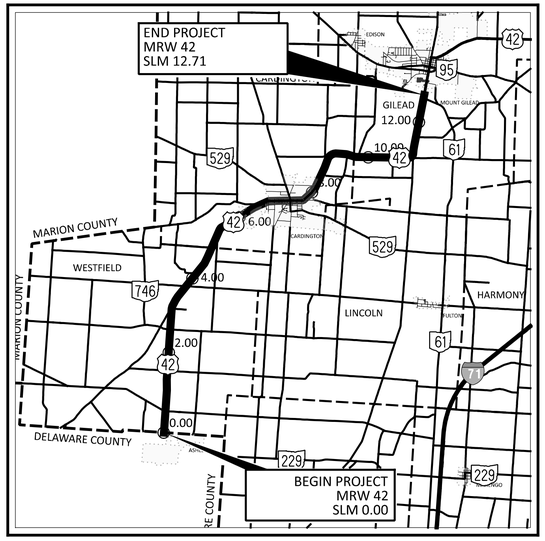

LOCATION MAP

LATITUDE: 40°29'49" LONGITUDE: -82°54'48"

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

DESIGN DESIGNATION

CURRENT ADT (2023)	*3156*
DESIGN YEAR ADT (2038)	*3500*
DESIGN HOURLY VOLUME (20)	*350*
DIRECTIONAL DISTRIBUTION	*55%*
TRUCKS (24 HOUR B&C)	*9%*
DESIGN SPEED	*55MPH (35MPH IN CARDINGTON)*
LEGAL SPEED	*55MPH (35MPH IN CARDINGTON)*

DESIGN FUNCTIONAL CLASSIFICATION:
04 MINOR ARTERIAL (RURAL)
NHS PROJECT ..... *NO*

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

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

PLAN PREPARED BY:
ODOT IN HOUSE DESIGN

ENGINEER'S SEAL
STATE OF OHIO · ROBERT ALLEN MCNEILL · E-78025 · REGISTERED PROFESSIONAL ENGINEER

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MRW-42-0.00

VILLAGE OF CARDINGTON
WESTFIELD TOWNSHIP, CARDINGTON TOWNSHIP, GILEAD TOWNSHIP
MORROW COUNTY

INDEX OF SHEETS:

FEDERAL PROJECT NUMBER

E250494

RAILROAD INVOLVEMENT

CSX

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF 12.71 MILES OF PAVEMENT RESURFACING ON US-42 IN MORROW COUNTY. 1.36 MILES OF THE PAVEMENT RESURFACING IS WITHIN THE LIMITS OF THE VILLAGE OF CARDINGTON. ALSO INCLUDED ARE PAVEMENT REPAIRS, PEDESTRIAN CROSSING IMPROVEMENTS, AND MINOR GUARDRAIL UPGRADES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	*0.03 ACRES*
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	*0.00 ACRES*
NOTICE OF INTENT EARTH DISTURBED AREA:	*N/A* (NOI NOT REQUIRED)*

** ROUTINE MAINTENANCE PROJECT*

2023 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 OF TRAFFIC AND SAFETY WILL BE AS SET FORTH ON PLANS AND ESTIMATES.

Anthony C. Turowski, P.E.
District 06 Deputy Director

Pamela Boratyn
Director, Department of Transportation

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	*1/19/24*	*MGS-2.1*	*7/18/25*	*MT-97.10*	*7/18/25*	*TC-41.20*	*10/18/13*		
BP-4.1	*7/19/13*	*MGS-4.3*	*7/18/25*	*MT-97.12*	*7/18/25*	*TC-41.30*	*4/21/23*		
BP-7.1	*7/18/25*	*MGS-5.2*	*7/15/16*	*MT-99.20*	*4/19/19*	*TC-42.20*	*10/18/13*		
		MGS-5.3	*7/15/16*	*MT-101.90*	*7/17/20*	*TC-52.10*	*10/18/13*		
RM-1.1	*1/20/23*			*MT-105.10*	*1/17/20*	*TC-52.20*	*1/15/21*		
						TC-61.30	*7/19/24*		
DBR-2-73	*7/19/02*					*TC-71.10*	*7/18/25*		
						TC-74.10	*7/21/23*		
						TC-83.30	*1/16/26*		
						TC-87.10	*1/16/26*		

SUPPLEMENTAL SPECIFICATIONS

SPECIAL PROVISIONS

800	*7/18/25*
821	*4/20/12*
832	*7/18/25*
872	*1/17/25*
874	*4/17/20*
875	*1/17/25*
921	*7/19/24*
997	*1/16/26*

