIC DECK REPAIR



MONOLITHIC DECK REPAIR REQUIRING INCIDENTAL FORMING

- (1) Remove existing wearing surface plus 1/2" of existing deck.
- (2) One inch vertical side shall be established outside the deteriorated area.
- (3) Total surface hydro demolition of existing deck 1/2" minimum of sound concrete and all deteriorated concrete.
- (4) 1 3/4" (Min.) Latex Modified Concrete Wearing Surface
- (5) Original depth of deck.

Estimated Quantities		
Item		Total
Removal of Epoxy Polymer Overlay	sq. foot	10155
Removal of Existing Deck Repair	sq. foot	400
Latex Modified Concrete Wearing Surface	sq. yard	1128
Curb Blockout	linear foot	550
Full Depth Repair	sq. foot	300
Total Surface Hydro Demolition	sq. yard	1128
Clean and Epoxy Seal	sq. foot	1337
Monolithic Deck Repair	cu. yard	29
Cored Slab Drains	each	32

Monolithic Deck Repair will be made at a fixed unit price (See Special Provision).

Removal of epoxy polymer overlay shall be in accordance with Sec 216, Seal Coat and Wearing Surface Removal.

General Notes:

Design Specification:
 2002 AASHTO LFD (17th Ed.) Standard Specifications
 Bridge Deck Rating = 6
 Design Loading:
 HS20-44 (1973 & New Construction)
 Design Unit Stresses:
 Class B-1 Concrete (Curb Blockout) $f'_c = 4,000$ psi
 Reinforcing Steel (Grade 60) $f_y = 60,000$ psi
 Joint Filler:
 All joint filler shall be in accordance with Sec. 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.
 Reinforcing Steel:
 Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.
 Miscellaneous:
 Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

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

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

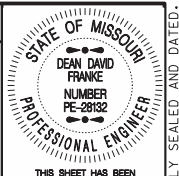
Bars bonded in old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for plain bars and 30 diameters for deformed bars, unless otherwise noted.

Traffic Handling:
 Traffic to be maintained on structure during construction. See roadway plans for traffic control and Sheet No. 2 for staged construction details.

REPAIRS TO BRIDGE: ROUTE 13 NB OVER LITTLE SAC RIVER

ROUTE 13 FROM RTE. 1-44 TO RTE. 0 ABOUT 2.7 MILES NORTH OF RTE. 1-44
 BEG. STA. 507+01.50± (Match Existing)

STD. 617.10
STD. 617.20
STD. 706.35



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DATE PREPARED: 1/7/2020

ROUTE 13	STATE MO
DISTRICT BR	SHEET NO. 1

COUNTY GREENE
 JOB NO. J8P3067B
 CONTRACT TO.

PROJECT NO.

