OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINII BEGIN	PROJECT TERMINII END	NET LENGTH MILES	TOWNSHIP	CITY	VILLAGE
1	UNI	US-36	(13.40)	13.40	13.66	0.26		MARYSVILLE	
2	UNI	US.36	(13.66 - 13.82)	13.66	18.98	5.32			
3	DEL	US.36	(0.00 - 8.94)	00.00	9.04	9.03		DELAWARE	

FHWA REGION	STATE	FEDERAL PROJECT		
5	OHIO			

1/14

PLAN NO. 260

DPC Office Copy #79690

The Standard 1989 Specifications of the State of Ohio, Department of Transportation, including changes and Supplemental Specifications listed in the plans and proposal shall 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 3 and provisions for the maintenance and safety of traffic will be as indicated in the proposal.

Approved
Date 2-13-90 W. Howard Tweed
District Deputy Director of Transportation

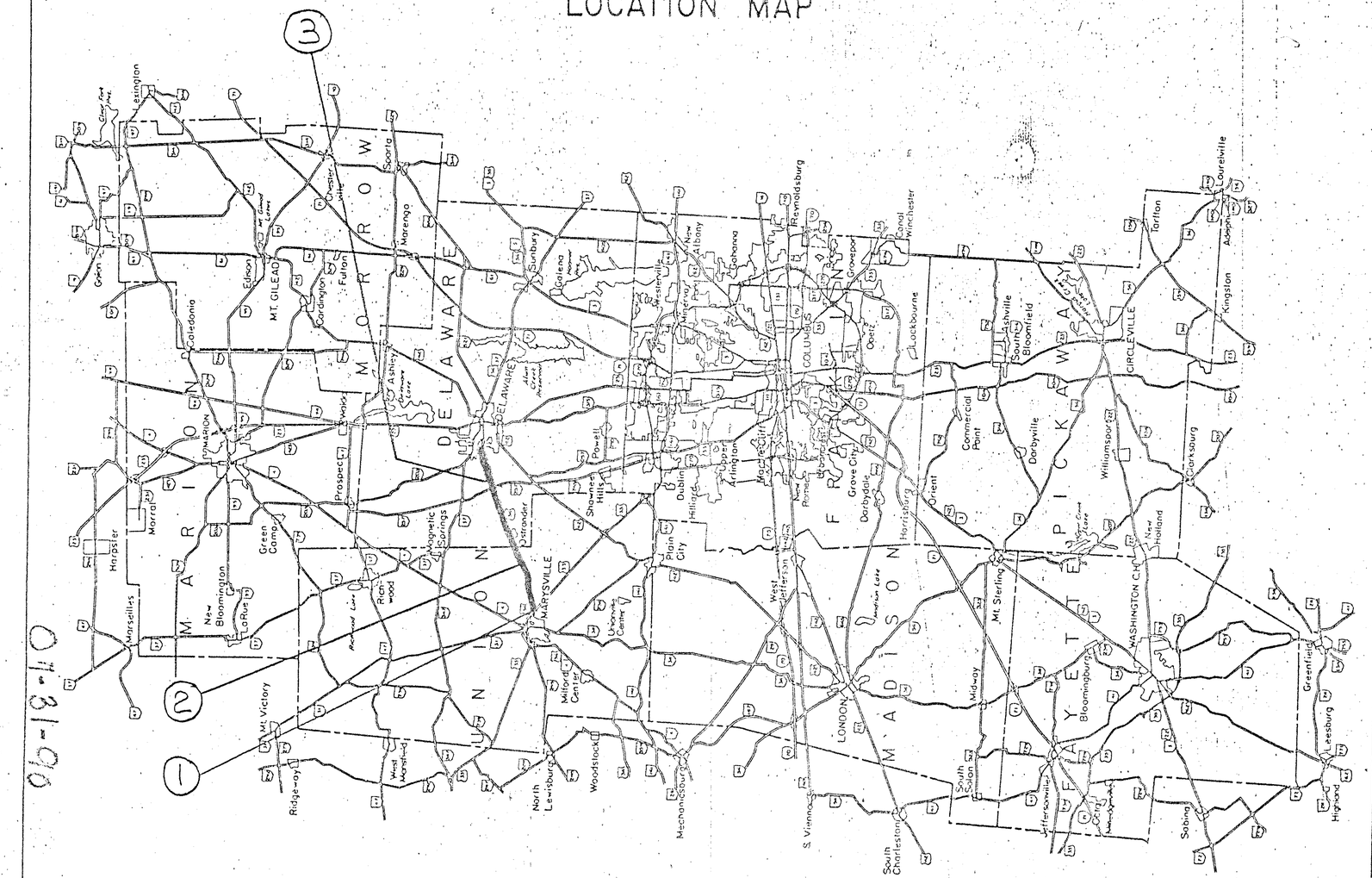
Approved
Date 2-8-90 B.D. Hamblenne
Engineer, Bureau of Bridges and Structural Design

Approved
Date 2-27-90 James E. Kopecka
Deputy Director, Operations

Approved
Date
Assistant Director, Department of Transportation

Approved
Date 5.30.90 Bernard B. Hurst
Director, Department Of Transportation

LOCATION MAP



STANDARD DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	
BP-5	10-01-87	847	10-17-83
MT 99.10	11-14-86	947	10-17-83
MT 99.20	4-29-88		
MT 97.10	4-29-88		
MT 97.11	10-04-89		

