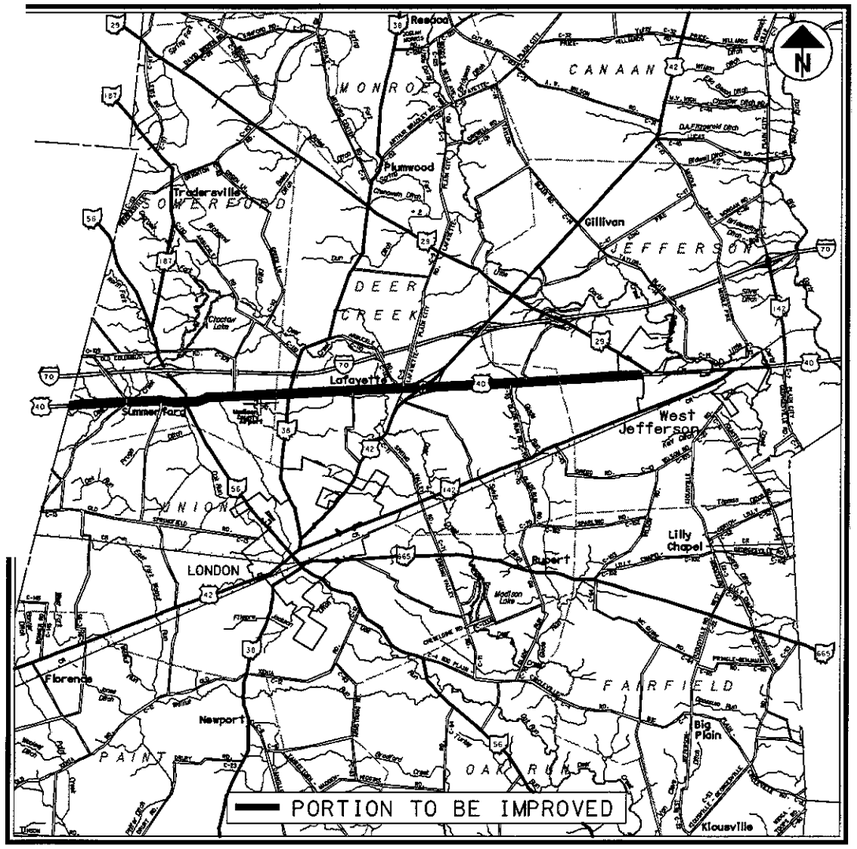
MAD-40-0.00-12.408 PID# 7600
980613
09-09-98
14PGS
DIST. 06

OHIO DEPARTMENT OF TRANSPORTATION

PLAN NO.

metric units

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINII		NET LENGTH km	CITY
				BEGIN	END		
1	MAD	40	(0.000 - 12.408)	0.000	19.457	19.554	



PART 1: LAT: 39°56'15" LONG: 83°25'30"

INDEX OF SHEETS:

PROJECT DESCRIPTION

RESURFACING OF 19.554 KM OF US-40 BY MEANS OF HOT IN-PLACE RECYCLING AND ITEM 448.

1997 SPECIFICATIONS

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THESES IMPROVEMENTS WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS PROJECT.

STANDARD DRAWINGS	
BP-3.1M	10/28/94
MT-35.10M	01/30/95
MT-35.11M	01/30/95
MT-95.30M	04/25/94
MT-95.31M	04/25/94
MT-95.32M	04/25/94
MT-98.12M	06/24/93
MT-98.13M	06/24/93
MT-98.14M	06/24/93
MT-98.15M	06/24/93
MT-98.16M	06/24/93
MT-98.17M	04/25/94
MT-98.18M	04/25/94
MT-99.20M	01/30/95

STANDARD DRAWINGS	
MT-105.10M	04/25/94
MT-105.11M	04/25/94
TC-65.10M	11/01/95
TC-65.11M	11/01/95
TC-65.12M	11/01/95
TC-71.10M	09/01/93
TC-72.20M	09/01/93
TC-82.10M	11/24/93

SUPPLEMENTAL SPECIFICATIONS	
SS-806	09/09/97
SS-1055	11/12/97

ENGINEERS SEAL

STATE OF OHIO
SCOTT N. PHINNEY
62316
REGISTERED PROFESSIONAL ENGINEER

SIGNED Scott N. Phinney
DATE 5-13-98

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

PLANS CERTIFIED BY:
NAME: D. A. Nicol DATE: 5-13-98
DISTRICT 6
OHIO DEPT. OF TRANSPORTATION

Approved Jack R. Mueller
Date 5/13/98 District Deputy Director of Transportation

Approved
Date 5-13-98 Director, Department of Transportation

NON-FEDERAL

PID NO. 7600

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

MAD-40-0.000

1/14

13-MAY-1998
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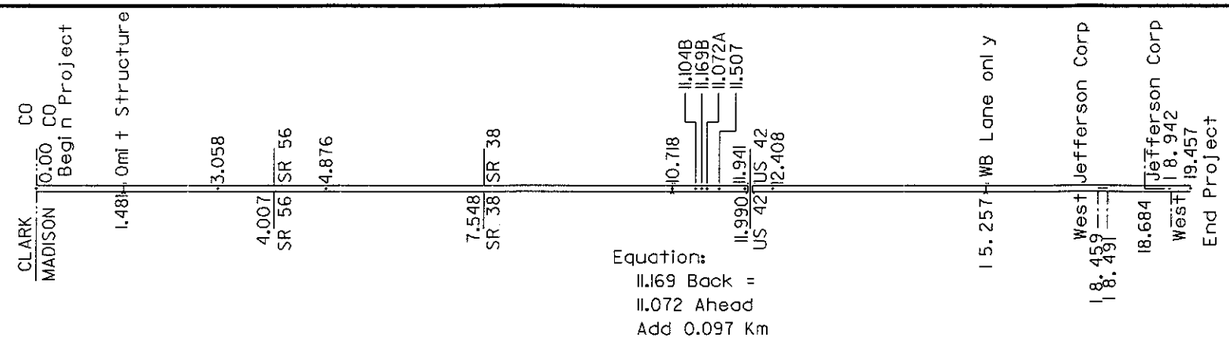

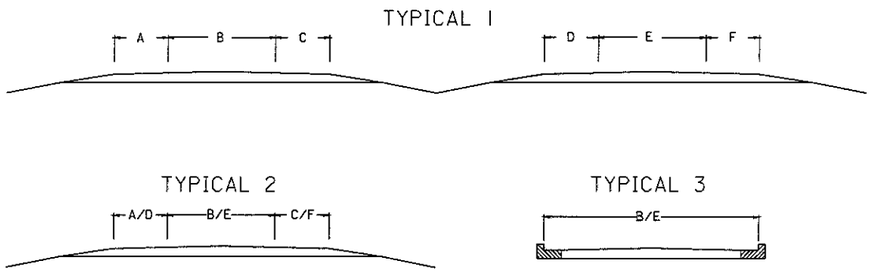

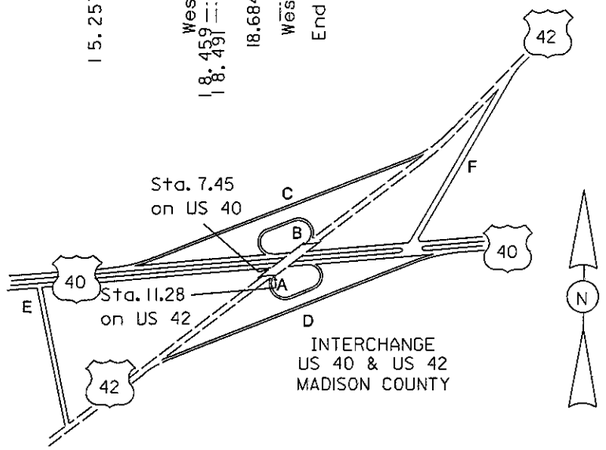

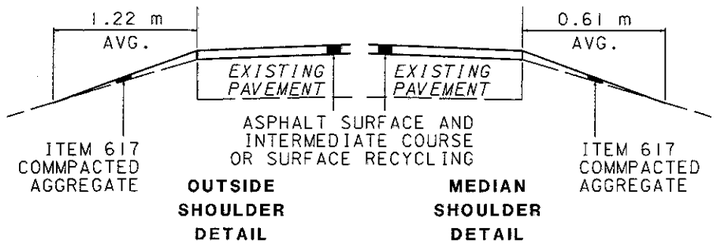

*FOR CALCULATION PURPOSES ONLY. SEE PROPOSAL NOTE FOR ITEM SPECIAL -ASPHALT CONCRETE PAVEMENT SURFACE HEATER DRUM MIX RECYCLING.

**ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 PG64-22, (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 THE PLACEMENT OF THE SURFACE COURSE. THIS MAY RESULT IN A PORTION OF THE ORIGINAL SURFACE BEING EXPOSED BEFORE THE OVERLAY IS PLACED. THE QUANTITY IN SHOWN IN THE TABLE IS FOR CALCULATION PURPOSES ONLY.

***ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE,(APPLIED AT 0.25 L PER SQ METER): THIS MATERIAL IS TO BE APPLIED ON THE INTERMEDIATE COURSE OF ASPHALT.

PAVEMENT DATA

PART	COUNTY	ROUTE	LOCATION FROM	LOCATION TO	LENGTH KM	LENGTH M	TYPICAL	AVERAGE WIDTHS A	B	C	D	E	F	PAVEMENT AREA	ASPHALT CONCRETE: SPECIAL· ASPHALT REJUVENATING AGENT (AT 0.45 L per SQ M)	SPECIAL· ASPHALT RUBBERIZING AGENT (AT 0.16 L per SQ M)	SPECIAL SURFACE RECYCLING AVG THICK	SPECIAL SURFACE RECYCLING	407 TACK COAT (AT 0.35 L per SQ M)	448 INTERMEDIATE COURSE TYPE 1, (PG64-22) AVG·· THICK	448 INTERMEDIATE COURSE TYPE 1, (PG64-22)	407··· TACK COAT (AT 0.25 L per SQ M)	448 SURFACE COURSE TYPE 1, (PG64-22) AVG THICK	448 SURFACE COURSE TYPE 1, (PG64-22)	617 COMPACTED AGGREGATE TYPE A AVG THICK	617 COMPACTED AGGREGATE TYPE A	SPECIAL· COURSE AGGREGATE (AT 0.004 TON per SQ M)	614 WORK ZONE MARKING SIGNS See note on pg. 8
			SLD	SLD	KM	M		M	M	M	M	M	M	SQ M	L	L	MM	SQ M	L	MM	CU M	L	MM	CU M	MM	CU M	TON	EACH
1	MAD	US-40	0.000	1.466	1.466	1466	1		6.70			7.32		20553	9249	1480	50	20553							64	343	74	6
1	MAD	US-40	1.466	1.481	0.015	15	1		6.70			7.32		210					74	15	3	53	32	7				
1	MAD	US-40	1.505	1.520	0.015	15	1		6.70			7.32		210					74	15	3	53	32	7				
1	MAD	US-40	1.520	3.058	1.538	1538	1		6.70			7.32		21563	9703	1552	50	21563							64	360	78	
1	MAD	US-40	3.058	4.876	1.818	1818	1		7.32			7.32		26616	11977	1916	50	26616							64	426	96	6
1	MAD	US-40	4.876	10.718	5.842	5842	1		7.32			7.32		85527	38487	6158	50	85527							64	1367	308	
1	MAD	US-40	10.718	10.911	0.193	193	1		7.32			7.32		2826					989	15	42	707	32	90	64	45	10	8
1	MAD	US-40	10.911	11.040	0.129	129	1		8.68			8.68		2239					784	15	34	560	32	72	64	30		
1	MAD	US-40	11.040	11.169	0.129	129	3		9.75			9.75		2516					881	15	38	629	32	81				
1	MAD	US-40	11.072	11.507	0.435	435	3		9.75			9.75		8483					2969	15	127	2121	32	271				
1	MAD	US-40	11.507	11.533	0.026	26	2		7.32			7.32		381					133	15	6	95	32	12	64	6		2
1	MAD	US-40	11.533	11.774	0.241	241	1		7.32			6.70		3379					1183	15	51	845	32	108	64	56		
1	MAD	US-40	11.774	11.867	0.093	93	1		7.32			7.32		1362					477	15	20	341	32	44	64	22		
1	MAD	US-40	11.867	19.457	7.590	7590	1		7.32			7.32		111118					38891	15	1667	27780	32	3556	64	1777		8
TOTALS															69416	11106		154259	46455		1991	33184		4248		4432	566	30

13-MAY-1998
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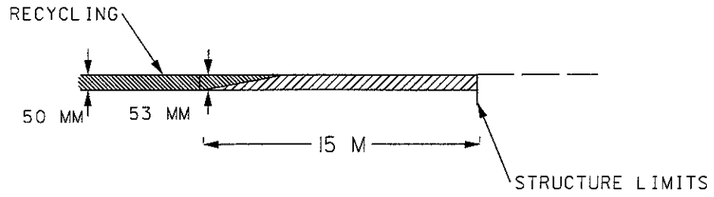
CALCULATED | CHECKED

PLAN NO.

ASPHALT CONCRETE

MAD-40-0.000



*FOR CALCULATION PURPOSES ONLY. SEE NOTE FOR ITEM SPECIAL - ASPHALT CONCRETE PAVEMENT SURFACE HEATER DRUM MIX RECYCLING.

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***ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE,(APPLIED AT 0.25 L PER SQ METER): THIS MATERIAL IS TO BE APPLIED ON THE INTERMEDIATE COURSE OF ASPHALT.

