

NON-ADVERTISEMENT BUS SHELTER PROGRAM

REGIONAL TRANSIT AUTHORITY

NEW ORLEANS EAST BUS HUB SITE LIGHTING



2817 CANAL ST.
NEW ORLEANS, LA. 70119
CITY OF NEW ORLEANS
The Honorable Latoya Cantrell, Mayor



STATE MAP

SCALE: N.T.S.

DRAWING INDEX	
SHEET NUMBER	SHEET TITLE
E0.00	READ BLVD. BUS HUB TITLE SHEET
E1.00	ELECTRICAL NOTES
E1.01	LEGEND
E1.02	ELECTRICAL GENERAL REQUIREMENTS
E2.00	ONE LINE DIAGRAM
E3.00	ELECTRICAL LOCATION PLAN
E4.00	DETAILS (1 OF 2)
E4.01	DETAILS (2 OF 2)



PROJECT LOCATION

PROJECT LOCATION MAP

SCALE: 1" = 500'

APPROVED BY:

11/13/2023

MATTHEW E. TORRES, P.E.
INFINITY ENGINEERING CONSULTANTS, LLC

DATE

REV	DATE	DESCRIPTION	BY	APP	REV	DATE	DESCRIPTION	BY	APP
0	11/2023	ISSUED FOR BID 100%	DJM	MET					



REGIONAL TRANSIT AUTHORITY



SCALE	NOTED
PROJECT NO.	21-030
RELEASE DATE	11/2023
DESIGNED BY	M. TORRES
DRAWN BY	D. BABINEAUX
CHECKED BY	J. LAWRENCE
APPROVED BY	M. TORRES

NON-ADVERTISEMENT SHELTER PROGRAM

READ BLVD. BUS HUB SITE LIGHTING

TITLE SHEET

SHEET NO. 21-030-E0.00

REV. 0

11/13/2023 11:33:32 AM - dmlushin - P:\Projects\21-030 RTA - Non-Advertisement Shelter Program\Drawings\Drawings by Discipline\Electrical Drawings\ELECTRICAL TITLE SHEET.dwg

11/13/2023 11:13:33 AM - dmuhlsin - P:\Projects\21-030 RTA - Non-Advertisement Shelter Program\Drawings\Drawings by Discipline\Electrical Drawings\ELECTRICAL NOTES AND LEGEND.dwg












































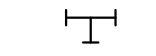









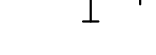









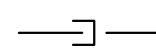




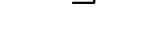
























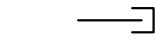














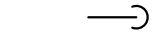









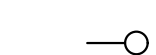













GENERAL NOTES									
1. CONCURRENT WITH OVERALL FACILITY OPERATIONS AND PRIOR TO STARTING WORK, CONTRACTOR SHALL COORDINATE INSTALLATION SCHEDULE WITH OWNER'S REPRESENTATIVE.					CONDUITS SHALL USE FACTORY MADE STANDARD RADIUS ELBOWS.				
2. COORDINATE WITH LOCAL UTILITIES SERVING THIS PROJECT FOR POWER & TELEPHONE. CONTRACTOR SHALL INCLUDE IN BASE BID ALL COSTS FOR TRENCHING; BACKFILL, CONDUIT AND CABLING AS REQUIRED FOR COMPLETE AND OPERABLE INSTALLATION OF ALL UTILITY SYSTEMS AND EQUIPMENT.					20. TO RESIST RUST, GALLING, CORROSION, AND SEIZING, LITHIUM BASED LUBRICANT, CROUSE-HINDS "STL" FOR RGS CONDUIT & BURNDY "PENETROX A" FOR ALUMINUM CONDUIT, SHALL BE APPLIED GENEROUSLY ON ALL THREADED CONNECTIONS AND PARTS, INCLUDING CONDUITS, CONDUIT FITTINGS, SCREW COVER OF JUNCTION BOXES AND ENCLOSURES, LIGHTING FIXTURES, BOLTS, SCREWS, PLUGS, ETC.				
3. ALL ELECTRICAL EQUIPMENT SHOWN ON DRAWINGS SHALL BE UL LISTED AND LABELED ACCORDINGLY.					21. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FITTINGS, DRAINS, NOT SHOWN BUT REQUIRED FOR A COMPLETE ELECTRICAL INSTALLATION CONSISTENT WITH GOOD INDUSTRY PRACTICE AND N.E.C. DRAINS SHALL BE INSTALLED AT LOW POINTS AND BREATHERS AT HIGH POINTS OF ALL CONDUIT RUNS, J-BOXES AND DEVICES.				
4. ALL WORK FOR UTILITY COMPANY INSTALLATION SHALL COMPLY WITH UTILITY COMPANY STANDARDS AND REGULATIONS. CONTRACTOR SHALL INSTALL ALL UTILITY COMPANY CONDUITS, STRUCTURES, VAULTS AND PADS, ETC. AS INDICATED ON THE UTILITY COMPANY SERVICE DRAWINGS FOR THIS PROJECT. OBTAIN A COPY OF ALL FINAL UTILITY SERVICE DRAWINGS AND PROVIDE ALL EQUIPMENT AND WIRING AS INDICATED. CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION COSTS AND INSPECTION FEES FOR UTILITY COMPANY.					22. UNLESS OTHERWISE SHOWN, ALL CONDUIT SHALL BE SUPPORTED WITH STEEL CHANNEL (UNISTRUT P-1000), STRUCTURAL ANGLE, OR BEAM CLAMPS EVERY 10'-0".				
5. THE TERM "PROVIDE" MEANS TO FURNISH, INSTALL & TEST.					23. EQUIPMENT SUPPORTS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION. FIELD WELDS SHALL BE DRESSED WITH ZINC COLD GALVANIZING COATING FOR CORROSION PROTECTION.				
6. ELECTRICAL CONTRACTOR SHALL LOCATE ALL PLANNED OR EXISTING UNDERGROUND PIPING, UTILITIES, AND OTHER OBSTRUCTIONS IN THE VICINITY OF THE WORK AREA PRIOR TO ANY DUCT BANK INSTALLATION.					24. ALL MOUNTING HARDWARE FOR OUTDOOR EQUIPMENT SHALL BE STAINLESS STEEL. ALL MOUNTING HARDWARE FOR INDOOR EQUIPMENT SHALL BE GALVANIZED STEEL, STAINLESS STEEL OR AS OTHERWISE SHOWN.				
7. UNLESS OTHERWISE SHOWN ON DRAWINGS, ELECTRICAL CONTRACTOR SHALL PROVIDE ALL EQUIPMENT TO INCLUDE BOXES, CONDUIT, FITTINGS, SUPPORTS, AND ASSOCIATED HARDWARE. SUBSTITUTIONS FOR ITEMS IDENTIFIED BY MANUFACTURER'S PART NO., MODEL, OR TYPE SHALL NOT BE MADE WITHOUT PRIOR ENGINEERING APPROVAL. OUTDOOR ENCLOSURES SHALL BE NEMA 3R OR 4X AS SPECIFIED ON DRAWINGS. INDOOR ENCLOSURES SHALL BE NEMA 1 OR 12.					25. PROVIDE SEPARATE NEUTRAL CONDUCTORS FOR ALL GFCI RECEPTACLES OR GFCI CIRCUITS, ELECTRONIC EQUIPMENT WITH SWITCHING POWER SUPPLIES AND ALL BRANCH CIRCUITS.				
8. COMPLY WITH ALL NATIONAL, STATE, PARISH, CITY AND LOCAL CODES AND ORDINANCES HAVING JURISDICTION, INCLUDING RULES AND REQUIREMENTS OF UTILITY SERVING AGENCIES.					26. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING IDENTIFIED ON DRAWINGS. GROUNDING WIRE SHALL BE 600 VOLT RATED, 90°C DRY/90°C WET, SINGLE CONDUCTOR, CLASS B STRANDED ANNEALED COPPER PER ASTM B-3. THERMOPLASTIC INSULATION, NYLON JACKET, TYPE THHN/THWN-2, COLOR CODED GREEN. SIZES AS SHOWN ON DRAWINGS.				
9. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND LICENSES. LOCAL CODE ENFORCEMENT AUTHORITY WILL PROVIDE BUILDING, PLUMBING/MECHANICAL AND ELECTRICAL INSPECTIONS DURING CONSTRUCTION.					27. UNLESS OTHERWISE SHOWN, GROUND CONNECTIONS TO EQUIPMENT AND STRUCTURE SHALL BE MADE UTILIZING HYDRAULIC COMPRESSION GROUND CONNECTORS OR EXOTHERMIC BOND TYPE SYSTEM.				
10. DESIGN DRAWINGS ARE DIAGRAMMATIC ONLY UNLESS SPECIFICALLY DIMENSIONED AND ARE ONLY INTENDED TO DEFINE THE BASIC FUNCTIONS REQUIRED. EXACT ROUTING AND LOCATIONS SHALL BE GOVERNED BY SOIL CONDITIONS, SITE SPECIFIC ARRANGEMENTS REQUIREMENTS. PROVIDE ALL MATERIAL, ETC. NECESSARY TO ACCOMPLISH THESE REQUIREMENTS. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND ARE A PART OF THE WORK INCLUDED. HOWEVER, NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE PERMITTED. DO NOT SCALE THE DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS AND SHALL COORDINATE WORK WITH ALL AFFECTED TRADES AND AN OWNER'S REPRESENTATIVE.					28. ALL CONDUCTORS SHALL BE COATED WITH A WIRE PULLING LUBRICANT WHEN PULLING IN CONDUIT. REMOVE EXCESS LUBRICANT AFTER PULL COMPLETION.				
11. IF A CONFLICT OCCURS BETWEEN THE DESIGN DRAWINGS AND SPECIFICATIONS, BRING THE ISSUE(S) TO THE ATTENTION OF THE ENGINEER.					29. PROVIDE EXPANSION AND DEFLECTION FITTINGS FOR CONDUITS CROSSING EXPANSION JOINTS. PROVIDE BONDING JUMPERS FOR ALL EXPANSION FITTINGS.				
12. PROVIDE SHOP DRAWING LAYOUT OF ALL ROOMS WITH ELECTRICAL DISTRIBUTION EQUIPMENT. LAYOUT SHALL SHOW LOCATIONS OF ELECTRICAL EQUIPMENT AND SHALL BE DRAWN TO SCALE.					30. DO NOT COMBINE HOMERUNS, EXCEPT AS INDICATED ON THE DRAWINGS.				
13. MAINTAIN ACCURATE CONTINUOUS RECORDS OF ANY AND ALL CHANGES FROM THE CONTRACT DOCUMENTS AND SHOP DRAWINGS. UPON COMPLETION OF THE PROJECT, DELIVER TO THE OWNER, ONE (1) SET OF LEGIBLE AND REPRODUCIBLE COPIES OF THESE "AS-BUILT" RECORD DRAWINGS.					31. PROVIDE TYPEWRITTEN PANELBOARD SCHEDULES TO PANELBOARD DOORS DEPICTING THE FINAL AS-BUILT CONDITIONS AT PROJECT COMPLETION.				
14. ALL TERMINATIONS AND DEVICES SHALL BE LISTED FOR 75°C FOR 100 AMPERE RATED EQUIPMENT AND 60 DEGREES C FOR LESS THAN 100 AMPERE UNLESS NOTED OTHERWISE.					32. VERIFY TYPE OF MOUNTING REQUIRED FOR ALL LIGHTING FIXTURES AND PROVIDE ALL MOUNTING HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.				
15. ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL CONDUIT PROTECTED LOW VOLTAGE WIRING. WIRING SHALL BE 600 VOLT RATED, 90°C DRY/90°C WET, SINGLE CONDUCTOR, CLASS B STRANDED ANNEALED COPPER. THERMOPLASTIC INSULATION, NYLON JACKET, TYPE THHN/THWN-2. SIZE AS SHOWN ON DRAWINGS.					33. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECT SIZING AND INSTALLATION OF ALL OUTLET, PULL AND JUNCTION BOXES IN ACCORDANCE WITH THE NEC.				
16. ABOVE GRADE CONDUIT AND FITTINGS SHALL BE RIGID GALVANIZED STEEL CONDUIT, UNLESS OTHERWISE NOTED. UNDERGROUND CONDUIT AND FITTINGS SHALL BE SCHEDULE 40 PVC, UNLESS OTHERWISE NOTED. ALL SPARE CONDUITS SHALL BE PROVIDED WITH 200LB NYLON PULL ROPES AND PLUGGED AT EACH END.					34. TO MINIMIZE FIELD WELDING, POTENTIAL CORROSION, AND POSSIBLE DAMAGE TO PRE-COATED OR GALVANIZED STRUCTURES, ELECTRICAL CONTRACTOR SHALL COORDINATE PRE-WELDING OF CONDUIT SUPPORTS TO STRUCTURAL MEMBERS WITH STRUCTURAL CONTRACTOR TO THE MAXIMUM EXTENT POSSIBLE PRIOR TO SURFACE TREATMENT OF THE STRUCTURE. CONDUIT SUPPORTS SHALL BE UNISTRUT CHANNEL P-1000 (HOT DIPPED GALVANIZED) OR EQUAL. WHERE PRE-INSTALLED SUPPORTS CANNOT BE ACCOMMODATED, FIELD WELDING TO STRUCTURAL MEMBERS WILL BE ALLOWED WITH THE SAME SURFACE TREATMENT APPLIED BY THE STRUCTURAL CONTRACTOR TO MATCH EXISTING CONDITIONS OF THE STRUCTURE TO BE APPLIED BY I/E CONTRACTOR UPON COMPLETION OF THE MODIFICATION. THIS SHALL BE APPLIED OVER THE ENTIRE WELD AREA.				
17. ALL CONDUIT FITTINGS SHALL HAVE COVERED OPENINGS ORIENTED FOR MAXIMUM ACCESSIBILITY.					35. PROVIDE ALL REQUIRED SUPPORTS FOR CONDUCTORS IN VERTICAL RACEWAYS PER NEC.				
18. AS A MINIMUM, INSTALL A PULL POINT AFTER THE THIRD CONDUIT BEND, AND ONE EVERY 300 FT OF STRAIGHT CONDUIT RUN.									
19. CONDUITS 1 1/2" AND SMALLER SHALL BE BENT IN THE FIELD. LARGER									

