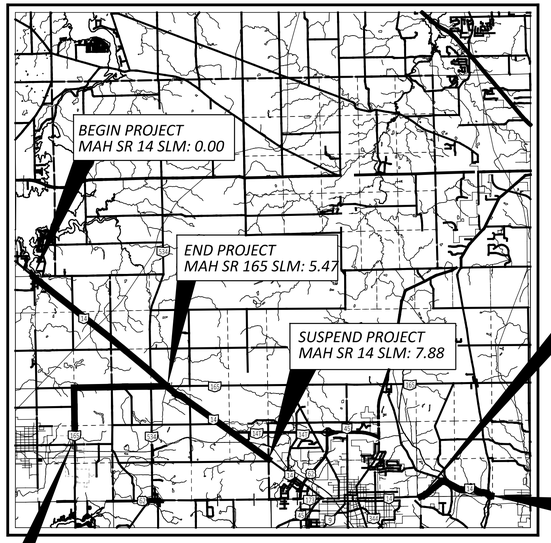
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MAH-14/165-0.00/1.67

VILLAGE OF BELOIT
CITY OF SALEM
SMITH, GOSHEN, AND GREEN TOWNSHIPS
MAHONING COUNTY



LOCATION MAP

LATITUDE: 40°56'55" LONGITUDE: 80°57'10"

N

FEDERAL PROJECT NUMBER

E231(001)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

RESURFACING SR 14 AND SR 165 IN MAHONING COUNTY, INCLUDING REPLACEMENT OF ONE STRUCTURE AND MINOR BRIDGE WORK TO SIX STRUCTURES.

EARTH DISTURBED AREAS (RESURFACING)

PROJECT EARTH DISTURBED AREA (RESURFACING):	4.12 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (NOI NOT REQUIRED)

EARTH DISTURBED AREAS (STRUCTURE REPLACEMENT)

PROJECT EARTH DISTURBED AREA (CULVERT REPLACEMENT):	0.81 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (NOI NOT REQUIRED)

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET P.12.

Arthur G. Noirot Jr., P.E.
District 04 Deputy Director

Pamela Boratyn
Director, Department of Transportation

INDEX OF SHEETS:

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DESIGN DESIGNATION

	SR 14 ARTERIAL	SR 14 COLLECTOR	SR 165 SLM 1.65-1.79	SR 165 SLM 1.79-5.47
		CURRENT TDMS DATA (SR 14 COLLECTOR AND SR 165) FOR INFORMATION ONLY		
CURRENT ADT (2025)	3,800	8,600	2,200	2,200
DESIGN YEAR ADT (2045)	3,800	8,600	2,500	2,500
DESIGN HOURLY VOLUME (2045)	450	1,100	300	300
DIRECTIONAL DISTRIBUTION	63.5%	54.1%	51.0%	51.0%
TRUCKS (24 HOUR B&C)	12.1%	12.5%	13.0%	13.0%
DESIGN SPEED	55	45	35	55
LEGAL SPEED	55	45	35	55

DESIGN FUNCTIONAL CLASSIFICATION:

SR 14 (0.00 TO 7.86) RURAL MINOR ARTERIAL
SR 14 (7.86 TO 7.88) URBAN MINOR ARTERIAL
SR 14 (7.88 TO 8.12) URBAN MAJOR COLLECTOR
SR 14 (8.12 TO 9.99) RURAL MAJOR COLLECTOR
SR 165 (SLM 1.67 TO 1.79) URBAN MAJOR COLLECTOR
SR 165 (SLM 1.79 TO 5.47) RURAL MAJOR COLLECTOR

NHS PROJECT ..... YES

DESIGN EXCEPTIONS

SHOULDER WIDTH, LANE WIDTH

ADA DESIGN WAIVERS

REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:

