THE CONTRACTOR SHALL REVIEW ALL CONSTRUCTION DRAWINGS, SPECIFICATIONS, EQUIPMENT INSTALLATION INSTRUCTIONS AND SHOP DRAWINGS OF ALL TRADES TO FAMILIARIZE HIMSELF WITH THE EXTENT OF THE WORK REQUIRED.

THE CONTRACTOR SHALL NOT SCALE THESE DRAWINGS. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT. UNLESS NOTED OTHERWISE. IT SHALL NOT BE THE INTENT OF THESE DOCUMENTS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE ELECTRICAL CONTRACTOR SHALL BE EXPECTED TO FURNISH AND INSTALL ALL ITEMS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. ALL CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY, EXACT ROUTING SHALL BE DETERMINED IN THE FIELD. UON.

ALL CUTTING AND PATCHING, FIRE SEALING, TRENCHING AND BACKFILL, ELECTRICAL COORDINATION, ETC. REQUIRED FOR THE INSTALLATION OF THIS WORK IS THE RESPONSIBILITY OF THIS CONTRACTOR.

IT SHALL BE UNDERSTOOD THAT ALL WORK SHALL COMPLY WITH THE LATEST EDITIONS OF NATIONAL ELECTRICAL CODE, APPLICABLE NATIONAL AND LOCAL CODES, LOCAL ORDINANCES, MANUFACTURERS' INSTALLATION INSTRUCTIONS, UL STANDARDS, NEPA. THAT SPECIFIED IN THESE DOCUMENTS, AND OTHER AUTHORITIES HAVING JURISDICTION OVER THE ELECTRICAL CONSTRUCTION WORK ON THIS PROJECT. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR.

THE REQUIREMENTS OF THE ARCHITECT'S DIVISION 1, GENERAL AND SPECIAL CONDITIONS, AND THE CONTRACT SHALL APPLY TO THIS WORK.

ALL MATERIAL SHALL BE NEW AND LISTED FOR ITS INTENDED USE. WHERE UNDERWRITER'S LABORATORIES LABELING IS AVAILABLE FOR THE CLASS OF MATERIAL INVOLVED, MATERIALS SHALL BE FURNISHED WITH UL LABEL OR LISTING, OR THE CONTRACTOR SHALL PROVE IT IS NOT REQUIRED. ALL EQUIPMENT SHALL HAVE UL LABELS AND BE LISTED FOR ITS INTENDED USE.

ELECTRICAL CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS FOR PERMITS, LICENSES, FEES, INSPECTIONS, INSURANCE FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK UNDER THIS CONTRACT AT

CONTRACTOR SHALL COMPLY WITH ALL RULES AND REGULATIONS OF OSHA AS APPLIED TO CONSTRUCTION PROJECTS.

IN THE EVENT A CONFLICT OCCURS BETWEEN THE CONTRACT, SPECIFICATIONS, DRAWINGS, REFERRED TO MANUFACTURERS' LITERATURE, CODES HAVING JURISDICTION OR OTHER DOCUMENTS REFERRED TO HEREIN. THIS CONTRACTOR SHALL CONTACT THE ARCHITECT AND ENGINEER FOR A RULING AND CLARIFICATION PRIOR TO SUBMITTING ANY BID DOCUMENTS. WHERE CONFLICTS ARE QUESTIONED AFTER BID SUBMITTALS, THE DOCUMENT OR DOCUMENTS WITH THE MOST STRINGENT, EXPENSIVE AND DETAILED REQUIREMENTS WILL BE ENFORCED BY THE ARCHITECT AND ENGINEER. THE CONTRACTOR SHALL BE REQUIRED TO FURNISH AND INSTALL THE MORE STRINGENT REQUIREMENTS AND AGREES THAT NO SEPARATE OR EXTRA PAYMENTS WILL BE MADE FOR ANY ITEM OF WORK OR MATERIALS REQUIRED TO FOLLOW THE MORE STRINGENT

ALL EQUIPMENT AND MATERIAL SHALL BE INSTALLED IN A FIRST CLASS WORKMAN-LIKE MANNER AND ALIGNED, LEVELED AND ADJUSTED FOR SATISFACTORY PERATION. INSTALL EQUIPMENT SO THAT ALL PARTS ARE EASILY ACCESSIBLE FOR INSPECTION, OPERATION, MAINTENANCE AND REPAIR.

REQUIREMENTS.

COMPLY WITH CODE REQUIREMENTS.

THE WORD "PROVIDE" MEANS THAT THIS CONTRACTOR SHALL FABRICATE, ERECT, CONNECT AND COMPLETELY INSTALL COMPLETE SYSTEMS PLACED IN PROPER OPERATING CONDITION. THIS SHALL INCLUDE ALL LABOR. PRODUCT OPTIONS ACCESSORIES AND INCIDENTAL MATERIALS REQUIRED TO COMPLETE THE INSTALLATION. THE WORD "CONNECT" MEANS THAT THIS CONTRACTOR SHALL PROVIDE (SEE DEFINITION ABOVE) ALL DISCONNECTING MEANS, OVERCURRENT PROTECTION AND WIRING REQUIRED TO PLACE THE EQUIPMENT AND SYSTEMS IN PROPER OPERATING CONDITION AND TO

ALL ELECTRICAL APPARATUS SHALL BE INSTALLED AT THE SAME MOUNTING HEIGHTS (UNLESS ALTERED BY AMERICANS WITH DISABILITIES ACT - ADA), USING THE SAME MATERIALS AND METHODS USED IN THE EXISTING CONSTRUCTION. THE QUALITY PERFORMANCE AND APPEARANCE OF THE NEW CONSTRUCTION SHALL MATCH THAT OF ANY EXISTING CONSTRUCTION.

FLECTRICAL CONTRACTOR SHALL FURNISH ALL, BUT NOT LIMITED TO, EQUIPMENT, TOOLS, SKILLED SUPERVISION NECESSARY FOR THE CONSTRUCTION, ERECTION, INSTALLATION. CONNECTION, TESTING AND ADJUSTMENT OF ALL CIRCUITS AND ELECTRICAL EQUIPMENT SHOWN OR NOTED ON PLANS.

IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL WORK IN ACCORDANCE WITH THE SPECIFICATIONS ASSOCIATED WITH THESE DRAWINGS. THE INSTALLATION OF ALL WORK PREFORMED AND ALL MATERIALS PROVIDED SHALL BE AS DIRECTED BY THE SPECIFICATIONS KEEPING IN MIND THAT THE NATIONAL ELECTRICAL CODE SHALL BE CONSIDERED AS A MINIMUM STANDARD AND THESE SPECIFICATIONS SHALL GOVERN ALL WORK. ALL EQUIPMENT SHALL BE AS SPECIFIED ON PLANS.

ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE AND FULLY OPERATIONAL ELECTRICAL SYSTEM, INSTALLED IN A GOOD WORKMANSHIP MANNER. ELECTRICAL CONTRACTOR SHALL INCLUDE ALL LABOR, EQUIPMENT, TOOLS AND MATERIALS FOR ELECTRIC DISTRIBUTION, AS SHOWN ON DRAWINGS.

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH POWER AND TELEPHONE COMPANIES AND ADHERE TO REQUIRED CRITERIA. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO

ELECTRICAL CONTRACTOR SHALL FURNISH ALL NEW SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, DISCONNECT SWITCHES, ETC. THAT ARE MANUFACTURED BY THE SAME MANUFACTURER. NEW PANELBOARDS ADDED TO AN EXISTING FACILITY SHALL BE OF THE SAME MANUFACTURER AS THE EXISTING PANELBOARDS. UNLESS NOTED AS EXISTING, ALL EQUIPMENT, WIRING, DEVICES, LUMINAIRES, LAMPS,

ETC., SHALL BE NEW AND AS SPECIFIED IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR FOR THE ADVANCE ORDERING OF LONG LEAD ITEMS SO AS NOT TO INTERFERE WITH THE PRODUCTION OF OTHER TRADES RESULTING IN ANY DOWN OR LAG TIME.

03 QUALITY ASSURANCE THIS CONTRACTOR SHALL VERIFY THE LOCATIONS AND MEASUREMENTS OF EQUIPMENT AND DEVICES BEFORE INSTALLATION TO AVOID CONFLICT WITH THE WORK OF OTHER TRADES. ANY UNCERTAINTIES AND CONFLICTS SHALL BE SUBMITTED TO THE ENGINEER

THE INTEGRITY OF ALL STRUCTURAL, FIRE AND SMOKE RATED PARTITIONS AND CEILINGS, ROOFING, AND WATER PROOFING SHALL BE MAINTAINED. CHECK NAMEPLATE DATA AND INSTALLATION DOCUMENTS OF ALL OWNER FURNISHED EQUIPMENT AND EQUIPMENT FURNISHED BY OTHER TRADES. VERIFY CIRCUIT SIZE, CONTROL REQUIREMENTS, AND MISCELLANEOUS REQUIREMENTS AGAINST THAT SHOWN IN THESE DOCUMENTS. ANY CONFLICT AND UNCERTAINTIES SHALL BE SUBMITTED TO THE ENGINEER FOR FINAL DECISION.

UPON COMPLETION OF WORK, THE CONTRACTOR SHALL DEMONSTRATE THE INSTALLATION AND MAKE SUCH TESTS AS MAY BE REQUIRED TO SATISFY THE ENGINEER AND OWNER THAT THE WORK IS INSTALLED IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS AND EQUIPMENT MANUFACTURER'S INSTRUCTIONS. TEST ALL LIGHTS, EQUIPMENT, APPLIANCES, AND OTHER SYSTEMS. ALL DEFECTS

SHALL BE PROMPTLY REMEDIED AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL TEST ALL WIRING AND CONNECTIONS FOR CONTINUITY AND GROUNDS AND CORRECT ALL FAULTS AT NO ADDITIONAL COST TO THE OWNER. CHECK SERVICE GROUND. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS. CHECK ALL EMPTY RACEWAYS TO ASSURE AN UNOBSTRUCTED AND USEABLE PATH FOR USE BY OTHER TRADES OR THE OWNERS VENDOR.

THE CONTRACTOR SHALL GUARANTEE THE SYSTEM INSTALLATION FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE AGAINST ANY DEFECT IN WORKMANSHIP OR MATERIAL. EXCEPTION: INCANDESCENT LAMPS SHALL BE GUARANTEED FOR 90

THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR TO ORIGINAL CONDITION ANY AND ALL DAMAGES TO BUILDING SURFACES, EQUIPMENT AND FURNISHINGS CAUSED DURING PERFORMANCE OF WORK.

CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY. ALL TEST EQUIPMENT SHALL BE FURNISHED BY THE CONTRACTOR AT HIS EXPENSE.

DURING THE CONSTRUCTION OF THIS PROJECT, THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF ELECTRICAL CONTRACT DRAWINGS ON WHICH SHALL BE RECORDED ALL, BUT NOT LIMITED TO, SIGNIFICANT CHANGES IN EQUIPMENT LOCATIONS, CIRCUIT ASSIGNMENT DEVIATIONS, EQUIPMENT SIZE CHANGES, ADDITIONS AND DELETIONS TO THE PROJECT, LOCATIONS OF ALL CONDUITS AND WIRING BELOW GRADE, LOCATIONS OF ALL INSTALLED PULL AND JUNCTION BOXES, FFFDER CIRCUIT LOCATIONS. FTC. THIS SET OF DRAWINGS SHALL BE USED TO

PREPARE RECORD DRAWINGS TO BE SUBMITTED TO THE OWNER UPON COMPLETION OF

UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL PREPARE AN OPERATION AND MAINTENANCE MANUAL WHICH SHALL INCLUDE CATALOG DATA. FOUIPMENT INFORMATION, WIRING DIAGRAMS, WARRANTY INFORMATION, RECOMMENDED MAINTENANCE PROCEDURES, REPLACEMENT PARTS LISTS, ETC. FOR THE ELECTRICAL INSTALLATION. THE QUANTITIES OF MANUALS SHALL BE AS REQUIRED BY THE ARCHITECTURAL SECTIONS OF THESE SPECIFICATIONS. THESE MANUALS SHALL BE DELIVERED TO THE ARCHITECT FOR APPROVAL AND PRESENTATION TO THE OWNER.

SHOP DRAWINGS OF MATERIALS, FOUIPMENT, LIGHTING FIXTURES AND WIRING DEVICES. SHALL BE SUBMITTED FOR APPROVAL. ALL EQUIPMENT SHALL BE AS SPECIFIED HERE IN OR AS CALLED FOR ON THE DRAWINGS AND ANY ITEM NOT SUBMITTED SHALL B PROVIDED AS SPECIFIED. THE RESPONSIBILITY TO ACCEPT OR REJECT ANY PROPOSED SUBSTITUTION REMAINS WITH THE PROJECT ENGINEER.

ALL OPERATING AND MAINTENANCE MANUALS SHALL BE DELIVERED TO THE OWNER. SUBMIT CERTIFICATES OF INSPECTION AND ACCEPTANCE TO THE ENGINEER. ANY ADDITIONAL COSTS INCURRED FOR SUBSTITUTE EQUIPMENT, MATERIALS AND METHODS SHALL BE PAID BY THE CONTRACTOR UNLESS APPROVED BY THE ENGINEER. CREDITS SHALL BE GIVEN TO THE OWNER WHERE SUCH SUBSTITUTE EQUIPMENT AND

METHODS RESULT IN LESS EXPENSE TO THE CONTRACTOR. ANY AND ALL DELAYS CAUSED BY THE REJECTION AND RE-SUBMITTAL OF SHOP DRAWINGS THAT ARE OR WERE IN CONFLICT WITH THE CONTRACT DRAWINGS SHALL BE THE DIRECT RESPONSIBILITY OF THIS CONTRACTOR.

CONTRACTOR AND EQUIPMENT SUPPLIERS SHALL PERFORM AND PROVIDE ALL COORDINATION STUDIES AND ARC FLASH STUDIES REQUIRED BY NATIONAL ELECTRICAL CODE FOR ALL REQUIRED SYSTEMS. REPORTS SHALL BE PROVIDED TO ENGINEER, INSPECTIONS DEPARTMENT AND OWNER.

THE ELECTRICAL CONTRACTOR SHALL KEEP ALL AREAS IN WHICH WORK IS BEING PERFORMED, FREE FROM DEBRIS AT ALL TIMES AND SAID AREAS SHALL BE LEFT BROOM CLEAN AT THE END OF EACH WORKING DAY. ALL ELECTRICAL WORK SHALL BE CLEANED AND MADE READY FOR FINAL INSPECTION

AND USE BY THE OWNER.

IE CONTRACT DOCUMENTS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE EVERY DETAIL OF CONSTRUCTION OR EVERY ITEM OF MATERIAL OR FOULPMENT REQUIRED. THE CONTRACT DOCUMENTS ARE INTENDED TO ILLUSTRATE AND SPECIFY HE GENERAL EXTENT. TYPE OF SYSTEM AND PERFORMANCE WITH ANY SPECIAL CONDITION AND FUNCTIONS REQUIRED. THE FLECTRICAL CONTRACTOR SHALL BE EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE AND OPERATABLE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO

DOCUMENTS OF ALL TRADES AND SHALL COORDINATE WITH OTHER TRADES SO AS TO AVOID CONFLICTS AND PROVIDE EQUIPMENT CONNECTIONS AS REQUIRED BY EQUIPMENT SHOP DRAWINGS AND EQUIPMENT NAMEPLATES. INDICATED LOCATIONS OF OUTLETS, EQUIPMENT CONNECTIONS, ETC. ARE APPROXIMATE AND SHALL BE VERIFIED BY REFERENCE TO RELATED DOCUMENTS (I.E. ARCHITECTURAL

CONTRACTOR SHALL MAINTAIN ON THE JOB SITE ONE COMPLETE SET OF CONTRACT

DRAWINGS, EQUIPMENT SHOP DRAWINGS, MANUFACTURER'S INSTRUCTIONS, MECHANICAL AND PLUMBING DRAWINGS, STRUCTURAL DRAWINGS, ETC.). ANY SLASH MARKS SHOWN FOR CONDUCTOR QUANTITIES ARE INTENDED TO ILLUSTRATE THE WIRING INTENT ONLY. NOTE THAT IT IS NOT THE INTENT OF THE CONTRACT DRAWINGS TO INDICATE ALL CONDUCTORS REQUIRED TO PROVIDE COMPLETE AND FULLY

RISER DIAGRAMS ARE DIAGRAMMATIC AND NOT INTENDED TO SHOW ALL REQUIRED MATERIALS. DEVICES AND QUANTITIES OF STATIONS OR DEVICES. THE FLOOR PLANS. SPECIFICATIONS, CODES, REGULATIONS, LAWS, AND MANUFACTURER REQUIREMENTS ALSO SUPPLEMENT AND GOVERN THE REQUIREMENTS AND QUANTITIES OF DEVICES FOR

THE CONTRACT DOCUMENTS ARE INTENDED TO ILLUSTRATE TO COMPETENT AND EXPERIENCED CONTRACTORS AND WORKMEN THE SYSTEMS REQUIRED AND TO PERMIT SUCH PEOPLE TO TAKE-OFF THE REQUIRED MATERIALS AND EQUIPMENT, LAY OUT THE WORK SPECIFIED, AND EXECUTE ALL NECESSARY MEANS REQUIRED TO PROVIDE THE

COMPLETE AND OPERABLE SYSTEMS SPECIFIED AND ILLUSTRATED.

THE SERVICE CONDUITS, EQUIPMENT, AND NEUTRAL CONDUCTORS SHALL BE GROUNDED. THE GROUND CONNECTIONS FOR SYSTEM NEUTRAL AND CONDUIT SYSTEMS SHALL BE MADE AT THE SERVICE ENTRANCE. RUN A BARE COPPER GROUNDING CONDUCTOR IN CONDUIT FROM POINT OF ENTRANCE EQUIPMENT TO THE METAL COLD WATER LINE WHERE IT ENTERS THE BUILDING PLUS THE BUILDING STEEL IF AVAILABLE. PROVIDE A SUPPLEMENTAL MADE ELECTRODE UTILIZING GROUND ROD(S), OTHER METAL UNDERGROUND SYSTEMS OR STRUCTURES, OR PLATE ELECTRODE IN ACCORDANCE WITH NEC 250-66 IF BUILDING STEEL IS NOT AVAILABLE. THE GROUNDING CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE NEC 250-122. ALL GROUNDING CONDUCTORS SHALL BE INSTALLED AS TO PERMIT SHORTEST PATH FROM EQUIPMENT GROUND. ALL CONNECTIONS TO GROUND CONDUCTORS SHALL BE ACCESSIBLE FOR INSPECTION AND MADE WITH APPROVED SOLDERLESS CONNECTORS, EXOTHERMIC WELD, OR BOLTED TO THE EQUIPMENT OR STRUCTURE TO BE GROUNDED. ALL CONTACT SURFACES SHALL BE THOROUGHLY CLEANED BEFORE CONNECTIONS ARE MADE TO INSURE GOOD METAL TO METAL CONTACT. ALL CONNECTIONS TO GROUND RODS AND

OR BUILDING FOOTER STEEL SHALL BE MADE BY EXOTHERMIC WELDS. IN NO CASE SHALL THE RESISTANCE OF THE "GROUND" EXCEEDED 25 OHMS. ALL ELECTRICAL WORK SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250. ALL "CSST" GAS PIPING SHALL HAVE A BONDING GROUND IN ACCORDANCE WITH NEC ARTICLE 250 AND SIZED PER NEC TABLE 250.66.

WIRING IN PVC CONDUIT SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR. PROVIDE EQUIPMENT GROUNDING MEANS FOR TELEPHONE EQUIPMENT AND FIRE ALARM GROUND FAULT CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR.

PROVIDE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN EACH RACEWAY UNLESS OTHERWISE NOTED. EACH GROUNDED RECEPTACLE SHALL HAVE A GROUNDING JUMPER ATTACHED TO THE BOX WITH A SCREW. REMOVAL OF ANY DEVICE SHALL NOT DISRUPT THE GROUND

BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM NO. 12 AWG, UNLESS OTHERWISE INDICATED ON THE DRAWINGS. CONDUCTORS FOR SIGNAL AND PILOT CONTROL

CIRCUITS MAY BE NO. 16 AWG. ALL CONDUCTORS SHALL BE STRANDED OR SOLID COPPER CONDUCTORS FOR #12 AND #10 AWG AND STRANDED FOR #8 AND LARGER WITH 600 VOLT THHN/THWN INSULATION UNLESS OTHERWISE SHOWN ON THE DRAWINGS. INSULATION TO LIGHT FIXTURES OR SPECIAL EQUIPMENT SHALL BE AS REQUIRED BY NAMEPLATES OR TO SUITE THE CONDITION. CONDUCTORS FOR CIRCUITS & EQUIPMENT RATED 100 AMP OR LESS SHALL BE SIZED FOR 60°C. CONDUCTORS FOR CIRCUITS & EQUIPMENT RATED ABOVE 100 AMP SHALL BE SIZED FOR 75°C.

TO COMPENSATE FOR VOLTAGE DROP ACROSS A BRANCH CIRCUIT, WIRE SHALL BE UPSIZED IN RELATION TO LENGTH. SEE CONDUCTOR SIZING TABLE AND APPLY COLOR CODE CONDUCTORS FOR VOLTAGE SYSTEMS SHALL BE AS FOLLOWS:

208 VOLTS 480 VOLTS A PHASE: BLACK A PHASE: BROWN B PHASE: RED B PHASE: ORANGE C PHASE: C PHASE: YELLOW NEUTRAL: NEUTRAL: GRAY

COMPLYING WITH SYSTEM PHASING ALONG THE ENTIRE LENGTH.

CONTINUITY OF DOWNSTREAM DEVICES.

GROUNDING CONDUCTORS: GREEN CONDUCTORS SHALL BEAR READABLE MARKINGS ALONG THE ENTIRE LENGTH. CONDUCTORS #6 AWG OR SMALLER SHALL BEAR FACTORY COLOR INSULATION

TYPE "MC" CABLE SHALL HAVE FACTORY COLOR INSULATION ON CONDUCTORS COMPLYING WITH SYSTEM PHASING ALONG THE ENTIRE LENGTH OF THE CONDUCTORS. FIELD PHASE TAPING WILL NOT BE ALLOWED. THE USE OF TYPE "AC" OR "NM" CABLE SHALL BE PROHIBITED.

JOINTS FOR #10 AWG OR SMALLER SHALL BE MADE WITH APPROVED TWIST-ON TYPE CONNECTORS AND INSULATED WITH SCOTCH #33 ELECTRICAL TAPE. JOINTS FOR #8 OR LARGER SHALL BE WITH MECHANICAL PRESSURE TYPE CONNECTORS OR LUGS AND PROPERLY TAPED WITH SCOTCHFILL AND SCOTCH #33 ELECTRICAL TAPE TO 150% OF THE INSULATING VALUE OF THE CONDUCTOR.

WIRING WITHIN PANELBOARDS, JUNCTION BOXES AND OUTLET BOXES SHALL BE NEATLY SQUARED AND BUNCHED TOGETHER. DO NOT USE PLASTIC TIE WRAP SYSTEMS. PROVIDE CIRCUIT NUMBER ON EACH CONDUCTOR WITHIN PANELBOARDS, JUNCTION BOXES AND OUTLET BOXES. PROVIDE PANEL NAME AND CIRCUIT NUMBERS ON ALL JUNCTION BOX COVERS

ALL WIRING LUGS AND TERMINALS THROUGHOUT THE PROJECT, INCLUDING BUT NOT LIMITED TO LUGS FOR SWITCHBOARDS, PANELBOARDS, CIRCUIT BREAKERS, MOTOR STARTERS, TRANSFORMERS, WIRING DEVICES, AND/OR EQUIPMENT SHALL BE 75° TEMPERATURE RATING. LUG AND TERMINAL SIZES SHALL MATCH THE CONDUCTOR SIZE. PARALLEL CONDUCTORS SHALL BE EXACTLY THE SAME LENGTH.

INDICATING CIRCUIT CONTAINED WITHIN BOX WITH PERMANENT MARKER.

TRAVELERS FOR SWITCHING SHALL BE THE SAME COLOR AS THE PHASE CONDUCTORS. NO MORE THAN THREE CIRCUITS SHALL BE ALLOWED IN ANY ONE CONDUIT. NO CONDUIT SHALL CONTAIN ANY SHARED NEUTRAL CONDUCTORS OR MORE THAN ONE CONDUCTOR OF THE SAME PHASE.

ALL WIRING SHALL BE IN CONDUIT OR TYPE "MC" CABLE WHICH IS ALLOWABLE IN CONCEALED LOCATIONS ONLY FOR SIZES #12 & #10 CONDUCTORS WITH INSULATED GROUND AND INSULATED THROAT CONNECTORS. MINIMUM SIZE CONDUIT IS 1/2". THE CONDUIT SHALL BE INTERMEDIATE (IMC), RIGID GALVANIZED (RGS) OR ELECTRICAL METALLIC TUBING (EMT) WITH STEEL COMPRESSION TYPE FITTINGS.

ALL WIRING FOR POWER, FIRE ALARM, SECURITY AND/OR COMMUNICATIONS IN EXPOSED AREAS SHALL BE IN CONDUIT ALL CONDUITS IN FINISHED AREAS SHALL BE CONCEALED UNLESS OTHERWISE INDICATED ON THE DRAWINGS. ALL CONDUITS IN UNFINISHED AREAS MAY BE RUN EXPOSED AND SHALL BE PARALLEL

WITH AND PERPENDICULAR TO THE STRUCTURE. PVC SCHEDULE 40 WILL BE ALLOWED UNDERGROUND, BELOW FLOOR SLABS, OUTSIDE OF THE BUILDING FOUNDATION BELOW GRADE FOR SERVICES TO BUILDING NOT SUBJECT TO PHYSICAL DAMAGE, OR WHERE INDICATED ON THE DRAWINGS. HOWEVER, ALL RISERS AND ELBOWS SHALL BE GALVANIZED RIGID STEEL, RGS CONDUITS SHALL EXTEND A MINIMUM OF 18" BELOW GRADE. APPLY BITUMASTIC COATING TO ALL METALLIC CONDUITS IN SLABS OR UNDERGROUND. THE USE PVC SCHEDULE 80 WHERE CONDUIT IS SUSCEPTIBLE TO PHYSICAL DAMAGE SHALL BE ACCEPTABLE PROVIDING IT IS NOT EXPOSED TO VIEW.

ALL MOTORS, EQUIPMENT, AND OTHER ITEMS SUBJECT TO VIBRATION SHALL BE CONNECTED WITH FLEXIBLE METAL CONDUIT (FMC) OR LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC) WITH LISTED FITTINGS.

FLEXIBLE METAL CONDUIT SHALL BE STEEL. FLEXIBLE CONDUIT OUTDOORS OR IN DAMP OR WET LOCATIONS SHALL BE LIQUID-TIGHT WITH BITE-TIGHT STEEL CONNECTORS. ALL CABLES SHALL BE SECURED WITHIN 12" OF TERMINATIONS AND EVERY SIX (6) FEET. CONDUIT PENETRATIONS THROUGH RATED WALLS OR ASSEMBLIES SHALL BE SEALED WITH A UL LISTED FIRE SEALANT. CONDUIT RUN THROUGH BUILDING EXPANSION JOINTS SHALL HAVE APPROPRIATE

CONDUITS IN HAZARDOUS AREAS SHALL BE THREADED GALVANIZED RIGID STEEL (GRS), THREADED INTERMEDIATE METAL CONDUIT (IMC) OR LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC) WITH LISTED FITTINGS. CONDUITS PASSING THROUGH BUILDING FOUNDATION WALLS OR OTHER MOISTURE PRONE

SURFACE SHALL BE PROPERLY WATER PROOFED. WHERE CORE DRILLING OF FLOOR/WALLS ARE REQUIRED, CONTRACTOR SHALL SEAL OPENINGS WATERTIGHT AFTER UTILITIES HAVE BEEN INSTALLED. LOCATION OF CORED HOLES SHALL BE COORDINATED WITH LOCATION OF EQUIPMENT IN A MANNER TO BE CLEAN AND FUNCTIONAL. THE CONTRACTOR SHALL INSTALL ONLY ONE CONDUIT PER HOLE AND SEAL THE OPENING AROUND THE CONDUIT AS SPECIFIED.

CONDUITS RUN IN FLOOR SLABS SHALL BE SPACED APART AND REMAIN CLEAR OF STRUCTURAL COLUMNS AS REQUIRED BY THE STRUCTURAL ENGINEER. CONDUITS PENETRATING THE ROOF STRUCTURE FOR THE PURPOSE OF SERVING EQUIPMENT SHALL UTILIZE THE OPENINGS THROUGH ROOF CURBS WHERE POSSIBLE. PENETRATIONS THROUGH THE ROOF SHALL BE HELD TO A MINIMUM.

SERVICE ENTRANCE CONDUITS SHALL BE SPACED APART AS REQUIRED BY NEC AND CONDUITS PENETRATING THE ROOF SHALL BE PROVIDED WITH A SUITABLE PREFABRICATED ROOF CURB OR PITCH POCKET.

FLEXIBLE CONDUIT WHIPS TO LIGHTING FIXTURES MAY BE 3/8" WITH A MAXIMUM LENGTH OF 6'-0" AND SUPPORTED WITHIN 12" OF TERMINATIONS. ALL WIRING SHALL BE INSTALLED IN CONDUIT IN ACCORDANCE WITH THE N.E.C. AND SO THAT THE REQUIRED CONDUCTORS MAY BE PULLED WITHOUT INJURY OR STRAIN AND

PROVIDE ALL PULL BOXES AND FITTINGS WHEREVER NECESSARY OR SHOWN. ALL STRAIGHT CONDUIT RUNS SHALL NOT EXCEED 100 FEET WITHOUT PULL BOX, NOT OVER 75 FEET FOR RUN WITH ONE (1) RIGHT ANGLE BEND AND NOT OVER 50 FEET FOR RUN

ALL CONDUIT SHALL BE PROPERLY SUPPORTED IN ACCORDANCE WITH THE N.E.C. AND SECURED WITHIN THREE (3) FEET OF TERMINATION AND ALL CONDUITS SHALL BE INDEPENDENTLY SUPPORTED EVERY TEN (10) FEET FROM STRUCTURE AND NOT FROM DUCTWORK, CEILING HANGERS OR CEILING SUPPORT WIRES. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL WIRES AND NYLON BUSHINGS AT BOTH ENDS.

13 LIGHTING FIXTURES FURNISH AND INSTALL LIGHTING FIXTURES AS SHOWN AND SCHEDULED ON THE

THE CATALOG NUMBERS GIVEN IDENTIFY THE SERIES OF LIGHT FIXTURE ONLY AND MAY NOT SPECIFY ALL MOUNTING HARDWARE AND ACCESSORIES REQUIRED. THE CATALOG NUMBERS ALSO MAY NOT IDENTIFY ALL ITEMS AND FINISHES REQUIRED BY THE LIGHT FIXTURE DESCRIPTION. INCLUDE ALL REQUIRED HARDWARE AND ACCESSORIES.

