GENERAL MEP SPECIFICATIONS

GENERAL

1. PRODUCTS AND INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LAWS, CODES, GOVERNMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, ETC. OF ALL AUTHORITIES HAVING JURISDICTION. WORK SHALL COMPLY WITH THE FOLLOWING CODES, STANDARDS AND ORGANIZATIONAL STANDARDS OF:
   2020 NATIONAL ELECTRIC CODE
   CITY OF AUSTIN AMENDMENTS (CURRENT VERSION)
   AUSTIN ENERGY DESIGN CRITERIA MANUAL
   2021 INTERNATIONAL ENERGY CODE
   NFPA
   ADA AND TAS REQUIREMENTS
2. WHERE CONFLICTS EXIST BETWEEN CODES, STANDARDS OR THESE SPECIFICATIONS, THE HIGHER REQUIREMENT SHALL APPLY. DEVIATIONS FROM THE CONTRACT DOCUMENTS REQUIRED BY THE ABOVE AUTHORITIES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
3. CONTRACTOR SHALL OBTAIN PERMITS, PAY ALL FEES AND ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS.
4. CONFIRM ALL UTILITY COMPANY REQUIREMENTS AND CONNECTION POINTS IN FIELD, PRIOR TO STARTING WORK.
5. ALL SPECIFICATIONS AND DRAWINGS, I.E., ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL ARE COMPLIMENTARY AND MUST BE USED IN COMBINATION TO OBTAIN COMPLETE CONSTRUCTION INFORMATION. ANY INFORMATION CONFLICTS WITHIN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION. ALL DRAWINGS ARE DIAGRAMMATIC IN NATURE, THEY ARE INTENDED TO SHOW THE APPROXIMATE LOCATIONS OF EQUIPMENT AND ASSOCIATED APPURTENANCES. THE CONTRACTOR SHALL LAYOUT ALL EQUIPMENT ROOMS TO MAKE SURE THE EQUIPMENT FITS IN THE ROOM OR SPACE SHOWN AND HAS ALL CLEARANCES REQUIRED BY THE APPLICABLE CODES, AUTHORITIES HAVING JURISDICTION AND MANUFACTURERS REQUIREMENTS PRIOR TO ORDER. EXACT LOCATION OF ALL ITEMS SHALL BE VERIFIED IN THE FIELD AND SHALL BE COORDINATED WITH EXISTING FIELD CONDITIONS. EXACT MEASUREMENTS SHALL BE ESTABLISHED BY THE CONTRACTOR AT THE JOB SITE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND REQUIRED TO VISIT THE PROJECT SPACE, VERIFY DIMENSIONAL DATA AND REVIEW THE EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK. ANY CONFLICTS WITH THE EXISTING CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER. THE JOB SITE VISIT SHALL OCCUR PRIOR TO THE FINAL BID.
7. WORK SHALL BE EXECUTED IN A GOOD WORKMANLIKE MANNER USING MECHANICS SKILLED IN THEIR RESPECTIVE TRADES. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND FREE OF DEFECTS. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND ASSOCIATED ITEMS TO PROVIDE COMPLETE AND WORKING SYSTEMS, PLACED IN OPERATION, PROPERLY ADJUSTED AND CONTROLLED.
8. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES PRIOR TO FABRICATION, PURCHASE AND/OR INSTALLATION OF ALL WORK.
9. CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION PREMISES IN A NEAT AND ORDERLY CONDITION AT THE END OF EACH WORKING DAY. CLEAN UP, REMOVE AND LEGALLY DISPOSE OF ALL TRASH AND DEBRIS.
10. CONTRACTOR SHALL PROTECT THEIR WORK AND EXISTING OR ADJACENT PROPERTY AGAINST WEATHER OR OTHER HARM, TO MAINTAIN THEIR WORK, MATERIALS, APPARATUS AND FIXTURES FREE FROM INJURY OR DAMAGE. ANY WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION REQUIRED, SHALL BE REMOVED AND REPLACED WITH NEW WORK AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF HIS WORKERS.
12. ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES FOR COORDINATING THE WORK UNDER THIS CONTRACT. CONFORM TO ALL GENERAL AND SPECIAL CONDITIONS OF PROJECT CONTRACT DOCUMENTS AND BUILDING/SITE REQUIREMENTS AS SPECIFIED BY ARCHITECT AND/OR OWNER.
13. IN CASES OF DOUBT AS TO THE WORK INTENDED, OR IN THE EVENT OF NEED FOR EXPLANATION THEREOF, THE CONTRACTOR SHALL REQUEST SUPPLEMENTARY INSTRUCTIONS FROM THE ENGINEER. NO CHANGES ARE TO BE MADE TO THE WORK OF THIS CONTRACT WITHOUT PRIOR KNOWLEDGE AND WRITTEN APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL HOLD THE ENGINEER AND ITS SUBCONTRACTORS HARMLESS AGAINST ALL CLAIMS AND JUDGMENTS ARISING OUT OF THE CONTRACTORS PERFORMANCE OF THE WORK ON THIS PROJECT. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK, WHICH HE EXPECTS ADDITIONAL COMPENSATION BEYOND THE CONTRACT AMOUNT, WITHOUT WRITTEN AUTHORIZATION FROM THE APPROPRIATE AUTHORITY. FAILURE TO OBTAIN SUCH AUTHORIZATION MAY INVALIDATE ANY CLAIM FOR EXTRA COMPENSATION.
14. ALL PRODUCTS AND MATERIALS LOCATED WITHIN SUPPLY AND/OR RETURN AIR PLENUMS SHALL BE SPECIFICALLY LISTED BY THE MANUFACTURER AS SUITABLE FOR PLENUM DUTY. PRODUCTS AND MATERIALS EXPOSED TO THE AIR STREAM SHALL BE PLENUM RATED WITH A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50 (ASTM E-84, NFPA 255 AND UL 723). RATINGS SHALL BE DETERMINED BY APPLICABLE ASTM, UL AND NFPA GUIDELINES. ALL PRODUCTS SHALL COMPLY AND BE LABELED WITH 25/50 FLAME AND SMOKE HAZARD RATINGS.
15. ALL EXISTING EQUIPMENT TO BE REUSED SHALL BE THOROUGHLY CLEANED PRIOR TO RE-INSTALLATION.
16. DEFINITIONS
    16.1. THE WORD "PIPING" INCLUDES PIPE, FITTINGS, CONTROLS, VALVES, INSULATION AND HANGERS.
    16.2. THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".

ARCHITECT COORDINATION

1. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN FOR THE LOCATION OF ALL VISIBLE CEILING MOUNTED DEVICES. ALL DEVICES IN DROPPED CEILINGS SHALL BE INSTALLED AT CENTER POINTS OF TILES UNLESS OTHERWISE INDICATED.

BUILDING/OWNER COORDINATION

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW OF, AND COMPLIANCE WITH, THE BASE BUILDING STANDARDS AND OWNER REQUIREMENTS FOR ALL EQUIPMENT, SYSTEM AND MATERIAL REQUIREMENTS AND METHODS.
2. ALL SHUT DOWNS OF EXISTING SYSTEMS SHALL BE SCHEDULED AND APPROVED BY THE OWNER PRIOR TO COMMENCEMENT OF WORK.
3. CONTRACTOR SHALL PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT AND TRANSFER TO POINT OF INSTALLATION, ALL OWNER FURNISHED ITEMS.
4. ALL ITEMS REMOVED SHALL BECOME PROPERTY OF THE OWNER AND SHALL BE DISPOSED OF AS PER THE OWNER'S INSTRUCTIONS, UNLESS INDICATED OTHERWISE.

BASIS OF DESIGN AND SUBSTITUTIONS

1. MANUFACTURERS AND MODELS LISTED ARE BASIS OF DESIGN. SUBSTITUTIONS ARE SUBJECT TO THE APPROVAL OF THE OWNER, ARCHITECT AND ENGINEER. IF A SUBSTITUTION IS SUBMITTED, IT IS THE CONTRACTORS RESPONSIBILITY TO EVALUATE IT AND CERTIFY THAT THE SUBSTITUTION IS EQUIVALENT IN ALL RESPECTS TO THE BASIS OF DESIGN. WHERE SUBMITTALS VARY FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL CLEARLY INDICATE ON SUBMITTAL OR ACCOMPANYING DOCUMENTS THE NATURE AND REASON FOR VARIATIONS. IF SUBSTITUTIONS ARE APPROVED, THE CONTRACTOR SHALL NOTIFY ALL OTHER CONTRACTORS, SUBCONTRACTORS OR TRADES AFFECTED BY THE SUBSTITUTIONS AND FULLY COORDINATE. ANY COSTS RESULTING FROM SUBSTITUTION, WHETHER BY CONTRACTOR OR OTHERS, SHALL BE RESPONSIBILITY OF AND PAID FOR BY SUBSTITUTING CONTRACTOR. APPROVED SHOP DRAWINGS DOES NOT ABSOLVE THIS CONTRACTOR FROM THIS RESPONSIBILITY. APPROVAL OF SUBSTITUTIONS IS AT THE DISCRETION OF THE ARCHITECT AND ENGINEER AND IF SUBMITTED AFTER THE BID, AT THE RISK OF THE CONTRACTOR.

SUBMITTALS

1. SHOP DRAWING SUBMITTALS – COORDINATE, PREPARE AND SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER FOR THEIR REVIEW. CONTRACTOR SHALL REVIEW AND INDICATE HIS APPROVAL OF EACH SHOP DRAWING PRIOR TO SUBMITTAL FOR REVIEW. DO NOT ORDER, START WORK OR FABRICATION UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED BY THE ENGINEER AND RETURNED TO THE CONTRACTOR.
2. CLEARLY IDENTIFY EACH ITEM ON THE SUBMITTAL AS TO MARK, LOCATION AND USE, USING SAME IDENTIFICATION AS PROVIDED ON DESIGN DRAWINGS. ELECTRONIC SUBMITTALS SHALL BE PRESENTED WITH ALL SHEETS IN ALPHANUMERIC ORDER AND ALL SHEETS ORIENTED WITH TOP OF SHEET UP. SUBMITTALS WILL BE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND NOT FOR DIMENSIONS OR QUANTITIES. THE SUBMITTAL REVIEW DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PURCHASE OF ANY ITEM IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS OR ITS COMPLETE AND PROPER INSTALLATION.

RECORD DRAWINGS

1. A SET OF M.E.P. RECORD/COORDINATION DRAWINGS SHALL BE MAINTAINED IN THE GENERAL CONTRACTORS OFFICE AT THE JOB SITE. RECORD DOCUMENTS SHALL INDICATE ADDITIONS, DELETIONS, VARIATIONS IN LOCATION, VARIATIONS IN NUMBERING ETC. ALTERATIONS SHALL BE MARKED IN RED AND DELETIONS IN GREEN AND SHALL BE ON THE LATEST CONTRACT DRAWING ISSUED.
2. RECORD DRAWINGS SHALL BE KEPT CLEAN AND UNDAMAGED AND SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN RECORDING DEVIATIONS FROM WORKING DRAWINGS. AFTER THE PROJECT IS COMPLETED, THESE SETS OF DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT AND ENGINEER IN GOOD CONDITION, AS A PERMANENT RECORD OF THE INSTALLATION AS ACTUALLY CONSTRUCTED.

EQUIPMENT

1. ALL PACKAGED EQUIPMENT SHALL BE INDEPENDENTLY THIRD PARTY LABELED AS A SYSTEM FOR ITS INTENDED USE BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) IN ACCORDANCE WITH OSHA FEDERAL REGULATIONS 29CFR1910.303 AND .399, AS WELL AS NFPA PAMPHLET NO. 70, AND THE NATIONAL ELECTRICAL CODE (NEC), ARTICLE 90-7.
2. MAKE ALL FINAL EQUIPMENT CONNECTIONS AND PROVIDE THE NECESSARY ADAPTERS, FITTINGS, DEVICES, ETC. FOR A COMPLETE AND OPERABLE SYSTEM. PROVIDE COMPLETE WITH BASES, ISOLATORS, SUPPORTS AND OTHER REQUIRED ACCESSORIES.
3. EQUIPMENT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE MANUFACTURER'S DATA AND INSTALLATION INSTRUCTIONS, INCLUDING CLEARANCES. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO CHECK AND CONFORM TO THESE REQUIREMENTS PRIOR TO STARTING WORK.
4. THE CONTRACTOR SHALL COORDINATE WITH THE OTHER TRADES FOR ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT. COORDINATE REQUIREMENT FOR PROVISION OF MOTOR STARTERS, DISCONNECTS, CONTACTORS, CONTROL WIRING, ETC. AS REQUIRED FOR PROPER FUNCTIONING SYSTEM.
5. ALL FLOOR MOUNTED EQUIPMENT SHALL BE INSTALLED ON CONCRETE HOUSEKEEPING PADS. MINIMUM PAD THICKNESS SHALL BE NOMINAL 4". PAD SHALL EXTEND BEYOND THE EQUIPMENT A MINIMUM OF 4" ON EACH SIDE. CONCRETE PADS SHALL BE PROVIDED BY THIS CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE THE SIZE AND LOCATION OF THE CONCRETE HOUSEKEEPING PADS WITH THE GENERAL CONTRACTOR.

IDENTIFICATION

1. FURNISH AND MOUNT ON EACH MECHANICAL UNIT, WATER HEATER, PUMP, PANELBOARD, SWITCHBOARD (INCLUDING BRANCH SWITCHES), LARGE JUNCTION BOX, SAFETY SWITCH, STARTER, REMOTE CONTROL, PUSH BUTTON STATION, AND ALL SIMILAR EQUIPMENT AND CONTROLS, A NAMEPLATE DESCRIPTIVE OF THE EQUIPMENT OR EQUIPMENT CONTROLLED.
2. PROVIDE BLACK AND WHITE NAMEPLATES CONSTRUCTED FROM LAMINATED PHENOLIC WITH A WHITE CENTER CORE. LETTERS SHALL BE ENGRAVED IN THE PHENOLIC TO FORM WHITE LETTERS 3/8" HIGH MINIMUM.

CUTTING, PATCHING AND DRILLING

1. THIS BUILDING MAY CONTAIN STRUCTURAL REINFORCEMENT THAT COULD BE DAMAGED DURING CONSTRUCTION. DO NOT CORE DRILL OR CUT ANY CONCRETE SLABS OR OTHER STRUCTURAL COMPONENTS FOR ANY REASON WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE STRUCTURAL ENGINEER, ARCHITECT AND THE BUILDING OWNER. PATCH AND FINISH TO MATCH SURROUNDING MATERIALS AND METHODS THAT HAVE BEEN CUT, DAMAGED OR MODIFIED.
2. X-RAY, SCANNING OR OTHER REINFORCEMENT LOCATION SERVICES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED IN BID.
3. CUT, PATCH AND RESTORE ALL EXISTING SURFACES NOT RECEIVING NEW FINISHES OR DISTURBED DURING EXECUTION OF THE WORK. MATERIALS AND FINISHES USED SHALL BE SIMILAR TO ADJACENT SURFACES AND THE COMPLETE REPAIR SHALL MEET THE APPROVAL OF THE ARCHITECT AND THE OWNER'S REPRESENTATIVE.

MOUNTING ACCESSORIES

1. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL ANGLE IRON, CHANNEL IRON, RODS, SUPPORTS, HANGERS, INSERTS, CONCRETE OR PLYWOOD REQUIRED TO INSTALL, MOUNT AND SUPPORT ANY M.E.P. EQUIPMENT OR DEVICE CALLED FOR ON CONTRACT DOCUMENTS. SUPPORTING MATERIAL SHALL BE COMPLETE WITH HANGERS, CONNECTORS, BOLTS, CLAMPS AND NECESSARY ACCESSORIES TO MAKE A COMPLETE INSTALLATION. SUPPORTING MATERIAL SHALL BE GALVANIZED, PAINTED OR OTHERWISE SUITABLY FINISHED FOR THE INSTALLED ENVIRONMENT.
2. DO NOT INSTALL OR SUPPORT ANY ITEMS FROM ANY DUCTWORK, PIPES OR CONDUITS. DO NOT INSTALL ANY PIPE OR DUCT DIRECTLY TOUCHING FLOORS, WALLS OR STRUCTURE.

FIRE STOPPING/FIRE DAMPERS

1. ALL PENETRATIONS OF SLAB-TO-SLAB PARTITIONS SHALL BE SEALED AIRTIGHT.
2. WHEREVER FIRE RATED PARTITIONS ARE PENETRATED FOR WIRE, DUCT, PIPE OR OTHER ITEM PASSAGE, SEAL PASSAGES WITH CODE APPROVED, LABORATORY TESTED AND LABELED SEALANT OF FIRE RESISTANCE RATING NOT LESS THAN THAT OF PENETRATED ASSEMBLY THAT WILL PREVENT PASSAGE OF FIRE AND SMOKE. ALL FIRE STOPPING SYSTEMS SHALL MEET THE REQUIREMENTS OF ASTM E 814, UL 1479, AND BE FACTORY MUTUAL APPROVED. ALL FIRE STOPPING AND/OR SMOKE STOPPING MATERIAL AND INSTALLATION SHALL BE AS MANUFACTURED BY HILTI OR APPROVED EQUAL.
3. INSTALLATION OF ITEMS AND OUTLETS IN RATED CEILINGS OR WALLS SHALL HAVE RATED BOXES OR BE PROVIDED WITH PRE-MANUFACTURED TENTS MATCHING THE RATING OF THE CEILING OR WALL ASSEMBLY.

ACCESS DOORS

1. ACCESS DOORS SHALL BE PROVIDED IN WALLS AND CEILINGS WHERE REQUIRED TO PERMIT PROPER ACCESS TO EQUIPMENT AND OTHER DEVICES WHICH REQUIRE MAINTENANCE OR SERVICE. DOORS PLACED IN WALLS, PARTITIONS OR OTHER FIRE-RATED CONSTRUCTION SHALL HAVE A LABEL SIGNIFYING THAT THE DOOR HAS THE SAME FIRE RATING AS THE FIRE-RATED CONSTRUCTION.
2. ACCESS PANELS SHALL BE CONSTRUCTED OF 14 GAUGE STEEL, WITH 16 GAUGE STEEL FRAMES.
3. DOORS SHALL FINISH FLUSH WITH THE SURROUNDING SURFACE. FRAMES SHALL HAVE 3" WIDE EXPANDED METAL FOR PLASTERED SURFACES AND PLAIN FLANGED TYPE FRAME FOR TILE, MASONRY OR GYPSUM BOARD SURFACES. DOORS AND FRAMES SHALL BE FURNISHED PRIME COATED.
4. DOORS INSTALLED IN CERAMIC TILE OR OTHER NON-PAINTED SURFACES SHALL BE STAINLESS STEEL.
5. HINGES SHALL BE CONCEALED SPRING TYPE, TO ALLOW DOORS TO BE OPENED 175 DEGREES. LOCKS SHALL BE FLUSH SCREWDRIVER TYPE WITH STEEL CAMS.
6. ACCESS PANELS SHALL BE 16" X 16" OR LARGER AS MAY BE REQUIRED FOR PROPER ACCESS TO THE DEVICE BEING SERVED.
7. ACCESS PANELS ARE NOT REQUIRED IN ACCESSIBLE LAY IN CEILINGS.
8. CONTRACTOR SHALL REVIEW THE ROOM FINISH SCHEDULE ON THE ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY THE NEED FOR ACCESS PANELS. PROVIDE ACCESS PANELS TO GENERAL CONTRACTOR FOR INSTALLATION.

START UP

1. AFTER INSTALLATION, THE CONTRACTORS SHALL CHECK ALL EQUIPMENT, AND PERFORM START UP IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS. PLACE ALL SYSTEMS INTO FULL OPERATION.
2. CLEAN ALL EQUIPMENT AND FIXTURES OF ALL CONSTRUCTION DUST PRIOR TO SUBSTANTIAL COMPLETION.

COMPLETION AND TRAINING

1. PROVIDE OWNER TRAINING AND DEMONSTRATION OF ALL SYSTEMS AND EQUIPMENT.
2. INSTRUCT OWNER ON PROPER OPERATION AND PREVENTATIVE MAINTENANCE OF M.E.P. SYSTEMS.
3. SUBMIT OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT AND SYSTEMS FOR ENGINEER REVIEW.
4. UPON COMPLETION OF PROJECT, CONTRACTOR SHALL SUBMIT A FINAL ELECTRONIC COPY OF ALL PLANS AND SPECIFICATIONS INDICATING AS-BUILT CONDITIONS TO ARCHITECT AND ENGINEER..

WARRANTY

1. FULLY WARRANT ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION. EXTEND ALL MANUFACTURER'S WARRANTIES TO OWNER, INCLUDING ALL EXTENDED WARRANTIES.
2. REPAIR OR REPLACE WITHOUT CHARGE TO THE OWNER, ALL ITEMS FOUND DEFECTIVE DURING THE WARRANTY PERIOD. IN THE CASE OF REPLACEMENT OR REPAIR DUE TO FAILURE WITHIN THE WARRANTY PERIOD, THE WARRANTY ON THAT PORTION OF THE WORK SHALL BE EXTENDED FOR A MINIMUM PERIOD OF ONE (1) YEAR FROM THE DATE OF SUCH REPLACEMENT OR REPAIR.

