

# OHIO DEPARTMENT OF TRANSPORTATION

PLAN NO.

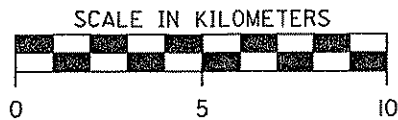
Proj 52-97



DEL-61-0.704  
 970052  
 02-04-97  
 13PGS  
 D.ST. 06



LATITUDE: 40°10'04" LONGITUDE: 83°19'26"



**DESIGN EXCEPTIONS**

DESIGN FEATURE	APPROVAL DATE	SHEET NOS.
LANE WIDTH	8-5-96	2
SHOULDER WIDTH	8-5-96	4
VERTICAL ALIGNMENT	8-5-96	
STOPPING SIGHT DISTANCE	8-5-96	
HORIZONTAL ALIGNMENT	8-5-96	

**UNDERGROUND UTILITIES**

TWO WORKING DAYS

**BEFORE YOU DIG**

CALL 1-800-362-2764 (TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE

NON-MEMBERS

MUST BE CALLED DIRECTLY

PLAN PREPARED BY:  
 O.D.O.T.  
 DISTRICT SIX  
 IN-HOUSE DESIGN

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI		NET LENGTH km	CITY	VILLAGE
				BEGIN	END			
1	DEL	61	(0.71-1.03)	0.71	12.63	11.92		
2	MRW	61	(0.00)	0.00	5.21	5.21		

**INDEX OF SHEETS:**

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**1995 SPECIFICATIONS**

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety will be as set forth on plans and estimates.

STANDARD DRAWINGS	
BP-3.1M	10-28-94
RM-1.1M	06-30-95
MT-97.10M	04-25-94
MT-97.11M	01-30-95
MT-99.10M	01-30-95
MT-99.20M	01-30-95
MT-105.10M	04-25-94
MT-105.11M	04-25-94
TC-65.10M	11-01-95
TC-65.12M	11-01-95
TC-71.10M	09-01-93
TC-82.10M	11-24-93

SUPPLEMENTAL SPECIFICATIONS	

PLANS CERTIFIED BY:

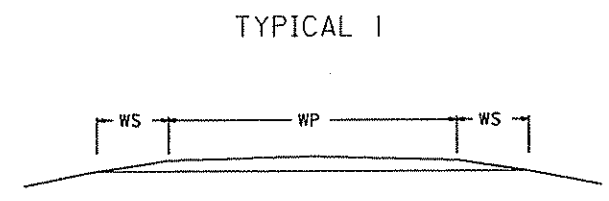
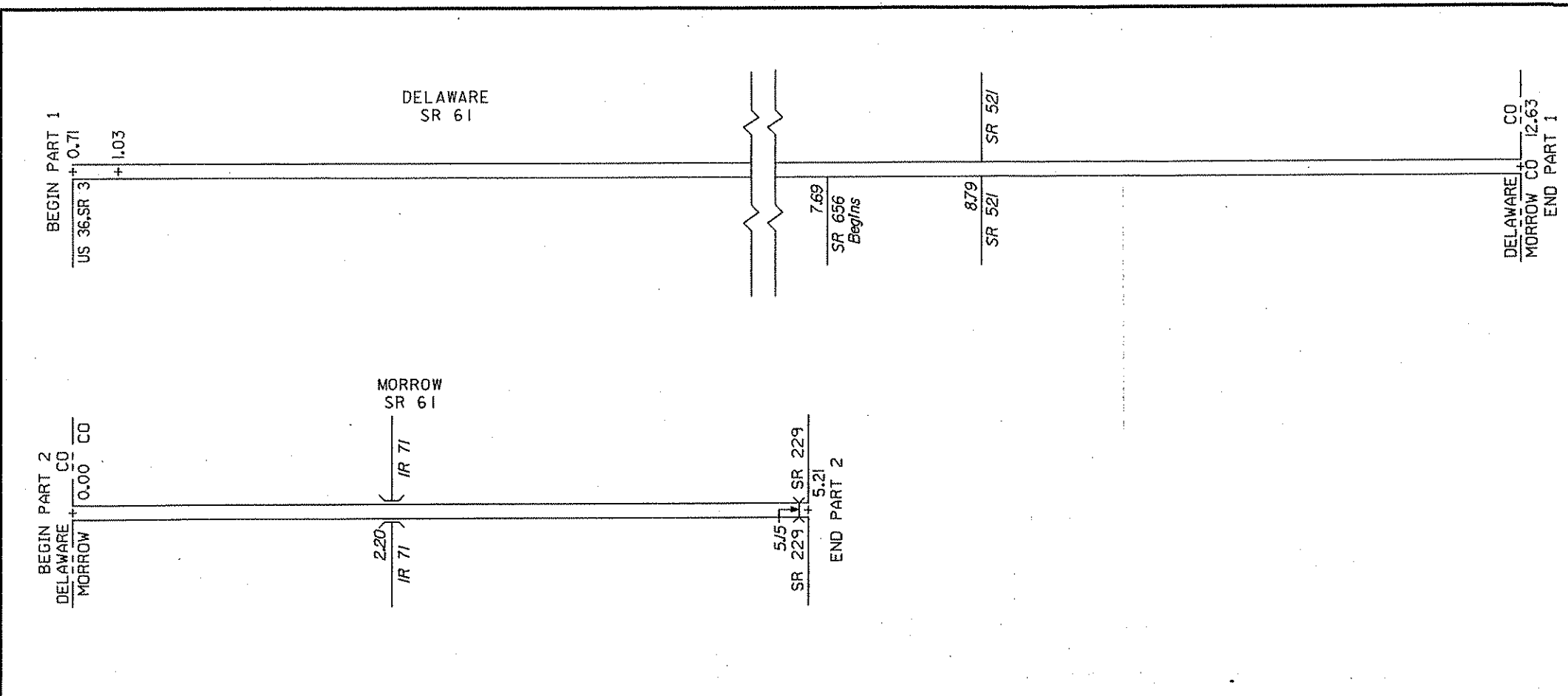
NAME: *D.S. Sheets* DATE: *10-10-96*

DISTRICT 6  
OHIO DEPT. OF TRANSPORTATION

Approved: *Michael C Flynn*  
 Date: *10-8-96* District Deputy Director  
 Approved: *[Signature]*  
 Date: *10-17-96* Director, Department of Transportation

FEDERAL PROJECT NO. STP  
 (Surface Transportation Program)  
 PID NO. 16010  
 CONSTRUCTION PROJECT NO.  
 RAILROAD INVOLVEMENT  
 DEL-61-0.704  
 1  
 13

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ITEM 254 PAVEMENT PLANING SHALL BE USED IN LIEU OF ITEM 202 WEARING COURSE REMOVED AS CALLED FOR IN STD. DWG. BP-3.IM

\* ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, AC-20, (SPOT LEVELING): THIS MATERIAL IS TO BE USED, AS DIRECTED BY THE ENGINEER, TO FILL RUTS AND IMPERFECTIONS; AND TO LEVEL AND RE-ESTABLISH THE ORIGINAL ALIGNMENT AND PROFILE OF THE PAVEMENT, PRIOR TO PLACEMENT OF THE SURFACE COURSE. THIS MAY RESULT IN A PORTION OF THE ORIGINAL SURFACE BEING EXPOSED BEFORE THE OVERLAY IS PLACED.