PID 121188 MRW-42-0.00

DESIGN AGENCY

DESIGNER RAM
REVIEWER KLM 11/26/25
PROJECT ID 121188
SHEET P.01 TOTAL P.59

MRW-42-0.00

PROPOSED NO PASSING ZONES:
PROPER PLACEMENT OF THE PROPOSED PASSING AND NO PASSING ZONES SHALL BE AS SHOWN IN THE CENTERLINE MARKING DIAGRAMS ON SHEETS P.49 THROUGH P.55. SLM'S ON THE CENTERLINE MARKING DIAGRAMS COULD BE DIFFERENT THAN THE SLM'S SHOWN ON THE PAVING PLAN. ALL START AND STOP SLM LOCATIONS SHALL BE CONFIRMED BY THE CONTRACTOR AND PLACED BY USING THE CONTROL POINTS SHOWN ON THE CENTERLINE MARKING DIAGRAMS. ANY IMPROPERLY PLACED PASSING OR NO PASSING ZONES SHALL BE IMMEDIATELY CORRECTED.

ENVIRONMENTAL COMMITMENTS:
NO TREE CLEARING IS REQUIRED OR PERMITTED ON THIS PROJECT. FOR THE PURPOSE OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANS, WITH A TRUNK 3 INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINUMUM HEIGHT OF 13 FEET.

ANY AND ALL CONSTRUCTION DEBRIS, EARTHEN DEBRIS, EXCESS ASPHALT OR CONCRETE, WOOD DEBRIS FROM CLEARING, EXCESS FILL MATERIAL, AND TRASH SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED UPLAND SITE OR LANDFILL ABOVE FEMA 100-YEAR FLOOD ELEVATIONS.

CONTRACTOR SHALL AVOID WORKING BEYOND PROPOSED CONSTRUCTION LIMITS, BELOW THE ORDINARY HIGH-WATER MARK OF STREAMS, WITHIN STREAM DITCHES UNLESS OTHERWISE APPROVED TO DO SO BY THE DISTRICT 6 ENVIRONMENTAL TEAM.

THE CONTRACTOR SHALL KEEP ALL IDLE EQUIPMENT, FUELS, LUBRICANTS, AND ANY STORAGE FOR/OF POTENTIALLY TOXIC OR HAZARDOUS MATERIALS OUT OF THE FEMA DESIGNATED SPECIAL FLOOD HAZARD AREA.

NO EQUIPMENT, MATERIALS, OR DEBRIS SHALL BE STORED ON ANY PARK LAND OR HISTORIC PROPERTY.

ITEM 630 - SIGNING, MISC.: SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY:
THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING A SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY. THE FLASHING UNIT SHALL BE SOLAR POWERED, PEDESTRIAN ACTIVATED, AND 2-SIDED WITH TWO LED ARRAY BASED YELLOW INDICATIONS ON EACH SIDE. MULTIPLE UNITS SHALL BE WIRELESSLY CONTROLLED AND SYNCHRONIZED. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) AND FHWA INTERIM APPROVAL FOR RRFBS (IA-21).

GENERAL REQUIREMENTS
EACH RRFB SHALL CONSIST OF TWO RAPIDLY FLASHED RECTANGULAR-SHAPED YELLOW INDICATIONS HAVING LED ARRAY BASED LIGHT SOURCE.

EACH RRFB SHALL BE A COMPLETE ASSEMBLY, CONSISTING OFBUT NOT LIMITED TO, SIGNAGE, SIGN MOUNTING HARDWARE, INDICATIONS AND ELECTRICAL COMPONENTS (WIRING, SOLID-STATE CIRCUIT BOARDS, ETC.).

FUNCTIONAL REQUIREMENTS
EACH RRFB SHALL UTILIZE SOLAR POWER.

EACH RRFB SHALL BE ACTIVATED BY ADA COMPLIANT PUSHBUTTONS.

THE RRFB SHALL BE NORMALLY DARK, SHALL INITIATE OPERATION ONLY UPON PEDESTRIAN ACTUATION, AND SHALL CEASE OPERATION AFTER A PREDETERMINED TIME LIMIT (BASED ON OMUTCD PROCEDURES).

EACH REMOTE RRFB SHALL BE WIRELESSLY ACTIVATED.

