

**SURVEYING PARAMETERS**

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

**PROJECT CONTROL**

POSITIONING METHOD: STATIC GNSS  
MONUMENT TYPE: B

**VERTICAL POSITIONING**

ORTHOMETRIC HEIGHT DATUM: NAV088  
GEOID: GEOID18

**HORIZONTAL POSITIONING**

REFERENCE FRAME: NAD 83 (2011)  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE PLANE, NORTH ZONE (3401)  
COMBINED SCALE FACTOR: 0.999903929 (STA-30)  
COMBINED SCALE FACTOR: 0.999890780 (SUM-271)

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.

**GROUND WIRE**

THE GROUND WIRE SHALL BE AS PER 732.19.

**625, CONDUIT CLEANED AND CABLES REMOVED**

THIS ITEM SHALL CONSIST OF CLEANING AN EXISTING CONDUIT BY REMOVING EXISTING CABLES, MUD AND DEBRIS SO THAT NEW CABLE CAN BE INSTALLED. INCIDENTAL TO THE CLEANING IS THE INSTALLATION OF BUSHINGS AND/OR COUPLINGS ON THE ENDS OF EXISTING CONDUIT AS REQUIRED. MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL OFF OF THE PROJECT SITE. DISTURBED AREAS SHALL BE PROPERLY RESTORED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, "CONDUIT CLEANED AND CABLES REMOVED" PER FOOT OF CONDUIT CLEANED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 625, CONDUIT CLEANED AND CABLES REMOVED 2183 FT

**SEEDING AND MULCHING**

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

659, SEEDING AND MULCHING 6,540.5 SQ. YD.  
659, COMMERCIAL FERTILIZER 0.6 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.

**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 LICENSED 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.

**ADDED**

**INTERIM COMPLETION DATE**

THE INTERIM COMPLETION DATE FOR PART 1 LIGHTING UPGRADE IS 10/14/2022.

