DESIGN DESIGNATION

A.A.D.T. - 2024 = 989 A.A.D.T. - 2043 = 1385 T = 11.2% V = 55 M.P.H.

FUNCTIONAL CLASSIFICATION-LOCAL

NO RIGHT OF WAY TO BE ACQUIRED FOR THIS PROJECT.

CONVENTIONAL SYMBOLS

(OSED IN LEWIS	.,	
	EXISTING	NEW
BUILDINGS AND STRUCTURES GUARD RAIL GUARD CABLE CONCRETE RIGHT-OF-WAY MARKER STEEL RIGHT-OF-WAY MARKER LOCATION SURVEY MARKER UTILITIES	0000 0000 111 V	••••• ••••
FIBER OPTICS OVERHEAD CABLE TV UNDERGROUND CABLE TV OVERHEAD TELEPHONE UNDERGROUND TELEPHONE OVERHEAD POWER UNDERGROUND POWER SANITARY SEWER STORM SEWER GAS WATER	-UTV- - OT - - UT - - OE - - UE - - S - - SS - - G - - W	-0TV- - UTV-
MANHOLE	SAN HYD)
FIRE HYDRANT	WV]
WATER VALVE	wv_C	€
WATER METER	₽™	€
DROP INLET	Ë	
DITCH BLOCK	=	<u> </u>
GROUND MOUNTED SIGN	SIGN	_
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL FENCE CHAIN LINK WOVEN WIRE GATE POST	—— \ —— \ —— \	<i>'</i> ——
BENCHMARK	ВМ)

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

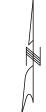
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

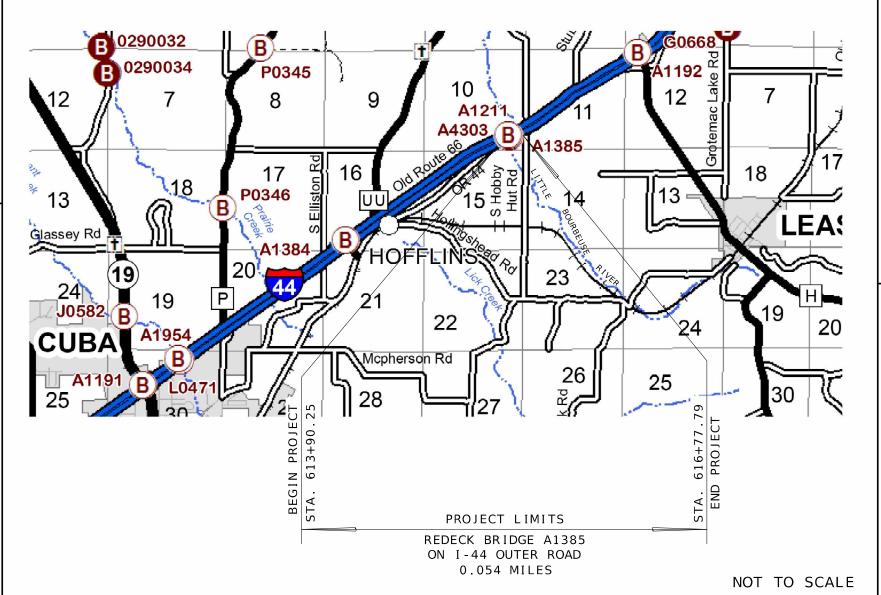
PLANS FOR PROPOSED STATE HIGHWAY



LOCATION OF CRAWFORD COUNTY

CRAWFORD COUNTY





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) (1 SHEETS)	2
QUANTITIES (QU) (2 SHEETS)	3
PLAN-PROFILE (PP)	4
TRAFFIC CONTROL SHEETS (TC)	5
EROSION CONTROL SHEETS (EC)	6
BRIDGE DRAWINGS (B) (11 SHEETS)	
A13851	1 - 11

THIS SHE SIGNED, SEA	
	REPARED
	/2024
ROUTE	STATE
I 44 OF	1
DISTRICT	SHEET NO.
DISTRICT	SHEET NO.
DISTRICT CD	SHEET NO. 1
DISTRICT CD COI	SHEET NO. 1 JNTY WFORD
CD COI	SHEET NO. 1 JINTY WFORD B NO.
DISTRICT CD COI CRA JOE J 55	SHEET NO. 1 JINTY WFORD 8 NO. 63533
DISTRICT CD COI CRA JOE J 55	SHEET NO. 1 JINTY WFORD B NO.
CD CONTR	SHEET NO. 1 JINTY WFORD 8 NO. 63533 ACT ID.
DISTRICT CD CO CRA JOE JOS CONTR	SHEET NO. 1 JINTY WFORD S NO. 53533 ACT ID.
DISTRICT CD CO CRA JOE JOS CONTR	SHEET NO. 1 JINTY WFORD 8 NO. 63533 ACT ID.

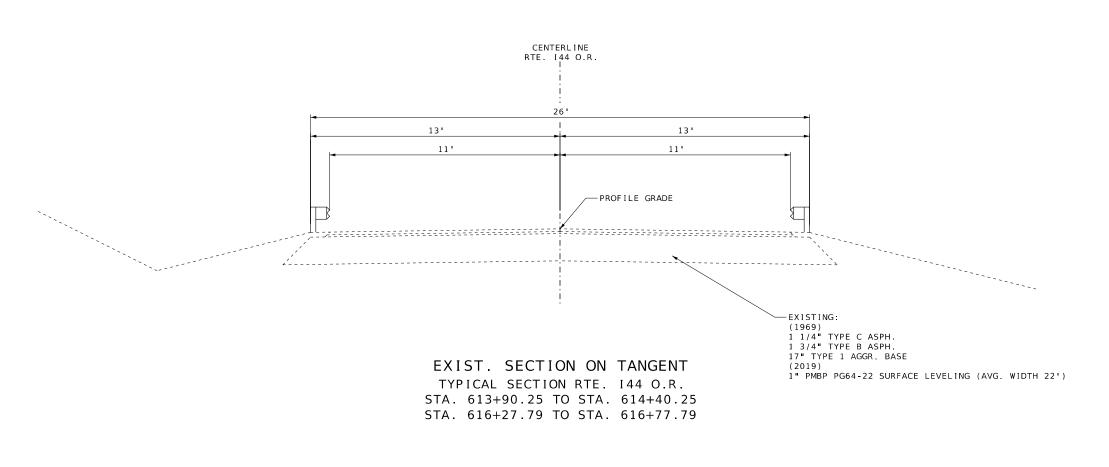
LENGTH OF PROJECT

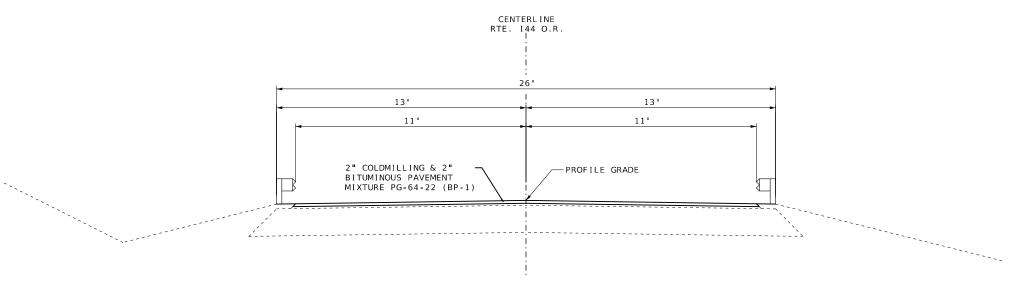
BEGINNING OF PROJECT STA. 613 + 90.25 STA. 616 + 77.79 END OF PROJECT 287.54 FEET APPARENT LENGTH

EQUATIONS AND EXCEPTIONS: NONE



TOTAL CORRECTIONS	0	FEET
NET LENGTH OF PROJECT	287.54	FEET
STATE LENGTH	0.054	MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	0.22	ACRES





PROPOSED ON TANGENT TYPICAL SECTION RTE. I44 O.R. STA. 613+90.25 TO STA. 614+40.25 STA. 616+27.79 TO STA. 616+77.79

BITUMINOUS SURFACE LEVELING (PG64-22) ESTIMATED AT 1.987 TON/CY TACK COAT = 0.10 GAL/S.Y.

