ELECTRICAL LEGEND

	(NOTE: ALL SYMBOLS SHOWN MAY NOT APPEAR ON DRAWINGS AND ARE USED AS APPLICABLE	L IU IHIS F	<u> </u>
SYMBOL	DESCRIPTION	REMARKS	MOUNTING HEIGHT TO CENTERLINE UNO
	POWER		
	CONDUIT CONCEALED IN WALL OR CEILING CONDUIT CONCEALED IN FLOOR (OR BELOW GRADE ON SITE PLAN)		
	CONDUIT EXPOSED ON WALL OR CEILING		
T	HOMERUN CONDUIT TELEPHONE CONDUIT CONCEALED UON (MIN 3/4")		
•	SURFACE METAL RACEWAY		
<u> </u>	FLEXIBLE CONNECTION, TYPE AS NOTED OVERHEAD UTILITIES		
	UNDERGROUND POWER		
	UNDERGROUND TELCO		
<u>⊕</u>	WALL MOUNTED JUNCTION BOX JUNCTION BOX		
①wp	WEATHERPROOF JUNCTION BOX		
<u> </u>	FLOOR MOUNTED JUNCTION BOX UNFUSED DISCONNECT SWITCH, RATING/POLES/NEMA RATING (60/3/1)		
<u> </u>	DISCONNECT BY OTHERS		
Æ	FUSED DISCONNECT SWITCH, RATING/POLES/NEMA RATING/FUSE SIZE (60/3/3R/40)		
(WH)	POWER POLE WITH VOICE/DATA & POWER RACEWAYS WATER HEATER		
	ELECTRICAL PANEL		
	EQUIPMENT AS INDICATED		
	HAND HOLE MAN HOLE (REFERENCE SPECIFICATIONS)		
0	CONDUIT		
<u> </u>	REMOTE PUSH BUTTON SINGLE RECEPT., AMP., VOLTAGE, NEMA CONFIGURATION AS REQUIRED OR AS NOTED		
=	120V. DUPLEX RECEPTACLE		18"
	120V. COUNTER TOP DUPLEX RECEPTACLE 120V. DEDICATED DUPLEX RECEPTACLE		42" 18"
<u> </u>	120V. QUADRAPLEX RECEPTACLE		18"
	120V. DUPLEX RECEPTACLE FOR TV POWER		SEE PLANS
GFI⊕	120V. GFI RECEPTACLE 120V. SQUARE OR ROUND FLOOR BOX WITH (1) DUPLEX RECEPTACLE		
	SQUARE OR ROUND FLOOR BOX WITH (1) DUPLEX RECEPTACLE		
PE .	PHOTO-ELECTRIC SWITCH		
	ON-OFF TIME CLOCK		
LC	LIGHTING CONTACTOR COMBINATION MOTOR STARTER DISCONNECT		
PP	POWER POLE		
TVSS	LOW VOLTAGE COMMUNICATION CIRCUIT TRANSIENT VOLTAGE SURGE		
	CIRCUIT BREAKER MOTOR		
	TRANSFORMER		
PB	PULL BOX DENOTES CONDUIT TURNING UP IN PLAN VIEW		
—— <u> </u>	DENOTES CONDUIT TURNING DOWN IN PLAN VIEW		
HI <u>GHER _DLO</u>	DWER DENOTES CHANGE IN CONDUIT ELEVATION IN PLAN VIEW ELECTRICAL METER		
\$ _M	MOTOR RATED SWITCH		
	LIGHITNG		
	SURFACE MOUNTED INCANDESCENT OR FLUORESCENT LIGHT FIXTURE		
	SURFACE MOUNTED OR PENDENT FLUORESCENT LIGHT FIXTURE SURFACE MOUNTED OR PENDENT EMERGENCY FLUORESCENT LIGHT FIXTURE		
0	RECESSED INCANDESCENT OR FLUORESCENT DOWN LIGHT FIXTURE		
	RECESSED INCANDESCENT OR FLUORESCENT EMERGENCY DOWN LIGHT FIXTURE RECESSED EMERGENCY FLUORESCENT LIGHT FIXTURE		
•	RECESSED FLUORESCENT LIGHT FIXTURE		
9	SURFACE MOUNTED WALL INCANDESCENT OR HID LIGHT FIXTURE		
⊬Ø ₽	RECESSED WALL INCANDESCENT OR HID LIGHT FIXTURE TWO HEAD BATTERY POWERED EMERGENCY EGRESS LIGHT		
₩	EXIT LIGHT, WALL MOUNTED		
H ⊗ ↓	EXIT LIGHT, WALL MOUNTED WITH DIRECTIONAL ARROW		
⊗ ⊗ ∤	EXIT LIGHT, CEILING MOUNTED EXIT LIGHT, CEILING MOUNTED WITH DIRECTIONAL ARROW		
Ţ	AREA OR STREET LIGHT FIXTURE		
→	AREA OR STREET LIGHT FIXTURE SINGLE POLE SWITCH		46"
•	THREE-WAY SWITCH		46"
\$4	FOUR WAY SWITCH		46"
. ~-	SINGLE POLE DIMMER SWITCH 600 WATT THERMAL MOTOR SWITCH—(FBE)		46" 46"
\$P	SINGLE POLE SWITCH WITH PILOT LIGHT		46"
\$wp	SINGLE POLE SWITCH, WEATHERPROOF		46"
k	SYSTEM		
ightharpoonup	TELEPHONE OUTLET & PLATE GANG DATA OUTLET & PLATE		
	COMBINATION TELEPHONE & DATA OUTLET		
	TELEPHONE BACKBOARD		
	GROUNDING		
₩	GROUND ROD C/W INSPECTION SLEEVE		
₩	GROUNDING ELECTRODE EXOTHERMIC WELD CONNECTION		
	MECHANICAL CONNECTION (eg LUG, C-TAP)		

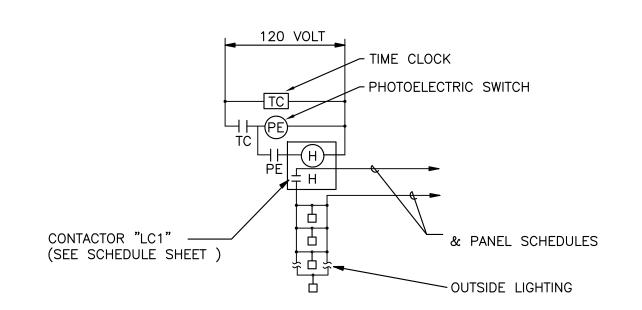
_	
	ABBREVIATIONS
	ABOVE FINISHED GRADE
AFG ABV	MOUNT ABOVE COUNTER
ABC	ABOVE CEILING
AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BFG	BELOW FINISHED GRADE
BKR	BREAKER
С	CONDUIT
C/W	COMPLETE WITH
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
CT	CURRENT TRANSFORMER
DF	ELECTRIC DRINKING FOUNTAIN
EC	EMPTY CONDUIT
ELEC	ELECTRICAL
EX	EXISTING
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FBE	FURNISHED & INSTALLED BY
	ELECTRICAL CONTRACTOR
FBO	FURNISHED BY OTHERS, INSTALLED BY
. 50	ELECTRICAL CONTRACTOR
FS	FIRE SUPPRESSION
FSCP	FIRE SUPPRESSION CONTROL PANEL
G	GROUND
GND	GROUND
GEC	GROUNDING ELECTRODE CONDUCTOR
GFI	GROUND FAULT INTERRUPTER
HP	HORSEPOWER
1	IONIZATION
IMC	INTERMEDIATE METALLIC CONDUIT
	(GALVANIZED)
JB	JUNCTION BOX
kCMIL	THOUSAND CIRCULAR MILS
LV	LOW VOLTAGE
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY
MTS	MANUAL TRANSFER SWITCH
NC	NORMALLY CLOSED
NIC	
	NOT IN CONTRACT
NL NC	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	OVER COUNTER
Р	PHOTOELECTRIC
РМ	POWER MONITOR
RMC	RIGID METALLIC CONDUIT (GALVANIZED)
RNC	RIGID NON-METALLIC CONDUIT
S/C	SEPARATE CIRCUIT
SCH	SCHEDULE
SPST	SINGLE POLE SINGLE THROW
TB	
THD	TELEPHONE TERMINAL BOARD TOTAL HARMONIC DISTORTION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
U/G	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
W	WALL MOUNTED
WH	WATER HEATER
WP	WEATHER PROOF, NEMA 3R
	i

GENERAL NOTES

- 1. ALL ELECTRICAL WORK SHOWN ON THESE DRAWINGS IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE ON THE DRAWINGS OR IN THE SPECIFICATIONS. FABRICATION AND INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEM SHALL BE DONE IN A FIRST CLASS WORKMANSHIP BY QUALIFIED TRADES PERSONS EXPERIENCED IN SUCH WORK.
- 2. SUBMISSION OF BID FOR THE ELECTRICAL WORK INDICATES THAT THE ELECTRICAL CONTRACTOR IS FAMILIAR WITH THE DESIGN INTENT, THE REQUIREMENTS OF THE PROJECT, REQUIREMENTS OF THE LOCAL ELECTRICAL AND TELEPHONE UTILITIES, AND LOCAL APPLICABLE CODES AND ORDINANCES.
- 3. ALL ELECTRICAL WORK SHALL CONFORM TO THE EDITION OF THE NEC ACCEPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- 4. SOME ASPECTS OF ELECTRICAL DESIGN ARE COMMONLY EXPRESSED IN SCHEMATIC FORM. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO INTERPRET THEM ACCURATELY AND CARRY OUT THE CONSTRUCTION AND/OR INSTALLATION SATISFACTORY TO THE CONSULTANT AND THE OWNER. IN CASE OF ANY UNCERTAINTIES OR AMBIGUITIES PROMPTLY CONSULT WITH THE PROJECT MANAGER FOR CLARIFICATION.
- 5. ABBREVIATIONS AND ACRONYMS USED ON THE DRAWINGS ARE DESCRIBED IN THE ABBREVIATIONS SECTION OF THE DRAWINGS. SOME COMMONLY USED AND INDUSTRY STANDARD ABBREVIATIONS AND ACRONYMS MAY NOT BE DESCRIBED. IF A CLARIFICATION IS REQUIRED PROMPTLY CONTACT THE PROJECT MANAGER.
- 6. SCHEDULE AND COORDINATE ALL WORK WITH OTHER TRADES BEFORE INSTALLATION OF EQUIPMENT TO AVOID CONFLICT DURING AND AFTER THE INSTALLATION.

