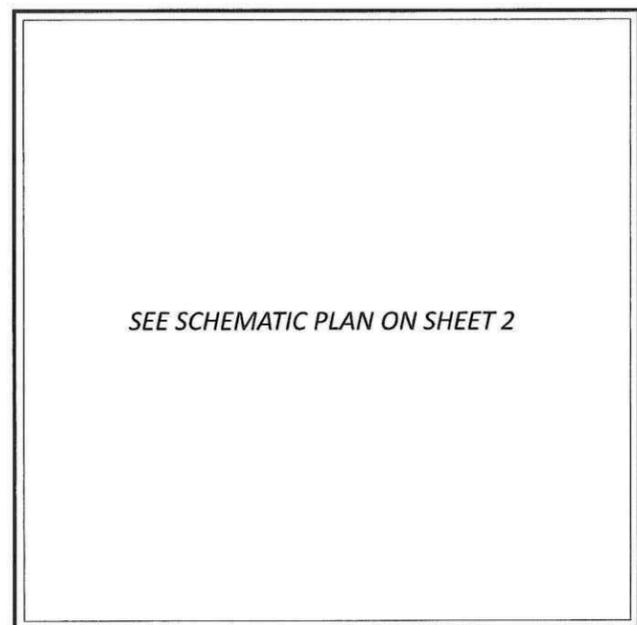


LOG - US 33/SR 47/SR 235/SR 540-VAR  
 230222 PID - 102999  
 Dist 7 4/13/2023

Contract Proposal available @  
 www.contracts.dot.state.oh.us

RAV-045/532/4/13-2023

MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 1/5/2023 TIME: 8:28:10 AM USER: lknapke  
 p:\cadd\dot-pw\benlby.com\ohio\dot-pw\02\Documents\01 Active Projects\District 07\Logan\102999\Roadway\Engineering\Roadway\Sheet\01\02\01.dgn



**LOCATION MAP**

LATITUDE: 40°25'51" LONGITUDE: 83°54'17"

| ROUTE   | LOCATION           | ADT  | TRUCKS |
|---------|--------------------|------|--------|
| LOG-33  | SLM 0.00 TO 1.97   | 6830 | 1580   |
| LOG-47  | SLM 5.31 TO 11.71  | 4450 | 560    |
| LOG-235 | SLM 6.17 TO 8.10   | 2890 | 440    |
| LOG-235 | SLM 13.90 TO 17.48 | 4580 | 295    |
| LOG-540 | SLM 1.67 TO 2.41   | 3025 | 350    |

**DESIGN EXCEPTIONS**

NONE

**ADA DESIGN WAIVERS**

NONE

**UNDERGROUND UTILITIES**  
 Contact Two Working Days  
 Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764  
 (Non members must be called directly)

PLAN PREPARED BY:  
 ODOT DISTRICT 7 - ENGINEERING  
 1001 ST. MARYS AVE.  
 SIDNEY, OHIO

ENGINEER'S SEAL:

SIGNED: *Chris Weiss*  
 DATE: 1/5/2023

**STATE OF OHIO**  
**DEPARTMENT OF TRANSPORTATION**  
**LOG-33/47/235/540-VAR**  
 STOKES, PLEASANT, WASHINGTON & HARRISON TOWNSHIPS  
 CITY OF BELLEFONTAINE  
 LOGAN COUNTY

