

ELECTRICAL SPECIFICATIONS

1. GENERAL:

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A201, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.

B. DRAWING ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATION WITH EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES, IS REQUIRED, MAINTAIN HEADROOM AND SPACE CONDITIONS.

C. BIDDERS, BEFORE SUBMITTING PROPOSALS, SHALL VISIT AND CAREFULLY EXAMINE THE AREA AFFECTED BY THIS WORK TO FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT, OR MATERIALS, REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.

D. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR, MINOR DEVIATIONS FROM DRAWING MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

E. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK MAY BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES AND CHARGES IN MAKING UP THE WORK PROPOSAL.

F. CONNECTIONS TO EXISTING WORK: INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES. AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.

G. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.

H. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

I. SEAL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL, UNLESS OTHERWISE NOTED.

J. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF CONDUIT AND EQUIPMENT, PROVIDE EQUIPMENT CURBS AS REQUIRED.

K. ALL EXISTING MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF SPECIFIC EQUIPMENT AND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE, ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS. REMOVED EQUIPMENT SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.

L. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK DURING OVERTIME HOURS AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.

M. UNLESS OTHERWISE SPECIFICALLY NOTED OR SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.

N. ALL MATERIAL AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.

O. INSURANCE: PROVIDE IN ACCORDANCE WITH OWNER/BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.

P. THE FINAL ACCEPTANCE SHALL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.

POWER SYSTEMS AT EARLIEST POSSIBLE DATE WITHIN THE CONSTRUCTION AREAS FOR THE REQUIREMENTS OF ALL TRADES AS HEREIN DESCRIBED. EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSICALLY POSSIBLE. MAINTAIN SYSTEM DURING WORKING OWNER. PROVIDE ALL REQUIRED MAINTENANCE, INCLUDING LAMPS AND SOCKETS.

C. QUALITY ASSURANCE

1) QUALITY OF MATERIALS: ALL EQUIPMENT SHALL BE NEW SPECIFICATION GRADE, FREE FROM DEFECTS AND LISTED BY APPROVED TESTING AGENCY AND BEARING THEIR LABEL MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION SHALL BE OF SAME MANUFACTURER, EXCEPT AS NOTED.

2) GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED AS DEFINED IN PARAGRAPH 2.C.

3) CURRENT CHARACTERISTICS:

a. SERVICE: 120/208 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.

b. DISTRIBUTION: 120/208 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.

4) HEIGHTS OF OUTLETS:

a. FROM FINISHED FLOOR TO CENTERLINE OF OUTLETS FOR:

- RECEPTACLES AND TELEPHONES: 1 FT-6 IN.
- WALL SWITCHES: 4 FT-0 IN.
- WALL FIXTURES: 7 FT-0 IN.
- MOTOR CONTROLLERS: 5 FT-0 IN.
- CLOCKS: 7 FT 6 IN

b. EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE, IN VIOLATION OF CODE, OR AS NOTED OR DIRECTED.

D. PRODUCT DELIVERY, STORAGE AND HANDLING

1) MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.

2) ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR, MINOR DEVIATIONS SHALL BE PERMITTED, CHANGES OF MAGNITUDE OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW. GROUP CONCEALED ELECTRICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.

E. MATERIALS

1) NAMEPLATES: PROVIDE BLACK LAMICOID SHEET WITH 3/4 IN. WHITE LETTERING, FASTENED WITH EPOXY CEMENT FOR EACH DISCONNECT SWITCH, CIRCUIT BREAKER, PANEL, CABINET, TRANSFORMER, ENCLOSURE, MOTOR CONTROLLER AND THE LIKE. NAMEPLATES SHALL DESCRIBE THE NAME AND NUMBER OF EACH COMPONENT.

2) CABLE TAGS: TAG EACH CONDUCTOR PASSING THROUGH SPLICE OR PULLBOX WITH A WHITE LINEN TAG, INDICATING POINT OF ORIGIN AND TERMINATION OF THE CIRCUIT.

3) INSERTS AND SUPPORTS:

a. INSERTS: STEEL, SLOTTED TYPE, FACTORY PAINTED.

- SINGLE ROD: SIMILAR TO GRINNELL FIG. 281.
- MULTI-ROD: SIMILAR TO FEE AND MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS.
- CLIP FORM NAILS FLUSH WITH INSERTS.
- MAXIMUM LOADING 75 PERCENT OF RATING.

b. SUPPORTS FROM BUILDING CONSTRUCTION: INSERTS, BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY), CANTILEVER BRACKETS OR OTHER MEANS. SUBMIT FOR REVIEW.

c. GROUPED LINES AND SERVICES: TRAPEZOID HANGERS OF BOLTED ANGLES OR CHANNELS.

d. WHERE BUILDING CONSTRUCTION IS INADEQUATE: PROVIDE ADDITIONAL FRAMING. SUBMIT FOR REVIEW.

F. PAINT SHALL BE THE BEST GRADE FOR ITS PURPOSE. DELIVER IN ORIGINAL SEALED CONTAINERS AND APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COLORS SHALL BE AS SELECTED BY ARCHITECT OR ENGINEER. UTILIZE GALVANIZED IRON PRIMER ON PANEL AND PULL BOXES, AFTER FABRICATION. UTILIZE HOT DIPPED GALVANIZED OR DIPPED IN ZINC BASED PRIMER FOR: OUTLET BOXES, JUNCTION BOXES, CONDUIT HANGERS, RODS, INSERTS AND SUPPORTS. ZINC BASED PRIMER WITH FINISH TO MATCH SURROUNDINGS SHALL BE USED FOR MARRED SURFACES OF STEEL EQUIPMENT AND RACEWAYS. A FIELD-APPLIED ZINC BASED PRIMER COAT SHALL BE UTILIZED FOR STEEL OR IRONWORK.

G. BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE. PAINTED EXPOSED WORK SOILED OR DAMAGED; CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.

H. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL SWITCHES, RECEPTACLES AND LIGHT FIXTURES SHALL BE VERIFIED WITH ARCHITECT.

I. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.

USE OF EQUIPMENT OR OCCUPANCY OF SPACES BY OWNER INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER, DATE IS EARLIER, THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDED THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR

D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION, WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.

E. CONTRACTOR SHALL PERFORM ALL CONTROLLED INSPECTIONS IN ACCORDANCE WITH THE STATE BUILDING CODE. SECURE ALL REQUIRED PERMITS AND APPROVALS AND TRANSMIT SAME TO OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES.

F. AREAS WITH NO ELECTRICAL WORK SHALL REMAIN AS IS. CONTRACTOR SHALL MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS TO ALL AREAS NOT COVERED BY THIS RENOVATION AND SHALL PROVIDE 48 HOUR NOTICE TO LANDLORD OF ANY PLANNED POWER INTERRUPTIONS OR SIGNAL SYSTEM OUTAGES.

4. SHOP DRAWINGS

A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT, CONTRACTOR SHALL PROVIDE COMPLETE SETS OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT, INDICATING CAPACITY, DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.