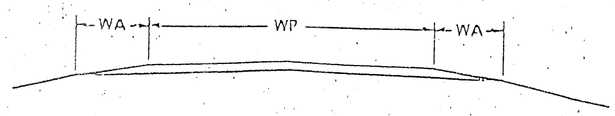
01-31-90

DEPARTMENT OF TRANSPORTATION
M & R 707 REV. 8-1-83

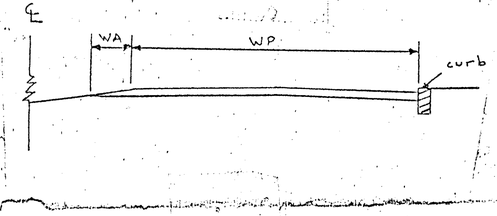
ASPHALT CONCRETE

PLAN NO. 260 — 2/14

TYPICAL 1



TYPICAL 2



① See Note on Sheet 3

Ⓐ See Note on Sheet 9

PAVEMENT DATA

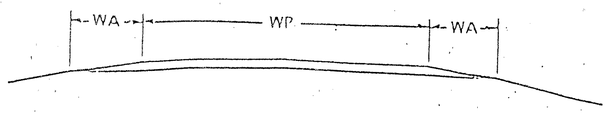
PART	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH LIN. FT.	WP FEET	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA SQ. YDS.	PROPOSED PAVEMENT 407 TACK COAT @ .08 gal./s.y. GALS.	202 WEARING COURSE REMOVED SQ. YD.	ASPHALT CONCRETE ITEM 403 THICK INCHES	ASPHALT CONCRETE ITEM 403 CU. YDS.	ASPHALT CONCRETE ITEM 404 THICK INCHES	ASPHALT CONCRETE ITEM 404 CU. YDS.	604 MAN HOLES ADJUSTED TO GRADE EACH	604 CATCH BASINS ADJUSTED TO GRADE EACH	814 WATER VALVES ADJUSTED TO GRADE EACH	254 PAVEMENT PLANING BITUMINOUS SQ. YD.	614 TEMP. CENTER LINES CLASS II 947.03 TYPE C Ⓐ MILE	202 RAISED PAVEMENT MARKERS REMOVED FOR STORAGE EACH	614 TEMP. CENTER LINES CLASS II Ⓐ MILE	617 COMPACTED AGGREGATE TYPE A CU. YD.
1	US-36	13.40 - 13.66	.26	1373	24/24	2	404	7,323	586	① 216	½	102	1	203					.52		.52	
1	US-36	EXTRA AREA FROM SHEET 4						2,004	160		½	28	1	56								
		TOTAL PART 1	.26	1373				9,327	746	216		130		259					.52		.52	
2	US-36	13.66 - 13.82	.16	845	24/24	2	404	4,507	361		½	63	1	125					.16		.16	
		13.82 - 18.98	5.16	27,245	24	1	404	72,653	5,812	① 662	½	1,009	1	2,018					5.16		5.16	
2	US-36	EXTRA AREA FROM SHEET 4						2,316	185		½	32	1	64								94
		TOTAL PART 2	5.32	28,090				79,476	6,358	662		1,104		2,207					5.32		5.32	94
3	US-36	7.89 - 8.07	(.18)	950	12	1	404	1,267	101		½	18	1	35					.18		.18	
		8.17 - 8.31	(.14)	739	12	1	404	985	79		½	14	1	27					.14		.14	
	CITY																					
		8.82 - 8.90	(.08)	422	12	1	404	563	45		½	8	1	16					.08		.08	
		8.94 - 9.04	(.10)	528	16	2	404	939	75		½	13	1	26					.10		.10	
3	US-36	EXTRA AREA (CITY) FROM SHEET 4						957	77		½	13	1	27								1
		TOTAL PART 3 (CITY)	(0.50)	(2,639)				(4,711)	(377)			(66)		(131)					.50		.50	(1)

DEPARTMENT OF TRANSPORTATION
M & R 707 REV. 8-1-83

ASPHALT CONCRETE

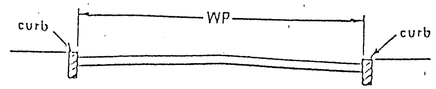
PLAN NO. 260

TYPICAL 1



Ⓐ - See Note on Sheet 9

TYPICAL 2



① Item 202 - Wearing Course Removed

The existing surface course shall be removed to a depth equal to the depth of the proposed new surface course using the cold planning method.

Part 1:

Begin Part 1 at - 13.40 - Butt Joint (2) - 37.5' × 26 ÷ 9 = 216 sq. yd.

Part 2:

Structure at — 15.18 — Butt Joint (2) — 37.5 × 24 ÷ 9 = 200 sq. yd.
Structure at - 16.48 - Taper (2) - 37.5 × 24 ÷ 9 = 200 "
— 16.48 - Plane Deck - 17 × 33 ÷ 9 = 62 "
Structure at - 17.33 - Butt Joint (2) - 37.5 × 24 ÷ 9 = 200 "

Part 3:

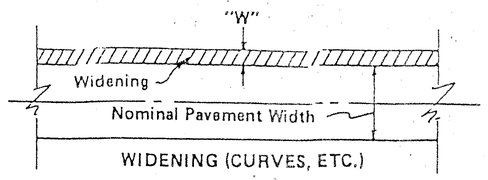
Structure at - 01.85 - Butt Joint (2) - 37.5 × 24 ÷ 9 = 200 sq. yd.
Structure at - 05.02 - Butt Joint (2) - 37.5 × 24 ÷ 9 = 200 "
End Part 3 at - 09.04 - Butt Joint - 37.5 × 24 ÷ 9 = 100 "

PAVEMENT DATA

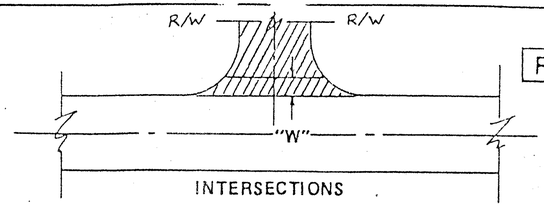
PART	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH LIN. FT.	WP FEET	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA SQ. YDS.	PROPOSED PAVEMENT 407 TACK COAT @ .08 gal./s.y. GALS.	202 WEARING COURSE REMOVED SQ. YD.	ASPHALT CONCRETE ITEM 403 THICK INCHES 1/2	ASPHALT CONCRETE ITEM 403 CU. YDS.	ASPHALT CONCRETE ITEM 404 THICK INCHES 1	ASPHALT CONCRETE ITEM 404 CU. YDS.	604 MAN HOLES ADJUSTED TO GRADE EACH	604 CATCH BASINS ADJUSTED TO GRADE EACH	814 WATER VALVES ADJUSTED TO GRADE EACH	254 PAVEMENT PLANING BITUMINOUS SQ. YD.	614 TEMP. CENTER LINES CLASS II 947.03 TYPE C Ⓐ MILE	202 RAISED PAVEMENT MARKERS REMOVED FOR STORAGE EACH	614 TEMP. CENTER LINES CLASS II Ⓐ MILE	617 COMPACTED AGGREGATE TYPE A CU. YD.
3	US-36	0.00 - 5.22 B	5.22	27,562	24	1	404	73,499	5,880	① 400		1,021		2,042					5.22		5.22	
		5.23A - 7.89	2.66	14,045	24	1	404	37,453	2,996			520		1,040					2.66	100	2.66	
		7.89 - 8.07	.18	950	12	1	404	1,267	101			18		35								
		8.07 - 8.17	.10	528	24	1	404	1,408	113			20		39					.10		.10	
	Rural	8.17 - 8.31	.14	739	12	1	404	985	79			14		27								
		8.31 - 8.44	.13	686	24	1	404	1,829	146			25		51					.13		.13	
		8.44 - 8.70	.26	1,373	24	1	404	3,661	293			51		102					.26		.26	
		8.70 - 8.82	.12	634	24	1	404	1,691	135			23		47					.12		.12	
		8.82 - 8.90	.08	422	12	1	404	563	45			8		16								
		8.90 - 8.94	.04	211	24	1	404	563	45			8		16					.04		.04	
3	US-36	8.94 - 9.04	.10	528	16	2	404	939	75	① 100		13		26								
		EXTRA AREA (RURAL) FROM SHEET 4						1981	158			28		55								113
		TOTAL PART 3 (RURAL)	(9.03)	(47,678)				(125,839)	(10,066)	(500)		(1,749)		(3,496)					8.53	(100)	8.53	(113)
		Total Part 3	9.03	47,678				130,550	10,443	500		1,815		3,627					9.03	100	9.03	114

DEPARTMENT OF TRANSPORTATION
M& R 709 REV. 9-1-83

EXTRA AREA AND DEDUCTIONS



Driveway Note:
Width is to be as directed by the Engineer.



