

# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## POR-82-5.84

MANTUA TOWNSHIP

PORTAGE COUNTY

**FEDERAL PROJECT NUMBER**

E191 (180)

**RAILROAD INVOLVEMENT**

NONE

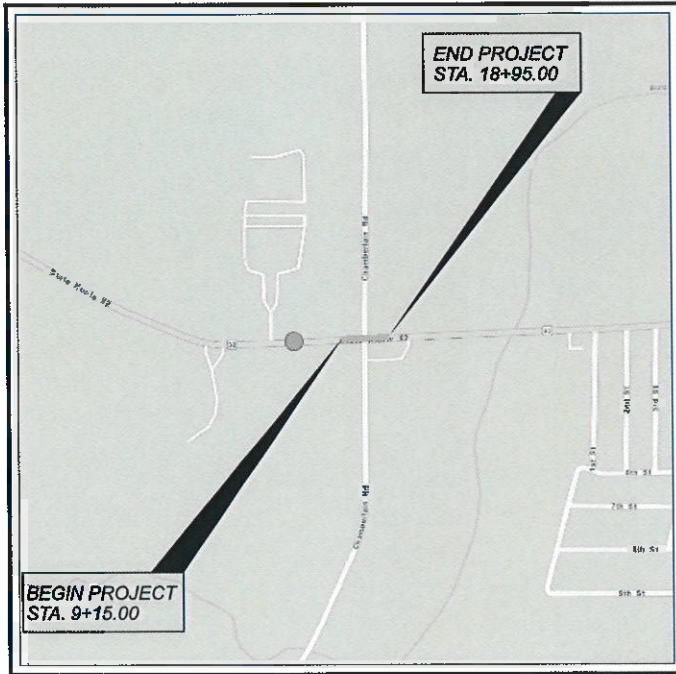
**PROJECT DESCRIPTION**

IMPROVEMENTS WILL INCLUDE THE INSTALLATION OF A ROUNDABOUT AT THE INTERSECTION OF SR 82 AND CHAMBERLAIN ROAD RESULTING IN THE RECONSTRUCTION OF 0.17 MILES OF SR 82 AND THE CONSTRUCTION OF CURB, DRAINAGE, LIGHTING, AND NEW SIGNING AND PAVEMENT MARKINGS. INCLUDES 0.24 MILES RESURFACING AND ADDITION OF CENTER AND EDGE RUMBLE STRIPES ALONG WEST CURVE

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA:	3.6 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.8 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.4 ACRES

BMP'S BEING IMPLEMENTED: VEGETATIVE BIOFILTERS (VBF) AND VEGETATIVE FILTER STRIPS (VFS)



**LOCATION MAP**

LATITUDE: N 41°18'31" LONGITUDE: W 81°16'52"



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

**DESIGN DESIGNATION**

	<u>SR 82</u>	<u>Chamberlain Rd.</u>
CURRENT ADT (2022)	7,150	3,250
DESIGN YEAR ADT (2042)	7,700	3,500
DESIGN HOURLY VOLUME (2042)	900	410
DIRECTIONAL DISTRIBUTION	68%	62%
TRUCKS (24 HOUR B&C)	2%	4%
DESIGN SPEED	50 MPH	45 MPH
LEGAL SPEED	45 MPH	45 MPH NORTH 40 MPH SOUTH

**DESIGN FUNCTIONAL CLASSIFICATION:**

SR 82 RURAL MAJOR COLLECTOR  
CHAMBERLAIN ROAD LOCAL ROAD

NHS PROJECT ----- NO

**DESIGN EXCEPTIONS**

NONE

**INDEX OF SHEETS:**

TITLE SHEET	P.1
SCHEMATIC PLAN	P.2
GEOMETRIC LAYOUT	P.3 - P.4
CROSS SECTIONS LAYOUT	P.5
TYPICAL SECTIONS	P.6 - P.9
GENERAL NOTES	P.10 - P.13
MAINTENANCE OF TRAFFIC	P.14 - P.18
GENERAL SUMMARY	P.19 - P.21
SUBSUMMARIES	P.22 - P.24
PROJECT SITE PLAN	P.25
PLAN AND PROFILE - SR 82	P.26 - P.29
CROSS SECTIONS - SR 82	P.30 - P.42
PLAN AND PROFILE - CHAMBERLAIN RD	P.43 - P.45
CROSS SECTIONS - CHAMBERLAIN RD	P.46 - P.55
CROSS SECTIONS - ROUNDABOUT	P.56 - P.61
ROUNDABOUT PROFILES	P.62 - P.66
PAVEMENT DETAILS	P.67 - P.71
DRIVE DETAILS	P.72 - P.78
DRIVE PROFILES	P.79 - P.83
STORM SEWER PROFILES	P.84
CULVERT DETAILS	P.85 - P.86
RESURFACING DETAILS - SR 82 (WEST)	P.87 - P.90
MISCELLANEOUS DETAILS	P.91
TRAFFIC CONTROL	P.92 - P.104
LIGHTING	P.105 - P.108
LANDSCAPING	P.109
RIGHT OF WAY	P.110 - P.126
SOIL PROFILE	