	L	.IGHT	ING CC)NTA(CTOR SCHEDULE
I.D.	CONTACT AMPERE RATING	NO. OF POLES	ENCLOSURE	COIL VOLTAGE	REMARKS
LC1	30	20	NEMA 1	120	CONTROLLED PHOTOCELL ON - TIMECLOCK OF

CONTRACTOR TO	TECTURAL DRAWING FOR ALL THE LIGHT FIX CROSS VERIFY WITH ARCHITECTURAL DRAWIN			LD BE BROUGHT TO ELECTRICAL ENGINE
TYPE MANUFACTUR	ER CATALOG NUMBER	SIZE LAMPS	MOUNT	REMARKS
A LITHONIA OR APPROVED I	ZL1D L48 5000LM FST MVOLT 35K 80 CRI W	/H LED	CHAIN HANG	LED SURFACE OR CHAIN 1x4 FIXTURE STRIP LIGHT FIXTURE
BE LITHONIA OR APPROVED E	BLWP2-TUWH PROR -40L EL14L	LED INCLUDED	WALL MOUNTED	2 FEET LED STRIP LIGHTS WALL MOUNTED WINUTES BATTERY BACK UP
MCGRAW-EDIS OA OR APPROVED E	OW1333-120V	LED INCLUDE	WALL	LED WALL-MOUNTED FULL CUTOFF FIXTURE CONTRACTOR TO FURNISH NECESSARY ACCESS INSTALL ON THE WALL.
SC OR APPROVED I	SQUAL IST-AF-350-LED-E1-T3-BRZ-7050-T20V	LED INCLUDE		DECORATIVE WALL SCONCE WALL-MOUNTED NYTURE CONTRACTOR TO FURNISH NECESSAR ACCESSORIES TO INSTALL ON THE WALL.
VINTAGE P1 OR APPROVED E	QUAL VNTW-3500L-50K-DIM-3M-BZ	LED INCLUDE	25FT POLE + 3 FEET BASE	LED WITH TYPE 3 MEDIUM OPTICS WITH FULL CUTOFF AT THE PROPERTY LINE. PROVIDE DARK BRONZE ROUND STEEL POLE.
EMX LITHONIA OR APPROVED EG	LHQM-S-W-1-G-120V	INCLUDED	WALL	EXIT AND EMERGENCY BATTERY PACK LIGHT COMBO GREEN LETTER AND WHITE HOUSING. E SIGN SHOULD HAVE 90 MINUTE BATTERY BACK AND MORE THAN 5 FOOT CANDLE.
LITHONIA EMXT _{OR} APPROVED EC	AFN-W-EXT	WALL	LED	LED WALL PACK WITH EMERGENCY BATTERY BACK UP FOR EXTERIOR. MOUNT ABOVE



TYPICAL OUTSIDE LIGHTING CONTROL SCALE: NO SCALE



PROJECT INFO

CLIENT:

COVENANT GROUP, LLC

PROJECT:

COVENANT GROUP - BUILDING SHELL - LEE'S SUMMIT, MO

ADDRESS:

400 NW CHIPMAN RD

LEE'S SUMMIT, MO 64806

PROJECT NO:

MAIN CONTACT

CHRISTOPHER CLARK, AIA, NCARB 7701 E KELLOGG DR, STE 630 WICHITA, KS 67207 (316) 302-4472 chris@clarkitecture.net

DEVELOPER

COVENANT REAL ESTATE GROUP

PERMIT

SHEET INFO

ISSUED FOR:

ISSUE DATE: 04/06/22

REVISION SCHEDULE

NO DESCRIPTION DATE
A CITY COMMENTS 05/05/22



ELECTRICAL LEGEND, SYMBOL, AND SCHEDULE

E-1

A. GENERAL

- 1. EXAMINE THE SITE CONDITIONS VERY CAREFULLY AND THE SCOPE OF PROPOSED WORK TOGETHER WITH THE WORK OF ALL OTHER TRADES AND INCLUDE IN THE BID PRICE ALL COSTS FOR WORK SUCH AS EQUIPMENT AND WIRING MADE NECESSARY TO ACCOMMODATE THE ELECTRICAL SYSTEMS SHOWN AND SYSTEMS OF OTHER TRADES.
- 2. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
- 3. PERFORM DETAILED VERIFICATION OF WORK PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND COMMENCING CONSTRUCTION. ISSUE A WRITTEN NOTICE TO THE CONSULTANT OF ANY DISCREPANCIES.
- 4. OBTAIN ALL PERMITS, PAY ASSOCIATED FEES AND SCHEDULE INSPECTION.
- 5. SUBMIT SHOP DRAWINGS, PRODUCT DATA AND SAMPLES. INDICATE DETAILS OF CONSTRUCTION, DIMENSIONS, CAPACITIES, WEIGHTS AND ELECTRICAL PERFORMANCE CHARACTERISTICS OF EQUIPMENT OR MATERIAL. WHERE APPLICABLE INCLUDE WIRING AND SINGLE LINE DIAGRAMS. ADVERTISING OR SALES LITERATURE SHALL NOT BE ACCEPTABLE AS SHOP DRAWINGS.
- 6. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, INSURANCE AND SERVICES TO COMPLETE THIS PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND PRESENT IT AS FULLY OPERATIONAL TO THE SATISFACTION OF THE
- 7. CARRY OUT WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND O.S.H.A.
- 8. PRIOR TO BEGINNING WORK COORDINATE ALL POWER AND TELCO WORK WITH THE LOCAL UTILITY COMPANIES AS IT MAY APPLY TO THIS SITE. ALL WORK TO COMPLY WITH THE RULES AND REGULATIONS OF THE UTILITIES INVOLVED.
- 9. PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR THE INSTALLATION OF THE ELECTRICAL WORK. ANY DAMAGE DONE TO THE WORK ALREADY IN PLACE BY REASON OF THIS WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE BY A QUALIFIED MECHANIC EXPERIENCED IN SUCH WORK. PATCHING SHALL BE UNIFORM IN APPEARANCE AND SHALL MATCH THE SURROUNDING SURFACE. DO NOT CUT STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE CONSULTANT.
- 10 CORE DRILLING THROUGH WALLS AND FLOORS FOR CONDUIT AND CABLE INSTALLATION IS TO BE PROVIDED BY THE GENERAL CONTRACTOR AT LOCATIONS DETERMINED BY THE STRUCTURAL ENGINEER. REFER TO STRUCTURAL DRAWINGS AND COORDINATE WITH GENERAL CONTRACTOR FOR INSTALLATION OF CONDUITS AND CABLES THROUGH WALLS AND FLOORS.
- 11. WHERE CABLE OR CONDUITS PASS THROUGH FLOORS AND FIRE RATED WALLS, SEAL CORE DRILLED OPENINGS AROUND CONDUITS OR CABLES USING UL APPROVED FIRE—STOPPING SYSTEM AND UL LISTED SEALANT.
- 12. ENSURE THAT ALL LIGHT, POWER, HEAT, TELEPHONE AND OTHER ELECTRICAL AND MECHANICAL SYSTEMS AND SERVICES IN THE BUILDING REMAIN OPERATIONAL DURING THE COURSE OF THIS PROJECT. PROVIDE TEMPORARY SERVICES AS REQUIRED. INCLUDE ALL COSTS FOR TEMPORARY SERVICES IN THE BID PRICE. REMOVE ALL EXISTING EQUIPMENT, WIRING ETC. NOT BEING RE—USED UNDER NEW SCHEMES, WHETHER SHOWN ON DRAWINGS OR NOT.
- 13. FABRICATION AND INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEM SHALL BE DONE IN A FIRST-CLASS WORKMANSHIP MANNER PER NECA STANDARD 1-2000 BY QUALIFIED PERSONNEL EXPERIENCED IN SUCH WORK. WORK SHALL BE SCHEDULED IN AN ORDERLY MANNER SO AS NOT TO IMPEDE PROGRESS OF THE PROJECT.
- 14. DURING PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF THE ELECTRICAL SYSTEMS, LOCATING EACH CIRCUIT PRECISELY AND DIMENSIONING EQUIPMENT, CONDUIT AND CABLE LOCATIONS. UPON COMPLETION OF THE INSTALLATION, TRANSFER ALL RECORD DATA TO BLACK LINE PRINTS OF THE ORIGINAL DRAWINGS IN RED AND SUBMIT THESE DRAWINGS AS RECORD DRAWINGS TO THE CONSULTANT.
- 15. AT THE COMPLETION OF THE PROJECT PROVIDE THREE SETS OF OPERATION AND MAINTENANCE MANUALS, BOUND IN 3-RING BINDERS, DULY LABELED, AND CONTAINING COMPLETE LIST OF REPLACEMENT PARTS, SHOP DRAWINGS AND CATALOG INFORMATION OF ALL MAJOR EQUIPMENT, SUCH AS TRANSFORMERS, LUMINAIRES, PANEL BOARDS, TRANSFER SWITCH, PANEL SCHEDULE, A/C SYSTEMS, TVSS, SECURITY SYSTEM, ETC.
- 16. THE COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF TIME OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE UPON WRITTEN NOTIFICATION AT THE EXPENSE OF THE CONTRACTOR.

B. SERVICE AND DISTRIBUTION

- 1. CONTRACTOR TO COORDINATE WITH LANDLORD AND/OR UTILITIES FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOK UP COSTS TO BE PAID BY CONTRACTOR. CONTRACTOR TO OBTAIN NECESSARY PERMITS, PAY ALL ASSOCIATED FEES AND SCHEDULE INSPECTIONS OF SERVICE WITH LOCAL AUTHORITIES HAVING JURISDICTION.
- 2. MAIN DISTRIBUTION CONFIGURATION SHALL BE BASED ON THE DESIGN INTENT.
- 3. VERIFY ALL DIMENSIONS AND CLEARANCES BY FIELD MEASUREMENTS PRIOR TO INSTALLATION.
- 4. BRANCH CIRCUIT PANEL BOARDS SHALL BE OF THE TYPE AND RATINGS AS SHOWN ON DRAWINGS. PANEL BOARDS SHALL BE CUTLER—HAMMER TYPE PRL2A OR APPROVED EQUAL. DISTRIBUTION BOARD SHALL BE CUTLER—HAMMER TYPE POW—R—LINE 4B OR APPROVED EQUAL.
- 5. PANEL BOARDS AND SPLITTERS SHALL HAVE COPPER MAINS AND SHALL BE OF THE CHARACTERISTICS AS NOTED ON THE DRAWINGS. AFTER COMPLETION OF WIRING, PROVIDE A TYPED DIRECTORY SHOWING A CLEAR DESCRIPTION OF EACH CIRCUIT BEING FED FROM PANEL AND PLACE IN METAL FRAME INSIDE DOOR.

