


JOB SPECIAL PROVISIONS TABLE OF CONTENTS

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

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Job No.: JST0110
Route: W, A, DD, T, TT, W
County: Benton, Henry, & St. Clair

 <p>SHANNON M. KELLNER NUMBER PE-2011015763</p> <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.</p>	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	JOB NUMBER: JST0110 BENTON COUNTY, MO DATE PREPARED: 07/26/24
	ADDENDUM DATE: <i>R001 October 16, 2024</i>
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: ALL	

JOB
SPECIAL PROVISION

A. General – State JSP-09-03K

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 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 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 2024 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- 13-01D

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 shall be completed on or before the date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

Notice to Proceed: December 09, 2024
Contract Completion Date: November 1, 2025

2.1 Calendar Days and Completion Dates. Completion of the project is required as specified herein. The count of calendar days will begin on the date the contractor starts any construction operations on the project.

Job Number	Calendar Days	Daily Road User Cost
JST0110	168	\$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 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.

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

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:

When Independence Day falls on:	The Holiday is Observed on:	Halt Lane Closures beginning at:	Allow Lane Closures to resume at:
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 needed. The resident engineer's office shall also be notified when the contractor requests emergency assistance.

Resident Engineer – Name: Gidget Koestner 417-829-8065 (Office) or 417-908-6686 (Mobile)

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	
Missouri Highway Patrol – Troop A: 816-622-0800	
MoDOT Customer Service: 417-895-7600	
Benton County Sheriff 660-438-6135	Benton County Office of Emergency Management 660-438-8412
Henry County Sheriff 660-885-7300	Henry County Office of Emergency Management 660-383-1061
St. Clair County Sheriff 417-646-7704	St. Clair County Office of Emergency Management 417-646-8421

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.

 **REVIS** **Shannon Kellner**, Project Contact
Southwest District
1057 E Gaines Dr.
Clinton, MO 64735

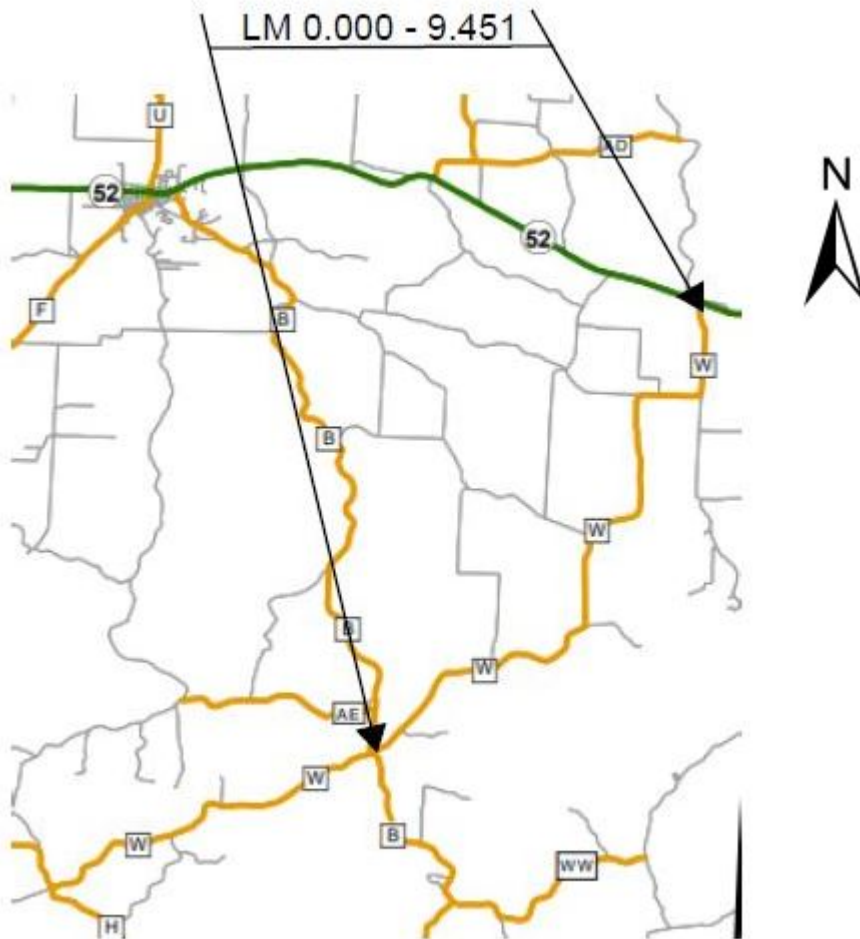
Telephone Number: 417-880-8046
Email: shannon.kellner@modot.mo.gov

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

F. **Project Details and Quantities – Route W (Benton)**

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 9.451. The total length of pavement limits are 14.130 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

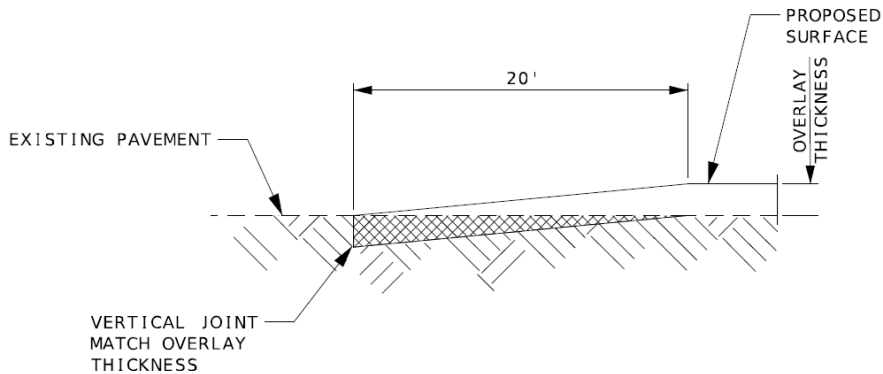
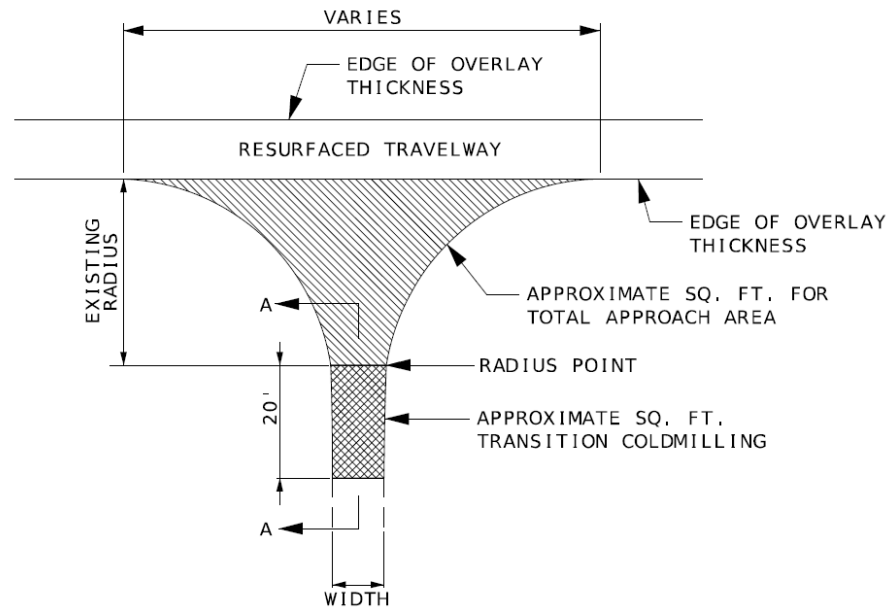


2.0 Mix and Pavement Transitions.

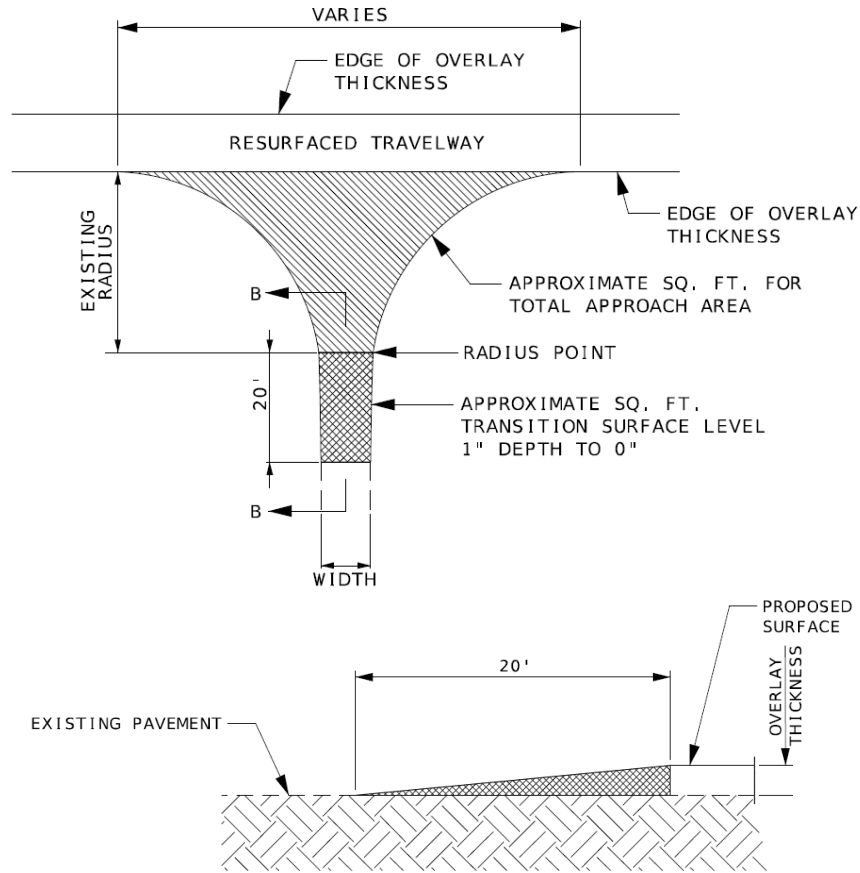
2.1 1" Plant Mix Bituminous Surface PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd² the entire width of the traveled way for the length of the pavement limits.

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).



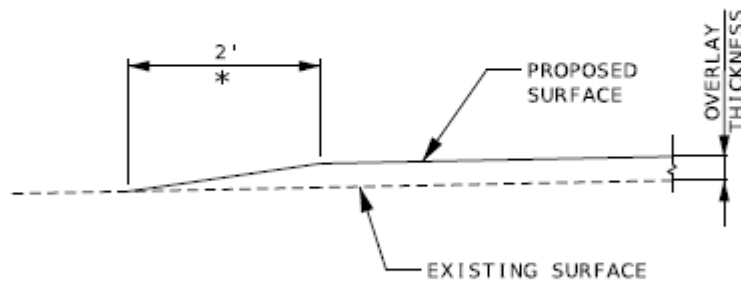
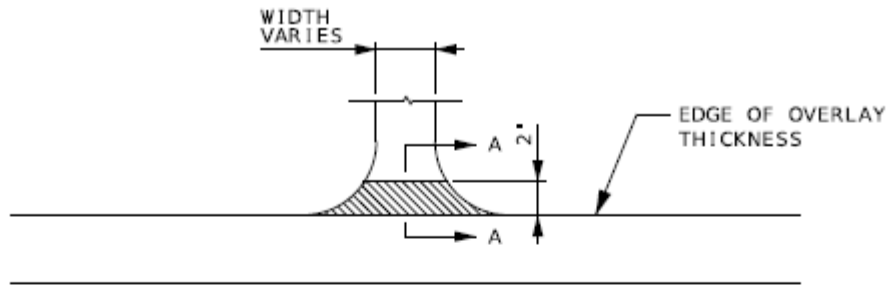
SECTION A-A
 TYPICAL STATE ROUTE JUNCTION
 (COLDMILLED TRANSITION)



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).



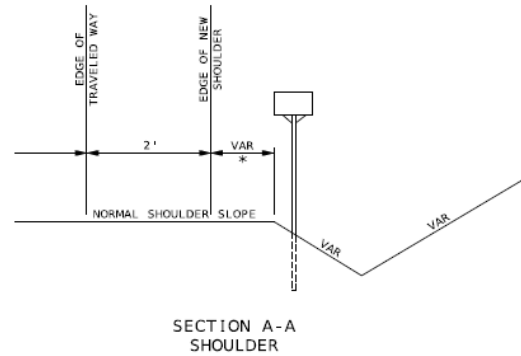
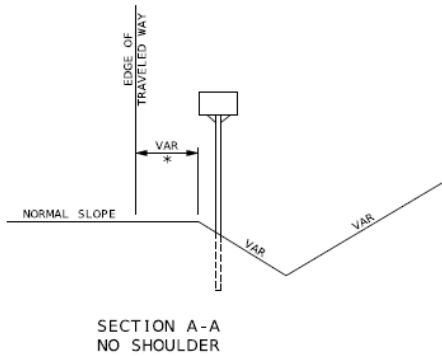
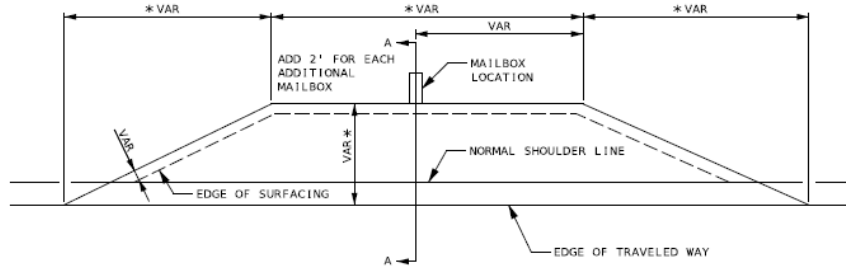
SECTION A-A
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

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

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



3.0 Pavement and Coldmilling Quantities.

1 REVISED 3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING								
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	APPROACH AREA (SF)	1.970	.08	REMARKS
FROM	TO					TON/CY QUANTITY	GAL/SY TACK	
0.000	0.014	W - B	0.014	VAR	4372	27.11	0.0	Route W Start
0.014	0.033	W - B	0.019	20		12.44	0.0	Tack Quantified w/ Modified Coldmill
0.033	9.424	W - B	9.391	20		6150.31	8815.0	
9.424	9.443	W - B	0.019	20		12.44	0.0	Tack Quantified w/ Modified Coldmill
9.443	9.451	W - B	0.008	VAR	3388	21.01	0.0	Route W End - Route B
						945.10		100 TONS/MILE
						8.84	14.0	MAILBOX/ENTRANCES
TOTALS						7177.27	8829.03	ASSUMES 30' ENTRANCE WIDTHS.
USE						7177.3	8829	

