

ELECTRICAL NOTES:

- ALL WORK AND MATERIAL SHALL COMPLY WITH ALL APPLICABLE LATEST REQUIREMENTS OF THE NATIONAL AND CHICAGO ELECTRICAL CODES, NATIONAL ELECTRICAL SAFETY CODES, ELECTRIC POWER COMPANY, TELEPHONE COMPANY, THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), STANDARDS AND REQUIREMENTS OF IDOT AND BUREAU OF ELECTRICITY, CITY OF CHICAGO.
- ALL MATERIAL SHALL BE NEW AND UNDERWRITERS LABORATORY LISTED AS SUITABLE FOR THE PURPOSE INTENDED, UNLESS NOTED OTHERWISE.
- ALL SYSTEMS WHICH ARE INCLUDED AS PART OF THE ELECTRICAL INSTALLATION FOR THIS PROJECT SHALL BE COMPLETE IN ALL DETAILS INCLUDING ALL COMPONENTS REQUIRED FOR PROPER AND SATISFACTORY OPERATION, EVEN IF ALL REQUIRED COMPONENTS AND APPURTENANCES ARE NOT SHOWN ON THE CONTRACT DRAWINGS AND/OR MENTIONED IN THE SPECIFICATIONS.
- REFER TO, AND COMPLY WITH CITY OF CHICAGO, BUREAU OF ELECTRICITY STANDARDS, DRAWINGS, DETAILS AND ALL APPLICABLE REQUIREMENTS, FOR A COMPLETE, FUNCTIONAL AND APPROVED STREET LIGHTING SYSTEM INSTALLATION.
- VERIFY EXISTING CONDITIONS AND LOCATIONS IN FIELD PRIOR TO SUBMITTING PROPOSAL. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING THE WORK AS PART OF THIS CONTRACT INCLUDE IN PROPOSAL ANY RELOCATION OR ALTERATION OF EXISTING ELECTRICAL SYSTEM, EQUIPMENT OR COMPONENTS WHICH IS REQUIRED TO CLEAR THE NEW CONSTRUCTION, ADDITIONS OR ALTERATIONS TO BE PERFORMED.
- NOTIFY THE ENGINEER, IN WRITING, OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND NEW WORK, OR BETWEEN ELECTRICAL WORK, AND THE WORK OF OTHER TRADES PRIOR TO SUBMITTING PROPOSAL. LACK OF SUCH NOTIFICATION SHALL BE CONSTRUED TO INDICATE NO DISCREPANCIES OR CONFLICTIONS EXIST. ADDITIONAL COMPENSATION WILL NOT BE GRANTED AFTER AWARD OF CONTRACT FOR ANY WORK REQUIRED TO COMPLY WITH THESE REQUIREMENTS.
- CONTRACTOR SHALL MAINTAIN POWER TO EXISTING LIGHTING SYSTEM TO REMAIN DURING CONSTRUCTION. THIS WORK SHALL BE INCLUDED IN THE COST OF "RELOCATE EXISTING LIGHTING UNIT".
- THE OPERATION OF THE EXISTING STREET LIGHTING, UNDERPASS LIGHTING AND OTHER SYSTEMS SHALL NOT BE DISRUPTED DURING THE EXECUTION OF THIS WORK WITHOUT PRIOR AUTHORIZATION BY THE ENGINEER. SHUT DOWN OF SERVICES SHALL ONLY BE PERMITTED UPON WRITTEN APPROVAL FROM THE ENGINEER AND THEN ONLY FOR THE DATE AND DURATION AGREED UPON.
- VERIFY IN THE FIELD, ROUTING AND POINT OF ORIGIN OF EXISTING UNDERGROUND CONDUITS FOR POWER FEEDS TO STREET LIGHTING AFFECTED BY NEW WORK. FOR NEW UNDERGROUND INSTALLATION MINIMUM BURIAL DEPTH OF THE DUCT SHALL BE 750 mm (30 INCHES). ANY EXPOSED CONDUIT ON STRUCTURE SHALL BE HEAVY WALL GALVANIZED STEEL, PVC COATED.
- DISCONNECT, REMOVE OR RELOCATE ALL EXISTING ELECTRICAL ITEMS AND EQUIPMENT, INCLUDING BUT NOT LIMITED TO LIGHTING SYSTEM (POLES, FIXTURES, CONTROLLERS, ETC.) CONDUITS, WIRING, AND OTHER MATERIAL GENERALLY CONSIDERED PART OF ELECTRICAL WORK WHICH INTERFERE WITH, OBSTRUCT OR ARE OBSTRUCTED BY THESE RECONSTRUCTIONS, OR ARE REQUIRED DURING THE COURSE OF THESE RECONSTRUCTIONS. PERMANENTLY INSTALL SUCH ITEMS IN NEW LOCATIONS AS DIRECTED OR AS SHOWN ON THE PLANS. PROVIDE NEW CONDUITS, WIRING, HANDHOLES, ETC., AS REQUIRED FOR SUCH RELOCATION. RECONNECT SUCH ITEMS AS REQUIRED TO MAINTAIN PROPER OPERATION IN NEW LOCATIONS. INSTALL NEW HANDHOLE/MANHOLE WHERE REQUIRED FOR SPLICING. SPLICE NEW AND EXISTING WIRING IN MANHOLE/HANDHOLE OR IN SPLICING BOX. EXTEND NEW CONDUIT AND WIRE WHERE APPLICABLE FROM EXISTING TO NEW LOCATION.
- MARK THE PROPOSED LOCATIONS OF ALL LIGHT POLES, ROUTING OF NEW CONDUITS AND PUSHES OF UNDERGROUND CONDUITS, FOR EXAMINATION AND CONFIRMATION WITH THE ENGINEER AT THE PRECONSTRUCTION INSPECTION. THE EXACT LOCATIONS OF ALL ITEMS SHALL BE CONFIRMED WITH THE ENGINEER PRIOR TO STARTING WORK.
- COORDINATE ALL ELECTRICAL WORK INCLUDING INSTALLATION OF NEW OR RELOCATED LIGHTING SYSTEM WITH EXISTING CONDITIONS, WORK OF OTHER TRADES AND CONSTRUCTION STAGING OF BRIDGE/ROADWAY WORK AS REQUIRED.
- REMOVE EXISTING POLES DESIGNATED FOR REMOVAL UNDER THIS CONTRACT, REUSE THEM FOR TEMPORARY LIGHTING OR DELIVER TO CITY STORAGE SUCH REMOVED POLES AS REQUIRED OR AS INDICATED. CLEAN AND RELAMP THE EXISTING LUMINAIRES, IF REQUIRED TO REUSE AND/OR PERMANENTLY REINSTALLED THEM.
- A STAGING SCHEDULE FOR MATERIAL INSTALLATION, REMOVAL AND APPROXIMATE DATE OF PROPOSED ENERGIZING OF PERMANENT LIGHTING SHALL BE SUBMITTED PRIOR TO THE COMMENCEMENT OF WORK TO ASSURE COORDINATION WITH THE COMPLETION OF WORK SCHEDULE.
- VERIFY AND CONNECT THE PROPOSED UNDERPASS LIGHTING UNITS TO THE REQUIRED EXISTING CIRCUITS EXTENDED FROM THE EXISTING LIGHTING CONTROLLER "E" VIA LIGHTING STANDARDS LOCATED ON I-90 EMBANKMENT ON BOTH EAST AND WEST SIDE OF THE ORIOLE AVENUE BRIDGE.

- THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR THE MAINTENANCE OF THE ENTIRE EXISTING LIGHTING CIRCUIT, BUT SHALL INSTEAD INSTALL PROTECTIVE FUSES AT THE LOCATION WHERE WORK IS TO BE PERFORMED TO ISOLATE THE PROPOSED WORK FROM THE EXISTING SYSTEM, WHICH SHALL BE MAINTAINED OPERATIONAL DURING CONSTRUCTION.
- MAKE NECESSARY MODIFICATIONS AND ADJUSTMENTS TO ALL ELECTRICAL ITEMS AND EQUIPMENT, BOTH NEW AND EXISTING, AS REQUIRED BY NEW CONSTRUCTION, ADDITIONS OR ALTERATIONS.
- PRIOR TO ENERGIZING THE ELECTRICAL SYSTEM, TEST THE ENTIRE INSTALLATION FOR GROUNDS, SHORTS, INSULATION RESISTANCE OR IMPROPER CONNECTION. APPLY DC VOLTAGE OF 1000 VOLTS FOR MEASUREMENT OF INSULATION RESISTANCE. (USE MOTOR DRIVEN MEGGER INSTRUMENT.) MINIMUM RESISTANCE OF LIVE PARTS TO GROUND SHALL BE 0.5 MEGOHM.
- IDOT UNDERPASS LIGHTING SYSTEM VOLTAGE IS 480/240 VOLT, 1 PHASE. CITY OF CHICAGO STREET LIGHTING SYSTEM VOLTAGE IS 240/120 VOLT, 1 PHASE.
- NEW OR RELOCATED STREET LIGHTING POLES SHALL BE LOCATED MIN. 900 mm OR 3'-0" FROM THE CURB FACE TO THE POLE CENTERLINE, UNLESS DIRECTED OTHERWISE.
- THE PROPOSED UNDERPASS LIGHTING UNITS SHALL BE LOCATED WITH A MINIMUM OF 3.3' SETBACK FROM THE EDGE OF TRAVELED PAVEMENT.
- ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF ELECTRICAL EQUIPMENT AND MATERIAL, INCLUDED AS PART OF THIS CONTRACT, SHALL BE PROVIDED BY THIS CONTRACTOR.
- PROVIDE NEW IDENTIFICATION NUMBERING BRACKETS AND LABELS FOR THE UNDERPASS LIGHTING UNITS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PAY ITEM FOR UNDERPASS LUMINAIRE.
- MATERIAL QUANTITIES NOTED IN THE BILL OF MATERIAL ARE ESTIMATION ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL QUANTITIES PRIOR TO ORDERING MATERIALS.
- THE EXISTING ROADWAY LIGHTING ON ORIOLE AVE. IS OWNED BY THE CITY OF CHICAGO.
- THE CONTRACTOR SHALL NOTE THAT THERE IS AN EXISTING CONDUIT DUCT BANK ATTACHED TO THE BOTTOM OF THE BRIDGE DECK, OWNED BY THE CITY OF CHICAGO. THE CONTRACTOR SHALL COORDINATE ALL NECESSARY WORK WITH CITY OF CHICAGO FOR THE PROPER REMOVAL, TEMPORARY REROUTING AND INSTALLATION REQUIRED TO MAINTAIN CONTINUITY OF SERVICES PRESENTLY PROVIDED THROUGH THESE CONDUITS. THE CONTRACTOR SHALL NOTE THAT THE DUCTS MAY HAVE ASBESTOS CONCRETE INSULATION AND PROPER CARE, AS REQUIRED BY EPA, MUST BE TAKEN FOR THE PROPER REMOVAL OF THESE DUCTS. REFER TO REMOVAL OF CONCRETE DECK IN "SPECIAL PROVISIONS" FOR DEMOLITION.
- VERIFY THE CORRECT BOLT CIRCLE SIZE FOR THE LIGHT POLE (PROVIDED BY CITY OF CHICAGO) TO BE INSTALLED ON THE BRIDGE PARAPET. PROVIDE THE STRUCTURAL CONTRACTOR WITH A BOLT CIRCLE TEMPLATE OF THE PROPOSED POLE FOR SETTING OF THE ANCHOR BOLTS FOR POLES TO BE LATER INSTALLED BY THIS CONTRACTOR. AS A PRECAUTION, VERIFY THE SETTING OF BOLTS PRIOR TO POURING OF CONCRETE MIX.
- ALL SIGNAGE ATTACH TO LIGHT STANDARDS TO REMAIN OR BE RELOCATED SHALL REMAIN UNDISTURBED.

