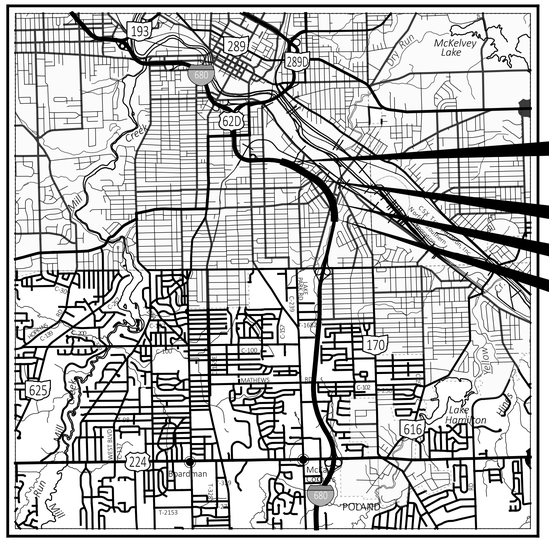
# STATE OF OHIO
# DEPARTMENT OF TRANSPORTATION




END PROJECT
MAH-680-7.69
STA 729+18

MAH-680 AT INDIANOLA

MAH-680 AT SHIRLEY

BEGIN PROJECT
MAH-680-8.58
STA 681+46

**LOCATION MAP**

LATITUDE: 41°04'07" LONGITUDE: -80°37'33"

N

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

## DESIGN DESIGNATION

DESIGN FUNCTIONAL CLASSIFICATION:
IR 680 - INTERSTATE FREEWAY AND EXPRESSWAY
NHS PROJECT ..... NO

## DESIGN EXCEPTIONS

NONE

# MAH-LG-FY2023

## TOWNSHIP OF BOARDMAN
## CITY OF YOUNGSTOWN
## MAHONING COUNTY

### INDEX OF SHEETS:



added sheets 3a, 4a & 4b

### FEDERAL PROJECT NUMBER

NON-FEDERAL

### RAILROAD INVOLVEMENT

NONE

### PROJECT DESCRIPTION

LIGHTING REPLACEMENTS AT IR 680/INDIANOLA AND IR 680/SHIRLEY INTERCHANGES.

### EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.3 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.3 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI NOT REQUIRED)

### LIMITED ACCESS

DELETED "MAINTENANCE PROJECT" AND ADDED "NOT"

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

### 2019 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL 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.

**DISTRICT DEPUTY DIRECTOR**

**DIRECTOR, DEPARTMENT OF TRANSPORTATION**

**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


### STANDARD CONSTRUCTION DRAWINGS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DM-1.1 | 7/17/20 | HL-30.21 | 4/17/20 | MT-95.30 | 7/19/19 | MT-95.40 | 1/17/20 | | |
| DM-4.3 | 1/15/16 | HL-30.22 | 1/15/21 | MT-98.10 | 1/17/20 | | | | |
| DM-4.4 | 1/15/16 | HL-30.31 | 4/17/20 | MT-98.11 | 1/17/20 | | | | |
| | | HL-30.32 | 4/17/20 | MT-98.20 | 4/19/19 | | | | |
| RM-4.3 | 1/21/22 | HL-30.33 | 1/21/22 | MT-98.22 | 1/17/20 | | | | |
| RM-4.4 | 7/19/19 | HL-30.41 | 1/21/22 | MT-98.28 | 1/17/20 | MT-101.70 | 1/17/20 | | |
| | | HL-40.10 | 7/17/20 | MT-105.10 | 1/17/20 | MT-101.75 | 1/17/20 | | |
| HL-10.11 | 1/15/21 | HL-50.11 | 1/16/15 | | | MT-104.10 | 10/16/15 | | |
| HL-10.12 | 1/20/17 | HL-50.21 | 1/15/21 | TC-41.20 | 10/18/13 | | | | |
| HL-10.13 | 4/17/20 | HL-60.11 | 7/21/17 | TC-42.20 | 10/18/13 | | | | |
| HL-10.31 | 4/17/20 | HL-60.12 | 7/16/21 | TC-52.10 | 10/18/13 | | | | |
| HL-20.11 | 1/15/21 | HL-60.21 | 7/20/18 | TC-52.20 | 1/15/21 | | | | |
| HL-20.13 | 4/17/20 | HL-60.31 | 1/17/20 | | | | | | |
| HL-20.21 | 1/15/21 | | | | | | | | |
| HL-20.24 | 1/15/21 | | | | | | | | |
| HL-30.11 | 1/15/21 | | | | | | | | |

added MT SCDs

| SUPPLEMENTAL SPECIFICATIONS | | SPECIAL PROVISIONS |
|---|---|---|
| 800-2019 | SEE PROPOSAL | |
| 813 | 10/19/18 | |
| 821 | 4/20/12 | |
| 825 | 1/17/20 | |
| 832 | 7/15/22 | |
| 913 | 4/16/21 | |
| 921 | 4/20/12 | |

ENGINEER'S SEAL
LIGHTING
STATE OF OHIO
REBECCA M. MOCARSKI
E-68469
REGISTERED PROFESSIONAL ENGINEER

TITLE SHEET

DESIGN AGENCY

DESIGNER AJN
REVIEWER RMM 4-26-22
PROJECT ID 106205
SHEET P.1 TOTAL 21


MAH-LG-FY2023
MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 10/13/2022 TIME: 8:48:28 AM USER: astrub
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**SURVEYING PARAMETERS**

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS.

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

PROJECT CONTROL

POSITIONING METHOD: STATIC
MONUMENT TYPE: A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 18

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: 0.99989849500
ORIGIN OF COORDINATE SYSTEM: (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.

**LIGHT POLE, CONVENTIONAL, AS PER PLAN, AT10B35**

POLES ISA3 & ISA4 ARE IN BRIDGE PILASTERS ON THE I-680 SB RAMP (COOPER ST) TO INDIANOLA AVE. ANY EXTRA WORK, EQUIPMENT & MATERIALS REQUIRED TO INSTALL POLES ISA3 AND ISA4 ON THE BRIDGE PILASTER (WHICH IS BEHIND A VANDAL PROTECTION FENCE) SHALL BE INCLUDED IN THIS PAY ITEM. IF JUNCTION BOXES ARE IN NEED OF NEW BOLTS OR NEW LIDS, THIS WORK AND MATERIALS ARE ALSO INCLUDED IN THIS PAY ITEM.

**UNDERPASS LIGHTING INSTALLATION**

THE UNDERPASS LIGHTING AT THE SHIRLEY ROAD OVERPASS WILL BE REPLACED AS SHOWN IN THE PLANS. THE LIGHTING SHALL BE REPLACED AS PER THE HEIGHTS AND LOCATIONS SHOWN ON SHEET 18. THE SHIRLEY RD UNDERPASS WILL BE MAINTAINED BY ODOT AND WILL BE ON THE SHIRLEY CIRCUIT (CC-SR).

**LIGHTING, MISC.: REMOVE UNDERPASS LIGHTING**

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO REMOVE ALL UNDERPASS LIGHTING, CABLES, CONDUIT, DISCONNECTS, AND ALL ITEMS ASSOCIATED WITH THE UNDERPASS LIGHTING AT SHIRLEY RD (4 LUMINAIRES).

ITEM 625 LIGHTING, MISC.: REMOVE UNDERPASS LIGHTING LS

**ITEM SPECIAL - SURVEY CONTROL VERIFICATION**

THE CONTRACTOR SHALL PERFORM THIS WORK TO VERIFY THE PROVIDED SURVEY CONTROL. THE CONTRACTOR WILL PERFORM THE VERIFICATION USING ONE OF THE TWO METHODS BELOW DEPENDENT UPON THE CONTRACTOR'S CHOSEN MEANS OF SURVEY CONTROL TO BE USED ON THE PROJECT. THE WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN OHIO LICENSED SURVEYOR.

