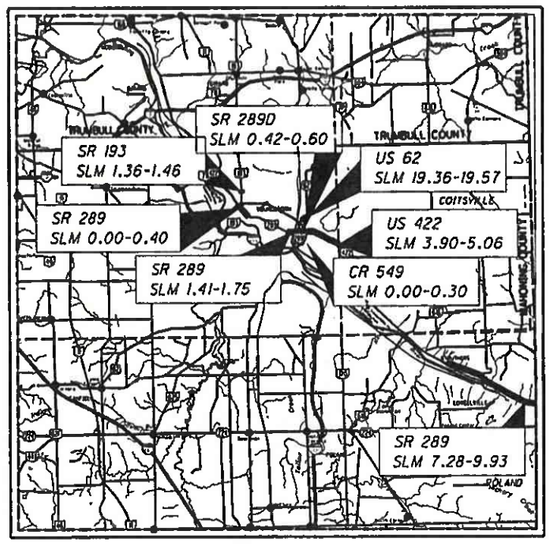
STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

MAH/TRU-62/ VAR-19.36/VAR

CITY OF YOUNGSTOWN
VILLAGE OF LOWELLVILLE
POLAND TOWNSHIP
MAHONING COUNTY



LOCATION MAP

LATITUDE: 41°06'40" LONGITUDE: 80°39'55"

SCALE IN MILES 0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION

DESIGN FUNCTIONAL CLASSIFICATION:
URBAN PRINCIPAL ARTERIAL - MAH-422 (3.90-5.06)
URBAN FREEWAY AND EXPRESSWAY- MAH-62 (19.36-19.57)
URBAN MINOR ARTERIAL - MAH-193 (1.36-1.46)
URBAN MINOR ARTERIAL - MAH-289 (0.00-0.40, 1.41-1.75, 7.28-9.93)
URBAN MINOR ARTERIAL - MAH-289D (0.42-0.60)
URBAN MAJOR COLLECTOR- MAH-549 (0.00-0.30)
NHS PROJECT ..... YES (US 422)
NHS PROJECT ..... YES (US 62)
NHS PROJECT ..... NO (SR 193)
NHS PROJECT ..... NO (SR 289)
NHS PROJECT ..... NO (CR 549)

DESIGN EXCEPTIONS

NONE

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
2088 SOUTH ARLINGTON ROAD
AKRON, OH 44306

ENGINEERS SEAL:

STATE OF OHIO · MATTHEW A. CHANEY · E-78423 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: Matthew Chaney
DATE: 11-29-19

INDEX OF SHEETS:

PROJECT DESCRIPTION

RESURFACING OF MAH 62 FROM 19.36 TO 19.57, MAH US 422 FROM 3.90 TO 5.06, MAH SR 193 FROM 1.36 TO 1.46, SR 289 FROM 0.00 TO 0.40 AND 1.41 TO 1.75 AND 7.28 TO 9.93. MAH SR 289 REROUTE ONTO CR 554 (N FRUIT ST) FROM 0.00 TO 0.30. MAH SR 289D FROM 0.42 TO 0.60. INCLUDES MINOR BRIDGE WORK TO 8 STRUCTURES. NORFOLK SOUTHERN RAILROAD ON SR 289 AT 3.60, UNKNOWN ABANDONED RAILROAD ON SR 289 AT 0.40.

EARTH DISTURBED AREAS

PROJECT EDA:	N/A (MAINTENANCE PROJECT)
ESTIMATED CONTRACTOR EDA:	N/A (MAINTENANCE PROJECT)
NOTICE OF INTENT EDA:	N/A (MAINTENANCE PROJECT)

2019 SPECIFICATIONS

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

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

CONFORMED SET

APPROVED: [signature]
DATE 12/3/19 DISTRICT DEPUTY DIRECTOR

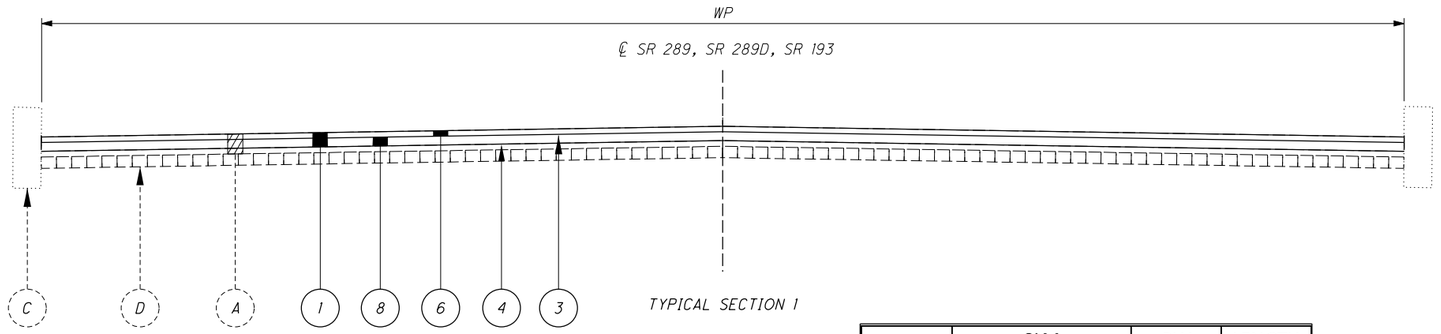
APPROVED: [signature]
DATE 12/20/19 DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14	MT-104.10	10/16/15			
BP-3.2	1/18/19	MT-105.10	7/19/13			
BP-5.1	1/18/19	MT-110.10	7/19/13			
DM-4.3	1/15/16	TC-41.20	10/18/13			
DM-4.4	1/15/16	TC-42.10	10/18/13			
		TC-42.20	10/18/13			
MT-95.31	4/19/19	TC-52.10	10/18/13			
MT-95.32	4/19/19	TC-52.20	7/20/18			
MT-95.50	7/21/17	TC-65.10	1/17/14			
MT-98.10	1/20/17	TC-65.11	7/21/17			
MT-98.20	4/19/19	TC-71.10	1/19/18			
MT-98.30	7/19/19	TC-82.10	1/18/19			
MT-99.20	4/19/19					
MT-101.90	7/21/17					
MT-102.20	4/19/19					

SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
800-2019	1/17/20	WPC	12/20/19
821	4/20/12		
832	10/19/18		
875	1/18/19		
921	4/20/12		
826	1/15/16		
897	1/15/16		

FEDERAL PROJECT NO. E150(679)
PID NO. 96556
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NORFOLK SOUTHERN
MAH/TRU-62/ VAR-19.36/VAR
1 / 26

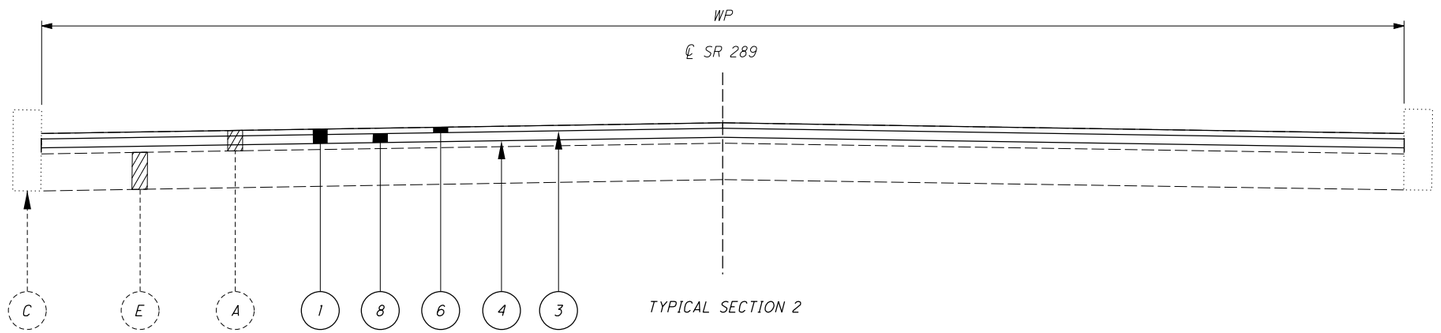


TYPICAL SECTION 1

ROUTE	SLM		PW	LENGTH
	FROM	TO	(FEET)	(MILES)
SR 289	0.00	0.04	45	0.04
SR 289	0.04	0.37	40	0.33
SR 289	0.37	0.40	50	0.03

ROUTE	SLM		PW	LENGTH
	FROM	TO	(FEET)	(MILES)
SR 289D	0.42	0.51	54	0.09
SR 289D	0.57	0.60	54	0.03

ROUTE	SLM		PW	LENGTH
	FROM	TO	(FEET)	(MILES)
SR 193	1.36	1.46	45	0.1



TYPICAL SECTION 2

ROUTE	SLM		PW	LENGTH
	FROM	TO	(FEET)	(MILES)
SR 289	1.41	1.54	56	0.13
SR 289	1.70	1.75	52	0.05

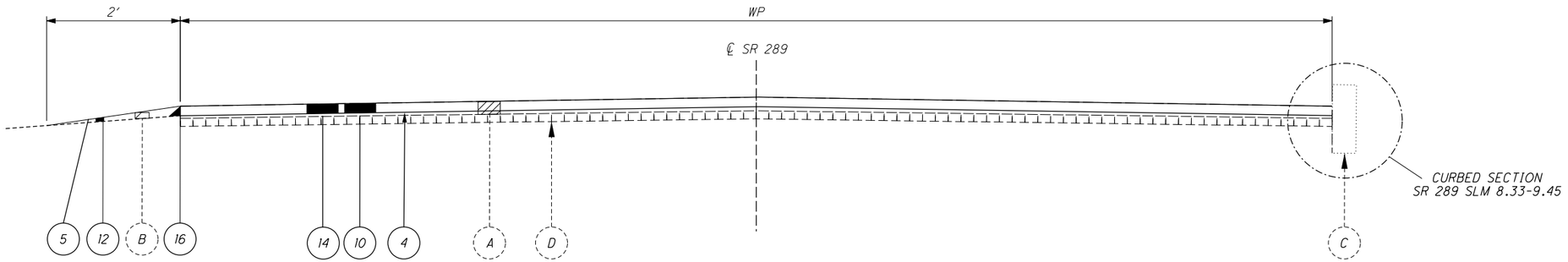
LEGEND

1. ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE, (T = 2¼")
2. ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE, (T = 2¾")
3. ITEM 407, NON-TRACKING TACK COAT @ 0.06 GAL/SY
4. ITEM 407, NON-TRACKING TACK COAT @ 0.09 GAL/SY
5. ITEM 408, PRIME COAT, AS PER PLAN @ 0.4 GAL/SY
6. ITEM 424, FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN (T=¾")
7. ITEM 826, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), FIBER TYPE C, AS PER PLAN (T=1½")
8. ITEM 826, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), FIBER TYPE C (T=1½")
9. ITEM 826, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), FIBER TYPE C (T=2")
10. ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG70-22M, (T=1¼") AS PER PLAN
11. ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446), (T=1½"), AS PER PLAN (PG70-22M)
12. ITEM 617, COMPACTED AGGREGATE, AS PER PLAN
14. ITEM 897, PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A (T=1¼")
15. ITEM 897, PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A, (T = 1½")
16. SAFETY EDGE - SEE BP 3.2 FOR DETAILS

- A EXISTING ASPHALT CONCRETE
- B EXISTING ASPHALT SHOULDER
- C EXISTING CURB
- D EXISTING BRICK
- E CONCRETE BASE

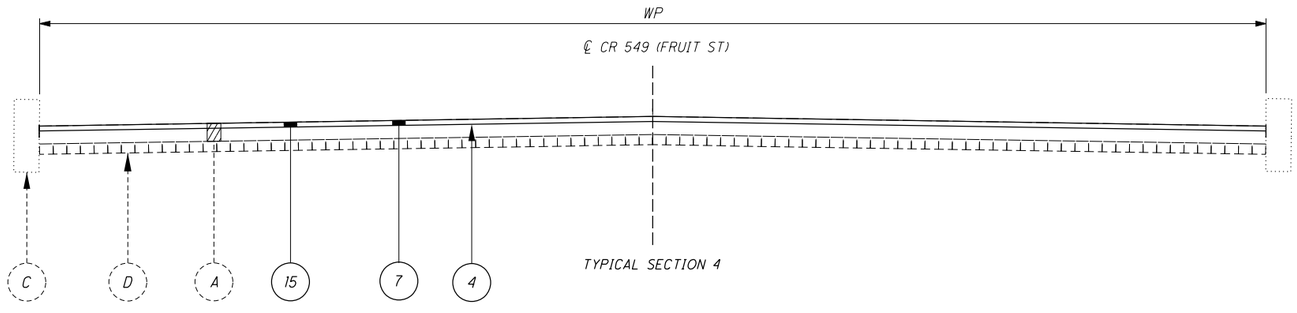
TYPICAL SECTIONS

MAH/TRU-62/
VAR-19.36/VAR



TYPICAL SECTION 3

ROUTE	SLM		PW	LENGTH
	FROM	TO	(FEET)	(MILES)
SR 289	7.28	8.33	24	1.05
SR 289	8.33	8.40	28	0.07
SR 289	8.40	9.42	24	1.02
SR 289	9.42	9.45	26	0.03
SR 289	9.45	9.93	22	0.48

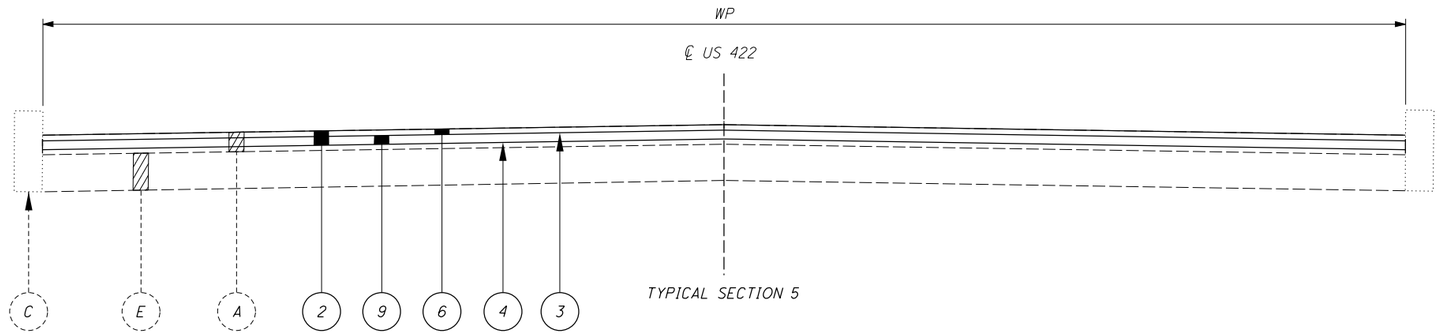


TYPICAL SECTION 4

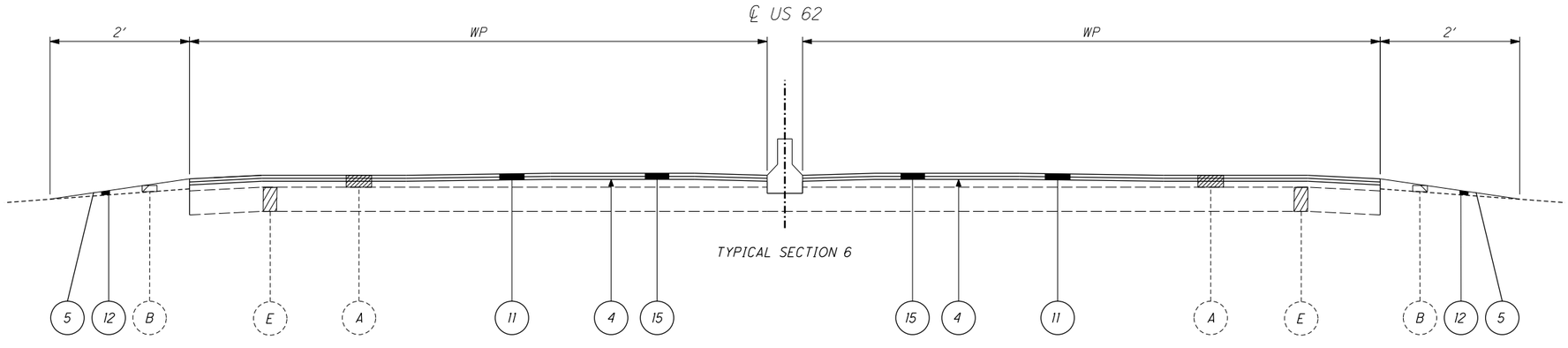
ROUTE	SLM		PW	LENGTH
	FROM	TO	(FEET)	(MILES)
CR 549	0.00	0.30	30	0.3

TYPICAL SECTIONS

MAH/TRU-62/
VAR-19.36/VAR



ROUTE	SLM		PW	LENGTH
	FROM	TO	(FEET)	(MILES)
US 422	3.90	4.16	54	0.26
US 422	4.16	4.20	68	0.04
US 422	4.20	4.96	54	0.76



ROUTE	SLM		PW	LENGTH
	FROM	TO	(FEET)	(MILES)
WB RAMP	19.35	19.44	27	0.09

ROUTE	SLM		PW	LENGTH
	FROM	TO	(FEET)	(MILES)
US 62 WB	19.40	19.57	40	0.17

ROUTE	SLM		PW	LENGTH
	FROM	TO	(FEET)	(MILES)
US 62 EB	19.39	19.57	40	0.18

TYPICAL SECTIONS

MAH/TRU-62/
VAR-19.36/VAR

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEADQUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)
OGPUPS 1-800-925-0988
ODOT 330-786-2267 MICHELLE CHANEY

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON THE PLANS, BUT CAN BE OBTAINED FROM THE OWNERS OF THE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.