B. INDICATE ON EACH SHOP DRAWINGS SUBMITTED:

- 1) PROJECT NAME AND LOCATION
- 2) NAME OF ARCHITECT AND ENGINEER
- 3) ITEM IDENTIFICATION
- 4) APPROVAL STAMP OF PRIME CONTRACTOR

C. SUBMISSIONS:

- 1) SUBMISSIONS 11 IN. X 17 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.
- 2) SUBMISSIONS LARGER THAN 11 IN. X 17 IN.: SUBMIT TWO PRINTS AND ONE PAPER SEPIA TO THE ARCHITECT. THE ARCHITECT WILL FORWARD ONE PRINT AND THE PAPER SEPIA TO THE ENGINEER.

D. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:

- 1) SAFETY/DISCONNECT SWITCHES
- 2) FUSES
- 3) CIRCUIT BREAKERS
- 4) PANELBOARDS/LOADCENTER (INCLUDING DIMENSIONS, SCHEDULES, AND CATALOG CUTS).
- 5) RACEWAYS
- 6) WIRE AND CABLE
- 7) WALL SWITCHES
- 8) INSERTION RECEPTACLES
- 9) MOMENTARY CONTACT SWITCHES
- 10) TIME SWITCHES
- 11) LIGHTING FIXTURES.

E. ASSIST AND PROVIDE ALL NECESSARY INFORMATION, DIAGRAMS, SKETCHES, ETC. TO THE HVAC CONTRACTOR, FOR THE PREPARATION OF COORDINATED SHOP DRAWINGS INDICATING ROUTING OF FEEDERS, CONTROL CONDUITS, RECESSED FIXTURES AND ADJACENT NEARBY PIPING AND DUCTWORK WHERE APPLICABLE, CERTIFIED BY ALL TRADES THAT COORDINATION HAS BEEN ESTABLISHED. SUBMIT FOUR(4) BOOKBOUND OPERATING AND SERVICE MANUALS WHICH SHALL INCLUDE COPIES OF ALL SHOP DRAWING. PROVIDE SHOP DRAWINGS FOR PANELS, FIXTURES, WIRING DEVICES, CONDUIT, CABLE, DISCONNECT SWITCH, RELAYS, CONTRACTORS, AND OTHER SYSTEMS AS DIRECTED BY THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER.

D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE AS INSTALLED CONDITIONS OF THE WORK. "AS-BUILT" DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.

6. LOW-VOLTAGE DISTRIBUTION EQUIPMENT:

A. PROVIDE COMPLETE EQUIPMENT INCLUDING: SWITCHES, FUSES, CIRCUIT BREAKERS, PANELS AND TRANSFORMERS.

B. ALL EQUIPMENT SHALL CONFORM TO NEMA, ANSI AND IEEE STANDARDS.

C. DISCONNECT SWITCHES SHALL BE FUSED OR NONFUSED AS NOTED. VOLTAGE SHALL BE AS REQUIRED. SWITCHES SHALL BE HEAVY DUTY, EXCEPT AS NOTED, AND HORSEPOWER RATED FOR MOTOR LOADS. TOGGLE TYPE SWITCHES SHALL BE NONFUSED, LOAD BREAK, HAVING MAXIMUM RATINGS OF 20 AMP AT 600 VOLTS AND 30 AMP AT 240 VOLTS. TWO-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 6908E. THREE-POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 7810F. KNIFE-BLADE TYPE SWITCHES SHALL BE LOAD BREAK, QUICK-MAKE- QUICK-BREAK, UL CLASS R UP TO 600 AMP. MAXIMUM RATING EXCEPT AS NOTED SHALL BE 800 AMP. ARC QUENCHERS SHALL BE PROVIDED. SWITCHES SHALL BE SIMILAR TO GENERAL ELECTRIC QMR. ALL SWITCH ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED.

7. FUSES:

A. CIRCUITS 0 TO 600 AMPERES SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMAN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

B. MOTOR CIRCUITS - ALL INDIVIDUAL MOTOR CIRCUITS WITH FULL LOAD AMPERE RATINGS (FLA) OF 480 AMPERES OR LESS SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMAN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

C. ALL FUSES SHALL BE PROVIDED BY SAME MANUFACTURER.

D. PROVIDE 1 SPACE MATCHING FUSE FOR EACH SET OF 3.

E. CIRCUIT BREAKERS: MOLDED CASE BREAKERS SHALL BE THERMAL-MAGNETIC, QUICK-MAKE-QUICK-BREAK, BOLT-ON TYPE, MANUALLY OPERATED WITH INSULATED TRIP-FREE HANDLE. MULTI-POLE TYPE BREAKERS SHALL CONTAIN INTERNAL TRIP BAR. TERMINALS SHALL BE SUITABLE FOR COPPER OR ALUMINUM CABLE. FURNISH AUXILIARY DEVICES WHERE REQUIRED FOR SHUNT-TRIPPING, OPEN AND CLOSE MOTOR OPERATOR AND ALARM INDICATION. ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED.

8. DISTRIBUTION PANELBOARDS, SWITCH AND FUSE:

A. THREE PHASE, 3 OR 4 WIRE WITH COPPER BUS BARS. ALL THROUGH BUS SHALL BE INSULATED.

B. NEMA CLASS 1 CONSTRUCTION TO ACCOMMODATE FUSIBLE, INDIVIDUALLY ENCLOSED SWITCHES, FRONT REMOVABLE, SWITCH AND DOOR INTERLOCKS. COVERS TO BE PAD-LOCKABLE.

C. PANELBOARD SHALL BE CONSTRUCTED OF CODE-GAUGE STEEL, GRAY FINISH OVER RUST INHIBITOR, FOR SURFACE MOUNTING. BOX AND PANEL FRAME SHALL BE FLANGED AND REINFORCED FOR RIGID SUPPORT OF INTERIOR AND ACCURATE ALIGNMENT OF INTERIOR WITH FRONT. TRIMS TO BE FASTENED TO BACK BOX WITH SCREWS.

D. ALL BRANCH SWITCHES SHALL HAVE INDIVIDUAL ENGRAVED LAMICOID NAMEPLATES (BLACK WITH WHITE CORE).

E. DISTRIBUTION PANELBOARD CONSTRUCTION MINIMUM SHORT CIRCUIT RATING 25,000 AMPERES, REMS SYMMETRICAL FOR ALL 120/208V APPLICATIONS. APPLICATIONS.

F. DISCONNECTS

- 1) DISCONNECT SWITCHES SHALL CONFORM TO NEMA AND UL STANDARDS, AND SHALL BE HORSEPOWER RATED.
- 2) SWITCHING MECHANISM SHALL BE QUICK-MAKE, QUICK-BREAK, SINGLE THROW WITH EXTERNAL OPERATING HANDLE MECHANICALLY INTERLOCKED WITH ENCLOSURE COVER TO PROVIDE ACCESS TO INTERIOR WHEN DISCONNECT IS IN OFF POSITION ONLY. PROVIDE MEANS TO LOCK OPERATING HANDLE IN THE OPEN AND CLOSED POSITION. DESIGNATE ON THE ENCLOSURE THE OPEN AND CLOSED POSITION OF THE OPERATING HANDLE.
- 3) SWITCHES SHALL BE OF THE DOUBLE STATIONARY CONTACT TYPE.
- 4) SWITCHES SHALL BE EQUIPPED WITH REJECTION TYPE FUSE HOLDERS, FUSIBLE AS SHOWN ON THE DRAWINGS; PROVIDE COMPLETE WITH FUSES AS SCHEDULED.