1. IF USING GPS DEVICES TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
   a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
   b. PERFORM A SITE CALIBRATION UTILIZING THE AVAILABLE HORIZONTAL AND VERTICAL CONTROL POINTS PROVIDED IN THE PLAN.
   c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSESD SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.
2. IF USING CONVENTIONAL SURVEY INSTRUMENTATION TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
   a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
   b. LOCATE AND OBSERVE ANGLE AND DISTANCE TO ALL AVAILABLE HORIZONTAL CONTROL POINTS PROVIDE IN THE PLAN
   c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM.

**SEEDING AND MULCHING**

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

IR 680/INDIANOLA:

| | |
|---|---|
| 659, SEEDING AND MULCHING | 734 SQ. YD. |
| 659, COMMERCIAL FERTILIZER | 0.1 TON |

IR 680/SHIRLEY:

| | |
|---|---|
| 659, SEEDING AND MULCHING | 681 SQ. YD. |
| 659, COMMERCIAL FERTILIZER | 0.1 TON |

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

**LUMINAIRE, INSTALLATION ONLY, AS PER PLAN (CONVENTIONAL, LOW MAST & HIGH MAST)**

THE CONTRACTOR SHALL CONTACT MICHELLE CHANEY (330-786-2267) TO OBTAIN THE 12 CONVENTIONAL, 16 LOW MAST LUMINAIRES, AND 4 HIGH MAST LUMINAIRES FOR THIS PROJECT WITHIN 1 WEEK OF THE PRE-CONSTRUCTION MEETING. (4 HIGH MAST LUMINAIRES AND 2 LOW MAST LUMINAIRES BELONG WITH THE SHIRLEY ROAD ADDITIVE ALTERNATE)

**TOWER INSPECTION**

THE DISTRICT TRAFFIC ENGINEER SHALL BE ASKED FOR AN INSPECTION PRIOR TO THE PLACEMENT OF THE VARMINT GUARD.

**PADLOCKS AND KEYS**

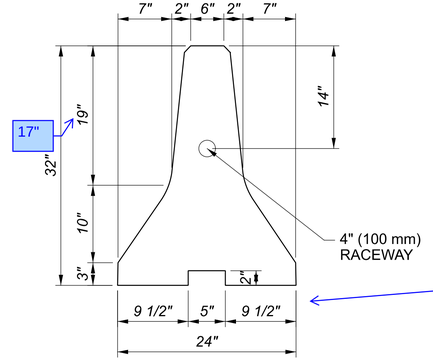
PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH C&MS 631.06. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

**BARRIER, MISC.: 32"**

THE CONCRETE BARRIER SHALL TRANSITION TO THE DIMENSIONS OF THE EXISTING NJS BARRIER SHOWN BELOW AND SHALL INCLUDE A RACEWAY.

THE CONTRACTOR SHALL ENSURE THAT THE ELECTRICAL RACEWAY IS CLEAR OF INTERNAL OBSTRUCTIONS. COST OF THE 4" (100 mm) POLYVINYL CHLORIDE RACEWAY AND NO. 10 AWG COPPER-CLAD OR ALUMINUM-CLAD WIRE SHALL BE INCLUDED IN THE UNIT COST PER FOOT FOR ITEM 622, BARRIER, MISC.:32".

Added missing line




REVISED DETAIL AND ADDED PAVEMENT UNDER BARRIER

MATERIALS: MATERIALS ARE SAME FOR THOSE SHOWN ON RM-4.3 AND RM-4.4, EXCEPT THAT CAST-IN-PLACE IS THE ONLY ACCEPTABLE METHOD. EDGES MAY BE CHAMFERED OR RADIUSED AS SHOWN ON THOSE DRAWINGS.

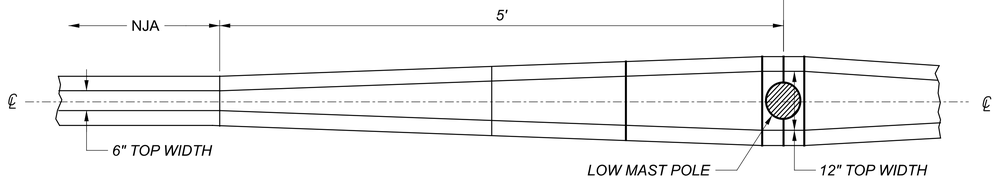
RACEWAYS: WHEN SPECIFIED, PLACE RACEWAY(S) TO MATCH RACEWAY ELEVATION IN ADJOINING SEGMENTS. PLACE TO OBTAIN MAXIMUM CONCRETE COVER.

REPLACEMENT OF DISTURBED PAVEMENT (T=17")

PAYMENT: THIS BARRIER TRANSITON SHALL INCLUDE ALL MATERIAL AND LABOR NEEDED TO CONSTRUCT THIS 10' SECTION, INCLUDING ANY RACEWAYS, REINFORCING STEEL, DOWELS AND OTHER NECESSARY INCIDENTALS. PAYMENT SHALL BE MADE AT THE UNIT PRICE FOR ITEM 622 - BARRIER, MISC.: 32".

REVERSE OF 5'-0 TRANSITION SHOWN AT LEFT

**PLAN VIEW - TRANSITION (WITH LOW MAST POLE)**




**AS-BUILT CONSTRUCTION PLANS**

IF DIRECTED BY THE ENGINEER, THE CONTRACTOR MAY NEED TO SUBMIT AS-BUILT CONSTRUCTION PLANS.

**ADDITIVE ALTERNATES**

ADDITIVE ALTERNATES FOR THIS PROJECT ARE PROVIDED AS DESCRIBED BELOW. THE DEPARTMENT HAS A BID BUDGET NOT TO EXCEED THE VALUE LISTED ON THE FRONT OF THE PROPOSAL AND WILL AWARD THE MAXIMUM AMOUNT OF WORK WITHIN THE BID BUDGET. THE SEGMENTS OF THE PROPOSAL CONSIST OF:

1) BASE BID (BID ITEMS 1-45), COMPLETION DATE 11/15/23
2) ADDITIVE ALTERNATE #1 (IR 680/SHIRLEY INTERCHANGE; PRIORITY 1), COMPLETION DATE 11/15/23

**LIGHT POLE REMOVED, AS PER PLAN**

ADDED NOTE

ONCE THE LIGHT POLES ON THE MEDIAN HAVE BEEN REMOVED, THE OPENINGS SHALL BE COVERED AND SECURED WITH A METAL PLATE. THE CONTRACTOR MAY DRILL HOLES IN THE METAL PLATE IN THE LOCATIONS OF THE EXISTING BOLTS AND REUSE THE ANCHOR BOLTS AND NUTS. THE METAL PLATE SHALL NOT OVERHANG THE TOP OF THE CONCRETE BARRIER.

THIS WORK SHALL BE INCLUDED IN THE UNIT COST PER EACH FOR ITEM 625 - LIGHT POLE REMOVED, AS PER PLAN.