PART	COUNTY	ROUTE	LOCATION FROM SLD	LOCATION TO SLD	SIDE	DESCRIPTION	LENGTH KM	LENGTH M	AVG WIDTH LT M	AVG WIDTH RT M	PAVEMENT AREA SQ M	ASPHALT CONCRETE: SPECIAL* ASPHALT REJUVENATING AGENT (AT 0.45 L per SQ M) L	SPECIAL* ASPHALT RUBBERIZING AGENT (AT 0.16 L per SQ M) L	SPECIAL SURFACE RECYCLING AVG THICK MM	SPECIAL SURFACE RECYCLING SQ M	407 TACK COAT (AT 0.35 L per sq m) L	448 INTERMEDIATE COURSE TYPE 1, (PG64-22) AVG** THICK MM	448 INTERMEDIATE COURSE TYPE 1, (PG64-22) CU M	407*** TACK COAT (AT 0.25 L per sq. m) L	448 SURFACE COURSE TYPE 1, (PG64-22) AVG THICK M	448 SURFACE COURSE TYPE 1, (PG64-22) CU M	617 COMPACTED AGGREGATE TYPE A AVG THICK MM	617 COMPACTED AGGREGATE TYPE A CU M	SPECIAL* COURSE AGGREGATE (AT 0.004 TON per SQ M) TON
1	MAD	US-40	3.838	3.970	R	RIGHT TURN LANE AT SR 56	0.132	132.00			397	59	64	50	7										1.59
1	MAD	US-40	3.891	3.993	R	LEFT TURN LANE AT SR 56 AND MEDIAN	0.102	102.00			248					87			62	38	9				
1	MAD	US-40	3.993	3.907	L	LEFT TURN AT SR 56 AND MEDIAN	0.086	86.00			258					90			65	38	10				
1	MAD	US-40	3.993	4.072	L	RIGHT TURN AT SR 56	0.079	79.00			288	36	46	50	4										1.15
1	MAD	US-40	6.381	6.463	L	LEFT TURN AT MADISON AIR PORT	0.082	82.00			184					64			46	38	7				
1	MAD	US-40	7.403	7.490	R	RIGHT TURN LANE AT SR 38	0.087	87.00			65	39	10	50	4										0.26
1	MAD	US-40	7.403	7.490	R	LEFT TURN LANE AT SR 38 AND MEDIAN	0.087	87.00			209					73			52	38	8				
1	MAD	US-40	7.480	7.623	L	LEFT TURN LANE AT SR 38, MEDIAN AND TAPER	0.143	143.00			282					99			71	38	11				
1	MAD	US-40	10.703	10.718	L/R	APPROACH TO STRUCTURE	0.015	15.00	6.70	7.32	286					100			72	38	11				
1	MAD	US-40	10.718	10.758	L	DEDUCT FOR STRUCTURE	-0.040	-40.00	7.30		-585						15	-9	-146	38	-22				
1	MAD	US-40	11.019	11.552	R	PARKING LANE	0.533	533.00		3.66	1950					683	15	29	488	38	74				
1	MAD	US-40	11.019	11.721	L	PARKING LANE	0.702	702.00	3.66		2299					805	15	34	575	38	87				
1	MAD	US-40	11.507	11.682	R	RAMP TAPER	0.175	175.00			111					39	15	2	28	38	4				
1	MAD	US-40				SERVICE RD. E/W US 40 TO SB US 42 (E)	0.929	929.00	6.70		6224					2178	15	93	1556	38	237				
1	MAD	US-40	11.800		L	RAMP SB US 42 TO WB US 40 (C)	2.380	2380.00	VAR		4948					1732	15	74	1237	38	188				
1	MAD	US-40	11.893		L	RAMP WB US 40 TO SB US 42 (B)	0.244	244.00	6.70		1635					572	15	25	409	38	62				
1	MAD	US-40	11.941		R	RAMP NB US 42 TO EB US 40 (D)	0.724	724.00	6.71		4858					1700	15	73	1215	38	185				
1	MAD	US-40	11.974		R	RAMP EB US 40TO NB US 42 (A)	0.244	244.00	6.70		1635					572	15	25	409	38	62				
1	MAD	US-40	12.212		L	SERVICE RD WB/EB US 40 TO NB US 42 (F)	2.035	2035.00	VAR		3340					1169	15	50	835	38	127				
1	MAD	US-40	12.212			RAMP TAPER	0.052	52.00	2.00		104					36	15	2	26	38	4				
1	MAD	US-40	0.000	10.672	L/R	CROSSOVERS					450					158			113	38	17				
1	MAD	US-40	10.672	19.457	L/R	CROSSOVERS					1750					613			438	38	67				
1	MAD	US-40	10.672	19.457	L/R	DRIVEWAYS					600					210	15	9	150	38	23				
1	MAD	US-40	10.672	19.457	L/R	INTERSECTIONS					1100					385	15	17	275	38	42				
1	MAD	US-40	0.000	19.457	L/R	GRAVEL DRIVES AND CROSSOVERS					4520											64	289		
TOTALS											37156	134	120		15	11365		424	7976		1213		289	3

CALCULATED | CHECKED

PLAN NO.

EXTRA AREA AND DEDUCTIONS

MAD-40-0.000

13-MAY-1998
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PAVEMENT PLANING

PLAN NO.

CALCULATED | CHECKED

PART	COUNTY	ROUTE	LOCATION FROM SLD	LOCATION TO SLD	LENGTH KM	LENGTH M	TYPICAL	AVERAGE WIDTHS A M	B M	C M	D M	E M	F M	PLANING DEPTH FROM MM	PLANING DEPTH TO MM	254 PAVEMENT PLANING BITUMINOUS SQ M	AVERAGE WIDTHS
1	MAD	US-40	1.466	1.481	0.015	15			6.70			7.31		38	38	210	APPROACH TO STRUCTURE
1	MAD	US-40	1.505	1.520	0.015	15			6.70			7.31		38	38	210	APPROACH TO STRUCTURE
1	MAD	US-40	3.891	3.993	0.102	102								38	38	248	LEFT TURN LANE AND MEDIAN AT SR 56
1	MAD	US-40	3.993	3.907	0.086	86								38	38	258	LEFT TURN LANE AND MEDIAN AT SR 56
1	MAD	US-40	6.381	6.463	0.082	82								38	38	184	LEFT TURN LANE AT MADISON COUNTY AIRPORT
1	MAD	US-40	7.403	7.409	0.087	87								38	38	209	LEFT TURN LANE AND MEDIAN AT SR 38
1	MAD	US-40	7.480	7.623	0.143	143								38	38	282	LEFT TURN AND MEDIAN AT SR 38
1	MAD	US-40	10.703	10.718	0.015	15			6.70			7.32		38	38	210	APPROACH TO STRUCTURE
1	MAD	US-40	10.718	10.758	0.040	40						10.67		38	38	427	BRIDGE DECK
1	MAD	US-40	11.021	11.040	0.019	19	1		9.75			9.75		0	38	370	TAPER
1	MAD	US-40	11.040	11.169	0.129	129	3		9.75			9.75		38	38	2516	CURB SECTION
1	MAD	US-40	11.072	11.507	0.435	435	3		9.75			9.75		38	38	8483	CURB SECTION
1	MAD	US-40	11.507	11.526	0.019	19	1		9.75			9.75		38	0	371	TAPER
1	MAD	US-40			0.027	27	2		6.70					0	38	181	BUTT JOINT ON SERVICE ROAD E
1	MAD	US-40			0.027	27	2		6.70					0	38	181	BUTT JOINT ON RAMP C
1	MAD	US-40			0.027	27	2		6.70					0	38	181	BUTT JOINT ON RAMP B
1	MAD	US-40			0.027	27	2		6.71					0	38	181	BUTT JOINT ON RAMP A
1	MAD	US-40			0.027	27	2		6.70					0	38	181	BUTT JOINT ON RAMP D
1	MAD	US-40	19.430	19.457	0.027	27	2		6.70					0	38	181	BUTT JOINT ON SERVICE ROAD F
1	MAD	US-40	19.430	19.457	0.027	27	2		6.70					0	38	181	BUTT JOINT ON SERVICE ROAD F
1	MAD	US-40	19.430	19.457	0.027	27	2		7.32			7.32		0	38	395	END OF PROJECT
1	MAD	US-40	0.000	10.672										38	38	450	CROSSOVERS
TOTALS																16090	

MAD-40-0.000

13-MAY-1998
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SHEET #	REF. #	COUNTY	ROUTE	LOCATION FROM	LOCATION TO	SIDE	DESCRIPTION	HWY KM	ITEM 644																
									CENTER LINE		EDGE LINE		LANE LINE	AUXILIARY MARKINGS											
														TRANSVERSE LINE		CHAN. LINE	STOP LINE	DOTTED LINE	CROSS-WALK LINE	LANE ARROWS					WORD ON PAVEMENT "ONLY"
									100 mm	EQUIV. SOLID LINE	WHITE 100 mm	YELLOW 100 mm	100 mm	WHITE 600 mm	YELLOW 600 mm	200 mm	600 mm	WHITE 100 mm	300 mm	LEFT	LEFT THRU	THRU	RIGHT THRU	RIGHT	2500 mm
				SLD	SLD				KM	KM	KM	KM	KM	METER	METER	METER	METER	METER	METER	EACH	EACH	EACH	EACH	EACH	EACH
	LONG LINE MARKINGS																								
		MAD	40	0.000	11.040	L/R	EDGE LINE	11.040			22.080	22.080													
		MAD	40	11.507	19.457	L/R	EDGE LINE	7.950			15.900	15.900													
		MAD	40				INTERCHANGE EDGE LINE	1.868			1.868	1.868													
		MAD	40				SERVICE ROAD E	0.909	0.909	1.818	1.818						7.30								
		MAD	40				SERVICE ROAD F	0.451	0.451	0.902	0.902						3.60								
		MAD	40	0.000	19.457	L/R	LANE LINE	19.457					39.107												
		MAD	40	10.964	11.040		PAVED MEDIAN	0.076	0.076	0.304															
		MAD	40	11.040	11.169		CURB SECTION	0.129	0.129	0.258	0.258														
		MAD	40	11.072	11.774		CURB SECTION	0.702	0.736	1.472	1.472														
		MAD	40	11.774	11.858		PAVED MEDIAN	0.084	0.084	0.336															
	AUXILIARY MARKINGS																								
		MAD	40	3.935	3.970	R	RIGHT TURN LANE	0.035								37.00								1	1
		MAD	40	3.954	3.970	R	LEFT TURN LANE	0.016								17.00	12.00			1					1
		MAD	40	3.993	4.015	L	LEFT TURN LANE	0.022								22.00	13.00			1					1
		MAD	40	3.993	4.015	L	RIGHT TURN LANE	0.022								22.00								1	1
		MAD	40	7.448	7.490	R	RIGHT TURN LANE	0.042								45.00	20.00							1	1
		MAD	40	7.448	7.490	R	LEFT TURN LANE	0.042								45.00				1					1
		MAD	40	7.514	7.559	L	RIGHT TURN LANE	0.045								40.00								1	1
		MAD	40	7.514	7.559	L	LEFT TURN LANE	0.045								40.00	15.00			1					1
		MAD	40				RAMP A	0.000									9.00								
		MAD	40				RAMP B	0.000									9.00								
	TOTALS CARRIED TO GENERAL SUMMARY								2.385		44.298	39.848	39.107			268.00	88.90			4				4	8