G. INSTALLATION

- 1) DISTRIBUTION PANELBOARD SHALL BE MOUNTED TO STRUCTURAL STEEL CHANNEL (KINDORF) WHICH SHALL BE BOLTED TO THE WALL USING EXPANSION ANCHORS FOR LARGE PANELS.

H. IDENTIFICATION

1) PROVIDE NAMEPLATE AT EACH SWITCH IDENTIFYING THE LOAD SERVED.

2) NAMEPLATES SHALL BE MOUNTED ON THE FRONT COVER SECURED WITH SELF-TAPPING SCREWS OR NUTS AND BOLTS. NAMEPLATES SHALL BE LAMINATED PHENOLIC, BLACK WITH A MINIMUM OF 1/4" HIGH WHITE LETTERING.

I. DISTRIBUTION AND SUB-DISTRIBUTION PANELBOARDS SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.

J. POWER PANELBOARDS SHALL BE SIMILAR TO GENERAL ELECTRIC TYPE "OMR", AS MANUFACTURED BY ATLAS SWITCH COMPANY, ELECTRIC SWITCHBOARD COMPANY OR APPROVED EQUAL.

K. PANELBOARD SHALL HAVE MAIN CIRCUIT BREAKER OR MAIN LUGS AS INDICATED ON THE DRAWINGS. QUANTITY, POLES AND TRIP RATINGS OF BRANCH CIRCUIT BREAKERS TO BE AS INDICATED ON DRAWINGS.

L. PANELBOARD SHALL HAVE ENGRAVED WHITE CORE, BLACK LAMACOID NAMEPLATE SCREWED ONTO PANE TRIM WITH DESIGNATION LISTED (PANELBOARD NAME, VOLTAGE, RATING OR MAINS IN AMPS).

B. MATERIALS

1) RACEWAYS:

- a. RIGID STEEL CONDUIT: FULL-WEIGHT PIPE, GALVANIZED, THREADED.
- b. ELECTROMETALLIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREADLESS.
- c. FLEXIBLE STEEL CONDUIT: CONTINUOUS SINGLE STRIP, GALVANIZED.
- d. WIREWAYS: WIRE SHALL BE AS NOTED, MINIMUM NO. 16 GAUGE STEEL WITH GROUND CONTINUITY. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.
- e. SURFACE METAL RACEWAY: SIZE AS NOTED. BASE 0.04 IN., COVER 0.25 IN. MATERIAL SHALL BE STEEL. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.

2) FITTINGS AND ACCESSORIES:

- a. RIGID STEEL: NONSPILT, THREADED, STEEL OR MALLEABLE IRON. ZINC DIE CAST NOT PERMITTED.
- b. ELECTROMETALLIC TUBING: COMPRESSION TYPE. GALVANIZED RIGID STEEL ELBOWS, 2 IN. OR LARGER.
- c. FLEXIBLE METALLIC CONDUIT: ANGLE WEDGE TYPE WITH INSULATED THROAT.
- d. BUSHINGS: METALLIC INSULATED TYPE.

2. GENERAL PROVISIONS FOR ELECTRICAL WORK:

A. DEFINITIONS:

- 1) "PROVIDE": TO FURNISH, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.
- 2) "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.
- 3) "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE, AND DELIVER COMPLETE WITH RELATED ACCESSORIES.
- 4) "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.
- 5) "WIRING": RACEWAY, FITTINGS, WIRE, BOXES, AND RELATED ITEMS.
- 6) "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES, OR IN ENCLOSURES.
- 7) "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.
- 8) "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

B. TEMPORARY LIGHT AND POWER: PROVIDE TEMPORARY LIGHT AND

3. SCOPE OF WORK:

A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMING WITH THE 2017 NATIONAL ELECTRICAL CODE (NEC) WITH AMENDMENTS, AND ALL OTHER APPLICABLE INDUSTRY, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.

B. ALL DRAWINGS, PLANS, DETAILS, SPECIFICATIONS AND SPECIAL ADDENDA ARE MADE PART OF THIS CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT UNLESS OTHERWISE AMENDED, MODIFIED, SUPPLIED OR SPECIFIED HEREIN.

C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OF ACTUAL

5. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS

A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND BOUND IN THREE RING BINDERS WITH CLEAR ACETATE COVERS. CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.

6. IDENTIFICATION

LAPERAUX

REVISION		
NO.	DATE	DESCRIPTION

DWG DATE: 05-16-2022
 DRAWN BY: STAFF
 PROJECT NO.: 2210
 DWG TITLE:

ELECTRICAL SPECIFICATIONS SHEET 1 OF 2

SHEET NO.
E2

- LIGHTING PLAN - GENERAL NOTES**
- REFER TO ARCHITECTURE DRAWING (A-2) FOR LIGHT FIXTURE SCHEDULE, MOUNTING AND FIXTURE LOCATION.
 - ALL EXISTING LIGHT FIXTURE & IT'S ELECTRICAL CONNECTION SHALL REMAIN. E.C. SHALL VERIFY THE OPERABLE CONDITION OF EXISTING LIGHT FIXTURE & ELECTRICAL CONNECTION IN FIELD. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
 - ALL NEW LIGHT FIXTURES SHALL BE CONNECTED TO EXISTING CIRCUITS VIA EXISTING TIME-CLOCK CONTROLS. E.C. TO FIELD VERIFY EXACT LOCATION AND OPERABLE CONDITIONS OF THE TIME CLOCK.

- LIGHTING PLAN - KEYED WORK NOTES**
- WIRE ALL EMERGENCY AND EXIT FIXTURE AHEAD OF SWITCHING & CONTROL FOR CONTINUOUS OPERATIONS.
 - ELECTRICAL CONTRACTOR (E.C.) TO CONNECT CIRCUIT FOR NEW LIGHT FIXTURES TO NEAREST EXISTING LIGHTING CIRCUIT AND SHALL CONTROL VIA EXISTING LIGHTING CONTROL SYSTEM FOR THE SAME CIRCUIT.
 - WALL MOUNTED JUNCTION BOX FOR PATIO LIGHTING. E.C. TO COORDINATE FINAL LOCATION WITH OWNER.
 - ELECTRICAL CONTRACTOR (E.C.) TO CONNECT CIRCUIT FOR PATIO LIGHTING TO EXISTING OUTDOOR LIGHTING CIRCUIT AND SHALL CONTROL VIA EXISTING LIGHTING CONTROL SYSTEM FOR THE SAME CIRCUIT.
 - EXISTING CONNECTION FOR HOOD LIGHTING SHALL REMAIN. E.C. TO FIELD VERIFY OPERABLE CONDITION OF THE HOOD LIGHTING CONNECTION AND REPLACE IF FOUND IN OPERABLE. BASE BID ACCORDINGLY.