ODOT DISTRICT 4 CAPITAL PLANNING
2088 S. ARLINGTON ROAD
AKRON, OH 44306

2LMN
1422 EUCLID AVE., STE 1044
CLEVELAND, OH 44115

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	1/19/24	MT-95.32	4/19/19	TC-71.10	4/21/23			800-2023	7/19/24
BP-3.2	1/18/19	MT-97.10	4/19/19	TC-74.10	7/21/23			821	4/20/12
BP-4.1	7/19/13	MT-97.12	1/20/17					832	7/19/24
		MT-99.20	4/19/19					844	4/20/18
DM-1.1	7/17/20	MT-101.60	4/21/23					921	7/19/24
DM-4.3	1/15/16	MT-101.90	7/17/20						
DM-4.4	1/15/16	MT-105.10	1/17/20						
		MT-110.10	7/19/13						
MGS-1.1	7/16/21								
MGS-2.1	1/19/18	TC-41.20	10/18/13						
		TC-42.10	10/18/13						
AS-2-15	7/21/23	TC-42.20	10/18/13						
DS-1-92	7/15/22	TC-52.10	10/18/13						
EXJ-3-82	1/18/13	TC-52.20	1/15/21						
		TC-65.10	1/17/14						
MT-95.31	7/19/19	TC-65.11	1/19/24						