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						
0.014	0.033	W - B	100	20	222.2	2.2	
9.424	9.443	W - B	100	20	222.2	2.2	
					TOTALS	444.4	
					USE	444	

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	0.014	W - B	73.92	VAR	485.8	48.6	
9.443	9.451	W - B	42.24	VAR	376.4	37.6	
					TOTALS	862.2	
					USE	862	

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
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	14	224	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	8	128	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	4	64	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	10	160	NO CENTER LINE
36	WO8-11	48 X 48	16	20	320	UNEVEN LANES
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	4	6	PILOT CAR IN USE WAIT & FOLLOW
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					1039.38	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					1040	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
TOTAL ROUTE W (BENTON)						
616-99.01					1	LS
* - 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 Mobilization is as follows:

ITEM NO.	QTY.	DESCRIPTION
618-10.00	LUMP SUM	MOBILIZATION

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" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
FROM	TO					
0.000	9.451	W-B	49901.28	99802.56	99802.56	
						ASSUMES SOLID DOUBLE YELLOW
			TOTALS	99,803	99,803	ADJUST PAINT TO EXISTING
			USE	99,803	99,803	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					
0.033	9.424	W-B	9.391	1878.2	5540.7	
			TOTALS	1,878.2	5540.7	
			USE	1,878.2	5,541	

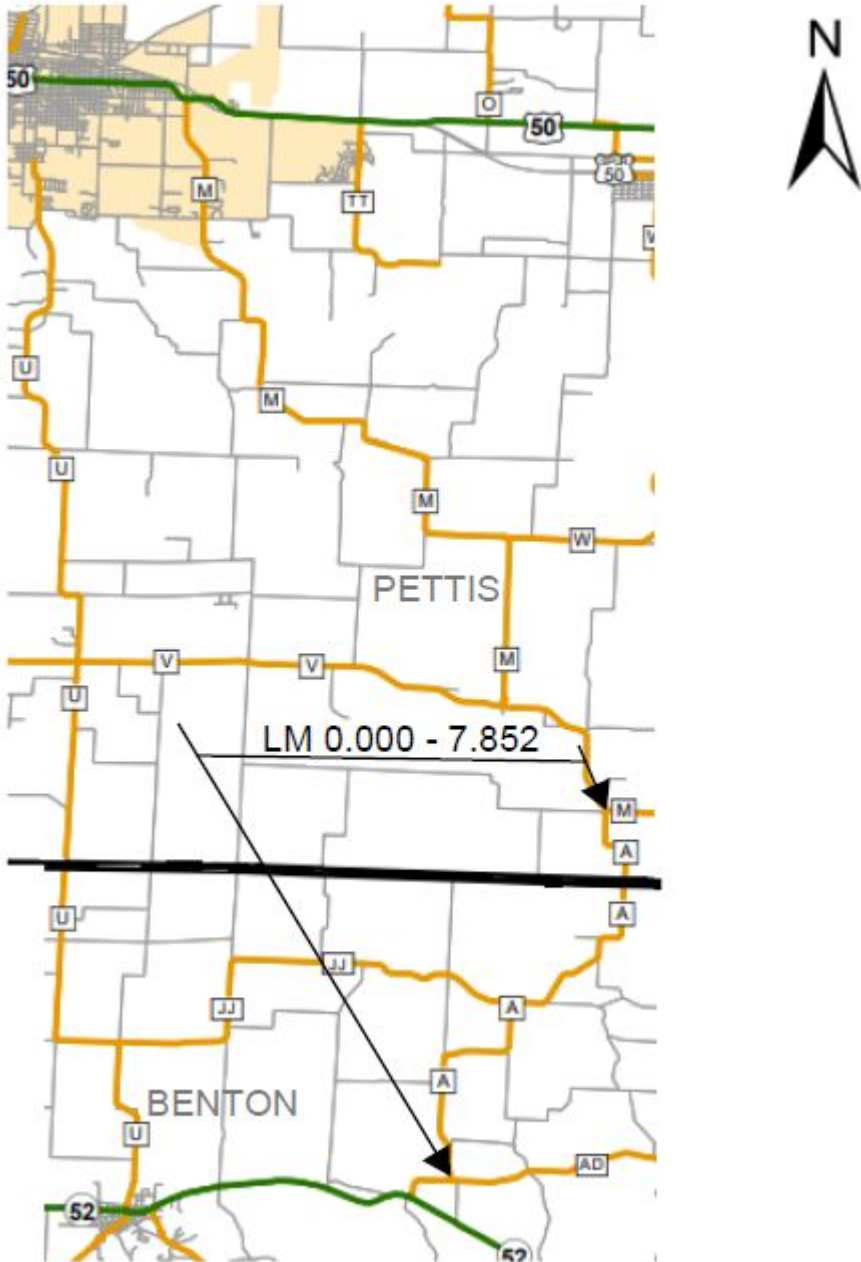
7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows:

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	87	8	396	GRAVEL (A) OR CRUSHED STONE (B)

G. **Project Details and Quantities – Route A**

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 1.250 to 7.852. The total length of pavement limits are 6.602 miles with a total average width of 21 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

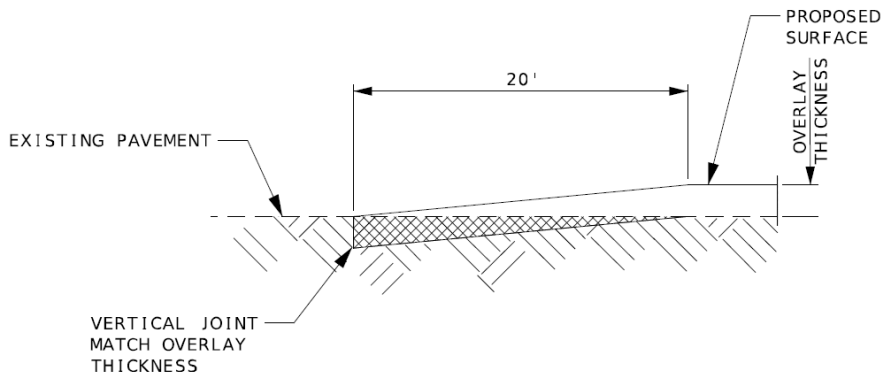
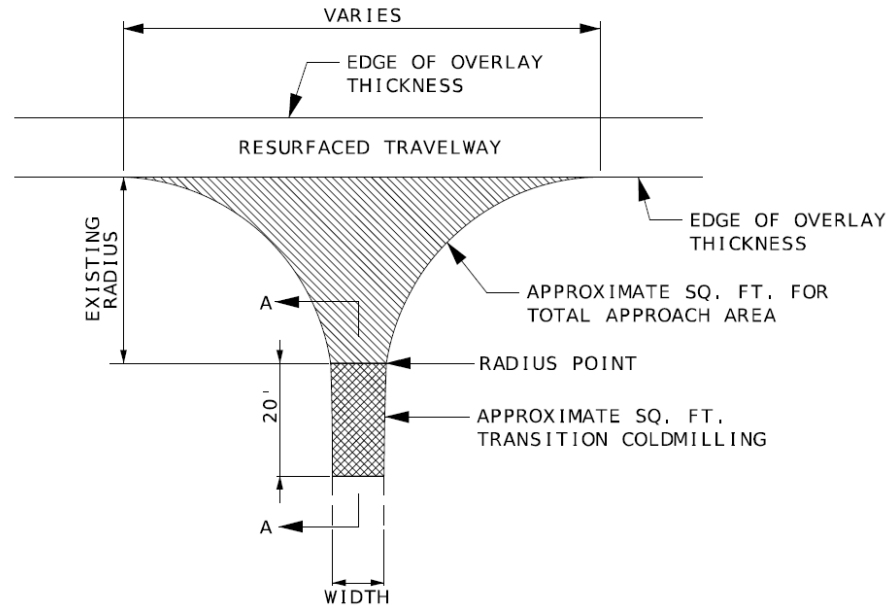


2.0 Mix and Pavement Transitions.

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/yd² the entire width of the traveled way for the length of the pavement limits.

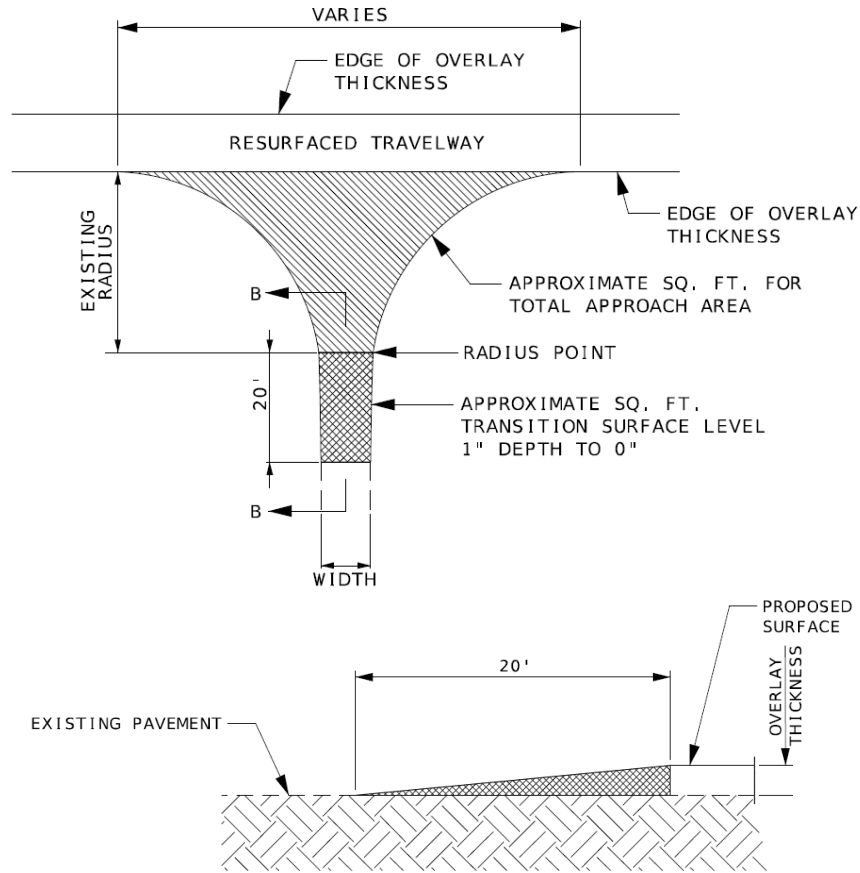
2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

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 A-A

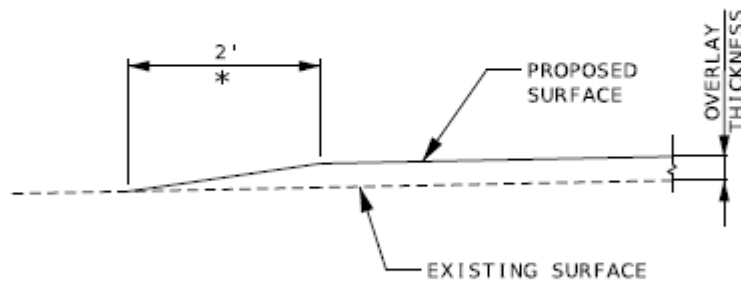
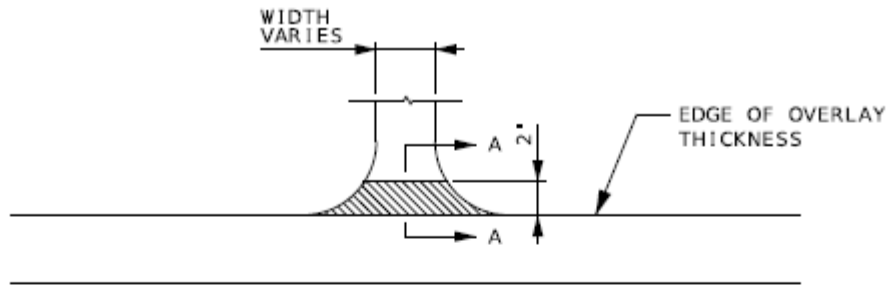
TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)



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).

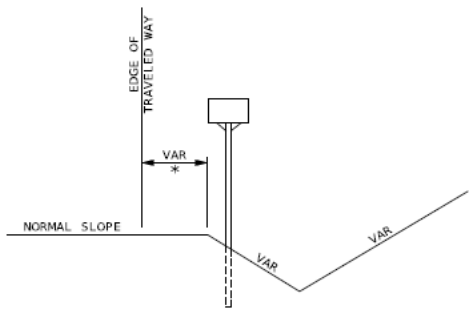
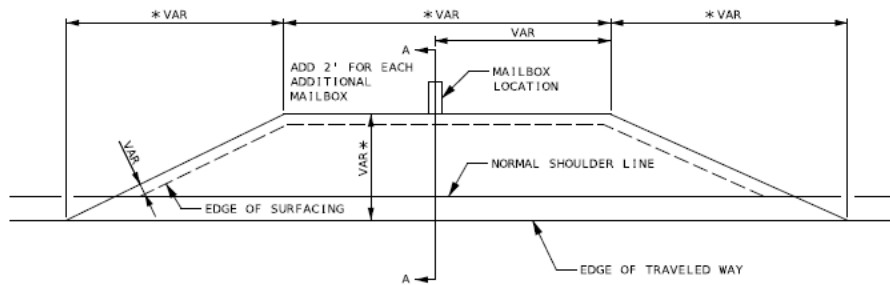


SECTION A-A
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

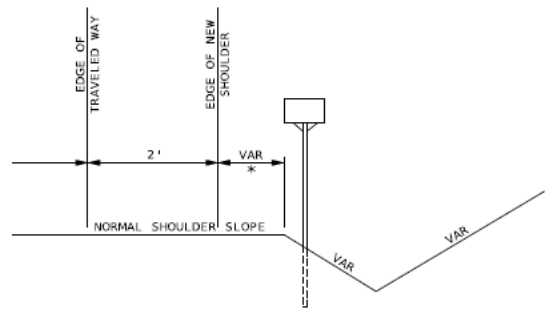
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

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.