AT&T
THE OHIO BELL TELEPHONE COMPANY
ATTN: HAROLD MAYNARD
50 W. BOWERY ST.
6TH FLOOR
AKRON, OH 44308
(330) 384-8974

AQUA OHIO
ATTN: LORI MCCLARY
6650 SOUTH AVE.
BOARDMAN, OH 44512
(330) 397-0795

CHARTER
ATTN: JASON SPRAGUE
2904 STATE RD.
ASHTABULA, OH 44004
(216) 575-8016 EXT. (216) 555-5740

CITY OF GIRARD WATER AND SEWER
ATTN: JERRY LAMBERT
100 W. MAIN ST.
GIRARD, OH 44420
(330) 545-3306

DOMINION ENERGY
ATTN: KEVIN BIRT
320 SPRINGSIDE DR. SUITE 320
AKRON, OH 44433
(330) 664-2541

OHIO EDISON
ATTN: MIKE BECK
730 SOUTH AVE.
YOUNGSTOWN, OH 44502
(330) 740-7704

YOUNGSTOWN WATER DEPARTMENT
ATTN: GENE LESON
26 S. PHELPS ST.
YOUNGSTOWN, OH 44503
(330) 743-5338

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PAVEMENT MARKING LANE WIDTHS

THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS:

ROUTE	S.L.M. TO	S.L.M.	LANE WIDTH
SR 289	0.00	0.40	10'
SR 289	1.41	1.75	12'
SR 289	7.28	8.09	10'
SR 289	8.09	8.33	11'
SR 289	8.33	9.12	12'
SR 289	9.12	9.57	11'
SR 289	9.57	9.93	10'
SR 289D	0.42	0.60	12'
CR 549	0.00	0.30	15'
SR 193	1.36	1.46	11'
US 62	19.36	19.57	12'
US 422	3.90	5.08	13'

PAVEMENT MARKING DETAILS

THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

ITEM 826 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), FIBER TYPE C, AS PER PLAN

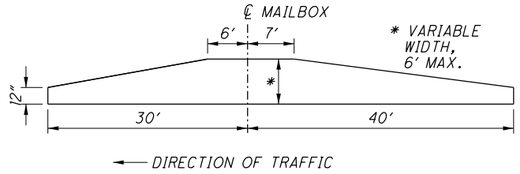
703.05 DO NOT USE ANY COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

WATERWAY PERMIT COMPLIANCE

ODOT WILL OBTAIN ALL NECESSARY WATERWAY PERMITS PRIOR TO PROJECT CONSTRUCTION. THE CONTRACTOR IS NOT AUTHORIZED TO PLACE ANY FILL OR WORK WITHIN ANY WATERWAY BELOW THE ORDINARY HIGH WATER MARK ELEVATION DURING CONSTRUCTION UNTIL THE PERMIT(S) ARE OBTAINED.

PAVED MAILBOX APPROACHES

ALL EXISTING MAIL BOX APPROACHES WILL BE PAVED WITH ASPHALT CONCRETE AS PER TYPICAL SHOWN OR AS NEAR AS PRACTICAL. AGGREGATE APPROACHES SHALL HAVE A 2 IN. MIN. THICKNESS; IMPROVED APPROACHES SHALL HAVE A 2 IN. MIN. THICKNESS. THE CONTRACTOR SHALL PAVE THE MAILBOX APPROACHES WITH THE PAVING OF THE MAINLINE AND SHOULDERS. PAYMENT SHALL BE AS FOLLOWS: GRADING, TACK, TOOLS, EQUIPMENT, MATERIAL AND INCIDENTALS REQUIRED TO LAYOUT AND CONSTRUCT THE MAILBOX APPROACHES SHALL BE INCLUDED IN THE UNIT BID FOR THE SPECIFIED MAINLINE SURFACE COURSE ASPHALT ITEM.



ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR

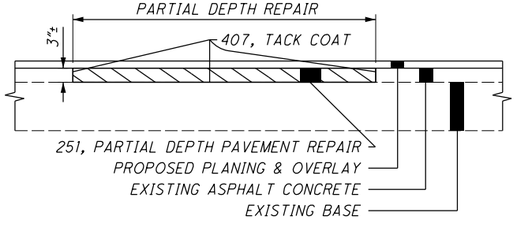
A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING ITEM 441 ASPHALT CONCRETE, TYPE 2. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE I PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

US 62 (SLM 19.36-19.57):
251, PARTIAL DEPTH PAVEMENT REPAIR, 500 SQ. YD.

US 422 (SLM 3.90-5.06):
251, PARTIAL DEPTH PAVEMENT REPAIR, 1500 SQ. YD.

SR 193 (SLM 1.36-1.46)/SR 289 (SLM 0.00-0.40)/
SR 289 (SLM 1.41-1.75)/SR 289D (SLM 0.42-0.60):
251, PARTIAL DEPTH PAVEMENT REPAIR, 750 SQ. YD.

SR 289 (SLM 7.28-9.93):
251, PARTIAL DEPTH PAVEMENT REPAIR, 2000 SQ. YD.



INTERSECTIONS

INTERSECTIONS WILL BE RESURFACED 10 FT BEYOND THE EDGE LINE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR INDICATED IN THE PLAN. INTERSECTIONS SHALL BE PAVED AFTER COMPLETION OF THE SURFACE COURSE OR WITH THE MAINLINE PAVEMENT IF THIS CAN BE ACCOMPLISHED WITHOUT CHANGING THE VELOCITY AND DIRECTION OF THE PAVER. USE THE SAME ASPHALT CONCRETE AS THE MAINLINE PAVEMENT. A BUTT JOINT, AS PER STANDARD CONSTRUCTION DRAWING BP-3.1, SHALL BE USED TO PROVIDE A SMOOTH TRANSITION TO THE EXISTING PAVEMENT. ANY GRADING OR PRIME NECESSARY TO ACCOMPLISH THIS WORK SHALL BE INCLUDED IN THE COST OF THE ASPHALT SURFACE COURSE.

DRIVEWAYS

THE CONTRACTOR WILL NOT BE PERMITTED TO LEAVE A DIFFERENCE IN ELEVATION BETWEEN THE MAINLINE ASPHALT SURFACE COURSE AND THE EXISTING DRIVEWAYS. IF APPROVED BY THE ENGINEER, AN ASPHALT WEDGE WITH A MINIMUM WIDTH OF 2' MAY BE PLACED EITHER ON THE ROADWAY SHOULDER OR DRIVEWAY DEPENDENT UPON WHICH SIDE IS HIGH. A QUANTITY OF MAINLINE SURFACE COURSE ASPHALT HAS BEEN PROVIDED IN THE CALCULATIONS AND GENERAL SUMMARY TO PERFORM THIS ITEM OF WORK.

IN THE EVENT THAT THE ENGINEER DETERMINES ADDITIONAL WORK IS NECESSARY TO PROPERLY ADDRESS FIELD CONDITIONS, AN ITEM FOR WEARING COURSE REMOVED HAS BEEN PROVIDED. THE REMOVAL DEPTH IS DEPENDENT UPON THE ELEVATION DIFFERENCE AND ALLOW FOR 1"-2" OF COMPACTED ASPHALT MATERIAL TO BE PLACED.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE B (446), AS PER PLAN (PG70-22M)

THE REQUIREMENTS OF 442 AND 446 WILL APPLY; DEVIATIONS FROM THESE ARE AS FOLLOWS:

THE PERCENTAGE OF RECLAIMED MATERIAL PROPOSED FOR USE WILL BE INCLUDED IN THE MIX DESIGN PROCESS TO ESTABLISH THE JOB MIX FORMULA (JMF) IN ACCORDANCE WITH 401.04.

MATERIALS:	THE MATERIALS SHALL BE:
AGGREGATES	703.05*

*THE VIRGIN COARSE AGGREGATE PORTION OF THE MIXTURE WILL CONTAIN 50% AIR COOLED BLAST FURNACE SLAG (ACBFS) AND MEET THE REQUIREMENTS OF 703.05.

USE AN NDES OF 50, AN NMAX OF 75 AND THE COMBINATION OF NEW AGGREGATES, NEW ASPHALT BINDER, AND RECLAIMED MATERIAL SHALL BE AS REQUIRED TO PRODUCE A COMPOSITION CONTAINING A MINIMUM OF 6.0% NEW ASPHALT BINDER RESULTING IN A MINIMUM TOTAL BINDER OF 6.5%.

703.05 DO NOT USE ANY FINE OR COARSE AGGREGATE WITH A 'SR' OR 'SRH' DESIGNATION ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

THE CONTRACTOR SHALL USE THE APPROPRIATE COUNTY, ROUTE AND SECTION TO OBTAIN TRAFFIC DATA, TO BE USED IN THE DESIGN OF THE JMF, AT THIS WEB SITE LOCATION:
http://www.odotonline.org/techservapps/traffmonit/countinformation/default.htm

CALCULATED MJP
CHECKED MAC

GENERAL NOTES

MAH/TRU-62/
VAR-19.36/VAR

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN
ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN
ITEM 638 - VALVE BOX ADJUSTED TO GRADE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 611.10.D FOR MANHOLES, 623.05 FOR MONUMENT BOXES, OR 638.18 FOR VALVE BOXES, THE CONTRACTOR WILL MAKE A CLEAN CIRCULAR CUT AROUND THE CASTING (A MINIMUM OF 1 5/32-0" OUTSIDE OF THE CASTING) AND ADJUST THE CASTING TO GRADE (ACCORDING TO THE TOLERANCES AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1) AFTER THE PAVEMENT SURFACE COURSE HAS BEEN PLACED.

CMS 499 CLASS QCMS CONCRETE (DYE THE CONCRETE SUCH THAT ITS COLOR CLOSELY MATCHES THE COLOR OF THE SURROUNDING PAVEMENT) WILL BE USED FOR BACKFILLING THE FULL PAVEMENT SECTION AND THE JOINT BETWEEN THE ASPHALT AND CONCRETE WILL BE SEALED WITH CMS 702.01 PG BINDER. EPOXY COATED REBAR SHALL BE PLACED IN THE CONCRETE AT 6" MAXIMUM ON CENTER AND A MINIMUM OF 3.5" CLEARANCE FROM THE TOP, BOTTOM AND SIDES. THE CONCRETE WILL BE VIBRATED SUFFICIENTLY TO ELIMINATE AIR POCKETS UNDER THE FRAME.

PAYMENT WILL INCLUDE REMOVAL OF THE EXISTING MATERIAL, INSTALLATION AND FURNISHING OF A NEW CASTING, AND ALL LABOR AND MATERIALS REQUIRED TO COMPLETE THIS ITEM OF WORK AS DESCRIBED.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

SR 289 (SLM 0.00-0.40):
ITEM 611, MANHOLE ADJUSTED TO GRADE, 10 EACH
ITEM 623, MONUMENT BOX ADJUSTED TO GRADE, 1 EACH
ITEM 638, VALVE BOX ADJUSTED TO GRADE, 3 EACH

SR 289 (SLM 1.41-1.75):
ITEM 611, MANHOLE ADJUSTED TO GRADE, 4 EACH
ITEM 623, MONUMENT BOX ADJUSTED TO GRADE, 1 EACH
ITEM 638, VALVE BOX ADJUSTED TO GRADE, 4 EACH

SR 289 (SLM 7.28-9.93):
ITEM 611, MANHOLE ADJUSTED TO GRADE, 16 EACH
ITEM 623, MONUMENT BOX ADJUSTED TO GRADE, 1 EACH
ITEM 638, VALVE BOX ADJUSTED TO GRADE, 10 EACH

SR 289D (SLM 0.42-0.60):
ITEM 611, MANHOLE ADJUSTED TO GRADE, 3 EACH
ITEM 623, MONUMENT BOX ADJUSTED TO GRADE, 1 EACH

CR 549 (SLM 0.00-0.30):
ITEM 611, MANHOLE ADJUSTED TO GRADE, 5 EACH
ITEM 623, MONUMENT BOX ADJUSTED TO GRADE, 1 EACH

SR 193 (SLM 1.36-1.46):
ITEM 623, MONUMENT BOX ADJUSTED TO GRADE, 1 EACH
ITEM 638, VALVE BOX ADJUSTED TO GRADE, 1 EACH

US 422 (SLM 3.90-5.06):
ITEM 611, MANHOLE ADJUSTED TO GRADE, 3 EACH
ITEM 623, MONUMENT BOX ADJUSTED TO GRADE, 1 EACH
ITEM 638, VALVE BOX ADJUSTED TO GRADE, 5 EACH

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1-1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

LINEAR GRADING

SHOULDER WIDTH BEYOND THE LIMITS OF THE COMPACTED AGGREGATE WILL BE GRADED TO PROVIDE POSITIVE DRAINAGE ND WILL BE PERFORMED ONLY IN THE AREAS NECESSARY. THIS WORK WILL NOT BE PERFORMED ON THE ENTIRE PROJECT. THE AREAS FOR THE WORK WILL BE MARKED BY THE PROJECT ENGINEER. UNDER NO CIRCUMSTANCES WILL THIS WORK BE PERFORMED CONCURRENTLY WITH ANY OTHER OPERATION.

GRADING WILL BE ACCOMPLISHED BY THE REMOVAL OF, OR ADDITION OF MATERIAL TO PROVIDE A 0.08 POSITIVE SLOPE. EXCESS MATERIAL WILL BE WINDROWED ON THE SHOULDER. THE GRADED AREAS WILL BE COMPACTED TO A SUFFICIENT DENSITY TO PREVENT EROSION UNTIL SEEDING AND MULCHING IS PERFORMED. ALL EXCESS MATERIAL WILL BE REMOVED FROM THE BERMS AND WILL BE DISPOSED OF OFF THE PROJECT BY THE CONTRACTOR.

SEEDING AND MUCHING, FERTILIZER AND LIME WILL BE PERFORMED WITHIN A PERIOD NOT TO EXCEED 10 DAYS AFTER THE LINEAR GRADING.

THE QUANTITY OF ITEM 209 IS NOT PERMITED TO BE INCREASED. REDUCTIONS IN QUANTITIES ARE PERMITTED AS DETERMINED BY THE PROJECT ENGINEER.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK WILL BE INCLUDED IN THE UNIT PRICE FOR THE PERTINENT BID ITEM. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:
209, LINEAR GRADING, 170 STA.
659, SEEDING AND MULCHING, 9447 SQ YD
659, COMMERCIAL FERTILIZER, 1.27 TON
659, LIME, 1.95 ACRES
659, WATER, 51 M. GAL.

ITEM SPECIAL - MISC.: RUMBLE STRIPS

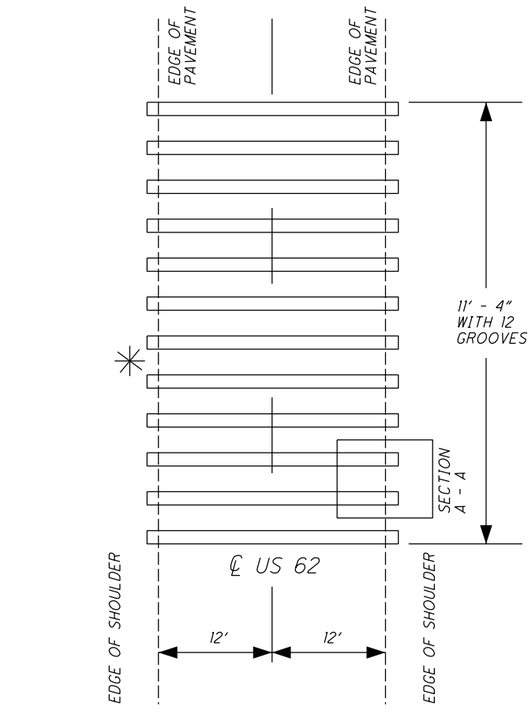
RUMBLE STRIPS SHALL BE PLACED AT THE LOCATION OF US 62 SHOWN BELOW. THIS ITEM HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM SPECIAL - MISC.: RUMBLE STRIPS, 77 FT

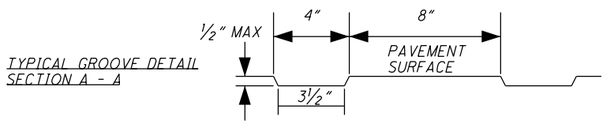
THE RUMBLE STRIPS SHALL CONSIST OF PARALLEL GROOVES CUT ONE (1) FOOT CENTER TO CENTER.

