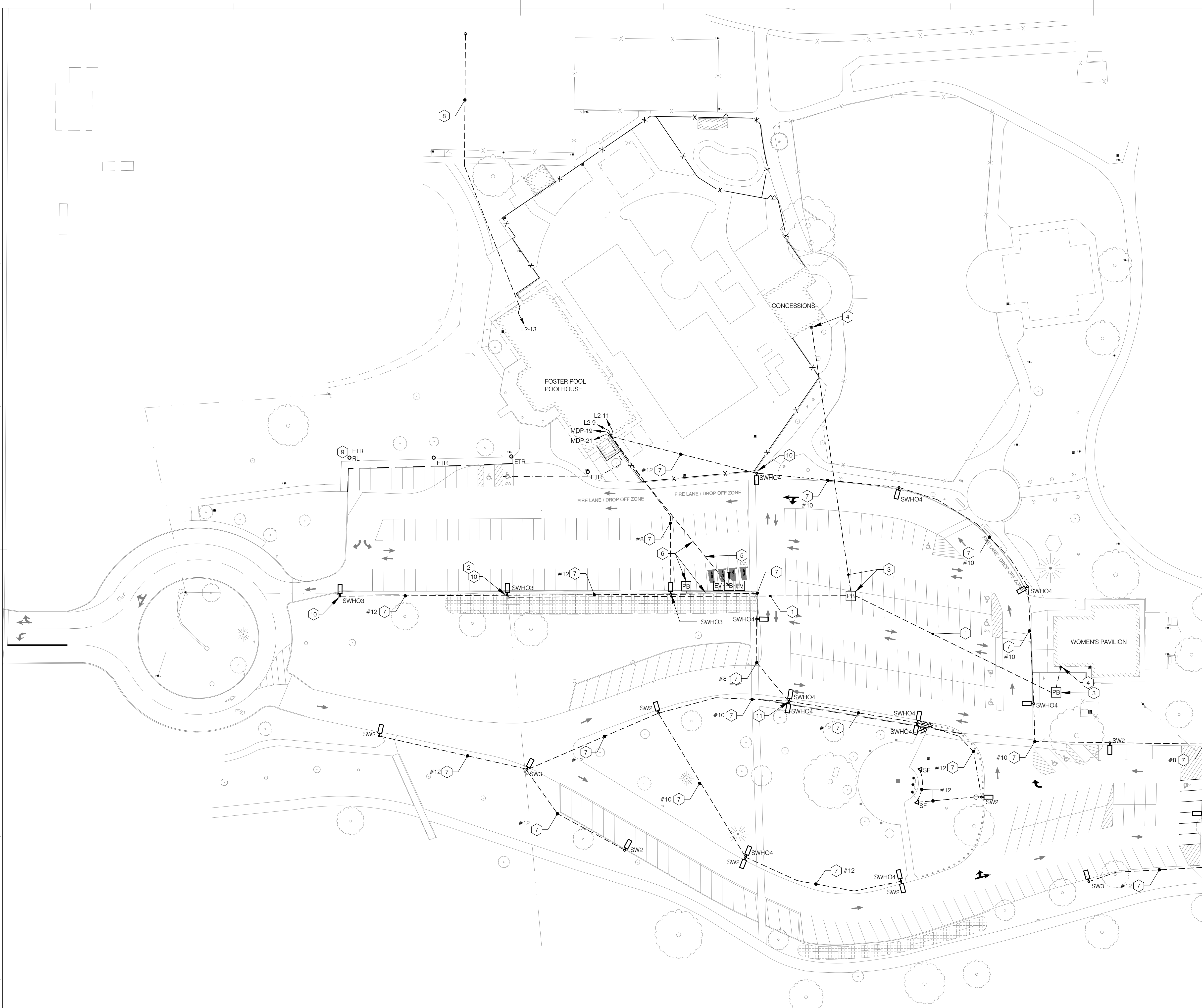


GENERAL ELECTRICAL NOTES

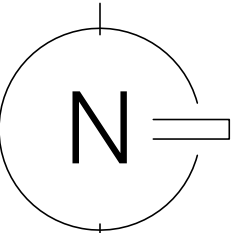
- B. MINIMUM UNDERGROUND CONDUIT SIZE SHALL BE 1 INCH, UNLESS OTHERWISE NOTED.
- C. TELEPHONE, DATA, CABLE TV, AND ELECTRIC UTILITY DUCT BANKS SHALL BE INSTALLED PER RESPECTIVE UTILITY COMPANY/PROVIDERS REQUIREMENTS.
- D. CAP ALL CONDUIT STUBS AND MARK ENDS WITH IRON PINS.
- E. PROVIDE PULL-WIRE IN ALL DUCT BANKS.
- F. PROVIDE METALLIC MARKING TAPE OVER ALL DUCTS/DUCTBANKS.
- G. TOP OF ELECTRICAL DUCT BANK SHALL BE A MINIMUM OF 36" BELOW FINISHED GRADE. TOP OF TELEPHONE, DATA, CABLE TV (COMMUNICATIONS) DUCT BANKS SHALL BE A MINIMUM OF 24" BELOW FINISHED GRADE, UNLESS OTHERWISE REQUIRED BY RESPECTIVE UTILITY COMPANIES.
- H. CONCRETE ENCASE DUCT BANKS AND/OR CONDUIT WHERE ROUTED UNDER DRIVEWAYS, ROADWAYS OR PARKING AREAS AS REQUIRED BY LOCAL AHJ.
- I. COORDINATE ROUTING AND INSTALLATION OF PROPOSED ELECTRIC PRIMARY, ELECTRIC SECONDARY, AND COMMUNICATION DUCTBANKS. COORDINATE PATHS, DEPTHS AND CONFIGURATIONS TO MAINTAIN CODE REQUIRED DEPTHS FROM TOP OF DUCTBANK TO FINISHED GRADE WHERE DUCTBANKS CROSS PATHS.
- J. CONTRACTORS SHALL RETURN THE EXISTING AREAS BACK TO ITS ORIGINAL CONDITION WHERE NEW WORK IS TO BE PERFORMED IN EXISTING AREAS TO REMAIN.
- K. REFERENCE CIVIL UTILITY PLANS FOR SITE UTILITY DESIGN INFORMATION. COORDINATE WORK WITH OTHER TRADES.
- L. CONTRACTOR SHALL INCLUDE ALL TRENCHING AND BACKFILLING ASSOCIATED WITH ELECTRICAL WORK IN BID.
- M. WHERE DEVICES AND EQUIPMENT ARE SUBJECT TO WATER AND OR MOISTURE, THE DEVICE OR ASSOCIATED CIRCUIT SHALL BE GFI PROTECTED. EQUIPMENT ENCLOSURES SHALL BE NEMA 3R RATED AT A MINIMUM.
- N. REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR CONDUIT SIZES AND QUANTITIES ASSOCIATED WITH THE UNDERGROUND PRIMARY AND SECONDARY SERVICE LATERAL DUCT BANKS.
- Q. ELECTRICAL CONTRACTOR SHALL BACKFILL ALL ELECTRICAL TRENCHES USING CLEAN FILL MATERIAL FREE OF ORGANIC CONTAMINATIONS AND OTHER DELETERIOUS MATTER. PLACE BACKFILL MATERIAL IN 8" THICK LAYERS WITH EACH LIFT COMPACTED AT NEAR OPTIMUM MOISTURE CONTENT. COMPACT LIFTS TO ACHIEVE A MINIMUM IN PLACE DENSITY OF 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698.
- R. ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES, AND DRAINAGE PRIOR TO TRENCHING OR AUGERING FOR POLE BASE (TYPICAL).

ELECTRICAL SITE PLAN KEYNOTES

- 1 UNDERGROUND SECONDARY SERVICE LATERAL. REFERENCE ELECTRICAL ONE LINE DIAGRAM B FOR ADDITIONAL INFORMATION.
- 2 EXISTING UTILITY POLE TO REMAIN. NEW POLE MOUNTED TRANSFORMERS TO BE INSTALLED PER POWER COMPANY REQUIREMENTS. REFERENCE ELECTRICAL ONE-LINE DIAGRAM B FOR ADDITIONAL INFORMATION.
- 3 EXISTING UTILITY POLE TO BE REMOVED. EXISTING SECONDARY SERVICE TO BE INTERCEPTED AND CUT BACK TO NEW IN GRADE PULL BOX AT BASE OF REMOVED POLE. E.C. TO TIE NEW SECONDARY FEEDERS INTO EXISTING WITHIN PULLBOX. CONDUCTOR SIZE AND TYPE TO MATCH EXISTING.
- 4 EXISTING POWER COMPANY METER AND CT CABINET TO REMAIN.
- 5 PROVIDE 1" (PVC SCHEDULE 40) WITH (4) #8 & (1) #10 GND FROM PANEL EV TO OUTDOOR RATED PULL BOX. EXTEND (2) #8 & (1) #10 GND TO EACH CHARGING STATION.
- 6 PROVIDE 1" (PVC SCHEDULE 40) WITH PULLSTRING FROM PANEL EV TO OUTDOOR RATED PULL BOX FOR FUTURE EV CHARGING STATIONS.
- 7 PROVIDE (1) 2" (PVC SCHEDULE 40) WITH WIRE SIZE INDICATED ON PLANS FOR SITE LIGHTING AND (2) #10 & (1) #12 GND FOR DATA/SECURITY POWER. PROVIDE (1) 2" (PVC SCHEDULE 40) WITH PULLSTRING FOR DATA.
- 8 PROVIDE (1) 2" (PVC SCHEDULE 40) WITH (2) #12 & (1) #12 GND AND (1) 2" (PVC SCHEDULE 40) WITH PULLSTRING CAPPED FOR FUTURE USE. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION.
- 9 EXISTING LIGHT FIXTURE TO BE RELOCATED TO LOCATION SHOWN ON PLANS. EXTEND EXISTING CIRCUITING AS REQUIRED.
- 10 EXISTING UTILITY POLE TO REMAIN. NEW LIGHT FIXTURE TO BE INSTALLED ON EXISTING POLE. PROVIDE ALL REQUIRED MOUNTING ACCESSORIES FOR A COMPLETE INSTALLATION.
- 11 EXISTING UTILITY POLE TO BE REMOVED. ELECTRICAL PANEL LOCATED AT POLE TO BE COMPLETELY REMOVED BACK TO SOURCE. E.C. SHALL TRACE ALL ASSOCIATED CIRCUITING AND TIE ALL EXISTING TO REMAIN LIGHTING INTO NEW SITE LIGHTING CIRCUIT.