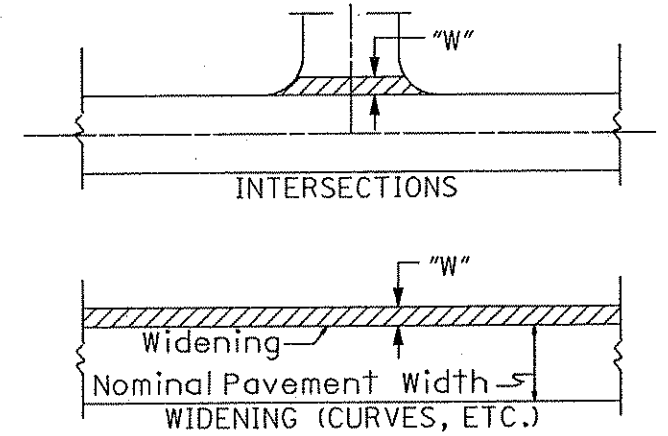
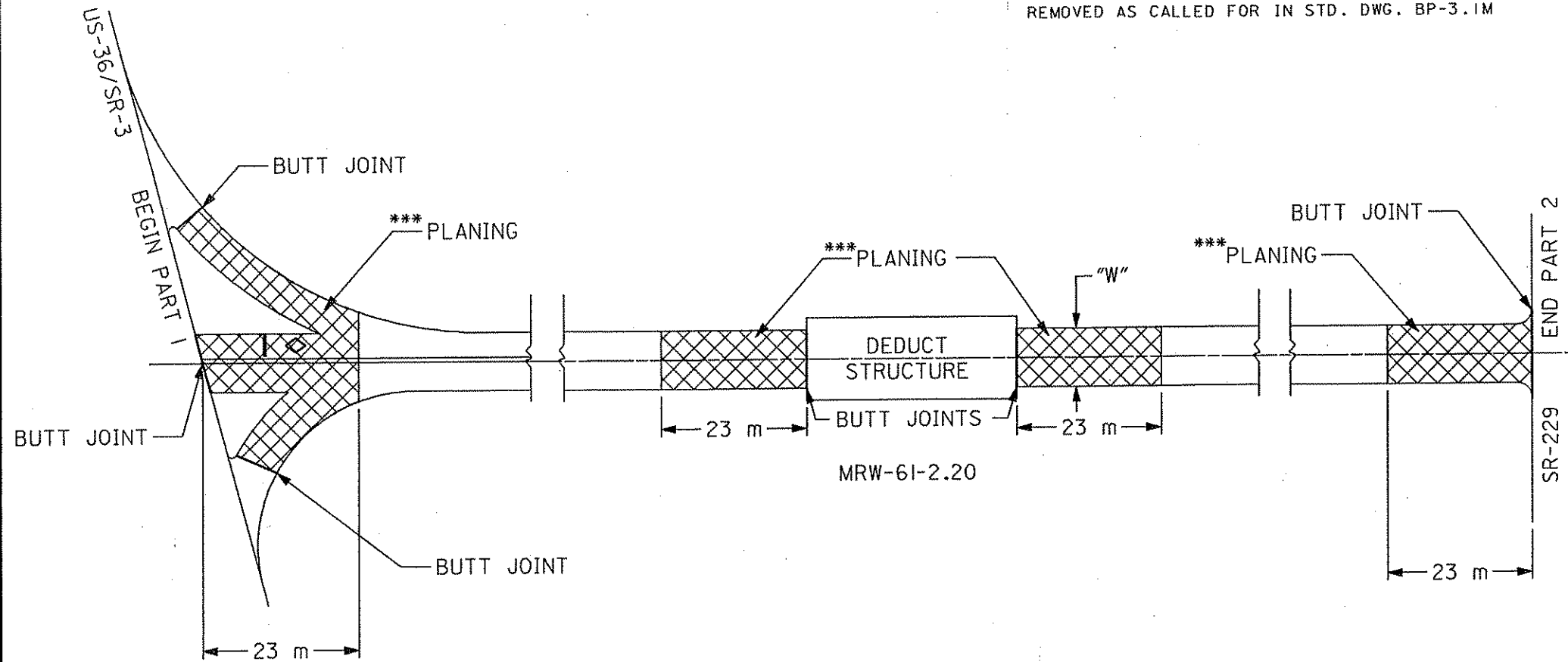
PAVEMENT DATA

PART	COUNTY	ROUTE	FROM	TO	LENGTH		AVERAGE WIDTH OF PAVEMENT	TYPICAL	EX. PAVEMENT TYPE	PAVEMENT AREA	ITEM 448, ASPHALT CONCRETE				254	614	617	604	604		
											TACK COAT AT 0.45 liter/sq. m	INTERMEDIATE COURSE TYPE 1, AC-20		SURFACE COURSE TYPE 1, AC-20							
												AVERAGE THICK 0 mm MIN.		AVERAGE THICK							
			SLD	SLD	km	m	m			sq m	liter	mm	cu m	mm	cu m	sq m	EACH	cu m	EACH	EACH	
1	DEL	61	0.71	1.03	0.32	320	7.62	I	404	2438	1097	*	32	25	61						
1	DEL	61	1.03	12.63	11.60	11600	6.71	I	404	77836	35026	*	1012	25	1946						
2	MRW	61	0.00	5.21	5.21	5210	6.71	I	404	34959	15732	*	454	25	874						
<b>TOTALS</b>											51855		1498		2881						

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\*\*\* ITEM 254 PAVEMENT PLANING SHALL BE USED IN LIEU OF ITEM 202 WEARING COURSE REMOVED AS CALLED FOR IN STD. DWG. BP-3.1M

\* ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, AC-20, (SPOT LEVELING): THIS MATERIAL IS TO BE USED, AS DIRECTED BY THE ENGINEER, TO FILL RUTS AND IMPERFECTIONS; AND TO LEVEL AND RE-ESTABLISH THE ORIGINAL ALIGNMENT AND PROFILE OF THE PAVEMENT, PRIOR TO PLACEMENT OF THE SURFACE COURSE. THIS MAY RESULT IN A PORTION OF THE ORIGINAL SURFACE BEING EXPOSED BEFORE THE OVERLAY IS PLACED.