REVISION 3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING								
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	APPROACH AREA (SF)	1.970 TON/CY QUANTITY	.08 GAL/SY TACK	REMARKS
FROM	TO							
1.250	1.269	A	0.019	21		13.07	0.0	Tack Quantified w/ Modified Coldmill
1.269	3.886	A	2.617	21		1799.61	2579.3	
3.886	3.908	JJ	0.022	VAR	4019	24.93	0.0	Route JJ
3.908	7.219	A	3.311	21		2276.85	3263.3	
7.219	7.257	A	0.038	VAR	5583	34.62	49.6	Route AD Radius
7.257	7.821	A	0.564	21		387.84	555.9	
7.821	7.840	A	0.019	21		13.07	0.0	Tack Quantified w/ Modified Coldmill
7.840	7.852	A	0.012	VAR	3628	22.50	0.0	Route End
						660.20		100 TONS/MILE
						2.38	4.0	MAILBOX/ENTRANCES
TOTALS						5235.06	6452.1	ASSUMES 30' ENTRANCE WIDTHS.
USE						5235.1	6452	

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						
1.250	1.269	A	100	21	233.3	2.3	
2.571	2.590	AD	100	20	222.2	2.2	
7.821	7.840	A	100	21	233.3	2.3	
TOTALS					688.8	6.8	
USE					689	7	

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						
3.886	3.908	JJ	116.16	VAR	446.6	44.7	
7.219	7.257	A	200.64	VAR	620.3	62.0	
7.840	7.852	A	63.36	VAR	403.1	40.3	
TOTALS					1,470.0	147.0	
USE					1,470	147	

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
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	15	240	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	6	96	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	2	32	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	10	160	NO CENTER LINE
36	WO8-11	48 X 48	16	20	320	UNEVEN LANES
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
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					995.63	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					996	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
Total Route A						
616-99.01					1	LS
* - 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 Mobilization is as follows:

ITEM NO.	QTY.	DESCRIPTION
618-10.00	LUMP SUM	MOBILIZATION

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" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
FROM	TO					
1.250	7.852	A	34858.56	69717.12	69717.12	
			0	0	0	
						ASSUMES SOLID DOUBLE YELLOW
			TOTALS	69,717	69,717	ADJUST PAINT TO EXISTING
			USE	69,717	69,717	FIELD CONDITIONS.

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					
1.250	7.840	A	6.59	1318.0	3888.1	
			TOTALS	1,318.0	3888.1	
			USE	1,318.0	3,889	

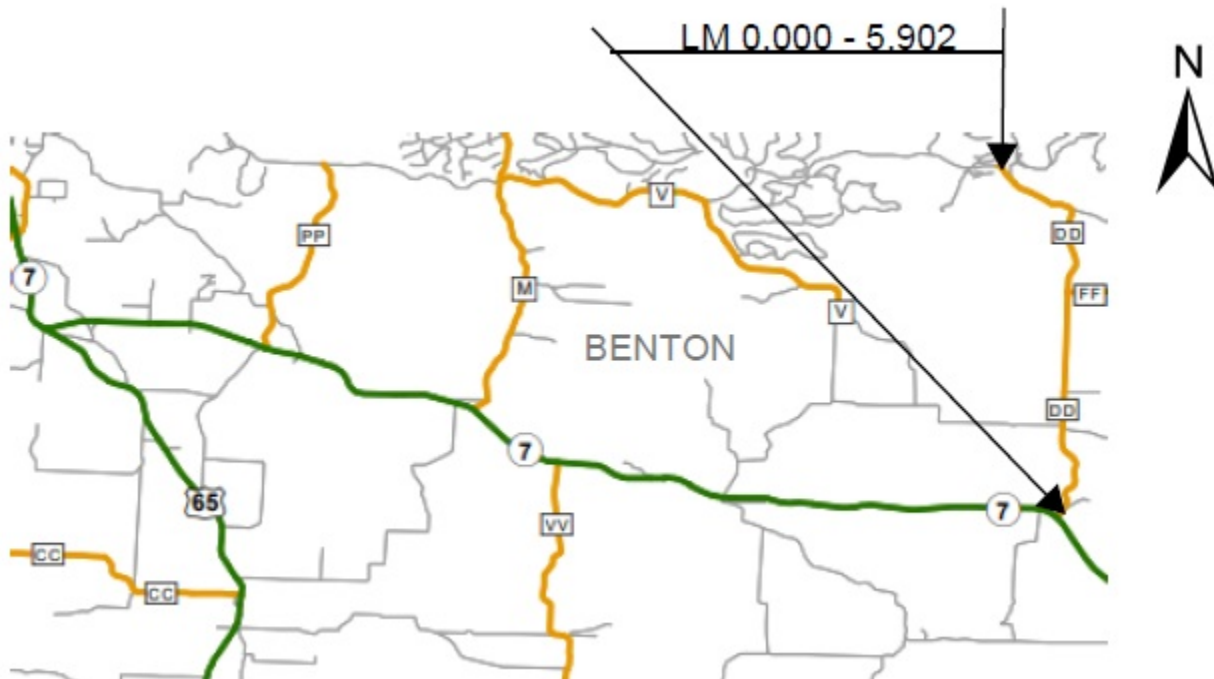
7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows

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	23	9	146	GRAVEL (A) OR CRUSHED STONE (B)

H. **Project Details and Quantities – Route DD**

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 5.906. The total length of pavement limits are 5.906 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

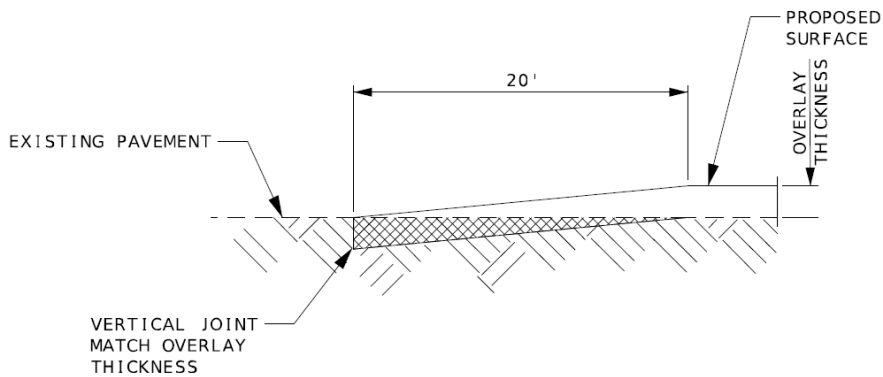
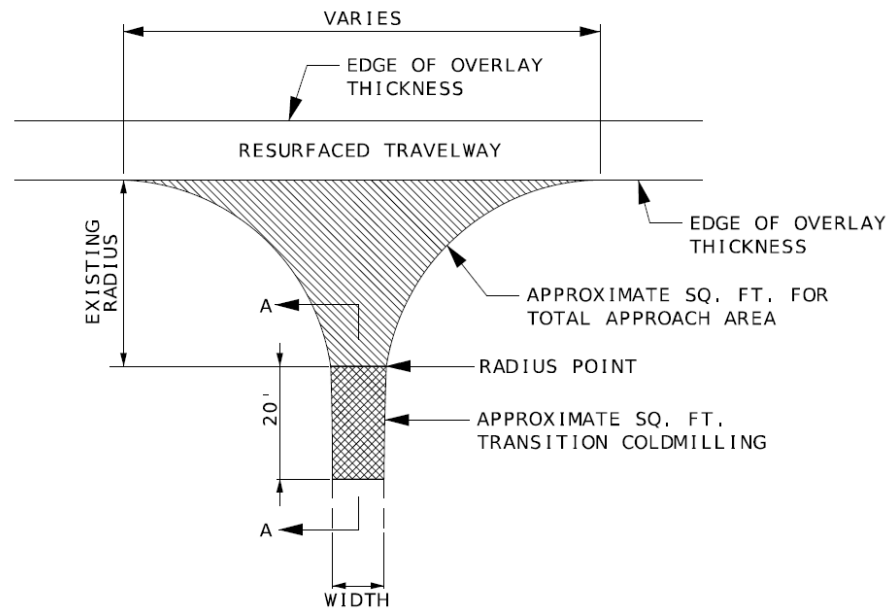


2.0 Mix and Pavement Transitions.

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/yd² the entire width of the traveled way for the length of the pavement limits.

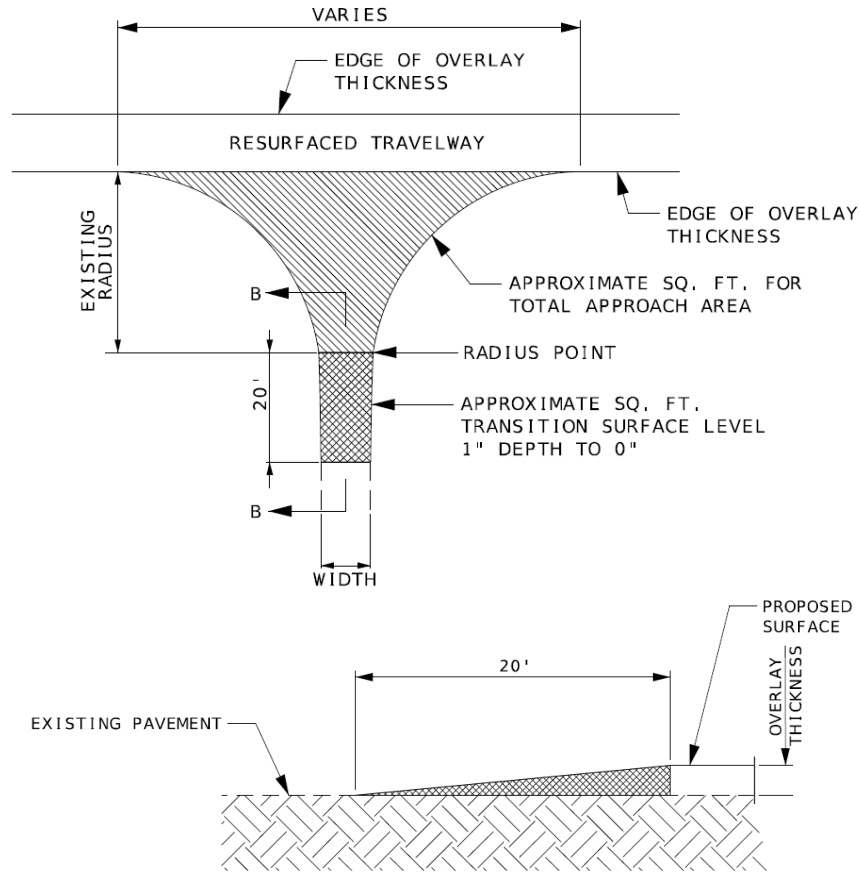
2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

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 A-A

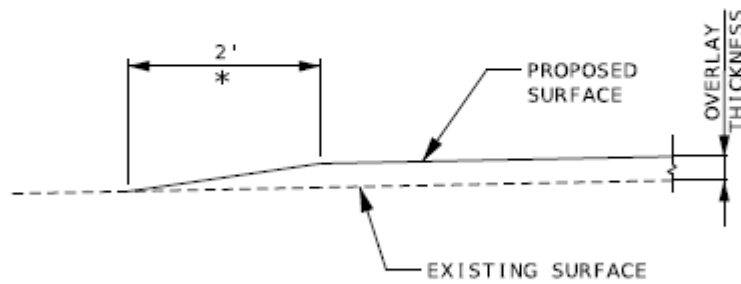
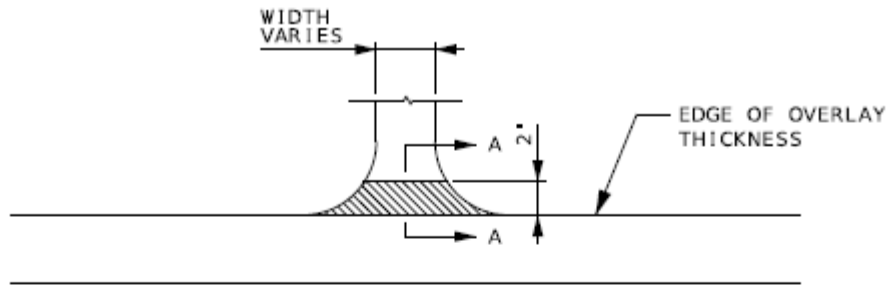
TYPICAL STATE ROUTE JUNCTION
 (COLDMILLED TRANSITION)



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).



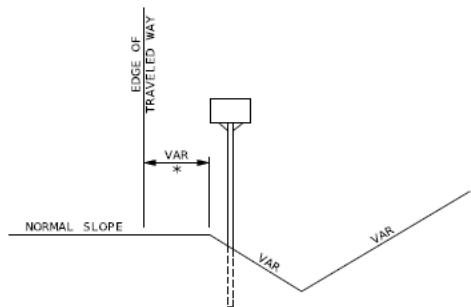
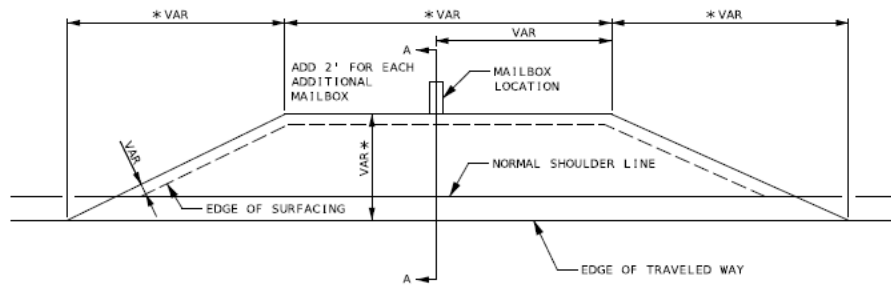
SECTION A-A
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

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

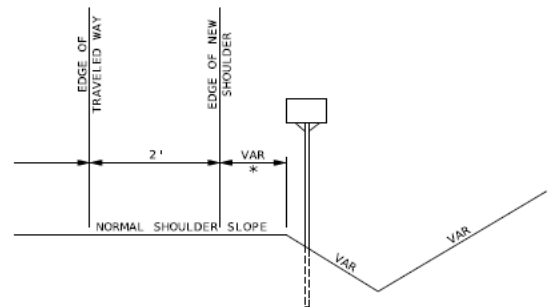
NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND 15' LENGTH, ADD 2' IN LENGTH PER ADDITIONAL MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