SEE BRIDGE PLANS FOR BRIDGE TYPICAL SECTION





REMOVAL OF IMPROVEMENTS									
STATION	TO	STATION	LOCATION	ITEM	QUANTITY				
613+90.25		616+77.90	S OR 44	EXISTING GUARDRAIL (ALL 4 CORNERS OF BRIDGE)	340 FT				
614+60.25		614+60.25	S OR 44	EXISTING BRIDGE NUMBER SIGN	1 (EACH)				
616+07.90	616+07.90 616+07.90 S OR 44 EXISTING BRIDGE NUMBER SIGN				1 (EACH)				
				USE	1 LUMP SUM				

TEMPORARY EROSION CONTROL										
				SILT	ROCKDITCH	SEDIMENT				
				FENCE	CHECKS	REMOVAL				
STATION	TO	STATION	LOCATION	LF	L.F	CY/LF				
614+25.25		614+97.25	S OR 44	184.0		1.8				
615+74.79		616+00.79	S OR 44	78.0		0.8				
614+25.25		614+97.25	S OR 44		40.0	4.0				
615+74.79		616+00.79	S OR 44		40.0	4.0				
			USE	262.0	80.0	11.0				

TYPE 2 ROCK BLANKET (2' THICK)									
				PERMENANT					
		FURNISHING	PLACING	EROS I ON					
		ROCK	ROCK	CONTROL					
SHEET		BLANKET	BLANKET	GEOTEXTILE					
NO	LOCATION	C.Y.	C.Y.	S.Y.					
4	WEST SPILL FILL	161.3	161.3	315.0					
4	EAST SPIL FILL	141.6	141.6	308.8					
	TOTAL =	302.9	302.9	623.8					
	USE	303	303	624					

SHEET NO	LOCATION	FURNISHING ROCK BLANKET C.Y.	PLACING ROCK BLANKET C.Y.	EROSION CONTROL GEOTEXTILE S.Y.	
4	WEST SPILL FILL	161.3	161.3	315.0	
4	EAST SPIL FILL	141.6	141.6	308.8	
	TOTAL =	302.9	302.9	623.8	
	USE	303	303	624	
			BITUMIN	OUS PAVEMEN	ΙΤ

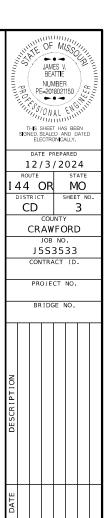
				LENGTH	W10.TH	4554	BIT PVMT MIXTURE PG 64-22	TACK		
				LENGTH	WIDTH	AREA	(BP-1)	COAT		
STATION	TO	STATION	LOCATION	FT.	FT.	SQ FT	TONS	GAL	REMARKS	
613+90.25		614+40.25	S OR 44	50.000	22	1100	13.49	12.22	2" MILL & FILL]
616+27.79		616+77.79	S OR 44	50.000	22	1100	13.49	12.22	2" MILL & FILL	
			TOTAL				26.98	24.44		
			USE				27	24		1
COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING (3 in THICK OR LESS)										
	COLD	I-III E I I I I	71101111100	J 17(VEIII	1 101	112110171	- 01 30111	, territo (J III IIII ON EE	

	COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING (3 in THICK OR LESS)										
STATION	ТО	STATION	LOCATION	LENGTH FT	WIDTH FT	COLDMILLING SQYD	REMARKS				
613+90.25		614+40.25	S OR 44	50.000	22	122.22	2" COLDMILLING				
616+27.79		616+77.79	S OR 44	50.000	22	122.22	2" COLDMILLING				
				TOTAL		244.4					
				USE		244					

PAVEMENT MARKING											
	WATERBORNE PAVEMENT MARKING - TYPE P BEADS										
	4" INTER. 4" SOLID										
				LENGTH	YELLOW	WHITE					
STATION	TO	STATION	LOCATION	FT	LF	LF	REMARKS				
613+90.25		616+77.79	S OR 44	287.54	71.9		CENTERLINE				
613+90.25		616+77.79	S OR 44	287.54		575.1	EDGEL INES				
				TOTAL	72	575					
	USE 72 575										
NOTE: ALL	PAVEME	NT MARKINGS	TO MATCH E	EXISTING.	LOCATE BEFORE	MILLING OR RE	SURFACING				

MGS GUARDRAIL											
				TYPE A	MGS						
				CRASHWORTHY	BR I DGE						
				END	APPROACH	SHAPING					
				TERMINAL	TRANSITION	SLOPES					
				(MASH)	SECTION	CLASS III					
STATION	TO	STATION	LOCATION	EACH	EACH	(100 FEET)	REMARKS				
613+77.48		614+64.98	S OR 44 - LT	1	1						
613+68.02		614+55.52	S OR 44 - RT	1	1						
616+12.52		617+00.02	S OR 44 - LT	1	1						
616+03.06		616+90.56	S OR 44 - RT	1	1						
613+74.98		614+64.98	S OR 44 - LT			0.9	LT OF BRIDGE A13851				
613+65.52		614+55.52	S OR 44 - RT			0.9	RT OF BRIDGE A13851				
616+10.02		617+00.02	S OR 44 - LT			0.9	LT OF BRIDGE A13851				
616+00.56		616+90.56	S OR 44 - RT			0.9	RT OF BRIDGE A13851				
			TOTAL =	4	4	4					
			USE =	4	4	4					

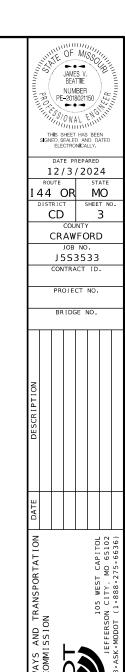
SEEDING AND MULCHING													
				SEEDING									
				COOL									
				SEASON									
				MIXTURE	MULCH								
STATION	TO	STATION	LOCATION	(AC)	(AC)								
613+72.25		614+60.25	S OR 44 - RT	0.08	0.08								
613+72.25		614+60.25	S OR 44 - LT	0.08	0.08								
616+07.79		616+95.79	S OR 44 - RT	0.07	0.07								
616+07.79		616+95.79	S OR 44 - LT	0.07	0.07								
			TOTAL	0.30	0.30								
			USE	0.3	0.3								

