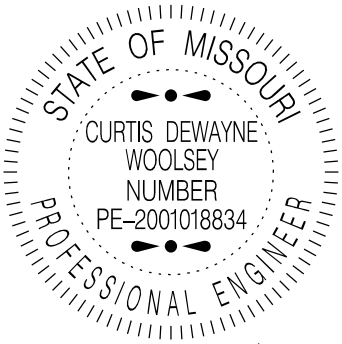
Job No.: JST0027, JST0028, JST0032, JST0037, JST0041
Route: Various
County: Various

JOB SPECIAL PROVISIONS TABLE OF CONTENTS

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



08/10/2023 8:15:34 AM
CURTIS DEWAYNE WOOLSEY - CIVIL
MO-PE-2001018834

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: JST0027, JST0028, JST0032, JST0037, JST0041
VARIOUS COUNTIES, MO
DATE PREPARED: 07/17/2023

ADDENDUM DATE:

Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: ALL

Job No.: JST0027, JST0028, JST0032, JST0037, JST0041
Route: Various
County: Various

JOB
SPECIAL PROVISION

A. General - State JSP-09-03J

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

1.1 This contract requires payment of the prevailing hourly rate of wages for each craft or type of worker required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations. The current State Wage Rates can be found on the Missouri Department of Transportation web page at www.modot.org 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 2023 Missouri Standard Plans
For Highway Construction

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

B. Contract Liquidated Damages JSP-13-01C

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

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

Job No.: JST0027, JST0028, JST0032, JST0037, JST0041
Route: Various
County: Various

Notice to Proceed Date: **November 06, 2023**
Contract Completion Date: **November 01, 2024**

2.1 Calendar Days. 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
JST0027	N/A	$1,800
JST0028	N/A	$1,800
JST0032	N/A	$1,800
JST0037	N/A	$1,800
JST0041	N/A	$1,800

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 **$1,500** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified contract completion date or calendar days.

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

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

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

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

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

2.0 Traffic Management Schedule.

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

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

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 JSP-90-11A

1.0 The contractor shall have communication equipment on the construction site or immediate access to other communication systems to request assistance from law enforcement or other emergency agencies for incident management. In case of traffic accidents or the need for law enforcement to direct or restore traffic flow through the job site, the contractor shall notify law enforcement or other emergency agencies immediately as needed. The area engineer's office shall also be notified when the contractor requests emergency assistance.

Resident Engineer, Kevin Plott: (573) 243-0899 (Office)
(573) 225-8409 (Cell)
Kevin.Plott@modot.mo.gov

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

Missouri Highway Patrol: (800) 525-5555
Scott County Sheriff: (573) 471-3530
Dunklin County Sheriff: (573) 888-2424
Cape Girardeau County Sheriff: (573) 243-3551
Madison County Sheriff: (573) 783-2234
Bollinger County Sheriff: (573) 238-2633

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 law enforcement agency.

2.2 The contractor shall notify law 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 law 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.

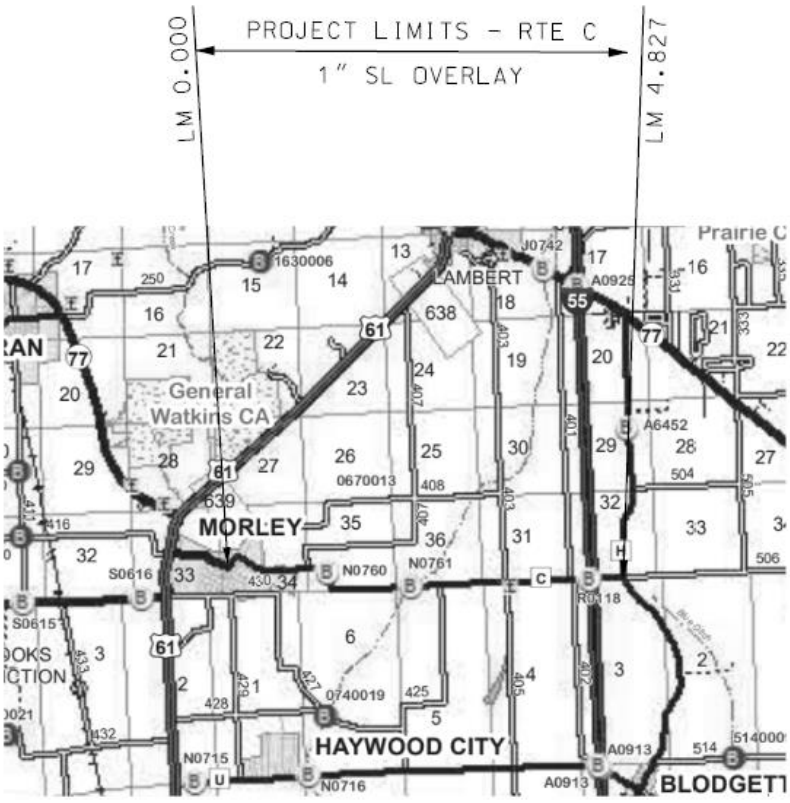
Curt Woolsey, PE – Project Manager
Southeast District
3956 East Main Street
Willow Springs, MO 65793

Telephone Number: 417-469-6232 (Office), 573-380-2123 (Cell)
Email: Curt.Woolsey@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 – JST0027 – Rte. C – Scott County

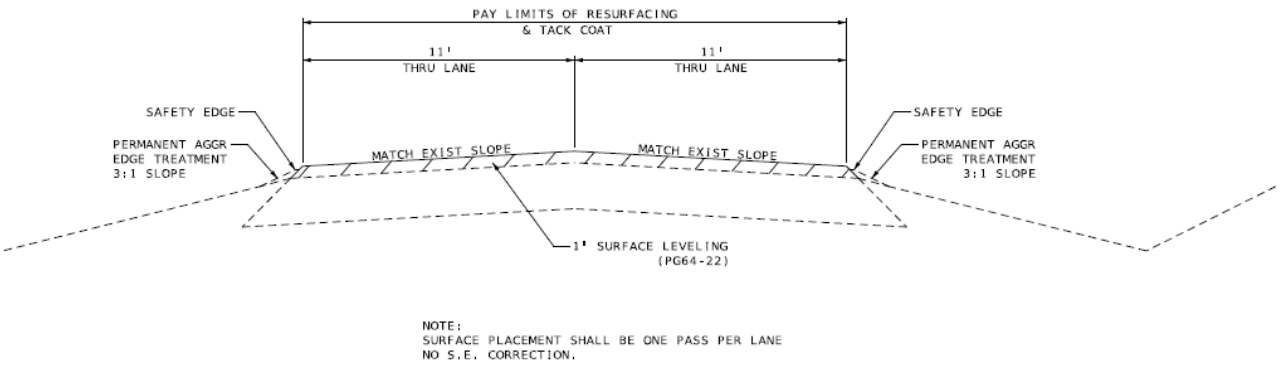
1.0 Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to Log Mile 4.878 on Rte. C in Scott County. The total length of the pavement limits is 4.878 miles with an average width of 22 feet. Pavement will not be placed at the following exception locations listed below:



EXCEPTIONS			
APPROX. LOG MILE		LENGTH (FT)	REMARKS
FROM	TO		
2.415	2.444	123	BRIDGE N0761
4.498	4.539	215	BRIDGE R0118
	TOTAL	338	

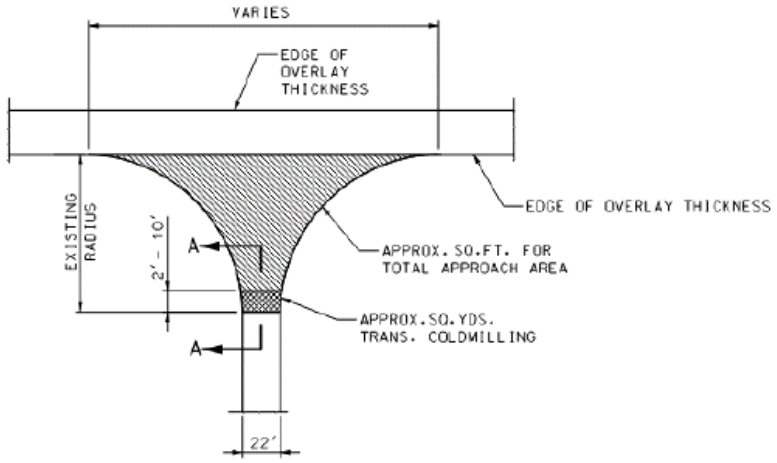
2.0 Mix and Pavement Transitions.

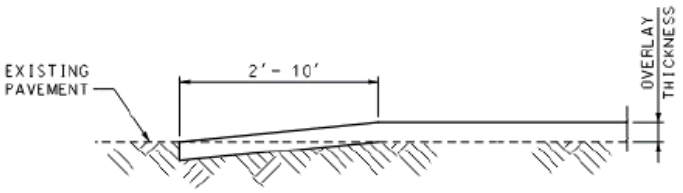
2.1 1” Bituminous Pavement Mixture PG 64-22 (Surface Leveling) pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd2 the entire width of the travel way for the length of the pavement limits.



2.2 Depth transitions when beginning and ending at a state route shall be cold milled at the rate of 1” in 50’. When beginning or ending mid-route, including exceptions, shall be cold milled at the rate of 1” in 50’.

