

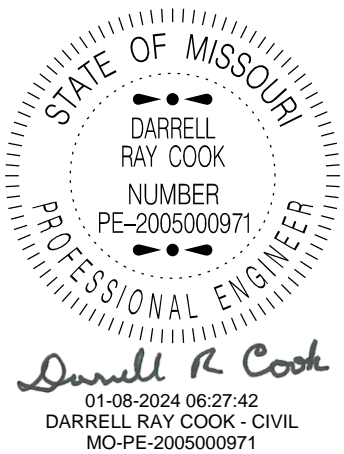
Job No.: JST0074  
Route: W, N, DD, Z, T, OO,  
MM, FF, WW, & HH  
County: Lawrence, Christian,  
Dade, Barry, & Greene

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(Job Special Provisions shall prevail over General Provisions whenever in conflict therewith.)

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	<p><b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b>          105 W. CAPITOL AVE.          JEFFERSON CITY, MO 65102          Phone 1-888-275-6636</p>
	<p>If a seal is present on this sheet, JSP's have been electronically sealed and dated.</p>
	<p>JOB NUMBER: JST0074          LAWRENCE, CHRISTIAN, DADE, BARRY, &amp; GREENE COUNTIES, MO          DATE PREPARED: 12/04/2023</p>
	<p>ADDENDUM DATE:</p>
<p>Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: ALL</p>	

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JOB SPECIAL PROVISION

A. General – State JSP-09-03J

**1.0 Description.** The Federal Government is not participating in the cost of construction of this project.

**1.1** This contract requires payment of the prevailing hourly rate of wages for each craft or type of worker required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations. The current State Wage Rates can be found on the Missouri Department of Transportation web page at [www.modot.org](http://www.modot.org) under "Doing Business with MoDOT", "Contractor Resources" for the applicable bid opening. This supplemental bidding document has important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

State Wage Rates

**1.2** The following documents are available on the Missouri Department of Transportation web page at [www.modot.org](http://www.modot.org) under "Doing Business with MoDOT"; "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications

Supplemental Plans to July 2023 Missouri Standard Plans  
For Highway Construction

These supplemental bidding documents contain all current revisions to the published versions and have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

B. Contract Liquidated Damages JSP-13-01C

**1.0 Description.** Liquidated Damages for failure or delay in completing the work on time for this contract shall be in accordance with Sec 108.8. The liquidated damages include separate amounts for road user costs and contract administrative costs incurred by the Commission.

**2.0 Period of Performance.** Prosecution of work is expected to begin on the date specified below in accordance with Sec 108.2. Regardless of when the work is begun on this contract, all work on all projects (job numbers) shall be completed on or before the Contract Completion date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

Notice to Proceed Date:	April 8, 2024
Contract Completion Date:	May 1, 2025

**2.1 Calendar Days.** The count of calendar days will begin on the date the contractor starts any construction operations on the project.

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Job Number	Calendar Days	Daily Road User Cost
JST0074	174	\$1800

**3.0 Liquidated Damages for Contract Administrative Costs.** Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **\$1500** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified contract completion date or calendar days.

**4.0 Liquidated Damages for Road User Costs.** Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged road user costs in accordance with Sec 108.8 in the amount specified in Section 2.1 for each calendar day, or partial day thereof, that the work is not fully completed. These damages are in addition to the contract administrative damages and any other damages as specified elsewhere in this contract.

C. Work Zone Traffic Management JSP-02-06N

**1.0 Description.** Work zone traffic management shall be in accordance with applicable portions of Division 100 and Division 600 of the Standard Specifications, and specifically as follows.

**1.1 Maintaining Work Zones and Work Zone Reviews.** The Work Zone Specialist (WZS) shall maintain work zones in accordance with Sec 616.3.3 and as further stated herein. The WZS shall coordinate and implement any changes approved by the engineer. The WZS shall ensure all traffic control devices are maintained in accordance with Sec 616, the work zone is operated within the hours specified by the engineer, and will not deviate from the specified hours without prior approval of the engineer. The WZS is responsible to manage work zone delay in accordance with these project provisions. When requested by the engineer, the WZS shall submit a weekly report that includes a review of work zone operations for the week. The report shall identify any problems encountered and corrective actions taken. Work zones are subject to unannounced inspections by the engineer and other departmental staff to corroborate the validity of the WZS's review and may require immediate corrective measures and/or additional work zone monitoring.

**1.2 Work Zone Deficiencies.** Failure to make corrections on time may result in the engineer suspending work. The suspension will be non-excusable and non-compensable regardless if road user costs are being charged for closures.

**2.0 Traffic Management Schedule.**

**2.1** Traffic management schedules shall be submitted to the engineer for review prior to the start of work and prior to any revisions to the traffic management schedule. The traffic management schedule shall include the proposed traffic control measures, the hours traffic control will be in place, and work hours.

**2.2** The traffic management schedule shall conform to the limitations specified in Sec 616 regarding lane closures, traffic shifts, road closures and other width, height and weight restrictions.

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**2.3** The engineer shall be notified as soon as practical of any postponement due to weather, material or other circumstances.

**2.4** In order to ensure minimal traffic interference, the contractor shall schedule lane closures for the absolute minimum amount of time required to complete the work. Lanes shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed lane is opened to traffic.

**2.5 Traffic Congestion.** The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of 10 minutes to prevent congestion from escalating to 15 minute or above threshold. If disruption of the traffic flow occurs and traffic is backed up in queues of 15 minute delays or longer, then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable.

#### **2.5.1 Traffic Safety.**

**2.5.1.1 Recurring Congestion.** Where traffic queues routinely extend to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway, the contractor shall extend the advance warning area, as approved by the engineer.

**2.5.1.2 Non-Recurring Congestion.** When traffic queues extend to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway infrequently, the contractor shall deploy a means of providing advance warning of the traffic congestion, as approved by the engineer. The warning location shall be no less than 1000 feet and no more than 0.5 mile in advance of the end of the traffic queue on divided highways and no less than 500 feet and no more than 0.5 mile in advance of the end of the traffic queue on undivided highways.

#### **3.0 Work Hour Restrictions.**

**3.1** Except for emergency work, as determined by the engineer, and long term lane closures required by project phasing, all lanes shall be scheduled to be open to traffic during the five major holiday periods shown below, from 12:00 noon on the last working day preceding the holiday until 6:00 a.m. on the first working day subsequent to the holiday unless otherwise approved by the engineer.

Memorial Day  
Labor Day  
Thanksgiving  
Christmas  
New Year's Day

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**3.1.1 Independence Day.** The lane restrictions specified in Section 3.1 shall also apply to Independence Day, except that the restricted periods shall be as follows:

<b>When Independence Day falls on:</b>	<b>The Holiday is Observed on:</b>	<b>Halt Lane Closures beginning at:</b>	<b>Allow Lane Closures to resume at:</b>
Sunday	Monday	Noon on Friday	6:00 a.m. on Tuesday
Monday	Monday	Noon on Friday	6:00 a.m. on Tuesday
Tuesday	Tuesday	Noon on Monday	6:00 a.m. on Wednesday
Wednesday	Wednesday	Noon on Tuesday	6:00 a.m. on Thursday
Thursday	Thursday	Noon on Wednesday	6:00 a.m. on Friday
Friday	Friday	Noon on Thursday	6:00 a.m. on Monday
Saturday	Friday	Noon on Thursday	6:00 a.m. on Monday

**3.2** The contractor shall not perform any construction operation on the roadway, roadbed or active lanes, including the hauling of material within the project limits, during restricted periods, holiday periods or other special events specified in the contract documents.

**4.0 Detours and Lane Closures.**

**4.1** When a changeable message sign (CMS) is provided, the contractor shall use the CMS to notify motorists of future traffic disruption and possible traffic delays one week before traffic is shifted to a detour or prior to lane closures. The CMS shall be installed at a location as approved or directed by the engineer. If a CMS with Communication Interface is required, then the CMS shall be capable of communication prior to installation on right of way. All messages planned for use in the work zone shall be approved and authorized by the engineer or its designee prior to deployment. When permanent dynamic message signs (DMS) owned and operated by MoDOT are located near the project, they may also be used to provide warning and information for the work zone. Permanent DMS shall be operated by the TMC, and any messages planned for use on DMS shall be approved and authorized by the TMC at least 72 hours in advance of the work.

**4.2** At least one lane of traffic in each direction shall be maintained at all times except for brief intervals of time required when the movement of the contractor’s equipment will seriously hinder the safe movement of traffic. Periods during which the contractor will be allowed to interrupt traffic will be designated by the engineer.

**5.0 Basis of Payment.** No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required to fulfill the above provisions, unless specified elsewhere in the contract document. All authorized changes in the traffic control plan shall be provided for as specified in Sec 616.

D. Emergency Provisions and Incident Management - SW

**1.0** The contractor shall have communication equipment on the construction site or immediate access to other communication systems to request assistance from the police or other emergency agencies for incident management. In case of traffic accidents or the need for police to direct or restore traffic flow through the job site, the contractor shall notify police or other emergency agencies immediately as

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needed. The resident engineer's office shall also be notified when the contractor requests emergency assistance.

**2.0** In addition to the 911 emergency telephone number for ambulance, fire or police services, the following agencies may also be notified for accident or emergency situation within the project limits.

Missouri Highway Patrol – Troop D: 417-895-6868	
MoDOT Customer Service: 417-895-7600	
Lawrence County Sheriff (417) 466-2131	Lawrence County Office of Emergency (417) 461-1077
Christian County Sheriff (417) 582-5330	Christian County Office of Emergency (417) 582-5400
Dade County Sheriff (417) 637-2312	Dade County Office of Emergency (417) 637-2532
Barry County Sheriff (417) 847-6556	Barry County Office of Emergency (417) 847-3121
Greene County Sheriff (417) 868-4040	Greene County Office of Emergency (417) 869-6040

Emergency Only Numbers
911 *55 cell phone – Missouri Highway Patrol 417-864-1160 – MoDOT Incident Management Coordinator

**2.1** This list is not all inclusive. Notification of the need for wrecker or tow truck services will remain the responsibility of the appropriate police agency.

**2.2** The contractor shall notify enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes this notification with enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.

**3.0** No direct pay will be made to the contractor to recover the cost of the communication equipment, labor, materials or time required to fulfill the above provisions.

E. Project Contact for Contractor/Bidder Questions JSP-96-05

All questions concerning this project during the bidding process shall be forwarded to the project contact listed below.

Ray Cook, Project Contact  
 Southwest District  
 3025 East Kearney  
 Springfield, MO 65803

Telephone Number: 417-895-7644  
 Email: [Darrell.Cook@modot.mo.gov](mailto:Darrell.Cook@modot.mo.gov)

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All questions concerning the bid document preparation can be directed to the Central Office – Design at (573) 751-2876.

F. Add Alternate Sections

**1.0 Description.** This project requires bidders to bid on additional contract work that will be considered for award. The award of this project does not guarantee work for the add alternate sections.

Routes	Proposal Section Description
W, N, DD, Z, T, OO, MM, FF	Base
Route WW	Add Alternate A
Route HH	Add Alternate B

Note: See plans for a breakdown of all quantities for each add alternate section.

**2.0 Consideration of Bids.** The contractor shall submit a bid for each add alternate section. The Commission reserves the right to award, to the lowest responsible bidder, the combination of add alternate sections that will allow the most work to be completed within the Commission’s budget.

1. Base + Add Alt A + Add Alt B
2. Base + Add Alt A
3. Base

**2.1 Budget.** The Commission will award the necessary add alternate sections of projects in order to meet its budget of \$16,974,784.00 committed for the following contracts:

Contract Number	Job Number
230818-G02	JST0044
230915-G08	JST0045
230915-G09	JST0046
231020-G06	JST0047

**2.2** The Commission reserves the right to award the combination of highest priority add alternate sections over the Commission’s budget as long as the low bidder does not change and the award of the combination of highest priority alternate sections does not exceed more than ten percent or \$250,000 of the Commission’s budget, whichever is less.

**2.3** The Commission’s budget is the basis for award of add alternates but not the basis for award of the base section. The base section of the contract will be awarded or rejected in accordance with Sec 100.

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**2.4** The awarded bidder will be notified, on MoDOT's website, of the Commission's selection of the combination of add alternate sections to be awarded the day of the Commission meeting.

**3.0 Bid Bond Requirements.** The contractor shall be required to obtain a bid bond for 5% of the total bid amount for the base bid and all add alternates. This bid bond will be considered applicable to the proposed work for any option.

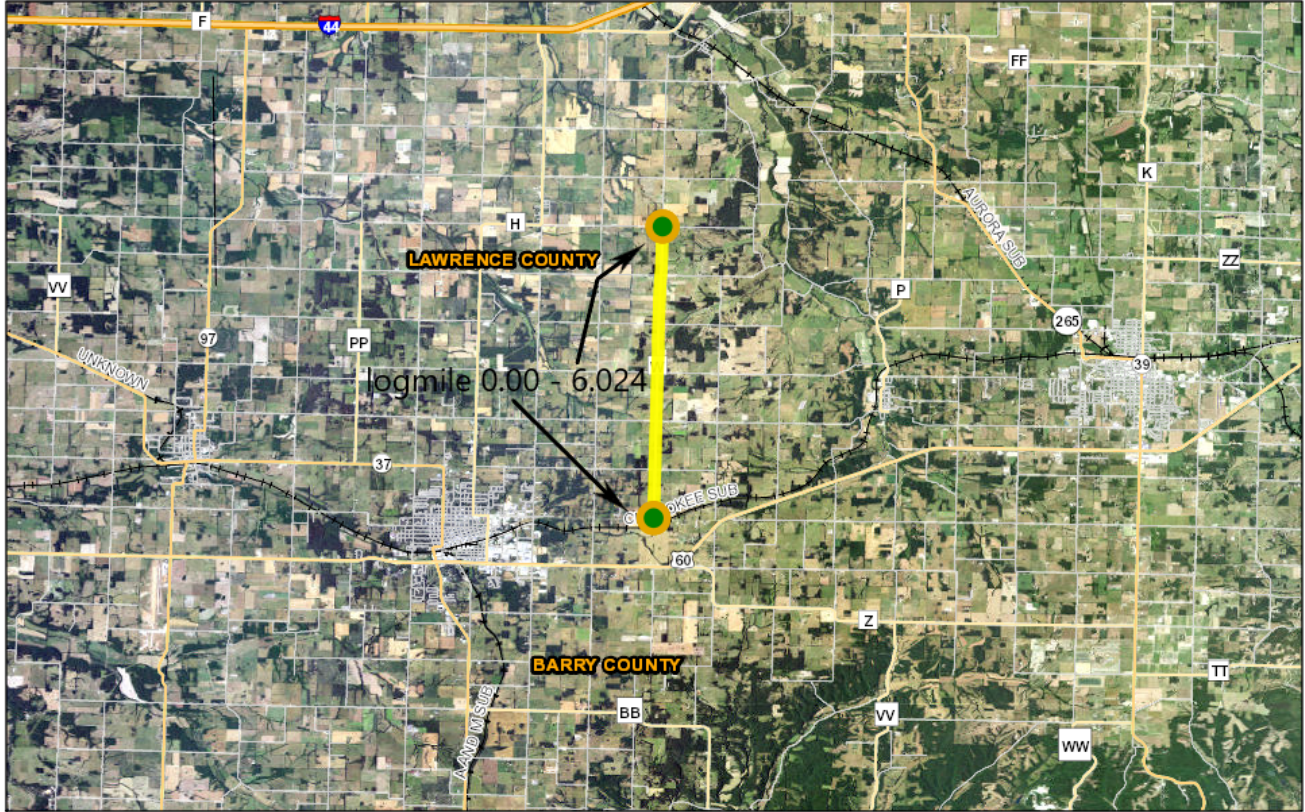
**4.0 Basis of Payment.** The accepted quantities of the chosen combination of base plus add alternate sections will be paid for by the contract unit bid price for item numbers found within the schedule of items for each section.

G. Project Details and Quantities – Lawrence County Route W (Base)

**1.0 Description.** This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 6.024. The total length of pavement limits are 6.024 miles with a total average width of 20 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

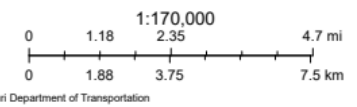
**NONE**

Job No.: JST0074  
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10/31/2023

st\_airpt06 IS MO CRD1 RR nhdFlowline dnrlands County IS  
 st\_airpt06 US RT CST1 AL LP BU SP City2 mdcMgmtArea County US



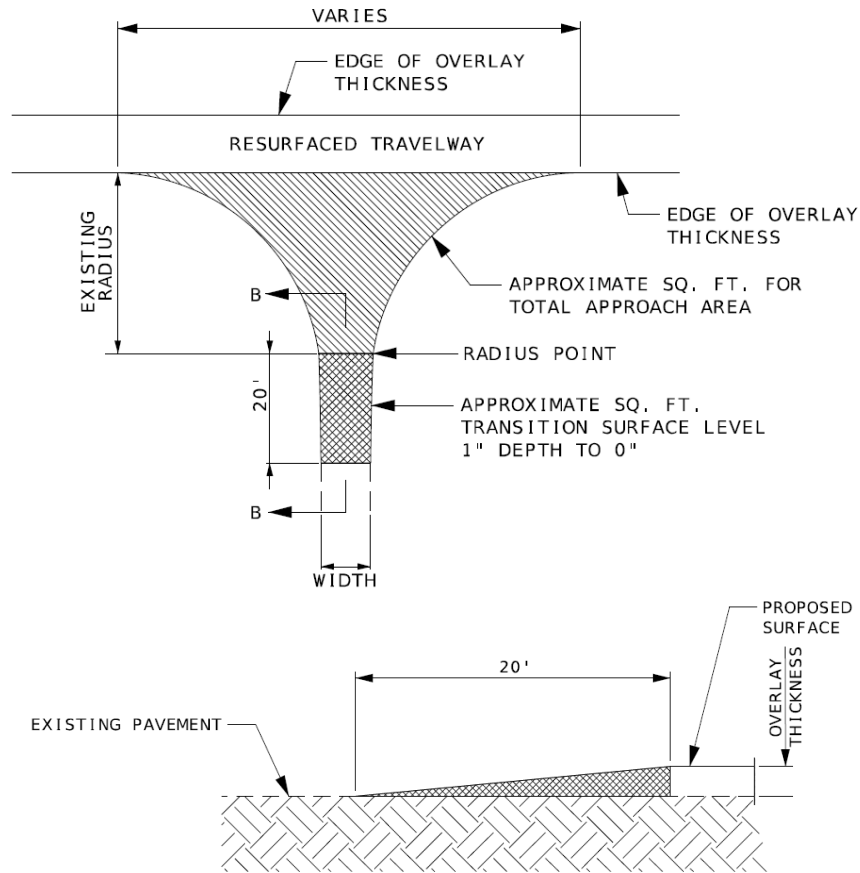
**2.0 Mix and Pavement Transitions.**

**2.1** 1" Plant Mix Bituminous Surface PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd<sup>2</sup> the entire width of the traveled way for the length of the pavement limits.

**2.2** Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

**2.3** Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

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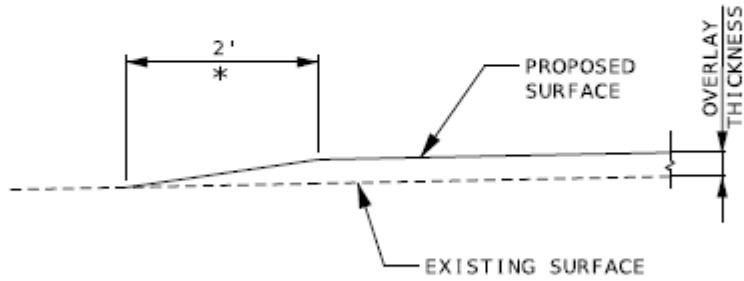
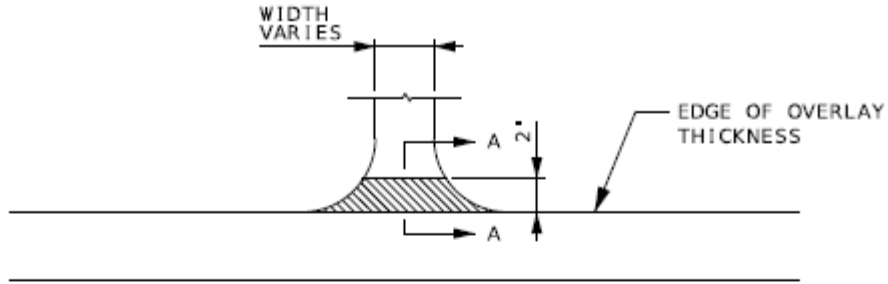


SECTION B-B

TYPICAL STATE ROUTE JUNCTION  
 (COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).

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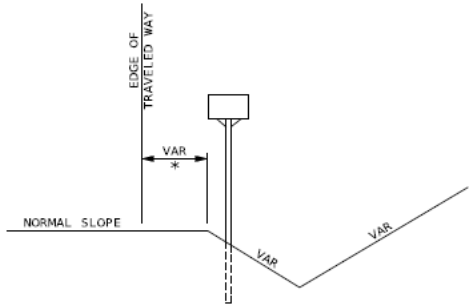
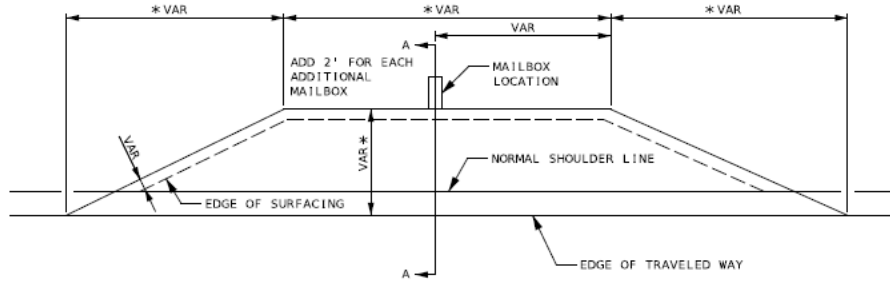
SECTION A-A  
TYPICAL ENTRANCE - NO SHOULDER  
(FIELD, PRIVATE OR COUNTY ROAD)  
\*TAPER AT 1:1 FOR FIELD ENTRANCE

2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

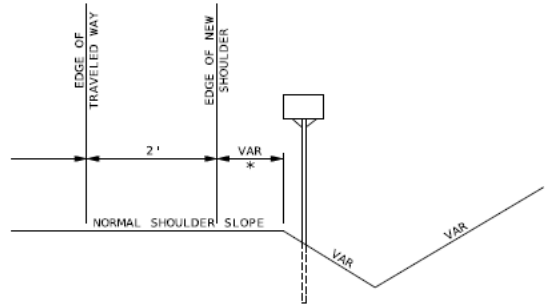
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NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND  
 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL  
 MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

TYPICAL MAILBOX TURNOUT  
 \* AS APPROVED BY THE ENGINEER



SECTION A-A  
 NO SHOULDER



SECTION A-A  
 SHOULDER

**3.0 Pavement and Coldmilling Quantities.**

3.1 Pavement quantities are as follows:

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BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	W	0.019	20	6.22		BEGINNING OF PROJECT TRANSITION
0.019	6.005	W	5.986	20	3934.42	5618.9	
6.005	6.024	W	0.019	20	6.22		END OF PROJECT TRANSITION
					602.39		100 TONS/MILE
					11.58	28.5	MAILBOX/ENTRANCES (ASSUME 30' ENTRANCE WIDTHS)
TOTALS					4,560.83	5647.4	
USE					4,560.8	5647	

**3.2 Coldmilling Quantities are as follows:**

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	W	100	20	222.2	22.2	BEGINNING OF PROJECT
6.005	6.024	W	100	20	222.2	22.2	END OF PROJECT
TOTALS					444.4	44.4	
USE					444	44	

**4.0 Temporary Traffic Control Plans.** See [Standard Plans 616.20](#) for standard temporary traffic control requirements.

**4.1 Construction signs and channelizers are as follows:**

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CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.²)	DESCRIPTION
11	WO3-4	48 X 48	16	1	16	BE PREPARED TO STOP
36	WO8-11	48 X 48	16	14	224	UNEVEN LANES
35	WO8-12	48 X 48	16	8	128	NO CENTER LINE
	WO20-1	48 X 48	16	16	256	ROAD/BRIDGE/RAMP WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 24	16	5	80	FLAGGER (SYMBOL, WITH FLAGS)
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	0	0	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	1	1.5	PILOT CAR IN USE WAIT & FOLLOW (SMALLER)
56	CONST-7	72 X 36	18	2	36	RATE OUR WORKZONE
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE
					874.5	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					875	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

**4.2 Other Traffic Control Devices and Mobilization are as follows:**

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

**5.0 Pavement Marking.** Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	4" INT.	4" SOLID	4" SOLID	REMARKS
FROM	TO			YELLOW (FT)	YELLOW (FT)	WHITE (FT)	
0.000	6.024	W	31806.72	0	63613.44	63613.44	
			TOTALS	0	63,613	63,613	ADJUST PAINT TO EXISTING
			USE	0	63,613	63,613	FIELD CONDITIONS.
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.							

