

OHIO DEPARTMENT OF TRANSPORTATION

PLAN NO.

446 RESURFACING TUS - 212 - 9.03

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI		NET LENGTH MILES	CITY	VILLAGE
				BEGIN	END			
1	TUS	SR 212	(9.03)	9.03	9.43	0.40		
2	TUS	SR 800	(22.78) (29.08)	22.78	30.48	7.30		

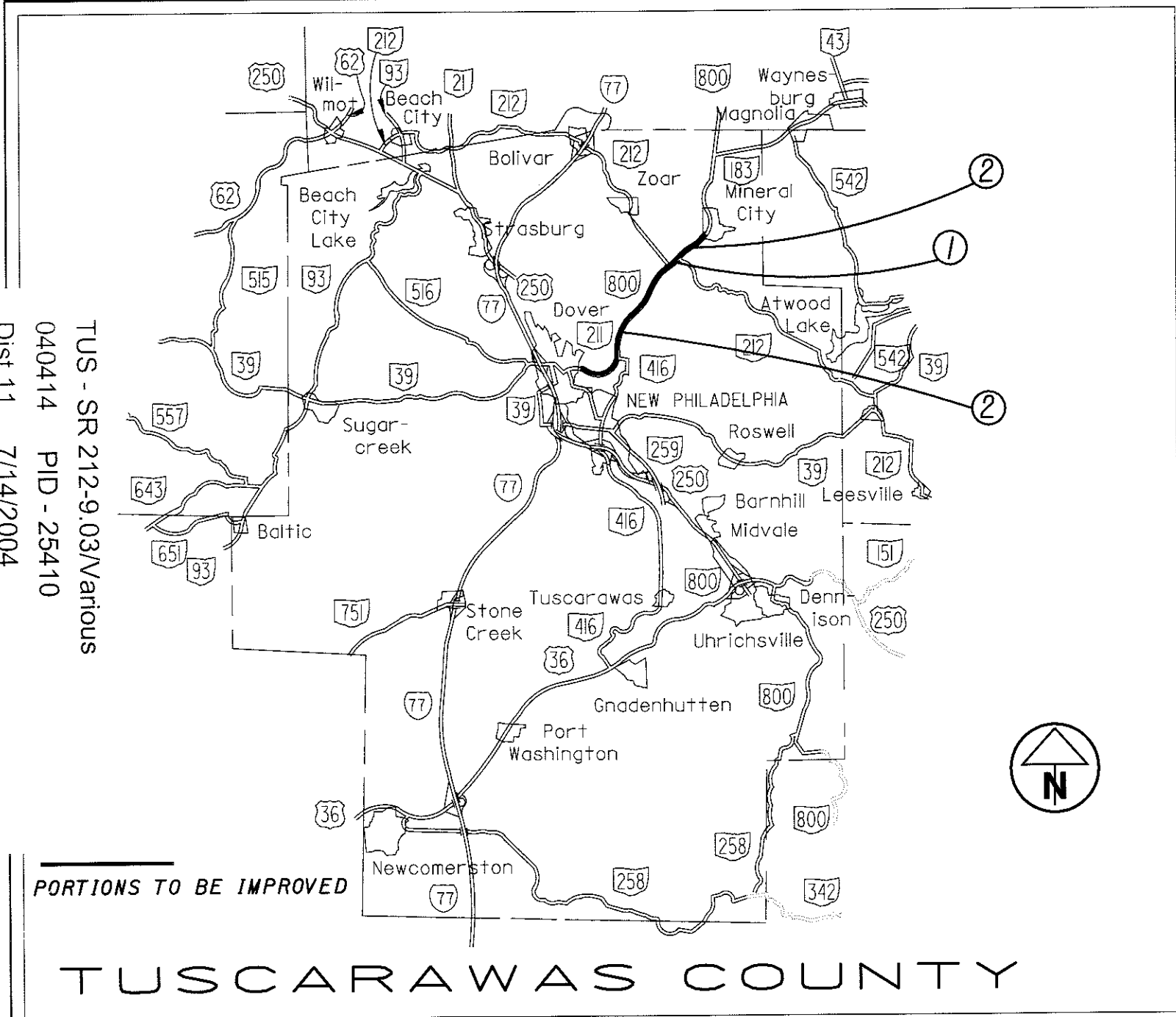
The Standard 2002 Specifications of the State of Ohio, Department of Transportation, including changes and Supplemental Specifications listed in the plans and proposal govern these improvements.

I hereby approve these plans and declare that the making of these improvements will require the closing of the highways to traffic on Parts No. NONE and that detours will be provided by State forces. The closing to traffic of the highways will not be required on Parts No. 1 & 2 and provisions for the maintenance and safety of traffic will be as indicated in the proposal.

Project Earth Disturbed Area = N/A (Maintenance Project)
Estimated Contractor Earth Disturbed Area = N/A (Maintenance Project)
Notice of Intent Earth Disturbed Area = N/A (Maintenance Project)

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TUS - SR 212-9.03/Various
 040414 PID - 25410
 Dist 11 7/14/2004

PORTIONS TO BE IMPROVED

TUSCARAWAS COUNTY

UNDERGROUND UTILITIES 2 WORKING DAYS BEFORE YOU DIG CALL 800-362-2764 (TOLL FREE) OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS MUST BE CALLED DIRECTLY	STANDARD DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
PLAN PREPARED BY O.D.O.T. DISTRICT 11	BP-3.1	7-28-00	TC-41.20	1-19-01	832	2-12-03
	BP-4.1	7-28-00	TC-42.20	4-20-01	833	2-12-03
			TC-52.10	4-20-01	908	4-18-03
	DM-4.3	7-19-02	TC-52.20	4-20-01		
	DM-4.4	7-19-02	TC-61.10	1-19-01		
	MT-97.12	4-19-02	TC-65.10	10-19-01		
	MT-99.20M	1-30-95	TC-65.12	10-19-01		
	MT-105.10	10-18-02	TC-71.10	4-19-02		
	MT-105.11	10-18-02	TC-73.10	1-19-01		

ENGINEERS SEAL:

STATE OF OHIO

TIMOTHY EARL STILLION
61138

REGISTERED PROFESSIONAL ENGINEER

SIGNED: *Timothy E Stillion*
DATE: 4-13-04

APPROVED DATE: 4-13-04

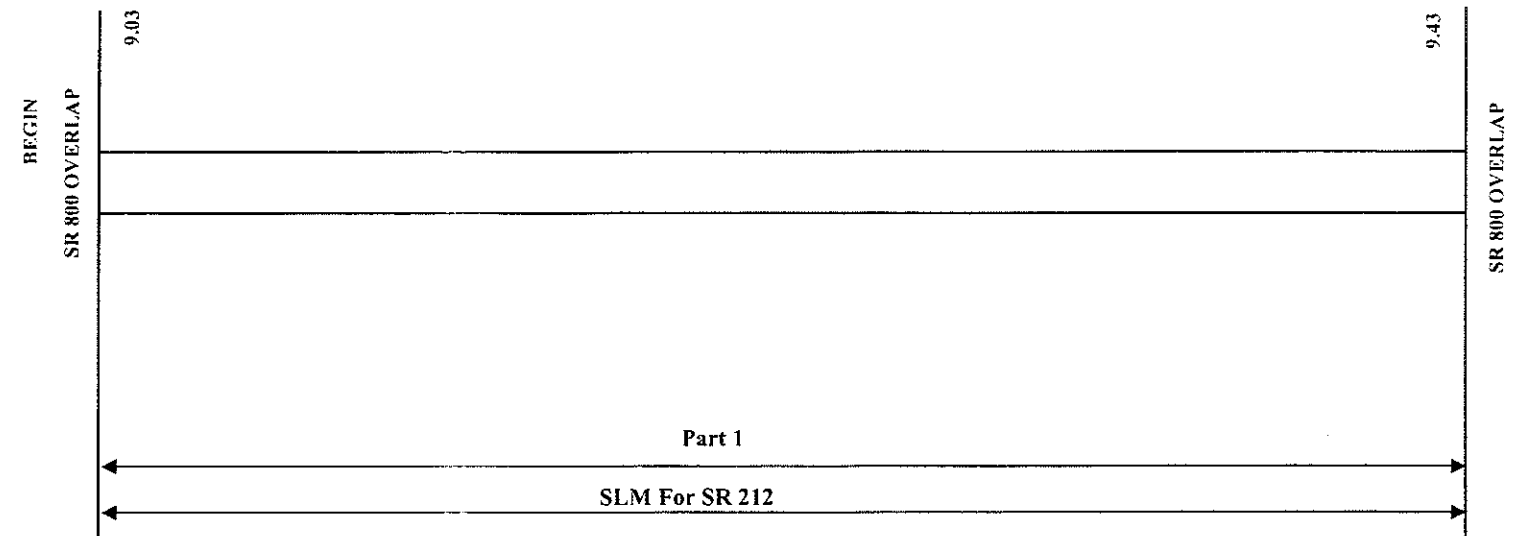
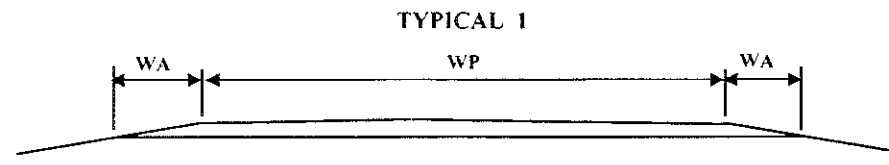
APPROVED DATE: 5-7-04