CALCULATED

CHECKED

PAVEMENT MARKING SUBSUMMARY

MAD-40-0.000

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14

13-MAY-1998
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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 UNIDIVIDED 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	COUNTY	ROUTE	LOCATION FROM SLD	LOCATION TO SLD	SIDE	DETAIL	DESCRIPTION	HWY KM	PRISMATIC RETRO-REFLECTOR COLORS ONE-WAY WHITE EACH	ONE-WAY YELLOW EACH	TWO-WAY WHITE/WHITE EACH	TWO-WAY YELLOW/YELLOW EACH	TWO-WAY WHITE/RED EACH	TWO-WAY YELLOW/RED EACH	202 RAISED PAVEMENT MARKER REMOVED FOR STORAGE EACH	621 PRISMATIC RETRO-REFLECTOR EACH	621 RAISED PAVEMENT MARKER INSTALL ONLY EACH	
	1	MAD	40	0.000	19.457	L/R		EXISTING	19.457							1994			
	1	MAD	40	0.000	19.457	L/R	5	LANE LINE	19.457					1624			1624	1624	
	1	MAD	40	10.964	11.040			PAVED MEDIAN	0.076				8					8	
	1	MAD	40	11.040	11.169		GAP	CURB SECTION	0.129				12					12	
	1	MAD	40	11.072	11.774		GAP	CURB SECTION	0.702				60					60	
	1	MAD	40	11.774	11.858			PAVED MEDIAN	0.084				10					10	
	1	MAD	40	3.935	3.970	R		RIGHT TURN LANE	0.035					15	11		26	26	
	1	MAD	40	3.954	3.970	R		LEFT TURN LANE	0.016					13	11		24	24	
	1	MAD	40	7.448	7.490	R		RIGHT TURN LANE	0.042					15	11		26	26	
	1	MAD	40	7.448	7.490	R		LEFT TURN LANE	0.042					15	11		26	26	
	1	MAD	40	3.993	4.015	L		LEFT TURN LANE	0.022					14	11		25	25	
	1	MAD	40	3.993	4.015	L		RIGHT TURN LANE	0.022					19	11		30	30	
	1	MAD	40	7.514	7.559	L		RIGHT TURN LANE	0.045					16	11		27	27	
	1	MAD	40	7.514	7.559	L		LEFT TURN LANE	0.045					16	11		27	27	
	1	MAD	40				6	RAMP A	0.000					11	11		22	22	
	1	MAD	40				6	RAMP B	0.000					11	11		22	22	
	1	MAD	40				3,4	INTERCHANGE EDGE LINE	3.128					131	131		262	262	
	1	MAD	40				6,GAP	SERVICE ROAD E	1.496	22			63				22	85	
	1	MAD	40				6,GAP	SERVICE ROAD F	0.451	11			20				11	31	
TOTAL																1994	2174	2347	

CALCULATED | CHECKED

PLAN NO.

RAISED PAVEMENT MARKER

MAD-40-0.000

6/14

13-MAY-1998
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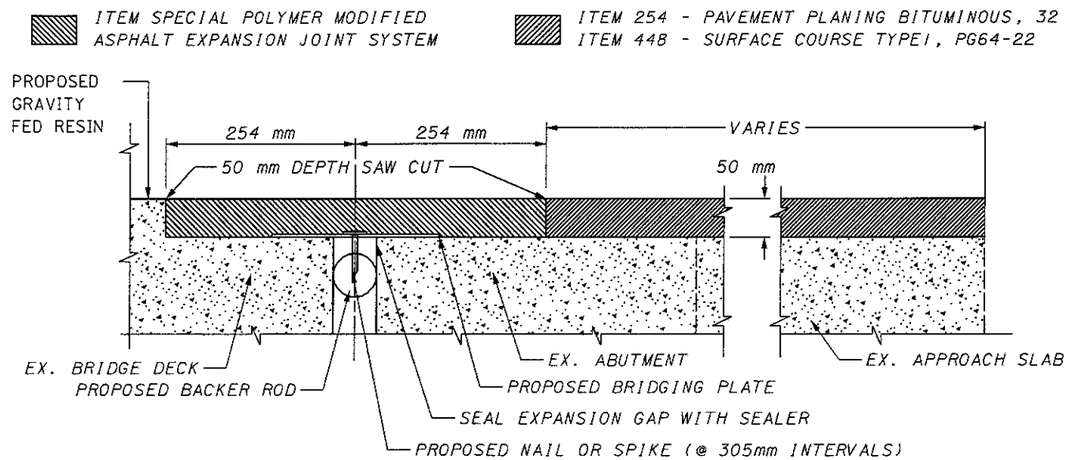
BRIDGE TREATMENT QUANTITIES

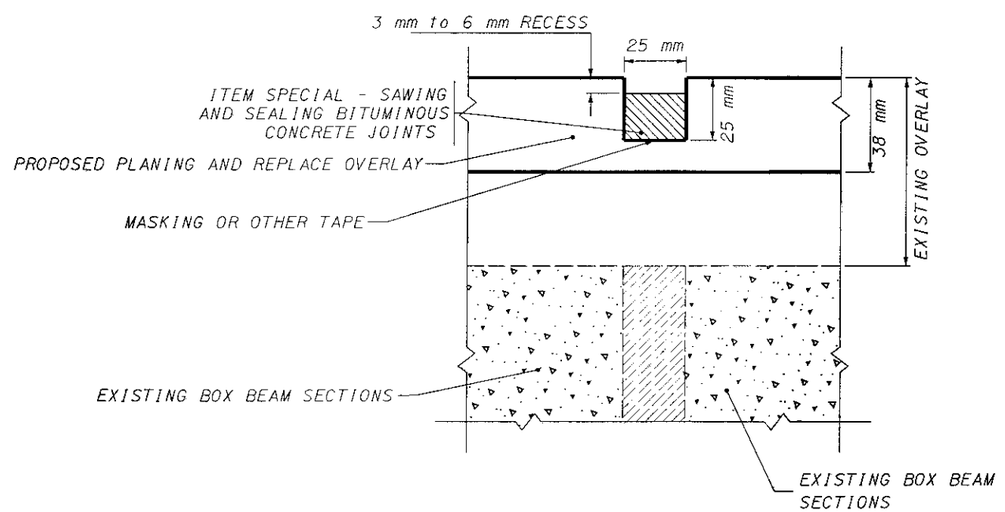
STRUCTURE # / BRIDGE TREATMENT	1.487R	1.487L	10.672R	10.672L	TOTALS
ITEM SPECIAL - POLYMER MODIFIED EXPANSION JOINT SYSTEM (M)	14.63	14.63			29.26
ITEM SPECIAL - SAWING AND SEALING BITUMINOUS CONCRETE JOINTS			22		22
ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECK, TYPE B (SQ M)	23.25	23.25			46.5
ITEM SPECIAL -TREATING CONCRETE BRIDGE DECKS W/ GRAVITY FED RESIN (SQ M)	327	327		398	1052

POLYMER MODIFIED EXPANSION JOINT DETAIL FOR MAD-40-1.487R/L



SAWING AND SEALING BITUMINOUS CONCRETE JOINT DETAIL FOR PIER JOINTS ON MAD-40-10.672R

(SEE GENERAL NOTE ON SHEET 11)



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PLAN NO.