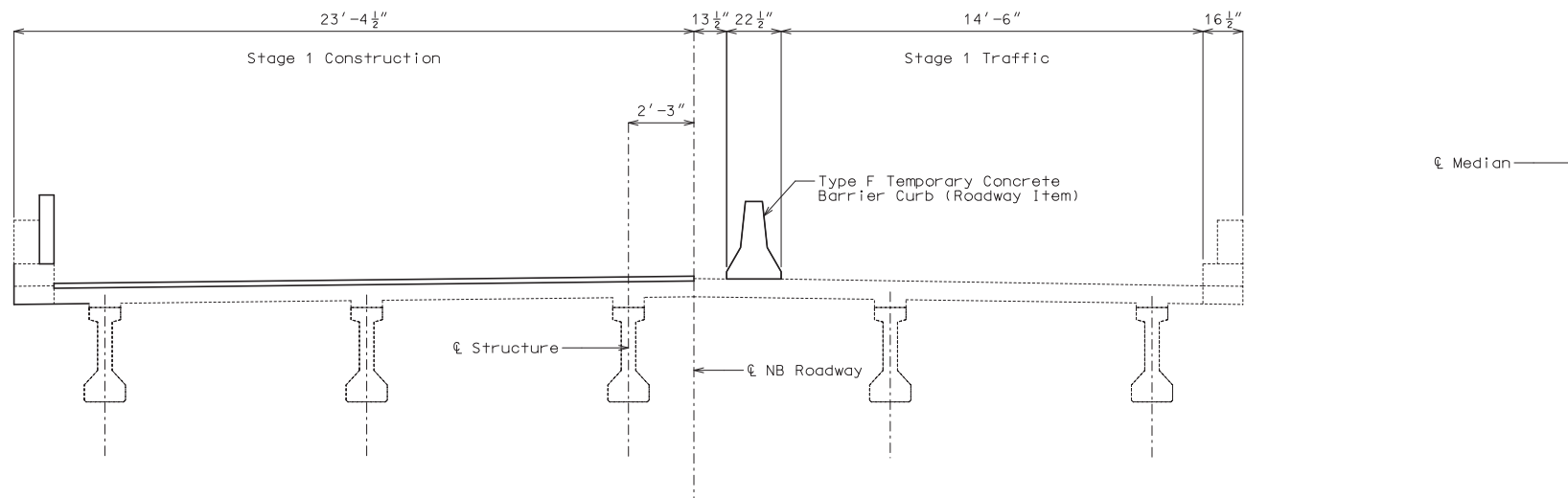
BRIDGE NO. A30304

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

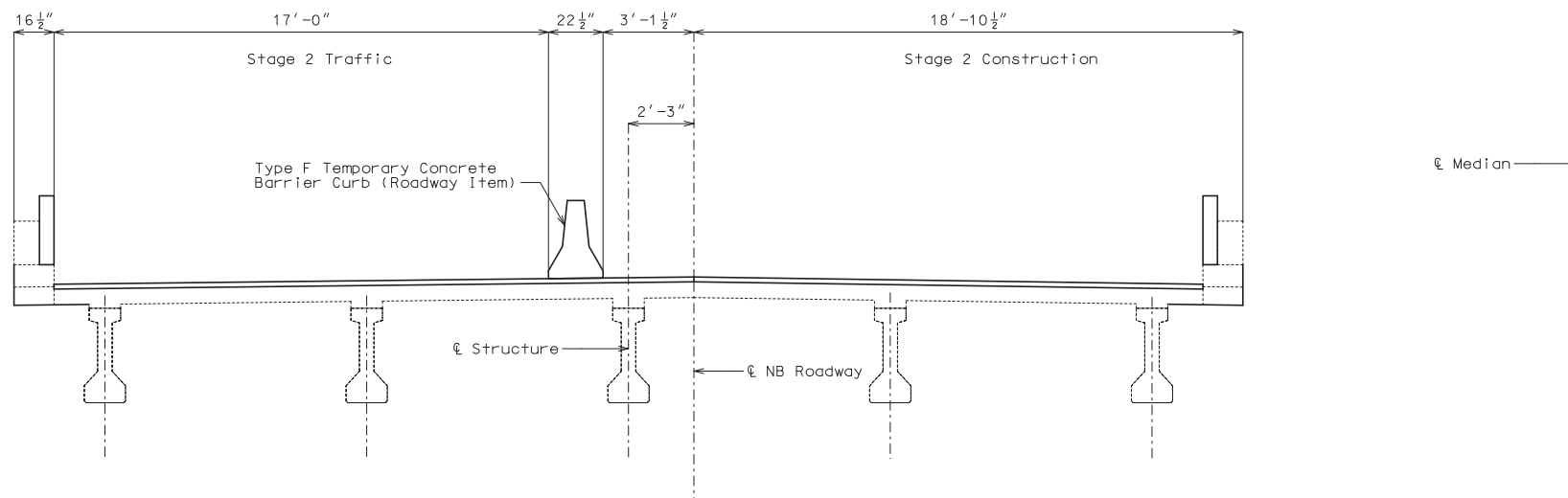
105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

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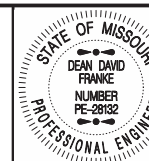
STAGE 1

Temporary barrier shall be attached to bridge by tie down straps during stage 1 construction.



STAGE 2

Temporary barrier shall not be attached to bridge during stage 2 construction.



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DATE PREPARED
1/7/2020

ROUTE 13 STATE MO

DISTRICT BR SHEET NO. 2

COUNTY GREENE

JOB NO. J8P3067B

CONTRACT ID.

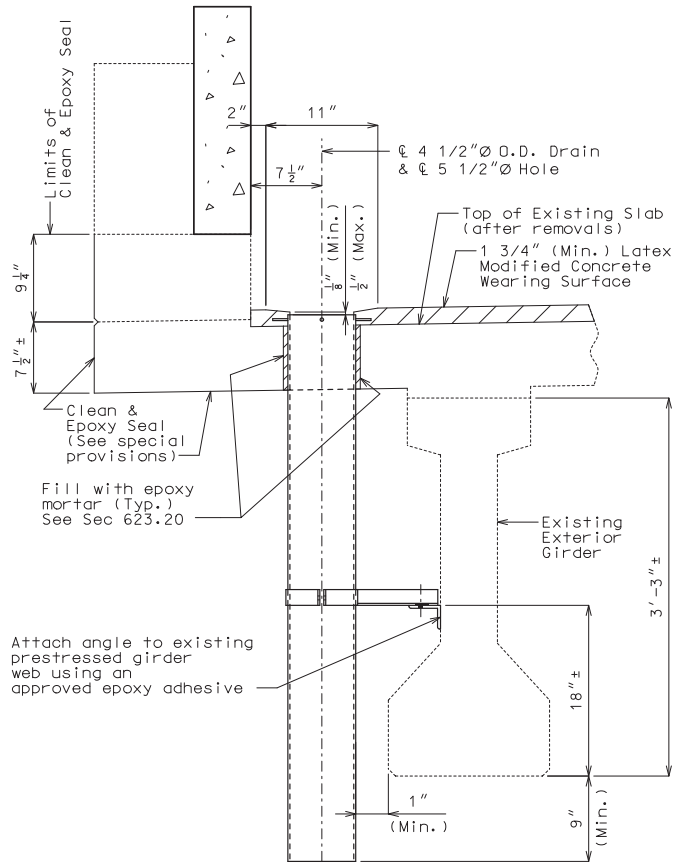
PROJECT NO.