Stephen S. R.
DISTRICT DEPUTY DIRECTOR

Gordon Proctor
DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E040(791)
 PID NO. 25410
 CONSTRUCTION PROJECT NO.
 TITLE SHEET
 TUS-212-9.03
1/14

PAVEMENT DATA



LEGEND
 Butt Joints per SCD BP-3.1

PAVEMENT DATA

PROPOSED PAVEMENT

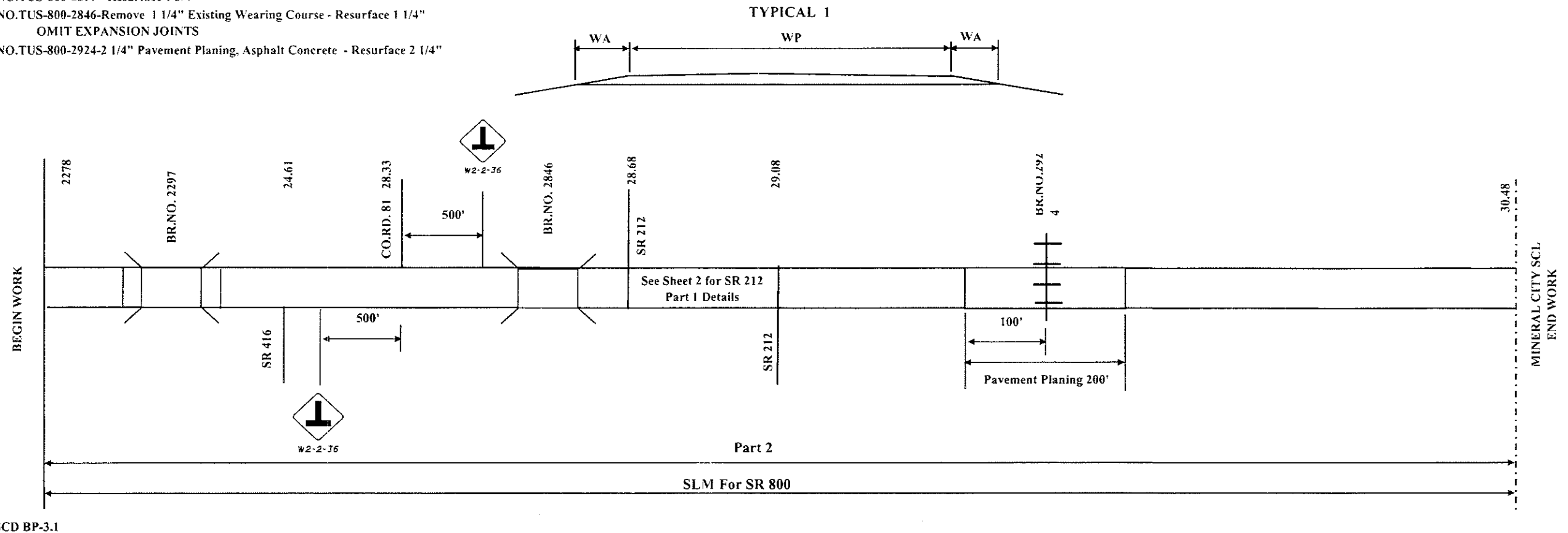
ASPHALT CONCRETE, PG64-22

Part	Route	Log Point to Log Point (Straight Line Mileage)		Mile	Feet	WP Feet	Typical	Existing Type Pavement	Pavement Area	407		ASPHALT CONCRETE, PG64-22			448	202	202	254	COMMENTS		
		Tack Coat @0.075 gal/s.y.	Tack Coat For Intermediate Course @ 0.04 gal/s.y.							In. min	ITEM 448 Intermediate Course, Type 1, Spot Leveling	In.	ITEM 446 Surface Course, Type 1, As Per Plan	In.	ITEM 448 Intermediate Course	Asphalt Concrete Surface Course (Driveways) As Per Plan	RPM's Removed. For Storage, As Per Plan	Wearing Course Removed		Pavement Planing, Asphalt Concrete	
		From	To					Sq. Yards	Gal	Gal	In. min	Cu. Yards	In.	Cu. Yards	In.	Cu. Yards	Cu. Yards	Each	Sq. Yards	Sq. Yards	
1	SR 212	9.03	9.43	0.40	2,112	24	1	404	5,632	422	225	0.5	78	1.25	196			53			
		Extra for Aggregate Drives			30	10			33								2				
		Extra for Paved Drives			45	10			50								1				
		Extra for Paved Public Roads			160	20			356								10				
		Extra for Mailbox Turnouts (2x 20 S/Y)							40	3	2	0.5	1	1.25	1						
		Extra for Jct Co. Rd. 113 (Eiler)							67	5	3	0.5	1	1.25	2						
		TOTAL PART 1		0.40	2,112				6,178	430	230		80		199			53			

TUS-212-9.03

BRIDGE TREATMENT

BR.NO.TUS-800-2297 - Resurface 1 3/4"
 BR.NO.TUS-800-2846-Remove 1 1/4" Existing Wearing Course - Resurface 1 1/4"
 OMIT EXPANSION JOINTS
 BR.NO.TUS-800-2924-2 1/4" Pavement Planing, Asphalt Concrete - Resurface 2 1/4"



CALCULATED: GDM
 CHECKED: TES

PAVEMENT DATA

PAVEMENT DATA

PROPOSED PAVEMENT

Part	Route	Log Point to Log Point (Straight Line Mileage)		Mile	Feet	WP Feet	Typical	Existing Type Pavement	Pavement Area	ASPHALT CONCRETE, PG64-22													
		From	To							407	407	In. min	ITEM 448 Intermediate Course, Type 1, Spot Leveling	In.	ITEM 446 Surface Course, Type 1, As Per Plan	In.	ITEM 448 Intermediate Course, Type 2	Asphalt Concrete Surface Course (Driveways) As Per Plan	RPM's Removed, For Storage, As Per Plan	Wearing Course Removed	Pavement Planing, Asphalt Concrete	Ground Mounted Support, No. 3 Post	Sign Flat Sheet
									Sq. Yards	Gal	Gal		Cu. Yards		Cu. Yards		Cu. Yards	Cu. Yards	Each	Sq. Yards	Sq. Yards	Ft.	Sq.Ft.
2	SR 800	22.78	23.50	0.72	3,802	22	1	404	9,294	697	372	0.5	129	1.25	323				95				
		23.50	26.45	2.95	15,576	22	1	404	38,075	2,856	1,523			1.25	1,322	1.75	1,851		389				
		26.45	28.46	2.01	10,613	24	1	404	28,301	2,123	1,132			1.25	983	1.75	1,376		265			15/13	18
		28.46	28.68	0.22	1,162	24	1	404	3,099	232	124	0.5	43	1.25	108				29				
		29.08	30.48	1.40	7,392	24	1	404	19,712	1,478	788	1	548	1.25	684				185		533		
		Extra for Aggregate Drives			570	10			633									35					
		Extra for Paved Drives			1,030	10			1,144									32					
		Extra for Paved Public Roads			780	20			1,733									48					
		Extra for Mailbox Turnouts (63x 20 S/Y)							1,260	95	50	0.5	18	1.25	44								
		Extra for Widening							7,567	568	303	0.5	105	1.25	263								
		Extra for Turnlane @ SR 416							1,405	105	56			1.25	49	1.75	68						
		Bridge Treatment from Sheet 6							731	55				1.25	25					1,742			
		TOTAL PART 2		7.30	38,545				112,954	8,209	4,348		843		3,801		3,295	115	963	1,742	533	28	18