REV	DATE	DESCRIPTION	BY	APP	REV	DATE	DESCRIPTION	BY	APP
0	11/2023	ISSUED FOR BID 100%	DJM	MET					



REGIONAL TRANSIT AUTHORITY		SCALE _____ NOTED _____	NON-ADVERTISEMENT SHELTER PROGRAM	
 Civil Structural Mechanical Electrical Marine Transportation Metairie, LA www.infinityec.com 504-304-0548		PROJECT NO. _____ 21-030 RELEASE DATE _____ 11/2023 DESIGNED BY _____ M. TORRES DRAWN BY _____ D. MUHSIN CHECKED BY _____ J. LAWRENCE APPROVED BY _____ M. TORRES		
			SHEET NO. 21-030-E1.00	REV. 0


11/13/2023 11:13:33 AM -- dmuhsin -- P:\Projects\21-030 RTA -- Non-Advertisement Shelter Program\Drawings\Electrical Drawings\ELECTRICAL NOTES AND LEGEND.dwg

ONE-LINE DIAGRAM LEGEND		SCHEMATIC DIAGRAM LEGEND		GENERAL & PLAN LEGEND		ABBREVIATIONS							
	STATUS INDICATING LIGHT COLOR AND FUNCTION AS NOTED		PUSH BUTTON NORMALLY CLOSED		LIMIT SWITCH N.C. OPENS AT LIMIT		ABOVE GROUND CONDUIT		CONDUIT BOX, C-H TYPE "GUAC"	A - AMBER OR AMPERE	FVR - FULL VOLTAGE REVERSING	PC - PHOTOCELL CONTROL	F.O. - FIBER OPTIC MULTI MODE CABLE
	THERMAL MAGNETIC CIRCUIT BREAKER AMPS FRAME, TRIP, AND POLES AS NOTED		PUSH BUTTON NORMALLY OPEN		LIMIT SWITCH N.O. CLOSSES AT LIMIT		UNDERGROUND CONDUIT		CONDUIT BOX, C-H TYPE "GUAT"	AC - AMPERE CONTINUOUS	GFI - GROUND FAULT INTERRUPTOR	PP - POWER PANEL	OHP - OVERHEAD POWERLINE
	MOTOR CIRCUIT PROTECTOR TYPE CIRCUIT BREAKER AMPS FRAME, CONTINUOUS, MAG TRIP, AND POLES AS NOTED		2 POSITION SELECTOR SWITCH		SPDT SWITCH		TELEPHONE/COMMUNICATION AND DATA CONDUIT		CONDUIT BOX, C-H TYPE "GUAX"	AF - AMPERE FRAME	HOA - HAND-OFF-AUTO	PS* - PRESSURE SWITCH	WP - WATERPROOF
	MOTOR - HORSEPOWER AS NOTED		SPST SWITCH		SOLENOID VALVE		GROUND WIRE		FLOODLIGHT, C-H TYPE "FMVS"	AT - AMPERE TRIP	KWH - KILOWATT HOUR	PT - POTENTIAL TRANSFORMER	
	METERING CURRENT TRANSFORMER RATIO AND QUANTITY AS NOTED		3 POSITION SELECTOR SWITCH		SINGLE PHASE MAGNETIC CORE XFMR (VOLTS & RATING AS INDICATED)		SPECIAL PURPOSE RECEPTACLE		EYEWASH STATION LIGHTING C-H TYPE "EVBX" WITH 60W GREEN LAMP	CPT - CONTROL POWER TRANSFORMER	LP - LIGHTING PANEL	S/N - SOLID NEUTRAL	
	ELECTRICAL EQUIPMENT ENCLOSURE FUNCTION AS NOTED		PRESSURE SWITCH N.C. OPENS ON RISING PRESSURE		SPACE HEATER ELEMENT		ELECTRIC MOTOR		THERMOSTAT	CT - CURRENT TRANSFORMER	LS* - LEVEL SWITCH	S/S - START/STOP	
	MAINTAINED 3 POSITION SELECTOR SWITCH		PRESSURE SWITCH N.O. CLOSSES ON RISING PRESSURE		FUSE (SIZE INDICATED)		CONDUIT UNION OR HUB CONNECTOR		TELEPHONE OUTLET	DPST - DOUBLE POLE SINGLE THROW	MCP - MOTOR CIRCUIT PROTECTOR	SPST - SINGLE POLE SINGLE THROW	
	MOMENTARY PUSHBUTTON SWITCH		LEVEL SWITCH N.C. OPENS ON RISING LEVEL		SINGLE PHASE MAGNETIC CORE XFMR (VOLTS & RATING AS INDICATED)		CONDUIT "T" FITTING		SINGLE POLE SWITCH	DPDT - DOUBLE POLE DOUBLE THROW	MS - MOTOR STARTER	SPDT - SINGLE POLE DOUBLE THROW	
	POWER TRANSFORMER VOLTAGE AND RATING AS NOTED		LEVEL SWITCH N.O. CLOSSES ON RISING LEVEL		WIRE TAP		CONDUIT "L" FITTING		DOUBLE POLE SWITCH	DS - DISCONNECT SWITCH	N.C. - NORMALLY CLOSED	T OR XFMR - TRANSFORMER	
	METERING POTENTIAL TRANSFORMER		WIRE CROSSING NO CONNECTION		FIELD WIRING REMOTE FROM MOTOR STARTER		CONDUIT EXPANSION JOINT		3 WAY SWITCH	FBO - FURNISHED BY OTHERS	N.I.C. - NOT IN CONTRACT	TS* - TEMPERATURE SWITCH	
	FUSED CONTROL POWER TRANSFORMER, 480VAC PRI, 120VAC SEC, VA RATING AS NOTED		TEMPERATURE SWITCH N.C. OPENS ON RISING TEMPERATURE		OPERATING COILS- M=MOTOR STARTER COIL, TDR=TIME DELAY RELAY, CR=CONTROL RELAY, C=CONTACTOR		LIQUIDTIGHT FLEXIBLE METALLIC CORE CONDUIT		GROUND ROD	FVNR - FULL VOLTAGE NON-REVERSING	N.O. - NORMALLY OPEN	* = L(LOW) OR H(HIGH)	
	UTILITY METER		TEMPERATURE SWITCH N.O. CLOSSES ON RISING TEMPERATURE		WIRE CROSSING NO CONNECTION		CONDUIT CAP OR PLUG		GROUNDWELL				
	POWER RECEPTACLE, RATING AND POLES AS NOTED		CONTACT NORMALLY OPEN		WIRE CROSSING NO CONNECTION		CONDUIT TURNING AWAY FROM VIEWER		AID TO NAVIGATION LIGHTING FIXTURE				
	ELECTRICAL GROUND		CONTACT NORMALLY CLOSED		FIELD WIRING REMOTE FROM MOTOR STARTER		CONDUIT TURNING TOWARD & GOING PAST VIEWER		PULL BOX				
	LIGHTNING ARRESTOR		MOTOR OVERLOAD THERMAL CONTACT		OPERATING COILS- M=MOTOR STARTER COIL, TDR=TIME DELAY RELAY, CR=CONTROL RELAY, C=CONTACTOR		GROUND WIRE LUGS AND CADWELD		LIGHTING CONTROL CONTACTOR				
	CARTRIDGE TYPE FUSE, CLASS, VOLTS, AMPS AS NOTED		TIME DELAY ON ENERGIZE CONTACT (TIMED TO OPEN)		PILOT LIGHT (COLOR INDICATED)		SINGLE RECEPTACLE		PHOTOELECTRIC CELL				
	FUSED CUTOUT SWITCH POLE MOUNTED		TIME DELAY ON ENERGIZE CONTACT (TIMED TO CLOSE)		TERMINAL BLOCK		DUPLEX RECEPTACLE		DISCONNECT SWITCH (UNFUSED)				
	PILOT DEVICE ENCLOSURE FUNCTION OR SYMBOL AS NOTED		TIME DELAY ON ENERGIZE CONTACT (TIMED TO CLOSE)		WIRING TERMINAL		DUPLEX RECEPTACLE G.F.I.		FUSED DISCONNECT (X - NO. OF POLES, Y - FUSE RATING, Z - SWITCH RATING, R - NEMA RATING)				
	DISCONNECT SWITCH, RATING AND POLES AS NOTED		TIME DELAY ON DE-ENERGIZE CONTACT (TIMED TO CLOSE)		PILOT LIGHT (COLOR INDICATED)		DUPLEX RECEPTACLE ISOLATED GROUND SURGE SUPPRESSION		COMBINATION STARTER (X - NO. OF POLES, Y - FUSE RATING, Z - SWITCH RATING, R - NEMA HOUSING RATING, S - NEMA SIZE STARTER RATING)				
	POLE MOUNTED WEATHERHEAD TYPE SERVICE ENTRANCE		TIME DELAY ON DE-ENERGIZE CONTACT (TIMED TO OPEN)		WIRING TERMINAL		SINGLE RECEPTACLE (EXPLOSION PROOF)		SINGLE POLE BREAKER				
	DELTA CONNECTED TRANSFORMER WINDINGS		FLOW SWITCH N.C. OPENS ON FLOW		GROUND		RECEPTACLE LOCATED ABOVE COUNTER		TWO POLE BREAKER				
	WYE CONNECTED TRANSFORMER WINDINGS		FLOW SWITCH N.O. CLOSSES ON FLOW		GROUND		PENDANT MOUNTED LIGHT FIXTURE		THREE POLE BREAKER				
	FULL VOLTAGE NON-REVERSING STARTER WITH THERMAL OVERLOAD (NEMA SIZE INDICATED)		PHOTOELECTRIC CELL		MOTOR POWER THERMAL OVERLOAD		BRACKET/WALL MOUNTED LIGHT FIXTURE		SINGLE POLE BREAKER				
	MOTOR STARTER COIL		HORN		SOLENOID VALVE OPERATOR		CEILING MOUNTED LIGHT FIXTURE		THREE POLE BREAKER				
	LIGHTING CONTACTOR COIL		FIRE DETECTOR		HORN		STANCHION MOUNTED LIGHT FIXTURE		CABLE TRAY				
	LIGHTING CONTACTOR, SIZE AS SHOWN				SOLENOID VALVE OPERATOR		BOLLARD LIGHT						
	MOTOR SPACE HEATER				FIRE DETECTOR								
	DRAWOUT CIRCUIT BREAKER												
	PHOTOELECTRIC CELL												


REV	DATE	DESCRIPTION	BY	APP	REV	DATE	DESCRIPTION	BY	APP
0	11/2023	ISSUED FOR BID 100%	DJM	MET					



REGIONAL TRANSIT AUTHORITY



Civil | Structural | Mechanical | Electrical | Marine | Transportation
Metairie, LA www.infinityec.com 504-304-0548



SCALE _____ NOTED

PROJECT NO. _____ 21-030

RELEASE DATE _____ 11/2023

DESIGNED BY _____ M. TORRES

DRAWN BY _____ D. MUHSIN

CHECKED BY _____ J. LAWRENCE

APPROVED BY _____ M. TORRES

NON-ADVERTISEMENT SHELTER PROGRAM

LEGEND

SHEET NO. _____ 21-030-E1.01

REV. _____ 0

11/13/2023 11:13:33 AM — dmuhsin — P:\Projects\21-030 RTA — Non-Advertisement Shelter Program\Drawings\Drawings by Discipline\Electrical Drawings\ELECTRICAL NOTES AND LEGEND.dwg

ELECTRICAL GENERAL REQUIREMENTS:

SCOPE OF WORK:

THE WORK COVERED BY THIS SECTION SHALL INCLUDE FURNISHING AND INSTALLING THE ELECTRICAL POWER AND LIGHTING SYSTEM SHOWN IN THE DRAWINGS. CONTRACTOR SHALL COORDINATE WITH ENTERGY AND REFER TO THEIR STANDARDS FOR INSTALLATION OF ELECTRICAL SERVICE EQUIPMENT. ALL LIGHTING SYSTEM CONDUCTORS, CONDUITS, PANELBOARDS, CONTROLLERS, PHOTOCELLS, CONTACTORS, TERMINAL BLOCKS, ENCLOSURES, AND OVERCURRENT PROTECTIVE DEVICES WILL BE FURNISHED, INSTALLED AND CONNECTED BY THE CONTRACTOR. THIS IS TO BE DONE AS INDICATED IN THE PLANS, SPECIFICATIONS, OR AS DIRECTED BY THE PROJECT ENGINEER. THE WORK SHALL BE IN ACCORDANCE WITH PLAN DETAILS AND SPECIFICATIONS AND THE CONTRACTOR SHALL MAKE ANY LIGHTING SYSTEM. EVERY FITTING, MINOR DETAIL, OR FEATURE MAY NOT BE SHOWN OR DESCRIBED. THE CONTRACTOR PERFORMING THE WORK IS ASSUMED TO BE SKILLED IN THE TRADE, CAPABLE OF UNDERSTANDING THE INTENT OF THE PLANS AND SPECIFICATIONS, AND CONSTRUCTING THE LIGHTING SYSTEM IN ACCORDANCE WITH THE BEST PRACTICE OF THE TRADE.

A. EXISTING CONDITIONS

THE CONTRACTOR SHALL VISIT THE CONSTRUCTION SITE TO DETERMINE EXISTING CONDITIONS AND ALLOW FOR SUCH CONDITIONS WHEN COMPUTING THE BID. THE CONTRACTOR SHALL THOROUGHLY INSPECT THE SITE AND SURROUNDING AREA FOR EVIDENCE OF UNDERGROUND FACILITIES AND CONTACT COMPANIES OR AGENCIES LIKELY TO HAVE UNDERGROUND FACILITIES IN THE VICINITY OF THE PROJECT BEFORE DIGGING OR TRENCHING. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGES TO EXISTING UNDERGROUND FACILITIES CAUSED BY CONTRACTOR OPERATIONS. WHEN NEW EQUIPMENT IS INSTALLED REPLACING EXISTING EQUIPMENT, THE EXISTING EQUIPMENT AND MATERIAL SHALL BE REMOVED BY THE CONTRACTOR IN THE FOLLOWING MANNER. IF ANY MATERIAL AND EQUIPMENT IS DECLARED SALVAGEABLE BY THE ENGINEER, IT SHALL REMAIN PROPERTY OF OWNER OF THE EQUIPMENT AND BE STORED AT A LOCATION AS DIRECTED BY THE PROJECT ENGINEER. THE REMAINING MATERIAL AND EQUIPMENT SHALL BECOME PROPERTY OF THE CONTRACTOR AND BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AT HIS OWN EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING LOUISIANA ONE AND CALLING 48 HOURS IN ADVANCE OF ANY EXCAVATION AND MAINTAINING CURRENT LOCATE TICKETS THROUGHOUT THE COURSE OF THE PROJECT.