BRIDGE NO. A30304

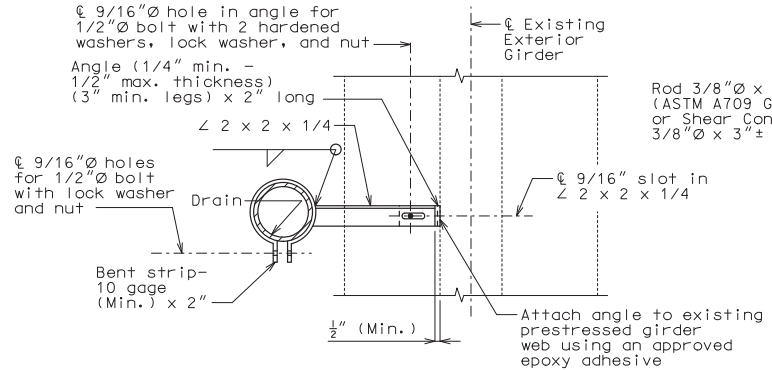
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

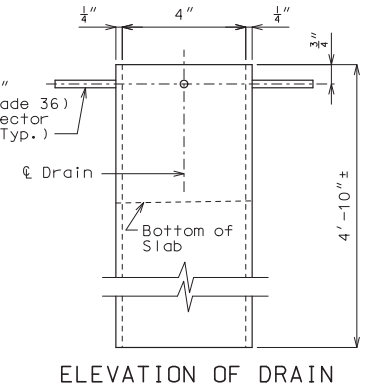
105 WEST CAPITOL
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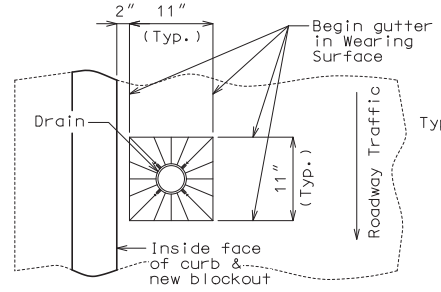
PART SECTION NEAR DRAIN