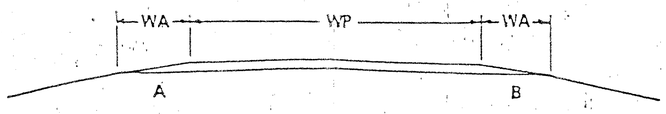
PLAN NO. 260 (4/14)

PART	ROUTE	LOG POINT TO LOG POINT	SIDE	DESCRIPTION	LENGTH MILES	LENGTH LIN. FT.	WIDTH "W" IN FEET	AREA IN SQ. YDS.	PROPOSED ITEMS 407 TACK COAT @ .08 gal./s.y. Gals.	407 COVER AGGR. @ ..... lbs./s.y. Tons	ASPHALT CONCRETE THICK INCHES ½	ASPHALT CONCRETE CU. YDS. ITEM 403	ASPHALT CONCRETE CU. YDS. ITEM 404	ASPHALT CONCRETE THICK INCHES 1	617 Compacted Aggregate Type A 2" avg. depth CU. YD.
1	US-36	VARIOUS		INTERSECTIONS				600							
		13.40 - 13.43	RT.	EXTRA AREA - TURN LANE	.03	158	12	211							
		13.42	℄	CROSSOVER		68	37	280							
		13.53	℄	CROSSOVER		68	37	280							
1	US-36	13.52 - 13.61	LT.	EXTRA AREA - TURN LANE	.09	475	12	633							
		TOTAL PART 1	TO	SHEET 2				2,004	160			28	56		
2	US-36	VARIOUS		INTERSECTIONS				2300							
		VARIOUS		DRIVEWAYS (BITUMINOUS)				400							
		VARIOUS		DRIVEWAYS (AGGREGATE)				(1700)							94
		13.67	℄	CROSSOVER		68	37	280							
		16.48		STRUCTURE - EXTRA WIDTH		18	12	24							
2	US-36	15.18		STRUCTURE - DEDUCT		224	24	- 597							
		17.33		STRUCTURE - DEDUCT		34	24	- 91							
		TOTAL PART 2	TO	SHEET 2				2316	185			32	64		94
3	US-36	VARIOUS		INTERSECTIONS				1700							
		VARIOUS		DRIVEWAYS (BITUMINOUS)				560							
	RURAL	VARIOUS		DRIVEWAYS (AGGREGATE)				(2040)							113
		7.80 - 7.89	℄	EXTRA AREA - TURN LANE	.09	475	12	633							
		7.89 - 8.07	℄	EXTRA AREA - TURN LANE	.09	475	6	317							
3	US-36	8.07 - 8.10	℄	EXTRA AREA - TURN LANE	.03	158	12	211							
		1.85		STRUCTURE - DEDUCT		177	24	- 472							
		5.02		STRUCTURE - DEDUCT		363	24	- 968							
		TOTAL PART 3 RURAL		TO SHEET 3				1981	158			28	55		113
3	US-36	VARIOUS		INTERSECTIONS				400							
	CITY	VARIOUS		DRIVEWAYS (BITUMINOUS)				240							
		VARIOUS		DRIVEWAYS (AGGREGATE)				(20)							1
3	US-36	7.89 - 8.07	℄	EXTRA AREA - TURN LANE	.09	475	6	317							
		TOTAL PART 3	CITY	TO SHEET 3				957	77			13	27		1

DOT 1922

SHOULDER TREATMENT

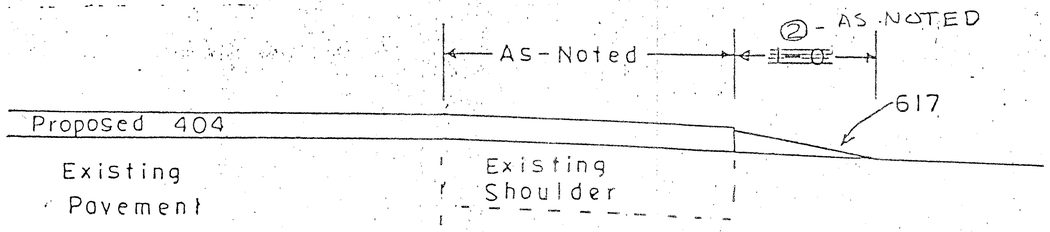
TYPICAL 1



TYPICAL 2



TYPICAL 3



② 617 BACKUP MATERIAL

PART 1 - 13.40 - 13.66 = 6Ft. Wide Each Side
PART 2 - 13.66 - 13.82 = 6Ft. Wide Each Side
PART 3 - 1.26 - 2.78 = 2Ft. Wide Each Side
7.44 - 8.94 = 2Ft. Wide Each Side
8.94 - 9.04 = 2Ft. Wide Left Side

SHOULDER DATA

PART	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH LIN. FT.	TYPICAL	EXISTING TYPE - WIDTH(ft) A TYPE	A WIDTH	B TYPE	B WIDTH	C TYPE	C WIDTH	D TYPE	D WIDTH	AREA SQ. YDS.	407 TACK Bit Matl. @ .08 gal./s.y. Gals.	407 TACK Cover Aggr. @ ..... lbs./s.y. Tons	ASPHALT CONCRETE 403 Thick Inches	403 Cu. Yds.	404 Thick Inches 1	404 Cu. Yds.	407 TACK Bit Matl. @ ..... gal./s.y. Gals.	407 TACK @ ..... c.y./s.y. Cu. Yds.	617 ② BACK-UP MATERIAL 2' WIDE Sq. Yds.	617 Compacted Aggregate TYPE A 2" AVG. DEPTH Cu. Yds.
1	US-36	13.40 - 13.66	.26	1373	2/3	404	2					404	2	610	49		1/2	8	1	17			1,831	102
2	US-36	13.66 - 13.82	.16	845	2/3	404	2					404	2	376	30		1/2	5	1	10			1,127	63
2	US-36	13.82 - 18.98	5.16	27,245	1	617	2	617	2					12,109										673
		TOTAL PART 2	5.32	28,090										12,485	30			5		10				736
3	US-36	0.00 - 1.26	1.26	6,653	1	617	2	617	2					2,957										164
	RURAL	1.26 - 2.78	1.52	8,026	2/3	404	7½	404	7½					13,377	1070			186		372			3,567	198
		2.78 - 5.22B	2.44	12,883	1	617	2	617	2					5,726										318
3	US-36	5.23A - 7.44	2.21	11,669	1	617	2	617	2					5,186										288