C. BASIC MATERIALS AND METHODS

- 1 INSTALLATION, MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE NATIONAL ELECTRICAL SAFETY CODE (NEC), APPLICABLE STATE ELECTRICAL CODES, THE NATIONAL ELECTRICAL SAFETY CODE (NESC) AND THE TERMS, CONDITIONS AND REGULATIONS OF THE AUTHORITY HAVING LAWFUL JURISDICTION PERTAINING TO THE WORK REQUIRED. ALL MATERIAL, EQUIPMENT AND DEVICES SHALL CONFORM TO THE APPLICABLE STANDARDS OF THE UNDERWRITERS LABORATORIES INC. (UL). THE LABEL OF AND LISTING BY UL IS
- 2. ALL MATERIALS AND EQUIPMENT SHALL BE NEW. MATERIALS AND EQUIPMENT SHALL BE THE STANDARD PRODUCTS OF MANUFACTURER'S CURRENT DESIGN. ANY FIRST—CLASS PRODUCT MADE BY A REPUTABLE MANUFACTURER MAY BE USED PROVIDING IT CONFORMS TO THE CONTRACT REQUIREMENTS AND MEETS THE APPROVAL OF THE CONSULTANT AND THE OWNER. APPROVALS SHALL BE OBTAINED PRIOR TO INSTALLATION.
- 3. ARRANGE CONDUIT, WIRING, EQUIPMENT, AND OTHER WORK GENERALLY AS SHOWN, PROVIDING PROPER CLEARANCES AND ACCESS. CAREFULLY EXAMINE ALL CONTRACT DRAWINGS AND FIT THE WORK IN EACH LOCATION WITHOUT SUBSTANTIAL ALTERATION. WHERE DEPARTURES ARE PROPOSED BECAUSE OF FIELD CONDITIONS OR OTHER CAUSES, PREPARE AND SUBMIT DETAILED DRAWINGS FOR ACCEPTANCE. THE RIGHT IS RESERVED TO MAKE REASONABLE CHANGES IN LOCATION OF EQUIPMENT, CONDUIT, AND WIRING UP TO THE TIME OF ROUGH—IN OR FABRICATION.
- 4. THE CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ALL OFFSETS, BENDS, FITTINGS, PULL BOXES AND ACCESSORIES ARE NOT NECESSARILY SHOWN. PROVIDE ALL SUCH ITEMS AS MAY BE REQUIRED TO FIT THE WORK TO THE CONDITIONS.
- MOUNTING HEIGHTS OF ALL WIRING DEVICES SHALL BE VERIFIED WITH THE CONSULTANT PRIOR TO INSTALLATION.
- 6. ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE NEMA 3R RATED UNLESS NOTED
- 7. MAINTAIN ALL CLEARANCES AS REQUIRED BY NEC.
- 8. SEAL AROUND CONDUITS AND AROUND CONDUCTORS WITHIN CONDUITS ENTERING THE MODULAR CABINETS WHERE PENETRATION OCCURS WITH A SILICONE SEALANT TO PREVENT MOISTURE PENETRATION INTO BUILDING.
- 9. SILICONE SEAL AROUND ALL BOLTS AND SCREWS USED TO SECURE EQUIPMENT TO EXTERIOR OF BUILDING.
- 10. MAKE NECESSARY CONNECTIONS FOR BATTERY IN EMERGENCY LIGHT FIXTURE. CONNECT EXTERIOR LIGHT FIXTURE (PROVIDED BY SHELTER MANUFACTURER) TO EXTERNAL JUNCTION BOX.

D. RACEWAYS AND BOXES

- 1. ALL WIRING FOR POWER AND SYSTEMS SHALL BE IN CONDUIT UNLESS DIRECTED OTHERWISE. ALL CONDUIT SHALL BE UL LABELED. MINIMUM SIZE CONDUIT SHALL BE 1/2 INCH TRADE SIZE UNLESS NOTED OTHERWISE.
- 2. UNLESS NOTED OTHERWISE, CONDUIT INSTALLED OUTDOORS SHALL BE GALVANIZED IMC OR GALVANIZED RMC WITH LIQUID TIGHT FITTINGS. ALL EXTERIOR HARDWARE SHALL BE GALVANIZED STEEL.
- 3. CONDUIT INSIDE BUILDING IN AREAS WHERE CONDUIT IS SAFE FROM MECHANICAL DAMAGE AND WHERE CONCEALED IN DRYWALL, METAL FLASHING ETC. SHALL BE EMT WITH COMPRESSION FITTINGS. CONDUIT IN HIGH TRAFFIC AREA, IN AREAS OF RISK OF PHYSICAL DAMAGE AND IN STAIRWELLS SHALL BE GALVANIZED RMC.
- 4. FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT SHALL BE INSTALLED IN LIQUID—TIGHT FLEXIBLE METAL CONDUIT.
- 5. CONDUIT WORK IN HAZARDOUS AREAS, OR AREAS WITH LARGE TEMPERATURE DIFFERENTIAL: USE RIGID STEEL OR IMC CONDUIT WITH CONDUIT SEAL FITTINGS, POURED WITH HARDENING COMPOUND AFTER CONDUCTORS ARE PULLED IN CONDUIT. SEALS SHALL BE INSTALLED PER NEC.
- 6. ACCEPTABLE MANUFACTURERS OF SEALS:
 - a. CROUSE-HINDS
 - b. APPLETON
 - c. KILLARK
 - d. O-Z/GEDNEY

E. CONDUCTORS AND CONNECTORS

- 1. UNLESS NOTED OTHERWISE, ALL CONDUCTORS SHALL BE COPPER, MINIMUM SIZE #12 AWG, WITH THERMOPLASTIC INSULATION (TYPES THHN OR THWN) CONFORMING TO NEMA WC5 OR CROSS—LINKED POLYETHYLENE INSULATION (TYPE XHHW) CONFORMING TO NEMA WC7. INSULATION SHALL BE RATED FOR 90°C. CONDUCTORS SHALL BE SOLID FOR #10 AND SMALLER, STRANDED FOR #8 AND LARGER.
- CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS: 208/120V BLACK (PHASE A), RED (PHASE B), BLUE (PHASE C), WHITE (NEUTRAL), GREEN (GROUND); 480/277V -BROWN (PHASE A), ORANGE (PHASE B), YELLOW (PHASE C), GRAY (NEUTRAL), GREEN (GROUND).
- 3. FOR COPPER CONDUCTORS #6 AWG AND SMALLER USE 3M SCOTCH-LOK OR T&B STA-KON COMPRESSION TYPE CONNECTORS WITH INTEGRAL OR SEPARATE INSULATION CAPS. FOR COPPER CONDUCTORS LARGER THAN #6 AWG USE SOLDERLESS, IDENT HEX SCREW OR BOLT TYPE PRESSURE CONNECTORS OR DOUBLE COMPRESSION C-CLAMP CONNECTORS, UNLESS SPECIFIED OTHERWISE ON DRAWINGS.
- 4. UNLESS NOTED OTHERWISE ALL LUGS SHALL BE TIN PLATED COPPER, TWO-HOLE, LONG BARREL. COMPRESSION TYPE.

E. CONDUCTORS AND CONNECTORS

- 5. CONDUCTOR LENGTHS SHALL BE CONTINUOUS FROM TERMINATION TO TERMINATION WITHOUT SPLICES. SPLICES ARE NOT ACCEPTABLE. IF SPLICES ARE UNAVOIDABLE PRIOR APPROVAL FROM THE CONSULTANT MUST BE OBTAINED.
- 6. ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 80 UNLESS NOTED OTHERWISE
- 7. ALL EMPTY CONDUIT INSTALLED FOR FUTURE INSTALLATION OF WIRES AND CABLES SHALL HAVE A PULL CORD.
- 8. PROVIDE CONDUIT EXPANSION/DEFLECTION FITTINGS WHERE CONDUITS CROSS EXPANSION JOINTS, FLOATING SLABS, OR ISOLATED SLABS. PROVIDE CONDUIT THRU-WALL SEALS WHERE CONDUITS CROSS BETWEEN INTERIOR AND EXTERIOR OR DAMP LOCATIONS. PROVIDE CONDUIT FIRE SEALS WHERE CONDUITS PASS THRU FIRE-RATED CONSTRUCTION.
- 9. WIREWAYS SHALL BE SHEET METAL SIZED AND SHAPED AS INDICATED. INCLUDE COUPLING, OFFSETS, ELBOWS, EXPANSION JOINTS, ADAPTERS, HOLDOWN STRAPS, END CAPS AND OTHER FITTINGS TO MATCH AND MATE WITH WIRE WAYS AS REQUIRED FOR COMPLETE SYSTEM. MANUFACTURERS: HOFFMAN, SQUARE—D OR APPROVED EQUAL.
- 10 HINGED COVER ENCLOSURES CONFORMING TO NEMA 250, TYPE 1, WITH CONTINUOUS HINGE COVER AND FLUSH LATCH, SIZED AS INDICATED. CABINETS TO CONFORM TO NEMA 250, TYPE 1, GALVANIZED STEEL BOX WITH REMOVABLE INTERIOR PANEL AND REMOVABLE FRONT, FINISHED INSIDE AND OUT WITH MANUFACTURER'S STANDARD ENAMEL. HINGED DOOR IN FRONT COVER WITH FLUSH LATCH AND CONCEALED HINGE. MANUFACTURERS: HOFFMAN, O-Z/GEDNEY, T&B OR APPROVED EQUAL.
- 11. PROVIDE BOXES FOR ALL OUTLETS, DEVICES, CONNECTIONS, ETC. PROVIDE JUNCTION AND PULL BOXES AS REQUIRED. PROVIDE CAST METAL BOXES FOR SURFACE MOUNTED LOCATIONS AND STAMPED STEEL BOXES FOR INTERIOR DRY FLUSH—MOUNTED LOCATIONS. SHEET METAL BOXES SHALL CONFORM TO NEMA 0S1; CAST—METAL BOXES SHALL CONFORM TO NEMA 81 AND SHALL BE SIZED IN ACCORDANCE WITH NEC UNLESS NOTED OTHERWISE.
- 12. PULL BOXES USED FOR FIBER OPTIC CABLES SHALL BE SIZED IN ACCORDANCE WITH THE CABLE MANUFACTURER'S INSTRUCTIONS SUCH THAT PROPER BENDING RADII OF THE FIBER OPTIC CABLE ARE MAINTAINED.