PART	COUNTY	ROUTE	FROM	TO	SIDE	DESCRIPTION	LENGTH		WIDTH "W"	AREA	ITEM 448. ASPHALT CONCRETE				254	617	REMARKS	
							km	m			TACK COAT AT 0.45 liter/sq. m	INTERMEDIATE COURSE TYPE 1, AC-20		SURFACE COURSE TYPE 1, AC-20		PAVEMENT PLANING BITUMINOUS 38 mm DEPTH		COMPACTED AGGREGATE TYPE A 75 mm
												AVERAGE THICK 0 mm MIN.		AVERAGE THICK				
			sid	sid						liter	mm	cu m	mm	cu m	sq m	cu m		
1	DEL	61	VARIOUS			INTERSECTION - BITUMINOUS				540	*	16	25	30				
1	DEL	61	VARIOUS			DRIVES - BITUMINOUS				252	*	7	25	14				
1	DEL	61	VARIOUS			DRIVES - AGGREGATE										183		
1	DEL	61	0.71		LT	TURN LANE	35.05	4.88	171	77	*	2	25	4				
1	DEL	61	0.71		RT	TURN LANE	15.24	6.40	98	44	*	1	25	2				
1	DEL	61	0.71			BEGIN PROJECT PLANING (@ US-36/SR-3)			431						431		***	
2	MRW	61	VARIOUS			INTERSECTION - BITUMINOUS			1100	495	*	14	25	28				
2	MRW	61	VARIOUS			DRIVES - BITUMINOUS			320	144	*	4	25	8				
2	MRW	61	VARIOUS			DRIVES - AGGREGATE			1240							93		
2	MRW	61	2.05	2.13	RT	EXTRA AREA	0.08	80.00	1.52	122	55	*	2	25	3			
2	MRW	61	2.20			APPROACH STRUCTURE PLANING		23.00	6.71	154					154		***	
2	MRW	61	2.20			STRUCTURE - DEDUCT		-133.00	6.71	-892	-401	*	-12	25	-22		***	
2	MRW	61	2.20			DEPART STRUCTURE PLANING		23.00	6.71	154					154		***	
2	MRW	61	2.48	2.54	RT	EXTRA AREA	0.06	60.00	1.83	110	50	*	1	25	3			
2	MRW	61	5.15		LT/RT	STRUCTURE - EXTRA AREA		16.76	2.13	36	16	*	1	25	1			
2	MRW	61	5.21			END PROJECT PLANING (@ SR-229)		23.00	6.71	154					154		***	
										1272		36		71	893	276		

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PLAN NO.  
EXTRA AREA AND DEDUCTIONS  
DEL-61-0.704  
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**ITEM 643 - CENTER LINE QUANTITIES**

PART	COUNTY	ROUTE	FROM		TO		DASHED	SOLID	TOTAL	REMARKS
			s.l.d.		s.l.d.		km	km	km	
1	DEL	61	0.71	SR 3	12.63	COUNTY LINE	4.58	18.46	11.92	
2	MRW	61	0.00	COUNTY LINE	5.21	SR-229	3.71	5.82	5.21	
<b>CENTER LINE TOTAL</b>									17.13	

**ITEM 643 - LANE LINE QUANTITIES**

PART	COUNTY	ROUTE	FROM		TO		DASHED	SOLID	TOTAL	REMARKS
			s.l.d.		s.l.d.		km	km	km	
<b>LANE LINE TOTAL</b>										

**ITEM 643 - EDGE LINE QUANTITIES**

PART	COUNTY	ROUTE	FROM		TO		WHITE			YELLOW			REMARKS	
			s.l.d.		s.l.d.		HIGHWAY	RAMP	TOTAL	HIGHWAY	RAMP	TOTAL		
							km	km	km	km	km	km		
1	DEL	61	0.71	SR 3	12.63	COUNTY LINE	(x2) 11.92		23.84					
2	MRW	61	0.00	COUNTY LINE	5.21	SR-229	(x2) 5.21		10.42					
<b>EDGE LINE TOTAL</b>									34.26					

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 PAVEMENT MARKING  
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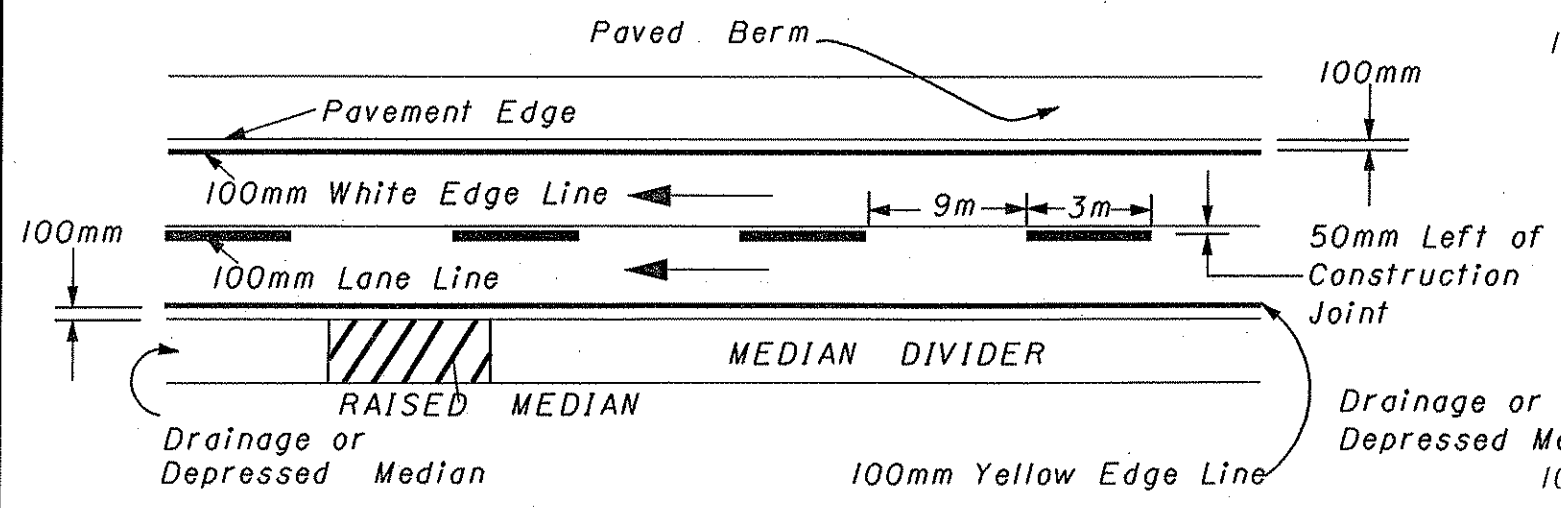
## ITEM 644 - AUXILIARY MARKING QUANTITIES

PART	COUNTY	ROUTE	FROM	TO	CHANNELIZING LINES	600 mm TRANSVERSE LINES		STOP LINES	CROSSWALK LINES 300 mm	WORD ON PAVEMENT ONLY		SCHOOL SYMBOL MARKING		LANE ARROWS				PAGE REFERENCE
			s.l.d.	s.l.d.		200 mm	WHITE			YELLOW	600 mm	WHITE	1800 mm	2500 mm	1800 mm	2500 mm	TURN	
			m	m	m	m	m	m	m	each	each	each	each	LEFT EACH	RIGHT EACH	EACH	EACH	
1	DEL	61	0.71					3.35										
2	MRW	61	12.63					3.35										
<b>AUXILIARY MARKING TOTALS</b>									6.70									