MEP SYSTEMS DEMOLITION NOTES

1. BEFORE SUBMITTING BID, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE TO VERIFY/EXAMINE THE EXACT EXTENT OF EXISTING CONDITIONS. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO VISIT THE SITE PRIOR TO BID, NOR FOR ANY ALLEGED MISUNDERSTANDING OF WORK TO BE PERFORMED. THE CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL LABOR AND MATERIAL THAT MAY EFFECT HIS WORK.
2. THE GENERAL EXTENT OF EXISTING WORK TO BE DISMANTLED AND REMOVED OR RELOCATED IS INDICATED ON THE DRAWINGS OR DESCRIBED HEREIN.
3. ALL COMPONENTS ASSOCIATED WITH SYSTEMS AND EQUIPMENT TO BE REMOVED OR RELOCATED MAY NOT BE SPECIFICALLY INDICATED. REMOVE ALL ASSOCIATED EQUIPMENT, DUCTWORK, COMPONENTS, HANGERS, PIPING, WIRING, CABLING, CONDUIT, BOXES, DEVICES AND ALL OTHER ITEMS RELATED TO EQUIPMENT AND MATERIALS WHICH ARE INDICATED TO BE REMOVED OR RELOCATED. REMOVE ALL WIRING AND CONDUIT BACK TO THE SOURCE FOR EXISTING CIRCUITS WHICH ARE BEING DEMOLISHED UNLESS SPECIFICALLY INDICATED. NO EQUIPMENT, MATERIALS OR ASSOCIATED COMPONENTS SHALL BE ABANDONED IN PLACE.
4. ABANDON ALL PIPING AND CONDUITS WHICH ARE CONCEALED IN CONCRETE, WALLS OR SLABS AND REMOVE ALL WIRING AND CABLES FROM ABANDONED CONDUITS. WATER TIGHT SEAL OPEN ENDS OF PIPING AND ABANDONED CONDUITS AND PATCH TO MATCH SURROUNDING MATERIALS AND METHODS.
5. CONTRACTORS SCOPE OF WORK INCLUDES TRACING OF ALL EXISTING PIPING SYSTEMS, CONTROLS AND ELECTRICAL CIRCUITS IN THE CONSTRUCTION AREA BACK TO SOURCE. IF REMOVAL OF EXISTING EQUIPMENT OR CIRCUITS AFFECTS ANY EXISTING CIRCUITS TO REMAIN, CONTRACTOR SHALL PROVIDE PIPING, DUCTWORK, CIRCUIT BREAKERS, FUSES, WIRING, CONDUIT, ETC. REQUIRED TO RECONNECT EXISTING TO REMAIN EQUIPMENT BACK TO SOURCE.

DISPOSAL OF DEMOLISHED MATERIALS

1. CONTRACTOR SHALL CLEAN THE PROJECT SITE AT THE END OF EACH WORKING DAY. CONTRACTOR SHALL NOTIFY THE BUILDING OWNER PRIOR TO DISPOSAL OF ALL DEMOLISHED MATERIALS TO ALLOW THE OWNER TO SALVAGE ANY USABLE MATERIALS. AFTER INSPECTION FROM THE OWNERS REPRESENTATIVE, ALL UNUSED MATERIALS SHALL BE REMOVED FROM THE JOB SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS AND APPLICABLE REGULATIONS.

PROTECTION

1. PROTECT FROM DAMAGE ALL EXISTING WORK TO REMAIN. ANY EXISTING TO REMAIN OR EXISTING TO BE RELOCATED MATERIALS AND EQUIPMENT DAMAGED DURING THE COURSE OF WORK SHALL BE REPLACED WITH MATERIALS AND EQUIPMENT CONFORMING TO THE PROJECT SPECIFICATIONS AT NO ADDITIONAL COST TO THE OWNER. CARE MUST BE TAKEN IN REMOVING ALL EXISTING MATERIALS.

TERMINATION AND PATCHING

1. DISCONNECT EXISTING TO BE REMOVED OR EXISTING TO BE RELOCATED PIPING, DUCTWORK, CONDUIT, WIRING, CABLING AND EQUIPMENT FROM EXISTING TO REMAIN POINT INDICATED. IF NOT INDICATED ON THE PLANS, VERIFY WITH THE DESIGN ENGINEER OR BUILDING OWNERS REPRESENTATIVE PRIOR TO DISCONNECTION.
2. WHERE EXISTING FLOORS, WALLS AND ROOFS MUST BE CUT OR ARE DAMAGED DURING REMOVAL OR RELOCATION OF WORK, PATCH THE CUT OR DAMAGED AREAS TO MATCH ADJACENT CONSTRUCTION WITH LIKE MATERIALS AND METHODS.
3. THE CONTINUITY OF ALL MEP SYSTEMS SERVICING AREAS TO REMAIN SHALL BE MAINTAINED. MODIFY THE EXISTING PIPING, DUCTWORK OR ELECTRICAL CIRCUITS IF REQUIRED IN ORDER TO MAINTAIN THE OPERATIONS OF EXISTING SYSTEMS.

SYMBOLS

LIGHTING

	DESCRIPTION
	2x4 LIGHT FIXTURE
	1x4 LIGHT FIXTURE
	STRIP LIGHT FIXTURE
	RECESSED CAN LIGHT
	WALL WASHER LIGHT FIXTURE
	SURFACED MOUNTED LIGHT FIXTURE
	WALL MOUNTED LIGHT FIXTURE
	CEILING MOUNTED EXIT SIGN W/FACE INDICATOR
	WALL MOUNTED EXIT SIGN W/FACE INDICATOR
	CEILING MTD. EXIT SIGN W/FACE INDICATOR/DIRECTION
	WALL MTD. EXIT SIGN W/FACE INDICATOR/DIRECTION
	WALL MOUNTED EMERGENCY LIGHTING UNIT
	EMERGENCY / NIGHT LIGHT FIXTURE (UNSWITCHED)

LIGHTING CONTROLS

	DESCRIPTION
$	SINGLE POLE SWITCH
$2	DOUBLE POLE SWITCH
$3	THREE WAY SWITCH
$4	FOUR WAY SWITCH
$D	DIMMER SWITCH
$M	MOTOR RATED SWITCH
$K	KEYED SWITCH
$WP	WEATHER PROOF SWITCH
$F	FAN SPEED CONTROL SWITCH
$T	MANUAL TIMER SWITCH
$PL	SWITCH WITH PILOT LIGHT INDICATOR
$OS	OCCUPANCY SENSOR SWITCH W/MANUAL ON/OFF SWITCH (AUTO ON/AUTO OFF)
$VS	VACANCY SENSOR SWITCH W/MANUAL ON/OFF SWITCH (MANUAL ON/AUTO OFF)
LC	LIGHTING CONTACTOR
LCP	LIGHTING CONTROL PANEL
LCTP	LIGHTING CONTROL TOUCH PAD (W/120V POWER)
TC	TIME CLOCK
#	LIGHTING CONTROL AREA TAG – BOX NUMBER TAG INDICATES A SPECIFIC LIGHTING CONTROL SCHEME IS REQUIRED FOR THE SURROUNDING AREA. REFER TO THE LIGHTING CONTROL SCHEDULE FOR ADDITIONAL PERFORMANCE SPECIFICATIONS AND OPERATIONAL REQUIREMENTS.
PC	PHOTOCELL (OUTDOOR OR INDOOR DAYLIGHT ZONE)
OS	OCCUPANCY SENSOR – WALL MOUNTED
OS	OCCUPANCY SENSOR – WALL MOUNTED IN CORNER
OS	OCCUPANCY SENSOR – CEILING MOUNTED (MINOR MOTION)
OS	OCCUPANCY SENSOR – CEILING MOUNTED (MAJOR MOTION)

COMMUNICATIONS AND SPECIAL SYSTEMS

	DESCRIPTION
	TELEPHONE/IT BACKBOARD
	DATA/TELEPHONE OUTLET – WALL MOUNTED
	DATA/TELEPHONE OUTLET – FLOOR MOUNTED
CR	CARD READER – WALL MOUNTED
PP	POWER POLE (BY OTHERS)

FIRE ALARM

	DESCRIPTION
FACP	CONTROL PANEL
RAP	REMOTE ANNUNCIATOR PANEL
P	MANUAL PULL STATION – WALL MTD. +48"
F	WATER FLOW MONITOR – WALL MTD.
R	CONTROL RELAY
T	TAMPER MONITOR – WALL MTD.
V	VISUAL STROBE DEVICE – WALL MTD.
AV	AUDIO/VISUAL DEVICE – WALL MTD. +80"
H	HORN DEVICE – WALL MTD.
MH	MAGNETIC DOOR HOLD OPEN DEVICE WALL MTD.
V	VISUAL STROBE DEVICE – CEILING MTD.
AV	AUDIO/VISUAL DEVICE – CEILING MTD.
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
SD DM	SMOKE DETECTOR – DUCT MOUNTED

GENERAL SYMBOLS

	DESCRIPTION
XX-XX	EQUIPMENT OR FIXTURE TAG
	NEW TO EXISTING CONNECTION
	POINT OF DISCONNECTION
	EQUIPMENT/ITEM – NEW
	EQUIPMENT/ITEM – EXISTING TO REMAIN
	EQUIPMENT/ITEM – TO BE DEMOLISHED
	EQUIPMENT/ITEM – TO BE DEMOLISHED
R	EQUIPMENT/ITEM – TO BE RELOCATED
R	EQUIPMENT/ITEM – RELOCATED TO NEW LOCATION

SYMBOLS

POWER

	DESCRIPTION
	PANELBOARD
	TRANSFORMER (XFMR)
	CONTROL PANEL (OR OTHER ELEC. EQUIPMENT)
VFD	VARIABLE FREQUENCY DRIVE (VFD)
	DISCONNECT
	MANUAL MOTOR STARTER
	MAGNETIC MOTOR STARTER
	COMB. DISCONNECT AND MAGNETIC MOTOR STARTER
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE
	QUAD RECEPTACLE
	MULTIPLE PHASE RECEPTACLE
TL	MULTIPLE PHASE RECEPTACLE – TWIST LOCK
GFCI	DUPLEX RECEPTACLE – GROUND FAULT
TR	DUPLEX RECEPTACLE – TAMPER RESISTANT
WP	DUPLEX RECEPTACLE – WEATHER PROOF
IG	DUPLEX RECEPTACLE – ISOLATED GROUND
+XX"	DUPLEX RECEPTACLE – MOUNTED XX" A.F.F.
USB	DUPLEX RECEPTACLE WITH (2) USB PLUGS
	FLOOR BOX – SIMPLEX RECEPTACLE
	FLOOR BOX – DUPLEX RECEPTACLE
	FLOOR BOX – QUAD RECEPTACLE
J	JUNCTION BOX – WALL MOUNTED
J	JUNCTION BOX – CEILING MOUNTED
F	JUNCTION BOX – CEILING MOUNTED FOR FAN
D	JUNCTION BOX – WITH DROP CORD
PB	PULL BOX
	POWER POLE (DATA RACEWAY IF APPLICABLE)
5	MOTOR (HORSEPOWER INDICATED IN CIRCLE)
J	JUNCTION BOX WITH FURNITURE WHIP
	PUSH BUTTON

GROUNDING

	DESCRIPTION
	MECHANICAL GROUNDING CONNECTION
	EXOTHERMIC WELD GROUNDING CONNECTION

LINE TYPES

	DESCRIPTION
	EQUIPMENT LOCATED BEHIND OTHER OBJECTS
	EQUIPMENT CLEARANCES
	DAYLIGHT HARVESTING ZONE BOUNDARY
	ELECTRICAL RACEWAY AND CONDUCTORS
	UNDERGROUND POWER
	OVERHEAD POWER
	UNDERGROUND GROUNDING
	COMMUNICATIONS (ABOVE GRADE)
	UNDERGROUND COMMUNICATIONS
	TELEPHONE (ABOVE GRADE)
	UNDERGROUND TELEPHONE

ELECTRICAL SHEET INDEX

PROJECT: 21-085

BUILDING CONTACT
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AMPED ENGINEERING
TBPE FIRM NO. F-19865

ABBREVIATIONS

A	AMPERES
AC	ALTERNATING CURRENT
A/C	AIR CONDITIONING
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
ATC	AUTOMATIC TEMPERATURE CONTROL
AWG	AMERICAN WIRE GAUGE
BTU	BRITISH THERMAL UNITS
C	CONDUIT
CATV	CABLE TELEVISION
CB	CRITICAL BRANCH
C/B	CIRCUIT BREAKER
CBM	CERTIFIED BALLAST MANUFACTURER
CCTV	CLOSED CIRCUIT TELEVISION
CD	CANDELA
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CU	COPPER
DB	DECIBEL
DC	DIRECT CURRENT
DIA	DIAMETER
EB	EQUIPMENT BRANCH
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ELEV	ELEVATOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EP	EMERGENCY POWER
EPO	EMERGENCY POWER OFF
EWC	ELECTRIC WATER COOLER
F	FUSE
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FLA	FULL LOAD AMPERES
FMC	FLEXIBLE METAL CONDUIT
G	GROUND
GFCI, GFI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRMC	GALVANIZED RIGID METAL CONDUIT
HOA	HAND-OFF-AUTOMATIC SWITCH
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HZ	HERTZ
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INT	INTERLOCK
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERES
KVAR	KILOVOLT-AMPERES REACTIVE
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LTG	LIGHTING
LRA	LOCK ROTOR AMPS
MC	METAL CLAD CABLE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MI	MINERAL INSULATED
MLO	MAIN LUGS ONLY
MW	MEGAWATT
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NL	NIGHT LIGHT
NO	NORMALLY OPEN
P	POLE
PB	PUSH BUTTON OR PANIC BUTTON OR PULL BOX
PNL	PANEL
PWR	POWER
PT	POTENTIAL TRANSFORMER
QTY	QUANTITY
REQ	REQUIRED
RMC	RIGID METAL CONDUIT
RMS	ROOT MEAN SQUARED
RNC	RIGID NON-METALLIC CONDUIT
RTS	REMOTE TEST STATION
RTU	ROOF TOP UNIT
SP	SPARE
ST	SHUNT TRIP
SW	SWITCH
SYM	SYMMETRICAL
TEL	TELEPHONE
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TMCB	THERMAL MAGNETIC CIRCUIT BREAKER
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
V	VOLT
VA	VOLT-AMPERE
VFD	VARIABLE FREQUENCY DRIVE
VT	VOLTAGE TRANSFORMER
W	WATT OR WIRE
WH	WATER HEATER
WP	WEATHER PROOF
XFMR	TRANSFORMER

ELECTRICAL GENERAL NOTES

1. ALL POWER, FIRE ALARM AND OTHER ELECTRICAL DEVICE CONTROL WIRING IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. THERMOSTAT, FIRE DAMPER, AND SIMILAR MECHANICAL EQUIPMENT CONTROL WIRING SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
2. ALL ELECTRICAL EQUIPMENT SHALL BE 'UL' LISTED.
3. CONTRACTOR SHALL PROVIDE 50% STEP-DIM BALLASTS IN LIGHTING WHERE TWO LEVELS OF SWITCHING ARE INDICATED, OR PROVIDE PROPER LOW VOLTAGE CONTROLS TO ACCOMPLISH STEPPING OF LAMPS.
4. LIGHTING FIXTURES SHALL BE SUPPORTED INDIVIDUALLY FROM STRUCTURE FRAMING MEMBERS AND NOT FROM DUCTWORK, PIPING OR CEILING GRIDS.
5. NO MATERIALS PROVIDED FOR THIS PROJECT MAY CONTAIN ASBESTOS OR PCBS.
6. ALL NEW PANELS AND TRANSFORMERS SHALL BE PROVIDED WITH COPPER BUSSING AND WINDINGS.
7. NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS, ONLY THOSE WHERE CLARIFICATION IS NECESSARY. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL WIRE NECESSARY FOR THE PROPER OPERATION OF ALL SYSTEMS WHETHER INDICATED HEREIN OR NOT.
8. VERIFY ALL DOOR SWINGS PRIOR TO INSTALLATION OF SWITCH BOXES.
9. WHERE CONDUITS PASS THROUGH FIRE RATED PARTITIONS, CONTRACTOR SHALL MAINTAIN FIRE RATING OF PENETRATIONS THROUGH APPROVED MEANS.

ELECTRICAL DEMOLITION NOTES

1. BEFORE SUBMITTING BID, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE TO VERIFY/EXAMINE THE EXACT EXTENT OF EXISTING CONDITIONS. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO VISIT THE SITE PRIOR TO BID, NOR FOR ANY ALLEGED MISUNDERSTANDING OF WORK TO BE PERFORMED. THE CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL LABOR AND MATERIAL THAT MAY EFFECT HIS WORK.
2. THE GENERAL EXTENT OF EXISTING ELECTRICAL WORK TO BE DISMANTLED AND REMOVED OR RELOCATED IS INDICATED ON THE DRAWINGS OR DESCRIBED HEREIN.
3. ALL COMPONENTS ASSOCIATED WITH SYSTEMS AND EQUIPMENT TO BE REMOVED OR RELOCATED MAY NOT BE SPECIFICALLY INDICATED. REMOVE ALL ASSOCIATED ELECTRICAL COMPONENTS, HANGERS, WIRING, CABLING, CONDUIT, BOXES, DEVICES AND ALL OTHER ITEMS RELATED TO EQUIPMENT AND MATERIALS WHICH ARE INDICATED TO BE REMOVED OR RELOCATED. REMOVE ALL WIRING AND CONDUIT BACK TO THE SOURCE FOR EXISTING CIRCUITS WHICH ARE BEING DEMOLISHED UNLESS SPECIFICALLY INDICATED. NO EQUIPMENT, MATERIALS OR ASSOCIATED COMPONENTS SHALL BE ABANDONED IN PLACE.
4. ABANDON ALL CONDUITS WHICH ARE CONCEALED IN CONCRETE, WALLS OR SLABS AND REMOVE ALL WIRING AND CABLES FROM ABANDONED CONDUITS. WATER TIGHT SEAL OPEN ENDS OF ABANDONED CONDUITS AND PATCH TO MATCH SURROUNDING MATERIALS AND METHODS.
5. CONTRACTORS SCOPE OF WORK INCLUDES TRACING OF ALL EXISTING CIRCUITS IN THE CONSTRUCTION AREA BACK TO SOURCE. IF REMOVAL OF EXISTING ELECTRICAL EQUIPMENT OR CIRCUITS AFFECTS ANY EXISTING CIRCUITS TO REMAIN, CONTRACTOR SHALL PROVIDE CIRCUIT BREAKERS, FUSES, WIRING, CONDUIT, ETC. REQUIRED TO RECONNECT EXISTING TO REMAIN ELECTRICAL EQUIPMENT BACK TO SOURCE.

DISPOSAL OF DEMOLISHED MATERIALS

1. CONTRACTOR SHALL CLEAN THE PROJECT SITE AT THE END OF EACH WORKING DAY. CONTRACTOR SHALL NOTIFY THE BUILDING OWNER PRIOR TO DISPOSAL OF ALL DEMOLISHED MATERIALS TO ALLOW THE OWNER TO SALVAGE ANY USABLE MATERIALS. AFTER INSPECTION FROM THE OWNERS REPRESENTATIVE, ALL UNUSED MATERIALS SHALL BE REMOVED FROM THE JOB SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS AND APPLICABLE REGULATIONS.

PROTECTION

1. PROTECT FROM DAMAGE ALL EXISTING WORK TO REMAIN. ANY EXISTING TO REMAIN OR EXISTING TO BE RELOCATED MATERIALS AND EQUIPMENT DAMAGED DURING THE COURSE OF WORK SHALL BE REPLACED WITH MATERIALS AND EQUIPMENT CONFORMING TO THE PROJECT SPECIFICATIONS AT NO ADDITIONAL COST TO THE OWNER. CARE MUST BE TAKEN IN REMOVING ALL EXISTING MATERIALS.

TERMINATION AND PATCHING

1. DISCONNECT EXISTING TO BE REMOVED OR EXISTING TO BE RELOCATED CONDUIT, WIRING, CABLING AND EQUIPMENT FROM EXISTING TO REMAIN POINT INDICATED. IF NOT INDICATED ON THE PLANS, VERIFY WITH THE DESIGN ENGINEER OR BUILDING OWNERS REPRESENTATIVE PRIOR TO DISCONNECTION.
2. WHERE EXISTING FLOORS, WALLS AND ROOFS MUST BE CUT OR ARE DAMAGED DURING REMOVAL OR RELOCATION OF ELECTRICAL WORK, PATCH THE CUT OR DAMAGED AREAS TO MATCH ADJACENT CONSTRUCTION WITH LIKE MATERIALS AND METHODS.
3. THE CONTINUITY OF ALL EXISTING CONDUITS AND FEEDERS SERVICING AREAS TO REMAIN SHALL BE MAINTAINED. MODIFY THE EXISTING CIRCUITS IF REQUIRED IN ORDER TO MAINTAIN THE EXISTING CIRCUITRY.