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

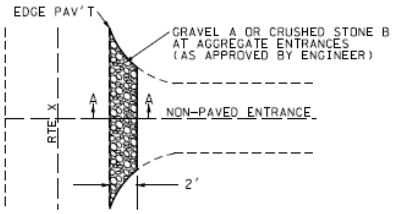




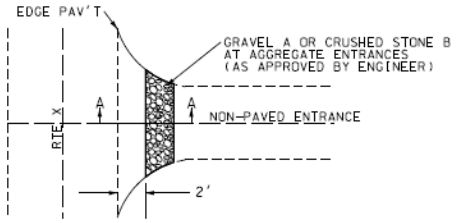
SECTION A-A
TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)

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

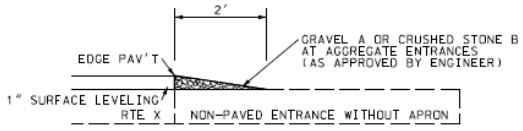
Job No.: JST0027, JST0028, JST0032, JST0037, JST0041
Route: Various
County: Various



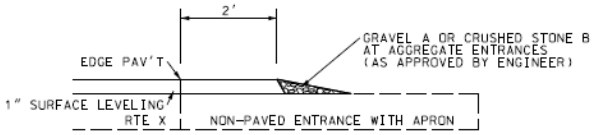
PLAN VIEW FOR NON-PAVED PRIVATE AND COMMERCIAL ENTRANCES WITHOUT EXISTING APRON



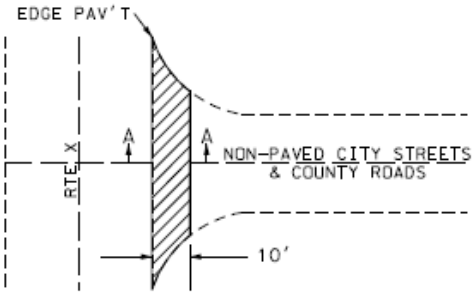
PLAN VIEW FOR NON-PAVED PRIVATE AND COMMERCIAL ENTRANCES WITH EXISTING APRON



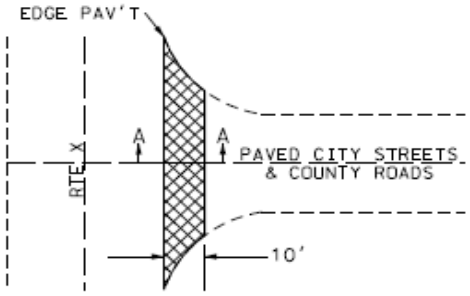
TYPICAL SECTION A-A



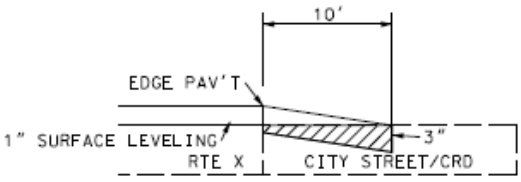
TYPICAL SECTION A-A



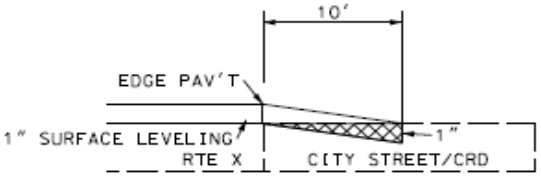
PLAN VIEW FOR NON-PAVED CITY STREETS AND COUNTY ROADS



PLAN VIEW FOR PAVED CITY STREETS AND COUNTY ROADS



TYPICAL SECTION A-A



TYPICAL SECTION A-A

3.0 Pavement, Cold Milling, and Gravel Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT							
LOG MILE	LOG MILE	NET LENGTH (MI)	AVERAGE WIDTH (FT)	BITUMINOUS PAVEMENT 1" SL PG64-22 (2.034 TON/CY) (TONS)	TACK COAT (0.08 GAL/SY) (GAL)	PERMANENT AGG EDGE TREATMENT (85.6 TON/MI) (TONS)	REMARKS
0.000	0.255	0.255	28	236.7	355.6	-	BEG. PROJECT TO AULT STREET
0.255	2.415	2.160	22	1575.1	2230.3	184.9	RTE. C
2.415	2.444	0.029	-	-	-	-	BR N0761 EXCEPTION
2.444	4.498	2.054	22	1497.8	2120.8	175.8	RTE. C
4.498	4.539	0.041	-	-	-	-	BR R0118 EXCEPTION
4.539	4.869	0.330	22	240.6	340.7	28.2	RTE. C
4.869	4.878	0.009	VAR	6.9	9.8	0.8	END PROJECT – RTE. C/H INTERSECTION
VAR	VAR	-	43	35.1	49.7	-	13 PAVED STREETS/COUNTY ROADS
VAR	VAR	-	58	43.7	20.6	-	4 AGG COUNTY ROADS
VAR	VAR	-	31	8.2	11.6	-	21 PRIVATE ENTRANCES
			SUB-TOTAL	3644.1	5139.1	389.7	
				72.9	-	-	SAFETY EDGE
				731.7	-	-	IRREGULARITIES @ 150 TONS/MI
			TOTALS	4448.7	5139.1	389.7	
			USE	**4448.7**	**5139**	**389.7**	

3.2 Cold Milling Quantities are as follows:

MODIFIED COLD MILLING (DEPTH TRANSITION)			
LOG MILE	LOG MILE	QUANTITY SQ. YD.	REMARKS
0.000	0.009	132	BEGIN PROJECT
2.405	2.902	117	BEFORE BR N0761 EXCEPTION
2.444	2.454	117	AFTER BR N0761 EXCEPTION
4.488	4.498	117	BEFORE BR R0118 EXCEPTION
4.539	4.540	117	AFTER BR R0118 EXCEPTION
4.869	4.878	123	END PROJECT
	TOTAL	**723**	

3.3 Gravel Quantities are as follows:

GRAVEL A OR CRUSHED STONE B			
LOG MILE	LOG MILE	TONS	REMARKS
0.000	4.878	60	60 GRAVEL ENTRANCES (2' APRON - 35' AVG WIDTH)
	TOTAL	60	
*USE GRAVEL AT ENTRANCES AS DIRECTED BY ENGINEER @ 1 TON/ENTRANCE			

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction sign quantities are as follows:

CONSTRUCTION SIGNING						
SIGN NO.	SIGN	SIZE (in.)	AREA (sq. ft.)	QTY.	TOTAL AREA (sq. ft.)	DESCRIPTION
1 *	GO20-1	60 x 24	10	2	20	ROAD WORK NEXT 5 MILES
2 **	WO20-1	48 x 48	16	8	128	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	6	96	NO CENTER LINE
36	WO8-11	48 x 48	16	10	160	UNEVEN LANES
53	GO20-4	36 x 18	4.5	1	4.5	PILOT CAR FOLLOW ME
56	CONST-7	48 x 24	8	2	16	RATE OUR WORK ZONE
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)
				CONSTRUCTION SIGNS TOTAL	730.88	
				USE	731	
* - 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 ENGINEER.						
REFER TO STANDARD PLAN 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Traffic Control Devices and Mobilization are as follows:

ITEM NO.	QTY.	DESCRIPTION
	30	CHANNELIZERS (TRIM-LINE)
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION
6161099	2	**CHANGEABLE MESSAGE SIGN - CONTRACTOR FURNISHED, CONTRACTOR RETAINED
** CMS TO BE USED AT ENGINEERS DISCRETION THROUGHOUT ALL PROJECT LOCATIONS IN CONTRACT.		

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS						
LOG MILE	LOG MILE	LENGTH (FT)	4" INT. YELLOW (FT)	4" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
0.000	4.877	25750.56	5710	10782	47740	RTE C - SCOTT COUNTY
		TOTAL	5710	10782	47740	
		USE	16492		47740	
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.						

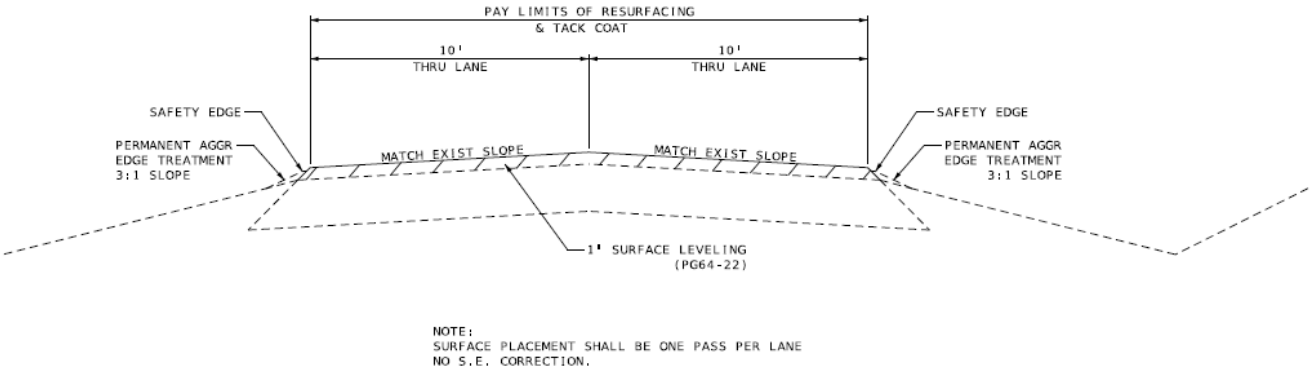
G. Project Details and Quantities – JST0028 – Rte. ZZ – Dunklin County

1. Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 1.040 to Log Mile 3.560 on Rte. ZZ in Dunklin County. The total length of the pavement limits is 2.494 miles with an average width of 20 feet. Pavement will not be placed at the following exception locations listed below:

EXCEPTIONS			
APPROX. LOG MILE		LENGTH	REMARKS
FROM	TO	(FT)	
2.045	2.059	74	BRIDGE A8477
3.046	3.058	64	BRIDGE N0568
	TOTAL	138	