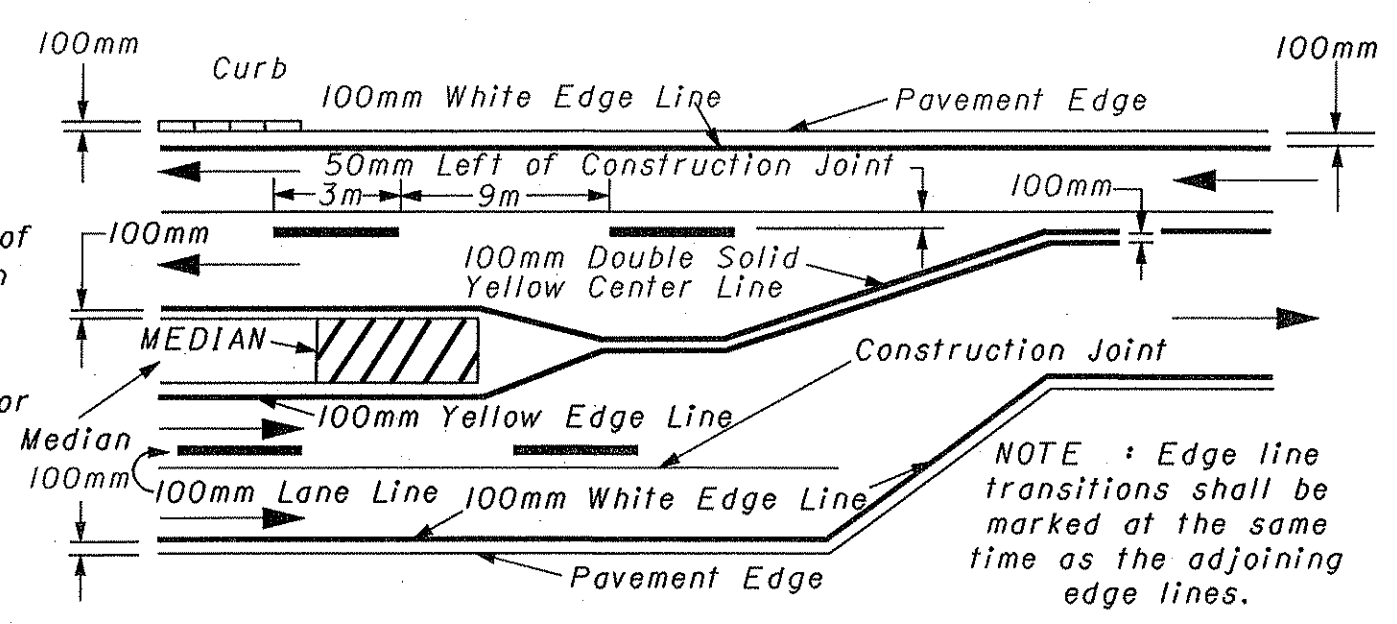
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PAVEMENT MARKING  
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FREEWAY & EXPRESSWAY MAINLINE MARKINGS

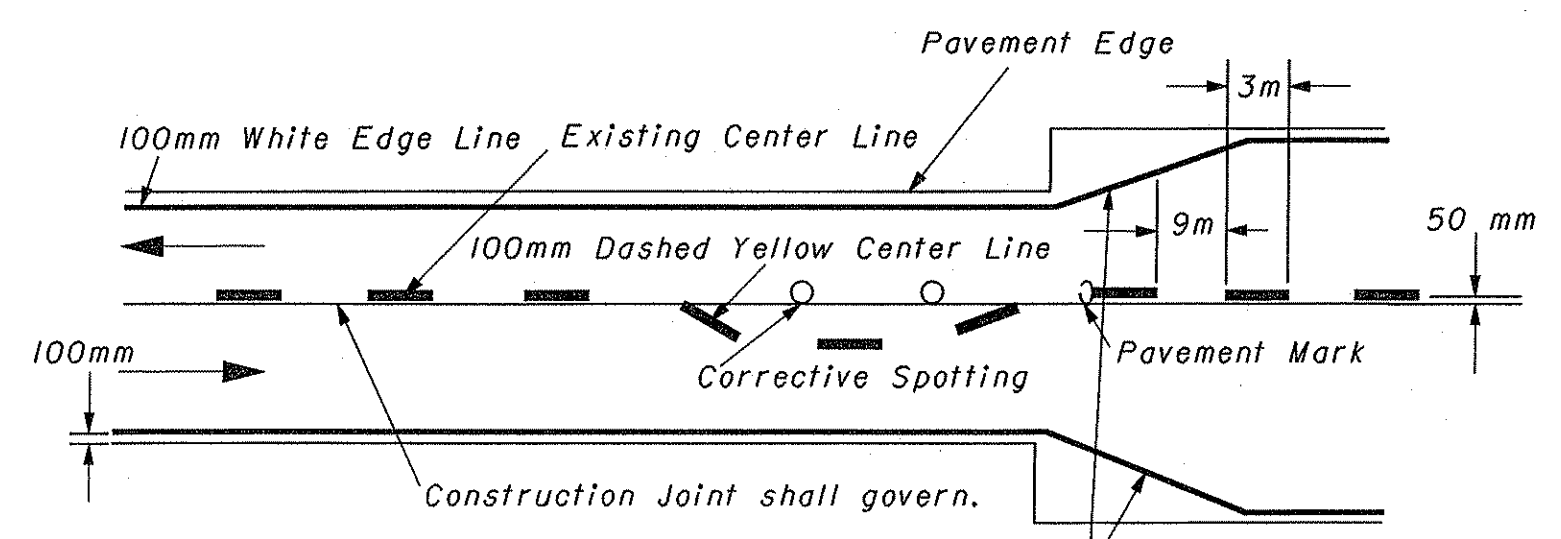


MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



NOTE : Edge line transitions shall be marked at the same time as the adjoining edge lines.

TWO LANE MARKINGS



Min. 30:1 Taper Both Sides  
At all locations where pavement widths change by construction plans.

NOTES :

1. The distance from the pavement edge to the nearside edge of the edgeline may be increased with the approval of the engineer in order to maintain uniform lane width.
2. See TC-72.20M for entrance and exit ramp markings.
3. The cycle length for dashed lines shall be 12 meters plus or minus 150mm. The minimum length of dash shall be sufficiently long to maintain a 3:1 ratio between length of gap and length of dash.

# LOCATION SUB-SUMMARY

DETAIL	
1	MAINLINE UNDIVIDED TYPICAL SPACING
2	TAPERED ACCELERATION LANE
3	DECELERATION LANE
4	PARALLEL ACCELERATION LANE
5	MULTILANE DIVIDED/EXPRESSWAY
6	STOP APPROACH

DETAIL	
7	1 LANE APPROACH W/ LT. TURN LANE
8	THRU APPROACH
9	2 LANE APPROACH W/ LT. TURN LANE
10	4 LANE DIVIDED TO 2 LANE TRANSITION
11	4 LANE UNDIVIDED TO 2 LANE TRANS.
12	TWO LANE NARROW BRIDGE
13	TWO WAY LEFT TURN LANE

DETAIL	
14	ONE LANE BRIDGE
15	HORIZONTAL CURVE
16	HORIZONTAL CURVE ALTERNATE
17	STOP APPROACH ALTERNATE
GAP	CENTERLINE AT 24 m TYP.