Continued on pg. 6

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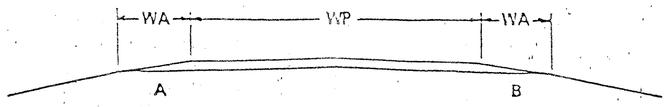
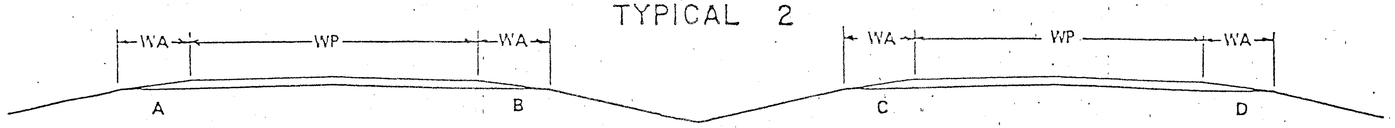
PLAN NO. 260

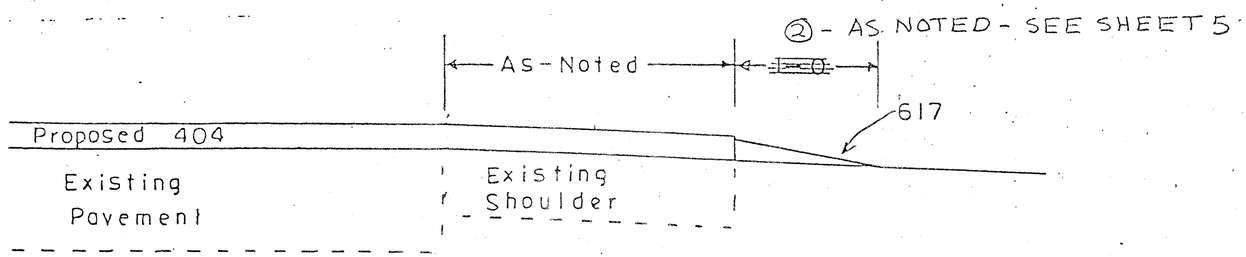
SHOULDER TREATMENT

TYPICAL 1



TYPICAL 2



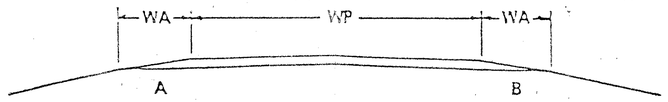


SHOULDER DATA

PART	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH LIN. FT.	TYPICAL	EXISTING TYPE - WIDTH(ft.) A TYPE	A WIDTH	B TYPE	B WIDTH	C TYPE	C WIDTH	D TYPE	D WIDTH	AREA SQ. YDS.	407 TACK Bit Matl. .....@.08..... gal./s.y. Gals.	407 TACK Cover Aggr. .....@..... lbs./s.y. Tons	ASPHALT CONCRETE 403 Thick Inches ½	403 Cu. Yds.	404 Thick Inches 1	404 Cu. Yds.	407 TACK Bit Matl. .....@..... gal./s.y. Gals.	407 TACK .....@..... c.y./s.y. Cu. Yds.	617 ② BACK-UP MATERIAL Sq. Yds.	617 Compacted Aggregate TYPE-A 2" AVG. DEPTH Cu. Yds.
3	US-36	7.44 - 7.89	.45	2,376	1	404	8	404	8					4,224	338		½	59	1	117			1056	57
		7.89 - 8.07	.18	950	1			404	8					844	68		½	12	1	23			211	12
		8.07 - 8.17	.10	528	1	404	8	404	8					939	75		½	13	1	26			235	13
		8.17 - 8.31	.14	739	1			404	8					657	53		½	9	1	18			164	9
	RURAL	8.31 - 8.44	.13	686	1	404	8	404	8					1,220	98		½	17	1	34			305	17
		8.44 - 8.70	.26	1,373	1	404	8		8					2,440	195		½	34	1	68			610	34
		8.70 - 8.82	.12	634	1	404	8	404	8					1,127	90		½	16	1	31			282	16
		8.82 - 8.90	.08	422	1			404	8					375	30		½	5	1	10			94	5
		8.90 - 8.94	.04	211	1	404	8	404	8					375	30		½	5	1	10			94	5
3	US-36	8.94 - 9.04	.10	528	1	404	5							293	23		½	4	1	8			117	7
		TOTAL PART 3 RURAL	9.03	47,678										39,740	2,070			360		717				1,143

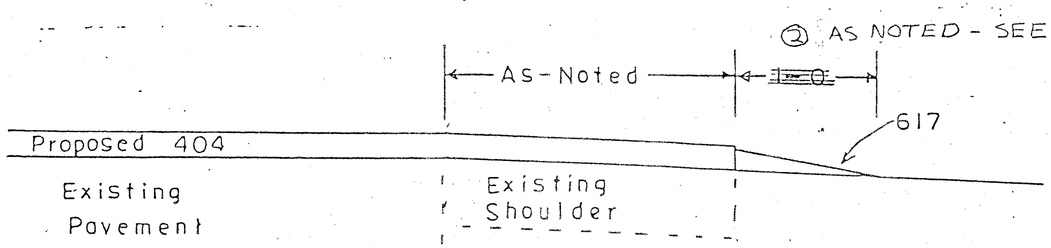
SHOULDER TREATMENT

TYPICAL 1



TYPICAL 2





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PLAN NO. 260

SHOULDER DATA

PART	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH LIN. FT.	TYPICAL	EXISTING TYPE - WIDTH (ft.) A TYPE	A WIDTH	B TYPE	B WIDTH	C TYPE	C WIDTH	D TYPE	D WIDTH	AREA SQ. YDS.	407 TACK Bit. Matl. @0.08 gal./s.y. Gals.	407 TACK Cover Aggr. @ lbs./s.y. Tons	ASPHALT 403 Thick Inches 1/2	ASPHALT 403 Cu. Yds.	CONCRETE 404 Thick Inches 1	CONCRETE 404 Cu. Yds.	407 TACK Bit. Matl. @ gal./s.y. Gals.	407 TACK @ c.y./s.y. Cu. Yds.	617 ② BACK-UP MATERIAL 2' WIDE Sq. Yds.	617 Compacted Aggregate 2" AVG. DEPTH Cu. Yds.
3	US-36	7.89 - 8.07	(.18)	950	1	404	8							844	68		1/2	12	1	23			211	12
		8.17 - 8.31	(.14)	739	1	404	8							657	53		1/2	9	1	18			164	9
	CITY																							
3	US-36	8.82 - 8.90	(.08)	422	1	404	8							375	30		1/2	5	1	10			94	5
		TOTAL PART 3 CITY	(.40)	(2,111)										(1,876)	(151)			(26)		(51)				(26)
		TOTAL PART 3	9.03	47,678										41,616	2,221			386		768				1169