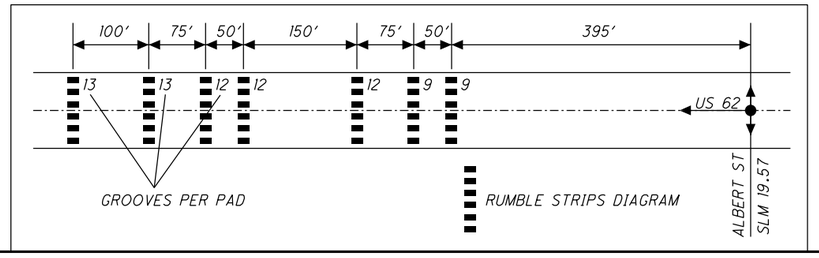
EACH GROOVE SHALL BE CUT TO A DEPTH OF APPROXIMATELY 3/8" WITH ALLOWENCE FOR PAVEMENT SURFACE IRREGULARITIES AND VARIATIONS. WIDTH OF THE GROOVE AT THE PAVEMENT SURFACE IS TO BE 4", WITH TAPERED SIDES SUCH THAT GROOVE WIDTH AT THE BOTTOM IS APPROXIMATELY 3 1/2".

CONSTRUCTION METHODS OTHER THAN SAW CUTTING MUST BE APPROVED BY THE ENGINEER.



✳ DAYLIGHT GROOVE INTO ASPHALT SHOULDER





ITEM 408 - PRIME COAT, AS PER PLAN

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

ITEM 424 - FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN

703.05 DO NOT USE ANY FINE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), AS PER PLAN (PG70-22M)

703.05 DO NOT USE ANY COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 611 - CATCH BASIN ADJUSTED TO GRADE

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY AND IS TO BE USED AS DIRECTED BY THE ENGINEER TO ADJUST CATCH BASINS TO GRADE.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

SR 289 (SLM 7.28-9.93):
ITEM 611, CATCH BASIN ADJUSTED TO GRADE, 18 EACH

CR 549 (SLM 0.00-0.30):
ITEM 611, CATCH BASIN ADJUSTED TO GRADE, 2 EACH

ITEM 611 - CATCH BASIN RECONSTRUCTED TO GRADE

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY AND IS TO BE USED AS DIRECTED BY THE ENGINEER TO RECONSTRUCT CATCH BASINS TO GRADE.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

SR 289 (SLM 7.28-9.93):
ITEM 611, CATCH BASIN RECONSTRUCTED TO GRADE, 1 EACH

CR 549 (SLM 0.00-0.30):
ITEM 611, CATCH BASIN RECONSTRUCTED TO GRADE, 1 EACH

CALCULATED AJS
CHECKED MAC

GENERAL NOTES

MAH/TRU-62/
VAR-19.36/VAR

MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. ON 2 AND 3 LANE SECTIONS: A MINIMUM OF ONE TEN FOOT BIDIRECTIONAL LANE SHALL BE MAINTAINED ON THE EXISTING AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

FOUR LANE SECTIONS: A MINIMUM OF ONE TEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.

4. TRUCK MOUNTED ATTENUATORS [TMA'S] SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.

5. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS TWO (2) MILES.

6. FOR ROUTES NOT ON THE PERMITTED LANE CLOSURE CHART, ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.

7. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH WORK ZONE MARKINGS) ALL LANE, CENTER, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS. QUANTITIES FOR SUCH PLACEMENT ARE CARRIED AS PART OF THE ITEMS LISTED UNDER 614 WORK ZONE PAVEMENT MARKINGS.

8. A QUANTITY OF 20 CU. YDS. OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

9. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

10. THE CONTRACTOR SHALL PLACE THE SIGNS: W8-1 [BUMP] PER OMUTCD 2C.28; AND W8-11 [UNEVEN LANES] PER OMUCTD 6F.45. PAYMENT FOR THESE SIGNS SHALL BE INCIDENTAL TO THE LUMP SUM ITEM 614-MAINTAINING TRAFFIC. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGNS HAS BEEN INCLUDED IN THE PLANS PER CMS 614.04.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

PHASE I - PLANED SURFACE
614, WORK ZONE CENTER LINE, CLASS I, 5.34 MILE
614, WORK ZONE STOP LINE, CLASS I, 381 FT
614, WORK ZONE LANE LINE, CLASS I, 6", 4.78 MILE
614, WORK ZONE MARKING SIGN, (ALL PHASES) 36 EACH

PHASE II - INTERMEDIATE COURSE
614, WORK ZONE CENTER LINE, CLASS I, 2.39 MILE
614, WORK ZONE STOP LINE, CLASS I, 347 FT
614, WORK ZONE LANE LINE, CLASS I, 6", 4.78 MILE

PHASE III - SURFACE COURSE
614, WORK ZONE CENTERLINE, CLASS III, 642 PAINT 5.34 MILE
614, WORK ZONE STOP LINE, CLASS III, 642 PAINT 381 FT
614, WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT 4.78 MILE

TO BE USED AS DIRECTED BY THE ENGINEER
614, WORK ZONE EDGE LINE, CLASS III, 6" 642 PAINT 4.32 MILE

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

TIME LIMITATION, TRAFFIC ON A MILLED SURFACE

THE MAXIMUM ALLOWABLE TIME FOR TRAFFIC TO BE PLACED ON A MILLED SURFACE SHALL BE 7 CONSECUTIVE CALENDAR DAYS. SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT, THE CONTRACTOR SHALL BE ASSSESSED A DISINCENTIVE IN THE AMOUNT OF $1500 PER DAY THAT THE TRAFFIC IS PLACED ON A MILLED SURFACE BEYOND THE SPECIFIED LIMT.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
ROAD & RAMP CLOSURES	>= 2WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	2 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERNS CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

DROPOFFS

THE CONTRACTOR WILL NOT BE PERMITTED TO LEAVE A DIFFERENCE IN ELEVATION BETWEEN THE MAINLINE ASPHALT SURFACE COURSE AND SIDE STREET APPROACHES/DRIVEWAYS GREATER THAN 1.25 INCH. THE CONTRACTOR SHALL PLACE A 12:1 ASPHALT WEDGE FOR ALL RESULTING ELEVATION DIFFERENCES GREATER THAN 1.25 INCH PRIOR TO OPENING TO TRAFFIC. THE PAVING OF INTERSECTION APPROACHES AND DRIVEWAYS, PER THE NOTES ON SHEET 5, SHALL BE PERFORMED WITHIN 7 DAYS OF MAINLINE SURFACE COURSE BEING APPLIED AND A DROPOFF BEING CREATED BETWEEN THE NEW SURFACE COURSE AND THE MILLED/EXISTING SIDE ROAD OR DRIVEWAY SURFACE. THE CONTRACTOR MAY ELECT TO PLACE A 12:1 ASPHALT WEDGE IN LIEU OF COMPLETING THE PAVING, HOWEVER THE ASPHALT CONCRETE USED FOR THE WEDGE SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 $^{17}/_{32}$ MAINTAINING TRAFFIC AND SHALL INCLUDE THE REMOVAL OF THE WEDGE BEFORE THE INTERSECTION/DRIVEWAY IS PAVED.

INTERIM START DATE (SR 289, SLM 7.28 - 9.93)

THE CONTRACTOR SHALL NOT BEGING ANY WORK ON SR 289 FROM SLM 7.28 - 9.93 UNTIL JULY 20, 2020. SHOULD THE CONTRACTOR FAIL TO MEET THE APPLICABLE REQUIREMENTS, A DISINCENTIVE IN THE AMOUNT OF $5,000 SHALL BE ASSESSED PER DAY OF WORK PERFORMED OUTSIDE OF THESE REQUIREMENTS.

TEMPORARY PAVEMENT WEDGES

TEMPORARY PAVEMENT WEDGES SHALL BE PROVIDED AT ALL TIMES WHERE TRAFFIC IS REQUIRED TO TRAVEL FROM OR ONTO A SURFACE OF A DIFFERENT ELEVATION IN THE DIRECTION OF TRAVEL (JOINTS, MANHOLES, CATCH BASINS, VALVE BOXES, MONUMENT BOXES, ETC.). THE TAPER RATE OF THE TEMPORARY PAVEMENT WEDGES SHALL BE AS PER THE REQUIREMENTS IN THE CHART BELOW. TEMPORARY PAVEMENT WEDGES SHALL BE REMOVED PRIOR TO PLACING THE SPECIFIED PAVEMENT COURSE. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE LUMP SUM BID ITEM FOR ITEM FOR ITEM 614 - MAINTAINING TRAFFIC.

		DURATION	
		7 DAYS OR LESS	MORE THAN 7 DAYS
SPEED	LESS THAN 45MPH	36:1	60:1
	45MPH OR GREATER	60:1	120:1

CALCULATED AJS CHECKED MAC

GENERAL NOTES OF TRAFFIC MAINTENANCE

MAH/TRU-62/VAR-19.36/VAR

7
26

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).
- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

IN GENERAL LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONE.

THE LEOS WORK AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 300 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A PORTABLE CHANGEABLE MESSAGE SIGN, THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCE OF 800 FEET AND 650 FEET RESPECTIVELY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. THE PCMS SHALL BE LOCATED. IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF. ADDITIONALLY WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE LINE PRESENTATION FORMATS WITH UP TO OF SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DE-ACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR AREAS) ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.07. THE CONTRACTOR SHALL PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THEIR USE. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 614.02.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

614 PORTABLE CHANGEABLE MESSAGE SIGN,
AS PER PLAN, 10 SIGN MONTH
ASSUMING 5 SIGNS FOR 2 MONTHS

SHEET NUM.										PART.						ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
					5	6	11	12		01/NHS/PV	02/S>2/PV	03/NHS/PV/YOUN	04/S>2/PV/YOUN	07/NHS/PV/YOUN	08/S>2/PV/YOUN						
																				ROADWAY	
							4,199	3,595			218			6,380	1,196	202	30000	7,794	SF	WALK REMOVED	
							654	546			34			1,006	160	202	32000	1,200	FT	CURB REMOVED	
						170					170					209	60200	170	STA	LINEAR GRADING	
							1,700	1,380			56			2,487	537	608	10000	3,080	SF	4" CONCRETE WALK	
							2,427	2,191			90			3,869	659	608	52000	4,618	SF	CURB RAMP	
							72	24			72			24		608	53020	96	SF	DETECTABLE WARNING	
						7					1	1	5			623	39501	7	EACH	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN	6
						77					77					SPECIAL	69013000	77	FT	RUMBLE STRIPS MISC.: RUMBLE STRIPS	6
																				EROSION CONTROL	
						9,447					9,447					659	10000	9,447	SY	SEEDING AND MULCHING	
						1.27					1.27					659	20000	1.27	TON	COMMERCIAL FERTILIZER	
						1.95					1.95					659	31000	1.95	ACRE	LIME	
						51					51					659	35000	51	MGAL	WATER	
										3,000						832	30000	3,000	EACH	EROSION CONTROL	
																				DRAINAGE	
						20					18		2			611	98630	20	EACH	CATCH BASIN ADJUSTED TO GRADE	
						2					1		1			611	98634	2	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
						41					16	3	22			611	99655	41	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	6

CALCULATED A.JS
CHECKED MAC

GENERAL SUMMARY

MAH/TRU-62/
VAR-19.36/VAR

SHEET NUM.											PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	7	8	13	14	15	16	17	18	19	01/NHS/PV	02/S>2/PV	03/NHS/PV/YOUN	04/S>2/PV/YOUN						
																			PAVEMENT	
4,750											200	2,300	1,500	750	251	01000	4,750	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)	
						12,997	9,905			35,449			35,449	22,902	254	01000	58,351	SY	PAVEMENT PLANING, ASPHALT CONCRETE	
						1,948	1,968	3,418	1,016	5,295	467	3,968	5,296	3,914	407	20000	13,645	GAL	NON-TRACKING TACK COAT	
								944	240		118	1,066			408	10001	1,184	GAL	PRIME COAT, AS PER PLAN	6
						271	207			739			739	478	424	10001	1,217	CY	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN	6
								1,321				1,321			441	50101	1,321	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN	6
									471		216	255			442	10051	471	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN (PG70-22M	5
								260	67		33	294			617	10101	327	CY	COMPACTED AGGREGATE, AS PER PLAN	6
							223							223	826	10041	223	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), FIBER TYPE C, AS PER PLAN	5
						542	413			1,981			1,981	955	826	10500	2,936	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), FIBER TYPE C	
							396	5,657	1,347		661	6,343		396	875	10000	7,400	LB	LONGITUDINAL JOINT ADHESIVE	
							5,347	37,972	11,282		5,181	44,073		5,347	897	01010	54,601	SY	PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A	
																			WATER WORK	
	23											10	5	8	638	10801	23	EACH	VALVE BOX ADJUSTED TO GRADE, AS PER PLAN	6
																			TRAFFIC CONTROL	
				176								176			621	00100	176	EACH	RPM	
				141								141			621	54000	141	EACH	RAISED PAVEMENT MARKER REMOVED	
					4.32						0.5	3.82			646	10010	4.32	MILE	EDGE LINE, 6"	
					4.78						0.16	0.26	2.32	2.04	646	10110	4.78	MILE	LANE LINE, 6"	
					5.34						0.08	2.78	1.16	1.32	646	10200	5.34	MILE	CENTER LINE	
					315							315			646	10300	315	FT	CHANNELIZING LINE, 8"	
					1,228							375	400	453	646	10310	1,228	FT	CHANNELIZING LINE, 12"	
					381							59	312	10	646	10400	381	FT	STOP LINE	
					1,044							629	415		646	10500	1,044	FT	CROSSWALK LINE	
					229							145	84		646	10600	229	FT	TRANSVERSE/DIAGONAL LINE	
					18								9	9	646	20300	18	EACH	LANE ARROW	
					2							2			646	20400	2	EACH	WORD ON PAVEMENT, 72"	
																			STRUCTURE REPAIRS	
																			FOR MAH-289-0154 ESTIMATED QUANTITIES	22
																			FOR MAH-289-0857 ESTIMATED QUANTITIES	22
																			FOR MAH-289D-0007 ESTIMATED QUANTITIES	22
																			FOR MAH-289D-0057 ESTIMATED QUANTITIES	22
																			FOR MAH-422-0496 ESTIMATED QUANTITIES	22
																			FOR MAH-422-0755 ESTIMATED QUANTITIES	22
																			FOR MAH-616-0588 ESTIMATED QUANTITIES	22
																			MAINTENANCE OF TRAFFIC	
			300								300				614	11110	300	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		36									36				614	12460	36	EACH	WORK ZONE MARKING SIGN	
		20											20		614	13000	20	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
			10								10				614	18601	10	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	8
		9.56									0.32	0.52	4.64	4.08	614	20010	9.56	MILE	WORK ZONE LANE LINE, CLASS I, 6"	
		4.78									0.16	0.26	2.32	2.04	614	20560	4.78	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
		7.73									0.16	2.91	2.32	2.34	614	21000	7.73	MILE	WORK ZONE CENTER LINE, CLASS I	
		5.34									0.08	2.78	1.16	1.32	614	21550	5.34	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
		4.32									0.5	3.82			614	22360	4.32	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
		728										94	624	10	614	26000	728	FT	WORK ZONE STOP LINE, CLASS I	
		381										59	312	10	614	26610	381	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
																			INCIDENTALS	
											LS				614	11000	LS		MAINTAINING TRAFFIC	
											12				619	16010	12	MNTH	FIELD OFFICE, TYPE B	
											LS				623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
											LS				624	10000	LS		MOBILIZATION	