DESIGN AGENCY



DESIGNER  
AJS

REVIEWER  
RMM 01/25/21

PROJECT ID  
106204

SHEET TOTAL  
P.3 | 29

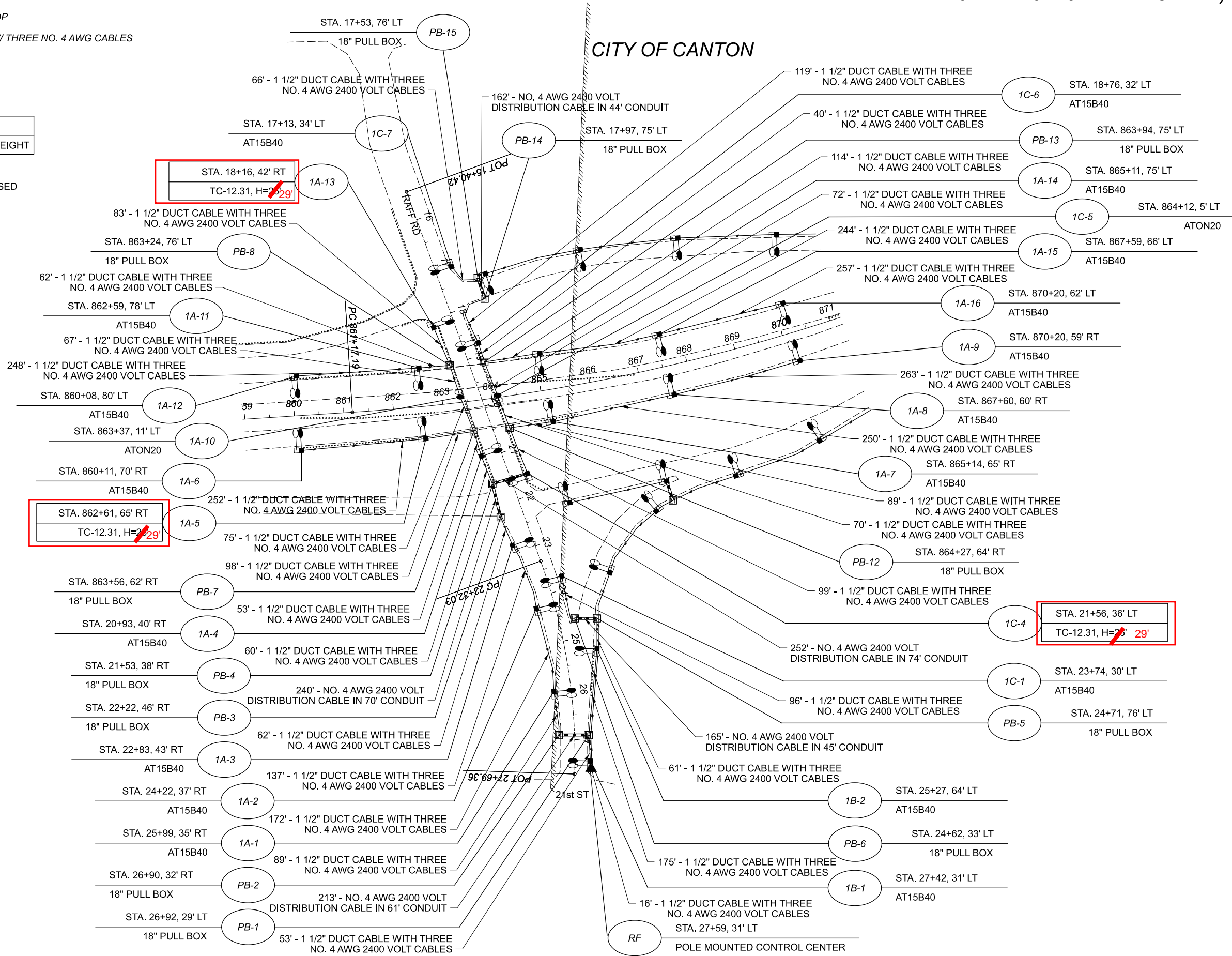
**LEGEND**

- LIGHT POLE, CONVENTIONAL
- LUMINAIRE, POST TOP
- 1 1/2" DUCT CABLE W/ THREE NO. 4 AWG CABLES
- 4" CONDUIT
- ▣ PULL BOX, 725.08, 18"
- ▲ CONTROL CENTER

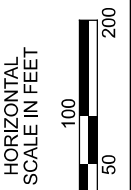
STATION, OFFSET
SIGN SUPPORT TYPE AND HEIGHT

PB-9 THROUGH 11 NOT USED

POWER SERVICE DATA	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CABLE	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
RF	480	7.9	2	60	A	16.5	30	2 & 4	ODOT