LIGHTING GENERAL NOTES

DESIGN AGENCY

DESIGNER AJN
REVIEWER RMM 4-26-22
PROJECT ID 106205
SHEET P.3 TOTAL 21

MAH-LG-FY2023

MODEL: Sheet 2 PAPERSIZE: 34x22 (in.) DATE: 10/12/2022 TIME: 4:42:27 PM USER: astrub
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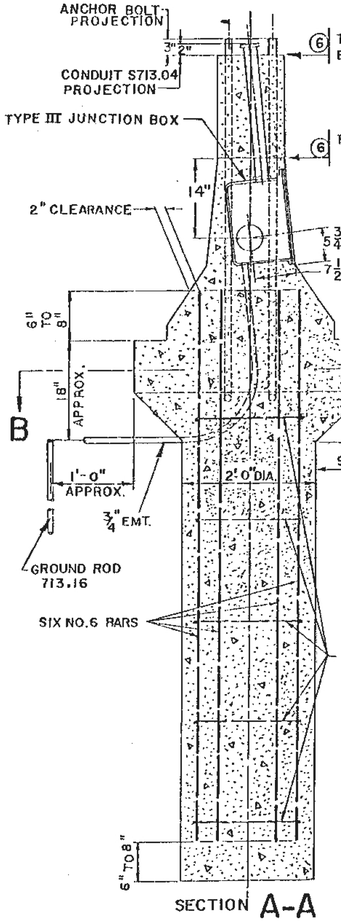
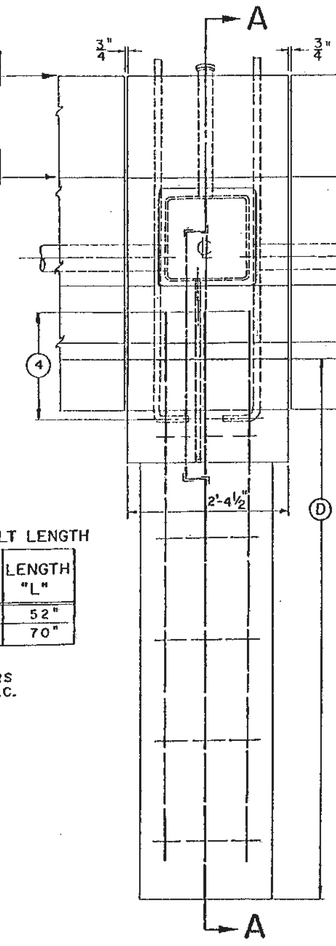
# FOUNDATION AND PULL BOX DETAILS - MEDIAN MOUNTED LIGHT POLES - TYPE 3




SECTION A-A

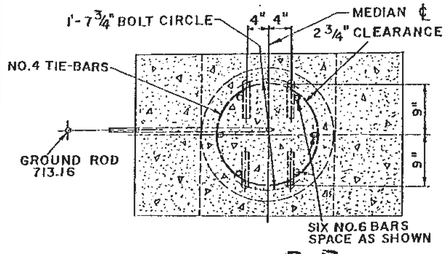



ANCHOR BOLT LENGTH

| BARRIER SECTION TYPE | LENGTH "L" |
|---|---|
| B | 52" |
| B-50 | 70" |

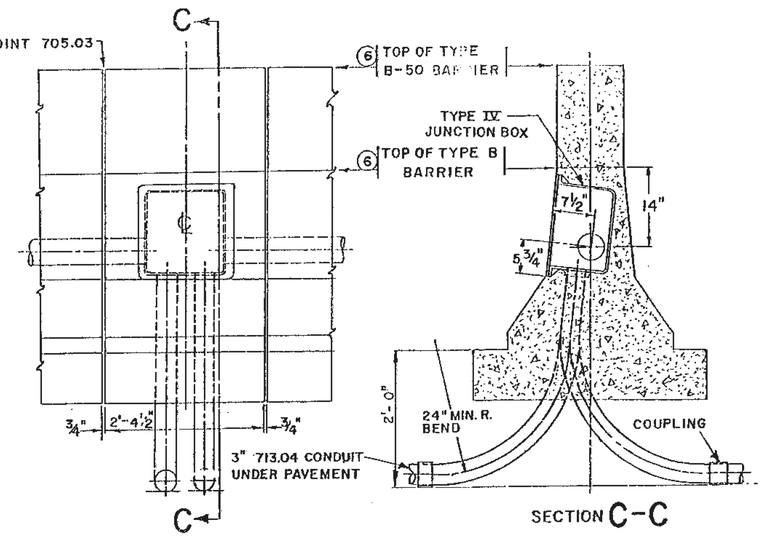
NO.4 TIE-BARS APPROX. 18" O.C.

## MEDIAN LIGHT POLE FOUNDATION




SECTION B-B

| LIGHT POLE MOUNTING HEIGHT | (D) MINIMUM FOUNDATION DEPTH BELOW GRADE |
|---|---|
| 40' | 8'-0" |
| 45' | 9'-0" |
| 50' | 10'-0" |
| | |

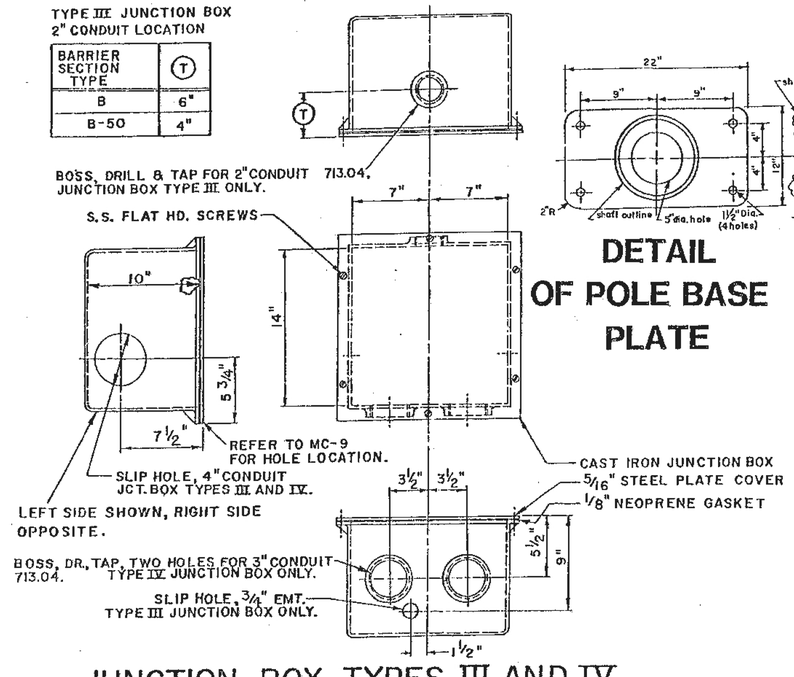



SECTION C-C

## MEDIAN PULLBOX

TYPE III JUNCTION BOX 2" CONDUIT LOCATION

| BARRIER SECTION TYPE | (T) |
|---|---|
| B | 6" |
| B-50 | 4" |




JUNCTION BOX TYPES III AND IV




## DETAIL OF POLE BASE PLATE

## NOTES

1. FOUNDATION TO BE CAST-IN-PLACE CLASS "C" CONCRETE.
2. REINFORCING TO COMPLY WITH AND BE PLACED IN ACCORDANCE WITH 509.
3. LIGHT POLE ANCHOR BOLTS TO BE 1¼" DIA. x LENGTH "L" INCLUDING 6" L-BEND, WITH ONE HEX NUT PER BOLT, PROJECTION ABOVE CONCRETE 3", THREAD LENGTH 3", GALVANIZED LENGTH 4".
4. MAINTAIN MINIMUM 17" OVERLAP OF ANCHOR BOLTS AND REINFORCEMENT BARS PER AASHTO.
5. THE TOP OF THE CONCRETE BARRIER SHALL BE FLAT, SMOOTH, AND LEVEL TO ELIMINATE NEED FOR LIGHT POLE SHIMS. GRIND SURFACE, IF REQUIRED, TO MAKE CONCRETE LEVEL.
6. REFER TO STANDARD CONSTRUCTION DRAWING MC-9 FOR BARRIER DIMENSIONS.
7. JUNCTION BOXES SHALL CONFORM TO 713.10, EXCEPT THAT GALVANIZED STEEL PLATE COVERS SHALL CONFORM TO ASTM A-242 OR A-36.
8. THE UNIT PRICE BID FOR EACH "ITEM 625, MEDIAN LIGHT POLE FOUNDATION," SHALL BE FULL COMPENSATION FOR FURNISHING AND PLACING ANCHOR BOLTS, REINFORCING, TYPE III JUNCTION BOX, EMT., AND ALL LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED.
9. THE UNIT PRICE BID FOR EACH "ITEM 625, MEDIAN PULL BOX," SHALL BE FULL COMPENSATION FOR FURNISHING AND PLACING TYPE IV JUNCTION BOX, CONDUIT ELLS, AND ALL LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED.
10. CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF 622 AND 625.

BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

HIGHWAY LIGHTING

FOUNDATION AND PULL BOX DETAILS MEDIAN MOUNTED LIGHT POLES TYPE 3

DATE 5-1-87

STANDARD CONSTRUCTION DRAWING **HL-20.13**

APPROVED _____ Engineer of Design Services

ADDED SHEET

LIGHTING GENERAL NOTES

DESIGN AGENCY

DESIGNER AJN

REVIEWER RMM 4-26-22

PROJECT ID 106205

SHEET P.3A TOTAL 21

MAH-LG-FY2023

MODEL: Sheet 3 PAPERSIZE: 34x22 (in.) DATE: 10/21/2022 TIME: 10:39:24 AM USER: astrub
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**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. A MINIMUM OF ONE TEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT OR 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. 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.

6. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS TWO MILES ON IR-271 OR ONE MILE ON US-30.

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

TO BE USED AS DIRECTED BY THE ENGINEER
614, WORK ZONE EDGE LINE, CLASS III, 6", 3.11 MILE

ADDED NOTE

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 - 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.

IR 680/INDIANOLA:
ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 50 HOURS
IR 680/SHIRLEY:
ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 50 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, 6 SIGN MONTH

**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 THE 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.

MAINTENANCE OF TRAFFIC GENERAL NOTES

DESIGN AGENCY

DESIGNER AJN

REVIEWER RMM 4-26-22

PROJECT ID 106205

SHEET P.4 TOTAL 21

MAH-LG-FY2023

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***ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)***

*NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR SPECIAL EVENTS:*

*NEW YEAR'S (OBSERVED)*
*TOTAL SOLAR ECLIPSE (4/8/24)*
*MEMORIAL DAY*
*FOURTH OF JULY (OBSERVED)*
*LABOR DAY*
*GENERAL/REGULAR ELECTION DAY ((NOV)*
*THANKSGIVING*
*CHRISTMAS (OBSERVED)*
*(OTHER HOLIDAY OR SPECIAL EVENT)*

*THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR SPECIAL EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:*

| DAY OF HOLIDAY OR SPECIAL EVENT | TIME ALL LANES MUST BE OPEN TO TRAFFIC |
|---|---|
| SUNDAY | 12:00N FRIDAY THROUGH 6:00 AM MONDAY |
| MONDAY | 12:00N FRIDAY THROUGH 6:00 AM TUESDAY |
| MONDAY | (TOTAL SOLAR ECLIPSE) 12:00N MONDAY THROUGH 6:00 AM WEDNESDAY |
| TUESDAY | 12:00N MONDAY THROUGH 6:00 AM WEDNESDAY |
| TUESDAY | (GEN./REG. ELECTION) 5:00 AM TUESDAY THROUGH 12:00 AM WEDNESDAY |
| WEDNESDAY | 12:00N TUESDAY THROUGH 6:00 AM THURSDAY |
| THURSDAY | 12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY |
| THURSDAY | (THANKSGIVING ONLY) 6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY |
| FRIDAY | 12:00N THURSDAY THROUGH 6:00 AM MONDAY |
| SATURDAY | 12:00N FRIDAY THROUGH 6:00 AM MONDAY |

*DURING THE SAME PERIODS, MAINTAIN PEDESTRAIN ACCESS IF PEDESTRIAN ACCESS WAS PRESENT PRIOR TO CONSTRUCTION.*

*[NEWLY CONSTRUCTED LANE ADDITIONS, ONCE COMPLETED AND INITIALLY OPENED TO TRAFFIC, SHALL BE OPEN TO TRAFFIC DURING ALL SUBSEQUENT DESIGNATED HOLIDAYS AND SPECIAL EVENTS, AND RELATED PERIODS OF TIME, SPECIFIED ABOVE.]*

*SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).*

| LANE VALUE CONTRACT | | | |
|---|---|---|---|
| DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED | RESTRICTED TIME PERIOD | TIME UNIT | DISINCENTIVE $ PER TIME UNIT |
| MAH IR 680 | PER PLCS | PER MINUTE | $130 |

***LANE CLOSURES***

*DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AS PER THE PERMITTED LANE CLOSURE CHART. THE PERMITTED LANE CLOSURE CHART USED FOR THIS PROJECT SHALL BE THE MOST CURRENT CHART AVAILABLE ON THE DATE THIS PROJECT SELLS.*

*THE CHART CAN BE FOUND AT:*
*http://plcm.dot.state.oh.us*

*SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE REQUIREMENTS IN THE CHART, THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES IN ACCORDANCE WITH THE LANE VALUE CONTRACT TABLE FOR TIME THAT THE LANE REDUCTION REMAINS BEYOND THE SPECIFIED LIMIT.*

***TRAFFIC CONTROL INSPECTOR***

MOVED NOTE FROM SHEET 4 TO MAKE ROOM ON SHEET 4

*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 SHALL HAVE NO OTHER CONSTRUCTION RELATED DUTIES. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.*

***ITEM 622 – PORTABLE BARRIER PLACEMENT***

*DURING THE PLACEMENT OF THE PORTABLE BARRIER, TRAFFIC WILL BE PROHIBITED FROM OCCUPYING THE TRAVEL LANE ADJACENT TO THE BARRIER. THE BARRIER WILL BE PLACED AT NIGHT PER THE WORK HOUR RESTRICTION NOTE AND IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE MAP. THE CLOSURE OF THE ADJACENT LANE WILL BE PER THE STANDARD DRAWING MT-95.30.*

*THE CONTRACTOR WILL SUBMIT A PLAN TO THE ENGINEER FOR APPROVAL SEVEN (7) DAYS IN ADVANCE OF THE PLANNED LANE CLOSURE. WORK WILL NOT BEGIN UNTIL APPROVAL OF THE PLANS HAS BEEN GRANTED.*

*ALL COSTS INVOLVED IN PLACING THE PORTABLE CONCRETE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 PORTABLE CONCRETE BARRIER.*

*ITEM 622 - PORTABLE BARRIER, UNANCHORED 8850 FT*

***DELINEATION OF PORTABLE AND PERMANENT BARRIER***

*BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.*

*BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.*

*INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.*

*THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.*

*DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.*

*TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.*

*THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:*

*ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY) 177 EACH*

*ITEM 614, OBJECT MARKER, ONE-WAY 177 EACH*

*PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.*

*[ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.]*

***ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)***

*THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.*

*INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.*

*THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.*

*WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.*

*WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.*

*THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.*

*PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.*

*THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY:*

*ITEM 614 - WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) 4 EACH*

ADDED SHEET & NOTEs

MAINTENANCE OF TRAFFIC GENERAL NOTES

DESIGN AGENCY

DESIGNER AJN

REVIEWER RMM 4-26-22

PROJECT ID 106205

SHEET P.4A TOTAL 21

MAH-LG-FY2023

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## MAINTENANCE OF TRAFFIC GENERAL NOTES

***WORK ZONE SPEED ZONES (WZSZS)***

*THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:*

| *WZSZ REVISION NUMBER(S)* | *COUNTY-ROUTE-SECTION(S)* | *DIRECTION(S)* |
|---|---|---|
| *WZ- 26167* | *MAH-680 (7.74-9.08)* | *NB* |
| *WZ- 26167* | *MAH-680 (7.11-8.64)* | *SB* |

*POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.*

*IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.*

*C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.*

*ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.*

*[WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.]*

*[WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS SHALL BE IN ACCORDANCE WITH THIS NOTE AND SCD MT-104.10. ADDITIONALLY PAYMENT MAY BE REMOVED, OR A DISINCENTIVE APPLIED, FOR WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS THE SAME AS DESCRIBED IN THE MOST RECENT PUBLICATION OF SS 808 IN REGARDS TO WZSZS USING DSL SIGN ASSEMBLIES (SEE SS 808.06 PARAGRAPHS 4 THROUGH 7, INCLUDING TABLE 1).]*

*ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMUTCD PART 6.*

*WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.*

*TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS*

| | WITH POSITIVE PROTECTION | | WITHOUT POSITIVE PROTECTION | |
|---|---|---|---|---|
| ORIGINAL POSTED SPEED LIMIT | WORKERS PRESENT | WORKERS NOT PRESENT | WORKERS PRESENT | WORKERS NOT PRESENT |
| 70 | 60 | 65 | 55 | 65 |
| 65 | 55 | 60 | 50 | 60 |
| 60 | 55 | 60 | 50 | 60 |
| 55 | 50 | 55 | 45 | 55 |

*THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.*

*ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY*
*18 SIGN MNTH*
*[ASSUMING 6 DSL SIGN ASSEMBLIES FOR 3 MONTHS]*

ADDED SHEET & NOTES

DESIGN AGENCY

DESIGNER AJN

REVIEWER RMM 4-26-22

PROJECT ID 106205

SHEET P.4B TOTAL 21

MAH-LG-FY2023

MODEL: Sheet 3 PAPERSIZE: 34x22 (in.) DATE: 10/21/2022 TIME: 10:40:22 AM USER: astrub
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| SHEET NUM. | | | | | | | | | | | | | PART. | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 4A | 4B | 7 | 8 | 9 | | | | | 01/NFP/OT | | | | | | |
| | | | | | | | | | | | | | | | | | | **ROADWAY** | |
| | LS | | | | | | | | | | | | LS | 201 | 11000 | LS | | CLEARING AND GRUBBING | |
| | | | | | | 140 | | | | | | | 140 | 202 | 30700 | 140 | FT | CONCRETE BARRIER REMOVED | |
| | | | | | | 140 | | | | | | | 140 | 622 | 90000 | 140 | FT | BARRIER, MISC.: 32" | 3 |
| | | LS | | | | | | | | | | | LS | SPECIAL | 69098400 | LS | | SURVEY CONTROL VERIFICATION | 3 |
| | | | | | | | | | | | | | | | | | | **EROSION CONTROL** | |
| | 11 | | | | | | | | | | | | 11 | 601 | 21050 | 11 | SY | TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT | |
| | | 734 | | | | | | | | | | | 734 | 659 | 10000 | 734 | SY | SEEDING AND MULCHING | |
| | | 0.1 | | | | | | | | | | | 0.1 | 659 | 20000 | 0.1 | TON | COMMERCIAL FERTILIZER | |
| | | | | | | | | | | | | | 3,000 | 832 | 30000 | 3,000 | EACH | EROSION CONTROL | |
| | | | | | | | | | | | | | | | | | | **DRAINAGE** | |
| | 60 | | | | | | | | | | | | 60 | 611 | 00200 | 60 | FT | 4" CONDUIT, TYPE C | |
| | 6 | | | | | | | | | | | | 6 | 611 | 99710 | 6 | EACH | PRECAST REINFORCED CONCRETE OUTLET | |
| | | | | | | | | | | | | | | | | | | **LIGHTING** | |
| | | | | | | 34 | 18 | | | | | | 52 | 625 | 00450 | 52 | EACH | CONNECTION, FUSED PULL APART | |
| | | | | | | 18 | 9 | | | | | | 27 | 625 | 00480 | 27 | EACH | CONNECTION, UNFUSED PERMANENT | |
| | | | | | | 3 | 7 | | | | | | 10 | 625 | 10490 | 10 | EACH | LIGHT POLE, CONVENTIONAL, AT10B35 | |
| | | | | | | | 2 | | | | | | 2 | 625 | 10491 | 2 | EACH | LIGHT POLE, CONVENTIONAL, AS PER PLAN, AT10B35 | 3 |
| | | | | | | 14 | | | | | | | 14 | 625 | 10494 | 14 | EACH | LIGHT POLE, LOW MAST | |
| | | | | | | 3 | 7 | | | | | | 10 | 625 | 14100 | 10 | EACH | LIGHT POLE FOUNDATION, 24" X 8' DEEP | |
| | | | | | | 14 | | | | | | | 14 | 625 | 14306 | 14 | EACH | MEDIAN LIGHT POLE FOUNDATION, 10' DEEP | |
| | | | | | | 9,924 | 948 | | | | | | 10,872 | 625 | 23200 | 10,872 | FT | NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE | |
| | | | | | | 2,505 | 1,215 | | | | | | 3,720 | 625 | 23400 | 3,720 | FT | NO. 10 AWG POLE AND BRACKET CABLE | |
| | | | | | | 510 | 1,280 | | | | | | 1,790 | 625 | 24320 | 1,790 | FT | 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES | |
| | | | | | | 236 | 120 | | | | | | 356 | 625 | 25902 | 356 | FT | CONDUIT, JACKED OR DRILLED, 725.04, 3" | |
| | 3,038 | | | | | | | | | | | | 3,038 | 625 | 25911 | 3,038 | FT | CONDUIT CLEANED AND CABLES REMOVED, AS PER PLAN | 2 |
| | | | | | | 3 | 9 | | | | | | 12 | 625 | 27561 | 12 | EACH | LUMINAIRE, INSTALLATION ONLY, AS PER PLAN (CONVENTIONAL) | 3 |
| | | | | | | 14 | | | | | | | 14 | 625 | 27561 | 14 | EACH | LUMINAIRE, INSTALLATION ONLY, AS PER PLAN (LOW MAST) | 3 |
| | | | | | | 470 | 1,180 | | | | | | 1,650 | 625 | 29000 | 1,650 | FT | TRENCH | |
| | | | | | | 16 | 3 | | | | | | 19 | 625 | 29930 | 19 | EACH | MEDIAN JUNCTION BOX | |
| | | | | | | 4 | 2 | | | | | | 6 | 625 | 30706 | 6 | EACH | PULL BOX, 725.08, 24" | |
| | | | | | | 17 | 9 | | | | | | 26 | 625 | 32000 | 26 | EACH | GROUND ROD | |
| | | | | | | | 1 | | | | | | 1 | 625 | 34001 | 1 | EACH | POWER SERVICE, AS PER PLAN | 2 |
| | 1 | | | | | | | | | | | | 1 | 625 | 34450 | 1 | EACH | CONTROL CENTER CABINET, COMPLETE | |
| | | | | | | 470 | 1,180 | | | | | | 1,650 | 625 | 36011 | 1,650 | FT | UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN | 2 |
| | LS | | | | | | | | | | | | LS | SPECIAL | 62540000 | LS | | MAINTAIN EXISTING LIGHTING | 2 |
| | 2 | | | | | | | | | | | | 2 | SPECIAL | 62540010 | 2 | EACH | REPLACEMENT OF EXISTING LIGHTING UNIT | 2 |
| | | | | | | | | 12 | | | | | 12 | 625 | 75400 | 12 | EACH | LIGHT POLE REMOVED | |
| | | | | | | | | 11 | | | | | 11 | 625 | 75401 | 11 | EACH | LIGHT POLE REMOVED, AS PER PLAN | 3 |
| | | | | | | | | 12 | | | | | 12 | 625 | 75500 | 12 | EACH | LIGHT POLE FOUNDATION REMOVED | |
| | | | | | | | 1 | | | | | | 1 | 625 | 76000 | 1 | EACH | ARC FLASH CALCULATIONS AND LABEL, INDIANOLA | |
| | | LS | | | | | | | | | | | LS | 625 | 98200 | LS | | LIGHTING, MISC.: REMOVE UNDERPASS LIGHTING | 3 |
| | | | | | | | | | | | | | | | | | | **TRAFFIC SURVEILLANCE** | |
| | | LS | | | | | | | | | | | LS | 809 | 70050 | LS | | AS-BUILT CONSTRUCTION PLANS | |
| | | | | | | | | | | | | | | | | | | **TRAFFIC SIGNALS** | |
| | 1 | | | | | | | | | | | | 1 | 633 | 67200 | 1 | EACH | CONTROLLER WORK PAD | |
| | | | | | | | | | | | | | | | | | | **MAINTENANCE OF TRAFFIC** | |
| | | | 50 | | | | | | | | | | 50 | 614 | 11110 | 50 | HOUR | LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE | |
| | | | | 177 | | | | | | | | | 177 | 614 | 13310 | 177 | EACH | BARRIER REFLECTOR, TYPE 1 (ONE-WAY) | |
| | | | | 177 | | | | | | | | | 177 | 614 | 13350 | 177 | EACH | OBJECT MARKER, ONE WAY | |
| | | | 6 | | | | | | | | | | 6 | 614 | 18601 | 6 | SNMT | PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN | 4 |
| | | | 3.11 | | | | | | | | | | 3.11 | 614 | 22360 | 3.11 | MILE | WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT | |
| | | | | 8,850 | | | | | | | | | 8,850 | 622 | 41100 | 8,850 | FT | PORTABLE BARRIER, UNANCHORED | |
| | | | | | 18 | | | | | | | | 18 | 808 | 18700 | 18 | SNMT | DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY | |

REVISED ITEM NUMBER AND FROM 8' TO 10' DEEP

REVISED THIS QUANTITY

ADDED THIS ITEM/QUANTITY

REVISED THIS QUANTITY

ADDED THESE 5 QUANTITIES

GENERAL SUMMARY

MAH-LG-FY2023

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 10/21/2022 TIME: 10:40:31 AM USER: asirub
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 04\Mahoning\106205\400-Engineering\Lighting\Sheets\106205_LG001.dgn

DESIGN AGENCY

DESIGNER AJN

REVIEWER RMM 4-26-22

PROJECT ID 106205

SHEET P.5 TOTAL 21

| BEGIN REF NO. | SHEET NO. | END REF NO. | STATION TO STATION | 202 CONCRETE BARRIER REMOVED FT | 622 BARRIER, MISC.: 32" FT | 625 CONNECTION, FUSED PULL APART EACH | 625 CONNECTION, UNFUSED PERMANENT EACH | 625 LIGHT POLE, CONVENTIONAL, AT10B35 EACH | 625 LIGHT POLE, CONVENTIONAL, AS PER PLAN, AT10B35 EACH | 625 LIGHT POLE, LOW MAST EACH | 625 LIGHT TOWER, BB100 EACH | 625 LIGHT POLE FOUNDATION, 24" X 8' DEEP EACH | 625 MEDIAN LIGHT POLE FOUNDATION, 10' DEEP EACH | 625 LIGHT TOWER FOUNDATION, 36" X 15' DEEP EACH | 625 LIGHT TOWER FOUNDATION, 36" X 20' DEEP EACH | 625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT | 625 NO. 10 AWG POLE AND BRACKET CABLE FT | 625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT | 625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT | 625 LUMINAIRE, LOW MAST, SOLID STATE (LED) (40000-45000 LUMENS), TYPE AW, 480 VOLT EACH | 625 LUMINAIRE, HIGH MAST, SOLID STATE (LED) (40000-45000 LUMENS), TYPE LN, 480 VOLT EACH | 625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN (CONVENTIONAL) EACH | 625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN (LOW MAST) EACH | 625 GLARE SHIELD EACH | 625 TRENCH FT | 625 TRENCH IN PAVED AREA FT | 625 MEDIAN JUNCTION BOX EACH | 625 PULL BOX, 725.08, 18" EACH | 625 PULL BOX, 725.08, 24" EACH | 625 GROUND ROD EACH | 625 POWER SERVICE, AS PER PLAN EACH | 625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN FT | 625 ARC FLASH CALCULATIONS AND LABEL, INDIANOLA EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | ISA17 | STA. 700+37, 1' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA17 | 12 | ISA16 | 700+37 1' RT 702+57 1' RT | | | | | | | | | | | | | 690 | | | | | | | | | | | | | | | | | |
| | 12 | ISA16 | STA. 702+57, 1' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA16 | 12 | JB8 | 702+57 1' RT 703+33 1' RT | | | | | | | | | | | | | 255 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | ISA20 | STA. 705+20, 93' RT | | | 2 | | 1 | | | | 1 | | | | | 135 | | | | | | 1 | | | | | | 1 | | | |
| ISA20 | 12 | PB10 | 705+20 93' RT 703+30 113' RT | | | | | | | | | | | | | | | 208 | | | | | | 198 | | | | | | 198 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | ISA19 | STA. 701+42, 150' RT | | | 2 | | 1 | | | | 1 | | | | | 135 | | | | | | 1 | | | | | | 1 | | | |
| ISA19 | 12 | ISA18 | 701+42 150' RT 703+23 114' RT | | | | | | | | | | | | | | | 203 | | | | | | 193 | | | | | | 193 | | |
| | 12 | ISA18 | STA. 703+23, 114' RT | | | 2 | | 1 | | | | 1 | | | | | 135 | | | | | | 1 | | | | | | 1 | | | |
| ISA18 | 12 | PB10 | 703+23 114' RT 703+30 113' RT | | | | | | | | | | | | | | | 18 | | | | | | 8 | | | | | | 8 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | PB10 | STA. 703+30, 113' RT | | | | 3 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| PB10 | 12 | PB9 | 703+30 113' RT 703+30 64' RT | | | | | | | | | | | | | 180 | | | 50 | | | | | | | | | | | | | |
| | 12 | PB9 | STA. 703+30, 64' RT | | | | 3 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| PB9 | 12 | JB8 | 703+30 64' RT 703+33 1' RT | | | | | | | | | | | | | 216 | | | 62 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | JB8 | STA. 703+33, 1' RT | | | | 3 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| JB8 | 12 | ISA15 | 703+33 1' RT 704+77 2' RT | | | | | | | | | | | | | 465 | | | | | | | | | | | | | | | | | |
| | 12 | ISA15 | STA. 704+77, 2' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA15 | 12 | ISA14 | 704+77 2' RT 706+97 2' RT | | | | | | | | | | | | | 690 | | | | | | | | | | | | | | | | | |
| | 12 | ISA14 | STA. 706+97, 2' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA14 | 12 | ISA13 | 706+97 2' RT 709+16 2' RT | | | | | | | | | | | | | 690 | | | | | | | | | | | | | | | | | |
| | 12 | ISA13 | STA. 709+16, 2' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA13 | 12 | ISA12 | 709+16 2' RT 711+58 2' RT | | | | | | | | | | | | | 756 | | | | | | | | | | | | | | | | | |
| | 12 | ISA12 | STA. 711+58, 2' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA12 | 12 | ISA11 | 711+58 2' RT 713+78 2' RT | | | | | | | | | | | | | 690 | | | | | | | | | | | | | | | | | |
| | 12 | ISA11 | STA. 713+78, 2' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA11 | 12 | ISA10 | 713+78 2' RT 715+98 3' RT | | | | | | | | | | | | | 690 | | | | | | | | | | | | | | | | | |
| | 12 | ISA10 | STA. 715+98, 3' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA10 | 12 | JB7 | 715+98 3' RT 716+26 2' RT | | | | | | | | | | | | | 114 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | ISA26 | STA. 729+18, 3' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA26 | 12 | ISA25 | 729+18 3' RT 726+98 3' RT | | | | | | | | | | | | | 690 | | | | | | | | | | | | | | | | | |
| | 12 | ISA25 | STA. 726+98, 3' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA25 | 12 | ISA24 | 726+98 3' RT 724+78 2' RT | | | | | | | | | | | | | 690 | | | | | | | | | | | | | | | | | |
| | 12 | ISA24 | STA. 724+78, 2' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA24 | 12 | ISA23 | 724+78 2' RT 722+58 2' RT | | | | | | | | | | | | | 690 | | | | | | | | | | | | | | | | | |
| | 12 | ISA23 | STA. 722+58, 2' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA23 | 12 | ISA22 | 722+58 2' RT 720+38 2' RT | | | | | | | | | | | | | 690 | | | | | | | | | | | | | | | | | |
| | 12 | ISA22 | STA. 720+38, 2' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA22 | 12 | ISA21 | 720+38 2' RT 718+18 2' RT | | | | | | | | | | | | | 690 | | | | | | | | | | | | | | | | | |
| | 12 | ISA21 | STA. 718+18, 2' RT | 10 | 10 | 2 | | | | 1 | | | 1 | | | | 150 | | | | | | | 1 | | | 1 | | | 1 | | | |
| ISA21 | 12 | JB7 | 718+18 2' RT 716+26 2' RT | | | | | | | | | | | | | 606 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | JB7 | STA. 716+26, 2' RT | | | | 3 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| JB7 | 12 | PB6 | 716+26 2' RT 716+26 60' LT | | | | | | | | | | | | | 216 | | | 62 | | | | | | | | | | | | | |
| | 12 | PB6 | STA. 716+26, 60' LT | | | | 3 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| PB6 | 12 | PB5 | 716+26 60' LT 716+28 131' LT | | | | | | | | | | | | | | | 81 | | | | | | 71 | | | | | | 71 | | |
| | 12 | PB5 | STA. 716+28, 131' LT | | | | 3 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| PB5 | 12 | PB1 | 716+28 131' LT 716+32 193' LT | | | | | | | | | | | | | 216 | | | 62 | | | | | | | | | | | | | |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | 140 | 140 | 34 | 18 | 3 | | 14 | | 3 | 14 | | | 9924 | 2505 | 510 | 236 | | | 3 | 14 | | 470 | | 16 | | 4 | 17 | | 470 | |