B. COORDINATION

THE CONTRACTOR SHALL COORDINATE ALL WORK TO AVOID INTERFERENCE AND CONFLICTS. THE CONTRACTOR SHALL RECEIVE AND FORWARD ALL COMMUNICATIONS ONLY THROUGH THE PROJECT ENGINEER OF HIS DESIGNATED REPRESENTATIVE.

C. VERIFICATION

THE CONTRACTOR SHALL VERIFY MOUNTING SPACE, EQUIPMENT DIMENSIONS, INSTALLATION REQUIREMENTS, AND ELECTRICAL CIRCUIT REQUIREMENTS OF ALL EQUIPMENT BEING SERVED PRIOR TO ORDERING ANY EQUIPMENT AND MATERIAL.

D. WARRANTIES AND GUARANTEES

THE CONTRACTOR GUARANTEES, BY HIS SIGNING OF THIS CONTACT, ALL EQUIPMENT, APPARATUS, MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF FINAL ACCEPTANCE OF THIS PROJECT. PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL FURNISH TO THE DESIGN ENGINEER THE FOLLOWING ADDITIONAL WARRANTIES AND GUARANTEES PERTAINING TO EACH PIECE OF MECHANICAL AND ELECTRICAL EQUIPMENT FURNISHED;

THE MANUFACTURER'S STANDARD WRITTEN WARRANTIES ON ALL EQUIPMENT FURNISHED ON THE PROJECT; THE CONTRACTOR'S WRITTEN GUARANTEE THAT, DURING A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF THE PROJECT, ALL NECESSARY REPAIRS TO OR REPLACEMENT OF SAID WARRANTED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR AT NO COST TO THE OWNER; OTHER WARRANTIES AND GUARANTEES AS REQUIRED UNDER THE SPECIFIC ITEMS ELSEWHERE HEREIN.

E. SUBMITTALS

AFTER THE ISSUANCE OF THE NOTICE TO PROCEED AND PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL PROVIDE ELECTRONIC SUBMITTALS AS PDF DOCUMENTS TO THE DESIGN ENGINEER. SUBMITTALS 10MB OF LESS CAN BE TRANSMITTED THROUGH EMAIL; OTHER METHODS WILL BE CONSIDERED UPON REQUEST. SUBMITTALS SHALL INCLUDE, BUT ARE NOT LIMITED TO, CATALOG CUT SHEETS, SHOP DRAWINGS, DESCRIPTIVE DATA, INSTALLATION AND OPERATING INSTRUCTIONS, BROCHURES, ETC., FOR ALL MATERIAL TO BE INSTALLED ON THE PROJECT. THE ITEM NUMBER FROM THE EQUIPMENT LIST, PARISH PROJECT NUMBER, PROJECT NAME, FABRICATOR OR MANUFACTURER'S NAME, AND CONTRACTOR'S COMPANY NAME SHALL BE ON EVERY SHEET OF THE SUBMITTAL AND BE IN A TYPED OR STAMP FORMAT. HAND WRITTEN IS NOT ACCEPTABLE. ALL CUT SHEETS WITHIN THE SUBMITTAL SHALL HAVE ALL PERTINENT DATA ON EACH ITEM CLEARLY MARKED TO INDICATE MATERIAL DESCRIPTION, BRAND NAME, MODEL NUMBER, SIZE, RATING, AND MANUFACTURING SPECIFICATIONS. DO NOT USE HIGHLIGHTING TO MARK INFORMATION. SUBMITTALS THAT DO NOT CONTAIN ALL DATA NECESSARY TO VERIFY CONFORMANCE WILL BE RETURNED FOR CORRECTION. ADDITIONAL SUBMITTALS OR RANDOM SAMPLES MAY BE REQUESTED AT THE DISCRETION OF THE DESIGNER OR PROJECT ENGINEER. SHOP DRAWINGS AND EQUIPMENT SUBMITTALS SHALL EASILY PRINT TO 8 1/2 X 11" OR 22" X 34". EQUIPMENT BROCHURES SHALL BE CLEAR, LEGIBLE, AND PROVIDE ACCURATE REPRESENTATION OF COLORS AND PATTERNS WHERE SUCH IS CALLED FOR IN THE ITEM'S DESCRIPTION OR AS NEEDED FOR CLARITY. DURING THE REVIEW PROCESS, ONE (1) ELECTRONIC SUBMITTAL SET WILL BE RETURNED WITH REQUIRED REVISIONS (IF ANY) NOTED THEREON. AFTER REVISIONS HAVE BEEN MADE, THE CONTRACTOR SHALL RE-SUBMIT AS PREVIOUSLY DESCRIBED. AFTER REVIEW, ITEMS STAMPED "REVIEWED: NO EXCEPTIONS TAKEN" WILL BE DISTRIBUTED ELECTRONICALLY. ITEMS STAMPED "RETURNED FOR CORRECTION" SHALL BE CORRECTED & RESUBMITTED. COMMENTS ON SUBMITTALS ARE NOT INTENDED TO RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE CONTRACT DOCUMENTS. SUBMITTALS AND DRAWINGS MARKED "REVIEWED: NO EXCEPTIONS TAKEN" DO NOT IMPLY THAT EQUIPMENT AND MATERIALS DESCRIBED ARE COMPLETE, CAN BE CONSTRUCTED OR INSTALLED, WILL OPERATE SUCCESSFULLY, OR WILL COORDINATE WITH EXISTING OR OTHER EQUIPMENT SPECIFIED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL

QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF WORK, PERFORMING WORK SAFELY & SATISFACTORY, AND FOR SATISFACTORY INSTALLATION & OPERATION OF EQUIPMENT. NO MATERIAL SHALL BE ORDERED AND NO FABRICATION OF INSTALLATION OF EQUIPMENT SHALL BEGIN UNTIL THE RELATED SUBMITTAL HAS BEEN DISTRIBUTED MARKED "REVIEWED: NO EXCEPTIONS TAKEN" BY THE DESIGN ENGINEER & A COPY HAS BEEN RECEIVED BY THE PROJECT ENGINEER. NOTE: ONE (1) LEGIBLE PAPER SET OF SUBMITTALS WILL BE REQUIRED FOR EACH O & M MANUAL, IN COLOR WHERE COLOR IS CALLED FOR IN THE ITEM'S DESCRIPTION, AND ON 11" X 17" OR 22" X 34" PAPER WHERE NEEDED FOR LEGIBILITY AND WHEN SHOP DRAWINGS ARE PROVIDED.

EQUIPMENT TO SUBMIT ON:

THE CONTRACTOR SHALL FURNISH, TO THE DESIGN ENGINEER FOR APPROVAL, BROCHURES AND MANUFACTURE'S INSTALLATION INSTRUCTIONS FOR ALL ELECTRICAL EQUIPMENT LISTED BELOW BEFORE PROCEEDING WITH ANY CONSTRUCTION. THE EQUIPMENT LISTED BELOW DOES NOT INCLUDE ALL MATERIAL THAT THE CONTRACTOR SHALL PROVIDE. AT ANY TIME, THE DESIGN OR PROJECT ENGINEER MAY REQUEST ADDITIONAL EQUIPMENT SUBMITTALS.

LIGHT POLES, LUMINARIES, LAMPS, PEDESTAL BASES, ANCHOR BOLTS, SPLICE/TAP CONNECTORS, JUNCTION BOXES (ABOVE AND BELOW GROUND), CONDUITS, CONDUIT CLAMPS, FASTENERS, HARDWARE, AND GROUNDING COMPONENTS.

NOTE: BOTH THE DESIGNER AND/OR PROJECT ENGINEER RESERVE THE RIGHT TO REQUEST SUBMITTALS ON ITEMS NOT LISTED AND TO TAKE RANDOM TEST SAMPLES FROM THE MATERIALS, EQUIPMENT, AND APPARATUS FURNISHED.

F. ELECTRICAL EQUIPMENT, APPARATUS & MATERIALS

FOR ALL ELECTRICAL EQUIPMENT, MATERIALS, AND APPARATUS TO BE FURNISHED AND USED ON THIS PROJECT, THE CONTRACTOR SHALL SUBMIT BROCHURES AND INSTALLATION INSTRUCTIONS TO THE DESIGN ENGINEER FOR APPROVAL. THE SUBMITTALS SHALL BE MADE IN ACCORDANCE WITH PARAGRAPH G "SUBMITTALS" OF THESE SPECIFICATIONS. THE SUBMITTALS SHALL HAVE DIMENSIONS, WEIGHTS, MOUNTING DATA, PERFORMANCE DATA, AND ALL OTHER INFORMATION THAT IS REQUIRED TO SHOW COMPLETE CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. DESCRIPTIVE SPECIFICATIONS, PLANS AND SYSTEM COMPATIBILITY SHALL GOVERN OVER SPECIFIED MANUFACTURER'S NAMES, MODEL NUMBERS, OR CATALOG NUMBERS. THE CONTRACTOR SHALL VERIFY ALL EQUIPMENT MODEL NUMBERS, CATALOG NUMBERS, AND VERIFY AVAILABILITY WITH SUPPLIERS. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER SUB-CONTRACTORS. THE CONTRACTOR SHALL FURNISH TO THE DESIGN ENGINEER, FOR APPROVAL, LAYOUT DRAWINGS FOR THE POWER CIRCUIT CONDUITS. ANY CHANGES TO THESE DRAWINGS SHALL BE SO NOTED AND ENCLOSED IN THE MAINTENANCE MANUALS AS "AS-BUILT".

G. RECORD "AS-BUILT" DRAWINGS

UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL FURNISH, TO THE DESIGN ENGINEER, ONE (1) COMPLETE SET OF PLANS THAT REFLECT THE FINAL "AS-BUILT" CONDITION OF THE ELECTRICAL PORTION OF THE PROJECT. DRAWINGS SHALL MEASURE 22" X 34" AND BE REPRODUCTIONS FROM WHICH SATISFACTORY PRINTS CAN BE MADE. DRAWINGS SHALL INCLUDE A COMPLETE EQUIPMENT LIST INDICATING MANUFACTURER'S NAME AND CATALOG OR SHOP DRAWING NUMBER FOR EACH PIECE OF EQUIPMENT FURNISHED. DRAWINGS SHALL INDICATE THE EXACT INSTALLED LOCATIONS OF ALL LIGHT POLES, ABOVE AND BELOW GROUND CONDUITS, WIRING, NEW SERVICE POLES, LIGHTING PEDESTALS, CONTROLLERS, ROADWAY BORES, JUNCTION BOXES, PLAN OR FIELD CHANGES, ADDITIONAL NOTES, ETC. EACH SHEET SHALL INCLUDE THE PROJECT NUMBER, PROJECT NAME, PARISH, CONTRACTOR'S NAME, AND DATE. ONE (1) 1/2 SIZE COPY SHALL ALSO BE INCLUDED WITHIN EACH OPERATION AND MAINTENANCE MANUAL (AS DESCRIBED UNDER PARAGRAPH J "OPERATION AND MAINTENANCE MANUALS"). NOTE: PRIOR TO FURNISHING FINAL "AS-BUILT" DRAWINGS, THE CONTRACTOR SHALL FURNISH ONE (1) FULL SIZE BOND SET OF COMPLETE "AS-BUILT" DRAWINGS TO THE DESIGN ENGINEER FOR REVIEW AND MAKE THE REQUIRED REVISIONS (IF ANY) AND RE-SUBMIT TO THE DESIGN ENGINEER THE REQUIRED QUANTITIES AS PREVIOUSLY DESCRIBED FOR FINAL APPROVAL AND DISTRIBUTION. NO DIRECT PAYMENT SHALL BE MADE FOR FURNISHING "AS-BUILT" DRAWINGS AS REQUIRED HEREIN.

H. OPERATION AND MAINTENANCE MANUALS

THE CONTRACTOR SHALL SUBMIT TO THE DESIGN ENGINEER FOR APPROVAL PDF COPIES OF OPERATIONS AND MAINTENANCE MANUALS. MANUALS SHALL INCLUDE, BUT NOT LIMITED TO THE FOLLOWING:

MAINTENANCE AGREEMENTS: ELECTRICAL EQUIPMENT AND APPARATUS BROCHURES; COPIES OF WARRANTIES AND GUARANTEES AS REQUIRED UNDER PARAGRAPH D "WARRANTIES AND GUARANTEES"; "AS-BUILT" DRAWINGS (AS REQUIRED UNDER PARAGRAPH G "AS-BUILT" DRAWINGS"); TEST RECORDINGS; AND CERTIFICATION LETTERS.

NOTE:

PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL FURNISH OPERATION & MAINTENANCE MANUALS, AS PREVIOUSLY DESCRIBED, TO THE DESIGN ENGINEER FOR REVIEW. ONE (1) OPERATION & MAINTENANCE MANUAL WILL BE RETURNED WITH REQUIRED REVISIONS (IF ANY) NOTED THEREIN. THE CONTRACTOR SHALL MAKE THE REQUIRED REVISIONS (IN ANY) AND RE-SUBMIT TO THE DESIGN ENGINEER THE REQUIRED QUANTITIES AS PREVIOUSLY DESCRIBED FOR FINAL APPROVAL AND DISTRIBUTION. NO DIRECT PAYMENT SHALL BE MADE FOR OPERATION AND MAINTENANCE MANUALS AS REQUIRED HEREIN.