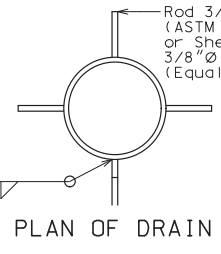
PART SECTION SHOWING BRACKET ASSEMBLY



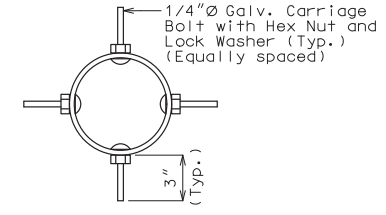
ELEVATION OF DRAIN



PART PLAN OF SLAB AT DRAIN

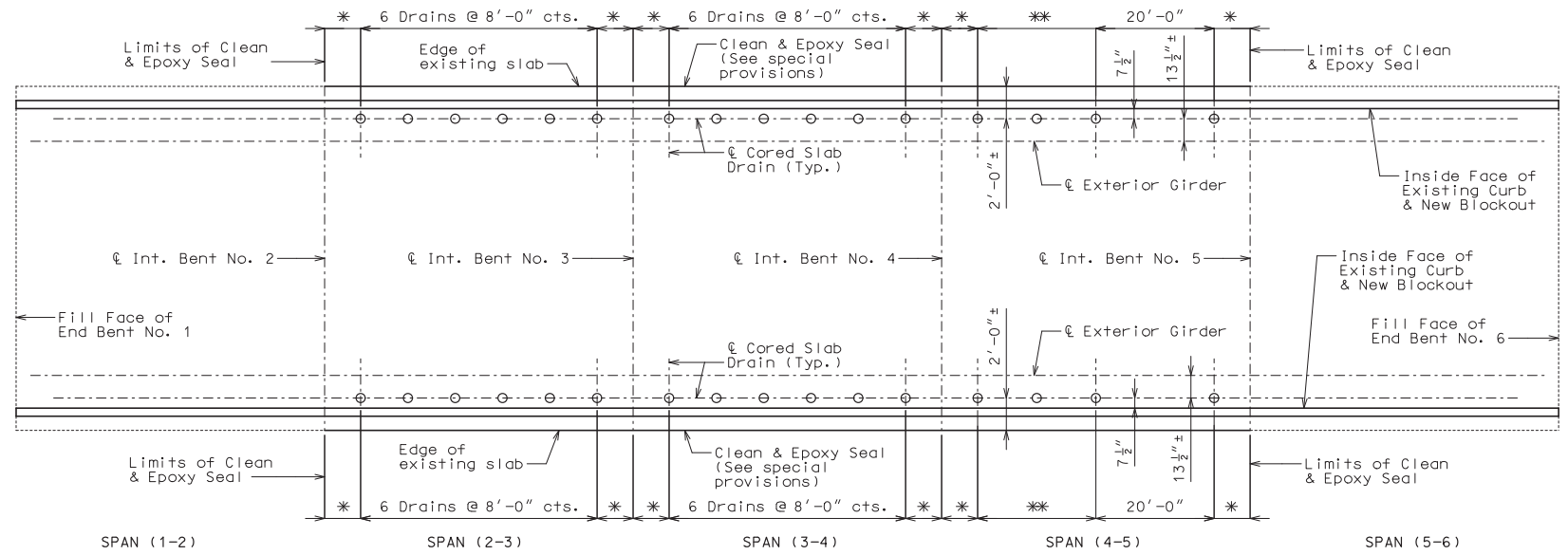


PLAN OF DRAIN



PLAN OF OPTIONAL FRP DRAIN

* 8'-0"±
** 3 Drains @ 10'-0" cts.



PLAN SHOWING CORED SLAB DRAIN LOCATIONS

CORED SLAB DRAINS

General Notes:

Contractor shall have the option to construct either steel or Fiberglass Reinforced Polymer (FRP) slab drains. All drains shall be of same type.

Slab drain bracket assembly shall be ASTM A709 Grade 36 steel.

The bracket assembly shall be galvanized in accordance with ASTM A123.

All bolts, hardened washers, lock washers and nuts shall be galvanized in accordance with ASTM A153.

Shop drawings will not be required for the slab drains and the bracket assembly.

Cost of cored slab drains, complete in place, will be considered completely covered by the contract unit price for Cored Slab Drain per each.

Holes for slab drains shall be cored. Percussion drilling will not be permitted.

Slab drain locations may be shifted the minimum extent necessary to avoid slab reinforcement.

Cored slab drains shall be placed vertically.

For details of plugging existing curb outlets, see Sheet No. 14.

Notes for Steel Drain:

Slab drains may be fabricated from 1/4" structural steel pipe ASTM A500 or A501.

The drains shall be galvanized in accordance with ASTM A123.

Drains shall be inserted through slab such that damage to galvanized coating is minimized.

Notes for Optional FRP Drain:

Drains shall be machine filament-wound thermosetting resin pipe meeting the requirements of ASTM D2996 with the following exceptions:

Minimum reinforced wall thickness shall be 1/4 inch.

The resin used shall be ultraviolet (UV) resistant and/or have UV inhibitors mixed throughout. Drains may have an exterior coating for additional UV resistance. Care shall be taken to avoid damage to exterior coating during installation.

The color of the slab drain shall be Gray (Federal Standard #26373). The color shall be uniform throughout the resin and any coating used.

The combination of materials used in the manufacture of the drains shall be tested for UV resistance in accordance with ASTM D4329 Cycle A. The representative material shall withstand at least 500 hours of testing with only minor discoloration and without any physical deterioration. The contractor shall furnish the results of the required ultraviolet testing prior to acceptance of the slab drains.

At the contractor's option, drains may be field cut. The method of cutting FRP slab drain shall be as recommended by the manufacturer to ensure a smooth, chip free cut.

No additional payment will be made for this substitution.

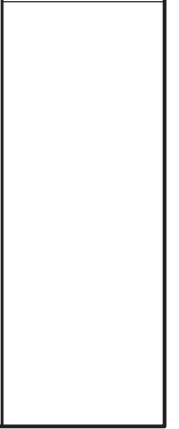


DATE PREPARED 1/7/2020	
ROUTE 13	STATE MO
DISTRICT BR	SHEET NO. 3
COUNTY GREENE	
JOB NO. J8P3067B	
CONTRACT TO.	
PROJECT NO.	
BRIDGE NO. A30304	

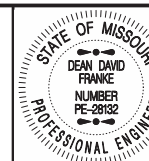
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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DATE PREPARED
1/7/2020

ROUTE 13 STATE MO

DISTRICT BR SHEET NO. 4

COUNTY GREENE

JOB NO. J8P3067B

CONTRACT ID.

PROJECT NO.