**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 REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEETS P.16 TO P.17

**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)

**ENGINEER'S SEAL:**



SIGNED: *Michael A Woodring*  
DATE: 4/2/2021

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS	
BP-2.2	01/15/21	MGS-1.1	1/19/18	HL-10.11	1/15/21	TC-41.20	10/18/13			800-2021	4/18/21	WATERWAY PERMIT
BP-3.1	01/17/20	MGS-2.1	1/19/18	HL-10.12	1/20/17	TC-41.30	10/18/13			813	10/19/18	WPC
BP-3.2	1/18/19	MGS-4.2	7/19/13	HL-10.13	4/17/20	TC-42.10	10/18/13			825	1/17/20	
BP-4.1	7/19/13	MGS-4.3	1/18/13	HL-20.11	1/15/21	TC-42.20	10/18/13			832	10/19/18	
BP-5.1	1/18/19	MGS-5.3	7/15/16	HL-30.11	1/15/21	TC-52.10	10/18/13			836	1/19/18	
				HL-30.21	4/17/20	TC-52.20	1/15/21			872	4/17/20	
CB-2.1	1/15/21	HW-1.1	7/20/18	HL-30.22	1/15/21	TC-61.30	7/19/19			875	1/18/19	
CB-2.2	1/15/21	HW-2.2	7/20/18	HL-40.10	7/17/20	TC-64.10	1/17/20			875	1/18/19	
				HL-60.11	7/21/17	TC-65.10	1/17/14			875	1/18/19	
DM-1.1	7/17/20	LA-1.2	1/16/09	HL-60.12	1/15/21	TC-65.11	7/21/17			895	4/18/14	
DM-1.2	1/18/13			HL-60.31	1/17/20	TC-71.10	1/19/18			902	7/19/19	
DM-4.2	7/20/12	MH-1.1	1/15/16							913	4/21/17	
DM-4.3	1/15/16	MH-1.2	1/15/16									
DM-4.4	1/15/16			MT-97.10	4/19/19							
		RM-1.1	1/15/21	MT-101.80	1/17/20							
		RM-3.1	7/20/18	MT-105.10	1/17/20							

APPROVED: *[Signature]*  
DATE: 4/2/21 DISTRICT DEPUTY DIRECTOR

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION

DESIGN AGENCY
<b>AECOM</b>
DESIGNER
STO
REVIEWER
JNR 02/19/21
PROJECT ID
111007
SHEET TOTAL
P.1   P.126

POR-82-5.84 (PID 111007)

POR-82-5.84

MODEL: Sheet PAPER SIZE: 11x17 (in.) DATE: 3/31/2021 TIME: 5:22:50 PM USER: michael.j.thompson PWA: \\pwrtdm01-rd-pw.dentley.com\AECOM\_US20\_NA\_2019\Documents\160623307-POR-82-614\111007\_400-Engineer\In\Roadway\Sheets\111007\_G1001.dgn

**GENERAL**

**ROUNDING**

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

**UTILITIES**

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

**GAS**  
DOMINION ENERGY OHIO  
ATTN: JOHN MEERDINK  
320 SPRINGSIDE DR. STE 320  
AKRON, OHIO 44333  
(330) 664-2467

**CABLE/COMMUNICATIONS**  
CHARTER COMMUNICATIONS  
ATTN: MARK JACKSON  
1200 BROWNSTONE AVE.  
AKRON, OHIO 44310  
(330)

**NORTHEAST OHIO NATURAL GAS**  
ATTN: TIM REILLY  
8470 STATION STREET  
MENTOR, OHIO 44060  
(440) 701-5100

**WINDSTREAM COMMUNICATIONS**  
ATTN: BRIAN VINSON  
245 NORTH MAIN ST.  
HUDSON, OHIO 44236  
(330) 650-8484

**ELECTRIC**  
FIRST ENERGY OHIO  
ATTN: DAVID MILLER  
1910 WEST MARKET STREET  
BUILDING #1  
AKRON, OHIO 44333  
(330) 436-4055