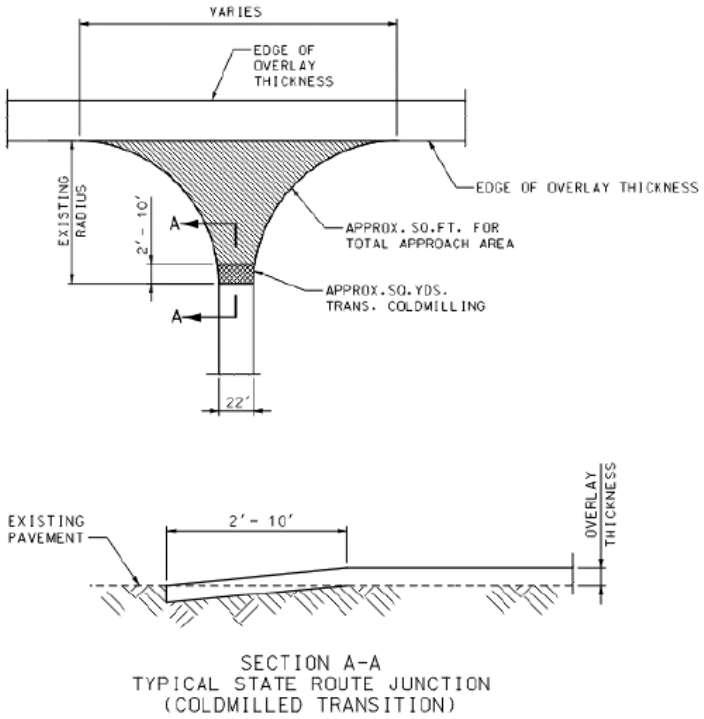
2.0 Mix and Pavement Transitions.

2.1 1” Bituminous Pavement Mixture PG 64-22 (Surface Leveling) 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 travel way for the length of the pavement limits.



2.2 Depth transitions when beginning and ending at a state route shall be cold milled at the rate of 1” in 50’. When beginning or ending mid-route, including exceptions, shall be cold milled at the rate of 1” in 50’.

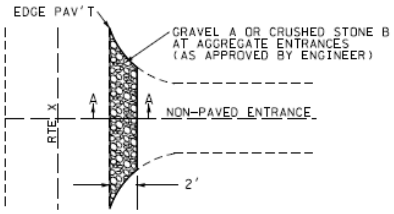
2.3 Cold milling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and cold milling areas (see transition area details below).



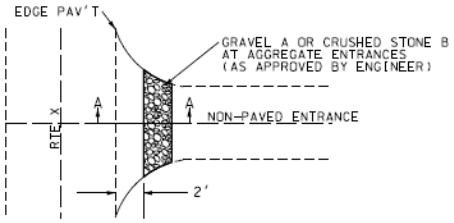
SECTION A-A
TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)

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

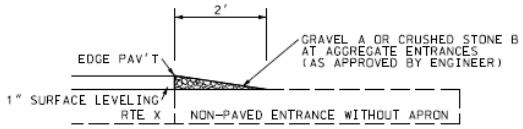
Job No.: JST0027, JST0028, JST0032, JST0037, JST0041
Route: Various
County: Various



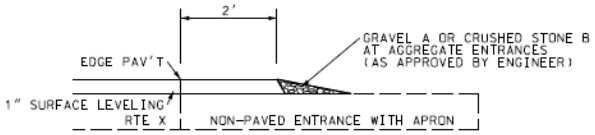
PLAN VIEW FOR NON-PAVED PRIVATE AND COMMERCIAL ENTRANCES WITHOUT EXISTING APRON



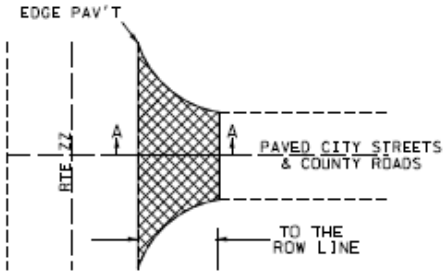
PLAN VIEW FOR NON-PAVED PRIVATE AND COMMERCIAL ENTRANCES WITH EXISTING APRON



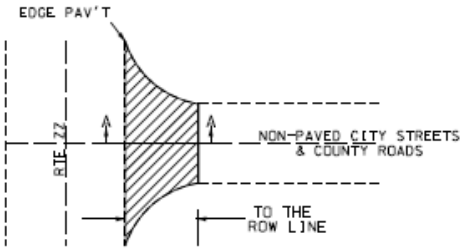
TYPICAL SECTION A-A



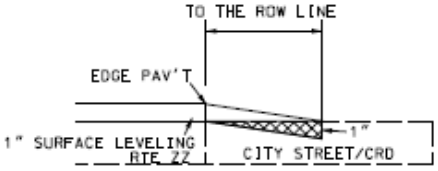
TYPICAL SECTION A-A



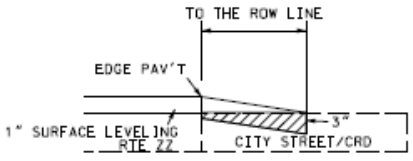
PLAN VIEW FOR PAVED CITY STREETS AND COUNTY ROADS



PLAN VIEW FOR NON-PAVED CITY STREETS AND COUNTY ROADS



TYPICAL SECTION A-A



TYPICAL SECTION A-A

3.0 Pavement, Cold Milling, and Gravel Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT							
LOG MILE	LOG MILE	NET LENGTH (MI)	AVERAGE WIDTH (FT)	BITUMINOUS PAVEMENT 1" SL PG64-22 (2.034 TON/CY) (TONS)	TACK COAT (0.08 GAL/SY) (GAL)	PERMANENT AGG EDGE TREATMENT (85.6 TONS/MILE) (TONS)	REMARKS
1.040	1.052	0.012	VAR	60.9	28.7	1.0	BEGIN PROJECT - RTE ZZ/CRD 721 TO ROW LINE AND INTERSECTION
1.052	2.045	0.993	20	658.3	932.1	85.0	RTE ZZ
2.045	2.059	0.014	24	-	-	-	EXCLUDE BRIDGE A8477
2.059	3.046	0.987	20	654.3	926.5	84.5	RTE ZZ
3.046	3.058	0.012	24	-	-	-	EXCLUDE BRIDGE N0568
3.058	3.553	0.495	20	328.2	464.6	42.4	RTE ZZ
3.553	3.56	0.007	VAR	9.9	14.0	0.6	END PROJECT - RTE ZZ/RTE NN
2.524	2.548	-	VAR	84.5	39.9	-	3 AGG COUNTY ROADS TO THE ROW LINE (CR 735, 735, & 725)
			SUB-TOTAL	1796.1	2405.8	213.5	
				35.9	-	-	SAFETY EDGE
				377.0	-	-	IRREGULARITIES @ 150 TONS/MI
			TOTALS	2209.0	2405.8	213.5	
			USE	**2209.0**	**2406**	**213.5**	

3.2 Cold Milling Quantities are as follows:

COLDMILLING				
LOG MILE	LOG MILE	COLDMILLING 3" OR LESS (SQ. YD.)	MODIFIED COLDMILLING DEPTH TRANSITIONS (SQ. YD.)	REMARKS
1.040	1.052	359	-	BEGIN PROJECT - RTE ZZ/CRD 721 TO ROW LINE AND INTERSECTION
1.052	1.061	-	111	BEGIN PROJECT TRANSITION ON MAINLINE
3.553	3.560	-	175	END PROJECT - RTE ZZ/RTE NN
2.036	2.045	-	111	50' TRANSITION - BEGIN BRIDGE A8477
2.059	2.068	-	111	50' TRANSITION - END BRIDGE A8477
3.037	3.046	-	111	50' TRANSITION - BEGIN BRIDGE N0568
3.058	3.067	-	111	50' TRANSITION - END BRIDGE N0568
	TOTAL	**359**	**730**	

3.3 Gravel Quantities are as follows:

GRAVEL A OR CRUSHED STONE B			
LOG MILE	LOG MILE	TONS	REMARKS
1.040	-	3	BEGIN PROJECT - TIE INTO EXISTING GRAVEL SURFACE
1.059	3.430	25	25 GRAVEL ENTRANCES (2' APRON - 31.6' AVG WIDTH)
	TOTAL	28	

*USE GRAVEL AT ENTRANCES AS DIRECTED BY ENGINEER @ 1 TON/ENTRANCE

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction sign quantities are as follows:

CONSTRUCTION SIGNING						
SIGN NO.	SIGN	SIZE (in.)	AREA (sq. ft.)	QTY.	TOTAL AREA (sq. ft.)	DESCRIPTION
1 *	GO20-1	60 x 24	10	2	20	ROAD WORK NEXT 3 MILES
2 **	WO20-1	48 x 48	16	9	144	ROAD WORK AHEAD
7	WO20-4	48 x 48	16	5	80	ONE LANE ROAD AHEAD
8	WO20-7a	48 x 48	16	9	144	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 x 48	16	5	80	BE PREPARED TO STOP
26	GO20-2	48 x 24	8	2	16	END ROAD WORK
35	WO8-12	48 x 48	16	4	64	NO CENTER LINE
36	WO8-11	48 x 48	16	6	96	UNEVEN LANES
53	GO20-4	36 x 18	4.5	1	4.5	PILOT CAR FOLLOW ME
56	CONST-7	48 x 24	8	2	16	RATE OUR WORK ZONE
58	GO20-4a	42 x 30	8.75	0	0	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 x 12	1.5	5	7.5	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)
				CONSTRUCTION SIGNS TOTAL	700.38	
				USE	**700**	
* - 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 ENGINEER.						
REFER TO STANDARD PLAN 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Traffic Control Devices and Mobilization are as follows:

ITEM NO.	QTY.	DESCRIPTION
	35	CHANNELIZERS (TRIM-LINE)
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS						
LOG MILE	LOG MILE	LENGTH (FT)	4" INT. YELLOW (FT)	4" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
1.052	3.553	13205.28	3301	-	-	RTE ZZ - DUNKLIN COUNTY
		TOTAL	3301	-	-	
		USE	**3301**	**-**	-	
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.						