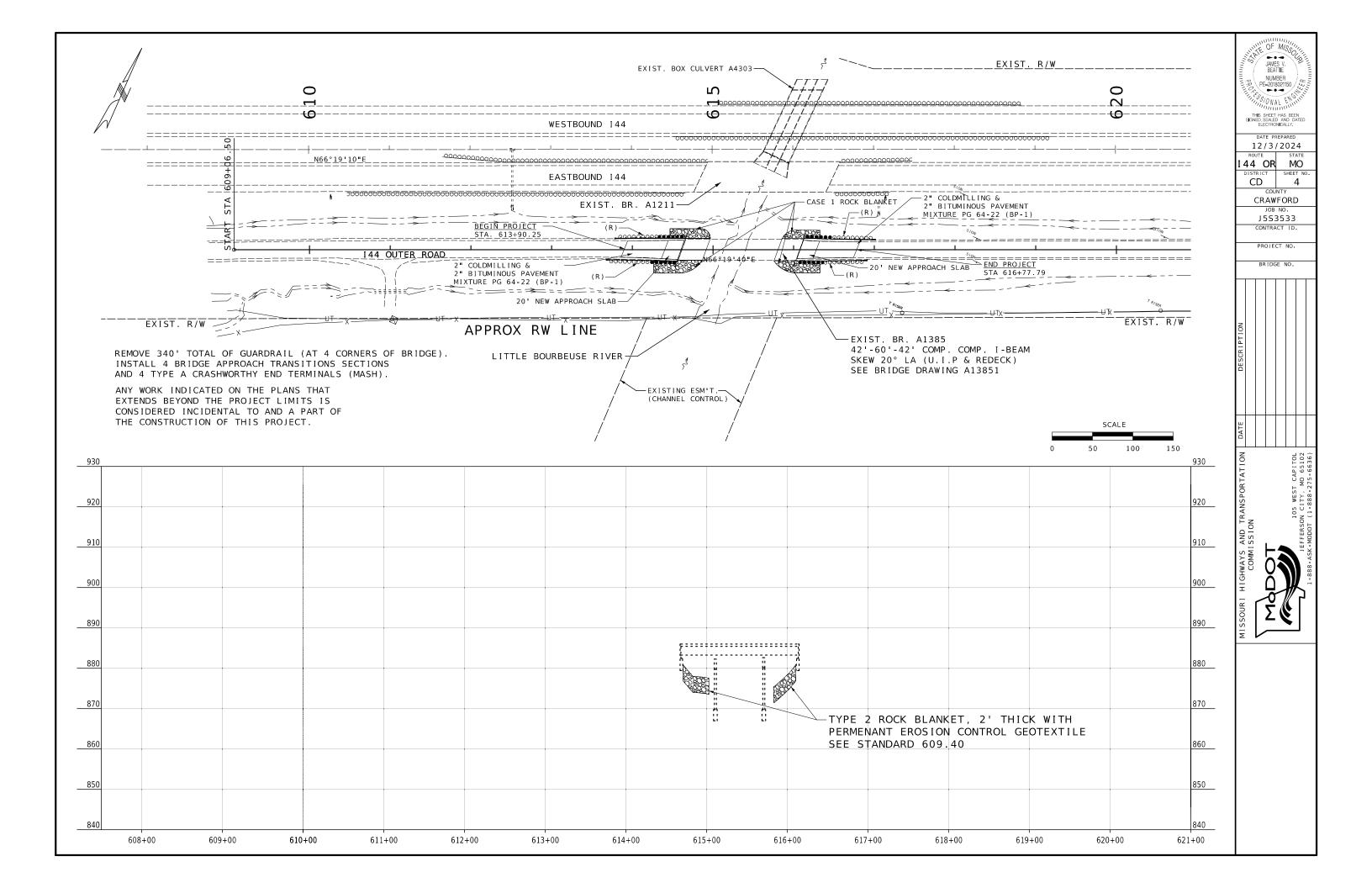


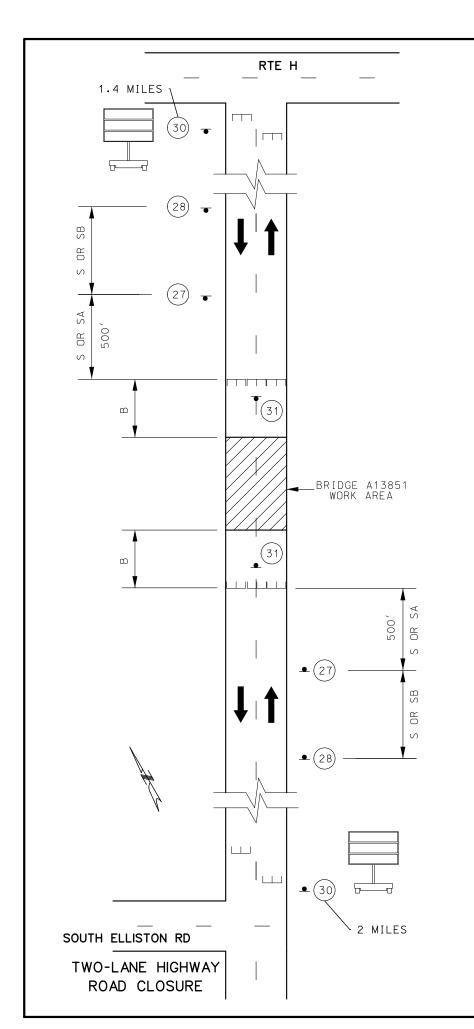
CONSTRUCTION SIGNING (VARIES)														
	TOTAL SIGN													
	SIZE	AREA	QTY	AREA	NUM.									
SIGN	IN.	SQ.FT.	EACH	SQ.FT.										
WARNING SIGNS						DESCRIPTION								
WO20-3	48X48	16	2	32	28	ROAD CLOSED AHEAD								
WO20-3	48X48	16	2	32	27	ROAD CLOSED 500FT								
REGULATORY SIGNS														
R11-2	48X30	10	2	20	31	ROAD CLOSED								
R11-3a	60×30	12.5	1	12.5	30	ROAD CLOSED 1.4 MILES AHEAD								
R11-3b	60×30	12.5	1	12.5	30	ROAD CLOSED 2 MILES AHEAD								
616.10.05	-	-												
CONSTRUCTION SIGNS TOTAL			109.00											

	ADDITIONAL CONSTRUCTION ITEMS										
ITEM NO.	QTY.	DESCRIPTION									
616-10.08	2	ADVANCED WARNING RAIL SYSTEM									
616-10.30	10	TYPE III MOVEABLE BARRICADE									
616-1098A	2	*CHANGEABLE MESSAGE SIGN WITHOUT COMMUNCATION									
		INTERFACE. CONTRACTOR FURNISHED, CONTRACTOR RETAINED."									

MOBILIZATION										
	1	LUMP	SUM							









AWRS

- CHANGEABLE MESSAGE SIGN

- TYPE III MOVEABLE BARRICADE



ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY

R11-3b

(30)

ROAD **CLOSED**

R11-2

(31)

SPEED	SIGN SPAC	ING (ft.)	CHANNEL I ZER	SPACING (ft.)	TAPER	BUFFFR		
NORMAL POSTED	UNDIVIDED	DIVIDED	THROUGH	BUFFER/	SHOULDER	LANE	LENGTH (ft.)	
(mph)	(S)	(S)	TAPERS	WORK AREA	(T1)	(T2)	(B)	
≤ 35	200	200	-	_	-	_	250	
40-45	350	500	-	_	-	_	360	
50-55	500	1000	ı	_	-	-	495	
60-70			-	-	-	-	730	
1. Shoulder taper	lenath based on	10 ft. (standard s	houlder width) of	fset, 2. Lane taper	lenath based on	12 ft. (standard lo	ne width) offset.	

GENERAL NOTES:

ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COMPLETELY COVERED OR REMOVED.

TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICE LOCATIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY RELOCATION OF SIGNS OR DEVICES FOR TRAFFIC CONTROL SHALL BE CONSIDERED INCIDENTAL, NO DIRECT PAY.

CONTRACTOR SHALL MAINTAIN ACCESS TO ENTRANCES AT ALL TIMES. CONTRACTOR SHALL COORDINATE ACCESS TO FIELD ENTRANCES WITH PROPERTY OWNERS.

500 F

WO20-3

(27)

ONE BARRICADE SHALL BE REQUIRED TO COMPLETELY CLOSE EACH 8 FEET OF PAVEMENT. PAVED SHOULDERS SHALL BE INCLUDED IN THE AREA TO BE CLOSED.

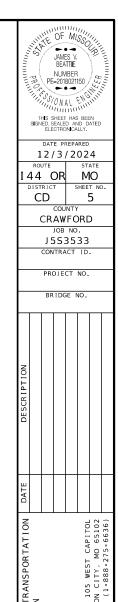
ROAD CLOSED SIGN MAY BE PLACED 7-10 FEET BEHIND THE BARRICADES AND AT A SIGN HEIGHT APPROPRIATE TO THE TYPE OF ROADWAY.

THE ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY OR ROAD CLOSED TO THRU TRAFFIC SIGN SHOULD BE LOCATED AT THE FIRST STATE ROUTE OR, AT THE DISCRETION OF THE ENGINEER, AT ANY OTHER INTERSECTION IN ADVANCE OF THE CLOSURE, ADDITIONAL BARRICADES MAY BE USED AND OFFSET TO FACILITATE ACCESS FOR WORK VEHICLES, LOCAL TRAFFIC, ETC. NO DIRECT PAY.