BRIDGE TREATMENT

MAD-40-0.000

CONSTRUCTION INITIATION:
THE CONTRACTOR SHALL ADVISE THE DISTRICT COMMUNICATIONS OFFICER (614-363-1251, EXTENSION 469) AND THE DISTRICT MAINTENANCE OF TRAFFIC ENGINEER (EXTENSION 477) BY VOICE OR BY FAX (614-369-7437), FOURTEEN DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DISTRICT COMMUNICATIONS OFFICER AND THE MAINTENANCE OF TRAFFIC ENGINEER OF ANY AND ALL DELAYS AND CHANGES REGARDING THE CONSTRUCTION PROJECT. THE PROJECT ENGINEER WILL PROVIDED ASSISTANCE/CLARIFICATION FOR ANY QUESTIONS.

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.

UNDERGROUND UTILITIES:
IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE ANY UNDERGROUND UTILITIES MARKED.
OHIO UTILITY PROTECTION SERVICE 1-800-362-2764
NON-MEMBERS MUST BE CALLED DIRECTLY.

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.

CONTRACTORS EQUIPMENT - OPERATION AND STORAGE:
THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC WHERE PRACTICAL. EQUIPMENT SHALL HAVE AT LEAST ONE AMBER FLASHING LIGHT. WHEN PARKED ALONG THE HIGHWAY, THE EQUIPMENT SHALL BE LOCATED EITHER A MINIMUM OF THIRTY FEET FROM THE EDGE OF PAVEMENT OR SIX FEET BEHIND GUARDRAIL WITH A MINIMUM OF 125 FEET OF GUARDRAIL PRECEDING THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT AN APPROVED CONTRACTOR'S STORAGE AREA.

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 202 - CONCRETE MEDIAN REMOVED:
THIS ITEM OF WORK SHALL REMOVE THE EXISTING CONCRETE MEDIAN LOCATED AT SLD 11.040 9(WEST)AND SLD 11.858(EAST).
THE FOLLOWING QUANTITY HAS BEEN PROVIDED:

SLD 3.991	= 24	SQ METERS
SLD 4.023	= 24	SQ METERS
SLD 11.040	= 98	SQ METERS
SLD 11.858	= 100	SQ METERS
ITEM 202-CONCRETE MEDIAN REMOVED	= 246	SQ METERS

ITEM 202- CURB AND GUTTER REMOVED:
THIS ITEM OF WORK SHALL REMOVE THE EXISTING CURB AND GUTTER LOCATED AT
THE FOLLOWING QUANTITY HAS BEEN PROVIDED:

SLD 11.11.858	= 159	METERS
ITEM 202- CURB AND GUTTER REMOVED	= 159	METERS

ITEM 202- CURB REMOVED:
THIS ITEM OF WORK SHALL REMOVE THE EXISTING CURB LOCATED AT SLD 11.040 AND 11.858.
THE FOLLOWING QUANTITY HAS BEEN PROVIDED:

SLD 11.040	= 152	METERS
SLD 11.858	= 68	METERS
ITEM 202-CURB REMOVED	= 220	METERS

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR:
THIS ITEM SHALL BE USED WHERE DIRECTED. THE DEPTH OF REPAIRS SHALL BE APPROXIMATELY 75 mm.
THE FOLLOWING QUANTITY HAS BEEN PROVIDED:
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR = 20 CU M

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 DEPTH OF THE ITEM 301 SHALL BE APPROXIMATELY 305 mm AND PLACED IN TWO EQUAL LIFTS. THE FOLLOWING QUANTITY HAS BEEN PROVIDED:
ITEM 253 - PAVEMENT REPAIR = 40 CU M

ITEM 254 - PAVEMENT PLANING, BITUMINOUS:
THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR ANY AND ALL DAMAGE THAT MAY RESULT FROM THE PLANING OPERATION, INCLUDING CASTINGS AND LOOPS. THE DEPTH OF PLANING CLOSE TO THE CASTINGS SHALL BE AS DIRECTED, TO ACHIEVE A SMOOTH RIDING FINISHED PAVEMENT. PLANED AREAS SHALL NOT BE EXPOSED TO TRAFFIC FOR MORE THAN FIVE DAYS PRIOR TO RESURFACING.

ITEM 301 - BITUMINOUS AGGREGATE BASE:
THIS ITEM OF WORK SHALL FILL AND REPAIR THE AREA WHERE THE CONCRETE MEDIAN AND CURB HAS BEEN REMOVED.
THE FOLLOWING QUANTITY HAS BEEN PROVIDED:

SLD 3.991	= 4	CU METERS
SLD 4.023	= 4	CU METERS
SLD 11.040	= 15	CU METERS
SLD 11.858	= 20	CU METERS
ITEM 301-BITUMINOUS AGGREGATE BASE	= 43	CU METERS

ITEM 407 - 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 0.35 LITER PER SQ. METER.

ITEM 614 - MAINTAINING TRAFFIC:
A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING AND COMPLETED PAVEMENT. LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL, TO THE DISTRICT SIX MAINTENANCE OF TRAFFIC COORDINATOR, THE CONTRACTOR'S MAINTENANCE OF TRAFFIC PLAN WITH CONSTRUCTION PHASING DESCRIPTIONS, PRIOR TO BEGINNING WORK.

ITEM 614 - TEMPORARY LANE LINE CLASS II:
THE FOLLOWING QUANTITY HAS BEEN PROVIDED

SLD 0.000 -10.718 =10.718 KM X 2 SIDE X 1 APP	=	21.436 KM
SLD 10.718-19.457 = 8.739 KM X 2 SIDE X 2 APP	=	34.956 KM
ITEM 614 - TEMPORARY LANE LINE, CLASS II	=	56.392 KM

ITEM 614 - TEMPORARY CENTER LINE CLASS II:
THE FOLLOWING QUANTITY HAS BEEN PROVIDED
SLD 11.040-11.169 = 0.129 KM X 2 APP = 0.258 KM
SLD 11.072-11.507 = 0.435 KM X 2 APP = 0.870 KM
ITEM 614 - TEMPORARY CENTER LINE, CLASS II = 1.128 KM

ITEM 614 - WORK ZONE MARKING SIGNS:
THE FOLLOWING QUANTITY HAS BEEN PROVIDED AS PER SECTION 614.04 OF THE CMS, OW-167-36 "NO EDGE LINES".

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR:
IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

1. FOR LANE CLOSURES: DURING INITIAL SET-UP AND TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

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GENERAL NOTES

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13-MAY-1998
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2. DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

THE OHIO HIGHWAY PATROL
614.466.2660

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE HOURLY BASIS UNDER ITEM SPECIAL - LAW ENFORCEMENT OFFICER WITH PATROL CAR.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED:
ITEM SPECIAL - L.E.O. WITH PATROL CAR = 160 HOURS

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THE CONTRACTOR MAY DO SO AT THE CONTRACTOR'S OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 - MAINTAINING TRAFFIC.