**INDEX OF SHEETS:**

|                              |       |
|------------------------------|-------|
| TITLE SHEET                  | 1     |
| SCHEMATIC PLAN               | 2     |
| TYPICAL SECTIONS             | 3-5   |
| GENERAL NOTES                | 6-10  |
| GENERAL SUMMARY              | 11-12 |
| PAVEMENT SUBSUMMARY          | 13-14 |
| DRIVE DETAILS                | 15    |
| TRAFFIC CONTROL SUBSUMMARIES | 16-17 |
| STRUCTURES                   | 18-19 |

| STANDARD CONSTRUCTION DRAWINGS |         |          |          | SUPPLEMENTAL SPECIFICATIONS | SPECIAL PROVISIONS |
|--------------------------------|---------|----------|----------|-----------------------------|--------------------|
| BP-3.1                         | 1/21/22 |          |          | 800-2019                    | SEE PROPOSAL       |
| BP-3.2                         | 1/18/19 |          |          |                             |                    |
|                                |         | TC-41.20 | 10/18/13 | 832                         | 7/15/22            |
| DM-4.3                         | 1/15/16 | TC-42.20 | 10/18/13 | 872                         | 1/21/22            |
| DM-4.4                         | 1/15/16 | TC-52.10 | 10/18/13 | 874                         | 4/17/20            |
|                                |         | TC-52.20 | 1/15/21  | 875                         | 1/18/19            |
| MT-96.11                       | 4/16/21 | TC-64.10 | 7/16/21  |                             |                    |
| MT-96.20                       | 7/15/16 | TC-65.10 | 1/17/14  |                             |                    |
| MT-96.26                       | 7/15/16 | TC-65.11 | 7/21/17  |                             |                    |
| MT-97.10                       | 4/19/19 | TC-71.10 | 7/16/21  |                             |                    |
| MT-97.12                       | 1/20/17 | TC-82.10 | 7/19/19  |                             |                    |
| MT-99.20                       | 4/19/19 | TC-85.21 | 7/16/21  |                             |                    |
| MT-101.90                      | 7/17/20 |          |          |                             |                    |
| MT-105.10                      | 1/17/20 |          |          |                             |                    |
| MT-107.10                      | 1/17/20 |          |          |                             |                    |
| MT-107.75                      | 1/17/20 |          |          |                             |                    |

**FEDERAL PROJECT NUMBER**

E170 (493)

**RAILROAD INVOLVEMENT**

NONE

**PROJECT DESCRIPTION**

THIS PROJECT CONSISTS OF RESURFACING WITH ASPHALT CONCRETE OF USR 33, SR 47, SR 235 & SR 540 IN LOGAN COUNTY.

**PROJECT LOCATIONS**

PARTICIPATION 1 = 01/STR/05  
 LOG-47-SLM 5.31 TO 9.37  
 LOG-235-SLM 6.17 TO 8.10  
 LOG-235-SLM 13.90 TO 17.46

PARTICIPATION 2 = 02/S5K/05  
 LOG-47-SLM 9.37 TO 11.71  
 LOG-235-SLM 17.46 TO 17.48

PARTICIPATION 3 = 03/NHS/05  
 LOG-33-SLM 0.00 TO 1.97

PARTICIPATION 4 = 04/S5K/05  
 LOG-540-SLM 1.67 TO 2.41

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: NA\*  
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: NA\*  
 NOTICE OF INTENT EARTH DISTURBED AREA: NA\*

\* 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.

APPROVED *Rodney L. Cherry P.E., P.S.*  
 DATE 1/5/2023 DISTRICT DEPUTY DIRECTOR

APPROVED *Jade Matlockbanks*  
 DATE 2-22-2023 DIRECTOR, DEPARTMENT OF TRANSPORTATION

|               |            |
|---------------|------------|
| DESIGN AGENCY |            |
| DESIGNER      | TMK        |
| REVIEWER      | CWW 8-2-22 |
| PROJECT ID    | 102999     |
| SHEET         | P.1        |
| TOTAL         | 19         |

LOG-33/47/235/540-VAR

**ITEM 632 - DETECTOR LOOP, AS PER PLAN**

DURING THE COURSE OF THIS CONTRACT, IT MAY BE NECESSARY FOR THE CONTRACTOR TO COORDINATE LOOP DETECTOR WORK WITH THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) AND OTHER CONTRACTORS INVOLVED WITH ASPHALT PLANING AND RESURFACING PROJECTS. THE CONTRACTOR SHALL REPLACE LOOP DETECTORS REMOVED BY ASPHALT PLANING OPERATIONS BEFORE PLACEMENT OF THE SURFACE COURSE.