1 ELECTRICAL SITE PLAN
SCALE: 1" = 40'-0"



City of Lakewood
Lakewood Park
Parking Lot
Lakewood, Ohio

Electrical Site Plan

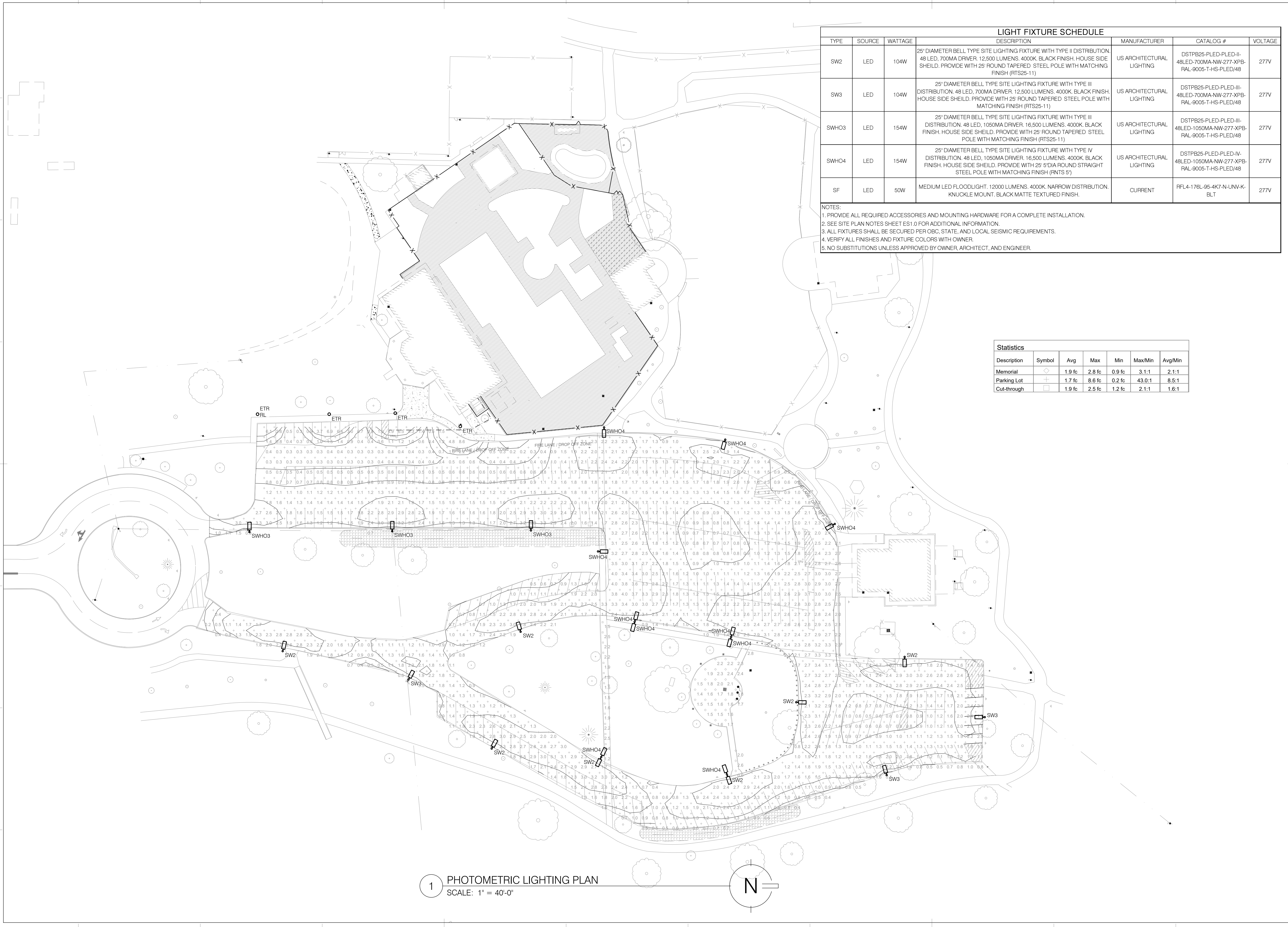
Issue/Revision:
0 02/15/2023 For ABR

Project Number: 5027 0121
Design by: ADG
Drawn by: ADG
Checked by: GSH

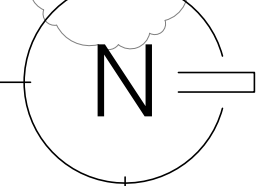
LIGHT FIXTURE SCHEDULE						
TYPE	SOURCE	WATTAGE	DESCRIPTION	MANUFACTURER	CATALOG #	VOLTAGE
SW2	LED	104W	25" DIAMETER BELL TYPE SITE LIGHTING FIXTURE WITH TYPE II DISTRIBUTION 48 LED, 700MA DRIVER, 12,500 LUMENS, 4000K, BLACK FINISH, HOUSE SIDE SHEILD. PROVIDE WITH 25" ROUND TAPERED STEEL POLE WITH MATCHING FINISH (RTS25-11)	US ARCHITECTURAL LIGHTING	DSTPB25-PLD-PLD-II-48LED-700MA-NW-277-XPB-RAL-9005-T-HS-PLD/48	277V
SW3	LED	104W	25" DIAMETER BELL TYPE SITE LIGHTING FIXTURE WITH TYPE III DISTRIBUTION, 48 LED, 700MA DRIVER, 12,500 LUMENS, 4000K, BLACK FINISH, HOUSE SIDE SHEILD. PROVIDE WITH 25" ROUND TAPERED STEEL POLE WITH MATCHING FINISH (RTS25-11)	US ARCHITECTURAL LIGHTING	DSTPB25-PLD-PLD-III-48LED-700MA-NW-277-XPB-RAL-9005-T-HS-PLD/48	277V
SWHO3	LED	154W	25" DIAMETER BELL TYPE SITE LIGHTING FIXTURE WITH TYPE III DISTRIBUTION, 48 LED, 1050MA DRIVER, 16,500 LUMENS, 4000K, BLACK FINISH, HOUSE SIDE SHEILD. PROVIDE WITH 25" ROUND TAPERED STEEL POLE WITH MATCHING FINISH (RTS25-11)	US ARCHITECTURAL LIGHTING	DSTPB25-PLD-PLD-III-48LED-1050MA-NW-277-XPB-RAL-9005-T-HS-PLD/48	277V
SWHO4	LED	154W	25" DIAMETER BELL TYPE SITE LIGHTING FIXTURE WITH TYPE IV DISTRIBUTION, 48 LED, 1050MA DRIVER, 16,500 LUMENS, 4000K, BLACK FINISH, HOUSE SIDE SHEILD. PROVIDE WITH 25" 5'DIA ROUND STRAIGHT STEEL POLE WITH MATCHING FINISH (FNTS 5')	US ARCHITECTURAL LIGHTING	DSTPB25-PLD-PLD-IV-48LED-1050MA-NW-277-XPB-RAL-9005-T-HS-PLD/48	277V
SF	LED	50W	MEDIUM LED FLOODLIGHT, 12000 LUMENS, 4000K, NARROW DISTRIBUTION, KNUCKLE MOUNT, BLACK MATTE TEXTURED FINISH.	CURRENT	RFL-176L-95-4K7-N-UNV-K-BLT	277V

- NOTES:
1. PROVIDE ALL REQUIRED ACCESSORIES AND MOUNTING HARDWARE FOR A COMPLETE INSTALLATION.
 2. SEE SITE PLAN NOTES SHEET ES1.0 FOR ADDITIONAL INFORMATION.
 3. ALL FIXTURES SHALL BE SECURED PER OBC, STATE, AND LOCAL SEISMIC REQUIREMENTS.
 4. VERIFY ALL FINISHES AND FIXTURE COLORS WITH OWNER.
 5. NO SUBSTITUTIONS UNLESS APPROVED BY OWNER, ARCHITECT, AND ENGINEER.

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Memorial	○	1.9 fc	2.8 fc	0.9 fc	3.1:1	2.1:1
Parking Lot	+	1.7 fc	8.6 fc	0.2 fc	43.0:1	8.5:1
Cut-through	□	1.9 fc	2.5 fc	1.2 fc	2.1:1	1.6:1



1 PHOTOMETRIC LIGHTING PLAN
SCALE: 1" = 40'-0"



City of Lakewood
Lakewood Park
Parking Lot
Lakewood, Ohio

Photometric Lighting
Plan

Issue/Revision:
0 02/15/2023 For ABR

Project Number: 5027 0121
Design by: ACG
Drawn by: ACG
Checked by: CSB

ES1.1

PENDANT MOUNTED ARM
XPB

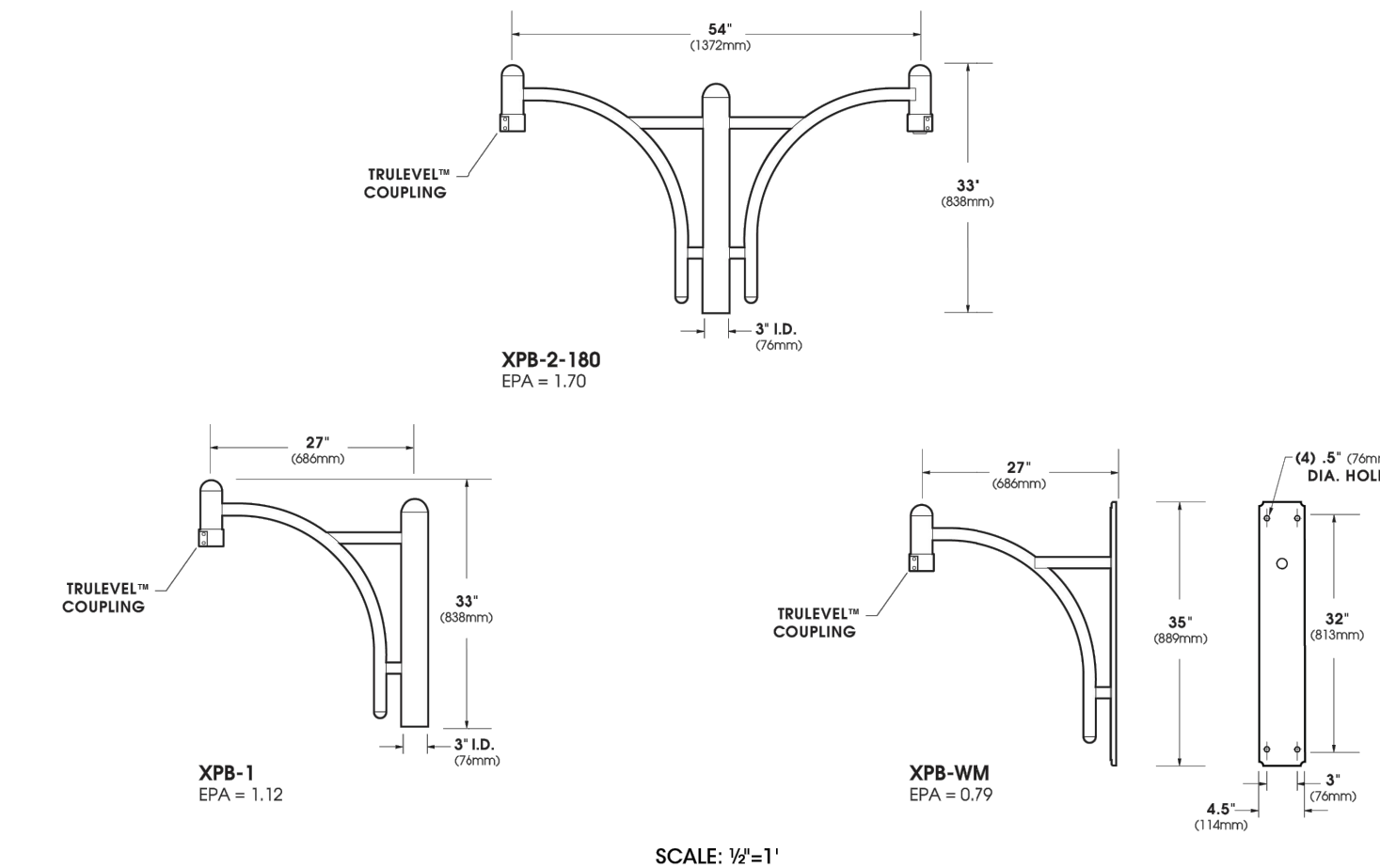
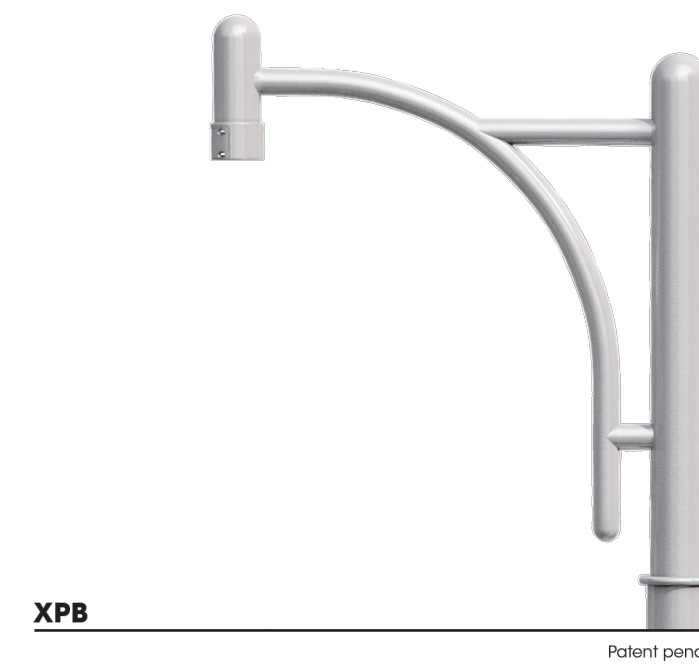
PROJECT NAME: _____

PROJECT TYPE: _____

FEATURES

Arm
90° extruded aluminum (6063-T1 alloy) 1 5/8" diameter swept arm with 2 horizontal extruded aluminum support arms welded to an extruded aluminum hub with a domed pole cap. The mounting hub is designed for a 2 7/8" x 6" tenon and has 8 (4 x 2) recessed socket head leveling screws. All welds are blended to create a one-piece, unified appearance. Fixture mounting uses the pendant Truelevel mounting to allow for luminaire leveling in the field. A wiring harness is provided through the arm assembly terminating in the Truelevel hub with quick-connects. All hardware is stainless steel.

Finish
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step media blast and iron phosphate pretreatment for protection and paint adhesion. 400°F bake for maximum hardness and durability.



U.S. Pole Co Inc. 600 West Avenue O, Fremont, CA 94551 Phone (847) 233-2000 Fax (847) 233-2001 www.uspole.com



2021301



SOLID STATE AREA LIGHTING
DSTPB SERIES-PLED

PROJECT NAME: _____

FIXTURE TYPE: _____

FEATURES

Luminaire
Upper housing is heavy gauge cast aluminum (min. .125" wall; alloy >0.2% Cu for DSTPB25) or spun aluminum with reveal (.125" min. wall for DSTPB20). Lower housing is 0.080" thick spun aluminum with integrated LED module seat. Lower housing is vented at top and bottom for convective cooling of LED module. Top Driver chamber is barriered from LED Module chamber. Truelevel ball coupling mount is welded to housing and facilitates quick leveling and installation.

LED Optics
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side and functions as a house side shielding element. Reflectors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments.

LED Emitters
High output LED's are utilized with drive currents ranging from 350mA to 875mA. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

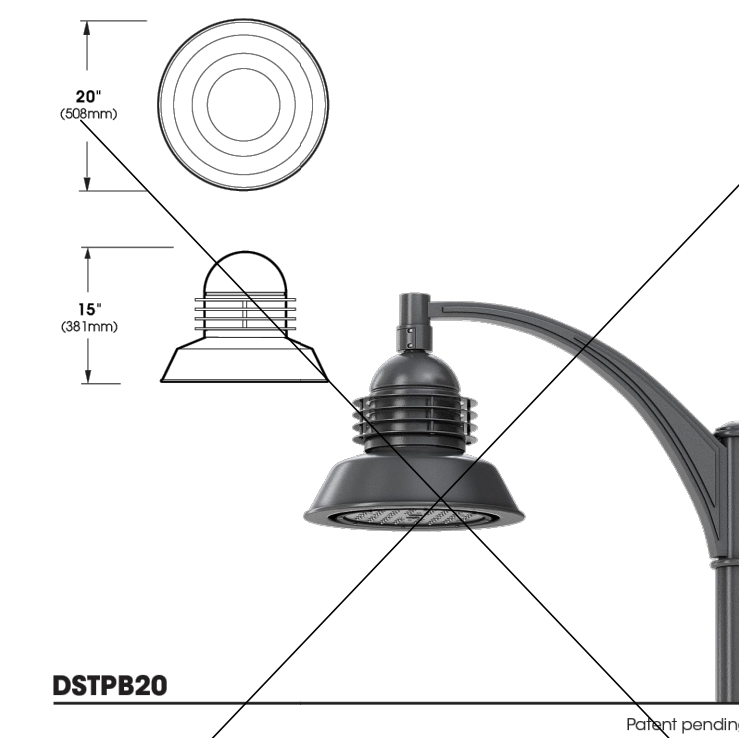
LED Driver
Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F to 40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. (0-10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with 20KV surge protector for field installation.)

Amber LED's
PCA (Phosphor Converted Amber) LED's utilize phosphors to create color output similar to LPS lamps and have a slight output in the blue spectral bandwidth. TRA (True Amber) LED's utilize material that emits light in the amber spectral bandwidth only without the use of phosphors.

Finish
Polyester powder coat incorporates four step iron phosphate process to pretreat metal surface for maximum adhesion. Top coat is baked at 400°F for maximum hardness and exterior durability.