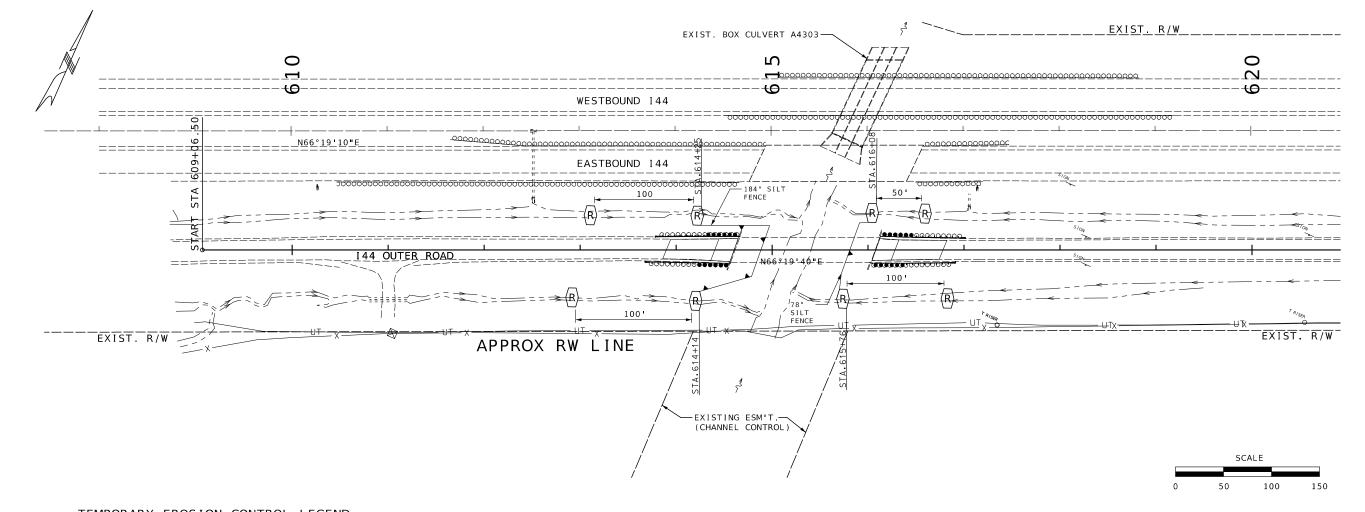
ALL TRAFFIC CONTROL SIGNS SHOWN ON THIS SHEET ARE CONSIDERED PERMANENT FOR THE DURATION OF THIS PROJECT.

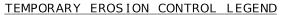
NOT TO SCALE

TRAFFIC CONTROL SHEET 1 OF 1









ROCK DITCH CHECK SILT FENCE

12/3/2024 I 44 OR MO CD 6 CRAWFORD JOB NO.
J5S3533
CONTRACT ID. PROJECT NO.

OF MOOULE AMES V. AMES V. BEATTE NUMBER PE-201802150

SOONAL EN

U.I.P. & REDECK EXISTING (42'-60'-42') CONTINUOUS COMPOSITE WIDE FLANGE BEAM SPANS (SKEW: 20° L.A.)

		Showing Lengths				Lap Length Splices **
Int. Bei	nt No. 2	Int. Bei		Bar Size	Splice Length	
Span 1	Span 2	Span 2	Span 3			opcc zongtn
18'-0"	16'-3"	16'-3"	18'-0"		4	2'-7"
				,	5	3'-3"
					6	3'-10"

** Unless otherwise shown.

4 - 11

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications Seismic Performance Category A

Design Loading:

H15-44 (1961); HS20-44 (New Construction) 15 lb/sf Future Wearing Surface Earth - 120 lb/cf, Equivalent Fluid Pressure 45 lb/cf Fatigue Stress - Case III

Design Unit Stresses:

Class B-1 Concrete (Barrier) f'c = 4.000 psiClass B-2 Concrete (End Bents & Superstructure, f'c = 4.000 psiexcept Barrier) Reinforcing Steel (ASTM A615 Grade 60) fy = 60,000 psi

Structural Steel Protective Coatings:

Protective Coating: System G in accordance with Sec 1081.

Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1081 for Overcoating of Structural Steel. The cost of surface preparation will be considered completely covered by the contract unit price per square foot for Surface Preparation for Overcoating Structural Steel

Field Coat(s): The color of the field overcoat shall be Gray (Federal Standard #26373) and shall be applied in accordance with Sec 1081.10.3.4. The cost of the intermediate field coat will be considered completely covered by the contract unit price per sq. foot for Intermediate Field Coat (System G). The cost of the finish field coat will be considered completely covered by the contract unit price per square foot for Finish Field Coat (System G).

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:

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

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

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

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

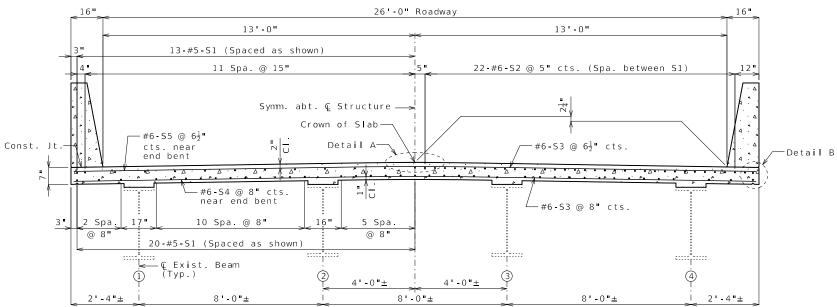
The area exposed by the removal of concrete and not covered with new concrete shall be coated with an approved qualified special mortar in accordance with Sec 704.

Rubblized concrete from the existing bridge deck that qualifies as clean fill may be placed on spill slopes at end bents above ordinary high water line (Roadway item).

For adjusted girder deflection due to the weight of the new deck and barriers, see Bridge Electronic Deliverables.

Longitudinal dimensions are based on the original design plans.

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



HALF SECTION NEAR MIDSPAN AND NEAR END BENT

HALF SECTION NEAR INT. BENT

SEC/SUR 10

TWP 39N

RGE 4W

TYPICAL SECTION THRU SLAB

Estimated Quantities									
I t em	Total								
Removal of Miscellaneous ACM (Non-Friable) sq. foo	t 13								
Removal of Existing Bridge Deck sq. foo	t 4242								
Bridge Approach Slab (Minor) sq. yar	118								
Slab on Steel sq. yar	470								
Type D Barrier linear foo	t 294								
Protective Coating - Concrete Bents and Piers (Epoxy) Iump sur	1 1								
Slab Drain eac	າ 22								
Surface Preparation for Overcoating Structural Steel (System G) sq. foo	t 3600								
Intermediate Field Coat (System G) sq. foo	t 3600								
Finish Field Coat (System G) sq. foo	t 1000								
Non-Destructive Testing linear foo	t 52								
Vertical Drain at End Bents eac	1 2								

Cost of any required excavation for bridge will be considered completely covered by the contract unit price for other items.

Estimated Quantities for Sla	ıb on St	eel
I t em		Total
Class B-2 Concrete	cu. yard	103
Reinforcing Steel (Epoxy Coated)	pound	36,900

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

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

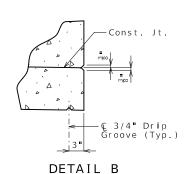
Slab shall be cast-in-place with conventional forming or stay-in-place corrugated steel forms. Precast prestressed panels will not be permitted.

For Optional Stay-In-Place Form Details, see Sheet No. 2.

Bridge deck surface may be finished with a vibratory screed.

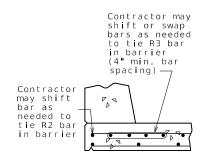
REPAIRS TO BRIDGE: ROUTE I-44 OUTER ROAD OVER LITTLE BOURBEUSE RIVER

ROUTE 44 OUTER ROAD FROM ROUTE H TO ROUTE 19 ABOUT 1.5 MILES SOUTHWEST OF ROUTE H BEGINNING STATION 614+60.25± (MATCH EXISTING)



-⊊ Roadway -Cross Slope 3/16" per f -Profile Grade (Match exist ±) Top of Slab Crown of Slab 2'-0" 2'-0" 4'-0" Parabolic Crown

DETAIL A

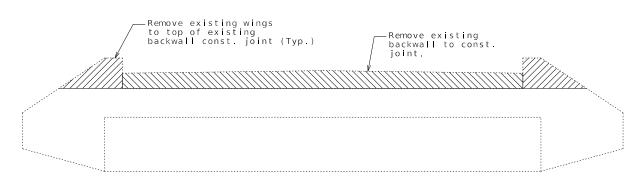


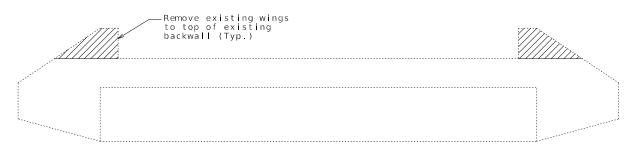
OPTIONAL SHIFTING TOP BARS AT BARRIER 44 OR MO SHEET NO BR 1 CRAWFORD

J5S3533 CONTRACT ID PROJECT NO.