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

**6.0 Permanent Aggregate Edge Treatment.** Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR 200 TON/MI (TON)	PRIME MC800 590 GAL/MI (GAL)	REMARKS
FROM	TO					
0.000	6.024	W	6.024	1204.8	3554.2	
			TOTALS	1,204.8	3554.2	
			USE	1,204.8	3,555	

**7.0 Gravel (A) or Crushed Stone (B).** Gravel (A) or Crushed Stone (B) quantities are as follows:

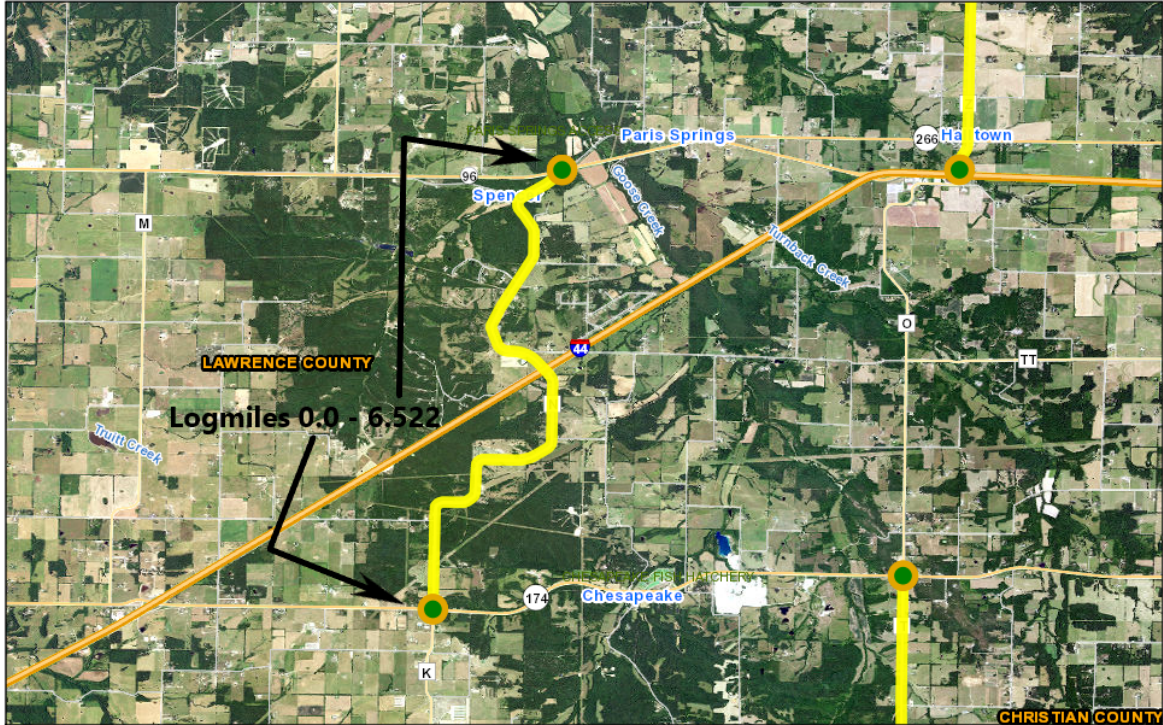
GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	116	60	176	GRAVEL (A) OR CRUSHED STONE (B)

H. Project Details and Quantities – Lawrence County Route N (Base)

- 2. Description.** This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 6.522. The total length of pavement limits are 6.522 miles with a total average width of 20 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

EXCEPTIONS				
Route -County	APPROX. LOG MILE		Length (FT)	COMMENTS/BRIDGE NUMBERS
	FROM	TO		
RTE. N - LAWRENCE	2.878	2.918	211.2	BRIDGE R0144
		TOTAL	211.2	

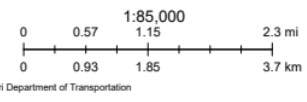
Job No.: JST0074  
 Route: W, N, DD, Z, T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene



10/31/2023

st\_airpt06 IS MO CRD1 RR nhdFlowline dnrlands  
 st\_airpt06 US RT CST1 AL LP BU SP City2 mdcMgmtArea

County IS  
 County US



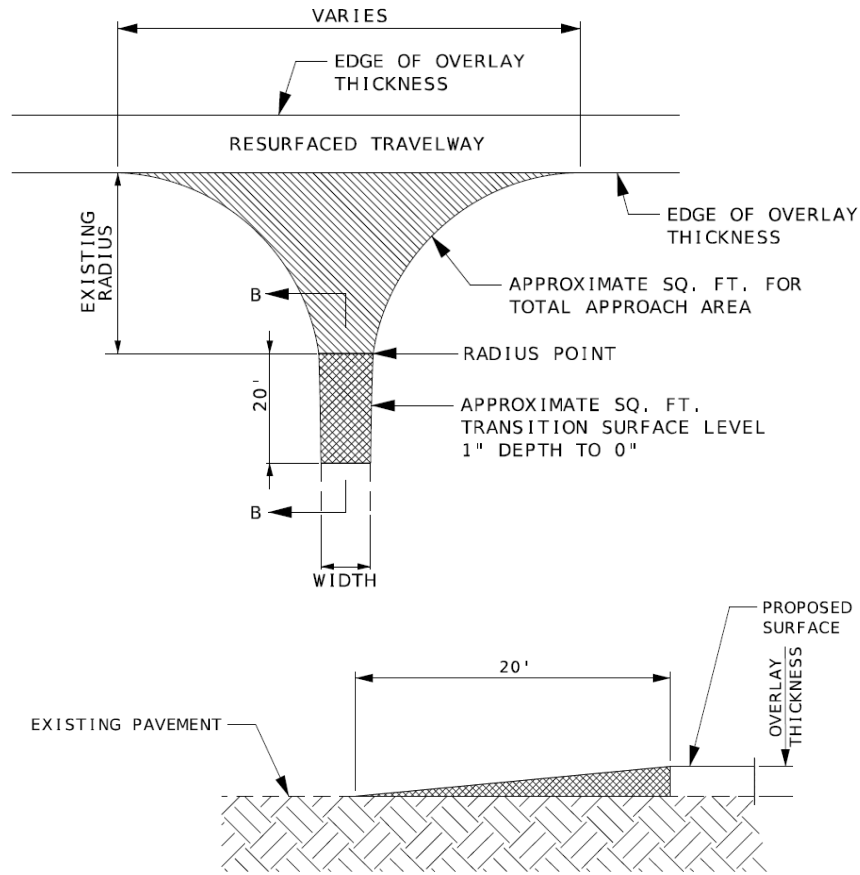
**2.0 Mix and Pavement Transitions.**

**2.1** 1" Plant Mix Bituminous Surface PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd<sup>2</sup> the entire width of the traveled way for the length of the pavement limits.

**2.2** Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

**2.3** Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

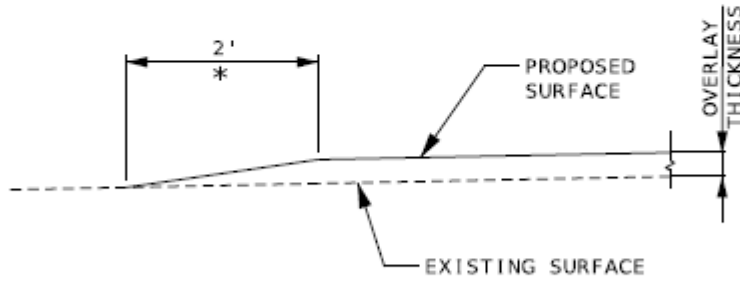
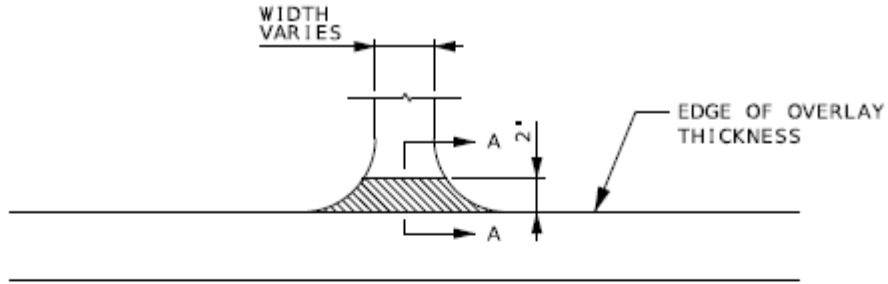


SECTION B-B

TYPICAL STATE ROUTE JUNCTION  
 (COLD MIX ROUTE TRANSITION)

**2.4** The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene



SECTION A-A

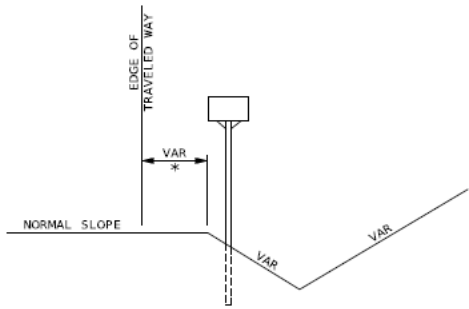
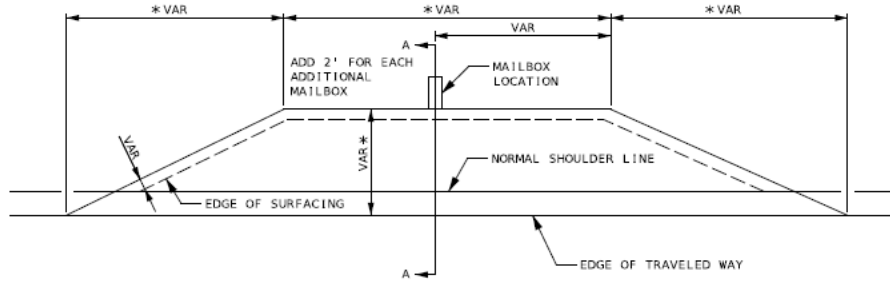
TYPICAL ENTRANCE - NO SHOULDER  
(FIELD, PRIVATE OR COUNTY ROAD)  
\*TAPER AT 1:1 FOR FIELD ENTRANCE

2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

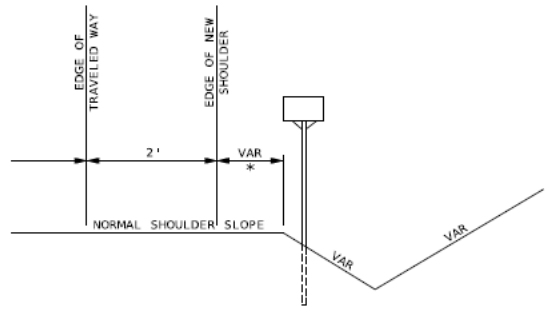
Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND  
 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL  
 MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

TYPICAL MAILBOX TURNOUT  
 \* AS APPROVED BY THE ENGINEER



SECTION A-A  
 NO SHOULDER



SECTION A-A  
 SHOULDER

**3.0 Pavement and Coldmilling Quantities.**

3.1 Pavement quantities are as follows:

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	N	0.019	20	12.44		BEGIN PROJECT TRANSITION
0.019	2.859	N	2.840	20	1866.66	2665.9	
2.859	2.878	N	0.019	20	12.48	17.8	TO BRIDGE R0144
2.918	2.937	N	0.019	20	12.48	17.8	FROM BRIDGE R0144
2.937	6.503	N	3.566	20	2343.84	3347.3	
6.503	6.522	N	0.019	20	12.44		END OF PROJECT TRANSITION
					648.20		100 TONS/MILE
					14.52	36.0	MAILBOX/ENTRANCES
TOTALS					4,923.08	6084.8	ASSUME 30' ENTRANCE WIDTHS
USE					4,923.1	6085	

3.2 Coldmilling Quantities are as follows:

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	N	100	20	222.2	22.2	BEGIN PROJECT
2.859	2.878	N	100	20	222.2	22.2	TO BRIDGE R0144
2.918	2.937	N	100	20	222.2	22.2	FROM BRIDGE R0144
6.503	6.522	N	100	20	222.2	22.2	END OF PROJECT
TOTALS					444.4	44.4	
USE					444	44	

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.²)	DESCRIPTION
11	WO3-4	48 X 48	16	3	48	BE PREPARED TO STOP
36	WO8-11	48 X 48	16	14	224	UNEVEN LANES
35	WO8-12	48 X 48	16	8	128	NO CENTER LINE
	WO20-1	48 X 48	16	13	208	ROAD/BRIDGE/RAMP WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 24	16	7	112	FLAGGER (SYMBOL, WITH FLAGS)
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	0	0	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	3	4.5	PILOT CAR IN USE WAIT & FOLLOW (SMALLER)
56	CONST-7	72 X 36	18	2	36	RATE OUR WORKZONE
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE
					893.5	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					894	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

**4.2 Other Traffic Control Devices and Mobilization are as follows:**

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

**5.0 Pavement Marking.** Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	4" INT.	4" SOLID	4" SOLID	REMARKS
FROM	TO			YELLOW (FT)	YELLOW (FT)	WHITE (FT)	
0.000	6.522	N	34436.16	0	68872.32	68872.32	
			TOTALS	0	68,872	68,872	ADJUST PAINT TO EXISTING
			USE	0	68,872	68,872	FIELD CONDITIONS.
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.							

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

**6.0 Permanent Aggregate Edge Treatment.** Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR 200 TON/MI (TON)	PRIME MC800 590 GAL/MI (GAL)	REMARKS
FROM	TO					
0.000	2.878	N	2.878	575.6	1698.0	TO BRIDGE R0144
2.918	6.522	N	3.604	720.8	2126.4	FROM BRIDGE R0144
			TOTALS	1,296.4	3824.4	
			USE	1,296.4	3,825	

**7.0 Gravel (A) or Crushed Stone (B).** Gravel (A) or Crushed Stone (B) quantities are as follows:

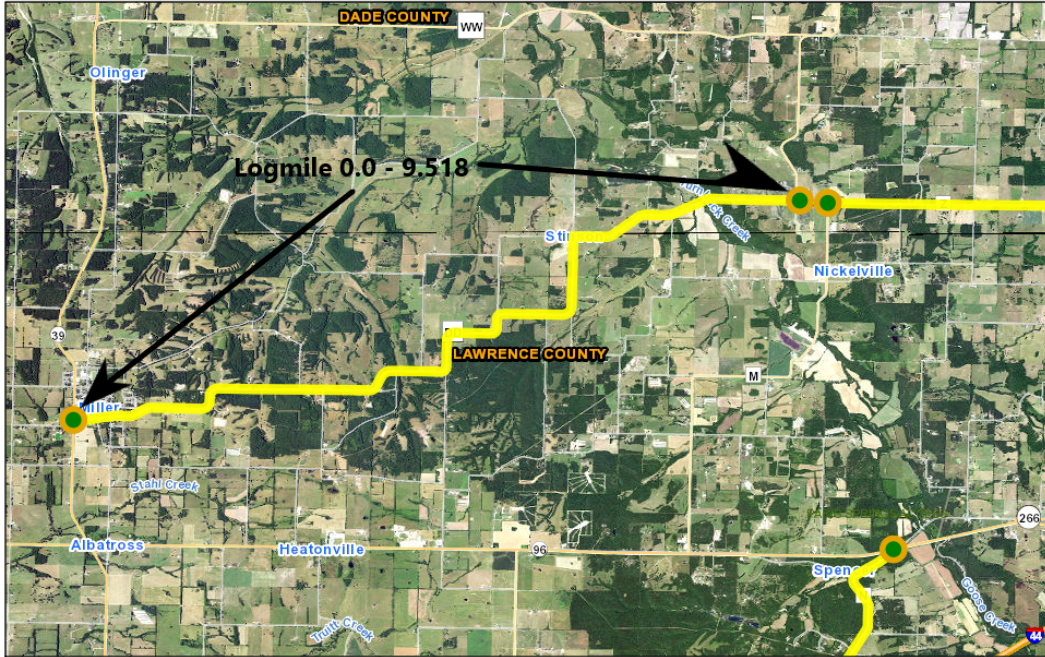
GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	168	54	222	GRAVEL (A) OR CRUSHED STONE (B)

I. Project Details and Quantities – Lawrence County Route DD (Base)

**3. Description.** This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 9.518. The total length of pavement limits are 9.518 miles with a total average width of 20 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

EXCEPTIONS				
Route -County	APPROX. LOG MILE		Length (FT)	COMMENTS/BRIDGE NUMBERS
	FROM	TO		
Rte. DD - Lawrence	8.475	8.515	211.2	B0419
		TOTAL	211.2	

Job No.: JST0074  
 Route: W, N, DD, Z, T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene



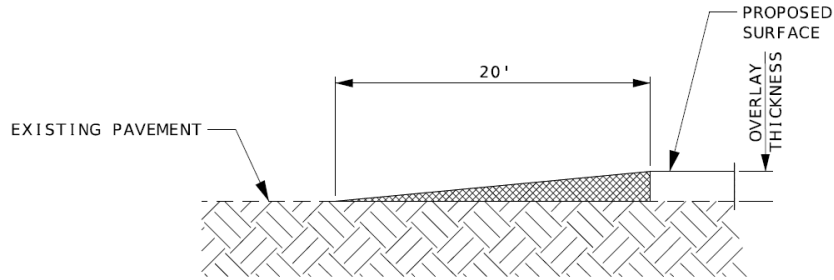
10/31/2023

st_airpt06	IS	MO	CRD1	RR	nhdFlowline	dnrlands	County	IS	0	0.57	1.15	2.3	mi
st_airpt06	US	RT	CST1	ALLP BU SP	City2	mdcMgmtArea	County	US	0	0.93	1.85	3.7	km

Missouri Department of Transportation



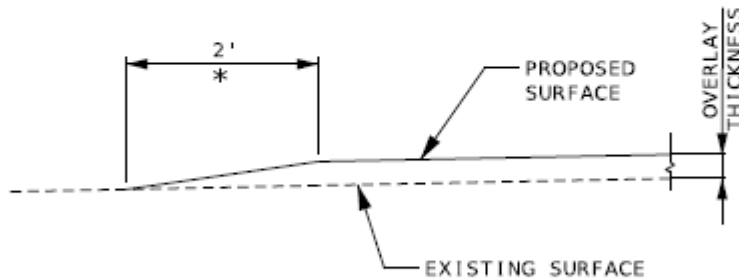
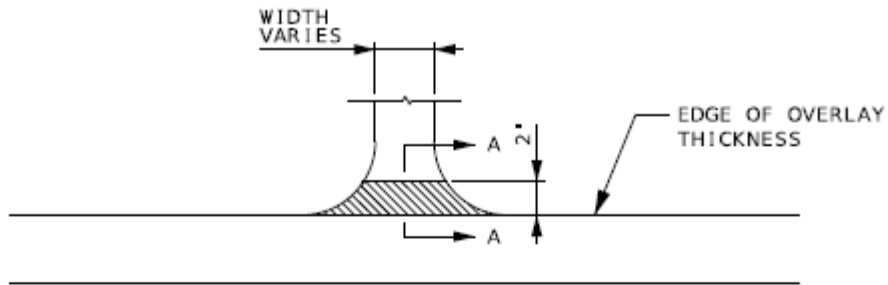
Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene



SECTION B-B

TYPICAL STATE ROUTE JUNCTION  
 (COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).



SECTION A-A

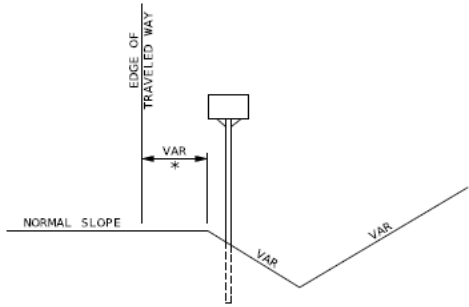
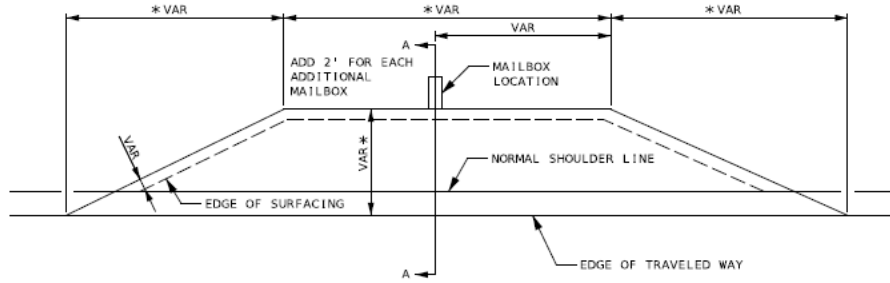
TYPICAL ENTRANCE - NO SHOULDER  
 (FIELD, PRIVATE OR COUNTY ROAD)  
 \*TAPER AT 1:1 FOR FIELD ENTRANCE

2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

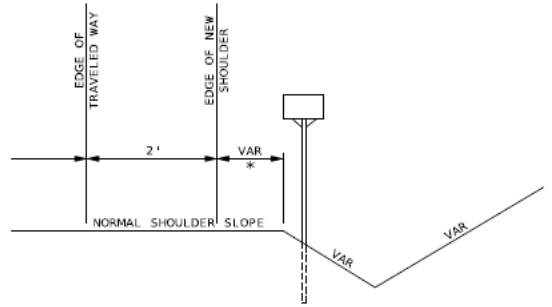
Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND  
 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL  
 MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

TYPICAL MAILBOX TURNOUT  
 \* AS APPROVED BY THE ENGINEER



SECTION A-A  
 NO SHOULDER



SECTION A-A  
 SHOULDER

3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.556	DD	0.556	20	182.72		BEGIN PROJECT (MILL AND FILL)
0.556	0.575	DD	0.019	20	12.44		DEPTH TRANSITION
0.575	8.456	DD	7.881	20	5179.97	7397.7	
8.456	8.475	DD	0.019	20	12.44		TO BRIDGE B0419 TRANSITION
8.515	8.534	DD	0.019	20	12.44		FROM BRIDGE B0419 TRANSITION
8.534	9.499	DD	0.965	20	634.32	905.9	
9.499	9.518	DD	0.019	20	12.43		END PROJECT TRANSITION
					947.83		100 TONS/MILE
					30.04	77.0	MAILBOX/ENTRANCES
TOTALS					7,024.64	8380.6	
USE					7,024.6	8381	

3.2 Coldmilling Quantities are as follows:

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.556	0.575	DD	100	20	222.2	22.2	DEPTH TRANSITION FROM MILL & FILL
8.456	8.475	DD	100	20	222.2	22.2	TO BRIDGE B0419 TRANSITION
8.515	8.534	DD	100	20	222.2	22.2	FROM BRIDGE B0419 TRANSITION
9.499	9.518	DD	100	20	222.2	22.2	END OF PROJECT TRANSITION
TOTALS					888.8	88.9	
USE					889	89	

COLDMILLING (3 IN. THICK OR LESS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.556	DD	2936	20	6523.7	652.4	MILL AND FILL THROUGH TOWN
TOTALS					6,523.7	652.4	
USE					6,524	652	

4.0 Temporary Traffic Control Plans. See [Standard Plans 616.20](#) for standard temporary traffic control requirements.

4.1 Construction signs and channelizers are as follows:

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.2)	DESCRIPTION
11	WO3-4	48 X 48	16	2	32	BE PREPARED TO STOP
36	WO8-11	48 X 48	16	20	320	UNEVEN LANES
35	WO8-12	48 X 48	16	10	160	NO CENTER LINE
	WO20-1	48 X 48	16	32	512	ROAD/BRIDGE/RAMP WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 24	16	6	96	FLAGGER (SYMBOL, WITH FLAGS)
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	0	0	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	2	3	PILOT CAR IN USE WAIT & FOLLOW (SMALLER)
56	CONST-7	72 X 36	18	2	36	RATE OUR WORKZONE
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE
					1292	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					1292	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Other Traffic Control Devices, Mobilization and Contractor Furnished Surveying and Staking are as follows:

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS								
APPROX. LOG MILE		ROUTE	LENGTH (FT)	4" INT.	4" SOLID	4" SOLID	30"	REMARKS
FROM	TO			YELLOW (FT)	YELLOW (FT)	WHITE (FT)	MIDBLOCK (EA)	
0.000	9.518	DD	50255.04	0	100510.08	100510.08	5	
			TOTALS	0	100,510	100,510	5	ADJUST PAINT TO EXISTING
			USE	0	100,510	100,510	5	FIELD CONDITIONS.

NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.