DSTPB25



DSTPB20

U.S. Pole Co Inc. 600 West Avenue O, Fremont, CA 94551 Phone (847) 233-2000 Fax (847) 233-2001 www.uspole.com



2021090



ROUND TAPERED STEEL POLE
RTS

PROJECT NAME: _____

PROJECT TYPE: _____

FEATURES

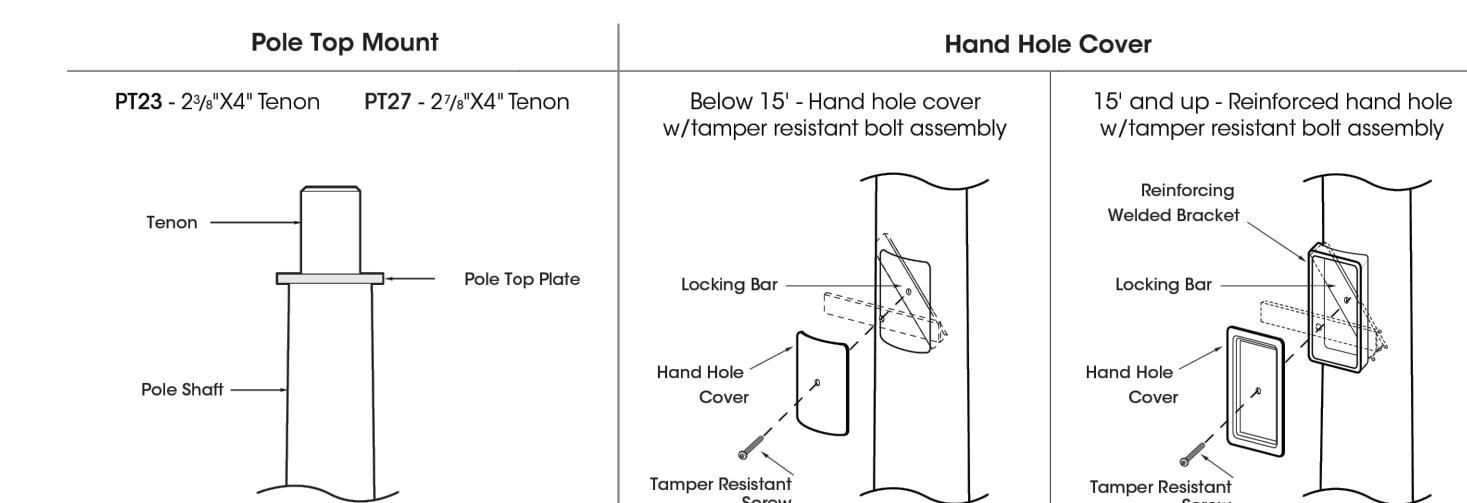
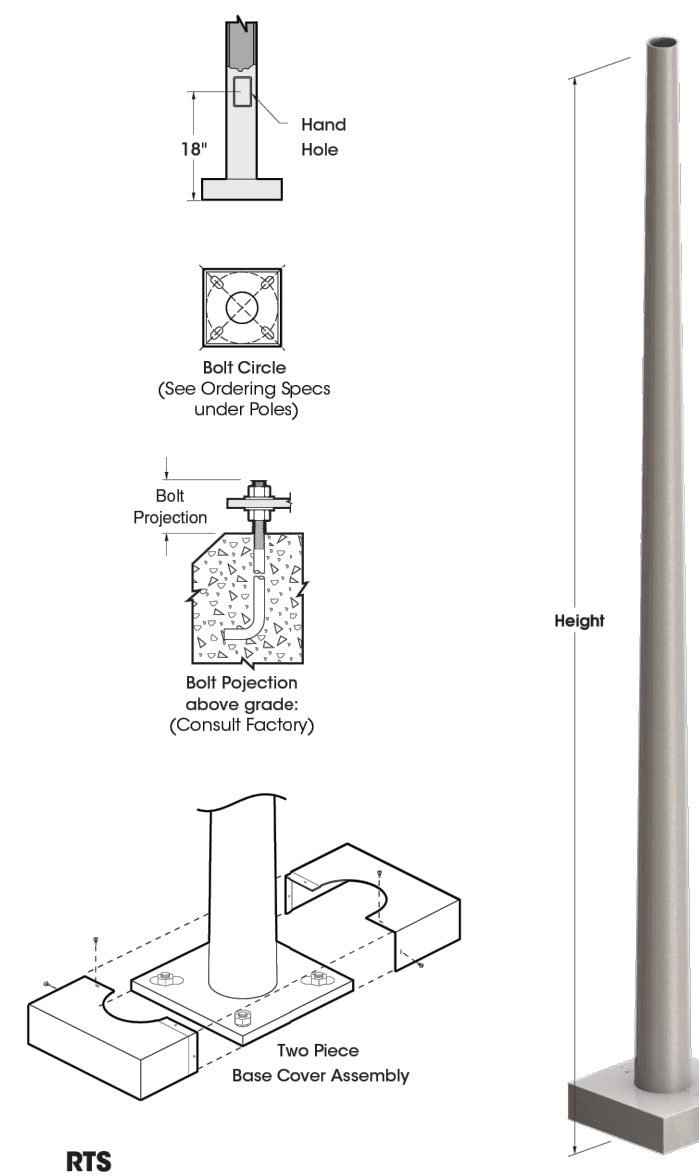
Shaft
One or two piece construction fabricated from coil stock. Weldable grade. Hot rolled commercial quality carbon steel. Guaranteed minimum yield strength 55,000 P.S.I. Shaft has uniform taper of approximately .14" per foot. Wall thickness 11 GA. (.120 wall) or 7 GA. (.180 wall) as specified. Flush reinforced hand hole is furnished with cover. Shaft is furnished with ground lug located inside pole on wall opposite hand hole.

Base Plate
Fabricated from structural quality hot rolled steel. Meets or exceeds minimum yield strength of 36,000 P.S.I. base telescopes and is circumferentially welded to pole shaft. Slotted bolt holes provide 1" flexibility on either side of bolt circle centerline.

Anchorage
(4) anchor bolts fabricated from hot rolled steel bar. Minimum yield strength of 50,000 P.S.I. bolts have 1" bend on one end and are threaded on the other. Bolts are fully galvanized and are furnished with two nuts and two washers.

Base Cover
Fabricated from heavy gauge quality carbon steel. Two-piece cover conceals base.

Finish
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step media blast and iron phosphate pretreatment for protection and paint adhesion. 400°F bake for maximum hardness and durability.



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2020269



BEACON
RATIO Flood
MEDIUM AND LARGE

DATE: _____ LOCATION: _____
TYPE: _____ PROJECT: _____
CATALOG #: _____

- FEATURES**
- Medium and Large LED flood with a variety of NEMA distributions for lighting applications such as area safety/security, accent, flag pole columns, or signs
 - Part of the Ratio flood series, this luminaire was designed in cohesion with the sitearea products to provide a sleek and timeless look
 - Features a dense optical array, providing reduced pixelation and increased visual comfort without compromising performance
 - Applications include safety/security, accent, flag pole, columns and signs

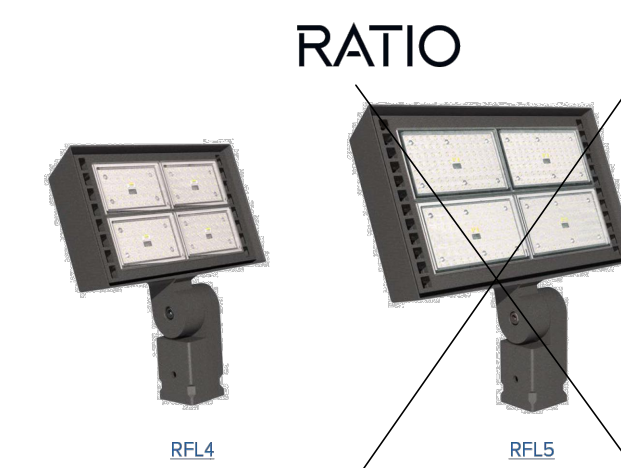


SPECIFICATIONS

- CONSTRUCTION**
- Corrosion resistant, rugged die-cast aluminum housing with powder coat paint finish
 - High impact UV stabilized acrylic outer lens protects LEDs and allows for cleaning and debris removal
 - Internal venting fins create optimal heat dissipation and allow all water to drain from the face of the luminaire
 - Visor and louvers options
 - Easy maintenance access to electrical components with removal of four screws from back of fixture housing
 - Lens hardware is internal to the fixture allowing for uniform pressure on the gasket for an optimal water tight seal
- OPTICS**
- 176 or 360 midpower LEDs
 - Stock Versions: 4000K and 5000K CCT
 - Variety of NEMA distributions: - N (3x3), M (4x4), and W (6x6). Stock version Wide (6x6) only
 - Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- CONTROLS**
- Photo control, occupancy sensor and wireless available for complete on/off dimming control

- CONTROLS (CONTINUED)**
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for wrist lock photocontrols or wireless control modules (control accessories sold separately)
 - 0-10V dimming leads available for use with control devices (provided by others), must specify lead length
 - 0-10V dimming driver standard, continuous dimming option to have leads pulled out for easy connection
- INSTALLATION**
- Interchangeable knuckle and trunnion mounting options
 - Knuckle arm fitter option available for 2-3/4" OD sensor. 180 degrees of adjustability (with no options). 4 degree adjustable increments
 - Trunnion option available for surface and crossarm mounting using (1) 3/4" or (2) 1/2" size through bolts

- ELECTRICAL (CONTINUED)**
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
 - 10KA surge protector optional
- CERTIFICATIONS**
- Fixture is IP66 rated
 - Listed to UL1598 for use in wet locations
 - DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
 - This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020
- WARRANTY**
- 5 year limited warranty



KEY DATA	
Lumen Range	12,000-30,000
Wattage Range	124-266
Efficacy Range (LPW)	116-125
Weights lbs. (kg)	16.0-25.7 (7.2-11.6)



currentlighting.com/beacon
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Page 1 of 6
Rev 1/29/22

RATIO_FLOOD_RFL4_8_SPEC

City of Lakewood
Lakewood Park
Parking Lot

Lakewood, Ohio

Electrical Site
Lighting Cutsheets

Issue/Revision:
0 02/15/2023 For ABR

Project Number: 5027 0121
Design by: ACG
Drawn by: ACG
Checked by: CSB

ES1.2

GENERAL ELECTRICAL NOTES

- A. INSTALL ALL EXPOSED RACEWAYS PARALLEL OR PERPENDICULAR TO WALLS OR STRUCTURAL MEMBERS. CONDUITS SHALL BE RUN ALONG THE STRUCTURAL SURFACE (INCLUDING ALL RADIIUSES AND CONTOURS) AND SHALL BE INSTALLED SO THAT THEY DO NOT OBSTRUCT PASSAGEWAYS OR ACCESS TO EQUIPMENT. ALL VISIBLE CONDUITS SHALL BE INSTALLED IN A NEAT AND ORDERLY FASHION AND MULTIPLE RACEWAYS SHALL BE GROUPED TOGETHER WHERE POSSIBLE. ALL RACEWAYS VISIBLE TO THE PUBLIC SHALL BE APPROVED BY THE ARCHITECT, OWNER, AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE CLEAR AND LEGIBLE CONDUIT ROUTING PLANS TO THE ARCHITECT AND GENERAL CONTRACTOR FOR REVIEW TWO WEEKS PRIOR TO SCHEDULED WORK.
- B. ENSURE THAT ALL MECHANICAL EQUIPMENT DISCONNECTING MEANS ARE READILY ACCESSIBLE AND PROVIDED WITH NEC REQUIRED CLEARANCES. COORDINATE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR AND GENERATOR CONTRACTOR PRIOR TO ROUGH-IN.
- C. COORDINATE ALL CEILING MOUNTED DEVICES, LIGHT FIXTURES, FLOOR MOUNTED DEVICES, AND EQUIPMENT WITH STRUCTURAL PLANS, ARCHITECTURAL PLANS, AND THE GENERAL CONTRACTOR IN THE FIELD PRIOR TO ROUGH-IN. ALL ELECTRICAL CONNECTIONS SHALL MEET LOCAL, STATE, AND NATIONAL CODE REQUIREMENTS.
- D. PROVIDE A 4" HOUSEKEEPING PAD FOR ALL FLOOR MOUNTED SWITCHGEAR, SWITCHBOARDS, AND TRANSFORMERS UNLESS OTHERWISE NOTED. COORDINATE HOUSEKEEPING PAD WITH THE ARCHITECT AND GENERAL CONTRACTOR PRIOR TO INSTALLATION.
- E. PROVIDE FINAL CONNECTION TO ALL ELECTRICALLY POWERED EQUIPMENT UNLESS OTHERWISE NOTED. COORDINATE SCOPE OF WORK WITH GENERAL MECHANICAL, PLUMBING, AND FIRE PROTECTION CONTRACTORS. COORDINATE WORK BETWEEN TRADES AND FIELD CONDITIONS.
- F. PROVIDE ALL REQUIRED SUPPORTS FOR A COMPLETE AND FUNCTIONAL INSTALLATION, INCLUDING BUT NOT LIMITED TO: MISCELLANEOUS STEEL, UNI-STRUT, ALL-THREAD, AIRCRAFT CABLE, ETC. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- G. REFER TO THE MEP SERIES OF DRAWINGS FOR ALL MECHANICAL AND PLUMBING EQUIPMENT CONNECTION REQUIREMENTS. COORDINATE FINAL SCOPE OF WORK IN THE FIELD. VERIFY ALL EQUIPMENT CHANGES WITH MECHANICAL OR PLUMBING CONTRACTOR AND MAKE ADJUSTMENTS AS NECESSARY TO CIRCUIT BREAKERS, FEEDERS, BRANCH CIRCUITS, PANEL SCHEDULES, ETC. ALL CHANGES SHALL BE NOTED ON AS-BUILT PLANS.
- H. VERIFY DIRECTION OF DOOR SWING PRIOR TO ROUGH-IN OF ALL LIGHTING CONTROL DEVICES. DEVICES SHALL BE READILY ACCESSIBLE AND NOT LOCATED BEHIND OPEN DOORS, WALL MOUNTED SHELVING, OR OTHER EQUIPMENT. COORDINATE WITH GENERAL CONTRACTOR AND FIELD CONDITIONS.
- I. REFER TO ARCHITECTURAL CEILING PLANS FOR ALL FIXTURE LOCATIONS WITHIN A CEILING OR CEILING GRID. IN AREAS WITHOUT CEILINGS, FIXTURES SHALL BE CENTERED, ALIGNED, OR SPACED BETWEEN ARCHITECTURAL OR STRUCTURAL ELEMENTS. COORDINATE EXACT LAYOUT IN THE FIELD. VERIFY LOCATIONS WITH ARCHITECT AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN.
- J. LIGHTING CONTROL VENDOR SHALL PROVIDE FINAL LIGHTING CONTROL DRAWINGS DURING CONSTRUCTION SUBMITTAL PHASE. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL SYSTEM REQUIREMENTS FOR A FULLY FUNCTIONAL SYSTEM, INCLUDING ALL CONNECTIONS, PROGRAMMING, ETC.
- K. EXIT SIGNS SHALL BE LOCATED SO THAT THEY ARE NOT BLOCKED FROM VIEW BY LIGHT FIXTURES, ARCHITECTURAL ELEMENTS, EQUIPMENT, SHELVING, ETC. EXIT SIGNS AT EGRESS DOORS SHALL BE CENTERED ABOVE DOOR UNLESS OTHERWISE NOTED. DIRECTIONAL INDICATORS SHALL BE VERIFIED WITH THE EGRESS PATHWAYS AS INDICATED ON THE LIFE SAFETY PLAN. COORDINATE ALL EXIT SIGN LOCATIONS WITH ARCHITECT AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN.
- L. PROVIDE GFCI PROTECTION FOR ALL RECEPTACLES AS REQUIRED PER NEC 210.8. GFCI RECEPTACLES SHALL BE READILY ACCESSIBLE. IN LOCATIONS WHERE THE RECEPTACLE IS NOT READILY ACCESSIBLE, PROVIDE A GFCI CIRCUIT BREAKER FOR PROTECTION. DO NOT INSTALL GFCI RECEPTACLES FED FROM GFCI CIRCUIT BREAKERS.
- M. INSTALL ALL LUMINAIRES PER NEC 410.10. ALL WET LOCATION FIXTURES, INCLUDING BUT NOT LIMITED TO IN-GRADE, EXTERIOR CANOPY, WALL MOUNTED, ETC. SHALL BE PROTECTED FROM WATER PENETRATION. ALL FIXTURES AND COMPONENTS SHALL BE LISTED FOR INTENDED USE.
- N. ALL SYSTEMS AND COMPONENTS INSTALLED WITHIN PLENUMS SHALL BE PLENUM RATED, INCLUDING BUT NOT LIMITED TO POWER WIRING, LOW VOLTAGE WIRING, SECURING METHODS, ETC.
- O. CONDUITS SHALL BE INSTALLED 1 1/2" BELOW UNDERSIDE OF ROOF DECK PER NEC 300.4.
- P. ALL LOW VOLTAGE LIGHTING CONTROL, INCLUDING BUT NOT LIMITED TO 0-10V WIRING, DMX WIRING, ETC. SHALL BE PLENUM RATED OR SHALL BE INSTALLED WITHIN CONDUIT. LOW VOLTAGE CONDUCTORS SHALL NOT BE ROUTED WITHIN THE SAME CONDUIT AS POWER CONDUCTORS. CONTROL WIRING SHALL BE INSTALLED AS REQUIRED BY MANUFACTURER AND NEC REQUIREMENTS.
- Q. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTION REQUIREMENTS WITH LOCAL UTILITY COMPANY PRIOR TO COMMENCING WORK.
- R. ALL TELEPHONE AND COMMUNICATION CABLING ENTERING THE BUILDING SHALL BE PROVIDED VIA SURGE SUPPRESSION DEVICE. COORDINATE ALL REQUIREMENTS IN THE FIELD WITH UTILITY COMPANY. INSTALL ALL REQUIRED COMPONENTS.