A13851







DETAILS OF CONCRETE REMOVAL AT END BENT NO. 1

DETAILS OF CONCRETE REMOVAL AT END BENT NO. 4

The cost of concrete removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck. Vertical wingwall reinforcement not embedded in new concrete shall be cut off one inch below concrete removal surface and the resulting holes shall be filled with a qualified special mortar.

General Notes:

Stay-In-Place Forms:

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

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

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

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

Pouring and Finishing Slab:

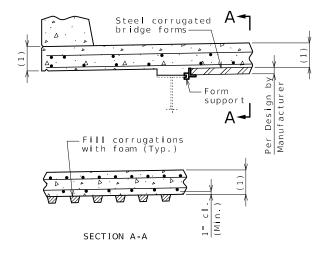
The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing, and removing bracing will be considered completely covered by the contract unit price for Slab on Steel.

Slab shall be poured upgrade from end to end at a minimum rate of 25 cubic yards per hour.

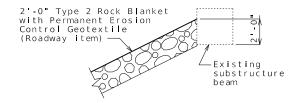
Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

(1) Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness.



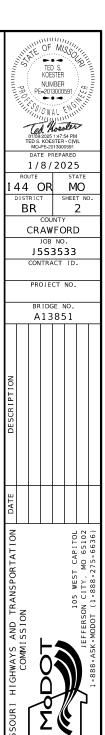
OPTIONAL STAY-IN-PLACE FORM DETAILS

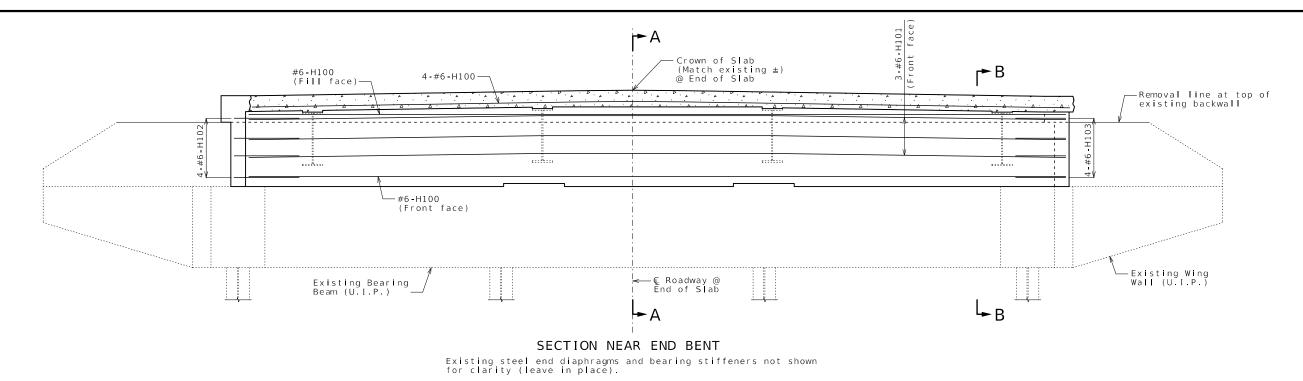


ROCK BLANKET ON SPILL SLOPES

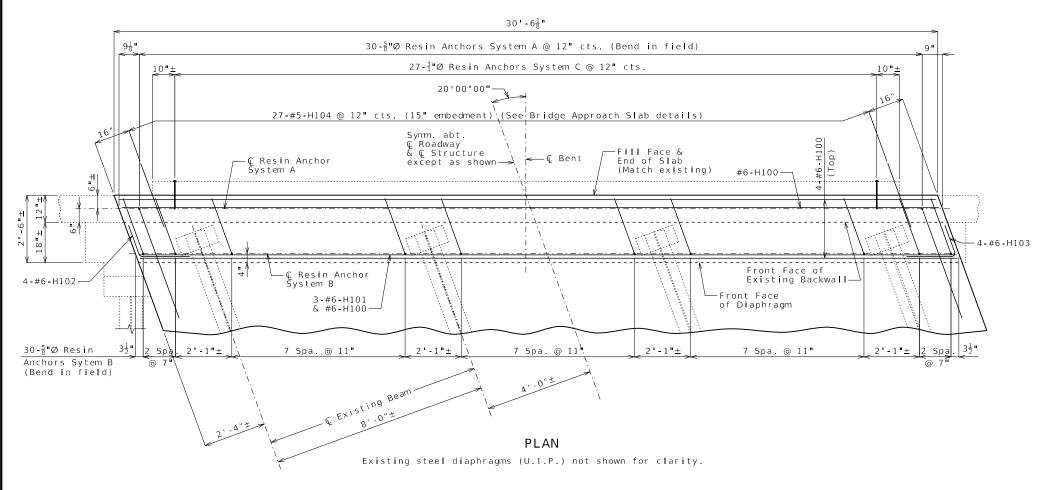


INT. BENTS NO. 2 & 3
SHOWING PROTECTIVE COATING





Resin anchors and Type D Barrier not show for clarity.



END BENTS NO. 1 & 4 Note: This drawing is not to scale. Follow dimensions.

Detailed Sep. 2024 Checked Oct. 2024

Sheet No. 3 of 11

Work this sheet with Sheet No. 4.

The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for beams shall extend a minimum of one foot outside the face of the beam encasement. Payment for cleaning and coating steel to be encased in concrete will be considered completely covered by the contract unit price for Slab on Steel.

The H101 bars are segmented for ease of placement through girder web holes. The t bar length for H101 bars shown in Bill of Reinforcing Steel allows for one lap splice with a length of 3'-8. Actual bar segment lengths to be determined by contractor for ease of installing bars. The contractor may use a mechanical bar splice in lieu of a lap splice. When a mechanical bar splice is used, the actual bar segment length will be determined by the contractor to accommodate manufacturer's recommendations for installation and ease of construction. The cost of furnishing and installing the bar splices will be considered completely covered by the contract unit price for Slab on Steel.
No adjustment of the quantity of reinforcing
steel will be allowed for the use of
mechanical bar splices.

Cost of field drilling holes in existing wide flange beam webs will be considered completely covered by the contract unit price for Slab on

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

Resin anchors system A & B and #5-H104 bars shall be placed parallel to centerline of roadway

For details of vertical drain at end bent, see

For details of bridge approach slab, see Sheet

For details and reinforcement of barrier, see Sheet No. 8.

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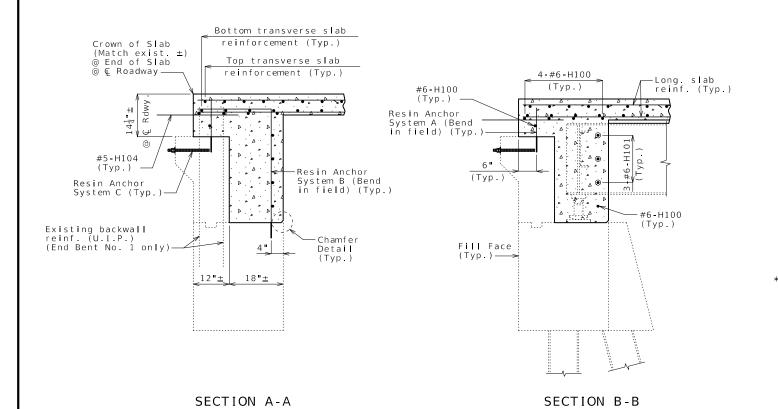
1/8/2025 44 OR MO

BR 3 CRAWFORD

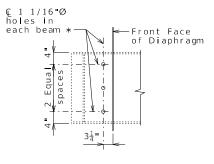
SHEET NO

J5S3533 CONTRACT ID.