I. CODES AND FEES

ALL MATERIAL FURNISHED AND ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH ALL STATE LAWS, CODES, RULES AND REGULATIONS. THE CONTRACTOR SHALL FILE AND OBTAIN ALL NECESSARY STATE PERMITS. THE CONTRACTOR SHALL PAY ALL FEES FOR STATE PERMITS AND LICENSES REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

J. QUANTITIES

ESTIMATED QUANTITIES ARE GIVEN ON THE PLANS FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR IS REQUIRED TO COMPUTE AND FURNISH THE QUANTITY OF MATERIALS NECESSARY TO COMPLETE THE WORK AS DETAILED ON THE PLANS AND SPECIFIED HEREIN.

K. MATERIALS AND EQUIPMENT

ALL MATERIALS, EQUIPMENT, AND ACCESSORIES INSTALLED UNDER THIS CONTRACT SHALL CONFORM TO THE RULES AND CODES AS RECOMMENDED BY THE NATIONAL ASSOCIATIONS GOVERNING. ALL MATERIALS SHALL BE NEW AND OF BEST QUALITY. THE CONTRACTOR SHALL PROTECT THE ENTIRE SYSTEM AND ALL PARTS THEREOF FROM INJURY DURING THE PROCESS AND UP TO THE ACCEPTANCE OF WORK.

L. IDENTIFICATION

EACH PIECE OF EQUIPMENT FURNISHED SHALL HAVE PERMANENT IDENTIFICATION PLATES AND SHALL BE IDENTIFIED AS FOLLOWS:

CONDUCTOR IDENTIFICATIONS: CONDUCTOR SIZES AWG #8 AND SMALLER SHALL BE IDENTIFIED BY COLOR CODING THEIR ENTIRE LENGTH. ALL OTHER CONDUCTORS SHALL HAVE INDIVIDUAL PERMANENT IDENTIFICATION AT EACH TERMINATION, SPLICE, TAP, JUNCTION BOX, AND EQUIPMENT ENCLOSURE.

CONTROLLERS AND DISCONNECTS: EACH CONTROLLER SHALL BE IDENTIFIED BY ITS LABEL AND THE LABEL SHALL BE LOCATED ON THE FRONT DOOR. ALL DISCONNECTS SHALL HAVE A PERMANENTLY ENGRAVED PLATE ATTACHED TO THE COVER OR HOUSING. HARDWARE SHALL BE MARINE DUTY STAINLESS STEEL HAVING A MINIMUM YIELD STRENGTH OF 30,000 PSI. THE PLATE SHALL CLEARLY IDENTIFY THE COMPONENTS FUNCTION AND THE SPECIFIC EQUIPMENT SERVED.

CIRCUIT SCHEDULES: EACH CONTROLLER SHALL HAVE A TYPED CIRCUIT SCHEDULE PERMANENTLY MOUNTED INSIDE THE CONTROLLER. THE CIRCUIT SCHEDULE SHALL LIST WHICH POLES/LUMINARIES ARE CONTROLLED BY EACH CIRCUIT BREAKER.

M. TESTS

PRIOR TO FINAL ACCEPTANCE AND AS DIRECTED BY THE PROJECT ENGINEER DURING CONSTRUCTION, THE LIGHTING SYSTEM SHALL BE TESTED TO PROVE PROPER OPERATION AND CONFIRM THAT 1 FOOTCANDLE MINIMUM HAS BEEN ACHIEVED THROUGHOUT THE ADDITIONAL BOARDING AREA. CONTRACTOR SHALL VISIT THE SITE AT NIGHT TO OBSERVE AND RECORD THE LIGHT LEVELS TO SUBMIT TO THE RESIDENT ENGINEER FOR REVIEW AND RECORD. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT NECESSARY TO CONDUCT ALL TEST. IF ANY COMPONENT BECOMES DEFECTIVE DURING TESTING, THE CONTRACTOR SHALL CORRECT OR REPLACE THE DEFECTIVE COMPONENT(S) AND RE-START TESTING AS DIRECTED BY THE PROJECT ENGINEER. NOTE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ALL ELECTRICAL UTILITIES CONSUMED DURING TESTING THAT IS PERFORMED PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL PERFORM GROUND RESISTANCE.

INSULATION TEST: CONDUCT INSULATION RESISTANCE TEST ON DIRECT BURIED CONDUCTORS AND OTHER AWG No. 10 AND LARGER CONDUCTORS. PERFORM TEST AFTER INSTALLING THE CONDUCTORS AND BEFORE CONNECTING EQUIPMENT THAT MAY BE DAMAGED BY THE TEST. WHEN MEASURE WITH 1000V DC INSULATION TESTER, READINGS BELOW 50 MEGAOHMS, WILL BE CONSIDERED DEFECTIVE.

GROUND RESISTANCE TEST: TESTS AT EACH SERVICE GROUNDING SYSTEM. GROUND RESISTANCE TEST SHALL BE CONDUCTED USING A 3- OR 4-POINT FALL-OF-POTENTIAL METHOD DEFINED BY IEEE STANDARD #81 OR OTHER INDUSTRY APPROVED TEST METHOD. EACH GROUNDING ELECTRODE SHALL BE TESTED PRIOR TO CONNECTION TO THE GROUND SYSTEM. RESISTANCE-TO-GROUND OF THE GROUND SYSTEM SHALL NOT EXCEED 25 OHMS. GROUND RESISTANCE MEASUREMENTS SHALL BE CONDUCTED IN NORMALLY DRY CONDITIONS NOT LESS THAN 48 HOURS AFTER THE LATEST RAINFALL. ALL GROUND RESISTANCE TEST SHALL BE CONDUCTED IN THE PRESENCE OF THE PROJECT ENGINEER AND THE DEPARTMENT'S ELECTRICAL INSPECTOR. THE CONTRACTOR SHALL DOCUMENT ALL TEST RECORDINGS AND PROVIDE A COPY OF ALL TEST REPORTS TO THE PROJECT ENGINEER AND ELECTRICAL INSPECTOR UPON COMPLETION.

N. CLEAN-UP AND MAINTENANCE OF THE WORK AREAS

THE CONTRACTOR SHALL NOT ALLOW THE ACCUMULATION OF SCRAP, DEBRIS, WASTE, AND OTHER ITEMS NOT REQUIRED FOR CONSTRUCTION OF THE WORK. THE CONTRACTOR SHALL RETAIN ALL STORED ITEMS IN AN ORDERLY ARRANGEMENT ALLOWING MAXIMUM ACCESS, NOT IMPEDING DRAINAGE OR TRAFFIC AND PROVIDING THE REQUIRED PROTECTION OF MATERIALS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE FROM THE JOB SITE ALL TOOLS, SURPLUS MATERIALS, EQUIPMENT, SCRAP, DEBRIS AND WASTE, AND CLEAN ALL PAVED AREAS ON AND ADJACENT TO THE SITE SOILED BY CONSTRUCTION OF THE PROJECT.

ELECTRICAL SPECIFICATIONS:

A. CONDUIT SYSTEM:

ALL CONDUITS SHALL BE INSTALLED CONCEALED UNLESS NOTED OTHERWISE ON THE PLANS. UNDERGROUND CONDUITS SHALL BE INSTALLED 2'-0" BELOW GRADE UNLESS SPECIFIED OTHERWISE. MARKER TAPE SHALL BE PLACED ABOVE ALL UNDERGROUND CONDUITS CARRYING ELECTRICAL CONDUCTORS. ALL CONDUITS WITHIN TRENCHES SHALL BE HAND PLACED INSIDE THE TRENCH, AND THE TRENCH BACKFILLED TO THE SATISFACTION OF THE PROJECT ENGINEER ON THE SAME DAY. WHEN POSSIBLE, MULTIPLE CONDUIT RUNS SHALL BE PLACED IN A COMMON TRENCH. ALL 90 DEGREE JOINTS SHALL BE WIDE SWEEP IN NATURE. ELECTRICAL CONDUIT SHALL BE IN ACCORDANCE WITH THESE PLANS, AND SPECIFICATIONS, INCLUSIVE OF THE FOLLOWING:

(A) UNDERGROUND CONDUIT NOT WITHIN THE LIMITS OF PAVED ROADWAY AREAS SHALL

BE SCHEDULE 40 PVC.

(B) UNDERGROUND CONDUIT WITHIN THE LIMITS OF PAVED ROADWAY AREAS SHALL BE SCHEDULE 80 HDPE.

(C) ABOVE GROUND CONDUIT SHALL BE RIGID GALVANIZED STEEL.

B. NON-METALLIC CONDUITS FOR POWER WIRING

NON-METALLIC CONDUITS SHALL BE EITHER SCHEDULE 40 OR SCHEDULE 80 PVC OR SCHEDULE 80 HIGH DENSITY POLYETHYLENE AND BE INSTALLED IN LOCATIONS AS INDICATED ON THE PLANS. NON-METALLIC CONDUITS SHALL BE UL LISTED, SUNLIGHT RESISTANT, AND CONFORM TO CURRENT UL SAFETY STANDARDS 651, NEMA TC-2, AND NEC CODE SPECIFICATIONS. NON-METALLIC CONDUITS SHALL BE BURIED UNDERGROUND AT A MINIMUM OF 2'-0". NON-METALLIC CONDUITS SHALL NOT BE PERMITTED ABOVE GROUND OR ABOVE SLABS. ALL NON-METALLIC CONDUITS SHALL CONTAIN GREEN INSULATED EQUIPMENT GROUNDING CONDUCTORS.

C. METALLIC CONDUITS FOR POWER WIRING

EXPOSED CONDUITS SHALL BE RIGID GALVANIZED STEEL (RGS) CONFORMING TO ANSI C80.1 AND UL 6. FITTINGS FOR RGS SHALL BE THREADED, CAST METAL, GALVANIZED AND COMPATIBLE WITH THE CONDUIT. INSTALL LOCKNUTS AND GROUNDING BUSHING WHERE METAL CONDUIT TERMINATES TO METAL ENCLOSURES EXPOSED CONDUIT SHALL BE SUPPORTED WITH P1000 STRUT AND STRAPS, NO MORE THAN 8-FEET ON CENTER AND ALWAYS WITHIN 12" OF A BOX, ENCLOSURE OR FITTING. CONNECTIONS TO ENCLOSURES SHALL BE WATERPROOF. USE MEYERS HUB OR EQUIVALENT.

D. CONDUCTORS

CONDUCTORS SHALL BE COPPER, SOLID OR STRANDED, FOR SIZES #10 AWG AND SMALLER AND SHALL BE STRANDED FOR #8 AWG AND LARGER. CONDUCTORS SHALL BE PROVIDED WITH 90 DEGREE C RATED INSULATION, TYPE XHHW-2 OR THWN-2. PROVIDE A MINIMUM OF 18" OF SLACK AT EACH BOLLARD LIGHTS BASE. PROVIDE WATERPROOF MASTIC ON ALL SPLICES AND TERMINATIONS. RESIDENT ENGINEER SHALL RESERVE THE RIGHT TO SPOT CHECK SPLICES AND TERMINATIONS. CONDUCTORS BE IDENTIFIED AS FOLLOWS:

- 1. PHASE A – BLACK
- 2. PHASE B – RED
- 3. NEUTRAL – WHITE
- 4. EQUIPMENT GROUND – GREEN

E. GROUNDING AND BONDING

GROUND AND BOND ELECTRICAL SYSTEM IN COMPLIANCE WITH THE LATEST EDITION OF NFPA 70. PROVIDE A GROUND ROD FOR EACH LIGHT STANDARD AS ILLUSTRATED ON THE DRAWING. PROVIDE A GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT. GROUNDING ELECTRODE CONDUCTORS SHALL BE BARE, SOLID COPPER, UNLESS SPECIFIED ON THE DRAWINGS.

F. BOLLARD LAMPS

LAMPS SHALL BE LED. WATTAGE SHALL BE AS INDICATED ON THE PLANS. AVERAGE RATED LAMP LIFE SHALL NOT BE LESS THAN 50,000 HRS, LAMPS SHALL BE CLEAR AND EPA COMPLIANT. LAMPS SHALL HAVE A 1 YEAR REPLACEMENT WARRANTY. MINIMUM INITIAL LAMP LUMENS SHALL BE 4000k COLOR TEMPERATURE.

CONSTRUCTION REQUIREMENTS

LIGHTING AND ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATION. ALL ELECTRICAL INSTALLATIONS SHALL COMPLY WITH NFPA 70 NATIONAL ELECTRIC CODE. CONTRACTOR SHALL COORDINATE WITH ENTERGY AND REFER TO THEIR STANDARDS TO INSURE ALL THEIR REQUIREMENTS ARE MET FOR CONNECTION TO ELECTRICAL SERVICE.