TUS-212-9.03

SHOULDER PREPARATION

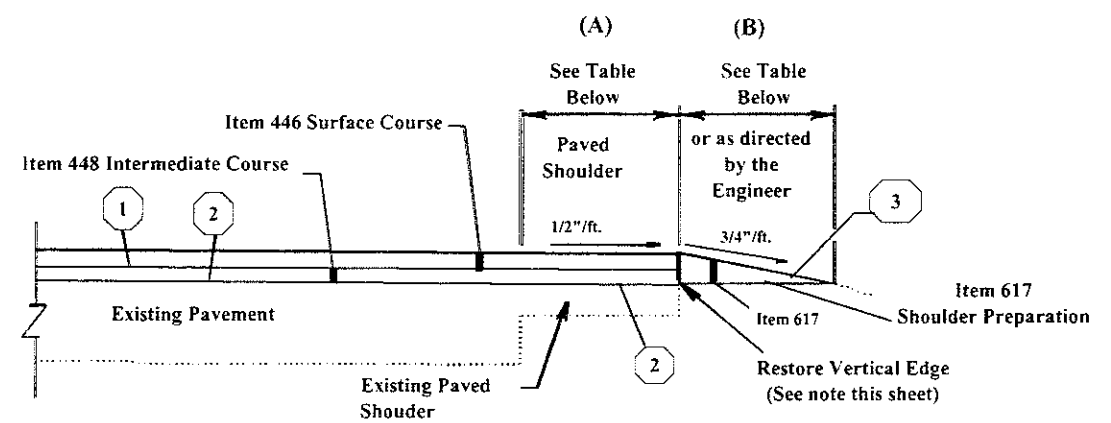
This work will be in accordance with CMS Item 617, with special attention given to Section 617.04. The work done will be in reasonably close conformity with the lines and typical sections shown on the plans or established by the Engineer.

ITEM 408 - PRIME COAT, AS PER PLAN

The Contractor will apply "MC-70" at a rate of 0.4 gallons per square yard, or as determined by the Engineer, to the completed compacted aggregate shoulder.

SHIELD

The Contractor shall provide a shield to prevent the spraying or drifting of liquid bituminous material onto the edge of the pavement or edgeline. The attention of the Contractor is directed to 107.10 of the specifications.



1. Typical Paved Shoulder Detail

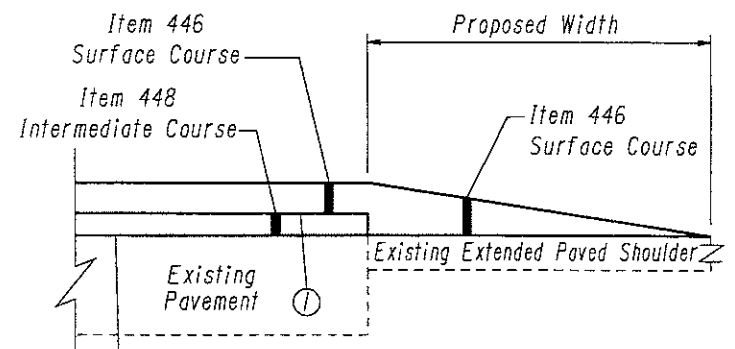
Item 407	
1	Tack Coat for Intermediate Course
2	Tack Coat
Item 408	
3	Prime Coat

SHOULDER QUANTITIES

Part	Route	Log Point to Log Point (Straight Line Mileage)		Mile	Feet	TYPICAL	Proposed Width Feet				Shoulder Area	448		446		407		408		617																																																					
												inch	Cu. Yards	inch	Cu. Yards	inch	Cu. Yards	Gal	Gallon	Gallon	Cu. Yards	Sq. Yards																																																			
																							Left	Right	A	B	A	B																																													
1	SR 212	From 9.03	To 9.43	0.40	2,112	1	2	2	2	939	0.5	13	1.25	33	38	70	1,126	196	2,816																																																						
																				6	6	2,816																																																			
TOTAL PART 1				0.40	2,112					3,755		13		33	38	70	1,126	196	2,816																																																						
2	SR 800	From 22.78	To 23.50	0.72	3,802	1	2	2	2	1,690	0.5	23	1.25	59	68	127	676	117	1,690																																																						
																				23.50	28.46	4.96	26,189	1	2	2	11,639	1.75	566	1.25	404	466	873	11,640	2,021	29,099																																					
																																					28.46	28.68	0.22	1,162	1	2	2	516	0.5	7	1.25	18	21	39	620	108	1,549																				
																																																						29.08	30.48	1.40	7,392	1	2	2	3,285	1	91	1.25	114	131	246	3,942	684	9,856			
																																																																							6	6	9,856
TOTAL PART 2				7.30	38,544					59,324		121		566	595	686	1,285	16,878	2,930	42,194																																																					

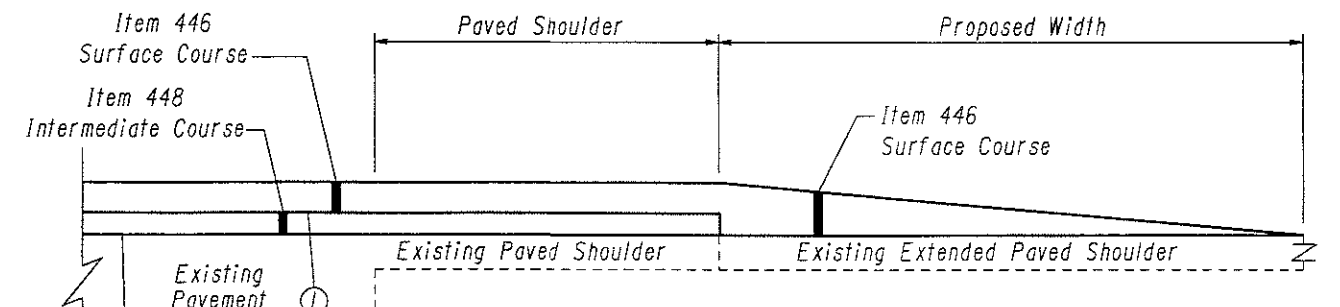
PART	COUNTY	ROUTE	LENGTH S.L.M.		SIDE	TYPICAL	LENGTH Feet	PROPOSED WIDTH Feet	PAVEMENT AREA Sq Yard	448-ASPHALT CONCRETE, INTERMEDIATE COURSE TYPE 2, PG64-22		446-ASPHALT CONCRETE, SURFACE COURSE TYPE 1, PG64-22, As Per Plan		407	407	REMARKS
			FROM	TO						THICK Inches	Cu. Yard	THICK Inches Avg.	Cu. Yard	TACK COAT ● 0.075 gal./sq. yard Gallon	TACK COAT For Intermediate Course ● 0.04 gal./sq. yard Gallon	
2	TUS	SR 800	24.47		Rt	2	75	8	67			3	6	5		MATHIAS CYCLE
			26.80		Rt	2	475	8	422			3	35	32		DOVER DAM
									489				41	37		TOTAL PART 2

EXTENDED PAVED SHOULDER LOCATIONS DATA SHEET



1. EXTENDED PAVED SHOULDER TYPICAL
(Without Existing Paved Shoulder)

- | |
|-------------------------------------|
| Item 407 |
| ① Tack Coat for Intermediate Course |
| ② Tack Coat |



2. EXTENDED PAVED SHOULDER TYPICAL
(With Existing Paved Shoulder)

TUS-212-9.03

PART	COUNTY, ROUTE, BRIDGE No.	LENGTH (BRIDGE LIMITS)	WIDTH	BRIDGE DECK AREA	202						448		446		407		STRUCTURAL FILE NUMBER	
					WEARING COURSE REMOVED 1/4" EPOXY OVERLAY	PORTIONS OF STRUCTURE REMOVED					ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I, PG64-22, (SPOT LEVELING)		ASPHALT CONCRETE SURFACE COURSE TYPE I, PG64-22, AS PER PLAN		TACK COAT @ 0.075 Gal/Sq. Yard	TACK COAT FOR INTERMEDIATE COURSE @ 0.04 Gal/Sq. Yard		
											THICKNESS		THICKNESS					CU YD
		FT	FT	SQ YD	SQ YD	SQ YD						CU YD	CU YD	GALLON	GALLON			
2	TUS-800-2846	329	44	(1608)	1608													
	Forward Approach	25	24	(67)	67													
	Rear Approach	25	24	(67)	67													
	Extra Bridge Area	329	20	731								1.25	25	55			7906706	
TOTAL PART 2				731	1742								25	55				

To permit the removal of the wearing course, the road shall be reduced to one lane traffic. Traffic shall be permitted on the half that had its wearing course removed. Closing of each lane shall be limited to the time actually required to do the work in each lane and arrangements for traffic control due to this work shall be made at the pre-construction meeting. Cost of this work shall be included in the lump sum bid for Item 614 - Maintaining Traffic.