Job No.: JST0074  
Route: W, N, DD, Z, T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

**6.0 Permanent Aggregate Edge Treatment.** Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR 200 TON/MI (TON)	PRIME MC800 590 GAL/MI (GAL)	REMARKS
FROM	TO					
0.000	8.475	DD	8.475	1695.0	5000.3	TO BRIDGE B0419
8.515	9.518	DD	1.003	200.6	591.8	FROM BRIDGE B0419
			TOTALS	1,895.6	5592.0	
			USE	1,895.6	5,593	

**7.0 Gravel (A) or Crushed Stone (B).** Gravel (A) or Crushed Stone (B) quantities are as follows:

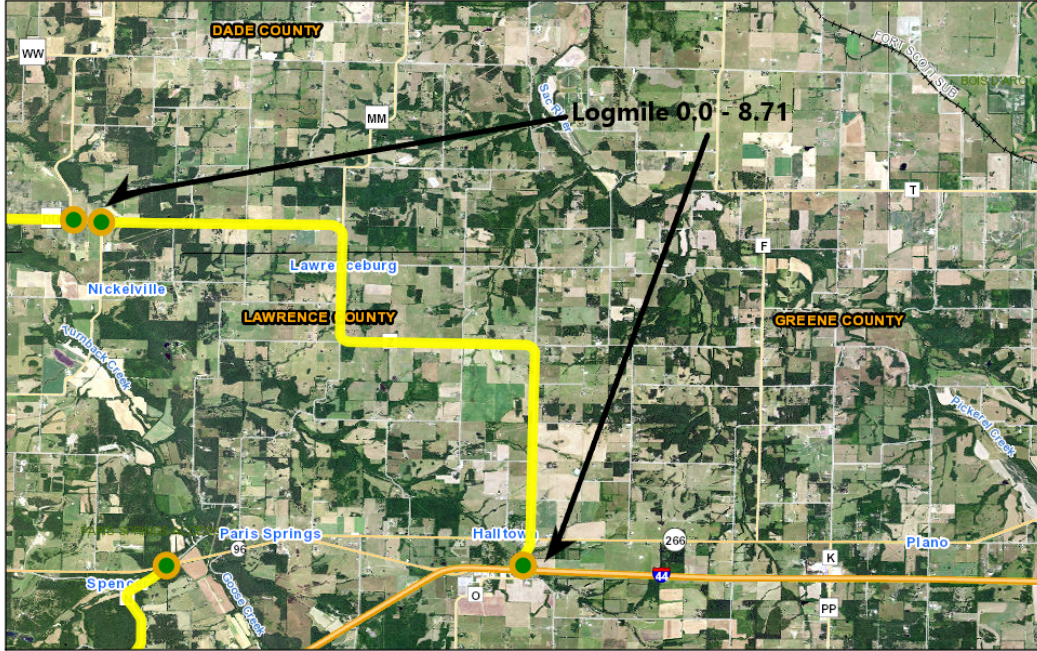
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	308	156	464	GRAVEL (A) OR CRUSHED STONE (B)

J. Project Details and Quantities – Lawrence County Route Z (Base)

**4. Description.** This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 8.710. The total length of pavement limits are 8.710 miles with a total average width of 20 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

EXCEPTIONS				
Route -County	APPROX. LOG MILE		Length (FT)	COMMENTS/BRIDGE NUMBERS
	FROM	TO		
RTE. Z - LAWRENCE	8.350	8.354	21.12	ROUTE 266 INTERSECTION
		TOTAL	21.12	

Job No.: JST0074  
 Route: W, N, DD, Z, T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene



10/31/2023

st_airpt06	IS	MO	CRD1	RR	nhdFlowline	dnriands	County	IS	0	0.57	1.15	2.3	mi
st_airpt06	US	RT	CST1	AL LP BU SP	City2	mdcMgmtArea	County	US	0	0.93	1.85	3.7	km

Missouri Department of Transportation

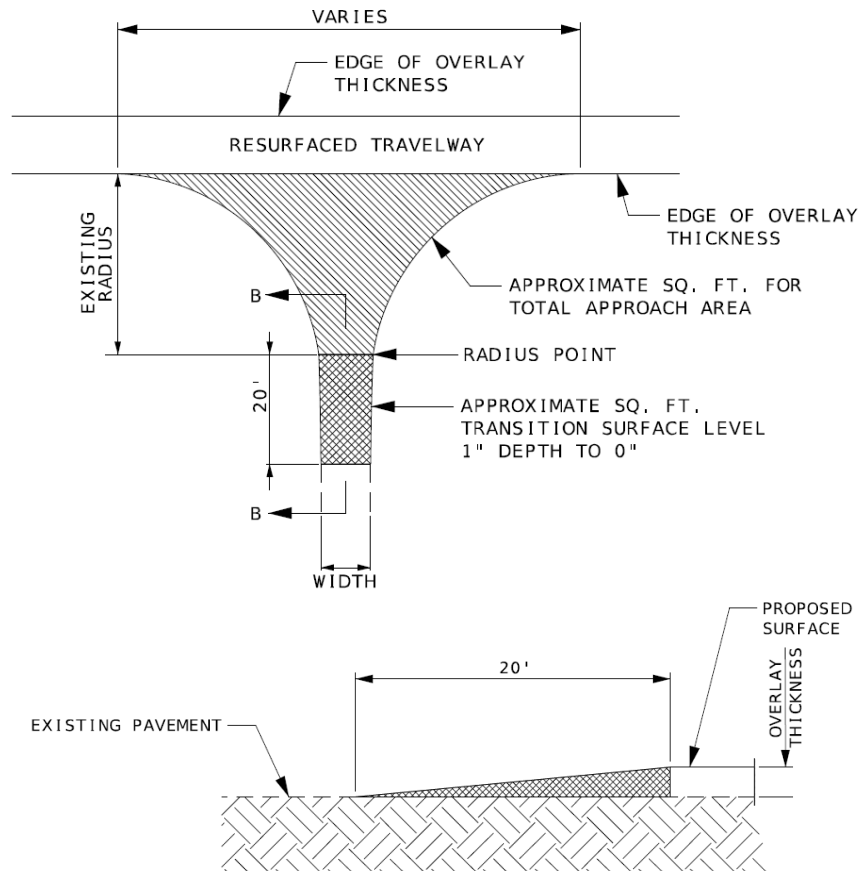
Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

**2.0 Mix and Pavement Transitions.**

**2.1** 1" Plant Mix Bituminous Surface PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd<sup>2</sup> the entire width of the traveled way for the length of the pavement limits.

**2.2** Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

**2.3** Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

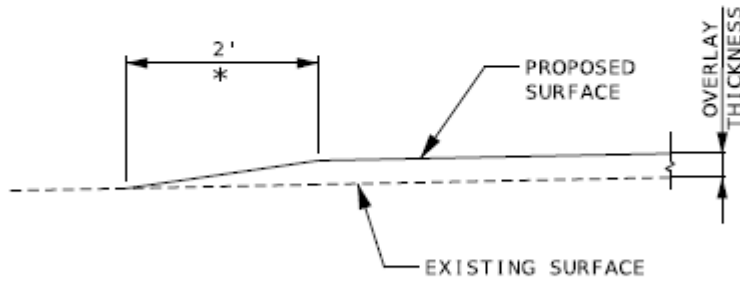
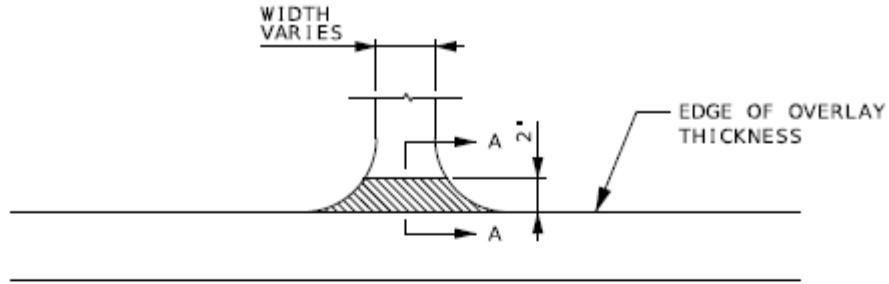


SECTION B-B

TYPICAL STATE ROUTE JUNCTION  
 (COLD MIX ROUTE TRANSITION)

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).



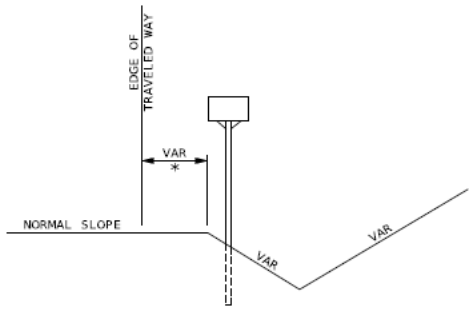
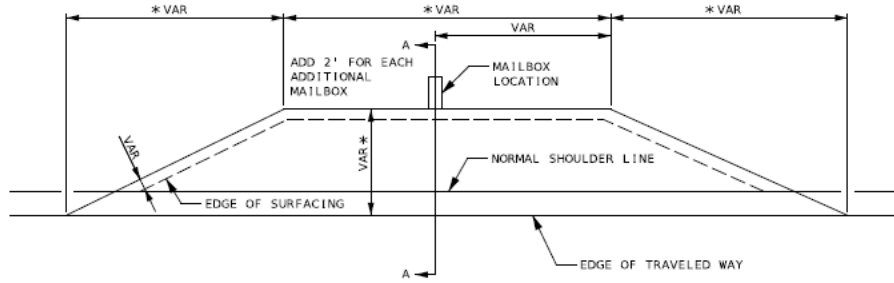
SECTION A-A  
TYPICAL ENTRANCE - NO SHOULDER  
(FIELD, PRIVATE OR COUNTY ROAD)  
\*TAPER AT 1:1 FOR FIELD ENTRANCE

2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

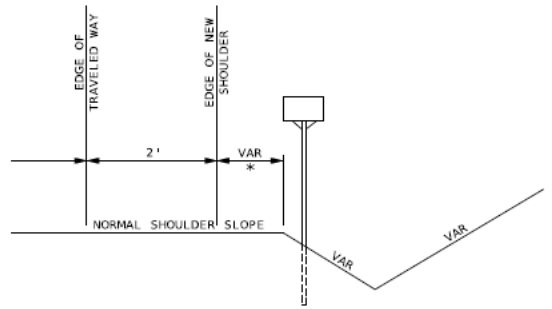
Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND  
 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL  
 MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

TYPICAL MAILBOX TURNOUT  
 \* AS APPROVED BY THE ENGINEER



SECTION A-A  
 NO SHOULDER



SECTION A-A  
 SHOULDER

3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

Job No.: JST0074  
Route: W, N, DD, Z, T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING								
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	FOG SEAL (GAL)	REMARKS
FROM	TO							
0.000	0.019	Z	0.019	20	6.22			BEGIN PROJECT TRANSITION
0.019	8.350	Z	8.331	20	5368.10	7819.8		
8.350	8.354							ROUTE 266 EXCEPTION
8.354	8.710	Z	0.356	20	114.70		501.2	MILL AND FILL/FOG SEAL SHDR
2.498	2.539	Z	0.041	VAR	30.88	44.8		ROUTE MM INTERSECTION
					874.70			100 TONS/MILE
					308.68	209.5		MAILBOX/ENTRANCES
TOTALS					6,703.28	8074.1	501.2	
USE					6,703.3	8074	501	

**3.2 Coldmilling Quantities are as follows:**

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	Z	100	20	222.2	22.2	BEGIN PROJECT TRANSITION
8.331	8.350	Z	100	21	222.2	22.2	TO ROUTE 266
TOTALS					444.4	44.4	
USE					444	44	

COLDMILLING (3 IN. THICK OR LESS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
8.354	8.710	Z	1880	20	4177.1	417.7	MILL AND FILL UNTIL END OF PROJECT
TOTALS					4,177.1	417.7	
USE					4,177	418	

**4.0 Temporary Traffic Control Plans.** See [Standard Plans 616.20](#) for standard temporary traffic control requirements.

**4.1 Construction signs and channelizers are as follows:**

Job No.: JST0074  
Route: W, N, DD, Z, T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.2)	DESCRIPTION
11	WO3-4	48 X 48	16	2	32	BE PREPARED TO STOP
36	WO8-11	48 X 48	16	18	288	UNEVEN LANES
35	WO8-12	48 X 48	16	10	160	NO CENTER LINE
	WO20-1	48 X 48	16	23	368	ROAD/BRIDGE/RAMP WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 24	16	6	96	FLAGGER (SYMBOL, WITH FLAGS)
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	1	8.75	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	1	1.5	PILOT CAR IN USE WAIT & FOLLOW (SMALLER)
56	CONST-7	72 X 36	18	2	36	RATE OUR WORKZONE
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE
					1123.25	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					1124	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Other Traffic Control Devices, Mobilization, and Contractor Furnished Surveying and Staking are as follows:

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	4" INT.	4" SOLID	4" SOLID	REMARKS
FROM	TO			YELLOW (FT)	YELLOW (FT)	WHITE (FT)	
0.000	8.710	Z	45988.8	0	91977.6	91977.6	
			TOTALS	0	91,978	91,978	ADJUST PAINT TO EXISTING
			USE	0	91,978	91,978	FIELD CONDITIONS.
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.							

Job No.: JST0074  
 Route: W, N, DD, Z, T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

**6.0 Permanent Aggregate Edge Treatment.** Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR 200 TON/MI (TON)	PRIME MC800 590 GAL/MI (GAL)	REMARKS
FROM	TO					
0.000	8.350	Z	8.35	1670.0	4926.5	BEGIN PROJECT TO ROUTE 266
			TOTALS	1,670.0	4926.5	
			USE	1,670.0	4,927	

**7.0 Gravel (A) or Crushed Stone (B).** Gravel (A) or Crushed Stone (B) quantities are as follows:

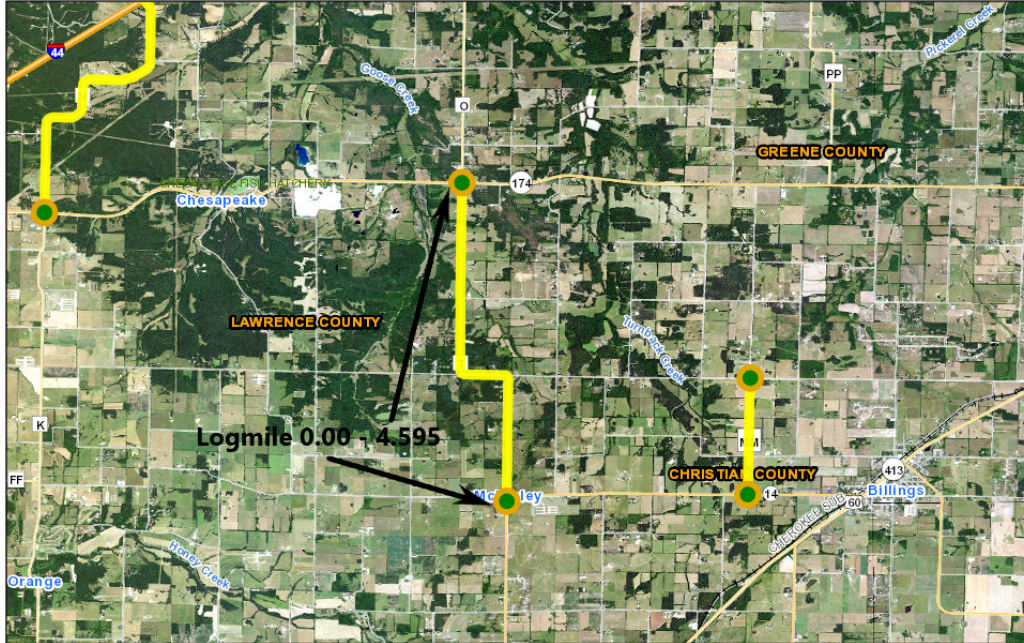
GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	300	102	402	GRAVEL (A) OR CRUSHED STONE (B)

K. Project Details and Quantities – Lawrence County Route T (Base)

**5. Description.** This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 4.595. The total length of pavement limits are 4.595 miles with a total average width of 22 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

**NONE**

Job No.: JST0074  
 Route: W, N, DD, Z, T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene



10/31/2023

st_airp06	IS	MO	CRD1	RR	nhdFlowline	dnrlands	County	IS	0	0.57	1.15	2.3	mi
st_airp06	US	RT	CST1	AL LP BU SP	City2	mdcMgmtArea	County	US	0	0.93	1.85	3.7	km

Missouri Department of Transportation

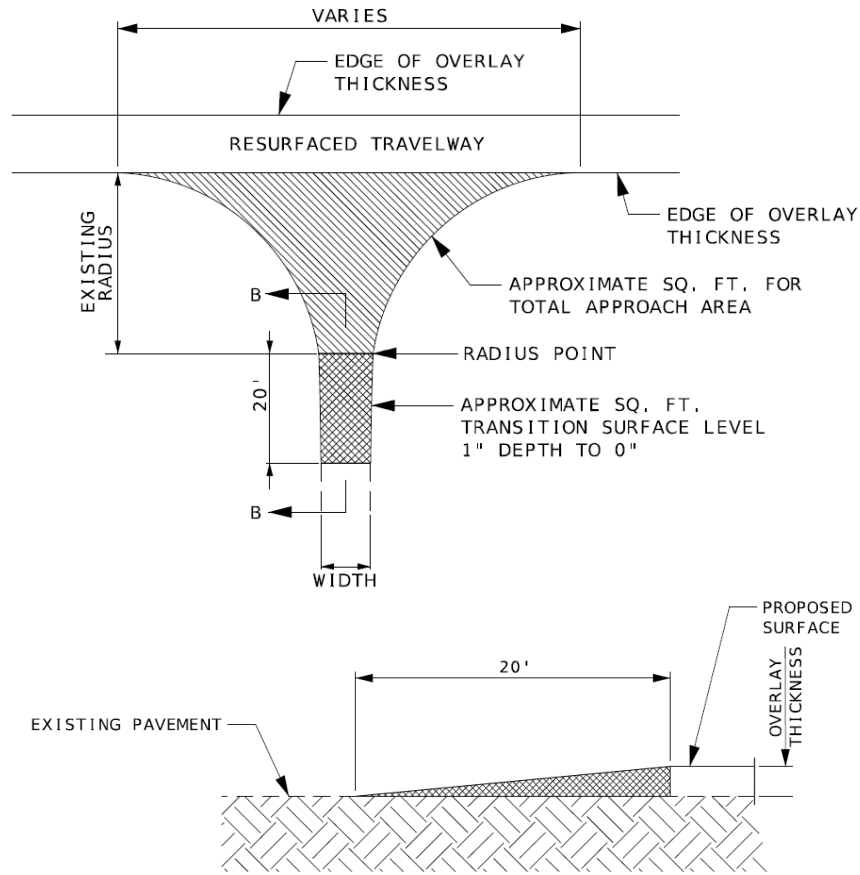
## 2.0 Mix and Pavement Transitions.

**2.1** 1" Plant Mix Bituminous Surface PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd<sup>2</sup> the entire width of the traveled way for the length of the pavement limits.

**2.2** Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

**2.3** Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

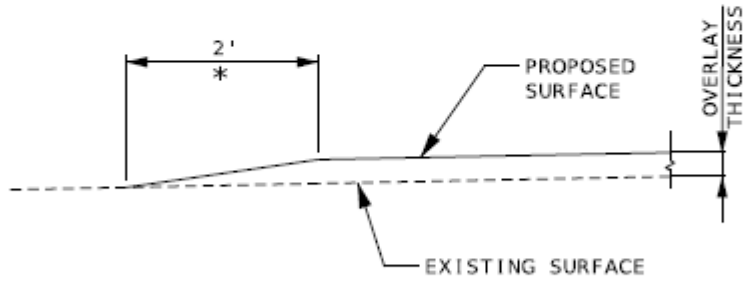
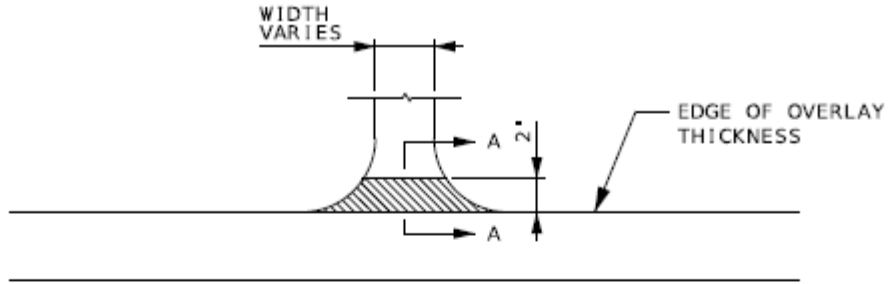


SECTION B-B

TYPICAL STATE ROUTE JUNCTION  
 (COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

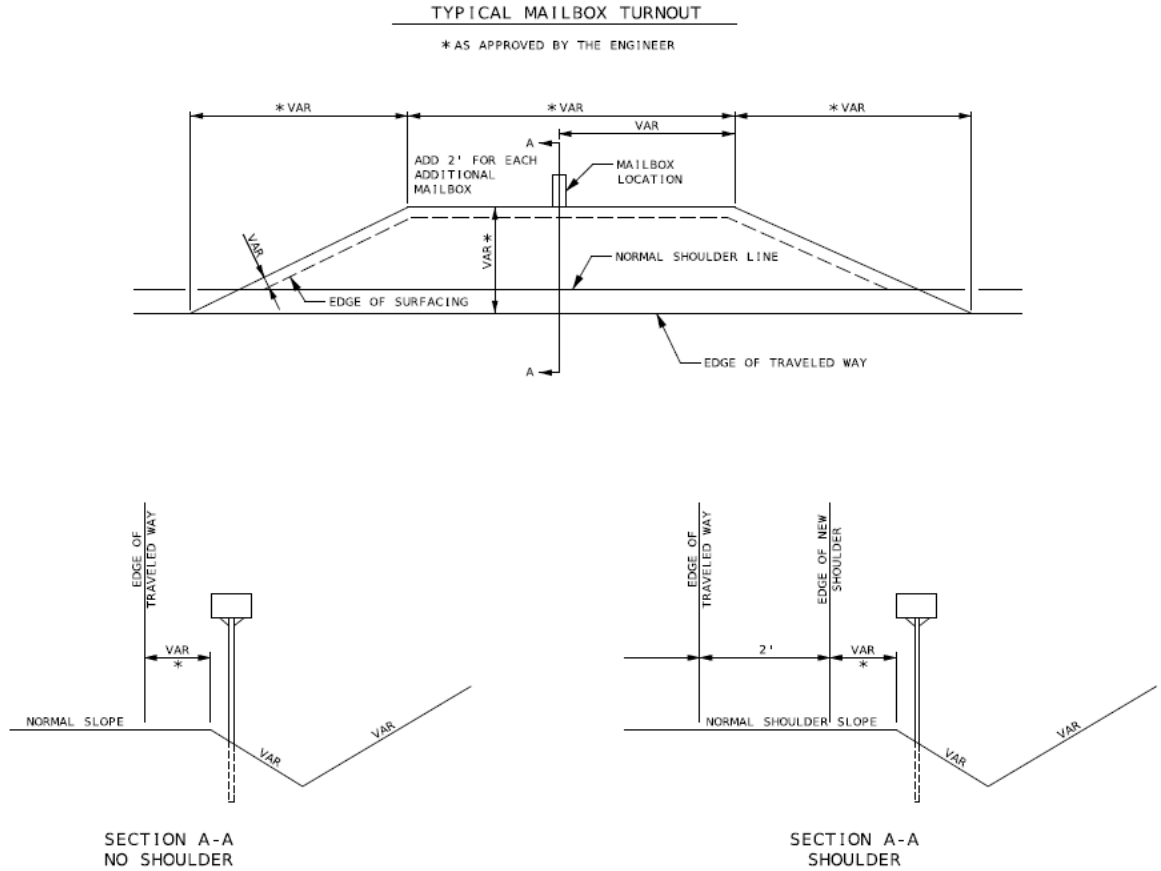


SECTION A-A  
TYPICAL ENTRANCE - NO SHOULDER  
(FIELD, PRIVATE OR COUNTY ROAD)  
\*TAPER AT 1:1 FOR FIELD ENTRANCE

2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND  
 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL  
 MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.



### 3.0 Pavement and Coldmilling Quantities.

#### 3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	T	0.019	22	13.68		BEGIN PROJECT TRANSITION
0.019	4.576	T	4.557	22	3229.85	4704.9	
4.576	4.595	T	0.019	22	13.68		END PROJECT TRANSITION
					574.41		125 TONS/MILE
					11.73	29.5	MAILBOX/ENTRANCES
TOTALS					3,843.35	4734.4	
USE					3,843.3	4734	

#### 3.2 Coldmilling Quantities are as follows:

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	T	100	22	244.4	24.4	BEGIN PROJECT TRANSITION
4.576	4.595	T	100	22	244.4	24.4	END PROJECT TRANSITION
				TOTALS	488.8	48.9	
				USE	489	49	

**4.0 Temporary Traffic Control Plans.** See [Standard Plans 616.20](#) for standard temporary traffic control requirements.