F. WIRING DEVICES

1. SWITCHES SHALL BE TOGGLE—TYPE, HORSEPOWER RATED, 120/277V, 20 AMP SPECIFICATION GRADE. DUPLEX RECEPTACLES SHALL BE RATED 20 AMPS, 125 VOLTS, NEMA5—20R, SPECIFICATION GRADE. MOUNTING HEIGHTS OF ALL WIRING DEVICES SHALL BE VERIFIED WITH THE OWNER PRIOR TO INSTALLATION.

G. PANELBOARDS

GROUND BUS.

- 1. PANELBOARDS SHALL CONFORM TO NEMA PB 1, NEMA 250 TYPE 1, UL 50 AND 67, AND THE NEC. PANELBOARDS SHALL BE OF THE TYPE AND RATINGS AS SHOWN ON DRAWINGS. SERIES RATED PANELBOARDS ARE NOT ACCEPTABLE.
- 2. PANELBOARDS SHALL BE FACTORY ASSEMBLED WITH DOUBLE ROW CONSTRUCTION.
 PROVIDE FRONT COVER HINGED TO BOX ON ALL PANELBOARDS. PROVIDE TIN PLATED
 COPPER BUSSING, FULL—AMPACITY PHASE AND 100% AMPACITY NEUTRAL BUSES, 50%
- 3. PROVIDE CIRCUIT NUMBERING AND TYPEWRITTEN PANELBOARD SCHEDULE FOR EACH PANELBOARD.
- 4. ACCEPTABLE MANUFACTURERS: SQUARE D, GENERAL ELECTRIC, CUTLER-HAMMER.

H. SAFETY SWITCHES AND OVERCURRENT PROTECTION DEVICES

- 1. ENCLOSED, NON-FUSIBLE AND FUSIBLE SAFETY (DISCONNECT) SWITCHES SHALL CONFORM TO NEMA KS1 TYPE HD, SIZED AS INDICATED ON DRAWINGS. ENCLOSURE TO BE RATED NEMA TYPE 3R FOR OUTDOOR USE AND TYPE 1 FOR INDOOR USE UNLESS OTHERWISE NOTED. OPERATING MECHANISMS SHALL BE DESIGNED SO THAT THE SWITCHES MAY BE LOCATED IN THE OFF POSITION.
- 2. ACCEPTABLE MANUFACTURERS: SQUARE D, GENERAL ELECTRIC, CUTLER HAMMER, SIEMENS.
- 3. UNLESS NOTED OTHERWISE, PROVIDE CLASS J TIME DELAY FUSES FOR MAIN FEEDERS, CLASS RK1 TIME DELAY FUSES FOR MOTOR CIRCUITS, AND CLASS RK5 NON—TIME—DELAY FOR OTHER BRANCH CIRCUITS. INSTALL FUSES SO THAT THE LABELS SHOWING THEIR RATINGS CAN BE READ WITHOUT REQUIRING FUSE REMOVAL. PROVIDE SIX (6) SETS OF SPARE FUSES AND A FUSE CABINET FOR EACH LOCATION WHERE FUSES ARE INSTALLED.
- 4. IN GENERAL, PROVIDE MOLDED CASE, BOLT—ON TYPE, AND THERMAL MAGNETIC TRIP CIRCUIT BREAKERS AS SHOWN AND AS REQUIRED FOR THIS PROJECT. MULTIPLE POLE BREAKERS SHALL BE SINGLE HANDLE, COMMON TRIP. PROVIDE HANDLE LOCKING DEVICES WHERE INDICATED. INTERRUPTING RATING AS INDICATED OR AS REQUIRED FOR AVAILABLE FAULT CURRENT.
- 5. FOR NEW OVERCURRENT DEVICES IN EXISTING EQUIPMENT, DEVICE VOLTAGE AND INTERRUPTING RATINGS SHALL MATCH EXISTING DEVICE RATINGS UNLESS NOTED OTHERWISE. BUS BARS, DRAWOUT AND PLUG-IN ASSEMBLIES, CONNECTORS, ADAPTERS, LUGS, AND OTHER HARDWARE SHALL BE OF THE SAME TYPE AND MANUFACTURE AS EXISTING EQUIPMENT. WHERE A DEVICE IS OBSOLETE AND THE MANUFACTURER DOES NOT OFFER AN EQUIVALENT REPLACEMENT DEVICE, PROVIDE WRITTEN NOTICE TO THE ENGINEER.
- 6. PROVIDE LABELS, CIRCUIT NUMBERING, AND UPDATED TYPEWRITTEN PANELBOARD SHEDULES FOR ALL PANELS AFFECTED BY THIS WORK.

. GROUNDING

- ALL SAFETY GROUNDING OF THE ELECTRICAL EQUIPMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH NEC.
- 2. GROUND LUGS ARE SPECIFIED UNDER "CONDUCTORS AND CONNECTORS".

CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.

SHARP BENDS. ALL BENDS TO BE A MINIMUM OF 8" RADIUS.

EXOTHERMIC-WELDING. USE ERICO T-319 GALVANIZING BAR.

- 2. GROUND EUGS ARE SI ECHTED UNDER CONDUCTORS AND CONNECTORS.
- 3. ALL GROUND LUG AND COMPRESSION CONNECTIONS SHALL BE COATED WITH ANTI-OXIDANT AGENT, SUCH AS NO-OX, NOALOX, PENETROX OR KOPRSHIELD.
- 4. GROUND ALL EXPOSED METALLIC OBJECTS ON BUILDING EXTERIOR INCLUDING BUILDING TIE DOWN BRACKETS.
- 5. PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND
- 6.. DO NOT INSTALL GROUND RODS AND CONDUCTORS OUTSIDE OF PROPERTY LINE.
- 7. REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUND
- 8. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID
- 9. REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY
- 10. ALL GROUND CONNECTIONS TO BE APPROVED FOR THE METALS BEING CONNECTED.
- 11. EXOTHERMIC WELDS TO BURIED GROUNDING SYSTEM SHALL BE PARALLEL TYPE, EXCEPT FOR BONDS TO GROUND RODS WHICH ARE TEE CONNECTIONS.
- 12. FOR MECHANICAL CONNECTIONS TO HATCHPLATE GROUND BARS USE A TWO-HOLE NEMA DRILLED CONNECTOR SUCH AS T&B 32007 OR APPROVED EQUAL.

J. DATA AND TELEPHONE WIRING

- 1. PROVIDE DATA OUTLETS WHERE SHOWN. EXACT TYPE OF DATA OUTLETS SHALL BE COORDINATED WITH THE OWNER. PROVIDE ALL ROUGH—IN AND EMPTY CONDUIT SYSTEM WHERE REQUIRED.
- 2. PROVIDE TELEPHONE OUTLETS WHERE SHOWN. TELEPHONE OUTLETS SHALL BE BUILDING STANDARD WITH WHITE FACEPLATE. PROVIDE ALL TELEPHONE WIRING AND CONDUIT. TERMINATE TELEPHONE WIRING AT A DEMARCATION POINT DETERMINED BY THE OWNER.

K. LIGHTING

- 1. PROVIDE ALL FLUORESCENT FIXTURES WITH T5 LAMPS, AND ELECTRONIC ENERGY SAVING BALLASTS.
- 2. LIGHTING SWITCHES SHALL BE TOGGLE—TYPE 277V 20 AMP SPECIFICATION GRADE WITH SINGLE AND THREE WAY AS SPECIFIED ON THE DRAWING.

L. IDENTIFICATION

- 1. ALL EQUIPMENT SHALL BE IDENTIFIED USING NAMEPLATES AND LABELS.
- 2. NAMEPLATES SHALL BE 1/8" THICK PLASTIC ENGRAVING SHEET, WHITE FACE, BLACK CORE, ENGRAVED WITH EQUIPMENT IDENTIFICATION AND ATTACHED TO EQUIPMENT WITH SELF—TAPPING SCREWS. CHEMICAL ADHESION PLATES ARE NOT ACCEPTABLE. LETTERS SHALL BE MINIMUM 1/4" HIGH.
- LABELS SHALL BE EMBOSSED PLASTIC WITH MINIMUM 1/4" HIGH LETTERS. LABELS SHALL BE USED FOR IDENTIFYING CONDUIT, CABLES, JUNCTION BOXES, RECEPTACLES ETC.
- 4. WORDING ON NAMEPLATES AND LABELS MUST BE APPROVED BY THE ENGINEER PRIOR TO MANUFACTURING.
- 5. EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR INSIDE THE LEASE SPACE SHALL HAVE AN ENGRAVED TAG ATTACHED AT EACH END IDENTIFYING THE ORIGINATING AND TERMINATING POINT.

N. TESTING AND COMMISSIONING

- 1. CONDUCT INSULATION RESISTANCE, RESISTANCE MEASUREMENTS THROUGH ALL NEW BOLTED CONNECTIONS, AND CONTINUITY TESTS OF ALL NEW FEEDERS TO INSURE CORRECT CABLE CONNECTION PER NETA ACCEPTANCE TESTING SPECIFICATIONS FOR ELECTRIC POWER DISTRIBUTION EQUIPMENT AND SYSTEMS STANDARDS. SUBMIT TEST REPORTS TO ENGINEER AND INCLUDE IN PROJECT CLOSE—OUT DOCUMENTATION
- 2. CARRY OUT TESTING AND COMMISSIONING OF ALL MAJOR ELECTRICAL EQUIPMENT SUCH AS SWITCHBOARDS, DISTRIBUTION BOARDS, GENERATOR, AUTOMATIC TRANSFER SWITCH, MOTOR STARTERS, ETC. ENGAGE THE SERVICES OF SUPPLIERS OF EQUIPMENT IN FACILITATING TESTING AND COMMISSIONING.
- 3. TESTING AND COMMISSIONING OF GENERATOR SET, AUTOMATIC TRANSFER SWITCH, AND SOLID—STATE CIRCUIT BREAKERS SHALL BE CARRIED OUT IN THE PRESENCE OF THE ENGINEER. NOTIFY THE ENGINEER SEVEN WORKING DAYS IN ADVANCE OF THE TEST

O. FINAL SITE CLEAN UP

- 1. UPON COMPLETION OF THE INSTALLATION, THE ELECTRICAL CONTRACTOR SHALL REVIEW AND CHECK THE ENTIRE INTALLATION, CLEAN EQUIPMENT AND DEVICES, AND REMOVE SURPLUS MATERIALS AND TRASH FROM THE OWNER'S PROPERTY, LEAVING THE WORK IN NEAT, CLEAN ORDER AND IN COMPLETE WORKING CONDITION.
- 2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY CARTONS, DEBRIS, AND TRASH FOR EQUIPMENT INSTALLED BY THE ELECTRICAL CONTRACTOR, INCLUDING EQUIPMENT FURNISHED BY THE OWNER OR OTHERS AND REMOVED FROM PACKAGING BY THE ELECTRICAL CONTRACTOR.