COORDINATE FIXTURE TYPE AND TRIM WITH CEILING CONSTRUCTION. RECESSED INCANDESCENT, FLUORESCENT, LED AND HID LIGHTING FIXTURES SHALL HAVE THERMAL PROTECTION. FIXTURES RECESSED IN INSULATED CEILINGS SHALL BE LISTED FOR DIRECT CONTACT WITH INSULATION MATERIAL OR MAINTAIN REQUIRED CLEARANCES FROM

RECESSED LIGHTING FIXTURES IN NON-ACCESSIBLE CEILINGS SHALL HAVE BOTTOM ALL LINEAR FIXTURES IN LAY-IN CEILINGS SHALL BE SUPPORTED FROM THE STRUCTURE INDEPENDENT OF THE CEILING SYSTEM AT ALL FOUR (4) CORNERS AND ATTACHED WITH LISTED GRID CLIPS. ALL OTHER RECESSED FIXTURES (ie. RECESSED CANS) IN LAY-IN CEILINGS SHALL BE SUPPORTED FROM THE STRUCTURE INDEPENDENT OF THE CEILING SYSTEM AT TWO LOCATIONS (OPPOSITE SIDES) AND ATTACHED WITH LISTED GRID CLIPS. RECESSED LIGHT FIXTURES IN FIRE RATED CEILINGS SHALL HAVE A FIRE RATED "TENT"

BUILT OVER THE FIXTURE TO MAINTAIN THE STATED INTEGRITY OF THE CEILING. SUCH FIXTURES SHALL BE RATED FOR INSTALLATION IN AN INSULATED CEILING AND DESIGNED TO WITHSTAND THE INCREASED TEMPERATURE BUILD-UP AROUND THE FIXTURE. LIGHTING FIXTURES INDICATED TO BE INSTALLED IN WET OR DAMP LOCATIONS SHALL HAVE THE APPROPRIATE UL "WET" OR "DAMP" LABELS. THE MANUFACTURER OF EACH LIGHTING FIXTURE SHALL REVIEW THE APPLICATION OF HIS EQUIPMENT AND CERTIFY AT THE TIME OF SHOP DRAWING SUBMITTAL THAT HIS FIXTURE HAS BEEN PROPERLY APPLIED AND CAN BE INSTALLED, MAINTAINED AND

LIGHTING FIXTURES IN COLD ATMOSPHERE SHALL HAVE BALLASTS SUITABLE FOR THE TEMPERATURE TO BE ENCOUNTERED. BALLASTS SHALL BE MANUFACTURED BY OSRAM/SYLVANIA, UNIVERSAL, OR ADVANCE.

SERVICED WHERE SHOWN ON THE DRAWINGS.

LED ELECTRONIC DRIVERS SHALL BE UL CLASS 2 AND HAVE A SOUND RATING OF CLASS "A" WITH A LIFE EXPECTANCY OF 50,000 HOURS. DRIVERS SHALL BE CAPABLE OF REDUCING OUTPUT POWER IF CASE TEMPERATURE EXCEEDS 90 DEG. DRIVERS SHALL BE CAPABLE OF 0-10V DIMMING.

THE CONTRACTOR SHALL FURNISH LAMPS WITH ALL LIGHT FIXTURES. ALL LAMPS SHALL BE AS SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE.

OUTLET BOXES SHALL BE METAL TYPE (STEEL OR ALUMINUM) AS MANUFACTURED BY STEEL CITY, RACO, APPLETON, OR APPROVED EQUAL. OUTLET BOXES SHALL BE 4" SQUARE MINIMUM AND SIZED PER NEC. THE USE OF GANGABLE BOXES SHALL BE PROHIBITED. OUTLET BOXES TO BE INSTALLED IN PLASTER OR GYPSUM-BOARD WALLS SHALL BE

EQUIPPED WITH PLASTER RING DEVICE COVER. BOXES FOR DUPLEX RECEPTACLES. SWITCHES, ETC. SHALL BE A MINIMUM OF 4" SQUARE AND 2 1/8" DEEP. BOXES FOR TELE/DATA OUTLETS SHALL BE A MINIMUM OF 4" SQUARE AND 2 1/8" DEEP. DEVICE COVERS SHALL BE SO SELECTED THAT THE DEPTH OF THE RAISED RING IS WITHIN 1/8" OF THE NOMINAL THICKNESS OF THE GYPSUM-BOARD, PLASTER OR CONCRETE. UON.

OUTLET BOXES IN MASONRY WALLS SHALL BE SUITABLE FOR INSTALLATION IN BLOCK AND CONCRETE WALLS. ALL OUTLET BOXES SHALL BE FLUSH AND SECURELY MOUNTED. OUTLET BOXES IN METAL STUD WALLS SHALL BE SECURED TO THE STUDS WITH "CADDY" OR "STEEL CITY" BOX SUPPORTS OR OTHER APPROVED SUPPORT. ALL OUTLET BOXES SHALL RECEIVE

OUTLET BOXES IN WET AND/OR DAMP LOCATIONS SHALL BE MALLEABLE IRON TYPE WITH THREADED HUBS AND GASKETED LOCKABLE WEATHERPROOF "EXTRA-DUTY" COVER OUTLET BOXES WITHIN RATED WALLS AND MOUNTED ON OPPOSITE SIDES OF THE WALLS SHALL BE SPACED A MINIMUM OF 24" APART HORIZONTALLY AND HAVE ONE STUD SPACE BETWEEN THE BOXES. OUTLET BOXES EXCEEDING 16 SQUARE INCHES IN RATED

WALLS SHALL HAVE A RATED GWB ENCLOSURE CONSTRUCTED AROUND THE BOX. FLOOR OUTLET BOXES SHALL BE MOUNTED FLUSH WITH FINISHED FLOOR AND BE "UL" LISTED AND APPROVED FOR SCRUB/MOP USE.

DEVICES SHALL BE "HD" SPECIFICATION GRADE, DECORA TYPE, WHITE COLOR UNLESS OTHERWISE NOTED AND AS MANUFACTURED BY HUBBELL, P & S, LEVITON, OR APPROVED EQUAL. TERMINATIONS TO DEVICES WITH THE USE OF STRANDED WIRE SHALL BE MADE WITH INSULATED STA-KON TERMINAL STUDS.

SWITCHES SHALL BE RATED 20 AMP, 120/277 VOLT. DUPLEX RECEPTACLES SHALL BE RATED 20 AMP, 125 VOLT GROUNDING TYPE WHERE INDICATED TO BE CONNECTED TO A MULTI-OUTLET CIRCUIT. DUPLEX RECEPTACLES ON A DEDICATED CIRCUIT SHALL BE RATED 20 AMPS, 125V GROUNDING TYPE.

DEVICE COVER PLATES SHALL BE #302 STAINLESS STEEL. DOR OUTLET DEVICES SHALL BE UL LISTED AND APPROVED FOR SCRUB/MOP USE COVER PLATES. PROVIDE PLASTIC ENGRAVED LABELS INDICATING PANEL CIRCUIT NUMBERS ATTACHED TO EQUIPMENT RATED 100 AMP OR LESS SHALL HAVE LUGS RATED FOR 60°C. EQUIPMENT

PANELBOARD SHALL BE MANUFACTURED BY SIEMENS, CUTLER-HAMMER, OR SQUARE-D. MANUFACTURER SPECIFIC EQUIPMENT IS SHOWN ON THE DRAWINGS TO INDICATE THE CIRCUIT BREAKERS SHALL BE MOLDED CASE, FULL SIZE, BOLTED TO THE SUPPLY BUSS UNLESS OTHERWISE NOTED. MULTI-POLE BREAKERS SHALL HAVE COMMON TRIP. PROVIDE PANEL DIRECTORY WITH EACH PANEL. DIRECTORY SHALL BE TYPE WRITTEN FOR ASSIGNED CIRCUITS AND NEATLY PENCILED-IN FOR SPARE BREAKERS AND SPACES.

RATED ABOVE 100 AMP SHALL HAVE LUGS RATED FOR 75°C.

ALL PANEL DOORS SHALL BE HINGED AND HAVE A LOCK AND KEY.

19 PANELBOARDS

PANELBOARD BUSSING SHALL BE STANDARD ALUMINUM UNLESS OTHERWISE INDICATED ON PANEL SCHEDULES. ALL PANELBOARDS SHALL HAVE AN EQUIPMENT GROUNDING BAR. PROVIDE A PHENOLIC ENGRAVED NAMEPLATE ON THE COVER OF EACH PANELBOARD NAMEPLATE SHALL INDICATE PANEL DESIGNATION, ORIGINATION, AND VOLTAGE. LABELS SHALL BE ENGRAVED PLASTIC WITH WHITE LETTERS ON BLACK BACKGROUND FOR 120/208V EQUIPMENT AND WHITE LETTERS ON A RED BACKGROUND FOR 277/480V EQUIPMENT. INDIVIDUAL ELECTRICAL METERS AND SWITCHGEAR SHALL BE CLEARLY

LABELED TO INDICATE THE SPACE AND/OR AREA SERVED. PROVIDE STRIPPING ON THE FLOOR AROUND ELECTRICAL PANELS TO CLEARLY IDENTIFY AND INDICATE THE "NOT LESS THAN 36" OF WORKING CLEARANCE AREA" AROUND ELECTRICAL EQUIPMENT AND THAT THIS AREA IS A "NO STORAGE AREA". LIGHTING AND POWER PANELBOARDS IN FINISHED AREAS SHALL BE RECESSED AND PROVIDED WITH FOUR 3/4" EMPTY CONDUITS STUBBED UP 6" INTO ACCESSIBLE CEILING

SPACE AND CAPPED. PROVIDE MOUNTING BACKBOARDS FOR ALL SURFACE MOUNTED ELECTRICAL AND COMMUNICATION EQUIPMENT. BACKBOARDS SHALL BE 3/4" TYPE "AC" PLYWOOD, PAINTED ON BOTH SIDES AND EDGES WITH TWO COATS OF LIGHT GRAY PAINT. NO SERIES RATING OF CIRCUIT BREAKERS IS ALLOWED.

ALL CIRCUIT BREAKERS WITH RATINGS OF 150A AND ABOVE SHALL HAVE ADJUSTABLE ALL CIRCUIT BREAKERS WITH RATINGS OF 600A AND ABOVE SHALL BE SOLID STATE. ALL PANELBOARDS SHALL BE MARKED AND LABELED IN COMPLIANCE WITH NEC ARTICLE

THIS CONTRACTOR SHALL FURNISH AND INSTALL A DISCONNECTING MEANS, WHERE REQUIRED BY CODE OR AS INDICATED ON THE CONTRACT DOCUMENTS, FOR ALL MOTORS, HVAC EQUIPMENT, HEATERS, APPLIANCES, WATER HEATERS, PUMPS, AND OTHER ALL POWER WIRING AND TERMINATIONS TO HVAC, PLUMBING, AND OTHER EQUIPMENT

OTHERWISE NOTED. ALL ELECTRICAL EQUIPMENT SHALL BE RAINTIGHT WHERE EXPOSED TO THE WEATHER. ALL FLEX CONDUITS CONNECTED TO SUCH EQUIPMENT SHALL BE LIQUID-TIGHT (LFMC).

SHALL BE BY THIS CONTRACTOR. CONTROL WIRING SHALL BE BY OTHERS UNLESS

WEATHERPROOF DUPLEX "GFI" RECEPTACLES SHALL BE PROVIDED NEAR ALL HVAC ALL DISCONNECT SWITCHES SHALL BE HORSEPOWER RATED, FUSED, HEAVY-DUTY TYPE WITH AMPERE RATINGS AND POLES AS REQUIRED TO ACCOMMODATE THE EQUIPMENT SERVED. CONTRACTOR SHALL VERIFY PROTECTIVE DEVICE RATING FOR EQUIPMENT PRIOR

EQUIPMENT WITH NAMEPLATE DATA INDICATING "MAX FUSE SIZE" SHALL BE EQUIPPED WITH A FUSED SAFETY SWITCH WITH APPROPRIATE FUSES. USE DUAL-ELEMENT TIME DELAY FUSES FOR MOTOR AND COMPRESSOR LOADS. SWITCHES USED FOR SERVICE ENTRANCE EQUIPMENT SHALL HAVE NEUTRAL AND GROUNDING BARS AND PROVISIONS FOR PADLOCKING. PROVIDE A PHENOLIC ENGRAVED NAMEPLATE ON THE COVER OF EACH DISCONNECT NAMEPLATE SHALL INDICATE EQUIPMENT BEING SERVED AND VOLTAGE. LABELS SHALL BE

EQUIPMENT AND WHITE LETTERS ON A RED BACKGROUND FOR 277/480V EQUIPMENT. BALLASTS SHALL BE ELECTRONIC TYPE <10% THD MINIMUM OR AS SPECIFIED IN THE ACCEPTABLE MANUFACTURERS: SQUARE D COMPANY, CULTER-HAMMER OR SIEMENS. PROVIDE FACTORY-ASSEMBLED TRANSFORMERS COMPLYING WITH APPLICABLE PORTIONS OF NEMA STANDARDS PUBLICATIONS ST 20 AND TR 27, RATED FOR CONTINUOUS

OPERATION AT RATED KVA.

ENGRAVED PLASTIC WITH WHITE LETTERS ON BLACK BACKGROUND FOR 120/208V

ENERAL PURPOSE: CONTINUOUS OPERATION OF RATED KVA. 65 DEGRESS C. MAXIMUM TRANSFORMER SURFACE TEMPERATURE RISE; TERMINAL ENCLOSURE WITH HINGED COVER, O ACCOMMODATE PRIMARY AND SECONDARY COIL WIRING CONNECTIONS AND ELECTRICAL SUPPLY RACEWAY TERMINAL CONNECTOR; 75 DEGREES C MAXIMUM TERMINAL COMPARTMENT TEMPERATURE WITH TRANSFORMER OPERATING CONTINUOUSLY AT RATED LOAD AND 40 DEGREES C AMBIENT TEMPERATURE; WIRING CONNECTIONS SUITABLE FOR COPPER OR ALUMINUM WIRING: CORE AND COILS FLECTRICALLY GROUNDED TO TRANSFORMER ENCLOSURE WITH FLEXIBLE METAL GROUND STRAP; PRIMARY WINDING ISOLATED AND INSULATED FROM SECONDARY WINDING.

VOLTAGE REGULATION TAPS: 6 PROVIDED WITH PRIMARY WINDING, FOUR 2-1/2 % INCREMENTS BELOW FULL-RATED VOLTAGE AND TWO 2-1/2 % INCREMENTS ABOVE INSULATION: TRANSFORMER 45 KVA OR LESS - CLASS 150; TRANSFORMER ABOVE 45 KVA - CLASS 220. VIBRATION ISOLATION: INTEGRALLY MOUNTED VIBRATION ISOLATION SUPPORTS BETWEEN CORE AND COIL ASSEMBLY AND TRANSFORMER ENCLOSURE. MAXIMUM SOUND LEVEL RATING: TRANSFORMER 45 KVA OR LESS - 45 DECIBLES;

SHEET METAL FULLY ENCLOSING TRANSFORMER; FACTORY PHOSPHATIZED AND LIGHT GRAY FINISH PAINTED WITH EXTERIOR ENAMEL; METAL PLATE WITH COMPLETE TRANSFORMER DATA PERMANENTLY ATTACHED. PROVIDE REQUIRED GROUNDING FOR A SEPARATELY DERIVED SYSTEM AS OUTLINED BY

TRANSFORMER ABOVE 45 KVA - 50 DECIBELS

HE ELECTRICAL CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROVIDING SEISMIC SUPPORT AND BRACING OF ELECTRICAL EQUIPMENT TO RESIST THE EFFECTS OF EARTHQUAKES AND ANY SPECIAL INSPECTIONS BASED ON GEOGRAPHIC LOCATION AS REQUIRED. THE SEISMIC RESTRAINTS AND SPECIAL INSPECTIONS AS REQUIRED SHALL MEET ALL APPLICABLE STATE AND LOCAL BUILDING CODE REQUIREMENTS.

HE ELECTRICAL CONTRACTOR SHALL VERIFY WITH THE ARCHITECT, STRUCTURAL ENGINEER AND SITE GEOTECH ENGINEER THE BUILDING USE, OCCUPANCY CATEGORY (II, III OR IV), SEISMIC USE GROUP (I, II OR III), SITE CLASS (A, B, C, D, E OR F) AND SEISMIC DESIGN CATEGORY. IF FINAL SEISMIC DESIGN CATEGORY IS A OR B, THEN SEISMIC RESTRAINTS ARE EXEMPT FROM ELECTRICAL SYSTEMS. IF SEISMIC DESIGN CATEGORY IS OTHER THAN A OR B, THE ELECTRICAL CONTRACTOR

PRIOR TO INSTALLATION OF ELECTRICAL EQUIPMENT AND SYSTEMS. INTERNAL SEISMIC RESTRAINT ELEMENTS OF MANUFACTURED EQUIPMENT SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER RETAINED BY THE MANUFACTURER. SUCH CERTIFICATE APPLIES ONLY TO INTERNAL ELEMENTS OF THE EQUIPMENT. ALL EQUIPMENT ANCHORAGE REQUIREMENTS SHALL BE COORDINATED WITH THE BUILDING STRUCTURE AND SHALL BE COMPATIBLE THERETO. ALL SUCH ANCHORAGE SHALL BE REVIEWED BY THE

REVIEW OF THE SEISMIC DESIGN AND SHOP DRAWINGS BY THE PROJECT'S ELECTRICAL ENGINEER, STRUCTURAL ENGINEER OR ARCHITECT SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY WITH SEISMIC AND OTHER REQUIREMENTS OF THE

COORDINATE THE EXACT LOCATION AND REQUIREMENTS OF THE ELECTRICAL SERVICE WITH OCAL POWER COMPANY BEFORE ROUGHING—IN COMPLETE ALL LOAD SERVICE

27 TRAINING AND INSTRUCTION

SHALL BE AT THE CONTRACTORS EXPENSE.

APPLICATION FORMS AND DELIVER SAID FORM TO THE OWNER FOR THEIR COMPLETION. THE SHORT CIRCUIT RATING OF ALL ELECTRICAL COMPONENTS SHALL BE NO LESS THAN THE VALUE SPECIFIED ON THE PANEL SCHEDULES AND/OR POWER RISER DIAGRAM BEFORE PURCHASING EQUIPMENT THE ELECTRICAL CONTRACTOR IS TO CONTACT THE POWER COMPANY AND OBTAIN THE AVAILABLE INRUSH CURRENT RATING AND ALL COMPONENTS SHALL BE RATED AND OR COORDINATED TO NO LESS THAN THE FURNISHED RATING. PROVIDE MAXIMUM AVAILABLE FAULT CURRENT AFFIXED TO MAIN SERVICE SWITCH. CURRENT SHALL BE PROVIDE BY ENGINEER/UTILITY COMPANY AND BE IN COMPLIANCE WITH NEC 110.24 A&B.

COORDINATE THE EXACT LOCATION AND REQUIREMENTS OF THE TELEPHONE AND CABLE SERVICE ENTRANCES WITH THE LOCAL TELEPHONE AND CABLE COMPANIES PRIOR TO OUGHING-IN. RUN SERVICE ENTRANCE CONDUITS FROM BUILDING ENTRANCE TO UTILITY TERMINATION CABINETS AND PROVIDE POWER AND GROUNDING AS REQUIRED BY THE TELEPHONE AND CABLE COMPANIES.

THIS CONTRACTOR SHALL PROVIDE ALL TEMPORARY LIGHTING AND POWER AS REQUIRED FOR ALL TRADES. ALL TEMPORARY WIRING INSTALLED SHALL BE REMOVED BY THIS CONTRACTOR.

REPRESENTATIVE AVAILABLE FOR ALL ARCHITECT, ENGINEER, OWNER AND INSPECTION

SHALL BE PLACED ON ALL OPEN ÉQUIPMENT WHICH IS HOT AND POSES A HAZÁRD TO

FINAL FIELD REVIEWS SHALL BE CALLED FOR BY THE CONTRACTOR ONLY WHEN THE INSTALLATION IS COMPLETE, FULLY OPERATIONAL, CLEANED AND 100% READY FOR A FINAL INSPECTION. THE CONTRACTOR SHALL REVIEW AND TEST ALL SYSTEMS BEFORE HE ARCHITECT, ENGINEER AND OWNER ARE CALLED ON FOR THEIR FINAL INSPECTIONS. IF THE ARCHITECT, ENGINEER, AND OWNER WASTE TIME PERFORMING CALLED FOR FINAL REVIEWS THAT ARE NOT COMPLETE AND READY FOR A REVIEW, THE CONTRACTOR SHALL

FINAL FIELD REVIEWS. ALL REQUIRED SYSTEMS CERTIFICATIONS SHALL BE MADE AVAILABLE AT THE TIME OF FINAL FIELD REVIEWS. ALL SYSTEMS AND EQUIPMENT SHALL BE COMPLETELY INSTALLED, OPERATIONAL AND TURNED "ON" PRIOR TO SCHEDULING FINAL FIELD REVIEWS.

HIS CONTRACTOR AND SYSTEMS INSTALLERS AND SUBCONTRACTORS OF ALL SPECIALTY OWNER HOW THE SYSTEMS ARE TO BE OPERATED AND MAINTAINED. AND REQUIRED PREVENTIVE MAINTENANCE PROCEDURES.

THE ARCHITECT ENGINEER AND OWNER TEN DAYS NOTICE SHALL BE GIVEN PRIOR TO DEMONSTRATIONS AND INSTRUCTIONS. THE OWNER WILL BE ALLOWED TO INVITE AS MANY PEOPLE AS HE DEEMS NECESSARY FOR THE DEMONSTRATIONS AND INSTRUCTIONS RAINING SHALL GIVE THE OWNER A TOUR OF THE ENTIRE ELECTRICAL SYSTEM. ALL ELECTRICAL SERVICE EQUIPMENT, PANELBOARDS, ETC. SHALL BE DESCRIBED AND THEIR PURPOSE EXPLAINED. THE ELECTRICAL ENGINEER WILL ASSIST THE CONTRACTOR WITH THIS TOUR UPON REQUEST. THE PURPOSE OF THIS TOUR IS TO FAMILIARIZE THE OWNER WITH THE TYPE OF SYSTEM INSTALLED AND LOCATIONS AND PURPOSE OF THE

THIS CONTRACTOR SHALL SCHEDULE THE DEMONSTRATION AND INSTRUCTION TIME WITH

NO EQUIPMENT SHALL BE TESTED OR OPERATED FOR ANY PURPOSE UNTIL IT HAS BEEN NSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND OR THE REQUIREMENTS OF LOCAL AUTHORITIES. MEGGER TEST ALL PHASE AND NEUTRAL CABLES RATED 100 AMPS AND LARGER FOR ADEQUATE INSULATION RESISTANCE TO GROUND.

NEC 250-30 AND SIZED IN ACCORDANCE NEC 250-66.

SHALL INCLUDE SUBMITTALS OF THE SPECIFIC METHODS AND MATERIALS OF SEISMIC RESTRAINT TO BE USED FOR THIS PROJECT FOR REVIEW BY THE STRUCTURAL ENGINEER

PROJECT'S ELECTRICAL ENGINEER PRIOR TO INSTALLATION.

6 ENGINEERS FIELD REVIEWS HIS CONTRACTOR AND HIS APPROPRIATE SUBCONTRACTORS SHALL HAVE A

AUTHORITY FIELD VISITS. PANELBOARDS, SWITCHBOARDS, TRANSFORMERS, AND OTHER EQUIPMENT AND SYSTEMS SHALL BE OPEN (COVERS REMOVED) TO PERMIT INSPECTION. "WARNING" LABELS/SIGNS

HIS CONTRACTOR SHALL HAVE AT THE PROJECT SITE ALL TOOLS, LADDERS AND TEST EQUIPMENT REQUIRED FOR THE ENGINEER TO ADEQUATELY EVALUATE THE SYSTEMS AND

PAY FOR ALL WASTED MANHOUR COSTS INCURRED.

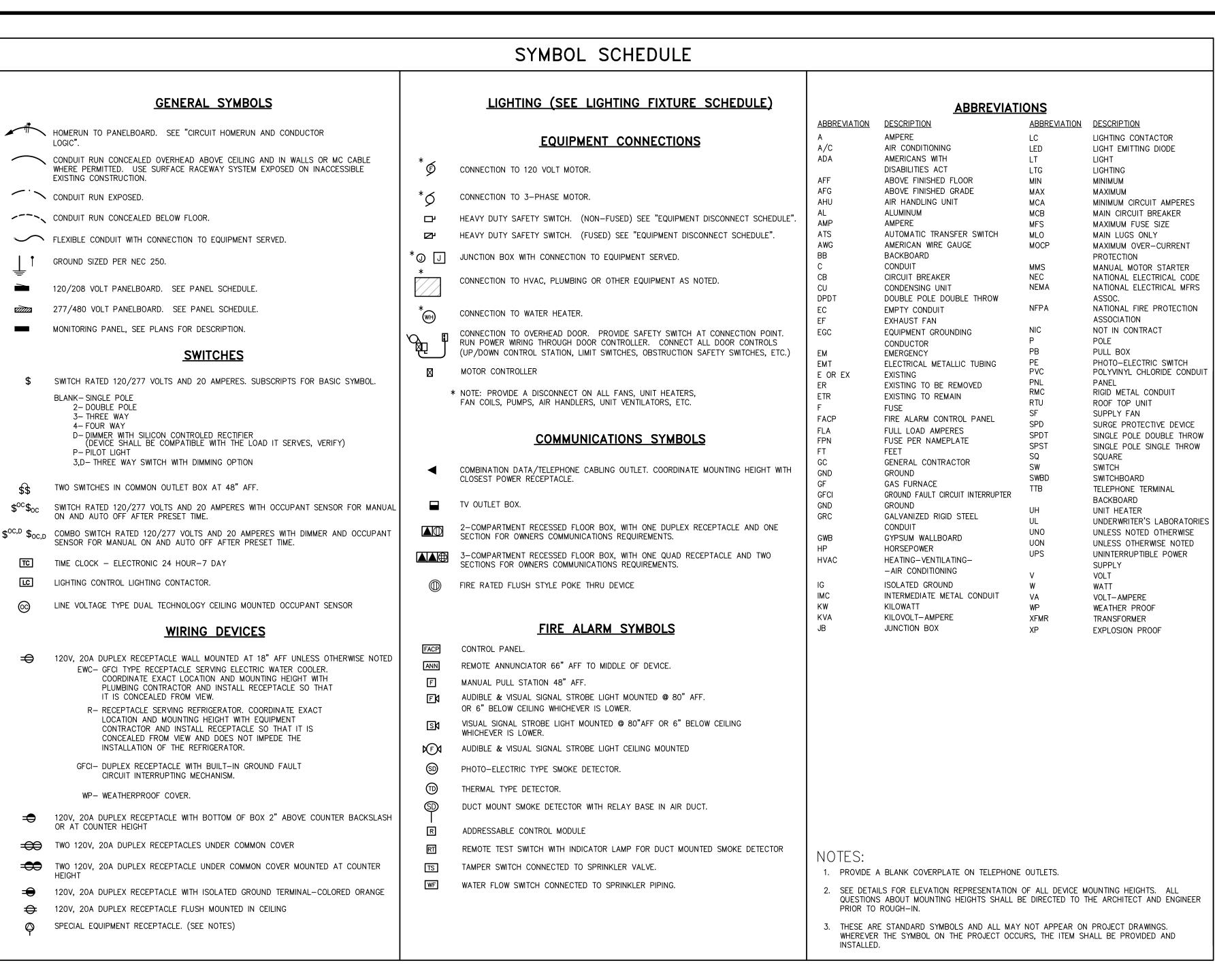
ALL INSTALLATION AND MAINTENANCE MANUALS SHALL BE AVAILABLE AT THE TIME OF

SYSTEMS SHALL DEMONSTRATE THE SYSTEM OPERATION AND TRAIN AND INSTRUCT THE THE TRAINING AND DEMONSTRATIONS SHALL INCLUDE ALL MANUFACTURER RECOMMENDED RAINING SESSIONS SHALL INCLUDE SIX (6) INSTRUCTION AND RECOMMENDED PREVENTIVE MAINTENANCE MANUALS BOUND IN BINDERS FOR EACH SYSTEM. THE INSTRUCTION MANUALS SHALL REMAIN THE PROPERTY OF THE OWNER. THIS CONTRACTOR AND HIS MANUFACTURER REPRESENTATIVES SHALL ALLOW FOR TWENTY-FOUR (24) INSTRUCTION HOURS TIME FOR ALL SYSTEMS. INSTRUCTION TIME

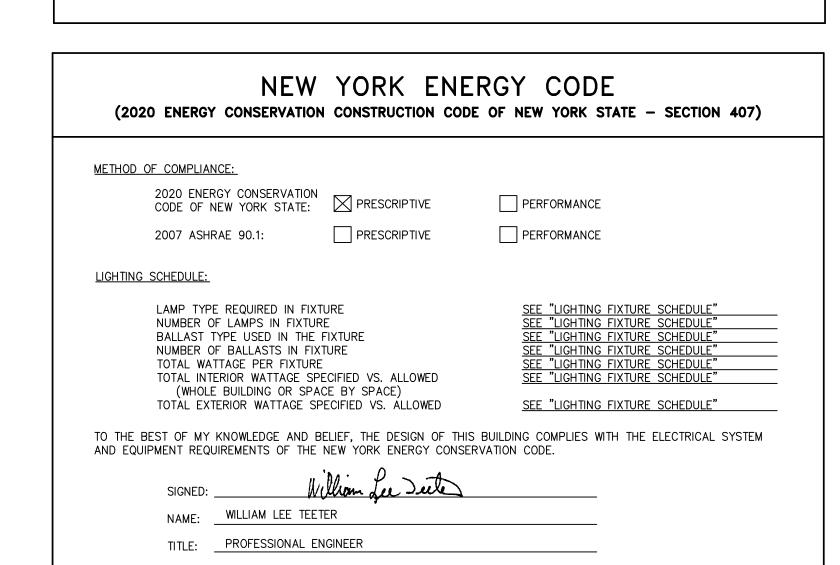
ELE	CTRICAL DRAWING SCHEDULE
DRAWING SHEET	DESCRIPTION
E001	ELECTRICAL SPECIFICATIONS
E002	ELECTRICAL SYMBOLS AND LIGHTING FIXTURE SCHEDULE
E003	ELECTRICAL SCHEDULES — HVAC & PLUMBING EQUIPMENT
E100	SITE PLAN — ELECTRICAL
E101	MAIN LEVEL FLOOR PLAN — LIGHTING — WEST
E102	MAIN LEVEL FLOOR PLAN — LIGHTING — EAST
E103	UPPER LEVEL FLOOR PLAN — LIGHTING — WEST
E104	UPPER LEVEL FLOOR PLAN — LIGHTING — EAST
E201	MAIN LEVEL FLOOR PLAN — POWER — WEST
E202	MAIN LEVEL FLOOR PLAN — POWER — EAST
E203	UPPER LEVEL FLOOR PLAN - POWER - WEST
E204	UPPER LEVEL FLOOR PLAN - POWER - EAST
E205	ROOF PLAN - POWER - WEST
E206	ROOF PLAN - POWER - EAST
E301	POWER RISER DIAGRAM & PANEL SCHEDULES
E302	PANEL SCHEDULES
E401	ELECTRICAL DETAILS
E402	ELECTRICAL DETAILS
E403	ELECTRICAL DETAILS

BDA DSGN, REV. BDA TECH REV

> RGAS PROJECT NO.: 23077 DRAWN: DATE:



FOR 120V-20A BRA	NCH CIRCUITS ONLY, U	JNLESS OTHERWISE NOTED
IF DISTANCE A + B IN FEET IS: (SEE DIAGRAM AT RIGHT)	USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE CONDUIT ACCORDINGLY:	A (FT) POWER PANEL
0' TO 100' 100' TO 175' 175' TO 300' 300' TO 450'	#12 (MIN.) #10 #8 #6 (MAX.)	1ST ON CKT B (FT) 1/2 WIRE LENGTH FROM FIRST
		TO LAST RECEPTACLE ON CIRCUIT
	ANCH CIRCUITS ONLY, U	
	USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE CONDUIT ACCORDINGLY:	JNLESS OTHERWISE NOTED
FOR 277V-20A BRA	USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE	JNLESS OTHERWISE NOTED A (FT) A (FT) A A (FT) A (FT)
FOR 277V-20A BRA IF DISTANCE A + B IN FEET IS: (SEE DIAGRAM AT RIGHT)	USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE CONDUIT ACCORDINGLY:	JNLESS OTHERWISE NOTED LIGHTING PANEL 1ST ON CKT
FOR 277V-20A BRA IF DISTANCE A + B IN FEET IS: (SEE DIAGRAM AT RIGHT) 0' TO 250'	USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE CONDUIT ACCORDINGLY: #12 (MIN.)	JNLESS OTHERWISE NOTED A (FT)



EQUIPMENT DISCONNECT SCHEDULE

\$ M MANUAL MOTOR STARTING SWITCH WITH OVERLOAD PROTECTION EQUAL TO SQUARE-D CLASS 2510 TYPE KG-1 SERIES.