ELECTRICAL SPECIFICATIONS

- A. GENERAL CONDITIONS, CODES & STANDARDS
 1. GENERAL CONDITIONS OF THE CONTRACT FOUND IN THE ARCHITECTURAL DRAWINGS, GENERAL AND SPECIAL CONDITIONS OF THE CONTRACT AND ANY OF THE OWNERS GENERAL REQUIREMENTS SHALL APPLY UNLESS NOTED OTHERWISE.
 2. REFER TO THE GENERAL CONDITIONS ON THE ARCHITECTURAL DOCUMENTS AND THE GENERAL AND SPECIAL CONDITIONS OF THE CONTRACT FOR ADDITIONAL REQUIREMENTS REGARDING: SAFETY, COORDINATION & COOPERATION, WORKMANSHIP, PROTECTION, CUTTING AND PATCHING, DAMAGE TO OTHER WORK, PRELIMINARY OPERATIONS, STORAGE, ADJUSTMENTS, CLEANING, ETC.
 3. ALL WORK SHALL BE IN CONFORMANCE WITH ALL LOCALLY ENFORCED, FEDERAL, STATE, AND LOCAL CODES AND ORDINANCES INCLUDING ANY SPECIAL OWNER REQUIREMENTS IN ADDITION TO THOSE SPECIFIED.
 4. CONTRACTOR SHALL PAY FOR AND OBTAIN ALL NECESSARY LICENSES, PERMITS AND INSPECTIONS REQUIRED TO PROCEED WITH THE WORK. THIS SHALL INCLUDE ALL REQUIRED COORDINATION WITH THE LOCAL UTILITY COMPANIES AND THEIR ASSOCIATED FEES OR COSTS.
 5. ALL EQUIPMENT AND MATERIALS USED SHALL BE NEW, UL LISTED FOR THE APPLICATION, AND SHALL BEAR AN APPROPRIATE UL LABEL.
- B. SCOPE OF WORK
 1. THIS CONTRACT SHALL INCLUDE THE FURNISHING, INSTALLING, CONNECTING, AND OPERATION OF ALL EQUIPMENT WHICH IS PART OF THE ELECTRICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY SIMILAR INSTALLATIONS. ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK, AND WHICH IS USUALLY INCLUDED IN WORK OF A SIMILAR CHARACTER SHALL BE FURNISHED AND INSTALLED UNDER THIS CONTRACT AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS REQUIRED TO PROVIDE THE OWNER A COMPLETE, CODE APPROVED AND OPERATIONAL ELECTRICAL SYSTEM.
 2. CAREFULLY READ SPECIFICATION FOR ALL PARTS OF THE WORK SO AS TO BECOME FAMILIAR WITH ALL TRADES WORK SCOPE. CONSULT WITH OTHER TRADES TO ENSURE PROPER LOCATIONS AND AVOID INTERFERENCES. ANY CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER BEFORE WORK IS COMMENCED.
 3. CONTRACTORS SHALL BE HELD TO HAVE EXAMINED THE PREMISES AND SITE SO AS TO COMPARE THEM WITH THE DRAWINGS AND SPECIFICATIONS. NOTE THE EXISTING CONDITIONS AND OTHER WORK THAT WILL BE REQUIRED, AND THE NATURE OF THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. NO ALLOWANCE SHALL BE MADE TO THE CONTRACTOR BY REASON OF THIS FAILURE TO HAVE MADE SUCH EXAMINATION OR OF ANY ERROR ON THEIR PART.
 4. ALL EXISTING UTILITY AND ELECTRICAL SERVICES SHALL BE FIELD VERIFIED. CORRECTIONS TO THE DESIGN AND INSTALLATION SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
 5. PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF ELECTRICAL WORK. ALL CORE DRILLING OR CUTTING OF FIRE RATED FLOORS, SHAFTS, AND WALLS SHALL BE FIRESTOPPED PRIOR TO FINISH PATCHING. ALL PENETRATIONS SHALL BE FIRE SEALED TO MATCH THE FIRE RATINGS OF THE FLOORS, SHAFTS, AND WALLS PENETRATED.
 6. TEMPORARY ELECTRICAL SERVICE, LIGHTING, AND RELATED WIRING SHALL BE PROVIDED TO OSHA REQUIREMENTS FOR THE USE OF ALL TRADES DURING CONSTRUCTION.
 7. TEMPERATURE AND INTERLOCK CONTROL COMPONENTS AND ALL RELATED WIRING AND CONDUIT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
 8. ALL WORK INCLUDING, BUT NOT LIMITED TO PARTS, MATERIAL, EQUIPMENT AND LABOR SHALL BE GUARANTEED FOR ONE YEAR AFTER ACCEPTANCE BY THE ENGINEER AND OWNER. WHERE AN EQUIPMENT MANUFACTURER HAS A WARRANTY THAT EXCEEDS ONE YEAR, THAT WARRANTY PERIOD SHALL APPLY TO THIS PROJECT.
- C. DOCUMENTS
 1. THE DRAWINGS ARE DIAGRAMMATIC. ALL WORK SHALL BE PERFORMED AS INDICATED ON THE DRAWINGS UNLESS EXISTING CONDITIONS OR COORDINATION ISSUES REQUIRE CHANGES. THESE CHANGES SHALL BE MADE WITH NO ADDITIONAL COST TO THE OWNER.
 2. ANY INCIDENTAL ITEMS OR LABOR, ETC. NOT INCLUDED IN THE SPECIFICATIONS OR THE DRAWINGS BUT REASONABLY IMPLIED AS NECESSARY FOR THE COMPLETE INSTALLATION OF ALL APPARATUS SHALL BE INCLUDING IN SCOPE.
 3. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER, AND ANY MATERIAL, OR LABOR CALLED FOR IN ONE SHALL BE FURNISHED EVEN THOUGH NOT MENTIONED IN BOTH.
 4. IF INCONSISTENCIES ARE FOUND IN THE DRAWINGS OR SPECIFICATIONS, OR DISCREPANCIES OCCUR BETWEEN THE SAME, OR BETWEEN THE FIGURES ON THE DRAWINGS AND THE SCALE OF SAME, OR BETWEEN THE LARGER AND SMALLER DRAWINGS, OR IN THE DESCRIPTIVE MATTER ON THE DRAWINGS, SUCH CONDITIONS SHALL BE REFERRED TO THE OWNER FOR REVIEW AND FINAL DECISION PRIOR TO THE BID DUE DATE.
 5. THE ACCEPTANCE OF THIS SCOPE WILL CONTEMPLATE THE USE OF EQUIPMENT AND MATERIALS EXACTLY AS SPECIFIED HEREIN, WHERE MORE THAN ONE MANUFACTURER IS MENTIONED ANY ONE MAY BE UTILIZED. SUBSTITUTE MANUFACTURERS MAY BE OFFERED ONLY AS AN ALTERNATE TO THE SPECIFIED EQUIPMENT AND MATERIAL AND MUST BE SUBMITTED AS SPECIFIED IN THE ARCHITECTURAL DOCUMENTS.
 6. MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THE SYSTEMS CAN BE OF ANY RECOGNIZED MANUFACTURER PROVIDED THESE ITEMS MEET MINIMUM STANDARDS AS SET IN THESE SPECIFICATIONS. REFER TO EACH SECTION FOR ANY SPECIFIC REQUIREMENTS.

D. COORDINATION

1. CONTRACTOR SHALL LOCATE, IDENTIFY AND PROTECT ANY EXISTING SERVICES WHICH ARE REQUIRED TO BE MAINTAINED OPERATIONALLY AND SHALL EXERCISE EXTRA CAUTION IN THE PERFORMANCE OF ALL WORK TO AVOID DISTURBING SUCH FACILITIES. ALL COSTS FOR REPAIR OF DAMAGES TO SUCH SERVICES SHALL BE PAID BY THE CONTRACTOR CAUSING THE DAMAGE.
2. EACH CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE TO OTHER WORK CAUSED BY THEIR WORK OR THROUGH THE NEGLIGENCE OF THEIR, OR THEIR SUB-TRADE'S PERSONNEL. ALL PATCHING, REPAIRING, REPLACEMENT AND PAINTING, ETC. SHALL BE DONE AS DIRECTED BY THE OWNER BY THE CRAFTSMEN OF THE TRADES INVOLVED. THE COSTS OF SUCH WORK SHALL BE PAID BY THE CONTRACTOR CAUSING THE DAMAGE.
3. IT IS ESSENTIAL THAT ALL WORK AT THE PROJECT BE DONE AT SUCH TIME AND IN SUCH MANNER AS NOT TO INTERFERE WITH THE OPERATIONS OF THE SPACE, ADJACENT SPACES, OR FACILITY. A WORK SCHEDULE SHALL BE ARRANGED WITH THE OWNER, INCLUDING PREMIUM TIME WORK TO FACILITATE WORK WITH A MINIMUM OF INTERFERENCE TO THE OWNERS OPERATIONS.
4. ELECTRICAL CONTRACTOR TO REVIEW SUBMITTALS PROVIDED BY OTHER DISCIPLINES AND TRADES FOR ALL ELECTRICAL CONNECTION REQUIREMENTS.

E. METHODS

1. EXCAVATIONS SHALL BE MADE IN OPEN TRENCHES. FLOORS SHALL BE SAW CUT. CONDUIT SHALL BE LAID ON AN APPROPRIATELY GRADED 6" BED OF CLEAN AND DRY SAND AS NOTED ON ARCHITECTURAL DRAWINGS.
2. BACKFILL THE REMAINDER OF THE TRENCH UTILIZING THE EXCAVATED MATERIAL IF APPROVED BY THE ARCHITECT OR THE OWNER. IF THE EXCAVATED MATERIALS ARE NOT ACCEPTABLE, ENGINEERED FILL SHALL BE USED. IF ARCHITECT SHALL BE UTILIZED TO BACKFILL THE REMAINDER OF THE TRENCH, BACKFILL SHALL BE ACCOMPLISHED IN 9" LIFTS WITH ALL LIFTS COMPACTED TO 95% PROCTOR. PATCH FLOOR TO MATCH EXISTING.
2. EQUIPMENT, CONDUIT, ETC. SHALL NOT BE SUPPORTED FROM ANY CEILING, OTHER PIPING, OTHER CONDUIT OR DUCTWORK, ROOF DECK, OR JOIST BRIDGING. ITEMS SHALL BE SUPPORTED FROM ACCEPTABLE STRUCTURAL BUILDING COMPONENTS AS DETERMINED BY THE ARCHITECT AND STRUCTURAL ENGINEER.
3. ALL ROOF PENETRATIONS, FLASHINGS AND COUNTER FLASHINGS SHALL BE PERFORMED BY THE OWNERS ROOFING CONTRACTOR AT THE REQUESTING CONTRACTORS COST.

F. SUBMITTALS

1. SHOP DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT OF ALL MATERIALS AND ACCESSORIES PROVIDED FOR THE PROJECT WHETHER SPECIFIED HERE-IN OR ON THE DRAWINGS. REVIEW OF THE SHOP DRAWINGS SHALL BE FOR GENERAL DESIGN CONCEPT AND ADHERENCE WITH THE SPECIFICATIONS. QUANTITY OF SHOP DRAWINGS SUBMITTED SHALL BE AS SPECIFIED BY THE ARCHITECT. SHOP DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR SHOWING LOCATIONS AND MEASUREMENTS FROM COLUMNS OF ALL CONCEALED AND EXPOSED PIPING, DUCTWORK, CONDUIT, EQUIPMENT, ACCESSORIES, ETC., AND SUBMITTED PRIOR TO INSTALLATION. THE OWNER MAY MAKE REPRODUCIBLE COPIES OF THEIR DRAWINGS AVAILABLE FOR USE IN PREPARATION OF SHOP DRAWINGS, HOWEVER THE OWNER SHALL NOT BE HELD RESPONSIBLE FOR NOT CONFIRMING ALL INFORMATION ON THE DRAWINGS PRIOR TO FABRICATION AND/OR INSTALLATION.
2. PROJECT RECORD DOCUMENTS - MAINTAIN AT THE JOBSITE ONE COPY OF ALL CONTRACT DOCUMENTS CLEARLY MARKED AS "PROJECT RECORD COPY". THESE DRAWINGS ARE TO BE MAINTAINED IN GOOD CONDITION, UPGRADED FOR CHANGES ENCOUNTERED AND AVAILABLE AT ALL TIMES FOR INSPECTION BY THE OWNER. DO NOT USE FOR FIELD CONSTRUCTION! PROJECT RECORD DOCUMENTS ARE TO BE KEPT CURRENT WITH EXACT DIMENSIONS OF ALL WORK, EQUIPMENT, DISTRIBUTION CONDUIT, CIRCUITS, ETC. MARK ALL INFORMATION IN RED LINES AND NOTES SO AS TO BE EASILY IDENTIFIED FROM THE BASE DRAWING. UPON COMPLETION OF THE WORK, ONE SET OF THESE DOCUMENTS SHALL BE TURNED OVER TO THE OWNER AS ONE QUALIFICATION PAYMENT.
3. THREE COMPLETE SETS OF AS-BUILT DOCUMENTATION SHALL BE PROVIDED. IT SHALL INCLUDE, BUT NOT BE LIMITED TO ACCURATE PLAN DRAWINGS, WIRING DIAGRAMS AND OPERATION AND MAINTENANCE MANUALS.