**4.1 Construction signs and channelizers are as follows:**

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.2)	DESCRIPTION
11	WO3-4	48 X 48	16	1	16	BE PREPARED TO STOP
36	WO8-11	48 X 48	16	10	160	UNEVEN LANES
35	WO8-12	48 X 48	16	6	96	NO CENTER LINE
	WO20-1	48 X 48	16	12	192	ROAD/BRIDGE/RAMP WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 24	16	5	80	FLAGGER (SYMBOL, WITH FLAGS)
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	0	0	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	1	1.5	PILOT CAR IN USE WAIT & FOLLOW (SMALLER)
56	CONST-7	72 X 36	18	2	36	RATE OUR WORKZONE
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE
					714.5	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					715	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

**4.2 Other Traffic Control Devices, Mobilization and Contractor Furnished Surveying and Staking are as follows:**

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

**5.0 Pavement Marking.** Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	4" INT.	4" SOLID	4" SOLID	REMARKS
FROM	TO			YELLOW (FT)	YELLOW (FT)	WHITE (FT)	
0.000	4.595	T	24261.6	0	48523.2	48523.2	
			TOTALS	0	48,523	48,523	ADJUST PAINT TO EXISTING
			USE	0	48,523	48,523	FIELD CONDITIONS.

NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.

**6.0 Permanent Aggregate Edge Treatment.** Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR	PRIME MC800	REMARKS
FROM	TO			200 TON/MI (TON)	590 GAL/MI (GAL)	
0.000	4.595	T	4.595	919.0	2711.1	
			TOTALS	919.0	2711.1	
			USE	919.0	2,712	

**7.0 Gravel (A) or Crushed Stone (B).** Gravel (A) or Crushed Stone (B) quantities are as follows:

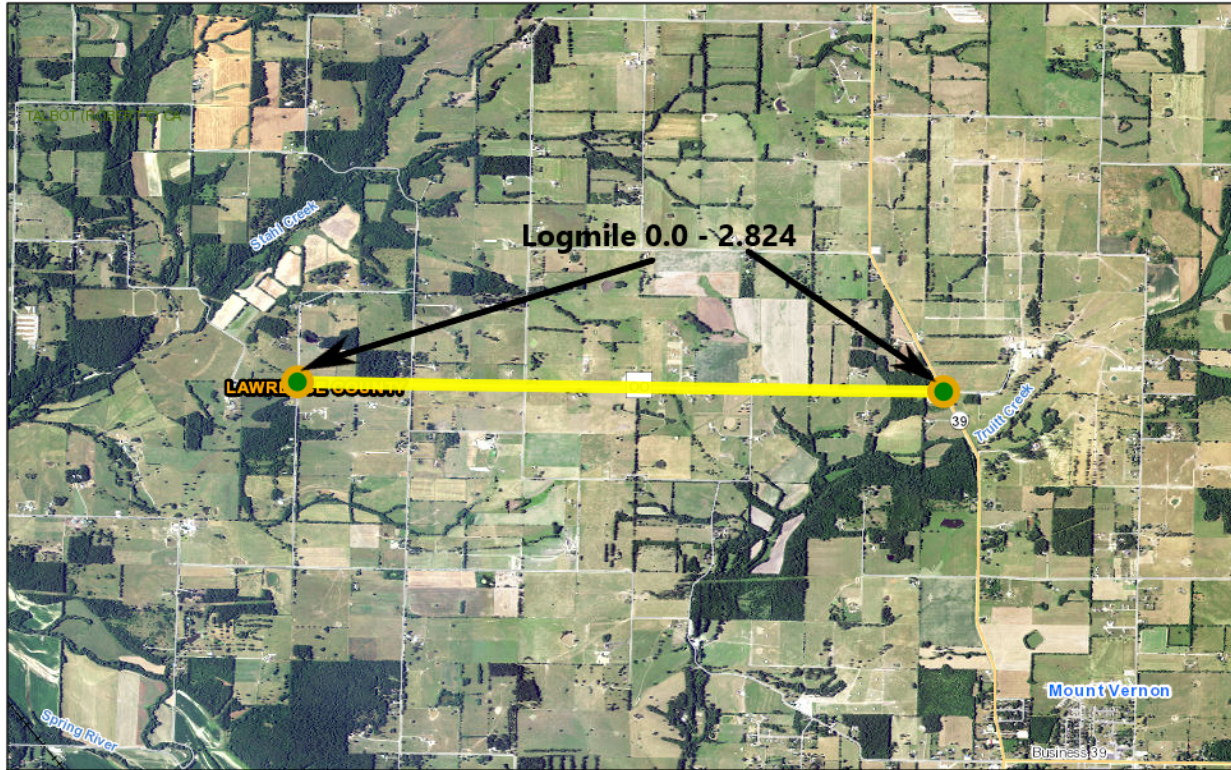
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	144	36	180	GRAVEL (A) OR CRUSHED STONE (B)

L. Project Details and Quantities – Lawrence County Route OO (Base)

**6. Description.** This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 2.824. The total length of pavement limits are 2.824 miles with a total average width of 20 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

**NONE**

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene



11/2/2023

st_airpt06	IS	MO	CRD2	RR	nhdFlowline	dnrlands	County	IS	0 0.29 0.58 1.16 mi 0 0.46 0.92 1.84 km Missouri Department of Transportation
st_airpt06	US	RT	CST2	AL LP BU SP	City2	mdcMgmtArea	County	US	

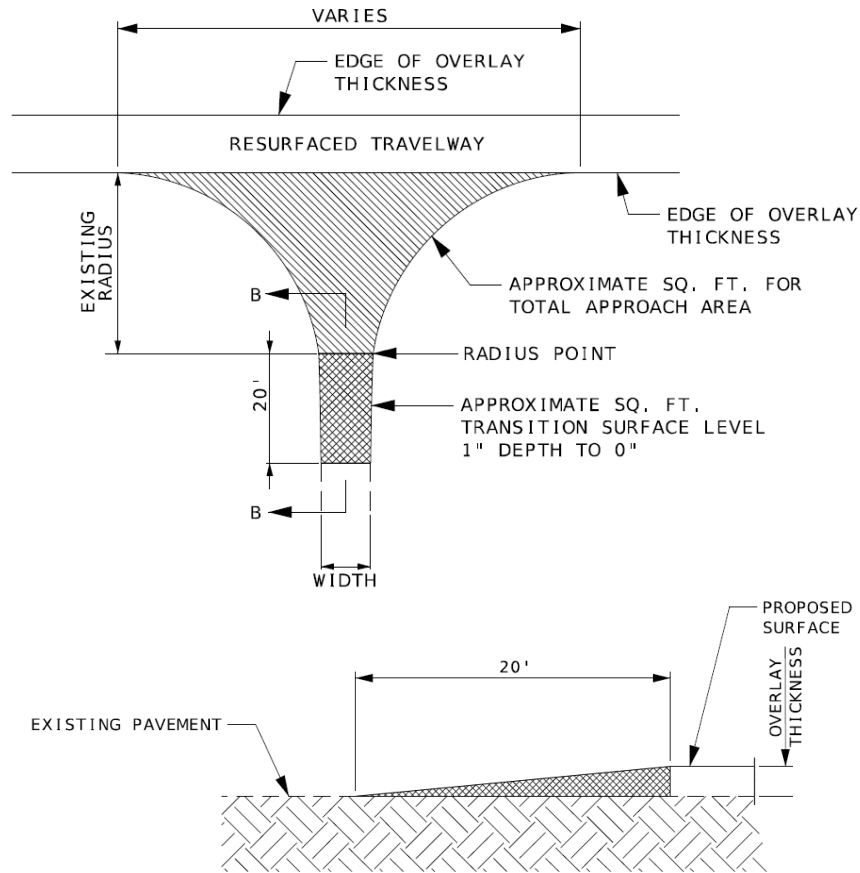
## 2.0 Mix and Pavement Transitions.

**2.1** 1" Plant Mix Bituminous Surface PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd<sup>2</sup> the entire width of the traveled way for the length of the pavement limits.

**2.2** Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

**2.3** Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

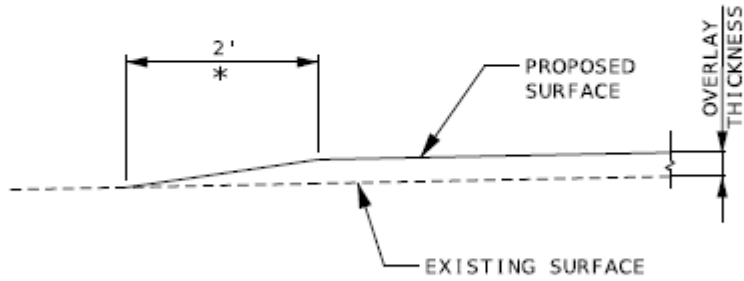
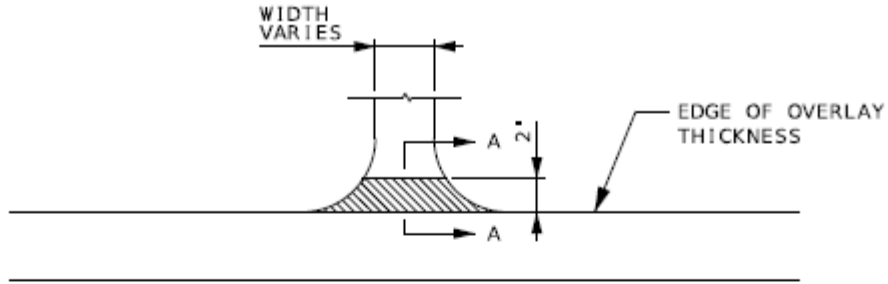


SECTION B-B

TYPICAL STATE ROUTE JUNCTION  
 (COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene



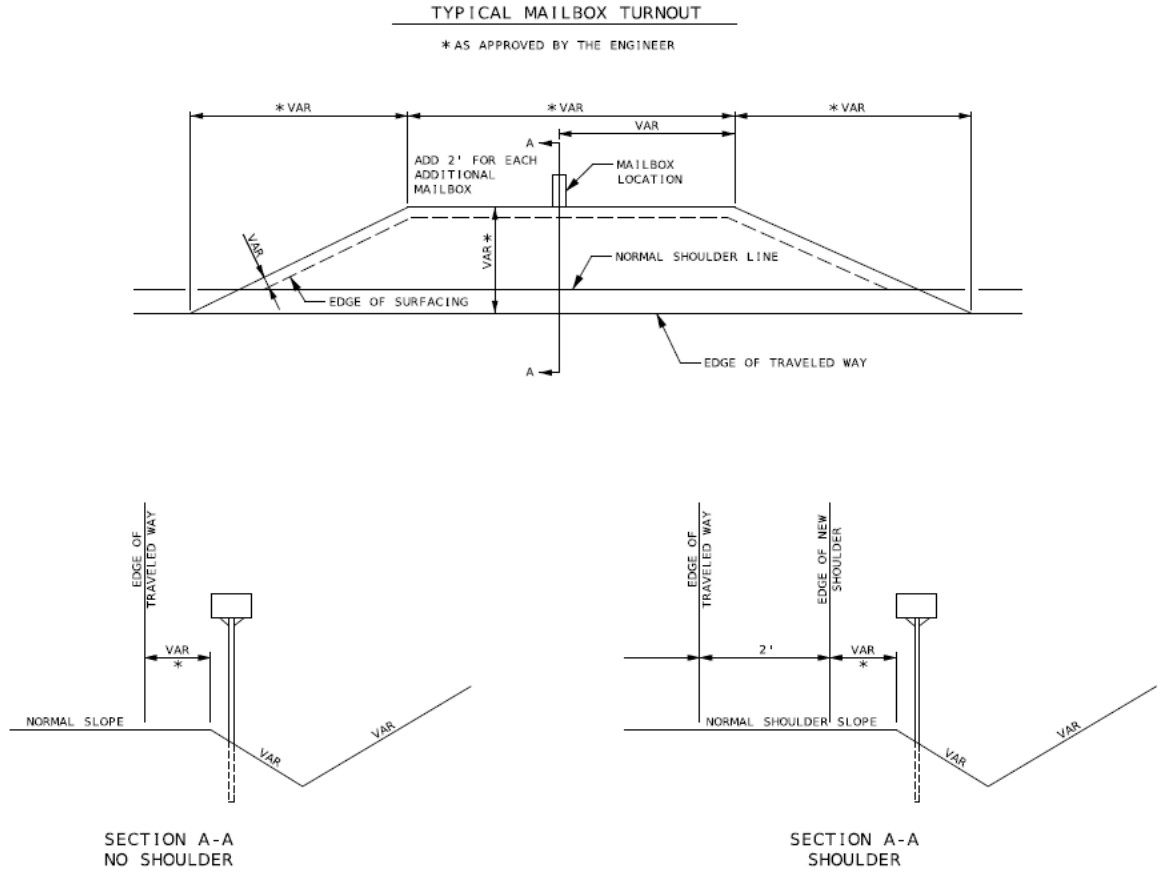
SECTION A-A

TYPICAL ENTRANCE - NO SHOULDER  
(FIELD, PRIVATE OR COUNTY ROAD)  
\*TAPER AT 1:1 FOR FIELD ENTRANCE

2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND  
 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL  
 MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.



### 3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	OO	0.019	20	6.22		BEGIN PROJECT TRANSITION
0.019	2.805	OO	2.786	20	1831.22	2615.2	
2.805	2.824	OO	0.019	20	6.22		END PROJECT TRANSITION
					282.40		100 TONS/MILE
					7.40	17.7	MAILBOX/ENTRANCES
TOTALS					2,133.46	2632.9	
USE					2,133.5	2633	

3.2 Coldmilling Quantities are as follows:

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	OO	100	20	222.2	22.2	BEGIN PROJECT TRANSITION
2.805	2.824	OO	100	20	222.2	22.2	END PROJECT TRANSITION
				TOTALS	444.4	44.4	
				USE	444	44	

**4.0 Temporary Traffic Control Plans.** See [Standard Plans 616.20](#) for standard temporary traffic control requirements.

**4.1 Construction signs and channelizers are as follows:**

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.²)	DESCRIPTION
11	WO3-4	48 X 48	16	2	32	BE PREPARED TO STOP
36	WO8-11	48 X 48	16	6	96	UNEVEN LANES
35	WO8-12	48 X 48	16	4	64	NO CENTER LINE
	WO20-1	48 X 48	16	12	192	ROAD/BRIDGE/RAMP WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 24	16	6	96	FLAGGER (SYMBOL, WITH FLAGS)
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
53	GO20-4	36 X 18	4.5	0	0	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	2	17.5	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	2	3	PILOT CAR IN USE WAIT & FOLLOW (SMALLER)
56	CONST-7	72 X 36	18	2	36	RATE OUR WORKZONE
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE
					660.5	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					661	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

**4.2 Other Traffic Control Devices, Mobilization, and Contractor Furnished Surveying and Staking are as follows:**

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

**5.0 Pavement Marking.** Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	4" INT. YELLOW (FT)	4" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
FROM	TO						
0.000	2.824	OO	14910.72	0	29821.44	29821.44	
			TOTALS	0	29,821	29,821	ADJUST PAINT TO EXISTING
			USE	0	29,821	29,821	FIELD CONDITIONS.

NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.

**6.0 Permanent Aggregate Edge Treatment.** Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR 200 TON/MI (TON)	PRIME MC800 590 GAL/MI (GAL)	REMARKS
FROM	TO					
0.000	2.824	OO	2.824	564.8	1666.2	
			TOTALS	564.8	1666.2	
			USE	564.8	1,667	

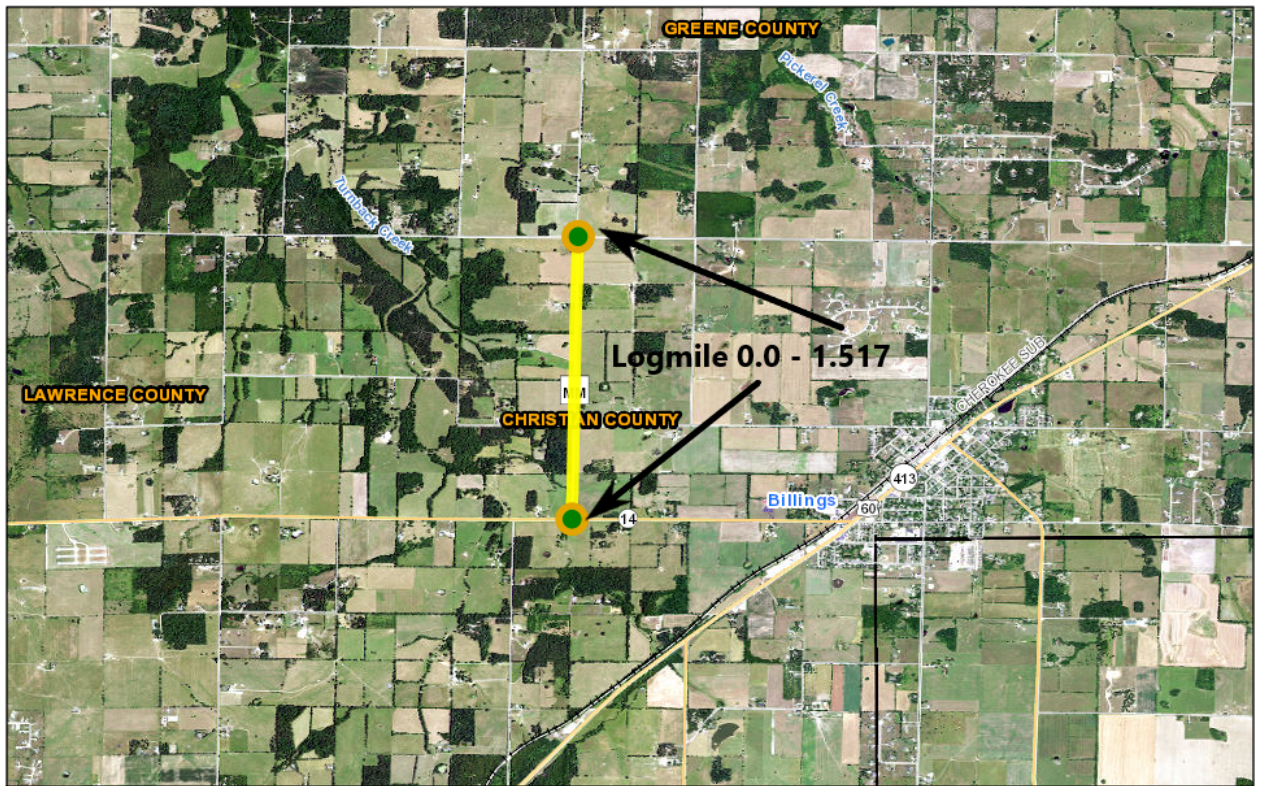
**7.0 Gravel (A) or Crushed Stone (B).** Gravel (A) or Crushed Stone (B) quantities are as follows:

ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	72	36	108	GRAVEL (A) OR CRUSHED STONE (B)

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

M. Project Details and Quantities – Christian County Route MM (Base)

7. **Description.** This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 1.517. The total length of pavement limits are 1.517 miles with a total average width of 20 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:



11/2/2023

st_airpt06	IS	MO	CRD2	RR	nhdFlowline	dnrlands	County	IS	0	0.29	0.58	1.16	mi
st_airpt06	US	RT	CST2	AL LP BU SP	City2	mdcMgmtArea	County	US	0	0.46	0.93	1.85	km

Missouri Department of Transportation

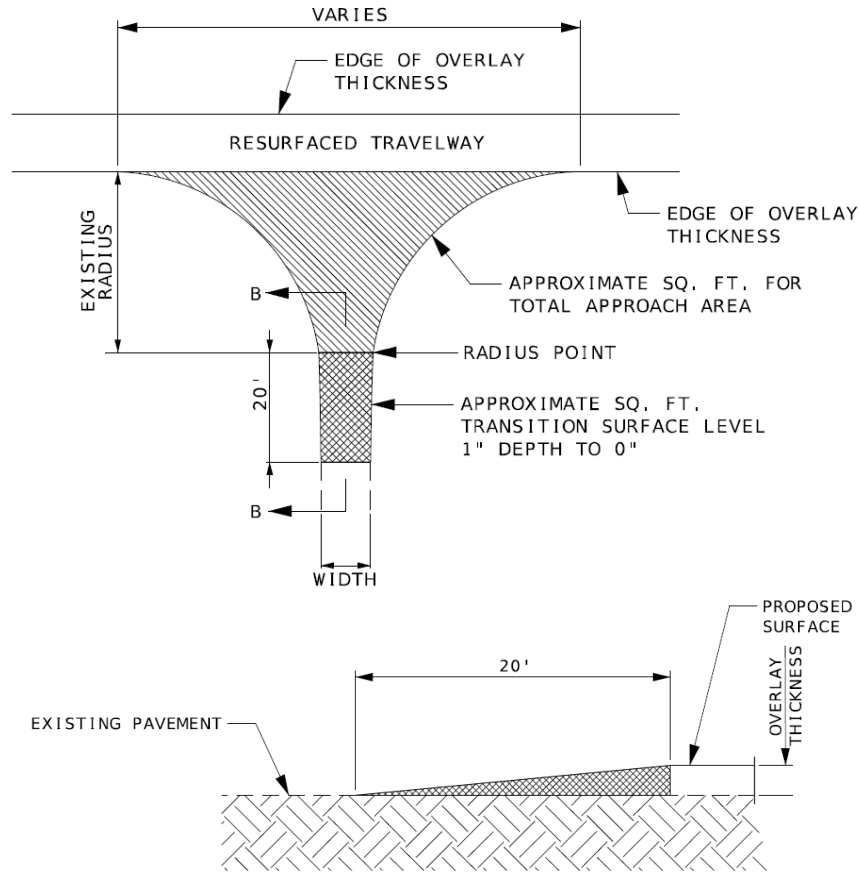
8.  
**2.0 Mix and Pavement Transitions.**

2.1 1" Plant Mix Bituminous Surface PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd<sup>2</sup> the entire width of the traveled way for the length of the pavement limits.

2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

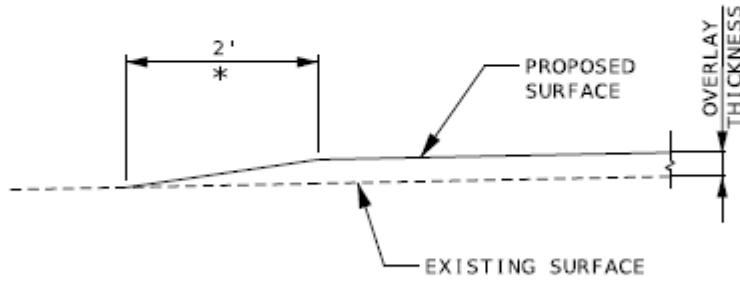
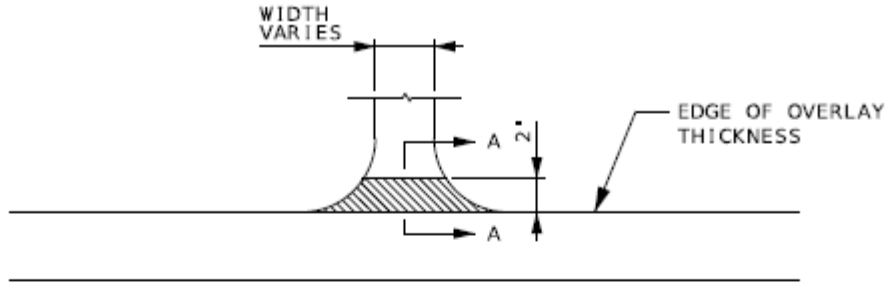


SECTION B-B

TYPICAL STATE ROUTE JUNCTION  
 (COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

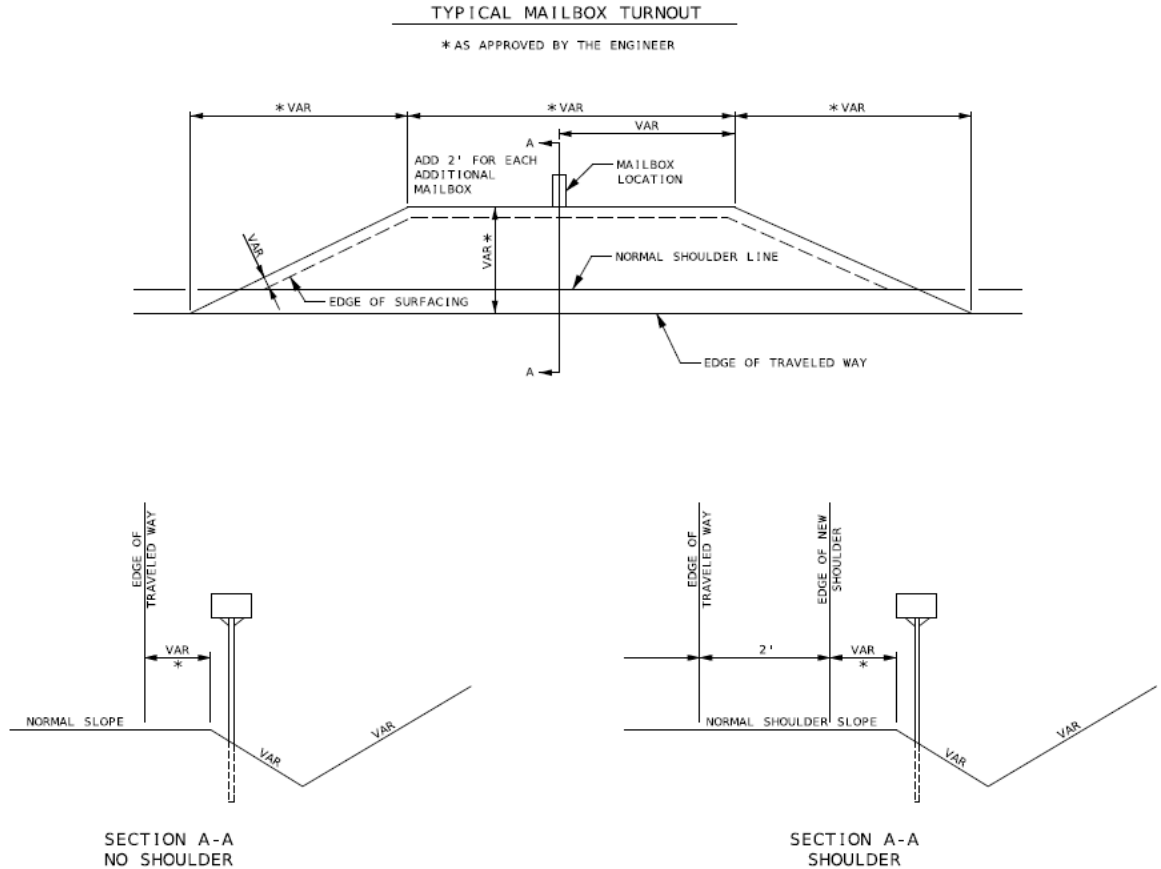


SECTION A-A  
TYPICAL ENTRANCE - NO SHOULDER  
(FIELD, PRIVATE OR COUNTY ROAD)  
\*TAPER AT 1:1 FOR FIELD ENTRANCE

2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND  
 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL  
 MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.