ALL RRFB LIGHT INDICATIONS SHALL BE WIRELESSLY SYNCHRONIZED (ALL LIGHTS WILL TURN ON WITHIN 120 MSEC AND REMAIN SYNCHRONIZED THROUGHOUT THE DURATION OF THE FLASHING CYCLE).

THE UNIT SHALL BE CAPABLE OF RUNNING 14 DAYS WITHOUT SUNLIGHT.

MATERIALS
FURNISH A COMPLETE ASSEMBLY, CONSISTING OF BUT NOT LIMITED TO, SIGNAGE, SIGN MOUNTING HARDWARE, INDICATIONS, AND ELECTRICAL COMPONENTS (WIRING, SOLID-STATE CIRCUIT BOARDS, ETC.). THE RRFB ASSEMBLY INCLUDES THE FOLLOWING ITEMS:

1. RRFB INDICATIONS
   A. EACH RRFB INDICATION LENS SHALL BE A MINIMUM SIZED OF APPROXIMATELY 5" WIDE X 2" HIGH.

   B. THE RRFB INDICATIONS SHALL BE ALIGNED HORIZONTALLY, WITH THE LONGER DIMENSION OF THE INDICATION HORIZONTAL. THERE SHALL BE TWO INDICATIONS ON THE FRONT AND TWO INDICATIONS ON THE BACK.

   C. EACH RRFB SHALL BE SUPPLIED WITH ALL REQUIRED HARDWARE TO INSTALL ASSEMBLY. ALL EXPOSED HARDWARE SHALL BE ANTI-VANDAL.

   D. EACH RRFB SHALL BE LOCATED BETWEEN THE BOTTOM OF THE CROSSING WARNING SIGN AND THE TOP OF THE SUPPLEMENTAL DOWNWARD DIAGONAL ARROW PLAQUE.

   E. THE LIGHT INTENSITY OF THE YELLOW INDICATIONS SHALL MEET THE MINIMUM CLASS 1 SPECIFICATIONS OF SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) STANDARD J595 (DIRECTIONAL FLASHING OPTICAL WARNING DEVICES FOR AUTHORIZED EMERGENCY, MAINTENANCE, AND SERVICE VEHICLES) DATED JANUARY, 2005.

   F. TO MINIMIZE EXCESSIVE GLARE DURING NIGHTTIME CONDITIONS, AN AUTOMATIC SIGNAL DIMMING DEVICE SHALL BE USED TO REDUCE THE BRILLIANCE OF THE RRFB INDICATIONS.

   G. AN LED PEDESTRIAN CONFIRMATION LIGHT DIRECTED AT AND VISIBLE TO PEDESTRIANS IN THE CROSSWALK SHALL BE INSTALLED INTEGRAL TO THE RRFB OR PUSHBUTTON TO GIVE CONFIRMATION THAT THE RRFB IS IN OPERATION.

   H. THE PEDESTRIAN CONFIRMATION LIGHT SHALL HAVE A MINIMUM AREA OF 0.5 SQUARE INCHES AND BE A CONSPICUOUS TO PEDESTRIANS AT ALL DISTANCED FROM THE BEGINNING OF THE CONTROLLED CROSSWALK TO A POINT 10 FEET FROM THE END OF THE CONTROLLED CROSSWALK DURING BOTH DAY AND NIGHT.

2. SIGNS
   A. ALL SIGN ASSEMBLIES SHALL USE ANTI-VANDAL FASTENERS TO MOUNT COMPONENTS TO SIGN AND SIGN TO FIXTURE.

   B. PEDESTRIAN PUSHBUTTON SIGNS SHALL BE PROVIDED AND INCLUDE THE LEGEND "PUSH BUTTON TO TURN ON WARNING LIGHTS". sIGNS SHOULD BE MOUNTED ADJACENT TO OR INTEGRAL WITH EACH PEDESTRIAN PUSHBUTTON.

   C. TWO SETS OF SIGNS SHALL BE REQUIRED PER UNIT FOR VIEW FROM EACH APPROACH.

   D. ASSURE SIGN MEETS THE REQUIREMENTS OF C&MS 630.

3. CONTROL CIRCUIT
   A. THE CONTROL CIRCUIT SHALL HAVE THE CAPABILITY OF INDEPENDENTLY FLASHING UP TWO INDEPENDENT OUTPUTS. THE LED LIGHT OUTPUTS AND FLASH PATTERN SHALL BE COMPLETELY PROGRAMMABLE.