CALCULATED A.JS CHECKED MAC

GENERAL SUMMARY

MAH / TRU-62 / VAR-19.36 / VAR

MAIN ROUTE	INTERSECTING ROUTE	QUADRANT RL=REAR LT, RR=REAR RT FL=FWD LT, FR=FWD RT (LOOKING UPSTATION)	CURB RAMP TYPE (SCD BP-7.1, SHEET 2/3)		202 PAVEMENT REMOVED	202 PAVEMENT REMOVED, ASPHALT	202 WALK REMOVED	202 CURB REMOVED	202 CURB AND GUTTER REMOVED		203 EXCAVATION (FOR WALK OR CURB RAMP INSTALLATION)		608 4" CONCRETE WALK	608 6" CONCRETE WALK	608 CURB RAMP	608 DETECTABLE WARNING			609 COMBINATION CURB AND GUTTER, TYPE 2	609 CURB, TYPE 6	
					SY	SY	SF	FT	FT		CY		SF	SF	SF	SF			FT	FT	
289	GRIFFITH ST.	FL	TYPE D				114.00	4.00					30.00		84.00						
		RL	TYPE D				132.00	24.00					84.00		48.00						
289	COVINGTON ST.	FL	TYPE D				92.00	5.00					36.00		56.00						
		RL	TYPE D				98.00	8.00					50.00		48.00						
289	WATT ST.	FR	TYPE B2				171.00	23.00					80.00		91.00						
		RR	TYPE B2				207.00	28.00					99.00		108.00						
289	JARIC AVE.	FL	TYPE A2				8.00									8.00					
		RL	TYPE A2				8.00									8.00					
289	PARK AVE.	FL	TYPE A2				8.00									8.00					
		FR	TYPE A2				8.00									8.00					
		RL	TYPE A2				8.00									8.00					
		RR	TYPE A2				8.00									8.00					
289	PARSONS AVE.	RL	TYPE A2				8.00									8.00					
289	QUEISNER AVE.	FL	TYPE A2				8.00									8.00					
289	WATSON ST.	FL	TYPE D				70.00	15.00					40.00		30.00						
		RL	TYPE D				8.00									8.00					
289	3RD ST.	FR	TYPE A2				76.00	19.00					16.00		60.00						
289D	RICE AVE.	FL	TYPE B2				95.00	20.00					35.00		60.00						
		RL	TYPE B2				143.00	23.00					15.00		128.00						
		RR	TYPE B2				144.00	25.00					108.00		36.00						
422	LANE AVE.	FL	TYPE B2				130.00	30.00					20.00		110.00						
		FR	TYPE B2				192.00	35.00					60.00		132.00						
		RL	TYPE B2				120.00	27.00					50.00		70.00						
		RR	TYPE B2				164.00	28.00					77.00		87.00						
422	FRUIT ST.	FL	TYPE D				170.00	30.00					50.00		120.00						
		RL	TYPE D				146.00	15.00					50.00		96.00						
		RR	TYPE D				116.00	14.00					50.00		66.00						
		FR	TYPE D				140.00	17.00					50.00		90.00						
422	FOREST AVE.	RR	TYPE D				190.00	17.00					50.00		140.00						
		FR	TYPE D				113.00	16.00					50.00		63.00						
422	ALBERT ST.	RL	TYPE D				110.00	18.00					50.00		60.00						
		FL	TYPE D				100.00	20.00					50.00		50.00						
422	PEARL ST.	RL	TYPE D				120.00	22.00					50.00		70.00						
		FL	TYPE D				110.00	15.00					50.00		60.00						
		RR	TYPE D				92.00	12.00					50.00		42.00						
		FR	TYPE D				86.00	13.00					50.00		36.00						
422	GARLAND AVE.	RR	TYPE D				110.00	26.00					50.00		60.00						
		FR	TYPE D				106.00	20.00					50.00		56.00						
		FL	TYPE D				106.00	22.00					50.00		56.00						
		RL	TYPE D				120.00	20.00					50.00		70.00						
422	BRUCE ST.	RR	TYPE D				146.00	26.00					50.00		96.00						
		FR	TYPE D				98.00	17.00					50.00		48.00						
			SUBTOTALS		0.00	0.00	4199.00	654.00	0.00	0.00	0.00	0.00	1700.00	0.00	2427.00	72.00	0.00	0.00	0.00	0.00	0.00
			TOTALS CARRIED TO GENERAL SUMMARY		0	0	4199	654	0	0	0	0	1700	0	2427	72	0	0	0	0	0

CALCULATED AJS
CHECKED MAC

CURB RAMP SUBSUMMARY

MAH/TRU-62/
VAR-19.36/VAR

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MAIN ROUTE	INTERSECTING ROUTE	QUADRANT RL=REAR LT, RR=REAR RT FL=FWD LT, FR=FWD RT (LOOKING UPSTATION)	CURB RAMP TYPE (SCD BP-7.1, SHEET 2/3)		202 PAVEMENT REMOVED	202 PAVEMENT REMOVED, ASPHALT	202 WALK REMOVED	202 CURB REMOVED	202 CURB AND GUTTER REMOVED		203 EXCAVATION (FOR WALK OR CURB RAMP INSTALLATION)		608 4" CONCRETE WALK	608 6" CONCRETE WALK	608 CURB RAMP	608 DETECTABLE WARNING			609 COMBINATION CURB AND GUTTER, TYPE 2	609 CURB, TYPE 6	
					SY	SY	SF	FT	FT		CY		SF	SF	SF	SF			FT	FT	
422	TRUESDALE AVE.	RR	TYPE D				146.00	20.00					50.00		96.00						
		FR	TYPE D				146.00	17.00					50.00		96.00						
		FL	TYPE D				130.00	22.00					50.00		80.00						
		RL	TYPE D				154.00	24.00					50.00		104.00						
422	EUCLID AVE.	RL	TYPE D				98.00	14.00					50.00		48.00						
		FL	TYPE D				130.00	23.00					50.00		80.00						
422	LOVELESS ST.	RR	TYPE D				138.00	22.00					50.00		88.00						
		FR	TYPE D				130.00	25.00					50.00		80.00						
422	EXCELSIOR AVE.	RL	TYPE D				104.00	21.00					50.00		54.00						
		FL	TYPE D				120.00	22.00					50.00		70.00						
422	JACKSON ST.	RR	TYPE D				146.00	24.00					50.00		96.00						
		FR	TYPE D				114.00	30.00					50.00		64.00						
422	MEDINA ST.	RR	TYPE D				106.00	23.00					50.00		56.00						
		FR	TYPE D				106.00	18.00					50.00		56.00						
422	CLINTON ST.	RL	TYPE D				113.00	14.00					50.00		63.00						
		FL	TYPE D				113.00	22.00					50.00		63.00						
422	PARK HEIGHTS AVE.	RR	TYPE D				138.00	21.00					50.00		88.00						
		FR	TYPE D				116.00	20.00					50.00		66.00						
422	HIMROD AVE.	RR	TYPE A1				128.00	23.00					50.00		78.00						
		FR	TYPE D				160.00	21.00					50.00		110.00						
422	LIVINGSTON ST.	RL	TYPE D				110.00	18.00					50.00		60.00						
		FL	TYPE A1				114.00	10.00					50.00		64.00						
		FR	TYPE A1				134.00	15.00					50.00		84.00						
422	LANSDOWNE BLVD.	RL	TYPE D				110.00	16.00					50.00		60.00						
		FL	TYPE D				160.00	18.00					50.00		110.00						
422	SHEHY ST.	RL	TYPE D				169.00	18.00					50.00		119.00						
		FL	TYPE D				138.00	17.00					50.00		88.00						
422	OAK ST. / EARLY RD.	RL	TYPE D				100.00	8.00					30.00		70.00						
		FL	TYPE D				8.00									8.00					
		RR	TYPE A1				8.00									8.00					
		FR	TYPE D				8.00									8.00					
			SUBTOTALS	0.00	0.00	0.00	3595.00	546.00	0.00	0.00	0.00	0.00	1380.00	0.00	2191.00	24.00	0.00	0.00	0.00	0.00	0.00
			TOTALS CARRIED TO GENERAL SUMMARY	0	0	0	3595	546	0	0	0	0	1380	0	2191	24	0	0	0	0	0

CALCULATED AJS
CHECKED MAC

CURB RAMP SUBSUMMARY

MAH/TRU-62/
VAR-19.36/VAR

LOCATION									621	621	621		621	
COUNTY	ROUTE	SECTION (S.L.M.)							RPM (WHITE/WHITE)	RPM(YELLOW/YELLOW)	RPM (WHITE/RED)		RAISED PAVEMENT MARKER REMOVED	REMARKS
		FROM	TO						EACH	EACH	EACH		EACH	
MAH	289	7.28	8.32							69			55	
MAH	289	8.32	9.60							85			68	
MAH	289	9.60	9.93							22			18	
SUBTOTALS										176				
TOTALS CARRIED TO GENERAL SUMMARY										176			141	

CALCULATED MJP
CHECKED MAC

RAISED PAVEMENT MARKER SUBSUMMARY

MAH/TRU-62/
VAR-19.36/VAR

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GENERAL SPEC: 640
MATERIAL TYPE: 646

CALCULATED AJS
CHECKED MAC

EDGE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	WHITE EDGE LINE, 6" TOTAL	WHITE EDGE LINE, 6" HIGHWAY	WHITE EDGE LINE, 6" RAMP	YELLOW EDGE LINE, 6" TOTAL	YELLOW EDGE LINE, 6" HIGHWAY	YELLOW EDGE LINE, 6" RAMP	COMMENTS
MAH	289	7.28	VILLAGE OF LOWELLVILLE (WEST)	8.32	SOUTH HUBBARD RD.	2.08	2.08					
MAH	289	9.32		9.57	VILLAGE OF LOWELLVILLE (EAST)	0.50	0.50					
MAH	289	9.57	VILLAGE OF LOWELLVILLE (EAST)	9.93	OHIO-PENNSYLVANIA STATE LINE	0.72	0.72					
MAH	62	19.36		19.44		0.25	0.16	0.09	0.25	0.16	0.09	
MAH	62	19.44		19.57		0.26	0.26		0.26	0.26		
TOTAL						3.81	3.72	0.09	0.51	0.42	0.09	

LANE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	LANE LINE, 6" DASHED	LANE LINE, 6" SOLID	COMMENTS
MAH	289	0.00	U.S. 422	0.40	COVINGTON ST.	0.80	0.80		
MAH	289	1.41	WATT ST.	1.75	S.R. 289D	0.68	0.68		
MAH	289D	0.42	U.S. 422	0.60	S.R. 289	0.36	0.36		
MAH	62	19.36		19.44		0.16	0.16		
MAH	62	19.44		19.57		0.26	0.26		
MAH	193	1.36		1.46	OXFORD AVE.	0.20	0.20		
MAH	422	3.90	OAK ST.	5.06		2.32	2.32		
TOTAL						4.78	4.78		

CENTER LINE

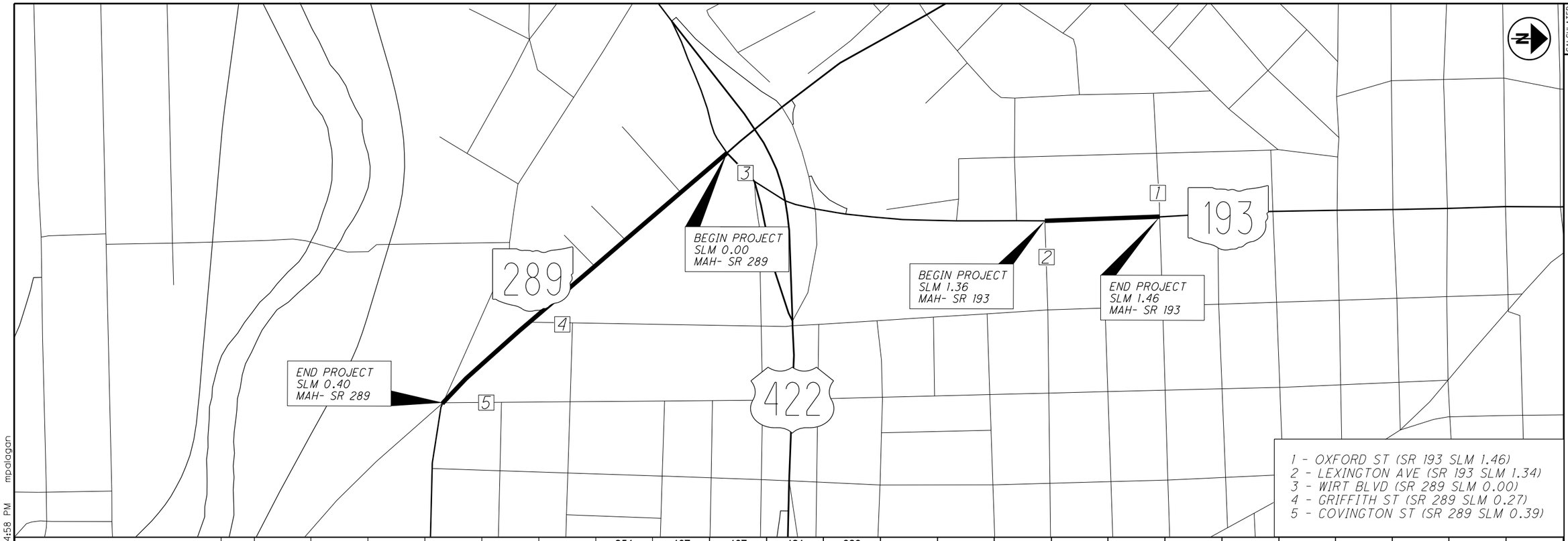
CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	EQUIVALENT SOLID LINE	COMMENTS
MAH	289	0.00	U.S. 422	0.40	COVINGTON ST.	0.40	0.80	
MAH	289	1.41	WATT ST.	1.75	S.R. 289D	0.34	0.68	
MAH	289	7.28	VILLAGE OF LOWELLVILLE (WEST)	8.32	SOUTH HUBBARD RD.	1.04	2.08	
MAH	289	8.32	SOUTH HUBBARD RD.	9.32		1.00	2.00	
MAH	289	9.32		9.57	VILLAGE OF LOWELLVILLE (EAST)	0.25	0.50	
MAH	289	9.57	VILLAGE OF LOWELLVILLE (EAST)	9.93	OHIO-PENNSYLVANIA STATE LINE	0.36	0.72	
MAH	289D	0.42	U.S. 422	0.60	S.R. 289	0.18	0.36	
MAH	62	19.36		19.44		0.08	0.16	
MAH	62	19.44		19.57		0.13	0.26	
MAH	549	0.00	HIMROD AVE.	0.30	OAK ST.	0.30	0.60	
MAH	193	1.36		1.46	OXFORD AVE.	0.10	0.20	
MAH	422	3.90	OAK ST.	5.06		1.16	2.32	
TOTAL						5.34	10.68	

AUXILIARY

CTY	ROUTE LOCATION	TRUE LOG	CHANNEL LINE, 8"	CHANNEL LINE, 12"	STOP LINE	CROSS WALK LINES	TRANSVERSE DIAGONAL LINES WHITE	TRANSVERSE DIAGONAL LINES YELLOW	ISLAND MARKING	SYMBOL MARKINGS RxR	SYMBOL MARKINGS SCHOOL 72"	SYMBOL MARKINGS SCHOOL 96"	LANE ARROWS TURN LEFT	LANE ARROWS TURN RIGHT	LANE ARROWS THRU	LANE ARROWS COMB.	LANE ARROWS REDUCT.	WORD ON PVMT ONLY 72"	WORD ON PVMT ONLY 96"	DOTTED LINES	COMMENTS
			FT	FT	FT	FT	FT	FT	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	
MAH	S.R. 289 @ COVINGTON ST.	0.390		145										3							
MAH	S.R. 289 @ WATT ST.	1.410		100									2								
MAH	S.R. 289 SLM 8.36	8.360				24															
MAH	S.R. 289 @ YOUNGSTOWN RD.	8.420				216															
MAH	S.R. 289 @ MC GILL ST.	8.950			24	240												2			"STOP" BEFORE STOP LINES
MAH	S.R. 289 SLM 9.04	9.040				49															
MAH	S.R. 289 @ 2ND ST.	9.070				100															
MAH	U.S. 62 @ ALBERT ST.	19.570		375	35																
MAH	U.S. 62 SLM 19.46	19.460	315				145														
MAH	C.R. 549 @ OAK ST.	0.300		58	10								2								
MAH	S.R. 193 SLM 1.36	1.360		150									2								
MAH	U.S. 422 @ LANE AVE.	3.910			140	415															
MAH	U.S. 422 @ FRUIT ST.	3.980			56																
MAH	U.S. 422 @ GARLAND AVE.	4.170			64																
MAH	U.S. 422 @ TRUESDALE AVE.	4.320			52																
MAH	U.S. 422 @ HIMROD AVE.	4.770		180									3								
MAH	U.S. 422 @ LANSDOWNE BLVD.	4.900		85									3								
MAH	U.S. 422 @ SHEHY ST.	4.920		135				84					3								
TOTAL			315	1228	381	1044	145	84					15	3				2			