PROJECT NO. A13851

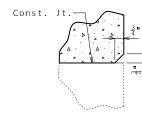


(Normal)

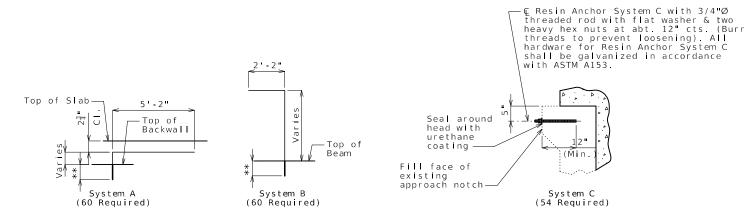


DETAIL OF WEB HOLES AT END BENTS

* Cost of field drilling holes in existing wide flange beam webs will be considered completely covered by the contract unit price for Slab on Steel.



CHAMFER DETAIL



(Normal)

DETAILS OF RESIN ANCHOR SYSTEMS

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

Notes:

Work this sheet with Sheet No. 3.

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

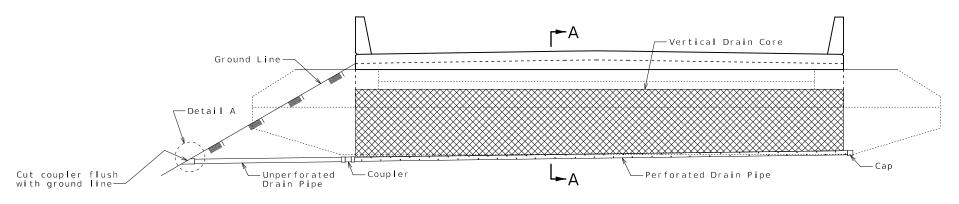
Cost of furnishing and installing the resin anchor systems, complete in place, will be considered completely covered by the contract unit price for Slab on Steel.

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

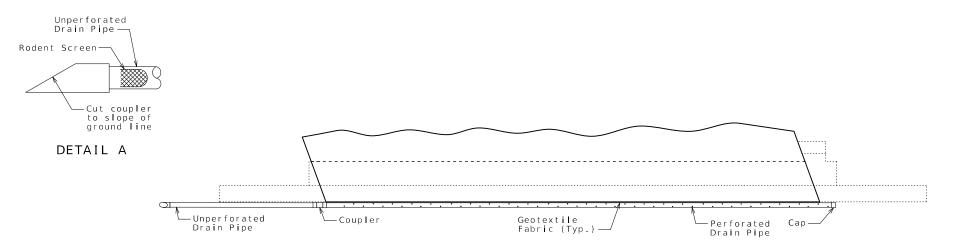
An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8-inch diameter rod for Resin Anchor Systems A and B.

TED S KOESTER NUMBER PE-201300059 PE-01/08/2025 1:48:39 PM TED S. KOESTER - CIVIL MO-PE-2013000591 1/8/2025 44 OR MO SHEET NO BR 4 CRAWFORD J5S3533 CONTRACT ID PROJECT NO. A13851

END BENTS NO. 1 & 4

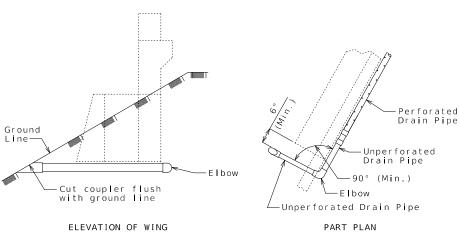


ELEVATION OF END BENT



PLAN OF END BENT

Approach notch not shown for clarity.



OPTIONAL TURNED DRAIN

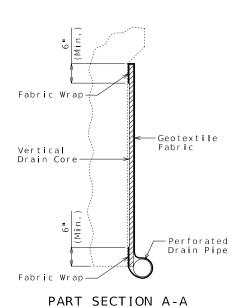
Detailed Sep. 2024 Checked Oct. 2024 (Use only when straight drain is not practical.)

VERTICAL DRAIN AT END BENTS

(End Bent No. 4 shown, End Bent No. 1 similar)

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

Sheet No. 5 of 11



General Notes:

All drain pipe shall be sloped 1 to 2 percent.

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

Drain pipe shall be placed at fill face of end bent. The pipe shall slope to lowest grade of ground line and also shall miss the lower beam of end bent by a minumum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.



1 / 8 / 2025

ROUTE STATE

44 OR MO

DISTRICT SHEET NO.