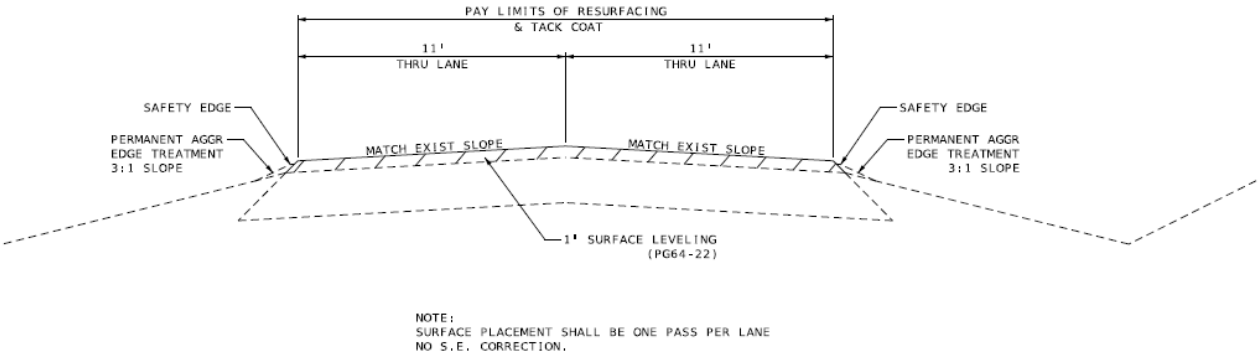
H. Project Details and Quantities – JST0032 – Rte. V – Cape Girardeau County

1.0 Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described her in. The project limits are from Log Mile 0.000 to Log Mile 5.898 on Rte. V in Cape Girardeau County. The total length of the pavement limits is 5.898 miles with an average width of 22 feet. Pavement will not be placed at the following exception locations listed below:

EXCEPTIONS			
APPROX. LOG MILE		LENGTH	REMARKS
FROM	TO	(FT)	
0.610	0.636	139	BRIDGE S0943
1.502	1.534	167	BRIDGE N0781
	TOTAL	306	

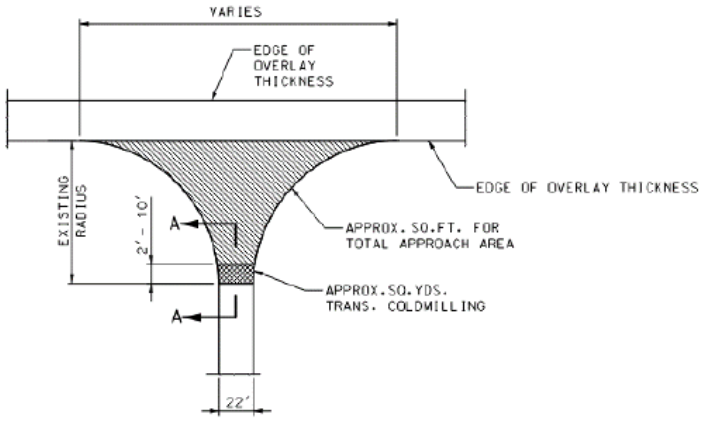
2.0 Mix and Pavement Transitions.

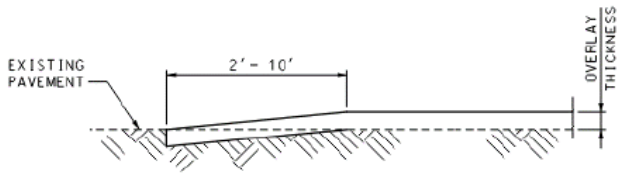
2.1 1” Bituminous Pavement Mixture PG 64-22 (Surface Leveling) pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd2 the entire width of the travel way for the length of the pavement limits.



2.2 Depth transitions when beginning and ending at a state route shall be cold milled at the rate of 1” in 50’. When beginning or ending mid-route, including exceptions, shall be cold milled at the rate of 1” in 50’.

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

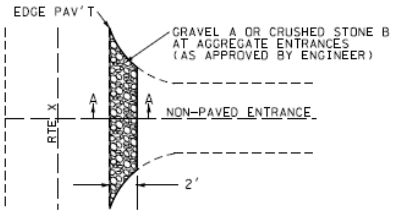




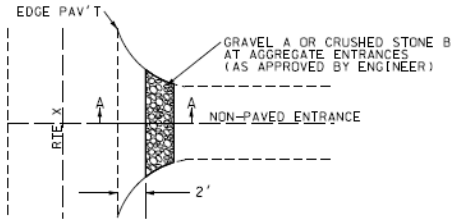
SECTION A-A
TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)

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

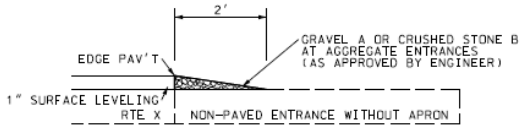
Job No.: JST0027, JST0028, JST0032, JST0037, JST0041
Route: Various
County: Various



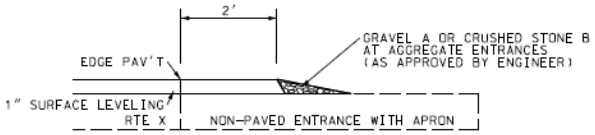
PLAN VIEW FOR NON-PAVED PRIVATE AND COMMERCIAL ENTRANCES WITHOUT EXISTING APRON



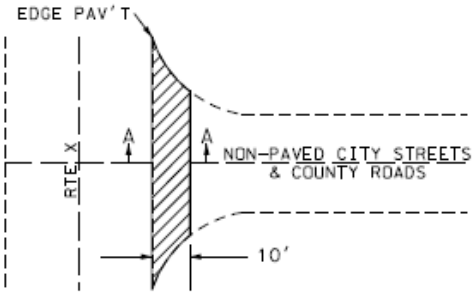
PLAN VIEW FOR NON-PAVED PRIVATE AND COMMERCIAL ENTRANCES WITH EXISTING APRON



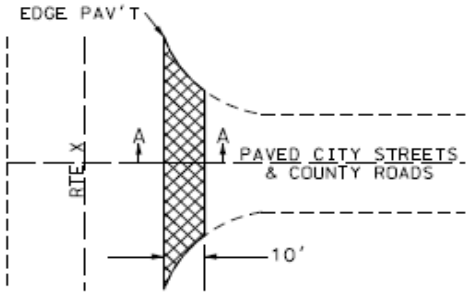
TYPICAL SECTION A-A



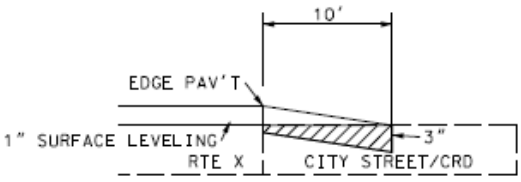
TYPICAL SECTION A-A



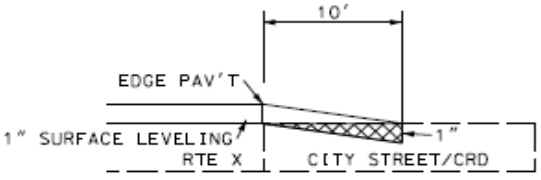
PLAN VIEW FOR NON-PAVED CITY STREETS AND COUNTY ROADS



PLAN VIEW FOR PAVED CITY STREETS AND COUNTY ROADS



TYPICAL SECTION A-A



TYPICAL SECTION A-A

3.0 Pavement, Cold Milling, and Gravel Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT							
LOG MILE	LOG MILE	NET LENGTH (MI)	AVERAGE WIDTH (FT)	BITUMINOUS PAVEMENT 1" SL PG64-22 (2.034 TON/CY) (TONS)	TACK COAT (0.08 GAL/SY) (GAL)	PERMANENT AGG EDGE TREATMENT (85.6 TON/MI) (TONS)	REMARKS
0.278	0.610	0.332	22	242.1	342.8	28.4	RTE V
0.610	0.636	0.026	22	-	-	-	BR S0943 EXCEPTION
0.636	1.502	0.866	22	631.5	894.2	74.1	RTE V
1.502	1.534	0.032	22	-	-	-	BR N0781 EXCEPTION
1.534	1.809	0.275	22	200.5	283.9	23.5	RTE V
1.809	1.836	0.027	22	19.7	27.9	-	BR N0782
1.836	2.857	1.021	22	744.5	1054.2	87.4	RTE V
2.857	2.879	0.022	22	16.0	22.7	-	BR B0496 – 1" MILL/FILL
2.879	5.898	3.019	22	2201.5	3117.2	258.4	RTE V
VAR	VAR	-	78.0	4.9	6.9	-	4 PAVED COUNTY ROADS/CITY STREETS
VAR	VAR	-	84.4	15.9	7.5	-	1 AGG COUNTY ROADS/CITY STREETS
VAR	VAR	-	38.6	14.5	20.6	-	30 PRIVATE PAVED ENTRANCES
			SUB-TOTAL	4091.1	5777.9	471.8	
				81.82	-	-	SAFETY EDGE
				562.00	-	-	IRREGULARITIES @ 100 TONS/MI
			TOTAL	4734.92	5777.9	471.8	
			USE	**4734.9**	**5778**	**471.8**	