PAVEMENT MARKING SUBSUMMARY

MAH/TRU-62/
VAR-19.36/VAR

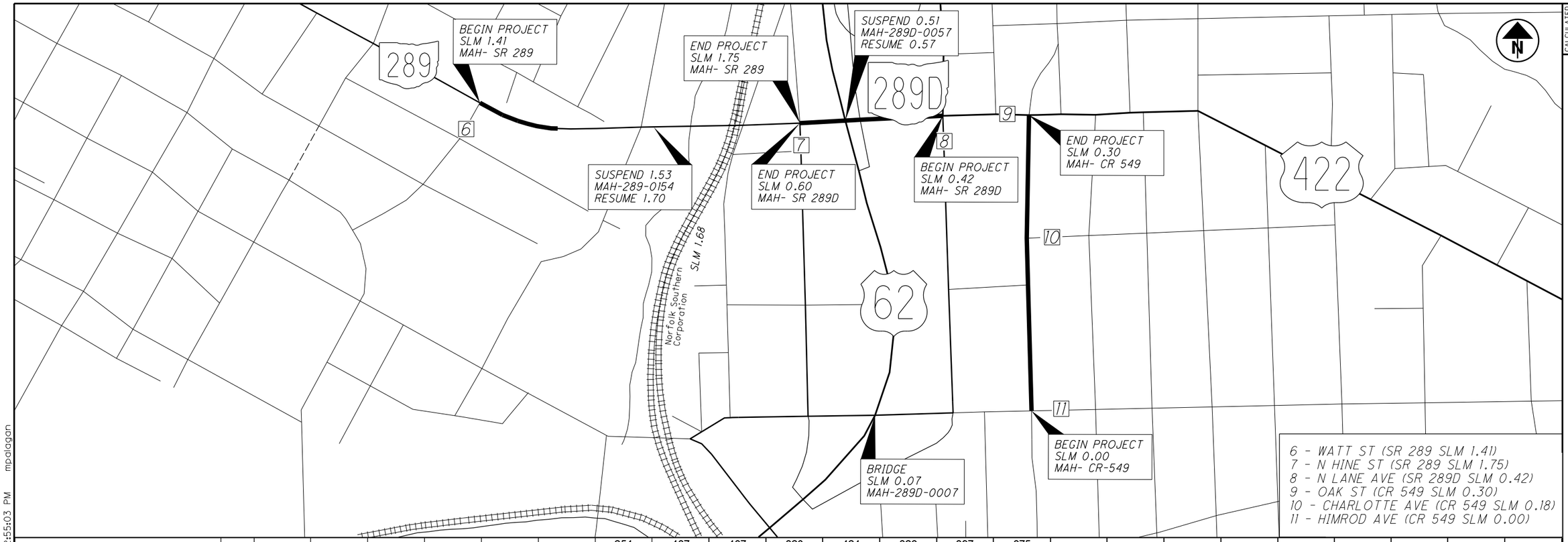


CALCULATED AJS
CHECKED MAC

PAVEMENT CALCULATIONS (SR 193, SR 289)

SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA		254 PAVEMENT PLANING, ASPHALT CONCRETE (T=2 1/4")	407 NON-TRACKING TACK COAT @ 0.06 GAL/SY	407 NON-TRACKING TACK COAT @ 0.09 GAL/SY	424 FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN (T=3/4")	826 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), FIBER TYPE C (T=1 1/2")													
					FT	FT	SY	SY		SY	GAL	GAL	CY	CY													
SR-289																										
0.00	TO	0.04	1		211.20	45	1056.00			1056.00	63.36	95.04	22.00	44.00												
0.04	TO	0.37	1		1742.40	40	7744.00			7744.00	464.64	696.96	161.33	322.67												
0.37	TO	0.40	1		158.40	50	880.00			880.00	52.80	79.20	18.33	36.67												
INTERSECTIONS					10.00	VARIES		515.56		515.56	30.93	46.40	10.74	21.48												
SR-193																										
1.36	TO	1.46	1		528.00	45.00	2640.00			2640.00	158.40	237.60	55.00	110.00												
INTERSECTIONS					10.00	VARIES		161.11		161.11	8.70	13.05	3.36	6.71												
									SUBTOTALS	0.00	12996.67	778.83	1168.25	270.76	541.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
									TOTALS CARRIED TO GENERAL SUMMARY	0	12997	779	1169	271	542	0	0	0	0	0	0	0	0	0	0	0

MAH/TRU-62/
VAR-19.36/VAR



SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA		254 PAVEMENT PLANING, ASPHALT CONCRETE (T=2 1/4")	407 NON-TRACKING TACK COAT @ 0.06 GAL/SY	407 NON-TRACKING TACK COAT @ 0.09 GAL/SY	826 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), FIBER TYPE C, AS PER PLAN (T=1 1/2")	424 FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN (T=3/4")	826 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), FIBER TYPE C (T=1 1/2")	897 PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A (T=1 1/2")	875 LONGITUDINAL JOINT ADHESIVE @ 0.25 LB/FT									
					FT	FT	SY	SY		SY	GAL	GAL	CY	CY	CY	SY	LB										
SR-289																										
1.41	TO	1.54	2		686.40	56.00	4270.93			4270.93	256.26	384.38		88.98	177.96											
1.70	TO	1.75	2		264.00	52.00	1525.33			1525.33	91.52	137.28		31.78	63.56											
INTERSECTIONS					10.00	VARIES		306.67		306.67	18.40	27.60		6.39	12.78											
SR-289D																										
0.42	TO	0.51	1		475.20	54.00	2851.20			2851.20	171.07	256.61		59.40	118.80											
0.57	TO	0.60	1		158.40	54.00	950.40			950.40	57.02	85.54		19.80	39.60											
CR-549																										
0.00	TO	0.30	4		1584.00	30.00	5280.00					475.20	220.00			5280.00	396.00									
INTERSECTIONS					10.00	VARIES		66.67				5.40	2.78			66.67										
								SUBTOTALS	0.00	9904.53	594.27	1372.01	222.78	206.34	412.69	5346.67	396.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
								TOTALS CARRIED TO GENERAL SUMMARY	0	9905	595	1373	223	207	413	5347	396	0	0	0	0	0	0	0	0	0	0

CALCULATED AJS
CHECKED MAC

PAVEMENT CALCULATIONS (SR 289, SR 289D, CR 549)

MAH/TRU-62/
VAR-19.36/VAR

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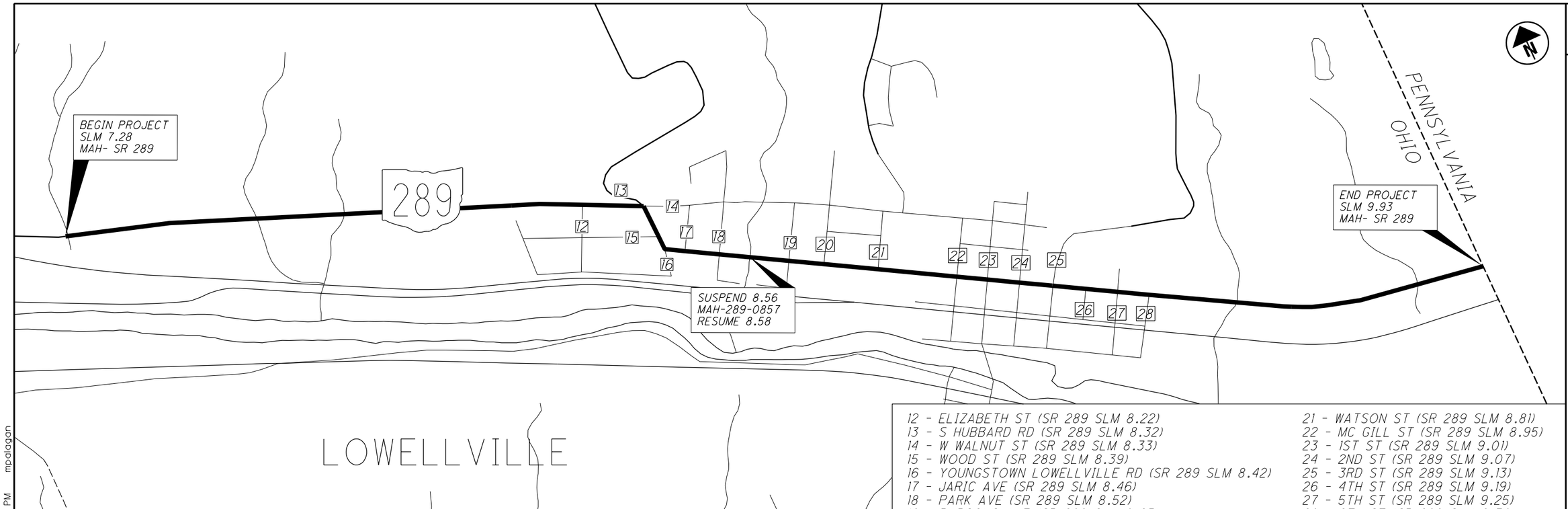


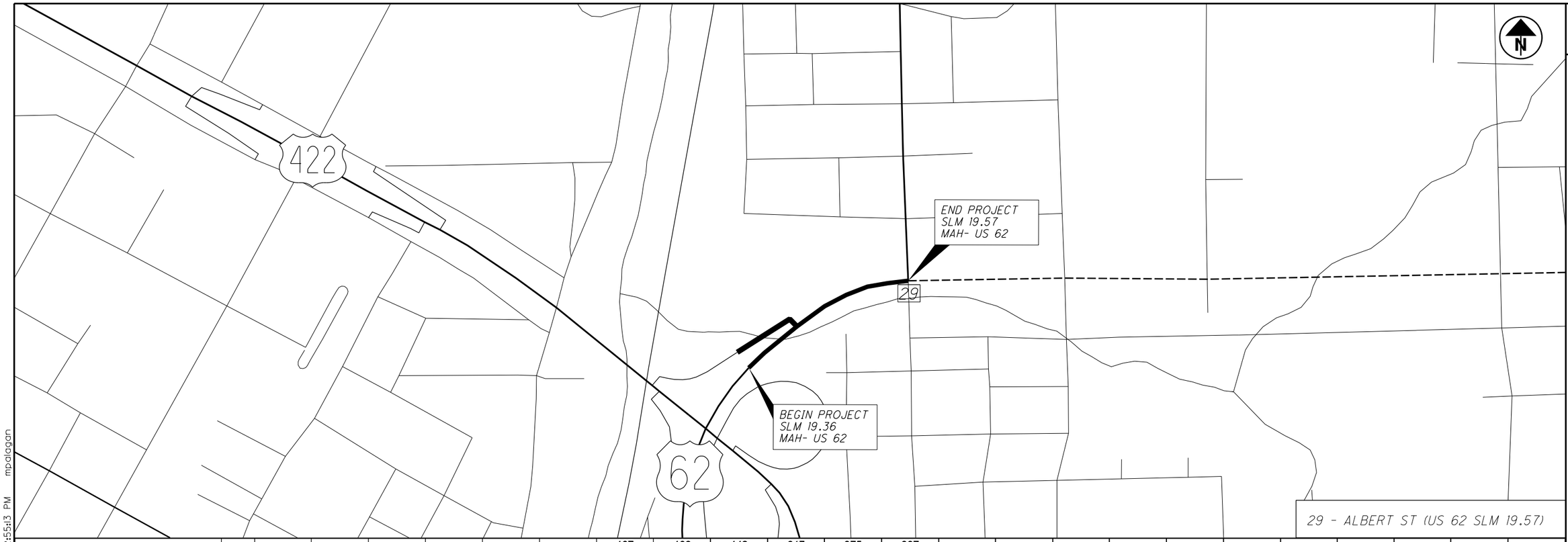
CALCULATED AJS
CHECKED MAC

PAVEMENT CALCULATIONS (SR 289)

SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA		407 NON-TRACKING TACK COAT @ 0.09 GAL/SY	408 PRIME COAT, AS PER PLAN @ 0.4 GAL/SY	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN (T=1 1/4")	617 COMPACTED AGGREGATE, AS PER PLAN (T=2")	875 LONGITUDINAL JOINT ADHESIVE @ 0.2 LB/FT	897 PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A (T=1 1/4")											
					FT	FT	SY	SY		GAL	GAL	CY	CY	LB	SY												
SR-289																											
7.28	TO	8.33	3		5544.00	24	14784.00			1330.56	492.80	513.33	182.52	2217.60	14784.00												
8.33	TO	8.40	3		369.60	28	1149.87			103.49		39.93		147.84	1149.87												
8.40	TO	9.42	3		5385.60	24	14361.60			1292.54		498.67		2154.24	14361.60												
9.42	TO	9.45	3		158.40	26	457.60			41.18		15.89		63.36	457.60												
9.45	TO	9.93	3		2534.40	22	6195.20			557.57	450.56	215.11	76.48	1013.76	6195.20												
INTERSECTIONS					10.00	VARIES		833.33		75.00		31.25			833.33												
DRIVEWAYS					2.00	VARIES		66.67		6.00		2.31		60.00	66.67												
MAILBOX APPROACHES					VARIES	VARIES		123.33		11.10		4.28			123.33												
								SUBTOTALS	0.00	3417.44	943.36	1320.77	259.00	5656.80	37971.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
								TOTALS CARRIED TO GENERAL SUMMARY	0	3418	944	1321	260	5657	37972	0	0	0	0	0	0	0	0	0	0	0

MAH/TRU-62/
VAR-19.36/VAR

17
26



CALCULATED AJS
CHECKED MAC

QUANTITY CALCULATIONS (US 62)

PAVEMENT

SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA		407 NON-TRACKING TACK COAT @ 0.09 GAL/SY	408 PRIME COAT, AS PER PLAN @ 0.4 GAL/SY	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN (PG70-22M) (T=1 1/2")	617 COMPACTED AGGREGATE, AS PER PLAN	875 LONGITUDINAL JOINT ADHESIVE @ 0.25 LB/FT	897 PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A (T=1 1/2")											
					FT	FT	SY	SY		GAL	GAL	CY	CY	LB	SY												
US-62 WB																											
19.36	TO	19.44	6		422.40	40.00	1877.33			168.96	37.55	78.22	10.43	211.20	1877.33												
19.44	TO	19.57	6		686.40	40.00	3050.67			274.56	61.01	127.11	16.95	343.20	3050.67												
US-62 EB																											
19.36	TO	19.44	6		422.40	40.00	1877.33			168.96	37.55	78.22	10.43	211.20	1877.33												
19.44	TO	19.57	6		686.40	40.00	3050.67			274.56	61.01	127.11	16.95	343.20	3050.67												
US-62 RAMP																											
19.35	TO	19.44	6		475.20	27.00	1425.60			128.30	42.24	59.40	11.73	237.60	1425.60												
								SUBTOTALS	0.00	1015.34	239.36	470.07	66.49	1346.40	11281.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
								TOTALS CARRIED TO GENERAL SUMMARY	0	1016	240	471	67	1347	11282	0	0	0	0	0	0	0	0	0	0	0

MAH / TRU-62 / VAR-19.36 / VAR

CALCULATED AJS
CHECKED MAC

PAVEMENT CALCULATIONS (US 422)

SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA		254 PAVEMENT PLANING, ASPHALT CONCRETE (T=2 3/4")	407 NON-TRACKING TACK COAT @ 0.06 GAL/SY	407 NON-TRACKING TACK COAT @ 0.09 GAL/SY	424 FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN (T=3/4")	826 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), FIBER TYPE C (T=2")													
					FT	FT	SY	SY		SY	GAL	GAL	CY	CY														
US-422																											
3.90	TO	4.16	5		1372.80	54.00	8236.80			8236.80	494.21	741.31	171.60	457.60														
4.16	TO	4.20	5		211.20	68.00	1595.73			1595.73	95.74	143.62	33.24	88.65														
4.20	TO	4.96	5		4012.80	54.00	24076.80			24076.80	1444.61	2166.91	501.60	1337.60														
INTERSECTIONS					10.00	VARIES		1538.89		1538.89	83.10	124.65	32.06	96.18														
									SUBTOTALS	0.00	35448.22	2117.66	3176.49	738.50	1980.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
									TOTALS CARRIED TO GENERAL SUMMARY	0	35449	2118	3177	739	1981	0	0	0	0	0	0	0	0	0	0	0	0

MAH/TRU-62/
VAR-19.36/VAR

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD DRAWING AND SUPPLEMENTAL SPECIFICATIONS:

SS 843 DATED 04/18/03

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, INCLUDING THE 2002 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

PROPOSED WORK:

MAH-289-0154 (OVER RR, CRAB CREEK, ANDREWS AVE)
- -PATCH ALL UNSOUND AREAS OF THE EXISTING CONCRETE WEARING SURFACE, INCLUDING THE APPROACH SLABS
- -REPAIR TRIPPING HAZARD WHERE APPROACH SIDEWALK MEETS SIDEWALK ON LEFT OF STRUCTURE
- -PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND SEAL WITH EPOXY-URETHANE
- -SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN
- -REPLACE DAMAGED APPROACH GUARDRAIL AT REAR
- -CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION
- -NEW STRUCTURE IDENTIFICATION SIGNS

MAH-289-0857 (GRAYS RUN)
- -PATCH ALL UNSOUND AREAS OF THE EXISTING CONCRETE WEARING SURFACE, INCLUDING THE APPROACH SLABS
- -SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN
- -REPAIR TRIPPING HAZARD WHERE APPROACH SIDEWALK MEETS SIDEWALK ON EITHER SIDE STRUCTURE
- -REPAIR SLOPE PROTECTION AT FORWARD RIGHT ABUTMENT
- -CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION
- -NEW STRUCTURE IDENTIFICATION SIGNS

MAH-616-0588 (DRY RUN)
- -SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN

MAH-289D-0007 (HIMROD AVE OVER US62 & SR7)
- -PATCH ALL UNSOUND AREAS OF THE EXISTING CONCRETE WEARING SURFACE, INCLUDING THE APPROACH SLABS
- -PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE, INCLUDING RAILING, CURB, AND FLOOR. SEAL WITH EPOXY-URETHANE
- -REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEALWITH EPOXY-URETHANE
- -CLEAN SCUPPERS AND VEGETATION GROWTH AT DECK EDGES
- -CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION

MAH-289D-0057 (OAK ST OVER US62 & SR7)
- -CLEAN SCUPPERS AND VEGETATION GROWTH AT DECK EDGES
- -REPLACE THE TOPS OF BACKWALLS
- -REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEALWITH EPOXY-URETHANE
- -PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND SEAL WITH EPOXY-URETHANE
- -REPAIR SLOPE PROTECTION AT REAR LEFT
- -REMOVE AND REPLACE ASPHALT OVERLAY ON DECK AND APPROACH SLABS
- -REMOVE DEBRIS FROM SLIDING PLATE EXPANSION JOINT
- -REPLACE MISSING AND DAMAGED ALUMINUM RAIL AT BOTH SIDES
- -CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION INCLUDING ON VPF
- -NEW STRUCTURE IDENTIFICATION SIGNS

MAH-422-0496 (OVER LINCOLN PARK)
- -PATCH ALL UNSOUND AREAS OF THE EXISTING CONCRETE WEARING SURFACE, INCLUDING THE APPROACH SLABS
- -SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN
- -REPAIR EXPANSION JOINT SEALS
- -PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE, INCLUDING RAILING, AND SEAL WITH EPOXY-URETHANE
- -REPAIR EROSION AT FORWARD AND REAR RIGHT
- -REPAIR SLOPE PROTECTION AT FORWARD AND REAR
- -REPLACE OLD AND DAMAGED GUARDRAIL AT ALL FOUR CORNERS OF STRUCTURE
- -CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION

MAH-422-0755 (DRY RUN)
- -SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN

CLEARING AND GRUBBING

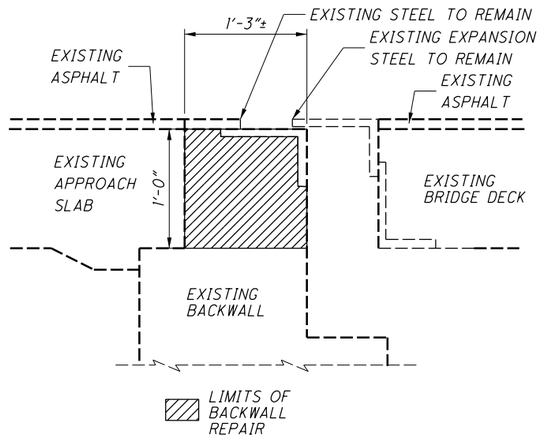
ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM 511 - CONCRETE MISC.: BACKWALL REPAIR

THIS ITEM OF WORK CONSISTS OF THE REMOVAL OF ALL UNSOUND CONCRETE AT BOTH ABUTMENT BACKWALLS OF STRUCTURE MAH-289D-0057 TO THE LIMITS SHOWN BELOW OR AS DIRECTED BY THE ENGINEER. THE PREPARATION OF THE SURFACE, FORMS, TEMPORARY SUPPORTS OF THE EXPANSION JOINT, AND PLACING CLASS QC I CONCRETE, SUBSTRUCTURE.

TEMPORARY SUPPORTS OF THE EXPANSION JOINT WILL BE USED TO MAINTAIN THE PROPER ALIGNMENT AND GRADE OF THE JOINT DURING REMOVAL AND REPLACEMENT OF BACKWALL CONCRETE. THE COST OF THIS TEMPORARY SUPPORT WILL BE INCIDENTAL TO THIS ITEM.

PAYMENT WILL BE MADE AT THE CONTRACT PRICE PER CU. YD. FOR ITEM 511 - CONCRETE MISC.: BACKWALL REPAIR WHICH WILL INCLUDE ALL MATERIALS AND LABOR INCLUDING REMOVAL AND DISPOSAL OF THE EXISTING CONCRETE REQUIRED TO MAKE THIS WORK COMPLETE.



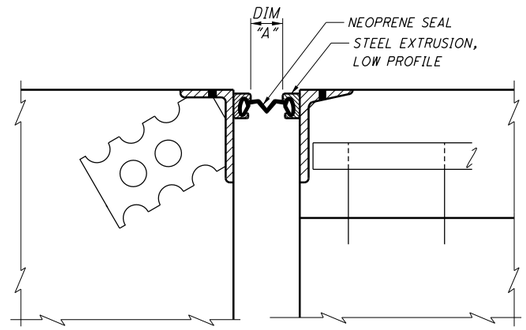
LINCOLN PARK

ACCESS TO ALL LINCOLN PARK FACILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES. TEMPORARY CONSTRUCTION FENCING WILL BE INSTALLED ALONG THE PROPOSED CONSTRUCTION LIMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO PROTECT LINCOLN PARK AND THE PUBLIC. APPROPRIATE SIGNAGE WILL BE INSTALLED TO ALERT USERS OF LINCOLN PARK OF CONSTRUCTION ACTIVITIES, IF IN PROXIMITY TO RECREATIONAL FACILITIES OR FEATURES. THE CONTRACTOR SHALL BE REQUIRED TO CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT AND THE CITY OF YOUNGSTOWN PARKS & RECREATION DEPARTMENT (DAWN TURNAGE, 330-742-8712) PRIOR TO THE BEGINNING OF CONSTRUCTION ACTIVITIES. AT LEAST ONE (1) DAY PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM ODOT AND THE CITY OF YOUNGSTOWN PARKS AND RECREATION DEPARTMENT OF THE PROPOSED ACCESS POINT(S) TO PERFORM THE PROPOSED MAINTENANCE ACTIVITIES BENEATH THE STRUCTURE AND THE ACCESS POINT(S) SHALL BE AGREED UPON BEFORE ANY SUCH WORK CAN BE PERFORMED.

ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN

THIS ITEM WILL INCLUDE THE REMOVAL AND REPLACEMENT OF THE EXISTING SEALS FROM EDGE TO EDGE OF STRUCTURE MAH-422-0496 DECK. UPON REMOVAL OF THE SEAL, THE CONTRACTOR WILL ATTEMPT TO MATCH THE REPLACEMENT SEAL AS CLOSELY AS POSSIBLE WITH THE EXISTING SEAL SO AS TO PROVIDE A SNUG, WATERTIGHT SEAL. THE EXISTING SEAL WILL BE FIELD MEASURE PRIOR TO ORDERING MATERIAL.

THIS WORK WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 516, ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN. THIS PRICE WILL INCLUDE THE REMOVAL OF THE EXISTING SEAL, LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS REQUIRED TO REPLACE THE SEAL.



DIMENSION A

TEMPERATURE, °F	ATB-7-2755
30°	2⅝"
40°	2⅜"
50°	2⅛"
60°	1⅞"
70°	1⅝"
80°	1⅜"
90°	1⅛"

ITEM 518 - SCUPPER MISC.: CLEANOUT

THIS WORK WILL CONSIST OF REMOVING ALL DEBRIS FROM ON TOP AND INSIDE OF THE SCUPPERS. SCUPPER CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 518, SCUPPER MISC.: CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

DESIGN AGENCY
ODOT--- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE NUMBER
AJS	AJS	MAC	11/20/19	
CHECKED	REVISED			
MAC	MJP			

STRUCTURE GENERAL NOTES
MAH-289-0154, MAH-289-0857, MAH-289D-0007, MAH-616-0588
MAH-422-0496, MAH-422-0755, MAH-616-0588

MAH/TRU-62/
VAR-19.36/VAR
PID No. 96556

EROSION REPAIR

THE FOLLOWING ITEMS WILL BE USED TO REPAIR THE EROSION THAT HAS OCCURED AT THE REAR ABUTMENT OF STRUCTURE MAH-289-0154 AND AT THE FORWARD AND REAR OF STRUCTURE MAH-422-0496 AS DIRECTED BY THE PROJECT ENGINEER:

MAH-289-0154
ITEM 601, DUMPED ROCK FILL, TYPE B, 7 CY

MAH-422-0496
ITEM 203, BORROW, 15 CY
ITEM 601, DUMPED ROCK FILL, TYPE B, 10 CY
ITEM 601, CRUSHED AGGREGATE SLOPE PROTECTION, 20 CY

SIDEWALK CORRECTIONS

THE ITEMS LISTED FOR STRUCTURES MAH-289-0154 AND MAH-289-0857 SHALL BE USED AS DIRECTED BY THE ENGINEER TO REPAIR THE EXISTING CURB AND SIDEWALK AT THE APPROACHES OF THE STRUCTURE.

MAH-289-0154
ITEM 202, WALK REMOVED, 40 SF
ITEM 202, CURB REMOVED, 10 FT
ITEM 608, 6" CONCRETE WALK, 40 SF
ITEM 609, CURB, TYPE 7, 10 FT

MAH-289-0857
ITEM 202, WALK REMOVED, 50 SF
ITEM 202, CURB REMOVED, 10 FT
ITEM 608, 6" CONCRETE WALK, 50 SF
ITEM 609, CURB, TYPE 7, 10 FT

SPECIAL - STRUCTURES: CONCRETE SPALL REMOVAL

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY SPALLED AREAS OF THE BOTTOM DECK FLOOR OF STRUCTURES MAH-289D-0007 AND MAH-289D-0057 WITHOUT SOUNDING. AFTER SPALLED CONCRETE AREAS HAVE BEEN REMOVED, REMOVAL AREAS WILL BE SEALED WITH ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

CONCRETE SPALL REMOVAL WILL BE PAID FOR AT THE UNIT BID PRICE FOR SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL. THIS PRICE WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

MAH-289D-0007
SPEC, STRUCTURES: CONCRETE SPALL REMOVAL, 50 SQ YD
512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), 50 SQ YD

MAH-289D-0057
SPEC, STRUCTURES: CONCRETE SPALL REMOVAL, 50 SQ YD
512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), 50 SQ YD

CONCRETE SLOPE PROTECTION REPAIR

THIS WORK WILL CONSIST OF REMOVING AND REPLACING A SLAB OF THE CONCRETE SLOPE PROTECTION UNDER STRUCTURE MAH-289D-0057 WITH ITEM 613, LOW STRENGTH MORTAR BACKFILL AND ITEM 601, CONCRETE SLOPE PROTECTION.

PLACE THE LOW STRENGTH MORTAR BACKFILL TO FILL ALL EROSION UNDER THE OLD CONCRETE SLOPE PROTECTION AND THEN PLACE NEW CONCRETE SLOPE PROTECTION SLABS PER CMS 601.07 AS DIRECTED BY THE PROJECT ENGINEER.

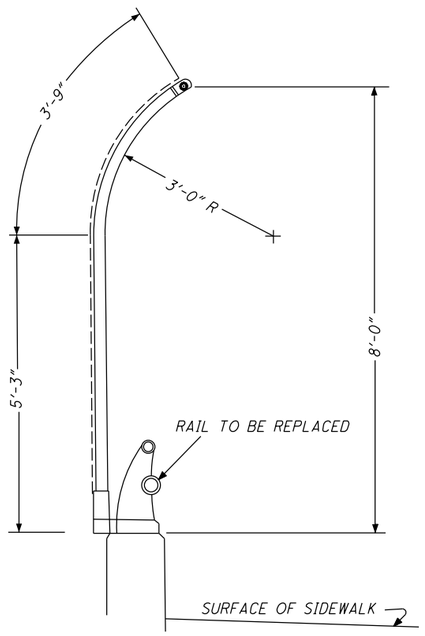
CONCRETE SLOPE PROTECTION REPLACEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 601, CONCRETE SLOPE PROTECTION AND ITEM 613, LOW STRENGTH MORTAR BACKFILL. REMOVAL OF EXISTING CONCRETE SLOPE PROTECTION WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 202, CONCRETE SLOPE PROTECTION REMOVED. THE PRICE FOR EACH ITEM WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 202, CONCRETE SLOPE PROTECTION REMOVED, 63 SY
ITEM 601, CONCRETE SLOPE PROTECTION, 63 SY
ITEM 613, LOW STRENGTH MORTAR BACKFILL, 125 CY

SPECIAL - STRUCTURES: REPLACE ALUMINUM RAIL

THIS ITEM WILL CONSIST OF THE REPLACEMENT OF THE MISSING AND DAMAGED RAILING OF THE VANDEL PROTECTION FENCE ON STRUCTURE MAH-289D-0057. THE ACTUAL SECTIONS NEEDED WILL BE FIELD MEASURED PRIOR TO ORDERING MATERIAL.

THIS WORK WILL BE PAID FOR AT THE UNIT PRICE BID FOR SPECIAL - STRUCTURES: REPLACE ALUMINUM RAIL. THIS PRICE WILL INCLUDE THE LABOR, EQUIPMENT, MATERIAL, RAILING AND INCIDENTALS REQUIRED TO REPLACE THE RAILING.



CORRECTING BRIDGE IDENTIFICATION SIGN NUMBERS:

SOME OF THE EXISTING BRIDGE NUMBER SIGNS HAVE INCORRECT BRIDGE NUMBERS ON THEM. THE FOLLOWING BRIDGE NUMBERS ARE THE CORRECT ONES AND WILL BE USED ON THE NEW BRIDGE IDENTIFICATIONS SIGNS.

STRUCTURE MAH-289-0154 (SFN:5004942) THE EXISTING SIGN SHOWS 0155. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0154.

STRUCTURE MAH-289D-0057 (SFN:5009510) THE EXISTING SIGN SHOWS 0053. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0057.

STRUCTURE/CULVERT IDENTIFICATION SIGNS

STRUCTURE IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:

MAH-289-0154 (TWO APPROACHES)
MAH-289-0857 (TWO APPROACHES)
MAH-289D-0057 (TWO APPROACHES)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:
- ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
- ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
- ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
- ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

GUARDRAIL REPLACEMENT

THE FOLLOWING ITEMS WILL BE USED TO REPLACE EXISTING PIECES OF GUARDRAIL THAT ARE DAMAGED, ROTTED, OR OUTDATED AT STRUCTURES MAH-289-0154 AND MAH-422-0496 AS DIRECTED BY THE PROJECT ENGINEER:

MAH-289-0154

202, GUARDRAIL REMOVED	50 FT
606, GUARDRAIL, TYPE MGS	50 FT

MAH-422-0496

202, GUARDRAIL REMOVED	125 FT
202, BRIDGE TERMINAL ASSEMBLY REMOVED,	4 EA
606, GUARDRAIL, TYPE MGS	125 FT
606, BRIDGE TERMINAL ASSEMBLY, TYPE 2,	4 EA

STREAM AVOIDANCE - MAH-289-1.54, MAH-616-5.88, MAH-422-4.96 AND MAH-422-7.55

UNDER NO CIRCUMSTANCES SHALL ANY EQUIPMENT (LIFT, BACKHOE, EARTH MOVING EQUIPMENT, ETC.) AND/OR MATERIALS ENTER THE STREAM(S) AT MAH-289-1.54, MAH-616-5.88, MAH-422-4.96 AND MAH-422-7.55. NO FILL MATERIAL (INCLUDING TEMPORARY FILLS) SHALL BE PLACED BELOW THE IDENTIFIED ORDINARY HIGH WATER MARK (OHWM) OF THE STREAM(S). THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ALL CONSTRUCTION MATERIALS, WASTE MATERIALS, WATER CHEMICALS OR OTHER SUBSTANCES USED TO CONSTRUCT THE PROJECT FROM ENTERING THE STREAM(S).