Excavation: Removal of the wearing course of the approaches to bridges as indicated will require adjustment of the shoulder. Shoulder material shall be removed on a slope of 1 inch/ ft. sloping away from the new pavement edge, as directed by the Engineer, and cost of this work shall be included in the unit price bid per sq. yard of Item 202 - Wearing Course Removed.

Approach at Structures: The feathering at structures will be from the thickness of wearing removed from the structure to 0 inches on both the rear and forward approaches, as per Standard Drawing; BP-3.I.

Bridges to be affected are: Br. No. TUS-800-2846

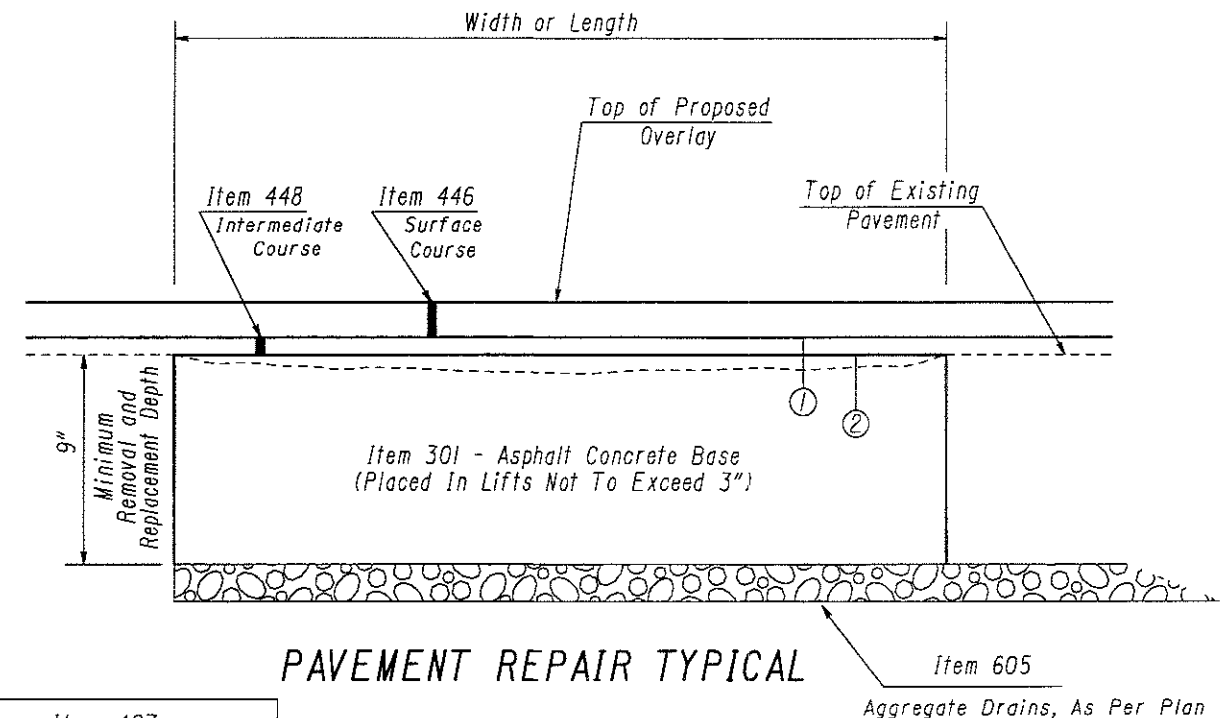
ITEM 621 - RPM

PART	COUNTY	ROUTE	S.L.M.		LENGTH FT.	SIDE	SPACING FT.	RPM REFLECTOR		RPM 1 WAY WHITE EACH	REMARKS
			BEGIN	END				TWO WAY YELLOW / YELLOW	TWO WAY WHITE / RED		
1	TUS	SR 212	9.03	9.43	2112	Ctr	40	53			
TOTAL PART 1								53			
2	TUS	SR 800	22.78	28.68	31,152	Ctr	40	779			
			29.08	30.48	7392	Ctr	40	185			
TOTAL PART 2								964			
TOTAL								1017			

ITEM 620 - DELINEATOR, TYPE C, POST MOUNTED

PART	COUNTY	ROUTE	S.L.M.		LENGTH FT.	SIDE	SPACING FT.	DELINEATOR, TYPE C, POST MOUNTED	REMARKS
			BEGIN	END					
2	TUS	SR 800	24.91	26.71	9504	Rt	400	24	
			24.91	26.71	9504	Lt	400	24	
TOTAL PART 2								48	

Quantities Carried to General Summary



PAVEMENT REPAIR TYPICAL

- Item 407
- ① Tack Coat for Intermediate Course
- ② Tack Coat

ITEM 253 - PAVEMENT REPAIR
ITEM 605 - AGGREGATE DRAIN

(Estimated Quantities)

Part 1 - (2 Locations) - Item 253 - 17 Cu. Yd. Pavement Repair
Item 605 - 60 Feet Aggregate Drain, As Per Plan
Part 2 - (15 Locations) - Item 253 - 341 Cu. Yd. Pavement Repair
Item 605 - 1360 Feet Aggregate Drain, As Per Plan
TOTAL Pavement Repair - 358 Cu. Yds.
Aggregate Drain, As Per Plan - 1420 - Feet

PAVEMENT REPAIR

The estimated quantities and approximate number of locations shown in the plan are based on a preliminary field review. A final field review will be performed by ODOT prior to construction and final locations may be given to the Contractor at the pre-construction meeting.

This work consists of removing existing asphalt concrete, brick, portland cement concrete, or aggregate pavement courses; shaping and compacting the exposed material; and placing new asphalt concrete pavement or aggregate and asphalt concrete pavement courses.

If needed Item 605 - Aggregate Drain, As Per Plan will be used in accordance with Item 605.07 of the CMS. The Aggregate Drain, As Per Plan shall be placed prior to placing the first pavement repair course. Aggregate shall be No. 57 size, unless otherwise directed by the Engineer.

The above estimated quantity is to be used as directed by the Engineer. Final payment for the above items shall be for the accepted quantity complete in place.

CALCULATED GDM
 CHECKED TES
 ITEM 253 - PAVEMENT REPAIR / ITEM 605 - AGGREGATE DRAIN
 ITEM 621 - RPM / ITEM 620 - DELINEATOR

TUS-212-9.03

ITEM SPECIAL - MAILBOX SUPPORT

DESCRIPTION

This work shall consist of furnishing and erecting mailbox supports and associated mounting hardware in accordance with plan details, and attaching an owner supplied mailbox, at locations specified in the plan or otherwise established by the Engineer.

MATERIALS

Wood post shall be nominal 4"x4" square or 4 1/2" diameter round, and conform to 710.14. Steel post shall be nominal pipe size 2" I.D. and conform to AASHTO M 181. Hardware (plates, screws, bolts, etc.) shall be commercial - grade galvanized steel.

SETTING POSTS

Posts shall be set per the first paragraph of 606.03, and shall in no instance be encased in concrete.

MOUNTING BOXES

Support hardware shall accommodate a single mailbox installation, and no more than two boxes may be mounted on a single post. As Directed by the Engineer, in multiple mailbox situations (2 or more) the "*Grouped Mailbox Installation" shall be used, rather than single supports. The mailbox shall be securely and neatly attached by the Contractor to the new support. The Contractor shall furnish all necessary attachment hardware (nuts, bolts, plates and washers) as necessary to accommodate the complete installation. In the absence of a new box supplied by the owner, the Contractor shall salvage the existing box and install it on the new support. Due care shall be exercised during the operation, and the Contractor shall be held responsible for repairing any box damaged by improper handling on his part, as judged and directed by the Engineer. The Contractor shall be responsible for coordinating with the local postmaster regarding the timing of the movement of any mailbox to a new location. The Contractor shall also be responsible for notifying the property owner three (3) days in advance of the new installation. A form letter will be provided to the Contractor at the pre-construction conference to give to each affected property owner.