**DISTRICT TRAFFIC**  
ODOT DISTRICT 4  
ATTN: MICHELLE CHANEY  
2088 S. ARLINGTON ROAD  
AKRON, OHIO 44306  
(330) 786-2267

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

**COORDINATION OF WORK WITH UTILITY COMPANIES**

RELOCATION OF EXISTING OVERHEAD AND UNDERGROUND FACILITIES BY THE AFFECTED UTILITY OWNERS IS REQUIRED FOR COMPLETION OF THE WORK. IF EXISTING UTILITY FACILITIES ARE NOT CLEARED FROM THE CONSTRUCTION AREA AT THE TIME OF CONTRACT AWARD AND NOTICE TO PROCEED, THE CONTRACTOR WILL BE REQUIRED TO COORDINATE THIS WORK WITH THAT OF THE AFFECTED UTILITY OWNERS AND SHALL REFLECT THIS IN THE SCHEDULE, MAINTENANCE OF TRAFFIC PLANS, AND UNIT COSTS.

**CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL**

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

**ITEM 202 - REMOVAL MISC.: ABANDONED WOODEN ELECTRIC POLE**

THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE ABANDONED ELECTRIC POLE LOCATED AT STA. 201+66, 31' RT. ON CHAMBERLAIN ROAD. THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF ODOT ITEM 202.

PAYMENT FOR ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR:

ITEM 202 - REMOVAL MISC.: ABANDONED WOODEN ELECTRIC POLE

**WORK ADJACENT TO DOMINION ENERGY OHIO PIPELINE(S) AND FACILITIES**

CONTRACTOR TO REFERENCE UTILITY 4A NOTE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LATERAL AND SUBJACENT SUPPORT OF DOMINION ENERGY'S PIPELINE(S), IN COMPLIANCE TO 29 CFR, PART 1926, SUBPART P, (SAFE EXCAVATION & SHORING). ONE-FOOT MINIMUM VERTICAL AND HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN DOMINION ENERGY'S OHIO'S (DEO) EXISTING PIPELINE(S) AND ALL OTHER IMPROVEMENTS. EXTREME CARE SHOULD BE TAKEN NOT TO HARM ANY DEO FACILITY (PIPELINES, ETC.) OR APPURTENANCE (PIPE COATING, TRACER WIRE, CATHODIC PROTECTION TEST STATION WIRES & DEVICES, VALVE BOXES, ETC.). DEO FACILITIES MUST BE PROTECTED WITH A TARP DURING BRIDGE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE AND LIABLE FOR ENSURING THAT ALL DEO EXISTING FACILITIES, ABOVE AND BELOW GROUND, REMAIN UNDAMAGED, ACCESSIBLE AND IN WORKING ORDER. THE CROSSING OF DEO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DEO FACILITY. PLEASE CONTACT DOMINION ENERGY OHIO'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK MCDONALD (330-266-2122), OR AL HUMRICHOUER (330-478-3757).

**CONSTRUCTION NOISE**

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 8 PM AND 7 AM EXCEPT AS DIRECTED BY THE ENGINEER. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

**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.

**ITEM 202 - REMOVAL MISC.: OLD COUNTRY INN SIGN  
ITEM 202 - REMOVAL MISC.: CORN MAZE SIGN  
ITEM 202 - REMOVAL MISC.: PRIVATE WAYFINDING SIGN**

IN ADDITION TO THE REQUIREMENTS OF 202, THIS ITEM SHALL INCLUDE THE REMOVAL OF THE COMMERCIAL SIGN, INCLUDING BUT NOT LIMITED TO ALL ELECTRICAL CONNECTIONS AND LIGHTING, FOUNDATIONS, AND SUPPORTS. ANY ELECTRICAL CIRCUITS SERVICING THE COMMERCIAL SIGN SHALL BE REMOVED TO THE RIGHT OF WAY LINE AND CAPPED.

THE CONTRACTOR SHALL CONTACT THE PROPERTY OWNER PRIOR TO STARTING REMOVAL. IF OWNERSHIP IS QUESTIONABLE, THE CONTRACTOR SHOULD CONSIDER CONTACTING THE LOCAL ELECTRIC SUPPLIER.