ELECTRICAL SPECIFICATIONS

RACEWAYS

1. ALL WIRE SHALL BE RUN IN ACCORDANCE WITH APPLICABLE CODE IN INTERMEDIATE METAL CONDUIT (IMC) OR ELECTRICAL METALLIC TUBING (EMT) OR METAL CLAD (MC) CABLING UNLESS OTHERWISE SPECIFICALLY STATED HEREIN. CONDUIT SIZE SHALL BE 3/4" MINIMUM UNLESS NOTED OTHERWISE.
2. CONDUIT IN EXTERIOR WALLS, EXPOSED TO THE WEATHER OR OTHER DAMP/WET LOCATIONS SHALL BE RIGID, THREADED, GALVANIZED, HEAVY WALL TYPE.
3. CONDUIT UNDERGROUND SHALL BE SCHEDULE 40 PVC CONDUIT WITH GROUND WIRE. PVC CONDUIT SHALL NOT BE RUN IN OR ABOVE FLOOR SLAB. PVC CONDUIT SHALL TERMINATE BELOW FLOOR SLAB WITH RIGID, THREADED METAL CONDUIT ADAPTER. CONDUIT ABOVE SLAB SHALL BE METAL.
4. ALL CONDUIT SHALL BE CONCEALED IN WALLS, FLOORS AND CEILINGS WHEREVER POSSIBLE. EXPOSED CONDUIT IN FINISHED AREAS WILL NOT BE PERMITTED. EXPOSED CONDUIT WILL BE PERMITTED IN UNFINISHED AREAS WITH THE SPECIFIC APPROVAL OF THE ARCHITECT.
5. USE FLEXIBLE CONDUIT FOR THE CONNECTION TO THE RECESSED OR SEMI-RECESSED LIGHTING FIXTURES (6' LENGTH MAXIMUM). USE LIQUID TIGHT METAL CONDUIT FOR ALL CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SUBJECT TO VIBRATION AND IN AREAS SUBJECT TO MOISTURE.
6. USE WATERTIGHT JOINTS WITH BURIED AND CONCRETE ENCASED CONDUIT. ALL BURIED CONDUITS OUTSIDE OF BUILDINGS SHALL HAVE A MINIMUM OF 24" OF COVER. METAL CONDUITS BURIED IN EARTH SHALL BE PAINTED WITH TWO COATS OF HEAVY ASPHALTUM PAINT.
7. CONDUIT SHALL BE SECURELY FASTENED IN PLACE. SUPPORT RUNS OF CONDUIT AS DETAILED IN THE APPROPRIATE TABLE OF THE NATIONAL ELECTRICAL CODE.
8. INSTALL EXPOSED RUNS OF CONDUIT AND CONDUIT ABOVE LAY-IN CEILINGS PARALLEL OR PERPENDICULAR TO THE WALLS, STRUCTURAL MEMBERS OF INTERSECTIONS OF VERTICAL PLANES AND CEILINGS. PROVIDE RIGHT ANGLE TURNS USING FITTINGS OR SYMMETRICAL BENDS. SUPPORT CONDUITS WITHIN 1' OF ALL CHANGES IN DIRECTION.
9. IF A CONDUIT IS SUSPENDED, IT SHALL BE SUPPORTED ON TRAPEZE HANGERS, WHICH USE "ALL-THREAD" RODS FROM THE STRUCTURAL STEEL. THE USE OF CEILING SUPPORT WIRE OR SIMILAR MATERIAL WILL NOT BE ACCEPTED.
10. INSTALL EMPTY CONDUIT FOR FUTURE USE AS INDICATED ON THE DRAWINGS. CONDUIT SHALL BE COMPLETE WITH JETLINE OR PULL ROPE, JUNCTION/OUTLET BOXES, TILE RINGS AND APPROPRIATE COVER PLATES.
11. PROVIDE PITCH POCKETS WHERE CONDUITS PENETRATE THE ROOF. HORIZONTAL PORTIONS OF CONDUIT EXPOSED ON THE ROOF AND FEEDING EQUIPMENT SHALL NOT BE MORE THAN 5'-0" UNLESS THE WRITTEN APPROVAL FROM ARCHITECT OR ENGINEER IS OBTAINED.
12. THREAD LUBRICATION/SEALANT IS REQUIRED ON OUTDOOR AND UNDERGROUND THREADED METAL JOINTS.
13. COORDINATE CONDUIT RUNS WITH OTHER TRADES AND ADJUST ROUTING TO AVOID INTERFERENCE.
14. RACEWAYS SHALL BE PROVIDED WITH EXPANSION FITTINGS WHERE NECESSARY TO COMPENSATE FOR THERMAL EXPANSION AND CONTRACTION.
15. SURFACE RACEWAYS SHALL BE AS INDICATED ON DRAWINGS AND INSTALLED AS A COMPLETE SYSTEM WITH ALL REQUIRED FITTINGS AND APPURTENANCES, RECEPTACLES/OUTLETS AND BONDING AS INDICATED ON PLAN. INSTALL RACEWAYS PARALLEL AND PERPENDICULAR TO BUILDING ELEMENTS.

BOXES

1. INSTALL PULL AND JUNCTION BOXES WHERE INDICATED ON DRAWINGS, AND WHERE REQUIRED FOR CHANGES IN DIRECTION, AT JUNCTION POINTS AND TO FACILITATE WIRE PULLING. FURNISH BOX SIZES IN ACCORDANCE WITH NEC UNLESS LARGER BOXES ARE INDICATED ON THE DRAWINGS.
   - INTERIOR CONCEALED – USE SHEET STEEL BOXES, ZINC COATED OR CADMIUM PLATED
   - IN FLOOR LOCATIONS – PROVIDE CAST IRON, CONCRETE-TITE FLOOR BOXES WITH ADJUSTABLE COVERS SET FLUSH AND LEVEL WITH THE FINISHED FLOOR, WITH OUTLETS AS INDICATED ON THE DRAWINGS. PROVIDE BOXES WITH LEVELING SCREWS. FLUSH TYPE COVERS AND OPENINGS TO SERVE OUTLETS USED. FURNISH FLUSH CAPS FOR CLOSING CAT BOX WHEN NOT IN USE.
   - ALL OTHER LOCATIONS EXCEPT BELOW GRADE USE CAST BOXES, ZINC-CADMIUM FINISH MALLEABLE IRON. FURNISH WEATHERPROOF BOXES WHEN INSTALLED OUTSIDE OR IN DAMP/WET LOCATIONS.
2. PROVIDE REMOVABLE COVERS OF CODE GAUGE, HOT ROLLED SHEET STEEL, HOT DIPPED GALVANIZED FOR ALL BOXES, UNLESS OTHERWISE NOTED.
3. EXTERIOR BELOW GRADE – COMPOSITE WATERPROOF ASSEMBLIES SUITABLE FOR IN-GROUND INSTALLATIONS.
4. WALL BOX SIZES SHALL BE MINIMUM 4" SQUARE X 2-1/2" DEEP WHERE WALL CONSTRUCTION PERMITS. FIXTURE OUTLETS IN CEILING SHALL BE MINIMUM 4" OCTAGONAL X 1-1/2" DEEP (4-11/16 OCTAGONAL X 2-1/2" DEEP WHERE REQUIRED TO ACCOMMODATE LARGER CONDUIT OR LARGER NUMBER OF WIRES). GANG BOXES SHALL BE ONE PIECE MINIMUM 2-1/8" DEEP.
5. FLUSH MOUNT BOXES IN ALL FINISHED WALLS, INSTALL THE PLASTER RINGS IN DRY-WALLED AND PLASTERED WALLS AND RAISED COVERS AS REQUIRED IN WALLS WITH OTHER FINISHES SO THAT THE COVER PLATES FIT TIGHTLY AGAINST BOXES OR RINGS. 3/16" MAXIMUM GAPS ARE ALLOWED FOR
6. NONCOMBUSTIBLE WALLS. SUPPORT ALL BOXES TO MAINTAIN PROPER ALIGNMENT AND RIGIDITY.
7. CLEAN BOXES OF ALL FOREIGN MATTER PRIOR TO THE INSTALLATION OR WIRING OR DEVICES.
8. MOUNTING HEIGHTS ON THE DRAWING ARE TO THE CENTERLINE OF THE BOXES UNLESS OTHERWISE
9. ADJUST LOCATIONS OF OUTLETS IN MASONRY OR TILE CONSTRUCTION TO OCCUR IN THE
10. NEAREST JOINT TO THE HEIGHT SPECIFIED. HEIGHTS SHALL MEET ADA REQUIREMENTS.

CONDUCTORS

1. COLOR CODE CONDUCTORS (EXCEPT CONTROL AND INSTRUMENTATION CONDUCTORS) AS FOLLOWS:

SERVICE TYPE	PHASE A	PHASE B	PHASE C	NEUTRAL
120/240V 1 PHASE, 3 WIRE	RED	BLACK	–	WHITE
120/240V, 3 PHASE, 4 WIRE, DELTA				
THROUGH METERING EQUIPMENT	RED	BLACK	ORANGE (HIGH-LEG)	WHITE
IN SERVICE EQUIPMENT	RED	ORANGE (HIGH-LEG)	BLACK	WHITE
120/208V, 1 PHASE, 3 WIRE	(NOTE 1)	(NOTE 1)	(NOTE 1)	WHITE
120/208V, 3 PHASE 4 WIRE, WYE	RED	BLACK	BLUE	WHITE
277/480V, 3 PHASE 4 WIRE, WYE	BROWN	YELLOW	PURPLE	NATURAL GRAY

NOTE 1 – ALL COLORS SHALL BE CONSISTENT THROUGHOUT EACH SYSTEM. FOUR WIRE WYE SECONDARY SYSTEMS SERVING MULTIPLE OCCUPANCY BUILDINGS REQUIRE THAT THE CUSTOMER INSTALL WIRING TO EACH OCCUPANT THAT STATISFIES THE COLOR CONSISTENCY OF THIS REQUIREMENT.

2. COLOR CODE ALL CONDUCTORS LARGER THAN #10 WHICH DO NOT HAVE CONTINUOUS INSULATION.
3. #12 AND #10 CONDUCTORS SHALL HAVE CONTINUOUS INSULATION COLOR AS LISTED ABOVE IN COLOR CODING SCHEDULE.
4. COLOR BY APPLICATION OF AT LEAST TWO LAPS OF COLORED TAPE ON EACH CONDUCTOR AT ALL POINTS OF ACCESS INCLUDING JUNCTION BOXES.
5. CONDUCTORS SHALL BE SOFT ANNEALED COPPER INSULATED FOR 600 VOLTS UNLESS SPECIFICALLY INDICATED OTHERWISE.
6. DRAWINGS INDICATE SIZES BASED ON COPPER CONDUCTORS.
7. INSULATION TYPE SHALL BE TYPE THW FOR WIRE SIZES #8 AWG AND LARGER AND THWN FOR #10 AWG AND SMALLER. THHN SHALL NOT BE USED IN WET OR DAMP LOCATIONS.
8. FLEXIBLE CORD SHALL BE HEAVY DUTY TYPE 'SO' WITH AN EQUIPMENT GROUND CONDUCTOR IN ADDITION TO THE CURRENT CARRYING CONDUCTORS.
9. PROVIDE #12 CONDUCTORS, UNLESS OTHERWISE INDICATED. CONTROL CONDUCTORS SHALL BE #14 MINIMUM FOR NEC CLASS 1 AND #16 FOR NEC CLASS 11.
10. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID. PROVIDE TYPE THHN/THWN INSULATION OR AS NOTED ON PLANS.
11. CONNECT #10 AND SMALLER WIRES WITH CONSTANT PRESSURE EXPANDABLE SPRING TYPE CONNECTORS. CONNECT #8 AND LARGER WIRES WITH COMPRESSION CONNECTORS OR SPLICES.
12. INSTALL WIRING IN CONDUIT. PULL CONDUCTORS USING RECOGNIZED METHODS AND EQUIPMENT LEAVING AT LEAST 6" WIRE AT ALL JUNCTION BOXES FOR CONNECTIONS. CLEANOUT EACH CONDUIT SYSTEM TO ELIMINATE OBSTRUCTIONS OVER FULL LENGTH BEFORE PULLING WIRE.
13. FORM AND TIE ALL WIRING IN PANELBOARDS. THERE SHALL BE NO WIRENUT JOINTS OR SPLICES MADE INSIDE SWITCHBOARDS/PANELBOARDS.
14. BRANCH CIRCUIT WIRE SIZES (AND CONDUITS) SHALL BE INCREASED FROM THOSE INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP. BRANCH CIRCUITS SHALL BE INSTALLED WITH WIRES OF SUFFICIENT SIZE SO THAT VOLTAGE DROP BETWEEN THE PANEL AND THE LOADS DOES NOT EXCEED LIMIT OF 2%.
15. WIRE SIZES SHALL BE BASED ON THE 60'C. AMPACITIES FOR WIRE SIZES #14-1 AWG AND 75'C AMPACITIES FOR WIRE SIZES #1/0 AWG AND LARGER.
16. ALL BOLTED CONNECTIONS SHALL BE TORQUED IN ACCORDANCE WITH MANUFACTURER'S STANDARDS. RE-TORQUE CONNECTIONS ONE MONTH OR MORE AFTER INITIAL TORQUE.

DEVICES

1. WIRING DEVICE COLOR SHALL BE IVORY OR AS SELECTED BY ARCHITECT, UNLESS OTHERWISE INDICATED.
2. PROVIDE TOTALLY ENCLOSED, SPECIFICATION GRADE, 20 AMPERE, 120/277 VOLT QUIET A/C GENERAL USE SNAP SWITCHES MANUFACTURED BY HUBBELL, P&S OR LEVITON.
3. PROVIDE SPECIFICATION GRADE NEMA CONFIGURATION 5-20R DUPLEX 125-VOLT GROUNDING TYPE RECEPTACLES UNLESS OTHERWISE NOTED ON THE DRAWINGS. MANUFACTURED BY HUBBELL, P&S OR LEVITON.
4. RECEPTACLES REQUIRING AMPERAGES, VOLTAGES OR CONFIGURATIONS DIFFERENT FROM THE DUPLEX CONVENIENCE RECEPTACLES ABOVE SHALL BE AS INDICATED ON THE DRAWINGS AND OF A QUALITY, MATERIAL AND CONSTRUCTION EQUAL TO THAT SPECIFIED FOR DUPLEX CONVENIENCE

RECEPTACLES

1. PROVIDE COVER OR DEVICE PLATES FOR OUTLET BOXES AS FOLLOWS UNLESS OTHERWISE NOTED:
2. FINISHED AREAS: THERMOPLASTIC- COLOR TO MATCH DEVICE
3. UNFINISHED AREAS: ZINC COATED SHEET METAL, ALUMINUM, OR CAST METAL AS APPROPRIATE FOR THE TYPE OF BOX.
4. EXTERIOR AREAS: COPPER FREE ALUMINUM WITH GRAY, POWDER EPOXY FINISH, GASKETED, WEATHERPROOF.
5. ALL OUTLET AND/OR JUNCTION BOXES SHALL BE COMPLETE WITH A COVER PLATE BY THIS CONTRACTOR. WHERE DEVICES ARE GANGED, THEY SHALL BE INSTALLED UNDER A COMMON COVERPLATE.
6. LOCATE SWITCHES AT 42" ABOVE THE FINISHED FLOOR ELEVATION ON CENTER OR NEAREST BLOCK COURSE UNLESS OTHERWISE NOTED. THE LONG DIMENSION OF THE SWITCHES SHALL BE VERTICAL.
7. LOCATE RECEPTACLES APPROXIMATELY 1'-6" ABOVE THE FINISHED FLOOR ELEVATION OR NEAREST BLOCK COURSE (WITHIN ADA REQUIREMENTS), UNLESS OTHERWISE NOTED. THE LONG DIMENSION OF THE RECEPTACLE SHALL BE VERTICAL. ALL DEVICES SHALL BE FLUSH MOUNTED U.N.O.
8. RECEPTACLES WITHIN 6' OF SINKS SHALL BE GFCI TYPE. ALL DEVICES INSTALLED OUTDOORS SHALL BE WEATHERPROOF AND GFCI PROTECTED.
9. RECEPTACLE IN BREAK AREAS, KITCHEN AREAS OR RESTROOMS TO BE GFCI PROTECTED.
10. COMMERCIAL GRADE RECEPTACLES SHALL BE PROVIDED WITH 125V, 20 AMP RATING.
11. ALL POWER OUTLETS SHALL BE PERMANENTLY LABELED INDICATING CIRCUIT NUMBER SERVING RECEPTACLE, FLOOR BOXES, POKE THROUGHS, TRACK, ETC.

LIGHTING:

1. LOCATE LIGHT SWITCHES 42" ABOVE THE FINISHED FLOOR ELEVATION ON CENTER OR NEAREST BLOCK COURSE UNLESS OTHERWISE NOTED. THE LONG DIMENSION OF THE SWITCHES SHALL BE VERTICAL.
2. PROVIDE DUAL TECHNOLOGY SENSORS FOR ALL LIGHTING CONTROLS.

SAFETY SWITCHES

1. PROVIDE DISCONNECT SWITCHES FOR ALL EQUIPMENT, WHERE REQUIRED BY CODE. MANUFACTURER SHALL BE SQUARE D, SIEMENS, G.E., OR CUTLER-HAMMER. ALL SAFETY SWITCHES SHALL BE BY ONE MANUFACTURER.
2. SAFETY SWITCHES SHALL BE THE ENCLOSED HEAVY-DUTY TYPE (TYPE HD) WITH QUICK-MAKE, QUICK-BREAK MECHANISM AND EXTERNAL PAD LOCKABLE OPERATING HANDLE.
3. SAFETY SWITCHES SHALL BE RATED FOR 240 OR 600 VOLTS AS APPLICABLE. THEY SHALL BE HORSEPOWER RATED WHEN USED IN MOTOR CIRCUITS.
4. SAFETY SWITCHES SHALL BE FUSIBLE OR NON-FUSIBLE 2, 3 OR 4 POLE AS INDICATED ON THE DRAWINGS. SAFETY SWITCHES SHALL BE SINGLE
5. MOUNT THE SAFETY SWITCHES SECURELY BETWEEN 3' X 6' LEVELS ABOVE THE FLOOR UNLESS OTHERWISE NOTED IN THE DRAWINGS. SWITCHES ON BLOCK WALLS SHALL BE MOUNTED ON A 3/4" PLYWOOD BACKBOARD, WHERE LOCATED INDOORS.
6. THE CONTRACTOR SHALL FURNISH A COMPLETE SET OF FUSES FOR ALL FUSIBLE SWITCHES, PLUS FUSIBLE EQUIPMENT FURNISHED BY OTHER TRADES. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, THE FUSES SHALL BE OF THE FOLLOWING TYPE:
   6.1. FUSES 601 TO 6000 AMPS SHALL BE UL CLASS RK5. TRADE TYPE SHALL BE KRP-C AS MANUFACTURED BY THE BUSSMANN COMPANY.
   6.2. FUSES 1/10 TO 600 AMPS SHALL BE UL CLASS RK1. TRADE TYPE SHALL BE LOW PEAK LPS-RK (600V) AND LPN-RK (250C) AS MANUFACTURED BY BUSSMANN COMPANY.
   6.3. ALL OTHER FUSES SHALL BE DUAL ELEMENT CURRENT LIMITING TYPE WITH 200,000 AMPERES SYMMETRICAL INTERRUPTING CAPACITY.
7. THIS CONTRACTOR SHALL REPLACE ALL FUSES BLOWN DURING CONSTRUCTION.
8. SERVICE DISCONNECTS SHALL BE LABELED PER ARTICLE 110.22(A). PROVIDE WEATHERPROOF, PERMANENT LABELING AS REQUIRED BY CODE.

MOTOR STARTERS

1. STARTERS SHALL BE SQUARE D, G.E., CUTLER-HAMMER/WESTINGHOUSE, OR SIEMENS.
2. COORDINATE ALL EQUIPMENT INDICATED ON THE ELECTRICAL DRAWINGS WITH MECHANICAL EQUIPMENT SCHEDULES AND SPECIFICATIONS.
3. STARTERS AND DISCONNECTS SUPPLIED AS AN INTEGRAL PART OF EQUIPMENT SHALL BE FURNISHED UNDER THE DIVISION PROVIDING THE EQUIPMENT. WIRING AND EQUIPMENT CONNECTIONS SHALL BE BY THIS CONTRACTOR.

TRANSFORMERS

1. THE KVA AND VOLTAGE RATINGS SHALL BE AS INDICATED ON THE DRAWINGS.
2. TRANSFORMERS SHALL BE DESIGNED FOR CONTINUOUS OPERATION AT RATED KVA, FOR 24 HOURS A DAY, 365 DAYS A YEAR OPERATION, WITH NORMAL LIFE EXPECTANCY AS DEFINED IN ANSI C57.96.
3. TRANSFORMERS SHALL MEET THE REQUIREMENTS OF THE MOST CURRENT VERSION OF FEDERAL LAW 10 CFR PART 431 "ENERGY EFFICIENCY PROGRAM FOR CERTAIN COMMERCIAL AND INDUSTRIAL EQUIPMENT".
4. TRANSFORMERS EFFICIENCY SHALL BE MEASURED ACCORDING TO FEDERAL LAW 10 CFR PART 431.
5. TRANSFORMER SOUND LEVELS SHALL NOT EXCEED ANSI AND NEMA LEVELS FOR SELFCOOLED TRANSFORMERS.
6. THE ENCLOSURE SHALL BE MADE OF HEAVY-GAUGE STEEL.
7. ALL TRANSFORMERS SHALL BE EQUIPPED WITH A WIRING COMPARTMENT SUITABLE FOR CONDUIT ENTRY AND LARGE ENOUGH TO ALLOW CONVENIENT WIRING.
8. THE MAXIMUM TEMPERATURE OF THE ENCLOSURE SHALL NOT EXCEED 90 DEGREES C PER UL REQUIREMENT.
9. THE CORE OF THE TRANSFORMER SHALL BE GROUNDED TO THE ENCLOSURE.

DISTRIBUTION PANELS

1. DISTRIBUTION PANELS SHALL BE DEAD FRONT TYPE WITH CIRCUIT BREAKERS, FUSES AND HEAVY-DUTY SWITCHES OF SIZE AND NUMBER INDICATED ON THE PANELS. PANELS SHALL BE MANUFACTURED AS A COMPLETE UNIT AND NOT AN ASSEMBLY OF PARTS SECURED FROM A SUPPLY ALL BUS BARS SHALL BE RECTANGULAR SOLID COPPER.
2. ALL LUGS SHALL BE UL APPROVED CU/AL TYPE. VERTICAL BUSSING SHALL BE EXTENDED THE FULL LENGTH OF THE PANEL.
3. ALL PANELS SHALL BE CAPABLE OF ACCEPTING SWITCH SIZES UP TO AND INCLUDING 600 AMPS.
4. DISTRIBUTION PANELS SHALL BE G.E., SQUARE "D", SIEMENS, OR WESTINGHOUSE.
5. THE INDIVIDUAL SWITCH AND FUSE UNITS SHALL BE OF THE QUICK-MAKE, QUICK-BREAK TYPE.
6. FUSED UNITS SHALL HAVE HINGED FUSE COMPARTMENTS WITH INTERLOCKED FUSE DOORS WHEN THE EXTERNALLY OPERATED HANDLE IS IN THE OFF POSITION. THESE UNITS SHALL BE REMOVABLE AND ACCESSIBLE FROM THE FRONT SO THAT THE CABINET MAY BE WALL-MOUNTED.
7. INSTALL PANELS SUCH THAT HANDLE FOR THE TOP SWITCH DOES NOT EXCEED 6'-6" ABOVE FINISHED FLOOR.
8. SURFACE-MOUNTED PANELS SHALL BE MOUNTED ON A 3/4" PLYWOOD BACKBOARD. FLOOR-MOUNTED PANELS SHALL BE MOUNTED ON A 4" HIGH CONCRETE PAD.
9. PROVIDE PHENOLIC LABELS FOR EACH PANEL AND FOR EACH SWITCH.
10. ALL DISTRIBUTION PANELS SHALL BE PERMANENTLY LABELED TO INDICATE WHERE THE POWER SERVING THE DISTRIBUTION PANEL ORIGINATES PER THE REQUIREMENT OF NEC 408.4(B).