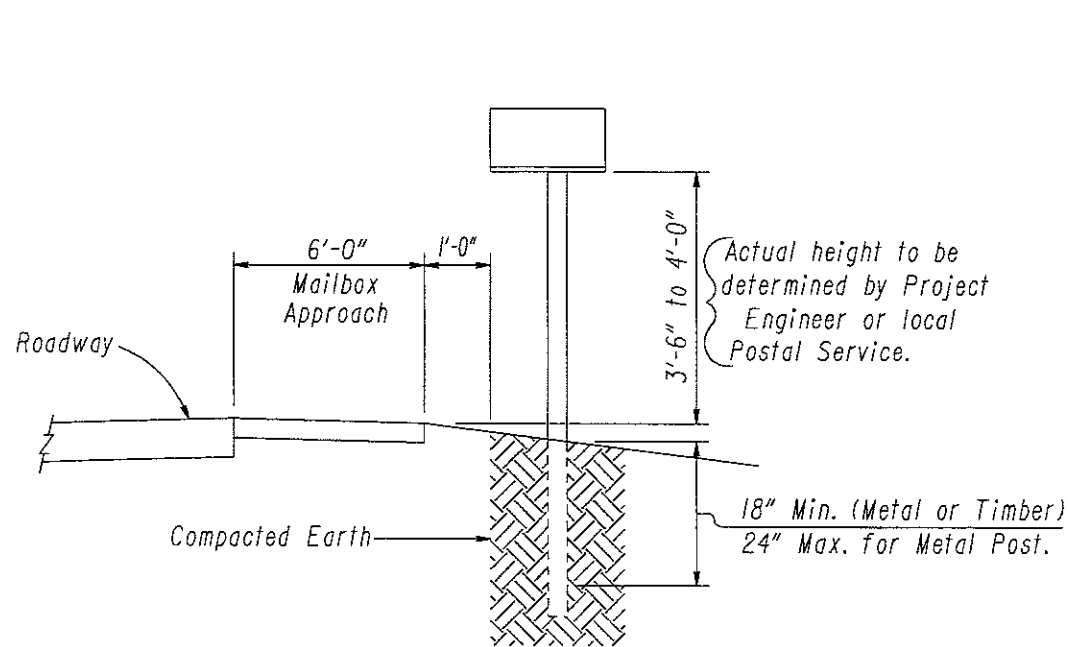
BASIS OF PAYMENT

Payment under this item shall be limited to final permanent installations. Temporary installations shall be in accordance with 107.10. However, the same material and size limitations as for permanent installations shall apply. Mailbox supports complete in place will be paid for at the Contract unit price bid per each, Item Special, Mailbox Support.

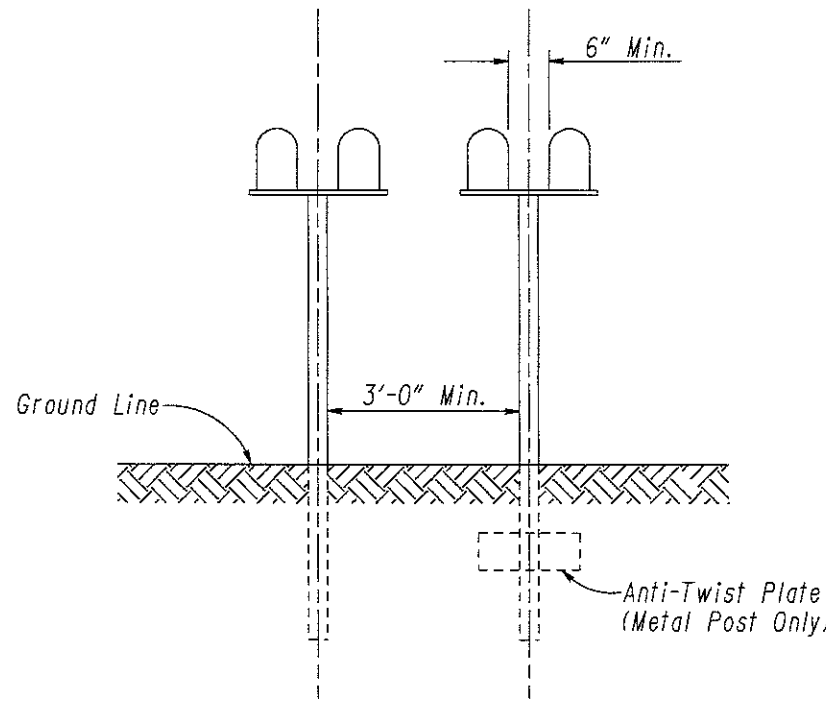
QUANTITIES CARRIED TO GENERAL SUMMARY

PART	SLM	SIDE	EXISTING SUPPORT	QUANTITY
2	24.15	LT	WAGON WHEEL	1
	25.78	RT	POST ENCASED IN CONCRETE	1
			Extra to be used as directed	2
			TOTAL PART 2	4

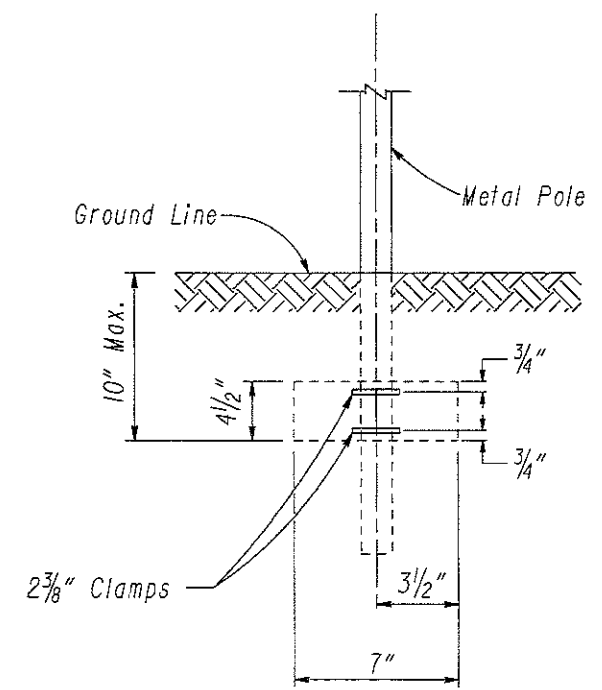
MAILBOX SUPPORT NOTES & QUANTITIES



ELEVATION AT MAILBOX APPROACH



*GROUPED MAILBOX INSTALLATION



ANTI-TWIST PLATE

TUS-212-9.03

CALCULATED GDM CHECKED TES

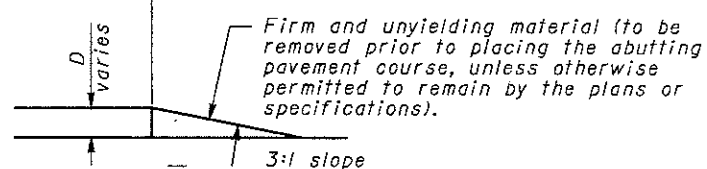
GENERAL NOTES

- It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. The suggested treatments are intended for high volume projects that will last at least seven days and have an active work zone 1 mile [1.6 km] or less in length. For guidance on the use of this sheet, see L&D Manual Volume One, Section 500. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for **Item 614 - Maintaining Traffic**.
- While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
- In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
- The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
- Where concrete barrier is specified, it shall be in accordance with **SCD RM-4.2** and Item 622.
- When drums are specified for a drop-off condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
- When OW-151 (Low Shoulder) signs or OW-155 (Shoulder Drop-Off) signs or OW-171 (Uneven Lanes) signs are required, they shall be placed 750' [230 m] in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the drop-off condition extends more than 0.5 mile [800 m], additional signs should be erected at intervals of 1.0 mile [1600 m] or less.
- For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate a difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
- Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10' [3.0 m], drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5" [125] and approval is granted by the Project Engineer.
- Pavement Repairs (or similar work):
 - Lengths greater than 60' [18 m] - utilize appropriate treatment from Condition I.
 - Lengths of 60' [18 m] or less - repairs shall be effected in accordance with CMS 255.08. Drums may be used as a separator adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT (MILLING OR RESURFACING)

- This treatment may be used when permitted for Condition I only.
- OW-171 sign required.