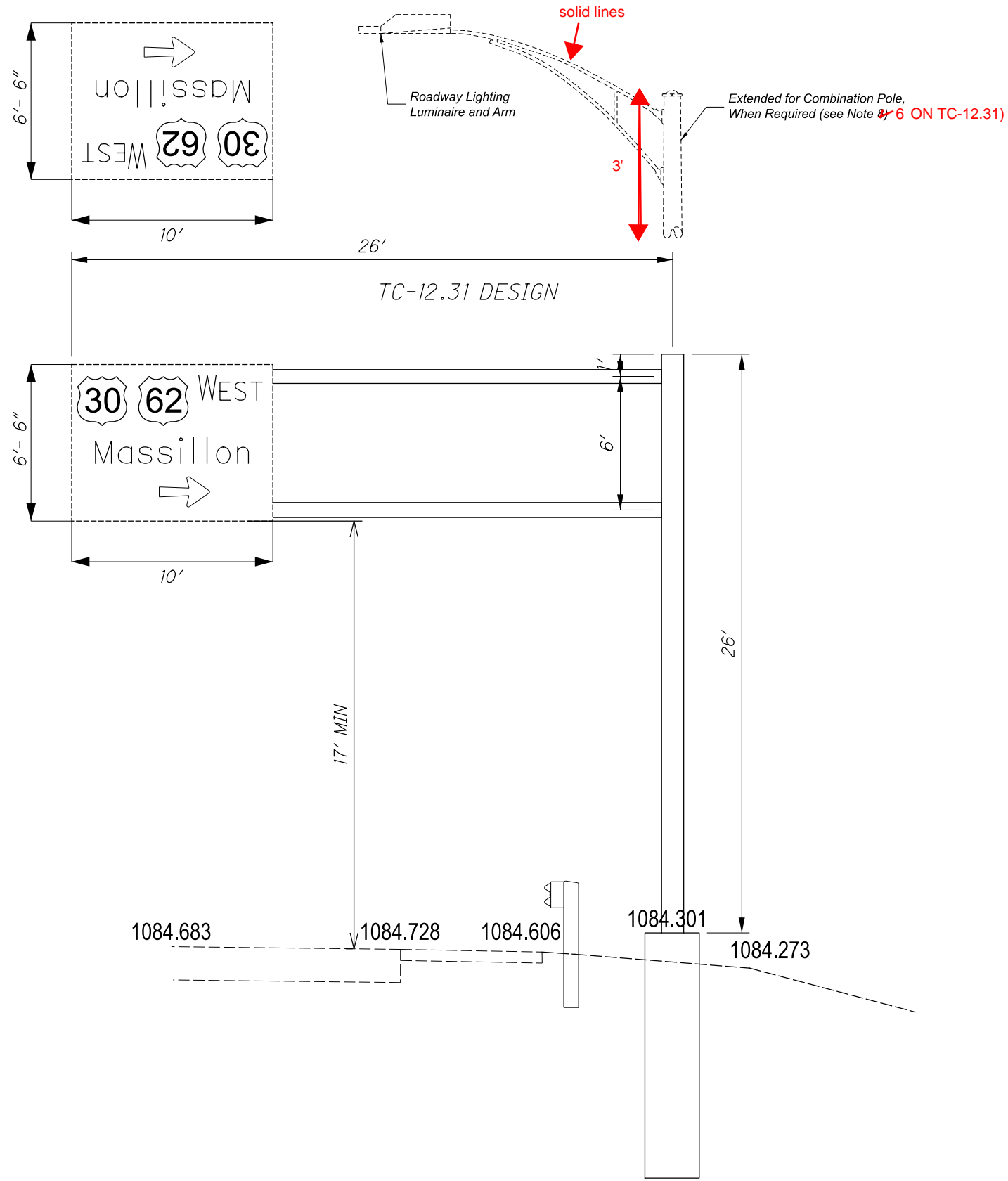


**ODOT LIGHTING  
 (CITY OF CANTON LIGHTING  
 INFORMATION ON NEXT SHEET)**



**LIGHTING PLAN VIEW - ODOT  
 STA-30 AT RAFF RD**

DESIGN AGENCY	
DESIGNER	AJS
REVIEWER	RMM 01/26/21
PROJECT ID	106204
SHEET TOTAL	P.18   29



CROSS SECTIONS  
RAFF RD (1A-13)

DESIGN AGENCY



DESIGNER

AJS

REVIEWER

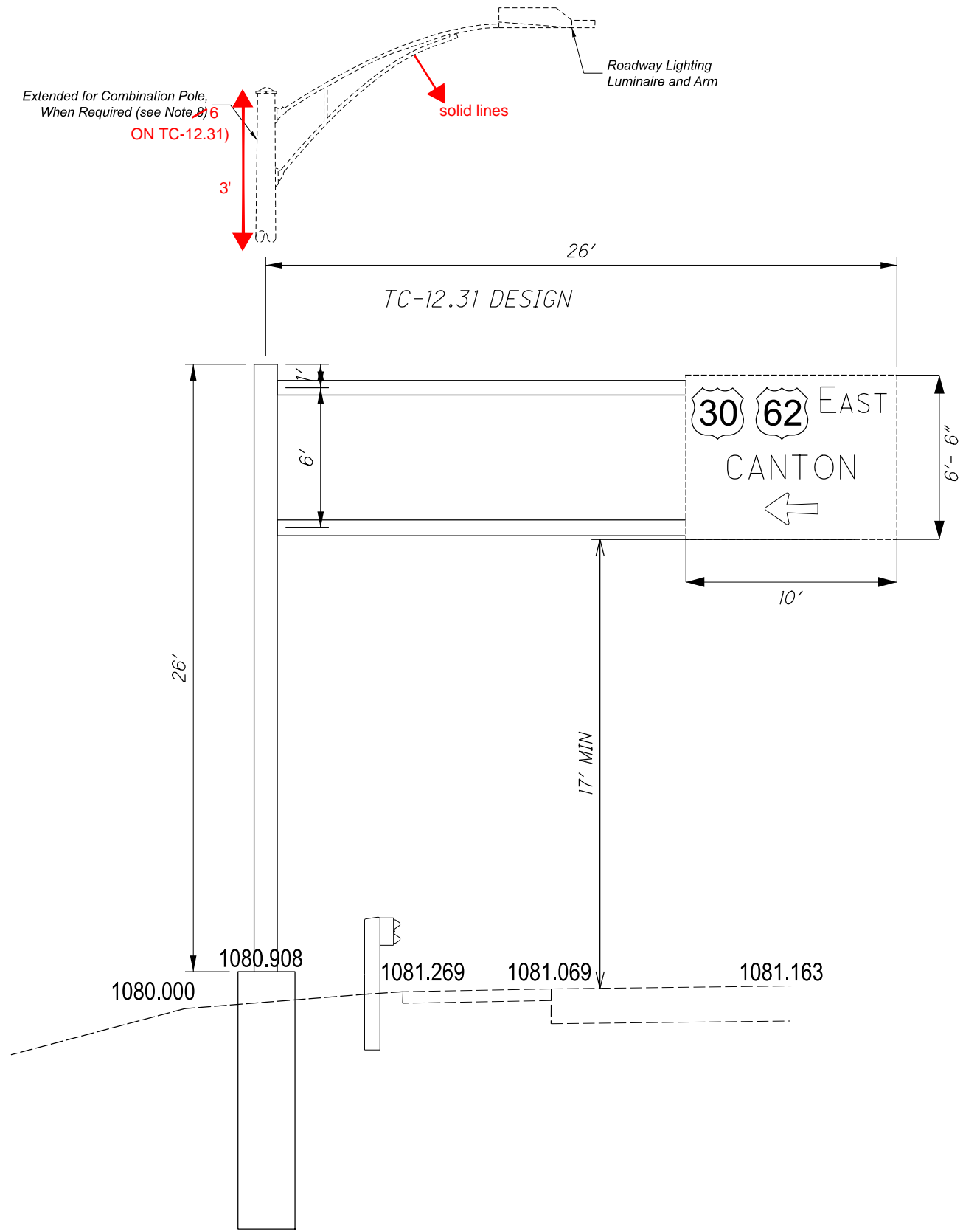
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PROJECT ID