### 3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	MM	0.019	20	6.22		BEGIN PROJECT TRANSITION
0.019	1.498	MM	1.479	20	972.17	1388.4	
1.498	1.517	MM	0.019	20	6.22		END PROJECT TRANSITION
					189.63		125 TONS/MILE
					2.04	5.1	MAILBOX/ENTRANCES
TOTALS					1,176.29	1393.5	
USE					1,176.3	1394	

3.2 Coldmilling Quantities are as follows:

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	MM	100	20	222.2	22.2	BEGIN PROJECT TRANSITION
1.498	1.517	MM	100	20	222.2	22.2	END PROJECT TRANSITION
				TOTALS	444.4	44.4	
				USE	444	44	

**4.0 Temporary Traffic Control Plans.** See [Standard Plans 616.20](#) for standard temporary traffic control requirements.

**4.1 Construction signs and channelizers are as follows:**

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT. <sup>2</sup> )	QTY.	TOTAL AREA (FT. <sup>2</sup> )	DESCRIPTION
11	WO3-4	48 X 48	16	2	32	BE PREPARED TO STOP
36	WO8-11	48 X 48	16	42	672	UNEVEN LANES
35	WO8-12	48 X 48	16	2	32	NO CENTER LINE
	WO20-1	48 X 48	16	8	128	ROAD/BRIDGE/RAMP WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 24	16	6	96	FLAGGER (SYMBOL, WITH FLAGS)
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	0	0	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	2	3	PILOT CAR IN USE WAIT & FOLLOW (SMALLER)
56	CONST-7	72 X 36	18	2	36	RATE OUR WORKZONE
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE
					1132	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					1132	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

**4.2 Other Traffic Control Devices, Mobilization, and Contractor Furnished Surveying and Staking are as follows:**

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

**5.0 Pavement Marking.** Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	4" INT. YELLOW (FT)	4" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
FROM	TO						
0.000	1.517	MM	8009.76	0	16019.52		
			TOTALS	0	16,020	0	ADJUST PAINT TO EXISTING
			USE	0	16,020	0	FIELD CONDITIONS.

NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.

**6.0 Permanent Aggregate Edge Treatment.** Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR 200 TON/MI (TON)	PRIME MC800 590 GAL/MI (GAL)	REMARKS
FROM	TO					
0.000	1.517	MM	1.517	303.4	895.0	
			TOTALS	303.4	895.0	
			USE	303.4	896	

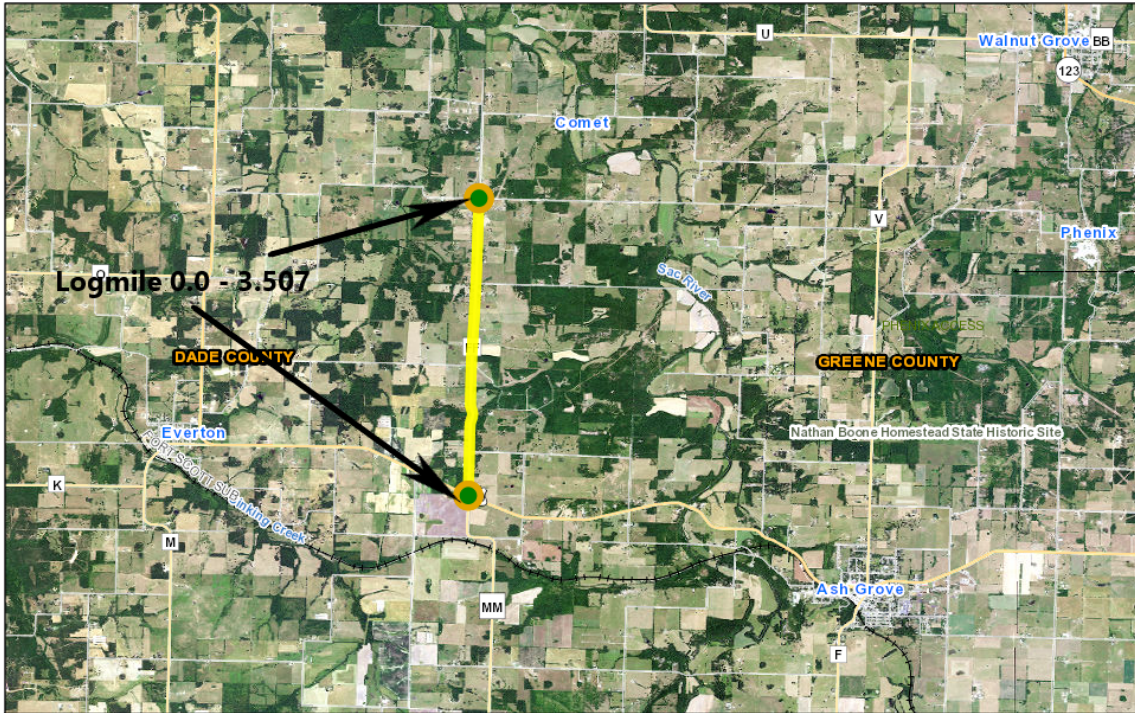
**7.0 Gravel (A) or Crushed Stone (B).** Gravel (A) or Crushed Stone (B) quantities are as follows:

ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	16	12	28	GRAVEL (A) OR CRUSHED STONE (B)

N. Project Details and Quantities – Dade County Route FF (Base)

**9. Description.** This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 3.507. The total length of pavement limits are 3.507 miles with a total average width of 20 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:  
**NONE**

Job No.: JST0074  
 Route: W, N, DD, Z, T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene



11/2/2023

st_airpt06	IS	MO	CRD1	RR	nhdFlowline	dnrlands	County	IS	
st_airpt06	US	RT	CST1	AL LP BU SP	City2	mdcMgmtArea	County	US	

Missouri Department of Transportation

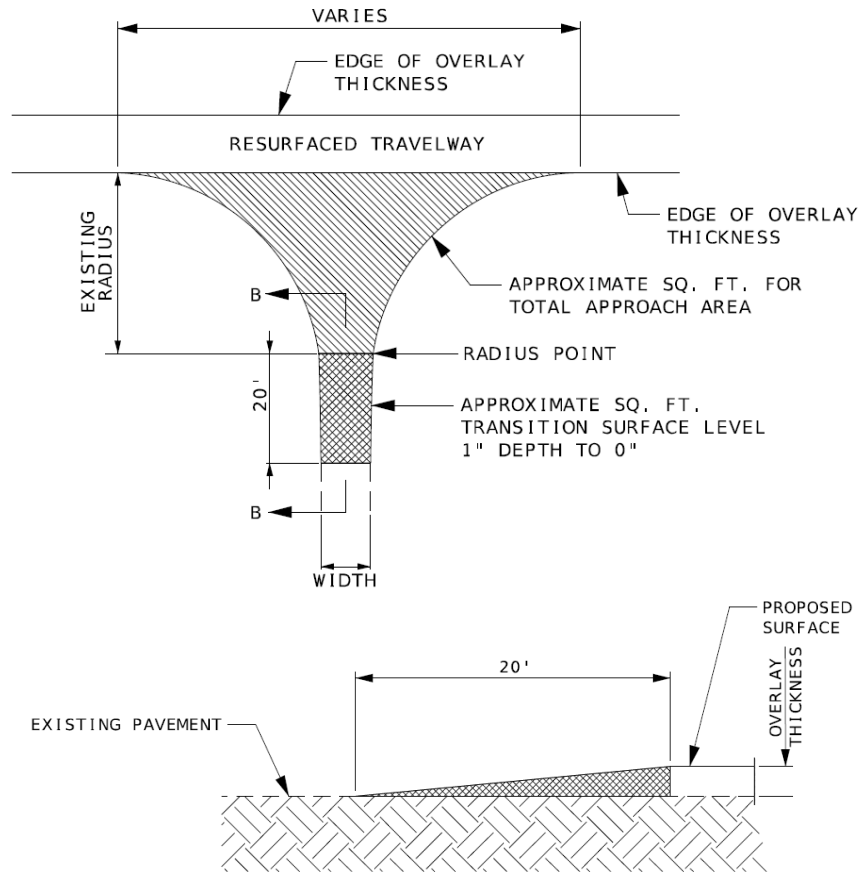
## 2.0 Mix and Pavement Transitions.

**2.1** 1" Plant Mix Bituminous Surface PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd<sup>2</sup> the entire width of the traveled way for the length of the pavement limits.

**2.2** Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

**2.3** Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

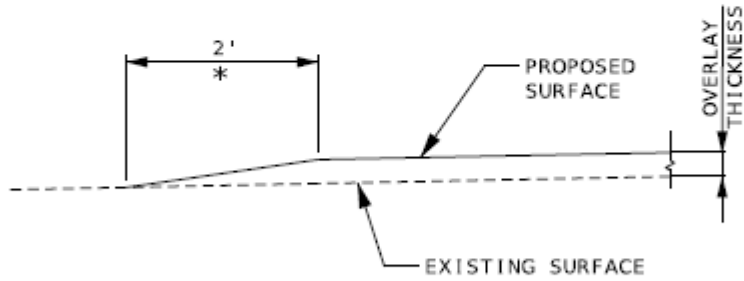
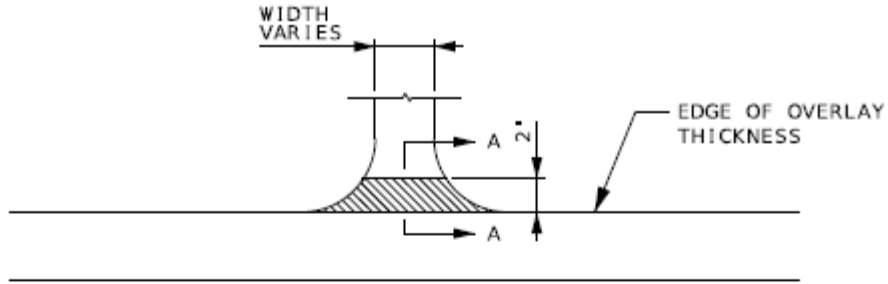


SECTION B-B

TYPICAL STATE ROUTE JUNCTION  
 (COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene



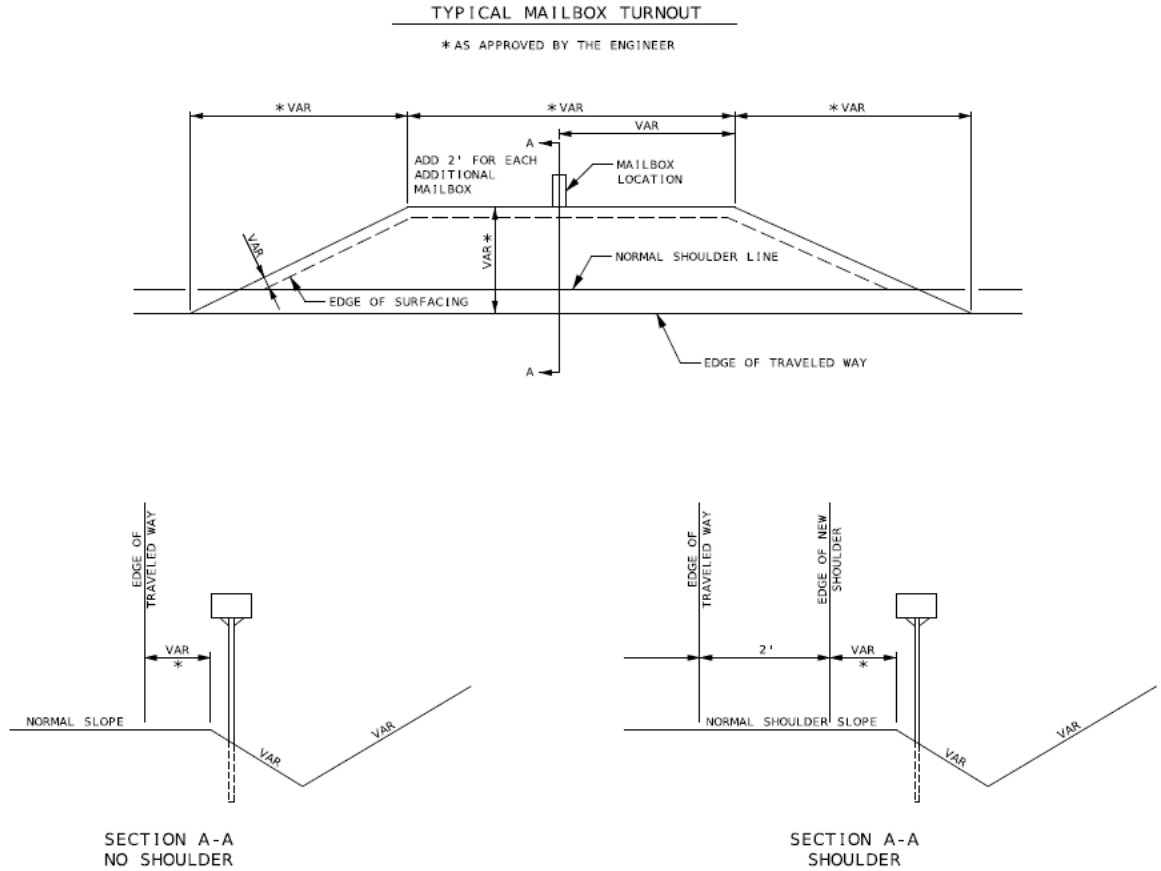
SECTION A-A

TYPICAL ENTRANCE - NO SHOULDER  
(FIELD, PRIVATE OR COUNTY ROAD)  
\*TAPER AT 1:1 FOR FIELD ENTRANCE

2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND  
 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL  
 MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.



**3.0 Pavement and Coldmilling Quantities.**

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING (ADD ALTERNATES)							
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	FF	0.019	20	6.22		BEGIN PROJECT TRANSITION
0.019	3.488	FF	3.469	20	2280.13	3256.3	
3.488	3.507	FF	0.019	20	6.22		END PROJECT TRANSITION
					350.70		100 TONS/MILE
					11.20	26.3	MAILBOX/ENTRANCES
TOTALS					2,654.47	3282.6	
USE					2,654.5	3283	

3.2 Coldmilling Quantities are as follows:

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	FF	100	20	222.2	22.2	BEGIN PROJECT TRANSITION
3.488	3.507	FF	100	20	222.2	22.2	END PROJECT TRANSITION
				TOTALS	444.4	44.4	
				USE	444	44	

**4.0 Temporary Traffic Control Plans.** See [Standard Plans 616.20](#) for standard temporary traffic control requirements.

**4.1 Construction signs and channelizers are as follows:**

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.2)	DESCRIPTION
11	WO3-4	48 X 48	16	2	32	BE PREPARED TO STOP
36	WO8-11	48 X 48	16	4	64	UNEVEN LANES
35	WO8-12	48 X 48	16	2	32	NO CENTER LINE
	WO20-1	48 X 48	16	8	128	ROAD/BRIDGE/RAMP WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 24	16	6	96	FLAGGER (SYMBOL, WITH FLAGS)
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	0	0	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	2	3	PILOT CAR IN USE WAIT & FOLLOW (SMALLER)
56	CONST-7	72 X 36	18	2	36	RATE OUR WORKZONE
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE
					524	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					524	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

**4.2 Other Traffic Control Devices, Mobilization and Contractor Furnished Surveying and Staking are as follows:**

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

**5.0 Pavement Marking.** Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	4" INT. YELLOW (FT)	4" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
FROM	TO						
0.000	3.507	FF	18516.96	0	37033.92		
			TOTALS	0	37,034	0	ADJUST PAINT TO EXISTING
			USE	0	37,034	0	FIELD CONDITIONS.

NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.

**6.0 Permanent Aggregate Edge Treatment.** Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR 200 TON/MI (TON)	PRIME MC800 590 GAL/MI (GAL)	REMARKS
FROM	TO					
0.000	3.507	FF	3.507	701.4	2069.1	
			TOTALS	701.4	2069.1	
			USE	701.4	2,070	

**7.0 Gravel (A) or Crushed Stone (B).** Gravel (A) or Crushed Stone (B) quantities are as follows:

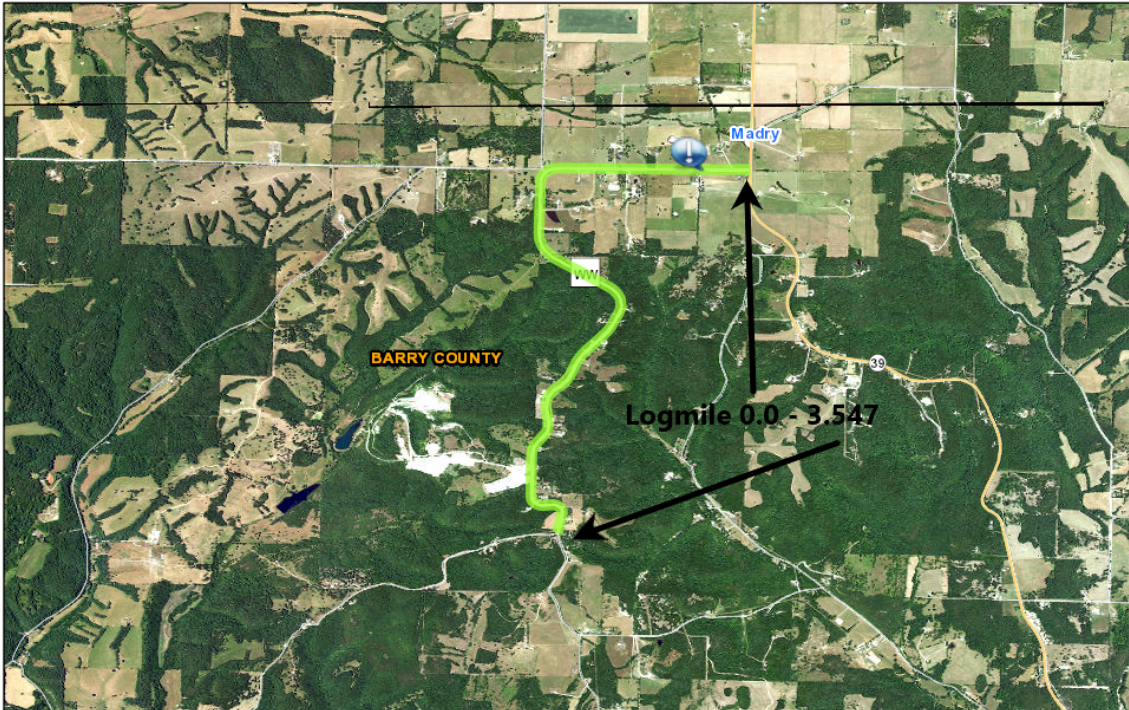
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	124	30	154	GRAVEL (A) OR CRUSHED STONE (B)

O. Project Details and Quantities – Barry Country Route WW (Add Alternate A)

**10. Description.** This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 3.547. The total length of pavement limits are 3.547 miles with a total average width of 20 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

**NONE**

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene



11/9/2023

st_airpt06	IS	MO	CRD2	RR	nhdFlowline	dnrlands	County	IS	0 0.29 0.58 1.16 mi 0 0.46 0.93 1.85 km Missouri Department of Transportation
st_airpt06	US	RT	CST2	AL LP BU SP	City2	mdeMgmtArea	County	US	

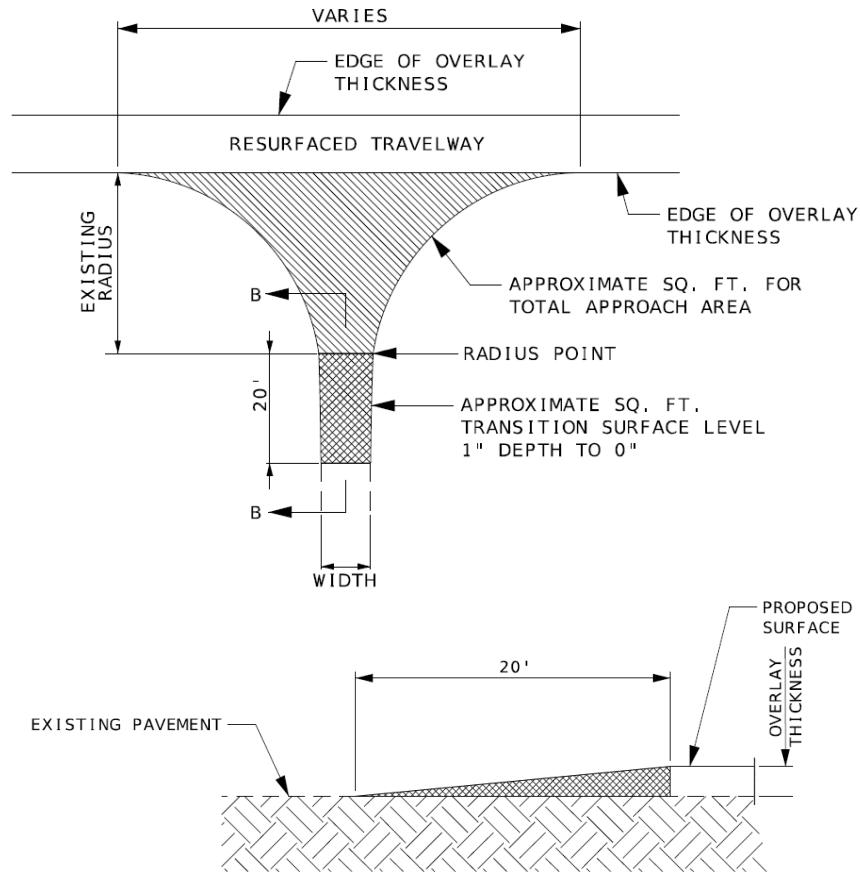
## 2.0 Mix and Pavement Transitions.

**2.1** 1" Plant Mix Bituminous Surface PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd<sup>2</sup> the entire width of the traveled way for the length of the pavement limits.