G. CONDUIT

1. CONDUIT SHALL BE HEAVY WALL RIGID GALVANIZED STEEL, WHERE EXPOSED AND SUBJECT TO DAMAGE, 8'-0" AFF AND BELOW, AND IN WET LOCATIONS WHERE INDICATED ON THE DRAWINGS.
2. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC AND SHALL BE CONCRETE ENCASED (3" MINIMUM) WHERE INDICATED ON THE DRAWINGS. A TRANSITION SHALL BE MADE TO HEAVY WALL RIGID GALVANIZED STEEL BEFORE PVC CONDUITS PENETRATE THE FLOOR SLAB.
3. INTERIOR CONDUITS SHALL BE ELECTRICAL METALLIC TUBING (EMT), NON-METALLIC SHEATHED (NMS) OR METAL CLAD (MC) CABLE MAY BE USED IF APPROVED BY THE OWNER AND INSTALLED IN LOCATIONS PERMITTED BY CODE.
4. FLEXIBLE METAL CONDUIT SHALL BE USED FROM OUTLET BOX TO INDIVIDUAL RECESSED LIGHT FIXTURES, AND FOR FINAL CONNECTIONS TO MOTORS AND OTHER DEVICES SUBJECT TO VIBRATION.

H. CONDUIT FITTINGS AND BOXES

1. INTERIOR OUTLET BOXES SHALL BE STANDARD GALVANIZED SHEET STEEL TYPE, NOT LESS THAN 14 GAUGE IN THICKNESS, WITH KNOCKOUT OPENINGS, EXTENSIONS, PLASTER RINGS AND COVER PLATES TO ACCOMMODATE THE DEVICES INSTALLED. COVER PLATES SHALL BE SMOOTH PLASTIC TO MATCH DEVICE COLOR. USE STEEL PLATES WITH ROUNDED CORNERS FOR SURFACE BOXES.
2. OUTDOOR (WET LOCATION) OUTLET BOXES SHALL BE CAST ALUMINUM TYPE WITH DEVICE COVERS TO SUIT.
3. OUTLET BOXES SHALL NOT BE LESS THAN 4 INCHES SQUARE, 1-1/2 INCHES DEEP.
4. COUPLINGS AND CONNECTORS FOR EMT SHALL BE DIE CAST ZINC OR STEEL. BUSHING SHALL BE GROUNDING TYPE WITH INSULATING PLASTIC INSERT.
5. FLOOR BOXES SHALL BE FLUSH SERVICE TYPE, RECTANGULAR CAST METAL CONSTRUCTION GANGLABLE ADJUSTABLE WITH BRASS (ALUMINUM) COVER AND TRIMMING COVER AS REQUIRED. COVER TYPE SHALL BE AS INDICATED ON LEGEND.

I. WIRE AND CABLE

1. CONDUCTORS FOR POWER AND LIGHTING SHALL BE NEW 600-VOLT, 90°C, TYPE XHHW, THHW, OR THWN INSULATION. MINIMUM SIZE #12-AWG, EXCEPT FOR CONTROL WIRING WHICH MAY BE #14-AWG. WIRE SIZES SHALL BE AS NOTED ON THE DRAWINGS. CONDUCTORS SHALL BE COPPER, UNLESS OTHERWISE APPROVED BY THE OWNER.
2. BRANCH CIRCUIT RUNS EXCEEDING 100 FEET IN TOTAL LENGTH FROM THE PANELBOARD TO THE LAST DEVICE, SHALL BE #10-AWG CONDUCTORS UNLESS OTHERWISE NOTED.
3. COMPRESSION TYPE LUGS AND CONNECTORS SHALL BE USED FOR ALL TERMINATIONS AND SPLICES.
4. ALL LOW VOLTAGE COMMUNICATIONS, FIRE ALARM, DATA, SECURITY, TELEPHONE AND ALL OTHER MISCELLANEOUS LOW VOLTAGE WIRING INSTALLED IN CEILING SHALL BE PLENUM RATED.

J. WIRING DEVICES

1. DUPLEX RECEPTACLES SHALL BE GROUNDING TYPE, NEMA 5-20R, RATED FOR 20 AMPS, 125 VOLTS, WITH PROVISIONS FOR BACK AND AN SIDE WIRING.
2. GFI TYPE RECEPTACLES SHALL BE READILY ACCESSIBLE AS REQUIRED PER NEC. COORDINATE INSTALLATION WITH FIELD CONDITIONS.
3. SWITCHES SHALL BE TOGGLE OPERATED, QUIET TYPE, RATED FOR 20 AMPS, 120/240 VOLTS, WITH PROVISIONS FOR BACK AND SIDE WIRING. THREE-WAY AND FOUR-WAY SWITCHES SHALL BE PROVIDED WHERE INDICATED.
4. DIMMERS SHALL BE LEVITON 'RENOIR II' SERIES, OF A RATING, VOLTAGE AND WATTAGE SUITABLE FOR LOAD SERVED.
5. COLORS OF DEVICES SHALL BE SELECTED BY ARCHITECT.
6. WIRING DEVICES SHALL BE SPECIFICATION GRADE, AS MANUFACTURED BY HUBBELL, LEGRAND, LEVITON AND GENERAL ELECTRIC.

K. LIGHTING AND RECEPTACLE PANELBOARDS

1. BRANCH CIRCUIT PANELBOARDS SHALL BE DEAD FRONT TYPE, WITH MAIN LUGS OR MAIN OVERCURRENT DEVICES AS INDICATED, BRANCH OVERCURRENT DEVICES AS NOTED, AND AN EQUIPMENT GROUND BAR. ALL IN A SURFACE OR FLUSH MOUNTED SHEET STEEL ENCLOSURE. MINIMUM SHORT CIRCUIT CAPACITY SHALL BE 22,000 AMPS SYMMETRICAL FOR 120/208V, AND 42,000 AMPS SYMMETRICAL FOR 277/480V APPLICATION UNLESS NOTED OTHERWISE.
2. ELECTRICAL PANELS MOUNTED ON THE INTERIOR OF A BUILDING SHALL BE NEMA 1 UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
3. ELECTRICAL PANELS MOUNTED ON THE EXTERIOR OF A BUILDING SHALL BE NEMA 3R UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
4. CIRCUIT BREAKERS SHALL BE BOLT ON TYPE, WITH MOLDED PLASTIC CASE, 1, 2, OR 3 POLES AS INDICATED. QUICK-MAKE, QUICK-BREAK, AND THERMAL-MAGNETIC TRIP DEVICE.
5. ALL BREAKERS FEEDING HVAC EQUIPMENT SHALL BE HACR RATED, UNLESS OTHERWISE NOTED.
6. ALL EQUIPMENT RATED 100A OR LESS SHALL HAVE 60-DEGREE C MINIMUM TERMINATIONS. ALL EQUIPMENT RATED OVER 100A SHALL HAVE 75-DEGREE C MINIMUM TERMINATIONS.
7. INDIVIDUAL SINGLE POLE CIRCUIT BREAKERS, WITH IDENTIFIED TIES, OR 2-POLE BREAKERS SHALL BE PROVIDED FOR EACH UNGROUNDED CONDUCTOR IN ALL MULTI-WIRE BRANCH CIRCUITS.
8. PANELBOARDS SHALL BE AS MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, SIEMENS, AND Eaton.

L. LUMINAIRES AND LAMPS

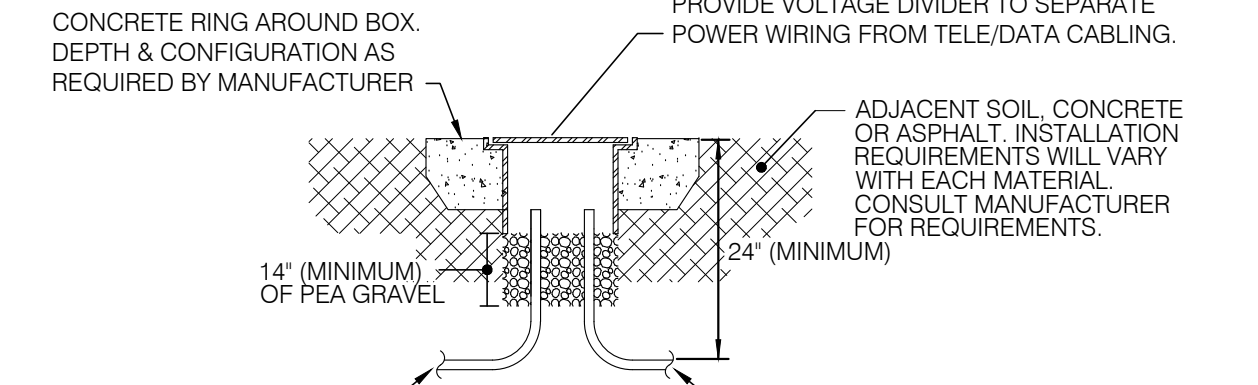
1. ALL LUMINAIRES SHALL BE SPECIFIED ON THE LUMINAIRE SCHEDULE.
2. PROVIDE ALL REQUIRED TRIMS AND ACCESSORIES FOR INSTALLATION IN DESIGNATED CEILING TYPE. REFER TO ARCHITECTURAL CEILING PLANS.
3. INTERIOR LED LIGHTING SHALL BE MINIMUM 80 CRI.
4. EXTERIOR LED LIGHTING SHALL BE MINIMUM 70 CRI.
5. EMERGENCY LIGHTING AS INDICATED, SHALL PROVIDE A MINIMUM OF ONE FOOT-CANDLE ALONG THE PATH OF EGRESS. EMERGENCY FIXTURE SUPPLIER SHALL PROVIDE FOOT-CANDLE PRINTOUT TO VERIFY EMERGENCY LIGHT LEVELS.
6. REFER TO ARCHITECTURAL PLANS FOR FIXTURE LOCATIONS AND MOUNTING HEIGHTS.

N. GROUNDING

1. GROUNDING OF THE CONDUITS, CABINETS, MOTORS, PANELS, AND OTHER EXPOSED NON-CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC ARTICLE 250.
2. BOND METAL WATER PIPING AND OTHER METAL PIPING (INCLUDING GAS PIPING) AND EXPOSED STRUCTURAL METAL IN ACCORDANCE WITH NEC ARTICLE 250.
3. GROUNDING OF THE ELECTRICAL SYSTEM SHALL BE BY MEANS OF AN INSULATED GROUNDING CONDUCTOR INSTALLED WITH ALL FEEDERS AND BRANCH CIRCUIT CONDUCTORS IN ALL CONDUITS.