ITEM 621 - RAISED PAVEMENT MARKER, INSTALL ONLY:
MATERIALS SUPPLIED BY THE DEPARTMENT:
ALL MATERIALS ARE TO BE CONTRACTOR FURNISHED, EXCEPT THAT THE DEPARTMENT SHALL SUPPLY RPM MATERIALS IN THE QUANTITIES SHOWN HEREIN TO THE CONTRACTOR. PAY ITEMS FOR THE DEPARTMENT SUPPLIED MATERIALS SHALL BE INDICATED AS "INSTALLATION ONLY". THE QUANTITY AND TYPE OF DEPARTMENT SUPPLIED MATERIALS ARE SHOWN ON THE RAISED PAVEMENT MARKER SUB-SUMMARY SHEET OF THIS PLAN.

THE CONTRACTOR SHALL PICK UP THE DEPARTMENT SUPPLIED RPM MATERIALS AT THE OPI WAREHOUSE, 315 PHILLIPI ROAD, COLUMBUS, OHIO 43228. FOR SOME PROJECTS HAVING QUANTITIES OF LESS THAN 20 RPMS, THE CONTRACTOR MAY PICK UP RPM MATERIALS AT THE DISTRICT OFFICES. QUANTITIES OVER 20 RPMS WILL BE PICKED UP AT THE RECYCLER'S WAREHOUSE OR AS ARRANGED WITH THE DISTRICT. THE CONTRACTOR SHALL PICK UP DEPARTMENT SUPPLIED RPM MATERIALS AT THE SPECIFIED LOCATION(S) FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY. THE RECYCLED RAISED PAVEMENT MARKER (RPM) AUTHORIZATION FORM IS TO BE SIGNED BY THE DISTRICT CONSTRUCTION ENGINEER PRIOR TO PICK UP OF THE RPMS. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND/OR THE PARTIES LISTED ON THE AUTHORIZATION FORM IN WRITING AT LEAST FIVE (5) CALENDAR DAYS PRIOR TO PICK UP OF THE DEPARTMENT SUPPLIED MATERIALS. THE CONTRACTOR SHALL STORE THE RPMS WITHOUT DAMAGE OR CONTAMINATION WITH FOREIGN MATTER. A DEDUCTION IN THE AMOUNT OF THE ACTUAL COST TO THE DEPARTMENT SHALL BE MADE FOR MATERIALS DAMAGED BY THE CONTRACTOR OR FOR CASTINGS RECEIVED BY THE CONTRACTOR WHICH WERE NOT INSTALLED AND WERE NOT RETURNED TO THE DEPARTMENT.

RETURN OF NON-PERFORMED RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT:
RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT, THAT ARE NON-PERFORMED SHALL BE CAREFULLY REPACKED OR PACKED IN THE BOXES IN THE SAME STYLE AND QUANTITY AS ORIGINALLY RECEIVED FROM THE DEPARTMENT.

CASTING STYLES SHALL NOT BE MIXED WITHIN ANY ONE CONTAINER. THE CONTRACTOR SHALL CLEARLY MARK ON THE OUTSIDE OF EACH CONTAINER, THE COLOR OF THE PRISMATIC RETRO-REFLECTOR, THE STYLE OF CASTING. BOXES SHALL BE PLACED ON SKIDS OR PALLETS IN THE SAME STYLE (LOW PROFILE OR CONVENTIONAL, REFLECTORISED OR NON REFLECTORISED) AND NO MORE THAN 420 RPMS (OR 21 BOXES) ON ONE SKID.

ONLY USE THE BOXES SUPPLIED BY THE RAISED PAVEMENT MARKER RECYCLER. BOXES MUST BE MARKED WITH THE RECYCLER'S PART OR CATALOG NUMBER AND THE PROJECT NUMBER. THE RECYCLER'S CATALOG OR PART NUMBERS MAY BE OBTAINED FROM THE OFFICE OF TRAFFIC ENGINEERING IN COLUMBUS, OHIO OR FROM THE RECYCLER. BOXES NOT MARKED WITH THE PROPER RECYCLER'S CATALOG OR PART NUMBERS, AND THE DEPARTMENT'S PROJECT NUMBER WILL NOT BE ACCEPTED AT THE RECYCLER'S WAREHOUSE.

NON PERFORMED MATERIALS WILL BE RETURNED TO THE LOCATION AS SPECIFIED BY THE DISTRICT CONSTRUCTION ENGINEER WITHIN 30 DAYS OF THE COMPLETION OF THE PROJECT.

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO PERFORM THE WORK, SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE PAY ITEM.

IF THE DEPARTMENT HAS TO REPACKAGE THE RPMS CORRECTLY, THE CONTRACTOR WILL BE ASSESSED THE ACTUAL COST FOR REPACKAGING THE MATERIALS BY THE DEPARTMENT'S FORCES.

LOADING OF MATERIALS SUPPLIED BY THE DEPARTMENT AT THE RECYCLER'S WAREHOUSE:

TRUCKS SHALL HAVE A LOADING HEIGHT OF 48 INCHES AND BE ABLE TO BACK UP FLUSH TO THE LOADING DOCK.

TRUCKS SHALL NOT HAVE ANY OBSTRUCTIONS OR PROTRUSIONS THAT PREVENT THE LOADING BY A STANDARD FORKLIFT OR LIFT TRUCK.

SEMI TRUCKS OR 20 FOOT COMMERCIAL TRUCKS ARE THE MOST APPROPRIATE TRUCKS FOR LOADS IN EXCESS OF 4 PALLETS (ONE PALLET = 21 BOXES = 2100 LBS).

STAKE BODY TRUCKS ARE APPROPRIATE TO LOAD LESS THAN 4 PALLETS, PROVIDED THE TRUCK IS RATED FOR THE LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT BY CHAINING OR STRAPPING DOWN AS NEEDED.

PICKUP TRUCKS ARE APPROPRIATE FOR LOADS OF APPROXIMATELY ONE PALLET, PROVIDED THE PICKUP TRUCK IS RATED FOR THE LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT.

DUMP TRUCKS, TILT BED TRUCKS, AND NON-COMMERCIAL MOVING VANS WILL NOT BE LOADED BY THE RECYCLER'S WAREHOUSE.

THE WAREHOUSE SUPERVISOR WILL REFUSE TO LOAD ANY TRUCK THAT IS UNSAFE TO LOAD OR UNSUITABLE FOR THE LOAD BEING PLACED ON THE TRUCK.

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.

ITEM 632 - DETECTOR LOOP:
THE CONTRACTOR SHALL GIVE FORTY-EIGHT HOURS NOTICE TO THE ROADWAY SERVICES DEPARTMENT BEFORE PLANING OPERATIONS BEGIN AT THE INTERSECTIONS OF STATE ROUTES 56 AND 38 CONTACT:

JIM BERGANDINE (614) 363-1251, EXTENSION 426 OR

DAVE ZERBE (614) 363-1251, EXTENSION 266

AT ANY INTERSECTIONS WHERE DAMAGE TO DETECTOR IS UNAVOIDABLE, THE CONTRACTOR SHALL REPLACE THEM. LOOPS SHALL BE INSTALLED BY CONTRACTOR WITHIN 21 DAYS FOLLOWING PLACEMENT OF FINAL COURSE OF ASPHALT AT EACH INTERSECTION AS DETERMINED BY THE PROJECT ENGINEER.