TYPICAL MAILBOX TURNOUT

* AS APPROVED BY THE ENGINEER



SECTION A-A
NO SHOULDER



SECTION A-A
SHOULDER

3.0 Pavement and Coldmilling Quantities.

REVISED 3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING								
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	APPROACH AREA (SF)	1.970 TON/CY QUANTITY	.08 GAL/SY TACK	REMARKS
FROM	TO							
0.000	0.013	DD	0.013	VAR	4312	26.74	0.0	
0.013	0.032	DD	0.019	20		12.44	0.0	Tack Quantified w/ Modified Coldmill
0.032	3.481	DD	3.449	20		2258.80	3237.5	
3.481	3.513	FF	0.032	VAR	5112	31.70	0.0	
3.513	5.887	DD	2.374	20		1554.77	2228.4	
5.887	5.906	DD	0.019	20		12.44	0.0	
						590.60		100 TONS/MILE
						1.87	3.0	MAILBOX/ENTRANCES
TOTALS						4489.38	5468.9	ASSUMES 30' ENTRANCE WIDTHS.
USE						4489.4	5469	

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						
0.013	0.032	DD	100	20	222.2	2.2	
5.887	5.906	DD	100	20	222.2	2.2	
TOTALS					444.4	4.4	
USE					444	4	

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	0.013	DD	68.64	VAR	479.1	47.9	
3.481	3.513	DD	168.96	VAR	568.0	56.8	Route FF
TOTALS					1,047.1	104.7	
USE					1,047	105	

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
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	14	224	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	5	80	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	1	16	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	6	96	NO CENTER LINE
36	WO8-11	48 X 48	16	12	192	UNEVEN LANES
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	0	0	PILOT CAR IN USE WAIT & FOLLOW
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					754.13	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					755	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
Total Route DD						
616-99.01					1	LS
* - 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 Mobilization is as follows:

ITEM NO.	QTY.	DESCRIPTION
618-10.00	LUMP SUM	MOBILIZATION

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" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
FROM	TO					
0.000	5.906	DD	31183.68	62367.36	62367.36	
			0	0	0	
			TOTALS	62,367	62,367	ASSUMES SOLID DOUBLE YELLOW
			USE	62,367	62,367	ADJUST PAINT TO EXISTING
						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:

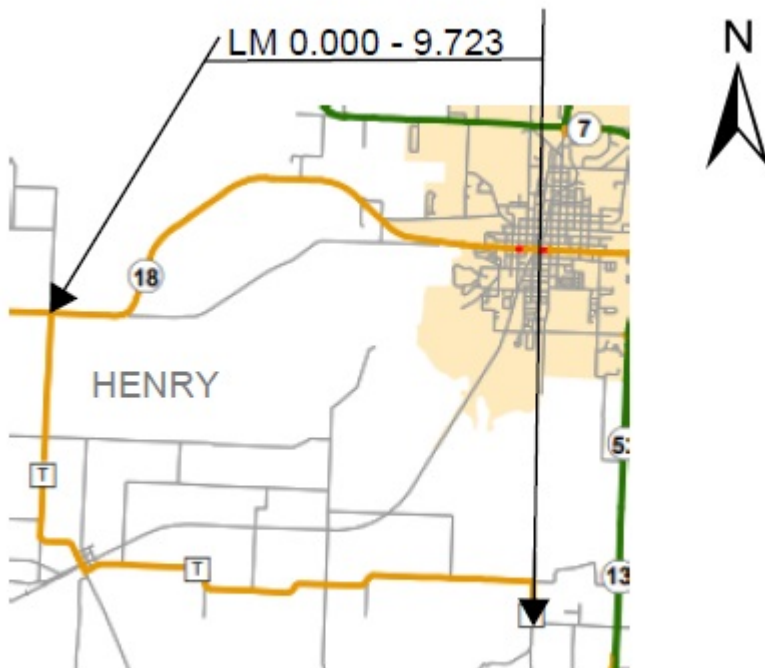
PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR 200 TON/MI (TON)	PRIME MC800 590 GAL/MI (GAL)	REMARKS
FROM	TO					
0.013	5.906	DD	5.893	1178.6	3476.9	
			TOTALS	1,178.6	3476.9	
			USE	1,178.6	3,477	

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	22	2	100	GRAVEL (A) OR CRUSHED STONE (B)

I. **Project Details and Quantities – Route T**

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 9.723. The total length of pavement limits are 9.723 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:



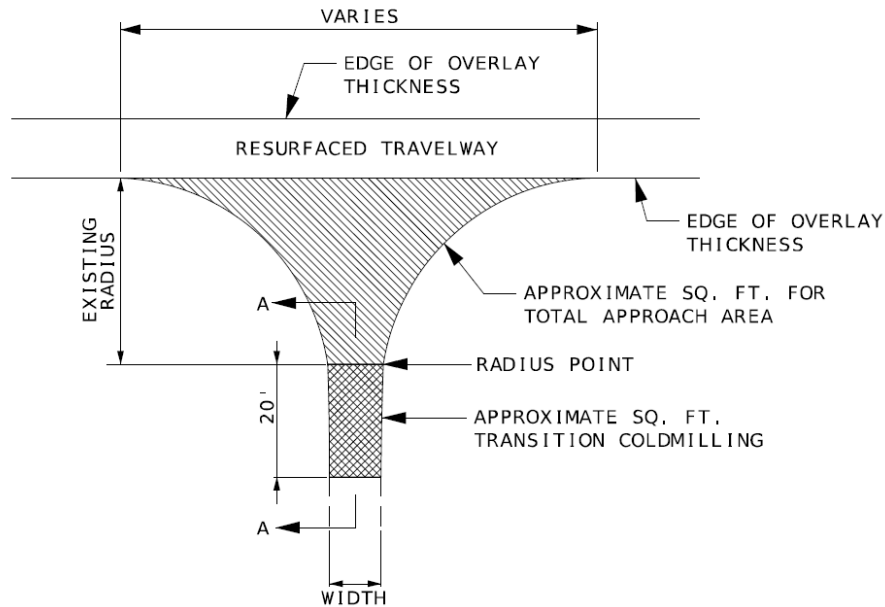
EXCEPTIONS			
APPROX. LOG MILE		Length (FT)	COMMENTS/BRIDGE NUMBERS
FROM	TO		
3.356	3.361	26.4	La Due Railroad
	TOTAL	26.4	

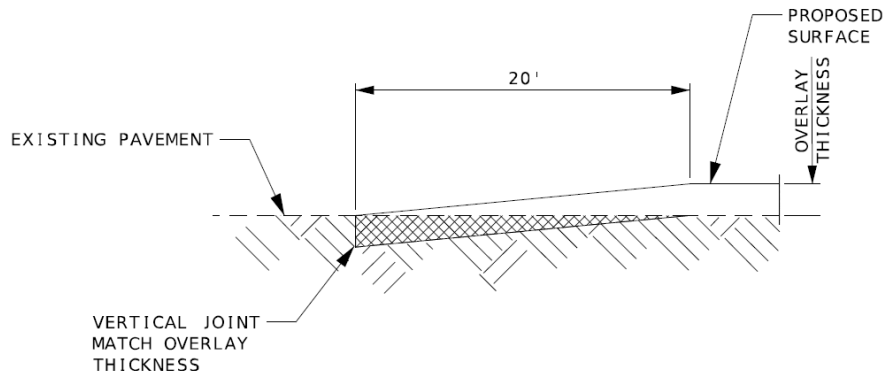
2.0 Mix and Pavement Transitions.

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/yd² 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'.

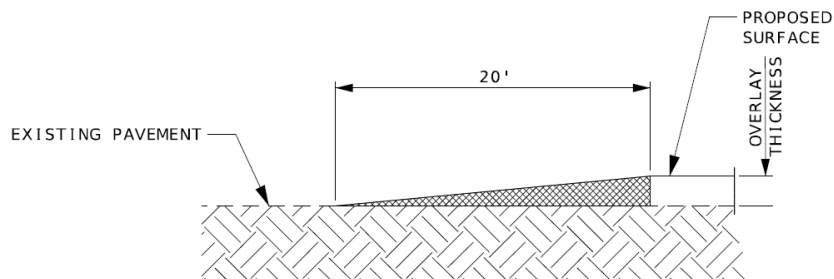
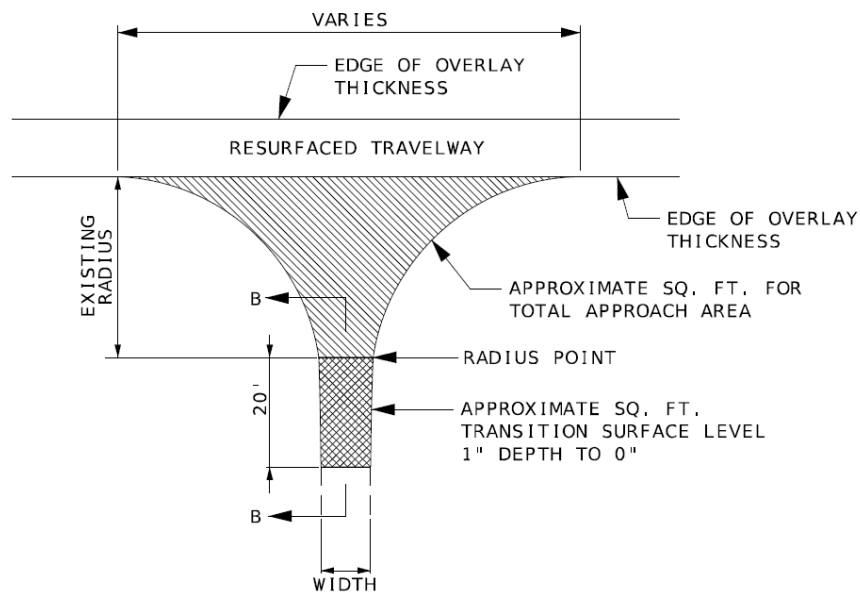
2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).





SECTION A-A

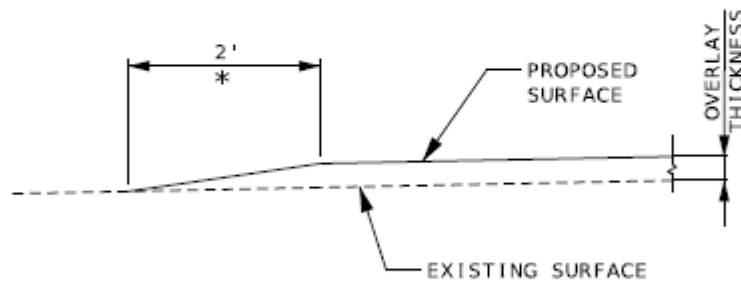
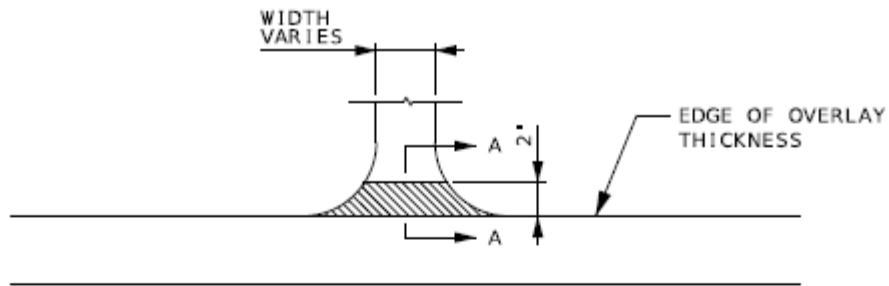
TYPICAL STATE ROUTE JUNCTION
 (COLDMILLED TRANSITION)



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).

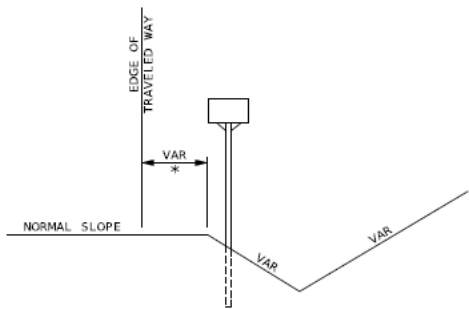
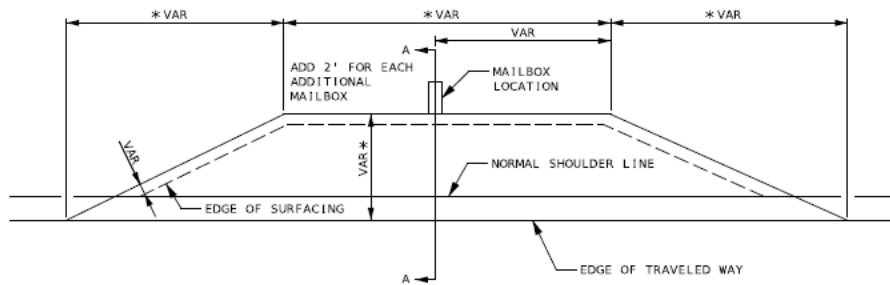


SECTION A-A
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

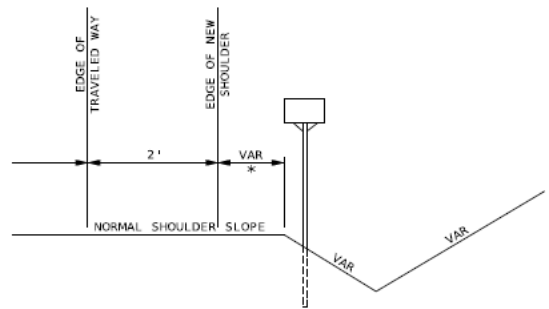
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

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.