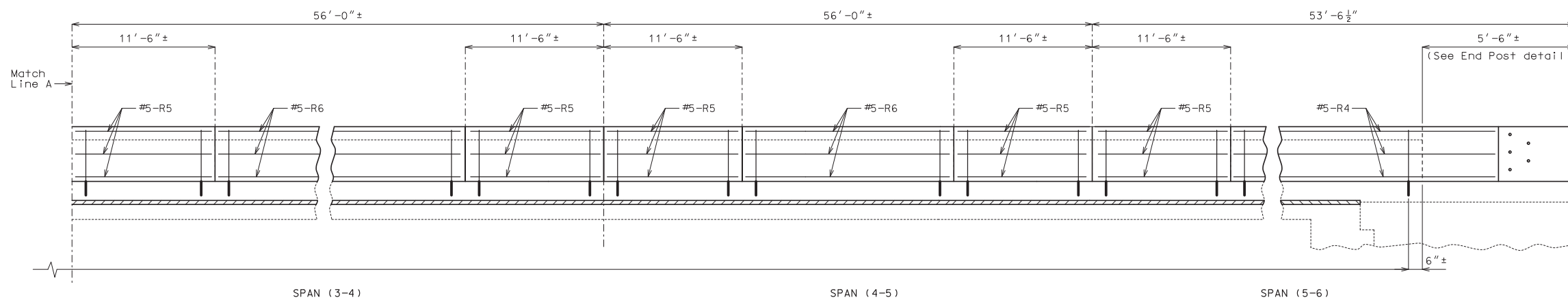
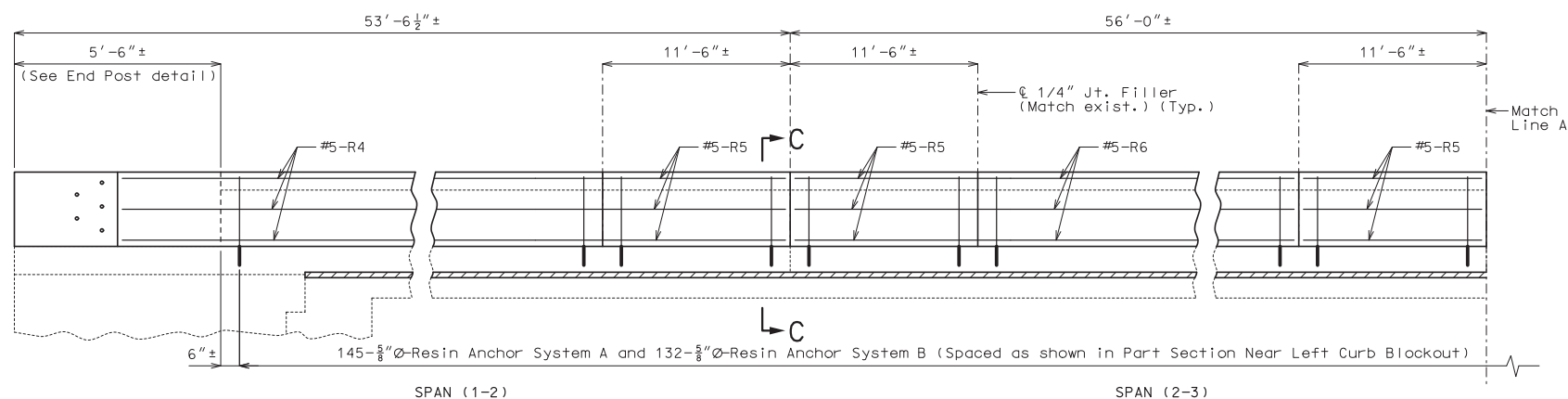
BRIDGE NO. A30304

DESCRIPTION	DATE

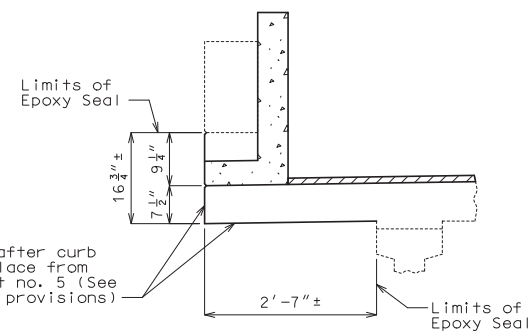
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SECTION NEAR LEFT CURB BLOCKOUT
(Right curb blockout similar)
Bridge rail and plugging of curb outlets not shown for clarity.



Clean and epoxy seal after curb outlet plugs are in place from C bent no. 2 to C bent no. 5 (See Sheet No. 3 & special provisions)

SECTION C-C

Notes:

Work this sheet with Sheets No. 5 & 6.

Longitudinal dimensions shown are taken parallel to grade at top of parapet.

For details of End Post, see Sheet No. 6.