SUPPLEMENTAL SPECIFICATIONS

SPECIAL PROVISIONS

ASBESTOS
REPORT 6/30/23
WATERWAY
PERMIT 2/3/25

ENGINEER'S SEAL
ROADWAY, STRUCTURE REPAIRS
STATE OF OHIO
MARK J. ANDRASIK
E-80194
REGISTERED
PROFESSIONAL ENGINEER

ENGINEER'S SEAL
STRUCTURE MAH-14-1.983
STATE OF OHIO
LINDSAY A. WALKER
E-77992
REGISTERED
PROFESSIONAL ENGINEER

TITLE SHEET

DESIGN AGENCY

DESIGNER
KMB
REVIEWER
MJA 12-19-23
PROJECT ID
105210
SHEET P.1 TOTAL 49

SHEET NUM.									PART.					ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7	8	9	15	16	17	18	29	01/S5K/05	02/STR/05	03/S5K/04	04/STR/47	05/STR/04						
																		ROADWAY	
		LS											LS	201	11000	LS		CLEARING AND GRUBBING	
						171							171	202	23000	171	SY	PAVEMENT REMOVED	
					519				105	414				202	23500	519	SY	WEARING COURSE REMOVED	
							100		100					202	30000	100	SF	WALK REMOVED	
							15		15					202	32000	15	FT	CURB REMOVED	
						491							491	202	38000	491	FT	GUARDRAIL REMOVED	
						4							4	202	42010	4	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
						450							450	202	75000	450	FT	FENCE REMOVED	
			1										1	202	98100	1	EACH	REMOVAL MISC.: INSPECTION WELL	P.9
			20										20	202	98200	20	FT	REMOVAL MISC.: CONDUIT	P.9
								177					177	203	10000	177	CY	EXCAVATION	
21									7	14				203	10000	21	CY	EXCAVATION (FOR PAVEMENT REPAIR)	
								170					170	203	20000	170	CY	EMBANKMENT	
			20										20	203	20001	20	CY	EMBANKMENT, AS PER PLAN	P.9
						180							180	204	10000	180	SY	SUBGRADE COMPACTION	
						4							4	209	15000	4	STA	RESHAPING UNDER GUARDRAIL	
	717								108	609				209	60200	717	STA	LINEAR GRADING	
				402					13	389				209	72000	402	STA	PREPARING SUBGRADE FOR SHOULDER PAVING	
						250							250	606	15050	250	FT	GUARDRAIL, TYPE MGS	
						187.5							187.5	606	15100	187.5	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
						4							4	606	26150	4	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	
							120		120					608	52000	120	SF	CURB RAMP	
							8		8					609	26000	8	FT	CURB, TYPE 6	
	17								9	8				623	39500	17	EACH	MONUMENT ASSEMBLY ADJUSTED TO GRADE	
	LS									LS				SPECIAL	69091000	LS		AS-BUILT CONSTRUCTION PLANS	P.7
	1									1				SPECIAL	69098000	1	EACH	VERTICAL CLEARANCE	P.7
			LS										LS	SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION	P.8
																		EROSION CONTROL	
		2,166											2,166	659	10000	2,166	SY	SEEDING AND MULCHING	
		108											108	659	14000	108	SY	REPAIR SEEDING AND MULCHING	
		108											108	659	15000	108	SY	INTER-SEEDING	
		0.3											0.3	659	20000	0.3	TON	COMMERCIAL FERTILIZER	
		0.45											0.45	659	31000	0.45	ACRE	LIME	
		12											12	659	35000	12	MGAL	WATER	
		126											126	660	30000	126	SY	SODDING UNSTAKED	
									500	1,000	500	500	500	832	30000	3,000	EACH	EROSION CONTROL	
																		DRAINAGE	
		50											50	611	00900	50	FT	6" CONDUIT, TYPE B	
		50											50	611	01400	50	FT	6" CONDUIT, TYPE E	
		50											50	611	01500	50	FT	6" CONDUIT, TYPE F	
			20										20	611	97400	20	FT	CONDUIT, MISC.: TYPE B FOR DRAINAGE DISCHARGE CONTINUANCE	P.9
			20										20	611	97400	20	FT	CONDUIT, MISC.: TYPE C FOR DRAINAGE DISCHARGE CONTINUANCE	P.9
			20										20	611	97400	20	FT	CONDUIT, MISC.: TYPE E FOR DRAINAGE DISCHARGE CONTINUANCE	P.9
			20										20	611	97400	20	FT	CONDUIT, MISC.: TYPE F FOR DRAINAGE DISCHARGE CONTINUANCE	P.9
	6								6					611	99655	6	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	P.7
			1										1	611	99720	1	EACH	INSPECTION WELL	
																		PAVEMENT	
2,950									800	2,150				251	01000	2,950	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)	
350									110	240				253	01000	350	SY	PAVEMENT REPAIR	
				41,490	7,215				43,155	5,550				254	01000	48,705	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5")	
				53,786	3,059				1,972	54,873				254	01000	56,845	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=2")	
						60							60	301	56000	60	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
21									7	14				304	20000	21	CY	AGGREGATE BASE (FOR PAVEMENT REPAIR)	
						30							30	304	20000	30	CY	AGGREGATE BASE	
				21,952	1,423				4,257	19,118				407	20000	23,375	GAL	NON-TRACKING TACK COAT	
						32							32	407	20000	32	GAL	NON-TRACKING TACK COAT	
				12,837		14			2,005	10,832			14	408	10001	12,851	GAL	PRIME COAT, AS PER PLAN	P.6