DETECTOR LOOPS SHALL BE INSTALLED IN ACCORDANCE WITH SCD 82.10M 11/24/93. THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED:

ITEM 632 - DETECTOR LOOP = 8 EACH
ITEM 632- LOOP DETECTOR TIE IN = 8 EACH

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GENERAL NOTES

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13-MAY-1998
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ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION JOINT SYSTEM:
THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

D.S. BROWN COMPANY
P.O. BOX 158
300 E. CHERRY ST.
N. BALTIMORE, OH 45872-0158
TEL: 1-800-258-0162

LINEAR DYNAMICS, INC.
RD #2 BOX 311
MUNCY, PA 17756
TEL: (717) 546-6041

INFASTRUCTURE SYSTEMS, INC.
830 E. Higgins Road
Chicago, IL 60173-4792
SUITE 111 M
TEL: (708) 706-9230

HARRIS SPECIALTY CHEMICAL, INC.
10245 CENTURION PARKWAY, N.
JACKSONVILLE, FL 32256
TEL: (904) 996-6000

MATERIALS:
BRIDGING PLATE:
MILD STEEL 3 mm OR 6 mm THICK PLATE, 200 mm WIDE OR 18 GAUGE (APPROX. 1.3 mm) ALUMINUM, 204 mm WIDE.
BINDER:

TYPE:	POLYMER MODIFIED ASPHALT
SOFTENING POINT:	180 DEGREES F. MIN.
FLOW:	3 mm. MAX. AT 140 DEGREES F.
PENETRATION:	9 mm. MAX. AT 77 DEGREES F. 1 mm. MAX AT 0 DEGREES F. ASTM D 3407
DUCTILITY:	40 cm. MIN. ASTM D 113
RESILIENCE:	60% MIN. AT 77 DEGREES F.
TENSILE ADHESION:	700% MIN.
SPECIFIC GRAVITY:	1.10 È 0.05
POURING TEMP:	350 - 390 DEGREES F.

AGGREGATE:

TYPE:	CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT
GRADATION:	THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:
THE BACKER ROD SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

INSTALLATION PROCEDURES:
SAWING AND SURFACE PREPARATION:
AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN 51 MILLIMETERS DEEP (508 mm CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 1649 DEGREES C. AT A VELOCITY OF 914 METERS PER SECOND WITH 103.4 kPa GAGE CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 152 mm OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRE-STRESSED BOX OR CONCRETE SLAB)
THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 3 mm OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 3 mm AND 30 mm BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:
SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMMODATE THE ENTIRE JOINT
LENGTH. SPIKE HOLES WILL BE DRILLED AT 300 mm INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:
SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1 mm THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 177 AND 199 DEGREES C. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 210 DEGREES C. NOR ALLOWED TO EXCEED 199 DEGREES C. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:
AGGREGATE PREPARATION:
HEAT THE AGGREGATE TO A TEMPERATURE OF 135 TO 163 DEGREES C., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:
MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS NOT LESS THAN 13 MILLIMETERS NOR EXCEEDING 64 MILLIMETERS. THE THICKNESS OF EACH LAYER CAN BE VARIED, WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MINIMUM 51 mm). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 13 mm AND ONE 25 mm. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF 51 MILLIMETERS OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:
CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE LITER SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE ODOT TESTING LABORATORY.

PAYMENT:
PAYMENT FOR ALL THE ABOVE WILL BE AT THE UNIT PRICE BID PER LINEAR METER OF SEALED JOINT IN PLACE FOR ITEM SPECIAL 516 31300, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM (50 MILLIMETERS THICK). THIS WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

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GENERAL NOTES

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ITEM SPECIAL - SAWING AND SEALING BITUMINOUS CONCRETE JOINTS:

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 PIER JOINTS OF THE BRIDGE.

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.

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 SHEET 7. THE CUT JOINTS SHALL LIE DIRECTLY ABOVE EACH EXISTING PIER 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 RE-CLEANED 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.

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.

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.

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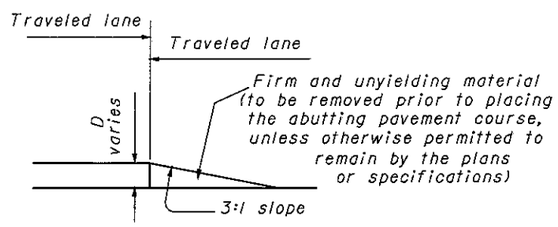
GENERAL NOTES

1. 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.
2. 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.
3. 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.
4. The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
5. Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing MC-9.2M and Item 622.
6. 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.
7. 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.
8. 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.
9. 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.
10. Pavement Repairs (or similar work):
    a. Lengths greater than 20 meters - utilize appropriate treatment from Condition I.
    b. Lengths of 20 meters or less - repairs shall be effected in accordance with Item 255.08. Drums may be used as a seperator adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT

(MILLING OR RESURFACING)

1. This treatment may be used when permitted for Condition I only.
2. OW-171 and OWP-171 signs required.



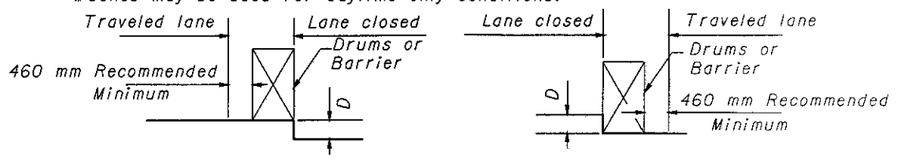
CONDITION I

DROPOFFS BETWEEN TRAVELED LANES

1. 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.



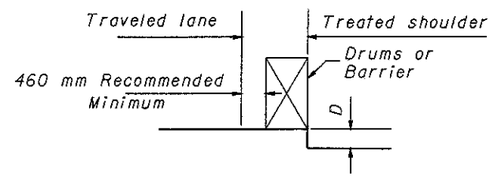
CONDITION II

DROPOFFS WITHIN GRADED SHOULDER AREA

1. The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
2. 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.

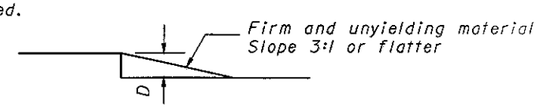
D (mm	Treatment
≤38	1) If edgelines are present, no treatment necessary OR 2) Erect OW-171 and OWP-171 signs.
>38-127	1) If min. lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If min. lane width* requirements cannot be met, close adjacent lane utilizing drums 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

1. This treatment may not be used within a bituminous shoulder where a hot longitudnal joint per Item 401.15 is required.
2. OW-151 signs required.



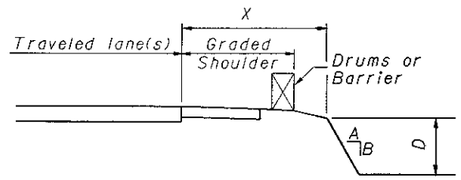
CONDITION III

DROPOFFS BEYOND GRADED SHOULDER OR BACK OF CURB

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

CHART A

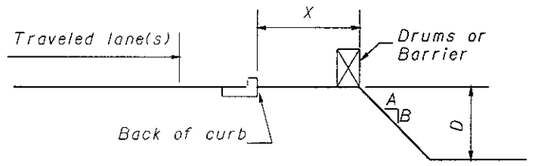
USE FOR: 1. Uncurbed Facilities.
2. Curbed Facilities, where:
   a. Curbs are less than 150 mm in height.
   b. Curbs are 150 mm or greater in height and the legal speed is 70 km/h or greater.