3P/30A/208V — HEAVY DUTY SAFETY SWITCH; 3 POLE, 30 AMP, 208 VOLT. FIRST NUMERAL INDICATES QUANTITY OF POLES SECOND NUMERAL INDICATES AMPERE RATING. THIRD NUMERAL INDICATES VOLTAGE. IE: 3P/30A/208V INDICATES 3 POLE, 30 AMP, 208 VOLT, ETC.

3P/30A/208V FUSED HEAVY DUTY SAFETY SWITCH SAME AS ABOVE EXCEPT WITH FUSES. ACTUAL SIZE AND TYPE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. FUSES SHALL BE 'RK-5' FUSETRONS.

3P/30A/208V/3R P NEMA 3R CONSTRUCTION HEAVY DUTY SAFETY SWITCHES. NO-FUSE AND FUSED SWITCHES 3P/30A/208V/3R RESPECTIVELY AS SPECIFIED ABOVE. /3R INDICATES NEMA 3R CONSTRUCTION. NOTE: PROVIDE NEUTRAL BARS, GROUNDING BARS, REJECTION CLIPS, SERVICE ENTRANCE LABELS, FUSES AND ALL OTHER ACCESSORIES REQUIRED FOR THE APPLICATION.

CIRCUIT HOMERUN SYMBOL SCHEDULE

A-(1,3,5) - ONE CIRCUIT HOMERUN TO PANEL "A", 208 VOLT OR 480 VOLT-3 PHASE CIRCUIT TO POLES #1, 3, & 5. SLASH MARKS INDICATE QUANTITY OF CONDUCTORS OTHER THAN TWO; — I INDICATES NEUTRAL, — INDICATES HOT, NOTE: TWO WIRE CIRCUITS DO NOT SHOW SLASH MARKS.

SLASH MARK INDICATES EQUIPMENT GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NATIONAL

LIGHTING NOTES

1. LED DRIVERS SHALL BE ELECTRONIC TYPE. 2. LED'S SHALL BE SOLID STATE WITH 3500 DEGREE COLOR TEMP.

ELECTRICAL CODE 250-122

- 3. LIGHTING FIXTURE CATALOG NUMBERS IDENTIFY THE SERIES OF LIGHTING FIXTURE ONLY. PROVIDE ALL FIELD FABRICATION, MOUNTING HARDWARE, ACCESSORIES AND OPTIONS REQUIRED TO ADAPT TO THE CONDITIONS AND MEET THE INTENT OF THE
- 4. COORDINATE FIXTURE OPERATING VOLTAGES WITH THAT PROVIDED BY THE CIRCUITRY.
- 5. COORDINATE FIXTURE TRIMS WITH THE CEILING TYPE. 6. DRIVERS AND LED'S SHALL BE DESIGNED TO START AND MAINTAIN PROPER OPERATION IN THE ENVIRONMENTAL AND
- TEMPERATURE CONDITIONS IN WHICH THE FIXTURES ARE APPLIED.
- 7. RECESSED LIGHTING FIXTURES SHALL HAVE THERMAL PROTECTION. 8. DOWNLIGHTS IN NONACCESSIBLE CEILINGS SHALL HAVE BOTTOM ACCESS.
- 9. LAY-IN TYPE FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE INDEPENDENT FROM THE CEILING SYSTEM. 10. DOWNLIGHT FIXTURES AND EXIT SIGNS IN SUSPENDED CEILINGS SHALL NOT BE SUPPORTED BY THE GRID SYSTEM AND SHALL
- BE SUPPORTED FROM THE STRUCTURE AND NOT RELY ON THE CEILING SYSTEM ALONE FOR SUPPORT.
- 11. LIGHTING FIXTURES IN WET LOCATIONS SHALL BE "WET LOCATION" LISTED. LIGHTING FIXTURES IN DAMP LOCATIONS SHALL BE

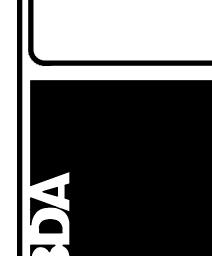
"DAMP LOCATION" LISTED. 12. SUBMIT SHOP DRAWINGS FOR APPROVAL.

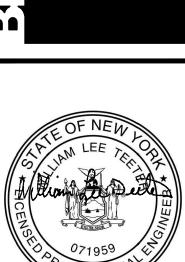
MBOL	MANUFACTURER &	DESCRIPTION	LAMP TYPE	VOLTS/	MOUNTING	INPUT	TOTAL	
TYPE	CATALOG NUMBER EQUAL TO: LITHONIA	2'x4' LED TROFFER, ALUMINUM FRAME WITH	& QUANTITY	DRIVER 120–277V	RECESSED	WATTS (FIXTURES	
A	#CPX-2X4-4000LM-80CRI-40K- SWL-MIN10-ZT-MVOLT	SATIN WHITE DIFFUSER.	4000 LUMENS 4000K	ELECTRONIC	CEILING	40.0	167	
	_	A/NL - NIGHT LIGHT FIXTURE, 24/7. SAME AS "A" WITH INTEGRATED E10WLCP	_	_	_			
AE		EMERGENCY BATTERY PACK.				40.0	2	
	EQUAL TO: LITHONIA #CPX-2X4-6000LM-80CRI-40K-	2'x4' LED TROFFER, ALUMINUM FRAME WITH SATIN WHITE DIFFUSER.	LED 6000 LUMENS	120-277V ELECTRONIC	RECESSED CEILING	44.0		
•	SWL-MIN10-ZT-MVOLT	A1/NL - NIGHT LIGHT FIXTURE, 24/7.	4000K				4	
A1E	-	SAME AS "A1" WITH INTEGRATED E10WLCP	_	_	_	44.0		
A1E		EMERGENCY BATTERY PACK.					4	
42	EQUAL TO: LITHONIA #CPX-2X2-3200LM-80CRI-40K-	2'x2' LED TROFFER, ALUMINUM FRAME WITH SATIN WHITE DIFFUSER.	LED 3200 LUMENS	120-277V ELECTRONIC	RECESSED CEILING	31.0		
	SWL-MIN10-ZT-MVOLT		4000K	LLLOWON	CEILING		10	
<u></u>	EQUAL TO: LITHONIA	A2/NL - NIGHT LIGHT FIXTURE, 24/7. 2'x2' LED TROFFER, ALUMINUM FRAME WITH	LED	120-277V	SURFACE	31.0		
2F	#CPX-2X2-3200LM-80CRI-40K- SWL-MIN10-ZT-MVOLT MULTISURFACE KIT #2X2SMKSH	SATIN WHITE DIFFUSER. MULTISURFACE KIT INCLUDED.	3200 LUMENS 4000K	ELECTRONIC	CEILING	1		
B	EQUAL TO: LITHONIA	1'x4' LED WRAPAROUND FIXTURE.	LED	120-277V ELECTRONIC	SURFACE CEILING	32.0	154	
	#SBL4-LP840 (CI-254RKU)		2994 LUMENS 4000K		CLILING		154	
M	SELECTED BY OWNER, PURCHASED	LARGE PENDANT FIXTURE WITH LED BULBS.	LED	120V	PENDANT	100.0		
	AND INSTALLED BY ELECTRICAL CONTRACTOR	CONTRACTOR TO PROVIDE \$1,000 ALLOWANCE.			CEILING	MAX	2	
	EQUAL TO: GOTHAM EVO	6" ROUND LED DOWNLIGHT, WHITE REFLECTOR,	LED LIMENS	1200	RECESSED	10.0		
C -	#EVO6-35-10-WR-WD-LSS- MVOLT	WHITE FLANGE.	1000 LUMENS 3500K		CEILING		316	
CF	_	SAME AS "C" WITH INTEGRATED 10W EL EMERGENCY BATTERY PACK.	_	_	_	10.0		
CE •		C/NL - NIGHT LIGHT FIXTURE, 24/7.					2	
	EQUAL TO: TECH LIGHTING	SMALL PENDANT LIGHTING FIXTURE, SMOKE	INCANDESCENT	120V	PENDANT	60.0		
) -	#700-TD-S-S-S VERIFY WITH ARCHITECT PRIOR ORDERING.	COLOR, SATIN NICKEL FINISH. CONTRACTOR TO PROVIDE ONE (1) E11 BASE 60W T6 MINI—CANDELABRA BULB.			CEILING		5	
· · · · · · · · · · · · · · · · · · ·	EQUAL TO: LITHONIA	1'x4' LED WALL MOUNTED CONTEMPORARY	LED	120-277V	SURFACE	36.0		
	#FMVCSLS-48IN-MVOLT-35K- 90CRI-BN-M4	SWITCHABLE SQUARE VANITY FIXTURE.	2960 LUMENS 3500K	ELECTRONIC	WALL		5	
F	EQUAL TO: LITHONIA	2'x4' LED TROFFER, ALUMINUM FRAME WITH	LED	120-277V	SURFACE	40.0		
	#CPX-2X4-4000LM-80CRI-40K- SWL-MIN10-ZT-MVOLT MULTISURFACE KIT	SATIN WHITE DIFFUSER. SHALLOW DEPTH MULTI-SURFACE MOUNTING KIT INCLUDED.	4000 LUMENS 4000K	ELECTRONIC	CEILING		4	
	#2X4SMKSH	PROCEDURE (EXAM) LED LIGHT MEDICAL	LED	120V	SURFACE	16.0		
	PROVIDED BY OWNER, INSTALLED BY ELECTRICAL CONTRACTOR	ILLUMINATION MI-550, PROVIDED BY OWNER, INSTALLED BY E.C.	LLD	120 V	CEILING	(TASK)	2	
		SURGERY LED LIGHT MEDICAL ILLUMINATION	150	4001/	SURFACE	54.0		
52 \ \ \ \ \	PROVIDED BY OWNER, INSTALLED BY ELECTRICAL CONTRACTOR	MI-1000, PROVIDED BY OWNER, INSTALLED BY E.C.	LED	120V	CEILING	54.0 (TASK)	2	
V								
NE	EQUAL TO: LITHONIA #WL4-30L-SLD-LP840-DIM10	5"x51" LED WRAPAROUND FIXTURE WITH INTEGRATED OCCUPANCY SENSOR. FIXTURE	LED 3000 LUMENS	120-277V ELECTRONIC	SURFACE WALL	28.0		
	"NE" - WITH E10WLCP	DIMS TO 10% WHEN UNOCCUPIED. "NE" WITH 90 MIN EMERGENCY BATTERY PACK.	4000K				7	
	EQUAL TO: PHOENIX LIGHTING	INDUSTRIAL TYPE ENCLOSED/GASKETED	LED 1336 LUMENS	120V-277V	SURFACE	17.0		
	#VA-W-17LED-WW-FGC	VAPORTIGHT SURFACE MOUNTED LIGHTING FIXTURE, FROSTED GLASS LENS.	3000K		CEILING		1	
<u> </u>	EQUAL TO: LITHONIA	EXTERIOR LED DECORATIVE WALL SCONCE UP	LED OAZ LUMENS	120V-277V	SURFACE	14		
S ?	#OLLWU-LED-P1-40K-MVOLT-WH	& DOWN FIXTURE, WHITE FINISH. SEE EXTERIOR ELEVATIONS SHEETS A201 & A202 FOR EXACT MOUNTING HEIGHTS AND LOCATIONS.	947 LUMENS 4000K		WALL @ 7' AGL	(EXTERIOR)	10	
	EQUAL TO: STONCO BY SIGNIFY	EXTERIOR LED WALL MOUNT MEDIUM SCONCE	LED	120V	SURFACE	50		
U 6	#LPW16-50-NW-G3-3-120-BK. (VERIFY WITH CIVIL DRAWINGS	FIXTURE, BLACK FINISH. SEE EXTERIOR ELEVATIONS SHEETS A201 & A202 FOR EXACT MOUNTING HEIGHTS AND LOCATIONS.	5334 LUMENS 4000K		WALL @ 15'AFG	(EXTERIOR)	14	
<u>~~</u>	C900 & C910 PRIOR ORDERING) EQUAL TO: LITHONIA LIGHTING	LED POLE MOUNTED FIXTURE, DARK BRONZE	LED	120V-277V	POLE	33.0		
В	#DSX0-LED-P1-40K-70CRI- T3LG-MVOLT-SPA-PIR	FINISH. TYPE 3 LOW GLARE DISTRIBUTION. INTEGRATED PHOTOCELL AND HIGH/LOW MOTION/AMBIENT SENSOR DIM TO 30% WHEN	4280 LUMENS 4000K	1204-2//4	I OLE	(EXTERIOR)	17	
	FOUND TO LITTION	UNOCCUPIED.	152	1001/	WALL			
o ?	EQUAL TO: LITHONIA #ERE-GY-T-WP-RD	WALL MOUNTED LED SQUARE TWIN REMOTE HEAD FIXTURE. GRAY COLOR.	LED	120V	WALL	<5 (5	
	FOUND TO LITTION	CHIDEACE MOUNTED LED STAT COME	150	1001	INDESC.			
x S	EQUAL TO: LITHONIA #EXRG-EL-M6	SURFACE MOUNTED LED EXIT SIGN. 90 MINUTE MINIMUM BATTERY BACKUP. WHITE FINISH, RED/GREEN LETTERS.	LED	120V	UNIVERSAL	<5 (20	
	FOLIAL TO: LITHONIA	COMPINATION ENERGENCY LIQUENCE USE TO THE	LED EXIT,	120V	UNIVERSAL	<5		
X1	EQUAL TO: LITHONIA #ECRG-HO-RD-M6	COMBINATION EMERGENCY LIGHTING UNIT/EXIT SIGN. WHITE THERMOPLASTIC HOUSING, RED/GREEN LETTERS. 90 MINUTE MINIMUM BATTERY BACKUP. REMOTE CAPABLE WHERE REQUIRED.	TWO(2) LED LAMPHEADS	12UV	UNIVERSAL		37	
<u></u> ЕМ	EQUAL TO: LITHONIA	SURFACE MOUNTED EMERGENCY LIGHTING	TWO(2)	120V	UNIVERSAL	<5 >		
	#ELM2L-M12	UNIT. WHITE THERMOPLASTIC HOUSING, 90 MINUTE MINIMUM BATTERY BACKUP. WHITE FINISH.	LED LAMPHEADS				61	
 ЈДN ⁻	L		<u> </u>	TOTAL WATT	S PER PROJECT	(INTERIOR)	16,614	
E LIC	GHTING FIXTURE QUANTITIES	LISTED IN THIS SCHEDULE ARE			RE FEET (INTERIO	· · · · ·	30,000	
		ILY. THE FLOOR PLANS GOVERN FRACTOR SHALL MAKE HIS OWN		TOTAL WATTS	S / SQUARE FOO) TC	0.55	

QUANTITY TAKEOFF.

ALLOWED WATTS / SQUARE FOOT (-10%)

0.71





BDA DSGN, REV. BDA TECH REV.

RGAS PROJECT NO.: 23077 DRAWN: DATE: 07/08/2024

BDA DSGN. REV. PROJECT NO.: 23077

E003

FAN SCHEDULE ELECTRICAL DATA NCH CIRCUIT 2#12, 1#12 GND THIS CONTRACT. TIONS REQUIRED FOR THE INSTALLATION OF THE MECHANICAL EQUIPMENT.

							TAG	SYSTEM SERVED	FAN TYPE	-	LECTRICAL L	AIA	- DISCONNECT	HOMERUN
							IAG	STSTEM SERVED	FAN TIPE	H.P.	WATTS	VOLTAGE	DISCONNECT	BRANCH
							<u>EF-1</u>	141 MENS RR	CEILING EXHAUST	_	17.6	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
							<u>EF−2</u>	142 WOMENS RR	CEILING EXHAUST	_	17.6	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
							<u>EF-3</u>	162 PUBLIC RR	CEILING EXHAUST	_	17.6	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
							<u>EF-4</u>	243 MENS RR	CEILING EXHAUST	_	17.6	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
							<u>EF-5</u>	249 MENS SHOWER	CEILING EXHAUST	_	17.6	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
							<u>EF-6</u>	223 JANITOR	CEILING EXHAUST	_	16.4	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
							<u>EF-7</u>	226 WOMENS SHOWER	CEILING EXHAUST	_	17.6	115V-1ø	20A SPST SWITCH	¾"C, 2#
							<u>EF-8</u>	242 WOMENS RR	CEILING EXHAUST	_	17.6	115V-1ø	20A SPST SWITCH	¾"C, 2#
							<u>EF-9</u>	155 02 CLOSET	CEILING EXHAUST	_	17	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
							<u>EF-10</u>	173 JANITOR CLOSET	CEILING EXHAUST	_	17.6	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
VARIABLE /	4IR-	CO	OLE	ED CO	DNDENSING (JNIT SCHEDULE	<u>EF-11</u>	232 FELINE HOLD 2	INLINE EXHAUST	1/30	_	115V-1ø	20A SPST SWITCH	¾"C, 2#
	1	ELECTRIC	CAL DAT	 ТА			<u>EF-12</u>	116 FELINE CONDOS 1	INLINE EXHAUST	1/50	_	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
TAG				1	DISCONNECT	HOMERUN	<u>EF-13</u>	112 FELINE CONDOS 2	INLINE EXHAUST	1/40	_	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
	MCA	моср	RLA	VOLTAGE		BRANCH CIRCUIT	<u>EF-14</u>	143 JANITOR	CEILING EXHAUST	_	17.6	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
CU-1 (DOAS 1-2-3)	120.2	125	91.6	208V-3ø	3P/200A/208V/3R-FPN	1½"C., 3#1 & 1#6 GND.	<u>EF-15</u>	171 FELINE HOLD CONDOS	INLINE EXHAUST	1/30	_	115V-1ø	20A SPST SWITCH	3⁄4°C, 2#
CU-2 (DOAS 8-9-10)	76.2	80	46.6	208V-3ø	3P/100A/208V/3R-FPN	1½"C., 3#1 & 1#8 GND.	<u>EF-16</u>	156/158 ISO AREAS	INLINE EXHAUST	1/30	_	115V-1ø	20A SPST SWITCH	3⁄4"C, 2#
CU-3 (DOAS 11-13)	101.3	110	70.8	208V-3ø	3P/200A/208V/3R-FPN	1½"C., 3#1 & 1#6 GND.								
CU-4 (DOAS 14-15)	58.3	70	42.6	208V-3ø	3P/100A/208V/3R-FPN	11/4"C., 3#4 & 1#8 GND.	<u>RF-1</u>	ECONOMIZER RELIEF FAN	IN-LINE EXHAUST	2	_	208V-1ø	2P/30A/208V/NF	3⁄4"C, 2#
BEING FURNISHED UND	ER THIS	CONTRA	ACT. TH	HE ELECTRIC	MECHANICAL CONTRACTOR CAL CONTRACTOR SHALL FU	JRNISH AND INSTALL ALL		CAL CONTRACTOR SHALL COC CTRICAL CONTRACTOR SHALL						

TAG		ELECTR	ICAL DA	TA	DICCOMPLECT	
TAG	MCA	моср	FLA	VOLTAGE	DISCONNECT	HOMERUN BRANCH CIRCUIT
<u>AHU-1</u>	8.8	15	3.9	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
<u>AHU-2</u>	8.8	15	3.9	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
<u>AHU-3</u>	10.8	15	3.9	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
<u>AHU-8</u>	4.8	15	3.9	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
<u>AHU-9</u>	8.8	15	3.9	208V-1ø	2P/30A/208V/NF	¾"C., 2#12 & 1#12 GND.
<u>AHU-10</u>	8.8	15	3.9	208V-1ø	2P/30A/208V/NF	¾"C., 2#12 & 1#12 GND.
<u>AHU-11</u>	8.8	15	3.9	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
<u>AHU-13</u>	10.8	15	3.9	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
<u>AHU-14</u>	8.8	15	3.9	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
<u>AHU-15</u>	8.8	15	3.9	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.

DISCONNECTS, FUSES, REDUCERS, CONTROL CIRCUITS, DUCT TYPE SMOKE DETECTORS AND CONNECTIONS

REQUIRED FOR THE INSTALLATION OF THE MECHANICAL EQUIPMENT.

STANDARD) All	? H/		LING	UNIT SCHEDULE						
TAG		ELECTR	ICAL DA	TA	DISCONNECT	HOMERUN					
	MCA	МОСР	KW	VOLTAGE	DISCONNECT	BRANCH CIRCUIT					
AHU-4	27	30	5.0	208V-1ø	2P/30A/208V/NF	3/4"C., 2#10 & 1#10 GND.					
<u>AHU-5</u>	43	45	8.0	208V-1ø	2P/60A/208V/NF	1"C., 2#6 & 1#10 GND.					
AHU-6	50	50	10.0	208V-1ø	2P/60A/208V/NF	1"C., 2#6 & 1#10 GND.					
AHU-7	71.5	80	15.0	208V-1ø	2P/100A/208V/NF	11/4"C., 2#3 & 1#8 GND.					

95.4 | 110 | 30.0 | 208V-3ø | 3P/200A/208V/NF | 1½°C., 3#1 & 1#6 GND.

DISCONNECTS, FUSES, REDUCERS, CONTROL CIRCUITS, DUCT TYPE SMOKE DETECTORS AND CONNECTIONS REQUIRED FOR THE INSTALLATION OF THE MECHANICAL EQUIPMENT.

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXACT EQUIPMENT BEING FURNISHED UNDER THIS CONTRACT. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL DISCONNECTS, FUSES, REDUCERS, CONTROL CIRCUITS, DUCT TYPE SMOKE DETECTORS AND CONNECTIONS REQUIRED FOR THE INSTALLATION OF THE MECHANICAL EQUIPMENT.

<u>AHU-12</u>

· · · · · · · · · · · · · · · · · · ·		ELECTR				VICE SCHEDULE
TAG	MCA	МОСР	FLA	VOLTAGE	DISCONNECT	HOMERUN BRANCH CIRCUIT
BS-1	0.4	15	_	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
BS <u>-2</u>	0.4	15	_	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
BS <u>-3</u>	0.6	15	_	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
BS <u>-8</u>	0.4	15	_	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
BS <u>-9</u>	0.4	15	_	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
BS <u>-10</u>	0.4	15	-	208V-1ø	2P/30A/208V/NF	3⁄4"C., 2#12 & 1#12 GND.
BS <u>-11</u>	0.4	15	-	208V-1ø	2P/30A/208V/NF	3⁄4"C., 2#12 & 1#12 GND.
BS <u>-13</u>	0.6	15	-	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
BS <u>-14</u>	0.4	15	-	208V-1ø	2P/30A/208V/NF	3⁄4"C., 2#12 & 1#12 GND.
BS <u>-15</u>	8.8	15	-	208V-1ø	2P/30A/208V/NF	3⁄4"C., 2#12 & 1#12 GND.
BEING FURNISHED UN	DER THIS	S CONTR ERS, CON	ACT. TH	HE ELECTRIC CIRCUITS, DI	CAL CONTRACTOR SHALL UCT TYPE SMOKE DETEC	OR FOR EXACT EQUIPMENT FURNISH AND INSTALL ALL TORS AND CONNECTIONS

	STANDARI) HI	EAT	PUI	MP SO	CHEDULE	
	TAG		ELECTR	ICAL DA	TA	BIGGONNEGT	
	TAG	MCA MOCP FLA VOLTAGE				DISCONNECT	HOMERUN BRANCH CIRCUIT
1	<u>HP-4</u>	14.6	15	-	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.
	<u>HP-5</u>	34.4	35	_	208V-1ø	2P/60A/208V/NF	3⁄4"C., 2#8 & 1#10 GND.
	<u>HP-6</u>	34.4	35	_	208V-1ø	2P/60A/208V/NF	3⁄4"C., 2#8 & 1#10 GND.
	<u>HP-7</u>	23.9	25	ı	208V-1ø	2P/30A/208V/NF	¾"C., 2#10 & 1#10 GND.
	<u>HP-12</u>	40.6	60	ı	208V-3ø	3P/60A/208V/NF	11/4"C., 3#4 & 1#10 GND.
						MECHANICAL CONTRACTOR	<u>-</u>
1	BEING FURNISHED ONL	JEK IHIS	CONTR	ACT. IH	E ELECTRIC	CAL CONTRACTOR SHALL F	URNISH AND INSTALL ALL

STANDAR	DH	EAT	PU	MP S	CHEDULE		FURNISHED	UNDER THI	S CONT	RACT. TH	HE ELEC	TRICAL	CONTRACTOR SHALL F	RACTOR FOR EXACT EQUIPMENT BEING FURNISH AND INSTALL ALL DETECTORS AND CONNECTIONS
TAC		ELECTR	ICAL DA	ATA	DIGGOLINEGE								L EQUIPMENT.	
TAG	MCA	моср	FLA	VOLTAGE	- DISCONNECT	HOMERUN BRANCH CIRCUIT	EAN	FILTE		IIT Q		-DIII		
<u>HP-4</u>	14.6	15	_	208V-1ø	2P/30A/208V/NF	3/4"C., 2#12 & 1#12 GND.	FAIN		יוט ר					1
HP-5	34.4	35	_	208V-1ø	2P/60A/208V/NF	3/4"C., 2#8 & 1#10 GND.				ELECTRI	CAL DAT	Ā		
<u>HP-6</u>	34.4	35	-	208V-1ø	2P/60A/208V/NF	3/4"C., 2#8 & 1#10 GND.	TAG	AREA SERVED	FLA	٧	PH	HZ	DISCONNECT	HOMERUN BRANCH CIRCUIT
<u>HP-7</u>	23.9	25	-	208V-1ø	2P/30A/208V/NF	3⁄4"C., 2#10 & 1#10 GND.					_			
HP-12	40.6	60	_	208V-3ø	3P/60A/208V/NF	11/4"C., 3#4 & 1#10 GND.	FFU-1	SURGERY	1.5	208	1	60	20A DPST SWITCH	34"C, 2#12, 1#12 GND
BEING FURNISHED UN	NDER THI S, REDUC	S CONTR ERS, CON	ACT. TH	HE ELECTRI CIRCUITS, D	CAL CONTRACTOR SHAL DUCT TYPE SMOKE DETE	TOR FOR EXACT EQUIPMENT L FURNISH AND INSTALL ALL CTORS AND CONNECTIONS	FURNISHED DISCONNEC	UNDER THI	S CONTI	RACT.	THE ELE	CTRICAL	CONTRACTOR SHALL	CTOR FOR EXACT EQUIPMENT BEING FURNISH AND INSTALL ALL EQUIRED FOR THE INSTALLATION OF

TAG AREA SERVED

MINI SPLIT / HEAT PUMP SCHEDULE

ELECTRICAL DATA

| EWH-1 | RISER ROOM | 5.0 | 24.1 | 208V-1ø | 2P/60A/208V/NF

EWH-2,3 | STAIRWELL | 3.0 | 14.4 | 208V-1ø | 2P/30A/208V/NF

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXACT EQUIPMENT BEING

MCA | MOCP | VOLTAGE | DISCONNECT

HOMERUN

BRANCH CIRCUIT

DAH-1	154 DOUBLE	1.0	15	208V-1ø	2P/30A/208V/NF	¾"C., 2#12 & 1#12 GND.		WH-1A	120	3	6.0	18.0	208V-3ø	3P/100A/208V/NF	11/4"C, 3#4, 1#8 GND
DHP-1	SURGERY	10.0	15	208V-1ø	2P/30A/208V/3R-FPN	¾"C., 2#12 & 1#12 GND.		WH-1B	120	3	6.0	18.0	208V-3ø	3P/100A/208V/NF	11/4"C, 3#4, 1#8 GND
2. ELEC BEING F DISCONN	URNISHED UNDER	R SHALL THIS CON UCERS, C	COORDII TRACT. ONTROL	NATE WITH THE ELECTF CIRCUITS,	CICAL CONTRACTOR SHALL F DUCT TYPE SMOKE DETECTOR			FURNISHED	UNDER THI	S CONTR	RACT. T	HE ELEC	CTRICAL C	ONTRACTOR SHALL F	TORS FOR EXACT EQUIPMENT BEING FURNISH AND INSTALL ALL QUIRED FOR THE INSTALLATION OF
						7		PUMP	SCH	EDU	LE				
ELE	ECTRIC H	EAT	ER S	3CHE	DULE		Ī				ELECTRIC	CAL DAT	A		
TAG	AREA SERVED	EL	ECTRICAL	_ DATA		HOMERUN		TAG	TYPE	HP	٧	PH	HZ		HOMERUN BRANCH CIRCUIT
		KW	AMPS	VOLTAGE	DISCONNECT	BRANCH CIRCUIT		RCP-1	IN-LINE	1/6	120	1	60	20A SPST SWITCH	¾"C, 2#12, 1#12 GND

NO KW KW VOLTAGE DISCONNECT

				ELECTRIC	CAL DAT	A		
HOMERUN	TAG	TYPE	HP	٧	PH	HZ	DISCONNECT	HOMERUN BRANCH CIRCUIT
BRANCH CIRCUIT	RCP-1	IN-LINE	1/6	120	1	60	20A SPST SWITCH	3/4"C, 2#12, 1#12 GND
11/4"C., 2#4 & 1#10 GND.	SP-1	SUMP	1/2	120	1	60	20A SPST SWITCH	3/4"C, 2#12, 1#12 GND
3/4"C., 2#12 & 1#12 GND.	NOTE:	CONTRACT	OD CITAL	1 COOR	DINIATE	\A/ITI TIII	- DILIMPING CONTRAC	TOPS FOR EVACT FOLLIDMENT I

WATER HEATER SCHEDULE

| GALLONS |-

ELECTRICAL DATA

| ELEM | ELEM | TOTAL |

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE PLUMBING CONTRACTORS FOR EXACT EQUIPMENT BEING FURNISHED UNDER THIS CONTRACT. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL DISCONNECTS, FUSES, REDUCERS, CONTROL CIRCUITS AND CONNECTIONS REQUIRED FOR THE INSTALLATION OF THE PLUMBING EQUIPMENT.