PART	LOCATION				D E T A I L	PRISMATIC RETRO-REFLECTOR COLORS					202	621	621	REMARKS
	COUNTY	ROUTE	S.L.D. SECTION			ONE-WAY		TWO-WAY			RAISED PAVEMENT MARKER REMOVED FOR STORAGE EACH	RAISED PAVEMENT MARKER EACH	RAISED PAVEMENT MARKER INSTALL ONLY EACH	
			FROM	TO		WHITE	YELLOW	WHITE/WHITE	YELLOW/YELLOW	WHITE/RED				
1	DEL	61	0.71	1.03	6	39						39	27	@ US-36/SR-3
1	DEL	61	1.03	2.11	GAP								45	GAP
1	DEL	61	2.11	3.22	15								96	
1	DEL	61	3.22	7.44	GAP								173	GAP
1	DEL	61	7.44	9.04	8	63						63	130	SR-656 TO SR-521
1	DEL	61	9.04	11.67	GAP								108	GAP
1	DEL	61	11.67	11.94	15								34	
1	DEL	61	11.94	12.63	GAP								28	DETAIL 15 TO MORROW COUNTY
1	DEL	61	0.71	12.63						743				
2	MRW	61	0.00	4.89	GAP								201	
2	MRW	61	4.89	5.21	6	39						39	27	
2	MRW	61	0.00	5.21						267				
TOTAL											1010	141	869	

CALCULATED  
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PLAN NO.

RAISED PAVEMENT MARKER

DEL-61-0.704

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**GENERAL:**

THE CONTRACTOR SHALL SUBMIT IN WRITING A SCHEDULE OF OPERATIONS TO THE ENGINEER (SEE 101.18) AND RECEIVE APPROVAL IN WRITING BEFORE WORK IS STARTED ON THIS PROJECT. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

**CONSTRUCTION INITIATION:**

THE CONTRACTOR SHALL ADVISE THE DISTRICT COMMUNICATIONS OFFICER AT 1-614-363-1251, EXTENSION 469 AND THE MAINTENANCE OF TRAFFIC ENGINEER, EXTENSION 477 OR BY FAX NO. 1-614-369-7437, FOURTEEN DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE PROJECT ENGINEER WILL PROVIDE ASSISTANCE/CLARIFICATION FOR ANY QUESTIONS.

**TRAFFIC:**

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. THE LENGTH OF RESTRICTED TRAFFIC ZONES SHALL BE KEPT TO A MINIMUM CONSISTENT WITH THE SPECIFICATION REQUIREMENTS FOR PROTECTION OF COMPLETED COURSES.

**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 MAY BE RAISED AN AMOUNT EQUAL TO THE THICKNESS OF THE RESURFACING COURSE OR COURSES SPECIFIED IN THESE PLANS.

**TACK COAT:**

THE TACK COAT OPERATION SHALL BE AS DETERMINED AT A PRE CONSTRUCTION CONFERENCE AS PER 407.05 AND APPLICATION RATES SHALL NOT EXCEED 0.45 LITER PER SQ. METER.

**ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR:**

THIS ITEM SHALL BE USED WHERE DIRECTED. THE DEPTH OF REPAIRS SHALL BE APPROXIMATELY 75 mm.

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED:

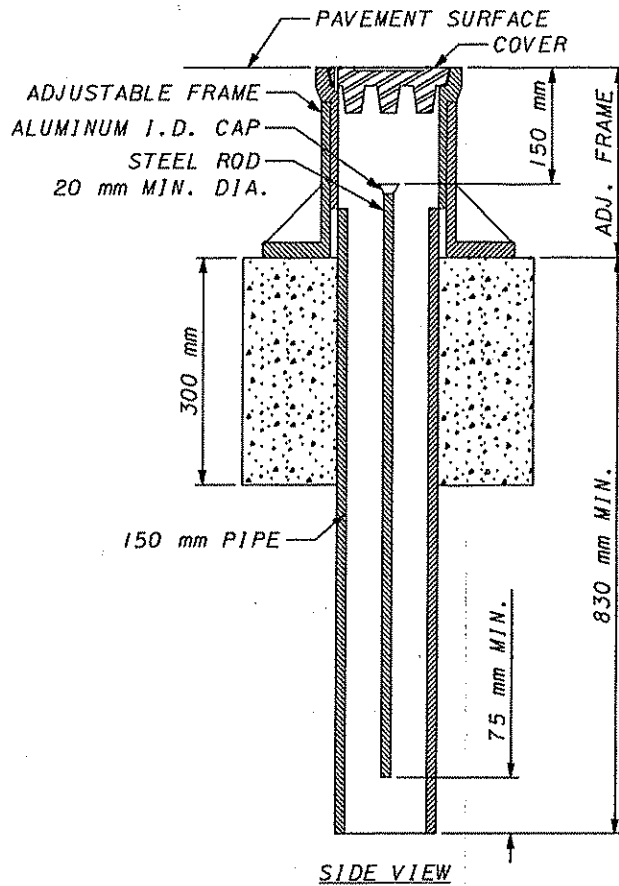
PART 1	250 CUBIC METERS
PART 2	50 CUBIC METERS
TOTAL TO GENERAL SUMMARY	= 300 CUBIC METERS

**ITEM 253 PAVEMENT REPAIR:**

THIS ITEM SHALL BE USED WHERE DIRECTED. THE EDGE OF THE PAVEMENT REMOVAL SHALL BE SAWED FULL DEPTH WITH A DIAMOND SAW PRIOR TO REMOVAL. THE ITEM 301 SHALL BE PLACED IN TWO EQUAL LIFTS.

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED:

PART 1	500 CUBIC METERS
PART 2	100 CUBIC METERS
TOTAL TO GENERAL SUMMARY	= 600 CUBIC METERS



FOR ADDITIONAL DETAILS  
SEE STANDARD DRAWING RM-1.1M

**ADJUSTABLE CENTERLINE MONUMENT DETAIL**

**ITEM 604 MONUMENT ASSEMBLY, AS PER PLAN:**

THIS WORK SHALL CONSIST OF FURNISHING AND PLACING CENTERLINE MONUMENTS AT THE FOLLOWING INTERSECTIONS:

**PART 1**

- 1.) S.R. 61 and Twp. Rd. 68 (Blaney Rd.)
- 2.) S.R. 61 and Twp. Rd. 69 (Rosecrans Rd.)
- 3.) S.R. 61 and S.R. 656
- 4.) S.R. 61 and S.R. 521
- 5.) S.R. 61 and Co. Rd. 65 (Kilbourne Rd.)
- 6.) S.R. 61 and Delaware-Morrow County Line

**PART 2**

- 7.) S.R. 61 and Co. Rd. 15 (West Liberty-Mt. Vernon Rd.)
- 8.) S.R. 61 and Co. Rd. 217 (Watson Rd.)

A REGISTERED SURVEYOR FROM DISTRICT SIX SURVEY DEPARTMENT SHALL BE RESPONSIBLE FOR REFERENCING AND VERIFYING THE LOCATIONS OF THE CENTERLINE MONUMENTS. THE CONTRACTOR SHALL NOTIFY THE SURVEY DEPARTMENT (614-363-1251) 48 HOURS PRIOR TO START OF MONUMENT WORK. PAYMENT FOR THIS ITEM SHALL INCLUDE ALL NECESSARY LABOR, MISCELLANEOUS HARDWARE, AND EQUIPMENT REQUIRED FOR PLACEMENT. PAYMENT WILL BE AT CONTRACT BID PRICE PER EACH.