CURB BLOCKOUT

Detailed July 2019
Checked Aug. 2019

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

Sheet No. 4 of 7



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DATE PREPARED
1/7/2020

ROUTE 13 STATE MO
DISTRICT BR SHEET NO. 5

COUNTY GREENE
JOB NO. J8P3067B
CONTRACT TO.

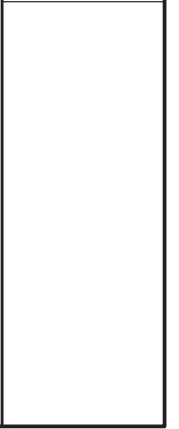
PROJECT NO.

BRIDGE NO. A30304

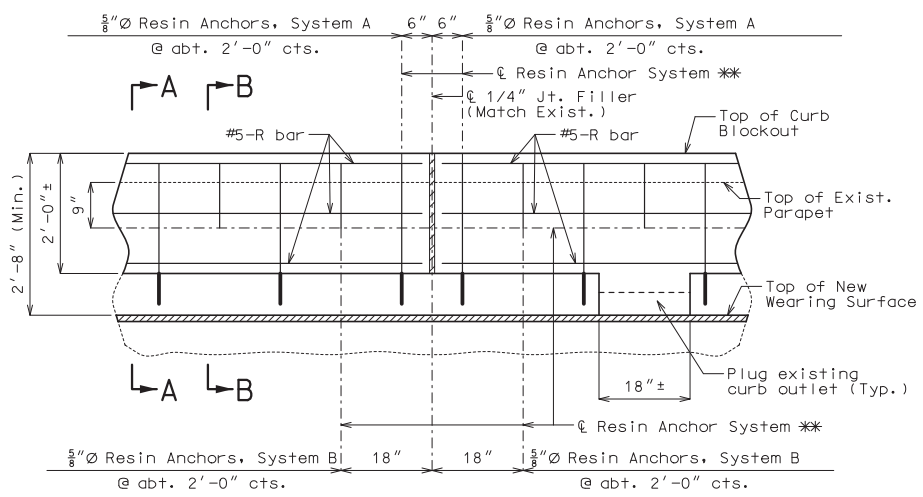
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

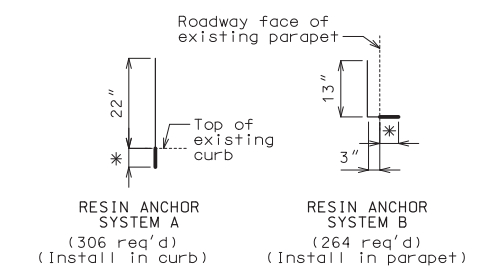
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JEFFERSON CITY, MO 65102
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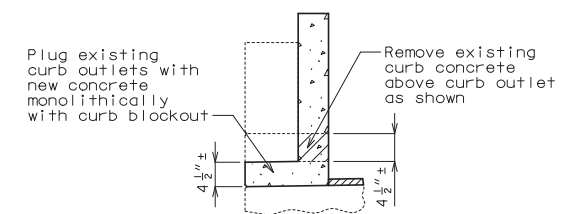
PART SECTION NEAR LEFT CURB BLOCKOUT



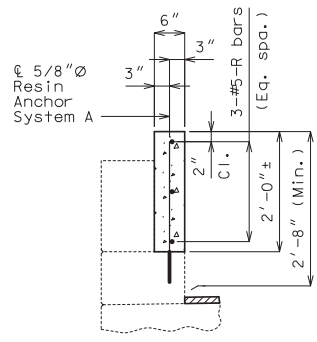
RESIN ANCHOR SYSTEM A (306 req'd) (Install in curb)
RESIN ANCHOR SYSTEM B (264 req'd) (Install in parapet)

* Use manufacturer's recommended embedment length. (5" minimum embedment)

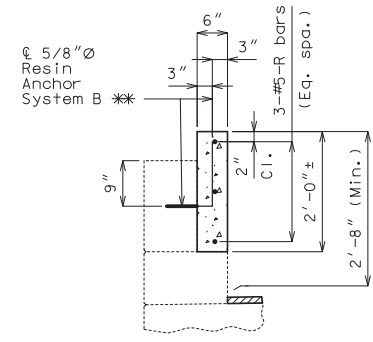
DETAILS OF RESIN ANCHORS



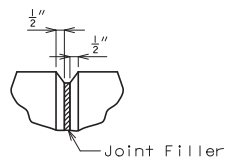
TYPICAL SECTION AT CURB OUTLET
Curb blockout reinforcement not shown for clarity.



SECTION A-A



SECTION B-B



FILLED JOINT DETAIL

CURB BLOCKOUT

Detailed Aug. 2019
Checked Aug. 2019

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

Sheet No. 5 of 7

Notes:

Work this sheet with Sheets No. 4 thru 6.

Concrete in curb blockout shall be Class B-1 with $f'c = 4000$ psi.