PANELBOARDS

1. PANELBOARDS SHALL BE ENCLOSED DEAD FRONT SAFETY TYPE WITH FEATURES AND RATINGS AS SCHEDULED ON DRAWINGS. ALL BUS BARS SHALL BE RECTANGULAR SOLID COPPER. SPACE, WHERE SHOWN IN PANEL SCHEDULES, DESIGNATES SPACE FOR FUTURE PROTECTIVE DEVICES AND SHALL INCLUDE BUS AND SUPPORT. PANELS KNOWN AS "LOAD CENTERS" ARE UNACCEPTABLE.
2. MANUFACTURER SHALL BE SQUARE D, SIEMENS, GE OR CUTLER-HAMMER.
3. MOLDED CASE CIRCUIT BREAKERS SHALL BE AS SCHEDULED ON THE DRAWINGS AND SPECIFIED IN THIS DIVISION. ALL BREAKERS SHALL BE BOLT ON TYPE. ALL BOLTED CONNECTIONS SHALL BE TORQUED IN ACCORDANCE WITH MANUFACTURERS STANDARDS. RE-TORQUE ALL CONNECTIONS ONE MONTH AFTER INITIAL TORQUE.
4. INSTALL CABINETS SO THAT CENTER OF THE TOP BREAKER DOES NOT EXCEED 6'-6" ABOVE THE FINISHED FLOOR. PROVIDE (2) SPARE 1" CONDUITS INTO ACCESSIBLE CEILING WHERE PANELS ARE FLUSH MOUNTED.
5. ELECTRICAL CONTRACTOR SHALL ARRANGE CIRCUITS AS NEAR AS POSSIBLE TO CIRCUIT NUMBERS ON THE DRAWINGS. AT COMPLETION OF JOB, ELECTRICAL CONTRACTOR SHALL TAKE CURRENT READING CHECKS OF RESPECTIVE PHASES. A MINIMUM OF CIRCUIT CONNECTIONS SHALL BE REARRANGED TO BALANCE, AS CLOSELY AS POSSIBLE, THE LOAD IN THE PANEL.
6. ENTRIES ON DIRECTORY CARDS SHALL BE TYPED, COMPLETE AND ACCURATE. FINAL ROOM NAMES/NUMBERS MAY BE DIFFERENT FROM THOSE USED ON PLANS AND SHOULD BE USED TO C

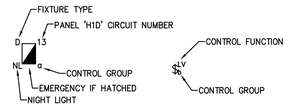
KEYED NOTES (NOT ALL NOTES APPLY TO THIS SHEET)

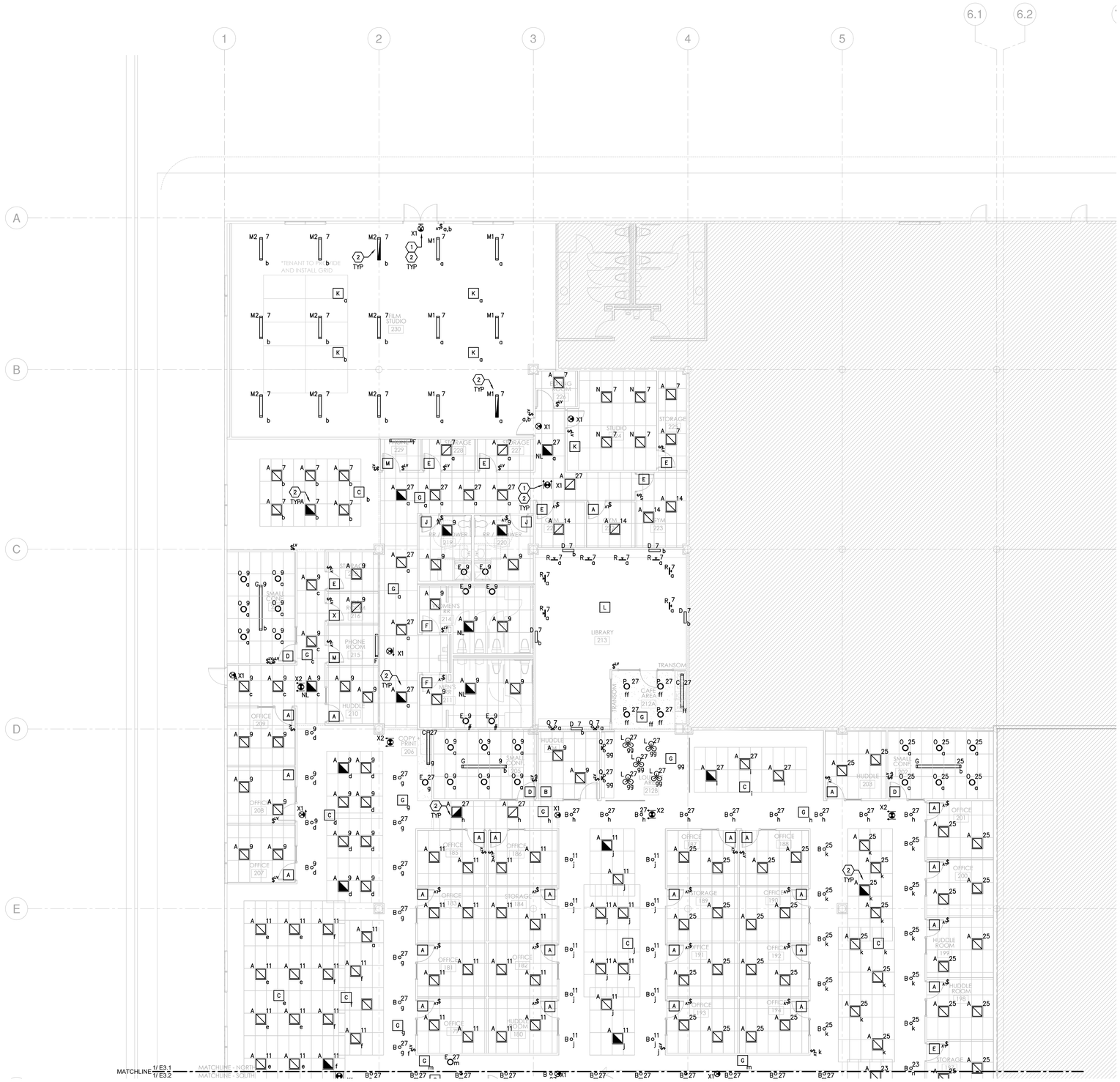
1. ALL EXIT SIGNS ARE TO REMAIN UNSWITCHED. CIRCUIT TO NEAREST LIGHTING CIRCUIT.(TYPICAL)
2. PROVIDE EXITS AND EMERGENCY LIGHTS WITH 90-MINUTE BATTERY PACK. PROVIDE WITH SELF-DIAGNOSTICS AND TEST BUTTON MOUNTED IN ACCESSIBLE LOCATION.
3. NIGHT LIGHTS TO REMAIN UNSWITCHED. (TYPICAL)

BOX NOTES (NOT ALL NOTES APPLY TO THIS SHEET)

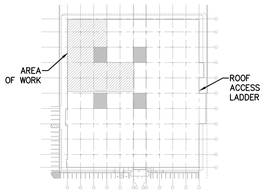
BOX NOTES SPECIFY LIGHTING CONTROL SCHEMES, REFER TO SHEET E5.0 FOR THE LIGHTING CONTROL PERFORMANCE SPECIFICATION. THE SCHEDULE REFLECTS MINIMUM REQUIREMENTS BY AREA TYPE, BUT DOES NOT IDENTIFY SPECIFIC PRODUCTS TO MEET REQUIREMENTS. SUBMITTAL FOR LIGHTING PACKAGE ARE TO INCLUDE LIGHT FIXTURES AS WELL AS CONTROLS COMPONENTS AND SEQUENCES TO COMPLY WITH SCHEDULE AND IECC REQUIREMENTS.

LIGHT FIXTURE DESIGNATION AND CONTROL GROUPS: (TYPICAL)





1 E3.1 NORTH LIGHTING PLAN
SCALE: 1/8"=1'-0"



KEY PLAN

PROJECT: 21-085

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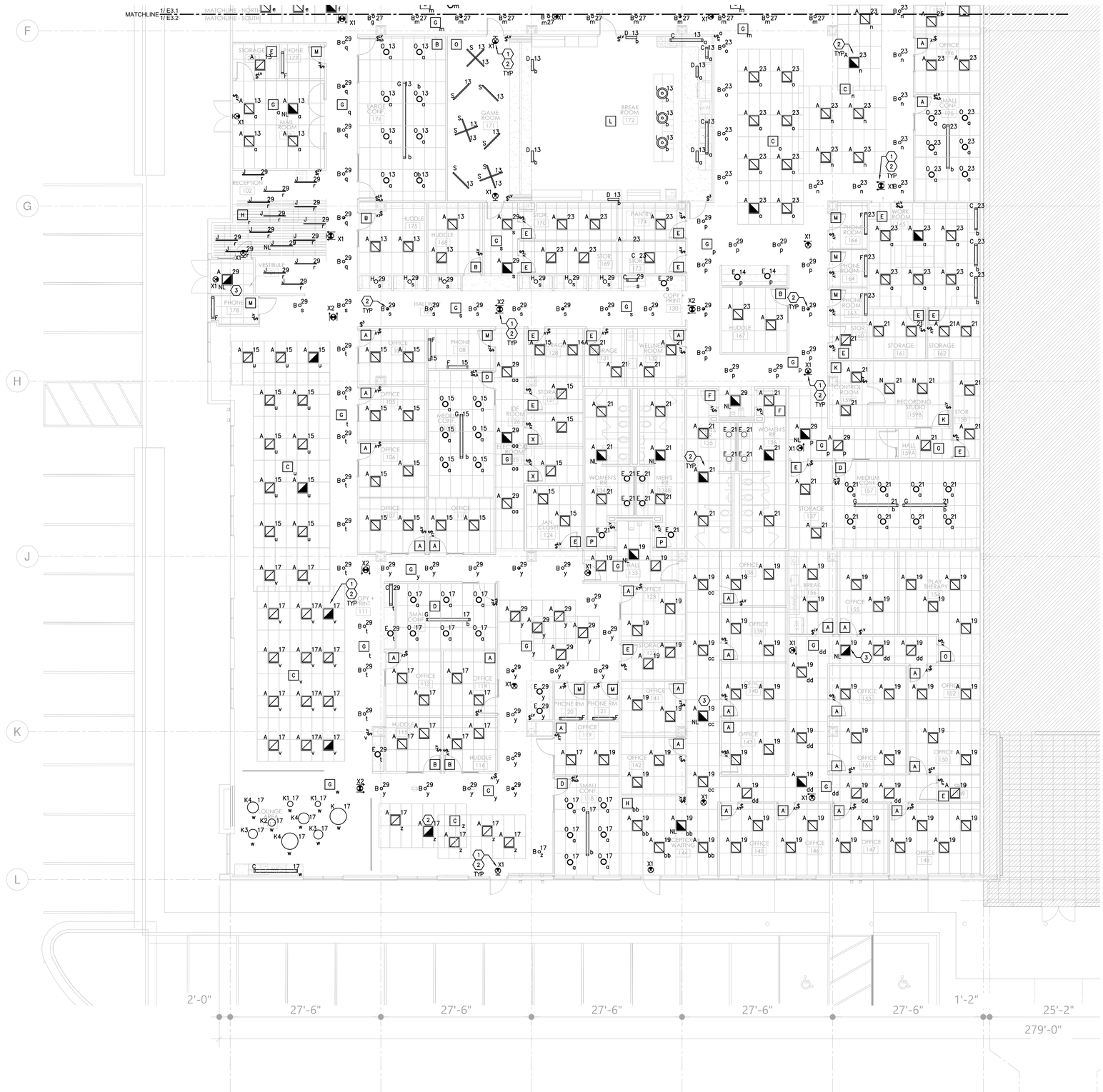
DATE:	6.20.22
SCALE:	NOTED
DRAWN BY:	AMPED

DATE	REVISION

NORTH LIGHTING PLAN

E3.1

PROJECT NO.
21-043



1 E3.2 SOUTH LIGHTING PLAN
SCALE: 1/8"=1'-0"

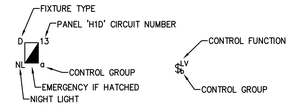
KEYED NOTES (NOT ALL NOTES APPLY TO THIS SHEET)

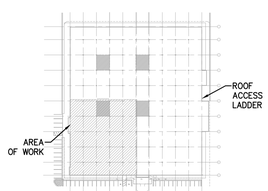
1. ALL EXIT SIGNS ARE TO REMAIN UNSWITCHED. CIRCUIT TO NEAREST LIGHTING CIRCUIT.(TYPICAL)
2. PROVIDE EXITS AND EMERGENCY LIGHTS WITH 90-MINUTE BATTERY PACK. PROVIDE WITH SELF-DIAGNOSTICS AND TEST BUTTON MOUNTED IN ACCESSIBLE LOCATION.
3. NIGHT LIGHTS TO REMAIN UNSWITCHED. (TYPICAL)

BOX NOTES (NOT ALL NOTES APPLY TO THIS SHEET)

BOX NOTES SPECIFY LIGHTING CONTROL SCHEMES, REFER TO SHEET E5.0 FOR THE LIGHTING CONTROL PERFORMANCE SPECIFICATION. THE SCHEDULE REFLECTS MINIMUM REQUIREMENTS BY AREA TYPE, BUT DOES NOT IDENTIFY SPECIFIC PRODUCTS TO MEET REQUIREMENTS. SUBMITTAL FOR LIGHTING PACKAGE ARE TO INCLUDE LIGHT FIXTURES AS WELL AS CONTROLS COMPONENTS AND SEQUENCES TO COMPLY WITH SCHEDULE AND IECC REQUIREMENTS.

LIGHT FIXTURE DESIGNATION AND CONTROL GROUPS: (TYPICAL)





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SOUTH LIGHTING PLAN
E3.2

PROJECT NO.
21-043

ELECTRICAL DEVICE SPECIFICATIONS

TVB-1 FLUSH MOUNTED TV BACKBOX CHIEF #PAC525 OR APPROVED EQUAL. INSTALL WITH RECEPTACLE AT TOP-LEFT AND DATA AT LOWER-RIGHT LOCATION. PROVIDE 1-1/4" CONDUIT WITH PULLSTRING TO 6" ABOVE CEILING TO ACCOMMODATE LOW VOLTAGE WIRING BY OTHERS.

FB-1 PROVIDE 10-GANG ON-GRADE FLOOR BOX, HUBBELL #CFB10GS5CR OR APPROVED EQUAL WITH (2) DUPLEX RECEPTACLES, (2) DATA DROPS, DEVICE MOUNTING PLATES, AND ALL REQUIRED ACCESSORIES. CONFIRM COVER FINISH WITH ARCHITECT. CONFIRM WITH CLIENT, FINAL HDMI APPURTENANCES FIT WITHIN FLOOR BOX PRIOR TO ORDERING.

FB-2 PROVIDE 6-GANG ON-GRADE FLOOR BOX, HUBBELL #CFB6G30RCROR OR APPROVED EQUAL WITH (2) DUPLEX RECEPTACLES, (4) DATA DROPS, DEVICE MOUNTING PLATES, AND ALL REQUIRED ACCESSORIES. CONFIRM COVER FINISH WITH ARCHITECT.

ELECTRICAL DEVICE SPECIFICATIONS

120V RECEPTACLES
ALL RECEPTACLES SHALL BE 20 AMP RATED, DECORA STYLE. HUBBELL #DR20 OR APPROVED EQUAL BY COOPER, LEVITON OR PASS AND SEYMOR. GFCI RECEPTACLES SHALL BE HUBBELL 20A AUTOGUARD OR APPROVED EQUAL. COLOR BY ARCHITECT.

AUTOMATIC RECEPTACLE CONTROL (IECC REQUIREMENT): AUTOMATICALLY DE-ENERGIZED 50% OF RECEPTACLES IN OPEN OFFICE FURNITURE SYSTEMS. CONTROLLED VIA LIGHTING CONTROLS/SENSORS. COORDINATE MULTI-CIRCUIT WIRING THOROUGHLY WITH FURNITURE VENDOR.

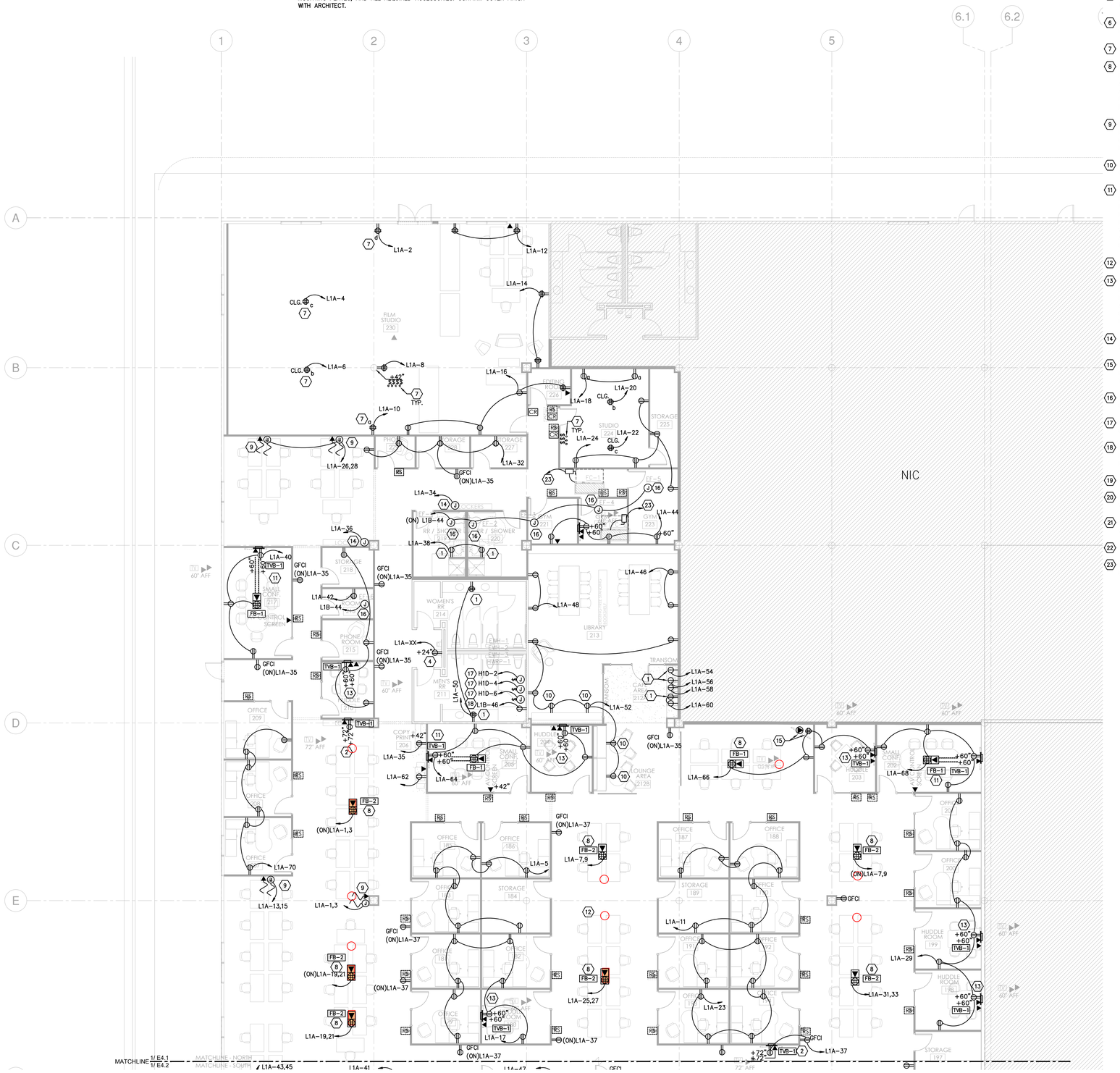
ELECTRICAL DEVICE SPECIFICATIONS

▶ DATA SYMBOL REPRESENTS A DATA BOX ROUGH-IN LOW ON WALL WITH 3/4" CONDUIT AND PULLSTRING TO 6" ABOVE CEILING OR 12" FROM STRUCTURE ABOVE IF NO CEILING WILL BE INSTALLED AT THE LOCATION. CONFERENCE ROOMS AND OPEN OFFICE AREAS REQUIRE LARGER CONDUIT AND ALTERNATE CONFIGURATIONS AS NOTED ON PLANS.

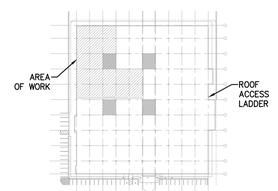
CR RS PROVIDE SINGLE GANG DATA BOX AND 3/4"C. W/PULLSTRING TO 6" ABOVE DROP CEILING SIDE OF WALL. NO "OPEN-TO-DECK" WALL SIDE PENETRATIONS. CONFIRM LOCATIONS AND HEIGHTS WITH AV CONSULTANT AND ARCHITECT PRIOR TO ROUGH-IN.