PART 1 TOTAL CARRIED TO GENERAL SUMMARY - 8 EACH

**ITEM 254 PAVEMENT PLANING, BITUMINOUS:**

THE EXISTING WEARING COURSE SHALL BE REMOVED TO A DEPTH EQUAL TO THE DEPTH OF THE PROPOSED NEW PAVEMENT. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR ANY AND ALL DAMAGE THAT MAY RESULT FROM THE PLANING OPERATION, INCLUDING CASTINGS. THE DEPTH OF PLANING CLOSE TO THE CASTINGS SHALL BE AS DIRECTED, TO ACHIEVE A SMOOTH RIDING FINISHED PAVEMENT. THE PLANED AREA SHALL NOT BE EXPOSED TO TRAFFIC FOR MORE THAN FIVE DAYS PRIOR TO RESURFACING. FAILURE TO COMPLY WITH THE FIVE DAY LIMIT SHALL SUBJECT THE CONTRACTOR TO LIQUIDATED DAMAGES AS PER SECTION 108.07 OF THE CMS.

**ITEM 614 - TEMPORARY CENTER LINE CLASS II:**

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED

PART 1 S.L.D. 0.71 - S.L.D. 12.63	
11.92 km x 1 LINE x 2 APP.	= 23.84 km
PART 2 S.L.D. 0.00 - S.L.D. 5.21	
5.21 km x 1 LINE x 2 APP.	= 10.42 km
TOTAL CARRIED TO GENERAL SUMMARY	= 34.26 km

**ITEM 614 - WORK ZONE MARKING SIGNS:**

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED AS PER STANDARD DRAWING MT-99.10M

PART 1 S.L.D. 0.71 - S.L.D. 12.63	
R-33-30 "DO NOT PASS"	= 18
R-34-30 "PASS WITH CARE"	= 17
OW-167-36 "NO EDGE LINES"	= 17
PART 2 S.L.D. 0.00 - S.L.D. 5.21	
R-33-30 "DO NOT PASS"	= 12
R-34-30 "PASS WITH CARE"	= 11
OW-167-36 "NO EDGE LINES"	= 7
TOTAL CARRIED TO GENERAL SUMMARY	= 82

**ITEM 619, FIELD OFFICE TYPE A, AS PER PLAN:**

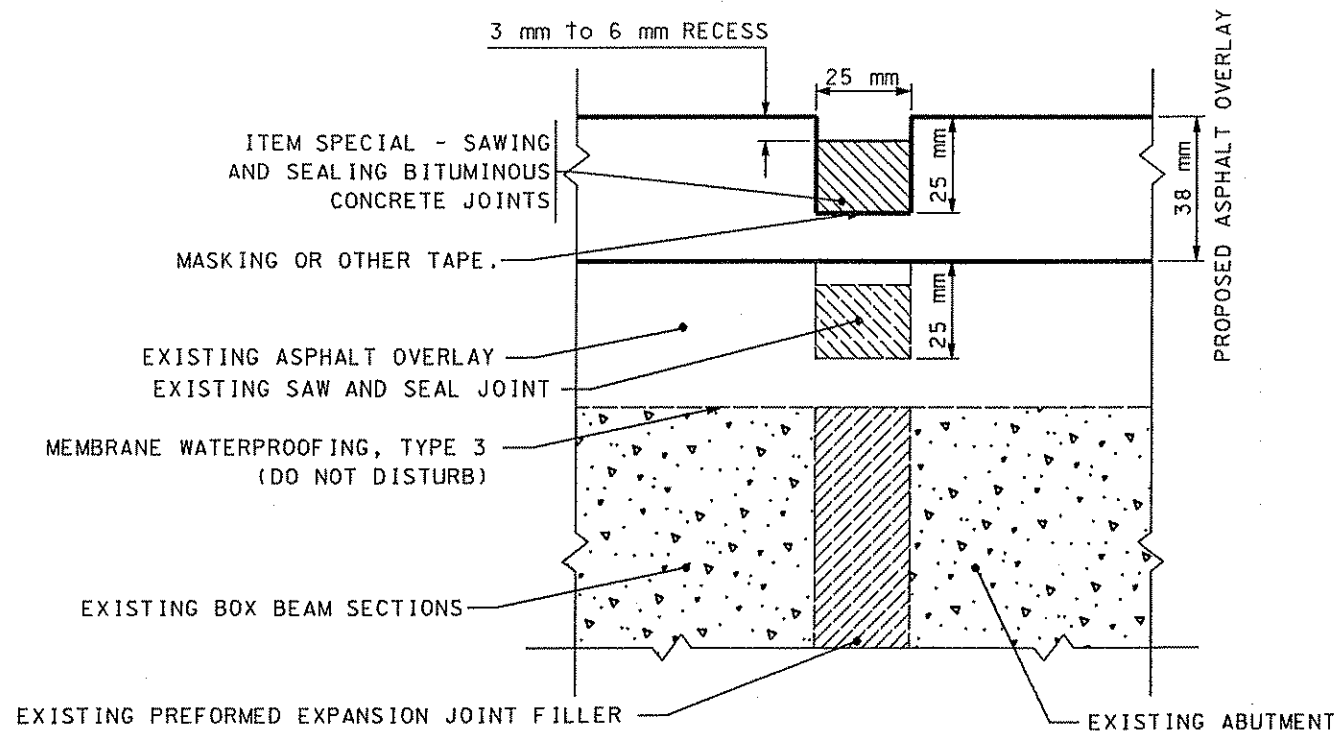
UNDER THIS ITEM, THE CONTRACTOR SHALL PROVIDE A FIELD OFFICE MEETING ALL REQUIREMENTS OF ITEM 619, FIELD OFFICE, TYPE A WITH THE FOLLOWING MODIFICATION. INSTEAD OF PROVIDING ONLY ONE PHONE LINE AS PER CMS, THE CONTRACTOR SHALL PROVIDE TWO SEPARATE PHONE LINES FOR THE FIELD OFFICE ON THIS PROJECT. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO GENERAL SUMMARY: ITEM 619 FIELD OFFICE, TYPE A, AS PER PLAN = LUMP SUM

**ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN:**

THIS ITEM SHALL CONSIST OF STATIONING USING 1 m LATH STAKES. THE STAKES SHALL BE SPACED AT 50 m INTERVALS AND SHALL EXTEND THROUGHOUT THE LENGTH OF THE PROJECT AND THROUGHOUT THE LENGTH OF ALL RAMPS. PLACEMENT OF THE STAKES SHALL BE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED OR MISSING STAKES.

CONSTRUCTION LAYOUT STAKES, AS PER PLAN WILL BE PAID FOR AT THE CONTRACT LUMP SUM BID, WHICH PRICE SHALL BE FULL COMPENSATION FOR ALL SERVICES, MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS, INCLUDING THE REMOVAL, NECESSARY TO COMPLETE THIS ITEM.

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**1) Description:**

This work shall consist of cutting and sealing transverse joints on the new bituminous concrete overlay of bridges. Bituminous concrete joints shall be constructed directly over, and in line with, the existing underlying transverse abutment joint of the bridge.