106204

SHEET TOTAL

P.20 29



CROSS SECTIONS  
RAFF RD (1C-4)

DESIGN AGENCY

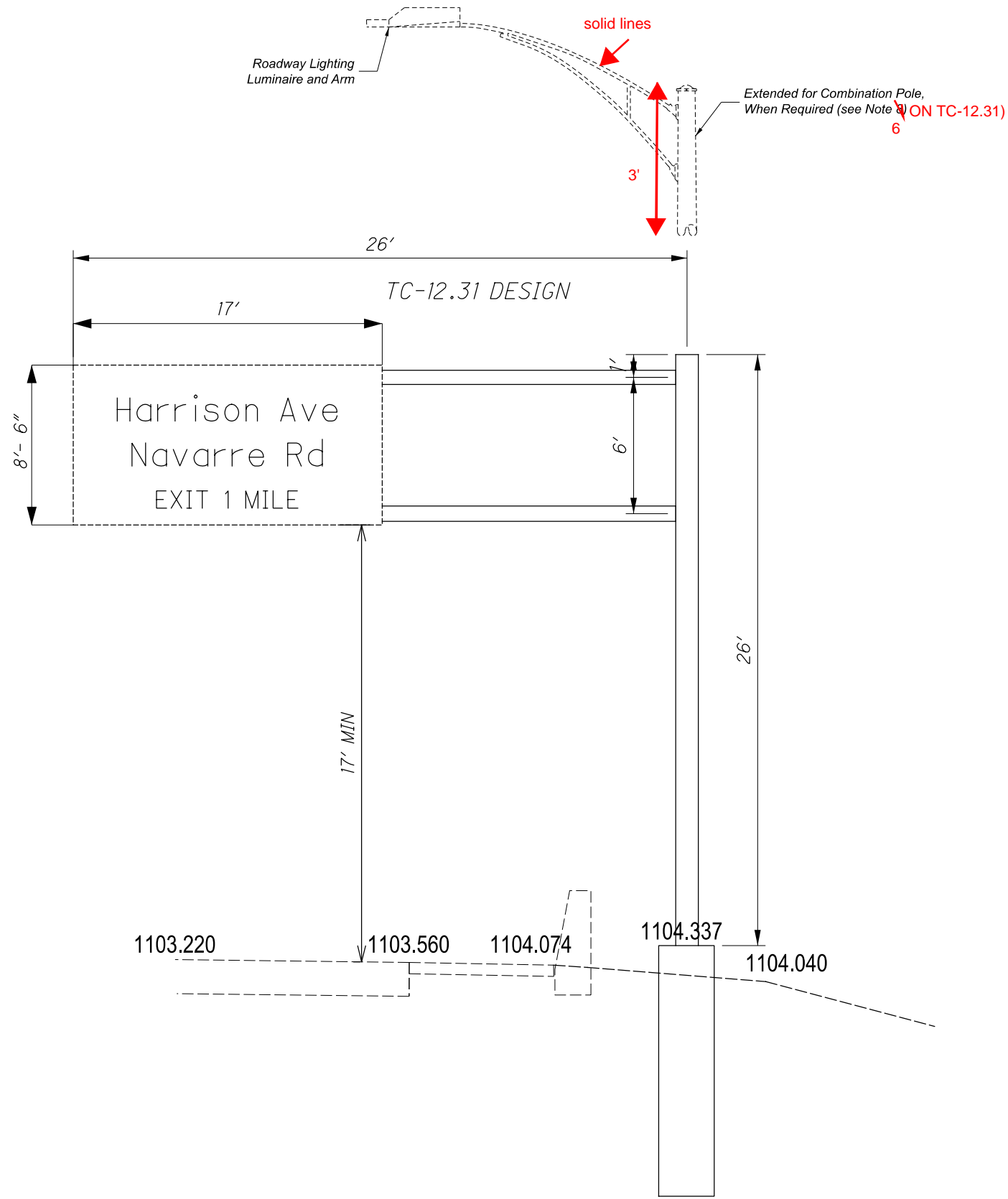


DESIGNER  
AJS

REVIEWER  
XXX MM-DD-YY

PROJECT ID  
106204

SHEET TOTAL  
P.21 29



CROSS SECTIONS  
RAFF RD (1A-5)