KEYED NOTES (NOT ALL NOTES APPLY TO THIS SHEET)

1. PROVIDE G.F.C.I. RECEPTACLE(S) AT 6" ABOVE COUNTERTOP. COORDINATE EXACT HEIGHT WITH FINAL MILLWORK PROCUREMENT PRIOR TO ROUGH-IN.
2. IN-WALL TV BOX
   PROVIDE TVB-1 AT UPPER HEIGHT TO ACCOMMODATE DUPLEX RECEPTACLE AND DATA. SEE ELECTRICAL DEVICE SPECIFICATIONS THIS PAGE. LOCATE DEVICES IN FULL COORDINATION WITH ARCHITECTURAL DRAWINGS.
3. PROVIDE MOTOR RATED SNAP SWITCH FOR POWER TO EWH.
4. PROVIDE GFCI BREAKER FOR ELECTRIC WATER COOLER OR WATER DISPENSER.
5. PROVIDE TWO(2) 2" SLEEVES, CAPPED ON BOTH SIDES AT 6" AFF AND WITHIN 12" OF ADJACENT WALL.
6. PROVIDE TWO(2) SETS 3" C. SLEEVES PENETRATING WALL IN ACCESSIBLE ABOVE CEILING LOCATION.
7. LOWER CASE LETTER ADJACENT TO DEVICES INDICATES SWITCHED RECEPTACLE(S).
8. FLOORBOX @ FURNITURE SYSTEMS:
   ROUTE POWER CONDUIT AND 1-1/2" DATA CONDUIT FROM FLOORBOX FB-2 TO ABOVE CEILING LOCATION. REFERENCE ARCHITECTURAL PLANS FOR DIMENSIONS AND LOCATIONS. CONTRACTOR TO X-RAY SLAB FOR IN-SLAB OBSTRUCTIONS AND COORDINATE DISCREPANCIES WITH ARCHITECT PRIOR TO CONCRETE CUTTING. PROVIDE AUTOMATIC RECEPTACLE CONTROL.
9. PROVIDE JUNCTION BOX AND 1-1/2" DATA ROUGH-IN TO SERVE SYSTEMS FURNITURE. COORDINATE EXACT REQUIREMENTS AND FURNITURE WIRING CONFIGURATION WITH FURNITURE VENDOR PRIOR TO PROCUREMENT OR INSTALLATION. PROVIDE AUTOMATIC RECEPTACLE CONTROL.
10. PROVIDE U.S.B. RECEPTACLE WITHIN BENCH. COORDINATE EXACT HEIGHT WITH CASEWORK PROVIDER AND ARCHITECT..
11. TV BOX & FLOORBOX:
    PROVIDE FLUSH MOUNTED TV BOX TVB-1 AT UPPER HEIGHT TO ACCOMMODATE DUPLEX RECEPTACLE AND DATA. PROVIDE ON-GRADE FLOORBOX FB-1, SEE ELECTRICAL DEVICE SPECIFICATIONS THIS PAGE. PROVIDE 1-1/4" CONDUIT FROM FB-1 TO TVB-1 TO ABOVE CEILING WITH PULL STRING TO ACCOMMODATE LOW VOLTAGE WIRING BY OTHERS. REFERENCE ARCHITECTURAL PLANS FOR DIMENSIONS AND LOCATIONS. CONTRACTOR TO X-RAY SLAB FOR IN-SLAB OBSTRUCTIONS AND COORDINATE DISCREPANCIES WITH ARCHITECT PRIOR TO CONCRETE CUTTING.
12. NO DATA CONDUITS PENETRATING THIS SIDE OF WALL TO OPEN DECK.
13. IN-WALL TV BOX W/LOWER DATA:
    PROVIDE TVB-1 AT UPPER HEIGHT TO ACCOMMODATE DUPLEX RECEPTACLE AND DATA. PROVIDE 1-1/4" CONDUIT FROM LOWER DATA LOCATION TO TVB-1 TO ABOVE CEILING WITH PULL STRING TO ACCOMMODATE LOW VOLTAGE WIRING BY OTHERS. SEE ELECTRICAL DEVICE SPECIFICATIONS THIS PAGE. LOCATE DEVICES IN FULL COORDINATION WITH ARCHITECTURAL DRAWINGS.
14. PROVIDE FLUSH-MOUNTED 4" SQUARE JUNCTION AT 18"AFF BEHIND LOCKERS WITH FLUSH MOUNTED COVER. COORDINATE FINISH WITH ARCHITECT.
15. TV AT CLG.
    PROVIDE POWER AND DATA FOR CEILING MOUNTED TV MOUNT. COORDINATE FINAL TV LOCATION WITH ARCHITECT OR AV CONSULTANT.
16. SINGLE-POINT CONNECTION TO EXHAUST FAN. SEE FAN SCHEDULE FOR CONTROLS. COORDINATE EXACT LOCATION WITH MECHANICAL.
17. PROVIDE MOTOR RATED SNAP SWITCH FOR POWER TO ELECTRIC WATER HEATER. COORDINATE BEST LOCATION WITH PLUMBING.
18. PROVIDE POWER TO RECEPTACLE SERVING WATER RE-CIRCULATION PUMP. MOUNT IN ACCESSIBLE ABOVE CEILING LOCATION. COORDINATE WITH FINAL PLUMBING EQUIPMENT LOCATION.
19. PROVIDE POWER TO SEWAGE INJECTOR LOCATED IN BASE CABINET.
20. COORDINATE EXACT LOCATION OF SECURITY POWER JUNCTION BOX WITH SECURITY VENDOR AND ARCHITECT.
21. PROVIDE POWER TO DISHWASHER. LOCATE SWITCH ABOVE COUNTER IN ALIGNMENT WITH RECEPTACLES. COORDINATE LOCATION WITH ARCHITECT.
22. PROVIDE TAMPER PROOF DEVICES FOR ALL RECEPTACLES WITHIN AREA INDICATED.
23. PROVIDE 480V, 30A, 3P, NEMA1 DISCONNECT FOR POWER TO FAN COIL. INDOOR UNITS ARE POWERED BY OUTDOOR UNITS. SEE ROOF PLAN.



1 E4.1 NORTH POWER PLAN
SCALE: 1/8"=1'-0"



KEY PLAN

PROJECT: 21-085

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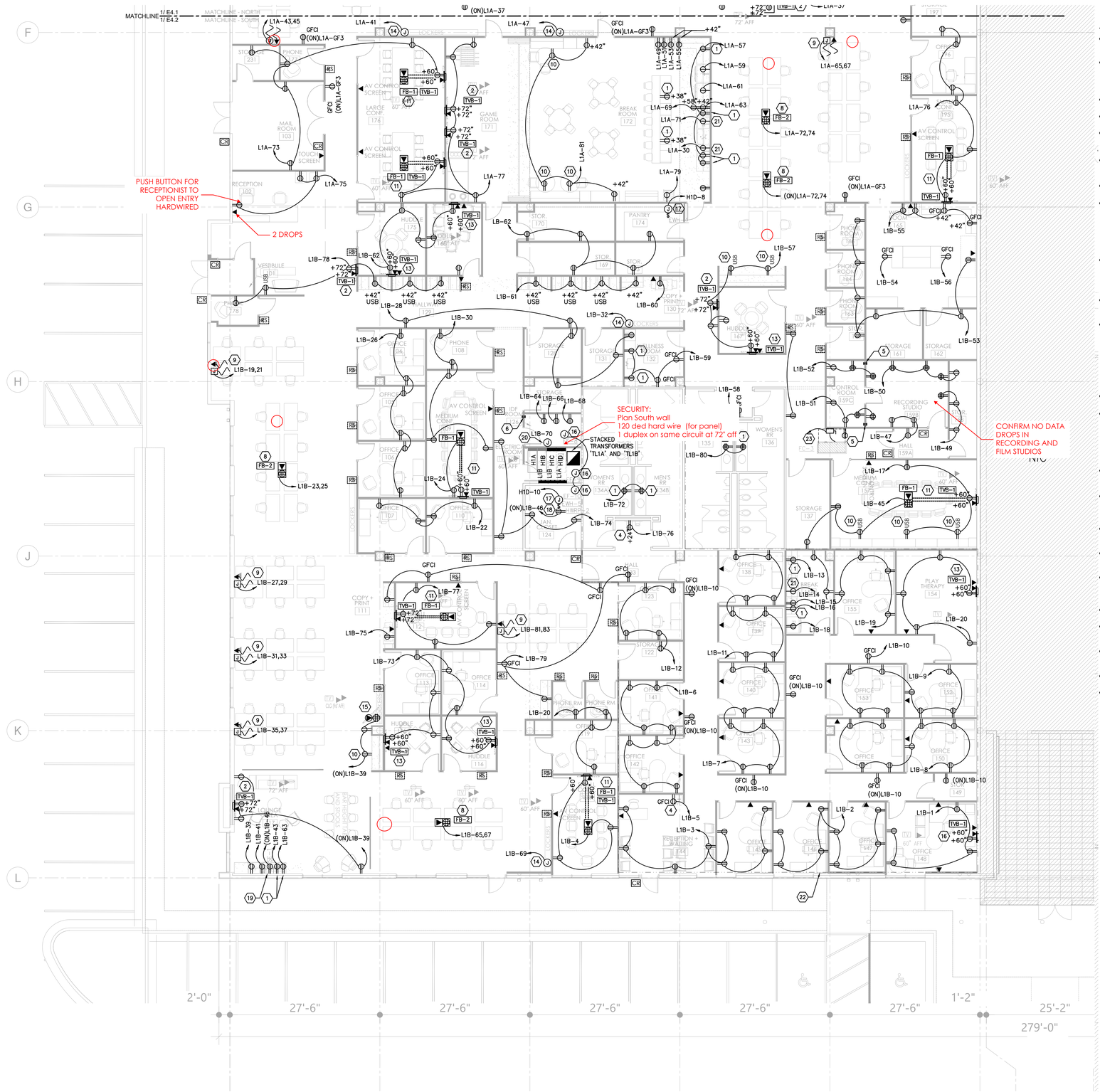
NORTH POWER PLAN
E4.1
PROJECT NO. 21-043



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5. PROVIDE TWO(2) 2" SLEEVES, CAPPED ON BOTH SIDES AT 6" AFF AND WITHIN 12" OF ADJACENT WALL.
6. PROVIDE TWO(2) SETS 3" C. SLEEVES PENETRATING WALL IN ACCESSIBLE ABOVE CEILING LOCATION.
7. LOWER CASE LETTER ADJACENT TO DEVICES INDICATES SWITCHED RECEPTACLE(S).
8. FLOORBOX @ FURNITURE SYSTEMS:
   ROUTE POWER CONDUIT AND 1-1/2" DATA CONDUIT FROM FLOORBOX FB-2 TO ABOVE CEILING LOCATION. REFERENCE ARCHITECTURAL PLANS FOR DIMENSIONS AND LOCATIONS. CONTRACTOR TO X-RAY SLAB FOR IN-SLAB OBSTRUCTIONS AND COORDINATE DISCREPANCIES WITH ARCHITECT PRIOR TO CONCRETE CUTTING. PROVIDE AUTOMATIC RECEPTACLE CONTROL.
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21. PROVIDE POWER TO DISHWASHER. LOCATE SWITCH ABOVE COUNTER IN ALIGNMENT WITH RECEPTACLES. COORDINATE LOCATION WITH ARCHITECT.
22. PROVIDE TAMPER PROOF DEVICES FOR ALL RECEPTACLES WITHIN AREA INDICATED.
23. PROVIDE 480V, 30A, 3P, NEMA1 DISCONNECT FOR POWER TO FAN COIL. INDOOR UNITS ARE POWERED BY OUTDOOR UNITS. SEE ROOF PLAN.

ELECTRICAL DEVICE SPECIFICATIONS

TVB-1 FLUSH MOUNTED TV BACKBOX CHIEF #PAC525 OR APPROVED EQUAL. INSTALL WITH RECEPTACLE AT TOP-LEFT AND DATA AT LOWER-RIGHT LOCATION. PROVIDE 1-1/4" CONDUIT WITH PULLSTRING TO 6" ABOVE CEILING TO ACCOMMODATE LOW VOLTAGE WIRING BY OTHERS.

(2) 3/4" INSTEAD OF 1-1/4" CONFIRM BOX SPEC HAS TWO 3/4"

FB-1 PROVIDE 10-GANG ON-GRADE FLOOR BOX, HUBBELL #CFB10G55CR OR APPROVED EQUAL WITH (2) DUPLEX RECEPTACLES, (2) DATA DROPS, DEVICE MOUNTING PLATES, AND ALL REQUIRED ACCESSORIES. CONFIRM COVER FINISH WITH ARCHITECT. CONFIRM WITH CLIENT, FINAL HDMI APPURTENANCES FIT WITHIN FLOOR BOX PRIOR TO ORDERING.

ELECTRICAL DEVICE SPECIFICATIONS

120V RECEPTACLES
ALL RECEPTACLES SHALL BE 20 AMP RATED, DECORA STYLE. HUBBELL #DR20 OR APPROVED EQUAL BY COOPER, LEVITON OR PASS AND SEYMOR. GFCI RECEPTACLES SHALL BE HUBBELL 20A AUTOGUARD OR APPROVED EQUAL. COLOR BY ARCHITECT.

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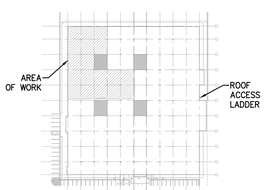
CS PROVIDE SINGLE GANG DATA BOX AND 3/4"C. W/PULLSTRING TO 6"
RS ABOVE DROP CEILING SIDE OF WALL. NO "OPEN-TO-DECK" WALL SIDE

1 / E4.2 **SOUTH POWER PLAN**
SCALE: 1/8"=1'-0"



KEY PLAN

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REGISTERED PROFESSIONAL ENGINEER
2022 06/28
DAVID PICH
91116
LICENSED PROFESSIONAL ENGINEER

DATE: 6.20.22
SCALE: NOTED
DRAWN BY: AMPED

DATE	REVISION

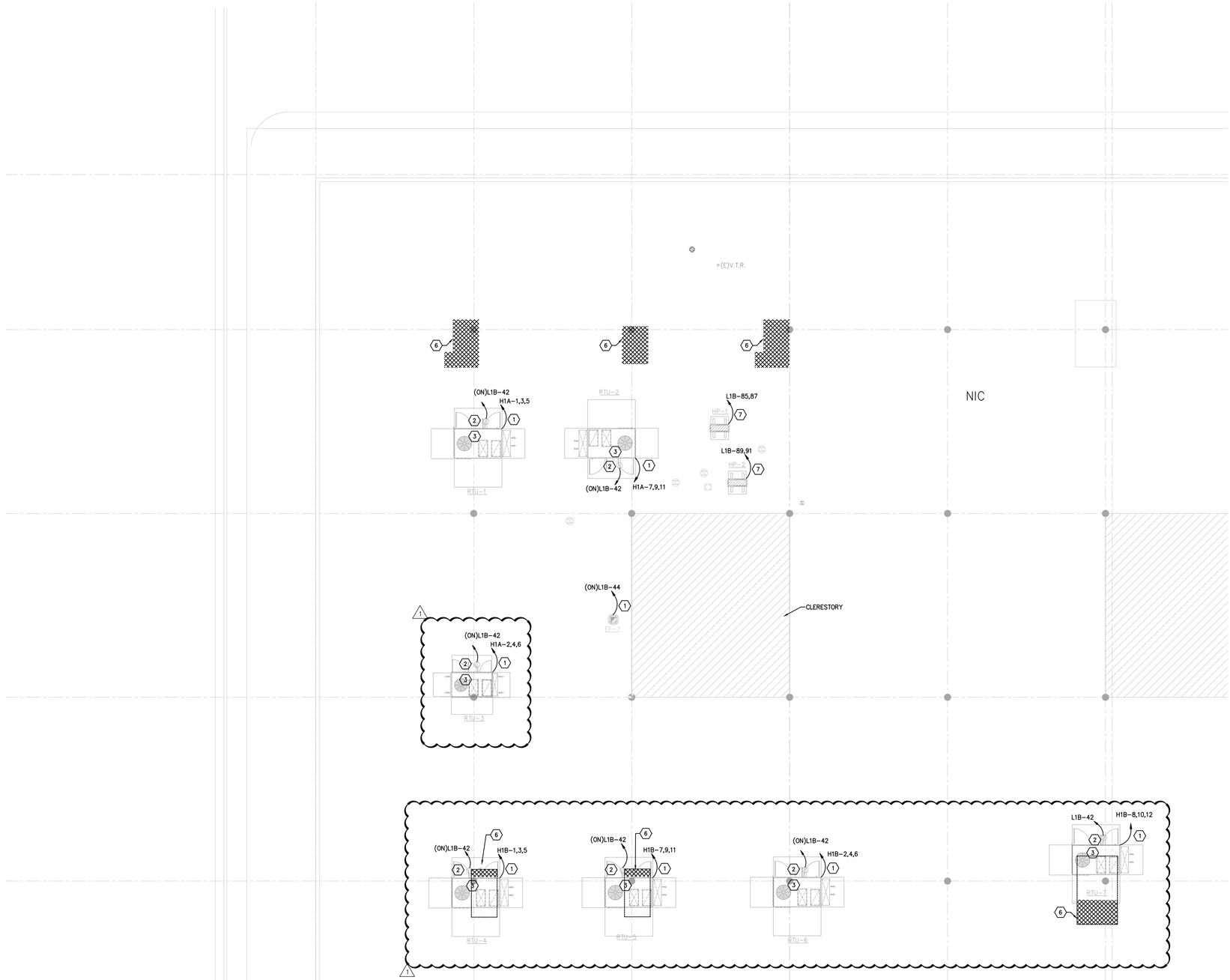
SOUTH POWER PLAN

E4.2

PROJECT NO. 21-043

KEYED NOTES

1. PROVIDE SINGLE POINT CONNECTION TO FACTORY MOUNTED NEMA 3R DISCONNECT SERVING MECHANICAL UNIT. PROVIDE POWER CONNECTION THROUGH ROOF CURB.
2. PROVIDE POWER TO FACTORY INSTALLED GFCI RECEPTACLE W/WEATHERPROOF COVER.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE 120V POWER TO MECHANICAL CONTRACTOR INSTALLED DUCT SMOKE DETECTOR. PROVIDE CONNECTION TO FIRE SYSTEM FOR RTU SHUTDOWN UPON ACTIVATION. USE 120V CIRCUIT L1B-38.
4. RE-CIRCUIT EXISTING EXHAUST FANS TO NEW TENANT PANEL. COORDINATE CONTROLS WITH MECHANICAL CONTRACTOR.
5. PROVIDE SINGLE POINT CONNECTION TO FACTORY DISCONNECT SERVING EXHAUST FAN. PROVIDE POWER CONNECTION THROUGH ROOF CURB.
6. DEMOLISH ALL ELECTRICAL DISCONNECTS, CONDUIT, AND/OR SUPPORTS SERVING INDICATED MECHANICAL EQUIPMENT ON ROOFTOP.
7. PROVIDE SINGLE POINT CONNECTION TO FACTORY MOUNTED NEMA 3R DISCONNECT SERVING MECHANICAL UNIT. PROVIDE POWER CONNECTION THROUGH ROOF CURB. INDOOR UNIT IS SERVED BY OUTDOOR UNIT.

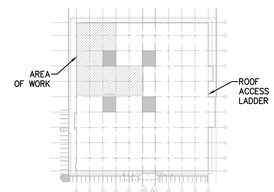


MATCHLINE 1/ E4.3 / 1/ E4.4

1 E4.3 NORTH POWER ROOF PLAN
SCALE: 1/8"=1'-0"

ROOF WARRANTY COORDINATION

THIS BUILDING HAS A WARRANTY IN EFFECT ON THE ROOFING MATERIALS AND WORKMANSHIP. CONTACT BUILDING OWNER TO COORDINATE ALL ROOF WORK WITH ORIGINAL ROOFING CONTRACTOR THAT CARRIES THE WARRANTY.