THE CITY OF BELLEFONTAINE WILL PROVIDE TO THE CONTRACTOR A SET OF PLANS SHOWING THE LOCATION OF THE LOOPS TO BE REPLACED. THE CONTRACTOR SHALL COORDINATE ALL NECESSARY WORK.

THE FRONT EDGE OF THE POWERHEAD LOOP DETECTORS SHALL BE LOCATED ONE TO THREE FEET BEHIND THE REAR EDGE OF THE STOP LINE.

THE CONTRACTOR SHALL COORDINATE AND CORROBORATE THE LAYOUT OF ALL LOOP DETECTORS AND PAVEMENT MARKINGS WITH THE CITY OF BELLEFONTAINE.

THE CITY OF BELLEFONTAINE SHALL BE PRESENT WHEN THE CONTRACTOR MARKS THE LOCATION WHERE THE PAVEMENT IS TO BE SAWED TO BE ASSURED THAT THE PROPOSED LOOP DETECTORS ARE IN THE SAME PLACE AS THE EXISTING LOOP DETECTORS. ALL LOOP DETECTOR INSTALLATIONS SHALL BE MADE BEFORE THE ASPHALT CONCRETE SURFACE COURSE IS PLACED.

THE CITY OF BELLEFONTAINE SHALL BE RESPONSIBLE FOR DISCONNECTION AND RECONNECTION OF THE LOOP DETECTORS IN THE SYSTEM. THE CONTRACTOR SHALL GIVE THE CITY OF BELLEFONTAINE, FORTY-EIGHT (48) HOURS NOTICE BEFORE BEGINNING PAVEMENT PLANING IN AREAS WITH LOOP DETECTORS. STANDARD CONSTRUCTION DRAWING TC-82.10

LOCATIONS AND NUMBER OF LOOPS ARE AS FOLLOWS:

**SR 47 X CR 32 INTERSECTION LOOP DETECTORS**

| LOCATION             | QUANTITY | DIMENSION/TYPE     |
|----------------------|----------|--------------------|
| EASTBOUND THRU LANE  | 2        | 6' X 6' ADVANCE    |
| EASTBOUND THRU LANE  | 1        | 6' X 30' POWERHEAD |
| NORTHBOUND THRU LANE | 1        | 6' X 30' POWERHEAD |
|                      |          |                    |
| SOUTHBOUND THRU LANE | 1        | 6' X 30' POWERHEAD |
| WESTBOUND THRU LANE  | 1        | 6' X 30' POWERHEAD |
| WESTBOUND THRU LANE  | 2        | 6' X 6' ADVANCE    |
| TOTAL                | 8        | (PART. 2)          |

**ITEM 632 - LOOP DETECTOR TIE-IN, AS PER PLAN**

THIS WORK SHALL CONSIST OF MAKING CONNECTIONS TO EXISTING LOOP DETECTOR LEAD-IN WIRE, WHETHER THAT WIRE IS UNDERGROUND OR AERIAL. INCLUDED IN THIS ITEM IS THE Poured WATERPROOF EPOXY INSULATED SPLICE KIT (CONFORMING TO 725.15) THAT MUST BE USED IN MAKING THESE CONNECTIONS.

ALL CONNECTIONS OF THE LOOP WIRE TO THE LOOP LEADS SHALL BE SOLDERED PRIOR TO BEING PLACED IN THE SPLICE KITS.

THIS ITEM IS NEEDED ONLY WHEN A TIE-IN SITUATION EXISTS. WHEN ALL NEW LEAD-IN WIRE IS SPECIFIED IN THE PLAN, THIS ITEM OF WORK IS NOT REQUIRED.