HOMERUN

BRANCH CIRCUIT

WILLIAM LEE TEETER, PE

3400 SOUTH TRYON ST. • SUITE D

CHARLOTTE, NC 28217

P: 704.376.2999 • F: 704.376.2999

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DANCES OWN OF

ROCALAND GREEN CENTER FOR ANIIN
RESCUE AND EDUCATIONAL
SERVICES, INC.
R.G. C.A.R.E.S. ANIMAL SHELTER
427 BEACH RD. LOCATED IN THE TOWN OF
HARVERSTRAW, NY 10993

SITE PLAN - ELECTRICAL

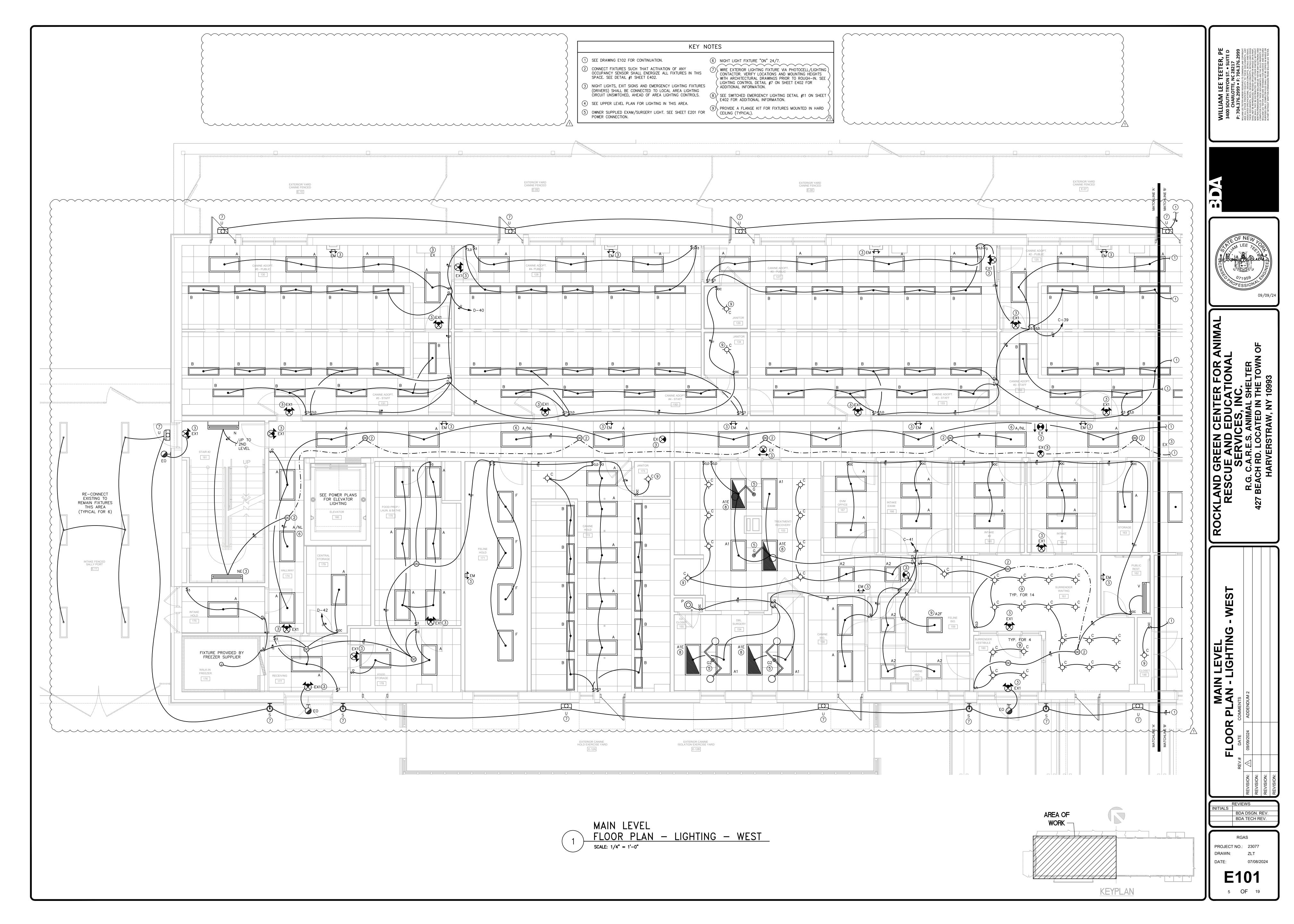
EV.# DATE COMMENTS

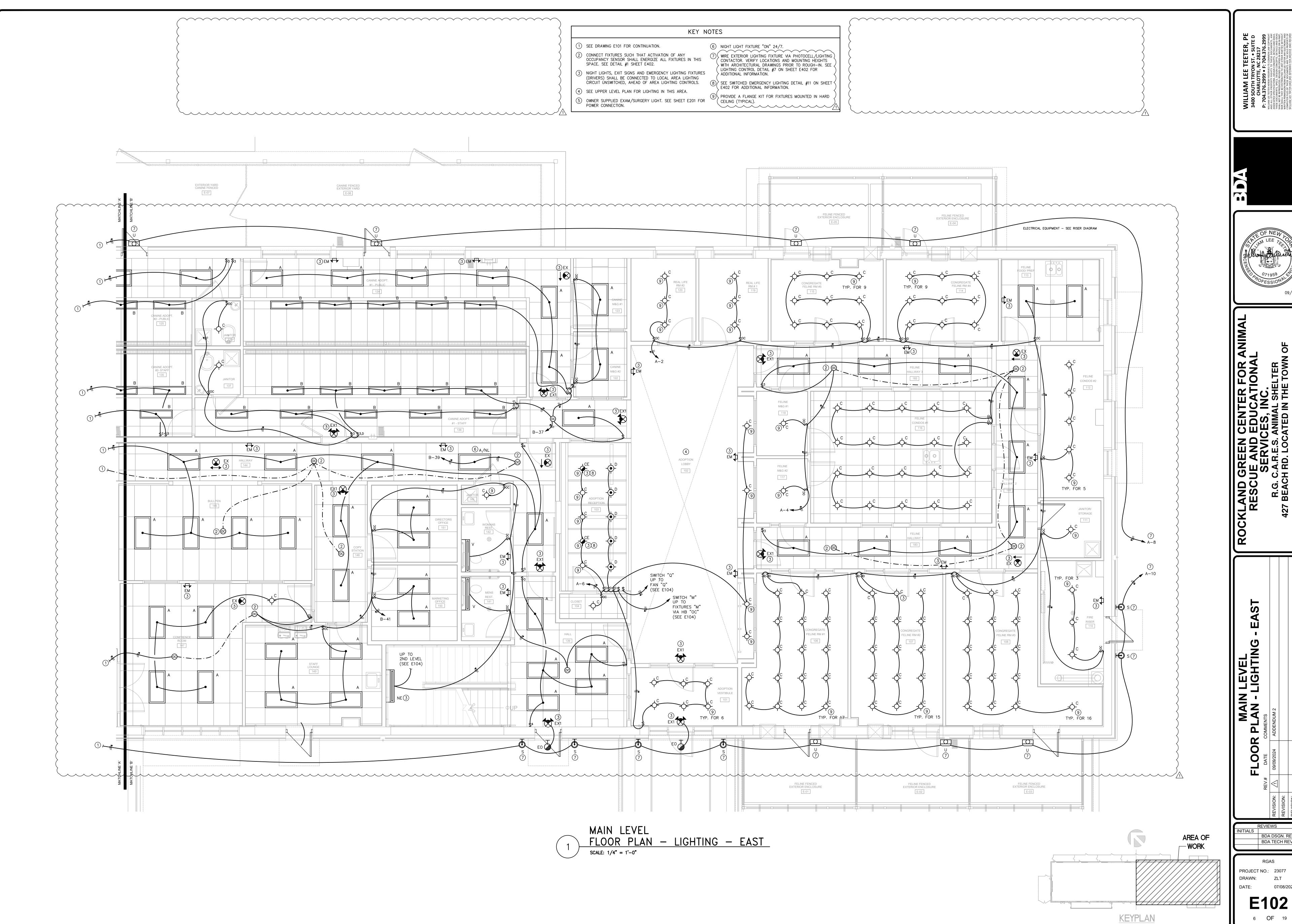
1 09/09/2024 ADDENDUM 2

REVIEWS
NITIALS
BDA DSGN. REV.
BDA TECH REV.

RGAS
PROJECT NO.: 23077
DRAWN: ZLT
DATE: 07/08/20

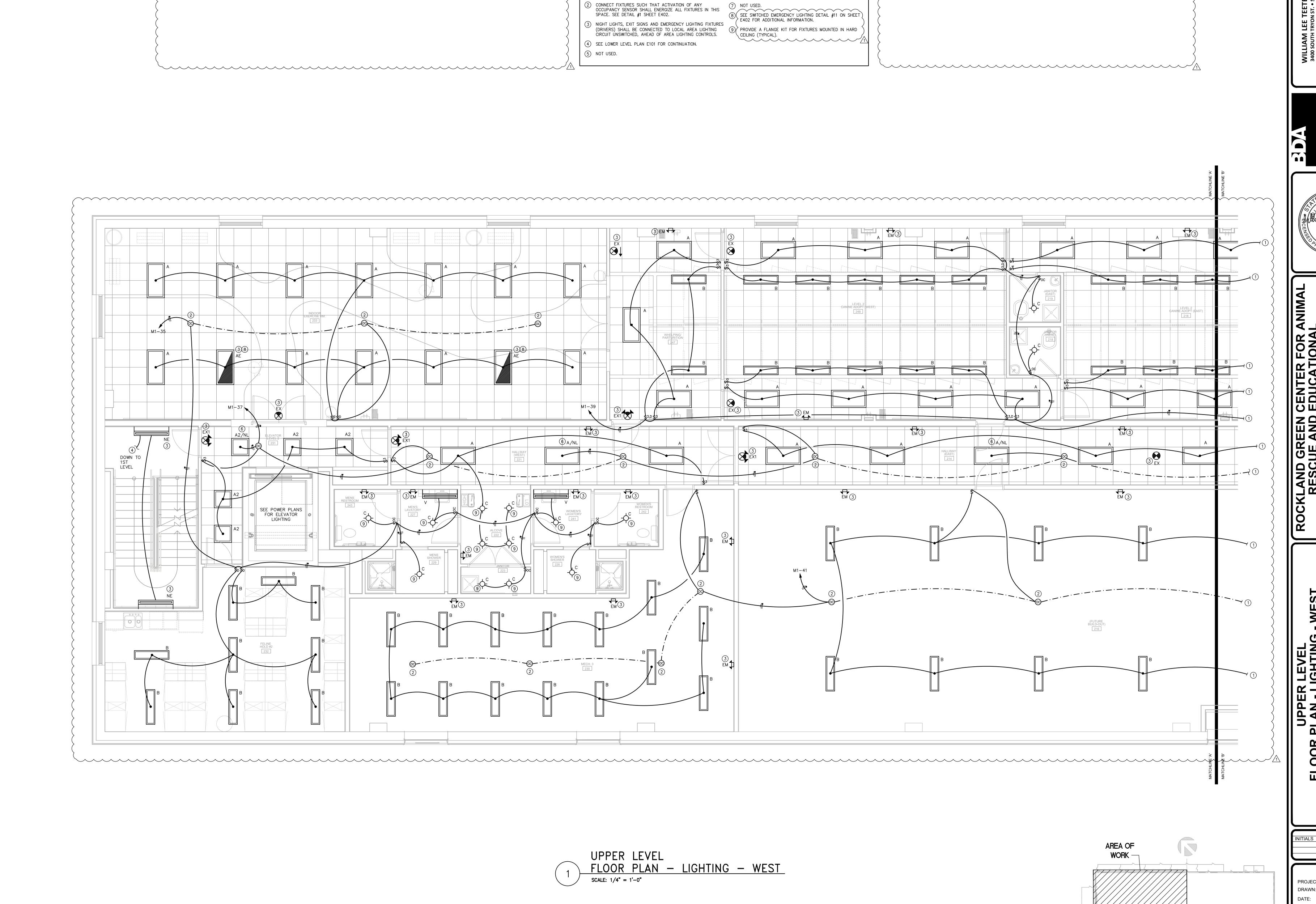
E1004 OF 19





BDA DSGN. REV. BDA TECH REV.

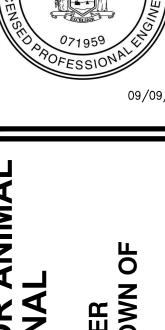
E102



KEY NOTES

6 NIGHT LIGHT FIXTURE "ON" 24/7.

1) SEE DRAWING E104 FOR CONTINUATION.

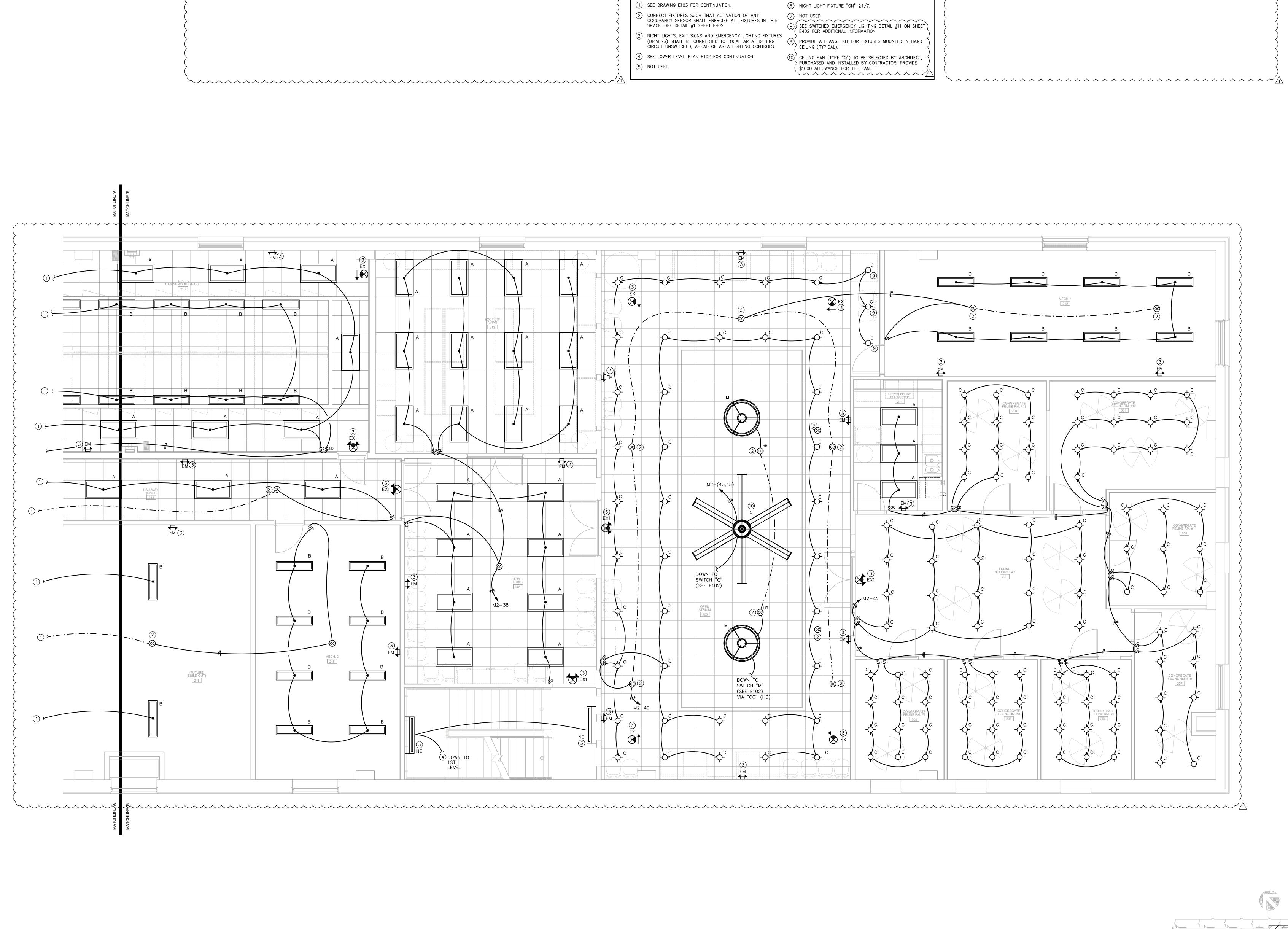


BDA DSGN. REV. BDA TECH REV.

PROJECT NO.: 23077

E103 7 **OF** 19

KEYPLAN



KEY NOTES

AREA OF WORK

KEYPLAN

ROCKLAND GREEN CENTER FOR A
RESCUE AND EDUCATIONAL
SERVICES, INC.

R.G. C.A.R.E.S. ANIMAL SHELTER

427 BEACH RD. LOCATED IN THE TOWN
HARVERSTRAW NY 10993

HEV# DATE COMMENTS

| Appendix 2 | Appendix 3 | Appendix 3 | Appendix 4 | Appendix 5 | Appendix 5 | Appendix 6 | Appendix

REVIEWS
INITIALS
BDA DSGN. REV.
BDA TECH REV.

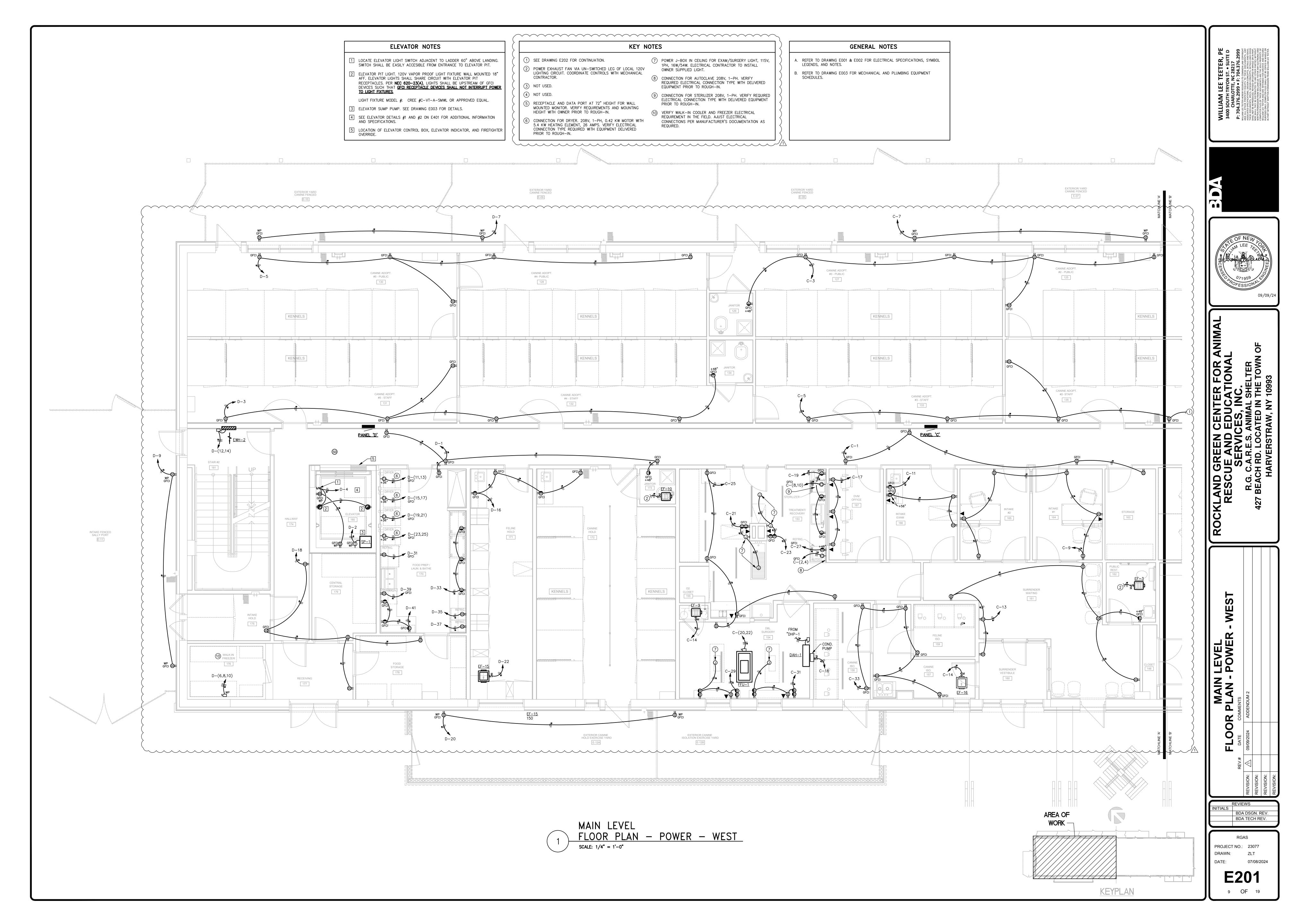
RGAS
PROJECT NO.: 23077
DRAWN: ZLT
DATE: 07/08/2024

8 **OF** 19

UPPER LEVEL

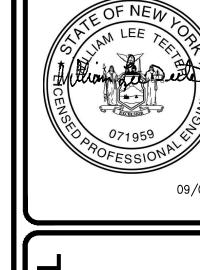
FLOOR PLAN - LIGHTING - EAST

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



KEY NOTES GENERAL NOTES 5 RECEPTACLE AND DATA PORT AT 72" HEIGHT FOR WALL MOUNTED MONITOR. VERIFY REQUIREMENTS AND MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH—IN. A. REFER TO DRAWING E001 & E002 FOR ELECTRICAL SPECIFICATIONS, SYMBOL LEGENDS, AND NOTES. 1) SEE DRAWING E201 FOR CONTINUATION. 2) POWER EXHAUST FAN VIA UN-SWITCHED LEG OF LOCAL 120V LIGHTING CIRCUIT. COORDINATE CONTROLS WITH MECHANICAL REFER TO DRAWING E003 FOR MECHANICAL AND PLUMBING EQUIPMENT 3 CONNECTION FOR STACKABLE WASHER 120V, 1-P, 15 AMPS. VERIFY ELECTRICAL CONNECTION TYPE WITH DELIVERED EQUIPMENT PRIOR TO ROUGH-IN. PROVIDE RESPECTIVE POWER CORD WITH PLUG AND CONNECT WASHER. (4) CONNECTION FOR STACKABLE ELECTRIC DRYER 208V, 1-P, 0.42 KW MOTOR WITH 5.4 KW HEATING ELEMENT, 26 AMPS. VERIFY ELECTRICAL CONNECTION TYPE WITH DELIVERED EQUIPMENT PRIOR TO ROUGH—IN. PROVIDE RESPECTIVE POWER CORD WITH PLUG AND CONNECT DRYER. ULSE LISTED 208/120V 3-PH, 1200A, SN FUSIBLE DISCONNECT SWITCH, FUSED WITH 1200A FUSES, NEMA-3R UTILITY METER _____ 208V, 3-PH, 1200A, SN EXTERIOR YARD CANINE FENCED E-07 AUTOMATIC TRANSFER C/T CABINET SWITCH "ATS", NEMA-3R GFCI +56" FCI +56" CONGREGATE FELINE RM #5 #1 - PUBLIC 124 M&G #1 — 208V, 3—PH, 1200A, SN GENERATOR DISCONNECT SWITCH NEMA-3R KENNELS KENNELS M&G #2 HALLWAY 3 KENNELS KENNELS CANINE ADOPT. #1 - STAFF FELINE M&G #1 FELINE M&G #2 HALLWAY 2 105 117 ADOPTION RECEPTION FELINE HALLWAY 1 — GENERATOR ANNUNCIATOR PANEL — SPRINKLER AND HVAC MONITORING PANEL CONGREGATE FELINE RM #1 PANEL 'MDP' FELINE RM #2 FELINE RM #3 ADOPTION VESTIBULE MAIN LEVEL
FLOOR PLAN — POWER — EAST

SCALE: 1/4" = 1'-0" AREA OF **KEYPLAN** 10 **OF** 19



BDA DSGN. REV. BDA TECH REV.

E202

ELEVATOR NOTES SEE ELEVATOR DETAILS #1 AND #2 ON E401 FOR ADDITIONAL INFORMATION AND SPECIFICATIONS.

[2] ELEVATOR DISCONNECT BY ELEVATOR MANUFACTURER.

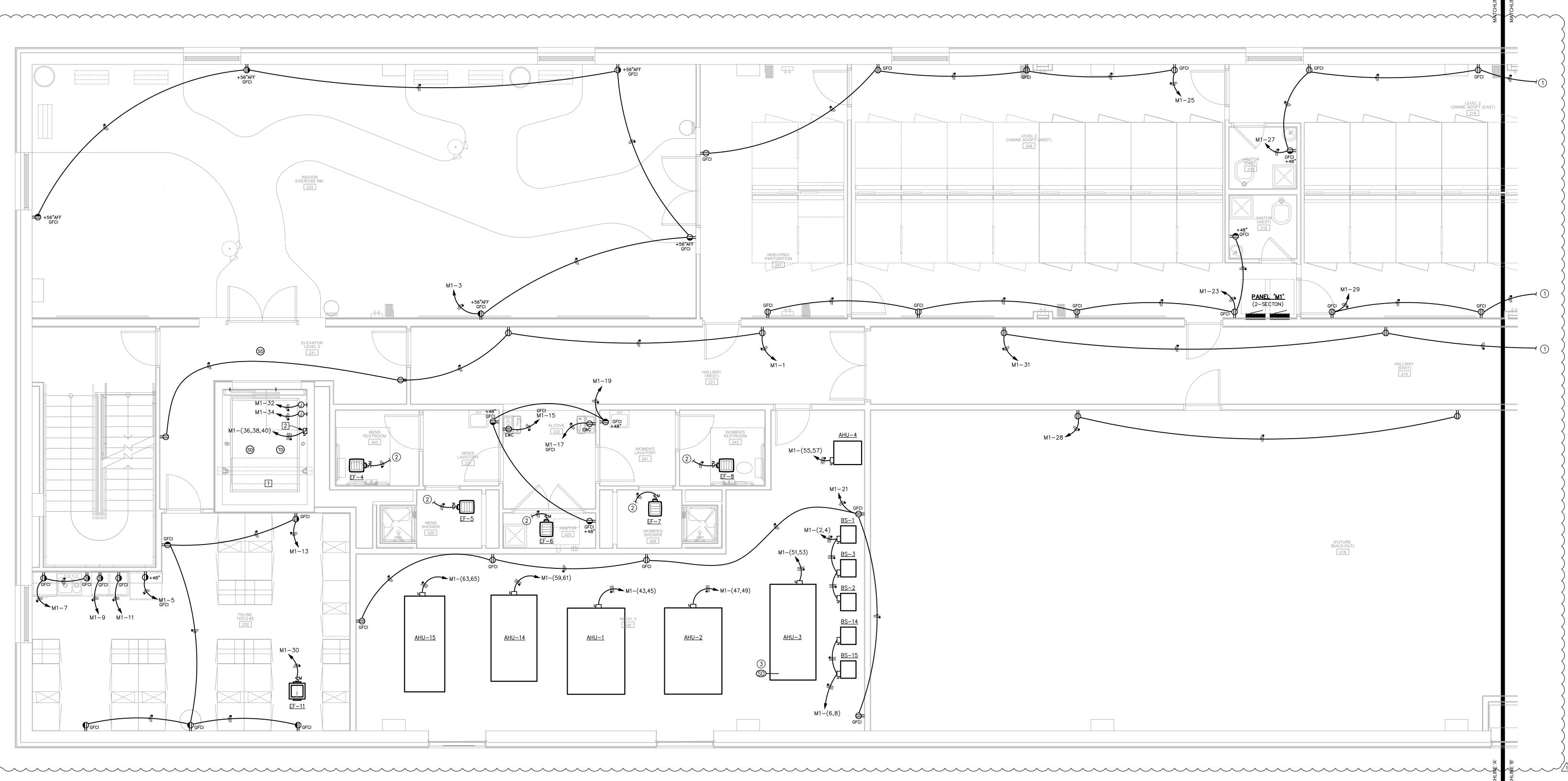
KEY NOTES

(1) SEE DRAWING E202 FOR CONTINUATION. POWER EXHAUST FAN VIA UN-SWITCHED LEG OF LOCAL 120V LIGHTING CIRCUIT. COORDINATE CONTROLS WITH MECHANICAL CONTRACTOR. (S) DUCT MOUNTED SMOKE DETECTOR(S) PROVIDED AND INSTALLED IN THE DUCT

BY MECHANICAL CONTRACTOR. THE DUCT MOUNTED SMOKE DETECTOR(S) SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR TO HVAC AND SPRINKLER MONITORING PANEL (PANEL PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR IN FIRE RISER ROOM 110). SEE E401 FOR RISER AMD NOTES.

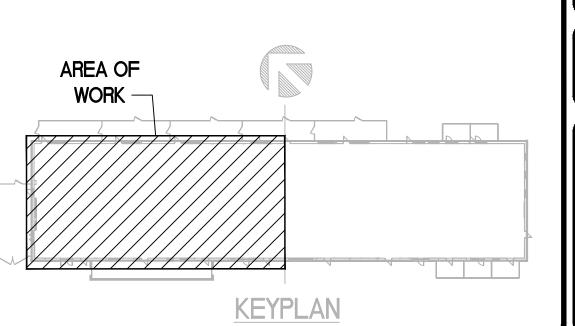
GENERAL NOTES

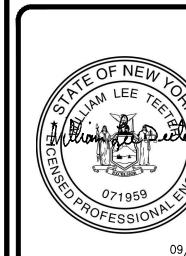
A. REFER TO DRAWING E001 & E002 FOR ELECTRICAL SPECIFICATIONS, SYMBOL LEGENDS, AND NOTES. B. REFER TO DRAWING E003 FOR MECHANICAL AND PLUMBING EQUIPMENT SCHEDULES.



UPPER LEVEL
FLOOR PLAN — POWER — WEST

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





BDA DSGN. REV. BDA TECH REV.

PROJECT NO.: 23077 **E203**

11 **OF** 19

MONITORING PANEL (PANEL PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR IN FIRE RISER ROOM 110). SEE E401 FOR RISER AMD NOTES. <u>AHU-9</u> M2-(62,64)M2-(54,56) **ADOPTION** LOBBY CONGREGATE FELINE RM. #10 CONGREGATE FELINE RM. #7 CONGREGATE FELINE RM. #8 205 CONGREGATE FELINE RM. #9

GENERAL NOTES

KEY NOTES

DUCT MOUNTED SMOKE DETECTOR(S) PROVIDED AND INSTALLED IN THE DUCT
BY MECHANICAL CONTRACTOR. THE DUCT MOUNTED SMOKE DETECTOR(S)
SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR TO HVAC AND SPRINKLER

(1) SEE DRAWING E203 FOR CONTINUATION.

A. REFER TO DRAWING E001 & E002 FOR ELECTRICAL SPECIFICATIONS, SYMBOL LEGENDS, AND NOTES.

B. REFER TO DRAWING E003 FOR MECHANICAL AND PLUMBING EQUIPMENT SCHEDULES.

KEYPLAN

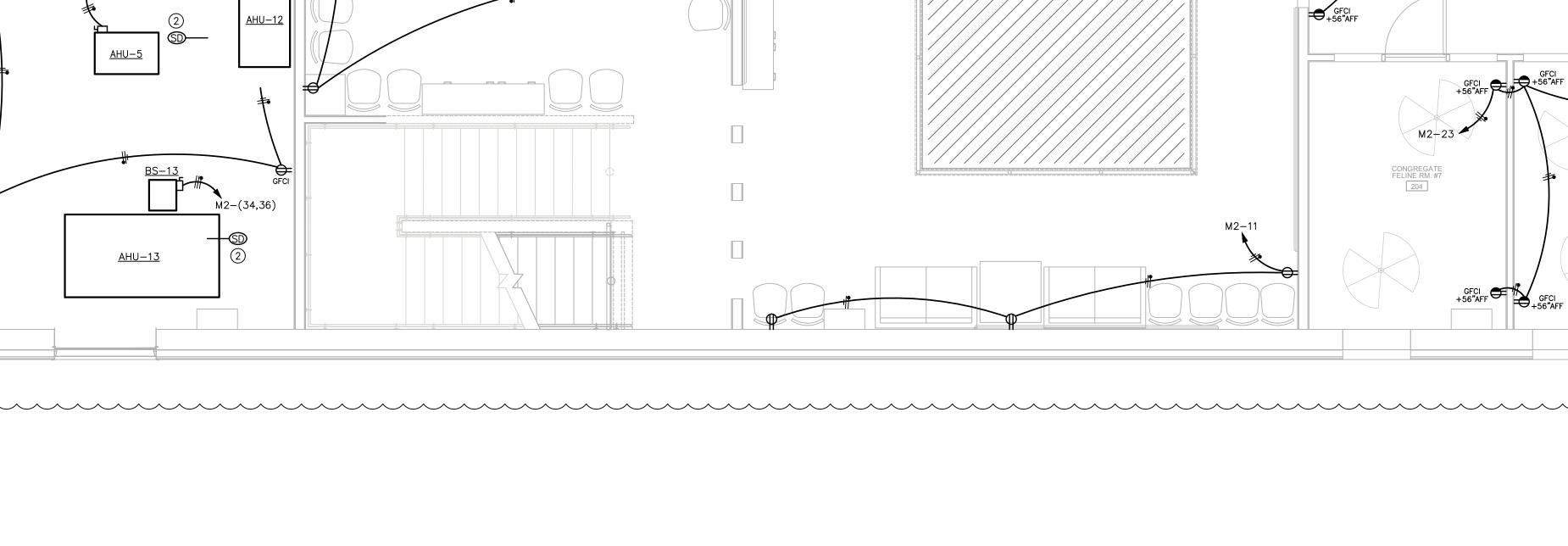
AREA OF

BDA DSGN. REV. BDA TECH REV.