REV	DATE	DESCRIPTION	BY	APP	REV	DATE	DESCRIPTION	BY	APP
0	11/2023	ISSUED FOR BID 100%	DJM	MET					



REGIONAL TRANSIT AUTHORITY

Civil | Structural | Mechanical | Electrical | Marine | Transportation
Metairie, LA www.infinitypec.com 504-304-0548

SCALE _____ NOTED

PROJECT NO. _____ 21-030

RELEASE DATE _____ 11/2023

DESIGNED BY _____ M. TORRES

DRAWN BY _____ D. MUHSIN

CHECKED BY _____ J. LAWRENCE

APPROVED BY _____ M. TORRES

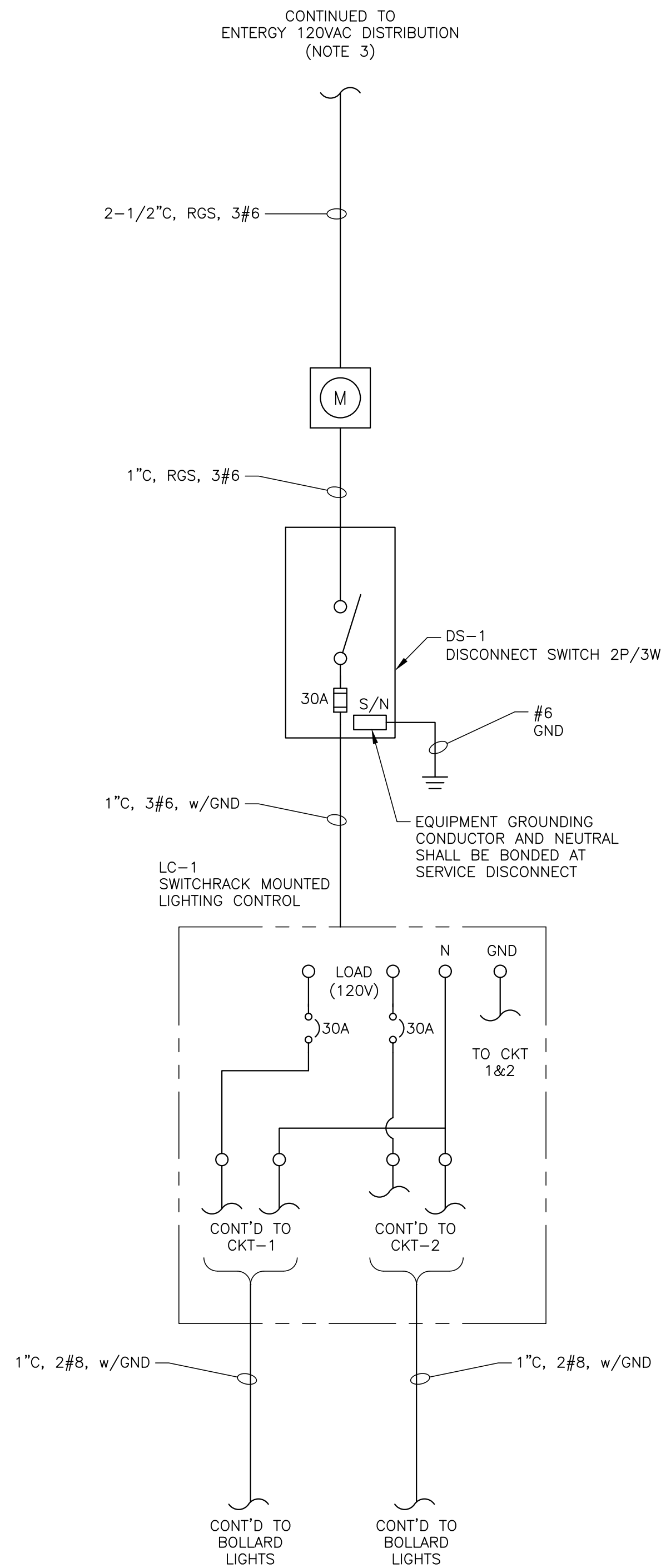
NON-ADVERTISEMENT SHELTER PROGRAM

ELECTRICAL GENERAL REQUIREMENTS

SHEET NO. 21-030-E1.02

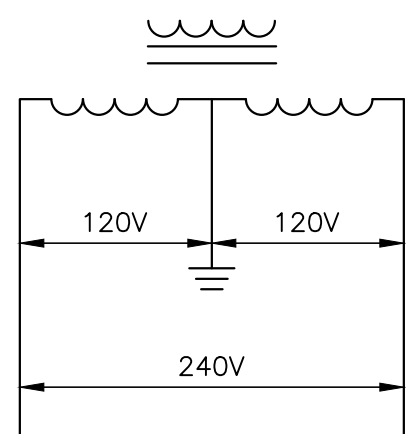
REV. 0

11/13/2023 10:51:55 AM -- dmuhsin -- P:\Projects\21-030 RTA -- Non-Advertisement Shelter Program\Drawings\Drawings by Discipline\Electrical Drawings\ELECTRICAL ONE LINE DIAGRAM.dwg



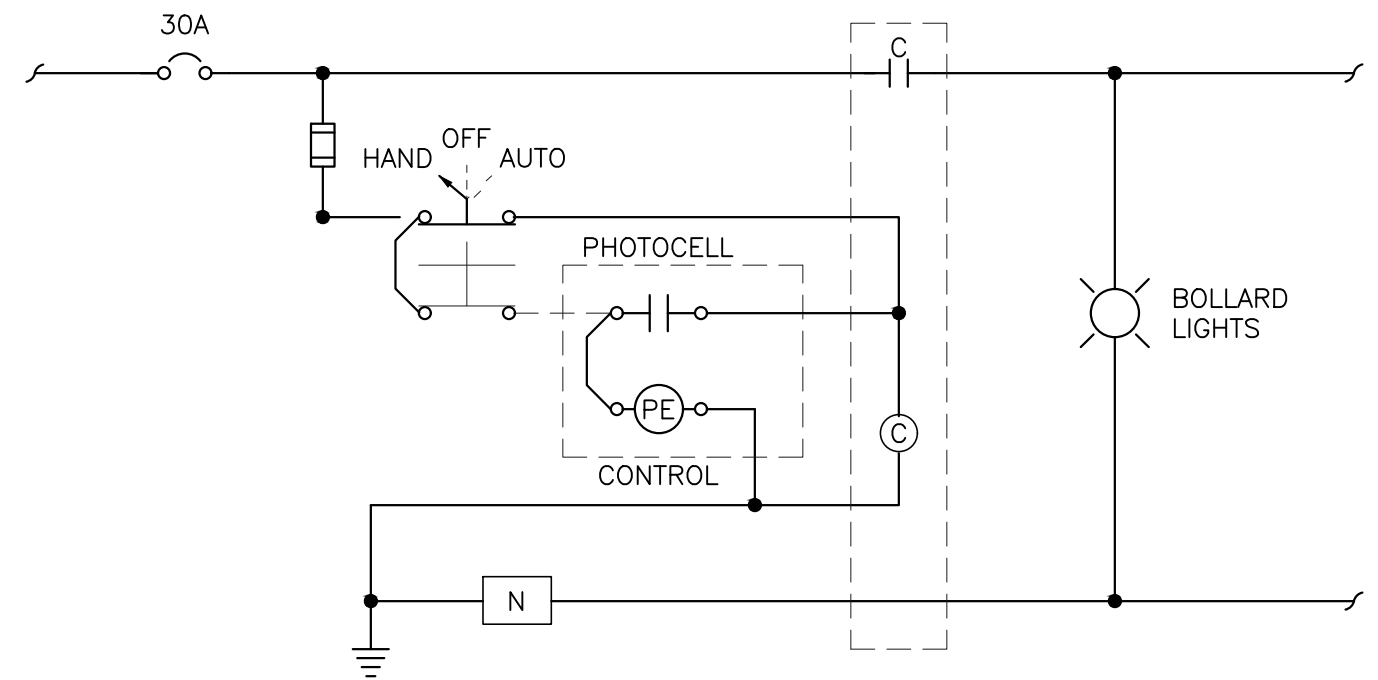
ONE-LINE DIAGRAM

SCALE: NTS



SINGLE PHASE 3 WIRE SYSTEM

SCALE: NTS



TYPICAL LIGHTING CONTROL SCHEMATIC

SCALE: NTS

NOTES:

1. FOR GENERAL NOTES AND LEGEND SEE E1.00 & E1.01.
2. FOR BILL OF MATERIALS SEE E4.00 & E4.01.
3. CONTRACTOR SHALL COORDINATE WITH ENTERGY REPRESENTATIVES TO ENSURE ALL REQUIREMENTS ARE MET TO FACILITATE A COMPLETE INSTALLATION PER ENTERGY REQUIREMENTS.
4. DISCONNECT SWITCHES AND METER SHALL BE MOUNTED TO EXISTING ENTERGY POLE AS SHOWN ON SHEET E4.01.
5. CONTRACTOR SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS, AT&T, COX CABLE, AND ALL OTHER ENTITIES WITH EXISTING SYSTEMS IN PLACE PRIOR TO STARTING WORK.

REV	DATE	DESCRIPTION	BY	APP	REV	DATE	DESCRIPTION	BY	APP
0	11/2023	ISSUED FOR BID 100%	DJM	MET					



REGIONAL TRANSIT AUTHORITY

Infinity
Engineering Consultants, LLC
Civil | Structural | Mechanical | Electrical | Marine | Transportation
Metairie, LA www.infinityec.com 504-304-0548

SCALE	NOTED
PROJECT NO.	21-030
RELEASE DATE	11/2023
DESIGNED BY	M. TORRES
DRAWN BY	D. MUHSIN
CHECKED BY	J. LAWRENCE
APPROVED BY	M. TORRES

NON-ADVERTISEMENT SHELTER PROGRAM	
ONE LINE DIAGRAM	
SHEET NO.	REV.
21-030-E2.00	0

11/13/2023 11:33:34 AM - discipline - P:\Projects\21-030 RTA - Non-Advertisement Shelter Program\Drawings\Electrical Drawings\ELECTRICAL LOCATION PLAN.dwg

REV	DATE	DESCRIPTION	BY	APP	REV	DATE	DESCRIPTION	BY	APP
0	11/2023	ISSUED FOR BID 100%	DJM	MET					



REGIONAL TRANSIT AUTHORITY

Civil | Structural | Mechanical | Electrical | Marine | Transportation
Metairie, LA www.infinityec.com 504-304-0548

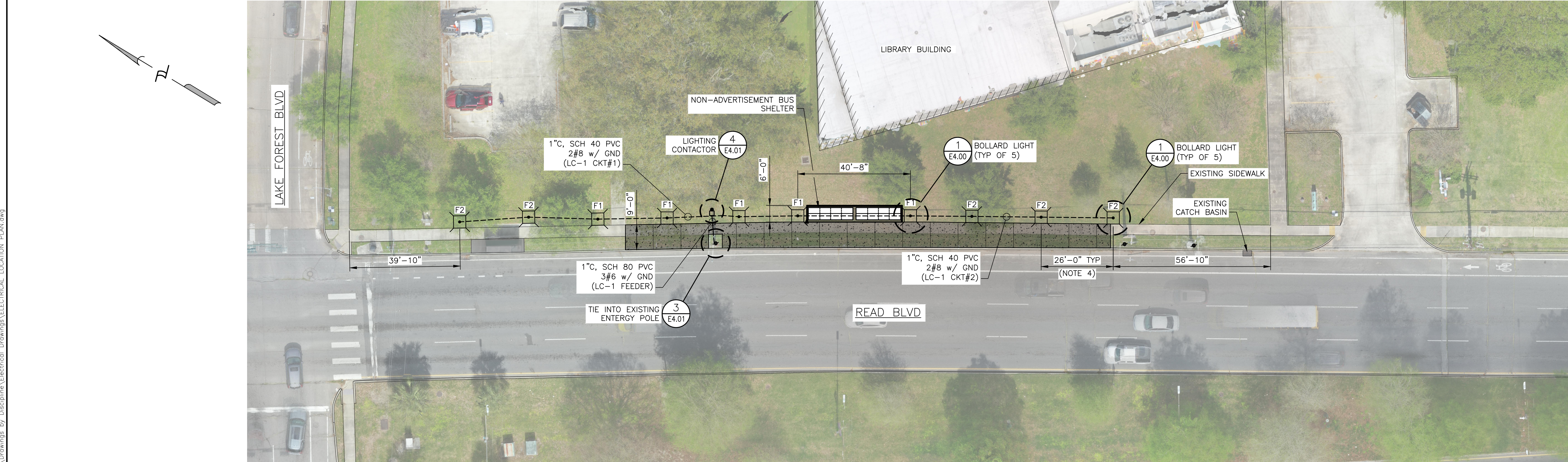
SCALE	NOTED
PROJECT NO.	21-030
RELEASE DATE	11/2023
DESIGNED BY	M. TORRES
DRAWN BY	D. MUHSIN
CHECKED BY	J. LAWRENCE
APPROVED BY	M. TORRES