PAVEMENT MARKING SUB-SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

8/14

PLAN NO. 260

CO.	ROUTE	FROM S.L.M.	FROM	TO S.L.M.	TO	621 QUANTITIES CENTER LINES MILES TOTAL	DASHED	SOLID	PARTICIPATION	621 CENTER LINE REMARKS
UNI	US-36	13.82		18.98	End Part 2	5.16	3.99	3.93		
DEL	US-36	0.00	Begin Part 3	9.04	End Part 3	9.03	7.08	6.56		
CENTER LINE TOTAL						14.19	11.07	10.49		

CO.	ROUTE	FROM S.L.M.	FROM	TO S.L.M.	TO	621 QUANTITIES 4" LANE LINES MILES TOTAL	DASHED	SOLID	PARTICIPATION	621 LANE LINE REMARKS
UNI	US-36	13.40	Begin Part 1	13.66	End Part 1	.52	.52			
UNI	US-36	13.66	Begin Part 2	13.82		.32	.32			
LANE LINE TOTAL						.84	.84			

CO.	ROUTE	FROM S.L.M.	FROM	TO S.L.M.	TO	WHITE EDGE LINE QUANTITIES TOTAL MILES	HIGHWAY MILES	RAMP MILES	PART.	YELLOW EDGE LINE QUANTITIES TOTAL MILES	HIGHWAY MILES	RAMP MILES	PART.	621 EDGE LINE REMARKS
UNI	US-36	13.40	Begin Part 1	13.66	End Part 1	.52	.26			.52	.26			
UNI	US-36	13.66	Begin Part 2	13.82		.32	.16			.32	.16			
UNI	US-36	13.82		18.98	End Part 2	10.32	5.16							
DEL	US-36	0.00	Begin Part 3	9.04	End Part 3	18.06	9.03							
EDGE LINE TOTAL						29.22	14.61			.84	0.42			

CO.	ROUTE	FROM S.L.M.	FROM	TO S.L.M.	TO	621 QUANTITIES 8" CHANNELIZING LINES MILES	LIN. FT.	PARTICIPATION	621 CHANNELIZING LINE REMARKS
CHANNELIZING LINE TOTAL									

847 AUXILIARY MARKING (947.03 TYPE A.) INLAID

CO.	ROUTE	S.L.M. FROM	S.L.M. TO	24" TRANSVERSE LINES WHITE LIN. FT.	24" TRANSVERSE LINES YELLOW LIN. FT.	STOP LINE 24" LIN. FT.	12" CROSSWALK LINES WHITE LIN. FT.	WORD ON PAVEMENT ONLY 96" EACH	WORD ON PAVEMENT SCHOOL 96" EACH	LANE ARROWS TURN LEFT EACH	LANE ARROWS TURN RIGHT EACH	LANE ARROWS THRU. EACH	LANE ARROWS COMB. EACH	RAILROAD SYMBOL ON PAVEMENT EACH	4" DOTTED LINES WHITE LIN. FT.	4" DOTTED LINES YELLOW LIN. FT.	REMARKS
AUXILIARY MARKING TOTALS																	

NOTES

ITEM 614 - TEMPORARY CENTER LINES, CLASS II, 947.03, TYPE C

THIS PROJECT IS AN EXPERIMENTAL PROJECT USING THIS ITEM ON THE FINAL COURSE OF ASPHALT CONCRETE. SEE SUPPLEMENTAL SPECIFICATIONS 947 FOR SPECIFICATIONS.

ITEM 614 - TEMPORARY CENTER LINES, CLASS II

THE CONTRACTOR MAY CHOOSE ANY OF THE METHODS UNDER ITEM 614 TEMPORARY CENTER LINES, CLASS II FOR THE FIRST LAYER OF ASPHALT CONCRETE.

DEPARTMENT OF TRANSPORTATION
MA R 712 REV. 9-1-83

GENERAL SUMMARY

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PLAN NO. 260

ITEM	PART 1 UNI 36	PART 2 UNI 36	TOTAL PART 1+2
407	795	6388	7183
403	138	1109	1247
404	276	2217	2493
202	216	662	878
202			
624	LUMP	LUMP	LUMP
617	102	830	932
617	1	5	6
614	LUMP	LUMP	LUMP
614	0.52	5.32	5.84
614	0.52	5.32	5.84
621	1.04	10.96	12
621	0.52	0.32	0.84
621		5.16	5.16
614	6	20	26

PART 3 DEL 36		
RURAL	CITY	TOTAL
12,136	528	12664
2,109	92	2201
4,213	182	4395
500		500
100		100
LUMP	LUMP	LUMP
1256	27	1283
8	1	9
LUMP	LUMP	LUMP
8.53	0.50	9.03
8.53	0.50	9.03
17.30	0.76	18.06
9.03		9.03
44		44

ITEM	GRAND TOTAL PARTS 1,2 & 3	UNIT	DESCRIPTION
407	19847	GAL.	TACK COAT
403	3448	CU.YD.	ASPHALT CONCRETE AC-20
404	6888	CU.YD.	ASPHALT CONCRETE AC-20, AS PER PLAN
202	1378	SQ.YD.	WEARING COURSE REMOVED
202	100	EACH	RAISED PAVEMENT MARKER, REMOVED FOR STORAGE
624	LUMP	LUMP	MOBILIZATION
617	2215	CU.YD.	COMPACTED AGGREGATE, TYPE A
617	15	M.GAL	WATER
614	LUMP	LUMP	MAINTAINING TRAFFIC
614	14.87	MILE	TEMPORARY CENTER LINE, CLASS II
614	14.87	MILE	TEMPORARY CENTER LINE, CLASS II, 947.03, TYPE C
621	30.06	MILE	EDGE LINE
621	0.84	MILE	LANE LINE
621	14.19	MILE	CENTER LINE
614	70	EACH	WORK ZONE MARKING SIGN

GENERAL NOTES

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.

RAILROAD CROSSINGS:
The new surface course shall be feathered or butt jointed to meet the rail grades as specified.

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:
This material shall be placed in a separate operation where and as directed by the engineer.

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 0.10 gal. per sq. yd.

COVER AGGREGATE:
Cover aggregate shall conform to 703.06.

Item 404 Asphalt Concrete, AC-20, as per plan
The top surface of the longitudinal and transverse joints shall be painted six (6) inches wide with the same bituminous material used in the 404 mixture as directed. Application rate shall be at least 0.25 gal./s.y. The cost of this operation to be included in the cost of the 404 Asphalt Concrete, AC-20, as per plan.

Fresh Tar Signs
The Contractor shall provide, erect and remove "Fresh Tar" signs in accordance with the O.M.U.T.C.D. Payment for the above to be included in the Unit Price Bid for Maintaining Traffic.