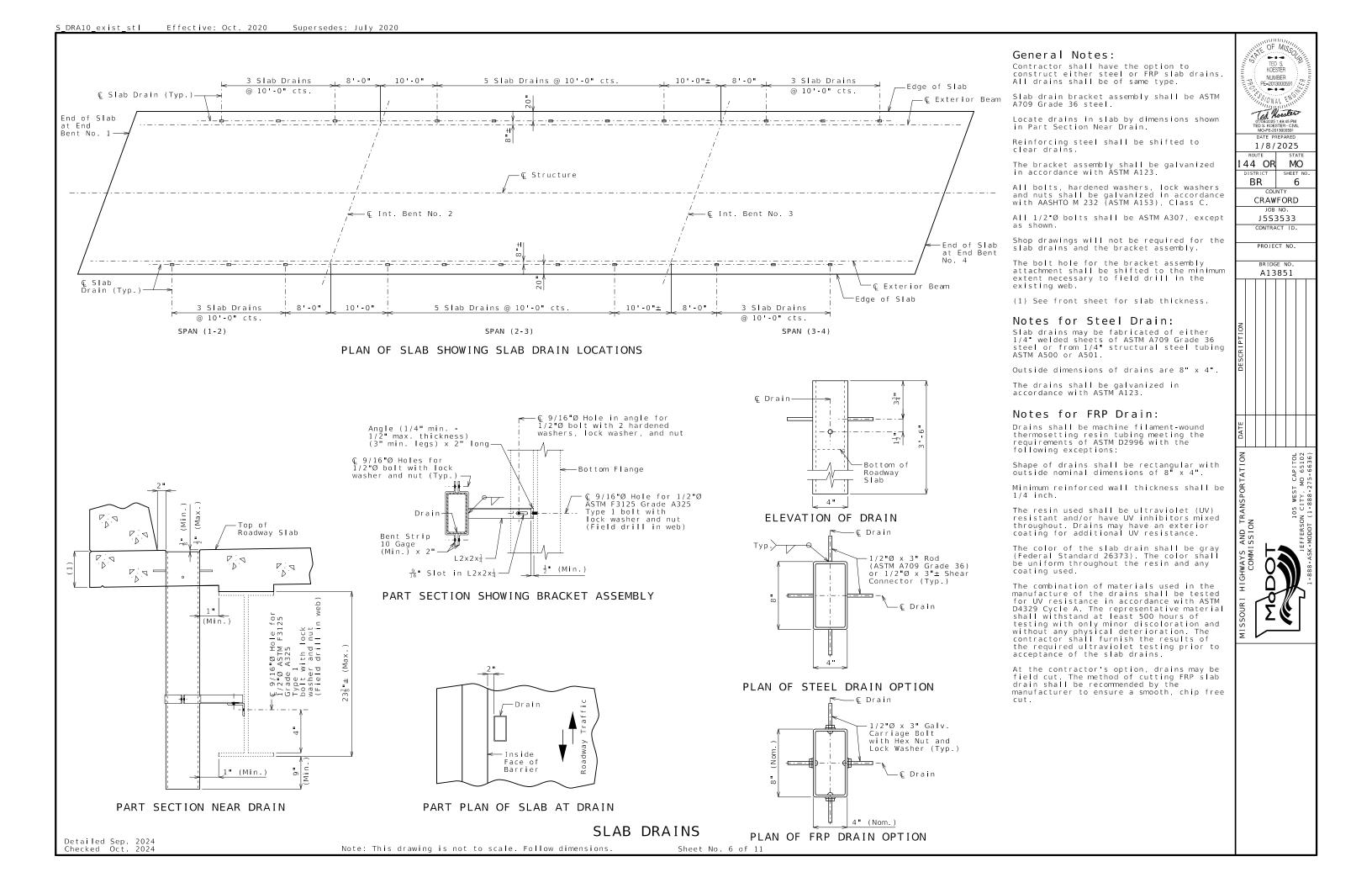
BR 5

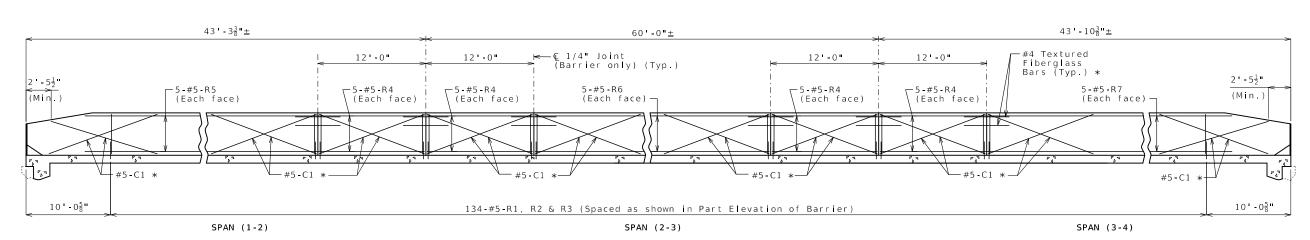
JOB NO.
J 5 S 3 S 3 3 CONTRACT ID.

PROJECT NO.



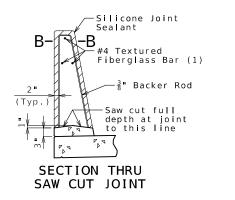






ELEVATION OF BARRIER

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



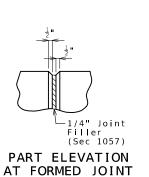
#4 Textured

Fiberglass

D A

#5-R1, R2 and R3

@ abt. 12" cts.

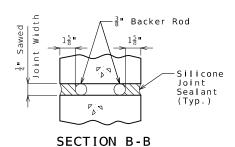


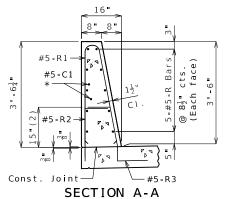
D A

#5-R1, R2 and R3

@ abt. 12" cts.

V—#5-C1 (Typ.) *







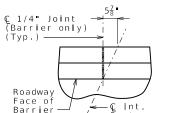
(2) To top of bar

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

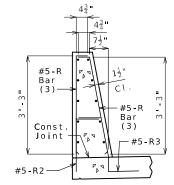
The cross-sectional area above

the slab is 3.52 square feet.

(3) The R1 bar may be separated into two bars as



PART PLAN SHOWING JOINT LOCATION



shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)



1/8/2025 44 OR MO SHEET NO

BR CRAWFORD J5S3533

7

CONTRACT ID PROJECT NO.

A13851

General Notes:

conventional forming.

per linear foot.

* Slip-formed option only.

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

Top of barrier shall be built parallel to

grade and barrier joints normal to grade.

reinforcement, complete in place, will be considered completely covered by the

contract unit price for Type D Barrier

Concrete in barrier shall be Class B-1. Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of slab to end of slab.

Concrete traffic barrier delineators

shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10

way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered

completely covered by the contract unit price for Type D Barrier.

accordance with Sec 717 for silicone joint sealant for saw cut and formed

For slip-formed option, both sides of

transversely broomed finish.

barrier shall have a vertically broomed finish and the top shall have a

Joint sealant and backer rods shall be in

and in accordance with Sec 617.
Delineators on bridges with two-lane, two-

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch

bevel, unless otherwise noted.

Payment for all concrete and

R-BAR PERMISSIBLE ALTERNATE SHAPE

PART ELEVATION OF BARRIER

- C 1/4" Joint (Formed or

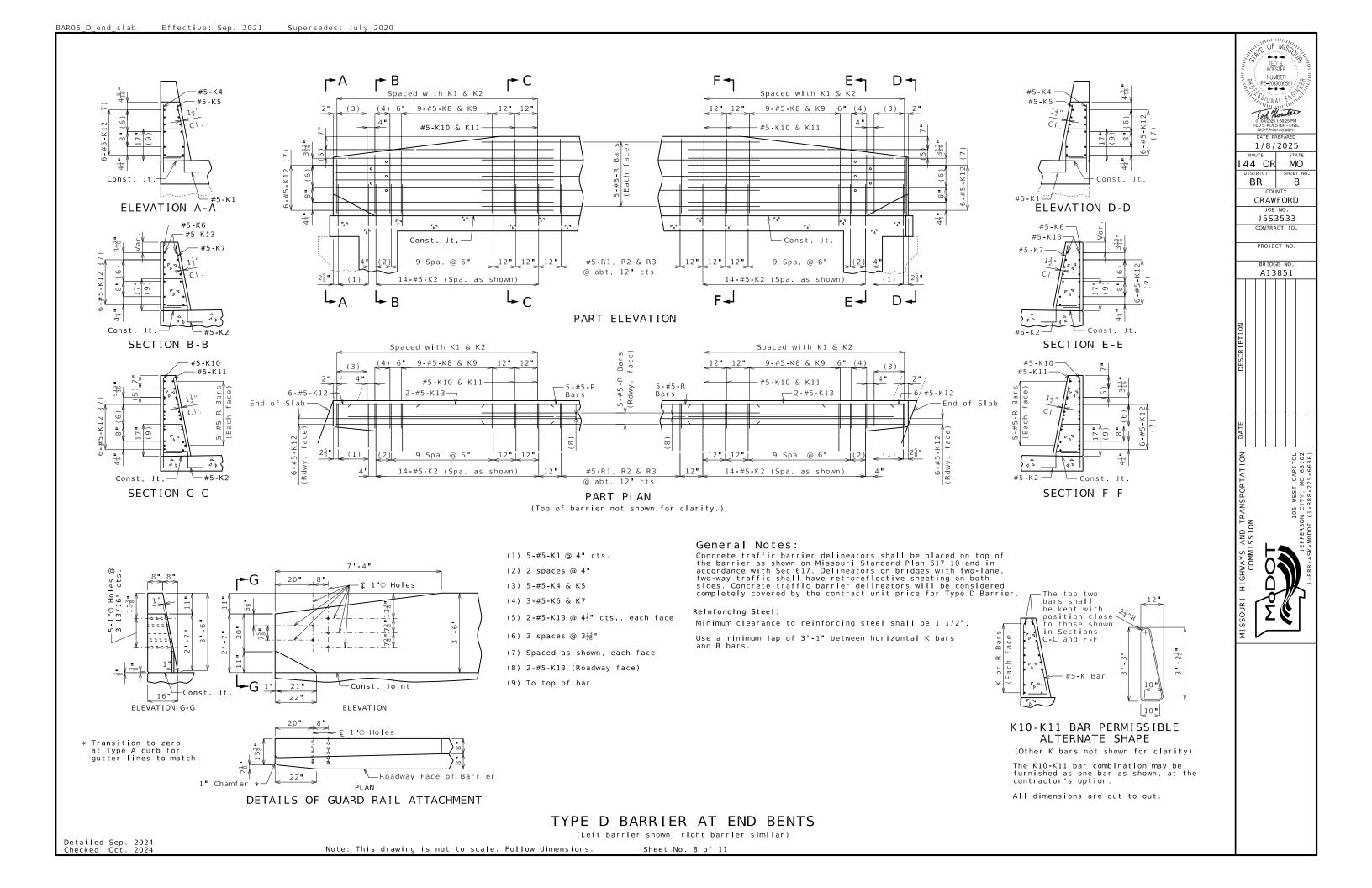
Saw Cut)