STREET LIGHTING INSTALLATION BILL OF MATERIALS

DESCRIPTION	UNIT	QUANTITY
REMOVE EXISTING STREET LIGHTING EQUIPMENT	L.S.	1
ELECTRIC CABLE IN CONDUIT, TRIPLEX 2-1/C #6, 1-1/C #8 GROUND	FOOT	2162
INSTALL LIGHT POLE, MAST ARM AND LUMINAIRE (PROVIDED BY CITY OF CHICAGO)	EACH	5
UNDERGROUND CONDUIT 2 1/2" DIA., GALVANIZED STEEL	FOOT	216
UNDERGROUND CONDUIT 4" DIA., GALVANIZED STEEL	FOOT	702
CONDUIT ATTACHED TO STRUCTURE, 4" DIA. PVC COATED, GALVANIZED STEEL	FOOT	1270
CONDUIT EMBEDDED IN STRUCTURE, 2" DIA. PVC	FOOT	427
DRILL EXISTING MANHOLE OR HANDHOLE	EACH	33
CONDUIT SUPPORT SYSTEM	L.S.	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	7
CONCRETE FOUNDATION 24" DIAMETER	FOOT	53.1
RELOCATE EXISTING LIGHTING UNIT	EACH	4
PAINT EXISTING POLE COMPLETE	EACH	4
RELOCATE EXISTING LIGHTING CONTROLLER	EACH	1
UNDERGROUND CONDUIT 3" DIA., GALVANIZED STEEL	FOOT	650
UNDERGROUND CONDUIT 2" DIA., GALVANIZED STEEL	FOOT	718
ADJUST EXISTING ELECTRICAL MANHOLE WITH 24" FRAME AND LID	EACH	5
ADJUST EXISTING ELECTRICAL MANHOLE WITH 30" FRAME AND LID	EACH	1
ELECTRICAL SERVICE INSTALLATION	EACH	1
ELECTRICAL UTILITY SERVICE CONNECTION	L.S.	1
ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 3 - 1/C No. 1/0	FOOT	460
REMOVE EXISTING MANHOLE	EACH	1
ELECTRICAL MANHOLE 36" x 48" x 48" WITH 24" FRAME AND LID	EACH	1