Measurement of curb blockout is to the nearest linear foot, measured at the top outside edge of parapet from end of post to end of post.

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

Payment for concrete, reinforcing steel, resin anchor systems, and any other work incidental to the curb blockout, complete in place, will be included in the contract unit price for Curb Blockout per linear foot.

Cost of any concrete curb or parapet repair will be included in the contract unit price for Curb Blockout.

All reinforcement shall be epoxy coated.

** Shift resin anchors where necessary to clear existing anchor bolts for bridge rail, miss curb outlets (if present) and clear existing reinforcement.

Concrete traffic barrier delineators shall be placed on top of the curb blockout similarly as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Curb Blockout.

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 #5 Grade 60 reinforcing bar shall be substituted for the 5/8" threaded rod.

Cost of labor and materials required to plug existing curb outlets will be considered completely covered by the contract unit price for Curb Blockout.



DATE PREPARED
1/7/2020
ROUTE 13 STATE MO
DISTRICT BR SHEET NO. 6

COUNTY GREENE
JOB NO. J8P3067B
CONTRACT TO.
PROJECT NO.
BRIDGE NO. A30304

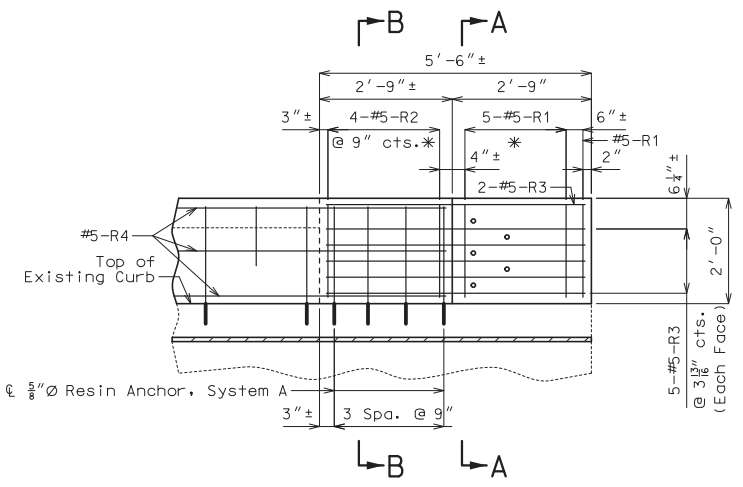
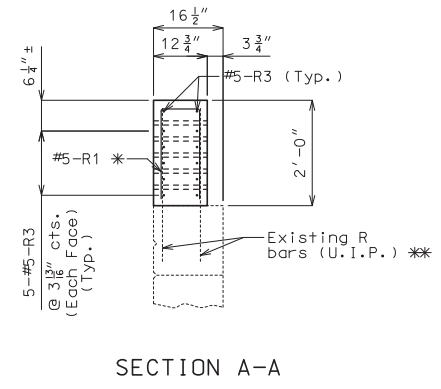
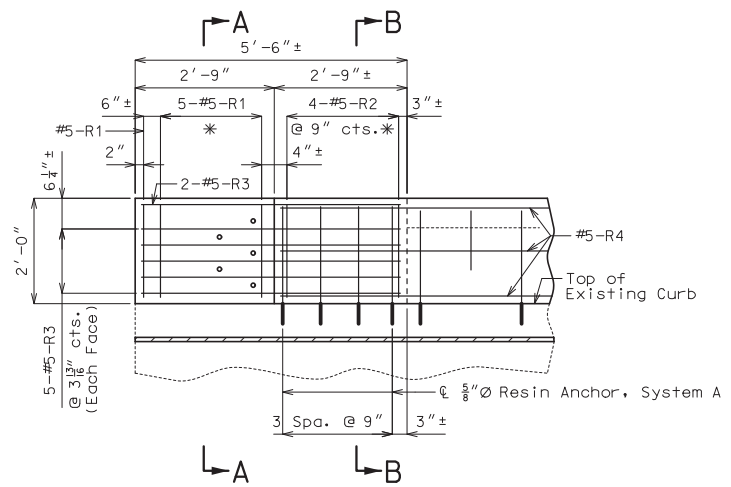
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