NON-ADVERTISEMENT SHELTER PROGRAM

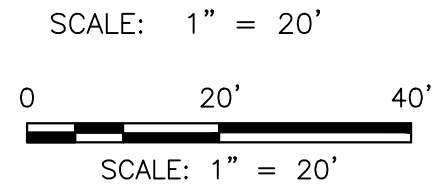
ELECTRICAL LOCATION PLAN

SHEET NO. 21-030-E3.00

REV. 0



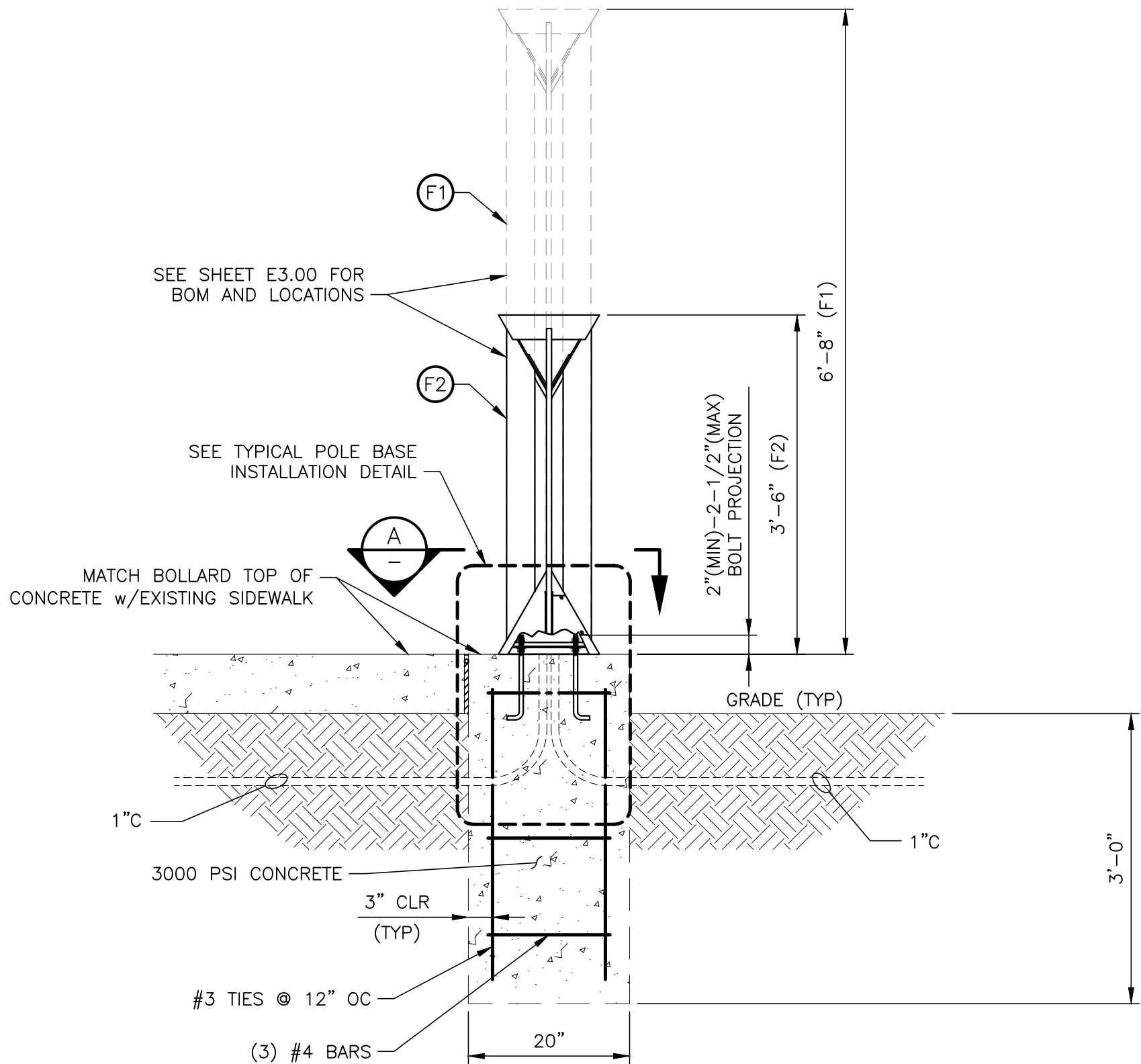
LIGHTING AND POWER PLAN



LIGHTING FIXTURE SCHEDULE							
No.	QTY.	CATALOG NO.	MANUFACTURER	DESCRIPTION	MOUNTING	LAMP	INPUT VOLTAGE
F1	5	BYB80-PLED-VSQ-W-20LED-875mA-40K-120-RAL-9005-T-CA	US ARCHITECTURAL	U.S. ARCHITECTURAL,BEYOND-PLED 4-SIDED CONTEMPORARY BOLLARD, 80" TALL, FLAT CLEAR ACRYLIC LENS, (20) LEDS, 875mA, 4000K, 120V, BLACK, INTEGRATED BASEPLATE w/ANCHOR BOLTS AND HARDWARE	ANCHORED TO FOUNDATION	LED	120V
F2	5	BYB42-PLED-VSQ-W-20LED-875mA-40K-120-RAL-9005-T-CA	US ARCHITECTURAL	U.S. ARCHITECTURAL,BEYOND-PLED 4-SIDED CONTEMPORARY BOLLARD, 42" TALL, FLAT CLEAR ACRYLIC LENS, (20) LEDS, 875mA, 4000K, 120V, BLACK, INTEGRATED BASEPLATE w/ANCHOR BOLTS AND HARDWARE	ANCHORED TO FOUNDATION	LED	120V

- NOTES:
- FOR GENERAL NOTES AND LEGEND SEE E1.00 & E1.01
 - THIS SHELTER IS ACCESSED FROM A CITY ROAD
 - THE HORIZONTAL CONTROL LOCATION SHOWN ON THIS DRAWING IS THEORETICAL UNTIL FORMALLY DETERMINED IN THE FIELD BY THE ENGINEER PRIOR TO CONSTRUCTION
 - SPACING BETWEEN LIGHT FIXTURES SHALL BE 25' UNLESS NOTED OTHERWISE

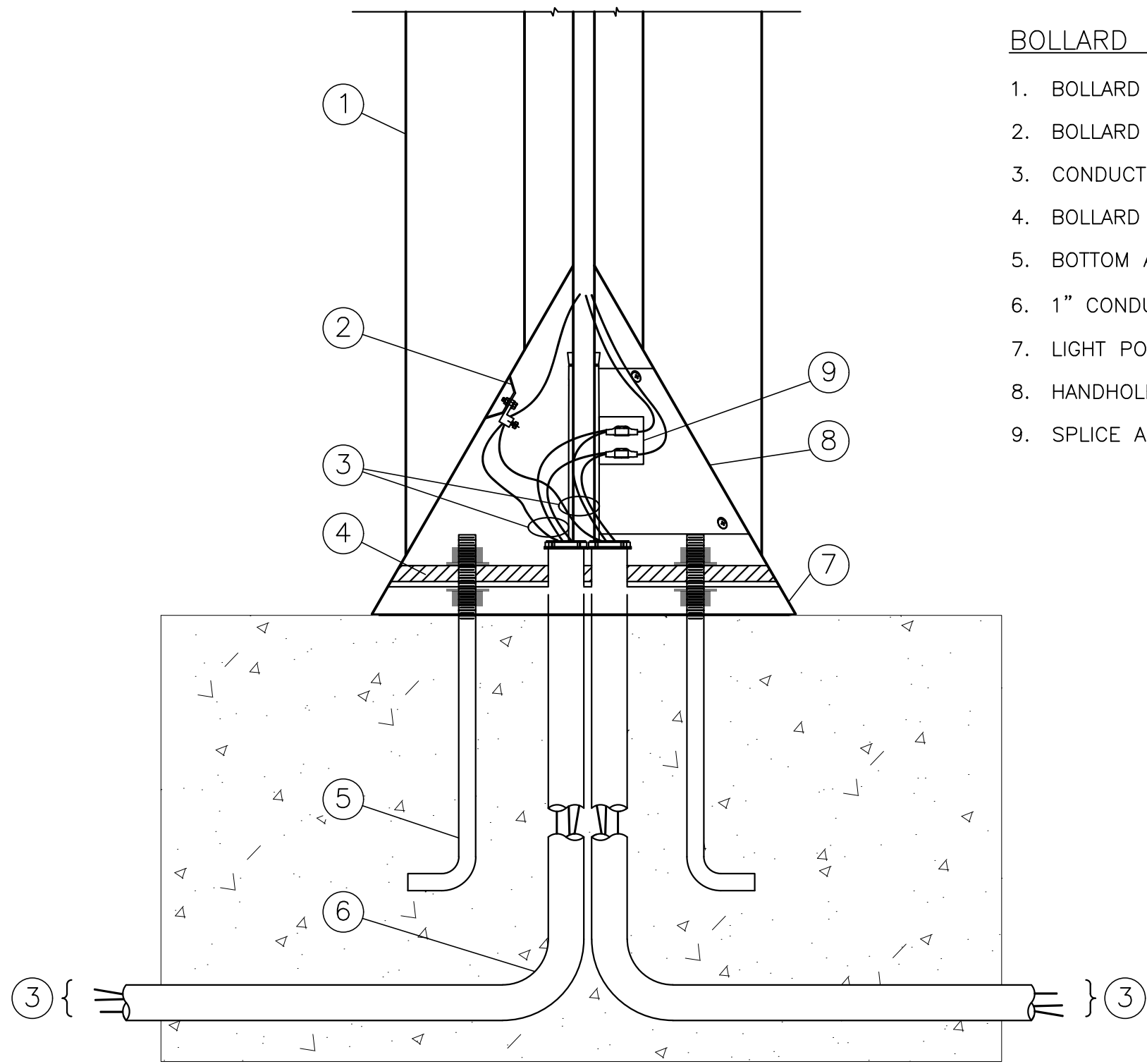
11/13/2023 11:13:27 AM -- dmuhsin -- P:\Projects\21-030 RTA -- Non-Advertisement Shelter Program\Drawings\Electrical Drawings\Electrical DETAILS.dwg



BOLLARD LIGHT DETAIL 1

SCALE: 3/4" = 1'-0"

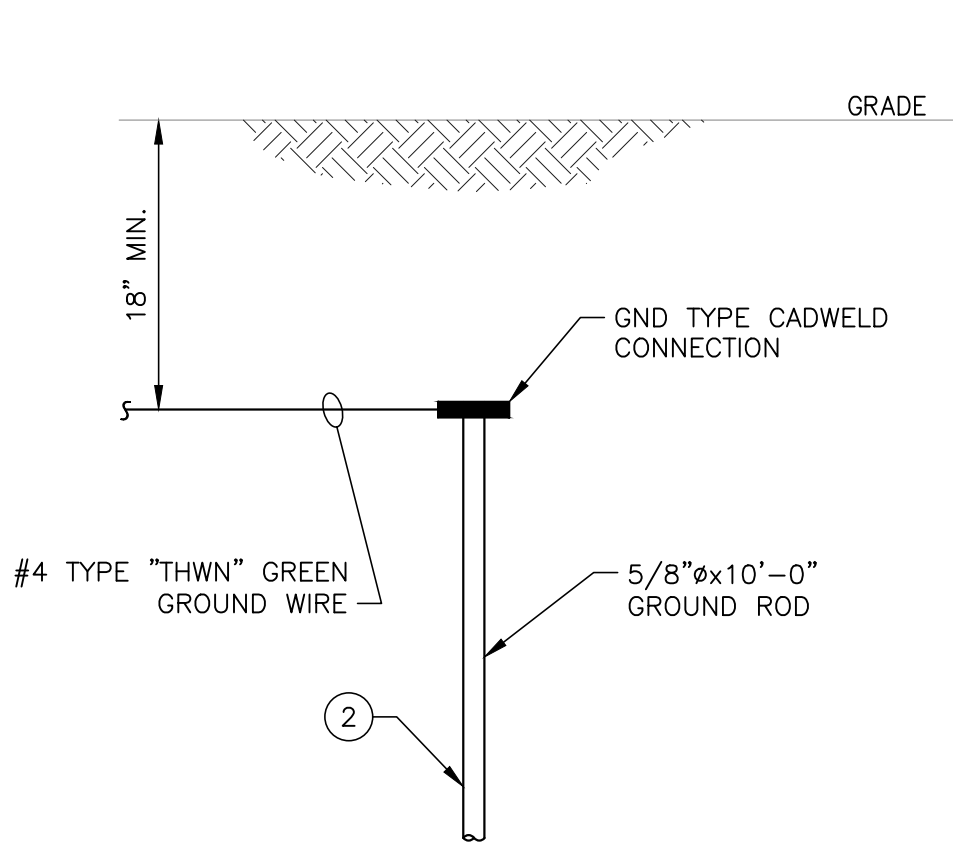
E3.00



BOLLARD INSTALLATION DETAIL 3

SCALE: 3" = 1'-0"

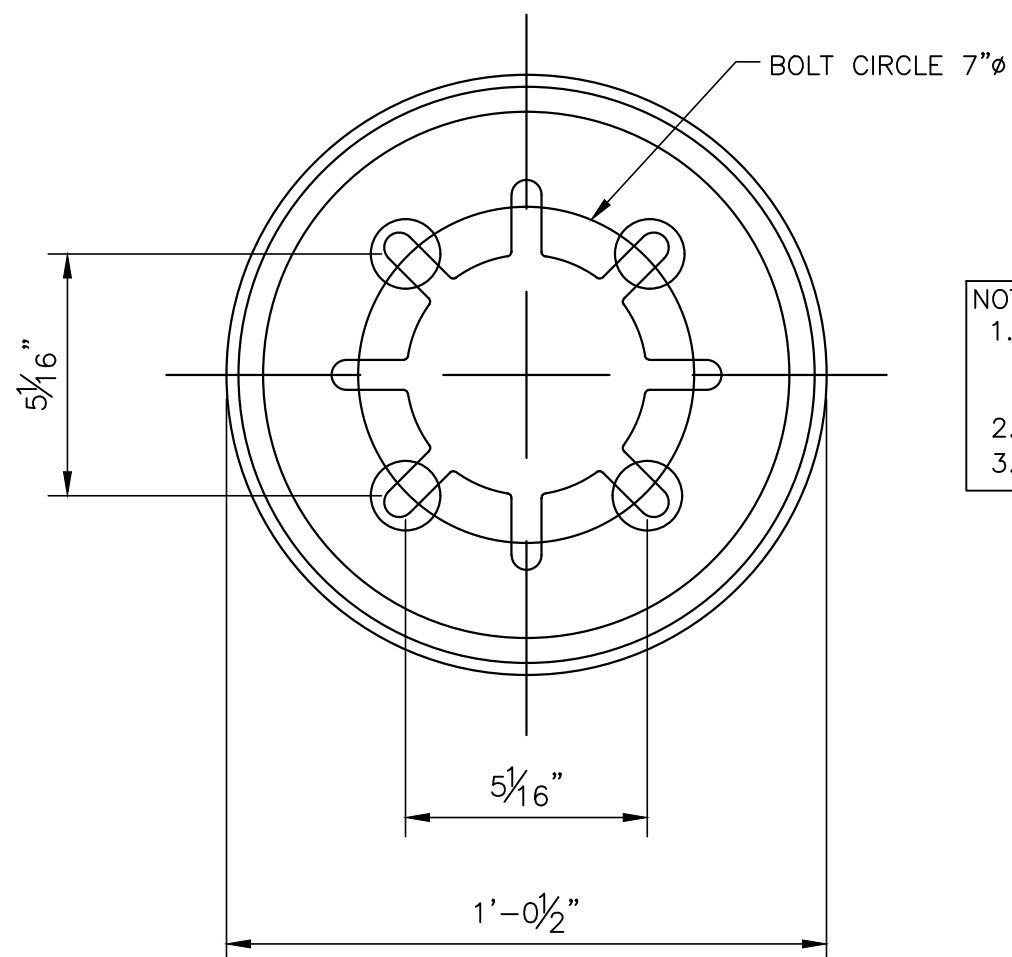
E3.00



GROUND ROD DETAIL 2

SCALE: N.T.S.