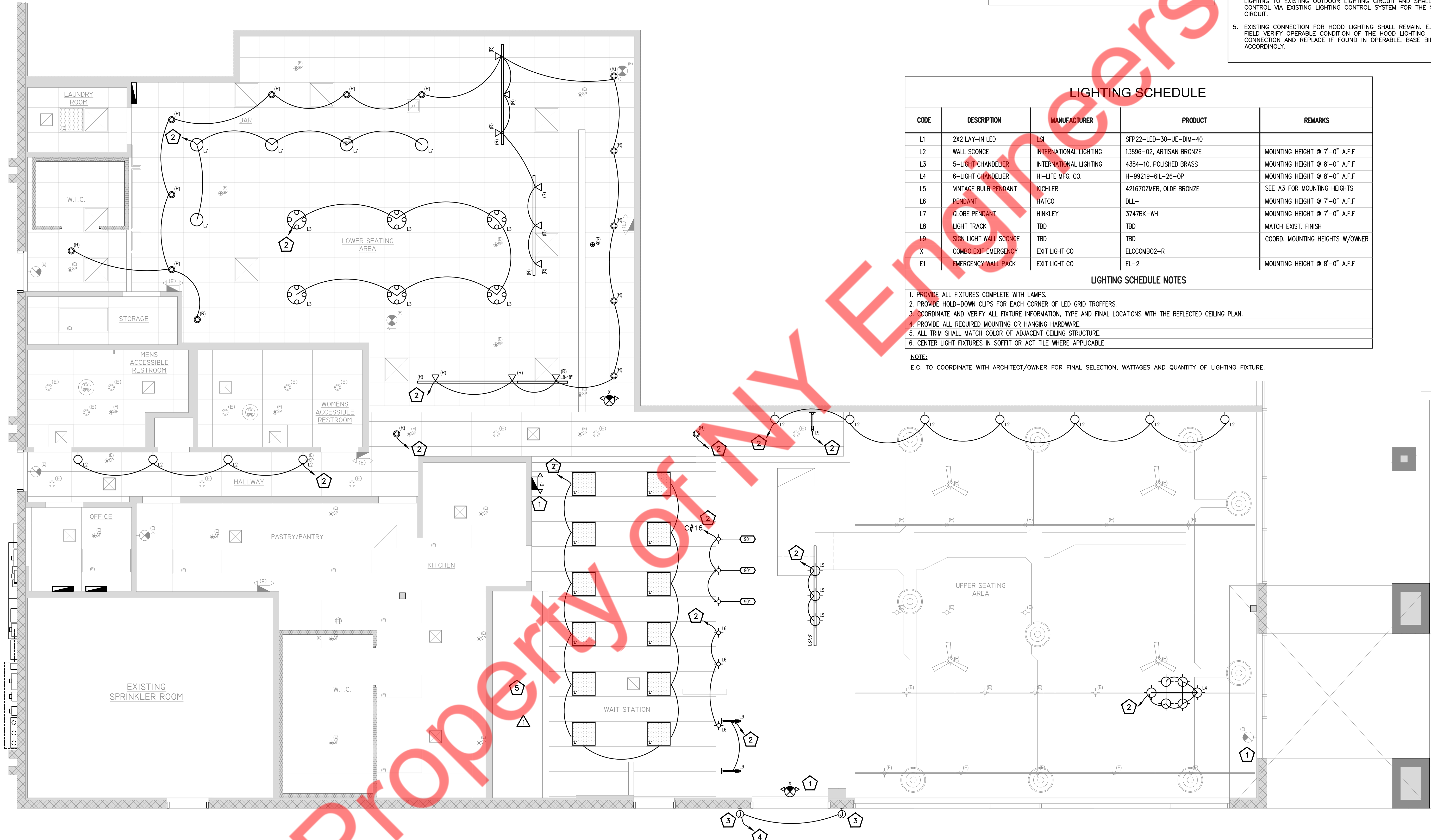
LIGHTING SCHEDULE

CODE	DESCRIPTION	MANUFACTURER	PRODUCT	REMARKS
L1	2X2 LAY-IN LED	LSI	SFP22-LED-30-UE-DIM-40	
L2	WALL SCONCE	INTERNATIONAL LIGHTING	13896-02, ARTISAN BRONZE	MOUNTING HEIGHT @ 7'-0" A.F.F
L3	5-LIGHT CHANDELIER	INTERNATIONAL LIGHTING	4384-10, POLISHED BRASS	MOUNTING HEIGHT @ 8'-0" A.F.F
L4	6-LIGHT CHANDELIER	HI-LITE MFG. CO.	H-99219-6IL-26-OP	MOUNTING HEIGHT @ 8'-0" A.F.F
L5	VINTAGE BULB PENDANT	KICHLER	421670ZMER, OLDE BRONZE	SEE A3 FOR MOUNTING HEIGHTS
L6	PENDANT	HATCO	DLL-	MOUNTING HEIGHT @ 7'-0" A.F.F
L7	GLOBE PENDANT	HINKLEY	3747BK-WH	MOUNTING HEIGHT @ 7'-0" A.F.F
L8	LIGHT TRACK	TBD	TBD	MATCH EXIST. FINISH
L9	SIGN LIGHT WALL SCONCE	TBD	TBD	COORD. MOUNTING HEIGHTS W/OWNER
X	COMBO EXIT EMERGENCY	EXIT LIGHT CO	ELCCOMBO2-R	
E1	EMERGENCY WALL PACK	EXIT LIGHT CO	EL-2	MOUNTING HEIGHT @ 8'-0" A.F.F

LIGHTING SCHEDULE NOTES

- PROVIDE ALL FIXTURES COMPLETE WITH LAMPS.
- PROVIDE HOLD-DOWN CLIPS FOR EACH CORNER OF LED GRID TROFFERS.
- COORDINATE AND VERIFY ALL FIXTURE INFORMATION, TYPE AND FINAL LOCATIONS WITH THE REFLECTED CEILING PLAN.
- PROVIDE ALL REQUIRED MOUNTING OR HANGING HARDWARE.
- ALL TRIM SHALL MATCH COLOR OF ADJACENT CEILING STRUCTURE.
- CENTER LIGHT FIXTURES IN SOFFIT OR ACT TILE WHERE APPLICABLE.

NOTE:
E.C. TO COORDINATE WITH ARCHITECT/OWNER FOR FINAL SELECTION, WATTAGES AND QUANTITY OF LIGHTING FIXTURE.