3.2 Cold Milling Quantities are as follows:

COLD MILLING				
LOG MILE	LOG MILE	MOD. COLD MILLING (DEPTH TRANSITION) (SY)	COLD MILLING BIT. PVMT. 3 IN. THICK OR LESS (SY)	REMARKS
0.278	0.287	122.2		RTE V
0.592	0.601	122.2		RTE V
0.601	0.610		122.2	RTE V
0.636	0.645		122.2	RTE V
0.645	0.654	122.2		RTE V
1.484	1.493	122.2		RTE V
1.493	1.502		122.2	RTE V
1.534	1.543		122.2	RTE V
1.543	1.552	122.2		RTE V
2.839	2.848	122.2		RTE V
2.848	2.857		122.2	RTE V
2.857	2.879		281.1	BR B0496 - 1" MILL/FILL
2.879	2.888		122.2	RTE V
2.888	2.897	122.2		RTE V
5.889	5.898	122.2		END PROJECT
	TOTAL	**978.0**	**1015.0**	

3.3 Gravel Quantities are as follows:

GRAVEL A OR CRUSHED STONE B			
LOG MILE	LOG MILE	TONS	REMARKS
0.000	5.898	75	75 GRAVEL ENTRANCES (2' APRON – 43.8' AVG WIDTH)
	TOTAL	**75**	

*USE GRAVEL AT ENTRANCES AS DIRECTED BY ENGINEER @ 1 TON/ENTRANCE

3.4 Seal Coat Quantities are as follows:

SEAL COAT						
LOG MILE	LOG MILE	NET LENGTH (MI)	AVERAGE WIDTH (FT)	AGGREGATE GRADE B1 (SY)	EMULSIFIED ASPHALT (0.38 GAL/SY) (GAL)	REMARKS
1.809	1.836	0.027	22	19.7	132.4	BR N0782 – CHIP SEAL/SEAL COAT
			TOTAL	19.7	132.4	
			USE	**20.0**	**133.0**	

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction sign quantities are as follows:

CONSTRUCTION SIGNING						
SIGN NO.	SIGN	SIZE (in.)	AREA (sq. ft.)	QTY.	TOTAL AREA (sq. ft.)	DESCRIPTION
1 *	GO20-1	60 x 24	10	2	20	ROAD WORK NEXT 6 MILES
2 **	WO20-1	48 x 48	16	7	112	ROAD WORK AHEAD
7	WO20-4	48 x 48	16	5	80	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	6	96	NO CENTER LINE
36	WO8-11	48 x 48	16	12	192	UNEVEN LANES
53	GO20-4	36 x 18	4.5	1	4.5	PILOT CAR FOLLOW ME
56	CONST-7	48 x 24	8	2	16	RATE OUR WORK ZONE
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	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)
				CONSTRUCTION SIGNS TOTAL	738.13	
				USE	**738**	
* - 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 ENGINEER.						
REFER TO STANDARD PLAN 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Traffic Control Devices and Mobilization are as follows:

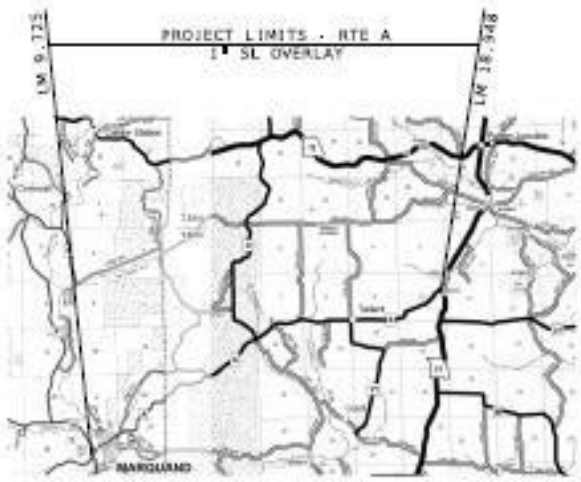
ITEM NO.	QTY.	DESCRIPTION
	48	CHANNELIZERS (TRIM-LINE)
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION

5.0 Pavement Marking. Pavement marking quantities are as follows

PERMANENT PAVEMENT MARKING											
LOG MILE	LOG MILE	LENGTH	PREFORMED THERMOPLASTIC			HIGH-BUILD WATERBORNE, TYPE L BEADS		STANDARD WATERBORNE, TYPE P BEADS			REMARKS
			LT ARROW	24" SOLID WHITE	24" SOLID YELLOW	4" SOLID YELLOW	6" SOLID WHITE	4" INT. YELLOW	4" SOLID YELLOW	4" SOLID WHITE	
		(FT)	(EA)	(FT)	(FT)	(FT)	(FT)	(FT)	(FT)	(FT)	
0.000	0.278	1467.84	5	36	52.6	3359.7	3230.2	-	-	-	CONCRETE PORTION
0.278	5.898	29673.6	-	-	-	-	-	1094.3	54305.4	58126	ASPHALT PORTION
		TOTALS	5	36	52.6	3359.7	3230.2	1095	54306	58126	
		USE	**5**	**36**	**53**	**3360**	**3231**	**55401**		**58126**	
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.											

I. <u>Project Details and Quantities – JST0037 – Rte. A – Madison County</u>

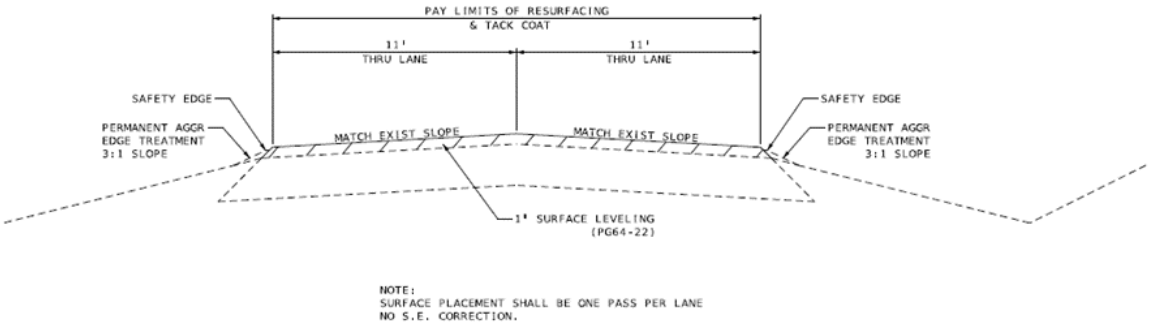
1.0 Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 9.725 to Log Mile 18.948 on Rte. A in Madison County. The total length of the pavement limits is 9.223 miles with an average width of 22 feet. Pavement will not be placed at the following exception locations listed below:



EXCEPTIONS			
APPROX. LOG MILE		LENGTH (FT)	REMARKS
FROM	TO		
9.848	9.975	670.56	BRIDGE A5019
	TOTAL	**670.56**	

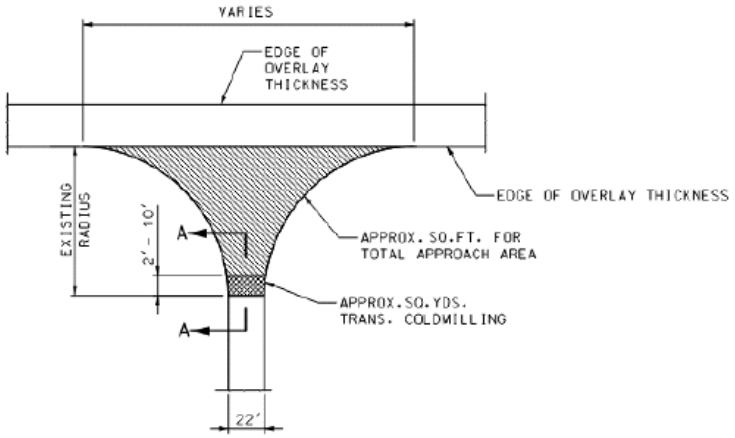
2.0 Mix and Pavement Transitions.

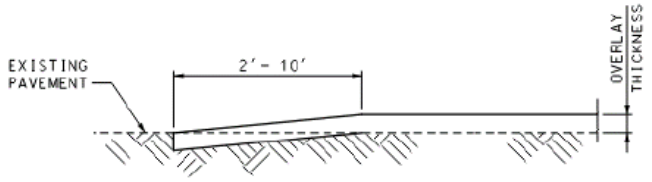
2.1 1” Bituminous Pavement Mixture PG 64-22 (Surface Leveling) pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd2 the entire width of the travel way for the length of the pavement limits.



2.2 Depth transitions when beginning and ending at a state route shall be cold milled at the rate of 1” in 50’. When beginning or ending mid-route, including exceptions, shall be cold milled at the rate of 1” in 50’.