Traveled lane Traveled lane



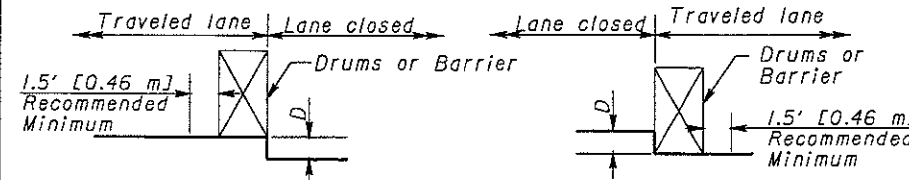
CONDITION I

DROP-OFFS BETWEEN TRAVELED LANES

- These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

D	Treatment
≤ 1/2" [≤ 40]	Erect OW-171 sign.
1/2"-3" [40-75]	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
> 3"-5" [75-125]	Lane closure utilizing drums as shown below.
> 5" [125]	Lane closure utilizing portable concrete barrier as shown below.

* Cones may be used for daytime only conditions.



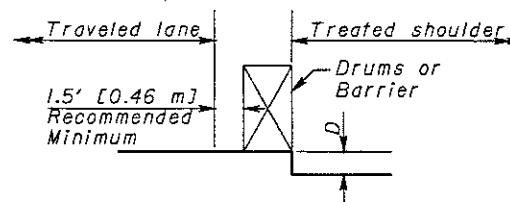
CONDITION II

DROP-OFFS WITHIN GRADED SHOULDER AREA

- The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
- The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials or concrete). For the purpose herein, its maximum width shall be considered to be 12' [3.6 m].

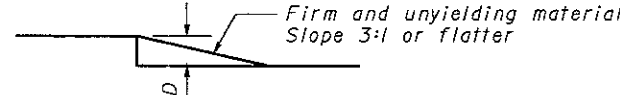
D	Treatment
≤ 1/2" [≤ 40]	1) Erect OW-155 signs.
> 1/2"-5" [40-125]	1) If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
> 5"-12" [125-305] Daylight only	If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below.
> 5"-24" [125-610]	1) If minimum lane width* requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums.
> 24" [610]	Lane closure utilizing portable concrete barrier as shown below.

* Minimum lane widths shall be 10' [3.0 m] unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

- This treatment may not be used within a bituminous shoulder where a hot longitudinal joint per CMS 401.15 is required.
- OW-151 signs required.



CONDITION III

DROP-OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

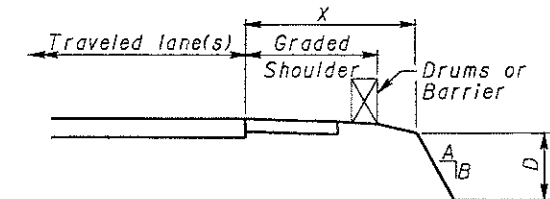
- See Note 2 under Condition II.
- Use Chart A or B below, as applicable.

CHART A

USE FOR: 1. Uncurbed Facilities.

2. Curbed Facilities, where:

- Curbs are less than 6" [150] in height.
- Curbs are 6" [150] or greater in height and the legal speed is greater than 40 mph [70 km/h].

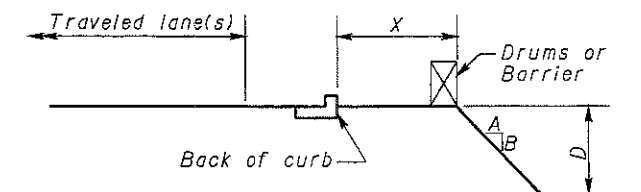


X	D	A/B	Treatment Required	
			Day	Night
0-4" [0-1.2 m]	Any	Any	(a)	(a)
4'-30" [1.2-9.1 m]	Any	3:1 or Flatter	None	None
4'-12" [1.2-3.6 m]	≤ 3" [≤ 75]	Steeper than 3:1	None	None
4'-12" [1.2-3.6 m]	> 3"-≤ 12" [75-305]	Steeper than 3:1	Drums	Drums
4'-12" [1.2-3.6 m]	> 12" [305]	Steeper than 3:1	Drums	Barrier
> 12'-20' [3.6-6.1 m]	< 12" [305]	Steeper than 3:1	None	None
> 12'-20' [3.6-6.1 m]	> 12"-≤ 24" [305-610]	Steeper than 3:1	Drums	Drums
> 12'-20' [3.6-6.1 m]	> 24" [610]	Steeper than 3:1	Drums	Barrier
> 20'-30' [6.1-9.1 m]	< 24" [610]	Steeper than 3:1	None	None
> 20'-30' [6.1-9.1 m]	> 24" [610]	Steeper than 3:1	Drums	Barrier
> 30' [9.1 m]	Any	Any	None	None

(a) Use treatment specified under Condition II.

CHART B

USE FOR: Curbed facilities, where the curb is 6" [150] or greater in height and the legal speed is 40 mph [70 km/h] or less.

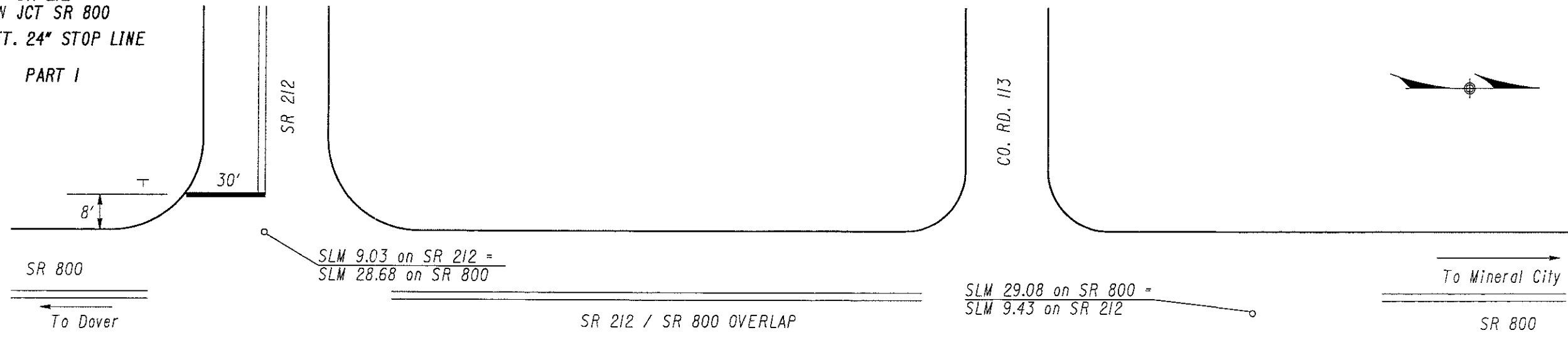


X	D	A/B	Treatment Required	
			Day	Night
0-10' [0-3.0 m]	< 12" [305]	Any	None	Drums
0-10' [0-3.0 m]	> 12" [305]	Any	Drums	Drums
> 10' [3.0 m]	Any	Any	None	None

NOTE: All metric dimensions (in brackets []) are in millimeters unless otherwise noted.