**2.2** Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

**2.3** Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

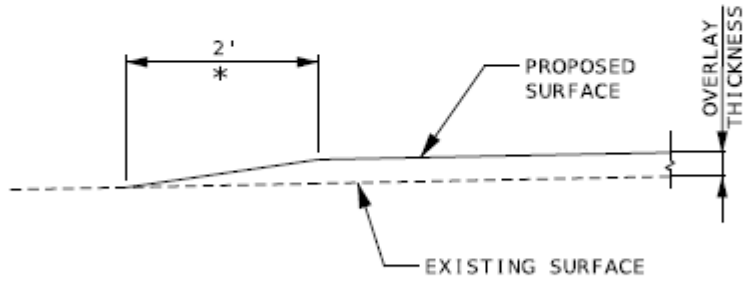
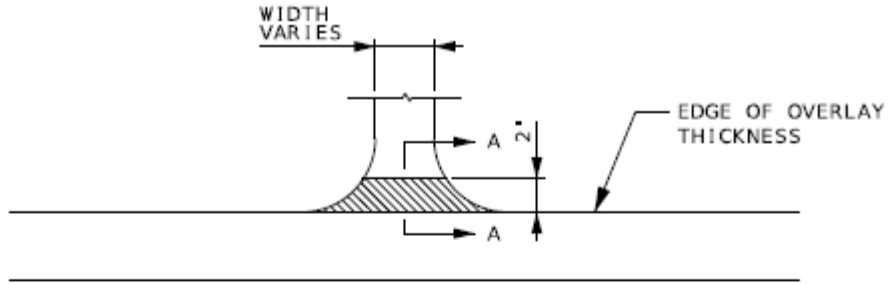


SECTION B-B

TYPICAL STATE ROUTE JUNCTION  
 (COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene



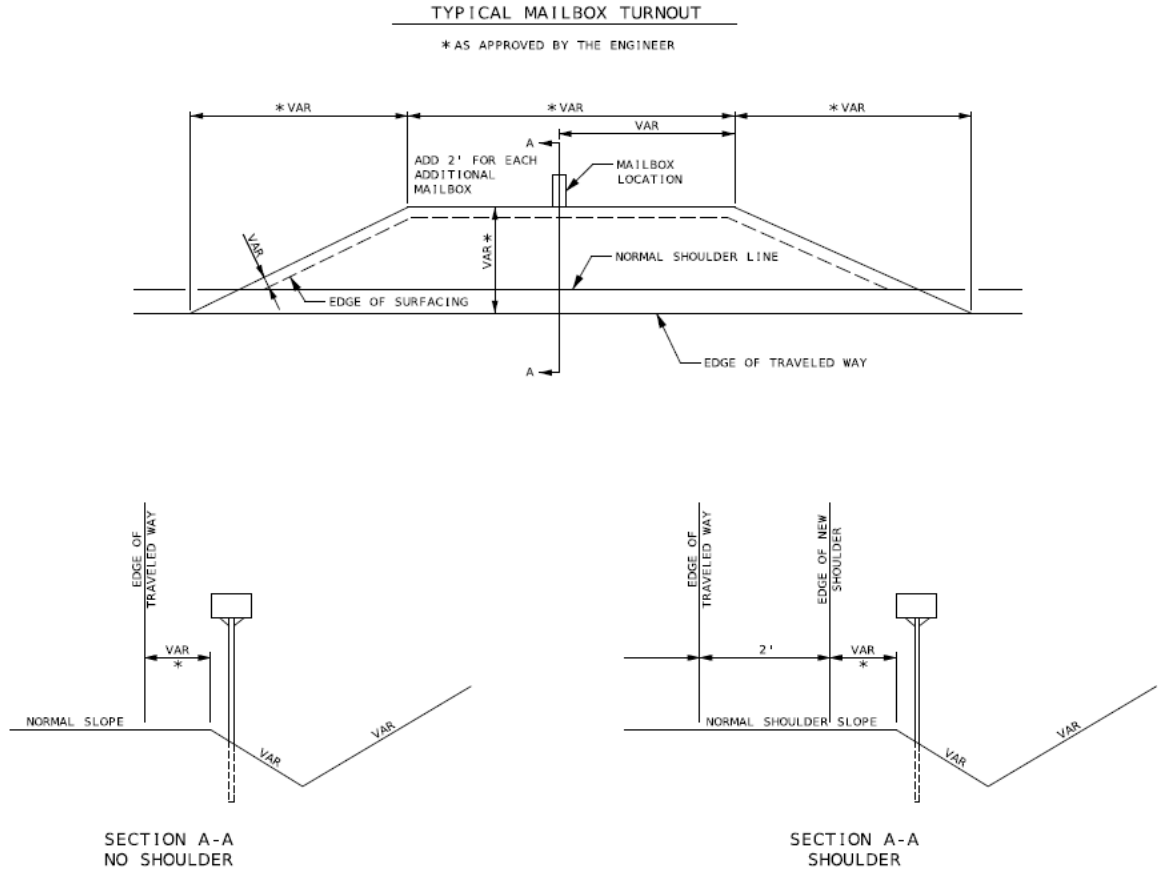
SECTION A-A

TYPICAL ENTRANCE - NO SHOULDER  
(FIELD, PRIVATE OR COUNTY ROAD)  
\*TAPER AT 1:1 FOR FIELD ENTRANCE

2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND  
 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL  
 MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.



### 3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	WW	0.019	20	12.44		BEGIN PROJECT TRANSITION
0.019	3.528	WW	3.509	20	2306.41	3293.9	
3.528	3.547	WW	0.019	20	12.44		END PROJECT TRANSITION
					266.03		75 TONS/MILE
					12.69	29.6	MAILBOX/ENTRANCES
TOTALS					2,610.02	3323.5	
USE					2,610.0	3324	

3.2 Coldmilling Quantities are as follows:

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	WW	100	20	222.2	22.2	BEGIN PROJECT TRANSITION
3.528	3.547	WW	100	20	222.2	22.2	END PROJECT TRANSITION
				TOTALS	444.4	44.4	
				USE	444	44	

**4.0 Temporary Traffic Control Plans.** See [Standard Plans 616.20](#) for standard temporary traffic control requirements.

**4.1 Construction signs and channelizers are as follows:**

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.²)	DESCRIPTION
11	WO3-4	48 X 48	16	1	16	BE PREPARED TO STOP
36	WO8-11	48 X 48	16	8	128	UNEVEN LANES
35	WO8-12	48 X 48	16	7	112	NO CENTER LINE
	WO20-1	48 X 48	16	4	64	ROAD/BRIDGE/RAMP WORK AHEAD
7	WO20-4	48 X 48	16	5	80	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 24	16	2	32	FLAGGER (SYMBOL, WITH FLAGS)
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
53	GO20-4	36 X 18	4.5	0	0	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	1	8.75	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	1	1.5	PILOT CAR IN USE WAIT & FOLLOW (SMALL)
56	CONST-7	72 X 36	18	2	36	RATE OUR WORKZONE
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE
					538.25	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					539	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

**4.2 Other Traffic Control Devices, Mobilization and Contractor Furnished Surveying and Staking are as follows:**

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

**5.0 Pavement Marking.** Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	4" INT. YELLOW (FT)	4" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
FROM	TO						
0.000	3.547	WW	18728.16	0	37456.32		
			TOTALS	0	37,456	0	ADJUST PAINT TO EXISTING
			USE	0	37,456	0	FIELD CONDITIONS.

NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.

**6.0 Permanent Aggregate Edge Treatment.** Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR 200 TON/MI (TON)	PRIME MC800 590 GAL/MI (GAL)	REMARKS
FROM	TO					
0.000	3.547	WW	3.547	709.4	2092.7	
			TOTALS	709.4	2092.7	
			USE	709.4	2,093	

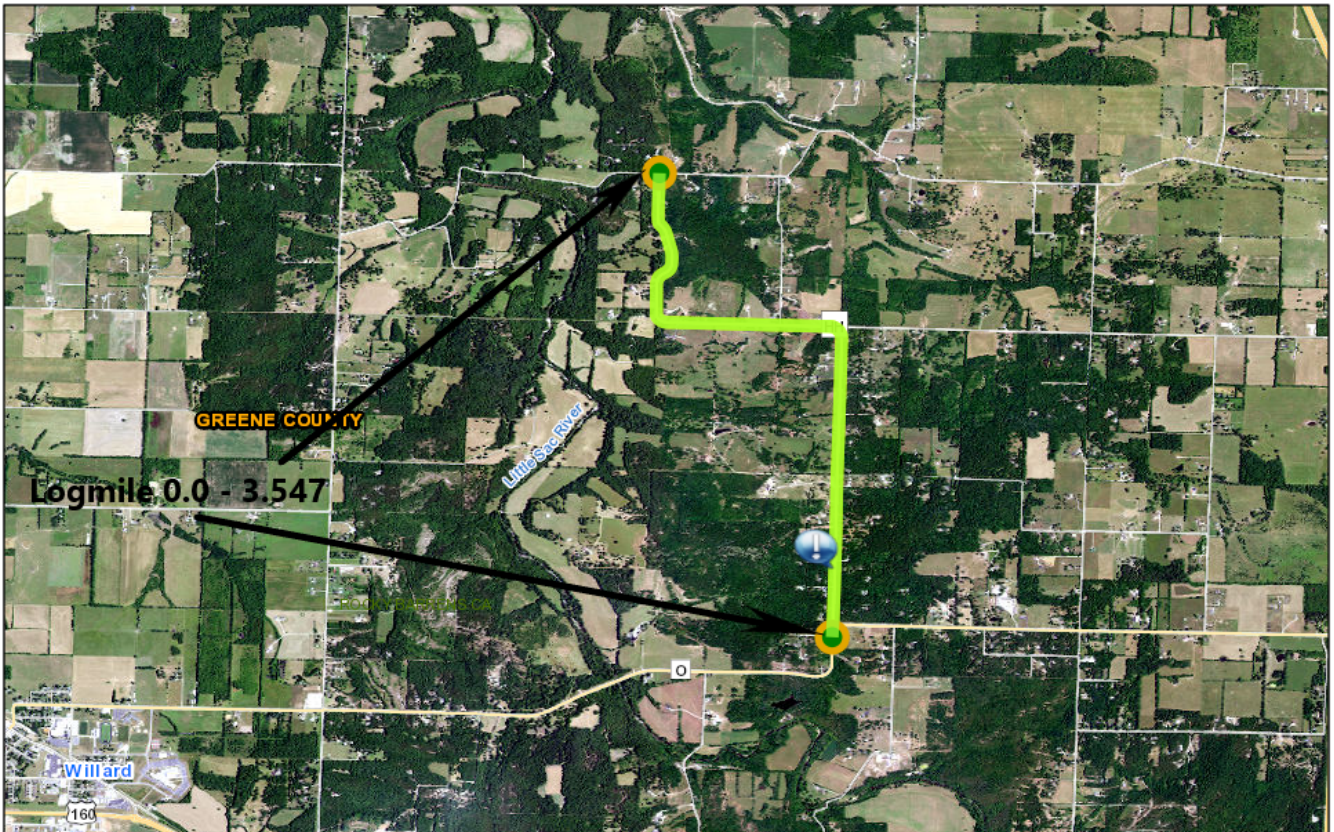
**7.0 Gravel (A) or Crushed Stone (B).** Gravel (A) or Crushed Stone (B) quantities are as follows:

GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	156	6	162	GRAVEL (A) OR CRUSHED STONE (B)

P. Project Details and Quantities – Greene County Route HH (Add Alternate B)

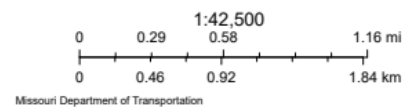
Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

**11. Description.** This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 3.065. The total length of pavement limits are 3.065 miles with a total average width of 20 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:  
**NONE**



11/9/2023

st_airpt06	IS	MO	CRD2	RR	nhdFlowline	dnriands	County	IS
st_airpt06	US	RT	CST2	AL LP BU SP	City2	mndcMgmtArea	County	US



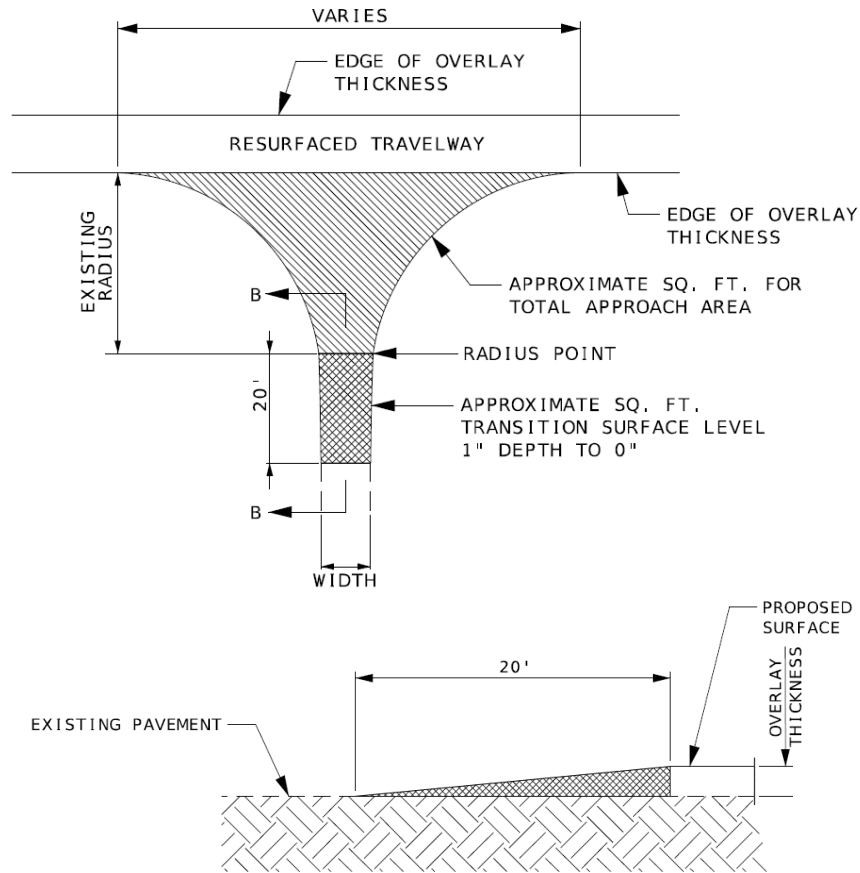
## 2.0 Mix and Pavement Transitions.

**2.1** 1" Plant Mix Bituminous Surface PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd<sup>2</sup> the entire width of the traveled way for the length of the pavement limits.

**2.2** Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

**2.3** Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

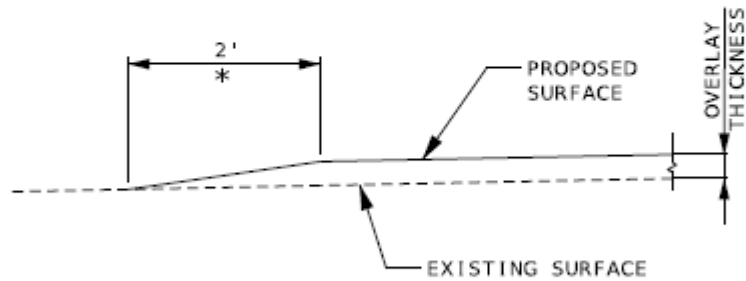
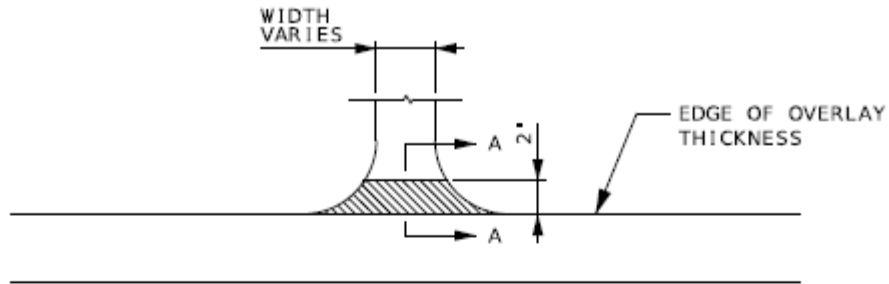


SECTION B-B

TYPICAL STATE ROUTE JUNCTION  
 (COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene



SECTION A-A

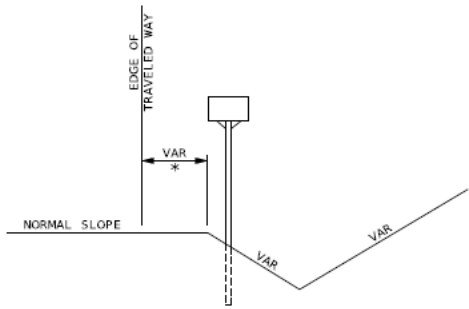
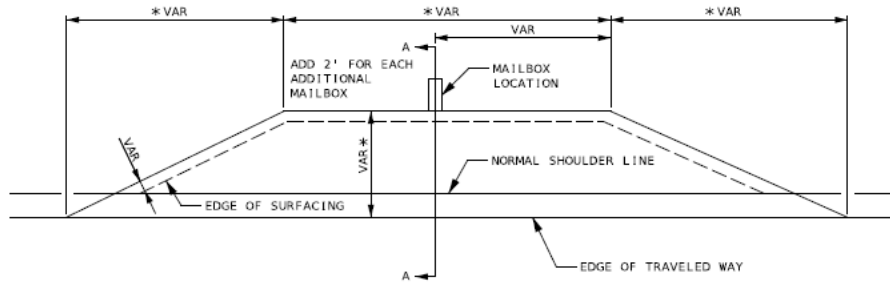
TYPICAL ENTRANCE - NO SHOULDER  
(FIELD, PRIVATE OR COUNTY ROAD)  
\*TAPER AT 1:1 FOR FIELD ENTRANCE

2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

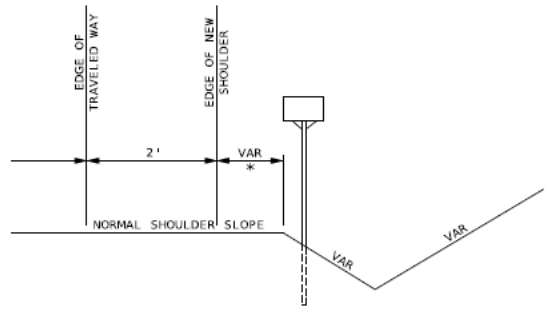
Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND  
 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL  
 MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

TYPICAL MAILBOX TURNOUT  
 \* AS APPROVED BY THE ENGINEER



SECTION A-A  
 NO SHOULDER



SECTION A-A  
 SHOULDER

**3.0 Pavement and Coldmilling Quantities.**

3.1 Pavement quantities are as follows:

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	WW	0.019	20	12.44		BEGIN PROJECT TRANSITION
0.019	3.046	WW	3.027	20	1989.61	2841.5	
2.961	2.980	WW	0.019	20	12.44		DEPTH TO MILL AND FILL
2.980	3.065	WW	0.085	20	55.91		MILL AND FILL TO END OF PROJECT
					236.25		75 TONS/MILE
					71.99	79.4	MAILBOX/ENTRANCES
TOTALS					2,378.65	2920.9	
USE					2,378.6	2921	

3.2 Coldmilling Quantities are as follows:

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
0.000	0.019	HH	100	20	222.2	22.2	BEGIN PROJECT TRANSITION
2.961	2.980	HH	100	21	222.2	22.2	DEPTH TO MILL AND FILL
TOTALS					444.4	44.4	
USE					444	44	

COLDMILLING (3 IN. THICK OR LESS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	TO						
2.980	3.065	HH	449	20	997.3	99.7	MILL AND FILL UNTIL END OF PROJECT
TOTALS					997.3	99.7	
USE					997	100	

4.0 Temporary Traffic Control Plans. See [Standard Plans 616.20](#) for standard temporary traffic control requirements.

4.1 Construction signs and channelizers are as follows:

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT. <sup>2</sup> )	DESCRIPTION
11	WO3-4	48 X 48	16	2	32	BE PREPARED TO STOP
36	WO8-11	48 X 48	16	8	128	UNEVEN LANES
35	WO8-12	48 X 48	16	4	64	NO CENTER LINE
	WO20-1	48 X 48	16	12	192	ROAD/BRIDGE/RAMP WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 24	16	6	96	FLAGGER (SYMBOL, WITH FLAGS)
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	1	8.75	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	1	1.5	PILOT CAR IN USE WAIT & FOLLOW (SMALL)
56	CONST-7	72 X 36	18	2	36	RATE OUR WORKZONE
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE
					691.25	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					692	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Other Traffic Control Devices, Mobilization and Contractor Furnished Surveying and Staking are as follows:

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

5.0 Pavement Marking. Pavement marking quantities are as follows:

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	4" INT. YELLOW (FT)	4" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
FROM	TO						
0.000	3.065	WW	16183.2	0	32366.4	0	
			TOTALS	0	32,366	0	ADJUST PAINT TO EXISTING
			USE	0	32,366	0	FIELD CONDITIONS.

NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.

**6.0 Permanent Aggregate Edge Treatment.** Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR 200 TON/MI (TON)	PRIME MC800 590 GAL/MI (GAL)	REMARKS
FROM	TO					
0.000	3.065	WW	3.065	613.0	1808.4	
			TOTALS	613.0	1808.4	
			USE	613.0	1,809	

**7.0 Gravel (A) or Crushed Stone (B).** Gravel (A) or Crushed Stone (B) quantities are as follows:

GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	204	30	234	GRAVEL (A) OR CRUSHED STONE (B)

Q. Supplemental Revisions JSP-18-01AA

Compliance with [2 CFR 200.216 – Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment](#).

The Missouri Highways and Transportation Commission shall not enter into a contract (or extend or renew a contract) using federal funds to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as substantial or as critical technology as part of any system where the video surveillance and telecommunications equipment was produced by Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

Stormwater Compliance Requirements

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

**1.0 Description.** This provision requires the contractor to provide a Water Pollution Control Manager (WPCM) for any project that includes land disturbance on the project site and the total area of land disturbance, both on the project site, and all Off-site support areas, is one (1) acre or more. Regardless of the area of Off-site disturbance, if no land disturbance occurs on the project site, these provisions do not apply. When a WPCM is required, all sections within this provision shall be applicable, including assessment of specified Liquidated Damages for failure to correct Stormwater Deficiencies, as specified herein. This provision is in addition to any other stormwater, environmental, and land disturbance requirements specified elsewhere in the contract.

**1.1 Definitions.** The project site is defined as all areas designated on the plans, including temporary and permanent easements. The project site is equivalent to the “permitted site”, as defined in MoDOT’s State Operating Permit. An Off-site area is defined as any location off the project site the contractor utilizes for a dedicated project support function, such as, but not limited to, staging area, plant site, borrow area, or waste area.

**1.2 Reporting of Off-Site Land Disturbance.** If the project includes any planned land disturbance on the project site, prior to the start of work, the contractor shall submit a written report to the engineer that discloses all Off-site support areas where land disturbance is planned, the total acreage of anticipated land disturbance on those sites, and the land disturbance permit number(s). Upon request by the engineer, the contractor shall submit a copy of its land disturbance permit(s) for Off-site locations. Based on the total acreage of land disturbance, both on and Off-site, the engineer shall determine if these Stormwater Compliance Requirements shall apply. The Contractor shall immediately report any changes to the planned area of Off-site land disturbance. The Contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas.

**2.0 Water Pollution Control Manager (WPCM).** The Contractor shall designate a competent person to serve as the Water Pollution Control Manager (WPCM) for projects meeting the description in Section 1.0. The Contractor shall ensure the WPCM completes all duties listed in Section 2.1.

**2.1 Duties of the WPCM:**

- (a) Be familiar with the stormwater requirements including the current MoDOT State Operating Permit for construction stormwater discharges/land disturbance activities; MoDOT’s statewide Stormwater Pollution Prevention Plan (SWPPP); the Corps of Engineers Section 404 Permit, when applicable; the project specific SWPPP, the Project’s Erosion & Sediment Control Plan; all applicable special provisions, specifications, and standard drawings; and this provision;
- (b) Successfully complete the MoDOT Stormwater Training Course within the last 4 years. The MoDOT Stormwater Training is a free online course available at MoDOT.org;
- (c) Attend the Pre-Activity Meeting for Grading and Land Disturbance and all subsequent Weekly Meetings in which grading activities are discussed;
- (d) Oversee and ensure all work is performed in accordance with the Project-specific SWPPP and all updates thereto, or as designated by the engineer;
- (e) Review the project site for compliance with the Project SWPPP, as needed, from the start of any grading operations until final stabilization is achieved, and take necessary actions to correct any

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

known deficiencies to prevent pollution of the waters of the state or adjacent property owners prior to the engineer's weekly inspections;

- (f) Review and acknowledge receipt of each MoDOT Inspection Report (Land Disturbance Inspection Record) for the Project within forty eight (48) hours of receiving the report and ensure that all Stormwater Deficiencies noted on the report are corrected as soon as possible, but no later than stated in Section 5.0.

**3.0 Pre-Activity Meeting for Grading/Land Disturbance and Required Hold Point.** A Pre-Activity meeting for grading/land disturbance shall be held prior to the start of any land disturbance operations. No land disturbance operations shall commence prior to the Pre-Activity meeting except work necessary to install perimeter controls and entrances. Discussion items at the pre-activity meeting shall include a review of the Project SWPPP, the planned order of grading operations, proposed areas of initial disturbance, identification of all necessary BMPs that shall be installed prior to commencement of grading operations, and any issues relating to compliance with the Stormwater requirements that could arise in the course of construction activity at the project.

**3.1 Hold Point.** Following the pre-activity meeting for grading/land disturbance and subsequent installation of the initial BMPs identified at the pre-activity meeting, a Hold Point shall occur prior to the start of any land disturbance operations to allow the engineer and WPCM the time needed to perform an on-site review of the installation of the BMPs to ensure compliance with the SWPPP is met. Land disturbance operations shall not begin until authorization is given by the engineer.