PAYMENT FOR THIS ITEM WILL INCLUDE ALL NECESSARY LABOR, MISCELLANEOUS HARDWARE AND EQUIPMENT REQUIRED TO PROVIDE FOR THE LOOP DETECTOR TIE-IN AND OPERATION. BASIS OF PAYMENT WILL BE AT THE CONTRACT BID PRICE PER EACH.

ITEM 632 LOOP DETECTOR TIE-IN, AS PER PLAN = 8 EACH

**ITEM 809 - STOP-LINE RADAR DETECTION**

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR MATRIX DETECTION UNIT. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.
2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.
3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.
4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.
5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ON-SITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.
6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).
7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.

PAYMENT FOR ITEM 809 STOP-LINE RADAR DETECTION SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH

UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT AND CONNECTIONS TESTED AND ACCEPTED.

| ITEM 809 - STOP LINE RADAR DETECTION |                              |          |
|--------------------------------------|------------------------------|----------|
|                                      | LOCATION                     | QUANTITY |
|                                      | SR 235 X SR 274 (EASTBOUND)  | 1        |
|                                      | SR 235 X SR 274 (WESTBOUND)  | 1        |
|                                      | SR 235 X SR 274 (NORTHBOUND) | 1        |
|                                      | SR 235 X SR 274 (SOUTHBOUND) | 1        |
|                                      | TOTAL (PART. 1)              | 4        |

**632 SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE**

THE CONTRACTOR SHALL REMOVE EXISTING MESSENGER WIRE LASHING RODS AND REINSTALL THEM AS NECESSARY FOR THE INSTALLATION OF ANY NEW CABLES ON THE EXISTING INTERSECTION SIGNAL SPANS. THE CABLES SHALL ENTER THE EXISTING STRAIN POLE THROUGH THE POLE CABLE ENTRANCE FITTING AND USE THE EXISTING CONDUIT SYSTEM TO GET TO THE CONTROLLER CABINET. THE NEW CABLES SHALL BE SUPPORTED BY A NEW CABLE SUPPORT ASSEMBLY AT THE TOP OF THE STRAIN POLE.

THE NEW SIGNAL CABLES SHALL BE BID BY SEPARATE BID ITEMS.

PAYMENT FOR ITEM 632 "SIGNALIZATION MISC.: UNLASH AND RELASH MESSENGER WIRE" SHALL BE MADE AT THE CONTRACT UNIT PRICE PER PER FOOT AND SHALL INCLUDE ALL LABOR, MATERIALS, CABLE SUPPORT ASSEMBLIES AND EQUIPMENT TO INSTALL NEW CABLES ON EXISTING SIGNAL SPAN WIRE INSTALLATIONS.

| REMOVE AND REINSTALL LASHING RODS |     |
|-----------------------------------|-----|
| LOCATION                          | FT  |
| SR 235 X SR 274                   | 330 |
|                                   |     |

**ITEM 632 REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: VEHICLE DETECTION CABLE**

THIS ITEM CONSISTS OF REMOVING THE VEHICLE DETECTION CABLE FROM THE EXISTING VEHICLE DETECTION UNITS ON THE SPAN BACK TO THE CONTROLLER CABINET.

PAYMENT FOR ITEM 632 REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: VEHICLE DETECTION CABLE, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT AND SHALL INCLUDE ALL LABOR, EQUIPMENT AND DISPOSAL OF THE VEHICLE DETECTION CABLE.

| REMOVAL OF VEHICLE DETECTION CABLE |     |
|------------------------------------|-----|
| LOCATION                           | FT  |
| SR 235 X SR 274                    | 500 |
|                                    |     |

**ITEM 632 TETHER WIRE, WITH ACCESSORIES**

| TETHER WIRE, WITH ACCESSORIES |     |
|-------------------------------|-----|
| LOCATION                      | FT  |
| SR 235 X SR 274               | 330 |
|                               |     |