DESIGN AGENCY

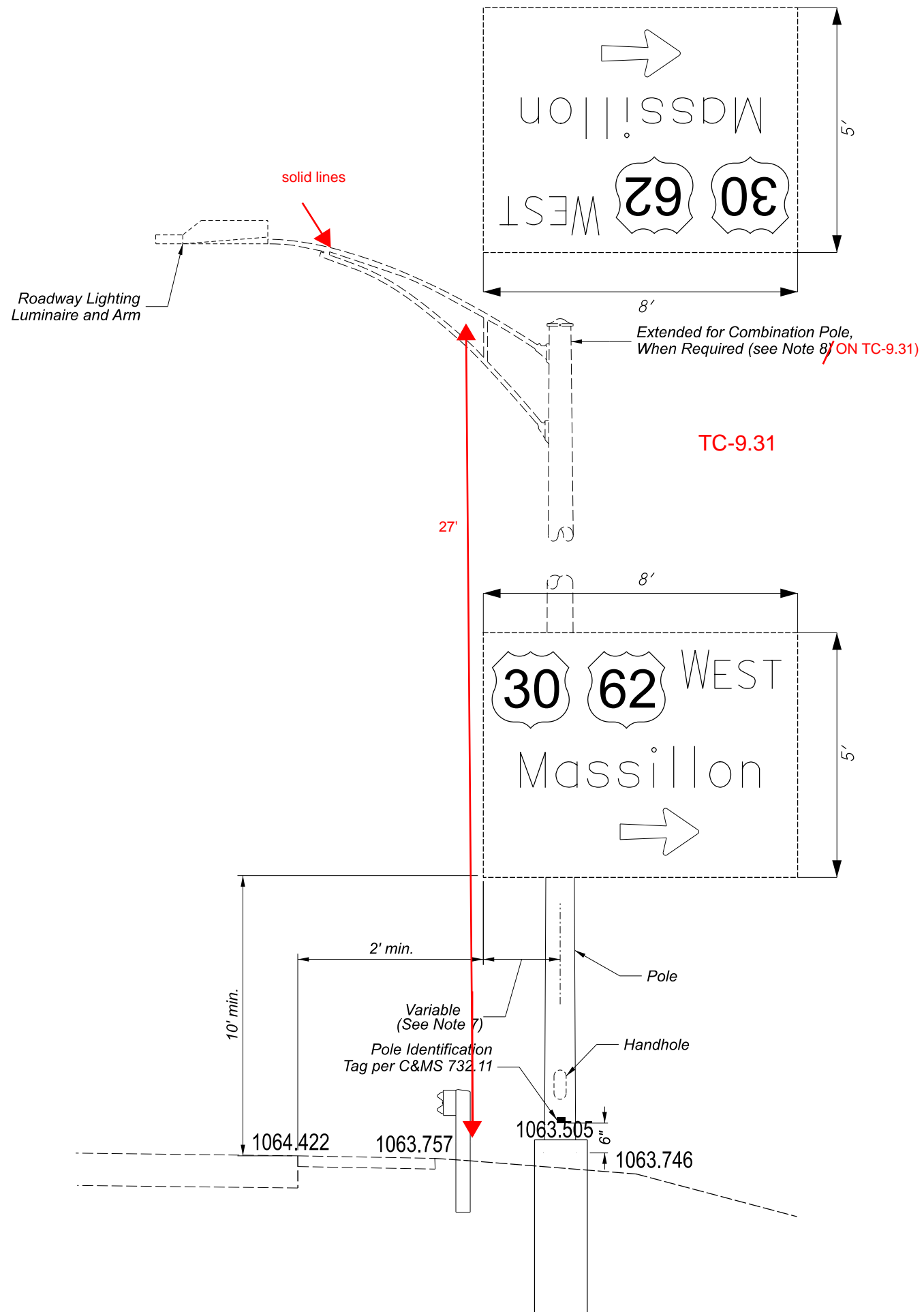


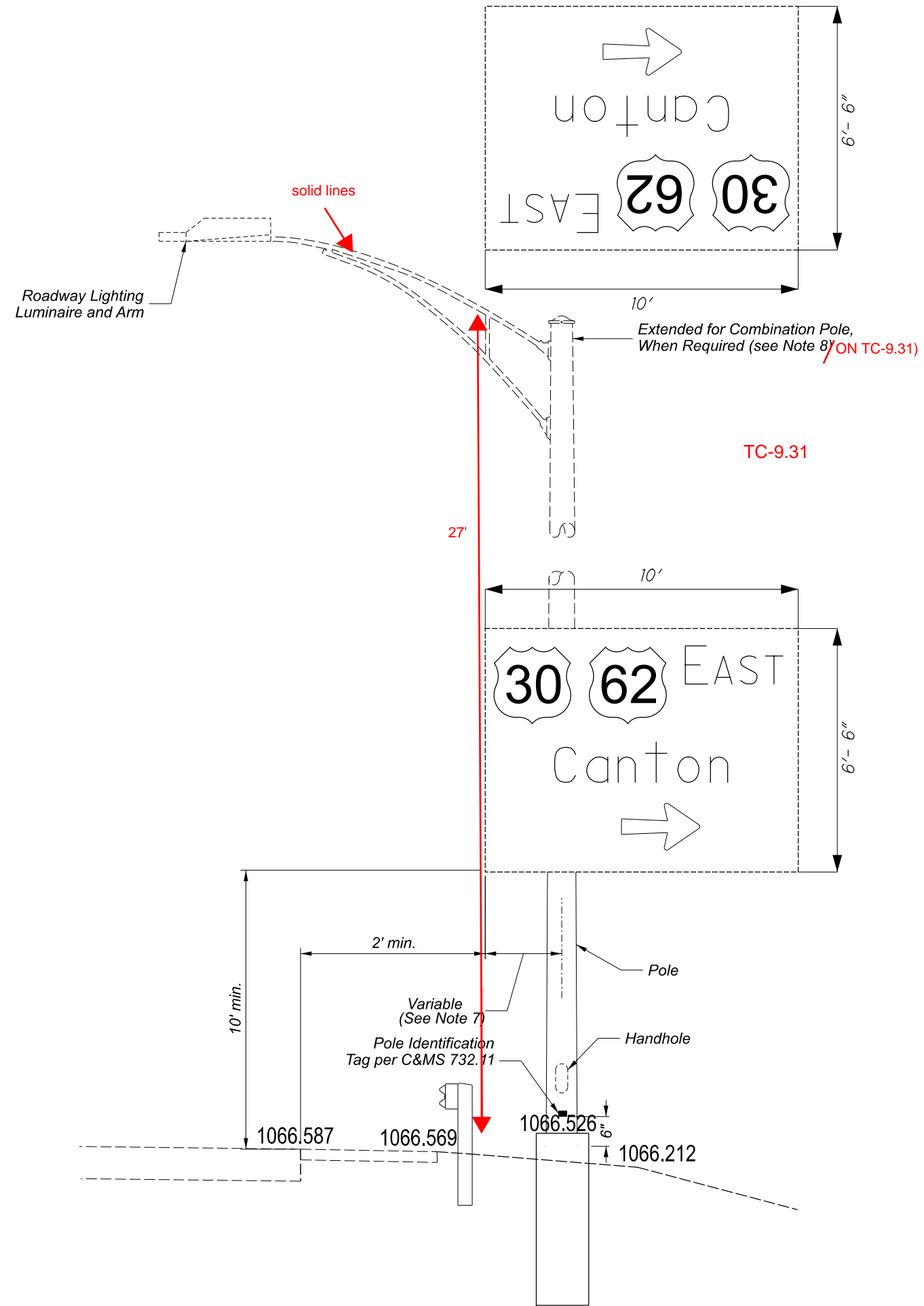
DESIGNER  
AJS

REVIEWER  
XXX MM-DD-YY

PROJECT ID  
106204

SHEET TOTAL  
P.22 29





CROSS SECTIONS  
WHIPPLE AVE (A-11)

DESIGN AGENCY



DESIGNER	AJS
REVIEWER	XXX MM-DD-YY
PROJECT ID	106204
SHEET	TOTAL
24	29



**SCOPE**

THE PURPOSE OF THIS CONTRACT IS TO HAVE THE CONTRACTOR MAINTAIN THE HIGHWAY LIGHTING SYSTEM FOR ROADWAY AND SIGN LIGHTING, ON THE STATE HIGHWAY SYSTEM, IN THE AREAS SHOWN ON THE LOCATION MAPS OF THIS PLAN.

TO MAINTAIN THE LIGHTING SYSTEM PROPERLY AND EFFICIENTLY THE CONTRACTOR SHALL PROVIDE BOTH CONTINUING MINIMAL MAINTENANCE AND COMPLETE MAJOR MAINTENANCE OF THE AFOREMENTIONED LIGHTING SYSTEM. SUCH MAINTENANCE WORK INCLUDES ACCEPTANCE OF COMPLETE RESPONSIBILITY AND LIABILITY FOR PROPER OPERATION AND MAINTENANCE OF THE LIGHTING SYSTEM.