KEY PLAN

PROJECT: 21-085

BUILDING CONTACT
AQUILA
JIM CLARK
512.684.3800

AMPED MEP ENGINEERING
TBPE FIRM NO. F-19865
Austin - Dallas/Ft. Worth
512.400.4189 | www.AMPEDMEP.com

AUSTIN STONE
6505 AIRPORT BLVD., SUITE 110
AUSTIN, TX 78752

KDS de stijl interiors
KAMPF/DE STIJL, INC.
A Texas Corporation
2006 East Cesar Chavez
Austin, Texas 78702
512-457-1332
kdsaustin.com

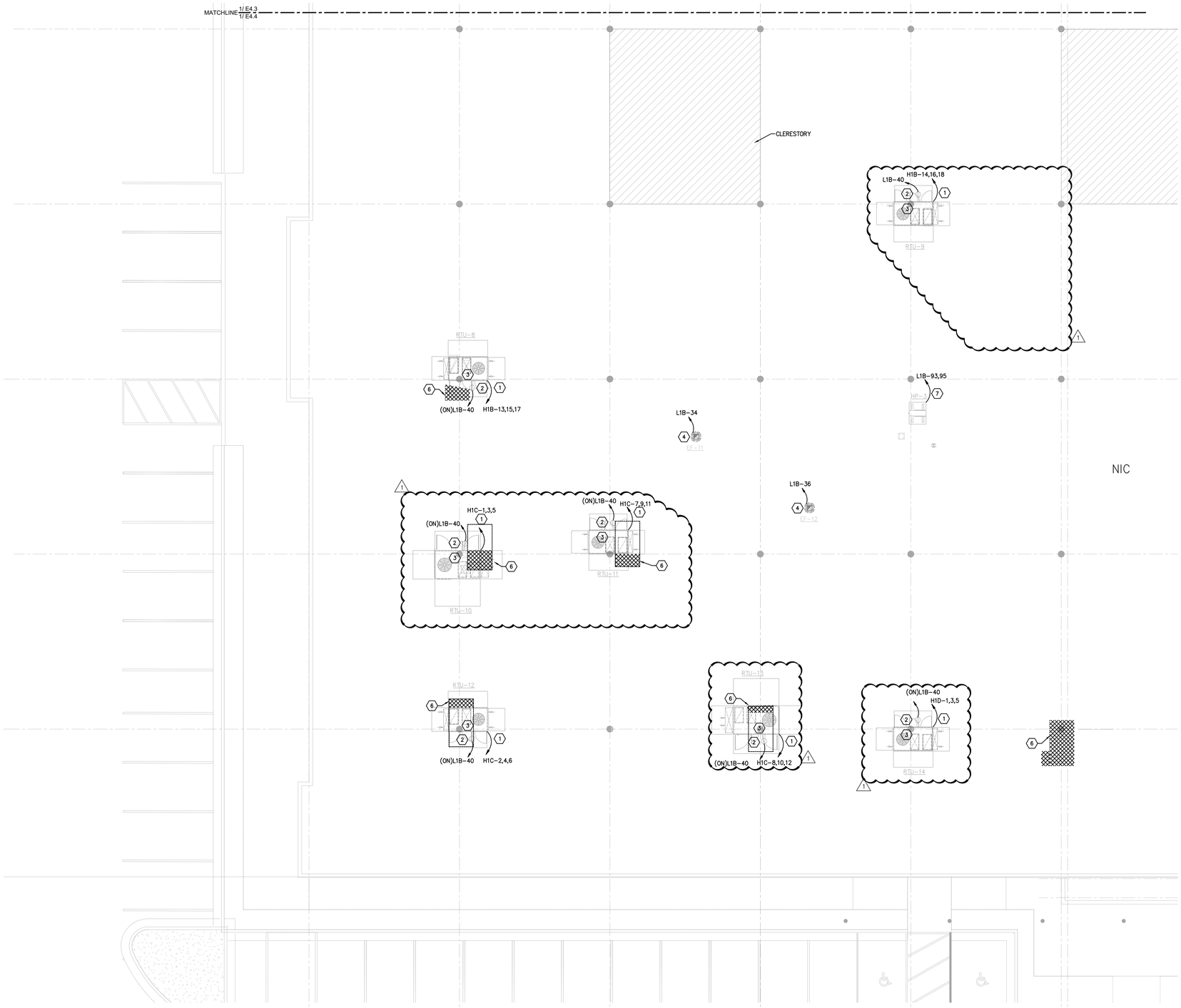
DATE:	6.20.22
SCALE:	NOTED
DRAWN BY:	AMPED

DATE		REVISION
08.15.22	1	Rev1 - HVAC Unit Rev

NORTH POWER ROOF PLAN

E4.3

PROJECT NO. 21-043

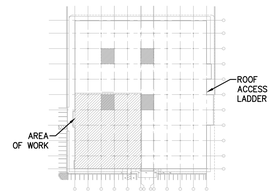


KEYED NOTES

1. PROVIDE SINGLE POINT CONNECTION TO FACTORY MOUNTED NEMA 3R DISCONNECT SERVING MECHANICAL UNIT. PROVIDE POWER CONNECTION THROUGH ROOF CURB.
2. PROVIDE POWER TO FACTORY INSTALLED GFCI RECEPTACLE W/WEATHERPROOF COVER.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE 120V POWER TO MECHANICAL CONTRACTOR INSTALLED DUCT SMOKE DETECTOR. PROVIDE CONNECTION TO FIRE SYSTEM FOR RTU SHUTDOWN UPON ACTIVATION. USE 120V CIRCUIT L1B-38.
4. RE-CIRCUIT EXISTING EXHAUST FANS TO NEW TENANT PANEL. COORDINATE CONTROLS WITH MECHANICAL CONTRACTOR.
5. PROVIDE SINGLE POINT CONNECTION TO FACTORY DISCONNECT SERVING EXHAUST FAN. PROVIDE POWER CONNECTION THROUGH ROOF CURB.
6. DEMOLISH ALL ELECTRICAL DISCONNECTS, CONDUIT, AND/OR SUPPORTS SERVING INDICATED MECHANICAL EQUIPMENT ON ROOFTOP.
7. PROVIDE SINGLE POINT CONNECTION TO FACTORY MOUNTED NEMA 3R DISCONNECT SERVING MECHANICAL UNIT. PROVIDE POWER CONNECTION THROUGH ROOF CURB. INDOOR UNIT IS SERVED BY OUTDOOR UNIT.

ROOF WARRANTY COORDINATION

THIS BUILDING HAS A WARRANTY IN EFFECT ON THE ROOFING MATERIALS AND WORKMANSHIP. CONTACT BUILDING OWNER TO COORDINATE ALL ROOF WORK WITH ORIGINAL ROOFING CONTRACTOR THAT CARRIES THE WARRANTY.



KEY PLAN

1 E4.4 SOUTH POWER ROOF PLAN
SCALE: 1/8"=1'-0"

PROJECT: 21-085
BUILDING CONTACT
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DATE: 6.20.22
SCALE: NOTED
DRAWN BY: AMPED

DATE		REVISION
08.15.22	1	Rev1 - HVAC Unit Rev

SOUTH POWER ROOF PLAN

E4.4

PROJECT NO. 21-043

COMcheck Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 90.1 (2019) Standard
Project Title: AUSTIN STONE LIGHTING
Project Type: Alteration

Construction Site:
6505 AIRPORT BOULEVARD
AUSTIN, Texas 78752

Owner/Agent:

Designer/Contractor:
DAVID PICH
AMPED mep
9600 ESCARPMENT BLVD STE 745
PMB 67
AUSTIN, Texas 78749
512-400-4189
david@AMPEDmep.com

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Office	35290	0.64	22586
		Total Allowed Watts =	22586

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Office (35290 sq.ft.)				
LED: TYPE A: Other:	1	340	31	10540
LED: TYPE B: Other:	1	114	12	1334
LED: TYPE C: Other:	1	47	4	193
LED: TYPE D: Other:	1	11	163	1793
LED: TYPE E: Other:	1	29	11	319
LED: TYPE F: Other:	1	11	56	616
LED: TYPE G: Other:	1	86	7	585
LED: TYPE H: Other:	1	6	6	38
LED: TYPE I: Other:	1	3	6	19
LED: TYPE J: Other:	1	15	38	567
LED: TYPE K1-5: Other:	1	8	18	144
LED: TYPE L: Other:	1	5	6	30
LED: TYPE M1: Other:	1	6	64	384
LED: TYPE M2: Other:	1	9	64	576
LED: TYPE N: Other:	1	4	33	132
LED: TYPE O: Other:	1	50	18	875
LED: TYPE P: Other:	1	4	10	42
LED: TYPE Q: Other:	1	4	6	25
LED: TYPE R: Other:	1	8	6	50
LED: TYPE S: Other:	1	10	11	111

Total Proposed Watts = 18373

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 90.1 (2019) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

DAVID PICH — Name - Title
Signature
22.06.20 — Date

LIGHTING CONTROL PERFORMANCE SPECIFICATION

CONTROL SCHEME	SPACE TYPES	UNSWITCHED	SWITCH CONTROLS	AUTO-ON 100%	AUTO-ON TO 50%	MANUAL ON	DIMMING	SCENE CONTROL	CEILING SENSOR	WALL SENSOR	DAYLIGHT HARVESTING	TIME TO DIM	UNOCCUPIED DIM LEVEL	PLUG LOAD CONTROL	TIME TO OFF(MINUTES)	PROGRAMMING	NOTES
A	ENCLOSED OFFICE		ON/OFF, DIM UP, DIM DOWN		YES		YES		YES					YES OFFICE	10	DEFAULT "AUTO-ON" LIGHT LEVELS: 50%	PROVIDE QTY OF CEILING MOUNTED OCCUPANCY SENSORS REQUIRED FOR FULL COVERAGE.
B	HUDDLE		ON/OFF, DIM UP, DIM DOWN		YES		YES			YES					10		
C	OPEN OFFICE		ON/Off, 50%, 100%		YES			YES	YES					YES	10	PLUG LOAD CONTROL OF ZONE INDICATED. COORDINATE WITH FURNITURE PROVIDER	PROVIDE FIXTURE ZONING ON 600sf MAXIMUM BASIS. PROVIDE QTY OF CEILING SENSORS REQUIRED FOR FULL COVERAGE.
D	CONFERENCE ROOMS		ON/OFF, DIM UP, DIM DOWN (PER ZONE)			YES	YES		YES						10		PROVIDE QTY OF CEILING MOUNTED OCCUPANCY SENSORS REQUIRED FOR FULL COVERAGE.
E	STORAGE/MAIL/WORK/GYM		ON/OFF			YES			YES						5		PROVIDE QTY OF CEILING MOUNTED OCCUPANCY SENSORS REQUIRED FOR FULL COVERAGE.
F	COMMON RESTROOM		ON/OFF	YES					YES			18	30%		20		SAFETY EXEMPTION INTERLOCK EXHAUST FAN WITH LIGHTING CONTROLS
G	CORRIDOR		ON/OFF	YES					YES						20	COORDINATE ZONE CONTROL WITH LOWER CASE LETTER INDICATED ON LIGHTING FLOORPLANS	PROVIDE QTY OF CEILING MOUNTED OCCUPANCY SENSORS REQUIRED FOR FULL COVERAGE.
H	ENTRY/LOBBY,CORRIDOR		ON/OFF, DIM UP, DIM DOWN (PER ZONE) WHERE SWITCHING SHOWN	YES*			YES		YES		YES				20	*AUTO-ON TO LAST SETTING PROVIDE DIMMING FOR SWITCHES INDICATED.	SAFETY EXEMPTION: AUTO ON
J	SHOWER RESTROOM		ON/OFF			YES									N/A		SAFETY EXEMPTION: AUTO ON INTERLOCK EXHAUST FAN WITH LIGHT SWITCH
K	STUDIOS		ON/OFF, DIM UP, DIM DOWN (PER ZONE)			YES	YES								N/A		SAFETY EXEMPTION: PROVIDE DIMMING WITHOUT OCC. CONTROLS
L	LIBRARY/BREAK ROO M		ON/OFF, DIM UP, DIM DOWN (PER ZONE)		YES		YES		YES		YES				10	SET DAYLIGHT HARVESTING CONTROLS TO 70 FC	PROVIDE QTY OF CEILING MOUNTED OCCUPANCY SENSORS REQUIRED FOR FULL COVERAGE.
M	PHONE ROOM		ON/OFF			YES				YES					5		
O	THERAPY/GAMING		ON/OFF, DIM UP, DIM DOWN		YES		YES		YES						10		PROVIDE QTY OF CEILING MOUNTED OCCUPANCY SENSORS REQUIRED FOR FULL COVERAGE.
P	COMMON RESTROOM		ON/OFF	YES					YES			18	30%		20		SAFETY EXEMPTION NO INTERLOCK
X	ELEC/MECH/IDF ROOMS		ON/OFF			YES									N/A		SAFETY EXEMPTION: PROVIDE LINE VOLTAGE SWITCHING FOR SPACE INDICATED.

GENERAL NOTES:
1. PROVIDE DUAL TECHNOLOGY FOR ALL LIGHTING CONTROL SENSORS.

LIGHT FIXTURE SCHEDULE

LABEL	Manufacturer	Catalog Number	Description	Mounting	Lamp	Fixture Wattage	Voltage	Notes
A	LITHONIA	2BLT2-40L-SDSM-GZ10-LP835	2' X 2' TROFFER, 4000 LUMEN, 3500K, SQUARE SMOOTH DIFFUSER, MVOLT, 0-10V 10% DIMMING	LAY-IN	LED	31	MVOLT	
B	ACUITY	LC4C-13LM-35K-MVOLT-XX-G4-80CRI-ZT-HW-COLOR-CSTEM-48N-COLOR	4" CYLINDRICAL DOWNLIGHT LED, 3500K, 0-10V 10% DIMMING	SUSPENDED CABLE @48" FROM DECK	LED	11.7	277	
C	VODE	707-SL-XX-C-0-XX-AE-2-O-Z-LO-409-AZ-0-AL	TRACK LIGHT, 4000K, 418 W/LF, 0-10V 1% DIMMING	TRACK	LED	4.1 W/LF	120	
D	ELLIPTIPAR	S104-M336-ZXX-M-VO-O-940-EL	INDIRECT LINEAR LED, 4000K, 18332 LUMENS, 0-10V 0.1% DIMMING	SURFACE MOUNTED	LED	163	277	
E	SPECTRUM GIANT	SP4ES-11L-40K-DX- AR4ES-MW-MF	4"SQUARE DOWNLIGHT, 1100 LUMENS, 4000K, 0-10V 1% DIMMING	RECESSED	LED	11	277	
F	FINELITE	HP2-WM-ID-4'-H-H-940-ASY-R-F-96LG-277-DC-FC-10%-MB-FE-SW	2' WALL MOUNT DIRECT / INDIRECT, 747LMFT-I, 612LMFT-D, 4000K, 90 CRI, 0-10V 10% DIMMING	SURFACE	LED	56	277	
G	FINELITE	HPX-P-ID-XX-S-S-940-WSO-F-277-DC-FC-1%- FA50-XX-FE-SW	2.5" LINEAR SUSPENDED DIRECT / INDIRECT, 664 LUMENS/FT, 4000K, 90 CRI, 0-10V 1%DIMMING	SUSPENDED @9'-0"AFF	LED	6.8W/LF	277	
H	ALORA HALSTON	PD470108	PENDANT WHITE AND GOLD FINISH	PENDANT	LED	6.3	277	
I	GUBI	RONDE PENDANT, 750 LUMEN, 2700K	PENDANTS OVER ISLAND - BLACK FINISH	SUSPENDED	LED	6.3	120	
J	MARK ARCHITECURAL	S1LD 4FT 1000LMF 35K STD	SLOT 1 DIRECT, 1000 LUMES/FOOT, 3500K, 90 CRI, 1% DIMMING	SUSPENDED	LED	37.8	277	
K1	SPECTRUM GIANT	GPRF1200GV-27L-40k-DS10X-RDC5-XX	12" GLOBES MULTIPLE, 2700 LUMENS, 4000K, 0-10V 10% DIMMING	SUSPENDED	LED	18	277	
K2	SPECTRUM GIANT	GPRF1600GV-27L-40k-DS10X-RDC5-XX	16" GLOBES MULTIPLE, 2700 LUMENS, 4000K, 0-10V 10% DIMMING	SUSPENDED	LED	18	277	
K3	SPECTRUM GIANT	GPRF2000GV-27L-40k-DS10X-RDC5-XX	20" GLOBES MULTIPLE, 2700 LUMENS, 4000K, 0-10V 10% DIMMING	SUSPENDED	LED	18	277	
K4	SPECTRUM GIANT	GPRF2400GV-27L-40k-DS10X-RDC5-XX	24" GLOBES MULTIPLE, 2700 LUMENS, 4000K, 0-10V 10% DIMMING	SUSPENDED	LED	18	277	
K5	SPECTRUM GIANT	GPRF3600GV-27L-40k-DS10X-RDC5-XX	36" GLOBES MULTIPLE, 2700 LUMENS, 4000K, 0-10V 10% DIMMING	SUSPENDED	LED	18	277	
L	ALORA KENJI	KENJI CH529024, E26	PENDANT , E26 LED LAMP 3500K, 800 LUMENS	SUSPENDED	LED	6	120	
M1	LITHONIA	CLX L48 3000LM SEF FDL MVOLT 35K 90CRI CLXRW48	4' LINEAR LED, 3500K, 0.1% DIMMING	MOUNTED TO DECK BETWEEN RIBS	LED	64	277	
M2	LITHONIA	CLX L48 3000LM SEF FDL MVOLT 50K 90CRI CLXRW48	4' LINEAR LED, 5000K, 0.1% DIMMING	MOUNTED TO DECK BETWEEN RIBS	LED	64	277	
N	LITHONIA	2VTL2-40L-ADSM-GZ10-LP940	2' X 2' LAY-IN	LAY-IN	LED	33	277	
O	LITHONIA	LDN4 35/15 LO4 WR	4" DOWNLIGHT, 3500K, DIMMABLE	RECESSED ACT	LED	17.5	277	
P	ESTIMATOR	SP4ES-20L-40K-D1-AR4ES-MW-MF	4" ROUND DOWNLIGHT DIM TO 10%, BLACK FINISH AND BLACK DIFFUSER	RECESSED GYP	LED	10.5	277	
Q	ALORA OSCAR	OSCAR WV550224	WALL SCONCE INSTALLED ABOVE BANQUETTES - BLACK FINISH, E26 LED LAMP 3500K, 505 LUMENS	SURFACE	LED	6.3	277	BACKBOX
R	ALORA ASTRID	ASTTRID WV316501	WALL SCONCE INSTALLED ABOVE BOOKSHELVES - BLACK FINISH, E26 LED LAMP 3500K, 505 LUMENS	SURFACE	LED	6.3	277	BACKBOX
S	FLUXWERX	FD1xAB35x02x[F1/F2/E1 /E2/E3/E4]M	PROFILE SPOKE 4- BLACK FINISH	VARYING HEIGHTS - SUSPENDED FROM DECK	LED	11.08	277	
X1	LITHONIA	EDG 1 GMR SD	EXIT SIGN, 90 MINUTE BATTERY BACKUP SELF DIAGNOSTICS, MIRRORED, 1-SIDE	RECESSED	LED	4.5	277	
X2	LITHONIA	EDG 2 GMR SD	EXIT SIGN, 90 MINUTE BATTERY BACKUP SELF DIAGNOSTICS, MIRRORED, 2-SIDED	RECESSED	LED	4.5	277	

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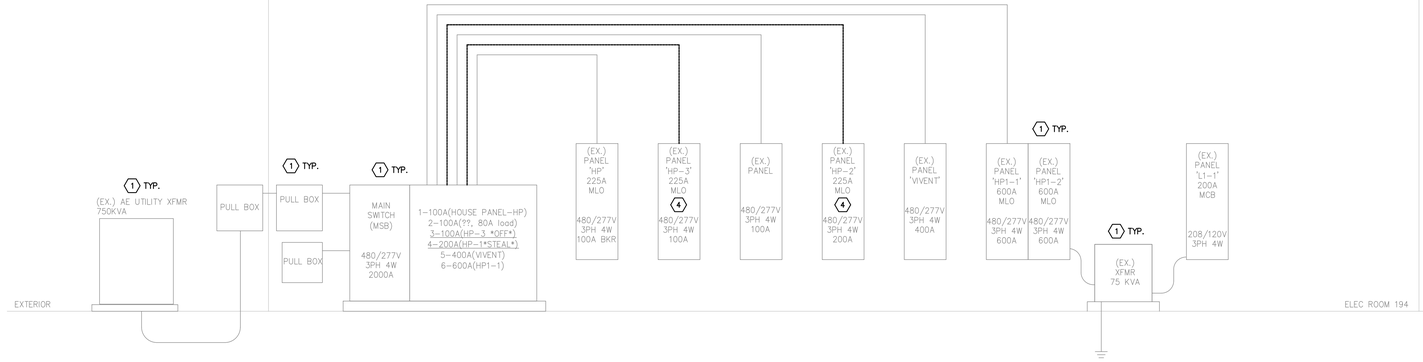
LIGHTING SCHEDULES AND COMCHECK

E5.0

PROJECT NO.
21-043



1 ONE-LINE DIAGRAM-DEMOLITION
E5.1 SCALE: NONE

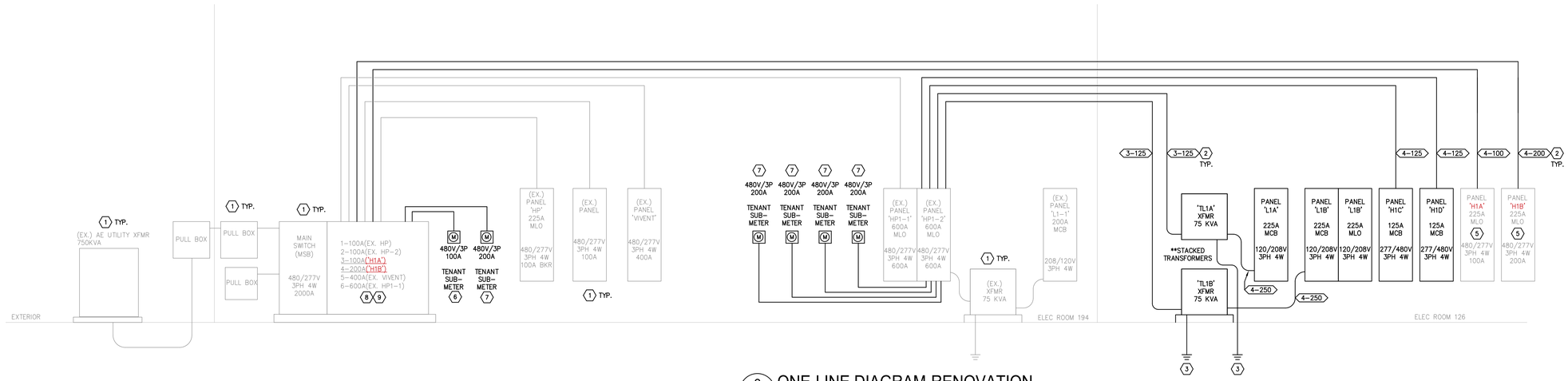
KEYED NOTES

1. EXISTING TO REMAIN. TYPICAL.
2. NEW CONDUIT AND WIRE PER SCHEDULE.
3. NEW GROUND PER NEC. TYPICAL.
4. RELOCATE ELECTRICAL PANEL TO NEW ELECTRICAL ROOM 125 IN TENANT SPACE.
5. RE-NAME RELOCATED PANEL WITH NEW IDENTIFICATION. SEE COVER SHEET FOR IDENTIFICATION DETAILS. REMOVE ANY REFERENCE TO PRIOR NAMING CONVENTIONS BEFORE RELEASE TO OWNER. PROVIDE NEW PANEL SCHEDULES WITH FIELD INSTALLED CIRCUITRY INDICATED.
6. PROVIDE E-MON D-MON 100A TENANT SUBMETER #E20-480100-JKIT
7. PROVIDE E-MON D-MON 200A TENANT SUBMETER #E20-480200-JKIT
8. RE-USE EXISTING 100A BREAKER TO SERVE RELOCATED PANELBOARD.
9. RE-USE EXISTING 200A BREAKER TO SERVE RELOCATED PANELBOARD.