PAYMENT FOR ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR:

ITEM 202 - REMOVAL MISC.: OLD COUNTRY INN SIGN  
ITEM 202 - REMOVAL MISC.: CORN MAZE SIGN  
ITEM 202 - REMOVAL MISC.: PRIVATE WAYFINDING SIGN

**SURVEYING PARAMETERS**

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET P.2 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

**PROJECT CONTROL**

POSITIONING METHOD: ODOT VRS GNSS  
MONUMENT TYPE: TYPE B

**VERTICAL POSITIONING**

ORTHOMETRIC HEIGHT DATUM: NAVD88  
GEOID: GEOID12B

**HORIZONTAL POSITIONING**

REFERENCE FRAME: NAD83 (2011)  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE PLANE, NORTH ZONE  
COMBINED SCALE FACTOR: 0.99989767  
ORIGIN OF COORDINATE SYSTEM: 0,0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

**CLEARING AND GRUBBING**

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED. ODOT HAS REMOVED ALL TREES MARKED EXCEPT FOR THE 15" IN THE NW QUADRANT.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	25	1	26
30"	1	0	1
48"	0	0	0
60"	0	0	0

**ITEM 204 - PROOF ROLLING**

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING 6 HOURS.

**ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING**

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. EXCAVATE AND REPLACE UNSTABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. UNSTABLE SUBGRADE INCLUDES UNSTABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05.  
  
IF THERE IS UNSTABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSTABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.
3. COMPACT THE SUBGRADE ACCORDING TO 204.03.
4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.  
  
PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.
5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.
6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.
7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITY FOR EXCAVATING THE UNSTABLE SUBGRADE AND IS PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

**MONUMENT ASSEMBLIES**

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET P.113

DESIGN AGENCY

**AECOM**

DESIGNER  
STO

REVIEWER  
JNR 02/19/21

PROJECT ID  
111007

SHEET TOTAL  
P.10 P.126

**ITEM 614, MAINTAINING TRAFFIC**

THE CONTRACTOR WILL BE RESPONSIBLE FOR ESTABLISHING, ERECTING, AND MAINTAINING THE DETOUR ROUTES AS SHOWN ON SHEETS P.16 - P.17. A 90-DAY DETOUR AND ROAD CLOSURE WILL BE ALLOWED. THE CONTRACTOR WILL COORDINATE THE DETOUR WITH ALL APPROPRIATE EMERGENCY SERVICES AND LOCAL OFFICIALS.

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

**ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE)**

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. (AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.)

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

**NOTICE OF CLOSURE SIGN TIME TABLE:**

DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

**ITEM 614, MAINTAINING TRAFFIC (ESTIMATED QUANTITIES)**

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

- 410 - TRAFFIC COMPACTED SURFACE, TYPE A OR B 185 CU. YD.
- 410 - TRAFFIC COMPACTED SURFACE, TYPE C 480 CU. YD.
- 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 40 CU. YD.
- 616 - WATER 15 M. GAL.

**ITEM 614, MAINTAINING TRAFFIC (ROAD CLOSED SIGN)**

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

- SR 82 JUST EAST OF CHAMBERLAIN ROAD INTERSECTION
- SR 82 JUST WEST OF CHAMBERLAIN ROAD INTERSECTION
- CHAMBERLAIN ROAD JUST NORTH OF SR 82 INTERSECTION
- CHAMBERLAIN ROAD JUST SOUTH OF SR 82 INTERSECTION

**ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)**

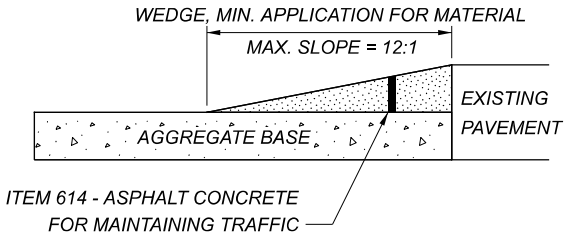
A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 90 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET P.16 - P.17. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$ 10,000 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

**TEMPORARY RAMPING OF VERTICAL SURFACES AT DRIVEWAYS**

IN ORDER TO PROVIDE FOR LOCAL ACCESS, LONGITUDINAL VERTICAL FACES ABUTTING DRIVES SHALL BE TEMPORARILY RAMPED AS DETAILED BELOW. TRANSVERSE VERTICAL FACES SHALL BE TEMPORARILY RAMPED A MINIMUM OF TEN FEET IN LENGTH AND TRAFFIC SHALL BE WARNED WITH WB-1 "BUMP" SIGNS IN ADVANCE OF THE RAMPED AREAS. THE GRADE BREAK SHALL NOT EXCEED A MAXIMUM OF 8% AT EITHER END OF THE WEDGE.