O. EXECUTION

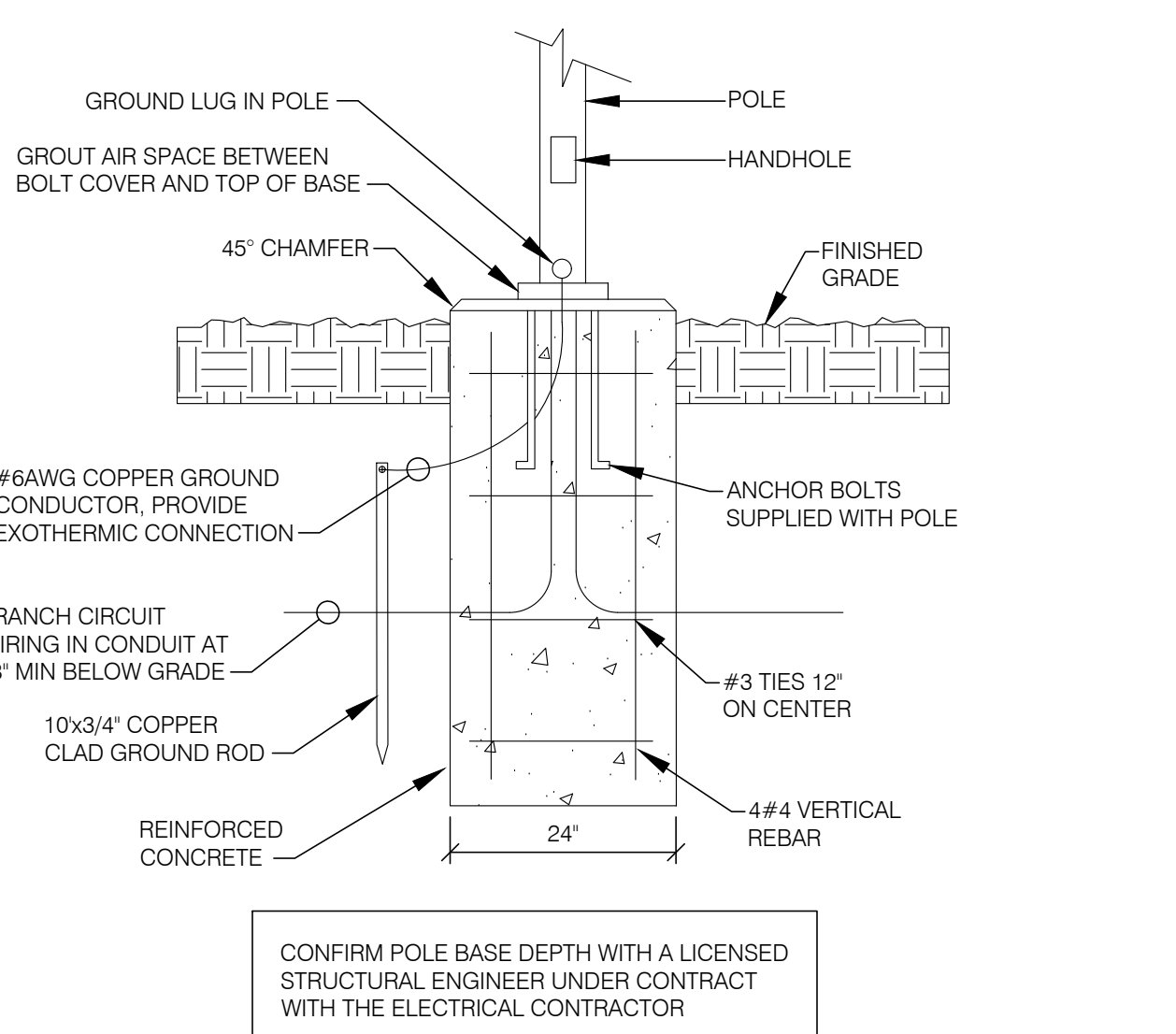
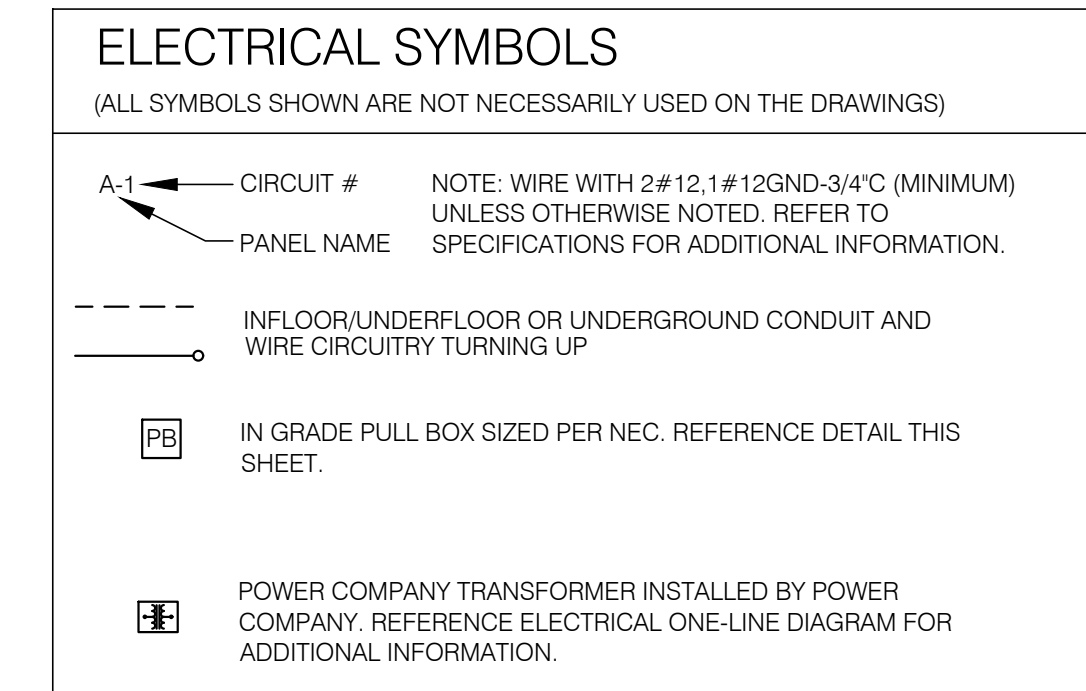
1. ALL CONDUIT RUN IN FINISHED AREAS SHALL BE CONCEALED. CONDUIT SMALLER THAN 1/2" SHALL NOT BE USED FOR ANY CIRCUIT HOMERUNS.
2. RACEWAYS EXPOSED TO DIFFERENT TEMPERATURES SHALL BE FILLED WITH AN APPROVED MATERIAL IN ACCORDANCE WITH ARTICLE 300.7 OF THE NEC.
3. HANGERS, SUPPORTS, OR FASTENINGS SHALL BE PROVIDED AT EACH ELBOW, AT THE ENDS OF STRAIGHT RUNS TERMINATING AT BOXES OR CABINETS, AND AT INTERMEDIATE POINTS AS REQUIRED BY CODE. CONDUITS OR BOXES SHALL NOT BE SUPPORTED BY CEILING SUPPORT WIRES OR OTHER CEILING SUPPORTING HARDWARE.
4. ACCESS PANELS SHALL BE PROVIDED FOR ALL JUNCTION BOXES AND PULL BOXES INSTALLED ABOVE DRYWALL CEILINGS. COORDINATE SIZE AND LOCATION WITH ARCHITECT.
5. FIXTURE SUPPORTS SHALL BE IN ACCORDANCE WITH ARTICLE 410.30 OF THE NEC OR ANY LOCAL CODES WHICH MAY APPLY.
6. PROVIDE PERMANENT NAMEPLATES WITH DESIGNATIONS FOR PANELBOARDS, FEEDER DEVICES, DISTRIBUTION EQUIPMENT AND STARTERS.
7. PROVIDE TYPEWRITTEN DIRECTORY CARDS WITH BRANCH CIRCUIT IDENTIFICATION FOR BRANCH CIRCUIT PANELBOARDS.
8. PANELBOARDS, FEEDER DEVICES, DISTRIBUTION EQUIPMENT AND STARTERS SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS IN ACCORDANCE WITH NEC 110.16.
9. INSTALL HANDLE GUARDS ON ALL BREAKERS FOR NIGHT LIGHTING, EMERGENCY, FIRE ALARM, AND SIMILAR CIRCUITS.
10. THE ELECTRICAL CONTRACTOR SHALL BALANCE PANELBOARD LOADING TO WITHIN 10% ON EACH PHASE BASED ON INSTALLED CONDITIONS. LOAD BALANCING CIRCUIT CHANGES SHALL BE PERFORMED OUTSIDE THE NORMAL OCCUPANCY WORKING SCHEDULE AND AT A TIME DIRECTED BY LANDLORD.
11. THE FINAL LOCATIONS OF ALL EQUIPMENT, OUTLETS, ETC. SHALL BE SUBJECT TO REASONABLE CHANGES IN LOCATION UP TO THE TIME OF ROUGHING-IN, AT NO ADDITIONAL COST TO THE OWNER.
12. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ELECTRICAL CONNECTION REQUIREMENTS WITH ALL EQUIPMENT PROVIDED BY OTHERS PRIOR TO ROUGH-IN.
13. AT ALL TIMES KEEP PREMISES AND BUILDING IN A NEAT AND ORDERLY CONDITION, FOLLOWING OWNERS INSTRUCTION IN REGARD TO STORING OF MATERIALS, PROTECTIVE MEASURES AND DISPOSING OF DEBRIS.
14. ALL SERVICE EQUIPMENT SHALL BE IDENTIFIED AS BEING SUITABLE FOR USE AS SERVICE EQUIPMENT. SERVICE EQUIPMENT SHALL BE FIELD MARKED WITH THE MAXIMUM AVAILABLE FAULT CURRENT AND THE DATE THE CALCULATION WAS PERFORMED. FIELD MARKING SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE INSTALLATION ENVIRONMENT.
15. RACEWAYS BELOW DRIVEWAYS, PARKING LOTS, AND ANY RACEWAYS INSTALLED BELOW GRADE SHALL BE INSTALLED A MINIMUM OF 24" BELOW FINISHED GRADE PER NEC 300-5.
16. CONTACT ELECTRIC POWER COMPANY AND MAKE NECESSARY ARRANGEMENTS FOR ELECTRIC SERVICE.
17. CONTACT TELEPHONE COMPANY AND MAKE NECESSARY ARRANGEMENTS FOR TELEPHONE SERVICE.



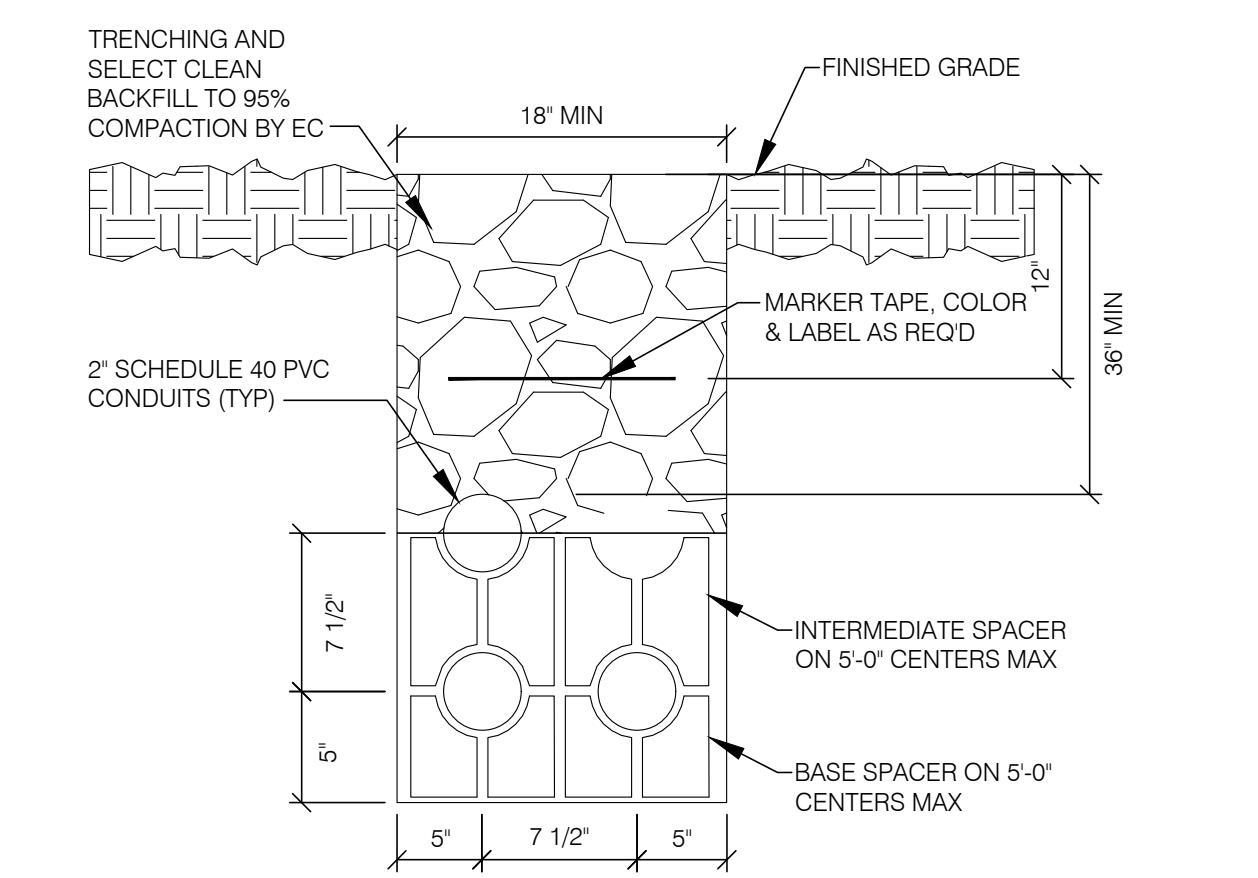
PROVIDE THE SAME QUANTITY AND SIZE OF PVC CONDUITS, AS INDICATED ON PLANS, LEAVING THE PULL BOX AS IS ENTERING FROM SITE LIGHTING AND TREE RECEPTACLES. IN ADDITION TO ABOVE MENTIONED CONDUITS, PROVIDE (2) SPARE 1" C. STUBS & (2) SPARE 2" C. STUBS FOR POWER, AND (2) SPARE 1" C. STUBS & (2) SPARE 2" C. STUBS FOR TELE/DATA ENTERING AND LEAVING THE PULL BOX.

A IN-GRADE PULL/JUNCTION BOX DETAIL
SCALE: NONE

- NOTES:
1. SPLICES SHALL BE AVOIDED WHERE POSSIBLE. WHERE REQUIRED, SPLICES SHALL BE MADE WITH WATERPROOF CONNECTORS.
 2. CONCRETE ENCASEMENT TO BE 3,000 PSI MINIMUM.
 3. DO NOT LOCATE BOXES IN HIGH VOLUME TRAFFIC APPLICATIONS.
 4. CONTACT SOIL AROUND BOX TO MANUFACTURERS RECOMMENDATIONS.
 5. THIS DETAIL IS INTENDED TO SHOW GENERAL DESIGN INTENT. ONLY THE ELECTRICAL CONTRACTOR MUST VERIFY ALL INSTALLATION REQUIREMENTS WITH THE MANUFACTURER PRIOR TO THE BIDDING AND INSTALL ALL BOXES ACCORDINGLY.
 6. FURNISH AND INSTALL PER MANUFACTURERS INSTRUCTIONS.