REVISED FROM 8' TO 10' DEEP

LIGHTING SUBSUMMARY (IR 680/INDIANOLA)

DESIGN AGENCY

DESIGNER AJN

REVIEWER RMM 4-26-22

PROJECT ID 106205

SHEET P.7 TOTAL 21

MAH-LG-FY2023

MODEL: Sheet 5 PAPERSIZE: 34x22 (in.) DATE: 10/21/2022 TIME: 10:40:41 AM USER: astrub
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 04\Mahoning\106205\400-Engineering\Lighting\Sheets\106205_LS001.dgn

| BEGIN REF NO. | SHEET NO. | END REF NO. | STATION TO STATION | 202 CONCRETE BARRIER REMOVED FT | 622 BARRIER, MISC.: 32" FT | 625 CONNECTION, FUSED PULL APART EACH | 625 CONNECTION, UNFUSED PERMANENT EACH | 625 LIGHT POLE, CONVENTIONAL, AT10B35 EACH | 625 LIGHT POLE, CONVENTIONAL, AS PER PLAN, AT10B35 EACH | 625 LIGHT POLE, LOW MAST EACH | 625 LIGHT TOWER, BB100 EACH | 625 LIGHT POLE FOUNDATION, 24" X 8' DEEP EACH | 625 MEDIAN LIGHT POLE FOUNDATION, 10' DEEP EACH | 625 LIGHT TOWER FOUNDATION, 36" X 15' DEEP EACH | 625 LIGHT TOWER FOUNDATION, 36" X 20' DEEP EACH | 625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT | 625 NO. 10 AWG POLE AND BRACKET CABLE FT | 625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT | 625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT | 625 LUMINAIRE, LOW MAST, SOLID STATE (LED) (40000-45000 LUMENS), TYPE AW, 480 VOLT EACH | 625 LUMINAIRE, HIGH MAST, SOLID STATE (LED) (40000-45000 LUMENS), TYPE LN, 480 VOLT EACH | 625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN (CONVENTIONAL) EACH | 625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN (LOW MAST) EACH | 625 GLARE SHIELD EACH | 625 TRENCH FT | 625 TRENCH IN PAVED AREA FT | 625 MEDIAN JUNCTION BOX EACH | 625 PULL BOX, 725.08, 18" EACH | 625 PULL BOX, 725.08, 24" EACH | 625 GROUND ROD EACH | 625 POWER SERVICE, AS PER PLAN EACH | 625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN FT | 625 ARC FLASH CALCULATIONS AND LABEL, INDIANOLA EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | ISA9 | STA. 725+14, 89' LT | | | 2 | | 1 | | | | 1 | | | | | 135 | | | | | 1 | | | | | | 1 | | | | | |
| ISA9 | 12 | ISA8 | 725+14 89' LT 723+00 108' LT | | | | | | | | | | | | | | | 223 | | | | | | | | 213 | | | | 213 | |
| | 12 | ISA8 | STA. 723+00, 108' LT | | | 2 | | 1 | | | | 1 | | | | | 135 | | | | | 1 | | | | | | 1 | | | | | |
| ISA8 | 12 | ISA7 | 723+00 108' LT 720+90 128' LT | | | | | | | | | | | | | | | 221 | | | | | | | | 211 | | | | 211 | |
| | 12 | ISA7 | STA. 720+90, 128' LT | | | 2 | | 1 | | | | 1 | | | | | 135 | | | | | 1 | | | | | | 1 | | | | | |
| ISA7 | 12 | ISA6 | 720+90 128' LT 718+82 147' LT | | | | | | | | | | | | | | | 219 | | | | | | | | 209 | | | | 209 | |
| | 12 | ISA6 | STA. 718+82, 147' LT | | | 2 | | 1 | | | | 1 | | | | | 135 | | | | | 1 | | | | | | 1 | | | | | |
| ISA6 | 12 | ISA5 | 718+82 147' LT 716+77 167' LT | | | | | | | | | | | | | | | 216 | | | | | | | | 206 | | | | 206 | |
| | 12 | ISA5 | STA. 716+77, 167' LT | | | 2 | | 1 | | | | 1 | | | | | 135 | | | | | 1 | | | | | | 1 | | | | | |
| ISA5 | 12 | PB1 | 716+77 167' LT 716+32 193' LT | | | | | | | | | | | | | | | 65 | | | | | | | | 55 | | | | 55 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | ISA4 | STA. 710+91, 334' LT | | | 2 | | | 1 | | | | | | | | 135 | | | | | 1 | | | | | | 1 | | | | | |
| ISA4 | 12 | ISA3 | 710+91 334' LT 712+48 271' LT | | | | | | | | | | | | | 528 | | | | | | | | | | | | | | | | | |
| | 12 | ISA3 | STA. 712+48, 271' LT | | | 2 | | | 1 | | | | | | | | 135 | | | | | 1 | | | | | | 1 | | | | | |
| ISA3 | 12 | PB4 | 712+48 271' LT 712+93 253' LT | | | | | | | | | | | | | | | 58 | | | | | | | | 48 | | | | 48 | |
| | 12 | PB4 | STA. 712+93, 253' LT | | | | 3 | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| PB4 | 12 | PB3 | 712+93 253' LT 713+54 235' LT | | | | | | | | | | | | | 225 | | | 65 | | | | | | | | | | | | | |
| | 12 | PB3 | STA. 713+54, 235' LT | | | | 3 | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| PB3 | 12 | ISA2 | 713+54 235' LT 713+89 223' LT | | | | | | | | | | | | | | | 46 | | | | | | | | 36 | | | | 36 | |
| | 12 | ISA2 | STA. 713+89, 223' LT | | | 2 | | 1 | | | | 1 | | | | | 135 | | | | | 1 | | | | | | 1 | | | | | |
| ISA2 | 12 | ISA1 | 713+89 223' LT 715+34 193' LT | | | | | | | | | | | | | | | 158 | | | | | | | | 148 | | | | 148 | |
| | 12 | ISA1 | STA. 715+34, 193' LT | | | 2 | | 1 | | | | 1 | | | | | 135 | | | | | 1 | | | | | | 1 | | | | | |
| ISA1 | 12 | PB2 | 715+34 193' LT 715+79 207' LT | | | | | | | | | | | | | | | 60 | | | | | | | | 50 | | | | 50 | |
| | 12 | PB2 | STA. 715+79, 207' LT | | | | 3 | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| PB2 | 12 | PB1 | 715+79 207' LT 716+32 193' LT | | | | | | | | | | | | | 195 | | | 55 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | PB1 | STA. 716+32, 193' LT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PB1 | 12 | CC-IS | 716+32 193' LT 716+33 197' LT | | | | | | | | | | | | | | | 14 | | | | | | | | 4 | | | | | 4 | | | |
| | 12 | CC-IS | STA. 716+33, 197' LT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | | | 18 | 9 | 7 | 2 | | | 7 | | | | 948 | 1215 | 1280 | 120 | | | 9 | | | 1180 | | 3 | | 2 | 9 | 1 | 1180 | 1 |