AVAILABLE FAULT CURRENT CALCULATIONS (NEC 110.24)

ELECTRICAL SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. A PERMANENT WEATHERPROOF LABEL SHALL INCLUDE THE DATE OF THE CALCULATION WAS PERFORMED AND THE MAXIMUM AVAILABLE FAULT CURRENT OF THE BUILDING POWER SYSTEM.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE MAXIMUM AVAILABLE FAULT CURRENT CALCULATIONS TO THE ENGINEER OF RECORD IN ELECTRONIC SUBMITTAL FORMAT. THE ENGINEER WILL REVIEW THE CALCULATIONS, AND IF ACCEPTABLE, WILL PROVIDE A DOCUMENT STATING THE DATE THE CALCULATIONS WERE COMPLETED AND THE FINAL DETERMINED MAXIMUM AVAILABLE FAULT CURRENT.



2 ONE-LINE DIAGRAM-RENOVATION
E5.1 SCALE: NONE

EX. MAIN DISTRIBUTION PANEL 'MSB'

CKT	DESCRIPTION	SW. OR C.B. FRAME	SW. OR C.B. TRIP	FEEDER
1	EX. 'HP - HOUSE PANEL	100A	100A	-
2	EX. 'HP - HOUSE PANEL	100A	100A	-
3	H1A' (RELOCATED, RE-NAMED)	100A	100A	RE:E5.1
4	H1B' (RELOCATED, RE-NAMED)	200A	200A	RE:E5.1
5	VIVENT TENANT	400A	400A	-
6	HP1-1	600A	600A	-

MAIN TYPE:	MCB
VOLTAGE:	480 3PH,4W
MAIN SIZE:	2000 A
AIC RATING:	
MOUNTING:	PAD MOUNTED

LOADING OF EXISTING PANEL:

1. NEC 220.87 DETERMINING EXISTING LOADS, WAS USED TO CREATE THE PANEL SCHEDULE. 125% OF EXISTING LOADS PLUS THE NEW LOADS TO DETERMINE EXISTING PANEL LOADING.
2. THE SUM OF LOADS ON THE EXISTING PANELS:

MAIN DISTRIBUTION 'MSB'

TOTAL EXISTING AND NEW LOADS ARE LESS THAN THE BREAKER RATING.

#1-HP	80.00A
#2-HP-2	80.00A
#3-H1A	65.96A
#4-H1B	151.92A
#5-VIVENT	320.00A
#6-HP1	385.42A
TOTAL	1082A

1082A IS LESS THAN 2000A MAIN IN MSB

FEEDER SCHEDULE

3 CONDUCTORS WITH GROUND				4 CONDUCTORS WITH GROUND				GROUNDING CONDUCTOR		
LABEL	AMPS	CONDUCTOR(S)	CONDUIT	LABEL	AMPS	CONDUCTOR(S)	CONDUIT	LABEL	CONDUCTOR(S)	CONDUIT
3-20	20	3#12, 1#12G.	3/4"	4-20	20	4#12, 1#12G.	3/4"	G-20	1#10	3/4"
3-30	30	3#10, 1#10G.	3/4"	4-30	30	4#10, 1#10G.	3/4"	G-30	1#10	3/4"
3-40	40	3#8, 1#10G.	3/4"	4-40	40	4#8, 1#10G.	3/4"	G-40	1#10	3/4"
3-50	50	3#8, 1#10G.	3/4"	4-50	50	4#8, 1#10G.	3/4"	G-50	1#10	3/4"
3-60	60	3#6, 1#10G.	1"	4-60	60	4#6, 1#10G.	1"	G-60	1#10	3/4"
3-70	70	3#4, 1#8G.	1"	4-70	70	4#4, 1#8G.	1-1/4"	G-70	1#8	3/4"
3-80	80	3#4, 1#8G.	1"	4-80	80	4#3, 1#8G.	1-1/4"	G-80	1#8	3/4"
3-100	100	3#3, 1#8G.	1"	4-100	100	4#2, 1#8G.	1-1/2"	G-100	1#8	3/4"
3-125	125	3#1, 1#6G.	1-1/2"	4-125	125	4#1, 1#6G.	1-1/2"	G-125	1#6	3/4"
3-150	150	3#1/0, 1#6G.	1-1/2"	4-150	150	4#1/0, 1#6G.	2"	G-150	1#6	3/4"
3-175	175	3#2/0, 1#6G.	1-1/2"	4-175	175	4#2/0, 1#6G.	2"	G-175	1#6	3/4"
3-200	200	3#3/0, 1#6G.	2"	4-200	200	4#3/0, 1#6G.	2-1/2"	G-200	1#4	3/4"
3-225	225	3#4/0, 1#4G.	2-1/2"	4-225	225	4#4/0, 1#4G.	2-1/2"	G-225	1#2	3/4"
3-250	250	3#250KCMIL, 1#4G.	2-1/2"	4-250	250	4#250KCMIL, 1#4G.	3"	G-250	1#2	3/4"
3-300	300	3#350KCMIL, 1#3G.	3"	4-300	300	4#350KCMIL, 1#3G.	3"	G-300	1#2	3/4"
3-350	350	(2 SETS) 3#2/0, 1#3G.	2"	4-350	350	(2 SETS) 4#2/0, 1#3G.	2"	G-350	1#1/0	1"
3-400	400	(2 SETS) 3#3/0, 1#3G.	2"	4-400	400	(2 SETS) 4#3/0, 1#3G.	2"	G-400	1#1/0	1"
3-500	500	(2 SETS) 3#250KCMIL, 1#2G.	2-1/2"	4-500	500	(2 SETS) 4#250KCMIL, 1#2G.	3"	G-500	1#2/0	1"
3-600	600	(2 SETS) 3#350KCMIL, 1#1G.	3"	4-600	600	(2 SETS) 4#350KCMIL, 1#1G.	3"	G-600	1#2/0	1"
3-800	800	(3 SETS) 3#300KCMIL, 1#1/0G.	2-1/2"	4-800	800	(3 SETS) 4#300KCMIL, 1#1/0G.	3"	G-800	1#3/0	1"
3-1000	1000	(3 SETS) 3#400KCMIL, 1#2/0G.	3"	4-1000	1000	(3 SETS) 4#400KCMIL, 1#2/0G.	3-1/2"	G-1000	1#3/0	1"
3-1200	1200	(4 SETS) 3#350KCMIL, 1#3/0G.	3"	4-1200	1200	(4 SETS) 4#350KCMIL, 1#3/0G.	3-1/2"	G-1200	1#3/0	1"
3-1600	1600	(5 SETS) 3#400KCMIL, 1#4/0G.	3"	4-1600	1600	(5 SETS) 4#400KCMIL, 1#4/0G.	3"	G-1600	1#3/0	1"
3-2000	2000	(6 SETS) 3#400KCMIL, 1#250KCMIL G.	3"	4-2000	2000	(6 SETS) 4#400KCMIL, 1#250KCMIL G.	3"	G-2000	1#3/0	1"
3-2500	2500	(7 SETS) 3#500KCMIL, 1#350KCMIL G.	3-1/2"	4-2500	2500	(7 SETS) 4#500KCMIL, 1#350KCMIL G.	3-1/2"	G-2500	1#3/0	1"
3-3000	3000	(8 SETS) 3#500KCMIL, 1#400KCMIL G.	3-1/2"	4-3000	3000	(8 SETS) 4#500KCMIL, 1#400KCMIL G.	3-1/2"	G-3000	1#3/0	1"
3-3500	3500	(10 SETS) 3#500KCMIL, 1#500KCMIL G.	3-1/2"	4-3500	3500	(10 SETS) 4#500KCMIL, 1#500KCMIL G.	3-1/2"	G-3500	1#3/0	1"
3-4000	4000	(11 SETS) 3#500KCMIL, 1#500KCMIL G.	3-1/2"	4-4000	4000	(11 SETS) 4#500KCMIL, 1#500KCMIL G.	3-1/2"	G-4000	1#3/0	1"

NOTE: PROVIDE CONDUIT, AT SIZE LISTED, FOR EACH SET OF CONDUCTORS.

PROJECT: 21-085

BUILDING CONTACT
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DATE: 6.20.22
SCALE: NOTED
DRAWN BY: AMPED

DATE	REVISION

ONE-LINE DIAGRAM AND FEEDER SCHEDULE

E5.1

PROJECT NO.
21-043

RELOCATED — PANELBOARD SCHEDULE — PANEL H1A

MAIN SIZE: 225A | FROM: MSB-3, 100A/3P | NEMA 1 | (Formerly 'HP-3'): ex. 100A/3P from MSB
MAIN TYPE: ML0 | MOUNTING: SURFACE
KAIC RATING: 18 | VOLTAGE: 480 /277V 3PH, 4W

DESCRIPTION	WIRE SIZE	AMPS POLE	LOAD (KVA) LTG	RCPT	MTR	HEAT	KITCH	MISC	CKT NO	PHASE			CKT NO	LOAD (KVA) MISC	KITCH	HEAT	MTR	RCPT	LTG	AMPS POLE	WIRE SIZE	DESCRIPTION
RTU-1	**#10**	25/3			**4.99**				1	A			2				**4.99**			25/3	**#10**	**RTU-3**
|	|	|			**4.99**				3		B		4				**4.99**			|	|	|
|	|	|			**4.99**				5			C	6				**4.99**			|	|	|
RTU-2	**#8**	**40/3**			**8.03**				7	A			8							20/3	-	EX. SPARE
|	|	|			**8.03**				9		B		10							|	-	|
|	|	|			**8.03**				11			C	12							|	-	|
EX. SPARE	-	20/3							13	A			14							20/3	-	EX. SPARE
|	-	|							15		B		16							|	-	|
|	-	|							17			C	18							|	-	|
EX. SPARE	-	25/3							19	A			20							20/3	-	EX. SPARE
|	-	|							21		B		22							|	-	|
|	-	|							23			C	24							|	-	|
EX. SPARE	-	20/3							25	A			26							20/3	-	EX. SPARE
|	-	|							27		B		28							|	-	|
|	-	|							29			C	30							|	-	|
EX. SPARE	-	15/3							31	A			32							-	-	SPACE
|	-	|							33		B		34							-	-	SPACE
|	-	|							35			C	36							-	-	SPACE
SPACE	-	-							37	A			38							-	-	SPACE
SPACE	-	-							39		B		40							-	-	SPACE
SPACE	-	-							41			C	42							-	-	SPACE
TOTALS			0.00	0.00	39.05	0.00	0.00	0.00						0.00	0.00	0.00	14.96	0.00	0.00			TOTALS

PHASE	A	B	C	KVA
LIGHTING	0.00	0.00	0.00	0.00
RECEPTACLE	0.00	0.00	0.00	0.00
HEAT	0.00	0.00	0.00	0.00
KITCHEN	0.00	0.00	0.00	0.00
MISCELLANEOUS	0.00	0.00	0.00	0.00
TTLS	0.00	0.00	0.00	0.00 TTL CONNECTED LOAD

KVA: MOTOR 1.66 (LARGEST)

LEGEND		
	SHADED LIGHT GREY	EXISTING TO REMAIN
	BOLD TEXT	NEW WORK IN EXISTING PANEL
	STANDARD TEXT	NEW WORK IN NEW PANEL

TOTAL DESIGN AMPS 64.96

GENERAL NOTES:
1. PROVIDE GFCI BREAKERS FOR ALL CIRCUITS SERVING WET AREA APPLIANCES, KITCHEN EQUIPMENT, ETC. THAT IS FIXED EQUIPMENT AND IS DIFFICULT TO MOVE FOR ACCESS TO A GFCI RECEPTACLE.
2. PROVIDE HACR BREAKERS FOR ALL AIR CONDITIONING, HEATING AND REFRIGERATION LOADS (NEC 440.21)
3. ALL WORK AND EQUIPMENT SHALL FULLY COMPLY WITH THE NATIONAL ELECTRICAL CODE (CURRENT VERSION) AND AUTHORITIES HAVING JURISDICTION REQUIREMENTS.

RELOCATED — PANELBOARD SCHEDULE — PANEL H1B

MAIN SIZE: 250A | FROM: MSB-4, 200A/3P | NEMA 1 | (Formerly 'HP-2'): ex. 200A/3P from MSB
MAIN TYPE: ML0 | MOUNTING: SURFACE
KAIC RATING: 18 | VOLTAGE: 480 /277V 3PH, 4W

DESCRIPTION	WIRE SIZE	AMPS POLE	LOAD (KVA) LTG	RCPT	MTR	HEAT	KITCH	MISC	CKT NO	PHASE			CKT NO	LOAD (KVA) MISC	KITCH	HEAT	MTR	RCPT	LTG	AMPS POLE	WIRE SIZE	DESCRIPTION
RTU-4	**#6**	40/3			**8.03**				1	A			2				**8.03**			40/3	**#6**	**RTU-6**
|	|	|			**8.03**				3		B		4				**8.03**			|	|	|
|	|	|			**8.03**				5			C	6				**8.03**			|	|	|
RTU-5	**#6**	**40/3**			**8.03**				7	A			8				**8.03**			**40/3**	**#6**	**RTU-7**
|	|	|			**8.03**				9		B		10				**8.03**			|	|	|
|	|	|			**8.03**				11			C	12				**8.03**			|	|	|
RTU-8	**#10**	25/3			**4.99**				13	A			14				**4.99**			25/3	**#10**	**RTU-9**
|	|	|			**4.99**				15		B		16				**4.99**			|	|	|
|	|	|			**4.99**				17			C	18				**4.99**			|	|	|
EX. SPARE	-	30/3							19	A			20							30/3	-	EX. SPARE
|	-	|							21		B		22							|	-	|
|	-	|							23			C	24							|	-	|
EX. SPARE	-	20/3							25	A			26							30/3	-	EX. SPARE
|	-	|							27		B		28							|	-	|
|	-	|							29			C	30							|	-	|
EX. SPARE	-	30/3							31	A			32							25/3	-	EX. SPARE
|	-	|							33		B		34							|	-	|
|	-	|							35			C	36							|	-	|
EX. SPARE	-	30/3							37	A			38							30/3	-	EX. SPARE
|	-	|							39		B		40							|	-	|
|	-	|							41			C	42							|	-	|
TOTALS			0.00	0.00	63.15	0.00	0.00	0.00						0.00	0.00	0.00	63.15	0.00	0.00			TOTALS

PHASE	A	B	C	KVA
LIGHTING	0.00	0.00	0.00	0.00
RECEPTACLE	0.00	0.00	0.00	0.00
HEAT	0.00	0.00	0.00	0.00
KITCHEN	0.00	0.00	0.00	0.00
MISCELLANEOUS	0.00	0.00	0.00	0.00
TTLS	0.00	0.00	0.00	0.00 TTL CONNECTED LOAD

KVA: MOTOR 1.66 (LARGEST)

LEGEND		
	SHADED LIGHT GREY	EXISTING TO REMAIN
	BOLD TEXT	NEW WORK IN EXISTING PANEL
	STANDARD TEXT	NEW WORK IN NEW PANEL

TOTAL DESIGN AMPS 151.92

GENERAL NOTES:
1. PROVIDE GFCI BREAKERS FOR ALL CIRCUITS SERVING WET AREA APPLIANCES, KITCHEN EQUIPMENT, ETC. THAT IS FIXED EQUIPMENT AND IS DIFFICULT TO MOVE FOR ACCESS TO A GFCI RECEPTACLE.
2. PROVIDE HACR BREAKERS FOR ALL AIR CONDITIONING, HEATING AND REFRIGERATION LOADS (NEC 440.21)
3. ALL WORK AND EQUIPMENT SHALL FULLY COMPLY WITH THE NATIONAL ELECTRICAL CODE (CURRENT VERSION) AND AUTHORITIES HAVING JURISDICTION REQUIREMENTS.

NEW — PANELBOARD SCHEDULE — PANEL H1C

MAIN SIZE: 125A | FROM: HP1-2, 125A/3P | NEMA 1
MAIN TYPE: MCB | MOUNTING: SURFACE
KAIC RATING: 18 | VOLTAGE: 480 /277V 3PH, 4W

DESCRIPTION	WIRE SIZE	AMPS POLE	LOAD (KVA) LTG	RCPT	MTR	HEAT	KITCH	MISC	CKT NO	PHASE			CKT NO	LOAD (KVA) MISC	KITCH	HEAT	MTR	RCPT	LTG	AMPS POLE	WIRE SIZE	DESCRIPTION
RTU-10	#6	40/3			8.03				1	A			2				8.03			40/3	#6	RTU-12
|	|	|			8.03				3		B		4				8.03			|	|	|
|	|	|			8.03				5			C	6				8.03			|	|	|
RTU-11	#10	25/3			4.99				7	A			8				4.99			25/3	#10	RTU-13
|	|	|			4.99				9		B		10				4.99			|	|	|
|	|	|			4.99				11			C	12				4.99			|	|	|
SPACE	-	-							13	A			14							-	-	SPACE
SPACE	-	-							15		B		16							-	-	SPACE
SPACE	-	-							17			C	18							-	-	SPACE
SPACE	-	-							19	A			20							-	-	SPACE
SPACE	-	-							21		B		22							-	-	SPACE
SPACE	-	-							23			C	24							-	-	SPACE
SPACE	-	-							25	A			26							-	-	SPACE
SPACE	-	-							27		B		28							-	-	SPACE
SPACE	-	-							29			C	30							-	-	SPACE
SPACE	-	-							31	A			32							-	-	SPACE
SPACE	-	-							33		B		34							-	-	SPACE
SPACE	-	-							35			C	36							-	-	SPACE
SPACE	-	-							37	A			38							-	-	SPACE
SPACE	-	-							39		B		40							-	-	SPACE
SPACE	-	-							41			C	42							-	-	SPACE
TOTALS			0.00	0.00	39.07	0.00	0.00	0.00						0.00	0.00	0.00	39.07	0.00	0.00			TOTALS

PHASE	A	B	C	KVA
LIGHTING	0.00	0.00	0.00	0.00
RECEPTACLE	0.00	0.00	0.00	0.00
HEAT	0.00	0.00	0.00	0.00
KITCHEN	0.00	0.00	0.00	0.00
MISCELLANEOUS	0.00	0.00	0.00	0.00
TTLS	0.00	0.00	0.00	0.00 TTL CONNECTED LOAD

KVA: MOTOR 1.66 (LARGEST)

LEGEND		
	SHADED LIGHT GREY	EXISTING TO REMAIN
	BOLD TEXT	NEW WORK IN EXISTING PANEL
	STANDARD TEXT	NEW WORK IN NEW PANEL

TOTAL DESIGN AMPS 93.99

GENERAL NOTES:
1. PROVIDE GFCI BREAKERS FOR ALL CIRCUITS SERVING WET AREA APPLIANCES, KITCHEN EQUIPMENT, ETC. THAT IS FIXED EQUIPMENT AND IS DIFFICULT TO MOVE FOR ACCESS TO A GFCI RECEPTACLE.
2. PROVIDE HACR BREAKERS FOR ALL AIR CONDITIONING, HEATING AND REFRIGERATION LOADS (NEC 440.21)
3. ALL WORK AND EQUIPMENT SHALL FULLY COMPLY WITH THE NATIONAL ELECTRICAL CODE (CURRENT VERSION) AND AUTHORITIES HAVING JURISDICTION REQUIREMENTS.

NEW — PANELBOARD SCHEDULE — PANEL H1D

MAIN SIZE: 125A | FROM: HP1-2, 125A/3P | NEMA 1
MAIN TYPE: MCB | MOUNTING: SURFACE
KAIC RATING: 18 | VOLTAGE: 480 /277V 3PH, 4W

DESCRIPTION	WIRE SIZE	AMPS POLE	LOAD (KVA) LTG	RCPT	MTR	HEAT	KITCH	MISC	CKT NO	PHASE			CKT NO	LOAD (KVA) MISC	KITCH	HEAT	MTR	RCPT	LTG	AMPS POLE	WIRE SIZE	DESCRIPTION
RTU-14	#10	25/3			4.99				1	A			2	3.00						20/1	#12	EWH-1
|	|	|			4.99				3		B		4	3.00						20/1	#12	EWH-2
|	|	|			4.99				5			C	6	3.00						20/1	#12	EWH-3
LIGHTING	#12	20/1	2.70						7	A			8	3.00						20/1	#12	EWH-4
LIGHTING	#12	20/1	2.70						9		B		10	4.50						25/1	#10	EWH-5
LIGHTING	#12	20/1	2.70						11			C	12							-	-	SPACE
LIGHTING	#12	20/1	2.70						13	A			14							-	-	SPACE
LIGHTING	#12	20/1	2.70						15		B		16							-	-	SPACE
LIGHTING	#12	20/1	2.70						17			C	18							-	-	SPACE
LIGHTING	#12	20/1	2.70						19	A			20							-	-	SPACE
LIGHTING	#12	20/1	2.70						21		B		22							-	-	SPACE
LIGHTING	#12	20/1	2.70						23			C	24							-	-	SPACE
LIGHTING	#12	20/1	2.70						25	A			26							-	-	SPACE
LIGHTING	#12	20/1	2.70						27		B		28							-	-	SPACE
LIGHTING	#12	20/1	2.70						29			C	30							-	-	SPACE
SPACE	-	-							31	A			32							-	-	SPACE
SPACE	-	-							33		B		34							-	-	SPACE
SPACE	-	-							35			C	36							-	-	SPACE
SPACE	-	-							37	A			38							-	-	SPACE
SPACE	-	-							39		B		40							-	-	SPACE
SPACE	-	-							41			C	42							-	-	SPACE
TOTALS			32.40	0.00	14.97	0.00	0.00	0.00						16.50	0.00	0.00	0.00	0.00	0.00			TOTALS

PHASE	A	B	C	KVA
LIGHTING	10.80	10.80	10.80	32.40
RECEPTACLE	0.00	0.00	0.00	0.00
HEAT	0.00	0.00	0.00	0.00
KITCHEN	0.00	0.00	0.00	0.00
MISCELLANEOUS	6.00	7.50	3.00	16.50
TTLS	16.80	18.30	13.80	48.90 TTL CONNECTED LOAD

KVA: MOTOR 1.66 (LARGEST)

LEGEND		
	SHADED LIGHT GREY	EXISTING TO REMAIN
	BOLD TEXT	NEW WORK IN EXISTING PANEL
	STANDARD TEXT	NEW WORK IN NEW PANEL

TOTAL DESIGN AMPS 86.57

GENERAL NOTES:
1. PROVIDE GFCI BREAKERS FOR ALL CIRCUITS SERVING WET AREA APPLIANCES, KITCHEN EQUIPMENT, ETC. THAT IS FIXED EQUIPMENT AND IS DIFFICULT TO MOVE FOR ACCESS TO A GFCI RECEPTACLE.
2. PROVIDE HACR BREAKERS FOR ALL AIR CONDITIONING, HEATING AND REFRIGERATION LOADS (NEC 440.21)
3. ALL WORK AND EQUIPMENT SHALL FULLY COMPLY WITH THE NATIONAL ELECTRICAL CODE (CURRENT VERSION) AND AUTHORITIES HAVING JURISDICTION REQUIREMENTS.