ABBREVIATION LIST:

A	AMPS
A/C	AERIAL CABLE
BOE.	CHICAGO BUREAU OF ELECTRICITY
COMED	COMMONWEALTH EDISON CO.
C	CONDUIT
GS	GALVANIZED STEEL
GRD	GROUND
LTG	LIGHTING
MTD	MOUNTED
NTS	NOT TO SCALE
RGS	RIGID GALVANIZED STEEL HEAVY WALL CONDUIT
UON	UNLESS OTHERWISE NOTED
TYP	TYPICAL
W	WATTS OR WIRE
E	EXISTING TO REMAIN
XR	EXISTING TO BE REMOVED

ELECTRICAL SYMBOL LIST

	IDOT EXISTING UNDERPASS LIGHTING FIXTURE TO BE REMOVED AND REUSED FOR TEMPORARY LIGHTING DURING CONSTRUCTION
	IDOT PROPOSED STANDARD UNDERPASS LIGHTING FIXTURE. (55W LPS)
	STAINLESS STEEL JUNCTION BOX
	EXISTING ELECTRIC LINE TO BE DISCONNECTED AND REMOVED
	PROPOSED WIRING AND CONDUIT; WIRING AND CONDUIT SIZES AS NOTED.
	EXISTING ELECTRIC EQUIPMENT/LINE TO REMAIN.
	EXISTING ELECTRICAL MANHOLE
	ELECTRICAL MANHOLE TO BE ADJUSTED
	EXISTING ELECTRICAL HANDHOLE
	PROPOSED MANHOLE
	PROPOSED EXPOSED CONDUIT RUN
	EXISTING UNIT DUCT TO BE REMOVED
	PROPOSED UNIT DUCT

UNDERPASS LIGHTING INSTALLATION BILL OF MATERIALS

DESCRIPTION	UNIT	QUANTITY
UNDERPASS LUMINAIRE 55W, LOW PRESSURE SODIUM VAPOR	EACH	16
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE 20" x 20" x 6"	EACH	2
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE 12" x 10" x 6"	EACH	8
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE 6" x 6" x 4"	EACH	16
ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 1/c No. 10	FOOT	2992
UNIT DUCT, 600V, 3-1/C NO.4, 1/C NO.6 (EPR-TYPE RHW) 1/4" DIA., POLYETHYLENE	FOOT	302
CONDUIT ATTACHED TO STRUCTURE, 1" DIA. PVC COATED GALVANIZED STEEL	FOOT	951
CONDUIT ATTACHED TO STRUCTURE, 2 1/2" DIA. PVC COATED GALVANIZED STEEL	FOOT	151
UNDERGROUND CONDUIT 2 1/2" DIA., GALVANIZED STEEL.	FOOT	66

EXISTING PLAN SHEETS

	EXISTING LIGHTING UNIT TO BE REMOVED AND REINSTALLED
	EXISTING LIGHTING UNIT TO BE REMOVED (OWNER SALVAGE)
	EXISTING LIGHTING UNIT TO REMAIN
	EXISTING AERIAL ELECTRIC CABLE

PROPOSED PLAN SHEETS

	PROPOSED LIGHTING UNIT
	LOCATION OF REINSTALLED LIGHTING UNIT
	EXISTING LIGHTING UNIT TO REMAIN

DWG. E-1



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DESIGNED	TS	REVISED	-
CHECKED	TPP	REVISED	-
DRAWN	JS	REVISED	-
CHECKED	TPP	REVISED	-

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ORIOLE AVENUE AT I-90  
STRUCTURE NO. 016-1101

ELECTRICAL NOTES, SYMBOL LIST  
AND BILL OF MATERIALS

SCALE: NONE SHEET NO. XX OF XX SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	1515.1-B	COOK	101	32
				CONTRACT NO. 60M79
ILLINOIS FED. AID PROJECT				