IT IS THE INTENT OF THIS CONTRACT THAT MINIMAL LIGHTING MAINTENANCE TAKE PRECEDENCE OVER MAJOR LIGHTING MAINTENANCE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. FIRST PRIORITY IS TO BE GIVEN TO THOSE TASKS WHICH KEEP THE MAXIMUM NUMBER OF LIGHTS IN OPERATION.

THE CONTRACTOR SHALL DETERMINE REPAIR REQUIREMENTS, TROUBLESHOOT DEFECTIVE UNDERGROUND CIRCUITS, AND REPLACE AND REPAIR DEFECTIVE OR WORN OUT PARTS, FIXTURES, CABLE AND DUCT, POLES, CONTROL CABINETS AND SWITCHES, AND ANY OTHER APPURTENANCES IN THIS CONTRACT AT THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION (ODOT) ENGINEER (HEREIN AFTER REFERRED TO AS THE ENGINEER).

THE CONTRACTOR SHALL GIVE THIS WORK HIS CONSTANT ATTENTION AND WILL MAINTAIN MATERIALS, EQUIPMENT AND LABOR TO PERFORM AS NEEDED FROM THE FIRST DAY OF THE CONTRACT TO THE LAST.

THE CONTRACTOR SHALL SUBMIT CATALOG CUTS TO THE ENGINEER, AS PER 625.06, WITHIN TWENTY-ONE (21) DAYS AFTER THE AWARD OF THE CONTRACT, FOR ALL OF THE ITEMS OF WORK. FAILURE TO COMPLY WITH ANY OF THE ABOVE WILL BE REGARDED AS FAILURE TO EXECUTE THE CONTRACT AND SHALL BE JUST CAUSE FOR CANCELLATION OF THE AWARD PER SECTION 103.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE CONTRACTOR SHALL BE REQUIRED TO FURNISH ALL LABOR, EQUIPMENT, MATERIALS AND SUPPLIES NECESSARY TO PERFORM THIS CONTRACT. WORK UNDER THIS CONTRACT WILL CONSIST OF, BUT IS NOT LIMITED TO: THE FURNISHING, TRANSPORTING AND ASSEMBLING OF REPLACEMENT MATERIALS AND DEVICES, THE REPAIR OR REPLACEMENT OF DEVICES, THE REMOVAL OF DEFECTIVE OR DAMAGED MATERIALS AND DEVICES, AND THE RESTORATION AND CLEANUP OF THE HIGHWAY. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE DONE IN A WORKMANSHIP-LIKE MANNER IN ACCORDANCE WITH PLANS AND SPECIFICATIONS AS SET HEREIN. THE CONTRACT SHALL BE PERFORMED IN A MANNER WHICH WILL PROVIDE CONTINUOUS REPAIR SERVICE TO THE SUBJECT LIGHTING SYSTEM.

**LAWS AND REGULATIONS**

THE CONTRACTOR SHALL FOLLOW STRICTLY AND ACCURATELY THE SPECIFICATIONS OUTLINED IN THE CONTRACT AS WELL AS ANY INSTRUCTIONS REGARDING THE GENERAL SCOPE OF WORK TO BE PERFORMED AS GIVEN BY THE ENGINEER. AS TO ANY PART OF THE JOB NOT COVERED THEREBY, THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE LAWS OF THE STATE, ALL MUNICIPAL ORDINANCES, ALL REGULATIONS AND REQUIREMENTS OF THE PUBLIC SERVICE COMMISSION, THE STANDARDS OF THE NATIONAL ELECTRIC CODE, BID PROPOSAL, PERTINENT ITEMS OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, STANDARD CONSTRUCTION DRAWINGS, AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.

THE CONTRACTOR SHALL AGREE TO REPLACE AND/OR REPAIR, WITHOUT ANY COST WHAT-SO-EVER TO THE DEPARTMENT, ALL AND EVERY PART OF ANY JOB DONE BY THE CONTRACTOR IF WITHIN SIXTY (60) DAYS AFTER COMPLETION OF SUCH JOB, IT IS FOUND BY THE DEPARTMENT'S OFFICIALS TO HAVE BEEN DONE DEFECTIVELY OR TO HAVE BEEN PERFORMED IN ANY WAY AT VARIANCE WITH THE SPECIFICATIONS AND INSTRUCTIONS FURNISHED AND GIVEN BY THE ENGINEER OR IN A MANNER CONTRARY TO THE LAW, THE REGULATIONS AND REQUIREMENTS OF PUBLIC SERVICE COMMISSION OR THE NATIONAL ELECTRIC CODE. THE ENGINEER WILL GIVE THE CONTRACTOR WRITTEN NOTICE OF ANY SUCH DEFECTS OR VARIANCES IN THE WORK PERFORMED.