E4.01



BASE PLATE SECTION A

SCALE: 3" = 1'-0"

A

- NOTE:
1. BOLLARD CAN BE MOUNTED AT STANDARD 0° W/STRUTS PARALLEL AND PERPENDICULAR TO THE CURB LINE OR AT 45° W/STRUTS AT A 45° ANGLE TO THE CURB
 2. 7" BOLT CIRCLE
 3. ANCHOR BOLTS (4) 1/2"x12"x2"

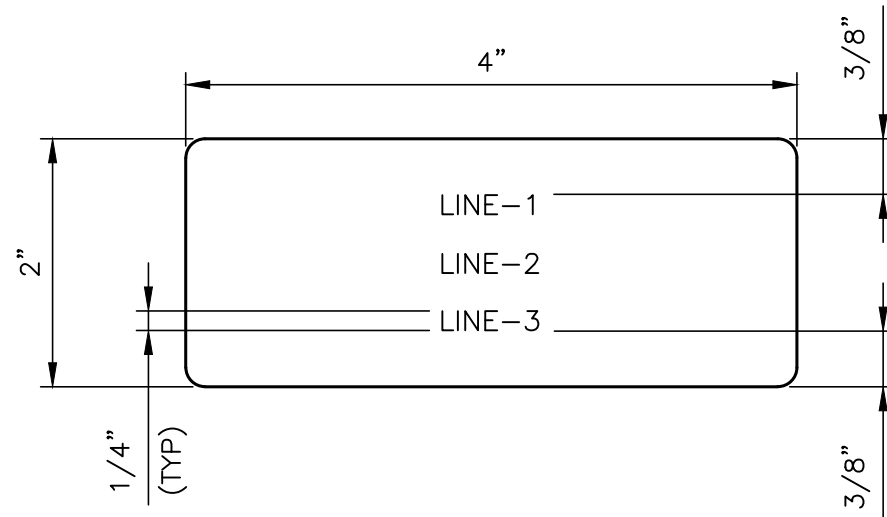
NOTES:

1. FOR GENERAL NOTES AND LEGEND SEE E1.00 & E1.01

BOLLARD LIGHT

1. BOLLARD LIGHT
2. BOLLARD GROUND LUG
3. CONDUCTORS
4. BOLLARD BASE ANCHOR PLATE
5. BOTTOM ANCHOR PLATE
6. 1" CONDUIT, PVC
7. LIGHT POLE BASE
8. HANDHOLE
9. SPLICE AND TAP CONNECTION

CONDUIT LENGTHS		
TYPE	QUANTITY	DESCRIPTION
LC-1 CKT#1	125 LF	LIGHTING CIRCUIT ON THE LAKE FOREST BLVD SIDE OF THE LIGHTING CONTACTOR. CONDUIT. W/CONDUCTORS, PVC/HDPE
LC-2 CKT#2	175 LF	LIGHTING CIRCUIT GOING AWAY FROM LAKE FOREST BLVD FROM THE LIGHTING CONTACTOR. CONDUIT W/CONDUCTORS, PVC/HDPE
LC-1 FEEDER	40 LF	FROM POWER POLE TO SWITCHRACK. CONDUIT W/CONDUCTORS, PVC/HDPE



NAMEPLATE SCHEDULE		
NAMEPLATE	SIZE	ENGRAVING
NP-1	2"x4"	FUSED DISCONNECT SWITCH 240VAC, 2P, 3W, 60A "DS-1"
NP-2	2"x4"	LIGHTING CONTROLLER "LC-1"

NAMEPLATE NOTES:

1. NAMEPLATES TO BE WEATHER RESISTANT MICARTA 3/32" THICK, BEVELED EDGES. BLACK LETTERS ON WHITE BACKGROUND.
2. TEXT TO BE CENTERED ON NAMEPLATE.
3. NAMEPLATES TO BE SECURED USING EPOXY GLUE.

REV	DATE	DESCRIPTION	BY	APP	REV	DATE	DESCRIPTION	BY	APP
0	11/2023	ISSUED FOR BID 100%	DJM	MET					



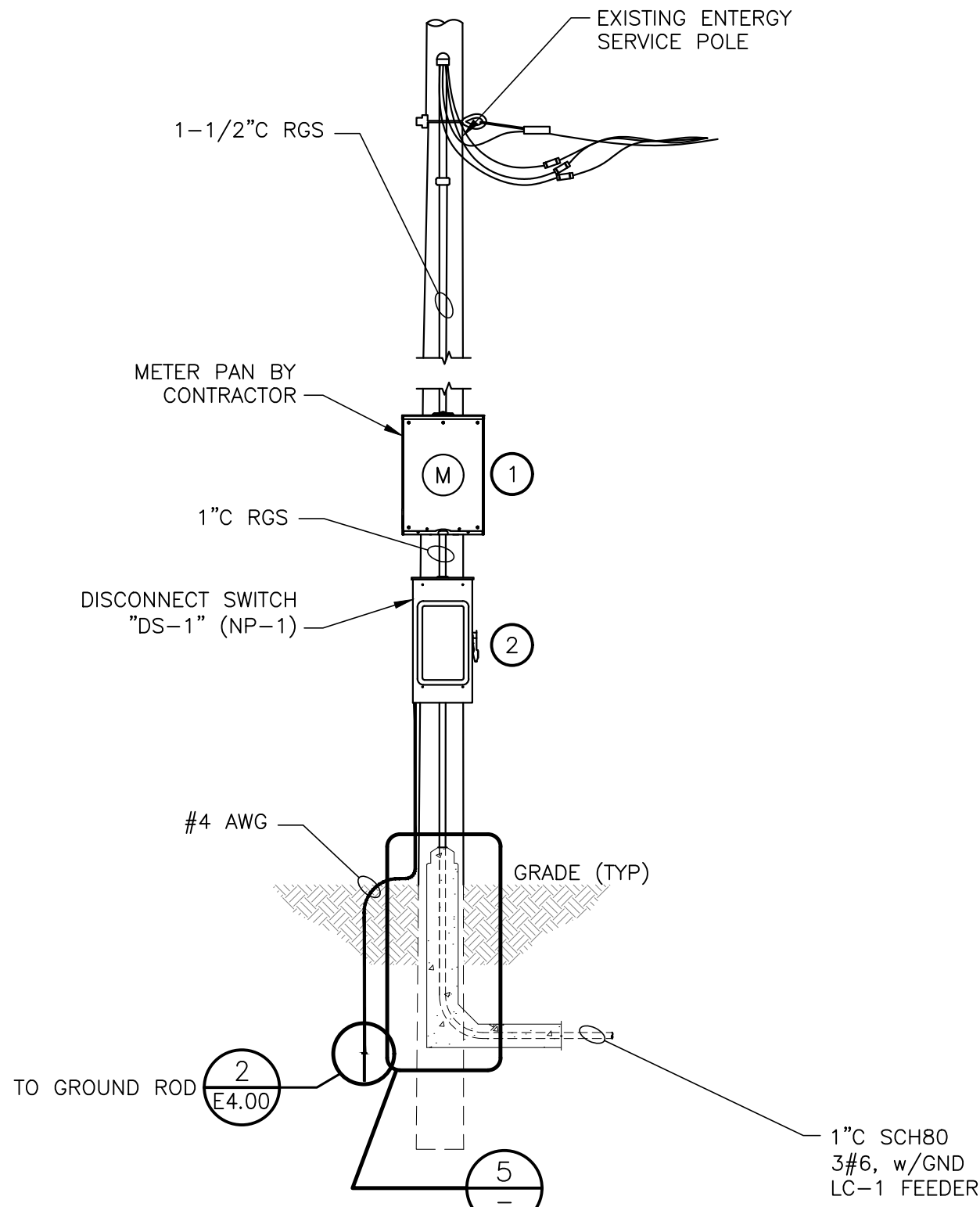
REGIONAL TRANSIT AUTHORITY

Infinity
Engineering Consultants, LLC
Civil | Structural | Mechanical | Electrical | Marine | Transportation
Metairie, LA www.infinityec.com 504-304-0548

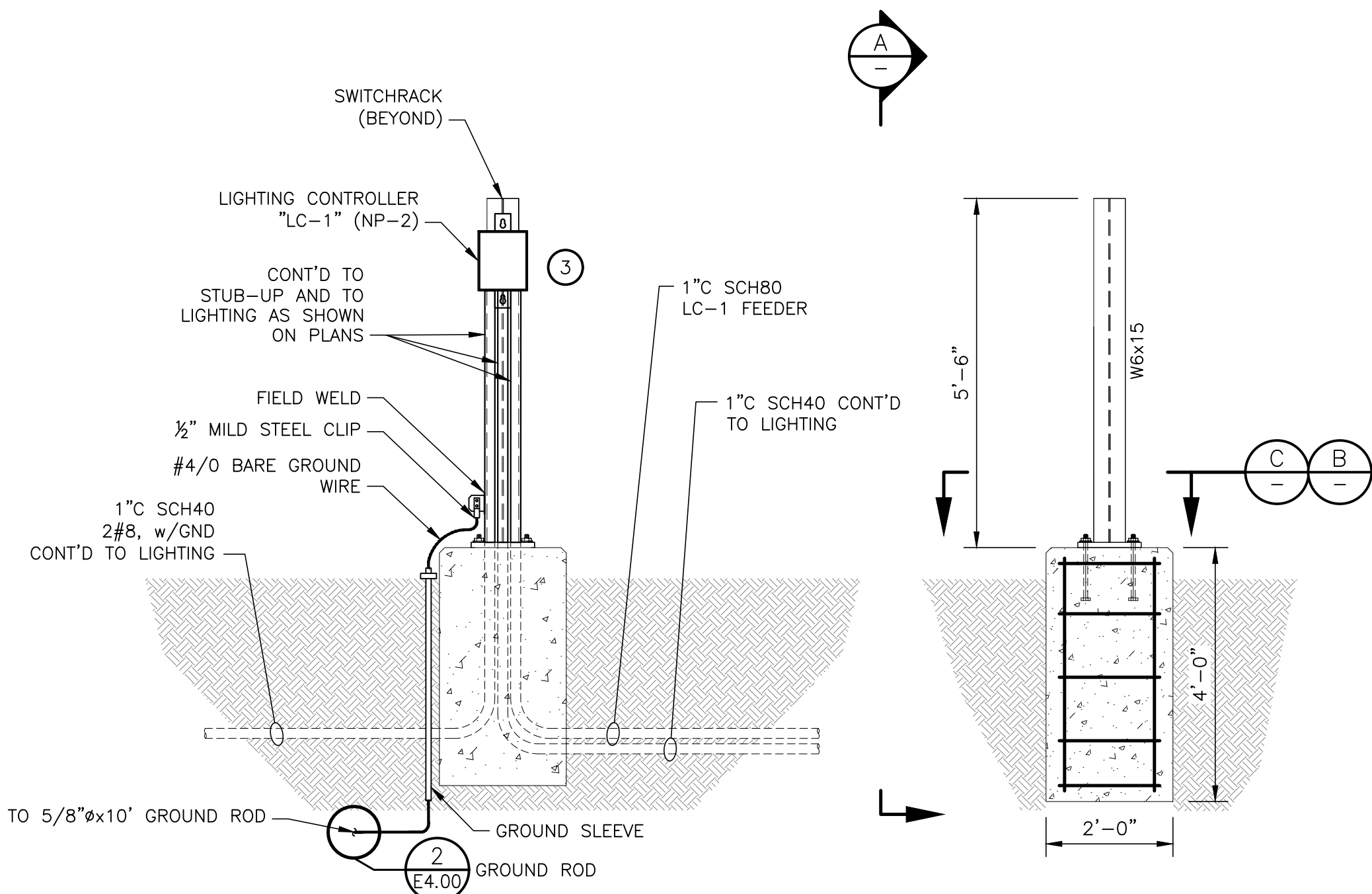
SCALE	NOTED
PROJECT NO.	21-030
RELEASE DATE	11/2023
DESIGNED BY	M. TORRES
DRAWN BY	D. MUHSIN
CHECKED BY	J. LAWRENCE
APPROVED BY	M. TORRES

NON-ADVERTISEMENT SHELTER PROGRAM	
DETAILS (1 OF 2)	
SHEET NO.	REV.
21-030-E4.00	0

11/13/2023 11:13:27 AM — P:\Projects\21-030 RTA — Non-Advertisement Shelter Program\Drawings\Drawings by Discipline\Electrical Drawings\ELECTRICAL DETAILS.dwg



ELECTRICAL SERVICE DETAILS 3
SCALE: 1/2" = 1'-0"

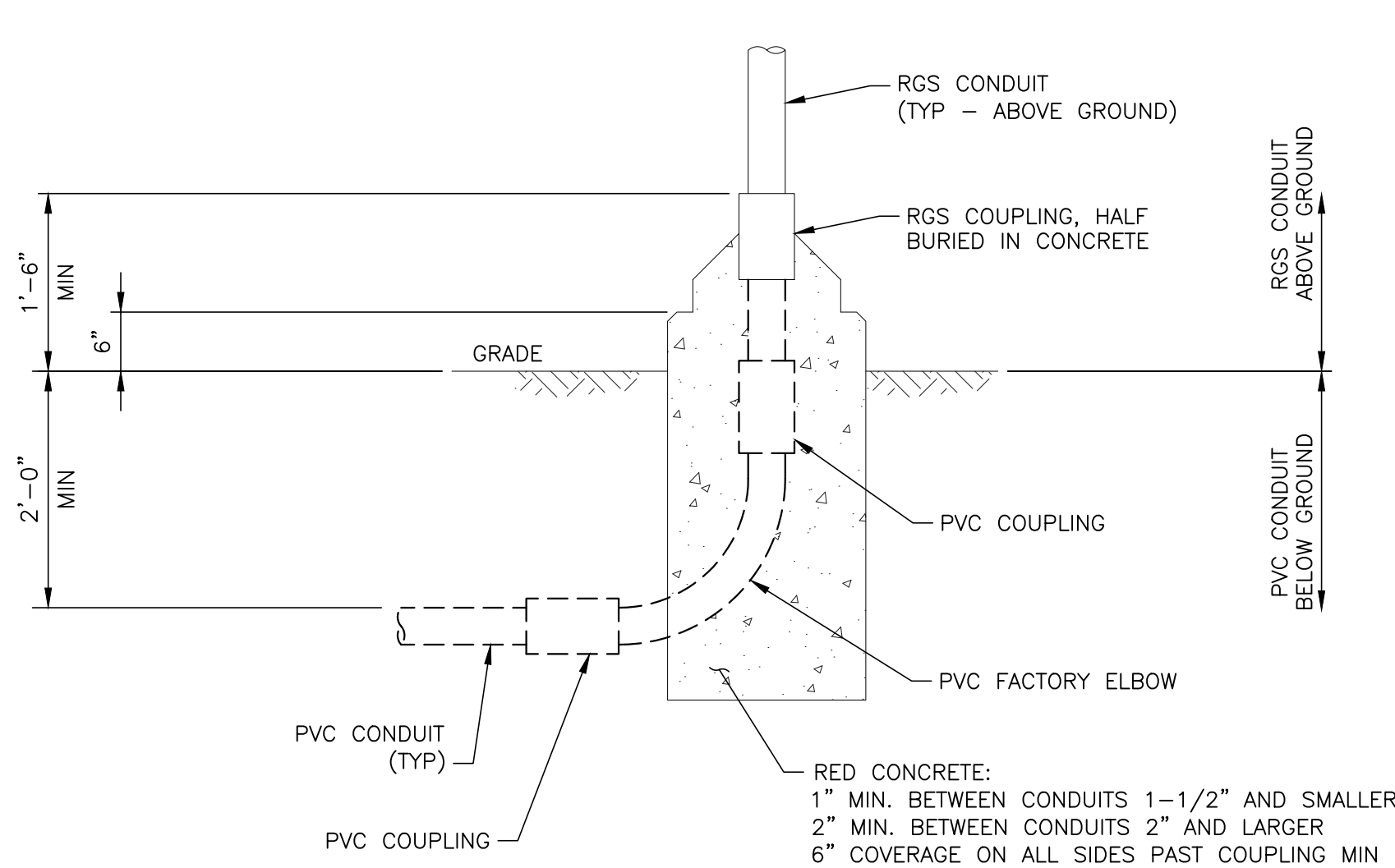


LIGHTING CONTACTOR & SWITCHRACK DETAILS 4
SCALE: 1/2" = 1'-0"