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

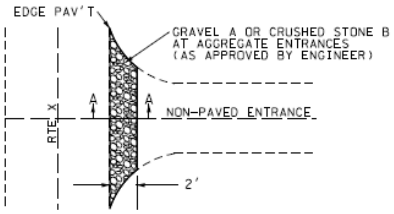




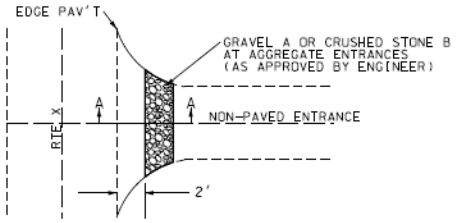
SECTION A-A
TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)

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

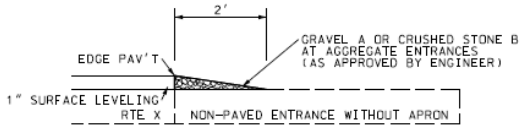
Job No.: JST0027, JST0028, JST0032, JST0037, JST0041
Route: Various
County: Various



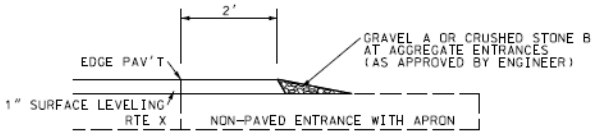
PLAN VIEW FOR NON-PAVED PRIVATE AND COMMERCIAL ENTRANCES WITHOUT EXISTING APRON



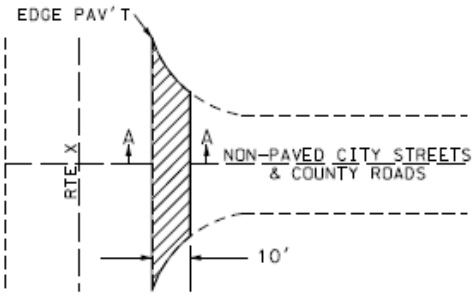
PLAN VIEW FOR NON-PAVED PRIVATE AND COMMERCIAL ENTRANCES WITH EXISTING APRON



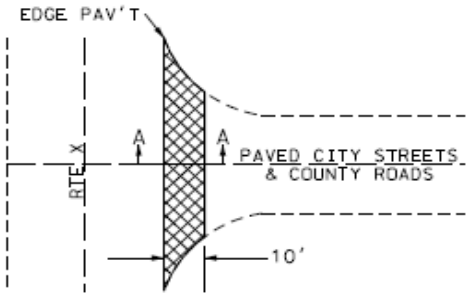
TYPICAL SECTION A-A



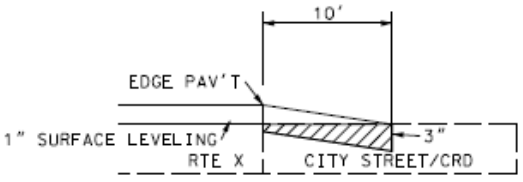
TYPICAL SECTION A-A



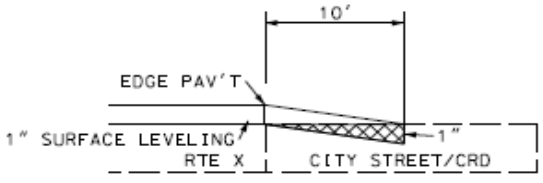
PLAN VIEW FOR NON-PAVED CITY STREETS AND COUNTY ROADS



PLAN VIEW FOR PAVED CITY STREETS AND COUNTY ROADS



TYPICAL SECTION A-A



TYPICAL SECTION A-A

3.0 Pavement, Cold Milling, and Gravel Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT							
LOG MILE	LOG MILE	NET LENGTH (MI)	AVERAGE WIDTH (FT)	BITUMINOUS PAVEMENT 1" SL PG64-22 (2.034 TON/CY) (TONS)	TACK COAT (0.08 GAL/SY) (GAL)	PERMANENT AGG EDGE TREATMENT (85.6 TON/MI) (TONS)	REMARKS
9.725	9.848	0.123	30	122.3	173.2	10.5	BEGIN PROJECT TO BRIDGE A5019
9.975	10.079	0.104	22	75.8	107.4	-	BRIDGE A5019 TO WHITENER ST
10.079	10.139	0.060	32	63.6	90.1	-	WHITENER ST TO MARTHA ST
10.139	18.948	8.809	22	6423.8	9095.6	754.1	MARTHA ST TO END PROJECT
VAR	VAR	-	VAR	44.9	1.8	-	2 STATE ROUTE INTERSECTIONS
VAR	VAR	-	150	9.42	13.3	-	4 PAVED COUNTY ROADS / CITY STREETS
VAR	VAR	-	75	141.25	66.7	-	9 AGG COUNTY ROADS/CITY STREETS
VAR	VAR	-	35	2.2	3.1	-	10 PRIVATE PAVED ENTRANCES
			SUB-TOTAL	6883.3	9551.2	764.6	
				137.7	-	-	SAFETY EDGE
				909.6	-	-	IRREGULARITIES @ 100 TONS/MI
			TOTALS	7930.6	9551.2	764.6	
			TOTALS	**7930.6**	**9551**	**764.6**	

3.2 Cold Milling Quantities are as follows:

MODIFIED COLD MILLING (DEPTH TRANSITION)			
LOG MILE	LOG MILE	QUANTITY SQ. YD.	REMARKS
9.725	9.734	144	BEGIN PROJECT
9.845	9.975	167	BRIDGE A5019 WEST APPROACH
VAR	VAR	44	STATE ROUTES
18.918	18.927	425	END PROJECT
VAR	VAR	1417	CITY STREETS AND COUNTY ROADS
	TOTAL	**2197**	

COLDMILLING BIT. PAVEMENT FOR REMOVAL OF SURFACE (3 IN. OR LESS)			
LOG MILE	LOG MILE	AREA (SY)	REMARKS
9.975	10.079	1342	BRIDGE A5019 TO WHITENER ST
10.079	10.139	1126	WHITENER ST TO MARTHA ST
	TOTAL	2468	

3.3 Gravel Quantities are as follows:

GRAVEL A OR CRUSHED STONE B			
LOG MILE	LOG MILE	TONS	REMARKS
9.725	18.948	52	52 GRAVEL ENTRANCES (2' APRON – 35' AVG WIDTH)
	TOTAL	52	

*USE GRAVEL AT ENTRANCES AS DIRECTED BY ENGINEER @ 1 TON/ENTRANCE

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction sign quantities are as follows:

CONSTRUCTION SIGNING						
SIGN NO.	SIGN	SIZE (in.)	AREA (sq. ft.)	QTY.	TOTAL AREA (sq. ft.)	DESCRIPTION
1 *	GO20-1	60 x 24	10	2	20	ROAD WORK NEXT 6 MILES
2 **	WO20-1	48 x 48	16	23	368	ROAD WORK AHEAD
7	WO20-4	48 x 48	16	6	96	ONE LANE ROAD AHEAD
8	WO20-7a	48 x 48	16	23	368	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 x 48	16	19	304	BE PREPARED TO STOP
26	GO20-2	48 x 24	8	2	16	END ROAD WORK
35	WO8-12	48 x 48	16	14	224	NO CENTER LINE
36	WO8-11	48 x 48	16	22	352	UNEVEN LANES
53	GO20-4	36 x 18	4.5	1	4.5	PILOT CAR FOLLOW ME
56	CONST-7	48 x 24	8	2	16	RATE OUR WORK ZONE
58	GO20-4a	42 x 30	8.75	2	17.5	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 x 12	1.5	17	25.5	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	4	8.76	WET PAINT (ARROW PIVOTS)
				CONSTRUCTION SIGNS TOTAL	1844.26	
				USE	**1844**	
* - 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 ENGINEER.						
REFER TO STANDARD PLAN 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Traffic Control Devices and Mobilization are as follows:

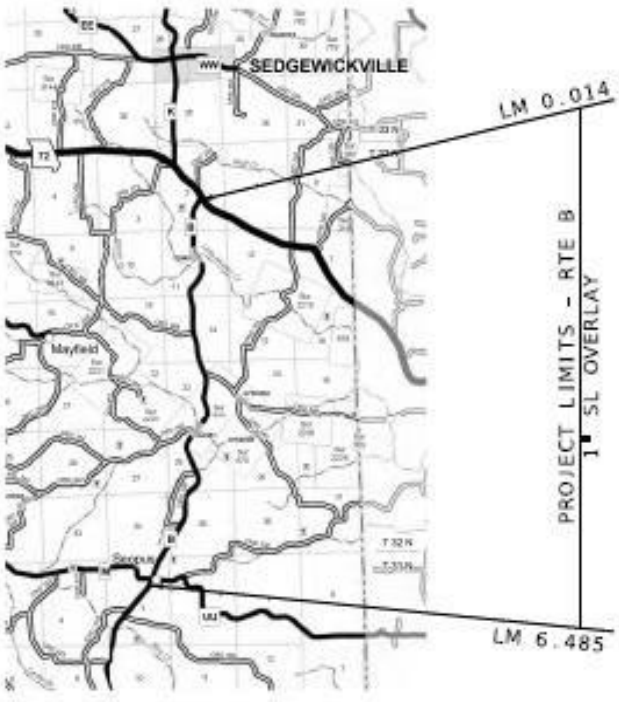
ITEM NO.	QTY.	DESCRIPTION
	50	CHANNELIZERS (TRIM-LINE)
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS						
LOG MILE	LOG MILE	LENGTH (FT)	4" INT. YELLOW (FT)	4" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
9.725	18.948	48697.4	2236.2	86692.2	94015.6	RTE A - MADISON COUNTY
		TOTAL	2236.2	86692.2	94015.6	
		USE	88928		94016	
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.						