PROJECT INFO

CLIENT:

COVENANT GROUP, LLC

PROJECT:

COVENANT GROUP - BUILDING SHELL - LEE'S SUMMIT, MO

ADDRESS:

400 NW CHIPMAN RD LEE'S SUMMIT, MO 64806

PROJECT NO:

MAIN CONTACT

CHRISTOPHER CLARK, AIA, NCARB 7701 E KELLOGG DR, STE 630 WICHITA, KS 67207 (316) 302-4472 chris@clarkitecture.net

DEVELOPER

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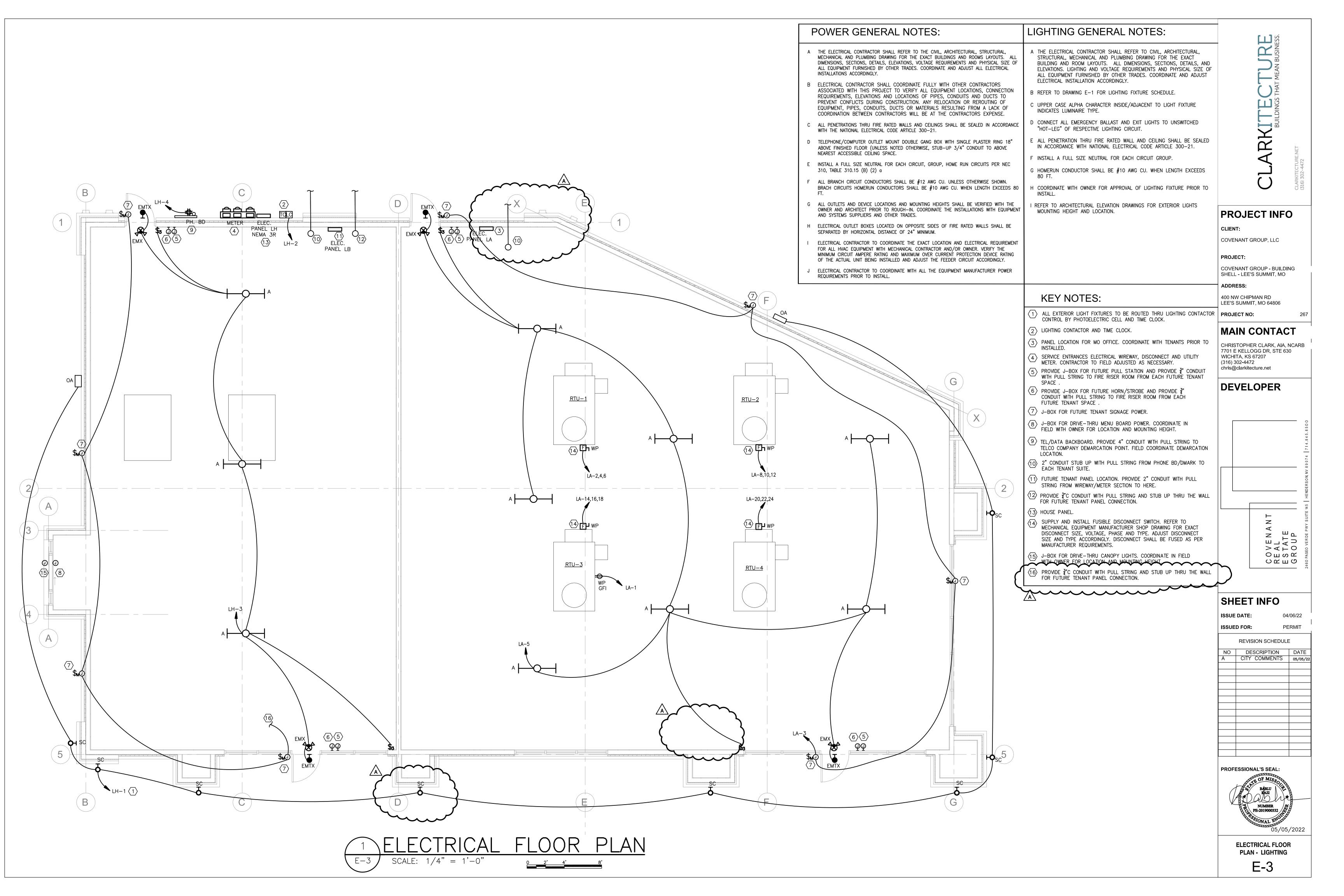
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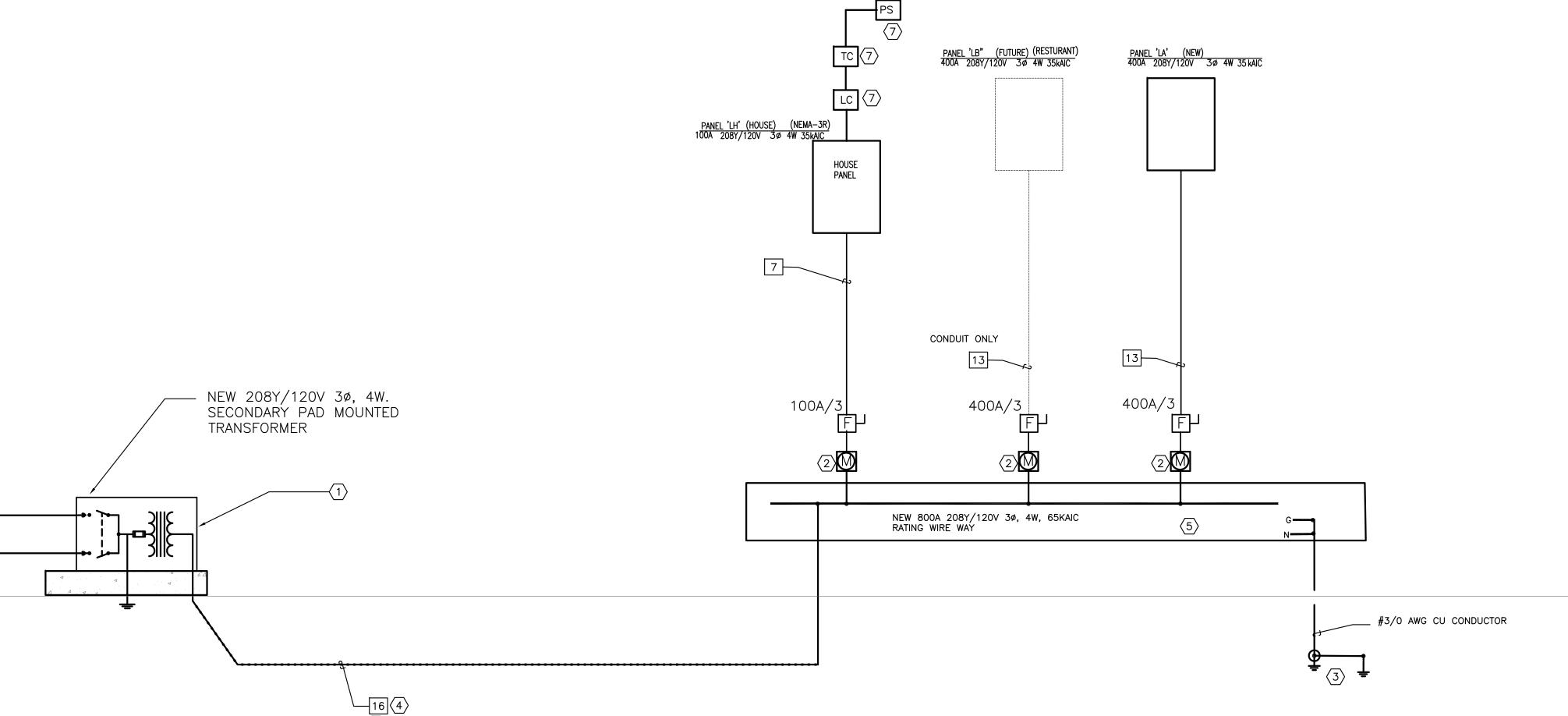
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CITY COMMENTS 05/05/22



ELECTRICAL SPECIFICATION

E-2





SPECIAL FEEDER NOTES:

ALL THE MAIN FEEDERS ARE ALUMINUM.

ALL THE BRANCH CIRCUITS ARE COPPER.

ELECTRICAL ONE LINE DIAGRAM SCALE: N.T.S.

CONDUIT AND WIRE DESIGNATION SCHEDULE (NOTE: ALL CONDUIT AND WIRE DESIGNATION SHOWN MAY NOT APPEAR ON DRAWING AND ARE USED AS APPLICABLE TO THIS PROJECT) WIRE/BKR MAX AMPS 🚨 DESCRIPTION REMARKS 1 3#10, 1#10G, 3/4"C 1 | 3#8, 1#10G, 3/4"C 40 1 | 3#6, 1#10G, 3/4"C 60 1 4#6, 1#6G, 1-1/4" RNC 1 3#3, 1#8G, 1"C 85 1 4#1/0, , 2"C 100 6 ALUMINUM 100 1 4#1/0, 1#6G, 2"C ALUMINUM 8 130 4#1, 1#6G, 1-1/2"C 3#1/0, 1#6G, 1-1/2°C 150 150 4#1/0, 1#6G, 2"C 4#250KCMIL, 1#4G, 2-1/2"C 200 ALUMINUM 4#350KCMIL, 1#2G, 3"C ALUMINUM 250 400 ALUMINUM $2 \mid 4\#250$ KCMIL, 1#1G, 2-1/2"C 600 2 | 4#350KCMIL, 1#1/0G, 3"C 800 $2 \mid 4\#500KCMIL, 1/\#1/0 3-1/2"C$ 700 16 3 4#350KCMIL, 3"C ALUMINUM

CONDUIT SIZE BASED ON THHN/THWN 40% FILL CALCULATION. WIRE SIZE BASED ON NEC 110-14C WITH 60°C AMPACITY TABLES FOR 20 AMPS THRU 100 AMPS

AND 75°C AMPACITY TABLES FOR VALUES > 100 AMPS.