REVISED FROM 8' TO 10' DEEP

# LIGHTING SUBSUMMARY (IR 680/INDIANOLA)

DESIGN AGENCY

DESIGNER AJN

REVIEWER RMM 4-26-22

PROJECT ID 106205

SHEET P.8 TOTAL 21

MAH-LG-FY2023

MODEL: Sheet 6 PAPERSIZE: 34x22 (in.) DATE: 10/21/2022 TIME: 10:40:42 AM USER: astrub
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 04\Mahoning\106205\400-Engineering\Lighting\Sheets\106205_LS001.dgn

| BEGIN REF NO. | SHEET NO. | END REF NO. | STATION TO STATION | 625 LIGHT TOWER REMOVED | 625 LIGHT POLE REMOVED | 625 LIGHT POLE FOUNDATION REMOVED | 625 LIGHT TOWER FOUNDATION REMOVED | 625 LIGHT POLE REMOVED, AS PER PLAN ADDED THIS ITEM |
|---|---|---|---|---|---|---|---|---|
| | | | | EACH | EACH | EACH | EACH | EACH |
| | 12 | R-1 | STA. 700+47 | | | | | 1 |
| | 12 | R-2 | STA. 701+32 | | 1 | 1 | | |
| | 12 | R-3 | STA. 703+14 | | 1 | 1 | | |
| | 12 | R-4 | STA. 703+24 | | | | | 1 |
| | 12 | R-5 | STA. 705+10 | | 1 | 1 | | |
| | 12 | R-6 | STA. 706+11 | | | | | 1 |
| | 12 | R-7 | STA. 707+06 | | 1 | 1 | | |
| | 12 | R-8 | STA. 708+98 | | | | | 1 |
| | 12 | R-9 | STA. 711+82 | | | | | 1 |
| | 12 | R-10 | STA. 712+48 | | 1 | 1 | | |
| | 12 | R-11 | STA. 713+79 | | 1 | 1 | | |
| | 12 | R-12 | STA. 714+63 | | | | | 1 |
| | 12 | R-13 | STA. 715+24 | | 1 | 1 | | |
| | 12 | R-14 | STA. 716+67 | | 1 | 1 | | |
| | 12 | R-15 | STA. 717+50 | | | | | 1 |
| | 12 | R-16 | STA. 718+72 | | 1 | 1 | | |
| | 12 | R-17 | STA. 720+27 | | | | | 1 |
| | 12 | R-18 | STA. 720+80 | | 1 | 1 | | |
| | 12 | R-19 | STA. 722+90 | | | | | 1 |
| | 12 | R-20 | STA. 722+96 | | 1 | 1 | | |
| | 12 | R-21 | STA. 725+04 | | 1 | 1 | | |
| | 12 | R-22 | STA. 725+74 | | | | | 1 |
| | 12 | R-23 | STA. 728+50 | | | | | 1 |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | | 12 | 12 | | 11 |

REVISED THIS QUANTITY

# LIGHTING SUBSUMMARY (IR 680/INDIANOLA)

DESIGN AGENCY

DESIGNER AJN

REVIEWER RMM 4-26-22

PROJECT ID 106205

SHEET P.9 TOTAL 21

MAH-LG-FY2023

MODEL: Sheet 7 PAPERSIZE: 34x22 (in.) DATE: 10/21/2022 TIME: 10:40:43 AM USER: astrub
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 04\Mahoning\106205\400-Engineering\Lighting\Sheets\106205_LS001.dgn

# LIGHTING SUBSUMMARY (ADDITIVE ALTERNATE 1: IR 680/SHIRLEY)

| BEGIN REF NO. | SHEET NO. | END REF NO. | STATION TO STATION | 625 CONNECTION, FUSED PULL APART EACH | 625 CONNECTION, UNFUSED PERMANENT EACH | | 625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT | 625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT | 625 CONDUIT, 1-1/4", 725.04 FT | 625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT | 625 LUMINAIRE, UNDERPASS, SOLID STATE (LED) EACH | 625 TRENCH FT | 625 STRUCTURE JUNCTION BOX EACH | 625 PULL BOX, 725.08, 24" EACH | | 625 POWER SERVICE, AS PER PLAN EACH | 625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN FT | 625 SERVICE TO UNDERPASS LIGHTING | 625 ARC FLASH CALCULATIONS AND LABEL, MIDLOTHIAN (YOUNGSTOWN) EACH | | 625 LIGHTING, MISC.: REMOVE UNDERPASS LIGHTING |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **SHIRLEY UNDERPASS LIGHTING** | | | | | | | | | | | | | | | LUMP | | | LUMP |
| | 13 | SRA12 | STA. 690+73, 56' RT | 2 | | | | | | | 1 | | 1 | | | | | | | | |
| SRA12 | 13 | SRA11 | 690+73 56' RT 690+34 55' RT | | | | | | 40 | | | | | | | | | | | | |
| | 13 | SRA11 | STA. 690+34, 55' RT | 2 | | | | | | | 1 | | 1 | | | | | | | | |
| SRA11 | 13 | PB13 | 690+34 55' RT 689+96 58' RT | | | | | | 58 | | | | | | | | | | | | |
| | 13 | PB13 | STA. 689+96, 58' RT | | 3 | | | | | | | | | 1 | | | | | | | |
| PB13 | 13 | PB12 | 689+96 58' RT 688+19 63' LT | | | | 675 | | | 215 | | | | | | | | | | | |
| | 13 | SRA10 | STA. 689+07, 66' LT | 2 | | | | | | | 1 | | 1 | | | | | | | | |
| SRA10 | 13 | SRA9 | 689+07 66' LT 688+66 65' LT | | | | | | 41 | | | | | | | | | | | | |
| | 13 | SRA9 | STA. 688+66, 65' LT | 2 | | | | | | | 1 | | 1 | | | | | | | | |
| SRA9 | 13 | PB12 | 688+66 65' LT 688+19 63' LT | | | | | | 72 | | | | | | | | | | | | |
| | 13 | PB12 | STA. 688+19, 63' LT | | 3 | | | | | | | | | 1 | | | | | | | |
| PB12 | 13 | PB2 | 688+19 63' LT 715+79 207' LT | | | | | 163 | | | | 153 | | | | | 153 | | | | |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | 8 | 6 | | 675 | 163 | 211 | 215 | 4 | 153 | 4 | 2 | | | 153 | LS | | | LS |

| BEGIN REF NO. | SHEET NO. | END REF NO. | STATION TO STATION | 625 LIGHT TOWER REMOVED EACH | 625 LIGHT POLE REMOVED EACH | 625 LIGHT POLE FOUNDATION REMOVED EACH | 625 LIGHT TOWER FOUNDATION REMOVED EACH | 625 LIGHT POLE REMOVED, AS PER PLAN ADDED THIS ITEM EACH |
|---|---|---|---|---|---|---|---|---|
| | 13 | R-24 | STA. 681+47 | 1 | | | 1 | |
| | 13 | R-25 | STA. 685+93 | 1 | | | 1 | |
| | 13 | R-26 | STA. 686+40 | 1 | | | 1 | |
| | 13 | R-27 | STA. 690+52 | 1 | | | 1 | |
| | 13 | R-28 | STA. 691+98 | | 1 | 1 | | |
| | 13 | R-29 | STA. 692+95, 289' RT | | 1 | 1 | | |
| | 13 | R-30 | STA. 693+53, 224' RT | | 1 | 1 | | |
| | 13 | R-31 | STA. 694+11, 258' RT | | 1 | 1 | | |
| | 13 | R-32 | STA. 694+82 | | | | | 1 |
| | 13 | R-33 | STA. 697+65 | | | | | 1 |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | 4 | 4 | 4 | 4 | 2 |

REVISED THIS QUANTITY

DESIGN AGENCY

DESIGNER AJN

REVIEWER RMM 4-26-22

PROJECT ID 106205

SHEET P.11 TOTAL 21

MAH-LG-FY2023

MODEL: Sheet 6A PAPERSIZE: 34x22 (in.) DATE: 10/21/2022 TIME: 10:40:44 AM USER: astrub
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 04\Mahoning\106205\400-Engineering\Lighting\Sheets\106205_LS001.dgn