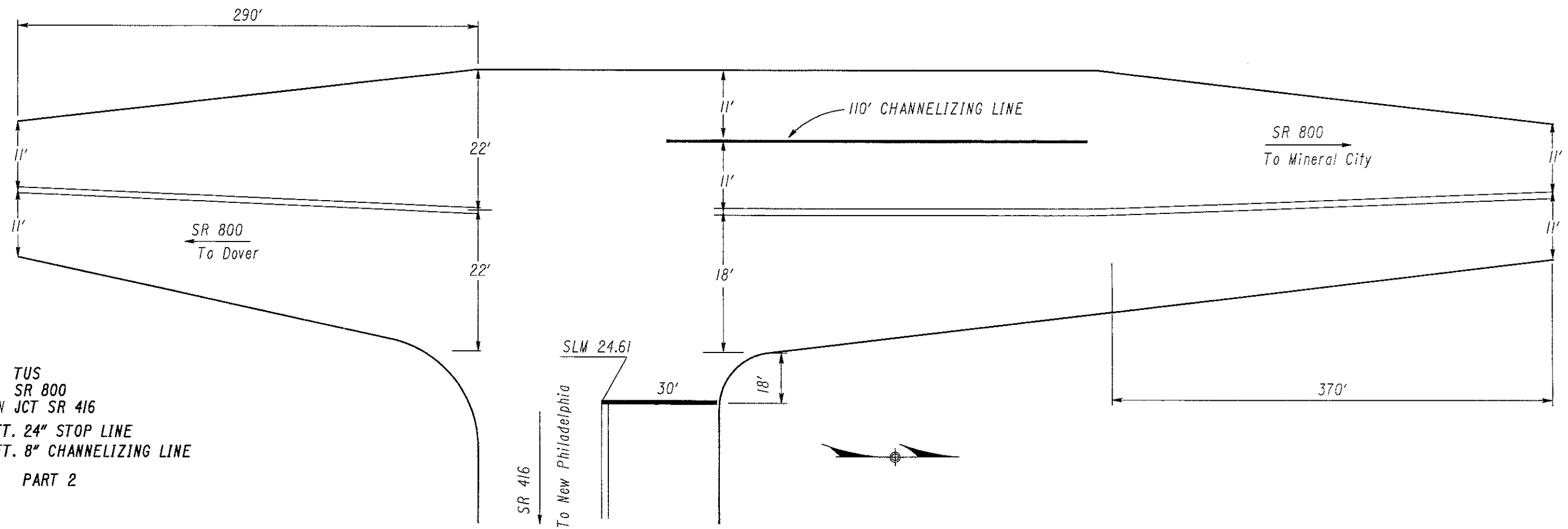
COUNTY TUS
 ROUTE SR 212
 LOCATION JCT SR 800
 80 FT. 24" STOP LINE

PART I



QUANTITIES CARRIED TO SHEET II

COUNTY TUS
 ROUTE SR 800
 LOCATION JCT SR 416
 30 FT. 24" STOP LINE
 110 FT. 8" CHANNELIZING LINE
 PART 2



CALCULATED
 GDM
 CHECKED
 TES

AUXILIARY PAVEMENT MARKING

TUS-212-9.03

10
 14

Item 642 - Edge Line Marking shall be placed to allow for the proper roadway width indicated on the Asphalt Pavement Sheet. Modifications may be as directed by the Engineer.

CALCULATED
GDM
CHECKED
TES

CO.	ROUTE	FROM		TO		WHITE EDGE LINE QUANTITIES				YELLOW EDGE LINE QUANTITIES				642 EDGE LINES
		S.L.M.	S.L.M.	TOTAL MILES	HIGHWAY MILES	RAMP MILES	PART.	TOTAL	HIGHWAY	RAMP	PART.	REMARKS		
TUS	SR 212	9.03	9.43	0.80									PART 1	
TUS	SR 800	22.78	28.68	11.80									PART 2	
		29.08	30.48	2.80									PART 2	
EDGE LINE TOTAL						15.40								

CO.	ROUTE	FROM		TO		642 QUANTITIES CENTER LINE MILES		PARTICIPATION	642 CENTER LINE
		S.L.M.	S.L.M.	TOTAL	EQUIVALENT LENGTH OF SOLID LINE	REMARKS			
TUS	SR 212	9.03	9.43	0.40	0.032			PART 1	
TUS	SR 800	22.78	28.68	5.90	7.576			PART 2	
		29.08	30.48	1.40	0.813			PART 2	
CENTER LINE TOTAL						7.70	8.421		

CO.	ROUTE	FROM		TO		642 QUANTITIES 4" LANE LINE MILES		PARTICIPATION	642 LANE LINE
		S.L.M.	S.L.M.	TOTAL	EQUIVALENT LENGTH OF SOLID LINE	REMARKS			
LANE LINE TOTAL									

CO.	ROUTE	FROM		TO		642 QUANTITIES 8" CHANNELIZING LINES		PARTICIPATION	642 CHANNELIZING LINES
		S.L.M.	S.L.M.	MILES	FT.	REMARKS			
TUS	SR 800	24.61					110	PART 2	
CHANNELIZING LINE TOTAL							110		

642 AUXILIARY MARKING TYPE I

CO.	ROUTE	S.L.M.		24" TRANSVERSE LINES		STOP LINE	12" CROSSWALK LINES	WORD ON PAVEMENT ONLY	SCHOOL MARKING SYMBOL	LANE ARROWS				RAILROAD SYMBOL MARKING	DOTTED LINES		REMARKS
		FROM	TO	WHITE FT.	YELLOW FT.					TURN		THRU	COMB.		96" WHITE FT.	96" YELLOW FT.	
										LEFT EACH	RIGHT EACH						
TUS	SR 212	9.03	9.43			80										For Detail See Sheet 10, PART 1	
TUS	SR 800	24.61				30										For Detail See Sheet 10, PART 2	
AUXILIARY MARKING TOTALS						110											

PAVEMENT MARKING SUB-SUMMARY

TUS-212-9.03

TRAFFIC

Traffic shall be maintained at all times as described below and in accordance with the specifications of item 614 and the Ohio Manual of Uniform Traffic Control Devices. The length of restricted traffic zones shall be kept to a minimum. When raised pavement markers are to be installed the required lane closure shall remain in effect until the epoxy is dry and all foreign matter or debris created by the installation of the RPM casting is removed from the roadway.

ALIGNMENT AND PROFILE

The work proposed by this project is for the resurfacing of the existing pavement. The alignment of the existing pavement will not be changed, and the profile of the proposed surface will be similar to that of the existing pavement except that it will be raised an amount equal to the thickness of the resurfacing course or courses specified in these plans.

INTERMEDIATE COURSE, SPOT LEVELING AND PATCHING

The material shall be placed in a separate operation where and as directed by the Engineer.

SURFACE COURSE COMPLETION REQUIREMENTS

Any given length of work on which resurfacing operations have been started in a construction season shall have the surface course placed that same season.

ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS), AS PER PLAN

This item of work shall consist of paving all existing driveways and intersecting public roads not otherwise indicated. A 2 inch average thickness shall be placed on existing aggregate drives and approaches or a 1 inch average thickness placed on the existing paved drives and approaches, for an average distance of 10 feet for driveways and 20 feet for public roads from the edge of pavement or paved shoulders, whichever is applicable, unless otherwise directed by the Engineer. Up grade driveway paving shall be placed to the beginning of the upslope of the driveway as directed by the Engineer. All grading, tack coat, prime coat, tools, equipment and incidentals required to layout and pave the driveways and intersecting public roads shall be included in the cu. yd. price bid for Item 448 - Asphalt Concrete Surface Course, Type 1, PG64-22 (Driveways). The Contractor's attention is directed to 107.10 of the Specifications. All driveways shall be paved within (5) working days after placing of the Item 446 - Asphalt Concrete Surface Course, Type 1, PG64-22. Materials furnished for fine and coarse aggregates used in this item shall exclude all stone and crushed carbonate stone.

EXTRA FOR WIDENING (PAVEMENT AREA)

An additional square yard pavement area has been added to the plan to be used as directed by the Engineer, to cover areas that have been widened on curves or on previous maintenance activities beyond the average pavement width shown.

CONTINGENCY QUANTITIES

The Contractor shall not order materials or perform work for items designated by plan note to be used "As Directed by the Engineer" unless authorized by the Engineer. The actual work locations and quantities used for such items shall be incorporated into the final change order governing completion of this project

ITEM 446- ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN

Materials furnished for fine and coarse aggregates used in this item shall exclude all stone and crushed carbonate stone.

ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22

ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (SPOT LEVELING)

Longitudinal and transverse irregularities are intermittently present throughout the existing pavement surface but the pavement does not require a full-width leveling course. Irregularities shall be filled with 448 in a manner that will result in surrounding portions of the existing surface remaining exposed after the spot leveling course is placed. The spot leveling course shall be a variable depth course with a minimum thickness of 0".

WORK ZONE MARKINGS AND WORK ZONE SIGNS

The Contractor shall install Item 614 - Work Zone Center Line, Class I, 642 Paint prior to opening the lane to traffic, or when the existing markings have been covered or damaged, as per requirement 614.11 of the CMS.

In the event the Contractor cannot install the Work Zone Center Line, Class I, due to conditions beyond his control, an estimated contingency quantity of "Do Not Pass" (R4-1) and "Pass With Care" (R4-2) signs have been provided.