NOTE! IN GENERAL, THE ACTUAL BREAKER AMPERAGE SHALL BE EQUAL TO OR NEXT STANDARD SIZE SMALLER THAN THE MAXIMUM WIRE AMPS. EXCEPTIONS SHALL BE MOTOR AND SPECIAL EQUIPMENT BREAKERS WHICH SHALL BE SIZED PER N.E.C. AND VENDOR REQUIREMENTS. OMIT GROUND CONDUCTORS ON SERVICE ENTRANCE FEEDERS (TYPICAL). USE #12 WIRE U.O.N. PRIOR TO ROUGH-IN, CONTRACTOR SHALL COÒRDINATÉ BREAKER AND WIRING WITH ACTUAL REQUIREMENTS OF EQUIPMENT BEING FURNISHED FOR THIS SPECIFIC PROJECT.

UNLESS NOTED OTHERWISE ALL 20A., 1P. BREAKERS TO UTILIZE #12 CONDUCTORS. EXCEPT WHERE BRANCH CIRCUIT IS IN EXCESS OF 90 LINEAR FEET CONDUCTORS TO BE #10 AND OVER 175 FEET LINEAR FEET CONDUCTORS TO BE #8. EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCREASED PROPORTIONATELY TO PHASE CONDUCTORS PER NEC 250.122(B).

DRAWING NOTES:

1. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT FEEDER SIZES.

KEY NOTES:

- NEW UTILITY TRANSFORMER PAD MOUNTED). COORDINATE WITH UTILITY COMPANY FOR LOCATION, SERVICE TAP, AND ADDITIONAL REQUIREMENTS.
- 2 UTILITY METER. CONTRACTOR TO FIELD COORDINATE FOR MOUNTING LOCATION. COORDINATE WITH UTILITY COMPANY FOR MEETING REQUIREMENTS.
- 3 PROVIDE (2) 5/8" X 10'-0" LONG COOPER CLAD GROUND ROD SPACED 10 FEET CENTER. BOND WITH 3/O COPPER CONDUCTOR WITH EXOTHERMIC WELD. REFER TO DETAIL "2/E-4" FOR SERVICE ENTRANCE DETAIL AND GROUND ROD DETAIL.
- 4 SUPPLY AND INSTALL NEW UNDERGROUND SERVICE LATERAL. FIELD EXACT COORDINATE CONDUIT ROUTING. SUPPLY AND INSTALL FEEDER 24" BFG DIRECT BURIED AND PROVIDE RMC AFG AND RNC UNDERGROUND. CONTRACTOR TO ARRANGE AND PAY FOR UNDERGROUND UTILITY LOCATION SURVEYS FOR ALL TRENCHING. INSTALL 6" WIDE METALLIC LINED RED PLASTIC MARKER TAPE 8" ABOVE ALL BURIED CONDUIT.
- 5 PROVIDE NEMA 3R WIREWAY AND SIZE WIREWAY AS PER NEC.
- (6) PROVIDE ALUMINUM CONDUCTOR ONLY FOR SERVICE LATERAL.
- SUPPLY AND INSTALLED LIGHTING CONTRACTOR. LIGHTING CONTACTOR TO BE CONTROLLED BY TIME CLOCK AND PHOTOCELL. FIELD COORDINATE FOR PHOTOCELL LOCATION.
- (8) SUPPLY AND INSTALLED CONDUIT ONLY WITH PULL STRING.

PROJECT INFO

CLIENT:

COVENANT GROUP, LLC

PROJECT: COVENANT GROUP - BUILDING

SHELL - LEE'S SUMMIT, MO

ADDRESS:

400 NW CHIPMAN RD

LEE'S SUMMIT, MO 64806 PROJECT NO:

MAIN CONTACT

CHRISTOPHER CLARK, AIA, NCARB 7701 E KELLOGG DR, STE 630 WICHITA, KS 67207 (316) 302-4472 chris@clarkitecture.net

DEVELOPER

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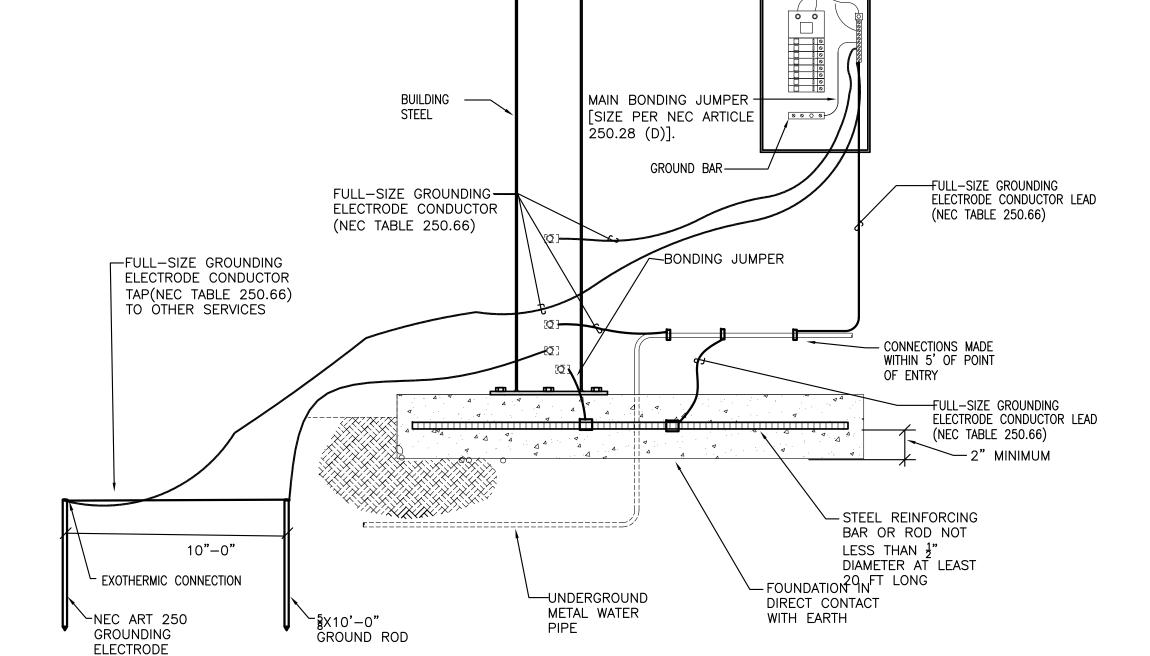
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PROFESSIONAL'S SEAL:

ELECTRICAL ONE LINE DIAGRAM

E-4



NOTES:

A. THIS DETAIL IS NOT INTENDED TO SHOW THE PHYSICAL ROUTING OF THE GROUNDING ELECTRODE CONDUCTORS, BUT SIZING AS OUTLINED IN NEC ARTICLE 250.66.

B. THE MINIMUM INSIDE BEND RADIUS IS:

- 6 INCHES (0.15M) FOR CONDUCTORS UP TO #6 GAUGE. - 12 INCHES (0.3M) FOR CONDUCTORS #6 TO #4/0 GAUGE. - 24 INCHES (0.6M) FOR CONDUCTORS #4/0 GAUGE AND UP.

SERVICE GROUNDING ELECTRODE DETAIL

E-4 SCALE: N.T.S.

	EL "LH" 08V, 3ø, 4W	(NOTE 1)	INTERRUPTING CAPACITY 65K AIC	TYPE: MAINS MOUN			MLO 100A SURF		(HOUS	E PANEL)		
KVA	DESCRIPTION		FEEDER	PROT.		CIRCUIT	S	PROT.	DESCRIPTION	f	FEEDER	KVA
0.8	LTG-EXTERIOR		2#12, 1#12G, 1/2"C	20/1	1	 	2	20/1	LC AND TIME CLOCK		1#12G, 1/2"C	0.2
0.8	LIGHTS FUTURE TENANT		2#12, 1#12G, 1/2"C	20/1	3	╫╇╢	4	20/1	TBB-RECEP	2#12,	1#12G, 1/2"C	0.4
	SPARE			20/1	5	╂┼┼	- 6	20/1	SPARE			
	SPARE			20/1	<u> </u>	∤ ┤┤	- 8	20/1	SPARE			
	SPARE			20/1	9	 	10	20/1	SPARE			
	SPARE			20/1	11	│ 	12	20/1	SPARE			
	SPARE			20/1	13	 	14	20/1	SPARE			
	SPARE			20/1	15	 	16	20/1	SPARE			
	SPARE			20/1	17	│ 	<u> 18</u>	20/1	SPARE			
	SPARE			20/1	19	 	_ 20	20/1	SPARE			
	SPARE			20/1	21	 	22_	20/1	MONUMENT SIGN		10G, 3/4°C	1.0
	SPARE			20/1	23	 	24	20/2	PARKING LIGHTS	2#8, 1#	10G, 3/4"C	2.0
	SPACE				25 -	 	_ 26					
	SPACE				27	╫╅╢		20/2	PARKING LIGHTS	2#8, 1#	10G, 3/4"C	2.0
	SPACE				29	┨┤┪	<u> 30</u>					
	SPACE				31	 		20/1	MONUMENT SIGN	2#10, 1#	10G, 3/4"C	1.0
	SPACE				33	 	34					
	SPACE				35 -	 ♦	- 36					
	SPACE				37	 	- 38					
	SPACE				39	╫┿╢	40					
	SPACE				41		- 42					
0.8	SUB-TOTAL			TOT	TAL:	6.4	KVA				SUB-TOTAL	5.6

NOTES:
1. PROVIDE POWER PANEL BOARD.
2. PARKING LIGHT CONNECTION BY OTHER PROJECT.