REVIS 3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING								
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	APPROACH AREA (SF)	1.970 TON/CY QUANTITY	.08 GAL/SY TACK	REMARKS
FROM	TO							
0.000	0.014	T	0.014	VAR	4857	30.12	0.0	Route T Start Milling Area
0.014	0.033	T	0.019	20		12.44	0.0	Start Transition Area
0.033	3.337	T	3.304	20		2163.84	3101.4	
3.337	3.356	T	0.019	20		12.44	0.0	Tack Quantified w/ Modified Coldmill
3.356	3.361	T	0.005	EXC		0.00	0.0	La Due Railroad Exception
3.361	3.380	T	0.019	20		12.44	0.0	Tack Quantified w/ Modified Coldmill
3.380	9.704	T	6.324	20		4141.69	5936.1	
9.704	9.723	T	0.019	20		12.44	0.0	Tack Quantified w/ Modified Coldmill
						972.30		100 TONS/MILE
						5.76	9.3	MAILBOX/ENTRANCES
TOTALS						7363.48	9046.8	ASSUMES 30' ENTRANCE WIDTHS.
USE						7363.5	9047	

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						
0.014	0.033	T	100	20	222.2	2.2	
3.337	3.356	T	100	20	222.2	2.2	
3.361	3.380	T	100	20	222.2	2.2	
9.704	9.723	T	100	20	222.2	2.2	
TOTALS					888.8	8.8	
USE					889	9	

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	0.014	T	73.92	VAR	539.7	54.0	
TOTALS					539.7	54.0	
USE					540	54	

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
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	27	432	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	12	192	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	8	128	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	10	160	NO CENTER LINE
36	WO8-11	48 X 48	16	20	320	UNEVEN LANES
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	8	12	PILOT CAR IN USE WAIT & FOLLOW
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					1381.38	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					1382	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
TOTAL ROUTE T						
616-99.01					1	LS
* - 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 Mobilization is as follows:

ITEM NO.	QTY.	DESCRIPTION
618-10.00	LUMP SUM	MOBILIZATION

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" SOLID YELLOW	4" SOLID WHITE	REMARKS
FROM	TO			(FT)	(FT)	
0.000	9.723	T	51337.44	102674.88	102674.88	
						ASSUMES SOLID DOUBLE YELLOW
			TOTALS	102,675	102,675	ADJUST PAINT TO EXISTING
			USE	102,675	102,675	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:

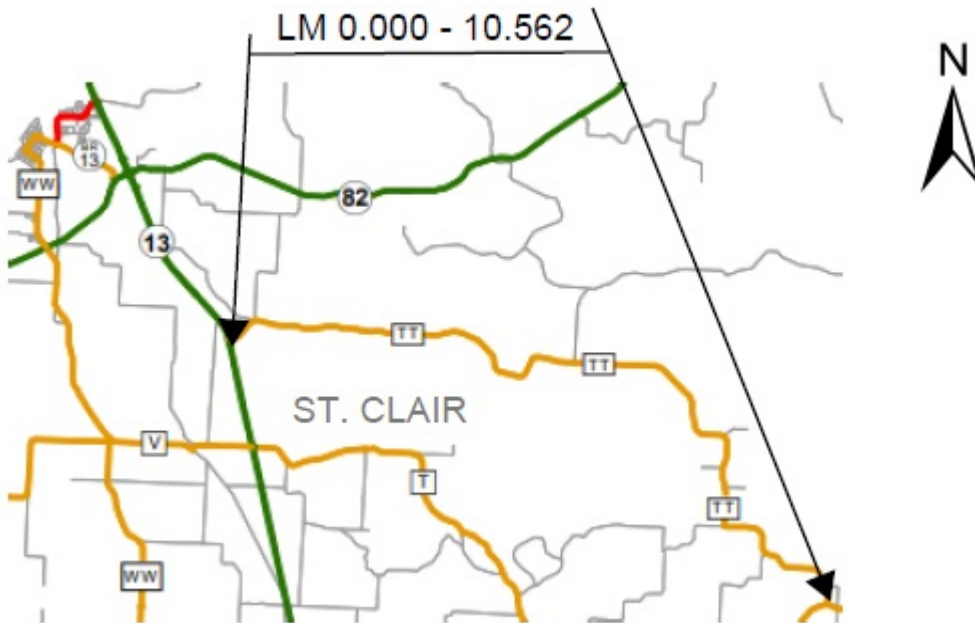
PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AGGR	PRIME MC800	REMARKS
FROM	TO			200 TON/MI (TON)	590 GAL/MI (GAL)	
0.033	9.704	T	9.671	1934.2	5705.9	
			TOTALS	1,934.2	5705.9	
			USE	1,934.2	5,706	

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	56	15	314	GRAVEL (A) OR CRUSHED STONE (B)

J. **Project Details and Quantities – Route TT**

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 10.562. The total length of pavement limits are 10.562 miles with a total average width of 20.25 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:



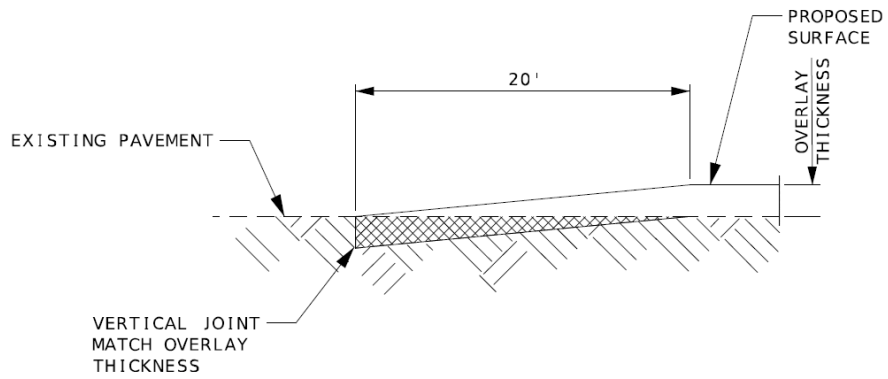
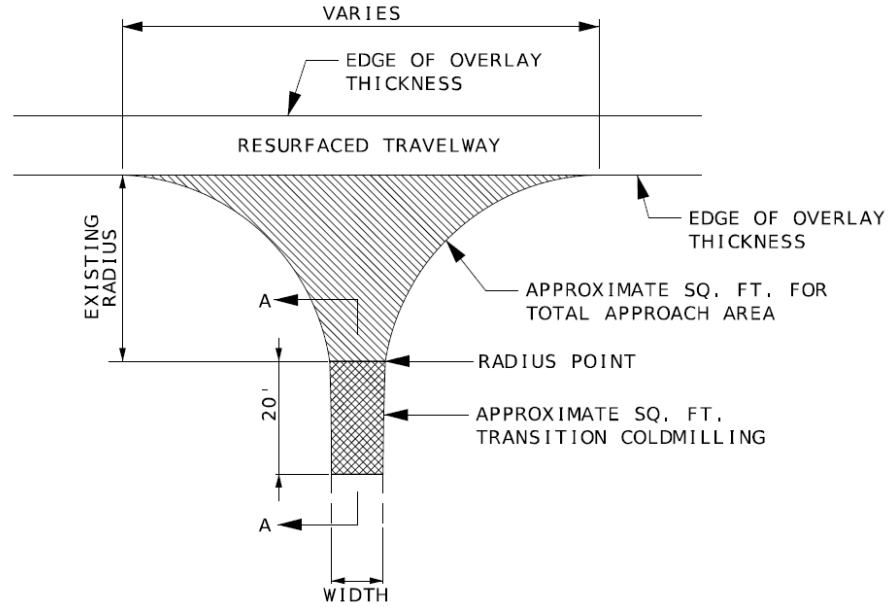
EXCEPTIONS			
APPROX. LOG MILE		Length (FT)	COMMENTS/BRIDGE NUMBERS
FROM	TO		
8.75	8.809	311.52	Bridge N0932
	TOTAL	311.52	

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/yd² the entire width of the traveled way for the length of the pavement limits.

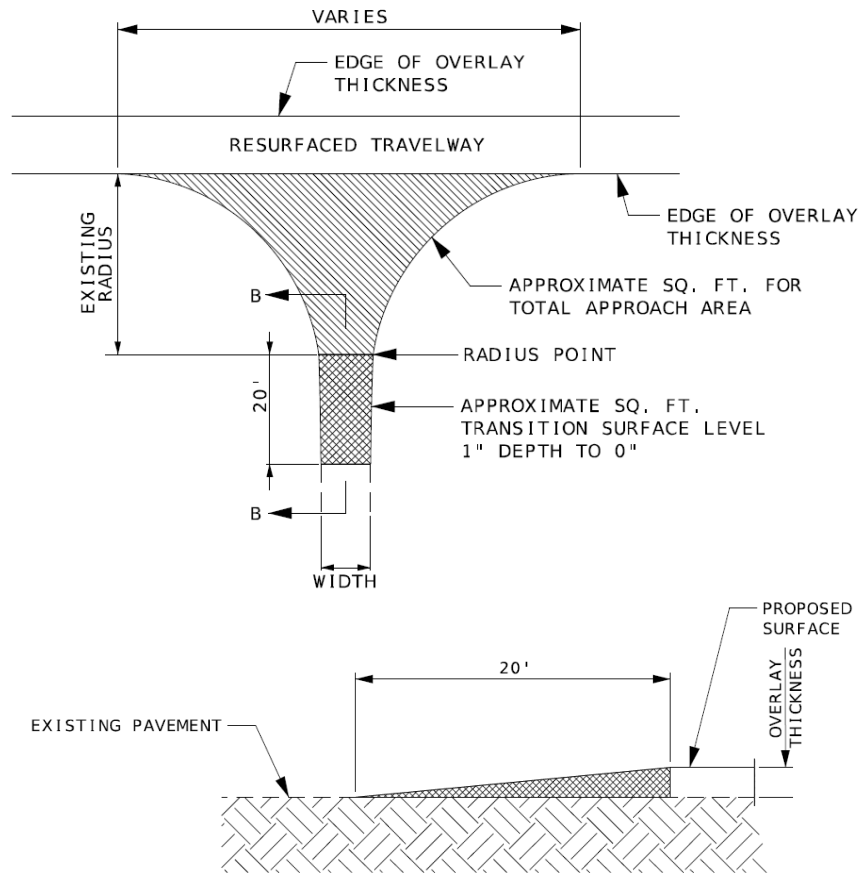
2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

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 A-A

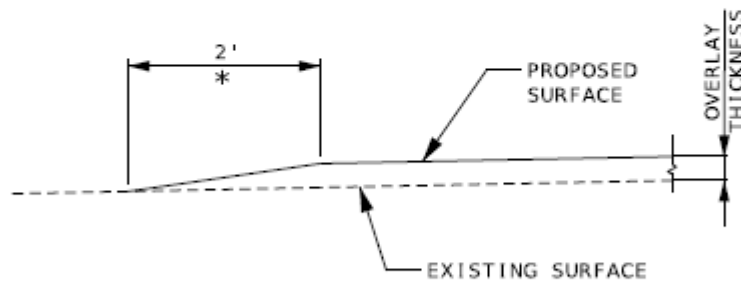
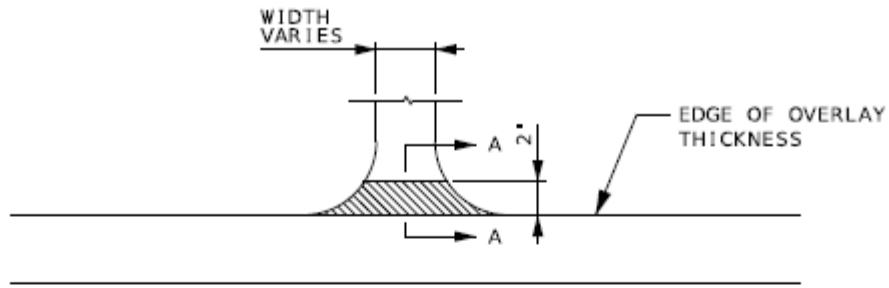
TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)



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).

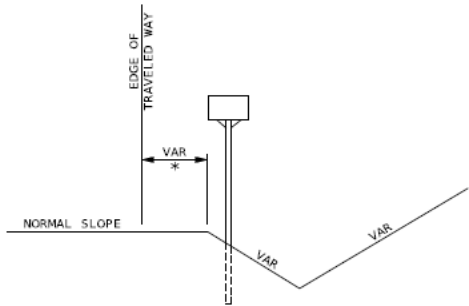
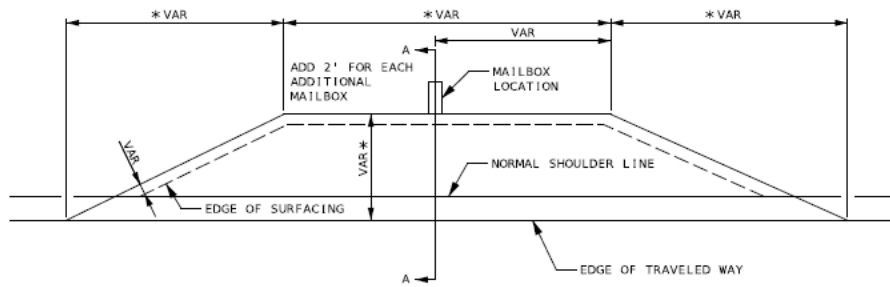


SECTION A-A
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

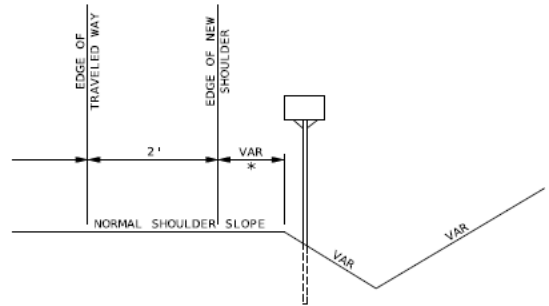
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

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.