A1 ELECTRICAL LIGHTING PLAN

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

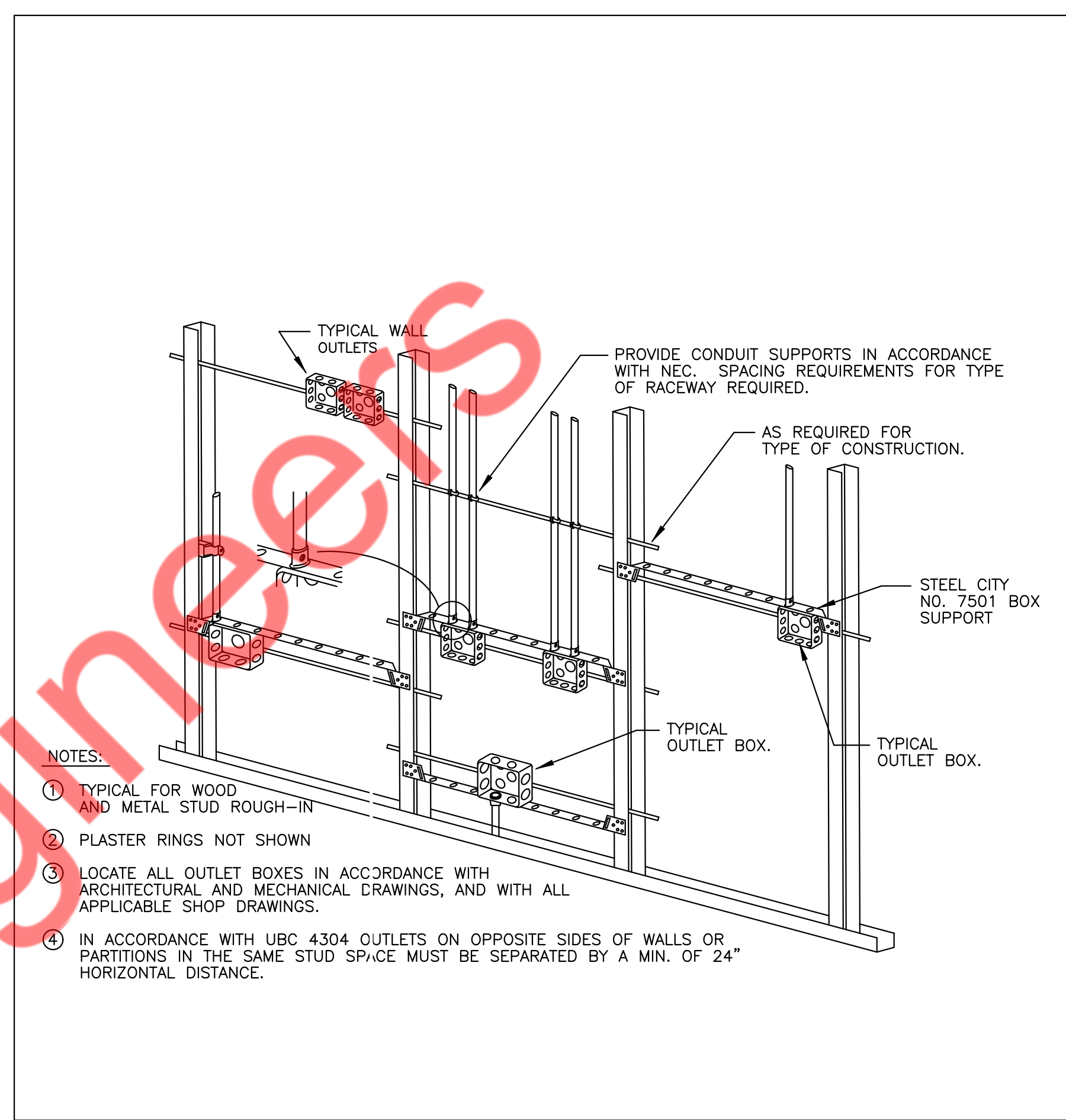
LAPERAUX

REVISION		
NO.	DATE	DESCRIPTION
1	06-17-2022	REVISION

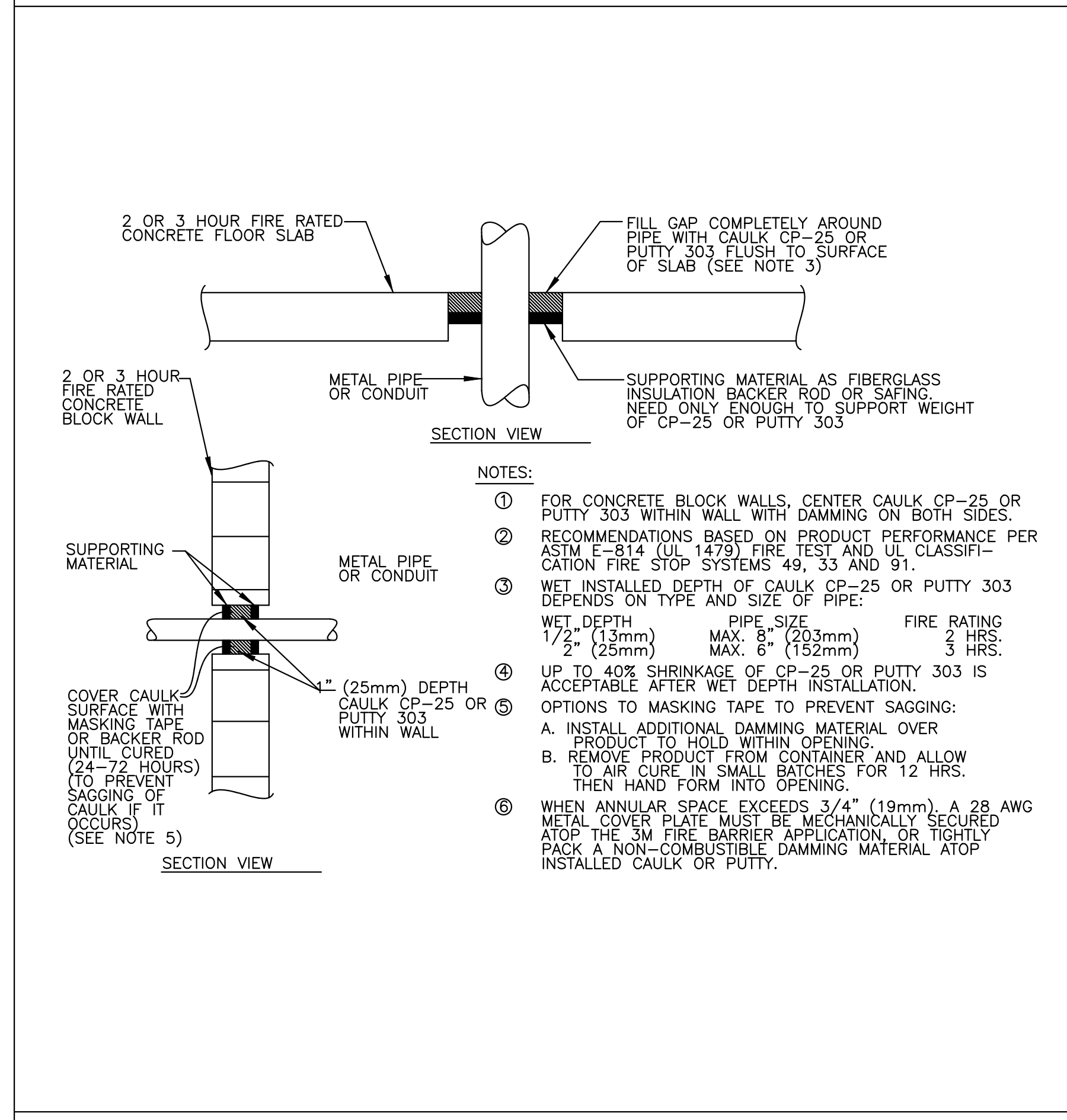
DWG DATE: 05-16-2022
 DRAWN BY: STAFF
 PROJECT NO.: 22110
 DWG TITLE:

ELECTRICAL LIGHTING PLAN

SHEET No.
E4



1
E6
DETAIL TYPICAL ROUGH-IN REQUIREMENTS
N.T.S



2
E6
FIRE STOP DETAIL
N.T.S

Property of NY Engineers

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LAPERAUX		
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REVISION		
NO.	DATE	DESCRIPTION

DWG DATE: 05-16-2022
DRAWN BY: STAFF
PROJECT No.: 22110
DWG TITLE:

ELECTRICAL
DETAILS

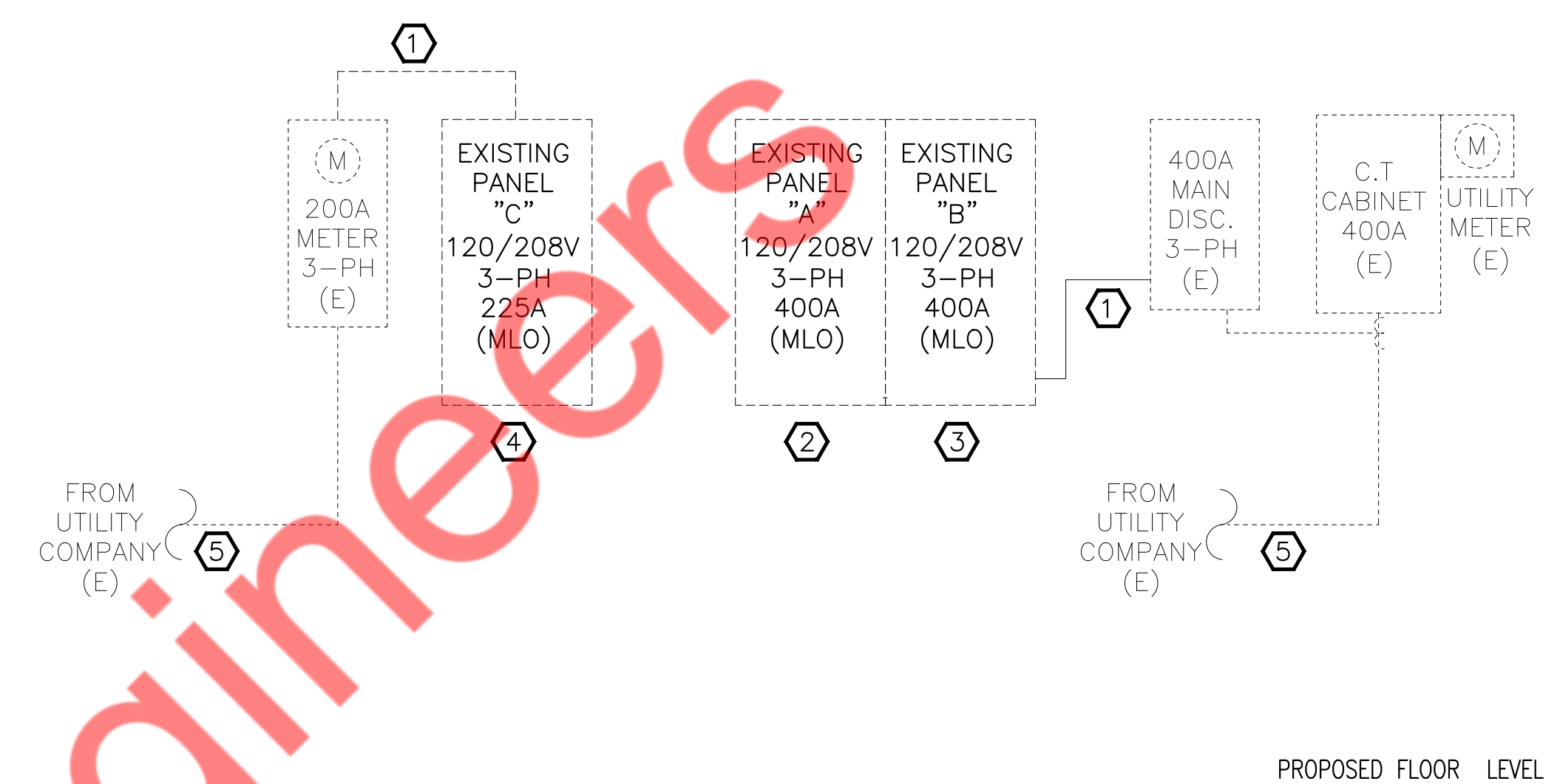
SHEET No.
E6

PANEL: A (EX) / (SECTION A)														MOUNTING: SURFACE	
208Y/120 VOLTS, 3 PHASE, 4 WIRE														PANEL LOCATION: OFFICE	
MAIN CB: N/A MLO: 400A BUS: EXISTING MIN. A.I.C RATING: 22 kA A FED FROM: EXISTING															
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.	
						A	B	C							
1			H-EX	3.84		7.69			3.84	H-EX	RTU2 (EX)	3P-50	2		
3	3P-50	RTU1 (EX)	H-EX	3.84	EXISTING				3.84	H-EX			4		
5			H-EX	3.84					3.84	H-EX			6		
7	20	TV_3NOS_BAR	E	0.54	2#12, #12G, 3/4"	0.74			0.20	M-EX	FAN (EX)	20	8		
9	20	RTU1 RECEPTACLE (EX)	R-EX	0.36	EXISTING				0.36	R-EX	RTU2 RECEPTACLE (EX)	20	10		
11	20	FOOD PRER AREA LIGHT (EX)	L-EX	0.40	EXISTING				0.36	R-EX	WINDOW SIGN RECEPTACLE (EX)	20	12		
13	20	WINDOW SIGN RECEPTACLE (EX)	R-EX	0.36	EXISTING	0.72			0.36	R-EX	WINDOW SIGN RECEPTACLE (EX)	20	14		
15	20	WINDOW SIGN RECEPTACLE (EX)	R-EX	0.36	EXISTING		0.56		0.20	L-EX	OFFICE LIGHTS (EX)	20	16		
17	20	EMERGENCY CIRCUIT (EX)	R-EX	0.40	EXISTING		0.50		0.10	L-EX	BATHROOM LIGHTS (EX)	20	18		
19	20	GFI BATHROOM RECEPTACLE (EX)	R-EX	0.18	EXISTING	0.38			0.20	L-EX	COOK RECESSED LIGHTS (EX)	20	20		
21	20	OFFICE RECEPTACLE (EX)	R-EX	0.54	EXISTING		0.84		0.30	L-EX	HALL RECESSED LIGHTS (EX)	20	22		
23	20	SIGN CIRCUIT (EX)	R-EX	0.20	EXISTING		0.30		0.10	L-EX	COUNTER RECESSED LIGHTS (EX)	20	24		
25	20	E601_ICE MACHINE (EX)_RELOCATED	E	1.73	2#12, #12G, 3/4"	3.27			1.54	E-EX	REACH IN FREEZER (EX)	20	26		
27	20	RECEPTACLES_BAR_PANTRY	E	0.72	2#12, #12G, 3/4"		2.26		1.54	E-EX		20	28		
29	20	HOOD FIRE SUPPRESSION SYSTEM	O	0.12	2#12, #12G, 3/4"			1.66	EXISTING	1.54	E-EX	MIXER (EX)	3P-20	30	
31	20	SPARE				1.54			1.54	E-EX			32		
33			E-EX	1.54			1.86		2#12, #12G, 3/4"	0.32	E	E202_UNDERBAR REFRIGERATOR (RELOCATED)	20	34	
35	3P-20	OVEN PROFER (EX)	E-EX	1.54	EXISTING		1.86		2#12, #12G, 3/4"	0.32	E	E203_UNDERBAR REFRIGERATOR (RELOCATED)	20	36	
37			E-EX	1.54		1.54						SPARE	20	38	
39	20	SPARE					0.00					SPARE	20	40	
41	20	E207 REACH IN FREEZER (EX)	E	1.37	EXISTING			1.73	2#12, #12G, 3/4"	0.36	R	E301_TABLE RECEPTACLES	20	42	
TOTAL CONNECTED LOAD (KVA)						15.87	13.92	14.49							

NOTE: L-EX=EXISTING LIGHTING; R-EX=EXISTING RECEPTACLE; H-EX=EXISTING HVAC; M-EX=EXISTING MOTOR;
E-EX=EXISTING KITCHEN/EQUIPMENTS; O-EX=EXISTING OTHER/MISCELLANEOUS.
L=LIGHTING; R=RECEPTACLE; H=HVAC; M=MOTOR; E=KITCHEN/EQUIPMENTS; O=OTHER/MISCELLANEOUS.