TREE CUTTING/REMOVAL PROHIBITED

THE MAH-289-1.54, MAH-289-8.57, MAH-289D-0.07, MAH-289D-0.57 AND MAH-422-4.96 BRIDGES ARE LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. TREE TRIMMING IS PERMITTED AT THESE LOCATIONS AS DIRECTED BY THE PROJECT ENGINEER, HOWEVER, NO TREES SHALL BE REMOVED AT THIS LOCATION. A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

DESIGN AGENCY
ODOT--- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
AJS	AJS	MAC	11/20/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MAC	MJP		

STRUCTURE GENERAL NOTES
MAH-289-0154, MAH-289-0857, MAH-289D-0007, MAH-289D-0057,
MAH-422-0496, MAH-422-0755, MAH-616-0588

MAH/TRU-62/
VAR-19.36/ VAR
PID No. 96556

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CALC:	AJS	DATE: 7/17/2019
CHECKED:	MAC	DATE: 11/26/2019

ESTIMATED QUANTITIES

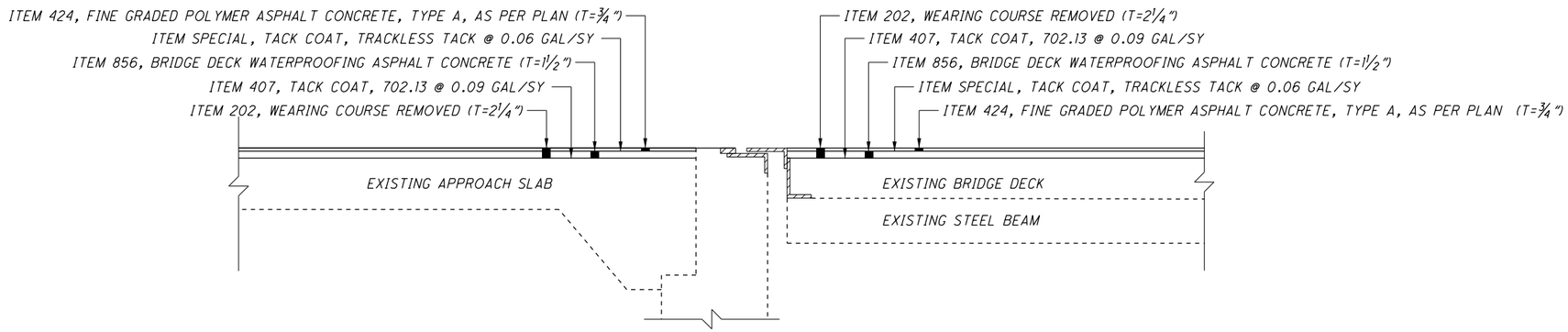
BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
MAH-289-0154 5004942 06/S>2/BR	MAH-289-0857 5005086 06/S>2/BR	MAH-289D-0007 5009472 05/NHS/BR	MAH-289D-0057 5009510 05/NHS/BR	MAH-422-0496 5005493 05/NHS/BR	MAH-422-0755 5005531 05/NHS/BR	MAH-616-0588 5006015 05/NHS/BR						
LS	LS	LS	LS	LS				201	11000		CLEARING AND GRUBBING	
40	50							202	30000	SF	WALK REMOVED	
10	10							202	32000	FT	CURB REMOVED	
			63					202	32800	SY	CONCRETE SLOPE PROTECTION REMOVED	
			1890					202	23500	SY	WEARING COURSE REMOVED	
50				125				202	38000	FT	GUARDRAIL REMOVED	21
				4				202	47000	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	21
				15				203	40000	CY	BORROW	
			171					407	13900	GAL	TACK COAT, 702.13	
			114					407	20000	GAL	NON-TRACKING TACK COAT	
			40					424	10001	CY	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A, AS PER PLAN	
			16					511	71100	CY	CONCRETE, MISC.:BACKWALL REPAIR	
100		150	200	200				512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
5032	232			4204	387	503		512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
				128				516	01301	FT	ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN	20
			128					516	14600	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: CLEANOUT OF EXPANSION JOINTS	
		6	4	17				518	12500	EACH	SCUPPER, MISC.: CLEANOUT	
100		100	150	200				519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	20
51	6	3		42				519	12304	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C	
		50	50					SPECIAL	53000800	SY	STRUCTURES: CONCRETE SPALL REMOVAL	
			72					SPECIAL	53001300	FT	STRUCTURES: REPLACE ALUMINUM RAIL	21
			63					601	21000	SY	CONCRETE SLOPE PROTECTION	
7				10				601	26000	CY	DUMPED ROCK FILL, TYPE B	
				20				601	20010	CY	CRUSHED AGGREGATE SLOPE PROTECTION	
	10							601	32100	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
50				125				606	15050	FT	GUARDRAIL, TYPE MGS	21
				4				606	35100	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	21
40	50							608	13000	SF	6" CONCRETE WALK	
10	10							609	28000	FT	CURB, TYPE 7	
			125					613	41200	CY	LOW STRENGTH MORTAR BACKFILL	
15	15		15					630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
2	2		2					630	80100	SF	SIGN, FLAT SHEET, 730.20	
2	2		2					630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
2	2		2					630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
			79					856	10000	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE	

DESIGN AGENCY
ODOT--- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
AJS	AJS	MAC	09/20/18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MAC	CMR		

ESTIMATED QUANTITIES
MAH-289-0154, MAH-289-0857, MAH-289D-0007, MAH-289D-0057, MAH-616-0588
MAH-422-0496, MAH-422-0755

MAH/TRU-62/
VAR-19.36/VAR
PID No. 96556



MAH-289D-0057

APPROACH SHOWN,
TRAILING SIMILAR

BRIDGE NUMBER	BRIDGE DECK				202	407	407	424	512	519	856	
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA		WEARING COURSE REMOVED (T= 2 1/4")	NON-TRACKING TACK COAT	TACK COAT, 702.13	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A (T=3/4")	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	PATCHING CONCRETE BRIDGE DECK - TYPE C	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE (T=1 1/2")	
	FT	FT	SQ YD		SY	GAL	GAL	CY	SY	SY	CY	
MAH-289-0154	838.00	51.00	4748.67						4748.67	47.49		
MAH-289-0857	47.00	24.00	125.33						125.33	5.00		
MAH-422-0496	612.00	58.00	3944.00						3944.00	39.44		
MAH-422-0755	41.00	43.00	195.89						195.89			
MAH-616-0588	73.00	40.00	324.44						324.44			
MAH-289D-0007	187.00	60.00	1246.67									
MAH-289D-0057	275.00	54.00	1650.00		1650.00	99.00	148.50	34.37			68.75	
TOTALS					1650	99	149	35	9339	92	69	

	APPROACH SLABS					202	407	407	424	512	519	856	
	LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)		WEARING COURSE REMOVED (T= 2 1/4")	NON-TRACKING TACK COAT	TACK COAT, 702.13	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A (T=3/4")	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	PATCHING CONCRETE BRIDGE DECK - TYPE C	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE (T=1 1/2")	
	FT	FT	SQ YD			SY	GAL	GAL	CY	SY	SY	CY	
	25.00	50.00	138.89							138.89	1.39		
	25.00	52.00	144.44							144.44	1.44		
	20.00	24.00	53.33							53.33	0.53		
	20.00	24.00	53.33							53.33	0.53		
	20.00	58.00	128.89							128.89	1.29		
	20.00	59.00	131.11							131.11	1.31		
	20.00	43.00	95.56							95.56			
	20.00	43.00	95.56							95.56			
	20.00	40.00	88.89							88.89			
	20.00	40.00	88.89							88.89			
	20.00	60.00	133.33								1.33		
	20.00	60.00	133.33								1.33		
	20.00	54.00	120.00			120.00	7.20	10.80	2.50			5.00	
	20.00	54.00	120.00			120.00	7.20	10.80	2.50			5.00	
TOTALS						240	15	22	5	1019	10	10	

DESIGN AGENCY
ODOT-- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
AJS	AJS	MAC	09/20/18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MAC	CMR		

STRUCTURE DETAILS

MAH-289-0154, MAH-289-0857, MAH-289D-0007, MAH-289D-0057,
MAH-422-0496, MAH-422-0755, MAH-616-0588

MAH/TRU-62/
VAR-19.36/VAR
PID No. 96556

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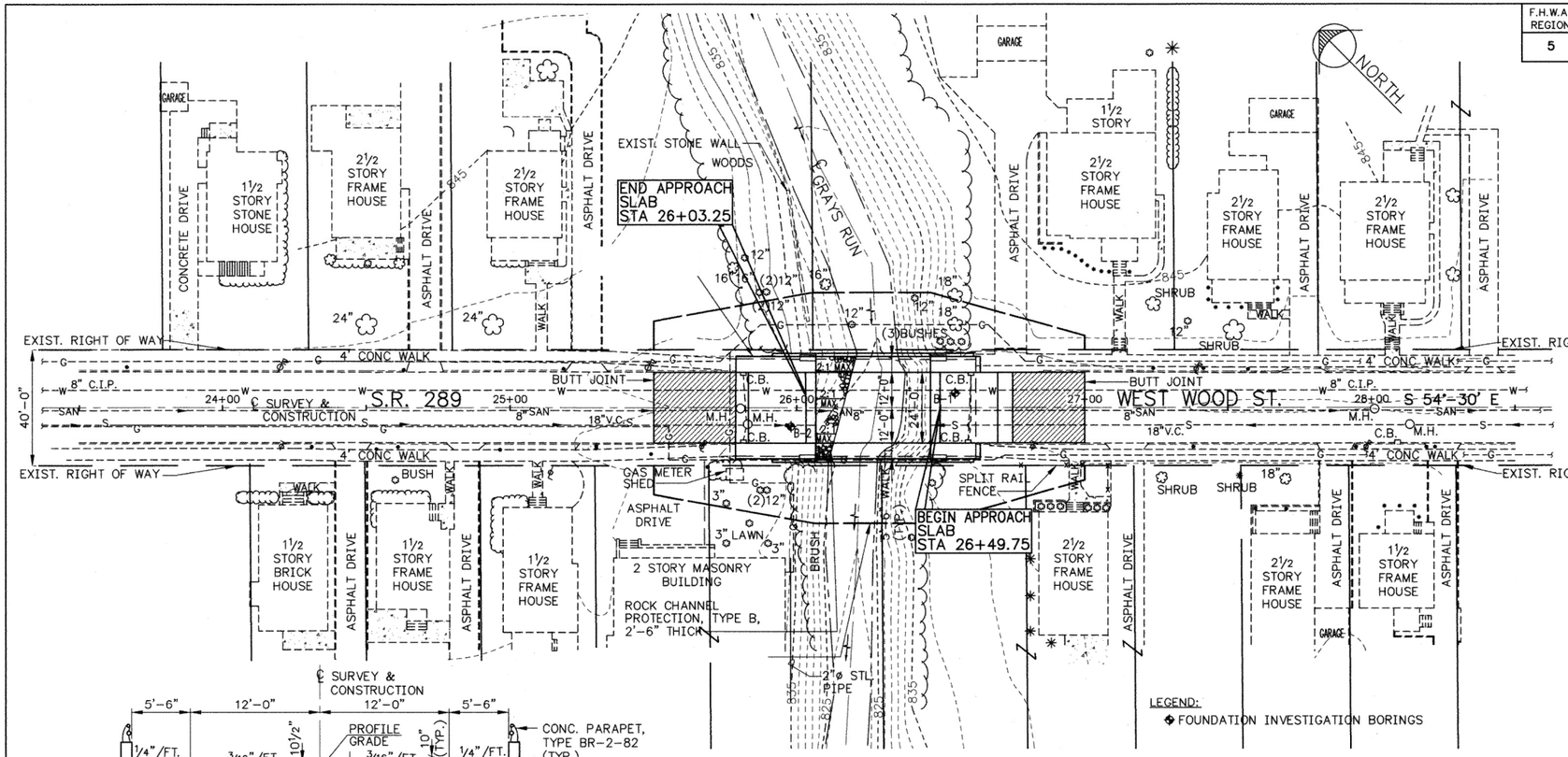
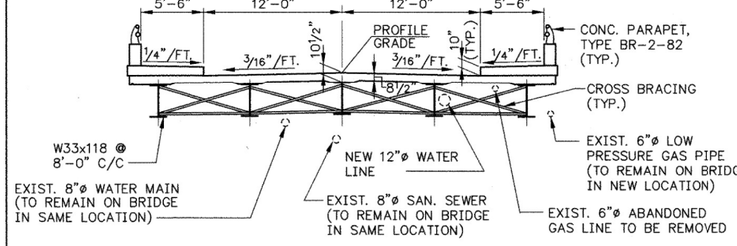
F.H.W.A. REGION	STATE	PROJECT		9/25
5	OHIO			

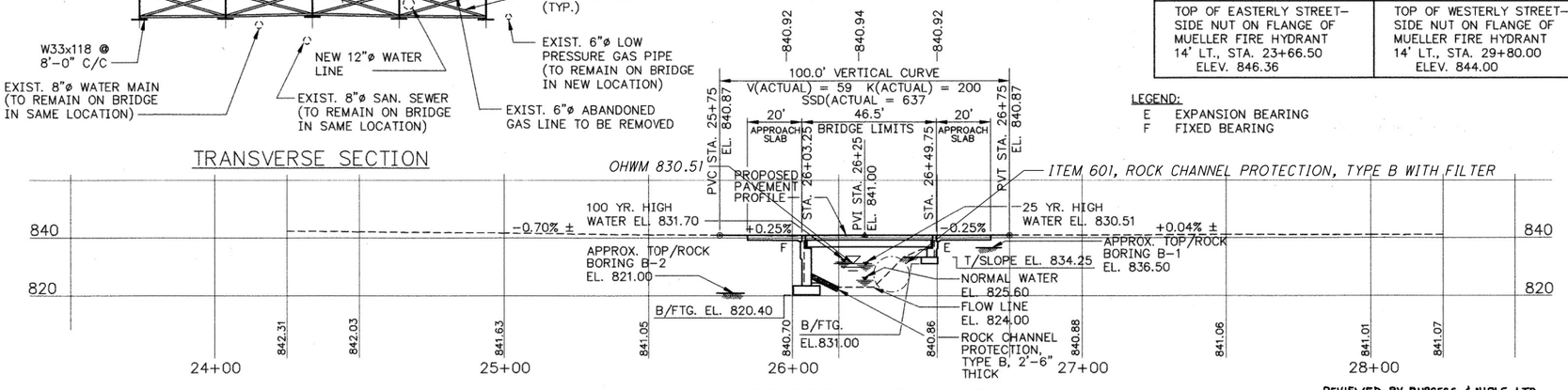
MAH 289-7.33



PLAN



TRANSVERSE SECTION



PROFILE ON ℄ SURVEY

REVIEWED BY BURGESS & NIPLE, LTD.
M.P.B. 8-12-94

LEGEND:
E EXPANSION BEARING
F FIXED BEARING

BENCHMARK	BENCHMARK
TOP OF EASTERLY STREET-SIDE NUT ON FLANGE OF MUELLER FIRE HYDRANT 14' LT., STA. 23+66.50 ELEV. 846.36	TOP OF WESTERLY STREET-SIDE NUT ON FLANGE OF MUELLER FIRE HYDRANT 14' LT., STA. 29+80.00 ELEV. 844.00

TRAFFIC COUNT	
DESIGN YEAR A.D.T. (2013)	2240
T (TRUCKS)	4%

HYDRAULICS

FREQUENCY	DISCHARGE C.F.S.	VELOCITY F.P.S.	HIGH WATER ELEVATION PROPOSED BRIDGE
25 YEAR	819	9.86	830.51
100 YEAR	1173	10.65	831.70

CLEARS 25 YEAR HIGH WATER BY: 6.39 FT.
DRAINAGE AREA: 2.01 SQ. MILES

EXISTING STRUCTURE

TYPE: SINGLE SPAN REINF. CONC. BEAM BRIDGE ON FULL HEIGHT ABUTMENTS (U-SHAPE)
SPAN: 40'-0"± CLEAR
ROADWAY: 24'-4"± F/F CURB
ALIGNMENT: TANGENT
SKEW: NONE
WEARING SURFACE: ASPHALT CONCRETE
APPROACH SLABS: 18'± (REAR) & 7'± (FORWARD)
STRUCTURE FILE NUMBER: 5005078
CONDITION: POOR DATE BUILT: 1939

PROPOSED STRUCTURE

TYPE: SINGLE SPAN STEEL BEAM (A588) WITH REINF. CONC. DECK ON CONC. ABUTMENTS
SPAN: 42'-0" C/C BEARINGS
ROADWAY: 24'-0" F/F CURB WITH 5'-6" WALKS (BOTH SIDES)
ALIGNMENT: TANGENT
SKEW: NONE
WEARING SURFACE: MONOLITHIC CONCRETE
APPROACH SLABS: AS-1-81 (20'-0" LONG)
LOADING: HS 20-44 (CASE II) AND THE ALTERNATE MILITARY LOADING
CROWN: 3/16"/FT.