ALL TEMPORARY RAMPING SHALL BE INSTALLED, AT THE DIRECTION OF THE ENGINEER, USING ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY:

- 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 200 CU. YD.



**DUMPSTER ACCESS DURING CONSTRUCTION**

A DUMPSTER IS LOCATED ADJACENT TO THE EXISTING DRIVEWAY AT THE PROPERTY OF 3030 STATE ROUTE 82. CONTRACTOR SHALL PROVIDE ACCESS TO THIS DUMPSTER FOR TRASH PICKUP THROUGHOUT CONSTRUCTION.

**DRIVES WITHIN DETOUR**

THE CONTRACTOR SHALL PROVIDE A 'ONE-WAY' R6-1-36 SIGN ACROSS FROM ALL DRIVES WITHIN CLOSURE LIMITS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - DETOUR SIGNING.

**DESIGNATED LOCAL DETOUR ROUTE**

IN ADDITION TO THE OFFICIAL, SIGNED DETOUR ROUTE, A LOCAL ROUTE HAS BEEN DETERMINED TO BE THE SECONDARY, UNSIGNED DETOUR ROUTE OR "DESIGNATED LOCAL DETOUR ROUTE" ON MENNONITE ROAD. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DETERMINED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE DESIGNATED LOCAL DETOUR ROUTE.

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=3")	7658 SY.
ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22 (T=1.25")	266 CU. YD.
ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448) (T=1.75")	372 CU. YD.
ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	20 CU. YD.
ITEM 616, WATER	50 M. GAL.
ITEM 617, COMPACTED AGGREGATE, TYPE A	157 CU. YD.
ITEM 617, WATER	50 M. GAL.
ITEM 642, CENTER LINE, TYPE 1	6.50 MILE

**DESIGNATED LOCAL SIGNED DETOUR ROUTE**

A LOCAL ROUTE HAS BEEN DETERMINED TO BE THE SIGNED DETOUR ROUTE FOR CHAMBERLAIN ROAD. THIS ROUTE IS SHOWN ON SHEET P.17. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL SIGNED DETOUR ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DETERMINED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE SIGNED DETOUR ROUTE.

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=3")	8214 SY.
ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22 (T=1.25")	285 CU. YD.
ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448) (T=1.75")	399 CU. YD.
ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	20 CU. YD.
ITEM 616, WATER	50 M. GAL.
ITEM 617, COMPACTED AGGREGATE, TYPE A	176 CU. YD.
ITEM 617, WATER	50 M. GAL.
ITEM 642, CENTER LINE, TYPE 1	7.00 MILE