**2) Materials:**

The joint sealant shall meet the requirements of ASTM Specification D3405, Joint Sealants, Hot-poured, for Concrete and Asphalt Pavements. Acceptable alternate materials are:

Roof-Flex 176, polyurethane, as produced by the Carboline Company, 350 Hanley Industrial Court, St. Louis, Missouri 63144 (Roger Zubal, 614-877-3406); a silicone sealant meeting Federal Specifications TT-S-001543A Class A (one-part silicone sealants) and TT-S-00230C Class A (one-component sealants), such as those manufactured by General Electric, Silicone Products Division, 6155 Rockside Rd., Rockside Square I, Independence, Ohio 44131 (John Fromholtz, 216-447-1750) or Dow Corning, 3737 Park East, Beachwood, Ohio 44122 (Robert Ruppel, 216-464-2330); or Sof-Seal, a cold-applied, low-modulus, two-component polymeric compound horizontal sealant as manufactured by W. R. Meadows, Inc., P.O. Box 543, Elgin, Illinois 60121 (Robert Cameron, 312-683-4500). Sealant will be accepted on the basis of the manufacturer's certification that it

conforms to the requirements of these specifications.

**3) Construction Details:**

**A) General:** The contractor shall conduct his operation so that the cutting, cleaning and sealing of transverse joints is a continuous operation that will be performed as soon as practical after the paving, but no later than four (4) days after placement of the asphalt concrete surface course. Traffic shall not be allowed to knead together or damage the joint cut prior to sealing.

**B) Cutting of Transverse Joints:** The contractor shall saw or rout transverse joints to the dimensions shown in the details on this sheet. The cut joints shall lie directly above each existing abutment joint. The joint location shall be marked on the new asphalt surface with a chalk line, or by some other acceptable method, before cutting. Details of the method for locating and accurately marking the proposed cuts shall be subject to the approval of the Engineer prior to starting any cutting or paving operations.

The blade or blades shall be of such size that the full width and depth of the cut can be made with one pass. Dry or wet cutting will be allowed. Joints shall extend the full width of the bridge.

**C) Cleaning Joints:** Dry sawed joints shall be thoroughly cleaned with a sufficient amount of compressed air to remove any dirt, dust, or

deleterious matter. Wet sawed joints shall be washed clean of all cuttings by flushing with a jet of water and with other tools as necessary. After flushing, the joint shall be blown out with compressed air. When the surfaces are thoroughly clean and dry, and just prior to placing the joint sealer, compressed air having a pressure of at least 621 kPa shall be used to blow out the joint and remove all traces of dust.

In the event freshly cut joints become contaminated before they are sealed, they shall be recleaned of all foreign material by high pressure water jet.

**D) Sealing Joints:** The joint shall be thoroughly dried before the sealant is placed. After cleaning and drying, a bond-breaker (tape) shall be applied to the bottom of the groove.

Hot-poured joint sealant material shall be heated in a kettle or melter constructed as a double boiler, with the space between the inner and outer shells filled with oil or other heat transfer medium. Positive temperature control and mechanical agitation shall be provided. Heating must be in strict accordance with the manufacturer's recommendation. Joint sealer material shall never be kept heated at the pouring temperature for more than four (4) hours and shall never be reheated. Sealer left in the applicator at the end of a day's work shall be removed and discarded.

Hot-poured sealant shall be applied immediately through a nozzle, which must project into the sawed joint, filling from the bottom up. The seal shall completely fill the joint in such a manner that, after cooling, the level of the sealer will not be higher than 3 mm below the pavement surface. Any depression in the cooled seal greater than 5 mm shall be brought up to the specified limit for further addition of hot-poured sealant. Care shall be taken in the sealing of the joints so that the final appearance will present a neat fine line.

The cold applied sealant materials (polyurethane, silicone, and polymeric compounds) shall be installed as per manufacturers' recommendations, or as directed by the Engineer. The sealant shall be installed when the ambient temperature is 4 degrees C or higher. Traffic shall not be allowed on the joint for one hour after application of the sealant.

**4) Method of Measurement:**

The quantity to be paid for under this item will be the number of meters of joints sawed and sealed as per the above requirements.

**5) Basis of Payment:**

The unit price per meter for Item Special - "Sawing and sealing bituminous concrete joints" shall include the cost of all labor, materials, and equipment necessary to complete the work, including the furnishing and placing of the joint sealer material.

**ITEM SPECIAL 516E31200 SAWING AND SEALING BITUMINOUS CONCRETE JOINTS:**

The following quantities have been provided for:

Part I  
 Bridge No. MRW-61-5.15:  
 7.62 m (joint length) x 2 (joints) = 15.24 m  
 Total carried to General Summary = 15.30 m

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DRAWING NOT TO SCALE

US 36 / SR-3

1.5 m

9 m

2 m

STOP BAR IS 15.85 m FROM CENTERLINE OF US-36/SR-3

EXISTING TRAFFIC SIGNAL STRAIN POLE  
EXISTING .30 m STEEL PULL BOX

EXISTING LOOP DETECTOR, THAT WILL BE DAMAGED DURING PLANING

SR-61

LOOP DETECTOR, 2 m x 9 m , WITH 2 TURNS OF TYPE E LOOP WIRE

ITEM 632 LOOP DETECTOR PAVEMENT CUTTING AND LOOP DETECTOR WIRE, TYPE E  
THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY TO BE USED, AS DIRECTED, TO REPLACE DAMAGED LOOPS ON SR-61 AT SLD 0.71:  
ITEM 632 LOOP DETECTOR PAVEMENT CUTTING 36 m  
ITEM 632 LOOP DETECTOR WIRE, TYPE E 87 m

CALL JIM BERGANDINE OF ROADWAY SERVICES AT 614-363-1251 EXT. 426 TWO FULL WORKING DAYS , PRIOR TO INSTALLING THE LOOP.

CALCULATED

CHECKED

PLAN NO.

LOOP DETECTOR REPLACEMENT

DEL-61-0.704

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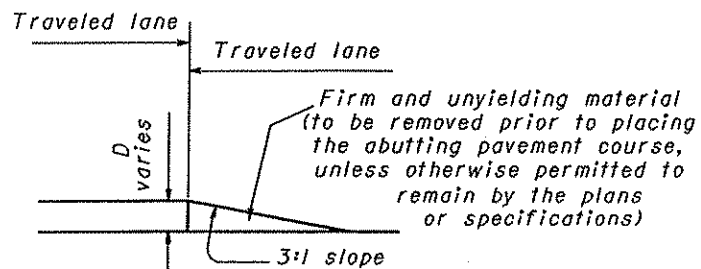
### GENERAL NOTES

- 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. 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 Standard Construction Drawing MC-9.2M and Item 622.
- When drums are specified for a dropoff 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-171 (Uneven Lanes) and OWP-171 signs are required, they shall be placed 230 meters 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 dropoff condition extends more than 800 meters, additional signs should be erected at intervals of 1.6 kilometer or less.
- For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate any 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 3.0 m, drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 127 mm and approval is granted by the Project Engineer.

- Pavement Repairs (or similar work):
  - Lengths greater than 20 meters - utilize appropriate treatment from Condition I.
  - Lengths of 20 meters or less - repairs shall be effected in accordance with Item 255.0B. 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 and OWP-171 signs required.