1 REVISED 3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING								
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	APPROACH AREA (SF)	1.970 TON/CY QUANTITY	.08 GAL/SY TACK	REMARKS
FROM	TO							
0.000	0.012	TT	0.012	VAR	2794	17.33	0.0	Route TT Start Milling Area
0.012	0.031	TT	0.019	20		12.44	0.0	Tack Quantified w/ Modified Coldmill
0.031	8.698	TT	8.667	20		5676.15	8135.4	
8.698	8.717	TT	0.019	20		12.44	0.0	Tack Quantified w/ Modified Coldmill
8.717	8.750	TT	0.033	20		21.61	0.0	Bridge N0932 Guardrail Mill
8.750	8.809	TT	0.059	EXC		0.00	0.0	Bridge N0932 Exception
8.809	8.844	TT	0.035	20		22.92	0.0	Bridge N0932 Guardrail mill
8.844	8.863	TT	0.019	20		12.44	0.0	Tack Quantified w/ Modified Coldmill
8.863	10.536	TT	1.673	20		1095.67	1570.4	
10.536	10.555	TT	0.019	20		12.44	0.0	Tack Quantified w/ Modified Coldmill
10.555	10.562	TT	0.007	VAR	1832	11.36	0.0	Route TT End Milling Area
						886.30		100 TONS/MILE
						7.92	12.3	MAILBOX/ENTRANCES
TOTALS						7789.04	9718.1	ASSUMES 30' ENTRANCE WIDTHS.
USE						7789.0	9718	

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						
0.012	0.031	TT	100	20	222.2	2.2	
8.698	8.717	TT	100	20	222.2	2.2	
8.844	8.863	TT	100	20	222.2	2.2	
10.536	10.555	TT	100	20	222.2	2.2	
TOTALS					888.8	8.8	
USE					889	9	

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	0.012	TT	63.36	VAR	310.4	31.0	
8.717	8.750	TT	174.24	20	392.3	39.2	
8.809	8.844	TT	184.8	20	409.8	41.0	
10.555	10.562	TT	36.96	VAR	203.6	20.4	
TOTALS					1,316.1	131.6	
USE					1,316	132	

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
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	14	224	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	7	112	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	3	48	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	12	192	NO CENTER LINE
36	WO8-11	48 X 48	16	22	352	UNEVEN LANES
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
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					1069.88	CONSTRUCTION SIGNS SUBTOTAL
ITEM NO. 616-10.05					1070	USE
ITEM NO. 616-10.25					10	CHANNELIZERS (TRIM-LINE)
TOTAL ROUTE TT						
616-99.10					1	LS
* - 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 Mobilization is as follows:

ITEM NO.	QTY.	DESCRIPTION
618-10.00	LUMP SUM	MOBILIZATION

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" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
FROM	TO					
0.000	10.562	TT	55767.36	111534.72	111534.72	
						ASSUMES SOLID DOUBLE YELLOW
			TOTALS	111,535	111,535	ADJUST PAINT TO EXISTING
			USE	111,535	111,535	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					
0.012	8.717	TT	8.705	1741.0	5136.0	
8.844	10.555		1.711	342.2	1009.5	
			TOTALS	2,083.2	6145.4	
			USE	2,083.2	6,146	

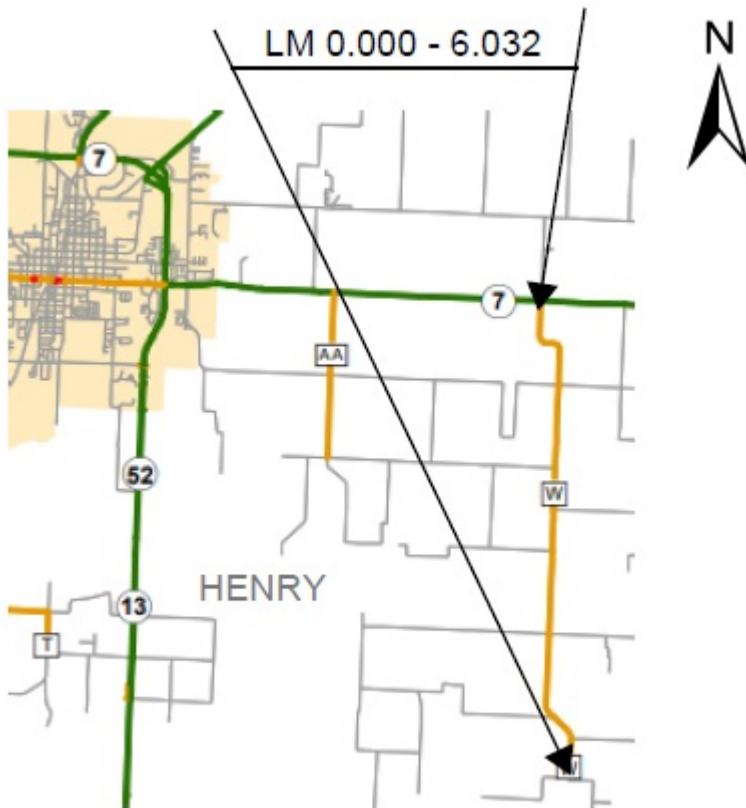
7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows:

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	72	10	348	GRAVEL (A) OR CRUSHED STONE (B)

K. **Project Details and Quantities – Route W (Henry)**

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 6.032. The total length of pavement limits are 6.032 miles with a total average width of 21.5 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

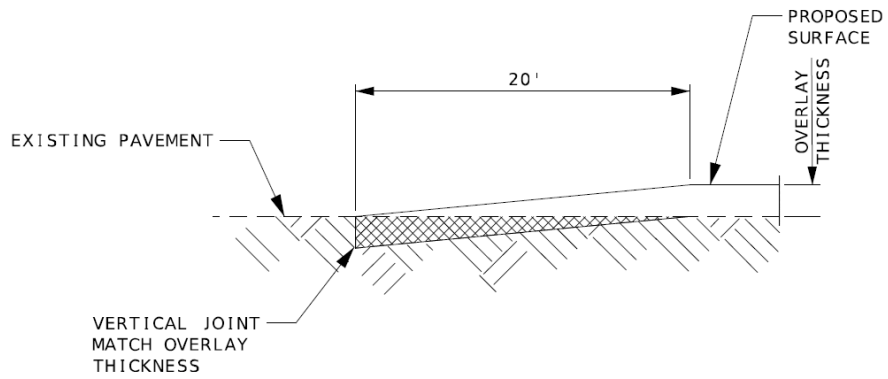
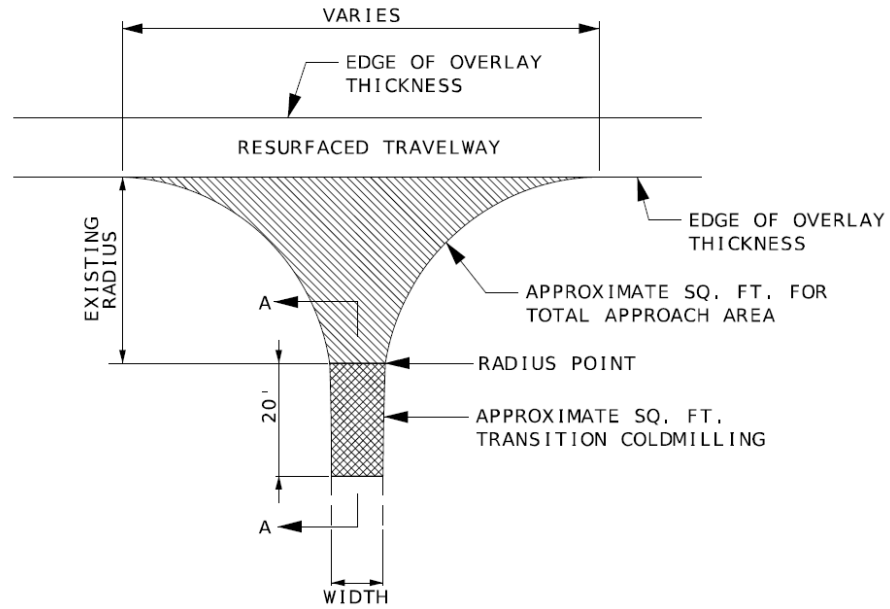


2.0 Mix and Pavement Transitions.

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/yd² the entire width of the traveled way for the length of the pavement limits.

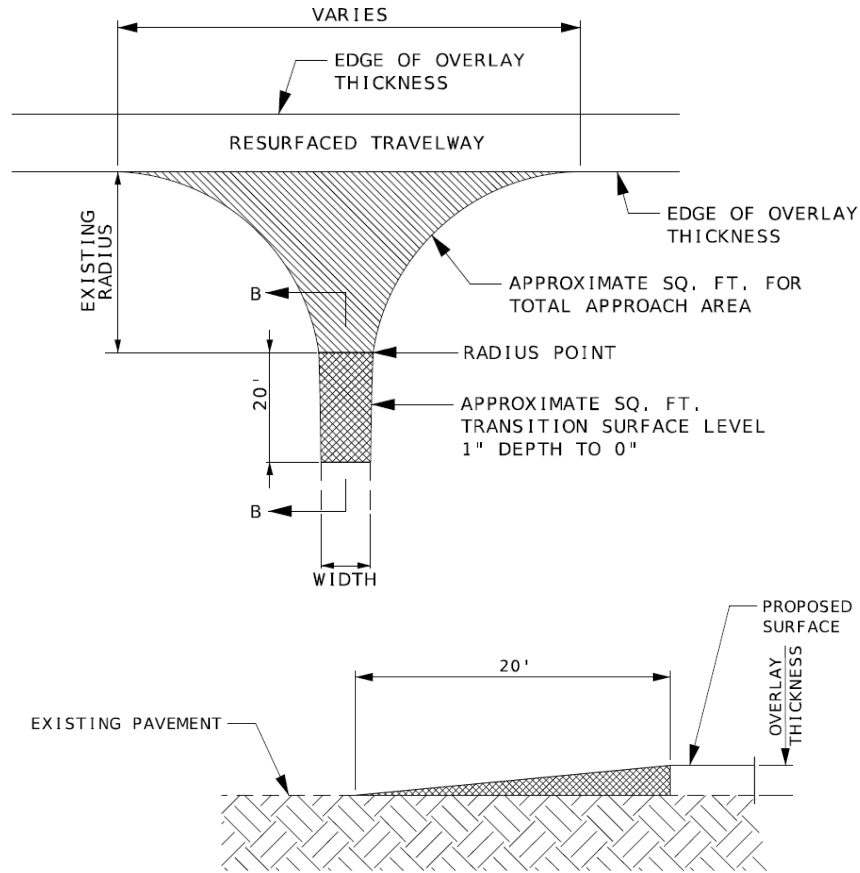
2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, shall be coldmilled at the rate of 1" in 100'.

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 A-A

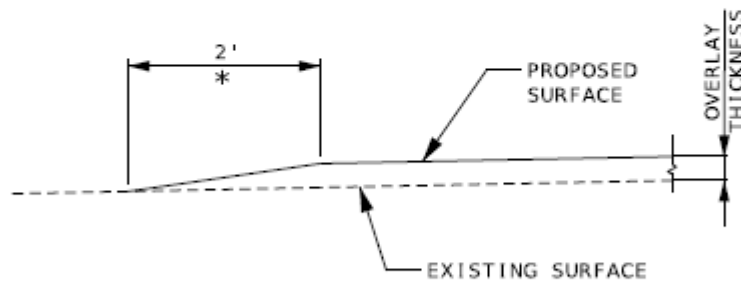
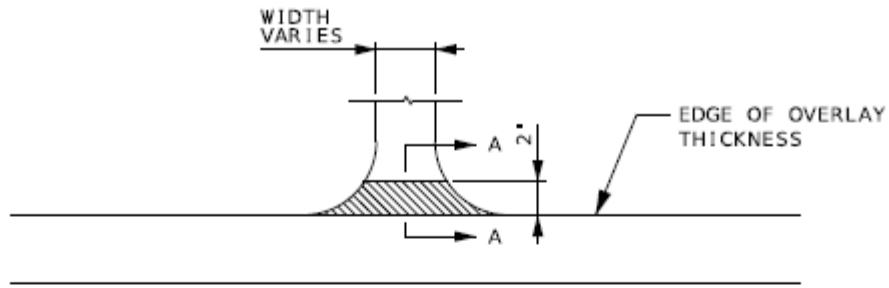
TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)



SECTION B-B

TYPICAL STATE ROUTE JUNCTION
 (COLD MIX ROUTE TRANSITION)

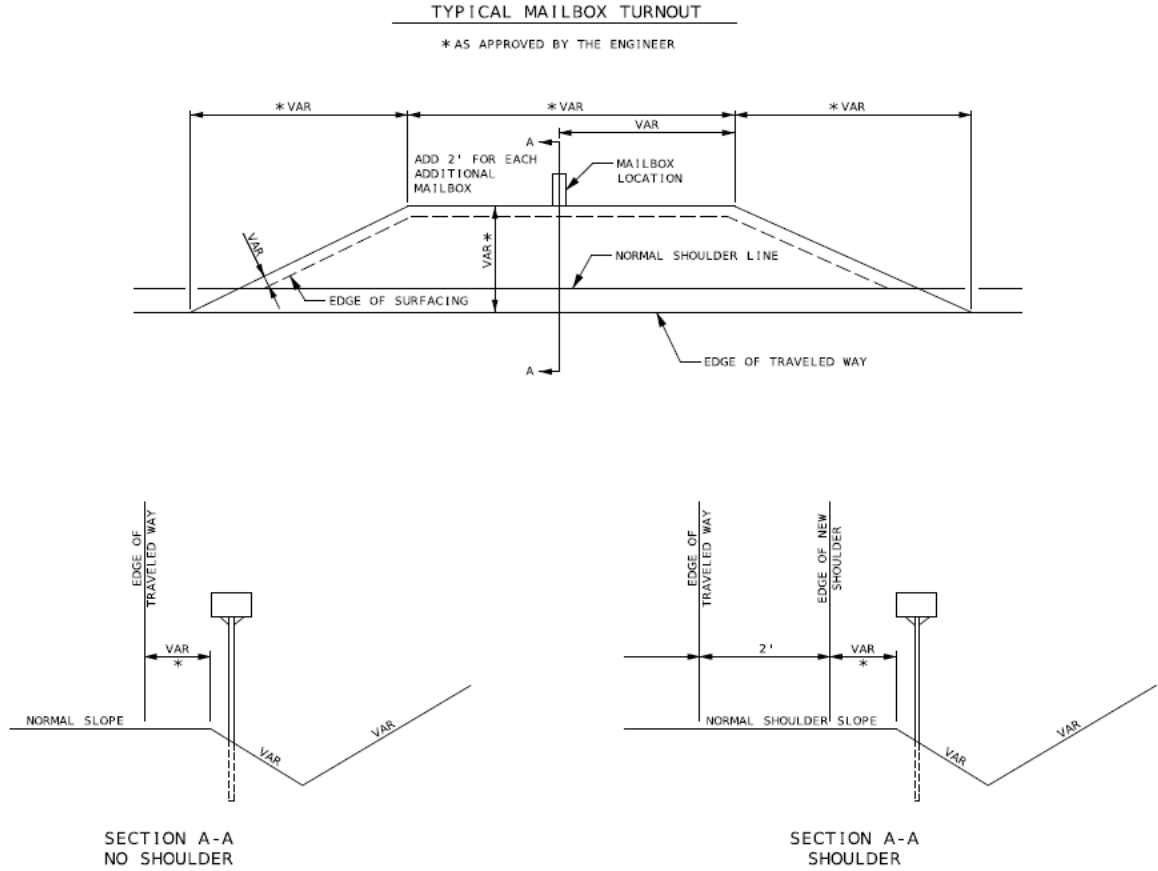
2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).



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).

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.