**TERM OF CONTRACT**

THE TERM OF THE CONTRACT SHALL BE TWENTY-FOUR (24) MONTHS FROM THE DATE OF EXECUTION OF THE CONTRACT. THIS CONTRACTOR SHALL BEGIN WORK ON OCT. 1, 2021 OR LATER, AS DIRECTED BY THE ENGINEER.

**INVENTORY UPDATE**

ODOT WILL UPDATE THE LIGHTING INVENTORY AS NEEDED TO ADD OR DELETE SITES AND/OR OTHER EQUIPMENT TO BE MAINTAINED BY THIS CONTRACT. ADDITIONS OR DELETIONS MAY INCLUDE NEW OR REMOVED EQUIPMENT, OR SYSTEMS TRANSFERRED TO (OR FROM) OTHER JURISDICTIONS.

**SUBMITTALS**

THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT THE PRE-CONSTRUCTION MEETING:

1. A COMPLETE SET OF ALL FORMS, SCHEDULES, AND PROCEDURES TO BE USED BY THE CONTRACTOR IN THE PERFORMANCE OF THIS CONTRACT.
2. A COMPLETE INVENTORY LIST OF THE MATERIALS THE CONTRACTOR INTENDS TO KEEP ON HAND AT ALL TIMES FOR THE DURATION OF THE CONTRACT.

**RESTORATION AND CLEANUP**

THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO A CONDITION EQUAL TO OR BETTER THAN THAT EXISTING BEFORE THE WORK WAS STARTED PER CMS 104.04.

BROKEN GLASSWARE IN THE WORK AREA SHALL BE CLEANED UP BY THE CONTRACTOR WHEN FOUND BY HIS CREWS. THE BROKEN GLASSWARE SHALL BE CLEANED BY SWEEPING THE AREA SO THAT IT IS FREE OF BROKEN GLASS. THE GLASS WHICH IS SWEEPED UP SHALL BE DISPOSED OF IN REGULAR RUBBISH DISPOSAL UNITS. ALL BROKEN CONCRETE SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE RIGHT-OF-WAY. PAYMENT, FOR RESTORATION WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS ITEMS.

**QUANTITIES**

THE QUANTITIES LISTED IN THIS CONTRACT ARE ESTIMATES ONLY. THE MAJOR MAINTENANCE PAY ITEMS WILL BE USED ONLY WHEN THERE IS A NEED FOR MAINTENANCE. THE CONTRACTOR SHALL NOT RECEIVE AN ADJUSTED UNIT PRICE FOR DECREASED QUANTITIES OF WORK. NO ADJUSTMENTS OR PAYMENTS SHALL BE MADE TO THE CONTRACTOR FOR NON-PERFORMED OR ELIMINATED ITEMS.

SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES IDENTIFIED IN THIS PLAN TO BE USED AS DIRECTED BY THE ENGINEER SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT. THE ESTIMATED QUANTITIES OF MATERIALS SHALL NOT BE ORDERED FOR DELIVERY TO THE PROJECT UNLESS AUTHORIZED BY THE ENGINEER. DUE TO THE NATURE OF THIS JOB, 104.02 DOES NOT APPLY.

**NOTIFICATION OF ACCIDENTS AND PROPERTY DAMAGE**

THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE DEPARTMENT ANY FATALITIES OR SERIOUS INJURIES TO EITHER EMPLOYEES OF THE CONTRACTOR, ODOT EMPLOYEES OR MEMBERS OF THE PUBLIC, AND ANY EXTENSIVE DAMAGE TO PROPERTY (EXCEPT AUTOMOBILES) RESULTING FROM THE PERFORMANCE OF THE WORK IN THIS CONTRACT.

**UTILITIES**

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

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

OUPS 1-800-362-2764 [CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY]

OGPUPS 1-800-925-0988  
ODOT MICHELLE CHANEY 330-786-2267

**UTILITIES NOTIFICATION**

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

**ADDED**

**NOTE:  
PART 2 IS A 2 YEAR MAINTENANCE CONTRACT THAT REQUIRES THE CONTRACTOR BE AVAILABLE 24/7 AND INCLUDES LIGHTING ISSUES/ KNOCKDOWNS THAT REQUIRE IMMEDIATE ATTENTION AND TIMELY MARKING OF OHIO 811 TICKETS.**

DESIGN AGENCY



DESIGNER

KMB

REVIEWER

RMM 06-22-21

PROJECT ID

106204

SHEET TOTAL

P.5 | 16