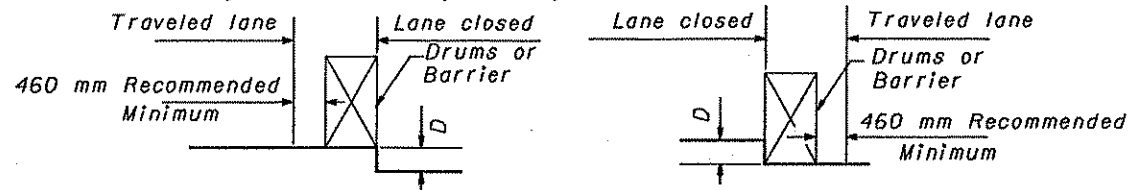
### CONDITION I

#### DROPOFFS BETWEEN TRAVELED LANES

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

D (mm.)	Treatment
<38	Erect OW-171 and OWP-171 signs.
>38-76	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
>76-127	Lane closure utilizing drums as shown below.
>127	Lane closure utilizing portable concrete barrier as shown below.

\*Cones may be used for daytime only conditions.



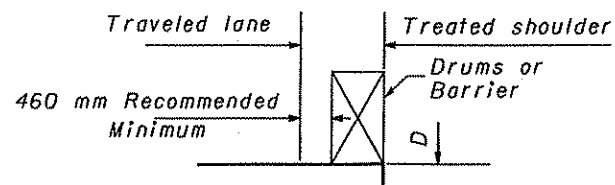
### CONDITION II

#### DROPOFFS 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 area (improved with aggregates, asphaltic materials, or concrete). For the purposes herein, its maximum width shall be considered to be 3.6 meters.

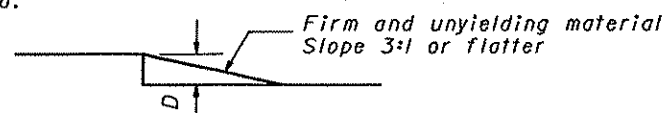
D (mm)	Treatment
<38	1) If edgelines are present, no treatment necessary OR 2) Erect OW-171 and OWP-171 signs.
>38-127	1) If min. lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If min. lane width* requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
>76-305 Daylight only	If min. lane width* requirements can be met, maintain lanes utilizing drums as shown below.
>76-610	1) If min. lane width* requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If min. lane width* requirements cannot be met, close adjacent lane utilizing drums.
>610	Lane closure utilizing portable concrete barrier as shown below.

\* Minimum lane widths shall be 3.0 meters 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 Item 401.15 is required.
- OW-151 signs required.



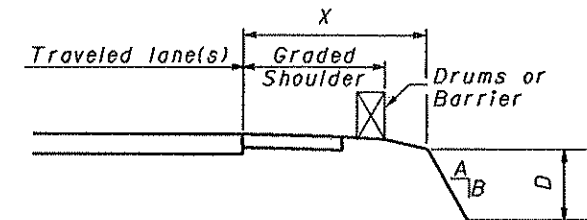
### CONDITION III

#### DROPOFFS 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:
- Uncurbed Facilities.
  - Curbed Facilities, where:
    - Curbs are less than 150 mm in height.
    - Curbs are 150 mm or greater in height and the legal speed is 70 km/h or greater.

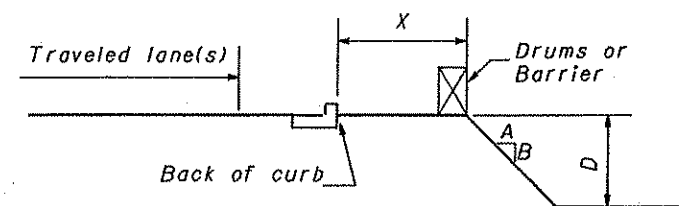


X (m)	D (mm)	A/B	Treatment Required	
			Day	Night
0-1.2	Any	Any	(a)	(a)
1.2-9.1	Any	3:1 or Flatter	None	None
1.2-3.6	<76	Steeper than 3:1	None	None
1.2-3.6	>76-<305	Steeper than 3:1	Drums	Drums
1.2-3.6	>305	Steeper than 3:1	Drums	Barrier
>3.6-6.1	<305	Steeper than 3:1	None	None
>3.6-6.1	>305-<610	Steeper than 3:1	Drums	Drums
>3.6-6.1	>610	Steeper than 3:1	Drums	Barrier
>6.1-9.1	<610	Steeper than 3:1	None	Drums
>6.1-9.1	>610	Steeper than 3:1	Drums	Barrier
>9.1	Any	Any	None	None

(a) Use treatment specified under Condition II.

### CHART B

- USE FOR: Curbed facilities, where the curb is 150 mm or greater in height and the legal speed less than 70 km/h.



X (m)	D (mm)	A/B	Treatment Required	
			Day	Night
0-3.0	<305	Any	None	Drums
0-3.0	>305	Any	Drums	Drums
>3.0	Any	Any	None	None

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SHEET NUMBER										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
2	3	4	5	6	8	9	10	11							
					1010					202	54100	1010	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE	
						300				251	01002	300	CU METER	PARTIAL DEPTH PAVEMENT REPAIR	
						600				253	02000	600	CU METER	PAVEMENT REPAIR	
	893									254	01000	893	SQ METER	PAVEMENT PLANING, BITUMINOUS	
51855	1272	7092								407	10000	60219	LITER	TACK COAT	
1498	36	205								448	14050	1739	CU METER	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, AC-20 (SPOT LEVELING)	
2881	71	394								448	16000	3346	CU METER	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20	
						8				604	38501	8	EACH	MONUMENT ASSEMBLY, AS PER PLAN	9
						82				614	12460	82	EACH	WORK ZONE MARKING SIGN	
						34.26				614	21400	34.26	KILOMETER	TEMPORARY CENTER LINE, CLASS II	
	276	1568								617	10100	1844	CU METER	COMPACTED AGGREGATE, TYPE A	
										617	25000	50	CU METER	WATER	
						141				621	00100	141	EACH	RAISED PAVEMENT MARKER	
						869				621	00200	869	EACH	RAISED PAVEMENT MARKER, INSTALLATION ONLY	
								36		632	27500	36	METER	LOOP DETECTOR PAVEMENT CUTTING	
								87		632	64900	87	METER	LOOP DETECTOR WIRE, TYPE E	
					34.26					643	00100	34.26	KILOMETER	EDGE LINE	
					17.13					643	00300	17.13	KILOMETER	CENTER LINE	
					6.7					644	00500	6.7	METER	STOP LINE	
								15.3		SPECIAL	51631200	15.3	METER	SAWING AND SEALING BITUMINOUS CONCRETE JOINTS	10
										614	11000	LUMP		MAINTAINING TRAFFIC	
						LUMP				619	15001	LUMP		FIELD OFFICE, TYPE A, AS PER PLAN	9
										SPECIAL	61925000	LUMP		COMPUTER EQUIPMENT FOR TYPE A OFFICE	
						LUMP				623	10001	LUMP		CONSTRUCTION LAYOUT STAKES, AS PER PLAN	9
										624	10000	LUMP		MOBILIZATION	

CALCULATED  
 CHECKED  
 PLAN NO.  
**GENERAL SUMMARY**  
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