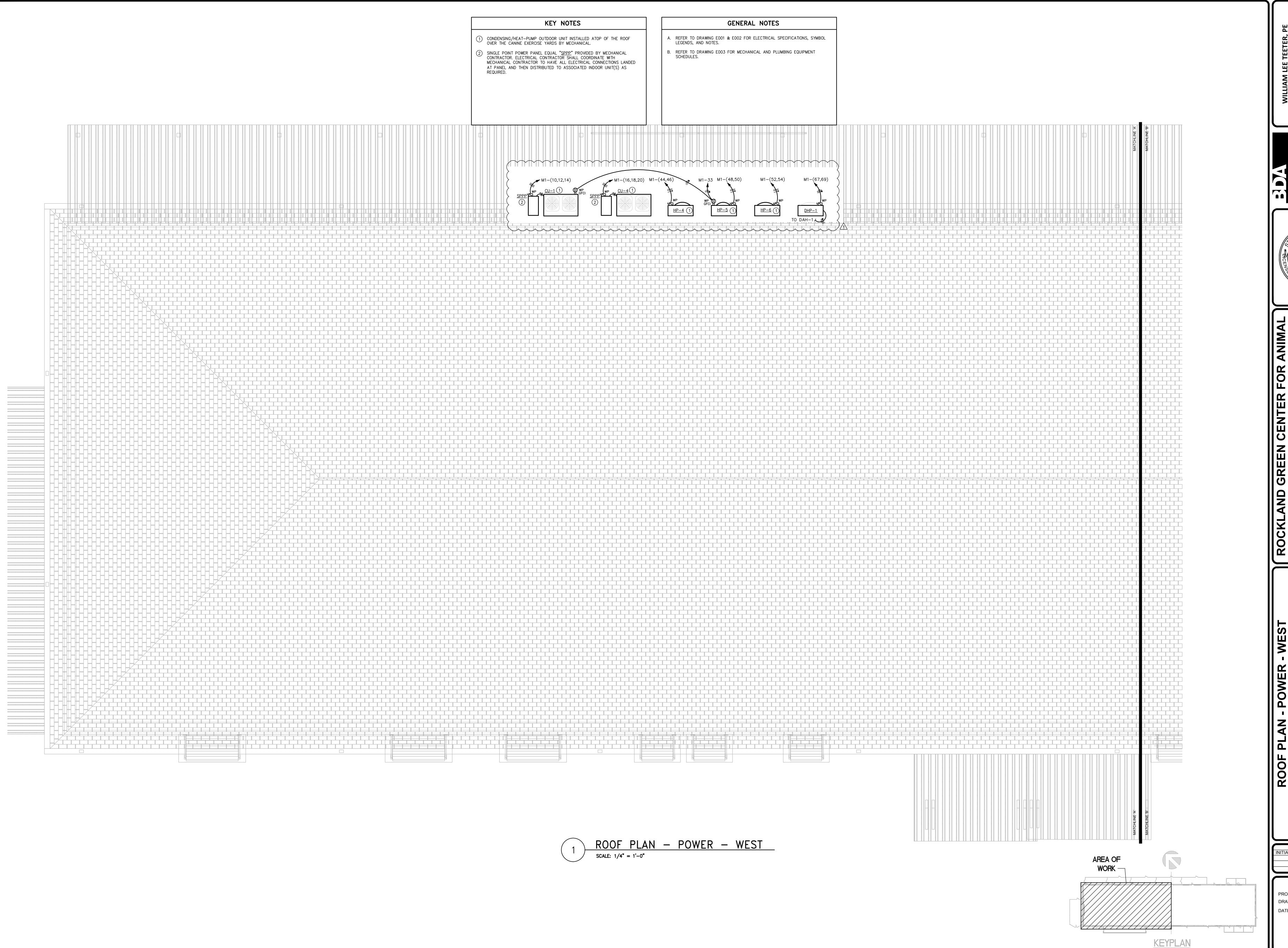
PROJECT NO.: 23077 DRAWN: ZLT **E204** 12 **OF** 19

UPPER LEVEL
FLOOR PLAN — POWER — EAST

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



RF-1 (SUSPENDED BELOW CLG)



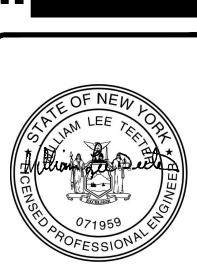
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CHARLOTTE, NC 28217

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IONAL ELTER E TOWN OF

ROCKLAND GREEN CENTER FOR A
RESCUE AND EDUCATIONAL
SERVICES, INC.

R.G. C.A.R.E.S. ANIMAL SHELTER

427 BEACH RD. LOCATED IN THE TOWN
HARVERSTRAW, NY 10993

AN - POWER - WEST

REV.# DATE COMMENTS
REVISION:

REVISION:

REVISION:

REVIEWS
TIALS
BDA DSGN. REV.
BDA TECH REV.

RGAS

PROJECT NO.: 23077

DRAWN: ZLT

DATE: 07/08/2024

E205

13 OF 19

3. REFER TO DRAWING E003 FOR MECHANICAL AND PLUMBING EQUIPMENT 2 SINGLE POINT POWER PANEL EQUAL "SPPP" PROVIDED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL SCHEDULES. CONTRACTOR TO HAVE ALL ELECTRICAL CONNECTIONS LANDED AT PANEL AND THEN DISTRIBUTED TO ASSOCIATED INDOOR UNIT(S) AS REQUIRED. ROOF PLAN — POWER — EAST

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

KEY NOTES

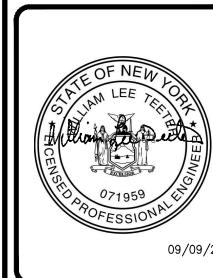
1) CONDENSING/HEAT-PUMP OUTDOOR UNIT INSTALLED ATOP OF THE ROOF

OVER THE CANINE EXERCISE YARDS BY MECHANICAL.

GENERAL NOTES

REFER TO DRAWING E001 & E002 FOR ELECTRICAL SPECIFICATIONS, SYMBOL

LEGENDS, AND NOTES.

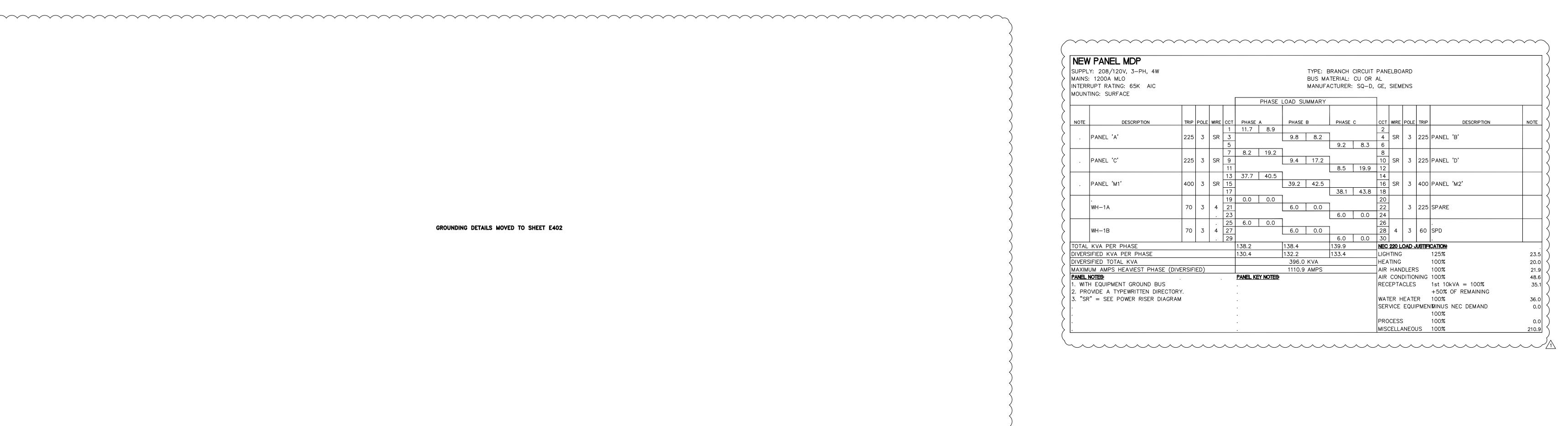


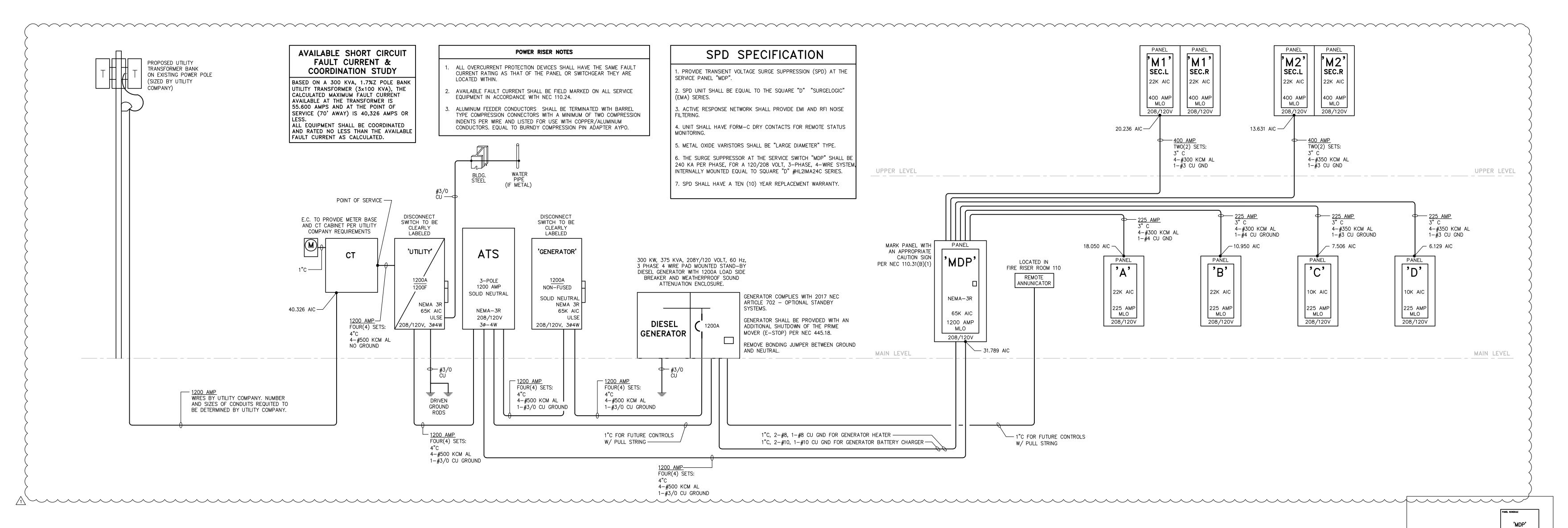
BDA DSGN. REV. BDA TECH REV.

AREA OF

KEYPLAN

E206 14 OF 19





GROUNDING DETAILS MOVED TO SHEET E402

 $\column{2}{c}$



BDA DSGN. REV. BDA TECH REV

PANEL SCHEDULE KEY

PROJECT NO.: 23077

E301

SUPPL	V PANEL M1 _Y: 208/120V, 3-PH, 4W S: 400A MLO					TYPE: BRANCH CIRCUIT PANELWOARDCTION PANELBOARD WITH 42 POLES BUS MATERIAL: CU OR AL PER SECTION. PROVIDE SUB-FEED LUGS AND MAI													V PANEL Y: 208/12 :: 400A MI
	RUPT RATING: 22K AIC															CTION TO SECOND SECTION.			RUPT RATI
MOUN'	TING: RECESSED											_						MOUN	TING: RECI
							PHASE	LOAD SU	JMMARY					1					
NOTE	DESCRIPTION	TRIP	POLE	WIRE	сст	PHASE	Α	PHASE	В	PHASE	С	сст	WIRE	POLE	TRIP	DESCRIPTION	NOTE	NOTE	
	REC - HALLWAY	20	1	12	1	0.7	0.2					2	12			BS-1,2,3			AHU-1
	REC - EXERCISE RM	20	1	12	3			0.9	0.2			4							
Α	REFRIGERATOR - FELINE	20	1	12	5					0.8	0.2	6	12	2	15	BS-14,15	,		AHU-2
	REC - FELINE	20	1	12	7	0.4	0.2					8							
Α	COUNTER REFRIG. FELINE	20	1	12	9			0.8	11.0			10	1	3	125	CU-1			AHU-3
Α	COUNTER REFRIG. FELINE	20	1	12	11				•	0.8	11.0	12							
	REC - FELINE	20	1	12	13	0.9	11.0					14							AHU-4
Α	EWC - ALCOVE	20	1	12	15			1.0	5.2			16	4	3	70	CU-4			
Α	EWC - ALCOVE	20	1	12	17					1.0	5.2	18] .						AHU-14
	REC - JAN./RESTROOMS	20	1	12	19	0.5	5.2				•	20							
	REC - MECH RM	20	1	12	21		•	0.9	0.0			22		1	20	SPARE			AHU-15
	REC - CANINE ADOPT WEST	20	1	12	23				•	0.9	0.0	24		1	20	SPARE			·
	REC - CANINE ADOPT WEST	20	1	12	25	0.7	0.0				•	26		1	20	SPARE			DHP-1/D
	REC - CANINE ADOPT EAST	20	1	12	27		•	0.7	0.4			28	12	1	20	REC FUT BUILD-OUT			
	REC - CANINE ADOPT EAST	20	1	12	29					0.9	0.1	30	12	1	20	FAN EF-11			SPARE
	REC - HALLWAY	20	1	12	31	0.5	1.0				•	32	12	1	20	ELEV CONTROLS			SPACE W
	REC - ROOF MECH	20	1	12	33		•	0.4	0.3			34	12	1	20	ELEV FAN & LIGHTS			SPACE W
	LTG - EXERCISE RESTROOMS	20	1	12	35			-	•	1.0	5.1	36	4	3	70	ELEVATOR	В		SPACE W
	LTG - CORRIDOR	20	1	12	37	0.6	5.1				•	38	1.						SPACE WI
	LTG KENNELS	20	1	12	39		•	1.5	5.1			40	1.						SPACE WI
	LTG FUT BUILD-OUT	20	1	12	41					1.1	0.0	42	1.	1	.	SHUNT TRIP SPACE			SPACE WI
TOTAL	KVA PER PHASE	•				27.1		28.4		28.1	•	NEC	220 L	OAD J	USTIF	ICATION:		TOTAL	. KVA PER
												SEE	RIGH	HT SE	CTIO	N FOR LOAD JUSTIFICATION.		DIVER	SIFIED KVA
								•		•								DIVER	SIFIED TOT
																		MAXIM	UM AMPS
REQUIR	EMENTS:				-	PANEL K	EY NOTES:											REQUIR	EMENTS:
1. WIT	H EQUIPMENT GROUND BUS					A. PRO	VIDE A C	GFCI BRE	AKER.									1. WIT	H EQUIPME
2. PR	OVIDE A TYPEWRITTEN DIRECTOR'	Y.				B. PRO	VIDE SHU	JNT TRIP	BREAKE	ER.								2. PR	OVIDE A T
						•													
																		•	
•						•													
•						•													
						•													

NEW PANEL M1	(LEFT SECTION) NE	EW PANEL M1		(RIGHT SI	ECTION)	NEW PANEL A							
JPPLY: 208/120V, 3—PH, 4W TYPE: BRANCH CIRCUIT PANE twoase ction panelboa		PPLY: 208/120V, 3-PH, 4W	TYPE:	Branch circuit pane twoass ection panelboard with 42 pol	ES	SUPPLY: 208/120V, 3-PH, 4W TYPE: BRANCH CIRCUIT PANELBOARD							
AINS: 400A MLO BUS MATERIAL: CU OR AL PER SECTION. PROVIDE		INS: 400A MLO	BUS MA		AND	MAINS: 225A MLO BUS MATERIAL: CU OR AL							
TERRUPT RATING: 22K AIC MANUFACTURER: SQ-D, GE, SIAMENSCONNECTION TO		ERRUPT RATING: 22K AIC	MANUF	ACTURER: SQ-D, GE, SJAMENSCONNECTION TO SECOND SECTION		INTERRUPT RATING: 22K AIC MANUFACTURER: SQ-D, GE, SIEMENS							
OUNTING: RECESSED	MOI	UNTING: RECESSED	DUACE LOAD CHAMADY			MOUNTING: RECESSED							
PHASE LOAD SUMMARY			PHASE LOAD SUMMARY				PHASE LOAD SUMMARY						
IOTE DESCRIPTION TRIP POLE WRE CCT PHASE A PHASE B PHASE C CCT WRE POLE TRIP	ESCRIPTION NOTE NO		TRIP POLE WIRE CCT PHASE A PHASE B	PHASE C CCT WIRE POLE TRIP DESCRIPTION	NOTE	NOTE DESCRIPTION TRIP POLE WIRE C	CCT PHASE A PHASE B PHASE C	CCT WIRE POLE TRIP DESCRIPTION					
REC - HALLWAY 20 1 12 1 0.7 0.2 2 12 2 15 BS-1,2,3	•	AHU-1	15 2 12 43 0.9 1.3	44 12 2 15 HP-4		REC - FELINE HALLWAY 20 1 12	1 0.7 0.9	2 12 1 20 LTG CONGREGATE RM					
REC - EXERCISE RM 20 1 12 3 0.9 0.2 4 .	· ·	ALUL 2	. . . 45 15 2 12 47	0.9 3.1 48 8 2 35 HP-5		REC - FELINE HALLWAY 20 1 12	0.7 0.6	4 12 1 20 LTG FEL CONDOS					
A REFRIGERATOR - FELINE 20 1 12 5 0.8 0.2 6 12 2 15 BS-14,15 REC - FELINE 20 1 12 7 0.4 0.2	•	AHU-2	15 2 12 47	0.9 3.1 48 8 2 35 HP-5		REC - FELINE ROOMS 20 1 12	5 1.1 0.						
A COUNTER REFRIG. FELINE 20 1 12 9 0.8 11.0 10 1 3 125 CU-1	<u> </u>	AHU-3	15 2 12 51 1.1 3.1	52 8 2 35 HP-6		REC - FIRE RISER 20 1 12	7 0.5 0.4	8 10 1 20 LTG EXTERIOR					
A COUNTER REFRIG. FELINE 20 1 12 11 0.8 11.0 12 .		7110 3	13 2 12 31 53	1.1 3.1 54 .		REC - FELINE EXTERIOR 20 1 12		10 10 1 20 LTG EXTERIOR					
REC - FELINE 20 1 12 13 0.9 11.0		AHU-4	30 2 10 55 2.4 0.0	56 1 20 SPARE		REC - FELINE FOOD PREP 20 1 12	11 0.5 0.						
A EWC - ALCOVE 20 1 12 15 1.0 5.2 16 4 3 70 CU-4	<u> </u>		57 2.4 0.0	58 1 20 SPARE		A DISHWASHER — FELINE 20 1 12 1	13 1.0 2.5	14 8 2 40 EWH-1					
A EWC - ALCOVE 20 1 12 17 1.0 5.2 18		AHU-14	15 2 12 59	0.9 0.0 60 1 20 SPARE		REC – FELINE FOOD PREP 20 1 12	15 0.8 2.5	.7 18 10 2 30 DRYER					
REC - JAN./RESTROOMS 20 1 12 19 0.5 5.2 20 .			61 0.9 0.0	62 1 20 SPARE				.7 18 10 2 30 DR TER					
REC - MECH RM 20 1 12 21 0.9 0.0 22 1 20 SPARE		AHU-15	15 2 12 63 0.9 0.0	64 1 20 SPARE		REC - EXTERIOR 20 1 12	19 0.7 2.7 21 0.2 1.6	22 12 1 20 WASHING MACHINE					
REC - CANINE ADOPT WEST 20 1 12 23 0.9 0.0 24 1 20 SPARE			65	0.9 0.0 66 1 20 SPARE		REC – FELINE CONGR. 20 1 12 2		.8 24 12 1 20 REFRIG. — FELINE PREP					
REC - CANINE ADOPT WEST 20 1 12 25 0.7 0.0 26 1 20 SPARE		DHP-1/DAH-1	15 2 12 67 1.0 0.0	68 1 20 SPARE		REC – FELINE CONGR. EXTER. 20 1 12 2	25 0.4 0.8	26 12 1 20 REFRIG. — FELINE PREP					
REC - CANINE ADOPT EAST 20 1 12 27 0.7 0.4 28 12 1 20 REC FUT	LD-OUT .		69 1.0 0.0	70 1 20 SPARE		REC - FELINE CONDOS 20 1 12 2	27 0.5 1.3	28 10 2 30 GENERATOR HEATER					
REC - CANINE ADOPT EAST 20 1 12 29 0.9 0.1 30 12 1 20 FAN EF-1		SPARE	20 1 71	0.0 0.0 72 1 20 SPARE		REC - ADOPTION LOBBY 20 1 12 :		.3 30 .					
REC - HALLWAY 20 1 12 31 0.5 1.0 32 12 1 20 ELEV CON		SPACE WITH BUSSING	73 0.0 0.0	74 SPACE WITH BUSSING		REC - ADOPTION LOBBY 20 1 12	31 0.7 0.4	32 10 1 20 GEN BATTERY CHARGER					
REC — ROOF MECH 20 1 12 33 0.4 0.3 34 12 1 20 ELEV FAN	LIGHTS .	SPACE WITH BUSSING	75 0.0 0.0	76 SPACE WITH BUSSING		B SPR & HVAC MONIT PNL 20 1 12	33 0.2 0.1	34 12 1 20 GEN CONTROLS					
LTG - EXERCISE RESTROOMS 20 1 12 35 1.0 5.1 36 4 3 70 ELEVATOR	B	SPACE WITH BUSSING	70 00 00	0.0 0.0 78 SPACE WITH BUSSING	•	FANS EF-12 EF-13 20 1 12 3							
LTG - CORRIDOR 20 1 12 37 0.6 5.1 LTG KENNELS 20 1 12 39 1.5 5.1 40 .	· ·	. SPACE WITH BUSSING	79 0.0 0.0	80 SPACE WITH BUSSING	•	SPARE 20 1	37 0.0 0.0	38 . 1 20 SPARE					
LTG KENNELS 20 1 12 39 LTG FUT BUILD—OUT 20 1 12 41 1.5 5.1 40 . . 1.1 0.0 42 . 1 . SHUNT TF	SDACE ·	. SPACE WITH BUSSING . SPACE WITH BUSSING	81 0.0 0.0		· ·	SPARE 20 1	39 0.0 0.1	40 12 1 20 RECIRC PUMP RCP-1					
TAL KVA PER PHASE 27.1 28.4 28.1 NEC 220 LOAD JUSTIFICATION		TAL KVA PER PHASE	37.7 30.2	38.1 NEC 220 LOAD JUSTIFICATION:		SPARE 20 1 .	41 0.0 0.	.0 42 . 1 20 SPARE					
SEE RIGHT SECTION FOR LOAD		ERSIFIED KVA PER PHASE	37.8 39.6	38.6 LIGHTING 125%	5.4	TOTAL KVA PER PHASE	11.7 9.8 9.2	NEC 220 LOAD JUSTIFICATION:					
		ERSIFIED TOTAL KVA	116.0 KVA	HEATING 100%	15.0	DIVERSIFIED KVA PER PHASE	12.0 10.1 9.5	LIGHTING 125%					
		XIMUM AMPS HEAVIEST PHASE (D		AIR HANDLERS 100%	17.5	DIVERSIFIED TOTAL KVA	31.6 KVA	HEATING 100%					
QUIREMENTS: PANEL KEY NOTES:		OUIREMENTS:	PANEL KEY NOTES:	AIR CONDITIONING 100%	48.6	MAXIMUM AMPS HEAVIEST PHASE (DIVERSIFIED)	100.0 AMPS	AIR HANDLERS 100%					
WITH EQUIPMENT GROUND BUS A. PROVIDE A GFCI BREAKER.		WITH EQUIPMENT GROUND BUS	A. PROVIDE A GFCI BREAKER.	RECEPTACLES 1st 10kVA = 100%	8.8	PANEL NOTES + REQUIREMENTS:	PANEL KEY NOTES:	AIR CONDITIONING 100%					
PROVIDE A TYPEWRITTEN DIRECTORY. B. PROVIDE SHUNT TRIP BREAKER.	2.	PROVIDE A TYPEWRITTEN DIRECTO	DRY. B. PROVIDE SHUNT TRIP BREAKI			1. WITH EQUIPMENT GROUND BUS	A. PROVIDE A GFCI BREAKER.	RECEPTACLES 1st 10kVA = 100%					
·			•	WATER HEATER 100%	0.0	2. PROVIDE A TYPEWRITTEN DIRECTORY.	B. PROVIDE LOCK-ON DEVICE ON BREAKER.	+50% OF REMAINING					
·	.			SERVICE EQUIPMENTAINUS NEC DEMAND	0.0	•	MARL BREAKER RED COLOR.	WATER HEATER 100%					
·	-		•	100%		•	·	SERVICE EQUIPMENTINUS NEC DEMAND					
·			•	PROCESS 100%	0.0	•	•	100% PROCESS 100%					
•			•	MISCELLANEOUS 100%	20.7	·	•	MISCELLANIEOLIS 100%					

MAINS NTERI	_Y: 208/120V, 3-PH, 4W S: 225A MLO RUPT RATING: 22K AIC								BUS MA	BRANCH ATERIAL: ACTURER:	CU OR	AL					
MOUN	TING: RECESSED						PHASE	LOAD SU	IMMARY			1					
					Ι		TTINGE	TOND 30	71411417 (1 (1								
NOTE			POLE		CCT		1	PHASE	В	PHASE	<u>C</u>				TRIP		
	REC - FELINE HALLWAY	20	1	12	7	0.7	0.9	0.7	1 0 0	Т		2	12	1		LTG CONGREGATE RM	
	REC - FELINE HALLWAY	20	1	12	3			0.7	0.6	111		4	12	1		LTG FEL CONDOS	
	REC - FELINE ROOMS	20	1	12	5	0.5		7		1.1	0.7	6	12	1		LTG ADOPT RECEPT	
	REC - FIRE RISER	20	1	12	7	0.5	0.4			٦		8	10	1		LTG EXTERIOR	
	REC - FELINE EXTERIOR	20	1	12	9			0.5	0.7		T	10	10	1		LTG EXTERIOR	
	REC — FELINE FOOD PREP	20	1	12	11			7		0.5	0.4	12	10	1		LTG EXTER SITE	
Α	DISHWASHER - FELINE	20	1	12	13	1.0	2.5		T	7		14	8	2	40	EWH-1	
Α	REFRIGERATOR - FELINE	20	1	12	15			0.8	2.5	<u> </u>	T	16					
	REC - FELINE FOOD PREP	20	1	12	17			_		0.4	2.7	18	10	2	30	DRYER	
	REC - FELINE M&G	20	1	12	19	0.7	2.7		1	7		20	•				
	REC - EXTERIOR	20	1	12	21			0.2	1.6		1	22	12	1		WASHING MACHINE	
	REC - FELINE CONGR.	20	1	12	23			7		0.7	0.8	24	12	1		REFRIG. – FELINE PREP	
	REC - FELINE CONGR. EXTER.	20	1	12	25	0.4	0.8		,	7		26	12	1		REFRIG. — FELINE PREP	
	REC - FELINE CONDOS	20	1	12	27			0.5	1.3			28	10	2	30	GENERATOR HEATER	
	REC - ADOPTION LOBBY	20	1	12	29			_		0.5	1.3	30					
	REC - ADOPTION LOBBY	20	1	12	31	0.7	0.4			-		32	10	1	20	GEN BATTERY CHARGER	
В	SPR & HVAC MONIT PNL	20	1	12	33			0.2	0.1			34	12	1	20	GEN CONTROLS	
	FANS EF-12 EF-13	20	1	12	35			_		0.1	0.0	36		1	20	SPARE	
	SPARE	20	1		37	0.0	0.0			_		38		1	20	SPARE	
	SPARE	20	1		39			0.0	0.1			40	12	1	20	RECIRC PUMP RCP-1	
	SPARE	20	1		41			,		0.0	0.0	42		1	20	SPARE	
OTAL	. KVA PER PHASE					11.7		9.8		9.2		NEC	220 L	OAD .	JUSTIF	ICATION:	
IVER	SIFIED KVA PER PHASE					12.0		10.1		9.5]LIGH	ITING			125%	
)IVER	SIFIED TOTAL KVA							31.6	KVA			HEA	TING			100%	
/AXIM	IUM AMPS HEAVIEST PHASE (DI	VERSIF	IED)					100.0	AMPS			AIR	HAN	DLER	:S	100%	
ANEL	NOTES + REQUIREMENTS:					PANEL KE	Y NOTES:					AIR	CON	DITIO	NING	100%	
. WIT	H EQUIPMENT GROUND BUS					A. PRO	VIDE A	GFCI BRE	AKER.			REC	EPTA	CLES	3	1st 10kVA = 100%	
2. PR	OVIDE A TYPEWRITTEN DIRECTOR	۲۲.				B. PRO	VIDE LO	CK-ON D	EVICE O	N BREAK	ER.					+50% OF REMAINING	
						MAR	L BREA	KER RED	COLOR.			WAT	ER F	IEATE	ΞR	100%	
						•						SER	VICE	EQU	IPME	NNTINUS NEC DEMAND	
																100%	
												PRC	CESS	3		100%	
						_						I MISO	CELL	ANEO	US	100%	

NEV	V PANEL M2																(LEFT SECT	TION)
SUPPL	Y: 208/120V, 3-PH, 4W								TYPE:	BRANCH	CI	IRCUIT	PAN	ETABO	ABD	CTION	PANELBOARD WITH 42 POLES	·
MAINS	: 400A MLO								BUS M	ATERIAL:	: C	U OR	AL	PER	SEC	TION.	PROVIDE SUB-FEED LUGS AND)
INTERI	RUPT RATING: 22K AIC								MANUF	ACTUREF	₹:	SQ-D,	GE,		EEN S C	ONNE	CCTION TO SECOND SECTION.	
MOUN	TING: RECESSED												-					
				1			PHASE	LOAD SU	JMMARY							,		
NOTE	DESCRIPTION	TRIP	POLE	WIR	E CCT	PHASE	Α	PHASE	В	PHASE	E C		ССТ	WIRE	POLE	TRIP	DESCRIPTION	NOTE
	REC - EXOTICS	20	1	12		0.5	5.6			•			2	3	3		CU-2	
	REC - EXOTICS	20	1	12	2 3			0.4	5.6				4					
	REC - LOBBY	20	1	12	2 5				•	0.7		5.6	6					
	REC - ATRIUM	20	1	12	2 7	0.5	8.5						8	1	3	110	CU-3	
	REC - ATRIUM	20	1	12	2 9		-	0.5	8.5				10					
	REC - ATRIUM	20	1	12	2 11					0.5		8.5	12					
	REC - ROOF MECH	20	1	12	2 13	0.4	4.0	1					14	6	2	45	AHU-5	
	REC - MECH RM	20	1	12	2 15			0.9	4.0	1			16					
	REC - MECH RM	20	1	12	2 17			-		1.1		5.0	18	6	2	50	AHU-6	
	REC - FELINE	20	1	12	2 19	1.1	5.0						20					
	REC - FELINE	20	1	12	2 21			0.9	7.5				22	3	2	80	AHU-7	
	REC - FELINE	20	1	12	2 23				_	1.1		7.5	24					
	REC - FELINE FOOD SINK	20	1	12	2 25	0.5	0.2						26	12	2	15	BS-8,9	
	REC - FELINE FOOD	20	1	12	2 27			0.5	0.2				28					
	REFRIGERATOR - FELINE	20	1	12	2 29			_		0.8		0.2	30	12	2	15	BS-10,11	
	COUNTER REFRIG - FELINE	20	1	12	2 31	0.8	0.2			_			32					
•	COUNTER REFRIG - FELINE	20	1	12	2 33			0.8	0.2				34	12	2	15	BS-13	
Α	DISHWASHER - FELINE	20	1	12	2 35			_		1.2		0.2	36					
	WASHER - FELINE	20	1	12	2 37	1.5	0.8			_			38	12	1	20	LTG - LOBBY AVIAN	
Α	DRYER - FELINE	30	2	10	39			2.6	0.7				40	12	1	20	LTG ATRIUM MECH	
					41					2.6		1.1	42	12	1	20	LTG CONGREGATE RMS	
TOTAL	. KVA PER PHASE					29.7		33.3		36.1			NEC	220 L	OAD.	JUSTIF	TCATION:	
													SEE	RIG	HT S	ECTIO	N FOR LOAD JUSTIFICATION.	
PANEL	NOTES + REQUIREMENTS:					PANEL KE	Y NOTES:											
1. WIT	H EQUIPMENT GROUND BUS					A. PRO	VIDE A	GFCI BRE	AKER.									
2. PR	OVIDE A TYPEWRITTEN DIRECTO	RY.				B. PRO	VIDE LO	CK-ON D	EVICE O	N A BR	EAŁ	KER.						
1. WIT	H EQUIPMENT GROUND BUS	RY.				A. PRO	VIDE A	GFCI BRE		N A BR	EAŁ	KER.						