REVISION 1 3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING								
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	APPROACH AREA (SF)	1.970	.08	REMARKS
FROM	TO					TON/CY QUANTITY	GAL/SY TACK	
0.000	0.011	W-H	0.011	VAR	3020	18.73	0.0	
0.011	0.030	W-H	0.019	21.5		13.38	0.0	Tack Quantified w/ Modified Coldmill
0.030	6.013	W-H	5.983	21.5		4212.24	6037.2	
6.013	6.032	W-H	0.019	21.5		13.38	0.0	Tack Quantified w/ Modified Coldmill
						603.20		100 TONS/MILE
						5.55	8.7	MAILBOX/ENTRANCES
TOTALS						4866.4696	6045.9	ASSUMES 30' ENTRANCE WIDTHS.
USE						4866.5	6046	

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						
0.011	0.030	W - H	100	21.5	238.9	2.4	
6.013	6.032	W - H	10	21.5	23.9	0.2	
					TOTALS	262.8	2.6
					USE	263	3

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	0.011	W - H	58.08	VAR	335.6	33.6	
					TOTALS	335.6	33.6
					USE	336	34

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
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	15	240	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	7	112	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	3	48	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	8	128	NO CENTER LINE
36	WO8-11	48 X 48	16	14	224	UNEVEN LANES
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
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					893.88	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 Mobilization is as follows:

ITEM NO.	QTY.	DESCRIPTION
618-10.00	LUMP SUM	MOBILIZATION

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" SOLID YELLOW	4" SOLID WHITE	REMARKS
FROM	TO			(FT)	(FT)	
0.000	6.032	W - H	31848.96	63697.92	63697.92	
			TOTALS	63,698	63,698	ASSUMES SOLID DOUBLE YELLOW
			USE	63,698	63,698	ADJUST PAINT TO EXISTING
						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					
0.030	6.013	W - H	5.983	1196.6	3530.0	
			TOTALS	1,196.6	3530.0	
			USE	1,196.6	3,530	

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	49	9	250	GRAVEL (A) OR CRUSHED STONE (B)

L. Supplemental Revisions JSP-18-01CC

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

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 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.

Delete Sec 106.9 in its entirety 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.

106.9.1.1 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.

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.

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 in 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.

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.

Pavement Marking Paint Requirements for Standard Waterborne and Temporary

1.0 Description. High Build acrylic waterborne pavement marking paint shall be used in lieu of standard acrylic waterborne pavement marking paint for all Standard Waterborne Pavement Marking Paint items and all Temporary Pavement Marking Paint items. Paint thickness, bead type, bead application rate, retroreflectivity requirements, and all other specifications shall remain as stated in the Missouri Standard Specifications for Highway Construction, except as otherwise amended in the contract documents.

2.0 Material Requirements. Material requirements for Sec 620.20.2.5 Standard Waterborne Paint, and Sec 620.10.2 Temporary Pavement Marking Paint shall be per Sec 1048.20.1.2 High Build Acrylic Waterborne Pavement Marking Paint.

M. 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 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.

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.

N. 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.

2.3 *JST0109*

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.

O. Lump Sum Temporary Traffic Control JSP-22-01A

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 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.

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

P. 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.

Q. 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 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.

R. Permanent Pavement Marking - SW

1.0 Description. This work shall consist of furnishing and placing permanent centerline, edge line, and lane line markings as specified, at locations shown on the plans or as approved by the engineer. 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.

3.0 Basis of Payment. The accepted quantity of permanent pavement marking paint 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.

S. Permanent Aggregate Edge Treatment - SW

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

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.

T. 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.

U. Gravel A or Crushed Stone B - SW

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.

V. 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.

W. 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.

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.

X. 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.

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.

Y. Missouri & Northern Arkansas Railroad Requirements

1.0 Introduction.

1.1 These Railroad Requirements set forth terms and conditions agreed between the Missouri & Northern Arkansas Railroad Company, Inc. (Railroad) and the Missouri Highways and Transportation Commission (Commission), under which Railroad will allow the Commission's contractors to enter in and upon Railroad's real property, right of way, tracks and other facilities (Railroad's Property) to perform the contractor's work relating to this project.

1.2 To report an emergency on the Railroad, call: 866-527-3499

1.3 The project is located on the MNA Clinton Subdivision, at Mile Post 273.4, DOT# 411251E near La Due, MO.

1.4 Definitions of terms set forth in the current edition of the Missouri Standard Specifications for Highway Construction shall be applicable to those terms as used in these Railroad Requirements.

1.5 Contractor may not access, at any time, any property of the Railroad outside the State's permanent and temporary easements without Railroad's prior, written approval.

2.0 Authority of Railroad Representative and Engineer.

2.1 The authorized representative of the Railroad, herein called "Railroad Representative", shall have final authority in all matters affecting the safe maintenance and operation of railroad traffic including the adequacy of the foundations and structures supporting the railroad tracks.

2.1.1 The Railroad designates the following individual as the Railroad Representative for this project. Except as otherwise provided in these Railroad Requirements, the contractor shall address all notices concerning this project to the Railroad Representative, as follows:

Mr. Greg Feyerabend
General Manager
Missouri & Northern Arkansas Railroad Company, Inc.
514 North Orner
Carthage, MO 64836
Email: Greg.Feyerabend@gwrr.com
TEL: (918) 289-4861 [mobile]

2.1.2 The Railroad, or the individual identified above, may designate a different individual to act as the Railroad Representative for this project, and may change the address information stated above, by giving written notice of the changes to the contractor and to the Engineer, as provided in these Railroad Requirements.

2.2 The authorized representative of the Commission (Engineer) shall have authority over all other matters as prescribed herein and in the project specifications.

3.0 Contractor's Indemnity Obligations to the Railroad. The contractor agrees to indemnify, defend and hold harmless the Railroad from and against any injury or death of persons whomsoever, or from any loss or damage to the Railroad's Property, caused by acts or omissions of the contractor in performing work on this project, whether on, over, under or in the vicinity of the Railroad's Property as more specifically detailed in the Right of Entry Agreement referenced in Section 4.5 below. In the event the contractor shall fail to restore the Railroad's Property immediately to a condition acceptable to the Railroad when any such loss or damage to the Railroad's Property is called to the contractor's attention by the Railroad, then the Railroad may perform such corrective work at the cost of the contractor. In addition to such remedies of the Railroad, the Commission will withhold from final payment due to the contractor the amount reasonably necessary to reimburse the Railroad for such loss or damage or for performing such work. The term "loss or damage" as used herein shall include, but not be limited to, the erosion and silting of, water damage to, and the accidental or intentional placing or dropping of objects on the Railroad's Property.

4.0 Notice of Starting Work. The contractor shall not commence any work on the Railroad's right of way until contractor has complied with the following conditions:

4.1. At least thirty (30) days in advance of the date the contractor proposes to begin work on the Railroad's Property, the contractor has given written notice of the contractor's proposed start date and time to the Railroad Representative, and Railroad's Manager of Track Maintenance (see paragraph 12.2.3 below), with a copy to the Engineer.

4.2 The Commission has obtained written approval from the Railroad's Representative for the contractor's insurance coverage as required by Section 17 of these Railroad Requirements, and authorization for the contractor to begin work on the Railroad's Property.

4.3 The contractor has determined whether fiber optic cable systems are buried on the Railroad's Property. If fiber optic cable systems are buried on the Railroad's Property, then the contractor has contacted the Railroad at the 24 hour number, 800-336-9193, has contacted the telecommunications company involved, has arranged for a cable locator, and has made arrangements for relocation or other protection of the fiber optic cable system on the Railroad's Property.

4.4 The contractor's employees, representatives or agents who are regularly assigned to perform work on the Railroad's Property have been certified as having completed the Internet Safety Orientation available at <https://railpros.com/training/> where contractor needs to complete the course. This certification shall be renewed annually. In addition the contractor shall require that every employee, representative or agent who is not regularly assigned to perform work on the Railroad's Property has received appropriate safety training before performing any work on the Railroad's property. The cost of the Internet Safety Orientation, which is subject to change, is currently \$75 per person per year.

4.5 Right of Entry. At least forty-five (45) days in advance of the date the contractor proposes to begin work on the Railroad's Property, the contractor shall enter into a Right of Entry Agreement with

Railroad prior to working on Railroad property. The application for Right of Entry Agreement can be found at the following address:

<http://www.gwrr.com/real-estate/accessing-property/>

4.5.1 The applicant must submit the completed application to the Real Estate Department including a check or money order, to cover the non-refundable fee of \$1,750 made payable to the Railroad. The application must include railroad milepost, railroad subdivision, and scope of work.

4.5.2 Upon approval of the application, the Real Estate Department will draft an agreement and forward to the applicant for signature. **Application does not guarantee approval.** The applicant must then return the signed document to the Real Estate Department along with the pertinent certificate of insurance outlined in the agreement. Once in receipt of these documents, the agreement will then be executed on behalf of the Railroad.

5.0 Interference with Railroad's Operations.

5.1 The Railroad's right of way is located within the limits of this project. The contractor shall take care to insure that it will not drop any debris or material on the Railroad's Property.

5.2 The contractor shall arrange and conduct all of the contractor's work so that it causes no interference with the Railroad's operations, including train, signal, telephone, telegraphic services, damage to the Railroad's Property, poles, wires and other facilities of tenants on the Railroad's Property. Whenever the contractor's work may directly affect the operations or safety of trains, the contractor shall submit a written description of the method of doing such work to the Railroad Representative for approval, but such approval shall not relieve the contractor from liability resulting from the contractor's work. Any work to be performed by the contractor that requires flagging service shall be deferred by the contractor until the flagging services are available at the job site.

5.3 Whenever the contractor's work upon the Railroad's Property will unavoidably cause an impediment to the Railroad's operations, such as requiring the use of runaround tracks or reduced train speed, the contractor should schedule and conduct these operations so that this impediment is reduced to the absolute minimum.

5.4 If conditions arising from, or in connection with the work require immediate and unusual provisions to protect the Railroad's operations and property, the contractor shall make such provisions. If in the judgment of the Railroad Representative, or the Engineer if the Railroad Representative is absent, such provision is insufficient, then the Railroad Representative or Engineer may require or provide such provisions as he/she deems necessary. In any event, the contractor shall make such provisions at the contractor's expense, and without cost to the Railroad or the Commission.

6.0 Track Clearances. During construction, the contractor shall maintain not less than the minimum track clearances as shown on the project plans. However, before undertaking any work within the Railroad's Property and before placing any obstruction over any track, the contractor shall:

6.1 Notify the Railroad Representative at least ten (10) days in advance of the proposed work.

6.2 Receive assurance from the Railroad Representative that arrangements have been made for flagging service as may be necessary.

6.3. Receive permission from the Railroad Representative to proceed with the work, as provided in section 4.0.

6.4. Confirm that the Engineer has received copies of the contractor's notice to the Railroad, and of the Railroad's response.

7.0 Construction Procedures.

7.1. General. The contractor's work on the Railroad's property shall be performed in accordance with these Railroad Requirements and shall be subject to the Railroad's inspection and review. The contractor shall submit plans that shall be signed, sealed, and stamped in accordance with the laws relating to Architects and Professional Engineers, Chapter 327, RSMo, for the demolition of any structure over Railroad right of way, and for temporary shoring and falsework that may affect the Railroad's facilities or traffic.

7.2 Excavation. The contractor shall maintain the subgrade of an operated track with the beam edge at least 12 feet from centerline of track and not more than 26 inches below top of rail, unless the existing section fails to meet this specification, in which case the contractor shall maintain the existing section.

8.0 Maintenance of Railroad Facilities. Within the project limits, the contractor shall maintain Railroad's Property, including all ditches and drainage structures, free of silt or other obstructions that may result from contractor's operations. The contractor shall promptly repair eroded areas within the Railroad's Property and repair any other damage to the Railroad's Property or the Railroad's tenants. The contractor shall perform all such maintenance and repair of damages due to the contractor's operations at the contractor's expense.

9.0 Storage of Materials and Equipment.

9.1 The contractor shall obtain permission from the Railroad Representative before storing any materials or equipment anywhere on Railroad's Property. The Railroad will not ordinarily permit storage within twenty-five feet (25') from the centerline of any track, or within three hundred feet (300') from any grade crossing. The Railroad will not be liable for damage to such material and equipment from any cause, and the Railroad Representative may move such material and equipment or require the contractor to move it, at the contractor's expense.

9.2 The contractor shall not leave unattended any grading or construction machinery parked upon Railroad's Property, unless it is effectively immobilized so that unauthorized persons cannot move such machinery.

10.0 Cleanup. Upon completion of the work, the contractor shall remove from within the limits of the Railroad's Property all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the contractor's and shall leave Railroad's Property in a neat condition satisfactory to the Railroad Representative.

11.0 Damages. The Railroad shall not assume liability for any damages to the contractor, contractor's work, employees, servants, equipment and materials caused by the Railroad's traffic. However, the preceding sentence shall not exempt the Railroad from liability for any loss, damage or injury proximately caused by the Railroad's intentional misconduct or sole or gross negligence. The contractor shall directly reimburse the Railroad for any cost the Railroad reasonably incurs for repairing damages to the Railroad's Property or to property of the Railroad's tenants, caused by or resulting from the operations of the contractor relating to this project.

12.0 Flagging Services.

12.1 When Flagging is Required. The Railroad has sole authority to determine the need for flagging to protect the Railroad's operations. Whenever the Railroad requires flagging services with reference to any of the contractor's work on this project, the contractor shall not perform any such work until all required flaggers are present at the job site.

12.1.1 In general, the Railroad may require flagging services whenever the contractor's personnel or equipment are, or are likely to be, working on the Railroad's Property, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging, to prevent unreasonable risks of accidental hazard to the Railroad's operations or personnel.

12.1.2 Normally the Railroad will assign one flagger to a project; but in some cases, more than one may be necessary, such as yard limits where the Railroad may assign up to three flaggers. However, if the contractor works within the distances that violate instructions given by the Railroad Representative, or performs work upon or adjacent to Railroad's Property that has not been scheduled with the Railroad Representative, the Railroad may require flagging services full time until the project is completed.

12.2 Scheduling and Notification of Flagging Services.

12.2.1 The contractor shall arrange with the Railroad all flagging services required by the Railroad to accomplish the contractor's work on this project.

12.2.2 Before the contractor begins work on the Railroad's Property, the contractor shall furnish to the Railroad Representative and the Engineer a schedule for all work required to complete the contractor's portion of the project within the Railroad's Property, and shall arrange for a job site meeting between the contractor, the Engineer, and the Railroad Representative. Until the contractor has provided its work schedule and met on-site with the Railroad Representative and the Engineer, the Railroad may withhold all flagging services from the contractor's proposed job site. Before the flagger(s) begin each day's work, the flagger(s) and the contractor shall meet to conduct a job briefing.