FHWA REGION	STATE	PROJECT	
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PLAN NO. 260

INITIAL PAVEMENT MARKINGS FOR RESURFACED SECTIONS GENERAL NOTES

In addition to the requirements of 621 and 647 the following shall apply:

621 and 647 Materials

The materials used on this project shall either be 621 fast dry traffic paint or 647 thermoplastic material approved by prequalification.

The Contractor shall provide storage for all materials and shall transport materials to the site where used. Glass beads shall be kept dry during storage and prior to use.

The Laboratory will furnish the names of manufacturers and code numbers from its approved list of prequalified white and yellow paint upon request.

621 and 647 Special Equipment

The Contractor's striper shall be equipped with an odometer graduated to 1/100 of a mile. The Engineer shall determine the degree of accuracy of the Contractor's odometer and establish an adjustment factor as may be required to accurately determine the pay item quantities. The Engineer shall periodically check the odometer's operation to assure maintenance to accurate measurements.

Failure of the odometer to function properly shall be cause to stop the work until the odometer is made to function properly. On short projects the Engineer may approve alternate methods to accurately measure the length of the various types of markings applied. If measurement of the work has to be done by the Department, the cost of the Department labor and equipment plus 10 percent shall be deducted from payment due the Contractor for the work. When measuring lane, edge and/or center line marking, the odometer shall be started at the first marked line and remain in operation, until the end of the section being marked, where it shall be shut off and the reading of the odometer recorded.

Electrical foot counters shall be provided and installed in the application equipment used to apply long line markings. The counters shall individually tabulate the amount of footage applied for each line, whether solid or dashed. The counters shall be a six digit type with a reset feature.

The Contractor shall use an accurate dashing mechanism, capable of being easily adjusted, to place lane or center line markings as specified in the plans or as directed by the Engineer.

Provision for the described special equipment by the Contractor shall be incidental to the application.

621 Material Quantity Measurement

The quantity of marking material or glass beads per unit of measurement will be computed by the Engineer at the end of each day's work. A day's applied mileage of less than 2 miles may be included in the next day's applied markings for the purpose of computing marking material and bead application rates.

The Contractor shall provide a calibrated measuring device acceptable to the Engineer for measuring material in the striper tanks.

The quantity of marking material used shall be determined by measuring the marking material in the tanks before and after marking material is applied. The Contractor shall cooperate with the Engineer in providing measurements whenever requested. The marking material application rate shall be determined by dividing the total gallons used by the appropriate marking length as determined from the foot counter as described within the Special Equipment Section of these notes. Any determination of pay deduction resulting from shortages in marking quantities shall be based on the measurements obtained by this method. The amount of glass beads applied will be ascertained by the Engineer by observation and from information supplied by the Contractor as to the quantity used.

647 Material Quantity Measurement

The quantity of marking material or glass beads per unit of measurement will be computed by the Engineer at the end of each day's work. A day's applied quantity of less than 100 pounds of marking material may be included in the next day's applied markings for the purpose of computing marking material and bead application rates.

The Contractor shall provide a calibrated measuring device acceptable to the Engineer for measuring material in the striper tanks.

The quantity of marking material used shall be determined by measuring the marking material before and after marking material is applied. The Contractor shall provide measurements whenever requested by the Engineer. The marking material application rate shall be determined by dividing the total pounds of thermoplastic material used by the appropriate marking length as determined from the foot counter as described within the Special Equipment Section of these notes. Any determination of pay deduction resulting from shortages in marking quantities shall be based on the measurements obtained by this method. The amount of glass beads applied shall by ascertained by the Engineer by observation and from information supplied by the Contractor as to quantity used.

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PLAN NO. 260

INITIAL PAVEMENT MARKINGS FOR RESURFACED SECTIONS GENERAL NOTES

621 Layout and Premarking

In accordance with 621.05 the Contractor shall "I" no-passing zones in accordance with a no-passing zone log provided by the Engineer.

647 Layout and Premarking

In addition to the requirements of 647.04, premarking for auxiliary markings shall be located from schematic forms provided by the Engineer.

Markings shall not be applied over existing markings except when applying initial permanent markings over temporary markings of "fast-dry" paint. Temporary markings other than fast-dry paint shall be removed and the surface prepared to the satisfaction of the Engineer before permanent markings are applied.

621 and 647 Auxiliary Pavement Marking

For this project, auxiliary markings shall be defined as: Stop lines, crosswalk lines, transverse lines, railroad and school symbol markings, lane arrows, word on pavement, curb and island markings, parking lot stall markings and dotted lines except when used to extend edge lines.

647 Material Application Temperature

The Contractor shall provide a calibrated temperature sensing device which will accurately measure the temperature of the extruded thermoplastic material when it makes contact with the pavement. A temperature of 400°F to 440°F at point of application to road surface must be maintained at all times.

647 Material Application Rates

In addition to the requirements of 647 the minimum application rates shall be as follows:

Pounds Per Mile of Line	Width of Line (Inches) 4	8	12	24
Solid Line	2340	4680	7020	14040
Dashed Line	585	1170	1755	3510

133 Pounds Per 100 Square Feet

947.02 Thermoplastic Pavement Markings

Glass beads intermixed or dropped on 947.02 thermoplastic pavement marking material shall meet the following specification:

Sieve No.	% Retained
10	3 Max
20	5 to 20
40	65 to 95
50	0 to 5
Refractive Index:	1.50 to 1.00
Roundness:	80% Min
Coating:	Adhesion Promoting

The application rate of drop-on beads shall be a uniform 25 pounds of beads for each 100 square feet of thermoplastic material surface area.

662 Raised Pavement Markers

This Contract may include sections of roadway where plowable prismatic raised pavement markers are to be installed in the pavement. Raised pavement marker placement for a resurfaced section shall begin after the permanent pavement marking for that resurfaced section is completed and dry.