EXISTING CONNECTED LOAD = 38.80 KVA NEWLY ADDED CONNECTED LOAD = 4.82 KVA
EXISTING DEMAND LOAD = 35.36 KVA NEWLY ADDED DEMAND LOAD = 3.26 KVA

TOTAL CONNECTED LOAD = 43.62 KVA
TOTAL DEMAND LOAD = 38.62 KVA



PANEL: B (EX) / (SECTION B)														MOUNTING: SURFACE	
208Y/120 VOLTS, 3 PHASE, 4 WIRE														PANEL LOCATION: OFFICE	
MAIN CB: N/A MLO: 400A BUS: EXISTING MIN. A.I.C RATING: 22 kA A FED FROM: EXISTING															
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.	
						A	B	C							
1			E-EX	1.54		1.54				E	SPARE	2P-30	2		
3	3P-20	GARBAGE DISPOSAL (EX)	E-EX	1.54	EXISTING		1.54			E			4		
5			E-EX	1.54				3.53		H-EX	HEATER (EX)	2P-30	8		
7	3P-20	EXHAUST & SUPPLY KITCHEN HOOD FANS (EX)	M-EX	1.54	EXISTING			3.53	EXISTING	2.00	H-EX		10		
9			M-EX	1.54				3.34	EXISTING	1.80	H-EX	WALK IN COMPRESSOR (EX)	2P-30	12	
11			M-EX	1.54				3.34	EXISTING	1.80	H-EX		14		
13	2P-30	ISLAND WHIP -1 (E206,E205 & REC)	E	0.40	2#10, #10G, 3/4"	7.30			6.90	E-EX	CHEF'S SUB PANEL	2P-60	16		
15			E	0.40			7.30		6.90	E-EX		20	18		
17	2P-30	ISLAND WHIP -2 (E201, E204, 209 & REC)	E	0.74	2#10, #10G, 3/4"	0.74					SPARE	2P-30	20		
19			E	0.74								20	22		
21	20	FAN / WALKIN COOLER (EX)	M-EX	1.54	EXISTING		3.08		EXISTING	1.54	E-EX	DISHWASHER (EX)	20	24	
23	20	DOOR LIGHTING WALKIN (EX)	L-EX	0.20	EXISTING			1.46	EXISTING	1.26	R-EX	DINING RECEPTACLE (EX)	20	26	
25	20	TRACK LIGHTS (EX)	L-EX	0.15	EXISTING	0.55			EXISTING	0.40	L-EX	TRACK LIGHTS (EX)	20	28	
27	20	TRACK LIGHTS (EX)	L-EX	0.15	EXISTING		1.23		EXISTING	1.08	R	CASHIER RECEPTACLES (EX)	20	30	
29	20	TRACK LIGHTS (EX)	L-EX	0.15	EXISTING			1.69	EXISTING	1.54	E-EX	EQUIP#17 (EX)	20	32	
31	20	HALL RECEPTACLE (EX)	R-EX	1.26	EXISTING	1.98			EXISTING	0.72	R	FOOD PREPR QUAD (EX)	20	34	
33	20	FOOD PREP QUAD (EX)	R-EX	0.72	EXISTING		1.44		EXISTING	0.72	R-EX	DINING FLOOR PLUGS (EX)	20	36	
35	20	FIRE SUPPRESSION SYSTEM	O-EX	0.50	EXISTING			0.90	EXISTING	0.40	L-EX	LIGHTING (EX)	20	38	
37			E	0.36	2#12, #12G, 3/4"	1.8			EXISTING	1.44	R-EX	RECEPTACLE OFFICE (EX)	20	40	
39	2P-20	E 107_HOT FOOD HOLDING CABINET (EX)	E	0.36	2#12, #12G, 3/4"		1.69		2#12, #12G, 3/4"	1.33	E-EX	S04D_FOOD WASTE DISPOSER	20	42	
41	20	S04A_DISHWASHER	E	1.92	2#12, #12G, 3/4"			3.36	EXISTING	1.44	O-EX	EXISTING	20	44	
TOTAL CONNECTED LOAD (KVA)						17.44	19.62	15.01							

NOTE: L-EX=EXISTING LIGHTING; R-EX=EXISTING RECEPTACLE; H-EX=EXISTING HVAC; M-EX=EXISTING MOTOR;
E-EX=EXISTING KITCHEN/EQUIPMENTS; O-EX=EXISTING OTHER/MISCELLANEOUS.
L=LIGHTING; R=RECEPTACLE; H=HVAC; M=MOTOR; E=KITCHEN/EQUIPMENTS; O=OTHER/MISCELLANEOUS.

EXISTING CONNECTED LOAD = 45.35 KVA NEWLY ADDED CONNECTED LOAD = 6.72 KVA
EXISTING DEMAND LOAD = 37.73 KVA NEWLY ADDED DEMAND LOAD = 5.00 KVA