**4.0 Inspection Reports.** Weekly and post run-off inspections will be performed by the engineer and each Inspection Report (Land Disturbance Inspection Record) will be entered into a web-based Stormwater Compliance database. The WPCM will be granted access to this database and shall promptly review all reports, including any noted deficiencies, and shall acknowledge receipt of the report as required in Section 2.1 (f.).

**5.0 Stormwater Deficiency Corrections.** All stormwater deficiencies identified in the Inspection Report shall be corrected by the contractor within 7 days of the inspection date or any extended period granted by the engineer when weather or field conditions prohibit the corrective work. If the contractor does not initiate corrective measures within 5 calendar days of the inspection date or any extended period granted by the engineer, all work shall cease on the project except for work to correct these deficiencies, unless otherwise allowed by the engineer. All impact costs related to this halting of work, including, but not limited to stand-by time for equipment, shall be borne by the Contractor. Work shall not resume until the engineer approves the corrective work.

**5.1 Liquidated Damages.** If the Contractor fails to complete the correction of all Stormwater Deficiencies listed on the MoDOT Inspection Report within the specified time limit, the Commission will be damaged in various ways, including but not limited to, potential liability, required mitigation, environmental clean-up, fines, and penalties. These damages are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of \$2,000 per day for failure to correct one or more of the Stormwater Deficiencies listed on the Inspection Report within the specified time limit. In addition to the stipulated damages, the stoppage of work shall remain in effect until all corrections are complete.

**6.0 Basis of Payment.** No direct payment will be made for compliance with this provision.

Job No.: JST0074  
Route: W, N, DD, Z. T, OO, MM, FF,  
WW, & HH  
County: Lawrence, Christian, Dade,  
Barry, & Greene

### Anti-Discrimination Against Israel Certification

By signing this contract, the Company certifies it is not currently engaged in and shall not, for the duration of the contract, engage in a boycott of goods or services from the State of Israel, companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel, or persons or entities doing business in the State of Israel as defined by Section 34.600 RSMo. This certification shall not apply to contracts with a total potential value of less than One Hundred Thousand Dollars (\$100,000) or to contractors with fewer than ten (10) employees.

### Ground Tire Rubber (GTR) Dry Process Modification of Bituminous Pavement Material

**1.0 Description.** This work shall consist of the dry process of adding ground tire rubber (GTR) to modify bituminous material to be used in highway construction. Existing GTR requirements in Section 1015 pertain to the wet process method of GTR modification that blends GTR with the asphalt binder (terminal blending or blending at HMA plant). The following requirements shall govern for dry process GTR modification. The dry process method adds GTR as a fine aggregate or mineral filler during mix production. All GTR modified asphalt mixtures shall be in accordance with Secs 401, 402, or 403 as specified in the contract; except as revised by this specification.

**2.0 Materials.** The contractor shall furnish a manufacturer's certification to the engineer for each shipment of GTR furnished stating the name of the manufacturer, the chemical composition, workability additives, and certifying that the GTR supplied is in accordance with this specification.

**2.1 Product Approval.** The GTR product shall contain a Trans-Polyoctenamer (TOR) added at 4.5 % of the weight of the crumb rubber or an engineered crumb rubber (ECR) workability additive that has proven performance in Missouri. Other GTR additives shall be demonstrated and proven prior to use such as a five-year field performance history in other states or performance on a federal or state-sanctioned accelerated loading facility.

**2.2 General.** GTR shall be produced from processing automobile or truck tires by ambient or cryogenic grinding methods. Heavy equipment tires, uncured or de-vulcanized rubber will not be permitted. GTR shall also meet the following material requirements:

Job No.: JST0074  
 Route: W, N, DD, Z. T, OO, MM, FF,  
 WW, & HH  
 County: Lawrence, Christian, Dade,  
 Barry, & Greene

<b>Table 1 – GTR Material Properties</b>		
<b>Property</b>	<b>Test Method</b>	<b>Criteria</b>
Specific Gravity	ASTM D1817	1.02 to 1.20
Metal Contaminates	ASTM D5603	≤0.01%
Fiber Content	ASTM D5603	≤0.5%
Moisture Content	ASTM D1509	≤1.0%*
Mineral Filler	AASHTO M17	≤4.0%

\*Moisture content of the GTR shall not cause foaming when combined with asphalt binder and aggregate during mix production

**2.3 Gradation.** The GTR material prior to TOR or ECR workability additives shall meet the following gradation and shall be tested in accordance with ASTM D5603 and ASTM D5644.

<b>Table 2 – GTR Gradation</b>	
<b>Sieve</b>	<b>Percent Passing by Weight</b>
No. 20	100
No. 30	98-100
No. 40	50-70
No. 100	5-15

**3.0 Delivery, Storage, and Handling.** The GTR shall be supplied in moisture-proof packaging or other appropriate bulk containers. GTR shall be stored in a dry location protected from rain before use. Each bag or container shall be properly labeled with the manufacturer’s designation for the GTR and specific type, mesh size, weight and manufacturer’s batch or Lot designation.

**4.0 Feeder System.** Dry Process GTR shall be controlled with a feeder system using a proportioning device that is accurate to within ± 3 percent of the amount required. The system shall automatically adjust the feed rate to always maintain the material within this tolerance and shall have a convenient and accurate means of calibration. The system shall provide in-process monitoring, consisting of either a digital display of output or a printout of feed rate, in pounds per minute, to verify feed rate. The supply system shall report the feed in 1-pound increments using load cells that will enable the user to monitor the depletion of the GTR. Monitoring the system volumetrically will not be allowed. The feeder shall interlock with the aggregate weight system and asphalt binder pump to maintain correct mixture proportions at all production rates.

Flow indicators or sensing devices for the system shall be interlocked with the plant controls to interrupt mixture production if GTR introduction rate is not within ± 3 percent. This interlock will immediately notify the operator if GTR introduction rate exceeds introduction tolerances. All

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plant production will cease if the introduction rate is not brought back within tolerance after 30 seconds. When the interlock system interrupts production and the plant has to be restarted, upon restarting operations; the modifier system shall run until a uniform feed can be observed on the output display. All mix produced prior to obtaining a uniform feed shall be rejected.

**4.1 Batch Plants.** GTR shall be added to aggregate in the weigh hopper. Mixing times shall be increased per GTR manufacturer recommendations.

**4.2 Drum Plants.** The feeder system shall add GTR to aggregate and liquid binder during mixing and provide sufficient mixing time to produce a uniform mixture. The feeder system shall ensure GTR does not become entrained in the exhaust system of the drier or plant and is not exposed to the drier flame at any point after introduction.

**5.0 Testing During Mixture Production.** Testing of asphalt mixes containing GTR shall not begin until at least 30 minutes after production or per additive supplier's recommendation.

**6.0 Construction Requirements.** Mixes containing GTR shall have a target mixing temperature of 325 F or as directed by the GTR additive supplier. The additive supplier's recommendations shall be followed to allow for GTR binder absorption/reaction. This may include holding mix in the silo to allow time for binder to absorb into the GTR. Rolling operations may need to be modified.

**7.0 Mix Design Test Method Modification.** A formal mixing procedure from the additive supplier shall be provided to the contractor and engineer that details the proper sample preparation, including blending GTR with the binder or other additives. Samples shall be prepared and fabricated in accordance with this procedure by the engineer and contractor throughout the duration of the project.

**8.0 Mix design Volumetrics.** Mix design volumetric equations shall be modified as follows:

**8.1** Additional virgin binder added to offset GTR absorption of binder shall be counted as part of the mix virgin binder

**8.2** GTR shall be included as part of the aggregate when calculating VMA of the mix.

**8.2.1** GTR SPG shall be 1.15

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**8.3** Mix  $G_{sb}$  used to determine VMA shall be calculated as follows:

$$G_{sb (JMF)} = \frac{(100 - P_{bmv})}{\left(\frac{P_s}{G_{sb}} + \frac{P_{GTR}}{G_{GTR}}\right)}$$

where:

$G_{sb (JMF)}$  = bulk specific gravity of the combined aggregate including GTR

$P_{bmv}$  = percent virgin binder by total mixture weight

$P_s$  = percent aggregate by total mixture weight (not including GTR)

$P_{GTR}$  = percent GTR by total mixture weight

$G_{sb}$  = bulk specific gravity of the combined aggregate (not including GTR)

$G_{GTR}$  = GTR specific gravity

**8.4**  $G_{se}$  shall be calculated as follows:

$$G_{se} = \frac{(100 - P_b - P_{GTR})}{\left(\frac{100}{G_{mm}} - \frac{P_b}{G_b} - \frac{P_{GTR}}{G_{GTR}}\right)}$$

**8.5**  $P_{be}$  shall be calculated as follows:

$$P_{be} = P_b - \frac{P_{ba}}{100} * (P_s + P_{GTR})$$

**9.0 Minimum GTR Amount.** The minimum dosage rate for GTR shall be 5 % by weight of total binder for an acceptable one bump grade or 10 % by weight of total binder for an acceptable two bump grade as detailed in the following table. Varying percentage blends of GTR and approved additives may be used as approved by the engineer with proven performance and meeting the specified requirements of the contract grade.

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Contract Binder Grade	Percent Effective Virgin Binder Replacement Limits	Required Virgin Binder Grade	Minimum GTR Dosage Rate
PG 76-22	0 - 20	PG 70-22	5 %
		PG 64-22	10 %
PG 70-22	0 - 30	PG 64-22	5 %
		PG 58-28	10 %
PG 64-22	0 – 40*	PG 58-28	5 %
		PG 52-34	10 %
PG 58-28	0 – 40*	PG 52-34	5 %
		PG 46-34	10 %

\* Reclaimed Asphalt Shingles (RAS) may be used when the contract grade is PG 64-22 or PG 58-28. RAS replacement shall follow the 2 x RAS criteria when calculating percent effective binder replacement in accordance Sec 401.

**Delete Sec 403.19.2 and substitute the following:**

**403.19.2 Lots.** The lot size shall be designated in the contractor’s QC Plan. Each lot shall contain no less than four sublots and the maximum subplot size shall be 1,000 tons. The maximum lot size shall be 4,000 tons for determination of pay factors. Sublots from incomplete lots shall be combined with the previous complete lot for determination of pay factors. When no previous lot exists, the mixture shall be treated in accordance with [Sec 403.23.7.4.1](#). A new lot shall begin when the asphalt content of a mixture is adjusted in accordance with [Sec 403.11](#).

**Delete Sec 106.9 and substitute the following:**

**106.9 Buy America Requirements**

Buy America Requirements are waived if the total amount of Federal financial assistance applied to the project, through awards or subawards, is below \$500,000.

**106.9.1 Buy America Requirements for Iron and Steel.**

On all federal-aid projects, the contractor’s attention is directed to Title 23 CFR 635.410 *Buy America Requirements*. Where steel or iron products are to be permanently incorporated into the contract work, steel and iron material shall be manufactured, from the initial melting stage through the application of coatings, in the USA except for “minimal use” as described herein. Furthermore, any coating process of the steel or iron shall be performed in the USA. Under a general waiver from FHWA the use of pig iron and processed, pelletized, and reduced iron ore manufactured outside of the USA will be permitted in the domestic manufacturing process for steel or iron material.

**106.9.2 Buy America Requirements for Iron and Steel for Manufactured items.**

A manufactured item will be considered iron and steel if it is “predominantly” iron or steel. Predominantly iron or steel means that the cost of iron or steel content of a product is more than 50 percent of the total cost of all its components.

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**106.9.2** Any sources other than the USA as defined will be considered foreign. The required domestic manufacturing process shall include formation of ingots and any subsequent process. Coatings shall include any surface finish that protects or adds value to the product.

**106.9.3** “Minimal use” of foreign steel, iron or coating processes will be permitted, provided the cost of such products does not exceed 1/10 of one percent (0.1 percent) of the total contract cost or \$2,500.00, whichever is greater. If foreign steel, iron, or coating processes are used, invoices to document the cost of the foreign portion, as delivered to the project, shall be provided and the engineer’s written approval obtained prior to placing the material in any work.

**106.9.4** Buy America requirements include a step certification for all fabrication processes of all steel or iron materials that are accepted per Sec 1000. The AASHTO Product Evaluation and Audit Solutions compliance program verifies that all steel and iron products fabrication processes conform to 23 CFR 635.410 Buy America Requirements and is an acceptable standard per 23 CFR 635.410(d). AASHTO Product Evaluation and Audit Solutions compliant suppliers will not be required to submit step certification documentation with the shipment for some selected steel and iron materials. The AASHTO Product Evaluation and Audit Solutions compliant supplier shall maintain the step certification documentation on file and shall provide this documentation to the engineer upon request.

**106.9.4.1** Items designated as Category 1 will consist of steel girders, piling, and reinforcing steel installed on site. Category 1 items require supporting documentation prior to incorporation into the project showing all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements. This includes the Mill Test Report from the original producing steel mill and certifications documenting the manufacturing process for all subsequent fabrication, including coatings. The certification shall include language that certifies the following. That all steel and iron materials permanently incorporated in this project was procured and processed domestically and all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410.

**106.9.4.2** Items designated as Category 2 will include all other steel or iron products not in Category 1 and permanently incorporated in the project. Category 2 items shall consist of, but not be limited to items such as fencing, guardrail, signing, lighting and signal supports. The prime contractor is required to submit a material of origin form certification prior to incorporation into the project from the fabricator for each item that the product is domestic. The Certificate of Materials Origin form (link to certificate form) from the fabricator must show all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements and be signed by a fabricator representative. The engineer reserves the right to request additional information and documentation to verify that all Buy America requirements have been satisfied. These documents shall be submitted upon request by the engineer and retained for a period of 3 years after the last reimbursement of the material.

**106.9.4.3** Any minor miscellaneous steel or iron items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically. Examples of these items would be bolts for sign posts, anchorage inserts, etc. The certification shall read “I certify that all steel and iron materials permanently incorporated in this project during all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements procured and processed domestically in accordance with CFR Title 23 Section 635.410 Buy America Requirements. Any foreign steel used was submitted and accepted under minor usage”. The certification shall be signed by an authorized representative of the prime contractor.

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**106.9.5** When permitted in the contract, alternate bids may be submitted for foreign steel and iron products. The award of the contract when alternate bids are permitted will be based on the lowest total bid of the contract based on furnishing domestic steel or iron products or 125 percent of the lowest total bid based on furnishing foreign steel or iron products. If foreign steel or iron products are awarded the contract, domestic steel or iron products may be used; however, payment will be at the contract unit price for foreign steel or iron products.

**106.9.6 Buy America Requirements for Construction Materials other than iron and steel materials.** Construction materials means articles, materials, or supplies that consist of only one of the items listed. Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization of the construction material. Upon request by the engineer, the contractor shall submit a domestic certification for all construction materials listed that are incorporated into the project.

- (a) Non-ferrous metals
- (b) Plastic and Polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables)
- (c) Glass (including optic glass)
- (d) Fiber optic cable (including drop cable)
- (e) Optical fiber
- (f) Lumber
- (g) Engineered wood
- (h) Drywall

**106.9.6.1 Minimal Use allowance for Construction Materials other than iron or steel.**

“The total value of the non-compliant products is no more than the lesser of \$1,000,000 or 5% of total applicable costs for the project.” The contractor shall submit to the engineer any non-domestic materials and their total material cost to the engineer. The contractor and the engineer will both track these totals to assure that the minimal usage allowance is not exceeded.

**106.9.7 Buy America Requirements for Manufactured Products.**

Manufactured products means:

- (a) Articles, materials, or supplies that have been:
  - (i) Processed into a specific form and shape; or
  - (ii) Combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.
- (b) If an item is classified as an iron or steel product, a construction material, or a section 70917(c) material under § 184.4(e) and the definitions set forth in this section, then it is not a manufactured product. However, an article, material, or supply classified as a manufactured product under § 184.4(e) and paragraph (1) of this definition may include components that are construction materials, iron or steel products, or section 70917(c) materials.

**106.9.7.1** Manufactured products are exempt from Buy America requirements. To qualify as a manufactured product, items that consist of two or more of the listed construction materials that have been combined together through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed through a manufacturing process, should be treated as manufactured products, rather than as construction materials.

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**106.9.7.2** Manufactured items are covered under a general waiver to exclude them from Buy America Requirements. To qualify for the exemption the components must comprise of 55% of the value of materials in the item. The final assembly must also be performed domestically.

R. Contractor Quality Control for Plant Mix Bituminous Surface Leveling NJSP-15-21A

**1.0 Description.** The contractor shall provide Quality Control (QC) testing and shall perform verification procedures associated with the production and placement of Plant Mix Bituminous Surface Leveling Mixture in accordance with this provision.

**2.0 Asphalt Plant Requirements.** The contractor shall perform quality control testing in the production of the Surface Leveling Mixture and report the results electronically on MoDOT-provided forms. All reports shall include the Contract ID, Project Number, Route, County, and Job Mix number.

**2.1** Calibration of the asphalt plant shall be in accordance with Sec 403.17.2.2. Record retention for verification of test reports shall be in accordance with Sec 403.17.3.2.

**2.2** At a minimum, the contractor shall perform one QC sieve analysis test for each day of production of Surface Level mixture in excess of 100 tons to verify the aggregate is within the required gradation range. Results of the QC sieve analysis test shall be reported to the engineer daily. A split of each sample shall be clearly labeled and stored by the contractor in a manner that prevents contamination. The engineer will collect a minimum of one random QC split sample, and one full sample from plant production, for testing per each 10,000 tons of production. Uncollected QC split samples shall be retained by the contractor until the engineer authorizes disposal or until the Final Inspection, whichever occurs earlier.

**2.3** The contractor shall monitor the quantity of asphalt binder used in the production of the mix, including any commercial mix, and report that quantity to the engineer. Original asphalt binder delivery tickets shall accompany the report submitted to the engineer. The engineer will perform a minimum of one asphalt binder content test per each 10,000 tons of production for any project that exceeds a total of 5,000 tons of production.

**2.4** The contractor shall take a daily QC sample of the asphalt binder per instructions in Section 460.3.13 of the EPG. The engineer will collect the QC samples and ship to the MoDOT Central lab for random testing. In addition, the engineer will take a minimum of one random Quality Assurance sample per project from the binder line. The engineer sample will be shipped to the Central Lab along with the daily samples and will be designated for testing.

**2.5** The contractor shall perform one moisture content test for each day of production of Surface Level mixture in excess of 100 tons. The frequency of the moisture test may be reduced if approved by the engineer.

**3.0 Roadway Requirements.** The contractor shall perform quality control verification of the Surface Leveling Mixture on the roadway and shall monitor the asphalt tonnage placed in relation to plan quantity.

**3.1 Irregularities.** Additional tons of Surface Leveling mix will be provided for irregularities in the existing roadway surface. The tonnage specified for irregularities is an estimated quantity and shall only be placed at locations where it is necessary to fill ruts and other low points. Prior to placing the mix, the

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contractor and engineer shall evaluate the entire route and develop a plan that best utilizes the tonnage needed for irregularities. Any excess quantity of irregularities shall not be placed.

**3.2 Tack.** On the first day of production, the contractor shall demonstrate proper application of tack coat in the presence of the engineer. Thereafter, when the engineer is not present to witness the application of the tack coat, the contractor shall document the tack application by taking a minimum of two high-resolution date/time stamped photographs of the tacked surface per one-mile segment. Pictures should be taken just in front of the paver in order to account for loss of tack from truck tires. The contractor shall also monitor and document the application rate. The contractor shall take distributor readings at the beginning and ending of each shift and document the quantity used.

**3.3 Spreading and Rolling.** On the first day of production, the contractor shall demonstrate successful spreading and compaction of the mixture, including proper rolling patterns, in the presence of the engineer. Thereafter, the contractor shall monitor all roadway production procedures and document daily. Use of approved Intelligent Compaction technology is an allowable substitute for daily documentation.

**3.4 Monitoring of Quantity.** The contractor shall monitor the quantity of Surface Level mix placed and report that information to the engineer and production staff as specified herein.

**3.4.1** The contractor shall verify that the quantity of Surface Leveling mix in the contract for each route is sufficient to cover the roadway as shown on the typical sections, including any surface irregularities. Any discrepancies shall be brought to the engineer's attention in writing prior to the pre-construction conference. Plan quantity shall be defined as the total tons computed to cover the surface area according to the typical section, plus any amount pre-approved by the engineer for pavement irregularities.

**3.4.2** The contractor shall provide temporary log mile reference points at no less than ½ mile intervals along each route to monitor the tons of Surface Leveling mix laid in relation to plan quantity. Entrances, shoulders, or other irregular areas will be monitored as directed by the engineer.

**3.4.3** During production, the contractor shall document the total tons placed in each one-mile segment, along with the plan quantity and the percent over/under for that segment. The cumulative quantity and percent over/under for the route should also be documented. After each one-mile segment, the contractor shall provide a status report to the production manager and the engineer. When the engineer is not present on the project, the contractor shall send an electronic status report to the engineer.

**3.4.4** The goal is to keep the placed quantity within 2% of plan quantity for the project. The engineer will monitor the status reports and will advise the contractor on how to proceed when there is an excessive variance from plan quantity. The engineer may decrease the frequency of the electronic status reports when the variances are consistently low.

**3.4.5** The contractor shall collect asphalt tickets from the delivery trucks and group them per each one-mile segment. The contractor shall submit to the engineer a daily summary report that includes all of the information specified in Section 3.4.3. The contractor shall sign the summary report confirming that the information is accurate and that the attached tickets represent the asphalt material placed.

**3.4.6** The contractor shall be equipped with a contractor-furnished cellular device capable of providing and maintaining a reliable means of immediate communication with the engineer when the engineer is not present on the project.

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**4.0 Excessive Quantity.** If the contractor places Surface Level mix on any one-mile segment, or any other isolated areas, in excess of plan quantity by 5% or more, without prior approval from the engineer, further investigation may be required to determine if the excess was warranted. If directed by the engineer, the contractor shall core the pavement at locations established by the engineer to determine the amount that was excessive, if any. No payment will be made for the cost to core the pavement or for the tons of Surface Level mix that the engineer determines to be excessive. If the amount of Surface Level mix is determined to be justified, payment will be made for the mix, and for the cost of coring at the fixed price established in Sec 109. Placement of asphalt in excess of plan quantity for two consecutive segments without prior approval from the engineer may result in issuance of an Order Record to stop work.

**5.0 Basis of Payment.** No direct payment will be made for compliance with this provision. All costs shall be considered completely covered under the pay items provided in the contract.

S. Cooperation Between Contractors – SW

**1.0 Description.** This contract is one of several contemplated relative to the overall project. Separate contracts may be let that will be within this contracts area.

**2.0 Construction Requirements.**

**2.1** The work for this project shall be performed in the order necessary to best facilitate the early completion of the combined projects on this improvement. The contractor shall be required to arrange the storage of materials and equipment and perform the construction operations so as not to unduly interfere with the operations of other contractors. This may require the contractor to store equipment and materials off state right of way and make the necessary arrangements for storage sites.

**2.2** Full cooperation of the contractors involved with this improvement in careful and complete coordination of their respective activities in the area will be required. Each contractor involved shall so schedule and conduct work as to avoid unnecessary inconvenience, delay to another and a manner as not to damage work being performed or completed by another. When necessary for proper prosecution of work, each contractor shall permit the other access through the overlapping construction areas and the use of any access or haul roads constructed by others.

**3.0 Method of Measurement.** No measurement will be made.

**4.0 Basis of Payment.** Payment for the above described work will be considered completely covered by the contract unit price for other items included in the contract.

T. Lump Sum Temporary Traffic Control JSP-22-01

**1.0 Delete Sec 616.11 and insert the following:**

**616.11 Method of Measurement.** Measurement for relocation of post-mounted signs will be made to the nearest square foot of sign area only for the signs designated for payment on the plans. All other sign relocations shall be incidental. Measurement for construction signs will be made to the nearest square

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foot of sign area. Measurement will be made per each for each of the temporary traffic control items provided in the contract.

**616.11.1 Lump Sum Temporary Traffic Control.** No measurement will be made for temporary traffic control items grouped and designated to be paid per lump sum. The list of lump sum items provided in the plans or contract is considered an approximation and may be subject to change based on field conditions. This is not a complete list and may exclude quantities for duplicate work zone packages used in simultaneous operations. The contractor shall provide all traffic control devices required to execute the provided traffic control plans for each applicable operation, stage, or phase. No measurement will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer.

## **2.0 Delete Sec 616.12 and insert the following:**

**616.12 Basis of Payment.** All temporary traffic control devices authorized for installation by the engineer will be paid for at the contract unit price for each of the pay items included in the contract. Whether the devices are paid individually, or per lump sum, no direct payment will be made for the following:

- (a) Incidental items necessary to complete the work, unless specifically provided as a pay item in the contract.
- (b) Installing, operating, maintaining, cleaning, repairing, removing, or replacing traffic control devices.
- (c) Covering and uncovering existing signs and other traffic control devices.
- (d) Relocating temporary traffic control devices, including permanent traffic control devices temporarily relocated, unless specifically included as a pay item in the contract.
- (e) Worker apparel.
- (f) Flaggers, AFADs, PFDs, pilot vehicles, and appurtenances at flagging stations.
- (g) Furnishing, installing, operating, maintaining, and removing construction-related vehicle and equipment lighting.
- (h) Construction and removal of temporary equipment crossovers, including restoring pre-existing crossovers.
- (i) Provide and maintaining work zone lighting and work area lighting.