	EL "LA" 08v, 3ø, 4w	(NOTE 1) (SECTION 1)	INTERRUPTING CAPACIT 65K AIC	Y TYPE: MAINS MOUN	S:		MLO 400A SURF	4	MEDICAL OFFIC	CE		
KVA	DESCRIPTI	ION	FEEDER	PROT.	'	CIRCUIT	ſS	PROT.	DESCRIPTION	F	EEDER	KVA
0.2 0.5 0.5	ROOF RECEPTACLE SIGN LIGHTS		2#12, 1#12G, 1/2°C 2#12, 1#12G, 1/2°C 2#12, 1#12G, 1/2°C	20/1	1 3 5		2 4 6	50/3	RTU-1 (NOTE 3)	3#6, 1#	10G, 3/4°C	12.6
	SPARE SPARE SPARE			20/1 20/1 20/1	7 9 11		8 - 10 - 12		RTU-2 (NOTE 3)	3#6, 1#	10G, 3/4°C	12.6
	SPARE SPARE SPARE			20/1 20/1 20/1	13 15 17	}	14 - 16 - 18		RTU-3 (NOTE 3)	3#6, 1#	10G, 3/4°C	12.6
	SPARE SPARE SPARE			20/1 20/1 20/1	21		20 22 24	50/3	RTU-3 (NOTE 3)	3#6, 1#	10G, 3/4°C	12.6
	SPARE			20/1	25		26	20/1	SPARE			
	SPARE SPARE		-	20/1	27	│ ┃ ┃ ┃	H 28		SPARE SPARE			
	SPARE			20/1	29 31		30 32		SPARE			_
					33	H	34					
	ļ				35	╫╫┩	36					
	<u> </u>			+	37 39		- <u>38</u> - 40					-
				+	41		42					
1.2	SUB-TOTAL			TO	TAL:	51.6	KVA			•	SUB-TOTAL	50.4

NOTES:
1. PROVIDE LIGHTING PANEL BOARD.
2. AIC RATING OF THIS PANEL CAN BE REDUCE AFTER COORDINATION STUDY DONE BY PANEL MANUFACTURER REPRESENTATIVE.
3. PROVIDE FEED THRU LUG FOR SECTION TWO.

PROJECT INFO

CLIENT:

COVENANT GROUP, LLC

PROJECT:

COVENANT GROUP - BUILDING SHELL - LEE'S SUMMIT, MO

ADDRESS:

400 NW CHIPMAN RD LEE'S SUMMIT, MO 64806

PROJECT NO:

MAIN CONTACT

CHRISTOPHER CLARK, AIA, NCARB
7701 E KELLOGG DR, STE 630
WICHITA, KS 67207
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chris@clarkitecture.net

DEVELOPER

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COVENAN REAL ESTATE GROUP

04/06/22

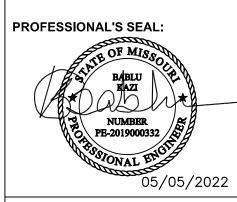
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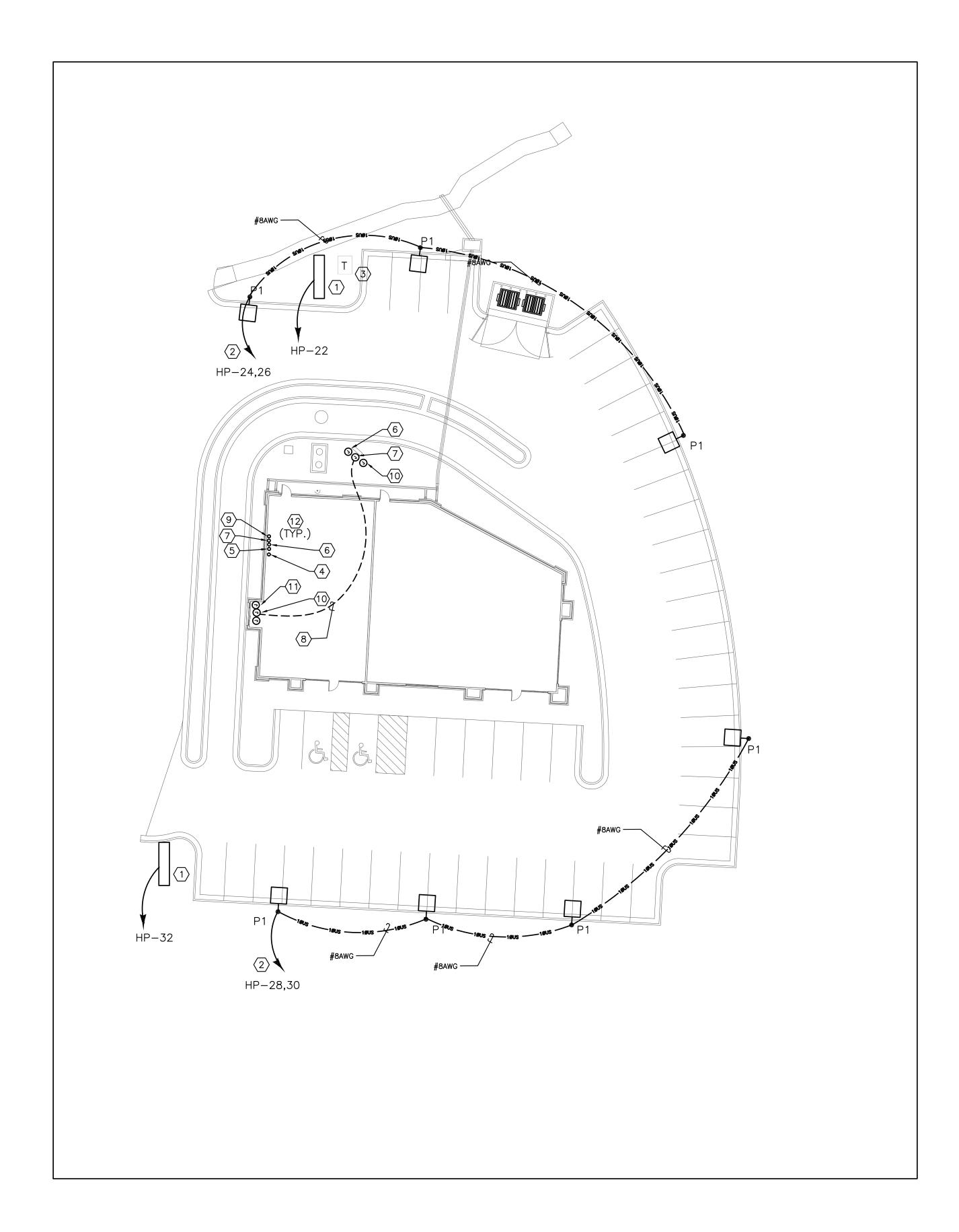
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NO	DESCRIPTION	DATE
Α	CITY COMMENTS	05/05/22



ELECTRICAL PANEL SCHEDULES

E-5



ELECTRICAL SITE PLAN **SCALE**: 1"=20'

GENERAL NOTES:

- A. THE ELECTRICAL CONTRACTOR SHALL REFER TO CIVIL, ARCHITECTURAL, STRUCTURAL, MECHANICAL AND PLUMBING DRAWING FOR THE EXACT BUILDING AND ROOM LAYOUTS. ALL DIMENSIONS, SECTIONS, DETAILS, AND ELEVATIONS. POWER AND VOLTAGE REQUIREMENTS AND PHYSICAL SIZE OF ALL EQUIPMENT FURNISHED BY OTHER TRADES. COORDINATE AND ADJUST ELECTRICAL INSTALLATION ACCORDINGLY.
- B. REFER TO DRAWING E-1 FOR LIGHTING FIXTURE SCHEDULE.
- C. UPPER CASE ALPHA CHARACTER INSIDE/ADJACENT TO LIGHT FIXTURE INDICATES LUMINAIRE TYPE.
- D. LOWER CASE ALPHA CHARACTER INSIDE/ADJACENT TO LUMINAIRE INDICATES ASSOCIATED SWITCH CONTROLLING LIGHTING BRANCH CIRCUIT.
- E. ALL PENETRATION THRU FIRE RATED WALL AND CEILING SHALL BE SEALED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE ARTICLE 300-21.
- F. COORDINATE WITH OWNER FOR APPROVAL OF LIGHTING FIXTURE PRIOR TO INSTALL.
- G. MINIMUM WIRE SIZE FOR PARKING LIGHTS IS #8AWG.

KEY NOTES:

- POWER CONNECTION FOR FUTURE MONUMENT SIGN. FILED COORDINATE EXACT LOCATION. SIGNAGE POWER SHALL ROUTED THRU LIGHTING CONTACTOR AND CONTROL VIA TIME CLOCK AND PHOTO ELECTRIC CELL.
- PARKING LIGHT SHALL ROUTED THRU LIGHTING CONTACTOR AND CONTROL VIA TIME CLOCK AND PHOTO ELECTRIC CELL.
- 3 UTILITY TRANSFORMER. FIELD COORDINATE EXACT LOCATION.
- 4 PROVIDE 1" CONDUIT FOR PRE-ORDER MENU BOARD TO FUTURE PANEL LOCATION. STUB UP AND CAP. VERIFY EXACT LOCATION WITH TENANT.
- $\sqrt{5}$ provide 1" conduit for future pre-menu/menu board to future panel LOCATION. STUB UP AND CAP. VERIFY EXACT LOCATION WITH TENANT.
- $\langle 6 \rangle$ provide 1" conduit for future menu board to future panel location. STUB UP AND CAP. VERIFY EXACT LOCATION WITH TENANT.
- 7 PROVIDE 1" CONDUIT FOR POWER TO OCS/SPEAKER POST TO FUTURE PANEL LOCATION. STUB UP AND CAP. VERIFY EXACT LOCATION WITH TENANT.
- $\langle 8 \rangle$ PROVIDE (2) 1" CONDUIT FROM OCS/SPEAKER POST TO DRIVE-THRU WINDOW.
- 9 PROVIDE WP, J-BOX AND 1" CONDUIT FOR DIRECTIONAL SIGN TO FUTURE PANEL LOCATION. STUB UP AND CAP. VERIFY EXACT LOCATION WITH TENANT.
- PROVIDE 1" CONDUIT FOR DETECTOR LOOP SET. STUB UP AND CAP. VERIFY
- EXACT LOCATION WITH TENANT. PROVIDE WP, J-BOX AND 3/4" CONDUIT FOR DRIVE-THRU TRANSOMS, SIDELIGHTS AND EXTERIOR SHELF POWER TO FUTURE PANEL LOCATION. STUB
- UP AND CAP. VERIFY EXACT LOCATION WITH TENANT. STUB UP CONDUITS 6" A.F.F FINISH FLOOR. COORDINATE WITH ARCHITECT, OWNER AND OTHER TRADES PRIOR TO INSTALLATIONS.