EXISITING — PANELBOARD SCHEDULE — PANEL HP1-2

MAIN SIZE: 600 | FROM: MSB-3, 100A/3P | NEMA 1
MAIN TYPE: ML0 | MOUNTING: SURFACE
KAIC RATING: 18 | VOLTAGE: 480 /277V 3PH, 4W

DESCRIPTION	WIRE SIZE	AMPS POLE	LOAD (KVA) LTG	RCPT	MTR	HEAT	KITCH	MISC	CKT NO	PHASE			CKT NO	LOAD (KVA) MISC	KITCH	HEAT	MTR	RCPT	LTG	AMPS POLE	WIRE SIZE	DESCRIPTION
TLIA	**#1**	**125/3**						**17.00**	1	A			2	**24.00**						125/3	**#1**	**H1D**
|	|	|					**17.00**	3		B		4	**24.00**						|	|	|
|	|	|					**17.00**	5			C	6	**24.00**						|	|	|
TLIB	**#1**	**125/3**						**17.30**	7	A			8							20/3	-	EX. SPARE
|	|	|					**17.30**	9		B		10							|	-	|
|	|	|					**17.30**	11			C	12							|	-	|
H1C	**#1**	**125/3**			**26.03**				13	A			14							20/3	-	EX. SPARE
|	|	|		**26.03**				15		B		16							|	-	|
|	|	|		**26.03**				17			C	18							|	-	|
EX. TL1-1	-	100/3						22.12	19	A			20							15/3	-	EX. SPARE
|	-	|					22.12	21		B		22							|	-	|
|	-	|					22.12	23			C	24							|	-	|
EX. SPARE	-	20/3							25	A			26							20/3	-	EX. SPARE
|	-	|						27		B		28							|	-	|
|	-	|						29			C	30							|	-	|
EX. SPARE	-	15/3							31	A			32							-	-	SPACE
|	-	|						33		B		34							-	-	SPACE
|	-	|						35			C	36							-	-	SPACE
SPACE	-	-							37	A			38							-	-	SPACE
SPACE	-	-							39		B		40							-	-	SPACE
SPACE	-	-							41			C	42							-	-	SPACE
TOTALS			0.00	0.00	78.09	0.00	0.00	169.26						72.00	0.00	0.00	0.00	0.00	0.00			TOTALS

PHASE	A	B	C	KVA
LIGHTING	0.00	0.00	0.00	0.00
RECEPTACLE	0.00	0.00	0.00	0.00
HEAT	0.00	0.00	0.00	0.00
KITCHEN	0.00	0.00	0.00	0.00
MISCELLANEOUS	80.42	80.42	80.42	241.26
TTLS	80.42	80.42	80.42	241.26 TTL CONNECTED LOAD

KVA: MOTOR 1.66 (LARGEST)

LEGEND		
	SHADED LIGHT GREY	EXISTING TO REMAIN
	BOLD TEXT	NEW WORK IN EXISTING PANEL
	STANDARD TEXT	NEW WORK IN NEW PANEL

TOTAL DESIGN AMPS 384.12

GENERAL NOTES:
1. PROVIDE GFCI BREAKERS FOR ALL CIRCUITS SERVING WET AREA APPLIANCES, KITCHEN EQUIPMENT, ETC. THAT IS FIXED EQUIPMENT AND IS DIFFICULT TO MOVE FOR ACCESS TO A GFCI RECEPTACLE.
2. PROVIDE HACR BREAKERS FOR ALL AIR CONDITIONING, HEATING AND REFRIGERATION LOADS (NEC 440.21)
3. ALL WORK AND EQUIPMENT SHALL FULLY COMPLY WITH THE NATIONAL ELECTRICAL CODE (CURRENT VERSION) AND AUTHORITIES HAVING JURISDICTION REQUIREMENTS.

PROJECT: 21-085

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DATE: 6.20.22
SCALE: NOTED
DRAWN BY: AMPED

DATE	REVISION

POWER SCHEDULES

E5.2

PROJECT NO. 21-043

NEW — PANELBOARD SCHEDULE — PANEL L1A

MAIN SIZE: 225 | **MAIN TYPE:** MCB | **KAIC RATING:** 22 | **NEMA 1** | **MOUNTING:** SURFACE | **VOLTAGE:** 208 /120V 3PH,4W

DESCRIPTION	WIRE SIZE	AMPS POLE	LOAD (KVA) LTG	RCPT	MTR	HEAT	KITCH	MISC	CKT NO	PHASE			CKT NO	LOAD (KVA) MISC	KITCH	HEAT	MTR	RCPT	LTG	AMPS POLE	WIRE SIZE	DESCRIPTION
FURNITURE FEED	#12	*20/1		1.50					1	A			2					1.00		20/1	#12	RCPTS-SWITCHED-230
FURNITURE FEED	#12	*20/1		1.50					3		B		4					1.00		20/1	#12	RCPTS-SWITCHED-230
OFFICE 186	#12	20/1		1.26					5			C	6					1.00		20/1	#12	RCPTS-SWITCHED-230
FURNITURE FEED	#12	*20/1		1.20					7	A			8					0.36		20/1	#12	QUAD-230
FURNITURE FEED	#12	*20/1		1.20					9		B		10					1.00		20/1	#12	RCPTS-SWITCHED-230
OFFICE 189	#12	20/1		1.26					11			C	12					1.20		20/1	#12	RCPTS-230
FURNITURE FEED	#12	*20/1		1.20					13	A			14					0.72		20/1	#12	RCPTS-230
FURNITURE FEED	#12	*20/1		1.20					15		B		16					0.90		20/1	#12	RCPTS-230
OFFICE 180	#12	20/1		1.44					17			C	18					0.36		20/1	#12	RCPTS-SWITCHED-224
FURNITURE FEED	#12	*20/1		1.20					19	A			20					1.00		20/1	#12	RCPTS-SWITCHED-224
FURNITURE FEED	#12	*20/1		1.20					21		B		22					1.00		20/1	#12	RCPTS-SWITCHED-224
OFFICE 193	#12	20/1		1.44					23			C	24					0.90		20/1	#12	RCPTS-224
FURNITURE FEED	#12	*20/1		1.20					25	A			26					1.50		*20/1	#12	FURNITURE FEED
FURNITURE FEED	#12	*20/1		1.20					27		B		28					1.50		*20/1	#12	FURNITURE FEED
OFFICE 199	#12	20/1		1.44					29			C	30					1.00		20/1	#12	DISHWASHER-172
FURNITURE FEED	#12	*20/1		1.20					31	A			32					0.90		20/1	#12	RCPTS-227
FURNITURE FEED	#12	*20/1		1.20					33		B		34					0.50		20/1	#12	LOCKERS
GP RCPTS	#12	20/1		1.26					35			C	36					0.50		20/1	#12	LOCKERS
GP RCPTS	#12	20/1		1.26					37	A			38					1.50		20/1	#12	RCPTS-219
GP RCPTS	#12	20/1		1.26					39		B		40					1.10		20/1	#12	RCPTS-217
LOCKERS	#12	20/1		0.50					41			C	42					1.00		20/1	#12	IDF-216
FURNITURE FEED	#12	*20/1		0.60					43	A			44					1.10		20/1	#12	RCPTS-GYM
FURNITURE FEED	#12	*20/1		0.60					45		B		46					0.72		20/1	#12	LIBRARY TABLES
LOCKERS	#12	20/1		0.50					47			C	48					0.72		20/1	#12	LIBRARY TABLES
ICE MAKER-172	#12	20/1		1.40					49	A			50					1.50		20/1	#12	RCPTS-211
UC FRIDGE-172	#12	20/1		0.30					51		B		52					1.26		20/1	#12	RCPTS-213
COFFEE MAKER-172	#12	20/1		1.40					53			C	54					1.50		20/1	#12	CAFÉ COFFFE-212A
WATER-172	#12	20/1		0.80					55	A			56					0.80		20/1	#12	CAFÉWATER-212A
COUNTERTOP-172	#12	20/1		0.72					57		B		58					1.40		20/1	#12	CAFÉ ICE MAKER-212A
FRIGERATOR-172	#12	20/1		1.00					59			C	60					0.48		20/1	#12	CAFÉ REF-212A
FRIGERATOR-172	#12	20/1		1.00					61	A			62					1.10		20/1	#12	COPIER-206
MICROWAVE-172	#12	20/1		1.60					63		B		64					1.26		20/1	#12	RCPTS-205
FURNITURE FEED	#12	*20/1		1.20					65			C	66					1.26		20/1	#12	RCPTS-203
FURNITURE FEED	#12	*20/1		1.20					67	A			68					1.08		20/1	#12	RCPTS-202
MICROWAVE-172	#12	20/1		1.60					69		B		70					1.08		20/1	#12	OFFICE-207
DISHWASHER-172	#12	20/1		1.00					71			C	72					1.50		*20/1	#12	FURNITURE FEED
RCPTS MAIL ROOM	#12	20/1		1.08					73	A			74					1.50		*20/1	#12	FURNITURE FEED
RCOP -102	#12	20/1		0.80					75		B		76					1.44		20/1	#12	RCPTS-195
RCPTS-171	#12	20/1		1.26					77			C	78							20/1		SPARE
BEV COOLER-172	#12	20/1		0.80					79	A			80							20/1		SPARE
RCPTS-172	#12	20/1		0.90					81		B		82							20/1		SPARE
SPARE		20/1							83			C	84							20/1		SPARE
TOTALS			0.00	45.88	0.00	0.00	0.00	0.00						0.00	0.00	0.00	0.00	39.64	0.00			TOTALS

PHASE	A	B	C	KVA	m	KVA
LIGHTING	0.00	0.00	0.00	0.00	MOTOR	1.75
RECEPTACLE	29.70	30.52	27.58	87.80	(LARGEST)	
HEAT	0.00	0.00	0.00	0.00		
KITCHEN	0.00	0.00	0.00	0.00		
MISCELLANEOUS	0.00	0.00	0.00	0.00		
TTLS	29.70	30.52	27.58	**87.80**	**TTL CONNECTED LOAD**	

LEGEND: SHADED LIGHT GREY — EXISTING TO REMAIN; **BOLD TEXT** — NEW WORK IN EXISTING PANEL; STANDARD TEXT — NEW WORK IN NEW PANEL

TOTAL DESIGN AMPS 143.89

GENERAL NOTES:
1. PROVIDE GFCI BREAKERS FOR ALL CIRCUITS SERVING WET AREA APPLIANCES, KITCHEN EQUIPMENT, ETC. THAT IS FIXED EQUIPMENT AND IS DIFFICULT TO MOVE FOR ACCESS TO A GFCI RECEPTACLE.
2. PROVIDE HACR BREAKERS FOR ALL AIR CONDITIONING, HEATING AND REFRIGERATION LOADS (NEC 440.21)
3. ALL WORK AND EQUIPMENT SHALL FULLY COMPLY WITH THE NATIONAL ELECTRICAL CODE (CURRENT VERSION) AND AUTHORITIES HAVING JURISDICTION REQUIREMENTS.
4. PROVIDE HANDLE TIES FOR BREAKERS WITH STAR '*' INDICATED NEXT TO BREAKER SIZE. SEE FURNITURE SYSTEMS ON FLOORPLANS.

NEW — PANELBOARD SCHEDULE — PANEL L1B

MAIN SIZE: 225 | **MAIN TYPE:** MCB | **KAIC RATING:** 22 | **NEMA 1** | **MOUNTING:** SURFACE | **VOLTAGE:** 208 /120V 3PH,4W

DESCRIPTION	WIRE SIZE	AMPS POLE	LOAD (KVA) LTG	RCPT	MTR	HEAT	KITCH	MISC	CKT NO	PHASE			CKT NO	LOAD (KVA) MISC	KITCH	HEAT	MTR	RCPT	LTG	AMPS POLE	WIRE SIZE	DESCRIPTION
OFFICE-148		20/1		0.90					1	A			2					1.26		20/1	#12	OFFICE-147
RECEPTION-144		20/1		1.27					3		B		4					0.90		20/1	#12	CONF-113
WATER COOLER-144		20/1						1.00	5			C	6					1.26		20/1	#12	OFFICE-141
OFFICE-143		20/1		1.26					7	A			8					1.26		20/1	#12	OFFICE-150
OFFICE-152		20/1		1.26					9		B		10					1.29		20/1	#12	CPUNSELORS HALLWAY
OFFICE-139		20/1		1.26					11			C	12					0.90		20/1	#12	OFFICE-123
COFFEE-156		20/1		1.40					13	A			14					1.00		20/1	#12	DISHWASHER-156
MICROWAVE-156		20/1		1.60					15		B		16					0.36		20/1	#12	RCPTS-156
MED-CONF-157		20/1		0.90					17			C	18					1.00		20/1	#12	REFRIGERATOR-156
FURNITURE FEED	#12	*20/1		0.90					19	A			20					0.72		20/1	#12	PHONE RM-120
FURNITURE FEED	#12	*20/1		0.90					21		B		22					0.72		20/1	#12	OFFICE-110
FURNITURE FEED	#12	*20/1		1.20					23			C	24					0.72		20/1	#12	MED CONF 109
FURNITURE FEED	#12	*20/1		1.20					25	A			26					1.08		20/1	#12	OFFICE-104
FURNITURE FEED	#12	*20/1		0.90					27		B		28					0.90		20/1	#12	PHONE-108
FURNITURE FEED	#12	*20/1		0.90					29			C	30					0.90		20/1	#12	HALL-129
FURNITURE FEED	#12	*20/1		0.90					31	A			32					0.50		20/1	#12	LOCKERS-130
FURNITURE FEED	#12	*20/1		0.90					33		B		34				1.20			20/1	#12	EF-11
FURNITURE FEED	#12	*20/1		0.90					35			C	36				1.20			20/1	#12	EF-12
FURNITURE FEED	#12	*20/1		0.90					37	A			38	0.70						20/1	#12	DUCT SMOKE DETECTOR
LOUNGE-117	#12	20/1		1.50					39		B		40					1.26		20/1	#12	ROOFTOP RCPTS
ICE MAKER-117	#12	20/1		1.00					41			C	42					1.26		20/1	#12	ROOFTOP RCPTS
WATER-117	#12	20/1		0.80					43	A			44				1.20			20/1	#12	EF's 1-7
FLOORBOX-157	#12	20/1		0.90					45		B		46				1.10			20/1	#12	HWRP-1, HWRP-2, SE-1
HALL-159A	#12	20/1		0.90					47			C	48				0.70			20/1	#12	EF's 8-10
STOR.-159	#12	20/1		0.72					49	A			50					1.26		20/1	#12	RCPTS-159
RCPTS-159	#12	20/1		0.90					51		B		52					0.90		20/1	#12	RCPTS-159
STORAGE-162	#12	20/1		1.26					53			C	54					1.00		20/1	#12	WORK ROOM-165
WORK ROOM-165	#12	20/1		1.00					55	A			56					1.00		20/1	#12	WORK ROOM-165
HUDDLE--167	#12	20/1		1.08					57		B		58					0.80		20/1	#12	EWC
WELLNESS-132	#12	20/1		0.90					59			C	60					1.00		20/1	#12	COPIER-130
USB-130	#12	20/1		0.72					61	A			62					0.90		20/1	#12	STORAGE-170
COFFEE-117	#12	20/1		1.40					63		B		64					1.50		20/1	#12	IDF-126
FURNITURE FEED	#12	*20/1		0.90					65			C	66					1.50		20/1	#12	IDF-126
FURNITURE FEED	#12	*20/1		0.90					67	A			68					1.50		20/1	#12	IDF-126
LOCKERS	#12	20/1		0.50					69		B		70	0.50						20/1	#12	SECURITY PANEL -126
SPARE	-	20/1							71			C	72					1.50		20/1	#12	RESTROOM-134A, 134B
OFFICE-113	#12	20/1		0.72					73	A			74					0.72		20/1	#12	JANITOR
COPIER-111	#12	20/1		1.00					75		B		76					1.00		20/1	#12	EWC
SM CONF-112	#12	20/1		1.08					77			C	78					1.08		20/1	#12	RECEPTION TV
COPY-111	#12	20/1		1.08					79	A			80					1.50		20/1	#12	RESTROOM-135, 136
FURNITURE FEED	#12	*20/1		0.90					81		B		82							20/1	-	SPARE
FURNITURE FEED	#12	*20/1		0.90					83			C	84							20/1	-	SPARE
TOTALS			0.00	40.51	0.00	0.00	0.00	1.00						1.20	0.00	0.00	5.40	34.45	0.00			TOTALS

PHASE	A	B	C	KVA	m	KVA
LIGHTING	0.00	0.00	0.00	0.00	MOTOR	
RECEPTACLE	26.10	24.64	25.12	75.86	(LARGEST)	
HEAT	0.00	0.00	0.00	0.00		
KITCHEN	0.00	0.00	0.00	0.00		
MISCELLANEOUS	0.70	0.50	1.00	2.20		
TTLS	26.80	25.14	26.12	**78.06**	**TTL CONNECTED LOAD**	

LEGEND: SHADED LIGHT GREY — EXISTING TO REMAIN; **BOLD TEXT** — NEW WORK IN EXISTING PANEL; STANDARD TEXT — NEW WORK IN NEW PANEL

TOTAL DESIGN AMPS 148.17

GENERAL NOTES:
1. PROVIDE GFCI BREAKERS FOR ALL CIRCUITS SERVING WET AREA APPLIANCES, KITCHEN EQUIPMENT, ETC. THAT IS FIXED EQUIPMENT AND IS DIFFICULT TO MOVE FOR ACCESS TO A GFCI RECEPTACLE.
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NEW — PANELBOARD SCHEDULE — PANEL L1B SECTION-2

MAIN SIZE: 250 | **MAIN TYPE:** MCB | **KAIC RATING:** 22 | **NEMA 1** | **MOUNTING:** SURFACE | **VOLTAGE:** 208 /120V 3PH,4W

DESCRIPTION	WIRE SIZE	AMPS POLE	LOAD (KVA) LTG	RCPT	MTR	HEAT	KITCH	MISC	CKT NO	PHASE			CKT NO	LOAD (KVA) MISC	KITCH	HEAT	MTR	RCPT	LTG	AMPS POLE	WIRE SIZE	DESCRIPTION
FC/HP-1	#8	30/2						2.60	85	A			86							20/1	-	SPARE
|	|	|						2.60	87		B		88							20/1	-	SPARE
FC/HP-2	#8	30/2						2.60	89			C	90							20/1	-	SPARE
|	|	|						2.60	91	A			92							20/1	-	SPARE
FC/HP-3	#8	30/2						2.60	93		B		94							20/1	-	SPARE
|	|	|						2.60	95			C	96							20/1	-	SPARE
SPARE	-								97	A			98							20/1	-	SPARE
SPARE	-								99		B		100							20/1	-	SPARE
SPARE	-								101			C	102							20/1	-	SPARE
SPACE									103	A			104									SPACE
SPACE									105		B		106									SPACE
SPACE									107			C	108									SPACE
SPACE									109	A			110									SPACE
SPACE									111		B		112									SPACE
SPACE									113			C	114									SPACE
SPACE									115	A			116									SPACE
SPACE									117		B		118									SPACE
SPACE									119			C	120									SPACE
SPACE									121	A			122									SPACE
SPACE									123		B		124									SPACE
SPACE									125			C	126									SPACE
TOTALS			0.00	0.00	0.00	0.00	0.00	15.60						0.00	0.00	0.00	0.00	0.00	0.00			TOTALS

PHASE	A	B	C	KVA	m	KVA
LIGHTING	0.00	0.00	0.00	0.00	MOTOR	
RECEPTACLE	0.00	0.00	0.00	0.00	(LARGEST)	
HEAT	0.00	0.00	0.00	0.00		
KITCHEN	0.00	0.00	0.00	0.00		
MISCELLANEOUS	5.20	5.20	5.20	15.60		
TTLS	5.20	5.20	5.20	**15.60**	**TTL CONNECTED LOAD**	

LEGEND: SHADED LIGHT GREY — EXISTING TO REMAIN; **BOLD TEXT** — NEW WORK IN EXISTING PANEL; STANDARD TEXT — NEW WORK IN NEW PANEL

TOTAL DESIGN AMPS 43.30

GENERAL NOTES:
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4. PROVIDE HANDLE TIES FOR BREAKERS WITH STAR '*' INDICATED NEXT TO BREAKER SIZE. SEE FURNITURE SYSTEMS ON FLOORPLANS.

PROJECT: 21-085

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DATE: 6.20.22
SCALE: NOTED
DRAWN BY: AMPED

DATE	REVISION

POWER SCHEDULES

E5.3

PROJECT NO. 21-043