TOTAL CONNECTED LOAD = 52.07 KVA
TOTAL DEMAND LOAD = 42.72 KVA

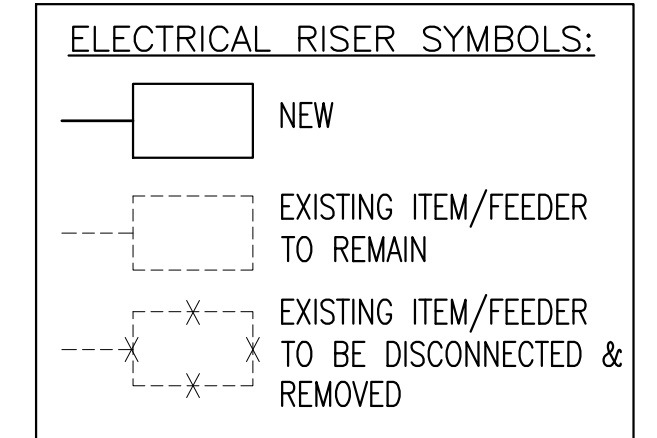
PANEL: C (EX)														MOUNTING: SURFACE	
208Y/120 VOLTS, 3 PHASE, 4 WIRE														PANEL LOCATION: BAR	
MAIN CB: N/A MLO: 225A BUS: 225A MIN. A.I.C RATING: 22 kA A FED FROM: EXISTING															
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.	
						A	B	C							
1			E	4.00		5.33			EXISTING	1.33	O-EX	EXISTING	2P-20	2	
3	3P-40	E 101_ELECTRIC TILTING BRAISING PAN (EX)	E	4.00	EXISTING		5.33		EXISTING	1.33	O-EX		4		
5			E	4.00				5.54	EXISTING	1.54	O-EX	EXISTING	20	6	
7	20	SPARE				1.54			EXISTING	1.54	O-EX	EXISTING	20	8	
9	20	SPARE					1.54		EXISTING	1.54	R-EX	AV ROOM	20	10	
11	20	E109_BENCH MIXER (EX)	E	0.69	EXISTING			2.23	EXISTING	1.54	O-EX	EXISTING	20	12	
13	20	E106_ELECTRIC COUNTERTOP FRYER-1 (EX)	E	1.80	EXISTING	1.80			EXISTING	0.30	E	901_HEAT LAMP	20	14	
15	20	E106_ELECTRIC COUNTERTOP FRYER-2 (EX)	E	1.80	EXISTING		2.10		EXISTING	0.30	E		20	16	
17	20	E108_18 PAN NON-INSULATED CABINET (EX)	E	2.00	EXISTING			3.54	EXISTING	1.54	O-EX	EXISTING	20	18	
19	20	E113_CONVECTION OVEN (EX)	E	1.70	EXISTING	3.70			EXISTING	2.00	E-EX	DRYER (EX)	2P-30	20	
21	20	EXISTING	O-EX	1.40	EXISTING		3.40		EXISTING	2.00	E-EX		22		
23	20	E112_GRAVITY FEED SLICER (EX)	E	0.48	EXISTING			0.84	2#12, #12G, 3/4"	0.36	R	CONVENIENCE OUTLETS	20	24	
25	20	EXISTING	O-EX	1.54	EXISTING	1.90			2#12, #12G, 3/4"	0.36	R	CONVENIENCE OUTLETS	20	26	
27	20	EXISTING	O-EX	1.54	EXISTING		1.90		2#12, #12G, 3/4"	0.36	R	CONVENIENCE OUTLETS	20	28	
29	20	Z08_48" WORKTOP REFRIGERATOR	E	0.35	EXISTING			0.63	2#12, #12G, 3/4"	0.18	R	CONVENIENCE OUTLETS	20	30	
TOTAL CONNECTED LOAD (KVA)						14.27	14.27	12.68							

NOTE: L-EX=EXISTING LIGHTING; R-EX=EXISTING RECEPTACLE; H-EX=EXISTING HVAC; M-EX=EXISTING MOTOR;
E-EX=EXISTING KITCHEN/EQUIPMENTS; O-EX=EXISTING OTHER/MISCELLANEOUS.
L=LIGHTING; R=RECEPTACLE; H=HVAC; M=MOTOR; E=KITCHEN/EQUIPMENTS; O=OTHER/MISCELLANEOUS.

EXISTING CONNECTED LOAD = 18.83 KVA NEWLY ADDED CONNECTED LOAD = 22.38 KVA
EXISTING DEMAND LOAD = 17.43 KVA NEWLY ADDED DEMAND LOAD = 14.98 KVA

TOTAL CONNECTED LOAD = 41.21 KVA
TOTAL DEMAND LOAD = 32.41 KVA

- ELECTRICAL RISER KEYED WORK NOTES:**
- EXISTING CONNECTION FOR PANEL TO REMAIN. E.C. TO COORDINATE WITH OWNER/ARCHITECT FOR EXACT POWER DISTRIBUTION IN FIELD. E.C. SHALL FIELD VERIFY OPERABLE CONDITION OF INCOMING CONNECTION FOR PANELS AND REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
 - EXISTING 400A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" TO REMAIN. E.C. SHALL VERIFY OPERABLE CONDITION, LOCATION AND CONNECTION IN FIELD. REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
 - EXISTING 400A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B" TO REMAIN. E.C. SHALL VERIFY OPERABLE CONDITION, LOCATION AND CONNECTION IN FIELD. REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
 - EXISTING 225A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "C" TO REMAIN. E.C. SHALL VERIFY OPERABLE CONDITION, LOCATION AND CONNECTION IN FIELD. REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
 - EXISTING SERVICE EQUIPMENTS FOR THE PROJECT SPACE SHALL REMAIN. E.C. TO FIELD VERIFY THE EXACT LOCATION AND OPERABLE CONDITION OF EXISTING EQUIPMENTS, REPLACE IF FOUND IN OPERABLE AND COORDINATE WITH OWNER/UTILITY COMPANY. BASE BID ACCORDINGLY. INFORM ENGINEER FOR ANY DISCREPANCY PRIOR COMMENCING ANY WORK.



- RISER GENERAL NOTES:**
- ELECTRICAL CONTRACTOR TO COORDINATE FAULT CURRENT (ISC) RATING WITH UTILITY COMPANY AND AHJ PRIOR TO COMMENCING ANY WORK.
 - E.C. SHALL VERIFY INCOMING SERVICE AMPERAGE, WIRE SIZING AND DISTRIBUTION.
 - E.C. TO VERIFY THE POWER DISTRIBUTION IN FIELD AND INFORM ENGINEER FOR ANY DISCREPANCY BEFORE COMMENCING ANY WORK.

- PANEL BOARD SCHEDULE GENERAL NOTES:**
- ELECTRICAL CONTRACTOR (E.C.) TO VERIFY ELECTRICAL LOADING OF THE EXISTING PANELS IN FIELD AND INFORM ENGINEER FOR ANY OVERLOADING OF PANELS DUE TO ADDITION OF NEW LOAD BEFORE COMMENCING ANY WORK.
 - ELECTRICAL CONTRACTOR TO VERIFY THE EXACT PANEL SIZES AND INCOMING FEEDER SIZE.
 - E.C. SHALL VERIFY THE CIRCUIT NUMBERS, CIRCUIT BREAKER & FEEDER SIZE FOR EXISTING AND RELOCATED EQUIPMENTS AND UPDATE IF REQUIRED IN FIELD.
 - E.C. SHALL MAINTAIN EXISTING CONNECTIONS AND BREAKERS FOR EXISTING TO REMAIN EQUIPMENTS.
 - E.C. SHALL PROVIDE THE ELECTRICAL CONNECTION TO ALL NEWLY ADDED EQUIPMENTS FROM THE EXISTING ELECTRICAL PANEL AND UPDATE THE CIRCUIT NUMBERS/BREAKERS AS NEEDED IN FIELD.

- PANEL BOARD SCHEDULE KEYED WORK NOTES:**
- E.C. TO FIELD VERIFY THE EXACT A.I.C RATING AS PER AVAILABLE FAULT LEVEL IN COORDINATION WITH UTILITY COMPANY AND EXISTING DISTRIBUTION. BASE BID ACCORDINGLY. INFORM ENGINEER FOR ANY DISCREPANCY PRIOR COMMENCING ANY WORK.

REVISION		
NO.	DATE	DESCRIPTION
1	06-17-2022	REVISION
2	08-19-2022	HEALTH COMMENT REVISION

DWG DATE: 05-16-2022
DRAWN BY: STAFF
PROJECT NO.: 22110
DWG TITLE: ELECTRICAL RISER DIAGRAM & PANEL SCHEDULES