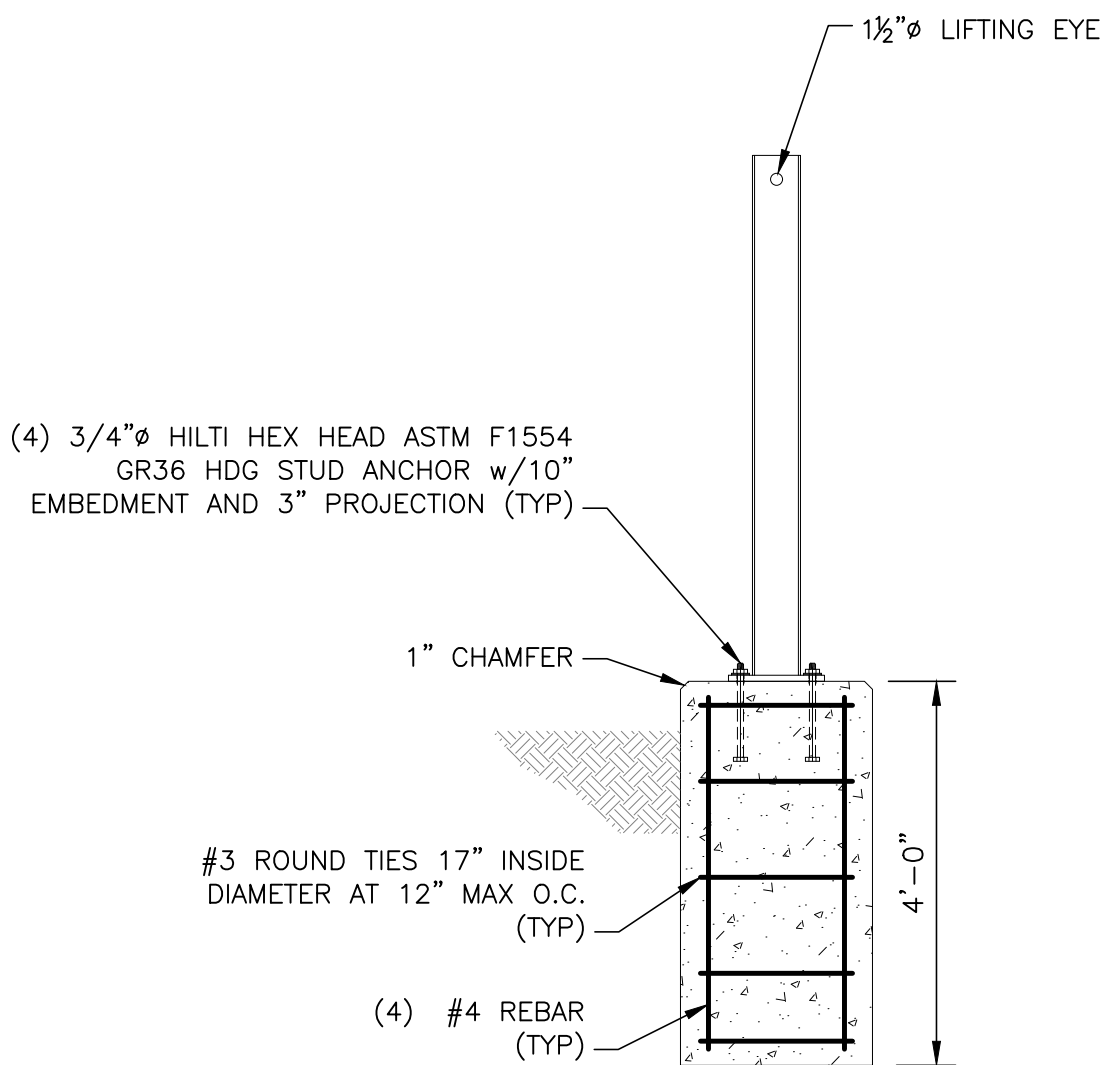
NOTES:

- FOR GENERAL NOTES AND LEGEND, SEE SHT. E1.00 & E1.01
- CONTRACTOR SHALL MOUNT THE SPECIFIED ELECTRICAL ENCLOSURES TO THE SWITCHRACK. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND DRILLING THE MOUNTING BOLT PATTERN OF THE ENCLOSURE PRIOR TO GALVANIZING. ONLY GALVANIZED UNISTRUT SHALL BE USED IF REQUIRED
- SWITCHRACK SHALL BE HOT DIPPED GALVANIZED PRIOR TO INSTALLATION. NO FIELD DRILLING ALLOWED
- CONTRACTOR SHALL COORDINATE WITH ENTERGY REPRESENTATIVES TO ENSURE ALL REQUIREMENTS ARE MET TO FACILITATE A COMPLETE INSTALLATION PER ENTERGY REQUIREMENTS
- RGS CONDUIT REQUIRED ABOVE GROUND USE; SCH40 PVC & SCH80 PVC ALLOWED ONLY FOR UNDERGROUND USE, AND PENETRATIONS
- CONTRACTOR SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS, AT&T, COX CABLE, AND ALL OTHER ENTITIES WITH EXISTING SYSTEMS IN PLACE PRIOR TO COMMENCING WORK

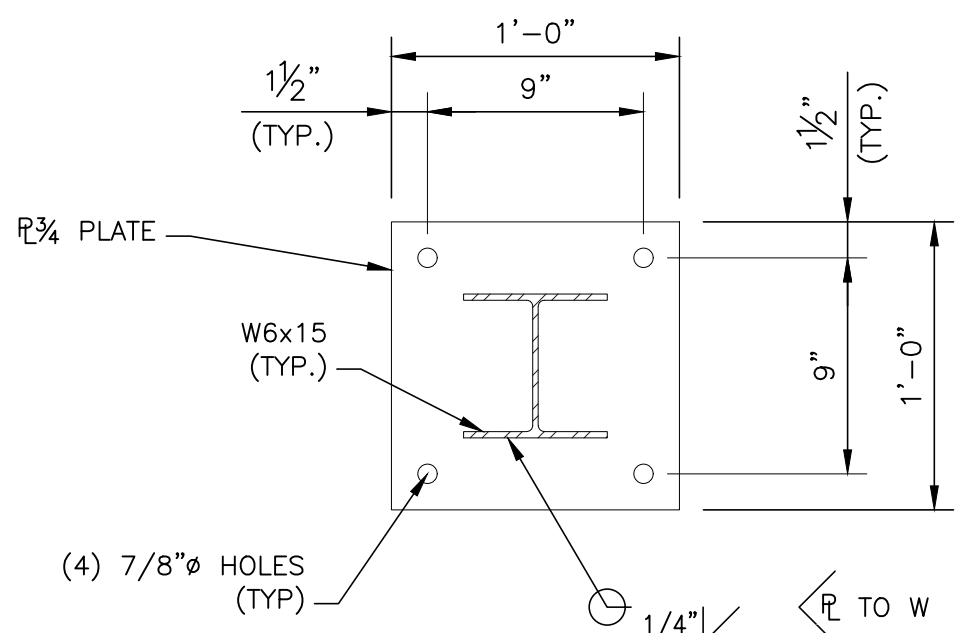
BILL OF MATERIALS		
TYPE	QUANTITY	DESCRIPTION
1	1	METER PAN, CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY TO PROVIDE A COMPLETE INSTALLATION AS NECESSARY
2	1	60 AMP, 2-POLE, GENERAL DUTY SAFETY SWITCH, FUSED AT 30A, 240VAC, NEMA 3R, ENCLOSURE DIMENSIONS: 10.81"H x 6.38"W x 3.75"D OR APPROVED EQUAL
3	1	LIGHTING CONTROLLER, 120/240VAC, 30 AMP, 2 POLE, 360 SWIVEL PHOTO-CONTROL RECEPTACLE, SUPPLY SIDE BREAKER WITH SURGE PROTECTION, NEMA 4X ENCLOSURE, SS PADLOCKABLE LATCH, RIPLEY #CC302NOEISWPL1C1 w/(2) ADDED LOAD TERMINALS OR APPROVED EQUAL



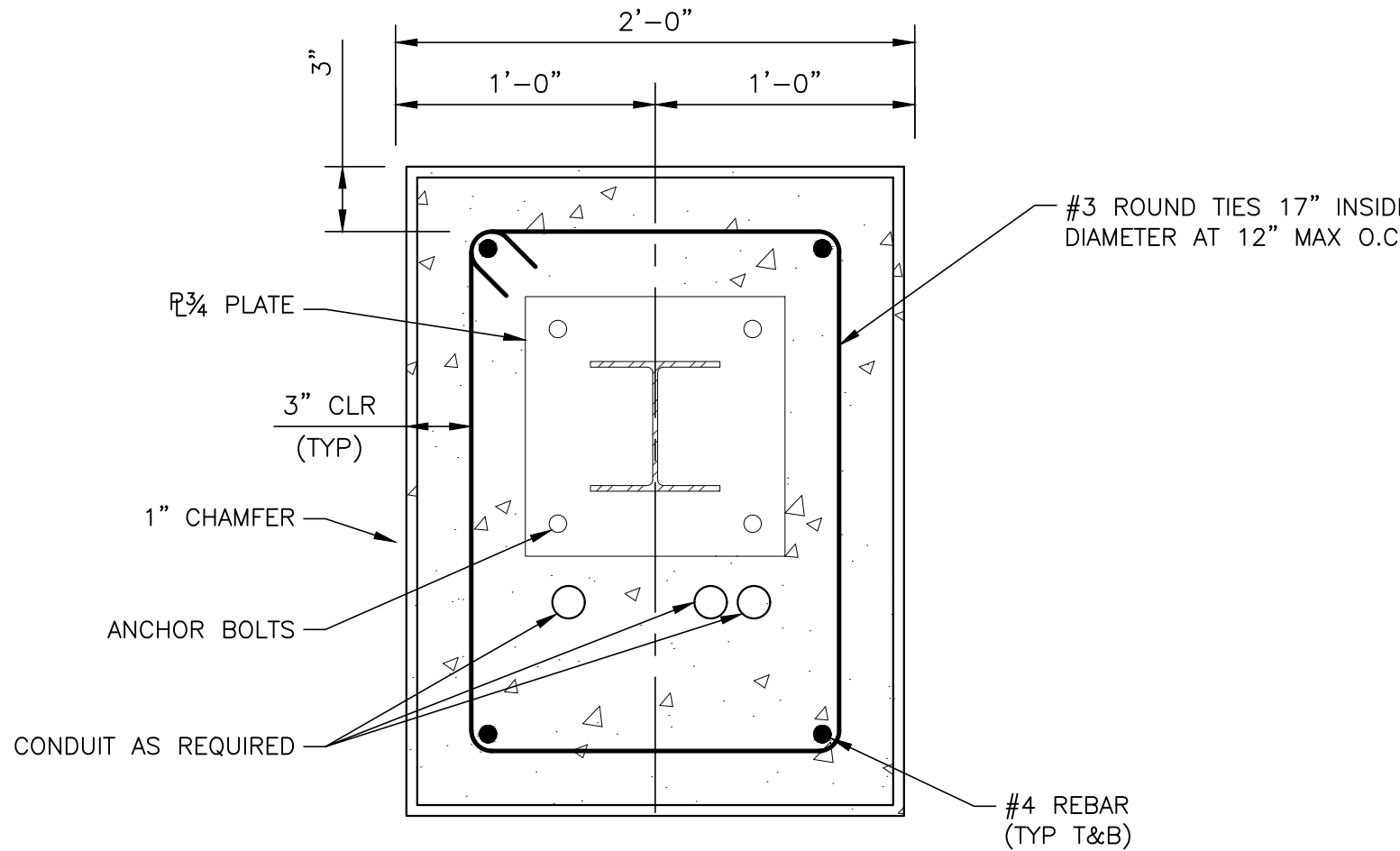
ELECTRICAL SERVICE CONDUIT STUB-UP DETAIL 5
SCALE: 3/4" = 1'-0"



SWITCHRACK SECTION A
SCALE: 1/2" = 1'-0"



STEEL PLATE SECTION B
SCALE: 1 1/2" = 1'-0"



FOUNDATION SECTION C
SCALE: 1 1/2" = 1'-0"

REV	DATE	DESCRIPTION	BY	APP	REV	DATE	DESCRIPTION	BY	APP
0	11/2023	ISSUED FOR BID 100%	DJM	MET					



SCALE	NOTED
PROJECT NO.	21-030
RELEASE DATE	11/2023
DESIGNED BY	M. TORRES
DRAWN BY	D. MUHSIN
CHECKED BY	J. LAWRENCE
APPROVED BY	M. TORRES

NON-ADVERTISEMENT SHELTER PROGRAM	
DETAILS (2 OF 2)	
SHEET NO.	REV.
21-030-E4.01	0