B SITE POLE BASE INSTALLATION - AT GRADE
SCALE: NONE



C DUCT BANK DETAIL
SCALE: NONE

City of Lakewood
Lakewood Park
Parking Lot
Lakewood, Ohio

Electrical Legend
& Details

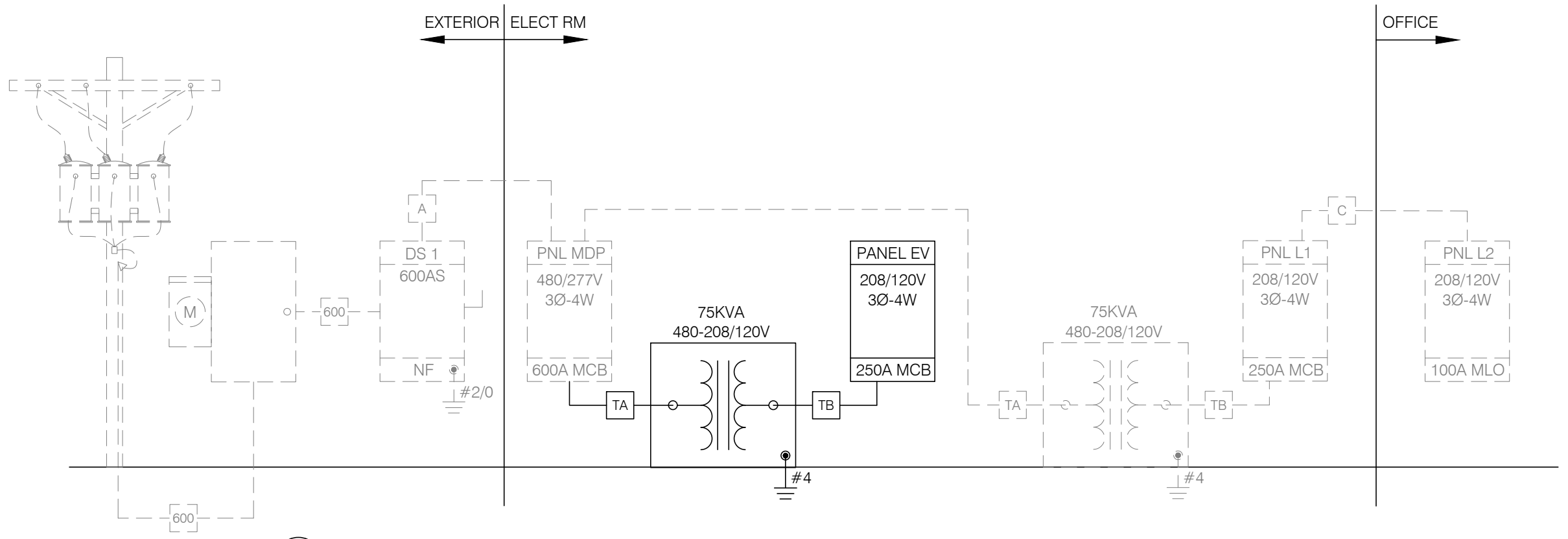
Issue/Revision:
0 02/15/2023 For ABR

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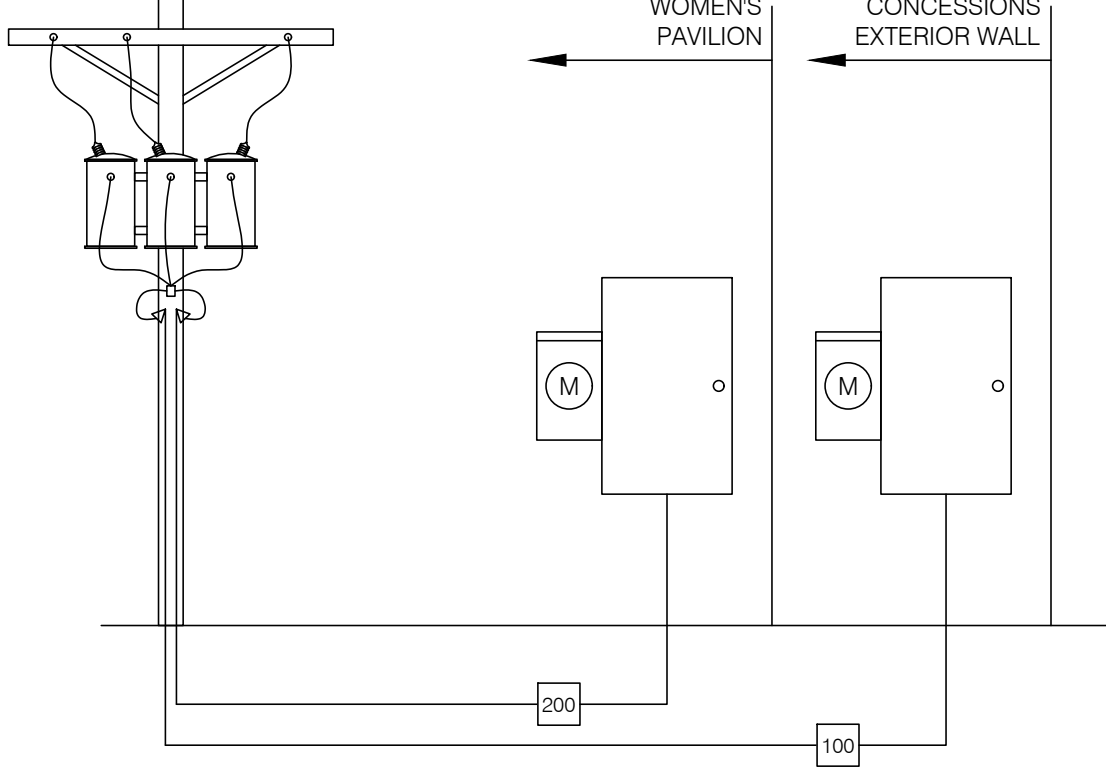
PANEL NAME		CIRCUIT BREAKER REMARKS		PANEL CHARACTERISTICS				CIRCUIT BREAKER REMARKS		OPTIONS	
MDP		CC=CONTROLLED CIRCUIT, EX=EXISTING LOAD TO REMAIN, ML=MODIFIED LOAD ON EXISTING BREAKER		600	600	480 / 277	14K	A=AFCI, S=SHUNT TRIP, H=HACR, G=GFCI, L=C/B LOCK, HT=HANDLE TIE, NB=NEW CIRCUIT BREAKER	MOUNTING	SURFACE	
				BUS	MCB	3-Ø, 4-W	AIC		BUS MATERIAL	COPPER	
CKT #	REMARKS	LOAD DESCRIPTION	LOAD TYPE	LOAD VA	PHASE L1 L2 L3	LOAD VA	LOAD TYPE	LOAD DESCRIPTION	REMARKS	CKT #	
1		PANEL L1 VIA 75KVA XFMR	PNL	23,966		7,482	X	P1 LAP POOL PUMP	E	35/3	
3	125/3		PNL	21,559		7,482	X			2	
5			PNL	21,123		7,482	X			6	
7			X	1,912		3,880	X			8	
9	20/3	EXHAUST FANS 1-3	X	1,912		3,880	X	P2 REC POOL PUMP	E	20/3	
11			X	1,912		3,880	X			12	
13			X	14,400		3,880	X			14	
15	100/3	EV 75 KVA XFMR	X	7,200		3,880	X	P3 SPEED SLIDE PUMP	E	20/3	
17			X	7,200		3,880	X			16	
19	20/1	SITE LIGHTING	L	950		7,482	X			20	
21	20/1	SITE LIGHTING	L	1,250		7,482	X	P4 BODY SLIDE PUMP	E	35/3	
23	20/1	SPARE	X			7,482	X			22	
25			X			3,048	X			24	
27		SPACE	X			3,048	X	P5 FAMILY SLIDE PUMP	E	15/3	
29			X			3,048	X			26	
31			X			5,820	X			28	
33		SPACE	X			5,820	X	P6 VORTEX PUMP	E	30/3	
35			X			5,820	X			32	
37			X			942	X			34	
39		SPACE	X			942	X	P7 FEATURE PUMP	E	15/3	
41			X			942	X			40	
PANEL NOTES: E = EXISTING BREAKER TO REMAIN, N = NEW BREAKER INSTALLED UNDER THIS PERMIT, C = TIE CIRCUIT INTO EXISTING TIME CLOCK, PHOTOCELL AND CONTACTOR.								NO SUBFEED LOAD		SUBFEED LUGS	
LIGHTING		TOTAL LIGHTING (L) KVA		24.90	73.76		PHASE A CONNECTED KVA				
DEMAND %		TOTAL TRACK LIGHTING (D) KVA		0.00	64.46		PHASE B CONNECTED KVA				
SHOW		TOTAL RECEPTACLE (R) KVA		19.84	62.77		PHASE C CONNECTED KVA				
WINDOW (FT)		TOTAL SHOW WINDOW (C) KVA		0.00	200.99		TOTAL CONNECTED KVA				
HVAC		TOTAL MOTOR (M) KVA		2.86	241.8		TOTAL CONNECTED AMPS				
DEMAND %		TOTAL ELECTRIC HEAT (H) HVA		0.00	202.29		TOTAL NEC DEMAND KVA				
MISC		TOTAL MISCELLANEOUS (X) KVA		153.38	243.3		TOTAL NEC DEMAND AMPS				
DEMAND %		TOTAL KITCHEN (K) KVA		0.00							

PANEL NAME		CIRCUIT BREAKER REMARKS		PANEL CHARACTERISTICS				CIRCUIT BREAKER REMARKS		OPTIONS	
EV		CC=CONTROLLED CIRCUIT, EX=EXISTING LOAD TO REMAIN, ML=MODIFIED LOAD ON EXISTING BREAKER		250	400	208 / 120	10K	A=AFCI, S=SHUNT TRIP, H=HACR, G=GFCI, L=C/B LOCK, HT=HANDLE TIE, NB=NEW CIRCUIT BREAKER	MOUNTING	FLUSH	
				BUS	MLO	3-Ø, 4-W	AIC		BUS MATERIAL	COPPER	
CKT #	REMARKS	LOAD DESCRIPTION	LOAD TYPE	LOAD VA	PHASE L1 L2 L3	LOAD VA	LOAD TYPE	LOAD DESCRIPTION	REMARKS	CKT #	
1	40/2	EV CHARGER	X	3,600		3,600	X	EV CHARGER (FUTURE)		40/2	
3			X	3,600		3,600	X			4	
5	40/2	EV CHARGER	X	3,600		3,600	X	EV CHARGER (FUTURE)		6	
7			X	3,600		3,600	X			8	
9	20/1	SPARE	X				X			20/1	
11	20/1	SPARE	X				X			20/1	
13	20/1	SPARE	X				X			20/1	
15	20/1	SPARE	X				X			20/1	
17	20/1	SPARE	X				X			20/1	
19	20/1	SPARE	X				X			20/1	
21	20/1	SPARE	X				X			20/1	
23	20/1	SPARE	X				X			20/1	
25	20/1	SPARE	X				X			20/1	
27	20/1	SPARE	X				X			20/1	
29	20/1	SPARE	X				X			20/1	
31	20/1	SPARE	X				X			20/1	
33	20/1	SPARE	X				X			20/1	
35	20/1	SPARE	X				X			20/1	
37	20/1	SPARE	X				X			20/1	
39	20/1	SPARE	X				X			20/1	
41	20/1	SPARE	X				X			20/1	
PANEL NOTES: * = EXISTING CIRCUIT FROM PANEL LPB TO BE RELOCATED.								NO SUBFEED LOAD		SUBFEED LUGS	
LIGHTING		TOTAL LIGHTING (L) KVA		0.00	14.40		PHASE A CONNECTED KVA				
DEMAND %		TOTAL TRACK LIGHTING (D) KVA		0.00	7.20		PHASE B CONNECTED KVA				
SHOW		TOTAL RECEPTACLE (R) KVA		0.00	7.20		PHASE C CONNECTED KVA				
WINDOW (FT)		TOTAL SHOW WINDOW (C) KVA		0.00	28.80		TOTAL CONNECTED KVA				
HVAC		TOTAL MOTOR (M) KVA		0.00	79.9		TOTAL CONNECTED AMPS				
DEMAND %		TOTAL ELECTRIC HEAT (H) HVA		0.00	28.80		TOTAL NEC DEMAND KVA				
MISC		TOTAL MISCELLANEOUS (X) KVA		28.80	79.9		TOTAL NEC DEMAND AMPS				
DEMAND %		TOTAL KITCHEN (K) KVA		0.00							

PANEL NAME		CIRCUIT BREAKER REMARKS		PANEL CHARACTERISTICS				CIRCUIT BREAKER REMARKS		OPTIONS	
L2		CC=CONTROLLED CIRCUIT, EX=EXISTING LOAD TO REMAIN, ML=MODIFIED LOAD ON EXISTING BREAKER		100	100	208 / 120	10K	A=AFCI, S=SHUNT TRIP, H=HACR, G=GFCI, L=C/B LOCK, HT=HANDLE TIE, NB=NEW CIRCUIT BREAKER	MOUNTING	FLUSH	
				BUS	MLO	3-Ø, 4-W	AIC		BUS MATERIAL	COPPER	
CKT #	REMARKS	LOAD DESCRIPTION	LOAD TYPE	LOAD VA	PHASE L1 L2 L3	LOAD VA	LOAD TYPE	LOAD DESCRIPTION	REMARKS	CKT #	
1	20/1	VESTIBULE/LOBBY/LTG	L	1,568		720	R	LOUNGE RECEIPT	*	20/1	
3	20/1	STAFF FINISHOWER/LTG	L	650		720	R	LADIES DRESSING RECEIPT	*	20/1	
5	20/1	WOMENS SHOWER/RR/LTG	L	980		720	R	LOCKER RECEIPT	*	20/1	
7	20/1	MENS SHOWER/RR/LTG	L	870		540	R	VESTIBULE RECEIPT	*	20/1	
9	20/1	DATA SECURITY CIRCUIT	M	1,750		720	R	VESTIBULE RECEIPT	*	20/1	
11	20/1	DATA SECURITY CIRCUIT	M	1,750		720	R	OFFICE RECEIPT	*	20/1	
13	20/1	DATA SECURITY CIRCUIT	M	1,750		900	R	OFFICE RECEIPT	*	20/1	
15	20/1	SPARE	X			180	X	ALARM POWER	*	20/1	
17	20/1	SPARE	X			360	R	LOUNGE RECEIPT	*	20/1	
19	20/1	SPARE	X			540	R	LOUNGE RECEIPT	*	20/1	
21	20/1	SPARE	X			720	R	COUNTERMENS DRESSING RECEIPT	*	20/1	
23	20/1	SPARE	X			180	R	WATER COOLER/FLUSH VALVE	*	20/1	
25	20/1	SPARE	X			720	R	MENS DRESSING & OUT RECEIPT	*	20/1	
27	20/1	SPARE	X			360	R	FAMILY CHANGING RR RECEIPT	*	20/1	
29	20/1	SPARE	X			382	G	ADULT CHANGING STATION	*	20/1	
31	20/1	SPARE	X				X	SPARE		20/1	
33	20/1	SPARE	X				X	SPARE		20/1	
35	20/1	SPARE	X				X	SPARE		20/1	
37	20/1	SPARE	X				X	SPARE		20/1	
39	20/1	SPARE	X				X	SPARE		20/1	
41	20/1	L	T/C & CONTACTOR	X	200		X	SPARE		20/1	
PANEL NOTES: * = EXISTING CIRCUIT FROM PANEL LPB TO BE RELOCATED.								NO SUBFEED LOAD		SUBFEED LUGS	
LIGHTING		TOTAL LIGHTING (L) KVA		4.06	7.60		PHASE A CONNECTED KVA				
DEMAND %		TOTAL TRACK LIGHTING (D) KVA		0.00	5.10		PHASE B CONNECTED KVA				
SHOW		TOTAL RECEPTACLE (R) KVA		7.92	5.29		PHASE C CONNECTED KVA				
WINDOW (FT)		TOTAL SHOW WINDOW (C) KVA		0.00	17.99		TOTAL CONNECTED KVA				
HVAC		TOTAL MOTOR (M) KVA		5.25	49.9		TOTAL CONNECTED AMPS				
DEMAND %		TOTAL ELECTRIC HEAT (H) HVA		0.00	18.62		TOTAL NEC DEMAND KVA				
MISC		TOTAL MISCELLANEOUS (X) KVA		0.38	51.7		TOTAL NEC DEMAND AMPS				
DEMAND %		TOTAL KITCHEN (K) KVA		0.00							



A ONE LINE DIAGRAM - POOL HOUSE
SCALE: NONE



B ONE LINE DIAGRAM - SITE
SCALE: NONE

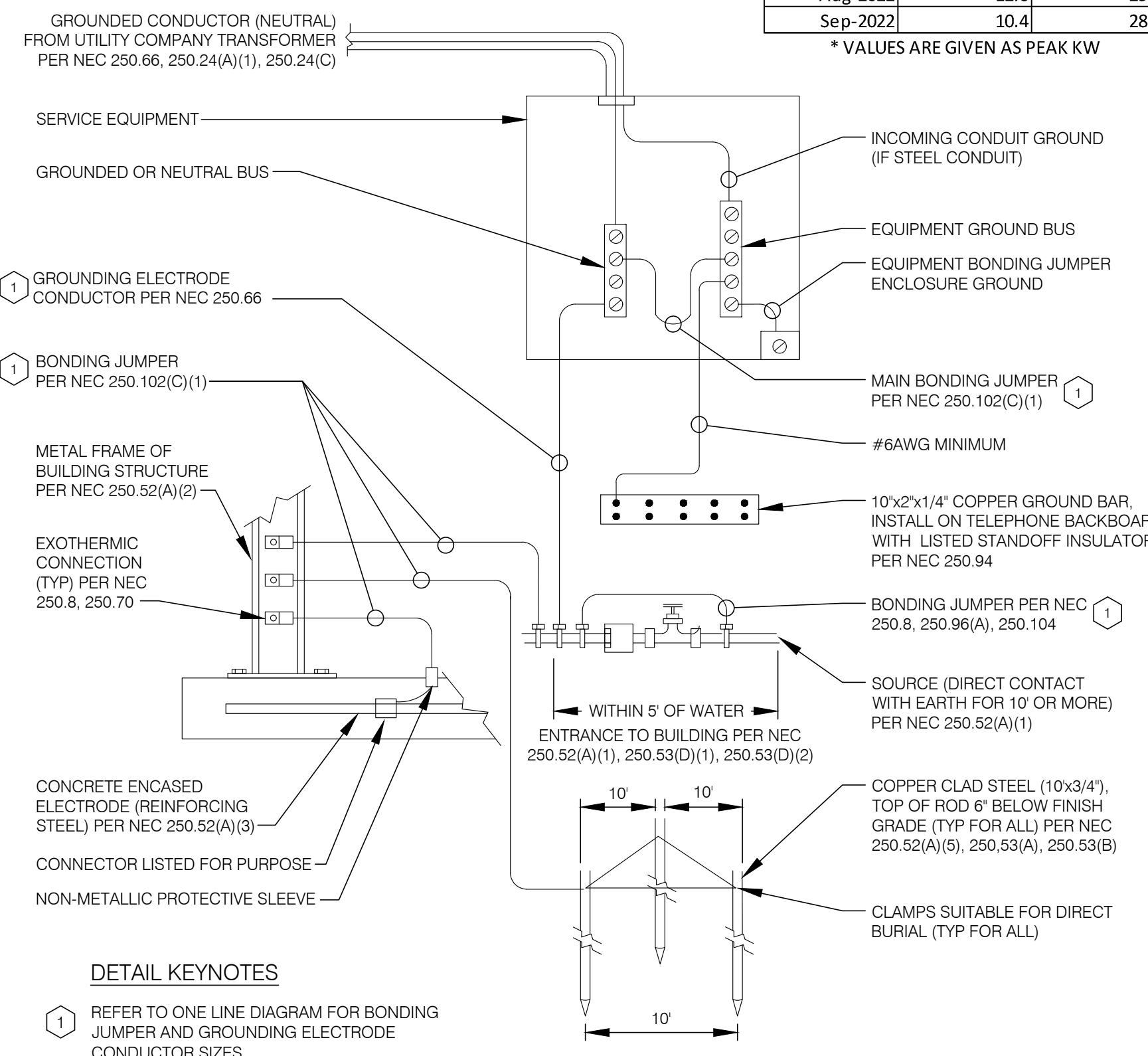
ELECTRICAL ONE LINE DIAGRAM LEGEND:
 — EQUIPMENT INSTALLED UNDER THIS CONTRACT
 - - - EQUIPMENT EXISTING TO REMAIN, UNLESS OTHERWISE NOTED