12.2.3 Before the contractor first begins any work upon or adjacent to the Railroad's Property, the contractor shall give not less than thirty (30) days' advance notice to the Railroad, and to the Engineer, of its intent to begin such work. The contractor shall address all notices relating to flagging to the Railroad as follows:

Mr. Greg Feyerabend
General Manager
Missouri & Northern Arkansas Railroad Company, Inc.
514 North Orner
Carthage, MO 64836
Email: Greg.Feyerabend@gwrr.com
TEL: (918) 289-4861 [mobile]

12.2.4 The Railroad usually assigns one flagger to work at the job site on a continuous basis until the contractor no longer needs flagging services. The contractor shall not call for flagging services on a spot basis. The Railroad's assigned flagger shall notify the Engineer when flagging services have begun and ended. The flagger shall give these notices immediately upon arrival at the job site on the first day, and

before departing from the job site on the last day of each separate period when the Railroad provides flagging services, or as soon as possible thereafter. The Engineer shall document these notifications in the project records.

12.2.5 After the contractor has begun work that requires flagging services, the contractor shall give not less than five (5) day's advance written notice to the Railroad before discontinuing flagging services and terminating the obligation to pay for flagging services. The contractor shall simultaneously provide a copy of this notice to the Engineer. If the contractor's work on or adjacent to the Railroad's Property is suspended at any time, or for any reason, then before the contractor resumes any work on or adjacent to the Railroad's Property, the contractor shall give advance, written notice to the Railroad and to the Engineer of its intent to resume such work. This notice shall provide sufficient details of the contractor's proposed work to enable the Railroad Representative to determine whether flagging services will be required before the contractor resumes its work on or adjacent to the Railroad's Property. The contractor shall give this required notice at least three (3) working days' before it intends to resume such work; however, the Railroad may take up to thirty (30) days after the contractor has given this notice before resuming flagging services at the job site. The requirements of this paragraph 12.2.5 shall not apply if the suspension and resumption of the contractor's work were previously scheduled with the Railroad pursuant to paragraph 12.2.2 of these Railroad Requirements, or the suspension was caused by an emergency as provided in paragraph 12.2.6 of these Railroad Requirements.

12.2.6 If, after the Railroad has assigned a flagger to the project site in accordance with section 12.0, any emergency requires the flagger's presence elsewhere, then the contractor shall suspend work on the Railroad's Property until the flagger is again available. Any additional costs to the contractor resulting from such delay shall be borne by the contractor and not by the Railroad.

12.3 Payment for Flagging Services.

12.3.1 The Commission will pay the Railroad directly for the cost of flagging services associated with this project by deducting the amount from the Commission's payments to the contractor.

12.3.2 The estimated cost of flagging services is approximately \$1,450 per day, based on an 8-hour work day and a 40-hour work week. The Railroad shall charge not more than its actual cost of providing these flagging services, which includes the base pay for the flagger or flaggers who actually performed the required flagging services, the Railroad's reasonable overhead costs, and the reasonable costs actually incurred for the flagger's travel expenses, meals and lodging if required. The Railroad may charge a maximum of one-hour travel time each way per day per flagger, for travel to and from the job site. A flagger's work in excess of 8 hours per day or 40 hours per week, but not more than 12 hours per day, will result in a pay rate of \$225 per hour after 8 hours. If a flagger performs required flagging services on a holiday, then the pay rate shall be \$225 per hour for all hours worked on the holiday. The Commission also shall reimburse the Railroad for its actual expenses reasonably incurred in preparing and handling invoices to the Commission for the cost of these flagging services. The Railroad's charges to the Commission shall be in accordance with applicable provisions of the Federal Aid Policy Guide issued by the Federal Highway Administration, including all current amendments.

12.3.3 The Railroad shall submit progress invoices to the Engineer during the time the Railroad requires flagging services. The Railroad shall submit its final invoice for flagging services to the Engineer within one hundred eighty (180) days after the contractor has notified the Railroad and the Commission that all its work over the Railroad's Property is complete, in accordance with section 18.0 below. If the Commission does not receive the Railroad's final flagging invoice within this time period, then the Railroad shall obtain payment directly from the contractor.

12.3.4 If a dispute arises between the Railroad, the Commission and the contractor concerning the amount charged for flagging service, then the Commission may deduct the full amount of the Railroad's invoice from the contractor's payment, until the dispute is resolved.

12.4 Flagging Complaints. The contractor and the Railroad shall attempt to resolve any complaints concerning flagging services in a timely manner. If the contractor disputes the need for a flagger, the contractor shall notify the Railroad Engineer and the Engineer. The contractor shall confirm any verbal complaints in writing within five (5) working days, by sending a copy to the Railroad Representative and to the Engineer.

13.0 Temporary Construction Grade Crossing.

13.1 When the contractor has no reasonable alternate method of transporting construction materials and personnel across the Railroad's track, the contractor shall make all necessary arrangements with the Railroad for the installation, maintenance and removal of one temporary grade crossing for a construction haul road including, without limitation, entering into Railroad's then current form of Temporary Private Grade Crossing Agreement. The contractor shall bear all costs incidental to such crossings, including flagging, whether services are performed by contractor's own forces or by the Railroad's personnel. The contractor shall execute the Railroad's standard Road Crossing Agreement covering terms and conditions for the temporary crossing.

13.2 Neither the contractor nor the Railroad shall construct any crossing for use by the contractor for transporting materials or equipment across the tracks of the Railroad until the Railroad Representative specifically authorizes the installation, maintenance, necessary watching and flagging thereof and removal, which shall be done at the contractor's expense.

14.0 Work for the Benefit of the Contractors. The project plans show all temporary or permanent changes in wire lines or other facilities that are necessary to complete the project, or these changes will be covered by appropriate plan revisions approved by the Commission and the Railroad. If the contractor desires any further changes, the contractor shall make separate arrangements with the Railroad for those changes, at the contractor's expense.

15.0 Cooperation and Delays. The contractor shall arrange a schedule with the Railroad for accomplishing staged construction involving work by the Railroad or tenants of the Railroad. In arranging a schedule, the contractor shall request information from the Railroad, and the Railroad shall promptly provide information, concerning the minimum lead-time required for assembling crews and materials. The contractor shall schedule adequate time for those activities. The contractor shall not make any claim against the Railroad for hindrance or delay on account of railway traffic for:

15.1 Any work the Railroad performs.

15.2 Other delay incident to or necessary for the safe maintenance of railway traffic.

15.3 Any delays due to compliance with these Railroad Requirements.

16.0 Trainman's Walkways. The contractor shall maintain along the outer side of each exterior track of multiple operated tracks, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 12 feet from the centerline of the track. Before the close of each workday, the contractor shall remove all temporary impediments to walkways and track drainage encroachments or obstructions that were allowed during work hours when flagging services were available. Whenever the contractor excavates or maintains any

excavation near the walkway, the contractor shall install a handrail with 12 feet minimum clearance from the centerline of the track.

17.0 Insurance.

17.1 General Insurance Provisions. The contractor shall, at its sole cost and expense, procure and continuously maintain in force during this project, the insurance coverage required under this section 17 until the contractor has completed all project work on the Railroad's Property, has removed all equipment and materials from the Railroad's Property, and has cleaned and restored the Railroad's Property to the satisfaction of the Engineer and the Railroad Representative. The amount of work to be performed upon, over or under the Railroad's Property is estimated to be one percent (1%) of the contractor's total bid for the project.

17.2 Commercial General Liability Insurance. The contractor shall maintain commercial general liability ("CGL") insurance with a limit of not less than \$2,000,000 for each occurrence and an aggregate limit of not less than \$6,000,000. CGL insurance must be written on ISO occurrence form CG 00 01 12 04 (or a substitute form providing equivalent coverage). The policy must contain the following endorsement, which must be stated on the certificate of insurance: "Contractual Liability Railroads" ISO form CG 24 17 10 01 (or a substitute form providing equivalent coverage) showing "**Missouri & Northern Arkansas Railroad Company** Property" as the Designated Job Site.

17.3 Business Automobile Coverage Insurance. The contractor shall maintain business auto coverage written on ISO form CA 00 01 (or a substitute form providing equivalent liability coverage) with a combined single limit of not less than \$5,000,000 for each accident. The policy must contain the following endorsements, which must be stated on the certificate of insurance: "Coverage For Certain Operations In Connection With Railroads" ISO form CA 20 70 10 01 (or a substitute form providing equivalent coverage) showing "Missouri & Northern Arkansas Railroad Company Property" as the Designated Job Site; and Motor Carrier Act Endorsement - Hazardous Materials Clean Up (MCS-90) if required by law.

17.4 Workers' Compensation and Employers' Liability Insurance. The contractor shall maintain workers' compensation insurance coverage, with not less than the minimum statutory liability required under the workers' compensation laws of the State of Missouri. The contractor shall maintain Employers' Liability (Part B) insurance coverage with limits of at least \$500,000 for each accident, a \$500,000 disease policy limit, and \$500,000 for each employee. If the contractor is self-insured, then the contractor shall provide evidence of state approval and excess workers' compensation coverage, which must include coverage for liability arising out of the U. S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable. The policy must contain the following endorsement, which must be stated on the certificate of insurance: "Alternate Employer Endorsement" ISO form WC 00 03 01 A (or a substitute form providing equivalent coverage) showing the Railroad in the schedule as the alternate employer (or a substitute form providing equivalent coverage).

17.6 Railroad Protective Liability Insurance. The contractor must maintain Railroad Protective Liability insurance written on ISO occurrence form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of the Railroad as named insured, with a limit of not less than \$2,000,000 per occurrence and an aggregate limit of \$6,000,000. Before commencing any work on the Railroad's Property, the contractor shall submit the original insurance policy to the Railroad, or may submit a binder stating that the required Railroad Protective Liability policy is in place until the contractor delivers the original policy to the Railroad. The contractor shall cause the Railroad Protective Liability Insurance policy to include a description of the named insured, the work, and the job site, as follows:

17.6.1 Named Insured. The Named Insured on the Railroad Protective Liability Insurance policy shall be Missouri & Northern Arkansas Railroad Company, Inc.

17.6.2 Description and Designation. The description of the work and designation of the job site to be shown on the Railroad Protective Liability Insurance policy are as follows:

Pavement resurfacing (mill/fill).
Job No. JST0110 near La due, Rte. T
DOT# 411251E MNA Clinton Sub, Mile Post 273.4 in Henry, MO.

17.7 Umbrella or Excess Insurance. If the contractor utilizes umbrella or excess insurance policies, these policies must “follow form” and afford no less coverage than the primary policy.

17.8 Pollution Liability Insurance. The contractor shall maintain pollution liability insurance coverage, which must be written on ISO form Pollution Liability Coverage Form Designated Sites CG 00 39 12 04 (or a substitute form providing equivalent liability coverage), with limits of at least \$5,000,000 per occurrence and an aggregate limit of \$10,000,000. If the scope of work as defined in this Project includes the disposal of any hazardous or non-hazardous materials from the job site, the contractor must furnish to the Railroad evidence of pollution legal liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting the materials, with coverage in minimum amounts of \$1,000,000 per loss, and an annual aggregate of \$2,000,000.

17.9 Other Insurance Requirements.

17.9.1. Each policy required above (except workers' compensation and employers' liability) must include the Railroad and its affiliated companies, including but not limited to Genesee & Wyoming, Inc. as “Additional Insured” using ISO Additional Insured Endorsements CG 20 26, and CA 20 48 (or substitute forms providing equivalent coverage). The coverage provided to the Railroad as an additional insured shall, to the extent provided under ISO Additional Insured Endorsement CG 20 26 and CA 20 48, provide coverage for the Railroad’s negligence whether sole or partial, active or passive.

17.9.2 Where allowable by law, the punitive damage exclusion shall be deleted, and the deletion shall be indicated on the certificate of insurance.

17.9.3 The contractor waives all rights of recovery, and its insurers also waive all rights of subrogation of damages against the Railroad and its agents, officers, directors and employees, except that these waivers shall not apply to punitive damages, nor to any loss, damage or injury proximately caused by the Railroad’s intentional misconduct or sole or gross negligence. The certificate of insurance shall acknowledge these waivers.

17.9.4 Prior to commencing any work on the Railroad's Property, the contractor shall furnish the Railroad with one or more certificates of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth in this Section 17.

17.9.5 The contractor shall only obtain insurance policies written by a reputable insurance company acceptable to the Railroad, or which currently has a Best's Insurance Guide Rating of “A-” and Class VII or better, and which is authorized to do business in the State of Missouri.

17.9.6 The fact that insurance is obtained by the contractor or by the Railroad on behalf of the contractor will not be deemed to release or diminish the liability of the contractor, including, without limitation, liability under the indemnity provisions contained in Section 3.0 of these Railroad Requirements. Damages

recoverable by the Railroad from the contractor or any third party will not be limited by the amount of the required insurance coverage, except to the extent of any payments the Railroad has received pursuant to insurance coverage obtained and paid for by the contractor.

17.10 Evidence of Insurance. The contractor shall provide evidence of insurance as required above to the addresses shown below, for review by the Commission and approval by the Railroad.

Railroad

Mr. Michael R. Morningstar
Director of Risk Management and Claims
Genesee & Wyoming Railroad Services,
Inc.
13901 Sutton Park Drive South
Suite 150
Jacksonville, FL 32224
Phone: (904) 900-6258
Fax: (904)223-4618

Commission

Ms. Brandi Baldwin
State Construction & Materials Engineer
MoDOT
P.O. Box 270
Jefferson City, MO 65102

17.11 Except as otherwise specifically provided in these Railroad Requirements, the Railroad will not accept binders as evidence of insurance, and the contractor shall provide the Railroad with the original insurance policy.

17.12 Insurance Required of Subcontractors. If any part of the work is sublet, the contractor shall maintain and provide evidence of similar insurance, in the same amounts as required of the prime contractor, to cover the subcontractor's operations. The Railroad will accept endorsements to the prime contractor's policies specifically naming subcontractors and describing the subcontractor's operations, for this purpose.

17.13 Cancellation of Insurance. The contractor and its insurers shall not cancel any of the required insurance coverage, except by permission of the Commission and the Railroad, or after thirty (30) days' written notice to the Commission and the Railroad at the addresses shown in subsection 17.10.

18.0 Completion of Work on Railroad's Property. The contractor shall notify Engineer and Railroad's Representative when the contractor has completed its work on Railroad's Property.

19.0 Failure to Comply. If the contractor violates or fails to comply with any of these Railroad Requirements, then the Railroad Engineer may require that the contractor vacate the Railroad's property and the Engineer may withhold all monies due to the contractor until the contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

20.0 Payment for Cost of Compliance. The contractor is not entitled to any separate payment for any extra cost it may incur on account of compliance with these Railroad Requirements. The contractor shall include all such costs in the contract unit price for items properly authorized in the contract.