   B. THE CONTROL CIRCUIT SHALL BE SEALED WATERTIGHT TO ELIMINATE DIRT CONTAMINATION AND ALLOW FOR SAFE HANDLING IN ALL WEATHER CONDITIONS.

   C. THE LEDS SHALL BE SEALED AGAINST DUST AND MOISTURE INTRUSION AS PER THE REQUIREMENTS OF NEMA STANDARD 250-1991 FOR TYPE 4 ENCLOSURE AND TO PROTECT ALL INTERNAL LED AND ELECTRICAL COMPONENTS.

4. BATTERY AND SOLAR PANELS

   A. BATTERY UNIT SHALL BE A 12VDC, 35 AHR MINIMUM, SEALED GEL OR AGM LEAD ACID BATTERY. BATTERIES SHALL HAVE A WRITTEN TWO YEAR FULL REPLACEMENT WARRANTY.

   B. THE SOLAR PANEL SHALL PROVIDE A MINIMUM OF 40 WATTS PEAK TOTAL OUTPUT.

   C. THE SOLAR PANEL SHALL BE MOUNTED TO AN ALUMINUM PLATE AND BRACKET AT AN ANGLE OF 45 DEGREES - 60 DEGREES TO PROVIDE MAXIMUM OUTPUT.

   D. ALL FASTENERS USED SHALL BE ANTI-VANDAL.

5. WIRELESS RADIO

   A. RADIO CONTROL SHALL OPERATE ON A 900 MHZ FREQUENCY HOPPING SPREAD SPECTRUM NETWORK, WI-FI OR APPROVED EQUAL.

   B. RADIO SHALL INTEGRATE COMMUNICATION OF RRFB CONTROL CIRCUIT TO ACTIVATE SIGN FROM PUSHBUTTON INPUT.

   C. THE RADIO SHALL BE SYNCHRONIZED SO ALL OF THE REMOTE RRFB LIGHT INDICATIONS WILL TURN ON WITHIN 120 MSEC OF EACH OTHER AND REMAIN SYNCHRONIZED THROUGH-OUT THE DURATION OF THE FLASHING CYCLE.

   A. THE PUSHBUTTON SHALL BE CAPABLE OF CONTINUOUS OPERATION OVER A TEMPERATURE RANGE OF -30 DEGREES F TO +165 DEGREES F.

   B. PUSHBUTTON SHALL BE ADA COMPLIANT.

7. PEDESTAL SHAFT AND BASE - MOUNT ON A STANDARD 4.5-INCH OD ALUMINUM PEDESTAL POLE WITH BREAKWAY BASE. A 14 FOOT POLE SHALL BE PROVIDED AND FIELD ADJUSTED AND CAPPED TO MAINTAIN THE PROPER SIGN MOUNTING HEIGHTS, UNLESS SPECIFIED OTHERWISE IN THE PLANS. POLE AND BASE MANUFACTURER SHALL BE LISTED ON ODOT'S QUALIFIED PRODUCTS LIST.

CONSTRUCTION
FURNISH AND INSTALL THE RRFB SIGN ASSEMBLIES, AND RELATED SUPPLEMENTAL SIGNAGE, PER PLAN AND PLAN NOTES, STANDARD CONSTRUCTION DRAWING (SCD) TC-87.10, AND OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).

WARRANTY
WARRANTY SHALL BE TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE.

MEASUREMENT
THE DEPARTMENT WILL MEASURE THE ITEM COMPLETE IN PLACE, INCLUDING ALL MATERIALS, TESTING, LABOR AND SOFTWARE FOR A FULLY FUNCTIONAL UNIT.

PAYMENT
PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH FOR ITEM 630 - SIGNING MISC.: SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY.

GENERAL NOTES

DESIGN AGENCY

DESIGNER RAM
REVIEWER KLM 11/26/25
PROJECT ID 12188
SHEET P.10 TOTAL P.59

MRW-42-0.00

MODEL: Sheet 03 PAPERSIZE: 34x22 (in.) DATE: 3/3/2026 TIME: 1:24:32 PM PLTDRV: OHDOT_PDF.pltcfg PENTBL: OHDOT_Pen.tbl USER: Robert.Mcneill@dot.ohio.gov WORKSPACE: OHDOTCEv02 WORKSET: 121188 PRODUCT: OpenRoadsDesigner 24.00.00.205
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 06\Morrow\121188\400-Engineering\Roadway\Sheets\121188_GN001.dgn