NEW	PANEL M2															(RIGHT SECT	TON
SUPPL	Y: 208/120V, 3-PH, 4W								TYPE:	BRANCH	CIRCUI	T PAN	ETABO	ABDO	TION	PANELBOARD WITH 42 POLES	
AINS:	400A MLO								BUS M	ATERIAL:	CU OF	R AL	PER	SEC	TION.	PROVIDE SUB-FEED LUGS AND)
NTERF	RUPT RATING: 22K AIC								MANUF	ACTURER	: SQ-l), GE,	SIÆEM	C2/AE	ONNE	ECTION TO SECOND SECTION.	
LUDON	ING: RECESSED											_					
							PHASE	LOAD SI	JMMARY							,	
NOTE	DESCRIPTION	TRIP	POLF	WIRE	CCT	PHASE .	Δ	PHASE	R	PHASE	С	CCT	WIRF	POLE	TRIP	DESCRIPTION	NO.
	FAN "Q"	20	2	12	43	1.0	4.2	THASE		THASE		44	4	3		HP-12	110
				, _	45			1.0	4.2	7		46	1			· · · · -	
	FAN RF-1	20	2	12	47	İ				0.8	4.2	48	1	,	,		
	•		<u>-</u>	-	49	0.8	2.2	7			1	50		2	25	HP-7	†
	SPARE	20	1		51			0.0	2.2			52	1.	-			
	SPARE	20	1		53	1				0.0	0.9	54	12	2	15	AHU-8	+
	SPARE	20	1		55	0.0	0.9	7				56	1.	١.	١.		
	SPARE	20	1		57			0.0	0.9			58	12	2	15	AHU-9	
	SPARE	20	1		59	1		<u> </u>		0.0	0.9	60		١.			
	SPARE	20	1		61	0.0	0.9	7			1	62		2	15	AHU-10	
	SPARE	20	1		63			0.0	0.9			64		١.			
	SPARE	20	1		65	1		<u> </u>		0.0	0.9	66	12	2	15	AHU-11	
	SPARE	20	1		67	0.0	0.9	7			•	68		.			
	SPARE	20	1		69			0.0	0.0	1		70		1	20	SPARE	
	SPACE WITH BUSSING				71			•	•	0.0	0.0	72				SPACE WITH BUSSING	
	SPACE WITH BUSSING				73	0.0	0.0	7			•	74				SPACE WITH BUSSING	
	SPACE WITH BUSSING				75			0.0	0.0			76				SPACE WITH BUSSING	
	SPACE WITH BUSSING				77					0.0	0.0	78				SPACE WITH BUSSING	
	SPACE WITH BUSSING				79	0.0	0.0					80				SPACE WITH BUSSING	
	SPACE WITH BUSSING				81			0.0	0.0			82				SPACE WITH BUSSING	
	SPACE WITH BUSSING				83					0.0	0.0	84				SPACE WITH BUSSING	
OTAL	KVA PER PHASE					40.5		42.5		43.8		NEC	220 L	OAD .	JUSTIF	TCATION:	
IVERS	SIFIED KVA PER PHASE					40.7		42.7		44.1		LIG	HTING	;		125%	
IVERS	SIFIED TOTAL KVA							127.5	KVA			HE/	ATING			100%	
1AXIM	UM AMPS HEAVIEST PHASE (DIVERSIF	TED)					366.9	AMPS			AIR	HAN	DLER	S	100%	
	NOTES + REQUIREMENTS:					PANEL KE	Y NOTES	!				AIR	CON	DITIO	NING	100%	
. WITH	H EQUIPMENT GROUND BUS					A. PROV	IDE A	GFCI BRE	AKER.			REC	EPTA	ACLES	3	$1st\ 10kVA = 100\%$	
. PRO	OVIDE A TYPEWRITTEN DIRECT	ORY.				B. PROV	IDE LO	CK-ON D	EVICE O	N A BRE	AKER.					+50% OF REMAINING	
						•						- 1				100%	
						•						SEF	VICE	EQU	IPME	NATINUS NEC DEMAND	
						•								_		100%	
						•						[PRO	CESS	S		100%	

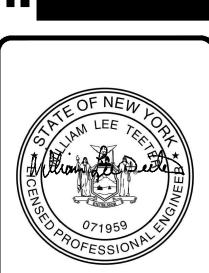
SUPPL	Y: 208/120V, 3-PH, 4W								TYPE: I	BRANCH (CIRCUIT	PAN	ELBO	ARD			
	: 225A MLO								BUS MA	ATERIAL:	CU OR	AL					
NTERF	RUPT RATING: 22K AIC								MANUFA	ACTURER:	SQ-D,	GE,	SIEM	IENS			
NOON.	TING: RECESSED											_					
							PHASE	LOAD SU	JMMARY	_							
NOTE	DESCRIPTION	TRIP	POLE	WIRE	CCT	PHASE	Δ	PHASE	R	PHASE (_	ССТ	WIRF	POLE	TRIP	DESCRIPTION	NOTE
NOIL	REC - HALL HALLWAY	20	1	12	1	0.9	0.4	THASE	<u> </u>	THASE	<u> </u>	2	12	1		REC – STAFF LOUNGE	NOIL
	REC - HALLWAY	20	1	12	3	0.0	0.1	0.7	1.2	1		4	12	1		ELEC. WATER COOLER	A
	REC - RESTROOMS/JAN	20	1	12	5			0.7	1.2	0.5	0.8	6	12	1		REFRIGERATOR	A
	REC - CANINE M/G	20	1	12	7	0.9	1.2	7		0.0	0.0	8	12	1		DISHWASHER	A
	REC - KENNELS/ADOPT	20	1	12	9	0.0	1,2	0.9	1.2	1		10	12	1		MICROWAVE	A
	REC - KENNELS/ADOPT	20	1	12	11			0.0		0.7	1.5	12	12	2		EWH-3	
	SPARE	20	1	-	13	0.0	1.5	ī		<u> </u>	1.0	14		-	-		
	REC - OFFICE	20	1	12	15	0.0		0.9	0.5	1		16	12	1	20	REC – CANINE YARDS	
	REC - OFFICE	20	1	12	17					0.9	1.1	18	12	1		REC - ADOPT. RECEPTION	
-	REC - COPY STATION	20	1	12	19	0.5	0.9	7				20	12	1		REC - ADOPTION LOBBY	
	COPY MACHINE	20	1	12	21			0.8	0.0	1		22		1		SPARE	
	REC - CUBICALS	20	1	12	23					0.9	0.0	24		1		SPARE	
	REC - CUBICALS	20	1	12	25	1.1	0.0	\neg				26		1		SPARE	
	REC - CUBICALS	20	1	12	27			0.9	0.0	1		28		1		SPARE	
	REC - CONF RM	20	1	12	29					1.0	0.0	30		1		SPARE	
	TV - LOUNGE	20	1	12	31	0.7	0.0	7				32		1		SPARE	
	SPARE	20	1		33			0.0	0.0]		34		1		SPARE	
	SPARE	20	1		35					0.0	0.0	36		1		SPARE	
	LTG CANINE ADOPT	20	1	12	37	0.9	0.0	٦				38		1		SPARE	
	LTG HALLWAY	20	1	12	39			1.0	0.0]		40		1		SPARE	
	LTG CONF LOUNGE OFFICES	20	1	12	41					0.9	0.0	42		1		SPARE	
TOTAL	. KVA PER PHASE	-	1		1	8.9		8.2		8.3		NEC	220 L	OAD v		ICATION:	
DIVERS	SIFIED KVA PER PHASE					8.5		7.9		7.9		LIGH	ITING	;		125%	3.5
DIVERS	SIFIED TOTAL KVA							24.3	KVA	•		∃HEA	TING			100%	0.0
MIXAN	IUM AMPS HEAVIEST PHASE (DI	VERSIF	IED)					70.9	AMPS			AIR	HAN	DLER	S	100%	0.0
EQUIR	EMENTS:					PANEL KE	Y NOTES	:				AIR	CON	DITIO	NING	100%	0.0
. WIT	H EQUIPMENT GROUND BUS					A. PROV	IDE A	GFCI BRE	AKER.			REC	EPTA	ACLES	3	$1st\ 10kVA = 100\%$	11.9
2. PR	OVIDE A TYPEWRITTEN DIRECTOR	RY.				B. PROV	IDE LO	CK-ON D	EVICE O	N A BREA	AKER.					+50% OF REMAINING	
												WAT	ER H	HEATE	ER	100%	0.0
												SER	VICE	EQU	IPMEI	NMTINUS NEC DEMAND	0.0
						•										100%	
												1	CES	_		100%	0.0
						•						MIS	CELL/	ANEO	US_	100%	8.9

NEW PANEL D						NEW PANEL C									
SUPPLY: 208/120V, 3-PH, 4W		TYPE: E	BRANCH CIRCUIT PANELBOARE	D		SUPPLY: 208/120V, 3-PH, 4W				TYPE	: BRANCH CIRCU	JIT PANELBO	DARD		
MAINS: 225A MLO			TERIAL: CU OR AL			MAINS: 225A MLO					MATERIAL: CU C		· -		
INTERRUPT RATING: 10K AIC			CTURER: SQ-D, GE, SIEMENS	S		INTERRUPT RATING: 10K AIC					JFACTURER: SQ-		MENS		
MOUNTING: RECESSED						MOUNTING: RECESSED					•	-,,			
	PHASE	LOAD SUMMARY						[PHASE	LOAD SUMMAF	RY				
NOTE DESCRIPTION	TRIP POLE WIRE CCT PHASE A	PHASE B	PHASE C CCT WIRE POL		NOTE	NOTE DESCRIPTION		E WIRE CCT		PHASE B	PHASE C			SCRIPTION	١
. REC — HALL/JANITOR	20 1 12 1 0.9 0.4			20 ELEV - SP-1 (SUMP PU	JMP) .	REC - HALLWAY			0.7 1.5			2 12	2 20 AUTOCLAVE		
. REC — KENNELS/ADOPT	20 1 12 3	1.1 0.5		20 ELEV - PIT LIGHTING		REC - KENNELS/ADOPT	20 1	12 3		1.1 1.5	5	4 .			
. REC — KENNELS/ADOPT	20 1 12 5	_	0.9 6.0 6 4 3	60 WALK-IN FREEZER		REC - KENNELS/ADOPT	20 1	12 5		_	1.1 1.5	6 .	1 . SPACE ONLY		
. REC — CANINE EXTERIOR	20 1 12 7 0.4 6.0		8		.	REC — CANINE YARD	20 1		0.4 1.5			8 12	2 20 STERILIZER		
. REC - SALLY PORT EXTERIO		0.4 6.0	10			REC - INTAKE RMS	20 1	12 9		1.1 1.5		10 .			
A DRYER	30 2 10 11	-	2.7 1.5 12 12 2	20 EWH-2		REC — EXAM	20 1	12 11		-	0.7 0.0	12 .	1 SPACE ONLY		
	. 13 2.7 1.5		14 .			REC - WAITING RM	20 1	12 13	1.3 0.2				1 20 FANS EF-9 E		
A DRYER	30 2 10 15	2.7 0.7		20 REC - FELINE/CANINE H	HOLD	SPARE	20 1	15		0.0 0.2			1 20 DAH-1 COND		
	. 17	7	2.7 0.9 18 12 1			COMPUTERS - DVM OFFICE	20 1	12 17		7	1.2 1.3		1 20 REC - DOUB	LE SURGERY	
A DRYER	30 2 10 19 2.7 0.4			20 REC - EXTERIOR		REC — TREATMENT	20 1		0.5 0.2				2 15 FFU-1		
	. 21	2.7 0.2		20 FAN EF-15		REC LTS - TREATMENT	20 1	12 21		0.5 0.2		22 .			
A DRYER	30 2 10 23	7	2.7 0.0 24 . 1	20 SPARE		REC LTS — TREATMENT	20 1	12 23		7	0.5 0.0	24	1 20 SPARE		
	. 25 2.7 0.0		26 . 1	20 SPARE		REC — TREATMENT	20 1		0.9 0.0			26	1 20 SPARE		
SPARE	20 1 27	0.0 0.0	28 . 1	20 SPARE		A REFRIGERATOR — TREATM	20 1	12 27		1.2 0.0		28	1 20 SPARE		
SPARE	20 1 29	7	0.0 0.0 30 . 1	20 SPARE		REC LTS — DBL SURGERY	20 1	12 29	,	7	1.0 0.0		1 20 SPARE		
A REFRIG. – FOOD PREP	20 1 12 31 0.8 0.0		32 . 1	20 SPARE		REC LTS — DBL SURGERY	20 1		1.0 0.0			32	1 20 SPARE		
REC - FOOD PREP	20 1 12 33	0.5 0.0	34 . 1	20 SPARE		REC - ISOLATION	20 1	12 33		1.1 0.0		34	1 20 SPARE		
. REFRIG. — FOOD PREP	20 1 12 35	_	0.8 0.0 36 . 1	20 SPARE		SPARE	20 1	35	,	1	0.0	36	1 20 SPARE		
. REFRIG. — FOOD PREP	20 1 12 37 0.8 0.0		38 . 1	20 SPARE		SPARE	20 1		0.0 0.0			38	1 20 SPARE		
A DISHWASHER — FOOD PREP	20 1 12 39	1.2 1.3		20 LTG - KENNELS		LTG — KENNELS	20 1	12 39		1.2 0.0		40	1 20 SPARE		
REC - FOOD PREP	20 1 12 41	1	0.5 1.2 42 12 1			LTG — TREATM EXAMS	20 1	12 41		1	1.3 0.0		1 20 SPARE		
TOTAL KVA PER PHASE	19.2	17.2		O JUSTIFICATION:		TOTAL KVA PER PHASE			8.2	9.4	8.5		LOAD JUSTIFICATION:		
DIVERSIFIED KVA PER PHASE	19.2	17.6	20.2 LIGHTING	125%	3.2	DIVERSIFIED KVA PER PHASE		-	7.7	9.4	8.5	LIGHTIN			
DIVERSIFIED TOTAL KVA		57.0 KVA	HEATING	100%	0.0	DIVERSIFIED TOTAL KVA				25.6 KVA		HEATING			
MAXIMUM AMPS HEAVIEST PHASE (DIVERSIFIED)	168.4 AMPS	AIR HANDLE		0.2	MAXIMUM AMPS HEAVIEST PHASE (I	DIVERSIFIED)			78.0 AMPS	5		NDLERS 100%		
REQUIREMENTS:			AIR CONDITI		0.0	PANEL NOTES + REQUIREMENTS:	•		PANEL KEY NOTES:	NEOL DDE : : : = -		I	NDITIONING 100%	400~	
1. WITH EQUIPMENT GROUND BUS			RECEPTACLE		7.0	1. WITH EQUIPMENT GROUND BUS	-ODV		A. PROVIDE A C			RECEPT			
2. PROVIDE A TYPEWRITTEN DIRECT	UK I.		WATED LIEA	+50% OF REMAINING		2. PROVIDE A TYPEWRITTEN DIRECT	UKT.	t	B. PROVIDE LOC	K-ON DEVICE	ON A BREAKER.	I	+50% OF REN	MAINING	
•			WATER HEA	UIPMENNTINUS NEC DEMAND	0.0			•	•			I	HEATER 100% EQUIPMENNTINUS NEC D)EMAND	
·			SERVICE EQ	100%	0.0			•	•			SEK VICE	. EQUIPMENMINUS NEC D 100%	PEIMAIND	
•			PROCESS	100%	0.0			•	•			PROCES			
·			MISCELLANE		46.6			•	•			I	.ANEOUS 100%		
•			IMISCELLANE	.003 100%	40.0	<u> -</u>			•			INITOCELL	.ANLOUS 100%		

NEW	V PANEL C																
SUPPL	_Y: 208/120V, 3-PH, 4W								TYPE: '	BRANCH (CIRCUIT	PAN'	FLBC)ARD			
	:: 225A MLO									ATERIAL: (/ 11 12			
	RUPT RATING: 10K AIC									ACTURER:			SIEW	MENS			
	TING: RECESSED											·,	C				
14.00	THO. TREGESCE				ŗ		PHASE	LOAD SU	UMMARY			1					
		T	\top	\Box	\sqcap		1117.02		/IVIIVI/ (I X I			 					
		'		'		1							'	'			
NOTE			POLE		_	1	1	PHASE		PHASE (<u>C</u>			_		DESCRIPTION	NOTE
	REC - HALLWAY	20		12	+	0.7	1.5			٦		2	12	2	20	AUTOCLAVE	A
	REC - KENNELS/ADOPT	20		12	_	1		1.1	1.5	1		4	<u> </u>	<u> </u>	 		
	REC - KENNELS/ADOPT	20		12		<u> </u>		¬		1.1	1.5	6	↓ '	1	+	SPACE ONLY	
	REC — CANINE YARD	20		12	7	0.4	1.5			-		8	12	2	20	STERILIZER	Α
	REC - INTAKE RMS	20	-	12		1		1.1	1.5			10	↓ '	<u> </u>	<u> </u>		
	REC - EXAM	20		12	11	<u> </u>				0.7	0.0	12	Ĺ'	1		SPACE ONLY	
	REC - WAITING RM	20	1	12	13	1.3	0.2	<u> </u>		-		14	12	1	20	FANS EF-9 EF-16	
	SPARE	20	1		15			0.0	0.2			16	12	1		DAH-1 CONDENS PUMP	
	COMPUTERS - DVM OFFICE	20	1	12	17	l				1.2	1.3	18	12	1	20	REC - DOUBLE SURGERY	
	REC - TREATMENT	20	1	12	19	0.5	0.2	<u> </u>				20	12	2	15	FFU-1	
	REC LTS - TREATMENT	20	1_1	12	21			0.5	0.2			22	۱ <u> '</u>	'			
	REC LTS - TREATMENT	20	1_	12	23	l				0.5	0.0	24	<u> </u>	1_	20	SPARE	
	REC - TREATMENT	20	_	_	25	0.9	0.0	1				26	<u> </u>	1	+	SPARE	
Α	REFRIGERATOR - TREATM	20		12				1.2	0.0			28		1	_	SPARE	
	REC LTS - DBL SURGERY	20		12	+	1			.1	1.0	0.0	30		1	_	SPARE	
	REC LTS - DBL SURGERY	20		12		1.0	0.0	1				32		1	_	SPARE	\top
	REC - ISOLATION	20	_	12			1 -	1.1	0.0	1		34		1	_	SPARE	+
	SPARE	20	_	+	35	1			1	0.0	0.0	36		1	_	SPARE	\dashv
	SPARE	20	_	+	37	0.0	0.0	7				38		1	_	SPARE	
	LTG - KENNELS	20	_	12		5.5		1.2	0.0	1		40	+	1	_	SPARE	
	LTG - TREATM EXAMS	20	_	12		1		1.2	1 0.0	1.3	0.0	42	+	1	_	SPARE	+
TOTAL	KVA PER PHASE	1 20	т.	1 12		8.2		9.4		8.5					-	FICATION:	
	SIFIED KVA PER PHASE					7.7		9.4		8.5		_	HTING		<u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	125%	3.7
	SIFIED TOTAL KVA				\longrightarrow	1.,			6 KVA	10.5		-	ATING			100%	
	SIFIED TOTAL KVA IUM AMPS HEAVIEST PHASE (DIV	/EDGI	בובט)		—	 			O AMPS			_				100%	0.0
	NOTES + REQUIREMENTS:	EROII	IEU			DANEI KI	TY MOTES:		AIVIF 3			_				100% G 100%	0.6
	<u>NOTES + REQUIREMENTS:</u> THEQUIPMENT GROUND BUS	•		•			<u>ey notes:</u> Vide a c	: GFCI BRE	- v I/ED			1		ACLES		1st 10kVA = 100%	0.0
	H EQUIPMENT GROUND BUS OVIDE A TYPEWRITTEN DIRECTOR'	٧٠								N A BREA	AI/ED	KLO	EFIA	IULES	,	+50% OF REMAINING	11.3
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PANEL SCHEDULE	PANEL SCHEDULE	PANEL SCHEDULE
'M1' sec. L	'M1' sec. L	'A'
PANEL SCHEDULE M2' SEC. L	PANEL SCHEDULE 'M2' SEC. L	PANEL SCHEDULE *B*
PANEL SCHEDULE	PANEL SCHEDULE	PANEL SCHEDULE

PANEL SCHEDULE KEY



VEL SCHEDULES
STN:
NDUM 2

BDA DSGN. REV. BDA TECH REV.

PROJECT NO.: 23077

CONNECT TO SHUNT TRIP ONLY (NOT TO FIRE ALARM SYSTEM)

NOTES:

- 1. WIRE COMPONENTS PER NORTH CAROLINA STATE FIRE MARSHALL
- "UNIFORM FIRE SAFETY STANDARDS FOR ELEVATORS". 2. CONNECT WARNING LIGHTS THRU FIRE ALARM PANEL.
- 3. SHUT-OFF VALVE: RUN TAMPER SWITCH TO F.A.P.(TYP.)
- 4. SIGN: ENGRAVED BAKELIGHT, RED WITH 1/8" HIGH WHITE LETTERS STATING. "DO NOT USE ELEVATOR WHEN FLASHING".
- 5. WARNING LIGHT: PROVIDED POWERED AND WIRED TO FIRE
- ALARM PANEL BY ELECTRICAL CONTRACTOR.
- 6. SEE POWER PLANS FOR EXACT DEVICE LOCATIONS. 7. SMOKE DETECTOR WITH AUXILLARY CONTACT (TYP.).
- 8. HEAT DETECTOR (1350 F) LOCATE HEAT DETECTOR NEXT TO THE SPRINKLER HEAD. CONNECT DETECTORS IN PARALLEL TO
- SHUNT-TRIP MECHANISM THRU AUXILLARY CONTACTS.
- 9. MONITORING PANEL. (SEE SPRINKLER AND HVAC MONIT. RISER DIAGRAM).

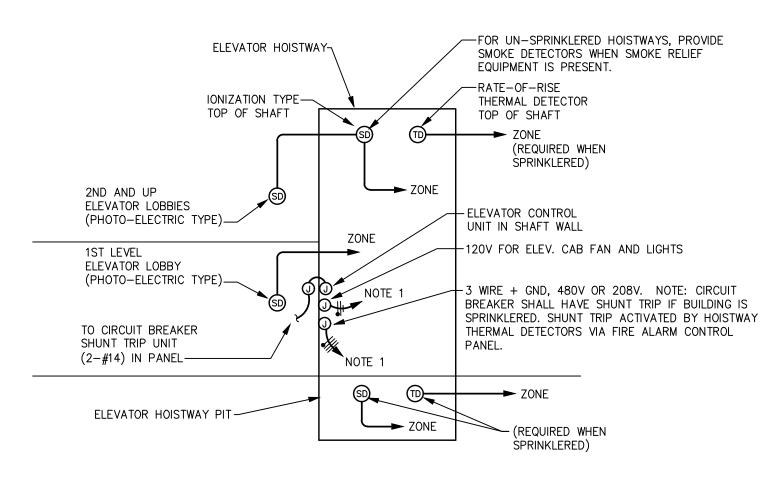
ELEVATOR RECALL CONTROL SYSTEM SPECIFICATIONS

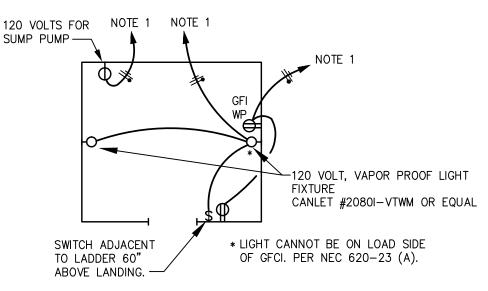
- 1. FURNISH AND INSTALL A SUPERVISED, LOW VOLTAGE, ADDRESSABLE CONTROL UNIT. THE SYSTEM SHALL INCLUDE, BUT NOT BE LIMITED TO, CONTROL PANEL WITH ALL REQUIRED COMPONENTS, POWER SUPPLIES, STANDBY BATTERY SYSTEM, INTEGRAL ALARM, CONDUIT, OUTLETS AND WIRE, END-OF-LINE DEVICES, POWER CIRCUIT, 120 VOLT POWER CIRCUIT, ETC.
- 2. ALL COMPONENTS SHALL BE U.L. LISTED AND COMPLY WITH NFPA 72. WIRING SHALL COMPLY WITH NEC ARTICLE 760. 3. CATALOG NUMBERS GIVEN ARE THOSE OF EDWARDS AND DENOTE THE MINIMUM QUALITY AND PERFORMANCE REQUIRED. EQUAL EQUIPMENT BY FCI, SIMPLEX, ADT. AUTOCALL, GAMEWELL, PYROTRONICS OR OTHER APPROVED
- 4. WIRING SHALL BE CLASS-B, COPPER SINGLE STRANDED CONDUCTORS, #16AWG, COLOR CODED AS REQUIRED BY EQUIPMENT SUPPLIER. COORDINATE WIRE AND CONDUIT SHOWN IN RISER DIAGRAM WITH EQUIPMENT SUPPLIER PRIOR TO CONDUIT INSTALLATION. ALL WIRE SHALL BE RUN IN EMT CONDUIT, 1/2" MINIMUM SIZE. AT THE CONTRACTORS OPTION, FIRE RETARDANT AND LOW SMOKE PRODUCING FIRE ALARM CABLE UL LISTED FOR THE PURPOSE MAY BE
- 5. THE CONTROL PANEL SHALL BE EQUAL TO THE EDWARDS FIRE SHIELD SERIES SEMI-FLUSH MOUNTED. THE PANEL SHALL BE COMPLETE WITH, BUT NOT LIMITED TO. POWER MODULES, MASTER PANEL CONTROLS, SIGNAL CIRCUIT MODULES FOR AUDIBLE/VISUAL DEVICES, SMOKE DETECTOR ALARM RECEIVING/POWER MODULES, REMOTE STATION MONITOR MODULE CAPABLE, 24 HOUR STANDBY BATTERY WITH INTERFACE MODULE AND CHARGER MODULE, AUXILIARY MODULES, TROUBLE MODULES, ALL REQUIRED TERMINAL STRIPS AND BLOCKS AND ACCESSORY RELAYS, AND ALL OTHER NECESSARY FEATURES FOR A COMPLETE SYSTEM. PROVIDE TRANSIENT SUPPRESSION ON THE POWER
- 6. THE SYSTEM SHALL BE TESTED AND CERTIFIED.

MANUFACTURER WILL BE ACCEPTABLE.

USED WITHOUT CONDUIT.

- 7. PROVIDE 12 MONTH GUARANTEE ON ALL WORKMANSHIP AND MATERIALS EFFECTIVE THE DATE OF BENEFICIAL USE.
- 8. THE SYSTEM SHALL OPERATE ON 120 VOLT POWER. FAILURE TO THE NORMAL POWER SOURCE SHALL AUTOMATICALLY TRANSFER TO THE STANDBY BATTERY.
- 9. SYSTEM OPERATION: ACTUATION OF EACH ELEVATOR LOBBY, ELEVATOR HOISTWAY, AND ELEVATOR MACHINE ROOM SMOKE DETECTOR SHALL INITIATE ALARM CONDITION AND ELEVATOR RECALL. VISBLE AND AUDIBLE SUPERVISORY SIGNAL SHALL BE ACTIVATED AT CONTROL UNIT THE ALARM INITIATION CIRCUIT FROM WHICH THE ALARM ORIGINATED.
- 10. THE SYSTEM SHALL BE FULLY SUPERVISED SUCH THAT ANY CIRCUIT OPENS OR GROUNDS, POWER FAILURES, OR DISARRANGEMENT OF SYSTEM COMPONENTS OR WIRING SHALL BE INDICATED AT THE CONTROL PANEL.