DESIGN AGENCY

**AECOM**

DESIGNER

JES

REVIEWER

MAW 07-24-20

PROJECT ID

111007

SHEET TOTAL

P.14 | P.126



OFFICE CALCS	SHEET NUM.																				PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	P.10	P.11	P.12	P.14	P.15	P.22	P.23	P.24	P.72	P.85	P.86	P.88	P.89	P.90	P.92	P.94	P.105	P.106	P.109	P.113	01/SAF/PV	02/STR/PV						
																		2			2		625	30700	2	EACH	<b>LIGHTING</b>	
																		2			2		625	30706	2	EACH	PULL BOX, 725.08, 24"	
																		8			8		625	32000	8	EACH	GROUND ROD	
																		1			1		625	34001	1	EACH	POWER SERVICE, AS PER PLAN	P.105
																		965			965		625	36010	965	FT	UNDERGROUND WARNING/MARKING TAPE	
																					1		625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (SR 82/CHAMBERLAIN)	P.105
																											<b>TRAFFIC CONTROL</b>	
														19							19		621	00100	19	EACH	RPM (YELLOW/YELLOW)	
													16								16		621	54000	16	EACH	RAISED PAVEMENT MARKER REMOVED	
																489.0					489.0		630	03100	489.0	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
																209.9					209.9		630	80100	209.9	SF	SIGN, FLAT SHEET	
																23					23		630	84900	23	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
																18					18		630	86002	18	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
																1					1		630	87500	1	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
			1																		1		632	90101	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN (FLASHER)	P.12
													0.48	0.9							0.9	0.48	646	10010	1.38	MILE	EDGE LINE, 6"	
													0.24	0.29							0.29	0.24	646	10200	0.53	MILE	CENTER LINE	
														150							150		646	10600	150	FT	TRANSVERSE/DIAGONAL LINE	
														2							2		646	20300	2	EACH	LANE ARROW	
														85							85		646	20510	85	FT	DOTTED LINE, 12"	
																											<b>LANDSCAPING</b>	
																					6	6	661	19000	6	EACH	DECIDUOUS SHRUB, 12" HEIGHT, POTENTILLA FRUITICOSA	
																					6	6	661	19000	6	EACH	DECIDUOUS SHRUB, 12" HEIGHT, SPIREA ABLIFLORA	
																					8	8	661	50100	8	EACH	EVERGREEN TREE, 5' HEIGHT, JUNIPERUS CHINESIS "IOWA"	
																					140	140	661	99930	140	SY	PLANTING, MISC.: LANDSCAPING FABRIC	P.109
																					1	1	662	30000	1	MGAL	LANDSCAPE WATERING	
																											<b>MAINTENANCE OF TRAFFIC</b>	
			15,872																		15,872		254	01000	15,872	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=3")	
			2,539																		2,539		407	20300	2,539	SAL	NON-TRACKING TACK COAT	
			185																		185		410	12000	185	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
			480																		480		410	13000	480	CY	TRAFFIC COMPACTED SURFACE, TYPE C	
			551																		551		441	50300	551	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), AS PER PLAN	P.12
			771																		771		441	50300	771	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
				LS																	LS		614	12420	LS		DETOUR SIGNING	
													15								15		614	12460	15	EACH	WORK ZONE MARKING SIGN	
			280									5									280	5	614	13000	285	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
				16																	16		614	18601	16	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	P.15
												0.48									0.48		614	21000	0.48	MILE	WORK ZONE CENTER LINE, CLASS I	
													0.24								0.24		614	21550	0.24	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
													0.48								0.48		614	22360	0.48	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
																					165		616	10000	165	MGAL	WATER	
			333																		333		617	10100	333	CY	COMPACTED AGGREGATE, TYPE A	
			100																		100		617	25000	100	MGAL	WATER	
			13.5																		13.5		642	00300	13.5	MILE	CENTER LINE, TYPE 1	
																											INCIDENTALS	
																					LS	LS	614	11000	LS		<b>MAINTAINING TRAFFIC</b>	
																					11	2	619	16010	13	MNTH	FIELD OFFICE, TYPE B	
																					LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
																					LS		624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY

**AECOM**

DESIGNER

STO

REVIEWER

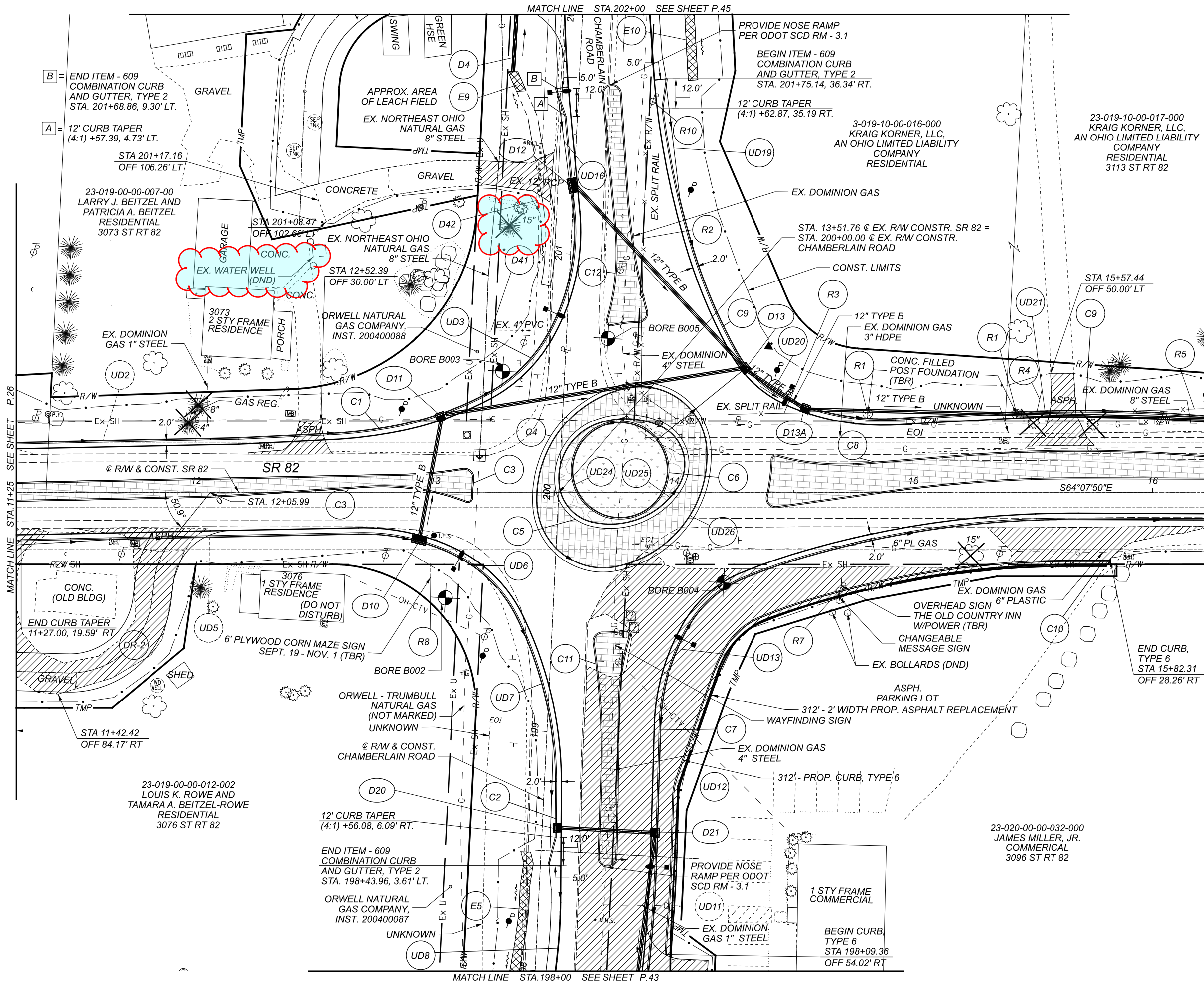
MAW 02/19/21

PROJECT ID

111007

SHEET TOTAL

P.21 P.126



NOTES

- FOR ROUNDABOUT GEOMETRICS AND REFERENCE LINE DATA, SEE SHEETS P.3 - P.4
- FOR ESTIMATED QUANTITIES, SEE SHEETS P.19 P.24
- FOR SR 82 CROSS SECTIONS, SEE SHEETS P.30 - P.42
- FOR ROUNDABOUT PROFILES, SEE SHEETS P.62 - P.66
- FOR ROUNDABOUT PAVEMENT DETAILS, SEE SHEETS P.67 - P.71
- FOR STORM PROFILES, SEE SHEETS P.28 AND P.84
- FOR PARKING LOT, ASPHALT REPLACEMENT, & CURB, TYPE 6 SEE SHEETS P.36 - P.37 & P.50 - P.51
- TAPER CURB HEIGHT FROM 6" TO 2" FROM STA. 198+53.75 TO STA. 198+43.96 (LT) FROM STA. 201+59.57 TO STA. 201+68.86 (LT) FROM STA. 201+65.18 TO STA. 201+75.14 (RT) FOR PARKING LOT CURB HEIGHT TAPERS, SEE SHEET P.76
- FOR ESTIMATED QUANTITIES, SEE SHEETS P.19 - P.24
- ENSURE POSITIVE OUTLET OF DOWNSPOUT

LEGEND

- ITEM 609 - 6" CONCRETE TRAFFIC ISLAND, AS PER PLAN, CLASS QC1P SHEET P.12
- ITEM 452 - 7" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1P, AS PER PLAN SHEET P.11
- ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1P, AS PER PLAN SHEET P.11
- TURF REINFORCING MAT, TYPE 1
- EXISTING DRIVEWAY/PARKING LOT LIMITS TO BE REMOVED
- VEGETATED BIOFILTER (INCLUDES 4" OF ITEM 659 TOPSOIL AND ITEM 670, DITCH EROSION PROTECTION)
- ROCK CHANNEL PROTECTION
- VEGETATED FILTER STRIP (INCLUDES 4" OF ITEM 659 TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION)
- PROPOSED LIGHT POLE SEE LIGHTING PLANS SHEET P.107
- PROPOSED POWER POLE, BY OTHERS