EQUIPMENT FEEDER SCHEDULE			
TAG #	AMPS	COPPER CONDUIT & WIRING	ALUMINUM CONDUIT & WIRING
600	600	2 SETS OF 4#350KCMIL-4'C	2 SETS OF 4#500KCMIL-4'C
200	200	4#3/0-4'C	4#250KCMIL-4'C
100	100	4#3-2'C	4#250KCMIL-1-1/2'C
A	600	2 SETS OF 4#350KCMIL, 1#1GND-3'C	2 SETS OF 4#500KCMIL, 1#2/0GND-4'C
B	200	4#3/0,1#6GND-2'C	4#250KCMIL,1#4GND-3'C
C	100	4#3,1#8GND-1-1/4'C	4#1,1#6GND-1-1/2'C
TA	90	3#1,1#6GND-1 1/4'C	3#2/0,1#6GND-2'C
TB	208	4#250KCMIL,1#4GND-3'C	4#350KCMIL,1#4GND-3'C

NOTES:
 1. ALL GROUND WIRES SHALL BE COPPER.
 2. ALL COPPER WIRING 100A AND BELOW SHALL BE 60°C RATED, ALL COPPER WIRING ABOVE 100A SHALL BE 75°C RATED.
 3. ALUMINUM WIRING SHALL ONLY BE USED FOR FEEDERS 110A AND LARGER.
 4. ALL ALUMINUM WIRING SHALL BE 75°C RATED.

FOSTER POOL SITE METER READING			
LOCATION:	CONCESSIONS	WOMENS CLUB	
METER NO:	110 022 488 933	110 023 446 369	
Nov-2021	5	20.6	
Dec-2021	5	13	
Jan-2022	5	12.6	
Feb-2022	5	16.8	
Mar-2022	5	16.8	
Apr-2022	6.6	15.9	
May-2022	6.9	22.6	
Jun-2022	8.9	19.3	
Jul-2022	12	28.8	
Aug-2022	12.6	29.5	
Sep-2022	10.4	28.2	

* VALUES ARE GIVEN AS PEAK KW



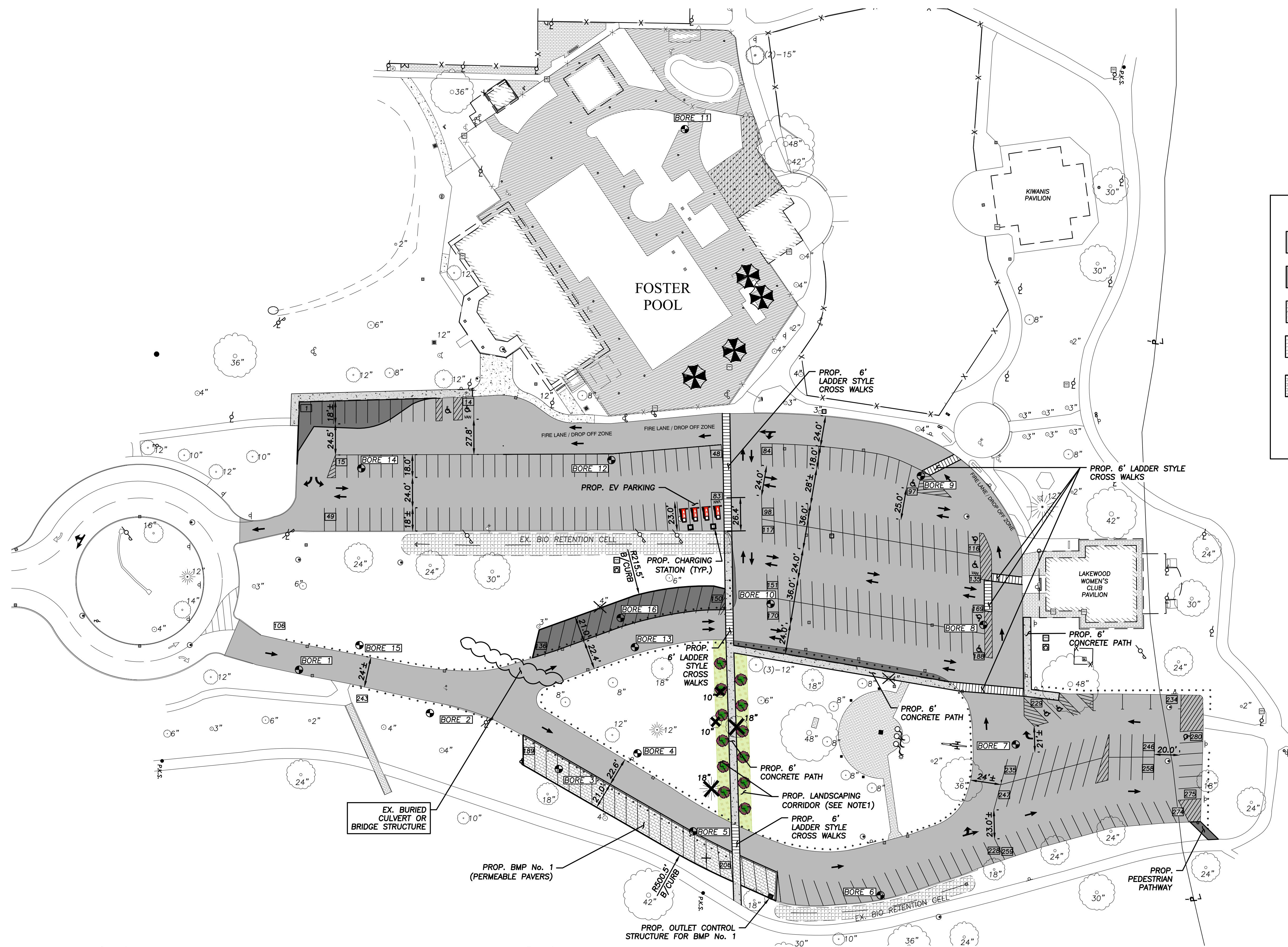
A SERVICE GROUNDING & BONDING DETAIL
SCALE: NONE

ONE-LINE DIAGRAM NOTES

- THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL POWER COMPANY REQUIREMENTS PRIOR TO BIDDING & INCLUDE THE COST OF ALL ASSOCIATED LABOR, MATERIALS, & CHARGES IN THEIR BID.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE UTILITY COMPANY PRIOR TO BIDDING AND PROVIDE EQUIPMENT RATED ACCORDINGLY. SUBMIT FAULT CURRENT CALCULATIONS WITH SHOP DRAWING SUBMITTAL. CONDUCTORS SHALL BE COPPER, UNLESS NOTED OTHERWISE.
- ALL BUSSING SHALL BE COPPER.
- GROUNDING ELECTRODE SYSTEM CONDUCTORS SHALL BE COPPER.
- PROVIDE FULL LENGTH VERTICAL BUSSING IN ALL SWITCHBOARDS, DISTRIBUTION PANELS & PANELBOARDS.
- ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE.
- ALL WALL-MOUNTED EQUIPMENT SHALL BE MOUNTED ON 3/4" FIRE RATED BACKBOARD.
- ALL FLOOR-MOUNTED EQUIPMENT SHALL BE MOUNTED ON 4" HIGH CONCRETE HOUSEKEEPING PAD.
- DRY TYPE TRANSFORMERS SHALL BE GROUNDED TO THE BUILDING GROUNDING ELECTRODE SYSTEM PER NEC.
- EXTERIOR MOUNTED ELECTRICAL EQUIPMENT SHALL BE NEMA 3R RATED AND BE FURNISHED WITH HEATERS, THERMOSTAT AND DISCONNECTING MEANS INTEGRAL TO EQUIPMENT.
- PROVIDE NAMEPLATES INDICATING EQUIPMENT DESIGNATION AND DESIGNATION OF SOURCE SUPPLYING THE DISCONNECTING MEANS FOR ALL SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, ENCLOSURES AND ELECTRICAL CABINETS. ACCESS DOORS/PANELS FOR CONCEALED ELECTRICAL EQUIPMENT, ENCLOSED SWITCHES/CIRCUIT BREAKERS/CONTROLLERS, POWER-TRANSFER DEVICES, PUSH-BUTTONS, CONTACTORS, LIGHTING CONTROL SYSTEMS, INVERTERS, GENERATORS, UPS, MONITORING EQUIPMENT, STARTERS, DISCONNECT SWITCHES, METER SOCKETS, RELAYS, TRANSFORMERS, AND JUNCTION BOXES GREATER THAN 4 1/16" SQUARE. PROVIDE NAMEPLATES ON BRANCH SWITCHES/BREAKERS OF SWITCHBOARDS AND DISTRIBUTION PANELS. NAMEPLATES SHALL BE ENGRAVED LAMACOID, 5/32" LETTERS CENTERED AT TOP OF PANEL AND SECURED WITH ADHESIVE TYPE FASTENERS. NORMAL POWER SHALL BE LABELED WITH WHITE BACKGROUND, BLACK LETTERS; EMERGENCY POWER AND MAIN SERVICE NAMEPLATE DISCONNECTS WITH RED BACKGROUND, WHITE LETTERING.
- COORDINATE SPACE WITH ALL OTHER TRADES TO MAINTAIN ALL CODE-REQUIRED CLEARANCES.
- REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE FINAL SETTINGS REQUIRED FOR ALL ADJUSTABLE/ELECTRONIC TYPE CIRCUIT BREAKERS WITH LONG TIME, SHORT TIME, GF, INSTANTANEOUS, ETC. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FINAL COORDINATION STUDY.
- PROPER CLEARANCE MUST BE MAINTAINED ABOUT ELECTRICAL EQUIPMENT PER NEC. FIELD VERIFY EXACT MOUNTING SPACE AVAILABLE IN ELECTRICAL ROOM / AREA PRIOR TO INSTALLATION OF ELECTRICAL EQUIPMENT.
- ELECTRICAL CONTRACTOR SHALL BALANCE PANELS AND ELECTRICAL EQUIPMENT TO ±10% BETWEEN PHASES: A/B, B/C, A/C REGARDLESS OF CIRCUITING INDICATED.
- HVAC CIRCUIT BREAKERS TO BE "HACR" TYPE WHERE REQUIRED BY EQUIPMENT NAMEPLATE PER NEC.
- FEEDER ROUTING IS DIAGRAMMATIC ONLY. ACTUAL ROUTING OF FEEDERS (OVERHEAD OR UNDERGROUND) IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH NEC ARTICLE 110.16 FOR LABELING OF PANELS FOR ARC FLASH HAZARD WARNING AS WELL AS FOLLOWING REQUIRED SAFETY PRECAUTIONS WHEN SERVICING OR MAINTAINING ELECTRICAL EQUIPMENT.

FEEDER NOTES

- <



HATCH LEGEND

- EXISTING ASPHALT TO BE RESURFACED
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- EXISTING BIO-RETENTION CELL
- PERVIOUS PAVEMENT OR PERMEABLE PAVERS
- PROPOSED ELECTRIC VEHICLE (EV) PARKING (4) (2 VEHICLES PER CHARGING STATION)
- PROP. TREE

NOTES:
 1. LANDSCAPING INSTALLATION BY THE CITY. QUANTITY AND CALIPER OF TREES TO BE DETERMINED BY CITY.

PARKING COUNT:

TOTAL EXISTING PARKING SPACES: 242
 EXISTING HANDICAP SPACES: 11

TOTAL RECONFIGURED PARKING SPACES ON EXISTING PAVEMENT : 233±
 TOTAL PARKING SPACES ON NEW PAVEMENT: 47±
 TOTAL SPACES ADDED: 38
 FINAL PARKING COUNT AFTER IMPROVEMENTS: 280
 HANDICAP SPACES REQUIRED: 8 (2 VAN ACCESSIBLE)
 HANDICAP SPACES PROPOSED: 9 (2 VAN ACCESSIBLE)

DATE	BY	DESCRIPTION
10/04/2022	APA	DRAFT ISSUE TO CITY
11/15/2022	APA	ISSUE TO CITY FOR REVIEW
12/6/2022	APA	ISSUE TO CITY FOR REVIEW
02/09/2023	APA	ISSUE TO CITY FOR REVIEW

BRAMHALL
 ENGINEERING AND SURVEYING COMPANY
 801 MOORE ROAD AVON, OHIO 44011
 (440) 934 - 7878 (440) 934 - 7879 FAX

DRAWN BY: CAT/REB
 CHECKED BY: APA

PREPARED FOR:
 CITY OF LAKEWOOD
 DIVISION OF ENGINEERING
 12650 DETROIT AVENUE, 2ND FLOOR
 LAKEWOOD, OHIO 44107
 (216) 529-6692

LAKWOOD PARK
 PHASE 2 - PARKING LOT IMPROVEMENTS
 OVERALL SITE PLAN
 CITY OF LAKEWOOD, COUNTY OF CUYAHOGA,
 STATE OF OHIO

SHEET
CE2.0
 JOB NO.
 21-5579 (A-1219)

J:\215579_Sheets_Lakewood\Final\Drawings\Phase 2 Parking Lot Improvements\Plan\CE2.0 Overall Site Plan.dwg, Plotted: Feb 09, 2023 - 9:46am