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5	OHIO		

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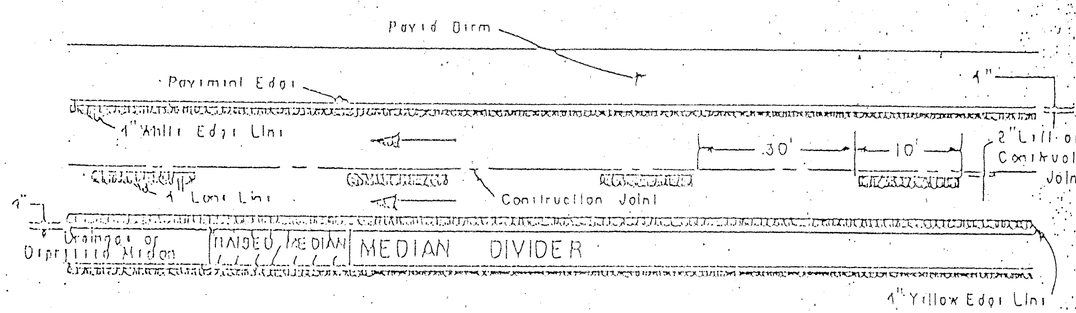
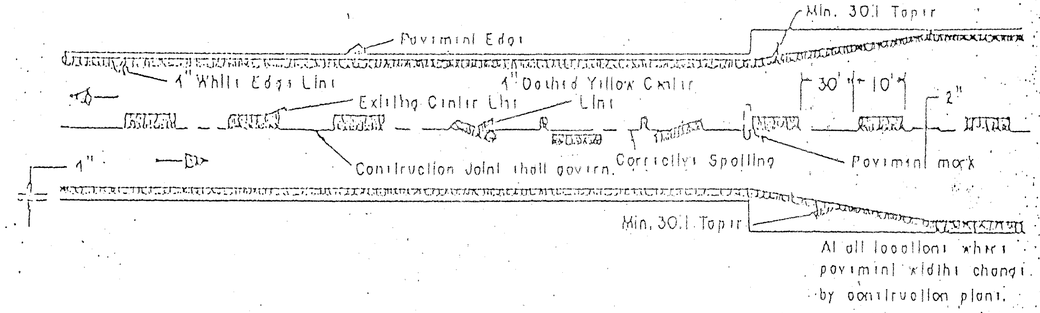
PLAN NO. 260

PAVEMENT MARKING TYPICAL DETAILS

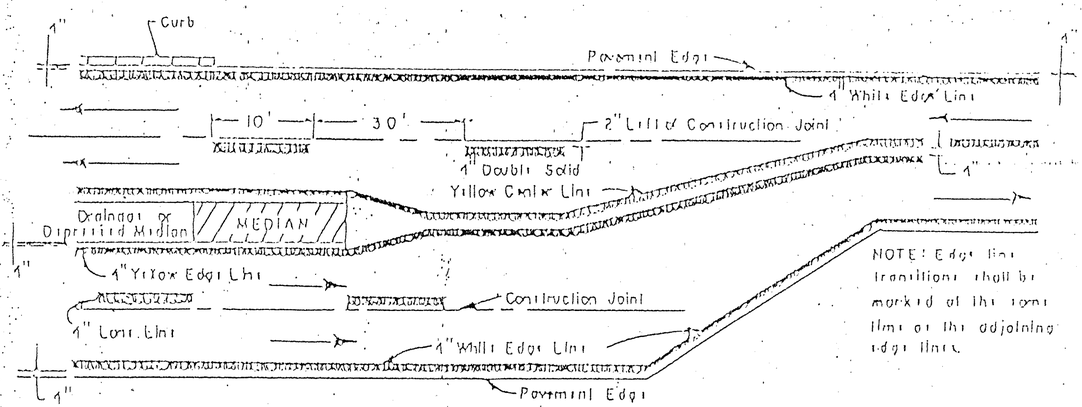
FREEWAY & EXPRESSWAY MAINLINE MARKINGS



TWO LANE MARKINGS



MULTILANE DIVIDED & UNDIVIDED HIGHWAY 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 72.20 FOR ENTRANCE AND EXIT RAMP MARKINGS.

3. The cycle length for dashed lines shall be 40 feet plus or minus 6 inches. The minimum length of dash shall be sufficiently long to maintain a 3:1 ratio between length of gap and length of dash.

DEPARTMENT OF TRANSPORTATION	
PAVEMENT MARKING TYPICAL DETAILS	DATE 11/80
JDL CDR	

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WORD AND SYMBOL MARKING DETAILS

FED RD DIVISION	STATE	PROJECT	
5	OHIO		

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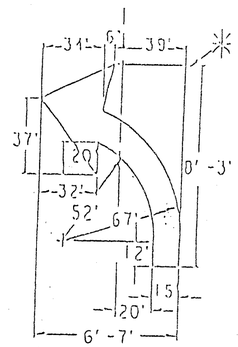
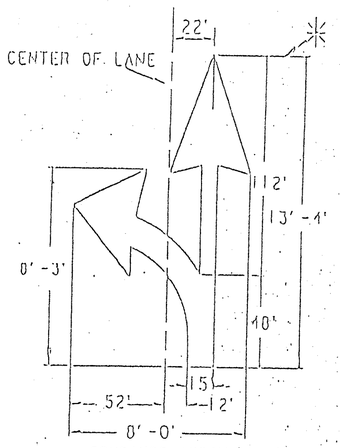
PLAN NO. 260

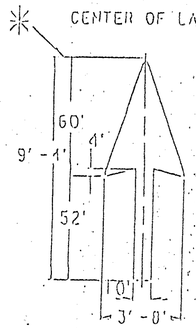
CENTER OF LANE



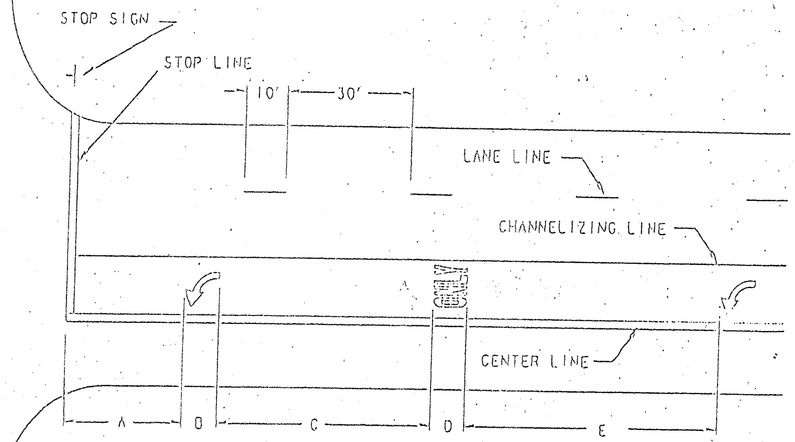
TURN ARROW
(LEFT ARROW SHOWN
RIGHT ARROW OPPOSITE)



COMBINED ARROW
THREE HEAD DIRECTIONAL ARROWS CAN BE ACHIEVED BY THE COMBINATION OF TURN ARROWS.