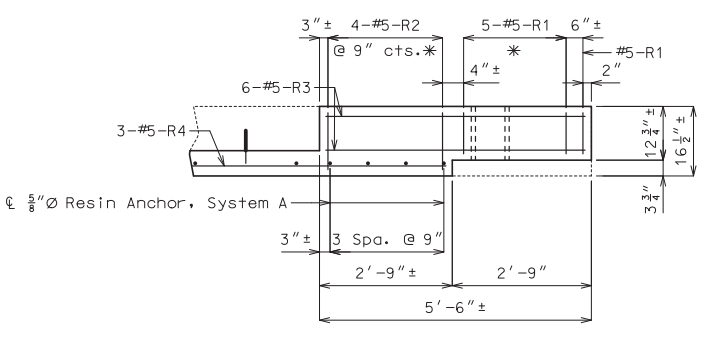
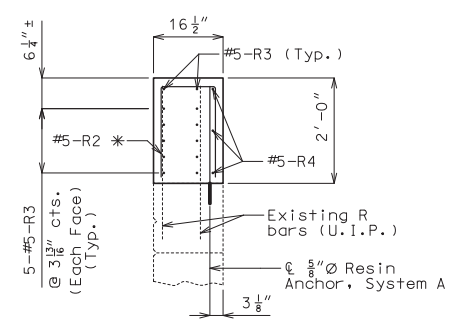
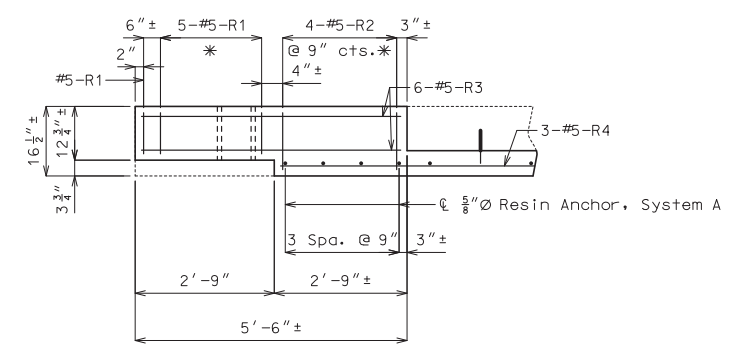
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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ELEVATION SHOWING LEFT END POST
Existing R bars (U.I.P.) not shown for clarity.

** At the discretion of the engineer, additional resin anchors may be used at roadway face of end post if existing R bars have deteriorated.
* Spaced with existing R bars. Shift new R bars as required to miss 1"Ø holes. Bend existing R bars as required to miss 1"Ø holes.

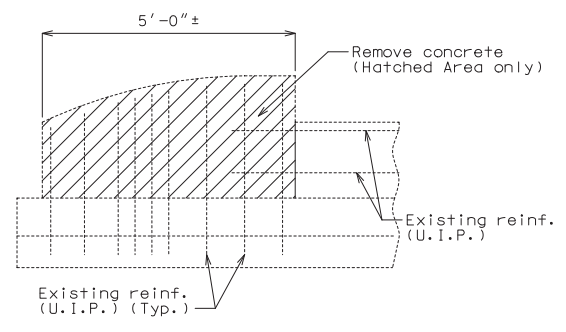
ELEVATION SHOWING RIGHT END POST
Existing R bars (U.I.P.) not shown for clarity.



PLAN SHOWING LEFT END POST
Existing R bars (U.I.P.) not shown for clarity.

SECTION B-B

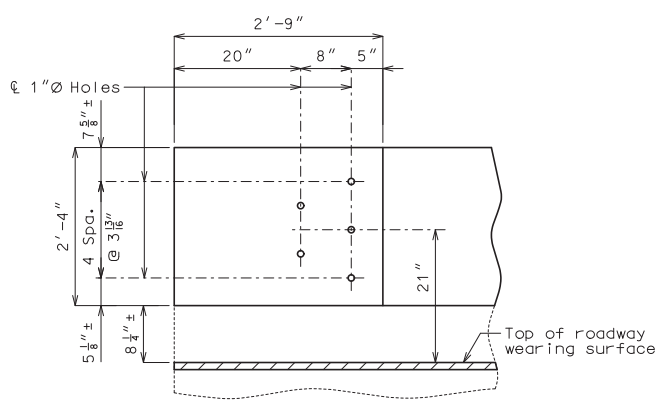
PLAN SHOWING RIGHT END POST
Existing R bars (U.I.P.) not shown for clarity.



Notes:
All exposed edges of curb blockout shall have 1/2" radius or 3/8" bevel unless otherwise shown.
Payment for concrete, reinforcing steel, resin anchor systems, and any other work incidental to the curb blockout, complete in place, will be included in the contract unit price for Curb Blockout per linear foot.
Cost of any concrete curb or parapet repair will be included in the contract unit price for Curb Blockout.
All reinforcement shall be epoxy coated.
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 #5 Grade 60 reinforcing bar shall be substituted for the 5/8"Ø threaded rod.
For details of Resin Anchors, System A, see Sheet No. 5.
16 required Resin Anchors, System A, are included in the resin anchor quantity on Sheet No. 5.

Notes:
Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout.
Cut existing R bars to clear top of new end post by at least 1 1/2".

DETAILS OF END POST AT END BENTS NO. 1 & 6



DETAILS OF GUARD RAIL ATTACHMENT

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