Work Zone Center Line, Class I markings shall be placed, and the above signs removed by the end of the Contractor's next work day. The following quantity has been carried to the General Summary:

Item 614, Work Zone Center Line, Class I - - - - - 15.40 Miles

The Contractor shall erect "No Edge Line" (W8-H13) sign in advance of any section of roadway lacking Ohio Manual standard edge line markings, as per the requirements of CMS 614.04.

The following estimated quantity has been carried to the General Summary for use as directed by the Engineer for Work Zone Marking Signs per the requirements of Item 614 of the specifications.

Item 614 - Work Zone Marking Sign	8 Each, Part 1
Item 614 - Work Zone Marking Sign	30 Each, Part 2
TOTAL	38 Each

CONVERSION OF METRIC STANDARD DRAWINGS

The metric standard drawings referenced on the Title Sheet shall be converted to English units using the SI (Metric) to English Conversion Factors provided in Section 109.02 of the 2002 Construction and Materials Specifications. The appendix of ASTM E 380 shall be utilized for any additional conversion factors required. Conversions shall be appropriately precise, and shall reflect standard industry English values where suitable.

NOTIFICATION OF WORK ZONE LANE RESTRICTIONS

The Contractor shall notify the Engineer at least eighteen (18) days prior to implementing any work zone restrictions that will reduce the width or vertical clearance of any lane on which traffic will be maintained during construction.

The Engineer shall immediately notify the District Roadway Services Manager to advise the Office of Highway Management of the restrictions.

401.19, SPREADING AND SURFACE TOLERANCES

Modify the requirements of 401.19 as follows:

Determine the Profile Index and International Roughness Index (IRI) for each 0.10-mile section of paving using equipment meeting the requirements of Supplement 1058 and that can provide Profile Index and IRI measurements.

Notify the Engineer before beginning profile testing. Remove any dirt and debris from the pavement surface and test it in the wheel paths. The wheel paths are located parallel to the centerline of the pavement and approximately 3.0 feet measured transvely, from both lane edges. Provide all traffic control and survey stationing needed to perform the smoothness measurement. Develop a Profile Index trace in accordance with California Test 526, 1978, using a 0.2-inch blanking band and an IRI calculation accordance with ASTM E950 for each section. Provide the Engineer with the traces and calculations for determining pay along with electronic copies of all longitudinal pavement profiles in ERD format (University of Michigan Transportation Research Institute's Engineering Research Division [ERD] format). The Engineer will send copies of all traces, electronic ERD files, evaluation results, a note the data is for this 401.19 plan note and project identification to the Asphalt Materials Engineer, Office of Materials Management.

The unit bid price adjustment applies to the total theoretical cubic yards representing the total thickness of the asphalt concrete pavement paved for each 0.10 mile long section for the lane represented by the profile. The total theoretical cubic yards will be calculated using the pavement width including shoulders, length and theoretical thickness. Aprons, turnouts or other incidental areas will not be included. Asphalt treated free draining base is not included. If the pavement surface is Open Graded Friction Course (Supplemental Specification 803), determine the Profile Index and IRI on the surface of the course immediately below.

No price adjustment will be made for those sections of pavement where both Profile Index and IRI information are not provided or corrective work has been performed.

Contract unit price adjustments of the completed asphalt concrete surface will be made using the following schedule:

Pay Schedule		
Profile Index (inches per mile per 0.10 mile section)	Price Adjust. (1)	Mean International Roughness Index (inches per mile) (IRI per 0.10 mile section)
1 or less	105	45 or less
Over 1 to 2	103	Over 45 to 50
Over 2 to 3	102	Over 50 to 55
Over 3 to 4	101	Over 55 to 60

(1) The Department will determine contract unit price adjustments using the IRI. If the Profile Index results in a larger price adjustment, the Department will use the larger adjustment.

COORDINATION OF RESURFACING AND PLANING OPERATIONS

Once the pavement planing operations have begun, it shall proceed continuously until all element of the work associated with the pavement planing operations are completed. The pavement planing operation shall be completed in a timely manner as directed by the Engineer. The resurfacing operation shall begin no later than 5 (five) working days after the completion of the pavement planing operation.

ITEM 202 - RAISED PAVEMENT MARKER REMOVED AND DISPOSED

All raised pavement markers removed shall become property of the contractor and shall be properly disposed of.

Payment will be made at the unit price bid under CMS Item 202, 'Raised Pavement Marker Removed **AND DISPOSED**, per each which shall be full compensation for all labor, materials and incidentals required to complete this item in a satisfactory and workmanlike manner.

UTILITIES

There are no underground utilities shown on this plan. The nature of the work required by this project will not affect any known underground utilities that exist under or adjacent to the work area.

Listed below are all utilities located within the project construction limits together with their respective owners:

Verizon	Attn: Jennifer Lofton	American Electric Power	Attn: Mike Lewis
6223 Norwalk Road		203 Mill Ave. SE	
Medina, Ohio 44256		New Philadelphia, Ohio 44663	
330-364-0510		330-308-6145	

East Ohio Gas Company	Attn: Tim Andrews	Dominion Ohio Gas Company	Attn: James Sympton
11th Street		1165 West Ryaen Ave.	
New Philadelphia, Ohio 44663		Youngstown, Ohio 44502-1394	
330-339-7771		330-742-8138	

Red Hill Development		Great Lakes Energy Partners L.L.C.	Attn: Sue Barclay
3596 SR 39 NW		P.O. Box 550	
Dover, Ohio 44622		Hartville, Ohio 44632-0550	
330-343-1226		330-877-6747.	

Buckeye Franklin Company	Attn: Dave Oliver	Time Warner Cable	Attn: Bob Pinter
State Route 800		1655 Britton Road	
Zoarville, Ohio 44698		Akron, Ohio 44310	
330-859-2465		330-633-9203	

GENERAL SUMMARY

SHEET NUMBER												ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
2	3	4	5	7	8	11	12										
ROADWAY																	
	1,742											202	23500	1,742	SQ. YD.	WEARING COURSE REMOVED	
53	963											202	54 000	1,016	EACH	RAISED PAVEMENT MARKER, REMOVED <i>AND DISPOSED</i>	
PAVEMENT																	
					358							253	02000	358	CU. YD.	PAVEMENT REPAIR	
	533											254	01000	533	SQ. YD.	PAVEMENT PLANING, ASPHALT CONCRETE	
430	8,209	1,285	37									407	10000	9,961	GALLON	TACK COAT	
230	4,348	686										407	14000	5,264	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
		16,878										408	10000	16,878	GALLON	PRIME COAT	
199	3,801	595	41									446	47021	4,636	CU. YD.	ASPHALT CONCTETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN	12
80	843	121										448	46020	1,044	CU. YD.	ASPHALT CONCTETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (SPOT LEVELING)	
	3,295	566										448	46050	3,861	CU. YD.	ASPHALT CONCTETE INTERMEDIATE COURSE, TYPE 2, PG64-22	
13	115											448	48021	128	CU. YD.	ASPHALT CONCTETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS), AS PER PLAN	12
					1,420							605	31101	1,420	FT.	AGGREGATE DRAINS, AS PER PLAN	7
		2,930										617	10100	2,930	CU. YD.	COMPACTED AGGREGATE, TYPE A	
		42,194										617	20000	42,194	SQ. YD.	SHOULDER PREPARATION	
TRAFFIC CONTROL																	
					48							620	10300	48	EACH	DELINEATOR, TYPE C, POST MOUNTED	
					1,017							621	00100	1,017	EACH	RPM	
	28											630	03100	28	FT.	GROUND MOUNTED SUPPORT, NO. 3 POST	
	18											630	80100	18	SQ. FT.	SIGN FLAT SHEET	
						15.40						642	00100	15.40	MILE	EDGE LINE, TYPE 1	
						7.70						642	00300	7.70	MILE	CENTER LINE, TYPE 1	
						110						642	00400	110	FT.	CHANNELIZING LINE, TYPE 1	
						110						642	00500	110	FT.	STOP LINE, TYPE 1	
MAINTENANCE OF TRAFFIC																	
							38					614	12460	38	EACH	WORK ZONE MARKING SIGN	
							15.40					614	21100	15.40	MILE	WORK ZONE CENTER LINE, CLASS 1, 642 PAINT	
						4						SPECIAL	69050000	4	EACH	MAILBOX SUPPORT	
												614	11000	LUMP		MAINTAINING TRAFFIC	
												624	10000	LUMP		MOBILIZATION	

CALCULATED: GDM
 CHECKED: TES

GENERAL SUMMARY

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