J. Project Details and Quantities – JST0041 – Rte. B – Bollinger County

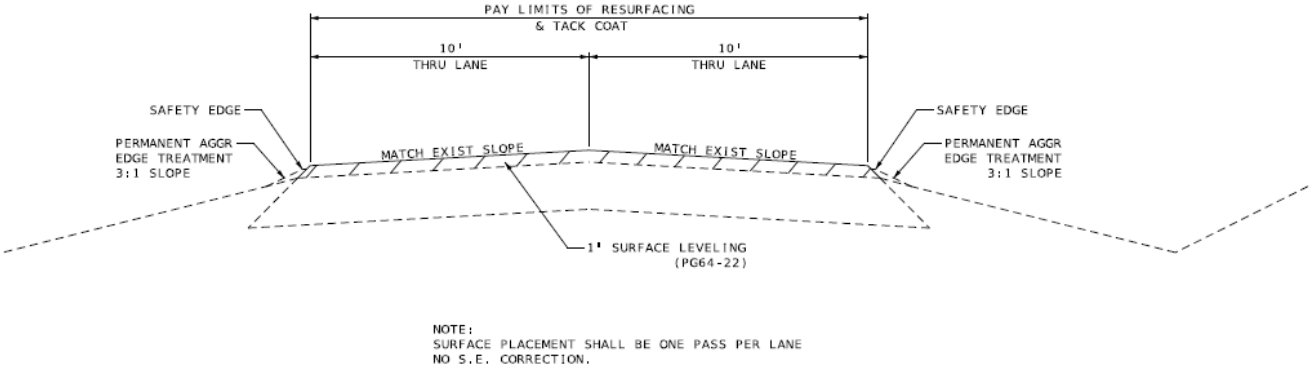
1.0 Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.014 to Log Mile 6.485 on Rte. B in Bollinger County. The total length of the pavement limits is 6.471 miles with an average width of 20 feet. Pavement will not be placed at the following exception locations listed below:



EXCEPTIONS			
APPROX. LOG MILE		LENGTH	REMARKS
FROM	TO	(FT)	
-	-	-	NO EXCEPTIONS
	TOTAL	0	

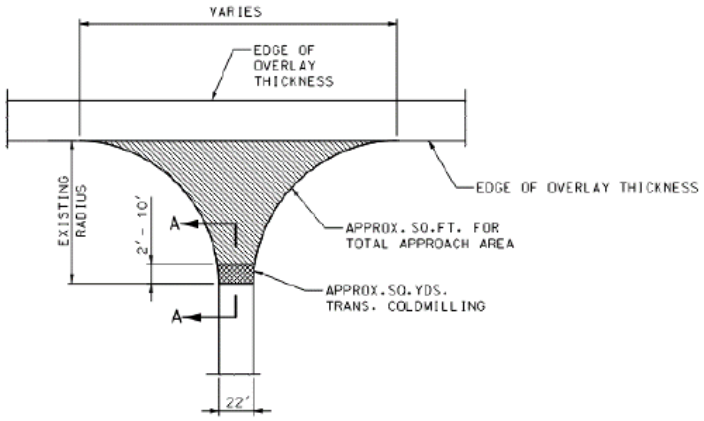
2.0 Mix and Pavement Transitions.

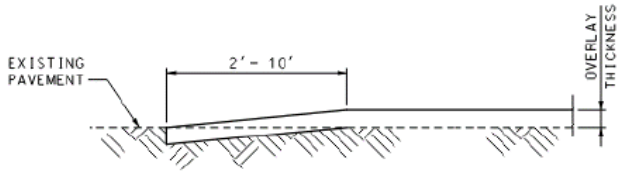
2.1 1” Bituminous Pavement Mixture PG 64-22 (Surface Leveling) pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd2 the entire width of the travel way for the length of the pavement limits.



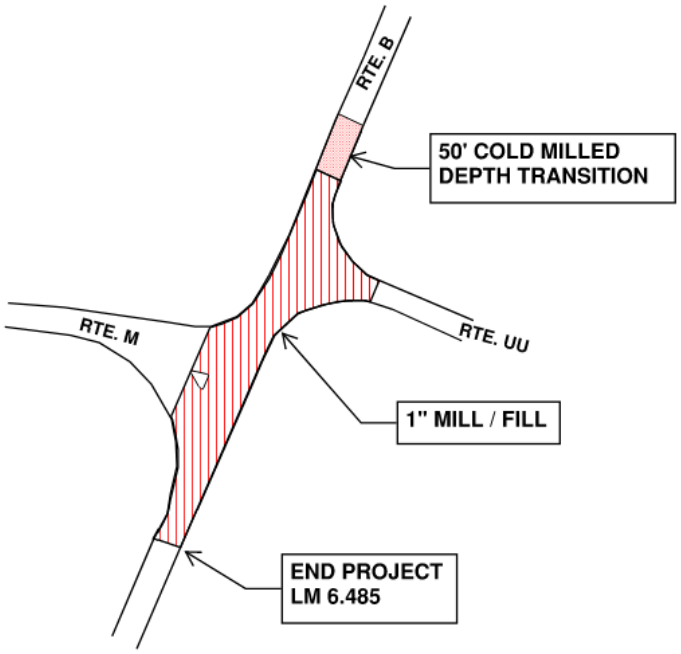
2.2 Depth transitions when beginning and ending at a state route shall be cold milled at the rate of 1” in 50’. When beginning or ending mid-route, including exceptions, shall be cold milled at the rate of 1” in 50’.

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



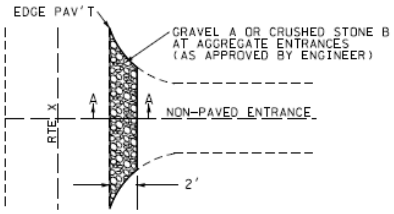


SECTION A-A
TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)

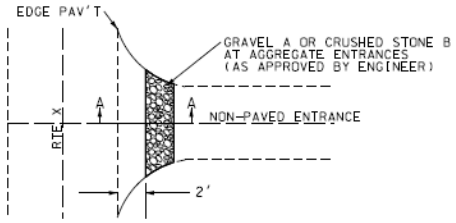


2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).

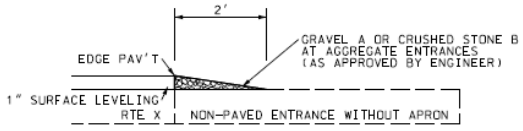
Job No.: JST0027, JST0028, JST0032, JST0037, JST0041
Route: Various
County: Various



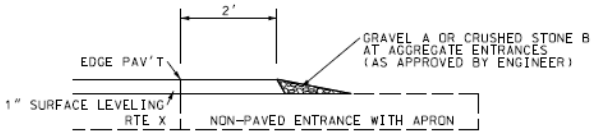
PLAN VIEW FOR NON-PAVED PRIVATE AND COMMERCIAL ENTRANCES WITHOUT EXISTING APRON



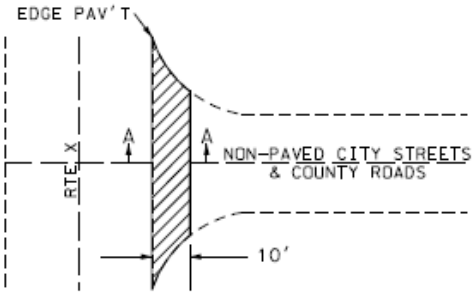
PLAN VIEW FOR NON-PAVED PRIVATE AND COMMERCIAL ENTRANCES WITH EXISTING APRON



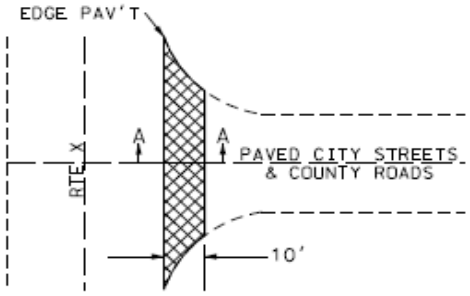
TYPICAL SECTION A-A



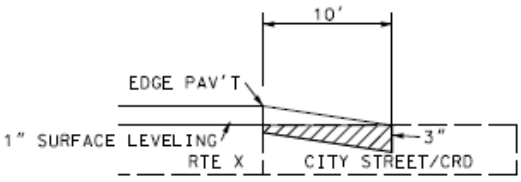
TYPICAL SECTION A-A



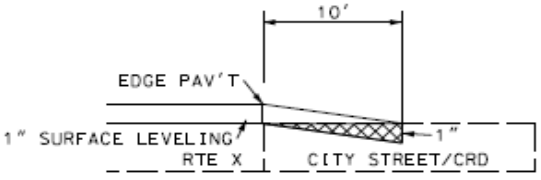
PLAN VIEW FOR NON-PAVED CITY STREETS AND COUNTY ROADS



PLAN VIEW FOR PAVED CITY STREETS AND COUNTY ROADS



TYPICAL SECTION A-A



TYPICAL SECTION A-A

3.0 Pavement, Cold Milling, and Gravel Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT									
LOG MILE	LOG MILE	NET LENGTH (MI)	AVERAGE WIDTH (FT)	BITUMINOUS PAVEMENT 1"SL PG 4-22 (2.034 TON/CY) (TONS)	TACK COAT (0.08 GAL/SY) (GAL)	SEAL COAT AGGREGATE GRADE B1 (SY)	EMULSIFIED ASPHALT SEAL COAT (0.38 GAL/SY) (GAL)	PERMANENT AGG EDGE TREATMENT (85.6 TON/MI) (TONS)	REMARKS
0.014	6.485	6.471	20	4289.8	6074.1	-	-	553.9	BEGIN PROJECT TO END PROJECT
3.815	3.854	0.039	20	-	-	457.6	173.9	-	BRIDGE A4381
VAR	VAR	-	VAR	45.2	1.8	-	-	-	2 STATE ROUTE INTERSECTIONS
VAR	VAR	-	-	-	-	-	-	-	0 PAVED COUNTY ROADS / CITY STREETS
VAR	VAR	-	75	70.6	33.3	-	-	-	5 AGG COUNTY ROADS/CITY STREETS
VAR	VAR	-	35	0.9	1.2	-	-	-	2 PRIVATE PAVED ENTRANCES
			SUB-TOTAL	4406.5	6110.4	457.6	173.9	553.9	
				88.1	-	-	-	-	SAFETY EDGE
				651.0	-	-	-	-	IRREGULARITIES @ 100 TONS/MI
			TOTALS	**5145.6**	**6110**	**458**	**174**	**553.9**	

3.2 Cold Milling Quantities are as follows:

MODIFIED COLD MILLING (DEPTH TRANSITION)			
LOG MILE	LOG MILE	QUANTITY SQ. YD.	REMARKS
0.014	0.023	111	BEGIN PROJECT
6.412	6.421	111	END PROJECT
VAR	VAR	417	CITY STREETS AND COUNTY ROADS
TOTAL		**639**	