1. SEE PANEL SCHEDULES FOR RESPECTIVE CIRCUIT DESIGNATION(S).

MACHINE ROOMLESS DESIGN **ELEVATOR PROVISIONS**

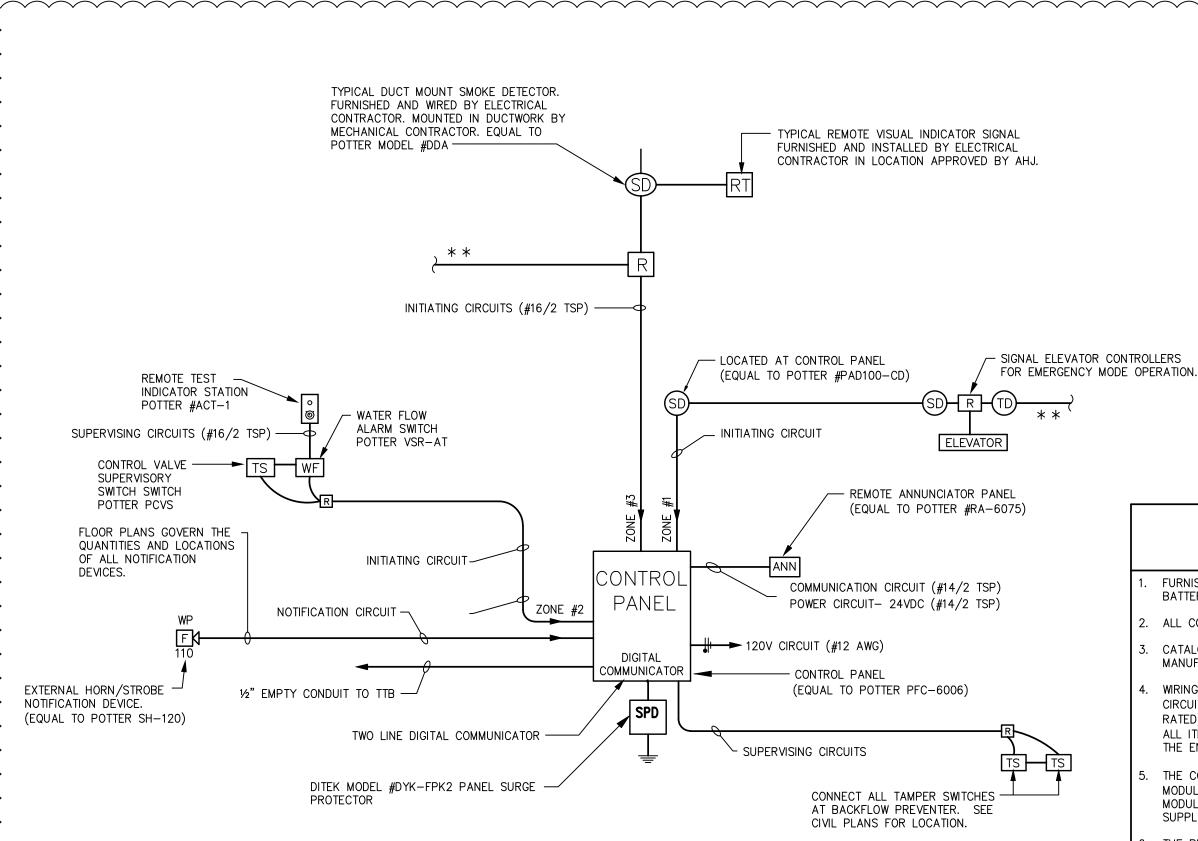
THE ELECTRICAL WORK ASSOCIATED WITH THE ELEVATOR SHALL BE IN ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES AND

STANDARDS.

- THIS CONTRACTOR SHALL COORDINATE THE ELEVATOR REQUIREMENTS WITH THE ELEVATOR INSTALLER. LOCATE EQUIPMENT ROOM AND HOISTWAY SWITCHES. LIGHTS, DETECTORS, RECEPTACLES, TELEPHONE, ETC AS DIRECTED BY THE ELEVATOR INSTALLER.
- THE HOISTWAY SHALL INCLUDE THE FOLLOWING: TWO (2) VAPOR-TIGHT WALL MOUNTED LIGHT FIXTURES AT 18" ABOVE THE PIT FLOOR AND TWO (2) VAPOR-TIGHT WALL MOUNTED LIGHT FIXTURE NEAR TOP OF HOISTWAY, COORDINATE BEST LOCATION IN THE FIELD TO ILLUMINATE ELEVATOR EQUIPMENT AT TOP OF HOISTWAY. TWO LIGHT CONTROL SWITCHES ADJACENT TO THE HOISTWAY LADDER AT 60" ABOVE THE LOWEST AND UPPER LANDING ENTRANCE SILL. A 20 AMPERE, GROUND FAULT CIRCUIT INTERRUPTER (GFCI) RECEPTACLE AT 18" ABOVE THE PIT FLOOR. A SECOND 20 AMPERE, RECEPTACLE AT 18" ABOVE THE PIT FLOOR FOR SUMP PUMP IF A PUMP IS SPECIFIED. AN IONIZATION TYPE SMOKE DETECTOR AT THE TOP OF THE HOISTWAY. A THERMAL DETECTOR AT THE TOP OF THE HOISTWAY (WHEN HOISTWAY IS SPRINKLERED).
- THIS ELEVATOR IS MACHINE ROOMLESS TYPE. PROVIDE A DIRECT CONNECTION FOR THE ELEVATOR UNIT AS REQUIRED BY THE ELEVATOR SUPPLIER. COORDINATE EXACT REQUIREMENTS WITH ELEVATOR INSTALLER PRIOR TO ROUGHING. PROVIDE CONDUIT AND TELEPHONE STATION CABLE FOR TELEPHONE SERVICE TO THE CONTROL UNIT AS REQUIRED. CABLE SHALL BE 4-PAIR, #24GA IN 3/4" EMT CONDUIT. PROVIDE A CONDUIT TO CONTROL UNIT FOR THE FIRE ALARM CONTROL AND CAB EMERGENCY
- ACTIVATION OF ANY THERMAL DETECTOR IN THE HOISTWAY SHALL AUTOMATICALLY SIGNAL THE ELEVATOR CONTROLLER AND ACTIVATE A SHUNT TRIP UNIT ON THE ELEVATOR SERVICE CIRCUIT BREAKER. PRIOR TO THE APPLICATION OF WATER.
- ACTIVATION OF ANY SMOKE DETECTOR IN THE HOISTWAY OR ELEVATOR LOBBIES SHALL AUTOMATICALLY SIGNAL THE ELEVATOR CONTROLLER. THESE SIGNALS WILL BE USED TO PLACE THE ELEVATOR IN AN EMERGENCY MODE OF OPERATION.
- ALL WIRING IN THE HOISTWAY SHALL BE RUN IN EMT CONDUIT (NO FLEX OR CABLE) ONLY WIRING ASSOCIATED WITH THE ELEVATOR EQUIPMENT IS ALLOWED TO RUN THROUGH THE HOISTWAY AND EQUIPMENT ROOMS. ALL POWER WIRING CIRCUITS SHALL HAVE A CODE SIZED EQUIPMENT GROUNDING CONDUCTOR.
- ALL WIRING BETWEEN THE ELEVATOR POWER AND CONTROLS/LIGHT FUSED SWITCHES AND THE ELEVATOR EQUIPMENT SHALL BE BY THIS CONTRACTOR.
- ONLY ITEMS THAT PERTAIN TO THE OPERATION OF THE ELEVATOR ARE ALLOWED IN THE ELEVATOR HOISTWAY.

ELEVATOR RECALL DIAGRAM





FIRE SPRINKLER & HVAC MONITORING SYSTEM RISER DIAGRAMMATIC

** FLOOR PLAN GOVERNS THE QUANTITY AND LOCATIONS OF ALL INITIATION AND NOTIFICATION DEVICES.

SPRINKLER AND HVAC MONITORING PANEL. REMOTE ANNUNCIATOR 66" AFF TO MIDDLE OF DEVICE. PHOTO-ELECTRIC TYPE SMOKE DETECTOR. DUCT MOUNT SMOKE DETECTOR WITH RELAY BASE IN AIR DUCT. AUDIBLE & VISUAL SIGNAL STROBE LIGHT MOUNTED @ 80" AFF. OR 6" BELOW CEILING WHICHEVER IS LOWER.

SYMBOL SCHEDULE

ADDRESSABLE CONTROL MODULE. REMOTE INDICATOR MODULE

WATER FLOW SWITCH CONNECTED TO SPRINKLER PIPING. TAMPER SWITCH CONNECTED TO SPRINKLER VALVE.

SPRINKLER & HVAC MONITORING SYSTEM SPECIFICATIONS

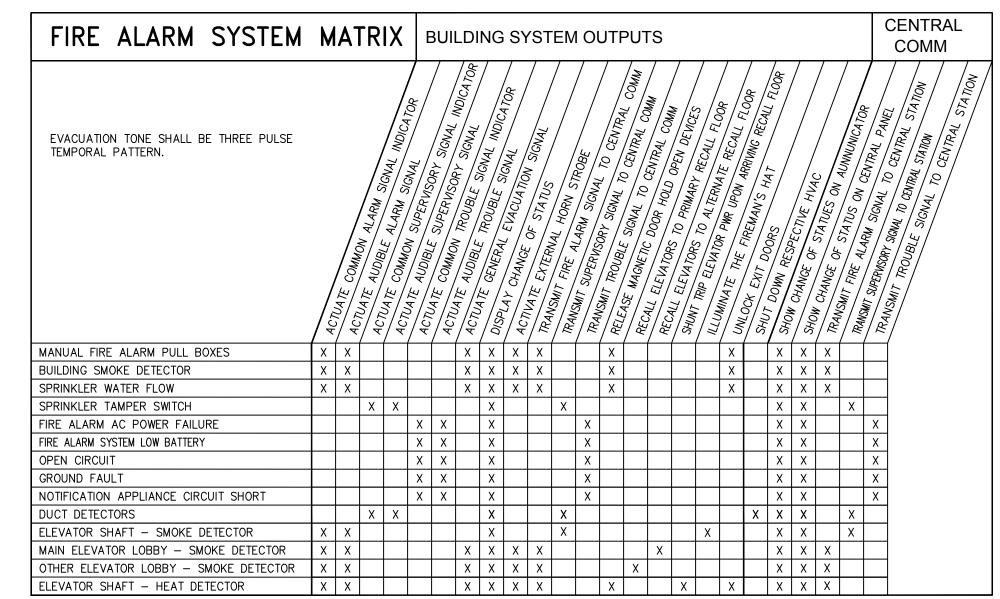
- FURNISH AND INSTALL A SUPERVISED, LOW VOLTAGE, HVAC MONITORING SYSTEM. THE SYSTEM SHALL INCLUDE, BUT NOT BE LIMITED TO, CONTROL PANEL WITH ALL REQUIRED COMPONENTS, POWER SUPPLIES, STANDBY BATTERY SYSTEM, INTEGRAL ALARM, CONDUIT, OUTLETS AND WIRE, END-OF-LINE DEVICES, POWER CIRCUIT, 120 VOLT POWER CIRCUIT, ACCESS TO TELEPHONE EQUIPMENT, AUTOMATIC DIALER, ETC.
- CATALOG NUMBERS GIVEN ARE THOSE OF POTTER AND DENOTE THE MINIMUM QUALITY AND PERFORMANCE REQUIRED. EQUAL EQUIPMENT BY FCI, SIMPLEX, ADT, AUTOCALL, GAMEWELL, PYROTRONICS OR OTHER APPROVED MANUFACTURER WILL BE ACCEPTABLE.
- WIRING SHALL BE CLASS-B, COPPER SINGLE STRANDED CONDUCTORS, #16AWG, COLOR CODED AS REQUIRED BY EQUIPMENT SUPPLIER. SYSTEM SHALL HAVE NO MORE THAN 50 ADDRESSABLE DEVICES ON EACH INITIATING CIRCUIT. CONDUCTORS SHALL BE RUN IN EMT CONDUIT, ½" MINIMUM SIZE. RUN INITIATING AND NOTIFICATION DEVICES WITH #16-2TSP AND POWER WITH #12 AWG. AT THE CONTRACTORS OPTION, FIRE RETARDANT (2-HR CI RATED) AND LOW SMOKE PRODUCING FIRE ALARM CABLE UL LISTED FOR THE PURPOSE MAY BE USED WITHOUT CONDUIT, PROVIDING ALL CABLES ARE RUN CONCEALED FROM VIEW IN WALLS OR ABOVE CEILINGS. EACH AND ALL ITEMS OF THE MONITORING SYSTEM SHALL BE LISTED AS A PRODUCT OF A SINGLE MANUFACTURER UNDER THE APPROPRIATE CATEGORY BY "UL". ALL DEVICES BY ANOTHER MANUFACTURER SHALL NOT BE ACCEPTABLE.
- THE ENTIRE SYSTEM SHALL BE INSTALLED BY A CURRENTLY LICENSED CONTRACTOR TRAINED & CERTIFIED BY THE MANUFACTURER. INSTALLER SHALL BE A NICET-CERTIFIED TECHNICIAN LEVEL IV MINIMUM. THE CONTROL PANEL SHALL BE SEMI-FLUSH MOUNTED. THE PANEL SHALL BE COMPLETE WITH POWER SUPPLY MODULES, MASTER PANEL CONTROLS, SIGNAL CIRCUIT MODULES FOR AUDIBLE/VISUAL DEVICES, ALARM RECEIVING MODULES, SMOKE DETECTOR ALARM RECEIVING/POWER MODULES, REMOTE STATION MONITOR MODULE CAPABLE, 24 HOUR STANDBY BATTERY WITH INTERFACE MODULE AND CHARGER MODULE, AUXILIARY MODULES, TROUBLE MODULES, ALL REQUIRED TERMINAL STRIPS AND BLOCKS AND ACCESSORY RELAYS, AND ALL OTHER NECESSARY FEATURES FOR A COMPLETE SYSTEM. PROVIDE TRANSIENT SUPPRESSION WIRED IN SERIES TO THE POWER
- THE REMOTE ANNUNCIATOR SHALL DUPLICATE FUNCTIONS OF THE CONTROL PANEL FOR ALARM, SUPERVISORY, AND TROUBLE INDICATIONS. ALSO DUPLICATE MANUAL SWITCHING FUNCTIONS OF THE CONTROL PANEL, INCLUDING ACKNOWLEDGING, SILENCING, RESETTING AND TESTING. ALPHANUMERIC DISPLAY SHALL BE THE SAME AS THE CONTROL PANEL. CABINET SHALL BE FLUSH MOUNTED IN WALL AND LOCATED AT A CONSTANTLY ATTENDED
- THE SYSTEM SHALL BE FULLY SUPERVISED SUCH THAT CIRCUIT OPENS OR GROUNDS, POWER FAILURES, OR DISARRANGEMENT OF SYSTEM COMPONENTS AND WIRING SHALL BE INDICATED AT THE CONTROL PANEL.
- THE SYSTEM SHALL HAVE PROVISIONS FOR CENTRAL STATION MONITORING VIA A DIGITAL COMMUNICATOR. CENTRAL STATION MONITORING SHALL BE DONE BY A U.L. LISTED STATION.

SUPPLY AND MUNICIPAL CONNECTION CIRCUITS. THE SPD SHALL HAVE A MINIMUM PEAK SURGE CURRENT OF 54,000 AMPS AND A RESPONSE TIME OF 5 NANOSECONDS.

- THE SYSTEM SHALL BE PROVIDED WITH SUFFICIENT BATTERY TO OPERATE THE ENTIRE SYSTEM UPON LOSS OF NORMAL 120 VAC POWER IN A NORMAL SUPERVISORY MODE FOR A PERIOD OF TWENTY-FOUR (24) HOURS WITH FIVE (5) MINUTES OF ALARM INDICATION AT THE END OF THIS PERIOD OR AS REQUIRED. . AREA SMOKE DETECTOR SHALL BE REQUIRED BY THE APPLICATION FOR DETECTION. DETECTOR SHALL INCLUDE DRY CONTACTS WHERE REQUIRED FOR CONTROL FUNCTIONS. DETECTORS SHALL BE PHOTOELECTRIC TYPE.
- DUCT MOUNT SMOKE DETECTORS SHALL BE PHOTOELECTRIC TYPE WITH APPROPRIATE SAMPLING TUBE, REMOTE MONITOR STATION, AND DRY CONTACTS FOR AHU SHUT—DOWN, (ADDITIONAL CONTACTS FOR AHU SHUT—DOWN WHERE MULTIPLE UNITS ARE SERVICING A COMMON AREA), SELF-RESTORING, WHITE COLOR. AIR DUCT HOUSING WITH SAMPLING TUBE RUN ENTIRE WIDTH OF DUCT. DETECTORS TO BE SUPPLIED BY THE ELECTRICAL CONTRACTOR, INSTALLED IN THE DUCT WORK BY THE MECHANICAL CONTRACTOR, AND WIRED BY THE ELECTRICAL CONTRACTOR.
- 2. FLOW AND TAMPER SWITCHES TO BE SUPPLIED AND INSTALLED IN THE PIPING BY THE PLUMBING CONTRACTOR, AND WIRED BY THE ELECTRICAL CONTRACTOR.
- 3. THE COMPLETED SYSTEM SHALL BE FULLY TESTED BY THE CONTRACTOR AND THE MANUFACTURER'S CERTIFIED TECHNICAL REPRESENTATIVE IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
- 14. PROVIDE 12 MONTH GUARANTEE ON ALL WORKMANSHIP AND MATERIALS EFFECTIVE THE DATE OF BENEFICIAL USE

ALL COMPONENTS SHALL BE U.L. LISTED AND COMPLY WITH NFPA 72. WIRING SHALL COMPLY WITH NEC ARTICLE 760.

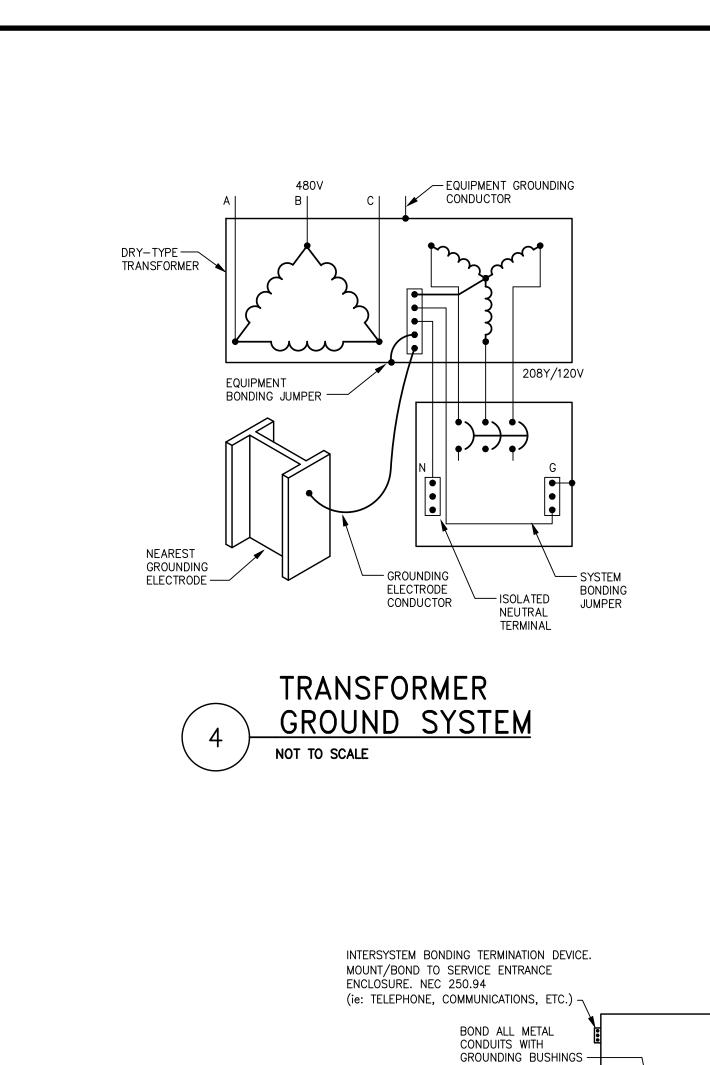
- 5. THE SYSTEM SHALL OPERATE ON 120 VOLT POWER. FAILURE TO THE NORMAL POWER SOURCE SHALL AUTOMATICALLY TRANSFER TO THE STANDBY BATTERY.
- 16. SYSTEM OPERATION: A) ACTIVATION OF A WATER FLOW DEVICE SHALL OPERATE AUDIBLE HORN AND VISUAL SIGNAL IN CONTROL PANEL AND INDICATE WHERE THE SIGNAL ORIGINATED. IT SHALL TRANSMIT AN ALARM SIGNAL TO AN OFF PREMISE SECURITY MONITORING COMPANY (APPROVED SUPERVISING STATION). B) ACTIVATION OF A DUCT MOUNTED SMOKE DETECTOR SHALL OPERATE AUDIBLE HORN AND VISUAL SIGNAL IN CONTROL PANEL AND INDICATE WHERE THE SIGNAL ORIGINATED. CONTROL PANEL SHALL TRANSMIT A SUPERVISORY SIGNAL TO THE OFF PREMISE SECURITY MONITORING COMPANY.
- C)ALL AUDIBLE SIGNAL DEVICES SHALL SOUND CONTINUOUSLY UNTIL ACKNOWLEDGED AND VISUAL SIGNALS SHALL ILLUMINATE UNTIL RESET. D)ACTIVATION OF ANY THERMAL DETECTOR IN THE HOISTWAY SHALL AUTOMATICALLY SIGNAL THE ELEVATOR CONTROLLER AND ACTIVATE A SHUNT TRIP UNIT ON THE ELEVATOR SERVICE CIRCUIT BREAKER. PRIOR TO THE APPLICATION OF WATER. E)ACTIVATION OF ANY SMOKE DETECTOR IN THE HOISTWAY OR ELEVATOR LOBBIES SHALL AUTOMATICALLY SIGNAL THE ELEVATOR CONTROLLER. THESE SIGNALS WILL BE USED TO PLACE THE ELEVATOR IN AN EMERGENCY MODE OF OPERATION.
- THE SYSTEM SHALL BE FULLY SUPERVISED SUCH THAT ANY CIRCUIT OPENS OR GROUNDS, POWER FAILURES, OR DISARRANGEMENT OF SYSTEM COMPONENTS OR WIRING SHALL BE INDICATED AT THE CONTROL PANEL. THE SYSTEM SHALL HAVE MONITORING VIA A DIGITAL COMMUNICATOR.



BDA DSGN, REV. BDA TECH REV. RGAS

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EXOTHERMIC CADWELD —

CONCRETE — ENCASED STEEL

UNDERGROUND WATER PIPE(S)

WILL BE ACCEPTABLE FOR REMODEL WORK ONLY.

ENTRANCE INTO THE BUILDING.

3. GROUNDING ELECTRODE CONDUCTORS SHALL BE COPPER.

SEE CONCRETE

REQUIREMENTS

ENCASED GROUNDING

1. GROUNDING ELECTRODE CONDUCTOR SHALL BE ENCLOSED FULL LENGTH BY CONDUIT (RMC OR EMT).

2. GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS (UNBROKEN) FROM THE NEUTRAL BUS

4. CONNECTION TO THE METAL COLD WATER PIPE SHALL BE MADE WITHIN 5' OF THE POINT OF

5. GROUNDING ELECTRODE CONDUCTORS AND BONDING JUMPER CONNECTIONS TO BUILDING STEEL,

CONCRETE ENCASED STEEL REBAR, AND DRIVEN GROUND RODS SHALL BE CONNECTED BY

SERVICE GROUND DETAIL

6. ALL GROUNDING BUSHINGS, CLAMPS, JUMPERS, FASTENERS, ETC. SHALL BE APPROVED AND LISTED FOR THE PURPOSE.

TO THE GROUNDING ELECTRODE. SPLICES AND/OR JOINTS ARE PROHIBITED. EXCEPTIONS AS ALLOWED PER NEC 250.64(C) IRREVERSIBLE COMPRESSION TYPE CONNECTORS OR BY EXOTHERMIC WELDING

DETAIL FOR ADDITIONAL

EXTENDING 10' OR

MORE VERTICALLY
IN DIRECT
CONTACT WITH

---- 4" PVC END BELLS (TYPICAL)

— 5' ON CENTER (TYPICAL)

CONDUIT ENTRANCE DETAIL

(TYPICAL)

- PLUMBING TEST PLUG

- 4" PVC LONG SWEEP ELBOWS

- SERVICE ENTRANCE EQUIPMENT

- EQUIPMENT GROUNDING BUS

- BOND SERVICE ENTRANCE ENCLOSURE

GROUNDING ELECTRODE CONDUCTOR,

_(3) 3/4" X 10'

COPPÉRCLAD DRIVEN

GROUND RODS. ADD

ADDITIONAL GROUND

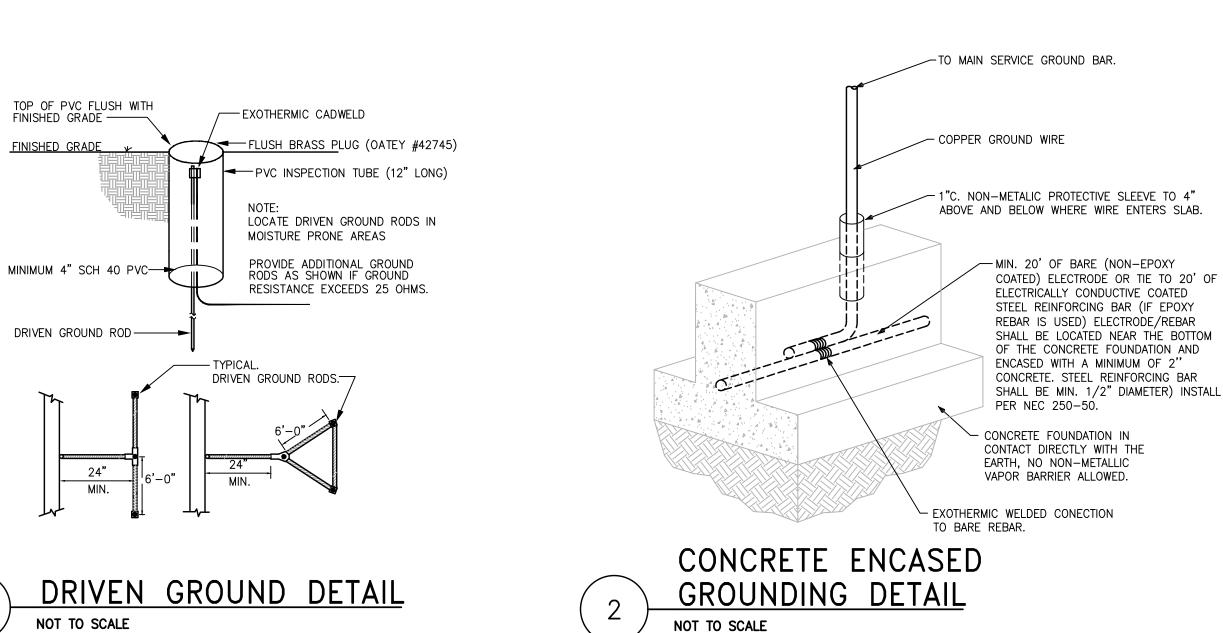
RODS IF REQ'D FOR 25 OHMS OR LESS.

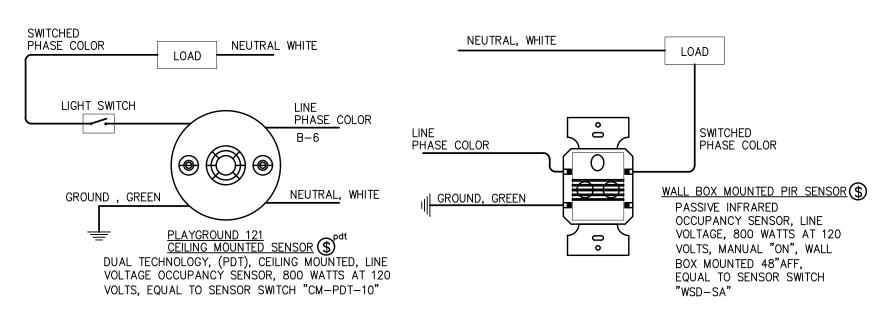
- MAIN BONDING JUMPER

NEUTRAL BUS

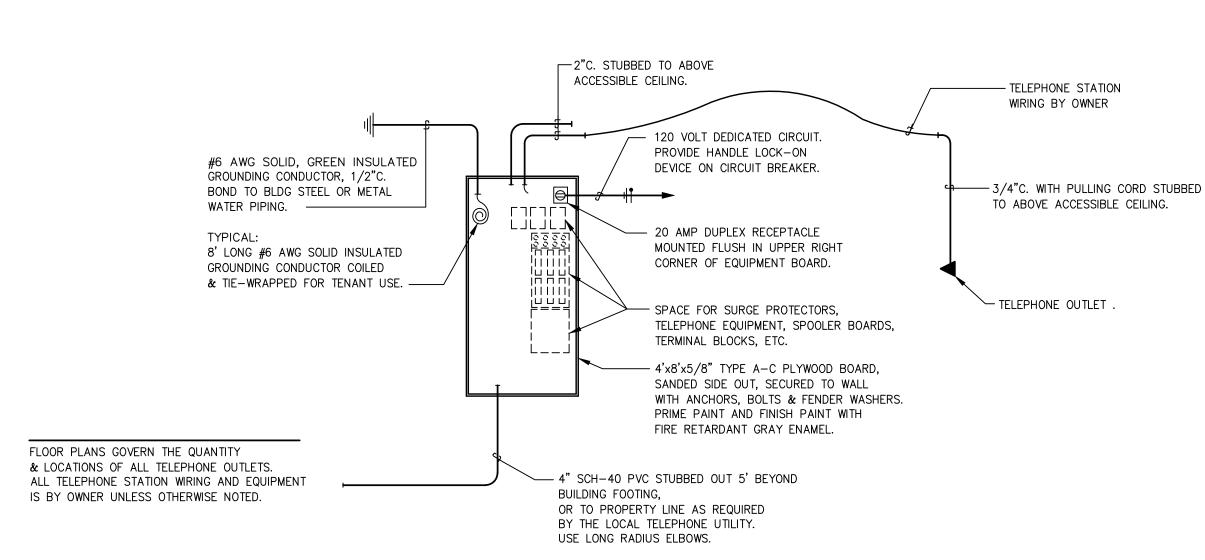
CONDUIT (TYP.)