GENERAL SUMMARY

DESIGN AGENCY

DESIGNER
SJD

REVIEWER
MJA 12-19-23

PROJECT ID
105210

SHEET P.13 TOTAL 49

MAH-14/165-0.00/1.67

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SHEET NUM.									PART.					ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7	10	11	15	16	20	21	31	01/S5K/05	02/STR/05	03/S5K/04	04/STR/47	05/STR/04						
																		PAVEMENT	
7									2	5				411	10000	7	CY	STABILIZED CRUSHED AGGREGATE	
				7,593	478				1,888	6,183				441	50100	8,071	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M	
				2,615	149				96	2,668				441	50300	2,764	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
				892					140	752				617	10101	892	CY	COMPACTED AGGREGATE, AS PER PLAN	P.6
				112,764	2,969				752	114,981				897	01010	115,733	SY	PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A (T=1.5")	
																		WATER WORK	
	2								2					638	10800	2	EACH	VALVE BOX ADJUSTED TO GRADE	
																		TRAFFIC CONTROL	
						1,082			543	539				621	00100	1,082	EACH	RPM	
						866			435	431				621	54000	866	EACH	RAISED PAVEMENT MARKER REMOVED	
	126								45	81				630	02100	126	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
	12									12				630	80100	12	SF	SIGN, FLAT SHEET	
	16								6	10				630	80100	16	SF	SIGN, FLAT SHEET, 730.20	
	26								6	20				630	84900	26	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
	18								6	12				630	86002	18	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
							27.59		4.5	23.09				646	10010	27.59	MILE	EDGE LINE, 6"	
							0.05			0.05				646	10110	0.05	MILE	LANE LINE, 6"	
							13.79		2.25	11.54				646	10200	13.79	MILE	CENTER LINE	
							105			105				646	10300	105	FT	CHANNELIZING LINE, 8"	
							560		560					646	10310	560	FT	CHANNELIZING LINE, 12"	
							126		40	86				646	10400	126	FT	STOP LINE	
							56		56					646	10520	56	FT	CROSSWALK LINE, 24"	
							70			70				646	10600	70	FT	TRANSVERSE/DIAGONAL LINE	
							57			57				646	10800	57	SF	ISLAND MARKING	
							2			2				646	20000	2	EACH	RAILROAD SYMBOL MARKING	
							11		9	2				646	20300	11	EACH	LANE ARROW	
																		STRUCTURE REPAIRS	
																		FOR MAH-14-0.342 ESTIMATED QUANTITIES	23
																		FOR MAH-14-4.576 ESTIMATED QUANTITIES	23
																		FOR MAH-14-9.296 ESTIMATED QUANTITIES	23
																		FOR MAH-14-9.628 ESTIMATED QUANTITIES	23
																		FOR MAH-165-1.670 ESTIMATED QUANTITIES	23
																		FOR MAH-165-3.234 ESTIMATED QUANTITIES	23
																		STRUCTURE 20 FOOT SPAN AND UNDER (MAH-14-1.983)	
																		MAINTENANCE OF TRAFFIC	
		100							40	60				614	11110	100	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
													LS	614	12420	LS		DETOUR SIGNING	
		12							6	6				614	12460	12	EACH	WORK ZONE MARKING SIGN	
		20							10	10				614	13000	20	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
			16						8	8				614	18600	16	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN	
		0.05								0.05				614	20010	0.05	MILE	WORK ZONE LANE LINE, CLASS I, 6"	
		0.05								0.05				614	20560	0.05	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
		13.79							2.25	11.54				614	21000	13.79	MILE	WORK ZONE CENTER LINE, CLASS I	
		13.79							2.25	11.54				614	21550	13.79	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
		27.59							4.5	23.09				614	22360	27.59	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
		105								105				614	23000	105	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8"	
		560							560					614	23010	560	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12"	
		105								105				614	23680	105	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	
		560							560					614	23690	560	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	
		126							40	86				614	26000	126	FT	WORK ZONE STOP LINE, CLASS I	
		126							40	86				614	26610	126	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
																		INCIDENTALS	
										LS				614	11000	LS		MAINTAINING TRAFFIC	
										6				619	16010	6	MNTH	FIELD OFFICE, TYPE B	
										LS				623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
										LS				624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY