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

METRIC

DROPOFFS IN WORK ZONES

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12/14

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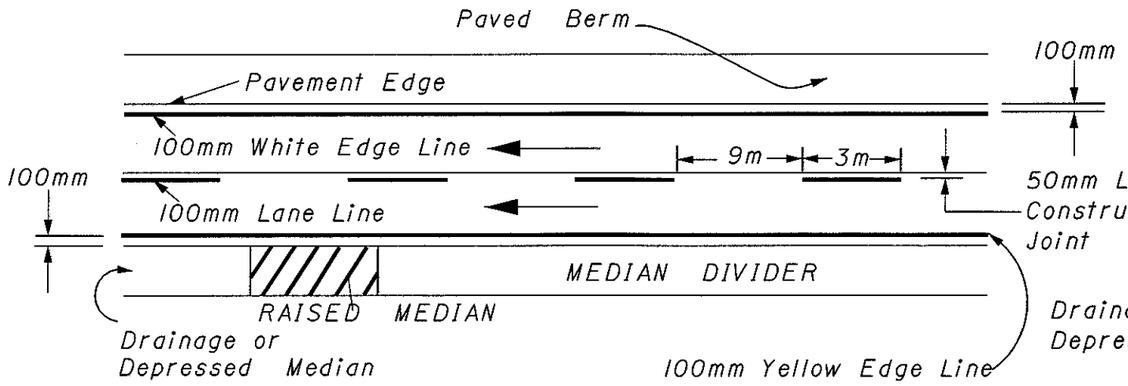
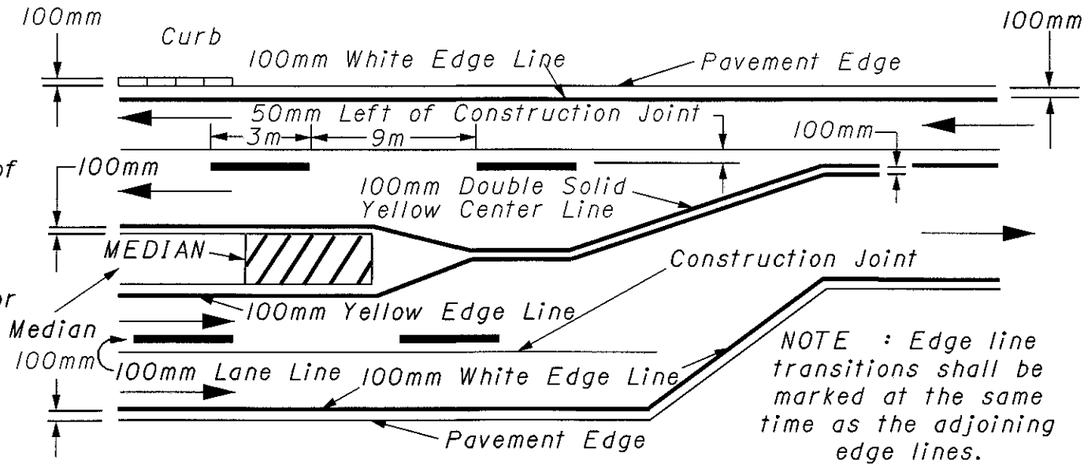
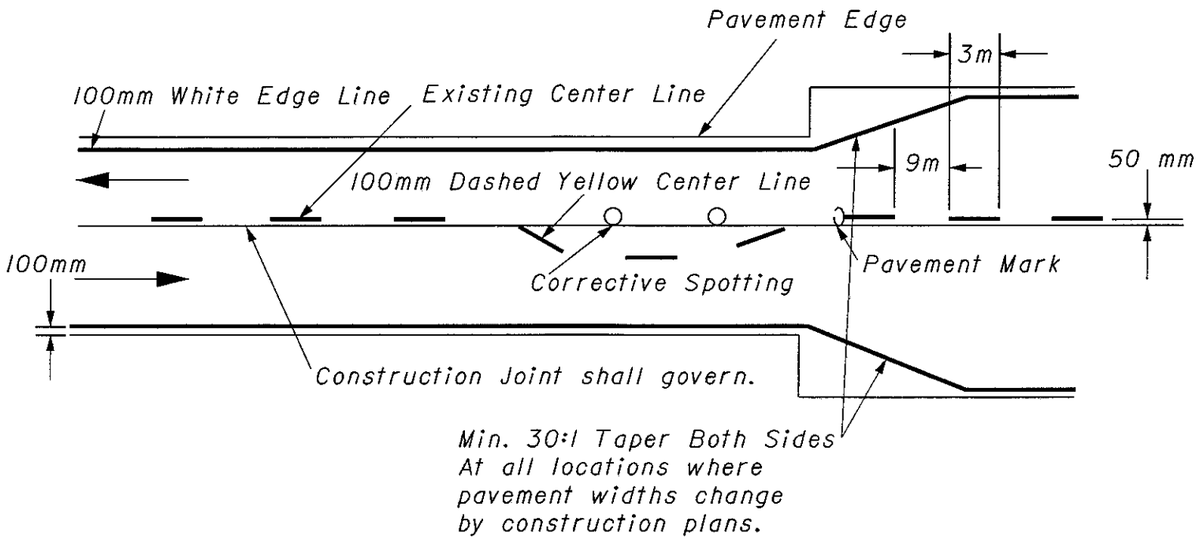
FREEWAY & EXPRESSWAY MAINLINE MARKINGS



MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



TWO LANE MARKINGS



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.

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PLAN NO.

PAVEMENT MARKING TYPICAL DETAILS

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SHEET NUMBER										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
2	3	4	5	6	7	8-11								
				1994						202	54100	1994	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE
						246				202	30600	246	SQ METER	CONCRETE MEDIAN REMOVED
						220				202	32000	220	METER	CURB REMOVED
						159				202	32500	159	METER	CURB AND GUTTER REMOVED
						20				251	01002	20	CU METER	PARTIAL DEPTH PAVEMENT REPAIR
						40				253	02000	40	CU METER	PAVEMENT REPAIR
		16090								254	01000	16090	SQ METER	PAVEMENT PLANING, BITUMINOUS
						43				301	46000	43	CU METER	BITUMINOUS AGGREGATE BASE, PG64-22
46455	11365									407	10000	57820	LITER	TACK COAT
33184	7976									407	14000	41160	LITER	TACK COAT FOR INTERMEDIATE COURSE
1991	424									448	46020	2415	CU METER	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22
4248	1213									448	47020	5461	CU METER	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
30										614	12460	30	EACH	WORK ZONE MARKING SIGN
						56.392				614	20400	56.392	KILOMETER	TEMPORARY LANE LINE, CLASS II
						1.128				614	21400	1.128	KILOMETER	TEMPORARY CENTER LINE, CLASS II
4432	289									617	10100	4721	CU METER	COMPACTED AGGREGATE, TYPE A
				2347						621	00200	2347	EACH	RAISED PAVEMENT MARKER, INSTALLATION ONLY
				2174						621	00300	2174	EACH	PRISMATIC RETROREFLECTOR
						8				632	26500	8	EACH	DETECTOR LOOP
						8				632	27200	8	EACH	LOOP DETECTOR TIE IN
			84.146							644	00100	84.146	KILOMETER	EDGE LINE
			39.107							644	00200	39.107	KILOMETER	LANE LINE
			2.385							644	00300	2.385	KILOMETER	CENTER LINE
			268.00							644	00400	268	METER	CHANNELIZING LINE
			88.90							644	00500	88.9	METER	STOP LINE
			8							644	01300	8	EACH	LANE ARROW
			8							644	01410	8	EACH	WORD ON PAVEMENT, 2500 MM
					22					SPECIAL	51631200	22	EACH	SAWING AND SEALING BITUMINOUS CONCRETE JOINTS
					29.26					SPECIAL	51631300	29.26	METER	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
					46.5					SPECIAL	51912300	46.5	SQ METER	PATCHING CONCRETE BRIDGE DECK - TYPE B
					1052					SPECIAL	51273500	1052	SQ METER	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN
154259	15									SPECIAL	40465100	154274	SQ METER	ASPHALT CONCRETE SURFACE RECYCLING (DRUM MIX)
566	3									SPECIAL	40466050	568.51	METRIC TON	AGGREGATE
69416	134									SPECIAL	40466000	69550	LITER	ASPHALT REJUVENATING AGENT
11106	120									SPECIAL	40466010	11226	LITER	ASPHALT RUBBERIZING AGENT
										SPECIAL	40466100	LUMP		TESTING
						160				614	11100	160	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR
										614	11000	LUMP		MAINTAINING TRAFFIC
						LUMP				623	10001	LUMP		CONSTRUCTION LAYOUT STAKES, AS PER PLAN
										624	10000	LUMP		MOBILIZATION
										806	16000	3	MONTH	FIELD OFFICE, TYPE A
										806	26000	3	MONTH	COMPUTER EQUIPMENT FOR FIELD OFFICE

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PLAN NO.

GENERAL SUMMARY

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