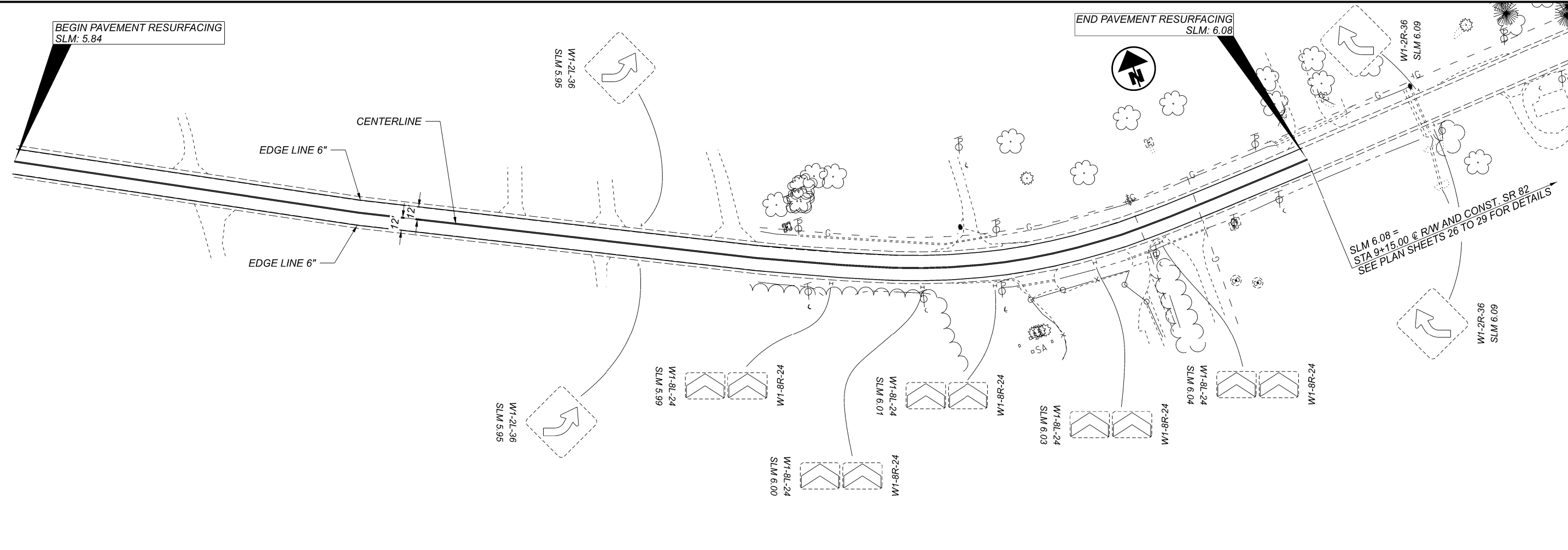


PLAN - SR 82 AND CHAMBERLAIN ROAD  
STA. 11+25 TO STA. 16+25

DESIGN AGENCY



DESIGNER	STO
REVIEWER	JNR 02/19/21
PROJECT ID	111007
SHEET	TOTAL
P.27	P.126



SLM RANGE	TYPICAL SECTION	SIDE	DISTANCE (D) FT	AVERAGE WIDTH (W) FT	SURFACE AREA (A) A=DxW/9 SY	CADD GENERATED AREA SY	202	209	254	407	407	408	441	441	617	621	621	646	646	618	618	874	
							WEARING COURSE REMOVED SY	PREPARING SUBGRADE FOR SHOULDER PAVING STA	PAVEMENT PLANING, ASPHALT CONCRETE (T=3.0') SY	NON-TRACKING TACK COAT @ 0.06 GAL/SY	NON-TRACKING TACK COAT @ 0.09 GAL/SY	PRIME COAT, AS PER PLAN @ 0.40 GAL/SY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22 (T=1.25') CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) (T=1.75') CY	COMPACTED AGGREGATE, AS PER PLAN (T=2.0') CY	RPM (YELLOW/YELLOW) EACH	RAISED PAVEMENT MARKER REMOVED EACH	EDGE LINE, 6" MILE	CENTER LINE MILE	RUMBLE STRIPES, EDGE LINE (ASPHALT CONCRETE) MILE	RUMBLE STRIPES, CENTER LINE (ASPHALT CONCRETE) MILE	LONGITUDINAL JOINT PREPARATION FT	
<b>MAINLINE SR 82</b>																							
5.84 TO 6.08		LT/RT	1267.20	30.00	4224.00			25.34	4224.00	253.44	380.16	225.28	146.67	205.33	31.29	19.00	16.00	0.48	0.24	0.48	0.24	1272.00	
<b>DRIVEWAYS</b>																							
5.84 TO 6.08			2.00	VARIES			2.00						1.00										
<b>MAILBOX APPROACHES</b>																							
5.84 TO 6.08			1267.20		0.00	246.67	247.00						8.58										
SUBTOTALS							249.00	25.34	4224.00	253.44	380.16	225.28	156.24	205.33	31.29	19.00	16.00	0.48	0.24	0.48	0.24	1272.00	
TOTALS CARRIED TO GENERAL SUMMARY							249	26	4224	254	381	226	157	206	32	19	16	0.48	0.24	0.48	0.24	1272	