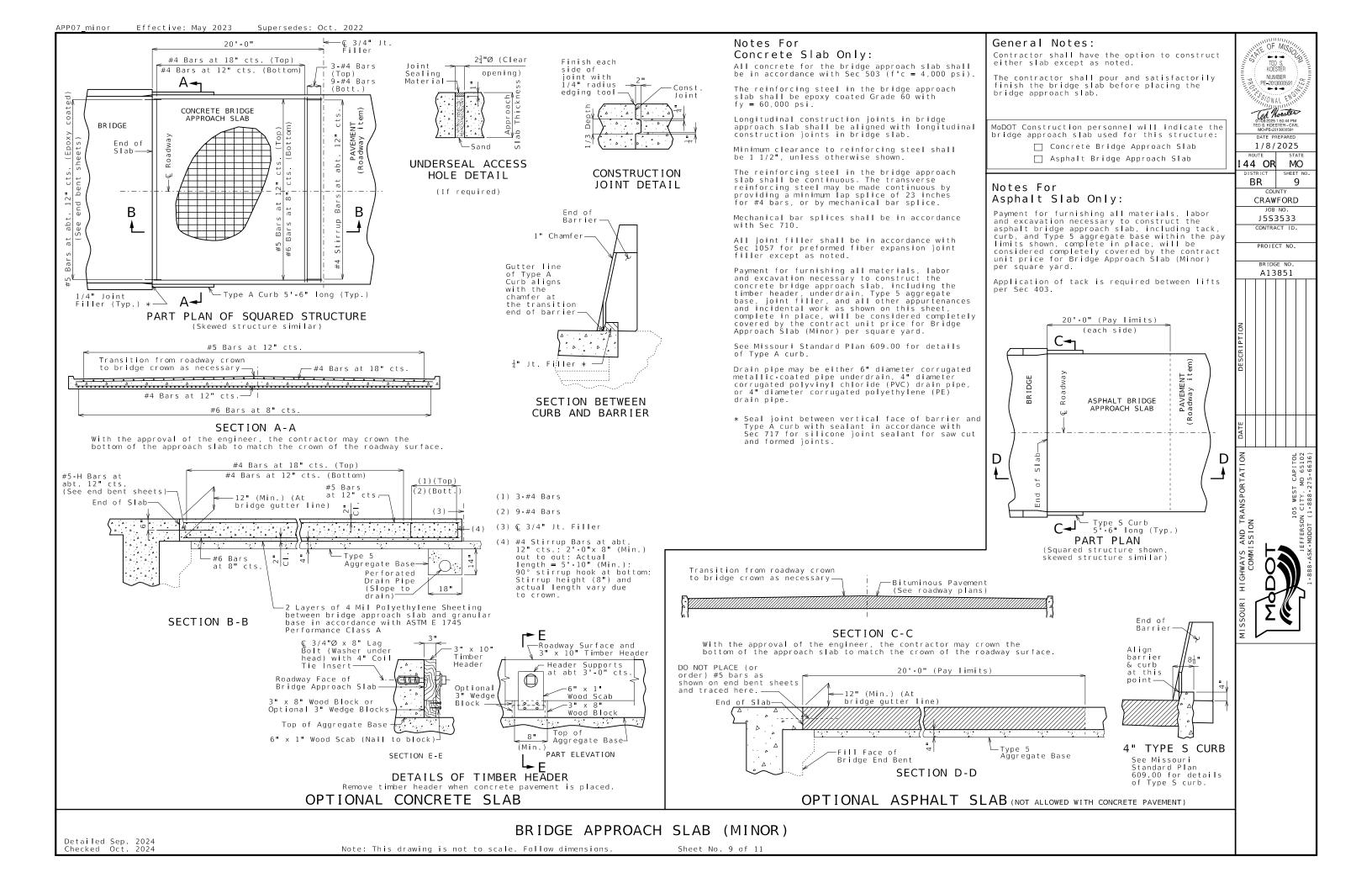
(1) Four feet long, centered on joint, slip-formed option only

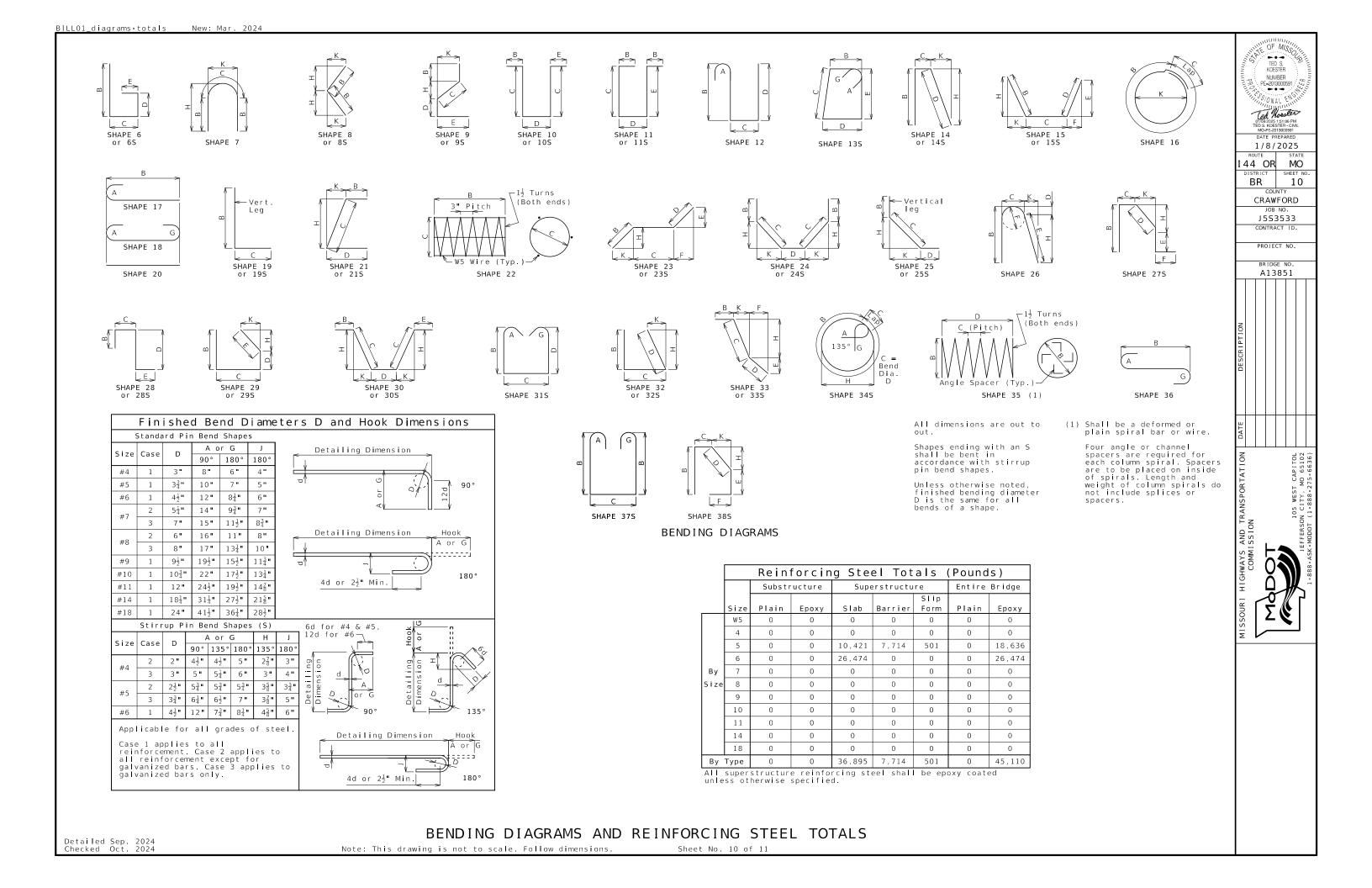
Detailed Sep. 2024 Checked Oct 2024

Sheet No. 7 of 11

TYPE D BARRIER







BILLO2 data New: Mar. 2024

	Bill of Reinforcing Steel							Bill of Reinforcing Steel									OF M/SS								
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		End Bents 1 & 4											1												01/08/2025 1:51:35 PM
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		Barrier																							A13831
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Nomi	nal len	gths are based on (out to	out dim	nensions sh	hown in	bending	diagrams and ar	e					•			Codes: (C = Requi	red coatings, wh	ere E =	Epoxy Coated and	G = Gal	vanized.		

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

All bars shall be Grade 60.

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

SH = Required shape, see bending diagrams.

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

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

Detailed Sep. 2024 Checked Oct. 2024

BILL OF REINFORCING STEEL Note: This drawing is not to scale. Follow dimensions.

Sheet No. 11 of 11