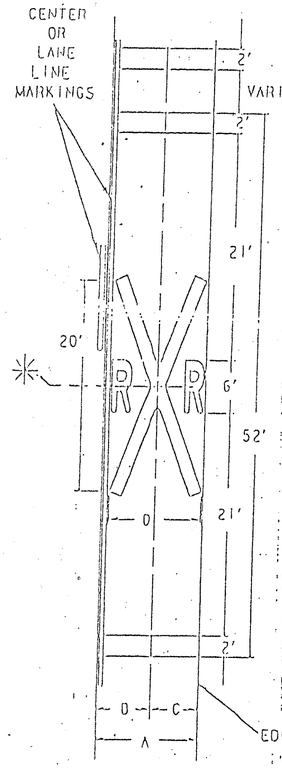


THROUGH ARROW



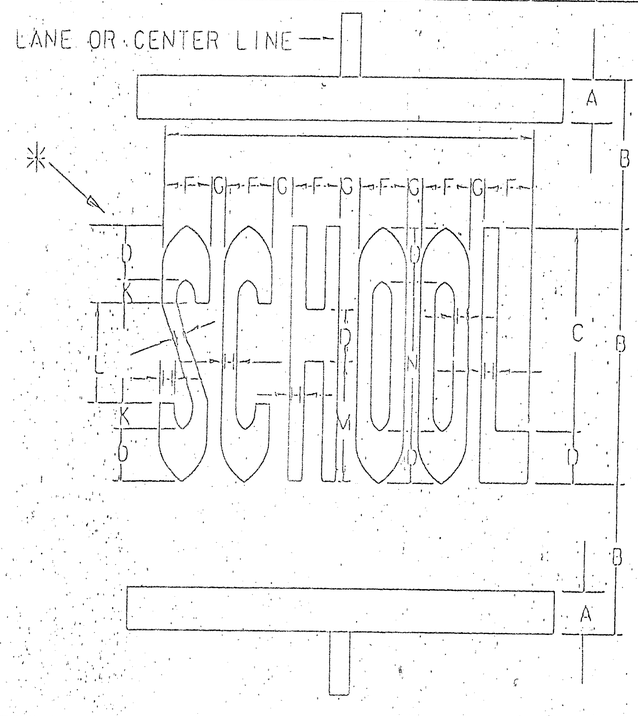
NOTE:
STOP BAR LOCATED MIN. 40' FROM AT LEAST ONE SIGNAL HEAD WHICH APPLIES TO THAT APPROACH

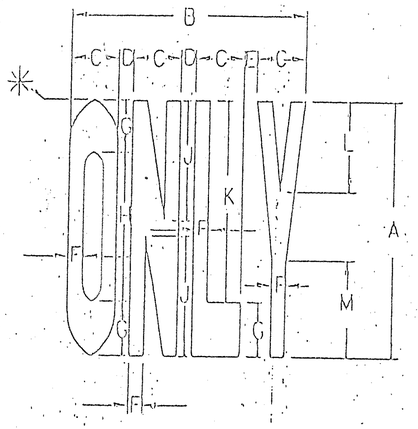
TYPE	DIMENSIONS (FEET)				
	A	B	C	D	E
RURAL	30 MIN.	0.25	32-00	8	32-60
URBAN	10 MIN.	0.25	32-00	6	21-60



A PVMT. WIDTH	DIMENSIONS (INCHES)		
	B	C	D
8'-0"	52	44	84
9'-0"	58	50	96
10'-0"	60	60	96
11'-0"	66	66	96
12'-0"	72	72	120

TYPE	DIMENSIONS (INCHES)												
	A	B	C	D	E	F	G	H	J	K	L	M	N
RURAL	16	96	76	20	150	20	6	6	0	9	30	45	56
URBAN	16	72	57	15	140	10	8	4.50	9	6.75	20.50	33.75	42





TYPE	DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	J	K	L	M
RURAL	96	94	20	6	2	6	20	56	45	76	32	36
URBAN	72	90	18	8	2	4.50	15	42	33.75	57	24	27

NOTES

1. PAVEMENT MARKING FOR WORDS, SYMBOLS, ARROWS AND TRANSVERSE LINES FOR WORD 'SCHOOL' OR THE RAILROAD SYSMOOL SHALL BE WHITE REFLECTIVE MATERIAL.

2. TWO TRANSVERSE LINES SHALL BE INCLUDED IN THE PAYMENT FOR EACH WORD 'SCHOOL'. THREE TRANSVERSE LINES SHALL BE INCLUDED IN THE PAYMENT FOR EACH RAILROAD SYMOOL.

3. ON MULTI-LANE APPROACHES, THE TRANSVERSE LINES USED WITH THE RAILROAD SYMBOLS SHALL EXTEND ACROSS ALL APPROACH LANES AND SYMOOLS SHALL BE PLACED IN EACH APPROACH LANE.

4. FOR THE RAILROAD SYMOOL, NO PORTION OF ONE TRANSVERSE LINE SHALL BE CLOSER THAN 30 FEET FROM THE NEAREST RAILROAD TRACK RAIL AND THE LINE MAY BE EITHER PARALLEL TO THE TRACK OR PERPENDICULAR TO THE CENTERLINE OF THE ROADWAY. THE OTHER TWO TRANSVERSE LINES AND THE RAILROAD SYMOOL SHALL BE LOCATED FROM THE STATION REFERENCE POINT SHOWN IN THE PLANS.

5. ON MULTI-LANE APPROACHES, THE TRANSVERSE LINES USED WITH THE WORD 'SCHOOL' SHALL EXTEND ACROSS ALL APPROACH LANES WITH A SINGLE WORD 'SCHOOL' CENTERED ACROSS THE APPROACH LANES. ON TWO LANE ROADWAYS, THE TRANSVERSE LINES SHALL EXTEND ACROSS THE ROADWAY WITH THE WORD 'SCHOOL' CENTERED ACROSS THE ROADWAY. CENTER OR LANE LINES SHALL NOT PASS THROUGH THE 'SCHOOL' MARKING.

6. THE STOP LINE SHOULD BE PLACED WHERE CROSS-CORNER VISION IS MAXIMUM. IN NO CASE MORE THAN 30 FEET OR LESS THAN 4 FEET FROM NEAREST EDGE OF THE INTERSECTING ROADWAY. FOR NORMAL INTERSECTIONS A MAXIMUM DISTANCE OF 10 FEET IS RECOMMENDED.

   IF A MARKED CROSSWALK IS PRESENT THE STOP LINE SHOULD BE PLACED 4 FEET IN ADVANCE OF AND PARALLEL TO THE NEAREST CROSSWALK.

7. ANY OF THE FOLLOWING STANDARDS FOR LETTER (EXCEPT 'R'), NUMERAL OR SYMBOL DIMENSIONING MAY BE USED.

   A.) STANDARD DIMENSIONS SHOWN ON THIS DETAIL (NOMINAL)

   B.) STANDARD DIMENSIONS IN ACCORDANCE WITH THE 1977 METRIC EDITION STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING WITH ERRATA.

   C.) STANDARD DIMENSIONS CONFORMING TO REQUIREMENTS OF SECTION 3D-17 OR AS SHOWN IN FIGURES 3-17, 3-18, 7-2, 7-3, 8-2 OR 9-6 OF THE 1970 NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

** THE LETTER 'R' DIMENSIONS SHALL BE AS SHOWN ON THIS SHEET AND IN THE NMUTCD SECTION 8-2.

✳ INDICATES STATION REFERENCE POINT

CADD FILE=WORD.DGN, D

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