COLDMILLING BIT. PAVEMENT FOR REMOVAL OF SURFACE (3 IN. OR LESS)			
LOG MILE	LOG MILE	AREA (SY)	REMARKS
6.421	6.485	1615.0	END PROJECT
TOTAL		**1615**	

3.3 Gravel Quantities are as follows:

GRAVEL A OR CRUSHED STONE B			
LOG MILE	LOG MILE	TONS	REMARKS
0.014	6.485	62	62 GRAVEL ENTRANCES (2' APRON – 35' AVG WIDTH)
	TOTAL	62	
*USE GRAVEL AT ENTRANCES AS DIRECTED BY ENGINEER @ 1 TON/ENTRANCE			

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction sign quantities are as follows:

CONSTRUCTION SIGNING						
SIGN NO.	SIGN	SIZE (in.)	AREA (sq. ft.)	QTY.	TOTAL AREA (sq. ft.)	DESCRIPTION
1 *	GO20-1	60 x 24	10	2	20	ROAD WORK NEXT 6 MILES
2 **	WO20-1	48 x 48	16	11	176	ROAD WORK AHEAD
7	WO20-4	48 x 48	16	6	96	ONE LANE ROAD AHEAD
8	WO20-7a	48 x 48	16	11	176	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 x 48	16	7	112	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	24	384	UNEVEN LANES
53	GO20-4	36 x 18	4.5	1	4.5	PILOT CAR FOLLOW ME
56	CONST-7	48 x 24	8	2	16	RATE OUR WORK ZONE
58	GO20-4a	42 x 30	8.75	7	61.25	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 x 12	1.5	10	15	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	4	8.76	WET PAINT (ARROW PIVOTS)
				CONSTRUCTION SIGNS TOTAL	1301.51	
				USE	**1302**	
* - 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 ENGINEER.						
REFER TO STANDARD PLAN 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Traffic Control Devices and Mobilization are as follows:

ITEM NO.	QTY.	DESCRIPTION
	50	CHANNELIZERS (TRIM-LINE)
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
618-10.00	LUMP SUM	MOBILIZATION

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS						
LOG MILE	LOG MILE	LENGTH (FT)	4" INT. YELLOW (FT)	4" SOLID YELLOW (FT)	4" SOLID WHITE (FT)	REMARKS
0.014	6.485	34166.88	3466.7	61042.2	68333.8	RTE B - BOLLINGER COUNTY
		TOTAL	3456	61042	68334	
		USE	**64498**		**68334**	
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.						

K. Supplemental Revisions JSP-18-01Z

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.

Anti-Discrimination Against Israel Certification

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

Job No.: JST0027, JST0028, JST0032, JST0037, JST0041
Route: Various
County: Various

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

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

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

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

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

Table 1 – GTR Material Properties

Property	Test Method	Criteria
Specific Gravity	ASTM D1817	1.02 to 1.20
Metal Contaminates	ASTM D5603	$\leq$ 0.01%
Fiber Content	ASTM D5603	$\leq$ 0.5%
Moisture Content	ASTM D1509	$\leq$ 1.0%*
Mineral Filler	AASHTO M17	$\leq$ 4.0%

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

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

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

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

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

Flow indicators or sensing devices for the system shall be interlocked with the plant controls to interrupt mixture production if GTR introduction rate is not within ± 3 percent. This interlock will immediately notify the operator if GTR introduction rate exceeds introduction tolerances. All plant production will cease if the introduction rate is not brought back within tolerance after 30 seconds. When the interlock system interrupts production and the plant has to be restarted, upon restarting operations; the modifier system shall run until a uniform feed can be observed on the output display. All mix produced prior to obtaining a uniform feed shall be rejected.

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

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

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

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

7.0 Mix Design Test Method Modification. A formal mixing procedure from the additive supplier shall be provided to the contractor and engineer that details the proper sample preparation, including

blending GTR with the binder or other additives. Samples shall be prepared and fabricated in accordance with this procedure by the engineer and contractor throughout the duration of the project.

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

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

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

8.2.1 GTR SPG shall be 1.15

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

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

$$where:$$

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

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

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

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

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

$G_{GTR} = GTR\ specific\ gravity$

8.4 G_{se} shall be calculated as follows:

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

8.5 P_{be} shall be calculated as follows:

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

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

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

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

Buy America

In addition to Section 106.9 of the Missouri Standard Specifications for Highway Construction, the following requirements will also be in effect for this project.

1.0 Description. The Bipartisan Infrastructure Law (BIL) was enacted on November 15, 2021. The BIL includes Build America, Buy America Act Publication L. No. 117-58. This provision expands the Buy America requirements beyond what is currently only required for steel and iron products. The steel and iron provisions have not changed with the new bill. Cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives are excluded from this requirement. All other materials and manufactured products permanently incorporated into the project will be subject to Buy America requirements. There are three categories requiring Buy America Certification:

a) Iron and steel – no changes to the current specification requirements.

b) Manufactured products – these are currently exempted under the 1983 waiver from FHWA.

c) Construction materials consisting primarily of:

- Non-ferrous metals;
- Plastic and polymer-based products (including polyvinylchloride, composite build materials, and polymers used in fiber optic cables);
- Glass (including optic glass);
- Lumber; or
- Drywall

1.1 All products and or materials will only be classified under one of these categories and not under multiple categories. It is the prime contractor's responsibility to assure all submittals required for Buy America are submitted to the Engineer prior to the products and or materials being incorporated in the job. The implementation of this policy will be in effect for all projects awarded after November 10, 2022.

1.2 New items designated as construction materials under this requirement will require the prime contractor to submit a material of origin form certification prior to incorporation into the project. The Certificate of Material origin form (link to certificate form) from the supplier and/or fabricator must show all steps of the manufacturing being completed in the United States. The Certificate of Material form shall be filed with the contract documents.

1.3 Any minor miscellaneous construction material items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically. The certification shall read "I certify all materials permanently incorporated in this project covered under this provision have been to the best of my knowledge procured and all manufactured domestically." The certification shall be signed by an authorized representative of the prime contractor.

1.4 The National Transportation Product Evaluation Program (NTPEP) compliance program verifies that some non-iron and steel products fabrication processes conform to 23 CFR 635.410 Buy America Requirements and an acceptable standard per 23 CFR 635.410(d). NTPEP compliant suppliers will not be required to submit step certification documentation with the shipment for some selected non-iron and steel materials. The NTPEP compliant supplier shall maintain the step certification documentation on file and shall provide this documentation to the engineer upon request.

2.0 Basis of Payment. Any costs incurred by the contractor by reason of compliance with the above requirements shall be considered as included in and completely covered by the unit price bid for the various items of work included in the contract.

Delete Sec 403.19.2 and substitute the following:

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

L. 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.

M. Bridge End Transitions

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 the smoothest transition and approach to the bridge. Where bridges are to be resurfaced, the surfacing shall be from curb to curb.

N. Pavement Marking Log

1.0 Description. The contractor shall log the locations of existing pavement marking prior to any construction operations that may affect the existing pavement marking. The log shall contain all existing pavement marking and shall include center stripes, no passing stripes, lane lines, turn arrows, hash bars, cross walks, and stop bars. The contractor shall provide a copy of the existing pavement marking log to the engineer. The contractor shall place the new pavement marking at the same locations as the existing pavement marking, unless otherwise directed by the engineer or shown on the plans.

2.0 Basis of Payment. No direct payment will be made for logging of existing pavement marking.

O. Additional Flaggers

1.0 Description. Additional flagger(s) and appropriate construction signs shall be provided at state route intersections and at other locations, as requested by the Engineer.

2.0 Basis of Payment. There will be no direct pay for all labor and equipment necessary to provide additional flaggers. All cost shall be considered completely covered under the pay items provided in the contract.

P. Permanent Aggregate Edge Treatment NJSP-15-40B

1.0 Description. This work shall consist of furnishing and installing a permanent aggregate edge treatment along the edge of shoulder or pavement as shown on the plans or as directed by the engineer.

2.0 Construction Requirements. Aggregate shall be simultaneously deposited and spread on the sub-grade and shall not be deposited on the pavement or shoulder and bladed into place. Aggregate material shall be shaped according to the typical section and compacted until there is no visible evidence of further consolidation.

3.0 Material Requirements. Material used for the aggregate edge treatment shall be Type 1, 5, or 7 Aggregate in accordance with Sec 1007 or an allowable substitute approved by the engineer. Bituminous cold millings meeting the gradation for Type 1, 5 or 7 Aggregate may be used in lieu of aggregate. Limestone screenings or other material with excessive fines will not be allowed. Material will be accepted based on certification in lieu of testing contingent upon satisfactory results being obtained in the field.

4.0 Measurement by Weight. Measurement of the aggregate edge treatment material shall be per ton and in accordance with Sec 310.5.3.

5.0 Basis of Payment. The accepted quantities of aggregate edge treatment will be paid for at the contract unit price for 304-99.10, Permanent Aggregate Edge Treatment, per ton and will be full compensation for all labor, equipment, and material to complete the described work. No fuel adjustment will be made for Permanent Aggregate Edge Treatment.

Q. Prime Contractor Requirements JSP-16-09

1.0 The limitation in Sec 108.1.1 of the Missouri Standard Specifications for Highway Construction that "the contractor's organization shall perform work amounting to not less than 40 percent of the total contract cost" is waived for this project. Instead, for the purposes of constructing this project only, the less restrictive terms of the Federal Highway Administration's rule at Title 23 Code of Federal Regulations (CFR) § 635.116(a) shall apply, so that the contractor must perform project work with its own organization equal to not less than 30 percent of the total original contract price. All other provisions in Sec 108.1.1 et seq. of the Missouri Standard Specifications for Highway Construction shall remain in full force and effect, and shall continue to govern the contractor and its subcontractors, in accordance with the provisions of Title 23 CFR § 635.116.