**616.12.1 Lump Sum Temporary Traffic Control.** Traffic control items grouped together in the contract or plans for lump sum payment shall be paid incrementally per Sec 616.12.1.1. Alternately, upon request from the contractor, the engineer will consider a modified payment schedule that more accurately reflects completion of traffic control work. No payment will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer. Additional items directed by the engineer will be paid for in accordance with Sec 109.4. No adjustment to the price will be made for overruns or underruns of other work or for added work that is completed within existing work zones.

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**616.12.1.1 Partial payments.** For purposes of determining partial payments, the original contract amount will be the total dollar value of all original contract line items less the price for Lump Sum Temporary Traffic Control (LSTTC). If the contract includes multiple projects, this determination will be made for each project. Partial payments will be made as follows:

- (a) The first payment will be made when five percent of the original contract amount is earned. The payment will be 50 percent of the price for LSTTC, or five percent of the original contract amount, whichever is less.
- (b) The second payment will be made when 50 percent of the original contract amount is earned. The payment will be 25 percent of the price for LSTTC, or 2.5 percent of the original contract amount, whichever is less.
- (c) The third payment will be made when 75 percent of the original contract amount is earned. The payment will be 20 percent of the price for LSTTC, or two percent of the original contract amount, whichever is less.
- (d) Payment for the remaining balance due for LSTTC will be made when the contract has been accepted for maintenance or earlier as approved by the engineer.

**616.12.1.2** Temporary traffic control will be paid for at the contract lump sum price for Item:

Item No.	Unit	Description
616-99.01	Lump Sum	Misc. Lump Sum Temporary Traffic Control

U. Bridge End Transitions - SW

**1.0** At all bridge exceptions, the engineer will determine in the field the ending point of the transition. This point will not necessarily be at the bridge end, but will be located at a point which provides a smooth transition and approach to the bridge. The limits of all bridge end transitions shall be approved by the engineer before any milling proceeds on these transitions. Where bridges are to be resurfaced, the surfacing shall be from curb to curb.

V. Pavement Marking Log – SW

**1.0 Description.** This work shall consist of the Contractor documenting the location of all existing pavement markings prior to coldmilling or resurfacing and installing new pavement markings to match the scheme that was in place prior to the project.

**2.0 Construction Requirements.** Prior to the start of resurfacing work, the Contractor shall document the color, type, and location of the existing pavement markings, including any change in pavement marking (e.g., solid yellow to intermittent yellow on the centerline) and no passing zones. The Contractor shall submit the method of documentation to the Engineer for approval prior to recording the existing pavement marking information.

**2.1** The existing pavement marking documentation provided by the Contractor shall include the location of existing pavement markings by either station or log mile. The Engineer shall reserve the right to make adjustments to the final pavement marking locations. The Engineer will provide the Contractor with any adjusted locations. Under no

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circumstances shall the Contractor make adjustments to the location of permanent pavement markings without the Engineer's approval.

**2.2** All permanent pavement markings shall be installed in accordance with Sec 620.

**3.0. Temporary Pavement Marking.** The Contractor shall provide temporary pavement marking in accordance with Sec 620 and Standard Plan 620.10. No compensation will be made to the Contractor for temporary pavement marking.

**4.0 Method of Measurement.** Measurement will be made in accordance with Sec 620.

**5.0 Basis of Payment.** No direct compensation will be made to the Contractor for compliance with this provision. All costs associated with the equipment, labor, materials, and time necessary to fulfill the requirements of this provision shall be considered completely covered by the pavement marking (Sec 620) line items in the contract.

W. Permanent Pavement Marking - SW

**1.0 Description.** This work shall consist of furnishing and placing permanent centerline, edge line, lane line markings, and preformed thermoplastic pavement marking, as specified, at locations shown on the plans or as approved by the engineer. The preformed thermoplastic pavement marking includes, but not limited to, 24" White (Stop Bars) and 24" Yellow (Hash Mark), 6" White for Crosswalks, Turn Arrows, Railroad Crossings, Yield Markings, and the word "ONLY". This work shall be in accordance with Section 620 and specifically as follows.

**2.0 Construction Requirements.** On roadways open to traffic, permanent centerline, edge line, and lane line markings shall be in place no later than five days after the final paving operations. This requirement applies per individual route if multiple routes are included in a contract or if a 15 mile section of an individual route is open to traffic within a contract. This requirement also applies to divided highways, once a directional segment of 15 mile, or the entire directional segment if less than 15 miles, is paved and open to traffic within a contract. To fulfill this requirement, the contractor may have to mobilize more than once for the installation of permanent centerline, edge line, and lane line markings. The contractor will also need to coordinate the permanent pavement marking with the installation of rumble strips. The contractor shall place the preformed thermoplastic pavement marking after the permanent centerline, edge line, and lane line marking is installed by the contractor or by others. The contractor will have 5 five days after the permanent centerline, edge line, and lane line markings are placed to start the preformed thermoplastic pavement marking installation and shall be placed in accordance with manufacturer's recommendations or as approved by the engineer.

**3.0 Basis of Payment.** The accepted quantity of permanent pavement marking paint and preformed thermoplastic pavement marking will be paid for at the contract unit price for each of the pay items include in the contract. Payment will be considered full compensation for all labor, equipment, material or time necessary to complete the described work including any other incidental items.

X. Permanent Aggregate Edge Treatment - SW

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**1.0 Description.** This work shall consist of furnishing and placing an aggregate material on the shoulders of the resurfaced route in areas indicated in the plans or as directed by the engineer. This work and material shall be in accordance with Section 310 except as follows. The edge treatment shall be at least 2' wide.

## **2.0 Material**

2.1 Aggregate Material utilized for permanent aggregate edge treatment shall be either commercial base or coldmillings. Any material shall be approved by the engineer prior to use.

2.1.1 Coldmilling material shall be an asphaltic material created by the equipment and operations as defined in Standard Specification 622.10.

2.1.2 Aggregate material shall be a 1" commercial base.

**3.0 Construction Requirements.** The contractor shall furnish, haul and spread aggregate material or coldmillings to bring the shoulders up to match the overlaid pavement elevation as shown in the typical sections.

**3.1** Aggregate or coldmillings shall be simultaneously deposited and spread on the sub-grade and shall not be deposited on the pavement or shoulder and bladed into place without prior approval from the engineer. Aggregate material or coldmillings shall be shaped according to the typical section and compacted until there is no visible evidence of further consolidation.

**3.2** Density shall be obtained from reasonable compactive efforts consisting of no less than three passes with a roller until no further visible compaction can be achieved, or by other methods approved by the engineer.

**3.3** After all placing, shaping, and compactive effort operations are completed, the permanent aggregate edge treatment shall match the overlaid pavement elevation as shown in the typical sections.

**3.4** A prime coat (MC-800) in accordance with Section 408, shall be placed on top of all permanent aggregate edge treatment, regardless of material used, at a target rate of 0.25Gal/SY.

**4.0 Method of Measurement.** Measurement of material furnished for shoulder aggregate shall be dependent upon the material the contractor chooses to use for this work. If the contractor chooses to use a 1" commercial base, measurement will be made per ton and in accordance with Section 310.5.3. If the contractor chooses to use coldmillings, measurement will be made per linear foot. In regards to utilizing coldmillings, the Contractor is hereby being informed that it shall be their responsibility to review the existing slopes on the project and ensure there is sufficient material to install new slopes in accordance with the specifications and plans. Measurement for all prime (MC-800) will be in accordance with Section 408.5

## **5.0 Basis of Payment.**

**5.1** The bid item for the shoulder material is for the 1" commercial base option. The accepted quantities of permanent aggregate edge treatment will be paid for at the contract unit price for PERMANENT AGGREGATE EDGE TREATMENT, pay item 304-99.10, including all labor, equipment, and material costs required to fulfill the requirements of the special provision

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**5.1.1** Should the contractor choose to construct the permanent aggregate edge treatment with coldmillings, notification must be given to the engineer in advance of the work so that a change order can be issued to facilitate payment of the permanent aggregate edge treatment with a contingent item as specified herein.

**5.1.2** For the coldmilling option, a zero-cost change order will be issued to zero out the tonnage of permanent aggregate edge treatment so that it can be converted to a linear foot quantity pay item. A contingent item for the permanent aggregate edge treatment paid by the linear foot will be added to the change order. The linear footage added to the contract shall be double the centerline miles of the project. A unit price for the permanent aggregate edge treatment, coldmilling option, will be determined by multiplying the original permanent aggregate edge treatment unit bid price and the tonnage included in the contract, then dividing by double the centerline miles of the project.

**5.2** The prime coat (MC-800) shall be paid for at the contract unit price for PRIME (MC-800), pay item 408-10.18, regardless of the material used to construct the edge treatment.

Y. Culvert Location - SW

**1.0 Description.** This work shall consist of the Contractor documenting the location of all existing crossroad culverts prior to conducting grading operations or placement of permanent aggregate edge treatment.

**2.0 Construction Requirements.** Prior to the start of grading or edge treatment work, the Contractor shall document the location of the existing crossroad culverts. The Contractor shall submit the method of documentation to the Engineer for approval prior to recording the existing culvert location.

**2.1** The documentation provided by the Contractor shall include the location of existing crossroad culverts by either station or log mile. Under no circumstances shall the Contractor begin grading or edge treatment work without the Engineer's approval.

**2.2** The location of each crossroad culvert shall be indicated with a lathe or other identifier that can be seen during contractor operations.

**2.3** The contractor shall exercise reasonable care in the locations of the crossroad culverts and all driveway culverts to ensure that grading or edge treatment operations do not result in the blockage of the culvert.

**2.4** The contractor as directed by the engineer shall remove any material from all culverts that was placed by grading or edge treatment operations.

**3.0 Basis of Payment.** No direct compensation will be made to the Contractor for compliance with this provision. All costs associated with the equipment, labor, materials, and time necessary to fulfill the requirements of this provision shall be considered completely covered by line items in the contract.

Z. Gravel A or Crushed Stone B - SW

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**1.0 Description.** This work shall consist of furnishing and placing gravel or crushed stone surfacing for transitions at aggregate side roads and entrances upon completion of overlay and shoulder work. This work and material shall be in accordance with Section 310 except as follows.

**2.0 Construction Requirements.** The contractor shall furnish, haul and spread gravel or crushed stone surfacing to smooth up the transitions and eliminate any edge drop offs created at aggregate side roads and entrances created from the construction of shoulders as approved by the engineer.

**3.0 Method of Measurement.** Measurement of material furnished for gravel or crushed stone will be made in accordance with Section 310.5.3, excluding any deductions for moisture.

**4.0 Basis of Payment.** The accepted quantities of gravel or crushed stone will be paid for at the contract unit price, including all labor, equipment, and material costs required to fulfill the requirements of the special provision.

AA. Contractor Furnished Surveying and Staking - SW

In addition to the requirements of Section 627 of the Missouri Standard Specifications for Highway Construction, the following shall apply:

**1.0 Description.** The contractor shall be responsible for all layout required on the project. This responsibility shall include, but not be limited to the following: Construction signing, transition milling, pavement marking, loop detectors, etc.

**1.1** The above list is not all inclusive. The contractor shall have the primary responsibility for these operations. The contractor shall provide the Resident Engineer (RE) with a staking plan layout for approval prior to the installation of signs. The RE will also provide assistance during this layout provided a request is submitted to the RE or Construction Project Manager 48 hours in advance. This will ensure that all permanently mounted traffic control devices remain consistent with District policy and avoid re-staking. If the contractor installs any signs without engineer approval, all costs associated with re-staking and/or relocation will be at the contractor's expense.

**1.2** The intent of this provision is to increase the quality of our work zones and minimize negative impacts to the contractor's schedule that can result from delays in staking.

**1.3** Any adjustments to the plan quantities or line numbers established in the contract shall be approved by the Engineer.

**2.0 Basis of Payment.** No direct payment will be made to cover the costs associated with these additional requirements. All costs will be considered completely covered by the unit bid price submitted for Contractor Furnished Surveying and Staking.

BB. Damage to Existing Pavement, Shoulders, Side Roads, and Entrances - SW

**1.0 Description.** This work shall consist of repairing any damage to existing pavement, shoulders, side roads and entrances caused by contractor operations. This shall include, but is not limited to, damage caused by the traffic during contractor operations within the project limits including the work zone signing.

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**2.0 Construction Requirements.** Any cracking gouging, or other damage to the existing pavement, shoulders, side roads, or entrances from general construction shall be repaired within twenty-four (24) hours of the time of damage at the contractor's expense. Repair of the damaged pavement, shoulders, side roads, or entrances shall be as determined by the engineer.

**3.0 Method of Measurement.** No measurement of damaged pavement or shoulder areas or damaged side roads or entrances as described above shall be made.

**4.0 Basis of Payment.** No payment will be made for repairs to existing pavement, shoulders, side roads or entrances damaged by contractor expenses.

CC. Multi-Year, Multi-Location Project – Special Requirements NJSP-22-02

**1.0 Description.** Whereas this project is identified by a single Job Number, and the project requires work be performed at multiple Locations, and the contract allows for work to be performed in multiple calendar years, these special requirements and allowances shall apply. A Location is generally identified in the contract or plans by Route and County but may be otherwise identified.

**2.0 Winter Shut-Down Period.** A Winter Shut-Down Period is required if all work on the project is not completed prior to December 1 of the calendar year in which the Notice to Proceed is made. The date range of the Winter Shut-Down Period shall be determined by the contractor and shall be shown on the contractor's most current Progress Schedule. The contractor's designated Winter Shut-Down Period shall begin no later than December 1 of the calendar year in which the Notice to Proceed is made and shall end on or after March 15 of the following year. No work shall be performed during the Winter Shut-Down Period, except for maintenance work that may be required per Sec 104.7 or 105.13 unless approved by the Engineer. Regardless of the length of the Winter Shut-Down Period, all work shall be complete prior to the contract Completion Date. All weather limitations specified elsewhere in the contract shall apply.

**3.0 Completion of Work per Location.** This contract includes work at multiple Locations, with non-contiguous project limits defined at each Location. Once work begins at a Location, the contractor shall diligently pursue completion of the work at that Location until all work is complete. If work at a Location begins prior to the Winter Shut-Down Period, all work at that Location shall be fully completed prior to the Winter Shut-Down Period, including permanent or temporary pavement marking. Work shall not begin at a Location if the long-range forecast is not conducive for completion of all work at that Location prior to the Winter Shut-Down Period.

**3.1 Partial Acceptance per Location.** Upon request by the contractor, a Location of work will be evaluated by the engineer for partial acceptance in accordance with Sec 105.15.1 after completion of all work at that Location.

**4.0 Administration of Calendar Days.** The total number of Calendar Days allowed to complete the work on this project and administration of Calendar Days shall be as specified in the Contract Liquidated Damages job special provision, except as specified herein. The count of Calendar Days will be paused during the Winter Shut-Down Period. The count of Calendar Days will be paused when work is complete at all Locations in which work had begun.

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**5.0 Pavement Marking.** Pavement marking shall be as specified elsewhere in the contract, except as specified herein.

**5.1 Temporary Raised Pavement Markers.** All Temporary Raised Pavement Markers shall be removed as part of the Temporary Pavement Marking prior to the Winter Shut-Down Period. If Temporary Pavement Marking is required during the Winter Shut-Down Period, the contractor shall use and maintain Temporary Pavement Marking Paint at the contractor's expense.

**5.2 Cold Weather Pavement Marking Paint.** If permanent pavement marking paint cannot be completed due to weather limitations specified in Sec 620.20.2.4, the contractor shall apply cold weather paint, as specified in Sec 620.10.6, in lieu of Standard Waterborne Paint, at no additional cost to the Commission. Retroreflectivity acceptance requirements and payment adjustments for Standard Waterborne Paint shall apply when using Cold weather paint. Cold weather paint that meets all contract requirements will be accepted in lieu of Standard Waterborne Paint and paid for as such. If retroreflectivity does not meet the minimum requirements for Standard Waterborne Paint but does meet the minimum requirements for Temporary Pavement Marking Paint, the Cold weather paint shall be considered Temporary Pavement Marking Paint and shall be re-marked with Standard Pavement Marking Paint when temperatures allow. No payment will be made until the Standard Pavement Marking Paint or Cold Weather Paint is accepted.

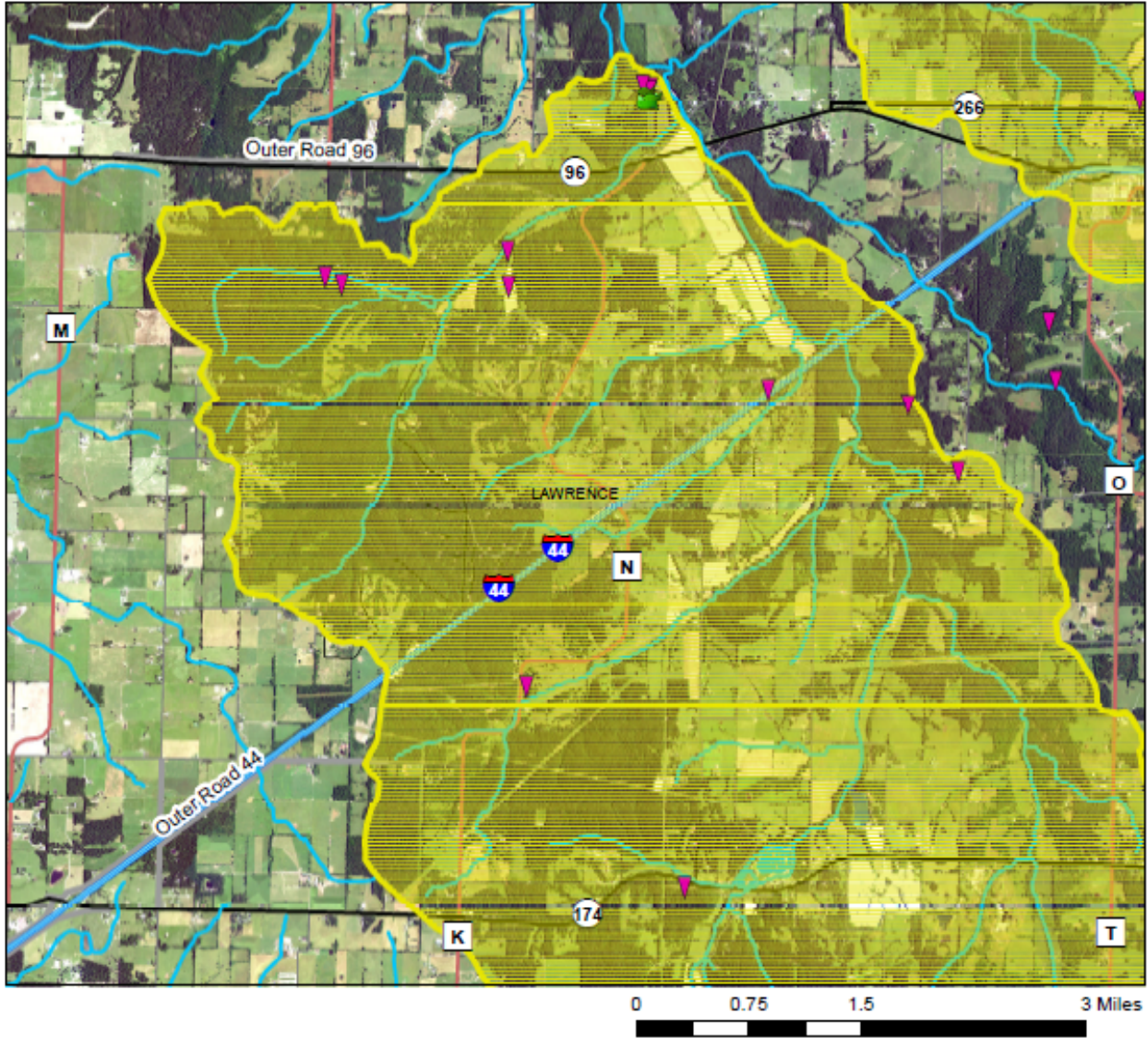
**6.0 Basis of Payment.** No additional payment will be made for compliance with these Special Requirements and Allowances provisions.

DD. PROTECTION MEASURES FOR ENVIRONMENTALLY SENSITIVE AREAS



**1.0 Description.** Portions of this project area are within designated sensitive areas or near sensitive resources, including designated Ozark cavefish recharge areas, a priority watershed, and designated critical habitat. To ensure the protection of endangered species and these sensitive areas, as well as other sensitive species that may be present, the following restrictions should be applied for work taking place within the areas shown in Figures 1.

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Lawrence County, MO, Route N  
Job #: ST0074, Pavement Repairs  
Ozark Cavefish Recharge Areas



**Legend**

-  Ozark Cavefish
-  Ozark Cavefish Recharge
-  Caves
-  State Streams
-  Route



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**Figure 1.** Ozark cavefish recharge area, Lawrence County, Route N.

**2.0 Restrictions.** To eliminate/minimize the potential for contamination of aquatic resources and the groundwater system, Personnel shall take the following precautions when working within the designated recharge areas, priority watershed, or near designated critical habitat.

**2.1 Debris Prevention and Staging.** Work shall not be allowed below the ordinary high-water elevation. The contractor will not be allowed to perform any construction operations from or enter any of the creeks with any equipment whatsoever, at any time for the duration of this project.

**2.2 Spill Prevention.** MoDOT personnel shall not refuel, conduct material transfers, or perform maintenance on equipment while the equipment is located within or over any visible stream channels (wet or dry) or sinkholes. Equipment shall not be parked in these areas. Use best management practices while fueling and maintaining equipment to prevent spills and to catch any material that is accidentally spilled. MoDOT has an approved State Operating Permit and a Pollution Prevention Plan developed in coordination with, and approved by, the Missouri Department of Natural Resources. MoDOT will assure strict adherence to this Permit and Plan throughout the course of the project. Any violation of the Plan will result in temporary suspension of work until corrective measures are implemented to comply with this provision. Personnel shall keep equipment properly maintained to avoid spills and leaks. Personnel shall inspect equipment before it is brought to the job site and must replace or repair any faulty equipment.

**2.3 Spill Containment.** A spill is defined as fuel, lubricants, paints, solvents, etc. reaching the ground where the fluid could be absorbed into the ground or run-off into an absorbent ground area.

**Initial reporting of any spill shall be made to MoDOT Environmental Section (Chris Shulse, Environmental Compliance Manager, 573-406-2207).**

If no MoDOT contact is available at the provided numbers, contact the Missouri Department of Natural Resources (573-634-2436) AND the United States Fish and Wildlife Service contaminants specialists Dave Mosby (573-234-2132 extension 113, cell 573-999-2747) or John Weber (573-234-2132 extension 177, cell 573-673-2564).

These numbers shall be always readily available on the job site. Personnel or their Supervisors shall be responsible for immediate reporting in the event of a spill.

Personnel shall maintain absorbent material and other containment measures capable of containing any spill of less than 50 gallons. Such measures could consist of earthen berms, spill absorbing materials, and any other approved methods used for spill control. Personnel shall also have a mobile spill kit on-site throughout the course of the project.

All empty containers of lubricants, fuels, and solvents shall be properly disposed.

**2.4 Erosion Control.** Erosion control measures shall be implemented to reduce suspended solids, turbidity and downstream sedimentation that may enter the ecosystem of any cave, surface water, or ground water sink. MoDOT will ensure strict adherence to the design, placement and

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maintenance of such temporary and permanent erosion control measures as stated in Division 800, Section 806 et seq., Missouri Standard Specifications for Highway Construction.

Pollution refers to sedimentation and contamination. As described above, MoDOT has a State Operating Permit and a Pollution Prevention Plan that were developed in coordination with, and approved by, the Missouri Department of Natural Resources. Section III of the Plan prohibits MoDOT from polluting any waters of the state. The Pollution Prevention Plan shall be implemented throughout the duration of the project.

**2.5 Weather Requirements.** To eliminate/minimize the potential for contamination of the groundwater system, no operations shall be performed within designated recharge areas if it is raining or if the National Weather Service forecast is predicting any form of precipitation within ten (10) hours after the proposed completion time of the operation. Section [620?] of the Engineering Policy Guide also provides minimum temperature requirements for [striping] applications, insuring effective application of various [striping] materials.

**2.6 Staging.** The contractor will not be allowed to perform any construction operations from or enter any of the creeks with any equipment whatsoever, at any time for the duration of this project.

**3.0 Basis of Payment.** No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required to fulfill the above special provisions except as specified elsewhere in the contract document.