DESIGNER
SJD

REVIEWER
MJA 12-19-23

PROJECT ID
105210

SHEET P.14 TOTAL 49

MAH-14/165-0.00/1.67

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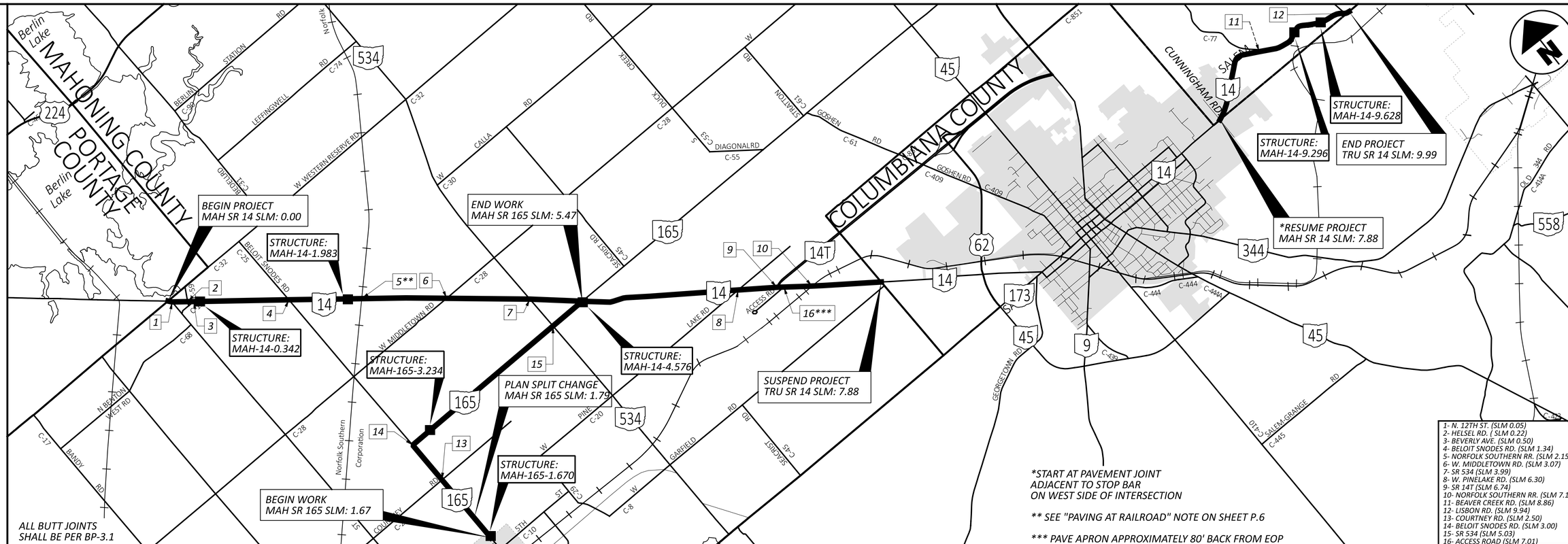

PAVEMENT CALCULATIONS

SLM RANGE	TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	WEARING COURSE REMOVED	PAVEMENT PLANING, ASPHALT CONCRETE (T=2")	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5")	PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A (T=1.5")	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) (T=1.75")	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M (T=1.25")	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M (T=1.5")	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M (SAFETY EDGE)	NON-TRACKING TACK COAT @0.06 GAL/SY	NON-TRACKING TACK COAT @ 0.09 GAL/SY	PRIME COAT, AS PER PLAN @ 0.40 GAL/SY	COMPACTED AGGREGATE, AS PER PLAN (T=1")	PREPARING SUBGRADE FOR SHOULDER PAVING
							202	254	254	897	441	441	441	441	407	407	408	617	209
			FT	FT	SY	SY	SY	SY	SY	SY	CY	CY	CY	CY	GAL	GAL	GAL	CY	STA
INTERSECTION																			
SR 14																			
0.00 TO 7.86			VARIES	10.00		2137.2				2137.20		74.21				192.35			
7.88 TO 9.99			VARIES	10.00		469.56				469.56		16.30				42.26			
ACCESS ROAD DRIVE APRON			VARIES	VARIES		361.67				361.67		12.56				32.55			
SR 165																			
1.79 TO 5.47			VARIES	10.00		560.56		560.56			27.25	19.46			33.63	50.45			
DRIVEWAYS																			
SR 14																			
0.00 TO 7.86			VARIES	2.00			147.00					8.90				13.23			
7.88 TO 9.99			VARIES	2.00			105.00					3.50				9.45			
SR 165																			
1.79 TO 5.47			VARIES	2.00		9.00	267.00					4.90				24.03			
MAILBOX APPROACHES																			
SR 14																			
0.00 TO 7.86					5550.00				5550.00			192.71				499.50			
7.88 TO 9.99					1665.00				1665.00			57.81				149.85			
SR 165																			
1.79 TO 5.47					2497.50			2497.50			121.41	86.72			149.85	224.78			
						SUBTOTALS	519.00	3058.06	7215.00	2968.42	148.66	477.07			183.48	1238.44			
						TOTALS CARRIED TO GENERAL SUMMARY	519	3059	7215	2969	149	478			184	1239			

MAH-14/165-0.00/1.67

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DESIGN AGENCY

DESIGNER
SJD

REVIEWER
MJA 12-19-23

PROJECT ID
105210

SHEET P.16 TOTAL 49