DEVELOPER

PROJECT INFO

COVENANT GROUP - BUILDING

MAIN CONTACT

CHRISTOPHER CLARK, AIA, NCARB 7701 E KELLOGG DR, STE 630

SHELL - LEE'S SUMMIT, MO

400 NW CHIPMAN RD LEE'S SUMMIT, MO 64806

WICHITA, KS 67207 (316) 302-4472

chris@clarkitecture.net

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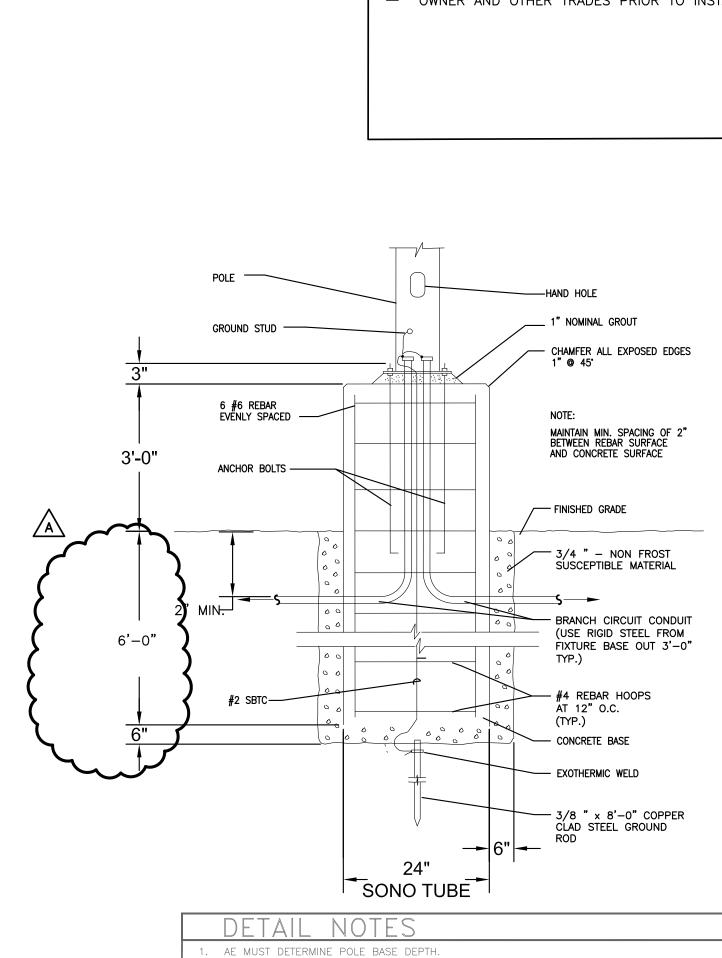
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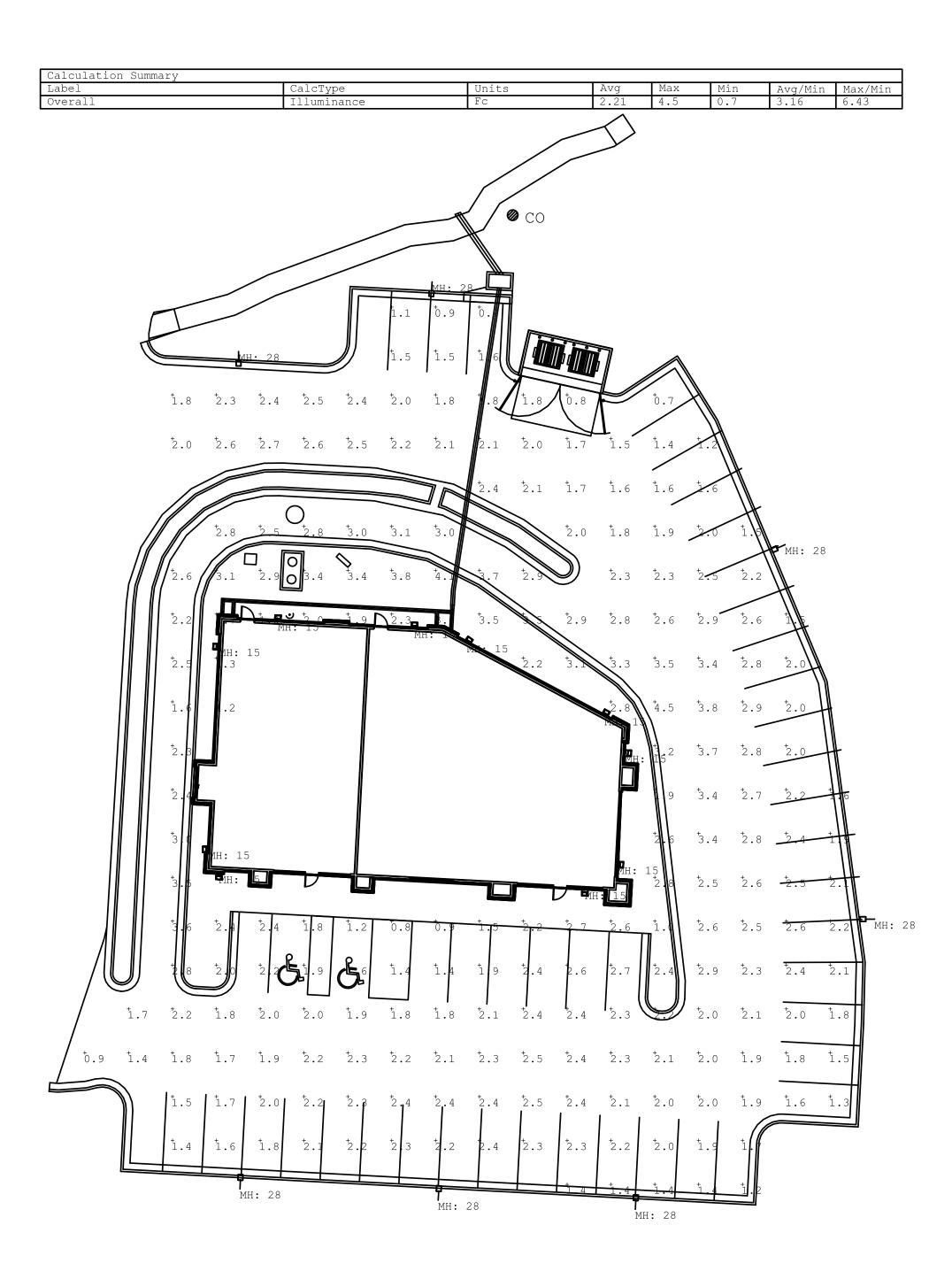


ELECTRICAL SITE PLAN

E-6



TYPICAL POLE BASE DETAIL E-6 SCALE:







PROJECT INFORMATION	
Project Name	Date
Catalog #	Туре

VIENTO SMALL

AREA & SITE LED LUMINAIRE



APPLICATIONS Auto Dealership Sales Lots
 Parks & Recreation Areas Security AreasMall & Retail Spaces Parking Lots Educational/Business

 Pedestrian Wakways Campuses APPROVALS ETL Listed. Complies with UL 1598 and CSA C22.2 No. 250.0-08
3G Vibration Rated for Bridge/Overpass Applications per ANSI

C136.31-2010, Test Level 2. Suitable for wet locations. IP 66 Optics and Housing. Select models DLC Qualified. For a completed list of DLC Qualified products, please visit: http://www.xtralight.com/dlc

PRODUCT PERFORMANCE

or www.designlights.org/qpl

LUMENS	WATTS	EFFICACY
4085	27.3	149.8 LPW
7605	52.7	144.3 LPW
10775	77.4	139.2 LPW
14735	109.1	135.0 LPW
	4085 7605 10775	4085 27.3 7605 52.7 10775 77.4

FEATURES

 Outstanding photometric performance results in sites with excellent uniformity, optimal pole spacing and lower power

- Optics are completely sealed against moisture and environmental
- contaminants (IP66).
- Low profile architectural design offers a contemporary appearance with excellent light output and is night sky friendly.
- Field serviceable luminaire utilizing Lumileds LED technology. Controls ready luminaire for independent operation or remote management.
- Operating temperature: -40°C to +40°C (-40°F to +104°F)
- CONSTRUCTION Housing: One-piece die-cast aluminum has integral heat sink fins to optimize thermal management through conductive and
- convective cooling. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life.
- Housing and door are protected with a thermoset TGIC-polyester
- powder coat finish using a tightly controlled multi-stage process to a uniform 3 mil thickness (min). This finish provides superior protection from corrosion and maximum environmental
- Powder coat finish in bronze, white or custom colors (consult factory).
- Integral arm with key hole slot facilitates quick and easy installation.
- Nut plate eliminates loose hardware in the pole and reduces installation labor.

Precision molded optics for superior uniformity, minimal light

- trespass and maximum pole spacing. Optical grade polymer is UV stabilized and impact resistant. IP66 rated LED light engines prevent dust and moisture from
- Distributions: Type II, Type III, Type IV and Type V. Types II, III, and IV available rotated right or left 90°, factory installed. Best in class Osram LEDs with 3000K, 4000K and 5000K CCT
- Zero uplight (U0) is night sky friendly, reduces wasted light.
- Lumen Maintenance: >100,000hrs L70 @ 25°C.
- **ELECTRICAL** Voltage: 120-277V 50/60Hz driver (standard); 347-480V
- 50/60Hz driver (optional). Class 2 electronic drivers are designed to have a power factor

>90%, THD <20%, and an expected life of 100,000 hours with

- Surge Protection: 20kA standard.
- NEMA twist-lock receptacle available as an option. NOTE: Photocontrol or shorting cap required for operation
- Dimming: 0-10v dimmable driver standard. Passive Infrared (PIR) Photo/Motion Sensor option available.
- WARRANTY

10 year limited warranty.

(not included).



www.xtralight.com • (800) 678-6960 • customerservice@xtralight.com All information is believed to be accurate at the time of publication. Please contact customer service or visit www.xtralight.com for the most updated product specifications. XtraLight" reserves the right to change specifications without notice.

PROJECT INFO

CLIENT:

COVENANT GROUP, LLC

PROJECT:

COVENANT GROUP - BUILDING SHELL - LEE'S SUMMIT, MO

ADDRESS:

400 NW CHIPMAN RD LEE'S SUMMIT, MO 64806

PROJECT NO:

MAIN CONTACT

CHRISTOPHER CLARK, AIA, NCARB 7701 E KELLOGG DR, STE 630 WICHITA, KS 67207 (316) 302-4472

DEVELOPER

chris@clarkitecture.net

SHEET INFO

ISSUED FOR:

REVISION SCHEDULE

REVISION SCHEDULE					
NO	DESCRIPTION	DATE			
Α	CITY COMMENTS	05/05/22			
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SITE LIGHTING PHOTOMETRIC PLAN E-7