KARL R. ROHRER ASSOC., INC. 1/13
3810 RIDGEWOOD ROAD
AKRON, OHIO

SITE PLAN

STRUCTURE No. MAH 289-0733
OVER
GRAYS RUN

MAHONING COUNTY STA. 26+03.25 TO STA. 26+49.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.B.D.	J.L.S.		P.A.K.	J.E.U.	12-10-93	

CAD DRAWING NO. \ 82036 \ 8.DWG

DESIGN AGENCY
ODOT-- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE NUMBER
AJS	AJS	MAC	09/20/18	
CHECKED	REVISED			
MAC	CMR			

SITE PLAN
MAH-289-0857
GRAYS RUN

MAH/TRU-62/
VAR-19.36/VAR
PID No. 96556

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24/26

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5\BRIDGE\9 Wed Nov 9 13:12:57 1994 TRISTAR #8

Fed. Rd. Dist.	State	Fed. Aid Proj.	Fiscal Year
10	Ohio	522-A	1928 (18/20)

I.C.H. 80 Sec. N
Trumbull County

DESIGN AGENCY
ODOT--- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
AJS	AJS	MAC	09/20/18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MAC	CMR		

SITE PLAN
TRU-422-2158
LITTLE SQUAW CREEK

MAH/TRU-62/
VAR-19.36/VAR
PID No. 96556

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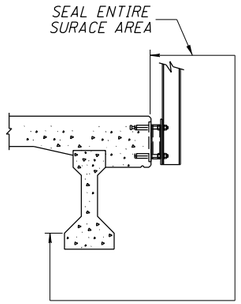
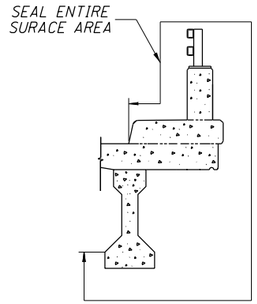
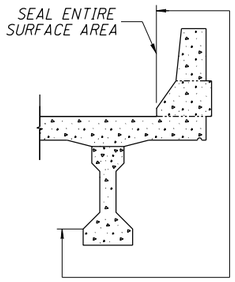


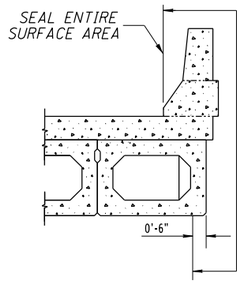
DETAIL A
CONCRETE DECKS WITH
OVER THE SIDE DRAINAGE



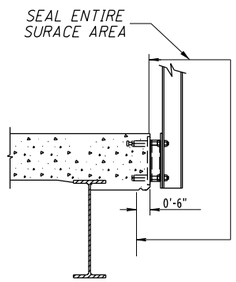
DETAIL B
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



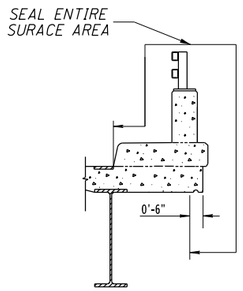
DETAIL C
CONCRETE DECK WITH
DEFLECTOR PARAPET



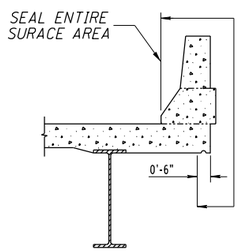
DETAIL D
PRESTRESSED BOX BEAM DECK
WITH DEFLECTOR PARAPET



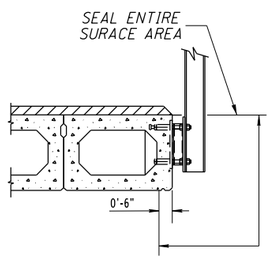
DETAIL E
CONCRETE DECKS WITH
OVER THE SIDE DRAINAGE



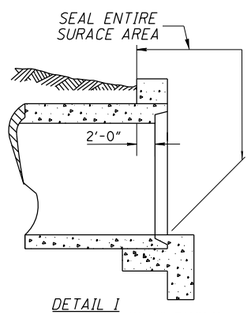
DETAIL F
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



DETAIL G
CONCRETE DECK WITH
DEFLECTOR PARAPET



DETAIL H
PRESTRESSED BOX BEAM DECK
WITH OVER THE SIDE DRAINAGE



DETAIL I
PRECAST REINFORCED
CONCRETE BOX CULVERT

BRIDGE NUMBER	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ESTIMATED QUANTITIES				
				ABUT (SQ YD)	PIER (SQ YD)	SUPER (SQ YD)	GENERAL (SQ YD)	TOTAL (SQ YD)
MAH-289-0154	PRESTRESSED CONCRETE BEAM SIMPLE SPAN	SEAL ALL PATCHED AREAS OF SUBSTRUCTURE PER DETAIL D	PER CMS				100	100
MAH-289D-0007	STEEL BEAM CONTINUOUS	SEAL ALL PATCHED AREAS OF SUBSTRUCTURE PER DETAIL F	PER CMS				150	150
MAH-289D-0057	STEEL BEAM CONTINUOUS	SEAL ALL PATCHED AREAS OF SUBSTRUCTURE PER DETAIL F	PER CMS				200	200
MAH-422-0496	STEEL GIRDER DECK	SEAL ALL PATCHED AREAS OF SUBSTRUCTURE PER DETAIL F AND DETAIL G	PER CMS				200	200

NOTES:
- EPOXY-URETHANE SEALER SHALL BE USED UNLESS SHOWN OTHERWISE
- DETAILS E, F, G AND H ALSO APPLY TO CONCRETE SLAB BRIDGES

DESIGN AGENCY
ODOT-- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
AJS	AJS	MAC	11/20/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MAC	MJP		

CONCRETE SEALING SHEET
MAH-289-0154, MAH-289-0857, MAH-289D-0007, MAH-289D-0057,
MAH-422-0496, MAH-422-0755, MAH-616-0588

MAH/TRU-62/
VAR-19.36/VAR
PID No. 96556

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SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: MAH/TRU-62/VAR-19.36/VAR

PID: 96556

Date: 12/20/19

1. Waterway Permits Time Restrictions:

Regional General Permit (RGP) Section B (Maintenance) is authorized for MAH/TRU-62/VAR-19.36/VAR, PID 96556. A copy of the RGP shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: **December 20, 2019**. The permit expires: **October 24, 2024.**

For authorized work in aquatic resources (including streams, wetlands, jurisdictional ditches, captured streams, lakes, ponds), the Department will consider the Contractor's submission of a reauthorization to the waterway permit expiration date based on project constraints. If more than one permit is authorized for the project, then all permits become invalid once the first permit expires. In order for the request to be considered, the Contractor must submit a justification to the Engineer at least 90 days prior to the waterway permit expiration date. The Engineer will submit the request for a time extension to the Ohio Department of Transportation, Office of Environmental Services, Waterway Permits Unit (ODOT-OES-WPU) for consideration and coordination with the U.S. Army Corps of Engineers (USACE), Ohio Environmental Protection Agency (OEPA), U.S. Coast Guard (USCG), U.S. Fish and Wildlife Service (USFWS), and Ohio Department of Natural Resources (ODNR) as appropriate.

2. Deviations From Permitted Construction Activities:

No deviation from the requirements for work in aquatic resources depicted in the plans, Special Provisions, and/or Working Drawings may be made unless a modification has been submitted to ODOT-OES-WPU and approved by the appropriate agencies (i.e., USACE, OEPA, USCG, ODNR, and USFWS).

For emergency situations resulting in unanticipated impacts to aquatic resources, provide notification (verbal or written) to the Engineer as soon as possible following discovery of the situation. Written notification to the Engineer and notification to the ODOT-OES-WPU (614-466-7100) must be made within 24 hours.

For non-emergency situations, notify the Engineer in writing for submission to the ODOT-OES-WPU (614-466-7100) for consideration and coordination with the appropriate agencies. Notification must be made at least 90 days prior to planned, non-permitted activities. Consideration of the requested deviation is at the discretion of the Director and must be coordinated with the appropriate regulatory agencies.

3. In-Stream Work Restrictions:

Work in the following aquatic resources is further restricted as follows:

Stream Name /Description	Resource Location	Location	Work restriction dates (No in-stream work permitted)
Grays Run	MAH-289-8.57	STA 26+3.75	None
Little Squaw Creek	TRU-422-21.58	21.58	None

In-stream work has been defined as the placement and/or removal of fill materials (temporary or permanent) below ordinary high water of a stream. Examples of "fill" include, but are not limited to: bridge piers, abutments, culverts, rock channel protection, scour protection, and temporary access fills.

Fills placed within a stream identified in the above table (outside of the work restriction dates) can continue to be worked from during the work restriction dates, but cannot be expanded, removed, or otherwise modified (below ordinary high water) until once again outside of the work restriction dates.

4. Materials:

Materials utilized in or adjacent to aquatic resources for temporary or permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Broken asphalt is specifically excluded. Chromated Copper Arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in aquatic resources.

5. Cultural Resources:

Per CMS 107.10, if archeological sites, historical sites, or human remains are discovered, cease all work in the immediate area and notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-Cultural Resource Section at 614-466-7100. In the event of human remains are identified by OES-Cultural Resources Section, the Engineer shall also contact the Mahoning County Sheriff's Office at (330) 480-5020 or the Trumbull County Sheriff's Office at (330) 675-2540.

6. Aquatic Resource Demarcation:

The table below or attached includes detailed fill quantities authorized within the aquatic resources. Aquatic resources not authorized for impact by these Special Provisions shall be demarcated in the field as per SS 832 prior to site disturbance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

Resource ID	Resource Location	Impact Location	Temporary Impact Amount	Permanent Impact Amount
Grays Run	MAH-289-8.57	STA 26+3.75	0 feet	35 feet (0.016 acre)
Little Squaw Creek	TRU-422-21.58	21.58	20 feet (0.01 acre)	139 feet (0.067 acre)

7. Spill containment:

Provide and Maintain an Oil Spill Kit with a minimum capacity of 65 gallons. The Spill Kit shall contain:
- 6 - 3 in. X 8 ft. Oil only socks
- 4 - 18 in. X18 in. Oil only pillows
- 2 - 5 in. X 10ft. Booms
- 50 - 16in. X 20 in. Oil only pads
- 10- Disposable Bags
- 1 - 65 Gallon drum with lid
- 25 pounds of Granular Oil Absorbent

The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream or wetland. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours. All costs associated with furnishing and maintaining the above referenced spill containment kit is incidental to work.

8. Blasting:

State law requires notification to the Ohio Department of Natural Resources should blasting be required within or near stream channels (See ORC 1533.58 & CMS 107.09). Notify the Engineer, in writing, a minimum of 30 days in advance of blasting, for submission to ODOT-OES-WPU (614-466-7100) for coordination with ODNR.

9. Project Inspection:

Inspection of Work may include inspection by representatives of other government agencies or railroad corporations that pay a portion of the cost of the Work or regulate the Work through State and Federal law. Comments from the representatives of these agencies shall be directed to the Engineer. Please forward a copy to ODOT-OES-WPU (614-466-7100).

10. Temporary Access Fills:

Special Provisions Notes:

Definitions:

Hydraulic Opening
The cross-sectional area allowing an unimpeded discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM).

Standard Temporary Discharge
Discharge equal to twice the *highest monthly flow* without producing a rise in the backwater above the OHWM. The U.S. Geologic Service publication "Techniques for estimating Selected Streamflow Characteristics of Rural Unregulated Streams in Ohio" provides equations that estimate monthly flow for Ohio Waterways These flows are also available in a web application by USGS StreamStats, (https://water.usgs.gov/osw/streamstats/ohio.html).

Average Monthly Flow
The average monthly flow represents the estimated "normal" flow.

Temporary Access Fills (TAFs)
Include, but are not limited to, dewatering fills, causeways, cofferdams, access pads, temporary bridges, etc. below the OHWM.

Requirements
21 calendar days prior to the initiation of any in-stream work, provide the Engineer with Working Drawings that include:

- Plan view drawing (50 scale or less) showing the location of all TAFs proposed for use on the project.
- Scaled cross section and profile drawing showing the OHWM and the proposed hydraulic opening.
- Calculations analyzing the hydraulic impacts of the TAF on the waterway. Include in the calculations an analysis of the hydraulic opening sized adequately to pass the Standard Temporary Discharge without producing a rise in backwater above the OHWM. Include, in the analysis, calculated channel velocities adjacent to the TAF, culvert exit velocities, calculated headwater and tailwater elevations, and any additional appropriate calculations to assess potential impacts to the waterway during normal and anticipated high flow (twice the highest monthly flow) events.
- A description of all temporary material to be placed below the OHWM elevation.
- A description of the installation and staging of all temporary fill over the life of the contract.
- Volume of temporary fill below the OHWM elevation.
- A description of the diversion ditches, equipment, conduits or means for maintaining normal flows in the waterway.
- A description of the removal of all temporary fill and restoration of the channel and all areas impacted by the TAFs.
- A schedule outlining the timing of the placement and removal of all temporary fill.
- Have competent individuals prepare and check the Working Drawings and hydraulic calculations. Provide a cover sheet containing the preparer(s) and checker(s): First Name, Last Name and Initials. The preparer(s) and checker(s) shall not be the same individual. Have an Ohio Registered Engineer review, approve, sign, seal and date the Working Drawings and hydraulic calculations according to ORC 4733 and OAC 4733-35. Include the following statement on the Working Drawings:
  "These Working Drawings were prepared in compliance with the terms of these Special Provisions and all contract documents."

Do not begin in-stream work until the Engineer has accepted the Working Drawings and hydraulic calculations.

The design of the Contractor's TAF must minimize impacts to water bodies, stream banks, stream beds, and riparian zones to the maximum extent practicable.

Fording of waterways and other aquatic resources is prohibited.

Construct TAFs in such a manner that will maintain flows, minimize upstream flooding, and avoid overtopping the TAF on a regular basis. ***TAFs shall be designed and constructed so that***

the hydraulic opening provides capacity for a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the (OHWM).

If the Contractor proposes a TAF which does not meet all the requirements of these Special Provisions, the Contractor must submit a request in writing for a modified TAF to the Engineer. The request must include all Working Drawings and hydraulic calculations required by these Special Provisions. The Department makes no guarantee to grant the request. The Contractor's proposed TAF request will be coordinated by OES with the USACE and the OEPA, as appropriate. The time frame allowed for the coordination of the contractor's proposed TAF will be a minimum of 60 days.

Installation of any temporary fill without appropriate authorization is strictly prohibited. All direct coordination with the USACE and/or OEPA will be performed through OES.

TAFs Construction and Payment
Begin planning and installing causeways and access fills as early in construction as possible to avoid conflicts with these Special Provisions or other environmental commitments that have been included in the construction plans.

TAFs in Streams and Rivers may include, but are not limited to, causeways, cofferdams, access pads, sheet piling, temporary bridges, etc. The Contractor must make every attempt to minimize disturbance to waterbodies, stream banks, stream beds and riparian zones during the construction, maintenance, and removal of the TAF. Construct the TAFs as narrow as practical. Install in-stream conduits parallel to the stream banks. Make the TAFs in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, and approach sections. Construct the TAFs as to not cause erosion or allow sediment deposits in the waterway.

Prior to the initiation of any in-stream work, establish a monument upstream of the proposed TAF to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation 1 foot above the OHWM. Ensure that the monument can be read from the bank of the waterway. Have this elevation set and certified by an Ohio Registered Surveyor. All costs associated with furnishing and maintaining the above referenced monument is incidental to the work.

Should the surface water elevation exceed the elevation 1 foot above OHWM, the Department will compensate the Contractor for repair of any resulting damage to the TAF up to the elevation of 1 foot above the OHWM, except as noted. The Department will recognize this event as an excusable, non-compensable delay in accordance with Section 108.06 B. of the Construction & Materials Specifications.

Follow the requirements in Item 502 for Structures for Maintaining Traffic and in Item 503 for Cofferdams and Excavation Bracing and any modifications to these items as shown in the plans. The Department will not pay for repair and maintenance of TAFs associated with Items 502 and 503 as a result of surface water elevation exceeding 1 foot above the OHWM. Compensation for damages associated with waterway flows will be provided as described in Items 502 and 503.

Construct the TAFs, not including Items 502 and 503, to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third the width of the stream is filled, then use culvert

pipes to allow the movement of aquatic life. Ensure that any ponding of water behind the TAF will not damage property, flood roadways, or threaten human health and safety.

The following minimum requirements apply to TAFs where culverts are used:

A. Furnish culverts on the existing stream bottom.
B. Avoid a drop in water elevation at the downstream end of the culvert that would result in an adverse impact to the waterway.
C. Furnish a sufficient number of culverts in addition to stream openings to provide a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.
D. Furnish culverts with a minimum diameter of 18 inches (0.5 m).

All TAFs must be constructed of suitable materials. Causeways and access fills must be encapsulated with clean, non-erodible, nontoxic Dumped Rock Fill, Type A, B, C, or D, as specified in C&MS 703.19.B. Extend rock fill up the slope from original stream bank for 50 feet (10 m) to catch and remove erodible material from equipment.

When the work requiring TAF is complete, all portions of the TAF (including all rock and culverts) will be removed in its entirety. Do not dispose of TAF material in other aquatic resources or where erosion into another aquatic resource is possible. The stream bottom affected by the TAFs will be restored to its pre-construction elevations. The TAFs will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

Unless specific TAF compensation is included in the plans, all environmental protection and control associated with the authorized activities, are incidental to the work within the boundaries of the aquatic resources.

11. Excavation Activities:

Excavated material will be placed at an upland site and disposed of in such a manner that sediment and runoff to streams and other aquatic resources is controlled and minimized. Additionally, no more than incidental fallback into jurisdictional waters of the U.S. is permitted during the excavation process. If any changes to the proposed work are deemed necessary, you must notify and coordinate with the ODOT-OES-WPU (614-466-7100).

12. Demolition Debris:

The intentional discharge of demolition debris from any structure (including but not limited to bridges, culverts, abutments, wing walls, piers) is not authorized for the MAH-289-8.57 project location.

If any demolition debris inadvertently falls into aquatic resources at the MAH-289-8.57 project location, it must be removed immediately. Notify the Engineer immediately in writing of any inadvertent fill discharged into aquatic resources at the MAH-289-8.57 project location.

Also contact ODOT-OES-WPU at 614-466-7100 if any unintentional discharge occurs.

The temporary discharge of demolition debris into aquatic resources (including but not limited to bridges, culverts, abutments, wing walls, piers) is conditionally authorized for the TRU-422-21.58 project location.

Perform demolition activities in a manner to prevent the discharge of fine (erodible) debris into aquatic resources at the TRU-422-21.58 project location. Utilize TAF or other catchment methods accepted by the Engineer and authorized by these Special Provisions to prevent erodible demolition debris from entering aquatic resources at the TRU-422-21.58 project location.

Demolition debris may not remain in the waterway for more than 72 hours and must be removed in its entirety. If removal of debris material cannot be achieved within 72 hours, notify the Engineer in writing and contact ODOT-OES-WPU at 614-466-7100.