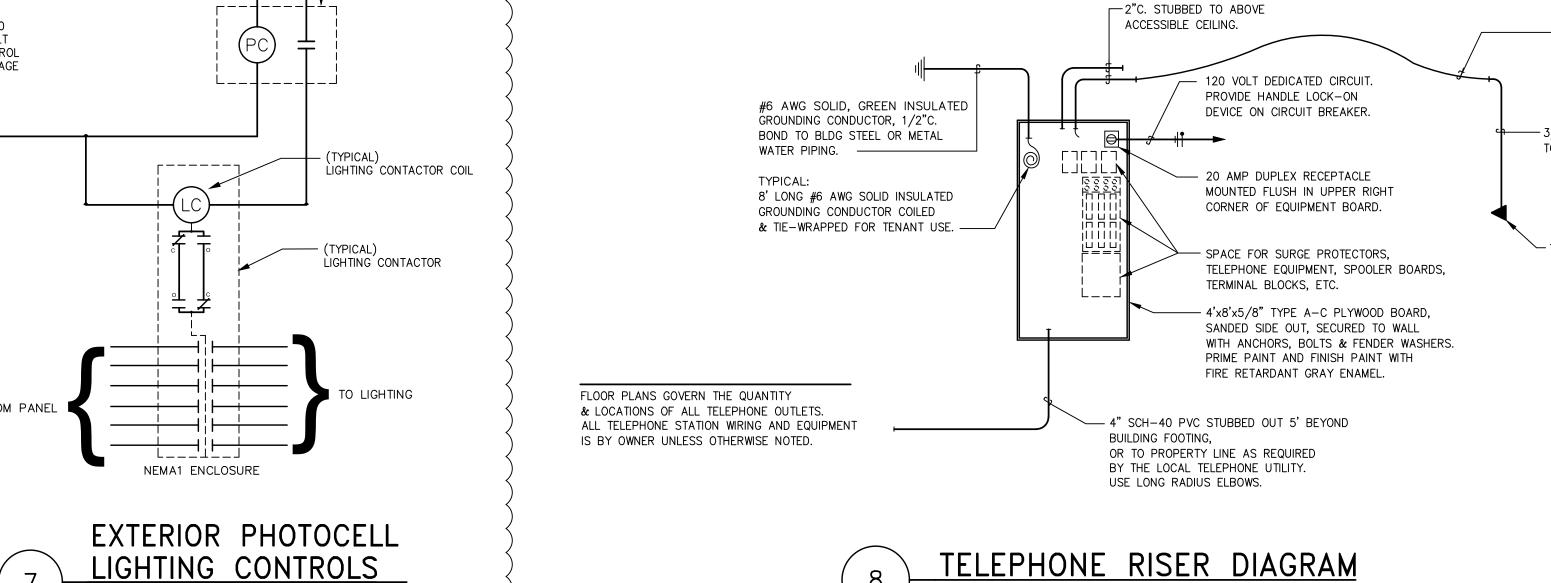
SIZE PER NEC 250-66

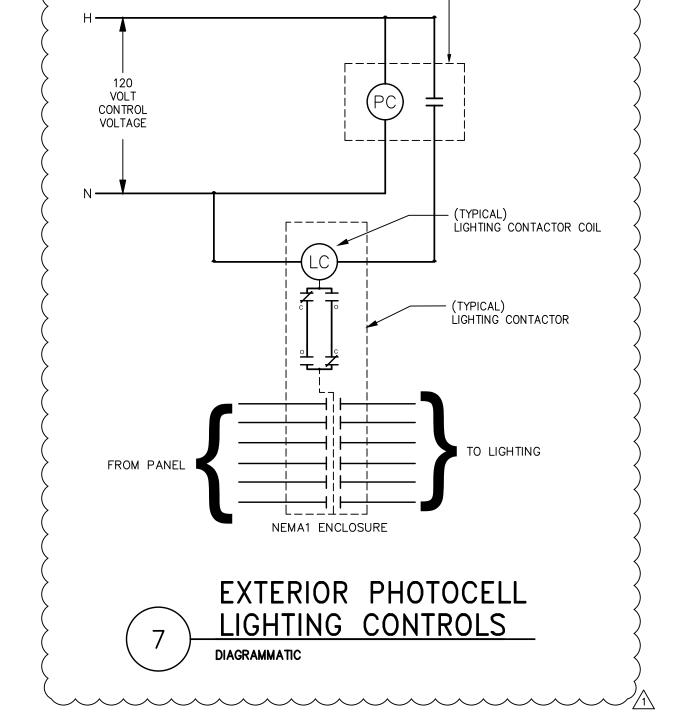


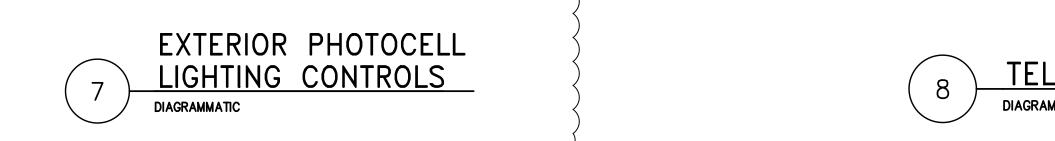


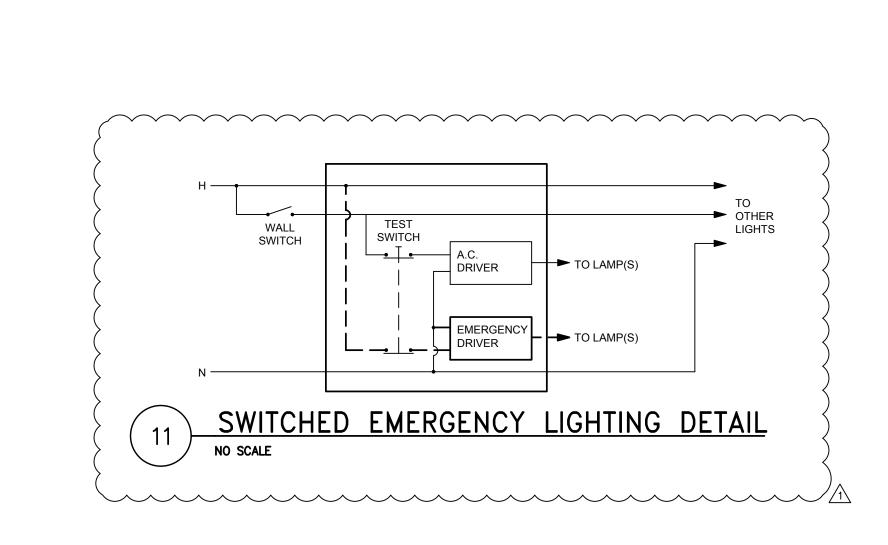


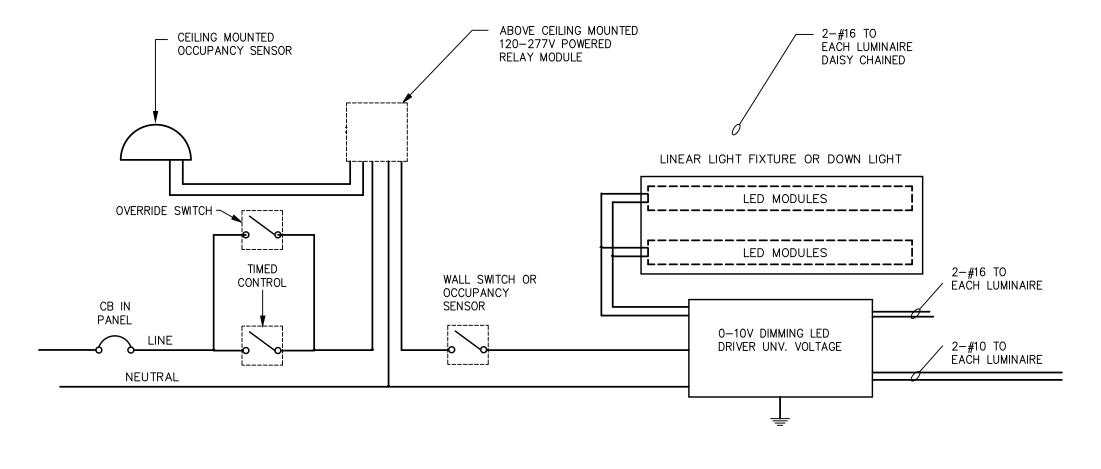




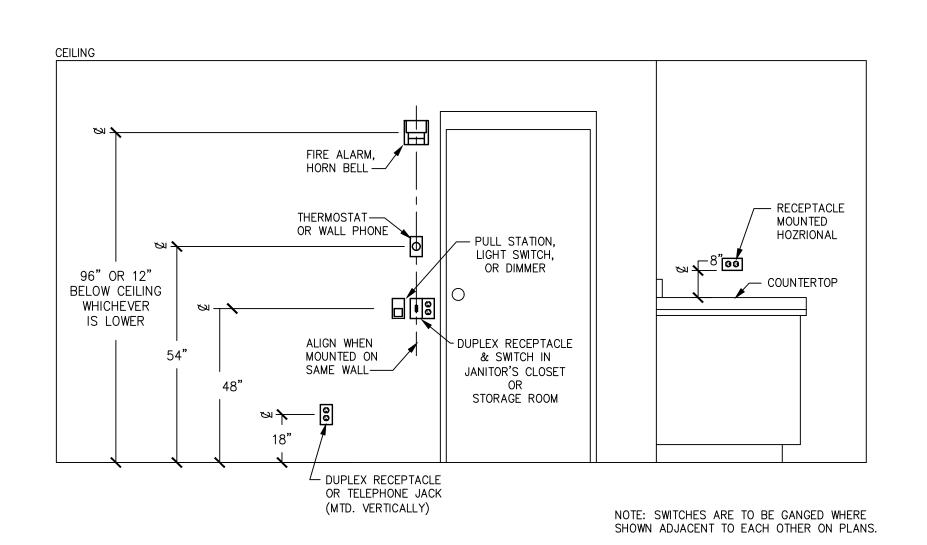








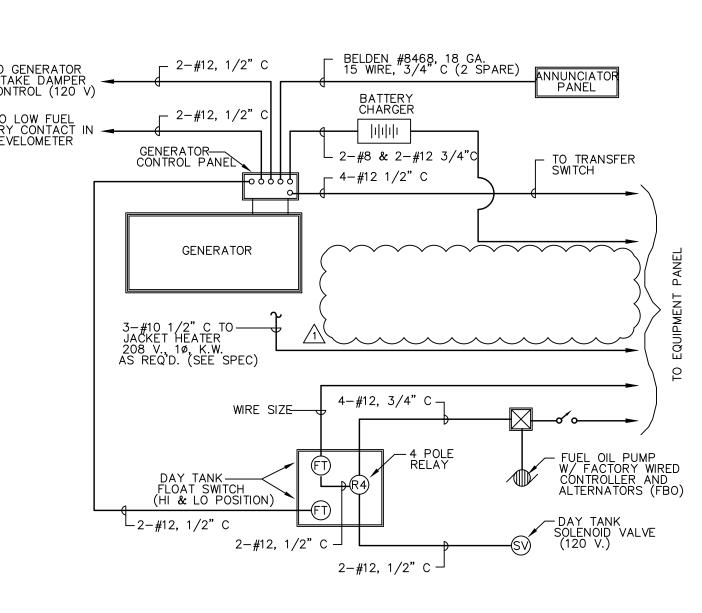
LED DRIVER WIRING DETAIL



TYPICAL MOUNTING HEIGHTS NOT TO SCALE

BDA DSGN. REV. BDA TECH REV. RGAS PROJECT NO.: 23077 DRAWN: DATE: 07/08/2024

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EMERGENCY DIESEL GENERATOR SYSTEM INTERLOCKING DIAGRAM NOT TO SCALE

EMERGENCY POWER SYSTEM

HEREIN SPECIFIED, A COMPLETE SYSTEM FOR THE GENERATION, CONTROL AND DISTRIBUTION OF ELECTRICAL POWER UPON FAILURE OF NORMAL SOURCE. SYSTEM SHALL INCLUDE ENGINE-GENERATOR UNIT(S), AUTOMATIC TRANSFER SWITCH(ES), DIESEL FUEL SUPPLY SYSTEM, AND ALL OTHER WIRING, RACEWAYS,

CONTRACTOR SHALL FURNISH AND INSTALL, AS INDICATED ON THE PLANS AND AS

EQUIPMENT, HARDWARE, ETC., NECESSARY FOR A COMPLETE AND PROPERLY FUNCTIONING SYSTEM, WHETHER OR NOT EVERY SUCH ITEM IS SPECIFICALLY SHOWN

SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 110 AND 37, NEC ARTICLE 700, UL 2200, STATE BUILDING CODE, AND ALL LOCAL CODES AND REQUIREMENTS. UPON FAILURE TO NORMAL POWER SOURCE TO THE AUTOMATIC TRANSFER SWITCH, SYSTEM SHALL FUNCTION AUTOMATICALLY TO RESTORE POWER TO DESIGNATED LOADS FROM THE ENGINE-GENERATOR SET WITHIN 10 SECONDS.

POWER RATING OF THE DIESEL ENGINE-GENERATOR SET SHALL BE BASED ON OPERATION AT 1800 RPM WHEN EQUIPPED WITH ALL NECESSARY OPERATION ACCESSORIES SUCH AS AIR CLEANERS, LUBRICATING OIL PUMP, JACKET WATER PUMP, GOVERNOR, ALTERNATING CURRENT GENERATOR, AND EXCITER REGULATOR. RADIATOR FAN SHALL BE INCLUDED AS NECESSARY OPERATING ACCESSORY. RATING SHALL APPLY AT SITE CONDITIONS.

THE ENGINE SHALL BE WATER-COOLED, IN-LINE TYPE, WITH FOUR STROKE ENGINE. HE ENGINE SHALL BE COMPRESSION IGNITION DIESEL WHICH MEETS SPECIFICATIONS FOR OPERATING ON NO. 2 FUEL OIL.

THE ENGINE SHALL BE EQUIPPED WITH FUEL, LUBE OIL, INTAKE AIR FILTERS, LUBE OIL COOLER, FUEL TRANSFER PUMP, FUEL PRIMING PUMP, RUNNING TIME METER, CHARGING ALTERNATOR, GEAR-DRIVEN WATER PUMP, AND INSTRUMENTS, INCLUDING A FUEL PRESSURE GAUGE, WATER TEMPERATURE GAUGE, LUBRICATING OIL PRESSURE GAUGE AS HEREIN SPECIFIED.

AN AUTOMATIC VOLTS PER HERTZ TYPE, SOLID STATE EXCITER/REGULATOR, MANUFACTURED BY THE GENERATOR MANUFACTURER, SHALL BE INCLUDED AND SHOCK MOUNTED INSIDE THE GENERATOR. VOLTAGE REGULATION SHALL BE +1% FROM NO LOAD TO FULL RATED LOAD. READILY ACCESSIBLE VOLTAGE DROOP, VOLTAGE LEVEL, AND VOLTAGE GAIN CONTROLS SHALL BE INCLUDED IN THE MODULE. VOLTAGE LEVEL ADJUSTMENTS SHALL BE MINIMUM OF +10%. THE MODULE SHALL INCLUDE THE FOLLOWING PROTECTIVE FEATURES:

VOLTAGE REGULATOR SHALL BE THREE PHASE SENSING. SINGLE SENSING SHALL NOT BE ACCEPTABLE. AN ENGINE MOUNTED RADIATOR WITH BLOWER-TYPE FAN SHALL BE PROVIDED TO MAINTAIN SAFE OPERATION AT 100 DEGREE F* (43 DEGREES C) AMBIENT TEMPERATURE. TOTAL AIR FLOW RESTRICTION TO AND FROM THE RADIATOR SHALL NOT EXCEED 0.5 IN. H20 (0, 12 KPA).

THE ENGINE COOLING SYSTEM SHALL BE PRETREATED BY THE ENGINE SUPPLIER FOR THE INHIBITION OF INTERNAL CORROSION. IN ADDITION, A SOLUTION OF 50% ETHYLENE GLYCOL SHALL BE ADDED, TO PREVENT FREEZING OF SYSTEM DUE TO EXTREME TEMPERATURES.

A CRITICAL EXHAUST SILENCER, AND ALL REQUIRED ACCESSORIES AND FITTINGS, SHALL BE PROVIDED. MOUNTING SHALL BE ON THE WEATHERPROOF ENCLOSURE. THE SILENCER SHALL BE MOUNTED SO THAT ITS WEIGHT IS NOT SUPPORTED BY THE ENGINE NOR WILL EXHAUST SYSTEM GROWTH, DUE TO THERMAL EXPANSION, BE IMPOSED ON THE ENGINE. EXHAUST PIPE SIZE SHALL BE SUFFICIENT TO ENSURE THAT EXHAUST BACKPRESSURE DOES NOT EXCEED THE MAXIMUM LIMITATIONS SPECIFIED BY THE ENGINE MANUFACTURER.

HE EXHAUST SILENCER SHALL BE MOUNTED DIRECTLY ON THE EXHAUST ELBOW OF THE ENGINE AND SHALL PROTRUDE THROUGH THE ENCLOSURE. A RAINCAP SHALL ALSO BE PROVIDED.

FULLY AUTOMATIC GENERATOR SET START-STOP CONTROLS IN THE GENERATOR CONTROL PANEL SHALL BE PROVIDED. CONTROLS SHALL PROVIDE SHUTDOWN FOR LOW OIL PRESSURE, HIGH WATER TEMPERATURE, OVERSPEED, OVERCRANK, AND ONE AUXILIARY CONTACT FOR ACTIVATING ACCESSORY ITEMS. CONTROLS SHALL INCLUDE ONE 30-SECOND CRANKING CYCLE WITH LOCKOUT AND MANUAL RESET FEATURE.

AN ENGINE-MOUNTED THERMAL CIRCULATION TANK-TYPE IMMERSION WATER HEATER INCORPORATING AN ADJUSTABLE THERMOSTATIC SWITCH SHALL BE FURNISHED TO MAINTAIN ENGINE JACKET WATER TO 90 DEGREES F (32.2 DEGREES C) IN A STILL AIR, AMBIENT TEMPERATURE OF 30 DEGREES F (-1.1 DEGREES C). THE HEATER SHALL BE 120 VOLT, SINGLE PHASE, 1.5KW, 60HZ.

THE ENGINE SHALL BE EQUIPPED WITH A 24 VOLT ELECTRIC STARTING SYSTEM WITH POSITIVE ENGAGEMENT DRIVE AND OF SUFFICIENT CAPACITY TO CRANK THE ENGINE AT A SPEED WHICH WILL START THE ENGINE UNDER OPERATING CONDITIONS. THE STARTING PINION WILL DISENGAGE AUTOMATICALLY WHEN THE ENGINE STARTS. THE STARTING SYSTEM SHALL INCORPORATE AN AUTOMATICALLY RESET CIRCUIT BREAKER FOR ANTIBUTT ENGAGEMENT.

A LEAD-ACID STORAGE BATTERY SET OF THE HEAVY-DUTY DIESEL STARTING TYPE SHALL BE PROVIDED. BATTERY VOLTAGE SHALL BE COMPATIBLE WITH THE STARTING SYSTEM. THE BATTERY SET SHALL BE RATED NO LESS THAN 220 AMPERE HOURS. A BATTERY RACK CONSTRUCTED IN CONFORMANCE WITH NEC REQUIREMENTS AND NECESSARY CABLES AND CLAMPS SHALL BE PROVIDED. BATTERIES SHALL BE CAPABLE OF CRANKING ENGINE AT RATED AMBIENT FOR MINIMUM OF FIVE MINUTES.

BATTERIES SHALL FIT INSIDE ENCLOSURE AND ALONG SIDE THE ENGINE. (BATTERIES UNDER THE GENERATOR ARE NOT ACCEPTABLE).

A CURRENT LIMITING, FLOAT-EQUALIZE CHARGER SHALL BE FURNISHED TO AUTOMATICALLY RECHARGE BATTERIES. THE CHARGER SHALL FLOAT AT 2.17 VOLTS PER CELL AND EQUALIZE AT 2.33 VOLTS PER CELL. IT SHOULD INCLUDE OVERLOAD PROTECTION, SILICON DIODE FULL WAVE RECTIFIERS, VOLTAGE SURGE SUPPRESSERS DC AMMETER, AND FUSED C OUTPUT. AC INPUT VOLTAGE SHALL BE 120 VOLTS, SINGLE PHASE. AMPERAGE OUTPUT SHALL BE NO LESS THAN 5 AMPERES. CHARGER SHALL BE WALL MOUNTING TYPE IN NEMA 3R ENCLOSURE OR IN GENERATOR

MAIN LINE MOLDED CASE, THREE-POLE, SINGLE THROW CIRCUIT BREAKER(S) RATED AS INDICATED ON THE DRAWINGS, AT 104 DEGREES F (40 DEGREES C) AMBIENT TEMPERATURE SHALL BE INSTALLED FOR THREE PHASE OVERLOADS AND/OR SHORT CIRCUIT PROTECTION. THESE RATINGS SHALL INCLUDE AT LEAST 10% ADDITIONAL CAPACITY FOR OVERLOAD AND OPERATING TEMPERATURE RISE OVER 104 DEGREES F(40 DEGREES C). IT SHALL OPERATE BOTH MANUALLY FOR NORMAL SWITCHING FUNCTIONS AND AUTOMATICALLY DURING OVERLOAD AND SHORT CIRCUIT CONDITIONS.

WEATHERPROOF, SOUND ATTENUATED (LEVEL II) ENCLOSURE FOR GENERATOR AND ALL OTHER ITEMS TO BE DESIGNED AND BUILT BY ENGINE MANUFACTURER AS AN INTEGRAL PART OF THE GENERATOR SET AN BE DESIGNED TO PERFORM WITHOUT OVERHEATING IN THE AMBIENT TEMPERATURE SPECIFIED.

CONSTRUCTED OF 16 GAUGE CORROSION RESISTANT SHEET METAL, SUITABLY REINFORCED TO BE VIBRATION FREE IN THE OPERATING MODE. ROOF TO BE PEAKED TO ALLOW DRAINAGE OF RAIN WATER. BAKED ENAMEL FINISH WITH PRIMER AND FINISH COAT TO BE PAINTED BEFORE ASSEMBLY. ALL FASTENERS SHALL BE RUST RESISTANT.

UNIT SHALL HAVE SUFFICIENT GUARDS TO PREVENT ENTRANCE BY SMALL ANIMALS. UNIT SHALL HAVE COOLANT AND OIL DRAINS OUTSIDE THE UNIT TO ACCUMULATE MAINTENANCE. EACH DRAIN LINE IS TO HAVE A HIGH QUALITY VALVE LOCATED NEAR THE FLUID SOURCE. FUEL TANK CAPACITY SHALL BE AS NOTED ON THE POWER RISER DIAGRAM.

AND CONTROL PANEL LOCATION. PROVIDE LOW-FUEL ALARM INDICATOR, ANALOG TYPE, VERIFY LOCATION. TANK SHALL BE CONSTRUCTED IN ACCORDANCE WITH NEMA, UL AND ASTM

PROVIDE U.L. LISTED BASE MOUNTED TANK WITH RUPTURE BASIN AND LEAK ALARM

CONNECTED TO REMOTE STATUS MONITOR AND CONTROL PANEL. VERIFY STATUS

THE GENERATOR ASSEMBLY SHALL BE MOUNTED SECURELY TO THE CONCRETE HOUSEKEEPING PAD. THE CONCRETE PAD SHALL BE 6" THICK, 3000 PSI WITH #4 REBAR TIED TOGETHER ON 6" CENTERS (BOTH WAYS). PROVIDE 11/6" THICK VIBRATION ISOLATION RUBBER MAT BETWEEN THE CONCRETE PAD AND CONCRETE DECK. THE GENERATOR SET FRAME SHALL HAVE SPRING VIBRATION ISOLATORS. ALL ELECTRICAL CONNECTIONS TO THE GENERATOR SET SHALL CONSIST OF WEATHER-PROOF FLEXIBLE CONDUIT.

PROVIDE AND INSTALL AUTOMATIC TRANSFER SWITCH TO OPERATE ON A 3 PHASE, 4 WIRE, 60 HZ SYSTEM. VOLTAGE AND AMPERAGE AS NOTED ON DRAWINGS. TRANSFER SWITCH SHALL BE 3 POLE WITH SOLID NEUTRAL UNLESS INDICATED AS 4-POLE ON THE POWER RISER DIAGRAM. THE ENTIRE ASSEMBLY SHALL BE UL LISTED UNDER UL-1008 AND COMPLY WITH NATIONAL ELECTRICAL CODE REQUIREMENTS. THE TRANSFER SWITCH SHALL BE DOUBLE THROW, ACTUATED BY A SINGLE ELECTRICAL OPERATOR, MOMENTARILY ENERGIZED; AND CONNECTED TO THE TRANSFER MECHANISM BY A SINGLE OVER-CENTER TYPE LINKAGE WITH A TOTAL TRANSFER TIME NOT TO EXCEED ONE-HALF SECOND.

THE TRANSFER SWITCH SHALL BE CAPABLE OF TRANSFERRING SUCCESSFULLY IN EITHER DIRECTION WITH 70% OF RATED VOLTAGE APPLIED TO THE SWITCH TERMINALS. PROVIDE WITH EXERCISER CLOCK WHICH SHALL VIRTUALLY EXERCISE THE GENERATOR SET WITHOUT TRANSFERRING THE LOAD.

THE NORMAL AND EMERGENCY CONTACTS SHALL BE POSITIVELY INTERLOCKED MECHANICALLY AND ELECTRICALLY TO PREVENT SIMULTANEOUS CLOSING. MAIN CONTACTS SHALL BE MECHANICALLY LOCKED IN POSITION IN BOTH THE NORMAL AND EMERGENCY POSITIONS WITHOUT THE USE OF HOOKS, LATCHES, MAGNETS OR SPRINGS AND SHALL BE SILVER ALLOY. SEPARATE ARCING CONTACTS, WITH MAGNETIC BLOWOUTS, SHALL BE PROVIDED ON ALL TRANSFER SWITCHES. INTERLOCKED MOLDED CASE CIRCUIT BREAKERS OR CONTACTORS ARE NOT ACCEPTABLE. THE TRANSFER SHALL BE EQUIPPED WITH A PERMANENTLY ATTACHED SAFE MANUAL OPERATOR DESIGNED TO PREVENT INJURY TO OPERATING PERSONNEL.

THE MANUAL OPERATOR SHALL PROVIDE A SAME CONTACT—TO CONTACT TRANSFER SPEED AS THE ELECTRICAL OPERATOR TO PREVENT A FLASHOVER FROM SWITCHING THE MAIN CONTACTS SLOWLY.

CAREFULLY "OHM" OUT CONTROL WIRING BETWEEN ATS AND GENERATOR SET PRIOR TO CONNECTING. CHECK FOR OPENS, SHORTS, OR GROUNDS. TEST ATS FUNCTIONS PRIOR TO CONNECTING LOAD CHECK NORMAL AND EMERGENCY INPUT FEEDERS, PRIOR TO CONNECTION, FOR INSULATION BREAKAGE, OPENS, SHORTS,

THE GENERATOR SET SHALL BE TESTED AT THE EQUIPMENT MANUFACTURER'S FACILITY PRIOR TO SHIPMENT. ALL TESTS SHALL BE RECORDED AND SUBMITTED TO IE ARCHITECT/ENGINEER. MINIMUM TESTING TO INCLUDE, BUT NOT LIMITED TO, THE

TRANSIENT RESPONSE.

VOLTAGE DIP AT 50, 75, AND 100% LOAD. FREQUENCY DIP. RECOVERY TIME.

ON COMPLETION OF THE INSTALLATION, START-UP SHALL BE PERFORMED BY THE GENERATOR SET MANUFACTURER, A TRAINED DEALER SERVICE REPRESENTATIVE. PARTS BOOKS COVERING THE ENGINE, GENERATOR, AND MAJOR AUXILIARY EQUIPMENT SHALL BE PROVIDED TO THE OWNER AT THIS TIME. PROCEDURES ON OPERATING AND MAINTENANCE OF THE STANDBY POWER SYSTEM SHALL BE EXPLAINED TO OPERATING PERSONNEL.

EQUIPMENT FURNISHED UNDER THESE SPECIFICATIONS SHALL BE GUARANTEED AGAINST DEFECTIVE PARTS AND WORKMANSHIP UNDER TERMS OF THE MANUFACTURER'S AND DEALER'S STANDARD WARRANTY. BUT, IN NO EVENT, SHALL IT BE FOR A PERIOD OF LESS THAN TWO YEARS FROM DATE OF INITIAL START-UP OF THE SYSTEM AND SHALL INCLUDE LABOR AND TRAVEL TIME FOR NECESSARY REPAIRS AT THE JOB SITE. RUNNING HOURS SHALL NOT BE A LIMITING FACTOR FOR THE SYSTEM WARRANTY.

BASE-TANK STORAGE REQUIREMENTS

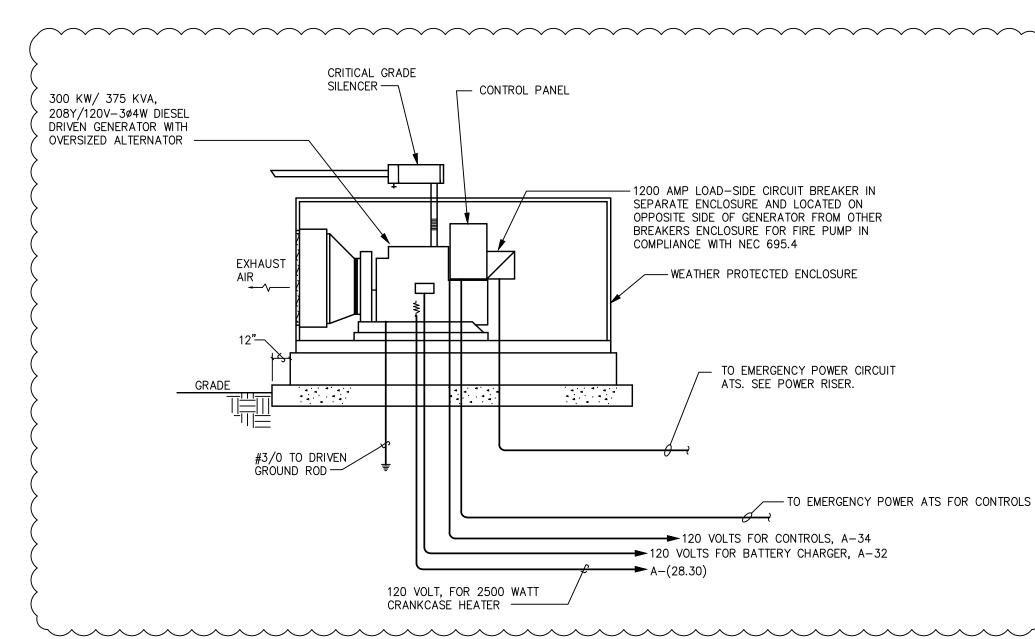
CONTROL OF SPILLAGE FROM ABOVEGROUND TANKS. FACILITIES SHALL BE PROVIDED SO THAT ANY ACCIDENTAL DISCHARGE OF ANY CLASS I, II, OR IIIA LIQUIDS WILL BE PREVENTED FROM ENDANGERING IMPORTANT FACILITIES, AND ADJOINING PROPERTY,

OR REACHING WATERWAYS. EXCEPTION NO. 1: TANKS STORING CLASS IIIB LIQUIDS DO NOT REQUIRE SPECIAL DRAINAGE OR DIKING PROVISIONS FOR FIRE PROTECTION PURPOSES. EXCEPTION NO. 2: ABOVEGROUND SECONDARY CONTAINMENT-TYPE TANKS NEED NOT MEET THE REQUIREMENTS OF 2-3.4 IF ALL OF THE FOLLOWING CONDITIONS ARE MET: (A) THE CAPACITY OF THE TANK SHALL NOT EXCEED 12,000 GAL (45,420 L). (B) ALL PIPING CONNECTIONS TO THE TANK SHALL BE MADE ABOVE THE NORMAL MAXIMUM LIQUID LEVEL.

(C) MEANS SHALL BE PROVIDED TO PREVENT THE RELEASE OF LIQUID FROM THE TANK BY SIPHON FLOW. (D) MEANS SHALL BE PROVIDED FOR DETERMINING THE LEVEL OF LIQUID IN THE TANK. THIS MEANS SHALL BE ACCESSIBLE TO THE DELIVERY OPERATOR. (E) MEANS SHALL BE PROVIDED TO PREVENT OVERFILLING BY SOUNDING AN ALARM WHEN THE LIQUID LEVEL IN THE TANK REACHES 90 PERCENT OF CAPACITY AND BY AUTOMATICALLY STOPPING DELIVERY OF LIQUID TO THE TANK WHEN THE LIQUID LEVEL IN THE TANK REACHES 95 PERCENT OF CAPACITY. IN NO CASE SHALL THESE PROVISIONS RESTRICT OR INTERFERE WITH THE PROPER FUNCTIONING OF THE NORMAL VENT OR THE EMERGENCY

(F) SPACING BETWEEN ADJACENT TANKS SHALL BE NOT LESS THAN 3FT (G) THE TANK SHALL BE CAPABLE OF RESISTING THE DAMAGE FROM THE IMPACT OF A MOTOR VEHICLE OR SUITABLE COLLISION BARRIERS SHALL

(H) WHERE THE INTERSTITIAL SPACE IS ENCLOSED, IT SHALL BE PROVIDED WITH EMERGENCY VENTING IN ACCORDANCE WITH 2-3.6. I) MEANS SHALL BE PROVIDED TO ESTABLISH THE INTEGRITY OF THE SECONDARY CONTAINMENT. FOR TESTING OF SECONDARY CONTAINMENT-TYPE



GENERATOR DEATIL

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